

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Hot-mix asphalt paving.
 - 2. Hot-mix asphalt patching.
 - 3. Asphalt surface treatments:
 - a. Seal coats
 - b. Crack sealants

1.2 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed hot-mix asphalt paving similar in material, design, and extent to that indicated for this project and with a record of successful in-service performance.
- B. Manufacturer Qualifications: Engage a firm experienced in manufacturing hot-mix asphalt similar to that indicated for this Project and with a record of successful in-service installations.
- C. Regulatory Requirements: Conform to applicable standards of authorities having jurisdiction for asphalt paving work on public property.
- D. Regulatory Requirements: Conform to applicable standards of the San Diego County Air Pollution Control District for quantities of volatile organic compounds (VOC) used in all materials.
- E. Asphalt-Paving Publications: Comply with Cal Trans Standards, Green Book 2008 Edition, and Asphalt Institute's "The Asphalt Handbook."

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Base Course Aggregate: Class 2 Aggregate Base mineral aggregate, $\frac{3}{4}$ inch maximum size, as specified in "Public Works Construction" Standard Specifications.
 - 1. Recycled asphalt paving may be used as base course aggregate, subject to complying with "PUBLIC WORKS CONSTRUCTION" Standard Specifications.
- C. Asphalt Aggregate: Type B Aggregate, as specified in "PUBLIC WORKS CONSTRUCTION" Standard Specifications.
 - 1. $\frac{3}{4}$ inch maximum size for base course.
 - 2. $\frac{1}{2}$ inch maximum size for surface course.

2.2 ASPHALT MATERIALS

- A. Asphalt Pavement Leveling Course: Conform to Viscosity Grade B-AR-4000 in Section 203 1.2 and Section 203-6 of the Reference Specification.
- B. Asphalt Pavement Wearing (Surface) Course: Conform to Viscosity Grade C2-AE-8000 in Section 203-1.2 and Section 203-6 of the Reference Specification.

- C. Prime Coat: Grade SC-70 liquid asphalt conforming to Section 203-2 of the Reference Specification.
- D. Tack Coat: Emulsified asphalt grade SS-1h conforming to Section 201-3 of the Reference Specification.
- E. Asphalt Paint: Conform to ASTM D41 or D43 per Section 203-8 of the Reference Specification.
- F. Water: Potable.

2.3 ASPHALT MIXES

- A. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction and designed according to procedures in Asphalt Institute's "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types."
 - 1. Comply with "PUBLIC WORKS CONSTRUCTION" Standard Specifications.
 - 2. Provide mixes complying with the composition, grading, and tolerance requirements of ASTM D3515 for the following nominal, maximum aggregate sizes:
 - 3. Surface Course: ½ inch maximum.

PART 3 - EXECUTION

3.1 PAVEMENT SECTIONS

- A. The pavement design will be based on laboratory R-Value testing of the imported fill materials and the traffic index designation provided by the Design/Builder. When the source of the import is identified or stockpiled on-site, laboratory R-Value testing should be performed and the appropriate pavement design will be provided. For preliminary planning purposes, a typical structural section would consist of 4 inches asphalt concrete over 6 inches of aggregate base placed above sub-grade soil compacted to at least 95 percent relative compaction.

3.2 BASE COURSE

- A. Place base course on sub-grade as follows:
 - 1. Compact base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
 - 2. Shape base to required crown elevations and cross-slope grades.
 - 3. When thickness of compacted base course is 6 inches or less, place materials in a single layer.
 - 4. When thickness of compacted sub-base or base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches or less than 3 inches thick when compacted.

3.3 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted. Grind and overlay where joining in lieu of butt-type joint.

3.4 CRACK REPAIR

- A. Remove vegetation and treat with herbicide.
- B. Rout cracks in accordance with SHARP H348 and H349.
- C. Fill cracks with hot-applied joint sealant. Apply with a wand from a double jacketed melter.
 - 1. Over-fill cracks and squeegee level with pavement.

3.5 SEAL COAT

- A. Preparation: All areas shall be power-swept, vacuumed and cleared of loose material.
 - 1. Standing water shall be spread out and allowed to dry. Do not apply seal coat to wet or damp surfaces.
 - 2. Oil spots shall be manually scraped and cleaned with a mild detergent. Apply primer over highly saturated petroleum areas.
 - 3. Cover and protect items within paved area that are not to be coated, such as valve boxes, manholes and concrete.
- B. Seal Coat Application: Apply first coat at rate of 0.125 to 0.185 gallons per square yard. After first coat has dried, apply second coat at rate of 0.100 to 0.185 gallons per square yard.

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: the University will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.
- B. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.
- C. Additional testing, at Design/Builder's expense, will be performed to determine compliance of corrected Work with specified requirements.
- D. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D3549.

END OF SECTION