31 00 00 – Earthwork

31 10 00 Site Clearing and Erosion Control

CCU is located within the City of Conway and, as a result, project site plans are subject to review under their Technical Review Committee approval process. The City of Conway is designated as a MS4 Stormwater Utility and as such will be the reviewing agency for compliance with the requirements of SCDHEC-OCRM for obtaining a land disturbance permit. Local storm drainage requirements should be considered applicable in addition to the SCDHEC Standards for Stormwater Management and Sediment Reduction, the SCDHEC Stormwater Management and Sediment Reduction Handbook, and the SCDHEC Stormwater Management BMP Handbook.

Tree protection material and requirements:

- Install tree protection fencing at drip line of specimen trees to be protected unless otherwise directed.

  - Fence Material: Orange polypropylene safety mesh.
  - Metal Posts and Rails: Steel chain-link fence tubing
  - Fence Height: 4 feet.

Where the use of existing underground pipelines or utilities is discontinued due to new construction, or where previously abandoned pipelines or utilities are encountered during the execution of new construction, they shall be completely removed and disposed of unless otherwise directed by the CCU Project Manager.

LEED Considerations:

- Sustainable Sites: Construction Activity Pollution Prevention (Prerequisite)

31 20 00 Earth Moving

The use of explosives is banned on campus.

All projects shall include pre-design geotechnical testing and reporting by a geotechnical testing agency that meets the qualification requirements of ASTM E 329. Coordinate with CCU Project Manager regarding arrangements for each individual project.

All earth moving projects shall include monitoring and testing by a geotechnical testing agency that meets the qualification requirements of ASTM E 329.

- Soil and aggregate materials shall be tested for composition and in-situ compaction at the frequency specified in the pre-design geotechnical report or as recommended by the geotechnical testing agency at the time of construction.

- Earth moving efforts shall be evaluated with regard to subgrade moisture and shall include construction dewatering and permanent subsurface drainage provisions as required to mitigate deleterious effects.
Construction activities shall be planned so as to mitigate the potential for destabilization or contamination of in-situ and installed soil and aggregate materials by sedimentation or vehicular traffic.

Aggregate Material Requirements:

Aggregate materials shall not be composed of marine limestone or slag except that marine limestone shall be acceptable for GABC as indicated below.

Graded Aggregate Base Course (GABC): GABC shall be utilized as the base course material for all impervious pavements in which a stone base course is required. It shall consist of naturally or artificially graded crushed stone (macadam) or marine limestone in accordance with Section 305 of the SCDOT “Standard Specifications for Highway Construction”. One exception is that SCDOT requires Asphalt Aggregate Base Course (Section 310) for pavements that will be accepted for operation and maintenance by the SCDOT.

Base and choker courses for pervious pavement systems shall be open graded aggregate materials in accordance with the requirements of the pavement system manufacturer, the geotechnical testing agency for the project, and the authorities having jurisdiction, as applicable.

Sand: Unless otherwise approved, sand shall be natural or manufactured sand in accordance with the gradation requirements for Fine Aggregate FA-10 (natural) or FA-10M (manufactured) as defined by the SCDOT “Standard Specifications for Highway Construction”.

Bid and contract documents for projects that include earth moving operations shall include provisions requiring the contingency unit prices listed below. Furthermore, where preliminary geotechnical testing indicates a significant probability that remedial efforts will be required to mitigate unsatisfactory in-situ soils, the selection of a winning bid shall include an evaluation of the estimated total project cost including expected additional costs for soil remediation. All unit prices shall specify in-situ or compacted-in-place measure and shall define measuring and accounting procedures for determining quantities for payment. Truck measure (load tickets) and applied swell factors shall not be used unless specifically approved by the CCU Project Manager.

- Excavating Unsatisfactory Soils and Hauling Offsite
- Excavating Unsatisfactory Soils and Stockpiling Onsite
- Backfill of Excavations of Unsatisfactory Soils with Onsite Satisfactory Soils
- Backfill of Excavations of Unsatisfactory Soils with Offsite Satisfactory Soils (Borrow)

Where the installation or replacement of utilities beneath existing pavement is required, the designer shall coordinate with the CCU Project Manager, on case by case basis, to determine whether an open cut trench or a jack and bore installation will be required. In cases where an open cut is used, backfill up to the level of the pavement base course shall consist of Excavatable Flowable Fill in accordance with SCDOT Specification Section 210.