

Appendix E

Riprap Class and Size

Gradation Requirements for Riprap			
Class	Rock by Mass	Mass	Approximate
	(in percent)	(in pounds)	Cubic Dimension ⁽²⁾⁽³⁾ (in inches)
1	20	22 to 33	6 to 8
	30	11 to 22	5 to 6
	40	1 to 11	2 to 5
	10 ⁽¹⁾	0 to 1	0 to 2
	20	55 to 110	8 to 10
2	30	22 to 55	6 to 8
	40	2 to 22	3 to 6
	10 ⁽¹⁾	0 to 2	0 to 3
	20	220 to 330	14 to 16
3	30	110 to 220	10 to 14
	40	11 to 110	5 to 10
	10 ⁽¹⁾	0 to 11	0 to 5
	20	550 to 770	18 to 20
4	30	220 to 550	14 to 18
	40	22 to 220	6 to 14
	10 ⁽¹⁾	0 to 22	0 to 6
	20	1,540 to 2,200	26 to 28
5	30	770 to 1,540	20 to 26
	40	55 to 770	8 to 20
	10 ⁽¹⁾	0 to 55	0 to 8
	20	1,870 to 3,530	28 to 34
6	30	1,100 to 1,870	22 to 28
	40	110 to 1,100	10 to 22
	10 ⁽¹⁾	0 to 110	0 to 10

1. Furnish spalls and rock fragments graded to provide a stable dense mass.
2. The volume of a rock with these cubic dimensions has a mass approximately equal to the specified rock mass.
3. Furnish rock with breadth and thickness at least one-third its length.

