



## MATERIALS TESTING

CONCRETE	METHOD
<b>CONCRETE AGGREGATE</b>	
Sieve Analysis	
• Washed	ASTM C 117; ASTM C 136; CTM 202
• Sieve Analysis Passing #200 Sieve only	ASTM C 117; CTM 202
Specific Gravity	
• Coarse Aggregate (retained on #4)	ASTM C 127; CTM 206
• Fine Aggregate (passing #4)	ASTM D 854; CTM 207
Sand Equivalent	ASTM D 2419; DOT CA Test 217
Soundness, Sodium Sulfate (5 cycles)	ASTM C 88
Durability Index (Coarse and Fine)	ASTM D 3744; CTM 229
Cleanliness Value of Coarse Aggregate	DOT CA Test 227
Clay Lumps and Friable Particles in Aggregate	ASTM C 142
Organic Impurities in Fine Aggregate	ASTM C 40; CTM 213
Crushed Particles (each size)	CTM 205
Flat and Elongated Particles in Aggregate	ASTM D 4791; AASHTO M283
Potential Reactivity of Aggregate by Chemical Method	ASTM C 289
Relative Mortar Strength of PCC Sand	CTM 515
Petrographic Examination of Aggregate	ASTM C 295; CTM 215
Unit Weight of Aggregate	ASTM C 29; CTM 212
Special Sample Preparation	
<b>CYLINDERS, BEAMS, AND CORES</b>	
Compression Test of Cast Cylinders (all sizes)	ASTM C 39
Compression Test of Cored Samples	ASTM C 42
Compression Test of Cored Gunitite Samples	
Compression Test of Lightweight Concrete	ASTM C 495
Compressive Strength (2" cube)	ASTM C 109
Flexural Strength, Simple Beam with Third Point Loading	ASTM C 78
Splitting Tensile of Cast Cylinders	ASTM C 496
Unit Weight of Lightweight Concrete	ASTM C 567
Proportion of Cement, Sand, & Aggregate in hardened concrete	ASTM C 85
Concrete Slab Moisture Transmission Kit	
Modulus of Elasticity	ASTM C 495
Special Sample Preparation	
<b>CEMENT</b>	
Physical Tests	ASTM C 150
Chemical Analysis	ASTM C 190; CTM 404
MASONRY	METHOD
<b>CONCRETE BLOCK</b>	
Compression Test on Masonry Cores	ASTM C 140
Absorption (set of 3)	ASTM C 140
Moisture Content as received (set of 3)	ASTM C 140
Shrinkage (set of 3)	ASTM C 426

In Laboratory Core Cutting (each)	
Shear Test on Masonry Cores (2 faces)	
Tension Test	
<b>MORTAR AND GROUT</b>	
Compression, 2" x 4" Mortar Cylinders	UBC Std. 24-22; ASTM C 109
Compression, 3" x 3" x 6" Grout Prisms	UBC Std. 24-22; ASTM C 942
Compression, 2" Cubes (set of 3)	
Special Sample Preparation	
<b>MASONRY PRISMS</b>	
Compression Test, Grouted Prisms up to 8" x 16"	ASTM E 447
Compression Test, Grouted Prisms over 8" x 16"	ASTM E 447
Handling charge for samples not tested or prepared	
Monthly charge for samples held after 28 days	
<b>BRICK / MASONRY</b>	
Absorption and Saturation Coefficient	ASTM C 67 / ASTM C 936
Compression Test	ASTM C 67 / ASTM C 936
Modulus of Rupture	ASTM C 67
Efflorescence (each)	ASTM C 67
<b>STEEL</b>	<b>METHOD</b>
<b>REINFORCING BAR TESTS</b>	
Tensile and Bend Tests, #2 through #9	ASTM A 615
Tensile and Bend Tests, #10 through #18	ASTM A 615
Unit Weight of Coating (galvanized)	
<b>STRUCTURAL STEEL</b>	
Tensile and Bend Test (sample preparation not included)	
Machine Charges, per sample	
Unit Weight of Galvanized Coating	
Machining and Preparation of Sample (each)	
<b>PIPE</b>	
Tensile Test (sample preparation not included)	
Flattening Test (sample preparation not included)	
<b>HIGH STRENGTH BOLTS</b>	
Bolt	Tensile Test A 370
Bolt	Hardness Test A 370
Nut	Hardness Test A 370
Washer	Hardness Test A 370
Proof Loading, Bolt or Nut	
<b>WELDED SPECIMEN TESTS</b>	
Face Bend (preparation not included)	
Root Bend (preparation not included)	
Side Bend (preparation not included)	
Sample Preparation	
Machining Charge	
<b>NON-DESTRUCTIVE TESTING</b>	
NDT Technician	
Radiographic (X Ray, Gamma Ray)	
<b>PRE-STRESSING WIRES AND TENDONS, ASTM A 416</b>	
Stress-Strain Analysis: Wire or Stands (including Chart and Percent Offset)	
Tensile Test Only	
Tendons	

MISCELLANEOUS MATERIAL	METHOD
<b>FIRE PROOFING TEST</b>	
Oven Dry Density (per sample)	
Adhesive/Cohesion Testing	
<b>SELECTED EQUIPMENT</b>	
Hydraulic Ram and Pump	
Torque Wrench	
Multiplier	
Skidmore Bolt Tension Calibrator	
Pachometer	
Air-Entrainment Testing (Concrete)	
Schmidt Hammer	