Erosion Control Blanket Construction Guidance Checklist

MILE HIGH FLOOD DISTRICT

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Scan the code for our Construction Management playlist on YouTube

ECB Introduction

Erosion Control Blanket (ECB) is a construction material that provides temporary cover and support for establishing vegetation on bare soil. ECB holds topsoil and seed (typically grass) in place to minimize erosion during germination of seed.

ECB Introduction

- ECB for District projects is intended to provide temporary erosion control during vegetation establishment.
- ECB materials should be biodegradable and consist of coconut fiber, straw and other organic twine. Outside netting should consist of biodegradable natural organic jute materials. Plastic netting is not allowed.
- ECB is made with varying thicknesses, density, and strength depending on the application.
- Heavier, denser blankets are used near flowing water along channels and streams. Lighter blankets are used on steep slopes (typically > 4H:1V) where there is a potential for rill erosion from rain events.
- ECB is held down with wooden stakes of different sizes.

ECB Materials

Step 1:

- Verify that the blanket material matches what is specified and does not contain any plastic netting.

ECB Materials

Coir mat and coconut blanket are the two most common types of ECB used on drainageway projects.

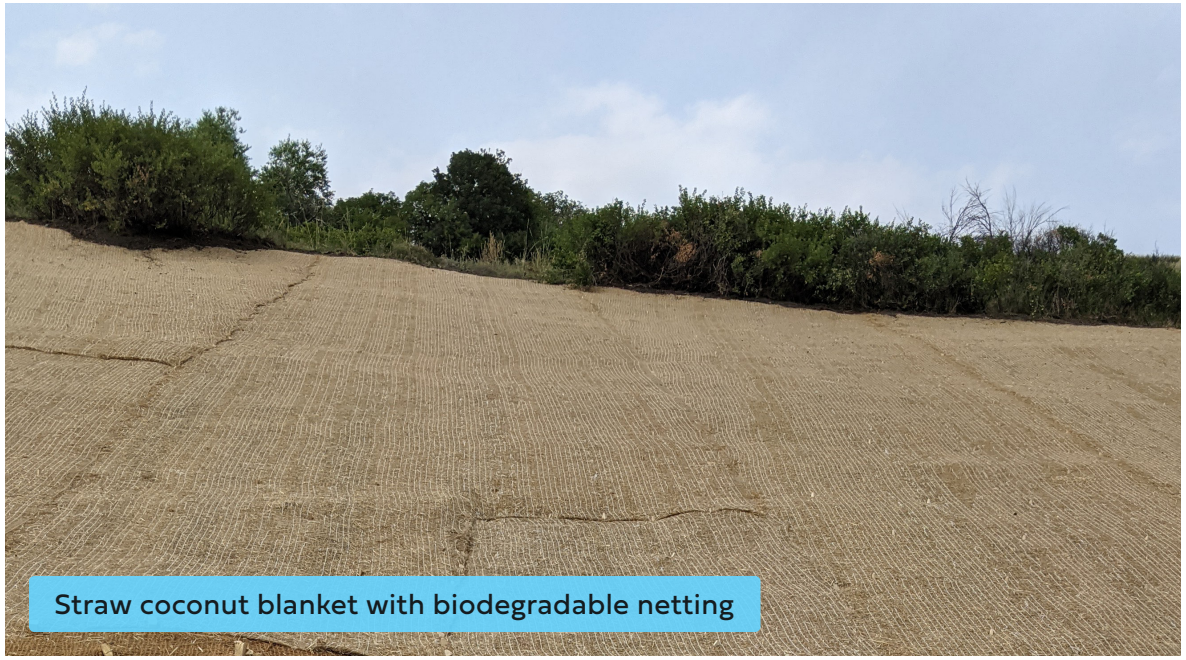
Coir Mat

Coconut Blanket with biodegradable netting

ECB Materials

Here are some photos of a straw blanket & straw coconut blanket.

Straw blanket with biodegradable netting



Straw coconut blanket with biodegradable netting

ECB Materials

Step 2:

- Verify that the length and type of stakes match specifications.
- Stakes should be wood wedge stakes or wood ecostakes. Metal staples are NOT allowed.


Wood wedge stakes (2”x4” cut at angle)


Metal staples (not allowed)

Wood ecostakes

ECB Installation

Step 3:

- Verify that topsoil is smooth prior to blanket installation.
- Topsoil should be raked smooth when it is dry; muddy and clumped soil is not acceptable. Make sure mud clods and rocks are removed so that the blanket lies flat on the surface.
- Confirm that seed, amendments and any fertilizer required are installed beneath the blanket prior to installation.
- Hand shaken straw mulch is typically specified under coir mat because it has more open area. Confirm that the straw mulch is spread evenly prior to installation of coir mat.

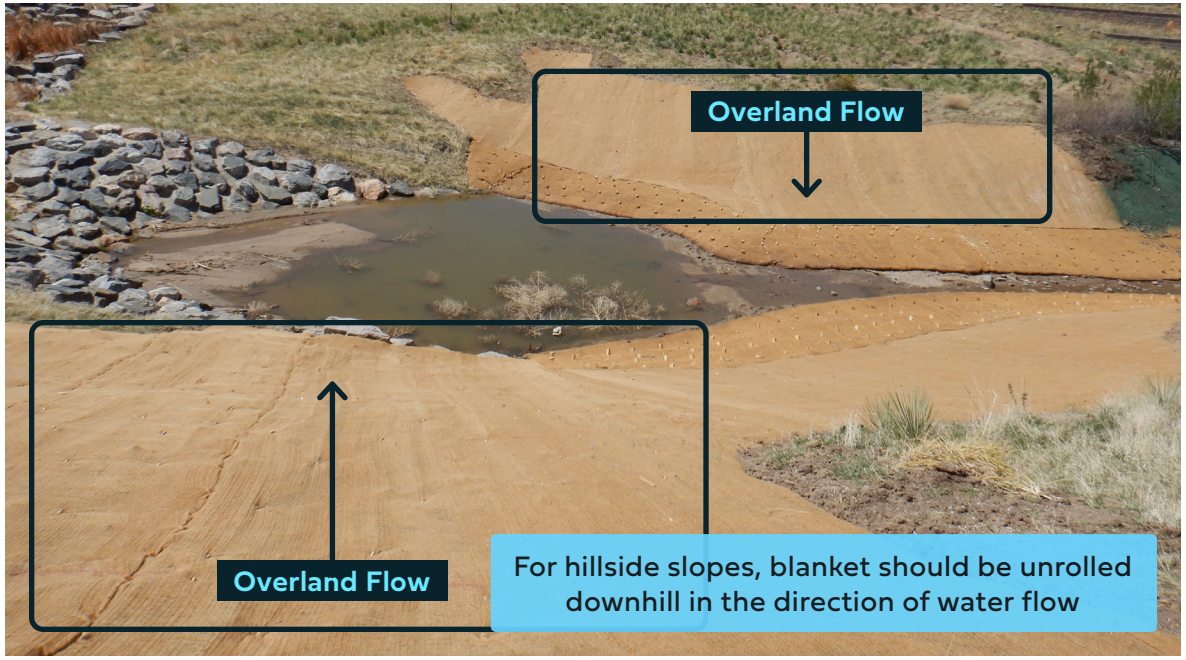
Topsoil with too many large clods

Topsoil smooth and clod free

ECB Installation

Step 3 (Continued):

- Check to make sure blanket is placed on the soil in the direction shown on the plans or as recommended by the manufacturer (see photos). Verify that blankets are placed smoothly but loosely on soil surface.

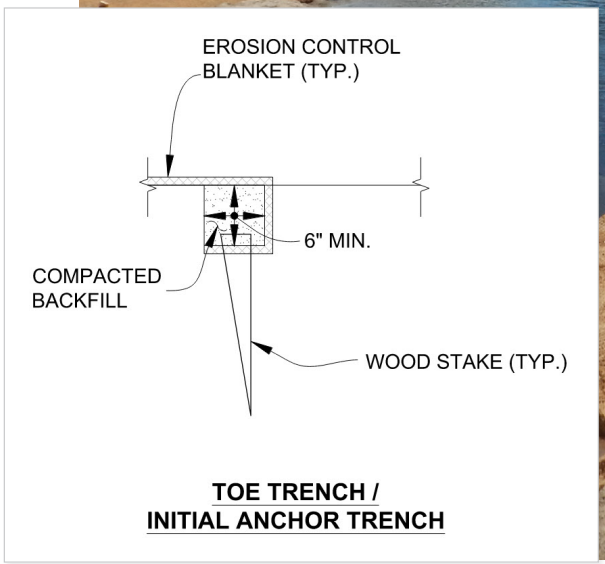


ECB Installation

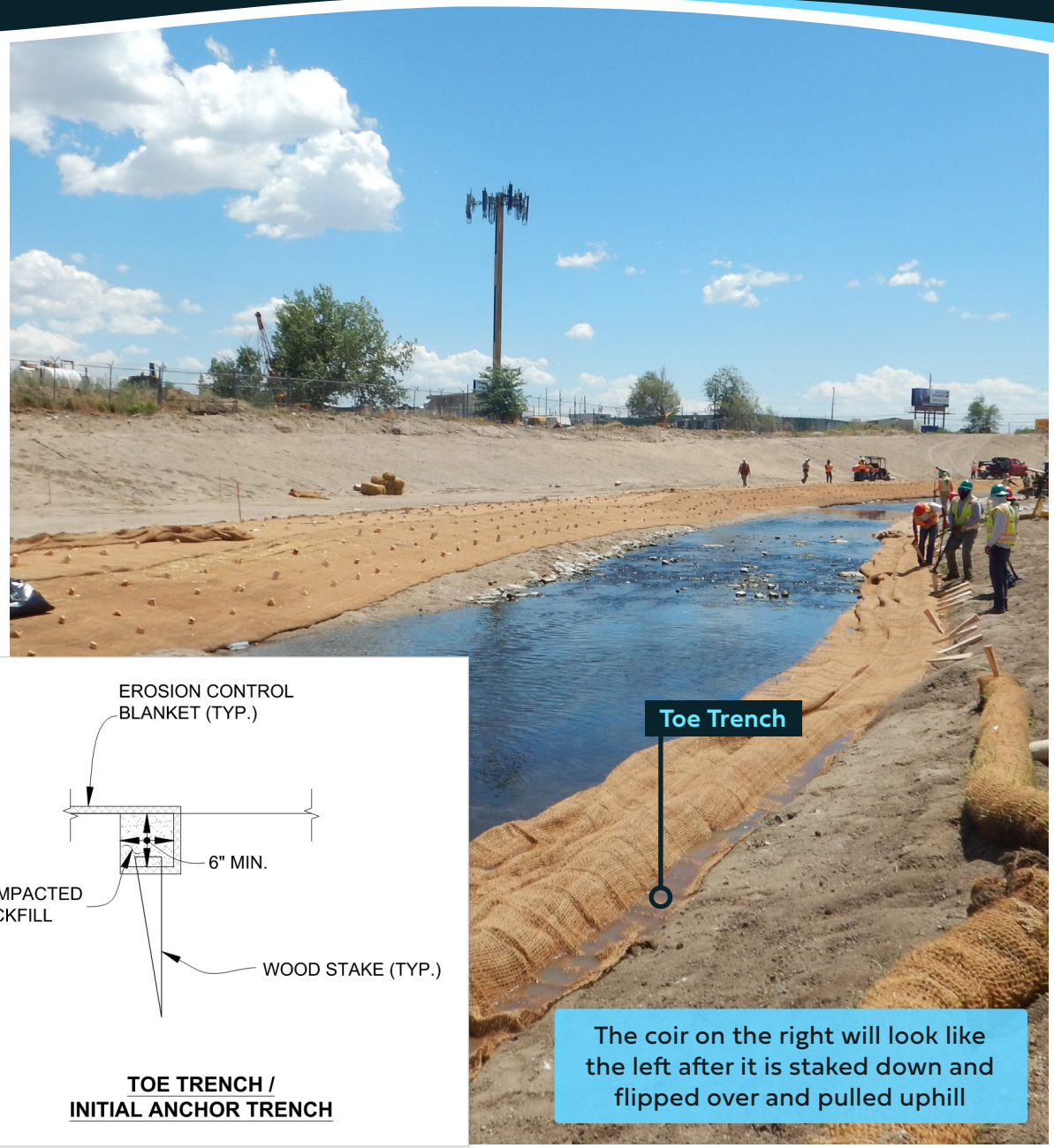
Step 4:

Blanket shall be trenched according to the Drawings and Specifications.

- Verify that all outside edges of blanket are buried and anchored in trenches.
- Most ECB along channels starts with a longitudinal toe trench at the bottom of the slope. The blanket is staked down and rolled over the trench back uphill like a burrito.
- Make sure initial anchor trenches are used at the upstream end of all installations.



TOE TRENCH / INITIAL ANCHOR TRENCH

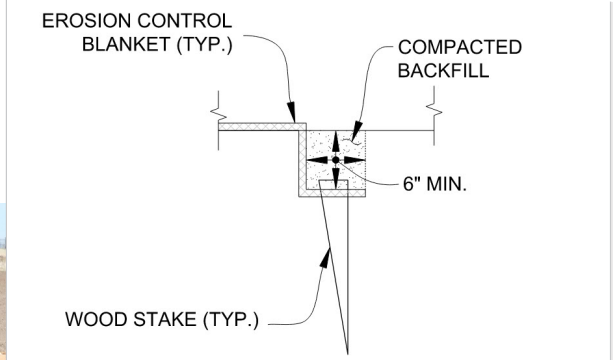


The coir on the right will look like the left after it is staked down and flipped over and pulled uphill

ECB Installation

Step 4 (Continued):

- Verify that longitudinal trenches are installed at the top of slopes and terminal anchor trenches are installed at the downstream end of all installations.
- Verify that abutting blankets are spliced at ends, with the upstream blanket placed over the downstream blanket with an overlap of 12-inches (any frayed edges should be folded under) and staked at spacing specified for overlaps. Likewise, confirm that adjacent blanket rolls are overlapped 12-inches (shingled), as shown on the next page.
- Confirm that trenches are backfilled with topsoil and that backfill is compacted firmly and seeded.



LONGITUDINAL TOP OF SLOPE TRENCH / TERMINAL ANCHOR TRENCH

Longitudinal trench at top of slope

ECB Installation

Here is a photo and detail of proper overlapping of ECB. Note that the upstream blanket is shingled over the downstream blanket by 12".

Overlap of erosion control blankets

ECB Installation

Step 5:

Verify that blanket is staked according to the details shown on the Drawings.

- Confirm that stakes are installed at spacing specified.
- Confirm that stakes are pounded into the soil so that only about 1" is sticking about the ground surface to reduce trip hazards.

ECB Installation

Confirm that there is no tenting of blanket or frayed edges.

Tenting created by large rock

Frayed blanket

ECB Installation

Finished Installation:

After staking is complete, blanket should be smooth, tight, in close contact with soil surface and without tenting.