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**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. Finish Grading of Planting Area Soil Surfaces.
  2. Finish Grading of Aggregate Mulch

**1.2 REFERENCES**

- A. ASTM — American Society for Testing Materials: D 1557—Test Method for Laboratory
- B. Compaction Characteristics of Soil Using Modified Effort.

**1.3 DEFINITIONS**

- A. Acceptance, Acceptable, or Accepted: Acceptance by the Owner's Representative in writing.
- B. Subgrade Surface: The filter material covering foam fill.
- C. Finished Grades: The required final soil surface elevations and contours indicated on the Drawings.
- D. Aesthetic Acceptance of Grades: Acceptance by the Owner's Representative in writing of the aesthetic correctness of the contours. Aesthetic acceptance does not address whether an area drains properly, whether the areas are at the correct elevations, or whether it has been compacted properly.

**1.4 QUALITY ASSURANCE**

- A. Finished Grade Smoothness Mock-up:
1. Prepare a 20-foot by 10-foot area of finish graded soil representing the finished graded surface of the planting areas.
  2. Locate mockup on site in a proposed planting area easily referenced by workers performing finish grading operations.
  3. Protect accepted mockup from physical damage with fencing, canopies, sandbags or other accepted means until Final Completion.
  4. The accepted mock-up shall be the standard by which finish grading will be judged and if accepted may be incorporated into final Work.

**1.5 SITE CONDITIONS**

- A. Environmental Requirements:
1. Do not work soil when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in the air or that clods will not break readily.
  2. Apply water, if necessary, to bring soil to an optimum moisture content for grading.
  3. Do not work soil when muddy or frozen.
- B. Existing Conditions:
1. Prior to Work commencement review and clearly mark in field horizontal and vertical locations of existing public underground utilities and structures with respective utility companies.
  2. Prior to Work commencement review and clearly mark in field horizontal and vertical locations of existing private underground utilities and structures with the Owner's Representative.
  3. Prior to Work commencement and after reviewing the Owner's record irrigation documents, review and clearly mark in field locations of heads, emitter lines, sleeves, valve boxes and other underground equipment, materials and structures.

**PART 2 PRODUCTS Not used.**

**PART 3 EXECUTION****3.1 EXAMINATION**

- A. General: Examine site and verify that conditions are suitable for finish grading Work, and that no defects or errors are present which would interfere with or cause incorrect finish grading Work to occur.
- B. Excessive Compaction: Verify that the topsoil is compacted no more than 75 percent of maximum dry density as determined by ASTM D 1557.
- C. Soil Preparation: Verify that soil preparation Work is complete.
- D. Notification of Unsuitable Conditions: Before proceeding with Work, notify the Owner's
- E. Representative in writing of unsuitable conditions and conflicts.

**3.2 PREPARATION**

- A. Protection of Existing Conditions:
  - 1. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, irrigation systems, plant materials and paving on or adjacent to the site of the Work.
  - 2. Provide barricades, fences or other barriers to protect existing conditions to remain from damage during construction.
  - 3. Use every possible precaution to prevent excessive compaction of planting area soil within or adjacent to the areas of Work.
  - 4. Do not store materials or equipment, permit burning, or operate or park equipment under the branches of existing plants to remain.
  - 5. Submit written notification of conditions damaged during construction to the Owner's Representative immediately.

**3.3 FIELD ENGINEERING**

- A. General:
  - 1. Establish lines and levels, locate and lay out by instrumentation and similar appropriate means for planting area finish grades.
  - 2. Provide as many grade stakes and string lines as required to achieve smooth finish grades acceptable to the Owner's Representative with positive surface drainage.
- B. High Points and Low Points: Provide grade stakes at high points and low points including top of catch basin rims and area drain rims.

**3.4 FINISH GRADING OPERATIONS**

- A. General:
  - 1. Grade soil surface with smooth uniform slope between points .
  - 2. Slope finish grades to drain surface water away from buildings, walks, paving, and other structures unless indicated otherwise.
  - 3. Grade soil surface smooth to be free of high and low areas which will inhibit surface drainage.
  - 4. Grade edges of aggregate mulch as shown.
  - 5. Hand-rake soil surface using screed boards, string lines and laser levels to achieve smooth surfaces acceptable to the Owner's Representative.
- B. Excessive Compaction:
  - 1. Take precautions to prevent soil from becoming compacted more than as specified in Section 32 91 13.
  - 2. Mechanically loosen planting medium to its full depth at areas compacted more than specified.
- C. Equipment: Use equipment of appropriate size and type to achieve the sculptural forms, profiles and a smooth soil surface free of high areas, depressions, equipment tracks, and excessive compaction.

- D. Depressions and Loose Material: Fill any depressions, and remove loose material to finish surface true to line and grade, presenting a smooth and unyielding surface.

### 3.5 TOLERANCES

#### A. Planting Areas:

1. Grade soil surface to within 0.05-foot of grades indicated on the Drawings, except bring soil surface grades along headers, paving, curbs, and other structures to within 0.01-foot of grades indicated on the Drawings.
2. Transition soil surface grades along paving, curbs, and other structures to areas of less strict tolerance over a 5-foot distance.

#### B. Aggregate Mulch Areas:

1. Grade soil surface to within 0.05-foot of grades indicated on the Drawings, except bring perimeter surface grades along headers, paving, curbs, and other structures to within 0.01-foot of grades indicated on the Drawings.
2. Transition soil surface grades along paving, curbs, and other structures to areas of less strict tolerance over 5-foot distance.

- C. Allowances: Make proper allowances for settlement and spoils from plant pits.

### 3.6 FIELD QUALITY CONTROL

#### A. Aesthetic Acceptance of Grades:

1. Upon completion of finish grading Work, schedule with the Owner's Representative a review to obtain aesthetic acceptance.
2. Provide 3 days advance written notification.
3. Do not commence planting Work until receiving aesthetic acceptance.

**END OF SECTION**