
Rock Excavation

Design Manual

Chapter 5

Earth Work

Originally Issued: 09-22-00

Revised: 06-25-19

This section discusses the procedure to be considered normal design practice for all projects involving rock excavation. The Soils Design Section in the Design Bureau will determine precisely where rock excavation is to occur.

1. Where the depth of rock excavation in any given area is 5 feet or less, design practice is to provide a normal ditch section. Refer to Design Detail [4110](#). Refer to Section [10A-1](#) for information regarding topsoil replacement.
2. Where the depth of rock excavation is greater than 5 feet, designers should prepare the necessary typical sections to convey rock excavation requirements for the project. Design Details [4110](#) or [4111](#) should be used as the basis for developing the necessary typical sections.
3. The development of the required typical section should be done jointly between the Design Section and the Soils Design Section to insure that the optimum section and requirements are specified for the project.
4. When the Soils Design Section indicates pre-splitting is required, it should be noted in the remarks column of Tab [107-25](#).
5. Steepened backslopes should be avoided in areas of shale, broken and weathered limestone, or similar rock.
6. Rock excavation should be bid as Class 12 or Class 13 Excavation. Refer to Section [2102](#) of the Standard Specifications for definitions of Class 12 and Class 13 materials and excavation.

Chronology of Changes to Design Manual Section:

005B-001 Rock Excavation

6/25/2019	Revised Updated hyperlinks. Updated header logo and text.
8/5/2016	Revised Retitled. Moved material from old Section 5A-1 to this section.
7/31/2015	Revised Adjusted the treatment detail to the one currently online, G_4D_Grade_Delay_S . Changed the procedure for the turn in of contractor furnished borrow needs that are published 4 to 6 months prior to letting. Added a discussion about an estimate reference note that tells the contractor the Department will expect notification of their treatment option choice. Added information stating an additional inch of subgrade treatment is required if the special backfill option is chosen.
5/15/2014	Revised Rewrote to reflect move to contractor furnished borrow.
5/8/2013	Revised Revise second paragraph under Borrow Areas to clarify contractors can propose alternates to optional borrow areas.
12/19/2012	Revised Rewrote to explain designers' responsibilities regarding borrows.
9/22/2000	New material.