SECTION 32 1216 – ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this section.

B. Comply with most current edition of the Northwestern University Design Standards.

B. This Section includes:

1. Cold milling of existing
2. Hot-mix asphalt patchi

C. Material Certificates: For each paving material, from manufacturer.

D. Material Test Reports: For each paving material.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the Illinois DOT

B. Testing Agency Qualifications: Qualified according to ASTM D 3666 for testing indicated.

C. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of the City of **[Evanston / Chicago]** for asphalt paving work.

1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.6 Project Conditions:

A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of IDOT for asphalt paving work.

B. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:

1. HMA Temperature: Delivered between 250 deg F and 350 deg F
2. Prime Coat: Minimum surface temperature of 60 deg F
3. Slurry Coat: Comply with weather limitations in ASTM D 3910.
4. Asphalt Base Course: Minimum surface temperature of 40 deg F in the shade and rising at time of placement.
5. Asphalt Surface Course: Minimum surface temperature of 45 deg F in the shade at time of placement and rising at time of placement.

C. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 55 deg F for water-based materials, and not exceeding 95 deg F. When more restrictive, manufacturer limits shall be adhered to.

D. Imprinted Asphalt Paving: Proceed with coating imprinted pavement only when air temperature is at least 50 deg F and rising and will not drop below 50 deg F within 8 hours of coating application. Proceed only if no precipitation is expected

PART 2 - PRODUCTS

A. Aggregates:

1. General: Use materials and gradations that have performed satisfactorily in previous installations.
2. Coarse Aggregate: ASTM D 692, sound; angular crushed stone, crushed gravel.
3. Fine Aggregate: ASTM D 1073, sharp-edged natural sand or sand prepared from stone, gravel, or combinations thereof.

4. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.
5. Mineral Filler: ASTM D 242, rock or slag dust, hydraulic cement, or other inert material.

B. Asphalt Materials:

1. Asphalt Binder: AASHTO M 320 and AASHTO MP 1a, PG 58-28, PG58-22, PG64-22
2. Prime Coat: ASTM D 2027, medium-curing cutback asphalt matching IDOT MC-30 per Section 1032 of the Standard Specifications for Road and Bridge construction.
3. Tack Coat: IDOT SS-1, SS-1hP, CSS-1, CSS-1hP, emulsified asphalt or cationic emulsified asphalt, slow curing, diluted in water, per Section 1032 of the Standard

J. Dowels: Reinforcing Bars: ASTM A 615, Grade 60; deformed

K. Imprinted Asphalt Materials:

1. Templates: Imprinted-asphalt manufacturer's standard flexible templates for imprinting pattern into hot asphalt paving.
2. Pattern: Specify or indicate on Drawings.

L. Coating System: Imprinted-asphalt manufacturer's standard system formulated for exterior application on asphalt paving surfaces.

1. Base Coating: Portland cement and epoxy-modified acrylic polymer blended with sand and aggregate, formulated for exterior application on asphalt paving surfaces.
2. Top Coating: Epoxy-modified acrylic polymer blended with sand and aggregate, formulated for exterior application on asphalt paving surfaces.
3. Colorant: UV-stable pigment blend, added to each coating layer.
4. Color: Specify or indicate on Drawings.

M. Mixes:

1. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes designed according to the Illinois Modified Strategic Highway Research Program criteria and the IDOT Special Provision “Superpave Bituminous Concrete Mixtures”.
2. Binder Course Mixture N50, IL-19.0, Surface Course Mixture N50, IL-9.5,Mix “C” designed in accordance with Sections 1030 and Sections 406 and 407 of the Standard Specifications for Road and Bridge Construction and the special provision, “Quality Control/Quality Assurance of Bituminous Concrete Mixtures.”
3.

3.2 SURFACE PREPARATION

A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

B. Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate

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2. In-place density of compacted pa

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