

CONTRACT NO.

CITY OF CUYAHOGA FALLS
2310 SECOND STREET
CUYAHOGA FALLS, OH 44221
Phone (330) 971-8000
Fax (330) 971-8168



TO BE COMPLETED BY THE CITY OF CUYAHOGA FALLS

DATE OF BIDDING _____, 2021 CONTRACT PRICE \$ _____

DATE AWARDED BOARD OF CONTROL _____, 2021 DATE EXECUTED _____, 2021

DEPARTMENT: ENGINEERING

ORDINANCE To Award

**CHESTNUT BOULEVARD RESURFACING
2ND STREET TO STATE ROAD
DBE GOAL = 6%**

ONLY THOSE CONTRACTORS WHO ARE PRE-QUALIFIED BY THE OHIO DEPARTMENT OF TRANSPORTATION AS OF 30 DAYS PRIOR TO THE SCHEDULED BID OPENING DATE WILL BE ELIGIBLE TO SUBMIT BIDS FOR THE CONSTRUCTION OF THIS PROJECT. A PRE-QUALIFICATION LETTER OR CERTIFICATE FROM ODOT SHALL BE INCLUDED AS PART OF THE BID DOCUMENTS.

THE FOLLOWING INFORMATION MUST BE COMPLETED FOR BID CONSIDERATION

COMPANY NAME _____

CONTACT PERSON _____ PHONE No. (____) _____ FAX: _____

Email Address: _____ Alternate Phone No. _____

ADDRESS _____
CITY STATE ZIP

Attach Bid Bond Here

CHESTNUT BOULEVARD RESURFACING
2ND STREET TO STATE ROAD
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CHESTNUT BOULEVARD RESURFACING
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* *These pages to be completely filled in, signed, notarized where required, and returned in the Proposal Book in its entirety at time of bid opening.*

τ *These pages to be inserted **after** bid awarded*

INFORMATION AND INSTRUCTIONS

Section 1

LEGAL NOTICE

Sealed proposals will be received in the office of the Director of Public Service, Municipal Building, Cuyahoga Falls, Ohio, until 12:00 noon, **TUESDAY, MAY 18, 2021**, with bids being opened in Conference Room "A", Second Floor, Municipal Building, 2310 Second Street, Cuyahoga Falls, Ohio, **for the resurfacing of Chestnut Boulevard, from 2nd Street to State Road. ONLY THOSE CONTRACTORS WHO ARE PRE-QUALIFIED BY THE OHIO DEPARTMENT OF TRANSPORTATION AS OF 30 DAYS PRIOR TO THE SCHEDULED BID OPENING DATE WILL BE ELIGIBLE TO SUBMIT BIDS FOR THE CONSTRUCTION OF THIS PROJECT. A PRE-QUALIFICATION LETTER OR CERTIFICATE FROM ODOT SHALL BE INCLUDED AS PART OF THE BID DOCUMENTS.**

Plans and proposals may be obtained free of charge on our website, www.cityofcf.com. The Acknowledgement of Receipt of Plans should be returned to engineering@cityofcf.com for inclusion on the Plan Holder list. Please call 330 971-8180 with any questions.

The pre-bid meeting will be a conference call on Monday, May 10, 2021, at 2:00 p.m. If you wish to participate in this meeting, call: 605-313-4802, access code 702729#.

Bidders must use the printed forms provided therefore, as none other will be accepted. Each proposal must contain the full name of the party or parties making the same, and all parties interested therein, and must be accompanied by a bond or certified check in the sum of five percent (5%) of the total amount of the bid, on a solvent bank, as a guarantee that if the bid is accepted, a contract will be entered into. The Director of Public Service reserves the right to reject any or all bids and to waive any informality in any proposal. Bids will be received only from parties that have obtained a recorded bid set of drawings and specifications as evidenced by returning the provided Acknowledgement of Receipt of Plans.

The successful bidder must post a Performance, Payment, Maintenance bond in the amount of one hundred percent (100%) of the total amount of the bid.

"DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN SECTION 153.011 OF THE REVISED CODE APPLY TO THIS PROJECT. COPIES OF SECTION 153.011 OF THE REVISED CODE CAN BE OBTAINED FROM ANY OF THE OFFICES OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES."

We are an Equal Opportunity Employer.

BY ORDER OF THE
ANTHONY L. ZUMBO, P.E., P.S., DIRECTOR OF PUBLIC SERVICE

FALLS NEWS-PRESS: April 25, 2021
 May 2, 2021
 May 9, 2021

**CITY OF
CUYAHOGA FALLS, OHIO**

**PRE-BID
CONSTRUCTION MEETING**

**CHESTNUT BOULEVARD RESURFACING
2ND STREET TO STATE ROAD**

A Pre-Bid Construction Meeting will be held to review bid documents and answer questions relative to the proposed project.

This meeting will be held by telephone conference on Monday, May 10, 2021, at 2:00 p.m. If you wish to participate in this meeting, call 605-313-4802, access code 702729#.

Contact person for this project is:

Craig Marko, P.E., or Brian Zemanek
City Engineer's Office
971-8180

TONY DEMASI, P. E.
CITY ENGINEER

INFORMATION AND INSTRUCTIONS TO BIDDERS

1. In accordance with the advertised legal notice, sealed bids will be received by the City of Cuyahoga Falls, Ohio at the office of the Director of Public Service in the Municipal Building for certain material, equipment and/or labor services. The bids will be opened and read aloud at the time and place specified in the legal notice.
2. Bidders are advised to thoroughly examine the contract documents before submitting their bids. There may be changes in the specifications from those heretofore used. It is hereby understood that the bidder has read and fully understands each and every clause embodied therein.
3. All material, equipment and/or labor services proposed shall be in accordance with the attached specifications. Any exceptions are to be specifically noted herein.
4. Each proposal must contain the full name of the party or parties making the same and all persons interested therein.
5. All proposals or bids shall be signed and submitted on the printed blanks provided for that purpose and bound herewith. Except during the filling in of the proposal forms, no pages are to be removed from this binding. The complete set of contract documents must be submitted with the proposals. For clarity, uniformity and ease of tabulating bids all bidders are requested to TYPE their bids on the proposal forms.
6. The price bid for each unit of material equipment and/or service must be stated separately in figures in the proper column.
7. Each bidder shall submit on the proposal form the name of the manufacturer, type and catalog number of the equipment or material he proposed to furnish. He shall also submit all other data, statements and samples called for by the specifications and the data sheet forming a part of the proposal form.
8. Manufacturers or distributors failing to provide MSDS's will be considered as failing to meet contractual requirement. This statement shall appear on purchase orders or offers to bid.
9. Each bid shall be accompanied by a bond executed by the bidder and a surety company, per Ohio Revised Code, which the surety company shall be licensed to do business in the State of Ohio, in an amount not less than five (5) percent of the aggregate amount of the bid or proposal; or the bidder may submit with the bid, in lieu of such bond, a certified check on a solvent bank, payable to the order of the Director of Public Service, City of Cuyahoga Falls, Ohio, in an amount equal to the amount required in such bond. Said bond or certified check is required as a guarantee that should the said bid or proposal be accepted by the Director of Public Service, the bidder will, within ten (10) days from the time he shall have been notified of the acceptance of the same, enter into contract with the City of Cuyahoga Falls for the material, equipment and/or service bid upon.

10. Should any proposal be rejected, such check or bond will be returned to the bidder and should any proposal be accepted, such check or bond will be returned after proper execution of the contract documents. If the bidder, to whom the contract shall have been awarded shall refuse or neglect, within ten (10) days after due notice that the contract has been awarded to him, to execute the same, then the deposits shall be forfeited to the City as liquidate damages for such neglect or refusal.
11. Each proposal shall be accompanied by a non-conclusion affidavit executed on the form provided thereof.
12. When requested by the City of use in evaluation the bids submitted, the bidder must furnish satisfactory evidence of its ability, competency, facility and financial resource to furnish the material, equipment and/or labor services so bid. If the bidder represents a manufacturer, then he must submit similar data relating to the manufacturer.
13. Each bid on equipment, material and/or labor services shall contain a statement of the time, after the award of the contract, required by the bidder to deliver the equipment, material and/or labor services included in the bid.
14. Each bid shall be sealed and addressed to the Director of Public Service, City of Cuyahoga Falls, Ohio, and shall bear on its face, the name of the bidder, a statement that it is a sealed bid to be opened on the day and hour above mentioned, and statement of the item numbers on which the bid is made.
15. All bids shall be filed with the Director of Public Service, in that office in the Municipal Building, in the City of Cuyahoga Falls, Ohio, on or before the day and hour mentioned above and stated in the legal notice of advertisement. No proposal presented after that time will be accepted.
16. Permission will not be given for the modification of any proposal after the same has been filed. No bidder may withdraw his bid, for a period of thirty (30) days after the date of opening of same.
17. If any person contemplating submitting a bid for the proposed material, equipment and/or labor services is in doubt as to the true meaning of any part of the specifications or other proposed contract documents, he may submit to the Director of Public Service, a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents or changes therein will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The Director of Public Service will not be responsible for any other explanation or interpretations of the proposed documents.
18. No bid will be accepted from, or contract awarded to, any person, firm or corporation that is in arrears to the City of Cuyahoga Falls, upon any debt or contract, or who has failed to execute, in whole or in part, in a satisfactory manner, any contract with the City; or who if a defaulter as to surety or otherwise upon any obligation to the City of Cuyahoga Falls.

19. Attention of the bidder is called to the statutory requirements of the State of Ohio relative to licensing of corporations organized under the laws of any other state.
20. Instructions must be adhered to; failure to strictly observe them shall constitute a sufficient cause of rejection of a bid.
21. the City shall not be liable for the payment of any material furnished under the contract except upon written order from the Director of Public Service supplementing this agreement, and no shipment of same shall be made under the contract except after receipt of such written order.
22. The Director of Public Service may consider bid specification items as distinct bids for each of the items such as material, equipment and/or labor services. However, all parts of any bid specification item must be bid to qualify that item for consideration.
23. After the public reading, all bids will be tabulated and upon completion of a report by the appropriate purchasing department on the bids received, the Director of Public Service will proceed, without unnecessary delay, to award contracts for the various times to the lowest and best bidders on materials, equipment and/or labor services, conforming to the specifications.
24. The Director of Public Service expressly reserves the right to reject any or all bids and to waive informalities and to judge the character and sufficiencies of equipment, apparatus, materials, and/or labor services bid upon. Bidders who are in sympathy with the purpose outlined above and prepared to act in accordance therewith, are invited to submit bids in accordance with these specifications.
25. A Performance Bond will be required (if indicated by the legal notice) of each successful bidder to assure the faithful completion of the contract that has been awarded. **The successful bidder shall name both the City and ODOT as obligees on the bond.**
26. The Performance Bond form and/or the Contract form are not to be executed by the bidder until a contract has been awarded.
27. The required contract provisions for federal-aid construction contracts contained in ODOT's 2013 LPA Template are hereby incorporated by reference. The rules and regulations in the Template shall apply to all work to be done under this contract. If any provisions of these rules and regulations conflict with any other clauses of this contract, the ODOT 2013 LPA Template shall govern.

End of Instructions

INSURANCE REQUIREMENTS - Amended 2/18/82

103.08 INSURANCE:

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the City nor shall the Contractor or any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

1. COMPENSATION INSURANCE:

The Contractor shall procure, and shall maintain during the life of this contract, Workmen's Compensation Insurance as required by the State of Ohio for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. If any class of employees engaged in hazardous work on the project under this contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

2. CONTRACTOR'S COMPREHENSIVE GENERAL LIABILITY INSURANCE AND AUTOMOBILE LIABILITY INSURANCE:

The Contractor shall procure and shall maintain, during the life of this contract, (1) Comprehensive General Liability Insurance including all Premises/Operations; Products/Completed Operations; and Broad Form Property Damage, and (2) Automobile Liability Insurance for all vehicles and equipment in the amount specified in subparagraph 2.

3. SUBCONTRACTOR'S COMPREHENSIVE GENERAL LIABILITY INSURANCE AND AUTOMOBILE LIABILITY INSURANCE:

The Contractor shall either (1) require of his subcontractors to procure and to maintain during the life OF HIS SUBCONTRACT, comprehensive, General Liability Insurance and Automobile Liability Insurance of the type and in the amount specified in Subparagraph 2 and 6 hereof or, (2) insure the activities of his policy, specified in Subparagraph 2 hereof.

4. SCOPE OF INSURANCE AND SPECIAL HAZARDS:

The insurance required under subparagraphs 2 and 3 hereof shall provide adequate protection for the Contractor and his Subcontractors, respectively, against claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this contract as enumerated in the SPECIAL PROVISIONS.

PAGE 2 – INSURANCE REQUIREMENTS – as amended.

1. BUILDER’S RISK INSURANCE (Fire and Extended coverage):

(Building Construction only) Until the project is completed and accepted by the City, the Contractor is required to maintain Builder’s Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the City, the Contractor, Subcontractors as their interests may appear. The Contractor shall not include any costs for Builder’s Risk Insurance (fire and extended coverage) premiums during construction unless the Contractor is required to provide such insurance; however, this provision shall not release the Contractor from his obligation to complete, according to plans specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor’s undertaking.

2. PROOF OF CARRIAGE OF INSURANCE:

The Contractor shall furnish the City with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: “The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days’ written notice has been received by the City.”

The minimum amount of such insurance including underlying and umbrella excess shall be as follows:

BODILY INJURY AND PROPERTY DAMAGE LIABILITY COMBINED SINGLE LIMIT

Each Occurrence	\$ 2,000,000.00
-----------------	-----------------

INCOME TAX REQUIREMENTS

Employers doing business within Cuyahoga Falls are required to deduct at the time of payment of salaries, wages, commissions or other compensation the tax of two (2) percent of the gross amount earned in Cuyahoga Falls.

Every employer who is required to deduct the tax at the source is liable directly to the City of Cuyahoga Falls for payment of such tax whether actually collected from their employees or not.

Also, the net profit from income earned within Cuyahoga Falls is subject to the tax. Both withholding and tax on profits are due quarterly.

CONTACT THE INCOME TAX DIVISION FOR THE NECESSARY FORMS AND ANY ADDITIONAL INFORMATION.

City of Cuyahoga Falls
Office of the Mayor

Mayor Don Walters
2310 Second Street
Cuyahoga Falls OH 44221



Phone: 330-971-8200
Fax: 330-971-5696
mayor@cityofcf.com

Dear Employer:

In today's society, we all seem to face the dangers and consequences of alcohol and drug abuse. Studies have found the workplace is not exempt from this scourge that is threatening our nation. It is found that two-thirds of those entering the workplace for the first time have used illegal drugs. Up to twenty-three percent of employees abuse alcohol/drugs on the job. The figures are staggering. Up to 100 billion dollars a year are lost in productivity.

The City of Cuyahoga Falls has passed Ordinance 12-1990, which requires employers who are awarded competitively-bid City contracts to maintain a drug-free workplace.

I have enclosed an outline of the requirements that need to be met. You will also find a sample policy statement, a certification to be completed and returned in your bid packet. It is our hope that through education and awareness, we can be an effective part of the solution.

Please know this office and I are available to assist in any way we can.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Walters", written in a cursive style.

Don Walters
Mayor

Encl.

181.07 EMPLOYERS AWARDED CITY CONTRACTS TO MAINTAIN DRUG FREE WORKPLACE.

1. No contract awarded through the process of competitive bidding, other than contracts pursuant to Ohio R.C. 125.04, shall be awarded to any bidder who does not certify that the following requirements have been met:
 - a. A statement has been published and provided to employees notifying them that the manufacture, use, possession, or distribution of drugs in the work place is prohibited, as well as a specification of the disciplinary action that may be taken against employees who violate that prohibition.
 - b. Any employee convicted of violating a criminal drug statute occurring in the work place is required to notify the employer of said conviction within five days after such conviction.
 - c. Notice has been published specifying the sanctions for or requiring satisfactory participation in a drug abuse assistance or rehabilitation program by an employee convicted of violating a criminal drug statute occurring in the work place.
 - d. A program has been implemented for the distribution of information on drug abuse awareness and the availability of counseling and referral services.
2. The Board of Control may, for good cause shown, grant an extension of time for compliance of the above requirements.
3. The Drug control Coordinator be and hereby is directed to provide information and assistance necessary to facilitate compliance with the provisions of this section.

(Ord. 12-1990. Passed 1-22-90)

SEXUAL HARASSMENT POLICY

Employees of the City of Cuyahoga Falls have a right to work in an environment free of sexual harassment. The City will not tolerate any form of sexual harassment or any offensive conduct that has the effect of severely interfering with an employee's work performance or creating a pervasive intimidating, hostile, offensive work environment. Examples of sexual harassment include, but are not limited to, unwanted sexual advances; implicit or explicit demands for sexual favors in exchange for favorable treatment or continued employment; repeated sexual jokes, flirtations, advances or propositions; verbal abuse of a sexual nature; graphic, verbal commentary about an individual's body, sexual prowess or sexual deficiencies; leering; whistling; touching; pinching; assault; coerced sexual acts; suggestive insulting, obscene comments or gestures; and display in the work place of sexually suggestive objects or pictures.

It is the policy of the City of Cuyahoga Falls that any form of sexual harassment is unacceptable, either within the workplace or at City-sponsored events, whether on or off property owned by the City, and is subject to appropriate disciplinary action.

The City encourages individuals who believe they are being harassed to clearly and promptly notify the offender that his or her behavior is unwelcome. This procedure is not a required first step for reporting sexual harassment. If for any reason an individual does not wish to approach the offender directly or if such discussion does not successfully end the harassment, then the individual should notify their supervisor.

Additionally, any employee who observes harassment of any type is to report it to his or her supervisor.

All employees are expected to cooperate with an investigation of any type of harassment. Failure to do so may lead to discipline. False information provided in the course of any investigation may also lead to discipline.

The City will not retaliate against an individual who makes a report of sexual harassment, nor permit any employee to do so. Retaliation is a very serious violation of this policy and should be reported immediately. Any individual found to have retaliated against an individual for reporting sexual harassment, or against anyone participating in the investigation of a complaint, will be subject to appropriate disciplinary action.

FIREARMS POLICY

As a result of the General Assembly passing Am. Sub. House Bill 12 regarding “concealed carry” of firearms, the City of Cuyahoga Falls, Ohio, has adopted a policy. Each Bidder must review the policy and file the certification that is included in this bid packet. The policy can be accessed at the City’s website, www.cityofcf.com, or a copy can be obtained from the office of the Director of Public Service located on the 2nd floor of City Hall, 2310 Second Street, Cuyahoga Falls, Ohio. Upon request, the policy can be faxed or mailed.

BIDS SUBJECT TO 60 DAY ACCEPTANCE

BECAUSE OF OUR DESIRE TO FAIRLY AND EQUABLY EVALUATE ALL COMPETITIVE BIDS, WE ARE SPECIFYING THAT ALL BIDS BE SUBJECT TO ACCEPTANCE BY THE CITY WITHIN 60 DAYS FROM THE DATE OF THE BID OPENING.

EXCEPTION BY THE BIDDER TO THIS REQUIREMENT MAY RESULT IN HAVING THE SUBJECT BID REJECTED BY THE CITY AS NOT HAVING MET THE CITY'S SPECIFICATIONS.

CONTRACTOR PERMIT/REGISTRATION REQUIREMENTS

The Contractor shall review and comply with the provisions of any and all permits issued for this work, including compliance with contractor registration, insurance and/or bonding provisions. Although City of Cuyahoga Falls permit fees for this work, if applicable, will be waived, costs for City of Cuyahoga Falls contractor registration, if applicable, will not.

INSURANCE

Section 2

CONTRACT FORMS

Section 3

(DIRECTOR OF PUBLIC SERVICE)

NOTE

The bidder hereby agrees that the Director of Public Service has the right to reject any or all bids and to waive informality in any bid and that the bidder shall not dispute the correctness of the quantities used in computing the lowest and best bid.

The bidder further agrees that the Director of Public Service may at his discretion award the contract on the basis of individual items taken separately in multiples or collectively for any or all items in this proposal and that he will not dispute the Director's judgment in his award upon this basis.

Signature of Officer, Partner or Owner

(Business address of bidder)

CERTIFIED CHECK OR BID BOND

Certified check or bid bond in the amount of:

_____ on
State Amount

Name of Bank or Bonding Company

_____ deposited herewith.

BIDDER

All bids not in conformity with these provisions will be rejected.

* *PLEASE PLACE BID BOND/CERTIFIED CHECK ON TOP OF THE BID PACKET WHEN SUBMITTING YOUR BID. ALSO, PLEASE HAVE NOTED THE ADDRESS OF WHERE THE BID BOND/CERTIFIED CHECK IS TO BE RETURNED. THANK YOU FOR YOUR COOPERATION.*

CERTIFICATION OF OSHA COMPLIANCE

I, _____, hereby certify that _____
Company Official) (Company)
will comply with all Federal, State and City of Cuyahoga Falls statutes, ordinances, rules and
regulations regarding job site safety, including but not limited to the Occupational Safety and
Health Act while engaged in this project. I understand that a failure of _____
(Company)
or its subcontractors to follow any safety regulation will result in the city, in its sole discretion
issuing a stop work order on the project until the violation is cured. Failure to stop work when
so ordered by the City may result in the immediate termination of the Agreement by the City.
The City may, in its sole discretion, notify OSHA of any violation of safety regulations by the
Company or its subcontractors. All fines and penalties that may result from any violation will be
borne by the Company or its subcontractor.

Signature

Title

State of Ohio)
)ss
County of _____)

Sworn to before me and subscribed in my presence this _____ of _____,
20_____.

Notary Public
My Commission Expires: _____

[seal]

CERTIFICATION

I, _____ certify that
(Company Official)

_____ has posted in the workplace and distributed
(Company)
to all employees our Drug-Free Workplace Policy Statement, a copy of which is attached hereto.

I further certify that _____ has made information on alcohol
(Employer)
and drug abuse awareness available to all employees and will provide information on the
availability of counseling and referral services to any employee requesting such information.

(Official Signature and Title)

State of Ohio)
County of Summit)ss
)

Sworn to before me and subscribed in my presence this ____ day of _____, 20____.

Notary Public

[Seal]

In accordance with City of Cuyahoga Falls Ordinance No. 12-1990, passed January 22, 1990:

DRUG FREE WORKPLACE POLICY STATEMENT

_____ hereby notifies all employees of our policy
(Employer)
regarding drugs in the workplace.

Without exception, the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance while in the workplace is strictly prohibited.

_____ requires that as a condition of employment,
(Employer)
any employee convicted of a drug violation occurring in the workplace must notify his or her employer within five (5) days after conviction.

Any employee found in violation of this policy is subject to appropriate personnel action, up to and including termination of employment. Continued employment may be conditioned upon successful completion of an acceptable drug rehabilitation program.

Any employee seeking information on drug or alcohol abuse awareness and the availability of counseling and referral services should contact:

(Name)

(Phone)

CERTIFICATION

I, _____ hereby certify that
(Company Official)

_____ has received, reviewed, and distributed the
(Company)

City of Cuyahoga Falls' policy regarding Sexual Harassment to all employees who will be working or involved with this project. I further certify that _____
(Company)

will indemnify the City of Cuyahoga Falls in any action brought against it alleging that an employee of _____ engaged in any conduct prohibited by the
(Company)

City's Sexual Harassment Policy while working or otherwise involved with this particular Project.

Signature

Title

State of Ohio)
)ss
County of _____)

Sworn to before me and subscribed in my presence this _____ day of _____, 20__.

Notary Public

My Commission Expires: _____

[Seal}

FIREARMS CERTIFICATION

I, _____ hereby certify that
(Company Official)

_____ has reviewed and
(Company)

distributed by the City of Cuyahoga Falls' policy regarding Firearms to all employees and subcontractors who will be working on or involved with this project. I further certify that

_____ will indemnify the City of
(Company)
Cuyahoga Falls in any action brought against it alleging that an employee of

_____ Engaged in any conduct prohibited

By the City's Firearms Policy while working or otherwise involved with this particular Project.

Signature

Title

State of _____)
)ss
County of _____)

Sworn to before me and subscribed in my presence this _____ day of _____, 200_____.

[Seal]

Notary Public
My commission expires: _____

EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the CONTRACTOR agrees as follows:

- a. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin or handicap status. The CONTRACTOR will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex, national origin or handicap status. Such action shall include, but not be limited to the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of this nondiscrimination clause.

- b. The CONTRACTOR will, in all applications or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, national origin or handicap status.
- c. The CONTRACTOR will cause the foregoing provisions to be inserted in all subcontractors for any work covered by this Contract so that such provisions will be binding upon each subcontractor, provided that foregoing provisions shall not apply to contractors or subcontracts for standard commercial supplies or raw materials.

NON-COLLUSION AFFIDAVIT

THIS AFFIDAVIT MUST BE EXECUTED FOR THE BID TO BE CONSIDERED.

STATE OF _____)

)

COUNTY OF _____)

I, _____, _____
(Name of party signing affidavit) (Title)

being duly sworn, do depose and say: that

(Insert names of all persons, firms, or corporations interested in the bid)

its agents, officers, or employees have not directly or indirectly entered into any agreement, participated in any collusions, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal; and also that no member of the Council, head of any department or bureau, or employee therein, or any officer of the City of Cuyahoga Falls is directly or indirectly interested therein.

Signature

Title

Sworn to and subscribed before me this _____ day of _____, 20____.

Notary Public in and for

COUNTY OF _____

STATE OF _____

My commission expires _____

[SEAL]

Have you double-checked your bid?
Errors or omissions could result in your bid being declared informal.

PREVAILING WAGE CONTRACTOR RESPONSIBILITIES

This is a summary of prevailing wage contractors' responsibilities. For more detailed information, please refer to Chapter 4115 of the Ohio Revised Code.

General Information

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than the following:

"New" construction threshold level has been adjusted to:	\$250,000
"Reconstruction, enlargement, alteration, repair, remodeling, renovation or painting" threshold has been adjusted to:	\$75,000

OR

As of January 1, 2020:

"New" construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction threshold level has been adjusted to:	\$93,292
"Reconstruction, enlargement, alteration, repair, remodeling, renovation or painting" that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction threshold has been adjusted to:	\$27,950

- a. Thresholds are to be adjusted biennially by the administrator of Ohio Bureau of Employment Services.
- b. Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of commerce, Bureau of the Census, but may not increase or decrease more than 3% for any year.

Penalties for Violation

If an intentional violation is determined to have occurred, the Contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means “a willful, knowing, or deliberate disregard for any provision” of the prevailing wage law and includes but is not limited to the following actions:

- a. Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- b. Intentional misclassification of employees for the purpose of reducing wages.
- c. Intentional misclassification of employees as independent contractors or as apprentices.
- d. Intentional failure to pay the prevailing wage.
- e. Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Bureau of Employment Services Wage and Hour Division.
- f. Intentionally employing an officer of a contractor or subcontractor that is known to be prohibited from contracting, directly or indirectly, with a public authority.

Responsibilities

A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Bureau of Employment Services, Wage and Hour Division, for the classification of work being performed.

1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.
2. Overtime must be paid at time and one-half the employee’s base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of OBES Wage and Hour Division must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.

B. Use of Apprentices and helpers cannot exceed the rations permitted in the wage rate schedules.

1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
2. Contractors must provide the Prevailing Wage coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.

- C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Bureau of Employment Services or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:
1. Time cards, time sheets, daily work records, etc.
 2. Payroll ledger/journals and cancelled checks/check register.
 3. Fringe benefit records must include program name, address, account number, and cancelled checks.
 4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.
 5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent on Ohio.
- D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.
- E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.
- F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.
1. Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.
- G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. Copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.
- H. Supply all subcontractors with the Prevailing Wage Rates and changes.
- I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:
1. Employee's names, addresses, and social security numbers.
 - a. Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.
 2. Employee's work classification.
 - a. Be specific about he laborers and/or operators.
 - b. For all apprentices, show level/year and percent of journeyman's rate
 3. Hours worked on the project for each employee.
 - a. The number of hours worked in each day and the total number of hours worked each week.
 4. Hourly rate for each employee.
 - a. The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.

- b. When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by dividing the total yearly contribution by 2080.
 5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.
 - a. When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.
 - b. When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by dividing the total yearly contribution by 2080.
 6. Gross amount earned on all projects during the pay period.
 7. Total deductions from employee's wages.
 8. Net amount paid.
- J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete: and that the wage rates shown are not less than those required by the O.R.C. 4115.
- K. Send a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

COMPLETION TIME CERTIFICATION

The Contractor shall state the number of calendar days necessary for completion of this Contract after the date of Award of Contract.

Number of calendar days for _____ : _____ days.
(Name of Contract)

Signature of Bidder

Witness: By: _____

Address: _____

**ODOT’s LPA Template (ODOT Spec Book and LPA Spec Book)
Required Contract Provisions.**

1. ODOT’S 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND ITS SUPPLEMENTS

With the exception of Section 100 “General Provisions” included in the matrix below, ODOT’s Construction and Material Specifications (CM&S) 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 CMS Manual.

In accordance with the Locally Administrated Transportation Projects Manual of Procedures (LATPM), 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.

Excluded 2019 Specifications			
Section 102.01	Section 103.01	Section 105.19	
Section 102.03	Section 103.02	Section 107.04	
Section 102.06	Section 103.04	Section 107.13	
Section 102.09	Section 103.05	Section 108.01	
Section 102.10	Section 103.06	Section 108.02(B)	
Section 102.11	Section 103.07	Section 108.02(E)	
Section 102.13	Section 104.02(A)	Section 108.02(G)	
Section 102.14	Section 105.05	Section 108.08	
Section 102.17			

2. STEEL AND IRON PRODUCTS MADE IN THE UNITED STATES

Furnish steel and iron products that are made in the United States according to the applicable provisions of Federal regulations stated in 23 CFR 635.410 and State of Ohio laws, and ORC 153.011 and 5525.21. “United States” means the United States of America and includes all territory, continental or insular, subject to the jurisdiction of the United States. Both the State and Federal requirements contained in (A.) and (B.) of this section apply to this contract.

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.

B. State Requirements. All steel products used in the Work for load-bearing structural purposes must be made from steel produced in the United States. State requirements do not apply to iron.

C. Exceptions. ODOT may grant specific written permission to use foreign steel or iron products in bridge construction and foreign iron products in any type of construction. ODOT may grant such exceptions under either of the following conditions:

1. 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.
2. The specified products are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet the requirements of the Contract Documents. ODOT may require the Contractor to obtain letters from three different suppliers documenting the unavailability of a product from a domestic source, if the shortage is not previously established.

D. Proof of Domestic Origin. Furnish documentation to the Engineer showing the domestic origin of all steel and iron products covered by this section, before they are incorporated into the Work. Products without a traceable domestic origin will be treated as a non-domestic product.

3. **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 there with 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 there with 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 constitute also signature of this certification as permitted by Title 28 United States Code, Section 1746.

4. **PREQUALIFICATION**

Only pre-qualified contractors are eligible to submit bids for this PROJECT. Pre-qualification 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 pre-qualify, the LPA must still select a qualified contractor. Subcontractors are not subject to the pre-qualification requirement. The "prime" contractor must perform no less than 30 percent of the total original contract price.

5. **PN033 - 4/18/2008- AS PER PLAN DESIGNATION**

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

For the last several years the “As Per Plan” designation has been added to some item descriptions in the proposal to assist the Contractors to easily identify 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.

6. FEDERALLY REQUIRED EEO CERTIFICATION FORM

The bidder hereby certifies that he **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 **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.*

7. 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 subcontractors 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.

8. PN 026 - 10/15/2004 - CERTIFICATION OF NONSEGREGATED 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 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 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.

9. 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 in 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.

10. CERTIFICATION OF COMPLIANCE WITH AFFIRMATIVE ACTION PROGRAMS

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

11. PN 020 – 11/21/2011 - NOTICE OF REQUIREMENT OF AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

The Bidder's attention is called to the affirmative action obligations required by the specifications set forth in 23 CFR Part 230, 41 CFR Part 60, Executive Order 11246, Section 503, and the affirmative action provisions of Vietnam Era Veterans' Readjustment Assistance Act (VEVRAA) of 1974.

Utilization goals applicable to the project, expressed in percentages, for minority and female participation for each construction craft can be found on ODOT's website at <http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/default.aspx>. These goals are based on 2000 census data and represent the area, per craft, minority and female availability pool.

Minority and female utilization obligations by craft per county (applicable to project):

<http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Construction/CountyAvailability-ByTrade.pdf>

Statewide utilization obligations by craft (applicable to the Contractor's statewide workforce):

<http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Construction/StatewideAverages-ByTrade.pdf>

Effective 11/21/2011 the New Hire Definition will be as follows:

An individual who has a break in service (not on an employer's payroll) for a period of 12 months or longer and the person affected is not a salaried employee but belongs to a union craft. Individuals compensated for training or incidental work which does not cause a break in unemployment compensation, i.e., paid by voucher check or petty cash, are considered new hires if the individual's break in service is 12 months or longer.

The time frame for a new hire shall be associated with the first project worked for that contractor regardless of whether it is public or private. When reporting new hires, the contractor shall identify that employee as a new hire on that specific project only. Subsequent work, barring a break in service of 12 months or more, would not qualify the employee as a new hire for that contractor.

The Contractor's compliance shall be based on the implementation of affirmative action obligations required by the specifications set forth in 23 CFR Part 230, and its good faith efforts to meet these obligations. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and females on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the affirmative action obligations shall be a violation of the contract and regulations in 23 CFR Part 230. The good faith efforts put forth by the contractor will be measured against the total work hours performed. Under FHWA, ODOT is the authority tasked with ensuring that the contractor adheres to the aforementioned regulations. In addition to complying with the Required Contract Provisions as outlined in the attached subcontract agreement the Contractor shall provide immediate written notification to the ODOT and the Prime Contractor when referral practices of the union or unions with which the Contractor has a collective bargaining agreement impede the company's efforts to meet its equal opportunity obligations.

The Office of Federal Contract Compliance Programs (OFCCP) administers and enforces equal employment opportunity laws that apply to Federal government contractors and subcontractors supplying goods and services, including construction, to the Federal Government under 41 CFR Part 60, Executive Order 11246, Section 503, and the affirmative action provisions of VEVRAA. The OFCCP monitors compliance with these laws primarily through compliance evaluations, during which a compliance officer examines the contractor's affirmative action efforts and employment practices. Under Executive Order 11246, the OFCCP may perform contract compliance reviews on contractors involved with federally funded ODOT projects.

Requirements for affirmative action obligations governing OFCCP contract compliance reviews are those listed in the Construction Contractors Technical Assistance Guide.

https://www.dol.gov/sites/dolgov/files/OFCCP/Construction/508_ctag_12032020.pdf

The Department of Administrative Services (DAS), Equal Opportunity Division, is responsible for ensuring state contractors implement and adhere to the State of Ohio's affirmative action program pursuant to Ohio Administrative Code (OAC) 123:2-3-02. Specifically, this unit's responsibilities include the issuance of certificates of compliance under ORC 9.47 and 153.08, conducting project site visits and compliance reviews (desk audits) to ensure contractors utilize minorities and women in the construction trades, as well as maintaining a working environment free of discrimination, harassment and intimidation. The DAS may perform contract compliance reviews on contractors involved with state funded ODOT projects. Requirements for affirmative action obligations governing DAS contract compliance reviews are those listed in the O.A.C. for the Metropolitan Statistical Area in which a project is located. <http://das.ohio.gov/Divisions/EqualOpportunity/ConstructionCompliance.aspx>

All prime and subcontractors regardless on the number of employees or the state contract amount are required to submit monthly utilization reports (Input Form 29) to Ohio Department of Administrative Services covering the contractor's total workforce within the state of Ohio. The reports must be filed electronically by the 10th of each month, beginning with the contract award and continuing until the contractor or subcontractor completes performance of the state contract. <http://das.ohio.gov/Divisions/EqualOpportunity/InputForm29.aspx>

The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs, 200 N. High Street, Room 409, Columbus, Ohio 43215, within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the subcontract is to be performed.

12. PN 029 - 10/15/2004 - ON-THE JOB TRAINING (OJT) PILOT PROGRAM

The requirements of this Training Special Provision supersede subparagraph 7b of the Special Provision entitled Special Employment Opportunity Responsibilities and implements 23 U.S.C. 140(a).

The following must be included as part of the Contractor's equal employment opportunity affirmative action training program:

The Contractor must provide on-the-job training aimed at developing full journey persons in the type or job classification in which they work.

The contractor is not required to have a specific number of trainees assigned to this project. The number of trainees will be distributed among the work classifications on the basis of the Contractor's needs and the availability of the journey persons in the various classifications. The Contractor will be credited for each trainee employed by him or her who is currently enrolled or becomes enrolled in an approved program.

Training and upgrading of minorities and women toward journey person status is a primary objective of this Training Special Provision. Accordingly, the Contractor must make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a

reasonable area of recruitment. This training commitment is not intended, and will not be used, to discriminate against any applicant for training, regardless of whether the applicant is a member of a minority group or not.

No employee will be employed as a trainee in any classification in which he or she has successfully completed a training course leading to journey person status or in which he or she has been employed as a journey person. The Contractor must satisfy this requirement by including appropriate questions in the employee's application or by other suitable means. Regardless of the method used, the Contractor's records must document the findings in each case.

The minimum length and type of training for each classification will be established in the training program selected by the Contractor.

No payment by the LPA will be made to the Contractor for providing this training. However, if the Contractor fails to provide adequate training and cannot show good faith efforts on its part to provide adequate training, it will be subject to a formal compliance review to determine the Contractor's efforts in meeting the EEO laws and regulations.

The Contractor must provide the following reports:

1. CR1 Report [Click Here for copy of CR1 Report](#)
 - A. To be completed on each trainee
 - B. To be filled out at the start of training and finish of training or at the end of the year, whichever comes first
 - C. To be submitted to the ODOT District in which the Contractor's home office is located.
2. Tracking will be on an annual basis. The Contractor must submit the subsequent CR1 to the ODOT District in which the Contractors home office is located.

The prime or subcontractor conducting the training must be involved in at least one Federal project per calendar year in order to get FHWA training credit. Participation in the OJT Program is not project or contract specific.

All Contractors are encouraged to participate in the OJT program. Such a program will be considered when examining the contractor's Good Faith Efforts toward meeting its contractual affirmative action obligations.

All Contractors shall submit their own Training Program or Apprenticeship Certificate, for approval, to the ODOT District in which the company's home office is located.

All OJT Trainees must have the appropriate certification. Apprenticeship Certificates can be obtained from the State of Ohio, Bureau of Apprenticeship and Training. The union apprenticeship agreement is not acceptable verification of an apprentice's enrollment in a union sponsored training program. A copy of the Apprenticeship Certificate along with a statement indicating the number of months/years the employee has been in the apprenticeship program must be submitted to the ODOT EEO Coordinator in the company's home district and to the prevailing wage coordinator in the district responsible for the project within 90 days of the apprentice beginning work on the project.

13. 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, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage 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, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (see 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

14. 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. LPA must formally incorporate into 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 website noted below on payrolls submitted to the 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:

beta.SAM.gov

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) Form FHWA-1273 (most recent revision at contract execution) Part IV. Payment of Predetermined Minimum Wage and Part V. Statements and Payrolls.

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 check. All payroll records and canceled pay checks shall be maintained for at least three years after final acceptance as defined in Section 109.12 of the Ohio Department of Transportation Construction and Materials Specifications. 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 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 weeks after the start of work. These payrolls shall be on a Form A-87 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.

[Click for Form A-87](#) then scroll down page to Pre-Uniform Guidance and click "Timecard Example A-87 Compliant".

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 that it is ultimately the responsibility of the Contractor to ensure that 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.

15. LIMITATION ON USE OF CONTRACT FUNDS FOR LOBBYING

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

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

In accordance with Title 23 United States Code, Section 112 and Ohio Revised Code, 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 or his 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 constitute also signature of this Non-Collusion Affidavit as permitted by title 28 United States Code, Section 1746.

REPORTING BID RIGGING

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) 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 DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

17. 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 that this contractual obligation be placed in all subcontractor and materialman contracts that it enters into and further requires that all subcontractors and materialmen place the same contractual obligations in each of their lower tier contracts.

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

During the life of this project, the Contractor and all its Subcontractors, that 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 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 that provides 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 and in good standing in the Ohio Bureau of Workers’ Compensation’s DFSP Discount Program or a similar program approved by the Bureau of Workers’ Compensation within 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 that 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 years after the date of the breach.

19. OHIO WORKERS’ COMPENSATION COVERAGE

The Contractor must secure and maintain valid Ohio workers’ compensation coverage until the project has been finally accepted by the Ohio Department of Transportation. 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 it's 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.

20. 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 Ohio Revised Code §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.

21. 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 that the claims or causes of action related to the goods or services that are the subject to the contract. In addition, the Contractor warrants and represents that it will require any and all of its subcontractors and first tier suppliers to assign any and 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.

22. 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 that 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 the Ohio Department of Transportation, 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.

23. PN 007 – 1/31/2021- DBE TRUCKING

The Code of Federal Regulations Title 49, 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 that 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 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 that 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 DBEs consent, as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the DBEs 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 supplementing 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 MSV (Materials and Supplies Vendor) 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.

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

- o 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.
- o 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
 - o provided by the DBE MSV
- o 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
- o 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
 - o 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
 - o 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
 - o 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.
- o The usual good faith efforts process applies.
- o 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 that 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 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/ODOT will monitor trucking with the following requirements for all Local-let projects:

- 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 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 must notify the LPA within seven (7) days of the DBE trucking activity. The Prime will then complete the Affidavits as required below on each Prompt Payment Spreadsheet.
- Prime Contractors will be required to complete the Affidavit disclosing the DBE trucking operations when completing the new Prompt Payment Spreadsheet. the previous month. The Prime 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 will sign and submit the Affidavit.
 - The DBE firm utilized DBE & Non-DBE trucking.
 - If selected, the Prime 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 will sign and submit the Affidavit.
- 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.
- 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:

- 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 completes the No Anticipated DBE Trucking Affidavit, utilizes DBE trucking and does not notify the

- LPA within seven days of the activity);
- 2nd Level Occurrence: The Department may withhold an estimate in the amount due to the DBE trucking firm that 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 completes the No Anticipated DBE Trucking Affidavit, utilizes DBE trucking and does not notify the LPA within seven days of the activity);
- 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:

- The Contractor's past project practices;
- 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 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
<http://www.dot.state.oh.us/Divisions/ODI/SDBE/Pages/Resources.aspx>.

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

1. Obtain a MyODOT account
 - a. Click [Link](#)
 - b. Click "Launch MyODOT"
 - c. Click: "Click Here"
 - d. Complete Account Application under "Request an Account"
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

Addition guidance can be found by [Click Here](#)

24. PN 013 – 03/15/2019 - DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION PLAN AND GOOD FAITH EFFORTS

Guidance for Bidders – Federally Funded Projects with a DBE Goal, to ensure compliance with the requirements outlined in PN 013 [Click Here](#)

DBE UTILIZATION PLAN

All Bidders shall submit a DBE Utilization Plan at the time of bid setting forth specific information demonstrating how the Bidder will achieve the DBE goal. By submitting a DBE Utilization Plan, the Bidder is affirming that they will be using the DBE firms identified in the Utilization Plan to meet the DBE contract goal. The DBE Utilization Plan shall be submitted with Formstack at time of bid submission. Any bids received without electronic submission of the DBE Utilization Plan at or before bid time, will be deemed unresponsive. **Bidders shall submit their DBE Utilization Plans via:** https://odot.formstack.com/forms/dbe_copy. This file contains the current list of certified DBEs and is updated regularly. The DBE Utilization Plan must be filled out completely and submitted prior to bid opening.

The DBE Utilization Plan shall include the following information:

- 1) The names and addresses of the certified DBE firm(s) that will be used to meet the DBE goal;
- 2) A description of the work that 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 firm(s) being used to meet the goal will be utilized as a subcontractor, regular dealer, manufacturer, consultant or other capacity; and
- 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 Small & Disadvantaged Business Enterprise within five (5) calendar days after the notification of the alternates.

DBE AFFIRMATION

The Apparent Low Bidder shall ensure the DBE firms being utilized to meet the DBE goal affirm their participation in the bid within five (5) calendar days after the bid opening to ODOT. The contract dollar amount(s) and/or DBE firm(s) included in the Apparent Low Bidder'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 Apparent Low Bidder shall utilize the Request to Terminate/Substitute DBE Form located at <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/business-economic-opportunity/dbe/dbe-resources> (form name is DBE Termination Form) and submit for review and approval by the Office of Small & Disadvantaged Business Enterprise within five (5) calendar days of the bid opening.

The Apparent Low Bidder shall utilize the DBE Affirmation Form located at <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/business-economic-opportunity/dbe/dbe-resources>. You will then need to click the link of the webpage "DBE Affirmation Form (PN 013) – Projects sold after September 1, 2018 or thereafter. 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 Apparent Low Bidder shall submit a separate DBE Affirmation Form for

each DBE it is utilizing for the DBE goal and 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 that the information is required in order for ODOT to complete its assessment. Bidders shall have five (5) calendar 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) calendar days of bid opening, the Apparent Low Bidder shall submit a Request to Terminate/Substitute DBE Form, as set forth herein. The Request to Terminate/Substitute DBE Form shall be submitted within five (5) calendar days after bid opening in order for the Apparent Low Bidder to still be considered for contract award. The Apparent Low Bidder shall include as its reason for termination the DBE firm's failure to provide a timely affirmation and should include all efforts the Apparent Low Bidder made to obtain the affirmation from the DBE firm and shall attach proof of these efforts, if available. If the Apparent Low Bidder intends to replace the DBE Firm, it shall include the replacement firm's information on the form. In the event the Apparent Low Bidder 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 calendar 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 Apparent Low Bidder's Good Faith Efforts in meeting the goal.

DBE BIDDERS

In the event that the Bidder is also a certified DBE firm, the Bidder is required to complete a DBE Utilization Plan as set forth above. In this instance, however, the certified DBE Bidder would not need to submit a DBE Affirmation Form for the work it is planning to self-perform in order to meet the goal. ODOT will consider the submission of the bid as the certified DBE Bidder's written confirmation that it is participating in the contract. However, a DBE Affirmation Form must be submitted for all other DBE firms that are being utilized toward the DBE goal.

JOINT VENTURES

In the event that 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 that 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

In the event that the DBE contract goal established by ODOT is not met, the Apparent Low Bidder shall demonstrate that 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 Apparent Low Bidder does not meet the goal at bid time, the Apparent Low Bidder shall submit its Good Faith Efforts (GFE's) documentation within five (5) calendar days of the bid opening. Submission of DBE affirmation(s) with additional participation sufficient to meet the DBE contract goal does not cure the Apparent Low Bidder's failure to meet the goal at bid time or eliminate the Apparent Low Bidder's responsibility of submitting GFE's within five (5) calendar days of the bid opening.

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

- (1) All written quotes received from certified DBE firms;
- (2) All written (including email) communications between the Apparent Low Bidder 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 Apparent Low Bidder 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) calendar days of bid opening. ODOT has provided Good Faith Efforts Guidance located at <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/business-economic-opportunity/dbe/dbe-resources>

All other Bidders shall submit documentation of GFE's if notified that the information is required in order for ODOT to complete its bid assessment. Bidders shall have five (5) calendar days from the date of notification to submit all required GFE documentation. Notification will be by phone or 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 that the Apparent Low Bidder has failed to demonstrate adequate GFE's to meet the goal, the Apparent Low Bidder will have an opportunity for administrative reconsideration prior to the contract being awarded.

As part of this reconsideration, the Apparent Low Bidder 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 Apparent Low Bidder 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 Apparent Low Bidder within five (5) business days of receiving written documentation or holding the in-person meeting.

ODOT will send the Apparent Low Bidder a written decision on reconsideration explaining the basis for finding that the Apparent Low Bidder 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 Apparent Low Bidder/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 Apparent Low Bidder/Awarded Contractor obtains written consent as provided in this paragraph. In order to request termination or substitution of a DBE firm, the Apparent Low Bidder/Awarded Contractor shall utilize the Request to Terminate/Substitute DBE Form located at <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/business-economic-opportunity/dbe/dbe-resources>. Once on the webpage, scroll down to the form named "DBE Termination Form (PN013)

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, that the Apparent Low Bidder/Awarded Contractor has good cause to terminate the DBE firm.

For purposes of this paragraph, 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 that the listed DBE firm is not a responsible contractor;
- 7) The listed DBE firm voluntarily withdraws from the project and provides to you 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 that the awarded contractor can self-perform the work for which the DBE contractor was engaged or so that 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) calendar days, which may be extended for an additional seven (7) calendar days if necessary at the request of the contractor, and ODOT shall provide a written determination to the contractor stating whether or not 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 <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/business-economic-opportunity/dbe/dbe-resources>. The DBE Affirmation Form, “DBE Affirmation Form (PN013) – Projects sold on September 1, 2018 or thereafter”, 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 Apparent Low Bidder/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 Apparent Low Bidder/Awarded Contractor must give the DBE five (5) calendar days to respond to the notice, advising ODOT and the Apparent Low Bidder/Awarded Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why ODOT should not approve the Apparent Low Bidder/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 subcontractors 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 that 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 Apparent Low Bidder to do any of the following shall result in the bid being rejected in accordance with ORC §5525.08:

- 1) Failure to submit a complete DBE Utilization Plan at the time of bid;
- 2) Failure to submit DBE Affirmation Form(s) and/or failure to submit Request to Terminate/Substitute DBE Form(s) as required by this Proposal Note; and
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

25. PN - 031 – 9/1/2020 – Local-let Construction Projects

The U.S. Department of Transportation’s (DOT’s) rules related to Disadvantaged Business Enterprises are published in the Code of Federal Regulations (CFR), 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), it’s 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 DOT 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 Construction and Materials Specifications (C&MS).

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 prime contractors to report their payments to all subcontractors with the submission of each invoice. The payment data reported must include any retainage withheld and any previously withheld retainage released. All such reporting must take place through a web-based submission on GoFormz. Invoices will not be approved and processed for payment unless this reporting form has been submitted and received by the Department.

The Prime Contractor must report the following information:

- 1.) The name of the payee;
- 2.) The dollar amount of the payment to the payee;
- 3.) The date the payee was paid;
- 4.) The amount of retainage withheld (if any).

The Prime Contractor must sign each reported payment and submit to ODOT via the GoForms website.

If the Prime Contractor fails 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 30 days of the payment being signed by the payer. This verification must include:

- 1.) Whether the payment was received, and if so, whether it was as expected or not;
- 2.) The dollar amount of the payment received; 2
- 3.) The date the payment was received.

SANCTIONS AND ADMINISTRATIVE REMEDIES

Failure by the prime contractor to follow Prompt Payment requirements 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 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, 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; and
- the number of times the Contractor has been previously sanctioned by ODOT.

26. WAIVER OF CM&S 614.03

ODOT's 2019 Construction and Material Specifications 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.

27. 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.

28. NON-DISCRIMINATION PROVISIONS

1) **Compliance with Regulations:** The CONTRACTOR will comply with the regulations relative to nondiscrimination in Federally-assisted programs of the United States Department of Transportation (hereinafter "U.S. DOT") Title 49, Code of Federal Regulations, 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").

(2) **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.

(3) **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.

(4) **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 the Federal Highway Administration (hereinafter "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.

(5) **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:

- (a) Withholding of payments to the CONTRACTOR under the contract until the CONTRACTOR complies, and/or
- (b) Cancellation, termination or suspension of the contract, in whole or in part.

(6) **Incorporation of Provisions:** The CONTRACTOR will include the provisions of paragraphs (1) through (5) 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, that, 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, and, in addition, the LPA / STATE may request the United States to enter into such litigation to protect the interests of the United States.

29. PN 095 – 03/30/2020 Potential Impacts and Delays Due to COVID-19

In an effort to anticipate the potential impacts to the Project caused by the COVID-19 threat and in following direction from the Governor and other authorities, the Contractor is on notice of the need to comply with all federal, state and local orders generated to prevent the spread of contagious or infectious diseases, including the Stay at Home Order from the Ohio Director of Health dated March 22, 2020, and subsequent orders, located through the following website:

<https://coronavirus.ohio.gov/wps/portal/gov/covid-19/home>

Contractor is on notice that the Project is considered essential and that the contractor and his employees, subcontractors and suppliers are considered essential businesses and performing essential functions as defined under the Stay at Home Order.

Notwithstanding any other provisions of the contract documents, in the event of project delay or impacts to performance due to a voluntary or mandatory COVID-19 virus Directives, Orders, quarantine or closure directed by government authorities, either party may, by providing notice to the other party as required

under CMS 108.02(F), extend the Completion Date for a period of up to thirty (30) days. Extensions under this paragraph shall be considered an excusable, non-compensable delay in accordance with CMS 108.06(B). If any portion of the Work is still not able to be performed upon the expiration of the extension, either party may provide notice to the other party requesting a termination for convenience under 108.09. The termination for convenience remains at the sole discretion of the LPA's Person in Responsible Charge in conjunction with the Office of Local Programs.

The Contractor and LPA will exercise best efforts to utilize remote services to perform Work that otherwise cannot be performed in person due to a voluntary or mandatory COVID19 virus quarantine, closure, or impact as directed by Stay at Home Order.

Impacts to the Project generated by the Stay at Home Order shall not be considered an "issue" under 108.02 (F) for Projects sold after the date of this Note. Contractors are on notice that their bids should include any impacts they foresee or should have reasonably foreseen due to the Stay at Home Order or existing or reasonably foreseeable orders by any other federal, state or local official.

If any emergency order or declaration of any government official is lifted at any time, the LPA will provide written notice to the Contractor that this Note shall be considered void thirty (30) days after receipt of the written notice. If the Stay at Home Order from the Ohio Director of Health dated March 22, 2020 is lifted at any time, this Note shall be considered null and void thirty (30) days after the lifting of those orders.

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

The required contract provisions for federal-aid construction contracts (contained in Form FHWA 1273 revised May 2012 and located here) are hereby incorporated by reference as if rewritten herein. Form FHWA-1273 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 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.

31. 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 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.

32. REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS (Electronic Form FHWA 1273 – May 1, 2012)

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Government wide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

- A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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 contracting agency deems appropriate.

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 \$10,000 or more.

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, 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.

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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash 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.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage

rate and fringe benefits therefore only when the following criteria have been met:

- (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 utilized 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) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor

to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records 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. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number

for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

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

(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 of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working

hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable

predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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. 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 journeymen 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.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

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

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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 watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any

workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 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.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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" 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:

(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.

2. 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. 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.

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

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 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.

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 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).

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 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 1, 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

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

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

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

2. 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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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.

* * * * *

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

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

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

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to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

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

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

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

Appendix A

Checklist for Bidders- Federally Funded Projects with a DBE Goal

- Quotes have been obtained by DBE firms for participation on the project

- NAICS codes have been verified on the Ohio Unified DBE Directory that the DBE firms to be utilized can be applied toward the project goal for the specific work wanted:
<http://www.dot.state.oh.us/Divisions/ODI/SDBE/Pages/DBE-Directory.aspx>

- DBE Utilization Plan has been completed & submitted electronically prior to bid opening via: https://odot.formstack.com/forms/dbe_copy (This applies to all Bidders including DBE Firms)

- The Utilization Plan submitted as described above, meets or exceeds the DBE Goal established for the project

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- If the DBE Goal has not been met that Good Faith Efforts have been submitted prior to bid to opening to: Dot.contractslettingmgr@dot.ohio.gov

- The affirmation form that is required 5 calendar days after bid opening has been downloaded ready to send out to all DBE firms listed on the Utilization Plan: <http://Transportation.ohio.gov/Divisions/ODI/SDBE/Pages/Resources.aspx>.

Findings of Recovery by Auditor of the State

Ohio law (ORC section 9.24) prohibits any state agency or political subdivision from awarding a contract for goods, services, or construction to any person against whom a finding for recovery has been issued by the Auditor of State, if that finding is unresolved. While there are additional criteria, the statute limits this prohibition to contracts which are paid in whole or in part with state funds and which exceed \$25,000.

The Auditor of State has established a database pursuant to ORC 9.24 in order to list all persons who have unresolved findings for recovery, dating back to January 1, 2001. Before entering into a public contract described above, a state agency or political subdivision is required to verify that the person does not appear in this database.

Each bidder shall log on to <http://www.auditor.state.oh.us/> and **provide a copy of a certified search of unresolved findings with your bid.** This requirement shall apply to all contracts awarded by the City of Cuyahoga Falls.

CERTIFICATION

I, _____ hereby certify that
(Company Official)

_____ does not have an unresolved finding of
(Company Official)

recovery issued by the Auditor of the State of Ohio as required by Ohio law (ORC section 9.24).

I further certify that _____ has provided a certified search of
(Company Official)

unresolved findings with this bid showing no unresolved findings in his/her name.

Signature

Title

State of Ohio)
)ss
County of _____)

Sworn to before me and subscribed in my presence this _____ day of _____, 20__.

Notary Public

My Commission Expires: _____

[Seal]

CERTIFICATION OF COMPLIANCE WITH O.R.C. 3517.13

The following certificates are required pursuant to Ohio's Campaign Finance Reform law.

One of the following two certificates shall be completed by any individual, partnership, unincorporated business, association, professional association, estate, trust, corporation, or business trust that has been awarded a contract by the City of Cuyahoga Falls.

It shall be the Contractor's responsibility to determine which of the two certificates applies and if compliance with R.C. 3517.13 has been achieved.

SPECIFICATIONS AND PROPOSALS

Section 4

PROPOSAL

DATE: _____

TO THE DIRECTOR OF PUBLIC SERVICE
CITY OF CUYAHOGA FALLS, OHIO

The undersigned proposes to:

Resurface Chestnut Boulevard from 2nd Street to State Road

all in accordance with the plans and specifications for the City of Cuyahoga Falls, Ohio.

The quantity in the column headed "ESTIMATED QUANTITY" is that which will be used in determining the total amount of the proposal for the purpose of determining the lowest bidder; but it is understood and agreed that this quantity is APPROXIMATE ONLY and that the Contractor to whom the Contract is awarded shall not be entitled to any claim for the loss of profits, or for other damages should the quantity prove to be greater or less than is herein given in said "ESTIMATED QUANTITY" column.

In the event that the amounts entered into the columns labeled "UNIT COST LABOR" and "UNIT COST MATERIAL" are inconsistent with the amounts entered in the column labeled "TOTAL UNIT COST", the bidder agrees that the amounts entered in the "UNIT COST LABOR" and "UNIT COST MATERIAL" shall control.

The bidder agrees further that if this proposal be accepted he will contract with the City to perform the work as outlined in the specifications in accordance with a work schedule that is agreeable to the Director of Public Service all for the following prices:

COMPANY

BY: _____

TITLE

ADDRESS

Zip Code

Phone

BASE BID CHESTNUT BLVD REPAVING

ITEM NO.	SPEC. REF.	ITEM DESCRIPTION	UNIT MEASURE	ESTIMATED QUANTITY	UNIT COST LABOR	UNIT COST MATERIAL	TOTAL UNIT COST	TOTAL COST	TOTAL AMOUNT WRITTEN OR TYPED WORDS
1	202	PAVEMENT REMOVED	SY	38					
2	202	WALK REMOVED	SF	3931					
3	202	CURB REMOVED	FT	256					
4	202	PIPE REMOVED, 24" AND UNDER	FT	6					
5	202	CATCH BASIN REMOVED	EACH	1					
6	203	EXCAVATION (FOR PAVEMENT REPAIR)	CY	167					
7	204	SUBGRADE COMPACTION	SY	65					
8	608	4" CONCRETE WALK	SF	455					
9	608	CURB RAMP	SF	2992					
10	608	DETECTABLE WARNING	SF	419					
11	653	TOPSOIL FURNISHED AND PLACED	CY	39					
12	659	SEEDING AND MULCHING, CLASS 1	SY	329					
13	670	SLOPE EROSION PROTECTION MAT, TYPE G	SY	329					
14	611	12" CONDUIT, TYPE B, 706.02	FT	6					
15	611	CATCH BASIN , NO. 3A	EACH	1					
16	611	CATCH BASIN RECONSTRUCTED TO GRADE	EACH	28					
17	611	MANHOLE ADJUSTED TO GRADE	EACH	26					
18	611	MANHOLE RECONSTRUCTED TO GRADE	EACH	1					
19	611	JUNCTION CHAMBER RECONSTRUCTED TO GRADE	EACH	1					
20	611	SPECIAL - MISCELLANEOUS METAL	LB	2000					
21	251	PARTIAL DEPTH PAVEMENT REPAIR (441)	SY	1000					
22	253	PAVEMENT REPAIR	SY	1000					
23	253	PAVEMENT REPAIR, Misc.: BRICK CROSSWALK REPLACEMENT	SY	1					
24	254	PAVEMENT PLANNING, ASPHALT CONCRETE 3"	SY	23614					
25	301	ASPHALT CONCRETE BASE, PG64-22	CY	13					
26	304	AGGREGATE BASE, AS PER PLAN	CY	176					
27	407	NON-TRACKING TACK COAT	GAL	3543					
28	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	CY	820					
29	441	ASPHALT CONCRETE INTERMEDIATE COUSE, TYPE 2, (448)	CY	1148					
30	452	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	SY	7					

4.1.1*

ITEM NO.	SPEC. REF.	ITEM DESCRIPTION	UNIT MEASURE	ESTIMATED QUANTITY	UNIT COST LABOR	UNIT COST MATERIAL	TOTAL UNIT COST	TOTAL COST	TOTAL AMOUNT WRITTEN OR TYPED WORDS
31	609	CURB, TYPE 6	FT	256					
32	609	CURB, MISC.: CURB, TYPE 6 REPLACEMENT	FT	156					
33	638	VALVE BOX ADJUSTED TO GRADE	EACH	25					
34	646	CENTER LINE	MILE	0.96					
35	646	CHANNELIZING LINE, 8"	FT	87					
36	646	STOP LINE	FT	51					
37	64	CROSSWALK LINE	FT	529					
38	646	PARKING LOT STALL MARKING	FT	109					
39	646	LANE ARROW	EACH	2					
40	625	PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE	EACH	1					
41	632	DETECTOR LOOP, AS PER PLAN	EACH	3					
42	614	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	HOURL	24					
43	614	WORK ZONE CENTER LINE, CLASS II	MILE	1.92					
44	614	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	FT	102					
45	614	WORK ZONE STOP LINE, CLASS I	FT	174					
46	614	MAINTAINING TRAFFIC	LS	1					
47	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	LS	1					
48	624	MOBILIZATION	LS	1					
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									

4.1.2*

RESOURCES AND EXPERIENCE OF BIDDER

THE BIDDER, in order to secure consideration of this proposal, shall complete the following:

A. State below work performed similar to that to be done under this proposed contract:

B. State below the larger items of owned equipment proposed for use under this proposed contract:

C. Submit evidence of financial ability to handle the work under this proposed contract. A statement such as "Adequate" will not be accepted by the Board of Control.

NOTE: NO PROPOSAL WILL BE CONSIDERED UNLESS THE ABOVE IS COMPLETED.

QUALIFICATION INFORMATION

The information contained herein is for the guidance of the Board of Control in awarding the Contract and will be regarded as confidential.

The undersigned bidder proposes to use the following entirely owned equipment on this project:

The undersigned bidder proposes to use the following rented equipment on this project:

The undersigned bidder agrees to maintain all owned or rented equipment used on this project in a workable and safe condition and further agrees that the director of public service (or a designee) shall have the right to inspect said equipment at any reasonable time.

THE UNDERSIGNED BIDDER HAS CONTRACTED WITH THE FOLLOWING GOVERNMENTAL AGENCIES FOR WORK OF A SIMILAR NATURE:

	LOCATION & TYPE	AGENCY	DATE (S)	\$ VALUE
1				
2				
3				
4				
5				

COMPANY

SIGNATURE

PRINT NAME AND TITLE

NOTICE OF SUBCONTRACTORS

Name of Bidder: _____

If you intend to have any portion of this contract performed by a subcontractor, list the subcontractor(s) below:

If you are the successful bidder, you will be fully responsible to the City of Cuyahoga Falls for the acts and omissions of all subcontractors, supplies and other persons performing or furnishing any portion of this contract. In addition, you must ensure that any warranties provided by or through any subcontractor, supplier, or other person are to the benefit of and enforceable by the City of Cuyahoga Falls, Ohio.

Acknowledged by:

Authorized Agent of Bidder

ATTENTION ALL BIDDERS

ATTENTION OF THE BIDDER is directed to general information relating to the PROPOSAL contained herein, all of which work shall be performed in accordance with the **Current Specifications for the City of Cuyahoga Falls** and any **Special Specifications** contained herein applicable to these improvements.

CURRENT CONSTRUCTION SPECIFICATIONS: (1976 Edition)

Bidders who do not have a copy of these specifications may obtain same from the office of the City Engineer at a cost of twenty dollars (\$20.00) per copy.

SPECIAL PROVISIONS:

This section of the Proposal contains any Addenda's, Supplemental Specifications and Special Specifications applicable to these improvement and should be carefully reviewed by the Bidder. (This section follows the Proposal of bid items).

QUALIFICATION INFORMATION:

This page follows the Proposal of Items of Work and shall be filled in by the bidder to be used by the Board of Control as a guide in awarding this contract. This information will NOT be read at the bid opening.

AWARD OF CONTRACT BY THE BOARD OF CONTROL:

The BOARD OF CONTROL proposes to award the contract for this Proposal based upon the summation of the individual total bid prices, however, the BOARD OF CONTROL reserves the right to REJECT ANY AND ALL BIDS.

LAWN RESTORATION

- 1) Perform lawn restoration and seeding work only after other work affecting ground surfaces have been completed. All existing lawn areas disturbed by the installation of this project shall be re-seeded to establish new lawn in these areas.
- 2) The Contractor shall be responsible for removal of all site debris, fine grading of the disturbed areas with four-inches (4") of new, clean, screened topsoil, and seeding new lawn areas with Fairlawn Brand Seed (Oliger) or equal at a rate of 5 lbs. per 1000 square feet.
- 3) To insure quick establishment of lawn areas the Contractor will apply Mil-Chem organic fertilizer (12-16-10) or approved equal at a rate of 40 lbs. per 5000 square feet and then install shredded wheat straw held in place with tackifier or green netting.
- 4) Seed shall be Fairlawn Brand as distributed by Oliger Seed or approved equal. Seed shall be clean and fresh, packed in sealed bags showing net weight, composition of mix, date of germination tests and supplier's name. Germination test shall be done within a nine (9) month period prior to sale of the seed.
- 5) Fertilizer shall be a granular, non-burning product composed of not less than 50% organic, slow acting, guaranteed analysis professional fertilizer. Included shall be starter fertilizer containing 13% nitrogen, 25% phosphoric acid and 12% potash by weight or approved similar composition.
- 6) Clean topsoil shall not contain glass, rocks, twigs, leaves or other unsuitable material. All topsoil shall be screened.

ATTENTION

GENERAL CONTRACTORS

PUBLIC IMPROVEMENT CONTRACTS ARE AWARDED BY THE BOARD OF CONTROL TO A GENERAL CONTRACTOR WHO IS ENTIRELY RESPONSIBLE TO THE CITY OF CUYAHOGA FALLS FOR THE WORK UNDER THE TERMS OF THE PROPOSAL CONTAINED HEREIN.

SUB-CONTRACTORS WORK DIRECTLY FOR THE GENERAL CONTRACTOR, WITH WHOM ALL PROBLEMS SHALL BE DISCUSSED, AND NO CONTACT SHALL BE MADE WITH THE DIVISION OF ENGINEERING EXCEPT THROUGH OR IN THE PRESENCE OF THE GENERAL CONTRACTOR.

PAYMENTS FOR THE WORK ARE MADE DIRECTLY TO THE GENERAL CONTRACTOR.

SPECIFICATION ADDENDUM

SECTIONS 109.08 & 109.09

109.08 Final Estimate

Before the final estimate is allowed, the Owner shall require the Contractor to submit an affidavit from each and every subcontractor showing that all claims and obligations arising in connection with the performance of his portion of the contract have been satisfactorily settled. The improvement shall be inspected by the Engineer, and if he finds the Work is completed according to the contract, shall, within 60 days after the completion of this contract, prepare a statement of the total cost of the Work done hereunder, and the Owner shall pay the entire sum so found to be due hereunder after deduction therefrom all previous payments under the provisions of this contract and ALSO DEDUCTING THE GUARANTEE AND RETAINAGE CHARGE AS SET FORTH IN SECTION 109.09 following.

109.09 Guarantee and Retainage

The Contractor shall guarantee all Materials and Equipment furnished and work performed for a period of one (1) year from the date of completion. The Contractor warrants and guarantees that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

Further the City will retain three percent (3%) of the entire cost of the work done by the Contractor for the above guarantee period of one year beginning on the date of the Engineer's final estimate payment sheet.

If the Contractor shall have complied with all the requirements of the contract in keeping said improvement in good and proper repair, at the end of his guarantee period upon order of the director the Contractor shall receive this retainer; but, if the Contractor shall fail to make all necessary repairs as indicated by said Engineer at any time during the above period, then the Engineer shall have power to expend all or such part of the amounts so retained as the said Engineer may see fit, and apply the same to making the necessary repairs.

Should the amount retained not be sufficient to make the required repairs, the contractor shall at once make good the deficiency. At the expiration of the guarantee period as above specified, whatever remains to the credit of the Contractor, provided all repairs shall have been made satisfactory to the said Engineer, shall be paid to the Contractor as full settlement of any balance due on said contract as herein provided whereupon and not until then, shall the Contractor be released from the obligation assumed in this contract and his bond discharged. The final acceptance of the work shall be the date when the guarantee is released.

SPECIFICATION ADDENDUM

SECTION 109.06

109.06 Partial Payments

(a) At least ten (10) days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the Engineer a partial payment estimate filled out and signed by the Contractor covering the Work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site, the partial payment estimate shall also be accompanied by supporting data, as follows: 1) waiver of lien, 2) proper invoice for material, 3) assurance of City's title to material, 4) proof of payment to vendor for material, 5) proof of applicable insurance on material is in effect. Payment for material stored on site shall be limited to major items of construction with a value exceeding one percent (1%) of contract value. The Engineer will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicated in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The Owner will, within thirty (30) days of presentation to him of an approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate. The Contractor will be paid the bid and stipulated unit and lump sum prices as set forth in his Proposal, for the amount of work approved for payment by the Engineer. The sum total for these items shall constitute full payment for the job complete, tested, and ready for use.

(b) The Owner shall retain ten percent (10%) of the amount of each partial payment until the work is complete. With the final payment the Owner shall pay the Contractor seventy percent (70%) of the retainage held.

Ord. 56-1990
4/9/90

GENERAL CONTRACTORS

IMPROVEMENT CONTRACTS FOR CURBING, PAVING, RESURFACING

THE CONTRACTOR TO WHOM THIS CONTRACT HAS BEEN AWARDED SHALL COMPLY WITH THE REQUIREMENTS OUTLINED HEREIN:

1. PLANS AND STANDARD DRAWINGS:
Prints shall be on the job and available at all times.

2. CONCRETE WORK INVOLVING FORM WORK:
No concrete work shall be placed until form work has been approved and accepted by the City Project Inspector.

Concrete work constructed in violation of this directive shall be subject to removal and replacement at the expense of the Contractor.

3. UNDERGROUND ELECTRIC AND COMMUNICATION WIRES, CONDUIT AND APPURTENANCES:
The Contractor shall be responsible for any damages.

4. LOCATION OF DOWN SPOUT DRAINS:
The Contractor shall be responsible for the location of all down spout drains. If a drain is inadvertently overlooked and it is necessary to drill a hole in the curb after it has been placed, the drilling shall be performed by the City's contractor at the expense of the Contractor.

5. LOCATING OF WATER SERVICE BOXES, WATER SHUT-OFF VALVE BOXES, AND SANITARY AND STORM SEWER MANHOLES:
The initial locating of these boxes and manholes will be performed by the City Water Utilities Department forces upon a one (1) week notice.

It will then be the responsibility of the Contractor to preserve the location stakes or log the points by another method. If it is necessary for the City Water Utilities Department forces to relocate these items, costs will be billed at the prevailing hourly rate at which the work is performed.

6. ADJUSTING WATER SERVICE BOXES TO GRADE:
The top of these curb boxes shall be either flush with or a maximum of 1/4" below the surface of the berm, drive approach, or sidewalk. These boxes will be replaced prior to adjusting as determined by the City Engineer. The Contractor will ensure that each box is in good condition and that the stem is operational.

All damaged or buried service boxes must be corrected within two (2) weeks following written notification by the City. All costs incurred by the City to correct damaged or buried service boxes will be billed at the prevailing hourly rate at which the work is performed.

7. ADJUSTING WATER SHUT-OFF BOXES TO GRADE:

The top of these water boxes shall be either flush with or a maximum of 1/4" below the final surface of pavement, berm, drive approach, or sidewalk. Measurement in excess of these limits shall be grounds for non-acceptance of this item.

The boxes shall be adjusted prior to addition of the final asphalt surface course. Riser rings are acceptable for water boxes, provided the top section is in good condition. The boxes will be replaced prior to adjusting as determined by the City Engineer.

All boxes found damaged, covered, or buried must be corrected within two (2) weeks following written notification by the City. All costs incurred by the City to expose or correct damaged boxes will be billed at the prevailing hourly rate at which the work is performed, minus the bid amount for items not performed.

8. ADJUSTING SANITARY AND STORM SEWER FRAMES AND LIDS TO GRADE:

The top of the sanitary and storm sewer frames and lids shall be either flush with or a maximum of 1/4" below the final surface of pavement, berm, drive approach, or sidewalk. Measurement in excess of these limits shall be grounds for non-acceptance of these items.

The frames and lids shall be adjusted prior to addition of the final asphalt surface course. The frames shall be replaced prior to adjusting as determined by the City Engineer. Riser rings are not acceptable for adjusting sanitary and storm sewer lids to grade.

Care must be exercised to prevent debris from falling into the base of the manhole during removal, loosening installation or adjusting of these frames and lids. All debris must be removed immediately to prevent restriction of flow. All damage or work incurred by the City or residents due to a plugged sewer caused by debris from this work will be at the expense of the Contractor.

The Water Utilities Department will provide all frames and lids needed to replace defective items. NOTE: All two-inch (2") frames and lids are to be replaced with Cuyahoga Falls Standard one-inch (1") frames and lids. All frames and lids needed will be picked up by the Contractor following coordination with the Water Utilities Superintendent. All items replaced are the property of the City and will be picked up by City forces.

All manhole frames and lids found damaged or buried must be corrected within two (2) weeks following written notification by the City. All costs incurred by the City to expose or adjust manhole frames and lids will be billed at the prevailing hourly rate at which the work is performed, minus the bid amount for items not performed.

SPECIAL PROVISIONS

ADDENDAS AND SUPPLEMENTAL SPECIFICATIONS
TO THE CURRENT CONSTRUCTION SPECIFICATIONS FOR
THE CITY OF CUYAHOGA FALLS.

THIS SECTION ALSO INCLUDES ANY SPECIAL
SPECIFICATIONS AND STANDARD CONSTRUCTION
DRAWINGS APPLICABLE TO THIS PROPOSAL

SECTION 5

NOTICE TO CONTRACTOR:

“DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN SECTION 153.011 OF THE REVISED CODE APPLY TO THIS PROJECT. COPIES OF SECTION 153.011 OF THE REVISED CODE CAN BE OBTAINED FROM ANY OF THE OFFICES OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES.”

CLAIMS RESOLUTION AND TERMINATION

SECTION 5.2



City of Cuyahoga Falls

Division of Engineering
2310 Second Street
Cuyahoga Falls, Ohio 44221-2583

PHONE: 330-971-8180

FAX: 330-971-8182

Mayor Don Walters

TONY V. DEMASI, P.E.
City Engineer

CRAIG MARKO, P.E.
Assistant City Engineer

CLAIMS RESOLUTION AND TERMINATION – CUYAHOGA FALLS

1. If a dispute arises during a project, the inspector informs the Engineer in Charge.
2. The Engineer will determine the validity of the claim within 3 days and discuss it with the inspector.
3. The inspector will then inform the Contractor of the resolution.
4. If this is not satisfactory to the Contractor, the Contractor may, within 3 days of being notified of the resolution, request a meeting be set up between the involved parties, in order to discuss and resolve the claim.
5. If this still does not satisfy the Contractor, the Law Director will be contacted and be informed of the claim. He will determine the validity of the claim from a legal point of view.
6. All involved parties will meet to discuss the determined resolution.
7. If this still does not satisfy the Contractor, then the claim will be taken to court.
8. The City may terminate the contract at any time for convenience of the City. The City will compensate the contractor according to ODOT Items 108.09, 109.04 and 109.05 for termination of the contract for the convenience of the City. This subsection is subject to the provisions of ORC 5525.14.

7/30/2020

CHANGE ORDERS

SECTION 5.3



City of Cuyahoga Falls

Division of Engineering
2310 Second Street
Cuyahoga Falls, Ohio 44221-2583

PHONE: 330-971-8180

FAX: 330-971-8182

Mayor Don Walters

TONY V. DEMASI, P.E.
City Engineer

CRAIG MARKO, P.E.
Assistant City Engineer

CHANGE ORDERS - CUYAHOGA FALLS

1. If additional work is required, on a project, the contractor informs the inspector, who in turn discusses the situation with the Engineer in charge.
2. The Engineer determines whether the change order is justified, or determines if there is a less expensive alternative.
3. If there is not a viable alternative, the Engineer will determine how the change order will affect the contract budget. He may determine that less important items can be non-performed to make up the additional funds required.
4. If the change order is less than 10% of the contract monies, the Engineer's and the Board of Control's approval are required.
5. However, if the change order is greater than 10% of the contract monies, the Engineer and the Board of Control must take the request to City Council for their approval.
6. Normally, all of the approvals are required before the additional work can be performed. However, in an emergency situation, where a delay would have a major impact on the schedule, or cost the City additional monies due to the slowing of the contractor's progress, the Engineer may allow the additional work to be completed before all approvals are obtained.
7. For LPA-ODOT projects, the City will notify ODOT District 4 of all change orders, and ODOT must approve significant change orders. For purposes of LPA-ODOT projects, significant change orders are defined as:
 - a. \$25,000 for projects less than \$500,000
 - b. Lesser of 5% of bid price, or \$100,000, for projects greater than \$500,000
 - c. Change order results in change to project limits
 - d. Change order results in change to environmental impacts

7/30/2020

PROJECT ADMINISTRATION PROCESSES

SECTION 5.4



TONY V. DEMASI, P.E.
City Engineer

City of Cuyahoga Falls

Division of Engineering
2310 Second Street
Cuyahoga Falls, Ohio 44221-2583
PHONE: 330-971-8180
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Mayor Don Walters

CRAIG MARKO, P.E.
Assistant City Engineer

Project Administration Processes

The City generally follows the process outlined in sections 102, 103 and 104 in the ODOT CMS for the project award policies, procedures and processes. The difference between the City's procedures and those outlined in the ODOT CMS are shown below:

1. Prior to the execution of a 'Notice of Award' the City Engineer will check the SAMS website to verify that the contractor is not current barred from being awarded construction contracts utilizing Federal funding.
2. Prior to the execution of a 'Notice of Award' the City Engineer will check the Ohio Auditor of State website to ensure the contractor doesn't have unresolved findings that would prevent the award of a construction contract.
3. Prior to the execution of a 'Notice of Award' the contractor is required to submit evidence to the satisfaction of the City Engineer that at least 30 percent of the work will be performed by the prime contractor's own forces.
4. The City will periodically review that the prime contractor will perform 30% of the original contract work over the life of the contract.
5. The City will not issue a NTP to the contractor until receiving notice from District that the award package was processed and the federal funds were encumbered.

7/30/2020

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 800
REVISIONS TO THE 2019 CONSTRUCTION & MATERIAL SPECIFICATIONS**

DATED 01-15-2021

101.02

On page 7, **Add** the following abbreviation below ASCE:
ASLA American Society of Landscape Architects

101.02

On page 9, **Add** “ITS Intelligent Transportation System” below “ITE Institute of Transportation Engineers”.

101.02

On page 9, **Replace** “OTE Office of Traffic Engineering” with “OTO Office of Traffic Operations”.

101.02

On page 10, **Replace** "REA Rural Electrification Administration" with the following:
REA Rural Electrification Act

101.02

On page 13, Delete the following:
~~QCQC Quality Control Qualifications Committee~~

101.03

On page 13, **Replace** the definition of Engineer with the following:
Engineer. Duly authorized agent of the Department acting within the scope of its authority for purposes of engineering and administration of the Contract. In managing the administration of the contract, the Engineer may confer with representatives of Industry including, but not limited to, the designer of record, landscape architects, environmental specialists, etc.

101.03

On page 14, **Add** the following definition below **Prebid Question**:
Professional Landscape Architect. A landscape architect registered with the Ohio Landscape Architects Board to practice landscape architecture in the State of Ohio.

102.16

On page 22, **Delete** the following:
102.16 Certificate of Compliance with Affirmative Action Programs. Before any Contract is awarded, the Department will require the Bidder to furnish a valid Certificate of Compliance with Affirmative Action Programs, issued by the State EEO Coordinator ~~dated prior to the date fixed for the opening of bids.~~

104.02.D

On page 25, **Replace** the first full paragraph with the following:
If the Contractor disagrees as to whether an alteration constitutes a significant change, use the notification procedures specified in 108.02.F.

104.02.D

On page 25, **Replace** item a. under Table 104.02-1 with the following:

- a. the estimated quantity of a contract item exceeds four units (this minimum quantity does not apply to pavement markings measured in units of miles), and

106.09

On page 38, **Replace** the entire section 106.09 with the following text:

106.09 Steel Products Made in the United States. Furnish steel products that are made in the United States according to the applicable provisions of State of Ohio laws, [ORC 153.011](#) and [5525.21](#). “United States” means the United States of America and includes all territory, continental or insular, subject to the jurisdiction of the United States.

A. State Requirements. All steel products used in the Work for load-bearing structural purposes must be made from steel produced in the United States. State requirements do not apply to iron.

B. Exceptions. The Director may grant specific written permission to use foreign steel products in bridge construction. The Director may grant such exceptions under either of the following conditions:

1. The cost for each contract item used does not exceed 0.1 percent of the total contract cost, or \$2,500, whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project.

2. The director determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

C. Proof of Domestic Origin. Furnish documentation to the Engineer showing the domestic origin of all steel products covered by this section, before they are incorporated into the Work. Products without a traceable domestic origin will be treated as a non-domestic product.

106.12

On page 39, **Add** the following section after 106.11.

106.12 Traffic Authorized Product. The Department may use Traffic Authorized Product (TAP) List for approval of products used in Intelligent Transportation Systems (ITS) or Traffic Signal Systems. The Office of Traffic Operations will maintain the TAP and the standard procedure for the TAP process. Inclusion of a product onto the TAP will be determined by Office of Traffic Operations with support from other Department offices. To be kept on the TAP, manufacturers must recertify their product according to the Department’s standard procedure by February 28 of each year. When a product requires TAP acceptance, only provide products listed on the TAP at the time of delivery of the product to the project. Provide the Engineer documentation according to the Department’s standard procedure that, at the time of delivery, the material provided is on the TAP.

107.07

On page 40, **Add** the following paragraph after the first paragraph:

Any illegal drugs, drug paraphernalia, mobile drug labs or dumps, weapons or firearms found on the Project Right of Way shall be considered a potential crime scene and shall not be handled or moved. Immediately notify law enforcement and the Project Engineer.

107.13

On page 46, **Replace** the last sentence in the last paragraph with the following:

The decision of the DCE will be made within 14 days and will be administratively final.

107.15

On page 47, **Replace** the second paragraph with the following:

In the event that the Engineer determines that damage to completed permanent items of Work results from traffic using a substantially completed section of Roadway, the Department may compensate the Contractor for repair of the damage as authorized by Change Order. Additionally, if traffic permanently damages beyond use and of the following temporary maintenance of traffic items, the Department may compensate the Contractor for replacement of the item as authorized by Change Order:

1. Arrow board.
2. Work zone signal, pole, or controller.
3. Lighting unit or pole.
4. Changeable message sign.
5. Work Zone Impact Attenuator
6. Truck Mounted Impact Attenuator
7. Digital Speed Limit Sign Assembly

107.15

On page 47, **Replace** the **A.** through **D.** with the following:

To receive compensation for the damage to permanent items of Work or temporary maintenance of traffic items named above, the Contractor must first meet the following requirements.

- A.** Notify the Engineer of each occurrence of damage in writing within 10 Calendar Days.
- B.** Contact the local law enforcement agency to determine if the accident was investigated and a report filed. If an accident report was filed, obtain the report and notify the motorist, and copy their insurance company, via certified mail informing both that the motorist is responsible for the cost of damage repairs. If the motorist does not respond within 30 days, make a second attempt to contact the motorist and copy the insurance company via certified mail.
- C.** If no response is received from the motorist or insurance company within 30 days of the motorist receipt of the second notice, send a letter to the Engineer within eighteen months of the event and include documentation of good faith effort to seek recovery from responsible parties.
- D.** The Department will make an adjustment according to 108.06 and 109.05 to compensate the Contractor for the added costs and delays, if any, resulting from the repair or replacement of damaged Work.

If there is no accident report on file and no means of identifying the responsible motorist, the Contractor may likewise be compensated to repair the damaged Work.

107.21

On page 50, Replace the 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. Contractors are prohibited from holding retainage from subcontractors that can provide a bond. For unbonded subcontractors and suppliers,

promptly release any retainage held, as set forth in any subcontractor or supplier agreement, 30 days after the work is satisfactory completed. For the purposes of this section, satisfactory completed will be interpreted as when the subcontractor has completed all physical work and submitted any necessary documentation required by the specifications and the Department. No subcontract provision shall permit the Contractor to delay subcontractor's retainage payments until the Project's final payment.

108.02.B.

On page 53, **Add** the following item to Section B after number 7:

8. On-line surveys of Project participants may be used to evaluate Project goals and help identify issues either before or immediately after the Initial Partnering Session. The on-line survey is located on the Division of Construction Management's Partnering website:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/Partnering.aspx>

108.02.E.

On page 53, **Replace** Section E with the following:

E. Partnering Monitoring. Monitor the progress of the Partnering relationship based on the goals decided during the Initial Partnering Session. On-line surveys of Project participants may be used to monitor progress on Project goals and help identify issues as they arise. The on-line survey is located on the Division of Construction Management's Partnering website:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/Partnering.aspx>

108.02.I.

On page 59, **Replace** Section I with the following:

I. Partnering Close-Out Survey. On-line surveys of Project participants may be used to get participants' feedback and improve the Partnering process. The Partnering Close-Out Survey is located on the Division of Construction Management's Partnering website:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/Partnering.aspx>

108.06.C

On page 64, **Add** the following paragraph after the first paragraph under the table:

Lane closures within the project, 60 days or less as indicated in the contract documents, which are impacted by weather will be extended for the actual work days lost each month. Lane closures within the project, 61 days or longer as indicated in the contract documents, which are impacted by weather will be extended when the actual work days lost exceeds the number of anticipated work days lost each month as determined by Table 108.06-1.

108.06.D.4

On page 64, **Replace** item D.4. with the following:

4. Delays due to acts of the government or a political subdivision other than the Department.

108.07

On page 65, **Replace** the fifth paragraph in section 108.07 "The Director may stop deducting liquidated damages when:" with the following:

Provided the project is available for use as intended by the Contract and the Work remaining will not impact traffic, the Contractor may submit a request that the Department suspend the assessment of liquidated damages for a stated period of time. For the limited purposes of assessing liquidated

damages, the closing of a shoulder is not considered an impact upon traffic. Submit this request within 30 days of the assessment of the liquidated damages. In addition to the written plan required to remain in control of the Work as stated above, this request should include at a minimum the Work left to be completed, the reason(s) the Work is incomplete or on hold, as well as, methods, resources and timelines for pursuing the same. This will define diligent pursuit of the work. Once accepted, and provided both of the following criteria are met, the Department may suspend the assessment of liquidated damages:

108.07

On page 65, **Replace** the subsections A through E with the following:

- A. The Contractor is diligently pursuing the remaining Work.
- B. Necessary items are completed and operational to provide an appropriate level of safety to the traveling public. These items include but are not limited to signs, pavement markings, guardrail, attenuators, signals and RPM's.

108.07

On page 65, **Add** the following paragraph after Item E and before TABLE 18.07-1:

The Contractor may submit a request for waiver of liquidated damages to the Department within 30 days of the assessment of liquidated damages.

108.07

On page 65, **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	\$650
\$2,000,000	\$10,000,000	\$1,000
\$10,000,000	\$50,000,000	\$1,700
Over \$50,000,000		\$3,100

109.05.C.8.b

On page 81, **Replace** the second paragraph with the following:

- b. Trucking that is subject to the prevailing wage law will be compensated according to 109.05.C.1, 109.05.C.2, 109.05.C.4, 109.05.C.6, and 109.05.C.10.

109.05.C.10

On page 82, **Replace** the last paragraph with the following:

In the event the Contractor declines to sign the Daily Force Account Record, the Department's records shall govern. Any resulting dispute must be pursued in accordance with 108.02.G.

202.05

On page 96, **Replace** the 1st and 2nd paragraphs with the following:

202.05 Pavement, Walks, Curbs, Steps, Gutters, or Traffic Dividers Removed. As designated, remove and dispose of the existing concrete pavement, asphalt pavement, wearing course, brick, walks, steps, gutters, curbs, and concrete traffic dividers. If removing only a portion of an existing pavement, walk, step, gutter, curb, or traffic divider, saw or otherwise construct a neat joint at the removal limit.

If Pavement Removed is specified, remove all pavement layers, including asphalt, concrete, and brick, from the surface to the bottom of the pavement courses as shown on the plans. Pavement Removed does not include removal of any unbound aggregate or natural soil material. If Wearing Course Removed is specified, remove all asphalt from the surface to the top of the concrete, brick, or both, or to the depth shown on the plans. If the existing surface is brick and Wearing Course Removed is specified, remove all brick from the surface. If Concrete Median Removed or Concrete Barrier Removed is specified, remove all the concrete to the depth specified in the plans.

202.13

On page 99, **Replace** the first paragraph with the following:

202.13 Basis of Payment. Payment is full compensation for all work involved in the removal and storage, reuse, or disposal of structures and obstructions, including excavation and backfill incidental to their removal, saw cutting, removing the contents of the underground storage and septic tanks and the custody, preservation, storage on the Right-of-Way, and disposal as provided in this specification.

202.13

On page 100, **Delete** the following:

~~202 Square Yard Base Removed
(Square Meter)~~

~~202 Each Precast Traffic Divider Removed for Reuse or Storage~~

202.13

On page 100, **Add** the following below 202 Foot (Meter) Curb Removed for Storage:

202 Foot or Concrete Median Removed
Square Yard
(Meter or
Square Meter)

202 Foot (Meter) Concrete Barrier Removed

203.02.B.

On page 101, **Delete** the entire section:

~~**B. Base.** Selected material of planned thickness placed on the subgrade as a foundation for other bases, or asphalt or concrete pavements. The base is a part of the pavement structure.~~

203.04

On page 103, **Replace** the second sentence of the fifth paragraph with the following:

The area is considered to contain hazardous waste or material and must be handled according to Department procedures and appropriate environmental agency regulatory requirements.

203.04.E

On page 104, **Delete** the entire section:

~~**E. — Pavement Widening Construction.** Locate sound pavement edges, and cut and trim pavement to a neat line. Repair and restore damage caused by the equipment or methods. Include the cost of cutting, trimming, and disposal under Item 203-Excavation.~~

301.02

On Page 161, **Add** the following paragraph after the last paragraph in the section:

Do not start mix production without a preliminary JMF approval and 48 hour notification to District Testing. Final approval of a JMF will be based upon field verification. The JMF can be rejected for failure to verify in the plant or at the project.

302.03

On Page 164, **Add** the following paragraph after the first sentence in the section:

Do not start mix production without a preliminary JMF approval and 48 hour notification to District Testing. Final approval of a JMF will be based upon field verification. According to 441.12 the JMF can be rejected for failure to verify in the plant or at the project.

401.03

On Page 173 **Revise** the first paragraph of 401.03 as follows:

Furnish materials conforming to:

Asphalt binder

(asphalt concrete, 401.14, 401.15).....702.01

Asphalt material (401.14, 401.17, 401.18)..... ~~SS875.02~~, 702.01, 702.04, 702.09, 702.12

or 702.13

Aggregates (base courses).....703.04

Aggregates (intermediate and surface courses).....703.05

Mineral filler703.07

401.04

On Page 174 **Replace** the 4th full paragraph with the following:

Determine RAS properties and usage as follows. Use no more than 3.0 percent RAS by dry weight of mix. When using RAP and RAS in combination use no more than 25 percent RAP. For design assume 12.0 percent available RAS binder. Determine gradation and specific gravity according to AASHTO PP 78-17, Section 5 or subsequent AASHTO applicable standard. Provide the required certification forms in the JMF submittal documenting that the RAS meets AASHTO MP 23-15 (2016), section 4 and that RAS from roofing tearoffs conforms to the EPA’s NESHAP, 40 CFR 61 Subpart M, and other applicable agency requirements for asbestos.

401.04

On Page 175 **Replace** Table 401.04-1 with the following:

TABLE 401.04-1 METHOD 1 – STANDARD RAP/RAS LIMITS

Asphalt Mix Application	Percent RAP by Dry Weight of Mix, Max.	RAS Usage ^[1]	Total Virgin Asphalt Binder Content, Min.	Comments
442 Polymer Surface Course	10%	None	5.2	Polymerized binder is virgin. (For non-polymer virgin binder allow 20% max RAP)
441 Surface Course	20%	None	5.0	Polymer or non-polymer virgin.
441, 442 Intermediate Course	35%	Manufacturing waste and tear-offs	3.0	Any mix type used as an intermediate course.
301 Base Course	50%	Manufacturing waste and tear-offs	2.7	OMM will establish the asphalt binder content.
302 Base Course	40% (30%)	Manufacturing waste and tear-offs	2.0	A lower RAP limit of 30 percent will be required if poor production mixing or coating is evident.

[1]No more than 3.0% RAS by dry weight of mix

401.04

On Page 176 **Replace** Table 401.04-2 with the following:

TABLE 401.04-2 METHOD 2-EXTENDED RAP/RAS LIMITS

Asphalt Mix Application	Percent RAP by Dry Weight of Mix, Max.	RAS Usage [1]	Total Virgin Asphalt Binder Content, Min.	Comments
442 Polymer Surface Course	15%	None	5.0	Polymerized binder is virgin. (For non-polymer virgin binder allow 25% max RAP)
441 Surface Course	25%	None	5.0	Polymer or non-polymer virgin.
441, 442 Intermediate Course	40%	Manufacturing waste and tear-offs	3.0	Any mix type used as an intermediate course.
301 Base Course	55%	Manufacturing waste and tear-offs	2.5	OMM will establish the asphalt binder content.
302 Base Course	45% (35%)	Manufacturing waste and tear-offs	1.8	A lower limit of 35 percent will be required if poor coating is evident. The virgin requirement of 302.02 does not apply.

[1]No more than 3.0% RAS by dry weight of mix

401.04.C

On Page 176, **Replace** the first sentence in the second paragraph with the following:
Ensure RAS is processed to have 100 percent passing the 1/2 inch (12.5 mm) sieve and at least 90 percent passing the No. 4 (4.75 mm) sieve.

401.08

On Page 178, **Add** the following paragraph after the first paragraph:
At a minimum, take a split sample of asphalt binder whenever the Department requests a sample. Address in the QCP the QC of mix plant asphalt binder samples and subsequent corrective action of binder test failures of any sample (QC or Department). Failure to perform QC of asphalt binder samples is at the Contractor’s risk. Any Department binder sample failures will result in penalties per Supplement 1102. These include remove and replace, pay deductions, or other penalties for the asphalt mix represented by the Department’s sample.

401.11

On Page 179 **Add** the following sentence to the end of the second paragraph of 401.11:
Any use of non-approved release agent, diesel, or fuel oil may result in suspension of truck, driver, or both for up to one year.

402.02

On Page 188, **Replace** the entire section with the following:

402.02 Calibration. Ensure the plant is calibrated according to Supplement 1101 when producing any asphalt concrete for the Department. Calibrate the asphalt binder meter according to Supplement 1101.07 Method A or B. When calibrating the asphalt binder meter according to Method B, daily aggregate and RAP weighbridge validations are required to be performed according to Supplement 1101.06. Document which plants follow Supplement 1101.01 Method B in the Quality Control Program (403.03). If issues persist for Method B calibrations or documentation, the Department will require the plant to follow Method A. When performing a complete calibration for ODOT projects notify District Testing 24 hours in advance of the calibration.

403.02

On Page 190, **Replace** the second paragraph with the following:

Restoration of VA procedures 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 asphalt the Materials Engineer, Office of Materials Management; the Administrator, Office of Materials Management; and the Pavement Engineer, Office of Construction Management.

403.03

On Page 190, **Add** the following sentence to the end of the first paragraph:

Include a revision date on the cover sheet and revision sheet listing the date(s), what section(s) and page(s) a revision was made, and a short description of what was revised, added, or removed.

403.03

On Page 190, **Replace** the third sentence in the second paragraph with the following:

Digital copies of the QCP and letter in pdf format are allowed in each Contractor plant laboratory and plant operation control room with the following requirements: The file icon must be appropriately labeled and be on the computer desktop of a computer in each area. Ensure the QCP contains page numbering and a Table of Contents inside the front cover locating all sections by page number. Remove out-of-date QCPs from the computer desktop.

403.03

On Page 191, **Delete** the second full paragraph.

~~The QCP is a reflection of a Contractor's sincerity and ability in producing a quality product. Development of this program beyond the minimum requirements specified below is encouraged and is taken into consideration by the QCQC when reviewing Contractor plant operation for qualification for VA.~~

403.03

On Page 191, **Replace** the third full paragraph with the following:

As a minimum include in the program:

403.03.B

On Page 191, **REPLACE** subsection B with the following:

B. Means for annual training 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 all personnel trained. Describe the QC Manager's

and supervisor's responsibilities and methods in ensuring ethical conduct is maintained throughout the year.

403.03.F

On Page 192, **Replace** the first paragraph with the following:

F. 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 8 years. Define the test record process. Define company records retention requirements. Provide copies of all test reports and forms used in the quality control process.

403.03.L

On Page 192, **Add** the following sentence after the last sentence in the paragraph:

Means of handling asphalt binder samples taken at the mix plant including any testing, labeling, and storing of samples.

403.03.N

On Page 192 **Replace** the paragraph with the following:

N. Define the roles and responsibilities of the Field Quality Control Supervisors. Provide a detailed description of how the FQCS will handle all mat issues including segregation, tenderness, mat tears, debris, holes, etc. List approved Field Quality Control Supervisors.

403.06.F

On Page 198, **Replace** the last paragraph with the following:

For all other mixes, if repeated problems with poor comparison of tests are not the District's fault; or poor comparison of Contractor tests to the JMF; or with plant operation, input materials, or any of the other requirements of Department specifications occur in a single project or successive projects, the District will request an opinion from the QC Review Group before notifying the Contractor of removal from Department VA. 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 Unconditional 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.

421.02

On Page 211, **Add** the following sentence directly after Table 421.02-2:

Do not use aggregates designated with "SR" or "SRH."

421.02

On Page 212, **Replace** the first sentence of the first full paragraph with the following:

For mineral filler, use Supplement 1028 Certified portland cement conforming to ASTM C 150, Type I.

421.03

On Page 212, **Revise** the third sentence in the second paragraph to the following:

Prepare the mix design by designing the mixture using the minimum, design, and maximum residual binder contents for gradations A or B and present all test data for all tests specified in Table 421.03-1.

421.03

On Page 213, **Replace** Table 421.03-1 with the following:

TABLE 421.03-1

ISSA Test No.	Description	Specification
TB-139	Wet Cohesion	
	30 minutes min. (set time)	12 kg-cm min.
	60 minutes min. (traffic)	20 kg-cm min or near spin
TB-114	Wet Stripping	90 percent min.
TB-100	Wet Track Abrasion Loss	
	1-hour soak 6 day soak	450 g/m ² max. 650 g/m ² max.
TB-144	Saturated Abrasion Compatibility	2 g loss max.
TB-113	Mix Time @ 25 °C	Controllable to 120 seconds
	Mix Time @ 40 °C	Controllable to 45 seconds
TB-147	Lateral Displacement (For Leveling and Rut Fill courses only)	5%, max.
TB-109	Excess Asphalt by LWT Sand Adhesion	538 g/m ² max.

421.03.A

On Page 213, **Replace** the first sentence after Table 421.03-1 with the following:

Check the ISSA TB-139 (set time) and ISSA TB-113 (mix time) tests at the highest and lowest temperatures expected during construction.

421.03.B.8

On Page 213, **Replace** B.8. with the following:

8. Quantitative effects of moisture content on the unit weight of the aggregate per AASHTO T 19 from 0.0 to 10.0% moisture content.

421.04.C

On Page 214, **Replace** paragraph C. with the following:

C. Provisions to meet the Department mix specifications including warning bands and action plans for aggregate, Binder, and tack coat materials to ensure they meet Department testing.

421.09

On Page 217 **Replace** the third and fourth paragraphs of the section with the following:

Remove all existing pavement markings so that less than 5% of the line remains visible. Repair damage to the pavement that results in the removal of more than 1/8 inch of pavement thickness. When a grinder drum is mounted to a skid steer loader, the drum must be able to accommodate a minimum of 150 teeth.

Seal visible joints and cracks longer than 2 feet (600 mm) in length and any joint or crack greater than 1/4 inch (6 mm) in width no matter the length using Item 423 Type II only. Apply crack sealant material at a width of 2 to 4 inches (50 to 100 mm) and at a thickness of not less than 1/16 inch (2 mm) and not greater than 3/16 inch (5 mm).

421.12

On Page 219, **Replace** the next-to-last sentence in the first paragraph with the following:
Present a revised corrective action plan and obtain the Engineer's approval before resuming work.

421.12.A

On Page 220, **Replace** the entire section with the following:

A. Binder. Obtain and label a Binder sample from supply tanker and diluted tack coat sample from the distributor truck at the direction of the Engineer and give the samples to the Engineer the same day. Provide and sample the Binder and diluted tack coat in one-quart (1 L) plastic containers with plastic screw tops. Label and retain one sample per each additional day for the Department. Take more samples when requested by the Engineer.

Visually inspect Binder in supply tanker(s) to ensure uniform material with no separation or contamination. Verify temperature of binder and tack coat. Monitor and verify proportioning of asphalt emulsion and water into distributor and proper mixing before use or sampling. Perform a minimum of one Binder and tack coat cook-off each production day to determine the residue content of the Binder and tack coat and verify compliance. If residue content is in warning band or out of compliance provide the Engineer with corrective actions prior to using.

Ensure mixing equipment is set at design asphalt emulsion percentage during production. Do not exceed a tolerance of $\pm 0.3\%$ residual content from the design residual content or the minimum and maximum content in the microsurface mix due to fluctuation in residual content in the Binder. If tolerance is exceeded, stop production. Correct the issue by correcting the Binder residual content by methods allowed by Supplement 1032 certified supplier or adjust the asphalt emulsion percent, if approved by the Engineer. Recalibrate the mixing equipment to the new adjusted asphalt emulsion percent to meet the design residual content of the microsurfacing mix for positive displacement mixing equipment.

421.12 B.

On Page 220, **Replace** the second sentence in the third paragraph with the following:
Obtain three (3) aggregate samples from the stockpile 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.

422.02 C.

On Page 225 **Replace** the first sentence in the third paragraph of the section with the following:
If a staging location will be used for the chip seal aggregate first move the initially tested aggregates from the aggregate source stockpile to the staging location and construct a project-specific staging stockpile.

422.06

On Page 228 **Replace** the second paragraph of the section with the following:
Remove all existing pavement markings so that less than 5% of the line remains visible. Repair damage to the pavement that results in the removal of more than 1/8 inch of pavement thickness. When a grinder drum is mounted to a skid steer loader, the drum must be able to accommodate a minimum of 150 teeth.

422.10 C.

On Page 231 **Replace** the first sentence of the section with the following:

C. Coarse Aggregate. At a minimum test one sample taken from the aggregate spreader box or project-specific stockpile at production start and sample and test one sample from the aggregate spreader box or project-specific stockpile randomly during the day.

422.10 C.

On Page 231 **Replace** the fifth sentence of the section with the following:
Sample and test aggregate according to AASHTO R 90, AASHTO R 76, and Supplement 1004 (AASHTO T 11 where required).

422.13

On Page 233 **Replace** the first paragraph of the section with the following:
422.13 Method of Measurement. The Department will measure Single Chip Seal or Double Chip Seal by the number of square yards (square meters) of aggregate, and the gallons (liters) of polymer emulsified binder, completed and accepted in place. The Department will determine the width by measuring the actual width of the chip seal. The Department will determine the length along the centerline of each roadway or ramp. The Department will determine the gallons (liters) of polymer emulsified binder applied according to Item 109.

422.14

On Page 234 **Replace** the Basis of Payment table with the following:

Item	Unit	Description
422	Square Yard (Square Meter)	Aggregate, Single Chip Seal, Type __
422	Gallons (Liters)	Emulsion, Single Chip Seal, Type ____
422	Square Yard (Square Meter)	Aggregate, Double Chip Seal, Type ____
422	Gallons (Liters)	Emulsion, Double Chip Seal, Type ____

423.02

On page 234 **Delete** the following:
~~Type III.....702.17.C~~

423.03

On page 235, **Delete** the following from the first sentence of the first full paragraph:
For Type II, ~~III~~, and IV crack 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.

423.03

On page 235, **Replace** the first sentence of the third full paragraph with:
For Type II ~~and III~~ crack sealants, use a mechanical applicator wand head capable of placing the crack sealant according to the tolerances of 423.07 while filling the cracks.

423.06

On page 236, **Delete** the following:
Mixing Type II and III.

423.06

On page 236, **Add** the following sentence after the second sentence:
Type II crack sealant may also be prepackaged per 702.17.B.

423.06

On page 236, **Delete** the last sentence of the section:
~~Do not heat Type III crack sealant to greater than 295 °F (146 °C).~~

423.07

On page 236, **Replace** the first sentence of the fourth paragraph:
For Type II ~~and III~~ crack sealants, place the sealant such that it fills the cracks with a band of sealant within 2 to 4 inches (50 to 100 mm) wide.

423.10

On page 237, **Delete** the following:
~~423 Pound (Kilogram) Crack Sealing, Type III
or Square Yard
(Square Meter)
423 Pound (Kilogram) Crack Sealing, Type II or III
or Square Yard
(Square Meter)~~

424.03

On Page 238, **Add** the following sentence to the end of the second paragraph:
Do not use RAS.

441.09

On Page 244, **Replace** the last sentence of the first paragraph with the following:
Perform each quality control test a minimum of one time for each 700 tons (635 metric tons), or for any portion of 700 tons, of asphalt concrete produced, for every production day. 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.

441.09

On Page 245, **Replace** the first full paragraph with the following:
Should additional testing as required above not be performed District Testing, after consultation with OMM, will require the testing frequency be increased to all tests every two hours of production 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 and/or Contractor including but not limited to warning, removal and/or a change of the facility to Unconditional Acceptance.

443.01

On Page 253, **Replace** the second paragraph with the following:
The requirements of 442; and 446 or 447 apply except as follows. Do not use the warm mix asphalt method (402.04) for this item.

443.03

On Page 253, **Replace** Note [5] after Table 443.03-2 with the following:

[5] VCA = Volume of Coarse Aggregate (Calculated for mix and dry rodded conditions according to AASHTO R 46)

443.03.E

On Page 254, **Replace** the section with the following:

E. Reclaimed Asphalt Concrete Pavement and Shingles. Do not use reclaimed asphalt concrete pavement except as described in D above. Do not use reclaimed asphalt shingles.

443.08

On Page 256, **Replace** the entire section with the following:

443.08 Acceptance. After accepting the test strips, the Department will accept SMA according to 446.04; or 447.04, 447.05, and 447.06.

443.09

On Page 256, **Replace** the section with the following:

443.09 Basis of Payment. The Department will pay for accepted quantities of Stone Matrix Asphalt Concrete, complete in place, including test strip, at the contract price as modified by 446.04; or 447.05 and 447.06, as follows:

Item	Unit	Description
443	Cubic Yard (Cubic Meter)	Stone matrix asphalt concrete, 12.5mm, PG70-22M, (_____)
443	Cubic Yard (Cubic Meter)	Stone matrix asphalt concrete, 12.5mm, PG76-22M, (_____)

447.05

On Page 263, **Replace** TABLE 447.05-1 with the following:

TABLE 447.05-1 MAT DENSITY LOTS

Mean of Cores ^[1]	Pay Factor
	Surface Course
98.0% or greater	[2]
97.0 to 97.9%	0.94
96.0 to 96.9%	1.00
94.0 to 95.9%	1.04
93.0 to 93.9%	1.00
92.0 to 92.9%	0.98
91.0 to 91.9%	0.90
90.0 to 90.9%	0.80
89.0 to 89.9%	[3]
Less than 89.0%	[2]
[1]Mean of cores as percent of average MSG for the production day.	
[2]Remove and replace.	
[3]The District will determine whether the material may remain in place. If the District determines the course should be removed and replaced, the Contractor will remove and replace this course. The pay factor for such material allowed to remain in place is 0.70.	

447.06.A

On Page 263, **Replace** the entire subsection A with the following:

A. Excluded Joints. Do not obtain joint cores from the following excluded joints to determine lot incentive/disincentive payment.

1. Joints where one side of the joint is formed by existing pavement not constructed on the project.
2. Joints within 15 feet longitudinally of an obstruction during construction of the wearing course (manholes, inlet grates, utilities, bridge structures, etc.)
3. Joints where plan material type, thickness, or acceptance method varies from one side of the joint to the other.
4. Joints on ramps.
5. Joints in intersections, gore areas or transitions, or anywhere the Engineer determines paving and phasing methods do not allow for consistent longitudinal joint construction. Prior to paving, submit requests in writing to the Engineer for consideration of any joints to be excluded on this basis. The Engineer will make the final determination.

447.06.C

On Page 264, **Add** the following paragraph after Table 447.06-1:

The Department will calculate a joint density lot pay factor for each item specified with 447 acceptance. The calculated pay factor adjustment will be applied to all material placed under the corresponding line item specifying 447 acceptance.

451.09

On Page 271, **Replace** the first eight paragraphs with the following:

451.09 Joints. Unless otherwise directed, construct all transverse contraction and construction joints normal to the centerline of the pavement lane and of the type, dimensions, and at locations

specified. Construct contraction joints by saw cutting. Saw contraction joints across the full pavement width for a continuous joint and match previously placed lanes.

Construct longitudinal joints between simultaneously placed lanes by sawing.

Accurately mark the pavement with the correct locations of all joints to be saw cut. Ensure the method of marking remains clearly visible after the paver passes and until the joint saw cut is completed. Reapply curing compound according to 451.11 at saw cut joints.

Use either a standard water-cooled, diamond-bladed concrete saw or an early-entry, dry cut, light-weight concrete saw. Provide saws with adequate guides, blade guards, and a method of controlling the depth of cut. After wet sawing, clean the joint using a jet of water. After dry sawing clean the joint using air under pressure. Maintain a standby saw in working condition and an adequate supply of blades.

When using standard concrete saws, and for pavement less than or equal to 10 inches (255 mm), saw joints to a minimum depth of one-fourth the specified pavement thickness. For pavements greater than 10 inches (255 mm) thick, saw joints to a minimum depth of one-third the specified pavement thickness. Saw joints $1/4 \pm 1/16$ inch (6 ± 1.6 mm) wide measured at the time of sawing.

When using early-entry saws use saw blades and skid plates as recommended by the saw manufacturer for the coarse aggregate type being used in the concrete. Saw joints $1/8$ inch (3 mm) wide and $2 \frac{1}{4}$ to $2 \frac{1}{2}$ inches (56 to 63 mm) deep.

Repair all cracking or spalling according to 451.17.

451.09.A.

On Page 272, **Replace** the entire section with the following:

A. Longitudinal Joint. Place deformed epoxy coated steel tiebars, epoxy coated hook bolt with epoxy coated coupling, or epoxy coated hook bolt alternate (wiggly bolt) with epoxy coated coupling, in longitudinal joints during consolidation of the concrete. Install them at mid-depth in the slab using approved mechanical equipment. As an alternate procedure, rigidly secure them on chairs or other approved supports to prevent displacement. Provide tie bars, hook bolts, or wiggly bolts of the size and spaced as shown on the standard construction drawings. If used, securely fasten hook bolts or wiggly bolts with couplings to the form at the longitudinal construction joint as shown on the standard construction drawings.

451.09.B.

On Page 273, **Delete** the first sentence of the section:

~~Unless otherwise directed, construct all transverse joints normal to the centerline of the pavement lane and of the type, dimensions, and at locations specified.~~

451.09.B.1.

On Page 273, **Replace** the third paragraph of the section with the following:

Immediately before paving check that the assemblies are held firmly in place and check that the dowels are parallel to the grade and parallel to centerline of pavement.

451.09.C.

On page 280, **Replace** the first sentence of the first paragraph with the following:

Where a pressure relief joint is not provided adjacent to a bridge structure, construct expansion joints at the first two regularly spaced transverse contraction joint locations adjacent to the bridge approach slab on each side of the bridge.

451.09.C.

On Page 280, **Replace** the first sentence of the third paragraph with the following:

Use round, straight, smooth, steel dowels, and within 2 hours prior to placing concrete, coat the dowels with a thin uniform coat of new light form oil as a bond-breaking material to provide free movement.

451.09.C.

On Page 280, **Replace** the fourth paragraph with the following:

Punch or drill proper size dowel holes into the preformed expansion joint filler to ensure a tight fit around each dowel.

451.09.D.

On Page 280, **Delete** the entire section.

~~**D. — Contraction Joints.** For pavement less than or equal to 10 inches (255 mm) thick, saw contraction joints with a standard (water-cooled diamond-bladed) concrete saw to a minimum depth of one-fourth of the specified pavement thickness. For pavement greater than 10 inches (255 mm) thick, saw contraction joints to a minimum depth of one-third the specified pavement thickness. When cutting joints using a standard (water-cooled diamond blade) saw ensure the joint is $1/4 \pm 1/16$ inch (6 ± 1.6 mm) wide when measured at the time of sawing.~~

~~When using the option of early entry (dry cut, light weight) saws, only use saw blades and skid plates as recommended by the saw manufacturer for the coarse aggregate type being used in the concrete. Perform the early entry contraction joint sawing after initial set and before final set. Saw the contraction joint $2\ 1/4$ to $2\ 1/2$ inches (56 to 63 mm) deep. Ensure any early entry saw joints are approximately $1/8$ inch (3 mm) wide at the time of sawing.~~

~~If the pavement is constructed in two or more separately placed lanes, install the joints continuous for the full width of the pavement. Saw the pavement with sawing equipment approved by the Engineer as soon as the saw can be operated without damaging the concrete. Provide saws with adequate guides, blade guards, and a method of controlling the depth of cut. After wet sawing, clean the joint using a jet of water. After dry sawing clean the joint using air under pressure. During sawing of contraction joints, maintain a standby saw in working condition with an adequate supply of blades.~~

451.09.E.

On Page 281, **Replace** the **E. Construction Joints** with **D. Construction Joints**.

455.04.F.

On Page 295, **Delete** item 6.

~~6. — Define who will perform the HIPERPAV analysis required in 451.09 and the proposed timeframe the Engineer will have to review the report.~~

455.05.A.3.

On Page 298 **Replace** the first full paragraph with the following:

After the initial curing at the project site and within 72 hours, deliver three (3) QA cylinders to District Testing and three (3) QA cylinders to the AASHTO accredited laboratory for standard curing and testing. Failure to comply with these requirements will be grounds for removal of the AASHTO accredited laboratory from the project at the discretion of the District Testing Engineer and OMM. The AASHTO accredited laboratory will test the QA sample and the QC sample and report the test results on the form accepted by the QCP. Distinguish the QA from the QC results for the subplot.

499.02

On Page 300, **Replace** the materials listing for “Fly ash” with “Fly ash or natural pozzolan”.

499.03

On Page 301, in Table 499.03-1, **Replace** notes [5] and [7] with the following:

- [5] The maximum fly ash, natural pozzolan, or slag cement content may be increased up to 50%.
- [7] Cement or a combination of cement and up to 15% fly ash or natural pozzolan; or up to 30% slag cement.

499.03

On Page 302, in Table 499.03-2, **Add** the following row after “Fly Ash”:

Natural pozzolan	25
------------------	----

499.03.A.

On Page 302, **Add** the following sentence after the second sentence in the first full paragraph:

Water-reducing admixtures conforming to the requirements of 705.12 may also be used or adjusted to meet slump requirements.

499.04.F.

On Page 303, **Replace** the last sentence of the paragraph with the following:

Adjust the absolute volume of the aggregates if the cementitious content is increased.

499.04.H.

On Page 304, **Replace** the entire paragraph with the following:

H. If slump loss occurs before or during placement of the concrete, the concrete slump may be field adjusted to restore plasticity with a Type F or G chemical admixture conforming to 705.12, additional water, or both, only if the maximum water-cementitious ratio of the accepted JMF is not exceeded. Mix for a minimum of 30 revolutions at mixing speed after addition of admixture, water, or both. Inform the Inspector, record all adjustments, and confirm compliance with 499.03A. The Engineer will recheck the slump and air content to ensure conformance to the specification. If after any adjustment the components of the load are segregated, the Department will reject the load.

499.05

On Page 305 **Add** the following subsection **D.** as follows:

D. Volumetric Truck Mixers. Volumetric Truck Mixers. Provide mixers conforming to ASTM C685, Sections 7, 8, 9, 10, 11, 13, and 14. Mixers must have rating plates indicating that the performance of the mixer is in accordance with the Volumetric Mixer Manufacturer Bureau or equivalent. Mix concrete in accordance with the manufacturer’s recommended procedures. The volumetric mixer must be capable of carrying sufficient unmixed dry bulk cement, supplementary cementitious materials, coarse and fine aggregate, admixtures and water, in separate compartments and accurately proportion the approved JMF. Each volumetric mixer shall be equipped with an onboard ticketing system that will electronically produce a record of all material used and their respective weights and the total volume of concrete placed. Place no more than 30 cubic yards (23 m³) per unit per day. Limit the use of volumetric truck mixers to QC Misc., QC MS, QC FS, and Item 613.

Provide a process control plan, product quality control plan, and manufacturer’s recommended procedures to the OMM Cement and Concrete Engineer. Calibrate the proportioning devices before the start of a project and at intervals recommended by the

manufacturer. Perform calibrations in the presence of the Engineer. Calibrate the cement and aggregate proportioning devices by weighing (determining the mass of) each component. Calibrate the admixture and water proportioning device(s) by weight (mass) or volume. Batch each material to ensure weights are within the tolerances listed in Table 499.06-2, based on the amount specified in the accepted JMF. Furnish batch tickets in accordance with Item 499.07. Verify yield daily based on the cement meter count (number of revolutions per 94 pounds (42.5 kg) of cement), for each volumetric truck mixer.

499.06

On Page 306 **Add** the following table after Table 499.06-1:

Table 499.06-2 VOLUMETRIC TRUCK BATCHING TOLERANCES

Material	Batching Tolerance (%)
Cement	0.0 to +4.0
Pozzolan	0.0 to +4.0
Carbonate Micro-fines	0.0 to +4.0
Aggregates	±2.0
Water	±1.0
Chemical Admixtures	±3.0

499.07-1

On Page 307 **Add** the following row after “Batch plant location”:

Producer/Supplier Code	
------------------------	--

499.07

On Page 307, in Table 499.07-1, **Add** the following row after “Fly ash”:

Natural pozzolan	lb (kg)
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499.07

On Page 308, in Table 499.07-2, **Add** the following row after "Fly ash":

Natural pozzolan		
------------------	--	--

499.08

On Page 308 **Delete** the 4th and 5th paragraphs of the section.

~~When concrete is delivered in transit mixers and before discharging any of a batch, the Engineer may allow adding water within the specified water-cement ratio limits. Perform sufficient mixing, a minimum of 30 revolutions at mixing speed, to adjust the slump and to regenerate the specified air content throughout the batch.~~

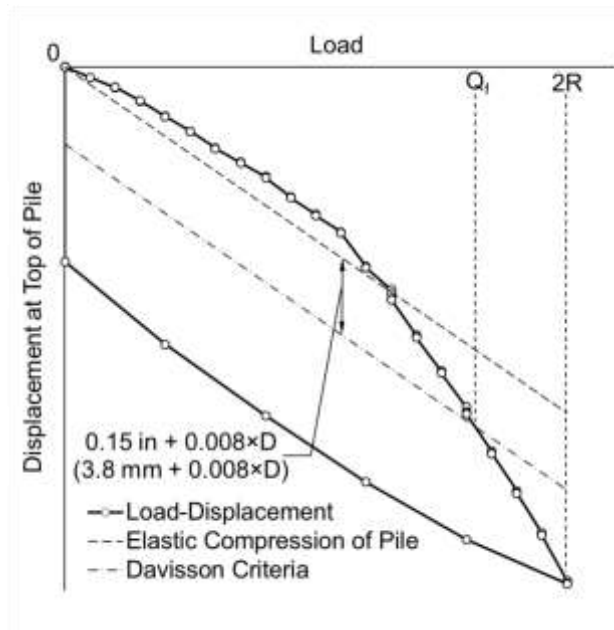
~~When approved by the Engineer, the Contractor may use approved admixtures (705.12, Type F or G) for retempering the load to adjust the slump after the start of discharge. Mix for a minimum of 30 revolutions at mixing speed after addition of the admixture.~~

501.04.B

On Page 311, **Add** the following sentence to the end of the first paragraph;
Shop Drawings are not required for elastomeric bearings.

506.03

On Page 327, After the last sentence **Add** the following graphic:



508.02

On Page 334, **Add** the following sentence after the second sentence of the last paragraph:

For phased construction of slab superstructures, do not place concrete for a closure pour until falsework on each side of the closure has been removed.

508.02

On Page 335, **Add** the following sentence to the end of the last paragraph:

Galvanize all deck hangers not encased in concrete per 711.02.

508.05

On Page 336, **Replace** the last paragraph with the following:

Include the cost for load testing required as per 508.02 in the item for which the falsework support is used.

509

On Page 336, **Replace** with the following:

ITEM 509 CONCRETE REINFORCEMENT

- 509.01 Description**
- 509.02 Materials**
- 509.03 Care of Material**
- 509.04 Method of Placing**
- 509.05 Bending**
- 509.06 Approval of Placing**
- 509.07 Splicing**
- 509.08 Supports**
- 509.09 Epoxy Coated Reinforcing Steel**
- 509.10 GFRP Reinforcement**
- 509.11 Method of Measurement**
- 509.12 Basis of Payment**

509.01 Description. This work consists of furnishing and placing supports, mechanical connectors, tie wires, and uncoated (black), epoxy coated and GFRP concrete reinforcement of the quality, type, size, and quantity designated, including steel dowels.

509.02 Materials. Furnish materials conforming to:

Epoxy coated reinforcing steel	709.00
Reinforcing steel, deformed bars.....	709.01, 709.03, 709.05
Spiral reinforcing steel	709.01 or 709.08
Bar mats and wire fabric	709.09, 709.10, 709.12
Plastic supports	709.15
GFRP deformed bars.....	705.28

Do not substitute one type of reinforcement (uncoated, epoxy coated, or GFRP) for another.

For metal bar supports used at or near the surface of the concrete, furnish either galvanized steel, stainless steel, epoxy coated steel or plastic coated steel.

Provide sufficient additional reinforcing steel to replace reinforcing steel removed by the Department for sampling. Replace random samples in the structures with additional steel, spliced according to 509.07.

When providing reinforcing steel for spiral cages, galvanized steel conforming to ASTM A767, Class 1, may be provided only for the spiral reinforcing steel in lieu of epoxy coated reinforcing steel. The galvanized coated reinforcing steel will meet all other requirements of 509. Where a sample splice is needed use the lap length requirements for epoxy coated. The Galvanized coating will be applied after the reinforcing has been fabricated. If the galvanized surface becomes damaged during handling in the field, repairs will conform to ASTM A780. Use bar supports and tie wires which are plastic coated or epoxy coated. Only suppliers certified under S1068 may provide this reinforcing.

509.03 Care of Material. Upon delivery to the project and before use, stack concrete reinforcement off the ground and keep it free from dirt, oil, grease, or avoidable rust. Before placing in the concrete, ensure the reinforcement is clean and free of loose rust.

When handling deformed reinforcement, use equipment that avoids damaging or abrading the bar. Lift bundles of reinforcement at multiple pickup points. Do not drop or drag reinforcement. If stored outdoors for more than 2 months, cover the reinforcing bars with opaque plastic or other types of cover that protect the bars from ultraviolet rays. Prevent exposure of reinforcing bars to temperatures above 120°F during storage.

509.04 Method of Placing. Place concrete reinforcement in the positions shown on the plans, and firmly secure the reinforcement during the placing and setting of concrete. Tie bars in the superstructure at all intersections, except tie bars at alternate intersections where bar spacing is less than 1 foot (0.3 m) in any direction. The Contractor may place up to 25 percent of the upper longitudinal bars in a bridge deck slab beneath the upper transverse bars to support the top mat. Do not drive or force concrete reinforcement into concrete after its initially set.

Welding on reinforcing is prohibited, except as permitted by 709.10 and 709.12. The Engineer will allow the Contractor to fabricate reinforcing bar cages for prestressed beams if fabrication is done in a manner satisfactory to the Director.

Install concrete reinforcement with the following clearances from the concrete surface:

- A. 2 1/2 inches [-0 inch, +0.5 inch] (65 mm [-0 mm, +13 mm]) to the top of sidewalks.

- B. 3 inches [± 0 inch] (75 mm [± 0 mm]) at the faces of footings placed against rock or earth.
- C. 1 1/2 inches [-0 inch, +0.25 inch] (38 mm [-0 mm, +6 mm]) to the bottom of a cast-in-place deck slab.
- D. 2 1/2 inches [-0.25 inch, +0.75 inch] (65 mm [-6 mm, +19 mm]) to the top surfaces of cast-in-place concrete deck slabs.
- E. 2 inches [-0 inch, +0.5 inch] (50 mm [-0 mm, +13 mm]) at all other surfaces.

509.05 Bending. Bend concrete reinforcement to the dimensions shown on the plans and in Table 509.05-1 (509.05-1M). Reject concrete reinforcement showing transverse cracks.

TABLE 509.05-1 STANDARD BENDS

Bar		Nominal Dimensions		180° Bend		90° Bend		135° Bend	
				D	A	D	A	D	A
Bar Size	Diameter in	Area in ²	Weight lb/ft	D in	A in	D in	A in	D in	A in
3	0.375	0.11	0.376	2 1/4	5	2 1/4	5	1 1/2	4
4	0.500	0.20	0.668	3	6	3	7	2	4 1/2
5	0.625	0.31	1.043	3 3/4	7	3 3/4	8 1/2	2 1/2	5 1/2
6	0.750	0.44	1.502	4 1/2	8	4 1/2	10		
7	0.875	0.60	2.044	5 1/4	10	5 1/4	12		
8	1.000	0.79	2.670	6	11	6	13 1/2		
9	1.128	1.00	3.400	9 1/2	15	9 1/2	15 1/2		
10	1.270	1.27	4.303	10 3/4	17	10 3/4	18		
11	1.410	1.56	5.313	12	19	12	20		
14	1.693	2.25	7.65	18 1/4	27	18 1/4	25		
18	2.257	4.00	13.60	24	36	24	33		

Tolerances: For diameter of bends, "D", the tolerance may be plus or minus the diameter of the bar. Standard fabricating tolerances shall be in accordance with the CRSI Manual of Standard Practice. No weight allowances will be made for tolerances.
Weight applies to steel only.

TABLE 509.05-1M STANDARD BENDS

Bar				Dimension %		Dimension %		Dimension %	
				180° Bend		90° Bend		135° Bend	
Bar	Diameter	Area	Weight	D	A	D	A	D	A
Size	mm	mm ²	kg/m	mm	mm	mm	mm	mm	mm
#10M	9.5	71	0.560	60	130	60	130	40	105
#13M	12.7	129	0.994	75	155	75	180	50	115
#16M	15.9	199	1.552	95	180	95	215	65	140
#19M	19.1	284	2.235	115	205	115	255		
#22M	22.2	387	3.042	135	255	135	305		
#25M	25.4	510	3.973	150	280	150	345		
#29M	28.7	645	5.060	240	380	240	395		
#32M	32.3	819	6.404	275	430	275	455		
#36M	35.8	1006	7.907	305	485	305	510		
#43M	43.0	1452	11.38	465	685	465	635		

Tolerances: For diameter of bends, “D”, the tolerance may be plus or minus the diameter of the bar. Standard fabricating tolerances shall be in accordance with the CRSI Manual of Standard Practice. No weight allowances will be made for tolerances. Weight applies to steel only.

509.06 Approval of Placing. Before placing concrete, obtain the Engineer’s approval of concrete reinforcement in place.

509.07 Splicing. Splice reinforcement only as specified or determined by the Engineer. Splice spiral reinforcement by lapping 1 1/2 turns. Do not replace spiral reinforcement removed for a material sample if the sample is from the end of the spiral and less than or equal to 30 inches (0.8 m) long.

Mechanical connectors shall be capable of developing 125 percent of the yield strength of the connected bars. For threaded connections, do not reduce the nominal area of the bars shown in the plans without increasing the grade of the reinforcing bar shown in the plans. The total slip of the bar within the splice sleeve of the connector after loading in tension to 30.0 ksi (207 MPa) and relaxing to 3.0 ksi (21 MPa) shall not exceed the following measured displacements between gage points clear of the splice sleeve:

- A. For bar sizes up to No. 14: 0.01 in. (0.25 mm)
- B. For No. 18 bars: 0.03 in. (0.76 mm)

Splice Nos. 14 and 18 (Nos. 45M and 55M) reinforcing steel bars with mechanical connectors.

The Department will not permit lap splices for these size bars.

Splice Nos. 14 and 18 (Nos. 45M and 55M) reinforcing steel bars with mechanical connectors. The Department will not permit lap splices for these size bars.

Splice additional steel used to replace random samples as follows:

TABLE 509.07-1

Bar Size	Lap Length (inches)	
	Uncoated	Epoxy Coated
4	22	27
5	29	35
6	34	41
7	43	52
8	57	69
9	72	87
10	92	111
11	113	137

TABLE 509.07-1M

Bar Size	Lap Length (mm)	
	Uncoated	Epoxy Coated
13M	560	690
16M	740	890
19M	870	1040
22M	1090	1320
25M	1450	1750
29M	1830	2210
32M	2340	2820
36M	2870	3480

The Department will not permit mechanical splices for GFRP reinforcement.

509.08 Supports. Use precast mortar blocks, metal supports, or plastic supports of adequate strength, of the proper depth, and in sufficient number to support concrete reinforcement. Space supports for concrete reinforcement no more than 4 feet (1.2 m) apart transversely and longitudinally. Metal supports shall have a shape that is easily enveloped by the concrete.

Mortar blocks may only be used to support the lower matt of reinforcing steel in concrete that is cast directly against bedrock or soil.

509.09 Epoxy Coated Reinforcing Steel. Use plastic coated or epoxy coated bar supports and tie wires to protect the epoxy coating from physical damage, as specified in 709.00, during placement and to prevent electrical coupling between mats. Carefully handle and install bars to perform minimal patching at the job site. Repair physical damage to the epoxy coating with a patching material all damaged coating areas greater than 1/4-inch (6 mm) square or 1/4-inch (6 mm) diameter; approximately 1/8-inch (3 mm) square or 1/8-inch (3 mm) diameter if the opening is within 1/4-inch (6 mm) of an equal or larger opening; or, a length of 6 inches (150 mm) regardless of area. Coating damage in cases where the damaged area is less than specified above need not be repaired. Use patching material of the same composition and quality as the original coating. Prepare the surface to a near white metal.

If repair is required, clean and repair the damaged areas and allow adequate cure time before placing concrete. The Engineer will approve the installation once patching has been done as outlined above.

509.10 GFRP Reinforcement. Secure GFRP reinforcement with plastic- or epoxy-coated tie wire; nylon or plastic zip ties; or thermoplastic injection molded clips. The maximum total unrepaired visible damage on each linear foot of each FRP bar shall not exceed 2% of the surface area in that linear foot of bar. The depth of the permissible damage shall not exceed 0.04 in. (1.0 mm). Replace the damaged bar or lap splice a new GFRP bar adjacent to the damaged portion with the appropriate lap length on either side of the damage. Do not field bend or straighten GFRP bars. Minimum inside bend radii shall conform to the requirements of Table 509.05-1 (509.05-1M). Do not field cut GFRP reinforcement.

509.11 Method of Measurement. The Department will measure Epoxy Coated Reinforcing Steel by the number of pounds (kilograms) shown on the plans. Additional measurements or calculations are not required.

The Department will measure GFRP Deformed Bars by the number of feet (meters) shown on the plans. Additional measurements or calculations are not required.

If the Contractor believes the pay weight or length, as shown on the plans, is in error, the Contractor is responsible to prove this discrepancy by recalculating the total weight or length for the reference number involved. The Contractor shall submit its figures to the Engineer for review and approval. The number of

pounds (kilograms) of reinforcing steel or feet (meters) of GFRP reinforcement shall be the actual number of pounds (kilograms) or feet (meters) of the various sizes incorporated in the concrete as shown on the plans, completed and accepted.

If the weight of the reinforcing steel is recalculated, determine the number of pounds (kilograms) from the number, length, and weight of the bars as shown on the steel list of the plans, based on the weight per foot (meter) shown in the Table 509.05-1 (509.05-1M) with deductions for bars not used, and addition for extra bars used as directed by the Engineer.

509.12 Basis of Payment. The Department will not include the supports, mechanical connectors, and tie wires in the calculated weights but will consider them incidental to the price bid.

The Department will pay for accepted quantities at the contract price as follows:

Item	Unit	Description
509	Pounds (Kilograms)	Epoxy Coated Reinforcing
509	Pounds (Kilograms)	Uncoated Reinforcing
509	Feet (Meters)	No. __ GFRP Deformed Bars

511.03

On page 343, **Revise** the first paragraph to the following:

511.03 Concrete. Provide concrete for structures according to 499.03, using Class QC 1, QC 2, QC 3, or QC 4 or QC 5 as specified in the Contract.

511.04

On page 343, **Delete** the third paragraph and table and **Replace** with the following:

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 (40 m³) of concrete.

511.07

On page 345, **Revise** the following definitions:

f'_{ci} = Compressive strength of prestressed concrete at release; ksi. Use the fabricator's reported strength if beams have been cast, otherwise use strength provided in the Plans.

$$k_{td} = \frac{t}{12 \left(\frac{100 - 4f'_{ci}}{f'_{ci} + 20} \right) + t}$$

511.09

On page 350, **Replace** the section with the following:

511.09 Construction Joints. A construction joint is a plane separating concrete placements that reach initial set at different times. Place construction joints in the locations shown in the plans. Construction joints shall have a non-finished surface, a formed finish surface or a roughened finish surface. Provide a non-finished surface on horizontal joints and a formed finished on vertical joints unless otherwise specified. A non-finished surface shall have uniformly exposed aggregate, no loose aggregate and all laitance removed. When placing concrete against an existing surface, placed in a previous project, the Department will consider the construction joint created to be a formed finish surface unless otherwise specified in the plans. All construction joint form work and bulkheads shall be in accordance with Item 508. Do not use an edger on construction joint edges. Cure the construction joints according to 511.14.

A roughened construction joint surface, when specified in the plans, shall be as follows:

- A. For bonding surfaces that can be finished, finish the surface by producing grooves at right angles and penetrating the finished surface approximately $1/4 \pm 1/8$ inch (6 ± 3 mm) at a maximum spacing of $1 - 1/4 \pm 1/4$ inch (32 ± 6 mm). Grooves shall terminate approximately 1/2-inches from the edge of finishing surface. If the first strike-off does not produce the required roughness, repeat the process before the concrete reaches initial set.
- B. For bonding surfaces that cannot be finished according to Part A, use mechanical scarifying equipment to thoroughly roughen the existing surface to a uniformly distributed $1/4 \pm 1/8$ inch (6 ± 3 mm) at a spacing of $1 - 1/4 \pm 1/4$ inch (32 ± 6 mm). Do not use chipping hammers heavier than the nominal 15 lb (7 kg) class and operate at an angle of less than 45 degrees with respect to the surface. Remove concrete in a manner that prevents cutting, elongating or damaging reinforcing steel.

Before placing fresh concrete against any hardened concrete surface, thoroughly clean and saturate the existing surface. Remove all loose particles, dust, dirt, laitance, oil, curing compound, concrete lip or edging, and any film of any sort. Flush construction joint surfaces with water and allow the surfaces to dry to a surface-dry condition immediately before placing concrete.

Requests to add, delete or relocate construction joints shall be in accordance with the ODOT Bridge Design Manual and shall be in writing, accompanied by revised plan sheets signed, sealed, and dated by an Ohio Registered Professional Engineer. Obtain the Engineer's acceptance prior to placing a construction joint not shown on the plans. The Department will not pay for added costs that result from such changes.

511.10

On page 350, **Replace** the section with the following:

511.10 Work Stoppage. If the work is unexpectedly interrupted by breakdowns, storms, delays or other causes which will result in an initial set of the placed concrete, rearrange the freshly deposited concrete to provide a straight and non-wavy construction joint per 511.09. If the Engineer determines that this construction joint adversely affects the structure capacity, the Engineer will require a corrective action plan per 501.05.C.

511.15

On page 355, **Replace** the first two paragraphs with the following:

511.15 Surface Finish. For concrete that is to be sealed with Epoxy-Urethane according to 512.03, perform surface profiling and surface finish according to 512.03.F.

For all others, finish the concrete surface as detailed below:

511.15.A.

On page 355, **Replace** the paragraph with the following:

A. Standard Finish. On all surfaces, remove fins and irregular projections with a stone or power grinder, taking care to avoid contrasting surface textures. Repair all cavities produced by form ties and, on visible surfaces, repair all defects using a mortar consisting of one part of hydraulic cement conforming to Item 499 and 1-1/2 parts sand conforming to 703.03, by volume and water conforming to 499.02 with a maximum water/cementitious ratio of 0.4. A defect is an imperfection in the concrete measuring at least 3/4" (19mm) in diameter or at least 1/2" (13 mm) deep but not exceeding a total volume of 1 cubic inch (16.387 mL). Finish all repaired surfaces on the structure in a similar manner and to the extent required to produce a uniform appearance.

512.03.F.

On page 364, **Replace** the entire section with the following:

F. Surface Preparation and Profiling.

1. Non-Epoxy Sealer

Remove dust, dirt, oil, wax, curing compounds, efflorescence, laitance, coatings and other foreign materials from surfaces to be sealed.

Ensure that all wastes generated by the surface preparation operation are managed in accordance with 107.19.

If the concrete surface had curing compound applied, acid test the surface after blasting to see if the curing compound was removed. Perform the acid test for every 500 square feet (47 square meters). Use a 30%, by weight, solution of hydrochloric acid. Apply 4 to 5 drops to the concrete surface. If foaming/fizzing occurs the curing compound is removed. Rinse the tested location with an ammonia solution to neutralize the concrete area tested (1 cup ammonia to 5 gallons water).

(NOTE: Muriatic acid and ammonia can be bought in a hardware store. Muriatic acid is used to clean masonry. Only dilute by pouring the acid into the water. DO NOT pour the water into the acid.)

When surfaces show intermittent or no foaming, use chemicals or other cleaning compounds to remove the curing compounds. Only use products approved by the sealer manufacturer. Furnish the Engineer documentation of the sealer manufacturer's approval and method to test if materials are removed.

2. Epoxy-Urethane Sealer

Remove dust, dirt, oil, wax, curing compounds, efflorescence, laitance, coatings and other foreign materials from surfaces to be sealed.

Ensure that all wastes generated by the surface preparation operation are managed in accordance with 107.19.

If the concrete surface had curing compound applied, acid test the surface after blasting to see if the curing compound was removed. Perform the acid test for every 500 square feet (47 square meters). Use a 30%, by weight, solution of hydrochloric acid. Apply 4 to 5 drops to the concrete surface. If foaming/fizzing occurs the curing compound is removed. Rinse the tested location with an ammonia solution to neutralize the concrete area tested (1 cup ammonia to 5 gallons water).

(NOTE: Muriatic acid and ammonia can be bought in a hardware store. Muriatic acid is used to clean masonry. Only dilute by pouring the acid into the water. DO NOT pour the water into the acid.)

When surfaces show intermittent or no foaming, use chemicals or other cleaning compounds to remove the curing compounds. Only use products approved by the sealer manufacturer. Furnish the Engineer documentation of the sealer manufacturer's approval and method to test if materials are removed.

After concrete has cured and forms are removed, use one or both of the following methods to produce a surface profile that feels and looks like 100 grit sandpaper or coarser. Provide the Engineer sandpaper for comparison. Perform the ASTM D7682-12, Method B, Standard Test Method for Replication and Measurement of Concrete Surface Profile Using Replica Putty to obtain a replica coupon of the prepared concrete surface on a flat, test section, on the first day of production, and as requested by the Engineer. With a micrometer, measure the surface profile obtained on the coupon, and provide the coupon to the Engineer.

- a. Water blast at 7000 psi (48Mpa) minimum, or
- b. Abrasive blast, followed by air brooming or power sweeping, to remove dust and sand from the surface and opened pores, or
- c. Use a combination of water blast and abrasive blast.

Install suitable traps, filters, drip pans and other separation devices in the cleaning equipment so oil and other foreign material are not deposited on the surface.

Fill all cavities produced by form ties and other single defects or defected areas with a prequalified trowelable mortar in accordance with Supplemental Specification 843.02 and 843.06. Provide a broom/brush finish to all trowelable mortar patches. Cure the trowelable mortar according to Supplemental Specification 843.07.

A defect is an imperfection in the concrete measuring at least 3/4" (19mm) in diameter or at least 1/2" (13mm) deep but not exceeding a total volume of 1 cubic inch (16.387 mL). A defected area is an area with a density of imperfections between 1/4" (6 mm) and 3/4" (19 mm) in diameter or between 1/4" (6mm) and 1/2" (13 mm) deep numbering 10 or more per 1 square foot (0.09 square meters) area.

Air dry for at least 10 days after completion of the manufacturer's recommended cure time for trowelable mortar. Brush abrasive blast, followed by air brooming or power sweeping, to remove dust and sand from the surface and opened pores.

512.03.G.

On page 365, **Replace** the first paragraph of the subsection with the following:

G. Application and Coverage. Do not apply sealer to surfaces with moisture. Determine moisture on surface in accordance with ASTM D4263 - Indicating Moisture in Concrete by the Plastic Sheet Method. Apply the sealer within 48 hours after moisture testing and brush abrasive blast. Do not apply sealer if rain is anticipated within six (6) hours after application. Clearly mark where the sealer application stops if not continuous.

512.04.B.

On page 368, **Replace** the section with the following:

B. Surface Preparation. Remove roadway dirt and debris from the area of the deck to be treated. Sweep, abrasive blast, then with the use of a manual or power broom sweep and blow with compressed air so that the surfaces to which the sealer is to be applied is dry and free of dust and dirt. Use high pressure compressed air to blow all loose material from visible cracks. Fit the cleaning equipment with suitable traps, filters, drip pans, driers and other devices to prevent oil and other foreign material from being deposited on the surface. Do not allow traffic on the clean surface prior to application of the sealer. Remove existing pavement markings using a method as specified in 614.11.G.1.a. ~~The cost of removal is incidental to the Work.~~ Remove all traces of asphalt or petroleum products and concrete curing seals by abrasive blasting prior to air sweeping.

512.06.B.

On page 371, **Replace** the section with the following:

B. Surface Preparation. First remove roadway dirt and debris from the area to be treated. Sweep abrasive blasted surfaces to which the sealer is to be applied, then manual or power broom swept and blown with compressed air so that they are dry and free of dust and dirt. Use high pressure compressed air to blow all loose material from visible cracks. Use a high pressure water blast followed by an air blast if particles are highly embedded in the cracks, to clean cracks. Fit the cleaning equipment with suitable traps, filters, drip pans, dryers and other devices to prevent oil and other foreign material from being deposited on the surface. Do not allow traffic on the clean surfaces prior to application of the sealer. Remove existing pavement markings using a method as specified in 614.11.G.1.a. ~~The cost of removal is incidental to the Work.~~ Remove all traces of asphalt or petroleum products and concrete curing by the abrasive blasting prior to air sweeping.

512.09

On page 376, **Add** the following paragraph after the last paragraph:

The Department will measure the removal of pavement markings using the same method of measurement as completed markings in the units designated per Item 641.

512.10

On page 376 **Replace** the last paragraph with the following:

The Department will consider the removal of dust, dirt, oil, wax, curing compounds, efflorescence, laitance, and other foreign materials as incidental to the surface preparation of the concrete surfaces to be sealed. When the surface to be sealed contains an existing coating, the Department will consider all materials, equipment and labor to remove the existing coating as incidental to the pay item Removal of Existing Coatings from Concrete. When the surface to be sealed contains pavement markings, the Department will consider all materials, equipment and labor to remove the existing pavement markings as incidental to the pay item Removal of Existing Pavement Marking.

512.10

On page 377, **Add** the following after the last item:

512	Linear Feet or Square Foot (Meter or Square Meter) or Each	Removal of Existing Pavement Marking
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513.13

On page 383, **Replace** the last sentence of the first paragraph with the following:

Weld stiffeners connected to cross frames and/or diaphragms to the top and bottom flange.

513.24

On page 391, **Add** the following sentence after the last sentence of the fifth paragraph:

The maximum sweep at any point along all members of an expansion joint shall not exceed ¼” in 50’.

513.28

On page 395, **Replace** the second paragraph with the following.

Shop blast unpainted Grade 50W material and main members requiring galvanized coating to SSPC-SP 6, commercial blast. QCP #3 shall apply according to Item 514.

514.17.C

On page 411, **Replace** the first paragraph of section with the following.

C. Additional Information Pertaining to Shop Applied Paint. Apply a prime coat to all structural steel surfaces by brush or spray methods, including insides of holes, behind stiffener clips, areas that are to be embedded in concrete and contact surfaces of connection, and splice material that is to be fastened with bolts in the shop or field. For ASTM A709 Grade 50W and 70W steel embedded in concrete diaphragms, apply a prime coat to the entire surface area encased within the diaphragm and extending at least 12-in outside the diaphragm. Apply a mist coating from 0.5 to 1.5 mils (12.5 to 37.5 µm) on surfaces within 2 inches (50 mm) of field welds other than those attaching intermediate or end cross frames to beams or girders. Apply one coat of primer to pins, pin holes, and contact surfaces of bearing assemblies, except do not paint those containing self-lubricating bronze inserts.

Once the prime coat is dry, apply erection marks, using a thinned paint of a type and color that is completely concealed by, and compatible, with the second coat.

515.06

On page 423 **Replace** the section with the following:

515.06 Shop Drawings. Provide shop drawings conforming to 501.04 and the following requirements.

Include all details, dimensions, dimensional tolerances, and size of materials, lifting devices, inserts, reinforcing steel supports, fabricator incorporated reinforcing, contractor supplied items, piece mark diagrams for field connection and erection of any steel and all prestress members, and all other information necessary for the complete fabrication and erection of the prestressed members. Show all items that will be incorporated into each prestressed member, including Contractor supplied hardware. All steel hardware to be incorporated into the prestressed member and added after Contract Sale shall be galvanized according to 711.02; and meet clearances specified in 509.04.

Provide mill certs to the fabricator, prior to the prefabrication meeting.

Provide the detensioning procedure and pattern conforming to 515.16.

515.10

On page 424, **Add** the following sentence after the last sentence in the section:

Verify casting bed losses annually and provide the data as an update to the Fabricator's Quality Control Plan.

515.15

On page 426, **Replace** the section with the following:

515.15 Concrete. The fabricator shall provide concrete mix designs to Office of Materials Management. The submittal will include:

- A. Test data showing the mix achieves the required 28-day strength when cured by methods used for member fabrication. The strength of the concrete for the mix design approval and during production is determined using a set of ~~two, 6 × 12-inch cylinders~~ or three, 4 × 8-inch cylinders.
- B. w/c ratio (maximum =0.40)
- C. A design and maximum slump. For SCC concrete, provide a slump flow range in accordance with ASTM C1611, provide the following:
 - a. Visual Stability Index (VSI) – Provide a VSI of 0 or 1 as listed in ASTM C 1611 for acceptance of the mix design
 - b. J-Ring- Test J-ring passing ability in accordance with ASTM C 1621. The measured difference between the slump flow and J-ring flow must be two inches or less to be acceptable.
 - c. Static Segregation- Test for static segregation according to ASTM C 1712. The measured penetration must be one-half inch or less to be acceptable.
 - d. Column Segregation- Test for column segregation according to ASTM C 1610. Provide a static segregation ≤15.0%.
- D. Test data showing the mix design achieves 2000 coulombs or less at 90 days when tested according to AASHTO T277. Use samples for the test that were mixed without corrosion inhibitors and that were cured with the same methods that will be used to produce the prestressed concrete bridge members. Do not apply additional cure to samples that have reached the required design strength.

Changes in proportioning, cement, pozzolans or aggregate will require retesting and resubmittal. Office of Materials Management may waive the retests. Provide the waiver request in writing and include all information for the new mix design and a comparison to the previously tested and approved mix design(s).

Deliver concrete according to Item 499 except that 499.03 and 499.04 does not apply. The plastic air content of the concrete before placement shall be 6 ± 2 percent. If the Department questions the concrete's placed air content, obtain cores from the prestressed member and have hardened air testing performed by an independent testing lab acceptable to the Department. Beams with hardened air contents below 4 percent will be rejected. Add an approved corrosion inhibiting admixture at the approved dosage and document the dosage that has been incorporated into each batch of concrete.

Maintain the mix design slump during production. Segregation of the mix is not acceptable. Do not exceed the maximum water-cement ratio during concrete production. When using admixtures to increase the slump, use Type F or G as described in 705.12. Do not use calcium chloride or admixtures containing calcium chloride.

Sample and test the conventional or SCC concrete for prestressed concrete members as specified in Table 515.15-1. For SCC mixes, perform slump flow in accordance with ASTM C 1611 and provide a VSI of 0 or 1. Fabricate test specimens in accordance with ASTM C 1758 per Table 515.15-1. Perform ASTM C 1621 and C 1712 at least once per bed line, per day, during concrete production, and within the tolerances listed in 515.15.C.

TABLE 515.15-1, TEST SPECIMEN REQUIREMENTS¹

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 4
30 to 60 cubic yards	First and last load per bed plus one random sample.	Minimum of 6
Greater than 60 cubic yards	First and last load per bed plus 2 random samples.	Minimum of 8

Determine strength, for both strand release and final shipping, by testing a group of cylinders, which consists of one cylinder from every sample location. 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.

The inspector may require additional cylinders from locations where the concrete does not conform to mix design or placement requirements. Include these additional cylinders in the group of cylinders for determining release and final strength.

The fabricator may place concrete in the bottom flange of a box beam before placing the interior forms and reinforcement for the upper portion of the member, provided continuous concrete placement is not interrupted for more than 45 minutes.

Screed the top surfaces of non-composite members and finish the surface with a burlap drag or other means to provide a uniform surface with a gritty texture suitable for waterproofing.

Screed the top surface of composite members and finish the surface with a wire broom, in a transverse direction and penetrating the finished surface approximately 1/4 inch (6 mm) + 1/16 inch (1.5 mm) – 1/8 inch (3 mm) at a maximum spacing of 1 -1/2 inches (38 mm).

Immediately after final concrete placement and surface finishing, protect the concrete surface with a suitable enclosure until application of live steam or radiant heat. Assure the enclosure's ambient

temperature is at least 50 °F (10 °C). Assure the plastic concrete's temperature before initial set doesn't rise more than 10 °F (5 °C) per hour. Limit the total rise before initial set to less than 40 °F (22 °C) and the maximum temperature to 100 °F (38 °C). Record the times and concrete temperatures before initial set.

For curing with low-pressure steam, do not apply live steam directly onto the concrete forms if it causes localized high temperatures.

For accelerated curing with radiant heat, apply radiant heat using pipes circulating steam, hot oil, or hot water, or using electric heating elements. Minimize moisture loss by covering all exposed concrete surfaces with plastic sheeting, 705.06, or by applying a liquid membrane curing compound, 705.07, to all exposed concrete surfaces. Before bonding field-cast concrete or other materials in the finished structure, remove the curing compound from the shear faces of composite members and other surfaces.

Start initial application of the steam or heat 2 to 4 hours after final concrete placement. If using retarders, start applying the steam or heat 4 to 6 hours after final concrete placement. If determining the time of initial set according to ASTM C 403, these time limits do not apply. Record and report the actual time of concrete placement of the last load, placement of enclosure and initial set time.

Apply live steam or radiant heat so the ambient temperature within the curing enclosure does not gain more than 40 °F (22 °C) per hour until reaching the curing temperature. Do not exceed 160 °F (71 °C). Only use a maximum temperature of 180 °F (82 °C) if the fabricator documents to the Department that delayed ettringite or alkali silica reaction is not at issue. Maintain the maximum curing temperature until the concrete has reached the required release strength. De-tension the strands immediately upon completing the accelerated curing. Keep a record of the time the application of heat began and curing temperatures throughout the entire curing process.

Provide a final surface finish free of bug holes, honeycombing, and other defects. Neatly fill cavities in the exposed surface of beams with mortar of the same cement and fine aggregate mixed in the same proportions as used in the concrete being finished.

Clean the concrete and apply and cure the grout according to the manufacturer's published recommendations. Reject beams with honeycombing that impairs the member's performance. Follow the requirements of Item 512.03 for beams to be sealed with epoxy urethane.

516.03

On Page 433, **Replace** the first paragraph with the following:

516.03 Coating. Coat exposed steel bearings attached to structural steel to match the coating of the adjoining structural steel. Metallize bearings with 100 percent zinc wire or galvanize bearings according to 711.02 that are to be attached to concrete beams. Repair damage to metallized or galvanized coatings according to 711.02.

516.03

On Page 433, **Replace** the second paragraph with the following:

Coat metal parts of expansion joints not part of extensions to existing steel expansion joints with metallized 100 percent zinc wire. Prepare the surface to be coated and apply coating as required by The Society of Protective Coatings SSPC-CS-23.00(1). Apply coating to a minimum thickness of 6 mils. The vertical extensions to existing steel expansion joints are not to have any protection and the horizontal extensions to existing steel expansion joints are to match the existing protection.

Beginning on page 438 **Replace** the section with the following:

ITEM 518 DRAINAGE OF STRUCTURES

- 518.01 Description**
- 518.02 Fabrication**
- 518.03 Materials**
- 518.04 General**
- 518.05 Porous Backfill**
- 518.06 Prefabricated Geocomposite Drain (PGD)**
- 518.07 Pipe**
- 518.08 Scuppers**
- 518.09 Excavation**
- 518.10 Method of Measurement**
- 518.11 Basis of Payment**

518.01 Description. This work consists of constructing drainage systems.

518.02 Fabrication. Fabricate scuppers according to Item 513. Select a fabricator that is at least pre-qualified at level SF. The Department will base final acceptance of all fabricated members on the Engineer's approval that the fabricated items can be successfully incorporated into the structures. Submit mill test reports for structural steel, steel castings, bronze, and sheet lead certified according to 501.06.

518.03 Materials. Furnish materials conforming to:

Scuppers, structural steel and cast steel	513
Metal pipe.....	707
Plastic pipe	707.33, 707.45
Other metals.....	711
Prefabricated Geocomposite Drain (PGD).....	712.16
Geotextile fabric, Type A.....	712.09
Reinforced thermosetting resin pipe.....	707.80

Furnish pipe specials of a grade at least as high as the type of pipe specified.

Furnish porous backfill consisting of gravel, stone, or air-cooled blast furnace slag, with a No. 57 size gradation according to Table 703.01-1. The sodium sulfate soundness loss shall not exceed 15 percent.

Furnish ACBFS conforming to Supplement 1027.

518.04 General. As shown on the plans, connect all parts to new or existing sewers or other outlets.

When installing to superstructure, take into account the deflection of spans under full dead load.

518.05 Porous Backfill. Place porous backfill as shown on the plans. When not shown on the plans, place backfill at least 2 feet (0.6m) thick behind the full length of abutments, wing walls, and retaining walls. Measure the thickness of porous backfill normal to the abutment or wall face. The Contractor may leave undisturbed rock or shale within 18 inches (0.5 m) of the abutment or wall. Place 2 ft³ (0.23 m³) of bagged No. 3 aggregate at each weep hole to retain the porous backfill. Place the porous backfill for the full width of the trench and extend it to the bottom of the approach slab or base, as shown in the plans. Place porous backfill in loose lifts not to exceed 12 inches. Run a plate compactor or tamper over the top of each lift for consolidation of approximately 85% of original layer thickness. If placed in loose lifts greater than 12 inches, flood the porous backfill at the appropriate moisture content for consolidation of approximately 85% of original layer thickness.

518.06 Prefabricated Geocomposite Drain (PGD) Do not use PGD on Integral Abutments or above the beam seat elevation on Semi Integral Abutments.

A. Preparation. Prepare the surface of the wall or abutment, on which the PGD is to be placed, to be free of soil, debris, and excessive irregularities that prevent continuous contact between the wall surface and the PGD.

B. Placement. Place PGD strips to provide continuous coverage over the face of the wall. Unroll PGD directly onto the prepared surface. Do not drag the PGD across the ground. Tension the PGD to remove any creases or wrinkles. Do not expose PGD to weather or direct sunlight for longer than 5 days. Place the geotextile fabric side to face toward the backfill or retained soil.

Construct the PGD in horizontal or vertical courses. Place the PGD in direct contact with the wall and secure to the surface using either adhesives per manufactures recommendation or nails as follows. Secure with 2 inch (51 mm) or longer concrete nails along with washers or wood battens of not less than 9 square inches (5887 square mm). Space the concrete nails no more than 3 feet (0.9 m) apart, both horizontally and vertically. Use at least one horizontal row of nails in each horizontal course of PGD, or use at least one vertical column of nails in each vertical course of PGD. Do not affect the drainage area and the downward flow in the drain by the adhesive or fasteners.

C. Splicing and covering. Form horizontal or vertical seams between courses by utilizing the flap of geotextile extending from one course and lapping over the flap on that of the next course. Securely fasten the overlapped flaps with a continuous strip of 3 inch (76 mm) wide, waterproof, plastic tape.

Where splices are necessary without a geotextile flap, place and center a 12 inch (0.3 m) wide continuous strip of geotextile over the seam and fasten with continuous strips of 3 inch (76 mm) wide, waterproof, plastic tape.

As an alternative method of splicing, either horizontally or vertically, rolls of PGD may be joined together by turning back the geotextile flap at the roll edges and interlocking the drainage core approximately two inches. Fold the flap under and tape it beyond the seam with 3 inch (76 mm) wide, waterproof, plastic tape. Shingle lap the core and fabric in the direction of water flow.

To prevent soil intrusion, cover all exposed edges of the PGD core by tucking the geotextile flap over and behind the core edge. Alternatively, a 12 inch (0.3 m) wide strip of geotextile may be used to wrap the edge, taping it to the geotextile side 8 inches (203 mm) in from the edge with a continuous strip of 3 inch (76 mm) wide, waterproof, plastic tape and folding the remaining 4 inches (102 mm) over and behind the core edge. Caps (bottom, top, or end) provided by the manufactures can also be used according to manufacturer's instructions.

Construct all seams, splices, and caps to prevent the backfill material from entering the PGD.

D. Connecting to Weep Holes and Drainage System. Connect the PGD to the drainage system as shown on the plans or per manufacturer's recommendations if not shown in the plans. Maintain a positive outlet for the water in the PGD at all locations.

Do not seal, block or restrict weep holes with the PGD. If available, use weep hole fittings provided by the manufacturer and installed to the manufacturer's instructions. If the PGD core is not perforated at the weep hole location, make a hole in the PGD core matching the diameter of the weep hole or larger to accommodate the pipe or fitting. When making holes in the core, do not damage the geotextile fabric.

Use manufacturer provided outlet fittings that transition between the PGD and the outlet pipe, and prevent material from entering the outlet pipe. If manufacturer fittings are not available, provide smooth-lined or corrugated outlet fittings according to manufacturer's recommendations. Fasten and seal outlet fittings to the wall drains according to manufacturer's recommendations.

E. Repair. Patch or replace damaged PGD. Remove the damaged area and place a PGD patch and splice the edges according to 518.06.C. If the damaged portion is larger than 50 percent of the PGD roll width, cut across the entire width of the roll to remove the damaged portion and splice according to 518.06.C.

If damage is limited to tears in the geotextile fabric, place a geotextile patch extending 6 inches (152 mm) beyond the damaged area in all directions or to the edge of the roll, and seal the entire perimeter with 3-inch (76 mm) wide, waterproof, plastic tape.

Replace and repair damaged PGD at no additional expense to the Department.

F. Backfilling. Replace or repair any PGD component that is damaged during the backfilling operation. Use hand operated compaction equipment to compact the backfill within 1-foot (0.3m) of the PGD.

518.07 Pipe. For drain pipe leading down from the superstructure, use either galvanized steel pipe, 748.06, or plastic pipe, 707.45, or reinforced thermosetting resin pipe, 707.80. Provide specials, elbows, tees, wyes, and other fittings essential for a complete and satisfactory installation of the same material and quality as the pipe. Construct watertight joints of adequate strength. In steel pipe, weld joints or use clamp-type couplings having a ring gasket. In plastic pipe, make joints according to the applicable ASTM standard. In reinforced thermosetting resin pipe, make joints according to manufacturer guidelines and procedures. Securely fasten the pipe to the structure with hanger or clamp assemblies that are galvanized according to 711.02.

Place subsurface pipe as shown in the plans. If the plans require drainage pipe in the porous backfill, provide plastic pipe conforming to 707.33.

For corrugated metal pipe, perforated specials are not required and the Contractor may make bends with adjustable elbows conforming to the thickness requirements of the pipe specifications.

518.08 Scuppers. Construct secure and watertight connections, including the connections to adjacent concrete. Provide castings, true to form and dimension. Weld the joints of structural steel scuppers. Galvanize scuppers according to 711.02.

518.09 Excavation. Excavate all material encountered to the dimensions necessary to provide ample space at least to install pipe or other drainage facility behind abutments and for outlets.

518.10 Method of Measurement. The Department will measure Porous Backfill and Porous Backfill with Geotextile Fabric, by the number of Square Yards (Square Meters), Cubic Yards (Cubic Meters) or lump sum. The Department will measure Prefabricated Geocomposite Drain by the number of Square Yards (Square Meters) or lump sum. The Department will measure pipe specials by the same method as the pipe. If pipe is by the foot (meter), the Department will measure the pipe along its centerline. The Department will measure all Square Yard (Square Meters) items as the area of the abutment or wall being covered for drainage.

518.11 Basis of Payment. The cost to backfill, if not separately itemized in the Contract, and excavation is incidental to the drainage facility that necessitates them.

The Department will include bagged aggregate with porous backfill for payment.

The Department considers all items to place the Prefabricated Geocomposite Drain including surface preparation, tape, fasteners, adhesives, outlet fittings or other support material, incidental to the Prefabricated Geocomposite Drain.

The Department will pay for perforated and non-perforated pipes for the Prefabricated Geocomposite Drain as separate pay items per 518.07.

The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
518	Cubic Yard (Cubic Meter) Square Yard (Square Meter) or Lump Sum	Porous Backfill
518	Cubic Yard (Cubic Meter) Square Yard (Square Meter) or Lump Sum	Porous Backfill with Geotextile Fabric
518	Square Yard (Square Meter) or Lump Sum	Prefabricated Geocomposite Drain
518	Foot (Meter)	___ inch (___ mm) ___ Pipe, Including Specials
518	Each	Scuppers, Including Supports
518	Pound or Foot (Kilogram or Meter)	Trough Horizontal Conductors
518	Pound or Foot (Kilogram or Meter)	Pipe Horizontal Conductors
518	Foot (Meter)	___ inch (___ mm) Pipe Downspout Including Specials

519.04

On Page 441 **Replace** the second sentence of the last paragraph with the following:

Thoroughly clean the surface of the area to be patched and all exposed reinforcing steel of all dirt, dust, all loose rust or other foreign materials with water, air under pressure, or any other method that produces satisfactory results.

520

On Page 442 **Replace** the entire section with the following:

ITEM 520 PNEUMATICALLY PLACED CONCRETE- SHOTCRETE

520.01 Description

520.02 Materials

520.03 Shotcrete Mix Design.

520.04 Delivery of Materials.

520.05 Storage of Materials.

520.06 Equipment.

520.07 Submittal Requirements.

520.08 Removal of Concrete.

520.09 Reinforcement.

520.10 Blast Cleaning of Repair Area.

520.11 Preconstruction Testing.

520.12 Shotcrete Placing.

520.13 Curing.

520.14 Inspection and Testing
520.15 Method of Measurement
520.16 Basis of Payment

520.01 Description. This work consists of removing all loose and disintegrated concrete; surface preparation; furnishing and placing reinforcing steel, welded steel wire fabric, and dowels; furnishing and placing pneumatically applied concrete; and curing for new work, rehabilitation, or repair.

520.02 Materials. Furnish materials conforming to:

Reinforcing steel	509
Portland cement	701.01 through 701.05, 701.09
Micro-silica	701.10
Fly ash	701.13
Slag Cement.....	701.11
Fine aggregate	703.02, 703.03
Air-entraining admixture	705.10
Chemical admixture for concrete	705.12
Welded steel wire fabric	709.10 or 709.12
Swedged anchor bolts	711.10

Use water for concrete mixing free from sewage, oil, acid, strong alkalis, vegetable matter, clay, and loam. Potable water is satisfactory for use in concrete. Non-potable water will meet the requirements of ASTM C 1602. Water from a reclaiming system will contain no more than 0.06% chlorides. Test the non-potable and reclaiming system water prior to the start of shotcrete production. Provide certified test data to the Engineer, at least 21 days prior to shotcrete production.

520.03 Shotcrete Mix Design. Only use mix designs accepted by the Department and the following requirements.

A. Provide a Shotcrete job mix conforming to the following:

1. Compressive strength. Provide a compressive strength, at a minimum, of 2000 psi at 3 days, and 4000 psi at 7 days, or as per plan requirements.

2. Migrating Corrosion Inhibitors. Each admixture shall be accompanied by manufacturer's written certification meeting ASTM C 1582. Dosage rate will follow manufacturer's recommendations.

~~3. Corrosion Inhibitor grease. Use corrosion inhibitor (grease) conforming to the following:~~

~~3.1.1. Drop point 300 °F (149 °C) minimum by ASTM D 566.~~

~~3.1.2. Flash point 300 °F (149 °C) minimum by ASTM D 92.~~

~~3.1.3. Water content 0.1% maximum by ASTM D 95.~~

~~3.1.4. Rust test — Rust Grade 7 or better after 720 hours, aggressive conditions: Rust Grade 7 or better after 1000 hours by ASTM B 117 and ASTM D 610.~~

~~3.1.5. Water soluble ions:~~

~~Chlorides — 10 ppm maximum — by ASTM D 512~~

~~Nitrates 10 ppm maximum — by ASTM D 3867~~

Sulfates 10 ppm maximum — by APHA 427D (15th ED)

~~3.1.6. Oil separation 0.5% by weight maximum at 160 °F (71 °C) by FIMS 719B, Method 321.2.~~

~~3.1.7. Soak test 5% Salt Fog at 100 °F (38 °C), 5 mils (0.13 mm) (Q Panel Type S), immerse panels in 50% salt solution and expose to 5% Salt Fog no emulsification after 720 hours by ASTM B 117 Modified.~~

B. Provide prepackaged shotcrete materials in accordance with ASTM C 1480 from a single manufacturer. The minimum compressive strength for shotcrete is 2000 psi at 3 days and minimum of 4000 psi at 28 days. Follow the manufacturer’s recommendations for storing the material on site, do not allow the prepackaged materials to become wet prior to use. Submit certified test data to the Engineer for approval prior to use that and meets the requirement of Table 520.3.B-1.

Table 520.3.B-1, SHOTCRETE CONCRETE PROPERTIES

Hardened Properties	Test Method	Requirement
Slant Shear Bond Strength @ 28 days	ASTM C 882 Modified ⁽¹⁾	2000 psi (14 MPa), min.
Drying Shrinkage @ 28 days	ASTM C 157 Modified ⁽²⁾	0.08%, max.
Rapid Chloride Permeability @ 28 days	ASTM C 1202 ⁽³⁾ / AASHTO T 277 ⁽³⁾	750 coulombs, max.
Volume of Permeable Voids @ 28 days	ASTM C 642 ⁽³⁾	10%, max.
Freeze-Thaw Resistance @ 300 cycles	ASTM C 666, Procedure A	95% RDM, min.
Flexural Strength @ 28 day	ASTM C 78	900 psi (6 MPa), min.
Compressive Strength @ 3 days	ASTM C 1604	2000 psi (14 MPa), min.
Compressive Strength @ 28 days	ASTM C 1604	4000 psi (28 MPa), min.

(1) No epoxy bonding agent used.

(2) ICRI Guideline No. 03733, “A Guide for Selecting and Specifying Materials for Repair of Concrete Surfaces”, 1”x1”x10” prism, air cured

(3) Either Rapid Chloride Permeability or Volume of Permeable Voids can be used.

Provide dry mix with migrating corrosion inhibitors. Each admixture shall be accompanied by manufacturer’s written certification meeting ASTM C 1582. Dosage rate will follow manufacturer’s recommendations.

520.04 Delivery of Materials. Deliver all materials in their original containers bearing the manufacturer’s label, specifying date of manufacturing, batch number, trade name, and quantity. Each shipment will be accompanied by a Safety Data Sheet (SDS).

520.05 Storage of Materials. Stock and store any material necessary to perform the work to prevent damage by the elements. Keep the storage space clean and dry per Manufacturer’s recommendations

520.06 Equipment. Provide shotcrete equipment capable of delivering the premixed material accurately, uniformly and continuously through the delivery hose.

A. Mixing: Provide dry-mix shotcrete using a rotary type or pressure vessel gun with a continuous-type predampener, capable of thoroughly mixing the shotcrete mixes in sufficient quantity to maintain

shotcreting continuity and a moisture range of 3 to 5% prior to discharging into the gun. Operate all equipment in accordance with the manufacturer’s recommendations.

Provide wet-mix shotcrete using a positive displacement pump (swing tube). Concrete for wet-mix shotcrete placement may be supplied by an approved concrete batch plant and delivered by truck concrete mixers. Supply plant batched concrete and delivery equipment meeting the requirements of ASTM C 94. Where the concrete mixture is prepared on-site, use mixing equipment with a calibrated water meter capable of mixing prepackaged shotcrete material. Supply concrete mixes used in shotcrete placement having a W/Cm ratio between 0.35-0.45. The maximum 90-minute limit will be implemented for wet-mix shotcrete after the addition of water to the mixture. Use of hydration control admixtures (HCA) may be used to extend the 90 minutes as approved in the job mix approval prior to use.

B. Air Pressure, Dry-Mix Process. Use a compressor or blower capable of delivering a sufficient volume of oil-free air at the pressure shown in Table 520.6.B-1. Maintain steady pressure throughout the placing process.

Use a water pump or a water booster pump with the size and capacity to deliver water to the nozzle with a pressure at least 15 psi more than the required air pressure.

The values shown in the Table 520.6.B-1 are based on a hose length of 150 feet with the nozzle less than 25 feet above the delivery equipment. Increase operating pressure approximately 5 psi for each additional 50 feet of hose and approximately 5 psi for each 25 feet the nozzle is raised.

TABLE 520.6.B-1, COMPRESSOR CAPACITIES

Compressor Capacity, CFM	Hose Diameter, in.	Maximum Size of Nozzle Tip, in.	Operating Air Pressure Available, psi
250	1	3/4	40
315	1-1/4	1	45
365	1-1/2	1-1/4	55
500	1-5/8	1-1/2	65
600	1-3/4	1-5/8	75
750	2	1-3/4	85

C. Air Pressure, Wet-Mix Process. Use a compressor or blower capable of delivering a sufficient volume of oil-free air to operate the pump at a line pressure between 100 psi and 300 psi. Use delivery hoses between 1-1/2 inches and 3 inches in diameter. Use mixing equipment capable of thoroughly mixing the materials in sufficient quantity to maintain continuous placement.

520.07 Submittal Requirements. Submit to the Engineer for review at least two weeks before beginning the work.

A. Evidence the contractor has successfully executed no less than five projects with similar size and scope over the last five years. The information provided is to include a statement of the type of work, and contact information for Engineer or Owner who have knowledge of the execution of the work and present condition of the work.

B. Documentation and owner references, verifying the qualifications of the nozzlemen. Personnel designated as nozzlemen on the job are required to document a minimum of one year of experience in the application of shotcrete on a comparable project and hold a current certificate for ACI Shotcrete Nozzleman, either dry-mix process or wet-mix process, as corresponds to the process indicated. Certifications for all nozzlemen to be utilized on the job.

C. Documentation the supervisor has experience supervising more than one comparable project including written documentation and owner references, verifying the qualifications.

D. JMF information and a list of materials and quantities. Include list of Admixture literature used. Indicate the admixture type and the manufacturer's recommendations for mixing the admixtures with JMF.

E. Methods and materials used for Depth control quality measures.

520.08 Removal of Concrete. In areas to be repaired, remove all loose, soft, honeycombed, and disintegrated concrete, plus a minimum of 1/4 inch (6 mm) to a maximum of 1 inch (25 mm) depth of sound concrete. Remove additional concrete as necessary to permit the placement of the minimum specified shotcrete thickness of not less than 1-1/2 inches (38 mm), except on top horizontal surfaces of not less than 3/4 inch (19 mm). Once initial removals are made, undercut all exposed reinforcing bars. Undercutting will expose the full circumference of the exposed reinforcing bar. Provide a clearance of 3/4 inch (19 mm) between the exposed reinforcing bar and the surrounding concrete.

Remove all heavy corrosion and scale from the reinforcing bars with wire brush or abrasive blasting. A minor amount or tightly adhered rust may be left in place.

Saw cut edge locations to a minimum of 1/2 inch (13 mm). Maintain an edge location depth of not less than the specified minimum depth for all repair areas.

Only use pneumatic, hand tools, or hydrodemolition equipment to obtain results satisfactory to the Engineer in the removal of concrete and in preparing and shaping the areas to be repaired.

If working around reinforcing steel, avoid loosening the steel, or shattering the concrete around it, beyond the repair area.

520.09 Reinforcement. For existing reinforcing bar that have been cut or having lost 20% or greater section loss, splice in supplement reinforcing bar of equal bar size. Use mechanical rebar slicing system for supplemental reinforcing bars.

Place deformed wire fabric in all vertical surface areas where the thickness of the shotcrete patch is greater than 1 1/2 inches (38 mm) or bottom side of horizontal surfaces. Repairs areas on the top of horizontal surfaces do not require deformed wire fabric. Reinforce patches with deformed wire fabric meeting either 2 x 2 inches (50 x 50 mm) with wire size number D 0.9 (MD 6), or 3 x 3 inches (75 x 75 mm) with wire size number D 1.4 (MD 9). Cover the entire area of the repair with deformed wire fabric, place the wire fabric no closer than 1/2 inch (13mm) to the prepared surface and not less than 1 inch (25 mm) from the finished surface. Overlap adjacent sheets of deformed wire fabric by 6 inches (150 mm), and securely tie them together. Carefully pre-bend fabric before installation to fit around corners and into re-entrant angles. Rolled wire fabric is prohibited. Wire fabric held in place by elastic force (spring-loaded) or by friction is prohibited.

The deformed wire fabric can be tied to the existing reinforcing bars if there is a 3/4 inch (19 mm) clearance around the bar. The maximum anchor spacing for the deformed wire fabric is 18 inches (46 cm) on center, in all horizontal for vertical surfaces and 12 inches (30 cm) in all horizontal for bottom vertical surfaces, overhead. A minimum of 3 anchors are required for each repair area. Unless specified on plans use 3/8 inch (10 mm) swaged anchor bolts. Embed anchors to manufactures recommendation to develop full capacity of swedge bolt. Use swedge bolt and nut to secure wire fabric.

520.10 Blast Cleaning of Repair Area. After performing 520.08 and 520.09, blast clean all surfaces to which shotcrete is to bond between 24 and 72 hours prior to placing of the shotcrete. All surfaces to which the concrete is to bond include exposed reinforcing steel, existing concrete, and the work face of any previously placed material. Blast clean all surfaces using high-pressure water blasting with or without abrasives in the water, abrasive blasting with containment, or vacuum abrasive blasting. High-pressure water washing requirements can be defined as a minimum pressure of 4000 psi (28 MPa) and flow of 5.0 gal/min (79 L/min). Maintain a standoff distance (the distance between the nozzle and the surface being cleaned) to a maximum of 12 in.

Bring the prepared substrate to saturated surface dry (SSD) with water meeting 520.02, ensure that all prepared substrate maintain a SSD prior to and during the shotcrete placement. The Engineer will approve the preparation and condition of all surfaces immediately before the application of the shotcrete.

520.11 Preconstruction Testing. Before placing any shotcrete on the project, each nozzleman will need to perform mock-up panels to be accepted by the Engineer. The purpose of the mock-up panel is to demonstrate the nozzleman's ability to place and finish shotcrete around the reinforcement. A nozzleman shall not perform any work on the structure until the Engineer accepts every mock-up panel.

Fabricate mock-up panels using the same personnel, equipment, materials and procedures that will be used on the project. Finish mock-up panels as required by plan, if no finish is required by plan, texture exposed surfaces according to 520.12.

Construct mock-up panels no less than 3 ft (0.9 m) square and a minimum of 4 inches (100 mm) deep. Mock-up panel depth will be adjusted if greater than 4 inches (100mm) to match the depth of application shown in the plans. Install reinforcement in the mock-up panel that matches the largest size and tightest spacing found for the reinforcement in the bridge. Orient the mock-up panel for a vertical surface application. If an overhead application is specified in the plan, perform an additional mock-up panel oriented for overhead application. Apply the shotcrete until panel is full and finish exposed surfaces. Age mock-up panels for at least 24 hours before cutting. Cut every mock-up panel in half, transverse to the main reinforcements. There shall be no voids with a maximum dimension greater than 0.25-inches adjacent to the reinforcement bars. If 0.25-inches or greater voids are found, an additional cut is to be performed to prove the debonding does not extend greater than 3-inches along the length of the reinforcement bar. The shotcrete in the mock-up panel shall not sag nor decrease the bond of the preceding coat for multiple layer application of shotcrete.

520.12 Shotcrete Placing. Place the shotcrete when the ambient temperature is between 50 °F and 90 °F. Do not place concrete against a surface containing frost, ice, standing water, or when the surface temperature is less than 40 °F. Protect the work from environmental conditions until final curing has been applied.

Do not place shotcrete during a rainfall event. Immediately cover previously placed shotcrete, not yet cured. Resume concrete placement after the rainfall stops.

Discontinue placement of shotcrete or shield the nozzle stream if wind causes separation of ingredients from the nozzle stream.

Apply the concrete using pneumatic equipment that sprays the mix onto the prepared surface. Minimize rebound and produce a compacted dense homogenous mass.

Use shooting strips or guide wires to ensure square corners, straight lines, and a plane surface of shotcrete, except as otherwise permitted by the plans or approved by the Engineer. Place shooting strips to keep the trapping of rebound at a minimum. At the end of each day's work, or similar stopping periods requiring construction joints, cut the work on a 45° angle through the full depth of the section, roughen the surface by stiff broom, racking or scoring for good surface bond when placing subsequent shotcrete layers. In shooting all surfaces, ensure that the stream of flowing material from the nozzle impinges as nearly as possible at right angles to the surface being covered, and hold the nozzle 2 to 4 feet (0.6 to 1.2 m) from the working surface.

Finish shotcrete repairs flush with the original masonry or concrete surface, except as noted for areas of exposed reinforcing steel. Do not initiate cutting or finishing until the shotcrete is sufficiently set. If not specified on plan, use rubber/sponge float to finish all exposed surfaces. On vertical and overhead surfaces, the layer thickness is to be established and demonstrated during the preconstruction testing phase of the project. If a successive coat is applied on shotcrete that has set for more than 2 hours, clean and dampen the shotcrete surface as required in 520.05 for the prepared surface.

After shotcrete has been placed to the desired thickness, cut off all high spots with a sharp trowel, or screed them to a true plane as determined by shooting strips or by the original masonry surface, or as directed. If using screeds, apply them lightly to all surfaces so as not to disturb the shotcrete for an appreciable depth, and work them in an upward direction when applied on vertical surfaces.

Shotcrete rebounded outside of the formwork is prohibited from being worked back into the surface and is not to be salvaged and included in later batches. Rebounded shotcrete is the responsibility of the Contractor for removal and disposal.

520.13 Curing. Cover the pneumatically placed shotcrete patches with burlap or cotton mats and keep them wet for 7 days after placing. If it is not practical to use mats, keep the surface wet by sprinkling for the same length of time. 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 511.14, 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. Protect all shotcrete against cold weather according to 511.12.

Do not use curing compounds on any surfaces against which additional shotcrete or other cementitious finishing materials are to be bonded unless positive measures, such as prepare surface per 520.10, are taken to completely remove curing compounds prior to application of such additional materials.

520.14 Inspection and Testing. At a minimum provide one test panel per nozzleman at the beginning of each day shotcreting occurs. The purpose of the test panel is to determine the compressive strength of all shotcrete placed after test panel per Table 520.3B-1. Fabricate test panel using the same personnel, equipment, materials and procedures that will be used on the project.

Construct a 24 inch x 24 inch x 3.5 inch (610mm x 610mm x 89mm) test panel with no reinforcement. Cure test panel in the same manner used for the structure. Follow ASTM C 1140 for panel size and coring, and compressive strength testing as per ASTM C 1604. Provide a minimum of six cores, test three cores per test age. Test the cores at an AASHTO Accredited laboratory for compressive strength.

After curing and before final acceptance, sound all patched areas. Remove and replace all unsound or cracked areas. In addition to sounding all patches, the Department will base acceptance of the shotcrete on compressive strength tests on cores taken from test panels.

Remove, replace, re-inspect, and re-test all defective patches, as determined by sounding, visible cracks, or unacceptable cores. Fill core holes according to 519.

Maintain the in-place inspection access equipment employed during the original work activities or provide alternate inspection equipment such as platform lifts, bucket trucks, snoopers trucks, or equivalent as approved by the Engineer for testing.

520.15 Method of Measurement. The Department will measure Pneumatically Placed Shotcrete by the number of square feet (square meters). The Department will measure the area of exposed surfaces of all completed, tested, and approved patches, irrespective of depth or thickness of the patch. If a patch includes corners or edges of such members as beams, columns, or curbs, the Department will include all the exposed surfaces; if a patch extends completely through a member or a slab, the Department will include both exposed surfaces.

The Contractor is responsible for all test panels, coring repair of core holes, independent laboratory testing of the cores, replacement of rejected areas, and all previously mentioned work under Pneumatically Placed Shotcrete for payment.

520.16 Basis of Payment. The Department will not pay for additional reinforcement to replace that damaged by the Contractor's operations.

The Department will not pay for removing, replacing, and re-inspecting of defective patched shotcrete as determined by sounding, visible cracks, or unacceptable cores.

The Department will pay for accepted quantities at the contract price as follows:

TABLE 520.16-1 SHOTCRETE 28 DAY COMPRESSIVE STRENGTH PAY FACTOR

Compressive Strength (psi)	Pay Factor (%)
>4000	100
3999 – 3700	90
3699 – 3520	75
<3520	Remove and Replace

Item	Unit	Description
520	Square Foot (Square Meter)	Pneumatically Placed Concrete Shotcrete

523.02

On page 451, **Replace** the first and second paragraphs with the following:

523.02 General. Perform dynamic tests on a ~~minimum~~ of two successfully tested piles. A successfully tested pile is one that provides adequate data to provide pile driving criteria as described in 523.04. Test

the first two piles driven for each pile size and UBV combination defined in the Plans; the two piles tested should be the two piles furthest apart within the same substructure unit and phase. Perform signal matching analysis of the dynamic test data on at least one of the two test piles. Perform the test according to ASTM D 4945 to determine driving requirements to achieve the required ultimate bearing values for the piles to be installed in the structure.

Perform restrike tests after piles have been driven and a minimum time specified in the plans has elapsed. When performing a restrike, warm the hammer before restriking the pile by applying at least 20 blows to another pile. Each restrike consists of performing dynamic testing on two piles and performing a signal matching analysis on one of the two piles tested. Test the same two piles as were tested for the dynamic load test item.

601.02

On page 464, **Replace** the first paragraph of the page with the following:

Ensure tied concrete block mats and articulating concrete block revetment systems are held together by galvanized steel wire, HDPE mesh, polypropylene mesh, or stainless steel wire.

601.12

On page 467, **Replace** the section with the following:

601.12 Tied Concrete Block Mat. When specified, use Tied Concrete Block Mat with Type ___ Underlayment conforming to 712.12 as shown on the plans. ~~Place directly on the Geotextile Fabric.~~ Install per the manufacturer's recommendation.

601.15

~~On page 468, **Replace** the Dumped Rock Fill, Type ___ pay item description with the following:
Tied Concrete Block Mat with Type ___ Underlayment~~

601.15

On page 468, **Replace** the Tied Concrete Block Mat, Type ___ pay item description with the following:
Tied Concrete Block Mat with Type ___ Underlayment

602.03.E

On page 470, **Replace** the next to last sentence of the first paragraph with the following sentence:
Only provide prefabricated wingwalls and headwalls as alternatives that have been approved by the Office of Geotechnical Engineering, included on the Department's Approved List, and when allowed by the Contract Documents.

605.02

On page 476, **Replace** the first paragraph of 605.02 with the following:

Backfill unclassified pipe underdrains, shallow pipe underdrains, deep pipe underdrains, base pipe underdrains, ~~or~~ rock cut underdrains, with or without a Geotextile Fabric, construction underdrains and aggregate drains with granular material consisting of ACBFS, limestone, or gravel. Furnish granular material meeting Size Nos. 8, 9, or 89. Gradations may be modified in accordance with Supplement 1069.11.C. Use granular material with a maximum sodium sulfate soundness loss of 15 percent.

606.02

On page 480, **Replace** the third paragraph with the following:

When using round wooden posts, construct type MGS using posts 69 in (1.75 m) in length.

606.06

On page 481, **Add** the following paragraph after the fourth paragraph:

Cover the face of the impact head with solid fluorescent yellow Type G reflective sheeting conforming to 730.19.

608.03.E.

On Page 486, **Delete** the last two sentences of paragraph E.

~~After the minimum curing period and a 30 day drying time apply an approved non epoxy sealer (705.23.B) according to Item 512. Ensure any remaining curing compounds that are incompatible with the selected sealer and all foreign materials are removed prior to sealer treatment.~~

609.06.E.

On Page 491, **Delete** the last two sentences of paragraph E.

~~After the minimum curing period and a 30 day drying time apply an approved non epoxy sealer (705.23.B) according to Item 512. Ensure any remaining curing compounds that are incompatible with the selected sealer and all foreign materials are removed prior to sealer treatment.~~

611.02.B

On page 497, **Delete** the following:

Corrugated steel spiral rib pipe.....707.12

611.02.B

On page 497, **Add** the following after the fifth item on the list:

Polymer-precoated corrugated steel spiral rib pipe.....707.11

611.02.C

On page 498, **Delete** the following:

~~Corrugated steel spiral rib pipe.....707.12~~

611.02.C

On page 498, **Add** the following after the fifth item on the list:

Polymer-precoated corrugated steel spiral rib pipe.....707.11

611.03

On page 501, **Add** the following to the seventh paragraph between the "707.07" and "707.12" material references:

, 707.11

611.04.A.

On page 502, **Replace** the first sentence of the first paragraph with the following:

A. Shop Drawings. Prepare shop drawings and calculations for C&MS items 706.051, 706.052, 706.053, and "Special Design" 706.02 and as required below.

611.11

On page 512, **Add** the following sentence to the beginning of the fourth paragraph of the section:

For all aluminum conduits, prior to placing concrete, coat the area to be paved with a zinc chromate primer or an epoxy paint formulated for applying to aluminum. Extend primer or epoxy 4 inches beyond the proposed paving limits.

611.12 Performance Inspection

On page 515, **Add** the following to TABLE 611.12.B:

TABLE 611.12.B

Conduit Type	Measurement Equipment	Type of Measurement
Rigid conduit and 748.06, steel casing pipe	Crawler mounted camera according to SS902.01 with crack measuring capabilities according to SS902.02 C	Joint gaps Crack widths
Plastic conduit, 707.12, corrugated steel spiral rib conduit, 707.24, corrugated aluminum spiral rib conduit, 748.01, ductile iron pipe, and Circular corrugated metal conduit not listed below	Crawler mounted camera with laser profiler according to SS902.02 A, B, and C or Mandrel according to SS902.03 and Crawler mounted camera according to SS902.01 with crack measuring capabilities according to SS902.02 C	Joint gaps Crack widths Deflection
The following types of corrugated metal conduit: 707.04, precoated, galvanized steel culverts 707.05 and 707.07, bituminous coated corrugated steel pipe with paved invert, 707.11 Polymer-precoated corrugated steel spiral rib pipe 707.13 and 707.14, bituminous lined corrugated steel pipe	Crawler mounted camera with laser profiler according to SS902.02 A, B, and C	Joint gaps Crack widths Deflection

614.03

On page 523, **Add** the following title to the beginning of the second paragraph:

A. Training and Responsible Person.

614.03

On Page 524, **Add** the following title to the beginning of the second paragraph:

B. Temporary Traffic Control Devices.

614.03

On Page 524, **Add** the following paragraph after the third paragraph:

For truck-mounted attenuators and trailer attenuators (TMAs) see 614.03.D.

614.03

On page 524, **Replace** the first sentence of the seventh full paragraph with the following:

Furnish traffic cones consisting of a highly visible orange predominant color with reboundable reflective sheeting complying with the requirements of 730.191 and in conformance with the OMUTCD.

614.03

On Page 525, **Add** the following paragraph after the first paragraph:

All temporary traffic control devices shall conform to the Quality Standards for Temporary Traffic Control Devices and Acceptable Delineation Methods for Vehicles.

614.03

On Page 525, **Add** the following title to the beginning of the second paragraph:

C. Conspicuity.

614.03

On Page 525, in the 7th paragraph **Replace** the following: “A. Apply one” with “1. Apply one”.

614.03

On Page 525, in the 8th paragraph **Replace** the following: “B. Outline” with “2. Outline”.

614.03

On Page 525, in the 9th paragraph **Replace** the following: “C. Outline” with “3. Outline”.

614.03.C

On Page 526, **Replace** the second paragraph with the following:

Acceptable methods for delineating material supply vehicles are depicted in the Quality Standards for Temporary Traffic Control Devices and Acceptable Delineation Methods for Vehicles.

614.03

On Page 526, **Add** the following at the end of the subsection:

D. Truck-mounted or Trailer Attenuator (TMA). Furnish a TMA that is NCHRP-350 (manufactured prior to 1/1/20) or MASH TL-3 compliant. Do not use a TMA in place of the arrow board at the beginning of a merge taper, or as a substitute in locations where other positive protection methods are required (portable barrier/impact attenuators, tapering outside of the clear zone, etc.). Use of a TMA for a work area already otherwise protected by positive protection shall be at the Contractor’s expense.

Furnish a TMA to protect each work area in the following situations:

1. When working on a multi-lane highway (45 mph and above) in a closed lane or shoulder without portable or permanent traffic barriers separating the work area from the traveled lanes.
2. Any situation on a multi-lane highway (45 mph and above) where a TMA is depicted or labeled as required or optional on a shadow vehicle in the OMUTCD.

Furnish a TMA for each work area if two or more localized work areas occur within the same stationary work zone and are separated by more than 700 feet.

Attach the TMA to the shadow vehicle in accordance with manufacturer specifications and place in advance of the work area according to recommended spacing in Table 614.03-1. Distances are

considered as guidelines. However, engineering judgement should be used to alter distances to take into account traffic conditions, vehicle mix, sight distance, and other site-specific conditions.

Table 614.03-1

For Shadow Vehicles Weighing 22,000 lb. or More		
Speed Limit (MPH)	Recommended Spacing ^[1]	
	Stationary Operation (Ft)	Moving Operation (Ft) ^[2]
Greater than 55	150	172
45-55	100	150
Less than 45	74	100
For Shadow Vehicles Weighing Less than 22,000 lb. but Greater Than 9,900 lb.		
Speed Limit (MPH)	Stationary Operation (Ft)	Moving Operation (Ft) ^[2]
Greater than 55	172	222
45-55	123	172
Less than 45	100	100

[1] Recommended spacing is distance between front of shadow vehicle and beginning of work area to provide adequate roll ahead distance and minimize the risk of vehicles cutting in ahead of the shadow vehicle.

[2] Distances are appropriate for speeds up to 15.5 mph.

614.10

On page 529, **Add** the following sentence to the end of the second paragraph:
Covering of one or more permanent or temporary vehicle or pedestrian signal head(s) shall be according to 632.25, except payment shall be included in Item 614 Maintaining Traffic.

614.10

On page 529, **Add** the following sentence to end of the second paragraph:
Energized signal covers shall block light from being visible.

614.11.B.

On page 529, **Replace** the entire section with the following:

B. Work Zone Marking Specifications. Equip traffic paint striping equipment for Class I and Class III markings with a computerized Data Logging System (DLS) conforming to 641.04 ~~when the length of marking exceeds 0.5 miles (0.8 km) of continuous line equivalent.~~ Furnish the Engineer daily, biweekly, and final DLS reports according to 641.04.

Unless otherwise shown on the plans, the Contractor may use 740.02 Type 1 or Type 1A paint, Supplemental Specification 807 Traffic Paint, Supplemental Specification 873 Wet Reflective Removable Tape, 740.10, or 740.06 Type I or Type II preformed material for work zone pavement markings. Do not use wet reflective optics specified in Supplemental Specification 807 with 740.02 Type 1A paint for cold weather applications. Unless using Supplemental Specification 807 Traffic Paint, furnish painted markings according to Item 642 except that:

1. For Class I or Class II work zone pavement markings, use the specified application rate from Table 614.11-1.

TABLE 614.11-1

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 pounds per 100 square feet				

TABLE 614.11-1M

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 kg per square meter				

2. For Class III work zone markings, use the specified application rate from Table 614.11-2.

TABLE 614.11-2

Type of Pavement Marking	Line Width (inch)				
	4	6	8	12	24
	Gallon per Mile of Line				
Solid Line	12	18	24	36	72
10-foot Dashed Line	3	4.5	--	--	--
Dotted Line	4	6	8	12	--
Arrows, Symbols, and Words	0.75 gallons per 100 square feet				
Glass Beads: 740.09, Type A	7.5 pounds per 100 square feet				

TABLE 614.11-2M

Type of Pavement Marking	Line Width (mm)				
	100	150	200	300	600
	Liter per Kilometer of Line				
Solid Line	28	42	56	84	168
3.0 m Dashed Line	7	10.5	--	--	--
Dotted Line	9.4	14.1	18.8	28.2	--
Arrows, Symbols, and Words	0.3 liters per square meter				
Glass Beads: 740.09, Type A	3.7 kg per square meter				

Ensure that Type I and II preformed material conform to 740.06 or wet reflective preformed material conforms to Supplemental Specification 873, except do not place any preformed material containing metal on any surface unless it will be removed later. Remove work zone pavement markings of 740.06 or

Supplemental Specification 873 preformed material before placement of 642 or 644 surface course markings at that location. Ensure that preformed material conforms to Item 645 or Supplemental Specification 873.

614.11.G.1.a

On page 532, **Delete** the third paragraph:

~~Use only sand, shot, or water blasting for removal of all pavement markings in preparation for placing Item 422 Chip Seal or Item 421 Microsurfacing.~~

614.16.B

On page 539, **Add** the following language as a new line at the end of the subsection:

6. TMAs.

614.16.C

On page 539, **Replace** the subsection with the following:

C. If traffic permanently damages beyond use any of the work zone traffic control items listed in 107.15, the Department will compensate the Contractor for replacement of the damaged item by Change Order provided the Contractor has pursued but failed to obtain compensation from the motorist.

614.16

On page 540, **Add** the following paragraph after the first paragraph:

C&MS Table 104.02-2 does not apply to final quantities of Law Enforcement Officer with Patrol Car.

614.16

On page 540, **Revise** the section as follows:

Item	Unit	Description
614	Lump Sum	Maintaining Traffic
614	Lump Sum	Detour Signing
614	Each	Replacement Drum
614	Each	Replacement Sign
614	Each	Object Marker, ___ - Way
614	Each, Mile, Foot (Kilometer, Meter)	Work Zone Pavement Markings
614	Each	Work Zone Raised Pavement Marker
614	Sign Month	Portable Changeable Message Sign
614	Each	Work Zone Speed Limit Sign
614	Each	Work Zone Marking Sign
614	Hour	Law Enforcement Officer with Patrol Car
614	Each	Barrier Reflector
614	Each	Work Zone Crossover Lighting System
614	Each	Work Zone Impact Attenuator, ___*** Wide Hazards, ___****
614	Mile (Kilometer)	Work Zone Lane Line, Class ___, ___*, ___**
614	Mile (Kilometer)	Work Zone Center Line, Class ___, ___**
614	Foot (Meter)	Work Zone Channelizing Line, Class ___, ___*, ___**
614	Mile (Kilometer)	Work Zone Edgeline, Class ___, ___*, ___**
614	Foot (Meter)	Work Zone Gore Marking, Class II, ___**

614	Foot (Meter)	Work Zone Stop Line, Class I, _____**
614	Foot (Meter)	Work Zone Arrow, Class I, _____**
614	Foot (Meter)	Work Zone Crosswalk Line, Class I, _____**
614	Foot (Meter)	Work Zone Dotted Line, Class _____*, _____**, _____**
614	Cubic Yard (Cubic Meter)	Asphalt Concrete for Maintaining Traffic

* Width of marking (4” or 6” for Lane Lines, Edgelines and Dotted Lines; 8” or 12” for Channelizing Lines and Dotted Lines).

** Type material (807 paint; 642 paint; 740.06, Type I or Type II; 873; 648; or left blank to allow any of the six.)

*** Width (24 in or over 24 in and less than 36 in).

**** Configuration (Unidirectional or Bidirectional).

617.03

On page 544, **Replace** the first paragraph of 617.03 with the following:

617.03 Prosecution. If reconditioning shoulders as part of a resurfacing project and traffic is maintained, place shoulder material along with the paving operations as rapidly as possible. Complete all shoulder reconditioning within four days following placement of the surface course and any course that results in a drop-off of 2.0 inches (50 mm) or greater. Adjacent to a safety edge constructed as part of the Work, complete all shoulder reconditioning within ten days following construction of the safety edge.

618

On page 546, **Replace the** Item heading with the following:

ITEM 618 RUMBLE STRIPS

618.03

On page 547, **Replace** the second and third sentences with the following:

The Department will measure lengths along the inside edge of the shoulder, edge line or center line, from the center of the first depression in a segment to the center of the last depression in that segment. If Rumble Strips are provided on more than one shoulder or edge line, the Department will measure lengths separately for each shoulder or edge line segment and add the individual lengths together to obtain the total length for the shoulder or the edge line.

618.04

On page 547, **Replace** the pay items with the following:

618	Feet (Meter)	Rumble Strips, Shoulder (Asphalt Concrete)
618	Mile (Kilometer)	Rumble Strips, Shoulder (Asphalt Concrete)
618	Feet (Meter)	Rumble Strips, Shoulder (Concrete)
618	Mile (Kilometer)	Rumble Strips, Shoulder (Concrete)
618	Feet (Meter)	Rumble Stripes, Edge line (Asphalt Concrete)
618	Mile (Kilometer)	Rumble Stripes, Edge line (Asphalt Concrete)
618	Feet (Meter)	Rumble Stripes, Edge line (Concrete)
618	Mile (Kilometer)	Rumble Stripes, Edge line (Concrete)
618	Feet (Meter)	Rumble Stripes, Center line (Asphalt Concrete)
618	Mile (Kilometer)	Rumble Stripes, Center line (Asphalt Concrete)
618	Feet (Meter)	Rumble Stripes, Center line (Concrete)
618	Mile (Kilometer)	Rumble Stripes, Center line (Concrete)

618.04

On page 547, **Add** the following paragraph after the first paragraph:

The Department will pay for longitudinal pavement marking material in accordance with Item 641.

619

On page 548, **Replace** Table 619.02-1 FIELD OFFICE with the following:

TABLE 619.02-1 FIELD OFFICE

Item	Type A	Type B	Type C
Minimum ceiling height, ft (m)	7 (2.1)	7 (2.1)	7 (2.1)
Floor space, ft ² (m ²)	150 (14)	500 (46)	1000 (93)
Separate enclosed room, ft ² (m ²) (Part of specified floor space)	0 (0)	0 (0)	100 (9)
Telephone service ^[1]	2	2	2
Internet service connection ^[5]	1	1	1
Multi-Function copier that is setup for scanning, printing and copying. ^[2]	1, 11×17	1, 11×17	1, 11×17
Calculator with tape	1	2	3
Desk and chair set	1	3	5
Work table, 30 × 72-inch (750 × 1800 mm)	1	2	3
4-drawer, legal size, lockable metal file cabinet	---	1	2
2-drawer, metal file cabinet	1	2	2
Portable fire extinguishers ^[3]	1	1	2
Plan rack ^[4]	1	1	2
All-weather parking spaces	8	16	20

[1] For each telephone and/or computer station specified, all ethernet wiring necessary to connect the phone and/or computer and multi-function copier to the internet company system, ~~and a working separate phone number for the printer for faxing.~~

[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:

One of the following MFC machines/series:

HP models E77822dn, E77825dn, E77830dn, E87640dn, E87650dn, E87660dn, E77822z, E77825z, E77830z, E87640z, E87650z, E87660z

Type B and C:

One of the following MFC machines/series:

HP Models: E77650dn, E77660dn, E77650dns, E77660dns, E77650z, E77660z, E77650zs, E77660zs, E77660zts, E77650z+, E77660z+, E77822dn, E77825dn, E77830dn, E87640dn, E87650dn, E87660dn, E77822z, E77825z, E77830z, E87640z, E87650z, E87660z

[3] Type 2-A:10-B:C, 5-pound (2.27 g) size

[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). 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.

621.03.E

On page 552, **Delete** “or on line” in the first sentence of the second paragraph.

622.08

On page 556, **Replace** the first sentence of the fourth paragraph with the following:

The Department will measure Portable Barrier Anchored, Portable Barrier Unanchored, Portable Barrier 50” (1270mm) and Portable Barrier 50” (1270mm) Bridge Mounted by the number of feet (meters) for each application of the barrier placed according to the plans.

622.09

On page 556, **Replace** the second paragraph with the following:

The Department will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
622	Foot (Meter)	Concrete Barrier, Type ____
622	Each	Concrete Barrier End Anchorage, Reinforced, Type ____
622	Each	Concrete Barrier End Section, Type ____
622	Foot (Meter)	Portable Barrier, ____" (____ mm)
622	Foot (Meter)	Portable Barrier, ____" (____ mm) Bridge Mounted
622	Foot (Meter)	Portable Barrier, Unanchored
622	Foot (Meter)	Portable Barrier, Anchored
622	Foot (Meter)	Portable Barrier, 50” (1270 mm)
622	Foot (Meter)	Portable Barrier, 50” (1270 mm) Bridge Mounted

625

On page 562, Replace “625.20 Plastic Caution Tape” in the list with the following:

625.20 Underground Warning / Marking Tape

625.05

On page 563, **Replace** “Plastic caution tape” in the material list with the following:

Underground warning / marking tape..... 725.22

625.12

On page 566, **Replace** the third sentence of the first paragraph to the following:

Use of conduit material shall comply with the NEC.

625.12

On page 567, **Add** the following paragraph after the fourth paragraph:

Do not use PVC conduit when multiple cell conduits are installed encased in a concrete barrier wall and install continuous lengths of HDPE conduit between junction boxes in the concrete barrier wall or transitions to underground pull boxes.

625.15

On page 569, **Add** the following sentence at the end of the seventh paragraph:

This compensation is for invoiced cost without mark-up.

625.20

On page 572, **Replace** the section with the following:

625.20 Underground Warning / Marking Tape. Install tape approximately 6 to 10 inch (150 to 250 mm) below the final finished grade. Place with the printed side up and parallel with the finished surface. Ensure that the tape is not pulled, distorted, or otherwise misplaced in completing the trench backfill. Provide approximately 10 ft (3 m) of tape inside each adjacent pull box connecting the underground utility run. Bond the tracer wire to a good earth ground in each pull box.

625.22

On page 575, **Delete** the fourth sentence in the first paragraph.

~~Trench in paved areas shall be separated for payment into Type A for pavements or sidewalks less than 6 inches (150 mm) thick and Type B for pavements 6 inches (150 mm) or greater.~~

625.22

On page 575, **Replace** the first sentence in the 6th paragraph with the following:

Underground warning / marking tape will be measured to the center of a light pole foundation, the center of a light tower foundation, the center of a pull box, the center of the pole of an embedded pole mounted power service, the center of the foundation for a power service with a foundation, or the wall of the building when the power service for the lighting in, on or within the building with no allowance for elevation change.

625.23

On page 576, **Replace** the pay item for “Plastic Caution Tape” with the following:

625 Foot (Meter) Underground Warning / Marking Tape

Revise the “Trench in Paved Area, (Type)” pay item as follows

625 Foot (Meter) Trench in Paved Area

626.01

On page 577, **Revise** the first paragraph as follows.

626.01 Description. This work consists of furnishing and installing barrier reflectors on guardrail blockouts, concrete barrier, cable barrier, retaining wall, and bridge parapets.

626.02

On page 577, **Revise** the third paragraph as follows.

Use barrier reflectors that are mountable on guardrail blockouts, concrete barriers, cable barrier, retaining walls, and bridge parapets. For wall or parapet mount, the barrier reflector may not extend further than 5 inches (125 mm) in a horizontal direction towards the traffic lanes.

626.04

On page 578, **Add** the following paragraph after the third paragraph.
Install reflectors that attach to the cable barrier on the cable that is nearest to traffic. If more than one cable is nearest to traffic, attach to the highest cable nearest to traffic. Install them centered between posts.

626.04

On page 578, **Add** the following paragraph after the eight paragraph.
For all median cable barrier reflectors, use bi-directional reflectors.

626.04

On page 578, **Revise** the ninth paragraph as follows.
Use one-way and bi-directional guardrail blockout, concrete barrier, retaining wall, and bridge parapet barrier reflectors according to the following table:

626.04

On page 579, **Revise** the first table as follows.

Mounting Location	
Concrete barrier, retaining walls, bridge rail or bridge parapets	
Type 1	Barrier Reflector
Guardrail	
Type 2	Corrosion Resistant Metal Guardrail Blockout Reflector
Type 3	Acrylic or Polycarbonate Plastic Guardrail Blockout Reflector
Type 4	Spring Loaded Guardrail Blockout Reflector
Type 5	L-Type Guardrail Blockout Reflector
Cable Barrier	
Type 6	Cable Barrier Reflector

630.04

On page 581, **Replace** the fourth paragraph with the following:
For flat sheet, double faced mile marker, and double faced street name signs, use Type G, H or J reflective sheeting for background and reflective legends. For extrusheet signs, use Type G reflective sheeting for the background, and use Type J, ASTM D 4956 Type XI reflective sheeting for reflective legends, shields and symbols (including hazardous material plaque, airport symbol, arrows and borders). Apply reflective sheeting to the surface according to the manufacturer’s recommendations, with no blisters, wrinkles, tears, or blemishes. Do not use reboundable or damage control sheeting for permanent signs.

630.04

On page 583, **Replace** the first sentence of the last paragraph with the following:
Fabricate sign post reflectors with flat sheet aluminum and match the reflective sheeting type to the sheeting type used for the corresponding sign.

630.06.B.

On page 585, **Replace** the first sentence of the fourth paragraph with the following:

When specified, furnish sign support identification stickers of Type F reflective sheeting listing the support type, design number, span/arm length, county, route, and section number (example: TC-15.116, design 1, 80 ft span, CUY-90-17.58).

630.06.B.

On page 585, **Delete** from the second sentence of the fifth paragraph the following:

Fabricate box trusses from ~~aluminum~~ or steel tubular members with built-in camber and mark each section "TOP".

630.15

On page 590, **Replace** "Span Wire Sign Support TC-17.10, Design ____" pay item with the following.

630 Each Span Wire Sign Support, Type TC-17.11, Design ____

632

On page 596, **Revise** "632.09 Pedestrian Pushbutton" as follows.

632.09 Pedestrian Pushbutton and Accessible Pedestrian Pushbutton

632.03

On page 597, **Delete** "732.08" from Detectors in the material list.

Detectors 732.07, ~~732.08~~

632.05

On page 598, **Add** the following to Table 632.05-1:

TABLE 632.05-1 TABLE AND WIRE IDENTIFICATION

Cable	Tag
Ground	GND
Power (2 wire) 1Ø 120 volt	AC +AC- or ACN
Power (3 wire) 1Ø 120/240 volt Neutral wire	AC + 1, AC + 2 AC- or ACN
Phase A Phase 1 Phase 1 northbound left turn lanes	Ø A Ø 1 Ø 1 NBLT
Phase A, pedestrian signal	Ø A PD
Radar, Advance Detection Phase, Direction	RAD-Adv Ø2, NB
Radar, Stop Line Detection Phase, Direction	RAD-SL Ø1, SBLT
Overlap, phase A + C Overlap, phase 1 + 6	Ø A + C Ø 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
Pre-emption, fire	PE FIRE
Pre-emption, railroad	PE RR
[1]Place the tag next to the MS plug at the detector amplifier.	

632.06

On page 599, **Replace** the second paragraph with the following:

Install signals in a plumb condition, using a balance adjuster only if approved by the engineer. Rigidly mount heads to mast arms with the yellow module located in front of the mast arm. Use drop pipes/extenders of suitable length only when necessary to bring the bottom of the signal heads to a proper roadway clearance. Drop pipes/extenders shall be kept as short as necessary on backplated signals. Use of drop pipes/extenders greater than 1.5 feet in length must be approved by the Engineer. Use disconnect hangers for suspended heads only when specified.

632.06

On page 599, **Replace** the third paragraph with the following:

Orient each signal face to its traffic approach, and lock faces in place by the serrated or other type device incorporated in signal housing and support hardware. Before closing serrations, apply a bead of Room-Temperature Vulcanizing (RTV) silicone to all serrated surfaces and then tighten to achieve positive locking. RTV silicone shall be white to facilitate visual inspection. On heads with dual concentric serrated rings, completely fill the space between the rings with RTV silicone.

632.06

On page 599, **Add** the following paragraph after the third paragraph:

For span wire installations, do not use balance adjusters on one-way heads or tethered heads.

632.09

On page 599, **Revise** the first sentence in the first paragraph as follows.

632.09 Pedestrian Pushbutton and Accessible Pedestrian Pushbutton.

632.15

On page 601, **Replace** the first sentence of the first paragraph with the following:

632.15 Signal Support. Furnish supports with mast arms with the required pole and arm length, damping device if arm length requires, anchor bolt circle diameter, and anchor bolt size.

632.15

On page 601, **Replace** the fifth paragraph with the following:

Conform to the requirements of AASHTO LRFDLTS-1, including all interim releases.

632.24

On page 604, **Add** the following sentence at the end of the first paragraph:

This compensation is for invoiced cost without mark-up.

632.25

On page 604, **Replace** the first paragraph with the following:

Cover vehicular signal heads if erected at intersections where traffic is maintained before energizing the signals. Cover pedestrian signal heads when specified in the plans. Use a sturdy opaque covering material specifically made for use with traffic signals and ensure that the color of the cover is different than the signal head, tan or beige white, so that it is clear to drivers and pedestrians the heads are covered, not dark. Use a method of covering and cover attachment and materials as approved by the Engineer. Covers are to be free of text, pictures, or any type of advertising. Maintain covers and remove them when directed by the Engineer.

632.25

On page 604, **Add** the following paragraph after the second paragraph.

Do not operate covered signals at night and ensure no conflicting signal light is visible at night. Comprise covers of 16 oz./yd. vinyl-coated polyester fabric consisting of no more than 2 layers sewn together. Completely cover signal, including central slits or ports in the cover, any time no active work is occurring on the signal installation.

632.29

On page 606, **Revise** the first sentence in the second paragraph as follows.

The Department will measure Pedestrian Pushbutton and Accessible Pedestrian Pushbutton by the number of individual units and will include pedestrian pushbutton signs.

632.29

On page 607, **Replace** the first sentence of the fourth paragraph with the following:

The Department will measure Signal Support, Combination Signal Support, Strain Pole, Combination Strain Pole, Wood Pole, and Pedestal by the number of complete units of each, and will include pole

arms, weather-heads and blind half couplings, damping device if arm length requires, anchor bolts and conduit elbows furnished for foundations.

632.30

On page 608, **Add** after the “Pedestrian Pushbutton” pay item add the following pay item.

632 Each Accessible Pedestrian Pushbutton

633

On page 609, **Delete** the following from the table of contents:

~~633.07 Controllers~~

633

On page 609, **Delete** the following from the section index:

~~633.06 Testing and Prequalification~~

633.01

On page 610, **Revise** the first sentence to the following.

This work consists of furnishing and installing traffic signal control equipment, including ~~controllers~~, cabinets, auxiliary equipment, and specified accessories, completely wired, at the locations shown on the plans and ready for service.

633.03

On page 610, **Delete** the following from the last paragraph:

Furnish material and equipment conforming to:

Concrete (cabinet foundations and work pads)	
QC Misc or QC 1	499, 511
Conduit	725.04, 725.051, 725.052
Controller unit	733.02
Cabinet and auxiliary equipment	733.03
Cabinet riser	733.04
Flasher controller	733.05
Controller, master, traffic responsive	733.06
Remote monitoring station	733.07
Uninterruptible Power Supply	733.09

633.06

On page 611, **Delete** the entire section.

633.07

Beginning on page 611, **Delete** the entire section.

~~633.07—Controllers. Install controller units, consisting of the timing unit, software, and signal timing, into the specified type of prewired cabinet.~~

~~Program controller units as shown on the plans unless otherwise directed by the Engineer. If the plan timing data or the supplemental timing data supplied by the Engineer does not exactly fulfill the timing requirements of the installed equipment, notify, in writing, the Engineer of the problem and identify the discrepancies. The Engineer will consult with the maintaining agency and notify the Contractor within 2 weeks. After programming, briefly operate controllers, with the signals turned~~

off by means of the signal shutdown switch, to ensure that operation is reasonable and conforms to the plans.

If the plans show two or more intersection controllers operated in a progressive signal system, coordinate signals by relating the various controller cycle start times to a zero time base, or other cycle start time at an adjacent signalized intersection. Ensure that the controller unit software provides coordination capability to allow associated controllers to be operated within the progressive traffic system. Coordination equipment shall supervise the operation of its associated controller by causing the end of certain phases and the beginning of the following phases to occur at set points. Program coordination timing according to the coordination timing data shown on the plans or provided by the Engineer.

633.13

On page 613, **Delete** the entire section.

~~**633.13 Controller, Master, Traffic Responsive.** The traffic responsive master controller supervises and controls the operation of an interconnected system of local controllers. Ensure that the master controller is able to communicate with a remote monitoring station. Locate this master controller in a local intersection controller cabinet unless otherwise shown on plans. If the local controller cabinet size is not sufficient to accommodate the master controller and its associated wiring, furnish the proper size cabinet for the local intersection controller to house the local controller, master controller, modem, and all auxiliary devices.~~

633.19

On page 614, **Delete** the first two paragraphs:

~~The Department will measure Controller Unit, Type ____, with Cabinet, Type ____ by the number of each complete unit, and will include controller unit with software, all required auxiliary equipment, loop detector units, and a prewired cabinet, with all items completely wired and tested. Ground mounted cabinets will include anchor bolts and conduit ells for installation in the foundation. Pole mounted cabinets will include pole mounting hardware.~~

~~The Department will measure Controller Unit, Type ____ by the number of each controller timing unit with software, and will include any signal timing programming or installation. The Department will measure Controller Unit, Type ____, Furnish Only by the number of each controller timing unit with software, and will exclude any signal timing programming or installation~~

633.19

On page 615, **Delete** the second paragraph:

~~The Department will measure Controller, Master, Traffic Responsive by the number of each unit, and will include installation, signal system software, programming, and any increase in cabinet size to house the master controller in the local intersection cabinet. The Department will measure Controller, Master, Traffic Responsive, Furnish Only by the number of each unit, and will include software, but exclude any programming or installation.~~

633.20

On page 615, **Delete** the following items:

~~633 — Each ———— Controller Unit, Type ____, with Cabinet, Type ____~~

~~633 — Each ———— Controller Unit, Type ____~~

~~633 — Each ———— Controller Unit, Type ____, Furnish Only~~

~~633 — Each ———— Controller, Master, Traffic Responsive~~

~~633 — Each ———— Controller, Master, Traffic Responsive, Furnish Only~~

641

On page 627, **Revise** the table of contents to the following:

- 641.01 Description**
- 641.02 Materials**
- 641.03 General**
- 641.04 Equipment**
- 641.05 Pavement Preparation**
- 641.06 Layout and Premarking**
- 641.07 Line Placement Tolerance**
- 641.08 Marking Types**
- 641.09 Two-Way Radio Communication**
- 641.10 Removal of Pavement Markings**
- 641.11 Unsatisfactory Materials and Deduction for Deficiency**
- 641.12 Method of Measurement**
- 641.13 Basis of Payment**

641.04

On page 629, **Replace** the first list with the following:

Measure and record application vehicle speed to nearest 0.1 MPH (0.16 km/h),
Measure and record weight or volume amount of material used by color,
Measure and record weight or volume amount of material used by line type,
Measure and record weight of glass beads,
Measure and record weight of wet reflective optics,
Measure and record pavement surface temperature,
Measure and record air temperature,
Measure and record dew point,
Measure and record humidity,
Calculate and record average material application rate and film thickness over the section painted.

641.04

On page 629, **Replace** the second list with the following:

Hand delivery of paper report,
Fax delivery of paper report,
E-mail of Excel spreadsheet file,
Flash drive transfer of Excel spreadsheet file.

641.04

On page 629, **Add** the following sentence after the second sentence of the first paragraph:

Continuous line equivalent is defined as 0.5 mile (0.8 km) of edge line, 0.25 mile (0.4 km) of double yellow center line, or 2 mile (3.2 km) of lane line.

641.05

On page 629, **Add** the following after the first sentence in the first paragraph:

Before applying marking material, the pavement surfaces must be completely dry. Test for moisture using the following test procedures, if needed as directed by the Engineer:

MOISTURE TEST

Tape a 12 inch (300 mm) square sheet of thin plastic to the road surface, sealing all edges.
After 15 minutes examine the side of the sheet facing the road surface.
If more than a sparse amount of moisture is present, do not apply marking material.

641.11

On page 632, **Revise** the header to the following:

641.11 Unsatisfactory Materials and Deduction for Deficiency.

641.11

On page 632, **Replace** the second paragraph with the following:

The Department will consider materials unsatisfactory if conformance to at least one of the following:

- A. Deficiency of marking material or glass beads is 20 percent or more.
- B. Materials applied outside the temperature or application requirements in Items 642, 643, and 646 without written approval of the Engineer.
- C. Markings not meeting the performance parameters contained in Supplement 1047, Appendices C, D, E, and G.
 - 1. Numerical rating of 8 or lower for Daytime Color (Appendix C)
 - 2. Composite rating of 8 or lower for Night Visibility (Appendix D)
 - 3. Numerical rating of 9 or lower for Durability (Appendix E)
 - 4. Less than the initial measurement for Retroreflectivity (Appendix G)

Replace pavement markings and glass beads in all sections determined to be unsatisfactory by retracing over the unsatisfactory markings at the full thickness specified in Items 642, 643 and 646.

642.02

On page 633, **Add** the following to the to the end of the first sentence of the first paragraph:
“in accordance with supplement 1089.”

642.02

On page 633, **Revise** the third sentence of the second paragraph to the following:

Samples not meeting the manufacturer’s production ranges will require the Contractor to re-apply, at his expense, any markings using that sample.

643.02

On page 636, **Add** the following to the to the end of the first sentence of the second paragraph:
“in accordance with supplement 1089.”

643.04

On page 636, **Delete** the first sentence of the third paragraph.

~~After sampling of resin is completed, transfer the entire contents of each material container to the striper tanks.~~

644.02

On page 638, **Add** the following to the to the end of the first sentence of the second paragraph:
“in accordance with supplement 1089.”

644.03

On page 638, **Replace** the first list with the following:

Measure and record application vehicle speed to the nearest 0.1 MPH (0.16 km/h).
Measure and record by line type.
Measure and record by color.
Measure and record weight of glass beads.
Measure and record weight of wet reflective optics.
Measure and record pavement surface temperature.
Measure and record air temperature.
Measure and record thermoplastic temperature in the kettle and at the point of application.

644.03

On page 639, **Replace** the sixth paragraph with the following:

Attach an automatic dispenser for glass beads, wet reflective optics, or both to the equipment so that the beads, optics, or both are immediately and uniformly dispensed over the marking surface. Equip the dispenser with an automatic cut-off control synchronized with the cut-off of the thermoplastic material

644.03

On page 639, **Add** the following sentence after the second sentence in the first paragraph:

Continuous line equivalent is defined as 0.5 mile (0.8 km) of edge line, 0.25 mile (0.4 km) of double yellow center line, or 2 mile (3.2 km) of lane line.

644.04

On page 640, **Replace** the fifth full paragraph with the following:

The Department will consider materials unsatisfactory if conformance to at least one of the following:

- A. Deficiency of thermoplastic marking material or glass beads is 20 percent or more.
- B. Materials applied outside the temperature or application requirements in 644.04 without written approval of the Engineer.
- C. Markings not meeting the performance parameters contained in Supplement 1047, Appendices C, D, E, and G.
 - 1. Numerical rating of 8 or lower for Daytime Color (Appendix C)
 - 2. Composite rating of 8 or lower for Night Visibility (Appendix D)
 - 3. Numerical rating of 9 or lower for Durability (Appendix E)
 - 4. Less than the initial measurement for Retroreflectivity (Appendix G)

Replace thermoplastic markings and glass beads in all sections determined to be unsatisfactory by entirely removing the unsatisfactory thermoplastic material by grinding as per 641.10 and then reapplying at the full thickness specified in 644.04. Do not apply a layer of sprayed thermoplastic to sections determined to be unsatisfactory to achieve the required thickness.

646.02

On page 643, **Add** the following to the to the end of the first sentence of the second paragraph:
“in accordance with supplement 1089.”

647.01

On page 648, **Add** the following to the first sentence of the first paragraph after "740.08":
, 740.09

647.02

On page 648, **Add** the following sentence after the second sentence:

Glass beads, Type E740.09

647.04.B.

On page 649, **Replace** the second sentence of the second paragraph with the following:
Drop-on glass beads are required.

647.04.C.

On page 649, **Replace** the second sentence of the second paragraph with the following:
Drop-on glass beads are required.

648.02

On page 650, **Add** the following to the to the end of the first sentence of the second paragraph:
“in accordance with supplement 1089.”

648.03

On page 650, **Replace** the first list with the following:

Measure and record application vehicle speed to the nearest 0.1 mph (0.16 km/h).
Measure and record by line type.
Measure and record by color.
Measure and record weight of glass beads.
Measure and record weight of wet reflective optics.
Measure and record pavement surface temperature.
Measure and record air temperature.
Measure and record spray thermoplastic temperature in the kettle and at the point of application.

648.03

On page 651, **Replace** the sixth paragraph with the following:

Attach an automatic dispenser for glass beads, wet reflective optics, or both to the equipment so that the beads, optics, or both are immediately and uniformly dispensed over the marking surface. Equip the dispenser with an automatic cut-off control synchronized with the cut-off of the spray thermoplastic material.

648.03

On page 651, **Add** the following sentence after the second sentence in the first paragraph:

Continuous line equivalent is defined as 0.5 mile (0.8 km) of edge line, 0.25 mile (0.4 km) of double yellow center line, or 2 mile (3.2 km) of lane line.

648.04

On page 651, **Delete** the second sentence in the first paragraph and the table that follows the first paragraph:

Test for moisture using the following test procedures, if needed as directed by the Engineer:

MOISTURE TEST

Tape a 12 inch (300 mm) square sheet of thin plastic to the road surface, sealing all edges.
After 15 minutes examine the side of the sheet facing the road surface.
If more than a sparse amount of moisture is present, do not apply spray thermoplastic.

648.05

On page 652, **Replace** the sixth paragraph with the following:

The Department will consider materials unsatisfactory if conformance to at least one of the following:

- A. Deficiency of spray thermoplastic marking material or glass beads is 20 percent or more.
- B. Materials applied outside the temperature or application requirements in 648.05 without written approval of the Engineer.
- C. Markings not meeting the performance parameters contained in Supplement 1047, Appendices C, D, E, and G.
 - 1. Numerical rating of 8 or lower for Daytime Color (Appendix C)
 - 2. Composite rating of 8 or lower for Night Visibility (Appendix D)
 - 3. Numerical rating of 9 or lower for Durability (Appendix E)
 - 4. Less than the initial measurement for Retroreflectivity (Appendix G)

Replace or reapply spray thermoplastic markings and glass beads in all sections determined to be unsatisfactory.

661.02

On page 676, **Revise** the first paragraph second sentence with the following.

Provide plant materials that are sourced from nurseries licensed by the Ohio Department of Agriculture or state equivalent, healthy specimens, typical of their species or variety, and that exhibit a normal habit of growth as set forth in the most current edition of the American Standard for Nursery Stock (ANSI Z60).

661.06

On page 676, **Add** the following sentence in the first paragraph after the second sentence. Stockpiled materials can be inspected by ODA with advanced notice.

700.00

On Page 687 **Add** the following table row after specification 409:

421	Microsurfacing Emulsion and Tack Coat	CSS-1hM: Certified Material. At the refinery or source as directed by OMM. Project and/ or Plant Sample per 421.12. Non-certified material is sampled and approved by OMM before use. 421 Tack Coat per 421.09: Project and/ or Plant Sample per 421.12. Tag and ship sample to the District lab for OMM Asphalt section testing. Document in SM.	CSS-1hM: Certified material: Submit to OMM. Non-certified material: Submit to OMM. Do not use until approved. 421 Tack Coat per 421.09. Dilute per 421.09. Do not use non-certified material to dilute.
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700.00

On page 689, **Revise** the table line with the following.

661	Planting Trees Shrubs, Perennials and Vines	Only accept materials from licensed nurseries. See OMM website for list of Ohio Department of Agriculture list of licensed suppliers. Inspect material for condition. Plant material should be sealed until used. Document in SM .	Final acceptance should take place after period of establishment. Notify District Testing if rejecting material.
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700.00

On Page 689, for Spec. Number 701.11, **Replace** “Ground Granulated Blast Furnace Slag (GGBFS)” with “Slag Cement”.

700.00

On Page 689, for Spec. Number 701.13 **Replace** “Fly Ash” with “Fly Ash/Natural Pozzolan”.

700.00

On Page 690 **Replace** the second full table row with the following:

702.02	Cut Back Asphalt	Certified material:	Certified material: Submit to OMM. Non-certified material: Submit to OMM. Do not use until approved.
702.03			
702.04	Cut Back Asphalt	At the refinery or source as directed by OMM. Project and/ or Plant: One sample per each 25,000 gallons. None for less than 300 gallons.	
702.07	Emulsions		
702.12			
702.13	Emulsified Asphalts		
	Asphalt Emulsion MWS	Non-certified material:	
	Non-Tracking Asphalt Emulsion	Will be sampled and approved by OMM before use.	
	SBR Asphalt Emulsion	702.13 – Provide Certified Test Data per specification requirements.	

700.00

On Page 690 **Add** the following table row after the third full table row:

702.08	Cold Liquid-Applied Elastomeric Waterproofing Membrane	Provide Certified Test Data per specification requirements.	
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700.00

On Page 693 **Add** the following row after 705.26:

705.27	Carbonate Micro-fines	Verify manufacturer on Concrete Plant Batch Ticket is on Certified List for S 1016 maintained by OMM. Verify material against bill of lading description. Document in SM
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700.00

On page 696, **Replace** 707.11 with the following:

707.11	Polymer-precoated corrugated steel spiral rib pipe	Products will be supplied by a source on the Certified List for S 1019 maintained by OMM. Receive with TE-24. Check dimensions and markings. Document in SM.	Notify District Testing and OMM Structural Welding and Metals section, if rejecting material because material non-performs or looks defective during use.
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700.00

On page 703, **Replace** 712.11 with the following

712.11	Temporary Erosion Control Mats Material [Types A through I]	Inspect material for condition and dimension. Manufacturer's certified test data required for acceptance. Field Acceptance item.	Notify District Testing if rejecting material.
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700.00

On page 706, **Replace** 725.20 with the following:

725.20	Multiple Cell Conduit and Fittings	Verify type and brand name of material is on QPL at the time of use. Inspect for condition, dimension, markings and conformance to plan requirements. Document in SM.	Notify District Testing if rejecting material. If material non-performs or looks defective during use notify District Testing and OMM.
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700.00

On page 709, **Revise** the table line with the following.

732.06	Pedestrian Pushbuttons and Accessible Pedestrian Pushbutton	Verify type and brand name of material is on TAP 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.
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700.00

On page 709, **Delete** 732.07 A from the table.

732.07.A	Loop Detector Units NEMA TS †	Verify type and brand name of material is on TAP 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.
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700.00

On page 710, **Delete** 732.08 from the table.

732.08	Loop Detector Units, Delay and Extension Type	Verify type and brand name of material is on TAP 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.
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700.00

On page 711, **Delete** 733.02 E, 733.02 F, and 733.03 A from the table.

733.02. E	Controller Unit Type 2070L	Verify type and brand name of material is on TAP 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.
733.02. F	Controller Unit Type 2070E	Verify type and brand name of material is on TAP 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.

733.03.A	Cabinet Type TS †	Verify type and brand name of material is on TAP 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.
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700.00

On page 711, **Delete** 733.02.C, 733.02.D, 733.02.G, and 733.06 from the table:

733.02.C	Controller Unit Type TS2/A1	Verify type and brand name of material is on TAP 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.
733.02.D	Controller Unit Type TS2/A2	Verify type and brand name of material is on TAP 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.
733.02.G	Controller Unit Type 2070LX	Verify type and brand name of material is on TAP 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.
733.06	Controller, Master, Traffic Responsive	Assure the same manufacturer as the supplied controller unit 733.02.	Notify District Testing if rejecting material.

700.00

On page 711, **Revise** 733.03 D as follows:

733.03 D	Cabinet Type 336L	Verify type and brand name of material is on TAP 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.
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700.00

On page 711, **Delete** 733.03 E:

733.03.E	Cabinet Type 336	Verify type and brand name of material is on TAP at the time of use.	Notify District Testing if rejecting material.
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		Inspect for conformance to dimension and condition. Document in SM.	If material non-performs or looks defective during use notify District Testing and OMM .
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700.00

On page 711, **Revise** 733.04 A as follows:

733.04 A	Cabinet Riser for TS 1- TS-2 cabinet	Field inspect for 1/4 aluminum thickness and accept.	Notify District Testing if rejecting material.
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700.00

On page 712, **Revise** 733.07 to the following:

733.07	Remote Monitoring Station	Compatible with the supplied 733.02 and 733.06 Supplemental Specification 809.10.G unit.	Notify District Testing if rejecting material.
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701.00

On Page 714 **Replace** section 701.00 with the following:

701.00 Acceptance. Provide cements meeting 701.01, 701.02, 701.04, 701.05, 701.07 and 701.09 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. Lists for certified cement, fly ash, natural pozzolan, slag cement and micro silica sources are maintained by the Laboratory.

701.11

On Page 714 **Replace** section 701.11 with the following:

701.11 Slag Cement. Provide slag cement according to ASTM C 989, Grade 100 minimum.

701.13

On Page 714 **Replace** the first paragraph of section 701.13 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 C 618, Class C, F, or N, except ensure a maximum loss on ignition (LOI) of 3 percent for fly ash and 5 percent for natural pozzolan.

702.01

On Page 715, **Replace** the first sentence with the following:

General. According to AASHTO M 320-10 Table 1 and Supplement 1105 except as follows.

702.01

On Page 716, **Add** before the next-to-last sentence of the first full paragraph the following:

Do not use paraffin wax, organic wax, or like materials.

702.01

On Page 716, **Add** the following sentence after the fourth sentence in the second full paragraph (5.3):

Do not use recycled engine oil bottoms (REOB), vacuum tower asphalt extender (VTAE), or like materials as modifiers.

702.01

On Page 716 **Replace** the sixth full paragraph with the following:

5.7 Ensure that PG 64-22 has a Penetration (AASHTO T49) of no more than 80.

702.09

On Page 721 **Add** new section 702.09 before 702.12 as follows:

702.09 Hot Applied Asphaltic Joint Adhesive. Provide hot applied asphaltic joint adhesive meeting the following requirements:

Table 702.09-1

Test	Description	Requirement
ASTM D 3236	Brookfield Viscosity @ 400°F (205°C)	4,000 - 10,000 CP
ASTM D 5329	Cone Penetration @ 77°F (25°C)	60-100 dmm
ASTM D 5329	Flow @ 140°F (60°C)	5 mm Max.
ASTM D 5329	Resilience @ 77°F (25°C)	30% Min.
ASTM D 113	Ductility @ 77°F (25°C)	30 cm Min.
ASTM D 113	Ductility @ 39.2°F (4°C)	30 cm Min.
ASTM D 5329	Tensile Adhesion @ 77°F (25°C)	500% Min.
AASHTO T 53	Softening Point	170°F Min.
ASTM D 5329	Asphalt Compatibility	Pass

Furnish hot applied asphaltic joint adhesive according to the Department's TE-24.

702.12

On Page 721, **Replace** the section with the following:

702.12 Non-Tracking Asphalt Emulsion. Provide certified non-tracking asphalt emulsion material meeting Table 702.12-1 and Supplement 1128 and Supplement 1032. Emulsion will comply with all specification requirements for at least 30 days after sample date.

Table 702.12-1

Tests on emulsion, AASHTO T 59, unless otherwise designated:	
Viscosity, Saybolt Furol at 77 °F (25 °C) (SFS)	20 to 100
Storage Stability Tests, 24-hr (% difference), max.	1.0
Settlement tests, 5-day (% difference), max.	5.0
Sieve Tests (%) (Distilled Water), max.	0.30
Distillation, Residue % solids, min. [1]	50
Oil distillate, %, max.	3

[1] Products may use residual by evaporation to perform residual and may use the material to perform residual tests but must be submitted during approval process in S-1128. Will be required to perform residual by distillation to obtain oil distillate %.

703.05.C

On page 733, **Add** the following sentence to the end of the paragraph:
Should the sample contain less than 10 percent of any of the sizes specified in AASHTO T104 Section 5.1, that individual size shall not be held to the above maximum loss requirement.

705.01

On page 747, **Replace** the section with the following:

705.01 Glass Fiber Reinforced Polymer (GFRP) Dowel Bars. Furnish round and straight fiber reinforced polymer (GFRP) dowel bars. Ensure resin used to manufacture the GFRP bars consists of an epoxy vinyl ester resin. Ensure the glass fiber used is ECR glass which meets ASTM D578. Ensure that the minimum glass fiber content is 70 percent by weight. Furnish dowel bars of a type meeting the dimensional requirements of the standard construction drawings. Provide certified test data according to 101.03 with each shipment.

705.28

On page 757, **Add** the following section:

705.28 Glass Fiber Reinforced Polymer (GFRP) Deformed Bars. Furnish GFRP reinforcement according to ASTM D7957 except as noted. Furnish deformed bars of a type meeting the dimensional requirements of the standard construction drawings. **Furnish certified material according to Supplement 1138.**

The Mean Tensile Modulus of Elasticity limit (ASTM D7957 Table 1) shall meet or exceed 8700 ksi (60 GPa).

The Mean Ultimate Tensile Strain limit (ASTM D7957 Table 1) shall meet or exceed 1.4%.

The Tensile Modulus of Elasticity limit (ASTM D7957 Table 2) shall meet or exceed 8700 ksi (60 GPa).

The Ultimate Tensile Strain limit (ASTM D7957 Table 2) shall meet or exceed 1.4%.

The Minimum Guaranteed Ultimate Tensile Force (ASTM D7957 Table 3) shall be as follows:

Bar Designation No	Minimum Guaranteed Ultimate Tensile Force Kip (kN)
2 (M6)	6.1 (27)
3 (M10)	13.2 (59)
4 (M13)	27.6 (123)
5 (M16)	36.6 (163)
6 (M19)	51.9 (231)
7 (M22)	68.5 (305)
8 (M25)	89.9 (400)
9 (M29)	124 (550)
10 (M32)	138 (615)

705.29

On page 758, **Add** the following section:

705.29 Synthetic Fibers for use in Portland Cement Concrete. Provide Type III synthetic, non-metallic fibers in accordance with ASTM C 1116 and ASTM D7508 with the following exceptions:

1. Aspect Ratio – Length/Equivalent Diameter, min.....70 – 100

max.....100

- 2. Tensile Breaking Strength, min.....70,000 psi (482 MPa)
- 3. Modulus of Elasticity, min.....800,000 psi (5515 MPa)
- 4. Length: 1.5 inches (38 mm) to 2.25 inches (57 mm)
- 5. Dosage Rate: Minimum of 4 pounds per cubic yard (2.4 kg/m³)

Test the synthetic fibers in accordance with ASTM C 1609 and ASTM C 1579 utilizing an AASHTO-accredited laboratory for portland cement concrete materials and in accordance with the following table:

Required Hardened Fiber Reinforced Concrete Properties

Physical Test	Specification	Requirement
Equivalent Flexural Strength Ratio ($R_{T,150}^{150}$)*	ASTM C 1609	Minimum of 25%
Crack Reduction Ratio (CRR)	ASTM C 1579	Minimum reduction >85%

*Test specimens when the concrete flexural strength at first crack (f_1) is a minimum of 600 psi. For 6 inch x 6 inch x 20 inch fiber reinforced beam the maximum required net deflection value of L/150 of the 18 inch span length is 0.12 inch.

Furnish materials according to the Department’s QPL.

706.05

On page 772, **Replace** the second paragraph with the following:

7.1 For the following box sizes, span by rise, refer to ASTM C1577: 6x4, 5, 6; 7x4, 5, 6, 7; 8x4, 5, 6, 7, 8; 9x4, 5, 6, 7, 8, 9; 10x4, 5, 6, 7, 8, 9, 10; 11x4, 5, 6, 7, 8, 9, 10, 11; and 12x4, 5, 6, 7, 8, 9, 10, 11, 12 feet. For the following box sizes, span by rise, refer to SS940: 14x4, 5, 6, 7, 8, 9, 10; 16x4, 5, 6, 7, 8, 9, 10; 18x4, 5, 6, 7, 8, 9, 10; and 20x4, 5, 6, 7, 8, 9, 10 feet.

707.01

On page 788, **Replace** the table with the following:

Pipe			Pipe-Arch	
Diameter	Wall Thickness		Size	Wall Thickness
(inch)	(inch)		(inch)	(inch)
6	0.052			
8	0.064			
10	0.064			
12	0.064			
15	0.064		17 × 13	0.064
18	0.064		21 × 15	0.064
21	0.064		24 × 18	0.064
24	0.064		28 × 20	0.064
27	0.064			
30	0.064		35 × 24	0.064
33	0.064			
36	0.064		42 × 29	0.064
42	0.064		49 × 33	0.079
48	0.064		57 × 38	0.109
54	0.079		64 × 43	0.109
60	0.109		71 × 47	0.138
66	0.138		77 × 52	0.168
72	0.138		83 × 57	0.168
78	0.168			
84	0.168			

707.01

On page 789, **Replace** the first table with the following:

Pipe	
Diameter	Wall Thickness
(mm)	(mm)
150	1.32
200	1.63
250	1.63
300	1.63
375	1.63
450	1.63
525	1.63
600	1.63
675	1.63
750	1.63
825	1.63
900	1.63
1050	1.63
1200	1.63
1350	2.01
1500	2.77
1650	3.51
1800	3.51
1950	4.27
2100	4.27

Pipe-Arch	
Size	Wall Thickness
(mm)	(mm)
430 × 340	1.63
530 × 380	1.63
610 × 460	1.63
710 × 510	1.63
885 × 610	1.63
1060 × 740	1.63
1240 × 840	2.01
1440 × 970	2.77
1620 × 1100	2.77
1800 × 1200	3.51
1950 × 1320	3.51
2100 × 1450	4.27

707.11

On page 792, **Revise** the following to:

707.11 Polymer-Precoated Corrugated Steel Spiral Rib Conduits. Provide conduits that have a center-to-center rib spacing of 7 1/2 inches (190 mm). Provide conduits and fittings according to AASHTO M 36, Type IR, with the following modifications:

6.1 Fabricate pipe from polymer-precoated, on both sides, steel sheet according to AASHTO M 246.

7.2.2 The ribs shall conform to AASHTO M 196, Section 7.2.2.

7.7.1 Reroll the ends of the individual pipe sections to form at least two annular corrugations on each end. Paint the rerolled end with zinc rich paint.

8.1.2 Ensure that the minimum wall thickness (coated) of steel pipe is as follows:

Pipe

Diameter (inch)	Wall Thickness (inch)		Diameter (mm)	Wall Thickness (mm)
18	0.064		450	1.63
21	0.064		525	1.63
24	0.064		600	1.63
30	0.064		750	1.63
36	0.064		900	1.63
42	0.064		1050	1.63
48	0.064		1200	1.63
54	0.079		1350	2.01
60	0.079		1500	2.01
66	0.109		1650	2.77
72	0.109		1800	2.77
78	0.109		1950	2.77
84	0.138		2100	3.51
90	0.138		2250	3.51

9.1 Coupling bands shall have annular corrugations.

9.2 Coupling bands shall conform to 707.01.

9.3 A bell and spigot joint according to ASTM A 760 (A760M) may be used with the following modifications:

9.3.1 These joints may be used for conduits ranging in size from 18 (450mm) to 48 (1200mm) inches in diameter.

9.3.2 Ensure the bell and spigot has a soil tight joint by use of a shop applied gasket on the bell end and a field applied gasket on the spigot end.

9.3.3 Provide a minimum of 0.064 (1.63mm) inch nominal sheet thickness or not more than two (2) nominal sheet thickness thinner than the thickness of the pipe to be joined.

14.1 Ensure that the certification and sampling conform to 707.01.

707.12

On page 793, **Replace** the table with the following:

Pipe

Diameter	Wall Thickness		Diameter	Wall Thickness
(inch)	(inch)		(mm)	(mm)
18	0.064		450	1.63
21	0.064		525	1.63
24	0.064		600	1.63
30	0.064		750	1.63
36	0.064		900	1.63
42	0.064		1050	1.63
48	0.064		1200	1.63
54	0.079		1350	2.01
60	0.079		1500	2.01
66	0.109		1650	2.77
72	0.109		1800	2.77
78	0.109		1950	2.77
84	0.138		2100	3.51
90	0.138		2250	3.51

707.62

On page 802, **Replace** the first paragraph with the following:

Polypropylene Corrugated Single Wall Pipe. Provide polypropylene corrugated single wall pipe for drainage pipe from 3 to 30-inch diameters according to ASTM F 3219, with the following modification:

707.65

On page 803, **Replace** the first paragraph with the following:

Polypropylene Corrugated Double Wall Pipe. Provide polypropylene corrugated double wall pipe for non-pressure storm sewer pipe from 12 to 60-inch diameters according to ASTM F 2881 with the following modification:

707.69

On page 803, **Replace** the entire section with the following:

Polypropylene Triple Wall Pipe. Provide polypropylene triple wall pipe and fittings for non-pressure sanitary sewer pipe from 30 to 60-inch diameters according to ASTM F 2764, with the following modifications:

1.2 Provide pipe and fittings for underground use for non-pressure sanitary sewer and storm sewer systems.

10.1 Provide a letter for certification to cover each shipment of material verifying that it meets specification requirements.

708.01

On Page 804, **Replace** the second paragraph with the following:

5.1 A green colorant approximately AMS-595A-34159.

708.02 B.1.f

On page 804, **Replace f.** with the following.

- f. **Color.** Greenish gray, approximating AMS-595A-34159, visual comparison.

708.02 C.1.a

On page 805, **Replace a.** with the following.

- a. **Color.** White, meeting or exceeding, AMS-595A-37875 according to ASTM E 1347.

708.02 D.1.a

On page 806, **Replace a.** with the following.

- a. **Finish, Specular gloss, ASTM D 523.** Use AMS-595A-16440 Gray: 70 % minimum after 3000 hours weathering resistance. Color change less than 2.0 ΔE*, (C.I.E 1976 L*a*b*) ASTM D2244.

708.02.D.1.f

On page 806, **Replace f.** with the following:

- f. **Colors.**
(1) **Specified.**^[2]

Brown	AMS-595A, 10324
Green	AMS-595A, 14277
Blue	AMS-595A, 15526
^[2] If not defined in the plans, the Engineer will specify from the list.	

- (2) **Elective.** As specified on the plans.

709.00 5.1

On page 808, **Replace** section 5.1 with the following:

5.1 Ensure that steel reinforcing bars to be coated are deformed and conform to 709.01, 709.03, or 709.05, and are free of oil, grease, or paint.

710.06

On page 815, **Replace** the first sentence of the first paragraph with the following:

Furnish deep beam rail according to AASHTO M 180, Type II or VI, Class A, with the following modifications:

710.12

On page 816, **Revise** the first paragraph with the following.

710.12 Square-Sawed and Round Guardrail Posts. Furnish pressure treated sawed posts of a timber grade in accordance with AASHTO M 168, 710.14, and 712.06. Furnish round guardrail posts according to 710.12, 710.14, and 712.06. Cut posts from growing timbers that are free from unsound or loose knots and rot and from injurious or excessive shake, and season checks that exceed 1/4 inch (6 mm) in width.

710.12

On page 816, **Delete** the last paragraph.

~~Furnish square sawed posts that are free from injurious cross grain and sapwood.~~

710.14

On page 817, **Revise** the first paragraph with the following.

710.14 Pressure Treated Guardrail and Fence Posts, Braces, and Blocks. Furnish pressure treated guardrail and fence posts, braces, and blocks according to AASHTO M 133 and 710.11, 710.12, and 712.06.

710.16

On page 817, **Revise** the first paragraph with the following.

710.16 Guard Posts. Furnish pressure treated wood posts according to 710.14. Furnish posts that are either sawed 5 by 6 in (125 by 150 mm) in cross section or 5 1/2 in + 1/2 in (138 mm) diameter round when measured 30 inches (0.75 m) from the top. Furnish posts that are 5 feet, 3 inches (1.6 m) in length and are embedded such that 30 inches (0.75 m) remains exposed. Ensure that the center-to-center spacing is spaced at 6 feet (1.8 m) intervals, unless otherwise shown on the plans.

712.06.E

On page 827, **Revise** the first and second paragraphs with the following.

E. Incising. Incise Douglas Fir lumber 3 inches (75 mm) or more thick on all four sides. Incise lumber less than 3 inches (75 mm) thick on the wide faces only, except as shown on the plans.

Incise Douglas fir with a minimum dimension of 2 inches (50 mm) using a suitable power-driven machine before treatment. Southern Yellow Pine is not required to be incised.

712.06.F

On page 827, **Replace** the first paragraph with the following.

F.Amount of Preservative. Pressure preservative treat all species of structural timber, lumber, piling, posts, and blocks in accordance with the appropriate AWPA U1 Commodity Standard or AASHTO M 133.

712.06.H

On page 828, **Revise** the ^a section below the table with the following.

^a Sizes shown are nominal dressed sizes

The sweep must not exceed .08 foot in 10 feet.

Sawn wood sign posts must be graded per the following:

Southern Pine Inspection Bureau (SPIB) Standard Grading Rules

Western Wood Products Association (WWPA) Standard Grading Rules

West Coast Lumber Inspection Bureau (WCLIB) Standard Grading Rules

Posts must be treated per current AASHTO M 133: **Preservatives and Pressure Treatment Processes for Timber standards and AWPA U1 Commodity Specification A.**

Douglas fir and Hem-Fir posts must be incised prior to treatment.

Inspection shall be in accordance with AWPA M2.

Quality control shall be in accordance with AWPA M3.

Care **and field treatment** of the posts shall be in accordance with AWPA M4.

712.12

On page 833, **Add** the following to the section:

712.12 Tied Concrete Block Mat. Furnish materials tested according to ASTM D6460 with a minimum un-vegetated shear stress value of 12 psf with Type 1 Underlayment. The Department will determine acceptance based on independent third-party test data. Furnish materials with the following underlayment options:

Type 1 Underlayment: Temporary Erosion Control Mat

Type 2 Underlayment: Temporary Erosion Control Mat and Turf Reinforcing Mat

Furnish products according to the Department’s QPL.

712.16

On page 835, **Insert** Item 712.16 after the last paragraph of Item 712.15:

712.16 Prefabricated Geocomposite Drain (PGD). Furnish Prefabricated Geocomposite Drain (PGD) consisting of a drainage core with geotextile fabric bonded to one side. Use drainage core material consisting of a preformed, stable, polymer plastic material with a cusped or geonet structure. Use drainage core that supports the geotextile and provides a bonding surface for the geotextile at intervals not exceeding 1-1/8 inches (29 mm) in any direction. Supply core that provides at least 14 square inches per square foot of flat area in contact with the geotextile.

Furnish a geotextile fabric composed of over 85% of polyester, polypropylene, polyolefin, or polyamide fibers by weight, that are formed into a stable network to ensure the performance during handling, installation, and service life. Use geotextile fabric that is resistant to chemical attack, rot, and mildew. Use geotextile fabric that is free of treatments or coatings that would adversely change the hydraulic properties of geotextile after installation. Furnish PGD that has the geotextile fabric covering the full length of the drainage core and has minimum 3 inch (76 mm) wide flaps/flanges of fabric extending beyond both longitudinal edges of the drainage core. Do not supply PGD that has ripped or torn geotextile fabric.

Furnish PGD in rolls, or in another acceptable manner, wrapped with an opaque, waterproof wrapping. Label or tag each roll or package to provide product identification sufficient to determine the product type, manufacturer, quantity, lot number, roll number, and date of manufacture. Prior to installation, protect the PGD from mud, dirt, dust, debris, harmful ultraviolet light, direct sunlight or temperature greater than 140 °F (60 °C). Furnish 3 inch (76 mm) wide, plastic tape for the sealing, seaming, and splicing the PGD. Furnish waterproof tape designed for underground applications that provides a strong bond that does not deteriorate over time in a buried condition. Furnish fittings and accessories provided by the manufacturer if available.

Submit Certified Test Data showing the product will meet or exceed the requirements listed in Tables 712.16-1 and 712.16-2.

TABLE 712.16-1 REQUIRED PGD CORE PROPERTIES

Property	Test Method	Unit	Required Value		
			Conventional Abutment/Wall Height		
			<10 ft	10 to 30 ft	30 to 50 ft
			(3m)	(3 to 9m)	(9 to 15m)
Thickness	ASTM D5199	in (mm)	0.4 to 1.0 (10 to 25)		
Minimum Compressive Strength	ASTM D1621	psf (kPa)	4625 (221)	10625 (508)	16625 (796)
Minimum In-Plane Flow Rate*	ASTM D4716	gal/min/ft (l/min/m)	5 (62)	15 (186)	25 (310)

* Tested under a confining pressure of 3,600 psf (172 kPa) and a hydraulic gradient of 1.0.

TABLE 712.16-2 REQUIRED PGD GEOTEXTILE PROPERTIES

Property	Test Method	Unit	Required Value		
			Percent <i>In Situ</i> Soil Passing 0.075 mm		
			<15	15 to 50	>50
Minimum Permittivity	ASTM D 4491	sec ⁻¹	0.5	0.2	0.1
Apparent Opening Size	ASTM D 4751	mm	AOS ≤ 0.43	AOS ≤ 0.25	AOS ≤ 0.22
Minimum Grab Strength	ASTM D 4632	lb (N)	157 (700)		
Maximum Elongation	ASTM D 4632	%	50		
Minimum Trapezoidal Tear Strength	ASTM D 4533	lb (N)	56 (250)		
Minimum Puncture Strength	ASTM D 6241	lb (N)	309 (1375)		
	or ASTM D 4833	lb (N)	58 (260)		

720.01

On page 836, in the second paragraph, **Replace** “730.192 or 730.192” with “730.192 or 730.193”

721.01

On page 836, **Add** the following sentence as the first sentence of the first paragraph:
Furnish castings conforming to Supplement 1062.

721.02

On page 836, **Add** the following sentence as the first sentence of the first paragraph:
Furnish prismatic retroreflectors conforming to Supplement 1062.

721.03

On page 836, **Replace** the section in its entirety with the following:

721.03 Casting Adhesive. Furnish casting adhesives that conform to Supplement 1062.07 - Raised Pavement Marker Casting Adhesive Acceptance Procedure.

Only furnish material listed on the Department’s QPL.

725.19.H

On page 847, **Revise** the first paragraph second sentence to the following:

Ensure that the pole and any cross arms or pole key is Southern Pine or Western Red Cedar, full length, pressure treated in compliance with specifications of the American Wood Protection Association or AASHTO M-133.

725.20

On page 848, **Replace** the entire section with the following:

725.20 Multiple Cell Conduit and Fittings. Ensure that fittings are factory made couplings that couple inner ducts and the outer conduit simultaneously, maintain the continuity and indexing of the inner ducts and are of a push fit design mechanically locked in place.

Furnish materials according to the Department’s QPL.

A. Polyvinyl Chloride. Ensure that the multiple cell conduit consists of inner ducts conforming to NEMA TC-8 type DB in an outer conduit conforming to NEMA TC-2 (type EPC-40 or EPC-80 as specified except that size shall be the true inside diameter) in a factory preassembled unit.

B. High Density Polyethylene. Ensure that the multiple cell conduit consists of inner ducts conforming to ASTM F2160 with smooth or ribbed inside, and Superglide permanent friction layer, in an outer conduit conforming to ASTM F2160 in a factory preassembled unit.

725.21

On page 848, **Revise** the first sentence to the following:

Ensure that the complete luminaire support from the luminaire(s) down through the connection to the foundation or other structure to which the luminaire support is attached conforms to the requirements of AASHTO’s *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals* LTS-6 (2013), except that the 40% hand-hole width criterion of 11.9.2 is not required.

725.22

On page 854, **Replace** the entire section with the following:

725.22 Underground Warning / Marking Tape. Furnish tape that is an inert material, approximately 6 inch (150 mm) wide composed of polyethylene plastic, highly resistant to alkalis, acids or other chemical components likely to be encountered in soils. Furnish tape in accordance with the ORC 3781.29 color code and with black identifying lettering in accordance with Table 725.22-1 printed on one side only.

Table 725.22-1 Underground Utility Facility Color Codes

Identifying Lettering	Color
ELECTRIC	Red
GAS	Yellow
COMMUNICATION	Orange
WATER	Blue
SEWER	Green

Furnish tape in continuous rolls with the identifying lettering repeated continuously the full length of the tape. Furnish tape with a break strength of at least 3000 lb (1361 kg) when tested to ASTM D6775. Furnish tape with a minimum diameter #12 AWG HDPE insulated copper clad steel tracer wire. Provide certified data verifying compliance with these requirements.

726.01

On page 854, **Revise** the first paragraph as follows.

726.01 Barrier Reflectors. Furnish concrete barrier, cable barrier, retaining wall, bridge parapet, bridge rail or guardrail blockout reflector body housings of the following Type:

726.01

On page 855, **Add** the following paragraph after the eleventh paragraph.

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 G, H, J, or Reboundable reflective 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.

730.14

On page 858, **Replace** the entire section with the following:

730.14 Aluminum Castings. Furnish certified material according to Supplement 1092 or 1093.

- A. Furnish sand castings according to ASTM B 26/B 26M, 356-T6 or T7.
- B. Furnish self-aligning aluminum extrusheet sign mounting clips with manufacturer identification mark conspicuously incorporated in relief on the top surface of the casting, and in accordance with Supplemental Specification 992.
- C. Furnish permanent mold castings according to ASTM B 108, 356-T6 or T7.

730.24

On page 860, **Add** the following section after section 730.23.

730.24 Digital Printing. Furnish UV overlamine protectant film and inks that the manufacturer of the reflective sheeting warrants according to Supplement 1049.

731.06

On page 861, **Revise** the first paragraph to the following:

731.06 Sign Flasher Assembly. Furnish beacons consisting of single traffic signal sections with 8 or 12-inch (200 or 300 mm) yellow lenses. Ensure that the flasher control unit flashes the beacons at a rate for each beacon of between 50 to 60 times per minute with the light period from one-half to two-thirds of the total cycle. Furnish flasher control units that have all solid state components and that meet NEMA TS-2. House control units within a weatherproof corrosion-resistant enclosure with a lockable door. Include the LED lamps.

731.07

On page 861, **Revise** the first paragraph to the following:

731.07 School Speed Limit Sign Assembly. Furnish yellow beacons that are 8 inches (200 mm) or 12 inches (300 mm). Ensure that the flashers flash the beacons alternately at a rate for each beacon of 50 to 60 times per minute with the light period from one-half to two-thirds of the total cycle. Furnish flashers that have all solid state components and that meet NEMA TS-2. Ensure that the backing members with hardware are compatible with the method of support.

732.01

On page 862, **Replace** the first paragraph with the following:

732.01 Vehicular Signal Heads, Conventional. Ensure that vehicular traffic signal heads conform to the ITE "Vehicle Traffic Control Signal Heads" standard. In conformance with the above standard,

provide signal heads that are of cast nonferrous corrosion resistant metal. For span mounted and non-tethered and free swinging installations, and for span mounted with tether and backplates or rigid mounted, use polycarbonate plastic heads with coloring obtained through colored plastic and not painted.

732.01

On page 862, **Replace** the third paragraph with the following:

Furnish signal heads with required mounting hardware. Furnish signal face orientation to traffic by serrated rings or other devices on housing sections and mounting hardware. Permit adjustment in increments not greater than 5 degrees of rotation and not affected by wind gusts when locked. Furnish galvanized steel or aluminum spacers and drop pipes 1 1/2 inches (38 mm) nominal pipe size (1.90 inch (48 mm) actual diameter). Ensure that disconnect hangers have at least twelve terminals unless a greater number is required. Tethered heads shall use 3/4-inch unpainted cast aluminum span wire clamps and cable entrance adapters with integral tri-studs (no tri-stud inserts), stainless steel hardware, and a single steel-reinforced mounting hole. Free-swinging heads shall use cast iron span wire clamps and cable entrance adapters with tri-studs. Tri-studs shall be secured to the head using stainless steel nylon-insert or distorted thread locknuts. A neoprene gasket placed under the clamp washer in the top signal section shall effectively seal the entrance adapter on the signal to make a waterproof connection and shall have a minimum thickness of 3/32 inch. Provide cutaway visors, unless specified otherwise, with all heads, and the inside surface of the visors shall have a finish of flat black. All other exterior surfaces of the signal head and hardware shall have a finish of Federal Yellow or Gloss Black to closely agree with Federal Standard 595, Color 13655 or Color 17038. The coating system used shall be durable, uniform, and weather resistant.

732.01

On page 863, **Replace** the first full paragraph with the following:

For polycarbonate signal heads, ensure a minimum wall thickness of 0.11 in (2.79 mm).

732.04.A.1.j.

On page 865, **Replace** the last sentence with the following:

The optical assembly shall be used for all ball and arrow modules and shall be optional on ~~arrow and~~ pedestrian modules.

732.06

On page 869, **Replace** the last sentence of the second paragraph with the following:

Furnish housing with manufacturers applied external surfaces black Color 17038 or yellow Color 13655, Federal Standard 595, unless specified otherwise in the Plans.

732.06

On page 869, **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 3.5 pounds (15.5N) and operate with a closed fist. There shall be a visible and audible indicator that the button press has occurred.

732.06

On page 869, **Add** the following section after the fourth paragraph.

A. Accessible Pedestrian Pushbutton. Use a pushbutton with a continuous locator tone and voice announcement of pedestrian signal status along with specific cross street information. Ensure all elements of the pushbutton are programmable and include all equipment necessary to program the pushbutton. Ensure the sign included with the pushbutton is the R10-3e.

732.06

On page 869, **Revert** the fourth paragraph to the following:
Furnish materials according to the Department's **TAP list**.

732.07.A.

Beginning on page 869, **Delete** the entire section.

~~A. **NEMA TS-1.** Ensure that the loop detector units comply with the requirements of NEMA TS-1, section 15, with the following modifications. Furnish shelf mounted loop detector units that are powered from 120 volts. Use solid state isolated output units for all controller applications where directly connected to a solid state digital controller unit. Ensure that the conductors in the cable harness for loop input pins are twisted three to five times per 1 foot (300 mm).~~

~~Ensure that the electrical connections for four channel shelf mounted units either are the 19-pin MS connector, as required by the foregoing specification, or consist of four connectors of the type required for single channel shelf mounted detector units.~~

~~If specified, design detector unit electrical connection plugs or wiring harness such that any multi-channel shelf mounted detector unit may be readily replaced with single channel detector units. Accomplish this by furnishing only units with the connector type required for single channel shelf mounted detector units, or by wiring the controller back panel to single channel harnesses which are, in turn, plug connected to an adapter harness which is mated to the multi-channel connector of the detector unit.~~

~~Furnish loop detector unit with an LED or LCD display indication of call strength ($\Delta I/L$ or equivalent). This display shall be a bar graph or numerical display with at least eight (8) discrete levels indicated.~~

~~Furnish materials according to the Department's TAP List.~~

732.08

On page 870, **Delete** the entire section.

732.11

On page 871, **Replace** the sixth sentence of the first paragraph with the following:

The Pole Identification Tag shall be clearly and deeply stamped with the ODOT Standard Construction Drawing Number, Design Number, and the fabrication date of the pole (e.g., TC-81.22, DES. 12, 05-12) in characters with a minimum height of 3/8 in.

732.12

On page 872, **Replace** the fourth sentence of the first paragraph with the following:

The Pole Identification Tag shall be clearly and deeply stamped with the ODOT Standard Construction Drawing Number, Design Number, and the fabrication date of the pole (e.g., TC-81.22, DES. 12, 05-12) in characters with a minimum height of 3/8 in.

732.21

On page 875, **Revise** the second paragraph to the following:
Furnish materials according to the Department's QPL.

732.22

On page 875, **Revise** the first sentence to the following:

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.

732.22

On page 875, **Replace** the tenth sentence with the following:
Reflective sheeting shall be Type J, ASTM D4956 Type XI.

733.01

On page 875, **Delete** the second definition.
~~“NEMA TS-1” and “Type TS-1” refers to equipment manufactured in conformance with the National Electrical Manufacturers Association (NEMA) Standards Publication No. TS-1.~~

733.01

On page 875, **Add** the following as the first paragraph:
“ATC” refers to equipment manufactured in conformance with the Advanced Transportation Controller Standard, a joint standard of AASHTO, ITE, and NEMA.

733.02

On page 876, **Delete** the entire section.

733.03

On page 879, **Delete** the following from the second paragraph:
Supply two through four phase controller operation with a minimum twelve position backpanel, configured for four pedestrian movements and four overlaps, with a ~~twelve channel NEMA TS-1 conflict monitor or NEMA TS-2 malfunction management unit.~~

733.03

On page 879, **Delete** the following from the fourth paragraph:
For signal phasing configurations that require a larger capacity backpanel or conflict monitor, supply a 16 position backpanel with a ~~16 channel NEMA TS-1 conflict monitor or NEMA TS-2 malfunction management unit.~~

733.03.15.

On page 880, **Add** the following paragraph after number 15:
Furnish 60-month warranties or the manufacturers’ standard warranty, whichever is greater for the following equipment:

- a. ATC/NEMA Cabinet & Equipment
 - (1) Bus Interface Units
 - (2) Malfunction Management Units
- b. ATC/CalTrans Cabinet & Equipment
 - (1) Model 2010/2018 Conflict Monitor Units

Ensure that the warranty period begins on the date of shipment to the project. Ensure that each unit has a permanent label or stamp indicating the date of shipment. Label shall indicate the equipment vendor name and or logo.

733.03.A.

Beginning on page 880, **Delete** the entire section.

~~**A. Type TS-1.**~~

1.—Cabinets. Furnish a cabinet size that provides ample space for housing the controller unit and all associated electrical devices furnished with it, together with any other auxiliary devices that are specified. Furnish a cabinet with sufficient shelf space to accommodate all existing, proposed, and designated future equipment. Ensure that the space provided accommodates the appropriate controller unit frame as designated in NEMA TS 1, Section 14.

Construct the cabinets of cast aluminum or sheet aluminum, drawn or formed, with aluminum support and stiffening of members provided as necessary. Ensure that the exterior is smooth with no sharp edges. Weld all joints. Ensure that the cabinet is rigid and is designed to support all components. Ensure that the application of the following loads do not result in breakage, deformation, or loss of weatherproof qualities: a 100 pound (445 N) load applied to any 1 inch (25 mm) square surface of the cabinet or door (open or closed), in any direction; or a 300 pound (1.3 kN) load applied vertically downward to any 4-inch (100 mm) square of the top surface or to the top edge of the closed and latched door.

Provide cabinet exterior surfaces of bare aluminum. When the plans specify a cabinet color, prime and finish all cabinet exteriors with two coats of high grade enamel paint of the specified color. Ensure that the cabinet interior surfaces are the same as the exterior, or may be painted flat white.

Ensure that the cabinet contains at least one rain-tight louvered vent equipped with a replaceable filter. Install vents to allow for the release of excessive heat and any explosive gases that might enter the cabinet.

Ensure that the cabinets are functional in design and have a door in the front providing access to substantially the full interior area. Attach a gasket of elastomeric material to the cabinet or door to form a weatherproof seal. Furnish door hinge pins of stainless steel or equivalent corrosion resistant material. Furnish a door stop to retain the door in at least a 90-degree open position.

Include a small, hinged, and gasketed door in door (police door) on the outside of the main controller door. Ensure that the door-in-door does not allow entrance to the controller mechanism nor to exposed electrical terminals, but provides access to a small switch panel and compartment (police panel).

Fit the cabinet with the necessary provisions for mounting, with a bottom conduit connection provided for pole-mounted cabinets. Furnish suitable hardware and equipment for each cabinet mounting method, including bolts for drilled and tapped holes on metal supports, pole attachment clamps, pedestal slipfitter, and anchor bolts and conduit ells for installation in concrete foundations. Furnish steel anchor bolts that are galvanized at least 1 inch (25 mm) beyond the threads. Certified cabinet anchor bolts are not required.

Directly place all equipment designed for shelf mounting on a shelf except for loop detector units (amplifiers) and similar devices designed for stacking on each other. Arrange components on shelves and devices on the door so that a 1-inch (25 mm) minimum space separates them when the door is shut. Ensure that plugs, wires, controls, or similar items do not compromise this space.

Reserve a minimum 4-inch (100 mm) clear area on the bottom of the cabinet for the routing of cables. Do not locate panel mounted equipment in the bottom 6 inches (150 mm) of the cabinet. Do not locate shelves or components within 6 inches (150 mm) of the bottom of foundation mounted cabinets.

Arrange all equipment for easy withdrawal and replacement, without the necessity of disturbing adjacent equipment. Permanently locate devices within the cabinet to allow free circulation of air and that do not restrict air flow from fan ducts or vents.

Ensure that the auxiliary equipment operates within a weatherproof cabinet at ambient temperatures between 30 and 165 °F (–34 and 74 °C).

When terminals and panel mounted devices with exposed electrical contact points are located next to shelf mounted equipment, provide spacers, shelf lips, or other means to assure that component units cannot be accidentally moved into contact with any exposed electrical terminal points.

Ensure that load switches, relays, flashers, fuses, switches, terminal blocks, and other equipment mounted or plugged into the back or side panels are readily accessible. Ensure that switches, controls, and indicator lights are visible and easily operable without moving the components from their normal shelf positions.

Furnish an aluminum shelf with integral storage compartment in the space immediately below the controller. Ensure the storage compartment has telescoping drawer guides for full extension. Ensure the compartment top has a non-slip plastic laminate attached.

Furnish LED strip lighting for internal illumination.

Furnish materials according to the Department's TAP List.

2. Accessory Equipment

a. Ventilating Fan. Equip all cabinets with a forced air ventilating fan. Furnish a fan that provides a capacity of at least 100 cubic feet (2.8 m³) per minute. Furnish a fan that is thermostatically controlled and adjusted to start at cabinet temperatures above 120 °F (49 °C) and to stop when the temperature has dropped below 100 °F (38 °C).

b. Load Switches. Furnish all cabinets with solid state, triple signal load switches complying with NEMA TS 1, Section 5. Additionally, ensure that all load switches have both input and output indicators.

c. Conflict Monitor. Furnish all cabinets with a separate solid state conflict monitor device. Ensure that the cabinet wiring, in the event of monitor disconnection, transfers the signals to a flashing condition. Furnish conflict monitors that comply with NEMA TS 1, Section 6. Additionally, ensure that all conflict monitors are capable of causing the signals to flash as a result of the following events:

- (1) All red lamps associated with a load switch are burned out;
- (2) Within one second when red and green, or yellow and green color pairings are displayed on the same phase;
- (3) The absence of a minimum yellow interval.

Ensure that the monitor indicates the exact load switch output channel upon which the failure event occurred. Furnish conflict monitors that are capable of storing a minimum of nine fault events (event logging feature). Furnish a monitor that utilizes a LCD display and has a RS-232 port for connection to a laptop computer. Furnish software and connector cables to diagnose the conflict monitor.

d. Flashers. Furnish solid state flashers that comply with NEMA TS 1, Section 8. When signals have a normal stop and go sequence that includes flashing, either ensure that the controller unit generates that flashing display or provide flashers. For this purpose, provide separate flashers from those provided for emergency back up. Furnish flashers that are designed with two circuits of at least 10 amperes each.

Equip each controller cabinet with terminals that are wired so that, by an interchange of jumpers, the flashing operation is arranged to display either flashing yellow or flashing red on the vehicular signals.

e. Relays. Ensure that the relays required for proper operation of the specified equipment are furnished and completely wired. Furnish relays that are enclosed, readily replaceable, and designed for one million operations without failure or need for adjustment.

f. Surge Protection Devices. Furnish surge protection on incoming power lines, interconnect lines, and detector leads.

The primary surge protection device (SPD) shall be an EDCO SHA 1250 or approved equal. A plug-in base shall be used to hold the device. All wiring connections shall be made to the base, and

appropriate cabinet clearances maintained, to allow the SPD module to be replaced by hand without the use of tools.

Furnish loop detector lead-in cable protection that consists of devices installed in each detector circuit where the lead-in connects to the terminal block. House each device in a case that consists of two stages; a 3-electrode gas tube arrestor and a semiconductor circuit. Ensure that the arrestor shunts to ground a common mode transient with a 1,000 ampere peak and an 8/20 microsecond wave shape, ionizing at 400 volts within 100 nanoseconds when subjected to a 1,000 volt per microsecond transient. Furnish a semiconductor circuit that clamps a differential transient to 30 volts within 40 nanoseconds of the appearance of the transient, and a common mode transient to 30 volts within 500 nanoseconds of the ionization of the gas tube arrestor. Ensure that the second stage is able to withstand a peak current of 13 amperes. Furnish a device that has impedance characteristics compatible with the detector unit so as not to cause false calls or increase the loop impedance above the sensitivity of the detector unit.

Furnish pedestrian pushbutton inputs with the same protection as specified for the loop detector lead-in cables.

Protect interconnect cable against transients by devices across each conductor of the cable and ground. The devices may be either 2 or 3 terminal devices. If 3 terminal devices are used, connect two conductors and ground to the same device. Furnish a protection device that consists of a gas tube arrestor with a maximum ionization voltage of 1000 volts on a 10,000 volt per microsecond transient or a maximum ionization voltage of 950 volts on a 3000 volt per microsecond transient. Ensure that the maximum time from beginning of the transient to ionization is 1.1 microseconds on a 10,000 volt per microsecond transient. Ensure that the device is not ionized by normal voltage variations on a 120 volt AC line. Furnish a device that is able to withstand a 10,000 ampere peak with an 8/20 microsecond waveshape.

g. Main Power Breaker. Furnish an incoming AC power line that is controlled by a main circuit breaker rated at 240 volts and an auxiliary breaker, with capacity and wiring as specified in NEMA TS-1, Section 10.3.2.2 and Figure 10-4.

If a power service disconnect switch is located before the controller cabinet, the neutral (AC) and the grounding bar in the controller cabinet shall not be connected together as shown in NEMA TS-1, Figure 10-4.

h. Radio Interference Filter. Furnish an incoming AC power line that contains a radio frequency interference (RFI) filter installed between the main circuit breaker and the solid state equipment. Also, provide RFI filtering for the load switches and flasher, unless the equipment furnished provides signal and flasher circuits switching at the zero voltage point of the power line sinusoid wave form.

i. Convenience Outlet and Light. Wire a convenience outlet into the cabinet for use by electrical maintenance equipment. Ensure that the outlet contains at least one standard duplex three-wire NEMA 5-15 receptacle of the ground-fault circuit interrupting (GFCI) type. Wire a second non-GFCI convenience outlet, not fed thru the UPS system (if used). Furnish and mount a white LED lamp in the upper portion of the cabinet. Furnish a door switch to control the convenience light.

j. Manual Control and Pushbutton. When required by the plans, provide intersection controller units with means for substituting manual operation of interval timing for automatic interval timing. Ensure that manual operation provides the same interval sequence as when the controller unit is operating automatically.

Obtain manual interval timing by a momentary pushbutton contact switch mounted on a 5-foot (1.5 m) minimum flexible weatherproof extension cord. Store that switch and cord behind the small door-in-door.

~~k. — **Switches.** — Furnish completely wired switches that are required for proper operation of specified equipment. Clearly and permanently label switches as to function and setting position, and ensure that they are accessible without the necessity of moving components.~~

~~(1) — **Signal Shutdown Switch.** — Furnish a cabinet with a signal shutdown switch for turning off the power to the signals at the intersection. Ensure that this switch only affects the power to the signals, and allows the controller to continue in operation. Locate the switch in the panel behind the small door-in-door (police door).~~

~~(2) — **Auto/Flash Switch.** — Furnish a cabinet with a flash control switch for activating the flashing of vehicular signals in a preselected emergency flash display. Ensure that the operation of the flash control switch causes a flashing display even under conditions of controller unit malfunction or of its removal from the cabinet. Ensure that the operation of the switch overrides any operation commands from a local or remote time switch. Locate the switch in the panel behind the small door-in-door (police door).~~

~~Program the transfer to and from flashing operation, when called remotely or by a local time switch, to occur only at points in the cycle allowed by the OMUTCD.~~

~~(3) — **Automatic/Manual Transfer Switch.** — Furnish a cabinet with an automatic/manual transfer switch. In the automatic position, ensure that the controller unit automatically sequences the signal head displays. In the manual position, ensure that the signal phase or interval sequencing occurs only upon manual activation of the manual control pushbutton. Locate the switch in the door-in-door (police door). Ensure that it is unnecessary, when switching from manual to automatic operation, or vice versa, to do so at any certain time or to make any time adjustments.~~

~~(4) — **Run/Stop Time Switch.** — Furnish a cabinet with a run/stop time switch that activates the controller stop time feature when in the “stop time” position. Locate the run/stop time switch on a switch panel in the cabinet.~~

~~(5) — **Controller Shutdown Switch.** — Furnish a cabinet with a controller shutdown switch that cuts off power to the controller unit, conflict monitor, and detector units. Ensure that power is not cut off to those components required to maintain flashing operation. Locate the controller shutdown switch on a switch panel in the cabinet.~~

~~(6) — **Coordinated/Free Switch.** — Furnish controllers operated in a coordinated system with a coordinated/free switch. Ensure that this switch allows the choice of operating the controller under the supervision of a coordination device or operating the controller independently of coordination control. Locate the coordinated/free switch on a switch panel in the cabinet.~~

~~(7) — **Detector Test Switches.** — Furnish momentary contact switches that will enter a vehicular or pedestrian call for any actuated phase. Furnish a switch for each actuated phase vehicular and pedestrian detection input. Conveniently group and label the switches.~~

~~l. — **Terminal Blocks.** — Furnish cabinets that include terminal blocks mounted on panels on the walls of the cabinet. Ensure that the blocks are not obstructed by shelf mounted devices. Furnish sufficient terminal sets for each individual harness wire as well as for contacts of signal load switches, flasher transfer relays, flasher, and other components. Also, provide separate terminal sets for field wiring connections, including power, signal, interconnection, and detector lead-in cables. Group terminal sets to separate higher voltage (120 VAC) from lower voltage, and arrange them into logical groups. Protect terminal blocks from accidental contact during the installation and removal of shelf-mounted equipment. Locate the blocks no closer than 4 inches (100 mm) from the bottom of pole and pedestal mounted cabinets, and no closer than 6 inches (150 mm) from the bottom of foundation mounted cabinets.~~

~~Ensure that the terminal points are UL listed as suitable to carry the rated loading. Ensure that the capacity and size of the terminals are as specified in NEMA TS-1, Section 10.2.5. Ensure that the~~

~~terminal points for signal field wiring for each circuit accommodates at least four 12 AWG conductors with spade type terminals.~~

~~Furnish terminal points for incoming power wiring that accepts either spade terminals or bare stranded wire and are suitable for either aluminum or copper conductors.~~

~~Space terminal sets for easy wiring. Furnish at least six reserve terminal sets for controllers. Harnesses may terminate on the back of terminal blocks using through panel terminals. Clearly mark terminal sets for ready identification including through panel terminals that are identified on both sides. Ensure that the contact between adjacent terminal points are made by bus bar, or by wire jumpers having spade type terminals securely attached to each end.~~

~~**m. Terminal Buses.** Furnish a cabinet with supply terminal buses fed from the line side of the incoming 120 VAC power line, after the phase wire has passed through the main power switch. Ensure that the requirements for use of radio interference filters are according to Item 8 of this Section, with the buses supplying load switches and with flashers being filtered when required. Ensure that a signal bus relay controls power to the bus supplying power for the signal load switches. . The following overrides NEMA requirements for signal bus relays. A solid state relay shall be used for the signal bus relay. The signal bus relay shall maintain output equal to or above the rating of the cabinet main overcurrent protection device over the NEMA TS-2 Environmental Operating Range of -50 to +185 degrees F (-45 to +85 degrees C).~~

~~Furnish a common terminal bus for the connection of the neutral wire of the incoming 120 VAC power line. Ensure that the common bus has sufficient terminal points to accommodate all potential cabinet wiring as well as field wiring. Use a separate common terminal, insulated from the panel, for the interconnect common.~~

~~Furnish bus terminal points that comply with Item 12 of this Section for conductor accommodation, attachment and identification.~~

~~**n. Grounding System/Bus Bars.** Furnish a cabinet that includes a grounding system as specified in NEMA TS-1, Section 10.3.2.1 with an adequate number (minimum of three) of ground terminal points.~~

~~**o. Wiring.** Neatly organize and route the harnesses and wiring bundles to individual terminals. Ensure that the harness provides a wire for each pin or contact of the device. Connect each wire to a marked terminal position. Use labeled spade type terminals or plug connections on all harness wiring. Group and lash or restrain wire bundles in such a manner that they will not interfere with the access to components, terminal blocks or buses, or the legibility of terminal identification. Ensure that the harnesses are of sufficient length to reach any point within the cabinet. Ensure that the cables and harness bundles are easily traced through the cabinet to their terminations. Route all wiring terminated on printed circuit boards (as commonly done for BIU backpanel connectors) at right angles to the pin array; no wires shall pass over the connector pins.~~

~~Wire the cabinet so that controller pin connections associated with a given phase number matches the phase number assigned to the specified traffic movement as shown on the plans.~~

~~Furnish all wiring with stranded conductors. Ensure that the wiring is adequate for the voltage and load that represents the ultimate load of the devices connected. Ensure that the ampacity rating of the wires are as specified in NEMA TS-1, Section 10.3.3.1. Ensure that the wiring is color coded as follows:~~

- ~~(1) Solid white, AC common.~~
- ~~(2) Solid green or green with yellow stripes, equipment ground.~~
- ~~(3) Solid black, AC line side power (AC+).~~

~~p. **Loop Detector Units.** Furnish loop detector units that comply with the requirements of NEMA TS-1, Section 15, with the following modifications:~~

- ~~(1) Furnish loop detector units that are shelf mounted and powered from 120 volts.~~
- ~~(2) Ensure that the unit uses solid-state isolated output devices.~~
- ~~(3) Furnish conductors in the cable harness for loop input pins that are twisted three to five times per foot (300 mm).~~
- ~~(4) Furnish detector unit electrical connection plugs or wiring harness that are designed such that any multi-channel shelf mounted detector unit is readily replaced with single channel detector units. Furnish only units with the connector type required for single channel shelf mounted detector units, or by wiring the controller back panel to single channel wiring harnesses which are, in turn, plug connected to an adapter harness that is mated to the multi-channel connector of the detector unit.~~
- ~~(5) When shown on the plans, supply delay and extension timing capability on the detector unit; otherwise, the controller unit software requirements of 733.02 will provide these features.~~
- ~~(6) Ensure that the harness provides a wire for each pin or contact of the device.~~
- ~~(7) Furnish loop detector unit with an LED or LCD display indication of call strength ($\Delta L/L$ or equivalent). This display shall be a bar graph or numerical display with at least eight (8) discrete levels indicated.~~

~~If vehicle detector types other than "loop" detectors are required by the plans, provide these detectors by separate bid item.~~

~~Furnish TS-1 cabinets according to the Department's TAP List.~~

733.03.B.1.h.

On page 888, **Replace** the first paragraph with the following.

Section 7.3, unless otherwise specified in the plans, provide a Size 5 cabinet for pole mounted cabinets, Size 7 for ground mounted cabinets. Supply larger cabinets if required to house the equipment to meet the plan requirements; ~~such as master controllers~~ such as additional ITS equipment, preemption devices, 16 position backpanels or special detection units.

733.03.B.2.

On page 888, **Replace** the entire section with the following:

2. Furnish loop detector and pedestrian inputs that have lightning/surge protection as ~~specified in 733.03.A.2.f.~~

Furnish loop detector lead-in cable protection that consists of devices installed in each detector circuit where the lead-in connects to the terminal block. House each device in a case that consists of two stages; a 3-electrode gas tube arrestor and a semiconductor circuit. Ensure that the arrestor shunts to ground a common mode transient with a 1,000 ampere peak and an 8/20 microsecond wave-shape, ionizing at 400 volts within 100 nanoseconds when subjected to a 1,000 volt per microsecond transient. Furnish a semiconductor circuit that clamps a differential transient to 30 volts within 40 nanoseconds of the appearance of the transient, and a common mode transient to 30 volts within 500 nanoseconds of the ionization of the gas tube arrestor. Ensure that the second stage is able to withstand a peak current of 13 amperes. Furnish a device that has impedance characteristics compatible with the detector unit so as not to cause false calls or increase the loop impedance above the sensitivity of the detector unit.

Furnish pedestrian pushbutton inputs with the same protection as specified for the loop detector lead-in cables.

733.03.B.6.

On page 889, **Revise** the first paragraph to the following.

6. The primary surge protection device (SPD) shall be an EDCO SHA-1250 or approved equal. A plug-in base shall be used to hold the device. All wiring connections shall be made to the base, and appropriate cabinet clearances maintained, to allow the SPD module to be replaced by hand without the use of tools. Cabinet power distribution shall conform to Figure 5-4, NEMA TS-2 2003 v02.06. In addition, ~~locates a non-GFCI NEMA 5-15 utility outlet on the right side power panel.~~ install three (3) non GFCI NEMA 5-15 utility outlets on the right side of the power panel for a total of six (6) receptacles. These outlets shall be powered independently of the UPS by direct connection to incoming utility power through a 15-amp circuit breaker labeled "UTILITY OUTLET."

733.03.B.8.

On page 889, **Delete** the entire section:

~~8. Include datakey module. Provide a datakey with each controller, taped securely to the top of the controller chassis.~~

733.03.C.2

On page 890, **Add** the following after c.

d. Use 332L ground mount cabinets that have an auxiliary output file. Ensure the auxiliary output file is in accordance with the Caltrans TEES 2009, Section 6.4.5.3 Output File #2 and come with two flasher blocks and six load switches. Ensure all channels from the output file are monitored by the CMU.

733.03.C.6.g.1

On page 899, **Revise** the first paragraph to the following.

(1) Install an RS232 port for laptop communications on the front panel of the Monitor. If specified in the plans, an ~~E~~ ethernet port shall be used in place of RS232.

733.03.D.

On page 900, **Delete** 733.03.D in its entirety.

733.03

On page 901, **Replace "E. Type 336L."** with the following:

D. Type 336L.

733.05

On page 903, **Revise** the first sentence to the following:

733.05 Flasher Controller. Furnish solid-state flasher that complies with NEMA TS-2, ~~Section 8,~~ and have two circuits, each rated at 10 amperes.

733.05

On page 903, **Revise** the second sentence of the paragraph to the following:

Furnish a cabinet that conforms to applicable requirements of 733.03.A B, except that the following items are not required: a small door-in-door (police door), shelves, and a fan.

733.06.B.1.

On page 903, **Replace** the first paragraph with the following.

1. Design. Furnish a solid state, digital microprocessor master controller design. Furnish a controller that uses menu driven prompts. If the master controller is used with Type 2070 controllers, provide software unless otherwise shown on the plans.

733.06

On page 903, **Delete** the entire section.

733.07.B.1

On page 905, **Revise** the sentence to the following:

1. Local intersection controller (see ~~733.02~~ Supplemental Specification 809.10.G)

733.07.C

On page 906, **Revise** the first sentence to the following:

Furnish controller units conforming to ~~733.02~~ Supplemental Specification 809.10.G for the type of controller shown on the plans.

733.09.A.

On page 907, **Replace** the second paragraph with the following:

Furnish a UPS compatible with all of the following traffic signal equipment; NEMA TS-2 controllers and cabinets, Model 332 & 336 cabinets, 2070 controller and electrical service pedestals.

733.09.C.

On page 909, **Add** the following paragraph after the fifth paragraph:

Furnish UPS battery according to the Department’s TAP List.

733.09.D.

On page 909, in the first paragraph, **Replace** the first sentence with the following.

Furnish an enclosure mountable to a standard Model 332, NEMA TS-2 traffic signal cabinet and be constructed of natural unpainted aluminum.

740.04.G

On page 913, **Replace** the first sentence of the section with the following:

Furnish yellow material containing a minimum of 5 percent by weight of primary yellow lead free pigment (measured according to ASTM D 126 or Department approved lab method).

740.08

On page 916, **Replace** the section in its entirety with the following:

740.08 Heat-Fused Preformed Thermoplastic Pavement Marking Material. Furnish heat-fused preformed thermoplastic pavement marking materials conforming to the following:

Material Type	Thickness	Pre-heat	Post-heat
Type A90	90 mil (2.29 mm)	Yes	Yes
Type B90	90 mil (2.29 mm)	No	Yes
Type A125	125 mil (3.18 mm)	Yes	Yes
Type B125	125 mil (3.18 mm)	No	Yes

Furnish heat-fused preformed thermoplastic pavement marking materials conforming to AASHTO M249 with the following the following requirements:

A. Pigments. Furnish white material with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. Furnish yellow material with sufficient pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The yellow pigments must be organic and must be heavy-metal free.

B. Heating indicators. Furnish the material with the top surface of the material (same side as the factory applied surface beads) shall have regularly spaced indents. The closing of these indents during application, shall act as a visual cue that the material has reached a molten state allowing for satisfactory adhesion and proper bead embedment, and as a post-application visual cue that the application procedures have been followed.

C. Skid Resistance. Furnish the material with properly applied and embedded surface beads, must provide a minimum resistance value of 45 BPN when tested according to ASTM E 303.

D. Environmental Resistance. Furnish the material that must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

Ensure that the material contains reflective glass beads, 740.09 Type E. Prequalify materials according to Supplement 1047. Furnish materials according to the Department’s Approved List.

740.09.E

On page 918, **Add** the following new section after section 740.09.D. Type D.:

E. Type E. Furnish heat-fused preformed plastic pavement marking materials that contain a minimum of thirty percent (30%) intermixed graded glass beads by weight and factory applied coated surface beads in addition to the intermixed beads at a rate of 1 lb. (± 10%) per 10 sq. ft.

Furnish factory applied coated surface beads with the following specifications:

- 1) Minimum 80% rounds
- 2) Minimum refractive index of 1.50

Furnish intermixed graded glass beads and factory applied coated surface beads that conform to Type 1 and/or Type 3 AASHTO M247 as recommended by the manufacturer.

Use materials certified according to Supplement 1089.

740.10.A

On page 918, **Revise** the entire section to the following:

A. Composition.

	White	Yellow
Binder	25% Min.	25% Min.
TiO ₂ Pigment (Type II Rutile)	10% Min.	
Lead-Free Pigment (Yellow 83)	N/A	*
Inter mixed Glass Beads	30% Min. (by weight)	30% Min. (by weight)
Filler	35% Max.	42% Max.

*amount of lead-free pigment is at the discretion of the manufacturer, as long as all other compositional requirements are met.

740.10.B.

On page 918, **Revise** the second sentence of the first paragraph to the following:

Ensure at least one third of the binder composition is maleic modified glycerol ester of rosin and is no less than 8 percent by weight of the entire material formulation.

740.10.C.

On page 919, **Revise** the second paragraph to the following:

Use lead-free Pigment Yellow 83 produced to meet the requirements of AMS-STD-595A Color No. 13538.

740.10.E.

On page 919, **Revise** the second paragraph to the following:

Visually match yellow spray thermoplastic with AMS-STD-595A No. 13538. Ensure daytime reflectance (Y) is greater than 45.

740.10.J.

On page 919, **Revise** the third sentence of the first paragraph to the following:

Test sample with a male indenter 5/8 inch (15.875 mm) and no female Die, at room temperature.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 821
ARROW BOARD**

April 20, 2012

- 821.01 Description**
- 821.02 Materials**
- 821.03 Use and Operation**
- 821.04 Basis of Payment**

821.01 Description. This work consists of furnishing, installing, maintaining and removing arrow boards.

821.02 Materials. Furnish materials conforming to:

Arrow Board.....921.02

821.03 Use and Operation. Locate arrow boards as shown in the plans or as directed by the Engineer. Supply all lubricants and parts necessary to obtain continuous operation and provide all service. Inspect the operation of the unit daily including weekends and holidays. Arrange with the Engineer an acceptable method of obtaining service for a malfunctioning panel within 2 hours of a reported malfunction.

Limit use of Type A arrow boards to low-speed 20 - 35 mph urban streets. Use of Type B arrow boards is appropriate for intermediate-speed 40 – 50 mph facilities and for maintenance or mobile operation on high-speed roadways. All arrow boards used in stationary traffic control operation on high-speed 55 mph or greater, high-volume roadways shall be Type C.

Fully charge battery and solar/battery units when first set up. Verify daily that the unit is operating satisfactorily and the remaining battery charge is sufficient for at least 2 more days.

An arrow board in the arrow mode shall be used only for stationary or moving lane closures on multi-lane roadways. For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode. Arrow boards shall not be used to laterally shift traffic.

Lock the control cabinet when left unattended.

Type A and B arrow boards used in mobile operations may be powered by the vehicle's electrical system, but shall not be left unattended when so powered. Caution is advised to prevent the vehicle's electrical system from running down while the arrow board is

being operated during frequent stops, as a run-down of the battery would leave the arrow board to be inoperative.

When an arrow board is not being used, it should be removed; if not removed, it should be shielded; or if the previous two options are not feasible, it should be delineated with retroreflective temporary traffic control devices.

821.04 Basis of Payment. The lump sum bid for 614 Maintaining Traffic includes the cost of arrow boards.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 832
TEMPORARY SEDIMENT AND EROSION CONTROL**

October 19, 2018

- 832.01 Description**
- 832.02 Definitions**
- 832.03 SCD References**
- 832.04 Requirements and Provisions**
- 832.05 Locate and Furnish BMP**
- 832.06 Temporary Access Fills (Causeway and Access Fills).**
- 832.07 Temporary Access Fills Construction**
- 832.08 Maintenance**
- 832.09 Storm Water Pollution Prevention Plan**
- 832.10 SWPPP Acceptance**
- 832.11 Inspections and SWPPP Updates**
- 832.12 Compensation**
- 832.13 Method of Measurement**
- 832.14 Basis of Payment**

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 SWPPP 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 not 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 (OHC000005) 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 EPA/OEPA 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 <http://www.epa.state.oh.us/dsw/permits/gpfact#137794352-applying-for-coverage> 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 to plan Engineer.
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 ensures 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 m²). 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 m²). 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 m²).

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. 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 II. 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 per 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. 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 reporting CECI, under supervision of 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 when significant changes warrant an updated SWPPP be developed. Submit the latest SWPPP update to 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, 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 Orientation	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.:OHC000005 Part III. E*)

Signature	Printed Name	Title	Company	Date



**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 proposed 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)				



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 be 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: _____

Appendix E

http://www.epa.state.oh.us/portals/35/permits/OHC000005/Final_OHC000005.pdf



Page 1 of 60
Ohio EPA Permit No.: OHC000005

Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

Ohio EPA APR 23 2018
Entered Directors Journal

OHIO ENVIRONMENTAL PROTECTION AGENCY

GENERAL PERMIT AUTHORIZATION FOR STORM WATER 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 storm water 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 Storm Water 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.

Craig W. Butler
Director

Total Pages: 60

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: 4-23-18

Appendix F

**Temporary Sediment and Erosion Control Best Management Practices (BMP)
Unit Price Schedule, October 2018**

EROSION CONTROL PRICES

Item	Unit	Description	Project Identified EDA (acres)					Fixed Price (\$)	Comment
			<5	5 to 10	10 to 15	15 to 20	>20		
			Price (\$)						
832	Sq. Yd.	Construction Seeding and Mulching	1.00	0.92	0.83	0.75	0.74		Based on NOI acres
832	Feet	Slope Drains						12.00	
832	Cu. Yd.	Sediment Basins and Dams						13.50	[3]
832	Cu. Yd.	Excavated Drop Inlet Protection						13.50	
832	Feet	Perimeter Filter Fabric Fence	4.05	3.10	2.85	2.55	2.30		Based on NOI acres
832	Feet	Filter Fabric Ditch Check						11.00	
832	Feet	Inlet Protection						11.25	
832	Cu. Yd.	Earthen Dike/Berm						3.00	
832	Sq. Yd.	Temporary Stabilization Matting						2.50	
832	Cu. Yd.	Rock Ditch Check, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D with Filter						55.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Basin Sediment Removal						10.00	
832	Cu. Yd.	Miscellaneous Sediment Removal						15.50	
832	Feet	Construction Fence						5.75	
832	Sq. Yd.	Construction Mulching	0.79	0.71	0.58	0.56	0.54		Based on NOI acres
832	Sq. Yd.	Winter Seeding and Mulching	1.08	1.00	0.92	0.85	0.81		Based on NOI acres
832	Cu. Yd.	Construction Entrance						75.25	

[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 C	Type D	Type C	Type D
1	\$ 60.00	\$ 58.00	\$ 27.50	\$ 27.50
2	\$ 60.00	\$ 58.00	\$ 27.50	\$ 27.50
3	\$ 67.00	\$ 65.00	\$ 27.50	\$ 27.50
4	\$ 71.00	\$ 68.00	\$ 27.50	\$ 27.50
5	\$ 63.00	\$ 60.00	\$ 27.50	\$ 27.50
6	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
7	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
8	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
9	\$ 66.00	\$ 65.00	\$ 27.50	\$ 27.50
10	\$ 70.00	\$ 68.00	\$ 27.50	\$ 27.50
11	\$ 65.00	\$ 63.00	\$ 27.50	\$ 27.50
12	\$ 71.00	\$ 68.00	\$ 27.50	\$ 27.50

[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"	\$598.00
2"	\$750.00
2 1/2"	\$915.00
3"	\$1,100.00
4"	\$1,590.00
5"	\$2,375.00
6"	\$3,650.00
8"	\$6,000.00

[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 DRRC website (<http://www.dot.state.oh.us/drrc/>).

Latest version of the OEPA NPDES Permit (OHC000005) 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.

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL SPECIFICATION 921
ARROW BOARD**

April 20, 2012

921.01 Description. This Supplemental Specification sets forth the requirements for Arrow Boards.

921.02 Materials. The Arrow Board shall consist of the following components: flasher panel, lamps, controls, power supply and mounting.

Furnish materials according to the Department's Approved List.

A. Flasher Panel. The flasher panel shall be of corrosion resistant metal construction of adequate design and strength. The panel shall be finished flat black. The panel type shall be one of the three below.

Panel Type	Minimum Size	Minimum Number of Elements
A	48 x 24 in (1200 x 600 mm)	12
B	60 x 30 in (1500 x 750 mm)	13
C	96 x 48 in (2400 x 1200 mm)	15

The Arrow Board shall be designed for operation in 100% humidity and temperatures from -20°F to +130°F (-29°C to +54°C).

B. Lamps. The lamps shall be LED. The lamp shall be fitted with a 360° hood at least 5" (125 mm) long.

Color output of light shall be amber.

The lamps shall be securely mounted and positioned in the panel perpendicular to the panel face and oriented so that the lamp location lug (on the back of the lamp) is on the horizontal center line through the lens.

The lamps shall be wired in circuits that can be switched to display any one of the following messages: left arrow, right arrow, left and right, caution bar, and corner caution.

C. Controls. Each Arrow Board shall contain a flasher control and a dimmer control unit housed in a cabinet which can be locked.

- 1. Flasher Control.** The flash rate for the sign panel shall be 25 to 40 flashes per minute. The flasher shall not cause electromagnetic interference. The lamps shall have a minimum "on time" of 50% and a maximum of 66%.

2. Dimmer Control. Lamp intensity shall be variable by means of a photoelectrically controlled circuit which shall reduce lamp output during low ambient light conditions. Lamp intensity shall be at the nighttime level whenever the ambient illumination is in or below the range of 2 foot-candle (21 lux) to 5 foot-candle (54 lux) and shall be at daytime level when ambient illumination is in or above the range of 5 foot-candle (54 lux) to 10 foot-candle (108 lux). If controls provide for continuous adjustment of lamp intensity with respect to ambient illumination, then lamp intensity shall increase linearly from nighttime intensity at 5 foot-candle (54 lux) to daytime intensity at 3250 foot-candle (35,000 lux). A time delay shall be built into the control to prevent false operation due to light flashes. The photoelectric control shall contain a switch which shall override the photoelectric control.

D. Power Supply. Battery and solar/battery units shall have a no-charge-life of not less than 15 days. No-charge-life is the number of consecutive days that the system can continue to function (double arrow mode, normal dimming during 12 hour night, full output during 12 hour day) starting with a full battery charge and with no additional charge provided by the solar cells.

E. Mounting. The Arrow Board may be trailer or vehicle mounted or mounted on a rigid supporting device, behind barrier wall, suitable for maintaining it in the designated position. Each of the mounting methods shall be suitably stable such as to prevent movement due to high winds or passage of large vehicles.

When a trailer is used, construction shall be such as to transport the Arrow Board and appurtenances adequately and legally as well as support them properly during operation. The trailer shall be equipped with devices which shall provide leveling and stability during operation.

Minimum Arrow Board mounting height shall be 7 feet (2.1 m) above the pavement surface (measured to the bottom of the panel), except on vehicle-mounted panels, which should be as high as practical.

PN 013 – 04/20/2018 - DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION PLAN AND GOOD FAITH EFFORTS

DBE UTILIZATION PLAN

All Bidders shall submit a DBE Utilization Plan at the time of bid setting forth specific information demonstrating how the Bidder will achieve the DBE goal. By submitting a DBE Utilization Plan, the Bidder is affirming that they will be using the DBE firms identified in the Utilization Plan to meet the DBE contract goal. The DBE Utilization Plan shall be submitted with the Project Bids (EBS)/Bid Express Online Submission through the DBE List folder at time of bid submission. Any bids received without electronic submission of the DBE Utilization Plan at or before bid time, will be deemed unresponsive. Bidders shall download the dbe.bin file from

<http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Construction/dbe-bids.bin>.

This file contains the current list of certified DBEs and is updated regularly. The dbe-bids.bin file must be saved in the same directory as the Project Bids (EBS) file.

The DBE Utilization Plan shall include the following information:

- 1) The names and addresses of the certified DBE firm(s) that will be used to meet the DBE goal;
- 2) A description of the work that 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 firm(s) being used to meet the goal will be utilized as a subcontractor, regular dealer, manufacturer, consultant or other capacity; and
- 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 Small & Disadvantaged Business Enterprise within five (5) calendar days after the notification of the alternates.

DBE AFFIRMATION

The Apparent Low Bidder shall ensure the DBE firms being utilized to meet the DBE goal affirm their participation in the bid within five (5) calendar days after the bid opening to ODOT. The contract dollar amount(s) and/or DBE firm(s) included in the Apparent Low Bidder'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 Apparent Low Bidder shall utilize the Request to Terminate/Substitute DBE Form located at <http://Transportation.ohio.gov/Divisions/ODI/SDBE/Pages/Resources.aspx> and submit for review and approval by the Office of Small & Disadvantaged Business Enterprise within five (5) calendar days of the bid opening.

The Apparent Low Bidder shall utilize the DBE Affirmation Form located at <http://Transportation.ohio.gov/Divisions/ODI/SDBE/Pages/Resources.aspx>. The DBE Affirmation Form will be utilized as written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the Bidder's DBE Utilization Plan. The Apparent Low Bidder shall submit a separate DBE Affirmation Form for each DBE it is utilizing for the DBE goal and 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 that the information is required in order for ODOT to complete its bid assessment. Bidders shall have five (5) calendar days from the date of notification to submit all required DBE Affirmation Forms to ODOT. Notification will be by phone or email.

In the event a DBE firm fails to confirm the information contained in the DBE Affirmation Form within five (5) calendar days of bid opening, the Apparent Low Bidder shall submit a Request to Terminate/Substitute DBE Form, as set forth herein. The Request to Terminate/Substitute DBE Form shall be submitted within five (5) calendar days after bid opening in order for the Apparent Low Bidder to still be considered for contract award. The Apparent Low Bidder shall include as its reason for termination the DBE firm's failure to provide a timely affirmation and should include all efforts the Apparent Low Bidder made to obtain the affirmation from the DBE firm and shall attach proof of these efforts, if available. If the Apparent Low Bidder intends to replace the DBE Firm, it shall include the replacement firm's information on the form. In the event the Apparent Low Bidder 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 calendar 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 Apparent Low Bidder's Good Faith Efforts in meeting the goal.

DBE BIDDERS

In the event that the Bidder is also a certified DBE firm, the Bidder is required to complete a DBE Utilization Plan as set forth above. In this instance, however, the certified DBE Bidder would not need to submit a DBE Affirmation Form for the work it is planning to self-perform in order to meet the goal. ODOT will consider the submission of the bid as the certified DBE Bidder's written confirmation that it is participating in the contract. However, a DBE Affirmation Form must be submitted for all other DBE firms that are being utilized toward the DBE goal.

JOINT VENTURES

In the event that 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 that 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)

In the event that the DBE contract goal established by ODOT is not met, the Apparent Low Bidder shall demonstrate that 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 Apparent Low Bidder does not meet the goal at bid time, the Apparent Low Bidder shall submit its Good Faith Efforts (GFE's) documentation within five (5) calendar days of the bid opening. Submission of DBE affirmation(s) with additional participation sufficient to meet the DBE contract goal does not cure the Apparent Low Bidder's failure to meet the goal at bid time or eliminate the Apparent Low Bidder's responsibility of submitting GFE's within five (5) calendar days of the bid opening.

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

- (1) All written quotes received from certified DBE firms;
- (2) All written (including email) communications between the Apparent Low Bidder 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 Apparent Low Bidder 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) calendar days of bid opening. ODOT has provided Good Faith Efforts Guidance located at <http://www.dot.state.oh.us/Divisions/ODI/SDBE/DBE%20Goal%20Forms/Contractors%20Good%20Faith%20Efforts%20Guidelines.pdf>

All other Bidders shall submit documentation of GFE's if notified that the information is required in order for ODOT to complete its bid assessment. Bidders shall have five (5) calendar days from the date of notification to submit all required GFE documentation. Notification will be by phone or 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 that the Apparent Low Bidder has failed to demonstrate adequate GFE's to meet the goal, the Apparent Low Bidder will have an opportunity for administrative reconsideration prior to the contract being awarded.

As part of this reconsideration, the Apparent Low Bidder 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 Apparent Low Bidder 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 Apparent Low Bidder within five (5) business days of receiving written documentation or holding the in-person meeting.

ODOT will send the Apparent Low Bidder a written decision on reconsideration explaining the basis for finding that the Apparent Low Bidder 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 Apparent Low Bidder/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 Apparent Low Bidder/Awarded Contractor obtains written consent as provided in this paragraph. In order to request termination or substitution of a DBE firm, the Apparent Low Bidder/Awarded Contractor shall utilize the Request to Terminate/Substitute DBE Form located at <http://Transportation.ohio.gov/Divisions/ODI/SDBE/Pages/Resources.aspx>.

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, that the Apparent Low Bidder/Awarded Contractor has good cause to terminate the DBE firm.

For purposes of this paragraph, 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 that the listed DBE firm is not a responsible contractor;
- 7) The listed DBE firm voluntarily withdraws from the project and provides to you 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 that the awarded contractor can self-perform the work for which the DBE contractor was engaged or so that 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) calendar days, which may be extended for an additional seven (7) calendar 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 <http://Transportation.ohio.gov/Divisions/ODI/SDBE/Pages/Resources.aspx>. 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 Apparent Low Bidder/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 Apparent Low Bidder/Awarded Contractor must give the DBE five (5) calendar days to respond to the notice, advising ODOT and the Apparent Low Bidder/Awarded Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why ODOT should not approve the Apparent Low Bidder/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 subcontractors 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 that 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 Apparent Low Bidder 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 at the time of bid;
- 2) Failure to submit DBE Affirmation Form(s) and/or failure to submit Request to Terminate/Substitute DBE 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

PN 060 – 04/20/2018 - PREVAILING WAGES ON STATE 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 Prime Contractor and all subcontractors shall comply with all provisions contained therein or as otherwise provided by this note. The Prime 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. 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 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 may be 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 times the basic hourly rate for any hours worked beyond forty hours during a pay week. The Prime Contractor and all subcontractors shall pay all compensation by company check or direct deposit 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 Prime 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 Prime Contractor and all subcontractors shall furnish each employee covered by prevailing wage a completed form whpw1512 in accordance with section 4115.05 of the Ohio Revised Code, showing the classification, hourly pay rate, fringes, and identifying the ~~District Prevailing Wage Coordinator (DPWC)~~ District Contractor Compliance Officer (CCO) 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 Prime Contractor or subcontractor and the employee and kept in the Prime Contractor's or subcontractor's payroll files.

The Prime Contractor shall submit to the designated Department representative, certified payrolls for the Prime Contractor and all subcontractors on form whpw1509 or equivalent, in accordance with sections 4115.07 and 4115.071 (C) of the Ohio Revised Code, three 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 Ohio State Apprenticeship Council, must accompany all certified payrolls 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~~ CCO 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 Prime 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 Prime Contractor and all subcontractors shall permit such representatives to interview any employees during working hours while the employee is on the job.

The Prime Contractor and all subcontractors shall submit via the Department's Civil Rights & Labor System (CRL), certified payrolls each week beginning three weeks after the start of work. The Department will not

accept payrolls not uploaded via CRL (i.e. - no handwritten payrolls). These payrolls shall include, but not be limited to, the following:

1. Employee name, address, social security number, 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 contract ID and pay week dates.
4. Signature of an authorized company representative will be done online through CRL.

CRL Requirements with interactive training guides can be found at <http://transportation.ohio.gov/crl/>.

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. Instructions for attaching the apprenticeship certificate can also be found at <http://transportation.ohio.gov/crl/> under "Attaching the Apprenticeship Certificate."

If the Prime 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 Prime Contractor or Subcontractor and/or withhold or suspend pay estimates after written notice and a reasonable opportunity to comply has been provided.

PN 095 – 03/30/2020 Potential Impacts and Delays Due to COVID-19

In an effort to anticipate the potential impacts to the Project caused by the COVID-19 threat and in following direction from the Governor and other authorities, the Contractor is on notice of the need to comply with all federal, state and local orders generated to prevent the spread of contagious or infectious diseases, including the Stay at Home Order from the Ohio Director of Health dated March 22, 2020, and subsequent orders, located through the following website:

<https://coronavirus.ohio.gov/wps/portal/gov/covid-19/home/public-health-orders/directors-order-to-stay-at-home>

Contractor is on notice that the Project is considered essential and that the contractor and his employees, subcontractors and suppliers are considered essential businesses and performing essential functions as defined under the Stay at Home Order.

Notwithstanding any other provisions of the contract documents, in the event of project delay or impacts to performance due to a voluntary or mandatory COVID-19 virus Directives, Orders, quarantine or closure directed by government authorities, either party may, by providing notice to the other party as required under CMS 108.02(F), extend the Completion Date for a period of up to thirty (30) days. Extensions under this paragraph shall be considered an excusable, non-compensable delay in accordance with CMS 108.06(B). If any portion of the Work is still not able to be performed upon the expiration of the extension, either party may provide notice to the other party requesting a termination for convenience under 108.09. The termination for convenience remains at the sole discretion of the Director.

The Contractor and ODOT will exercise best efforts to utilize remote services to perform Work that otherwise cannot be performed in person due to a voluntary or mandatory COVID19 virus quarantine, closure, or impact as directed by Stay at Home Order.

Impacts to the Project generated by the Stay at Home Order shall not be considered an “issue” under 108.02 (F) for Projects sold after the date of this Note. Contractors are on notice that their bids should include any impacts they foresee or should have reasonably foreseen due to the Stay at Home Order or existing or reasonably foreseeable orders by any other federal, state or local official.

If any emergency order or declaration of any government official is lifted at any time, ODOT will provide written notice to the Contractor that this Note shall be considered void thirty (30) days after receipt of the written notice. If the Stay at Home Order from the Ohio Director of Health dated March 22, 2020 is lifted at any time, this Note shall be considered null and void thirty (30) days after the lifting of those orders.

PN 105 – 10/19/2018 - CRITICAL PATH METHOD PROGRESS SCHEDULE FOR SINGLE SEASON PROJECTS

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A. General. The progress schedule required for this project is the critical path method schedule (CPM schedule). The Contractor shall designate a Schedule Representative who shall be responsible for coordinating with the Engineer during the preparation and maintenance of the schedule. The requirements of this note replace the progress schedule requirements in 108.03 of the Construction & Material Specifications.

B. Interim Schedule. Interim schedules are not permitted for this project.

C. Baseline Schedule. The Contractor shall submit a baseline schedule within 15 days of the execution of the Contract, or prior to the start of work, whichever comes first. The baseline schedule will be in CPM schedule format and as described below. The Engineer will review the baseline schedule and will either “approve”, “approve as noted” or “reject” the schedule within 7 days of receipt. If the

Engineer does not provide written notification regarding the disposition of the baseline schedule within 7 days, the submission will be considered approved.

For baseline schedules that are “approved as noted”, the Contractor shall make the necessary revisions and resubmit the revised schedule within 7 days. The Engineer will only reject baseline schedules that are not in compliance with contract requirements.

For baseline schedules that are “rejected”, the Engineer shall indicate in writing all portions of the schedule that are not in compliance with the contract requirements. The Engineer shall conduct a mandatory meeting with the Contractor and the Contractor’s Schedule Representative within 7 days of the Engineer’s written notice. The purpose of this meeting is to resolve all issues with the baseline schedule. At this meeting the Contractor shall provide clarification and all requested information necessary for the Engineer to “approve” the baseline schedule.

In the event the baseline schedule is not “approved” within 60 days of execution of the contract, all work shall cease on the project until the baseline schedule is “approved”.

Approval of the baseline schedule does not revise the Contract Documents. The baseline schedule must be “approved” or “approved as noted” by the Engineer prior to the Engineer evaluating any Contractor claims associated with time impacts.

- Schedule Requirements.** Submit an .xer or .xml file (to be determined by the Engineer) prepared in Primavera software manufactured by Oracle. The Department will “Import” or accept progress schedule files from the Contractor. All Calendars assigned to activities must be project level Calendars not Global or Resource Calendars; all Activity Codes shall be project level and not Global or EPS level Activity Codes; no Resources shall be assigned to activities, and no Project Codes shall be assigned.

Table 1 – Schedule Filename Convention			
Progress Schedule	1st Submission	2nd Submission	3rd Submission
Interim Schedule	YYPPPP01IS	YYPPPP02IS	YYPPPP03IS
Baseline Schedule	YYPPPP01B	YYPPPP02B	YYPPPP03B
Schedule Update #1	YYPPPP01SU01	YYPPPP02SU01	YYPPPP03SU01
Schedule Update #2	YYPPPP01SU02	YYPPPP02SU02	YYPPPP03SU02
Delay Analysis	YYPPPP01TIA01	YYPPPP02TIA01	YYPPPP03TIA01

Weather Delay Analysis	YYPPPP01WD01	YYPPPP02WD01	YYPPPP03WD01
Recovery Schedule	YYPPPP01RS01	YYPPPP02RS01	YYPPPP03RS01

YY – Project Year PPPP – Project Number

Provide a working day schedule that shows the various activities of work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date. Show the order and interdependence of activities and the sequence for accomplishing the work. Describe all activities in sufficient detail so that the Engineer can readily identify the work and measure the progress of each activity. The baseline schedule must reflect the scope of work, required phasing, maintenance of traffic requirements, interim completion dates, the Completion Date, and other project milestones established in the Contract Documents. Include activities for submittals, working drawings, shop drawing preparation, submittal review time for the Department shop drawings, material procurement and fabrication, and the delivery of materials, plant, and equipment, and other similar activities.

The Contractor shall be responsible for assuring all work, including all subcontractor work, is included in the schedule. The Contractor shall be responsible for assuring that all work sequences are logical and that the schedule indicates a coordinated plan.

Failure by the Contractor to include any element of work required for performance of the Contract shall not excuse the Contractor from completing all work within the required time. The Engineer’s review of the baseline schedule will be for compliance with the specifications and contract requirements. Approval by the Engineer will not relieve the Contractor of any of their responsibilities for the accuracy or feasibility of the schedule. Omissions and errors will be corrected as described in Section F or I in this note and will not affect contract time.

a) Administrative Identifier Information:

- i. Project Number
- ii. County
- iii. Route Number
- iv. FHWA Number
- v. PID Number
- vi. Contract Signed Date

- vii. Completion Date
- viii. Contractor's Name
- ix. Contractor's Dated Signature
- x. ODOT's Dated Approval Signature

b) Project Activities:

- i. Activity Identification (ID). Assign each activity a unique identification number. Activity ID length shall not exceed 10 characters. Once accepted, the Activity ID shall be used for the duration of the project.
- ii. Activity Name. Each activity shall have a narrative description consisting of a verb or work function (e.g.; form, pour, excavate) and an object (e.g.; slab, footing, underdrain). Do not include commas in the narrative description.
- iii. Activity Original Duration. Assign a planned duration in working days for each activity. Do not exceed a duration of 20 working days for any construction activity unless approved by the Engineer. Activity durations will be in whole days, do not include decimals in the duration. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities to meet the duration requirements of this paragraph.
- iv. Activity Relationships:
 - o All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
 - o Use only finish-to-start relationships with no leads or lags to link activities, or use start-to-start relationships with lags no greater than the predecessor duration to link activities.
 - o Use of finish-to-finish relationship is required when both activities are already linked with a start-to-start relationship.
 - o Negative lags are not allowed with any relationship

c) Project Milestones:

- i. Start Project: The Contractor shall include as the first milestone in the schedule, a milestone named "Start Project". The date used for this milestone is the date the contract is executed and signed by the Department.
 - ii. End Project Milestone: The Contractor shall include as the last activity in the project schedule, a milestone named "End Project". The date used for this milestone is considered the project completion date.
 - iii. Start Phase Milestone: The Contractor shall include as the first activity for a project phase, an activity named "Start Phase X", where "X" identifies the phase of work. The Contractor may include additional milestones but, as a minimum, must include all contractual milestones.
 - iv. End Phase Milestone: The Contractor shall include as the last activity in a project phase, an activity named "End Phase X" where "X" identifies the phase of work. The Contractor may include additional milestones, but at a minimum must include contractual milestones.
- d) Level of Effort Activities:
Use level of effort activities to show the duration of specified contract work periods, phases and road closures. The level of effort activity type is allowed to have a start-to-start relationship with the first activity in a series of activities and a finish-to-finish relationship with the last activity in a series of activities.
- e) Constraints:
Use constraints sparingly in the schedule. If constraints are used, use only Early Constraints or Late Constraints.
- f) Calendars:
Weather, seasonal (winter) and environmental shutdown periods shall be shown using non-work calendars. The activity can be assigned to a calendar indicating time periods of non-work. These custom calendars can be created to show days, weeks, or months of non-work. Seasonal weather conditions, as shown in CMS 108.06-1 shall be evenly dispersed into the CPM schedule calendars as non-work days and included in the planning and scheduling of all work. All calendars developed by the Contractor shall be established as Project Calendars, with the

calendar name including the project year, project number and describing the function (i.e. 160345 – 5 day workweek, 160345 – earthwork, 160345 – structures, 160345 – asphalt, 160345 – concrete cure, 160345 – environmental restriction, 160345 – 7 day week, etc.). Each calendar should indicate an 8 hour workdays. No Global Calendars shall be incorporated into any progress schedule submission. Project Calendars cannot inherit holidays and exceptions from a Global Calendar.

g) Activity Codes:

The Contractor shall, at a minimum, include Project Activity Codes for Area, Phase, and Responsibility for each activity. Work Breakdown Structure is permitted, but is not to be used in lieu of Activity Codes. No Global Activity Codes shall be incorporated into any progress schedule submission.

h) Schedule Options:

The schedule may only be calculated using retained logic. Show open ends as non-critical. Total float shall be calculated as finish float. Ignore relationships to and from other projects.

2. Submission Requirements. Submit all schedules within the time frames specified. Submit the schedule and information in electronic file format via email or compact disc (CD) compatible with the Engineer’s computer. Submit the following information along with the electronic baseline schedule:

a) A pdf of the baseline schedule in CPM format including the Administrative Identifier Information discussed in Section C.1.a on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Total Float, Start Date, Finish Date, and Calendar ID. Use arrows to show the relationships among activities. Identify the critical path of the project on the bar chart in red. The critical path is defined as; the longest path of activities in the project that determines the project completion date. The activities that make-up the critical path of activities are the “Critical Activities.”

b) A hard copy of the Six Week Look Ahead Schedule in CPM format. This schedule will have all the requirements of the baseline schedule in bar chart format except that it shall be limited to those activities that have an early start or early finish within

a six week period of the data date.

- c) A complete Scheduling/Leveling Report (SCHEDLOG.TXT file generated by the Primavera scheduling software application) which includes Schedule Settings, Statistics, Errors, Warnings, Scheduling/Leveling Results, Exceptions, Activities with unsatisfied constraints, Activities with unsatisfied relationships, and Activities with external dates. The statistics shall include, number of Activities, number of Activities Not Started, number of Activities In Progress, number of Activities Completed, number of Activity Relationships, and number of Activities with Constraints. Total number of activities on the critical path, percent complete, activities without predecessors, activities without successors, and activities out of sequence.

D. Float. Use of float suppression techniques, such as; preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), lag logic restraints, zero total or free float constraints, extending activity times, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates.

1. **Definitions of Float.** Total Float is the length of time along a given network path that the actual start and finish of activity(s) can be delayed without delaying the project completion date. Project Float is the length of time between the End Project Milestone and the Contract Completion Date.
2. **Ownership of Float.** Float available in the schedule, at any time shall not be considered for the exclusive use of either the Department or the Contractor. During the course of contract execution, any float generated due to the efficiencies of either party is not for the sole use of the party generating the float; rather it is a shared commodity to be reasonably used by either party. Efficiencies gained as a result of favorable weather within a calendar month, where the number of days of normally anticipated weather is less than expected, will also contribute to the Project Float. A schedule showing work completing in less time than the contract time, and accepted by the Department, will be considered to have Project Float. Project Float will be a resource available to both the Department and the Contractor. No time extensions will be granted nor delay damages paid unless a delay occurs which impacts the project's critical path, consumes all available float and extends the work beyond the Contract Completion Date.

3. **Negative Float.** Negative float will not be a basis for requesting time extensions. Any extension of time will be addressed in accordance with the Section G. Scheduled completion date(s) that extend beyond the contract (or phase) completion date(s) may be used in computations for assessment of liquidated damages. The use of this computation is not to be construed as an order by the Department to accelerate the project.

E. Monthly Update Schedule. A monthly update schedule is a schedule in which only progress is updated from the prior data date to the current data date. Work added and/or excusable delays encountered since the prior data date must be represented as a schedule revision as described in Section F.

1. **Update Requirements.** On the fifth day of the current month, during the life of the Project, submit an updated schedule and all required information with a data date of the first day of the current month. The date for submission and data date may be adjusted to accommodate regularly scheduled progress meetings. Submit the monthly updated bar chart and the updated schedule in electronic format as specified in Section C.2. The Engineer shall “approve” or “reject” the schedule update within 7 days of receipt of the updated CPM schedule. The Engineer may withhold estimates if the updated schedule is not submitted as required by this section. For each updated schedule, identify the actual start and finish dates for all completed activities and the actual start date and remaining duration for all activities in progress. Correct out-of-sequence progress listings generated by the Scheduling Statistics Report on the critical path only. The project schedule shall be reviewed at each monthly progress meeting. Any corrections shall be made prior to the next monthly progress meeting.

Submit the following with each updated schedule:

- i. A pdf of the updated in CPM format.
- ii. A pdf of the Six Week Look Ahead Schedule in CPM Format
- iii. Provide a written narrative that identifies any non-critical revisions or shifts in the critical path and submit reasons for the changes or shifts in the critical path.
- iv. A complete Scheduling/Leveling Report (SCHEDLOG.TXT) file generated by the

Primavera scheduling software application.

- v. A pdf of the Claim Digger Report (generated by the Primavera Software application) providing a comparison between this updated schedule and the previous Monthly Updated Schedule.
- vi. Electronic files (formatted as described above)

2. Early Completion Monthly Update Schedule. An Early Completion Monthly Update Schedule is defined as a monthly update schedule submitted by the Contractor in which the Finish Date precedes the Contract Completion Date. If after incorporating necessary revisions in accordance with Section F, the Finish Date precedes the Contract Completion Date by at least 30 days, the Engineer will initiate a change order amending the Contract Completion Date to the Early Completion Date shown on the accepted Early Completion Monthly Update. The amended Completion Date will be effective upon execution of that change order and all contract provisions concerning the Completion Date such as incentives, disincentives, excusable delays, compensable delays, and liquidated damages will be measured against the amended Completion Date. The Contractor may elect not to execute the change order amending the Completion Date; however, in so doing, the Contractor waives its rights to delay damages in meeting the projected early Completion Date and the time between the Early Completion Date and the Contract Completion Date is used as Project Float.

3. Late Completion Monthly Update Schedule. A Late Completion Monthly Update Schedule is defined as a monthly update schedule submitted by the Contractor in which the Finish Date exceeds the Contract Completion Date. In the event the Finish Date is more than 14 days beyond the current contract completion date and a schedule revision is not warranted, the Contractor must proceed in accordance with Section I.

F. Revisions. The Work may require and/or the Contractor may make revisions to the CPM schedule. Addition of new activities or new calendars or changes to existing activities, calendars or logic constitute a revision.

1. Any revision which modifies the critical path or impacts an interim date or project completion date must be represented on a companion schedule submitted with the monthly update schedule. A fragnet shall be used to define the sequence of new activities that are proposed to be added to the existing schedule. The fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. If submitted as a fragnet, the Contractor shall compute two Finish Dates. The first Finish Date shall be computed without consideration of any impact by the fragnet. The second Finish Date shall be computed with consideration of any impact by the fragnet. The Contractor shall also submit a written narrative stating the reason for the proposed revisions.
2. Any revision which does not modify the critical path or the interim date or project completion date can be submitted in a narrative form accompanying the monthly update schedule. The narrative shall include the reason for the revisions.

The Engineer shall “approve” or “reject” proposed revisions within ten days of receipt of appropriate schedules and narrative. All approved revisions will be incorporated into the Monthly Update Schedule which will become the Revised Monthly Update Schedule.

G. Time Extensions for Delays in Accordance with C&MS 108.06.B and 108.06.D. The Work may require and/or the Contractor may request an extension of the Completion Date. Perform the following analysis to compute the duration of the time extension. Submit a pdf copy and an electronic copy of each analysis performed.

1. Determine project progress prior to circumstance(s) necessitating the time extension. The previous accepted monthly update, updated to the date of the circumstance alleging to have caused delay, shall be used to display the prior progress of the project. This schedule is referred to as the Un-impacted Schedule
2. Prepare a fragmentary network (fragnet) depicting the circumstance that is believed to have delayed the project.
3. Insert the fragnet into the Un-impacted Schedule, run the schedule calculations and determine the finish date. This schedule is referred to as the Impacted Schedule.
4. Compare the Impacted Schedule finish date with the Un-impacted Schedule finish date to determine the duration of any warranted time extension.

Submit the impacted schedule with the request for time extension. Include a narrative report describing the effects of new activities and relationships to interim and contract completion dates. All approved time extensions will be incorporated into the monthly update with the fragnet used to determine impacts incorporated into the schedule.

H. Weather Days in Accordance with C&MS 108.06.C. The Contractor may request and/or the Engineer will determine an extension of the completion date due to weather days. Perform the following analysis to compute the duration of the time extension. Submit a pdf copy and an electronic copy of each analysis performed.

1. The previously accepted monthly update shall be used to display progress of the project and planned activities for the next 30 day period that incurred weather days. Make a copy of the schedule file to use for the analysis. This schedule is referred to as the Non-weather Schedule.
2. Prepare a list of weather days believed to have delayed the project and the activities that were impacted.
3. Utilizing the calendar(s) of those impacted activities, Remove any planned weather days. Insert the weather day(s) into the calendar(s) for the planned work as a non-work day. Run the schedule calculations and determine the finish date. This schedule is referred to as the Weather Schedule.
4. Compare the Weather Schedule finish date with the Non-weather Schedule finish date to determine the duration of any warranted time extension.

Submit the weather schedule with the request for time extension on a monthly basis. Include a narrative report describing the effects of weather days to interim and contract completion dates.

I. Recovery Schedule. If the Monthly Update Schedule or Revised Monthly Update Schedule projects a finish date for the Project more than 14 calendar days later than the current Completion Date, submit a recovery schedule showing a plan to finish by the current Completion Date if requested by the Engineer. The Department will withhold Estimates until the Engineer approves the recovery schedule. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor. In the event the current Completion Date is in dispute; the recovery schedule will need to be submitted once the dispute has been resolved.

J. Basis of Payment. The Department will make partial payments according to C&MS Section 109.09 and as modified by the following schedule:

1. The Department will release 60 percent of the lump sum amount bid for CPM Progress Schedule to the Contractor with the first regular estimate payable after the Engineer has approved the CPM Baseline schedule submission.
2. The Department will release an additional 30 percent of the lump sum amount bid for CPM Progress Schedule to the Contractor with the first regular estimate payable after 50 percent of the original contract amount is complete.
3. The Department will release the remaining 10 percent of the lump sum amount bid for CPM Progress Schedule to the Contractor with the first regular estimate payable after 90 percent of the original contract amount is complete.

The Department will pay for the accepted quantities at the contract price as follows:

Item	Unit	Description
108E30000	Lump Sum	CPM Progress Schedule Short Duration Projects

Designer's Note: This note should be used for single season projects whose cost is greater than \$5 million; which have more than 3 phases; or, as may otherwise be appropriate. The Critical Path Method Progress Schedule is now a contract pay item as per Section J of the note and should be included in the Proposal as a pay item. It is recommended that this note be used for the projects described above where PN 120, PN 121, PN 122, PN 123, PN 124 and PN 125 are specified. Any questions should be addressed to the Construction Administration Staff Specialist in the Office of Construction Management.

PN 420 – 1/17/2020 - SURFACE SMOOTHNESS REQUIREMENTS FOR PAVEMENTS

DESCRIPTION: The surface tolerance specification requirements are modified as follows for all pavements of constant width with at least 1 centerline mile (1.6 km) of continuous paving. Short breaks in paving such as bridge decks, intersections, etc. are not considered breaks in continuous paving. Also included is pavement for ramps, including acceleration lanes and deceleration lanes, where the total length is greater than 0.5 miles (0.8 km); and all interstate-to-interstate ramps including acceleration lanes and deceleration lanes, regardless of total length.

For roads with less than 1 centerline mile (1.6 km) of paving; ramps, acceleration lanes, and deceleration lanes not included above; and sections of undivided highways, as defined in this note, within corporation limits with posted speed limits less than 40 miles per hour, smoothness measurement and corrective action for all areas of localized roughness with an IRI in excess of 250 inches per mile (3.95 m/km) in 25 feet (7.6 m) is required. For these same areas, no corrective action for 0.1-mile (0.16 km) sections having an IRI greater than 90 inches per mile (1.42 m/km) is required and no pay adjustments will be made.

Do not include pavement for turn lanes including center turn lanes, shoulders, crossovers, approach slabs, and bridge decks in IRI measurements, corrective actions, and pay adjustments.

Areas not part of this specification are subject to the requirements of the original item(s) specified.

If the pavement surface is Rubberized Open Graded Asphalt Friction Course (Supplemental Specification 803), this specification applies to the surface of the course immediately below and references to the number of courses placed do not include the SS803 course.

MATERIALS AND EQUIPMENT: Provide smoothness measuring equipment conforming to Supplement 1058. Furnish the Department's approval letter of the profiler and the operator to the Engineer. The Engineer will verify the smoothness measuring equipment conforms to Supplement 1058. The Engineer will complete the Smoothness Profiler Verification Report found in Supplement 1058, Appendix A, to document profiler calibration prior to measurement. The Engineer will verify the profile operator's certification against the operator list posted on the Office of Construction Administration webpage. Furnish equipment meeting the requirements of C&MS 257.02 for performing corrective diamond grinding.

SMOOTHNESS MEASUREMENT: Measure the pavement surface smoothness in both wheel paths. Wheel paths are located parallel to the centerline or baseline of the roadway or ramp and approximately 3.0 feet (1.0 m) from the centerline of the lane or ramp, measured transversely in both directions. Ensure the path of the profiler is parallel to the lane centerline at all times. Measure the entire length of pavement, event marking the profile runs such that profile data can later be identified when the profile sensor(s) is within 1.0 foot (0.3 m) of any existing pavement not constructed on the project, pressure relief joint, approach slab, or other non pavement features (i.e. manholes, valve boxes). It is the operator's responsibility to note such locations in the collected inertial profiles. Remove any objects such as dirt, debris, curing covers, etc., prior to

performing the surface smoothness measurements. Replace any curing covers after the measurements are taken. Repair any membrane curing damaged during the measurements.

Do not perform any surface smoothness measurements until the pavement has cured sufficiently to allow measuring without damaging the pavement. When the pavement will not support the profiler on the next working day, notify the Engineer and inform the Engineer when the measurements will be taken. Provide the Engineer at least 24 hours' notice prior to performing any measurements. Do not take measurements until project site verification is demonstrated to the Engineer according to Supplement 1058.

Develop an IRI according to ASTM E 1926 for each 0.1-mile (0.16 km) section. Submit two copies of the summary report from ProVAL conforming to Supplement 1110 and two electronic copies of all longitudinal pavement profiles in ProVAL compatible format to the Engineer. The Engineer will submit one copy of the summary report and one electronic copy of the profiles to the Office of Technical Services.

Provide necessary traffic control and survey stationing for all surface smoothness measurements.

MANDATORY CORRECTIVE ACTION: Perform corrective action for the applicable surface type as required. Provide a list of all mandatory corrective action locations, with station, lane, and proposed corrections to the Engineer for approval. Do not perform any corrective actions without approval of the Engineer. Corrective action required to meet the maximum allowable IRI values that are performed after the contract completion date will be a Punch List item in accordance with C&MS 109.12.B. Corrective action will not be assessed liquidated damages in C&MS 108.07 or contract disincentives. If correction action on the Punch List is not completed within a reasonable time, it will be subject to an assessment of fifty percent of liquidated damages in accordance with C&MS 109.12.B.

Asphalt Concrete Surface: Classify asphalt pavement areas into one of the following types based on the work performed as part of the Project.

Type A: Asphalt pavement specified as at least two uniform courses with the total thickness placed greater than or equal to 3 inches (75 mm).

Type B: Asphalt pavement specified as either: a) at least one uniform course with the total thickness placed less than 3 inches (75 mm) and including Item 254 or SS897 planing prior to resurfacing, or b) at least two uniform courses with the total thickness less than 3 inches (75 mm) without including Item 254 or SS897 planing prior to resurfacing.

Type C: Asphalt pavement specified as a single uniform course not meeting the criteria of Type B. The uniform course may be placed on a non-uniform leveling course.

TABLE 420-1 ASPHALT CONCRETE PAVEMENT CLASS CRITERIA

Pavement Class	Divided Highways*		Undivided Highways*	
	Corrective Action	Pay Adjustment Schedule (Table 420-3)	Corrective Action	Pay Adjustment Schedule (Table 420-3)
Type A [\geq 3in. + 2-course]	[1],[5]	A	[2],[5]	A
Type B [$<$ 3in. + Milling] or [$<$ 3in. + 2-course]	[1],[5]	A	[3],[5]	A
Type C [$<$ 3in. + 1-course]	[2],[5]	A	[4]	B

* Divided highways have physical separation such as a grass median, raised concrete median, guardrail, or barrier between the two directions of travel. Highways with continuous two way left turn lanes are considered undivided. Undivided highways with short sections, less than 1000 feet (300 m), of physical separation are considered undivided for the entire length.

Corrective Action:

- [1] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 160 inches per mile (2.53 m/km) in 25 feet (7.6 m).
- [2] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 200 inches per mile (3.16 m/km) in 25 feet (7.6 m).
- [3] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 225 inches per mile (3.55 m/km) in 25 feet (7.6 m).
- [4] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 250 inches per mile (3.95 m/km) in 25 feet (7.6 m).
- [5] Correct any 0.1-mile (0.16 km) sections having an IRI greater than 90 inches per mile (1.42 m/km).

Perform corrective action as required in Table 420-1. Do not propose diamond grinding corrections in excess of one-third the contract Item course thickness. When removal is required for corrective action, remove the entire asphalt course(s) affected, for the full lane width, and replace per the original contract item(s). Apply Item 407 Tack Coat prior to placing any asphalt concrete. Do not diamond grind more than 5 percent by longitudinal length of the lane-miles (lane-km) eligible for a pay adjustment.

Re-measure each 0.1-mile (0.16 km) section where corrective action was performed to ensure compliance with Table 420-1.

If the final surface course is Item 803, seal any diamond ground areas with material meeting the requirements of 702.04 prior to placing the Item 803.

Portland Cement Concrete Surface: Classify pavement areas into one of the following types based on the work performed as part of the Project.

Type A: Concrete pavement with the total specified thickness greater than or equal to 8 inches (200 mm).

Type B: Concrete pavement with the total specified thickness greater than 6 inches (150 mm) and less than 8 inches (200 mm).

Type C: Concrete pavement with the total specified thickness less than or equal to 6 inches (150 mm).

TABLE 420-2 PORTLAND CEMENT CONCRETE PAVEMENT CLASS CRITERIA				
Pavement Class	Divided Highways*		Undivided Highways*	
	Corrective Action	Pay Adjustment Schedule (Table 420-3)	Corrective Action	Pay Adjustment Schedule (Table 420-3)
Type A [\geq 8in.]	[1],[5]	A	[1],[5]	A
Type B [$>$ 6 in. & $<$ 8in.]	[1],[5]	A	[2],[5]	A
Type C [\leq 6 in.]	[2],[5]	A	[3]	B

* Divided highways have physical separation such as a grass median, raised concrete median, guardrail, or barrier between the two directions of travel. Highways with continuous two way left turn lanes are considered undivided. Undivided highways with short sections, less than 1000 feet (300 m), of physical separation are considered undivided for the entire length.

Corrective action:

- [1] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 160 inches per mile (2.53 m/km) in 25 feet (7.6 m).
- [2] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 200 inches per mile (3.16 m/km) in 25 feet (7.6 m).
- [3] Correct all areas of localized roughness having deviations, high or low points, with an IRI in excess of 225 inches per mile (3.55 m/km) in 25 feet (7.6 m).
- [5] Correct any 0.1-mile (0.16 km) sections having an IRI greater than 90 inches per mile (1.42 m/km).

Perform corrective action as required in Table 420-2 by diamond grinding or removing and replacement per the original contract items.

Re-measure each 0.1-mile (0.16 km) section where corrective action was performed to ensure compliance with Table 420-2.

Complete all corrective action prior to determination of pavement thickness. If corrective action is required, the surface texture after diamond grinding is acceptable and no additional texturing is required.

Asphalt and Portland Cement Concrete Surfaces: If corrective action is required, develop a corrective action plan at least 7 days before beginning corrective action. Include in the plan identification and detailed location descriptions of all localized and lot violations and proposed corrective action. Do not begin corrective action until receiving the Engineer’s acceptance of the corrective action plan. The corrective action plan is limited to grinding, pavement removal and replacement or a combination of the two. Upon completion of the corrective action, re-measure

surface smoothness according to this specification. In the event the Contractor is not able to correct the surface smoothness to meet the Specification, the DCE may establish a deduction to the Contract in accordance with section 105.03 of the C&MS.

EXEMPTED CORRECTIONS: Required corrective action resulting from contract requirements for maintaining traffic and construction joints placed at the beginning and end of each work period are considered exempted corrections. The contractor will identify and define all exempted correction locations. Exempted corrections for maintaining traffic occur primarily at ramps or other access points where paving must be suspended. Required corrective action due to material availability, weather, or any other reason not listed above, is not considered an exempted correction. No exempted corrections for maintaining traffic exist on projects where the maintenance of traffic plan does not interfere with paving operations. Perform exempted corrections according to the requirements for mandatory corrective action.

METHOD OF MEASUREMENT: Determine the IRI for each lane for each 0.1-mile (0.16 km) section of paving. The IRI for a 0.1-mile (0.16 km) section is the average of the IRI of the two wheel paths.

PAY ADJUSTMENTS: A lump sum pay adjustment will be made according to the following schedule and calculations for each lane for each 0.1-mile (0.16 km) section. Payment will be based on a 12 foot (3.7 m) lane width, regardless of lane width. Pay adjustments are based on the weighted average bid unit cost per square yard for the section multiplied by the pay factor as determined in Table 420-3. Pavement thickness is the total thickness of asphalt concrete, Portland cement concrete, or both placed as part of the contract and does not include any SS803 course, free draining base, aggregate base, stabilized subgrade, etc.

TABLE 420-3 PAY SCHEDULE			
SCHEDULE A		SCHEDULE B	
IRI	PAY ADJUSTMENT	IRI	PAY ADJUSTMENT
Inches per mile per 0.1 mile section (m/km per 0.16 km section)	Percentage of Unit Cost (PUC) (%)	Inches per mile per 0.1 mile section (m/km per 0.16 km section)	Percentage of Unit Cost (PUC) (%)
35 (0.55) or less	4	45 (0.71) or less	4
Over 35 to 50 (0.55 to 0.79)	$(50 - \text{IRI}) * \left(\frac{4}{15}\right)$	Over 45 to 60 (0.71 to 0.95)	$(60 - \text{IRI}) * \left(\frac{4}{15}\right)$
Over 50 to 70 (0.79 to 1.10)	0	Over 60 (0.95)	0
Over 70 to 90 (1.10 to 1.42)	$-(\text{IRI} - 70) * \left(\frac{6}{20}\right)$		
Over 90 (1.42)	(1)		

(1) Corrective action required

Asphalt Pavements:

$$WUC = \frac{(t_1 \times u_1) + (t_2 \times u_2) + (t_3 \times u_3) \dots}{36}$$

Where: WUC = weighted unit cost (\$/SY).

t = lift thickness (in.).

u = bid unit cost (\$/CY).

Concrete Pavements:

$$WUC = \text{bid unit cost } (\$/SY)$$

Pay Adjustment (PA):

$$PA = WUC \times 704 \times PUC$$

Where: WUC = weighted unit cost (\$/SY).

PUC = percentage of unit cost from Table 420-3, expressed as a decimal.

Pay adjustments will be based on the measured IRI after any mandatory corrective action however no incentive will be paid for any 0.1-mile (0.16 km) section where mandatory corrective action was performed regardless of the resulting IRI. No pay adjustments will be made for sections less than 0.1 miles (0.16 km) long, however corrections for localized roughness are required.

One-tenth mile (0.16 km) sections with exempted corrections only are eligible for incentive pay based on IRI measurements taken after completion of the exempted corrections.

At the Contractor's option, corrective action may be performed on any section with an IRI greater than 70 inches per mile (1.10 m/km) to reduce or eliminate the negative pay adjustment however, no incentive will be paid regardless of the resulting IRI. As an option the Department may allow corrective action, in the form of diamond grinding, Item 254, or SS897 pavement planing, to improve the profile on any course prior to the surface course. If the final course is Item 803 do not perform corrective action on the Item 803. Only diamond grinding may be performed on the course immediately below Item 803.

Negative pay adjustments apply to sections with mandatory corrective action and exempted corrections.

No payment will be made for any 0.1-mile (0.16 km) section subject to Schedule A that has an IRI greater than 90 inches per mile (1.42 m/km) until corrective action has been completed and the IRI has been reduced to less than 90 inches per mile (1.42 m/km).

BASIS OF PAYMENT: Include the cost of all labor, equipment, and materials necessary to meet this specification in the contract unit or lump sum price for the applicable pavement items.

Designer Notes: This note should be used on all paving projects at least 1 centerline mile (1.6 km) long (both divided and undivided highways). Undivided highway sections totally within corporation limits should be excluded.

The designer should consider clarifying in the plans which locations are considered divided highways and which are undivided highways according to the definition in the note if there is any chance of misinterpretation.

If there are any questions on the use or application of this note contact:

Dan Radanovich – Division Planning, Office of Technical Services (614-351-2878)
Construction Pavement Engineer – Division of Construction Management, Office of
Construction Administration (614-466-3165)

PN 520 10/19/2018 - FUEL PRICE ADJUSTMENT

General: This Fuel Price Adjustment (Fpa) provision is intended to minimize risk to the Contractor or Design Build Team, (DBT) due to fuel price fluctuations that may occur during the Contract. This provision is not designed to estimate actual quantities of fuel used in construction operations, but to provide a reasonable basis for calculating a fuel price adjustment based on average conditions.

The Department determines adjustments under the provisions of this Proposal Note, and presumes that the Contractor/(DBT) has relied on these provisions when determining unit bid prices. The monthly application range for percent change (Mbp/Cbp) will not exceed 50% for a Fuel Price Adjustment increase or decrease as outlined in Section B, Calculation of Fuel Price Adjustment.

A. Price Adjustment Criteria: These requirements provide for a price adjustment, positive or negative, to payments due the Contractor/(DBT) for fluctuations in the cost of fuel consumed in the performance of certain items of work. The total price adjustment must be more than \$400. These price adjustment provisions apply only to those items in the contract as grouped by category and identified in Table A-1. All adjustments will be made based on fuel consumption indicated by Table A-1, and no changes will be made for actual consumption rates.

Category descriptions and the fuel usage factors which are applicable to each are as follows:

Fuel Adjustment Categories, Table A-1				
Category	Basis of Calculation and Threshold Quantity	Eligible Items	Units	Fuel Usage Factor
Earthwork	Apply only to the greater of the sum of all Excavation quantities or the sum of all Borrow and Embankment quantities. Threshold Quantity* = 30,000 c.y. (22,936 c.m.)	203, 204	Gallons per cubic yard (Gallons per cubic meter)	0.50 (0.65)
Aggregate Bases	Apply to quantity calculated based on the Method of Measurement and Basis of Payment. Threshold Quantity* = 2,500 c.y. (1,912 c.m.)	304, 307	Gallons per cubic yard (Gallons per cubic meter)	0.75 (0.98)
Select Granular Backfill	Apply to quantity calculated based on the Method of Measurement and Basis of Payment. Threshold Quantity* = 2,000 c.y. (1,529 c.m.)	840	Gallons per cubic yard (Gallons per cubic meter)	0.75 (0.98)
Flexible Bases and Pavements	Apply to quantity calculated based on the Method of Measurement and Basis of Payment. Threshold Quantity* = 1,200 c.y. (917 c.m.)	301, 302, 424, 441, 442, 443, 446, 448, 614, 615, 803, 806, 826, 851, 857, 860, 880	Gallons per cubic yard (Gallons per cubic meter)	1.70 (2.22)
Rigid Bases and Pavements	Apply to quantity calculated based on the Method of Measurement and Basis of Payment. Threshold Quantity* = 1,200 c.y. (917 c.m.)	305, 306, 451, 452, 526, 884,	Gallons per cubic yard (Gallons per cubic meter)	1.00 (1.31)
Structural Concrete	Apply to quantity calculated based on the Method of Measurement and Basis of Payment. Threshold Quantity* = 350 c.y. (268 c.m.)	511, 524, 842, 892	Gallons per cubic yard (Gallons per cubic meter)	4.00 (5.23)

* A Fuel Price Adjustment will only apply when the sum of all **original** contract quantities or for Design Build Projects all completed in-place accepted final quantities for the category meet or exceed the specified

Threshold Quantity. When a Fuel Price Adjustment applies, calculate the Fuel Price Adjustment for the sum of all quantities for the category per this proposal note.

B. Calculation of Fuel Price Adjustment: Fuel Price Adjustments may be either positive or negative. A positive Fuel Price Adjustment will result in a payment to the Contractor/(DBT) while a negative Fuel Price Adjustment will result in a deduction.

The Department will calculate a Monthly Base Price (Mbp) for fuel for each month of each calendar year beginning with January 2001. The method for calculating the Monthly Base Price (Mbp) will be on file in the Division of Construction Management. The Monthly Base Price (Mbp) will be used to calculate all Fuel Price Adjustments. The Contract Base Price (Cbp) will be the Monthly Base Price (Mbp) for the month the contract was bid. All Monthly Base Price (Mbp) values will be posted on the Division of Construction Management, Office of Construction Administration website at: <http://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Pages/PriceIndexes.aspx>

During each month of the contract the Engineer will select the applicable Monthly Base Price (Mbp) and calculate the ratio of the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp). The formulas below allow for a variation in fuel prices without recognizing cost increases/ decreases within the range of 90% to 110% of the Contract Base Price (Cbp).

When, and only when, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is less than 0.90 or greater than 1.10 will the Engineer calculate a Fuel Price Adjustment (Fpa).

Cost increases in excess of 150% of the Contract Base Price (Cbp) will not be recognized. When, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is greater than 1.50, the Fpa shall be calculated using a Cbp/Mbp ratio of 1.50.

Cost decreases in excess of 50% of the Contract Base Price (CBP) will not be recognized. When, the Monthly Base Price (Mbp) divided by the Contract Base Price (Cbp) is less than 0.50, the Fpa shall be calculated using a Cbp/Mbp ratio of 0.50.

For a Price Increase:

$$Fpa = [(Mbp/Cbp) - 1.10] \times Cbp \times Q$$

For a Price Decrease:

$$Fpa = [(Mbp/Cbp) - 0.90] \times Cbp \times Q$$

Where:

Fpa = Fuel Price Adjustment

Mbp = Monthly Base Price

Cbp = Contract Base Price

Q = The number of gallons of fuel used in the placement of items identified in Table A-1 during that month at the specified Fuel Usage Factor. Q will be determined by the Engineer for each category by multiplying the applicable Fuel Usage Factor by the sum of quantities of completed and accepted work for the specified items.

The total Monthly Fuel Price Adjustment will be the algebraic sum of the Fuel Price Adjustments for materials placed during the month for each applicable category identified in Table A-1. The Total Fuel Price Adjustment for the project will be the algebraic sum of all Monthly Fuel Price Adjustments. The

Department will calculate the Monthly and Total Fuel Price Adjustment on a monthly basis and make contract modifications as provided in Section C, Payment/Deduction.

C. Payment/Deduction: The Fuel Price Adjustment will be paid, or deducted, upon approval of a change order prepared after completion of all work. Contractor/(DBT) markups are not permitted. Partial payments or deductions will be processed prior to total completion when the unpaid accrued Total Fuel Price Adjustment exceeds \$10,000 or once every 12 months.

D. Expiration of Contract Time: When eligible items of work grouped by category and identified in Table A-1 are performed after expiration of contract time and liquidated damages are chargeable, the value of Monthly Base Price (Mbp) used to compute the price adjustment will be either the Monthly Base Price (Mbp) at the time of actual performance or the Monthly Base Price (Mbp) at the time contract time expired, whichever is less.

E. Extra Work: When eligible items of work grouped by category and identified in Table A-1 are added to the contract as Extra Work and for which a unit price is negotiated the Contractor/(DBT) must use the appropriate price for fuel when preparing required backup data for the negotiated price. No Fuel Price Adjustment will be made for fuel consumed in the performance of eligible work added to the contract as Extra Work at a negotiated price when the work commences within 90 days of the approval of the change order authorizing said extra work. If the eligible work at a negotiated price commences more than 90 days after the approval of the change order authorizing said extra work a Fuel Price Adjustment will be made if said extra work quantities exceed the applicable threshold quantity in Table A-1. The Fuel Price Adjustment will be calculated using the Monthly Base Price (Mbp) value for the month the change order authorizing said extra work was approved as the value for its Contract Base Price (Cbp).

When Extra Work is added to the contract as a Force Account operating costs for equipment used in the performance of this work will be paid in accordance with C&MS 109.05.C.4 with no further adjustment.

F. Final Quantities: Upon completion of the work and determination of final pay quantities a change order will be prepared to reconcile any difference between estimated quantities previously paid and the final quantities. In this situation, the value for the Monthly Base Price (Mbp) used in the price adjustment formula will be the average of all Monthly Base Price (Mbp) values previously used for computing price adjustments.

Designer Note: This note is to be used on all projects with quantities that meet or exceed the threshold values given for any of the categories of pertinent work listed in Table A-1 of this proposal note. Questions regarding this note should be directed to the Construction Administration Staff Specialist, Office of Construction Administration at 614-387-1164.

PN 534- 04/20/2018 - Asphalt Binder Price Adjustment

A. Eligibility

If the Department's asphalt binder index has increased or decreased in excess of 10%, asphalt concrete may be eligible for a price adjustment. The total price adjustment must be more than \$400.

B. Price Adjustment Criteria and Conditions:

The Department will establish and publish the asphalt binder Bidding Index (BI) and Placing Index (PI) for each month of each calendar year. The asphalt binder indexes will be posted on the Department's website.

The Department will establish the asphalt binder indexes based on the data provided in the Potem & Partners, Inc., Asphalt Weekly Monitor[®] (AWM) (<http://www.poten.com/copyright.asp>).

The Department will use the selling price for PG 64-22 paving grade asphalt from the Midwest/Mid-continent Markets of Illinois/Michigan/Ohio/Indiana/Kentucky for the Ohio cities/areas listed. The Department will average the Ohio cities/areas low and high selling prices as published in the last weekly publishing period of each month that includes the last Friday of the month to calculate the BI and PI. The calculated asphalt binder BI will be posted by the Department as the index for the following month. The calculated asphalt binder PI will be posted by the Department as the index for the current month.

The Director will determine the asphalt binder indexes in the event data from the AWM is unavailable for any reason.

C. Price Adjustment Calculations

If the ratio of the PI to the BI is greater than 1.10 or less than 0.90, the Department will adjust the compensation the contractor receives for eligible quantities of asphalt concrete. The adjustment is based on the bid month and the month of asphalt concrete placement. The adjustment will apply to the price for asphalt binder used in eligible asphalt concrete quantities according to the following formula:

For a price increase:

$$PA = \left(\frac{PI}{BI} - 1.10 \right) \times C \times Q$$

For a price decrease:

$$PA = \left(\frac{PI}{BI} - 0.90 \right) \times C \times Q$$

Where:

PA = Price Adjustment

BI = Bidding Index, the asphalt binder index for the month the project is bid

PI = Placing Index, the asphalt binder index for the month the asphalt concrete is placed

C = BI x percent virgin asphalt binder / 100

Q = Eligible quantity of asphalt concrete in tons (metric tons)

The percent of virgin asphalt binder used to calculate C is determined from the approved Job Mix Formula (JMF).

The eligible quantity of asphalt concrete, Q, is the complete, in-place, and accepted quantity in tons (metric tons) placed in the month being considered for price adjustment. If the quantity is paid in cubic yards (cubic meters), the Department will convert the volume into tons (metric tons) using the conversion factor established according to the Department's Construction and Material Specifications Item 401.21.

If eligible asphalt concrete is placed beyond an approved Contract Completion Date, the Department will base price adjustments on either the PI for the last month of the approved Contract Completion Date, or the PI for the actual month of placing, using whichever PI is less.

At a minimum, the Department will calculate and apply price adjustments at the end of each construction season and as soon as practical after the completion of the project.

D. Extra Work/Force Account:

When new asphalt concrete pay items are added to the contract as Extra Work, in accordance with the provisions of C&MS Section 109.05, no price adjustments will be made.

Designer Note PN 534 – 04/17/2015 - Asphalt Binder Price Adjustment

For use with the 2013 C&MS

This note will be used on all projects that specify asphalt concrete with a minimum of 1000 CY (765 m³) for any contract item listed in the Schedule of Contract Items; or on design-build projects where a minimum of 1000 CY (765 m³) is expected to be used on any contract item listed in the Schedule of Contract Items.

DESIGNERS WHO HAVE QUESTIONS ON APPLICATION OF THIS NOTE SHOULD CONTACT:

Pavement Staff Specialist, Office of Construction Administration at (614) 644-6622

PREVAILING WAGE

SECTION 6

INSTRUCTIONS FOR PREPARING CERTIFIED PAYROLL REPORTS

General:

Contractors and subcontractors are required by law to submit certified payroll reports for work on projects covered by Ohio's Prevailing Wage Law. This form meets the reporting requirements established by Ohio Revised Code Chapter 4115. The use of this form is not mandatory; employers may submit their own forms provided that all of the required information is included. This form may be reproduced, or additional copies obtained from:

Ohio Bureau of Employment Services
Wage and Hour Division
131 North High Street 5th Floor
Columbus, Ohio 43216 (614) 644-2239

Certified Payroll Heading:

Employer name and address: Company's full name and address. Indicate if the company is a subcontractor, if so; list the name of the General or Prime.

Project: Name and location of the project, including county.

Contracting Public Authority: Name and address of the contracting public authority.

Week Ending: Month, day, and year for last day of reporting period.

Payroll #: Indicates first, second, third, etc., payroll filed by the company for the project.

Page indicator: Number of pages included in the report.

Project Number: Determined by the public authority. If there is no number leave blank.

Payroll Information by column:

1. Employee Name, Address and Social Security Number: This information must be provided for all employees that perform physical labor on the project. Corporate officers, partners, and salaried employees are considered employees and must be paid the prevailing rate. Individual sole proprietors do not have to pay themselves prevailing rate but must report their hours on the project.
2. Work Class: List classification of work actually performed by employee. If unsure of work classification, consult the Ohio Bureau of Employment Services, Wage and Hour Division. Employees working more than one classification should have separate line entries for each classification. Indicate what year/level for Apprentices. Be specific when using laborer and operator classifications, for example, Backhoe Operator or Asphalt Laborer.
3. Hours Worked, Day & Date: In the first row of column 3 enter days of pay period example, M T W TH F S SU. The second row is for the date that corresponds with each day for the pay period. In the employee information section enter the number of hours worked on the prevailing wage project and which day the hours were worked. Separate rows are labeled for (ST) straight time hours and (OT) overtime hours. All hours worked after 40, must be paid at the appropriate overtime rate.
4. Project Total Hours: Total the hours entered for pay period.
5. Base Rate: Enter actual rate per hour paid to the employee. The overtime hourly rate is time and one-half the base rate listed in the prevailing wage schedule plus fringe benefits at straight time rate. The prevailing wage schedule lists the base rate plus fringe benefit amounts. These amounts added together equal the total prevailing wage rate. Employers must pay this total amount in one of three ways.
 - a) Total rate may be paid in entirety in the base rate to the employee; in which case, the cash designation will be checked for fringe benefits.
 - b) Total rate may be paid as listed in prevailing wage rate schedule with total fringe amounts paid approved plans.
 - c) Total rate may be paid with a combination of base rate and fringe payments to approved plans in amounts other than those listed in schedule.
6. Project Gross: Enter total gross wages earned on the project for straight time and overtime. Project hours X base rate should equal project gross.
7. Fringes: If fringe benefits are paid in the hourly base rate, indicate this by marking the cash space. If fringe benefits are paid to approved plans as listed in the prevailing wage rate schedule, mark the space Approved Plans. If fringe benefits are paid partially in the base rate and partially to approved plans, mark the space Cash & Approved plans. List the hourly amount paid to approved plans for each fringe. If payments are not made on a per hour basis, calculate the hourly fringe credit by dividing the yearly employer contribution by the lesser of: hours actually worked in the year (these must be documented) or 2080. Fringe benefits include: Employer's share of health insurance, life insurance, retirement plan, bonus/profit sharing, sick pay, holiday pay, personal leave, vacation, and education/training programs.
8. Total Hours All Jobs: Total all hours worked during the pay period including non-prevailing wage jobs.
9. Total Gross All Jobs: Gross amount earned in the pay period for all hours worked.
10. Self explanatory
11. Self explanatory
12. Self explanatory

CERTIFIED PAYROLL REPORT

Employer Name and Address			Name of General/Prime Contractor				Project Name and Location					Contracting Public Authority				
Check if Subcontractor <input type="checkbox"/>		Week Ending:			Payroll #:		Page ___ of ___			Project Number:						
1. Employee Name, Address SSN		2. Work Class	3. Hours Worked Day & Date			4. Project Total Hrs	5. Base Rate	6. Project Gross	7. Fringes: Cash ___ Appd Plans ___ Cash & Approved Plans			8. Total Hrs All Jobs	9. Total Gross All Jobs	10. Taxes Withheld	11. Other Deducts	12. Net Paid
									H & W	Pens	Vac	Apo	Other			
			OT													
			ST													
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Date _____ My signature on this form signifies that I pay, or supervise the payment of the employees shown above. I am certifying: 1) That during the pay period reported on this form, all hours worked on this project have been paid at the appropriate prevailing wage rate for the class of work done. 2) That fringe benefits have been paid as indicated above. 3) That no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissible deductions as defined in the Ohio Revised Code Chapter 4115. 4) That apprentices are registered with the U.S. Department of Labor Bureau of Apprenticeship and Training. The willful falsification of any of the above statements may subject the contractor or subcontractor to civil or criminal prosecution.

NAME AND TITLE _____ SIGNATURE _____

PLEASE BE ADVISED THAT THIS FORM IS INTENDED TO BE USED AS A SAMPLE ONLY. IT IS NOT INTENDED TO BE THE ACTUAL PAYROLL REPORT TO BE FILED. IN ORDER TO COMPLY WITH THE STATE STATUTE REGARDING THE FILING OF CERTIFIED PAYROLL REPORTS, THE REPORT FILED BY YOUR COMPANY MUST INCLUDE A STATEMENT CERTIFYING THAT THE "PAYROLL IS CORRECT AND COMPLETE AND THE WAGES PAID ARE NOT LESS THAN THOSE REQUIRED BY THE CONTRACT". IF YOU HAVE ANY QUESTIONS REGARDING THE FILING OF CERTIFIED PAYROLL REPORTS, PLEASE CONTACT THE OHIO BUREAU OF EMPLOYMENT SERVICES, WAGE AND HOUR DIVISION AT (614)-644-2239.

CERTIFICATION

Date

I, _____

_____ (Name of signatory part) (Title)

do hereby certify:

(1) That I pay or supervise the payment of the persons employed by

_____ on the _____
 (Contractor or subcontractor) (Building or work)

_____ ; that during payroll period

commencing on the _____ day of _____ 20____ and

ending the _____ day of _____ 20____ all laborers

and mechanics employed on said project have been paid at the prevailing rate of wages for laborers and mechanics for the class of work called for by said project, and that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ (Contractor or subcontractor)

from the total wages earned by any person and that no deduction have been made either directly or indirectly from the total wages earned by any person, other than permissible deductions as defined in Chapter 4115. Ohio Revised Code, and described below:

(2) That this and all payrolls required to be submitted for the above period are correct and complete; that the prevailing wage rates for laborers and mechanics are not less than the prevailing wage rates then payable in the same trade or occupation in the locality where the work is being performed, as determined by the Ohio Department of Industrial Relations; and, that the classifications set

forth for each laborer and mechanic conform with the work performed,

(3) That apprentices employed during the above period are duly registered in a bona fide apprenticeship program registered with the State Apprenticeship Council.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- In addition to the base hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as determined by the Ohio Department of Industrial Relations have been made to

_____ in the amount of: \$ _____ for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage ratio plus the amount of the required fringe benefits as determined by the Ohio Department of Industrial Relations, except as noted in Section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

Ohio Bureau of Employment Services
 Wage and Hour Division

Remarks: 145 South Front Street
 PO Box 1618
 Columbus, Ohio 43216-1618

Name and Title	Signature
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6.2.1

(SAMPLE)

AFFIDAVIT OF CONTRACTOR OR SUBCONTRACTOR

PREVAILING WAGES

Name of Company _____

I, _____, (Name of person signing affidavit) Title _____

do hereby certify that the wages paid to all employees for the full number of hours worked in connection with the Contract to the Improvement, Repair and Construction of:

(Project Name & Location)

during the following period from _____ to _____

is in accordance with the prevailing wage prescribed by the contractor document.

I further certify that no rebates or deductions for any wages due any person have been directly or indirectly made other than those provided by law.

(Signature of Officer or Agent)

Sworn to and subscribed in my presence this _____ day of _____, 20__.

(Notary Public)

The above affidavit must be executed and sworn to by the officer or agent or the Contractor or Subcontractor who supervises the payment of employees, before the owner will release the surety and/or make a final payment due under the terms of the Contract.

"General Decision Number: OH20210001 02/12/2021

Superseded General Decision Number: OH20200001

State: Ohio

Construction Types: Heavy and Highway

Counties: Ohio Statewide.

Heavy and Highway Construction Projects

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	01/22/2021
2	02/12/2021

BROH0001-001 06/01/2019

DEFIANCE, FULTON (Excluding Fulton, Amboy & Swan Creek Townships), HENRY (Excluding Monroe, Bartlow, Liberty, Washington, Richfield, Marion, Damascus & Townships & that part of Harrison Township outside corporate limits of city of Napoleon), PAULDING, PUTNAM and WILLIAMS COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0001-004 06/01/2019		

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 29.34	16.11

BROH0003-002 06/01/2019		

FULTON (Townships of Amboy, Swan Creek & Fulton), HENRY (Townships of Washington, Damascus, Richfield, Bartlow, Liberty, Harrison, Monroe, & Marion), LUCAS and WOOD (Townships of Perrysburg, Ross, Lake, Troy, Freedom, Montgomery, Webster, Center, Portage, Middleton, Plain, Liberty, Henry, Washington, Weston, Milton, Jackson & Grand Rapids) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0005-003 05/01/2019		

CUYAHOGA, LORAIN & MEDINA (Hinckley, Granger, Brunswick, Liverpool, Montville, York, Homer, Harrisville, Chatham, Litchfield & Spencer Townships and the city of Medina)

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CAULKERS; CLEANERS; POINTERS; & STONEMASONS.....	\$ 34.85	16.94
SANDBLASTERS.....	\$ 35.10	16.94
SEWER BRICKLAYERS & STACK BUILDERS.....	\$ 35.35	16.94
SWING SCAFFOLDS.....	\$ 35.35	16.94

BROH0006-005 06/01/2019		

CARROLL, COLUMBIANA (Knox, Butler, West & Hanover Townships), STARK & TUSCARAWAS

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

 BROH0007-002 06/01/2019

LAWRENCE

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

 BROH0007-005 06/01/2019

PORTAGE & SUMMIT

	Rates	Fringes
BRICKLAYER.....	\$ 29.34	16.11

 BROH0007-010 06/01/2019

PORTAGE & SUMMIT

	Rates	Fringes
MASON - STONE.....	\$ 29.34	16.11

 BROH0008-001 06/01/2019

COLUMBIANA (Salem, Perry, Fairfield, Center, Elk Run, Middleton, & Unity Townships and the city of New Waterford), MAHONING & TRUMBULL

	Rates	Fringes
BRICKLAYER.....	\$ 29.34	16.11

 BROH0009-002 06/01/2019

BELMONT & MONROE COUNTIES and the Townships of Warren & Mt. Pleasant and the Village of Dillonvale in JEFFERSON COUNTY

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11
Refractory.....	\$ 31.45	19.01

BROH0010-002 06/01/2019

COLUMBIANA (St. Clair, Madison, Wayne, Franklin, Washington, Yellow Creek & Liverpool Townships) & JEFFERSON (Brush Creek & Saline Townships)

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0014-002 06/01/2019

HARRISON & JEFFERSON (Except Mt. Pleasant, Warren, Brush Creek, Saline & Salineville Townships & the Village of Dillonvale)

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0016-002 06/01/2019

ASHTABULA, GEAUGA, and LAKE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0018-002 06/01/2019

BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE (Gasper, Dixon, Israel, Lanier, Somers & Gratis Townships) & WARREN COUNTIES:

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0022-004 06/01/2019

CHAMPAIGN, CLARK, CLINTON, DARKE, GREENE, HIGHLAND, LOGAN, MIAMI, MONTGOMERY, PREBLE (Jackson, Monroe, Harrison, Twin, Jefferson & Washington Townships) and SHELBY COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0032-001 06/01/2019

GALLIA & MEIGS

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0035-002 06/01/2019

ALLEN, AUGLAIZE, MERCER and VAN WERT COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0039-002 06/01/2019

ADAMS & SCIOTO

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0040-003 06/01/2019

ASHLAND, CRAWFORD, HARDIN, HOLMES, MARION, MORROW, RICHLAND, WAYNE and WYANDOT (Except Crawford, Ridge, Richland & Tymochtee Townships) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

FOOTNOTE: Layout Man and Sawman rate: \$1.00 per hour above journeyman rate.

Free standing stack work ground level to top of stack; Sandblasting and laying of carbon masonry material in swing stage and/or scaffold; Ramming and spading of plastics and gunniting: \$1.50 per hour above journeyman rate.

""Hot"" work: \$2.50 above journeyman rate.

BROH0044-002 06/01/2019

	Rates	Fringes
Bricklayer, Stonemason COSHOCOTON, FAIRFIELD,		

GUERNSEY, HOCKING, KNOX,
 KICKING, MORGAN,
 MUSKINGUM, NOBLE (Beaver,
 Buffalo, Seneca & Wayne
 Townships) & PERRY
 COUNTIES:.....\$ 29.34 16.11

 BROH0045-002 06/01/2017

FAYETTE, JACKSON, PIKE, ROSS and VINTON COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 28.65	14.55

 BROH0046-002 06/01/2019

ERIE, HANCOCK, HURON, OTTAWA, SANDUSKY, SENECA, WOOD (Perry & Bloom Townships) and WYANDOT (Tymochtee, Crawford, Ridge & Richland Townships) COUNTIES & the Islands of Lake Erie north of Sandusky

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

FOOTNOTE: Layout Man and Sawman rate: \$1.00 per hour above journeyman rate.

Free standing stack work ground level to top of stack; Sandblasting and laying of carbon masonry material in swing stage and/or scaffold; Ramming and spading of plastics and gunniting: \$1.50 per hour above journeyman rate.

""Hot"" work: \$2.50 above journeyman rate.

 BROH0052-001 06/01/2019

ATHENS COUNTY

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

 BROH0052-003 06/01/2019

NOBLE (Brookfield, Noble, Center, Sharon, Olive, Enoch, Stock, Jackson, Jefferson & Elk Townships) and WASHINGTON COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 29.34	16.11

BROH0055-003 06/01/2017		

DELAWARE, FRANKLIN, MADISON, PICKAWAY and UNION COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 28.65	14.55

CARP0003-004 05/01/2017		

MAHONING & TRUMBULL

	Rates	Fringes
CARPENTER.....	\$ 26.20	17.42

CARP0069-003 05/01/2017		

CARROLL, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
CARPENTER.....	\$ 25.98	15.98

CARP0069-006 05/01/2017		

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
CARPENTER.....	\$ 24.04	15.29

CARP0171-002 05/01/2019		

BELMONT, COLUMBIANA, HARRISON, JEFFERSON & MONROE

	Rates	Fringes
CARPENTER.....	\$ 27.37	20.02

CARP0200-002 05/01/2017		

ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA,
 GUERNSEY, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING,
 MADISON, MARION, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY,
 PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON and WASHINGTON

COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 29.07	16.22
Diver.....	\$ 39.41	10.40
PILEDRIVERMAN.....	\$ 29.07	16.22

CARP0248-005 07/01/2008

LUCAS & WOOD

	Rates	Fringes
CARPENTER.....	\$ 27.27	14.58

CARP0248-008 07/01/2008

	Rates	Fringes
CARPENTER DEFIANCE, FULTON, HANCOCK, HENRY, PAULDING & WILLIAMS COUNTIES.....	\$ 23.71	13.28

CARP0254-002 05/01/2017

ASHTABULA, CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
CARPENTER.....	\$ 32.40	16.97

CARP0372-002 05/01/2016

ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM & VAN WERT

	Rates	Fringes
CARPENTER.....	\$ 24.54	18.21

CARP0639-003 05/01/2017

MEDINA, PORTAGE & SUMMIT

	Rates	Fringes
CARPENTER.....	\$ 30.42	16.99

CARP0735-002 05/01/2019

ASHLAND, ERIE, HURON, LORAIN & RICHLAND

	Rates	Fringes
CARPENTER.....	\$ 26.30	17.91

CARP1311-001 05/01/2017

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE,
GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY &
WARREN

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 29.34	15.95
Diver.....	\$ 40.58	9.69

CARP1393-002 07/01/2008

CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA,
PAULDING, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Piledrivermen & Diver's Tender...	\$ 27.30	16.05

DIVERS - \$250.00 per day

CARP1393-003 07/01/2008

ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM, VAN WERT & WYANDOT

	Rates	Fringes
Piledrivermen & Diver's Tender...	\$ 25.15	15.92

DIVERS - \$250.00 per day

CARP1871-006 05/01/2017

BELMONT, HARRISON, & MONROE

	Rates	Fringes
Diver, Wet.....	\$ 48.11	17.33
Piledrivermen; Diver, Dry.....	\$ 32.07	17.33

CARP1871-008 05/01/2017

ASHLAND, ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE,
LORAIN, MEDINA, PORTAGE, RICHLAND & SUMMIT

	Rates	Fringes
Diver, Wet.....	\$ 45.80	18.84
Piledrivermen; Diver, Dry.....	\$ 30.53	18.84

CARP1871-014 05/01/2017

CARROLL, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
Diver, Wet.....	\$ 38.34	16.95
Piledrivermen; Diver, Dry.....	\$ 25.56	16.95

CARP1871-015 05/01/2017

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
Diver, Wet.....	\$ 37.34	16.07
Piledrivermen; Diver, Dry.....	\$ 24.89	16.07

CARP1871-017 05/01/2017

MAHONING & TRUMBULL

	Rates	Fringes
Diver, Wet.....	\$ 40.65	17.62
Piledrivermen; Diver, Dry.....	\$ 27.10	17.62

CARP2235-012 01/01/2014

COLUMBIANA & JEFFERSON

	Rates	Fringes
PILEDRIVERMAN.....	\$ 31.74	16.41

CARP2239-001 07/01/2008

CRAWFORD, OTTAWA, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
CARPENTER.....	\$ 23.71	13.28

 ELEC0008-002 05/25/2020

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING,
 PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
CABLE SPLICER.....	\$ 38.98	18.96
ELECTRICIAN.....	\$ 41.81	4.5%+20.73

 ELEC0032-003 11/29/2020

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY, VAN WERT &
 WYANDOT (Crawford, Jackson, Marseilles, Mifflin, Ridgeland,
 Ridge & Salem Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 32.12	20.29

 ELEC0038-002 04/27/2020

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) &
 LORAIN (Columbia Township)

	Rates	Fringes
ELECTRICIAN Excluding Sound & Communications Work.....	\$ 39.88	21.22

FOOTNOTES;

- a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th;
 Labor Day; Thanksgiving Day; & Christmas Day
- b. 1 week's paid vacation for 1 year's service; 2 weeks' paid
 vacation for 2 or more years' service

 ELEC0038-008 04/29/2019

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) &
 LORAIN (Columbia Township)

	Rates	Fringes
Sound & Communication Technician		
Communications Technician...\$	27.55	11.98
Installer Technician.....\$	26.30	11.94

FOOTNOTES;

- a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; & Christmas Day
- b. 1 week's paid vacation for 1 year's service; 2 weeks' paid vacation for 2 or more years' service

 ELECO064-003 11/30/2020

COLUMBIANA (Butler, Fairfield, Perry, Salem & Unity Townships)
 MAHONING (Austintown, Beaver, Berlin, Boardman, Canfield, Ellsworth, Coitsville, Goshen, Green, Jackson, Poland, Springfield & Youngstown Townships), & TRUMBULL (Hubbard & Liberty Townships)

	Rates	Fringes
ELECTRICIAN.....\$	35.67	16.37

 ELECO071-001 01/01/2019

ASHLAND, CHAMPAIGN, CLARK, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HIGHLAND, HOCKING, JACKSON (Coal, Jackson, Liberty, Milton, Washington & Wellston Townships), KNOX, LICKING, MADISON, MARION, MONROE, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE (Beaver, Benton, Jackson, Mifflin, Pebble, Peepee, Perry & Seal Townships), RICHLAND, ROSS, TUSCARAWAS (Auburn, Bucks, Clay, Jefferson, Oxford, Perry, Salem, Rush, Washington & York Townships), UNION, VINTON (Clinton, Eagle, Elk, Harrison, Jackson, Richland & Swan Townships), and WASHINGTON COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operators.....\$	33.62	13.40
Groundmen.....\$	24.17	11.32
Linemen & Cable Splicers....\$	38.27	14.42

ELEC0071-004 01/01/2019

AUGLAIZE, CLINTON, DARKE, GREENE, LOGAN, MERCER, MIAMI, MONTGOMERY, PREBLE, and SHELBY COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 33.62	13.40
Groundman.....	\$ 24.17	11.32
Lineman & Cable Splicers....	\$ 38.27	14.42

ELEC0071-005 12/31/2018

ASHTABULA, CUYAHOGA, GEAUGA, LAKE & LORAIN

	Rates	Fringes
LINE CONSTRUCTION: Equipment Operator		
DOT/Traffic Signal & Highway Lighting Projects...	\$ 32.44	14.10
Municipal Power/Transit Projects.....	\$ 40.10	16.42
LINE CONSTRUCTION: Groundman		
DOT/Traffic Signal & Highway Lighting Projects...	\$ 25.06	12.26
Municipal Power/Transit Projects.....	\$ 31.19	14.11
LINE CONSTRUCTION: Linemen/Cable Splicer		
DOT/Traffic Signal & Highway Lighting Projects...	\$ 36.13	15.03
Municipal Power/Transit Projects.....	\$ 44.56	17.58

ELEC0071-008 01/01/2019

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 33.62	13.40
Groundman.....	\$ 24.17	11.32
Lineman & Cable Splicers....	\$ 38.27	14.42

ELEC0071-010 01/01/2019

BELMONT, CARROLL, HARRISON, HOLMES, JEFFERSON, MEDINA, PORTAGE,
 STARK, SUMMIT, and WAYNE COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 33.62	13.40
Groundman.....	\$ 24.17	11.32
Lineman & Cable Splicers....	\$ 38.27	14.42

 ELEC0071-013 01/01/2019

BROWN, BUTLER, CLERMONT, HAMILTON, and WARREN COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 33.62	13.40
Groundman.....	\$ 24.17	11.32
Lineman & Cable Splicers....	\$ 38.27	14.42

 ELEC0071-014 01/01/2019

ADAMS, ATHENS, GALLIA, JACKSON (Bloomfield, Franklin, Hamilton,
 Lick, Jefferson, Scioto & Madison Townships), LAWRENCE, MEIGS,
 PIKE (Camp Creek, Marion, Newton, Scioto, Sunfish & Union
 Townships), SCIOTO & VINTON (Brown, Knox, Madison, Vinton &
 Wilkesville Townships)

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 33.62	13.40
Groundman.....	\$ 24.17	11.32
Lineman & Cable Splicers....	\$ 38.27	14.42

 ELEC0082-002 11/30/2020

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN
 (Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 32.15	20.51

 ELEC0082-006 11/26/2018

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN
(Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
Sound & Communication Technician		
Cable Puller.....	\$ 12.18	3.85
Installer/Technician.....	\$ 24.35	11.29

ELEC0129-003 02/24/2020

LORAIN (Except Columbia Township) & MEDINA (Litchfield & Liverpool Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 35.35	17.68

ELEC0129-004 02/24/2020

ERIE & HURON (Lyme, Ridgefield, Norwalk, Townsend, Wakeman, Sherman, Peru, Bronson, Hartland, Clarksfield, Norwich, Greenfield, Fairfield, Fitchville & New London Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 35.35	17.68

ELEC0141-003 09/01/2019

BELMONT COUNTY

	Rates	Fringes
CABLE SPLICER.....	\$ 30.63	25.87
ELECTRICIAN.....	\$ 30.38	25.87

ELEC0212-003 11/26/2018

BROWN, CLERMONT & HAMILTON

	Rates	Fringes
Sound & Communication Technician.....	\$ 24.35	10.99

ELEC0212-005 06/03/2020

BROWN, CLERMONT, and HAMILTON COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 31.30	19.07

ELEC0245-001 01/01/2020

ALLEN, HARDIN, VAN WERT & WYANDOT (Crawford, Jackson, Marseilles, Mifflin, Richland, Ridge & Salem Townships)

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 32.37	25.9%+6.75
Groundman Truck Driver.....	\$ 17.70	25.9%+6.75
Lineman.....	\$ 40.46	25.9%+6.75

FOOTNOTE: a. Half day's Paid Holiday: The last 4 hours of the workday prior to Christmas or New Year's Day

ELEC0245-003 01/01/2020

DEFIANCE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, and WOOD COUNTIES

	Rates	Fringes
Line Construction		
Cable Splicer.....	\$ 46.53	25.9%+6.75
Groundman/Truck Driver.....	\$ 17.70	25.9%+6.75
Heli-arc Welding.....	\$ 40.76	25.9%+6.75
Lineman.....	\$ 40.46	25.9%+6.75
Operator - Class 1.....	\$ 32.37	25.9%+6.75
Operator - Class 2.....	\$ 28.32	25.9%+6.75
Traffic Signal & Lighting Technician.....	\$ 36.41	25.9%+6.75

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

ELEC0245-004 01/01/2020

ERIE COUNTY

	Rates	Fringes
Line Construction		
Cable Splicer.....	\$ 46.53	25.9%+6.75
Groundman/Truck Driver.....	\$ 17.70	25.9%+6.75
Lineman.....	\$ 40.46	25.9%+6.75
Operator - Class 1.....	\$ 32.37	25.9%+6.75
Operator - Class 2.....	\$ 28.32	25.9%+6.75

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

ELEC0246-001 10/29/2018

	Rates	Fringes
ELECTRICIAN.....	\$ 38.00	84%+a

FOOTNOTE: a. 1 1/2 Paid Holidays: The last scheduled workday prior to Christmas & 4 hours on Good Friday.

ELEC0306-005 05/28/2018

MEDINA (Brunswick, Chatham, Granger, Guilford, Harrisville, Hinckley, Homer, Lafayette, Medina, Montville, Sharon, Spencer, Wadsworth, Westfield & York Townships), PORTAGE (Atwater, Aurora, Brimfield, Deerfield, Franklin, Mantua, Randolph, Ravenna, Rootstown, Shalersville, Streetsboro & Suffield Townships), SUMMIT & WAYNE (Baughman, Canaan, Chester, Chippewa, Congress, Green, Milton, & Wayne Townships)

	Rates	Fringes
CABLE SPLICER.....	\$ 36.87	16.56
ELECTRICIAN.....	\$ 34.54	5%+18.06

ELEC0317-002 06/01/2020

GALLIA & LAWRENCE

	Rates	Fringes
CABLE SPLICER.....	\$ 32.68	18.13
ELECTRICIAN.....	\$ 35.10	26.22

 * ELEC0540-005 12/28/2020

CARROLL (Northern half, including Fox, Harrison, Rose & Washington Townships), COLUMBIANA (Knox Township), HOLMES, MAHONING (Smith Township), STARK, TUSCARAWAS (North of Auburn, Clay, Rush & York Townships), and WAYNE (South of Baughman, Chester, Green & Wayne Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 34.00	25.50

 ELEC0573-003 06/01/2020

ASHTABULA (Colebrook, Wayne, Williamsfield, Orwell & Windsor Townships), GEAUGA (Auburn, Middlefield, Parkman & Troy Townships), MAHONING (Milton Township), PORTAGE (Charlestown, Edinburg, Freedom, Hiram, Nelson, Palmyra, Paris & Windham Townships), and TRUMBULL (Except Liberty & Hubbard Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 34.11	19.46

 ELEC0575-001 11/30/2020

ADAMS, FAYETTE, HIGHLAND, HOCKING, JACKSON (Bloomfield, Franklin, Hamilton, Jefferson, Lick, Madison, Scioto, Coal, Jackson, Liberty, Milton & Washington Townships), PICKAWAY (Deer Creek, Perry, Pickaway, Salt Creek & Wayne Townships), PIKE (Beaver, Benton, Jackson, Mifflin, Pebble, PeePee, Perry, Seal, Camp Creek, Newton, Scioto, Sunfish, Union & Marion Townships), ROSS, SCIOTO & VINTON (Clinton, Eagle, Elk, Harrison, Jackson, Richland & Swan Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 33.75	19.22

 ELEC0648-001 09/02/2019

BUTLER and WARREN COUNTIES (Deerfield, Hamilton, Harlan,

Massie, Salem, Turtle Creek, Union & Washington Townships)

	Rates	Fringes
CABLE SPLICER.....	\$ 30.50	18.23
ELECTRICIAN.....	\$ 30.00	19.85

ELEC0673-004 02/01/2020

ASHTABULA (Excluding Orwell, Colebrook, Williamsfield, Wayne & Windsor Townships), GEAUGA (Burton, Chardon, Claridon, Hambden, Huntsburg, Montville, Munson, Newbury & Thompson Townships) and LAKE COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 33.81	21.47
ELECTRICIAN.....	\$ 33.56	21.47

ELEC0683-002 06/01/2020

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY (Circleville, Darby, Harrison, Jackson, Madison, Monroe, Muhlenberg, Scioto, Walnut & Washington Townships), and UNION COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 35.50	21.06
ELECTRICIAN.....	\$ 34.50	21.06

ELEC0688-003 06/01/2020

ASHLAND, CRAWFORD, HURON (Richmond, New Haven, Ripley & Greenwich Townships), KNOX (Liberty, Clinton, Union, Howard, Monroe, Middleberry, Morris, Wayne, Berlin, Pike, Brown & Jefferson Townships), MARION, MORROW, RICHLAND and WYANDOT (Sycamore, Crane, Eden, Pitt, Antrim & Tymochtee Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 30.00	19.66

ELEC0972-002 06/01/2020

ATHENS, MEIGS, MONROE, MORGAN, NOBLE, VINTON (Brown, Knox, Madison, Vinton & Wilkesville Townships), and WASHINGTON COUNITIES

	Rates	Fringes
CABLE SPLICER.....	\$ 37.35	27.81
ELECTRICIAN.....	\$ 33.95	27.71

 ELEC1105-001 05/28/2018

COSHOCTON, GUERNSEY, KNOX (Jackson, Clay, Morgan, Miller, Milford, Hilliar, Butler, Harrison, Pleasant & College Townships), LICKING, MUSKINGUM, PERRY, and TUSCARAWAS (Auburn, York, Clay, Jefferson, Rush, Oxford, Washington, Salem, Perry & Bucks Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 30.95	17.96

 ENGI0018-003 05/01/2019

ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, and SUMMIT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 38.63	15.20
GROUP 2.....	\$ 38.53	15.20
GROUP 3.....	\$ 37.49	15.20
GROUP 4.....	\$ 36.27	15.20
GROUP 5.....	\$ 30.98	15.20
GROUP 6.....	\$ 38.88	15.20
GROUP 7.....	\$ 39.13	15.20

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or

Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; Wheel Excavator; and Asphalt Plant Engineer (Cleveland District Only).

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Horizontal Directional Drill (Over 50,000 ft lbs thrust); Hydro Milling Machine; Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); Vermeer type Concrete Saw; and Maintenance Operators (Portage and Summit Counties Only).

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer (Portage and Summit Counties Only); Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); Welding Machines; and Railroad Tie Inserter/Remover; Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator

(48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Forklift; Form Trencher; Hydro Hammer except masonry; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

 ENGI0018-004 05/01/2019

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, and YANDOT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 37.14	15.20
GROUP 2.....	\$ 37.02	15.20
GROUP 3.....	\$ 35.98	15.20

GROUP 4.....	\$ 34.80	15.20
GROUP 5.....	\$ 29.34	15.20
GROUP 6.....	\$ 37.39	15.20
GROUP 7.....	\$ 37.64	15.20

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; and Wheel Excavator.

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 50,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); and Vermeer type Concrete Saw.

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag

capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Railroad Tie Inserter/Remover; Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); and Welding Machines; Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift; Form Trencher; Hydro Hammer expect masonry; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonary Forklift; Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

 ENGI0066-023 06/01/2017

COLUMBIANA, MAHONING & TRUMBULL COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 1 - A & B.....	\$ 39.23	19.66

ASBESTOS; HAZARDOUS/TOXIC
WASTE PROJECTS

GROUP 2 - A & B.....\$ 38.90 19.66
ASBESTOS; HAZARDOUS/TOXIC
WASTE PROJECTS

GROUP 3 - A & B.....\$ 34.64 19.66
ASBESTOS; HAZARDOUS/TOXIC
WASTE PROJECTS

GROUP 4 - A & B.....\$ 30.70 19.66
ASBESTOS; HAZARDOUS/TOXIC
WASTE PROJECTS

GROUP 5 - A & B.....\$ 27.30 19.66
HAZARDOUS/TOXIC WASTE
PROJECTS

GROUP 1 - C & D.....\$ 35.96 19.66
HAZARDOUS/TOXIC WASTE
PROJECTS

GROUP 2 - C & D.....\$ 35.66 19.66
HAZARDOUS/TOXIC WASTE
PROJECTS

GROUP 3 - C & D.....\$ 31.76 19.66
HAZARDOUS/TOXIC WASTE
PROJECTS

GROUP 4 - C & D.....\$ 28.14 19.66
HAZARDOUS/TOXIC WASTE
PROJECTS

GROUP 5 - C & D.....\$ 25.03 19.66
ALL OTHER WORK

GROUP 1.....\$ 32.69 19.66
ALL OTHER WORK

GROUP 2.....\$ 32.42 19.66
ALL OTHER WORK

GROUP 3.....\$ 28.87 19.66
ALL OTHER WORK

GROUP 4.....\$ 25.58 19.66
ALL OTHER WORK

GROUP 5.....\$ 22.75 19.66

GROUP 1 - Rig, Pile Driver or Caisson Type; & Rig, Pile Hydraulic Unit Attached

GROUP 2 - Asphalt Heater Planer; Backfiller with Drag Attachment; Backhoe; Backhoe with Shear attached; Backhoe-Rear Pivotal Swing; Batch Plant-Central Mix Concrete; Batch Plant, Portable concrete; Berm Builder-Automatic; Boat Derrick; Boat-Tug; Boring Machine Attached to Tractor; Bullclam; Bulldozer; C.M.I. Road Builder & Similar Type; Cable Placer & Layer; Carrier-Straddle; Carryall-Scraper or Scoop; Chicago Boom; Compactor with Blade Attached; Concrete Saw (Vermeer or similar type); Concrete Spreader Finisher; Combination, Bidwell Machine; Crane; Crane-Electric Overhead; Crane-Rough Terrain; Crane-Side Boom; Crane-Truck; Crane-Tower; Derrick-Boom; Derrick-Car; Digger-Wheel (Not trencher or road widener); Double Nine; Drag Line; Dredge; Drill-Kenny or Similar Type; Easy Pour Median Barrier Machine (or similar type); Electromatic; Frankie Pile; Gradall; Grader; Gurry; Self-Propelled; Heavy Equipment Robotics Operator/Mechanic; Hoist-Monorail; Hoist-Stationary & Mobile Tractor; Hoist, 2 or 3 drum; Horizontal Directional Drill Operator; Jackall; Jumbo Machine; Kocal & Kuhlman; Land-Seagoing Vehicle; Loader, Elevating; Loader, Front End; Loader, Skid Steer; Locomotive; Mechanic/Welder; Metro Chip Harvester with Boom; Mucking Machine; Paver-Asphalt Finishing Machine; Paver-Road Concrete; Paver-Slip Form (C.M.I. or similar); Place Crete Machine with Boom; Post Driver (Carrier mounted); Power Driven Hydraulic Pump & Jack (When used in Slip Form or Lift Slab Construction); Pump Crete Machine; Regulator-Ballast; Hydraulic Power Unit not attached to Rig for Pile Drillings; Rigs-Drilling; Roto Mill or similar Full Lane (8' Wide & Over); Roto Mill or similar type (Under 8'); Shovel; Slip Form Curb Machine; Speedwing; Spikemaster; Stonecrusher; Tie Puller & Loader; Tie Tamper; Tractor-Double Boom; Tractor with Attachments; Truck-Boom; Truck-Tire; Trench Machine; Tunnel Machine (Mark 21 Java or similar); & Whirley (or similar type)

GROUP 3 - Asphalt Plant; Bending Machine (Pipeline or similar type); Boring machine, Motor Driven; Chip Harvester without Boom; Cleaning Machine, Pipeline Type; Coating Machine, Pipeline Type; Compactor; Concrete Belt Placer; Concrete Finisher; Concrete Planer or Asphalt; Concrete Spreader; Elevator; Fork Lift (Home building only); Fork lift & Lulls; Fork Lift Walk Behind (Hoisting over 1 buck high); Form Line Machine; Grease Truck operator; Grout

Pump; Gunnite Machine; Horizontal Directional Drill Locator; Single Drum Hoist with or without Tower; Huck Bolting Machine; Hydraulic Scaffold (Hoisting building materials); Paving Breaker (Self-propelled or Ridden); Pipe Dream; Pot Fireperson (Power Agitated); Refrigeration Plant; Road Widener; Roller; Sasgen Derrick; Seeding Machine; Soil Stabilizer (Pump type); Spray Cure Machine, Self-Propelled; Straw Blower Machine; Sub-Grader; Tube Finisher or Broom C.M.I. or similar type; & Tugger Hoist

GROUP 4 - Air Curtain Destructor & Similar Type; Batch Plant-Job Related; Boiler Operator; Compressor; Conveyor; Curb Builder, self-propelled; Drill Wagon; Generator Set; Generator-Steam; Heater-Portable Power; Hydraulic Manipulator Crane; Jack-Hydraulic Power driven; Jack-Hydraulic (Railroad); Ladavator; Minor Machine Operator; Mixer-Concrete; Mulching Machine; Pin Puller; Power Broom; Pulverizer; Pump; Road Finishing Machine (Pull Type); Saw-Concrete-Self-Propelled (Highway Work); Signal Person; Spray Cure Machine-Motor Powered; Stump Cutter; Tractor; Trencher Form; Water Blaster; Steam Jenny; Syphon; Vibrator-Gasoline; & Welding Machine

GROUP 5 - Brakeperson; Fireperson; & Oiler

 IRON0017-002 05/01/2020

ASHTABULA (North of Route 6, starting at the Geauga County Line, proceeding east to State Route 45), CUYAHOGA, ERIE (Eastern 2/3), GEauga, HURON (East of a line drawn from the north border through Monroeville & Willard), LAKE, LORAIN, MEDINA (North of Old Rte. #224), PORTAGE (West of a line from Middlefield to Shalersville to Deerfield), and SUMMIT (North of Old Rte. #224, including city limits of Barberton) COUNTIES

	Rates	Fringes
IRONWORKER		
Ornamental, Reinforcing, & Structural.....	\$ 35.93	23.11

 IRON0017-010 05/01/2020

ASHTABULA (Eastern part from Lake Erie on the north to route #322 on the south to include Conneaut, Kingsville, Sheffield, Denmark, Dorset, Cherry Valley, Wayne, Monroe, Pierpont, Richmond, Andover & Williamsfield Townships)

	Rates	Fringes
IRONWORKER		
Structural, including metal building erection & Reinforcing.....	\$ 35.93	23.11

IRON0044-001 06/01/2018

ADAMS (Western Part), BROWN, BUTLER (Southern Part), CLERMONT, CLINTON (South of a line drawn from Blanchester to Lynchburg), HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of county inside lines drawn from Marshall to Lynchburg from the northern county line through E. Monroe to Marshall) and WARREN (South of a line drawn from Blanchester through Morrow to the west county line) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING		
Beyond 30-mile radius of Hamilton County Courthouse..	\$ 28.67	21.20
Up to & including 30-mile radius of Hamilton County Courthouse.....	\$ 27.60	20.70

IRON0044-002 06/01/2020

CLINTON (South of a line drawn from Blanchester to Lynchburg), HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of county inside lines drawn from Marshall to Lynchburg from the northern county line through E. Monroe to Marshall) & WARREN (South of a line drawn from Blanchester through Morrow to the west county line)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 28.76	21.40
Ornamental; Structural.....	\$ 30.27	21.40

IRON0055-003 07/01/2019

CRAWFORD (Area Between lines drawn from where Hwy #598 & #30 meet through N. Liberty to the northern border & from said Hwy junction point due west to the border), DEFIANCE (S. of a line drawn from where Rte. #66 meets the northern line through

Independence to the eastern county border), ERIE (Western 1/3), FULTON, HANCOCK, HARDIN (North of a line drawn from Maysville to a point 4 miles south of the northern line on the eastern line), HENRY, HURON (West of a line drawn from the northern border through Monroeville & Willard), LUCAS, OTTAWA, PUTNAM (East of a line drawn from the northern border down through Miller City to where #696 meets the southern border), SANDUSKY, SENECA, WILLIAMS (East of a line drawn from Pioneer through Stryker to the southern border), WOOD & WYANDOT (North of Rte. #30)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 21.30	20.92
Flat Road Mesh.....	\$ 29.77	21.30
Tunnels & Caissons Under Pressure.....	\$ 29.77	21.30
All Other Work.....	\$ 30.38	24.40

IRON0147-002 06/01/2020

ALLEN (Northern half), DEFIANCE (Northern part, excluding south of a line drawn from where Rte. #66 meets the northern line through Independence to the eastern county border), MERCER (Northern half), PAULDING, PUTNAM (Western part, excluding east of a line drawn from the northern border down through Miller City to where #696 meets the southern border), VAN WERT, and WILLIAMS (Western part, excluding east of a line drawn from Pioneer through Stryker to the southern border) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 29.58	23.27

IRON0172-002 06/01/2020

CHAMPAIGN (Eastern one-third), CLARK (Eastern one-fourth), COSHOCTON (West of a line beginning at the northwestern county line going through Walhonding & Tunnel Hill to the southern county line), CRAWFORD (South of Rte. #30), DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, HARDIN (Excluding a line drawn from Roundhead to Maysville), HIGHLAND (Eastern one-fifth), HOCKING, JACKSON (Northern half), KNOX, LICKING, LOGAN (Eastern one-third), MADISON, MARION, MORROW, MUSKINGUM (West of a line starting at Adams Mill going to Adamsville & going from Adamsville through Blue Rock to the southern border), PERRY, PICKAWAY, PIKE (Northern half), ROSS, UNION, VINTON and WYANDOT

(South of Rte. #30) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 30.75	20.80

IRON0207-004 06/01/2020

ASHTABULA (Southern part starting at the Geauga County line),
 COLUMBIANA (E. of a line from Damascus to Highlandtown),
 MAHONING (N. of Old Route #224), PORTAGE (E. of a line from
 Middlefield to Shalersville to Deerfield) & TRUMBULL

	Rates	Fringes
IRONWORKER		
Layout; Sheeter.....	\$ 31.25	25.75
Ornamental; Reinforcing;		
Structural.....	\$ 28.06	24.70
Ornamental; Reinforcing.....	\$ 30.25	25.75

IRON0290-002 06/01/2020

ALLEN (Southern half), AUGLAIZE, BUTLER (North of a line drawn
 from east to the west county line going through Oxford,
 Darrrtown & Woodsdale), CHAMPAIGN (Excluding east of a line
 drawn from Catawla to the point where #68 intersects the
 northern county line), CLARK (Western two-thirds), CLINTON
 (Excluding south of a line drawn from Blanchester to
 Lynchburg), DARKE, GREENE, HIGHLAND (Inside lines drawn from
 Marshall to Lynchburg & from the northern county line through
 East Monroe to Marshall), LOGAN (West of a line drawn from
 West Liberty to where the northern county line meets the
 western county line of Hardin), MERCER (Southern half), MIAMI,
 MONTGOMERY, PREBLE, SHELBY & WARREN (Excluding south of a line
 drawn from Blanchester through Morrow to the western county
 line) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 29.68	22.90

IRON0549-003 12/01/2020

BELMONT, GUERNSEY, HARRISON, JEFFERSON, MONROE & MUSKINGUM
 (Excluding portion west of a line starting at Adams Mill going
 to Adamsville and going from Adamsville through Blue Rock to

the south border)

	Rates	Fringes
IRONWORKER.....	\$ 34.03	23.22

IRON0550-004 05/01/2020		

ASHLAND, CARROLL, COLUMBIANA (W. of a line from Damascus to Highlandtown), COSHOCTON (E. of a line beginning at NW Co. line going through Walhonding & Tunnel Hill to the South Co. line), HOLMES, HURON (S. of Old Rte. #224), MAHONING (S. of Old Rte. #224), MEDINA (S. of Old Rte. #224), PORTAGE (S. of Old Rte. #224), RICHLAND, STARK, SUMMIT (S. of Old Rte. #224, Excluding city limits of Barberton), TUSCARAWAS, & WAYNE

	Rates	Fringes
Ironworkers:Structural, Ornamental and Reinforcing.....	\$ 29.27	20.87

IRON0769-004 06/01/2020		

ADAMS (Eastern Half), GALLIA, JACKSON (Southern Half), LAWRENCE & SCIOTO

	Rates	Fringes
IRONWORKER.....	\$ 32.75	26.34

IRON0787-003 12/01/2020		

ATHENS, MEIGS, MORGAN, NOBLE, and WASHINGTON COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 30.98	22.75

* LAB00265-008 05/01/2020		

	Rates	Fringes
LABORER ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT,		

TRUMBULL & WOOD COUNTIES		
GROUP 1.....	\$ 33.05	11.25
GROUP 2.....	\$ 33.22	11.25
GROUP 3.....	\$ 33.55	11.25
GROUP 4.....	\$ 34.00	11.25
CUYAHOGA AND GEAUGA COUNTIES ONLY: SEWAGE PLANTS, WASTE PLANTS, WATER TREATMENT FACILITIES, PUMPING STATIONS, & ETHANOL PLANTS CONSTRUCTION.....		
	\$ 35.66	11.25
CUYAHOGA, GEAUGA & LAKE COUNTIES		
GROUP 1.....	\$ 34.28	11.25
GROUP 2.....	\$ 34.45	11.25
GROUP 3.....	\$ 34.78	11.25
GROUP 4.....	\$ 35.23	11.25
REMAINING COUNTIES OF OHIO		
GROUP 1.....	\$ 32.62	11.25
GROUP 2.....	\$ 32.79	11.25
GROUP 3.....	\$ 33.12	11.25
GROUP 4.....	\$ 33.57	11.25

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Asphalt Raker; Concrete Puddler; Kettle Man Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Paint Striper; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning);

Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - \$1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner (With Air-pressurized - \$1.00 premium); & Gunitite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD \$1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0006-002 05/01/2018

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. of the East-West Turnpike) & SUMMIT (N. of the East-West Turnpike)

	Rates	Fringes
PAINTER		
COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS		
GROUP 1.....	\$ 27.90	16.16
GROUP 2.....	\$ 28.30	16.16
GROUP 3.....	\$ 28.60	16.16
GROUP 4.....	\$ 34.16	16.16
COMMERCIAL REPAINT		
GROUP 1.....	\$ 26.40	16.16
GROUP 2.....	\$ 26.80	16.16
GROUP 3.....	\$ 27.10	16.16

PAINTER CLASSIFICATIONS - COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting; Closed Steel Above 55 feet; Bridges & Open Structural Steel; Tanks - Water Towers; Bridge Painters; Bridge Riggers; Containment Builders

GROUP 4 - Bridge Blaster

PAINTER CLASSIFICATIONS - COMMERCIAL REPAINT

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting

PAIN0007-002 07/01/2019

FULTON, HENRY, LUCAS, OTTAWA (Excluding Allen, Bay, Bono, Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genova) & WOOD

	Rates	Fringes
PAINTER		
NEW COMMERCIAL WORK		
GROUP 1.....	\$ 27.64	17.79
GROUP 2.....	\$ 27.39	17.79
GROUP 3.....	\$ 27.39	17.79
GROUP 4.....	\$ 27.39	17.79
GROUP 5.....	\$ 27.39	17.79
GROUP 6.....	\$ 27.39	17.79
GROUP 7.....	\$ 27.39	17.79
GROUP 8.....	\$ 27.39	17.79
GROUP 9.....	\$ 27.39	17.79

REPAINT IS 90% OF JR

PAINTER CLASSIFICATIONS

GROUP 1 - Brush; Spray & Sandblasting Pot Tender

GROUP 2 - Refineries & Refinery Tanks; Surfaces 30 ft. or over where material is applied to or labor performed on above ground level (exterior), floor level (interior)

GROUP 3 - Swing Stage & Chair

GROUP 4 - Lead Abatement

GROUP 5 - All Methods of Spray

GROUP 6 - Solvent-Based Catalized Epoxy Materials of 2 or More Component Materials, to include Solvent-Based Conversion Varnish (excluding water based)

GROUP 7 - Spray Solvent Based Material; Sand & Abrasive Blasting

GROUP 8 - Towers; Tanks; Bridges; Stacks Over 30 Feet

GROUP 9 - Epoxy Spray (excluding water based)

PAIN0012-008 05/01/2019

BUTLER COUNTY

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 21.95	10.20
GROUP 2.....	\$ 25.30	10.20
GROUP 3.....	\$ 25.80	10.20
GROUP 4.....	\$ 26.05	10.20
GROUP 5.....	\$ 26.30	10.20

PAINTER CLASSIFICATIONS

GROUP 1: Bridge Equipment Tender; Bridge/Containment Builder

GROUP 2: Brush & Roller

GROUP 3: Spray

GROUP 4: Sandblasting; & Waterblasting

GROUP 5: Elevated Tanks; Steeplejack Work; Bridge; & Lead Abatement

PAIN0012-010 05/01/2019

BROWN, CLERMONT, CLINTON, HAMILTON & WARREN

	Rates	Fringes
PAINTER		
HEAVY & HIGHWAY BRIDGES-		
GUARDRAILS-LIGHTPOLES-		
STRIPING		
Bridge Equipment Tender		

and Containment Builder.....\$ 21.95	10.20
Bridges when highest point of clearance is 60 feet or more; & Lead Abatement Projects.....\$ 26.30	10.20
Brush & Roller.....\$ 25.30	10.20
Sandblasting & Hopper Tender; Water Blasting.....\$ 26.05	10.20
Spray.....\$ 25.80	10.20

PAIN0093-001 12/01/2018

ATHENS, GUERNSEY, HOCKING, MONROE, MORGAN, NOBLE and
WASHINGTON COUNTIES

	Rates	Fringes
PAINTER		
Bridges; Locks; Dams; Tension Towers; & Energized Substations.....\$ 34.04		18.50
Power Generating Facilities.\$ 30.89		18.50

PAIN0249-002 06/01/2020

CLARK, DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE

	Rates	Fringes
PAINTER		
GROUP 1 - Brush & Roller.....\$ 24.17		11.22
GROUP 2 - Swing, Scaffold Bridges; Structural Steel; Open Acid Tank; High Tension Electrical Equipment; & Hot Pipes.....\$ 24.17		11.22
GROUP 3 - Spray; Sandblast; Steamclean; Lead Abatement.....\$ 24.92		11.22
GROUP 4 - Steeplejack Work..\$ 25.12		11.22
GROUP 5 - Coal Tar.....\$ 25.67		11.22
GROUP 6 - Bridge Equipment Tender & or Containment Builder.....\$ 32.88		11.22
GROUP 7 - Tanks, Stacks & Towers.....\$ 27.81		11.22
GROUP 8 - Bridge Blaster, Rigger.....\$ 35.88		11.22

PAIN0356-002 09/01/2009

KNOX, LICKING, MUSKINGUM, and PERRY

	Rates	Fringes
PAINTER		
Bridge Equipment Tenders and Containment Builders....	\$ 27.93	7.25
Bridges; Blasters; and Riggers.....	\$ 34.60	7.25
Brush and Roller.....	\$ 20.93	7.25
Sandblasting; Steam Cleaning; Waterblasting; and Hazardous Work.....	\$ 25.82	7.25
Spray.....	\$ 21.40	7.25
Structural Steel and Swing Stage.....	\$ 25.42	7.25
Tanks; Stacks; and Towers...\$	28.63	7.25

PAIN0438-002 12/01/2018

BELMONT, HARRISON and JEFFERSON COUNTIES

	Rates	Fringes
PAINTER		
Bridges, Locks, Dams, Tension Towers & Energized Substations.....	\$ 32.80	17.68
Power Generating Facilities.\$	29.65	17.68

PAIN0476-001 06/01/2020

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 26.47	14.53
GROUP 2.....	\$ 33.10	14.53
GROUP 3.....	\$ 26.68	14.53
GROUP 4.....	\$ 27.12	14.53
GROUP 5.....	\$ 27.12	14.53
GROUP 6.....	\$ 27.37	14.53
GROUP 7.....	\$ 28.47	14.53

PAINTER CLASSIFICATIONS:

GROUP 1: Painters, Brush & Roller

GROUP 2: Bridges

GROUP 3: Structural Steel

GROUP 4: Spray, Except Bar Joist/Deck

GROUP 5: Epoxy/Mastic; Spray- Bar Joist/Deck; Working Above 50 Feet; and Swingstages

GROUP 6: Tanks; Sandblasting

GROUP 7: Towers; Stacks

PAIN0555-002 09/01/2020

ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 31.48	16.46
GROUP 2.....	\$ 32.97	16.46
GROUP 3.....	\$ 34.46	16.46
GROUP 4.....	\$ 37.38	16.46

PAINTER CLASSIFICATIONS

GROUP 1 - Containment Builder

GROUP 2 - Brush; Roller; Power Tools, Under 40 feet

GROUP 3 - Sand Blasting; Spray; Steam Cleaning; Pressure Washing; Epoxy & Two Component Materials; Lead Abatement; Hazardous Waste; Toxic Materials; Bulk & Storage Tanks of 25,000 Gallon Capacity or More; Elevated Tanks

GROUP 4 - Stacks; Bridges

PAIN0639-001 05/01/2011

	Rates	Fringes
Sign Painter & Erector.....	\$ 20.61	3.50+a+b+c

FOOTNOTES: a. 7 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; Christmas Day & 1 Floating Day

- b. Vacation Pay: After 1 year's service - 5 days' paid vacation; After 2, but less than 10 years' service - 10 days' paid vacation; After 10, but less than 20 years' service - 15 days' paid vacation; After 20 years' service - 20 days' paid vacation
- c. Funeral leave up to 3 days maximum paid leave for death of mother, father, brother, sister, spouse, child, mother-in-law, father-in-law, grandparent and inlaw provided employee attends funeral

 PAIN0788-002 06/01/2020

ASHLAND, CRAWFORD, ERIE, HANCOCK, HURON, MARION, MORROW, OTTAWA (Allen, Bay, Bono, Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genoa), RICHLAND, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 24.66	14.05
Structural Steel.....	\$ 26.26	14.05

WINTER REPAINT: Between December 1 to March 31 - 90%JR

\$.50 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

While working swingstage, boatswain chair, needle beam and horizontal cable. While operating sprayguns, sandblasting, cobblasting and high pressure waterblasting (4000psi).

\$1.00 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

For the application of catalized epoxy, including latex epoxy that is deemed hazardous, lead abatement, or for work or material where special precautions beyond normal work duties must be taken. For working on stacks, tanks, and towers over 40 feet in height.

 PAIN0813-005 12/01/2008

GALLIA, LAWRENCE, MEIGS & VINTON

	Rates	Fringes
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PAINTER

Base Rate.....	\$ 24.83	10.00
Bridges, Locks, Dams & Tension Towers.....	\$ 27.83	10.00

PAIN0841-001 06/01/2018

MEDINA, PORTAGE (South of and including Ohio Turnpike), and
SUMMIT (South of and including Ohio Turnpike) COUNTIES

	Rates	Fringes
Painters:		
GROUP 1.....	\$ 25.75	14.35
GROUP 2.....	\$ 26.40	14.35
GROUP 3.....	\$ 26.50	14.35
GROUP 4.....	\$ 26.60	14.35
GROUP 5.....	\$ 27.00	14.35
GROUP 6.....	\$ 39.20	11.75
GROUP 7.....	\$ 27.00	14.35

PAINTER CLASSIFICATIONS:

GROUP 1 - Brush, Roller & Paperhanger

GROUP 2 - Epoxy Application

GROUP 3 - Swing Scaffold, Bosum Chair, & Window Jack

GROUP 4 - Spray Gun Operator of Any & All Coatings

GROUP 5 - Sandblast, Painting of Standpipes, etc. from
Scaffolds, Bridge Work and/or Open Structural Steel,
Standpipes and/or Water Towers

GROUP 6 - Public & Commerce Transportation, Steel or
Galvanized, Bridges, Tunnels & Related Support Items
(concrete)

GROUP 7 - Synthetic Exterior, Drywall Finisher and/or Taper,
Drywall Finisher and Follow-up Man Using Automatic Tools

PAIN0841-002 06/01/2018

CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE

Rates Fringes

PAINTER

Bridges; Towers, Poles & Stacks; Sandblasting Steel; Structural Steel & Metalizing.....	\$ 22.78	13.63
Brush & Roller.....	\$ 21.77	13.63
Spray; Tank Interior & Exterior.....	\$ 22.60	13.63

PAIN1020-002 07/01/2020

ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER,
PAULDING, PUTNAM, SHELBY, VAN WERT, and WILLIAMS COUNTIES

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 25.22	14.11
Drywall Finishing & Taping..	\$ 23.92	14.11
Lead Abatement.....	\$ 26.97	14.11
Spray, Sandblasting Pressure Cleaning, & Refinery.....	\$ 25.87	14.11
Swing Stage, Chair, Spiders, & Cherry Pickers...	\$ 25.47	14.11
Wallcoverings.....	\$ 22.82	14.11

All surfaces 40 ft. or over where material is applied to or
labor performed on, above ground level (exterior), floor
level (interior) - \$.50 premium

Applying Coal Tar Products - \$1.00 premium

PAIN1275-002 06/01/2020

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS
& UNION

	Rates	Fringes
PAINTER		
Bridges.....	\$ 34.64	14.40
Brush; Roller.....	\$ 25.16	14.40
Sandblasting; Steamcleaning; Waterblasting (3500 PSI or Over)& Hazardous Work.....	\$ 25.86	14.40

Spray.....	\$ 25.66	14.40
Stacks; Tanks; & Towers.....	\$ 28.67	14.40
Structural Steel & Swing		
Stage.....	\$ 25.46	14.40

 PLAS0109-001 05/01/2018

MEDINA, PORTAGE, STARK, and SUMMIT COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 28.86	17.11

 PLAS0109-003 05/01/2018

CARROLL, HOLMES, TUSCARAWAS, and WAYNE COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 28.21	17.11

 PLAS0132-002 05/01/2018

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 28.86	17.11

 PLAS0404-002 05/01/2018

ASHTABULA, CUYAHOGA, GEAUGA, AND LAKE COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 29.63	17.11

 PLAS0404-003 05/01/2018

LORAIN COUNTY

	Rates	Fringes
PLASTERER.....	\$ 28.86	17.11

 PLAS0526-022 05/01/2018

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

Rates	Fringes
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PLASTERER.....\$ 28.86 17.11

PLAS0526-023 05/01/2018

BELMONT, HARRISON, and JEFFERSON COUNTIES

Rates Fringes

PLASTERER.....\$ 28.21 17.11

PLAS0886-001 05/01/2018

FULTON, HANCOCK, HENRY, LUCAS, PUTNAM, and WOOD COUNTIES

Rates Fringes

PLASTERER.....\$ 29.63 17.11

PLAS0886-003 05/01/2018

DEFIANCE, ERIE, HURON, OTTAWA, PAULDING, SANDUSKY, and SENECA COUNTIES

Rates Fringes

PLASTERER.....\$ 28.86 17.11

PLAS0886-004 05/01/2018

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, and VAN WERT COUNTIES

Rates Fringes

PLASTERER.....\$ 28.21 17.11

PLUM0042-002 07/01/2018

ASHLAND, CRAWFORD, ERIE, HURON, KNOX, LORAIN, MORROW, RICHLAND & WYANDOT

Rates Fringes

Plumber, Pipefitter,
Steamfitter.....\$ 34.20 22.07

PLUM0050-002 07/06/2020

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING,
PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 43.60	26.73

PLUM0055-003 05/04/2020		

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, MEDINA (N. of Rte. #18 &
Smith Road) & SUMMIT (N. of Rte. #303, including the corporate
limits of the city of Hudson)

	Rates	Fringes
PLUMBER.....	\$ 37.07	27.71

PLUM0083-001 07/01/2017		

BELMONT & MONROE (North of Rte. #78)

	Rates	Fringes
Plumber and Steamfitter.....	\$ 32.16	31.51

PLUM0094-002 05/01/2020		

CARROLL (Northen Half), STARK, and WAYNE COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 35.78	21.44

PLUM0120-002 05/04/2020		

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN (the C.E.I. Power
House in Avon Lake), MEDINA (N. of Rte. #18) & SUMMIT (N. of
#303)

	Rates	Fringes
PIPEFITTER.....	\$ 40.22	25.48

PLUM0162-002 06/01/2020		

CHAMPAIGN, CLARK, CLINTON, DARKE, FAYETTE, GREENE, MIAMI,

MONTGOMERY & PREBLE

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 32.25	26.47

PLUM0168-002 06/01/2019		

MEIGS, MONROE (South of Rte. #78), MORGAN (South of Rte. #78)
& WASHINGTON

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 35.32	31.63

PLUM0189-002 06/01/2019		

DELAWARE, FAIRFIELD, FRANKLIN, HOCKING, LICKING, MADISON,
MARION, PERRY, PICKAWAY, ROSS & UNION

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 38.45	16.98

PLUM0219-002 05/31/2018		

MEDINA (Rte. #18 from eastern edge of Medina Co., west to
eastern corporate limits of the city of Medina, & on the county
road from the west corporate limits of Medina running due west
to and through community of Risley to the western edge of
Medina County - All territory south of this line), PORTAGE, and
SUMMIT (S. of Rte. #303) COUNTIES

	Rates	Fringes
Plumber and Steamfitter.....	\$ 37.02	23.79

PLUM0392-002 06/01/2020		

BROWN, BUTLER, CLERMONT, HAMILTON & WARREN

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 33.91	22.29

PLUM0396-001 08/01/2020

COLUMBIANA (Excluding Washington & Yellow Creek Townships & Liverpool Twp. - Secs. 35 & 36 - West of County Road #427), MAHONING and TRUMBULL COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 34.30	26.56

PLUM0495-002 06/01/2018

CARROLL (Rose, Monroe, Union, Lee, Orange, Perry & Loudon Townships), COLUMBIANA (Washington & Yellow Creek Townships & Liverpool Township, Secs. 35 & 36, West of County Rd. #427), COSHOCTON, GUERNSEY, HARRISON, HOLMES, JEFFERSON, MORGAN (South to State Rte. #78 & from McConnelsville west on State Rte. #37 to the Perry County line), MUSKINGUM, NOBLE, and TUSCARAWAS COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 38.24	23.09

PLUM0577-002 06/01/2019

ADAMS, ATHENS, GALLIA, HIGHLAND, JACKSON, LAWRENCE, PIKE, SCIOTO & VINTON

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 34.90	24.11

PLUM0776-002 07/01/2020

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY and VAN WERT COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 37.63	25.58

TEAM0377-003 05/01/2020

STATEWIDE, EXCEPT CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 28.89	15.40
GROUP 2.....	\$ 29.31	15.40

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Asphalt Distributor; Batch; 4- Wheel Service; 4-Wheel Dump; Oil Distributor & Tandem

GROUP 2 - Tractor-Trailer Combination: Fuel; Pole Trailer; Ready Mix; Semi-Tractor; & Asphalt Oil Spraybar Man When Operated From Cab; 5 Axles & Over; Belly Dump; End Dump; Articulated Dump; Heavy Duty Equipment; Low Boy; & Truck Mechanic

TEAM0436-002 05/01/2020

CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 29.55	16.95
GROUP 2.....	\$ 30.05	16.95

GROUP 1: Straight & Dump, Straight Fuel

GROUP 2: Semi Fuel, Semi Tractor, Euclids, Darts, Tank, Asphalt Spreaders, Low Boys, Carry-All, Tourna-Rockers, Hi-Lifts, Extra Long Trailers, Semi-Pole Trailers, Double Hook-Up Tractor Trailers including Team Track & Railroad Siding, Semi-Tractor & Tri-Axle Trailer, Tandem Tractor & Tandem Trailer, Tag Along Trailer, Expandable Trailer or Towing Requiring Road Permits, Ready-Mix (Agitator or Non-Agitator), Bulk Concrete Driver, Dry Batch Truck, Articulated End Dump

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the

most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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 from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

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

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

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

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

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

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END OF GENERAL DECISION"