

ROAD COMMISSION FOR OAKLAND COUNTY

SPECIAL PROVISION
FOR
RIP RAP

RCOC/DESIGN:AP/JO

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RCOC20SP813A
ORG:04-05-21

a. Description

This work consists of constructing riprap revetments in accordance with the plans, any permits, and in accordance with section 813, Slope Protection, of the *Michigan Department of Transportation 2020 Standard Specifications for Construction*, except as modified herein or otherwise directed by the Engineer.

b. Materials

The material to be used for the riprap is to be fragmented natural stone only. Cobblestone, broken concrete, precast concrete blocks, or grouted riprap are not allowed. Riprap shall be washed, clean, free of debris and contaminants. Riprap containing materials that would potentially cloud or pollute receiving waters shall not be permitted. The allowable rock size is shown in Table 1.

Table 1: Riprap Rock Size Requirements

Material Type	Diameter Size	
	Minimum (Inches)	Maximum (Inches)
Plain Riprap	8	16
Heavy Riprap	17	24

Provide Geotextile Liner for Riprap and Heavy Geotextile Liners for Heavy Riprap applications.

c. Construction

Riprap will be permanent unless specified as temporary on the plans or as directed by the Engineer.

Riprap shall be placed in accordance with section 813.03.E.1 and in a manner with the least amount of disturbance to the watercourse.

Place Riprap and Heavy riprap on Geotextile Liner as specified in section 813.03.E.

The minimum layer thickness of plain riprap shall be 20 inches, and the minimum thickness of heavy riprap shall be 30 inches.

d. Measurement and Payment

The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

Pay Item	Pay Unit
Riprap, Plain, RCOC.....	Square Yard
Riprap, Plain, RCOC.....	Ton
Riprap, Heavy, RCOC.....	Square Yard
Riprap, Heavy, RCOC.....	Ton

Riprap, Plain, RCOC and **Riprap, Heavy, RCOC** includes all materials, labor and equipment required to furnish and install riprap in place. Payment includes all layers of riprap combined and riprap will not be paid by each layer.

The unit prices for the relevant riprap pay items also include the cost of the following:

1. Providing and placing geotextile liner
2. Excavating and disposing of surplus materials
3. Constructing riprap headers and trenches

Removal of sediment buildup at temporary and permanent riprap sites may be required as directed by the Engineer and will not be paid for separately. Final removal of temporary riprap, if called for on plans or directed by the Engineer, will not be paid for separately.