

**MIDLAND COUNTY ROAD COMMISSION**

**BID FORM**

Sealed Proposals will be received at the office of Board of Road Commissioners, County of Midland, at 2334 N. Meridian Road, Sanford, Michigan, until:

**DATE: Monday, March 7th, 2016 at 1:00 p.m.**

**Estimated Quantity, 28160 Syd**

**Item No. 27 – Micro Cold Milling HMA, 0-2”**

Micro Cold Milling HMA, 0-2 Inches.....\$\_\_\_\_\_/SYD

**DESCRIPTION**

This work shall consist of profile milling existing HMA surface to the depth and cross section as shown on the log or plans. Includes all equipment, materials, labor, and traffic control necessary to remove the material and haul it to MCRC’s Clay Pit located in Sanford, MI. The project site is an approximate 2 mile stretch of Eastman Road in Larkin Township.

COMPANY BIDDING \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE/FAX \_\_\_\_\_

\_\_\_\_\_  
AUTHORIZED SIGNATURE TITLE

**INDICATE ON ENVELOPE:** Company Name, Item Number, Bid Item, Time and Date

MIDLAND COUNTY ROAD COMMISSION  
SPECIAL PROVISION  
FOR  
**MICRO COLD MILLING HOT MIX ASPHALT (0 to 2 inches)**

MCRC:ALB

1 of 2

02-15-16

**a. Description.** This work consists of production milling, removal, and disposal of existing hot mix asphalt (HMA) surface.

**b. Materials.** None specified.

**c. Equipment.** Equip the milling machine with a built-in automatic grade averaging control system that can control the longitudinal profile and transverse cross-slope to produce the specified results.

Provide a milling machine capable of removing a minimum of half the lane width to a depth of 2 inches. Provide a milling drum with a minimum of 3 wraps of carbide teeth with a maximum tooth spacing of 3/16 inch. Carbide cutting teeth are required to be uniform in diameter and have a uniform length of  $\pm 0.03$  inches. Tooth holder blocks are required to be uniform and not cause variations in the cut radius greater than 0.03 inches. Teeth on the revolving cutting drum must be continually maintained and replaced as warranted to provide a uniform surface texture. The contractor must submit a copy of the drum manufacturer's specifications meeting the requirements of this special provision prior to the start of work.

Advancing ground speed of the milling operation must provide a full uniform texture pattern that will be determined on a test section prior to commencement of work. Supply documentation showing the recommended revolutions per minute (RPM) and advancing speed for the milling machine. Do not exceed a milling speed of 2/3 the drum RPM's in feet/minute.

Equip the milling machine with an integral pickup and conveying device to immediately remove material being milled from the surface of the roadway and discharge the millings into a truck in one operation. Provide a machine with a means of effectively limiting the amount of dust escaping from the milling and removal process.

For non-mainline areas where it is impractical to use the equipment described above, alternative equipment may be permitted with approval of the Engineer. Alternative equipment must be capable of providing a textured surface tolerance the same as the mainline milled surface.

**d. Construction.** Mill all areas as indicated on the plans or as directed by the Engineer. In rutted areas, mill no deeper than necessary to texture the low points of the wheel ruts. Texture the entire surface substantially free from waves or irregularities with a maximum 1/8 inch variation between ridge contact points as measured with a 10 foot straightedge.

Bumps and depressions that exceed the specified tolerance and require additional milling will be subject to correction as directed by the Engineer at no additional cost to the Department.

Provide protection around existing manholes, catch basin inlets, utility valve boxes, and any similar structures. Any damage to such structures as a result of the milling operation will be repaired at the Contractor's expense. The Contractor is responsible for preventing the milled material from falling

into inlet openings. Any milled material that does fall into inlet openings must be removed by the Contractor.

Provide positive drainage for all milled surfaces and make every attempt to work with existing drainage and grades to maintain positive flow.

Dispose of the HMA millings off site unless otherwise stated in the contract.

**e. Acceptance.** Construct a 500 foot test section on the first day of milling at the machine ground speed and RPM's that will be used for the project. Any request by the Contractor to increase the forward speed of the milling operation will require an additional test section and be at the discretion of the Engineer.

The Department will randomly select a minimum of 4 locations at each site and the average mean texture depth (MTD) will be determined. The finished surface macrotexture MTD must be a maximum of 0.08 inches as measured according to the requirements of *ASTM E 965* volumetric technique.

**f. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

<b>Pay Item</b>	<b>Pay Unit</b>
Micro Cold Milling, HMA, 0 to 2 inches .....	Square Yard

**Micro Cold Milling, HMA, 0 to 2 inches** will be measured in square yards of removed area to the depth(s) specified in the contract. The Engineer may direct the depth to be adjusted during the initial pass  $\pm 1/2$  inch due to field conditions such as scabbing or delamination at no additional cost. The milled area is defined as the actual length and width of the milled surface visually verified and accepted by the Engineer for payment. No area deductions will be made for minor unmilled areas such as catch basin inlets, manholes, utility boxes and similar structures. Payment **Micro Cold Milling, HMA, 0 to 2 inches** includes all labor, equipment, and material necessary to complete the work according to this special provision. Removing and disposing of the millings, and cleaning the pavement, are included in the cost of this item.