

BALLAST AND SUBBALLAST MATERIAL SPECIFICATIONS			
		LIMITING VALUES	
TEST SPECIFICATION	ASTM TEST	BALLAST CLASS 1, 2 & 3	SUBBALLAST
MATERIAL TYPES ALLOWED		NATURALLY OCCURRING, CRUSHED ROCK BALLAST	NATURALLY OCCURRING, SINGLE SOURCE, CRUSHED STONE OR CRUSHED CONCRETE***
WASHING 100% REQUIRED		YES*	NO
ABRASION NUMBER	ASTM C535 AND MMA	30% MAX.	
L.A. ABRASION NUMBER	ASTM C535 OR C131	25% MAX.	50% MAX.
SOUNDNESS (SODIUM SULFATE) LOSS	ASTM C88	1.8% MAX.	10% MAX.
FLAT OR ELONGATED PARTICLES	ASTM D4791 OR USACE CRD-C119	5% MAX.	
ABSORPTION	ASTM C127	0.5% MAX.	
BULK SPECIFIC GRAVITY	ASTM C127	2.6 MIN.	
PASSING NO. 200 SIEVE**	ASTM C117	0.5% MAX.	10% MAX.
CLAY LUMPS AND FRIABLE PARTICLES	ASTM C142	0.4% MAX.	
TOTAL SAMPLE LIQUID LIMIT	ASTM D423	25 MAX.	
TOTAL SAMPLE PLASTICITY INDEX	ASTM D424	6 MAX.	
SAMPLING AND TESTING FREQUENCY	ASTM D75	10,000 TONS	


*APPLIES TO CLASS 1 AND 2, INCLUDING REWASHING PROCESSED BALLAST (STOCK PILES)

**WASHED SAMPLE

***CRUSHED CONCRETE SHALL BE FREE OF METAL AND ANY OTHER MATERIALS FOREIGN TO CONCRETE

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

BALLAST & SUBBALLAST
MATERIAL SPECIFICATIONS



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STD DWG

0010C

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