

CU-STRUCTURAL SOIL[®] INSTALLATION SPECIFICATIONS

1.1 GENERAL

- A. The work of this section consists of all Structural Soil work and related items as indicated on the drawings or as specified herein and includes, but is not limited to, the following:

CU-Soil[™] is a proprietary material patented by Cornell University (US Patent #5,849,069) and marketed under the registered trademark, CU-Structural Soil[®]. Only licensed companies are authorized to produce this material, meeting the specifications described in this text. For a list of licensed CU-Soil[™] producers, call AMEREQ, INC. at 800-832-8788.

1.2 DELIVERY, STORAGE AND HANDLING

- A. Delivered CU-Structural Soil[®] shall be at or near optimum compaction moisture content as determined by AASHTO T 99 (ASTM D 698) and should not be placed in frozen, wet or muddy sites.
- B. Protect CU-Structural Soil[®] from exposure to excess water and from erosion at all times. Do not store CU-Soil[™] unprotected. Do not allow excess water to enter site prior to compaction. If water is introduced into the CU-Soil[™] after grading, allow water to drain to optimum compaction moisture content.

1.3 EXAMINATION OF CONDITIONS

- A. All areas to receive CU-Structural Soil[®] shall be inspected by the installing contractor before starting work and all defects such as incorrect grading, compaction, and inadequate drainage shall be reported to the engineer prior to beginning this work.

1.4 QUALITY ASSURANCE

- A. Qualifications of installing contractor: The work of this section should be performed by a contracting firm which has a minimum of five years experience. Proof of this experience shall be submitted as per paragraph, SAMPLES and SUBMITTALS, of this section.

1.5 UNDERGROUND UTILITIES AND SUBSURFACE CONDITIONS

- A. The installing contractor shall notify the engineer of any subsurface conditions which will affect the contractor's ability to install the CU-Soil[™].
- B. The installing contractor shall locate and confirm the location of all underground utility lines and structures prior to the start of any excavation.
- C. The installing contractor shall repair any underground utilities or foundations damaged during the progress of this work.

1.6 SITE PREPARATION

- A. Do not proceed with the installation of the CU-Structural Soil[®] material until all walls, curb footings and utility work in the area have been installed. For site elements dependent on CU-Structural Soil[®] for foundation support, postpone installation of such elements until

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immediately after the installation of CU-Structural Soil[®].

- B. Install subsurface drain lines as shown on the plan drawings prior to installation of CU-Structural Soil[®] material.
- C. Excavate and compact the proposed subgrade to depths, slopes and widths as shown on the drawings. Maintain all required angles of repose of the adjacent materials as shown on the drawings. Do not over excavate compacted subgrades of adjacent pavement or structures.
- D. Confirm that the subgrade is at the proper elevation and compacted as required. Subgrade elevations shall slope parallel to the finished grade and/or toward the subsurface drain lines as shown on the drawings.
- E. Clear the excavation of all construction debris, trash, rubble and any foreign material. In the event that fuels, oils, concrete washout silts or other material harmful to plants have been spilled into the subgrade material, excavate the soil sufficiently to remove the harmful material. Fill any over excavation with approved fill and compact to the required subgrade compaction.
- F. Do not proceed with the installation of CU-Structural Soil[®] until all utility work in the area has been installed. All subsurface drainage systems shall be operational prior to installation of CU-Structural Soil[®].
- G. Protect adjacent walls, walks and utilities from damage. Use ½” plywood and/or plastic sheeting as directed to cover existing concrete, metal and masonry work and other items as directed during the progress of the work.
 - 1. Clean up all trash and any soil or dirt spilled on any paved surface at the end of each working day.
 - 2. Any damage to the paving or architectural work caused by the installing contractor shall be repaired, as directed by the engineer.
- H. Maintain all silt and sediment control devices required by applicable regulations. Provide adequate methods to assure that trucks and other equipment do not track soil from the site onto adjacent property and the public right of way.

1.7 WATER

- A. The installing contractor shall be responsible to furnish his own supply of water (if needed) free of impurities, to the site.

1.8 INSTALLATION OF CU-STRUCTURAL SOIL[®] MATERIAL

- A. Install CU-Structural Soil[®] in 6 inch lifts and compact each lift.
- B. Compact all materials to at least 95% Proctor Density from a standard compaction curve AASHTO T 99 (ASTM D 698). No compaction shall occur when moisture content exceeds maximum as listed herein. Delay compaction if moisture content exceeds maximum allowable and protect CU-Structural Soil[®] during delays in compaction with plastic or plywood as directed by the engineer.
- C. Bring CU-Structural Soil[®] to finished grades as shown on the drawings. Immediately protect the CU-Structural Soil[®] from contamination by toxic materials, trash, debris, water containing cement, clay, silt or materials that will alter the particle size distribution of the mix with

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plastic or plywood as directed by the engineer.

- D. The engineer may periodically check the material being delivered, prior to installation for color and texture consistency with the approved sample provided by the installing contractor as part of the submittal for CU-Structural Soil[®]. If the engineer determines that the delivered CU-Soil[™] varies significantly from the approved samples, the engineer shall contact the licensed producer.
- E. Engineer shall ensure that the delivered structural soil was produced by the approved CU-Soil[™] licensee by inspecting weight tickets showing source of material.
- F. CU-Soil[™] should not be stockpiled long-term. Any CU-Soil[™] not installed immediately should be protected by a tarp or other waterproof covering.

1.9 FINE GRADING

- A. After the initial placement and rough grading of the CU-Structural Soil[®] but prior to the start of fine grading, the installing contractor shall request review of the rough grading by the engineer. The installing contractor shall set sufficient grade stakes for checking the finished grades.
- B. Adjust the finish grades to meet field conditions as directed.
Provide smooth transitions between slopes of different gradients and direction.
Fill all dips with CU-Soil[™] and remove any bumps in the overall plane of the slope.
 - a. The tolerance for dips and bumps in CU-Structural Soil[®] areas shall be a 3" deviation from the plane in 10'.All fine grading shall be inspected and approved by the engineer prior to the installation of other items to be placed on the CU-Structural Soil[®].
- C. The engineer will inspect the work upon the request of the installing contractor. Request for inspection shall be received by the engineer at least 10 days before the anticipated date of inspection.

1.10 ACCEPTANCE STANDARDS

- A. The engineer will inspect the work upon the request of the installing contractor. Request for inspection shall be received by the engineer at least 10 days before the anticipated date of inspection.

1.11 CLEAN-UP

- A. Upon completion of the CU-Structural Soil[®] installation operations, clean areas within the contract limits. Remove all excess fills, soils and mix stockpiles and legally dispose of all waste materials, trash and debris. Remove all tools and equipment and provide a clean, clear site. Sweep, do not wash, all paving and other exposed surfaces of dirt and mud until the paving has been installed over the CU-Structural Soil[®] material. Do no washing until finished materials covering CU-Structural Soil[®] material are in place.

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END OF SECTION