

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**COATING OF GALVANIZED LIGHTING, SIGNAL, SIGN, AND MISCELLANEOUS
SUPPORT STRUCTURES**

STR:SCK

1 of 3

APPR:POJ:MJF:04-10-20
FHWA:APPR:04-13-20

a. Description. This work consists of coating galvanized structural highway appurtenances (light standards, traffic signal mast arm, strain poles, etc.) as specified in the contract and subsection 716 of the Standard Specifications for Construction except as modified herein.

b. Material. Provide a liquid or powder coating system as described below or as approved by the Engineer.

1. Coating System.

A. Provide a powder coating system with an exterior grade polyester, polyurethane, or fluoropolymer top coat; or

B. Provide a liquid coating system with an aliphatic polyurethane, polyaspartic, polysiloxane, or fluoropolymer top coat.

2. Provide top coat dry film thickness per paint manufacturer's specifications or a minimum 2 mils, whichever is greater.

3. Selected top coat must meet or exceed the requirements of *American Architectural Manufacturers Association (AAMA) 2604*.

4. Use a tie coat to promote adhesion over galvanized surfaces, if recommended by the coating manufacturer. Apply tie coat by method and thickness as recommended by the coating manufacturer.

5. Provide top coat color per plan note.

6. Provide the coating manufacturer's recommended touch-up coating as required.

The coating manufacturer must furnish certification and test results for the top coat to the Engineer to verify that the material complies with *AAMA 2604*. If the coating manufacturer also recommends a tie coat for galvanized surfaces, submit tie coat product information to the Engineer, including tie coat application method and recommended thickness.

Ensure the fabrication plant is certified by the *American Institute of Steel Construction (AISC) Sophisticated Paint Endorsement* or *Society for Protective Coatings (SSPC)-QP 3* or *Certification Standard for Shop Application of Complex Protective Coating Systems* if applying liquid coating system. Ensure fabrication plant is certified by the *Powder Coating Institute (PCI)-4000* if applying powder coating system. If the powder coating is being applied by someone other than the original

equipment manufacturer then the coating company must possess a valid PCI 3000 certification.

c. Surface Preparation. Perform surface preparation in accordance with subsection 716.03 of the Standard Specifications for Construction.

d. Coating Process for Galvanized Steel. Provide the liquid or powder coating system per the paint manufacturer's recommendations, except ensure conditions for coating are in accordance with subsection 915.04 of the Standard Specifications for Construction unless the manufacturer recommends more stringent conditions. Out gas forgiving additive in compliance with *AAMA 2604* is permitted.

The powder coating applicator must carry out a preliminary test to establish whether out-gassing from the galvanizing is likely by testing parts where the zinc is thickest. Ensure the galvanized components are heated to a temperature at least 55 degrees Fahrenheit (F) higher than the coating curing temperature as provided by the coating manufacturer. Ensure the temperature is measured at the hottest point across the object during tests. If the substrate cannot be satisfactorily degassed sufficiently to minimize further out-gassing during baking, then ensure a specially formulated anti-gassing quality powder coating, or an anti-bubbling additive as per the manufacturer's recommendations, is used to minimize out-gassing.

Apply the paint system per paint manufacturer specifications including strict adherence to curing temperature and time except where the requirements listed in section 716 of the Standard Specifications for Construction are more stringent.

e. Construction. Ensure extreme care is exercised in handling the coated components in the shop, during shipping, and erecting of the structural highway appurtenances. Ensure coated pieces are not moved or handled until sufficient cure time has elapsed to ensure no damage is done to the coating. Ensure the coated components are insulated from the binding chains by softeners approved by the Engineer. Pad hooks and slings used to hoist steel. Space structural highway appurtenances in such a way that no rubbing will occur that may damage the coating during shipment and storage. Store the components on padded pallets at the job site, or by other means approved by the Engineer, so that the pieces do not rest on the ground and so that the components do not fall or rest on each other. Provide all shipping and storage details to the Engineer and ensure they are approved prior to shipment of the structural highway appurtenance.

Ensure shop and field repairs of coating are done in accordance with coating supplier's recommendations except where the requirements listed in this specification are more stringent. Submit all written procedures for shop and field repairs including the coating of nuts, bolts, and washers for approval to the Engineer prior to coating. Do not begin coating until approval is received from the Engineer. Repair or recoat surfaces which will be inaccessible for coating after erection prior to erection. When the erection work has been completed, including all connections, prepare the steel for repairs. The cost of all repairs will be borne by the Contractor.

f. 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 |
|--|-----------------|
| Coating Galvanized Support Structures..... | Each |

Coating Galvanized Support Structures will be measured as a unit for each complete (e.g.

traffic signal mast arm and pole) highway structure that is coated and includes the cost of surface preparation, applying the tie coating, applying the complete coating system, stenciling, applying approved sealants, and shop and field repairing the complete coating system.

Galvanizing and repair of damaged galvanized surfaces is included in the pay item for furnishing the galvanized component.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
**PRECAST CONCRETE PEDESTAL SIGNAL FOUNDATION AND PRECAST
UNDERGROUND SERVICE PEDESTAL (METAL) FOUNDATION**

STR:POJ

1 of 1

APPR:RWS:MJF:06-02-20

FHWA:APPR:06-04-20

a. Description. This work consists of fabricating, furnishing, and installing precast concrete foundations to be used for pedestal pedestrian signals and underground service pedestals (metal), as shown in the contract, and in accordance with the standard specifications except as modified herein.

b. Materials.

1. Concrete. Use concrete grade 3500 or 3500HP in accordance with section 1004 of the Standard Specifications for Construction.
2. Anchor bolts. Use *ASTM F1554 Grade 36*.
3. Reinforcing Steel. Must meet section 905 of the Standard Specifications for Construction.
4. Open-Graded Aggregate, 34R.

c. Fabrication. Fabricate at a commercial precast facility certified by *Precast/Prestress Concrete Institute (PCI)*, *National Precast Concrete Association (NPCA)*, or *American Concrete Pipe Association (ACPA)*. Provide quality control and notify the Engineer prior to fabrication to provide the opportunity for quality assurance inspection. The Engineer may elect to forego this inspection but not the certification requirements. Provide steel reinforcement as necessary to protect foundations from any shipping, handling, or installation damage. Precast foundations are subject to rejection by the Engineer for visible damage or improper material documentation during fabrication and at time of delivery and installation.

d. Construction. Ensure precast pedestal signal foundations are placed plumb and level in the excavation on 6 inches of 34R open-graded aggregate, with an annular space of 3-6 inches. Fill the annular space with 34R in one-foot lifts and compact each lift. Restore disturbed areas in kind in accordance with section 816.

e. Measurement and Payment. The completed work, as described, will not be paid for separately but will be included in the associated pay item(s) covered in subsection 820.04 of the Standard Specifications for Construction.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SPAN WIRE TETHER

SIG:EMS

1 of 1

APPR:NJB:HLO:03-21-24
FHWA:APPR:03-18-24

a. Description. This work consists of furnishing and installing hardware, connector hangers, fittings, stabilizer bar, pole clamps, tri-stud and 2 nested extension plates, 22 inches minimum length associated stainless steel fasteners and a span wire tether.

Bottom tether or top tether traffic signal heads as shown on plans or as directed by the Engineer.

b. Materials. Furnish material meeting the requirements of sections 818, 820, and 921 of the Standard Specifications for Construction.

- 1. Furnish tether span wire that is 5/16 inch nominal diameter for spans without tie-offs or with tie-offs, extra high-strength grade, 7-strand, galvanized, Class A, zinc-coated steel meeting the requirements of *ASTM A475*. Maintain clearance of 17 feet over roadway.
- 2. Ensure pole clamps, turnbuckle, tether wire to breakaway link connection, and all other components in the load path from the wire to the pole are galvanized steel.
- 3. Ensure three-way pull-off clamp or bull ring, galvanized or stainless, can resist a single pull load of 6,570 pounds minimum. Ensure breakaway link breaks at 3,325 pounds.
- 4. Materials will be accepted based on certification and visual inspection.

c. Construction. Complete this work in accordance with sections 818, 820 and 921 of the Standard Specification for Construction, as shown on the plans, and as directed by the Engineer.

Where installation is specified, install the span wire tether on existing or new signal head(s) at location(s) shown on the plans. Furnish, install, remove, or install on the project, a span wire tether, as shown on the plans or as directed by the Engineer.

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 |
|------------------------|-----------------|
| Span Wire Tether | Each |

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
TRAFFIC SIGNAL WORK - CONSTRUCTION METHODS

SIG:EMS

1 of 2

APPR:HLO:NJB:04-29-20
FHWA:APPR:05-06-20

a. Description. This special provision is for electrical construction and/or relocation of traffic signal facilities is to be used in addition to the applicable sections of the standard specifications. In case of conflict use whichever is most restrictive.

b. Materials. Furnish new material and equipment, unless specified otherwise, and comply with sections 918 and 921 of the Standard Specifications for Construction. Materials furnished by the Department to the Contractor will be picked up by the Contractor at such site as designated by either MDOT, or the Local Agency representing MDOT, with any associated costs included in pay items as indicated on the plans and will not be paid for separately.

1. General. Provide manufacturer's certifications, in accordance with the specifications, for all wire and cable and other items or as directed by the Engineer. Do not install any wire or cable before it has been approved by the Engineer. Include statement "Materials are in accordance with the Specifications" on their material order, especially on wire and cable.

Reuse only the best of the existing material and equipment where the contract calls for reuse of existing material and equipment as directed by the Engineer. The Department will have the right to furnish the Contractor with a new part if any are found defective prior to dismantling. Any part or parts damaged by the Contractor subsequent to starting the removal are a liability of the Contractor.

Furnish the Engineer an as-built record of all underground or overhead work installed within 5 days after completion of each section of the underground conduit, cable or overhead line work. This record must include the size and length of cable and duct lines, location of the lines, handholes and manholes, and location and size of support poles. Tag and stamp all wires and cables using a brass tag indicating the source and use of the cable.

Connect the ground wire to the ground rod with a UL rated copper or bronze ground clamp.

c. Construction. All work must comply with sections 819 and 820 of the Standard Specifications for Construction, the applicable "typical" signal construction details, this special provision, and requirements of the *NEC, National Electrical Safety Code (NESC)*, and the Michigan Department of Licensing and Regulatory Affairs (LARA). Contact the LARA for electric service inspection and be responsible for payment of all applicable fees.

1. Maintain all existing street lighting, traffic signal, primary, transmission, communication cables, etc. circuits in an operational condition, unless otherwise noted on the plans or as directed by the Engineer.

2. In addition to subsections 104.07 and 812.03 of the Standard Specifications for

Construction, the following applies to Contractor maintenance of permanent or temporary traffic signal installations which are being worked on by the Contractor:

A. The Contractor is responsible for maintaining any portion of a traffic signal which has been worked on by the Contractor until final acceptance of that specific location.

B. If MDOT forces are required to work on an emergency traffic signal malfunction that is determined to have been caused by the work of a Contractor, the cost of the work will be the responsibility of the Contractor.

C. If vandalism occurs to equipment that is not energized, the Contractor is responsible for replacement.

3. Utility Coordination. Notify the System Operating Division of the local utility 72 hours in advance of any work on underground or overhead transmission or distribution circuits. If possible, the System Operating Division will shutdown and red tag the line by 8 a.m. for the day requested. Notify the System Operating Division when the work is complete.

Provide coordination and make arrangements, as described above, to work on traffic signal circuits.

Schedule, coordinate, install, and pay for work provided by the local utility company(s), as indicated on the plans or as directed by the Engineer. The Engineer will not authorize payment for delay caused by the Contractor's failure to properly schedule and coordinate any utility work.

4. Agency Coordination. Secure all necessary permits covering the operations, including permits from the Public Authorities having jurisdiction over the streets, or other Public Properties in which the work is located, and the improvements therein. Obtain the amount of any charges for payment, including fees or inspection charges required by such authorities, and include the cost of these fees in the bid prices.

The local traffic authority may impose restrictions regarding particular times of certain days of the week wherein the Contractor cannot perform work and may, in fact, be required to clear the area of work obstacles or construction equipment. The Contractor must take note of this and there will be no extra payment to perform the work with possible restrictions imposed. The Engineer will not authorize extra payment if the Contractor chooses to perform work during overtime status.

5. Ensure construction is performed by persons who are experienced and qualified for the work required. On-site licensed (Journeyman electrician) supervision is required for the electrical system installation (including placement of traffic loops, conduits, and/or cables in dirt, foundations, and handholes) and must be present at all times when electrical construction is in progress. Ensure the ratio of electrical journeymen or master electricians to registered apprentice electricians is on the basis of one electrical journeyman or master electrician to one registered apprentice electrician in accordance with Michigan Law section 338.883e. This ratio is to be enforced on a jobsite basis. For traffic signal work a single jobsite is defined as a single intersection or single electronic traffic control device.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SPAN WIRE

SIG:EMS

1 of 1

APPR:MLO:SCK:07-31-23
FHWA:APPR:08-08-23

a. Description. This work consists of furnishing and installing hardware, connector hangers, fittings, bull rings or three-way pull-off connections, span wire clamps, pole band clamps, associated stainless steel fasteners and a span wire.

b. Materials. Furnish material meeting the requirements of sections 818, 820, and 921 of the Standard Specifications for Construction.

1. Furnish span wire that is 5/16 inch nominal diameter for spans without tie-offs and 1/2 inch nominal diameter for spans with tie-offs, extra high-strength grade, 7-strand, galvanized, Class A, zinc-coated steel meeting the requirements of *ASTM A475*. Maintain clearance of 17 feet over roadway.

2. Ensure pole clamps and all other components in the load path from the wire to the pole are galvanized steel, capable of resisting a load of 6,570 pounds minimum for 5/16 inch nominal diameter span wire and 13,705 pounds minimum for 1/2 inch nominal diameter span wire without permanent distortion.

3. Ensure three-way pull-off connection or bull ring, galvanized or stainless steel, can resist a single pull load of 13,705 pounds minimum.

4. Materials will be accepted based on certification and visual inspection.

c. Construction. Complete this work in accordance with sections 818, 820 and 921 of the Standard Specifications for Construction, as shown on the plans, and as directed by the Engineer.

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 |
|-----------------|-----------------|
| Span Wire | Each |

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PEDESTAL, UNDERGROUND SERVICE, METERED AND UNMETERED

SIG:EMS

1 of 2

APPR:BA:HLO:05-05-20
FHWA:APPR:05-06-20

a. Description. This work consists of installing or removing a complete pedestal for underground (UG) electrical service, either metered and/or unmetered. A complete pedestal UG electrical service includes the pedestal, meter socket (as required), brackets, hardware, fittings, connectors, cable, conduit, risers, grounding, and all appurtenant material required to complete the work.

b. Materials. Provide pedestal(s) in accordance with this special provision. Provide hardware, connectors, cable, conduit, and all other appurtenant materials in accordance with sections 918 and 921 of the Standard Specifications for Construction. Provide other required material, not specifically addressed in the Standard Specifications for Construction, in accordance with local utility company requirements and the *NEC*. Ensure the UG electrical service pedestal is in accordance with the following:

1. Suitable for mounting on a foundation as shown on the plans;
2. Fabricated from stainless steel;
3. Equipped with a 3- to 6-circuit, load center, 100 ampere service rated;
4. Neutral and ground lugs installed 15 inches from grade;
5. Customer door to have gasket on all four sides and equipped with a main door lock, Corbin no. 15481RS, Pelco (Type II) SM-1025 or equivalent Lock to be constructed of nonferrous or stainless materials, which operates with a Traffic Industry conventional #2 key, Corbin No. 1R6380 or Pelco (Type II) SM-0198-2 or equivalent. Ensure a minimum of two keys are included for the main door of each cabinet.
6. Ensure unmetered pedestal are no greater than: Width = 12.00 inches, Depth = 8.25 inches, Height = 32.00 inches; and
7. Ensure metered pedestal are no greater than: Width = 12.00 inches, Depth = 8.25 inches, Height = 52.00 inches.

c. Construction. Complete this work in accordance with sections 819 and 820 of the Standard Specifications for Construction, per the contract, and this special provision.

Contact the local power company and coordinate installation or removal, of underground electrical service power feed and meter and meter sockets as required, as indicated on the plans or as directed by the Engineer.

Where installation of new underground service, metered, is called for on the plans, install a new meter socket and provide bonding in compliance with MDOT, *NEC*, *National Electrical Safety Code (NESC)* and local utility company requirements. Use weatherproof LB's to enter and exit all meters, service disconnects, and controllers. Complete additional work required by the local utility company to make a complete and operating installation.

Where removal is called for on the plans, complete removal work in accordance with MDOT, *NEC*, *NESC*, and local utility company requirements.

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

| Pay Item | Pay Unit |
|--|-----------------|
| Pedestal, Underground Serv, (type) | Each |
| Pedestal, Underground Serv, Rem | Each |

1. **Pedestal, Underground Serv, (type)** includes the work as described, including additional work required by the local utility company to make a complete and operating installation.

2. **Pedestal, Underground Serv, Rem** includes the work as described, including additional work required by the local utility company to remove a complete pedestal for underground electrical service.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
MICRONIZED COPPER WATER BASED WOOD PRESERVATIVE SYSTEMS

STR:SCK

1 of 1

APPR:HLZ:POJ:04-13-20
FHWA:APPR:04-13-20

a. Description. Micronized copper water based wood preservative systems are an alternate to the preservative systems identified in section 912 of the Standard Specifications for Construction, except on wood posts used for signing. Micronized copper water based wood preservative systems are proprietary systems used to treat timber and lumber for resistance to insect attack, decay, and rot. Proprietary micronized copper based wood preservative systems are evaluated by the *International Code Council Evaluation Service, Inc (ICC-ES)*. This special provision covers the requirements for micronized copper azole (MCA) and micronized copper quaternary (MCQ).

b. Materials. *ICC-ES* requirements and specified commercial standards are incorporated herein by reference. Treated wood product reports issued by the *ICC-ES* as Evaluation Service Reports (ESRs) must be current as posted on the *ICC-ES* website <https://icc-es.org/> and in compliance with AC326. The preservative(s) must not contain arsenic. The treated wood product's report must allow for the wood species and end use that is required by the project specifications. The Contractor must provide test data certification for each lot, that the treated timber and lumber meets the retention requirements of the appropriate *AWPA* Use Category.

Condition and treat timber and lumber for above ground use to the minimum preservative retention corresponding to *AWPA* Use Category 4A (UC4A). Condition and treat timber and lumber for ground contact to the minimum preservative retention corresponding to *AWPA* Use Category 4B (UC4B).

Condition and treat all round posts, except northern white cedar, to the minimum preservative retention corresponding to *AWPA* Use Category 4B (UC4B).

Incorporation of timber and lumber treated to the preservative retention in *AWPA* Use Category 3B (UC3B) or less is not permitted. Timber and lumber placed in violation of this special provision is cause for removal and replacement at the contractor's expense. No pay adjustments will be allowed for incorporation of timber and lumber treated to UC3B preservative retention. Removal is required.

c. Construction. Use stainless steel fasteners or hot dipped galvanized fasteners in accordance with *ASTM A653/A653M*, batch or post-dipped process, with a minimum coating thickness of 1.85 oz of Zinc per square foot of surface area (G185). Do not mix fastener types. Do not use aluminum fasteners. Aluminum must not be in direct contact with treated wood. Non metallic spacers are to be used where contact with aluminum could occur.

d. Measurement and Payment. Payment is included in other items of work.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS
FOR
WOOD POLE REVISIONS

SIG:HJK

1 of 1

APPR:SCK:HLO:11-14-24
FHWA:APPR:11-21-24

Delete the third paragraph of subsection 918.11, on page 9-157 of the Standard Specifications for Construction, in its entirety and replace with the following.

Treat the full length of pressure treated poles with 4,5-dichlor-2-N-octyl-4-Isothiazolin-3-one (DCOI) in accordance with the AWPAs Processing and Treatment Standard for the Use Category System (UCS).

CITY OF KALAMAZOO

SPECIAL PROVISION

FOR

PAVT, REM, MODIFIED

Wightman/PTS

1 of 1

6/09/2025

a. Description. This work consists of removing HMA, concrete, bricks, sand and gravel interlayers, embedded rails, masonry, and any other common pavement material or combination of materials, regardless of thickness, reinforcement, and overlays.

b. Materials. None Specified

c. Construction. Remove pavement to an existing joint or sawed joint. Saw cut pavement full depth in a straight neat line as directed by the Engineer. Do not use a crane and ball pavement breaker. Do not disturb remaining pavement. Remove and dispose of existing HMA pavement, reinforced or non-reinforced concrete pavement, and other materials in accordance with subsection 204.03 of the Standard Specifications for Construction. From Sta. 63+38 to Sta. 83+00 Salvage any existing brick pavers encountered in the pavement section and stockpile at a centralized location onsite for pickup and removal by the City. Take care not to chip, break, or otherwise damage existing brick pavers during removal.

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 |
|--------------------------|-----------------|
| Pavt, Rem, Modified..... | Square Yard |

The limits of **Pavt, Rem, Modified** will be established as noted on the plans or at the discretion of the Engineer. The unit price includes all labor, equipment, and materials to salvage brick pavers and saw cut, remove, haul and dispose of the pavement, embedded rails, sand and gravel interlayers regardless of thickness.

CITY OF KALAMAZOO

SPECIAL PROVISION
FOR

EROSION CONTROL, INLET PROTECTION, FABRIC DROP, MODIFIED

Wightman/PTS

1 of 1

06/09/2025

a. Description. This work consists of furnishing and installing acceptable inlet protection devices (devices) listed in the *Soil Erosion and Sedimentation Control Manual* when the pay item Erosion Control, Inlet Protection, Fabric Drop, Modified is included in the contract.

b. Materials. The following devices are approved for use, or approved equal:

1. Siltsack Type B, Regular Flow with or without Curb Deflector, by ACF Environmental, Inc.
2. Inlet Pro Sediment Bag, Standard Flow, with or without foam deflector by Hanes Geo Components.
3. Dandy Curb Bag, Dandy Bag, Dandy Curb Sack, Dandy Sack, or Dandy Pop by Dandy Products, Inc.
4. Flexstorm Catch-It and Flexstorm Pure used with filter bag types FX, FX+, FXO, PC, PC+ or IL.

Fabric drops installed in curb inlets shall have a curb filter or deflector integrated into the product that fits across the curb back opening.

Ensure provided devices are sized appropriately for the drainage structures in which they will be installed.

c. Construction. Install, maintain and remove the devices in accordance with the manufacturer's guidelines. Remove material collected by the devices in accordance with the manufacturer's guidelines or as directed by the Engineer.

Dispose of collected material in accordance with subsection 205.03.P of the 2020 MDOT Standard Specifications for Construction. Those devices that are no longer needed and have been removed may be reused elsewhere on the project as approved by the Engineer.

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 |
|--|-----------------|
| Erosion Control, Inlet Protection, Fabric Drop, Modified | Each |

Erosion Control, Inlet Protection, Fabric Drop, Modified will be paid for as one each for each time the device listed herein is installed, maintained, and removed at a separate location within the project limits.

CITY OF KALAMAZOO
SPECIAL PROVISION
FOR

WATERBORNE PERMANENT PAVEMENT MARKINGS

Wightman/PTS

1 of 1

06/09/2025

a. Description. This work consists of providing all labor, material, and equipment necessary to prepare pavement surfaces and apply retroreflective permanent waterborne pavement markings. Ensure preparation of pavement surfaces and application of materials is in accordance with this special provision, the contract, 2020 MDOT Standard Specifications for Construction, Michigan Manual on Uniform Traffic Control Devices, manufacturer’s recommendations, and as directed by the Engineer.

b. Material. Provide material for waterborne pavement markings and glass beads in accordance with section 920 of the 2020 MDOT Standard specifications for Construction and from the Qualified Product List.

c. Construction. Install retroreflective permanent waterborne pavement markings of the type indicated at the specified locations or at the direction of the Engineer in accordance with section 811 of the 2020 MDOT Standard specifications for construction. Legends and symbols shall be of the appropriate shape and dimensions as provided for in the most recent edition of the Michigan Manual on Uniform Traffic Control Devices.

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

| Pay Item | Pay Unit |
|--|-----------------|
| Pavt Mrkg, Waterborne, ___ inch, (type), Modified..... | Foot |
| Pavt Mrkg, Waterborne, (legend/symbol), Modified..... | Each |
| Pavt Mrkg, Waterborne, ___ inch, Cross Hatching, (color), Modified..... | Foot |
| Pavt Mrkg, Waterborne, ___ inch, Dotted Thru Guide Line, (color), Modified..... | Foot |
| Pavt Mrkg, Waterborne, ___ inch, Solid Turning Guideline, (color), Modified..... | Foot |

Removing curing compound, removing existing pavement marking, or recessing pavement markings required for the work in this special provision will be paid for separately under the respective pay items.

CITY OF KALAMAZOO

SPECIAL PROVISION

FOR

RELATIONS AND RESPONSIBILITY TO THE PUBLIC

COK

Page 1 of 1

6/9/2025

- a. Description.** The contractor shall notify the engineer when the first day of construction is planned no less than 10 business days prior to the start of the work. Following this correspondence, the City will issue a press release, media notice or other general form of notification to all the city's residents of the planned work. No work shall be performed prior to the issuance of this notice.

Additional notification shall be provided to the residents directly affected via door hanger notices no less than 72 hours before their street is planned to receive work. The contractor will provide preprinted door hanger material to carry the contractor's message. Message content must be approved by the engineer prior to printing and distribution. The responsibility for filling out the door hangers and distributing them will be the contractor's. Payment for this work will not be paid separately, but payment will be considered as having been included in the contract unit prices bid for other contract items. No work shall be performed prior to the distribution of these door hangers.

24 hours before every construction operation that will substantially affect a resident or business adjacent to the project site, (such as driveway closures, mailbox relocation, etc.) the contractor will notify residents or businesses affected. The contractor shall assist the City in coordination of work and mitigating impacts to the extent possible while maintaining construction schedules and ensuring project completion.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SLOPE RESTORATION, NON-FREEWAY

RSD:NJM

1 of 5

APPR:DMG:JJG:11-30-23

a. Description. This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket, permanent turf reinforcement mat (TRM), bonded fiber matrix (BFM), or modified mulch blanket to those areas. Ensure turf establishment is in accordance with section 816 and 917 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

b. Materials. The materials, application rates, and construction methods specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. Furnish the following materials on this project:

1. Seeding mixture as called for on the plans.
2. Chemical fertilizer nutrient, Class ___.
3. Topsoil. The following percentages of furnished and salvaged topsoil are estimated for this project and provided for informational purposes only.

Topsoil Furnished: 30 percent

Topsoil Salvaged: 70 percent

4. Mulching material.
5. Permanent Turf Reinforcement Mat (TRM) for Slope Restoration, Non-Freeway, Type D, must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

| <u>Property</u> | <u>Test Method</u> | <u>Requirement</u> |
|-------------------------|--------------------|--------------------|
| Mass/Unit Area | ASTM D6566 | 10 oz/syd |
| UV Stability @ 1000 hrs | ASTM D4355/D4355M | 80 percent |
| Tensile Strength (MD) | ASTM D6818 | 165 lbs/ft |

Acceptance. Supply a general certification for the permanent TRM from one of the following manufacturers or approved equal:

| | | |
|--------------|---------------------------------------|----------------|
| Recyclex TRM | American Excelsior Co., Arlington, TX | (800) 777-7645 |
| P300 TRM | North American Green, Poseyville, IN | (800) 772-2040 |

| | | |
|------------------|--------------------------------------|----------------|
| Landlok 450 TRM | Propex, Inc., Chattanooga, TN | (800) 621-1273 |
| Excel PP5-10 TRM | Western Excelsior, Evansville, IN | (866) 540-9810 |
| Vmax P550 TRM | North American Green, Poseyville, IN | (800) 772-2040 |

6. Bonded Fiber Matrix (BFM) for use in Slope Restoration, Non-Freeway, Type E. Furnish a product from the list below or an approved equal.

| | | |
|----------------|---|----------------|
| Soil Guard | Mat Inc., Floodwood, MN | (888) 477-3028 |
| HydroStraw BFM | HydroStraw, LLC, Rockford, WA | (800) 545-1755 |
| HydraMax | North American Green, Poseyville, IN | (800) 772-2040 |
| Bindex BFM | American Excelsior Co., Arlington, TX | (800) 777-7645 |
| ProMatrix EFM | Profile Products LLC, Buffalo Grove, IN | (800) 508-8681 |

If multiple grades of the selected product are available, use the grade appropriate for the application as approved by the Engineer.

Approved equal BFMs must consist of long strand, virgin wood fibers (90 percent by weight) bound together by a pre-blended, high-strength polymer adhesive (10 percent by weight). The virgin wood fibers will be thermally refined from clean whole wood chips. Ensure the organic binders are a high-viscosity colloidal polysaccharide tackifier with activating agents to render the resulting matrix insoluble upon drying.

7. Modified Mulch Blanket. Where modified mulch blanket is required, furnish an excelsior mulch blanket free of chemical additives. Ensure the netting thread is 100 percent biodegradable and manufactured with non-plastic materials such as jute, sisal, or coir fiber. Degradable, photodegradable, UV-degradable, oxo-degradable, or oxo-biodegradable plastic netting including polypropylene, nylon, polyethylene, and polyester is not an acceptable alternative. All netting materials must have a loose weave design with movable junctions between the machine and cross-machine direction twines that move independently and reduce the potential for wildlife entanglement.

For Slope Restoration, Non-Freeway, Type F, furnish a single net modified mulch blanket from the list below or an approved equal.

| | | |
|-----------------------------------|----------------------------|----------------|
| Premier Straw Single Net FibreNet | American Excelsior Co. | (800) 777-7645 |
| Curlex NetFree 100% Biodegradable | American Excelsior Co. | (800) 777-7645 |
| ECS-1B Biodegradable Single Straw | East Coast Erosion Control | (800) 582-4005 |
| S1000BD Single Net | Enviroscape ECM, Ltd. | (888) 550-1999 |
| Excel SR-1 All Natural | Western Excelsior Corp. | (866) 540-9810 |
| S75BN | Western Excelsior Corp. | (866) 540-9810 |

For Slope Restoration, Non-Freeway, Type G, furnish a double net modified mulch blanket from the list below or an approved equal.

| | | |
|-----------------------------------|----------------------------|----------------|
| Premier Straw Double Net FibreNet | American Excelsior Co. | (800) 777-7645 |
| Curlex II FibreNet | American Excelsior Co. | (800) 777-7645 |
| ECX-2B Double Net Biodegradable | East Coast Erosion Control | (800) 582-4005 |
| S2000BD Double Net | Enviroscape ECM, Ltd. | (888) 550-1999 |
| Excel R-2 All Natural | Western Excelsior Corp. | (866) 540-9810 |
| Excel SS-2 All Natural | Western Excelsior Corp. | (866) 540-9810 |
| S150BN | Western Excelsior Corp. | (866) 540-9810 |

c. Construction. Ensure construction methods are in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for slope restoration but no later than the maximum time frames specified in subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact, and ensure all areas to be seeded are weed-free prior to placing topsoil. Place topsoil to the minimum depth as detailed herein and in accordance with the plans and standard specifications to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, fill this additional depth using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work.

Ensure topsoil is weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2-inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface. Incorporate seed into top 1/2-inch of topsoil.

Spread mulch at a rate of two tons per acre. If the Engineer allows dormant seeding spread mulch at a rate of 3 tons per acre. Place mulch anchoring over the mulch at a rate in accordance with subsection 816.03.F of the Standard Specifications for Construction. Place mulch blanket and high-velocity mulch blanket in accordance with subsection 816.03.G of the Standard Specifications for Construction and Standard Plan R-100 Series.

Install areas constructed with the TRM on prepared (seeded) grades as shown on the plans in accordance with the manufacturer's published installation guidelines. Anchor the top edge of the TRM in a minimum six-inch deep trench. Operation of equipment on the slope is prohibited after placement of the TRM. No credit for splices, overlaps, tucks, or wasted material will be made.

Mix the BFM and organic binders thoroughly at a rate of 40 pounds for each 100 gallons of water or as otherwise recommended by the manufacturer. Hydraulically apply the BFM slurry in successive layers, from two or more directions, to fully cover 100 percent of the soil surface. Ensure the minimum application rate is at least 3000 pounds of BFM for each acre or otherwise apply in accordance with the manufacturer's recommendations as appropriate depending on site conditions.

Do not apply BFM on saturated soils or immediately before, during, or after rainfall.

Install modified mulch blanket in accordance with the manufacturer's published guidelines and as directed by the Engineer.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed, and mulch treatment. This replacement will be paid for as additional work using the applicable pay items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at no cost to the contract.

The Engineer will inspect the seeded turf to ensure it is well-established, in a vigorous growing condition, and contains the species called for in the seeding mixture.

If the seeded turf is not well-established at the end of the first growing season, the Contractor is responsible to re-seed until the turf is well established and approved by the Engineer at no cost to the contract.

Provide weed control, if weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, in accordance with subsection 816.03.I of the Standard Specifications for Construction. Weed control will be at no additional cost to the contract.

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

| Pay Item | Pay Unit |
|---|-----------------|
| Slope Restoration, Non-Freeway, Type __ | Square Yard |

1. Place **Slope Restoration, Non-Freeway, Type A** in all areas not described in the other types of slope restoration and will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type A** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; Mulch; and Mulch Anchoring.

2. Place **Slope Restoration, Non-Freeway, Type B** parallel (8 feet minimum) to the edge of the roadway in areas that have a 1 on 3 slope or less, in any ditch with a grade less than 1.5 percent, as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type B** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type B** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Mulch Blanket.

3. Place **Slope Restoration, Non-Freeway, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type C** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type C** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Mulch Blanket, High Velocity.

4. Place **Slope Restoration, Non-Freeway, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type D** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type D** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Turf Reinforcement Mat.

5. Place **Slope Restoration, Non-Freeway, Type E** as shown on the plans, or as directed by the Engineer and measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type E** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Bonded Fiber Matrix.

6. Place **Slope Restoration, Non-Freeway, Type F** parallel (8 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope or less, and in any ditch with a grade

less than 1.5 percent. **Slope Restoration, Non-Freeway, Type F** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and single net modified Mulch Blanket.

7. Place **Slope Restoration, Non-Freeway, Type G** in areas that have a 1 on 2 slope and in any ditch with a grade of 1.5 percent to 3 percent. **Slope Restoration, Non-Freeway, Type G** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and double net modified Mulch Blanket.