PUT CR Old SR 12/CR 18-S/CR 19 – Widen & Resurface
Internet Sign-In Form
Bid Open: October 23, 2025 at 10:30 AM

Company Name _____

Contact Name _____

Email Address _____

Street Address _____

City, State, Zip Code _____

Phone _____

Addendums can potentially be issued as late as the day before the bid opening. Completing and returning this form ensures you will be directly informed of any addendums.

Email or Fax completed form to Putnam County Engineer's Office:

michael.lenhart@putnamcountyohio.gov

Fax: (419) 523-6014

OFFICE OF THE COUNTY ENGINEER

PROPOSAL

TO THE BOARD OF COUNTY COMMISSIONERS
COUNTY OF PUTNAM

For: PUT CR Old SR 12/CR 18-S/CR 19 – Widen & Resurface

Bidder's Name: _____

Street Address: _____

P.O. Box: _____

City, State, Zip: _____

Project PID: 114054

DBE Goal: 6%

Federal Authorization Date: July 14, 2025

EEO: Equal Employment Opportunity Compliance Certificate is a prerequisite for award

Date of Letting: October 23, 2025

Place of Letting: Putnam County Board of Commissioners
245 E. Main Street
Ottawa, Ohio 45875

Completion Dates: September 1, 2026

Prepared By:
Putnam County Engineer
245 E. Main Street, Ste. 205
Ottawa, OH 45875

Michael L. Lenhart, P.E., P.S.

BID DOCUMENTS

Table of Contents

Supplemental Documents:

Location Map
Supplemental Spec 800 – Revisions to the 2023 Construction & Material Specifications
Supplemental Spec 832 – Temporary Sediment and Erosion Control
Disadvantaged Business Enterprise (DBE) Program Affidavit of Subcontractor Payment

https://development.ohio.gov/business/construction-compliance/certificate-of-compliance

ADVERTISEMENT

NOTICE TO BIDDERS

Sealed bids will be received at the Office of the Putnam County Board of Commissioners, 245 E. Main St., Ottawa, OH 45875, until 10:30 AM on Thursday, October 23, 2025 for furnishing all labor, materials and equipment necessary for the:

PUT CR Old SR 12/CR 18-S/CR 19 – Widen & Resurface

and at said time and place, shall be publicly opened and read aloud.

All information for Bidders, specifications, bid documents and maps for this project are posted on the internet and may be viewed and obtained on Putnam County's web page at https://putnamcountyohio.gov/bid-info/.

The Contractor must be ODOT prequalified, and the DBE goal is 6 %. The completion date is September 1, 2026. Engineer's Total Estimate: $1,915,000.00.

COUNTY OF PUTNAM

Cindy Landwehr, Clerk
Putnam County Commissioners

Michael L. Lenhart, P.E., P.S.
Putnam County Engineer

Bid Advertisement Date: October 1, 2025
October 8, 2025

INTRODUCTION

It is the intent of these contract documents to serve as the basis for preparing a contractor's estimate of cost, or the contractor's bid; to show engineering intent and to set a level of quality of workmanship and performance; and as the basis for the written contract or agreement between owner and contractor.

They represent the composite of the requirements of the engineer, the owner and any and all funding agencies. An effort has been made, insofar as is practicable, to minimize any duplication or conflict in requirements or standards or performance and workmanship. Insomuch as this is not always possible, there may be contained herein some conflicting requirements or standards. When such is the case, the more stringent requirements shall always govern, unless stated otherwise. Likewise, Supplemental Provisions will amend and/or add to the Standard Provisions and shall always have precedence over the provisions to which they are a supplement.

The engineer, acting as the owner's representative, shall interpret the intent of the contract documents in a fair and unbiased manner and shall decide any and all questions which may arise to quality and acceptability of materials furnished and work performed.

I. INSTRUCTIONS TO BIDDERS

1. SUBMISSION OF BID

Sealed Bids will be received at the Putnam County Board of Commissioners Office, on or before the advertised Bid date and time, as extended, for all labor, materials, equipment, supervision, coordination and other things necessary for the full and complete performance of the project described by the accompanying Bid advertisement (herein referenced as the "Project").

Bids must be submitted in sealed envelopes marked with the Project title, the name of the Bidder and his address. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the Board of County Commissioners 245 E. Main Street, Ottawa, Ohio 45875. Bids shall be opened immediately upon expiration of the Bid submission time, with the names of bidders and their respective bid prices read publicly.

2. STANDARD SPECIFICATIONS & TERMS

The Construction & Material Specifications of the State of Ohio, Department of Transportation (January 1, 2023) shall serve as standard specifications for any contract awarded hereunder. Said Construction & Material Specifications shall be referenced herein as the "Standard Specifications." Supplemental specifications, requirements, terms, conditions and covenants of these Instructions to Bidders and of the accompanying Bid Documents shall control over conflicting terms found in the Standard Specifications.

Wherever the following terms appear in the Standard Specifications, said terms shall have the following meaning:

A. The terms "State," "State of Ohio," "Department" and "Department of Transportation" refer to the County, acting through its Board of Commissioners. The County also may be referenced as the "County" or the "Owner" herein.

B. The term "Director," "DCE" and "DDD" refers to the County Engineer.

C. The term "Engineer" refers to the County Engineer, or to his duly authorized representative.

D. The term "Laboratory" refers to such testing laboratory or consultant as shall be designated by the County Engineer or by the County Engineer's duly authorized representative.

A numerical designation for an "item" referenced herein refers to the description of said item number as provided by the Standard Specifications.

Bidders are specifically referred to the definitions provided by section 101.03 of the Standard Specifications. Any undefined trade and technical words and terms shall be deemed to have the meaning established by trade usage in the highway/bridge construction and civil engineering consultation business.

3. FORM OF BID

Bids shall be submitted using the attached blank forms, designed for such purpose. These forms must be completed intact, without removal of any part, must recite the full name of the party making the Bid, and must be properly signed.

In each blank marked “unit price,” bidders are required to provide a Bid price per referenced unit for the requested materials, labor or equipment, or referenced combination thereof. Failure to provide a price for each unit price item, or failure to provide prices for lump sum items, will render the Bid informal, allowing its rejection at the County’s discretion.

Extended unit prices are calculated by multiplying the bidder’s unit price entries times their respective approximate quantities. The resultant extended unit price figures, in addition to any lump sum prices, are added to calculate the amount of each Bid.

The sum of the unit prices and lump sum prices provided by each Bidder shall comprise that Bidder’s Bid price for consideration of award of contract. If an error is made in the extension of unit prices, or in addition of the unit and lump sum prices, the accurate extended unit prices and total shall govern.

Quantities provided by the Bid Documents are estimates only. The Engineer reserves the right to eliminate, increase or decrease the actual quantity of any unit price item or to non-perform any lump sum item.

4. BIDDER QUALIFICATIONS

Prequalification may be granted under any local standards currently used by the County Engineer. In addition, each Bidder shall complete any Bidder qualification forms provided with the Bid Documents, and shall furnish documentation and evidence of qualifications as are required thereby. Prequalification by the Ohio Department of Transportation, as described by ORC Sections 5525.02-.09, for performance of Work of the same type, character and magnitude as described hereby, is acceptable.

5. EXAMINATION OF BID DOCUMENTS & SITE OF WORK

Bidders must carefully examine the Bid Documents and perform a reasonable site investigation before submitting a Bid. Submission of a Bid is an affirmative statement that the Bidder has investigated the Project site and is satisfied as to the character, quality, quantities and conditions to be encountered in performing the Work. A reasonable site investigation includes investigating the Project site, borrow sites, hauling roads and all other locations related to the performance of the Work.

6. BID GUARANTEE

Each Bid shall be accompanied by a bid guarantee, in the form of a bid bond, a certified check, a cashier’s check or a letter of credit, in conformity with the requirements of ORC 153.54 and 153.571 (B). If a bid bond is used, the bond shall be in the full amount of the bid and signed by a Surety company authorized to do business in Ohio, and accompanied by the Surety’s sufficient power of attorney affirming said signature. If a certified check, cashier’s check or letter of credit is used, the instrument shall be drawn on a solvent bank in an amount not less than ten percent (10%) of the Bid. The bid guarantee shall be given as security that, if the Bid is accepted, the Bidder will enter into a contract in conformity with the Bid. Bids less than twenty-five thousand dollars ($25,000.00) do not require a bid guarantee.

7. FACTORS FOR ACCEPTANCE OR REJECTION OF BIDS

A. Pursuant to ORC 307.90 (A), a contract shall be awarded to the lowest and best Bid.

B. Any Bid which is incomplete, conditional, obscure, or which contains additions not called for or irregularities of any kind, may be rejected.

C. The Board of Commissioners reserves the right to reject any and all Bids, and also the right to waive any informality in the Bid. The Board of Commissioners has the right to postpone the decision to award a contract for up to sixty (60) days.

D. No contract shall be awarded to any person, firm or corporation that is in arrears or is in default to the County upon any debt or contract, or that is in default as surety or otherwise upon any obligation to the County, or has failed to perform faithfully any previous contract with the County, or that has an unresolved finding of recovery with the State Auditor, or has been debarred by the County from consideration for contract awards.

E. A conditional or qualified Bid will not be accepted.

F. Award will be made to one Bidder per proposal.

8. WITHDRAWAL OF BIDS

A Bidder may request, in writing, to withdraw its Bid within five (5) business days of the opening. Such requests will be reviewed by the Board of Commissioners for approval as permitted by ORC 9.31 and 153.54 (G). If approved, collection of the bid guarantee or bond will be waived.

9. OTHER COSTS & REQUIREMENTS

Bids must include all costs of performing the Work and all costs of fulfilling the requirements of laws, rules and regulations pertaining thereto. The following is a partial list of ancillary contract costs and requirements. Said list is provided for the convenience of Bidders, to assist in their inclusion of all components of costs and fulfillment of all requirements, though this list does not recite all such costs and requirements.

A. Bids must include the cost of all required bonds (performance and maintenance). (Must have ODOT and Putnam County Board of Commissioners as obligee.)

B. Bids must include the cost to procure all permits and licenses, to pay all charges, fees and taxes, and to provide all notices necessary and incidental to the due and lawful prosecution of the Work.

C. Bids must include the cost of insurance coverage of the type and at least in the amounts set forth by section 107.12 of the Standard Specifications and by any special bid provisions.

D. The County is exempt from all sales, excise, and transportation taxes, with the exception of State of Ohio gasoline tax. Bid prices shall exclude all such taxes. **Upon request, the County will fill out a tax-exempt certification.**

E. “Declaration of Personal Property Tax Delinquency” form must be fully executed and notarized pursuant to ORC Section 5719.042, before an award can be made.

F. Disadvantaged Business Enterprise (DBE) Requirement: DBE participation goals (subcontracts, materials, supplies) have been set on this project for those certified as DBEs pursuant to Title 23, U.S.C. section 140(c) and 49 CFR, Part 26, and where applicable, qualified to bid with ODOT under Chapter 5525 of the ORC.

10. LPA'S CHANGE ORDER PROCESS

The LPA (Putnam County Engineer) uses ODOT's Change Order Process found in the Construction and Material Specifications (C&MS) 109.05 and the 2013 Manual of Procedures (MOP) 109.05. Going forward, as these documents are updated, the LPA (Putnam County Engineer) will follow the version of these documents that were stated in the contract documents.

11. LPA'S DISPUTE RESOLUTION AND ADMINSTRATIVE CLAIM PROCESS

Putnam County's Dispute Resolution and Administrative Claim Process is premised on the partnering approach to construction administration and must be adhered to by the Contractor in order to resolve disputes on the project and in order to seek additional compensation or contract time from Putnam County in the form of an Administrative Claim.

Disputes and Claims

Disputes include disagreements, matters in questions, and difference of opinion between Putnam County's personnel and the Contractor. Claims are disputes that are not settled through Steps 1 and 2 of the Dispute Resolution and Administrative Claim Process and for which the Contractor has documented costs or time incurred as a result of such disputes.

Disputes and claims by subcontractors and suppliers may be pursued by the Contractor on behalf of subcontractors or suppliers. Disputes and claims of subcontractors and suppliers against the Contractor will not be reviewed by Putnam County. Disputes and claims by subcontractor and suppliers against Putnam County by no supported by the Contractor will not be reviewed by Putnam County.

Disputes and claims subject to review by Putnam County include:

1. Interpretation of specifications, standard drawings, plans, proposal, working drawings, change orders, authorized by the Putnam County Engineer, and orders by the Putnam County Engineer's personnel having authority over the project, provided that such orders have been authorized in accordance with Ohio law.

2. Differing site conditions as defined in ODOT CMS 104.02.B.

3. Cost and time incurred by:
    a. Suspension of work pursuant to ODOT CMS 104.02.C.
    b. Significant changes in character of work pursuant to ODOT CMS 104.02.D.
    c. Utility interference with the work pursuant to ODOT CMS 105.07 and the Utility Note.
    d. Extra work ordered pursuant to ODOT CMS 104.02.F and the policy on Change Orders.
    e. Acts or inaction of Putnam County or other governmental agencies.

4. Contract time extensions due to weather, shortages of labor, equipment, or materials, or other causes beyond the Contractor's control as defined in ODOT CMS 108.06.

5. Other subjects mutually agreed upon by Putnam County and the Contractor to be within the scope of the Dispute Resolution and Administrative Claim Process.

Process
The Contractor must exhaust Putnam County's Dispute Resolution and Administrative Claim Process prior to seeking additional compensation or contract time by filing an action in any appropriate Court located in Putnam County, Ohio. The following procedures do not compromise the Contractor's right to seek relief in any appropriate Court located in Putnam County, Ohio.

All parties to the dispute must adhere to this Dispute Resolution and Administrative Claim Process. Putnam County personnel involved in the second tier review will not consider a dispute until the previous tier has properly reviewed the dispute and issued a decision. The Contractor's personnel shall not contact the Putnam County personnel involved in a second tier review until a decision has been issued by the previous tier.

Failure to meet any of the timeframes outlined below or to request an extension may terminate further review of the dispute and may serve as a waiver of the Contractor's right to file a claim.

Continuation of Work
The Contractor shall continue with all work, including that which is in dispute. Putnam County will continue to pay for work.

Step 1 (On-Site Determination)
The Project Engineer shall meet with the Contractor's superintendent within two (2) working days of receipt of the Contractor's written notice. They shall review all pertinent information and contract provisions and negotiate in an effort to reach a resolution according to the Contract Documents. The Project Engineer will issue a written decision of Step 1 within fourteen (14) calendar days of the meeting. If the dispute is not resolved, the Contractor must either abandon or escalate the dispute to Step 2.

Step 2 (Dispute Resolution Committee)
Within seven (7) calendar days of receipt of the Step 1 decision, the Contractor must submit a written request for a Step 2 meeting to the Putnam County Engineer. The Putnam County Engineer will assign the dispute a dispute number. The dispute number will consist of the project number, followed by a hyphen and then the number of disputes on this project that this dispute represents. Within fourteen (14) calendar days of submission of the request for a Step 2 meeting, the Contractor shall submit the Dispute Documentation as follows:

1. The Contractor shall submit three (3) complete copies of the documentation of the dispute to the Putnam County Engineer.

2. The Dispute Documentation shall be identified on a cover page by city, county, project number, Contractor name, subcontractor or supplier if involved in the dispute, and dispute number.

3. The Dispute Documentation shall be an original document that clearly and in detail gives the required information for each item of additional compensation and time extension requested.

4. A narrative of the disputed work or project circumstance at issue. This section must include the dates of the disputed work and the date of early notice.

5. References to the applicable provisions of the plans, specifications, proposal, or other contract documents. Copies of the cited provisions shall be included in the Dispute Documentation.

6. The dollar amount of additional compensation and length of contract time extension being requested.

7. The cost and supporting documents that served as the basis for the requested compensation stated in number six (6) above.

8. A detailed schedule analysis must be included in the Dispute Documentation for any dispute concerning additional contract time, actual or constructive acceleration, or delay damages. At a minimum, the schedule analysis must include the Schedule Update immediately preceding the occurrence of the circumstances alleged to have caused delay and must comply with accepted industry practices. Failure to submit the required schedule analysis will result in the denial of that portion of the Contractor's request.

9. Copies of relevant correspondence and other pertinent documentation.

Within fourteen (14) calendar days of receipt of the pertinent documents related to the dispute, the Putnam County Engineer will meet with personnel from the Contractor's Headquarters and consider the dispute. The Putnam County Engineer's Chief Deputy not involved in Step 1 will assist the Putnam County Engineer with this meeting and forthcoming decision within fourteen (14) calendar days of this Step 2 meeting. The Putnam County Engineer will issue a written decision of Step 2. The decision of the Putnam County Engineer is the final step of Putnam County's Dispute Resolution Process. The Putnam County Engineer is not bound by any offers of settlement or findings of entitlement made during Step 1 of this Dispute Resolution Process.

Step 3

If not resolved, the Contractor shall go through the proper legal proceedings through the appropriate court located in Putnam County, Ohio.

II. SUPPLEMENTAL CONTRACT PROVISIONS

1. AWARD REQUIREMENTS OF SUCCESSFUL BIDDER/CONTRACTOR

The following is a partial list of award contract requirements. Said list is provided for the convenience of Bidders, to assist in their inclusion of all components of costs of such requirements, though this list does not recite all such costs and requirements.

A. The successful Bidder/Contractor must provide a one hundred percent (100%) Performance Bond based on the contract amount, in conformity with the requirements of ORC section 153.54 (C) and 153.57 (A). A Maintenance Bond in the amount to ten percent (10%) of the final contract amount, extending coverage for one (1) year beyond the acceptance date of the completed Project, must be provided by the Contractor as a prerequisite to final payment. Said Maintenance Bond shall assure the repair and/or correction of any defects, deficiencies or omissions in the Project Work.

B. The Contractor must provide evidence of all insurance coverage requirements of section 107.12 of the Standard Specifications.

C. The Contractor agrees to provide the County with full and complete documentation of payment of prevailing wages to all employees of the Contractor and of its subcontractors governed by Federal Davis-Bacon Prevailing Wage law.

D. The Contractor agrees to provide the County with a contact person, a telephone number, a mailing address and, if available, an electronic mail address for purposes of giving notice to the Contractor of any changes in prevailing wage rates. Where an electronic mail address is given, the Contractor agrees that the use of that method by the County satisfies any notice requirements of any change in prevailing wage rates. Upon commencement of contract work, the Contractor and its subcontractors subject to the contract's prevailing wage requirements must provide the prevailing wage coordinator with a schedule of wages, with certified copies of payroll being required throughout work on the Project.

E. The Contractor further agrees to stay informed of applicable prevailing wage rates and to immediately inform all its subcontractors and the Engineer of such changes. The Contractor agrees to defend and indemnify the County, its elected officials, agents and employees, against all claims, actions, demands, judgments, settlements, damages, liabilities, losses, and costs of any kind, including, but not limited to, reasonable fees of attorneys and experts, arising from or related to the Contractor's failure to inform its subcontractors of changes in prevailing wage rates.

F. The Contractor must furnish the County with a completed IRS Form W-9, "Request for Taxpayer Identification Number & Certification." The Internal Revenue Code requires the County to file an information return each January 31st on all payments made the previous year of $600.00 or more. As required by Section 3406 of the Internal Revenue Code (26 U.S.C. 3406), the County shall withhold federal taxes of a rate of thirty-one percent (31%) if a correct taxpayer identification number is not provided. Back-up withholding requirements continue until the required information is received.

2. OTHER CONTRACTOR DUTIES

In addition to the duties cited by the Standard Specifications and elsewhere in these Bid Documents, the Contractor has the following duties:

A. When determined necessary by the Engineer, the Contractor shall provide a field office, suitably and of ample size and accommodations, from which the Engineer's inspections, as well as the Contractor's Work, may be carried out. The Contractor must keep a full set of Plans and Specifications available at the field office.

B. The Contractor must furnish, without extra compensation therefore, such assistance as the Engineer, or his assistants or inspectors may require, in measuring in and setting stakes or marks for indicating lines, grades or levels, for measuring or determining quantities for estimates, and for handling and inspecting materials to be used on the Work, whether such materials have been delivered upon the site of Work or are in local storage. The Contractor shall provide such facilities for weighing and measuring materials as the Engineer may deem necessary, to secure the proper fulfillment of the provisions and requirements of the Specifications.

C. The Contractor shall diligently protect and preserve all stakes, marks, bench marks and monuments set or used by the Engineer, and shall be responsible for securing therefore the proper lines, grades and levels for the structures to be built.

D. The Contractor must place or construct, in such manner and at such points as the Engineer may require, necessary sanitary conveniences for the use of employees on the Work site. They shall be properly secluded from public observation, shall be maintained sanitary and inoffensive at all times, and their use shall be strictly enforced. The Contractor must provide an ample supply of pure drinking water for employees at all times, and the source of such supply shall be subject, at all times, to the approval of the Engineer.

E. The Contractor is reminded of its duty to notify the registered underground utility protection service and owners of underground utility facilities at least two working days in advance of commencement of construction operations that may involve such facilities, to allow surface marking of facility locations.

F. The Contractor shall, using the U.S. government's System for Awards Management (SAM), ensure that any project subcontractors are not on the excluded parties list. The Engineer will also check all project subcontractors using the System for Award Management. https://www.sam.gov/SAM/

3. DISCRIMINATION PROHIBITED

The Contractor understands and agrees that, in the hiring of employees for the performance of work under the contract or any subordinate contract hereunder, the Contractor, its subcontractors and persons acting on behalf of the same shall not discriminate in the hiring or retention of subordinate contractors or employees "by" or "for" reason of race, creed, sex, disability (as defined by ORC 4112.01) or color; nor shall said parties discriminate against any citizen of the State of Ohio in the employment of labor or workers who otherwise qualify and who are available to perform the work to which the contract relates.

Further, the Contractor and its subcontractors and persons acting on behalf of the same shall not discriminate against or intimidate any employee hired for performance of the Work under the contract on account of race, creed, sex, disability (as defined by ORC 4112.01) or color.

In addition, the Contractor agrees, as a prerequisite of award, to submit an "Equal Employment Opportunity Compliance Certificate," and to fulfill all requirements thereof.

4. INSPECTION

The Engineer, assistants and agents shall have, at all times, immediate access and right to enter upon the Work site and other Work premises occupied by the Contractor as well as upon the site of all sources from which materials are being obtained for the contract. The Contractor shall provide safe and proper facilities for permitting such entrance and for inspecting and testing purposes. Subcontractors and suppliers shall have similar obligations imposed by subordinate contracts. The Contractor shall furnish the Engineer with all reasonable facilities for ascertaining that the materials and Work are in accordance with the requirement and intention of the Specifications and contract, even to the extent of uncovering or removing portions of finished Work.

The Contractor shall give definite information, at any time, as to the place from which, or persons from whom, any material is being or will be procured. All materials to be used may be subjected to such tests as the Engineer may require assuring that such materials conform, in all respects, to the requirements of the Specifications, or that they are equal to samples submitted by the Contractor. All materials which do not conform to such requirements shall be rejected, and the Contractor shall remove such rejected materials from the vicinity of the Work within twenty-four (24) hours thereafter.

The inspection and supervision of the Work and materials by the Engineer, assistants and inspectors is intended to aid the Contractor in accomplishing the fulfillment of duties and obligations under the contract, but such inspection and supervision shall not relieve the Contractor from contract obligations.

Defective Work shall be made good and unsuitable materials may be rejected, notwithstanding that such Work and materials have been previously overlooked by the Engineer and accepted or estimated for payment. If the Work, or any part thereof, is found, at any time before the acceptance of the whole Work and for the period of the Maintenance Bond thereafter, to be defective, or to contain defective materials, the Contractor shall make good such defects under the direction of the Engineer.

Upon being attached to, or incorporated in the Work, or affixed in or to the soil, all materials shall become property of the County. Thereafter the Contractor shall have no right of property therein, unless they are afterward rejected by the Engineer. The Contractor bears risk of loss of and damage to the Work until completion and final acceptance of the Work.

The Contractor shall schedule inspection twenty-four (24) hours in advance of the performance of the respective Work. At the pre-construction meeting, the Engineer shall provide the Contractor with phone numbers and names of a contact person and of the Engineer's inspectors. The Contractor shall inform the Engineer of his Work schedule and the hours of operation before the Contractor may begin Work.

When Work is scheduled and the Contractor desires to change the approved schedule, the Contractor shall contact the Engineer's inspector at or before 7:30 a.m. of the scheduled Work date to cancel or adjust the hours of inspection. If the Contractor fails to contact the Engineer's inspector as stated above or if the notice is within two (2) hours of the scheduled inspection and is insufficient to cancel attendance by the Engineer's inspector, the Contractor will be charges for two (2) hours of inspection time at the current inspection rate. This cost will be subtracted from the Contractor's monthly pay estimate.

5. SIGNIFICANT CHANGES IN CHARACTER OF THE WORK.

The Engineer may alter the Work as necessary to complete the Project. The Engineer will make appropriate adjustments according to 108.06 and 109.05, if such alterations significantly change the character of the Work.

If the alterations or changes in quantities significantly change the character of the Work under the Contract, whether such alterations or changes are in themselves significant changes to the character of the Work or by affecting other Work cause such other Work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the Contract. Before performing significantly changed Work, reach agreement with the Department concerning the basis for the adjustment. If the Contractor disagrees as to whether an alteration constitutes a significant change, use the notification procedures specified in 104.02.G.

The term “significant change” is defined as the follows:
1. when the character of the Work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
2. when the product of the quantity in excess of the estimated quantity of a contract item and the unit price exceeds the limits set forth in Table 104.02-1. If the increase does not exceed the limits set forth in Table 104.02-1, then the Department will pay for the increased Work at the Contract Price.

Table 104.02-1

Contract Price	Contract Limits
Up to $500,000	$25,000
$500,001 to $2,000,000	5% of Total Contract Price
Over $2,000,000	$100,000

If the decrease in quantity of any unit price Contract Item exceeds twenty-five percent (25%) of the estimated quantity, and the total of all such adjustments for all Contract Items is more than $400, then after the determination of final quantities according to 109.12.C, the Engineer will adjust the unit prices for the affected Contract item by multiplying the bid unit price by the factor obtained from Table 104.02-2.

Table 104.02-2

% Decrease	Factor	% Decrease	Factor
25 to 28	1.02	61	1.14
29 to 32	1.03	62	1.15
33 to 35	1.04	63	1.16
36 to 38	1.05	64	1.17
39 to 41	1.06	65	1.18
42 to 44	1.07	66	1.19
45 to 47	1.08	67	1.20
48 to 50	1.09	68	1.21
51 to 53	1.10	69	1.22
54 to 56	1.11	70	1.23
57 to 59	1.12	71	1.24
60	1.13	72 and over	1.25

6. NO WAIVER RIGHTS

No act of the Engineer, or his assistants or inspectors, shall operate as waiver of any provisions of the contract, nor shall any breach of this contract operate as a waiver of any other subsequent breach. Any and all remedies provided in this contract are cumulative, in addition to other remedies herein provided. The mention of any specific liability or duty of the Contractor, in any part of the Specifications or contract, shall not be construed as a limitation or restriction upon general liability or duty imposed upon the Contractor by said Specifications and contract. Should any part of the Work be sublet by the Contractor, such action shall in no way release the Contractor from liability or obligation hereunder. The Contractor shall be liable for the acts, omissions and negligence of any subcontractor, and shall be responsible therefore as though no subcontract existed.

7. DAMAGES FOR LATE COMPLETION; EXTENSIONS OF TIME

Time is of the essence to this contract. The rate of progress shall be such as to complete the Project Work within the time limit specified herein. **The completion date for this project is: September 1, 2026.**

In the event that the Work is not completed within the time limit aforesaid, the Contractor shall reimburse the County an amount equal to the County's costs for and expenses of Project inspections, supervision and similar engineering services provided by or for the County after the expiration of the aforesaid time limit, and until completion and acceptance of the Work.

In addition, in the event that the Work is not substantially completed within the time limit aforesaid, with said incompletion prohibiting beneficial use and occupancy of the Project, in compensation for the public's loss of use of the Project, the Contractor shall forfeit liquidated damages in the amount set forth by section 108.07 of the Standard Specifications.

Such amounts shall be deducted by the Engineer from the partial or final estimates to be allowed the Contractor.

The Board of County Commissioners may for good cause shown, extend the time of completion. Any such extension in time shall not be deemed a waiver by the County of any other rights provided for under this contract, and shall not operate to release any Surety from any bond obligations.

8. NIGHT, SUNDAY & HOLIDAY WORK

No Work will be permitted on Sundays or legal holidays, except as authorized by the Engineer or the Board of Commissioners. No Work will be permitted after dark except under terms and conditions agreed to in writing by the Engineer, Board of Commissioners and Contractor. No extra compensation will be allowed to the Contractor for night, Sunday or Holiday Work, regardless of cause of such Work.

9. PARTIAL PAYMENTS

Before the day, stipulated by the Owner, of each month, the Contractor shall make a written estimate of the amount of value of the work and materials incorporated into the work during the preceding month, broken down into bid items. The Contractor shall submit his estimate to the Engineer immediately upon its preparation, and after each such partial estimate has been certified

to in writing by the Engineer the owner shall, on or before the first day of the month next following, pay the Contractor as specified below.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, 8 percent of the first 50 percent of such total amount will be deducted and retained by the Owner until the final payment is made except. The balance of the amount payable, less all previous payments, shall be certified for payment.

Upon completion and acceptance of the project by the Owner and Engineer, (i.e., the signing of the "Certification of Substantial Completion" by all parties involved), the Owner shall release one half (1/2) of the retainer. The remaining one half (1/2) of the retainer shall be retained by the Owner for the following periods after the date of approval and acceptance of the project.

Acceptance Date	Period
From Feb. 15 to Aug. 15	90 Calendar Days
From Aug. 16 to Feb. 14	180 Calendar Days

The owner agrees that upon expiration of the above period, the Contractor shall be entitled to the whole sum of the reserve, less any part expended by the Owner in making repairs.

Should any defective work or material or acceptable work that has been damaged by the Contractor's operations be discovered previous to the final acceptance or should a reasonable doubt arise previous to the final acceptance as to the integrity of any part of the completed work, the estimate and payment for such defective or questioned work shall not be allowed until the effect has been remedied and cause for doubt removed.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment.

10. CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

ODOT's 3/19/25 LPA Template (ODOT Spec Book and LPA Spec Book)
Required Contract Provisions.

1. ODOT'S 2023 CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND ITS SUPPLEMENTS

ODOT's Construction and Material Specifications (C&MS) and its supplements are hereby incorporated by reference, in their entirety, as if rewritten herein. **The incorporation of this document by reference does not interfere with the order of precedence set forth in Section 105.04 of the C&MS Manual.**

When bidding this project, the contractor should replace the terms "the department", "the engineer", "the DCE" and "the DCA" with the term "the Local Public Agency (LPA)." Furthermore, nothing in this document is intended to alter the LPA's adherence to Ohio Revised Code, local ordinance or other applicable requirements which are properly established.

2. PN 100 FOR LPA PROJECTS

PN 100 outlines general provisions to a construction contract. Local public agencies (LPAs) may choose to incorporate this document to include LPA specific preferences.

PN 100 is included in the contract ☐

If PN 100 is included, the document must be edited and added to the contract.

PN 100 is not included in the contract ☒

3. PN 133 – 10/20/2023 – Products Made in the United States

The requirements of this note replace the domestic material requirements in 106.09 of the Construction & Material Specifications.

This note is automatically inserted into all projects that have federal funding in the construction phase or any prior phase. If there was federal participation in environmental studies, right of way acquisition, preliminary engineering or other phase defined in the environmental document, this note should be included in the proposal.

Furnish products that are made in the United States according to the applicable provisions of the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, which includes the Build America, Buy America Act Pub. L. 117-58, §§ 70901-52.

A. Federal Requirements. All steel or iron products incorporated permanently into the Work must be made of steel or iron produced in the United States and all subsequent manufacturing must be performed in the United States. Manufacturing is any process that modifies the chemical content; physical shape or size; or final finish of a product. Manufacturing begins with the initial melting and mixing and continues through the bending and coating stages. If a domestic product is taken out of the United States for any process, it becomes a foreign source material.

All construction materials must be manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

"Construction materials" includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of:

- Non-ferrous metals;
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Fiber optic cable (including drop cable);
- Optical fiber;
- Lumber;
- Engineered wood; and
- Drywall.

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

All manufactured products used in the project are not required to be produced in the United States.

B. Exceptions. The Director may grant specific written permission to use non-domestic steel or iron products in any type of construction in accordance with 23 CFR 635.410(b)(4). The Director may grant such exceptions under the following condition:

- The cost of products to be used does not exceed 0.1 percent of the total Contract cost, or $2,500, whichever is greater. The cost is the value of the product as delivered to the project.

The Director may grant specific written permission to use non-domestic construction materials and manufactured products in any type of construction in accordance with 2 CFR Part 184. The Director may grant such exceptions under the following conditions:

- The total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project; or
    - applicable costs are defined as the cost of materials (including the cost of any manufactured products) used in the project that are subject to a domestic preference requirement
    - the actual cost of the materials, not the anticipated cost of those materials.
- The total amount of the Federal funding applied to the project, through awards or subawards, is below $500,000;

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

C. Proof of Domestic Origin. Furnish certification to the Engineer showing the domestic origin of all products covered by this section before they are incorporated into the Work. The Daily Source Report form itself is not acceptable certification of domestic origin. Non-domestic product(s) incorporated into the Work does not relieve the Contractor of any responsibility to correct the Work up to and including removal and replacement of the non-domestic product(s). Products without a traceable domestic origin will be treated as a non-domestic product.

4. CERTIFICATION AGAINST DEBARMENT AND SUSPENSION

The bidder hereby certifies by signing this proposal that, except as noted below, under penalty of perjury and under other such penalties as the laws of this state and the United States of America provide, that the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of federal funds is **not** currently under suspension, debarment, voluntary exclusion or determination of ineligibility by any federal agency; that the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of federal funds has **not** been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three (3) years; that the company or any person associated therewith in the capacity of owner, partner, director, manager, auditor, or any position involving the administration of federal funds does **not** have a proposed debarment pending; that the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator has **not** been indicted, convicted, or had a civil judgment rendered against the company or themselves by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years.

If there are exceptions to any of the above clauses, please include a statement with the bid package detailing these exceptions.

Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. For any exception noted, indicate below to whom it applies, initiating agency and dates of action. Providing false information may result in criminal prosecution or administrative sanctions. Execution of this proposal on the signature portion thereof shall also constitute signature of this certification as permitted by Title 28 United States Code, Section 1746.

5. PREQUALIFICATION

Only prequalified contractors are eligible to submit bids for this project. Prequalification status must be in force **at the time of bid, at the time of award, and through the life of the construction contract.** For work types that ODOT does not prequalify, the LPA must still select a qualified contractor. Subcontractors are not subject to the prequalification requirement. The "prime" contractor must perform no less than 30 percent of the total original contract price.

6. PN 033 - 4/18/2008- AS PER PLAN DESIGNATION

(Not required by FHWA, but strongly suggested if As Per Plan is used by the LPA)

The "As Per Plan" designation is sometimes added to item descriptions in the proposal to assist contractors with easily identifying standard items that have been altered by plan notes.

The "As Per Plan" designation has proven to be a very useful tool for the contractors. However, its use was never intended to relieve the contractors of their responsibility to read, bid, and construct all items in accordance with all governing plan notes. Therefore, the absence of an "As Per Plan" designation on some item descriptions in the proposal for which there are clear and controlling plan notes does not relieve the contractors of the responsibility to read, bid, and construct those particular items in accordance with the governing plan notes.

Be advised that the item descriptions in the bidding proposal must be read or interpreted with the governing plan notes and the Construction and Material Specification Manual. A claim based upon an "order of precedence" basis will be denied. In the event that a conflict, either real or perceived, exists between the item description and the governing plan note, the contractors are to request clarification through the pre-bid process.

7. FEDERALLY REQUIRED EQUAL EMPLOYMENT OPPORTUNITY (EEO) CERTIFICATION FORM

The bidder hereby certifies that he or she **has** ...., **has not** ...., participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he or she **has** ...., **has not** ...., filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements. ***The bidder must circle the appropriate "has" or "has not" above.***

8. PN 017 - 10/15/2004 - FEDERALLY REQUIRED EEO CERTIFICATION CLAUSE

The Federally Required EEO Certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)) and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

9. PN 026 - 10/15/2004 - CERTIFICATION OF NON-SEGREGATED FACILITIES

A. Certification of Non-segregated Facilities, as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities (for a Federal-aid highway construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity clause).

B. Bidders are cautioned as follows: By signing this bid, the bidder has agreed to the provisions of the "Certification of Non-segregated Facilities" in this proposal. This certification provides that the bidder does not maintain or provide for his or her employees' facilities which are segregated on a basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the bidder will not maintain such segregated facilities.

C. Bidders receiving Federal-aid highway construction contract awards exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, will be required to provide for the forwarding of the following notice to prospective subcontractors for construction contracts and material suppliers where the subcontracts or material supply agreements exceed $10,000 and are not exempt from the provisions of the Equal Opportunity clause.

"Notice to Prospective Subcontractors and Material Suppliers of Requirement for Certification of Non-segregated Facilities" -

A. A Certification of Non-segregated Facilities as required by the May 9, 1967, Order of the Secretary of Labor (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, which is included in the proposal, or attached hereto, must be submitted by each subcontractor and material supplier prior to the award of the subcontract or consummation of a material supply agreement if such subcontract or agreement exceeds $10,000 and is not exempt from the provisions of the Equal Opportunity clause.

B. Subcontractors and material suppliers are cautioned as follows: By signing the subcontract or entering into a material supply agreement, the subcontractor or material supplier will be deemed to have signed and agreed to the provisions of the "Certification of Non-segregated Facilities" in the subcontract or material supply agreement. This certification provides that the subcontractor or material supplier does not maintain or provide for his or her employees facilities which are segregated on the basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The certification also provides that the subcontractor or material supplier will not maintain such segregated facilities.

C. Subcontractors or material suppliers receiving subcontract awards or material supply agreements exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause will be required to provide for the forwarding of this notice to prospective subcontractors for construction contracts and material suppliers where the subcontracts or material supply agreements exceed $10,000 and are not exempt from the provisions of the Equal Opportunity clause.

10. PN 003 - 10/15/2004 - TITLE VI RELATED STATUTES NON-DISCRIMINATION STATEMENT

The LPA, under Title VI of the Civil Rights Act and related statutes, ensures that no person within the LPA shall on the grounds of race, color, national origin, sex, disability, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

11. CERTIFICATION OF COMPLIANCE

In accordance with Ohio Revised Code §9.47, before any Contract is awarded, the LPA will require the Bidder to furnish a valid Certificate of Compliance issued by the State EEO Coordinator dated prior to the date fixed for the opening of bids.

12. PN 059 - 10/15/2004 - WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:
* An existing published wage determination
* A survey underlying a wage determination
* A Wage and Hour Division letter setting forth a position on a wage determination matter
* A conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response for this initial contact is not satisfactory, the process described in 2.) and 3.) should be followed.

Regarding any other matter not yet ready for the formal process described within this section, initial contact should be made with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determination
Wage and Hour Division
U. S. Department of Labor

200 Constitution Avenue, N.W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (see 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U. S Department of Labor
200 Constitution Avenue, N.W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requester considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

13. PN 061 –10/22/2012- WAGE SCALE ON ALL FEDERAL-AID PROJECTS

The wage rates for this project were determined by the Secretary of Labor in accordance with Federal-Aid requirements. The LPA must formally incorporate them into the contract documents.

Contractors shall use only the classifications and wage rates set forth in the United States Department of Labor (USDOL) wage decision found at the website noted below on payrolls submitted to the ODOT District Office. Additionally, please note that the wage modification in effect at the time of the project sale date shall be used by all contractors.

This USDOL wage decision may be viewed by accessing the United States Department of Labor (USDOL) website at:

https://sam.gov/content/wage-determinations

This contract requires the payment of the total of the basic hourly rates plus the fringe benefits payments for each classification in accordance with the following regulations which by reference are made part of this contract:

1) The U.S. Department of Labor Regulations, Title 29, Subtitle A, Part 5, Sections 5.5, 5.31, and 5.32, most recent revision at contract execution.

2) The portions of Form FHWA-1273 (most recent revision at contract execution) relating to Payment of Predetermined Minimum Wage and Statements and Payrolls. (Form FHWA-1273 shall be physically incorporated in all contracts, subcontracts, and lower-tier subcontracts.)

The failure to pay prevailing wages to all laborers and mechanics employed on this project shall be considered a breach of contract. Such a failure may result in the termination of the contract and debarment.

The contractor and all subcontractors shall pay all wages and fringe benefits by company funds

transfer or legal tender. All payroll records and company funds transfer transactions or legal tender transactions shall be maintained for at least three (3) years after final acceptance as defined in Section 109.12 of the ODOT C&MS. The contractor's and all subcontractor's payroll records and canceled pay checks shall be made available for inspection by the Department and the U.S. Department of Labor, upon request, anytime during the life of the contract, and for three (3) years thereafter by the U.S. Department of Labor. Additionally, the contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

The wage and fringe rates determined for this project shall be posted by the contractor in a prominent and accessible place on the project, field office, or equipment yard where they can be easily read by the workers.

The contractor and all subcontractors shall submit to the District Construction Office certified payrolls each week beginning three (3) weeks after the start of work. These payrolls shall be on a Form WH-347 or equivalent and shall show the following:

1) Employee name, address, classification, and hours worked.
2) The basic hourly and overtime rate paid, total pay, and the manner in which fringe benefit payments have been irrevocably made.
3) The project number and pay week dates.
4) Original signature of a company officer on the certification statement.

Additionally, a copy of the "Apprentice Certification" obtained from the Ohio State Apprenticeship Council must accompany all certified payrolls submitted for all apprentices working on this project.

Please be aware it is ultimately the responsibility of the contractor to ensure all laws relating to prevailing wages in the USDOL Regulations, Title 29, parts 1 and 5, are strictly adhered to by all subcontractors on the project.

If the contractor or any subcontractor fails to comply with any of the provisions contained in this proposal note, the Department may terminate the contract, debar the contractor or subcontractor, and/or withhold or suspend pay estimates after written notice and a reasonable opportunity to comply has been provided.

The applicable wage and fringe rates for this project are to be incorporated in their entirety as an attachment to the executed contract.

14. LIMITATION ON USE OF CONTRACT FUNDS FOR LOBBYING

A. The prospective bidder certifies, by signing and submitting this bid proposal, to the best of his or her knowledge and belief that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any 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.

B. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. 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 civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

C. The prospective bidder also agrees by submitting his or her bid proposal that he or she shall require the language of this certification be included in all lower tier subcontracts which exceed $100,000 and that all such subcontractors shall certify and disclose accordingly.

15. PN 045 - 10/15/2004 - NON -COLLUSION AFFIDAVIT

In accordance with Title 23 USC, Section 112 and ORC, Chapter 1331 et. seq: and Sections 2921.11 and 2921.13, the bidder hereby states, under penalty of perjury and under other such penalties as the law provides, that he/she or his/her agents or employees have not entered, either directly or indirectly, into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal. Execution of this proposal on the signature portion thereof shall also constitute signature of this Non-Collusion Affidavit as permitted by title 28 USC, Section 1746.

REPORTING BID RIGGING

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The "hotline" is part of the USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

16. PN 014 - 10/15/2004 - DRUG-FREE WORKPLACE

The prime contractor agrees to comply with all applicable state and federal laws regarding drug-free workplace. The prime contractor shall make a good faith effort to ensure that all its employees while working on this project will not purchase, transfer, use, or possess illegal drugs or alcohol or abuse prescription drugs in any way.

The prime contractor shall also require this contractual obligation be placed in all subcontractor and materialman contracts it enters into and further requires all subcontractors and materialmen place the same contractual obligations in each of their lower-tier contracts.

17. PN 034 - 05/25/2011 – DRUG FREE SAFETY PROGRAM

During the life of this project, the contractor and all its subcontractors who provide labor on the project site must be enrolled in and remain in good standing in the Ohio Bureau of Worker’s Compensation (OBWC) Drug-Free Safety Program (DFSP) or a comparable program approved by the OBWC.

In addition to being enrolled in and in good standing in an OBWC-approved DFSP or a comparable Drug Free Workplace Program (DFWP) approved by the OBWC, the LPA requires each contractor and subcontractor that provides labor to subject its employees who perform labor on the project site to random drug testing of five (5) percent of its employees. The random drug testing percentage must also include the on-site supervisors of the contractors and subcontractors. Upon request, the contractor and subcontractor shall provide evidence of required testing to the LPA.

Each subcontractor shall require all lower-tier subcontractors who provide labor on the project site with whom the subcontractor is in contract for the work to be enrolled in and be in good standing in the OBWC DFSP or an OBWC-approved DFWP prior to a lower-tier subcontractor providing labor at the site.

The LPA will declare a bid non-responsive and ineligible for award if the contractor is not enrolled in and in good standing in the OBWC's DFSP Discount Program or a similar program approved by the OBWC within eight (8) days of the bid opening. Furthermore, the LPA will deny all requests to sublet when the subcontractor does not comply with the provisions of this proposal note.

Failure of the contractor to require a subcontractor to be enrolled in and be in good standing in the OBWC DFSP or an OBWC-approved DFWP prior to the time the subcontractor provides labor at the site shall result in the contractor being found in breach of the contract and that breach shall be used in the responsibility analysis of that contractor or the subcontractor who was not enrolled in a program for future contracts with the State for five (5) years after the date of the breach.

18. OHIO WORKERS' COMPENSATION COVERAGE

The contractor must secure and maintain valid Ohio workers' compensation coverage until the project has been finally accepted by ODOT. A certificate of coverage evidencing valid workers' compensation coverage must be submitted to the LPA before the contract will be executed by the LPA.

The contractor must immediately notify the LPA in writing if it or any subcontractor fails or refuses to renew their workers' compensation coverage. Furthermore, the contractor must notify the LPA in writing if its or any of its subcontractor's workers' compensation policies are canceled, terminated, or lapse.

The failure to maintain valid workers' compensation coverage shall be considered a breach of contract which may result in the contractor or subcontractor being removed from the project, withholding of pay estimates, and/or termination of the contract.

19. PN 038 - 10/15/2004 - UNRESOLVED FINDING FOR RECOVERY

The contractor affirmatively represents to the LPA that it is not subject to a finding for recovery under ORC §9.24, or that it has taken the appropriate remedial steps required under §9.24 or otherwise qualifies under that section. The contractor agrees that if this representation is deemed to be false, the contract shall be void ab initio as between the parties to this contract, and any funds paid by the state hereunder shall be immediately repaid to the LPA, or an action for recovery may be immediately commenced by the LPA and/or for recovery of said funds.

20. PN 039 - 10/15/2004 - ASSIGNMENT OF ANTITRUST CLAIMS IN STATE CONTRACT LANGUAGE

The contractor should recognize that in actual economic practice, overcharges resulting from antitrust violations are usually borne by ODOT and/or the LPA. As consideration for the Award of the Contract and intent to be legally bound, the contractor acting herein by and through the person signing this contract on behalf of the contractor as a duly authorized agent, hereby assigns, sells,

conveys, and transfers to ODOT and/or the LPA any and all right, title, and interest to any and all claims and causes of action the contractor now has or hereafter requires under state or federal antitrust laws provided the claims or causes of action related to the goods or services are the subject to the contract. In addition, the contractor warrants and represents that it will require all of its subcontractors and first-tier suppliers to assign all federal and state antitrust claims and causes of action to ODOT and/or the LPA. The provisions of this article shall become effective at the time the LPA executes this contract without further acknowledgment by any of the parties.

All contracting entities shall assign their rights and responsibilities to ODOT and/or the LPA for all antitrust claims and causes of action regarding subcontractors.

21. PN 024 – 04/21/2006 – US ARMY CORPS OF ENGINEERS AND OHIO ENVIRONMENTAL PROTECTION AGENCY PERMITS

The above referenced permits are incorporated and made a part of this contract as special provisions incorporated herein. Therefore, in the event the contractor or its agents refuse or fail to adhere to the requirements of the US Army Corps of Engineers 404 Permit and/or the Ohio Environmental Protection Agency's 401 Water Quality Certification and an assessment or fine is made or levied against ODOT and/or the LPA, the contractor shall reimburse the Department within thirty (30) calendar days of the notice of assessment or fine, or the Department may withhold the amount of the fine from the contractor's next pay estimate. All money collected or withheld from the contractor shall be delivered to the permitting agencies issuing the assessment or fine.

These fines are not to be construed as a penalty but are liquidated damages to recover costs assessed against the Department due to the contractor's refusal or failure to comply with the permits.

22. PN 007 – 1/31/2021- DBE TRUCKING

Title 49 CFR Section 26.55(d)(4)(5)(6) governs trucking operations.

The Disadvantaged Business Enterprise (DBE) trucking firm must be able to quote and negotiate its own prices. The DBE trucking firm must also provide a quote for each project on which the firm is to be utilized toward the project DBE goal.

The DBE will be responsible for the management and supervision of their trucking operation on each contract. A DBE is not performing a Commercially Useful Function (CUF) if the contract exists for the purpose of creating the appearance of DBE participation.

The DBE must own and operate at least one fully licensed, insured, and operational truck used on the contract.

The DBE receives credit for the total value of the transportation services the DBE provides on the contract using trucks the DBE owns, insures, and operates using drivers it employs (not 1099/independent contractors).

The DBE may lease trucks on a long-term basis (a year or more) and receive full DBE credit as long as employees of the DBE operate the truck.

A lease must indicate the DBE has exclusive use of and control over the truck, including responsibility of maintenance and insurance. This does not preclude the leased truck from working for others during the term of the lease with the DBE's consent as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the DBE's name and identification number as well.

The DBE must carry a copy of the lease agreement in the leased truck when working onsite.

Truck Monitoring:

Credit for expenditures with DBEs for materials or supplies toward the DBE goal is described as follows:

1. A DBE firm may be a regular dealer in bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business if the firm both owns and operates distribution equipment for the products. Any supplementation of a regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

2. When the materials or supplies are obtained from a DBE Materials and Supplies Vendor (MSV) manufacturer the prime contractor may receive credit for 100 percent of the cost of the materials or supplies toward the DBE goal. For purposes of this section, a manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

3. When the materials or supplies are purchased from a DBE MSV regular dealer or supplier, the prime contractor may receive credit for up to 60 percent of the cost of the materials or supplies toward the DBE goal. For purposes of this section, a regular dealer or supplier is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

Historically, 60% of the cost of materials and supplies purchased from a DBE MSV (100% from a DBE MSV manufacturer) would normally be counted toward DBE goals. Effective September 1, 2018:

- Prime contractors must obtain information about the method of procurement for each item to be procured from a DBE MSV. The DBE Affirmation Form has been modified to accommodate this information.

- To be eligible to receive 100% credit toward DBE goals for a materials and supplies subcontract:
    - The DBE MSV must be certified with the correct (manufacturer) NAICS code for the item
    - The DBE MSV must be certified with the correct descriptor for the item
    - The role the DBE MSV will play on the specific procurement in question must be consistent with the manufacture of the item, as indicated by the information provided by the DBE MSV

- To be eligible to receive 60% credit toward DBE goals for a materials and supplies subcontract:
    - The DBE MSV must be certified with the correct (wholesale or retail) NAICS code for the item
    - The DBE MSV must be certified with the correct descriptor for the item
    - The role the DBE MSV will play on the specific procurement in question must be consistent with the regular sale or lease of the item, as indicated by the information provided by the DBE MSV
    - The item must not be drop-shipped

- The above scenario applies to both bulk items (petroleum products, steel, cement, gravel, stone, asphalt, and others that ODOT may consider to be bulk items) and non-bulk items. For bulk items, there is an additional scenario whereby a contract with a DBE MSV could receive

60% credit. To be eligible to receive 60% credit toward DBE goals for a bulk item materials and supplies subcontract:

- The DBE MSV must be certified with the correct (wholesale or retail and trucking) NAICS codes for the item
- The DBE MSV must be certified with the correct descriptor for the item
- The role the DBE MSV will play on the specific procurement in question must be consistent with the regular sale or lease of the item, as indicated by the information provided by the DBE MSV
- The DBE MSV must deliver the bulk item from a non-DBE vendor to the prime contractor using distribution equipment that it both owns [or for which it has a long-term (1 year or more) lease] and operates with its regular (not ad hoc) employees

o If not eligible for 100% or 60% credit, an item may still be eligible for credit toward DBE goals, but only for the fee or commission the DBE MSV receives for its services, and only if the following additional criteria are met:

- The DBE MSV must be certified with NAICS code 425120 Wholesale Trade Agents and Brokers
- The DBE MSV must convincingly explain how the prime contractor benefits by transacting business with it rather than directly with the non-DBE vendor from which the DBE MSV is re-selling

➢ The usual good faith efforts process applies.
➢ All credit toward DBE goals is conditional. Actual credit will be determined based upon invoices, receipts, and/or transportation documents/bills of lading, which must be submitted to ODOT as they are received throughout the course of the project.

DBE TRUCKING DISCLOSURE AFFIDAVIT

In order to ensure the prime contractors are monitoring DBE trucking/hauling operations on projects with federal funding, prime contractors must complete the DBE Trucking Disclosure Affidavits Section ("Affidavit") when completing and submitting the Prompt Payment Spreadsheet for reimbursement. The Affidavit will be completed by the prime contractor on the Prompt Payment Spreadsheet and, once submitted, will be routed to the project's SharePoint site. This information will be used to affirm DBE and non-DBE trucking utilized by each DBE firm performing those duties during the previous month. The LPA and ODOT will monitor trucking with the following requirements for all Local-let projects:

o Prime contractors will be required to provide a master list of all anticipated DBE trucking firms to the District Construction Monitor (DCM) at the time of the Pre-Construction Meeting.

- If no DBE trucking is anticipated on a project, the prime contractor will check the box "No Anticipated DBE Trucking Affidavit" on the first submittal of the Prompt Payment Spreadsheet. If DBE trucking/hauling does occur, the prime contractor must notify the LPA within seven (7) days of the DBE trucking activity. The prime contractor will then complete the Affidavits as required below on each Prompt Payment Spreadsheet.

o Prime contractors will be required to complete the Affidavit disclosing the DBE trucking operations during the previous month when completing the new Prompt Payment Spreadsheet. The prime contractor will complete the Trucking Affidavit section on the Prompt Payment Spreadsheet on each reimbursement submittal. The prime contractor will select one of the following options on the Trucking Affidavit section of the form.

- The DBE firm performed trucking by utilizing their own equipment and workforce and/or work was subcontracted to another DBE (i.e., only trucking that can be counted for DBE participation was utilized).
    - No other information is required. The prime contractor will sign and submit the Affidavit.
- The DBE firm utilized DBE & Non-DBE trucking.
    - If selected, the prime contractor will provide a list of non-DBE trucking that was utilized (i.e., not all trucking will earn DBE credit).
- No trucking was performed.
    - No other information is required. The prime contractor will sign and submit the Affidavit.

o The DCM will perform a check of the Affidavit when reviewing the Prompt Payment Spreadsheet when submitted for reimbursement. The LPA and/or Compliance Managers will follow up on any red flags. For example, if the LPA compares information collected during the CUF process with the affidavit and sees any discrepancies. (Prompt Payment, DBE Tracking and CUF | Ohio Department of Transportation)

o Trucking will continue to be monitored at project sites by construction field staff and the LPAs.

SANCTIONS AND ADMINISTRATIVE REMEDIES

Failure by the prime contractor to follow the DBE Trucking Disclosure Affidavit requirements may result in the issuance of sanctions as follows:

o 1st Level Occurrence: The Department will issue a Letter of Reprimand to the contractor (applies if there is a failure to submit the Affidavits and/or the Affidavits are not submitted timely; if the prime contractor completes the No Anticipated DBE Trucking Affidavit, utilizes DBE trucking, and does not notify the LPA within seven (7) days of the activity).

o 2nd Level Occurrence: The Department may withhold an estimate in the amount due to the DBE trucking firm the Affidavit was not submitted for (applies if there is a failure to submit the Affidavits and/or the Affidavits are not submitted timely; if the prime contractor completes the No Anticipated DBE Trucking Affidavit, utilizes DBE trucking and does not notify the LPA within seven (7) days of the activity).

o 3rd Level Occurrence: If a pattern of not submitting the Affidavit(s) persists or the contractor has falsified, misrepresented, or withheld information; ODOT can pursue other remedies available by law including suspension, revocation, and/or debarment.

Factors to be considered in issuing sanctions may include, but are not limited to the following:

o The contractor's past project practices,
o The magnitude and the type of offense,
o The degree of the contractor's culpability,
o Any steps taken to rectify,
o The contractor's record of performance on other projects, and
o The number of times the contractor has been previously sanctioned by ODOT.

DBE MSV DIRECTORY - http://www.dot.state.oh.us/Divisions/ODI/SDBE/Pages/DBE-Directory.aspx (select MSV only)

DBE AFFIRMATION FORM - The new DBE Affirmation Form is now available at DBE Affirmation Form - Projects Sold on or after 9/1/18 | Ohio Department of Transportation.

Opening Prompt Payment (PP) Spreadsheet (Trucking Affidavit Section on PP Spreadsheet) through GoFormz:

1. Obtain a MyODOT account
   a. Click Link
   b. Click "Request an Account."
   c. Review instructions under "Request an Account."
   d. Go to http://myodot.dot.state.oh.us/ to complete account application.
2. Getting GoFormz Access
   a. Email GoFormz.Help@dot.ohio.gov put Create GoFormz Account in the subject line
   b. Login for GoFormz will be emailed back
   c. Click www.goformz.com

Additional guidance can be found at GoFormzEndUserGuide.docx

23. PN 013 – 10/20/23 DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION PLAN AND GOOD FAITH EFFORTS – LPA Projects

DEFINITION OF *DAYS*

Unless otherwise noted, *days* means calendar days, but in computing any period of time described in this proposal note, 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. See https://www.opm.gov/policy-data-oversight/pay-leave/federal-holidays for a list of Federal holidays. State holidays are those designated in division (A) of section 124.19 of the Revised Code (https://codes.ohio.gov/ohio-revised-code/section-124.19), with modifications as designated in the first two sentences of division (B)(4) of section 124.18 of the Revised Code (https://codes.ohio.gov/ohio-revised-code/section-124.18). (State holidays are generally the same as Federal holidays.)

DBE UTILIZATION PLAN

The bidder's DBE Utilization Plan **must be submitted by the bidder prior to bid opening at https://odot.formstack.com/forms/dbe_copy**. By submitting a DBE Utilization Plan, the Bidder affirms it will be using the DBE firms identified in the Utilization Plan to meet the DBE contract goal. The Bidder further affirms it will not deviate from the Utilization Plan without ODOT's prior written consent.

Unless the bidder is a certified DBE firm, **a bid opened without a DBE Utilization Plan submitted prior to bid opening will be deemed unresponsive**.

The DBE Utilization Plan shall include the following information:

1. The names of the certified DBE firms(s) that will be used to meet the DBE goal
2. A description of the work each DBE will perform. To count toward meeting a goal, each DBE firm must be certified in a NAICS code applicable to the kind of work the firm would perform on the contract
3. Whether the DBE firms(s) being used to meet the goal will be utilized as a subcontractor, regular dealer, manufacturer, consultant, or other capacity
4. The dollar amount of the participation of each DBE firm used to meet the DBE goal.

PROJECTS AWARDED ON ALTERNATES

In the event the project is awarded on alternates, which increases or decreases the total dollar amount of the bid, a revision to the DBE Utilization Plan and DBE Affirmation Form(s) shall be

submitted and approved by the Office of Business & Economic Opportunity within five (5) days after the notification of the alternates.

DBE AFFIRMATION

The Apparent Low Bidder (ALB) shall ensure the DBE firms being utilized to meet the DBE goal affirm their participation in the bid within five (5) days after the bid opening to ODOT. The contract dollar amount(s) and/or DBE firm(s) included in the ALB's DBE Utilization Plan must match the contract dollar amount(s) and/or DBE firm(s) included on the DBE Affirmation Form(s). If the contract dollar amount(s) and/or DBE firm(s) do not match, the ALB shall utilize the Request for Consent to Terminate/Reduce a DBE Commitment form located at DBE Commitment Reduction or Termination Form | Ohio Department of Transportation and submit for review and approval by the Office of Business & Economic Opportunity within five (5) days of the bid opening.

The ALB shall utilize the DBE Affirmation Form located at DBE Affirmation Form - Projects Sold on or after 9/1/18 | Ohio Department of Transportation. The DBE Affirmation Form will be utilized as written confirmation from each listed DBE firm that it is participating in the contract in the type and amount of work provided in the bidder's DBE Utilization Plan. The ALB shall submit a separate DBE Affirmation Form for each DBE it is utilizing for the DBE goal as well as their Good Faith Efforts package if they were not able to attain the DBE Goal via DBE participation.

All other bidders shall submit a DBE Affirmation Form(s) if notified the information is required in order for ODOT to complete its assessment. Bidders shall have five (5) days from the date of notification to submit all required DBE Affirmation Forms to ODOT. Notification will be by email.

In the event a DBE firm fails to confirm the information contained in the DBE Affirmation Form within five (5) days of bid opening, the ALB shall submit a Request for Consent to Terminate/Reduce a DBE Commitment form, as set forth herein. The Request for Consent to Terminate/Reduce a DBE Commitment form shall be submitted within five (5) days after bid opening in order for the ALB to still be considered for contract award. The ALB shall include as its reason for termination the DBE firm's failure to provide a timely affirmation and should include all efforts the ALB made to obtain the affirmation from the DBE firm and shall attach proof of these efforts, if available. If the ALB intends to replace the DBE Firm, it shall include the replacement firm's information on the form. In the event the ALB is unable to affirm a DBE firm included in its original DBE Utilization Plan at bid submission and it results in a goal shortfall, Good Faith Efforts (GFE's) must be submitted by the fifth day after bid opening. All GFE documentation submitted for consideration should demonstrate the efforts the bidder made prior to the time of bid submission to secure sufficient DBE participation on the project to meet the DBE goal although the bidder was unable to do so. A DBE firm's failure to timely confirm information contained in the DBE Affirmation Form will be considered as good cause to terminate the DBE firm and will also be considered a part of the ALB's Good Faith Efforts in meeting the goal.

DBE BIDDERS

In the event the Bidder is a certified DBE firm, the Bidder is not required to complete a DBE Utilization Plan as set forth above and would not need to submit a DBE Affirmation Form for the work it is planning to self-perform in order to meet the goal.

JOINT VENTURES

If the bidder is a Joint Venture, the Joint Venture will only be considered a Certified DBE firm if the Joint Venture itself has been certified. The Joint Venture may, however, utilize a Certified DBE firm that is also a partner in the Joint Venture as part of its DBE Utilization Plan. The Certified DBE Firm/Joint Venture Partner, however, does not need to submit a DBE Affirmation Form for any work the Certified DBE Firm/Joint Venture Partner is going to perform to meet the goal. ODOT will consider submission of the Joint Venture's bid as the Certified DBE Firm/Joint Venture Partner's confirmation that it is participating in the contract.

GOOD FAITH EFFORTS (GFE's)

If the DBE contract goal established by ODOT is not met, the ALB shall demonstrate it made adequate good faith efforts to meet the goal, even though it did not succeed in obtaining enough DBE participation to do so.

If the ALB does not meet the goal at bid time, the ALB shall submit its Good Faith Efforts (GFE's) documentation within five (5) days of the bid opening. Submission of DBE affirmation(s) with additional participation sufficient to meet the DBE contract goal does not cure the ALB's failure to meet the goal at bid time or eliminate the ALB's responsibility of submitting GFE's within five (5) days of the bid opening.

The ALB shall demonstrate its GFE's by submitting the following information within five (5) days after the bid opening:

1. All written quotes received from certified DBE firms
2. All written (including email) communications between the ALB and DBE firms
3. All written solicitations to DBE firms, even if unsuccessful
4. Copies of each non-DBE quote when a non-DBE was selected over a DBE for work on the contract
5. Phone logs of communications with DBE firms

The ALB shall utilize the Pre-Bid GFE Template to document their GFE's. This template and supporting documentation shall be sent along with any DBE Affirmation Forms within five (5) days of bid opening. ODOT has provided Good Faith Efforts Guidance located at Good Faith Efforts (GFE) for Contractors | Ohio Department of Transportation

All other bidders shall submit documentation of GFE's if notified the information is required in order for ODOT to complete its bid assessment. Bidders shall have five (5) days from the date of notification to submit all required GFE documentation. Notification will be by email.

ODOT shall utilize the guidance set forth in 49 CFR §26.53 Appendix A in determining whether the bidder has made adequate good faith efforts to meet the goal.

ADMINISTRATIVE RECONSIDERATION

ODOT will review the GFE documentation and issue a written determination on whether adequate GFE's have been demonstrated prior to contract award. If ODOT determines the ALB has failed to demonstrate adequate GFE's to meet the goal, the ALB will have an opportunity for administrative reconsideration prior to the contract being awarded.

As part of this reconsideration, the ALB may provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. Such written documentation or argument must be provided to ODOT, attention to the Office of Chief Legal Counsel, 1980 West Broad Street, MS 1500, Columbus, Ohio 43223 (with copy to the Office of Contract Sales, MS 4110), within two (2) business days of ODOT's written determination that GFE's were not adequately demonstrated. The ALB may also include in their written documentation a request for an in-person meeting to discuss the issue of whether it met the goal or made adequate good faith efforts to do so. ODOT's Office of Chief Legal Counsel will respond to the ALB within five (5) business days of receiving written documentation or holding the in-person meeting.

ODOT will send the ALB a written decision on reconsideration explaining the basis for finding that the ALB did or did not meet the goal or make adequate good faith efforts to do so. The result of the reconsideration process is not administratively appealable to the United States Department of Transportation.

TERMINATION OR REPLACEMENT OF A DBE

By submitting a DBE Utilization Plan, the bidder is committing to use the DBE firms identified in the plan. The ALB/Awarded Contractor shall utilize the specific DBEs listed in the DBE Utilization Plan to perform the work and supply the materials for which each is listed unless the ALB/Awarded Contractor obtains written consent as provided in this paragraph. In order to request termination or substitution of a DBE firm, the ALB/Awarded Contractor shall utilize the Request for Consent to Terminate/Reduce a DBE Commitment form located at DBE Commitment Reduction or Termination Form | Ohio Department of Transportation.

This termination/replacement procedure applies only to DBE firms or the amount of work being utilized to meet the goal.

Without ODOT's written consent to terminate/replace a DBE firm being utilized to meet the goal, the Awarded Contractor shall not be entitled to any payment for DBE listed work or material unless it is performed or supplied by the listed DBE.

GOOD CAUSE

ODOT may provide written consent to terminate a DBE only if it agrees, for reasons stated in a concurrence document, the ALB/Awarded Contractor has good cause to terminate the DBE firm.

For purposes of this section, good cause to terminate a DBE includes the following circumstances:

1) The listed DBE firm fails or refuses to provide the required DBE Affirmation Form or to execute a written contract
2) The listed DBE firm fails or refuses to perform the work of its subcontract in a manner consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE firm to perform its work on the subcontract results from the bad faith or discriminatory action of the awarded contractor
3) The listed DBE firm fails or refuses to meet the awarded contractor's reasonable, nondiscriminatory bond requirements.
4) The listed DBE firm becomes bankrupt, insolvent, or exhibits credit unworthiness
5) The listed DBE firm is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law
6) ODOT has determined the listed DBE firm is not a responsible contractor
7) The listed DBE firm voluntarily withdraws from the project and provides to the contractor written notice of its withdrawal
8) The listed DBE is ineligible to receive DBE credit for the type of work required
9) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract; and
10) Other documented good cause that ODOT determines compels the termination of the DBE firm. Provided that good cause does not exist if the awarded contractor seeks to terminate a DBE it relied upon to obtain the contract so the awarded contractor can self-perform the work for which the DBE contractor was engaged or so the awarded contractor can substitute another DBE or non-DBE contractor after contract award.

REPLACEMENT

When a DBE firm is terminated or fails to complete its work on the contract for any reason, the Awarded Contractor must make GFEs to find another DBE firm to replace the original DBE. These GFEs shall be directed at finding another DBE to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the contract goal. The GFEs shall be documented by the Awarded Contractor. If ODOT requests documentation under this provision, the Awarded Contractor shall submit the documentation within seven (7) days, which may be extended for an additional seven (7) days if necessary, at the request of the contractor, and

ODOT shall provide a written determination to the contractor stating whether GFEs have been demonstrated.

In addition to post-award terminations, the provisions of this section apply to pre-award deletions and substitutions of DBE firms put forward by bidders in the DBE Utilization Plan.

ADDITION

In the event additional DBE participation is required for the project, the Awarded Contractor shall utilize the DBE Affirmation Form located at DBE Affirmation Form - Projects Sold on or after 9/1/18 | Ohio Department of Transportation. The DBE Affirmation Form will be utilized as written confirmation from each DBE firm that it is participating in the contract in the kind and amount of work on the project.

WRITTEN NOTICE TO DBE

Before transmitting to ODOT its request to terminate and/or substitute a DBE firm, the ALB/Awarded Contractor must give notice in writing to the DBE firm with a copy to ODOT of its intent to request to terminate and/or substitute and the reason(s) for the request.

The ALB/Awarded Contractor must give the DBE five (5) days to respond to the notice, advising ODOT and the ALB/Awarded Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why ODOT should not approve the ALB/Awarded Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), ODOT may provide a response period shorter than five (5) days.

GOAL ATTAINMENT POST AWARD

The Awarded Contractor shall make available upon request a copy of all DBE subcontracts. The Awarded Contractor shall ensure that all subcontracts or agreements with DBEs require that the subcontract and all lower-tier subcontracts be performed in accordance with this Proposal Note.

Approval of a DBE Utilization Plan does not ensure approval of C-92 Requests to Sublet, nor does approval of a DBE Utilization Plan indicate the DBE goal has been met. ODOT will monitor goal attainment throughout the life of the project. It is the responsibility of the Awarded Contractor to advise ODOT of any changes to the DBE Utilization plan throughout the life of the project. The DBE goal of a project is stated as a percentage of the contract. In the event the contract amount increases or decreases, the actual dollar amount of the DBE goal for the project may increase or decrease accordingly.

SANCTIONS AND ADMINISTRATIVE REMEDIES

PRE-BID
Failure by the ALB to do any of the following shall result in the bid being rejected as non-responsive in accordance with ORC §5525.08:

1. Failure to submit a complete DBE Utilization Plan prior to bid opening
2. Failure to submit DBE Affirmation Form(s) and/or failure to submit Request for Consent to Terminate/Reduce a DBE Commitment form(s) as required by this Proposal Note; or
3. Failure to meet the goal and/or failure to demonstrate GFEs to meet the goal as required by this Proposal Note.

POST-BID
Failure by the Awarded Contractor to carry out the requirements of this Proposal Note, including the submission of adequate good faith efforts to meet the goal for a project, is a material breach of the contract and may result in the issuance of sanctions as follows:

1st Tier: Letter of Reprimand

2nd Tier: Damages equivalent to the DBE shortfall

3rd Tier: If a pattern of paying damages persists or the contractor has falsified, misrepresented, or withheld information, ODOT can pursue other remedies available by law including suspension, revocation, and/or debarment.

Factors to be considered in issuing sanctions may include, but are not limited to, the following:

- the magnitude and the type of offense
- the degree of the contractor's culpability
- any steps taken to rectify
- the contractor's record of performance on other projects including, but not limited to:
    - annual DBE participation
    - annual DBE participation on projects without goals
    - the number of complaints ODOT has received regarding the contractor
    - the number of times the contractor has been previously sanctioned by ODOT

24. PN 031 - 6/27/2023 – PROMPT PAYMENT - LOCAL-LET CONSTRUCTION PROJECTS

The U.S. Department of Transportation's (USDOT's) rules related to Disadvantaged Business Enterprises are published in 49 CFR Part 26. Within 49 CFR Part 26, 49 CFR 26.29 lays out the prompt payment requirements that apply to ODOT (the Department), its subrecipients (LPA's), and, by extension, both prime contractors and subcontractors (including non-DBEs). The 49 CFR 26.29 requirements apply only to federally funded contracts (i.e., contracts with USDOT financial assistance). The prime contractor must comply with this Proposal Note and the Department's prompt payment requirements as published in 107.21 of the C&MS.

Second-tier subcontract means a subcontract awarded directly by the subcontractor for the purpose of acquiring supplies or services (including construction) for performance of a prime contract. It does not include the contractor's supplier agreements with vendors, such as long-term arrangements for materials or supplies that benefit multiple contracts and/or the costs of which are normally applied to a contractor's general and administrative expenses or indirect costs.

The Department will monitor payments made by prime contractors and subcontractors for compliance with this Proposal Note, C&MS 107.21 and, where applicable, 49 CFR 26.29. To facilitate this monitoring, the Department requires both prime **and** subcontractors to report their payments to all subcontractors/second-tier subcontractors with the submission of each invoice. The payment data reported must include any retainage withheld *(when allowable under the Department's Retainage Policy dated 4/14/21*) and any previously withheld retainage released. All such reporting must take place through a web-based submission on GoFormz. Please note: submission through GoFormz is required for all Local-let projects. Invoices will not be approved and processed for payment unless this reporting form has been submitted and received by the Department.

The prime/subcontractor must report the following information:

- The name of the payee
- The dollar amount of the payment to the payee
- The date the payee was paid
- The amount of retainage withheld (if any)

Ohio's 10-day prompt payment requirement is based on the payer's payment issuance date and NOT the payee's payment receipt date.

The prime/subcontractor must sign each reported payment and submit to ODOT via the GoFormz website.

The second-tier subcontractor is responsible for completing the affirmation of payment form in GoFormz.

The prime is responsible for ensuring that all subcontractors and second-tier subcontractors are correctly completing all prompt payment forms via the GoFormz website.

If the prime or subcontractor(s) fail to submit the aforementioned documentation with each invoice, they will be determined to be non-compliant and invoices will not be processed for payment.

Payees must verify each payment reported by the payer within thirty (30) days of the payment being signed by the payer. This verification must include:

- Whether the payment was received, and if so, whether it was or was not as expected
- The dollar amount of the payment received
- The date the payment was received

The prime contractor shall fully complete the last prompt payment form upon receipt of final payment.

SANCTIONS AND ADMINISTRATIVE REMEDIES

Failure by the prime contractor and/or subcontractor(s) to follow Prompt Payment requirements may result in the issuance of sanctions as follows:

1st Tier: Notice of Violation via a Letter of Reprimand

2nd Tier: If corrective actions are not taken within the specified three (3) business days, a pay estimate in the amount due to the subcontractor(s) that was not reported or paid may be withheld.

3rd Tier: If a pattern of paying damages persists or the contractor or subcontractor(s) has falsified, misrepresented, or withheld information, ODOT can pursue other remedies available by law including suspension, revocation, and/or debarment.

Factors to be considered in issuing sanctions may include, but are not limited to the following:

- the magnitude and the type of offense
- the degree of the contractor's or subcontractor's culpability
- any steps taken to rectify
- the contractor's or subcontractor's record of performance on other projects
- the number of times the contractor or subcontractor has been previously sanctioned by ODOT

25. WAIVER OF C&MS 614.03

ODOT's 2023 C&MS section 614.03, third paragraph, does not apply to any project which is not physically located on the National Highway System (NHS), and/or does not impact NHS traffic in any way.

26. ODOT AS OBLIGEE ON BOND

The contractor shall furnish a performance and payment bond in an amount at least equal to 100 percent of the estimate as security for the faithful performance of its contract. In addition to the project owner, ODOT shall be named as an obligee.

27. NON-DISCRIMINATION PROVISIONS

A. Compliance with Regulations: The contractor will comply with the regulations relative to nondiscrimination in Federally-assisted programs of the USDOT Title 49 CFR, Part 21, as they may be amended from time to time, (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this contract.

In addition, the contractor will comply with the provisions of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, FHWA Guidance, and any other Federal, State, and/or local laws, rules and/or regulations (hereinafter referred to as "ADA/504").

B. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, sex, age, or disability, in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate, either directly or indirectly, in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations, as well as the ADA/504 regulations.

C. Solicitations for Contractors or Subcontractors, including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a contract or subcontract including procurements of materials or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, or disability.

D. Information and Reports: The contractor will provide all information and reports required by the Regulations or directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State or FHWA to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of the contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor will so certify to the State or FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.

E. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the LPA will impose such contract sanctions as it or State/FHWA may determine to be appropriate, including, but not limited to:

(1) Withholding of payments to the contractor under the contract until the contractor complies, and/or

(2) Cancellation, termination, or suspension of the contract, in whole or in part.

F. Incorporation of Provisions: The contractor will include the provisions of paragraphs (A) through (E) above in every contract or subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor will take such action with respect to any subcontractor procurement as the LPA or State/FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the LPA/State to enter into such litigation to protect the interests of the LPA

and the State. In addition, the LPA/State may request the United States to enter into such litigation to protect the interests of the United States.

28. PN 015 - 04/17/2020 - CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

The required contract provisions for federal-aid construction contracts are hereby incorporated by reference as if rewritten herein. The current version of Form FHWA-1273 (available at https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf) shall be physically incorporated in all contracts, subcontracts, and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreement for supplies or services related to a construction contract). The prime contractor shall be responsible for ensuring that the FHWA-1273 is physically incorporated into all lower-tier subcontracts.

SANCTIONS AND ADMINISTRATIVE REMEDIES

Failure by the prime contractor to include the provisions of FHWA-1273 in their contract or in their lower-tier subcontracts may result in the issuance of sanctions as follows:

1st Tier: Letter of Reprimand

2nd Tier: Damages equivalent to the daily liquidated damages amount found in C&MS section 108.07 for each incident of non-compliance

3rd Tier: If a pattern of paying damages persists or the contractor has falsified, misrepresented, or withheld information, the LPA can pursue other remedies available by law including suspension, revocation, and/or debarment.

Factors to be considered in issuing sanctions may include, but are not limited to the following:

- the magnitude and the type of offense
- the degree of the contractor's culpability
- any steps taken to rectify
- the contractor's record of performance on other projects; and
- the number of times the contractor has been previously sanctioned by the LPA.

29. PN 032 – 01/31/2021 – C92s REQUIRED ON LOCAL-LET CONSTRUCTION PROJECTS

State and Federal law requires that all contractors and subcontractors participating on state or federally funded projects be evidenced in writing and in conformity with all applicable state and federal laws and regulations.

Effective immediately, all projects advertising after 2/1/2021 will require that a Request to Sublet (C92) form is completed for each subcontractor and DBE materials supplier working on the project prior to the start of work.

A template for this form may be found and submit via the GoFormz website located at www.goformz.com.

30. REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS (Electronic Form FHWA 1273 – October 23, 2023) (SEE NEXT PAGE)

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

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

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

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

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

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

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

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

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

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

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

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. **Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS

ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

1. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

III. SCOPE OF WORK

1. GENERALLY

The Contractor shall furnish, at its own cost and expense, all management, labor, tools, forms, equipment, appliances, machinery, transportation, materials and other things necessary, of whatever nature, to perform the Work, and shall perform and complete, within the time limit specified, all of the Work indicated or implied by the Notice to Bidders, Instructions to Bidders, General & Supplemental Provisions, Standard Specifications, Scope of Work, Plans & Specifications, and Estimated Quantities prepared for this Project, including the removal of surplus or condemned materials, and the thorough cleaning of the site of the Work and structures built.

In no case will any Work, in excess of such requirements, be paid for unless ordered in writing by the County Engineer as hereinafter specified.

All Work shall be of the best quality throughout. Unless otherwise provided herein, all materials shall be new.

2. SCHEDULE OF PERFORMANCE

At the pre-construction meeting, the Contractor must provide the Engineer with a printed schedule showing the interrelation and planned performance of all major items of Work, with completion reasonably scheduled thereon to occur by the scheduled completion date recited herein. The Engineer shall review and consider acceptance of the schedule as provided by section 108.02 (B) (1) of the Standard Specifications.

IV. PLANS & SPECIFICATIONS

1. GENERALLY

The Plans and Specifications are intended to explain and supplement each other, and to indicate and provide for the construction of the various related parts of the Project in a complete and connected manner. Should any detail be omitted, any discrepancies or errors appear, or misunderstandings arise, in or with respect to such Plans and Specifications, the additions, corrections, or explanations necessary to provide for the construction in accordance with such intent shall be made by the Engineer, and such additions, corrections and explanations shall be final and binding upon the Contractor, subject to dispute resolution.

2. "OR EQUAL"

Whenever an article, material or equipment is defined herein by describing a proprietary product, or by using the name of manufacturer or vendor, the term "or equal", if not inserted, shall be implied. The specific article, material or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency and quality desires and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design and efficiency. The Contractor shall comply with the requirements of the contract documents, relative to the approval of materials and equipment by the County, before the same are incorporated in the Work.

3. LIST OF PLANS & SPECIFICATIONS

PUTNAM COUNTY
SUPPLEMENTAL SPECIFICATIONS FOR ASPHALT CONCRETE

The successful bidder shall submit a job mix formula prior to commencing the work for all hot mix asphalt mixtures to be supplied to Putnam County in this project. Item 441.02 shall apply if the source of material is changed. The job mix formula shall include the mix type proposed for use, aggregate type and gradation, percentage of asphalt binder by weight of mixture, grade of asphalt binder, description and source of modifier (if applicable) and unit weight of the mixture. The job mix formula shall have previously been approved for use on ODOT work.

Acceptance of the mixture shall be in accordance with the Ohio Department of Transportation (ODOT) procedures, with an independent testing laboratory performing the tests and reporting the data to the owner's representative.

Acceptance shall also be based upon the owner representative's observation that production and quality control operations are resulting in an acceptable product, if not, Item 105.03 ODOT plans and specifications apply.

The Owner requires the submission of a plant ticket with each load at the job site showing the composition of the mix as well as the load weights.

Prior to production the Contractor must supply to the owner, a mix plant certification and a certified scale report from ODOT performed within the current calendar year for each hot mix plant that will provide product to Putnam County in the year of construction.

Prior to construction the Contractor shall supply to the Owner, all job mix formulas and appropriate specifications to all testing laboratories selected by the Putnam County Engineer.

No Sunday work shall be performed, unless prior consent is given by the County Engineer.

It will be the responsibility of the Contractor to provide all traffic control for the work performed. The roadway may be closed to through traffic with signing as described by the Ohio Manual of Uniform Traffic Control Devices with local traffic and emergency vehicles allowed to pass through the construction zone.

It will be the responsibility of the Contractor to notify the Putnam County Sheriff at 419-523-3208 of the location of the construction and when the roadways will be open to all traffic. If the Contractor is to close a roadway for resurfacing during the operation of the public schools, it will be the responsibility of the Contractor to notify those schools prior to closings to coordinate school bus routes (school district boundaries and phone numbers can be obtained from the Putnam County Engineer).

It will be the responsibility of the Contractor to erect and maintain “ROAD UNDER CONSTRUCTION” signs (or equivalent) at all intersections contingent to the project until berm stone operations are completed.

The County Engineer shall be notified of the scheduling of the resurfacing one (1) week prior to the beginning of the work. Also, if the Contractor leaves Putnam County for another job, he must give at least three (3) days’ notice before returning.

PAVING
NOTES AND SPECIFICATIONS:

1) The Ohio Department of Transportation Construction and Material Specifications (dated January 1, 2023) shall apply with the below exceptions:
2) Intersection approaches are to be resurfaced as directed by the County Engineer.
3) All haul trucks shall be within legal load limits.
4) All haul routes shall be approved by the County Engineer prior to placement of material.
5) It shall be the Contractor’s responsibility to call road closings to schools, sheriff’s office, etc.
6) The safety edge, per the U.S. Dept. of Transportation (FHWA Division), shall be used on this project.
7) Asphalt binder price adjustment shall be per Item 401.20, Ohio Dept. of Transportation Construction and Material Specifications (dated January 1, 2023).
8) Item 614 – Maintaining Traffic shall apply to this project.

UTILITY NOTE

PUT CR Old SR 12/CR 18-S/CR 19
Widen & Resurface
PID 114054

Bidders are advised that the following utility facilities are shown on the plans and may not be cleared from the construction area at the time of award of the contract. These utility facilities shall remain in place or be relocated within the construction limits of the project as set out below all station locations listed below are approximate unless otherwise stated.

No Known Utility Conflicts

GENERAL COMMENTS

The contractor shall exercise caution when working in proximity to the existing and/or relocated utility facilities. Sections 105.06 and 107.17 of the Ohio Department of Transportation Construction and Material Specifications require, among other things, that the contractor cooperate with all utilities located within the limits of this construction project and take responsibility for the protection of the utility property and services.

If the contractor is directed by a utility company to perform any work not specifically contained in this note, the County will not compensate the contractor for this work unless the County approves the request in writing before the work begins. If the work is not pre-approved by the County, the contractor will be responsible for obtaining reimbursement for its work from the utility company that directed the contractor to perform the work.

In the event that the contractor requests that additional work, not specifically contained in this note, be performed by a utility company, the contractor will be responsible for reimbursing the utility company for the additional work unless the County has agreed in writing to pay for the additional work before the work begins.

V. PREVAILING WAGE RATE SCHEDULES

PN060-PROJECTS WITH NO FEDERAL AID

The following is in addition to Section 108.10

This contract is subject to Ohio Prevailing Wage Laws, Chapter 4115 of the Ohio Revised Code and the Contractor and all subcontractors shall comply with all provisions contained therein or as otherwise provided by this note. The Contractor guarantees that the prevailing wage scale to be paid to all laborers and mechanics employed on this contract shall be in accordance with the schedule of the prevailing hourly wage and fringe benefits as determined by the Ohio Department of Commerce for the county in which the work is being performed. Failure to pay prevailing wages to all laborers and mechanics employed on this project shall be considered a breach of contract. Such a failure may result in the revocation of the contractor's and/or subcontractor's certificate of qualification and debarment. A schedule of the most current prevailing wage rates may be accessed by registering with the Ohio Department of Commerce, Labor and Worker Safety Division, Wage and Hour Bureau at the following web address:

http://198.234.41.198/w3/webwh.nsf?Opendatabase

The Contractor and all subcontractors shall compensate the employees on this contract at a pay rate not less than the hourly wage and fringe rate listed on the website noted above, for the applicable job classification or as modified by the Ohio Department of Commerce, Division of Labor and Worker Safety Wage and Hour Bureau, when new prevailing rates are established.

Overtime shall be paid at one and one-half (1 ½) times the basic hourly rate for any hours worked beyond forty (40) hours during a pay week. The Contractor and all subcontractors shall pay all compensation by company check to the worker and fringe benefit program.

The wage and fringe rates determined for this project or as may be later modified, shall be posted by the Contractor in a prominent and accessible place on the project, field office, or equipment yard where they can be easily read by the workers or otherwise made available to the workers. On the first pay date of contract work the Contractor and all subcontractors shall furnish each employee covered by prevailing wage a completed form whpw1512 in accordance with section 4115.05 Ohio Revised Code, showing the classification, hourly pay rate, fringes, and identifying the District Prevailing Wage Coordinator (DPWC), if such employees are not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of labor. These forms shall be signed by the Contractor or subcontractor and the employee and kept in the Contractor's or subcontractor's payroll files.

The Contractor and all subcontractors shall submit to the DPWC or other designated Department representative, certified payrolls on form whpw1509 or equivalent, in accordance with sections 4115.07 and 4115.071(C) of the Ohio Revised Code, three (3) weeks after the start of work and every subsequent week until the completion of

the contract. Additionally, a copy of the “Apprentice Certification” obtained from the USDOL Bureau of Apprenticeship and Training must accompany the first certified payroll submitted for all apprentices working on this project. Upon completion of the contract and before the final payment, the Contractor shall submit to the DPWC a final wage affidavit in accordance with section 4115.07 of the Ohio Revised Code stating that wages have been paid in conformance with the minimum rates set forth in the contract. Please be aware that it is ultimately the responsibility of the prime Contractor to ensure that all laws relating to prevailing wages in Chapter 4115 of the Ohio Revised Code, are strictly adhered to by all subcontractors.

The Contractor and all subcontractors shall make all of its payroll records available for inspection, copying or transcription by any authorized representative of the contracting agency. Additionally, the Contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

If the Contractor or any subcontractor fails to comply with any of the provisions contained in this proposal note, the Department may terminate the contract, debar the Contractor or subcontractor and/or withhold or suspend pay estimates after written notice and a reasonable opportunity to comply has been provided.

VI. PROPOSAL FORMS

BIDDER QUALIFICATIONS

Bidders must be pre-qualified as required by item I. (4) of the Instructions to Bidders.

In addition, each Bidder shall provide the Bidder Qualification information required by the following form. In lieu of completing the attached tables, a Bidder may attach hereto a listing of the required information, with the word "attached" printed in affected table.

Do you intend to sublet any portions of the work? _____ If so, please complete the following:

NAME OF SUBCONTRACTOR	AMOUNT OF SUBCONTRACT	ITEMS OF WORK

List below any equipment you own, which is available for the proposed work.

Quantity	Item	Description, Size, Capacity, Etc.	Condition	Years of Service	Present Location

List equipment which you intend to purchase or rent for use on the proposed Work.

Quantity	Item	Description, Size, Capacity, Etc.	Purchase or Rent	Approx. Cost

List all incomplete Contracts and Subcontracts on hand:

Date	Owner and Location	Value of Contract	Type of Work	Required Date of Completion

(Use back of sheet if necessary.)

List projects of this type of work you have completed in this County in the past three years.

Owner and Location	Amount of Contract	Type of Work Done	Date

List the largest performance bonds you have obtained in the past three years.

Date	Owner and Location	Amount of Bond	Type of Work Done	Required Date of Completion

Are there any outstanding liens against you or your projects? _____

If answer is yes to any of the above, please furnish details. (If there is insufficient space on this page, attach additional sheets.)

_____

_____

AFFIRMATION OF BIDDER QUALIFICATIONS FORM

I, the undersigned, hereby affirm that I am an officer or sole proprietor of the Bidder identified below, that I am duly authorized by said Bidder to execute this document, and that the answers given on the Bidder Qualifications forms are complete and true.

Signed this _____ day of _____, 20____.

Bidder:_____

(Signed)_____

Printed Name:_____

Title:_____

DECLARATION OF PERSONAL PROPERTY TAX DELINQUENCY

OHIO REVISED CODE 5719.04

I, the undersigned, hereby affirm that the bidder identified below IS/IS NOT (please circle the one that applies) charged at the time of submitting this Bid with any delinquent personal property taxes on the general tax list of personal property of the County.

COMPLETE THIS PARAGRAPH ONLY IF APPLICABLE:

The amount of any such due and unpaid delinquent tax and any due and unpaid penalties and interest is $_____.

Signed this _____ day of _____, 20___.

Bidder:_____

(Signed)_____

Printed Name:_____

Title:_____

STATE OF OHIO)
COUNTY OF _____) ss:

Before me, a Notary Public, in and for said County, personally appeared the person identified above, who did sign this document after first affirming that the execution of this document was an authorized act on behalf of the above Bidder.

IN TESTIMONY WHEREOF, I have affixed my hand and the seal of my office at this _____day of _____, 20___.

_____
NOTARY PUBLIC

CERTIFICATE OF BIDDER
UNRESOLVED FINDINGS OF RECOVERY
WITH AUDITOR OF STATE
ORC 9.24 & 9.241

I, the undersigned, hereby affirm that the Bidder identified below:

CHECK & COMPLETE ONLY ONE

☐ has no unresolved findings of recovery with the State of Ohio Auditor, as defined by; ORC 9.24 & 9.241

☐ has the following unresolved findings of recovery with the State of Ohio Auditor, as Defined by ORC 9.24 & 9.241:

_____

_____

_____

_____

Signed this _____ day of _____, 20___.

Bidder:_____

(Signed)_____

Printed Name:_____

Title:_____

HOLD HARMLESS CLAUSE

Putnam County, Ohio

INDEMNITY: To the maximum extent allowed by Ohio law, the Contractor shall defend, indemnify, and hold harmless the County and the Owner (i.e.: county, township, and/or municipality), if applicable, (hereinafter: the indemnified parties), and all of their elected and appointed officials, together with all their employees and agents from any and all claims, demands, causes of action, judgments, liens, penalties, costs, and expenses (including attorney fees and expenses) of any kind, including claims for bodily injury, illness, death, property damage, or loss of use, which may at any time be imposed upon, incurred by, or asserted against the indemnified parties as a result of any action of the Contractor, its officers, employees, invitees, or agents arising out of or in consequence of this Agreement, including, but not limited to: 1.) The performance or non-performance of the work or any obligation under this Agreement; 2.) The common law or any legislation, regulation or order including environmental laws, rules, and orders; or 3.) Negligence including any passive negligence of the indemnified parties. This indemnification shall survive any termination of this Agreement and is not limited by the Contractor's insurance coverage. In order to effectuate and facilitate the indemnification of the indemnified parties, Contractor does hereby waive any and all employer immunity provided by the workmen's compensation law under Section 35, Article II, of the Ohio Constitution. At the option of the indemnified parties, Contractor shall provide the indemnified parties with legal counsel, and shall further bear all costs and expenses including attorney fees in the defense of any suit arising hereunder. Additionally, Contractor shall repair or pay for the repair of any damage to the indemnified parties' property caused by the Contractor or its officers, employees, invitees, or agents.

INSURANCE: Contractor at its sole cost and expense shall furnish and keep in full force and effect during the time this Contract is in effect sufficient insurance (as per **107.12** of the C&MS) to protect the indemnified parties from any claim arising from the Contractor's conduct as a result of this Agreement, including: workers' compensation coverage in compliance with State law; comprehensive general liability insurance; and motor vehicle liability insurance (including coverage for owned, non-owned or hired vehicles) with broad form property damage coverage with limits of at least $1,000,000.00 for bodily injury or death per occurrence and $1,000,000.00 property damage per occurrence, plus loss insurance for the equipment used. If the above insurance sums are blank, Contractor shall provide insurance as specified. Such liability insurance policies shall insure the contractual liability assumed hereunder, shall name the indemnified parties as additional insured parties for all work under this Contract, and shall provide that such insurance is primary to any other of indemnified parties' liability insurance. Prior to commencing any work, Contractor shall furnish the indemnified parties with proof of such insurance with companies acceptable to the indemnified parties.

OHIO WORKERS' COMPENSATION COVERAGE

The Contractor must secure and maintain valid Ohio workers' compensation coverage until the County, as set forth in Section 109.12(E) of the Construction and Material Specifications Manual, has finally accepted the Project. A certificate of coverage evidencing valid workers' compensation coverage must be submitted to the County before the Contract will be executed.

The Contractor must immediately notify the County, in writing, if it or any subcontractor fails or refuses to renew their workers' compensation coverage. Furthermore, the Contractor must notify the County, in writing, if its or any of its subcontractor's workers' compensation policies are cancelled, terminated, or lapse.

The failure to maintain valid workers' compensation coverage shall be considered a breach of contract, which may result in the Contractor being removed from the Project, withholding of pay estimates and/or termination of the Contract.

NON-COLLUSION AFFIDAVIT

TO BE EXECUTED BY EACH AWARDEE OF A PRINCIPAL CONTRACT

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)§
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_____, being first duly sworn, deposes and says that he is _____(sole owner, a partner, president, secretary, etc.) of _____ (company name).
The party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham bid, not that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price of said bidder or of any other bidder, nor to fix any overhead, profit or cost element of such bid price, nor that of any other bidder , nor to secure any advantage against the public body awarding the contract to anyone interested in the proposed contract; that all statements contained in such bid are true; and further, that said bidder has not, directly or indirectly, submitted his bid price or any breakdown thereof, not the contents thereof, nor divulged any information or data relative thereto, nor paid and will not pay fees in connection therewith to any corporation, partnership, company, association, organization, bid expository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

(Signed)_____

Printed Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Notary Public

NON-COLLUSION AFFIDAVIT

TO BE EXECUTED BY EACH "AWARDEE" OF A SUBCONTRACT

)
)§
)

_____, being first duly sworn, deposes and says that he is _____(sole owner, a partner, president, secretary, etc.) of _____ (company name) the party submitting a bid for a subcontract covering _____ (nature of the subcontract) that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham bid, not that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price of a said bidder or of any other advantage against the principal contractor or anyone interested in the proposed subcontract; that all statements contained in such bid are true; and further, that said bidder has not, directly or indirectly, submitted his bid price or any breakdown thereof, nor the contents thereof, nor divulged any information or data relative thereto, nor paid and will not pay fees in connection therewith to any corporation, partnership, company, association, organization, bid expository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

The provisions of the affidavit shall not be held as disqualifying a person, firm or corporation who has submitted a sub-proposal to one bidder from submitting separate sub-proposals or quoting prices for materials or work to other bidders.

(Signed)_____

Printed Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20____.

_____
Notary Public

BID GUARANTY AND CONTRACT BOND
(Section 153.571 Ohio Revised Code)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____ (Name & Address) as Principal, and _____ (Name) as Sureties, are hereby held and firmly bound unto **both ODOT and the BOARD OF PUTNAM COUNTY COMMISSIONERS**, hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Owner on **October 23, 2025** to undertake the project known as **PUT CR Old SR 12/CR 18-S/CR 19 – Widen & Resurface**.

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of: _____ dollars ($_____). (If the foregoing blank is not filled in, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if the blank is filled in, the amount stated must not be less than the full amount of the bid including alternates, in dollars and cents. A percentage is not acceptable.) For the payment of the penal sum will and truly be made, we hereby jointly and severally bind our heirs, our executors, administrators, successors, assigns and ourselves.

THIS CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above-named Principal has submitted a bid to the above referred to project.

Now, therefore, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, detailed specifications and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten percent (10%) of the penalty hereof between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the Obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal pays to the Obligee the difference not to exceed ten percent (10%) of the penalty hereof between the amount specified in the bid, or the costs in connecting with the resubmission, of printing new contract documents, required advertising, and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if the Obligee accepts the bid of the Principal and the Principal within ten (10) days after the awarding of the contract enters into a proper contract in accordance with the bid, plans, details, specifications and bills of material, which said contract is made a part of this bond the same as though set forth herein.

Now also, if the said Principal shall well and faithfully do and perform the things agreed to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, material men, and laborers, for labor performed and material furnished in the carrying forward, performing or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any material man or laborer having a just claim, as well as for the Obligee herein; then this obligation shall

be void; expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The above Surety hereby certifies that it is authorized by the superintendent of insurance, State of Ohio, to execute the above bond and that the liability incurred is within the limits prescribed by Section 3929.121 of the Ohio Revised Code.

The said Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any way affect the obligation of said surety on its bond and does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or in or to the plans and specifications.

SIGNED AND SEALED this _____ day of _____, 20___.

Principal:

_____
Signature

Printed Name:_____

Title:_____

Surety:

Surety Company:

Name:_____

Address:_____

_____

By:_____
Attorney-in-fact

Surety Agent:

Name:_____

Address:_____

_____

VII. PROPOSAL

Ottawa, Ohio, _____, 20_____

To the Board of County Commissioners:

The undersigned Bidder certifies the pre-bid examination, in its entirety, of all Bid Documents contained in or referenced by this Proposal, including the Notice to Bidders, Instructions to Bidders, General & Supplemental Provisions, Standard Specifications, Scope of Work, Plans & Specifications, and Planned Bid Items & Quantities, which shall govern this improvement and are made a part of this Proposal and the ensuing contract.

DESCRIPTION OF THE IMPROVEMENT

PUT CR Old 12/CR 18-S/CR 19 – Widen & Replace

The undersigned Bidder proposes to furnish any and all material, tools, labor, transportation, machinery, appliances, and appurtenances necessary, and to prosecute to full completion, the Work called for hereunder, and in consideration thereof, to accept from the County, as full payment for completion of each item as specified, the respective unit or lump sum price hereafter set forth.

The undersigned Bidder agrees that, if this Proposal is accepted, said Bidder will, within ten (10) days after notification of such acceptance, enter into the contract for the performance of the Work proposed and, as a guarantee of the faithful performance thereof, to furnish at the time of executing the contract, a bond in the amount equal to 100% of the total Bid price, with a Surety subject to the approval of the County.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the Project by**: September 1, 2026.** Bidder further agrees to pay as liquidated damages, per ODOT Item 108.07, ODOT specifications latest editions and as provided in Section II. (7) of these documents.

The Bidder hereby agrees that the Board of County Commissioners has the right to reject any and all bids, and the Bidder will not dispute the correctness of the quantities used to determine the lowest and best bid.

Accompanying this Bid is a bid guarantee or bond payable to the County and ODOT. Upon any failure to execute the Contract or provide an adequate performance bond as aforesaid, it is agreed that the undersigned Bidder shall forfeit the bid guarantee or bond accompanying the proposal to the County and ODOT, to the extent allowed by law.

Bidder acknowledges receipt of the following addendum:

_____

Bidder (full name): _____

Signed: _____

Printed Name: _____

Title: _____

Bidder's mailing address: _____

_____

_____

Phone Number: _____

Fax Number: _____

Attch: Bid Guarantee or Bond
Equal Employment Opportunity (EEO) Certificate of Compliance
Supplemental Bidder Qualification Forms (if any)
Release of Liens (if any)

BID PRICES
Planned Bid Items & Quantities

PUT CR Old SR 12/CR 18-S/CR 19
WIDEN & RESURFACE

Engineer's Estimate: $1,915,000.00

ITEM	DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL COST
203E10001	9" Deep, 2' Wide, Excavation Special	44,948	FT		
204E10000	Subgrade Compaction	9,989	SY		
301E46001	Asphalt Concrete Base Course, As Per Plan	4,994	TON		
407E10000	Tack Coat (0.075 gal/SY)	6,144	GAL		
411E10001	Stabilized Crushed Aggregate (Berm) (2' Each Side), As Per Plan	1,706	TON		
441E50101	1" Asphalt Concrete Surface Course, Type 1 (448), PG 70-22 (Polymer Additive), As Per Plan	4,566	TON		
441E50201	1" Asphalt Concrete Intermediate Course, Type 1 (448), PG 70-22 (Polymer Additive), As Per Plan	4,566	TON		
643E00104	Edge Line, 4"	12.518	MILE		
643E00300	Center Line	6.259	MILE		
643E00500	Stop Line	28	FT		
Special	Formed Construction Joint	13	EACH		
832E30000	Erosion Control	1	LUMP	$3,000.00	$3,000.00
614E11000	Maintaining Traffic	1	LUMP		
624E10000	Mobilization	1	LUMP		
		TOTAL			

VIII. ARTICLES OF AGREEMENT

This Agreement is made and entered into by the County, acting by and through its Board of County Commissioners, and the Contractor identified below, hereinafter called the Contractor.

WITNESSETH:
The Contractor, for and in consideration of certain payments to be made as specified herein, hereby covenants and agrees to perform and execute all provisions of its Proposal for construction of the subject public improvement, including fulfillment of the requirements of the Notice to Bidders, Instructions to Bidders, General & Supplemental Provisions, Standard Specifications, Scope of Work, Plans & Specifications, and Planned Bid Items & Quantities, and to be governed by the provisions contained therein, setting forth duties, relations and obligations of the Engineer, Contractor and the Surety, which are hereto attached and made a part hereof, and agrees to fully and completely perform the Work described hereby in a manner to achieve completion thereof by or before the completion date of: **September 1, 2026.**

In consideration of the performance by the Contractor of the covenants and agreements as herein set forth, the County hereby covenants and agrees to pay the Contractor according to the schedule of rates and prices set forth in the attached Proposal of said Contractor, and at the time and in the manner hereinafter set forth herein.

IN WITNESS WHEREOF, the parties to this Agreement have hereunto set their hands effective this _____ day of _____, 2025.

COUNTY OF PUTNAM

	_____ CONTRACTOR (full name)
_____ (Signature) Board of Commissioners	_____ (Signature) Contractor
_____ (Printed Name & Title)	_____ (Printed Name & Title)
	_____
	_____ (Mailing Address)

Approved on County's behalf as to form:

By:_____
For: Prosecuting Attorney

Date:_____

COUNTY AUDITOR'S CERTIFICATE

CONTRACT NO: N/A PROJECT: PUT CR Old 12/CR 18-S/CR 19 – Widen & Resurface

FUND: 2002 AL&G (Contracts, Services- Roads) VENDOR NO: _____

DATE: _____ VENDOR: _____.

It is hereby certified that the amount to meet the obligation of this contract in the fiscal year in which the contract has been made has been lawfully appropriated for the purposes of the contract and is in the Putnam County Treasury of in the process of collection to the credit of the 2002 AL&G (Contracts, Services-Roads) . Fund free from any previous encumbrances, obligations or certificates now outstanding.

_____
Putnam County Auditor

It is hereby certified that the amount ($_____) required to meet the contract, agreement, obligation, payment or expenditure for the above, has been lawfully appropriated or authorized or directed for such purpose and is in the Putnam County Treasury or in the process of collection to the credit of the _____ Fund free from any obligation or certification now outstanding.

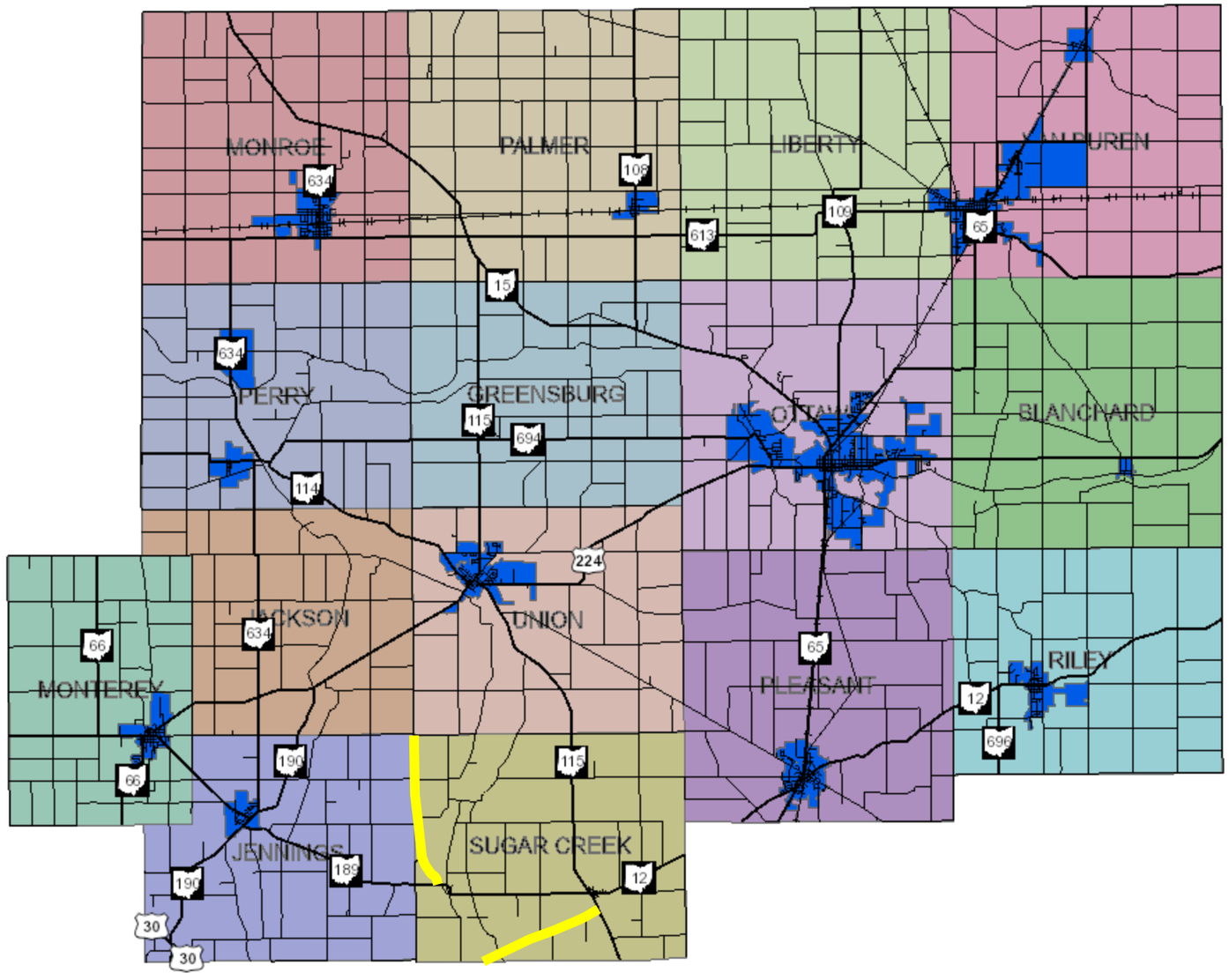
_____
Putnam County Auditor

It is hereby certified that the amount ($_____), for the fiscal year _____ required to meet the contract, agreement, obligation, payment or expenditure, for the above, has been lawfully appropriated or authorized or directed for such purpose and is in the Putnam County Treasury or in the process of collection to the credit of the _____ Fund free from any obligation or certification now outstanding. Outstanding balance of contract, estimated ($_____) to be appropriated for the fiscal year(s) _____.

_____
Putnam County Auditor

THIS CONTRACT IS NOT VALID UNLESS COUNTY AUDITOR'S CERTIFICATE IS SIGNED

PID 114054 CR Old SR 12/CR 18-S/CR 19



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0 2.25 4.5 9 mi

0 3.5 7 14 km

Railroad

Townships

BLANCHARD

GREENSBURG

JACKSON

JENNINGS

LIBERTY

MONROE

MONTEREY

OTTAWA

PALMER

PERRY

PLEASANT

RILEY

SUGAR CREEK

UNION

VAN BUREN

Roads

C; T

M; P; R

S

U

Putnam Villages

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 800
REVISIONS TO THE 2023 CONSTRUCTION & MATERIAL SPECIFICATIONS

DATED 01/17/2025

101.02

On page 8, **Replace** DSR Dynamic Shear Rheometer (asphalt binder test) with the following:

DSR Daily Source Report

101.02

On page 9, **Add** the following abbreviation below NPDES National Pollutant Discharge Elimination System:

NWE Normal Water Elevation

101.03

On page 14, **Add** the following definition after Materials definition:

Normal Water Elevation. Water elevation within a waterway produced by groundwater flow and not influenced or minimally influenced by surface water runoff. The Normal Water Elevation shown in the plans is approximate and will fluctuate seasonally and from year to year.

105.20

On page 36, **Add** the following new section after 105.19:

105.20 As Per Plan Designation. Work item descriptions may include an "As Per Plan" ("APP") designation in the proposal or the plans to assist with identifying Work with project specific requirements.

Read, bid and construct all items in accordance with all governing plan notes. The absence of an "As Per Plan" designation on work item descriptions having clear and controlling project specific requirements does not relieve the responsibility to read, bid and construct those particular items per the item's governing project specific requirements. The "order of precedence" as identified by C&MS 105.04 will not be cause for disregarding project specific requirements for Work with or without an "As Per Plan" designation.

Item descriptions in the proposal or plans must be read or interpreted with the governing project specific requirements and the C&MS. Submit a Prebid Question per C&MS 102.05 if a perceived conflict exists between the work item description and the governing project specific requirements.

106.01

On page 36, **Replace** the first paragraph with the following:

106.01 Source of Supply and Quality Requirements. Notify the Engineer of the proposed sources of supply before the delivery of materials. Submit material information to the Department per Supplement 1136. The Engineer may approve materials at the source of supply before delivery. If the proposed sources of supply cannot produce the specified material, then furnish materials from alternate sources without adjustment to the Contract Price or Completion Date.

107.13

On page 46, **Replace** the entire section with:

107.13 Reporting, Investigating, and Resolving Motorist Damage Claims.

The Contractor and the Department are required to report, investigate, and resolve motorist damage claims according to 107.10 and 107.12 and as follows.

When a motorist reports damage to its vehicle either verbally or in writing to the Contractor, the Contractor shall within 3 days make and file a written report to the District's construction office. In the event that the Department directly receives the motorist's claim, the Department shall within 3 days send the claim report to the Contractor. In the event the Contractor has not agreed to resolve the motorist claim, the District's construction office shall forward the report to the Department's Court of Claims Coordinator in the Division of Chief Legal Counsel who, as a co-insured party, may then contact the Contractor's insurance company and request that the insurance company investigate and resolve the claim. If the Contractor or their insurance company does not resolve the claim in a timely manner, the Department may advise the motorist of the option of pursuing the claim through the Tort Claims Program with the Office of Risk Management in the Department of Administrative Services (claims other than non-injury pothole claims) or in the Ohio Court of Claims (non-injury pothole claims) in accordance with ORC 2743.15.

In the event of a claim filed against the Department with the Office of Risk Management (ORM) or a lawsuit filed against the Department in the Ohio Court of Claims by the motorist, the Department, as co-insured party, may request the Contractor's insurance company to defend this claim or lawsuit and hold the Department harmless according to 107.12.

If the ORM claim or Court of Claims lawsuit claim amount is $10,000 or less and the Court of Claims Coordinator in the Division of Chief Legal Counsel determines that the Contractor is responsible for the claimed damages then the Department's Court of Claims Coordinator in the Division of Chief Legal Counsel may, after notifying the Contractor, determine that it would be in the best interest of the Department to settle the claim or lawsuit. Any compromise or settlement amount including court costs may be assessed to the Contractor and deducted from the project. The Engineer will notify the Contractor prior to executing the deduction. The Contractor or the Contractor's insurance company may within 14 days appeal the assessment decision of the Court of Claims Coordinator to the District Construction Engineer. The decision of the District Construction Engineer will be made within 14 days. Should the District Construction Engineer decision differ from the Court of Claims Coordinator, the District Construction Engineer will forward the decision to the District Deputy Director or Capital Program Administrator for final determination.

107.15

On page 47, after the second paragraph, **Add** "Portable Barrier" to the bottom of the list of items.

107.21

On page 51, **Replace** the first paragraph with the following:

107.21 Prompt Payment. In accordance with ORC 4113.61, make payment to each subcontractor and supplier within 10 Calendar Days after receipt of payment from the Department for Work performed or materials delivered or incorporated into the Project, provided that the pay estimate prepared by the Engineer includes Work performed or materials delivered or incorporated into the public improvement by the subcontractor or supplier.

A. Bonded subcontractors. Withhold no retainage from bonded subcontractors.

B. Unbonded subcontractors and suppliers. Withhold from unbonded subcontractors and suppliers the percent retainage, if any, the Contractor feels necessary to protect itself.

Retainage cannot exceed eight percent of the estimates paid until fifty percent of the work has been satisfactorily completed, then the amount retained cannot exceed four percent. Progressively and proportionately release any retainage held, as set forth in any subcontractor or supplier agreement. For the purposes of this section, a subcontractor's work is satisfactorily completed when payment for a subcontractor's work or supplier's material has been made by the Department. No subcontract provision shall permit the Contractor to delay subcontractor's retainage payments until the Project's final payment

108.02.F.

On page 54, **Replace** the last sentence of the first paragraph with the following two sentences:

Mitigation efforts may or may not result in additional costs. Mitigation efforts which result in additional cost will be compensated per 109.05.B or 109.05.C.

108.02.F.

On page 54, **Replace** the second paragraph with the following:

1. Contractor Initial Oral Notification. Provide ~~immediate~~ oral notification upon discovery of an issue to the Engineer that ~~upon discovering~~ a circumstance ~~that~~ may require a revision to the Contract Documents ~~or may result in a dispute~~ prior to pursuing or constructing future work that will impact mitigation efforts of the issue. Upon notification, the Engineer will attempt to resolve the identified issue as quickly as possible.

108.02.F.

On page 54, **Replace** the last sentence of the third paragraph with the following:

This early notice must be given by the end of the second working day following the discovery of the circumstance.

108.02.G.

On page 54, **Replace** the second paragraph with the following:

All parties to the dispute must adhere to the Dispute Resolution and Administrative Claim process. Informal discussions with the DCE are permissible during the Step 1 review. Do not contact other Department personnel who are to be involved in a Step 2 or Step 3 review until a decision has been issued by the previous tier. Department personnel involved in Step 2 or Step 3 reviews will not consider a dispute until the previous tier has properly reviewed the dispute and issued a decision.

108.02.G.

On page 55, **Replace** the first sentence of the first paragraph with the following:

Failure to meet any of the timeframes outlined above or below or to request an extension may terminate further review of the dispute and serve as a waiver of the Contractor's right to file a claim.

108.02.G.

On page 55, **Add** the following sentence to the end of the first full paragraph:

Failure by the Department to meet the timeframes outlined in this section will be a de facto equivalent time extension to the Contractor for the subsequent Dispute Resolution and Administrative Claims Process step.

108.02.G.1.

On page 55, **Replace** the subsection with the following:

1. Step 1 (Project Level Determination). The Engineer will meet with the Contractor's superintendent within two (2) working days of receipt of the Contractor Written Early Notice set forth in 108.02.F.2. Jointly review all pertinent information and contract provisions and negotiate in an effort to reach a resolution. If the Engineer has considered all information previously offered by the Contractor when issuing a response to the Written Early Notice, then the Engineer's written response shall be considered a Step 1 decision if the response clearly states it is in response to the Written Early Notice. If not, the Engineer will issue a written Step 1 decision within seven (7) calendar days of the meeting. If the dispute is not resolved, either abandon or escalate the dispute to Step 2.

108.02.G.2.

On page 55, **Replace** the second paragraph of the subsection 108.02.G.2. with the following:

Within seven (7) calendar days of receipt of the Step 1 decision, either abandon the dispute or submit a written request for a Step 2 meeting to the District Construction Engineer (DCE). The DCE will assign the dispute a dispute number. Within fourteen (14) calendar days of submitting the request for a Step 2 meeting, electronically submit the Dispute Documentation to the DCE as follows:

108.02.G.3.

On page 56, **Replace** the first sentence in the ninth paragraph with:

3. Step 3 (Director's Claims Board Hearing or Alternative Dispute Resolution). Submit a written Notice of Intent to File a Claim to the Dispute Resolution Coordinator in the Division of Construction Management within seven (7) calendar days of receipt of the Step 2 decision.

108.02.G.3.a.1.

On page 56, **Replace** the first sentence of 108.02.G.3.a.1. with the following:

(1) Electronically submit the Claim Documentation to the Dispute Resolution Coordinator within thirty (30) calendar days of receipt of the Notice of Intent to File a Claim. This timeframe may be extended with approval of the Dispute Resolution Coordinator.

108.02.G.3.a.3.

On page 58, **Replace** the fourth paragraph with the following:

The Board will hear the entire claim on behalf of the Director. The Board may have its own technical advisors at the hearing for consultation and assistance in reviewing the claim. The Contractor and District will each be allowed adequate time to present their respective positions before the Board. The Contractor and District will also each be allowed adequate time for rebuttal, limited to the scope of the opposing party's presentation. The Board may suspend any portion of a presentation or rebuttal it deems to be argumentative, repetitive, or irrelevant to the claim. The Contractor's position will be presented by one or more of the Contractor's employees who are thoroughly knowledgeable of the claim. The Contractor may have legal counsel present during the hearing to observe or for private consultation but shall not present on behalf of the Contractor. Similarly, the District's position will be presented by one or more District representatives who are thoroughly knowledgeable of the claim.

108.02.G.4.

On page 59, **Replace** the fourth paragraph with:

4. Interest on Claims. The Department will pay interest in accordance with ORC Section 5703.47 on any amount ultimately found due on a claim which is not paid within 30 days of the expenditure of funds by the Contractor in accordance with ORC 126.30 when all Work related to the Claim is complete. However, interest will not be paid on the amount of any agreed settlement unless specifically itemized and included in the total settlement prior to agreement.

108.07.B.

On page 66, **Replace** Table 108.07-1 with the following:

TABLE 108.07-1 SCHEDULE OF LIQUIDATED DAMAGES

Original Contract Amount (Total Amount of the Bid)		Amount of Liquidated Damages to be Deducted for Each Calendar Day of Overrun in Time
From More Than	To and Including	
$0.00	$500,000	$450
$500,000	$2,000,000	$600
$2,000,000	$10,000,000	$1,000
$10,000,000	$50,000,000	$2,300
Over $50,000,000		$4,200

108.095

On page 67, **Add** the following new section after 108.09 and before 108.10:

108.095 Partial Severability Due to Legal Revisions. If any term of the Contract is to any extent illegal, otherwise invalid, or incapable of being legally enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other requirements hereof shall remain in full force and effect.

109.05.D.2.e.2

On page 85, **Replace** the first paragraph with the following:

(2) The delay for which payment of field overhead is sought is only due to delays defined in 108.06.D.2, 108.06.D.3, 108.06.D.4, 108.06.D.5 or for delays due to revised Work as specified in 104.02.B or 104.02.F.

109.05.D.2.f.2

On page 85, **Replace** the first paragraph with the following:

(2) The delay for which payment of home office overhead is sought is only due to delays defined in 108.06.D.2, 108.06.D.3, 108.06.D.4 and 108.06.D.5.

201.04

On page 94, **Replace** the subsection with the following:

201.04 Scalping. Scalping includes removing surface material such as roots, sod, grass, residue of agricultural crops, sawdust, and decayed vegetable matter. The depth of scalping does not include topsoil or other material below the scalping operation.

A. The Engineer will not require areas to be scalped in the plan embankment construction locations when both of the following conditions are true:

1. The embankment height is greater than 9 feet as measured vertically from the existing ground surface to the proposed ground surface, and

2. The slope of the existing ground is 8:1 or flatter.

B. Scalp all other areas where excavation or embankment is required.

202.03

On page 96, **Add** the following paragraph after the last paragraph of the section:

Demolition of bridges or portions of bridges in which the work endangers property or the welfare, life, health of any individual requires an engineered drawing and meeting according to 501.05.

203.06.A

On page 107, **Replace** the first sentence of the 3rd paragraph with the following:

Compact Type D and Type E granular material using at least ten passes of a smooth drum vibratory roller having a minimum effective weight of 10 tons.

204.05

On page 114, **Replace** the entire subsection with the following:

204.05 Rock, Shale, or Coal Subgrade. Excavate rock, shale, or coal encountered in the subgrade to 6 inches below the final subgrade elevation. Ensure the excavated surface is shaped to drain and has a uniform surface that cannot trap water. Excavate for a width of 1 foot beyond the shoulders. Replace to the subgrade profile with suitable material conforming to 204.02 Granular Material Type B, following the gradation of 703.17, and compacted according to 204.03.

204.06.B.2

On page 115, **Replace** the entire paragraph with the following:

2. For granular soils, and mixtures of soil, rock, and granular materials, use a 50-ton roller with a tire pressure of 120 pounds per square inch.

209.09

On page 140, **Replace** the second line of the Basis of Payment table with the following:

209	Feet	Ditch Cleanout

255

On page146, **Replace** Item 255 in its entirety with the following:

ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT

255.01 Description
255.02 Materials
255.03 Removal of Existing Pavement
255.04 Correction of Subgrade or Subbase
255.05 Placing Dowel Bars, Deformed Bars, and Tiebars
255.06 Placement of Portland Cement Concrete
255.07 Wearing Course Replacement
255.08 Opening to Traffic
255.09 Method of Measurement
255.10 Basis of Payment

255.01 Description. This work consists of full depth removal of existing pavement; compacting the subgrade or subbase; furnishing and placing dowel bars, deformed bars, tiebars, and reinforcing steel where specified; placing, consolidating, finishing, and curing new portland cement concrete to the level of the adjacent portland cement concrete pavement or wearing course; replacing wearing course where required; and restoring affected shoulders.

255.02 Materials. Furnish materials conforming to:

Concrete, Class QC 1, QC MS, QC RS 499
Curing materials, Type 2 ..... 705.07
Non-shrink non-metallic grout..... 705.20
Reinforcing steel 709.10
Preformed elastomeric joint sealer.. 705.11
Deformed bars and Tiebars 705.01 or 709.00
Dowel bars and basket assemblies 705.01 or 709.13
Expansion shield anchors Type A 712.01

Use epoxy coated hook bolt, wiggle bolt, and coupling.

Select and furnish grout from the Qualified Product List issued by OMM that firmly anchors the dowel bars, deformed bars, and tiebars within 30 minutes.

~~**Rapid Repair Concrete Mix Materials**. If the bid item requires RRCM (Rapid Repair Concrete Mix) do not use the Concrete classes listed above. Develop a specialized mix design as follows:~~

~~Use one of the following special rapid early repair admixture systems such as:~~

~~4 x 4 concrete system~~

~~Rapid -1~~

~~Other manufactured systems acceptable to the Director~~

~~Develop a RRCM concrete mix design that will achieve a flexural strength of 400 psi (2.8 MPa) in not less than 4 hours and not more than 6 hours using 6 in x 6 in (150 mm x 150 mm) beam samples conforming to ASTM C293.~~

~~Use cements conforming to 701.02, 701.04 or 701.05~~

~~Use fine aggregate conforming to 703.02.A~~

~~Use coarse aggregate(s) conforming to 703.02.B and 703.13~~

~~Provide concrete with 4 to 8 percent air content.~~

~~During the testing of the RRCM mix design develop the mix's maturity curve according to Supplement 1098 using the actual materials that will be used on the project.~~

~~Document and submit to the Engineer the RRCM mix design results showing flexural strength, time to strength, materials, sources of materials, quantities of materials and batching requirements.~~

~~The Engineer will have 10 days to review the mix design and accept or reject.~~

255.03 Removal of Existing Pavement. The Engineer will locate and mark all areas for repair before the start of diamond sawing. Provide the Engineer with aerosol spray paint to outline those areas for repair.

Saw cut the existing rigid pavement to the full depth at the limits of the area designated by the Engineer using a diamond saw blade. For Type 1 repairs where there is an existing asphalt concrete overlay on top of the concrete pavement to be removed, the Contractor may make either a full depth saw cut through the asphalt concrete overlay and the concrete pavement, or make an offset saw cut through the asphalt concrete

overlay. If making an offset saw cut through the asphalt concrete overlay, remove the overlay as necessary to provide clearance for the full depth saw cut through the concrete pavement. Do not make offset saw cuts with Type 2 repairs. The Contractor may elect to make additional cuts to facilitate the removal of the pavement.

Remove pavement in the repair area by the lift-out method without damaging or undermining the remaining pavement. After the repair area is isolated by full depth saw cuts, drill holes through the deteriorated slab, and install lift pins. Vertically lift the pavement out of the repair area. Remove loose debris left behind after lift-out using hand methods. Dispose of removed pavement according to Item 202.

Do not break the pavement and clean out the material using a backhoe unless the Engineer determines that the lift-out method is not feasible due to deteriorated pavement or existing asphalt concrete repairs.

If the bottom face of the adjacent concrete pavement is deteriorated for a height greater than one-fourth (1/4) the thickness of the rigid pavement, make additional full depth saw cuts as directed by the Engineer along the full width of the lane or lanes to remove the deteriorated areas. Repair pavement damaged during the pavement sawing or pavement removal according to Item 255 or Item 256.

255.04 Correction of Subgrade or Subbase. After removing the pavement full depth and before installing dowel bars, deformed bars, or tiebars, shape and re-compact the subgrade or subbase to the satisfaction of the Engineer. Use concrete to replace any subgrade or subbase material removed as part of the rigid pavement replacement.

255.05 Placing Dowel Bars, Deformed Bars, and Tiebars. Drill dowel bar, deformed bar, and tiebar holes using hydraulic, electric, or pneumatic percussion drills without spalling or damaging the existing concrete. Provide drills capable of independent adjustment of each drill shaft in the horizontal and vertical direction. When drilling for dowel bars, use a device capable of drilling a minimum of three holes at a time. For repairs 10 feet (3 m) or greater in length, provide tiebars or wiggle bolts of the size and spaced as shown on the standard construction drawings along the longitudinal joint(s). Blow all drilled holes clean with oil-free compressed air. Maintain holes dry and frost free before grouting the bars. Pneumatically inject grout starting at the rear of the drilled holes and drawing a bead of material towards the front. Inject a sufficient amount of grout to fill all voids around the bars. Use a grout retention disc with a radius slot as shown in the standard drawings to retain the grout within the drilled holes. Place the grout retention disc on the bars at the end to be inserted in the hole. Insert the bars in the holes and rotate them approximately one full revolution. Ensure a small amount of grout extrudes through the radius slot in the grout retention disc when the bars are installed. Hold dowel bars in proper alignment until the grout has hardened.

255.06 Placement of Portland Cement Concrete. Place concrete for Type 1 repairs to the level of the adjacent portland cement concrete and replace the wearing course where applicable. Place concrete for Type 2 repairs to the level of the adjacent wearing course.

Do not place any portland cement concrete until the grout around the bars has hardened. Coat dowel bars with bond breaking material conforming to 451.09.B. Place portland cement concrete according to 451.07. Use forms when placing portland cement concrete against any unbound material and if necessary, when placing against asphalt concrete. Cast each repair in one continuous operation. Consolidate the concrete around the perimeter of the repair and within the limits of the repair area using an internal type vibrator. Use approved internal type vibrators capable of visibly affecting the concrete for a distance of 12 inches (0.3 m) from the vibrator head.

When using QC RS concrete, if a maturity curve exists, the Contractor may install maturity sensors to measure the maturity of each day's placement according to Supplement 1098. If QC RS placement from one location to another is delayed by more than 1 hour treat the delayed placement as a new day's placement and install additional maturity sensors according to Supplement 1098.

Ensure that batch tickets of the delivered QC RS conform to the accepted mix design. Provide batch tickets in accordance with 499.07.

Ensure the delivered QC RS mix is workable and produced without balling or clumping of the macro-fibers. A demonstration of the mix may be required by the Engineer prior to placing any of the mix on the project.

While the concrete is still in a plastic state, test the surface for trueness and for being flush with the edges of the adjacent slabs using a 10-foot (3 m) straightedge. Place the straightedge parallel to the pavement centerline with half of the straightedge resting on the adjacent pavement and draw the straightedge across the repair to test the repair edges. Check areas within the repair length in a similar manner. Where the straightedge shows deviations, correct all high or low areas exceeding 1/8 inch in 10 feet (3 mm in 3 m). Recheck the concrete surface after making corrections to ensure conformance to the above tolerance. Make additional checks and corrections until the repair is within tolerance.

Texture Type 1 repairs like that of the surrounding pavement. Texture Type 2 repairs according to 451.10.

Apply the liquid membrane-forming curing compound at a minimum rate of 1 gallon (1 L) of material for each 150 square feet (3.7 m^2).

255.07 Wearing Course Replacement. Trim the limits of the repair to form a vertical face 1.5 inches (38 mm) deep from the surface. Replace the removed asphalt concrete overlay with material as shown on the plans. Compact the material as approved by the Engineer using any of the roller types specified in 449.02. Apply Item 407 tack coat to the surface of the portland cement concrete and between any lifts of asphalt concrete.

Before opening the rigid replacement to traffic, restore the shoulders to the original line and grade. Use either aggregate or asphalt concrete as shown on the plans or as the Engineer directs. Fill the low areas and compact them flush with the surrounding shoulder.

Seal the perimeter surface of the repaired areas by applying a 2 to 4 inch (50 to 100 mm) wide strip of approved 705.04 material or 702.01 approved PG binder.

255.08 Opening to Traffic. Do not open the rigid replacement to traffic until the concrete meets the requirements of Table 255.08-1 based on beam testing on the project or maturity testing.

TABLE 255.08-1 OPENING TO TRAFFIC

Repair Thickness, in (mm)		Modulus of Rupture, psi (MPa)
Greater than or equal	**Less than**	
	8 (200)	400 (2.8)
8 (200)	9 (225)	350 (2.4)
9 (225)	10 (250)	300 (2.1)
10 (250)		250 (1.7)

If maintaining traffic in adjacent lanes, schedule work to place the concrete in the prepared repair area within 48 hours after removing pavement. In accordance with standard drawing MT-101.90, drums may be used as a separator to the adjacent traveled lane for repairs 60 feet (18 m) or less in length.

If unable to complete placement of the concrete in the exposed repair area by the end of a daily work shift, fill or cover repair areas less than 4 feet (1.2 m) from the traveled lane. Fill using a temporary patch material suitable to the Engineer or cover unfilled repair areas 10 feet (3 m) or less in length with a steel plate.

Do not leave repair areas unfilled with concrete when work is suspended on weekends or holidays. If unable to complete placement of the concrete in the exposed repair area before suspending work for a

weekend or holiday or within the 48-hour time specified above, fill the repair area with an asphalt concrete mixture or other suitable temporary patch material with a durable surface as the Engineer directs. Maintain the temporary patches while they are in service.

255.09 Method of Measurement. The Department will measure the quantity of Full Depth Pavement Removal and Rigid Replacement by the number of square yards (square meters) repaired in the complete and accepted work.

The Department will measure the quantity of Full Depth Pavement Sawing by the number of feet (meters) of perimeter full depth saw cuts in the complete and accepted work. The Department will not measure offset saw cuts. The Department will not measure additional cuts made to facilitate the removal of the pavement.

255.10 Basis of Payment. Payment is full compensation for furnishing all materials, including paint; developing and testing the concrete mix, removing pavement by any method; compacting subbase and subgrade; placing rigid pavement, including concrete necessary to replace removed subbase or subgrade; furnishing and placing dowel bars, deformed bars, tiebars, and reinforcing steel; performing maturity testing and acceptance; placing, maintaining, removing, and disposing of temporary patches; and restoring the shoulders.

The Department will not pay for additional concrete sawing and removal depths within 1 inch (25 mm) greater than those shown on the plans.

The Department will not pay for additional work to repair damage caused by pavement sawing, pavement drilling or pavement removal.

The Department will include tack coat in the cost of the asphalt concrete. The Department will pay for asphalt concrete according to Item 301, Item 441, or Item 442.

The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
255	Square Yard (Square Meter)	Full Depth Pavement Removal and Rigid Replacement, Type 1, Class ___
255	Square Yard (Square Meter)	Full Depth Pavement Removal and Rigid Replacement, Type 2, Class ___
255	Foot (Meter)	Full Depth Pavement Sawing

301.01

On Page 160, **Replace** the last sentence of the section with the following:

The requirements of Item 440 apply.

302.02.A.

On Page 161, in Table 302.02-1 Mix Composition **Add** the following row after "Binder Content" row as follows:

F/A Ratio, max. [5]	1.4

302.02.A.

On Page 161, in Table 302.02-1 **Replace** rows for "Blows"; "Stability"; "Flow"; and "Design Air Voids" with the following:

Blows [6]	70

Stability, lb [6] (N)	3000 (13,345) [Min]
Flow, 0.25 mm [6]	28 [Max]
Design Air Voids [7]	4.0

302.02.A.

On Page 161, in Table 302.01-1 Footnotes **Add** Footnote [5] and shift remaining footnote numbers down as follows:

[5] Using effective asphalt binder content
[6] ASTM D5581
[7] Percent, Supplement 1036

401.02

On Page 171, **Add** the following to the materials list:

Hot applied joint sealer…….. 702.17 Type 1

401.05

On page 173 **Replace** the first paragraph with the following:

401.05 Weather Limitations. Place asphalt concrete only if the surface is dry and if weather conditions are such to ensure proper handling, finishing, and compaction. Never place asphalt concrete if the surface temperature is below the minimum established in Table 401.05-1. Chemical warm mix asphalt (WMA) additives on the approved list are required for placement in colder temperatures.

401.05

On page 173 **Replace** Table 401.05-1 with the following:

Table 401.05-1 Weather Limitations

Course Thickness	**Minimum Surface Temperature**	
	All mixes[1]	**Chemical WMA Required[1]**
3.0 inches (75 mm) and over [2]	36 °F (2 °C)	32 °F (0 °C)
1.5 to 2.9 inches (38 to 74 mm)	40 °F (5 °C)	32 °F (0 °C)
1.0 to 1.4 inches (25 to 37 mm)	50 °F (10 °C)	40 °F (5 °C)
Less than 1.0 inch (25 mm)	60 °F (16 °C)	50 °F (10 °C)
Variable Intermediate, 0 to 3.0 inches (0 to 75 mm)	40 °F (5 °C)	32 °F (0 °C)
[1] If used or required, only use chemical WMA additives on the approved list according to 402.05.B. [2] When paving on an aggregate base or subgrade, use a minimum air temperature of 40 °F (5 °C), or a minimum air temperature of 32 °F (0 °C) when using chemical WMA.		

401.05

On page 173 **Replace** the fourth paragraph with the following:

Do not schedule the placement of any surface course with a polymer modified asphalt binder after November 1, regardless of pavement and air temperatures. Obtain the approval of the Engineer to place any surface course with a polymer modified asphalt binder after November 1. Use an approved chemical WMA additive during production, if approved, with the minimum pavement and air temperatures of 40 °F (5 °C).

401.06

On Page 174, **Delete** the second paragraph, that begins with:
If placing asphalt concrete…

401.08.D

On Page 177, **Replace** the fifth full paragraph with the following:

If placing asphalt concrete against a vertical pavement face, curb, gutter, manhole, or other structure, clean the surface of foreign material and apply a thick, uniform coating of certified 702.01 PG binder, 702.09 Hot Applied Asphaltic Joint Adhesive, or 702.13 SBR Asphalt Emulsion to provide 100 percent coverage.

Apply a 2 to 4 inch wide strip of approved 705.04 material or 702.01 approved PG binder at butt joints where a new asphalt surface course meets existing asphalt concrete pavement, including at project limits, drives, and intersections.

After completion of the surface course, seal gutters at curbing, median barriers, concrete medians, and traffic islands with certified 702.01 PG binder as directed by the Engineer. Apply the binder at a uniform width of approximately 4 inches (100 mm) and at a rate just sufficient to fill surface voids. The Contractor may open the surface course to traffic before sealing the gutters.

402.03

On Page 180, **Replace** the first paragraph with the following:

402.03 Calibration. Ensure the plant is calibrated and adheres to the procedures according to Supplement 1101 when producing any asphalt concrete for the Department. Verify the calibrations biweekly using a quick calibration method outlined in S1101. Document all data from calibrations by means of data logger or mix plant controls printouts and post the results in plain view in the plant control room and plant laboratory for reference by the Monitoring Team. All plant quick calibration results for the previous 12 calendar months need to be stored and available for review at the mix plant. Store all remaining records in accordance with 403.03. If issues arise within quick calibration results, documentation, mix production, or plant operation, the Department may require the plant is calibrated according to Supplement 1101 when producing any asphalt concrete for the Department.

402.04.D.

On Page 181, **Replace** the first paragraph with the following:

D. RAP and RAS QC and Management Requirements. Provide enough space for meeting all RAP and RAS handling requirements at a mix plant facility. Provide a clean, graded base for stockpiles that does not collect water. Test processed stockpiles to ensure uniform gradation and asphalt binder content. Sample at the face of stockpiles and test at least every two weeks or once every 5,000 tons of RAP or RAS used, whichever occurs first. This includes an inspection to ensure no deleterious materials are in the stockpile. Ensure stockpiles adhere to a maximum tolerance from the established stockpile average on the JMF of ± 4 percent passing the No. 4 (4.75 mm) sieve and ± 0.30 percent for asphalt binder content by centrifuge extraction before continued use of the processed stockpile. If the stockpile is out of tolerance based on testing, immediately stop using the stockpile and notify District Testing until the issue is resolved. If the issue cannot be resolved, the stockpile will be rejected and all JMFs using the stockpile with be withdrawn or rescinded. Provide all test results and forms on the TE-199. Include a summarized table of the data with date tested for each stockpile and include the stockpile identification(s). Ensure the summarized table is posted in the testing facility and mix plant control room and easily available for review by the Department for the life of the stockpile.

402.04.D.

On page 182, **Replace** the first paragraph with the following:

Maintain in the plant lab and control room an up to date and dated site map of all tested and untested RAP and RAS stockpiles. Give each stockpile a unique identification using the following format: Year processed, company abbreviations, plant location and number where the stockpile was processed, screen size, "GR" if the pile contains coarse gravel, and A, B, etc. based on number of stockpiles processed (e.g., 2023, ODOT, Columbus-614, ½", GR, A). Identify if RAS stockpiles are from un-used manufactured shingle waste or used roofing tear-off shingles. Provide in the plant lab RAP and RAS properties for each uniform, blended stockpile cross referenced with its identification. In addition, provide the date the stockpile processing was completed and the stockpile estimated size in tons. For all RAP and RAS established stockpiles, provide a log for each stockpile of the tonnage used and subtracted from the initial measured stockpile versus the measured stockpile tonnage to date that is updated weekly and is available at the testing facility and mix plant control room and easily available for review by the Department for the life of the stockpile. Ensure the measured tonnage is within five percent tolerance of the actual. If the tolerance is exceeded, immediately stop production and notify District Testing until the issue is resolved. If the issue cannot be resolved, the stockpile will be rejected and all JMFs using the stockpile with be withdrawn or rescinded. Provide signage at all RAP and RAS stockpiles. Do not add to a stockpile once it is tested for uniformity. Provide signage at all uniform stockpiles to inform haulers that uniform stockpiles are not to be added to.

402.04.D.

On page 182, in the second paragraph, **Replace** the second sentence with the following::

Rejection of stockpiles can occur for the presence of foreign or deleterious materials, lack of uniformity, incomplete mixing in the asphalt mixture, adding to stockpiles, or moving RAP or RAS in a way not traceable through the QCP records and methods.

402.05

On Page 182, **Replace** the first paragraph with the following:

Notify District Testing before using and ensure the daily TE-199 Quality Control Report reports that WMA was used during production. Warm Mix Asphalt (WMA) is defined as asphalt mixtures produced with various technologies, including water foaming and chemical additives, that have the capacity to be used with lower production temperatures (below 300 degree F), but can also be used at normal production temperatures to achieve improved compactability, in-place density, and sustainability and without a diminution of short- and long-term performance. WMA technologies may be used to produce asphalt concrete. Specify the use of warm mix asphalt in the QCP for approval by OMM.

402.05.B

On Page 183, **Replace** the second paragraph with the following:

Chemical WMA may be used where WMA is allowed. Use chemical WMA additives on the approved list only at the recommended rates listed on the approved list. When chemical WMA is required by specifications for cold temperature paving, produce mix using HMA mixing temperatures. Ensure bill of lading from terminal and TE-199 documents that chemical WMA additive was used, the amount used, and the product name used.

402.06

On Page 183, **Replace** the entire section with the following:

402.06 In-line Blending of Modifiers and Additives. Provide in-line blending at the asphalt concrete mix plant of modifiers such as SBR polymer binders and additives such as liquid antistrips. Ensure asphalt concrete mix plants meet the following if the mix plant plans to use modifiers or additives. Include in the QCP what mix plant facilities will use modifiers or additives and how they

will be incorporated into the mix. Ensure modifier and additive rates are not consistently on the low or high side and adjust to meet target rate and note change on the TE-199.

Ensure in-line blending pumps and flow meters meet S-1053 and also meet or exceed the modifier or additive manufacturer's recommendations. Provide a written statement from the manufacturer that the pump and flow meter meet S-1053 and also meet or exceed the modifier or additive manufacturer's recommendations.

A. Post Blended SBR Polymer Binders. If an asphalt binder is modified by SBR at an asphalt concrete mixing plant, equip the plant with an automated SBR flow control and monitoring system. Obtain OMM's approval of the system before operating and demonstrate the system calibration to District Testing. If District Testing waives the demonstration, provide a letter documenting calibration data for the flow system to District Testing for each project. Obtain written approval from OMM for the use of SBR and ensure the QCP contains methods for properly controlling and sampling SBR binder blends.

For drum mix plants, introduce the SBR directly into the asphalt binder line through means of an in-line motionless blender or other device approved by OMM that is able to provide a homogeneous blend. Ensure the in-line motionless blender design provides aggressive interaction of asphalt binder and SBR emulsion to provide a homogenous blend at the sampling port. Do not use swirl type blend.

Locate a sampling valve between the in-line blender and the plant drum, at least 12 ft (3 m) downstream of the in-line blender and at least 5 ft (1 m) downstream of a piping elbow. Ensure the sampling valve port is at least 1 inch (25.4 mm) in diameter. Ensure the sampling valve can be opened quickly for maximizing sample flow for the purpose of obtaining a proper sample.

In place of an in-line sampling valve, a sample may be taken from a 3 to 5 gal (11 to 19 L) surge tank as long as the tank is downstream of the required blender and the in-line flow can be quickly and directly diverted to the surge tank.

Continue mixing for a minimum of 20 seconds after SBR is added and long enough to provide a uniform mixture.

Ensure the SBR pumping and metering system is capable of adding the SBR within the limits of 702.01. For drum plants ensure the SBR pump is automatically controlled by an independent computer and interfaced with the asphalt binder flow to automatically maintain the SBR flow within specification limits. Produce asphalt mixtures for placement in automatic SBR control mode only.

Ensure the SBR meter is a magnetic flow meter consisting of a metering flow tube which utilizes Faraday's Law of Induction to measure the flow and includes a transmitter to transmit the flow signal to a totalizer located in the control room of the asphalt plant. Obtain OMM approval for use of any other type of SBR meter. Locate the SBR meter downstream of any recirculation lines. Provide a means for removing the SBR line at the in-line blender to be able to obtain a sample of the SBR for calibration purposes. Ensure the SBR meter is accurate to ± 2.0 percent over a flow range typical of that used at the asphalt plant (typically 0.8 to 12 gpm (0.05 to 0.76 L/s) at drum plants and 10 to 25 gpm (0.63 to 1.58 L/s) at batch plants).

Ensure the totalizer displays total volume measured and flow rate in standard engineering units. Ensure the totalizer is interfaced with a data logger that produces printouts of the logged data every five minutes for a drum plant or every batch for a batch plant. Ensure the logged data includes time, date, flow rate, and flow total except flow rate is not necessary for batch plant production.

B. Liquid Antistrip Additives. Use liquid antistrip additives on the approved list only. When liquid antistrip additives are required by specifications, in-line blend at the asphalt concrete mix plant only according to Supplement 1053.

C. Chemical WMA Additives. When using chemical WMA additives, in-line blend according to Supplement 1053. In-line blending may occur at asphalt binder terminals as long as in-line blending equipment meets Supplement 1053 and the system is approved by OMM.

403

On Page 185, **Replace** Item 403 in its entirety with the following:

ITEM 403 ASPHALT CONCRETE QUALITY ASSURANCE

ITEM 403 ASPHALT CONCRETE QUALITY ASSURANCE

403.01 Description. This specification outlines the asphalt concrete quality assurance program including the contractor requirements for controlling asphalt concrete mixtures during production and construction through Contractor provided quality control (QC) and the Department Verification Acceptance (VA) program.

403.02 General. The Contractor is responsible for all aspects of process control and QC needed to ensure quality of the specified material, including but not limited to sampling, testing, inspecting, assessing, and corrective action to ensure the quality of the final product.

The Department is responsible for all aspects of quality assurance (QA) and independent assurance (IA) to ensure and verify the quality and acceptability of the final product. Independent (non-split) random samples are required for Contractor QC when those results are used in the acceptance decision, and for Department VA.

The Department will verify Contractor QC results by QC monitoring reviews and by Department VA sampling and testing. If the Contractor results cannot be verified, Department results will be used for acceptance and payment. If the Contractor fails to operate according to their Department-accepted Quality Control Program (QCP), the Department will accept asphalt mixtures by Restricted Acceptance.

Restoration of Contractor QC sampling and testing used for acceptance will be by the Department's Quality Control Review Group (QC Review Group) based on District recommendation and review of the Contractor problems, resolutions, and QCP. The QC Review Group consists of the Asphalt Materials

Engineer, Office of Materials Management (OMM); the Administrator, OMM; and the Pavement Engineer, Office of Construction Administration.

Acceptance does not relieve the Contractor of responsibility for supplying and installing a finished product conforming to all requirements of the Contract.

Supplement 1041 outlines the responsibilities and requirements for Contractor and Consultant employees engaged in all aspects of asphalt concrete production at any level, including, but not limited to, management, supervision, QC, plant operations, materials management, paving operations, and hauling truck drivers.

403.03 Quality Control Program (QCP). For each paving season create and execute a QCP. In the QCP cover processes conducted to provide an asphalt mixture at the paving site that is uniform in composition, conforms to the specification requirements and that when placed is free of any defect (ex. segregation, lack of mixture and texture uniformity, raveling, rutting, holes, debris etc.) within the Contractor's control at project completion. The intention of the QCP is not to copy and paste or paraphrase what is already in the specifications. It is expected that contractors that only place asphalt mix (i.e., paving contractors) also submit a QCP. A minimum of four weeks before mix production and placement, but no later than second Friday in January, submit a hard copy of the proposed QCP to OMM for review and acceptance.

Provide digital copies in a searchable formatted PDF, such as Optical Character Recognition. Convert files from Microsoft Office documents (printed or saved as a PDF) and other computer programs (e.g., plant control systems), including all appendices, as a single document with page numbering. Documents that are unable to be converted digitally without printing can be scanned into a PDF, however, the results must be digitally readable. Save digital files with the date of revision in the file name. Keep a copy of the Department's acceptance letter and the QCP in both the Contractor plant laboratory and the plant operation control room. A digital copy of the QCP and acceptance letter may be kept in each location provided that the QCP file icon is labelled with a descriptive file name that includes the revision date and is on the computer's desktop in each area. Remove out-of-date QCPs from the computer desktop. Updates to the QCP will require the entire QCP to be submitted with the updates and a summary of the changes. Send a hard copy and a digital copy of the acceptance letter and QCP to OMM and District Testing in every District in which work is performed.

Execute and comply with the Department accepted QCP. Failure to comply with the accepted QCP may result in removal of personnel in accordance with Supplement 1041, removal from VA, and adversely affect the Contractor's Prequalification rating.

For Contractors who produce and place material, include all sections in the order below and include the bold titles. For Contractors who only produce mix include sections A through M, S, and T. For Contractors who only place mix include sections A through C and M through T. As a minimum, include in the following in the QCP:

Make the first page of the QCP a front cover with the Company name(s) and logo, the construction year, a statement that this is their Quality Control Plan, and the revision date. Start the second page with the Table of Contents listing all the required sections below in the same order with page numbers and including Appendices. Name Appendices with letter and title of each section and include after the revision sheet.

A. Quality Control Personnel: Provide the Contractor's full name including main address, mailing address if different, phone number(s), email(s), and other information as deemed fit. Provide a table of organization (can be a hierarchy list) including company president, vice president, superintendents, Quality Control, Plant, and Paving Managers including area managers, and supervisors and note their designated responsibilities to meet QCP requirements. Include office and cell phone numbers, emails, office location if different than the main office, and Department approvals (e.g. Asphalt Level 2 or 3 and

FQCS). Provide the name of the Quality Control Manager holding a Supplement 1041 Level 3 approval for production and the names of FQCS for placement and who are company employees. Provide lists of approved Asphalt Level 2 and 3 technicians and FQCS technicians in Appendix A that includes expirations and a date showing when the lists were put together. Note any technicians that are consultants and the company that employs them.

B. Training: Document means for annual training including in ethical conduct according to company expectations of all company employees and consultants who are responsible for the mix design, production, testing, and placement of asphalt mix and their supervisors. Document how and when training is given, what the expectations are, how expectations are communicated and list the personnel classifications being trained. Describe the QC Manager's and supervisor's responsibilities and methods to ensure personnel are trained and ethical conduct is maintained throughout the year.

C. Review of QCP: Procedure for ensuring that every Contractor employee involved in the testing of asphalt mix, operation of the asphalt plant facility, and placement has read the QCP and has on site access to all applicable Department specifications, supplements, proposals, policies, and the current approved JMF.

D. Level 2 Lab Calibration: Procedures for equipment calibration and documentation for Level 2 lab equipment including calibration record storage. Ensure calibration intervals meet or exceed the Department requirements (Supplements, AASHTO, ASTM standards, and AASHTO R 18). Provide documentation that all Level 2 lab equipment has been calibrated at the time of the Level 2 lab approval inspection.

E. Asphalt Mixture Quality Control Sampling and Testing:

E1. QC Technicians: Assign Level 2 technicians for all Level 2 QC testing duties. Provide a list designating Level 2 technician responsibilities and expected actions. A list of technician names is not required in the QCP but shall be included in AWP. Ensure only approved personnel handle and test samples at all times. If Level 2 consultant technicians are used, include a document in the QCP listing designated responsibilities and expected actions (if different from employee expectations). Provide a copy of the document to the Level 2 consultant technician.

E2. Random Numbers: Provide and follow the procedure for determining random numbers for asphalt mix QC sampling and testing including additional sampling and full testing at the start of production. Track random numbers used. Include how random numbers are tracked and the frequency that they will be monitored and that processes are being done correctly (that they have an approximately equal distribution of results across the entire Lot or Sublot). Document how any misuse of the random number procedure is corrected and ensure future compliance.

E3. Labeling: Document and follow the procedure for labeling QC, calibrations, sublots, and split samples and testing done on the TE-199, TE-448, and TE-125. Include procedures for saving samples, including duration, and how samples will be destroyed and removed from the lab that are not required by specification (e.g., heat up pills in oven and bust open).

E4. Extra Testing: Provide and follow procedures, frequencies, and expectations (e.g., how will the extra testing help with ensuring the mixture conforms to the specification requirements) for extra testing (e.g., responses to poor test results or field mix problems, aggregate stock testing, reclaimed asphalt concrete pavement checks, additional moisture checks) and any other testing necessary to control materials not already defined in these Specifications. Include how these will be labeled on the Quality Control Report. If extra testing procedures do not follow Department procedures, provide step-by-step instructions for each test in Appendix E4. Note: District Testing may observe, review, and approve or disapprove the procedures at any time according to 403.06.E.

E5. Warning Band & Control Charts: Provide and use warning bands for all tests and give specific instruction how the warning bands and control charts will be used for tests in concert with 403.06.E, 403.06.F, Table 403.06.G-1 specification requirements. Include an example control chart according to 403.06.E in Appendix E5.

E6. QC Test Result Issues: Provide and follow step-by-step procedure of how QC technicians will handle mix that is in the warning band, out of specification including when multiple failures happen, and how these issues will be resolved (e.g., when air voids are out what adjustment(s) will be made, etc.). Flow charts may be used and provided.

E7. Recording: Provide how results will be accurately and correctly recorded and reported and who will be responsible for sending daily results to District Testing. If the role for sending daily results to District Testing is the QC technician, indicate QC technician (a specific name is not required). Provide copies of all test reports and forms used in the quality control process including any forms that would be used for handwritten data in Appendix E7.

F. Record Retention: Provide and follow methods to maintain all worksheets, including all handwritten records, and other test and sample records from all plant(s) and, or project(s) for a minimum of eight years. Define the test record retention process. Define company records retention requirements.

G. Asphalt Binder QC: Provide and follow procedures for handling and testing of the mix plant asphalt binder QC samples and subsequent corrective action of binder test failures of any sample (QC or Department). Include how samples will be labeled and stored. Failure to perform QC of asphalt binder samples is at the Contractor's risk. Any Department binder sample failures will result in penalties according to Supplement 1102. These include remove and replace, pay deductions, or other penalties for the asphalt mix represented by the Department's sample. The Department may take as few as one sample representing the entire course being placed according to C&MS 700.00.

H. Mix Plant Info: List of each mix plant name, mix plant number, AWP Facility ID, plant operator(s), phone number(s), email address(es) (if applicable), county the plant is located, physical address, mailing address (if different), and if plant is portable. For each mix plant also include the mix plant type including drum type (e.g., counter-flow, parallel flow, double barrel, mini drum, uni-counterflow), if applicable, plant operating system, the high and low operating tons per hour, number and size of storage silos, number and size of liquid asphalt binder silos or tankers, RAP processing method used, if the plant has the capabilities to in-line blend chemical additives (e.g. chemical WMA and liquid antistrips), if plant has WMA water injection system, RAP bin sizes and number of bins, and if RAS will be used. Provide copies of 5-minute printouts with labels showing the minimum criteria required according to Supplement 1101 with each computerized system used in Appendix H.

I. Quick Calibrations:

Provide expectations on when quick calibrations will be performed according to Supplement -1101 outside of the minimum frequency (e.g., mix production issues). Provide example quick calibration documentation forms in Appendix I.

J. RAP/RAS Processing: Provide and follow procedures to meet the processing, testing and documentation requirements for RAP and RAS in 402.04 including test forms, record keeping, technician responsibilities, and the following.

J1. RAP Processing: Include in the QCP methods of validating RAP properties when using concurrent project RAP. Include additional methods and procedures to dictate how the processing of RAP by means of fractionation or by additional in line processing will be accomplished for mix plants using Method 2. Specify documentation method for RAP pile measurements. Include any additional information about RAP or RAS processing and pile maintenance (e.g., if RAP piles are moved to other or shared between plants).

J2. RAS Processing: If RAS is used, include RAS usage methods before using RAS and include what Contractor requirements apply to the RAS processor. Include the Contractor's blending equipment type and operation and uniformity testing requirements for preblended RAP and RAS or RAS and virgin aggregate. If methods are different based on the mix plant, specify what plants follow what methods. Other methods must be approved by OMM prior to use on a project.

K. Material Verification & Handling: Provide and follow procedure and frequency for ensuring aggregates, RAP, and RAS piles, and asphalt binder source and PG grade (bill of lading and BOL load number) are reviewed against the running JMFs and record of review listing the above information be kept in the plant lab for the duration of the project. Means to meet the handling and storage requirements of 402.06 and asphalt binder suppliers for all asphalt binders.

L. In-Line Blending of Additives: Provide and follow processes outside of Supplement 1053 for in-line blending for chemical WMA additives and liquid antistrip additives (e.g., storing and handling additive during cold weather). Include procedure(s) to calibrate in-line additive pumps. Include a description of what chemical WMA additives and antistrip additives will be used at each facility (may be included in 403.03.H). Include example weight tickets with chemical WMA used according to 402.05.B and forms for dosing rate verification in Appendix L.

L1. 401.05 Cold Temp Production: Provide and follow procedure and processes for producing mix with chemical WMA for cold temperature paving according to 401.05 including how it will be communicated with District Testing when it will be used, how the target dosage will be determined, and corrective actions when mix issues occur (e.g., chunking or low density in the field). Address communication efforts and checks with paving company.

L2. Dosage Verification: Provide and follow procedures to ensure proper dosing rates are within tolerance according to Supplement 1053 and a corrective action plan when rates do not meet requirements.

M. Haul Vehicles & Mix Quality: Define who is responsible at each mix plant and at the paving site to meet delivered mixture uniformity/coating. Provide and follow specific methods for ensuring all haul vehicles meet all Department requirements including procedures for ensuring haul vehicles not meeting requirements are not used, that proper bed release products are used and checks to ensure non-approved release agents or products (i.e., diesel) are avoided, and that tarps completely cover all loads. Include immediate notification to the Department of non-compliance. Detail procedures of loading mixture to minimize thermal and material segregation.

N. Field Quality Control Supervisor (FQCS): Provide a Supplement 1041 approved FQCS who is a company employee that is routinely and usually at the paving site during placement of any permanent asphalt concrete pavement. Define the roles and responsibilities of the FQCS including how the FQCS will be determined when more than one person on the paving crew is a FQCS and what position on the crew (e.g., paving foreman) would likely be the FQCS.

O. Misc. Equipment for Paving: Provide and follow details on calibration and verification of asphalt distributors, tar kettles, and other equipment used for applying emulsions and hot applied materials (e.g., tack coats, longitudinal joint adhesive, VRAM).

P. 401.05 Cold Temp Paving: Describe and follow the extra steps (e.g., additional rollers, extra monitoring of density) planned for cold temperature paving, including any communication.

Q. Mix Paving Issues: Provide and follow a detailed description of how the FQCS will handle and correct all paving issues including segregation, tenderness, mat tears, debris, holes, low density, bleeding/flushing, not straight joints, poor tack coat, longitudinal joint sealant, VRAM application, and milling/planing irregularities like scabbing, etc. Include that the FQCS is to immediately communicate all issues to the Department.

R. Field Sampling & Coring: Provide and follow procedures for sampling, tracking, handling and documentation method for all sampling and testing at the project paving site including taking of all cores used for density determination or density gauge correlation. Describe the process for Supplement 1055 cores including who will run the cores for the Contractor and how the results will be reported back to the Supplement 1055 gauge operator. Ensure personnel obtaining and handling cores at the project site are approved Asphalt Level 2 technicians, FQCS or personnel approved by OMM or Office of Construction Administration.

S. Signatures: Provide the signature of the Quality Assurance Manager for both production and placement and, if different, the person in authority to enforce all operations covered by the QCP as outlined in this subsection.

T. Revision Sheet: Provide a revision sheet with the last 8 years of records. In the revision sheet include three columns: the first column being the date of the revision (matching with the revision sheet date); the second column is to list the section and page number being updated; and the third column is to provide a short description of what was revised, added, or removed. Highlight all revisions from the previous version to make clear to the Department what was revised or added.

Stone-Matrix Asphalt (SMA) Mixes: For 443 mixes, develop and follow a separate project specific QCP with the following additional information beyond the above sections in a single QCP and submit to OMM, District Testing, and the Engineer at least 3 weeks before the start of production for acceptance. Include production and placement. activities for the SMA. If separate companies produce and place the mix, collaborate to develop a single project specific QCP. Also, submit the already accepted QCP outlined above along with the project specific QCP. Provide a front cover for the project specific QCP that clearly indicates its use for SMA; the construction project number; the Company names(s) and logo(s); and the revision date. Provide a Table of Contents as the second page including page numbers and sections in the order below.

U. Quality Control:

U1. Manager and Technicians: List the QC Manager that will oversee production and their experience with SMA. Provide a list of approved Asphalt Level 2 and 3 technicians that will be present during production of the SMA and their experience with SMA sampling and testing.

U2. Testing Equipment: Provide additional equipment and calibrations to test SMA.

U3. Additional Testing for SMA: Describe what additional testing will take place. Include special testing worksheets to calculate the additional tests required for SMA in Appendix U3.

U4. Troubleshooting Production of SMA: Provide step-by-step details on what adjustments will be made if mix issues happen (e.g., segregation, draindown, fiber stabilizer clumps in mix, etc.)

V. Production: Provide the plant(s) that will produce the SMA and the experience the plant operator(s) has with SMA production. Include additional calibration procedures for the fiber stabilizer and verifying rates.

W. Placement of SMA:

W1. FQCS: Provide the FQCS that will oversee the placement of the SMA and their experience with placing SMA.

W2. Hauling: Provide any additional steps on hauling of the asphalt mix including special considerations related to haul distance, air temperature, etc.

W3. Project Specific Paving: Provide any additional steps that are specific to paving SMA for this project that will need special considerations (e.g., gore areas, hand work, pavement geometry, etc.).

W4. Test Strip: Provide details on placement of the test strip including any changes needed compared to non-443 mix placement.

W5. Troubleshooting: Provide step-by-step details on what adjustments will be made if mix issues happen (e.g., segregation, fat spots, bleeding/flushing, etc.)

X. Signatures: Provide signatures and dates of the QC Manager, Asphalt Level 3, Plant Operator, and FQCS so that they understand the SMA specification, their duties, and have read this project specific QCP and company QCP.

403.04 Testing Facilities. Provide testing facilities at the plant site conforming to Supplement 1041. Provide testing facilities and sufficient testing equipment and qualified staff that can handle the production at the plant, including multiple projects being produced during the same production day.

403.05 Asphalt Mixture Sampling. Sample and provide enough material to perform all required and requested testing by the Department. Follow sampling requirements as outlined below.

The District may require sampling and testing from the roadway according to AASHTO R 97, Subsection 5.9 (*Sampling from Roadway before Compaction*).

Report all sampling and testing on the Quality Control Report, as applicable (TE-125 for 301, 302, and 424 Type A or TE 199 for all other mixes) and when applicable the 448 and 449 Sublot Report (TE-448).

A. Quality Control (QC) Sampling & Testing. For QC sampling and testing, the Contractor's technician will randomly select the truck in which to take a sample by using a Department provided random number generator. For 448 and 449 sublots, the Department will provide the random number immediately prior to each sublot. The Contractor's technician will give no indication to anyone other than the Department of the time that the sample is to be taken. Include the random number, sample tonnage location, and time of sampling on the daily Quality Control Report with each test. with each test.

Random independent (not split) sampling and testing is required by Federal regulation. A single pattern of non-randomness will be a minor event as indicated in Supplement 1041 and a continued pattern of non-randomness will trigger a major event and Restricted Acceptance according to 403.11.

For QC 446, 447, and non-449 sublot samples, sample and test a minimum of one time for each 750 tons (680 metric tons) of asphalt concrete produced, or for any portion of 750 tons, for every production day.

For 448 and 449 sublot sampling and testing, the sublot sample will be the QC sample as described below. For low production days where a sublot sample is not generated, sample and test one random QC sample.

A production day includes the period of time from when mix production begins to the time the last load of asphalt leaves the asphalt plant, either from the mix drum or from any storage silo. Any planned break in plant production to accommodate a new work shift triggers a new production day.

Perform random additional sampling and full testing beyond the minimum specified for QC during the first three days of production. These samples will be called 'Additional Tests' and are required. All tests are required to be reported on the Quality Control Report.

Extra sampling and testing are at the Contractor's discretion according to their QCP and are considered process control. All tests are required to be reported on the Quality Control Report. Contractor process control sampling and testing do not need to be random and cannot be used for acceptance.

If samples are split, test all samples taken. Split samples are for process control or troubling shooting differences in Department and Contractor results and cannot be used for acceptance. When split samples are requested, provide a clean area of sufficient size and a hard surface to perform sample splitting at the testing facility. Split samples by quartering and recombining only as described in AASHTO R 76, Method B for hard surfaces for the Department and Contractor's sample. Alternately, use a mechanical splitter according to AASHTO R 47, Type A, followed by the quartering method. The split sample size required is generally 22 to 27 pounds (10,000 to 12,000 g). A mechanical quartering device approved by OMM

may be used in lieu of the above but only split according to the procedure outlined in the Contractor QCP. Wrap and label split samples as process control, the Lot Sublot, time, location (tonnage), and accompanying Contractor test identification. The Monitoring Team will pick up all Department samples within four work days. Sample mishandling (careless identification, changing sample size, consistency, or pre-testing) will result in a change to Restricted Acceptance.

B. Sublot Sampling and Testing. For 448 and 449 acceptance mixes not including 301, 302, and 424 Type A mixes, conform to the procedures of Supplements 1035, 1038, 1039, and 1043. Use 3000 tons (3000 metric tons) Lots and 750 tons (750 metric tons) Sublots. However, when production is limited to less than 3000 tons (3000 metric tons), the quantity produced will be considered a partial Lot, unless otherwise approved by District Testing or OMM. For partial Lots of 1500 tons (1500 metric tons) or less sample and test at least two sublot samples regardless of the tons produced. The Department will provide the random number for the sublot immediately prior to each sublot sample. It is the responsibility of the QC technician to ensure they have the sublot sample and immediately notify the Monitoring Team if they do not have one.

Sublot samples will be considered QC samples and will have full testing performed as outlined in 403.06. The test results will apply for both QC and sublot requirements.

Test all sublot samples from locations selected by the Monitoring Team or Engineer. A change in the location of the Sublot sample must be approved by the Monitoring Team and be reasonably close to the original location. This location allowance does not apply to any other samples including Department VA sample locations selected by the Monitor.

Record all sublot test data on form TE-448 in addition to the Quality Control Report.

C. Small Quantity. Small Quantity (SMQ) sampling and testing will be allowed for Contractors with an accepted QCP according to 403.03 and for facilities not on Restricted Acceptance. SMQ is only allowed for JMF's that have been properly offset according to Supplement 1043, show documented acceptable comparison testing according to 403.06 and 403.10, and do not represent a 448/449 sublot sample location. Notify District Testing a minimum of 24-hours prior to testing of any SMQ material unless otherwise authorized by District Testing. The total production per project for each mix type is not to exceed 750 tons or 20 percent of the mix type bid quantity tonnage, whichever is less.

District Testing can sample, test and reject any material received under this procedure. Material may be rejected by visual inspection by the Department or rejected through Department verification testing. Poor plant or mix control, poor mix performance, poor mix quality, failure to submit the required forms as required, or ongoing District sample failures can result in disallowing further use of this procedure on the project and future projects. This procedure may be disallowed by the Department for any Contractor's facility when documented premature SMQ mix failure in any application has occurred on the Contractor's previous project(s).

When material is being produced under this procedure and has a quantity of less than 150 tons per production day for each mix type, no QC sampling or testing is required, and the acceptance is by Contractor certification as outlined below. A Department Level 2 or 3 technician must be present to verify the mix in the haul trucks is acceptable, not visually segregated, well coated, and is within an acceptable mix temperature. Any mixture sent to the paving site greater than 150 tons that does not have adequate QC testing will be considered non-specification material and subject to removal.

A quick check plant calibration must have been performed in accordance with the Contractor's QCP as outlined in 402.03. Computerized plant operation tickets, a copy of the dated and signed quick check calibration(s), and a TE 199 SMQ form must be submitted.

The required SMQ information must be submitted by the Contractor to District Testing by the end of each production day unless otherwise authorized by District Testing. The TE-199 SMQ form will be

signed by an employee of the Contractor having authority to represent the Contractor as outlined in the Contractor's QCP. The TE-199 SMQ form will be sent to the Project Engineer and District Testing.

Failure to follow the procedures outlined above may result in the removal of SMQ use for the mix plant facility. Ongoing issues occurring company-wide may result in the removal of SMQ acceptance for the company.

403.06 Quality Control Tests. Prior to each production day, determine the moisture content of each aggregate, RAP, and RAS stockpile to be used in the JMF according to AASHTO T 255 and ensure the moisture contents are entered into the mix plant controls. Retest stockpiles after weather event prior to resuming production day and as outlined in the Contractor's QCP.

Perform process and QC tests on all samples to control the asphalt concrete mix within the specifications and report each test result according to Table 403.08-1. As a minimum and as required by mix type, ensure that these QC tests measure the asphalt binder content, gradation, air voids, Maximum Specific Gravity (MSG), and any additional testing according to the Contractor's accepted QCP. Perform only asphalt binder content and gradation testing for 301, 302, and 424 Type A. Ensure QC tests for asphalt binder content and air voids are not consistently on the low side or high side of JMF and adjust the mix within the tolerances allowed by the specification.

Perform additional process testing, QC sampling and testing, or both, over the minimum required, during production when the QC tests show the asphalt concrete being produced is outside the warning bands in the Contractor's QCP. Immediately resolve problems indicated by any test result exceeding the warning bands and immediately retest a sufficient number of samples to validate corrections have returned the materials to within the warning band limits. The Contractor may determine the method of testing the asphalt concrete beyond the minimum specified contractually according to the details and the methods technicians will follow in the Contractor's accepted QCP.

Should additional testing as required above not be performed, District Testing, after consultation with OMM, will require the testing frequency to be increased for the remainder of the project. If this occurs, District Testing will request an opinion from the QC Review Group for action(s) against the technician, Contractor, or both including but not limited to warning, removal, or a change of the facility to Restricted Acceptance.

Record the results of every test performed, including failed tests.

Perform the required QC tests, control charts, and test requirements as follows:

A. Asphalt Binder Content. Determine the asphalt binder content of a sample of asphalt concrete by performing an Asphalt Content (AC) Gauge test according to Supplement 1043. Make all printouts available for review by the Monitoring Team at any time. Offset the AC Gauge for each JMF on each project at the start of the project. Perform the offset using the solvent extraction method for every QC sample according to Supplement 1038 and the AC Gauge Verification and Offset Record until the offset is established. Use solvent extraction according to Supplement 1038 when an AC Gauge problem exists and for testing cooled samples that cannot adequately be tested in an AC Gauge test.

Total, for each day's production, the flow meter printouts for SBR polymer added at the asphalt concrete mixing plant. Calculate the percent of polymer versus neat asphalt binder in the mix each day and record values on the Quality Control Report. Provide calculation worksheets and printouts in the plant laboratory for review by the Monitoring Team. A +/- 0.2 percent tolerance from the target amount of SBR polymer will be used as a guide for an acceptable amount of SBR polymer, but consistently low values will not be acceptable. Only take SBR PG-Modified Binder samples using a five-gallon (19 L) bucket. Take 1 gallon (4 L) of binder to clean the valve port and discard it. Take 2 gallons (7.5 L) of binder, stir its contents and transfer it to the required sample containers.

Determine the moisture content of the asphalt concrete for each AC Gauge test according to Supplement 1043. Maintain the moisture content at 0.80 percent or less.

B. Gradation. Perform the gradation test on aggregate remaining after removing the asphalt binder with a solvent from an asphalt concrete sample used in an AC Gauge test (solvent sample) or on aggregate remaining after removing the asphalt binder with a preapproved asphalt ignition oven according to Supplement 1054 and from an asphalt concrete sample used in an AC Gauge test (ignition oven sample). For asphalt concrete samples with polymer modified PG Binder use only an asphalt ignition oven to obtain aggregate gradation results. District Testing may make an exception to this for SBS polymer if no issues arise. Correct each solvent sample for ash. Perform all other gradations on solvent samples, ignition oven samples, or on samples obtained according to the Contractor's accepted QCP.

The gradation results of all the sieves must be representative of the JMF. If the Contractor fails to control the entire gradation, the Department may require a redesign according to 440.

When the F-T value is specified for a mix, calculate it for each gradation analysis. Maintain the F-T value at +4 percentage points or less for these mixes during production.

Calculate the F/A ratio for every solvent sample or ignition oven sample analysis. Maintain the F/A ratio so no F/A ratio is greater than 1.2 for all mixes. Use the effective asphalt binder content determined by the AC Gauge for calculating the F/A ratio. For 302 mixes, use total asphalt content determined by the AC Gauge. Calculate the effective asphalt binder content according to the Department's Asphalt Level 2 procedures. Use MSG from the production mix test. Use the combined Gsb value based on bin percentages during the time the sample was taken. Calculate the effective asphalt binder content on the calculation sheet using the asphalt binder content determined by the AC Gauge and attach it to the Quality Control Report. If the F/A ratio is greater than 1.0 for ignition oven samples, calculate the F/A ratio using the percent passing the No. 200 (75 µm) sieve from a washed gradation of the ignition oven sample according to AASHTO T 30.

C. Air Voids and MSG. Determine the air voids of the asphalt concrete by analyzing a set of compacted specimens and a corresponding MSG determination according to Supplement 1036. Use a Marshall or gyratory compactor meeting the requirements of Supplement 1041 to compact specimens. If the compactor was moved to the plant before production, calibrate it and present the results to District Testing for acceptance. Ensure that the cure temperature and specimen compaction temperature are the same. Use a 1-hour cure for all mix samples used in air voids analysis. The Contractor may use a 2-hour cure time if voids are consistently near the low air void warning band. When a 2-hour cure is used, notify District Testing and OMM and use the 2-hour cure for all air voids testing through the remainder of the project, and record the cure time and temperature on the Quality Control Report. Use the approved JMF lab compaction temperature. Do not reduce lab compaction temperature for warm mix asphalt. Use a compaction temperature tolerance of +/- 5.0 ºF (3.0 ºC). Compact specimens to design blows or Ndes. Record on the Quality Control Report if the mixture produced was run at the asphalt plant as a hot mix asphalt (HMA) or as a warm mix asphalt (WMA) produced according to 402.05 or another approved method.

Calculate the Voids in Mineral Aggregate (VMA) value for every set of compacted specimens according to Supplement 1037.

Calculate the average of all the MSG determinations performed each production day and report this average on the Quality Control Report. When the range of three consecutive daily average MSG determinations is equal to or less than 0.020, average these three average MSG determinations to determine the Maximum Theoretical Density (MTD). Exclude the MSG in the daily average MSG if the sample did not meet the requirements in Table 403.06.G-1. After the MTD is established, compare all individual MSG determinations to the MTD.

D. Other Requirements. Perform an APA test once each day for the first 3 days according to Supplement 1057 if the produced mixture requires an APA test. Compact the sample the same day the sample was taken, cure it overnight, and test it the following day. Give the test result and sample density to District Testing the day of the APA test. Report the APA data on the Quality Control Report.

Retain all QC samples for each AC Gauge test and MSG test and all compacted specimens for review by the Department for at least two days for AC Gauge tests and at least seven days for MSG and compacted specimen samples unless directed otherwise. Maintain MSG samples in the state described in AASHTO T 209, Section 7.3 and keep sample at room temperature.

Measure the temperature of the mixture and record the value. Validate the results on the load tickets at least once during each hour of production.

The Contractor may conduct extra process control testing of any type. Record all extra testing along with all other quality control records and have these records readily available for the Monitoring Team's review. District Testing may observe, review, and approve or disapprove the procedures at any time.

E. Control Charts. Maintain up to date control charts showing each individual test result and the moving accumulative range as follows for all mixes:

1. Plot tests showing the percent passing for: 1/2 inch (12.5 mm), No. 4 (4.75 mm), No. 8 (2.36 mm), and No. 200 (75 µm) sieves, the percent asphalt binder content, the MSG, percent air voids, the VMA, the Gmb, the produced mixture Gsb, the effective specific gravity of combined aggregate blend (Gse), and aggregate bin percentages, including baghouse fines.

2. Show the out of specification limits specified in 403.06.F and Table 403.06.G-1 and QCP Warning Band Limits on the control charts. Additionally, for MSG show the established MTD range limits.

3. Label each control chart to identify the project, mix type and producer.

4. Record the moving accumulative range for three tests under each test point on the chart for air voids, MSG, and asphalt binder content. Accumulative range is defined as the positive total of the individual ranges of two consecutive tests in three consecutive tests regardless of the up or down direction tests take. If more than the minimum required testing (i.e. 750 tons per sample per production day, 403.05.A) is performed do not include the result in accumulative range calculations.

Regularly calculating and tracking Percent-Within-Limits (PWL) is suggested to assist in determining process control and QC effectiveness and for identifying potential areas that need additional attention (e.g., low PWL values for any material characteristic). For PWL calculations reference AASHTO R 9 or the Federal Highway Administration's Standard Specifications for the Construction of Roads and Bridges on Federal Highway Projects ("FP-24"), Section 106.05, and use the material characteristic specification limit(s) for upper limits, lower limits, or both.

Make all charts available for review by the Department.

F. Test Requirements for 301, 302, and 424 Type A. Control mixes as follows:

1. If a single asphalt binder content is more than ±0.50 percent beyond the JMF, immediately take and test an additional sample.

2. If the Range difference in any three consecutive asphalt binder content tests is greater than 0.70 percent for 302 mixes or 0.60 percent for 301 and 424 Type A mixes immediately notify the Monitoring Team. Range is defined as the difference between the largest and the smallest test result.

3. If the Range difference in any three consecutive gradation tests for the No. 4 (4.75 mm) sieve is greater than 10.0 percent, immediately notify the Monitoring Team.

4. Maintain gradations within design limits of mix type.

5. Maintain a minimum of 7 percent retained on the 1 inch (25.0 mm), ¾ inch (19.0 mm), ½ inch (12.5 mm), and 3/8 inch (9.5 mm) for 302 mix.

Stop production and immediately notify the Monitoring Team when either 6 or 7 occurs:

6. If two consecutive asphalt binder content tests are more than ± 0.50 percent beyond the JMF, notify the Monitoring Team and cease production until the problem is corrected.

7. If Range deviations as specified in 2 or 3 continue, cease production.

Any mixture sent to the paving site without stopping production and notifying the Monitoring Team, when required by this specification, will be considered non-specification material.

G. Test Requirements for all other mixes. Control all other mixes in accordance with Table 403.06.G-1 and as follows:

TABLE 403.06.G-1

Mix Characteristic	**Out of Specification Limits[5]**
Asphalt Binder Content[1]	-0.30% to 0.30%
1/2 inch (12.5 mm) sieve[1]	-6.0% to 6.0%
No. 4 (4.75 mm) sieve[1][8]	-5.0% to 5.0%
No. 8 (2.36 mm) sieve[1]	-4.0% to 4.0%
No. 200 (75 µm) sieve[1]	-2.0% to 2.0%
Air Voids[2]	2.5% to 4.5%
Air Voids[3]	3.0% to 5.0%
MSG[4]	-0.012 to 0.012
F/A	1.2 max
F-T	+4 max[6]
VMA	Design – 0.5%[7]

[1] Deviation from the JMF
[2] For Design Air Voids of 3.5%
[3] For Design Air Voids of 4.0%
[4] Deviation from the MTD
[5] Unless otherwise restricted by mix type specification
[6] When specified for mix type
[7] Reduce VMA production minimum 0.5% from minimum design VMA (e.g., minimum design VMA for a 442 19.0 mm is 13.0 and the minimum during production will be 12.5%)
[8] For 442 12.5 mm mixes do not exceed 63% max during production

Stop production and immediately notify the Monitoring Team when either 1, 2, or 3 occurs:

1. Any two tests in a row or any two tests in two days are outside of the specification limits of Table 403.06.G-1. Do not shut down during the first three days of production for VMA unless two VMA tests in a row are outside specification limits.

2 Any two tests in a row or any two tests in two days (QC and 448 and 449 sublot) exceeding 63 percent passing the No. 4 sieve for 442 12.5 mm mixes.

3 Any four consecutive moving accumulative ranges greater than specification limits of 2.50 percent for air voids or 0.60 percent for asphalt binder content occur.

Any mixture sent to the paving site without stopping production and notifying the Monitoring Team, when required by this specification, will be considered non-specification material.

H. Load-and-Hold Testing and Restart of Production. Perform a load-and-hold procedure by producing the mix and performing full testing if production is stopped due to a plant shutdown from failing test results. Demonstrate to the Department that the plant can produce the JMF conforming to the appropriate mix specifications. Provide notification of the date and time of the scheduled load and hold testing that is mutually agreed upon by the Contractor and the Department. Provide full test results to the Department including any plant or mix changes to correct all deficiencies. The Department will review the results to determine if production may continue. Do not restart production until an adequate correction to remedy problems is in place and the Monitoring Team is satisfied. Determine root-cause(s) for problem(s) and take immediate action to resolve when there is a lack of Department satisfaction with mix quality or control. When production problems cannot be solved within one day after a plant shut down a contractor's representative holding Level 3 Asphalt Department approval is required to be at the asphalt plant until a full production day is achieved with results satisfactory to the Monitoring Team. If deficiencies cannot be corrected, the Department may opt to rescind the JMF according to 403.09.

Multiple load-and-holds at a mix plant facility may result in the Department requiring the Contractor to prove that the mix can be produced and meet specifications on non-Department and non-LPA projects at the cost to the Contractor before being permitted to proceed producing for the Department or LPA projects.

403.07 JMF Field Adjustments. During the first three days of production the Contractor may adjust the JMF gradation within the below limits without a redesign of the mixture. For projects with less than 3 days of production, give District Testing written notice of any JMF gradation adjustments within 1 workday following the last day of production. Limit adjustments of the JMF to conform to actual production, without a redesign of the mixture, to ±3 percent passing each of the 1/2 inch (12.5 mm), No. 4 (4.75 mm), and No. 8 (2.36 mm) sieves and ±1 percent passing the No. 200 (75µm) sieve. Do not exceed the limits in Table 424.02-1, Table 441.02-1, Table 442.02-2, and Table 443.03-1 in the adjusted JMF. Do not exceed five percent adjustment for each individual aggregate. RAP may be reduced up to five percent (virgin AC would go up to meet total AC) and maintain the original JMF virgin PG grade (e.g., going from 30 percent to 25 percent would still require a PG 58-28). Determine the need for any JMF gradation adjustments in the time specified. Should no adjustments be made, the Department will base acceptance on conformance to the original JMF. After the time period specified, the Department will not allow additional adjustments to the JMF.

Should a redesign of the mixture become necessary, submit a new JMF according to the requirements for the initial JMF. A new acceptance lot begins when a new JMF established by a redesign of the mixture becomes effective. Make any adjustment of this new JMF as provided for the original JMF. Record both the design JMF and the adjusted JMF in effect during production of an acceptance lot on the Quality Control Report for that lot. In the event that a new JMF is proposed, tested, and approved, also make a notation on all tickets for the first day's production under the new JMF.

403.08 Quality Control Reports. Record all test results and sample identification on the Quality Control Report including the random number, sample tonnage location, and time of sampling with each test. Record on the Quality Control Report if the mixture produced was ran at the asphalt plant as a hot mix asphalt (HMA) or as a warm mix asphalt (WMA) produced according to 402.05 or another approved method. Also record if antistrip additives were used, dosage rate, the daily quantity used, and copies of the yield checks according to Supplement 1053. After startup adjustments, report any plant operation changes on the Quality Control Report. Ensure that these documents contain technician comments as to production quality, input materials received and condition, and include any other process or QC activities as specified in the QCP. Document all decisions regarding responses to test results on the Quality Control Report. (referring to the particular test), including reasons why a particular problem may exist, what action was taken to correct the problem (plant operation or testing), and what communication with Department personnel took place. Attach computerized plant printouts representing samples tested to that day's report, if desired by the Monitoring Team, or otherwise keep them with the quality control records.

Ensure that the technician records the test results for the AC content and percent passing the No. 4 (4.75 mm) sieve on the plant printout from the tonnage the quality control sample was taken. Keep remaining printouts and a copy of all QC reports in the plant laboratory for the duration of the project after which they may be transferred to an office location for records retention.

Deliver (fax, e-mail, hand) completed Quality Control Reports to District Testing by the end of each day in which testing is conducted. If desired by District Testing and always for unsigned E-mail versions, mail the originals. Ongoing problems with submitting reports on time may also result in the plant not being able to produce until the report is submitted with adequate time for review by District Testing. Ongoing problems with inadequate, incomplete, or illegible reporting will result in a change to Restricted Acceptance. The Contractor's technician must sign each Quality Control Report. Retain copies of all records documenting the quality control inspections and tests as outlined in the Contractor's QCP according to 403.03.F and furnish them to District Testing on request.

Provide delivery tickets of liquid or hydrated lime antistrip additive, if used, to District Testing at the end of the project and at the end of each construction year on a multiple year project. Provide the following information for each shipment: letter of certification, production date, shipment date, shipment destination, batch or lot number, and net weight. The District Testing will verify the weight (in pounds) of antistrip additive used is within 10 percent of the calculated amount of antistrip additive required for the total weight of asphalt binder, based on the produced JMF. The Department may obtain samples of the hydrated lime at any time to verify quality. If the quality of the hydrated lime is in question, the Department may require independent laboratory testing.

Report test results to the accuracy of the following decimal places. When the figures to be dropped in rounding off are exactly one-half of unity in the decimal place to be retained, round the value up to the nearest number in the decimal place to be retained.

TABLE 403.08-1 REPORTING ACCURACY

	Single Test	**Average**
Asphalt Binder Content, Effective Binder Content (PBE)	0.01	0.01
No. 200 (75 µm) sieve	0.1	0.1
Other sieves	Whole number	0.1
BSG, MSG, MTD, GSB, GSE	0.001	0.001
Air Voids	0.1	0.1
VMA	0.1	0.1
F/A	0.1	0.1
F-T	Whole number	Whole number
Mix Moisture Percent	0.01	0.01
APA, inch (mm)	0.0004 (0.01)	0.004 (0.1)

Additionally for 448 and 449 acceptance mixes (excluding 301, 302, and 424 Type A), track the Sublot and Lot tonnages through the project and identify on the Quality Control Report each random Sublot test as to Lot number and Sublot tonnage location. In addition to the Quality Control Report and submit form TE-448 with lot identification and actual sieve weights for each Sublot sample from the technician's gradation worksheets.

403.09 Mixture and Placement Deficiencies. The Contractor is responsible for controlling all production processes to assure the Engineer that the mixture delivered to the paving site is uniform in composition, within the specification requirements and limits, conforms to the JMF, and that the placed mixture is free of any defect (ex. segregation, tenderness, lack of mixture and/or texture uniformity,

raveling, flushing, rutting, holes, debris etc.). Correct pavement problems according to 401.08. If the Department has any suspicion that other mixture composition or pavement problems exist, the Monitoring Team will conduct an initial investigation through review of data, sampling of the asphalt pavement, or both. Should a Department investigation determine that the Contractor's QCP is not controlling the mixture in a manner to achieve mixture quality as described above, the Contractor's QC test results, and corresponding pavement quality may be rejected. In that case the Department will conduct a thorough investigation by testing samples from the roadway and use those test results in determining disposition of the non-specification material.

A mixture is not uniform in composition if multiple non-specification individual tests or any four consecutive non-specification moving accumulative ranges exist. The mixture can be rejected, production can be stopped or a redesign can be required by the Department. OMM will not approve any redesign it determines is unsatisfactory to provide acceptable mix performance. Submit this new design for approval according to 440 and at no additional cost to the Department.

When any Contractor QC tests are out of specification and not within the limits of 403.06.F and Table 403.06.G-1, material that is sent to the paving site, the Engineer in conjunction with District Testing or OMM will determine disposition of the material according to Supplement 1102.

403.10 Verification Acceptance (VA). The Code of Federal Regulations requires independent random sampling and testing for acceptance through verification sampling and testing; and requires evaluation with an independent assurance (IA) program.

District Testing will perform VA by testing independent random samples. If the independent random Department VA sampling and testing verifies the accompanying Contractor tests, the individual and average of the Contractor's quality control tests will be used to determine acceptance as follows:

- For 449 acceptance mixes (301, 302, and 424 Type A) according to 449.04.A - Each production day;
- For 448 and 449 acceptance mixes - Average of the Contractor's tests for each Lot according to 448.04 and 449.04 B, respectively;
- For 446, 447, 448, or 449 acceptance mixes - Daily average MSG (other than 301, 302, and 424 Type A).

A. Monitoring. The Department will establish District Monitoring Teams for the purpose of verifying all Contractor mixture production processes. Verification will be accomplished by obtaining independent random samples from the plant or roadway. Split samples may be used to help isolate differences in test results resulting from a technician performing the test or equipment but cannot be used for verification of Contractor QC results or acceptance.

B. Sampling. The Department will perform VA by sampling and testing independent samples a minimum of one in every four production days to verify Contractor sampling, testing, and mix control. The Department will determine where the sample is taken. One day may be added to the above Department sample testing frequency for each production day that is less than 500 tons (450 metric tons). In addition to the above, for 446 and 447 acceptances, the Department may take a daily sample for asphalt content and the sample may also be utilized for gradation and MSG. The Department can require samples from the plant or project site (hopper, plate or truck).

The Department may take additional samples including split samples, to determine plant operation and equipment, and personnel process control functionality, effectiveness, proficiency, and isolating variability and for additional verification of Contractor QC or as desired. Other properties can be tested by the District as desired.

The Department will sample or require the Contractor to sample with the Monitor witnessing sufficient material to perform all the tests. If the Contractor desires, enough material will be taken or

provided to obtain three split samples: one is the Contractor split for information purposes only; one is the Department split for verification acceptance; and one is the referee split for dispute resolution. If requested, provide the Monitor access to split the sample at the plant facility. If the Contractor takes the sample for the Monitor, the Monitor or Department must witness the entire sampling process and must take immediate possession of the Department's verification and referee samples. The Department will take immediate possession of the Department and referee splits and deliver them to District Testing.

District Testing or OMM will also perform independent assurance (IA) monitoring and testing of QC technicians and for projects from independent assurance samples (IAS) or split samples.

The Contractor's portion of the Department's VA split sample or IAS results are for informational purposes only and cannot be used for quality determination, verification, acceptance, or payment (Federal regulation 23 CFR 637).

C. Department Verification Testing and Monitoring. All Department VA or IAS samples will be prepared by the Monitor (e.g., material for nuclear gauge pans or MSG) and tested at District Testing or OMM using Department equipment.

All VA samples will be tested for asphalt content and gradation. The Department will also perform MSG testing on VA samples on all mixes other than 301, 302, and 424 Type A.

Record the results, date tested, and technician performing the testing, and include in District Testing project record.

The Contractor may test the split of the VA sample with the Monitor witnessing

The Department will use its VA test results and the Contractor's production day QC individual and average test results or sublot tests in the comparison for the Department VA testing.

The Department can use QC split samples to investigate contractor data but they cannot be used as VA samples. The results will be compared to the Contractor split using tolerances in Table 403.10-1.

TABLE 403.10-1 DEPARTMENT VERIFICATION ACCEPTANCE

Percent Asphalt Binder[1] [2]	**Percent Passing No. 4 (4.75mm)** [1] [2]	**MSG Comparison** [3]
± 0.30	± 4	0.010

[1]District VA mix test deviation from the approved JMF.
[2]District VA mix test deviation from that production day QC test result and/or individual and average lot testing results.
[3]Deviation of District MSG VA compared to QC MSG daily average for all asphalt pavement mixture types except 301, 302, and 424 Type A. mixtures.

If the Department VA tests confirm Contractor testing is within the verification tolerances, but a pattern of high or low results exist that suggests mix control is not at the approved design JMF, then investigate with the Monitoring Team to correct the problem to the Monitoring Team's satisfaction. Direct any questions regarding interpretation of circumstances to OMM in writing.

If the Monitor witnesses the Contractor's portion of the Department's VA split sample being tested, the results may also be utilized as an IAS sample.

D. Contractor QC Tests are Acceptable and Verified. Production is acceptable if:

1. The Monitoring Team determines that the Contractor's QCP is being fully followed; and

2. The Department VA tests verify contractor QC testing and both results are within the limits specified in 403.10.C; and

3. For 301, 302, and 424 Type A mixes, the remaining sieves do not exceed the limits of the applicable specification.

Failure on the Contractor's part to respond and resolve Monitoring Team concerns may result in a change to Restricted Acceptance.

Acceptance is according to 446, 447, 448, or 449.

E. Contractor QC Tests Not Acceptable or Verified. If the Department VA test is not within specification, tolerance limits, or does not verify the accompanying Contractor QC tests within the verification tolerances of Table 403.10-1, immediately cease production until resolved. Investigate to the Department's satisfaction.

The Monitoring Team, District Testing, or OMM may choose to participate in determining the cause of non-verification or out of specification results. Until fully resolved, the Department results will be utilized for acceptance.

The Contractor may dispute the results within seven calendar days with written notification to the Department as to why the Contractor believes the Department's VA results may be erroneous with supporting documentation and testing (which could include historical test data). If Contractor documentation and testing adequately supports their tested results as determined by OMM, the referee sample will be sent to OMM. for dispute resolution. The Department will deliver the referee sample to OMM. The results closest to the referee sample results will be used in acceptance.

If the Contractor's written request for referee testing is accepted The Department may allow District Testing to investigate a non-comparison or out-of-specification material issue by testing the Department's VA sample at the Contractor's mix plant lab to determine if the non-comparison is from Contractor testing (technician or equipment). If this material is found to verify the original Department's VA results, the referee sample will be sent to OMM for dispute resolution. If this material does not compare with the Department's VA results, then the Department's initial results will be utilized for acceptance.

If a Contractor's MSG test result is not verified by Department MSG VA testing according to the tolerance in Table 403.10-1, the Department's corresponding MSG for that production day and every day back to when the Contractor's MSG was verified by the Department's MSG VA will be used for each 446, 447, 448, or 449 acceptance mixes (other than 301, 302, and 424 Type A Day/Lot density and QC air void determination). If an independent VA plant sample is not available, the Department may test MSG from a random independent field sample or road cut sample for Department VA testing.

The Contractor may occasionally request a review with the Department for the purpose of determining the cause of a verification comparison problem. Department decisions upon review are final. If a Contractor is requesting a review of every occurrence of lack of comparison and the Department test is predominantly found correct, the Department may deny that Contractor further reviews until the Contractor has determined the root-cause of the problem and made corrections to prevent it from recurring.

TABLE 403.10-2 DEVIATION LIMITS

Property	Mix	Limits
Asphalt Binder Content	All	±0.50 %
No. 4 (4.75 mm) sieve	All, except 302	±6.0%
	302	±7.0%

Additionally, stop production and perform additional tests to aid in problem solving if ongoing Department VA tests do not verify. . Document the resolution and root cause. If needed, contact OMM for assistance in resolving problems.

F. Contractor Department VA Removal and Restoration. For 446 and 447 MSG, for a given Contractor facility, if in a series of eight or more Contractor/ Department MSG comparison tests (VA, Monitoring tests) the Contractor MSG is lower than the Department MSG by more than 0.002 or low MSG comparisons that occur more than 65 percent of the time, the facility will be removed from Department MSG Verification Acceptance and operate under 403.11.

The District will request an opinion from the QC Review Group before notifying the Contractor of removal from Department VA if repeated problems occur with: poor comparison of tests originating from Contractor sampling or testing (not the District); poor comparison of Contractor tests to the JMF; plant operation; source materials; or any of the other requirements of Department specifications regardless of whether they occur in a single project or successive projects. The District will immediately notify the Contractor of the removal with a follow up letter from District Testing. Once notified, acceptance of asphalt mixtures is by Restricted Acceptance. Restoration of the VA procedures may occur on a future project with a District recommendation to the QC Review Group based on consistent improved plant operation and mix control, a review of the Contractor problems and resolutions, and a review of the QCP by the QC Review Group.

G. Dispute Resolution for 446 and 447 cores. The Contractor may dispute the results of District Testing core results within seven calendar days with written notification to the Department as to why the Contractor believes the Department's results may be erroneous with supporting documentation and testing (which could include historical test data). If Contractor documentation and testing adequately supports their information as determined by OMM, the Department's core(s) will be delivered to OMM by District Testing. Do not cut more cores unless the Department feels the cores were damaged prior to the original District Testing core results. If OMM BSG core test results differ by more than 0.010 from District Testing results, OMM results will be used in the calculation of the pay factor. If not, then the original District Testing core results will be used.

The Contractor may occasionally request a review of District Testing results. However, if a Contractor frequently requests a review of District Testing core results and the District Testing results are predominantly found correct, the Department may deny that Contractor further reviews. Department decisions upon review are final.

403.11 Restricted Acceptance. If the Contractor is removed from Department VA, the following will occur.

The Contractor must bring its QCP and operation to a level acceptable to the District, OMM, and QC Review Group before production continues. District Testing will ensure that the project C-95 (Contractor's Prequalification Rating survey) reflects the change to Restricted Acceptance in all of the appropriate C-95 categories. The Department will accept all material for Department projects from the facility under Restricted Acceptance. SMQ acceptance while the facility is under Restricted Acceptance will not be permitted.

Quality control testing requirements specified in 403.06 are modified as follows:

A. Sampling and testing once every 90 minutes during the production day using a random number to determine the time to sample for each JMF produced. Ensure the sample is within five minutes of the random time. If no trucks are being loaded, sample the next truck to be loaded. Do not discuss sampling times with anyone other than the Department.

This requirement does not apply to 446 and 447 MSG Restricted Acceptance according to 403.10.F.

If the sampling and testing exceeds the capacity of the testing facility according to 403.04, immediately notify the Engineer and District Testing, then stop production until the testing facility can handle the capacity. The Department may limit the number of JMF's being produced at a mix plant facility if more than one is being produced and sampling and testing becomes an issue while on Restricted Acceptance.

B. For 301, 302, and 424 Type A mixes, if the variation from the JMF for one test is ±8 percent passing the No. 4 (4.75 mm) sieve or ±0.30 percent asphalt binder content, investigate and correct the problem, then resample and test. Maintain the moving average of three tests within ±4 percent passing the No. 4 (4.75 mm) sieve and ±0.20 percent asphalt binder content. In addition to the applicable Quality Control Reports, maintain control charts according to 403.06.E for asphalt binder content and the No. 4 (4.75 mm) sieve. If the Range difference in any three consecutive tests is greater than 0.6 percent for asphalt binder content or 10.0 percent passing the No. 4 (4.75 mm) sieve, notify the Monitoring Team. If Range deviations as specified continue, cease production.

For 446 and 447 MSG, the Department will test a single daily MSG for each corresponding 446 and 447 Day/Lot density determination from the facility. The facility can be returned to Department MSG VA when the 65 percent criteria (see 403.10.F) are not exceeded in a series of 30 comparison tests.

C. Report each day's testing on a Quality Control Report, according to 403.08. Report all testing performed by the Contractor's technician on the Quality Control Report. After startup adjustments, report any plant operation changes on the Quality Control Report. Ensure that each Quality Control Report contains technician comments as to production quality, input materials received and condition, and includes any other quality control activities required in the QCP. The Contractor's technician must sign each Quality Control Report. Attach each day's computerized plant printouts to that day's report. The technician must note on the accompanying printout from which tonnage the quality control sample was taken with accompanying test results for asphalt binder content and percent passing the No. 4 (4.75 mm) sieve. Keep a copy of all Quality Control Reports for a project in the Contractor's plant laboratory.

District Testing will monitor according to 403.10, except notification for ceasing production does not have to be in writing. Additional samples may be obtained for Department testing at any time.

For 301, 302, and 424 Type A mixes, if the average of the Lot or partial Lot acceptance tests for any sieve other than the No. 4 (4.75 mm) sieve exceeds the specification limits, the pay factor is determined as follows:

TABLE 403.11-1 301, 302, 424 TYPE A PAY FACTORS

Number of Tests	1	2	3	4
Pay Factor	0.98	0.97	0.96	0.95

For 448 and 449 Sublot acceptance mixes, the Department will perform acceptance sampling and testing according to 403.05, 448.04, and 449.04 except the Lot size will be 5000 tons (5000 metric tons) with 1250 ton (1250 metric tons) Sublots. Sublots and acceptance samples may be taken from the roadway or plant at the District's discretion. Department testing under Restricted Acceptance will receive a lower testing priority than other VA projects.

407.07

On Page 204, **Add** after the 1st paragraph the following new paragraph:

Provide weight tickets (including weigh back tickets) for every load, or partial load used, according to Supplement 1060 based on weight tickets from an Ohio Permitted Device according to provisions of Ohio Revised Code Section 1327, and Ohio Administrative Code Chapter 901:6.

407.08

On Page 204, **Add** after the last pay item the following:

407 Gallon Tack Coat, 702.13

408.09

On Page 205, **ADD** after the 1st paragraph the following new paragraph:

Provide weight tickets (including weigh back tickets) for every load, or partial load used, according to Supplement 1060 based on weight tickets from an Ohio Permitted Device according to provisions of Ohio Revised Code Section 1327, and Ohio Administrative Code Chapter 901:6.

421.02

On Page 211, **ADD** to "Mineral Filler (Portland Cement)" after 701.04 the following:

or 701.05

421.02

On Page 212, **Replace** the 2nd paragraph the following:

For mineral filler, use Supplement 1028 Certified Portland cement conforming to 701.04 ASTM C 150, Type I or 701.15 ASTM C 595, Type IL. Do not interchange Type I and Type IL and specify which is being used in the mix design. Adjustments in the quantity of mineral filler added to the mixture are permitted to improve mixture consistency, mix time, or set time. Do not exceed ± 0.5% from the mix design during placement.

421.12.B

On Page 221, in the 1st sentence of the section **Replace** the reference to "Table 421.02-3" with the following:

"Table 421.02-2"

421.12.B.

On Page 221, **Replace** the third paragraph with the following:

Stockpile a minimum of 10 percent of the project aggregate or 200 tons (180 metric tons) of aggregate whichever is less at a staging area. Obtain three (3) aggregate samples from the stockpile prior to any production starting and perform gradation testing on each sample according to AASHTO R 90, AASHTO R 76, Supplement 1004 (AASHTO T 11 where required), and moisture content per AASHTO T 255. Use dry gradations for determining the No. 200 (75 µm) sieve. Determine the percent passing for each sieve size listed in Table 421.02-2. Calculate the average of each sieve for all three tests. Ensure the average value for each sieve is within the requirements of Table 421.02-2. Do not begin production if not in compliance with gradation band and stockpile tolerance. Prior to production, the Contractor may request a JMF adjustment to the JMF gradation in writing to the Engineer within the below limits without a redesign of the mixture based on the results from the three stockpile samples. Limit the adjustment from the original JMF gradation to conform to actual production to ±3 percent passing each of the No. 4 (4.75 mm) and No. 8 (2.36 mm) sieves and ±1.0 percent passing the No. 200 (75 µm). The Department will not approve adjustments that exceed the design ranges in Table 421.02-2.

421.12.B.

On Page 221, **Replace** the first sentence of the fifth paragraph with the following:
Reject aggregate that does not meet the stockpile tolerance in Table 421.02-2 compared to the approved JMF or JMF adjustment.

423.02
On Page 235, **Replace** "Type I" with the following:
Type I……702.17.A

423.02
On Page 235, **Add** the following after "Type IV":
Type V……702.17.E

423.02
On Page 236, **Replace** the first paragraph with the following:
Furnish crack sealant or mastic materials according to 702.17.

423.03
On Page 236, **Add** the following paragraph after the third paragraph:
For Type V mastic sealants, heat the sealant in a kettle or melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat-transfer fluid. Use a kettle or melter with separate thermometers for the oil bath and mixing vat. Equip the kettle with a full sweep type agitator to prevent the Type V material from separating.

423.03
On Page 236, **Add** the following paragraph after the fifth paragraph:
For Type V mastic sealants use the manufacturer's recommendation for application equipment requirements.

423.05
On Page 237, **Add** the following paragraph after the first paragraph:
For Type V mastic sealant, clean cracks and joints to remove debris and any loose deteriorated pavement. For crack or joint reservoir depths greater than 2.5 inches (62.5 mm), fill according to 423.07. Stop application if the material becomes separated (asphalt and aggregate are not homogenous).

423.07
On Page 237, **Replace** the second paragraph with the following:
Seal only cracks that are wide enough to permit entry of sealant. Seal tightly closed cracks (less than 1/4-inch (6 mm) wide) only if they show signs of raveling or spalling.

423.07
On Page 237, **Add** the following paragraph after the second paragraph:
For Types I, II, and IV sealants, do not seal cracks greater than 1-inch (25 mm) wide, and do not seal spalls or cavities greater than 4 inches (100 mm) wide, unless otherwise directed.

423.07
On Page 237, **Add** the following paragraph after the last paragraph:
For Type V mastic sealant, place the sealant such that it fills the cracks and joints with a band on all sides, 2 inches (50 mm) wide beyond the edges of the deteriorated area and does not exceed 1/8 inch (4 mm) thickness above the pavement. If the crack or joint depths are greater than 2.5 inches

(62.5 mm), fill the crack or joint in multiple lifts allowing the first lift to cool prior to adding the final lift.

423.10

On Page 238, **Add** the following to the end of the list:

423	Pound (Kilogram) or Square Yard (Square Meter)	Crack Sealing, Type V

424.02.A.

On Page 238, **Delete** the 2nd sentence of the section.

424.02.E.

On Page 239, in Table 424.02-1 **Replace** Footnotes [1] and [3] with the following:

[1] Gradation includes any baghouse fines and mineral filler and is specified in percent passing.

[3] Fine Aggregate - Use natural sand with at least 50 percent silicon dioxide by weight according to 703.05.D. For 50 blow mixes, use no more than 20 percent limestone sand, No. 10 limestone, or combination of both by weight of total aggregate. For 75 blow mixes, use 20 percent limestone sand, No. 10 limestone, air cooled slag sand or combination thereof by weight of total aggregate. Baghouse fines and mineral filler percentages used will be included with the percentages for limestone sand, No. 10 limestone, and air cooled slag sand and not for natural sand. If 10 percent RAP is used the silicon dioxide content of the total natural sand blend must be at least 50 percent. Contact OMM for guidance on submitting RAP aggregate silicon dioxide data.

440.03

On Page 241, **Replace** the third sentence of the first paragraph with the following:

Develop a JMF to comply with the mix design criteria and submit it to OMM on approved forms and in AWP at least four weeks prior to the start of production for preliminary approval.

440.03

On Page 241, **Add** to the end of the 4th paragraph the following:

Baghouse fines from the mix plant and mineral filler may be used in the JMF, however, limit the combination of both to 2.0 percent by weight of total aggregate. Use the lowest fine aggregate Gsb listed in the JMF submittal for the baghouse fines ~~and mineral filler~~.

440.03

On Page 241, **Add** to the end of the 4th paragraph the following:

Use the mineral filler Gsb on the aggregate annual gravity list and if not on the list, then have the mineral filler tested by an AASHTO accredited lab.

440.03

On Page 241, in the first sentence of the fifth paragraph, **Replace** (2020) with (2021).

440.03

On Page 241, in the fifth paragraph, **Delete** "AASHTO MP 23-15 (2021), Section 4" and **Replace** with "AASHTO M350".

440.03

On Page 241, **Replace** the sixth paragraph with the following:

Note on the JMF submittal RAP page whether Method 1 or Method 2 RAP processing is used.

440.03

On Page 241, **Replace** the seventh paragraph with the following:

For surface course JMF submittals having polymer asphalt binder and RAP, including 424 mixes, do not submit any blends having 1 through 9 percent RAP.

440.03

On Page 241, **Delete** the eighth paragraph.

440.03

On Page 242, beginning with and including the 2nd full paragraph **Replace** the remainder of the section the following:

Include any required antistrip additive in the mix design but perform the volumetric design without the antistrip additive. Submit the following to OMM with the proposed JMF:

A. The product name, manufacturer, and the rate of liquid antistrip additive used by weight of total AC. Also provide the rate used by weight of virgin AC for purposes of metering at the mix plant. If using hydrated lime submit certified test data showing the hydrated lime conforms to AASHTO M 303, Type 1 and include the rate used meeting 440.06.B. Only use one LAS additive manufacturer's product and do not combine products with other manufacturer's additives including when chemical WMA is being used.

B. All Tensile Strength Ratio (TSR) data. If antistrip additives are required according to 440.06 due to the materials used, submit TSR results after addition of the antistrip additive. If antistrip additives are optional or required due to not meeting the minimum TSR, then submit TSR results before and after addition of the antistrip additive.

C. Results of the washed gradation test of the individual components of the mix used in determining the combined gradation.

D. Results of the adherent fines testing for each component.

OMM may perform additional tests on lab or plant produced mix according to Supplements 1004, 1051, and 1052. If a change in the aggregate production is suspected, OMM may require the Contractor to perform washed gradations on components and calculate adherent fines to determine the need for additional TSR review.

440.03

On Page 242, **Replace** the first sentence of the last paragraph with the following:

OMM may perform additional tests on lab or plant produced mix according to Supplements 1004, 1051, 1052, and 1118.

440.04

On Page 242, **Replace** the first and second sentences of the third paragraph with the following:

Use the effective asphalt binder content when calculating the F/A ratio. Calculate the effective asphalt binder content according to the Department's Asphalt Level 2 procedures.

440.04

On page 242, **Replace** the third and fifth sentences of the 1st paragraph with the following:

Provide a mix design with at least four asphalt binder content points but no more than five, including a minimum of two points above and two points below the JMF asphalt binder content.

Use a two hour cure for volumetric mix samples and ensure the cure temperature and specimen compaction temperature are the same.

440.05

On Page 243, **Add** the following sentence after the third sentence in the fourth paragraph:

Give each RAP stockpile a unique identification according to 402.04.D.

440.05

On Page 243, **Replace** the last sentence of the fourth paragraph with the following:

For design assume 10.0 percent available RAS binder. Determine gradation and specific gravity according to AASHTO PP 78-17 (2021), Section 5 or subsequent AASHTO applicable standard.

440.05.A

On Page 244, **Replace** the first full sentence of the paragraph with the following:

If 26-30 percent RAP is used in the JMF submittal, the Contractor may submit a 10,000-gram RAP sample along with a blend chart using the PG grading system, according to the Department's Level 3 Mix Design procedures and MS-2 Section 11.4.2, to determine the grade of virgin asphalt binder to use.

440.05.A.

On Page 244, **Add** the following sentence before the last sentence of the section:

When using RAS, blend the mixture meeting the proposed mix design proportions, extract and recover, and PG grade according to the Department's Level 3 Mix Design procedures and MS-2 Section 11.4.2. If the combined binder exceeds the proposed PG grade at the high or low temperature, redesign or do not use RAS.

440.06

On Page 245, **Replace** the section with the following:

440.06 Antistrip Additive. Use liquid antistrip (LAS) additives meeting the requirements of 440.06.A or hydrated lime meeting the requirements of 440.06.B. LAS or hydrated lime is required to be used for all mixes if the proposed JMF contains any gravel coarse aggregate, contains more than 25 percent natural sand, or contains more than 20 percent RAP containing gravel coarse aggregate. Conduct the tests listed in Table 440.06-1 for all 442 mixes and all mixes requiring LAS or hydrated lime. The minimum TSR result is 0.80.

TABLE 440.06-1 ANTISTRIP TESTS

Test Description	Specification
Moisture damage potential test	Supplement 1051
Washed gradation	AASHTO T 11 as modified by Supplement 1004
Adherent fines test for each component	Supplement 1118

For 442 mixes, add, if not already required, or increase LAS or add hydrated lime, if the results of the moisture damage potential test show the TSR of the asphalt concrete mix to be less than 0.80. Increase LAS for all other mixes if the results of the moisture damage potential test show the TSR of the asphalt concrete mix to be less than 0.80.

A. Liquid Antistrip Additive.
Use LAS additives on the approved list only. Include LAS additive at rate by weight of total AC specified in Table 440.06-2. Do not use more than one additive manufacturer's product including when chemical WMA is used.

TABLE 440.06-2 LAS RATES

Requirements	301 & 424 Type A mixes [1]	All other mixes	
		Min	Max [2]
Additive also a chemical WMA additive	0.30	0.30	0.75
Additive specifically for antistrip	0.50	0.50	1.00
Organosilane Product	0.10	0.05	0.10

[1]The moisture damage potential test is not required for 301 and 424 Type A mixes
[2]If LAS additive is used at the maximum dosage rate, the Department will waive performing the moisture damage potential test.

B. **Hydrated Lime**. Include hydrated lime in the dry form at a rate of 1.0 percent by the dry weight of aggregate for asphalt concrete except use 0.75 percent for 302 mixes. Conform to AASHTO M 303, Type 1 for hydrated lime. If hydrated lime is used at the specified rates, the Department will waive performing the moisture damage potential test.

441.02
On Page 247, in Table 441.02-1 **Replace** the row "Asphalt Binder[2]" with the following:

Asphalt Binder[2]	5.8 to10.0	5.8 to 10.0	4.6 to 9.0

441.02
On Page 247, in Table 442.02-1, **Replace** the row "VMA, Min. [7]" with the following:

VMA, min.[7]	15.5	15.5	12.5

442.02
On Page 249, in Table 442.02-2 in the row designated "No.4", column designated "12.5 mm Intermediate Course Mix" **Revise** the [1] footnote designation as shown**:** 60 max

442.02
On Page 249, **Replace** the third and fourth sentences of the third full paragraph with the following: Deformation less than 0.20 inch (5.0 mm) at 120 °F (48.9 °C) are considered passing for PG 58-28 and PG 64-22 mixes. Deformation less than 0.12 inch (3.0 mm) at 130 °F (54.4 °C) are considered passing for all other mixes.

443.03
On Page 252, **Replace** Table 443.03-3 MORTAR TEST REQUIREMENTS with the following:

TABLE 443.03-3 MORTAR TEST REQUIREMENTS

Tests	Description	Specification
AASHTO T315	Unaged Dynamic Shear Rheometer, G*/ sin δ (kPa)	5 minimum
AASHTO T315 & T240	RTFO Aged Dynamic Shear Rheometer, G*/ sin δ (kPa)	11 minimum
AASHTO R28 & T313	PAV Aged BBR, Stiffness (MPa)	1500 maximum

446.04

On Page 256, **Replace** the 1st sentence of the 3rd paragraph with the following:

A Lot consists of the area of pavement, including shoulders, placed using material produced in one production day as defined in 403.05. If any production day (Lot) exceeds 3000 tons, an additional lot is required to be cored.

446.04

On Page 257, **Add** to the end of the last paragraph and before Table 446.04-1 the following:

The Contractor may dispute the results of the cores following 403.10.G.

447.04

On Page 260, **Replace** the 1st sentence of the 3rd paragraph with the following:

A Mat Density Lot consists of the area of pavement, including shoulders, placed using material produced in one production day as defined in 403.05. If any production day (Lot) exceeds 3000 tons, an additional lot is required to be cored.

447.04

On Page 261, **Add** to the end of the last paragraph and before Table 447.04-1 the following:

The Contractor may dispute the results of the cores following 403.10.G.

447.05.C

On Page 262, **Replace** the last sentence in the 1st paragraph with the following:

Once all test results for the Joint Density Lot have been received, the Department will compute the PWT and average in place density for each lot according to Supplement 1044 using the Excel spreadsheet on the Department's website.

447.05.C.

On Page 263, **Add** to the end of the last paragraph in the section, and after Table 447.05-1, the following:

Values computed using equations referenced in this specification may vary slightly from the spreadsheet values due to rounding of numbers. In all cases the numbers computed using the Department's Excel spreadsheet will govern. All pay factors are shown in number form (not percentages) and are rounded to the hundredth decimal place by the spreadsheet. No other rounding is allowed. The Contractor may dispute the results of the cores following 403.10.G.

448.04

On Page 264, in Table 448.04-1, **Replace** the 1st Row with the following:

Asphalt Binder Content	0.30	1.00

449.04.A.

On Page 268, **Replace** Table 449.04-1 with the following:

Table 449.04-1 Mix Acceptance

	Deviation From JMF[1]	**Range**
Asphalt Binder Content [2]	± 0.30%	0.50
Asphalt Binder Content [3]	± 0.40%	0.70
No. 4 (4.75mm) Sieve	± 6%	12

[1] Based on the average of the day or night QC tests [2] For 301 and 424 type a mixes [3] For 302 mixes

449.04.B.

On Page 268, in Table 449.04-2, **Replace** the 1st Row with the following:

Asphalt Binder Content	0.30	1.00

449.04.B.

On Page 268, **Replace** the first sentence of the second paragraph with the following:

If the average of the Lot acceptance tests for a particular sieve or sieves, or for asphalt binder content deviates from the JMF by more than the tolerances shown in Table ~~449.04-2~~ 449.04-3, but falls within the tolerances shown in Table 449.04-2, then the Lot is considered reasonably acceptable and may remain in place with payment at a reduced pay factor as show in Table 449.04-3.

451.03

On Page 271, **Replace** the last sentence of the section with the following:

When the concrete pavement bid item includes "with QC/QA" the Engineer will perform Quality Assurance conforming to 455.

455.03.C

On Page 296, **ADD** to the end of the numbered list the following:

21. Initial Curing Method*
22. Minimum and maximum temperatures of cure box during initial curing*
23. Date received at lab *

455.04.F.

On Page 298, **Add** the following listed items (all remaining items are re-numbered in correct numerical sequence):

1. Describe the process to ensure the evaporation rate does not exceed 0.1 lbs/ft^2/hour during the placement period as determined using ACI 308-18 prior to scheduling placement. Provide an example of the forms, charts, and details used to determine the evaporation rate and how the information will be provided to the Department project staff.
2. Describe the method of determining the correct saw cutting window and how the depth of saw cuts will be measured for verification. Provide an example of how the information will be provided to the Department project staff.

455.04.F.9

On Page 298, **Replace** the 451.05.B. with 451.04:

9. Describe methods of monitoring the vibrator operation and frequency, time of day, station location and track speed according to 451.04.

499.02

On Page 303, **Add** at the end of the list the following:

Macro-fibers[6]705.29

499.02

On Page 303, **Add** at the end of the footnote list the following:

[6] Applies only to Class QC RS.

499.03

On Page 304, in Table 499.03-1, **Replace** the second to the last row with the following:

~~QC FS~~ QC RS[10]	See Supplement 1126	~~N/A~~ 2,000	~~900 (408)~~ 520 (236)	~~1-inch nominal maximum size~~ Well Graded

499.03

On Page 304, in Table 499.03-1, **Add** to the footnotes list the following:

[10] Provide QC RS with 6±2% air content.

499.03

On Page 305, in Table 499.03-4 **Revise** the 2nd row under the "Type of Work" column as follows:

Structural Concrete (511, 622)

499.04

On Page 306, **Replace** paragraph **A.** with the following:

A. Batch the concrete to the proportions of the accepted JMF. Provide a workable and finishable mix. Adjustments to the JMF's aggregate proportions up to 100 lbs (44 kg) for workability may be made. Adjustments greater than 100 lbs (44 kg) may be made if approved by the Engineer. Maintain an absolute volume of 27.0 cubic feet/cubic yard for the adjusted concrete mix. For Well Graded JMF adjustments, maintain the combined aggregate gradation within the optimal zone II requirements and the Tarantula Curve limits for well-graded mixes as defined in Supplement 1126. If outside the optimal zone II of the Coarseness Factor Chart or the Tarantula Curve limits of the Tarantula Curve, adjust the JMF's proportions to maintain the combined gradation within Zone II and the Tarantula Curve limits and report the JMF changes to the Engineer.

499.04.B

On Page 306, **Add** the following sentence to the end of the paragraph:

Keep aggregate stockpiles at or above SSD condition prior to batching.

499.04.D

On Page 306, **Replace** the subsection with the following:

D. Adjust the SSD aggregate design weights in the JMF to compensate for the moisture contained in the aggregates. Perform moisture burn offs on all aggregates prior to concrete production. For bridge deck concrete, perform a moisture burn off 2 hours prior to the start of concrete placement.

Provide moisture burn off calculations showing the free moisture of each aggregate prior to batching concrete.

499.05.D.

On Page 308, **Replace** the last sentence of the 1st paragraph with the following:

Limit the use of volumetric truck mixers to QC Misc., QC MS, QC ~~FS~~ RS, and Item 613.

499.06

On Page 308, **Replace** the second paragraph with the following:

Prior to and during batching, maintain all coarse and fine aggregates at a uniform moisture content, at or above, an SSD condition.

499.06.D

On Page 309, **Replace** the third paragraph with the following:

Batch each material to ensure weights are within the tolerance specified in Table 499.06-1, based on the amount specified in the approved JMF including any proportion adjustments according to Item 499.04.

499.06.D

On Page 309, in Table 499.06-1, **Add** the following footnote designation "[4]" to the sixth row:

Water[3] [4]	±1.0

499.06.D

On Page 309, in Table 499.06-1, **Add** the following footnote "[4]" after footnote [3] as follows:

[4] Tolerance based on target water quantity, not water quantity allowed at maximum water-cementitious ratio.

499.06.D.

On Page 309, in Table 499.06-1, **Add** a new row after the current last row as follows:

Macro-fibers	±3.0

499.06.D.

On Page 309, in Table 499.06-2, **Add** a new row after the current last row as follows:

Macro-fibers	±3.0

499.07

On Page 310, in Table 499.07-1, **Add** the following row after the last row:

Allowable additional water	gallons

499.07

On Page 310, in Table 499.07-1, **Add** a new row after the row labeled "Retarder" as follows:

Macro-fibers	lb (kg)

499.07

On Page 311, **Replace** the last sentence in the section with the following:

Provide a copy of the moisture burn off calculation sheet with the first ticket of the day, or when there is an updated moisture burn off performed.

499.07

On Page 311, in Table 499.07-2, **Add** a new row after the row labeled "Water-reducer" as follows:

Macro-fibers		

499.08

On Page 311, **Add** the following after the last sentence in the section:

For bridge deck concrete, ensure the temperature of the concrete does not exceed 85 °F (30 °C).

501.03

On Page 312, **Replace** the last word of section 501.03 with received.:

Payment per 109.10 will not be made until 30 days after OMM is notified and proper documentation is received.

501.04.A.

On Page 312, **Replace** the second paragraph with the following.

For structures carrying railroad traffic, submit the prepared shop drawings at least 40 days prior to the pre-fabrication meeting to each railroad company involved for review and approval. Resolve all railroad comments prior to submitting drawings to OMM. The submission to OMM shall include shop drawings accepted by each railroad company involved; copies of all documentation between the railroad(s) and the Contractor; Contractor accepted shop drawings, and the Contractor's written acceptance letter. Also furnish the fabricator's quality control specialist with these drawings before the pre-fabrication meeting.

501.04.A.

On Page 312, **Replace** the third paragraph with the following.

For all other structures, the submission to OMM shall include a written acceptance letter and each drawing. Also, furnish the fabricator's quality control specialist with these drawings before the pre-fabrication meeting.

501.04.B.

On Page 313, **Replace** the second paragraph with the following.

Submit the shop drawings to the Engineer and the District Office of Planning and Engineering with the materials delivered to the project. Do not incorporate material into the work until after submitting the drawings. Department approval of these shop drawings is not required.

501.05.B.6

On Page 319, **Replace** the section with the following:

6. Analyze the load effects from construction loads on bridges when:

a. Construction loads exceed 75 percent of posted loads or 60,000-lbs whichever is less. Construction loads include: construction material, vehicles, construction equipment and construction debris. To determine posted load allowance for load posted bridges:

(1) Compare the total vehicle weight and axle configuration of a construction vehicle to 75 percent of the weight limit of the posted vehicle with the same axle configuration shown on the posting sign. Do not place more than one construction vehicle on a posted bridge at any one time. For tracked vehicles, each wheel inside the track counts as an axle.

(2) If no construction vehicle is placed on a posted bridge, the construction load shall not exceed 75 percent of the heaviest posted vehicle weight.

(3) No construction point load shall exceed 5,000-lbs.

b. Applied construction load supported on an outrigger exceeds 60-psi or the minimum loaded area is less than 200-in^2. Do not support any loads on outriggers on load posted bridges.

The analysis shall be in accordance with the AASHTO LRFD Bridge Design Specifications.

507.03

On Page 331, **Add** the following sentence after the last sentence of the subsection:
Provide a Concrete Cylinder Cure Box per 511.04.

509.03

On Page 339, **Replace** the last sentence of the second paragraph with the following.

Perform necessary repairs according to 509.10 for epoxy coated reinforcement, 711.02 for galvanized reinforcement and 509.11 for GFRP reinforcement.

511

On Page 345, **Replace** Items 511.04 and 511.05 with the following:

511.04 Quality Control Requirements
511.05 Mass Concrete Requirements

511.03

On Page 346, **Add** the following sentence to the end of the first paragraph:
Mix concrete according to 499.08.

511.04

On Page 346, **Replace** section 511.04 with the following:

511.04 Quality Control Requirements When the concrete bid item requires QC/QA, develop and submit a Quality Control plan (QCP) for the work and perform quality control testing of the concrete conforming to Item 455.

When the concrete bid item requires QC/QA, The Engineer will perform Quality Assurance conforming to 455.

When the concrete bid item does not require QC/QA, the Engineer will make at least one set of acceptance test cylinders for each 50 cubic yards of concrete.

With any 511 concrete bid item provide and maintain a Concrete Cylinder Curing Box (CCCB) capable of holding at least twelve 4 × 8 inch cylinders at a temperature of 60 to 80 °F degrees no matter what the ambient temperature. Provide a max-min thermometer with each CCCB to ensure these temperature requirements are met. The box will have a sealed lid. If the project has numerous 511 concrete bid items, one CCCB may be used for multiple items of work. Locate the CCCB at a site that is convenient to the concrete work and will eliminate handling damage to both the Contractor QC or QA cylinders and the Department Cylinders. Move the CCCB as needed during the project when the distance from the concrete work increases the possibility of cylinder handling damage.

511.05

On Page 347, **Replace** section 511.05 with the following:

511.05 Mass Concrete Requirements. For concrete components with a minimum dimension of 5-ft or greater, develop a concrete mix design QC-4 for mass concrete according to 499.03. Develop a Thermal Control Plan (TCP) to control placement of the mass concrete so that the highest maximum

internal temperature of the placed concrete is not greater than 160 °F and the maximum differential concrete temperature does not exceed 36 °F over 28 days from time of placement.

For drilled shafts with a dimension of 7-ft diameter or greater, develop a concrete mix design QC-4 for mass concrete according to 499.03. Develop a TCP to control placement of the mass concrete so that the highest maximum internal temperature of the placed concrete is not greater than 160 °F.

Submit the TCP to the Engineer for acceptance at least 10 calendar days prior to placement along with the approved JMF (s).

As a minimum, the TCP shall include the following information:

A. Duration and method of curing.

B. Procedures to control concrete temperature at the time of placement. The mix shall contain no frozen pieces of ice after blending and mixing components.

C. Methods and equipment used for controlling temperature differentials.

D. Temperature sensor types, locations and installation details. As a minimum, concrete temperatures shall be monitored at the calculated hottest location, on at least 2 outer faces, 2 corners, and top surfaces.

E. Temperature monitoring and recording system; operation plan; recording and reporting plan with example output; and a remedial action plan.

F. Criteria for form removal to control the maximum temperature differential.

As an alternative to the maximum differential concrete temperature specified above, the Contractor may propose maximum differential temperature limits based on strength gain with time. The TCP for the alternative proposal shall include the methods used to determine the temperature and supporting data and design to support the accuracy of the method chosen. Provide complete calculations and basis for increasing the maximum differential temperature specification. The TCP for the alternative proposal shall also provide the Engineer with tables that define ambient temperatures for acceptable concrete placement, the required temperature of the concrete for the ambient air temperature, the maximum predicted concrete temperature, the maximum predicted differential temperature, the time for removal of forms, the allowable air temperature for form removal, and the predicted maximum and differential temperature from placement to age of 28 days. The Department will consider all cracking of a mass concrete placement where the differential temperature exceeded 36 °F the responsibility of the Contractor.

Upon the Engineer's acceptance of the TCP, continuously monitor all temperature sensors over the required age of the concrete. If the maximum limit or differential temperature limits are exceeded at any time, immediately take action to retard and reduce the out-of-specification temperatures. If a mass concrete placement temperature exceeds the specification limits of the currently accepted TCP, re-engineer, revise and resubmit the TCP. Do not place additional mass concrete until the revised TCP is accepted.

The Department will consider in-place mass concrete that exceeds the temperature limits or that cracked, as defective and resulting delays as non-excusable. Determine the extent and effect of the damage and submit a proposed repair plan to the Engineer to return the concrete to acceptable quality. The Department will determine if the proposed repair methods are acceptable or if removal is required.

511.07

On Page 348, **Delete** the first paragraph, the calculations and the second paragraph:

511.07

On Page 349, **Replace** the first paragraph on the page after Table 511.07-1, with the following:

Until discharged in the work, ensure the temperature of bridge deck concrete does not exceed 85 °F (30 °C) and ensure that the temperature of all other concrete does not exceed 95 °F (35 °C).

511.07

On Page 350, **Replace** the first paragraph on the page with the following:

Do not add or apply water to the concrete after it has left the truck and before applying curing materials according to 511.13.

511.08

On Page 352, **Replace** the sixth sentence of the third paragraph with the following:

After the concrete curing period specified in Item 511.13 has been reached, before applying construction loads on the deck (excluding personnel, hand operated equipment and manually powered vehicles) and before allowing vehicle traffic in the lane immediately adjacent to median bridge railing saw cut each control joint at least 4 inches ~~(100 mm)~~ deep around the perimeter of the front face, top and back face of the top portion of parapet, no lower than 12 and ½ inches ~~(313 mm)~~ above the top of the concrete deck slab.

511.08

On Page 352, **Replace** the third sentence of the fourth paragraph with the following:

Cure slipform concrete according 511.13, Method A.

511.09

On Page 352, **Replace** the last sentence of the first paragraph with the following:

Cure the construction joints according to 511.13.

511.13

On Page 355, **Replace** section 511.13 with the following:

511.13 Curing.

Cure concrete as follows:

TABLE 511.13-1, CURING REQUIREMENTS

Location	Curing Method [1]
Superstructure concrete	Method A
Concrete to which sealer is applied	Method A
Construction joints	Method A
Top surface of concrete deck superstructure concrete	Method A followed by Method B
Concrete with waterproofing	Method A or Method B
All other concrete	Method A or Method B
[1] Method A is water curing. Method B is membrane curing. If using Method B on areas to be waterproofed, remove the curing membrane.	

Concrete curing methods are as follows:

A. Method A, Water Curing. With the exception of the top surface of deck superstructure concrete, protect surfaces not covered by forms immediately after final finishing with two thicknesses of wet burlap. Keep burlap wet for at least 7 days by the continuous application of water. If forms are removed before 7

days, immediately drench the exposed concrete with water and cover it with burlap. Continuously apply water to the burlap for the remainder of the curing period.

Instead of continuous application of water, with the exception of the top surface of deck superstructure concrete, the Contractor may cover the wet burlap with white polyethylene sheeting or plastic coated burlap blankets conforming to 705.06. Place plastic coated burlap blankets wet and with the burlap side against the previous layer of wet burlap. Sufficiently lap and secure adjoining plastic coated blankets or polyethylene sheets at the laps and edges to form a seal that maintains the concrete wet at laps and edges. Cover white polyethylene sheeting or plastic coated blankets containing holes or tears with an additional covering of plastic sheeting or blankets as directed by the Engineer.
Cover the top surface of deck superstructure concrete with a single layer of clean wet burlap after it is bull floated if necessary and finished. Keep the burlap wet by a continuous flow of water through soaker hoses and cover the hoses with a 4 mils white opaque polyethylene film for 7 days. After 7 days, allow the surface of the deck to dry.

After curing the top surface of the deck superstructure concrete for 7 days, remove the burlap and standing water. Within 12 hours after removing the burlap, apply a curing membrane and cure the concrete according to Method B.

B. Method B, Membrane Curing. Immediately after the free water has disappeared on surfaces not protected by forms, apply curing material conforming to 705.07, Type 1 or 1D. If forms are removed before the end of the 7-day curing period, apply curing material on the concrete exposed by removing the forms.

Thoroughly mix curing material immediately before use. Apply the membrane curing material at the rate of at least 1 gallon per 200 square feet of surface and in a fine mist to provide a continuous, uniform, and water impermeable film without marring the concrete surface, The surface of the 705.07, Type 1D material shall have the appearance of a white sheet of typing paper.

Do not allow workers, materials, and equipment on the concrete during the curing period, unless adequately protecting the membrane curing material from damage.

If the film is broken or damaged during the specified curing period, reapply curing material as specified above to the damaged or affected areas.

511.14

On Page 355, **Replace** section 511.14 with the following:

511.14 Application of External Loads to New Concrete, Removal of Forms, Removal of Falsework and Opening to Traffic.

A. Applications of External Loads to New Concrete

Do not apply external loads to or perform work on new concrete until workers and construction materials will not damage the concrete or interfere with its curing.

1) Prior to 36 hours after placement, Worker foot traffic is allowed on the concrete as long as they do not make any impressions or damage the concrete.

2) After 36 hours after placement and prior to reaching 85% f'c (*) apply only minor loads including tying reinforcement in place, setting bearings or forms being placed for future work. No stockpiling of reinforcement, forms or other materials or using machinery on the concrete.

3) After 36 hours and after the field cured compressive strength cylinders or maturity results reach 85% f'c (*) apply any additional external loads or superimposed concrete placement.

* Test 2 field cured cylinders per 511.04 with the average compressive strength required to be greater than or equal to 85% f'c or test 2 flexural strength beams with an average strength greater than or equal to 650 psi. The maturity curve method may be used for determining the strength according to supplement 1098 in lieu of field cured samples.

B. Removal of Formwork.

Forms may be removed as soon as the concrete has hardened sufficiently. Damage to concrete form removal prior to field cured compressive strength cylinders or test 2 flexural strength beams with an average strength greater than or equal to 650 psi maturity results reach 85% f'c (*) will be the responsibility of the contractor.

* Test 2 field cured cylinders per 511.04 with the average compressive strength required to be greater than or equal to 85% f'c or test 2 flexural strength beams with an average strength greater than or equal to 650 psi. The maturity curve method may be used for determining the strength according to supplement 1098 in lieu of field cured samples.

C. Removal of Falsework and Opening to Traffic.

Remove falsework and open structures to traffic only after the concrete has reached the strength specified by Table 511.14-1A for concrete bid items requiring QC/QA. Use Table 511.14.1B for concrete items not requiring QC/QA. Do not shorten the minimum required Method A curing time regardless of strength test results.

TABLE 511.14-1A

LOADING REQUIREMENTS FOR CONCRETE REQUIRING QC/QA

	Span[1]	**Required Strength [2]**
Removing Falsework	Any Span	Compressive Strength ≥ 85% f'c or Flexural Strength (Center point) ≥ 650 psi
	All pier caps	
Traffic	Any	
[1]Span is defined as the horizontal distance between faces of the supporting elements when measured parallel to the primary reinforcement.		
[2] Field cured samples. Applicable only when the average modulus of rupture for two flexural strength (Center Point) tests is ≥ 650 psi or two compressive strength cylinders is ≥ 85% f'c. The maturity curve method may be used for determining the strength according to Supplement 1098 in lieu of field curing samples.		

TABLE 511.14-1B

LOADING REQUIREMENTS FOR CONCRETE

NOT REQUIRING QC/QA

	Span[1]	**Age of Concrete in Days**	
		No Test	Test [2]
Removing Falsework	Over 10 feet (3 m)	14	5
	10 feet (3 m) or less and all pier caps	7	3
Traffic	Any	14	7
[1]Span is defined as the horizontal distance between faces of the supporting elements when measured parallel to the primary reinforcement.			
[2] Field cured samples. Applicable only when the average modulus of rupture for two flexural strength (Center Point) tests is ≥ 650 psi or two compressive strength cylinders is ≥ 85%f'c. The maturity curve method may be used for determining the strength according to Supplement 1098 in lieu of field curing samples.			

Take enough specimens to verify compliance with the strength requirements of Table 511.14-1A. Obtain samples from the first and last sublots of continuously placed concrete for quantities of 500 yd^3 or less, and one extra set of specimens for each additional 500 yd^3 or fraction thereof. Obtain samples in equally spaced increments throughout the placement as directed by the Engineer. Delays in placements of more than 4 hours are not considered continuously placed and are to be treated as separate placements.

If the air temperature surrounding the concrete is maintained between 32 and 50 °F, and if the provisions of 511.12 do not apply, maintain the concrete above 32 °F for 7 days or until a successful strength test conforming to Table 511.14-1A, except this time shall not be less than 5 days.

511.19

On page 360, **Replace** the section with the following:

511.19 Joints, Cracks, Scaling and Spalls

A. Joints prior to opening to traffic

After completing all curing operations and allowing the deck to thoroughly dry, seal the following areas with a high molecular weight methacrylate (HMWM) sealer. Flood the areas and squeegee off the excess material as specified in Item 512 before opening the deck to traffic:

1. Transverse joints in the deck.
2. Joints between the concrete deck and steel end dams.
3. Longitudinal joints in the deck.
4. Longitudinal joints between the deck and safety curb, barriers, and parapets, etc.
5. Repaired portable barrier anchor locations.

B. Cracks prior to opening to traffic.

Evaluate the top and bottom of the deck for cracks, within 7 days of opening the deck to traffic in the presence of the Engineer. Provide the Engineer with a summary of the inspection including top surface crack locations, bottom surface crack locations, size of cracks on the top surface greater than 20 mils (0.020 inches) and the percentage of top and bottom cracked area itemized separately. The Department will define the top surface as all exposed deck surface area for a phase width not covered by parapets or sidewalks multiplied by the bridge limits. The Department will define the bottom surface of the same phase as all exposed deck surface area not covered by flanges or encased in diaphragms.

The Department will define all cracked area per phase as follows:

1. For cracks spaced greater than 12”, the cracked area will include 6” on each side of crack for full length of the crack.

2. For cracks spaced 12” or less, the cracked area will include the area between the cracks and 6” outside the limits of the crack clusters.

For deck cracking that is 20% or less than the top or bottom deck areas per phase and less than 20 mils in width, seal top surface cracks with HMWM sealer. All costs with sealing the cracking are incidental to the appropriate concrete item.

For deck cracking exceeding 20% of the top or bottom deck area per phase or if a crack exceeds 20 mils, an investigation will be performed by the Engineer and OMM to determine the treatment of the cracks and evaluate the project for violations that would contribute to the cracking. Provide documentation requested by the Engineer for review. If the OMM investigation finds no violations of the specification that would cause the deck cracking, the Department will pay the cost of the additional corrective work on a negotiated price per 109.05.B. If the investigation shows the contractor had violations of the specification that would contribute to deck cracking, the cost of the corrective work will be the responsibility of the contractor.

C. Cracking investigation prior to Final Inspection

Evaluate the top and bottom of the deck for cracks, within 30 days of final inspection per 109.12.A in the presence of the Engineer. An earlier date may be approved by the Engineer. Provide the Engineer with a summary of the inspection including top surface crack locations, bottom surface crack locations, size of cracks on the top surface greater than 20 mils and the percentage of top and bottom cracked area itemized separately. If the Engineer deems it necessary to set up traffic control for the final inspection, the Department will pay for additional work on a negotiated price per 109.05.B. The Department will define the cracked area per 511.19.B.

For deck cracking that is 20% or less than the top or bottom deck areas per phase and less than 20

mils in width, seal top surface cracks as directed by the Engineer with HMWM sealer on a negotiated price per 109.05.B.

For deck cracking exceeding 20% of the top or bottom deck area per phase or if a crack exceeds 20 mils (0.020 in) width, an investigation will be performed by the Engineer and OMM to determine the treatment of the cracks and evaluate the project for violations that would contribute to the cracking. Provide documentation requested by the Engineer for review. If the OMM investigation finds no violations of the specification that would cause the deck cracking, the Department will pay the cost of the additional corrective work on a negotiated price per 109.05.B. If the investigation shows the contractor had violations of the specification that would contribute to deck cracking, the cost of the corrective work will be the responsibility of the contractor.

D. Scaling and spalls

For deck scaling that is greater than 0.250 inches deep, or on more than 20% of the deck surface area, or deck spalling on more than one area, or an area greater than 32 square yards, the Engineer will investigate the project with OMM to determine the treatment and proceed according to 108.02 to resolve.

511.24

On Page 364, **Revise** the 7th paragraph as follows:

All costs for sealing as specified in 511.19.A are incidental to the appropriate concrete item.

513.04

On Page 383, **Replace** the third paragraph on page 383 with the following:

At least two weeks before starting shop fabrication, the fabricator shall notify the Office of Materials Management and furnish a proposed fabrication schedule for the work and tentative date that the structural steel will be ready for delivery. The ready for delivery date shall include ten days for the Department to perform final inspection upon accepting the final inspection request. The fabricator shall update OMM on any changes to their schedule to allow for the ten days to perform final inspection.

513.04

On Page 383, **Replace** the fifth paragraph on page 383 with the following:

The fabricator shall not ship fabricated members performed under Item 513, UF Level or Levels 1 through 6 from the shop without prior hold point inspections unless the Office of Materials Management waives the inspection. Requests for final inspection will not be accepted until the fabricator completes and inspects with documentation, final fabrication and shop coatings and the Contractor documents approval of shop drawings and material test reports have been received by the Department. The Department will have ten days to perform the final inspection upon accepting the final inspection request.

513.06

On Page 384, **Add** the following sentence at the end the second paragraph:

Include a title block on each drawing with the ODOT Project Number and the Bid Line Item.

513.06

On Page 384, **Replace** the first sentence of the third paragraph with the following.

For multiple span beam and girder bridges, include an overall layout with dimensions showing the relative unloaded vertical and horizontal position of beam or girder segments with respect to a full-length base or work line.

513.19

On Page 388, **Replace** the first paragraph of 513.19 with the following:

513.19 Holes for High-Strength Bolts and Bearing Bolts. Provide cylindrical holes, perpendicular to the member, clean cut, and free of ragged edges. Remove burrs by countersinking not more than 1/16 inch or by grinding. Provide finished holes with a diameter not larger than the nominal diameter of the bolt plus 1/16 inch for bolts less than 1 inch in diameter. Provide finished holes with a diameter not larger than the nominal diameter of the bolt plus 1/8 inch for bolts greater than 1 inch in diameter. The hole diameter shall not vary by more than 1/32 inch from a true circle for 85 percent of the holes in a contiguous group, and not more than 1/16 inch for the remainder.

513.20.C.

On Page 391, **Replace** the first full paragraph on the page with the following:

Do not reuse galvanized A 325 bolts. Re-tightening previously tightened bolts that became loose by tightening adjacent bolts is not reused.

513.22

On Page 393, **Replace** the first sentence of the second paragraph of with the following.

In addition to the stud bend tests of Article 9.6.6.1 of the AASHTO/AWS *Bridge Welding Code*, perform bend tests of stud shear connectors at the start of each workday, when welding has been interrupted for an hour or more, when changing grounds, when changing weld settings, and when changing cable loop due to arc blow.

513.25.A.

On Page 395, **Replace** the first sentence of the second paragraph of with the following.

Use a steel stamp to make the radiograph identification mark shown on the shop drawing layout in the area marked "Weld Identification" of Figures 8.1A through 8.1D of the AASHTO/AWS *Bridge Welding Code* in a manner to make it visible in the radiograph of the area without resorting to superimposed like markings.

513.25.A.

On Page 395, **Replace** the third paragraph with the following.

For film radiographic, use film locations or a technique employed that will show the top and bottom images of the plate edge. Use films 4 1/2 × 17 inches (114 × 432 mm) where practical and a minimum film size of 4 1/2 × 10 inches (114 × 254 mm).

513.25.A.

On Page 395, **Add** the following as a new paragraph after the third paragraph:

For digital radiographic images, follow AWS D1.5-2020 clause 8.12.4.2. The contractor will provide software and training to the Department for the evaluation of radiographic images.

513.25.A.

On Page 395, **Replace** the fourth paragraph of 513.25.A with the following that is now the fifth paragraph:

Supply a technical report for the RT testing similar to Annex N Form N-6 of the AASHTO/AWS Bridge Welding Code, and include the following: Project identification, member piece mark, description of the repairs made, and the qualification level of the technician.

513.25.B.

On Page 396, **Replace** the second paragraph with the following:

Inspect welds using the procedure and techniques for the dry powder magnetic-particle examination of welds using the prod or the yoke method according to AWS 8.7.8. The prod test equipment shall have a functioning ammeter. Provide a prod magnetizing current of 100 amperes per inch (25 mm) of prod spacing but not less than 400 amperes. Use only aluminum prods.

513.25.B.

On Page 396, **Delete** the sixth paragraph of 513.25.B. The paragraph starts with "MPI will not…"

513.26

On Page 397, **Replace** the third paragraph with the following:

Place material stored in the fabricating shop or in the field on skids or blocks to prevent the metal from contacting the ground. Place and store girders and beams in an upright position for shipping, and field and shop storage. Field splice plates shall be bolted with temporary bolts, which shall be removed and replaced, when field splice plates are placed in their final position or shifted laterally with respect to their final position. Keep material clean and properly drained. Install bearing devices and anchorages according to Item 516.

514.03

On Page 400, **Replace** section 514.03 with the following:

514.03 Superintendent. In addition to the requirements of 105.06, the Superintendent must successfully complete a Bridge Painting pre-qualification course and training offered by the Department. The course must have been completed within the past four years and an individual course transcript must have been received by the Superintendent. Present transcript to the Engineer prior to commencing work. No work is permitted unless the Superintendent provides a valid course transcript.

515.14

On Page 429, **Replace** the last sentence of the fifth paragraph with the following:

Do not use spliced strands.

515.15

On Page 431, **Replace** Table 515.15-1 with the following:

TABLE 515.15-1, TEST SPECIMEN REQUIREMENTS

Cubic Yards per Bed	Sampling Frequency	Number of Cylinders Required
Less than or equal to 30 cubic yards	First and last load per bed	Minimum of 6
30 to 60 cubic yards	First and last load per bed plus one random sample.	Minimum of 9
Greater than 60 cubic yards	First and last load per bed plus 2 random samples.	Minimum of 12

515.15

On Page 431, **Replace** the first paragraph after Table 515.15-1 with the following:

Determine strength, for both strand release and final shipping, by testing a group of cylinders, which consists of at least one cylinder from every sample location. Test a minimum of three cylinders for release, and a minimum of three cylinders for final shipping strength. Each group of cylinders shall

have an average strength of what is specified in the shop drawings, and no individual cylinder shall have less than 95 percent of the specified strength.

515.18

On Page 434, **Replace** the section with the following:

515.18 Prestressed Member Acceptance and repair. Throughout the fabrication process reject all prestressed members not meeting specification requirements except as noted below for camber.

For all rejected members provide the Department with a complete description of the rejection, and unless waived by the Director, an Ohio registered professional engineer's written evaluation of the criticalness of the rejection and the professional engineer's proposed repair method that will repair the rejected member to an acceptable condition. The Department will determine the acceptability of the member and the repair procedure. If acceptable, the fabricator will only make repairs witnessed by the Department's inspector unless waived by the Director.

Use the Precast/Prestress Concrete Institute's Manual for the evaluation and repair of Precast, Prestressed Concrete Bridge Products MNL-137-06 as a general guide.

The Department will not accept for shipping, prestressed members with measured camber exceeding the Design Camber (Dt), used to establish the seat elevations, according to 511.07, by more than the Sacrificial Haunch thickness nor camber more than one inch less than Design Camber, until a corrective work plan has been approved by the Engineer. The plan shall be signed, sealed and dated by an Ohio Registered Engineer and shall include all revised plan information necessary to place the deck to the plan thickness. If the prestressed members are acceptable, exclusive of the deviation from Design Camber, the Department will pay for all costs incurred resulting from measured camber exceeding or more than 1 inch under Design Camber calculated for the actual beam age at the time of deck placement, as Extra Work, 109.05.

516.03

On Page 437, **Replace** the first paragraph with the following:

516.03 Coating. Coat steel components of bearings as follows:

A. Uncoated weathering steel bearings attached to uncoated weathering steel members shall remain uncoated.

B. Galvanize, metallize or apply inorganic zinc prime coat to steel bearings attached to steel members to be painted followed by field application of the epoxy and urethane coat.

C. Galvanize or metallize steel bearings attached to concrete, galvanized steel and metallized steel members.

The bearing's faying surface in contact with the supported member need not be coated. Inorganic zinc prime coating shall be in accordance with 514. Metallizing shall be in accordance with Supplemental Specification 845. Galvanizing shall be in accordance with 711.02. Repair damage to metallized or galvanized coatings according to 711.02.

516.04

On Page 437, **Add** the following material to list in 516.04:

Steel Plate Shims 711.01

516.04

On Page 437, **Add** the following sentence at the end of 516.04:

Steel plate shims shall be the same material as the adjacent structural steel.

516.07

On Page 439, **Replace** the section with the following:

516.07 Bearing Devices.

A. Steel Bearings

For sliding plates, lubricate the sliding surfaces with flake graphite, and superimpose plates on each other with their edges flush.

After making final connection to structure, the following tolerances apply:

1. The bearing's marked centerline shall be within ± 0.125-in of the substructure's marked centerline.

2. After deck placement, the position of rockers, sliding plates and rollers shall be plumb to within an angular tolerance of 0.20-rad. (1-degree) at 60°F.

3. The bearing's marked centerline shall be within ± 0.125-in of the punch marked bearing centerlines on the steel beam/girder.

Accurately set, level and align bearing plates, and bolsters. Set bearing plates and bolsters on 0.125 inch (3 mm) thick sheet lead, conforming to 711.19.

Set bearing plates or bolsters on bridge seat areas that are flat with a smooth level surface. If the bridge seat area is high or uneven, use a bushhammer or grinder followed by thin film of trowelable mortar per Supplemental Specification 843 to fill the pitted surface to bring the seat area to the proper elevation and provide a level, even surface. If the bridge seat area is lower than Plan elevation by 0.25-in or less, use trowelable mortar per Supplemental Specification 843 to level the surface. If the bridge seat area is lower than Plan elevation by more than 0.25-in., center and connect steel plate shims with length and width dimensions at least 0.625-in larger than the bearing area to both the bearing and the steel member by a 0.25-in all-around fillet weld to bring the seat area to the proper elevation.

B. Elastomeric Bearings

After making final connection to structure, the following tolerances apply (See Figure *516.07-B-1*1):

1. The bearing's marked centerline shall be within ± 0.125-in of the substructure's marked centerline.

2. After deck placement, a line drawn through the bottom and top corners of the bearing shall be plumb to within an angular tolerance of 0.20-rad. (1-degree) at 60°F.

3. The bearing's marked centerline shall be within ± 0.125-in of the punch marked bearing centerlines on the steel beam/girder.

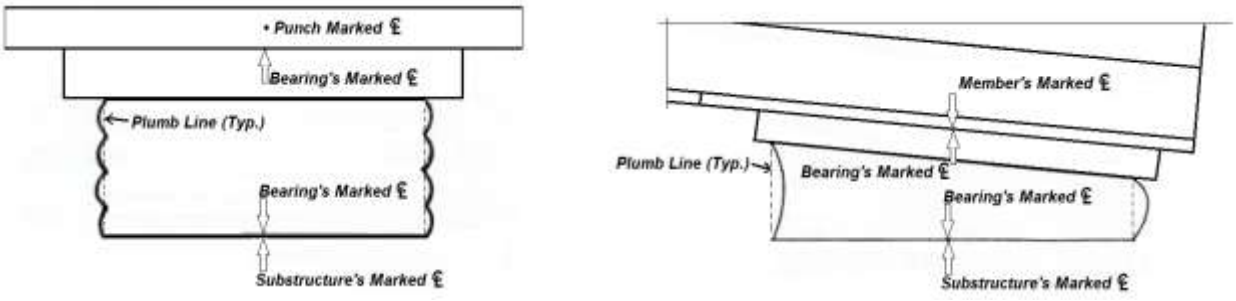

Figure 516.07-B-2

Set elastomeric bearings directly on the concrete surface. If the beams seats are to be sealed with an epoxy or non-epoxy sealer prior to setting the bearings, do not apply sealer to the concrete surfaces

under the proposed bearing locations. If these locations are sealed, or membrane cured, remove the sealer or membrane cure to the satisfaction of the Engineer before setting the bearings. Perform this removal at no expense to the Department.

Set elastomeric bearings on bridge seat areas that are flat with a smooth level surface measured using a level placed across the entire bearing area with a tolerance of +/- 1/8 inch. This tolerance is not applicable to adjacent box beams. The elastomeric bearing shall be in contact with the bridge seat for a minimum of 95 percent of the outside perimeter of the bearing prior to and after beam/girder erection. If the bridge seat area is high or uneven measured +/- 1/8 inch using a straight edge across the entire bearing area, use a bushhammer or grinder followed by thin film of trowelable mortar per Supplemental Specification 843 to fill the pitted surface to bring the seat area to the proper elevation and provide a level, even surface. If the bridge seat area is lower than Plan elevation by 1/4-in ~~0.25 in~~ or less, use trowelable mortar per Supplemental Specification 843 to level the surface. Provide a Corrective Work Plan according to C&MS 501.05.C for bridge seat locations that are greater than 1/4-in ~~0.25 in~~ below Plan elevations.

Position elastomeric bearings so that, when the completed bridge is at 60 °F (16 °C), the elastomeric bearings are vertical. If the bridge is erected at an ambient temperature higher than 80 °F or lower than 40 ºF and the bearing shear deflection exceeds 1/6 of the bearing height at 60 ºF ± 10 ºF, raise the beams or girders to allow the elastomeric bearings to return to their undeformed shape at 60 ºF ± 10 ºF.

Reject bearings according to 106.07 as unacceptable material that exhibit the following:

1) Three or more separate surface cracks greater than 1/16” wide or a single crack greater than 3/16” deep or wider than 1/4" in.

2) Bearings exhibiting bulging patterns implying out of tolerance cover or layer thickness or bulges spanning two or more layers.

3) Bearings that do not return to original shape after resetting.

4) Bearings that are not completely vulcanized to the load plate or masonry plate.

Where the load plate of an elastomeric bearing is to be connected to the structure by welding, control the welding so that the plate temperature at the elastomer bonded surface does not exceed 300 °F as determined by use of pyrometric sticks or other temperature monitoring devices.

C. Anchor Bolts

Set anchor bolts for bearing devices that are clear of the beam or girder flanges, in the concrete after erecting the main structural steel, except as specified below for bearing devices at abutments. Place reinforcing steel in the bridge seat to not interfere with the drilling of anchor holes. Accurately set anchor bolts in the holes and embed the anchor bolts in non-shrink, non-metallic grout. Until the anchors are installed, prevent water from entering and or freezing in the anchor bolt holes.

If structural steel interferes with the setting of the anchor bolts, set the anchor bolts before erecting the steel. The Contractor may determine the location of the bolts by using a template and form holes or embed the bolts when placing concrete or, drilling holes in the hardened concrete.

Install anchor bolts to project at least 1/4 inch beyond the nut when tightened. Damage or burr the threads on the projecting end of the bolt after the nut is tightened. The bolt threads shall not extend to the planes of the contact surfaces between the connected parts. Include the length of two additional threads to the specified thread length of the bolt to allow for thread runout. Washers no thicker than 1/4 inch are permitted under the nut.

Permanently fasten bearing devices to the abutments, steel beams, or girders after backfilling the abutments to within 2 feet of the top of the bridge seat.

516.09

On Page 440, **Revise** the section as follows:

516.09 Basis of Payment. The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
516	Foot or Pound	Structural Steel Expansion Joints
516	Foot	Structural Expansion Joints Including Elastomeric ___ Seals
516	Foot	Elastomeric Compression Seals for Structural Steel Joints, ___ Width
516	Foot	Vertical Extension of Structural Expansion Joints
516	Square Foot	___ Preformed Expansion Joint Filler
516	Foot	Joint Sealer
516	Each, Foot, Square	Bearing Devices Foot, Pound
516	Each, Square Foot	___ inch Preformed Bearing Pad, Type PEP
516	Each	Elastomeric Bearing with Internal Laminates Only
516	Each	___ × ___ × ___ Elastomeric Bearing with Internal Laminates and Load Plate ____ × ___ × ___
516	Square Foot	1/8-inch Preformed Bearing Pads, Type CDP

519.06

On Page 448, **Replace** the last sentence of the second paragraph with the following:

Apply membrane curing according to 511.13, Method B, immediately after rubbing the surface.

520.13

On Page 454, **Replace** the third sentence of the first paragraph with the following:

If the Engineer determines that the above curing procedures are impractical because of the inaccessibility of isolated repair areas, the Contractor may cure the final shotcrete surface according to 511.13, Method B, using twice the manufacturer's recommended coating rate for formed concrete surfaces (equal to a white sheet of typing paper) at the time of application.

524.10

On Page 464, **Add** the following sentence to the end the first paragraph:

Provide a Concrete Cylinder Cure Box as per 511.04.

526.04

On Page 468, **Add** the following sentence to the end of 526.04:

Provide a Concrete Cylinder Cure Box as per 511.04.

526.05

On Page 468, **Replace** the second sentence of the first paragraph with the following:

Cure approach slabs according to 511.13.A.

601.02

On page 469, **Replace** the second listed item with the following:

Concrete, Class QC -Misc, QC 1…….499, 511

601.04.D.

On page 471, **Replace** the heading and the first sentence with the following:

D. Type D – Reinforced Concrete Slab. Construct a 6-inch (150 mm) reinforced concrete slab according to the plans and the standard construction drawing.

606

On page 481, **Add** "Cable Barrier" and "Noise Barrier" to the title:

Item 606 Guardrail, Cable Barrier and Noise Barrier.

606.06

On page 483, **Revise** the last paragraph in the section as follows:

Cover the face of the impact head with solid fluorescent yellow Reboundable retroflective sheeting conforming to 730.191.

606.07

On Page 483, **Revise** 606.07 to now be 606.09 as follows:

606.09 Method of Measurement. The Department will measure Guardrail, new or rebuilt, and Cable Barrier, of the type specified by the number of feet (meters) from center-to-center of end posts, excluding anchor assemblies. If, however, end connections are made to masonry or steel structures, the Department will measure to the center of the normal post bolt slot. If rail element is used across a bridge, the Department will measure to the first post off the bridge.

The Department will measure Anchor Assembly of the type specified by the number each assembly furnished and erected complete.

The Department will measure Bridge Terminal Assembly of the type specified by the number of each assembly furnished and erected complete.

The Department will measure Impact Attenuator of the type specified by the number of each furnished and erected complete.

The Department will measure Guardrail Post of the kind specified by the number of each furnished and erected.

The Department will also measure Noise Barrier assemblies by the number of each assembly furnished and erected complete.

606.07

On Page 483, **Add** a new 606.07 with the following:

606.07 Cable Barrier Elements. Cable barrier is a proprietary product to be selected from ODOT's Approved Products list (found on ODOT Roadway Engineering website). Cable barrier shall be installed in accordance with the manufacturer's recommendations and installation videos.

606.08

On Page 483, **Revise** 606.08 to now be 606.10 as follows:

606.10 Basis of Payment. The additional costs associated with furnishing and installing extra-length posts instead of standard-length guardrail posts are incidental to Guardrail Post, 8 foot (2.44 m) or Guardrail Post, 9 foot (2.75 m).

For the extra costs associated with furnishing and installing extra-length posts in lieu of standard-length guardrail posts, payment for 9 foot (2.75 m) guardrail posts is considered full compensation.

The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
606	Foot (Meter)	Guardrail, Type ___
606	Foot (Meter)	Guardrail, Barrier Design, Type ___
606	Foot (Meter)	Guardrail, Rebuilt, Type ___
606	Each	Anchor Assembly, Type ___
606	Each	Anchor Assembly, Barrier Design, Type ___
606	Each	Bridge Terminal Assembly, Type ___
606	Each	Impact Attenuator, Type ___
606	Each	Guardrail Post
606	Each	Guardrail Post, 8 foot (2.44 m)
606	Each	Guardrail Post, 9 foot (2.75 m)
606	Foot (Meter)	Cable Barrier, Type ____
606	Each	Cable Barrier, Type ____
606	SF	Noise Barrier, Type ____
606	Lump Sum	Noise Barrier, Type ____

606.08

On Page 483, **Add** a new 606.08 with the following:

606.08 Noise Barriers. Noise barrier is a proprietary product to be selected based on the ODOT Environmental Services Noise Program and project requirements. The Noise Wall supplier shall be selected from ODOT's Approved Noise Wall Suppliers List (See ODOT Materials Management website). Noise barrier shall be installed in accordance with the manufacturer's recommendations and installation videos.

608.02

On page 486, **Replace** the third item with the following:

Concrete, Class QC Misc. or QC 1[1][2] .....…….499

608.02

On page 487, **Replace** the asterisked note with the following:

[1] Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option.

[2] Provide Concrete Cylinder Cure Box according to 511.04.

609.02

On page 489, **Replace** the first item with the following:

Concrete, Class QC Misc. or QC 1[1][2].....……..499

609.02

On page 489, **Replace** the asterisked note with the following:

[1] Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option.

[2] Provide Concrete Cylinder Cure Box according to 511.04.

609.02

On Page 489, **Replace** the second paragraph after the list of materials with the following:

Furnish asphalt concrete curb conforming to 441 Type 1 intermediate course.

611.02.A.

On page 495, **Delete** the following materials references from the Type A Conduit – Culverts list:

~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner….. 707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner….707.20~~

611.02.B.

On page 495, **Delete** the following materials references from the Type B Conduit – Storm or sanitary sewers under pavement list:

~~Bituminous lined corrugated steel pipe…. 707.13 or 707.14~~
~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner….. 707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner….707.20~~

611.02.C.

On page 496, **Delete** the following materials references from the Type C Conduit – Storm or sanitary sewers not under pavement list:

~~Bituminous lined corrugated steel pipe…. 707.13 or 707.14~~
~~Aluminum coated Steel Conduits with precoated galvanized smooth steel interior liner….. 707.19~~
~~Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner….707.20~~

611.02.J.

On page 499, **Replace** the second paragraph with the following:

If a precast reinforced concrete 3-sided flat topped culvert (706.051), a reinforced concrete arch section (706.052), or a precast reinforced concrete round section (706.053) is specified, the Engineer may allow the Contractor to substitute one for the other. Refer to 611.04 for submittal requirements.

611.04.A.

On page 500, **Replace** the first sentence of the paragraph with the following:

Prepare and submit shop drawings for C&MS items 706.05, 706.051, 706.052, 706.053.

611.04.A.1.

On page 501, **Replace** the first sentence of the paragraph with the following:

1. Submit load rating reports for C&MS items 706.051, 706.052 and 706.053 in accordance to the most current version of ODOT's Bridge Design Manual along with one copy of the shop drawings and one copy of the calculations to the Office of Structural Engineering for all structures with a 10 foot or larger span.

611.08.B.3.a.

On page 507, **Replace** paragraph with the following:

a. For joints in precast reinforced concrete box culverts (706.05), fill the top exterior joint gap with nonshrink mortar. Provide a smooth transition between exterior joint sections for all exterior surface

elevations that deviate by more than 0.25 inches. Ensure a smooth surface for placement of the exterior joint wrap. Next, cover all exterior joints with a 12 inch wide strip of joint wrap, centered on the joint, in accordance with the joint wrap manufacturer's recommendations. Apply additional water proofing membrane, as specified in the contract documents, directly over the joint wrap.

611.10.C.3.

On page 510, **Add** the following sentence to the end of the third listed item:

Reset the existing casting in mortar, with a flush joint, to the new grade.

611.10.D.

On page 510, **Replace** the entire section with the following:

D. Adjustment to grade. When adjusting an existing manhole, catch basin, or inlet to match grade, follow the procedure(s) below:

1. Carefully remove and clean the existing casting and adjust the height of supporting walls to the new grade. Provide an adjusting device on file with the Office of Materials Management, or as approved by the Engineer. Reset the existing casting in mortar, with a flush joint, to the new grade.

2. Carefully remove the existing cover or grate and install a casting or an acceptable adjusting device on file with the Office of Materials Management or as approved by the Engineer. Install the adjusting device according to the adjusting device manufacturer's recommendations. Reset the cover or grate to the new grade.

611.11

On page 510, **Add** the following sentence to the end of the second paragraph:

Prepare the conduit surface by cleaning and removing all debris and obstructions.

613.03

On page 519, in Table 613.03-1 in column "Type 3", **Replace** the 297 lb/yd³ of Fly Ash, Class C [4] with 500 lb/yd³.

614.03.B

On page 523, **Revise** the fourth paragraph as follows:

Use Type IV, IX, XI or Reboundable retroreflective sheeting complying with 730.19, 730.193, 730.194, or 730.191, respectively, for faces of construction signs, vertical panels, object markers, and stripes on glare screen panels. Use Type XI retroreflective sheeting complying with 730.194 for faces of barricades.

614.03.B

On page 523, **Revise** the fifth paragraph as follows:

Use fluorescent orange retroreflective sheeting for all orange construction signs, object markers, and stripes on glare screen paddles. Use standard orange or fluorescent orange retroreflective sheeting for the orange portions of drums, cones, barricades and vertical panels.

614.03.B

On page 523, **Revise** the first sentence of the sixth paragraph as follows:

Furnish orange drums with Reboundable retroreflective sheeting complying with the requirements of 730.191 and in conformance with the OMUTCD.

614.03.B

On page 523, **Revise** the first sentence of the seventh paragraph as follows:

Furnish traffic cones consisting of a highly visible orange predominant color with Reboundable retroreflective sheeting complying with the requirements of 730.191 and in conformance with the OMUTCD.

614.03.B

On page 523, **Revise** the ninth paragraph as follows:

Furnish object markers that are a minimum size of 6 x 12 inches and that consists of retroreflective sheeting adhered to an aluminum or plastic plate.

614.03.C

On page 524, **Revise** the fifth paragraph as follows:

Conspicuity tape: Use red and white, Type IV, IX or XI retroreflective sheeting that complies with 730.19, 730.193 or 730.194 respectively.

614.03.C.1

On page 524, **Revise** the first sentence as follows:

Apply one 2 inch wide (minimum) horizontal stripe of Type IV, IX, or XI retroreflective sheeting to a minimum of 50 percent of the length of each side of the payload portion of the vehicle, rearward from the back of the cab, NCHRP 350 Category IV equipment and trailers.

614.03.C.2

On page 524, **Revise** the first sentence as follows:

Outline the lower rear facing area of the vehicle, NCHRP 350 Category IV equipment, and trailers with 2 inch wide (minimum) horizontal stripe of Type IV, IX or XI retroreflective sheeting.

614.03.C.3

On page 524, **Revise** the first sentence as follows:

Outline the upper rear facing area with two pairs of strips of 2-inch wide (minimum) retroreflective Type IV, IX or XI sheeting, each pair consisting of strips 12 inches long, must be positioned horizontally and vertically on the right and left upper corners of the rear of the body of each vehicle or trailer, as close as practicable to the top of the vehicle or trailer and as far apart as practicable.

614.08

On page 528, **Revise** the fourth sentence of the second paragraph as follows:

Ensure that each face of the paddle is made of Type XI retroreflective sheeting meeting the requirements of 730.194.

614.11.B.

On page 530, **Replace** Table 614.11-1 with the following:

Type of Pavement Marking	Line Width (inch)				
	4	6	8	12	24
	Gallon per Mile of Line				
Solid Line	22	33	44	66	132
10-foot Dashed Line	5.5	8.25	--	--	--
4-foot Dashed Line	2.2	3.3	--	--	--
Dotted Line	7.3	10.95	14.6	21.9	--
Arrows, Symbols, and Words	1.4 gallons per 100 square feet				
Glass Beads: 740.09, Type A	~~15~~ 10 pounds per 100 square feet				

614.11.B.

On page 530, **Replace** Table 614.11-1M with the following:

Type of Pavement Marking	Line Width (mm)				
	100	150	200	300	600
	Liter per Kilometer of Line				
Solid Line	52	78	105	157	314
3.0 m Dashed Line	13	19.5	--	--	--
1.2 m Dashed Line	5.2	7.8	--	--	--
Dotted Line	17.3	25.95	34.6	51.9	--
Arrows, Symbols, and Words	0.6 liters per square meter				
Glass Beads: 740.09, Type A	~~7.3~~ 4.9 kg per square meter				

614.11.J.

On page 534, **Add** new section 614.11.J.:

J. Clean Up. Disperse remaining loose glass beads or wet reflective optics from the non-marked roadway surface in areas where the glass beads or wet reflective optics are applied by hand, are loaded into the striping apparatus, or are applied along the radii of intersections.

614.115

On page 538, **Replace** Table 614.115-2 with the following:

Line Type	Normal Spacing Feet (Meter)	Segment Length Feet (Meter)	Normal No. Contained In Segment	Maximum No. Permitted To Fail
Edge	10 (3.0) 20 (6.0)	50 (15) 100 (30.0)	6	3
Center, Double/Solid	20 (6.0) 10 (3.0)	100 (30.0) 50 (15.0)	12	6
Lane or Dashed Center	40 (12.0) 5 (1.5)	200 (60.0) 2-Stripe	6	3
Channelizing	20 (6.0) 10 (3.0) 5 (1.5)	100 (30.0) 50 (15.0) 25 (7.5)	6	3

615.05

On page 543**, Replace** the table and footnotes with the following:

MINIMUM COURSE THICKNESS REQUIRED

Pavement Type	Course Make-Up	Class A	Class B
Rigid	452	9 in (230 mm)	7 in (180 mm)
Flexible [6]	441 Type 1 [1]	1-1/4 in (32 mm)	1-1/4 in (32 mm)
	441 Type 2 [2] [5]	1-3/4 in (45 mm)	1-1/2 in (38 mm)
	302 [3] [5][7]	5-1/2 in (140 mm)	3-1/2 in (90 mm)
	304 [4] [5]	6 in (100 mm)	6 in (100 mm)

[1]Meet surface course requirements.
[2]Meet intermediate course requirements.
[3]The Contractor may use 301 or 441 Type 2 intermediate course.
[4]The Contractor may use 2-1/2 inches (65 mm) 301, 302, or 441 Type 2 intermediate course in lieu of 6 inches (150 mm) of 304.
[5]The Engineer may waive maximum placement lift thicknesses if quality control testing conforming to Supplement 1055 is performed and a final density between 93 and 96.5 percent is achieved.
[6]The Contractor may use 442 in lieu of 441.
[7] The use of anti-segregation equipment according to 302 is not required for pavement constructed under this Item. IF the pavement will be part of the final pavement build up, anti-segregation equipment is required according to 302.

619.02

On page 549, **Replace** footnotes [2]**,** [4] and [5] of Table 619.02-1 FIELD OFFICE with the following:

[2]Copier must meet minimum specifications provided for each field office type. Contractor responsible for paper supplies, copier supplies, and maintenance of copier.

Type A, B and C: (Check with ODOT IT Support to approve non-preferred print unit)
Copy/Print Speed: 20 Pages Per Minute (Letter), 15 Pages Per Minute (Legal), 12 Pages Per Minute (Ledger) or higher
Duplex printing support
Automatic document feeder with 40 sheet duplexing document feeder
Copier Memory: 256 MB
Data Security Kit
Paper Capacity - 250 sheet × 2 trays, 50-sheet Bypass tray
Network Interface: Enternet port 10/100Base-TX, 1000Base-TX

Color Scanning with following requirements:
- Up to Up to 600 × 600 dpi
- Scan Area up to 11" × 17"
- Scanning Protocol Support - TCP/IP, SMTP, SMB, FTP, POP3, NCP
- File Scan Types Supported: Single Page TIFF, JPEG, PDF, Multi- Page TIFF, PDF, and
- Scanning Support for Scan-to-Email, SMB (Folder), URL, and TWAIN

Network protocol support for TCP/IP
Support Kerberos Authentication
Support TLS 1.2
Support SNMPv3
Supports at least the below Web Encryption Ciphers
AES256-GCM-SHA384

AES256-SHA256
AES256-SHA
AES128-GCM-SHA256
AES128-SHA256
AES128-SHA

Supports FIPS 140 Compliance Library
Client and Server Print Driver Support for PCL Print Drivers
Server Operating System Support for Windows Server 2016 and later (32 Bit/64 Bit)
Client Print driver support for Windows 10 and later (Both PCL/(32 Bit and 64 Bit))
Minimum print/copy resolution of 600 × 600 dpi
Preferred print unit: one of the following MFC machines/series:

- M776dn - #T3U55A
- Flow M776z - #3WT91A
- Flow M776zs - #T3U56A

[4]Capable of handling the breakdown of 22 × 34-inch (559 × 864 mm) sized plans into ten sections.

[5]Provide a broadband internet connection capable of minimum download speeds as follows:
30 Mbps download 5 Mbps upload - Network Latency less than 50 milliseconds. If speeds are not available through an individual or singular circuit, provide the highest speed available in the area and install multiple circuits to achieve the specified speeds. When multiple broadband services are available the following is the preferred order: Cable, DSL, Cellular, and Wireless Radio (Satellite Communication is not compatible with ODOT VPN connection and will not be accepted). Supply modems capable of being configured in Bridge Mode. If a cellular network is used, provide the cellular equipment, including software and router equipment to connect to the ODOT provided Cisco ASA 5505 firewall. Supply ODOT with all documentation for the broadband circuit including all username/user ids, passwords and account information. Verify that the broadband internet connection is active and working as specified. ODOT IT personnel will confirm that bandwidth and network latency are compliant with the required field office specifications. All field office Internet connections are for ODOT use only.

620.02

On page 550, **Revise** the seventh line of the table and the second following sentence as follows:

Retroreflective sheeting…….730.191, 730.194

Delineators consist of reflectors mounted on flexible posts or brackets. Reflectors are retroreflective sheeting adhered to either a flexible post or an aluminum plate.

621.08

On page 554, **Revise** the third sentence of the section as follows:

Remove all standing water from the hole, clean the hole, and coat with 407.02 asphalt material before filling.

622.02

On page 555, **Add** the following footnotes:

622.02 Materials. Furnish materials conforming to:

Concrete,	
Class QC [1][2]	499
Reinforcing steel and wire fabric	509.02
Forms	515.14
Preformed filler	705.03
Curing materials	705.05, 705.06, or 705.07 Type 2
Precast concrete	706.13
Dowel bars	709.01 thru 709.05
Steel	711.01

[1]Replacing Coarse aggregate in the concrete mixes with Recycled Concrete Aggregate conforming to Supplement 1117 is an option

[2]Provide a Concrete Cylinder Cure Box per 511.04.

622.04

On page 555, **Add** the following sentences to the end of the section:

All barrier segments are to be marked on the top, PCB-XX-MASH-TL-3, where XX indicates the year cast. If the barrier is cast using welded wire fabric instead of the rebar, add "WWF" to the end of the notation. Permanently impress these markings in the barrier using a minimum of 2" high lettering. ~~With the exception of previously approved PCB tested under NCHRP-350, all portable barriers must be MASH compliant for freestanding, anchored in asphalt and anchored in concrete conditions.~~

622.04

On page 555, **Delete** the word "proprietary" in the fifth sentence of the paragraph.

622.09

On page 556, **Delete** the word "proprietary" in the second sentence of the first paragraph.

622.08

On page 556, **Replace** the last paragraph with the following:

The Department will not measure repaired or replacement barrier sections damaged during handling.

622.07

On page 556, **Replace** the section with the following:

622.07 Curing. Cure concrete according to ~~511.14~~ 511.13, Method B and the following additional requirements. Apply the curing compound using an approved mechanical sprayer equipped with a shield to protect the spray from wind. For small areas, the Engineer will allow the use of other acceptable methods.

Do not apply any load or conduct any work that will damage newly placed concrete. Allow a minimum of 36 hours of cure time to elapse on any concrete placed first at a horizontal construction joint. The Contractor may cure precast sections according to 515.15. With the Engineer's approval, the Contractor may also use radiant heated forms for curing.

The Contractor may use ~~511.14~~ 511.13, Method A for curing of short sections of barrier (leave-outs); however, before the curing is completed for any leave-outs, apply material conforming to 705.07, Type 2 at the normal rate specified in ~~511.14~~ 511.13, Method B.

The Contractor may cure horizontal construction joints between the foundation and the upper portion of the barrier, and between portions of the upper barrier placed separately according to ~~511.14~~ 511.13, Method A or B. Do not remove the membrane before placing the next portion of the concrete barrier.

624

On page 562, **Replace** entire Item 624 Mobilization with the following**:**

ITEM 624 MOBILIZATION

ITEM 624 MOBILIZATION

624.01 Description. This work consists of the preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all field offices, buildings, and other facilities necessary for work on the project; for all other work and operations that must be performed or costs incurred before beginning the Work on the other contract items; and for demobilization.

If Mobilization is not included as a pay item in the Contract, the Department will not pay for this work separately but will consider it incidental to the other Contract Items.

624.02 Limitation. The Department will limit the sum of the partial payments specified in 624.04.A and 624.04.B to 5% of the original contract amount. The Department will pay the balance of the lump sum amount bid, as specified in 624.04.C.

If the lump sum amount bid for Mobilization exceeds 5% of the original contract amount, the Department will pay the excess upon completion of the project.

624.03 Method of Measurement. The Department will measure Mobilization as a unit, acceptably performed.

624.04 Basis of Payment. The Department will make partial payments according to 109.09 and as modified by the following schedule:

A. The Department will release 50 percent of the lump sum amount bid for Mobilization or 50 percent of 5% of the original contract amount, whichever is less, to the Contractor with the first estimate payable, but not sooner than 15 days after the start of work at the project site.

B. The Department will release an additional 40 percent of the lump sum amount bid for Mobilization or 40 percent of 5% of the original contract amount, whichever is less, with the first regular estimate after 10 percent of the original total contract amount, including payments for delivered materials but excluding Mobilization, is earned.

C. Upon completion of all work on the project, including final cleanup, the Department will release payment of the remaining 10 percent of the lump sum amount bid for Mobilization and any amount of the lump sum price bid for Mobilization, in excess of 5% of the original contract amount for partial payment. Final cleanup includes but is not limited to the removal of construction layout stakes and sediment and erosion control items.

The Department will pay for accepted quantities at the contract price as follows:

Item	Unit	Description
624	Lump Sum	Mobilization

625.05

On page 564, **Add** the following footnote:

625.05 Materials. Furnish materials conforming to:

Concrete QC Misc or QC 1[1] 499, 511
Reinforcing steel 509.02
Sand 703.06
Cable 725.02
Unit type duct-cable systems 725.03
Conduit 725.04, 725.051, 725.052
Pull boxes.....725.06, 725.07, 725.08, 725.12
Junction boxes 725.10
Luminaires 725.11
Lamps 725.11
Cable connectors and connector kits 725.15
Cable splicing kits.....725.15
Ground rods 725.16
Power service components 725.19
Wood service poles.....725.19
Anchor bolts and nuts 725.21
Light poles 725.21
Light towers 725.21
Portable power units 725.21
Underground warning / marking tape.....725.22

[1]Provide a Concrete Cylinder Cure Box per 511.04.

625.06

On page 565, **Add** the following sentence to the end of 625.06:

Shop drawings shall include the AASHTO criteria and loads for which the support was designed.

625.10

On page 567, **Replace** the first sentence with the following:

Excavate for each foundation in accordance with 524 to the dimensions given.

625.10

On page 567, **Replace** the seventh paragraph with the following:

Place concrete for the foundation in accordance with 524 except that forms will not be required for portions of foundations extending more than 6 inches (150 mm) below the ground line, unless the soil does not have sufficient stability to stay in place during the placing of the concrete.

625.10

On page 567, **Add** the following to the end of the last paragraph:

After 14 days, erect and load supports on anchor base foundations. The Contractor may erect and load supports after 7 days if the tests of two beam specimens of concrete yield an average modulus of rupture of not less than 650 pounds per square inch.

625.12

On page 568, **Replace** the eighth paragraph with the following:

Securely fasten onto or build into the structure each conduit. Support conduit using no less than the minimum spacing for the conduit Type in Chapter 3 of the NEC. Use clamps of the same material and finish as the conduit. For plastic conduit, use stainless steel clamps. Secure clamps to concrete with stainless steel concrete tapping screws.

625.18

On page 572, **Revise** the second paragraph as follows:

Make each cable connection below grade (i.e. pull boxes, junction boxes in retaining walls, etc.) with a cable splicing kit. Three-way butt splices may be constructed using two copper E-crimp tap connectors inside the splice enclosure.

625.22

On page 577, **Add** the following paragraph to the end of the section:

Service to Underpass lighting will be measured to include all underpass lighting electrical components, such as raceway, wire, connectors, junction boxes, and attachment hardware as detailed in the Plans, originating at and including each disconnect and any conduit from the pull box to the disconnect; pull box and luminaires are not included in this item.

626.04

On page 580, **Replace** the Barrier Reflectors Color & Direction table and footnotes with the following:

BARRIER REFLECTORS COLOR & DIRECTION	*Divided Highway*		*Undivided Highway*		*Interchange Ramp*	
	Median	*Right Shoulder*	*Right Shoulder*		*Median*	*Right Shoulder*
Barrier Type			*2-lane*	*Multilane*		
Concrete Barrier/Parapet	Yellow/Red	White/None	White/White	White/None	Yellow/Red	White/Red
Guardrail	Yellow/Yellow	White/None	White/White	White/None	Yellow/Yellow	White/Red
Cable Rail	Yellow/Yellow	Not Used				

630.02

On page 581, **Replace** the second paragraph with the following:

Transfer manufacturers' guarantees or warranties on all traffic sign material, including required guarantees for sign sheeting in accordance with Supplement 1049, to the Department or other maintaining agency upon completion and acceptance of the project.

630.02

On page 582, **Add** the following to "Other materials":

Other materials:
Retroreflective sheeting, Type I……730.18
Retroreflective sheeting, Type IV……730.19
Retroreflective sheeting, Type IX……730.193
Retroreflective sheeting, Type XI……730.194
Nonreflective acrylic opaque sheeting……..730.20
Silk screen inks……730.22

Transparent acrylic electronic cuttable films……730.23
Digital Printing……..730.24

630.02

On page 581, **Add** On page 564, **Add** the following footnote:

Furnish materials conforming to:

Concrete, Class QC Misc or QC 1[1].....499, 511
Steel:
Structural steel.....711.01
Reinforcing steel 509.02
U-channel posts.....730.015
Square posts 730.016
Wooden Box Beam……730.017
Tube and pipe.....730.01
Anchor bolts and nuts 730.02
Poles and arms 730.03
Base and arm plates.....730.04
Handhole covers.....730.05
Pole caps.....730.06
Arm caps 730.07
Hardware.....730.08
Stainless steel 730.09
Stainless steel hardware 730.10
Messenger wire 732.18
Aluminum:
Sheet and plate 730.11
Extrusions.....730.12
Tube and pipe.....730.13
Castings.....730.14
Forgings 730.15
Welding rods.....730.16
Hardware.....730.17
Other materials:
Decals.....725.21
Reflective sheeting, Type F.....730.18
Reflective sheeting, Type G.....730.19
Reflective sheeting, Type H.....730.192
Reflective sheeting, Type J 730.193
Nonreflective acrylic opaque sheeting 730.20
Silk screen inks 730.22
Transparent acrylic electronic cuttable films 730.23

[1]Provide a Concrete Cylinder Cure Box per 511.04.

630.04

On page 582, **Revise** the first sentence of the second paragraph as follows:

Prior to retroreflective sheeting application, clean aluminum sign surfaces either by total immersion in a tank containing an alkaline solution of the manufacturer's specification or by steam cleaning with an alkaline solution of the manufacturer's specification, followed by a thorough rinsing with running water."

630.04

On page 583, **Revise** the second paragraph as follows:

For flat sheet fluorescent yellow and fluorescent yellow-green warning signs, use type XI retroreflective sheeting. For other flat sheet sign types and colors, double faced mile marker, and double faced street name signs, use Type IV, IX or XI retroreflective sheeting for background and retroreflective legends.

630.04

On page 583, **Replace** the third paragraph with the following:

For extrusheet signs, use Type IV or Type XI retroreflective sheeting for the background, and use Type XI retroreflective sheeting for retroreflective legends, shields and symbols (including hazardous material plaque, airport symbol, arrows and borders). Use the same sheeting type to cover the entire background surface. Use the same sheeting type for the entire legend. Apply retroreflective sheeting to the surface according to the manufacturer's recommendations, with no blisters, wrinkles, tears, or blemishes. Do not use Reboundable sheeting for permanent signs.

For retroreflective legends on flat sheet, double faced mile marker and double faced street name signs, use reverse silk screen transparent ink, digital printing, transparent acrylic electronic cuttable film, or direct applied retroreflective sheeting copy. When using direct applied retroreflective sheeting copy, apply all legend on a sign with the same rotation angle orientation. For nonreflective legends, use direct silk screen black ink or direct applied nonreflective acrylic opaque black sheeting copy. For double faced mile marker signs, use flat sheet aluminum and apply retroreflective sheeting and legend to both sides. For double faced street name signs, use extruded aluminum blanks with minimum thickness of 0.063 inch (1.6 mm) and thicker, stiffened edges, and apply retroreflective sheeting and legend to both sides.

630.04

On page 583, **Revise** the fourth paragraph as follows:

Extrusheet panels consist of flat sheet aluminum reinforced with aluminum extrusions attached by spot welding. Panels extruded in a single operation may be used in lieu of spot welded panels. Do not use extruded panels and spot welded panels in the same sign. Bolt together the minimum number of full length, sheeted panels to achieve the sign height, using aluminum bolts, washers, lock washers and nuts. For retroreflective legends, shields and symbols (including hazardous material plaque, airport symbol, arrows and borders) use direct applied retroreflective sheeting. Apply all retroreflective legend on a sign with the same rotation angle orientation. For nonreflective legends, use direct applied nonreflective acrylic opaque black sheeting copy. Use sheeting from the same manufacturer for both the legend and background.

630.04

On page 583, **Revise** the last paragraph as follows:

Use fluorescent yellow-green Type XI retroreflective sheeting for the following signs and plaques: School (S1-1), School Bus Stop Ahead (S3-1), SCHOOL BUS TURN AHEAD (S3-2), SCHOOL ENTRANCE (S3-H3), SCHOOL (S4-3P), School Speed Limit Ahead (S4-5, S4-5a), yellow portions of School Speed Limit (S5-H1), Pedestrian Crossing (R1-6, R1-6b, R1-9), Bicycle (W11-1), Pedestrian (W11-2), Handicapped (W11-9), Bicycle/Pedestrian (W11-15), Trail Crossing (W11-15a), Playground (W15-1), and SAFETY ZONE (W15-H2). Fabricate supplemental warning plaques [such as Advisory Speed (W13-1P), SHARE THE ROAD (W16-1P), Distance (W16-2P, W16-2aP, W16-3P, W16-3aP), Supplemental Arrow (W16-5P, W16-6P, W16-7P) and AHEAD (W16-9P)] from fluorescent yellow green Type XI retroreflective sheeting when used with a sign above.

630.04

On page 584, **Revise** the second paragraph as follows:

Use fluorescent yellow Type XI retroreflective sheeting for all yellow signs, yellow portions of multi-colored signs, and yellow sign post reflectors, except for signs and portions of signs required to be fabricated with fluorescent yellow-green Type XI retroreflective sheeting.

630.04

On page 584, **Revise** the fourth paragraph as follows:

Furnish 4 x 2.5 inch (100 x 62 mm) sign identification labels of Type I retroreflective sheeting as shown in Figure 1. For signs fabricated in English based sizes, use white labels with red ink legend. For signs fabricated in hard metric based sizes, regardless of the sign message units contained on the sign face, use yellow labels with red ink legend. Place the label on the back side of the sign in the lower right corner of rectangular signs, or in an equivalent location for other sign shapes, approximately 3 inches (75 mm) from side and bottom sign edges (for smaller signs, these dimensions may be reduced). Position the label so it can be read horizontally and is clearly visible, not near bolt holes or rivets, and not obstructed by the sign support when erected.

630.04

On page 584, **Revise** the first sentence of the fifth paragraph as follows:

Silk screen or digitally print the fabrication data onto the face of the label, and include the month and year of fabrication, state project number, sign manufacturer name, the sign process (silkscreen, digital, cut vinyl), and the sheeting manufacturer brand.

630.04

On page 584, **Revise** the Figure 1 heading as follows:

FIGURE 1
LABEL DESIGN

630.04

On page 585, **Revise** the first sentence of the first paragraph as follows:

Fabricate sign post reflectors with flat sheet aluminum and match the retroreflective sheeting type to the sheeting type used for the corresponding sign.

630.06.B

On page 586, **Revise** the first sentence of the fourth paragraph as follows:

When specified, furnish sign support identification stickers of Type I retroreflective sheeting listing the support type, design number, span/arm length, county, route, and section number (example: TC15.116, design 1, 80 ft span, CUY-90-17.58).

630.14

On page 589, **Replace** the fifth paragraph with the following:

The Department will measure Ground Mounted Wooden Box Beam Support by the number of feet (meters), and will include u-channel post, sheet metal cap, stabilizers, hardware for sign attachment, solid concrete block, excavation, backfilling, disposal of surplus material, and installation of breakaway feature.

632.03

On page 598, **Revise** the sixteenth line of the table as follows:

Signal heads 732.01, 732.02, 732.05

632.03

On page 598, **Add** the following footnotes:

Furnish materials and equipment conforming to:

Concrete, Class QC Misc or QC 1[1].....499, 511
Steel[2]:
Poles, supports, arms, appurtenances
and anchor bases 730.02, 730.03, 730.04,
.....730.05, 730.06, 730.07,
.....732.12, 732.11
Pedestals.....732.15
Backplates 732.22
Hardware.....730.08
Stainless steel hardware 730.10
Other Items:
Conduit, rigid 725.04, 725.051, 725.052
Ground rod 725.16
Pull boxes.....725.06, 725.07, 725.08, 725.12
Identifying tags or bands.....725.02
Signal heads 732.01, 732.02, 732.03, 732.05
Lamps.....732.04
Pushbuttons 732.06
Detectors 732.07
Wood poles 732.13
Down guys 732.14
Conduit risers 732.16
Cable supports.....732.17
Messenger wire 732.18
Cable and wire.....732.19
Power service 732.20
Disconnect Switch with enclosure 732.21
Backplates.....732.22
Tether Wire 732.18

[1] Provide a Concrete Cylinder Cure Box per 511.04.

[2] Acceptance of materials and products is based on certified test data, furnished in triplicate, or on test results of samples according 106.04, as required by the Laboratory.

632.05

On page 600, **Replace** Table 632.05-1 with the following:

Table 632.05-1 Cable and Wire Identification

Cable	Tag
Ground	GND
Power (2 wire)1∅ 120 volt	AC +AC- or ACN
Power (3 wire) 1∅ 120/240 volt Neutral wire	AC + 1, AC + 2 AC- or ACN
Phase A Phase 1 Phase 1 northbound left turn lanes	∅ A ∅ 1 ∅ 1 NBLT
Phase A, pedestrian signal	∅ A PD
Radar, Advance Detection Phase, Direction	RAD-Adv ∅2, NB
Radar, Stop Line Detection Phase, Direction	RAD-SL ∅1, SBLT
Overlap, phase A + C Overlap, phase 1 + 6	∅ A + C ∅ 1 + 6
Detector lead-in, phase A Detector lead-in, phase 1 Detector lead-in, phase 1 northbound left turn lanes	DET A DET 1 DET 1 NBLT
Detector lead-in, phase A (call type) Detector lead-in, phase 1 (call type) northbound thru lanes	DET A CALL DET 1 CALL NB-THRU
Detector harness[1]	DET A
Interconnect	IC
Preemption, fire	PE FIRE
Preemption, railroad	PE RR
[1]Place the tag next to the MS plug at the detector amplifier.	

633

On page 611, **Delete** the subsection title "**633.13 Controller, Master, Traffic Responsive**".

633.03

On page 612, **Add** the following footnote:

Furnish material and equipment conforming to:

Concrete (cabinet foundations and work pads)
QC Misc or QC 1[1] 499, 511
Conduit 725.04, 725.051, 725.052
Cabinet and auxiliary equipment.....733.03
Cabinet riser.....733.04
Flasher controller.....733.05
Remote monitoring station 733.07
Uninterruptible Power Supply……. 733.09

[1] Provide a Concrete Cylinder Cure Box per 511.04.

633.15

On page 614, **Delete** all of section 633.15 **Communications.**

633.18

On page 614, **Replace** the last sentence of the first paragraph with the following:

A ground rod (paid for separately) shall be provided for freestanding UPS cabinets.

641.03

On page 628, **Add** the following paragraph between the fourth and fifth paragraphs:

Disperse remaining loose glass beads or wet reflective optics from the non-marked roadway surface in areas where the glass beads or wet reflective optics are applied by hand, are loaded into the striping apparatus, or are applied along the radii of intersections

641.05

On page 631, **Replace** the first paragraph with the following:

Before applying marking material, the pavement surfaces must be completely dry. In the presence of the Engineer, test for moisture using the following test procedure, when rainfall has occurred within 24 hours prior to the start of the pavement marking operations or as directed by the Engineer.

641.08.E

On page 632, **Revise** the first paragraph as follows:

Place stop lines as solid 24-inch (600 mm) wide white stripes. Place transverse crosswalk lines as solid 12-inch (300 mm) wide white stripes. Place longitudinal bar crosswalk lines as solid 24-inch (600 mm) wide white stripes.

641.12

On page 633, **Insert** the following after the second sentence of the first paragraph:

The Department will measure Crosswalk Line as the total length of all individual transverse or longitudinal crosswalk lines.

641.12

On page 633, in the third sentence of section 641.12, **Delete** the hyphen from the word “TwoWay”.

641.12

On page 633, **Add** the following after the fourth sentence of the paragraph:

641.12 Method of Measurement. The Department will measure pavement markings complete in place in the units designated. The Department will measure line quantities as the length of completed marking, including the gaps, intersections, and other sections of pavement not normally marked. The Department will measure Crosswalk Line as the total length of all individual transverse or longitudinal crosswalk lines. The Department will measure Two-Way Left Turn Arrow as one pair of two opposing left turn arrows. The Department will measure Speed Measurement Marking as a 24-inch-wide by 4 feet long marking including the surveying work. The Department will measure the removal of pavement markings using the same method of measurement as completed markings in the units designated.

642.04

On page 636, **Replace** the second sentence in the first paragraph with the following:

Apply glass beads at a minimum rate of ~~15~~ 10 pounds per 100 square feet (~~7.3~~ 4.9 kg per 10 m^2) for Type 1 traffic paint.

642.05

On page 636, **Add** the following item between the "Lane Arrow" and "Word on Pavement" items:

642 Each Two Way Left Turn Arrow

643.05

On page 639, **Add** the following item between the "Lane Arrow" and "Word on Pavement" items:

643 Each Two Way Left Turn Arrow

644.06

On page 642, **Add** the following item between the "Lane Arrow" and "Word on Pavement" items:

644 Each Two Way Left Turn Arrow

645.02

On page 642, **Replace** the first item in the list with the following:

Type A (permanent markings), Type A1, A2, A3 or A4 ……740.05

645.05

On page 643, **Add** the following item between the "Lane Arrow" and "Word on Pavement" items:

645 Each Two Way Left Turn Arrow

646.07

On page 648, **Add** the following item between the "Lane Arrow" and "Word on Pavement" items:

646 Each Two Way Left Turn Arrow

659.03

On page 662, **Replace** the entire second paragraph with the following:

The Contractor may provide other lime grade materials. The lime grade materials provided will meet Table 3-5 "Total Neutralizing Power, Fineness, Moisture, and Effective Neutralizing Power of Various Liming Materials That Can be Found in Ohio" found in Bulletin 472, *Ohio Agronomy Guide*, published by the Cooperative Extension Service, The Ohio State University. Based on the type of lime grade material provided, determine the increase or decrease in the standard application rate from Table 3-6 according to the "Adjustments for the Type of Liming Material" section.

661.09

On page 676, **Replace** the title of the section to the following:

Item 661.09 Soil Recipe.

661.09

On page 676, **Replace** the section with the following:

Soil Recipe

Till soil with backhoe or chisel plow to 2 feet deep. Topdress 10% of the vertical tillable inches (see chart below) to at least an eight (8) foot diameter (50 ft^2) around where each plant will be located. Vertical tillable inches will vary with equipment availability and constraints as well as soil composition. Rototill EPA rated Class IV compost (preferably pine compost) into the soil to appropriate depth. Disking may be necessary to level soil and to incorporate compost.

SOIL AMMENDMENTS

DEPTH OF TILLABLE SOIL (INCHES)	AMOUNT OF COMPOST (INCHES TOPDRESS)
8	0.8
9	0.9
10	1.0
11	1.1
12	1.2

TOPDRESS

Topdress with EPA rated Class IV compost (preferably pine compost) at one inch depth to at least an eight (8) foot diameter (50 ft2) around each plant.

661.10.A.

On page 677, **Replace** the first paragraph with the following:

A. Planting Holes: Dig planting holes that have sloping side walls and are 'bowl shaped'. Slope the side walls to approximately 45 degrees. Dig the planting hole so that the diameter at the top is at least two times the diameter of the root ball. Dig the planting hole to the same depth as the root ball structure. Planting hole depth shall result in the base of the tree flare being at or slightly above final grade. The soil directly beneath the root ball should be undisturbed or prepared to minimize settling.

661.10.C.

On page 677, **Replace** the second paragraph with the following:

Backfill the planting hole with similar soil. Fill the hole gradually and settle the backfill with water to the top of the root structure. Do not place backfill in direct contact with the trunks or stems. Add backfill around the root structure up to the plant's root collar at the soil surface.

661.11

On page 678, **Replace** the section with the following:

661.11 Mulch.

A. Tree Mulching. Use composted bark / wood mulch with various sized pieces of wood and bark. Finely ground or dyed mulches are unacceptable. Do not use ground pallets or processed wood. Provide mulch that is free of soil, rocks, weeds, and that has been aged at least six months to one year.

Mulch should be 2-4inches deep with a 3–4-foot radius around newly planted trees. Do not volcano mulch around the tree. Mulch should be in a doughnut shape leaving four inches adjacent to the tree trunk free of mulch.

B. Plant Mulching. Provide plant mulch that consists of shredded bark and shredded wood. The length of any individual component cannot exceed 2 inches (50 mm). Ensure that at least 75 percent of the mulch can pass a 1 inch (25 mm) screen. Landscape mulch may contain up to 50 percent shredded wood. Wood chips are not acceptable. Provide mulch that is free of soil, rocks, and weeds, and that has been aged at least one year before installation.

Smooth and shape the backfill mix to form a shallow basin slightly larger than the planting hole. Mulch these areas with a 4 inch (100 mm) layer of landscape mulch uniform in texture and size. Do not

place mulch in direct contact with the trunks of any trees. Rake and smooth all planting beds upon completion of work.

661.12

On page 678, **Delete** section 661.12 in its entirety.

662.02

On page 680, **Replace** the first and second paragraphs with the following:

Watering. Furnish the water used in watering landscape plants. Thoroughly water all plant material at the time of planting regardless of soil moisture content. Continue to water throughout the period of establishment. Watering shall be weekly throughout the growing season.

Saturate the root zone and mulched area of each plant without causing run-off according to Table 662.03-1. During fall planting, continue to water until the ground is frozen and recommence watering after the spring thaw. Furnish a rain gauge approved by the Engineer, unless noted otherwise. A rain gauge is not needed for trees.

666.02

On page 681, **Delete** section 666.02 in its entirety.

666.03

On page 681, **Replace** the second, third and fourth paragraphs with the following:

Remove all dead wood and dead branches 1 inch (25 mm) or more in diameter. Remove all branches interfering with or hindering the healthy growth of the tree. A branch removal cut shall be made without cutting into the branch bark ridge or branch collar or leaving a stub. Remove all diseased branches. For branches that may be partly dead yet have a good healthy lateral branch between the dead part and the base, cut off the branch with a good clean slanting cut close to and beyond the healthy lateral branch.

Remove low hanging, unsound, or unsightly branches on trees or shrubs designated to remain. Remove all branches or growth interfering with the free traffic movement on the highway. Prune branches of trees extending over the roadbed to provide a clear height of 20 feet (6 m) above the roadbed surface.

Prune off all stubs or improper cuts resulting from former pruning or limbs that have been broken flush with the trunk or limb of the tree in order to ensure proper healing.

666.04

On page 681, **Delete** section 666.04 in its entirety.

700.00

On page 687, **Replace** 511with the following:

511	Concrete for Structures	NON QC/QA SPECIFICATIONS Make one set of cylinders each 50 yd^3 or less. Document in AWP.	Once initial set has occurred, but no more than 48 hours after sampling, ship cylinders to District Testing with required documentation.

		Field or Standard Cure according to ACI/ODOT specifications. QC/QA SPECIFICATIONS Follow requirements of Item 455 for quality assurance sampling and testing. Document in AWP.	Once initial set has occurred, but no more than 48 hours after sampling, ship quality assurance cylinders to District Testing with required documentation.

700.00

On page 687, **Delete** 610 from 700 table.

700.00

On page 709, **Delete** the line for 730.192 and make revisions to the chart as highlighted below:

Spec No.	Material	Material only Inspection or Sampling Requirements	Additional Instructions
730.18	Retroreflective Sheeting Type I	Use if certification provided. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.19	Retroreflective Sheeting Type IV	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.191	Retroreflective Sheeting Reboundable	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.193	Retroreflective Sheeting Type IX	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.194	Retroreflective Sheeting Type XI	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to dimension and condition. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
730.20	Nonreflective Sheeting	Verify type and brand name of material is on QPL at the time of use. Inspect for conformance to	Notify District Testing if rejecting material. If material non-performs or looks

		dimension and condition. Document in SM.	defective during use notify District Testing and OMM.

700.00

On page 710, **Delete** the line for 732.03.

700.00

Starting on page 686 through page 714, Section 700 Material Details, MINIMUM REQUIREMENTS FOR SAMPLING MATERIALS, **Replace** all instances of "TE-24" with "DSR".

700.00

Starting on page 686 through page 714, Section 700 Material Details, MINIMUM REQUIREMENTS FOR SAMPLING MATERIALS, **Replace** all instances of "SM" with "AWP".

700.00

On page 689, **Add** the following row after 701.13:

701.15	Portland-limestone Cement, Type IL	Verify manufacturer on Concrete Plant Batch Ticket is on Certified List for Supplement 1028 maintained by OMM. Verify material against bill of lading description. Document in AWP.	

700.00

On page 692 **Replace** row 705.10 with the following:

705.10	Air Entraining Admixtures	Verify type and brand name of material listed on Concrete Plant Batch Ticket is on QPL at the time of use. Document in AWP.	Storage: Admixtures should be stored at concrete producer in such a manner to permit easy access for proper identification in weather resistant units. If an issue is suspected to be present with any material, collect one (1) QA sample. Minimum sample size one (1) quart.

700.00

On page 692 **Replace** row 705.12 with the following:

705.12	Chemical Admixtures for Concrete	Verify type and brand name of material is on QPL at the time of use. Document in AWP.	Storage: Admixtures should be stored at concrete producer in such a manner to permit easy access for proper identification in weather resistant units. If an issue is suspected to be present with any material, collect one (1) QA sample. Minimum sample size one (1) quart.

701.00

On Page 715, **Replace** the first sentence of the paragraph with the following:

Provide cements meeting 701.01, 701.02, 701.04, 701.05, 701.07, 701.09 and 701.15 and certified according to Supplement 1028; fly ash or natural pozzolan meeting 701.13 and certified according to Supplement 1026; slag cement meeting 701.11 and certified according to Supplement 1034; and micro silica meeting 701.10 and certified according to Supplement 1045, without prior sampling, testing and approval by the Department.

701.11

On Page 715 **Replace** the section with the following:

701.11 Slag Cement. Provide slag cement according to ASTM C 989, meeting the Grade 100 slag activity index minimum.

701.13

On Page 715, **Replace** the paragraph with the following:

701.13 Fly Ash or Natural Pozzolan for Use in Portland Cement Concrete. Provide fly ash or natural pozzolan according to ASTM C618, Class C, F, or N, except ensure a maximum loss on ignition (LOI) of 5.0 percent. ~~for fly ash and 5 percent for natural pozzolan.~~

701.13

On Page 715, Delete the second paragraph.

701.15

On Page 715, **Delete** the second sentence in the paragraph.

701.16

On page 715 **Add** after 701.15 the following:

701.16 Portland-limestone Cement, Type 1L HE. Provide portland-limestone cement according to ASTM C 595, Type 1L HE. ~~The maximum allowable limestone content is fifteen percent by mass.~~

701.17

On page 715 **Add** after 701.16 the following:

701.17 Portland-limestone Cement, Type 1T. Provide Portland-limestone cement according to ASTM C 595, Type 1T(S<25). Ternary blended cements containing pozzolans will not be allowed.

702

On page 716 **Replace** the last sentence in the first paragraph with the following:

The remaining materials may be acceptable for shipment to and immediately used in construction projects based on meeting the requirements of Department QPL and certified test data based on what each material requires.

702.09

On page 722 **Replace** the last sentence of Section 702.09 with the following:

Furnish materials according to the Department's QPL. Provide Certified Test Data to the Engineer for each shipment of material corresponding to the batch of material being used.

704.04

On page 749, **Add** the following new subsection:

704.04 Brick Made from Recycled Materials. Furnish brick made from recycled materials conforming to ASTM C 67, with the following modification:

4.1 Furnish materials according to the Department's QPL.

4.2.1 Furnish bricks of such size and shape as to allow their incorporation in the structure in conformance with the specified dimensions of the structure. Furnish bricks that have a rectangular cross-section with square corners. Ensure that the ends, edges, and one face are plain surfaces.

705.04

On page 749 **Add** the following paragraph after the first paragraph of Section 705.04:

Furnish materials according to the Department's QPL. Provide Certified Test Data to the Engineer for each shipment of material corresponding to the batch of material being used.

705.20.A.

On Page 752, **Replace** the table and footnote with the following:

Test Description	Specification	Requirements	Notes
Bond Strength (dry)	ASTM C882[2]	2 day, Min. 1800 psi	Average of three samples [1]
Bond Strength after subjected to 300 cycles freeze/thaw testing	Specimens cast according to ASTM C882 should be subjected to ASTM C666 Procedure B prior to testing Bond Strength according to ASTM C882	Min. 1600 psi	Average of three samples [1]
Heat Deflection	ASTM D648	7 day, Min. 130 ºF	
Linear Coefficient of Shrinkage	ASTM C531	% Max. 0.005	
Pullout Strength Test (dry)	See procedure below	24 hours, Min. Load 22,500 lbs	Average of three cylinders in dry condition
Pullout Strength Test (wet)	See procedure below	24 hours, Min. Load 22,500 lbs	Average of three cylinders in wet condition

[1] A total of six samples will be made under ASTM C882. Three of the specimens cast according to ASTM C882 should be subjected to ASTM C666 Procedure B prior to testing the Bond Strength according to ASTM C882.

[2] Cure according to each of the Classes specified in the product based on the requirements below:

- if the product specifies Class A, Curing Temperature to be at minimum temperature specified in the product.
- if the product specifies Class B, Curing Temperature to be at 40°F. **Note: If product is also listed as a Class A and the minimum temperature is >30 °F & < 40 °F, then cure at 50 °F.**
- if the product specifies Class C, Curing Temperature to be at maximum temperature specified in the product.

705.23.A.5.

On Page 755, **Replace** A.5. of 705.23 with the following:

5. Volatile Organic Compounds (VOC) maximum, OAC 3745-113 Coating Type

705.23.A.

On Page 755, **Replace** the second to last paragraph of the subsection with the following:

Furnish the test data, a one quart sample, and product literature, including data sheets, label and coating type, to the Office of Materials Management (OMM). OMM will determine material acceptance.

705.23.B.5.

On Page 756, **Replace** B.5. of 705.23 with the following:

5. Volatile Organic Compounds (VOC) maximum, OAC 3745-113 Coating Type

705.23.B.

On Page 756, **Replace** the second to last paragraph of the subsection with the following:

Furnish the test data, a one quart sample, and product literature, including data sheets, label and coating type, to the Office of Materials Management (OMM). OMM will determine material acceptance.

706.05

On page 774, **Add** the following sentence to the end of second paragraph:

Prepare and submit Shop Drawings according to 611.04 A.

706.10

On page 789, **Replace** the entire section with the following:

706.10 Bituminous Pipe Joint Filler. Provide cold applied, mineral filled, joint sealing compound for joints of bell and spigot, or tongue and groove sewer; or drain pipe conforming to the following:

A. Composition. Provide an asbestos-free steam-refined petroleum asphalt or a refined coal tar, dissolved in a suitable solvent, and containing an appropriate stiffener.

B. General Requirement. Provide a bituminous plastic cement that has a smooth, uniform mixture, not thickened or livered, and that shows a separation easily overcome by stirring. Ensure that the material is of such consistency and properties that it is readily applied with a trowel, a putty knife, or with a caulking gun without pulling or drawing. Provide a material that when applied to metal, concrete, or vitrified clay surfaces, exhibits good adhesive and cohesive properties and has only slight shrinkage after curing. Provide a material that is not damaged by exposure to below freezing temperatures.

C. Detail Requirements. Provide materials conforming to the following requirements:

1.	When applied in a layer 1/16 to 1/8-inch (1.6 to 3.2 mm) thick on a tinned metal panel and cured at room temperature for 24 hours, the bituminous plastic cement shall set to a tough, plastic coating, free from blisters.		
		Minimum	Maximum
2.	Grease Cone Penetration (unworked, 150 grams, 25 °C, 5 sec, ASTM D217, mm/10	175	250
3.	Weight, kg/L, ASTM D6511.6 [i]	1.17	--
4.	Non-volatile, 10 g, 105 to 110 °C, %, ASTM D6511.7 [ii]	75	--
5.	Ash, by ignition, %, ASTM D6511.9 [iii]	25	45

Notes:

i. Convert lb/gal to kg/L by multiplying by 0.11983

ii. Apply in a thin layer. A crucible meeting ASTM D6511.9 may be used and applied in a thin layer to the inner wall.

iii. Use a minimum of 3.0 grams of the sample after the non-volatile test. If a crucible is used in the non-volatile test, then the crucible and sample (mass of dry residue) can be used for this test.

Furnish materials according to the Department's QPL.

707.13

On Page 797, **Delete** the entire section.

~~**707.13 Bituminous Lined Corrugated Steel Pipe [1/2-inch (13 mm) Corrugations].** Provide pipe according to 707.01 and AASHTO M 190, Type D.~~

707.14

On Page 797, **Delete** the entire section.

~~**707.14 Bituminous Lined Corrugated Steel Pipe [1-inch (25 mm) Corrugations].** Provide pipe according to 707.02 and AASHTO M 190, Type D.~~

707.19

On Page 799, **Delete** the entire section.

~~**707.19 Aluminum Coated Steel Conduits with precoated galvanized smooth steel interior liner.** Provide Type IA pipe which has a corrugated exterior with a smooth interior liner. Ensure that the interior liner conforms to 707.04. Ensure that the corrugated exterior conduit material conforms to AASHTO M274. Provide corrugated exterior conduits per 707.01 or 707.02 with the following modifications to AASHTO M36:~~

~~7.7.1 Provide Aluminum Coated Steel Conduits with precoated galvanized smooth steel interior liner pipe with plain cut helical ends. Match mark ends. Install conduit so that match marks align and are in accordance with the layout drawings supplied by the manufacturer.~~

~~9.2 Provide external flat sheet coupling bands with a minimum wall thickness (coated) of .064 inch and that are a minimum of 12" wide. Ensure coupling bands are aluminum coated steel.~~

~~9.5 Ensure a soil tight joint by the use of a flat gasket conforming to ASTM D1056 2B1 that is a minimum of 12" wide and centered over the joint.~~

707.20

On Page 799, **Delete** the entire section.

~~**707.20 Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner.** Provide Type IA pipe which has a corrugated exterior with a smooth interior liner. Ensure that the interior liner conforms to 707.04. Ensure that the corrugated exterior conduit material conforms to AASHTO M 218. Provide corrugated exterior conduits per 707.01 and 707.02 with the following modifications to AASHTO M36:~~

~~7.7.1 Provide Galvanized Coated Steel Conduits with precoated galvanized smooth steel interior liner pipe with plain cut helical ends. Match mark ends. Install conduit so that match marks align and are in accordance with the layout drawings supplied by the manufacturer.~~

~~9.2 Provide external flat sheet coupling bands with a minimum wall thickness (coated) of .064 inch and that are a minimum of 12" wide. Ensure coupling bands are galvanized coated steel.~~

~~9.5 Ensure a soil tight joint by the use of a flat gasket conforming to ASTM D1056 2B1 that is a minimum of 12" wide and centered over the joint.~~

707.65

On Page 807, **Replace** the subsection with the following:

707.65 Corrugated Polypropylene Smooth Lined Pipe. Provide smooth lined corrugated polypropylene pipe, closed profile polypropylene pipe, couplings, and fittings according to AASHTO M 330, Type S or Type D.

Provide materials from manufacturers certified according to Supplement 1066 or material supplier vendors according to Supplement 1140.

708.01

On Page 808, **Add** the following paragraph after the second paragraph:

Provide an inorganic zinc silicate primer with a maximum Volatile Organic Compounds (VOC) meeting OAC 3745-113 Coating Type.

708.02.B.1.

On Page 809, **Add** the following after 708.02.B.1.g.:

h. Volatile Organic Compounds (VOC), maximum, ASTM D 3960. meet requirements of OAC 3745-113 Coating Type.

708.02.C.1.g.

On Page 810, **Replace** 708.02.C.1.g. with the following:

g. Volatile Organic Compounds (VOC), maximum, ASTM D 3960 meet requirements of OAC 3745-113 Coating Type.

708.02.D.1.

On Page 810, **Replace** section 708.02.D.1. with the following:

1. **Physical Requirements.**

a. Volume solids, ASTM D2697. 42 percent minimum.

b. Curing time, at 77 °F (25 °C) and 50% RH. Set-to-touch, ASTM D1640: 30 minutes, minimum; 4 hours, maximum.

c. Pot life. Follow the paint manufacturers recommendations for applying the coating within the pot life specified with no evidence of gellation. The coating shall be in a free-flowing condition and easily sprayed

d. Volatile Organic Compounds (VOC), maximum, ASTM D3960. Meet requirements of OAC 3745-113 Coating Type.

e. Colors.

(1) Specified.[2]

Brown	AMS-595A, 10324
Green	AMS-595A, 14277
Blue	AMS-595A, 15526
Gray	AMS-595A, 16440

[2] If not defined in the plans, the Engineer will specify from the list

(2) Elective. As specified on the plans.

f. Gloss requirements, ASTM D523.

Full gloss	minimum 80% unless specified on the plans
Semi-gloss	30 to 45%
Lusterless (Matte)	maximum 6%

708.02. D.2.C.

On Page 811, **Replace** section 708.02.D.2.C. with the following:

C. Weathering Resistance Test. Test the panels according to ASTM D 4587, ~~Method D~~ Cycle Number 4, using Ultra Violet A 340 bulbs. Place the panels on test at the beginning of a wet cycle. After 3000 hours of continuous exposure, examine the panels to verify that they show no rusting and that the coating shows no blistering or loss of adhesion. Perform the 60 degree specular gloss and color measurements on the sprayed panels utilized for this test. Average the three initial measurements (one per panel) together. Also, average the three final measurements together. Specular gloss, ASTM D523, shall be 70 % minimum after 3000 hours weathering resistance. Color change shall be ≤ 2.0 ΔE*, (C.I.E 1976 L*a*b*) ASTM D 2244.

708.02. D.2.F.

On Page 812, **Replace** the second paragraph of 708.02. D.2.F. with the following:

Prequalification. Before approval, submit copies of the manufacturer's certified test data showing that the coating system, using AMS-595A-16440 Gray for the urethane finish coat, complies with the performance requirements of this specification to the Laboratory Ensure that the certified test data also states the following physical properties for each coating: Density, pounds per gallon ~~(g/mL)~~; Solids, percent by weight; Solids, percent by volume; Viscosity; Drying time; and VOC content, pounds per gallon ~~(g/mL)~~.

711.03

On Page 824, **Replace** 711.03 with the following:

711.03 Steel for Piling. Furnish steel for H-piling conforming to ASTM A 572 Grade 50. Furnish steel for sheet piling according to ASTM A572 Grade 50. Furnish steel for cast-in-place reinforced concrete piles conforming to ASTM A 252, Grade 2 or 3.

711.21

On Page 828, **Replace** the subsection with the following:

711.21 Preformed Bearing Pads. Furnish Type CDP (Cotton Duck Pads) or Type PEP (Plain Elastomeric Pads) as follows:

A. Type CDP. Preformed Type CDP shall be composed of multiple layers of 8-oz/yd2 cotton duck impregnated and bonded with new unvulcanized natural and/or synthetic rubber compressed into resilient pads of uniform thickness. A lot shall consist of a single sheet that is continuously formed to the manufacturer's specified thickness not to exceed 2500 pounds of material. Test a minimum of two samples from a lot as follows: The samples shall be 2-in x 2-in with the full sheet thickness. Cure the test specimens for 4-hours at room temperature (70°F ± 10°F). Load each specimen in compression, perpendicular to the direction of lamination. Set the origin of deflection and compressive strain measurements at a compressive stress of 5-psi. Increase the load at a steady rate of 500-lbs/min and record deflection measurements to a maximum load of 10,000-psi. Between 30 and 60 seconds after the maximum load is released, measure the loss in thickness from the origin of deflection thickness as a percentage of the origin of deflection thickness. The lot average thickness loss at 10,000-psi shall not exceed 13%. Test specimens shall show no indications of fracture throughout the duration of the loading sequence. The lot average compressive strain of the specimens at an average compressive stress of 2000-psi shall fall between 7.5% and 17.5%. The lot average surface hardness, expressed in standard rubber hardness figures, is 90 ± 5 Shore Durometer.

Provide Certified Test Data verifying material compliance (i.e. 2000-psi compressive strain, 10,000-psi compression set and Shore Durometer averages), and include product name; manufacturer's name, address, phone number, and Certified Test Data for each thickness of Type CDP.

B. Type PEP. The elastomer compound used in the construction of these bearings shall contain only virgin crystallization resistant polychloroprene (neoprene) or virgin natural polyisoprene (natural rubber) as the raw polymer. All materials shall be new with no reclaimed material incorporated in the finished bearing. The elastomer compounds shall be low-temperature Grade 3. Perform testing of the elastomer compound at the manufacturer's discretion with all test reports retained according to the manufacturer's documented retention policy. The Durometer Hardness shall be 55 ± 10 in accordance with ASTM D2240 Type A.

Provide Certified Test Data verifying Shore Durometer and include product name; manufacturer's address, phone number, and Certified Test Data for each thickness of Type PEP.

711.23

On page 828, **Replace** the section with the following:

711.23 Elastomeric Bearings. Furnish steel laminated bearings from fabricators certified according to Supplement 1081.

The fabricator or an independent laboratory approved by the Department shall perform elastomer material testing and elastomeric bearing quality control testing on a lot basis as defined in the Quality Control Plan accepted according to Supplement 1081. If the sampled material or bearing fails to meet any requirement, the Department will consider the lot to be unacceptable material according to 106.07. Provide certification of all component materials, and steel laminated bearings, according to 501.06.B.

A. Elastomer Compound. The elastomer compound used in the construction of these bearings shall contain only virgin crystallization resistant polychloroprene (neoprene) or virgin natural polyisoprene (natural rubber) as the raw polymer. All materials shall be new with no reclaimed material incorporated in the finished bearing. The elastomer compounds shall be low-temperature Grade 3. Testing of the

elastomer compound shall be performed at the fabricator's discretion with all test reports retained with certification documentation.

B. Elastomer Material Testing. Sample, test and accept elastomer to the requirements defined in Table 711.23-1. Elastomer test samples shall be taken from fabricated bearings according to ASTM D3183. All material tests shall be conducted at 73°F ± 3°F unless otherwise noted. The Department will consider costs for additional sample test bearings as incidental to the unit bid price.

Table 711.23-1

Test Parameter		Requirement	
		Polychloroprene	Polyisoprene
1	Durometer Hardness, Points	50±5 or 60±5	50±5 or 60±5
2	Secant Shear Modulus at 50% Strain, PSI	Plan Specified ±15%	Plan Specified ±15%
3	Tensile Strength, Minimum PSI	2250	2250
4	Ultimate Elongation, Minimum %	400	450
5	Low Temperature Brittleness at -40°F	No Failure	No Failure

References:

1. ASTM D2240 Type A – Applies only to steel reinforced bearings designed according to AASHTO LRFD 14.7.6 (Method A)
2. ASTM D4014 Annex A1 modified per AASHTO M251 Section 8.8.4 – Applies to steel reinforced bearings designed according to AASHTO LRFD 14.7.5 (Method B) unless otherwise noted in the Plans
3. ASTM D412
4. ASTM D412
5. ASTM D746 Procedure B

C. Steel Laminates. Steel for laminates shall be according to ASTM A 709, Grade 36 or ASTM A1011 Grade 36. Minimum nominal steel laminate thickness shall be 12 Gauge (0.1046-in; +/- 0.006-in). A maximum of one, 1/4 in diameter hole will be allowed for fabrication. Blast clean steel laminates to a condition matching that of SSPC-VIS 1-01, Pictorial Standard BSP6 or CSP6, and clean steel of oil or grease before bonding. Plates shall be free of sharp edges and burrs.

D. Load Plates, Masonry Plates and Structural Shapes. Steel material for load plates, masonry plates and structural shapes shall be according to 711.01. Steel load plate surfaces in contact with structural steel flanges and masonry plate surfaces in contact with the beam seat shall not exceed an out-of-flatness value of 0.01-in. Steel load plate and masonry plate surfaces vulcanized to the elastomeric bearing shall not exceed an out-of-flatness value of 0.06-in. Blast clean steel plate surfaces vulcanized to the elastomeric bearing to a condition matching that of SSPC-VIS 1-01, Pictorial Standard BSP6 or CSP6, and clean steel of oil or grease before bonding. Steel fabrication shall be in accordance with 513. When welding to plates vulcanized to elastomeric bearings, control welding according to 516.07. Coat plates according to 516.03.

E. Steel Laminated Bearings. Cast bearings with steel laminates as a unit in a mold. Bond and vulcanize bearings under heat and pressure. The molds shall have standard shop practice mold finish. Load plates and masonry plates in contact with the elastomeric bearing shall be hot bonded to the bearing during vulcanization. Bearings with steel laminates that are designed to act as a single unit shall be manufactured as a single unit. Only at locations where steel laminate alignment devices produce grooves or indentions on the exterior surface, repair the surface with a vulcanized patch or by

a silicon caulk conforming to Federal Specifications TT-S-001543A or approved equal. Vulcanized patches shall not be larger than the size of the surface indention or groove plus ½-in.

Flash tolerance, finish, and appearance of bearings shall meet the requirements of the latest edition of the Rubber Handbook as published by The Association for Rubber Products Manufacturers (ARPM).

F. Quality Control.

1. Short-term Load Test. Perform a short-term load test on every steel reinforced bearing delivered to the project. All test apparatus shall be calibrated annually in accordance with ASTM E4. The Quality Control Plan shall include the method for obtaining the applied load. The short-term load test consists of applying a minimum compressive load equal to 1.5 times the unfactored dead plus live load specified in the Plans. The load shall be held for 5-min, removed, and reapplied for a second period of 5-min. The bearing shall be visually examined during the second load application. Bearings exhibiting three or more separate surface cracks greater than $^{1}/_{16}$-in wide or a single crack greater than $^{3}/_{16}$-in deep or wider than $^{1}/_{4}$-in are unacceptable material according to 106.07. Bearings exhibiting bulging patterns implying out-of-tolerance cover or layer thickness or bulges spanning two or more layers is unacceptable material according to 106.07.

Documentation for Short-term Load Test:

a) For Bearings Designed according to AASHTO LRFD 14.7.6 (Method A) – During second load application, document maximum applied bearing load for each load application. Document the visual examination with reference to any cracks and statement the bulging is not exhibiting out of tolerance cover or layer thickness or bulges spanning two or more layers. Document final test result as pass or fail.

b) For Bearings Designed according to AASHTO LRFD 14.7.5 (Method B) – During second load application, document all four sides of the loaded bearing with digital color photographs at a minimum image resolution of 300-dpi. Every photograph shall include a 6-in minimum length black and white imperial rule scale with 1/8-in markings. It is the responsibility of the user to establish appropriate safety and health practices. Certified Test Data for the short-term load test shall include date of test; load versus time graphs with 15 second maximum intervals; maximum applied bearing load for each load application; photographs; and test result (i.e. Pass or Fail).

2. Tolerances. Tolerances for furnished plain and steel laminated bearings shall be in accordance with Table 711.23-2. The minimum elastomer cover thickness over a steel laminate shall be 0.125-in. Bearings with any tolerance outside the specified limits are unacceptable material according to 106.07.

Table 711.23-2

Description	**Tolerance**
Bearing length & width	-0.000”, +0.250”
Bearing design thickness	-0.000”, +0.125”
Individual layer thickness – at any location	-0.125”, +0.125”
Laminate cover thickness	-0.000”, +0.125”
Parallelism – top & bottom surfaces	±0.005 Radians
Parallelism - sides	±0.020 Radians
Load plate thickness	-0.0625”, +0.0625”
Load plate length & width	-0.250”, +0.250”
Load plate bevel	±0.002 Radians
Load plate position	-0.125”, +0.125”

G. Marking. Using indelible ink or flexible paint at a location on the bearing that is clearly visible with the supported structure in its erected position, mark each bearing delivered to the project with a

unique alphanumeric designation and identify the up-station direction. Each bearing's unique designation shall be included in the packing list for every delivered bearing.

The following marking information shall also be included on the top surface of every delivered bearing: project number, bridge number, substructure designation, beam line designation and heat number (if applicable).

711.29

On page 831, In the fifth line of the Physical Properties table **Replace** 200 psi with 2000 psi:

Tensile strength (machine direction) ASTM D 882 Modified [1]	275 lb/in (48.1 N/mm) 2000 psi (13.8 MPa)

712.09

On page 834, **Replace** the first paragraph of 712.09 with the following:

712.09 Geotextile Fabrics. Furnish fabric composed of strong rot-proof polymeric fibers formed into a woven or non-woven fabric. Products must be tested by the AASHTO Product Evaluation and Audit Solutions process. The Department will determine acceptance of Type A, B, C and D fabric according to data obtained in the most current AASHTO Product Evaluation and Audit Solutions report – Laboratory Results of Evaluations on Geotextiles and Geosynthetics. The AASHTO Product Evaluation and Audit Solutions testing results must meet or exceed the requirements listed in Table 712.09-1. For all tests except Ultraviolet Exposure, the products Minimum Average Roll Values (MARV), as published in the AASHTO Product Evaluation and Audit Solutions report, must also meet or exceed the requirements listed in the table. If no MARV value is published in the AASHTO Product Evaluation and Audit Solutions report, the manufacturer must submit to the Department certified test data showing the MARV values for the product will meet or exceed the requirements listed in Table 712.09-1.

712.09

On page 834, **Delete** the second paragraph of 712.09.

712.09

On page 835, **Replace** Table 712.09-1 with the following, and **Delete** Note 1 in its entirety:

TABLE 712.09-1Property	Test Method	Required Value
Type A: Underdrains and Slope Drains		
Minimum tensile strength	ASTM D 4632	80 lb
Minimum puncture strength	ASTM D 6241	140 lb
Minimum tear strength	ASTM D 4533	25 lb
Apparent opening size	ASTM D 4751	
Soil Type-1: Soils with 50% or less passing No. 200 (75 µm) sieve		AOS ≤ 0.6 mm
Soil Type-2: Soils with 50 to 85% passing No. 200 (75 µm) sieve		AOS ≤ 0.3 mm
Minimum permittivity	ASTM D 4491	0.5 sec^{-1}
Type B: Filter Blankets for Rock Channel Protection		
Minimum tensile strength	ASTM D 4632	200 lb
Minimum elongation	ASTM D 4632	15%
Minimum puncture strength	ASTM D 6241	440 lb
Minimum tear strength	ASTM D 4533	50 lb
Apparent opening size	ASTM D 4751	AOS ≤ 0.6 mm
Minimum permittivity	ASTM D 4491	0.2 sec^{-1}
Type C: Sediment Fences		
Minimum tensile strength	ASTM D 4632	120 lb
Maximum elongation	ASTM D 4632	50%
Minimum puncture strength	ASTM D 6241	275 lb
Minimum tear strength	ASTM D 4533	40 lb
Apparent opening size	ASTM D 4751	AOS ≤ 0.84 mm
Minimum permittivity	ASTM D 4491	0.01 sec^{-1}
Ultraviolet exposure strength retention [2]	ASTM D 4355	70%
Type D: Subgrade-Base Separation or Stabilization		
Minimum tensile strength	ASTM D 4632	180 lb
Maximum elongation	ASTM D 4632	50%
Minimum puncture strength	ASTM D 6241	385 lb
Minimum tear strength	ASTM D 4533	70 lb
Apparent opening size	ASTM D 4751	Same as Type A
Minimum permittivity	ASTM D 4491	0.05 sec^{-1}

[2] Provide certified test data to the Department. Include strength retention data at 0, 150, 300, and 500 hours

720.01

On page 842, **Revise** the first three paragraphs of this section as follows:

For bridge parapet bracket or bridge rail bracket, furnish rectangular reflectors that are a minimum size of 3 × 6 inches (75 × 150 mm) and that consist of Type XI retroreflective sheeting according to 730.194 adhered to an aluminum plate. Furnish white, yellow, or red reflectors as specified. Furnish aluminum plate for reflectors according to ASTM B 209 (B 209M), 6061-T6 with a minimum thickness of 0.060 inch (1.5 mm).

For ground mounted delineators, furnish rectangular Reboundable retroreflective sheeting according to 730.191 that is a minimum size of 3 × 6 inches (75 × 150 mm) adhered to a flexible post. Furnish white, yellow or red reflectors as specified.

For surface mounted delineators, furnish a 3-inch (75 mm) wide band of Reboundable retroreflective sheeting according to 730.191 adhered completely around a flexible post. Furnish white or yellow reflectors as specified.

721.03

On page 843, **Revise** the first sentence of this section as follows:

Furnish casting adhesives that conform to Supplement 1062.06 - Raised Pavement Marker Casting Adhesive Acceptance Procedure.

725.06

On page 844, **Add** the following sentence to the end of the first paragraph:

Ensure that the pull box lid has no concave areas that hold water; any lid with concave area(s) totaling more than 4 square inches will not be accepted by the Department.

725.19.I.

On page 854, **Replace** the paragraph with the following:

I. Circuit Breakers. Ensure that circuit breaker assemblies for lighting control circuits are capable of full (24 hours per day) continuous (over 3 hours) operation with a pre-defined minimum enclosure size, and housed in an enclosure sufficient to achieve the 100% rating. Install standard (80%) breakers, except use 100% rated breakers if nuisance tripping occurs and no higher nominal current is available, or when they are specified by Plan Note.

726.01

On page 860, **Replace** the section with the following:

726.01 Barrier Reflectors. Permanently label each barrier reflector to provide product identification sufficient to determine the product type, manufacturer, and brand name. Place the label in such a location on the barrier reflector so that it can be read after installation. Furnish concrete barrier, cable barrier, retaining wall, bridge parapet, bridge rail or guardrail blockout reflector body housings according to the Department's QPL of the following Types:

A. Type 1, Barrier Reflector. Furnish concrete barrier, retaining wall, bridge parapet, or bridge rail reflector body housings that are made of acrylic or polycarbonate plastic. Ensure that the minimum retroreflective surface area of the reflector is 7 square inches (4400 mm²).

Furnish white reflectors that reflect the following minimum candela of light at the indicated observation angles for each 1 foot-candle (10.76 lx) of incident light at the indicated entrance angles. Furnish amber reflectors that reflect at least 60 percent of these values.

MINIMUM SPECIFIC INTENSITY, CD/10.76 LX

	Observation Angle	
Entrance angle	**0.2°**	**2.0°**
-4°	62	0.25
15°	52	0.18

The entrance angle is measured in the horizontal plane between the direction of incident light and normal to the face of the reflector. The observation angle is measured in the vertical plane between the observer's line of sight and the direction of light incident to the reflector face.

B. Type 2, Barrier Reflector. Furnish corrosion resistant metal guardrail blockout reflectors that are a minimum size of 4.5 × 10 × 0.125 inches (112.5 × 250 × 3.1 mm) with 1/4" (6 mm) predrilled mounting

holes. One or both sides shall be covered with a minimum 4.5 × 5 inches (112.5 × 125 mm) of Type XI retroreflective sheeting.

C. Type 3, Barrier Reflector. Furnish acrylic or polycarbonate plastic guardrail blockout reflector housings with 1/4" (6 mm) predrilled mounting holes. Products shall be structurally reinforced to withstand the force of thrown plowed snow. New products will be tested by the Department for a minimum of one winter season before approval. One or both sides shall be covered with a minimum 4.5 × 5 inches (112.5 × 125 mm) of Type XI retroreflective sheeting.

D. Type 4, Barrier Reflector. Furnish spring loaded guardrail blockout reflector (reflector plate, holding arm and holding plate) made of plastic with UV protection.

The reflector plate shall have a minimum size of 5.33 x 6.33 x 0.150 inches. One or both sides of the reflector plate shall be covered with a minimum 5.0 x 6.0 inches of Type XI retroreflective sheeting.

The total height of the Spring Loaded Guardrail Blockout Reflector shall be 26.00 inches, which includes the reflector plate, holding arm and holding plate.

The holding plate shall have 2 predrilled holes for 5/11 x 1 1/14-inch long leg screw.

The spring shall be made of 0.135 phos-music wire conform to ASTM A228-07 standard specification requirements.

E. Type 5, Barrier Reflector. Furnish L-type guardrail blockout reflector 6.50” x 11.38” (retroreflective and mounting plate) made of durable, flexible high-density polyethylene (HDPE) plastic with UV protection.

The retroreflective plate shall have a minimum size of 6.50” x 4.25” inches. One or both side of the retroreflective plate shall be covered with a minimum of 26.0 square inches Type XI retroreflective sheeting.

The mounting plate shall have two (2) 1/2" (12.7 mm) predrilled mounting holes.

~~Furnish materials according to the Department’s QPL.~~

F. Type 6, Cable Barrier Reflector. Furnish nylon, or polycarbonate plastic cable barrier reflectors. Products will have a minimum of 22.5 square inches of Type XI retroreflective sheeting visible to drivers traveling in both directions. Products will either be attached to the cable or ground mounted. Ground mounted products will meet the requirements of 720.03. ~~Use products that are structurally reinforced to withstand the force of thrown plowed snow. New products will be tested by the Department for a minimum of one winter season before approval.~~

~~Permanently label each barrier reflector to provide product identification sufficient to determine the product type, manufacturer, and brand name. Place the label in such a location on the barrier reflector so that it can be read after installation.~~

~~Furnish materials according to the Department’s QPL.~~

730.017

On page 863, **Add** the following to the end of the subsection:

730.017 Wooden Box Beams. Furnish wooden box beams fabricated from 1/10 or 1/8 inch (2.54 or 3.18 mm) thick laminated veneers with the grain oriented parallel to the length of the finished beam and the veneers glued together in a continuous process with lap or scarf joints connecting successive veneers in each layer staggered throughout the thickness of the beam. A 45 degree miter shall be used for the corner joints. The adhesive used shall be a phenol-formaldehyde which conforms to ASTM D2559. The beams shall be pressure treated with a preservative meeting AWPA Standard U1, Commodity Specification F: Composite Materials.

Furnish certified material according to Supplement 1072.

730.18

On page 865, **Revise** the section as follows:

730.18 Retroreflective Sheeting Type I. Furnish Type I retroreflective sheeting according to ASTM D 4956, Type I, including supplemental requirement S1.

730.19

On page 865, **Revise** the first sentence of the section as follows:

730.19 Retroreflective Sheeting Type IV. Furnish Type IV retroreflective sheeting of microprismatic construction according to Supplement 1049, and according to ASTM D 4956, Type IV, including supplemental requirement S1.

730.191

On page 865, **Revise** the first paragraph of the section as follows:

730.191 Retroreflective Sheeting Reboundable. Furnish Reboundable retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type III, IV, or VIII including supplemental requirements S1 and S2, with watermarks or other identification marks inconspicuously incorporated into the face of the sheeting on a repeating pattern if necessary to distinguish the sheeting from other similarly appearing sheetings.

730.192

On page 865, **Delete** the section.

730.193

On page 865, **Revise** the first paragraph of the section as follows:

730.193 Retroreflective Sheeting Type IX. Furnish Type IX retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type IX, including supplemental requirements S1.

730.194

On page 865, **Add** the new section as follows:

730.194 Retroreflective Sheeting Type XI. Furnish Type XI retroreflective sheeting according to Supplement 1049, and according to ASTM D 4956, Type XI, including supplemental requirements S1.

Furnish materials according to the Department's QPL.

730.22

On page 866, **Add** the following sentence to the end of the paragraph:

For all flat sheet signs and after all ink has fully cured, provide a clear UV overlaminate protectant film applied to the entire sign surface, sticker surface, or both that the manufacturer of the reflective sheeting guarantees according to Supplement 1049.

732.06

On page 876, **Replace** the third paragraph with the following:

The pushbutton shall be a minimum of 2 inches across in at least one dimension. The force required to activate the pushbutton shall be no greater than 5.0 pounds (22.2N) and operate with a closed fist. There shall be a visible and audible indicator that the button press has occurred.

732.11

On page 877, **Add** the following to the end of the first paragraph:

Any support that differs from the ODOT Standard Construction Drawings for Traffic Supports shall include the word "NON_STANDARD" on the pole tag; examples of non-standard As-Per-Plan supports are those with aesthetic elements such as haunched arms, fluting, and clamp-on arms. Attach two Pole Identification Tags to supports with clamshell bases: one on the pole shaft near the base plate and another above the clamshell.

732.20

On page 881, **Replace** the first sentence with the following:

Furnish risers for power service that are 1 to 1½-inch (25 to 38 mm) diameter conduit and fittings according to 725.04.

732.22

On page 881, **Revise** the eighth, tenth and eleventh sentences of the section as follows:

A 2-inch (50 mm) wide continuous outside border of fluorescent yellow retroreflective sheeting shall be applied to the front of the backplate.

Retroreflective sheeting shall be Type XI.

Prepare backplate surfaces in accordance with 630.04 prior to applying the retroreflective material.

732.22

On page 881, **Add** the following to the end of the section:

732.22 Backplates. Furnish louvered backplates constructed of wrought sheet aluminum, according to ASTM B 209 (B 209M), 6061-T6, 0.050 inch (1.3 mm) minimum thickness. Louvers shall be at least 8 percent of the total backplate area. Backplate base metal shall be anodized to maximize paint adhesion according to Mil-A-8625, Type II or Type I. Furnish backplates painted on both sides with at least two coats of flat black alkyd enamel paint or polyester powder coat (no epoxy) closely matching FED-STD-595b-37038. Furnish a backplate that extends 5 inches (125 mm) beyond the outside of the signal assembly on all sides. The overall outside shape of the installed backplate shall be rectangular. The backplate shall allow no gaps between the backplate and the signal head or between signal sections. A 2-inch (50 mm) wide continuous outside border of fluorescent yellow retroreflective sheeting shall be applied to the front of the backplate. Border shall not be applied over the louvers. Retroreflective sheeting shall be Type XI. Prepare backplate surfaces in accordance with 630.04 prior to applying the retroreflective material. All assembly and mounting hardware shall be stainless steel conforming to 730.10. If used, machine nuts shall be thread-deforming or nylon locknuts. Rivets shall not be used for mounting the backplate to the signal head. A minimum of four mounting points shall be used on each signal section for attaching the backplate. Furnish all mounting hardware.

Provide backplates conforming to SS916.

740.05

On page 907, **Add** the new section as follows:

D. Type A4 Material. Furnish Type A4 material conforming to ASTM D 4505, Level 1, Classes 2 or 3, skid resistance level A, and that have a minimum thickness at the thinnest portion of the cross-section of not less than 0.020 inch (0.50 mm), including any pre-coated adhesive layer. Furnish material to meet minimum initial wet retro reflectance values for wet conditions in accordance with Table 740.05.D-1.

Table 740.05.D-1

Minimum Initial Retroreflective Values for Wet Conditions

ASTM Testing Condition	Color	
	White	Yellow
Wet Recovery (ASTM E 2177)	250	200
Wet Continuous (ASTM E 2832)	100	75

Prequalify materials according to Supplement 1047. Furnish materials according to the Department's Approved List.

740.09.C

On page 910, **Revise** the section as follows:

C. Type C. Furnish Type C glass beads for thermoplastic material conforming to Supplement 1008 and meeting the following specification.

Ensure that the glass beads have the following gradation when tested according to Supplement 1008.

Sieve Size	**Percent Retained**
No. 16 (1.18 mm)	3 maximum
No. 20 (850 µm)	5 to 20
No. 40 (425 µm)	65 to 95
No. 50 (300 µm)	0 to 5

Reflective Media: Ensure that the glass beads are smooth, clear, free from any air inclusions, and scratches that might affect their functions as a retro-reflective media, and that have the characteristics listed below.

Roundness (Percent by Weight): Ensure that not more than 20 percent of the glass beads are irregular or fused spheroids and that at least 80 percent of the beads are true beads.

Index of Refraction: Ensure that the refractive index of the beads is a minimum of 1.50 as determined by the liquid immersion method at 77 °F (25 °C). Ensure that the silica content of glass beads is not less than 60 percent.

Coating (Drop-on Beads Only): Furnish glass beads that, at a minimum, have a moisture-proof coating to enhance its embedment in the applied binder film. Ensure that the beads show no tendency to absorb moisture in storage and remain free of clusters and lumps. Ensure that they flow freely from the dispensing equipment at any time when surface and atmosphere conditions are satisfactory for marking operations.

Determine the moisture-resistance of the glass beads based on AASHTO T 346 section 9.

Ensure the glass bead packaging is clearly marked "THERMO"

Use materials certified according to Supplement 1089. Furnish materials according to the Department's Approved List.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION 832
TEMPORARY SEDIMENT AND EROSION CONTROL

July 19, 2024

832.01 Description. This work consists of locating, furnishing, installing, and maintaining temporary sediment and erosion control Best Management Practices (BMP) for earth disturbing activity areas, developing a Storm Water Pollution Prevention Plan (SWPPP), performing Storm Water Pollution Prevention Inspections, filing a Co-Permittee form as required. Furnish a SWPPP if required prior to any earth disturbing activity. Furnish and install temporary sediment and erosion control BMPs in compliance with all National Pollutant Discharge Elimination System (NPDES) and surface water permits. Amend the SWPPP in accordance with the Ohio Environmental Protection Agency (Ohio EPA) General Construction Stormwater NPDES Permit. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State, or local agencies, adhere to the more restrictive laws, rules, or regulations.

832.02 Definitions

Alternative BMP. Temporary structural BMP recommended for use by the SWPPP Designer when traditional BMP listed in Appendix F are determined to be "not-appropriate" based on design considerations listed in 832.05. Alternative BMP selected by the SWPPP Designer must be compliant with the OEPA NPDES Permit and be accepted for use by the Engineer.

BMP. Temporary structural sediment and erosion control best management practices designed and installed by methods compliant with the Ohio EPA NPDES Permit (Appendix E of this specification Part III. G. 2.), by this specification and location shown on the SWPPP.

C&MS. Construction and Material Specifications of the Ohio Department of Transportation dated as shown on the plans.

CECI. Contractor's Erosion Control Inspector. Must have active CESSWI or CPESC certification.

CESSWI. Certified Erosion, Sediment, and Storm Water Inspector sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at www.cesswi.org.

CPESC. Certified Professional in Erosion and Sediment Control as sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at www.cpesc.net.

Co-Permittee. A requirement of OEPA NPDES Permit (Appendix E of this specification, Part I. F. Notice of Intent Requirements).

EDA. Earth Disturbing Activity is any activity that exposes bare ground or an erodible material to storm water, including any "Disturbance" as defined in OEPA NPDES Permit, Part VII, Definition H.

Contractor EDA. Any EDA that is <u>not</u> shown on the plans as part of the project. EDA not shown on the plans and occurring within the project limits is also Contractor EDA.

Project EDA. Any EDA that is shown on the plans as part of the project.

Total EDA. Combined Project EDA and Contractor EDA.

EPA. Environmental Protection Agency.

Isolated Wetland Permit. OEPA permit allowing the discharge of fill material into an isolated wetland.

NOI. Notice of Intent.

NOT. Notice of Termination.

NPDES. National Pollutant Discharge Elimination System.

OEPA. Ohio Environmental Protection Agency.

OEPA NPDES Permit. OEPA Storm Water Construction General Permit (OHC000006) Appendix E of this specification.

OES. Office of Environmental Services-ODOT.

OHWM. The line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas or defined in accordance with the most current version of 33 CFR 328.

Operator. As defined in OEPA NPDES Permit (Appendix E of this specification, Part VII. Definitions, Q.)

OWPCA. Ohio Water Pollution Control Act (Ohio Revised Code 6111.01 et seq.).

Post-Construction BMP. Permanent water quality or water quantity best management practices required by the EPAOEPA NPDES Permit.

PCN. Pre-Construction Notification for 404 permit.

SCD. Standard Construction Drawing.

SWPPP. Storm Water Pollution Prevention Plan.

SWPPP Designer. The Ohio licensed Professional Engineer that also maintains a current CPESC certification who developed the Storm Water Pollution Prevention Plan.

SWPPPTrack. Software subscription service version SWPPPTrack LTIS OH developed and provided by Storm Water Simplified Ltd. for use on construction projects that require coverage under the OEPA NPDES Permit.

USACE. United States Army Corps of Engineers.

404 Permit. USACE permit authorizing discharge of fill material into Waters of the US, per Section 404 of the Clean Water Act.

401 Water Quality Certification (401 WQC). OEPA permit authorizing discharge of fill material, per Section 401 of the Clean Water Act.

Waters of the United States. Defined in Code of Federal Regulations, 33 CFR Part 328.

832.03 SCD References. Construct the following features according to the SCDs as listed on the plan title sheet.

Construction Fence DM-4.3
Dikes DM-4.3
Filter Fabric Ditch Check DM-4.4
Inlet Protection.....DM-4.4
Perimeter Filter Fabric Fence DM-4.4
Rock Channel Protection Type C or D with/without Filter
.....DM-4.3/4.4
Sediment Basins and Dams DM-4.3
Slope Drains.....DM-4.3
Construction Entrance (Type 1 Driveway).....BP 4.1

832.04 Requirements and Provisions. Furnish a SWPPP meeting all the requirements of this specification and that maintains compliance with OEPA NPDES Permit (See Appendix E), related rules, specifications, SCD, and permits. The Department will furnish the Contractor a copy of the NOI and the OEPA approval letter at or before the Pre-Construction meeting.

Locate, furnish, install, and maintain temporary sediment and erosion control Best Management Practices (BMP) that maintain compliance with the OEPA NPDES Permit, Clean Water Act (33 USC Section 1251 et seq.), the OWPCA, the 404 permit, the 401 WQC, the Isolated Wetland Permit, local government agency requirements, specifications, SCD, and other related rules and permits.

File a Co-Permittee form when the project requires a Notice of Intent (NOI) to the OEPA. Information about electronic filing of the Co-Permittee notice can be found at STREAMSGuide(ConstSWMS4-copermit).pdf (ohio.gov) Submit a copy of the Contractor's OEPA Co-Permittee approval notice or a copy of the submitted application to the Engineer at or before the Pre-Construction meeting.

The following provisions survive the completion and/or termination of the contract.

Provision 1. If a governmental agency or a local governmental authority finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, full responsibility is borne by the Contractor to make all corrections.

Provision 2. If a governmental agency or a local governmental authority furnishes an assessment, damage judgment or finding, fine, penalty, or expense for a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor will reimburse the Department within 10 Calendar Days of the amount for any of the above. The Department may withhold the amount of money requested for the above from the Contractor's next pay estimate and deliver that sum to the governmental agency or local governmental authority issuing the assessment, damage judgment or finding, fine, penalty or expense.

Provision 3. The Contractor agrees to indemnify and hold harmless the Department, and will reimburse the Department for any assessments, damage judgment or finding, fine, penalty, or expense as a result of the failure of performing this portion of the Contract. The Department may withhold the amount of any assessments, damage judgment or finding, fine, penalty or expense from the Contractor's next pay estimate.

Provision 4. If a governmental agency or a local governmental authority furnishes a stop work order for any of the following: a violation of the above noted requirements; BMP are incomplete; SWPPP is incomplete; implementation of the SWPPP is not being performed correctly or completely, the Department will find the Contractor in default.

Provision 5. If the Department or any government regulatory agency finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor shall correct and mitigate the conditions within 48 hours of notification by the Department or regulatory agency. Failure to correct non-compliant site conditions may result in the Department suspending work for the entire project until the corrections are performed. Repeated non-compliance with the SWPPP or failure to regularly update the SWPPP as needed to match the site conditions may result in removal of the Contractor's Superintendent in accordance with C&MS 108.05.

EDA Requirements. Furnish appropriate BMP for all EDA. Unless otherwise indicated, BMP will be compensated provided that the BMP are designed, installed and maintained appropriately. For projects that do not require a SWPPP as indicated in the table below, furnish a written plan for acceptance by the Engineer that identifies the location, extent and purpose of the BMP proposed. Compensation will not be provided for the written plan.

An estimated amount is established in the proposal for BMP to be used for project EDA and estimated Contractor EDA as outlined below:

Scenarios for Routine Maintenance Projects (as identified on the Plan Title Sheet)			
Project EDA (acres)	Estimated Contractor EDA (acres) [1]		
	EDA = 0	0 < EDA < 1	1 ≤ EDA < 5
EDA = 0	A	B	C
0 < EDA < 5	B	B	C

Scenarios for Non-Routine Maintenance Projects			
Project EDA (acres)	Estimated Contractor EDA (acres) [1]		
	EDA = 0	0 < EDA < 1	EDA ≥ 1
EDA = 0	A	B	D
0 < EDA < 1	E	[2]	F
EDA ≥ 1	F	F	F

[1] If the actual Contractor EDA in the SWPPP exceeds the estimated Contractor EDA on the Title Sheet resulting in a Total EDA > 1 acre (0.4 ha), use Scenario D.

[2] If project EDA and estimated Contractor EDA are less than 1 acre (0.4 ha), use Scenario E. If Project EDA and Estimated Contractor EDA are greater than 1 acre (0.4 ha), use Scenario F. If the actual Contractor EDA exceeds the estimated Contractor EDA and results in the Total EDA exceeding 1 acre (0.4 ha), use Scenario D.

Scenario A:	No requirements for SWPPP, NOI and NOT. Furnish written plan to Engineer. BMP accepted by the Engineer will be compensated.
Scenario B:	Provide BMP for Contractor EDA. No SWPPP, NOI or NOT are required. BMP used for Contractor EDA will not be compensated. Furnish written plan to Engineer.
Scenario C:	Furnish a BMP, SWPPP, NOI, and NOT for Contractor EDA only. BMP used for Contractor EDA, SWPPP, NOI and NOT will not be compensated.
Scenario D:	Furnish a NOI, SWPPP with BMP, and a NOT for all EDA areas. The NOI, SWPPP, BMP, and the NOT will not be compensated.
Scenario E:	Furnish BMP for all EDA. No SWPPP, NOI or NOT are required. BMP used for the Project EDA will be compensated. Furnish written plan to Engineer.
Scenario F:	Furnish a SWPPP with BMP for all EDA areas and file a Co-Permittee form. The SWPPP and these BMP will be compensated. The Department will furnish a NOI and NOT.

832.05 Locate and Furnish BMP. Locate and furnish the BMP in accordance with the OEPA NPDES Permit requirements and the Accepted SWPPP.

The Contractor's SWPPP Designer is responsible for selecting appropriate BMP that are designed in compliance with the OEPA NPDES Permit. SWPPP Designers shall utilize BMP listed in Appendix F as the first option when selecting BMP. If the SWPPP designer determines that the BMP listed in Appendix F are not appropriate based on design limitations, constructability constraints or if the BMP may cause a safety hazard, the Department may accept other materials (Alternative BMP) recommended by the SWPPP Designer. Provide design criteria supporting the selection of Alternative BMP on the SWPPP. Utilize cost effective Alternative BMP that meet each location's design requirements.

All Alternative BMP must be evaluated through the Office of Materials Management New Product Development Standard Procedure 515-001(SP) Appendix 2 and be accepted by the Office of Construction Administration prior to being used on ODOT projects. The Department may reject any Alternative BMP determined to be inappropriate, cost excessive or not effective based on the opinion of ODOT's Office of Construction Administration.

ODOT's Office of Construction Administration maintains compensation rates for commonly used and accepted Alternative BMP. For all other Alternative BMP accepted by the Engineer, the Department will compensate the Contractor at agreed unit prices based on material cost, labor and equipment costs as outlined in C&MS 109.05 B.

Furnish filter fabric ditch checks, inlet protection, perimeter filter fabric fence, sediment basins and dams, dikes, slope drains, construction entrances, erosion control mat and rock channel protection materials as specified on the SCD.

Post-Construction BMP as defined in 832.02 are not temporary erosion control features. Construction requirements and compensation for Post-Construction BMP are detailed in the project plans. Provide protective measures that ensure sediment, debris, and any contamination will not enter the Post-Construction BMP.

A. Sediment Controls. Install sediment controls immediately prior to earth disturbing activities. Ensure that ponding of water from sediment controls will not damage property or threaten human health or safety. All stormwater from disturbed areas is required to pass through a sediment control prior to being discharged from the project. Remove sediment controls when their tributary areas have been stabilized with at least 70% permanent vegetation.

1. Perimeter Filter Fabric Fence. Provide perimeter filter fabric fence to pond stormwater and trap sediment from sheet flow runoff. Use perimeter filter fabric fence as prescribed in the OEPA NPDES Permit.

2. Inlet Protection. Provide inlet protection on storm sewer inlets to pond stormwater and trap sediment from entering the storm system. Install inlet protection for new inlets once the inlet has potential to accept runoff. Utilize BMP that are capable of bypassing high flow events to avoid flooding of public streets or private properties.

3. Curb Inlet Protection. Utilize Alternative BMP for Curb Inlet Protection in accordance with this Section and 832.10 SWPPP Acceptance. Provide curb inlet protection on

storm sewer inlets to pond stormwater and trap sediment from entering the storm system. Install inlet protection for new inlets once the inlet has potential to accept runoff. Utilize BMP that are capable of bypassing high flow events to avoid flooding of public streets or private properties. Use accepted below grade inlet protection products as Alternative BMP when ponding water onto public streets may cause hazardous conditions or snow and ice equipment may damage the BMP.

4. Excavated Drop Inlet Protection. Provide excavated drop inlets as appropriate for phased construction. Construct per the Ohio Rainwater and Land Development manual with weep holes and #57 gravel filter. Provide stormwater ponding storage at 135 CY per acre of tributary drainage area. Do not use this control next to open traffic without a traffic control barrier.

5. Sediment Trap/Dam. Provide sediment traps/dams where feasible to intercept and treat concentrated runoff from tributary areas of 5 acres or less. Sediment traps/dams contain a dewatering zone, sediment storage zone and a rock filter outlet. Design the sediment trap/dam to meet the requirements of the OEPA NPDES Permit.

6. Sediment Basin. Provide sediment basins where feasible to intercept and treat concentrated runoff from tributary areas of 5 acres or more. Sediment basins contain a dewatering zone, sediment storage zone and a designed outlet with surface dewatering device. Design the sediment basin to meet the requirements of the OEPA NPDES Permit. Sediment traps/dams may be used to treat runoff from tributary areas of 5 acres or less.

7. Filter Fabric Ditch Check. Provide filter fabric ditch checks where feasible to intercept and treat concentrated runoff from tributary areas of 2 acres or less. Filter fabric ditch checks contain geotextile fabric with stone backing (or straw bales only when allowed by the Engineer per SCD DM-4.4). Use this control only when sediment traps/dams are impractical or may cause safety hazards. A maximum of two filter fabric ditch checks may be placed in series for a maximum treatment area up to 4 acres.

B. Erosion Controls. Install erosion controls concurrent with the work areas to protect against surface erosion and sediment loss. Erosion controls are not intended to remove sediment suspended in stormwater. All stormwater discharges from erosion controls are required to be directed to an appropriate sediment control.

1. Construction Seed and Mulch. Furnish commercial fertilizer, seed, and mulch materials conforming to C&MS 659. Apply seed and straw mulch materials according to C&MS 659 as modified below.

Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2). This BMP may only be installed after March 15 and before October 15. Use wood fiber or compost mulch only with concurrence of the Department. Fertilize construction seeding areas at one-half the application rate specified in C&MS 659. If project conditions prevent fertilizing the soil, then the fertilizing requirements of C&MS 659 may be waived. Do not place construction seed or fertilizer on frozen ground. Apply seed and mulch for this BMP at the rates shown below.:

Seed Mixture	Number of Bales
Annual Ryegrass 2 lb./1000 ft^2 (10 kg/1000 m^2)	2 / 1000 ft^2 (0.01 ha)

2. Winter Seed and Mulch. Apply seed and straw mulch materials according to C&MS 659 as modified below. Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2). Winter Seed and Mulch is required for EDA operations occurring between October 15 and March 15 and can only be installed during that time. When straw mulch is used in this BMP, it is required to be crimped in place. Crimped mulch is required to be anchored into the soil surface with a mechanical crimping implement or other suitable implement accepted by the Engineer. Bonded Fiber Matrix (BFM) may be used instead of straw mulch. BFM product and application rates should be selected to ensure extended periods of stabilization protection during winter months. Select BFM or alternative mulch products with an expected functional longevity of 6 months or more. Provide maintenance of the BMP throughout the winter seed and mulch period. Utilize slope drains, stormwater diversions or other erosion control BMP with winter seed and mulch to provide appropriate protection of the winter seed and mulch areas. The Department will not compensate for repairs or reapplication of winter seed and mulch resulting from inappropriate application or failure to appropriately protect the winter seed and mulch areas. The use of other seed and/or mulch materials in this time period requires specific Department approval. The use of winter seeding and mulching is not an acceptable practice for protecting the subgrade surface where pavement is anticipated.

Seed Mixture	Number of Bales
Fawn Tall Fescue 3.0 lb./1000 ft^2 (15 kg/1000 m^2) and Annual Ryegrass 2 lb./1000 ft^2 (10 kg/1000 m^2)	2 / 1000 ft^2 (0.01 ha)

3. Construction Mulch. Construction Mulch is the application of straw mulch applied directly to the disturbed soil surface. Use straw according to C&MS 659. C&MS 659 wood fiber or compost mulch may only be used with concurrence of the Department. Apply Construction Mulch to areas that require temporary stabilization and where temporary vegetation is not considered desirable. Use a mechanical crimping implement or other suitable implement accepted by the Engineer when installing Construction Mulch on exposed subgrade. Apply Construction Mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2).

4. Slope Drain. Provide slope drains to temporarily convey stormwater and protect cut and fill slopes from surface erosion. Use earthen dikes/berms to direct stormwater to the slope drains. Design the slope drains to adequately convey stormwater for a 10-year storm event where practicable.

5. Earthen Dike/Berm. Provide earthen dikes/berms to temporarily divert and convey stormwater. Construct earthen dikes/berms prior to cut slope construction and concurrently with fill slope construction.

6. Construction Entrance. Furnish Construction Entrance materials conforming to C&MS 712.09 Type D Filter Blankets for Rock Channel Protection and C&MS 703.01, Size Number 1 and 2, CCS aggregate. Furnish Construction Entrance protection at the locations shown on the SWPPP and as required below:

a. At locations where construction vehicles enter or leave EDA areas.

b. At all points of egress to public roads.

c. At all access locations where runoff from the construction access road is not protected by sediment controls.

Provide the appropriate size culvert as needed to prevent water from flowing onto paved surfaces and from overtopping the construction entrance surface. Identify the culvert size on the SWPPP. Install a maximum of three Construction Entrances per mile along the length of the project. The length of the project is the plan length along the project's longest axis. Additional construction entrances in excess of the maximum require acceptance from the Engineer.

Provide a configuration consisting of 6 inches of aggregate over geotextile fabric. Provide geometry according to a Type 1 Driveway as shown in the SCD. Provide a minimum 10 foot width and length measuring a minimum of 150 feet and not exceeding 200 feet from edge of pavement.

Construction Entrance removal includes the appropriate disposal of geotextile fabric and pipe. Aggregate may be incorporated into embankment work in accordance with C&MS 203 when approved by the Engineer.

7. Rock Ditch Check. Provide rock ditch checks in open channel conveyances for velocity control and to protect against surface erosion of the channel. Install rock ditch checks concurrently with channel grading. Remove rock ditch checks once 70% permanent vegetation has established in the channel.

8. Rock Channel Protection. Provide rock channel protection without fabric for rock ditch checks. Provide rock channel protection with fabric for all other BMP. Provide rock channel protection as recommend by the SWPPP Designer and accepted by the Engineer for other applications to prevent surface erosion.

9. Temporary Stabilization Matting. Provide temporary matting on permanent slopes and permanent open channel conveyances for temporary stabilization and for the establishment of permanent vegetation. Only provide matting on areas approved by the Engineer. Provide temporary matting per C&MS 671. Install temporary matting on slopes and open channel conveyances after final surface preparation within timeframes listed in the OEPA NPDES Permit for permanent stabilization.

C. Aquatic and Environmental Resource Protection. Provide construction fence for demarcation of aquatic and environmental resources when shown on the SWPPP and accepted by the Engineer. Alternative types of demarcation may be allowed when accepted by the Engineer. Provide appropriate sediment and erosion control protection to all environmental and aquatic resources on and, adjacent to the project. Aquatic and environmental resource protection may include diverting project water flow using dikes and slope protection and using sediment controls to intercept project runoff. The Contractor may use a combination of BMP as appropriate. Show all aquatic and environmental resources located within & adjacent to the Project and all Contractor EDA on the SWPPP.

D. Stream Relocation, Temporary Diversion Channels that carry Waters of the United States. Perform this work in compliance with the OEPA NPDES Permit and in conformance with all contract requirements (Waterway Special Provisions). Stabilize Stream Relocation, Temporary Diversion Channels with appropriate stabilization BMP or 70 percent vegetative growth before diverting flow into the new channel.

E. Concrete Washout Area BMP. Compensation for this BMP is incidental to the concrete work.

F. Dewatering BMP. Compensation for this BMP is incidental to the corresponding work. This BMP does not include a Surface Dewatering Device installed as part of a Sediment Basin.

G. Project fueling and refueling BMP locations. Compensation for this BMP is incidental to the project.

The SWPPP shall include BMP to prevent and respond to spills or leaks as required by the OEPA NPDES Permit.

The Contractor will provide a separate Spill Prevention Control & Countermeasure Plan (SPCC) if required as described in 40 CFR Part 112. The Contractor will not be compensated for the SPCC Plan. Spill response protocols are to be included in the SWPPP when not included in a SPCC.

H. All other BMP that are required and not specifically referenced in Appendix F or not accepted as an Alternative BMP in accordance with this section will not be paid as a separate item, but will be included by the Contractor as part of the total project cost.

832.06 Temporary Access Fills (Causeways and Access Fills). Fording of jurisdictional waters, including all streams and rivers is not allowed. Evaluate the Waterway Special Provisions to determine whether or not temporary access fills are permitted in the contract. If temporary access fills have been permitted by the Department, construct fill(s) consistent with the Waterway Special Provisions and additional contract requirements.. Only the footprint area (acreage), linear impact limits and volume of temporary fill as permitted and contained in the Waterway Special Provisions will be allowed. If the Contractor proposes temporary access fill(s) which has not been permitted by the Department, the Contractor will coordinate procurement of the permits with the appropriate regulatory agency/agencies. All costs and time associated with the procurement of the permits are incidental to the Work. If the Contractor requests modification of the Department procured permits, coordinate the request with the Engineer and OES. The Department makes no guarantee to grant the permit modification request.

832.07 Temporary Access Fills Construction. Begin planning and installing temporary access fills as early in construction as possible to avoid conflicts with the Waterway Special Provisions or other environmental commitments that have been included in the contract documents.

Temporary access fills in aquatic resources may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, access fills, etc.

Make every attempt to minimize disturbance to aquatic resources during construction, maintenance and removal of the temporary access fills. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the temporary access fills. Construct the temporary access fills as narrow as practical and perpendicular to the stream banks. Make the temporary access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, bed, and approach sections. Construct the temporary access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the Ordinary High Water Mark (OHWM). If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume 2. Ensure that the monument can be read from the bank of the waterway. Ensure that this work is supervised by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the Work.

Construct the temporary access fills to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third of the width of the waterway is filled, , then use culvert pipes to allow the movement of aquatic life. Maintain normal downstream flows. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to causeways where culverts are used.

A. Furnish culverts on the existing stream bottom.

B. Avoid a drop in water elevation at the downstream end of the culvert.

C. Furnish a sufficient number of culverts in addition to stream openings to providing a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.

D. Furnish culverts with a minimum diameter of 18 inches (0.5 m)

All temporary access fills must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

All portions of the temporary access fills will be removed in its entirety. Do not dispose of temporary access fill material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the temporary access fills will be restored to its pre-construction elevations. The temporary access fills will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

All environmental protection and sediment and erosion controls associated with the Waterway Special Provisions or Contractor procured permits are incidental to the work within the boundaries of the permits.

832.08 Maintenance. Properly maintain all BMP throughout all phases and sequencing of construction activities. Dispose of silt removed from BMP according to C&MS 105.16. When the Contractor properly places the erosion control Items then the Department will pay for the cost to maintain or replace these items of work by the following:

If a recorded rain event is greater than 0.5 inches (13mm), the Department will pay to replace all BMP that have been damaged as a result of the rain event at the unit price for those BMP including Sediment Removal as described in Appendix F. Record BMP replacement quantities using the SWPPPTrack software inspection software application. Replacement quantities not recorded in the SWPPPTrack software inspection software application will not be compensated. Restoration maintenance necessary to restore the BMP as a result of a rain event is included in the unit price for the BMP.

If a recorded rain event is less than or equal to 0.5 inches (13mm), the Department will pay to remove the sediment per the unit price for Sediment Removal as described in Appendix F. No compensation will be provided for BMP that are damaged as a result of rain events less than or equal to 0.5 inches (13mm).

Example: *A 0.6 inch rain event damaged a 300 ft. segment of filter fabric fence. A 200 ft. segment was knocked over but was still functional and could be restored. The 300 ft. damaged segment was replaced and the sediment was removed. The 200 ft. segment was picked up, retrenched and the sediment removed. How do we pay for the 300 ft. damaged segment and the 200 ft. restored segment and the sediment removal?*

Pay for 300 ft. of new Item Perimeter Filter Fabric Fence and Item Miscellaneous Sediment Removal. Do not pay for restoration of the 200 ft. segment of restored filter fabric fence. Pay for Item Miscellaneous Sediment Removal for the 200 ft. segment.

For all Perimeter Filter Fabric Fence, Filter Fabric Ditch Checks, Rock Checks, and Inlet Protection, Dikes, remove trapped sediment and any other debris which has accumulated when sediment reaches a height of one-half the BMP. Compensation will be paid at the unit price for Miscellaneous Sediment Removal as described in Appendix F.

When the sediment fills the sediment storage zone (as described in the OEPA NPDES Permit) of a Sediment Basin or Sediment Trap/Dam, remove deposited sediment. Compensation for the removed sediment is paid at the unit price for Basin Sediment Removal as described in Appendix F. Remove Sediment Basins and Sediment Traps/Dams after the contributing drainage area has been stabilized.

When erodible materials accumulate at the surface of the construction entrance, furnish additional stone as needed to prevent tracking. Compensation for additional stone needed to maintain the Construction Entrance will be paid at the unit price for Construction Entrance. If tracking occurs, restore and clean the affected roadway surface at no additional cost to the Department.

Maintain the BMP until 70% permanent vegetation is established in the EDA portion of the tributary area contributing runoff to the BMP in accordance with the OEPA NPDES Permit (See Appendix E, Part VII, J). Remove BMP after 70% permanent vegetation is established. The Engineer may allow early removal of BMP, when necessary, due to BMP inaccessibility. Dispose of the removed materials including sediment according to C&MS 105.16 and C&MS 105.17.

832.09 Storm Water Pollution Prevention Plan. If required, prepare the SWPPP as outlined in this specification. Have the PE/CPESC perform an in-person project assessment identifying the existing project conditions and drainage patterns. Document the date of the PE/CPESC in-person project assessment in SWPPPTrack. Perform the in-person project assessment during SWPPP development or within 30-days of the initial SWPPP submittal. Submit the SWPPP to the Engineer for acceptance using the SWPPPTrack software web platform. Allow 14 days for the initial review of the SWPPP. Address all comments from the Engineer and submit any required revisions, modifications, phases and updates using the SWPPPTrack software web platform. Allow an additional 7 days for subsequent reviews. All activity identified by the SWPPP that is not specifically identified as a pay item elsewhere shall be included in the Lump Sum price bid for the Storm Water Pollution Prevention Plan. At a minimum, the design and information requirements that must be included in the SWPPP are as follows:

A. Include the following general information:

1. Provide a site specific SWPPP designed and sealed by a Professional Engineer who holds a current CPESC certification.

2. Furnish the names of the individuals on site who will serve as the PE/CPESC SWPPP designer and CECI.

3. Describe the type of construction activities that will be taking place.

4. Furnish signatures of all contractors and subcontractors involved in BMP practices (see Appendix B).

5. Furnish the total EDA areas in acres and identify the immediate receiving stream or surface water for each drainage area.

6. Furnish installation details of all proposed Alternative BMP.

7. Provide construction and grading details for all Sediment Trap/Dam and Basins.

B. Include Existing Condition Plan sheets (maximum 1" = 50' scale) showing the following information at a minimum:

1. Temporary sediment control BMP to be installed prior to or concurrent with early earth disturbing activities (including but not limited to clearing and grubbing, mobilization, staging areas, demolition, grading activities, etc.)

2. Existing contours shown at a 2-foot maximum interval for all Project and Contractor EDA areas

3. Stormwater runoff tributary areas to all sediment controls intercepting concentrated flows (Tributary areas for sheet flow sediment controls are not required to be shown on the plan.)

4. Existing conditions of the Project and Contractor EDA including drainage patterns, ditches, drainage system, utilities

5. Project construction limits

6. All Contractor EDA areas

7. Labels of all direct discharge locations receiving runoff from Project and Contractor EDA to waters of the State or U.S throughout the Project and Contractor EDA. Direct discharges may include but are not limited to, storm sewer outfalls, open channel conveyances, direct sheet flow.

8. Provide a table of existing condition BMP and direct discharge locations in tabular format on the plan which can be exported to .csv file and is consistent with SWPPPTrack software

C. Include Proposed Condition Plan sheets (maximum 1" = 50' scale) showing the following information at a minimum:

1. Temporary sediment and erosion control BMP based on modified drainage patterns as needed to represent construction phasing prior to reaching final buildout conditions.

2. Temporary sediment and erosion control BMP based on final buildout conditions and drainage patterns. Include BMP to be installed during previous phasing which is intended to be left in place through final buildout.

3. Proposed contours shown at a 2-foot maximum interval for all Project and Contractor EDA areas. If proposed surfaces cannot be obtained from the Department provided electronic files, provide clear representation of the proposed drainage patterns in sufficient detail to select, design and locate appropriate BMP.

4. Stormwater runoff tributary areas to all sediment controls intercepting concentrated flows (Tributary areas for sheet flow sediment controls are not required to be shown on the plan.)

5. Project construction limits

6. All Contractor EDA areas

7. Label existing, relocated and proposed direct discharge locations

8. Provide a table of proposed condition and interim BMP in tabular format on the plan which can be exported to .csv file and is consistent with SWPPPTrack software

D. Include BMP estimated quantities in BMP tables.

E. Show the location of the following support activities. Ensure the following activities are located a minimum of 100 feet (30 m) from any aquatic resource:

1. Concrete or asphalt plant areas
2. Material and equipment staging or storage areas
3. Dewatering Areas
4. Concrete truck wash out BMP areas
5. Construction access BMP locations
6. Vehicle fueling and refueling locations

F. Provide an implementation schedule for BMP based on the Contractor's proposed construction sequence.

G. Show locations of Post-Construction BMP. Include Post-Construction BMP in the schedule of construction sequence.

H. Include a schedule of cover practices meeting the requirements of the Ohio NPDES Permit.

I. Include erosion control BMP to be installed for protecting erosive areas, provide temporary or permanent stabilization and control stormwater. Stormwater erosion control BMP shall be sized based on tributary runoff area and consistent with Ohio's Rainwater and Land Development Manual.

J. Show all environmental preservation areas, wetlands and waterways within or adjacent to the Project and Contractor EDA as illustrated in the Plans.

K. Furnish an estimated quantity for Basin Sediment Removal and Miscellaneous Sediment Removal for removing sediment from sediment controls.

L. Include project area soil types and identify any potentially highly erodible locations.

M. Label all sediment Trap/Dam and Basins with tributary area, sediment storage zone volume, dewatering zone volume, outlet size and type, etc.

Electronic design files, necessary to develop the SWPPP with the required information listed in this section, shall be made available to the awarded Contractor upon request.

832.10 SWPPP Acceptance. Furnish the SWPPP to the Department for acceptance. The Department will allow work to begin upon receiving an acceptable SWPPP. See Appendix C for a sample acceptance checklist. The Department may assess critically the following:

A. The type and location of BMP with totals.

B. The SWPPP is specific for this project.

C. There is no language in the SWPPP about any BMP being directed for use by the Engineer.

D. The total estimated BMP quantities agree with the (per Each) "Erosion Control" amount identified in the proposal.

E. The SWPPP accounts for the various phases of construction and the associated degree of earthwork disturbance over the life of the project.

F. The SWPPP delineates overall watershed areas and individual BMP watersheds. Enough detail is shown in the SWPPP to verify that the BMP are appropriate for the application. If topographic mapping contained in the plans is not sufficient to identify and delineate the watersheds associated with the work, provide the appropriate mapping.

G. The SWPPP identifies the locations and specific geometry of the required Sediment Traps/Dams, Basins and related control structures. Provide the following information for each Sediment Trap/Dam and Basin:

1. Calculations demonstrating compliance with the 48 hour draw down time (if required by the OEPA NPDES Permit),
2. Size of the contributing drainage area,
3. Volume of the Sediment Storage Zone
4. Volume of the Dewatering Zone
5. Basin excavation quantity or dam embankment quantity
6. Quantity of rock channel protection
7. Riser Pipe, outlet structure details and surface dewatering device

Revise the accepted SWPPP as needed to maintain compliance with OEPA NPDES Permit. Revisions and amendments (See Appendix E, Part III, D) to the accepted SWPPP will be at no additional cost to the Department.

832.11 Inspections and SWPPP Updates. Perform the OEPA NPDES Permit required inspections utilizing a mobile device capable of running the latest version of the SWPPPTrack LTIS inspection software application developed by Storm Water Simplified Ltd. Contact Storm Water Simplified Ltd. at (888) 401-1993 or OHSupport@SWPPPTrack.com for project setup coordination, payment, and for mobile device requirements.

Perform OEPA NPDES Permit required inspections with the SWPPPTrack inspection application and populate all inspection fields accurately to represent current project conditions until final stabilization.

The inspections must be performed by one of the following parties:

A. The PE/CPESC who signed and sealed the SWPPP.

B. The CPESC inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.

C. The CESSWI inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.

Prepare the inspection reports for projects that require a SWPPP. Utilize the SWPPPTrack inspection software application to prepare and submit inspection reports to the Engineer every 7 days and within 24 hours of a 0.5 inch (13 mm) or greater rainfall event until final stabilization has been established with a minimum of 70 percent permanent vegetation. The inspection occurrence may be delayed or the inspection frequency may be reduced per the OEPA NPDES Permit Part III.G.2.i.

The PE/CPESC, will update, amend and revise the SWPPP as the contractor's operations and site conditions warrant. Identify all revisions and updates to the SWPPP and indicate what measures will be taken to maintain OEPA NPDES Permit compliance. Record BMP condition, modifications, installations, additions, removals and SWPPP modifications with the SWPPPTrack inspection software application. Record all BMP locations utilizing the SWPPPTrack inspection software application.

Document BMP inspections utilizing photos as required by the SWPPPTrack inspection software application. Perform a monthly inspection of the project utilizing the SWPPPTrack inspection software application. The monthly inspection is required to be performed by the PE/CPESC who maintains responsibility over the SWPPP. The monthly inspection may be performed by an individual employed by the PE/CPESC company who is under the direct supervision of the PE/CPESC. If the inspection is performed by an individual other than the PE/CPESC, the individual shall maintain an active CPESC certification. The PE/CPESC is required to review and certify all monthly inspections through the SWPPPTrack software inspection application. The PE/CPESC shall review the weekly and rainfall event inspections and all CECI changes to the SWPPP. The PE/CPESC is required to re-sign and seal the SWPPP for major grading phases that significantly modify drainage patterns or when significant changes warrant an updated SWPPP be developed. Submit the amended SWPPP for acceptance to the Engineer using the SWPPPTrack software web platform.

The CECI is required to notify the Department within 24 hours of any compliance deficiencies or verified complaints related to the SWPPP or OEPA NPDES Permit. Weekly, rainfall event and monthly inspections will document BMP deficiencies as Open Work Items in the SWPPPTrack inspection software application. Within 48 hours of the Department's or CECI's notice of deficiency/Open Work Item, the contractor is required to construct, install, repair or correct the BMP measures needed to close the deficiency/Open Work Items. The CECI will close Open Work Items only after the BMP measures have been appropriately addressed and inspected utilizing the SWPPPTrack inspection software application.

832.12 Compensation. The Department will furnish Item 832 Each, Erosion Control with an amount in the proposal to pay for BMP work. The fixed amount shown in the proposal is included (as any other bid items) in the Total Bid Amount. This fixed amount is the Department's estimate of the total cost of BMP work required to be performed for the project. If the BMP work exceeds this amount, the BMP work will still be paid at the pre-determined prices. All BMP work will be paid at the proposal pre-determined unit price times the correctly installed BMP number of units. The payment due will be deducted from Item 832 Each, Erosion Control. C&MS Table 104.02-2 does not apply to reductions in this contract item. Compensation for BMP will not be provided until the BMP location and quantity is recorded in the SWPPPTrack inspection software application and an initial inspection is performed by the CECI indicating that the BMP meets the installation requirements.

The Lump Sum amount bid for the SWPPP includes all work associated with development, PE/CPESC project assessment, design, revisions, modifications, amendments and submittals of the SWPPP. Changes made to the SWPPP, but not caused by the Department, are the financial responsibility of the Contractor. Additional compensation will only be permitted for Department accepted amendments to the SWPPP resulting from revisions to the contract documents as per sections 104.02.B, 104.02.D and 104.02.F. Provide the additional costs for the amended SWPPP to the Department prior to beginning the associated revised work. The Department will only pay for one accepted SWPPP regardless of the number of Construction phases, revisions, amendments or project redesigns.

The Lump Sum amount bid for the Storm Water Pollution Prevention Inspections includes all work associated with NPDES required inspections, monthly inspections, and reporting. All costs associated with providing and maintaining the required CPESC and CESSWI personnel, conducting the NPDES required inspections utilizing the SWPPPTrack inspection software application and support engineering services are included in the contract Lump Sum bid for Storm Water Pollution Prevention Inspections.

The Lump Sum amount bid for the Storm Water Pollution Prevention Inspection Software includes all costs for the SWPPPTrack inspection software and services. The Contractor is responsible for purchasing and contracting with Storm Water Simplified Ltd. for the use of the SWPPPTrack software application and services until final stabilization.

832.13 Method of Measurement.

The Department will measure the SWPPP as a Lump Sum.

The Department will measure the Storm Water Pollution Prevention Inspections as a Lump Sum.

The Department will measure the Storm Water Pollution Prevention Inspection Software services as Lump Sum.

The Department will measure Construction Seeding and Mulching by the number of square yards (square meters).

The Department will measure Slope Drains by the number of feet (meters) of conduit.

The Department will measure Sediment Basins by the number of cubic yards (cubic meters) of excavation or embankment.

The Department will measure Sediment Basin surface dewatering device by each.

The Department will measure Sediment Traps/Dams by the number of cubic yards (cubic meters) of excavation or embankment.

Any pipe required for the outlet structure of a Sediment Basin or Trap/Dam is incidental to the unit price paid for Sediment Basins and Traps/Dams.

The Department will measure Perimeter Filter Fabric Fence, and Construction Fence by the number of feet (meters).

The Department will measure Filter Fabric Ditch Check by the number of feet (meters).

The Department will measure Excavated Drop Inlet Protection by the number of cubic yards (cubic meters) of excavation.

The Department will measure Inlet Protection by the number of feet (meters).

The Department will measure Curb Inlet Protection by each or feet (meters).

The Department will measure Earthen Dike/Berm by the number of cubic yards (cubic meters) of embankment.

The Department will measure Temporary Stabilization Matting by the number of square yards (square meters).

The Department will measure Rock Ditch Check, Type C or D (without filter) by the number of cubic yards (cubic meters).

The Department will measure Rock Channel Protection, Type C or D (with or without filter) by the number of cubic yards (cubic meters).

The Department will measure Sediment Removal by the number of cubic yards (cubic meters).

The Department will measure Construction Mulching by the number of square yards (square meters) regardless if the application is crimped or not.

The Department will measure Winter Seeding and Mulching by the number of square yards (square meters).

The Department will measure Construction Entrance protection by the number of cubic yards (cubic meters)

832.14 Basis of Payment. The Department will pay the contract Lump Sum price bid for the Storm Water Pollution Prevention Plan. The Department will make partial payments for the Storm Water Pollution Prevention Plan according to C&MS Section 109.09 and as modified by the following schedule:

A. The Department will release 60 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after the Engineer has accepted the Storm Water Pollution Prevention Plan submission.

B. The Department will release 30 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 50 percent of the project is complete.

C. The Department will release the remaining 10 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 90 percent of the project is complete.

The Department will make partial payment for the Storm Water Pollution Prevention Inspections according to C&MS Section 109.09.

The Department will make partial payments for the Storm Water Pollution Prevention Inspection Software services according to C&MS Section 109.09 and as modified by the following schedule:

A. The Department will pay 60 percent of the lump sum amount bid for the Storm Water Pollution Prevention Inspection Software with the first regular estimate.

B. The Department will pay the remaining 40 percent of the lump sum amount bid for the Storm Water Pollution Prevention Inspection Software services according to 109.09.

The Department will pay for appropriately selected, designed, properly installed and accepted BMP per Item 832 Each, Erosion Control. BMP compensation will be based on the unit prices shown in Appendix F or accepted unit prices for Alternative BMP by the Engineer.

The Department will not pay for BMP Items which are required as a result of the Contractor's negligence, carelessness, or failure to install permanent controls.

The Department will not pay for any causeway and access fills.

The Department will not pay to replace BMP that have failed as a result of improper maintenance or installation.

The Department will not pay for concrete washout area BMP. Concrete washout area BMP are considered incidental to the concrete work.

The Department will not pay for BMP which are required as a part of the work and are not specifically identified as a separate item. Compensation for BMP that are required for NPDES Permit compliance and are not included in Appendix F or not accepted as an Alternative BMP in accordance with Section 832.05 are considered incidental to the work.

The Department will not pay for Post-Construction BMP as a part of this specification.

Item	Unit	Description
832	Lump Sum	Storm Water Pollution Prevention Plan
832	Lump Sum	Storm Water Pollution Prevention Inspections
832	Lump Sum	Storm Water Pollution Prevention Inspection Software
832	Each	Erosion Control

Appendix A

BMPBMP Inventory Naming Validation

Ohio Department Of Transportation, SS 832 – *BMP ID and Naming Validation Form*

Sediment Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
IP	Inlet Protection	Filter Fabric Inlet Protection		LF
CIP	Curb Inlet Protection	Alternative BMP	Dandy Curb Bag for 3A inlet	EA
EDIP	Excavated Drop Inlet Protection	Drop Inlet Excavation W/gravel		EA
PFFF	Perimeter Filter Fabric Fence	Filter Fabric Fence		LF
FFDC	Filter Fabric Ditch Check	Filter Fabric Ditch Check		LF
SB	Sediment Basin	Sediment Basin w/ Surface Dewatering		CY
ST	Sediment Trap	Sediment Trap		CY
DWT	Dewatering Discharge	Dewatering Sediment Control		EA
SDWTD	Sediment Basin Surface Dewatering Device	Surface Dewatering Device		EA

Erosion Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
SD	Slope Drain	Slope Drain		LF
DI	Dike	Earthen Dike		CY
CE	Construction Entrance	Rock Construction Entrance		CY
RDC	Rock Ditch Check	Rock Ditch Check		CY
ECM	Erosion Control Matting	Erosion Matting, Type___		SY
RCP	Rock Channel Protection	Rock with Geotextile Fabric		CY
TS	Temporary Stabilization	Construction Seed and Mulch		SY
PS	Permanent Stabilization	Permanent Stabilization		SY

Miscellaneous Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
CF	Construction Fence	Construction Fence		LF
CWO	Concrete Washout	Concrete Washout		EA
TAF	Temporary Access Fill	Causeway, Cofferdam, Dewatering Fill, etc.		EA

Outfalls

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
DSWD	Direct Surface Water Discharge	Direct Surface Water Discharge		

Designer Note: SWPPP Designers should utilize the BMP ID Type (short) naming conventions for BMP callouts and populating the BMP Inventory Tables shown in this appendix. BMP ID's should be numbered sequentially by Type (PFFF1, PFFF2, IP1, SB1, etc.). BMP ID Type (Extended Names) are not used in the BMP Inventory Tables and are included for reference only.

BMP ID Type and Standard BMP Descriptions will be used for validation when uploading the tables to SWPPPTrack. Ensure BMP Types and Standard BMP Descriptions above are used to create the BMP Inventory Tables. When Alternative BMP materials are proposed, the Alternative BMP Description name should be filled in with the proprietary device proposed on the SWPPP. The Alternative BMP Description should accurately describe the BMP with appropriate units. (i.e. 12" Compost Filter Sock, LF).) Curb Inlet Protection only utilize Alternative BMP and will always require an alternative description. Coordinate uploading of the inventory table with SWPPPTrack. BMP Inventory Table templates can be downloaded on ODOT's Office of Construction Administration website: http://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Pages/InspectionForms.aspx.

Appendix A

Existing Conditions BMP Inventory Table

Ohio Department Of Transportation, SS 832 - *Existing Conditions* - BMP Inventory Table			
Name:		Date Created:	
Company Name:			

Contract#	Part Code	BMP	Standard BMP Description	Alternative BMP Description	Plan Page	Quantity	Unit Of Measure	Roadway Name	Location Station	Road Orientatio	Project Discharge
		PFFF1	Perimeter Filter Fabric Fence		4	375	LF	SR 7	145+32	RT	Y
		PFFF2	Perimeter Filter Fabric Fence		4	235	LF	SR 7	145+85	LT	Y
		PFFF3	Alternative BMP	12" Compost Filter Sock	11	305	LF	SR 14	96+50	RT	N
		IP1	Inlet Protection		5, 10	20	LF	SR 14	94+00	RT	Y
		IP2	Inlet Protection		5, 10	20	LF	SR 14	94+00	LT	Y
		CIP1	Alternative BMP	Dandy Curb Bag (3A Inlet)	5, 10	1	EA	SR 14	93+00	LT	Y
		CIP2	Alternative BMP	FlexStorm Catch It	6	1	EA	SR 14	155+55	LT	Y
		CIP3	Alternative BMP		6	1	EA	SR 14	155+50	RT	Y
		FFDC1	Filter Fabric Ditch Check		8	15	LF	SR 14	86+50	RT	Y

Proposed BMP Inventory Table

Ohio Department Of Transportation, SS 832 - *PROPOSED* - BMP Inventory Table			
Name:		Date Created:	
Company Name:			

Contract#	Part Code	BMP ID	Standard BMP Description	Alternative BMP Description	Plan Page	Quantity	Unit Of Measure	Roadway Name	Location Station	Road Orientation	Project Discharge
		PFFF4	Perimeter Filter Fabric Fence		6,7	250	LF	SR 7	155+00	RT	Y
		CF1	Construction Fence		4	100	LF	SR 7	145+32	RT	N
		CF2	Construction Fence		4	230	LF	SR 7	145+85	LT	N
		CIP4	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+25	LT	N
		CIP5	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+40	LT	N
		CIP6	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+60	LT	N
		CIP7	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+40	RT	N
		CIP5	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+60	RT	N
		CIP6	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	LT	N
		CIP7	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+40	LT	N
		CIP8	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	RT	N
		CIP9	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	RT	N
		CIP10	Alternative BMP	FlexStorm Catch It	5	1	EA	SR 7	150+35	RT	N
		CIP11	Alternative BMP	FlexStorm Catch It	5,10	1	EA	SR 14	94+40	RT	N
		CIP12	Alternative BMP	Dandy Curb	5,10	1	EA	SR 7	150+70	RT	N
		CIP13	Alternative BMP	Dandy Curb	5,10	1	EA	SR 7	150+85	LT	N
		CIP15	Alternative BMP	Dandy Curb	5,10	1	EA	SR 14	94+50	LT	N
		IP3	Alternative BMP	42" SedCatch SedCage	5,10	1	EA	SR 7	92+85	LT	Y
		IP4	Filter Fabric Inlet Protection		5,10	1	LF	SR 7	152+50	LT	N

Appendix B

SIGNATURE LIST

NPDES and Surface Water Pollution Prevention Plan
Contractors and Sub-contractors responsible for any Earth Disturbing Activity
Duty to inform contractors and subcontractors
(OEPA Permit No.:OHC000006 Part III. E)

Signature	Printed Name	Title	Company	Date

OHIO DEPARTMENT OF TRANSPORTATION	**Appendix C SWPPP Review Form**	ODOT Project Ct.-Rt.-Sec:_____ Proj. #/PID:_____ Date:_____

Question #	Question	YES	NO	N/A	Comments
1	Is the SWPPP specific to the purposed project?				
2	Has the Contractor filed for a Co-Operator's notice to OPEA?				
3	Does the SWPPP list "Operators" and contain signatures of responsible parties? (Any Contractor or sub who has day-to-day operational control over sediment and erosion control activities)				
4	Was the plan developed by a P.E./CPESC qualified individual?				
5	Does the SWPPP list the CECI?				
6	Does the SWPPP show installation details of all proposed Alternative BMP?				
7	Have the proposed Alternative BMP been accepted for use by the Engineer?				
8	Does the SWPPP include existing conditions plan sheets identifying BMP's to be installed with early earth disturbing activities? (i.e. mobilization, clearing and grubbing, tree clearing, contractor staging, demolition, etc.) (Ref. 832.09 B.)				
9	Does the SWPPP include proposed conditions plan sheets identifying BMP's to be installed based on final buildout drainage patterns? (Ref. 832.09 C.)				

Question #	Question	YES	NO	N/A	Comments
10	Have all discharge points, having a direct connection to a waterway, been labeled on the SWPPP? (Direct connections include ditches, channels, storm sewer outlets, direct sheet flow.)				
11	Have sediment controls been included on the SWPPP, intercepting all potential runoff from project and contractor disturbed areas?				
12	Have drainage tributary areas been identified for all sediment controls intercepting concentrated flows? (i.e. sediment traps/basins, FFDC, inlet protection) (Verify tributaries for existing condition BMP and tributaries for proposed condition BMP, Ref. 832.09)				
13	Are the selected sediment control BMP's appropriate for their tributary area? (i.e. 5 Ac max for sediment traps, 2 Ac max for FFDC, 1 Ac max for inlet protection)				
14	Are sediment traps/basin used for tributary areas exceeding 2 acres? (Sediment traps and basins should be used for larger drainage areas unless ponding water may cause a safety hazard to the public. Sediment traps/basins should be a SWPPP Designer's first option for sediment treatment.)				
15	Are volume sizing calculations shown on the SWPPP for all sediment traps/basins? (Traps/basins require a minimum 67 CY per acre dewatering zone plus 37 CY per acre sediment storage zone.)				
16	Does the SWPPP show preservation areas, wetlands, waterways within and adjacent to the project?				

Question #	Question	YES	NO	N/A	Comments
17	Does the SWPPP include all contractor EDA? (i.e. borrow/waste, staging areas, etc.)				
18	Does the SWPPP include a BMP implementation schedule that aligns with the Contractor's construction sequence?				
19	Does the SWPPP show fuel storage locations and list procedures for spill prevention and countermeasures?				
20	Are concrete washouts, fuel storage, staging areas shown on the plan? (Ensure these activities are a minimum 100-feet away from a waterway.)				
21	Are construction entrances shown at all points of egress?				
22	Does the SWPPP show a schedule of stabilization practices? (i.e. temporary and permanent seeding based on dormant areas)				
23	Does the SWPPP show soil types and identify any highly erodible areas? (i.e. steep slopes requiring additional erosion control BMP)				
24	Do all BMP include adequate details for installation? (Ensure all BMP can be appropriately installed as shown on the plans)				

Appendix D

Co-Permittee Notice of Intent for Coverage Under Ohio EPA Storm Water Construction General Permit

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by Ohio's NPDES general permit for storm water associated with construction activity. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. NOTE: All necessary information must be provided on this form. Read the accompanying instructions *carefully* before completing the form. Do not use correction fluid on this form. Forms transmitted by fax will not accepted. There is no fee associated with submitting this form.

I. Applicant Information/Mailing Address

Company (Applicant) Name: _____

Mailing (Applicant) Address: _____

City: _____ State: _____ Zip Code: _____

Contact Person: _____ Phone: _____ Fax: _____

Contact E-Mail Address: _____

II. Facility/Site Location Information

Existing Ohio EPA Facility Permit Number: __ GC __ __ __ __ __ * __ G OR OHR1 __ __ __ __ __

Initial Permittee Name: _____ Phone: _____

Facility/Site Name: _____

City: _____ Township(s): _____

County(ies): _____ State: Ohio Zip Code: _____

Facility Contact Person: _____ Phone: _____ Fax: _____

Facility Contact E-Mail Address: _____

III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: _____ Title: _____

Applicant Signature: _____ Date: _____

EPA 4496 (Rev. 4/03) Click to clear all entered information CLEAR

Information available at *https://epa.ohio.gov/dsw/permits/gpfact#137794352-applying-for-coverage*

Appendix E
https://epa.ohio.gov/static/Portals/35/permits/OHC000006.pdf

Ohio EPA 04/11/2023

Entered Director's Journal

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: _____ Date: 04/11/2023

Effective Date: April 23, 2023
Expiration Date: April 22, 2028

OHIO ENVIRONMENTAL PROTECTION AGENCY

GENERAL PERMIT AUTHORIZATION FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of stormwater from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Stormwater Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.

E-SIGNED by Anne Vogel on 2023-04-11 19:00:28 GMT

2023-04-11 19:00:28 UTC

Anne M. Vogel
Director

Appendix F

Temporary Sediment and Erosion Control Best Management Practices (BMP)
Unit Price Schedule, July 2024

EROSION CONTROL PRICES

			Project Identified EDA (acres)					Fixed Price ($)	Comment
			<5	5 to 10	10 to 15	15 to 20	>20		
Item	**Unit**	**Description**	Price ($)						
832	Sq. Yd.	Construction Seeding and Mulching	1.21	1.11	1.00	0.91	0.86		Based on NOI acres
832	Feet	Slope Drains						14.50	
832	Cu. Yd.	Sediment Basins and Dams						16.50	[3]
832	Cu. Yd.	Excavated Drop Inlet Protection						16.50	
832	Feet	Perimeter Filter Fabric Fence	4.89	3.75	3.44	3.08	2.78		Based on NOI acres
832	Feet	Filter Fabric Ditch Check						13.50	
832	Feet	Inlet Protection						13.75	
832	Cu. Yd.	Earthen Dike/Berm						3.75	
832	Sq. Yd.	Temporary Stabilization Matting						3.25	
832	Cu. Yd.	Rock Ditch Check, Type C or D without Filter						87.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D with Filter						92.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D without Filter						87.00	[1]
832	Cu. Yd.	Basin Sediment Removal						12.00	
832	Cu. Yd.	Miscellaneous Sediment Removal						19.00	
832	Feet	Construction Fence						3.25	
832	Sq. Yd.	Construction Mulching	0.96	0.86	0.70	0.68	0.66		Based on NOI acres
832	Sq. Yd.	Winter Seeding and Mulching	1.30	1.21	1.11	1.02	0.98		Based on NOI acres
832	Cu. Yd.	Construction Entrance						104.00	

[1] Add the following amount per cubic yard for the cost of Type C or D Rock materials.
[3] Add the amount for the appropriately sized surface dewatering device for sediment basin outlet.

Appendix F

BMP ROCK MATERIAL SCHEDULE

District [2]	Purchase & Delivered to Job		Produced on Job	
	Type D or C		Type D or C	
1	$ 106.00		$ 53.00	
2	$ 106.00		$ 53.00	
3	$ 117.00		$ 58.50	
4	$ 122.00		$ 61.00	
5	$ 117.00		$ 58.50	
6	$ 117.00		$ 58.50	
7	$ 117.00		$ 58.50	
8	$ 122.00		$ 61.00	
9	$ 120.00		$ 60.00	
10	$ 122.00		$ 61.00	
11	$ 117.00		$ 58.50	
12	$ 111.00		$ 55.50	

[2] Based on the District in which the project is administered.

SEDIMENT BASIN SURFACE DEWATERING DEVICE

Device Size	Purchase & Delivered to Job
1 1/2”	$671.00
2”	$841.00
2 1/2”	$1,026.00
3”	$1,233.00
4”	$1,783.00
5”	$2,662.00
6”	$4,092.00
8”	$6,726.00

[3] Surface dewatering device sized appropriately for sediment basin

Designer Note:

Provide this Supplemental Specification on all plans.

Under the Erosion Control heading, provide the following Reference Items:

> Item 832 Each Erosion Control - Provide an encumbered dollar value to be placed in the proposal for Item: 832 Each Erosion Control. This amount is for both the "quantity" and "total" fields. This amount should only be provided in the C2 Estimate, the Special Considerations Field on the Plan Package Submittal Form, and in the Plans.
>
> Example: $10,000 set up for Item 832 Each Erosion Control then 10,000 placed in the "quantity" and "total" fields.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Plan - Provide a Lump Sum item for Storm Water Pollution Prevention Plan for projects that have 1 or more acres of estimated Total EDA.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Inspections – Provide a Lump Sum item for Storm Water Pollution Prevention Inspections which includes the anticipated weekly, rainfall event and monthly inspections.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Inspection Software services. Include costs for the SWPPPTrack software based on Contractor duration to achieve 70% permanent vegetation establishment.

For additional guidance on the NPDES process for ODOT projects, see the NPDES Construction Permit Implementation Plan flowchart on the Office of Hydraulic Engineering website.

For help estimating the encumbered dollar value for the Item 832 - Erosion Control, see the BMP Estimator on the Office of Hydraulic Engineering website *(https://www.transportation.ohio.gov/working/engineering/hydraulic/post-construction-bmp/supplemental-guidance/temporary-sediment-erosion)*.

Latest version of the OEPA NPDES Permit (OHC000006) combines Big Darby and Olentangy specific watershed requirements. Provide plan notes on the Preliminary SWPPP related to watershed specific requirements such as testing of stormwater discharge. Modify the Storm Water Pollution Prevent Inspection Lump Sum item of this specification to include all permit required stormwater testing.

Ohio Department of Transportation
Disadvantaged Business Enterprise (DBE) Program
Affidavit of Subcontractor Payment

Federal regulations require ODOT to monitor and verify that work subcontracted to a DBE firm is actually performed by the that firm, and to report the DBE attainment on each project. This affidavit is to be completed, signed and emailed to ODOT within 45 days of the substantial work complete date. The affidavit seeks to verify actual payments made to the DBE firm.

Payment Period _____ Project No. _____ PID _____
Interim affidavits only **ODOT-let projects only**

►**Interim** ☐ Interim affidavits must be submitted for each DBE firm at the end of each construction season for multi-year projects.

►**Final** ☐ Final affidavits for each DBE firm must be submitted within 45 days of the substantial work complete date.

Enter the construction/services/trucking payment amount in column A.
For DBE MSVs, enter the materials/supplies payment amount in column B.

All amounts indicated must be cumulative

	A	B
Prime Contractor Name _____		
Name of DBE Subcontractor/ Non-DBE Subcontractor **(if there is a DBE Sub-subcontractor)** _____		
Name of DBE Sub-subcontractor (If applicable) _____		

By signing below, the noted firms agree that the payment amounts recorded above are true and accurate as of the payment time period noted above. Furthermore, the noted firms understand that the DBE listed above must perform a ***commercially useful function*** as defined in 49 CFR Part 26 in order to receive credit towards the DBE contract goal.

I, the ***Prime Contractor's*** authorized representative, declare under penalty of perjury of the laws of Ohio and the United States that the information entered above is accurate and true.

_____
Prime Contractor Signature **Date**

_____
Print Name **Title**

I, the ***Subcontractor's*** authorized representative, declare under penalty of perjury of the laws of Ohio and the United States that the information entered above is accurate and true.

_____
DBE/Non-DBE Subcontractor Signature **Date**

_____
Print Name **Title**

I, the ***Sub-subcontractor's*** authorized representative, declare under penalty of perjury of the laws of Ohio and the United States that the information entered above is accurate and true.

_____
DBE Sub-subcontractor Signature **Date**

_____
Print Name **Title**

Please email completed, signed form to PaymentAffidavits@dot.ohio.gov. **Include the PID in the subject line.** Do not send anything other than payment affidavits to this address.