

1. NARRATIVE

1.1. PROJECT DESCRIPTION

This project "Montgomery BHO 1448 (37)" will rehabilitate the Creamery West Hill Covered Bridge, Bridge 32 on Town Highway 25 over the West Hill Brook in the Town of Montgomery. This site is located approximately 0.2 miles west of the intersection of TH 25 & TH 12. The rehabilitated covered bridge will be a one lane, single span, wood deck supported by timber trusses. The project will maintain traffic on an alternate route during construction. The total length of project work, including both approaches, drives and existing roadway is approximately 189 ft., including 23 ft. of roadway subbase work south and 10 ft. of roadway subbase and ditch work north. The estimated disturbed area (including on-site or contiguous waste, borrow and staging areas) is approximately 0.09 acres. This project should last one construction season.

1.2. SITE INVENTORY & ANALYSIS

1.2.1. Off Site Drainage Characteristics (Up And Down Gradient). The land in the project area is mountainous and forested. It consists of growth of brush, softwood and hardwood trees. The soil is primarily "hilly, thin, well drained soils on flood plains of minor streams and their tributaries. These soils formed in very fine sandy loam and silt loam alluvium." Road surfaces are gravel and there are no surrounding residential properties.

1.2.2. Drainage, Waterways, Bodies of Water. The bridge crosses the West Hill Brook. The stream is sinuous, incised and flashy. The stream at the bridge is 2 ft wide at the bottom and 25 ft wide at the top and 4 ft deep from top to bottom. The watershed area is 8.8 sq. miles.

1.2.3. Topography, Existing Roads, Buildings, Utilities. The project site is on TH 25, which is a Class 4 gravel town highway through a low-lying valley. There is residential property far to the west of the project, but it is not within the vicinity of the work.

1.2.4. The vegetation on the north approach is forested with a mix of hardwoods and softwoods and the south approach is comprised of assorted brush, as well as small to medium sized hardwood, and softwood trees. Several small hardwoods, softwoods and areas of brush will be removed within the existing right-of-way to accommodate the new construction. Seed & Mulch will stabilize slopes flatter than 66%.

1.2.5. The Soil Conservation Service "Soil Survey of Franklin County" identifies two soil types in the project site.

1.2.5.1.1. SyE Stowe stony soils, 25 to 60 % slopes. This soil is the primary soil covering most of the bridge site area. The soil profile is typically: 0-60 in. of very fine sandy loam. Its erosion hazard rating is slight. The slope suggests low erodibility.

1.2.5.1.2. WnB Westbury stony fine sandy loam, 3 to 8 % slopes. The soil profile is typically: 0-60 in. very fine sandy loam. Its erosion hazard rating is severe. The slope suggests high erodibility.

1.2.6. Sensitive Resource Areas near the project include an archaeological area (outside PDF fence limits) to the immediate northwest of the covered bridge, and an historic area which is the covered bridge itself.

1.2.7. The Proximity to Natural or Man-Made Water Features in this area is as follows: The project is directly above the West Hill Brook with existing ditches running along the highway and draining to the stream.

1.3. RISK EVALUATION

1.3.1. Should changes prior to or during construction result in one or more acres of earth disturbance, or should the project become part of a larger plan of development, then the selected contractor will be responsible for additional permitting with VANR via filing of the appropriate Notice of Intent under the Construction General Permit process.

1.4. TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL (SEE EROSION CONTROL DETAILS)

1.4.1. Temporary Measures to Prevent Erosion & Control Sediment Transport include:

1.4.1.1.1. "Project Demarcation Fencing" delineates the construction area for construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

1.4.1.1.2. "Seeding & Mulching" stabilizes slopes ranging from 0% to 66%. Add biodegradable "Erosion Control Matting with all-natural fibers" (or equivalent) to slopes ranging from 33% to 66%. Use seeding for long term exposed slopes. Grass takes 2 weeks to establish itself. Stabilize slopes within 48 hours or sooner considering rain.

1.4.1.1.3. "Stone Check Dams" placed in ditches reduce flow velocities and prevent erosion. Place dams in ditches so that the elevation of the top of a check dam is level with the toe of the next upslope check dam. The check dams may be removed once the stone lining of the ditches is complete and the surrounding area stabilized.

1.4.1.1.4. "Silt Fence" placed level on slopes control sheet flow sediment transport. Place level silt fence 5'-10' from the toe of slopes. Turn the ends of silt fence slightly uphill to stop concentrated water from flowing around the ends. The maximum slope length between separate runs of silt fence is 100'. Place silt fence before beginning upslope earthwork. Silt fence shall not be placed across contours.

1.4.1.1.5. Hay bales are unacceptable alternatives to silt fences, sand bags, or check dams.

1.5. FINAL EROSION CONTROL MEASURES

1.5.1. Place "Aggregate Surface Course and "Subbase" on the roadway to prevent erosion. Compact aggregate appropriately to prevent erosion of the aggregate.

1.5.2. "Seeding & Mulching" will establish vegetation on side slopes less than 66% that prevents erosion and control sediment transport. Add biodegradable "Erosion Control Matting" (or equivalent) to slopes ranging from 33% to 66%.

1.5.3. Roadway Ditches beside the road control concentrated flows and prevent erosion. Including Erosion Matting in roadway ditches prevents erosion and controls sediment transport. See details.

1.5.4. Place stone fill on roadway slopes to prevent erosion. See project plan sheets for limits of work.

2. GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

2.1. The Erosion Control Plans are guidelines for preventing erosion and controlling sediment transport throughout the life of the project. The purpose of the plan is to minimize soil loss and the pollution and sedimentation of receiving waters.

2.2. Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. Use additional erosion control measures as necessary during the sequence of construction and as directed by the Engineer. See sub section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2006.

2.3. Maintain existing vegetated buffers along stream banks, wetlands or other sensitive areas wherever possible.

2.4. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes. Control only sediment-laden runoff from the project site.

2.5. Install erosion and sediment control measures as shown in the Erosion Control Plan or as directed by the Engineer. Do not modify the type, size or location of any control or practice without approval of the Engineer. Note any changes on the plans, in the weekly inspection report, and report them to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures promptly once damage is discovered.

2.6. Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly after construction activity has temporarily or permanently ceased. Establish temporary vegetation if the disturbed area is to be without construction activity for a period of 14 days. Install perimeter control measures following clearing and before the start of any grubbing or grading activity. Install other temporary controls in incremental stages as construction proceeds.

2.7. Operate construction equipment only within perimeter control measures.

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (37)

FILE NAME: s04j148ero.dgn
PROJECT LEADER: J. WEAVER

PLOT DATE: 3/29/06
DRAWN BY: J. TREI

DESIGNED BY: J. TREI
EPSC NARRATIVE

CHECKED BY: J. WEAVER
SHEET 8 OF 33