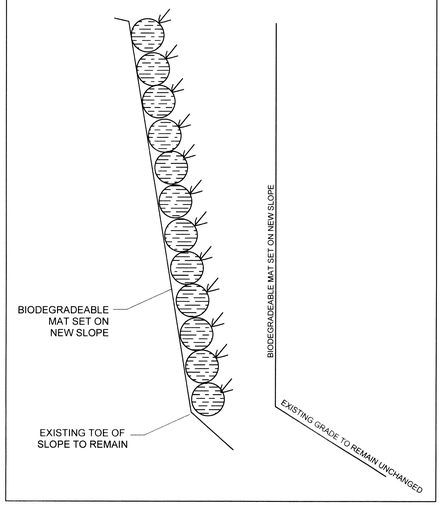
BIOLOG DETAIL - TYPICAL
n.t.s.



INSTALLATION GUIDELINES FOR BIOLOGS

Installation Guidelines:

Determine on site where the installation should begin and end. Usually installation begins downstream. Sediment and erosion control measures such as silt fence and sediment barriers should be in place of disturbances on work site. Prepare the site of installation by removing large rocks or other such obstructions. Re-grade slope, if necessary. Gradual slopes, flatter than 2:1 are preferred.

Determine the mean water elevation. Mark the level on a stake driven into the substrate 1 to 2 feet off-shore. KoirLogs (fig. 1) should be 1/2 to 2/3 below mean water elevation for the survival of vegetation.

KoirLogs must be level, installed along a horizontal contour and parallel to the stream bank. KoirLogs can be installed adjacent to the shoreline (fig. 2 & 3) or away from the shoreline(fig. 4 & 5) depending on the prevailing physical conditions.

When KoirLogs are installed adjacent to the shoreline, drive pencil point hardwood stakes (2" x 2" x 36") through at least 2 loops of the outer netting of the KoirLog on the waterside. Stakes can be spaced 3' on center for medium flow conditions and 2' apart on center for rapid flow conditions. KoirTwine or BioTwine can be used to tie the logs to the stakes. Stakes should be driven down so that the top of the stake is level with the top of the KoirLog. KoirLogs shall be placed along the stream banks at a height sufficient to protect the shore from flows or waves. Additional KoirLogs(fig. 3) may be stacked above the lower logs to protect the upper shore or stream bank.

When KoirLogs are installed away from the shoreline, the area behind (fig. 5) the logs can be backfilled and covered with KoirMat to create an aquatic shelf. Alternatively, the area (fig. 4)behind the log can be stabilized using pre vegetated KoirBed. For off - shore applications, drive stakes 1 to 2 feet on center along both sides of the KoirLog in parallel rows. Lacing across the stakes is a good method to hold the KoirLogs in place. Weave lacing back and forth across the KoirLog and attach the lacing to each stake using knots, notches, staples or nails.

Adjacent KoirLogs must be laced together, end to end, tightly and securely with KoirTwine or BioTwine (fig. 6)

Ends of the KoirLog not abutting another KoirLog must be bent towards the shore and dug into the bank to prevent the water from flowing behind the KoirLogs causing them to be pulled out.

Plant the KoirLog with appropriate native plant species after the KoirLog has been submerged in water for a short period of time. Insert fingers or a planting iron through the outer netting to create a hole for the plant plug. Gently push the plug deep into the KoirLog. Recommended spacing of the plant plugs is 4" to 12" along two lines in a staggered pattern.

Cover the root ball by wrapping coir fiber around the base of the stem. Check to ensure that the plants have been firmly installed in the substrate. Plants and materials have to be monitored approximately 3-4 weeks after installation to ensure the success and survival of the plants and the integrity of the materials.

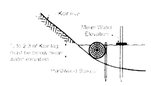


FIG 1.

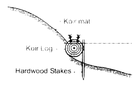


FIG 2.

FIG 3.

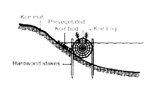


FIG 4.

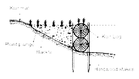


FIG 5.

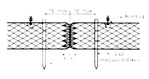


FIG 6.

INSTALLATION GUIDELINES FOR EROSION CONTROL BLANKETS & MATTINGS

Site Preparation:
Grade and shape the area of installation. If applicable, prepare seedbed by loosening 2" to 3" of topsoil. Application of lime and mixed grade fertilizer is recommended prior to seeding and installation of blankets & matting's. Make sure soil is free of clods, rocks, wood and other obstructions so that the blankets & matting's are in direct contact with soil.

Seeding:
In most cases, it is recommended that seeding be done prior to installation of blankets. For turf reinforcement mat and open weave matting, seeding is often done after matting installation. Best results are achieved when a veneer of soil is raked over the broadcast seeded surface. Straw or hay mulch may be added after seeding. All check slots and other areas disturbed during installation process should be re-seeded.

Anchoring:
U-shaped metal staples (11-gauge minimum, 6" to 12" long) or wooden stakes (at least 12" long) can be used to anchor blankets to the ground. Keep a minimum edge distance of 2" from the edge of the blanket to the center of the staples or stakes.

Installation on Slopes

- Grade soil, fertilize and seed as per general guidelines below.

- Begin at the top of the slope and anchor blankets in a 12" deep and 12" wide initial anchor trench (see Fig.2) and anchor with staples at 18" spacing.

- Unroll blanket down slope in the direction of the water flow (see Fig.1). The blanket should not be stretched but should have full contact with the soil. Anchor blanket using staples or stakes. See "Staple Pattern Guide for Slopes" on the below.

- Overlap edges of adjacent parallel rolls by approximately 6" and anchor with staples at 24" to 36" spacing depending on the slope.

- When blankets have to be spliced, place upper blanket end over lower blanket end (shingle style) with 12" overlap and anchor with two staggered rows of staples at 12" spacing.

- Anchor, fill and compact ends of blankets in 12" deep and 6" wide terminal anchor trench. Anchor with staples at 18" spacing.

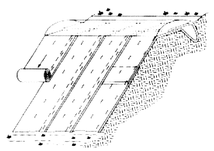


FIG 1.

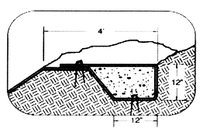


FIG 2.

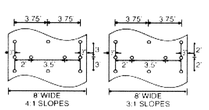


FIG 3.

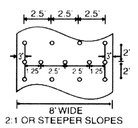
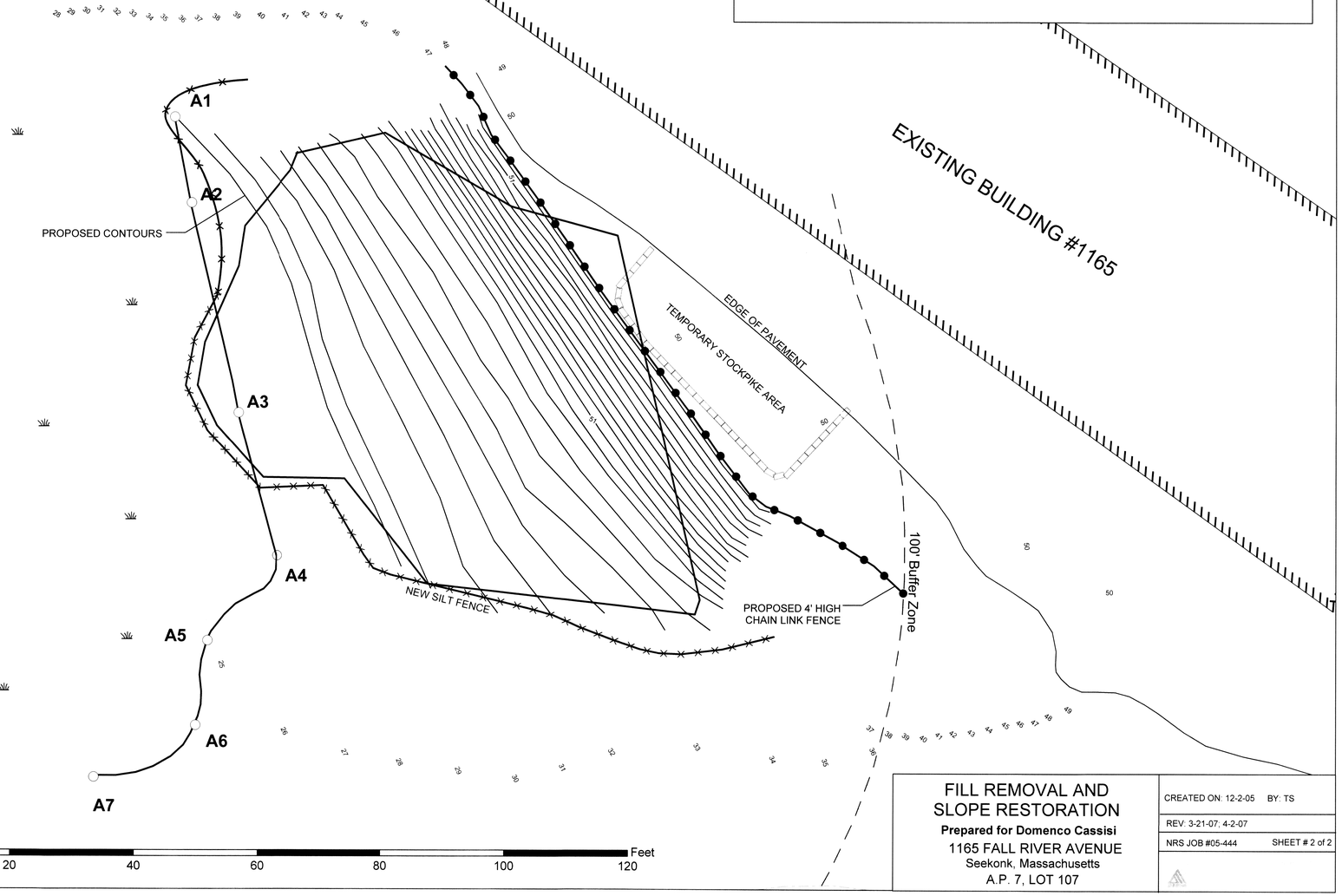


FIG 4.

- Ortho Image #217834
- Attleboro Topographic Map
- Plan and Topography from Geisser Engineering Corp. "Partial Topographic Survey" Dec 21, 2005

NOTES FOR RESTORATION

1. Silt Fence to be established prior to any fill removal.
2. All material shall be stockpiled at the top of grade behind stakes hay bales. All material shall be removed from the site.
3. The exposed slopes shall be stabilized with matting secured in place with Biologs (see detail).
4. Once the stockpile has been removed, the area will be loamed and seeded with a conservation grass mixture.
5. Silt fence shall be removed only after the slope has fully stabilized.
6. All areas outside of the existing pavement shall be allowed to revegetate naturally.



FILL REMOVAL AND SLOPE RESTORATION

Prepared for Domenco Cassisi
1165 FALL RIVER AVENUE
Seekonk, Massachusetts
A.P. 7, LOT 107

CREATED ON: 12-2-05 BY: TS
REV: 3-21-07; 4-2-07
NRS JOB #05-444 SHEET # 2 of 2