



GRADE RIPRAP SHALL BE THE CLASS AND SIZE OF ROCK ACCORDING TO THE FOLLOWING:

CLASS 50	CLASS 100	CLASS 200	CLASS 700	CLASS 2000	
WEIGHT OF ROCK (LBS)					% (BY WEIGHT)
50-30	100-60	200-140	700-500	2000-1400	20
30-15	60-25	140-80	500-200	1400-700	30
15-2	25-2	80-8	200-20	700-40	40
2-0	2-0	8-0	20-0	40-0	10

#### RIPRAP:

- ROCK FOR RIPRAP SHALL BE ANGULAR IN SHAPE.
- THICKNESS OF A SINGLE RAMP SHALL NOT BE LESS THAN 1/3 ITS LENGTH.
- DESIGN BASED ON ODOT HYDRAULICS MANUAL AND COSM.

#### RIPRAP INSTALLATION:

- EXCAVATE BELOW FINISHED GRADE TO DEPTH & DIMENSION SHOWN ON APPROVED PLANS.
- INSTALL WOVEN GEOTEXTILE FABRIC.
- PLACE RIP RAP TO FINISHED GRADE.

DRAWN CJH

DIV EROSION

REV DATE



CITY OF BEND

CITY OF BEND

STANDARD DRAWING

710 NW WALL ST., BEND, OREGON 97701

PIPE SLOPE DRAIN

SCALE NTS

DATE 11/01/2024

APPR

STD DWG E-11