

# **MATERIALS SOURCE GUIDE**

**August 2021**



**CONSTRUCTION FIELD SERVICES  
DIVISION**

## FOREWORD

This manual has been prepared to give information and guidance to personnel associated with sampling, testing and inspection of materials used in Michigan Department of Transportation and Federal Aid Secondary projects. Its purpose is to supplement the Materials Quality Assurance Procedures (MQAP) Manual, Hot Mix Asphalt (HMA) Production Manual, Procedures for Aggregate Inspection, Density Control Handbook, and the Michigan Construction Manual to standardize procedures and assure adequate, uniform quality control.

Buy America step certification is required for pay items and materials as listed in the document located at the following web link: [http://www.michigan.gov/documents/mdot/MDOT\\_BuyAmericaStepCertPayItems\\_401954\\_7.pdf](http://www.michigan.gov/documents/mdot/MDOT_BuyAmericaStepCertPayItems_401954_7.pdf) Please also review the Special Provision for Source of Steel and Iron (Buy America), 20SP105(A) at the following web link: [https://mdotcf.state.mi.us/public/dessssp/spss\\_source/20SP-105A-01.pdf](https://mdotcf.state.mi.us/public/dessssp/spss_source/20SP-105A-01.pdf) To reference The Buy America - Compliance Listing of Approved Manufacturers, Qualified Products List and Tested Stock Suppliers navigate to the following web link: [http://www.michigan.gov/mdot/0,4616,7-151-9622\\_11044\\_11367-291113--,00.html](http://www.michigan.gov/mdot/0,4616,7-151-9622_11044_11367-291113--,00.html)

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      \  
      Construction Field Services – Manuals; Materials Source Guide

Periodically check the website for updates to the Materials Source Guide. Updated guides can be downloaded and printed.

## TABLE OF CONTENTS

<u>Title</u>	<u>Page</u>
Definitions .....	4
Index (In reference to the Materials Acceptance Requirements Table) .....	11
Materials Acceptance Requirements, including Special Instructions, copied from the MDOT Materials Quality Assurance Procedures Manual Chapter 6 .....	27
Approved Suppliers List.....	55
Approved Manufacturers List.....	59
Qualified Products List.....	68
Selecting and Shipping Samples .....	91
Appendix	
Visual Inspection Items by Quantity - Alphabetical.....	93
Visual Inspection Items by Quantity - by Specification Number.....	95

This manual is in accordance with the 2020 Standard Specifications for Construction.

## DEFINITIONS

(References to the Materials Quality Assurance Procedures Manual-MQAP)

**BASIS OF ACCEPTANCE:** Refers to the method by which materials incorporated into MDOT projects are accepted. Below is a list of all the current Basis of Acceptance methods used by MDOT for acceptance of materials.

- **Visual Inspection (VI):** (See MQAP Section 1.06) Materials which may be visually inspected by MDOT personnel for acceptance or rejection. When a maximum VI limit is given for materials with another specified basis of acceptance, materials may be accepted by VI up to maximum VI quantities as indicated for that material, per item, per contract. (NOTE: All materials should be visually inspected prior to incorporation into the job without quantity limit, and may be rejected on that basis even though material may be acceptable on another basis.)
- **General Certification (Gen Cert):** (See MQAP Section 2.01) When this certification is specified as the basis of acceptance in the contract documents, it must be provided in accordance with Section 2.01 of the MQAP. A general certification must include a general description of the material(s), a list of the applicable specifications (ASTM, AASHTO, MDOT or other designations as appropriate), and a statement that the material(s) conforms to these specifications.
- **Test Data Certification (Test Data Cert):** (See MQAP Section 2.01) When this certification is specified as the basis of acceptance in the Materials Acceptance Requirements Table, in addition to the requirements of a General Certification, the certification must also include laboratory test report(s) for samples obtained from the same lot(s), batch, heat, etc. of material represented by the certification and tested according to applicable specifications (ASTM, AASHTO, MDOT).
- **Approved Manufacturer (Appr Mfr):** (See MQAP Section 2.02) A manufacturer who has submitted quality control documentation and/or material samples, and has been given approval status to certify specific material(s). General Certification per the requirements of Section 2.01 of the MQAP must accompany all Approved Manufacturer shipments to either an Approved Supplier location or the MDOT project site. Strict adherence to the requirements for Certification Documentation and Distribution is required of all Approved Manufacturers.
  - **Approved Supplier:** (See MQAP Section 2.02) When Approved Manufacturer is specified as the basis of acceptance in the contract documents, the material must be supplied by the manufacturer or, **without modification** to the material, by an Approved Supplier. An Approved Supplier must recertify Approved Manufacturer material(s). Strict adherence to the requirements for Certification Documentation and Distribution is required of all Approved Suppliers for the recertification of material(s). All original Approved Manufacturer General Certification(s) must accompany the material(s) shipment to the MDOT project site. When Approved Manufacturer is specified, a supplier may not distribute or recertify material(s) unless they have been granted Approved Supplier status.
- **Special Provision:** Revisions and additions to the Standard and Supplemental Specifications applicable to an individual project. Special Provisions have been reviewed and approved for use by MDOT. Materials acceptance may be defined by these documents included in the project proposals.
- **Fabrication Inspection (Fabrication Inspection):** Materials subjected to Fabrication Inspection are those that are typically manufactured offsite and shipped to the project. Refer to the proper subsection of the Structural Fabrication Quality Manual (SFQM) to find the requirements of the various Fabrication Inspections currently performed by MDOT.

- **Acceptance Testing (Test):** Sampling and testing of a material to determine compliance with specification requirements prior to incorporation into the project. Acceptance testing is the required basis of acceptance for some materials, as indicated in the contract documents, but may be applied to all materials regardless of the basis of acceptance.

#### OTHER DEFINITIONS

**Manufacturer:** A producer or fabricator of materials with control over the quality, workmanship and handling of material.

**Supplier:** A supplier has no control, other than through careful handling, over the quality and workmanship of material.

#### CERTIFICATION DOCUMENTATION

(See MQAP Section 2.01)

Where more than one piece of paper is included in the certification document, all pages must be numbered ( \_\_\_ of \_\_\_ ) and include Contract I.D. in order to reunite them should they become separated.

Stencil, stamp, or otherwise mark all certified material prior to delivery to a supplier or project. This mark must identify the AASHTO, ASTM, or MDOT specification that the material meets, to allow the material to be recognized and checked against the certification document.

**General Certification** – This documentation must consist of all of the following:

- Company name, address and contact information.
- Date the certification was produced.
- Contract number (Control Section/Job Number).
- Name of contractor.
- If material is certified by a supplier or Contractor, the manufacturer's name must be included on the certification.
- A list of all applicable specifications (ASTM, AASHTO, MDOT or other designations as appropriate) which the material is certified to meet.
- Any applicable specification modifier such as class, grade, type, etc.
- Name of material (MDOT designation and Spec Number).
- Identification markings on shipment as required by the General Materials Certification Procedures, in the Quality Assurance Procedures Manual, Section 2.01.03.B.
- A statement, signed by a responsible representative of the manufacturer, supplier, or Contractor that the material represented by the certification meets all MDOT listed specification requirements.

**Test Data Certification** - When this certification is specified as the basis of acceptance in the Materials Acceptance Requirements Table, in addition to the requirements of a General Certification, the following information must also be included:

- Laboratory test report(s) for samples obtained from the lot(s) of material represented by the certification and tested according to applicable specifications (ASTM, AASHTO, MDOT).

### CERTIFICATION DISTRIBUTION

All certification documents except those issued by Approved Manufacturers/Approved Suppliers must be distributed as follows: Submit to the Construction/Project Engineer. The Contractor is ultimately responsible for all materials documentation distribution to the Project Engineer's office.

Approved Manufacturer/Approved Supplier Certifications must follow the above distribution requirements with the addition of one a copy being mailed, emailed, or faxed on the date of shipment to:

Michigan Department of Transportation  
Construction Field Services Division  
Materials Control  
P.O. Box 30049  
Lansing, Michigan 48909  
Facsimile: (517) 322-5664  
Email: MDOT-MaterialsControl@michigan.gov

### CERTIFICATIONS AND RECERTIFICATIONS

Information required on certifications may vary from one material to the next. The following examples of certification documents are ONLY provided for reference.

#### MATERIALS SOURCE LIST (See MQAP Section 1.04)

A completed and signed Materials Source List (Form 501) is required project documentation, and required for payment of associated items of work. The Materials Source List is not a substitute for other required material quality control and quality assurance documentation. Prime contractors are responsible for accurate submission of the Materials Source Lists for all materials including their subcontractors.



**Enter Your Company Letterhead/Logo Here  
(Name, Address, Contact Info)**

**GENERAL CERTIFICATION**

Date: \_\_\_\_\_ Name of Contractor: \_\_\_\_\_

Control Section/Project #: \_\_\_\_\_ Project/Job Location: \_\_\_\_\_

We certify that the following described materials/products meet the specification requirements of the MICHIGAN DEPARTMENT OF TRANSPORTATION, ASTM, or AASHTO.

**MDOT MATERIAL NAME:** *As described in the MDOT Materials Source Guide*

**MDOT SPEC #:** *As described in the MDOT Materials Source Guide*

**LOT #, HEAT OR IDENTIFICATION:**

**CLASS, GRADE OR TYPE:**

**SIZE OR WEIGHT:**

**Signature of Company Representative**

**Printed Name of Company Representative**

**Title of Company Representative**

**DISTRIBUTION:** Submit to the Construction/Project Engineer



**Enter Your Company Letterhead/Logo Here  
(Name, Address, Contact Info)**

**APPROVED SUPPLIER RECERTIFICATION**

Contract ID: \_\_\_\_\_  
Control Section/Job #: \_\_\_\_\_ DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

We certify that the following described material meets the specification requirements of the MICHIGAN DEPARTMENT OF TRANSPORTATION for the above project and this material is certified by the manufacturers indicated below.

<b>MDOT MATERIAL NAME:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MDOT SPEC #:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MANUFACTURER:</b>
<b>LOT, HEAT OR IDENTIFICATION:</b>
<b>QUANTITY:</b>
<b>MDOT MATERIAL NAME:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MDOT SPEC #:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MANUFACTURER:</b>
<b>LOT, HEAT OR IDENTIFICATION:</b>
<b>QUANTITY:</b>
<b>MDOT MATERIAL NAME:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MDOT SPEC #:</b> <i>As described in the MDOT Materials Source Guide</i>
<b>MANUFACTURER:</b>
<b>LOT, HEAT OR IDENTIFICATION:</b>
<b>QUANTITY:</b>

All steel furnished on this certification is of domestic origin and is in compliance with the project "Buy America" provision.

**Signature of Company Representative**

**Printed Name of Company Representative**

**Title of Company Representative**

**DISTRIBUTION:** Submit to the Construction/Project Engineer. Submit one additional Copy MAILED or FAXED to Construction Field Services Division, MDOT, P.O. BOX 30049, LANSING, MI 48909. FAX # (517)322-5664 or via email to MDOT-MaterialsControl@michigan.gov , COMPLETE ON DATE OF MATERIAL SHIPMENT.

MATERIALS ACCEPTANCE REQUIREMENTS TABLE  
DEFINITIONS

Sampling Frequency: **(If Required)** Amount of material or number of items, as defined in the Materials Acceptance Requirements Table or other contract documents, which require a sample when submitting material to the Construction Field Services Division for testing.

Size of Sample: **Minimum** size of sample required for testing as defined in the Materials Acceptance Requirements Table or other contract documents.

Maximum VI Quantity: Maximum amount of material which can be accepted by visual inspection for each material, per item, per project.

Remarks: Special notes pertaining to individual materials.

Special Instructions: More detailed information pertaining to particular types of materials, and referenced in "Remarks" or listed in the Materials Source Guide.

**NOTE:** When the Basis of Acceptance is not "Test", the sampling criteria provided may be used as guidance if the Project/Construction Engineer determines there may be a problem with the material and requests sampling and testing.

ALPHABETICAL INDEX  
 TO 2020 MATERIAL SPECIFICATION NUMBERS  
 IN THE MATERIAL ACCEPTANCE REQUIREMENTS TABLE

-A-

ABS Pipe .....	909.07A1
Abrasive, Low Dusting Blasting .....	715.02 & 716.02
Abutment Backfill .....	902
Adhesive Systems for Structural Anchors and Lane Ties .....	712.03J
Adhesive Systems for Dowel Bars & Tie Bars .....	603.03B2
Adjusting Rings for Manholes and Drainage Structures (Recycled Rubber) .....	909.01
Adjusting Rings for Manholes and Drainage Structures (Precast Concrete) .....	913.06
Admixture, Air Entraining .....	903.01
Admixture, Latex Emulsion for Concrete .....	903.03
Admixture, Mineral Filler, Bituminous Mixtures .....	902
Admixture, Pozzolanic (Fly Ash) for Concrete .....	901.07
Admixture, Water Reducing, Retarding, and/or Liquid Accelerators .....	903.02
Admixture for Expansive Grout Type E-1 .....	1005.02C
Aggregates .....	902
Air Entraining Admixture .....	903.01
Aluminum Alloy Pipe (Corrugated) .....	909.05B
Aluminum Alloy Sheets, Corrugated .....	909.05B
Aluminum Alloy Structural Plate .....	Misc. #9
Aluminum Sheets for Signs .....	919.02A3
Anchor Bolts, Studs, Rods .....	908.14
Anchor Bolts and Nuts, Other Purposes .....	908.14D
Anchors, Concrete Adhesive Bonded (Resin) .....	712.03J
Anchors, Expansion .....	712.03K
Approved Manufacturers .....	Page 58
Approved Suppliers .....	Page 54
Arrow Bars, Lighted .....	922.07
Arrow Boards, Type C Solar Assist .....	922.07
Asphalt Binder .....	904.03A
Asphalt Emulsion, Bond Coat .....	904.03C
Asphalt Release Agents .....	501.02
Asphalt Rubber, Overband Crackfill .....	502.02B
Assemblies, Load Transfer .....	914.07

Back-up Plates for Guardrail .....	908.11C
Backer Rod, Foam.....	914.04B
Backfill, Abutment.....	902
Band Clamps, Strain Pole.....	921.05A
Bar Chairs.....	905.03D
Barbed Wire.....	907.03B
Barricades.....	922.03E
Barrier Reflectors.....	922.04A
Barrier Reflectors, Temporary .....	922.04A
Bases, Precast Concrete.....	913.07
Baskets, Dowel, Load Transfer .....	914.07
Beam Guardrail.....	908.11A
Beam Plates, Sealant for Perimeter .....	713.02B
Bearings, Elastomeric.....	914.12A
Bent Tie Bars, Lane Ties .....	914.09
Biaxial Geogrid, Road Grade.....	910.06
Bituminized Fiber Joint Filler .....	914.03
Bituminized Fiberglass and Cotton Fabric.....	Misc. #14
Bituminous Materials (Asphalt Binder) .....	904.03A
Blasting Abrasive, Low Dusting.....	715.02 & 716.02
Blasting Abrasive, Steel Grit.....	715.02
Block, Concrete .....	913.05
Bolts, Mechanical Expansion Anchors .....	914.10
Bolts, Adhesive Anchor Systems.....	914.10
Bolts, Anchor, Studs, Rods.....	908.14
Bolts, Anchor, Other Purposes.....	908.14D
Bolts, High Strength.....	906.07
Bond Release Agent, Concrete (Dowel Bars) .....	914.07A3
Bonded Anchors, Concrete Adhesive .....	712.03J
Brick, Clay and Sand Lime .....	913.03
Brick, Concrete .....	913.03C
Bridge Deck Drain Extensions, Fiberglass .....	909.08C
Bridge Railing, Base Plate and Post Elements .....	908.09A
Bridge Railing, Hardware.....	908.09C
Bridge Railing, Tube, Parapet .....	908.09B
Bridge Railing, Tube, Rectangle (Galvanized) .....	908.09A
Bridge Sign Connections .....	810.03O
Bushings for Pins and Link Plates.....	707.02

Cable, Electrical.....	918.03
Cable, Prestress Strand .....	905.07
Calcium Chloride .....	922.12A
Calcium Chloride Concrete Accelerators .....	903.04
Cantilever, Sign Support.....	919.07
Caps, Expansion for Dowel Bars.....	914.07C
Casing, Steel Pipe.....	909.05D
Cast Iron Pipe.....	Misc. #2
Castings, Miscellaneous Metals (Manhole).....	908
Catch Basins.....	908
Cedar Posts (Wood Fence).....	912.07B
Cement .....	901
Certification Verification of Cement .....	901
Certification Verification of Expansive Grout .....	1005.02C
Chain Link Fence Fabric.....	907.04A
Chairs, Steel Reinforcement.....	905.03D
Chemical Fertilizer for Grass Seeding.....	917.10
Chemical Weed Sprays .....	917.16
Class A, B and F Bury Plastic Pipe .....	909.06
Clay Brick.....	913.03
Clay Pipe .....	Misc. #3
Closed-Cell Polypropylene Foam Joint Filler .....	914.03C
Coarse Aggregate.....	902
Coating for Dowel Bars.....	914.07A2
Coating for Rebar, Epoxy .....	905.03
Coating Systems for Steel Structures, Hangers Assemblies and End Diaphragms (Prime, Intermediate, Top).....	915
Cobblestone .....	916.01A
Cold Applied Pipe Joint Sealer (Mastic).....	909.09
Cold Plastic Pavement Marking, Permanent.....	811.03D4
Cold Plastic Pavement Marking, Temporary (Tape) .....	922.06A
Column Break-Away Sign Support.....	919.06
Compost.....	917.08
Compression Gasket .....	909.03
Concrete Adhesive System for Bonded Anchors (Resin).....	712.03J
Concrete Barriers, Temporary .....	922.04
Concrete Barrier Reflectors .....	922.04A
Concrete Bases, Precast.....	913.07
Concrete Block .....	913.05

Concrete Brick .....	913.03C
Concrete End Sections, Precast.....	909.04E
Concrete Expansion Anchors .....	712.03K
Concrete Pipe, Reinforced and Non-Reinforced .....	909.04A - C
Conduit, Electrical.....	918.01, 918.01A, B, D, F
Conduit, Electrical (Polyethylene).....	918.01D & E
Cones, Traffic .....	922.03A
Contraction Baskets .....	914.07
Copper Sheet (Waterstop).....	908.08
Corrugated Aluminum Alloy Pipe.....	909.05B
Corrugated Aluminum Alloy Sheets.....	909.05B
Corrugated Poly-Pipe, Culverts and Sewers .....	909.06
Corrugated Poly-Tubing, Underdrains .....	909.07B
Corrugated Plate, Structural .....	Misc. #8
Corrugated Steel Pipe .....	909.05A
Corrugated Steel Pipe (Polymer Coated).....	909.05A1
Corrugated Steel Sheets .....	909.05A1
Cotton Fabric, Bituminized .....	Misc. #14
Coupling Bands .....	909.05A3
Cover, Sign .....	922.02D
Covers and Lids, Manholes .....	908
Crack Injection .....	914.06
Culvert, Cast Iron.....	Misc. #2
Culverts, Class B .....	909.06
Curing Compound.....	903.06
Curtain, Turbidity .....	916.07
Cut-offs for Piling .....	906.05

-D-

Deck Drain Extensions, Bridge.....	909.08C
Deformed Steel Bars for End-of Pour Joint Devices .....	914.08
Delineator Posts, Flexible.....	919.03D
Delineator Posts, Steel .....	919.03D
Delineator Reflectors .....	919.03A, B
Dense Graded Aggregate.....	902
Detectable Warning Surfaces.....	803.02B
Dimension (Sawed) Posts, Wood.....	912.08
Ditch Lining (Geotextile Blanket) .....	910.03A
Dowel Bar Grouting Systems .....	603.03B2

Dowel Bars for Load Transfer (Steel) .....	914.07
Dowel Baskets, Load Transfer .....	914.07
Downspouts, Bridge Deck .....	909.08A
Downspouts, Culvert .....	909.08B
Drain Pipe (Underdrain).....	909.07A, B
Drainage Marker Post.....	909.10
Drainage Casting, Misc. Metals.....	908
Drainage Structures, Precast Reinforced Concrete .....	913.06
Drainage Structure Adjusting Rings, Precast Concrete .....	913.06
Ductile Iron Castings .....	908.05
Ductile Iron Pipe .....	Misc. #2
Dust Palliative, Calcium Chloride .....	922.12A

-E-

Edge Drain (Tubing) .....	909.07B
Elastomeric Bearings.....	914.12A
Elastomeric Leveling Pads .....	914.12B
Electrical Cable.....	918.03
Electrical Conduit (Galvanized Steel and Non-Metallic).....	918.01A
Electrical Conduit (Polyethylene).....	918.01D
Electrical Conduit (Polyvinyl Chloride) .....	918.01B
Electrical Traffic Control Devices.....	921.03
Embedded, Galvanic Anodes .....	712.03Y
Emulsified Asphalt.....	904.03C
Emulsion, Latex Admixture for Concrete.....	903.03
End Sections, Grate, for Culverts.....	401.03E
End Sections, Slope, Steel.....	909.05C
End Sections, Steel .....	909.05C
End Sections, Precast Concrete.....	909.04E
End Sections, Guardrail.....	908.11A
End-of-Pour Joint Devices/Deformed Steel Bars .....	914.08
Epoxies for Adhesive Systems .....	712.03J
Epoxy Binder, Joint Spall Repair.....	914.05
Epoxy Coated Dowel Bars.....	914.07A
Epoxy Coated Steel Reinforcing Bars .....	905.03
Epoxy Coating for Bar Reinforcement.....	905.03
Epoxy Coating for Dowel Bars.....	914.07A2
Epoxy Mastic .....	712.03D
Epoxy Resin Adhesive for Crack Injection .....	914.06

Excelsior Mulch Blankets.....	917.15B
Expansion Anchors, Structure .....	712.03K
Expansion Baskets .....	914.07
Expansion Caps for Dowel Bars.....	914.07C
Expansion Joint Devices, Bridge.....	706.03K4
Expansive Grout Type E-1, Admixture .....	1005.02C
External Type Gasket for Pipe.....	909.03
Extruded Aluminum Sections for Sign Panels.....	919.02A1

-F-

Fabric, Bituminous, Cotton, Fiberglass .....	Misc. #14
Fabric, Filter, for Underdrain (Geotextile Blanket).....	910.03A
Fabric for Chain Link Fence .....	907.04A
Fabric for Woven Wire Fence.....	907.03A
Fabric Reinforcement, Welded Steel Wire (Mesh) .....	905.06
Fast Set Patching, Hydraulic Mortar.....	1006
Fence, High Tensile Wire .....	907.05A
Fence, Horizontal Rail .....	907.04C
Fence Fabric, Chain Link.....	907.04A
Fence Fabric, Woven Wire .....	907.03A
Fence Gates, Chain Link.....	907.04D
Fence Gates, Woven Wire .....	907.03F
Fence Pedestrian, Posts and Rail .....	907.04C
Fence Protective.....	907.06
Fence Posts, Steel.....	907.04C
Fence Posts, Wood .....	(907.03E & 907.05B) 912.07B
Fertilizer .....	917.10
Fiber Joint Filler, Bituminized .....	914.03
Fiberglass Fabric .....	Misc. #14
Filter Bags, Geotextile Blanket .....	910.03A
Filter Fabric for Wrapped Underdrain (Knitted Sock) .....	910.03A
Fine Aggregate .....	902
Flexible Metal Conduit .....	918.01
Fly Ash, Mineral Filler for Bituminous Mixtures .....	902
Fly Ash, Pozzolanic Admixture for Concrete .....	901.07
Foam Backer Rod.....	914.04B
Foundation Piling.....	906.05

-G-



Galvanic Anodes, Embedded .....	712.03Y
Galvanized Bridge Tube Railing .....	908.09B
Galvanized Conduit, Electrical.....	918.01A
Galvanized Slotted Drain Pipe.....	Misc. #5
Galvanized Steel Sheets, Corrugated .....	909.05A1
Gasket, Compression .....	909.03
Gasket, External Type for Pipe.....	909.03
Geocomposite Wall Joint Drain .....	910.05B
Geogrid, Biaxial Road Grade.....	910.06
Geotextile Blanket.....	910.03A
Geotextile Pipe Wrap Liner.....	910.03A
Geotextile Rip Rap Liner .....	910.03B
Geotextile Separator.....	910.03C
Geotextile, Stabilization .....	910.03D
Glare Screen.....	804.01
Glass Beads, Standard.....	920.02B
Granular Material .....	902
Grass Seed.....	917.12
Gray Iron Castings.....	908.05
Grit, Steel, Blasting Abrasive.....	715.02
Grounding Rods.....	918.02C
Grounding System.....	918.02
Grout Under Masonry Plates .....	712.03X
Grout, For Full-Depth Concrete Pavement Repairs .....	603.03B2
Grouting Cracks by Pressure Injection, Intrusion.....	914.06
Grouts and Mortars.....	1005.02A, B, C
Guar Gum Base Adhesive, Mulch Binder.....	917.15C
Guardrail Anchorage, Bridge, Beam Elements, End Sections, Shoes and Departing End Terminals .....	908.11A
Guardrail Approach Terminals.....	908.11A
Guardrail Hardware .....	908.11B
Guardrail Offset Blocks, Recycled Plastic or Rubber .....	912.08Q
Guardrail Posts and Blocks, Wood (Dimension Sawed) .....	912.08
Guardrail Posts for Beam Guardrail, Steel .....	908.12
Guardrail Reflectorized Washer .....	908.13
Guardrail Steel Beam Elements .....	908.11A
Guide Posts .....	912.07B
Guy Wire, Electrical .....	918.11A

H Piling .....	906.05
Handholes, Polymer, Light Weight Composite.....	918.06D
Handholes, Precast .....	918.06
Hanger Assemblies, Coating Systems .....	915
Hardware, Fence .....	907.04E
Hardware, Guardrail .....	908.11B
Hardware, Sign .....	919.02C
Headwall, Precast Concrete .....	401.03E
Herbicide, Spray .....	917.16
High Strength Steel Bolts, Nuts and Washers.....	906.07
High Tensile Fence Wire .....	907.05A
Highway Lighting Materials (Luminaires) .....	918.09
Hollow Load and Non-Load Bearing Block (Concrete).....	913.05
Hot-Poured Joint and Crack Sealant .....	914.04A
Hydraulic Anchor Systems .....	712.03J

-I-

Insulation, Blankets and Polystyrene.....	903.07C & D
Interim Linseed Oil Curing Compound .....	903.07A
Iron Pipe, Cast and Ductile Iron and Fittings .....	Misc. #2

-J-

Jacked-In-Place Steel Pipe .....	909.05D
Joint Filler .....	914.03, 914.03B, 914.03C
Joint Filler, Fiber (Bituminized) .....	914.03
Joint and Crack Sealant, Hot-Poured .....	914.04A
Joint Sealer, Pipe Gaskets (O-Ring) .....	909.03
Joint Sealer for Pipe, Cold Applied (Mastic) .....	909.09
Joint Spall Repair Materials .....	914.05
Joint Wall Drain, Geocomposite .....	910.05B

-K-

-L-

Lane Ties .....	914.09
Latex Base Adhesive for Mulch .....	917.15C
Latex Emulsion Admixture for Concrete .....	903.03
Lead Sheet (Waterstop) .....	908.07
Light Standards.....	918.08

Lighted Arrows .....	922.07A
Limestone Dust, Bituminous Mineral Filler .....	902
Liner for Riprap .....	910.03B
Link Plates for Steel Bridge Construction .....	906.08
Linseed Oil Interim Curing Compound .....	903.07A
Liquid Asphalt, MC & RC-250.....	904.03B
Load Transfer, Dowel Bars (Steel) .....	914.07
Load Transfer Assemblies, Dowel Baskets.....	914.07
Load-Bearing Block (Concrete) .....	913.05
Loop Sealant, Traffic.....	921.08B
Low Dusting Blasting Abrasive .....	715.02 & 716.02
Lumber, Structural .....	912.05
Luminaires .....	918.09

-M-

Mail Box Posts .....	912.07B
Malleable Iron Castings .....	908.03
Manhole, Block .....	913.05
Manhole, Brick .....	913.03C
Manhole Castings .....	908
Manhole Covers and Lids.....	908
Marking Tape, Cold Plastic, Permanent.....	811.03D4
Marking Tape, Temporary Lane .....	922.06A
Masonry Plate, Grout.....	712.03X
Masonry Units, Precast Drainage.....	913.06
Mastic (Cold Applied Joint Sealer for Pipe) .....	909.09
Mechanical Reinforcement Splicing .....	712.03L
Membrane, Preformed Waterproofing .....	914.11
Membrane Curing Compound .....	903.06
Mesh Reinforcement (Pavement).....	905.06
Metal End Sections.....	909.05C
Metallic Waterstop, Sheet Copper.....	908.08
Metallic Waterstop, Sheet Lead.....	908.07
Mineral Filler for Bituminous Mixtures .....	902
Mortars and Grouts.....	1005.02A, B, C
Mulch Anchoring .....	917.15C
Mulch Binder, Tackifiers, Non-Asphalt Emulsion .....	917.15C
Mulch Blanket, Excelsior and Straw .....	917.15B2
Mulch Blanket, High Velocity .....	917.15B1

Mulch Blanket, Straw .....	917.15B2
Mulching Materials for Nursery Stock.....	917.14
-N-	
Non-Load Bearing Block.....	913.05
Non-Reinforced Concrete Pipe.....	909.04C
Non-Shrink Mortars and Grouts, Type H1 (Non-Metallic) .....	1005.02B
Nursery Stock (Trees, Bushes) .....	917.03
-O-	
O-Ring, Compression Gasket.....	909.03
Open-Graded Aggregate .....	902
Outlet, Drainage Pipe (Underdrain) .....	909.07C1, 2, & 3
Outlet Ending (Underdrain) .....	404.02C
Overband Crackfill .....	502.02B
-P-	
PVC Sanitary Sewer Pipe.....	909.06
Paint for Coating Existing Steel Structures (Prime, Intermediate, Top) .....	915
Paint for Pavement Marking .....	811.03D
Patching, Fast Set Hydraulic Mortar.....	1006
Pavement Lane Ties.....	914.09
Pavement Marking Cover (Temporary) .....	922.06C
Pavement Marking, Standard Glass Beads .....	920.02B
Pavement Marking, Modified Epoxy .....	811.03D8
Pavement Marking, Polyurea .....	811.03D7
Pavement Marking, Thermoplastic, Liquid .....	811.03D5
Pavement Marking, Thermoplastic, Sprayable .....	811.03D6
Pavement Marking, Thermoplastic, Preformed .....	811.03D9
Pavement Marking, Waterborne, Liquid, Paint.....	811.03D1
Pavement Marking Regular Dry Paint .....	811.03D3
Pavement Marking Tape, Cold Plastic .....	811.03D4
Pavement Marking Tape, Type R/NR.....	922.06A
Pavement Markers, Raised (Temporary) .....	922.06B
Pavement Reinforcement (Mesh).....	905.06
Pavement Tie Bars .....	914.09
Penetrating Water Repellents.....	706.03S
Perforated Poly-Tubing, Underdrain.....	909.07B
Pile Points.....	906.05
Piling, H Piling and Special Sections.....	906.05
Piling, Steel Sheet .....	906.06

Piling, Steel Shells.....	906.05
Piling, Timber.....	912.06
Pipe, Cast and Ductile Iron.....	Misc. #2
Pipe, Clay.....	Misc. #3
Pipe, Concrete.....	909.04A - C
Pipe, Corrugated Aluminum Alloy.....	909.05B
Pipe, Corrugated Polyethylene (CPE/HDPE).....	909.06
Pipe, Corrugated Steel.....	909.05A
Pipe, Downspouts.....	909.08A, B
Pipe, Gasket.....	909.03
Pipe, Plastic, Class A, B and F Bury.....	909.06
Pipe Joint Sealers.....	909.09
Pipe, Steel Casing.....	909.05D
Pipe Wrap, Geotextile.....	910.03A
Plastic Drums.....	922.03
Plastic Guardrail Blocks.....	912.08Q
Plywood for Signs.....	919.02A2
Poles, Tower Lighting.....	918.10A
Polyethylene Pipe for Culverts and Sewers(CPE/HDPE).....	909.06
Polyethylene Tubing for Underdrain.....	909.07B
Polymer Coated Corrugated Steel Pipe.....	909.05A1
Polystyrene, Insulation.....	903.07D
Polyvinyl Chloride Pipe (CPV/PVC).....	909.06
Portable Signs.....	922.07C
Post Tensioning, Tendons.....	905.08
Posts, Delineator, Flexible (Plastic).....	919.03D
Posts, Delineator, Steel.....	919.03D
Posts, Dimension Sawed (Wood).....	912.08
Posts, Drainage Marker.....	909.10
Posts, Mailbox.....	912.07B
Posts, Signs, Steel.....	919.04
Posts, Wood for Fencing.....	912.07B
Posts, Wood Sign.....	912.08, 919.05
Posts for Chain Link Fence (Steel).....	907.04C
Posts for Woven Wire Fence (Steel).....	907.03D
Pozzolanic Admixture for Concrete (Fly Ash).....	901.07
Precast Concrete Bases.....	913.07
Precast Concrete Box Sections.....	909.04D
Precast Concrete End Sections.....	909.04E

Precast Concrete 3 Sided or Arch Sections.....	909.04G
Precast Concrete Handholes.....	918.06
Precast Concrete Headwalls .....	401.03E
Precast Reinforced Concrete Drainage Structures .....	913.06
Precast Sumps .....	913.07
Prefomed Waterproofing Membrane .....	914.11
Premixed Grouts and Mortars, Type H1 (Non-Metallic) .....	1005.02B
Prestress Strand for Concrete .....	905.07
Prestressed Concrete Beams.....	708.03A
Protective Coating for Concrete, Water Repellent .....	706.03S
Protective Fence.....	907.06

-Q-

Qualified Products List.....	Page 68
------------------------------	---------

-R-

R C 250, Liquid Asphalt Waterproofing Primer .....	904.03B
Railing, Bridge Tube Element (Galvanized) .....	908.09B
Raised Pavement Markers (Temporary) .....	922.06B
Recertifiers.....	Page 54
Recycled Plastic or Rubber Guardrail Offset Block.....	912.08Q
Recycled Rubber Adjusting Rings .....	909.01
Recycled Rubber Joint Filler.....	914.03B
Reflective Sheeting.....	919.02B1
Reflective Sheeting, Temporary Signs .....	922.02B
Reflectorized Washers, Guardrail.....	908.13
Reflectors, Delineator .....	919.03A, 919.03B
Reflectors, Concrete Barriers .....	922.04A
Reflectors, Concrete Barriers, Temporary.....	922.04A
Regular Dry Pavement Marking Paint .....	811.03D3
Reinforced Concrete Pipe .....	909.04A
Reinforcing Steel Bars .....	905.03
Release Agents, Asphalt.....	501.02
Retarding Admixtures .....	903.02
Rip Rap.....	916.01C
Road Grade Biaxial Geogrid.....	910.06
Rubber, Recycled, Joint Filler.....	914.03B
Rustic Construction, Timber .....	912.09

Sand Lime Brick.....	913.03
Sawn Wood Posts and Blocks.....	912.08
Sealant for Perimeter of Beam Plates .....	713.02B
Sealer for Pipe Joints, Cold Applied (Mastic) .....	909.09
Seeding Mixtures .....	917.12
Selecting and Shipping Samples.....	Page 91
Separator, Geotextile.....	910.03C
Sewer Pipe, Concrete.....	909.04A - C
Sewer Pipe, PVC Sanitary.....	909.06
Shear Developers (Studs) .....	906.09
Sheet Copper (Waterstop).....	908.08
Sheet Lead (Waterstop) .....	908.07
Sheeting, Reflective.....	919.02B1
Sheeting, Reflective, Temporary Signs .....	922.02B
Shelf Life, Curing Compound (Linseed Oil Base).....	903.07A
Shipping and Selecting Samples.....	Page 91
Shotcrete, Waterproofing.....	710.03D
Shredded Bark, Mulching Materials.....	917.14
Sign Hardware .....	919.02C
Sign Paddles.....	922.11
Sign Posts.....	919.04, 919.05
Sign Support, Cantilever .....	919.07
Sign Support, Truss.....	919.08
Signals, Electrical Traffic Control.....	921.03
Signs, Permanent .....	919.02
Signs, Portable .....	922.07C
Signs, Temporary, Prismatic .....	922.02
Signs, Temporary, Cover.....	922.02D
Signs, Temporary, Reflective Sheeting .....	922.02B
Silt Fence (full assembly) .....	916.02
Silt Fence Geotextile (fabric only).....	910.04
Slag Cement .....	901.06
Sleeves, Steel for Guardrail.....	908.11C
Sleeves, Steel for Wood Sign Posts.....	919
Slope Paving Block.....	913.09
Slotted Drain Pipe, Galvanized.....	Misc. #5
Sod .....	917.13
Span Wire, Electrical .....	921.02

Splicing, Reinforcement (Mechanical) .....	712.03L
Sprays, Chemical (Weed Control) .....	917.16
Stabilization Geotextile .....	910.03D
Standard Mortars and Grouts .....	1005.02A
Steel Barbed Wire.....	907.03B
Steel Beam Guardrail Elements .....	908.11A
Steel Castings.....	908.04
Steel Grit Blasting Abrasive.....	715.02
Steel H Piling .....	906.05
Steel Pipe, Jacked-In-Place .....	909.05D
Steel Posts for Beam Guardrail .....	908.12
Steel Posts for Fence .....	907.03D, 907.04C
Steel Posts for Signs .....	919.04
Steel Reinforcing Bars.....	905.03
Steel Sheet, Corrugated Galvanized.....	909.05A1
Steel Sheet Piling .....	906.06
Steel Sleeves for Guardrail.....	908.11C
Steel Sleeves for Wood Sign Posts.....	919
Straight Tie Bars, Lane Ties .....	914.09
Strain Poles (Traffic Signal).....	921.05
Strain Pole Band Clamps.....	921.05A
Strand for Prestressed Concrete.....	905.07
Straw Mulch Blankets .....	917.15B
Structural Plate for Pipe (Corrugated) .....	Misc. #8
Structural Steel .....	906.04
Structural Tile.....	913.08
Structural Timber and Lumber.....	912.05
Structure Expansion Anchors .....	712.03K
Stud Shear Developers .....	906.09
Subbase.....	902
Sumps, Precast .....	913.07

-T-

Tackifiers for Mulch.....	917.15C
Tape, Lane Marking, Temporary .....	922.06A
Temporary Concrete Barriers .....	922.04
Temporary Overlay and Chip Seal Markers .....	922.06B
Temporary Seal for Cracks Injection .....	914.06
Temporary Signs .....	922.02



Tendons for Post Tensioning.....	905.08
Tension Wire.....	907.04B
Thermoplastic Pavement Marking.....	811.03D5, 811.03D6
Three Coat/Clear System, Post.....	907.03D
Tie Bar Grouting Systems .....	603.03B2
Tie Bars for Longitudinal Sawed Joints .....	914.09
Tile, Structural.....	913.08
Timber and Lumber, Structural.....	912.05
Timber Piling.....	912.06
Tower Lighting Units .....	918.10A
Traffic Cones .....	922.03A
Traffic Loop Sealant.....	921.08B
Treated Wood .....	912.05
Truss, Sign Support.....	919.08
Tube Railing, Galvanized .....	908.09B
Turbidity Curtain .....	916.07

-U-

Underdrain Outlet Endings .....	404.02C
Underdrain Pipe.....	909.07A, B, C

-V-

Vests.....	922.11
------------	--------

-W-

Wall Joint Drain, Geocomposite .....	910.05A
Warning Flashers and Lights.....	922.07B
Washers, Reflectorized .....	908.13
Water .....	911
Water Main Materials.....	923
Water Reducing/Retarding Admixture.....	903.02
Water Repellent, Penetrating Sealer .....	706.03S
Waterproofing Membrane, Preformed.....	914.11
Waterproofing Primer, Liquid Asphalt, RC 250 .....	904.03B
Waterstop (Metallic).....	908.07, 908.08
Watertight Joints .....	909.03
Weed Spray (Herbicides) .....	917.16
Welded Wire Reinforcement (Mesh).....	905.06
Wet Reflective Optics.....	920.02C
Wire, Electrical Cable .....	918.03
Wire, High Tensile Fence .....	907.05A

Wire, Rope.....	908.11B
Wire Mesh.....	905.06
Wood Fence Posts .....	912.07B
Wood Mulch/Chips.....	917.14
Wood Posts and Lath for Silt Fence .....	916.02
Wood Posts for Guardrail (Dimensioned Sawed).....	912.08
Wood Posts for Signs .....	912.08, 919.05
Woven Wire Fence Materials .....	907.03
Wrap, Filter Fabric .....	910.03A

-X- -Y- -Z-

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>401.03E</b> End Section Grate for Culverts	VI	-	-	-	See Standard Plans for Sizes.
<b>401.03E</b> Precast Concrete Headwalls	Gen Cert	-	-	-	24" or less. For larger than 24" construct per Section 706 of Standard Specifications.
<b>404.02C</b> Underdrain Outlet Endings	VI	-	-	-	See Standard Plans.
<b>501.02</b> Asphalt, Release Agents	VI	-	-	-	
<b>NOTE:</b> Must be approved by the project engineer. No fuel or oil based agents.					
<b>502.02B</b> Overband Crackfill	VI See Remark	-	-	-	Must be a Qualified Product (502.02B).
<b>603.03B2</b> Adhesive Systems for Grouting Dowel Bars and Tie Bars for Full-Depth Concrete Pavement Repairs	VI See Remark	-	-	-	Must be a Qualified Product (603.03B2).
<b>NOTE:</b> Use for grouting to existing concrete in the same direction of traffic in the same lane as the repair. For grouting lane ties (deformed bars positioned transverse to the direction of traffic located between traffic lanes) select from Adhesive Anchor Systems for Structural Anchors and Lane Ties (712.03J).					
<b>706.03K4</b> Expansion Joint Devices for Bridges	See Remark	-	-	-	See project plans for list of approved devices and details.
<b>706.03S</b> Penetrating Water Repellent (Protective Coating for Concrete)	VI See Remark	-	-	-	Must be a Qualified Product (706.03S).
<b>707.02</b> Bushings for Pins and Link Plates	VI See Remark	-	-	-	Must be a Qualified Product (707.02).
<b>708.01</b> Structural Prestressed Concrete Construction	Fabrication Inspection	-	-	-	See Chapter 5 of the Structural Fabrication Quality Manual for Approved Supplier List and section 2.2. See Special Instructions.
<b>710.03D</b> Waterproofing Shotcrete	VI	-	-	-	
<b>712.03A1c</b> Abrasive, Low Dusting	Gen Cert	-	-	-	See Section 715.02.
<b>712.03D</b> Epoxy Mastic	VI	-	-	-	
<b>712.03J</b> Adhesive Anchor Systems for Structural Anchors and Lane Ties	VI See Remark	-	-	-	Must be a Qualified Product (712.03J).

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<b>712.03K</b> Structure Expansion Anchors (Mechanical Expansion Anchors)	VI See Remark	-	-	-	Must be a Qualified Product (712.03K). Pull-out testing is required see MQAP Manual Section 3.03.
<b>712.03L</b> Mechanical Reinforcement Splicing	VI See Remark	1 per project	2 splices	-	See Special Instructions. Must be a Qualified Product (712.03L).
<b>712.03X</b> Grout Under Masonry Plates	VI	-	-	-	
<b>712.03Y</b> Embedded Galvanic Anodes	VI See Remark	-	-	-	Must be a Qualified Product (712.03Y).
<b>713.02B</b> Sealant for Perimeter of Beam Repairs	VI See Remark	-	-	-	Must be a Qualified Product (713.02B).
<b>715.02</b> Coating Systems for New Hanger Assemblies	VI See Remark	-	-	-	Must be a Qualified Product (915).
<b>715.02</b> Abrasive, Low Dusting	VI See Remark	-	-	-	Must be a Qualified Product (715.02).
<b>715.02</b> Abrasive, Steel Grit	VI	-	-	-	Verify uniform profile after blasting of 1 to 2.8 mils per SSPC.
<b>716.02</b> Abrasive, Low Dusting	VI See Remark	-	-	-	See Section 715.02.
<b>803.02B</b> Detectable Warning Surfaces	VI See Remark	-	-	-	Must be a Qualified Product (803.02B).
<b>804.01</b> Glare Screen	VI	-	-	-	Included in Concrete Spec.
<b>808.03C</b> Temporary Fence Materials	VI	-	-	-	
<b>810.03O</b> Bridge Sign Connections	Fabrication Inspection	-	-	-	See Section 2.4 of the Structural Fabrication Quality Manual.
<b>811.03D1</b> Waterborne, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D1).
<b>811.03D2</b> Low Temperature Waterborne, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D2).

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>811.03D3</b> Regular Dry Paint, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D3).
<b>811.03D4</b> Cold Plastic Tape, Preformed Pavement Marking Material	VI See Remark	-	-	-	MQAP Manual Section 5.14. Must be a Qualified Product (811.03D4).
<b>811.03D5</b> Thermoplastic Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D5).
<b>811.03D5</b> Thermoplastic, Blocks Rumble Strips and Snowmobile Crossings	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D5).
<b>811.03D6</b> Thermoplastic, Sprayable, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D6).
<b>811.03D7</b> Polyurea, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D7).
<b>811.03D8</b> Modified Epoxy, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D8).
<b>811.03D9</b> Preformed Thermoplastic, Preformed Pavement Marking Material	VI See Remark	-	-	-	MQAP Manual Section 5.14. Must be a Qualified Product (811.03D9).
<b>901</b> Cement	Appr Mfr	See Remark	10 lb	45 ton	See Special Instructions, see MQAP Manual Section 2.06.
<b>901.06</b> Slag Cement	Appr Mfr	-	10 lb	-	See Special Instructions for Cement.
<b>901.07</b> Fly Ash, Pozzolanic Admixtures for Concrete	Appr Mfr	-	10 lb	-	See Special Instructions for Cement, see MQAP Manual Section 2.07

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>902</b> Coarse Aggregates	Test	See Remark	50 lb	100 ton	See Special Instructions  Refer to Chapter 3 of the Procedures for Aggregate Inspection Manual for sampling information.  <b>See Current List of all Prequalified Aggregate Suppliers at Construction Field Services Web Page.</b>  Actual Current List of Prequalified Aggregate Suppliers web page address: <a href="https://www.michigan.gov/documents/mdot/MDOT_Prequalified_Aggregate_Supplier_List_691933_7.pdf">https://www.michigan.gov/documents/mdot/MDOT_Prequalified_Aggregate_Supplier_List_691933_7.pdf</a>
<b>902</b> Dense-Graded Aggregates	Test	See Remark	50 lb	500 ton	
<b>902</b> Open-Graded Aggregates	Test	See Remark	50 lb	100 ton	
<b>902</b> Granular Material Class I	Test	See Remark	50 lb	100 ton	
<b>902</b> Granular Material Class II (Subbase), Class IIA and Class IIAA	Test	See Remark	50 lb	500 cyd	
<b>902</b> Class II (Abutment B. F.)	Test	See Remark	50 lb	100 cyd	
<b>902</b> Granular Material Class III	Test	See Remark	50 lb	500 cyd	
<b>902</b> Granular Material Class IIIA	Test	See Remark	25 lb	100 cyd	
<b>902</b> Fine Aggregate	Test	See Remark	25 lb	100 ton	
<b>902</b> Mineral Filler for HMA Mixtures	Test See Remark	1 per project	1 qt	10 ton	Refer to Section 902.11 of the 2012 Standard Specifications.
<b>903.01</b> Air Entraining Admixtures	VI See Remark	-	-	-	Must be a Qualified Product (903.01).
<b>903.02</b> Liquid Chemical Admixtures	VI See Remark	-	-	-	Must be a Qualified Product (903.02).
<b>903.03</b> Latex Admixture for Concrete	Appr Mfr	1 per lot	1 qt	-	
<b>903.04</b> Calcium Chloride Concrete Accelerators	VI See Remark	-	-	-	Note the chemical composition.
<b>903.06</b> Membrane Curing Compound	Test Data Cert	1 per lot or batch	1 qt	200 gal	

**NOTE:** Curing compounds must not be used after ONE year from manufacture. Date of manufacture must be clearly printed on the outside of containers.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>903.07A</b> Interim Curing (Linseed Oil Based)	Test Data Cert	1 per lot or batch	1 qt	50 gal	See Note for 903.06 above.
<b>903.07C</b> Insulating Blanket	Test Data Cert	-	-	10 sheets	
<b>903.07D</b> Polystyrene Insulation	Test Data Cert	-	-	-	
<b>904.03A</b> Asphalt Binder for HMA Mixtures	See Remark	See Remark	See Remark	-	See Special Instructions.
<b>904.03B</b> Liquid Asphalt (MC)	Gen Cert	1 per batch	See Remark	-	1 gal from the top and 1 gal from the bottom of tank.
<b>904.03B</b> Liquid Asphalt (RC-250)	Gen Cert	1 per batch	2 qt	5 gal	
<b>904.03C</b> Emulsified Asphalt	Appr Mfr * See Remark	See Remark	See Remark	-	See Special Instructions.
<b>905.03</b> Bar Reinforcement (Uncoated)	Appr Mfr *	1 per project per mfr per size	See Remark	500 lb	See Special Instructions.
<b>905.03</b> Bar Reinforcement (Epoxy Coated) 1. Bar 2. Epoxy Coating Companies 3. Epoxy Coating Material (905.03C)	Appr Mfr * Appr Mfr * VI See Remark	1 per project per mfr per size	See Note	500 lb	See Special Instructions.  Epoxy Coating must be a Qualified Product (905.03C).
<b>905.03D</b> Bar Chairs and Wire Ties for Epoxy Coated Steel Reinforcement	VI	-	-	-	
<b>905.06</b> Welded Steel Wire Reinforcement (Mesh)	Appr Mfr *	1 per project per mfr	See Remark	500 syd	See Special Instructions.
<b>905.07</b> Strand for Prestressed Concrete	Appr Mfr *	1 per heat	2 pcs each 60 in long	-	See Special Instructions.
<b>905.08</b> Tendons for Post Tensioning of Box Beams (Prestressing Strand)	Appr Mfr * See Remark	1 per heat	2 pcs each 60 in long	-	See Special Instructions.

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<b>905.08</b> Tendons for Post Tensioning of Box Beams (Post Tensioning Bar)	Test	1 per heat per project	2 pcs each 30 in long	-	
<b>906.04</b> Structural Steel	Fabrication Inspection	-	-	-	See Section 2.3 of the Structural Fabrication Quality Manual. See Special Instructions.
<b>906.05</b> Foundation Piles (Steel H Piling and Special Sections, Steel Shells for Cast-in- Place Concrete Piles and Pile Points)	Test Data Cert	-	-	-	
<b>906.05</b> Pile Cutoffs	Gen Cert	-	-	-	
<b>906.06</b> Steel Piles (Temporary and Permanent Steel Sheet Piling)	Gen Cert	-	-	-	
<b>906.07</b> High Strength Steel Bolts, Nuts, and Washers for Structural Joints	Test	1 per dia per length per heat per project	3 assemblies	-	See Special Instructions.
<b>906.09</b> Shear Developers (Studs)	VI See Remark	-	-	-	Must be a Qualified Product (906.09).
<b>907.03A - C</b> Woven Wire Fence (Woven Wire Fabric, Barbed Wire, Smooth Line Wire)	Test Data Cert	1 per project per mfr	Full width of roll 5 ft 6 ft 4 ft	400 ft	
<b>907.03D</b> Woven Wire Fence (Steel Posts)	Test Data Cert	1 per project per mfr	1 post	25 posts	
<b>907.03E</b> Woven Wire Fence (Treated Wood Posts)	See Remark	-	-	-	See Section 912.07B.
<b>907.03F</b> Woven Wire Fence (Gates)	VI	-	-	-	
<b>907.04A</b> Steel Chain Link Fence (Fabric)	Test Data Cert	See Remark	5 ft full width of roll	250 ft	1 per height and/or mesh size, per project and 1 per mfr per project.
<b>907.04B</b> Steel Chain Link Fence (Tension Wire)	Gen Cert	1 per project per mfr	3 ft	500 ft	



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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>907.04C</b> Steel Chain Link Fence (Post for Fence and Gates), (Pedestrian Fence and Structure Fencing (Steel))	Test Data Cert	1 per project per mfr	1 post	25 posts	See Special Instructions.
<b>NOTE:</b> An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
<b>907.04C</b> Steel Chain Link Fence (Top Rail), ((Horz. Rail) (Pedestrian Fence))	Test Data Cert	1 per project per mfr See Remark	5 ft	250 ft	See Special Instructions.
<b>907.04D &amp; E</b> Steel Chain Link Fence (Gates, Fence Fittings and Hardware)	VI	-	-	-	
<b>907.05A</b> High Tensile Wire Fence (Wire)	Test	1 per project per mfr	3 ft	250 ft	
<b>907.05B</b> High Tensile Wire Fence (Treated Wood Posts)	See Remark	-	-	-	See Section 912.07B.
<b>907.05C</b> High Tensile Wire Fence (Hardware)	VI	-	-	-	
<b>907.06</b> Protective Fence	VI	-	-	-	
<b>908</b> Castings, Manhole <b>908.03</b> Malleable Iron <b>908.04</b> Steel <b>908.05</b> Gray/Ductile Iron	VI	-	-	-	
<b>908.07</b> Sheet Lead	Gen Cert	-	-	25 sft	
<b>908.08</b> Sheet Copper	Gen Cert	1 per consignment	13 in square or equivalent area	25 sft	May be accepted in field if weight requirements can be documented.
<b>908.09A</b> Tubing, Steel Railings (Base Plate, Angle, and Non-Tubular Post Elements)	Fabrication Inspection	-	-	-	See Structural Fabrication Quality Manual Section 2.3.
<b>908.09B</b> Tubing, Steel Railings (Rail Elements and Tubular Post Elements)	Fabrication Inspection	-	-	-	See Structural Fabrication Quality Manual Section 2.3.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>908.09C</b> Tubing, Steel Railings (Hardware)	Test	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
<b>908.10</b> Hardware for Timber Construction	VI	-	-	-	
<b>908.11A</b> Guardrail, Steel Beam Elements, End Sections	Appr Mfr *	1 per project per mfr	1 piece at least 1 ft length	125 ft	Including Anchorage, Bridge, Shoes, Departing End Terminals.
<b>908.11A</b> Guardrail Approach Terminals	Appr Mfr *	-	-	-	
<b>908.11B &amp; C</b> B. Hardware  C. Steel Sleeves, Soil Plates, Bearing Plates, Backup Plates	VI	-	-	-	Item supplied by guardrail supplier.
<b>908.11B</b> Wire Rope	Gen Cert	-	-	-	
<b>908.12</b> Steel Posts for Beam Guardrail	Appr Mfr *	1 per 1000 posts or fraction thereof	1 post	25 posts	
<b>908.13</b> Reflective Washers	VI See Remark	-	-	-	Inspect galvanizing, dimensions and type of sheeting.
<b>908.14</b> Anchor Bolts, Nuts, and Washers	Test	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
<b>908.14D</b> Anchor Bolts and Nuts for Other Purposes	Gen Cert	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
<b>909.01</b> Recycled Rubber Adjusting Rings for Manholes and Drainage Castings	VI See Remark	-	-	-	Must be a Qualified Product (909.01).
<b>909.03</b> Watertight Joint Systems	VI See Remark	-	-	-	Must be a Qualified Product (909.03).
<b>909.03</b> Gasket, Compression (O-Rings)	VI	-	-	-	Part of Watertight Joint System.
<b>909.03</b> Gasket, External Rubber Type	VI	1 per lot or shipment	18 in length full width of gasket	-	Part of Watertight Joint System.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>909.04A</b> Reinforced Concrete Pipe	Appr Mfr *	1 percent of number of pcs of each size	See Remark	5 pieces of 42 in or smaller	See Special Instructions.
<b>909.04B</b> Reinforced Concrete Elliptical Pipe	Appr Mfr *	1 percent of number of pcs of each size	See Remark	5 pieces of 42 in or smaller	See Special Instructions.
<b>909.04C</b> Non-Reinforced Concrete Pipe	Appr Mfr *	See Remark	See Remark	10 pcs	See Special Instructions.
<b>909.04D</b> Precast Concrete Box Sections	Appr Mfr * See Remark	-	-	-	Spans 20 ft. and greater (measured from inside of exterior walls, parallel to the roadway centerline) require QA inspection. QA inspection may be required for spans from 10-20 ft. Box = 4 sided. See section 2.1 of the Structural Fabrication Quality Manual. See Special Instructions.
<b>909.04E</b> Precast Concrete End Section for Culverts and Sewers	Appr Mfr *	1 percent of number of pcs	Full size units	10 pcs	Strength test by coring or cylinders, VI dimensions and conditions. Test for air content. .
<b>909.04G</b> Precast Concrete Three-Sided or Arch Culverts	Appr Mfr See Remark	-	-	-	Spans 20 ft. and greater (measured from inside of exterior walls, parallel to the roadway centerline) require QA inspection. QA inspection may be required for spans from 10-20 ft. See section 2.1 of the Structural Fabrication Quality Manual. See Special Instructions.
<b>909.05A</b> Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark	-	See Special Instructions.
<b>909.05A1</b> Corrugated Steel Sheets (Galvanized)	Gen Cert	See Remark	See Remark	-	See Special Instructions.
<b>909.05A1</b> Polymer Coating, Galvanized Corrugated Steel Pipe	VI See Remark	-	-	-	Coating must be from Qualified Products List (909.05A1).
<b>909.05A3</b> Coupling Bands	Gen Cert	-	-	5 pcs	

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>909.05B</b> Corrugated Aluminum Alloy Sheet	Gen Cert	See Remark	See Remark	25 sheets	See Special Instructions.
<b>909.05B</b> Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	See Remark	250 ft	Sample Size: A 6 in by 3 in (minimum) section cut from the end of the pipe avoiding the seams. Do not damage coating.
<b>909.05C</b> Steel End Section	Gen Cert	-	-	4 pcs	
<b>909.05D</b> 1. Steel Pipe (Jacked-in-Place)	Gen Cert	-	-	-	
<b>909.05D</b> 2. Casing, Steel Pipe	VI	-	-	-	
<b>909.06</b> 1. Corrugated Polyethylene Pipe (CPE/HDPE), (Smooth Lined Type S)	See Remark	-	-	100 ft	See MQAP Chapter 3.10.
<b>909.06</b> 2. Corrugated Polyvinyl Chloride (CPV) Pipe	Test	1 per 1000 ft	See Remark	12 in. dia and over, 100 ft	Over 12 in. dia- one 10 ft and one 6 ft. length plus coupling.
<b>909.06</b> 3. Plastic Pipe Class A, B and F Bury (CPE/HDPE & CPV)	VI See Remark	-	-	-	Must be a Qualified Product (909.06).
<b>909.06</b> 4. Smooth Polyvinyl Chloride (PVC) Pipe and Fittings for Sanitary Sewer	VI	1 per 6000 ft	1 piece, 5 ft in length	-	Sample must include bell end of pipe.
<b>909.07A</b> Pipe for Underdrains Smooth Perforated Plastic Pipe (PVC)	Test	1 per 2500 ft or fraction thereof	5 ft length	250 ft	Sample must include bell end of pipe.
<b>909.07A1</b> Pipe for Underdrains Acrylonitrile-Butadiene-Styrene (ABS)	Test	1 per 6000 ft	1 piece, 6 ft in length	600 ft	If bell and spigot joint, sample from bell end.
<b>909.07B</b> Pipe for Underdrains Corrugated Plastic Tubing (Perforated and Non-Perforated) (Wrapped and Non-Wrapped)	Appr Mfr * 4-, 6-, or 8- in dia	1 per 5000 ft sample from coils	See Remark	250 ft	Sample Size, one 10 ft length plus coupling. For perforated tubing wrapped in fabric, tie fabric securely in place before cutting sample. Do not disturb fabric after cutting.
<b>909.07C</b> Outlet Pipe for Underdrains 1. Polyvinyl Chloride (PVC) Pipe	Test	1 per 2500 ft or fraction thereof	5 ft length	250 ft	See 404.02C for Underdrain Outlet Endings. Sample must include bell end of pipe.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
<b>909.07C</b> Outlet Pipe for Underdrains 2. Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark	-	See Special Instructions for 909.05A,. See 404.02C for Underdrain Outlet Endings.
<b>909.07C</b> Outlet Pipe for Underdrains 3. Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	6 in x 3 in	250 ft	See 404.02C for Underdrain Outlet Endings. See 909.05B.
<b>909.08A</b> Bridge Deck Downspouts	VI	-	-	-	
<b>909.08B</b> Culvert, Downspouts 1. Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark	-	See 909.05A Corrugated Steel Pipe.
<b>909.08B</b> Culvert, Downspouts 2. Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	6 in x 3 in	250 ft	See 909.05B.
<b>909.08B</b> Culvert, Downspouts 3. Corrugated Polyethylene Pipe (Corrugated Type C) (CPE/HDPE)	Test	1 per 1000 ft	See Remark	<12 in. dia up to 250 ft ≥12 in. dia up to 100 ft	A sample consists of one 10-foot-long piece, one 6-foot-long piece, and one coupling.
<b>909.08C</b> Bridge Deck Drain Extensions (Polyethylene)	Gen Cert	-	-	-	
<b>909.09</b> Cold Applied Pipe Joint Sealer (Mastic)	VI	1 per shipment from a single container	1 qt	-	
<b>909.10</b> Drainage Marker Post	See Delineator Posts	-	-	-	
<b>910.03A</b> Geotextile Blanket (incl. Filter Bags)	Test	See Remark	See Remark	See Remark	See Special Instruction 910.03. Anticipate up to 28 calendar days for the testing of geotextile samples.
<b>910.03A</b> Knitted Sock Pipe Wrap	See Remark	-	-	-	See 909.07B Certified with Corrugated Plastic Tubing.
<b>910.03B</b> Geotextile Liner (Rip-Rap, etc.)	Test	See Remark	See Remark	See Remark	See Special Instruction 910.03. Anticipate up to 28 calendar days for the testing of geotextile samples.
<b>910.03B</b> Heavy Geotextile Liner (Rip-Rap, etc.)	Test	See Remark	See Remark	See Remark	See Special Instruction 910.03. Anticipate up to 28 calendar days for the testing of geotextile samples.



































































































































