



CITY OF BATTLE CREEK

NOTICE OF INVITATION FOR BIDS

IFB#: 2017-058B

TITLE: Application for Pavement Markings

ISSUE DATE: March 2, 2017

BID DUE DATE: March 16, 2017, at 2:00 PM Local Time (office hours 8-12 and 1-5)
LOCATION: Purchasing Department

10 N. Division Street, Suite 214
Battle Creek, MI 49014

Purchasing Contact: Nils Vos
Phone: (269) 966-3381
E-mail: npvos@battlecreekmi.gov

DESCRIPTION: The City is soliciting bids for the purpose of contracting for the City's annual requirements for application of pavement markings. The resulting contract is anticipated for a term of up to three (3) years.

Download this solicitation from our website at: battlecreekmi.gov Copies of the complete Invitation for Bids document may also be obtained from the Purchasing Department, Room 214, 10 N. Division Street, Battle Creek, Michigan 49014, (269) 966-3390.

Bids must be in the actual possession of the Purchasing Department at the location indicated, on or prior to the exact time and date indicated above. Bids received by the correct time and date shall be opened and the amount bid shall be publicly read. Late bids shall not be considered.

BIDDERS ARE STRONGLY ENCOURAGED TO CAREFULLY READ THE ENTIRE INVITATION FOR BID.

THIS BID IS OFFERED BY: _____
(Company Name)

1.0 INSTRUCTIONS TO BIDDERS

1. BID SUBMISSION:

- A. Bids must be submitted in complete original form by mail or messenger to the following address:
Office of the Purchasing Agent, Room 214, City Hall, 10 N. Division Street, Battle Creek, MI 49014
- B. Bids will be accepted at the above address until the time and date specified herein, and immediately after will be publicly opened and read aloud. The prevailing clock shall be www.time.gov.
- C. All bids shall be tightly sealed in an opaque envelope and plainly marked with the Invitation for Bid number, due date and the bidder's name and address clearly indicated on the envelope.
- D. Late bids will not be accepted and will be returned to the bidder.
- E. All bids submitted in response to this invitation shall become the property of the City and be a matter of public record available for review.

2. PREPARATION OF BIDS:

- A. The bid shall be legibly prepared with ink or typed.
- B. If a unit price or extension already entered is to be altered, it shall be crossed out and initialed by the bidder with ink.
- C. The bid shall be legally signed on the OFFER TO CONTRACT page and the complete address of the bidder given thereon.
- D. The City is exempt from Federal Excise and State Sales Taxes, and such taxes shall not be included in bid prices

3. SIGNATURES: All bids, notifications, claims and statements must be signed by an individual authorized to bind the bidder.

- (a.) CORPORATIONS: Signature of official shall be accompanied by a certified copy of the resolution of the Board of Directors authorizing the individual signing to bind the corporation.
- (b.) PARTNERSHIPS: Signature of one partner shall be accompanied by a certified copy of the power of attorney authorizing the individual signing to bind all partners. If all partners sign bid no authorization is needed.

4. REJECTION OR WITHDRAWAL: Submission of additional terms, conditions or agreements with the bid document is grounds for deeming a bid nonresponsive and may result in bid rejection. The City reserves the right to reject any bids and to waive any informalities and minor irregularities defects in 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 time set for receipt of bids. Bids are an irrevocable offer and may not be withdrawn within 90 days after opening date.

5. AWARD: The bid will be awarded to that responsible, responsive bidder whose bid, conforming to this solicitation, will be most advantageous to the City, price and other factors considered. Unless otherwise specified in this IFB, the City reserves the right to accept a bid in whole or in part, and to award by item or by group, whichever is deemed to be in the best interest of the City. Any bidder who is in default to the City at the time of submittal of the bid shall have his bid rejected. The City reserves the right to clarify any contractual terms with the concurrence of the Contractor; however, any substantial non-conformity in the offer, as determined by the City, shall be deemed non-responsive and the offer rejected.

In evaluating bids, Owner shall consider the qualifications of the Bidders, and where applicable, operating costs, delivery time, maintenance requirements, performance data, and guarantees of materials and equipment. In addition, the City may conduct such investigations as Owner deems necessary to assist in the evaluation of a Bid and to establish the responsibility, qualifications and financial ability of the Bidders to fulfill the contract.

6. CONTRACT: A response to an IFB is an offer to contract with the City based upon the terms, conditions, and specifications contained in the City's IFB. Bids do not become contracts unless and until they are executed by the City, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the IFB, unless any of the terms and conditions are modified by an Addendum or a Contract Amendment.

7. BID RESULTS: A bid tabulation will be posted on the City's website and will also be on file and available for review after contract award in the Purchasing Department.

8. CHANGES AND ADDENDA TO BID DOCUMENTS: Each change or addendum issued in relation to this bid document will be on file in the Office of the Purchasing Agent. In addition, to the extent possible, copies will be mailed to each person

registered as having received a set of bid documents. It shall be the bidder's responsibility to make inquiry as to changes or addenda issued. All such changes or addenda shall become part of the contract and all bidders shall be bound by such addenda. Information on all changes or addenda issued will be available at the office of the City Purchasing Agent.

9. **SPECIFICATIONS:** Unless otherwise stated by the bidder, the bid will be considered as being in accordance with the City's applicable standard specifications, and any special specifications outlined in the Bid document. References to a particular trade name, manufacturer's catalogue, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of the City, and should not be construed as excluding bids. However, the City does reserve the right to specify a sole brand, with no brand substitutions allowed. The bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless departure or substitution is clearly noted and described in the bid and allowed by the IFB. The City reserves the right to determine if equipment/product being bid is an acceptable alternate. All goods shall be new unless otherwise so stated in the bid. Any unsolicited alternate bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of this bid, may be considered non-responsive. The City reserves the right to disregard any conflicting terms and conditions submitted by the contractor and hold the contractor to the submitted bid price. Contractors are strongly encouraged to not submit anything with their bid that is not specifically requested in this solicitation.
10. **DELIVERY:** Bids shall include all charges for delivery, packing, crating, containers, etc. Prices bid will be considered as being based on F.O.B. Delivered, freight included.
11. **INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS:** All inquiries shall be made within a reasonable time prior to the date and time fixed for the bid opening in order that a written response in the form of an addendum, if required, can be processed before the bids are opened. (Inquiries received that are not made in a timely fashion may or may not be considered).
12. **CURRENCY:** Prices calculated by the bidder shall be stated in U.S. dollars.
13. **PRICING:** Prices shall be stated in units of quantity specified in the Bid Document. In case of discrepancy in computing the amount of the bid, the unit price bid will govern.
14. **NOTICE TO PROCEED/PURCHASE ORDER:** The successful bidder may not commence work under this contract until authorized to do so by the Purchasing Agent.
15. **CERTIFICATION:** By signature in the offer section of the Offer and Acceptance page, bidder certifies:
- A. The submission of the offer did not involve collusion or other anti-competitive practices.
 - B. The bidder has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer.
 - C. The bidder hereby certifies that the individual signing the bid is an authorized agent for the bidder and has the authority to bind the bidder to the contract.
 - D. The bidder hereby certifies that the firm will abide by the COPELAND ANTI-KICKBACK ACT, Title 18, U.S.C. June 25, 1948, Section 874, Kickbacks from Public Employees.
16. **DEFINITIONS:**
"CITY" - The City of Battle Creek.
"CITY UNIT" - The department of the City that intends to use the resulting contract.
"CONTRACTOR" - The bidder whose proposal is accepted by the City.
17. **MICHIGAN CONSTITUTIONAL REQUIREMENT:** Notwithstanding any provision in this Contract to the contrary, and in accordance with Article I, Section 26 of the Michigan Constitution as adopted by the electorate November 7, 2006, The City or its general contractors shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of this Contract. This section shall not prohibit any action that must be taken to establish or maintain eligibility for any federal program if ineligibility would result in a loss of federal funds in connection with this Contract, nor shall this section be interpreted as prohibiting bona fide qualifications based on sex that are reasonable necessary to the execution of this Contract. In the event of conflict between any term of this Contract and this section, the language of this section shall control.

2.0 GENERAL TERMS AND CONDITIONS

- 2.1 MATERIALS AND WORKMANSHIP:** Unless otherwise specified, all materials and workmanship shall be new and of the best grade of their respective kinds for the purpose.
- 2.2 NON-DISCRIMINATION CLAUSE:** The bidder agrees not to discriminate against any employee or applicant for employment, to be employed in the performance of such contract, with respect to hire, tenure, terms, conditions or privileges, of employment, or any matter directly or indirectly related to employment, because of race, religion, national origin, age, sex, height, weight, sexual orientation or marital status. Breach of this covenant may be regarded as material breach of the contract as provided for in Act 220 and Act 453 of the Public Acts of 1976, as amended, entitled "Michigan Handicapper's Civil Rights Act" and the Michigan Elliott Larson Civil Rights Act." The bidder further agrees to require similar provisions from any subcontractors, or suppliers. The bidder agrees to comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, as supplemented in Department of Labor regulations (41 CFR, Chapter 60).
- 2.3 ASSIGNMENT OF CONTRACT:** The contractor shall assign no right or interest in this contract in whole or in part and no delegation of any duty of Contractor shall be made without prior written permission of the City.
- 2.4 INDEMNIFICATION:** The contractor shall protect, defend, and save the City, its officials, employees, departments and agents harmless from and against any claims, demands, suits, actions, or proceedings of any kind or nature, in any way resulting from negligent acts or omissions of the contractor or any of its agents, employees, boards, commissions, divisions, departments, or authorities in performing obligations under this agreement. Each party to this agreement agrees that any bond or insurance protection required by this agreement shall limit the terms of this indemnification provision. In case of any action brought against the City by reason of any such claim, suit, action or demand, upon prompt notice from the City, contractor covenants to defend such action or proceeding by counsel that is reasonably satisfactory to the City.
- 2.5 CONTRACT:** The contract shall contain the entire agreement between the City and the Contractor relating to this requirement and shall prevail over any previous contracts, proposals, negotiations, or master agreements in any form. By signing the Offer to Contract, it is agreed that the RFP in its entirety and all enclosed forms are fully incorporated herein as a material part of the contract. In case of conflicts, the most recent document will prevail.
- 2.6 PROVISIONS REQUIRED BY LAW:** Each provision required by law to be in the contract shall be enforced as though it were included herein, and if any such provision is not inserted, the contract shall be amended to make such insertion or correction.
- 2.7 RELATIONSHIP OF PARTIES:** It is clearly understood that each party shall act in its individual capacity and not as an agent, employee, partner, joint venture, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other party for any purpose. Taxes or social security payments shall not be withheld from a City payment issued hereunder; Contractor should make arrangements to directly pay such expenses, if any.
- 2.8 RIGHTS AND REMEDIES:** No provision in this contract shall be construed as a waiver by either party of any existing or future right or remedy available by law in the event of any claim, default, or breach of contract. The failure of either party to insist upon the strict performance of any term or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the acceptance of materials or services, obligations imposed by this contract or by law, shall not be deemed a waiver of any right of either party to insist upon the strict performance of the contract.
- 2.9 ADVERTISING:** Contractor shall not advertise, issue a press release or otherwise publish information concerning this RFP or contract without prior written consent of the City. The City shall not unreasonably withhold permission.
- 2.10 APPLICABLE REGULATIONS/POLICIES:** The Revised Code of the State of Michigan, the Charter of the City of Battle Creek, all City Ordinances, Rules and Regulations and Policies shall apply. It shall be the responsibility of the Proposer to be familiar and comply with said regulations/policies.
- 2.11 ROYALTIES, PATENTS, COPYRIGHTS, NOTICES AND FEES:** Contractor shall give all notices and pay all royalties and fees. Contractor shall defend all suits or claims for infringement of any patent rights and shall save the City harmless from loss on account thereof. Contractor shall comply with all laws, ordinances and codes applicable to any portion of the work. All services, information, computer program elements, reports, and other deliverables that are created under this Agreement shall be the property of the City. The Contractor shall place no restrictions on the City with regard to the distribution of any of these materials; the City shall have full, unrestricted rights to make and distribute unlimited copies of any services, information, computer programs/elements, reports, or any other deliverable. Patents for any item created under this contract shall be assigned to the City.
- 2.12 SUBCONTRACTORS:** No subcontract shall be made by the contractor with any other party for furnishing any of the services herein contracted for without the advance written approval of the City. All subcontractors shall comply with Federal and State laws and regulations that are applicable to the services covered by the subcontractor and shall include all the terms and conditions set forth herein, which shall apply with equal force to the subcontract, as if the subcontractor were the Contractor referred to herein. Contractor is responsible for contract performance whether or not subcontractors are used.
- 2.13 OTHER FEDERAL COMPLIANCE:** Where applicable (such as, but not limited to, Construction Managers) contractor shall comply with: Copeland Anti-kickback Act (18 U.S.C. 874); Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327A 330); Section 306 of the Clean Air Act (42 U.S.C. 1857 (h)); Section 508 of the Clean Water Act (33 U.S.C. 1368); Executive Order 11738, and EPA regulations (40 CFR, Part 15); and the Energy Policy and Conservation Act (Pub. L. 94A 163, 89 Stat. 871).

TERMS AND CONDITIONS FOR CONSTRUCTION/INSTALLATION

1. **ACCIDENT PREVENTION:** The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all the damages to persons or property either on or off the site, which occur as a result of his fault or negligence in connection with the prosecution of the work. The safety provisions of applicable laws and OSHA standards shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the city may determine to be reasonably necessary.
2. **CONFLICTS AND OMISSIONS:** The intent of the contract documents is to provide everything necessary for the proper execution of the work. In case of conflict, the work shall not proceed until all parties concerned have agreed upon a decision. Director's decision shall be final.
3. **WORKING CONDITIONS:** All work shall be done in accordance with all regulations governing the City Unit wherein the work is to be performed and with minimum possible interference with the proper functioning of the activities of the City Unit. Materials, tools, etc., shall be confined so as not to unduly encumber the premises.
4. **PRIOR EXAMINATION:** Contractor shall familiarize himself with local conditions affecting the job prior to submitting the bid. He shall take his own measurements and be responsible for the correctness of same. Contractor shall be held to have made such examinations and no allowances will be made in his behalf by reason of error or omission on his part. If any part of the Contractor's work depends for proper results upon existing work or the work of another contractor, the Contractor, before commencing work, shall notify the Director in writing of any defects that will affect the results.
5. **OTHER CONTRACTS:** The City may let other contracts in connection with the work and the Contractor shall properly connect and coordinate his work with the work of such other contractors. The City shall not be liable for any damages or increased costs occasioned by the failure of other contractors or sub-contractors to execute their work as may be anticipated by these documents.
6. **INSPECTION:** Contractor shall at all times permit and facilitate inspection of the work by the city.
7. **CHANGES:** Contractor shall make changes in the contracted work only as ordered in writing by the City. The actual work performed under this contract may be increased 50% or decreased 25% from the approximate quantities set forth in this IFB. Work will be performed only based on written authorization from the Owner. The City reserves the right to include other similar projects in this contract over and above those mentioned in said tabulations within these limitations. If extra work orders are given in accordance with the provisions of this contract, such work shall be considered a part hereof and subject to all of its terms and requirements.
8. **WARRANTY:** Contractor guarantees to remedy any defects due to faulty materials or workmanship that appear in the work within one year from the date of final acceptance by the City.
9. **PROTECTION:** Contractor shall properly protect all new and existing structures from damage. Contractor shall comply with all safety rules and regulations as published by the Michigan Dept. of Labor, Bureau of Safety and Regulations.
10. **CLEAN-UP:** Contractor shall at all times keep the premises free from accumulations of waste materials or rubbish caused by his employees or work and at the completion of the work he shall remove all his waste, tools, equipment, staging and surplus materials from the structure and grounds and leave work clean and ready for use.
11. **SAFETY RULES:** The contractor shall perform all work under this contract in conformance with the State of Michigan general safety rules and regulations for the construction industry, being Act 89 of the Public Acts of 1963, as amended.
12. **TERMINATION FOR BREACH:** The City may terminate this contract for violations hereof when violations are not stopped immediately and corrected within a reasonable length of time after notification by the City. In the event of such termination, the City may complete the contracted work and the Contractor shall be liable for any excess cost occasioned the City thereby and in such case the City may take possession of and use in completing the work such materials and equipment as may be on the site and necessary therefore.
13. **SUBCONTRACTORS:** Bidders should submit with the Bid all known subcontractors to be associated with their bid, including the type of work to be performed. Bidder shall notify the City of all subcontractors before work begins. All subcontractors shall be bound by all of the requirements of this contract; however, the prime contractor shall be responsible for the performance of their subcontractors.
14. **EMPLOYEES AND SUPERINTENDENCE:** Contractor shall enforce good order among his employees and shall not employ on the work site any disorderly, intemperate or unfit person or anyone not skilled in the work assigned to him. Contractor, or a competent person having authority to act for him, shall be at the work at all times.

SPECIAL TERMS AND CONDITIONS

1. **PAYMENT:** Payment shall be made monthly, or at the end of each project, within 30 days of the submittal of a correct invoice for goods received or work performed. If applicable, expenses shall be billed at cost without markup, and must be supported by actual receipts. Mileage and per diem rates, if applicable, shall not exceed the federal rates.
2. **TERM AND RENEWAL:** The term of the contract shall commence on the first of the month following award, unless otherwise identified herein or a different date is required. The contract shall remain in effect for a period of one (1) year, unless terminated, canceled or extended as otherwise provided herein. The contractor agrees that the City shall have the right, upon mutual consent, to renew the contract for up to two (2) additional one-year periods. In the event that the City exercises such right, all terms, conditions and provisions of the original contract shall remain the same and apply during the renewal period.
3. **PRICE ADJUSTMENT:** The Purchasing Department may review a fully documented request for a price increase only after the contract has been in effect for one (1) year. A price increase adjustment shall only be considered at the time of a contract renewal and shall be a factor in the renewal review process. The City shall determine whether the requested price increase or an alternate option is in the best interest of the City.
4. **QUANTITIES:** Because this is an annual requirements contract, the City reserves the right to increase or decrease the estimated quantity as best fits its needs, and the City does not guarantee maximums or minimums. The City also reserves the right to spot-bid unusually large one-time quantities or to buy outside of this contract if extenuating circumstances exist.
5. **CONTRACTOR'S INSURANCE:**
 - a. The Contractor shall at the time of execution of this contract, file with the City the Certificate of Insurance, which shall cover all of his insurance as required herein, including evidence of payment of premiums thereon, and the policy or policies or insurance covering said City and their officers, agents and employees. Each such policy and certificate shall be satisfactory to the City. Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations under this Contract.
 - b. The contractor shall maintain insurances in force at all times during the term of this agreement at the minimum amounts and types as indicated. Sole proprietors are not required to carry Workers' Compensation insurance.

Coverage Afforded

Workers' Compensation

Commercial General Liability:
(including XCU if appropriate)

Automobile Liability:

Bodily Injury
Property Damage
or Combined Single Limit

Bodily Injury

Liability

Property Damage

or Combined Single Limit

Limits of Liability

\$ 100,000 or statutory limit

\$1,000,000 each occurrence

\$1,000,000 each occurrence

\$1,000,000

\$ 300,000 each person

\$ 500,000 each occurrence

\$ 500,000

\$ 500,000

The City of Battle Creek shall be listed as an additional insured on general liability coverage, and shall be provided with a Certificate of Insurance that reflects this additional insured status. A 30-day notice of cancellation or material change shall be provided to the City and so noted on the Certificate of Insurance. All certificates and notices shall be sent to City of Battle Creek, P.O. Box 1717, Battle Creek, Michigan 49016.

6. **VENDOR EVALUATION:** Experience with the City shall be taken into consideration when evaluating responsibility of the vendor.
7. **CANCELLATION:** The City reserves the right to cancel the whole or any part of this contract due to failure by the contractor to carry out any material obligation, term, or condition of the contract. The City shall issue written notice to the contractor for any of the following circumstances:
 - A. The contractor fails to adequately perform the services set forth in the specifications of the contract:
 - B. The contractor fails to make progress in the performance of the contract or gives the City reason to believe that the contractor will not or cannot perform to the requirements of the contract.

Upon receipt of the written notice of concern, the contractor shall have ten calendar days to provide a satisfactory response to the City. Failure on the part of the contractor to adequately address all issues of concern may result in the City resorting to any single or combination of the following remedies.

- A. Cancel any contract:
- B. Reserve all rights or claims to damage for breach of any covenant of the Contract:
- C. In case of default, the City reserves the right to complete the required work. The City may recover reasonable excess cost from the contractor by any remedies as provided by law.

The City intends to maintain a budget to cover all expenses related to this contract; however, the City may cancel this contract if funds are no longer available. In such case, the City shall provide the Contractor with a 60-day written notice of cancellation. The City will pay for all *authorized* completed work or received goods.

8. **VENUE:** Any party bringing a legal action or proceeding against any other party arising out of or relating to this Agreement or the transactions it contemplates shall bring the legal action or proceeding:

(i) in the United States District Court for the Western District of Michigan; or

(ii) in any court of the State of Michigan sitting in Calhoun County, if there is no federal subject matter jurisdiction.

9. **GOVERNING LAW:** This agreement shall be enforced under the laws of the State of Michigan. Contractor must comply with all applicable federal, state, county, and City laws, ordinances, and regulations. Contractor shall ensure payment of all taxes, licenses, permits, and other expenses of any nature associated with the provision of services herein. Contractor shall maintain in current status all Federal, State and Local licenses and permits required for the operation of the business conducted by the Contractor.

SPECIFICATIONS

SEE ATTACHEMENT B FOR DETAILED SPECIFICATIONS, SPECIAL PROVISIONS, AND PLANS

PRICE SHEET

Prices shall be all-inclusive to include, but not limited to, the following: shipping, travel, time, materials, overhead, etc.

Bidders must submit bids with no conflicting terms and conditions and no modifications to the price page.

If bidders believe the price page needs modification (such as the unit of measure, for example), immediately call the buyer listed on the front page of this IFB. Changes may only be made before bidding and via authorized addendum issued by the City.

No.	Description	Quantity	Unit	Unit Price	Total
1	Pavt Mrkg, Mobilization	4	Ea		
2	Pavt Mrkg, Ovly Cold Plastic, 6 inch, Cross Hatching, White	40	Ft		
3	Pavt Mrkg, Ovly Cold Plastic, 6 inch, Cross Hatching, Yellow	40	Ft		
4	Pavt Mrkg, Ovly Cold Plastic, 6 inch, Crosswalk	200	Ft		
5	Pavt Mrkg, Ovly Cold Plastic, 12 inch, Cross Hatching, White	40	Ft		
6	Pavt Mrkg, Ovly Cold Plastic, 12 inch, Cross Hatching, Yellow	40	Ft		
7	Pavt Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	100	Ft		
8	Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	100	Ft		
9	Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	2	Ea		
10	Pavt Mrkg, Ovly Cold Plastic, Only	2	Ea		
11	Pavt Mrkg, Ovly Cold Plastic, Railroad Sym	2	Ea		
12	Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	2	Ea		
13	Pavt Mrkg, Ovly Cold Plastic, School	2	Ea		
14	Pavt Mrkg, Ovly Cold Plastic, Thru and Lt Turn Arrow Sym	2	Ea		
15	Pavt Mrkg, Ovly Cold Plastic, Thru and Rt Turn Arrow Sym	2	Ea		
16	Pavt Mrkg, Ovly Cold Plastic, Thru Arrow Sym	2	Ea		
17	Pavt Mrkg, Ovly Cold Plastic, Bike	4	Ea		
18	Pavt Mrkg, Ovly Cold Plastic, Direction Arrow Sym, Bike	4	Ea		
19	Pavt Mrkg, Ovly Cold Plastic, Speed Hump Sym	4	Ea		
20	Pavt Mrkg, Ovly Cold Plastic, Speed Hump Advance Warning Sym	2	Ea		
21	Pavt Mrkg, Ovly Cold Plastic, Yield Line Triangle Sym, 12 inch x 18 inch	12	Ea		
22	Pavt Mrkg, Ovly Cold Plastic, Yield Line Triangle Sym, 24 inch x 36 inch	8	Ea		
23	Pavt Mrkg, Ovly Cold Plastic, Yield Ahead Triangle Sym, 6 feet x 13 feet	2	Ea		
24	Pavt Mrkg, Ovly Cold Plastic, Yield Ahead Triangle Sym, 6 feet x 20 feet	2	Ea		
25	Pavt Mrkg, Ovly Cold Plastic, Disabled Parking Sym, White	2	Ea		
26	Pavt Mrkg, Ovly Cold Plastic, Shared Lane Sym	4	Ea		

No.	Description	Quantity	Unit	Unit Price	Total
27	Pavt Mrkg, Ovly Cold Plastic, Bicycle Detector Sym	4	Ea		
28	Pavt Mrkg, Ovly Cold Plastic, Lane-Reduction Arrow Sym	2	Ea		
29	Pavt Mrkg, Preformed Thermopl, Lt Turn Arrow Sym	2	Ea		
30	Pavt Mrkg, Preformed Thermopl, Rt Turn Arrow Sym	2	Ea		
31	Pavt Mrkg, Preformed Thermopl, Thru Arrow Sym	2	Ea		
32	Pavt Mrkg, Preformed Thermopl, Thru and Lt Turn Arrow Sym	2	Ea		
33	Pavt Mrkg, Preformed Thermopl, Thru and Rt Turn Arrow Sym	2	Ea		
34	Pavt Mrkg, Preformed Thermopl, Only	2	Ea		
35	Pavt Mrkg, Preformed Thermopl, School	2	Ea		
36	Pavt Mrkg, Preformed Thermopl, Railroad Sym	2	Ea		
37	Pavt Mrkg, Preformed Thermopl, Disabled Parking Sym, White on Blue	2	Ea		
38	Pavt Mrkg, Thermopl, 6 inch, Cross Hatching, White	500	Ft		
39	Pavt Mrkg, Thermopl, 6 inch, Crosswalk	500	Ft		
40	Pavt Mrkg, Thermopl, 6 inch, White	400	Ft		
41	Pavt Mrkg, Thermopl, 12 inch, Cross Hatching, White	400	Ft		
42	Pavt Mrkg, Thermopl, 12 inch, Crosswalk	400	Ft		
43	Pavt Mrkg, Thermopl, 12 inch, White	400	Ft		
44	Pavt Mrkg, Thermopl, 24 inch, Stop Bar	200	Ft		
45	Pavt Mrkg, Waterborne, 4 inch, White	400,000	Ft		
46	Pavt Mrkg, Waterborne, 4 inch, Yellow	800,000	Ft		
47	Pavt Mrkg, Waterborne, 6 inch, Crosswalk	20,000	Ft		
48	Pavt Mrkg, Waterborne, 6 inch, White	160,000	Ft		
49	Pavt Mrkg, Waterborne, 12 inch, Crosswalk	36,000	Ft		
50	Pavt Mrkg, Waterborne, 18 inch, Stop Bar	500	Ft		
51	Pavt Mrkg, Waterborne, 24 inch, Crosswalk	4,000	Ft		
52	Pavt Mrkg, Waterborne, 24 inch, Stop Bar	4,000	Ft		
53	Pavt Mrkg, Waterborne, Lt Turn Arrow Sym	120	Ea		
54	Pavt Mrkg, Waterborne, Rt Turn Arrow Sym	120	Ea		
55	Pavt Mrkg, Waterborne, Thru Arrow Sym	20	Ea		
56	Pavt Mrkg, Waterborne, Thru and Lt Turn Arrow Sym	2	Ea		
57	Pavt Mrkg, Waterborne, Thru and Rt Turn Arrow Sym	2	Ea		
58	Pavt Mrkg, Waterborne, Only	60	Ea		
59	Pavt Mrkg, Waterborne, School	4	Ea		
60	Pavt Mrkg, Waterborne, Railroad Sym	24	Ea		
61	Pavt Mrkg, Waterborne, Bike	10	Ea		
62	Pavt Mrkg, Waterborne, Direction Arrow Sym, Bike	10	Ea		
63	Rem Spec Mrkg	1,000	Sft		
64	Minor Traf Devices	1	LS		
65	Pavt Mrkg, Longit, 6 inch or Less Width, Rem	1,000	Ft		
66	Pavt Mrkg, Longit, Greater than 6 inch Width, Rem	500	Ft		
				GRAND TOTAL	

OFFER TO CONTRACT:

TO THE CITY OF BATTLE CREEK:

We hereby offer and agree to furnish the materials, transportation or service in compliance with all terms, conditions, specifications, and amendments in the Invitation for Bid and any written exceptions in the offer. We understand that the items in this Invitation to Bid, including, but not limited to, all required certificates are fully incorporated herein as a material and necessary part of the contract.

The undersigned hereby states, under penalty of perjury, that all information provided is true, accurate, and complete and states that he/she has authority to submit this bid, which will result in a binding contract if accepted by the City of Battle Creek.

We acknowledge receipt of the following addendum(s): _____.

I certify, under penalty of perjury, that I have the legal authorization to bind the firm hereunder, and that our firm is not debarred from doing business under the Federal Excluded Parties List System (epls.gov).

I, the Contractor or Contractor's legally authorized signer, further certify compliance with the City of Battle Creek Ordinance Chapter 214, Discrimination Prohibited. I further acknowledge and agree that the Contractor's violation of Chapter 214 shall be a material breach of this contract. In addition, Contractor acknowledges and agrees that it shall be liable for any costs or expenses incurred by the City in obtaining from other sources, the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under the contract as a result of a material breach in the Contract for violations of Chapter 214.

Company Name

For clarification of this offer, contact:

Address

Name: _____

City State Zip

Phone: _____

Signature of Person Authorized to Sign

Fax: _____

Printed Name

Email: _____

Title

ACCEPTANCE OF OFFER:

Contract Term: _____

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the Invitation for Bid, including all terms, conditions, specification, amendments, etc. and the Contractor's Offer as accepted by the City.

This contract shall henceforth be referred to as Contract No. 2017-058B. The Contractor has been cautioned not to commence any billable work or to provide any material or service under this contract until Contractor receives purchase order and/or a notice to proceed from the City of Battle Creek Purchasing Agent.

COUNTERSIGNED:

APPROVED AS TO FORM BY:

City Manager

Date

City Attorney

Witness Signature

Date

ATTACHMENT A - DISADVANTAGED BUSINESS (DBE) FORM

I. YOUR FIRM'S BACKGROUND:

Is your firm an MBE (at least 51% minority ownership)? ____ YES ____ NO

Is your firm a WBE (at least 51% woman ownership)? ____ YES ____ NO

Are you subcontracting any part of this project? ____ YES ____ NO

II. SUBCONTRACTING INFORMATION: If subcontracting any part of the project, the bidder/contractor expressly agrees that:

- (1) If awarded a contract as a result of this bid, the major subcontractors used in the prosecution of the work will be those listed below, and
- (2) The following list includes all subcontractors who will perform work representing approximately five percent (5%) or more of the Total Base Bid.
- (3) The Bidder represents that the subcontractors listed below are financially responsible and are qualified to do the work required.

SUBCONTRACTOR NAME	City/State	Trade or Commodity	MBE	WBE	Approximate dollar value
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____
_____	_____	_____	Y / N	Y / N	\$ _____

III. DBE RECRUITMENT ACTIVITY LOG: List the MBE's and WBE's that were approached about being a subcontractor for this job, but who are NOT listed above as a subcontractor.

NAME OF FIRM APPROACHED, BUT NOT USED ON THIS PROJECT	City/State	Trade or Commodity	MBE	WBE	Reason not used on this project
_____	_____	_____	Y / N	Y / N	_____
_____	_____	_____	Y / N	Y / N	_____
_____	_____	_____	Y / N	Y / N	_____

ATTACHMENT B

SPECIFICATION, SPECIAL PROVISIONS, AND PLANS

General requirements

All work shall be done in accordance with the *2012 Standard Specifications for Construction* of the Michigan Department of Transportation, except as noted below or elsewhere in these contract documents.

§ 101 Terms, Format, and Definitions

In this Contract, Special Provisions are also called Project Specifications, and Supplemental Specifications are also called General Specifications.

Unless otherwise noted, the Construction Influence Area (CIA) shall consist of the entire project site as well as sufficient distance around it to warn traffic.

§ 102 Bid Submission, Award, and Execution of Contract

Deleted.

§ 103 Scope of the Work

§ 103 is modified by "General Conditions of Contract," I.9 "Soil Boring Data," and I.13, "Extra Work."

§ 104 Control of the Work

§§ 104.10 is modified by "General Conditions of Contract," I.16, "Discrepancies," III.27 "Removal of Condemned Materials and Structures," III.28 "Errors and Omissions," V.2 "Interpretation of Specifications and Drawings," V.6 "Approval of Materials and Equipment," and VII.4 "Compensation for Extra Work and Work Omitted."

The use of backflow preventers is required whenever water is obtained from a hydrant.

§ 105 Control of Materials

§§ 105.10: On non-Federal Aid projects, structural steel fabricated outside the United States will be permitted.

§ 107 Legal Relations and Responsibilities to the Public

§ 107.10 is deleted.

§ 108 Prosecution and Progress

§ 108.01 is deleted.

Table 108-1 is superseded by whatever amount for liquidated damages may be specified in these contract documents.

§§ 108.02 is modified by "General Conditions of Contract," I-10(b) "Sunday, Holiday, and Night Work."

§§ 108.10 is modified by "Agreement," I.B.

§ 109 Measurement and Payment

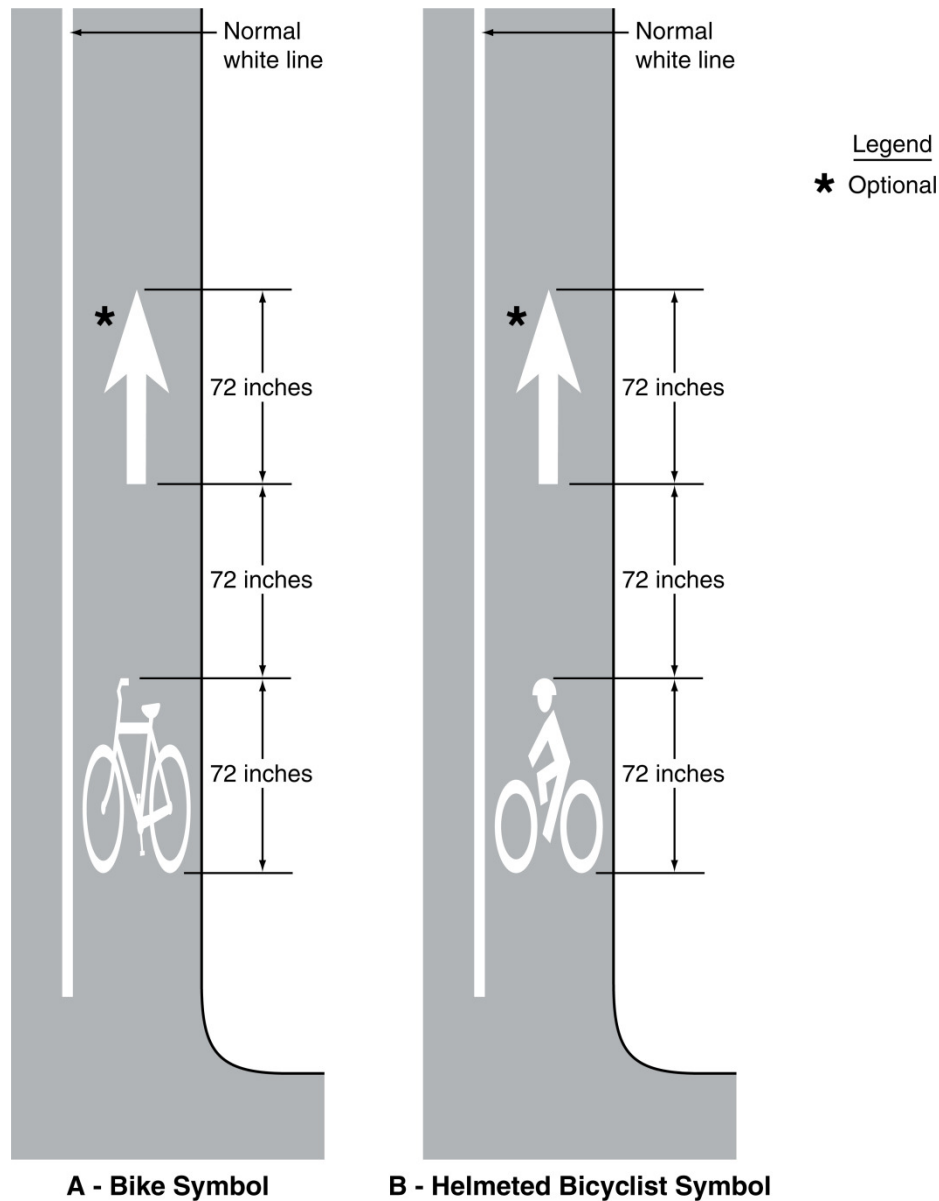
§§ 109.07 is modified by "General Conditions of Contract" VII.7 "Acceptance of Work."

**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR BICYCLE LANES**

Description. Furnish and apply white retroreflective permanent pavement markings according to the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)* and the Michigan Department of Transportation's 2012 *Standard Specifications for Construction*.

Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.



Apply bicycle lane markings, where specified by the Engineer, as shown in these illustrations:

When applying a bicycle symbol marking over an existing bicycle symbol marking, use the same style symbol as the existing marking.

When applying a new bicycle symbol on an unmarked area of pavement, use the symbol style in Illustration B (Helmeted Bicyclist Symbol).

Apply the arrows (labeled "Optional" in the illustrations) where directed to by the Engineer.

Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Bike.....	Each
Pavt Mrkg, (material), Direction Arrow Sym, Bike.....	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Bike includes payment for supplying and applying a bicycle pavement marking symbol of the material specified. Unless otherwise specified, bicycle pavement marking symbols of either style will be eligible for payment.

Pavt Mrkg, (material), Direction Arrow Sym, Bike includes payment for supplying and applying a bicycle thru arrow symbol of the material specified.

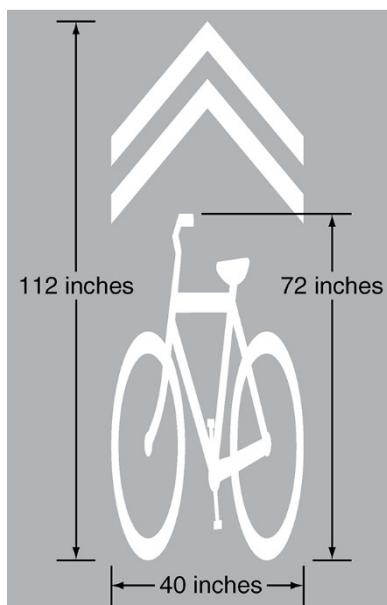
**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR SHARED LANES**

Description. Furnish and apply white retroreflective permanent pavement markings for lanes shared by bicycles and motor vehicles; according to the Federal Highway Administration's *Standard Highway Signs* manual, the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

Pavement markings for shared lane markings must conform to the pattern shown below.



Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Shared Lane Sym.....	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Shared Lane Sym includes payment for supplying and applying a shared lane symbol of the material specified.

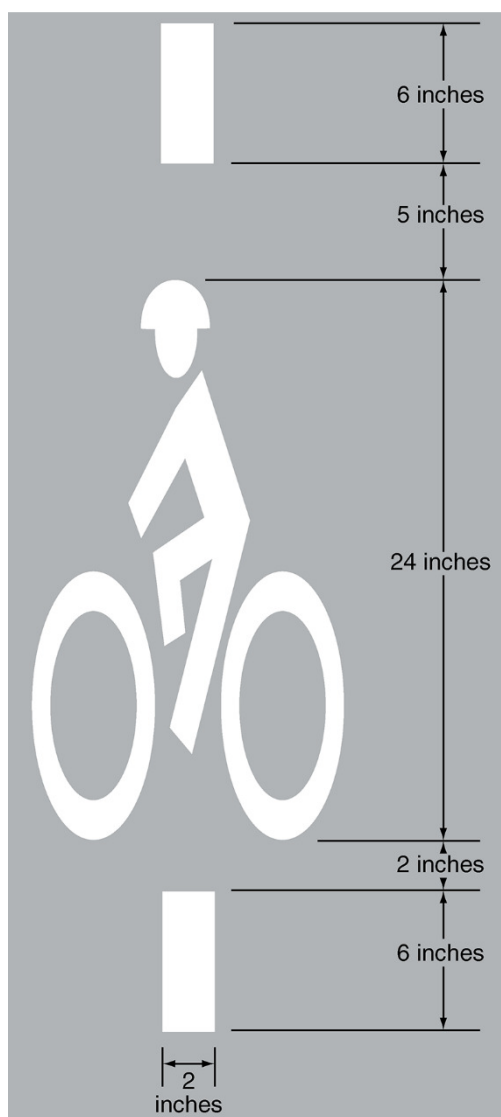
SPECIAL PROVISION FOR PERMANENT PAVEMENT MARKINGS FOR BICYCLE DETECTORS

Description. Furnish and apply white retroreflective permanent pavement markings for bicycle detectors; according to the Federal Highway Administration's *Standard Highway Signs* manual, the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

Pavement markings for bicycle detector markings must conform to the pattern shown below.



Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Bicycle Detector Sym	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Bicycle Detector Sym includes payment for supplying and applying a bicycle detector symbol of the material specified.

SPECIAL PROVISION FOR PERMANENT PAVEMENT MARKINGS FOR LANE-REDUCTION ARROWS

Description. Furnish and apply white retroreflective permanent pavement markings for lane-reduction arrows; according to the Federal Highway Administration's *Standard Highway Signs* manual, the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

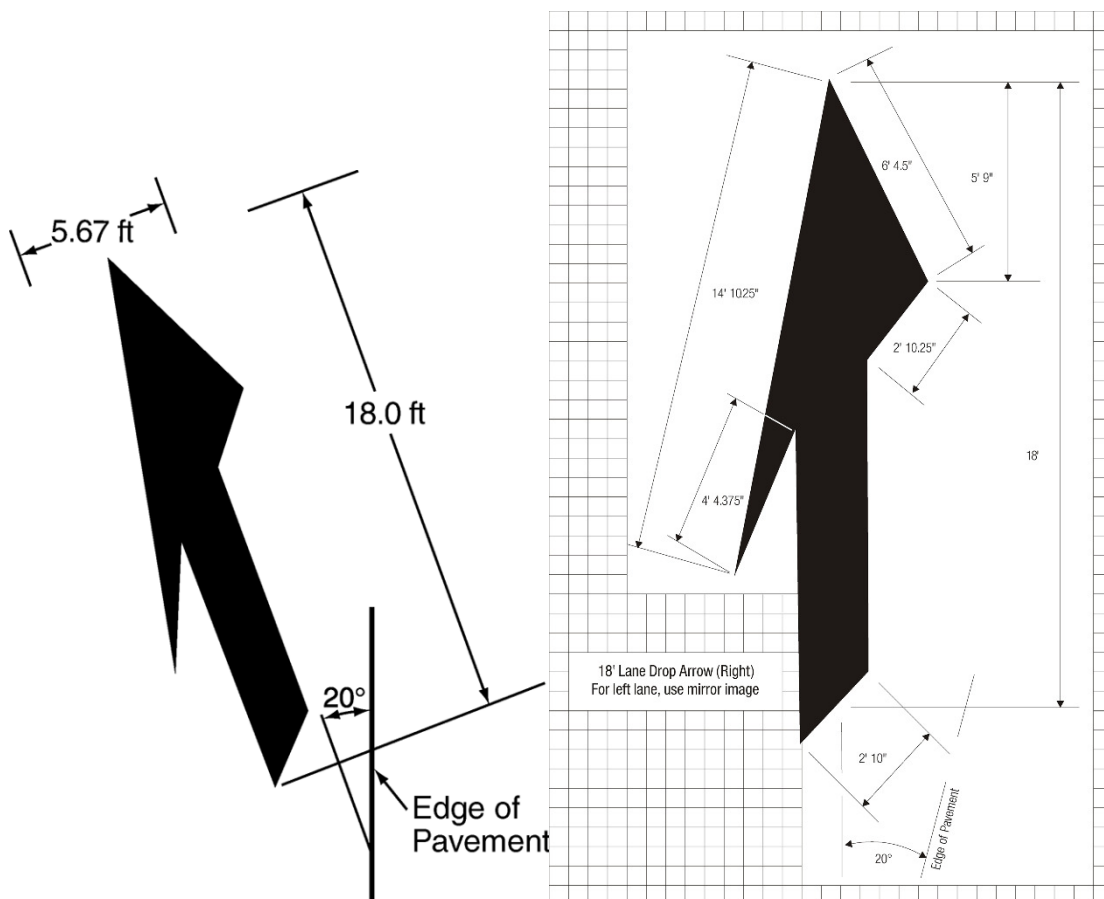
Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

Pavement markings for lane-reduction arrows pointing left (for placement in a right lane) must conform to the patterns below.

Lane-reduction arrows pointing right (for placement in a left lane) must be mirror images of the left-pointing patterns shown below. Use left- or right-pointing arrows as specified in the Proposal or as directed by the Engineer.

Orient lane-reduction arrows at a 20° angle to the edge of pavement as shown below.



Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Lane-Reduction Arrow Sym	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Lane-Reduction Arrow Sym includes payment for supplying and applying a lane-reduction arrow symbol of the material and direction specified.

**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR CROSSWALKS**

Description. Furnish and apply retroreflective permanent crosswalk pavement markings according to the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

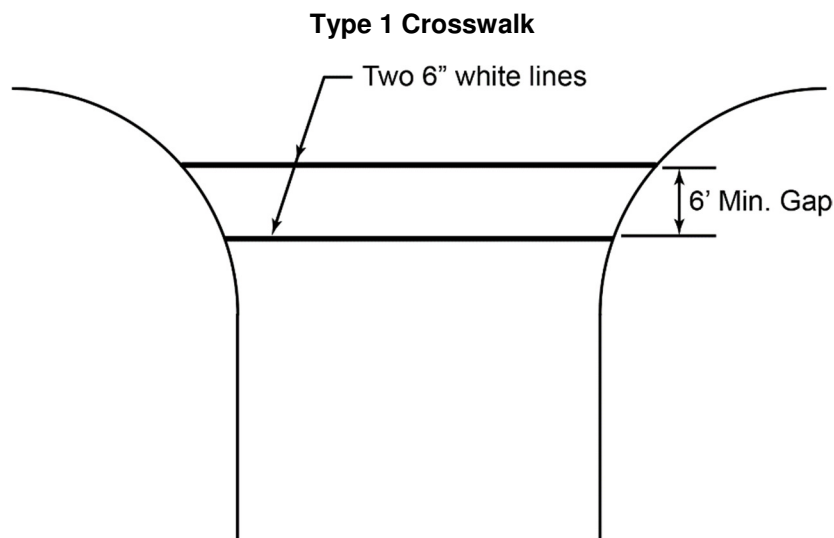
Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03, with the following additional requirements.

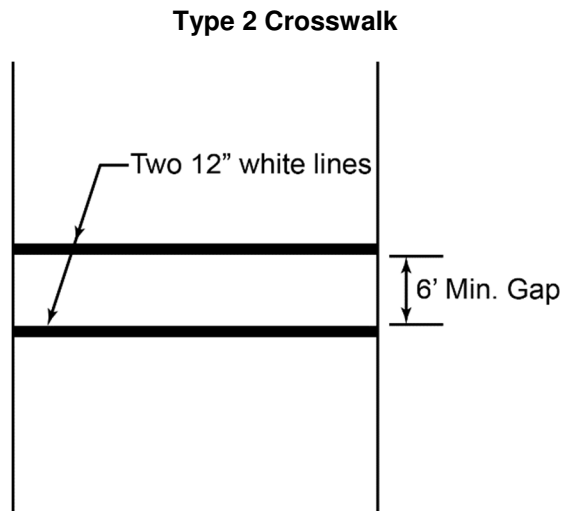
When applying crosswalk markings over existing crosswalk markings, apply the same widths and patterns as the existing markings, unless directed otherwise by the Engineer.

When applying crosswalk markings on unmarked pavements, apply markings in one of the following three pattern types, unless shown otherwise on the Plans or unless directed otherwise by the Engineer:

Type 1: Two 6 inch transverse white lines. Place these lines so that there is a gap at least 6 feet wide between them. Type 1 crosswalk markings are the standard crosswalk markings, to be used on unmarked pavements unless otherwise indicated on the Plans or directed by the Engineer.

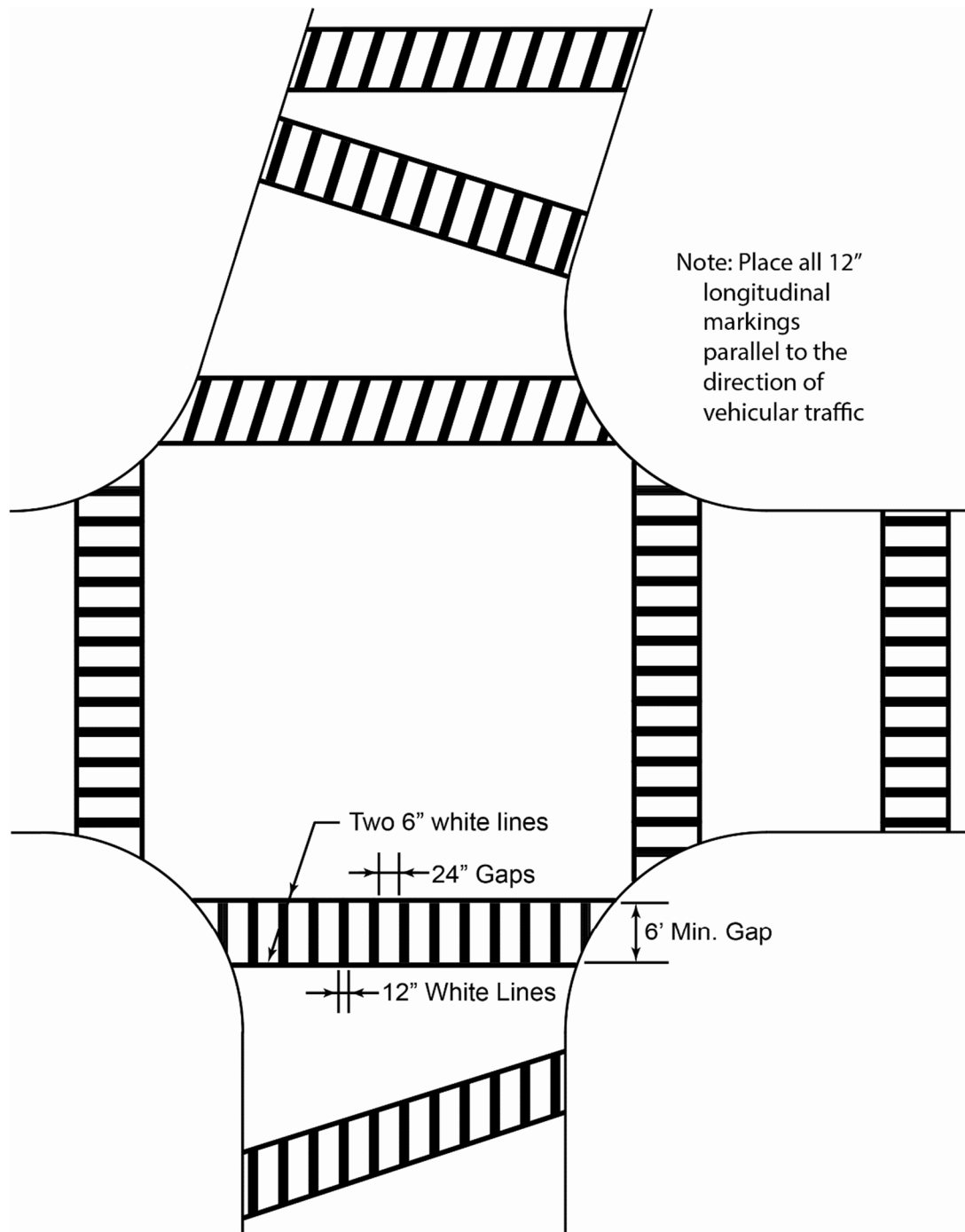


Type 2: Same as Type 1, except use two 12 inch transverse white lines. Type 2 crosswalk markings will ordinarily be specified at midblock crosswalks where decorative pavements are present. Place the two 12 inch lines on the adjacent asphalt or concrete pavements. Do not place any markings on the decorative pavement surfaces.



Type 3: Same as Type 1, except that longitudinal white lines must be added between the two transverse lines, forming a "ladder" configuration. The white longitudinal lines must be 12 inches wide, and must be separated by 24 inch wide gaps. Place the 12 inch longitudinal lines parallel to the flow of through traffic across the crosswalk. This will not necessarily be perpendicular to the 6 inch transverse lines. Type 3 crosswalk markings will ordinarily be specified for midblock crosswalks that lack decorative pavement surfaces, crosswalks at intersections with high-speed approaches, or crosswalks where drivers' vision is limited by crest vertical curves or other sight obstructions.

Type 3 Crosswalks at Mid-Block Locations and at Intersections



Measurement and Payment. Measurement and Payment will be as specified in *Standard Specifications* subsection 811.04 and in applicable Special Provisions.

**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR PARKING FOR DISABLED PERSONS**

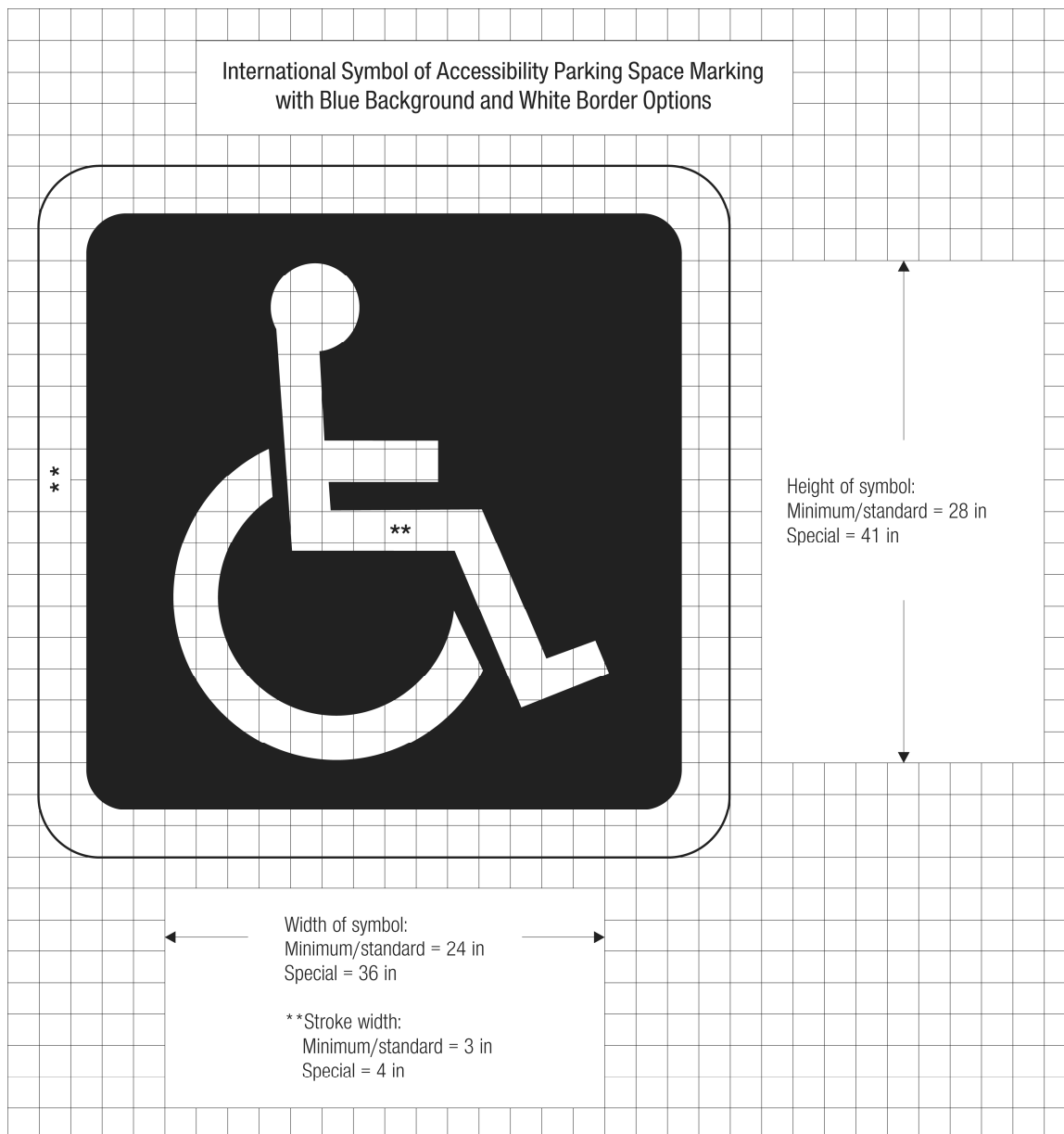
Description. Furnish and apply white, or blue and white, retroreflective permanent pavement markings for parking spaces for persons with disabilities; according to the Federal Highway Administration's *Standard Highway Signs* manual, the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

Pavement markings for parking spaces for disabled persons must conform to the pattern shown on the following page.

Use a white disabled symbol 24 x 28 inches. The white rectangular outer border may be omitted. The white symbol may be applied without the blue background, where specified in the contract documents or by the Engineer. When applying a disabled symbol along with a blue background, the corners of the blue background may be left unrounded. The minimum allowable size of the blue background is 40 inches square.



Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Disabled Parking Sym, White.....	Each
Pavt Mrkg, (material), Disabled Parking Sym, White on Blue	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Disabled Parking Sym, White includes payment for supplying and applying a white disabled parking symbol of the material specified.

Pavt Mrkg, (material), Disabled Parking Sym, White on Blue includes payment for supplying and applying a white disabled parking symbol with a blue background of the material specified.

**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR SPEED HUMPS AND SPEED TABLES**

Description. Furnish and apply white retroreflective permanent pavement markings for speed humps and speed tables according to the 2011 *Michigan Manual on Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

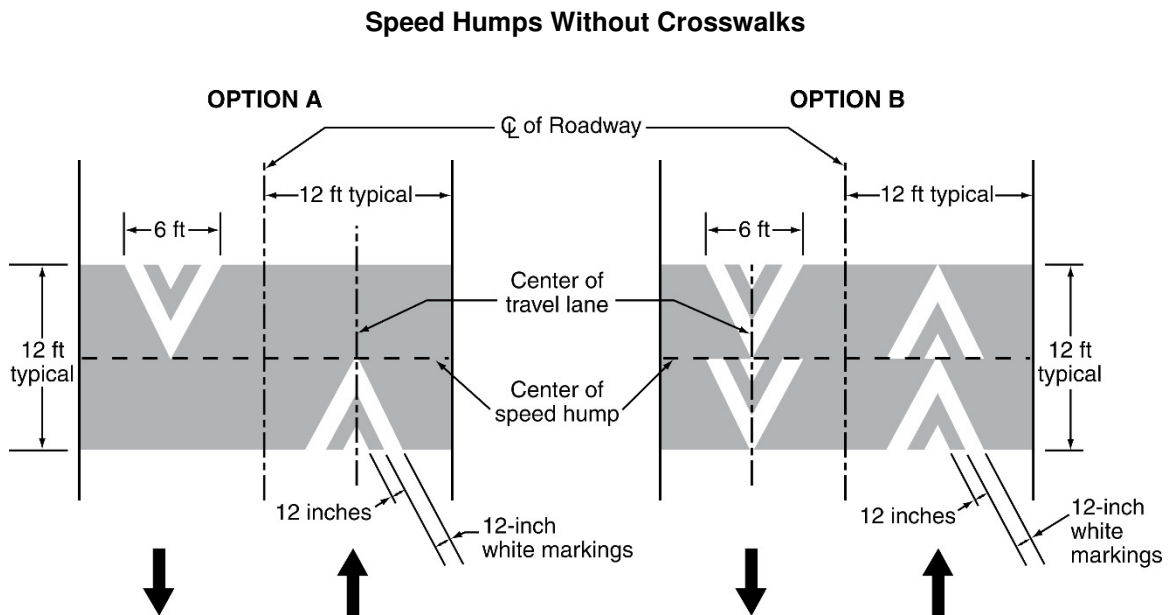
Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

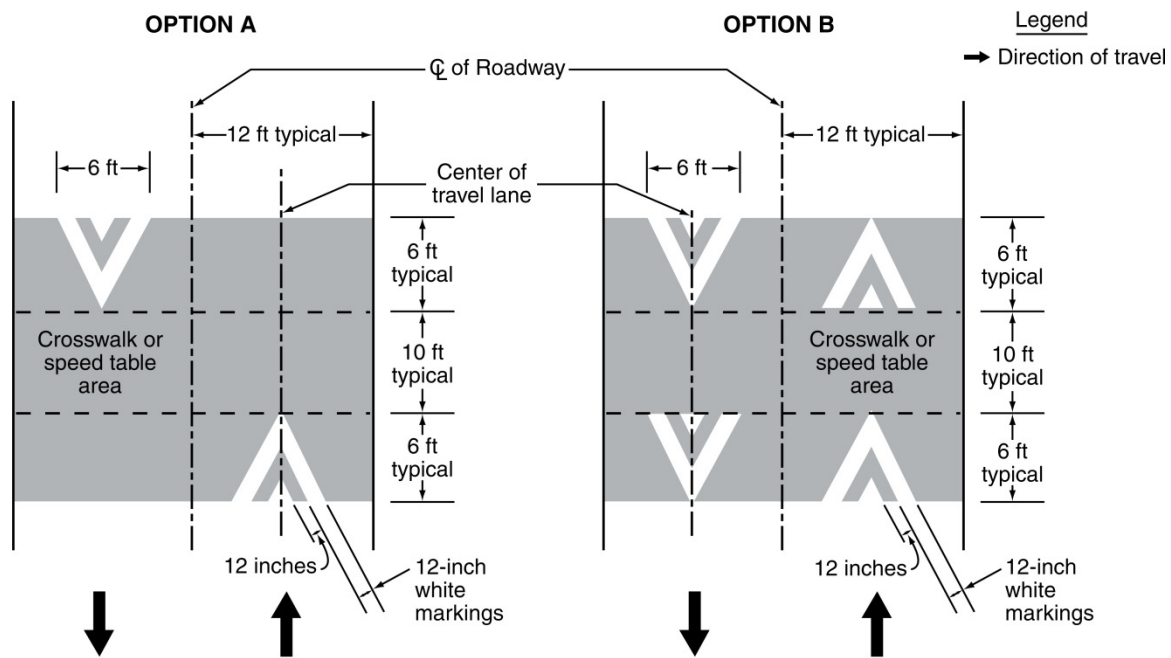
When applying speed hump markings over existing markings, use the same sizes and patterns as the existing markings, unless otherwise directed by the Engineer.

Apply speed hump markings and advance warning markings on unmarked areas of pavement, where specified by the Engineer, as shown in the following illustrations.

When applying new markings on unmarked areas of pavement, use the "Option B" marking patterns.

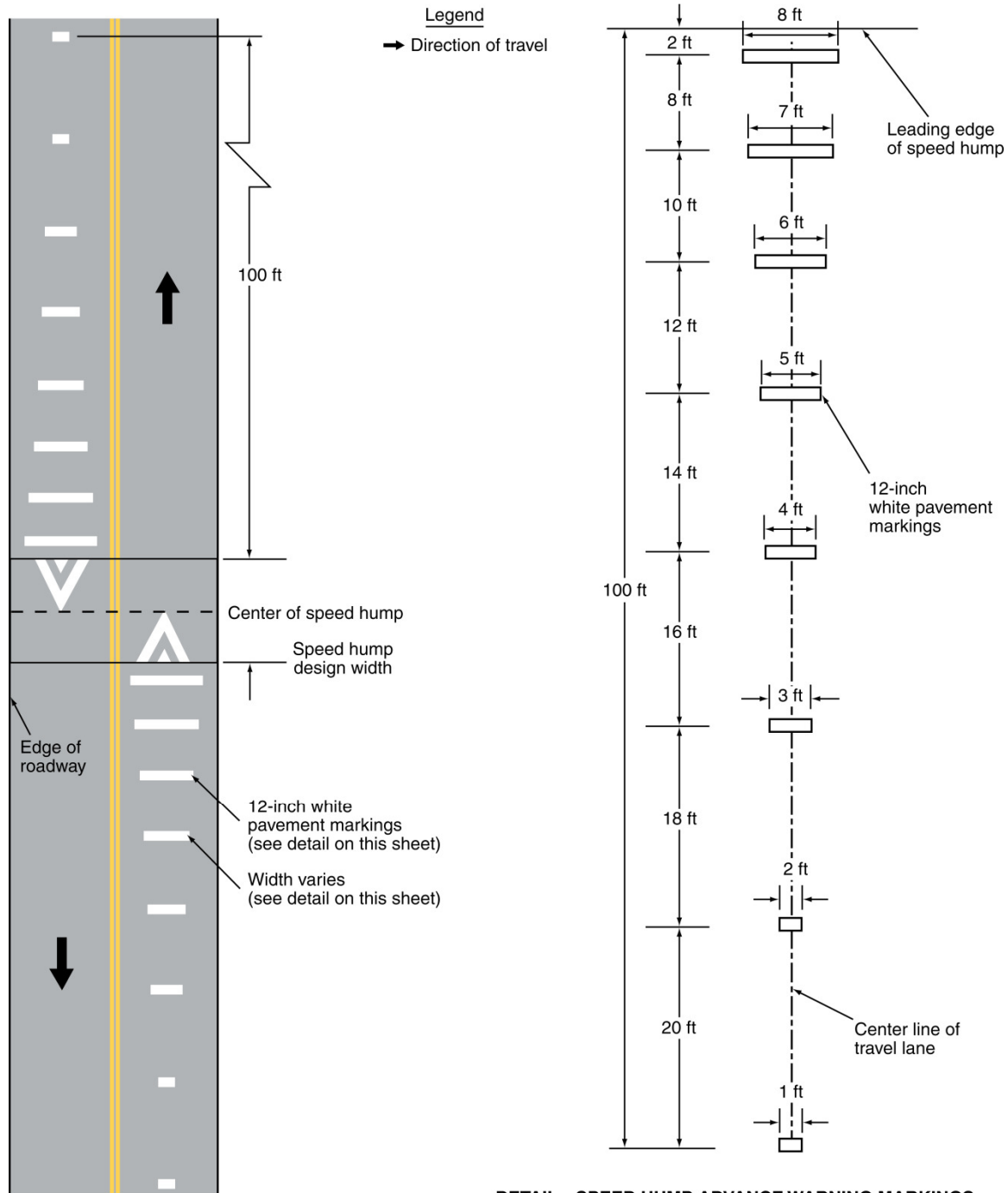


Speed Humps With Crosswalks, or Speed Tables



Note: Optional crosswalk lines are not shown in this figure

Advance Warning Markings for Speed Humps and Speed Tables



DETAIL—SPEED HUMP ADVANCE WARNING MARKINGS

Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Speed Hump Sym	Each
Pavt Mrkg, (material), Speed Hump Advance Warning Sym.....	Each

Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

At speed humps where new markings are applied over older speed hump markings that do not conform to the styles and dimensions of markings shown on the illustrations included here, payment for re-marking those older markings will be made using payment items for crosswalk markings.

For payment purposes, each speed hump symbol placed on unmarked pavement is defined as one set of chevrons. For example, the preceding drawings of Option B speed humps each contains four speed hump symbols.

Pavt Mrkg, (material), Speed Hump Sym includes payment for supplying and applying one speed hump symbol , of the dimensions shown on the included illustration, of the material specified.

Pavt Mrkg, (material), Speed Hump Advance Warning Sym includes payment for supplying and applying one set, one lane in one direction, of speed hump advance warning markings, of the dimensions shown on the included illustration, of the material specified.

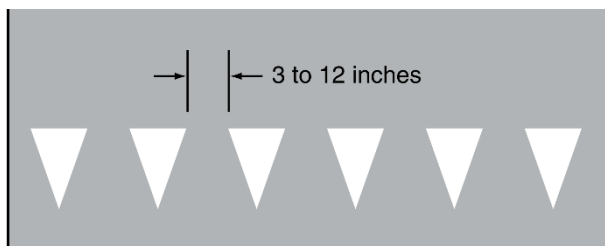
**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS FOR YIELD LINES AND YIELD AHEAD TRIANGLES**

Description. Furnish and apply white retroreflective permanent pavement markings according to the *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2012 Standard Specifications for Construction*.

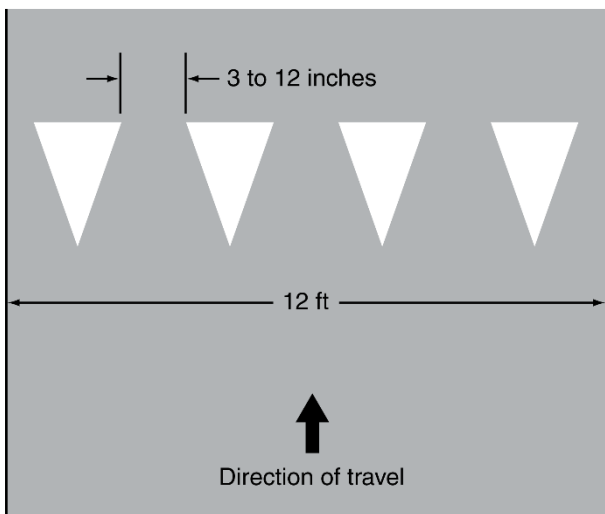
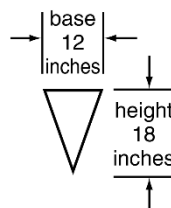
Materials. As specified in *Standard Specifications* subsection 811.02 and in applicable Special Provisions.

Construction. As specified in *Standard Specifications* subsection 811.03 and in applicable Special Provisions, with the following additional requirements.

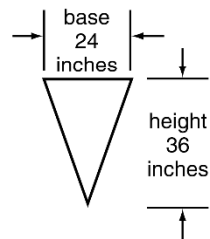
Apply yield line markings, where specified by the Engineer, as shown in these illustrations:



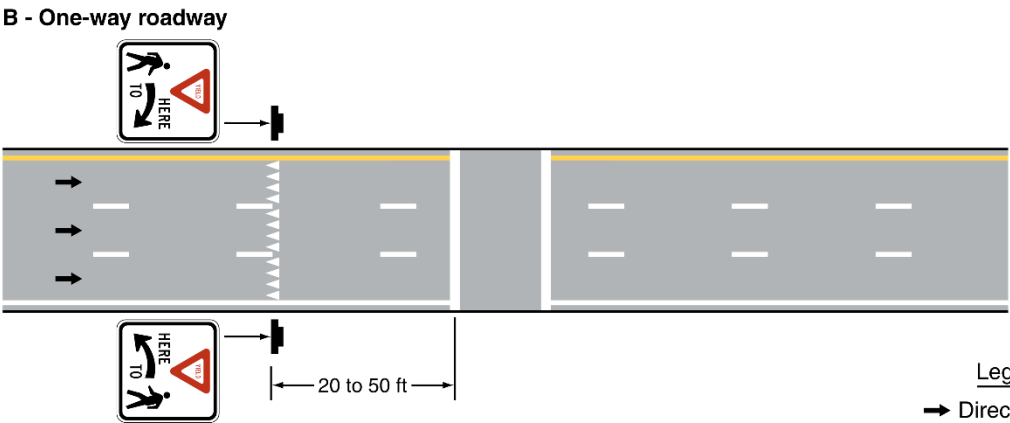
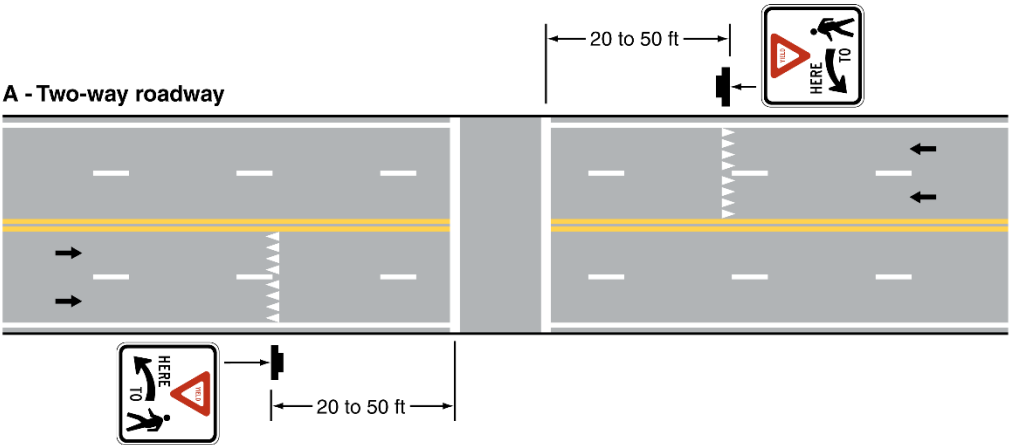
(a) Minimum Dimensions



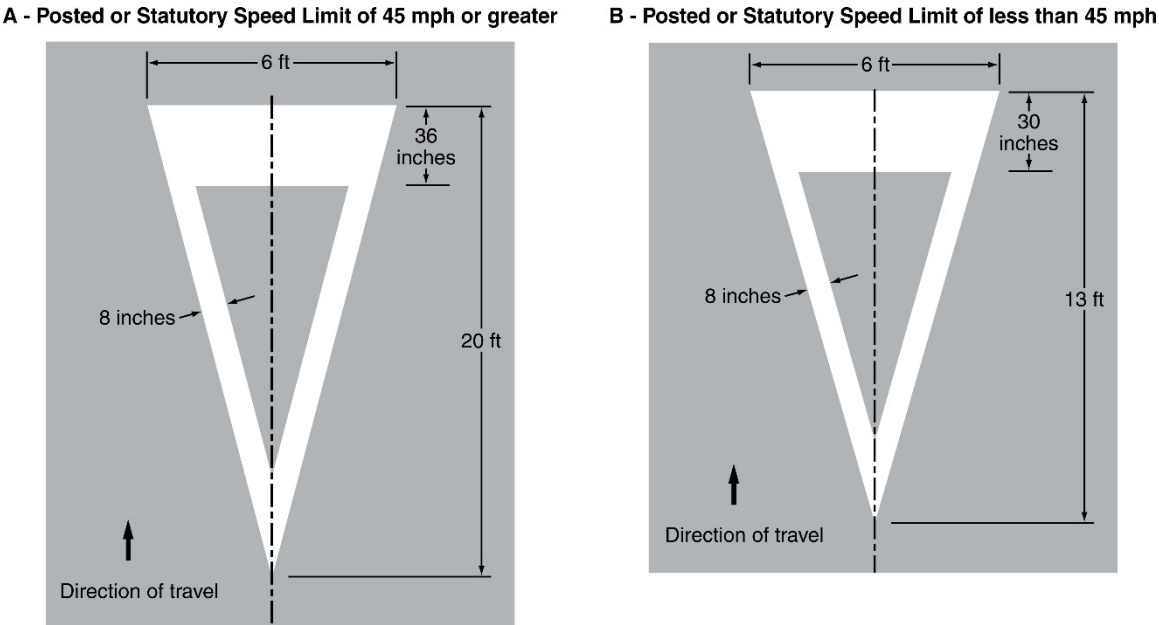
(b) Maximum Dimensions



Notes:
Triangle height is equal to
1.5 times the base dimension.



Apply yield ahead triangle markings, where specified by the Engineer, as shown in this illustration:



When applying a symbol marking over an existing symbol marking, use the same size symbol as the existing marking.

Measurement and Payment.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), Yield Line Triangle Sym, 12 inch x 18 inch	Each
Pavt Mrkg, (material), Yield Line Triangle Sym, 24 inch x 36 inch	Each
Pavt Mrkg, (material), Yield Ahead Triangle Sym, 6 feet x 13 feet.....	Each
Pavt Mrkg, (material), Yield Ahead Triangle Sym, 6 feet x 20 feet.....	Each

For payment purposes, each triangle constitutes one symbol. Measurement and payment will be made as specified in *Standard Specifications* subsection 811.04, with the following additions.

Pavt Mrkg, (material), Yield Line Triangle Sym, __ inch x __ inch includes payment for supplying and applying a yield line triangle symbol of the material specified.

Pavt Mrkg, (material), Yield Ahead Triangle Sym, __ feet x __ feet includes payment for supplying and applying a yield ahead triangle symbol of the material specified.

**SPECIAL PROVISION
FOR
PERMANENT PAVEMENT MARKINGS**

Description. Furnish and apply retroreflective permanent pavement markings according to the Federal Highway Administration's *Standard Highway Signs* manual, the *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)*, and the Michigan Department of Transportation's *2003 Standard Specifications for Construction*.

Materials. As specified in *Standard Specifications* subsection 811.02, with the following additions.

All materials supplied that are listed in *Standard Specifications* subsection 811.02 must be on the Michigan Department of Transportation's Qualified Products List.

Use liquid applied pavement marking materials manufactured in the previous 12 months or within the shelf-life directed by the manufacturer, whichever is less. Use solid applied materials within the shelf-life directed by the manufacturer. Provide certification liquid and solid applied pavement marking materials have been stored per the manufacturer's requirements. Materials not in compliance will be rejected and removed at the Contractor's expense.

Glass beads must meet the general requirements of *Standard Specifications* subsection 920.02.B, and the applicable requirements for specific applications of subsection 920.02.C. All glass beads meeting subsections 920.02.B and 920.02.C to be used on Federal-aid projects must contain no more than 200 parts per million of arsenic or lead, as determined in accordance with Environmental Protection Agency testing methods 3052, 6010B, or 6010C.

Preformed Thermoplastic Pavement Markings. An ester modified rosin resistant to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and glass beads that has been factory produced as a preformed, finished product; and designed to be fastened to pavement surfaces by means of the application of heat. The thermoplastic material must conform to AASHTO M249, with the exception of relevant differences due to the material being supplied in a preformed state.

Glass Beads. The requirements listed here for glass beads used in preformed thermoplastic pavement markings supersede the requirements for glass beads found in the *Standard Specifications*.

The preformed material must consist of at least thirty percent intermixed glass beads by weight. The beads must conform to AASHTO M247, with a minimum of eighty percent true spheres and a minimum refractive index of 1.50.

Preformed material used for crosswalks, bicycle markings, and handicap markings must have factory applied coated surface beads and abrasives (in addition to the intermixed beads) at a rate of ½ pound (± 20%) per 11 square feet. The surface beads and abrasives must be applied so that every shaped portion contains glass beads or abrasives with a minimum hardness of 7 (Mohs scale). These factory applied coated surface beads must meet the following requirements:

1. Minimum 80% rounds.
2. Minimum refractive index of 1.5.
3. Minimum SiO₂ content of 70 %.
4. Maximum iron content of 0.1 %.

Size Gradation		Retained, %	Passing, %
US Mesh	µm		
12	1700	0 - 2 %	98 – 100 %
14	1400	0 – 6 %	94 – 100 %
16	1180	1 – 21 %	79 – 99 %
18	1000	28 – 62 %	38 – 72 %
20	850	62 – 71 %	29 – 38 %
30	600	67 – 77 %	23 – 33 %
50	300	86 – 95 %	5 – 14 %
80	200	97 – 100 %	0 – 3 %

Preformed material used for locations other than crosswalks, bicycle markings, and handicap markings must have factory applied coated surface beads (in addition to the intermixed beads) at a rate of 1 pound (± 10%) per 10 square feet. The factory applied coated surface beads must have a minimum of 90% true spheres, a minimum refractive index of 1.50, and must meet the following gradation requirements:

Size Gradation		Retained, %	Passing, %
US Mesh	µm		
12	1700	0 - 2 %	98 – 100 %
14	1400	0 – 3.5 %	96.5 – 100 %
16	1180	2 – 25 %	75 – 98 %
18	1000	28 – 63 %	37 – 72 %
20	850	63 – 72 %	28 – 37 %
30	600	67 – 77 %	23 – 33 %
50	300	89 – 95 %	5 – 11 %
80	200	97 – 100 %	0 – 3 %

Pigments.

White: The preformed material must contain sufficient titanium dioxide to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

Red, Blue, and Yellow: The preformed material must contain sufficient pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The yellow pigments must be organic and must be heavy-metal free.

Other Colors: The pigments must be heavy-metal free.

Heating Indicators. The top surface of the material (same side as the factory applied surface beads) must have regularly spaced indents that are designed to act as visual cues during application that the material has reached a molten state so that satisfactory adhesion and proper bead embedment has been achieved, and a post-application visual cue that the installation procedures have been followed.

Skid Resistance. Preformed material used for crosswalks, bicycle markings, and handicap markings must, upon application, provide a minimum skid resistance value of 60 BPN when tested according to ASTM E303. Preformed material used for locations other than crosswalks, bicycle markings, and handicap markings must provide a minimum skid resistance value of 45 BPN when tested according to ASTM E303.

Thickness. Use preformed material with a 125 mil thickness; except that markings used for bicycle lane and handicap markings may have a 90 mil thickness.

Environmental Resistance. The material must be resistant to deterioration due to exposure to sunlight, water, salt, and adverse weather conditions; and impervious to oil and gasoline.

Retroreflectivity. The preformed retroreflective marking materials must exhibit adequate and uniform nighttime retroreflectivity.

Preformed material used for crosswalks, bicycle markings, and handicap markings must have a minimum retroreflectivity as measured by a Delta LTL 2000 or LTL-X Retroreflectometer of $275 \text{ mcd m}^{-2} \text{ lx}^{-1}$ for white.

Preformed material used for locations other than crosswalks, bicycle markings, and handicap markings must have a minimum retroreflectivity as measured by ASTM E1710 using a Delta LTL 2000 or LTL-X Retroreflectometer of $500 \text{ mcd m}^{-2} \text{ lx}^{-1}$ for white and $300 \text{ mcd m}^{-2} \text{ lx}^{-1}$ for yellow.

Application Temperature. The material must be designed to be applied to pavement surfaces without minimum ambient and pavement temperatures and without preheating the pavement to a specific temperature. The material must be capable of being applied without the use of a thermometer.

Packaging. The preformed marking material must be placed in cardboard cartons with protective plastic film and cardboard stiffeners where necessary to prevent damage in transit. Each packed carton must not weigh more than seventy pounds. Instructions for applying the material, in both English and Spanish, must be included in every carton.

Construction. As specified in *Standard Specifications* sections 811.03 and 812.03, with the following additional requirements.

All self-propelled pavement marking equipment must be certified by the Michigan Department of Transportation.

Unless directed otherwise by the Engineer, use 4 inch markings for motor vehicle lane lines and 6 inch markings for bicycle lane lines and for edge line pavement markings.

Temporary traffic control must conform to the current *MMUTCD*.

The Engineer may call weekly progress meetings, at his discretion. The Contractor, City inspector, and the Engineer will be required to attend.

Dispose of excess and removed materials in accordance with all laws. Do not use City or private dumpsters.

Preformed Thermoplastic Pavement Markings. Apply according to the manufacturer's instructions.

Measurement and Payment. Measurement and payment will be made as specified in *Standard Specifications* subsections 811.04 and 812.04, with the following changes and clarifications.

Contract Item (Pay Item)	Pay Unit
Pavt Mrkg, (material), ___ inch, (color).....	Foot
Pavt Mrkg, (material), ___ inch, Crosswalk	Foot
Pavt Mrkg, (material), ___ inch, Stop Bar.....	Foot
Pavt Mrkg, (material), ___ inch, Cross Hatching, (color)	Foot
Pavt Mrkg, (material), (legend)	Each
Pavt Mrkg, (material), (symbol)	Each
Pavt Mrkg, Mobilization.....	Each

Pavt Mrkg, Mobilization includes payment for each time the Contractor's forces are called to Battle Creek, regardless of the extent or duration of each call's work. Failure to complete all work assigned for each call does not qualify for payment to return and complete previously assigned uncompleted or unaccepted work. **Pavt Mrkg, Mobilization** supersedes all call back and second application pay items listed in the *Standard Specifications*.

Payment for all temporary traffic control for pavement marking work will be included in the **Minor Traf Devices** item.

Payment for railroad crossing symbols includes payment for the large "X" and the "RR" legend.