

**SECTION 02 57 16
SOIL STABILIZATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Excavating, treatment, and placement of lime treated subsoil mix.

1.02 RELATED REQUIREMENTS

- A. Section 31 22 00 - Earth Moving (Excavation, Filling and Grading)

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Submit mix design and materials mix ratio that will achieve specified requirements.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with NLA Bulletin 326.

1.05 FIELD CONDITIONS

- A. Do not install mixed materials in wind in excess of 10 mph (16 k/h) or when temperature is below 40 degrees Fahrenheit.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All fill materials are subject to testing and inspection. Fill considered suitable for backfilling and grading shall be free from wood, debris or other combustible materials, vegetable matter or any material subject to decay or disintegration, and any alkaline debris such as lime, plaster and cement from operations. On-site materials excavated within the work area may be used for filling and backfilling. The Authority's Inspector will determine whether the materials in the excavated areas are suitable for use as backfill. All unsuitable materials shall be removed and new materials approved prior to installation and compaction.
- B. Controlled Fill: sound, durable, sand, gravel, stone, or blends of these materials, free from organic or other deleterious materials :

Sieve Passing	Percent
1 1/2 inch	100
1 inch	80 - 100
1/4 inch	30 - 65
No. 40	5 - 40
No. 200	0 - 10

1. Magnesium Sulphate Soundness Test: 20% maximum loss by weight after 4 test cycles.

2.02 ACCESSORIES

- A. Geotextile Fabric: Non-woven polypropylene.

2.03 EQUIPMENT

- A. Equipment: Capable of excavating subsoil, mixing and placing materials, wetting, consolidation, and compaction of material.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not place fill over frozen or spongy subgrade surfaces.

3.02 EXCAVATION

- A. Protect adjacent structures from damage by this work.
- B. Excavate subsoil to depth indicated.

- C. Proof roll subgrade to identify soft areas; excavate those areas.
- D. Do not excavate within normal 45 degree bearing splay of any foundation.
- E. Notify Landscape Architect of unexpected subsurface conditions. Discontinue affected Work in area until notified to resume work.
- F. Correct areas over-excavated in accordance with Section 31 23 16.

3.03 3.03 SOIL TREATMENT AND BACKFILLING

- A. Site mix subsoil, backfill and compact. Blend treated subsoil mix to achieve required stabilization.
- B. Mix and wait 16 hours minimum and no more than 72 hours maximum before placing.
- C. Place mix material in continuous layers not exceeding 6 inches depth.
- D. Maintain optimum moisture content of mix materials to attain required stabilization.
- E. Do not exceed 30 minutes in placing adjacent mixed material.
- F. Commence compaction of mix no later than 60 minutes after placement.
- G. Compact to 95 percent of maximum density determined in accordance with applicable standards; test in-place density in accordance with applicable standards.
- H. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise.
- I. Shape to required line, grade, and cross section.
- J. Make grade changes gradual. Blend slope into level areas.
- K. At end of day, terminate completed Work by forming a straight and vertical construction joint.
- L. Replace damaged fill with new mix to full depth of original mix.
- M. Remove surplus mix materials from site.

3.04 3.04 CURING

- A. Immediately following compaction of mix, do not permit traffic for 72 hours after surface.

3.05 3.05 TOLERANCES

- A. Top Surface of Fill shall be flush with adjacent material.

3.06 3.06 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 40 00.
- B. Compression test and analysis of fill material will be performed in accordance with applicable standards.
- C. If tests indicate Work does not meet specified requirements, remove Work, replace and retest.

END OF SECTION 02 57 16