

SECTION 02245

SOIL STABILIZATION

(SPECIFICATION WRITER MAY DELETE THIS SECTION)

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SECTION 02245

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PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Lime or Electrochemically Stabilized Subgrade
- B. Cement Stabilized Subgrade
- C. Fly Ash Stabilized Subgrade
- D. Geotextile Fabric

1.02 RELATED SECTIONS

- A. Section 02200 – Earthwork ***check cross references***
- B. Section 02223 - Excavation, Backfilling, and Compacting for Pavement ***check cross references***
- C. Section 02227 - Aggregate Materials ***check cross references***
- D. Construction Drawings
- E. Geotechnical Report for boring locations and findings of subsurface materials and conditions.

1.03 REFERENCE STANDARDS

- A. American Society for Testing Materials (ASTM) latest edition.
 - C 150 - Portland Cement
 - C 618 - Fly Ash for Soil Stabilization
 - C 977 - Quicklime and Hydrated Lime for Soil Stabilization
 - D 1633 - Test method for compressive strength of molded soil cement cylinders
 - D 4320 - Chemically - Grouted Soils
- B. American Association of State Highway and Transportation Officials (AASHTO) latest edition.
 - M 216 - Lime for Soil Stabilization National Lime Association (NLA).
- C. Bulletin 326 - Lime Stabilization Construction Manual.

1.04 ENVIRONMENTAL REQUIREMENTS

Do not install mixed materials in wind in excess of 10 mph or when temperature is below 40^o F.

1.05 QUALITY ASSURANCE

Perform work in accordance with Maine and City of Saco standards in conjunction with requirements specified herein.

1.06 SUBMITTALS

- A. Submit a sample of each materials to be used in a 10 pound air-tight container to the testing laboratory.
- B. Submit the name of each materials supplier and specific type and source of each material. Any change in source throughout the job requires approval of the Owner or Engineer.
- C. Submit mix design and materials mix ratio that will achieve specified requirements for soil stabilization of state and local agencies.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Lime or Electrochemical Additive
- B. Portland Cement
- C. Fly Ash
- D. Coarse Aggregate
- E. Fine Aggregate
- F. Subsoil: Existing Reused
- G. Geotextile Fabric for Stabilization
 - 1. Mirafi 500x or 600x
 - 2. Phillips 66 Supac 6WS
 - 3. Dupont Typar 3401 and 3601
 - 4. Trevira S1114 and S1120
 - 5. Tensar SS-1 and SS-2
 - 6. Exxon GTF-200 or 350

2.02 EQUIPMENT

Capable of excavating subsoil, mixing and placing materials, wetting, consolidation and compaction of material.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Obtain Engineer's approval of the mix design before proceeding with the placement.
- B. Do not start stabilization without weather and soil conditions being favorable for the successful application of the proposed material.
- C. Proof roll subgrade to identify areas in need of stabilization.

3.02 EXCAVATION

- A. Excavate subsoil to a depth sufficient to accommodate soil stabilization.
- B. Remove lumped subsoil, boulders and rock that interferes with achieving uniform subsoil conditions.

3.03 SOIL TREATMENT AND BACKFILLING

- A. Lime Stabilized Subgrade: Where indicated on Drawings or to condition borrow wet of optimum, treat prepared subgrade with hydrated lime in accordance with applicable State highway specification. Compact to not less than 93 percent of the optimum density, in accordance with ASTM D 1557.
- B. Cement Stabilized Subgrade: Where indicated on Drawings to condition borrow wet of optimum, treat prepared subgrade with Portland Cement in accordance with applicable State highway specification. Compact to not less than 93 percent of the optimum density, in accordance with ASTM D 1557.
- C. Maintain optimum moisture of mix materials to attain required stabilization.
- D. Finish surface within plus or minus one inch from required elevations.

3.04 GEOTEXTILE FABRIC

- A. Place fabric in those areas that are shown on the plans or in those areas that need additional stabilization prior to the placement of the base course.
- B. Place fabric specified in the plans and specifications in accordance with the manufacturer's recommendations.

---END OF SECTION 02245---