TOWN ROAD AND BRIDGE STANDARDS
TOWN OF WESTMINSTER, VERMONT

The Town of Westminster hereby adopts the following Town Road and Bridge Standards which shall apply to the construction, maintenance and repair of all town roads and bridges.

The standards listed here are considered minimum and are presented for purposes of guiding construction and maintenance personnel. The standards listed here include three types of management practices and are designed to: ensure the safety of the traveling public, minimize damage to road infrastructure during flood events, and enhance water quality protections by minimizing sediment delivery to surface waters and/or wetlands. The select board reserves the right to modify the standards for a particular project, where, because of unique physical circumstances or conditions, there is no possibility that the project can be completed in strict conformance with these provisions. Any modifications to the standards must be done in a manner that protects the underlying intent of the management practice, be it public safety, flood hazard avoidance, or water quality protection. Fiscal reasons are not a basis for modification of the standards. Questions about modifications to the standards should be directed to the VTrans District Office.

Any new road, whether or not that road is proposed to be conveyed to the town, shall be constructed according to the minimums of these standards. If any federal and/or state funding is involved in a project, the VTrans district office will be notified prior to any field changes taking place that would alter the original scope of work.

Roadways

- All new or substantially reconstructed roads will have at least a 15-inch thick processed gravel subbase, with gravel roads having the top 3 inches (minimum) as crushed gravel.
- All roadways will be graded so water does not remain on the road surface. For roadways that are not superelevated, this generally means a 2-4% ($^1/_4$" - $^1/_2$" per ft) crown for gravel roads and a 1-2% ($^1/_8$" - $^1/_4$" per ft) crown for paved roads to promote sheeting of water.
- Proper grading techniques for gravel roadways will be used to avoid creating a ridge or berm between the crown and the ditch.
- Any berm along the roadway shoulder that prevents the proper sheeting of water will be removed.

Ditches and Slopes

Soil exposed during ditch and slope construction or maintenance will be treated immediately following the operation. Priority should be given to areas vulnerable to erosion immediately adjacent to or discharging to surface waters and/or roadway drainage facilities. The following are minimum erosion control measures:

- Seed and mulch ditches with grades less than 2%. Use biodegradable, non-welded matting and seed on ditches with grades between 2% and 5%. Stone line all ditches with grades greater than 5%; alternatively, install stone check dams. Dams should be comprised of a well graded stone matrix 2 to 9 inches in size. Dams should not exceed 2 feet in height and check dam crest should be at least 6" below the top of the ditch.
- Create parabolic (wide "U" shaped) ditches when constructing new or substantially reconstructing ditches, rather than narrow "V" shaped ditches. Ditches with gradual side slopes (maximum 2H: 1V ratio) and a wide bottom (at least 2 feet) are preferred.

- Use biodegradable, non-welded matting to stabilize side-slopes where slopes are greater than 1:1; apply seed and mulch to any raw or exposed side-slope if slopes are less than or equal to 1:1.
- Ditches should be turned out to avoid direct outlet into surface waters. There must be adequate outlet protection at the end of the turnout, either a structural (rock) or vegetative filtering area.

Culverts and Bridges

- All new driveway culverts will have a minimum diameter of 15 inches.
- All new roadway culverts will have a minimum diameter of 18 inches.
- Any culvert with a drainage area greater than 0.25 sq mi will require a hydraulic engineering study. Culverts will be designed to convey the Q25 design storm with minimal surcharge.
- All bridges (structures with spans greater than 6 feet) and open bottom structures will require a hydraulic engineering study. Structures will be designed to convey the Q25 design storm and allow for passage of ice and debris.
- When installing or replacing culverts, use appropriate techniques such as headwalls and wingwalls, where there is erosion or undermining or where it may occur.
- Install a splash pad or plunge pool at the outlet of drainage culverts where there is erosion or where erosion may occur. Splash pads and plunge pools are not appropriate for use in streams supporting aquatic life.

Guardrail

When roadway, culvert, bridge, or retaining wall construction or reconstruction projects result in hazards such as foreslopes, drop offs, or fixed obstacles within the designated clear-zone, a roadside barrier such as guardrail shall be installed. The most current version of the AASHTO Roadside Design Guide will govern the analysis of the hazard and the subsequent treatment of that hazard.

Access Management

The town will have a process in place, formal or informal, to review all new drive accesses and development roads where they intersect Town roads, as authorized under 19 V.S.A. Section 1111. Towns may reference VTrans A-76 Standards for Town & Development Roads and B-71 Standards for Residential and Commercial Drives.

Training

Town highway maintenance crews will collectively attend a minimum total of 6 hours of training per year on best road management practices. The town will keep documentation of their attendance.

Passed and adopted by the Selectboard of the Town of Westminster, State of Vermont on October 25, 2011.

Select Board: [signature] Toby Young

Paul M. Hark Jeffrey A. Ruggiero

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