

# City of Eaton Rapids Technical Specifications

## Concrete Work

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1. **SCOPE**

This work shall consist of furnishing all labor, materials and equipment necessary for the proper mixture and placement of concrete. The current MDOT standard specifications for construction (SSC) shall be followed, unless otherwise specified.

## 2. Materials

### **Supplier**

The use of transit-mix concrete is required. The contractor shall notify the City who the supplier will be prior to beginning the work. The City must approve the concrete supplier and the mixer trucks used to transport the concrete.

### **Concrete Mixture**

Batching and mixing operations shall conform to ASTM C94. Water shall not be added to the mix after the trucks leave the batch plant. The mix for sidewalks shall be MDOT P1 with approximated proportions of one-part cement: two parts fine aggregate, and three parts coarse aggregate. The mix shall contain 6 sacks of cement per cubic yard, with a maximum allowable slump of 3 1/2" (three and one-half inches).

Coarse aggregate shall conform to MDOT 6AA. Fine aggregate shall conform to MDOT 2NS. Cement shall be Type 1A air – entraining Portland cement conforming to ASTM Specification C150 or Type 1 with air entrainment admixture. Air shall be 6% plus or minus 1%.

The compressive strength of Class A concrete shall not be less than 3500 pounds per square inch (psi.) after 28 days. The compressive strength of Class B concrete shall not be less than 3000 psi after 28 days.

Water shall be clean and free of deleterious substances such as oil, alkali, and organic matter. Portable water shall be used from a source approved by the City.

No admixture will be used unless approval is received from the City, or is specified. Admixtures, if approved, shall be used in strict accordance with manufacturer's directions and shall conform with applicable ASTM Standards.

### **Reinforcing**

Concrete slabs, walls and footings shall be reinforced with mesh or steel bars. Bars shall be rust free, new deformed billet steel conforming to ASTM A 615, Grade 60 and mesh shall conform to ASTM A1064.

### **3. Construction Methods**

#### **Subgrade Preparation**

The earth grade shall be prepared by removing the existing damaged concrete, top soil, vegetative cover and root mat. The base shall then be prepared by excavating and or placing of embankment material to achieve the grade and cross-section required. All soft and yielding material shall be removed and replaced with acceptable material.

A minimum of three (3) inches of Class II granular material shall be used under all sidewalk construction. The base shall be smoothed, trimmed and compacted prior to placement of forms. The City may order additional compaction to achieve the desired subgrade density after visual inspection.

#### **Formwork**

All concrete work shall be accurately formed to lines and existing grades. Forms shall extend to the full depth and width of the specified concrete surface. Forms shall be shored and braced from the outside to maintain ¼" tolerance in thickness, line and grade. Formwork shall be left in place until the concrete is sufficiently hard so as to not damaged upon removal.

Construct all formwork to provide continuous, straight, smooth surfaces and edges. Exposed edges shall have a ½" chamfer. Curved walks shall be formed on a radius with flexible forms.

#### **Placement**

All formwork and reinforcement placement shall be inspected by the City prior to the placement of concrete. The contractor shall give ample notice and time so that such inspection can be made.

No concrete shall be deposited until the area has been dewatered and not until after the Contractor has made satisfactory provisions to eliminate all possibility of water entering or flowing through the concrete while it is being poured or curing.

Subgrades shall be wetted and forms shall be oiled prior to concrete placement. All debris shall be removed from forms and reinforcement.

Exposed concrete shall not be poured when the atmospheric temperature is below 40 degrees F or when the concrete temperature is below 55 degrees F as placed. Concrete shall not be poured on frozen ground. Concrete shall not be cast if the temperature of the concrete is above 90 degrees F.

Tickets shall be prepared in accordance with MDOT 2012, SSC, Section 601 Portland Cement Concrete For Pavements.

When placement of concrete is started, it shall be carried on as a continuous operation until the placement of the section is completed.

### **Finishing**

Horizontal, exposed surfaces shall be floated and troweled just enough to produce a smooth, dense surface, free from irregularities. All joints and edges shall be rounded to a radius of one - quarter inch by use of an approved edging tool. After completion of floating and finishing, a fine brush shall be drawn across the finish surface to remove tool marks, and provide a non-slip surface.

All concrete sidewalk and driveway approaches shall be legibly stamped with the name of the contractor and the year, with figures 1 ½" to 2 ½" tall. The stamps shall be used at the of each segment, each truck load, and intervals no greater than 100 feet in length.

### **Joints**

Transverse expansion joints ½" thick shall be placed in sidewalk at approximately 100-foot intervals. ½" thick expansion joints shall be placed anywhere that the walk meets the back of a curb, and anywhere the walk meets the edge of a concrete driveways or building walls.

Contraction (plane of weakness) joints shall be placed at a minimum distance equal to the width of the sidewalk. The joint shall be sawed to a width of 1/8' and to a depth of ¼" of the slab thickness.

Sawing must be accomplished as soon as the concrete has hardened such that no excess raveling or spalling occurs, but before random cracks develop. Joints shall be at right angles to the line of the walk, and perpendicular to its surface. Tooled joints are not allowed.

### **Curing and Protection**

Sidewalks and other slabs on grade shall be treated with curing compound conforming to the requirements of ASTM C309. The compound conforming to the requirements of ASTM C309. The compound shall be sprayed or rolled on to provide a continuous film over the entire surface of the walk after completion of finishing, and as soon as all free water has left the surface. Compound shall be applied at a rate of not less than one gallon per 200 square feet. Immediately upon removing sidewalk forms, the exposed concrete edge shall be sprayed with curing compounds or backfilled with earth. The final of topsoil will be such that that mature sod will be ½" below the concrete.

All concrete shall be protected from vehicles for the first 72 hours after placing. The period of protection will increase to 7 days as the temperature decreases to 40 degrees. Any concrete found to be defective or damaged due to weather, vandalism, or other causes shall be removed and replaced, at contractor expense. Damaged sections of sidewalks and curb and gutter shall be removed back to the nearest joint or as indicated by the City.

Freshly placed concrete shall be protected from rain by covering with polyethylene film.

Concrete shall not be allowed to freeze for 72 hours. Protection must be provided when there is a forecast for freezing.

Barricades shall be placed at the areas under repair from the time the damaged section is removed until it is ready for use.

#### **4. Testing**

The contractor shall make arrangements for and coordinate various concrete test as ordered by the City. The testing company shall be selected by the City and the City will pay for the test. The contractor will be charged for any waiting time suffered by the testing company. All test will be done according to ASTM standards.

City of Eaton Rapids  
200 S. Main St.  
Eaton Rapids, MI 48827

#### Notice to Bidders

The City of Eaton Rapids will receive proposals from qualified contractors for the replacement of concrete sidewalk.

The bid is open to all qualified concrete contractors. The City will enter into a contract with the successful Concrete Contractor.

Note; Where "contractor" is referred to in these specifications, this shall be interpreted to refer to the concrete contractor unless otherwise noted.

Proposals must be mailed or delivered in person to Laura Boomer, City Clerk of Eaton Rapids 200 S. Main St. All proposals must be sealed in envelopes plainly labeled "Concrete Sidewalk Replacement" and must be received prior to 10:00 A.M. local time August 6, 2020. This will be a public bid opening. Evaluation of proposals and award will be at a later date; the successful contractor will receive notice of intent prior to receipt of a Purchase Order. Work shall start within 10 working days from the purchase order issue date. The City of Eaton Rapids reserves the right to except or reject any or all bids.

5.

**Sidewalk Repair List**

620 Water St – 20 Sq. Ft.	606 Hastay Blvd – 32 Sq. Ft.
706 Water St – 48 Sq. Ft.	707 Hastay Blvd – 16 Sq. Ft.
711 Water St – 112 Sq. Ft.	705 Hastay Blvd – 110 Sq. Ft.
718 Water St – 64 Sq. Ft.	231 S Main St – 128 Sq. Ft.
719 Water St – 32 Sq. Ft.	242 S Main St – 16 Sq. Ft.
802 Water St – 32 Sq. Ft.	300 S Main St/Spicer 158 Sq. Ft.
810 Water St – 64 Sq. Ft.	316 S Main St – 45 Sq. Ft.
912 Water St – 16 Sq. Ft.	307 S Main St – 50 Sq. Ft.
1002 Water St – 64 Sq. Ft.	219 S Main St – 60 Sq. Ft.
1006 Water St – 32 Sq. Ft.	405 S Main St – 30 Sq. Ft.
1111 Water St – 16 Sq. Ft.	509 S Main St – 378 Sq. Ft.
1114 Water St – 48 Sq. Ft.	511 S Main St – 66 Sq. Ft.
1201 Water St – 80 Sq. Ft.	515 S Main St – 150 Sq. Ft.
1202 Water St – 48 Sq. Ft.	601 S Main/Broad St - 615 Sq. Ft.
1211 Water St – 64 Sq. Ft.	600 S Main St – 282 Sq. Ft.
1301 Water S – 100 Sq. Ft.	609 S Main St – 60 Sq. Ft.
1302 Water St – 5 Sq. Ft.	615 S Main St – 125 Sq. Ft.
1306 Water St – 100 Sq. Ft.	707 S Main St – 60 Sq. Ft.
1403 Water St – 64 Sq. Ft.	710 S Main St – 72 Sq. Ft.
1407 Water St – 16 Sq. Ft.	817 S Main St – 35 Sq. Ft.
108 E. Knight St – 172 Sq. Ft.	129 S. Main St – 35 Sq. Ft.
101 Main St/E. Knight St – 60 Sq. Ft.	124 Division St – 16 Sq. Ft.
233 E knight St – 28 Sq. Ft.	128 Division St – 40 Sq. Ft.
106 E Knight St – 110 Sq. Ft.	310 Division St – 24 Sq. Ft.
215 River St – 28 Sq. Ft.	316 Division St – 32 Sq. Ft.
441 Canal/Lansing St – 156 Sq. Ft.	

300 Dexter Rd – 48 Sq. Ft.  
312 Dexter Rd – 30 Sq. Ft.  
114 Broad St – 32 Sq. Ft.  
210 Broad St – 16 Sq. Ft.  
211 Broad St. – 66 Sq. Ft.  
203 Broad St – 30 Sq. Ft.  
301 Broad St – 32 Sq. Ft.  
311 Broad St – 16 Sq. Ft.  
418 Broad St – 16 Sq. Ft.  
600 S Main/Broad St – 80 Sq. Ft.

**6. Proposal Submittal**

One original plus two (2) copies for a total of three (3) of the entire response must be submitted to the City of Eaton Rapids as follows:

Laura Boomer

Clerk City of Eaton Rapids

200 S. Main St.

Eaton Rapids, MI 48827

All proposal must be received prior to Thursday August 6, 2020 at 10:00 am. Proposals maybe mailed or dropped off at Eaton Rapids City Hall. Proposals must be received in the Clerk's Office by 10:00 am for it to be considered in the RFP Process.

**Please mark the outside of the envelope Sidewalk Proposal.**



## **7. Evaluation of Proposals**

Only proposals meeting the minimum qualifications will be evaluated. The City of Eaton Rapids will evaluate proposals based on, but not limited to, the following criteria.

- Experience in sidewalk replacement, a list of previous projects maybe requested.
- Capability of contractor
- Price

The City of Eaton Rapids reserves the right to accept or reject any or all proposals, in part or in total, to wave any irregularity in any proposal if it is deemed in the best interest of the City of Eaton Rapids.

## **8. Insurance**

### **Contractor's and Sub Contractors Insurance**

The contractor shall not be awarded work under this contract unless the insurance required under this section has been obtained. The contractor shall not permit any sub-contractor to commence work on a sub contract unless like insurance has been obtained.

### **Worker Disability Compensation Insurance**

The contractor shall procure and maintain during the life of this contract Worker's Disability Compensation Insurance as required by law for all his/her employees to be engaged in work under this contract, and in case any such work is sub-let, the Contractor shall require the sub-contractor similarly to provide Worker's Disability Compensation Insurance for all of the latter's employees to be engaged in such work as required by law.

### **Contractor's Public Liability and Property Damage Insurance**

The Contractor shall procure and maintain during the life of this contract, Contractor's Public Liability Insurance in an amount of not less than One Million Dollars (\$1,000,000.00) for injuries including accidental death, each occurrence and Contractors Property Damage Insurance in the amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence.

### **Sub-Contractor's Public Liability and Property Damage Insurance**

The Contractor shall require each of his/her sub-contractors to procure and maintain during the life of the subcontract Sub-Contractor's Public Liability and Property Damage Insurance in an amount of not less than One Million Dollars (\$1,000,000.00) including accidental death, for each

occurrence and Contractor's Property Damage Insurance in the amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence.

**Contractor's Motor Vehicle Bodily Injury and Property Damage Insurance**

The Contractor shall procure and self-maintain during the life of this Contract, Motor Vehicle Bodily Injury Insurance (comprehensive form) in the amount of not less than One Million Dollars (\$1,000,000.00) for injuries, including accidental death to each person; and in the amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence and property damage in an amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence. The Contractor shall procure and maintain during the life of the contract, hired and non-ownership motor vehicle bodily and property damage insurance in the amount of not less than One Million Dollars (\$1,000,000.00) for injuries ,including death, to each person and in an amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence and property damage in the amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence.

**Owner's and Contractor's Protective Public Liability and Property Damage Insurance**

The Contractor shall procure and maintain, during the life of this contract, Owners and Contractor's Protective Public Liability and property Damage Insurance in the name of the City of Eaton Rapids in the amount of not less than One Million dollars (\$1,000,000.00) for injuries, including accidental death for each occurrence and property damage in the amount of not less than One Million Dollars (\$1,000,000.00) for each occurrence. Such insurance shall include motor vehicle exposure.

**City of Eaton Rapids as Additional Insured**

The City of Eaton Rapids, including elected, appointed officials, all employees and volunteers, boards commissions and/or sub-contractors for the City of Eaton Rapids and a copy of an endorsement to this effect shall be supplied for each policy involved.

**Indemnification, Defend and Hold Harmless Agreement**

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

(Contactor/Company) By and through the undersigned \_\_\_\_\_

(individual), It's \_\_\_\_\_(title), Respectively, agrees to indemnify and hold harmless the City of Eaton Rapids, a Michigan Municipal Corporation, 200 S. Main St, Eaton Rapids MI 48827, (hereinafter the City), it's Council, officers, attorneys, affiliates, successors and assigns from any and all liability arising, directly or indirectly, from the following activity:

All Contract Related Work

In the event any suit, proceeding, claim, loss,damage,cost,charge,or expense be brought against the City, it's Council, officers, administrators, employees, attorneys, affiliates, sorcerers and assigns by virtue of the above-referenced activity, hereby covenants and agrees to assume the defense thereof and defend the same as its own expense and pay all cost, charges, attorney fees and any other expense related thereto. Not withstanding the foregoing, this Indemnification, Defend and Hold Harmless Agreement exclude the sole acts and/or the sole omissions to act on the part of the City of Eaton Rapids.

\_\_\_\_\_  
(Signature of person submitting bid)

Subscribed and sworn this \_\_\_\_\_ day of \_\_\_\_\_, 2020 before me a Notary Public in and said County.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
My Commission Expires:

**(Return this statement on Company letterhead with your proposal)**





**2020 Sidewalk Replacement Bid Form**

Proposal 1. Removal and replacement of four inch (4") concrete sidewalk per square foot per location including removal and/or installation of sand, dirt, tree roots as needed to meet grade. Removal of forms, site restoration and seed as required.

\_\_\_\_\_ Price per Sq. Ft.

Proposal 2. Removal and replacement of six inch (6") concrete driveway sidewalks per square foot per location, including removal and/or installation of sand, dirt, tree roots as needed to meet grade. Removal of forms, site restoration and seed as required.

\_\_\_\_\_ Price per Sq. Ft.

**The undersigned verifies the information contained herein is truthful and accurate and that they are owners agent of the company. Additionally, the undersigned declares that he/she carefully examined all the items of the specifications and instructions and that he/she fully understands the requirements of the same.**

**Representative's Signature** \_\_\_\_\_

**Printed Name** \_\_\_\_\_ **Title** \_\_\_\_\_

**Company Name** \_\_\_\_\_

**Address** \_\_\_\_\_

**Phone #** \_\_\_\_\_ **Email** \_\_\_\_\_