



# City OF DEXTER

## INVITATION TO BID

**BID TITLE:** 2016 Hydrant Repairs

**BID DUE DATE:** WEDNESDAY, AUGUST 10, 2016 10:30 AM

### ISSUING AGENCY INFORMATION

**ISSUED BY:** City of Dexter, 8140 Main Street, Dexter, MI 48130

**ISSUE DATE:** 7-22-16

**RETURN TO:**  
City of Dexter  
Assistant to the City Manager  
Justin Breyer  
8140 Main Street (mailing)  
8123 Main Street (drop off)  
Dexter, MI 48130

**Phone:** (734) 426-8303 ext. 17  
**Fax:** (734) 426-5614

**Website:** [www.dextermi.gov](http://www.dextermi.gov)

### INSTRUCTIONS TO BIDDERS

**COMPLETE THE INFORMATION BELOW AND RETURN THIS PAGE WITH YOUR BID AND ANY REQUIRED DOCUMENTS TO THE ADDRESS LISTED ABOVE UNDER "ISSUING AGENCY INFORMATION."**

**Alternate Bids:** Vendors may submit alternate bids (a bid on services other than specified). Alternate bids are considered only if the vendor is the lowest responsible vendor on their primary bid. Bids must be clearly identified as "Primary" and "Alternate".

### BIDDERS MUST COMPLETE THE FOLLOWING

**PAYMENT TERMS: NET 30 DAYS**

**DELIVERY DATE:**

**BIDDER NAME/ADDRESS/CERTIFICATIONS:**

**AUTHORIZED BIDDER SIGNATORY**  
(print and sign in ink):

**BIDDER PHONE #:**

**BIDDER FAX #:**

**BIDDER EMAIL ADDRESS AND WEBSITE:**

**IMPORTANT: SEE STANDARDS AND TERMS**

**City OF DEXTER – 2016 HYDRANT REPLACEMENT  
STANDARD TERMS AND CONDITIONS**

**By submitting a response to this invitation for bid, request for proposal, limited solicitation, or acceptance of a contract, the vendor agrees to acceptance of the following Standard Terms and Conditions and any other provisions that are specific to this solicitation or contract.**

**ACCEPTANCE/REJECTION OF BIDS, PROPOSALS, OR LIMITED SOLICITATION RESPONSES:** The City reserves the right to accept or reject any or all bids, proposals, or limited solicitation responses, wholly or in part, and to make awards in any manner deemed in the best interest of the City. Bids, proposals, and limited solicitation responses will be firm for 30 days, unless stated otherwise in the text of the invitation for bid, request for proposal, or limited solicitation.

**ACCESS AND RETENTION OF RECORDS:** The contractor agrees to provide the City, or their authorized agents, access to any records necessary to determine contract compliance. The contractor agrees to create and retain records supporting the services rendered or supplies delivered for a period of three years after either the completion date of the contract or the conclusion of any claim, litigation, or exception relating to the contract.

**ALTERATION OF SOLICITATION DOCUMENT:** In the event of inconsistencies or contradictions between language contained in the City's solicitation document and a vendor's response, the language contained in the City's original solicitation document will prevail.

**ASSIGNMENT, TRANSFER AND SUBCONTRACTING:** The contractor shall not assign, transfer or subcontract any portion of the contract without the express written consent of the department.

**COMPLIANCE WITH LAWS:** The contractor must, in performance of work under the contract, fully comply with all applicable federal, state, or local laws, rules and regulations. Any subletting or subcontracting by the contractor subjects subcontractors to the same provision.

**CONFORMANCE WITH CONTRACT:** No alteration of the terms, conditions, delivery, price, quality, quantities, or specifications of the contract shall be granted without prior written consent of the City of Dexter. Supplies delivered which do not conform to the contract terms, conditions, and specifications may be rejected and returned at the contractor's expense.

**E-MAIL/FACSIMILE RESPONSES:** E-Mail and Facsimile responses will be not be accepted. Bids, or portions thereof, received after the due time will not be considered.

**HOLD HARMLESS/INDEMNIFICATION:** The contractor agrees to protect, defend, and save the City, its elected and appointed officials, agents, and employees, while acting within the scope of their duties as such, harmless from and against all claims, demands, causes of action of any kind or character, including the cost of defense thereof, arising in favor of the contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of services or in any way resulting from the acts or omissions of the contractor and/or its agents, employees, representatives, assigns, subcontractors, except the sole negligence of the City, under this agreement.

**LATE BIDS AND PROPOSALS:** Regardless of cause, late bids and proposals will not be accepted and will automatically be disqualified from further consideration. It shall be solely the vendor's risk to assure delivery at the designated office by the designated time. Late bids and proposals will not be opened and may be returned to the vendor at the expense of the vendor or destroyed if requested.

**RIGHT TO REJECT:** The City has the right to reject bids and proposals with reason.

**PAYMENT TERM:** All payment terms will be computed from the date of delivery of supplies or services OR receipt of a properly executed invoice, whichever is later. Unless otherwise noted in the solicitation document, the City is allowed 30 days to pay such invoices.

**TAX EXEMPTION:** The City of Dexter is tax exempt (#38-6004671).

**TERMINATION OF CONTRACT:** Unless otherwise stated, the City may, by written notice to the contractor, terminate the contract in whole or in part at any time the contractor fails to perform the contract.

**COMPLIANCE WITH WORKERS' COMPENSATION ACT**

The Contractor is required to supply the City of Dexter with proof of compliance with the Workers' Compensation Act while performing work for the City of Dexter. Neither the Contractor nor its employees are employees of the City. The proof of insurance/exemption must be in the form of workers' compensation insurance, an independent contractor exemption, or documentation of corporate officer status and must be

received by the City, within 10 working days of the Notice of Award and must be kept current for the entire term of the contract.

CONTRACTS WILL NOT BE ISSUED TO VENDORS WHO FAIL TO PROVIDE THE REQUIRED DOCUMENTATION WITHIN THE ALLOTTED TIME FRAME.

### **CONTRACT TERMINATION**

Termination for Cause. The City may, by written notice to the Contractor, terminate this contract in whole or in part at any time the Contractor fails to perform this contract.

### **INSURANCE REQUIREMENTS – BID/PROPOSAL**

**General Requirements:** The Contractor shall maintain for the duration of the contract, at its cost and expense, insurance against claims for injuries to persons or damages to property, including contractual liability, which may arise from or in connection with the performance of the work by the Contractor, agents, employees, representatives, assigns, or subcontractors. This insurance shall cover such claims as may be caused by any negligent act or omission. All coverages shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with insurance carriers acceptable to the City of Dexter, Michigan.

**Primary Insurance:** The Contractor's insurance coverage shall be primary insurance as respect to the City, its officers, officials, employees, and volunteers and shall apply separately to each project or location. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be in excess of the Contractor's insurance and shall not contribute with it.

**Specific Requirements for Commercial General Liability:** The Contractor shall purchase and maintain occurrence coverage with combined single limits for bodily injury, personal injury, and property damage of \$300,000 per occurrence and \$1,000,000 aggregate per year to cover such claims as may be caused by any act, omission, or negligence of the Contractor or its officers, agents, representatives, assigns or subcontractors. Coverages shall include the following extensions: (a) Contractual Liability; (b) Products and Completed Operations; (c) Independent Contractor's Coverage; (d) Broad Form General Liability Extensions, or equivalent; (e) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

**Additional Insured Status:** The City, its officers, officials, employees, and volunteers are to be covered and listed as additional insureds; for liability arising out of activities performed by or on behalf of the Contractor, including the insured's general supervision of the Contractor; products and completed operations; premises owned, leased, occupied, or used.

**Specific Requirements for Automobile Liability:** The Contractor shall purchase and maintain coverage with limits of not less than \$300,000 per person (personal injury), \$1,000,000 per accident occurrence (personal injury), and \$100,000 per accident occurrence (property damage), OR combined single limits of \$1,000,000 per occurrence to cover such claims as may be caused by any act, omission, or negligence of the Contractor or its officers, agents, representatives, assigns or subcontractors. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

**Certificate of Insurance/Endorsements:** Insurance must be placed with an insurer with a Best's rating of no less than A-. This insurance must be maintained for the duration of the contract. The City must receive all required certificates and endorsements within 10 days from the date of the Notice of Award before a contract will be issued. Work may not commence until a contract is in place. The Contractor must notify the City immediately, and no less than 30 days, of any material change in insurance coverage, such as changes in limits, coverage, change in status of policy, etc. The City reserves the right to require complete copies of insurance policies at all times.

**Proof of Insurance Coverage:** The contractor shall provide the City of Dexter, Michigan, at the time contracts are returned for execution, certificates and policies listed below:

- A. Certificate of Insurance for Worker's Compensation Insurance;
- B. Certificate of Insurance for Commercial Liability Insurance;
- C. Certificate of Insurance for Automobile Liability Insurance;
- D. Original Policy, or Original Binder pending insurance policy, or Owner's & Contractor's Protective Liability Insurance;
- E. If so requested, certified copies of all policies mentioned above will be furnished.

**Hold Harmless:** (Page HHA-1) of this contract shall be executed by the contractor and submitted no later than 10 days following the Notice of Award and acceptance of the contract.

**2016 HYDRANT REPLACEMENT - PROJECT SCOPE**

**Project Location:**

City of Dexter

**Permitted Activity:**

Replacement of Fire Hydrants as Outlined in the Attached Listing

**Contractor Requirements:**

Contractors bidding must be qualified to complete the work as proposed.

City Staff will perform the inspection of the project.

**Scope of Project:**

City Council is scheduled to award the bid on August 22, 2016. The work shall begin on or after October 10, 2016 and shall be completed within 2 weeks. The work shall be completed no later than November 18, 2016. Final payment for restoration will occur in the spring of 2017 once turf has fully established.

<b>COMPANY NAME:</b>	
<b>PLEASE PROVIDE THE COMPANIES/SUPERVISORS QUALIFICATIONS AND EXPERIENCE PERFORMING SUCH WORK. MUNICIPAL REFERENCES ARE REQUIRED:</b>	
<b>IDENTIFY MEMBERSHIP IN RELEVANT PROFESSIONAL ORGANIZATIONS:</b>	
<b>LIST BID CONTINGENCIES/CONDITIONS/DEVIATIONS:</b>	
<b>TOTAL BID PRICE (unit price sheet must also be completed and attached):</b>	
<b>START DATE:</b>	<b>END DATE:</b>
<b>TERMS:</b>	
<b><i>BID MUST BE FIRM IN ACCORDANCE WITH PLANNED SCHEDULE</i></b>	<b>F.O.B CITY OF DEXTER</b>

## HOLD HARMLESS AGREEMENT

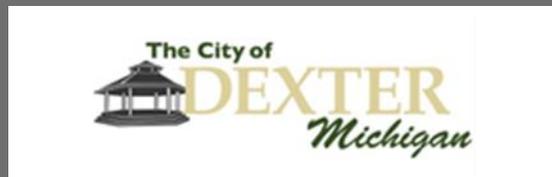
"To the fullest extent permitted by law, \_\_\_\_\_, agrees to defend, pay in behalf of, indemnify, and hold harmless the City of Dexter, its elected and appointed officials, employees and volunteers and others working for or in behalf of the City of Dexter, against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the City of Dexter, its elected and appointed officials, employees, volunteers or others working in behalf of the City of Dexter, by reason of personal injury, including bodily injury and death; and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this Contract."

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# CITY OF DEXTER

## 2016 HYDRANT BID ATTACHMENT 1 – BID FORM



JULY, 2016



---

ARCHITECTS. ENGINEERS. PLANNERS.

Company Name: \_\_\_\_\_

**ATTACHMENT 1: CONTRACTOR'S QUOTATION**

**TO BE SUBMITTED TO BY NO LATER THAN August 10, 2016 at 10:30 AM EDT**

Company Name:					
Description		Amount	Unit	Price	Total Cost
2.	Gate Valve and Well, 12 inch	1	Ea	\$	\$
3.	Gate Valve and Well, Remove	1	Ea	\$	\$
4.	Hydrant, Remove	5	Ea	\$	\$
5.	Fire Hydrant	4	Ea	\$	\$
6.	3" Topsoil, Seeding Mix Type THM, and Mulch	500	Syd	\$	\$
7.	Erosion Control, Silt Fence	400	Ft	\$	\$
8.	Traffic Control Maintenance and Control	1	LS	\$	\$
9.	Mobilization, Max 5%	1	LS	\$	\$
*Please note that all quantities are estimates and actual quantities shall be approved by the City of Dexter.					
<b>Total Price:</b>					\$

**Alternate Bid Item**

5a.	Fire Hydrant, Owner Furnished	4	Ea	\$	\$
1	Line Stop	1	Ea	\$	\$

# CITY OF DEXTER

## 2016 HYDRANT BID ATTACHMENT 2 – METHOD OF PAYMENT



JULY, 2016



---

ARCHITECTS. ENGINEERS. PLANNERS.

**ATTACHMENT 2  
METHOD OF PAYMENT FOR UNIT PRICE ITEMS**

Prices and Measurement

Payment for work under this contract will be based on a unit price or lump sum for work actually completed. Final measurements of the work will be taken by the Engineer to determine the amount of work done and thereby determine the total cost. The method of applying the unit prices to measured quantities will be as herein specified. Payment will include the cost of all labor, tools, materials, and equipment necessary to do the work.

Several items may have been included in the bid form but may not be called for on the plans. These items have been included in order to establish a unit price in the event that the item of work is necessary. The Contractor should be aware that these items may increase, decrease, or be zero based on field conditions, or Owner direction

This quotation will require the following items of work:

Item 1. Line Stop

The completed work as measured for LINE STOP will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Line Stop	each

The contract unit price shall be payment in full for all labor, material and equipment necessary to install the line stop. Payment for the line stop shall include the following (except such items for which separate pieces are received on the bid form): excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, and utilities; furnishing and placing of the line stop, joining materials, corporation stops, fittings, bulkheads, and plugs; cleaning, backfill and fill materials; complete clean up and surface restoration.

The contract unit price shall also include payment in full for dewatering of excavation as described in the earthwork section. The contract unit price does not include dewatering by means of deep wells or well points. In the event that dewatering by mean of deep wells or well points are required, as determined by the engineer, then this work shall be paid for separately.

Item 2. Gate Valve and Well, 12 inch

The completed work as measured for GATE VALVE and WELL will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Gate Valve and Well, 12 inch	each

The contract unit price shall be payment in full for all labor, materials and equipment necessary to construct the gate valve and well. Each well shall be complete with base, steps, frames and covers, stubs, and pipe openings. Payment for Gate Valves and Wells shall include the following (except such items for which separate prices are received on the bid form): excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, and utilities; furnishing and placing of structure, jointing materials, valve, corporation stops, fittings, bulkheads, and plugs; cleaning; furnishing and placing of required bedding, backfill and fill materials; complete cleanup and surface restoration.

The contract unit price shall also include payment in full for dewatering of excavation as described in the Earthwork section. The contract unit price does not include dewatering by means of deep wells or well points. In the event that dewatering by means of deep wells or well points is required, as determined by the Engineer, then this work shall be paid for separately.

Item 3.4. Remove Gate Valve and Hydrant

The completed work as measured for REMOVE GATE WELL, AND HYDRANT will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Gate Valve and Well, Remove	each
Remove Hydrant	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to remove gate wells, or hydrants as called for on the plans.

Gate well removal shall include removing and salvaging the casting and gate valve as well as complete removal and disposal of the gate well structure. If the Owner wishes to retain the salvaged casting or gate valve, then the contractor shall deliver these items to the Owner's storage yard. Otherwise, the contractor shall be responsible for disposal of the unwanted castings and valves.

Hydrant removal shall include removing the hydrant assembly and valve back to the existing water main tee. Removal work shall also include placement of approved caps or plugs and thrust blocks on the open end of the tee. If the Owner wishes to retain the hydrant assemblies, then the Contractor shall deliver the salvaged hydrants to the Owner's storage yard. Otherwise the contractor shall be responsible for disposal of the unwanted hydrant assemblies.

Excavation as well as furnishing, placing, and compacting suitable backfill shall be considered as included in all of the removal work. Furnishing and placing caps and/or plugs and necessary thrust blocks on the remaining water main ends after the removals are complete shall also be considered as included as part of the removal work unless a separate pay item is included in the Bid Form to cap water main.

Item 5. Fire Hydrant

The completed work as measured for FIRE HYDRANT will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Fire Hydrant	each
Fire Hydrant, Owner Furnished	each

The contract unit price shall be payment in full for all labor, materials and equipment necessary to construct the Fire Hydrant assembly complete as shown on the plan details. Payment for Fire Hydrants shall include the following (except such items for which separate prices are received on the bid form): excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, and utilities; furnishing and placing of fire hydrant, water main pipe, jointing materials, restrained joints, companion shut off valve and box, fittings, bend, bulkheads, plugs, and thrust blocks; cleaning; furnishing and placing of required bedding, backfill and fill materials; complete cleanup and surface restoration. The unit price for fire hydrants shall include all work from the water main to the location where the hydrant assembly is placed.

The contract unit price for fire hydrant owner furnished shall be payment in full for all labor, materials and equipment necessary to construct the Owner furnished hydrant assembly.

The contract unit price shall also include payment in full for dewatering of excavation as described in the Earthwork section. The contract unit price does not include dewatering by means of deep wells or well points. In the event that dewatering by means of deep wells or well points are required, as determined by the Engineer, then this work shall be paid for separately.

Item 6. Surface Restoration

The completed work as measured for SURFACE RESTORATION will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
3" Topsoil, Seeding Mix Type THM, and Mulch	square yard

Surface Restoration with seed shall be measured in place by square yards and shall be based upon the average length and width measurements of the restored area as determined by the Construction Observer.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and place the topsoil, seed, and mulch. Watering seed until vigorous turf growth is established shall be considered as incidental to the surface restoration work unless a separate pay item for water is included in the Bid Form.

Application of mulch anchoring shall be considered as incidental to the placement of the mulch unless a separate pay item for the mulch anchoring has been included in the Bid Form.

Item 7. Soil Erosion Control, Silt Fence

The completed work as measured for SILT FENCE will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Erosion Control, Silt Fence	feet

Silt fence shall be measured in place horizontally by linear feet. The length shall be measured along the top of fence from end of fence to end of fence.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain the silt fence in accordance with the plan notes and details. Removal and disposal of the silt fence and accumulated sediment upon final completion of the project shall be considered as included in the work. Placement and maintenance of stone outlet filters at low points along the silt fence line shall also be considered as included in the silt fence work. Maintenance work will include removal and replacement of silt fence and outlet filters as directed by the Engineer. Restoration of disrupted areas shall be paid for separately under the appropriate surface restoration pay items.

Item 8. Traffic Control

The completed work as measured for TRAFFIC MAINTENANCE AND CONTROL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Maintenance and Control	lump sum

The contract lump sum price shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain all signs, cones, barricades, flagging, etc. as required by the Michigan Manual of Uniform Traffic Control Devices and the Supplemental Specifications. Removal of any temporary signs or other traffic control equipment upon completion of the project shall be considered as incidental to the traffic maintenance and control work.

Item 9. Mobilization

The completed work as measured for MOBILIZATION will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Mobilization, max. 5%	lump sum

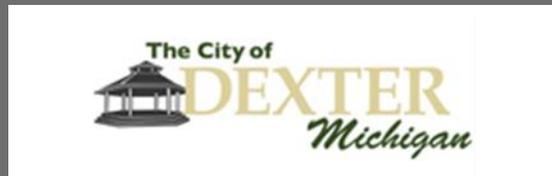
The lump sum price shall be payment in full for all preparatory work and operations which may include, but is not limited to, the following items:

1. The movement of personnel, equipment, supplies, and incidentals to the project site.
2. The establishment of the Contractor's offices, buildings, and other facilities to work on the project.
3. Other work and operations that must be performed.
4. Expenses incurred, prior to beginning work on the various contract items on the project site.
5. Pre-construction costs, exclusive of bidding costs, which are necessary direct costs to the project rather than directly attributable to other pay items under the contract.
6. Permits, bonds, etc.

The pay item will state the maximum amount that can be bid. When the percentage of the original contract amount earned is less than 5 percent, the costs of project specific bonding, insurances, and permits will be reimbursed when a paid invoice is received by the Engineer. The costs of these will then be made in accordance with the Partial Payment Schedule shown below. The original contract amount is the total value of all contract items including the mobilization item. The percentage earned is exclusive of the mobilization item. The total sum of all payments for this item shall not exceed the original contract amount bid for mobilization, regardless of the fact that the Contractor may have, for any reason, shut down his work on the project, moved equipment away from the project and then back again, or for additional quantities or items of work added to the contract.

# CITY OF DEXTER

## 2016 HYDRANT BID ATTACHMENT 3 – SPECIAL PROVISION



JULY, 2016



---

ARCHITECTS. ENGINEERS. PLANNERS.

**ATTACHMENT 3  
SPECIAL PROVISION  
FOR  
MAINTAINING TRAFFIC**

**OHM: PMD**

**Page 1 of 4**

**7/22/2016**

**a. Description.**

This work consists of all labor, materials, and equipment required to maintain traffic in accordance with this special provision for the proposed work on Huron River Drive east of Central Street in the City of Dexter, Michigan. The project consists of the removal and replacement of fire hydrants and a gate valve along Huron River Drive as well as a line stop of the water main supplying these hydrants.

**b. General**

Traffic shall be maintained by the Contractor throughout the project, in accordance with Section 104.07, 104.11, and Section 812 of the Michigan Department of Transportation's 2012 Standard Specifications for Construction, the 2011 Michigan Manual of Uniform Traffic Control Devices, and any supplemental specifications in this proposal.

1. **Notice of Traffic Control** - The Contractor shall notify the Engineer, Washtenaw County Road Commission, the City of Dexter, local police and emergency agencies, the Western-Washtenaw Area Value Express (WAVE) transit agency, and school bus agencies a minimum of five business days prior to implementation of any lane closures or major traffic shifts.
2. **Coordination of Work** - The Contractor shall coordinate this work with other Contractors, other Contractors performing work within or adjacent to the Construction Influence Area (CIA), to avoid conflicts in the maintenance of traffic, construction signing, and to provide for the orderly progress of contract work. Known projects are listed on the Coordination Clause.
3. **Road Maintenance** – The City of Dexter, Washtenaw County Road Commission, or contract maintenance agencies may perform maintenance work within or adjacent to the Construction Influence Area (CIA). These agencies will coordinate their operations with the Engineer to minimize the interference to the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items or for delays and/or inefficiencies resulting from maintenance activities.
4. To maintain the mobility of traffic and pedestrians, every attempt should be made to follow the maintaining traffic plans, maintaining traffic typicals, and specifications provided. Any change of, or variation from, the maintaining traffic plan shall be approved by the Engineer prior to implementation.

**c. Construction Influence Area.**

The Construction Influence Area (CIA) shall include the area within the road right-of-way or easements, including intersecting roadways, to the limits of advanced construction signing, or any other signs that pertain to this location. In addition, the CIA includes the right-of-way of any designated detour route, intersecting road or ramp adjacent to the work zone as far as the construction detour signing extends.

**d. Traffic Restrictions**

1. The Contractor shall maintain traffic in accordance with the plan, except as noted below. Changes or adjustments in the signing provided may be necessary, as determined by the Engineer.
2. Lane Closures
  - A. Two-way traffic shall be maintained at all times, except as indicated on the plans or approved by the Engineer. Minimum lane widths shall be 10 feet unless otherwise indicated on the plans or approved by the Engineer.

- B. No lane closures or flagging sequences will be allowed where the Contractor is not working or can accomplish the work without a closure in the opinion of the Engineer. Lane closures and flagging operations will be allowed only in areas and situations deemed necessary by the Engineer. This lane closure prohibition or approval by Engineer includes brief closures for truck loading and unloading, dumping, etc. This project shall be constructed under traffic per the above-mentioned specifications and the maintaining traffic diagrams and notes in the plans.
  - C. No conflicting lane closures shall be permitted on any one roadway; all lane closures must originate from the same side of the road. When lane closures are in place, the Contractor shall remove all conflicting pavement markings, and shall completely cover all conflicting warning, regulatory, and guide signs. The sign covers shall be in accordance with Section 812.03 of the 2012 Standard Specifications for Construction.
3. Working within Intersections
- A. Use flag control for cross street traffic as directed by the Engineer. Additional flaggers used at unsignalized intersections and driveways, as directed by the Engineer, shall be included with the **Traffic Control** pay item. Only uniformed police officers may override active traffic signals.
  - B. Intersection closures will be permitted for the construction of stamped colored concrete crosswalks, as shown on the plans. The Contractor shall keep the nearest adjacent intersections open in order to maintain full two-way access to all businesses and residences at all times.
4. Work Day, Hours, and other local restrictions
- A. Normal working hours for areas outside of roadways within the City of Dexter are 7:00 AM to 7:00 PM, Monday through Saturday. Contractor shall not start up machinery or equipment prior to 7:00 AM. If the Contractor needs to schedule any work beyond these hours, the Contractor must submit this request in writing to the Engineer.
  - B. No work or additional lane closures, unless approved by the Engineer, shall be performed during Memorial Day, July 4th, Dexter Daze (August 8th), Labor Day, or Thanksgiving holiday periods, as defined by the Engineer.

**e. Staging**

Complete work in consecutive stages. Unless otherwise approved by the Engineer, work operations in preceding stage must be complete before beginning next stage. Access to all driveways shall be maintained at all times throughout the project and staging operations.

Stage 1 Overview:

Execute line stop of 12-inch watermain in the location shown on the Hydrant Location Map attached to the bid document. Two-way traffic shall be maintained at all times utilizing the MDOT Maintenance of Traffic Typical for a Shoulder Closure while the line stop is being installed.

Stage 2 Overview:

Remove the gate valve and fire hydrants as shown on the Hydrant Location Map. Replace hydrants and gate valve accordingly. Two-way traffic shall be maintained at all times using flag control as necessary for in work the Huron River Road Right of Way. The MDOT Maintenance of Traffic typical for a Lane Closure Utilizing Traffic Regulators shall be used when removing and replacing these hydrants and gate valve.

Work under this Stage requiring traffic control shall be performed between 7:00 am and 7:00 pm.

**f. Traffic Control Devices**

1. General

- A. All traffic control devices moved to facilitate the Contractor's operation shall be reset by the end of the work day. The Contractor shall routinely maintain all traffic Control devices. Routine Maintenance includes, but not limited to, maintaining proper placement, replacing damaged devices and cleaning. The Contractor shall be responsible for reviewing the adequacy and maintenance of all traffic control devices at least once per day every day for the duration of this project. Weekly Service Reports shall be made available to the Engineer upon request for review and payment.
- B. All traffic control devices except Portable Changeable Message Signs (PCMS) and lighted arrows shall be approved by FHWA as meeting NCHRP 350 crashworthy requirements and meet acceptable criteria as defined in the current AATSA publication entitled, "Quality Guidelines for Traffic Control Devices and Features." All traffic control devices must be acceptable to MDOT.
- C. The Contractor shall notify the Engineer at least 72 hours in advance of erection or removal of signs.

2. Signs

- A. All diamond signs shall be 48 in x 48 in, unless otherwise noted.
- B. Mount all temporary signs, regardless of size, that will be in place for more than 3 days on driven posts. Place ground driven sign systems as described in Standard Plan or Special Detail WZD-100 Series. Temporary signs less than or equal to a 20 square foot sign area that will be in place for less than or equal to 3 days may be mounted on driven posts or on portable systems with bases adequately sandbagged against overturning.
- C. Distances shown between construction warning, regulatory and guide signs shown on the plans, or any typicals referred to by the plans, are approximate and may require field adjustment, as directed by the Engineer.

3. Pavement Markings

- A. Place temporary pavement markings, Type R, on existing pavement areas that will remain after construction and on new pavement for interim traffic control at locations the Engineer specifies. When using Type R pavement markings, ensure that the markings adhere to the pavement until permanent markings are installed.
- B. Grinding of pavement markings is prohibited. Alternative methods for pavement marking removal, such as mechanical scrubbing or sand blasting, are to be used.
- C. All existing pavement markings that are removed for traffic control or obliterated during construction operations shall be replaced as directed by the Engineer.

4. Barricades

- A. "Barricade, Type III, High Intensity, Double Sided, Lighted" shall be placed as directed by the Engineer. When used to close roadways, sufficient Type III barricades shall be used to stretch side to side without gaps between the barricades to close the entire road, including curbs and/or shoulders.

**g. Contractor Responsibilities – Construction signing (Detour Route, Work Zone)**

- 1. All related construction signing, including lead-in or advanced warning signing shall be provided, erected and maintained by the Contractor. The contractor will be responsible for providing and erecting all signs including lane closure devices/signing for maintaining traffic.
- 2. **Coverings:** The Contractor shall uncover and cover signs which need covering at any time as directed by the Engineer.

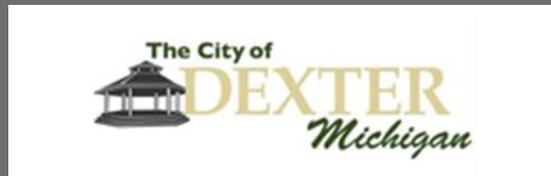
3. **Sandbags:** The Contractor shall place a minimum of eight sandbags on any and all signs and devices not inserted into the ground to prevent movement.
4. **Lights:** Attach and maintain two (2) steady burn amber lights (type "C") on each Type III barricade.
5. **Maintenance of Signs:** The Contractor shall maintain all signs and devices as directed by the Engineer (including but not limited to cleaning, re-erecting fallen signs and devices, replacing damaged or dead lamps, moving non-ground-inserted signs and devices, etc.).
6. **Typicals:**

The Contractor shall refer to Maintenance of Traffic plans and the following MDOT MOT Typicals and/or Details:

- (1) Sign Support, Temporary Traffic Control Devices: WZD-100A, WZD-125-E
- (2) Tables for "L", "D", "B" values: M0020a
- (3) Shoulder Closure on a Two-Lane Two-Way Road: M0110a
- (4) Lane Closure Utilizing Traffic Regulators: M0150a

# CITY OF DEXTER

## 2016 HYDRANT BID ATTACHMENT 4 – HYDRANT LOCATION MAP



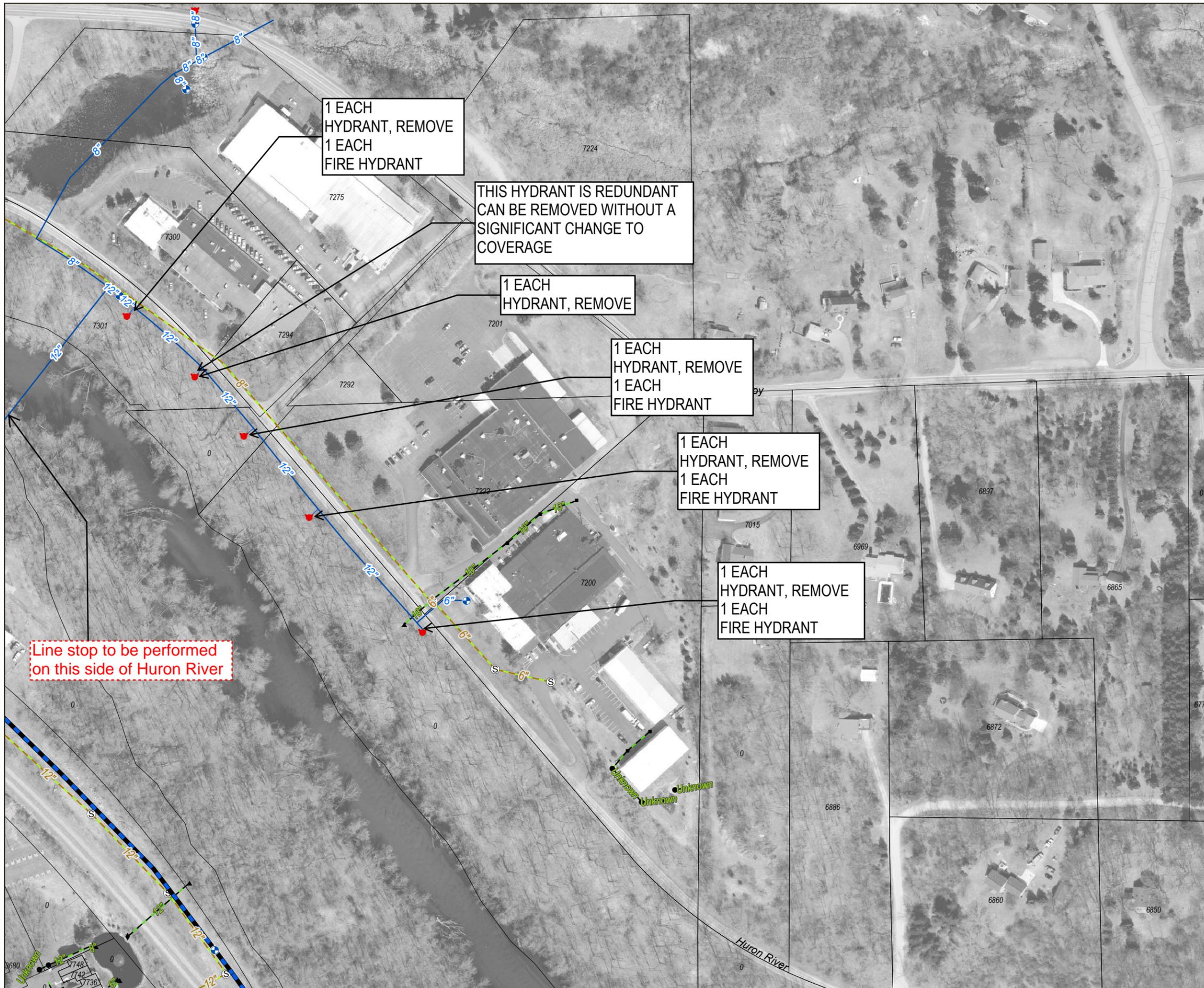
JULY, 2016



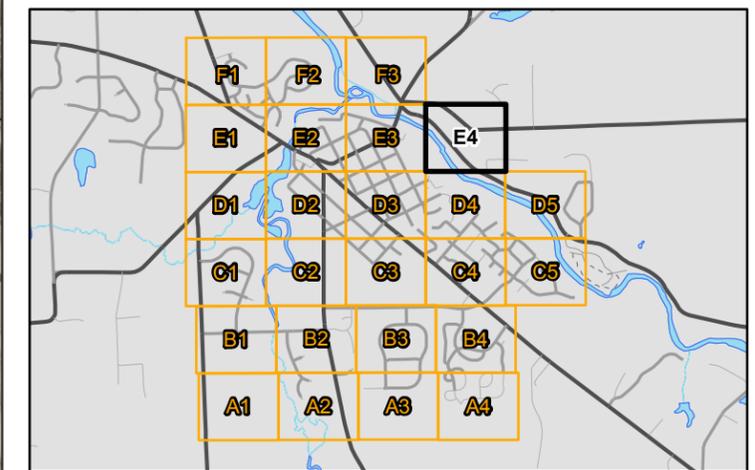
---

ARCHITECTS. ENGINEERS. PLANNERS.

# Attachment 4: Hydrant Location Map



Water Structures	Sanitary Structure	Storm Structures
Gate Valve	Air Release Valve	Manhole
Blow Off	Bulkhead	Catch Basin
Tower	Cleanout	Yard Basin
Hydrant	Manhole	End Section
Plug	Pump Station	DEQ Outfall
Reducer	Treatment Plant	Storm Sewer
Well	Force Main	Storm Sewer
Water Plant	Gravity Main	
Water Main	Lateral	
Distribution		
Service		
Raw		



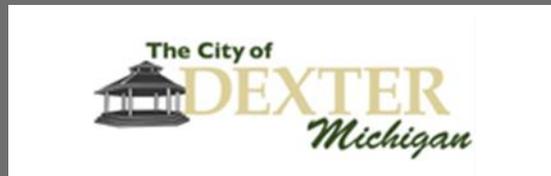
Source: Data provided by Washtenaw County, Scio Township, the Village of Dexter and Microsoft Bing. Orchard, Hiltz and McCliment does not warrant the accuracy of the data and/or the map. This document is intended to depict the approximate spatial location of the mapped features within the Community and all use is strictly at the user's own risk.

Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl

Note: Village of Dexter Parcels September 2014

# CITY OF DEXTER

## 2016 HYDRANT BID ATTACHMENT 5 – TYPICALS AND DETAILS



JULY, 2016



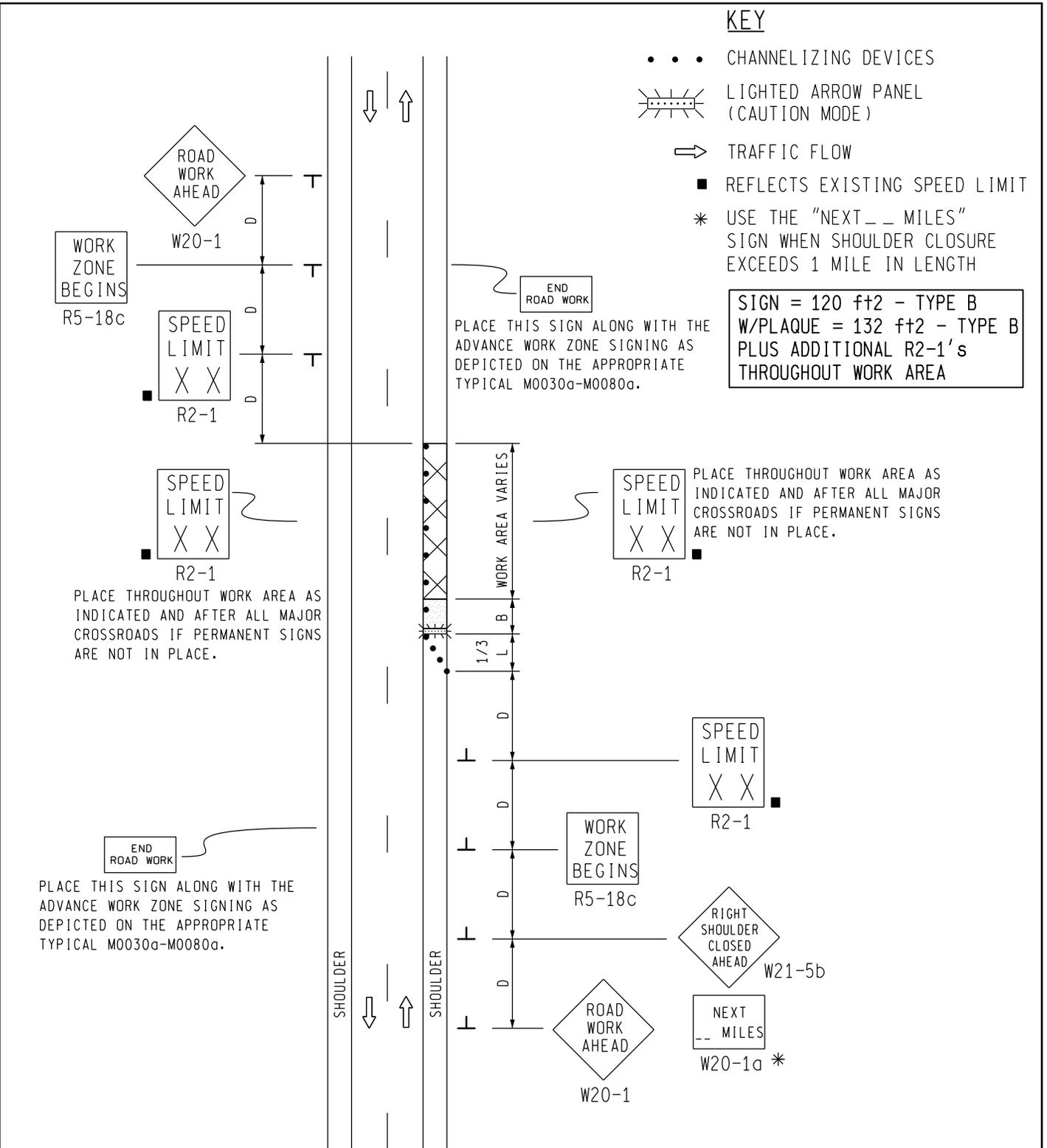
---

ARCHITECTS. ENGINEERS. PLANNERS.

**KEY**

- • • CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- \* USE THE "NEXT -- MILES" SIGN WHEN SHOULDER CLOSURE EXCEEDS 1 MILE IN LENGTH

SIGN = 120 ft± - TYPE B  
 W/PLAQUE = 132 ft± - TYPE B  
 PLUS ADDITIONAL R2-1's  
 THROUGHOUT WORK AREA



**MDOT**  
 Michigan Department of Transportation  
 TRAFFIC AND SAFETY  
 MAINTAINING TRAFFIC  
 TYPICAL

TYPICAL TEMPORARY TRAFFIC CONTROL  
 FOR A SHOULDER CLOSURE ON A TWO  
 LANE TWO-WAY ROADWAY  
 NO SPEED REDUCTION

DRAWN BY: CON:AE:djf	OCTOBER 2011	M0110a	SHEET 1 OF 2
CHECKED BY: BMM:CRB	PLAN DATE:		
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0110a.dgn REV. 10/04/2011			

NOT TO SCALE

## NOTES

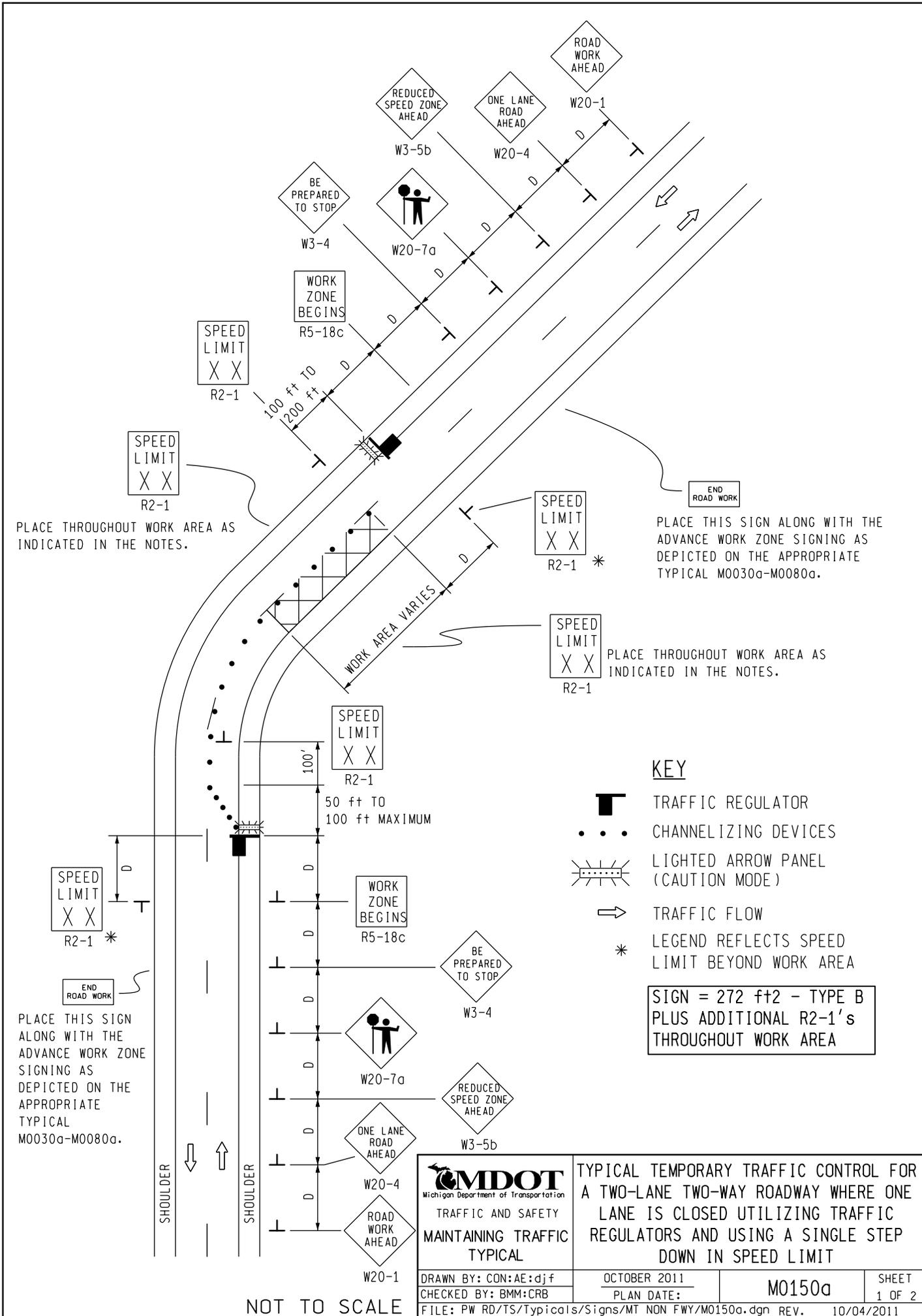
1. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES  
 $1/3 L$  = MINIMUM LENGTH OF TAPER  
 B = LENGTH OF LONGITUDINAL BUFFER  
 SEE **M0020a** FOR "D," "L," AND "B" VALUES
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4E. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES SHOULD BE EQUAL IN FEET TO THE POSTED SPEED IN MILES PER HOUR ON TAPER(S) AND TWICE THE POSTED SPEED IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHLY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
8. WHEN BUFFER AREAS ARE ESTABLISHED, THERE SHALL BE NO EQUIPMENT OR MATERIALS STORED OR WORK CONDUCTED IN THE BUFFER AREA.
- 29A. THE TYPE OF REFLECTIVE SHEETING USED FOR THE W20-1a PLAQUE SHALL BE THE SAME AS THE TYPE USED FOR THE PARENT SIGN.

### SIGN SIZES

DIAMOND WARNING	- 48" x 48"
W20-1a PLAQUE	- 48" x 36"
R2-1 REGULATORY	- 48" x 60"
R5-18c REGULATORY	- 48" x 48"

NOT TO SCALE

 TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A SHOULDER CLOSURE ON A TWO LANE TWO-WAY ROADWAY NO SPEED REDUCTION	
	DRAWN BY: CON:AE:djf	OCTOBER 2011
CHECKED BY: BMM:CRB	PLAN DATE:	M0110a
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0110a.dgn		REV. 10/04/2011



PLACE THROUGHOUT WORK AREA AS INDICATED IN THE NOTES.

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

PLACE THROUGHOUT WORK AREA AS INDICATED IN THE NOTES.

**KEY**

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  \* LEGEND REFLECTS SPEED LIMIT BEYOND WORK AREA

SIGN = 272 ft ± 2 - TYPE B PLUS ADDITIONAL R2-1's THROUGHOUT WORK AREA

PLACE THIS SIGN ALONG WITH THE ADVANCE WORK ZONE SIGNING AS DEPICTED ON THE APPROPRIATE TYPICAL M0030a-M0080a.

**MDOT**  
Michigan Department of Transportation  
TRAFFIC AND SAFETY  
MAINTAINING TRAFFIC  
TYPICAL

TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS AND USING A SINGLE STEP DOWN IN SPEED LIMIT

DRAWN BY: CON:AE:djf	OCTOBER 2011	M0150a	SHEET 1 OF 2
CHECKED BY: BMM:CRB	PLAN DATE:		
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0150a.dgn REV. 10/04/2011			

NOT TO SCALE

## NOTES

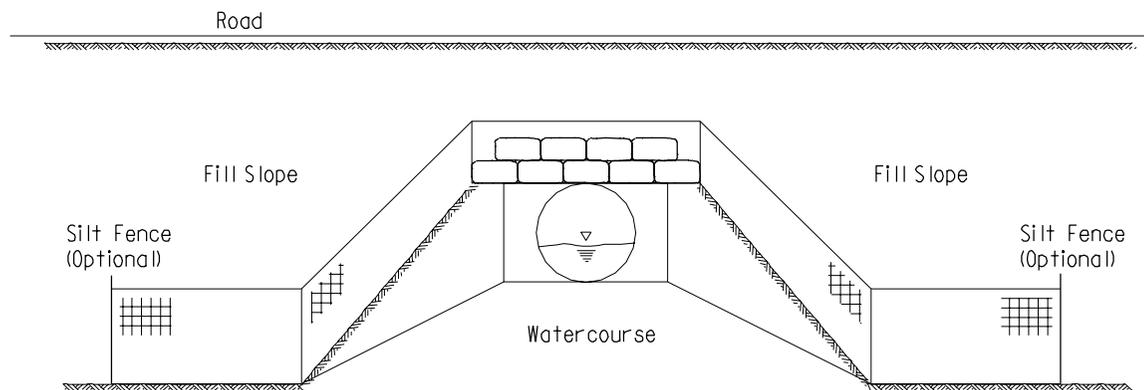
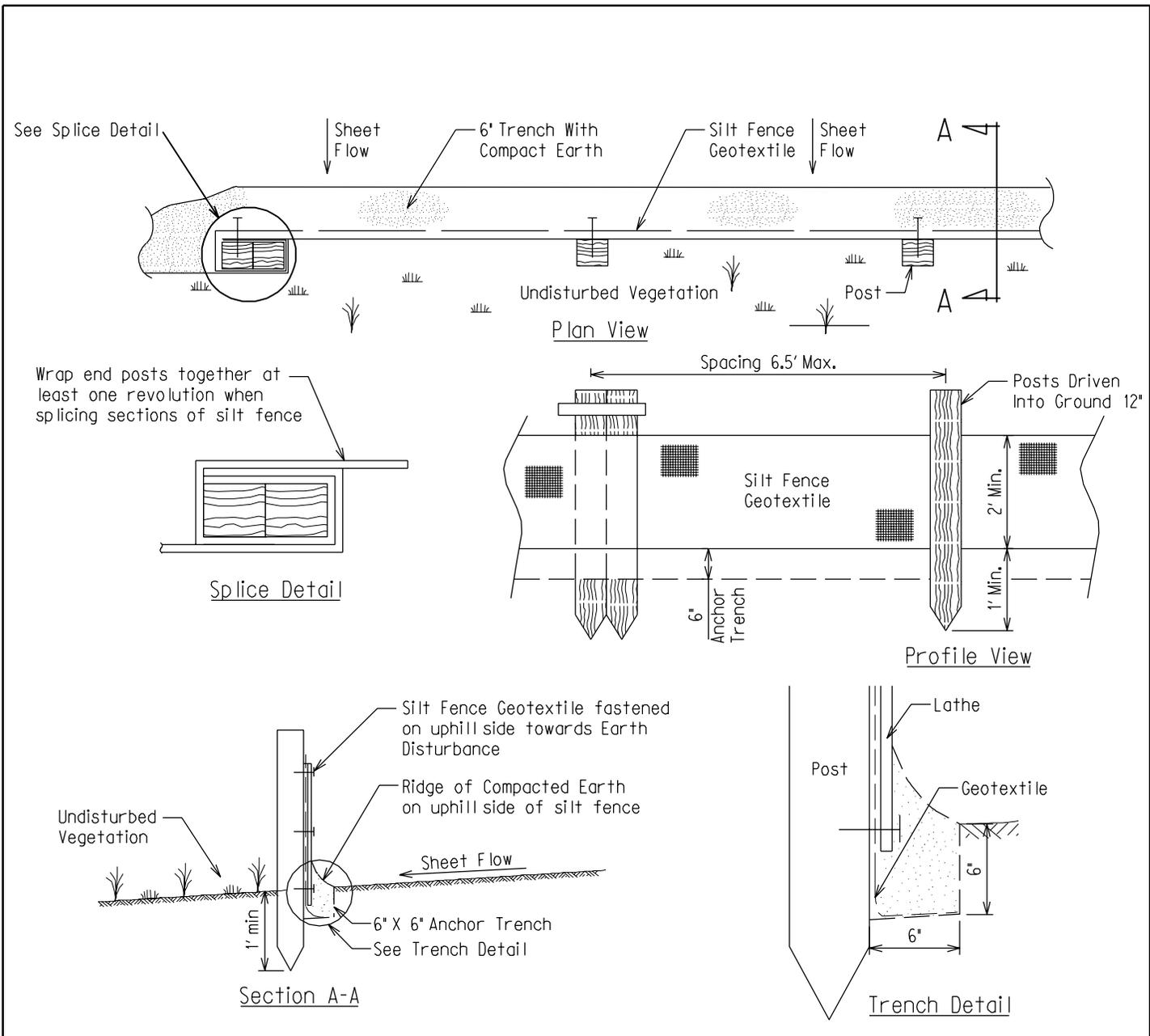
- 1H. D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES AND LENGTH OF LONGITUDINAL BUFFERS  
SEE **M0020a** FOR "D" VALUES.
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4A. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET AND SHOULD BE EQUAL IN FEET TO TWICE THE POSTED SPEED IN MILES PER HOUR IN THE PARALLEL AREA(S).
5. FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHLY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
9. ALL TRAFFIC REGULATORS SHALL BE PROPERLY TRAINED AND SUPERVISED.
- 9A. IN ANY OPERATION INVOLVING MORE THAN ONE TRAFFIC REGULATOR, ONE PERSON SHOULD BE DESIGNATED AS HEAD TRAFFIC REGULATOR.
10. ALL TRAFFIC REGULATORS' CONDUCT, THEIR EQUIPMENT, AND TRAFFIC REGULATING PROCEDURES SHALL CONFORM TO THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CURRENT EDITION OF THE MDOT HANDBOOK ENTITLED "TRAFFIC REGULATORS INSTRUCTION MANUAL."
11. WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS, APPROPRIATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY ILLUMINATE THE TRAFFIC REGULATOR'S STATIONS.
- 12E. THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS SHALL BE NO MORE THAN 2 MILES IN LENGTH UNLESS RESTRICTED FURTHER IN THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC. ALL SEQUENCES OF MORE THAN 2 MILES IN LENGTH WILL REQUIRE WRITTEN PERMISSION FROM THE ENGINEER BEFORE PROCEEDING.
13. WHEN INTERSECTING ROADS OR SIGNIFICANT TRAFFIC GENERATORS (SHOPPING CENTERS, MOBILE HOME PARKS, ETC.) OCCUR WITHIN THE ONE-LANE TWO-WAY OPERATION, INTERMEDIATE TRAFFIC REGULATORS AND APPROPRIATE SIGNING SHALL BE PLACED AT THESE LOCATIONS.
14. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W3-4 SIGNS.
15. THE HAND HELD (PADDLE) SIGNS REQUIRED BY THE MMUTCD TO CONTROL TRAFFIC WILL BE PAID FOR AS PART OF FLAG CONTROL.
- 16A. ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED SHALL BE PLACED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK AREA WHERE THE REDUCED SPEED IS IN EFFECT, AND AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS REFLECTING THE REDUCED SPEED ARE MORE THAN TWO MILES APART.
- 16B. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED SHALL BE PLACED BEYOND THE LIMITS OF THE REDUCED SPEED AS INDICATED.
- 16E. WHEN EXISTING SPEED LIMITS ARE REDUCED MORE THAN 10 MPH, THE SPEED LIMIT SHALL BE STEPPED DOWN IN NO MORE THAN 10 MPH INCREMENTS.
- 28E. THE TRAFFIC REGULATORS SHOULD BE POSITIONED AT OR NEAR THE SIDE OF THE ROAD SO THAT THEY ARE SEEN CLEARLY AT A MINIMUM DISTANCE OF 500 FEET. THIS MAY REQUIRE EXTENDING THE BEGINNING OF THE LANE CLOSURE TO OVERCOME VIEWING PROBLEMS CAUSED BY HILLS AND CURVES.

### SIGN SIZES

DIAMOND WARNING	- 48" x 48"
RECTANGULAR REGULATORY	- 48" x 60"
R5-18c REGULATORY	- 48" x 48"

NOT TO SCALE

 <b>MDOT</b> Michigan Department of Transportation TRAFFIC AND SAFETY <b>MAINTAINING TRAFFIC TYPICAL</b>	<b>TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TWO-LANE TWO-WAY ROADWAY WHERE ONE LANE IS CLOSED UTILIZING TRAFFIC REGULATORS AND USING A SINGLE STEP DOWN IN SPEED LIMIT</b>	
	DRAWN BY: CON:AE:djf CHECKED BY: BMM:CRB	OCTOBER 2011 PLAN DATE:
FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0150a.dgn REV. 10/04/2011		



Culvert Extension Showing Sand/Stone Bags with optional Silt Fence

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR

**Silt Fence**



09-30-2005  
PLAN DATE

E&S-26-A

SHEET  
1 OF 2

**Use:**

A Silt Fence is a permeable barrier erected adjacent to disturbed areas to capture sediment from sheet flow. It is made of woven geotextile fabric which is stretched and supported by wooden posts and trenched in at the bottom.

The Silt Fence retards the movement of sediment-laden water allowing the deposition and retention of sediment.

Do not install Silt Fence across streams or ditches where flows are concentrated.

The use of a Silt Fence should never be substituted for the application of permanent or temporary vegetative cover.

**Installation and Maintenance:**

It is critical to thoroughly trench in the bottom of Silt Fence as shown to maximize its performance and to prevent failure from undercutting, overtopping or collapsing. Geotextile should extend along side and bottom of trench.

Ensure that stable overflow outlets are available.

Remove all sediment from behind Silt Fence when it reaches approximately 50 percent of its capacity and make repairs promptly.

Silt Fence shall remain in place and properly maintained until the disturbed area is completely stabilized.

**Optional Measures:**

As an extra precautionary measure when there is a steep disturbed area adjacent to a watercourse, two rows of Silt Fence may be placed.

Sand and Stone Bags (E & S-24) may be used to provide additional support for Silt Fence. Installed at culvert extensions as shown in the detail above

**Related SESC Measures:**

- E & S-2 Grubbing Omitted
- E & S-6 Vegetative Buffer Strips
- E & S-9 Benches
- E & S-24 Sand and Stone Bags
- E & S-28 Mulching and Mulch Anchoring
- E & S-32 Surface Roughening and Scarification
- E & S-33 Mulch Blankets and High Velocity Mulch Blankets.

**Measurement and Payment:**

Optional work shown, when installed and maintained as directed by the Engineer, will be paid using the associated contract item listed here.

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
Erosion Control, Silt Fence	Foot
Erosion Control, Maintenance, Sediment Removal	Cubic Yard
Erosion Control, Sand Bag	Each
Erosion Control, Stone Bag	Each

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT SESC DETAIL FOR

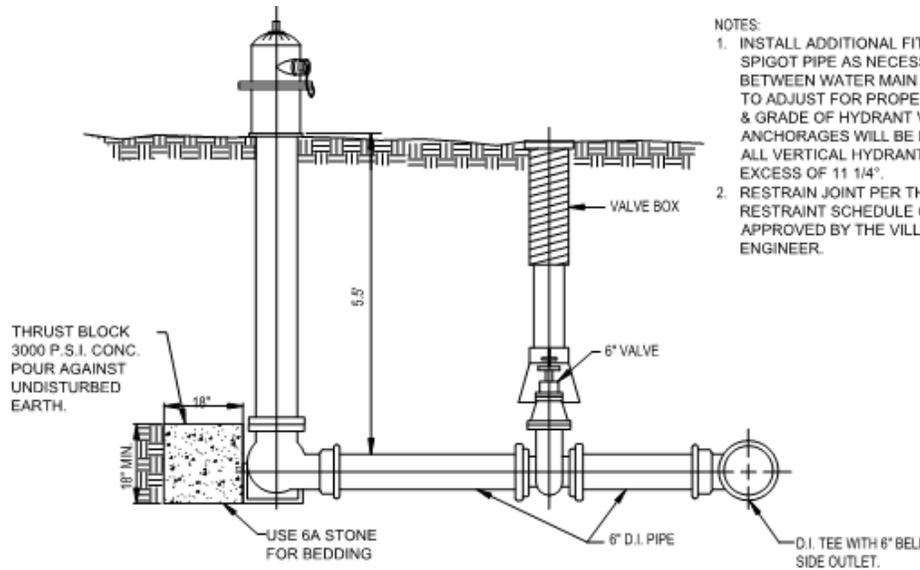
**Silt Fence**



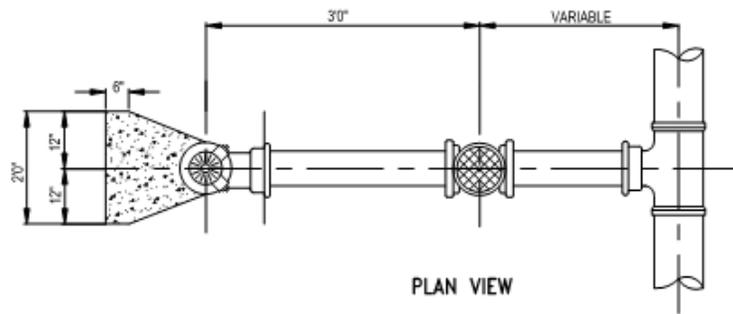
04-07-2006  
PLAN DATE

E&S-26-A

SHEET  
2 OF 2



PROFILE VIEW

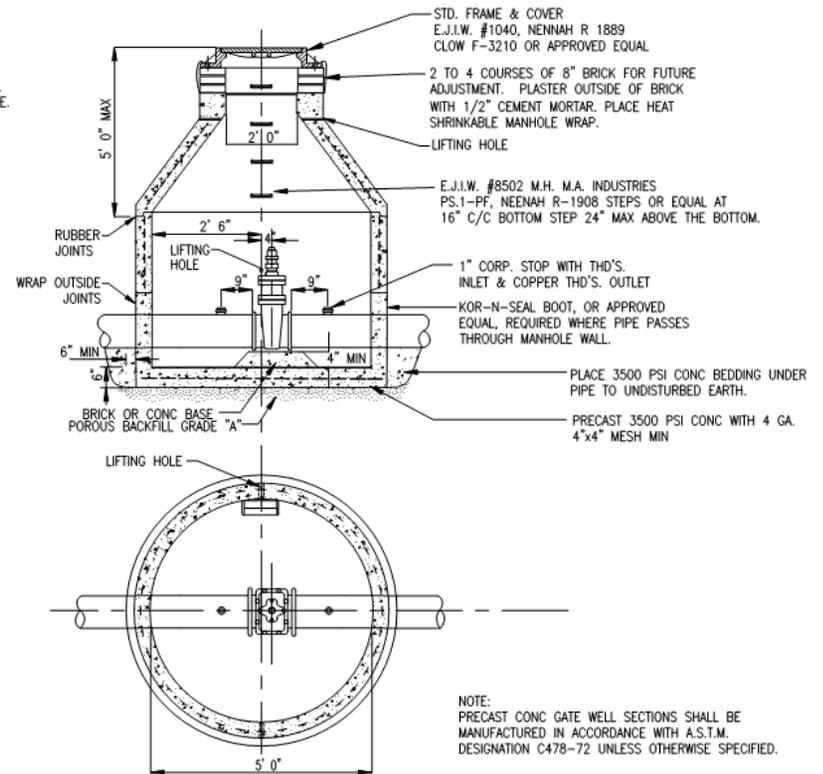


PLAN VIEW

STANDARD HYDRANT SETTING

- NOTES:
1. INSTALL ADDITIONAL FITTINGS & SPIGOT PIPE AS NECESSARY BETWEEN WATER MAIN & VALVE BOX TO ADJUST FOR PROPER LOCATION & GRADE OF HYDRANT VERTICAL ANCHORAGES WILL BE REQ'D ON ALL VERTICAL HYDRANT BENDS IN EXCESS OF 11 1/4°.
  2. RESTRAIN JOINT PER THE RESTRAINT SCHEDULE OR AS APPROVED BY THE VILLAGE ENGINEER.

NOTE:  
ALL LIFTING HOLES SHALL  
BE FILLED WITH CONCRETE.



NOTE:  
PRECAST CONC GATE WELL SECTIONS SHALL BE  
MANUFACTURED IN ACCORDANCE WITH A.S.T.M.  
DESIGNATION C478-72 UNLESS OTHERWISE SPECIFIED.

STANDARD PRECAST GATE WELL

NOTE: FOR 6" OR 8" WATER MAIN, USE 5'-0" DIAMETER GATE WELL  
FOR 12" OR 16" WATER MAIN, USE 6'-0" DIAMETER GATE WELL