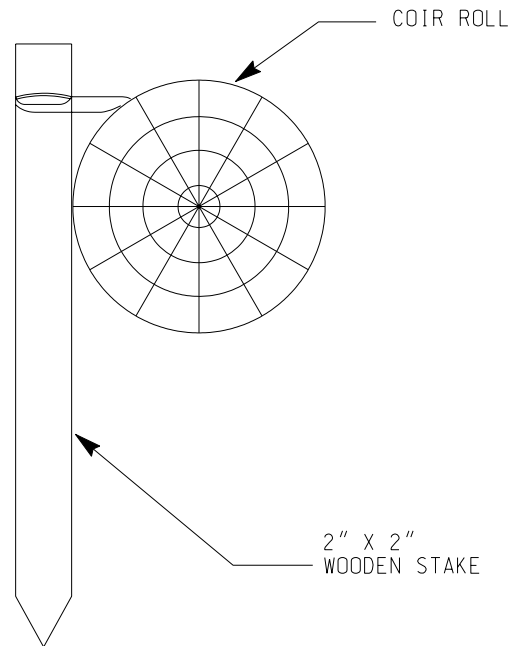
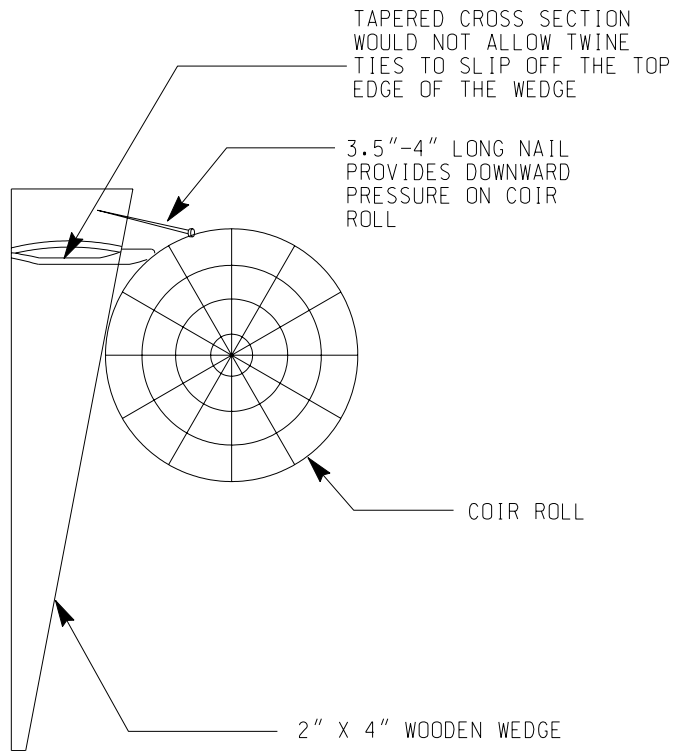


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⊗ 2" X 4" WOODEN WEDGE ANCHORS
(Manufacturer's preferred method)

⊗ 2" X 2" WOODEN STAKE ANCHORS

NOTES:

1. DO NOT SCALE DRAWINGS.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS.

WOODEN ANCHORES IN COIR ROLL (LOG) INSTALLATION

Figure 1

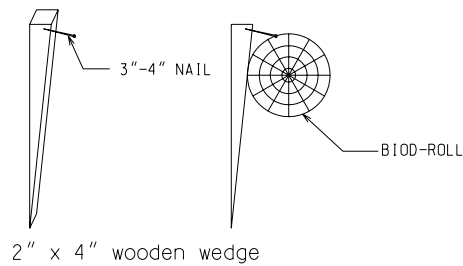
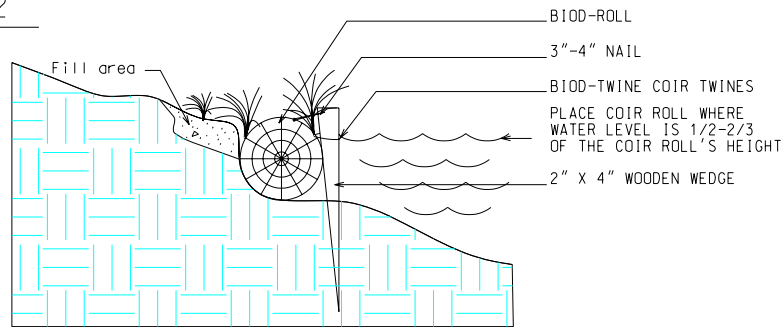
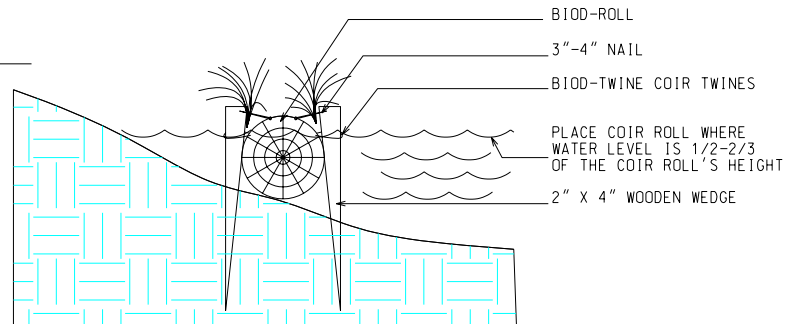


Figure 2



* COIR ROLL PLACEMENT WITH BANK SUPPORT

Figure 3



* COIR ROLL PLACEMENT WITHOUT BANK SUPPORT

Installation guide for BioD-Roll Coir Roll System

1. If the shoreline or streambank that need to be restored is severely eroded, grade the shoreline or streambank according to the natural terrain of the area (2:1 slope is generally recommended). Immediately, place an erosion control blanket along the graded slope to prevent erosion.
2. Place coir rolls along the streambank as designed. Tie the ends of adjacent coir rolls together with coir twines. BioD-twine 6mm is recommended. Use extra loops of coir twine through the outer netting of adjacent coir rolls.
3. Wooden wedges (2"x4") with a 3-4" nail at the top is recommended for coir roll installation (Fig.1). In general, 36" long wedges are recommended for 12" diameter coir rolls and 48" long wedges are recommended for 16" and 20" diameter coir rolls. Place suitable length wooden wedges every 3' (2' spacing for low flow conditions) in the waterside when the bank supports coir rolls from the landside (Fig. 2). If the bank does not support the coir rolls, place wooden wedges in land side as well as in waterside (Fig 3). Pound the wedge
4. Bend the ends of the first and the last coir roll towards the shore and dig them into the bank. This avoids water gathering behind the coir rolls and prevents pulling the coir roll out.
5. Once the coir rolls are installed properly, plant suitable native wetland plants on and around coir rolls where water is available for the young plants.

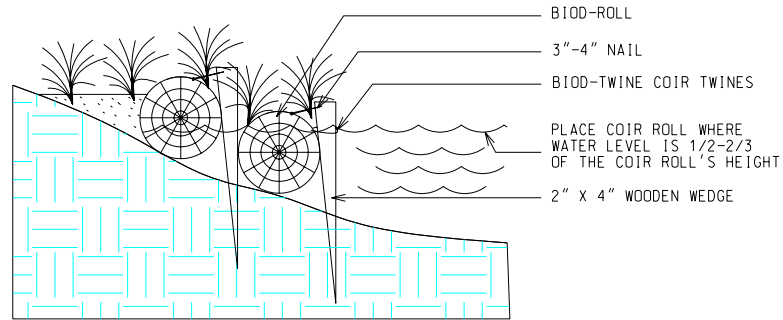
* Note: These general instructions should be altered at the discretion of the design engineer/architect to individual site conditions as needed.

NOTES:

1. DO NOT SCALE DRAWING.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS.
3. PLANT SUITABLE NATIVE PLANTS AND ADDRESS ANY SPECIAL SITE CONDITIONS IF EXIST.

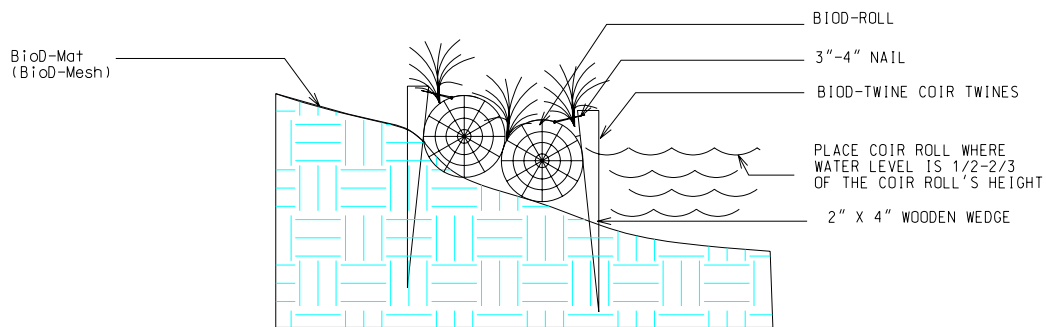
SINGLE LAYER BIOD-ROLL COIR ROLLS (LOGS) APPLICATIONS.

Figure 1



* COIR ROLL PLACEMENT WITHOUT BANK SUPPORT

Figure 2



* COIR ROLL PLACEMENT WITHOUT BANK SUPPORT

INSTALLATION GUIDE FOR BIOD-ROLL COIR ROLL SYSTEM

1. If the shoreline or streambank that need to be restored is severely eroded, grade the shoreline or streambank according to the natural terrain of the area (2:1 slope is generally recommended). Immediately, place an erosion control blanket along the graded slope to prevent erosion.
2. Place coir rolls along the streambank as designed. Tie the ends of adjacent coir rolls together with coir twines. BioD-twine 6mm is recommended. Use extra loops of coir twine through the outer netting of adjacent coir rolls.
3. Wooden wedges (2"x4") with a 3-4" nail at the top is recommended for coir roll installation (Fig.1). In general, 36" long wedges are recommended for 12" diameter coir rolls and 48" long wedges are recommended for 16" and 20" diameter coir rolls. Place suitable length wooden wedges every 3' (2' spacing for low flow conditions) in the waterside when the bank supports coir rolls from the landside (Fig. 2) If the bank does not support the coir rolls, place wooded wedges in land side as well as in waterside (Fig 3). Pound the wedges down so the nail on top is pressing the coir roll down. Tying coir rolls to wedges with several loops of coir twine will provide extra support.
4. Bend the ends of the first and the last coir roll towards the shore and dig them into the bank. This avoids water gathering behind the coir rolls and prevents pulling the coir roll out.
5. Once the coir rolls are installed properly, plant suitable native wetland plants on and around coir rolls where water is available for the young plants. In situations where coir rolls are installed away from water, place the selected plants closer to the coir rolls where plants get water. With time, plants will grow into the coir rolls. Success of any restoration depends on the success of vegetation establishment. If plants are to be installed in an area without water, irrigation must be provided until establishment of vegetation. Recommended spacing for plant plugs is 6 inches.

* Note: These general instructions should be altered at the discretion of the design engineer/architect to individual site conditions as needed.

NOTES:

1. DO NOT SCALE DRAWING.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS.
3. PLANT SUITABLE NATIVE PLANTS AND ADDRESS ANY SPECIAL SITE CONDITIONS IF EXIST.

MULTI LAYER BIOD-ROLL COIR APPLICATIONS.