

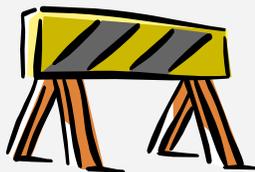
From Brenda O'Brien, Engineer of Construction and Technology

MDOT-Construction and
Technology Support Area
P.O. Box 30049
Lansing, Michigan 48909
Phone/517-322-1087
Fax/517-322-5664
www.michigan.gov/mdot/

Index: Earthwork

Questions regarding this
Construction Advisory
should be directed to:

Dave Gauthier, Grading
and Drainage Engineer,
517-322-5710 or
gauthierd@michigan.gov



BJO:DMG

Slope Restoration

Timely slope restoration is critical during the construction phase to establish vegetation as soon as possible, and to minimize soil erosion and subsequent off-site sedimentation. The primary components of slope restoration include topsoil, fertilizer, seed and mulch. Per specification subsection 208.03B, slope restoration is to be completed within 5 calendar days after final grading or within 24 hours after final grading if the earth disturbance is within 150 feet of a lake, stream or wetland. Final grade is not explicitly defined in the standard specifications, but implied to be the time when all grading activities are completed prior to slope restoration. Once final grade is achieved, the contractor should be directed to complete slope restoration in accordance with the standard specifications. The contractor is also subject to a limit of maximum area of bare soil permissible, as detailed in subsection 208.03C. If this area requirement is exceeded, the contractor should be directed to stabilize that area necessary to be in compliance with the limitations outlined in the specifications before disturbing more soil.

Topsoil quality, quantity and placement are important factors to establish adequate vegetation in a timely manner. Quality topsoil should consist of natural loam, sandy loam, silty loam or clay loam humus bearing soil to support plant growth. Topsoil that is too sandy will not retain moisture and will inhibit the germination and establishment of vegetation and should be avoided. The topsoil should be placed at a minimum thickness of three inches and be loose, friable, free of lumps, roots, rocks, litter and foreign matter. Final shaping of topsoil should be evenly graded and free of ruts to enable mulching material to be placed in direct contact with the soil.

Chemical fertilizer nutrient (typically Class A on MDOT projects) utilized for slope restoration is comprised of both water soluble and non-water soluble ingredients, and is intended for placement with one application. The water soluble component of the fertilizer provides a quick boost to generate initial germination, while the non-water soluble component provides a slow release of fertilizer in approximately 4 to 6

weeks. Review fertilizer packages to verify proper ingredients to ensure the fertilizer meets the minimum requirements, as outlined in Section 917 of the standard specifications.

The variety of seed specified for a project should be selected from the Qualified Products List (QPL) and tagged, identifying the supplier and all other pertinent details about the seed type. Seed placement, application rates and seasonal limitations should be in accordance with the standard specifications and verified during construction to ensure the potential for well established vegetation. If permanent seeding is permitted outside of the seasonal limitations, the contractor should be required to certify in writing that if the vegetation fails to establish they will correct all deficiencies at their cost the following spring. If necessary, acceptance of the project may be delayed until adequate vegetation is established and the potential for erosion is eliminated.

Mulch materials should be placed on a given area within 1 day after seeding and fertilizing. If mulch is not placed

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within 1 day, the area should be inspected for proper seed coverage and reseeded as necessary. Mulch materials may include straw or hay mulch utilizing tackifier from the QPL, mulch blankets, high

velocity mulch blankets, turf reinforcing mats or any other approved technique for stabilizing the exposed ground surface. To ensure effectiveness, install mulch blankets and turf reinforcing

mats in accordance with the manufacturer's published guidelines.

Please share this information with consultants and local agencies within your area.