

**Designer Erosion Prevention and Sediment Control Checklist**  
Essex STP WALK (9)S

**1. Narrative**

**1.1 Project Description**

This project involves the construction of 1,230 linear feet of 6 foot wide and 188 linear feet of 5 foot wide concrete sidewalk with 404 linear feet of concrete curbing along the south side of Vermont Route 15/Jericho Road from the intersection of Vermont Route 15 and Vermont 128 to Sand Hill Road and along the west side of Sand Hill Road to the existing concrete sidewalk on Sand Hill Road. Construction of the project will include new drainage structures and stormpipes, roadway widening, relocating steel beam guardrail, relocating fence, pavement overlay, associated pavement markings, signage and landscaping in the project area. Construction will disturb approximately 0.17 acres of land outside the paved roadway of Jericho and Sand Hill Roads with minimal grade change proposed in this area. The project area presently consists of 52,790 square feet (1.2 acres) of impervious area. At completion of the project, the project area will consist of 60,586 square feet (1.39) acres of impervious area. The increase is due to the addition of widened shoulders and the construction of the sidewalk.

**1.2 Site Inventory and Analysis**

**1.2.1 Off site drainage characteristics (up and down-gradient)** - Existing drainage for Vermont Route 15 consists of a closed drainage system with catch basins and stormpipes directing stormwater to outlets along the northeast bank of Alder Brook where Vermont Route 15 crosses. The proposed project maintains this existing drainage pattern. The installation of four new drainage basins will be needed to replace four existing drainage basins that will be removed to construct the new concrete sidewalk.

**1.2.2 Drainage, waterways, and bodies of water** - Alder Brook crosses the project location at approximate station 7+20 flowing in a southerly direction to the Winooski River. The drainage from the project area currently all drains toward Alder Brook, and will continue to do so.

**1.2.3 Topography, existing roads, buildings, utilities** - The project will begin at the Vermont 128 intersection and continue along Vermont Route 15 remaining relatively level until station 2+00, with the exception of sidewalk ramps. From station 2+00 the sidewalk falls to the east at a 1.3% grade until station 3+87, where the slope then increases to 2.62% until the Alder Brook crossing. After the Alder Brook crossing, the sidewalk rises at a 1.45% grade to station 8+58 where it increases to reach a maximum of 6.74% at 8+97 and then flattens back out by 9+50 to 2%. From 9+50 there is a rise of 2% until 12+50 where it levels out until reaching the intersection of Sand Hill Road. From the beginning of Sand Hill Road, the sidewalk is relatively level throughout the remainder of the project area, falling with grades less of than 1.0%.

Route 15 is lined by residential and commercial buildings along most of the project area from the intersection of Vermont 128 to the end of the project on Sand Hill Road. There is one intersecting residential street, Alder Lane, along the section of Route 15 opposite the proposed sidewalk.

The portion of existing sidewalk along the south side of the intersection of Vermont Route 15 and Sand Hill Road from Station 14+11 - 17+60 will be retained. A 9 foot section of curb beginning at 15+73 along Sand Hill Road will be removed in order to construct the new 5 foot wide sidewalk.

The segment of new 6 feet wide sidewalk being constructed from 1+80 - 14+11 and the portion of sidewalk that will be added to Sand Hill Road between stations 15+73 - 17+60 will be constructed along the edge of the paved roadway. The roadway on Vermont Route 15 is being widened in several locations including portions of the north side between stations 0+96 - 2+68, 3+02 - 5+65, 9+53 - 10+53 and 11+76 - 14+05 as well as sections along the south side including sections between stations 1+88 - 2+70, 10+61 - 11+62, and 11+83 - 12+50.

**1.2.4 Vegetation** - The area between the buildings and Vermont Route 15 consists of paved drives, paved parking areas, concrete sidewalk along Vermont Route 15 and Sand Hill Road, curbing, grassed areas and sporadic street trees. Several trees will be removed or replaced within the project area. These trees include one spruce at station 4+26 to be moved and replaced and eight trees between stations 9+40 - 10+00 to be removed. All other trees will be retained and protected during construction and seventeen new trees will be planted.

**1.2.5 Soils** - The USDA soil survey data delineates three soil types within the project area including Munson and Belgrade Silt Loam (MuD) .40, Adams and Windsor Loamy Sands (AdA) .17, and Hartland Very Fine Sandy Loam (HIE) .49. The location of these soils in the project area is shown on plan sheets 25C, 25D, and 25E. Also included on these sheets are tables describing the properties of each soil type. The first and third soil types are rated as being *highly erodable*. The Adams and Windsor Loamy Sands soil is rated as *having low erodability*.

**1.2.6 Sensitive resources areas** - There is a harsh sunflower community at approximate station 8+56 which will be protected by fence as a condition of the Endangered and Threatened Species Permit issued for the project. There are no known archaeological sites, prime agricultural land, wetlands or critical habitats in the project area.

**1.2.7 Proximity to natural or man-made water features** - The new sidewalk construction crosses Alder Brook at approximately station 7+20.

1.2.8 This project meets the goals to the Town of Essex Stormwater Management Plan and the Town MS4 requirements by minimizing the increase in curbing and by not altering the existing drainage patterns.

**1.3 Temporary Erosion and Sediment Control**

**1.3.1 Description of all temporary structural erosion and sediment control measures** - As specified on plan sheets 25F, 25G and 25H:

The project will be constructed in phases in an attempt to reduce the time that soil is left disturbed.

A Project Demarcation Fence (PDF) will be installed along the limits of required soil disturbance to prevent construction equipment from disrupting soil or vegetation unnecessarily.

Topsoil stockpiles will be mulched and continuously staked haybales or silt fence will be installed around the stockpile.

Erosion matting will be installed in all disturbed areas with slopes steeper than 3:1.

Stone filters will be constructed around all new catch basins to provide inlet protection during construction.

Seeding and mulching will be required within 48 hours of final grading.

**1.3.2 Design calculations for all temporary structural control measures** - not applicable (there are no structural control devices designed for this project).

**1.4 Final Erosion Control Measures**

**1.4.1 Description of permanent erosion and sediment control measures** - All disturbed areas will either be covered with concrete sidewalk pavement, curbing or will be re-vegetated with seed, fertilizer and mulch as shown on the plan and detail sheets 25J, 25K and 25L. All new catch basins will have a 2 foot sediment sump.

**EROSION & SEDIMENT CONTROL PLANS**

10-20-05	REVISED FOR CONTRACT PLANS	BH/DH
REVISIONS		
THESE PLANS WITH LATEST REVISIONS SHOULD ONLY BE USED FOR THE PURPOSE SHOWN BELOW:		# OF SHEETS
<b>STP WALK (9) TOWN OF ESSEX ROUTE 15 IN ESSEX CENTER, VT</b>		proj. no. 02-132
		survey
		&D/OTHERS
		design
		DLH/LAL
		drawn
		DB
		checked
		LAL/DLH
		date
		03/01/04
		scale
		1" = 100'
		sht. no.
		<b>25B</b>
		02132-25B

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