

F. Division 2 - Site Work1. Earthwork

## a. General

- 1) Specify protective barriers required for adjacent property, trees, bench marks, trenches, pits, vulnerable exposed surfaces, etc.
- 2) Specify removal of water from all excavations.
- 3) Specify compliance with the Occupational Health and Safety Act.
- 4) Control soil erosion and tracking dirt onto streets. (See City criteria).

## b. Products

## 1) Materials

Specify site fill materials, vapor barriers, bedding materials and weeping tile.

## c. Execution

- 1) Direct Contractor to visit and closely examine the site so as to be aware of existing conditions.
- 2) Advise Contractor if a soils report is available and what responsibility the owner/architect take for its accuracy.
- 3) Site Preparation  
  
Specify requirements for topsoil removal, erosion control measures and storage (if required). Indicate if any other extraneous materials are to be disposed of.
- 4) Excavation  
  
Indicate what excavation is to be done by this trade (i.e. is mechanical and site service work included).

State who will approve bearing surface. Insure these exposed surfaces are properly protected. State how excavated material is to be disposed of. Provide warning regarding existing buried services. Specify protection for all exposed critical surfaces from freezing. Specify requirements for dewatering and working below the water table (sumps, well points, etc.).

5) Backfilling

Specify when backfilling may begin. Specify materials to be used in specific situations, compaction required and thickness of layers acceptable. Warn against backfilling one side only of walls likely to be adversely affected. All service line trenches shall be mechanically compacted; no water-jetting allowed.

6) Specify special requirements for backfilling under slabs on grade, paving and buried services.

7) Specify precompaction of virgin ground to be built on, that may have been affected by frost or is soft for other reasons.

8) Specify bedding requirements for buried services if included in this section.

9) State what testing is to be done, testing sequence, and who will appoint and pay testing company.

10) Specify quality of rough grading in terms of tolerance and its relation to the proposed surface treatment.

2. Landscaping

a. Plant Materials

1) All plant materials are to comply with the published horticultural standards of the American Association of Nurserymen to grading and quality.

2) All plants are to be No. 1 Grade, Colorado nursery-grown, under proper cultural practices with respect to fertile soil, ample spacing,

regular cultivation, weed, pest and disease control, adequate moisture and pruning, in accordance with good horticultural practices. All such plants shall have been transplanted and/or root-pruned regularly, but not later than one growing season prior to arrival on the site.

- 3) The sizes of root balls for trees shall be sufficiently large to contain at least 75% of the fibrous root system.
- 4) For deciduous trees with a caliper of more than 6 inches and for coniferous trees over 18 feet in height, create a unique specification for the approval of the City Forester. Unusually large size specimens require very special handling.
- 5) Non-dormant, cold storage, frozen balled or large bare-root stock may only be used if approved, in advance, by the City Forester. Tree spade dug material and container stock is generally acceptable although tree ball sizes must be monitored.
- 6) Substitutions of specified material must be approved by the City Forester.

b. Topsoil

Friable natural loam with an acidity range 6.0 pH to 8.0 pH, containing organic matter a minimum of 4% for clay loams and 2% for sandy loams, and free of stones and roots over 2 inches in diameter, and subsoil, clay lumps, and other solid materials. (Verify the use of existing topsoil-check soil report). Stockpile topsoil on site for landscaping purposes. All topsoil intended for use or reuse is to be tested both to conform to this specification and to ascertain N.P.K. ratio for fertilizer requirements. Remove excess topsoil from the site and dispose of as City directs. All soil stockpile areas are to be restored as part of general site development.

c. Seeding

Note: Seeding will only be permitted for large areas, such as play fields, and only where approved by Parks and Recreation Department.

1) Grass Seed

Prepared and mixed by an approved seed house, tested to be within rates for purity and germination specified by government standard. Mixture to be appropriate to site conditions to the satisfaction of the Parks and Recreation Department.

2) Hydro Seeding

Hydro seeding and mulching will be permitted in lieu of the usual methods if circumstances warrant, subject to approval by the Parks and Recreation Department.

d. Sodding

1) Certified No. 1 cultivated turf grass sod, grown and classified in conformance to established standards. It shall have at least two years growth from time of seeding, strong fibrous roots, and no stones, or burned or bare spots.

2) Mixture of grass varieties in sod shall be as specified by the Parks and Recreation Department.

e. The specific design of underground sprinkler systems will be done by a designer having proven experience in irrigation design. The design must be approved by the Parks Department. (See Appendix H)

f. All plant material must be warranted for one year. The sprinkler system will be warranted for one year including blow-out and turn-on by the contractor. The turf must be warranted for one year. All of these warranties are effective beginning from the completion and acceptance of the specific installation and not necessarily at substantial completion of the facility. A time must be agreed to among the contractor, the A/E, and City staff.