STORMWATER IMPROVEMENTS DESIGN
MOUNT ASCUTNEY HOSPITAL
AND HEALTH CENTER
289 COUNTY ROAD
WINDSOR, VERMONT

June 30, 2021

This project involves stormwater improvements on the eastern side of the Mount Ascutney Hospital property in Windsor, Vermont, along the boundary with County Road. BMP 1 involves swale improvements along the northern and eastern edge of the upper northeast hospital parking lot and provides some pretreatment for BMP 2. BMP 2 is an infiltration basin with a pretreatment forebay. BMP 3 receives runoff from BMP 2 and additional hospital property to be treated. BMP 3 includes a pretreatment swale and two infiltration basins.
**PROFILE 100% DESIGN**

**STORMWATER IMPROVEMENTS DESIGN**

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1. **Existing Grade**
2. **Proposed Grade**

- **EXISTING CATCH BASIN - ELEVATION 486.4' INSTALL TRASH RACK (TRASHRACKS.COM LSQ-24 OR EQUIVALENT) ON GRATED OPENING 2H:1V**
- **INSTALL NAG VMAX C350 AT SPILLWAY. EXTEND TO BEGINNING OF PILOT CHANNEL. KEY IN MIN. 6". MAIN BOTTOM BURNT TO ELEVATION 485.0'**
- **PROPOSED CHECK DAMS MAXIMUM SPACING 25 FT OVERFLOW SPILLWAY ELEVATION 492.5'**
- **BASIN BOTTOM ELEVATION 491.0'**
- **SOIL RESTRICTIVE LAYER (FINE SAND WITH SILT) IN TEST PIT 2 INSTALL NAG VMAX C350 AT SPILLWAY. EXTEND TO BEGINNING OF PILOT CHANNEL. KEY IN MIN. 6". APPROX. BOTTOM OF RESTRICTIVE LAYER (VERY FINE SAND WITH SILT)**

**SECTIONS**

- **SECTION C - INFILTRATION CELLS**
  - **1" = 5' V, 1" = 10' H**

**MAP INFORMATION**

- **Severance Green, Suite 203**
- **Colchester, VT 05446**
- **Telephone: 802.876.7778**
- **www.fitzgeraldenvironmental.com**

**ECOSOLUTIONS LLC**

- **Main Office: Westford, VT p: 802.598.6297**
- **Pacific Office: Honolulu, HI p: 808.367.1026**

**DISTRIBUTED IN CONFORMITY WITH**

- **STORMWATER MANAGEMENT AND IMPROVEMENTS DESIGN**
- **MOUNT ASCUTNEY HOSPITAL AND HEALTH CENTER**

**PROJ. NUMBER: SHEET NO. SHEET 4**

**REVISED: AS SHOWN**

**SCALE: EHB DRAWN EF, DW, JB**

**CHECKED: SHEET 4**

**DATE: 2021-06-30**

**www.ecosoldesigns.com**
I. Earthwork/Related Items:
A. Materials:
1. Type II Stone Fill (VTAO 704.04b)
   a) Type II Stone Fill shall be angular blast rock with the long dimensions of
      the rock ranging in length from 2" to 36". At least 50% of the volume shall
      have a least dimension (thickness) of 12".
2. Granular Bedding (VTAO 704.04)
   a) Granular borrow bedding shall be obtained from approved sources,
      consisting of stone and sand reasonably free from loam, silt, clay, and
      organic material.
3. 6" to 8" minus Stone, 2" Stone, 1-1/2 Stone, 1-1/2 Stone, Pea Stone
   a) Stone shall be a well-graded stone reasonably free from silt, loam, clay, or
      organic material.
4. Dimensional Stone
   a) Stone wall shall be constructed of dimensional stone. Stone shall be blocky
      and angular with a minimum longest dimension of 36". Ideal stone dimensions
      are 36" long x 36" wide x 24" high.
5. Trash/Debris Rack
   a) Round intake risers shall be fitted with an Agri Drain heavy duty bar guard
      or equivalent as approved by the Designer/Engineer.
   b) Square intake risers shall be fitted with a TRASHSHACKS.COM LSU-24
      aluminum square top-mount grate or equivalent as approved by the
      Designer/Engineer.
6. Geotextile (VTTrans item 649.31)
   a) Geotextile fabric shall be nonwoven and meet specifications shown in
      Table 720.01A in VTTrans Standard Specifications for Construction.
B. Excavation:
   1. The Contractor shall protect existing structures and utilities from damage and
      excessive settlement during excavation, backfilling, and compaction activities. The
      Contractor shall repair any such damage at their own expense.
II. Erosion Control and Site Restoration
A. Materials:
1. Grass Seed
   a) Grass seed shall be furnished in new, clean, sealed, and properly labeled
      containers. Seed which has become wet, moldy or otherwise damaged
      shall not be acceptable.
   b) Disturbed areas shall be seeded with a Conservation Mix approved prior to
      use.
   c) Hydroseeding is acceptable as approved by the Designer/Engineer.
2. Topsoil
   a) Natural friable surface soil capable of sustaining vigorous plant growth,
      free from subsoil, stones, plants, roots, sticks, and other extraneous
      materials.
3. Mulch
   a) Hay mulch shall consist of mowed, properly cured grass and legumes
      reasonably free of weeds, twigs, debris, or other objectionable material.
   b) Mulch at a rate of 2 tons per acre.
4. Erosion Control Matting
   a) Straw erosion control blanket along the infiltration basin side slopes shall
      be North American Green BIONET SC150BN or equivalent as approved by
      the Designer/Engineer.
   b) Permanent erosion control matting on the infiltration basin spillway shall be
      North American Green VMAX C350 or equivalent as approved by the
      Designer/Engineer.
   c) All erosion control matting shall be secured with North American Green
      BioSTAKES or equivalent as approved by the Designer/Engineer.