

MATERIALS

ROCK QUALITY: ALL ROCK SHALL BE SOUND, UNWEATHERED, WEATHERING RESISTANT, ANGULAR LEDGE ROCK. THE LONGEST DIMENSION OF ANY INDIVIDUAL ROCK SHOULD NOT EXCEED THREE TIMES ITS SHORTEST DIMENSION. ACCEPTABILITY OF ROCK WILL BE DETERMINED BY LABORATORY TESTS AS HERINAFTER SPECIFIED, GEOLOGIC, EXAMINATION, AND HIDTORICAL USAGE RECORDS.

ALL ROCK DELIVERED TO AND INCORPORATED IN THE PROJECT SHALL MEET THE FOLLOWING MINIMUM SPECIFICATIONS:

- A) ABSORPTION
(CORPS OF ENGINEERS CRD-C 107) NOT MORE THAN 3.0%
- B) ACCELERATED EXPANSION (15 DAYS)
(CDR-C-148) NOT MORE THAN 15.0%

BREAKDOWN

THE TEST SAMPLE WILL BE PREPARED AND TESTED IN ACCORDANCE WITH CORPS OF ENGINEERS TESTING PROCEDURE CRD-C-148 "METHOD OF TESTING STONE FOR EXPANSIVE BREAKDOWN ON SOAKING IN ETHYLENE GLYCOL." TEST REQUIREMENTS OF NOT MORE THAN 15% BREAKDOWN WILL BE COMPUTED BY DIVIDING THE NUMBER OF INDIVIDUAL PIECES OF INITIAL SAMPLE SUFFERING BREAKDOWN (THAT IS, SEPARATING INTO TWO OR MORE PIECES) BY THE TOTAL NUMBER OF INITIAL PIECES IN THE SAMPLE.

- C) SOUNDNESS
(MgSO4 AT 5 CYCLES) NOT GREATER THAN 5% LOSS
- D) UNCONFINED COMPRESSIVE STRENGTH
ASTM D 2166-66 (REAPPROVED 1979) INTACT STENGTH OF 14,500 OR GREATER

FREQUENCY OF TESTING: QUARRY SOURCES OF ROCKERY ROCK SHALL BEGIN A TESTING PROGRAM WHEN EITHER BECOMING A SUPPLIER OR WHEN A NEW AREA OF THE SOURCE PIT IS OPENED. THE TESTS DESCRIBED IN ROCK QUALITY SECTION SHALL BE PERFORMED EVERY FOUR THOUSAND (4000) TONS FOR THE FIRST TWELVE THOUSAND (12000) TONS OF MATERIAL BLASTED AND REMOVED TO ESTABLISH THAT SPECIFIC ROCK SOURCE. THE TESTS SHALL THEN BE PERFORMED ONCE A YEAR OR AT AN APPARENT CHANGE IN MATERIAL. IF PROBLEMS WITH A SPECIFIC AREA IN A PIT OR WITH A PARTICULAR MATERIAL ARE ENCOUNTERED, THE INITIAL TESTING CYLCE SHALL BE RESTARTED.

ROCK DENSITY: RECOGNIZING THAT NUMEROUS SOURCES OF ROCK EXIST, AND THAT THE NATURE OF ROCK WILL VARY NOT ONLY BETWEEN SOURCES BUT ALSO WITHIN EACH SOURCE, THE DENSITY OF ROCK SHALL RANGE BETWEEN ONE HUNDRED FIFTY-FIVE (155) AND ONE HUNDRED SIXTY-FIVE (165) PCF. TYPICALLY ROCKS USED FOR ROCKERY CONSTRUCTION SHALL BE SIZED APPROXIMATELY AS FOLLOWS:

<u>ROCK SIZE</u>	<u>ROCK WEIGHT</u>
SMALL ONE MAN	58
LARGE ONE MAN	210
SMALL TWO MAN	265
LARGE TWO MAN	580
SMALL THREE MAN	760
LARGE THREE MAN	1830
SMALL FOUR MAN	3000
LARGE FOUR MAN	4000
FIVE MAN	>5000
SIX MAN	>7000



CITY OF PUYALLUP

DEVELOPMENT ENGINEERING and PUBLIC WORKS DEPARTMENTS

ROCK RETAINING WALL NOTES

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