Section _____ INSTALLATION GUIDELINES – STALITE STRUCTURAL SOIL MIX FOR TREES

PART 1 – GENERAL

1.1 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.
1. Stalite Structural Soil Mix

Carolina Stalite Company 800-898-3772 www.permatill.com

1.2 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.
1. Material Test Reports: For Stalite Expanded Slate

B. Submit manufacturer's technical product data and certified laboratory test results for the following:
1. Sandy Clay Loam

C. Sample: Provide one (1) quart of Stalite Structural Soil Mix in a heavy duty clear re-sealable plastic storage bags labeled, "Structural Soil Mix" and the project name.

PART 2 - PRODUCTS

2.1 MATERIALS

A. STRUCTURAL SOIL MIX (SSM)

1. The Structural Soil Mix shall be Stalite Structural Soil Mix (a special pre-mixed blend of 80% 3/4" graded **"STALITE"** Expanded Argillitic Slate Aggregate and 20% approved sandy clay loam) compacted in one foot lifts to a minimum of three feet deep where specified on the drawings.
Source: Carolina Stalite Company, Chuck Friedrich, RLA, ASLA (877) -737- 6284

B. TREE PIT BACKFILL PLANTING MIX

1. The tree pit backfill planting mix shall be high quality topsoil mixed 50% with of the excavated structural soil.

PART 3 - EXECUTION

3.1 PREPARATION

A. GENERAL

1. The paving contractor shall obtain necessary approvals before placing each SSM layer.

2. The paving contractor shall use adequate numbers of skilled workmen who are thoroughly trained in the necessary crafts and are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.

3. The contractor must provide access for and cooperate with the testing laboratory.

4. Adequacy of the final compaction of all elements requiring compaction shall be determined in the field by the engineer to achieve the minimum specified compaction level.

B. PREPARING SUBGRADE

1. The subgrade shall be prepared according to the following procedure:
   a. Remove all organic matter, debris, loose material and large rocks.
   b. Dig out soft and mucky spots and replace with suitable material.
   c. Loosen hard spots and uniformly compact the subgrade to 95% of its maximum dry density.

C. PERFORATED UNDERDRAIN SYSTEM

1. The underdrain system shall be Installed, including sock or soil separator fabric, according to drawing and specifications, and connected to the storm drain.

3.2 PLACING STRUCTURAL SOIL MIX BY PAVING CONTRACTOR

A. GENERAL

1. **IMPORTANT: THE TREES MUST BE PLANTED AFTER THE PAVEMENT IS PLACED**

2. Adequacy of the final compaction shall be determined in the field by the engineer by proof roll.

3. The drains and optional vertical vents shall be installed as specified and structural soil compacted under and around each pipe.

4. Optional – If wooden tree pit forms are used, they shall be installed as directed by the Landscape Architect.

5 The SSM shall be placed in approximately uniform lifts over the entire area of project and each lift compacted, including the open tree pit areas. Minimum depth for large shade trees shall be three feet deep and a minimum depth of two feet deep for small trees. Construction equipment, other than for compaction, shall not operate on the exposed structural soil mix. Over-compaction should be avoided. No foot or equipment traffic should be allowed on the compacted material until the paving is placed.

6. The drip irrigation system is to be installed and tested during the screenings laying course installation to avoid disturbing the compaction of the mix.

B. COMPACTING

1. Use of portable vibratory plate compacting machine (Recommended)

a. Place structural soil mix in horizontal lifts not exceeding 12 inches of compacted depth. Use a minimum of two passes, of not less than 10 seconds per pass, before moving the vibratory plate to the next adjacent location. Additional passes may be required and should be determined in the

field by the engineer to insure stability of the layer. Continue placing and compacting 12" lifts until the specified depth is reached.

2. Use of vibratory steel roller (for large areas)

a. For large spaces, a vibratory steel roller weighing no more than 12 tons static weight can be used. Horizontal lifts should not exceed 12" compacted. The minimum number of passes is two and maximum number is four. Additional passes may be required and should be determined in the field by the engineer to insure stability of the layer.

3.3 PLACING SCREENINGS FOR LAYING COURSE BY PAVING CONTRACTOR

A. GENERAL

1. All necessary approvals shall be obtained from the contractor before placing the sand or screenings.

B. PLACING LAYING COURSE BY THE PAVING CONTRACTOR

1. The coarse sand for the laying course shall be placed by using these procedures:

a. Spread the sand/screenings evenly over the area to be paved and at least 6 inches from the edge of the area to be paved.

b. Compact the sand laying course using vibrating plate compacting equipment until no densification is achieved with additional passes by the vibrating equipment.

c. Screed and level a final seating layer over the compacted layer of the laying course to achieve the thickness and grades specified on the drawings after final compaction.

d. Do not disturb the laying course once it is compacted, screeded and leveled. If the laying course is disturbed, re-compact and reshape it until it meets the requirements in this section.

3.4 PAVER INSTALLATION

A. Install the pavers as per drawings and specifications.

B. No vehicles or heavy equipment are permitted on the compacted layer course until pavers are completely installed.

3.5 CONCRETE PLACEMENT

A. Concrete can be placed as specified directly on the compacted structural soil.

B. Asphalt paving requires a 4" layer of ABC stone to support the equipment to prevent horizontal displacement and rutting of the structural soil.

PART 4 - TREE PLANTING

4.1 TREE PIT PREPARATION BY LANDSCAPE CONTRACTOR

A. TREE PIT EXCAVATION

1. The Landscape Contractor shall excavate the tree pit using these procedures:

a. After the pavement is placed, excavate the structural soil mix to a depth equal to the height of the root ball of the tree to be planted. Remove the SSM to within a one feet of the edge of the paved area.

b. Place the tree in the pit and backfill as soon as possible, as recommended in section "B". Remove any excess soil on the top of the root ball that was filled above the root collar at the nursery. No tree pit shall remain excavated for more than 2 hours unless forms are used.

B. TREE PIT BACKFILL PLANTING MIX

1. The landscape contractor shall backfill the tree pit by using these procedures:

a. Remove any optional wooden forms. Immediately place the tree in the pit as detailed and mix the excavated structural soil 50:50 with the specified topsoil. Backfill the planting mix into the pit around the root ball in one foot lifts and tamp until firm.

b. Tamp the planting mix in one foot lifts until the pit is filled to the specified grade.

c. Dispose of the excavated structural soil mix (do not re-use as structural soil).

d. Attach drip irrigation as specified.

End of Section