



MONROE COUNTY
R O A D
COMMISSION

840 S. Telegraph Road • Monroe, Michigan 48161 • Phone: (734) 240-5102 • Fax: (734) 240-5101

PROPOSAL

FOR

2023 BRIDGE PREVENTIVE MAINTENANCE

BID OPENING:

Wednesday, March 29, 2023 at 10:00 a.m.

**BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF MONROE**

Greg W. Stewart, Chairman
Dan Minton, Vice Chairman
Jack Thayer, PE, Member
William Kipf, Member
James S. Jacobs, Member

**MONROE COUNTY ROAD COMMISSION
INVITATION TO BID**

Sealed bids will be received by the Board of County Road Commissioners of the County of Monroe until **10:00 a.m.** local time on **Wednesday, March 29, 2023** at their office located at 840 South Telegraph Road, Monroe, Michigan, 48161 for the following:

- 2023 HMA Paving
- 2023 HMA Mixtures
- 2023 Asphalt Emulsions
- 2023 Bridge Preventive Maintenance
- 2023 Precast Concrete Box Culvert Materials

Bids will be publicly opened and read aloud by the Bid Committee at 10:00 a.m. Proposals may be downloaded from the Road Commission's website at <https://www.mcrc-mi.org/Bids.aspx>.

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF MONROE, MICHIGAN

**MONROE COUNTY ROAD COMMISSION
PROPOSAL
2023 BRIDGE PREVENTIVE MAINTENANCE**

TO: The Board of County Road Commissioners of the County of Monroe, Michigan

FOR: Preventive maintenance consisting of silane treatment, epoxy overlay, joint sealing, and pavement markings on ten bridges in Monroe County, Michigan (MCRC Project No. 468-021-239159)

Ladies and Gentlemen:

The undersigned bidder hereby affirms that:

1. The proposal is in all respects fair and without any collusion or fraud.
2. The undersigned have examined the site of the proposed project and have made a personal investigation and estimate of quantities.
3. The undersigned will contract to furnish all labor, equipment, tools, and material necessary at the unit prices stated on the attached bid forms and to complete the work in the time specified to the satisfaction of the Board of County Road Commissioners of the County of Monroe, Michigan.

Company: _____

Address: _____

City, State, ZIP: _____

Telephone: _____

By: _____

Title: _____

Date: _____

Notes:

1. If the bidder is a partnership, each member must sign the proposal.
2. Corporations must execute the proposal by duly authorized officers in accordance with the Articles of Incorporation.

INSTRUCTIONS TO BIDDERS
and
GENERAL CONDITIONS

The Michigan Department of Transportation 2020 Standard Specifications for Construction are incorporated as part of these bidding documents and shall govern except as provided in the Invitation to Bid, Instructions to Bidders and General Conditions, and Proposal. Reference to the Department or Commission in the Michigan Department of Transportation 2020 Standard Specifications for Construction shall mean the Board of County Road Commissioners of the County of Monroe, hereinafter referred to as "Board," unless otherwise specified.

OWNER

The owner is the Board of County Road Commissioners of the County of Monroe, also referred to as the "Board."

ENGINEER

The Engineer is the County Highway Engineer or the individual assigned by the County Highway Engineer to be in charge of the Contract. The person assigned as the Engineer may be an employee of the Board, a consultant, or an outside contractor hired by the Board.

BIDDER

The Bidder is one who submits a signed bid with the required documentation directly to the Board at the time and place specified.

BID FORMS

Sealed proposals must be submitted on the bid forms furnished by the Board. The proposal shall be submitted in its entirety (pages 1 through 11) with no modifications or changes except as authorized by an addendum and with no pages removed. All proposals must be filled out in ink or typewritten and shall be legibly signed, giving the complete name and address of the Bidder.

All bids must be in a sealed envelope and clearly marked "**Bid for 2023 Bridge Preventive Maintenance.**"

BIDDER'S SURETY

The proposal must be accompanied by a cashier's check, certified check or a bid bond made payable to the Board of County Road Commissioners of Monroe County, Michigan in the sum of five percent (5%) of the amount of the bid. Upon awarding and signing of a contract, or in the event of bid rejection, such bid surety will be returned to the Bidder. Bids may be held for a period of forty (40) days.

INTERPRETATION AND ADDENDA

All questions about the meaning or intent of the Bidding Documents are to be directed to the Engineer. Interpretation or clarification considered necessary by the Engineer to such questions will be issued by Addenda delivered to all parties recorded by the Engineer as having received the Bidding Documents. Questions received less than seven days prior to the date for opening the bids may not be answered. Only questions answered by formal written Addenda are binding. Oral and other interpretations or clarifications will be without legal effect.

OPENING OF BIDS

Bids will be received by the Board at 840 S. Telegraph Road, Monroe, Michigan, 48161 until **10:00 a.m.** local time on **Wednesday, March 29, 2023** at which time they will be publicly opened and read aloud.

REJECTION OF BIDS

The Board reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, nonresponsive, unbalanced, or conditional bids and to reject the bid of any Bidder if the Board believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the bid is not responsive or if the Bidder is unqualified or of doubtful financial ability or fails to meet any pertinent standards or criteria established by the Board. The Board also reserves the right

to waive all informalities in any bid should it be deemed in the best interest of the Road Commission to do so. Discrepancies between the multiplication of units of work and the unit prices will be resolved in favor of the unit price. Discrepancies between the indicated sum of any column of figures and the correct sum will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of words.

TITLE VI ASSURANCE

The Monroe County Road Commission, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC 2000d to 2000d-4) and Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, hereby notifies all bidders that it assures that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, gender, age, or disability in consideration for an award.

PROHIBITION OF DISCRIMINATION

In accordance with Act No. 453, Public Acts of 1976, the Contractor and subcontractors hereby agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status. Further, in accordance with Act No. 220, Public Acts of 1976 as amended by Act No. 478, Public Acts of 1980, the Contractor and subcontractors hereby agree not to discriminate against an employee or applicant for employment tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of a disability that is unrelated to the individual's ability to perform the duties of a particular job or position. A breach of the above covenants shall be regarded as a material breach of this contract.

SAFETY REQUIREMENTS

The Contractor is responsible for protecting the life and health of all personnel on the project; the safety and health of the public; and property during the construction of the project in accordance with subsection 104.07.B of the Michigan Department of Transportation 2020 Standard Specifications for Construction. Prior to the commencement of work, the Contractor must submit a written "Construction Safety Program" that outlines the plan and procedures for preventing and mitigating accidents on the project and meeting all health and safety requirements of the contract.

CONTRACT EXECUTION

The Bidder to whom the Contract is awarded shall, within ten (10) calendar days after notice of award, enter into a written contract with the Board and furnish proof of insurance as hereinafter specified. Failure to execute the contract or furnish satisfactory proof of insurance will be considered cause for annulment of award.

PERFORMANCE AND LIEN BONDS

The successful Bidder to whom the contract is awarded shall furnish two (2) surety bonds as follows:

Performance Bond - To the Board of County Road Commissioners of the County of Monroe, Michigan for the faithful fulfillment of the terms of the contract in the amount of one-hundred (100) percent of the contract amount

Lien Bond - To the Board of County Road Commissioners of the County of Monroe, Michigan for the payment of all labor and materials used in the work in the amount of one-hundred (100) percent of the contract amount

INCREASED OR DECREASED QUANTITIES

The Board reserves the right to increase or decrease quantities from those originally estimated and such changes will be paid for at the unit price bid so long as the total contract amount is not changed more than ten (10) percent. Changes in excess of that amount will be individually negotiated.

PROGRESS SCHEDULE

In no case shall any work be commenced prior to receipt of formal notice of award by the Board.

The low Bidder for the work covered by this proposal will be required to meet with the Board's representative to review the Contractor's proposed work schedule. The schedule for this meeting will be set within one (1) week after the low bidder is determined.

The Board's representative will arrange the time and place for the meeting.

TIME OF COMPLETION

All contract work shall be completed on or before **October 15, 2023**.

FAILURE TO COMPLETE ON TIME

Liquidated damages will be assessed in accordance with section 108 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

PAYMENTS TO CONTRACTOR

Payments will be made to the Contractor on a bi-weekly basis. The Board will make a partial payment to the Contractor on the basis of an estimate, prepared by the Engineer, of the work performed on the project during the preceding period less a five (5) percent retainer.

FINAL INSPECTION, ACCEPTANCE AND FINAL PAYMENT

The Engineer or their designated representative will make an inspection of all work included in the contract and notify the Contractor of defects to be remedied prior to acceptance and payment.

DISPUTES

The Engineer's written decision on any question arising under the contract between the Board and Contractor shall be final and binding upon both the Board and the Contractor in the absence of fraud, bad faith, or abuse of discretion.

ASSIGNMENT CLAUSE

The contract between the Board and the Contractor may not be assigned to a third party without the written consent of the Board.

TAXES

The Contractor shall include, and will be deemed to have included, in its base bid and contract price all applicable Michigan Sales and Use taxes which have been enacted into law as of the date the bid is submitted.

EXTENSION OF CONTRACT

Upon mutual agreement of both parties, the Board may extend the length of the contract for up to three additional one-year terms. The pricing, terms, and conditions of the original contract will remain the same for any subsequent one-year extensions. Requests for a contract extension must be made in writing to the Purchasing Agent by December 1.

BOARD RESPONSIBILITY

The Board shall not supervise, direct or have control or authority over, nor be responsible for, the Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with laws and regulations applicable to the furnishing or performance of the work unless otherwise specified in the Special Provisions. The Board will not be responsible for the Contractor's failure to perform or furnish the work in accordance with the Contract Documents.

INDEMNIFICATION, DAMAGE LIABILITY AND INSURANCE

- A. Indemnification. The Contractor must hold harmless, indemnify, defend and represent the Board and its officers, agents and employees against any and all claims for bodily injury or property

damage, or any other claim arising out of performance of the work on this contract. The Contractor will not be responsible for claims that result from the sole negligence or willful acts of said indemnitee.

- B. Workers' Compensation Insurance. The Contractor must carry the necessary Workers' Compensation Insurance and submit a certification that it carries Workers' Compensation to the Board.
- C. Bodily Injury and Property Damage. The Contractor must carry adequate insurance, satisfactory to the Board, to afford protection against all claims for damage to public or private property and injuries to persons arising out of performance of the work. Copies of completed certificates must be submitted to the Board.

- 1. General Liability, Bodily Injury and Property Damage. The Contractor must provide the following minimum limits of property damage and bodily injury liability:

Bodily Injury and Property Damage Liability:	
Each Occurrence	\$1,000,000
Aggregate	\$2,000,000

- 2. Automobile Liability, Bodily Injury and Property Damage. The Contractor must provide the following minimum limits of property damage and bodily injury liability:

Bodily Injury Liability:	
Each Person	\$500,000
Each Occurrence	\$1,000,000

Property Damage Liability:	
Each Occurrence	\$1,000,000

Combined Single Limit for Bodily Injury and Property Damage Liability:	
Each Occurrence	\$2,000,000

- 3. Umbrella Policy. The Contractor may meet the requirements of above minimum limits of bodily injury and property damage liability through an umbrella policy.

- D. Additional Insured. The Bodily Injury and Property Damage Policy must include the following endorsements, verbatim:

“Additional Insured: The Board of County Road Commissioners of the County of Monroe, the Monroe County Road Commission and its officers, agents and employees.”

“Provide written notice ten (10) days prior to cancellation, expiration, termination or reduction in coverage for nonpayment of the premium and written notice thirty (30) days prior to cancellation, expiration, termination or reduction in coverage for all other reasons.”

- E. Per Project Aggregate. The Bodily Injury and Property Damage Policy must be endorsed with an endorsement that provides the General Aggregate Limit to each designated construction project.
- F. Notice. The Contractor must ensure that all insurance policies and binders include an endorsement by which the insurer agrees to notify the Department in writing at least 30 days before there is a cancellation or material change in coverage. The Contractor must stop operations if any insurance is canceled or reduced, and must not resume operations until new issuance is in force.
- G. Reports. The Contractor or insurance carrier shall report to the Board any claims received, inspections made and the disposition of claims. The Board will withhold final payment release until

either the Contractor pays the claim or until final disposition of the claim by the Contractor's insurance company has been received by the Board.

MAINTENANCE OF TRAFFIC

See the Special Provisions for Maintaining Traffic attached to the proposal.

SPECIFICATIONS

All work not otherwise specified shall be done in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction. Within these specifications, all references to the Michigan Department of Transportation shall mean the Board. The errata to the Standard Specifications can be found on the Michigan Department of Transportation website at www.michigan.gov/mdot.

MATERIALS

All materials shall be in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction and the special provisions attached to the proposal.

DESCRIPTION OF WORK

See the Log of Work attached to the proposal.

The estimated quantity for the **Conc Surface Coating** item of work is based on:

Structure #	Township	Road	Crossing	Railing (Sft)	Conc Surface Coating (Syd)
7279	Berlin	US Turnpike	Mouilee Creek	644	72
7256	Dundee	Ann Arbor	North Macon Creek	550	61
7257	Dundee	Ann Arbor	Bear Swamp Creek	416	46
7273	Frenchtown	Vivian	Sandy Creek	629	70
7283	London	Oakville Waltz	Stony Creek	881	98
7284	London	Oakville Waltz	Stony Creek Overflow	701	78
7251	Milan	Dennison	Bear Swamp	480	53
7296	Monroe	LaPlaisance	Plum Creek	468	52

530

The estimated quantity for the **Silane Treatment** item of work is based on:

Structure #	Township	Road	Crossing	Deck (Sft)	Approach Slabs (Sft)	Fascia Beams (Sft)	Railing (Sft)	Total Area of Silane Treatment (Sft)
7279	Berlin	US Turnpike	Mouilee Creek	2,714	1,780	341	288	5,479
7255	Dundee	Ann Arbor	Macon Drain	6,480	1,392	270		8,142
7256	Dundee	Ann Arbor	North Macon Creek	2,085	1,880	203	438	4,718
7257	Dundee	Ann Arbor	Bear Swamp Creek	1,612	1,870	158	326	4,055
7269	Exeter	Stone	Sandy Creek	1,360		105		1,465
7273	Frenchtown	Vivian	Sandy Creek	1,166	1,460	125	629	3,380
7283	London	Oakville Waltz	Stony Creek	3,152		488	702	4,521

7284	London	Oakville Waltz	Stony Creek Overflow	2,584		330	564	3,615
7251	Milan	Dennison	Bear Swamp	1,350	1,173	152	370	3,155
7296	Monroe	LaPlaisance	Plum Creek	1,723		180	376	2,371

Total = 40,889

SPECIAL PROVISIONS AND NOTICES TO BIDDERS

The following special provisions and notices to bidders are attached to this proposal:

1. Concrete Surface Coatings
2. Silane Treatment for Bridge Concrete
3. Thin Epoxy Polymer Bridge Deck Overlay
4. Resealing Construction Joints on Structures
5. Maintaining Traffic, Road Closure
6. Maintaining Traffic, Traf Regulator Control
7. Utility Coordination

UTILITY COORDINATION

For the protection of underground utilities, the contractor shall notify “Miss Dig” at 1-800-482-7171 or 811, a minimum of three working days, excluding weekends or holidays prior to excavating and otherwise fully comply with the provisions of Act 174 of 2013 and as amended. Miss Dig members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be part of the Miss Dig system.

The Contractor shall conduct operations in such a manner as to ensure that those utilities not requiring relocation will not be disturbed.

COMMUNICATIONS

Any questions regarding this bid shall be directed to the person listed below:

Name: Elizabeth Johnson
 Phone: 734-240-5109
 Email: EJohnson@mcrc-mi.org

**MONROE COUNTY ROAD COMMISSION
UNIT PRICE CONTRACT
2023 BRIDGE PREVENTIVE MAINTENANCE**

TO: Board of County Road Commissioners of Monroe County, Michigan

The undersigned, having full knowledge of the proposal and specifications for the **2023 Bridge Preventive Maintenance** contract including Bidders' Addenda _____ and the conditions of these Contract Documents, hereby agrees to furnish all labor, equipment, materials, transportation, and incidentals necessary to perform the work as specified in the Instructions to Bidders and General Provisions at the unit price named below:

UNIT PRICE WORK					
Item Code	Item Description	Quantity	Unit	Unit Price	Bid Amount
7100011	Conc Surface Coating	530	Syd	\$	\$
7107010	Silane Treatment	40,899	Sft	\$	\$
7120003	Hand Chipping, Shallow	46	Syd	\$	\$
7120012	Patching Conc, C-L	9	Cyd	\$	\$
7120020	Epoxy Ovly	3,782	Syd	\$	\$
7127001	Bridge Joints, Clean and Seal	354	Ft	\$	\$
8110231	Pavt Mrkg, Waterborne, 4 inch, White	1,610	Ft	\$	\$
8110232	Pavt Mrkg, Waterborne, 4 inch, Yellow	307	Ft	\$	\$
8120210	Pavt Mrkg, Longit, 6 inch or Less Width, Rem	1,780	Ft	\$	\$
8120264	Pavt Mrkg, Wet Reflective, Type NR, Tape, 4 inch, Yellow, Temp	152	Ft	\$	\$
8127050	Maintaining Traffic, Road Closure	1	Ea	\$	\$
8127050	Maintaining Traffic, Traf Regulator Control	9	Ea	\$	\$
Total Bid =					\$

Contractor Signature: _____

Printed Name and Title: _____

Quantities are not guaranteed. Final payment will be based on actual quantities.

Bidder agrees that the work will be completed and ready for final payment in accordance with the General Conditions. Work on the **2023 Bridge Preventive Maintenance** contract is to be completed by **October 13, 2023** as detailed in the Time of Completion section above.

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work on time.

The following documents are attached to and made a condition of this Bid:

Required Bid Security in the form of either:

Certified Check or Bid Bond in the amount of:

_____ Dollars (\$ _____)

Communications concerning this Bid shall be addressed to the Bidder's representative.

Name of Representative: _____

Address: _____

City, State, ZIP: _____

Telephone Number: _____

Fax Number: _____

E-Mail Address: _____

The terms used in this Bid, which are defined in subsection 101.03 of the Michigan Department of Transportation 2020 Standard Specifications of the Construction, have the meanings assigned to them in the Standard Specifications for Construction.

SUBMITTED on: _____, 2023

If Bidder is:

An Individual

By:

Individual's Name

Doing Business As:

Business Address:

Phone No:

A Partnership

By:

Firm Name

General Partner

Business Address:

Phone No.:

A Corporation

By: _____
Corporation Name

State of Incorporation

By: _____
Name of Person Authorized to Sign

Title

Business Address: _____

Phone No.: _____

A Joint Venture

By: _____
Name

Business Address: _____

Phone No.: _____

By: _____
Name

Business Address: _____

Phone No.: _____

Each joint venture member must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.

PROPOSAL ATTACHMENTS

2023 BRIDGE PREVENTIVE MAINTENANCE

1. Log of Work
2. Concrete Surface Coatings
3. Silane Treatment for Bridge Concrete
4. Epoxy Overlay
5. Resealing Construction Joints on Structures
6. Maintaining Traffic, Road Closure
7. Maintaining Traffic, Traf Regulator Control
8. Utility Coordination

**Monroe County Road Commission
2023 Bridge Preventive Maintenance**

MCRC Project No. 468-021-239159

Str. No.	Township	Road Name	Intersecting Feature	Deck Length (Ft)	Deck Width (Ft)	Total Approach Slab Length (Ft)	7100011 Conc Surface Coating (Syd)	7107010 Silane Treatment (Sft)	7120003 Hand Chipping, Shallow (Syd)	7120112 Patching Conc, C-L (Cyd)	7120020 Epoxy Ovly (Syd)	7127001 Bridge Joints, Clean and Seal (Ft)	8110231 Pavt Mrkg, Waterborne, 4 inch, White (Ft)	8110232 Pavt Mrkg, Waterborne, 4 inch, Yellow (Ft)	8120210 Pavt Mrkg, Longit, 6 inch or Less Width, Rem (Ft)	8120264 Pavt Mrkg, Wet Reflective, Type NR, Tape, 4 inch, Yellow, Temp (Ft)	8127050 Maintaining Traffic, Road Closure (Each)	8127050 Maintaining Traffic, Road Closure (Each)
7279	Berlin	US Turnpike	Mouilee Creek	62	44.5	40	72	5,479			504		230	38	250	24		1
7255	Dundee	Ann Arbor	Macon Drain	135	48.0	29		8,142			875	96	350	34	370	32		1
7256	Dundee	Ann Arbor	North Macon Creek	45	47.0	40	61	4,718			444	94	190	25	200	16		1
7257	Dundee	Ann Arbor	Bear Swamp Creek	35	46.8	40	46	4,055			390	94	170	25	180	16		1
7269	Exeter	Stone	Sandy Creek	34	40.0	0		1,465			151		90	25	100	8		1
7273	Frenchtown	Vivian	Sandy Creek	33	36.5	40	70	3,380			294							1
7283	London	Oakville Waltz	Stony Creek	75	42.7	0	98	4,521			356		170	25	180	16		1
7284	London	Oakville Waltz	Stony Creek Overflow	60	43.7	0	78	3,615			291		140	85	210	16		1
7251	Milan	Dennison	Bear Swamp	40	34.5	34	53	3,155	45	8	284		170	25	180	16	1	
7296	Monroe	LaPlaisance	Plum Creek	40	43.7	0	52	2,371	1	1	194	70	100	25	110	8		1
Totals							530	40,899	46	9	3,782	354	1,610	307	1,780	152	1	9

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONCRETE SURFACE COATINGS

STR:JAB

1 of 3

APPR:SCK:RL:03-31-21

a. Description. This work consists of furnishing and applying an acrylic based concrete surface coating to concrete structures, including but not limited to barriers, median barriers, sound walls, screen walls, retaining walls, fascias, wing walls, piers and substructure locations as specified on the plans. Ensure all work and materials are in accordance with the standard specifications, except as modified herein.

b. Materials. Select the acrylic based concrete surface coating from the products listed herein.

The color(s) to be used for the concrete surface coatings and the location(s) of the specific colors are on the plan sheets. Ensure the color of the first coat is in contrast with both the bare concrete and the finish coat. On any single structure, use the same product for all areas to be coated with a specified color. Do not mix colors or products from more than one source.

Submit color samples to the Engineer for review and approval. If required by the Engineer, complete a test section to demonstrate the final color prior to application of the coating to the structure.

<u>Company</u>	<u>Product</u>
Benjamin Moore	Super Spec Masonry 100% Acrylic Elastomeric Coating Flat 056
Carboline Company	Carbocrylic 3350
ChemMasters	Colorcoat
ChemMasters	Colorlastic
Conspec	Permacoat
ICI Dulux Paints	Decra-Flex 300
O'Leary Paint Company	O'Leary 1375 Elastomeric
PPG Industries, Inc.	Perma-Crete Pitt-Flex Elastomeric Coating 4-110
Sherwin-Williams	Concrete Texture Coating Smooth B97-160 Series
Sika Corporation	Elastocolor
Sika Corporation	Sikagard 550W Elastic
Sonneborn	Super Color Coat
Tamms Industries	Tammolastic
Thoro	Thorocoat
Thoro	Thorolastic

c. Construction.

1. Surface Preparation. Cure new concrete a minimum of 28 days before coating. Following the curing period, and prior to coating, test for moisture content in the concrete as described below.

Ensure all concrete to be coated is tested for the presence of moisture after surface preparation has been completed and prior to application of the coating. Ensure testing is in accordance with *ASTM D4263*. Tape an 18 inch by 18 inch sheet (4 mil) of transparent polyethylene to the concrete surface to be coated. Ensure all edges are sealed with tape that will stick to the concrete substrate and not allow the infiltration of air. Leave the plastic sheet in place a minimum of 16 hours to detect the presence of moisture in the concrete. Ensure there is no moisture visible on the polyethylene sheet after the minimum period of time has elapsed for coating work to begin. Ensure this is verified by the Engineer before application of the coating begins. This test may not be reliable in cooler conditions. Ensure alternate methods to detect moisture are approved by the Engineer. Perform this test a minimum of once every 100 feet on barriers, walls etc., and a minimum of once on columns, piers, etc. Prepare the surface, including removing fins and projections and filling surface voids and cracks (if required), in accordance with manufacturer's recommendations, except as modified by this special provision.

Ensure the surface to be coated is dry and free from all contamination including, but not limited to: dirt, form release agents, oil, grease, laitance, loose material and curing compounds. Clean the surface by low-pressure water cleaning, steam cleaning, or abrasive blasting (followed by oil-free moisture-free compressed air cleaning) or by combination to achieve an acceptable cleaned surface. When low-pressure water cleaning or steam cleaning is used, ensure the concrete surface profile (CSP) is CSP 1 in accordance with the *International Concrete Repair Institute Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays* (Guideline No. 310.2R-2013). When abrasive blasting is used, ensure the concrete surface profile is CSP 2 to CSP 4. Low-pressure water or steam cleaning primarily removes water soluble contaminants. Aged concrete with contaminants such as hardened curing compound may require light abrasive blasting to completely remove the contaminant. Since many curing compounds contain wax, remove even well adhered residue prior to coating to ensure a good bond between the surface coating and the concrete.

Verify that the compressed air used for any work is free of oil and moisture contamination in accordance with *ASTM D4285*. Use either an absorbent or a nonabsorbent white collector positioned within 24 inches of the air-discharge point, centered in the air stream. Allow air to discharge onto the collector for a minimum of 1 minute. Visually examine the collector for the presence of oil and/or water. Conduct the test at least one time per shift for each compressor system in operation in the presence of the Engineer. If air contamination is evident, make adjustments to achieve clean, dry air. Examine the work performed since the last acceptable test for evidence of defects or contamination due to contaminated compressed air. Repair contaminated work at no additional cost to the contract.

When low pressure water cleaning or steam cleaning is used, the power washer must deliver 3000 - 4500 pounds per square inch (psi) and utilize a 15 degree or smaller nozzle tip held perpendicular to the surface being cleaned. When using light abrasive blasting to remove contaminants on new construction, be careful not to remove excessive concrete material.

2. Visual Inspection. Check surface cleanliness by lightly rubbing with a dark cloth or by pressing translucent adhesive tape onto the concrete surface in the presence of the Engineer. An acceptable level of residual dust can be agreed upon by the Engineer and the Contractor. Perform a water drop test in the presence of the Engineer prior to coating the concrete surface to detect for the presence of any hydrophobic contaminants. Hydrophobic contaminants

include materials such as form release agents, curing compounds, oil, grease, wax, and resins. If contaminants are detected, as evidenced by a lack of rapid absorption of the water drop into the concrete, remove the contaminants, and perform the tests again until no contaminants are detected.

3. Application. Apply two coats (do not dilute) of the acrylic based concrete surface coating. Apply each coat to provide the minimum wet film thickness as recommended by the manufacturer. A primer is not required unless stated as required in the manufacturer’s product data sheet. Temperature limitations of the air, coating material and concrete for application will follow manufacturer’s recommendations but must not be outside the temperature range of 45 to 90 degrees Fahrenheit (F) and ensure the temperature of the air, coating material and concrete is at least 5 degrees F above the dew point and rising. Do not apply the concrete surface coating at a relative humidity greater than 90 percent or if rain is forecasted within the specified rain resistance period.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Conc Surface Coating	Square Yard

Conc Surface Coating includes preparing the substrate concrete surface, conducting the visual inspection and applying the primer (if required) and two top coats of surface coating. No additional payment will be made for the test section.

MONROE COUNTY ROAD COMMISSION
SPECIAL PROVISION
FOR
SILANE TREATMENT FOR BRIDGE CONCRETE

MCRC:MLS

1 of 2

03-10-22

a. Description. This work consists of cleaning and preparing the exposed surfaces of the existing bridge decks, approach slabs, fascia beams, and railing and applying a spray-applied penetrating silane sealer.

b. Materials. Deliver the sealer to the project in original, undamaged, and unopened containers with the manufacturer's label identifying the product and batch number. Use one of the following 100 percent silane materials:

1. Aquanil™ Plus 100, ChemMasters, Inc., Madison, OH
2. Baracade Silane 100C, The Euclid Chemical Company, Cleveland, OH
3. Certi-Vex® Penseal 244 100%, Vexcon Chemicals, Inc., Philadelphia, PA
4. MasterProtect H 1000, BASF Construction Chemicals, LLC Building Systems, Shakopee, MN
5. KlereSeal® 9100-S, Pecora Corporation, Harleysville, PA
6. Protectosil® BH-N, Evonik Degussa Corporation, Parsippany, NJ
7. Sikagard® 705L, Sika Corporation, Lyndhurst, NJ
8. SIL-ACT™ ATS-100, Advanced Chemical Technologies, Oklahoma City, OK
9. Xiameter® OFS-6403 Silane, Dow Corning Corporation, Midland, MI

c. Construction. Perform the work in accordance with the plans, standard specifications, and this special provision. Follow the selected manufacturer's recommendations for surface preparation and application, except as modified by this special provision.

1. Surface Preparation. Ensure all concrete to be sealed is at least 28 days old. Ensure the surface to be sealed is dry, clean, and free from all contamination including, but not limited to: old coatings, dirt, form release agents, oil, grease, laitance, loose material, and curing compounds.

Abrasive blasting followed by oil-free compressed air cleaning is required. Water blasting or wire brushing is prohibited. Ensure that the concrete surface profile (CSP) after abrasive blasting is a CSP 3 in accordance with the *International Concrete Repair Institute (ICRI) Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays, and Concrete Repair (Guideline No. 310.2R-2013)*.

When using light abrasive blasting to remove contaminants on concrete, be careful not to remove excessive concrete material.

When blowing the prepared concrete surfaces clean, provide an airline with an in-line water trap and air free of oil and water as it leaves the airline. Verify that the compressed air is free of moisture and oil contamination in accordance with the requirements of *ASTM D 4285*. Conduct the test at least once per shift before the blowing operation.

- 2. Application. Surfaces must dry for a minimum of 24 hours following rain or exposure to other sources of moisture.

Do not apply the sealant when the ambient temperature or surface temperature is outside the range of 40 to 90 degrees Fahrenheit (F) or is forecasted to be outside that range within 12 hours after application.

Use low-pressure airless spray equipment with solvent-resistant hoses and gaskets. Apply sealer at a minimum rate of 1 gallon per 200 square feet of concrete surface. Do not apply sealer during inclement weather or when inclement weather is anticipated within 12 hours. Apply sealer in a single uniform application.

Protect all surrounding traffic, waterways, and structures from overspray and dripping.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Silane Treatment	Square Foot

The Engineer will measure **Silane Treatment** by the area treated. The unit price for **Silane Treatment** includes the cost of preparing the surface, applying the silane sealer, and cleanup of overspray. No compensation will be made to the Contractor for surplus materials.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
THIN EPOXY POLYMER BRIDGE DECK OVERLAY

STM:JD

1 of 5

APPR:JAB:MTH:04-28-21
FHWA:APPR:04-28-21

a. Description. This work consists of cleaning/preparing entire deck surface and applying a two-coat epoxy overlay. Ensure all work is completed in accordance with section 712 of the Standard Specifications for Construction except as modified herein. Bring any discrepancies between the two to the attention of the Engineer

b. Materials. Use a solvent-free, moisture insensitive, 100 percent solids, low-modulus, and two-component epoxy system to overlay the structure. Ensure containers are marked clearly "Part A" or "Part B". The epoxies that are approved for thin overlays are in Table 1.

Table 1: Approved Two Component 100 Percent Solids Epoxy Systems

Supplier	Product	Telephone
BASF	MasterSeal 350	(800) 433-9517
E-Bond	526 Lo-Mod	(616) 532-0782
E-Chem	EP50	(505) 217-2121
Euclid Chemical	Flexolith Flexolith Summer Grade Flexolith HD	(800) 321-7628
Poly-Carb	Flexogrid Mark – 163 Flexogrid Mark - 154	(817) 797-1113
Sika	Sikadur 22-Lo Mod	(248) 866-8956
Transpo	T-48 Chip Seal	(573) 808-1040
Unitex	Propoxy Type III DOT	(800) 745-3700

Ensure aggregate meets the gradation requirements in Table 2 and has a hardness of seven or higher on the Mohs hardness scale. Ensure aggregate is angular, consists of natural silica sand, basalt, or other nonfriable aggregate, and contains less than 0.2 percent moisture when tested in accordance with *ASTM C566*.

Table 2: Angular Aggregates Gradation Requirements

Sieve Size	Minimum % Passing	Maximum % Passing
3/8	100	100
4	98	100
8	30	75
16	0	5
30	0	1
Pan	0	0

Provide general certification per the *MQAP Manual* to the Engineer that the aggregate meets the requirements specified herein.

c. Equipment. For the epoxy overlay, provide a distribution system or distributor capable of accurately blending the epoxy resin and hardening agent, and uniformly and accurately applying the epoxy materials at the specified rate to the bridge deck in such a manner as to cover 100 percent of the work area including 1 inch of the vertical face of curb/barrier. Provide a fine aggregate spreader capable of uniformly and accurately applying dry aggregate to cover 100 percent of the epoxy material. Provide a self-propelled vacuum truck.

For hand applications, provide calibrated containers, a Jiffy® type mixer, and notched squeegees which are suitable for mixing and applying the epoxy and aggregate.

For mechanical applications, provide mixing equipment that will automatically and accurately proportion the components in accordance with the manufacturer's recommendations, mix and continuously place the epoxy overlay. Ensure the operation proceeds in such a manner that will not allow the mixed material to segregate, dry, be exposed or otherwise harden in such a way as to impair the retention and bonding of broadcasted aggregate.

d. Construction.

1. Surface Preparation. The Engineer will inspect patching and cleaning operations. The Engineer's approval is required prior to placement of the overlay. Protect utilities, drainage structures, curbs, bridge joints, and any other structure within or adjacent to the epoxy overlay from surface preparation activities and application of the surface treatment materials. For the purposes of this special provision, the term *bridge joints* does not include sawed construction joints.

Verify that the compressed air used for any work is free of oil and moisture contamination in accordance with *ASTM D4285*. Use either an absorbent or a nonabsorbent white collector positioned within 24 inches of the air-discharge point, centered in the air stream. Allow air to discharge onto the collector for a minimum of 1 minute. Visually examine the collector for the presence of oil and/or water. Conduct the test at least one time per shift for each compressor system in operation in the presence of the Engineer. If air contamination is evident, make adjustments to achieve clean, dry air. Examine the work performed since the last acceptable test for evidence of defects or contamination due to contaminated compressed air. Repair contaminated work at no additional cost to the contract.

Do not perform surface preparation or installation of epoxy overlay on concrete less than 28 days of age. Ensure that traffic paint lines and surface texturing or grooving are removed. Clean the entire concrete surface by abrasive blasting or shotblasting to remove all materials that may interfere with the bonding or curing of the binder. The cleaned concrete surface must meet the *International Concrete Repair Institute Guideline 310.2R, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair*, concrete surface profile (CSP) 7. To ensure prepared surface is adequate for epoxy adhesion, perform a direct tension test per *ASTM C1583/C1583M*. Perform one direct tension test for every 400 square yards of overlay area. Minimum bond strength must be 250 psi for the surface preparation to be considered adequate. Use a vacuum truck or oil-free moisture-free air blast to remove all dust and other loose material. Brooms are prohibited. Remove any oil or other contamination after initial cleaning.

Ensure both courses of epoxy overlay are applied within 24 hours of the final cleaning, and prior to opening the area to traffic.

No visible moisture can be present on the surface of the concrete at the time of epoxy overlay application. Oil-free moisture-free compressed air may be used to dry the deck surface. Use a plastic sheet left taped in place in accordance with *ASTM D4263* to identify moisture in the epoxy overlay area except as modified herein. Tape an 18 inch by 18 inch transparent polyethylene sheet (4 mil) to the deck every 500 square feet. Ensure all edges are sealed with tape that will stick to the concrete substrate. Leave the plastic sheet in place for a minimum of 3 hours or the manufacturer's recommended cure time for the conditions, whichever is longer. Ensure there is no moisture visible on the polyethylene sheet. Ensure alternate methods to detect moisture are approved by the Engineer.

Remove all debris from the bridge joints. Protect the bridge joints, and any other areas not to be overlaid, from damage during preparation of the surface. Ensure the protection is removed once the epoxy and aggregate has been applied and prior to initial set. Ensure removing the protection is done soon enough to in no way harm the adjacent overlay. Ensure protection is applied again prior to the second coat and removed again prior to initial set as to not damage adjacent surfaces. Ensure the protection meets the approval of the Engineer.

2. Application. Ensure handling and mixing of the epoxy resin and hardening agent is performed in a safe manner to achieve the desired results in accordance with the manufacturer's recommendations for a two-coat system or as directed by the Engineer. Do not place epoxy overlay materials when the concrete surface is less than 50 °F or ambient air temperature is forecast to fall below 50 °F within 8 hours of application. Do not place epoxy overlay materials if weather or surface conditions are such that the material cannot be properly handled, placed, and cured in accordance with the manufacturer's requirements and the specified requirements of traffic control.

Apply the epoxy overlay in two separate courses in accordance with the manufacturer's recommendation for a two-coat system with the following rate of application. Ensure the first course is no less than 2½ gallons per 100 square feet. Ensure the second course is no less than 5 gallons per 100 square feet.

Ensure application of aggregate to both the first and second courses is of sufficient quantity so the entire surface is covered in excess. Ensure no bleed through, or wet spots are visible in the overlay. Remove and replace any areas within course applications with wet spots or where epoxy has bled through.

After the epoxy mixture has been prepared for the overlay, immediately and uniformly apply it to the surface of the bridge deck with a notched squeegee. Apply the dry aggregate in such a manner as to cover the epoxy mixture completely within 5 minutes. Minimize all foot traffic on the uncured epoxy and ensure any foot traffic will only be done with steel spiked shoes approved by the Engineer. Cure each course of epoxy overlay until vacuuming or brooming can be performed without tearing or damaging the surface. Do not allow traffic or equipment on the overlay surface during the curing period. Remove by vacuuming or brooming all loose aggregate after the first course curing period. Immediately apply the next overlay course to complete the overlay. Ensure the minimum curing periods are in accordance with the manufacturer's recommendations, as shown in Table 3, or as directed by the Engineer. Remove by vacuuming or brooming all loose aggregate after the second course curing period.

Ensure all bridge joints are free of loose aggregate, epoxy and other debris resulting from overlay operations. Excess aggregate may be reused if it is clean, dry, free from foreign matter, and meets gradation requirements. Blend the excess aggregate at a ratio of 3 parts virgin material to 1 part recycled material. Inspect aggregate recovery equipment prior to reclamation operation to prevent the introduction of foreign material. Collect excess aggregate within 24 hours of placement. Do not collect excess aggregate that has been rained on or driven on.

Table 3: Anticipated Cure Time (Hours)

Average Temperature of Deck, Epoxy and Aggregate Components, °F	1 st Course	2 nd Course
<60		(a)
60-64	2	2
65-69	2	2
70-74	1.75	1.75
75-79	1.75	1.75
80-84	1.5	1.5
>85	1	1
a. Second course must be cured for minimum of 8 hours if the air temperature drops below 60 °F during the curing period, or per the manufacturer's recommendations.		

Plan and execute the work to provide the minimum curing periods as specified in Table 3, or other longer minimum curing periods as recommended by the manufacturer prior to opening to public or construction traffic, unless otherwise permitted. Ensure first course applications are not opened to traffic. Remove any contamination, detrimental to adhesion of the second course, from the first course at Contractor's expense prior to the application of the second course.

Remove and replace any areas damaged or marred by the Contractor's operations in accordance with this special provision. All cost associated with this work will be borne by the Contractor.

Remove and replace areas as directed by the Engineer and in accordance with 20SP-712D – Removal of Thin Epoxy Polymer Bridge Deck Overlay.

Provide the Engineer with all records including, but not limited to, the following for each batch provided:

- batch numbers and sizes,
- location of batches as placed on deck, referenced by stations,
- epoxy yield, referenced by stations
- batch time,
- temperature of air, deck surface, epoxy components, including aggregates,
- loose aggregate removal time, and
- time open to traffic.

3. Clean Up. At the end of the project or a minimum 7 days after the epoxy polymer overlay has cured, remove, and dispose all loose aggregate that has shed from the epoxy binder by vacuuming or brooming. Do not re-use this aggregate.

e. Measurement and Payment. The completed work, as described, will be measured and

paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Epoxy Ovly	Square Yard

Epoxy Ovly includes preparing and cleaning the concrete surface, preparing and applying a two-coat epoxy overlay system on the concrete surface, and including miscellaneous clean-up. This pay item also includes cleaning and protecting bridge joints.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
RESEALING CONSTRUCTION JOINTS ON STRUCTURES

STM:JD

1 of 2

APPR:JAB:ARB:05-03-21

a. Description. This work consists of resealing construction joints on structures. Work includes removing any existing joint sealants and backer rods, cleaning the joints, and sealing with polyurethane or polyurethane hybrid sealants at the locations shown on the plans, or as directed by the Engineer. Perform all work in accordance with the standard specifications and standard plans, except as modified in this special provision.

b. Materials. Provide a solid, round, closed-cell, polyethylene foam backer rod meeting the requirements of *ASTM D5249, for Type 1 or Type 3*. Select a polyurethane or polyurethane hybrid sealant based on the performance requirements in Table 1 or as approved by the Engineer.

Table 1: Polyurethane or Polyurethane Hybrid Sealant Requirements

Property	Test Method	Minimum Result
Movement capability, %	<i>ASTM C719</i>	+35/-35
Tensile strength, psi	<i>ASTM D412</i>	175
Tear strength, pli	<i>ASTM D624</i>	35
Ultimate elongation at break, %	<i>ASTM D412</i>	400
Hardness, Shore A	<i>ASTM C661</i>	25
Tack-free time, hrs	<i>ASTM C679</i>	6
Adhesion in peel, pli	<i>ASTM C794</i>	20

Ensure non-sag polyurethane and polyurethane hybrids meet *ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A, O*

Ensure self-leveling polyurethane and polyurethane hybrids meet *ASTM C920, Type S, Grade P, Class 35, Use T, M, A, I*

Provide general certification per the *MQAP Manual* to the Engineer that the materials meet the requirements specified herein.

c. Construction.

1. Joint Preparation. Remove existing joint sealants and backer rods. Immediately prior to application of the polyurethane or polyurethane hybrid sealant, clean joint faces by abrasive blasting to remove all materials that may interfere with the bonding or curing of the sealant. Ensure the prepared joint faces meet the *International Concrete Repair Institute Guideline No. 03732*, concrete surface profile (CSP) 3. Use a vacuum or oil-free moisture-free air blast to remove all dust and other loose material. Remove any oil or other contamination after initial

cleaning. Ensure there is no visible moisture present on the surface of the concrete at the time of application. Place backer rod to a depth in accordance with the sealant manufacturer's recommendations.

2. Joint Sealing. Provide Engineer with manufacturer's recommended application procedures. Do not install sealant on concrete surfaces that are less than the age specified by the manufacturer's recommendations. Horizontal applications with a cross slope less than or equal to 6 percent may use a self-leveling or non-sag sealant. Horizontal applications with a cross slope greater than 6 percent and vertical applications must use a non-sag sealant. Do not place sealant if weather or surface conditions are such that the material cannot be properly handled, placed, and cured within the manufacturer's requirements and specified requirements of traffic control.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract price using the following pay item:

Pay Item	Pay Unit
Bridge Joints, Clean and Seal	Foot

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC, ROAD CLOSURE

MCRC:MLS

1 of 3

03-01-23

a. Description. Maintain traffic in accordance with the Michigan Manual of Uniform Traffic Devices (MMUTCD) 2011 Edition (as revised), sections 104.11, 812, and 922 of the Standard Specifications for Construction, as applicable, and as herein stated, and as directed by the Engineer.

b. Construction Influence Area. The Construction Influence Area (CIA) shall consist of the width of the existing right-of-way from the project point of beginning to the point of ending. The CIA shall extend a sufficient distance in each direction beyond the project beginning and ending to warn motorists of construction ahead per the appropriate Maintaining Traffic Typical. In addition, the CIA shall include the rights-of-way of any intersecting streets adjacent to the work zone for a distance of approximately 500 feet.

c. General. The Contractor shall be responsible for protecting vehicular and pedestrian traffic, work in progress, and construction workers in the CIA by implementing procedures described in this proposal, the MMUTCD, the Standard Specifications for Construction, and other applicable state and federal requirements.

The Contractor shall notify the Engineer a minimum of 72 business hours before implementing a road closure.

d. Traffic Restrictions. Close the road to traffic while work is being actively performed or while the work is curing and reopen the road to traffic after the work is completed.

No work shall be performed during the following holiday periods as listed in Table 1 or as defined by the Engineer.

Table 1: 2023 Holiday Shutdown Periods

Holiday	From	To
Memorial Day	3:00 p.m., Friday, 5/26/2023	6:00 a.m., Tuesday, 5/30/2023
Independence Day	3:00 p.m., Friday, 6/30/2023	6:00 a.m., Wednesday, 7/5/2023
Labor Day	3:00 p.m., Friday, 9/1/2023	6:00 a.m., Tuesday, 9/5/2023

Maintain access for emergency vehicles at all times. The Contractor will be required to assist emergency vehicles (fire, ambulance, police) in gaining access into, around, and through the work zone at all times without exception.

e. Traffic Control Devices. All traffic control devices and their usage shall conform to the Michigan Manual on Uniform Traffic Control Devices (MMUTCD) 2011 Edition and as specified herein.

All sign materials and supports must meet NCHRP 350 crashworthy requirements.

All temporary warning, regulatory, and guide signs must be removed, covered, or laid down with the legs removed when not in use.

Refer to Maintaining Traffic Typical 101-GEN-SPACING-CHARTS for device spacing, taper lengths, shift lengths, and buffer zones. Distances between the warning, regulatory, and guide signs shown on the typical are approximate and may require field adjustment as directed by the Engineer.

Erect Road Closed Ahead (W20-2) signs in advance of the first major side street on either side of the bridge as directed by the Engineer.

Erect a Type III barricade and Road Closed to Thru Traffic (R11-4) at the first major side street on either side of the bridge as directed by the Engineer.

Erect a Type III barricade and Road Closed (R11-2) at the first driveway on either side of the bridge as directed by the Engineer.

Utilize 28-inch traffic cones on both sides of the bridge to protect the workers and work. Traffic cones will not be paid for separately and are included in the unit price for **Maintaining Traffic, Road Closure**.

The estimated maximum quantity of dissimilar sign legends in use at one time is as follows:

Sign	Description	Size	Estimated Quantity	Area per Sign (Sft)	Type B Area (Sft)
W20-2	Road Closed Ahead	48" x 48"	2	16	32
R11-2	Road Closed	48" x 30"	2	10	20
R11-4	Road Closed to Thru Traffic	48" x 30"	2	10	20
Totals					72

f. Measurement and Payment. The completed work as measured will be paid for at the contract unit price for the following pay item:

Pay Item	Pay Unit
Maintaining Traffic, Road Closure.....	Each

The unit price for **Maintaining Traffic, Road Closure** includes the cost of the following items of work:

Item of Work	Quantity	Unit
Minor Traf Devices	1	Lump Sum
Sign, Type B, Temp, Prismatic, Furn	72	Square Feet
Sign, Type B, Temp, Prismatic, Oper	72	Square Feet
Type III Barricade, High Intensity, Double Sided, Lighted, Furn	4	Each
Type III Barricade, High Intensity, Double Sided, Lighted, Oper	4	Each

The estimated quantities are for informational purposes only and are based on the maximum quantity of dissimilar sign legends and traffic control devices in use at one time on the project.

Additional signing or temporary traffic control devices required to expedite the construction will be at the Contractor's expense.

MONROE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
MAINTAINING TRAFFIC, TRAF REGULATOR CONTROL

MCRC:MLS

1 of 3

03-01-23

a. Description. Maintain traffic in accordance with the Michigan Manual of Uniform Traffic Devices (MMUTCD) 2011 Edition (as revised), sections 104.11, 812, and 922 of the Standard Specifications for Construction, as applicable, and as herein stated, and as directed by the Engineer.

b. Construction Influence Area. The Construction Influence Area (CIA) shall consist of the width of the existing right-of-way from the project point of beginning to the point of ending. The CIA shall extend a sufficient distance in each direction beyond the project beginning and ending to warn motorists of construction ahead per the appropriate Maintaining Traffic Typical. In addition, the CIA shall include the rights-of-way of any intersecting streets adjacent to the work zone for a distance of approximately 500 feet.

c. General. The Contractor shall be responsible for protecting vehicular and pedestrian traffic, work in progress, and construction workers in the CIA by implementing procedures described in this proposal, the MMUTCD, the Standard Specifications for Construction, and other applicable state and federal requirements.

The Contractor shall notify the Engineer a minimum of 72 business hours before implementing a lane closure.

d. Traffic Restrictions. Maintain two-way traffic with a minimum of one lane of traffic at all times with traffic regulators.

Lane closures will not be permitted outside of normal working hours except as approved by the Monroe County Road Commission. Normal daytime hours are considered to be Monday through Saturday from 7 a.m. to 7 p.m.

No work shall be performed or lane closures allowed during the following holiday periods as listed in Table 1 or as defined by the Engineer.

Table 1: 2023 Holiday Shutdown Periods

Holiday	From	To
Memorial Day	3:00 p.m., Friday, 5/26/2023	6:00 a.m., Tuesday, 5/30/2023
Independence Day	3:00 p.m., Friday, 6/30/2023	6:00 a.m., Wednesday, 7/5/2023
Labor Day	3:00 p.m., Friday, 9/1/2023	6:00 a.m., Tuesday, 9/5/2023

Maintain access for emergency vehicles at all times. The Contractor will be required to assist emergency vehicles (fire, ambulance, police) in gaining access into, around, and through the work zone at all times without exception.

e. Traffic Control Devices. All traffic control devices and their usage shall conform to the Michigan Manual on Uniform Traffic Control Devices (MMUTCD) 2011 Edition and as specified herein.

All sign materials and supports must meet NCHRP 350 crashworthy requirements.

All temporary warning, regulatory, and guide signs must be removed, covered, or laid down with the legs removed when not in use.

Refer to Maintaining Traffic Typical 101-GEN-SPACING-CHARTS for device spacing, taper lengths, shift lengths, and buffer zones. Distances between the warning, regulatory, and guide signs shown on the typical are approximate and may require field adjustment as directed by the Engineer.

Signing for a lane closure shall be in accordance with Maintaining Traffic Typical 110-TR-NFW-2L except that Injure / Kill A Worker (R5-18b), Work Zone Begins (R5-18c), Reduced Speed Zone Ahead (W3-5b), Speed Limit (R2-1), and End Road Work (G20-2) signs will not be required where shown.

Channelizing devices for lane closures shall be 28-inch traffic cones. Traffic cones will not be paid for separately and are included in the unit price for **Maintaining Traffic, Traf Regulator Control**.

The estimated maximum quantity of dissimilar sign legends in use at one time is as follows:

Sign	Description	Size	Estimated Quantity	Area per Sign (Sft)	Type B Area (Sft)
W20-1	Road Work Ahead	48" x 48"	2	16	32
W20-4	One Lane Road Ahead	48" x 48"	2	16	32
W20-7a	Traffic Regulator (Symbol)	48" x 48"	2	16	32
W3-4	Be Prepared to Stop	48" x 48"	2	16	32
Totals					128

f. Measurement and Payment. The completed work as measured will be paid for at the contract unit price for the following pay item:

Pay Item	Pay Unit
Maintaining Traffic, Traf Regulator Control.....	Each

The unit price for **Maintaining Traffic, Traf Regulator Control** includes the cost of the following items of work:

Item of Work	Quantity	Unit
Minor Traf Devices	1	Lump Sum
Sign, Type B, Temp, Prismatic, Furn	128	Square Feet
Sign, Type B, Temp, Prismatic, Oper	128	Square Feet
Traf Regulator Control	1	Lump Sum

The estimated quantities are for informational purposes only and are based on the maximum quantity of dissimilar sign legends and traffic control devices in use at one time on the project.

Additional signing or temporary traffic control devices required to expedite the construction will be at the Contractor's expense.

NOTICE TO BIDDERS
UTILITY COORDINATION

MCRC:MLS

1 of 2

03-02-23

The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in subsection 104.08 of the Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in subsection 107.12 of the Standard Specifications for Construction. Contractor delay claims resulting from a utility will be determined based upon subsection 108.09 of the Standard Specifications for Construction.

For the protection of underground utilities and in conformance with Public Act 174 of 2013, the Contractor shall contact MISS DIG by calling (800) 482-7171 or by dialing 8-1-1 a minimum of three full working days, excluding Saturdays, Sunday and holidays, before beginning an excavation in an area where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who are not a part of the MISS DIG System.

Public Utilities

The following Public Utilities have facilities located within the Right-of-Way:

COUNTY DRAINS

Monroe County Drain Commissioner
1005 South Raisinville Road
Monroe, MI 48161
Attn: Tim Csurgo
Phone: 734-240-3110
Email: Tim.Csurgo@monroemi.org

ELECTRIC

DTE Energy
8001 Haggerty Road
Belleville, MI 48111
Attn: Bonnie Talaga
Phone: 734-397-4015
Email: bonnie.talaga@dteenergy.com

NATURAL GAS

DTE Gas Company
17150 Allen Road
Melvindale, MI 48122
Phone: 313-389-7261
Email: basel.djazmati@dteenergy.com

NATURAL GAS

Michigan Gas Utilities
899 South Telegraph Road
Monroe, MI 48161
Attn: Kristopher Kleinsmith
Phone: 734-457-6166
Email: KRKleinsmith@michigangasutilities.com

SANITARY

Berlin Township Water & Sewer Department
8000 Swan View Drive
Newport, MI 48166
Attn: Jason Dobson
Phone: 734-586-2187 x 6
Email: jason@berlintwp.net

SANITARY

City of Monroe
120 East First Street
Monroe, MI 48161
Attn: Scott Calloway
Phone: 734-625-2096
Email: scott.calloway@monroemi.gov

TELECOMMUNICATIONS

AT&T

17651 Michigan Avenue
Dearborn, MI 48126
Attn: Jasna Cehaja
Phone: 313-240-5602
Email: jc267g@att.com

TELECOMMUNICATIONS

Comcast

25626 Telegraph Rd
Southfield, MI 48034
Attn: Jeff Dobies
Phone: 248-808-2722
Email: Jeff_Dobies@cable.comcast.com

TELECOMMUNICATIONS

Frontier Communications

109 Randolph Street
Brooklyn, MI 49230
Attn: Harold Roth
Phone: 989-627-9759
Email: harold.roth@fr.com

WATER

Berlin Township Water & Sewer Department

8000 Swan View Drive
Newport, MI 48166
Attn: Jason Dobson
Phone: 734-586-2187 x 6
Email: jason@berlintwp.net

TELECOMMUNICATIONS

Buckeye Broadband

4818 Angola Road
Toledo, OH 43615
Attn: Michael Sheahan
Phone: 419-724-3713
Email: msheahan@telesystem.us

TELECOMMUNICATIONS

Everstream

300 South Washington Square, Suite 140
Lansing, MI 48933
Attn: Tadd Marcell
Phone: 906-396-7575
Email: tmarcell@everstream.net

TELECOMMUNICATIONS

Lumen (CenturyLink)

19675 West 10 Mile Road
Southfield, MI 48075
Attn: David Huckfeldt
Phone: 571-812-2592
Email: dave.huckfeldt@lumen.com

WATER

Frenchtown Township Water Department

5300 North Dixie Highway
Newport, MI 48166
Attn: Randy Kendall
Phone: 734-915-8799
Email: randykendall19@gmail.com

The owners of existing service facilities within the grading limits will protect or move them to locations designated by the Engineer or remove them entirely from the highway Right-of-Way. The County will not require owners of Public Utilities to move additional poles or structures to facilitate the operation of construction equipment unless the Engineer determines that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.