

ITEM 620.0150XX25 – STONE FILLING, CLASS XX (By Weight)

1. DESCRIPTION:

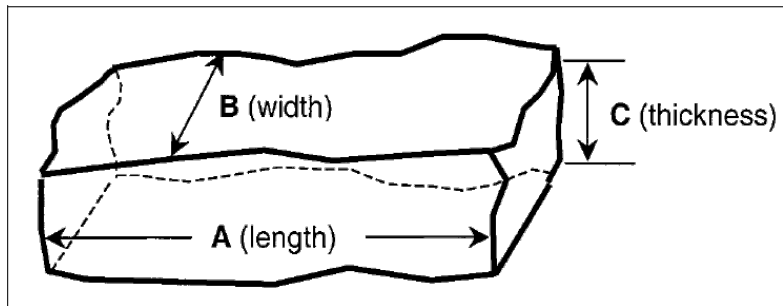
1.01 The requirements of Section 620-1 and Subsection 620-1.02 shall apply.

2. MATERIALS:

2.01 The requirements of Subsections 620-2.01 shall apply.

2.02 The requirements of subsection 620-2.02 shall apply with the exception of gradation, which shall conform to the following requirements.

2.02.1 Maximum ratio of $A/C < 3$



Riprap shape described by three axes.

2.02.2 Minimum and maximum allowable particle size in inches shall conform to the table for the specified riprap class. The d_{15} , d_{50} , d_{85} , d_{100} indicate the size for which 15%, 50%, 85%, 100% (by weight) of the particles are smaller. The corresponding weights are given in the subsequent table.

Minimum and Maximum Allowable Particle Size in Inches.								
Nominal Riprap Class by Median Particle Diameter		d_{15}		d_{50}		d_{85}		d_{100}
Class	Size	Min	Max	Min	Max	Min	Max	Max
I	6 in	3.7	5.2	5.7	6.9	7.8	9.2	12.0
II	9 in	5.5	7.8	8.5	10.5	11.5	14.0	18.0
III	12 in	7.3	10.5	11.5	14.0	15.5	18.5	24.0
IV	15 in	9.2	13.0	14.5	17.5	19.5	23.0	30.0
V	18 in	11.0	15.5	17.0	20.5	23.5	27.5	36.0
VI	21 in	13.0	18.5	20.0	24.0	27.5	32.5	42.0
VII	24 in	14.5	21.0	23.0	27.5	31.0	37.0	48.0
VIII	30 in	18.5	26.0	28.5	34.5	39.0	46.0	60.0
IX	36 in	22.0	31.5	34.0	41.5	47.0	55.5	72.0
X	42 in	25.5	36.5	40.0	48.5	54.5	64.5	84.0
Note: Particle size d corresponds to the intermediate ("B") axis of the particle.								

ITEM 620.0150XX25 – STONE FILLING, CLASS XX (By Weight)

Minimum and Maximum Allowable Particle Weight in Pounds.								
Nominal Riprap Class by Median Particle Weight		W ₁₅		W ₅₀		W ₈₅		W ₁₀₀
<u>Class</u>	<u>Weight</u>	Min	Max	Min	Max	Min	Max	Max
I	20 lb	4	12	15	27	39	64	140
II	60 lb	13	39	51	90	130	220	470
III	150 lb	32	93	120	210	310	510	1100
IV	300 lb	62	180	240	420	600	1000	2200
V	1/4 ton	110	310	410	720	1050	1750	3800
VI	3/8 ton	170	500	650	1150	1650	2800	6000
VII	1/2 ton	260	740	950	1700	2500	4100	9000
VIII	1 ton	500	1450	1900	3300	4800	8000	17600
IX	2 ton	860	2500	3300	5800	8300	13900	30400
X	3 ton	1350	4000	5200	9200	13200	22000	48200
Note: Weight limits for each class are estimated from particle size by: $W = 0.85(\gamma_s d^3)$ where d corresponds to the intermediate ("B") axis of the particle, and particle specific gravity is taken as 2.65.								

3. CONSTRUCTION DETAILS:

3.01 The requirements of Section 620-3 shall apply.

4. METHOD OF MEASUREMENT:

4.01 The quantity to be paid for shall be the number of tons of stones incorporated into the work conforming to the requirements of these specifications and in accordance with lines, grades and cross-sections shown on the plans or as directed by the Engineer.

5. BASIS OF PAYMENT:

5.01 The unit price bid shall include the costs of furnishing all labor, material, and equipment necessary to satisfactorily complete the work except that any necessary excavation will be paid for separately.

(xx corresponds to required class size)