

SECTION 02575

PAVEMENT REPAIR

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Bituminous Road Restoration.
- B. Bituminous Drive Restoration.
- C. Gravel Shoulder.
- D. Concrete Curb and Gutter.
- E. Concrete Drive Restoration.
- F. Concrete Road Restoration.

1.2 RELATED SECTIONS

- A. Section 02222 - Excavation.
- B. Section 02223 - Backfilling.
- C. Section 02225 - Trenching.
- D. Section 02231 - Aggregate Base Course.
- E. Section 02520 - Portland Cement Concrete Paving.
- F. Section 03001 - Concrete for pavements.

1.3 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Bituminous Road Restoration:
  - 1. Basis of Measurement: At the unit price bid per square yard as stated in the proposal.
  - 2. Basis of Payment: Includes all equipment, material, and labor required to excavate or fill to subgrade, place, grade, and compact, granular subbase and aggregate base, certifications, and placing and compacting paving materials.
- B. Bituminous Drive Restoration:
  - 1. Basis of Measurement: At the unit price bid per square yard as stated in the proposal.
  - 2. Basis of Payment: Includes all equipment, material, and labor required to excavate or fill to subgrade, supply, place and compact, granular subbase and aggregate base, certifications, and placing and compacting paving materials.

- C. Gravel Shoulder:
  - 1. Basis of Measurement: At the unit price bid per square yard as stated in the proposal.
  - 2. Basis of Payment: Includes all labor, material, equipment necessary to place, grade, and compact aggregate shoulder as necessary for construction.
  
- D. Concrete Curb and Gutter:
  - 1. Basis of Measurement: At the unit price bid per lineal foot as stated in the proposal.
  - 2. Basis of Payment: Includes equipment, material and labor to remove and dispose of existing curb, excavation, fill material, compacting and constructing a new curb per current MDOT standard specifications and standard plans.
  
- E. Concrete Drive Restoration:
  - 1. Basis of Measurement: At the unit price bid per square foot or square yard as stated in the proposal.
  - 2. Basis of Payment: Includes equipment, material and labor to remove and dispose of existing pavement, excavation, placement and compact fill material, set forms, place reinforcing steel, place concrete, float, finish, and test Class A concrete.
  
- F. Concrete Road Restoration:
  - 1. Basis of Measurement: At the unit price bid per square foot or square yard as stated in the proposal.
  - 2. Basis of Payment: Includes equipment, material and labor to remove and dispose of existing pavement, excavation, placement and compact fill material, compacting, forming and constructing a new concrete pavement per MDOT specifications.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01300 - Submittals.
- B. Submit shop drawings and product data for all items to be installed and/or constructed within this Section.

#### 1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with applicable requirements of Section 03001 - Concrete.

#### 1.6 REGULATORY REQUIREMENTS

- A. Perform construction within public road right-of-way to meet the requirements of the authority having jurisdiction.
- B. Obtain construction permits as required by the authority having jurisdiction over the Work in the public right-of-way. Notify the authority 48 hours prior to working within the road right-of-way.
- C. Maintain traffic control as required in Section 01570 – Traffic Regulations.

#### 1.7 REFERENCES

- A. Michigan Department of Transportation 2003 Standard Specifications for construction.

- B. Eaton County Road Commission Standards.
- C. MS-2 - Mix design methods for Asphalt Concrete and Other Hot Mix Types - The Asphalt Institute (AI).
- D. ASTM D946 - Penetration - Graded Asphalt Cement for Use in Pavement Construction.

## 2. PART 2 PRODUCTS

### 2.1 MATERIALS AND MIX - PAVEMENTS

- A. MDOT 22A Dense Graded Aggregate – for bituminous pavement aggregate.
- B. MDOT 23A Dense Graded Aggregate – for gravel road surface course, road shoulder, and gravel drive surface course.
- C. Cold patch for temporary patches.
- D. Asphalt: Conform to MDOT Standards.
  - 1. Leveling Course: 3C Mix
  - 2. Wearing Course: 4C Mix
- E. Paint: Regular dry paint for pavement markings shall conform to MDOT Standards in accordance with the MDOT Standard Specifications for Construction current edition.
- F. Asphalt Bond Coat: MDOT Standards.
- G. All concrete shall be Class A as specified in Section 03001 – Concrete.

### 2.2 ACCESSORIES

- A. Asphalt Bond Coat to be homogenous, medium curing, liquid asphalt in accordance with MDOT Standards and approved by the Engineer.

### 2.3 SOURCE QUALITY CONTROL

- A. Provide mix design under provisions of Section 01400 – Quality Control.
- B. Submit proposed mix design of each class of concrete to appointed firm for review prior to commencement of Work.
- C. Submit certification for cement and aggregates to ensure conformance with specified requirements as required by the Engineer.

## 3. PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify base conditions under provisions of Sections 02223 - Backfilling and 02225 - Trenching.
- B. Verify that compacted subgrade, granular base or aggregate base is dry and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

### 3.2 INSTALLATION OF TEMPORARY PATCHES

- A. Permanent or acceptable temporary repairs of all driveways and roadways shall be made immediately after the utility is installed.
- B. Bituminous and/or concrete drives to be repaired shall be sawcut to a straight. The driveway shall be replaced to an existing joint if located within 5 feet of the utility trench. The minimum replacement width shall be the trench width plus 4 feet.
- C. All drives shall be completely backfilled with sand compacted to 95 percent of its maximum dry density as determined by modified proctor method.
- D. Maintain temporary patches until final patch can be installed. Mark areas with appropriate signs to provide motorists with adequate warning.

### 3.3 PREPARATION

- A. Adjust manholes, catch basins, valve boxes, and monument boxes to grade.
- B. Sawcut and remove existing pavement a minimum of 2 feet back from top edge of undisturbed soil on both sides of trench.
- C. Sawcut to a minimum of 1 1/2 inch depth on straight line perpendicular to the roadway.
- D. Remove pavement to an existing joint when a joint lies within 5 feet of the top edge of undisturbed soil.
- E. Notify Engineer minimum 2 working days prior to placing paving mix.
- F. Coat surfaces of manhole and catch basin frames and valve and monument boxes with oil to prevent bond with paving mix.
- G. Asphalt:
  - 1. Apply bond coat in accordance with manufacturer's instructions and MDOT standard requirements.
  - 2. Apply bond coat to contact surfaces of curbs and existing pavement.
- H. Prepare other areas damaged during construction as determined by the Engineer according to these guidelines.
- I. Road surface shall be prepared in accordance with MDOT standards to accept pavement markings.

### 3.4 PLACEMENT

- A. Thickness:
  - 1. Asphalt Road: As noted in the plans.
  - 2. Gravel: 8 inches minimum or match existing thickness whichever is greater.
- B. Compact asphalt pavement by rolling with a minimum 5ton roller unless otherwise directed by Engineer. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- C. Develop rolling with consecutive passes to achieve even and smooth finish, without roller marks for asphalt paving.

- D. Materials, construction and methods of placement to conform to MDOT Standard Specifications for Construction. Curb and gutter shall match the current Eaton County Road Commission and Michigan Department of Transportation standard plans.
- E. Replace curb and gutter where required, matching section and details of existing, including joints, reinforcement and ties. See Section 02520 – Portland Cement Concrete Paving.
- F. Concrete: Refer to Section 02520 – Portland Cement Concrete Paving.
- G. Gravel Road Shoulder: Place 4 inch gravel road shoulder to the width as shown on the plans and compact to a minimum of 98 percent of the materials maximum dry density according to the modified proctor method.
- H. Grade surfaces to match existing elevations and for drainage.
- I. Apply pavement markings in compliance with MDOT Standards.

3.5 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400 – Quality Control.

END OF SECTION