

SECTION 32 12 02

FLEXIBLE PAVING (MUNICIPAL AND STATE AID PROJECTS)

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Hot plant mixed asphalt-aggregate mixtures for wearing and non-wearing pavement courses.
 - 2. Bituminous tack coat.
- B. Related Sections
 - 1. Section 32 11 23 - Aggregate Base Courses.
 - 2. Section 32 16 13 - Concrete Curbs and Gutters.

1.02 PRICE AND PAYMENT PROCEDURES

- A. Measurement and Payment
 - 1. Bituminous Material for Tack Coat: Measured by volume in gallons at 60 degrees F. Payment shall be at the unit price bid per GALLON of bituminous tack coat installed. The amount bid shall include all material and work required to mix and place the tack coat specified. Cleaning of all debris and dirt from the previous bituminous surfaces prior to placement of Tack Coat is included in the Bid Unit Price for Tack Coat. Payment for tacking exposed edges of existing bituminous surfaces and concrete curb and gutter in conjunction with non wearing course placement is considered incidental to the placement of the non wearing course.
 - 2. Bituminous Paving: Payment shall be at the unit price bid per TON of bituminous surfacing for the respective bituminous courses. The amount bid shall include all material and work required to mix and place the bituminous course specified.
- B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid. The costs shall be included in the unit price bid for the associated bituminous paving items. Such items of work include but are not limited to:
 - 1. Equipment and materials necessary for meeting the testing requirements of Source Quality Control for the bituminous tack coat, if required, include in price bid for bituminous tack coat.
 - 2. The cost of all labor, equipment and materials necessary to comply with the testing
 - 3. requirements of the "Certified Plant" designation, include in price bid for Plant-Mixed Bituminous Surfacing.
 - 4. The cost of all labor, equipment and materials necessary for constructing clean, vertical,
 - 5. solid edge at the adjacent asphalt surface, include in the price bid for Plant-Mixed Bituminous surfacing.
 - 6. The cost of all labor, equipment and materials to adjust all castings and gate valves twice; once during base course construction and once at wear course construction.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.).
 - 1. Plant mixed asphalt pavement shall conform to the current MnDOT Specification 2360 Plant Mixed Asphaltic Pavement and Technical Memoranda in force 30 calendar days prior to bid date and referencing the use of English units of measure, except as modified in these Specifications.

2. MnDOT Specification Section 2357 shall apply to the construction of bituminous tack coat, except as modified herein.
3. MnDOT Section 02360.7C (Pavement Smoothness Specification – IRI (International Roughness Index)) is hereby DELETED.
4. Unless noted otherwise, the provisions in this Section are in addition to the referenced specification.

1.04 SUBMITTALS

- A. Submit mixture design report to the Engineer. Conform to MnDOT Spec. 2360.2.F and 2360.2.G.8, and Division 01.
- B. Submit mix design report for all projects, regardless of the size of the project.
- C. Submit Q/C results in accordance with MnDOT Spec. 2360.2.G.8 and MnDOT's most recent Materials Control Schedule.

1.05 PRE PAVING ITEMS

- A. There shall be an inspection of the sanitary sewer, storm sewer and watermain utilities prior to the start of construction. The Contractor shall notify the Engineer twenty-four (24) hours in advance to aid in accomplishing this inspection. All deficiencies in these existing systems prior to beginning street construction must be immediately brought to the attention of the Engineer.
- B. After the manholes and valve boxes are cleaned, and raised to proper grade prior to paving, they shall be inspected to assure trouble free operation.
- C. Curb Boxes: The Contractor shall be responsible for locating all curb boxes within the limits of the project. The Contractor shall notify the Engineer at least twenty-four (24) hours in advance of this location work so that a representative of the Engineer can be present at all times while this work is being done. This work shall be done prior to start of construction. Prior to completion of the project, the curb boxes shall be adjusted to be flush with the surface.
- D. A final inspection of all utilities will be performed at the completion of the project for acceptance. Adjustments shall be made as follows:
 1. Sanitary Sewer - All sanitary sewer manhole castings shall be left in place during the paving operation. The castings shall be adjusted before the wear course is laid and shall be left between ¼ inch and ½ inch below finished grade. Where the Engineer requires or where it is impossible to adjust the structure with the addition or removal of adjustment rings, reconstruction will be necessary. In such cases, it will be necessary to add or remove manhole sections. Remove or adding manhole section will be paid separately under reconstruct manhole.
 2. Storm sewer - Existing storm sewer castings shall be adjusted where necessary to be 0.1 foot below finished gutter line except in areas of surmountable curb for which the top of casting shall match the top of curb.
 3. Water Valve Boxes - All water valve boxes shall be adjusted prior to placement of wear course and left between ¼ inch and ½ inch below finished grade. Thorough tamping of the material around the valve box is required. In the event the valve box cannot be adjusted without the use

- of extensions, the Contractor shall remove the upper section, place the necessary extension and replace the upper section.
4. Grouting Adjusting Rings - Whenever adjustment rings are grouted, the Contractor shall grout the rings; place the casting and remove all excess grout on the inside of the manhole by wiping smooth with a gloved hand or similar instrument.
 5. Castings – All castings shall be cleaned after paving is completed. All pickholes shall be cleaned and all castings shall be able to be opened without extra effort.

PART 2 PRODUCTS

2.01 CERTIFIED PLANT

- A. The supplier shall have sufficient testing facilities and qualified personnel including Certified Technicians. If requested by the Engineer, the required tests shall be performed in a timely manner and with a good quality control program.

2.02 MATERIALS

- A. Bituminous material and aggregate shall be as shown on the typical sections in the plans.
- B. The bituminous material used for bituminous driveways shall conform to Section 2360 of the Minnesota Department of Transportation Standard Specification with the exception that the maximum aggregate size may be one-half inch (1/2") in diameter.

2.03 BITUMINOUS TACK COAT

- A. The bituminous material for tack coat shall be applied in accordance with Section 2357 of the Minnesota Department of Transportation Standard Specification. The rate of application shall be 0.05 gallons per square yard of surface or as approved by the Engineer.
- B. The bituminous material for tack coat shall be CSS-1H.

2.04 PLANT MIXED BITUMINOUS SURFACING

- A. Plant mix bituminous surfacing shall be in accordance with Section 2360 of the Minnesota Department of Transportation Standard Specification.

PART 3 EXECUTION

3.01 BITUMINOUS TACK COAT

- A. The material shall be applied at the rate of 0.05 gallons per square yard.
- B. The contact surfaces of all fixed structures, the edge of the in-place mixture in all courses at transverse joints, and the wearing course at longitudinal joints shall be given a uniform coating of Liquid Asphalt or Emulsified Asphalt before placing the adjoining mixture. The bituminous material shall be applied by methods that will ensure uniform coating and in no case shall the application be excessive.

3.02 BITUMINOUS STREET PAVING

- A. The bituminous wearing course shall be constructed in the construction season following the season in which the underground utilities, aggregate base and bituminous base course have been constructed.
- B. The Contractor is required to use the self-propelled pneumatic tire roller as an intermediate roller on the wearing courses.
- C. The bituminous surfacing shall be constructed with maximum deviation of plus or minus 1/4-inch from the planned compacted thickness.
- D. Cut the adjacent asphalt surface prior to construction of the bituminous surface course to obtain a clean, vertical, solid edge.
- E. It shall be the Contractor's responsibility to cover all manholes and valves with a protective material or device to keep the bituminous material from sealing the covers to the frame during the seal coat process.
- F. Compaction of all bituminous mixtures shall be by the Maximum Density Method.

3.03 BITUMINOUS DRIVEWAY CONSTRUCTION

- A. The driveway slab shall form a smooth transition from the street to property line and shall provide drainage to the street.
- B. Excess material developed in grading the driveway subbase shall be disposed off site by the Contractor and at the Contractor's expense.
- C. As determined by the engineer, it may be necessary to excavate the existing driveway beyond the property line. The existing driveway material will have to be replaced and shall be done at the contract unit price bid for the type of material being replaced.
- D. Driveway subbase shall be brought to a smooth grade by excavating or filling to allow for the placing of 6 inches of Class 5 gravel and a 3 inch bituminous mat.
 - 1. Where a 4 inch gravel base already exists but is loose or unstable, the top 1 inch of base shall be excavated, replaced with Class 5 gravel, and compacted prior to the installation of the bituminous mat.
- E. All Class 5 aggregate shall be compacted to 100% dry density. A mechanical tamper or any other approved method will be required for compaction of subgrade.
- F. Refer to standard plates for typical sections and width requirements. Also see the Driveway and Sidewalk Construction Policy for additional details.

3.04 QUALITY CONTROL

- A. Source Quality Control
 - 1. The bituminous mix shall be designed using Contractor Trial Mix Designs. A current Mn/DOT mix design may be accepted provided it represents the aggregate source and bituminous plant being used for the project, and is approved by the Engineer. No bituminous mixture shall be placed without an approved mix design.
 - 2. Testing of the material bituminous tack coat may be required, if determined by the Engineer, that the material appears suspect.

B. Field Quality Control

1. Three (3) inch diameter core samples shall be taken by the Owner to verify the thickness of the compacted finished bituminous structure. Sample locations shall be designated by the Engineer and made with a drilling device that produces clean sharp, vertical edges.
2. If any cores prove deficient, the Contractor may, at its own cost and expense, take additional core samples to further define the extent of the deficiency.
3. The Engineer shall calculate deficient pavement areas using the locations and thickness results of all core samples and prorating the thickness profile.
4. A \$0.50 deduction per square yard will be made for each 1/8-inch deficiency of thickness beyond the specified tolerances.
5. Reduction in payment for bituminous courses constructed to more than the a maximum permissible thickness shall be in accordance with MnDOT Section 2360.7, except that the thickness tolerances specified herein apply.

C. Testing:

1. Should any of the specified tests fail, the Contractor shall notify the Engineer immediately and shall arrange and pay for additional test as may be necessary to satisfy the Engineer that the requirements have been met.

This Page Left Blank Intentionally