

**Slope Interruption Device or Perimeter Sediment Control
Slope Stabilization and Sediment Control
GUIDE SPECIFICATION**

PRODUCT:
ProWattle™

MANUFACTURER:
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1.0 Description:

Slope Interruption Device (SID) or Perimeter Sediment Control Device (PSCD) shall conform to the details shown on the plans and these special provisions and shall be installed on stabilized excavation and embankment slopes as a slope interruption device or around sites with disturbed soils as a perimeter sediment control device. For stabilization of disturbed slopes, it is typically installed in conjunction with a spray-on soil stabilizer or erosion control blankets. The intended function is to disperse or spread concentrated water runoff, to reduce runoff velocities and significantly reduce movement and accumulation of sediment.

2.0 Material:

Materials shall conform to the provisions in these special provisions.

Device shall consist of polygonal or “L” shaped assemblies comprising semi-rigid, overlapping layers of apertured polymeric high density polyethylene (HDPE) sheets, and one or more integrated filter sheets. Each sediment filter segment shall be 7 feet long and have minimum vertical freeboard between 5” and 6” with a 4-inch hinged horizontal flap at the bottom, secured in place with nails, and wood stakes and shall conform to the following:

A. The device shall have an integrated filter fabric within a thermally extruded high density polyethylene outer jacket conforming to the following:

Specification	Requirements
Height (freeboard), inches, min.	5.0 to 6.0
Mass per Unit Weight, (pounds/foot) (maximum – wet or dry)	0.28 – 0.34
Tensile Yield ASTM D-638 (lb/in ²)	1800 - 2800
Ultimate Tensile Strength: ASTM D-638 (lb/in ²)	2000 - 2800
Filter Percentage Open Area COE 22125-86 (min %)	20%
Filter Apparent Opening Size (AOS) ASTM D 4751 (microns)	350
Ultraviolet stability (outer jacket & filter), percent tensile strength retained after 500 hours, min. ASTM Designation: D 4355	90
Caltrans protocol San Diego State University SERL soil retention test – 3 consecutive 10 yr storms	81%
Life in application (years - minimum)	4
Made from recycled materials (min)	92%
Recyclable at end of life (Zero Waste)	100%

* or appropriate test method for specific polymer

B. A copy of the manufacturer’s product sheet together with instructions for installation shall be furnished to the Engineer 5 days before installation.

Stakes

Install wood stakes on the downhill side to prevent downhill movement. Wood stakes shall be a nominal minimum of 1" x 1" x 18" in size. Wood stakes shall be untreated fir, redwood, cedar, or pine and cut from sound timber. They shall be straight and free of loose or unsound knots and other defects which would render them unfit for the purpose intended. Metal stakes shall not be used.

3.0 Installation:

Device shall be installed as follows:

- A. A shelf shall be constructed on elevation contours to a sufficient width for the horizontal flap, as shown in the installation instructions. The cleared shelf shall be free of obstructions including, but not limited to, rocks, clods, and debris greater than 1-inch in any dimension. Install 6" nails (60D Bright Common) every 3.5 feet.
- B. Backfill flap with 1 to 1.5" of soil
- C. At the segment overlaps insert one section into the adjoining section as per the installation instructions.
- D. Stakes shall be installed no more than 5 linear feet apart along the length on the downstream side of the vertical section.
- E. On slopes, device shall be placed in multiple parallel rows on contours 10 feet apart along the slope for slope inclination (horizontal to vertical) of 2:1 and steeper, 15 feet apart along the slope for slope inclination between 2:1 and 4:1, 20 feet apart along the slope for slope inclination between 4:1 and 10:1, and a maximum of 50 feet apart along the slope for slope inclination of 10:1 and flatter.
- F. Device shall be installed approximately parallel on the slope contour and perpendicular to water flow.
- G. Device shall be installed on the shelf with the horizontal flap positioned horizontally and facing up-slope or toward the flow (facing upstream) with the flap backfilled with native soil to a depth of 1.0 to 1.5 inches.
- H. A minimum of two 6" 60D Bright-Common anchor nails shall be installed through the center of the horizontal flap in each 7-foot segment. Nails shall be installed flush with the flap to ensure good contact with the soil.
- I. The ends of the device segments shall be dog-legged or angled up-slope to ensure water and sediment containment.
- J. Device shall be installed before the application of other erosion control or soil stabilization materials in the same area.
- K. On perimeter installations, it may not necessary to use wooden stakes, except in areas of concentrated flows.

4.0 Maintenance:

Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches half the vertical height. Removed sediment shall be incorporated in the project at designated locations or disposed-of outside the project or in conformance with requirements. Damage to SID resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

Split or torn segments shall be repaired with zip-ties or 16-gauge galvanized wire or replaced. Broken or split stakes shall be replaced. Sagging segments shall be repaired with stakes. Locations where rills and other evidence of concentrated runoff have occurred beneath the barrier strips shall be corrected. Segments needing repair shall be repaired or replaced within 24 hours of identifying the deficiency.

5.0 Method of Measurement:

Quantities of Slope Interruption or Perimeter Sediment Control to be paid for will be determined by the linear foot measured along the centerline of the installed strip. Where segments are joined and overlapped, the overlap will be measured as a single installed strip.

6.0 Basis of payment:

The contract price paid per linear foot for slope interruption or perimeter sediment control installation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved, complete in place, including shelf excavation and backfill, and maintenance, as shown on the plans, and in these special provisions, and as directed by the Engineer.