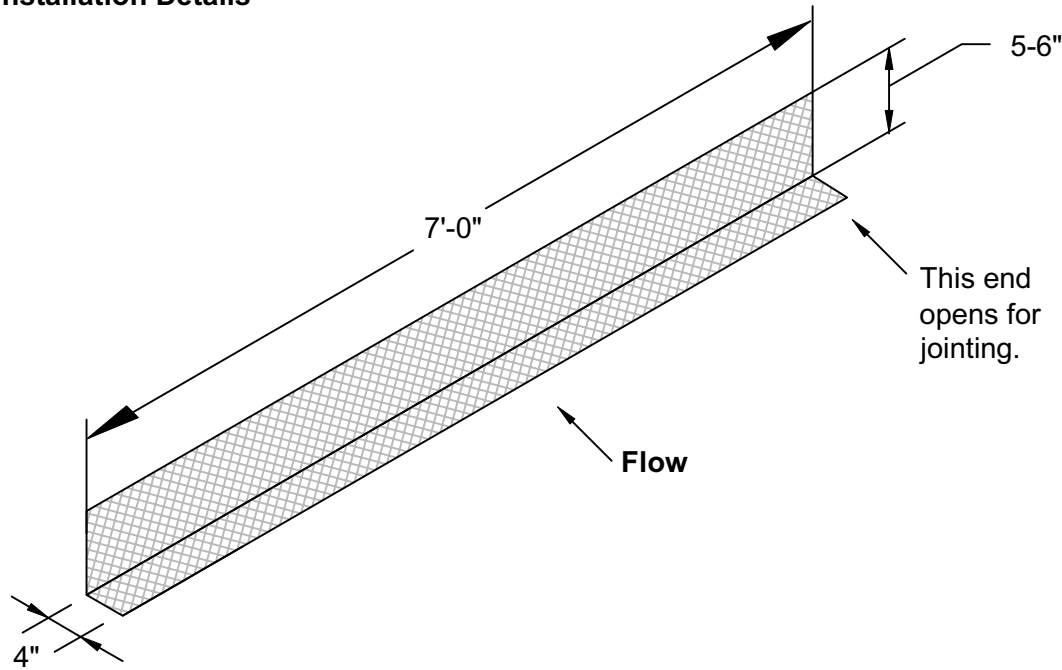
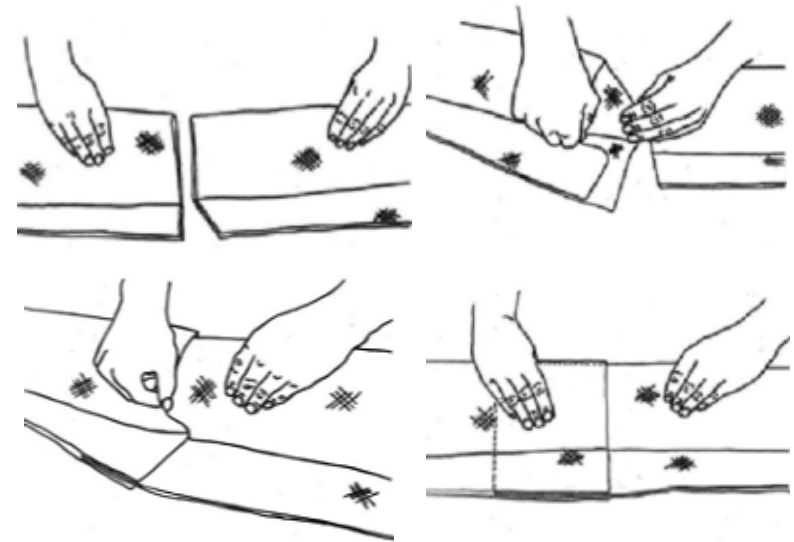


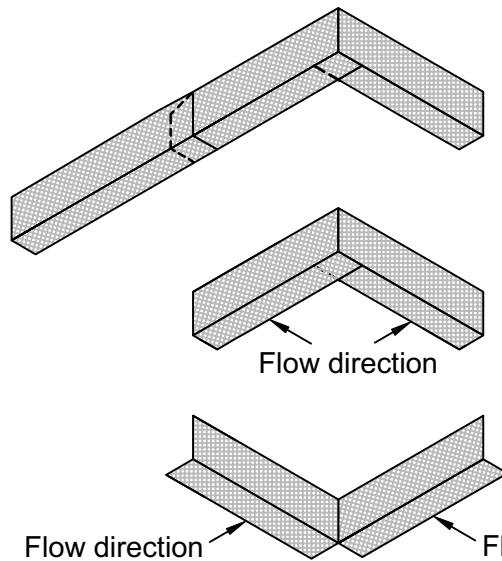
ERTEC® ProWattle™
Installation Details



ProWattle Joint



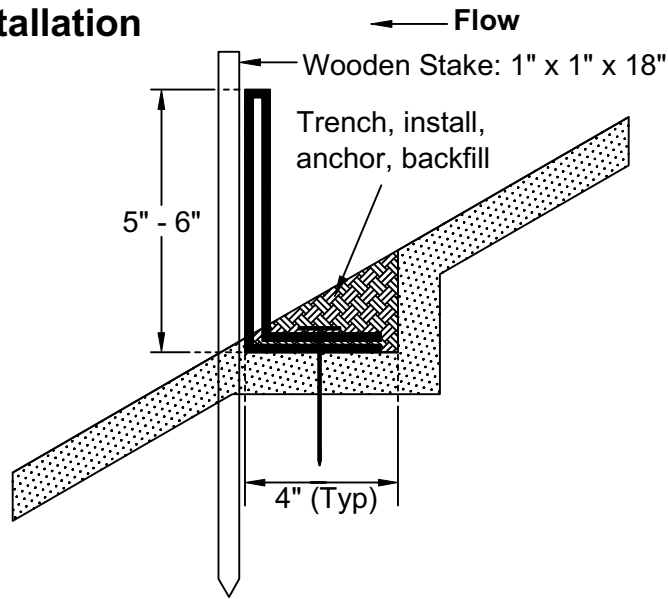
The end of one PW is inserted and butted up to the adjoining PW. Butt the segments together firmly.



Notes:

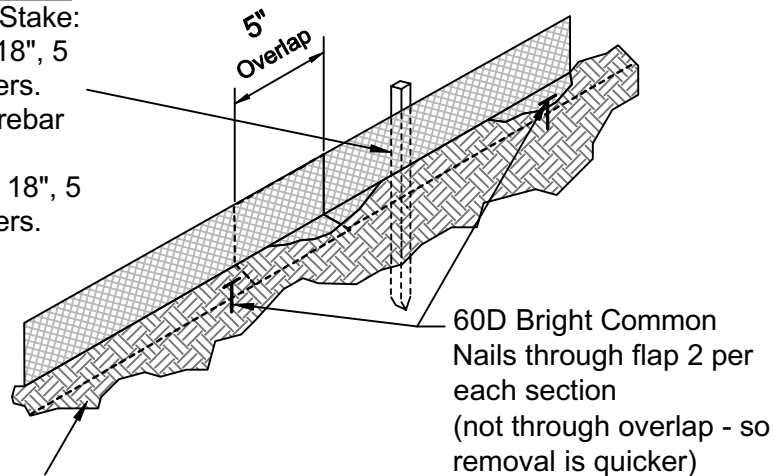
1. To bend ProWattle™ around obstacles, first slit flap through to crease. Then bend to desired angle, in either direction, as shown.
2. Dog-leg at end-of-runs or bend around obstacles to contain sediment.
3. Dog-Leg periodically on down hill run to slow velocity and prevent scour.

Slope Installation



Staking Methods:

1. Wooden Stake:
1" x 1" x 18", 5 feet centers.
2. #3 or #4 rebar j-hook,
minimum 18", 5 feet centers.

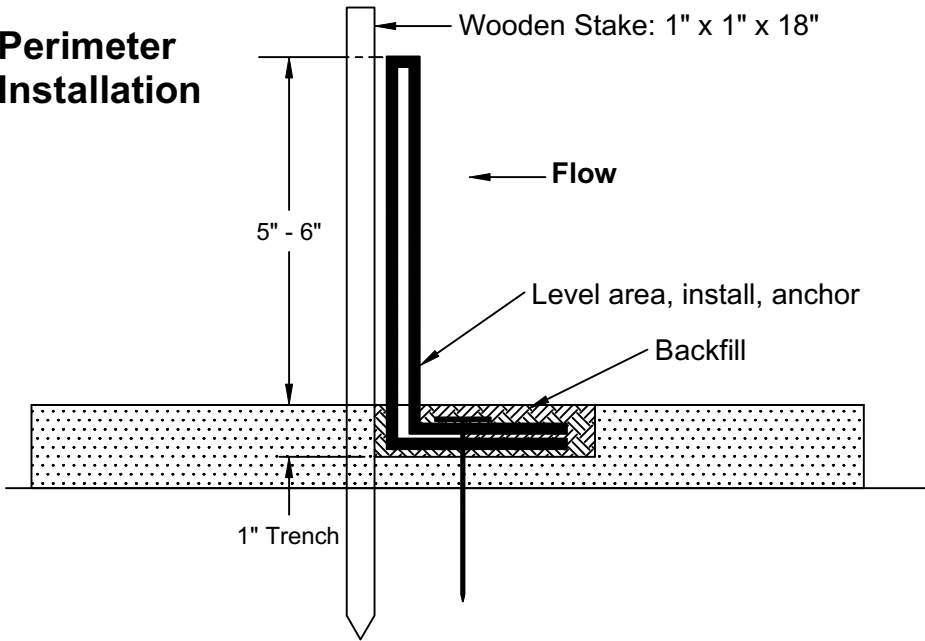


Guidelines for installing on a slope

1. Install ProWattle approximately parallel to the slope contour. For any 20-foot length of ProWattle prevent the ProWattle from varying more than 5 percent from level. Install ProWattle on slopes at the following spacing unless shown otherwise:
 - i. 10 feet apart for slopes steeper than 2:1 (horizontal:vertical)
 - ii. 15 feet apart for slopes from 2:1 to 4:1 (horizontal:vertical)
 - iii. 20 feet apart for slopes from 4:1 to 10:1 (horizontal:vertical)
 - iv. 50 feet apart for slopes flatter than 10:1 (horizontal:vertical)
2. Dig a flat area 4" wide on the slope as shown in the diagram. Use a 4" or 5" trench shovel for best results.
3. Clear the area of obstructions including rocks, clods, and debris prior to installation.
4. Position ProWattle into place with horizontal flap pointing upstream.
5. Extend the line of ProWattles by joining segments together. Open one end of each segment to insert the adjoining piece. Butt segments together tightly.
6. Hammer two (2) 60D bright common nails (6" nails), 6" u-shaped sod staples, or Round-Top pins through the horizontal flap into ground. Position nails about 12 to 18 inches from each end (2 nails per segment). Do not position nail where segments overlap. Hammer nails flush with the horizontal flap so that the flap makes good contact with soil.
7. On the downstream side of the vertical section, reinforce with wood stakes (1"x1"x18") as shown. Install one stake every 5 feet. Do not fasten the stakes to ProWattle. Rebar j-hook stakes (#3 or #4) are an alternative for hard soil where wood stakes are difficult to install.
8. Backfill the horizontal flap completely with at least 1 inch of soil to prevent undercutting.
9. When no longer required, ProWattle can be removed and reused. Breakup and shake sediment from ProWattle segments. It is not necessary to clean ProWattle of all remaining sediment prior to reuse (it is not necessary to pressure-wash ProWattle between installations). The residual sediment that remains on the filter can be beneficial as a secondary filter (filter cake) upon subsequent installations. Prior to reuse, perform 2-step quality inspection as shown in this guide (www.ertecsystems.com/).

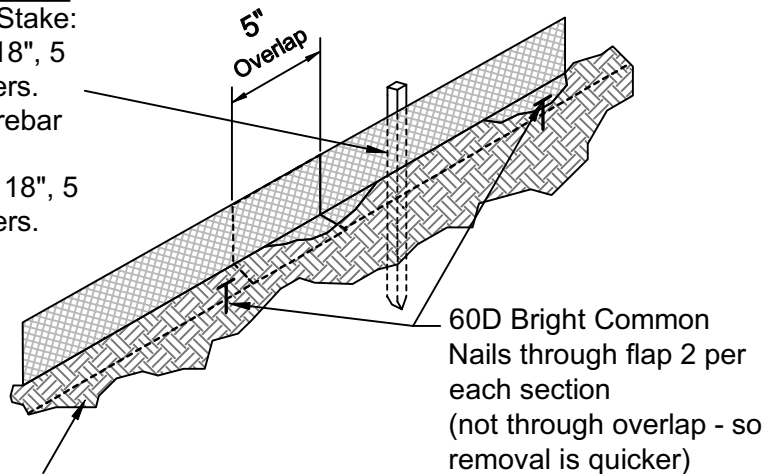
ERTEC® ProWattle™
Installation Details

Perimeter Installation



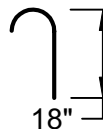
Staking Methods:

1. Wooden Stake:
1" x 1" x 18", 5 feet centers.
2. #3 or #4 rebar j-hook,
minimum 18", 5 feet centers.




Backfill flap with soil

Alternate Stake:
#3 or #4 rebar



Guidelines for installing around site perimeters

1. Dig a trench, 1" deep and 4" wide. Use a 4" or 5" trench shovel for best results.
2. Clear the area of obstructions including rocks, clods, and debris prior to installation.
3. Position ProWattle into trench with horizontal flap pointing upstream.
4. Extend the line of ProWattles by joining segments together. Open one end of each segment to insert the adjoining piece. Butt segments together tightly.
5. Hammer two (2) 60D bright common nails (6" nails), 6" u-shaped sod staples, or Round-Top pins through the horizontal flap into ground. Position nails about 12 to 18 inches from each end (2 nails per segment). Do not position nail where segments overlap. Hammer nails flush with the horizontal flap so that the flap makes good contact with soil.
6. On the downstream side of the vertical section, reinforce with wood stakes (1"x1"x18") as shown. Install one stake every 5 feet. Do not fasten the stakes to ProWattle. Rebar j-hook stakes (#3 or #4) are an alternative for hard soil where wood stakes are difficult to install.
7. Backfill the horizontal flap completely with at least 1 inch of soil to prevent undercutting.
8. When no longer required, ProWattle can be removed and reused. Breakup and shake sediment from ProWattle segments. It is not necessary to clean ProWattle of all remaining sediment prior to reuse (it is not necessary to pressure-wash ProWattle between installations). The residual sediment that remains on the filter can be beneficial as a secondary filter (filter cake) upon subsequent installations. Prior to reuse, perform 2-step quality inspection as shown in this guide (www.ertecsystems.com).

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Layout Name: P3 Perimeter		
Scale: NONE	Default Print Size: 8.5" x 11"	Page: 3 of 5

ERTEC® ProWattle™

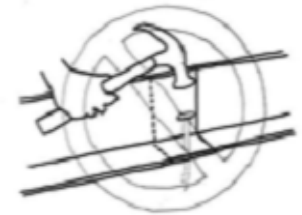
Additional Installation Instructions

Anchoring

- Anchor to the soil with 6 inch nails (60d 6" bright common nails). It is NOT necessary to use galvanized nails. Drive nails through the flap so that flap is in contact with the soil at a minimum of 2 nails each 7 feet. Place nails about 1.5 feet from each end (1). For easy removal, DO NOT install nail or pin in the overlap (2).



1.



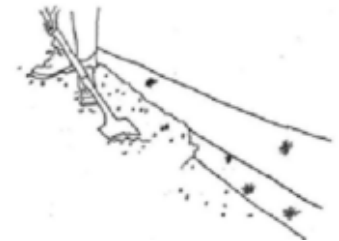
2.

Keying-in the flap

- If there is available loose soil, it is permissible to install without trenching. Place ProWattle on grade. One to two inches of soil should be pushed on top of the flap after nails are installed, to prevent undercutting.

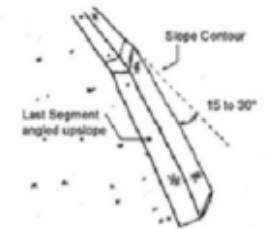
Installation on grass

- Grass is a natural sediment control barrier. When installing ProWattle on top of grass, it is recommended to not trench below grade. Tamp down the grass and install ProWattle on top of grass. Install nails every 2 feet or as necessary so there are no gaps for water to flow underneath. It is not necessary to backfill.



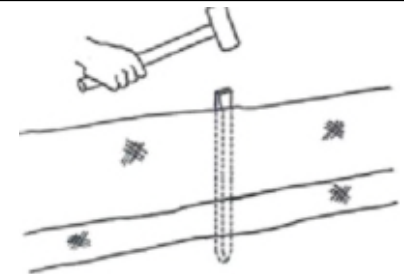
End-of-run

- The last in-line PW must be angled slightly up-slope to prevent water from flowing around the end. (Water end-runs will cause concentrated flows, which in turn will create rills and gullies).



Staking

- Install wooden stakes (1" X 1" X 18") on the downstream side of PW on 5 foot centers (one stake every 5 feet (maximum)). If staking is not possible due to surface conditions, it is acceptable to place gravel bags downstream of the vertical section as required.



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File Name:
ERTEC - Additional Installation Instructions
- ProWattle.dwg

Layout Name:
P4 Additional Instructions

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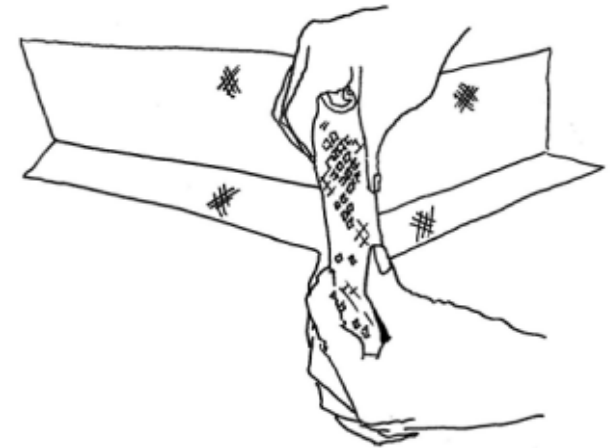
Additional Installation Instructions - continued

Removal

- When the slope is stable with vegetation cover greater than 70%, PW can be removed and stored for reuse or relocated to another project.


Inspection prior to redeployment

- PW is designed to resist degradation from sunlight and provide many years of usability while protecting slopes from erosion. There is a simple and quick 2-step test to determine if PW retains its functionality. Select several random PW segments from the lot that is to be redeployed:
 1. Examine the filter (1). Make sure filter is in-place and intact. If there are no tears or holes proceed to step 2.
 2. Bend a segment sharply (2). Examine the black outer jacket along its vertical dimension. If the segment does not crack-thru, it can be redeployed.
- If not reusable due to damage, PW can be recycled as #2 (HDPE).



Maintenance: Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Debris shall be removed daily and sediment shall be removed when the sediment accumulation reaches 75% of the barrier height. Removed sediment shall be incorporated in the project at designated locations.

Important: All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each project for their application. ERTEC Environmental Systems makes no warranties as to the accuracy of completeness of the information, and disclaims any liability regarding its use. ERTEC Environmental System's only obligations are those in the ERTEC Environmental Systems Standard Terms and Conditions of Sale for this product, and in no case will ERTEC Environmental Systems or its distributors be liable for any incidental indirect or consequential damages arising from the sale, resale, use or misuse of the product. Specifications are subject to change without notice. In addition, ERTEC Environmental Systems reserves the right to make changes, without notification to Buyer, to processing or materials that do not affect compliance with any applicable specification.

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Layout Name: P5 Additional Instructions			
Scale: NONE	Default Print Size: 8.5" x 11"	Page: 5 of 5	