City of Negaunee
PO Box 70
319 W. Case Street
Negaunee, MI 49866
906 475-9991

April 7, 2021

INVITATION FOR BIDS

Sealed bids will be received by the City of Negaunee at City Hall located at 319 W. Case Street, Negaunee, Michigan, 49866 until 10:30am ET on Monday, April 26, 2021 for **2021 Crack Fill Project**. Bids will be received by the City of Negaunee and addressed to: **Negaunee City Clerk, City of Negaunee, P.O. Box 70, 319 W. Case Street, Negaunee, MI 49866**. Contractors please clearly mark "*2021 Crack Fill Project"* on the outside envelope of sealed bid. The Contractors Name and Address shall also be clearly marked on the outside envelope.

The Bid Form is enclosed.

The City reserves the right to reject any or all bids, or to accept any bid or part of a bid.

Mark Daavettila
DPW Director
City of Negaunee
906 475-9991

CITY OF NEGAUNEE

2021 Crack Fill Project

This project includes 9.7 miles of Overband Crack Filling on various roads in City of Negaunee.

Description of Work

Overband Crack Filling shall be done in accordance with section 502 of MDOT 2012 Standard Specifications for Construction (attached) and as described below.

Notice must be given to City of Negaunee a minimum of 3 working days prior to any Overband Crack Filling.

Residents are to be contacted prior to Overband Crack Filling to make sure vehicles, campers, etc. are not on public roads.

The Overband Crack Filling completion date is **August 13, 2021.** Enclosed is the Bid Form listing road names, and estimated mileage for the City of Negaunee.

The lump sum street price shall include all costs necessary to complete Overband Crack Filling; including labor, equipment, materials, traffic control and providing all required documentation per section 502 of the MDOT 2012 Standard Specifications for Construction.

The successful bidder will provide the City of Negaunee with proof of public liability ($500,000 minimum) and property damage ($500,0000 minimum) insurance to protect the City of Negaunee and any property owners against any and all claims arising out of the performance of the contracted services.

This project will be paid on a **LUMP SUM** basis including: mobilization, all items identified by MDOT 2012 Specifications Section 502, and traffic control.

BID FORM

Contractor: _____

Address: _____

_____

Overband Crack Filling		
Street Location	**Miles**	**Lump Sum Street Price**
Rail St (Division to Healy)	0.345	
Prince St (Cherry to the ballfield)	0.341	
Cherry St (Brown to Prince)	0.372	
North Baldwin (Muskoday to City limits)	0.531	
Cliff & N. Tobin (Teal Lake Ave to Arch)	0.163	
Ridge St (Teal Lake Ave to McKenzie)	0.417	
Mitchell Ave (Brown to Hungerford)	0.142	
E. Case St (Teal Lake Ave to Healy)	0.258	
Elm St (Baldwin to Prince)	0.142	
Lake St (Baldwin to Prince)	0.260	
Shoreline Dr (US-41 to culdesac)	0.481	
Buffalo Rd (CR-480 to New Buffalo)	2.420	
New Buffalo Rd (Ann to Buffalo)	0.650	
W. Water St (Teal Lake Ave to US-41)	0.834	
Division St (County Rd to Rail)	0.209	
Tracy Mine Rd (County Rd to dead-end)	0.351	
Croix St (US-41 by Holiday to Baldwin)	0.635	
Lexington Blvd (Camelot to Camelot)	0.105	
Camelot Dr (Prince to Prince)	0.332	
Maas St (Croix to US-41)	0.279	
Snow St (Tobin to Cyr)	0.095	
Cyr St (Snow to Bluff)	0.095	
W. Peck St (Teal Lake Ave to Pioneer)	0.076	
W. Peck St (Kanter to Tobin)	0.090	

TOTAL BID **$**

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(words)

Section 502. HMA CRACK TREATMENT

502.01. Description. This work consists of treating cracks in Hot Mix Asphalt (HMA) surfaces using either a saw or rout and seal process or an overband process.

502.02. Materials. Provide materials in accordance with the following:

Hot Poured Joint Sealant.....914
Asphalt Binder 904
Polyester Fibers.....904

A. **Saw or Rout and Seal.** Provide hot-poured joint sealant that meets the requirements of subsection 914.04 for sealing sawn or routed cracks.

B. **Overband.** Provide overband material as specified in subsection 502.02.B.1 or subsection 502.02.B.2.

1. **Overband (Alternate 1).** Provide a field-blended liquid mixture with the following characteristics and proportions:

   a. Performance graded asphalt binder PG 64-22 south of M-46 and PG 58-28 north of M-46;
   b. Asphalt rubber product selected from the Qualified Product List, 5 percent by weight; and
   c. Polyester fibers, 5 percent by weight.

   If using field mixed material, add the polyester fibers to the polymer modified asphalt cement and mix in the kettle. Do not allow field mix material to exceed 400 °F.

2. **Overband (Alternate 2).** Provide an asphalt rubber product selected from the Qualified Product List. Do not allow prepackaged material to exceed 400 °F.

502.03. Construction.

A. **Equipment.** Provide equipment, in accordance with section 107 and this subsection, capable of meeting the requirements of this subsection.

1. **Compressed Air System.** Provide and use a compressed air system that produces a continuous, high-volume, high-pressure stream of clean, dry air to prepare cracks. Equip the air compressor with a moisture separator to remove oil and water from the air supply. Provide a compressor capable of producing at least 100 psi at a continuous air flow of 150 cfm.

2. **Melter Applicator.** Provide a melter applicator consisting of a boiler kettle equipped with pressure pump, hose, and applicator wand. Equip the unit with the following:

   a. Shutoff control on the applicator hose;
   b. Mechanical full-sweep agitator in the kettle to provide continuous blending;
   c. Thermometers to monitor the material temperature and the heating oil temperature; and
   d. Thermostatic controls that allow the operator to regulate material temperature up to 425 °F.

3. **Application Wand.** Apply the material using either a wand followed by a V-shaped or U-shaped squeegee or a round application head with a concave underside.

B. **Pre-Production Meeting.** Before beginning work, conduct an on-site pre-production meeting with the Engineer to discuss the following:

1. Contractor's detailed work schedule,
2. Traffic control plan,
3. Required project documentation,
4. Inspection of the condition of equipment,
5. The Contractor's Quality Control (QC) Plan, and
6. The Contractor's designated Authorized Representative.

C. **Crack Preparation.** Clean and dry cracks using compressed air and other tools to remove loose dirt, vegetation, and deleterious material. Clean cracks no more than 10 minutes before filling.

D. **Crack Treatment Methods.**

1. **Saw or Rout and Seal.** Treat visible working cracks no greater than 1¼ inches wide in the pavement surface using the saw or rout and seal process. Treat working cracks in shoulders unless otherwise required. The Department defines working cracks as cracks that experience considerable horizontal or vertical movement, at least ⅛ inch, as a result of temperature change or traffic loading.

   Create a reservoir by sawing or routing along the crack. Create the reservoir to a volume of at least 7.5 cubic inches per foot of crack and with a 1:1 width to depth ratio. Ensure the finished reservoir walls are vertical and the reservoir bottom is flat. Place sealant flush or no greater than ⅛ inch below the pavement surface.

2. **Overband.** The Contractor may treat non-working cracks with material placed in an overband configuration. The Department defines non-working cracks as cracks that experience relatively little

horizontal or vertical movement, less than ⅛ inch, as a result of temperature change or traffic loading.

Apply overband material to clean, dry cracks. Apply overband 4 inches wide and from ⅛ inch to 3/16 inch thick.

The Contractor may increase the maximum application width to 6 inches for coverage of multiple cracks, with Engineer's prior written approval.

Place temporary pavement markings before opening the road to traffic if overband material obliterates existing pavement markings.

Apply overband as follows unless otherwise required:

a. **Stand Alone Overband Crack Fill.** If no other surface treatment is required on the pavement, fill visible cracks in the road less than 1¼ inch wide.

b. **Micro-Surfacing Preparation.** If preparing the pavement for a micro-surface overlay, fill visible cracks in the road less than 1¼ inch wide.

c. **Chip Seal Preparation.** If preparing the pavement surface for a single or double chip seal, fill cracks greater than ⅛ inch wide or 3 feet long. Seal cracks with varying widths and portions at least ⅛ inch wide, along the entire length.

d. **Paver Placed Surface Seal.** If preparing the pavement for a paver placed surface seal, fill cracks with widths from ¼ inch to 1¼ inch.

e. **HMA Ultra-Thin Overlay.** If preparing the pavement for an HMA ultra-thin overlay, fill visible cracks less than 1¼ inch wide.

E. **Weather Limitations.** Place material at air temperatures from 45 °F to 85 °F. Do not place material if moisture is present in the crack.

F. **Cure Time and Repair.** Allow the material to cool before opening the road to traffic. Apply de-tackifying solution, if required, to protect the uncured crack treatment material from tracking. Do not use blotting materials, including sand, aggregate, sawdust, or paper. Repair treated pavement areas, damaged by traffic at no additional cost to the Department.

G. **Quality Control (QC).** Provide and follow a QC plan for production and construction processes. Provide the Engineer a copy of the QC plan for review and approval, prior to the pre-production meeting. Maintain QC measures until the Engineer accepts the work.

Comply with the approved QC plan throughout the project and allow the Engineer access to work in progress for assurance review and testing. If the Engineer identifies a condition causing unsatisfactory crack treatment, immediately stop production and correct the work at no additional cost to the Department.

Ensure the QC plan addresses at least the following:

1. A detailed description explaining how field crews will determine working and non-working cracks. Separately detail projects with multiple pavement sections.
2. The sealant material and equipment used to heat, handle, and apply sealant material in accordance with the manufacturer's specifications. Provide the material manufacturer's specifications to the Engineer upon request.
3. Reservoir configuration for the saw or rout and seal operation.
4. Procedures for crack cleaning.
5. Replacement criteria for cutting tools.
6. Controls implemented to ensure flying dust and debris is not directed toward adjacent traveled lanes, pedestrians, parked vehicles, or buildings.
7. An action plan for adjusting crack sealing operations to address actual environmental conditions if adverse environmental conditions occur.
8. Proposed procedure for monitoring the work to ensure acceptance requirements are met.

H. **Acceptance.** Upon completion of work, schedule an inspection with the Engineer. The Engineer will note deficiencies, including areas exhibiting adhesion failure, cohesion failure, missed cracks, or other factors the Engineer determines unacceptable. Correct work the Engineer identifies as unacceptable. Notify the Engineer upon completion of required corrective work.

502.04. Measurement and Payment.

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

A. **Overband Crack Fill.** The Engineer will measure **Overband Crack Fill, Roadbed** along the roadway centerline. This measurement includes traffic lanes, paved shoulders, auxiliary lanes, and ramps to the

2-foot gore point. For divided highways, the Engineer will measure the roadway separately in each direction.

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

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

B. **HMA Crack Treatment.** The Engineer will measure **HMA Crack Treatment, Roadbed** along the roadway centerline. This measurement includes traffic lanes, paved shoulders, auxiliary lanes, and ramps to the 2-foot gore point. For divided highways, the Engineer will measure the roadway separately in each direction.

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

The Engineer will measure **HMA Crack Treatment, Ramp** along the ramp centerline beginning at the 2-foot gore point.

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