



Department of Management Services
Purchasing Division
241 West South Street
Kalamazoo, MI 49007-4796
Phone: 269.337.8020
Fax: 269.337.8500
www.kalamazoocity.org
purchasing@kalamazoocity.org

INVITATION FOR BIDS (IFB)

The City of Kalamazoo, Michigan is soliciting sealed bids for:

Project Name: 2022 Streets Crack Seal Program

Bid Reference #: 91396-008.0

IFB ISSUE DATE: February 16, 2022

BID DUE/OPENING DATE: March 16, 2022 @ 3:00 PM Local Time

Facsimile Bids Will Not Be Accepted.

MAILING ADDRESS & INSTRUCTIONS

Mail To:

Purchasing Division
241 W. South Street
Kalamazoo, MI 49007

Questions for this IFB should be directed to:

Department Contact: Tom Palumbo, PE,
Senior Civil Engineer at
palumbot@kalamazoocity.org or
(269) 337-8697

Include on the Envelope the Project Name and Bid Reference Number. All Envelopes Must Be Sealed.

You are invited to submit a bid for this project. Specifications, terms, conditions and instructions for submitting bids are contained herein. This Invitation for Bids with all pages, documents and attachments contained herein, or subsequently added to and made a part hereof, submitted as a fully and properly executed bid shall constitute the contract between the City and the successful bidder when approved and accepted on behalf of the City by an authorized official or agent of the City. Please review the bid document as soon as possible and note the **DEADLINE FOR QUESTIONS** in the Instructions to Bidders.

All bidders shall complete and return the Bid and Award page(s) and submit all information requested herein in order for a bid to be responsive. The bid document shall be returned in its entirety, in a properly identified and sealed envelope to the Purchasing Division at the above address. **BIDS MUST BE RECEIVED BEFORE THE DUE DATE - LATE BIDS WILL NOT BE CONSIDERED.** The City reserves the right to postpone the bid opening for its own convenience.

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STATEMENT OF NO BID

NOTE: If you DO NOT intend to bid on this commodity or service, please complete and return this form immediately. Your response will assist us in evaluating all responses for this important project and to improve our bid solicitation process.

The Purchasing Division of the City of Kalamazoo wishes to keep its bidders list file up-to-date. If, for any reason you cannot supply the commodity/service noted in this bid solicitation, this form must be completed and returned to remain on the particular bid list for future projects of this type.

If you do not respond to this inquiry within the time set for the bid opening date and time noted, we will assume that you can no longer supply this commodity/service, and your name will be removed from this bid list.

- _____ Specifications too "tight", i.e. geared toward one brand/ manufacturer only (explain below).
- _____ Specifications are unclear (explain below).
- _____ We are unable to meet specifications.
- _____ Insufficient time to respond to the Invitation for Bid.
- _____ Our schedule would not permit us to perform.
- _____ We are unable to meet bond requirements.
- _____ We are unable to meet insurance requirements.
- _____ We do not offer this product or service.
- _____ Remove us from your bidders list for this commodity or service.
- _____ Other (specify below).

REMARKS: _____

SIGNED: _____ NAME: _____
(Type or Print)

TITLE: _____ DATE: _____

FIRM NAME: _____
(if any)

ADDRESS: _____
(Street address) (City) (State) (Zip)

PHONE: _____ FAX: _____

EMAIL: _____

SECTION I INSTRUCTIONS FOR BIDDERS

1. EXAMINATION OF BID DOCUMENT

Before submitting a bid, bidders shall carefully examine the specifications and shall fully inform themselves as to all existing conditions and limitations. The bidder shall indicate in the bid the sum to cover the cost of all items included on the bid form.

2. PREPARATION OF BID

The bid shall be legibly prepared in ink or typed. If a unit price or extension already entered by the bidder on the Bid and Award form is to be altered, it shall be crossed out and the new unit price or extension entered above or below and initialed by the bidder with ink. The bid shall be legally signed and the complete address of the bidder given thereon.

All bids shall be tightly sealed in an envelope plainly marked SEALED BID and identified by project name, bid opening date and time. Bids opened by mistake, due to improper identification, will be so documented and resealed. The Purchasing Division will maintain and guarantee confidentiality of the contents until the specified opening date and time. Bids submitted by Fax machine will not be accepted.

3. EXPLANATION TO BIDDERS

Any binding explanation desired by a bidder regarding the meaning or interpretation of the Invitation for Bid (IFB) and attachments must be requested in writing, **at least 5 business days before the bid opening** so a reply may reach all prospective bidders before the submission of bids. Any information given to a prospective bidder concerning the IFB will be furnished to all prospective bidders as an amendment or addendum to the IFB if such information would be prejudicial to uninformed bidders. Receipt of amendments or addenda by a bidder must be acknowledged in the bid by attachment, or by letter or fax received before the time set for opening of bids. Oral explanation or instructions given prior to the opening will not be binding.

4. CASH DISCOUNTS

Discount offered for payment of less than thirty (30) days will not be considered in evaluating bids for award. Offered discounts of less than thirty (30) days will be taken if payment is made within the discount period, even though not considered in evaluation of the bid.

5. WITHDRAWAL OF BIDS

Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bid. No bid may be withdrawn for at least ninety (90) days after bid opening.

6. ALTERNATE BIDS

Bidders are cautioned that any alternate bid, unless specifically requested or any changes, insertions or omissions to the terms and conditions, specifications or any other requirement of this IFB may be considered non-responsive, and at the option of the City, result in rejection of the alternate bid.

7. LATE BIDS

Any bid received at the office designated herein after the exact time specified for receipt will not be considered. (Note: The City reserves the right to consider bids that have been determined by the City to be received late due to mishandling by the City after receipt of the bid and no award has been made).

8. UNIT PRICES

If there is a discrepancy between unit prices and their extension, unit prices shall prevail.

SECTION II BID AND AWARD

The undersigned having become thoroughly familiar with all of the bid/contract documents incorporated herein, the project site and the location conditions affecting the work, hereby proposes to perform everything required to be performed in strict conformity with the requirements of these documents, and to provide and furnish all the equipment, labor and materials necessary to complete, in a professional manner, the furnishing and installing of all of the following, meeting or exceeding the specifications as set forth herein for the prices as stated below.

2022 STREETS CRACK SEAL PROGRAM

LOCAL STREETS					
<u>Street</u>	<u>From</u>	<u>To</u>	<u>Length (Lane Mile)</u>	<u>Unit Price / Lane Mile</u>	<u>Total Price</u>
Alta Vista Ave	Bronson Blvd	Inkster	0.452		
Broadway Ave	Winchell Ave	Aberdeen	0.660		
Center St	Charlotte	Wallace	0.872		
Denner St	Forbes	Alamo	0.884		
E Clay St	Rose St	Edwards	0.410		
Elizabeth St	Woodward	Norway	0.634		
Indiana St	Cherry	Howard	0.422		
Inkster Ave	Alta Vista	Westchester	0.446		
Montrose Ave	Bronson Blvd	Rose St	1.050		
William St	Cobb	Westnedge	0.498		

MAJOR STREETS					
Street	From	To	Length (Lane Mile)	Unit Price / Lane Mile	Total Price
Arboretum Pkwy	Solon Roundabout	Drake Rd	2.780		
E Alcott St	Kalamazoo County HCS Drive	Portage St	0.900		
E Cork St	Alley (380' W of Lovers Ln)	Sprinkle Roundabout	7.672		
E Kilgore Rd	Manchester	Sprinkle	2.165		
Factory St	Palmer Ave	Lane Blvd	0.328		
King Hwy	E Michigan	City Limit	5.693		
Manchester Rd	Kilgore	Covington	0.358		
Oakland Dr	Parkview	Calhoun	3.844		
Palmer Ave	Portage St	James	0.688		
S Drake Rd	700' S of Stadium	KL Ave	4.449		
W Lovell St	Oakland	Saint John Pl	1.354		
W Michigan Ave	Sprague Ave	Stadium Dr	0.456		
LOCAL STREETS + MAJOR STREETS PROJECT TOTAL					

Note: **All necessary traffic control, mobilization, and other items incidental to the work being performed shall be included in the Contractor's unit price, as there will not be additional pay items for these in this contract.** Such items will not be bid or paid for separately but shall be included in the overall unit price. More information on this can be found in *Section V: Special Conditions*.

Bidder shall provide all of the information as requested herein with their bid. Failure to do so and/or failure to provide post-bid requested information may be cause for rejecting the bid as non-responsive.

After receipt of Notice to Proceed, **work shall start no earlier than June 27, 2022**, unless otherwise agreed to by the Project Manager, and **shall be completed by August 28, 2022**.

Bidder/Contractor has examined and carefully studied the bidding documents and attachments, and acknowledges receipt of the following addenda:

Addendum No: _____

Date: _____

By my signature below, I certify that the firm bidding on this contract, when making hiring decisions, does not use a past criminal conviction as a bar to or preclude a person with a criminal conviction from being considered for employment with the bidding firm unless otherwise precluded by federal or state law. I further certify that I have read and agree to be bound by the provisions of the City's Non-Discrimination Clause found in Appendix A as updated by City Ordinance 1856.

Signed: _____ Name: _____

Title: _____

CITY OF KALAMAZOO EX-OFFENDER POLICY CHECKLIST

As part of the City’s commitment to reducing unacceptable poverty, encouraging rehabilitation, reducing recidivism and strengthening families in Kalamazoo, the City has updated its Purchasing Policy to ensure that firms with whom the City does business share in this commitment by utilizing hiring practices that do not unfairly deny people with arrest and conviction records gainful employment. *(Important: This requirement also extends to any subcontractors the bidder intends to use to fulfill the contract for goods or services being sought from the City.)*

Part I: Proof that the bidder does not inquire about an individual’s past arrest or criminal history on the bidder’s employment application form

- Attach a copy of the current application for employment being used by the bidder

Part II: Certification that the bidder does not use an individual’s past arrest or criminal history to unlawfully discriminate against them by checking one or more of the following:

- That pursuant to federal or state law bidder is precluded from hiring persons with certain criminal records from holding particular positions or engaging in certain occupations by providing a cite to the applicable statute or regulation; if checking this box, provide a citation to the applicable statute or rule upon which the bidder is relying: _____
- That bidder conducts criminal history background checks only as necessary, and only after making a conditional offer of employment; that any withdrawal of an offer of employment to an individual because of a past criminal history is job-related and consistent with business necessity after the individual has been provided an individualized assessment opportunity to review and challenge or supplement the history of past criminal conduct being relied upon by the bidder.
- That the use by bidder of criminal history background checks complies with the U.S. Equal Employment Opportunity Commission’s Enforcement Guidance on the Consideration of Arrest and Conviction Records in Employment Decisions and that the bidder has not had a determination rendered against it in past 7 years that it discriminated against a person through the use of an individual’s arrest or criminal history

I CERTIFY THAT THE ABOVE STATEMENTS ARE TRUE.

Date

Signature

Printed Name

Position

CITY OF KALAMAZOO LOCAL PREFERENCE POLICY AND CERTIFICATION

The lowest responsive Kalamazoo County bidder whose bid is not low but falls within 2% of the lowest responsive bid is afforded the opportunity to become the successful bidder if it agrees to reduce its bid to match the lowest responsive bid. The City of Kalamazoo is the sole determiner whether a bidder is responsible, qualifies as a Kalamazoo County bidder, and if its bid is responsive to the City’s specifications, terms and conditions.

If the lowest Kalamazoo County bidder chooses not to match the lowest bid, the next lowest responsive Kalamazoo County bidder whose bid falls within 2% of the lowest bid, is given the opportunity to match the lowest responsive bid.

To qualify as a Kalamazoo County bidder, the bidder must meet both the following criteria:

1. Have a physical presence in Kalamazoo County by maintaining a permanent office, factory or other facility in Kalamazoo County with employees working in Kalamazoo County.
2. Have paid real or personal property taxes related to said business to the City of Kalamazoo, County of Kalamazoo or other municipal corporation within Kalamazoo County in the previous tax year, except that a non-profit entity need not meet this requirement.

This local preference policy applies only to purchases for materials, supplies, capital outlay, and services for maintenance, repair or operation of City facilities that are over \$25,000. If more than 50% of the contract is sub-contracted to firms located outside of Kalamazoo County that bid does not qualify for the local preference policy outlined above. The local preference policy will not apply if prohibited by law. The Purchasing Agent has the authority to finally determine if the bidder qualifies as a Kalamazoo County bidder as set forth herein. The Purchasing Agent may take into account the permanency of the business in Kalamazoo, and whether the business appears to be claiming to be a Kalamazoo County business solely or primarily to qualify as a Kalamazoo County business under this Resolution, and any other material factors.

CERTIFICATION

If you qualify as a Kalamazoo County bidder and wish to be considered for the local preference provisions as provided above please certify that fact by providing the information requested below and attesting to its accuracy.

Firm Name: _____

Street Address of Business: _____

City, State, and Zip Code: _____

Number of employees working in Kalamazoo County: _____

Name the city or township to which business real and/or personal property taxes are paid or provide non-profit status: _____

The above information is accurate:

Signature: _____ Date: _____

Title: _____

Revised April 2008

REFERENCE QUESTIONNAIRE

Please answer the following questions completely.

1. Firm name: _____
2. Established: Year _____ Number of Employees: _____
3. Type of organization:
 - a. Individual: _____
 - b. Partnership: _____
 - c. Corporation: _____
 - d. Other: _____
4. Former firm name(s) if any, and year(s) in business:

5. Include at least 3 references of contracts for similar work performed over the last five (5) years. Include: owner, contact person and phone number and description of work performed.
 - a. Company Name: _____
Address: _____
Phone: _____
Contact: _____
Type of work or contract: _____
 - b. Company Name: _____
Address: _____
Phone: _____
Contact: _____
Type of work or contract: _____
 - c. Company Name: _____
Address: _____
Phone: _____
Contact: _____
Type of work or contract: _____

I hereby certify that all of the information provided is true and answered to the best of my ability.

Signed: _____ Name: _____
(type or print)

Title: _____ Date: _____

I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have the authority to submit this bid which will become a binding contract if accepted by the City of Kalamazoo. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered/accepted anything of value to/from an official or employee of the City of Kalamazoo that would tend to destroy or hinder free competition.

The firm's identification information provided will be used by the City for purchase orders, payment and other contractual purposes. If the contractual relationship is with, or the payment made to, another firm please provide a complete explanation on your letterhead and attach to your bid. Please provide for accounts payable purposes:

Tax Identification Number (Federal ID): _____

Remittance Address: _____

Financial Contact Name: _____ Financial Contact Phone Number: _____

Financial Contact Email Address: _____

I hereby state that I have read, understand and agree to be bound by all terms and conditions of this bid document.

SIGNED: _____ NAME: _____
(Type or Print)

TITLE: _____ DATE: _____

FIRM NAME: _____
(if any)

ADDRESS: _____
(Street address) (City) (State) (Zip)

PHONE: _____ FAX: _____

EMAIL ADDRESS: _____

FOR CITY USE ONLY - DO NOT WRITE BELOW

NOTE: This blanket addendum is for informational purposes only and does not need to be acknowledged by bidders in their submission.

COVID-19 ADDENDUM #2

January 1, 2022

TO: ALL Prospective Bidders
PROJECT: ALL Upcoming Projects

The purpose of this addendum is to clarify and/or modify the sealed bid delivery and bid opening process for all upcoming projects. All work affected is subject to all applicable terms and conditions of the Bidding and Contract Documents.

1. UPDATE TO SEALED BID DELIVERY AND BID OPENING POLICY:

Effective immediately and continuing until further notice, the City of Kalamazoo will return to IN-PERSON bid openings following City Hall guidelines, including Mask Mandate.

BIDS MUST BE RECEIVED BEFORE THE DUE DATE AND TIME – LATE BIDS WILL NOT BE CONSIDERED.

Bidders can submit sealed bids in one of the following ways:

- **Mail your bid**, to be received before the bid due date and time indicated in the bid document, to the City of Kalamazoo at the following address:

City of Kalamazoo
Purchasing Division
241 West South Street
Kalamazoo, MI 49007

- **Deliver your bid to the Treasurer’s Office Payment Drop Box** located in the northwest corner of City Hall before the bid due date and time indicated in the bid document.
- **Deliver your bid to City Hall In Person** before the bid due date and time indicated in the bid document.

All bids shall be tightly sealed in an envelope plainly marked SEALED BID and identified by project name, bid opening date and time. Bids opened by mistake, due to improper identification, will be so documented and resealed. The Purchasing Division will maintain and guarantee confidentiality of the contents until the specified opening date and time. Bids submitted by fax machine or email will not be accepted.

The Purchasing Division will post bid tabulations to the City of Kalamazoo website within 24 hours after the bid opening date and time at: <https://www.kalamazoocity.org/bidopportunities>.

Questions regarding this sealed bid delivery and bid opening policy change related to the COVID-19 virus should be directed to the City of Kalamazoo at (269) 337-8020.

Sincerely,



Michelle Emig
Purchasing Division Manager

SECTION III CITY OF KALAMAZOO INDEMNITY AND INSURANCE

Contractor, or any of their subcontractors, shall not commence work under this contract until they have obtained the insurance required under this paragraph, and shall keep such insurance in force during the entire life of this contract. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan and acceptable to the City of Kalamazoo within ten (10) days of the Notice of Award. The requirements below should not be interpreted to limit the liability of the Contractor. All deductibles and SIR's are the responsibility of the Contractor.

The Contractor shall procure and maintain the following insurance coverage:

Workers' Compensation Insurance including Employers' Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than \$1,000,000 per occurrence and aggregate. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included and (E) XCU coverage if the nature of the contract requires XC or U work.

Automobile Liability in accordance with all applicable statutes of the State of Michigan, with limits of liability not less than \$1,000,000 per occurrence, combined single limit for Bodily Injury, and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

Additional Insured: Commercial General Liability and Automobile Liability, as described above, shall include an endorsement stating that the following shall be *Additional Insureds*: The City of Kalamazoo, all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and board members, including employees and volunteers thereof. It is understood and agreed that by naming the City of Kalamazoo as additional insured, coverage afforded is considered to be primary and any other insurance the City of Kalamazoo may have in effect shall be considered secondary and/or excess.

To the fullest extent permitted by law the Contractor agrees to pay on behalf of, indemnify, and hold harmless the City of Kalamazoo, its elected and appointed officials, and employees against any claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed, or recovered against or from the City of Kalamazoo, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, caused in whole or part by any negligent act or omission by the Contractor, its employees, agents, or officers which arises out of, or is in any way connected or associated with, this contract.

Cancellation Notice: All policies, as described above, shall include an endorsement stating that it is understood and agreed that thirty (30) days, or ten (10) days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: City of Kalamazoo, Purchasing Division, 241 W. South Street, Kalamazoo, MI 49007.

INDEMNITY AND INSURANCE

Continued

Proof of Insurance Coverage: The Contractor shall provide the City of Kalamazoo at the time that the contracts are returned by him/her for execution, or within 10 days of Notice of Award, whichever is earlier, a Certificate of Insurance as well as the required endorsements. In lieu of required endorsements, if applicable, a copy of the policy sections where coverage is provided for additional insured and cancellation notice would be acceptable. Copies or certified copies of all policies mentioned above shall be furnished, if so requested.

If any of the above coverages expire during the term of this contract, the Contractor shall deliver renewal certificates and/or policies to City of Kalamazoo at least ten (10) days prior to the expiration date.

Scope of Coverage: The above requirements and conditions shall not be interpreted to limit the liability of the Contractor under this Contract, but shall be interpreted to provide the greatest benefit to the City and its officers and employees. The above listed coverages shall protect the Contractor, its employees, agents, representatives and subcontractors against claims arising out of the work performed. It shall be the Contractor's responsibility to provide similar insurance for each subcontractor or to provide evidence that each subcontractor carries such insurance in like amount prior to the time such subcontractor proceeds to perform under the contract.

SECTION IV SPECIAL REQUIREMENTS

1. BID BOND/GUARANTEE

The bid must be accompanied by a bid bond which shall not be less than five (5%) percent of the total amount of the bid. No bid will be considered unless it is accompanied by the required guarantee. The bid guarantee shall ensure the execution of the bid and award, and the furnishing of a performance bond and a labor and material bond (A and B below) by the successful bidder. (Contractors Note: A cashier's or certified check in lieu of a bid bond is **NOT** acceptable.)

A. PERFORMANCE BOND

A performance bond shall be furnished in the full amount of the contract ensuring the City of faithful performance of all the provisions of the contract, and the satisfactory performance of any equipment required hereunder. The bond shall also ensure the City against defective workmanship and/or materials.

B. LABOR AND MATERIAL (PAYMENT) BOND

A labor and material (payment) bond shall be furnished for the period covered by the contract, in the full amount of the contract for the protection of labor and material suppliers and sub-contractors.

Bonds shall be secured by a guaranty or a surety company listed in the latest issue of the U.S. Treasury, circular 570, and licensed to do business in the State of Michigan, and written in favor of the City of Kalamazoo. The amount of such bonds shall be within the maximum amount specified for such company in said circular 570. The bonds shall be accompanied by a power of attorney showing authority of the bonding agent to sign such bonds on behalf of the guaranty or surety company. The cost of the bonds shall be borne by the Contractor.

Failure of the Contractor to supply the required bonds within ten (10) days after Notice of Award, or within such extended period as the Purchasing Agent may agree to, shall constitute a default and the City of Kalamazoo may either award this contract to the next lowest bidder or re-advertise for bids and may charge against the Contractor for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting bidder shall have no claim against the City of Kalamazoo for a refund.

2. WAIVERS OF LIEN

Upon completion of all work and request for final payment, the Contractor shall furnish a 100% waiver of lien from each supplier and sub-contractor covering all items of the work. Failure to supply waivers of lien for the entire job upon completion and final payment request will be considered grounds for withholding final payment.

3. SUBCONTRACTORS

- A. Contractors shall state on the Bid and Award page any and all subcontractors to be associated with their bid, including the type work to be performed. Any and all subcontractors shall be bound by all of the terms, conditions and requirements of the contract; however, the prime contractor shall be responsible for the performance of the total work requirements.

- B. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women business enterprise, and shall use its best efforts to ensure that minority and women business enterprises have maximum practicable opportunity to compete for subcontract work under this agreement.

SECTION V SPECIAL CONDITIONS

1. INTENT

It is the intent of these plans and specifications to provide for a general contractor who shall provide all labor, materials, tools and equipment necessary to perform in a professional manner for the **2022 Streets Crack Seal Program** as described in the specifications and bid document.

2. SCOPE OF WORK

The scope of work for this project shall consist of an overband crack sealing of pavement per Section 502 of the 2020 Michigan Department of Transportation Standard Specifications for Construction and the included special provision(s). Roads to be crack sealed are listed in the bid documentation. The contract and work shall be carried out in conformance with the MDOT Standard Specifications for Construction, special provisions included in the contract documentation, and Ordinances of the City of Kalamazoo in effect on the date of invitation for bids.

All necessary traffic control, labor, materials, tools, equipment, and other items incidental to the work being performed shall be included in the Contractor's unit price for this contract. Such items will not be bid or paid for separately but shall be included in the overall unit price.

The bidder shall furnish all labor, supervision, supplies, tools, equipment, and other means necessary or proper for performing and completing the work. The bidder shall be responsible for the cleaning up of the job site and shall repair or restore all structures and property that may be damaged or disturbed during performance of the work to the satisfaction of the Public Services Department for the City of Kalamazoo. Drainage structure covers shall be salvaged and reused if in usable condition; otherwise, they shall be replaced. Where needed, all traffic control used for such operations as defined by the MMUTCD will be the responsibility of the bidder.

The bidder shall have all work completed by August 28, 2022.

3. UNIT PRICING

The unit price, including its pro rata share of overhead, multiplied by the quantity shown shall represent the total bid and shall be held firm for the life of this contract. Any bid not conforming to this requirement may be rejected as non-responsive.

4. TEMPORARY UTILITIES

- A. Temporary or construction water will NOT be available on the sites. The Contractor must provide for drinking water.
- B. Temporary toilets: To be supplied by the Contractor as may be necessary.

5. PROGRESS SCHEDULE

- 5.1 After receipt of notification by Contractor of Notice to Proceed **work shall start no earlier than June 27, 2022.**
- 5.2 Project shall have a final completion date of **August 28, 2022.**

- 5.3 Work of a similar nature may be added to this contract if agreed to by the City and the Contractor. In the event that work is added, the progress schedule for the existing work will remain unchanged. Any contract time added for additional work will be applied to that additional work only and cannot be added to items in the original contract. Any work done on the items in the original contract past the number of working days stated herein will be subject to liquidated damages regardless of any work that may be added at a later date.
- 5.4 The Contractor will be required to meet with the Public Services representatives to work out a detailed progress schedule. The schedule for this meeting will be within two weeks after contract award has been made.
- 5.5 The named sub contractor(s) for all items shall also be present at the scheduled meeting and be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule. If unable to attend the scheduled meeting, the sub-contractor shall, at a minimum, sign the Progress Schedule to indicate their approval of the dates of work. MDOT Form 1130 shall be used for schedule submission and signature of all parties.
- 5.6 The Progress Schedule shall include, as a minimum, the starting and completion dates for major items, and where specified in the bid document the date the project is to be opened to traffic as well as the final project completion date specified in the bid document. The Progress Schedule shall be coordinated with all aspects of the work occurring at the site.
- 5.7 Failure on the part of the Contractor to carry out the provisions of the Progress Schedule as established may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.
- 5.8 The starting date and the contract time to the completion date for this project may be adjusted by Public Services without imposing liquidated damages upon the receipt of satisfactory documented evidence that unforeseen delayed delivery of critical materials will prevent the orderly prosecution of the work.
- 5.9 Any request extension of the completion date and satisfactory documented evidence of unforeseen delays shall be submitted via MDOT Form 1100A – Extension of Contract Time.
- 5.10 MDOT Standard Specifications for Construction Section 501.03.I.1, Weather Limitations, shall apply.

6. LIQUIDATED DAMAGES

- 6.1 Liquidated damages, if applicable, shall be \$500.00 a day regardless of contract size.
- 6.2 The provisions of Article 108.10B of the MDOT 2020 Standard Specifications for Construction for reducing liquidated damages of 50 percent of the amount indicated in Table 108-1 of article 108.10C for projects where traffic is maintained during construction will not apply.

7. MAINTAINING TRAFFIC

- 7.1 This work shall be in accordance with the requirements of Section 812 of the MDOT Standard Specifications for Construction, the Maintaining Traffic special provision, and as specified herein. The Contractor is advised that the current Michigan Manual of Uniform Traffic Control Devices (MMUTCD) is hereby established as governing all work in connection with traffic control devices, barricade lighting, etc. required on this project.

- 7.2 The Contractor shall furnish, erect, maintain and, upon completion of the work, remove all traffic control devices and barricade lights within the project and around the perimeter of the project for the safety and protection of through and local traffic. This includes, but is not limited to: Advance, regulatory and warning signs; barricades and channeling devices at intersecting streets on which traffic is to be maintained; barricades at the ends of the project and at right of way lines for intersecting streets which are to be closed with the first usable street on each side of the project. Traffic regulators, where required by the Engineer, are included.
- 7.3 Where the existing pavement or partial widths of new pavement are to be utilized for the maintenance of through and local traffic, channelizing devices will be required at 50' intervals or as directed by the Engineer for channeling and directing traffic through the construction area.
- 7.4 Through traffic shall be maintained utilizing sidewalk closures with detours and traffic shifts per MDOT traffic and safety details.
- 7.5 Protection of all pedestrian traffic shall be maintained at all times in accordance with the MMUTCD. Type II barricades and sidewalk detour signs shall be used in accordance with the MMUTCD at all intersections and ramps. Sidewalk detours shall direct pedestrians safely around closed sidewalk locations and shall be placed at the nearest pedestrian crossing locations still open to traffic.
- 7.6 Payment for furnishing and operating all temporary traffic control devices and traffic regulators shall be paid as pay items included in this contract and shall include all the temporary traffic control measures on all road segments.
- 7.7 Under Article 812.04.D "Operated Pay Items" the term 'Relocating' shall include the relocating of the item from any street covered by the contract to any other street covered by the contract.
- 7.8 No work shall be allowed on the following dates:
- | | |
|----------|------------------------|
| 4/15/22 | Good Friday |
| 5/30/22 | Memorial Day Holiday |
| 6/19/22 | Juneteenth |
| 7/4/22 | Fourth of July Holiday |
| 9/5/22 | Labor Day Holiday |
| 11/11/22 | Veteran's Day |
| 11/24/22 | Thanksgiving |
| 12/25/22 | Christmas |
| 1/1/23 | New Year's Day |
- 7.9 Milled surfaces will not be allowed on travel lanes for longer than 72 hours unless approved by the Project Manager. Any traffic surface within the construction area containing a drop off at the edge of a pavement greater than two (2) inches shall not be allowed to be opened to the public without proper wedging of the edges according to the COK standard detail. Any areas not conforming to the road levelness and profile shall be signed appropriately in accordance with the MMUTCD and best management practices.
- 7.10 Once work is initiated that includes lane restrictions or detours, that work shall be continuous until complete. If work is suspended for more than three (3) continuous working days all lane restrictions and detours shall be removed at the Contractor's expense.

Special Restrictions: Access to frontage properties shall be maintained as much as practical. Emergency access shall be maintained at all times. The Contractor shall maintain two way traffic with flag control as needed when the road is restricted to only one traffic lane.

Payment for furnishing and operating all temporary traffic control devices shall be included in the cost of the contract and not be paid for as a separate item. It shall include all the temporary traffic control measures on all road segments.

8. COORDINATING

The Contractor's attention is called to Article 104.08 of the MDOT Standard Specifications for Construction entitled "Cooperation by Contractor" and the special provisions contained within this contract.

9. WORK HOURS

All work shall be done between the hours of 7 am to 7 pm (Monday – Saturday). Work done outside of these times will be at the discretion of the Project Manager.

No work shall be done on Sunday, unless otherwise approved by the Project Manager in writing.

The Contractor shall conduct their work in such a manner that no excavations are left open overnight. If this is not possible, the Contractor shall provide and install a temporary fence to protect the excavation, at the Contractor's expense.

SECTION VI GENERAL CONDITIONS

1. PROJECT MANAGER’S STATUS

The City Engineer (Engineer) or his/her duly authorized representative shall be the City’s Project Manager and shall have the duties and responsibilities as provided in the contract.

The Project Manager shall have the authority to reject any work or materials which do not conform to the contract and to decide questions or interpretations which may arise from the contract documents.

The Contractor shall immediately report to the Project Manager any questionable or obvious error or omission which may be apparent in the contract documents and shall not proceed with work until the Project Manager has resolved the error or omission.

2. CONSTRUCTION SCHEDULE AND COORDINATION

- 2.1 The Contractor shall supply the City with an agreeable construction schedule before commencing work on this contract. This schedule shall detail beginning and completion dates for each major component of the project.
- 2.2 The Contractor shall coordinate and cooperate with all other contractors who may be working on the site, to allow for the orderly progress of work being done.
- 2.3 The Contractor is required to keep the Project Manager fully informed of any proposed work which will tend to interfere with the existing operations at the site.
- 2.4 The Contractor shall schedule all work to accommodate the City's schedule. In the event the Contractor's schedule falls on weekends, nights or overtime work is required, no additional compensation will be allowed. All work shall be part of this contract without regard to when it is done.
- 2.5 The Contractor shall coordinate with other construction projects and contractors adjacent to the location of this project.
- 2.6 The Contractor shall notify, by door hanger/written flier (pre-approved by the Project Manager), affected residents and business of work and areas to be disturbed by construction at least 72 hours in advance. Work shall not commence until the affected residents/business have been notified and given advanced notice. The Contractor shall work to minimize impacts to those affected by the construction while still maintaining project schedule and objectives. For impacts to driveways or property access points that affect residents or businesses, resident/business shall be notified 24 hours in advance of the work taking place and coordinated with for parking and property access.

3. PROTECTION OF WORK

The Contractor shall maintain adequate protection of all his/her work from damage and shall protect all public and private abutting property from injury or loss arising in connection with this contract.

4. PROTECTION OF PROPERTY

- 4.1 The Contractor shall confine his/her equipment and operations to those areas of the work site necessary for the completion of the work, or as authorized by the Project Manager. The Contractor shall protect and preserve from damage any facilities, utilities or features including trees, shrubs and turf which are not required to be disturbed by the requirements of the work.
- 4.2 The Contractor shall be responsible to determine the location of and to protect from damage any utilities or other improvements.

5. REMOVAL OF RUBBISH

The Contractor shall daily remove all rubbish and accumulated materials due to his/her construction.

6. REMOVAL OF PERMANENT TRAFFIC SIGNS AND POSTS

The Contractor shall notify the Project Manager five (5) working days in advance of the time permanent signs must be removed to accommodate the construction. The Contractor shall remove and salvage any permanent signs that must be removed for construction.

7. PERMANENT TRAFFIC SIGN STAKING

The City shall stake the field locations for the new permanent traffic signs that the Contractor shall install under this contract. The Contractor shall call MISS DIG to arrange for staking prior to sign installation.

8. LAWN SPRINKLER SYSTEMS

- 8.1 Owners of known lawn sprinkler systems shall be notified by the contractor a minimum of 72 hours in advance of any work to be done that will affect those systems. Modifications to the systems are the responsibility of the owners and are not a part of this contract.
- 8.2 Owners of lawn sprinkler systems that were unknown to the contractor at the beginning of work and uncovered during the work for this contract, shall be notified as soon as possible and no later than 24 hours after discovery of the system. The Contractor shall coordinate with the owner for placement outside the immediate work area until modifications can take place. Modifications to the systems are the responsibility of the owners and are not a part of this contract.

9. SALVAGING DRAINAGE STRUCTURE COVERS

The City of Kalamazoo reserves the right to salvage any drainage structure covers or portions thereof which are to be removed as a result of work done under this contract. Any covers which are to be salvaged will be identified by the City. The contractor will set those items identified aside for pick up by City personnel.

10. REMOVING AND REPLACING CURB AND GUTTER

When the contract provides for streets to be milled and resurfaced, or when the existing base course is to remain in place, and replacement of curb and gutter is called for, milling or other surface removal operations will not take place until placement of the new curb and gutter, and adjacent concrete base course has been completed.

11. DRAINAGE INLET COVERS (K COVERS)

In compliance with the Clean Water Act, all inlet covers must have on their backs reminders against dumping waste into the drains.

12. FLY ASH USE IN CONCRETE ITEMS

The use of fly ash, as described in Section 901.07 of the MDOT Standard Specifications for Construction, shall not be allowed.

13. EXISTING WATER MAINS

The Contractor will be responsible for any damage to the existing water mains during the work required under this contract. This includes but is not limited to the construction of the proposed storm sewers, catch basins, leaching basins, leaching trenches, subgrade under drains, subgrade undercutting, full depth repairs, or other miscellaneous work.

14. GRADE INTERSECTIONS

All intersections are to be considered as complete units and their grades determined before construction is started.

15. UNDERGROUND UTILITIES

For protection of underground utilities, the Contractor shall dial Miss Dig at 1-800-482-7171 a minimum of 72 hours prior to excavating in the vicinity of utility lines. All “Miss Dig” participating members will thus be routinely notified. This does not relieve the Contractor of notifying utility owners who may not be part of the “Miss Dig” alert system.

16. ADJUSTING MONUMENT BOXES

It is the intent that all government corners on this project be preserved and that, where necessary, monument boxes be placed or adjusted whether shown or not.

17. PAVEMENT REMOVAL QUANTITIES

Pavement removal as called for in this proposal shall be at the discretion of the Project Manager. If, in his/her judgment, areas of pavement may be left in place or additional area added to provide the proper cross-section and base, adjustments can be made in the quantities.

18. COLD MILLING

In those locations where cold milling is called for and the existing curb is to remain in place, the cold milling item shall cover removal of all asphalt up to the face of the curb. Any materials which are left due to the inability of the cold milling machine to work immediately adjacent to the face of the curb will be removed to the depth indicated on the typical cross-section by other means approved by the Project Manager. Any extra work involved in removing said HMA material shall be considered incidental to the item of Cold Milling HMA Surface.

19. SITE SECURITY

The Contractor shall be responsible for job site security of all materials and tools provided by him/her and no claim for loss or damage will be considered by the City.

20. SITE ACCESS

The City will provide fair and reasonable access to the job site within the working schedules of both parties.

21. MATERIALS INSPECTION AND RESPONSIBILITY

- 21.1 The Project Manager shall have the right to inspect any materials to be used in carrying out the terms of the contract.
- 21.2 The City does not assume any responsibility for the contracted quality and standard of all materials, equipment, components or completed work furnished under this contract.
- 21.3 Any materials, equipment, components or completed work which does not comply with contract specifications, MDOT, or state codes may be rejected by the City, and shall be replaced by the Contractor at no cost to the City.
- 21.4 Any materials, equipment or components rejected shall be removed within a reasonable period of time from the premises of the City at the entire expense of the Contractor after written notice has been mailed by the City to the Contractor that such materials, equipment or components have been rejected.

22. GUARANTEE

The Contractor shall guarantee all of his/her work for a period of one (1) year following the date of final acceptance of the completed work and shall repair, replace or make good any materials or work which fail to function or perform or be found defective, without cost to the city.

23. SAFETY

The Contractor shall comply with all applicable OSHA and MIOSHA regulations.

24. SPECIFICATIONS FOR CONSTRUCTION

The items of work in this contract shall conform to the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, MDOT Supplemental Specifications, and/or the City of Kalamazoo Standard Specifications unless superseded by a Special Provision contained in this document.

25. QUANTITIES

The quantities shown on the Bid and Award pages are approximate only and may be subject to increase or decrease. No guarantee of maximum or minimum is given.

26. PRICE

The unit price, including its pro rata share of overhead, multiplied by the quantity shown shall represent the total bid and shall be held firm for the life of this contract. Any bid not conforming to this requirement may be rejected as non-responsive. Special attention of all bidders is called to this provision since if conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities, nor extra compensation allowed; provided the net monetary value of all such additive and subtractive changes in quantities of such items of work, i.e., difference in cost, shall not increase or decrease the original contract price by more than twenty five (25) percent. Some items of work might be increased beyond the 25% limitations as spelled out previously, upon mutual agreement.

27. BASIS FOR PAYMENT

Payment shall be based on the bid unit price for each work item and the approved constructed quantity for that work item. Due to potential differences in conditions between the plans and the field, final as built quantities may be different than contained in the bid document. The City does not guarantee quantities and will pay only for "as built" quantities approved by the Project Manager or his representative. Quantities in excess of those approved shall be at the Contractor's own expense, the City will not be responsible for excess quantities not approved. Should an item of work have to be redone, such as replacing new walk because the Contractor failed to adequately protect the wet concrete from rain or pedestrian or vehicular damage, such work shall be replaced at the Contractor's expense. Should changes in design result in the Project Manager directing the removal and reinstallation of already completed work prior to final completion and acceptance of the project, such removal and installation shall be paid for based on as-bid unit prices and the quantities removed and installed.

28. PAY ESTIMATES

The Contractor shall be responsible for the generation of invoices for payment. Payment will be generated by the City based upon an approved invoice. Frequency of payment shall be monthly unless agreed to otherwise by the Project Manager, with the invoiced period ending on the last day of the month. However, if a different frequency is approved by the Project Manager, it shall not exceed bi-weekly invoicing.

29. PAYMENT TO CONTRACTOR

The Project Manager will be responsible for approving all measured quantities of work. Once measured quantities are approved, the Contractor shall submit a pay invoice to the City of Kalamazoo Attn: Accounts Payable at 241 West South Street, Kalamazoo MI, 49007 or apinvoice@kalamazoo-city.org. The contractor is required to meet with the Project Manager to verify final constructed quantities within 60 days of project completion. In the event of a disagreement the Project Manager's measured quantities shall be considered final.

30. INSPECTION OF WORK

The City may maintain inspectors on the job who shall, at all times, have access to work.

31. INSPECTION OF SITE

Each bidder shall visit the site of the proposed work and fully acquaint himself/herself with the existing conditions relating to construction, labor, and shall fully inform himself/herself as to the facilities involved and the difficulties and restrictions attending the performance of this contract. The bidder shall thoroughly examine and become familiar with the drawings, specifications, and all other bid/contract documents. The Contractor, by the execution of this contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument, or to visit the site and acquaint himself/herself with the conditions there existing. No allowance shall be made subsequently in this connection on behalf of the Contractor for any negligence of his/her part. For inspection call the Public Services Department, Engineering Division.

32. LAYING OUT OF WORK

Before submitting a bid, the Contractor shall verify all measurements and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the measurements indicated on the drawings. Any difference that may be found shall be submitted to the City Engineer for consideration before proceeding. The City Engineer will provide staking for the project.

33. SUPERVISION

The Contractor shall employ an experienced superintendent or foreperson on the job at all times.

34. TARDINESS

Construction delays resulting from tardiness on the part of the Contractor will be reviewed by the City in the event of any request for contract extension by the Contractor.

35. ADDITIONS

Any modification to the contract shall be subject to prior approval by the Purchasing Agent. City Commission approval may also be required.

Prices for additional work required are not requested in the itemized listing contained herein for the base project. Should additional work be authorized, compensation shall be made on the basis of price or prices to be mutually agreed upon. Such additional work shall not begin until a Change Order has been approved.

36. INSPECTION AND TESTING

The Contractor shall give the Project Manager timely notice of readiness of the work for all required inspections, tests or approvals, and shall cooperate with inspections and testing personnel to facilitate required inspections or tests.

37. QUESTIONS

Bidders shall address questions regarding the specifications to Tom Palumbo, P.E., Senior Civil Engineer at palumbot@kalamazoo.org. (This does not relieve the requirements of Page 6, Item 3.) Questions regarding terms, conditions and other related bid requirements may be addressed to Craig Hull, Buyer, at (269) 337-8444.

SECTION VII TERMS AND CONDITIONS

1. AWARD OF CONTRACT

- A. This contract will be awarded to that responsible bidder whose bid, conforming to this solicitation, will be most advantageous to the City, price and other factors considered. The City reserves the right to accept or reject any or all bids and waive informalities and minor irregularities in bids received. Other factors include, as an example but not limited to, delivery time, conformance to specifications, incidental costs such as demurrage and deposits, etc.

Notification of award will be in writing by the Purchasing Agent. Upon notification, the Contractor shall submit to the Purchasing Division all required insurance certificates (if required) and such other documentation as may be requested or required hereunder. Upon their receipt and subsequent approval by the City, the Purchasing Agent will forward to the Contractor a written **NOTICE TO PROCEED**. Work shall **NOT** be started until such **NOTICE TO PROCEED** is received by the Contractor.

- B. Unilateral changes in bid prices by the bidder shall not be allowed. However, the City, at its sole option, reserves the right to negotiate with bidders in the event of, but not limited to:
- 1) No bids received;
 - 2) A single bid being received; or
 - 3) Prices quoted are over budget and/or unreasonable.

2. COMPLETE CONTRACT

This bid document together with its addenda, amendments, attachments and modifications, when executed, becomes the complete contract between the parties hereto, and no verbal or oral promises or representations made in conjunction with the negotiation of this contract shall be binding on either party.

3. SUBCONTRACTORS – NON-ASSIGNMENT

Bidders shall state in writing any and all sub-contractors to be associated with this bid, including the type of work to be performed. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women-owned business enterprises.

The Contractor hereby agrees and understands that the contract resulting from this solicitation shall not be transferred, assigned or sublet without prior written consent of the City of Kalamazoo.

4. TAXES

The City of Kalamazoo is exempt from all federal excise tax and state sales and use taxes.

5. **INVOICING**

All original invoice(s) will be sent to the Financial Services Division, 241 W. South Street, Kalamazoo, MI 49007 or via email at apinvoice@kalamazoo-city.org. The Finance Division processes payments after receipt of an original invoice from the Contractor and approval by the department. The City of Kalamazoo's policy is to pay invoice(s) within 30 days from the receipt of the original invoice, if the services or supplies are satisfactory and the proper paperwork and procedures have been followed. **In order to guarantee payment to the vendor on a timely basis, the vendor needs to receive a purchase order number before supplying the City of Kalamazoo with goods or services.** All original, and copies of original invoice(s), will clearly state which purchase order they are being billed against.

The City of Kalamazoo is a government municipality and therefore is tax exempt from all sales tax.

The vendor is responsible for supplying the Finance Division with a copy of their W9 if they are providing a service to the City of Kalamazoo.

6. **PAYMENTS**

Upon issuance of certificates of Payment by the Architect/Engineer for labor and material incorporated in the work and the materials suitably stored at the site payment shall be made up to ninety (90%) percent of the value thereof.

When the cumulative total of payment is equal to fifty (50%) percent of the contract sum, subsequent payments will be made in the full amount for labor and material certified by the Architect/Engineer.

The amount retained shall be held until final acceptance of the work, receipt of all payrolls, releases, and waiver of liens.

7. **CHANGES AND/OR CONTRACT MODIFICATIONS**

The City reserves the right to increase or decrease quantities, service or requirements, or make any changes necessary at any time during the term of this contract, or any negotiated extension thereof. Price adjustments due to any of the foregoing changes shall be negotiated and mutually agreed upon by the Contractor and the City.

Changes of any nature after contract award which reflect an increase or decrease in requirements or costs shall not be permitted without prior approval by the Purchasing Agent. City Commission approval may also be required.

ANY CHANGES PERFORMED IN ADVANCE OF PURCHASING AGENT APPROVAL, MAY BE SUBJECT TO DENIAL AND NON-PAYMENT.

8. LAWS, ORDINANCES AND REGULATIONS

The Contractor shall keep himself/herself fully informed of all local, state and federal laws, ordinances and regulations in any manner affecting those engaged or employed in the work and the equipment used. Contractor and/or employees shall, at all times, serve and comply with such laws, ordinances and regulations.

Any permits, licenses, certificates or fees required for the performance of the work shall be obtained and paid for by the Contractor.

This contract shall be governed by the laws of the State of Michigan.

9. RIGHT TO AUDIT

The City or its designee shall be entitled to audit all of the Contractor's records, and shall be allowed to interview any of the Contractor's employees, throughout the term of this contract and for a period of three years after final payment or longer if required by law to the extent necessary to adequately permit evaluation and verification of:

- A. Contractor compliance with contract requirements,
- B. Compliance with provisions for pricing change orders, invoices or claims submitted by the Contractor or any of his payees.

10. HOLD HARMLESS

If the negligent acts or omissions of the Contractor/Vendor or its employees, agents or officers, cause injury to person or property, the Contractor/Vendor shall indemnify and save harmless the City of Kalamazoo, its agents, officials, and employees against all claims, judgments, losses, damages, demands, and payments of any kind to persons or property to the extent occasioned from any claim or demand arising therefrom.

11. DEFAULT

The City may at any time, by written notice to the Contractor, terminate this contract and the Contractor's right to proceed with the work, for just cause, which shall include, but is not limited to the following:

- A. Failure to provide insurance and bonds (when called for), in the exact amounts and within the time specified or any extension thereof.
- B. Failure to make delivery of the supplies, or to perform the services within the time specified herein, or any extension thereof.
- C. The unauthorized substitution of articles for those bid and specified.
- D. Failure to make progress if such failure endangers performance of the contract in accordance with its terms.
- E. Failure to perform in compliance with any provision of the contract.

- F. **Standard of Performance** - Contractor guarantees the performance of the commodities, goods or services rendered herein in accordance with the accepted standards of the industry or industries concerned herein, except that if this specification calls for higher standards, then such higher standards shall be provided.

Upon notice by the City of Contractor's failure to comply with such standards or to otherwise be in default of this contract in any manner following the Notice to Proceed, Contractor shall immediately remedy said defective performance in a manner acceptable to the City. Should Contractor fail to immediately correct said defective performance, said failure shall be considered a breach of this contract and grounds for termination of the same by the City.

In the event of any breach of this contract by Contractor, Contractor shall pay any cost to the City caused by said breach including but not limited to the replacement cost of such goods or services with another Contractor.

The City reserves the right to withhold any or all payments until any defects in performance have been satisfactorily corrected.

In the event the Contractor is in breach of this contract in any manner, and such breach has not been satisfactorily corrected, the City may bar the Contractor from being awarded any future City contracts.

- G. All remedies available to the City herein are cumulative and the election of one remedy by the City shall not be a waiver of any other remedy available to the City.

12. **TERMINATION OF CONTRACT**

The City may, at any time and without cause, suspend the work of this contract for a period of not more than ninety days after providing notice in writing to the Contractor. The Contractor shall be allowed an adjustment in the contract price or an extension of the contract times, or both, directly attributable to the suspension if Contractor makes an approved claim.

The City may, without prejudice to any other right or remedy of the City, and with or without cause, terminate the contract by giving seven days written notice to the Contractor. In such case the Contractor shall be paid, without duplication, for the following items:

- A. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such work;
- B. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the contract documents in connection with uncompleted work, plus fair and reasonable sums for overhead and profit on such expenses;
- C. All documented claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and
- D. Reasonable expenses directly attributable to termination.

The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

13. INDEPENDENT CONTRACTOR

At all times, the Contractor, any of his/her employees, or his/her sub-contractors and their subsequent employees shall be considered independent contractors and not as City employees. The Contractor shall exercise all supervisory control and general control over all workers' duties, payment of wages to Contractor's employees and the right to hire, fire and discipline their employees and workers. As an independent contractor, payment under this contract shall not be subject to any withholding for tax, social security or other purposes, nor shall the Contractor or his/her employees be entitled to sick leave, pension benefit, vacation, medical benefits, life insurance or workers' unemployment compensation or the like.

14. PROJECT SUPERVISOR

The Contractor shall employ an individual to act as Project Supervisor. The Project Supervisor shall be available to the Contractor's workers and the Project Manager at all times by use of a beeper or other reliable means. The Project Supervisor shall prepare daily work plans for the employees, monitor employee performance, attendance and punctuality; and work closely with the City's Project Manager in assuring contract compliance.

15. MEETINGS

The Contractor and/or Project Supervisor shall be available to meet with the Department Head or Project Manager at a mutually agreeable time to discuss problems, issues or concerns relative to the contract. Either party may call a meeting at any time. When such a request for a meeting is made, the meeting date shall, in no case exceed five (5) working days after the request; and, if in the sole opinion of the Department Head, the severity of the circumstance warrants, no more than one (1) working day.

16. INSPECTION OF WORK SITE

Before submitting bids or quotes for work, the Contractor shall be responsible for examining the work site and satisfying himself/herself as to the existing conditions under which he/she will be obligated to operate, or that in any way affects the work under this contract. No allowance shall be made subsequently, on behalf of the Contractor, for any negligence on his/her part.

17. CONTRACT PERIOD, EXTENSIONS, CANCELLATION

- A. The contract shall be in effect for the term stated in the specifications.
- B. The City may opt to extend this contract upon mutual agreement of both parties. The number of extensions shall be limited to that stated in the specifications.
- C. The City may, from time to time, find it necessary to continue this contract on a month-to-month basis only, not to exceed a six (6) month period. Such month-to-month extended periods shall be by mutual agreement of both parties, with all provisions of the original contract or any extension thereof remaining in full force and effect.

- D. All contracts, extensions and cost increases are subject to availability of funds and the approval of the City Commission (if required).
- E. The City reserves the right to cancel the contract due to non-appropriation of funds by the City with thirty (30) days written notice.
- F. Either party may terminate the contract (or any extension thereof) without cause at the end of any twelve (12) month term by giving written notice of such intent at least 60 days prior to the end of said twelve (12) month term.
- G. All notices are in effect commencing with the date of mailing. Written notices may be delivered in person or sent by First Class mail; faxed or emailed to the last known address.
- H. If cancellation is for default of contract due to non-performance, the contract may be canceled at any time (see Item 11, DEFAULT)

**APPENDIX A
NON-DISCRIMINATION CLAUSE FOR ALL CITY OF
KALAMAZOO CONTRACTS**

The Contractor agrees to comply with the Federal Civil Rights Act of 1964 as amended; the Federal Civil Rights Act of 1991 as amended; the Americans With Disabilities Act of 1990 as amended; the Elliott-Larson Civil Rights Act, Act. No. 453, Public Act of 1976 as amended; the Michigan Handicappers Civil Rights Act, Act No. 220, Public Act of 1976 as amended, City Ordinance 1856 and all other applicable Federal and State laws. The Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation or gender identity that is unrelated to the individual's ability to perform the duties of the particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability family status, sexual orientation or gender identity that is unrelated to the individual's ability to perform the duties of the particular job or position.
3. If requested by the City, the Contractor shall furnish information regarding practices, policies and programs and employment statistics for the Contractor and subcontractors. The Contractor and subcontractors shall permit access to all books, records and accounts regarding employment practices by agents and representatives of the City duly charged with investigative duties to assure compliance with this clause.
4. Breach of the covenants herein may be regarded as a material breach of the contract or purchasing agreement as provided in the Elliott-Larsen Civil Rights Act and City Ordinance 1856.
5. The Contractor will include or incorporate by reference the provisions of the foregoing paragraphs 1 through 4 in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission* and will provide in every subcontract or purchase order that said provision will be binding upon each subcontractor or seller.
6. The Contractor will not preclude a person with a criminal conviction from being considered for employment unless otherwise precluded by federal or state law. (for contracts over \$25,000)

The Elliott-Larson Civil Rights Act, Sec. 202 of Act. No. 453 of 1976 reads in part as follows:

Sec. 202. (1) An employer shall not:

- (a) Fail or refuse to hire, or recruit, or discharge or otherwise discriminate against an individual with respect to employment, compensation, or a term condition or privilege of employment because of religion, race, color, national origin, age, sex, height, weight or marital status.
- (b) Limit, segregate or classify an employee or applicant for employment in a way which deprives or tends to deprive the employee or applicant of an employment opportunity or otherwise adversely affects the status of an employee or applicant because of religion, race, color, national origin, age, sex, height, weight or marital status.
- (c) Segregate, classify or otherwise discriminate against a person on the basis of sex with respect to a term, condition or privilege of employment, including a benefit plan or system.

* Except for contracts entered into with parties employing less than three employees.
1-2010



Department of Management Services
Purchasing Division
241 West South Street
Kalamazoo, MI 49007-4796
Phone: 269.337.8020
Fax: 269.337.8500
www.kalamazoocity.org
purchasing@kalamazoocity.org

**APPENDIX B
ADDITIONAL INFORMATION**



**THE CITY OF KALAMAZOO
DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION**

Qualified Products List (QPL)

2022 Streets Crack Seal Program

Bid Reference #: 91396-008.0

MATERIALS SOURCE GUIDE

January 2022



**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 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 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

For copies of the most recent Materials Source Guide you can:

Download from the internet at web address:

https://www.michigan.gov/mdot/0,4616,7-151-9622_11044_11367_68095---,00.html

Or Navigate by:

www.michigan.gov/mdot
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 Reports, Publications and Specs
 \
 Manuals & Guides; Manuals, Guides, Advisories & Memos
 \
 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.

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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.

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

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.

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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)
401.03E End Section Grate for Culverts	VI	-	-	-	See Standard Plans for Sizes.
401.03E Precast Concrete Headwalls	Gen Cert	-	-	-	24" or less. For larger than 24" construct per Section 706 of Standard Specifications.
404.02C Underdrain Outlet Endings	VI	-	-	-	See Standard Plans.
501.02 Asphalt, Release Agents	VI	-	-	-	
NOTE: Must be approved by the project engineer. No fuel or oil based agents.					
502.02B Overband Crackfill	VI See Remark	-	-	-	Must be a Qualified Product (502.02B).
603.03B2 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).
NOTE: 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).					
706.03K4 Expansion Joint Devices for Bridges	See Remark	-	-	-	See project plans for list of approved devices and details.
706.03S Penetrating Water Repellent (Protective Coating for Concrete)	VI See Remark	-	-	-	Must be a Qualified Product (706.03S).
707.02 Bushings for Pins and Link Plates	VI See Remark	-	-	-	Must be a Qualified Product (707.02).
708.01 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.
710.03D Waterproofing Shotcrete	VI	-	-	-	
712.03A1c Abrasive, Low Dusting	Gen Cert	-	-	-	See Section 715.02.
712.03D Epoxy Mastic	VI	-	-	-	
712.03J Adhesive Anchor Systems for Structural Anchors and Lane Ties	VI See Remark	-	-	-	Must be a Qualified Product (712.03J).

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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)
712.03K 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.
712.03L Mechanical Reinforcement Splicing	VI See Remark	1 per project	2 splices	-	See Special Instructions. Must be a Qualified Product (712.03L).
712.03X Grout Under Masonry Plates	VI	-	-	-	
712.03Y Embedded Galvanic Anodes	VI See Remark	-	-	-	Must be a Qualified Product (712.03Y).
713.02B Sealant for Perimeter of Beam Repairs	VI See Remark	-	-	-	Must be a Qualified Product (713.02B).
715.02 Coating Systems for New Hanger Assemblies	VI See Remark	-	-	-	Must be a Qualified Product (915).
715.02 Abrasive, Low Dusting	VI See Remark	-	-	-	Must be a Qualified Product (715.02).
715.02 Abrasive, Steel Grit	VI	-	-	-	Verify uniform profile after blasting of 1 to 2.8 mils per SSPC.
716.02 Abrasive, Low Dusting	VI See Remark	-	-	-	See Section 715.02.
803.02B Detectable Warning Surfaces	VI See Remark	-	-	-	Must be a Qualified Product (803.02B).
804.01 Glare Screen	VI	-	-	-	Included in Concrete Spec.
808.03C Temporary Fence Materials	VI	-	-	-	
810.03O Bridge Sign Connections	Fabrication Inspection	-	-	-	See Section 2.4 of the Structural Fabrication Quality Manual.
811.03D1 Waterborne, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D1).
811.03D2 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)
811.03D3 Regular Dry Paint, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D3).
811.03D4 Cold Plastic Tape, Preformed Pavement Marking Material	VI See Remark	-	-	-	MQAP Manual Section 5.14. Must be a Qualified Product (811.03D4).
811.03D5 Thermoplastic Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D5).
811.03D5 Thermoplastic, Blocks Rumble Strips and Snowmobile Crossings	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D5).
811.03D6 Thermoplastic, Sprayable, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D6).
811.03D7 Polyurea, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D7).
811.03D8 Modified Epoxy, Liquid Pavement Marking Materials	VI See Remark	-	-	-	MQAP Manual Section 5.13. Must be a Qualified Product (811.03D8).
811.03D9 Preformed Thermoplastic, Preformed Pavement Marking Material	VI See Remark	-	-	-	MQAP Manual Section 5.14. Must be a Qualified Product (811.03D9).
901 Cement	Appr Mfr	See Remark	10 lb	45 ton	See Special Instructions, see MQAP Manual Section 2.06.
901.06 Slag Cement	Appr Mfr	-	10 lb	-	See Special Instructions for Cement.
901.07 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)
902 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. See Current List of all Prequalified Aggregate Suppliers at Construction Field Services Web Page. Actual Current List of Prequalified Aggregate Suppliers web page address: https://www.michigan.gov/documents/mdot/MDOT_Prequalified_Aggregate_Supplier_List_691933_7.pdf
902 Dense-Graded Aggregates	Test	See Remark	50 lb	500 ton	
902 Open-Graded Aggregates	Test	See Remark	50 lb	100 ton	
902 Granular Material Class I	Test	See Remark	50 lb	100 ton	
902 Granular Material Class II (Subbase), Class IIA and Class IIAA	Test	See Remark	50 lb	500 cyd	
902 Class II (Abutment B. F.)	Test	See Remark	50 lb	100 cyd	
902 Granular Material Class III	Test	See Remark	50 lb	500 cyd	
902 Granular Material Class IIIA	Test	See Remark	25 lb	100 cyd	
902 Fine Aggregate	Test	See Remark	25 lb	100 ton	
902 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.
903.01 Air Entraining Admixtures	VI See Remark	-	-	-	Must be a Qualified Product (903.01).
903.02 Liquid Chemical Admixtures	VI See Remark	-	-	-	Must be a Qualified Product (903.02).
903.03 Latex Admixture for Concrete	Appr Mfr	1 per lot	1 qt	-	
903.04 Calcium Chloride Concrete Accelerators	VI See Remark	-	-	-	Note the chemical composition.
903.06 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)
903.07A Interim Curing (Linseed Oil Based)	Test Data Cert	1 per lot or batch	1 qt	50 gal	See Note for 903.06 above.
903.07C Insulating Blanket	Test Data Cert	-	-	10 sheets	
903.07D Polystyrene Insulation	Test Data Cert	-	-	-	
904.03A Asphalt Binder for HMA Mixtures	See Remark	See Remark	See Remark	-	See Special Instructions.
904.03B Liquid Asphalt (MC)	Gen Cert	1 per batch	See Remark	-	1 gal from the top and 1 gal from the bottom of tank.
904.03B Liquid Asphalt (RC-250)	Gen Cert	1 per batch	2 qt	5 gal	
904.03C Emulsified Asphalt	Appr Mfr * See Remark	See Remark	See Remark	-	See Special Instructions.
905.03 Bar Reinforcement (Uncoated)	Appr Mfr *	1 per project per mfr per size	See Remark	500 lb	See Special Instructions.
905.03 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).
905.03D Bar Chairs and Wire Ties for Epoxy Coated Steel Reinforcement	VI	-	-	-	
905.06 Welded Steel Wire Reinforcement (Mesh)	Appr Mfr *	1 per project per mfr	See Remark	500 syd	See Special Instructions.
905.07 Strand for Prestressed Concrete	Appr Mfr *	1 per heat	2 pcs each 60 in long	-	See Special Instructions.
905.08 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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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
905.08 Tendons for Post Tensioning of Box Beams (Post Tensioning Bar)	Test	1 per heat per project	2 pcs each 30 in long	-	
906.04 Structural Steel	Fabrication Inspection	-	-	-	See Section 2.3 of the Structural Fabrication Quality Manual. See Special Instructions.
906.05 Foundation Piles (Steel H Piling and Special Sections, Steel Shells for Cast-in- Place Concrete Piles and Pile Points)	Test Data Cert	-	-	-	
906.05 Pile Cutoffs	Gen Cert	-	-	-	
906.06 Steel Piles (Temporary and Permanent Steel Sheet Piling)	Gen Cert	-	-	-	
906.07 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.
906.09 Shear Developers (Studs)	VI See Remark	-	-	-	Must be a Qualified Product (906.09).
907.03A - C 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	
907.03D Woven Wire Fence (Steel Posts)	Test Data Cert	1 per project per mfr	1 post	25 posts	
907.03E Woven Wire Fence (Treated Wood Posts)	See Remark	-	-	-	See Section 912.07B.
907.03F Woven Wire Fence (Gates)	VI	-	-	-	
907.04A 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.
907.04B 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)
907.04C 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.
NOTE: 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.					
907.04C 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.
907.04D & E Steel Chain Link Fence (Gates, Fence Fittings and Hardware)	VI	-	-	-	
907.05A High Tensile Wire Fence (Wire)	Test	1 per project per mfr	3 ft	250 ft	
907.05B High Tensile Wire Fence (Treated Wood Posts)	See Remark	-	-	-	See Section 912.07B.
907.05C High Tensile Wire Fence (Hardware)	VI	-	-	-	
907.06 Protective Fence	VI	-	-	-	
908 Castings, Manhole 908.03 Malleable Iron 908.04 Steel 908.05 Gray/Ductile Iron	VI	-	-	-	
908.07 Sheet Lead	Gen Cert	-	-	25 sft	
908.08 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.
908.09A Tubing, Steel Railings (Base Plate, Angle, and Non-Tubular Post Elements)	Fabrication Inspection	-	-	-	See Structural Fabrication Quality Manual Section 2.3.
908.09B 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)
908.09C Tubing, Steel Railings (Hardware)	Test	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
908.10 Hardware for Timber Construction	VI	-	-	-	
908.11A 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.
908.11A Guardrail Approach Terminals	Appr Mfr *	-	-	-	
908.11B & C B. Hardware C. Steel Sleeves, Soil Plates, Bearing Plates, Backup Plates	VI	-	-	-	Item supplied by guardrail supplier.
908.11B Wire Rope	Gen Cert	-	-	-	
908.12 Steel Posts for Beam Guardrail	Appr Mfr *	1 per 1000 posts or fraction thereof	1 post	25 posts	
908.13 Reflective Washers	VI See Remark	-	-	-	Inspect galvanizing, dimensions and type of sheeting.
908.14 Anchor Bolts, Nuts, and Washers	Test	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
908.14D Anchor Bolts and Nuts for Other Purposes	Gen Cert	1 per heat per diameter per project	1 assembly	-	See Special Instructions.
909.01 Recycled Rubber Adjusting Rings for Manholes and Drainage Castings	VI See Remark	-	-	-	Must be a Qualified Product (909.01).
909.03 Watertight Joint Systems	VI See Remark	-	-	-	Must be a Qualified Product (909.03).
909.03 Gasket, Compression (O-Rings)	VI	-	-	-	Part of Watertight Joint System.
909.03 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)
909.04A 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.
909.04B 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.
909.04C Non-Reinforced Concrete Pipe	Appr Mfr *	See Remark	See Remark	10 pcs	See Special Instructions.
909.04D 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.
909.04E 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. .
909.04G 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.
909.05A Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark	-	See Special Instructions.
909.05A1 Corrugated Steel Sheets (Galvanized)	Gen Cert	See Remark	See Remark	-	See Special Instructions.
909.05A1 Polymer Coating, Galvanized Corrugated Steel Pipe	VI See Remark	-	-	-	Coating must be from Qualified Products List (909.05A1).
909.05A3 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)
909.05B Corrugated Aluminum Alloy Sheet	Gen Cert	See Remark	See Remark	25 sheets	See Special Instructions.
909.05B 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.
909.05C Steel End Section	Gen Cert	-	-	4 pcs	
909.05D 1. Steel Pipe (Jacked-in-Place)	Gen Cert	-	-	-	
909.05D 2. Casing, Steel Pipe	VI	-	-	-	
909.06 1. Corrugated Polyethylene Pipe (CPE/HDPE), (Smooth Lined Type S)	See Remark	-	-	100 ft	See MQAP Chapter 3.10.
909.06 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.
909.06 3. Plastic Pipe Class A, B and F Bury (CPE/HDPE & CPV)	VI See Remark	-	-	-	Must be a Qualified Product (909.06).
909.06 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.
909.07A 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.
909.07A1 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.
909.07B 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.
909.07C 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)
909.07C 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.
909.07C 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.
909.08A Bridge Deck Downspouts	VI	-	-	-	
909.08B Culvert, Downspouts 1. Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark	-	See 909.05A Corrugated Steel Pipe.
909.08B Culvert, Downspouts 2. Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	6 in x 3 in	250 ft	See 909.05B.
909.08B 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.
909.08C Bridge Deck Drain Extensions (Polyethylene)	Gen Cert	-	-	-	
909.09 Cold Applied Pipe Joint Sealer (Mastic)	VI	1 per shipment from a single container	1 qt	-	
909.10 Drainage Marker Post	See Delineator Posts	-	-	-	
910.03A 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.
910.03A Knitted Sock Pipe Wrap	See Remark	-	-	-	See 909.07B Certified with Corrugated Plastic Tubing.
910.03B 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.
910.03B 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.

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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)
910.03C Geotextile Separator (Woven, Non-woven)	Test	See Remark	See Remark	See Remark	See Special Instruction 910.03. Anticipate up to 28 calendar days for the testing of geotextile samples.
910.03D Stabilization Geotextile (Woven, Non-woven)	Test	See Remark	See Remark	See Remark	See Special Instruction 910.03. Anticipate up to 28 calendar days for the testing of geotextile samples.
910.04 Silt Fence Geotextile (fabric only)	VI See Remark	-	-	-	Must be a Qualified Product (910.04). See 916.02 for sampling and acceptance instructions for Silt Fence (full assembly).
910.05A Wall Drain	Test	1 per 2000 ft or less	See Remark	250 sft	See Special Instruction 910.05. Suppliers must provide separate samples of filter wrap geotextile and polymer core.
910.06 Road Grade Biaxial Geogrid	Test	1 per lot per shipment	1 pc 6 ft long full roll width	-	Sample must be <u>rolled</u> not folded. Include lot number and/or roll number, name of manufacturer, and the product or style number. Anticipate up to 28 calendar days for the testing of geogrid samples.
911 Water	Test See Remark	1 per source	1 qt	-	Water approved for drinking by the Michigan Dept of Public Health may be used without sampling and testing.
912.05 Structural Timber and Lumber	Appr Mfr *	Each Charge	22 cores See Remark	-	48 cores if treatment is creosote.
912.06 Timber Piles	VI	-	-	-	
912.07B Treated Wood; Fence Posts, Guide Posts, Guard Posts and Mail Box Posts	VI	-	-	-	
912.08 Wood Posts and Blocks for Guardrail and Highway Signs (Dimension Sawed)	Appr Mfr *	Each Charge	22 cores	-	Cedar post need not be treated.
912.08Q Recycled Plastic or Rubber Guardrail Offset Blocks	VI See Remark	-	-	-	Must be a Qualified Product. May only be used on Steel Posts (912.08Q).
912.09 Timber for Rustic Construction	Gen Cert	-	-	-	

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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)
913.03 Clay and Sand Lime Brick and Block	Test	1 per 250,000 or fraction thereof	6 pcs	1000 pcs	
913.03C Concrete Brick	Test Data Cert	See Remark	6 pcs	1000 pcs	1 from each 10,000 bricks or fraction thereof; 2 from lots more than 10,000 to 100,000; 3 from each lot over 100,000.
913.05 Concrete Block	Test Data Cert	See Remark	4 pcs	1000 pcs	One from lot of 10,000 or fraction thereof; 2 from lots more than 10,000.
913.06 Precast Reinforced Concrete Units for Drainage Structures (Tops, Risers and Sump Bases)	Appr Mfr *	1 percent per size	See Remark	10 pcs total	Submit QA cylinder test results and core samples. Submit sample 1-3 sq.in. from wall of unit if absorption is required.
913.06 Precast Drainage Structure Adjusting Rings	Gen Cert	-	-	-	
913.07 Precast Concrete Bases, for Drainage Structures	Appr Mfr *	5 percent of total	-	10 pcs total	
913.08 Structural Tile	Test	1 per proj.	6 tiles	1000 tiles	
913.09 Slope Pavement Blocks	Appr Mfr *	1 per 25,000	6 blocks	1000 pcs	
914.03 Bituminized Fiber Joint Filler	Test Data Cert	1 per 1000 sft or fraction thereof	2 ft See Remark	150 sft	Sample for structure to be at least 5 in. wide. ¼ in. filler need not be sampled.
914.03B Recycled Rubber Joint Filler	VI See Remark	-	-	-	Must be a Qualified Product (914.03B).
914.03C Closed-Cell Polypropylene Foam	Test Data Cert	1 per 1000 sft or fraction thereof	2 ft See Remark	150 sft	Sample for structure to be at least 5 in. wide. ¼ in. filler need not be sampled.
914.04A Hot-Poured Joint and Crack Sealant	VI See Remark	-	-	-	Must be a Qualified Product (914.04A).
914.04B Backer Rod for Use with Hot-Poured Joint Sealant	VI	-	-	-	
914.05 Joint Spall Repair Materials	See Remark	-	-	-	See contract documents as applicable.
914.06 Epoxy Resin Adhesive and Temporary Seal (Crack Injection)	VI See Remark	-	-	-	Must be a Qualified Product (914.06).

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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)
914.07 Transverse Pavement Joints 1. Dowel Bars 2. Dowel Baskets (Load Transfer Assemblies)	Appr Mfr Appr Mfr	- -	1 bar Full size unit	1200 bars 100 assemblies	Bond Release Agent must be a Qualified Product (914.07A). See Special Instructions 914.07. Field Inspection required, MQAP Manual Section 3.04. See Special Instructions 914.07.
914.07A Coatings for Dowel Bars 1. Epoxy Coating Companies 2. Epoxy Coating Material 3. Bond Release a. Bituminous Material b. Alternate Bond Release Agents	Appr Mfr * VI See Remark Gen Cert VI See Remark	1 per project per mfr - - -	1 bar - - -	240 bars - 20 gal max -	Epoxy Coating must be a Qualified Product (914.07A2). Must be a Qualified Product (914.07A3).
914.07C Dowel Bar Expansion Caps	VI	-	-	-	Caps must conform to Standard Plan R-40 Series.
914.08 End-of-Pour Joint Devices	VI	-	-	-	
914.08 Deformed Bars 1. Bars 2. Epoxy Coating	Appr Mfr * VI See Remark	1 per project per mfr	-	500 lb	Epoxy Coating must be Qualified Product (905.03C).
914.09 Straight and Bent Tie Bars for Longitudinal Pavement Joints (Lane Ties) 1. Bars 2. Epoxy Coating	Appr Mfr * VI See Remark	1 per project per mfr	2 bar	500 lb	Epoxy Coating must be a Qualified Product (905.03C).
914.10 Bolts for Structure Expansion Anchors	Gen Cert	-	-	-	
914.11 Preformed Waterproofing Membrane and Joint Waterproofing Membrane	VI See Remark	-	-	-	Must be a Qualified Product (914.11). Do not use on Treated Wood Materials.
914.12A Elastomeric Bearings	Gen Cert	-	-	-	
914.12B Elastomeric Leveling Pads	Gen Cert	-	-	-	

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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)
915 Bridge Coating Systems	VI See Remark	-	-	-	Must be a Qualified Product (915).
916.01A Cobblestone	VI	-	-	-	
916.01C Riprap	VI	-	-	-	
916.02 Silt Fence (full assembly) NOTE: Sample to include identifying markings of fabricator. Indicate on sample ID description of markings. Note where markings were found.	Appr Mfr *	See Remark	See Remark	500 ft	1 sample for the first 3000 ft or fraction thereof; 1 sample for each additional 10,000 ft or fraction thereof; 1 piece 12 ft long by full fence height include 2 attached posts and lath. See 910.04 for acceptance instructions for Silt Fence Geotextile (fabric only).
916.07 Turbidity Curtain	VI				
917.03 Nursery Stock	VI	-	-	-	
917.05 Balling Material	VI	-	-	-	
917.06A Wire for Bracing and Guying	VI	-	-	-	
917.06B Hose for Bracing and Guying	VI	-	-	-	
917.06C Stakes for Bracing and Guying	VI	-	-	-	
917.08 Compost	VI	-	-	-	
917.10 Chemical Fertilizer for Grass Seed	VI See Remark	-	-	-	Provide the bag label, showing the guaranteed analysis.
917.12 Grass Seeding Mixtures Grass Seed Varieties	VI See Remarks VI See Remark	1 per lot per shipment	1/2 lb	1100 lbs	For projects that include more than 5 acres of seeding, see Grass Seed Testing Special Provision in contract. Varieties of seed must be Qualified Product (917.12).
917.13 Sod	VI	-	-	-	
917.13A Pegs for Sodding	VI	-	-	-	

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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)
917.14 Mulching Materials for Nursery Stock	VI	-	-	-	Only shredded hardwood, wood chips or wood products not allowed.
917.15B1 & 2 High Velocity Mulch Blankets and Standard Mulch Blanket	VI See Remark	-	-	-	Must be a Qualified Product (917.15B 1 & 2). High velocity - netting 2 sides. Standard - netting 1 side.
917.15C Mulch Anchoring - Latex, Recycled Newsprint, Wood Fiber, Guar Gum, Other Tackifiers	VI See Remark	-	-	-	Must be a Qualified Product (917.15C).
917.16 Weed Control (Herbicides)	Test Data Cert	-	-	-	
918.01 Flexible Metal Conduit	VI	-	-	-	
918.01A Electrical Conduit, Rigid (Galvanized Steel)	Gen Cert	See Remark	6 ft, include coupling, if applicable	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.01B & C Electrical Conduit (Polyvinyl Chloride) Schedule 40 and 80	Gen Cert	See Remark	6 ft sample w/ bell end incl coupling	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.01D & E Electrical Conduit (Polyethylene/HDPE) Schedule 40 and 80	Gen Cert	See Remark	See Remark	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft; 6 ft plus a separate section consisting of 2- 18 in. long pcs. connected by the joint.
918.01F Electrical Conduit (Rigid Fiberglass)	Gen Cert	See Remark	6 ft sample w/ bell end incl. coupling	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.02 Grounding System	VI	-	-	-	
918.02C Grounding Rods	VI	-	-	-	

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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)
918.03 Electrical Cable	See Note	-	-	-	
<p>NOTE: Suitability and compliance with specifications will be determined by the agency responsible for maintaining the system. This agency shall provide the project engineer with a memo or other appropriate form indicating that the inspection has been made and that the material is acceptable.</p>					
918.06 Precast Concrete Handholes and Manholes for Electrical and Telephone Connections	Appr Mfr *	1 percent per size	-	10 pcs	
918.06D Light Weight Composite Handholes	VI See Remark	-	-	-	Must be a Qualified Product (918.06D).
918.08 Light Standards (Steel and Aluminum Light Standards)	Gen Cert	-	-	-	
918.08C Light Standards, Frangible Transformer Bases	VI See Remark	-	-	-	Must be a Qualified Product (918.08C).
918.09 Luminaries	Gen Cert	-	-	-	
918.10A Tower Lighting Units	Fabrication Inspection	-	-	-	See Section 2.4 of the Structural Fabrication Quality Manual.
918.11A Guy Wire	Gen Cert	1 per size	3 ft	-	
919 Steel Sleeves for Wood Posts	Gen Cert	-	-	-	
919.02 Signs (Permanent)	See Remark	-	-	-	General Cert must be attached and inspected at project site.
919.02A1 Metal Sections (Extruded Aluminum)	VI See Remark	-	12 in. long and full width of section	-	Mill Cert must be submitted to the Project Engineer.
919.02A2 Plywood	Gen Cert See Remark	-	-	-	Grade mark on materials serves as certification.
919.02A3 Aluminum Sheet	VI See Remark	-	Min. of 12 in. square	-	Mill Cert must be submitted to the Project Engineer.

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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)
919.02B1 Reflective Sheeting	VI See Remark	1 per run or lot	See Remark	1 roll, for less than 3 in. in width	Must be a Qualified Product (919.02B1) 4 pcs each 12 in. square. For rolls less than 12 in. width, at least 7.5 ft.
919.02C Sign Hardware	Gen Cert See Remark	-	-	-	Identifying marks on items may serve as certification.
919.03A Delineators, Aluminum Reflectors	Gen Cert	1 per shipment per color	21 pcs	25 pcs each color	
919.03B Delineators, Reflective Sheeting Reflectors	Gen Cert	1 per shipment per color	2 pcs each color	25 pcs each color	
919.03D Delineator Posts, Steel	Gen Cert	1 per project per mfr	1 post	80 post	
919.03D Delineator Posts, Plastic	VI See Remark	-	-	-	Must be a Qualified Product (919.03D).
919.04 Steel, Galvanized Sign Posts	Test Data Cert	1 per project per mfr	See Remark	20 posts	Sample 30 in. length min. length. Posts for temporary signs may be painted.
919.05 Wood Sign Posts	Appr Mfr *	Each charge	22 cores	20 posts	General Cert to Construction Field Services. See 912.08.
919.06 Steel Column Breakaway Sign Supports	VI	-	-	-	Mill Cert must be submitted to the Project Engineer.
919.07 Cantilever Sign Supports	Fabrication Inspection	-	-	-	See Section 2.4 of the Structural Fabrication Quality Manual.
919.08 Truss Sign Supports	Fabrication Inspection	-	-	-	See Section 2.4 of the Structural Fabrication Quality Manual.
920.02B Standard Glass Beads	Gen Cert	1 from each lot	2 lb	500 lbs	
920.02C Wet Reflective Optics	VI See Remark	-	-	-	Must be a Qualified Product (920.02C).
921.02 Messenger Wire and Span Wire	Gen Cert	1 per size	3 ft	-	

MATERIALS ACCEPTANCE REQUIREMENTS

See Miscellaneous area at the end of table for materials deleted from the 2012 Standard Specifications for Construction.

*** Must be tested unless provided by an Approved Manufacturer.**

**** When the Basis of Acceptance is not "Test", the sampling criteria below may be used when there are concerns with material quality.**

Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
921.03 Traffic Signals and Mounting Assemblies	See Note	-	-	-	
NOTE: Compliance with specifications will be determined by the agency responsible for maintaining the system. Agency must provide the project engineer with a memo or other appropriate form indicating that the inspection has been made and the material is acceptable.					
921.05 Traffic Signal Strain Pole	Gen Cert	-	-	-	
921.05A Strain Pole Band Clamps	VI See Remark	-	-	-	Must be a Qualified Product (921.05A).
921.08B Traffic Loop Sealant	Gen Cert	2 from each lot	Tubes	-	
922.02 Temporary Traffic Control Temporary Signs	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.02B Temporary Traffic Control Reflective Sheeting (Signs)	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.02D Temporary Traffic Control Sign Covers	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.03 Temporary Traffic Control A. Cones B. Drums	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.03E Temporary Traffic Control Type III Barricade, Reflective Sheeting	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.04 Temporary Traffic Control Temporary Concrete Barriers (TCB)	Test Data Cert See Remark	Each project	-	-	Contractor must provide certifications and documentation confirming the TCB provided meets the requirements of subsection 922.04.A of the Standard Specifications for Construction.
922.04A Barrier Reflectors Temporary	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.04A Barrier Reflectors Permanent	VI	-	-	-	

MATERIALS ACCEPTANCE REQUIREMENTS

See Miscellaneous area at the end of table for materials deleted from the 2012 Standard Specifications for Construction.

*** Must be tested unless provided by an Approved Manufacturer.**

**** When the Basis of Acceptance is not "Test", the sampling criteria below may be used when there are concerns with material quality.**

Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
922.06A Temporary Traffic Control Temporary Pavement Markings; Type R and NR Tape	VI See Remark	-	-	-	Must be a Qualified Product (922.06A).
922.06A2 Temporary Traffic Control Temporary Pavement Markings; Paint	VI See Remark	-	-	-	Must be a Qualified Product (811.03D).
922.06B Temporary Traffic Control Temporary Raised Pavement Markers	VI See Remark	-	-	-	Must be a Qualified Product (922.06B).
922.06C Temporary Traffic Control Pavement Marking Cover	VI See Remark	-	-	-	Must be a Qualified Product (922.06C).
922.07A Temporary Traffic Control Lighted Arrows; Type B and C (Solar Assist)	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.07B Temporary Traffic Control Warning Flashers and Lights; Type A, B, C	See Remark	Each project	3 each type	-	See MQAP Manual Section 3.07.
922.07C Temporary Traffic Control Portable Changeable Message Signs	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.11 Temporary Traffic Control Sign Paddles and Vests	See Remark	-	-	-	See MQAP Manual Section 3.07.
922.12A Temporary Traffic Control Dust Palliative 1. Calcium Chloride Solids	Test Data Cert	1 per project	5 lb	5000 lb	
922.12A Temporary Traffic Control Dust Palliative 2. Calcium Chloride Solutions	Test Data Cert	1 per project	1 qt	1000 gal	
923 Watermain Materials	Gen Cert	-	-	250 ft of pipe	See contract documents as applicable.
1005.02A Standard Mortar and Grout Mixtures	VI	-	-	-	
1005.02B Non-Shrinking Mortar and Grout, Type H-1 (Non-Metallic) Pre-Mixed	VI See Remark	-	-	-	Must be a Qualified Product (1005.02B).

MATERIALS ACCEPTANCE REQUIREMENTS

See Miscellaneous area at the end of table for materials deleted from the 2012 Standard Specifications for Construction.

*** Must be tested unless provided by an Approved Manufacturer.**

**** When the Basis of Acceptance is not "Test", the sampling criteria below may be used when there are concerns with material quality.**

Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required by the Engineer**	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
1005.02C Admixture for Expansive Grout, Type E-1	Test Data Cert	-	-	-	
NOTE: Certification to include manufacturers recommended dosage per sack of cement.					
1006 Prepackaged Hydraulic Fast Set Mortar	VI See Remark	-	-	-	Must be a Qualified Product (1006).
Misc. #2 Culvert, Cast and Ductile Iron	Gen Cert	-	-	250 ft	
Misc. #3 Clay Pipe	Gen Cert	See Remark	See Remark	10 pieces	See Special Instructions.
Misc. #5 Galvanized Slotted Drain Pipe	VI See Remark	-	-	-	MDOT approval of Design is required. Coating thickness checked at project site.
Misc. #8 Corrugated Galvanized Steel Structural Plated	Gen Cert	1 per 100 plates or fraction thereof	1 piece at least 3 in. by 3 in.	10 plates	
Misc. #9 Aluminum Alloy Structural Plates	Gen Cert	-	-	-	
Misc. #13 Pavement Warning Strips	VI	-	-	-	
Misc. #14 Bituminized Cotton Fabric and Fiberglass Fabric	Gen Cert	See Remark	1 piece full width of roll, min of 3 ft	5 rolls	1 per 100 rolls (50 sft per roll) or fraction thereof; for lots of more than 100 rolls - 1 sample plus 1 for each 500 rolls or fraction thereof. Do not sample from first 3-4 ft of roll.

***** See following pages for SPECIAL INSTRUCTIONS *****

SPECIAL INSTRUCTIONS

708.01 Prestressed Concrete

Fabrication inspection is required for all prestressed miscellaneous bridge products, prestressed straight-strand bridge beams, and prestressed deflected-strand bridge beams. The following steel components incorporated into prestressed concrete beams do not require fabrication inspection: dowel bars and sole plates.

712.03L Mechanical Reinforcement Splicing

The contractor must make test splices, witnessed by the Engineer, on the largest bar sizes that are to be spliced. See Bridge Field Services Advisory (BFSA) 2012-03. Test splice consists of 2 pieces of reinforcing bar joined by the coupler with 12 inches of bar exposed on each end of the coupler.

901 Cements and Fly Ash

Samples of fly ash and slag cement must be accompanied by a sample of the Portland cement with which it is being used. The plastic lined cement sample bags furnished by the laboratory will hold 10 pounds when full.

902 Prequalified Aggregate Suppliers

Quality Assurance tests will be conducted by Department personnel at the frequencies stated in Chapter 3 of the MDOT Aggregate Supplier Program, found in the Procedures for Aggregate Inspection Manual.

Every Project Engineer will verify passing quality assurance tests by contacting the Region/Transportation Service Center's Material's Supervisor. Enter a telephone record memo or copy of the test report in the project file.

The statement on each delivery ticket is required documentation of the Pre-Qualified Supplier Program and is to be provided by the supplier. This statement represents the results of quality control testing and does not signify acceptance by MDOT.

904.03A Asphalt Binder for HMA Mixtures

If the Asphalt Binder is supplied from a source currently on the Approved Asphalt Binder Certifier List, a certification meeting the requirements of Section 2.04.05 of the Materials Quality Assurance Procedures Manual is required. See the contract documents for sampling, acceptance, and daily monitoring requirements.

If the binder is supplied from a source that is **not** currently shown in the Approved Asphalt Binder Certifier List, the asphalt binder must be sampled, tested, and approved for use prior to incorporation into the project. See contract documents for sampling, acceptance, and monitoring requirements.

See Current List of Asphalt Binder Certifiers at Construction Field Services Web Page.

Instructions to Construction Field Services web page: From MDOT home page (michigan.gov/mdot), click on about MDOT (left side), then click on Highway Field Services, and then click Construction Field Services. The Approved Asphalt Binder Certifier List is under Resources & Publications.

Actual Current List of Approved Asphalt Binder Certifier web page address:
http://michigan.gov/documents/AppBinderCertlist_49824_7.pdf

904.03C Emulsified Asphalt

Size of Sample – For CV Sampling see Section 2.05.06 of the *Materials Quality Assurance Procedures Manual*. For all other sampling see contract documents for criteria. Submit the samples in plastic containers only.

905.03 Bar Reinforcement (Uncoated)

Sample size must be 2 pieces, one 24 in. and one 36 in. Sample ID must include the name of the bar manufacturer, lot number, and heat number. Mill Cert must be attached to the Sample ID form.

905.03C Bar Reinforcement (Epoxy Coated)

Sample size must be 2 pieces, one 24 in. and one 36 in. Sample ID must include the name of the epoxy coating company, epoxy resin trade name, name of bar manufacturer, lot number, and heat number. Mill Cert must be attached to the Sample ID form. Epoxy coating must be a Qualified Product (905.03C).

905.06 Welded Steel Wire Reinforcement

Sample size must be one-piece, full width of fabric with two transverse wires. Longitudinal wires must extend 6 in. to 8 in. either side of transverse wires. Sampling not required when larger wire is less than 0.13 in. (w1.5) in dia. Include on sample ID the size that the wires are supposed to be. Sample may be folded or cut into approx. 3 ft. sections. If cut, pieces should be wired together and identified. Mill Cert must be attached to the Sample ID form.

905.07 Strand for Prestressed Concrete

Do not obtain sample from within 5 feet of the end of the reel. Mill Cert must be attached to the Sample ID form.

905.08 Tendons for Post Tensioning of Box Beams – Prestressing Strand

Do not obtain sample from within 5 feet of the end of the reel. Mill Cert must be attached to the Sample ID form.

906.04 Structural Steel

Fabrication inspection is required for all main and secondary bridge members pay items listed in 707.04.

Fabrication inspection is required for structural steel and pipe bridge railing pay items listed in 711.04.

Fabrication inspection is required for the following structural steel bridge rehabilitation pay items listed in 713.04: pin and hanger replacement, bearing stiffeners at temporary supports, retrofit structural steel, and structural steel welded repairs.

The following structural steel components do not require fabrication inspection: plate washers and pier nosing.

906.07 High Strength Steel Bolts

An assembly is typically a combination of a bolt, nut, and washer but may be any combination of a bolt, nut, washer, lock washer, etc. depending on the project specifications. Mill Certs must be included for each component of the assembly and be attached to the Sample ID form. Plate washers are not required to be sampled and tested.

907.04C Steel Chain Link Fence-Posts for Fence and Gates

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.

907.04C Steel Chain Link Fence-Top Rail, Horizontal Rail

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.

908.09C Tubing, Steel Railings (Hardware)

An assembly is typically a combination of a bolt, nut, and washer but may be any combination of a bolt, nut, washer, lock washer, etc. depending on the project specifications. Plate washers are not required to be sampled and tested.

908.14 Anchor Bolts, Nuts, and Washers

An assembly is typically a combination of a bolt, nut, and washer but may be any combination of a bolt, nut, washer, lock washer, etc. depending on the project specifications. For Type C, D, E and J cantilevers, the sampling frequency is 1 assembly per heat, per diameter, per foundation, for a max of 3 per project. Full length bolts are required for testing but if the total length is less than 20", a second sample must be submitted for testing. Non MDOT standard plan bolts require shop drawings along with a Mill Cert attached to the Sample ID form. Stainless steel anchors bolts are not required to be sample and tested. Plate washers are not required to be sampled and tested.

908.14D Anchor Bolts and Nuts for Other Purposes

A General Cert is acceptable for stainless steel anchor bolts, pedestal foundations for pedestrian signals, push buttons, controller cabinets, and Hawks signals and repeaters. Anchor bolts for all other purposes require testing. An assembly is typically a combination of a bolt, nut, and washer but may be any combination of a bolt, nut, washer, lock washer, etc. depending on the project specifications. Plate washers are not required to be sampled and tested.

909.04A Reinforced Concrete Pipe

909.04B

Size of Sample - Full size units for strength test. For absorption tests, 26-inch square to 81-inch square in area from the wall of each piece of pipe tested.

Number of Samples - One percent of the number of pieces of each size.

Reinforced concrete pipe 42-inch diameter and larger may be tested by coring. Size of core will be 4-inch nominal diameter (but not less than 3 ¼ inches actual). Up to 1 percent of the number of pieces of pipe for each size, but not less than 3 pieces, will be

selected for coring. One core will be drilled and tested from each of these test pieces. Reinforcement will be inspected prior to incorporation in the pipe.

909.04C Nonreinforced Concrete Pipe

Size of Sample - Same as reinforced concrete pipe.

Number of Samples - One percent of the number of pieces, but not less than 2 pieces of each size except that at the option of the department the following sampling schedule will apply for 4 inches through 24 inches in diameter sewer pipe for quantities of 500 or more:

Sampling Schedule - Per the following:

<u>Concrete Pipe</u>	<u>Number of Samples</u>
500 to 1,000 pieces	6
1,001 to 2,000 pieces	8
2,001 to 5,000 pieces	11
Over 5,000 pieces	2 samples per 1,000 or fraction thereof

909.04.D Precast Concrete Box Sections

The following structural steel components do not require fabrication inspection: plate washers, connection plates, and connection angles used to connect culvert segment, headwall, and wingwall.

909.04.G Precast Concrete Three-Sided or Arch Culverts

The following structural steel components do not require fabrication inspection: plate washers, connection plates, and connection angles used to connect culvert segment, headwall, and wingwall.

909.05A Corrugated Steel Pipe

Size of Sample - A 6-inch by 3-inch (minimum) section cut from the pipe. The sample should be taken from the end of the pipe avoiding the seams. Care should be taken to assure the coating is not damaged during sampling. Mill Cert must be attached to the Sample ID form.

Number of Samples - Per the following:

<u>Diameter of Pipe</u>	<u>Quantity Represented (maximum)</u>
12 inches or less	2500 ft
15 inches through 54 inches	1000 ft
60 inches and over	500 ft

Less than 5 percent of the quantity in the above table may be visually inspected.

909.05A1 Corrugated Galvanized Steel Sheets

Size of Sample - One strip the full width of the sheet and 3 ½ inches in the direction of the length of the sheet. The strip may be cut from the end of the sheet for material coated in coils. If the sheets were individually coated after being cut to length, as indicated by heavy accumulations of zinc at one end, the sample strip shall be cut from the end opposite the heavy accumulation and after cutting 4 inches from the end of the sheet. Mill Cert must be attached to the Sample ID form.

Number of Samples - Per the following:

<u>Diameter of Pipe (max)</u>	<u>Length of Sheet</u>	<u>Quantity Represented</u>
12 inches or less	44 inches or less	2500 ft
15 through 54 inches	50 to 175 inches, approx*	1000 ft
60 inches and over	190 inches and over*	500 ft

*Larger pipe may be made from combination of shorter sheets. Less than 5 percent of the quantity in the table above may be visually inspected.

NOTE: Normally each heat and thickness is to be sampled. Exception may be made where quantities are limited and/or mixtures of heat numbers are excessive.

909.05B Corrugated Aluminum Alloy Sheets

Size of Sample - A transverse strip full width of the sheet and at least 3 inches in length cut from the end of the sheet.

Number of Samples - A sample shall be taken from each of 3 different sheets for lots weighing 5 tons or less, from 4 sheets for lots weighing more than 5 tons and less than 10 tons, and from 5 sheets for lots weighing 10 tons or more.

910.03 Geotextiles

Sampling Frequency - Obtain samples to represent the required quantity of geotextile according to the following schedule:

<u>Geotextile</u>	<u>First Sample</u>	<u>Additional Samples</u>
Blanket	500 to 1500 syd	7,500 syd or less
Liner for Riprap	500 to 1500 syd	5,000 syd or less
Separator/Stabilization	500 to 1500 syd	25,000 syd or less
Liner for Heavy Riprap	500 to 1500 syd	4,000 syd or less

Maximum for VI - 500 syd (4500 sq ft)

Size of Sample - Sample must be a minimum of 75 sft, taken across the full roll width. For rolls over 15 ft wide, sample must be a minimum of 5 ft long, taken across the full roll width.

Geotextile samples submitted for testing must be identified with the lot number and/or roll number, the name of the manufacturer, and the product or style number.

NOTES:

Geotextiles must be unwrapped one full roll circumference prior to sampling.

Geotextiles must be **rolled**, not folded, and shipped in a manner to prevent creases in the fabric.

910.05 Drainage Geocomposites

Size of Sample –

Filter wrap geotextile sample must be a minimum of 75 sft, taken across the full roll width.

Polymer core sample must be a minimum of 6 ft long, taken across the full roll width.
Coupon of the assembled drainage geocomposite must be a minimum of 1 ft long, taken across the full roll width.

NOTES:

Manufacturers and suppliers must provide separate samples of filter wrap geotextile and polymer core for testing. These samples must be taken from the same production lot as the assembled drainage geocomposite intended for use on the project.

Include a coupon of the assembled drainage geocomposite when the separate components are submitted for testing.

Assembled coupon and component samples of the drainage geocomposite submitted for testing must be identified with the lot number and/or roll number, the name of the manufacturer, and the product or style number.

914.07 Load Transfer Assemblies; Dowel Baskets

Field Inspection required per Chapter 3.04 of the Materials Quality Assurance Procedures Manual. A Powerpoint in Division 602 of the Construction Manual has been created to assist with the field inspections. Form #0553 is to be used to document the inspections.

Assemblies must meet the requirements of Standard Plan, R-40-H.
All shipments of load transfer assemblies will be accompanied by proper certification documentation.

- Certification from steel (dowel bar) manufacturer.
- Certification from epoxy coating company.
- Documentation of epoxy coating.
- Certification from assembly manufacturer.
- Documentation of bond release.

When shipment is made to a project, each bundle will bear a legible tag with the following information:

- Assembly manufacturer name and plant location.
- Control section/project number.
- Lot number or other identification that will also be shown on the accompanying certification.
- Supplier and/or contractor's name.

Misc. #3 Clay Pipe

Normal Sampling Frequency - One percent of the number of pieces, but not less than 2 pieces of each size except that at the option of the department the following sampling schedule will apply for 4-inch through 24-inch diameter sewer pipe for quantities of 500 or more:

Sampling Schedule - Per the following:

<u>Clay Pipe</u>	<u>Number of Samples</u>
500 to 1,000 pieces	6
1,001 to 2,000 pieces	8
2,001 to 5,000 pieces	11
Over 5,000 pieces	2 samples per 1,000 or fraction thereof

Size of Sample - Full size units for strength test. For absorption tests, 26 inches square to 82 inches square in area from the wall of each piece of pipe tested.

APPROVED SUPPLIERS

The firms listed in this section have received written permission from the Construction Field Services Division to recertify material for use on Michigan Department of Transportation projects. Supplying materials is also allowed by manufacturers listed in the Approved Manufacturers List.

When recertification of any materials is made by any firm not found on this list, please notify the Construction Field Services Division, Materials Control, immediately.

See also Section 2.02 of the Materials Quality Assurance Procedures Manual.

APPROVED SUPPLIERS

A.J. Rehmus & Son, Inc., Bay City, MI
ABC Coating Co. of Illinois, Inc., Manteno, IL
ABC Coating Co. of Michigan, Inc., Wyoming, MI
ABC Coating Co. of Minnesota, Inc., Minneapolis, MN
ABC Coating Co. of Oklahoma, Inc., Tulsa, OK
Action Traffic & Maintenance Co., Flint, MI
ADL Systems, Inc., Portland, MI
Allied Seed, L.L.C., Nampa, ID
Alro Steel Corporation, Alpena, MI
Art Thureson, Inc., Waterford, MI
Austin Morgan Companies, Clarkston, MI
B&R Reinforcing, Columbus, OH
BARNSCO, Detroit, MI
Bella Concrete Construction, LLC, Houghton Lake, MI
Boomer Construction Materials, Detroit, MI
Brandt Technologies LLC, Bensenville, IL
Burt Forest Products Co., Ann Arbor, MI
C & D Hughes, Inc., Charlotte, MI
C.A. Hull Co., Inc., Walled Lake, MI
Cadillac Culvert, Cadillac, MI
Carroll Distributing and Construction Supply, Inc. (Store 16), Wyoming, MI
Causie Contracting, Inc., Mason, MI
Central Michigan Contracting, Inc., Houghton Lake, MI
Chiles Michigan, Inc., Flat Rock, MI
Cipparrone Contracting, Inc., Southfield, MI
CMA Supply, South Bend, IN
Co-Pipe Products, Taylor, MI
Concrete Central Inc., Grand Rapids and Traverse City, MI
Core and Main LP, Canton, Kentwood and Shelby Twp., MI
Crawford Contracting, Inc., Mt. Pleasant, MI
CSI Geoturf, Inc., Highland, Traverse City, and Byron Center, MI
D.J. McQuestion & Sons, Inc., LeRoy, MI
Dale Dukes & Sons, Inc., Big Rapids, MI
Davis Construction, Lansing, MI
Dayton Superior Corporation, Miamisburg, OH, Oregon, IL, Valparaiso, IN
Diane Dukes, Inc., Big Rapids, MI
Doan Construction, Ypsilanti, MI
Dornbos Sign & Safety Inc., Charlotte, MI
Eastlund Concrete Construction, Holt, MI
East Jordan Iron Works, Inc., Wyoming, MI
Edward R. White Contractor, Inc., Waterford, MI
Elsey Construction Products, Harper Woods, MI
Environmental Protection Products, Williamsburg, MI
ERSCO Construction Supply, Lansing and Wyoming, MI
ETNA Supply Co., Chesterfield, Flint, Grand Ledge, Grand Rapids and Holland, MI
ETNA Supply Co., Jackson, Kalamazoo, Mt. Pleasant and Muskegon, MI
ETNA Supply Co., Saginaw, Sault Ste. Marie, Springfield, Traverse City and Wixom, MI
ETNA Supply Co., South Bend, IN and Toledo, OH
Evergreen Seed Supply, Deshler, OH
F&M Concrete Construction, LLC, Dimondale, MI
Ferguson Enterprises, Inc., Flushing, Kalamazoo, Kentwood, Lansing, and Warren, MI
Firelands Supply Co., Norwalk, OH
Fort Wayne Contracting, Inc., Detroit, MI
Frederick Steel Company, Cincinnati, OH

APPROVED SUPPLIERS

Future Fence Co., Sterling Heights, MI
G3 Steel Group, Troy, MI
Geo Products, Birmingham, MI
Give 'Em-A-Brake Safety, Grandville, MI
Grant Welding Service, Grant, MI
Harbor Pipe and Supply, Traverse City, MI
Harris Rebar/Ambassador Steel Corporation, Comstock Park and Lansing, MI, Bourbonnais, IL
Harris Rebar, Bethlehem, PA
Hunt Brothers Concrete Contractors, Inc., Whittemore, MI
Hymmco, Saginaw, MI
Indiana Material Handling, IMH Products, Inc., Indianapolis, IN
InteRebar Fabricators/InteRebar Epoxy, Schererville, IN
J & J Contracting, Ithaca, MI
J & N Construction, LLC, Gaylord, MI
J.D. Russell Co., Utica, MI
JISI Group, LLC, Sterling Heights, MI
Jacklin Steel Supply Co., Escanaba, MI
Jensen Bridge and Supply Co., Grand Rapids and Sandusky, MI
John Deere Landscapes, Ann Arbor, and Grand Blanc, MI
John Deere Landscapes, Clinton and Commerce Townships, MI
John Deere Landscapes, Grand Rapids, Holland, and Kalamazoo, MI
John Deere Landscapes, Dimondale, Livonia, Madison Heights, and Saginaw, MI
John Deere Landscapes, Shelby Township
John Deere Landscapes, Taylor, and Traverse City, MI
Kalamazoo Forest Products, Inc., Otsego, MI
Kamma & Roodvoets, Inc., Grand Rapids, MI
Kenmark, Inc., Buckley, MI
Kerkstra Precast Inc., Grandville, MI
Klein Brothers Hardwood, Inc., Milford, MI
L.J. Construction, Inc., Clifford, MI
L.W. Lamb, Inc., Saugatuck, MI
Lane Enterprises, Inc., Carlisle, PA
Mack Industries, Inc., White Lake, MI
Manthei Development Corp., Charlevoix, MI
Martin J. Concrete, Inc., Coopersville, MI
Meadow Burke, Palisades Park, NJ
Metro Rebar, West Bloomfield, MI
Michigan Highway Signs, Flint, MI
Michigan Pipe and Valve, Jackson, Saginaw, and Traverse City, MI
Midway Contractor Supply, Negaunee, MI
Midwest Pipe Coatings, Schererville, IN
Milbocker & Sons, Inc., Allegan, MI
Miller Products & Supply Company, Iron Mountain, MI
Nationwide Fence & Supply Co., Chesterfield, MI
North Coast Roofing Systems, Grand Rapids, MI
Northern Concrete Pipe, Bay City, Charlotte, Clarkston, and Wyoming, MI; Sylvania, OH
Northern Construction Services Corp., Niles, MI
NuTek Steel, Toledo, OH
OEM Distribution, LLC, Detroit, MI
Oglesby Construction, Inc., Norwalk, OH
One Supply Group, Auburn Hills, MI
P.K. Contracting, Inc., Lake City, MI
Power Line Supply Company, Reed City, MI
Rathco Safety Supply, Inc., Portage, MI

APPROVED SUPPLIERS

Remington Construction Company, Inc., Mattawan, MI
Rhino Seed and Landscape Supply, Bradley and Brighton, MI
Rightway Fence Co., Sterling Heights, MI
Sanches Construction Company, Lansing, MI
Simcote, Inc., Saint Paul, MN and Marion, OH
Snowden, Inc., Escanaba, MI
Standale Lumber, Grandville, MI
Striker Supply, Traverse City, MI
Sweeney Construction Materials, Novi, MI
T & D Concrete Construction LLC, Mason, MI
Titusville Fabricators, Inc., Franklin, PA
Tri-Valley Landscaping, Inc., Saginaw, MI
UP Concrete Pipe Co., Escanaba, MI
Van Laan Construction Supply, Dutton, MI
Wady Industries, Maquoketa, IA
Watson Bowman Acme Corp., Amherst, NY
Weyand Bros. Inc., Saginaw, MI

APPROVED MANUFACTURERS

The materials in this section may be accepted for use on Michigan Department of Transportation projects on the basis of certification from the suppliers listed under specific materials.

This Approved Manufacturers List is in accordance with the 2012 Standard Specifications for Construction.

See also Section 2.02 of the Materials Quality Assurance Procedures Manual.

APPROVED MANUFACTURERS

Spec. # and Material Name	Approved Manufacturers	Approved Distribution Facilities (not manufacturer specific)
901 Cement	<p>Argos USA, LLC - Martinsburg, WV</p> <p>Ash Grove - Mississauga, Ontario, Canada; Joliette, Quebec, Canada</p> <p>Buzzi Unicem USA - Chattanooga, TN; Festus MO; Greencastle, IN</p> <p>Central Plains Cement - Sugar Creek, MO</p> <p>Continental Cement Company - Hannibal, MO</p> <p>Fairborn Cement Company - Fairborn, OH</p> <p>Holcim (US), Inc. - Alpena, MI; Paulding, OH; and Bloomsdale, MO</p> <p>Illinois Cement Company - LaSalle, IL</p> <p>Kosmos Cement Company - Louisville, KY</p> <p>LeHigh Cement Company, LLC - Logansport and Mitchell, IN; Union Bridge, Maryland; Picton, Ontario, Canada</p> <p>McInnis Cement - Port Daniel-Gascons, Quebec, Canada</p> <p>St. Mary's Cement, Inc. (US) - Detroit and Charlevoix, MI; Bowmanville and St. Mary's, Ontario, Canada</p>	<p>Ash Grove - Detroit, and Dundee, MI; Duluth, MN</p> <p>Buzzi Unicem USA - Elmira and Grandville, MI; Elkhart, IN; Joliet, IL</p> <p>Holcim (US), Inc. – Detroit, Essexville, Muskegon, St. Joseph and Zilwaukee, MI; Chicago, Lemont and Summit, IL; Toledo, OH; Green Bay, WI</p> <p>St. Mary's Cement, Inc. (US) – Cleveland 1, Cleveland 2, Marysville and Toledo, OH; Ferrysburg, MI;</p>
901.06 Slag Cement	<p>Ash Grove - Detroit, MI; Mississauga, Ontario, Canada</p> <p>Holcim (US), Inc. - South Chicago, IL</p> <p>Skyway Cement Company, LLC - Chicago, IL</p> <p>St. Mary's Cement, Inc. (US) - Detroit, MI; Milwaukee, WI</p>	<p>Ash Grove - Dundee, MI</p> <p>Holcim (US), Inc. – Detroit, Essexville, Muskegon, St. Joseph and Zilwaukee, MI; Chicago, Lemont and Summit, IL; Toledo, OH; Green Bay, WI</p> <p>St. Mary's Cement, Inc. (US) – Cleveland 1, Cleveland 2 and Marysville, OH; Ferrysburg, MI</p>
Spec. # and Material Name	Approved Manufacturers	Approved Distribution Facilities (not manufacturer specific)
901.07 Pozzolanic Admixtures (Fly Ash) for Concrete	<p>Ash Grove - Bell River, St. Clair, MI</p> <p>Boral Resources - Avon Power Plant, Avon Lake, OH; Erickson Power Plant, Lansing, MI; Sammis Power Station, Stratton, OH; Monroe Power Plant, Monroe, Michigan; Schahfer Station, Unit 15, Unit 17 & Unit 18, Wheatfield, IN; Labadie Power Station, Labadie, MO; Rush Island Power Station, Festus, MO; Coal Creek Steam Generating Plant, Underwood, ND</p> <p>Charah, Inc. - Zimmer Power Station, Moscow, OH; Miami Fort Unit 7 & 8, North Bend, OH</p> <p>Holcim (US), Inc. - Will Co. Plant, Romeoville, IL; Elm Road Generating Station, Oak Creek, IL; Columbia, Portage, WI; Edgewater Sta. Unit 5, Sheboygan, WI; Pleasant Prairie, Kenosha, WI; Weston #3, Wausau, WI;</p> <p>Separation Technologies, LLC - Clifty Creek Power Station, Madison, IN; Longview Power Plant, Maidsville, WV</p> <p>Waste Mgmt./FlyAsh Direct - Zimmer Power Plant, Moscow, OH; Miami Fort Unit 7 & 8, North Bend, OH; Avon Lake Unit 9, Cleveland, OH; Joppa Generating Station, Joppa, IL</p>	<p>Ash Grove - Dundee, MI</p>

APPROVED MANUFACTURERS

Spec. # and Material Name	Approved Manufacturers	Manufacturers Location
903.03 Latex Admixture For Concrete	Trinseo BASF Corporation Polytherm Systems, Inc., General Tires	
904.03C Emulsified Asphalt	<p>See Current List of Emulsified Asphalts at Construction Field Services Web Page.</p> <p>Instructions to Construction Field Services web page: From MDOT home page (michigan.gov/mdot), click on about MDOT (left side), then click on Highway Field Services, and then click Construction Field Services. The <u>Approved Emulsified Asphalt Suppliers List</u> is under Resources & Publications.</p> <p>Actual Construction Field Services web page address: http://www.michigan.gov/documents/mdot_c&t_emulsionlist_66894_7.pdf</p>	
905.03 Bar Reinforcement (Uncoated)	ABC Coating Co. of MI ASI Alton Steel, Inc. Byer Steel (formerly A.B. Steel) <u>CMC Steel</u> CMC Steel Florida CMC New Jersey CMC Steel Oklahoma CMC Tennessee CMC Steel Texas CMC Steel Cascade Steel Rolling Mills ERSCO Construction Supply EVRAZ Rocky Mountain Steel <u>Gerdau Ameristeel Corporation</u> Charlotte Steel Mill Div. Jackson Steel Mill Div. Midlothian Steel Mill Div. St. Paul Steel Mill Div. HYMMCO, LLC <u>Nucor Steel</u> Nucor Steel Auburn, Inc. Nucor Steel Birmingham, Inc. Nucor Steel Connecticut, Inc Nucor Steel Jackson, Inc. Nucor Steel Kankakee, Inc. Nucor Steel Marion, Inc. Nucor Steel Sedalia, LLC Optimus Steel, LLC Steel Dynamics Inc.	Wyoming, MI Alton, IL Cincinnati, OH Baldwin, FL Sayreville, NJ Durant, OK Knoxville, TN Seguin, TX Cayce, Columbia, SC McMinnville, OR Lansing and Wyoming, MI Pueblo, CO Charlotte, NC Jackson, TN Midlothian, TX St. Paul, MN Saginaw, MI Auburn, NY Birmingham, AL Wallingford, CT Flowood, MS Bourbonnais, IL Marion, OH Sedalia, MO Vidor, TX Pittsboro, Columbia City, IN; Roanoke, VA

<p>905.03C Bar Reinforcement (Epoxy Coated)</p>	<p>ERSCO Construction Supply HYMMCO, LLC <u>Epoxy Coating Companies</u> <u>ABC Coating Co.</u> ABC Coating Co. of OK, Inc. ABC Coating Co. of MI, Inc. ABC Coating Co. of IL, Inc. ABC Coating Co. of MN, Inc., Ambassador Steel Corp./Harris Rebar American Highway CMC Rebar Corrosion Control, Inc. (CCI) Harris Rebar Lane Enterprise, Epoxy Coating Div. Midwest Pipe Coatings <u>Simcote</u> Simcote Simcote Titusville Fabricators, Inc. Wady Industries, Inc.</p>	<p>Lansing and Wyoming, MI Saginaw, MI Tulsa, OK Wyoming, MI Manteno, IL Minneapolis, MN Bourbonnais, IL Kankakee, IL Kankakee, IL; Muncie, IN; Waxahachie, TX Auburn, NY Bethlehem, PA Carlisle, PA Schereville, IN Saint Paul, MN Marion, OH Franklin, PA Maquoketa, IA</p>
<p>905.06 Welded Steel Wire Reinforcement (Mesh)</p>	<p>Hallett Wire Products Co. Insteel Wire Products Iowa Steel & Wire Liberty Engineered Wire Products Numesh Nucor Steel Connecticut, Inc. Oklahoma Steel & Wire Co. Inc. Structural Reinforcement Products Inc. Tatano Wire Products LLC</p>	<p>Kingman, AZ; Jacksonville, FL; Hickman, KY; St Joseph, MO; Mt Airy, NC; Hazelton, PA; Gallatin, TN; Dayton, TX Centerville, IA Upper Sandusky and Warren, OH Glen Falls, NY Wallingford, CT Madill, OK Hazelton, PA Lemont Furnace, PA</p>
<p>905.07 Strand for Prestressed Concrete</p>	<p>Bekaert Corporation Insteel Wire Products Liberty Strand Tech Manufacturing, Inc. RettCo Steel, LLC Sumiden Wire Products Corporation Wire Mesh Corporation (WMC)</p>	<p>Van Buren, AR Sanderson, FL; Gallatin, TN; Houston, TX Summerville, SC Newnan, GA Stockton, CA; Dickson, TN St. Matthews, SC</p>
<p>905.08 Tendons for Lateral Post Tensioning</p>		
<p>908.11A Guardrail, Steel Beam Elements, Anchorage, Bridge, Shoes, Departing End Terminals (End Sections)</p>	<p>Contech Engineered Solutions, LLC Gregory Highway Products Highway Safety Corporation IMH Products, Inc. R.G. Steel Corporation SPIG Industry LLC Trinity Industries, Inc.</p>	<p>Glastonbury, CT Indianapolis, IN Pulaski, PA Abingdon, VA Lima, OH</p>

<p>908.11A Guardrail Approach Terminals</p> <p>Remarks: Approach Terminals are proprietary items, accepted as complete units. All systems must be approved by the NCHRP and MDOT Barrier Advisory Commission.</p>	<p><u>Type 1</u> SRT 350 FLEAT - 350 refer to Design Std. Plans 61(X) latest version</p> <p><u>Type 2</u> ET-Plus SKT - 350 refer to Design Std. Plans 62(X) latest version</p> <p><u>Type 3</u> CAT FLEAT - MT refer to Design Std. Plans 63(X) latest version</p>	<p>Trinity Industries, Inc. <u>* Road Systems, Inc.</u> Gregory Highway Products R.G. Steel Corporation Highway Safety Corporation</p> <p>Trinity Industries, Inc. <u>* Road Systems, Inc.</u> Gregory Highway Products R.G. Steel Corporation Highway Safety Corporation</p> <p>Trinity Industries, Inc. <u>* Road Systems, Inc.</u> Gregory Highway Products R.G. Steel Corporation Highway Safety Corporation</p>	<p>*NOTES:</p> <p>Road Systems, Inc. (RSI) developed both SKT 350 and FLEAT-350 systems.</p> <p>RSI does not manufacture beams.</p> <p>The 3 listed companies under RSI are distributors and distribute SKT and FLEAT <u>smart</u> parts that make-up the approved approach terminals.</p>
<p>908.12 Steel Posts for Beam Guardrail</p>	<p>Contech Engineered Solutions, LLC Gregory Highway Products Highway Safety Corporation IMH Products, Inc. R.G. Steel Corporation SPIG Industry LLC Trinity Industries, Inc.</p>	<p>Glastonbury, CT Indianapolis, IN Pulaski, PA Abingdon, VA Lima, OH</p>	
<p>909.04A Reinforced Concrete Pipe</p>	<p>Concrete Industries, Inc. Co-Pipe Products, Inc. County Materials Corporation Northern Concrete Pipe</p> <p>Upper Peninsula Pipe Co.</p>	<p>Green Bay, WI Taylor, MI Marathon, WI Bay City, Charlotte, Clarkston, and Wyoming, MI; Toledo (Sylvania), OH Escanaba, MI</p>	
<p>909.04C Non-Reinforced Concrete Pipe</p>	<p>Concrete Industries, Inc. Co-Pipe Products, Inc. Northern Concrete Pipe</p> <p>Upper Peninsula Pipe Co.</p>	<p>Green Bay, WI Taylor, MI Bay City, Charlotte, Clarkston, and Wyoming, MI; Toledo (Sylvania), OH Escanaba, MI</p>	
<p>909.04D Precast Concrete Box Sections</p>	<p>Co-Pipe Products, Inc. County Materials Corporation Mack Industries Northern Concrete Pipe</p> <p>Quality Precast, Inc. Upper Peninsula Pipe Co.</p>	<p>Taylor, MI Marathon, WI White Lake, MI, and Toledo, OH Bay City, Charlotte, Clarkston, and Wyoming, MI; Toledo (Sylvania), OH Kalamazoo, MI Escanaba, MI</p>	

<p>909.07C Pipe for Underdrains Underdrain Outlet 2. Corrugated Steel Pipe</p>	<p>Armco Steel Corporation Bark River Culvert & Equipment Co. Contech Engineered Solutions, LLC</p> <p>Jensen Bridge & Supply Co. Lane Enterprises, Inc. Michigan Culvert Co. Cadillac Culvert St. Regis Culvert, Inc.</p>	<p>South Bend, IN Escanaba, MI Mason, MI; Mitchell & South Bend, IN; Portage, WI; Shakopee, MN; Ashland and Winchester, KY; Anderson, SC; and Canfield, OH Grand Rapids and Sandusky, MI Pulaski, PA Mason, MI Cadillac, MI Charlotte, MI</p>
<p>909.08B Culvert, Downspouts 1. Corrugated Steel Pipe</p>	<p>Armco Steel Corporation Bark River Culvert & Equipment Co. Contech Engineered Solutions, LLC</p> <p>Jensen Bridge & Supply Co. Lane Enterprises, Inc. Michigan Culvert Co. Cadillac Culvert St. Regis Culvert, Inc.</p>	<p>South Bend, IN Escanaba, MI Mason, MI; Mitchell and South Bend, IN; Portage, WI; Shakopee, MN; Ashland and Winchester, KY; Anderson, SC; and Canfield, OH Grand Rapids and Sandusky, MI Pulaski, PA Mason, MI Cadillac, MI Charlotte, MI</p>
<p>912.05 Structural Timber & Lumber</p>	<p>American Timber and Steel Co., Inc. Central Nebraska Wood Preservers, Inc. Iowa Wood Preservers, Inc. John Biewer Lumber Company Straits Wood Treating, Inc. Midwest Timber Woodstock, Inc.</p>	<p>Norwalk, OH Sutton, NE Oskaloosa, IA Lansing and St Clair, MI Bay City, MI Edwardsburg, MI West Branch, MI</p>
<p>912.08 Wood Posts and Blocks for Guardrail and Highway Signs (Dimension Sawed)</p>	<p>American Timber and Steel Co., Inc. Central Nebraska Wood Preservers, Inc. Iowa Wood Preservers, Inc. John Biewer Lumber Company Straits Wood Treating, Inc. Midwest Timber Woodstock, Inc.</p>	<p>Norwalk, OH Sutton, NE Oskaloosa, IA St. Clair, MI Bay City, MI Edwardsburg, MI West Branch, MI</p>
<p>913.06 Precast Reinforced Concrete Units for Drainage Structures (Tops, Risers and Sump Bases)</p>	<p>Advance Concrete Products Co. Bush Concrete Products, Inc. Concrete Industries, Inc. Consumers Concrete Products Co-Pipe Products, Inc. County Materials Corporation Elmer's Grand Valley Concrete Products Kerkstra Precast, Inc. Mack Industries Mack Vault of Toledo-a Div. of Mack Industries Northern Concrete Pipe</p> <p>Norwalk Concrete Industries Quality Precast, Inc. Upper Peninsula Pipe Co.</p>	<p>Highland, MI (Specialty Items) Muskegon, MI Green Bay, WI Kalamazoo, MI Taylor, MI Marathon, WI Traverse City, MI Grand Rapids, MI Grandville and Jenison, MI White Lake, MI Bowling Green, OH</p> <p>Bay City, Charlotte, Clarkston, and Wyoming, MI; Toledo (Sylvania), OH Norwalk, OH Kalamazoo, MI Escanaba, MI</p>
<p>913.07 Precast Concrete Bases</p>	<p>See Spec. 913.06, Drainage list</p>	

<p>913.09 Slope Pavement Blocks</p>	<p>4D, Inc. Bark River Concrete Products Best Block Company Carlesimo Products, Inc. Concrete Service, Inc. Consumers Concrete Products Fendt Builder's Supply, Inc. Ferguson Block Co., Inc. Grand Blanc Cement Products Jansen Block Co. Northern Concrete Pipe</p>	<p>Midland, MI Bark River, MI Warren, MI Farmington, MI Traverse City, MI Kalamazoo and South Haven, MI Ann Arbor and Farmington Hills, MI Davison, MI Grand Blanc, MI Grand Rapids, MI Grand Rapids, MI</p>
<p>914.07 Transverse Pavement Joints 1. Dowel Bars (Uncoated) See Spec. 914.07A for Epoxy Coating Manufacturers (Coaters).</p>	<p><u>CMC Steel</u> CMC New Jersey CMC Tennessee Cascade Steel Rolling Mills Steel Dynamics, Inc.</p>	<p>Sayreville, NJ Knoxville, TN McMinnville, OR Pittsboro, IN</p>
<p>914.07 Load Transfer Assemblies; Dowel Baskets</p>	<p>American Highway Barnsco Boomer Construction Materials CMT Manufacturing, Highway Division</p>	<p>Kankakee, IL Detroit, MI Detroit, MI Durant, IA</p>
<p>914.07A Tranverse Pavement Joints 1. Dowel Bars (Epoxy Coated) For coating info. See QPL 914.07A2 for approved material and manufacturers.</p>	<p>Barnsco Boomer Construction Materials CMT Manufacturing, Highway Division <u>Epoxy Coating Companies</u> ABC Coating Co. of MI, Inc. American Highway CMC Rebar Lane Enterprises Simcote</p>	<p>Detroit, MI Detroit, MI Durant, IA Wyoming, MI Kankakee, IL Kankakee, IL Carlisle, PA Marion, OH</p>
<p>914.08 Transverse End of Pour Joint Devices B. Deformed Bars</p>	<p><u>Bar Manufacturers</u> See Reinforcement Bar Manufacturers Spec. 905.03</p>	<p><u>Epoxy Coating Material</u> See Reinforcement Bar, Spec 905.03C and QPL 905.03C.</p>
<p>914.09 Straight and Bent Tie Bars for Longitudinal Pavement Joints, (Lane Ties)</p>	<p><u>Bar Manufacturers</u> See Reinforcement Bar Manufacturers Spec. 905.03</p>	<p><u>Epoxy Coating Material</u> See Reinforcement Bar, Spec 905.03C and QPL 905.03C.</p>
<p>916.02 Silt Fence (full assembly) Must be assembled using a qualified geotextile fabric listed in the QPL 910.04.</p>	<p>American Excelsior Co. Inc. C.S.I. / Geo Turf, Inc. DGI Industries Environmental Protection Products ACF Environmental – Ferguson Waterworks Geo-Synthetics Geoproducts, Inc. Hanes Geo Components. Klein Brothers Hardwood Inc. Pallen Enterprises Rhino Seed and Landscape Supply Willacoochee Industrial Fabrics, Inc.</p>	<p>Westland, MI Highland, MI Bennington, NH Williamsburg, MI Richmond, VA Waukesha, WI Birmingham, MI Charlotte, NC, Wixom and Wyoming, MI Milford, MI Conyer, GA Bradley, MI Willacoochee, GA</p>

<p>918.06 Precast Concrete Handholes & Manholes for Electrical & Telephone Connections</p>	<p>Advance Concrete Products Bush Concrete Products, Inc. Carlesimo Products, Inc. Consumers Concrete Products Elmer's Grand Valley Concrete Products, Inc. Hartford Concrete Products, Inc. Kerkstra Precast, Inc. Mack Industries Northern Concrete Pipe Norwalk Concrete Industries Quality Precast, Inc. Upper Peninsula Pipe Co.</p>	<p>Highland, MI Muskegon, MI Farmington, MI Kalamazoo, MI Traverse City, MI Grand Rapids, MI Hartford City and Ashley, IN Jenison, MI White Lake, MI Bay City, Charlotte, Clarkston, and Wyoming, MI; Toledo (Sylvania), OH Norwalk, OH Kalamazoo, MI Escanaba, MI</p>
<p>919.05 Wood Sign Posts</p>	<p>American Timber and Steel Co., Inc. John Biewer Lumber Company Straits Wood Treating, Inc. Midwest Timber Woodstock, Inc.</p>	<p>Norwalk, OH St. Clair, MI Bay City, MI Edwardsburg, MI West Branch, MI</p>

QUALIFIED PRODUCTS LIST

The materials in this section may be accepted for use on Michigan Department of Transportation projects based on the trade name, model number, etc., as listed.

This Qualified Products List is in accordance with the 2012 Standard Specifications for Construction.

Also see Section 5.01 if the MQAP Manual.

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
502.02B Overband Crackfill	K-T 1190 AR Plus Type 2 Deery 102 Deery 103 Roadsaver 211 Roadsaver 221 1190 Dura-Fill 3405 ColJoint ARS II WR Meadows 1190	Bit-Mat Products CrafcO, Inc. CrafcO, Inc. CrafcO, Inc. CrafcO, Inc. CrafcO, Inc. CrafcO, Inc. P&T Products, Inc. Colas Solutions W.R. Meadows, Inc.
603.03B2 Adhesive Systems for Grouting Dowel Bars and Tie Bars for Full-Depth Concrete Pavement Repairs NOTE: Use these Qualified Products for grouting repairs to existing concrete in the same direction of traffic in the same lane of repair. For grouting lane ties (deformed bars positioned transverse to the direction of traffic located between traffic lanes) use QPL 712.03J, "Adhesive Systems for Structural Anchors and Lane Ties".	ASF-1000 Ultrabond 1 Ultrabond 2 UltraBond HS-200 Inject-Tite Standard Set Inject-Tite Fast Set Aka Bond Aka Bond 550XP Aka Bond 550XPP Sonneborn Rapid Gel BHS-1250 BHS-1250XP CanRez 800 Araldite AW / HW 8561 Spec Bond 201 Highway Fast Set Epoxy TRU Grip HI-Modepoxy 590 Tru-Grip 591 AWA Gel Dural Fast Set Epoxy Gel Dural HS Gel Futura Bond 566 Hilti RSE DOT Redhead A7+ Redhead C6+ Redhead G5+ Epcon A7 Epcon-Ceramic 6 SurePoxy 117 Kelipoxy II Dynapoxy EP-430 FAST Poly-Carb Mark 198.4 Polyject/Polybac 1257 Polyject/Polybac 1295 AC 50 Silver AC 100+ Gold PE 1000+ Pure 50+ Pure 110+ T308+ Speed Bond #1 Sikadur Injection Gel Sikadur 881 DBA Sikadur DOT-SP13 Arcylic -Tie AT Epoxy Tie Dowel Bar Adhesive #5 Pro Poxxy 300 Pro Poxxy 300 FAST CIA Gel 7000 Rezi-Weld Gel Paste Rezi-Weld Gel Paste State	Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. Adhesives Technology Corp. ANKR-Tite Fastening Systems ANKR-Tite Fastening Systems Axson North America (Formerly Akemi Plastics) Axson North America (Formerly Akemi Plastics) Axson North America (Formerly Akemi Plastics) BASF Construction Chemical Blackhawk Sales Company, Inc. Blackhawk Sales Company, Inc. Cansto Coatings Ciba Specialty Chemicals Corp. Conspec by Dayton Superior, Inc. Dayton Superior Corp. J. Dedoes, Inc. J. Dedoes, Inc. E-Chem Euclid Chemical Company Euclid Chemical Company Futura Adhesives & Chemicals Hilti, Inc. ITW Commercial Construction ITW Commercial Construction ITW Commercial Construction ITW Ramset/Red Head ITW Ramset/Red Head Kaufman Products Kelken Construction Systems Pecora Corporation Olin Epoxy-Poly-Carb (Blue Cube Operations LLC) Olin Epoxy-Poly-Carb (Blue Cube Operations LLC) Polygem, Inc. Polygem, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Powers Fasteners, Inc. Prime Resins, Inc. Sika Corporation Sika Corporation Sika Corporation Simpson Strong-Tie Company, Inc. Simpson Strong-Tie Company, Inc. Superior Epoxies & Coatings Unitex Unitex USP Structural Connectors W.R. Meadows, Inc. W.R. Meadows, Inc.

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers																																																						
706.03S Penetrating Water Repellent Treatment for Concrete Surfaces (Protective Coating for Concrete)	Application Rate, sq ft/gal 150-200 ATS-200	Advanced Chemical Technologies, Inc.																																																						
707.02 Bushings for Pins & Link Plates	CJ Garmax	TriStar Garlock																																																						
712.03J Adhesive Systems for Structural Anchor & Lane Ties* NOTE: *Lane Ties defined as deformed bars positioned transverse to the direction of traffic located between lanes. For grouting dowel bars and tie bars (bars positioned to existing concrete in the direction of the traffic in the same lane as the repair) use QPL 603.03B2, "Adhesive Systems for Grouting Dowel Bars for Full-Depth Concrete Pavement Repairs". Note 1. Anchors shall be installed per manufacturer's recommendations with a minimum embedment depth of 12 diameters for reinforcing steel and 9 diameters for threaded bolts. Note 2. Material is limited to the shelf life recommendations by the manufacturer.	<table border="1"> <thead> <tr> <th>Name</th> <th>Adhesive Type</th> <th>Mixing & Inject.</th> </tr> </thead> <tbody> <tr><td>Ultrabond 1</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>HS-200</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Hilti HIT-HY 100</td><td>Urethane-Methacrylate</td><td>Yes</td></tr> <tr><td>Hilti HIT-HY 200-A</td><td>Urethane-Methacrylate</td><td>Yes</td></tr> <tr><td>Hilti HIT-HY 200-R</td><td>Methacrylate</td><td>Yes</td></tr> <tr><td>Hilti HIT RE-10</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Hilti HIT-RE-500v3</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Redhead A7+</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Super Por-Rok</td><td>Non-Shrink Grout</td><td>Yes</td></tr> <tr><td>DeWALT Pure 110+Epoxy</td><td></td><td>Yes</td></tr> <tr><td>Sika AnchorFix 500</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>AT-XP</td><td>Acrylic</td><td>Yes</td></tr> <tr><td>Acrylic-Tie</td><td>Methacrylate</td><td>Yes</td></tr> <tr><td>SET</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Pro-Poxy 300</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>CIA-Gel 7000</td><td>Epoxy</td><td>Yes</td></tr> <tr><td>Rezi Weld Gel Paste State</td><td>Epoxy</td><td>Yes</td></tr> </tbody> </table>	Name	Adhesive Type	Mixing & Inject.	Ultrabond 1	Epoxy	Yes	HS-200	Epoxy	Yes	Hilti HIT-HY 100	Urethane-Methacrylate	Yes	Hilti HIT-HY 200-A	Urethane-Methacrylate	Yes	Hilti HIT-HY 200-R	Methacrylate	Yes	Hilti HIT RE-10	Epoxy	Yes	Hilti HIT-RE-500v3	Epoxy	Yes	Redhead A7+	Epoxy	Yes	Super Por-Rok	Non-Shrink Grout	Yes	DeWALT Pure 110+Epoxy		Yes	Sika AnchorFix 500	Epoxy	Yes	AT-XP	Acrylic	Yes	Acrylic-Tie	Methacrylate	Yes	SET	Epoxy	Yes	Pro-Poxy 300	Epoxy	Yes	CIA-Gel 7000	Epoxy	Yes	Rezi Weld Gel Paste State	Epoxy	Yes	Adhesives Technology Corp. Adhesives Technology Corp. Hilti, Inc. Hilti, Inc. Hilti, Inc. Hilti, Inc. Hilti, Inc. ITW Commercial Construction CGM, Inc. Powers Fasteners, Inc. Sika Corporation Simpson Strong-Tie Anchor Systems Simpson Strong-Tie Anchor Systems Simpson Strong-Tie Anchor Systems Unitex USP Structural Connectors W.R. Meadows, Inc.
Name	Adhesive Type	Mixing & Inject.																																																						
Ultrabond 1	Epoxy	Yes																																																						
HS-200	Epoxy	Yes																																																						
Hilti HIT-HY 100	Urethane-Methacrylate	Yes																																																						
Hilti HIT-HY 200-A	Urethane-Methacrylate	Yes																																																						
Hilti HIT-HY 200-R	Methacrylate	Yes																																																						
Hilti HIT RE-10	Epoxy	Yes																																																						
Hilti HIT-RE-500v3	Epoxy	Yes																																																						
Redhead A7+	Epoxy	Yes																																																						
Super Por-Rok	Non-Shrink Grout	Yes																																																						
DeWALT Pure 110+Epoxy		Yes																																																						
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SET	Epoxy	Yes																																																						
Pro-Poxy 300	Epoxy	Yes																																																						
CIA-Gel 7000	Epoxy	Yes																																																						
Rezi Weld Gel Paste State	Epoxy	Yes																																																						
712.03K Structure Expansion Anchors (Mechanical Expansion Anchors) Pull-out Testing is required per MQAP Manual Section 3.03. NOTE: Mechanical Expansion Anchors shall be set by applying the manufacturer's specified torque. The turn of the nut method will not be an acceptable alternative.	<ol style="list-style-type: none"> 1. Pre-Drilled Flush Type <ol style="list-style-type: none"> a) Hilti HDI (3/8", 1/2", 3/4" dia. anchors only) 2. Pre-Drilled Stud Type - Not suitable for lane ties or for guardrail end shoes because of exposed thread. <ol style="list-style-type: none"> a) Hilti Kwik-Bolt II or Kwik-Bolt III <ul style="list-style-type: none"> 3/8" dia. anchor - min. embedment = 2 1/2" 1/2" dia. anchor - min. embedment = 3 1/2" 5/8" dia. anchor - min. embedment = 4" b) Simpson Strong-Tie Wedge-All <ul style="list-style-type: none"> 1/2" dia. anchor - min. embedment = 4 1/2" 																																																							
712.03L Mechanical Reinforcement Splicing NOTE: Splices used to connect precast structural elements shall be high strength splices.	BPI Barsplicer System Grip-Twist Threaded Position Coupler Taper Threaded Grip-Twist Zap Screwlok Tru-Splice Stainless Steel Bar-Lock L-Series DBDI Lenton Lenton Form Saver Lenton Interlok (High Strength) Lenton Position Coupler NMB Splice Sleeve (High Strength)	BarSplice Products, Inc., Dayton, OH BarSplice Products, Inc., Dayton, OH BarSplice Products, Inc., Dayton, OH BarSplice Products, Inc., Dayton, OH Contractors Materials Company, Cincinnati, OH Dayton Superior Corp., Miamisburg, OH Dayton Superior Corp., Miamisburg, OH PENTAIR, Solon, OH PENTAIR, Solon, OH PENTAIR, Solon, OH PENTAIR, Solon, OH Splice Sleeve North America, Inc., Livonia, MI																																																						
712.03Y Embedded Galvanic Anodes	MasterProtect CP Models: 8065, 8105, 8150 Sentinel-GL Sika Galvashield XP Sika Galvashield XP+ Sika FerroGard 650, 670, 675 Galvashield XP Galvashield XP+ Galvashield XPC Galvashield XPT	BASF Chemical Company Euclid Chemical Co. Sika Corporation Sika Corporation Sika Corporation Vector Corrosion Technologies Vector Corrosion Technologies Vector Corrosion Technologies Vector Corrosion Technologies																																																						

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
713.02B Sealant for Perimeter of Beam Repairs NOTE: No silicone materials - only polyurethane (PU) or PU blended materials that are paintable. Typically 1 week cure prior to painting. All non-sag material.	MasterSeal NP 1 Bostik 2020 Duralink (F1200) Loxon H1 Loxon S1 Sikaflex-15LM SikaHyflex-150 LM Vulkem 116 XtraBond 9500	BASF Construction Chemicals, Shakopee, MN Bostik US Chem Link Sherwin-Williams Sherwin-Williams Sika Corporation Sika Corporation Tremco, Inc. Premier Industrial Supply
715.02 Coating Systems for New Hanger Assemblies	See Coating Systems for Steel Structures, Hanger Assemblies and End Diaphragms QPL 915	
715.02 Abrasive, Low Dusting NOTE: The blasting profile produced by these abrasives will depend on the equipment used. It is the responsibility of the contractor to produce a profile within the 1.0 to 2.8 mils specified range. The abrasive additive, Blastox may be used with any of the listed low-dusting abrasives.	20/40 40/70 Black Diamond Abrasive - Coal Slag GMA Garnet Blast Black Shot Granulated Slag Jetmag 32B4 StarBlast XL Emerald Creek Garnet Blackjack MSM, Waupaca Materials Alluvial River Garnet Ebony Grit - Copper Slag International Garnet 20-40 International Garnet 30-60 Galaxy Garnet 30-60 Black Beauty Sharpshot XL - Iron Silicate	10X Engineered Materials, Wabash, IN 10X Engineered Materials, Wabash, IN U.S. Minerals, Tinley Park, IL GMA Garnet Pty Ltd, Narngulu, WA, Australia Bell & MacKenzie Co. Ltd, Hamilton, Ontario Carpenter Brothers Inc., Mequon, WI the Chemours Company, Wilmington, DE Emerald Creek Garnet, Fernwood, ID Faulks Brothers Constr. Co., Inc., Waupaca, WI Marco Group International, Beaver Falls, PA Opta Minerals Inc. Opta Minerals Inc. Opta Minerals Inc. Opta Minerals Inc. Harsco Minerals International, Gary, IN Universal Minerals Kentucky, Inc., Louisville, KY
803.02B Detectable Warning Surfaces (ADA Compliant Sidewalk Ramps), 1. Cast-in-Place	Access Tile Cast In Place Replaceable Advantage Classic Advantage Premier AlertCast ADA Solutions Cast in Place Paver - Composite ADA Solutions Cast in Place Replaceable - Rectangular & Radius - Composite ADA Solutions Iron Dome© - Cast in Place Replaceable - Cast Iron DetecTile Replaceable Tactile Panel Duralast© Detectable Warning Plates Armor-Tile Cast in Place Composite NF Detectable Warning Plate TufTile TufTile Galvanized Steel Tile TufTile Polymer Tactile Tile	Access Products, Inc., Buffalo, NY Advantage Tactile Systems, Buffalo, NY Advantage Tactile Systems, Buffalo, NY AlertTiles, Wilmington, NC ADA Solutions, Wilmington, MA ADA Solutions, Wilmington, MA ADA Solutions, Wilmington, MA DetecTile Corporation East Jordan Iron Works, East Jordan, MI Engineered Plastics, Inc., Williamsville, NY Neenah Foundry Company, Neenah, WI TufTile, Inc. TufTile, Inc. TufTile, Inc.
2. Surface Applied* *NOTE: Surface applied detectable warning surfaces may only be used to retrofit existing concrete	ADA Solutions Surface Applied - Composite Alerttile Armor-Tile Surface Applied Composite Warning System	ADA Solutions, Wilmington, MA Detectable Warning Systems, Wilmington, NC Engineered Plastics, Inc., Williamsville, NY

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
811.03D1 Waterborne, Liquid Pavement Marking Material	<u>Product ID</u>	<u>Color</u>
	TM-2582	White
	TM-2204	White
	TM-2583	Yellow
	TM-2205	Yellow
	982211	White
	982212	Yellow
	982221	White
	982222	Yellow
	982201	White
	982202	Yellow
	985205	Blue
	985203	Black
	14228	White
24228	Yellow	
811.03D2 Low Temperature Waterborne, Liquid Pavement Marking Material	<u>White</u>	<u>Lead Free Yellow</u>
	985351	985352
	TM2372	TM2373
811.03D3 Regular Dry Paint, Liquid Pavement Marking Material	<u>White</u>	<u>Lead Free Yellow</u>
	TM-5604	TM-5607
	982271	982282
811.03D4 Cold Plastic Tape, Preformed Pavement Marking Material, Permanent (Long Line, Legends & Crosswalks)	Wet Reflective Long Line:	
	<u>White</u>	<u>Yellow</u>
	380 AW	381 AW
	DeltaLine XRP-R	DeltaLine XRP-R
		<u>Adhesive</u>
		P50
		D-20
		3M
		Brite-line Technologies, LLC
	Standard Long Line:	
	<u>White</u>	<u>Yellow</u>
	380I ES	381I ES
	Director 60	Director 60
	Director 60 HPT	Director 60 HPT
		<u>Adhesive</u>
		P50
		DP-E4
		DP-E4
		3M
		Swarco
		Swarco
	Shadow Tape:	
<u>Black</u>	<u>Adhesive</u>	
385 AW	P50	
385 ES	P50	
Director 60	DP-E4	
	3M	
	3M	
	Swarco	
Special Markings (symbols, legends, stop bars, crosswalks, crosshatching):		
<u>White</u>	<u>Yellow</u>	
270 ES	271 ES	
380I ES	381I ES	
ATM 300	ATM 300	
	ATM Permanent	
	Primer	
Director 60	Director 60	
Director 60 HPT	Director 60 HPT	
	<u>Adhesive</u>	
	P50	
	P50	
	DP-E4	
	DP-E4	
	3M	
	3M	
	Advanced Traffic Markings	
	Swarco	
	Swarco	
811.03D5 Thermoplastic, Liquid Pavement Marking Material	<u>White</u>	<u>Yellow</u>
	884285	884685
	Swarcotherm EWH 131	Swarcotherm EYH 132
	Viatherm E413W	
811.03D5 Thermoplastic, Blocks Rumble Strips	Viatherm E411W	

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers	
811.03D6 Thermoplastic, Sprayable, Liquid Pavement Marking Material	<u>White</u>	<u>Yellow</u>	
	01-WAK-BADA	01-YAK-AADA	Crown Technology
	01-WHK-BADA	01-YHK-AADA	Crown Technology
	0321012	0321212	Crown Technology
	W1SS7056	Y1SS7006	Ennis-Flint
	W2SS7056	Y2SS7006	Ennis-Flint
	617496 Thermodrop	617369 Thermodrop	Ennis-Flint
	884822	883241	Ennis-Flint
	884822PT	883241PT	Ennis-Flint
	884824	883240	Ennis-Flint
	11128	21128	Ozark Materials, LLC
	1157MWHSI	2798MYHSI	Swarco
	3023MWASI	3021MYASI	Swarco
811.03D7 Polyurea, Liquid Pavement Marking Material	5000 LPM White	3M	
	5001 LPM Yellow	3M	
	LS90 White and Yellow	Epo-Plex	
	HPS-5 White and Yellow	Ennis Flint	
811.03D8 Modified Epoxy, Liquid Pavement Marking Material	HPS-4 White and Yellow	Ennis-Flint	
	MFUA-10 White and Yellow	Swarco	
811.03D9 Preformed Thermoplastic, Preformed Pavement Marking Material	PreMark	Ennis-Flint	
	PreMark XF	Ennis-Flint	
	HotTape	Ennis-Flint	
	Preformed Thermoplastic	Gentem Inc.	
	OPTAMARK	Geveko Markings	
	Preformed Thermoplastic	Ozark Materials, LLC	
SWARCO Preformed Thermoplastic	Swarco		

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures	<u>EUCLID CHEMICAL CO.</u>			
	Eucon AEA 92	AE	Air-entraining	1.5
903.02 Liquid Chemical Admixtures	Accelguard G3	E	Water-reducer accelerator (non-chloride)	16 - 90
	Accelguard NCA	C	Accelerator (non-chloride)	15
	Eucon Air Mix 200	AE	Air-entraining	3
	EUCON Air MAC6	AE	Air-entraining	0.5 - 4
	EUCON MR	A	Water-reducer	4.5
		MR	Mid-range water-reducer	5.5
		F	High-range water-reducer	12
	EUCON MRX	MR	Mid-range water-reducer	3.5
		F	High-range water-reducer	7.5
	EUCON SE	A	Water-reducer	2.5
		D	Water-reducer retarder	4.5
	EUCON WR	A	Water-reducer	2.5 - 10
		D	Water-reducer retarder	2.5 - 10
	EUCON WR-91	A	Water-reducer	3
		MR	Mid-range water-reducer	5
		D	Water-reducer retarder	6
		A	Water-reducer	3.5
	EUCON A+	MR	Mid-range water-reducer	4.5
		D	Water-reducer retarder	3.5
	EUCON Retarder75	D	Water-reducer retarder	1 - 16
EUCON Stasis	D	Water-reducer retarder	1.5 - 4	
EUCON AIR MAC12	AE	Air-entraining	2 - 10	
PLASTOL 5700	F	High-range water-reducer	4.5 - 12	
PLASTOL 6400	F	High-range water-reducer	2 - 5.5	
PLASTOL 6420	MR	Mid-range water-reducer	5.5 - 10	
PLASTOL ULTRA 209	F	High-range water-reducer	3.5 - 12	
	F	High-range water-reducer		

(Continued)

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures	<u>GCP APPLIED TECHNOLOGIES, INC.</u>			
	ADVA 140M	A	Water-reducer	5 - 9
903.02 Liquid Chemical Admixtures	ADVA 405	F	High-range water-reducer	9 - 16
	ADVA Cast 198	F	High-range water-reducer	11 - 18
	ADVA Cast 575	F	High-range water-reducer	4 - 15
	ADVA Cast 585	F	High-range water-reducer	3.5 - 10
	ADVA Cast 600	F	High-range water-reducer	4 - 10
		A	Water-reducer	2 - 4
		F	High-range water-reducer	4 - 10
	Daraset 400	C	Accelerator (non-chloride)	15
	Daravair 1400	AE	Air-entraining	1
	Darex AEA ED	AE	Air-entraining	0.5 - 5.0
	Darex II AEA	AE	Air-entraining	1 - 5
	MIRA 62	A	Water-reducer	4.5
		MR	Mid-range water-reducer	6 - 12
		F	High-range water-reducer	12 - 15
	MIRA 95	A	Water-reducer	2.0 - 6.0
		F	High-range water-reducer	10 - 15
		MR	Mid-range water-reducer	6.0 - 10.0
	MIRA 110	MR	Mid-range water-reducer	9 - 12
		F	High-range water-reducer	12 - 15
	Polarset	C	Accelerator (non-chloride)	8 - 60
Recover	D	Water-reducer retarder	2.5 - 6	
Terapave AEA	AE	Air-entraining	1.5	
WRDA 82	A	Water-reducer	3	
ZYLA 630	A	Water-reducer	4 - 7	
	D	Water-reducer retarder	2 - 7	
ZYLA R	D	Water-reducer retarder	6 - 12	
(Continued)				

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures 903.02 Liquid Chemical Admixtures	<u>MAPEI CORPORATION</u>			
	Dynamon SX	F	High-range water-reducer	6 - 12
		MR	Mid-range water-reducer	3.5 - 6
	KB-1200	A	Water-reducer	3 - 5
		MR	Mid-range water-reducer	5 - 8
	Polychem Paver Plus	A	Water-reducer	2 - 8
	Polychem VR	AE	Air-entraining (vinsol resin)	0.5
	Polychem SA	AE	Air-entraining	0.4 - 3.0
	Polychem SA-14	AE	Air-entraining	0.5 - 3.0
	Polychem SA-50	AE	Air-entraining	1 - 3
	Polychem 400 NC	A	Water-reducer	2 - 5
	Polychem Super Set	C	Accelerator (non-chloride)	16 - 32
	Polychem Super Set Plus	C	Accelerator (non-chloride)	16 - 90
	Polychem R	D	Water-reducer retarder	3 - 5
	Polychem SPC	F	High-range water-reducer	5.5
(Continued)				

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures	<u>MASTER BUILDER SOLUTIONS</u>			
	<u>US LLC.</u>			
	MasterSet DELVO	D	Water-reducer retarder	3
	MasterGlenium 3400	F	High-range water-reducer	3
903.02 Liquid Chemical Admixtures	MasterGlenium 7500	A	Water-reducer	1.5
		F	High-range water-reducer	3 - 15
	MasterGlenium 7700	F	High-range water-reducer	4 - 15
	MasterGlenium 7710	F	High-range water-reducer	4
	MasterGlenium 7720	A	Water-reducer	1.7
		MR	Mid-range water-reducer	2.6
		F	High-range water-reducer	3.2
	MasterGlenium 7920	F	High-range water-reducer	4
		MR	Mid-range water-reducer	2
	MasterGlenium 7925	F	High-range water-reducer	4
		MR	Mid-range water-reducer	2
	MasterAir AE 90	AE	Air-entraining	1
	MasterAir AE 200	AE	Air-entraining	1
	MasterAir AE 400	AE	Air-entraining	0.5
	MasterPolyheed 900	A	Water-reducer	4
		MR	Mid-range water-reducer	7
	MasterPolyheed 997	A	Water-reducer	3
		MR	Mid-range water-reducer	6
		F	High-range water-reducer	10
	MasterPolyheed 1725	A	Water-reducer	2.5 - 4
		MR	Mid-range water-reducer	5.5 - 7
		F	High-range water-reducer	8 - 12
	MasterPolyheed 100	A	Water-reducer	4
		MR	Mid-range water-reducer	8
	MasterPozzolith 200	A	Water-reducer	2
		D	Water-reducer retarder	4
	MasterPozzolith 700	A	Water-reducer	2
		D	Water-reducer retarder	5
	MasterSet AC 534V1	C	Accelerator (non-chloride)	10
	MasterSet FP 20	C	Accelerator (non-chloride)	10
	MasterGlenium 7511	A	Water-reducer	2 - 4
		MR	Mid-range water-reducer	4 - 6
		F	High-range water-reducer	6 - 15
	MasterRheobuild 1000	MR	Mid-range water-reducer	9
		F	High-range water-reducer	13

(Continued)

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures	<u>PREMIERE CONCRETE</u>			
	<u>ADMIXTURES</u>			
903.02 Liquid Chemical Admixtures	EcoFlo Green	F	High-range water-reducer	8 - 16
		A	Water-reducer	2 - 4
		MR	Mid-range water-reducer	5 - 8
	Optiflo 700	A	Water-reducer	3 - 5
		MR	Mid-range water-reducer	5 - 10
	OptiFlo 50	A	Water-reducer	3 - 5
		MR	Mid-range water-reducer	5 - 6
		D	Water-reducer retarder	6
	OptiFlo 500	A	Water-reducer	2 - 3.5
		D	Water-reducer retarder	3.5 - 5
	OptiFlo MR	A	Water-reducer	3 - 5
		MR	Mid-range water-reducer	5 - 12
		F	High-range water-reducer	12 - 16
	OptiFlo N2A	A	Water-reducer	3 - 6
		MR	Mid-range water-reducer	6 - 9
		G	High-range water-reducer retarder	13 - 15
	OptiFlo Plus	MR	Mid-range water-reducer	5 - 12
	OptiFlo 100R	D	Water-reducer retarder	3 - 5
	ConAir	AE	Air-entraining	0.5 - 4
	ConAir 260	AE	Air-entraining	0.5 - 4
ConAir X	AE	Air-entraining	0.5 - 4	
UltraFlo 2000	A	Water-reducer	2 - 4	
	MR	Mid-range water-reducer	4 - 6	
	F	High-range water-reducer	6 - 12	
UltraFlo 5600	MR	Mid-range water-reducer	6 - 10	
	F	High-range water-reducer	10 - 24	
	A	Water-reducer	3 - 6	
UltraFlo DP	F	High-range water-reducer	5 - 12	
NitroCast K	E	Water-reducer accelerator (non-chloride)	10 - 90	
NitroCast NC	E	Water-reducer accelerator (non-chloride)	10 - 90	
ProLong L	D	Water-reducer retarder	2.5 - 6.5	

(Continued)

QUALIFIED PRODUCTS LIST (QPL)

ADMIXTURES FOR CONCRETE
Air Entraining - ASTM C 260; Chemical - ASTM C 494
(See Notes Following Listing of Admixtures)

Spec. # and Material Name	Manufacturer or Supplier and Trade Name	Type	Producer and Description	Recommended Dosage min. or range fl oz/cwt
903.01 Air Entraining Admixtures	SIKA CORP. Sika Plastocrete-10N	A	Water-reducer	2
		D	Water-reducer retarder	3.5
903.02 Liquid Chemical Admixtures	Sika Plastocrete-161	A	Water-reducer	3
		D	Water-reducer retarder	6
	Sika Plastocrete-250	A	Water-reducer	2
		D	Water-reducer retarder	5
	Sika Plastiment XR	D	Water-reducer retarder	3
		AE	Air-entraining	2
	Sika AEA-14	AE	Air-entraining	2
	Sika AIR 260	AE	Air-entraining	1
	Sika AIR 360	AE	Air-Entraining	1
	SikaControl Air-160	A	Water-reducer	2
	Sikament AFM	MR	Mid-range water-reducer	5
		F	High-range water-reducer	10
		MR	Mid-range water-reducer	6.5
	Sikament SPMN	F	High-range water-reducer	10
		A	Water-reducer	3
	Sikament 475	F	High-range water-reducer	7
		MR	Mid-range water-reducer	5
		A	Water-reducer	3
	Sikament 686	MR	Mid-range water-reducer	5.5
		F	High-range water-reducer	8
		A	Water-reducer	3
	SikaPlast 200	MR	Mid-range water-reducer	6.5
		G	High-range water-reducer retarder	13
		MR	Mid-range water-reducer	6.5
	Sikaplast 300 GP	A	Water-reducer	5
		MR	Mid-range water-reducer	7.5
	SikaSet NC	C	Accelerator (non-chloride)	10
	Sikatard 440	E	Water-reducer accelerator (non-chloride)	10
Rapid - 1	D	Water-reducer retarder	3	
ViscoCrete 1000	C	Accelerator (non-chloride)	20	
	A	Water-reducer	1.5	
ViscoCrete 2100	MR	Mid-range water-reducer	3	
	F	High-range water-reducer	8	
	F	High-range water-reducer	5	
ViscoCrete 4100	F	High-range water-reducer	5	
ViscoCrete 6100	F	High-range water-reducer	5	
Viscoflow-2020	A	Water-reducer	3	
	MR	Mid-range water-reducer	6	
(Continued)				

SPEC. 903 ADMIXTURE NOTES:

1. Dosage Rate

The dosage rate indicated is that recommended by the producer or that used in qualification tests for approval of the admixture. There is no assurance that the desired water-reduction and/or retardation will be achieved with these dosages with a particular cement being used, as the effect is dependent on the cement chemistry, concrete temperature, and other factors. Increasing the dosage appreciably above that recommended may result in abnormal behavior of the concrete, such as extremely long or very short setting times. Reducing the dosage below that recommended may have the effect of substantially no change from concrete without the admixture. The dosage shown for retarding admixtures will normally produce a 1- to 3-hour retardation in the setting of the concrete, compared to similar concrete without the admixture, when used at normal temperatures (approximately 70°F). Increased dosage, within reasonable limits, will usually increase the retardation. Use of a retarding admixture will not slow the stiffening of concrete due to loss of slump.

2. Air-Entraining Admixtures

The contractor is responsible for verifying the compatibility of all chemical admixtures and the air-entraining admixture. If admixtures are from more than one manufacturer, run a trial batch prior to concrete placement. Provide test results for slump, air-entrainment and seven-day compression for two (2) cylinders. Actual dosage for Air-Entrainers may vary from those listed on the Qualified Products List as required by the mix design.

3. Lignin Type Admixtures

Lignin (or lignosulfonate) admixtures typically will cause the entrainment of additional air in air-entrained concrete. This type admixture does not generally entrain air by itself, but makes other air-entraining materials much more efficient. Thus, a change in dosage of either the chemical admixture or the air-entraining admixture may have a more significant effect on the air content than normally expected. It is the contractor's responsibility to be sure the specific admixture proposed for use is compatible with his operations so that excessive air content in the concrete is not developed. Most lignosulfonate type water-reducers will provide a moderate retardation if used at higher dosage rates.

4. High-Range Water-Reducers

Type F and G high range water-reducing (HRWR) admixtures (frequently called "superplasticizers") are capable of greater water reduction and greater strength gain than regular Type A water-reducers, or can provide substantial increase in slump while maintaining a cohesive concrete without loss of strength. Type G admixtures will also provide retardation of setting similar to Type D admixtures. Problems with this type of admixture include the following: (a) Loss of slump is frequently much more rapid than with plain concrete or when other admixtures are used, especially for older formulations of superplasticizers; (b) Effectiveness depends on the chemistry of the Portland cement, and the cements generally available in Michigan do not have the most favorable chemistry; (c) The air-void system may be adversely affected. Type F and G admixtures are to be used only according to the provisions of the Standard Specifications.

5. Admixtures Containing Chlorides

Some Type A and D admixtures may contain chlorides, as noted in the above listing. Section 903.03 of the Standard Specifications permits the use of these admixtures, except they are prohibited in concrete for bridge superstructure, prestressed concrete, and concrete containing galvanized steel or aluminum.

(End of Admixture Notes)

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name		Manufacturers or Suppliers
905.03C Bar Reinforcement (Epoxy Coating) NOTE: Epoxy Coating Material Only. The Coating Applicator and Bar Manufacturer can be Approved Manufacturers, see Approved Manufacturers List.	<u>Epoxy Coating Product Name</u>	<u>Repair Coating Product Name</u>	
	Scotchkote FBEC 413	Scotchkote 323R	3M
	Resicoat RB-600	Thermal Chem BarPatch #803	Akzo Nobel Powder Coatings
	Nap-Gard 7-2719 Rebar FBE	Nap-Gard 7-1868	Axalta Coating Systems
	Nap-Gard 7-2750	Nap-Gard 7-1868	Axalta Coating Systems
	Pureflex Green	Tnemec Series 66 G8925	Axalta Coating Systems
	Greenbar 720A009	Greenbar 920966S	IFS Coatings, Inc.
	Greenbar 720A009LG		Valspar (Sherwin Williams)
	Vectrashield PFY80006	Vectrashield Patch Kit	Valspar (Sherwin Williams)
906.09 Shear Developers (Studs)	<u>Markings</u>		
	B		Bluearc Stud Welding
	C		Cox Industries
	N		Nelson Stud Welding Co. (Div. of Gregory Ind.)
	X		Stud Welding Associates, Inc.
TW		Tru-Weld from Tru-Fit Products Corp.	
909.01 Recycled Rubber Adjusting Rings for Manholes and Drainage Structures	Flex-O-Ring		American Highway Products
	Pivoted Turnbuckle		American Highway Products
	Pro-Ring		Cretex Specialty Products
	Infra-Riser		East Jordan Iron Works
	Ladtech HDPE		Ladtech, Inc.
	HDPE Recycled Manhole Adjusting Ring		P. Spear Company
	UGT Grade Ring		Underground Technologies
Whirlygig		Whirlygig, Inc.	

QUALIFIED PRODUCTS LIST (QPL)

Spec. #	Pipe Material	Joint System	Pipe Diameter (Inches)	Approved Manufacturers
909.03 Watertight Joint Systems	Corrugated Polyethylene Pipe	Bell/Spigot N-12WT Pro-Link Ultra WT Rubber Gasket	12 thru 60	ADS – Hancor
	Corrugated Polyethylene Pipe	Compression Gasket	12 thru 24	Baughman Tile Co.
	Corrugated Polyethylene Pipe	Haviland Smooth-Flow WT Compression Gasket	12 thru 36	Haviland Drainage Products Co.
	Corrugated Polyethylene Pipe	MaxSeal Gasket	12 thru 60	JM Eagle
	Corrugated Polyethylene Pipe	Gold Flow Corrugated SLCP Compression Gasket	12 thru 36	Prinsco, Inc.
	Corrugated Polyethylene Pipe	Gold Flow WT w/SpringSeal gaskets	12 thru 36	Prinsco, Inc
	Corrugated Polyethylene Pipe	Bell/Spigot Polyisoprene Gaskets	12 thru 60	Southeast Culvert, Inc.
	Corrugated Polyethylene Pipe	Vertex Single Compression Gasket	12 thru 60	Southeast Culvert, Inc.
	Corrugated Polyvinyl Chloride Pipe (PVC)	Integrally Formed Elastomeric Gasket, Bell/Spigot	12 thru 36	Contech Engineered Solutions, LLC
	Concrete Pipe	Single Offset Self-Lubricating Gasket, Tylox - Hamilton Kent	12 thru 24	Co-Pipe Products Inc.
	Concrete Pipe	Press Seal Gasket Corp.-4G, 4F; Hamilton Kent-Tylox Super Seal; Universal Polymer & Rubber-Profile Gasket	12 thru 33	Northern Concrete Pipe, Inc.
	Concrete Pipe	Press Seal Gasket Corp.-4G, 4F, O-ring, M875;	36 thru 72	Northern Concrete Pipe, Inc.
	Concrete Pipe	Hamilton Kent-Tylox SuperSeal Press Seal Gasket Corp.O-ring, M875;	78 thru 144	Northern Concrete Pipe, Inc.
	Concrete Pipe	Compression Gasket, Profile Cross Section, O-Ring Cross Section, Pipe Gasket & Supply	12 thru 24	Upper Peninsula Concrete Pipe Co.
	Concrete Pipe	Hamilton Kent Tylox SuperSeal Models 135 and 185 Tongue-and-Groove, Single Offset	12 thru 72	Concrete Industries, Inc.
	Concrete Pipe	Profile X-Section Gasket, Hamilton Kent	12 thru 36	County Materials Corp.
	Corrugated Metal Pipe	H12 Hugger Band with Single Bolt Bar and Strap with Compression Gasket	12 thru 24	Contech Engineered Solutions, LLC
	Corrugated Metal Pipe	Gasket-Bidco Wrap 12 x 3/8 Band	12 thru 18 Band 7 24 thru 30 Band 12 & larger Band 21	Jensen Bridge & Supply Co.
	Corrugated Metal Pipe	12 Bolted Band Angle with Compression Gasket Bidco Wrap 6 x 1/8 Band	12 thru 72	Cadillac Culvert
	Corrugated Metal Pipe	Bolted Corrugated Steel Band with Compression Gasket Ensolite IV Series	12 thru 24	St. Regis Culvert Inc.

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
909.05A1 Polymer Coated Corrugated Steel Pipe	Trenchcoat Protective Film	Valfilm USA
909.06 Class A, B and F Bury Plastic Pipe Smooth Lined Corrugated Plastic Pipe (CPE/HDPE); Corrugated Polyvinyl Chloride Pipe (CPV)	N12 Dual Wall (CPE/HDPE) A-2000 PVC (CPV) Smooth Flow (CPE) GoldFlo WT HDPE (CPE/HDPE)	Advanced Drainage Systems (ADS) Contech Engineered Solutions, LLC Haviland Drainage Products Prinsco, Inc.
909.10 Drainage Marker Post	See Delineator Posts 2. Plastic Material, QPL 919.03D	
910.04 Silt Fence Geotextile (fabric only) Fabricated Fence must be assembled by an Approved Manufacturer listed in 916.02.	Belton 940 Geoturf S1200 Geoturf S1240 Geoturf S1240OR Geoturf S1400 Kintex SF-3 GTF - 180 Propex 2130 SKAPS W100 TerraTex SF-D Willacoochee, Style 1210 WINFAB 105SF	Belton Industries, Inc., Norcross, SC CSI Geoturf, Inc., Highland, MI CSI Geoturf, Inc., Highland, MI CSI Geoturf, Inc., Highland, MI CSI Geoturf, Inc., Highland, MI CSI Geoturf, Inc., Highland, MI Geoproducts, Inc., Birmingham, MI LinQ Industrial Fabrics Propex Fabrics, Inc., Austell, GA Skaps Industries, Athens, GA Hanes Geo Components, Winston-Salem, NC Willacoochee Industrial Fabrics, Inc., Willacoochee, GA Willacoochee Industrial Fabrics, Inc., Willacoochee, GA
912.08Q Recycled Plastic Or Rubber Guardrail Offset Blocks	<u>Model</u> Type B/BD, MGS-8 and MGS-8D Dura-Bull Bloclout SPI #4 Diamond Block Eco-Block Mondo Block P-Block Thrie Beam Block EDEN Block Polylumber PL6814R King Block 8 in. King MASH-16 Composite Block Type T/TD Mondo Block Thrie Beam Block EDEN Block Polylumber King Size King Block 8 in. King MASH-16 Composite Block	Creative Building Products Diamond Roadway Products Eco-Composites LLC Mondo Polymer Technologies, Inc. Monroeville Industrial Moldings Monroeville Industrial Moldings Project Back to EDEN Ramco International Trinity Industries, Inc. Trinity Industries, Inc. Mondo Polymer Technologies Monroeville Industrial Moldings Project Back to EDEN Ramco International Trinity Industries, Inc. Trinity Industries, Inc.
914.03B Recycled Rubber Joint Filler	Reflex	The J D Russell Company
914.04A Hot-Poured Joint and Crack Sealant (Joint and Crack Sealer in Concrete Pavements, Bridges, Other Structures and HMA Rout and Seal applications)	Deery 101 ELT Roadsaver 522 3725 Elastoflex 72 MACSEAL 6690-4 MOD Dura-Fill 3725 3405-M Michigan	Crafco, Inc. Crafco, Inc. Crafco, Inc. Maxwell Products McAsphalt, Ind. P & T Products W.R. Meadows

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
914.06 Epoxy Resin Adhesive & Temporary Seal (Crack Injection)	Crackbond LR321 LV	Adhesives Technology Corp.
	Crackbond SLV302	Adhesives Technology Corp.
	Akabond 817	Axson, Eaton Rapids, MI (formerly Akemi Corp.)
	Akabond 818	Axson, Eaton Rapids, MI (formerly Akemi Corp.)
	Akabond 819	Axson, Eaton Rapids, MI (formerly Akemi Corp.)
	MasterInject 1380	BASF Construction Chemical, Shakopee, MN
	MBT P&R Concsive 1360	BASF Construction Chemical, Shakopee, MN
	BHS-1617	Blackhawk Sales Co, Inc., Rock Island, IL
	BHS-1618	Blackhawk Sales Co, Inc., Rock Island, IL
	BHS-1619	Blackhawk Sales Co, Inc., Rock Island, IL
	Arndite 8560	Ciba Corporation, East Lansing, MI
	EP-SLV	E-Chem, LLC
	True Grip 150	J. Dedoes, Inc., Milford, MI
	NIP124LV	Epoxy Unlimited, Harrison Twp, MI
	CI 060	Hilti Inc., Columbus, OH
Dynapoxy EP-450	Pecora Corporation	
E Bond 550	Ridgemoor Supply, Kentwood, MI	
Sikadur 35, Hi-Mod LV	Sika Corporation, Lyndhurst, NJ	
Sikadur 52	Sika Corporation, Lyndhurst, NJ	
Pro Poxy 50 Super LV	Unitex, Kansas City, MO	
914.07A Transverse Pavement Joint 2. Dowel Bar Coating (Epoxy)	Scotchkote 426	3M
	Resicoat RB 601	Akzo Nobel Powder Coatings
3. Alternate Bond Release Agent	Nap-Gard 7-2732P	Axalta Coating Systems, LLC
	PFR 70001	Valspar (Sherwin Williams)
914.08 Transverse Pavement Joint, <u>Deformed</u> Dowel Bar Coating	Bond Release Agent - Tectyl 506	Daubert Chemical
	BCG Protec 6116 DS MA	Bradley Coatings Group
914.09 Straight & Bent Tie Bars for Longitudinal Pavement Joints (Lane Ties), Coating	See Reinforcement Bar Coating, QPL 905.03C	
	See Reinforcement Bar Coating, QPL 905.03C	
914.11 Preformed Waterproofing Membrane NOTE: Not to be used on Treated Wood Materials.	Carlisle CCW 711-Highway and Bridge Membrane	Carlisle Coatings and Waterproofing
	Geotac Waterproofing Membrane	Crafco Inc.
	Geotac Polyester HS	Crafco Inc.
	Petrotac 4591	Propex Operating Company
	Protecto Wrap M400 AR	Protecto Wrap Co.
	Sealtight Mel-Dek	W.R. Meadows, Inc.

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers				
915 Coating Systems for Steel Structures, Hanger Assemblies and End Diaphragms NOTES: *Indicates product can be used on faying surfaces of slip critical bolted connections which require Class "B". +Information from the Slip Coefficient and Creep Resistance Test Certificate is given for use with primed bolted connections to meet Class "B" requirements.	*Carbozinc 859 +100 hrs min cure, 6 mils max DFT, 10 oz/gal max thin Carboguard 893 Carbothane 133 VOC or LV	Coats	1 st	Carboline Company		
			2 nd			
			3 rd			
		*Interzinc 315B +48 hrs min cure, 4 mils max DFT, no thinner allowed Intergard 475HS Interthane 870UHS		1 st	International Protective Coatings	
			2 nd			
			3 rd			
		*Amercoat 68HS +168 hrs min cure, 3 mils max DFT, 4 oz/gal max thin Amercoat 399 Amercoat 450H		1 st	PPG Industries	
			2 nd			
			3 rd			
		*Zinc Clad III HS +168 hrs min cure, 5 mils max DFT, 12 oz/gal max thin Macropoxy 646 Fast Cure Epoxy Acrolon 218 HS		1 st	Sherwin-Williams	
			2 nd			
			3 rd			
	*Zinc Clad 4100 +72 hrs min cure, 5 mils max DFT, 6 oz/gal max thin Macropoxy 646 Fast Cure Epoxy Acrolon 218 HS		1 st	Sherwin-Williams		
		2 nd				
		3 rd				
	*Zinc Clad 4100 +72 hrs min cure, 5 mils max DFT, 6 oz/gal max thin Macropoxy 646 Fast Cure Epoxy Hi-Solids Polyurethane 250		1 st	Sherwin-Williams		
		2 nd				
		3 rd				
917.12 Seed Varieties Varieties of Seed on QPL Date of Testing Not to Exceed One Year Approved MDOT seed mixtures, see Table 917-1 in the Spec Book. *Species	<u>*Kentucky Blue Grass</u> Arc Baron Bristol Brooklawn Cannon Corsair Diva Fielder Guinness Midnight Nassau NuBlue NuBlue Plus Parade Raven RugbyII SR 2100 SR 2150 Touchdown Wildwood	<u>*Perennial Ryegrass</u> Advent Accent II Charger II Fiesta 4 Manhattan 5 Palace II Diva Palmer III Pennant III Pepper II Pillar II Prelude III Premium Primary II Process Quickstart II Saguaro Savant Sideways SR 4650 SR 4660ST	<u>*Hard Fescue</u> Aurora II Aurora Gold Eureka II Gladiator Matterhorn Nanook Nordic Reliant II Reliant IV Rescue Rescue 911 Scaldis II Spartan II SR 3150 Sword	<u>*Creeping Red Fescue</u> Celestial Cindy Lou Dawson Epic Hector Kent Kevin Ruddy Seabreeze GT Shademaster II Shoreline SR 5250	<u>*Fults Salt Grass</u> Fults Fults II Salty Sea Salt	

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
917.15B1 Turf Mulch Blankets, High Velocity Mulch Blankets (Two Sided Net)	AEC Premier Straw Highway Double Net Curlex II Contech High Velocity ERO-MAT ECS-2 Mulch Blanket Enviroscape HV Straw Mulch Blanket S2000 S2000D Straw Blanket ECB EX32 ECB S32 S2 Erosion Control Blanket ECS-2D Erosion Control Blanket DS-150 Erosion King High Velocity Double Net Excel SS-2 (Regular) WinterStraw HVW	American Excelsior Co. American Excelsior Co. Contech Engineered Solutions, LLC East Coast Erosion Control Blankets Enviroscape ECM Enviroscape ECM ErosionControlBlanket ErosionControlBlanket S.I. Geosolutions / Land Hanes Geo Components North American Green Rhino Seed & Landscape Supply Western Excelsior Corp. Winters Excelsior Company
917.15B2 Turf Mulch Blankets, Mulch Blankets (Single Sided Net)	AEC Premier Straw Highway Single Net Curlex 1-CL Curlex I Contech ERO-MAT Futerra Mulch Blanket ECS-1 Mulch Blanket ECS-1D Mulch Blanket Enviroscape Straw Mulch Blanket S1000 S1000D Straw Blanket ECB EX31 ECB S31 Erosion Control Blanket DS-75 Erosion King Mulch Blanket S1 Erosion Control Blanket ERO-MAT V75S Excel SR-1 (Regular) WinterStraw SNW	American Excelsior Co. American Excelsior Co. American Excelsior Co. Contech Engineered Solutions, LLC Profile Products, LLC East Coast Erosion Control East Coast Erosion Control Enviroscape ECM Enviroscape ECM ErosionControlBlanket ErosionControlBlanket North American Green Rhino Seed & Landscape Supply Synthetic Ind. / BonTerra America Verdyol-Canada Western Excelsior Corp. Winters Excelsior Company
917.15C Mulch Binders (Tackifiers)	<u>1. Latex Base Adhesive</u> BUTOFAN NS 268 EZ Straw Seeding Mulch w/Tack <u>2. Paperfiber Mulch Binders</u> Applegate Mulch Cellin Fiber Mulch Geopro Basis Plus Hydro Green Hydroseeding Mulch Hydro Green Hydroseeding Mulch Profile Cellulose Profile Cellulose w/Tack Rhino Greenstar Rhino Greenstar Plus <u>3. Excelsior/Guar Gum Base Adhesive</u> Excel Fiber Mulch Profile Wood Fiber with Tackifier <u>4. Guar Gum Base Adhesive</u> Geotack EcoTak-OP5 Finn A500 Hydro-Stik Landtack ConTack Lawn Tack <u>5. Hydrophilic Polymers</u> Agro Tack MP Exact-Tac (E-T) Geotack II Con-Tack A/T Eco-Tak-SAT 11 RMB Plus	BASF Corp. Rhino Seed & Turf Supply Applegate Insulation System Cellin Manufacturing, Inc. Hanes Geo Components Nu-Wool, Inc. Nu-Wool, Inc. Profile Products, LLC Profile Products, LLC Rhino Seed & Landscape Supply Rhino Seed & Landscape Supply American Excelsior Co. Profile Products, LLC CSI Geoturf, Inc. Eastern Products, Inc. Finn Corporation Midwest Land Supply, Inc. Profile Products, LLC Rhino Seed & Landscape Supply Agro Diversified Industries American Excelsior Co. CSI Geoturf, Inc. Profile Products, LLC Eastern Products, Inc. Reinco Mulch Binder Corp

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers																				
918.06D Light Weight Composite Handholes	Armorcast Box and Cover Assembly A6001640TAPCX12 PHA Series Hand Holes Quazite Box PG1730BA12 & Cover PG1730HA Polymer Concrete Pull Box & Cover FCA 173012 Duralite – 1118-18, 1212-12, 1730-24, 2436-36, & 3048-36 Synertech Underground Enclosure S1730B12FA & Cover S1730HBB0A	Arborcast Products Company Highline Products, Inc. Hubbell NewBasis Oldcastle Infrastructure Synertech Molded Products																				
918.08C Light Standards, Frangible Transformer Bases	<u>11 Inch Bolt Circle</u> TB1-17 Modified TB2-17 <u>13 Inch Bolt Circle</u> TB1-17 TB1-17 Modified	Akron Foundry Co. Akron Foundry Co.																				
919.02B1 Reflective Sheeting	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Type III</u> Series</th> <th style="text-align: center;"><u>Type IV</u> Series</th> <th style="text-align: center;"><u>Type IX</u> Series</th> <th style="text-align: center;"><u>Type XI</u> Series</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">3870</td> <td style="text-align: center;">3930</td> <td style="text-align: center;">3990</td> <td style="text-align: center;">4000</td> </tr> <tr> <td style="text-align: center;">--</td> <td style="text-align: center;">T-6500 Series</td> <td style="text-align: center;">T-9500 Series</td> <td style="text-align: center;">T-11500 Series</td> </tr> <tr> <td style="text-align: center;">Nikkalite Ultralite Grade II</td> <td style="text-align: center;">Nikkalite CRG 94000 Series</td> <td style="text-align: center;">--</td> <td style="text-align: center;">--</td> </tr> <tr> <td></td> <td style="text-align: center;">5900 Series</td> <td style="text-align: center;">7900 Series</td> <td></td> </tr> </tbody> </table>	<u>Type III</u> Series	<u>Type IV</u> Series	<u>Type IX</u> Series	<u>Type XI</u> Series	3870	3930	3990	4000	--	T-6500 Series	T-9500 Series	T-11500 Series	Nikkalite Ultralite Grade II	Nikkalite CRG 94000 Series	--	--		5900 Series	7900 Series		3M Avery Dennison Nippon Carbide Industries (USA) Inc. ORAFOL Americas Inc.
<u>Type III</u> Series	<u>Type IV</u> Series	<u>Type IX</u> Series	<u>Type XI</u> Series																			
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--	T-6500 Series	T-9500 Series	T-11500 Series																			
Nikkalite Ultralite Grade II	Nikkalite CRG 94000 Series	--	--																			
	5900 Series	7900 Series																				
919.03D Delineator Post, Plastic, Flexible 1. Ground Mount	Survivor Delineator Post Flexi-Guide 400 Series Flexi-Guide 500 Series Flexstake HD 600 Series Flexstake HD 650 Series Flexstake TM 750 Series SH248GP3 Shur-Flex Driveable Delineator SQR-LOC Flexible Delineator	Carsonite PEXCO, Davison Traffic Control Products PEXCO, Davison Traffic Control Products Flexstake Flexstake Flexstake Safe-Hit Shur-Tite Trinity Highway/Safe-Hit																				
2. Surface Mount	IRS Multipurpose Delineator Post City Post Flexi-Guide FG 300 Model UR Flexi-Guide FG 300 Model EFX TSM Series Flexible Delineator Post K71 Flexible Marker Post SM 700 Series TM 750 Series Shur-Flex Surface Mount Delineator	Impact Recovery Systems PEXCO, Davison Traffic Control Products PEXCO, Davison Traffic Control Products PEXCO, Davison Traffic Control Products PEXCO, Davison Traffic Control Products US Reflector Flexstake Flexstake Shur-Tite																				
920.02C Wet Reflective Optics	Connected Roads All Weather Elements Series 50/51 Reflective Elements Series All Weather 50/51 Visi-Ultra Duralux	3M 3M Potters Industries LLC Swarco Industries, Inc.																				
921.05A Steel Clamps for Traffic Signal Strain Poles	Strain Clamps	Utility Metals																				

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers								
922.06A Temporary Traffic Control, Temporary Pavement Markings Type R and NR Tape Paint - See Specific Paint Type in QPL 811.03D *WR Tape is wet-night retro reflective	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u>White (Type)</u></td> <td style="width: 50%; border: none;"><u>Yellow (Type)</u></td> </tr> <tr> <td style="border: none;">710 (WR) (R)</td> <td style="border: none;">711 (WR) (R)</td> </tr> <tr> <td style="border: none;">Deltaline TWR (R)</td> <td style="border: none;">Deltaline TWR (R)</td> </tr> <tr> <td style="border: none;">Visaline TWR (NR)</td> <td style="border: none;">Visaline TWR (NR)</td> </tr> </table>	<u>White (Type)</u>	<u>Yellow (Type)</u>	710 (WR) (R)	711 (WR) (R)	Deltaline TWR (R)	Deltaline TWR (R)	Visaline TWR (NR)	Visaline TWR (NR)	3M Brite-line Technologies, LLC Volare/ Swarco Industries, Inc
<u>White (Type)</u>	<u>Yellow (Type)</u>									
710 (WR) (R)	711 (WR) (R)									
Deltaline TWR (R)	Deltaline TWR (R)									
Visaline TWR (NR)	Visaline TWR (NR)									
922.06B Temp. Raised Pavement Markers	Type 1: Model 932 Chip Seal Marker TRPM Chip Seal Marker Type 2: Model 932 Overlay Marker Temporary Overlay Marker Type 3: Stimsonite Model 88	Apex Universal, Inc. PEXCO, Davidson Traffic Control Products Apex Universal, Inc. PEXCO, Davidson Traffic Control Products Stimsonite Corporation								
922.06C Temporary Pavement Marking, Pavement Marking Cover	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><u>Black (Type)</u></td> <td style="width: 50%; border: none;"><u>Other (Type)</u></td> </tr> <tr> <td style="border: none;">ATM-19-285</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">3M-715</td> <td style="border: none;"></td> </tr> </table>	<u>Black (Type)</u>	<u>Other (Type)</u>	ATM-19-285		3M-715		ATM 3M		
<u>Black (Type)</u>	<u>Other (Type)</u>									
ATM-19-285										
3M-715										
1005.02B Non-Shrinking Mortar and Grout Type H-1(Non-Metallic) Pre-Mixed H-2 eliminated.	MBT 928 Grout MasterFlow 100 Set Grout Boomer Premium Grout Upcon Super Flow Grout Celtite 10-50 Hi-Flow Conset Grout-XT Conspec 100 Enduro 50 Grout Gifford-Hills Supreme Grout 1107 Advantage Grout Sure Grip Grout NS Grout Five Star Grout Pro-Grout 90 SureGrout Crystex Duragrout Quikrete Precision Grout SC Miltipurpose Grout Superb Grout 611 Sealite 588 Grout	BASF Construction Chemical, Shakopee, MN BASF Construction Chemical, Shakopee, MN BASF Construction Chemical, Shakopee, MN Boomer Construction Materials, Detroit, MI Bostik Const. Prod. Co., Cleveland, OH Celtite Inc., Georgetown, KY ChemMasters, Madison, OH Conspec by Dayton Superior, Kansas City, KS Conspec by Dayton Superior, Kansas City, KS Cormix, Inc., Cleveland, OH (form. Gifford-Hill) Dayton Superior, Kansas City, KS Dayton Superior, Kansas City, KS Euclid Chemical Co., Cleveland, OH Five Star Products, Inc. G.C.M., Inc., Bensalem, PA Kaufman Products, Inc., Baltimore, MD L&M Construction Chemicals, Inc., Omaha, NE L&M Construction Chemicals, Inc., Omaha, NE Quikrete Technical Center, Atlanta, GA SpecChem Specco Industries, Lemont, IL W. R. Meadows, Inc., Elgin, IL								

QUALIFIED PRODUCTS LIST (QPL)

Spec. # and Material Name	Product Name	Manufacturers or Suppliers
1006 Prepackaged Hydraulic Fast Set* Mortar NOTE: *Percentage based upon weight of prepackaged bag containing both cement and sand. Example Calculation: 50 lb bag approved at 60% extension = 50 x 0.60 = 30 lb coarse aggregate per bag.		Max. Aggregate Extension, %
	MasterEmaco T 1060	60*
	MasterEmaco T 545	60*
	Burke Fast Patch 928	50*
	Chem Speed 65	50*
	HD-50 Heavy Duty Concrete Patch	60*
	Express Repair	60*
	Five Star Highway Patch	60*
	Durapatch Hiway	50*
	Planitop 18	60*
	Planitop 18ES	40*
	Commercial Grade Fast Set	45.5*
	DOT Mix	
		BASF Construction Chemical BASF Construction Chemical Edoco, a Dayton Superior Co., Kansas City, KS Chem Masters Dayton Superior Corp. Euclid Chemical Co. Five Star Products, Inc. L&M Construction Chemicals, Inc. Mapei Corporation Mapei Corporation Quikrete

SELECTING AND SHIPPING SAMPLES

The following instructions will apply for the selection, identification, and shipment of samples unless otherwise specified:

1. Samples shall be selected with care and shall be representative of the material sampled.
2. Pack samples to withstand rough shipment. Liquid materials shall be shipped in screw-top cans or friction-top cans with lids soldered in place unless otherwise specified or required. Friction-top cans with lids not soldered in place and glass jars must be surrounded and packed with suitable absorbent material in sufficient quantity to absorb all the liquid if the tops of the cans should come off or the glass jars should become broken. All packages containing liquid samples shall be marked "Fragile-Liquid."

Mark pipe, tile, and concrete test specimens conspicuously, "Handle with Care-Fragile."

3. The sample identification form must be legibly prepared and filled out in detail. All available information for proper identification of the sample shall be given including the lot number, batch number, serial number, or other identification marks.

The sample identification form shall be securely attached to the container in which the sample is shipped by means of a tag envelope. Also, include duplicate identification sheet inside wrappings, or if shipped in cloth sack, inside the sack.

4. Aggregate samples shipped to the Testing Laboratory shall be shipped in a closely woven bag. Do not use sacks which have contained sugar.
5. Cement and Pozzolanix Admixtures shall be shipped in plastic lined cloth bags.
6. The method of transportation of the samples will depend on the size, weight or quantity of material being shipped, and the time element. Small and light-weight samples shall be sent via UPS, bus, parcel post, or express. Large and heavy-weight samples shall be sent by motor freight. The sampler, being familiar with conditions, shall make shipment in the manner deemed most appropriate and economical.
7. Cloth bags, plastic liners, screw-top cans and friction-top cans may be obtained from the Laboratory. All containers must be clean and free from foreign materials. Cloth bags or sacks must be clean, free from tears or holes, and tightly woven to prevent loss of fine material.
8. All samples shall be consigned to the Michigan Department of Transportation, Construction Field Services Division, Secondary Governmental Complex, 8885 Ricks Road, Lansing, Michigan 48909, unless otherwise noted.

APPENDIX

Visual Inspection Items - Alphabetical

This list is intended as a quick reference, alphabetical by material name, for materials which normally require some form of testing but have VI quantities listed. It does not include materials which are accepted by VI basis only.

Visual Inspection Items - By Specification Number

This list is intended as a quick reference, by specification number for materials which normally require some form of testing but have VI quantities listed. It does not cover materials which are accepted on a VI basis only.

This Visual Inspection Items List is in accordance with the 2012 Standard Specification for Construction.

VISUAL INSPECTION ITEMS - Alphabetical

<u>SEC.</u>	<u>MATERIAL</u>	<u>MAXIMUM V.I.</u>
909	Acrylonitrile-Butadiene-Styrene (ABS) Pipe for Underdrain	600 ln ft
919	Aluminum Sheet	100 sq ft
902	Aggregate, Coarse	100 tons
902	Aggregate, Dense-Graded	500 tons
902	Aggregate, Fine	100 tons
902	Aggregate, Open-Graded	100 tons
904	Asphalt, Liquid (RC-250)	5 gal - 150 lbs
905	Bar Reinforcement (all)	500 lbs
914	Bituminous Fiber Joint Filler	150 sq ft
501	Bituminous Mixtures	500 tons/project/mix
914	Bolts for Structure Exp. Anchor	250 units
914	Bond Release	20 gal max
922	Calcium Chloride Solids	5000 lbs
922	Calcium Chloride Solutions	1000 gals
Misc.	Cast & Ductile Iron Pipe	250 ft
901	Cement	45 tons
Misc.	Clay Pipe	10 pcs
913	Clay and Sand Lime Brick	1000 pcs
913	Concrete Block	1000 pcs
913	Concrete Brick	1000 pcs
909	Concrete Pipe, Non-Reinforced	10 pcs
909	Concrete Pipe, Reinforced & Elliptical	5 pcs of 42" dia or less
Misc.	Corrugated Galv. Steel Plates	10 plates
909	Corrugated Aluminum Sheets	25 sheets
909	Corrugated Aluminum Alloy Pipe	250 ln ft
909	Corrugated Plastic Pipe	<12 in dia 250 ft
	" "	>12 in dia 100 ft
909	Corrugated Plastic Pipe, Smooth Lined	Same as CPP
909	Corrugated Plastic Tubing for Underdrains	250 ft
909	Corrugated Steel Pipe	*
	12" or less	125 ln ft
	15" to 54"	50 ln ft
	60" or greater	25 ln ft
909	Corrugated Steel Pipe for Underdrains	*
909	Corrugated Steel Sheets	*
	12" or less	125 ln ft
	15" to 54"	50 ln ft
	60" or greater	25 ln ft
909	Coupling Bands	5 pcs
914	Deformed Bars	500 lbs
919	Delineator Posts, Steel	80 posts
919	Delineator Reflectors (Plastic and Reflective Sheeting)	25 pcs each color
914	Dowel Bars	1200 pcs
918	Electrical Conduit, Plastic	400 ln ft
918	Electrical Conduit, Rigid	400 ln ft
914	Epoxy Binder	5 gals
Misc.	Fiberglass and Bit. Cotton Fabric	5 rolls
910	Geotextile Blanket	500 sq yd
910	Geotextile Liner/ Riprap	500 sq yd
910	Geotextile Liner/Heavy Riprap	500 sq yd
910	Geotextile Stabilizer/Separator	500 sq yd
916	Geotextile Silt Fence	500 ln ft
920	Glass Beads, Standard	500 lbs

(Continued)

VISUAL INSPECTION ITEMS - Alphabetical

<u>SEC.</u>	<u>MATERIAL</u>	<u>MAXIMUM V.I.</u>
902	Granular, Class I	100 tons
902	Granular, Class II (Subbase)	500 cu yd
902	Granular, Class II (Abutment b.f.)	100 cu yd
902	Granular, Class IIA	500 cu yd
902	Granular, Class III	500 cu yd
902	Granular, Class IIIA	100 cu yd
908	Guardrail Beam Elements/End Sections	125 ln ft
908	Guardrail Posts, Steel	25 posts
918	Handholes, Precast Concrete	10 pcs
907	High Tensile Wire Fence (Wire)	250 ft
903	Insulating Blanket	10 sheets
903	Interim Curing (Linseed Based)	50 gals
914	Joint Assemblies	Fab. Insp. Req./100 assemblies
909	Mastic (Cold-Applied Joint Sealer)	10 gals
903	Membrane Curing Compound	200 gals
908	Metallic Waterstop (Sheet Lead & Copper)	25 sq ft
902	Mineral Filler (Bit. Mixes)	10 tons
909	Polyethylene Pipe (Downspouts)	<12 in dia 250 ft
	“	>12 in dia 100 ft
913	Precast Concrete Bases and Sumps	10 pcs total
918	Precast Concrete Handholes	10 pcs
909	Precast Concrete End Sections	10 pcs
913	Precast Units for Dr. Structures	10 pcs total
909	PVC Pipe (Sanitary Sewer)	600 ft
907	Rail for Braces (Chain Link)	250 ft
919	Reflective Sheeting	1 roll for less than 3" width
905	Reinforcement Steel	500 lbs
917	Seed and Seeding Mixtures	100 lbs
913	Slope Paving Blocks	1000 pcs
909	Smooth Plastic Pipe for Underdrains (Outlet)	250 ft
907	Steel Chain Link Fence Fabric	250 ft
909	Steel End Sections	4 pcs
919	Steel, Galvanized Sign Posts	20 posts
907	Steel Posts/Chain Link Fence	25 line, 25 gate posts
919	Steel Posts/Delineator	80 posts
905	Steel Wire Fabric (Mesh)	500 sq yds
913	Structural Tile	1000 tiles
907	Top Rail (Chain Link)	250 ft
907	Tension Wire	500 ft
914	Tie Bars (Lane Ties)	500 lbs
910	Wall Drain	100 sq ft
919	Wood Sign Posts	20 posts

*See Remarks in Acceptance Requirements Section

VISUAL INSPECTION ITEMS – by Specification Number

<u>SEC.</u>	<u>MATERIAL</u>	<u>MAXIMUM V.I.</u>
910	Geotextile Blanket	500 sq yd
910	Geotextile Liner/Riprap	500 sq yd
910	Geotextile Stabilizer/Separator	500 sq yd
910	Geotextile Liner/Heavy Riprap	500 sq yd
910	Wall Drain	250 sq ft
913	Clay and Sand Lime Brick	1000 pcs
913	Concrete Brick	1000 pcs
913	Concrete Block	1000 units
913	Precast Units for Dr. Structures	10 pcs total
913	Precast Concrete Bases and Sumps	10 pcs total
913	Structural Tile	1000 tiles
913	Slope Paving Blocks	1000 pcs
914	Bituminized Fiber Joint Filler	150 sq ft
914	Epoxy Binder	5 gals
914	Dowel Bars	1200 bars
914	Joint Assemblies	Fab. Insp. Req./100 assemblies
914	Bond Release	20 gal max
914	Deformed Bars	500 lbs
914	Tie Bars	500 lbs
914	Bolts for Structure Exp. Anchor	250 units
916	Geotextile Silt Fence	500 ft
917	Seed and Seeding Mixtures	100 lbs
918	Precast Concrete Handholes	10 pcs
918	Electrical Conduit, Polyethylene	400 ft
918	Electrical Conduit, Rigid	400 ft
919	Aluminum Sheet	100 sq ft
919	Reflective Sheeting	1 roll for less than 3" width
919	Delineator Reflectors (Plastic & Reflective Sheeting)	25 pcs each color
919	Steel Delineator Posts	80 posts
919	Galvanized Steel Sign Posts	20 posts
919	Wood Sign Posts	20 posts
920	Glass Beads, Standard	500 lbs
922	Calcium Chloride Solids	5000 lbs
922	Calcium Chloride Solutions	1000 gals
Misc.	Clay Pipe	10 pcs
Misc.	Cast & Ductile Iron Pipe	250 ft
Misc.	Fiberglass and Bit. Cotton Fabric	5 rolls
Misc.	Corrugated Galvanized Steel Plates	10 plates

*See Remarks in Acceptance Requirements Section

**APPENDIX C
SPECIAL PROVISIONS**



**THE CITY OF KALAMAZOO
DEPARTMENT OF PUBLIC SERVICES
ENGINEERING DIVISION**

SPECIAL PROVISIONS

2022 Streets Crack Seal Program

Bid Reference #: 91396-008.0

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
HOT MIX ASPHALT CRACK TREATMENT AND OVERBAND CRACK FILL

CFS:EMC

1 of 2

APPR:KPK:DBP:06-23-16
FHWA:APPR:06-23-16

a. Description. The work consists of treating cracks in hot mix asphalt (HMA) surfaces using either a saw or rout and seal process or an overband process.

b. Materials. Provide materials in accordance with subsection 502.02 of the Standard Specifications for Construction with the following modification:

1. Delete subsection 502.02.B.1 of the Standard Specifications for Construction.

c. Construction. Ensure all construction is in accordance with subsection 502.03 of the Standard Specifications for Construction with the following modification:

1. Delete the second sentence of the second paragraph of subsection 502.03.D.2 of the Standard Specifications for Construction and replace with the following: "Apply overband 4 inches wide, $\pm 1/4$ inch and from 1/8 inch to 3/16 inch thick."

2. Add the following to the end of subsection 502.03.D.2.b. of the Standard Specifications for Construction: "Allow to cure for a minimum of 3 days prior to placement of micro-surface."

3. Add the following to the end of subsection 502.03.D.2.c of the Standard Specifications for Construction: "Allow curing for a minimum of 7 days prior to placement of chip seal."

4. Add the following to the end of subsection 502.03.D.2.d of the Standard Specifications for Construction: "Allow to cure for a minimum of 14 days prior to placement of Paver Placed Surface seal."

5. Add the following to the end of subsection 502.03.D.2.e of the Standard Specifications for Construction: "Allow to cure for a minimum of 14 days prior to placement of HMA Ultra-thin Overlay."

d. Measurement and Payment. Delete subsection 502.04 of the Standard Specifications for Construction, in its entirety and replace it with the following:

502.04 Measurement and Payment.

Pay Item	Pay Unit
Overband Crack Fill, Lane	Lane Mile
Overband Crack Fill, Ramp	Lane Mile
HMA Crack Treatment, Lane	Lane Mile
HMA Crack Treatment, Ramp	Lane Mile

A. **Overband Crack Fill.** The Engineer will measure **Overband Crack Fill, Lane** along the centerline of each lane. This measurement includes the traffic lane, as defined in the Lane Mile Inventory, and any adjacent paved shoulders.

The Engineer will measure **Overband Crack Fill, Ramp** along the ramp centerline beginning at the 2-foot gore point including shoulders.

The unit prices for **Overband Crack Fill**, of the type required, include the cost of preparing and filling the cracks using the overband method, providing the required documentation, corrective work, and temporary traffic markings.

B. **HMA Crack Treatment.** The Engineer will measure **HMA Crack Treatment, Lane** along the centerline of each lane. This measurement includes traffic lanes, as defined in the Lane Mile Inventory, and paved shoulders. The Engineer will measure **HMA Crack Treatment, Ramp** along the ramp centerline beginning at the 2-foot gore point including shoulders.

The unit price for **HMA Crack Treatment**, of the type required, includes the cost of preparing, filling and sealing the cracks, including treating working cracks with the saw or rout and seal method, and treating non-working cracks with the overband method.