

APPENDIX B

Geotechnical Parameters and Methods Requested:

Test Description	Method (AASHTO or Specified)
Soil Lab Testing	
Moisture Content	T265, ASTM D2216
Atterberg limits	T89, T90, ASTM D4318
Shrinkage Limits	ASTM D4943
Organic Content by Loss-on-ignition	T267, ASTM D2974
Pin Hole Dispersion Test	ASTM D4647
Extrude Liners and Visually Classify (per liner)	ASTM D 2488
USDA Textural Classification	USDA
pH of Soil	T200, G57
Resistivity of Soil	G57
Soluble Sulfates	T290, ASTM D4542
Maximum Index Density	ASTM D4253
Minimum Index Density	ASTM D4254
Aggregate Testing	
Sieve Analysis Coarse Aggregate above #4	T11, T27, ASTM C136, C117
Sieve Analysis Fine Aggregate Through No. 200	T11, T27, ASTM C136, C117
Sieve Analysis Coarse and fine Aggregate through No. 200	T11, T27, ASTM C136, C117
Sieve Analysis Fines through #200	T11, ASTM C117
Particle Size Analysis (6-inch to – #200)	ASTM D6913
Particle Size Analysis (3-inch to – #200)	ASTM D6913
Particle Size Analysis (3/4-inch to – #200)	ASTM D6913
Particle Size Analysis (#4 to – #200) washed	ASTM D6913
Hydrometer Analysis	T88, ASTM D422
Specific Gravity and Absorption for fine aggregate	T84, ASTM C128
Specific Gravity of Soil with coarse aggregate	T100, ASTM D854
Specific Gravity of Soil without coarse aggregate	T100, ASTM D854
Specific Gravity - Course Aggregate (2" minus)	T85, ASTM C127
Specific Gravity - Course Aggregate (2" plus)	T85, ASTM C127
Los Angeles Abrasion (small size coarse aggregate)	T96, ASTM C13
Los Angeles Abrasion (large size coarse aggregate)	ASTM C535
Friable Pieces Aggregate	T112, ASTM C142
Lightweight Particles	T113, ASTM C123
Sand Equivalent	T176
Compaction Testing	
Standard Proctor (no oversize correction)	ASTM D698/ T-99
Standard Proctor (with oversize correction)	ASTM D698-D4718/T-99 T-224
Modified Proctor (without oversize correction)	ASTM D1557/ T-180
Modified Proctor (with oversize correction)	ASTM D1557-D4718/T-180 T-224
California Bearing Ratio-one point with proctor	T193, ASTM D1883
California Bearing Ratio-three point with proctor	T193, ASTM D1883
Soil Strength Testing	
Unconfined Compressive Strength	ASTM D2166
Direct Shear in silts or clays (one pass)	ASTM D3080
Direct Shear in sands (one pass)	ASTM D3080
Additional passes (per each pass)	
Triaxial, Unconsolidated Undrained, field moisture (per point)	ASTM D2850

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Triaxial, Unconsolidated Undrained, saturated (per point)	ASTM D2850
Triaxial, Consolidated Undrained with PWP (per point)	ASTM D4767
Triaxial, Consolidated Drained (per point)	ASTM D4767(modified)
Triaxial, Consolidated Undrained with PWP (3 pt. staged)	ASTM D4767(modified)
Unconfined Compression of Rock Samples	ASTM D7012
Soil Permeability Testing	
Constant Head Test for clean sands (minus 3/8-inch)	ASTM D2434
Constant Head Test for Gravels	ASTM D2434
Triaxial Flexible-wall Falling Head Test (saturated)	ASTM D5084
Triaxial Flexible-wall Constant Flow Rate Test	ASTM D5084
Portland Cement Concrete and Masonry Testing	
Compressive Strength Test 6x12 or 4x8 Cylinder	C31, C78