

## SECTION 32 91 10 - GROWING MEDIA FOR PLANTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes: Organic hydrophilic growing media for plants for the following applications.
1. Green roofs. (WaterGrip Roof Brownie)
  2. Living walls. (WaterGrip Wall Brownie)
  3. Loose media for amending soils. (WaterGrip Ground-Up)
  4. Soil amendment cylinders for trees. (WaterGrip TreeCore)
  5. Planter and container liners (WaterGrip Hydromat-Planter-Container-Liner)
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 07 55 63 – Vegetated Protected Membrane Roofing.
  2. Section 32 84 13 – Drip Irrigation.
  3. Section 32 93 13 – Ground Covers, Plants and Bulbs.
  4. Section 32 93 33 – Shrubs and Trees.
  5. Section 32 94 00 – Planting Accessories; edging, root barrier, drainage mat.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data sheets.
- B. Mock-Up: Provide an on-site mock-up on site for each application. Approved mock-ups may remain in place.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials and products in compliance with manufacturer's instructions and recommendations. Protect from weather damage prior to installation.

### PART 2 - PRODUCTS

#### 2.1 GROWING MEDIA

- A. Basis of Design Manufacturer: WaterGrip Growing Media by EZ Care Growing Technologies LLC, 113 Vine Street, Saugus, MA 01906, Tel. 781-233-4704; Fax 781-233-4068, [info@watergripmedia.com](mailto:info@watergripmedia.com).
- B. Growing Media for Green Roofs: Roof Brownie by WaterGrip.
1. Size: 24 inches by 12 inches by 3 inches.
  2. Saturated Weight: 11.8 pounds per square foot.
  3. Water Held: 10.5 pounds per square foot; 1.3 gallons per square foot.
  4. Percent Water Held: 890 percent.
- C. Growing Media for Living Walls: Wall Brownie by WaterGrip.

1. Size: 12 inches by 12 inches by 3 inches.
  2. Saturated Weight: 11.8 pounds per square foot.
  3. Water Held: 10.5 pounds per square foot; 1.3 gallons per square foot.
  4. Percent Water Held: 890 percent.
- D. Loose Growing Media for Amending Soils: Ground-Up by WaterGrip.
1. Size: 1 cubic foot.
  2. Saturated Weight: 47.12 pounds per cubic foot.
  3. Water Held: 41.84 pounds per cubic foot; 5 gallons per cubic foot.
  4. Percent Water Held: 665 percent.
- E. Soil Amendment Cylinders for Trees: TreeCore by WaterGrip.
1. Cylinder Size: 3 inch diameter by 18 inches long and 5 inch diameter by 24 inches long as applicable to tree caliper.
  2. Saturated Weight: 11.8 pounds per square foot.
  3. Water Held: 10.5 pounds per square foot; 1.3 gallons per square foot.
  4. Percent Water Held: 890 percent.
- F. Growing Media for Planter and Container Liners: Hydromat by WaterGrip.
1. Size: 12 inches by 24 inches by 3 inches.
  2. Saturated Weight: 11.8 pounds per square foot.
  3. Water Held: 10.5 pounds per square foot; 1.3 gallons per square foot.
  4. Percent Water Held: 890 percent.

## PART 3 - EXECUTION

### 3.1 EXAMINATION AND PREPARATION

- A. Inspect and prepare substrates as recommended by manufacturer. Commencement of installation constitutes acceptance of conditions.
- B. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

### 3.2 INSTALLATION

- A. Installation of Growing Media for Green Roofs: Install products in accordance with manufacturer's written instructions.
  1. Hydrate and install brownies prior to installation of plants. Recommended number of plugs per tray is 72 or 1 by 1 inch as applicable. Ensure that plants are installed using plugs no larger than 2 inches maximum, and that plugs do not tear the brownie. Larger plug sizes will void warranty for brownies.
  2. If a profile of 6 inches is required for plants, two brownies may be stacked on top of each other, but must not exceed engineered roof load requirements.
  3. Coordination with Edging: Edging is the work of a separate Section. Coordinate such that edging shall be set along entire perimeter of brownies. Acceptable edging is Permaloc GeoEdge 3-1/2 inches by 4-1/2 inches or equal acceptable to the growing media manufacturer.
  4. Coordination with Waterproof Membrane and Drainage Mat: Waterproof membrane and drainage mat is work of a separate Section. Coordinate such that drainage mat is set on

- on waterproof membrane so that mat overlaps by a minimum of 6 inches to protect roofing membrane. Drainage mat shall cover entire area that brownies will be placed. Acceptable drainage mat is Colbond 9611R or equal acceptable to the growing media manufacturer. Set brownies on top of drainage mat ensuring that brownies are set firmly together to prevent any voids or crevices. If required, brownies can be pre-planted or planted on site during installation process per specification as noted above.
5. Coordination with Drip Irrigation: Drip irrigation is work of a separate Section. Coordinate such that drip irrigation is set 12 inches on center and shall conform to manufacturer's specifications for proper volume of water to keep brownies moist in an effort to prevent the brownies from drying out during the time it takes for the plants to establish. Drip irrigation shall not be abandoned until architect has determined plants are indeed well-rooted and have over 90 percent coverage. Do not use U-shaped clips to hold drip in place should as they may penetrate roofing membrane. To prevent uplift, using netting acceptable to growing media manufacturer fastened to edging with fasteners as provided by growing media manufacturer.
- B. Installation of Growing Media for Living Walls: Install products in accordance with manufacturer's written instructions.
1. Set brownies vertically with proper support structure in place and cross members no less than 12 inches apart, so as to prevent the brownie from sagging and falling out of the support structure.
  2. Coordinate with drip irrigation spaced not more than 24 inches on center, or a drip line every two rows of brownies.
  3. Install brownies prior to installation of plants. Recommended number of plugs per tray is 72 or 1 by 1 inch as applicable. Ensure that plants are installed using plugs no larger than 2 inches maximum, and that plugs do not tear the brownie. Larger plug sizes will void warranty for brownies.
- C. Installation of Loose Growing Media for Amending Soils: Install as a soil amendment and not in lieu of soil. Install loose growing media 40 percent by volume to soil ratio (and not less than 30 percent nor more than 50 percent). Spread to specified depth and rototilled into existing or proposed grades at the following rates:
1. Lawn Areas, Rototill Method: Add 1 to 2 inch depth of loose media to the surface of final proposed grade and rototill to a depth of six inches.
  2. Planting Beds, Rototill Method: Add 2 to 3 inch depth of loose media to the surface of final proposed grade and rototill to a maximum depth of twelve inches.
  3. Soil Blending: All blends must be approved by Landscape Architect.
- D. Installation of Soil Amendment Cylinders for Trees: Install products in accordance with manufacturer's written instructions using an auger, air-spade or post hole-digger and set top of cylinder within 1 to 2 inches of finished grade. Saturate prior to installation and mulch over with material such as mulch, gravel or loam that will not prevent water from entering the cylinder. Do not backfill clay or impervious surfaces over the cylinder.
1. New Trees with Caliper Ranging From 1 Inch to 3 Inches (Using 3 Inch Diameter Cylinder): Evenly space cylinders approximately 3 feet on center on a tight circle around the tree, set immediately adjacent to the rootball. Do not interfere with tree staking and guying. Place an additional centrifugal ring at 2 foot intervals outward and staggered from the innermost ring for increased root production and to minimize water usage.
  2. New Trees with Caliper 3-1/2 Inches and Greater (Using 5 Inch Diameter Cylinder): Evenly space cylinder approximately 4 feet on center on a tight circle around the tree, set immediately adjacent to the rootball. Do not interfere with tree staking and guying. Place an additional centrifugal ring at 2 foot intervals outward and staggered from the innermost ring for increased root production and to minimize water usage.

3. Existing Trees of All Caliper Sizes (Using 5 Inch Diameter Cylinder): Evenly space cylinders hand-dug approximately 3 feet on center on a tight circle around the existing trunk in areas which do not interfere with existing large tree roots. Do not install at trees that have significant surface roots. Place an additional centrifugal ring at 3 foot intervals outward and staggered from the innermost ring for increased root production and to minimize water usage.
- E. Installation of Growing Media for Planter and Container Liners: Install products in accordance with manufacturer's written instructions.
1. Fully saturate brownie upon installation and prior to backfilling specified soils.
  2. Set brownies horizontally above and adjacent to the drainage layer (gravel) and filter fabric which shall be located at the bottom of the planter.
  3. Set brownies vertically along the sides of the planter, if there is ample room for plants and soil.
  4. Set plants in direct contact with growing media. If planter depth does not allow for this to occur, set brownie on top of soil or additional drainage gravel/ballast.
- 3.3 PROTECTION
- A. Protect installed growing media until covered by planting materials.

END OF SECTION