

SECTION 02505

PAVING BASE AND SUBBASE COURSE

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SECTION 02505

PAVING BASE AND SUBBASE COURSE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Granular Base and Subbase (also referred to as subbase and base aggregates or subbase and base gravels)

1.02 RELATED REQUIREMENTS

- A. Section 02100 - Site Preparation
- B. Section 02200 – Earthwork
- C. Section 02220 - Excavation, Backfill and Compaction
- D. Section 02227 - Aggregate Materials
- E. Section 02511 - Asphaltic Concrete Paving
- F. Section 02525 - Curb and Sidewalks
- G. Section 02900 – Seeding and Miscellaneous Site Work

1.03 REFERENCES

- A. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1157 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lbs (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
- C. ASTM D2167 - Test for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
- D. ASTM D1556 - Test Method for Density of Soil in-place by the Sand-Cone Method.
- E. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth) Method B (Direct Transmission).
- F. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.

PART 2 - PRODUCTS

2.01 FILL MATERIALS (SPECIFICATION WRITER SHOULD EDIT TO REFLECT PROJECT TESTING LAB PROVISIONS)

Submit materials certificate to on-site independent testing laboratory which is signed by material producer and Contractor, certifying that materials comply with, or exceed, the requirements herein. Materials shall comply with the gradations specified in Section 02227, Aggregate Material.

PART 3 - EXECUTION

3.01 EXAMINATION

Verify substrate has been inspected, gradients and elevations are correct, and dry.

3.02 CONSTRUCTION

- A. Perform base course construction in a manner that will drain surface properly at all times and at same time prevent runoff from adjacent areas from draining onto base course construction.
- B. Compact base material to not less than 95% of maximum density as determined by ASTM D-1557 unless otherwise indicated on the Drawings.
- C. Granular Base: Construct to thickness indicated on Drawings. Apply in lifts or layers not exceeding 6", measured loose.
- D. Granular Subbase: Construct to thickness indicated on Drawings. Apply in lifts or layers not exceeding 8", measured loose.
- E. All work of this section shall conform to the requirements of Sections 304 of the Maine Department of Transportation Specification for furnishing, placing, and surface tolerance of aggregate base and subbase courses.

3.03 FIELD QUALITY CONTROL

- A. An Independent Testing Laboratory, selected and paid by Contractor, (**SPECIFICATION WRITER SHALL VERIFY**) shall be retained to perform construction testing of in-place base courses for compliance with requirements for thickness and tolerance. Paving base course tolerances shall be verified (by rod and level readings on no more than fifty-foot centers) to +0.05' of design elevation that allow for paving thickness as shown in the Drawings. Contractor shall provide instruments and a suitable benchmark.
- B. The following tests shall be performed on each type of material used as base course material:
 - 1. Moisture and Density Relationship: ASTM D 698 or ASTM D 1557.
 - 2. Mechanical Analysis: AASHTO T-88
 - 3. Plasticity Index: ASTM D-4318-84
 - 4. Base material thickness: Perform one test for each 20,000 square feet in-place base material area.
 - 5. Base material compaction: Perform one test in each lift for each 20,000 square feet in-place base material area.
 - 6. Test each source of base material for compliance with applicable state highway specifications.
- C. Field density tests for in-place materials shall be performed according to one of the following standards as part of construction testing requirements:
 - 1. Sand-Cone Method: ASTM D1556
 - 2. Balloon Method: ASTM D2167
 - 3. Nuclear Method: ASTM D2922, Method B (Direct Transmission).
- D. Independent Testing Laboratory shall prepare test reports that indicate test location, elevation data, and test results. The Owner, Engineer, and Contractor shall be provided with copies of reports within 96 hours of time test was performed. In event that any test performed fails to meet these Specifications, the Owner and Contractor shall be notified immediately by Independent Testing Laboratory. The Owner reserves right to employ a second Independent Testing

Laboratory and to direct any testing that is deemed by them to be necessary. Contractor shall provide free access to site for testing activities.

- E. Any base or subbase courses which become contaminated due to weather, erosion, or other activities, whether or not such contamination is under the control of the Contractor shall be removed and replaced. Said removal and replacement shall be incidental to the work and no additional payment will be made to the Contractor.

---END OF SECTION 02505---