

February 17, 2014

Overview of the construction related to the concrete plugs and trough drain

Project Background:

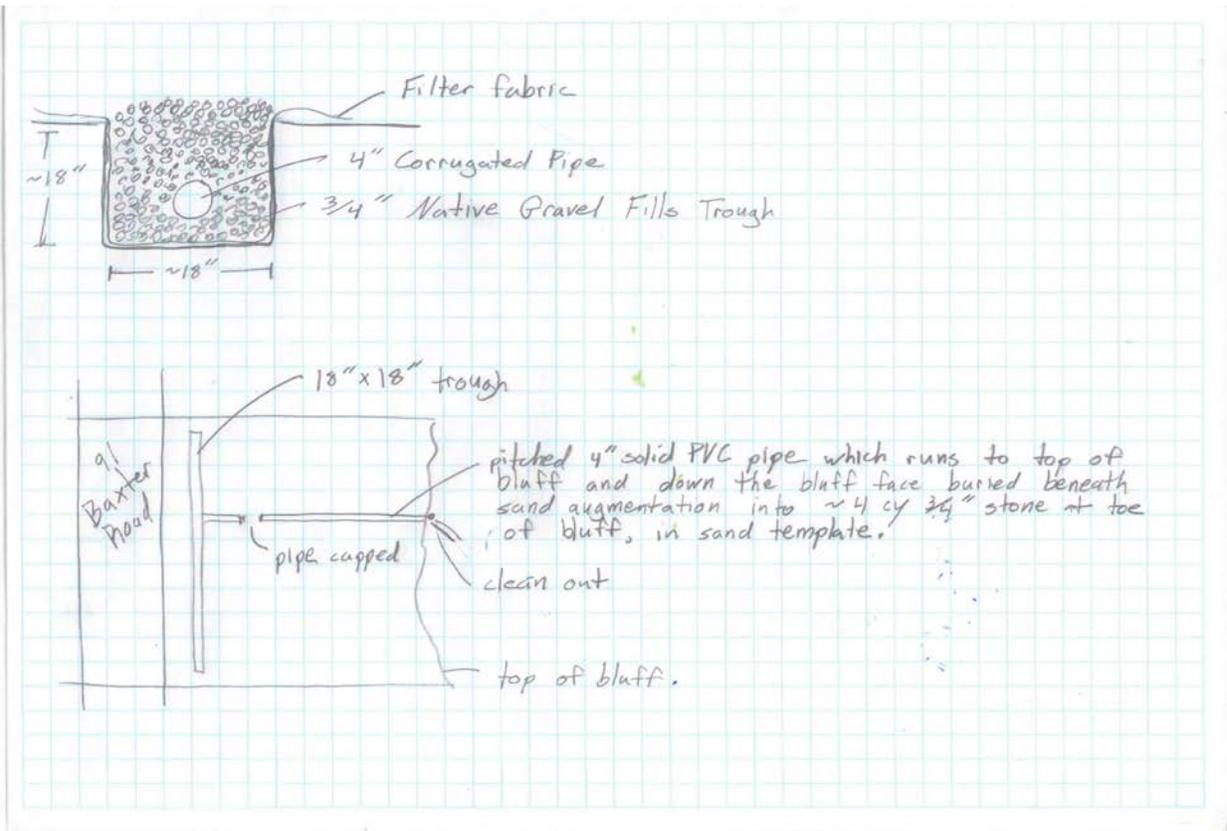
- Surface water runoff at 91 Baxter Road was contributing to significant erosion of the bank face. This condition became (most) apparent during construction of the project.
- Per recommendation from Mark Haley, a subsurface drain was installed to direct the water to the toe of the bank, rather than allowing it to break out on the bank face and cause additional erosion.

Project Description:

- The subsurface drain was installed at 91 Baxter Road, parallel to and approximately 10 feet seaward of the roadway, for a distance of approximately 41 feet.
- The subsurface drain consists of an 18 inch deep x 18 inch wide trough that is lined with filter fabric and holds a 4" diameter corrugated pipe. The trough is backfilled with $\frac{3}{4}$ inch gravel.
- The subsurface drain collects storm water runoff and directs it to another 4" diameter PVC pipe that runs down the face of the bank and terminates at the toe of the bluff, in a gravel trough placed in the sand template behind the geotubes.
- No excavation into the bank or beach occurred to install the PVC pipe that runs down the face of the bank; this pipe was placed within sand added to the bank face or the sand template on the geotubes.
- The pipe is currently not connected.







The concrete plugs were installed at the location of the portholes, approximately every 35' of tube. After a tube is filled, a small amount of sand is removed from the porthole area so that the trunk which extends up from the porthole can be rolled up and tucked inside the geotube. Enough space is left, so that the porthole can then be filled with a small amount of cement and then patched over with a piece of geomesh. The geomesh is glued to the tube with premium PL, but is for aesthetic purposes only. The concrete is what ensures the trunk does not come unraveled in a storm and thrash around on the surface of the bag, becoming a weak point in the system. The amount of concrete used per hole was roughly the size of a soccer ball. High strength premixed concrete was used. It was mixed on site and a few shovels full were added to each porthole before being patched over.



