

CONSTRUCTION SPECIFICATION

797. Rain Garden

1. Scope

The work shall consist of excavation and earth fill, along with planting and establishing vegetation as shown on the drawings and specified herein. In some situations, construction may also include soil modification and installation of an underdrain.

2. Utilities

The landowner and/or contractor shall be responsible for locating all buried utilities in the project area including private utilities such as electric lines to yard lights. Contact JULIE prior to construction to located utilities.

3. General

Construction operations shall be carried out in a manner and sequence where erosion, air and water pollution are minimized and are within legal limits.

The completed job shall present a professional appearance and shall conform to the line, grades and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used. The contractor shall assure that all state laws concerning buried utilities have been met.

All objectionable materials must be removed from designated work area such as trees, stumps, roots, brush, weeds and trash.

4. Site Preparation

Remove or eliminate existing vegetation.

Where topsoil is present, topsoil that is removed from disturbed areas should be stockpiled.

Maintaining infiltration during construction is essential to building a functioning rain garden. Protect rain garden from compaction and sedimentation during all phases of construction. Where rough grading is required maintain one foot of cover over final bottom elevation of rain garden until completed.

Direct significant sources of runoff away from the rain garden during construction. All upstream areas should be stabilized prior to final construction of rain garden.

5. Construction

Avoid compaction in infiltration area during construction including compaction from foot traffic. Where equipment use is necessary, all efforts should be made to keep equipment out of active infiltration area. Where that is not possible, low-impact earth moving equipment must be used to prevent compaction of underlying soils.

Where possible, prevent surface water from entering the rain garden during construction. Where accumulation of fine materials or surface ponding has occurred, remove deposited materials and score underlying soils to a depth of 6 inches.

Make certain an impermeable layer does not exist prior to planting on sites where compaction has occurred, particularly where construction equipment has been used to construct the rain garden or on new construction. In situations where compaction during construction has occurred, break up impermeable layer before planting.

Complete final grading to achieve proposed design elevations, loosen the subsoil leaving space for soil amendments as specified on plan.

6. Materials

The materials and manufacture of any appurtenances, such as tile, underdrain or mulch must be as shown and specified on the construction plan.

Protect nursery stock from dehydration during transport and on-site storage. Keep all planting stock, except items needed immediately for planting, stored in a cool environment out of direct sunlight and wind. Keep plants moist if being held for an extended period of time.

7. Establishment of Vegetation

Where applicable, divert water from rain garden or lower the rain garden outlet until vegetation is established to minimize ponding of water during plant establishment. Remove diversion or complete construction of outlet to the designed depth when plants grow taller than the ponding depth.

Ensure adequate growing medium for vegetation.
Replace any stockpiled topsoil before planting.
Incorporate specified soil amendments to a depth of 3 – 6 inches.

Vegetation must be planted according to the planting design and schedule. Plant species, size and spacing must conform to the planting schedule.

Plug stock must be planted upright and at a depth where the natural soil thinly covers the top of the plug to prevent drying out of planting medium. Firmly pack soil around roots to eliminate air pockets. Properly planted plugs should resist gentle lifting pressure.

Container stock must be handled by moving the container, not by grasping the stem. Remove plants from containers before placing in the ground. Loosen fibrous roots and straighten or cut all encircling roots to avoid future girdling problems. If plants are in paper pots, slit along each side or remove before placing in the ground. Place plants so the plant's crown is at or slightly above ground level. Firmly pack soil around roots to eliminate air pockets.

Balled and burlapped vegetation should be planted in a hole 1½ times as wide as the root ball. Handle plants by moving the root ball, not grasping the stem. Remove any rope, wire, plastic or twine from the tree. Pull back burlap around trunk and fold once in the hole. Completely remove non-biodegradable material. Straighten or cut all encircling roots to avoid future girdling problems. Place plants at the same depth as in the nursery and on a stable bed to prevent settling. Firmly pack soil around roots to eliminate air pockets.

Mulch vegetation after planting to suppress weeds and conserve moisture. Use only shredded hardwood mulch aged six months or more. Space should be left between the plant and the mulch to allow for air exchange to the roots and to prevent disease and pest pressures. Do not apply mulch in areas where ground cover is to be established by seeding.

Thoroughly water vegetation after planting until soil is moist to a depth of 4 inches.

Identify those in charge of weeding and watering during plant establishment, as necessary.