**GENERAL**

* 1. Related Documents
     1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
  2. Summary
     1. Section Includes:
        1. Furnishing and installation of Tree Root Barrier
     2. Related Sections:
        1. Division 32 – Exterior Improvements
  3. Definitions
     1. Tree Root Barrier: Plastic mechanical barrier in modular panels used to redirect and guide tree roots down and away from hardscape surfaces.
     2. Linear Application: Installation method of Tree Root Barrier, used in a straight line along the hardscape to be protected.
     3. Surround Application: Installation method of Tree Root Barrier, surrounding a planting area perimeter.
     4. Root Pruning Application: Installation method of Tree Root Barrier, used for existing trees in planting areas where existing roots must be severed for installation.
  4. Submittals
     1. Product data: Manufacturers standard literature defining materials for use on the Project.
     2. Samples, if required by Architect:
        1. Tree root barrier: One full length panel.
     3. Quality control: Complete installation instructions specified, may be combined with product data.
  5. Quality Assurance
     1. Manufacturer’s qualifications:
        1. Minimum twenty-five (25) years experience in tree and plant protection.
  6. Delivery, Storage and Handling
     1. Packing and Shipping
        1. Provide materials in original, unopened containers with manufacturer’s labels intact and legible.
     2. Acceptance at Site
        1. Damaged materials will not be accepted, as determined by visual inspection.
        2. Rejected materials shall be removed from project site immediately.
     3. Storage and Protection
        1. Store materials in dry area in manufacturer’s protective packaging, in original containers with labels and instructions intact.

**PRODUCTS**

* 1. MANUFACTURERS
     1. Acceptable manufacturers:
        1. Products specified as standard of quality are manufactured by DeepRoot Green Infrastructure, LLC. (DeepRoot), 530 Washington Street, San Francisco, CA 94111; 800.458.7668; fax 800.277.7668; [www.deeproot.com](http://www.deeproot.com)
        2. Products meeting standards listed within this specification may be acceptable for use subject to approval of product list and samples.
  2. MANUFACTURED UNITS
     1. Tree Root Barrier
        1. 12” Depth, UB 12-2
           1. Material: black, recyclable, injection molded panel manufactured with 75% reprocessed polypropylene with added ultraviolet inhibitors.
           2. Dimensions: 0.080” (2.03 mm) wall thickness in modules 24” (609 mm) long and 12" (305 mm) deep.
           3. Additional specifications:

3/8" (9.53mm) wide integral molded 0.060" (1.52mm) thickness double top edge with stiffening ribs; bottom edge attached to vertical root deflecting ribs.

Integral molded vertical root directing ribs; 0.060" (1.52mm) thickness by 1/2" (12.7mm) deep spaced at 6" (152mm) O.C.

Integral molded horizontal anti-lift ground lock tabs; 0.060" (1.52mm) thickness by 2" (50.8mm) long by 1/2" (12.7mm) wide; minimum three per panel.

Integral zipper joining system for panel connections.

* + - 1. 18” Depth, UB 18-2
         1. Material: black, recyclable, injection molded panel manufactured with 75% reprocessed polypropylene with added ultraviolet inhibitors.
         2. Dimensions: 0.075” (1.90 mm) wall thickness in modules 24” (609 mm) long and 18" (457 mm) deep.
         3. Additional specifications:

3/8" (9.53mm) wide integral molded 0.060" (1.52mm) thickness double top edge with stiffening ribs; bottom edge attached to vertical root deflecting ribs.

Integral molded vertical root directing ribs; 0.060" (1.52mm) thickness by 1/2" (12.7mm) deep spaced at 6" (152mm) O.C.

Integral molded horizontal anti-lift ground lock tabs; 0.060" (1.52mm) thickness by 2-1/4" (57.15mm) long by 3/8" (9.53mm) wide; minimum nine per panel.

Integral zipper joining system for panel connections.

* + - 1. 24” Depth, UB 24-2
         1. Material: black, recyclable, injection molded panel manufactured with 75% reprocessed polypropylene with added ultraviolet inhibitors.
         2. Dimensions: 0.080” (2.03 mm) wall thickness in modules 24” (609 mm) long and 24" (609 mm) deep.
         3. Additional specifications:

3/8" (9.53mm) wide integral molded 0.060" (1.52mm) thickness double top edge with stiffening ribs; bottom edge attached to vertical root deflecting ribs.

Integral molded vertical root directing ribs; 0.060" (1.52mm) thickness by 1/2" (12.7mm) deep spaced at 6" (152mm) O.C.

Integral molded horizontal anti-lift ground lock tabs; 0.075" (1.90mm) thickness by 2" (50.8mm) long by 1/2" (12.7mm) wide; minimum twelve per panel.

Integral zipper joining system for panel connections.

* + - 1. 36” Depth, UB 36-2
         1. Material: Extruded Homopolymer Polyethylene with ultraviolet inhibitors.
         2. Dimensions: 0.080” (2.03 mm) thick, in modules 24” (609mm) wide and 36” (910 mm) deep.
         3. Integral vertical root directing ribs at 6” (152mm) O.C.
         4. Integral joining system for panel connections.
      2. 48” Depth, UB 48-2
         1. Material: Extruded Homopolymer Polyethylene with ultraviolet inhibitors.
         2. Dimensions: 0.080” (2.03 mm) thick, in modules 24” (609mm) wide and 48” (1220 mm) deep.
         3. Integral vertical root directing ribs at 6” (152mm) O.C.
         4. Integral joining system for panel connections.

**INSTALLATION**

1. EXAMINATION
   * 1. Verification of conditions
        1. Verify other work in other sections is complete in order to minimize site impacts by installation of tree root barrier.
        2. Any damage to site work due to installation of tree root barrier shall be repaired at the expense of the Contractor.
2. Linear Applications
   * 1. For installation along linear applications of hardscapes:
        1. Assemble the appropriate number of root barrier panels using Zipper Joining System.
        2. Trench immediately adjacent to hardscape to the appropriate depth for installation of specified root barrier so that top of barrier is ½”-1” (12.7mm to 25.4mm) above finished soil grade.
        3. Place root barrier in trench, vertical ribs facing toward planting area and tree roots.
        4. Where possible, use hardscape as a guide for root barrier alignment.
        5. Backfill adjacent planting soil against the root barrier to promote clean fit to hardscape. Fill to finish grade per project specifications.
3. Surround Applications
   * 1. For installation within individual tree openings or planters that require root barrier protection along all sides of hardscapes.
        1. Assemble the appropriate number of root barrier panels using Zipper Joining System.
        2. Trench immediately adjacent to hardscape to the appropriate depth for installation of specified root barrier so that top of barrier is ½”-1” (12.7mm to 25.4mm) above finished soil grade.
        3. Place root barrier in trench, vertical ribs facing toward planting area and tree roots.
        4. Where possible, use hardscape as a guide for root barrier alignment.
        5. Backfill adjacent planting soil against the root barrier to promote clean fit to hardscape. Fill to finish grade per project specifications.
        6. Distribute soil evenly to maintain the shape of the root barrier and compact per project specifications.
4. Silva Cell System Applications
   * 1. For installation within and adjacent to Silva Cell system applications.
        1. Assemble the appropriate number of root barrier panels using Zipper Joining System.
        2. Trench immediately adjacent to Silva Cell frames to the appropriate depth for installation of specified root barrier so that top of barrier is ½”-1” (12.7mm to 25.4mm) above finished soil grade.
        3. Place root barrier in trench, vertical ribs facing toward planting area and tree roots.
        4. Where possible, use hardscape as a guide for root barrier alignment.
        5. Backfill adjacent planting soil against the root barrier to promote clean fit to hardscape. Fill to finish grade per project specifications.
        6. Distribute soil evenly to maintain the shape of the root barrier and compact per project specifications.

*END OF SECTION*