

This guide specification was prepared utilizing a 3-part format recommended by the Construction Specifications Institute (CSI) and generally incorporates recommendations from their SectionFormat™/Page Format™, and MasterFormat®, latest Editions, insofar as practicable.

Carefully review and edit the text to meet the Project requirements and coordinate this Section with the remainder of the Specifications and the Project plans.

Where bold, bracketed text is indicated, e.g. **[text]**, make the appropriate selection and delete the remainder of text within additional brackets, highlighting, and boldface type, if any.

This specification defines material and performance requirements for the "DeepRoot Utility Protection Barrier System". The Specifier should adapt these specifications to reflect specific Project requirements.

Consult the manufacturer for assistance in editing this guide specification for specific Project applications where necessary, including conventional applications, and for assistance in evaluating and sizing design elements for DeepRoot Utility Protection Barrier stormwater applications.

This Specification was current at the time of publication but is subject to change. Please confirm the accuracy of these specifications with the manufacturer prior to use.

Some elements in these specifications require coordination with Project plans; these items are noted "according to the Project plans and specifications" or similar phrases.

Refer to the DeepRoot website, www.deeproot.com for additional information.



SECTION 31 05 19

DEEPROOT UTILITY PROTECTION BARRIER

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. DeepRoot Utility Protection Barriers: geomembrane products that provide durable protection for underground infrastructure and block invasive roots from existing or proposed underground utilities.
 - 2. Associated materials.
- B. Related Requirements:
 - 1. Project plans and general provisions of the Contract, including General and Supplementary Conditions as well as Division 01 Specification Sections, apply to this Section.
 - 2. Section 01 33 00 - Submittal Procedures

1.02 REFERENCES

- A. Definitions:
 - 1. BACKFILL: Aggregate or native soil used to replace, or the act of replacing, earth in an excavation next to the Utility Protection Barrier to provide support and stability.
- B. Reference Documents:
 - 1. DeepRoot Utility Protection Barrier Technical Data Sheets.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Sequencing and Scheduling:
 - 1. General: Before beginning Work in this Section
 - a. Prepare a detailed schedule of the Work involved for coordination with other trades.
 - b. Schedule utility installations.
 - c. Where necessary to prevent damage, protect the installed system if Work must occur over or adjacent to the installed DeepRoot Utility Protection Barrier system(s).

1.04 SUBMITTALS

- A. Action Submittals: Submit in accordance with Section **[01 33 00] [other]**:

[OR]

- A. Action Submittals: Submit these to the **[Landscape Architect] [Architect] [Engineer]** for review and acceptance prior to the start of installation of materials and products specified in this Section.
 - 1. Product Data: For each type of product, submit the manufacturer's product literature with technical data sufficient to demonstrate that the product meets these specifications
- B. Closeout Submittals: Submit in accordance with Section **[01 33 00] [other]**:

[OR]

- B. Closeout Submittals: Submit these to the **[Landscape Architect] [Architect] [Engineer]** at the completion of installation.

1.05 QUALITY ASSURANCE

- A. Comply with the relevant laws, codes, ordinances, and regulations established by Federal, State, and Municipal authorities that have jurisdiction. Obtain the necessary permits and approvals from the relevant authorities.
- B. Manufacturer Qualifications:
 - 1. A manufacturer whose product is manufactured in an ISO/TS 16949-compliant and ISO 9001:2015 registered factory.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Utility Protection Barrier: Protect the Utility Protection Barrier system from damage during delivery, storage, and handling.
 - 1. Store Utility Protection Barrier on smooth surfaces, free from dirt, mud, and debris. Store components under a tarp to protect from sunlight.
 - 2.

PART 2 – PRODUCTS

2.01 UTILITY PROTECTION BARRIER MANUFACTURER

A. Acceptable Manufacturers:

USA - Head Office DeepRoot Green Infrastructure, LLC 1032 Irving Street, #614 San Francisco, CA 94122-2819

B. Substitutions: Manufacturers seeking approval for their products must comply with the Owner's Instructions to Bidders, generally found in the Project Manual. If these instructions are not included in Division 00 or Division 01, submit requests as specified herein.

1. Submit proposed substitutions to the **[Landscape Architect] [Architect] [Engineer]** not less than **[7] [other]** days prior to the date for receipt of Bids.

[OR]

B. No substitutions are allowed.

2.02 UTILITY PROTECTION BARRIER DESCRIPTION

- A. DeepRoot Utility Protection Barriers are geomembrane products that provide durable protection for underground infrastructure and block invasive roots from existing or proposed underground utilities.
- B. These DeepRoot Utility Protection Barriers are available in the following dimensions and offer the following design features:

UTILITY BARRIER TYPE	WIDTH	LENGTH	MIL THICKNESS
UPB 6-150	6' (1.8 m)	150' (45.72 m)	60 mil
UPB 8-150	8' (2.4 m)	150' (45.72 m)	60 mil

DEEPROOT UTILITY PROTECTION BARRIER FEATURES:

- Cut to any measured length with a utility knife.
- Available in rolls for continuous placement up to 150 linear feet (45.7 m) without seams, and up to 1200 square feet (111.48 m²) overall.
- Increased dimensions possible with vertical placement or horizontal overlap.
- Vertical or horizontal joining with sealant tape.

DEEPROOT UTILITY PROTECTION BARRIER MATERIALS:

- Nonwoven polypropylene 60 mil, coated double-sided.

2.03 AGGREGATE AND SOILS

- A. When required per the Project plans and specifications
1. Backfill

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the conditions under which the DeepRoot Utility Protection Barriers are to be installed.
 - 1. Carefully check and confirm dimensions, quantities, and grade elevations.
 - 2. Carefully review the Project plans to understand the existing underground conditions before digging. Confirm the locations of aboveground and underground utility lines, infrastructure, and other improvements.
 - 3. Notify the Contractor and the **[Landscape Architect] [Architect] [Engineer]** in writing about any conflicts between existing and new improvements, discrepancies, or any other conditions detrimental to the proper and timely completion of the installation.
 - 4. Obtain written approval of changes to the Work prior to proceeding. Proceed with the installation only after the necessary changes have been made and any unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Take necessary precautions to avoid damaging existing improvements and plantings.
- B. Before beginning Work, lay out and mark the location of the complete DeepRoot Utility Protection Barrier system.
- C. Coordinate the installation with other trades that may affect the completion of the Work.

3.03 INSTALLATION OF DEEPROOT UTILITY PROTECTION BARRIER SYSTEM

- A. Inspect the DeepRoot Utility Protection Barrier for damage before placement. Reject any damaged units.
- B. Layout the DeepRoot Utility Protection Barrier according to the Project plans and specifications.
- C. Install the DeepRoot Utility Protection Barrier system strictly according to the manufacturer's instructions, as specified herein, and according to the Project plans and specifications. If requirements conflict or contradict, adhere to the more stringent requirements.
- D. If conflicts arise during installation, notify the **[Landscape Architect] [Architect] [Engineer]** in writing and provide action recommendations. Proceed with the work only upon receiving written approval for the action.
- E. Specialty Application Installation
 - 1. Contact DeepRoot to support specialty application installation.

3.04 PROTECTION

- A. Protect installed DeepRoot Utility Protection Barriers during construction.

3.05 CLEAN UP

- A. Ensure clean-up during installation and upon completion of the Work. Keep the site free of soil, sediment, trash, and debris. Remove excess soil materials, debris, and equipment from the site after completing the Work in this section.
- B. Repair any damage resulting from the installation of this Work by utilizing skilled installers experienced in construction-type remedial Work and the relevant trades.

END OF SECTION