Figure 2.5-135—{Continuous Contact Between Glacial Till and Top of Shale Bedrock}

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Figure 2.5-136—{Aerial Photo of Site with Waypoints from Field Reconnaissance}

LEGEND

WP1 Paleoliquefaction Waypoints

WF0 Surface Faulting Waypoints

0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

References:
• PAMAP, 2006.

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Figure 2.5-137—{Boring Location Plan}

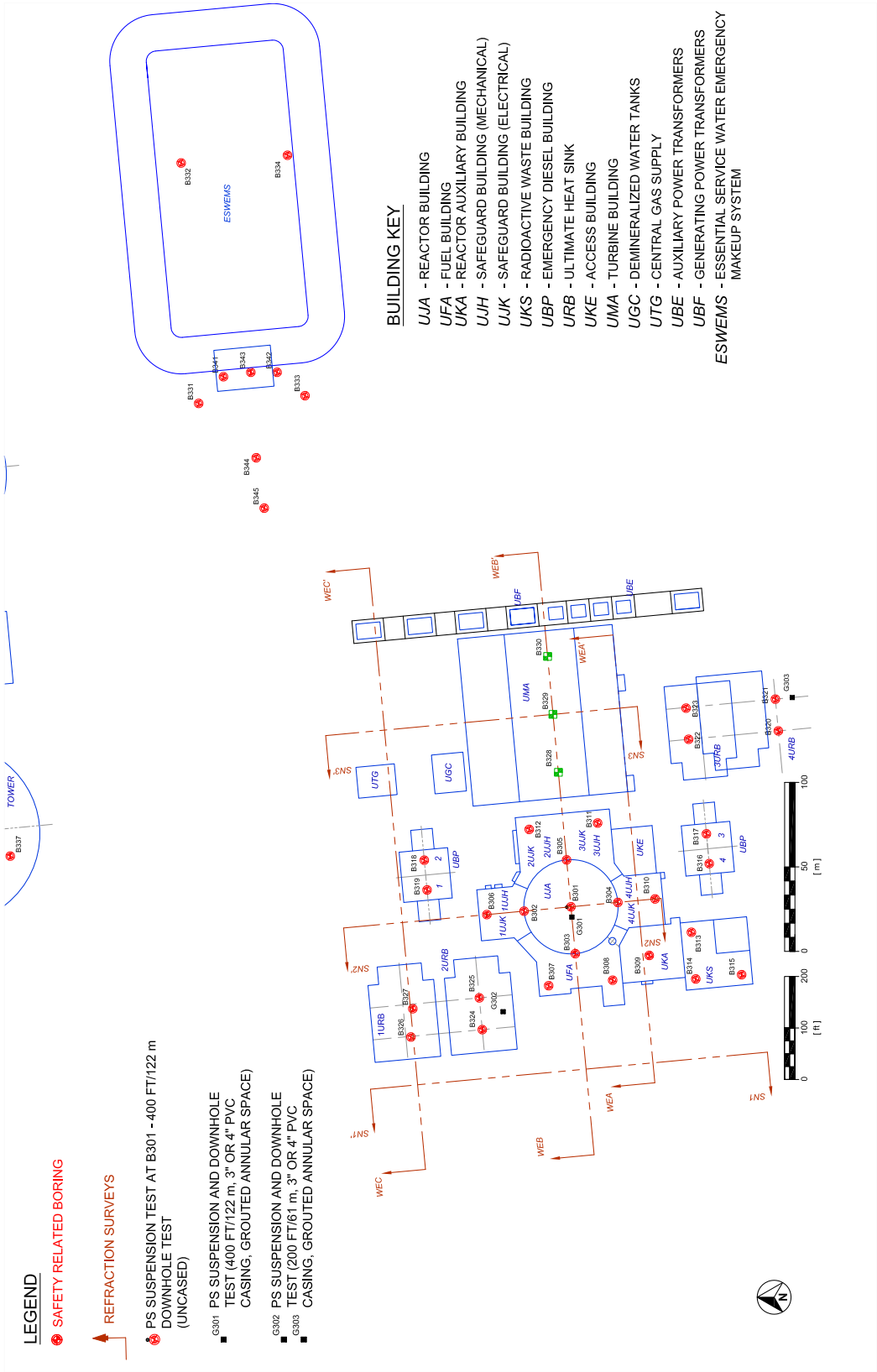

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Figure 2.5-138—{Geotechnical Cross Sections}

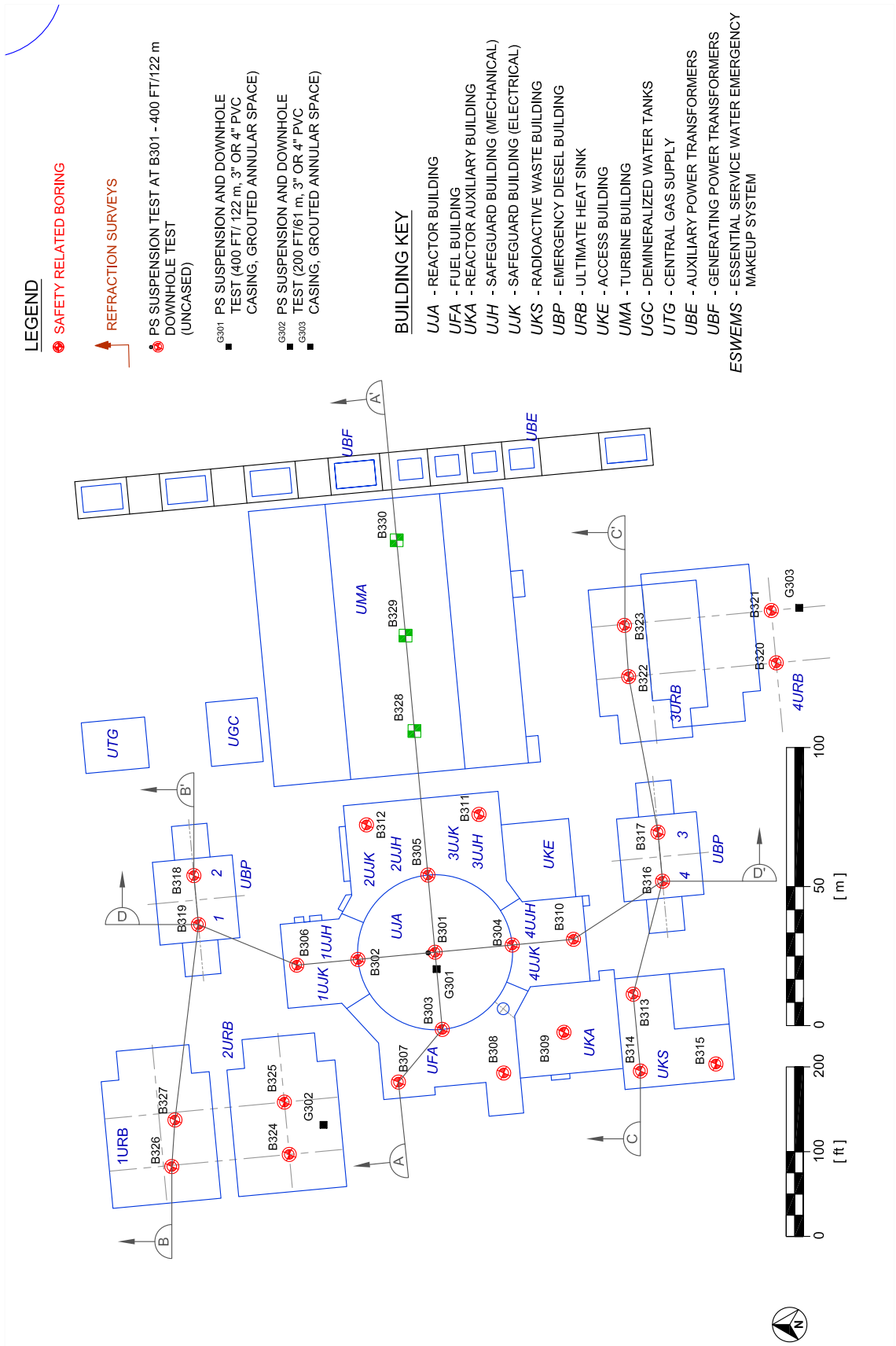

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Figure 2.5-139—{Geotechnical Subsurface Section A-A'}

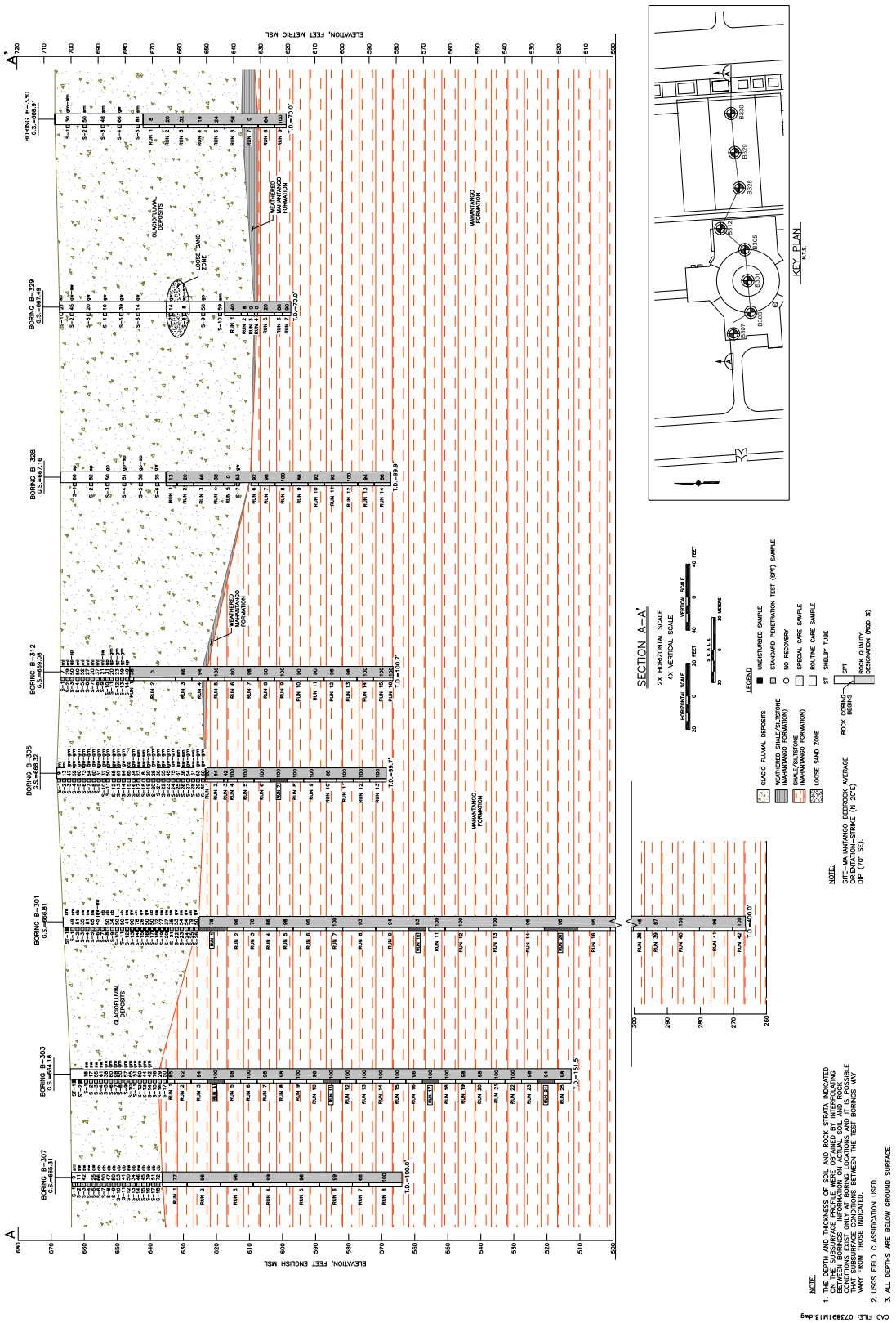

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Figure 2.5-140—{Geotechnical Subsurface Section B-B'}

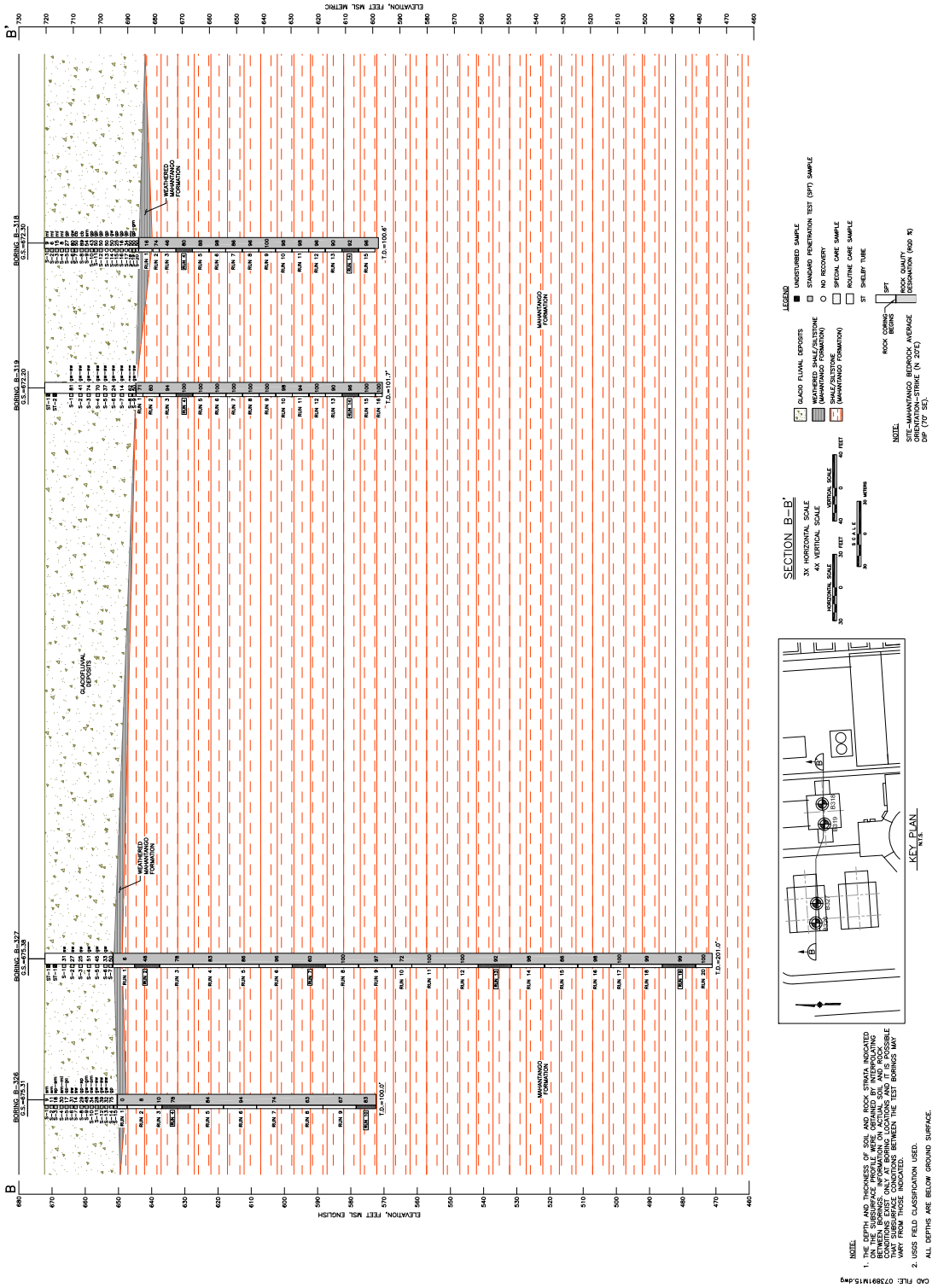

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Figure 2.5-141—{Geotechnical Subsurface Section C-C'}

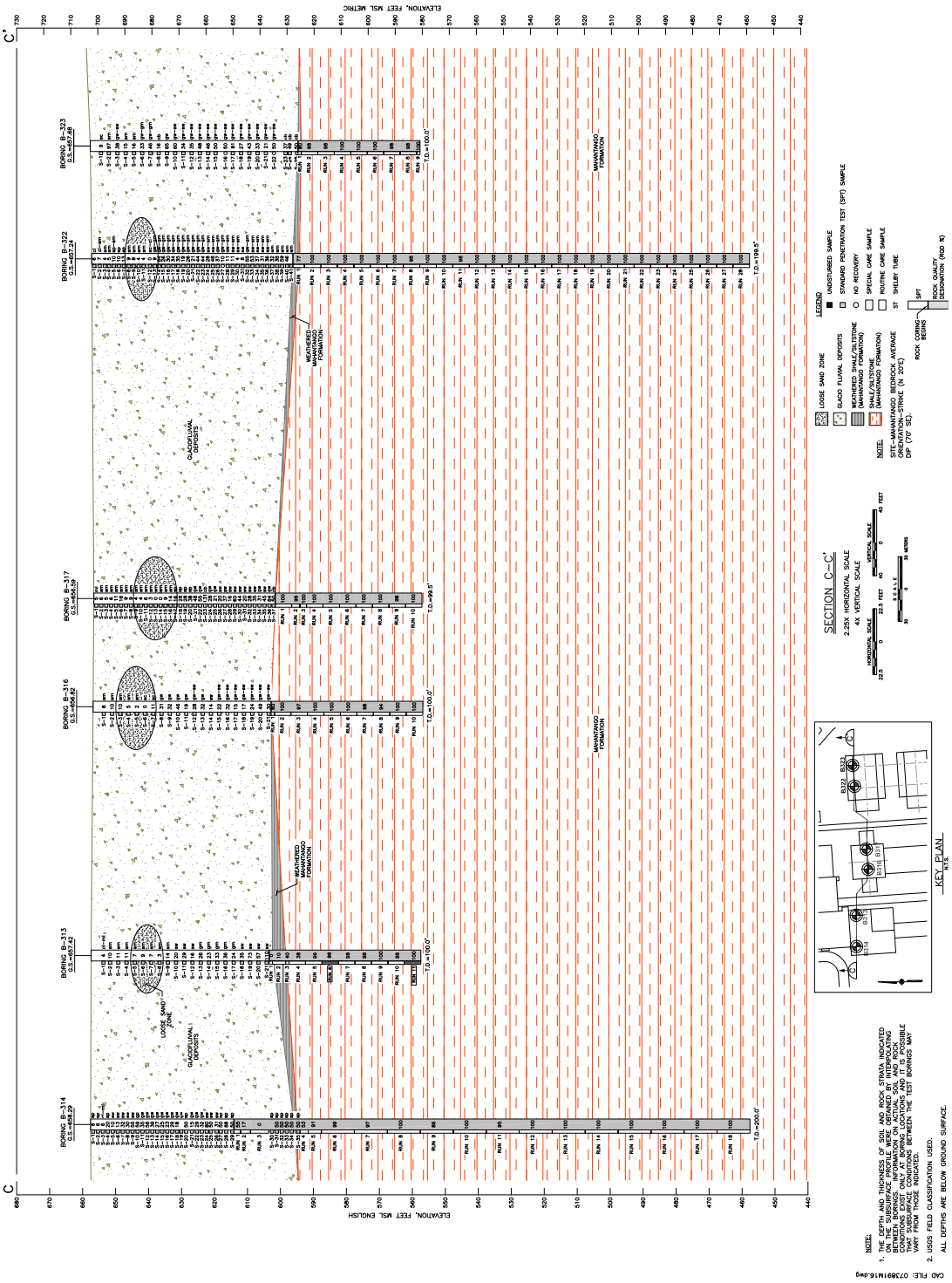

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Figure 2.5-142—{Geotechnical Subsurface Section D-D'}

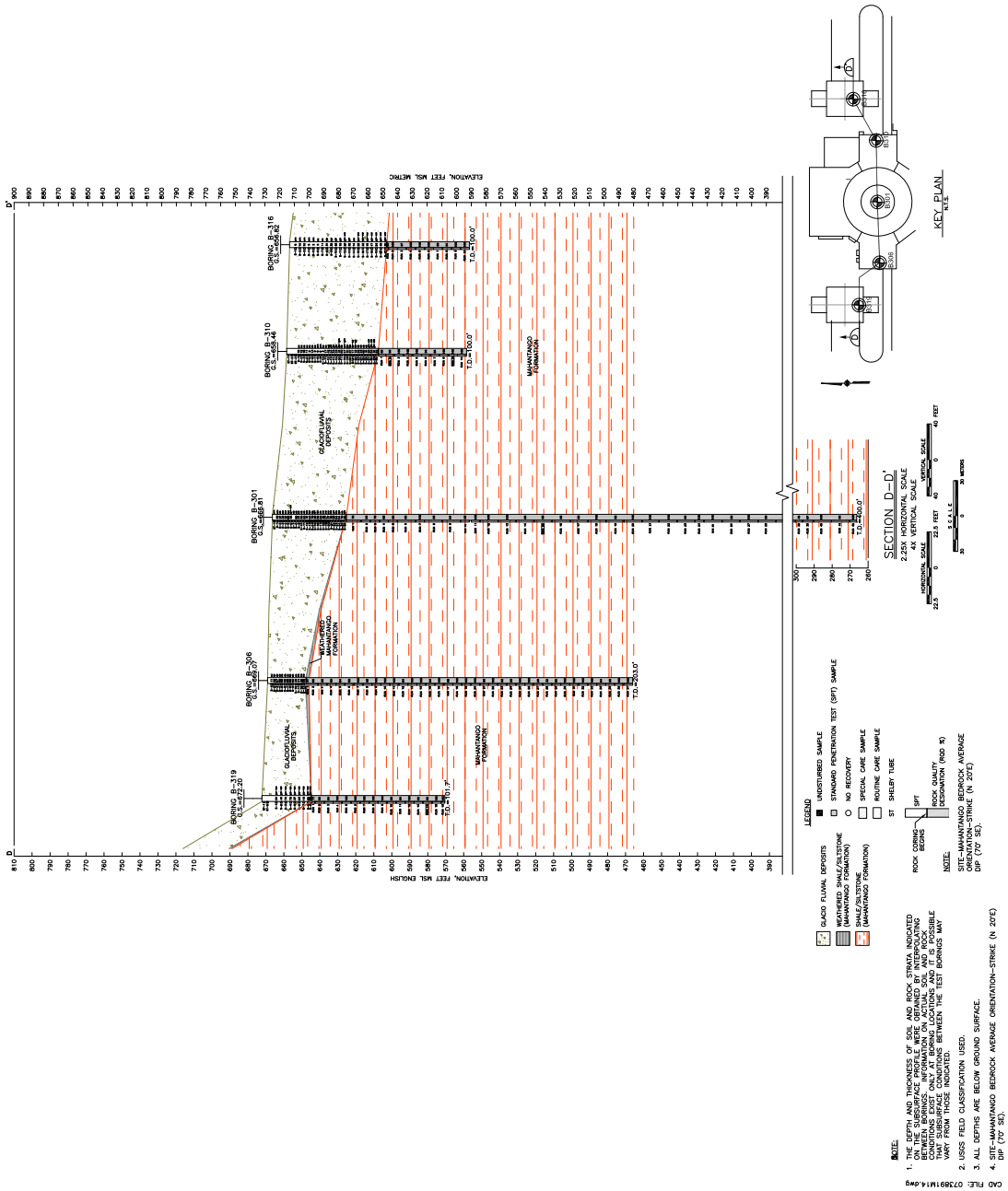

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Figure 2.5-143—{Surface Elevation Contours}

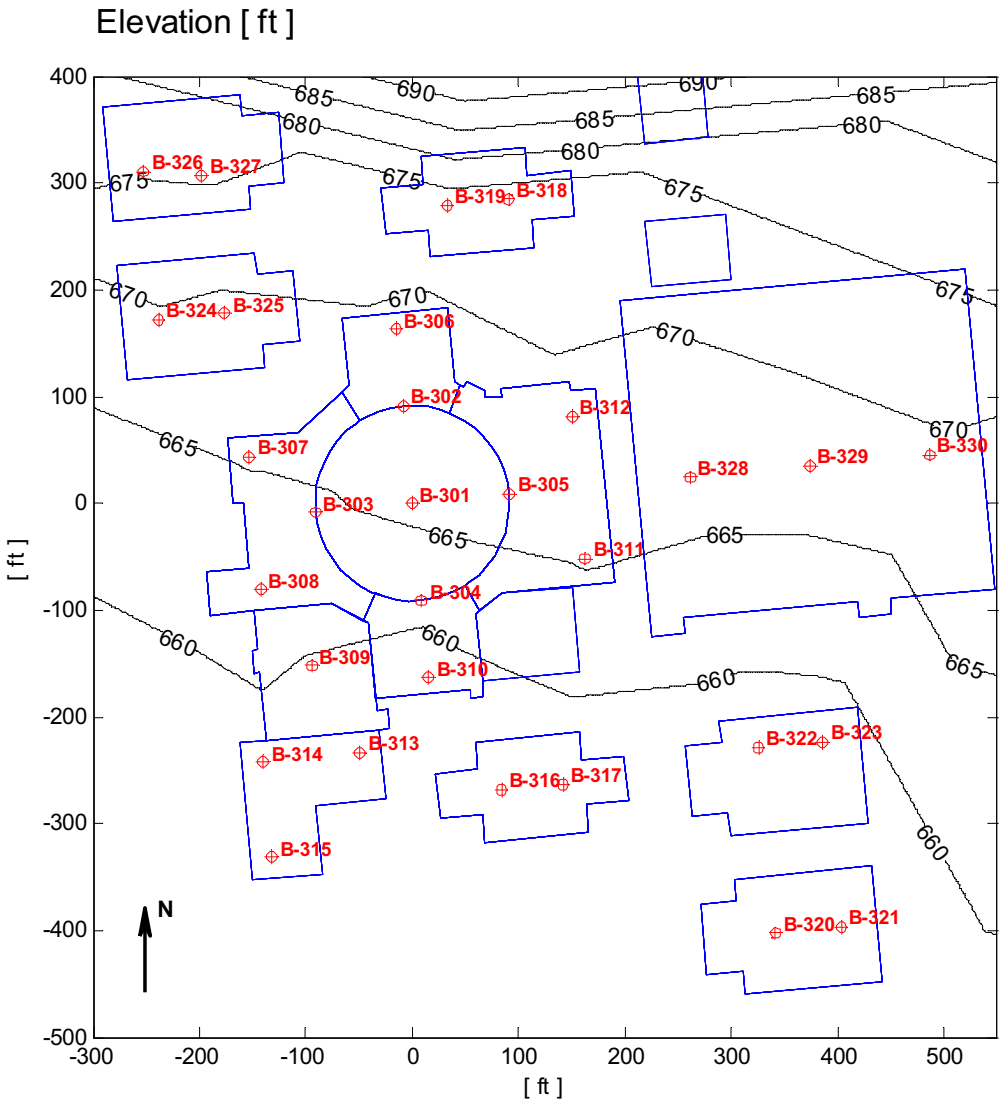

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Figure 2.5-144—{Thickness of Overburden}

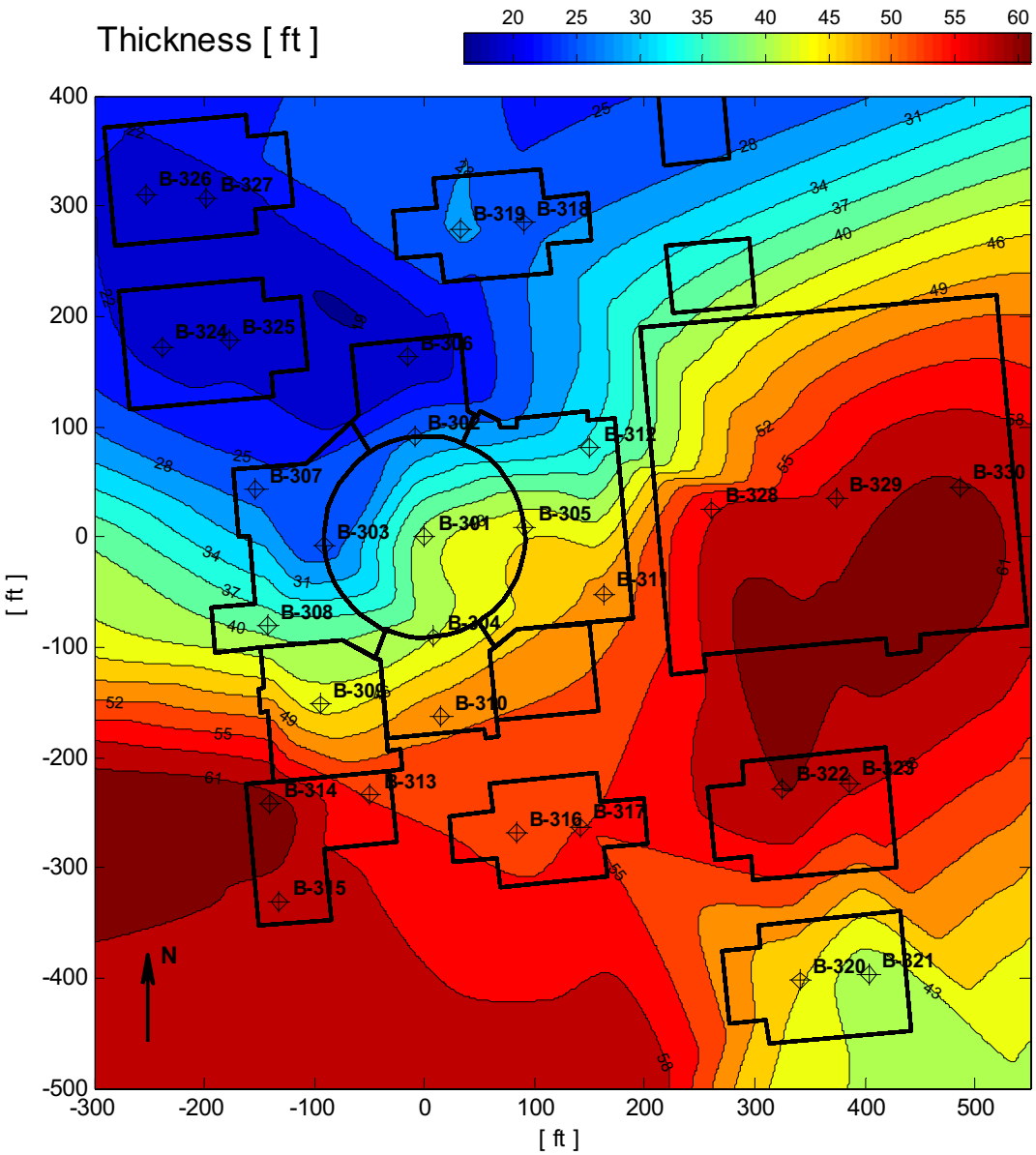

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Figure 2.5-145—{Thickness of Weathered Rock}

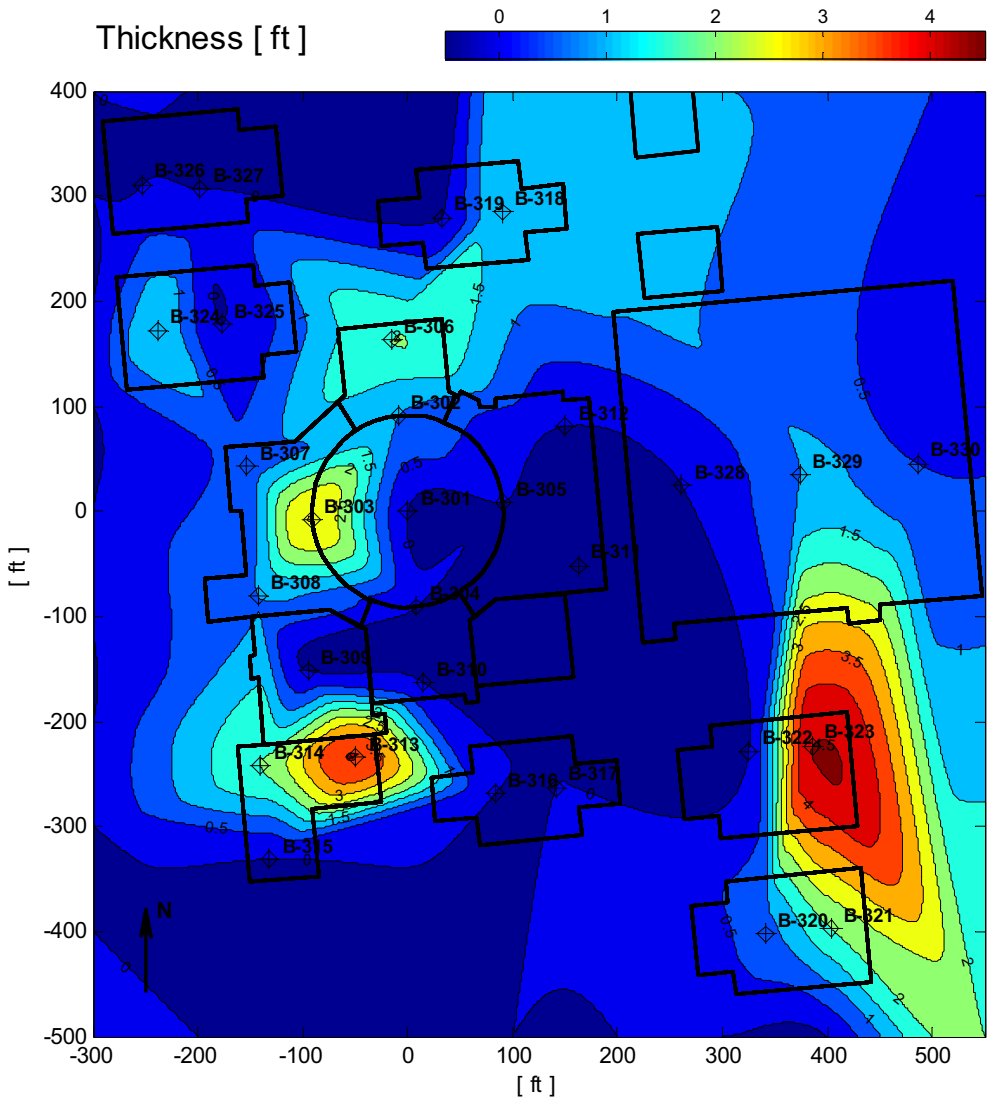

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Figure 2.5-146—{Elevation of Competent Rock}

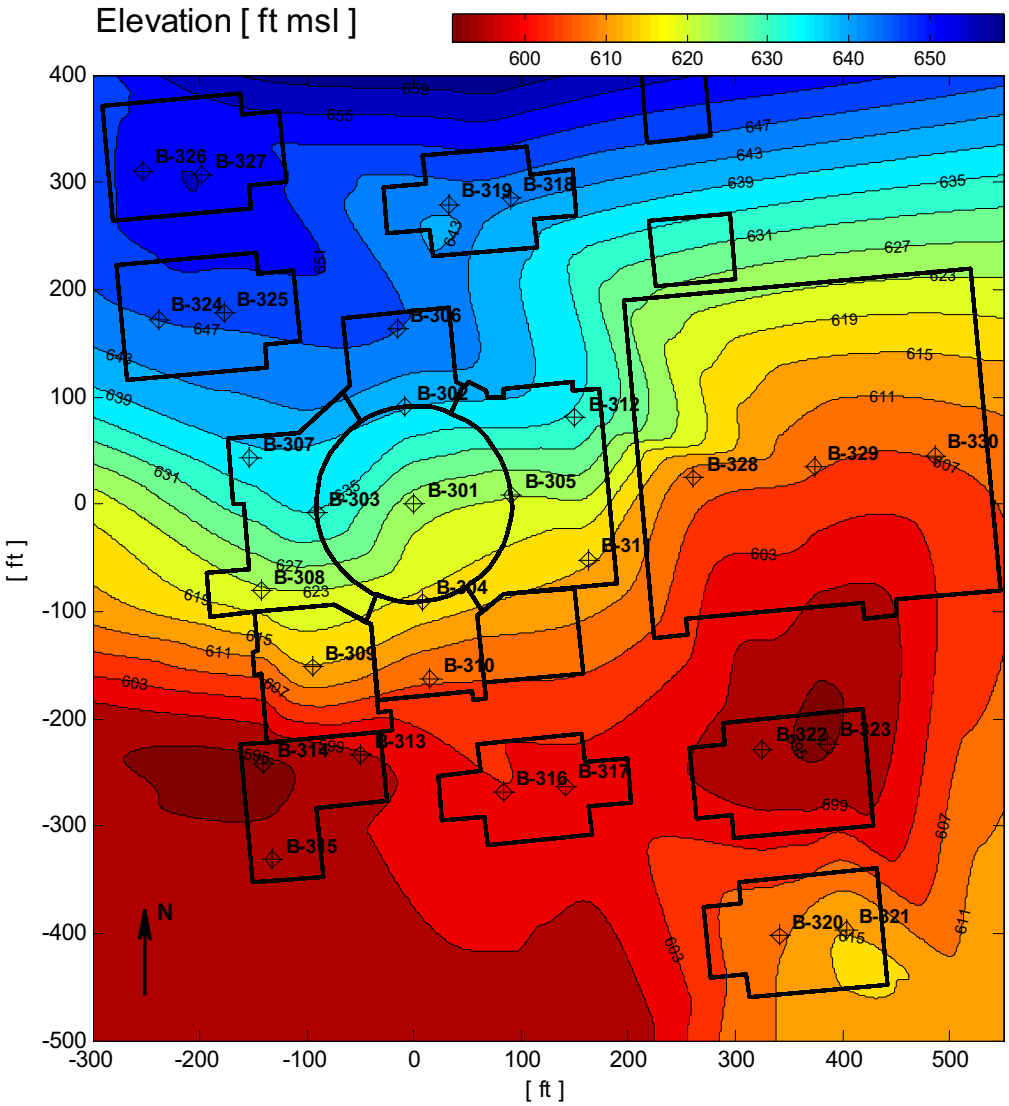

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Figure 2.5-147—{Overburden Thickness and Elevation of Rock (Area near Essential Service Water Emergency Makeup System - ESWEMS)}

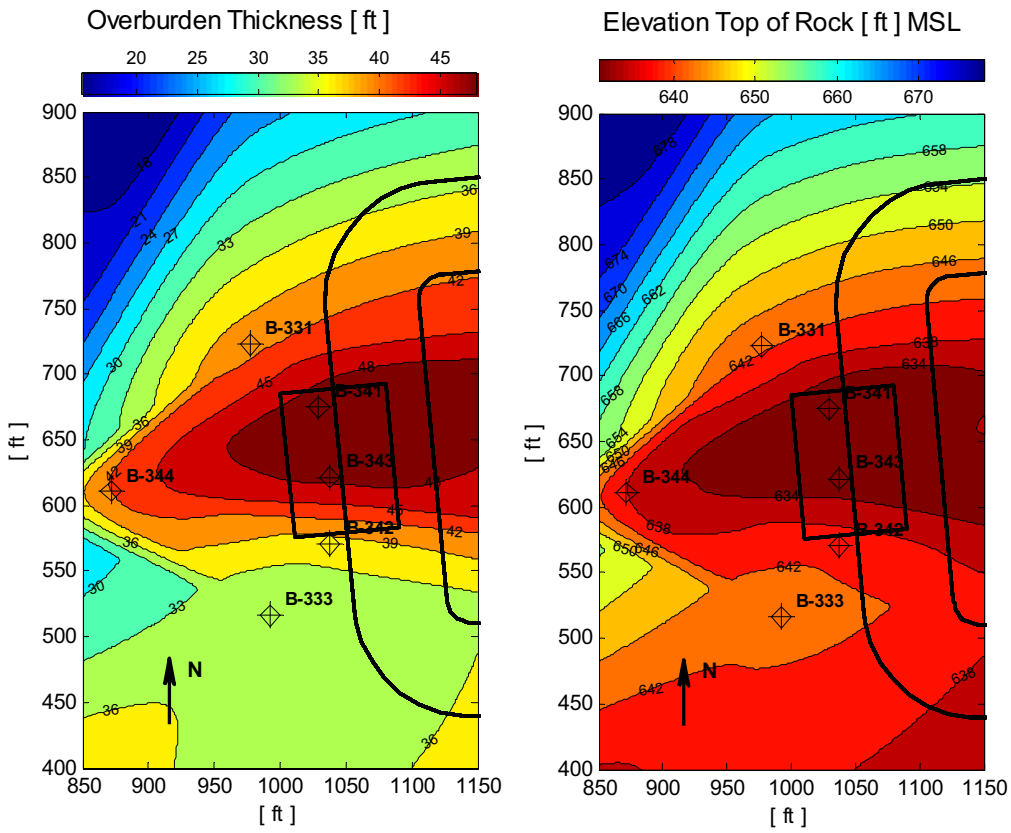

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Figure 2.5-148—{Location of Shelby Tubes}

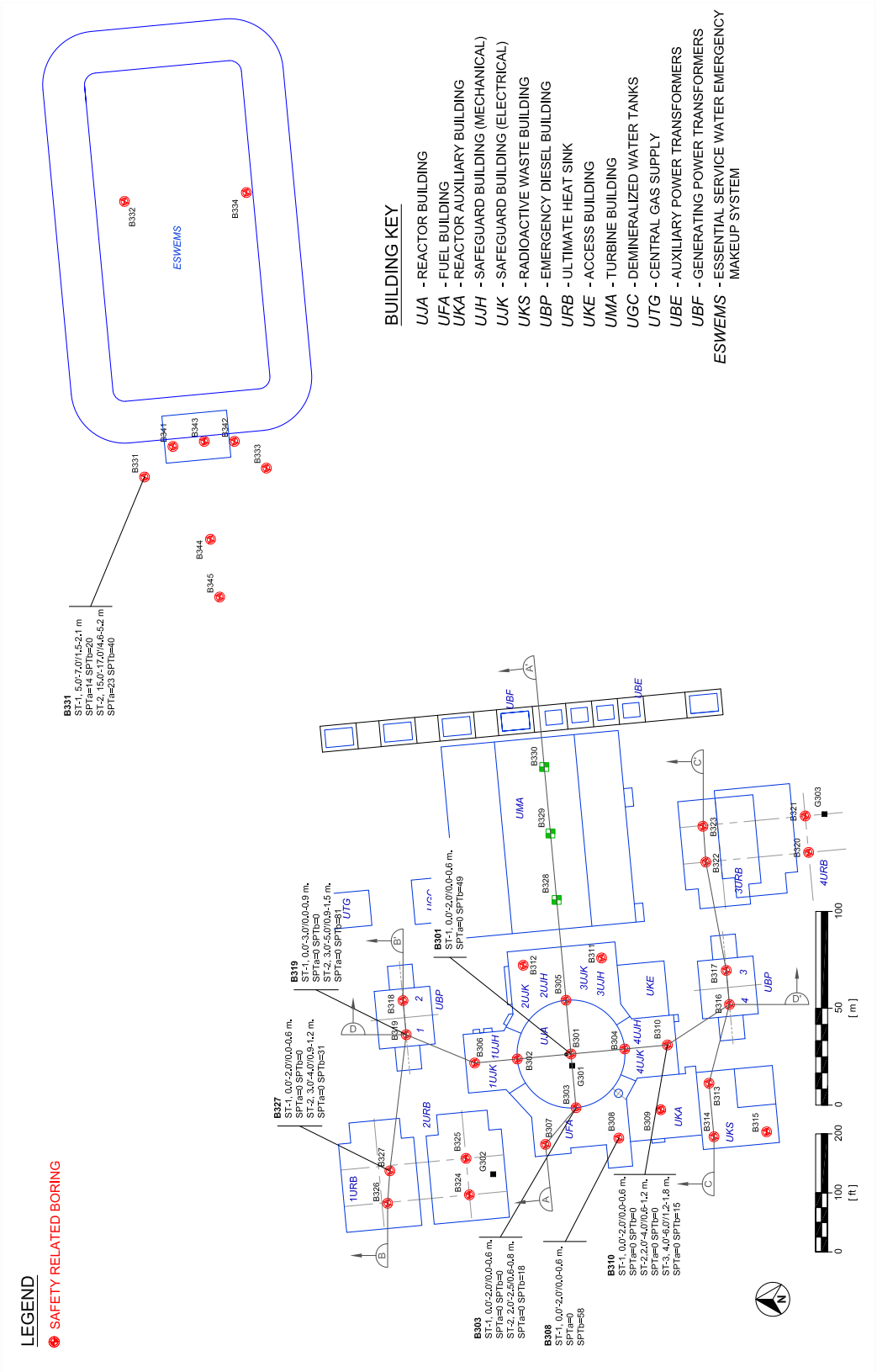

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Figure 2.5-149—{Location of Special Care Samples}

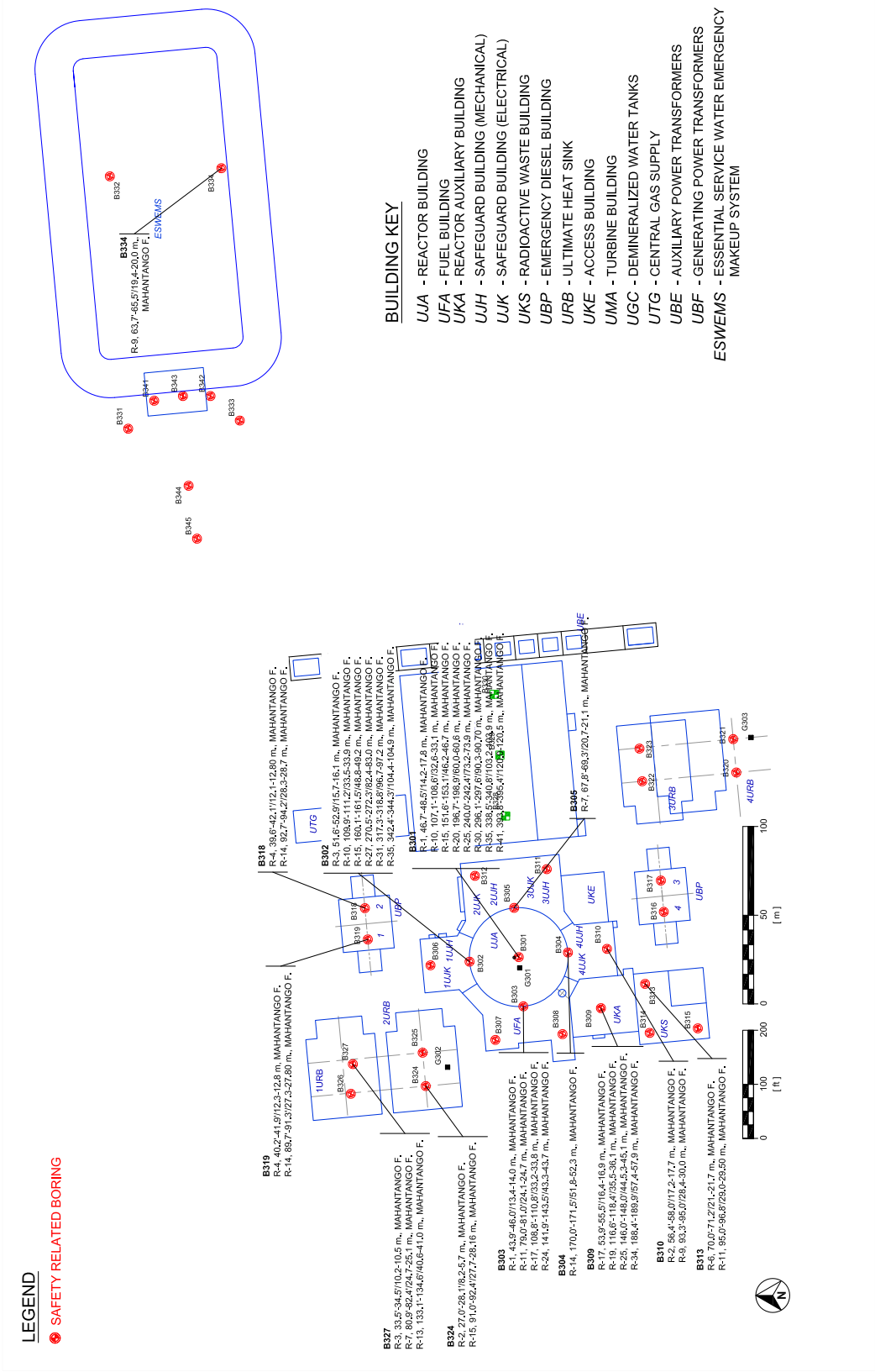

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Figure 2.5-150—{Standard Penetration Test (SPT) Variability}

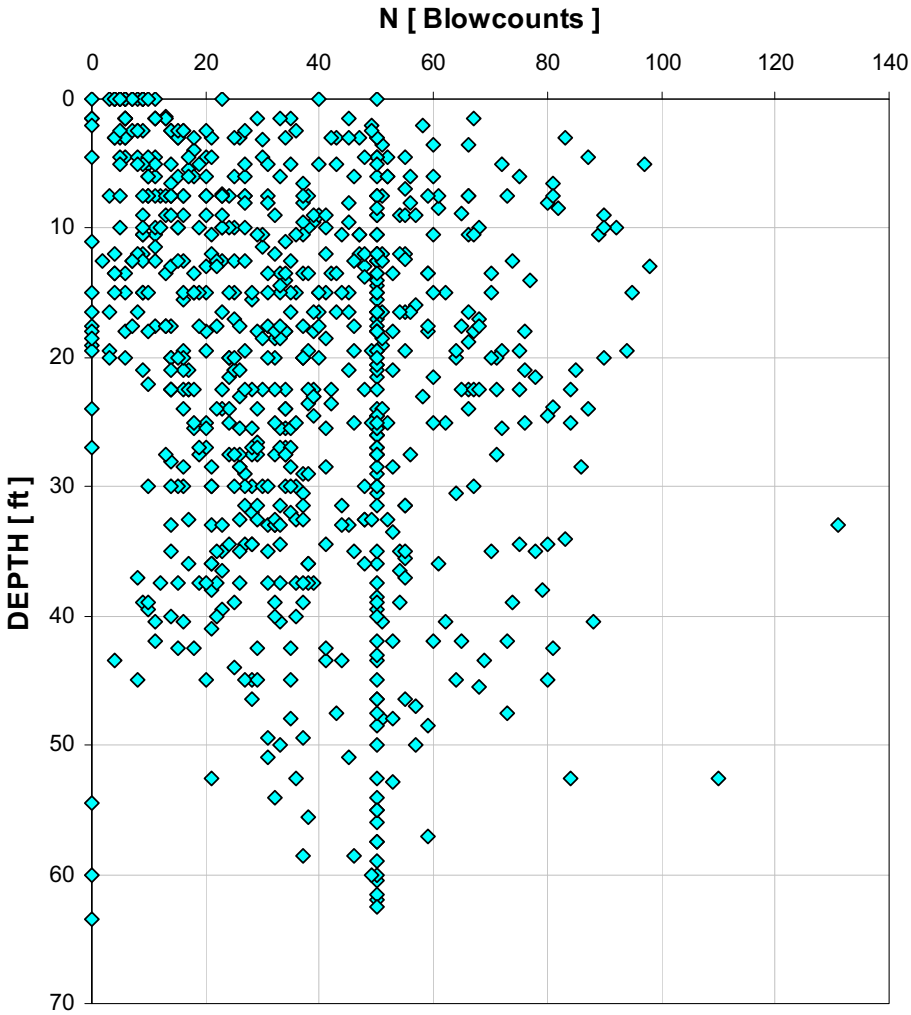

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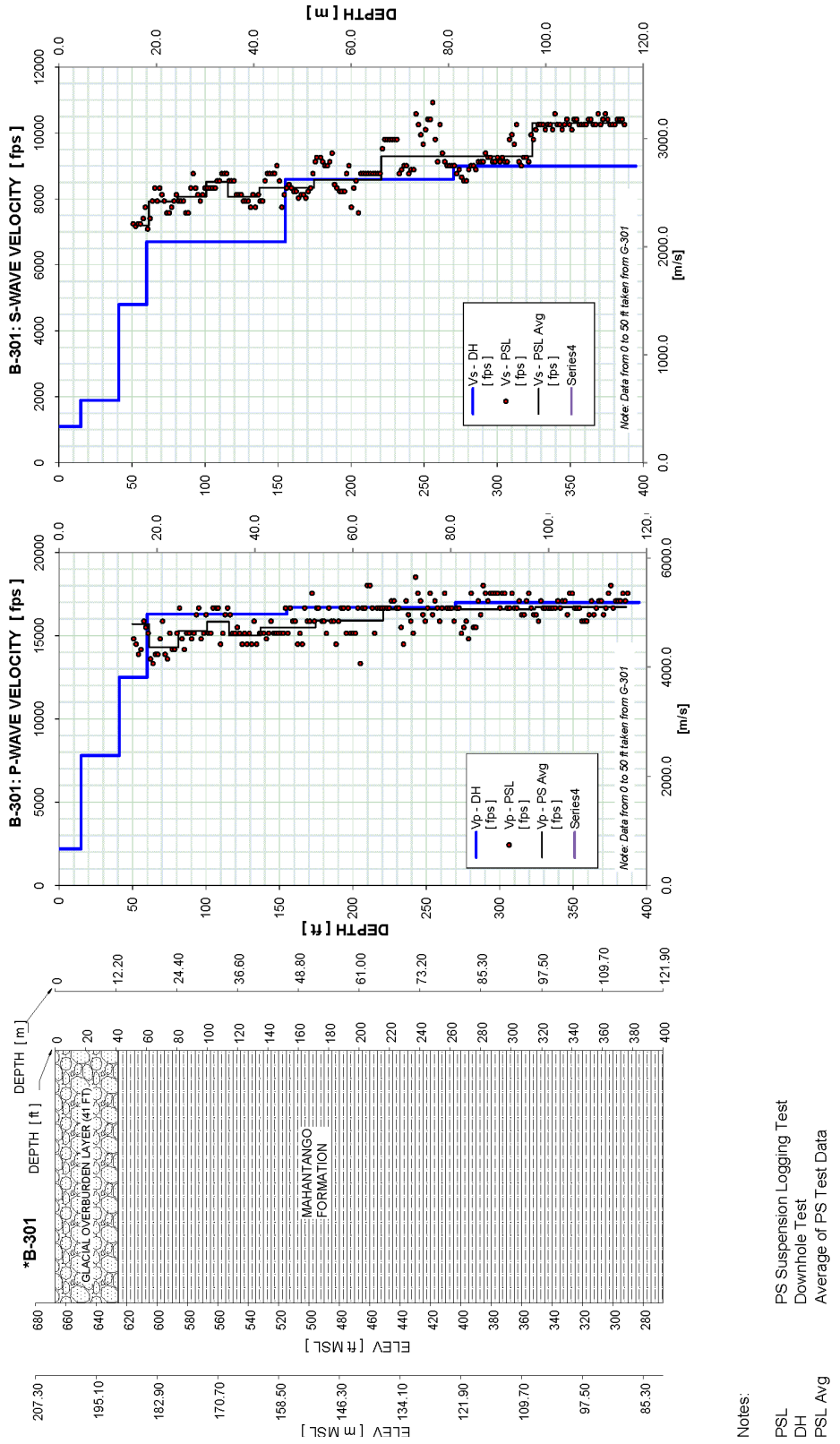
Figure 2.5-151—{Geophysical Tests B-301}



Notes:

PSL PS Suspension Logging Test
DH Downhole Test
PSL Avg Average of PS Test Data

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Figure 2.5-152—{Geophysical Tests G-301}

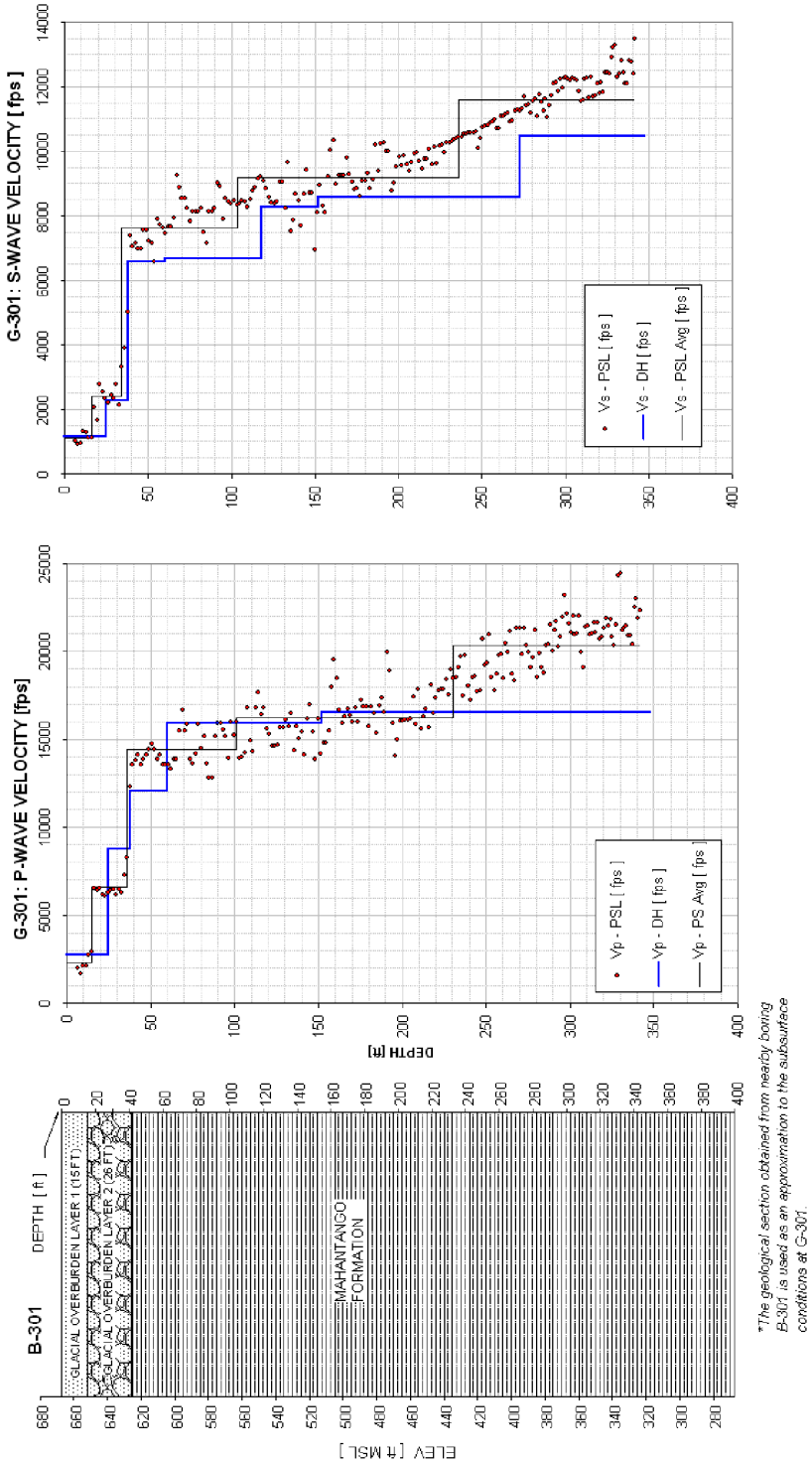

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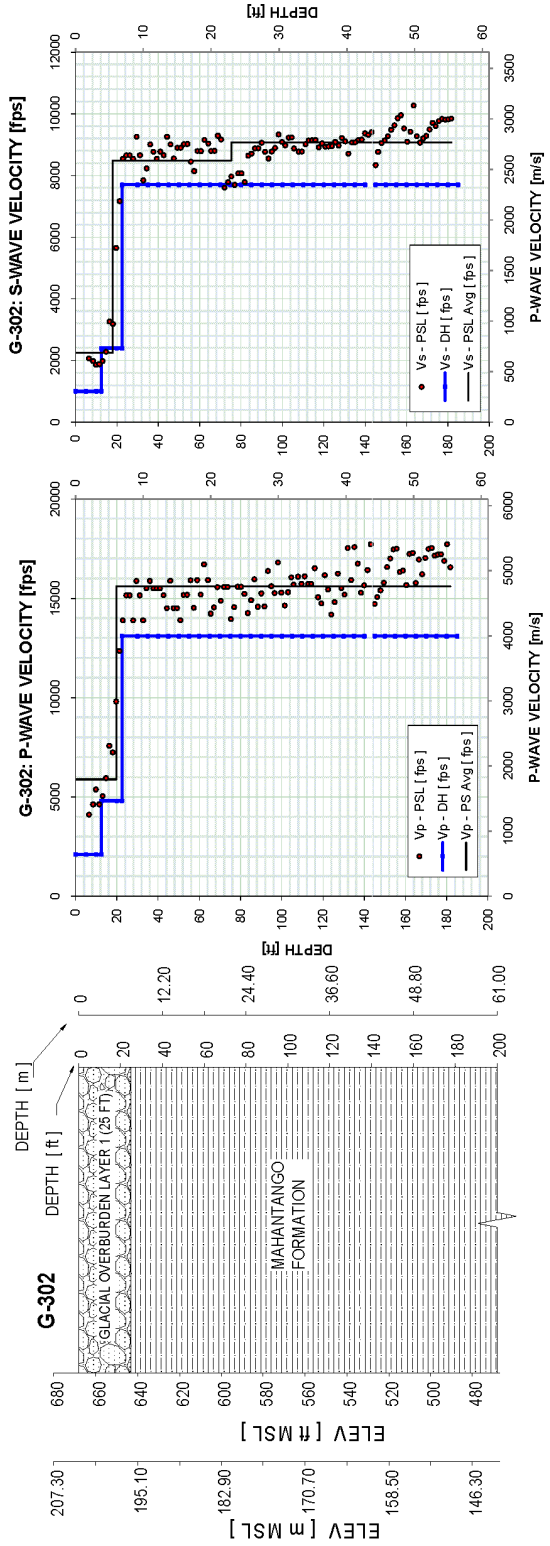
Figure 2.5-153—{{Geophysical Tests G-302}}



Notes:
PSL PS Suspension Logging Test
DH Downhole Test
PSL Avg Average of PS Test Data

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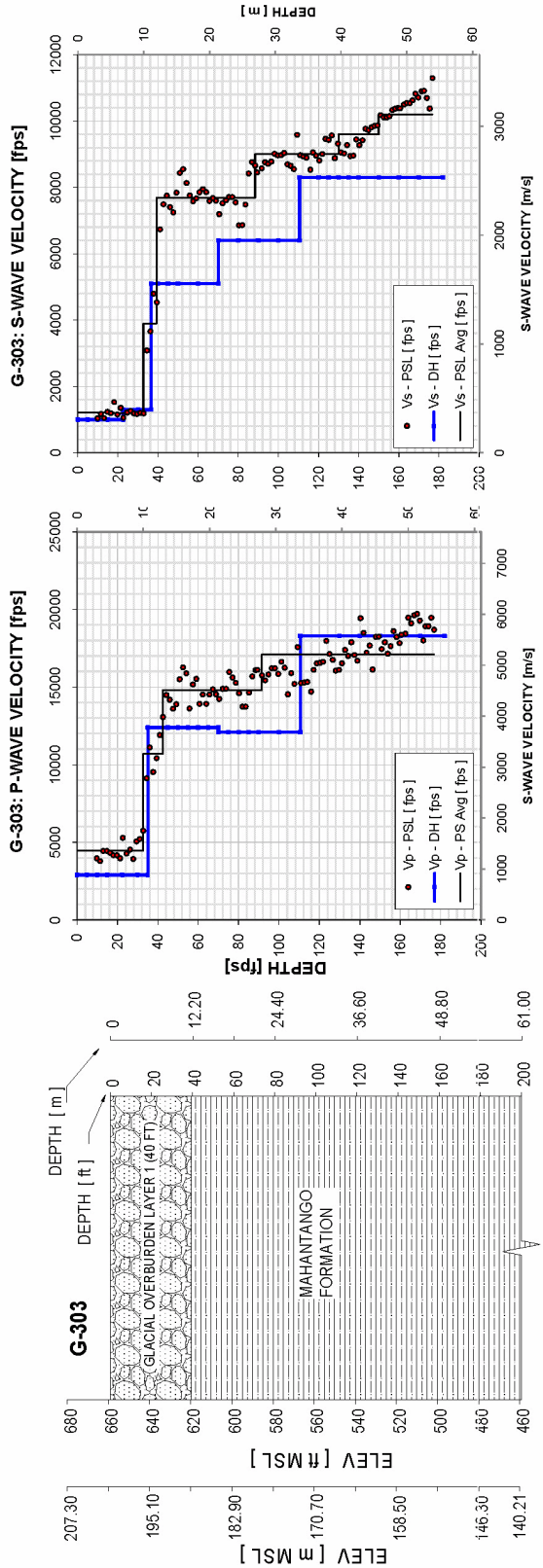

Figure 2.5-154—{Geophysical Tests G-303}

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Figure 2.5-155—{Refraction Survey Page 1 of 7}

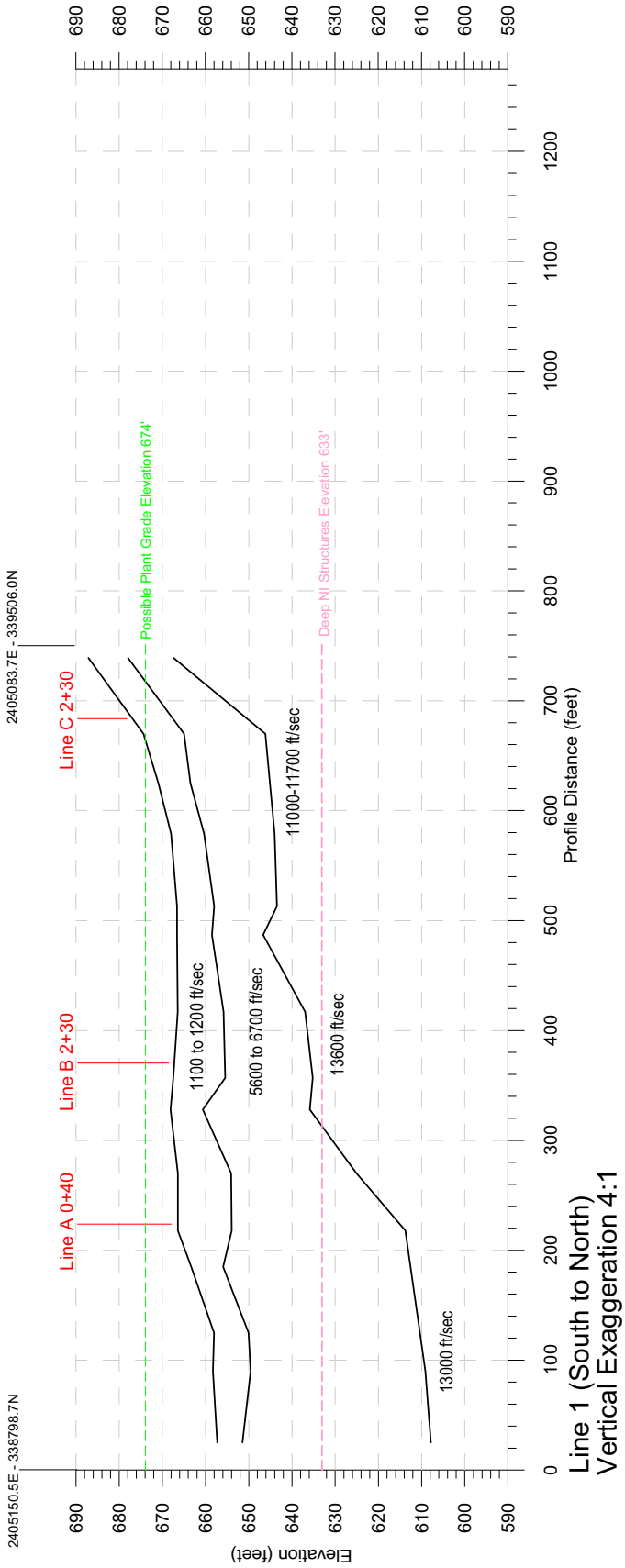

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Figure 2.5-156—{Refraction Survey Page 2 of 7}

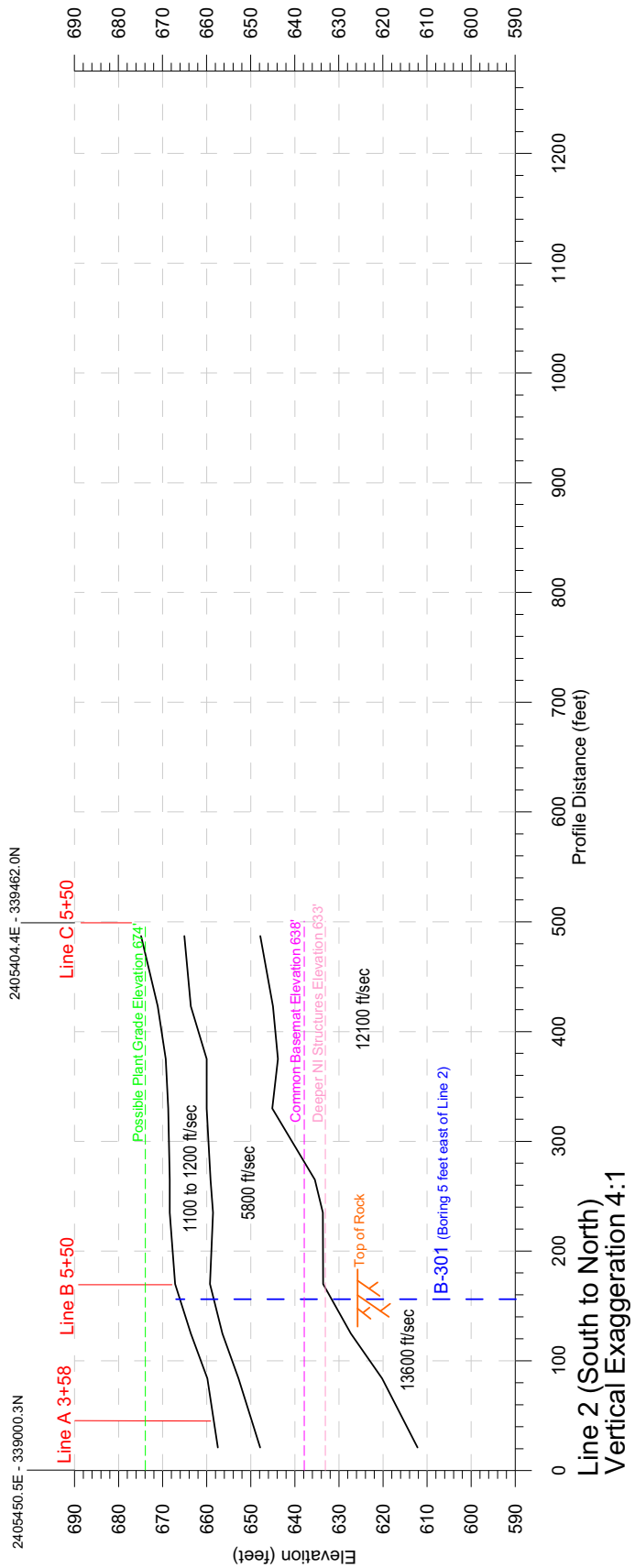

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Figure 2.5-157—{Refraction Survey Page 3 of 7}

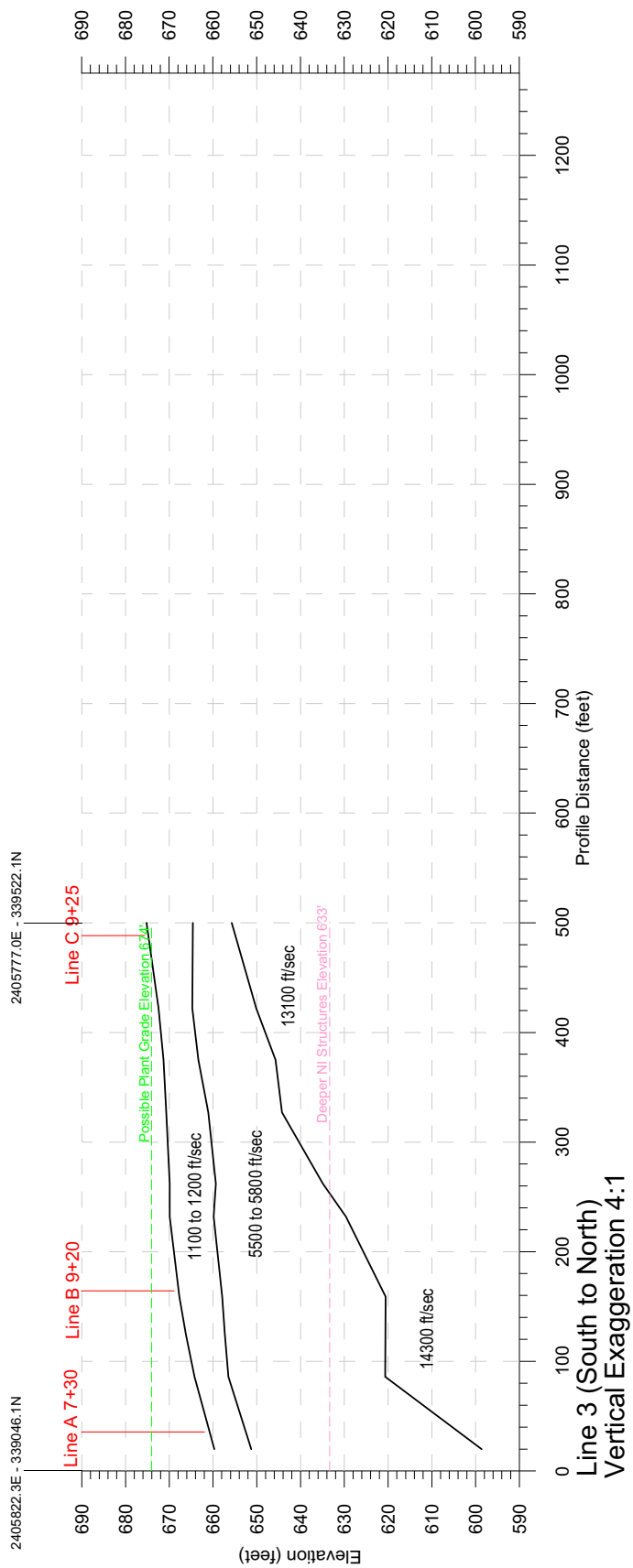

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Figure 2.5-158—{Refraction Survey Page 4 of 7}

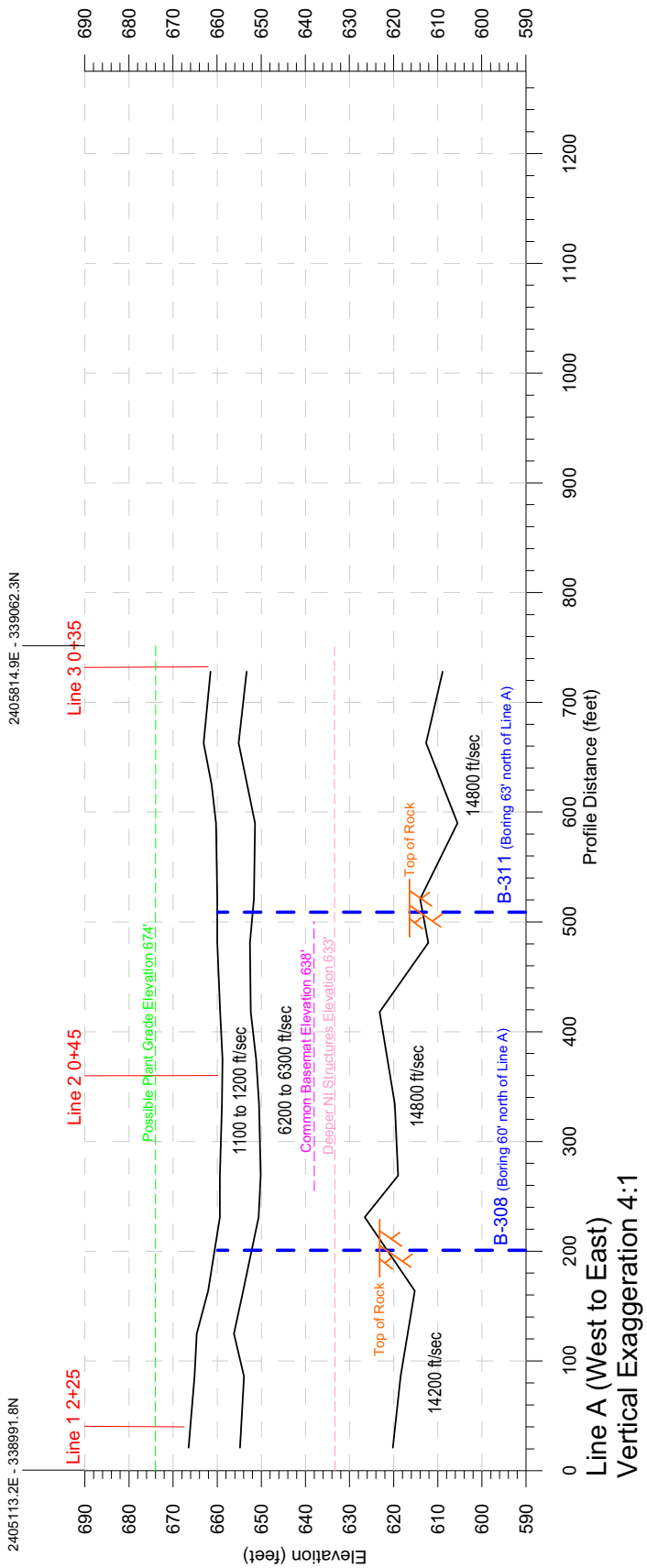

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Figure 2.5-159—{Refraction Survey Page 5 of 7}

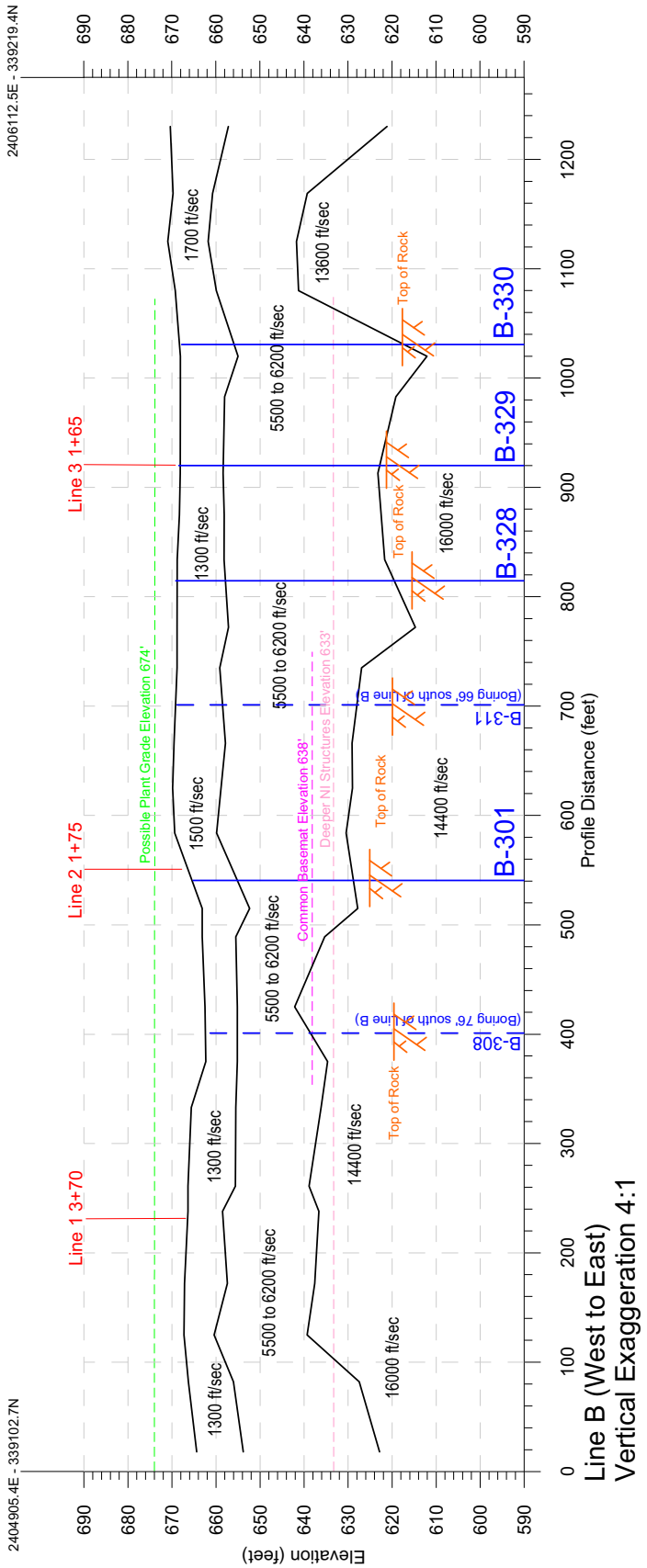

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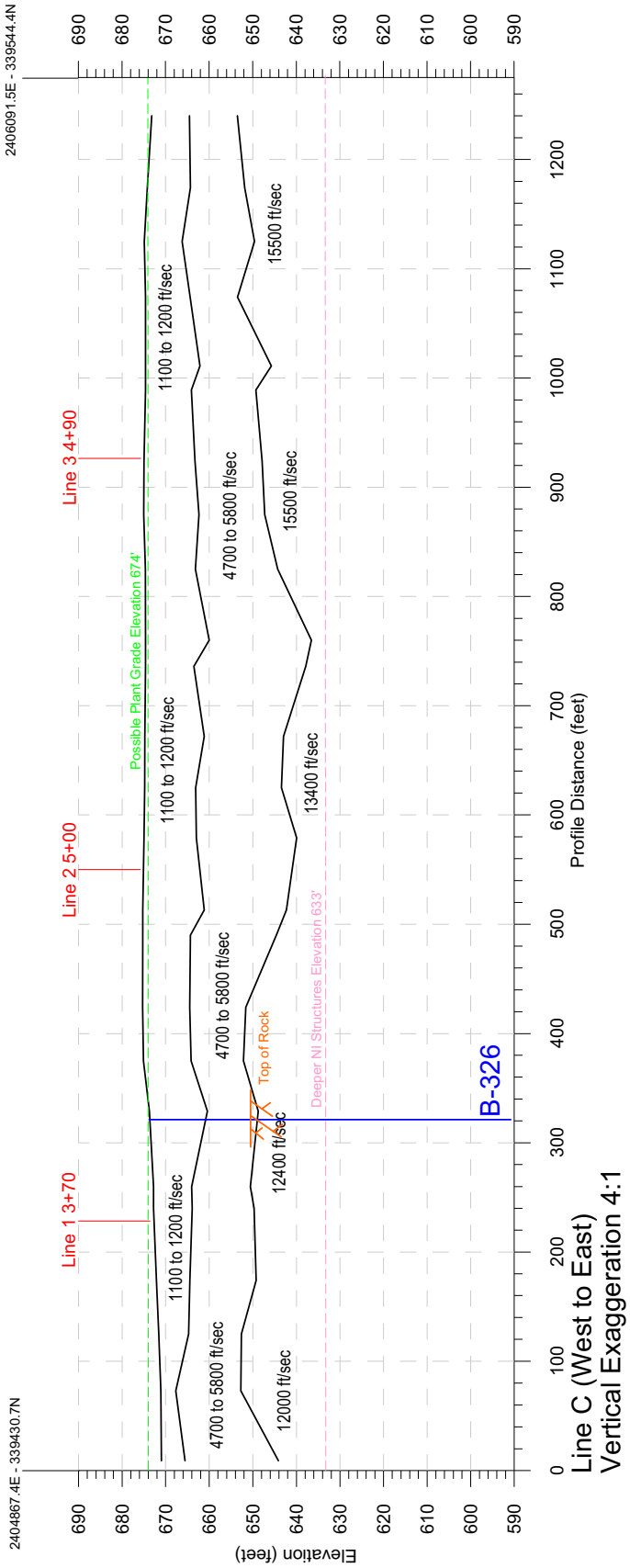
Figure 2.5-160—{Refraction Survey Page 6 of 7}



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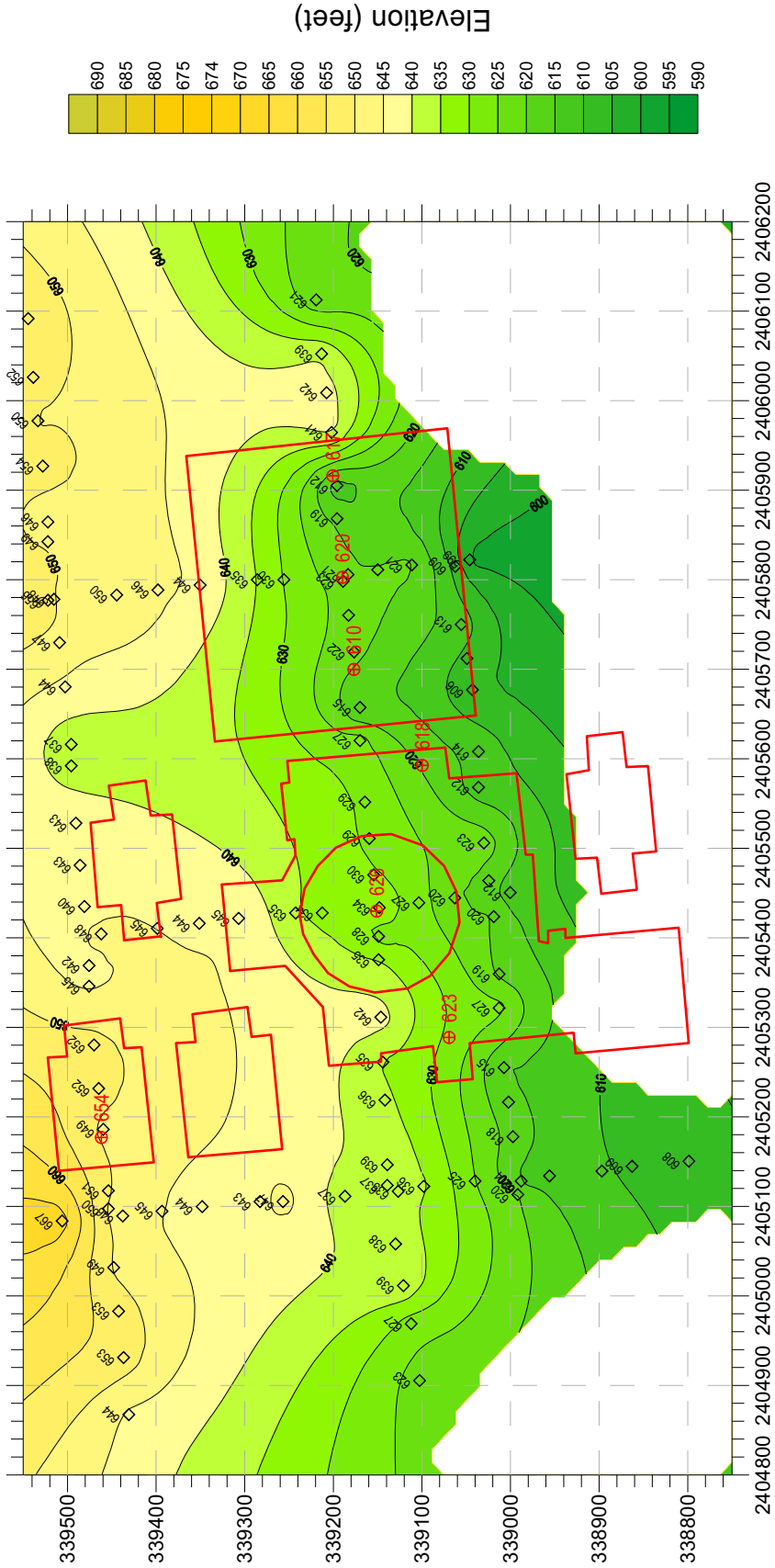

Figure 2.5-161—{Refraction Survey Page 7 of 7}

Horizontal Scale = Distance [ft]
Top of Bedrock (Vp > 14000 fps)

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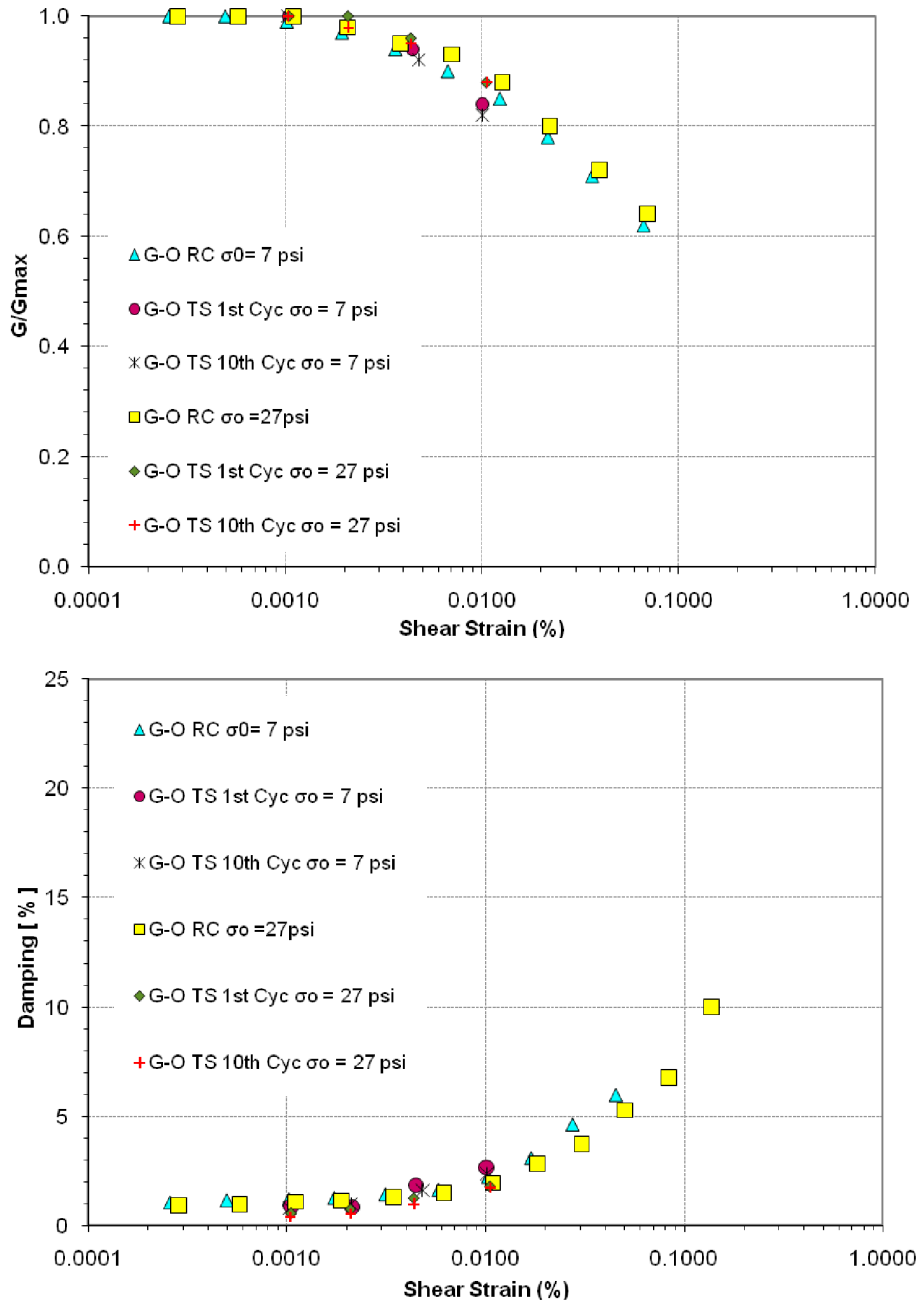
Figure 2.5-162—{Resonant Column Test A B331-ST-2}



G-O: Glacial Overburden
RC: Resonant Column
TS: Torsional Shear

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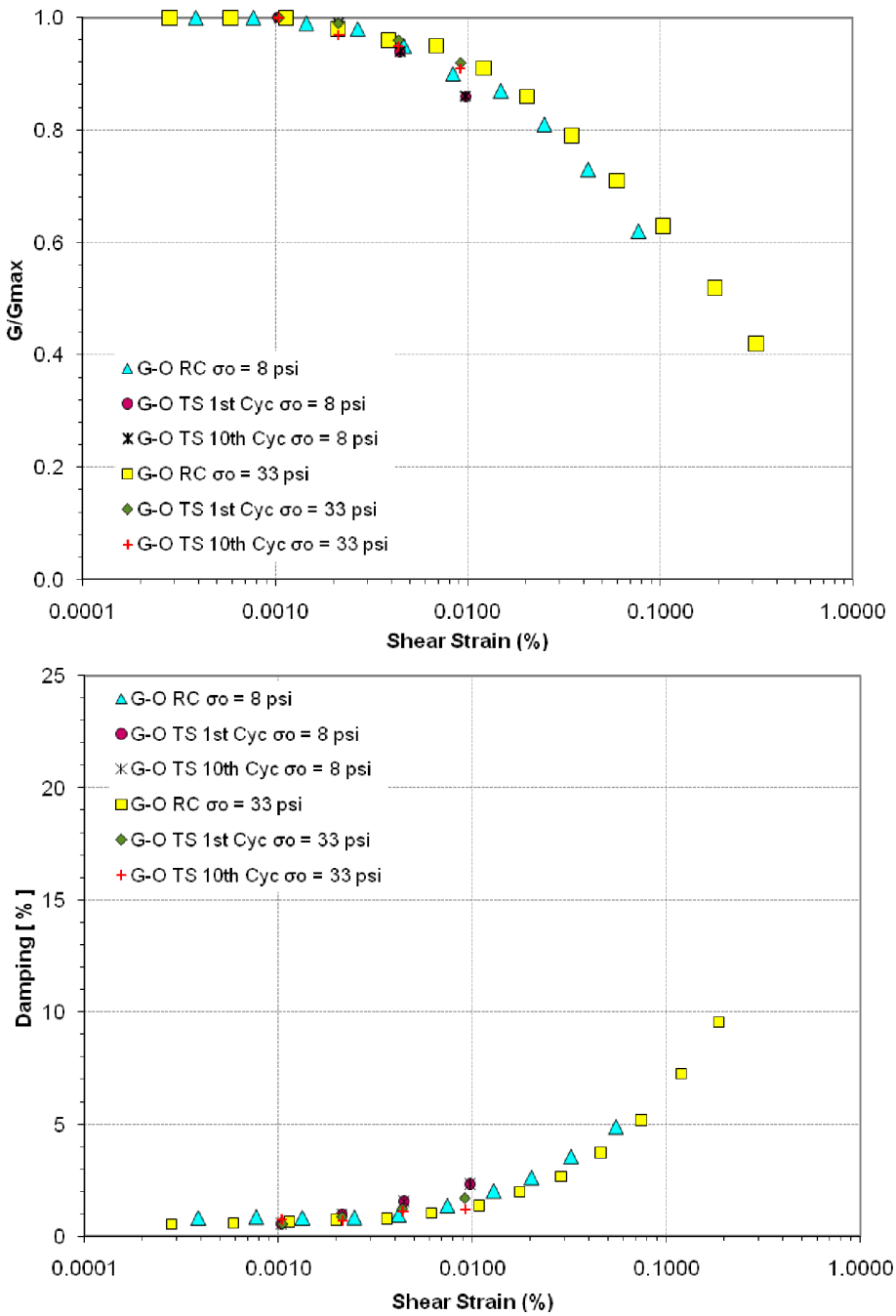
Figure 2.5-163—{Resonant Column Test A B310-U3}



G-O: Glacial Overburden
RC: Resonant Column
TS: Torsional Shear

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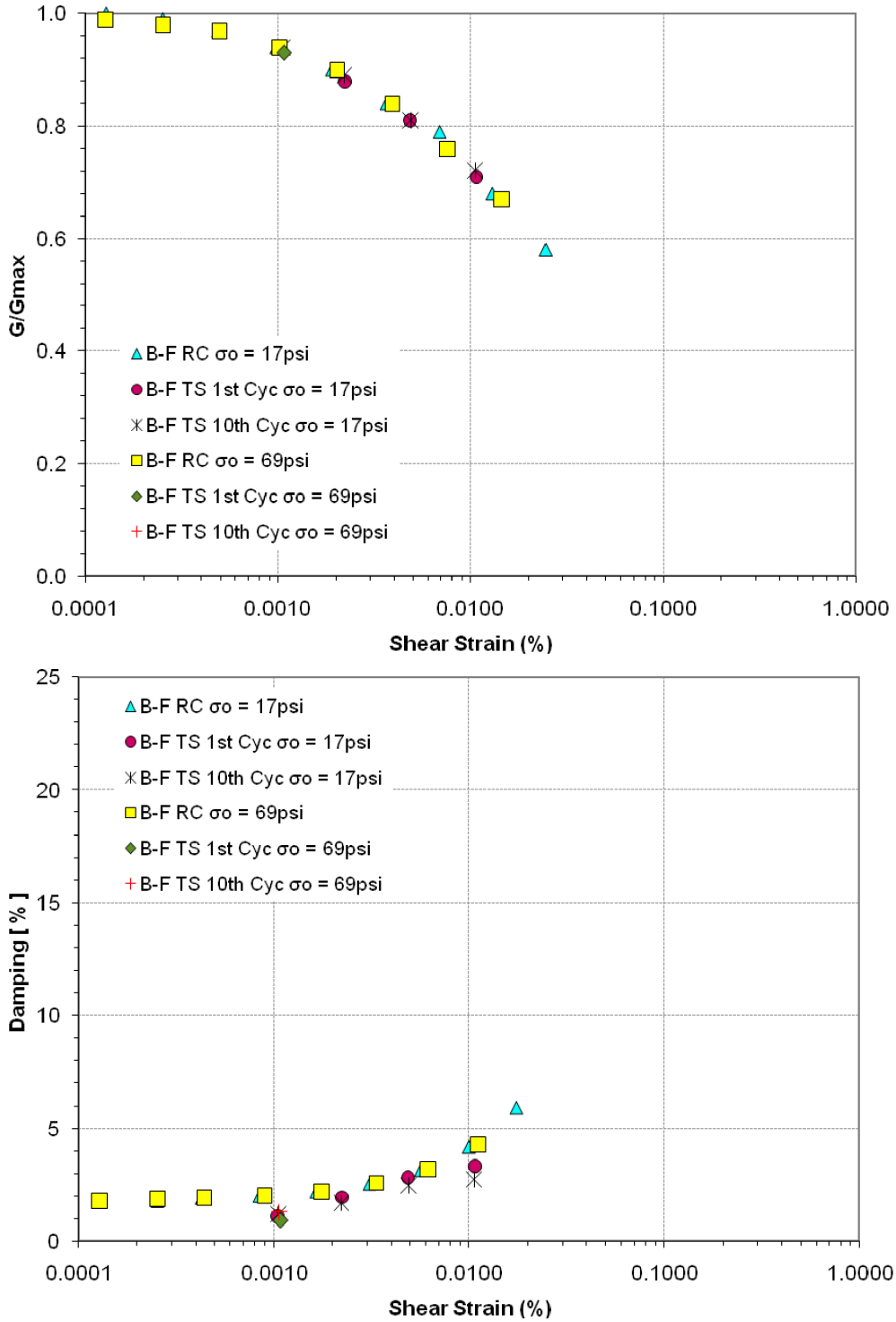
Figure 2.5-164—{Resonant Column Test Pit Face}



B-F: Back Fill
RC: Resonant Column
TS: Torsional Shear

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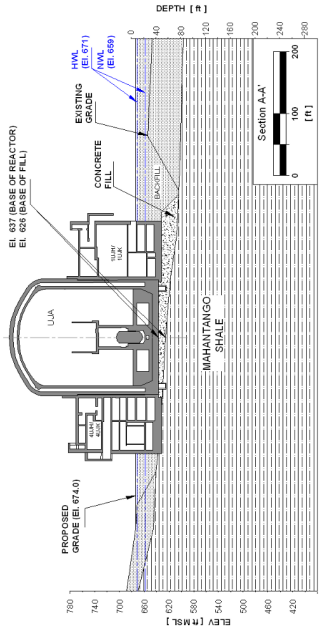
Figure 2.5-165—{NI Soil Velocity Profile}



NI - Best Estimate		D_{top} [ft]	γ [pcf]	V_s [fps]	V_p [fps]	ν	G_{max} [ksf]	E_{max} [ksf]	DS_G [%]
1	Engineered Fill 1	36	140	600	1250	0.35	1570	4240	1.00
2	Engineered Fill 2	26	140	800	1670	0.35	2780	7510	1.00
3	Engineered Fill 3	-16	140	1000	2100	0.35	4350	11770	1.00
4	Concrete	0	150	7240	11820	0.20	244180	586920	0.80
5	Mahantango Formation Layer 1	10	170	6800	12900	0.31	244120	638430	0.80
6	Mahantango Formation Layer 2	30	170	7150	15300	0.36	269900	734290	0.80
7	Mahantango Formation Layer 3	70	170	7600	16100	0.36	304940	827390	0.70
8	Mahantango Formation Layer 4	125	170	8500	16100	0.31	361440	996910	0.70
9	Mahantango Formation Layer 5	190	170	8950	16750	0.30	422900	1099710	0.70
10	Mahantango Formation Layer 6	240	170	9600	16850	0.26	466560	1225840	0.70

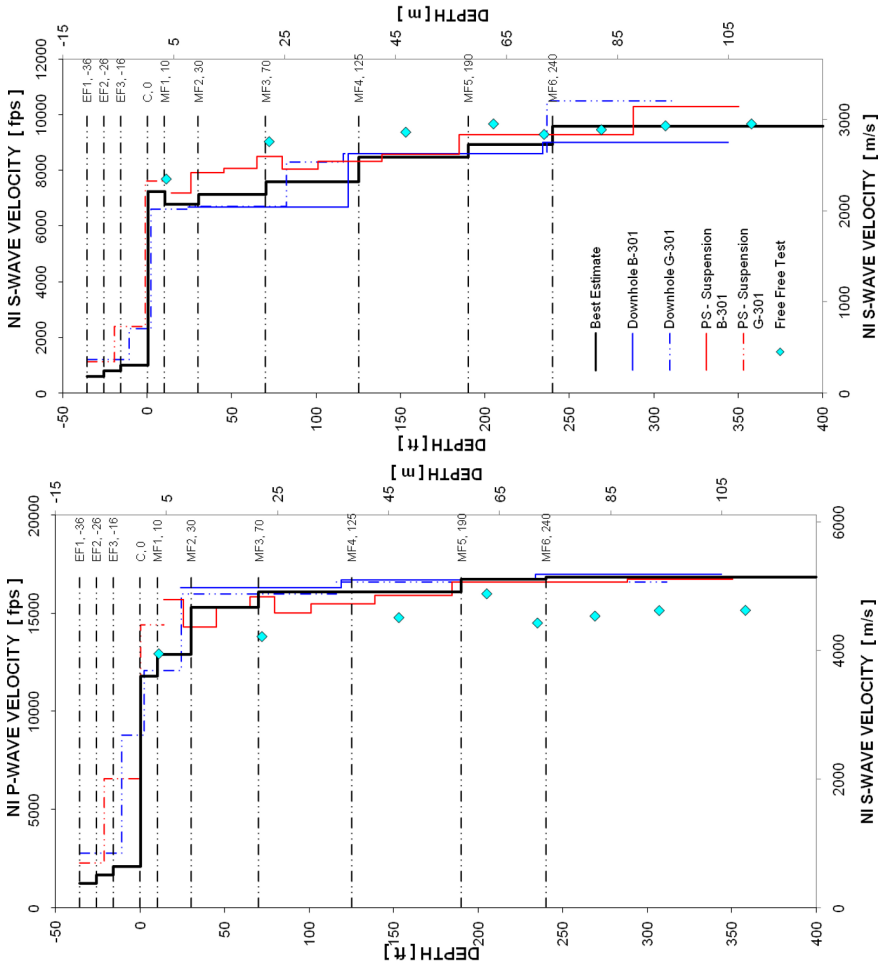


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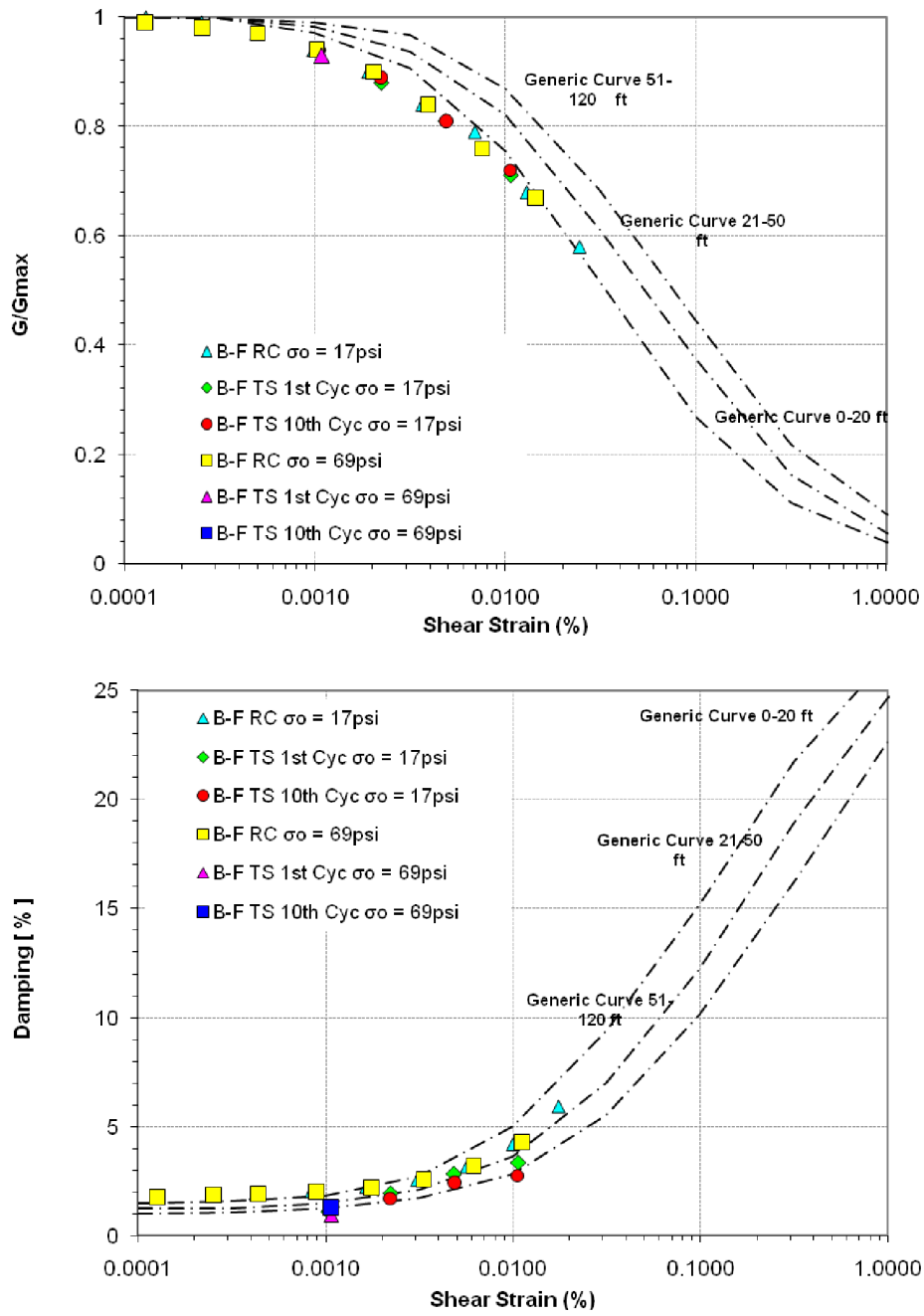
Figure 2.5-166—{Recommended Strain Dependent Properties}



B-F: Back Fill
RC: Resonant Column
TS: Torsional Shear

Generic curves: EPRI

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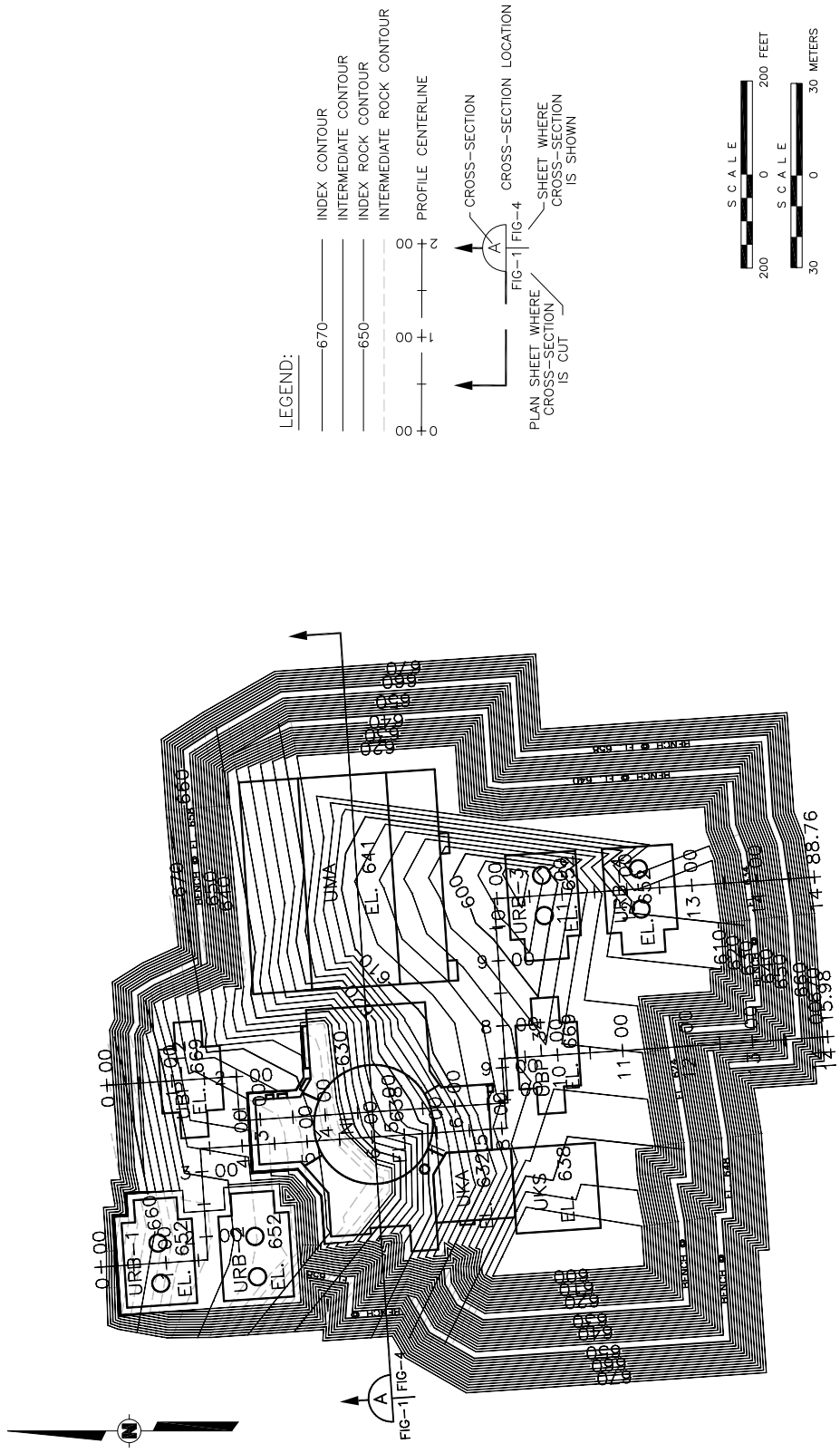
Figure 2.5-167—{Excavation Plan}



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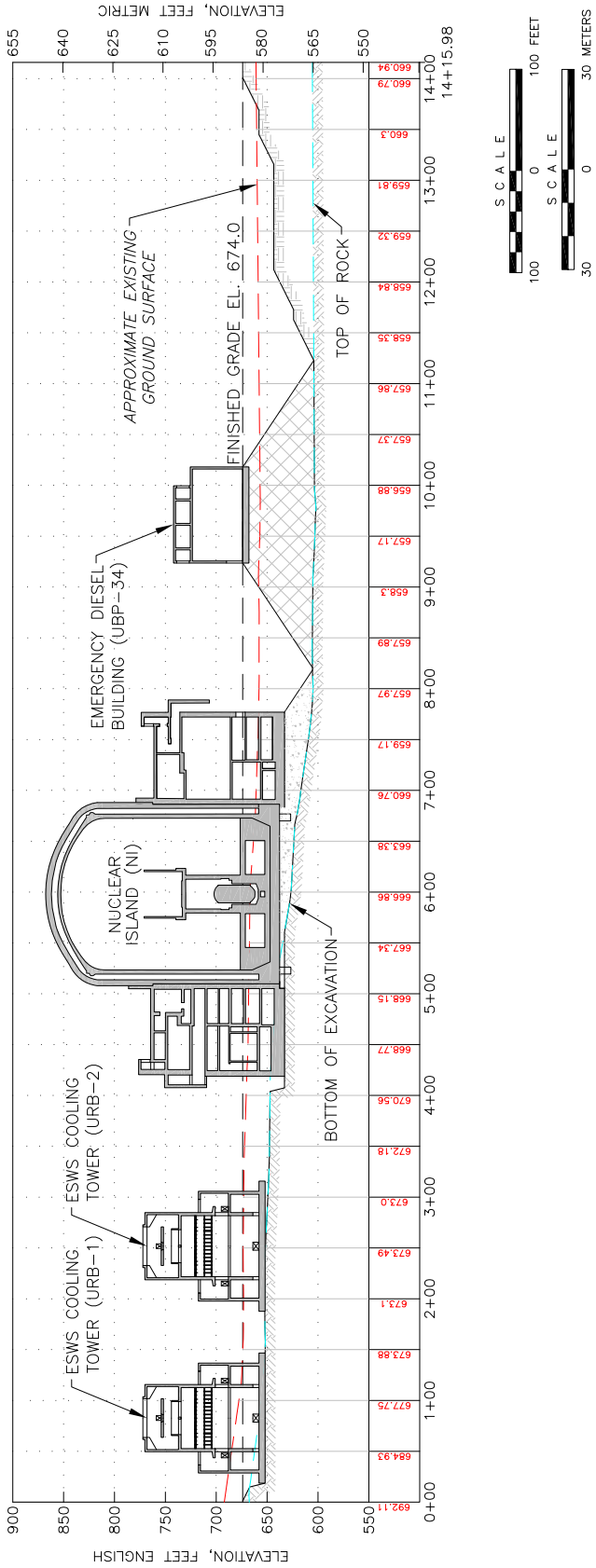

07-3891-B20(M)

Figure 2.5-168—{Excavation West Profile}

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Figure 2.5-169—{Excavation East Profile}

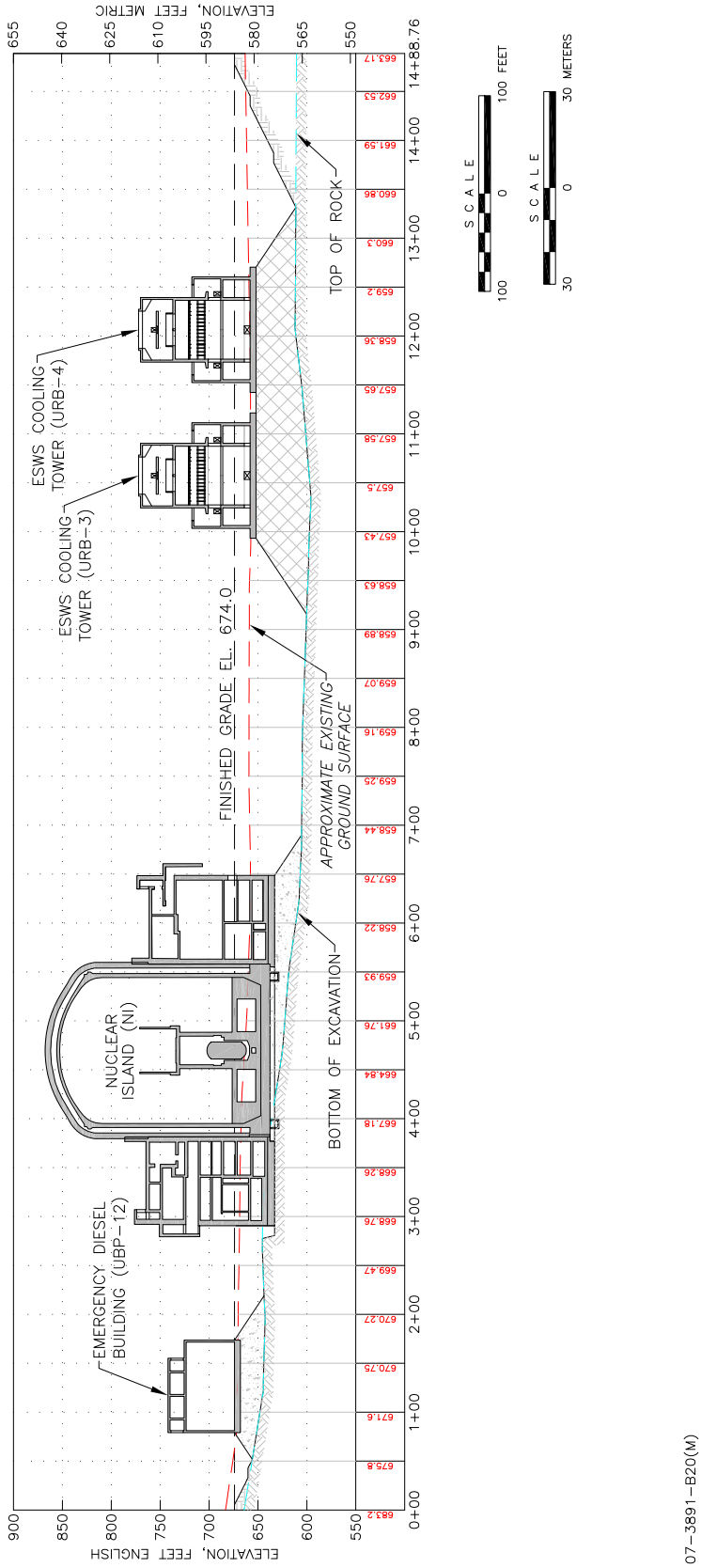

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Figure 2.5-170—{Excavation Cross Section}

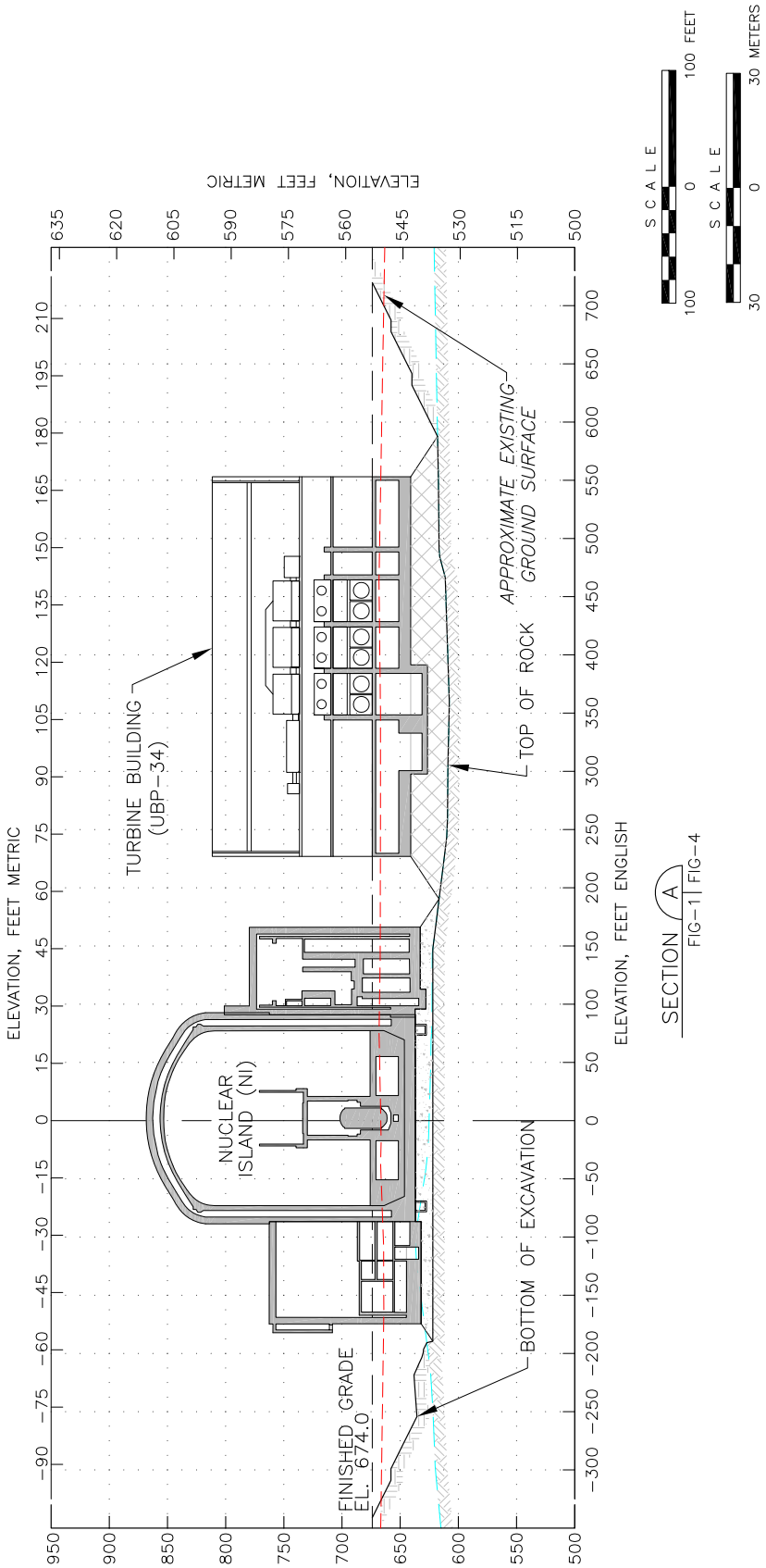

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Figure 2.5-171—{Liquefaction Analysis, Vs Method}

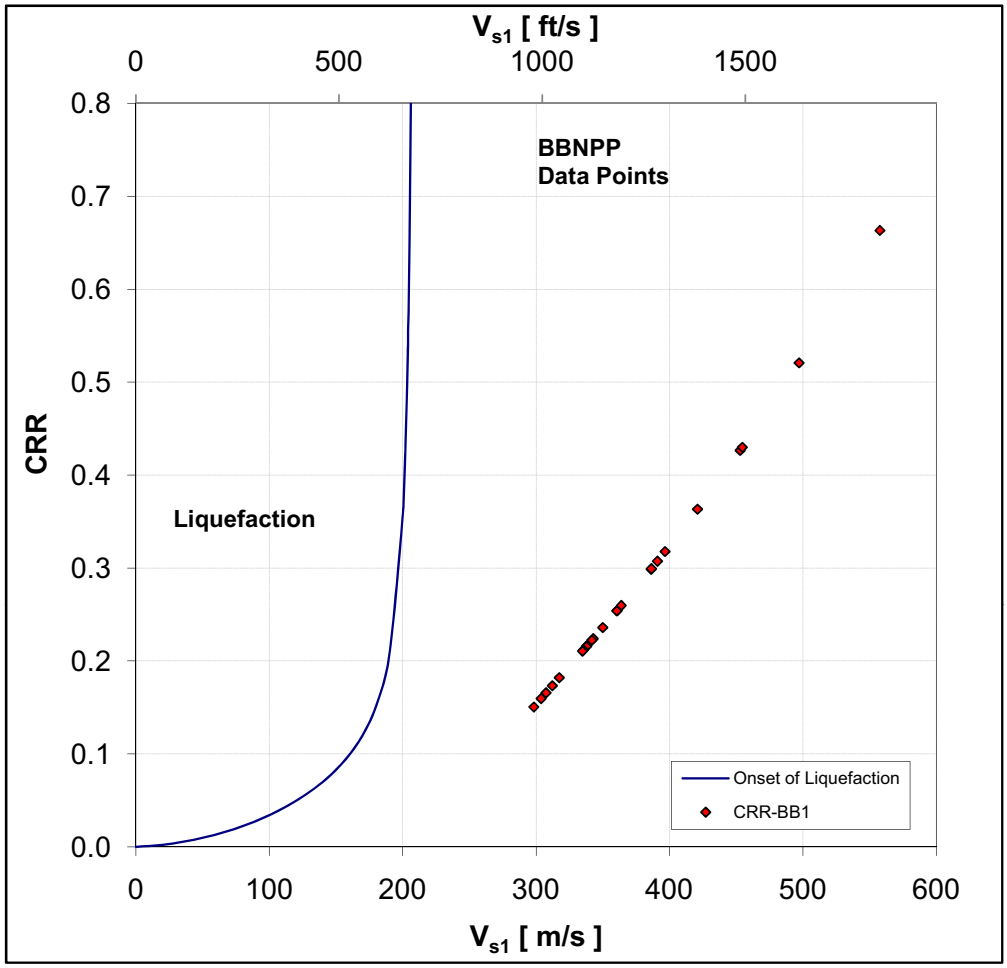

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Figure 2.5-172—{Liquefacation Analysis, SPT Method}

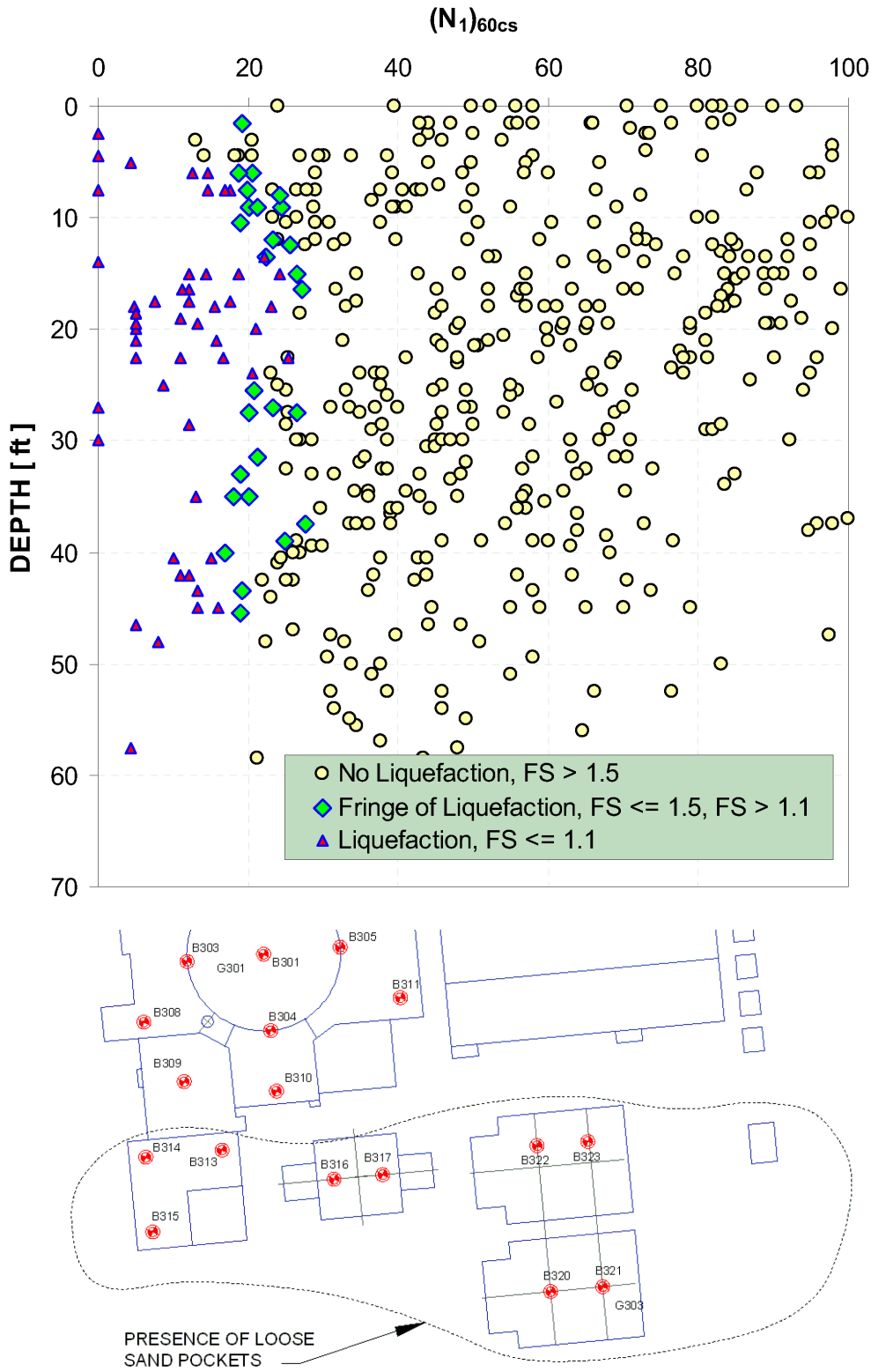

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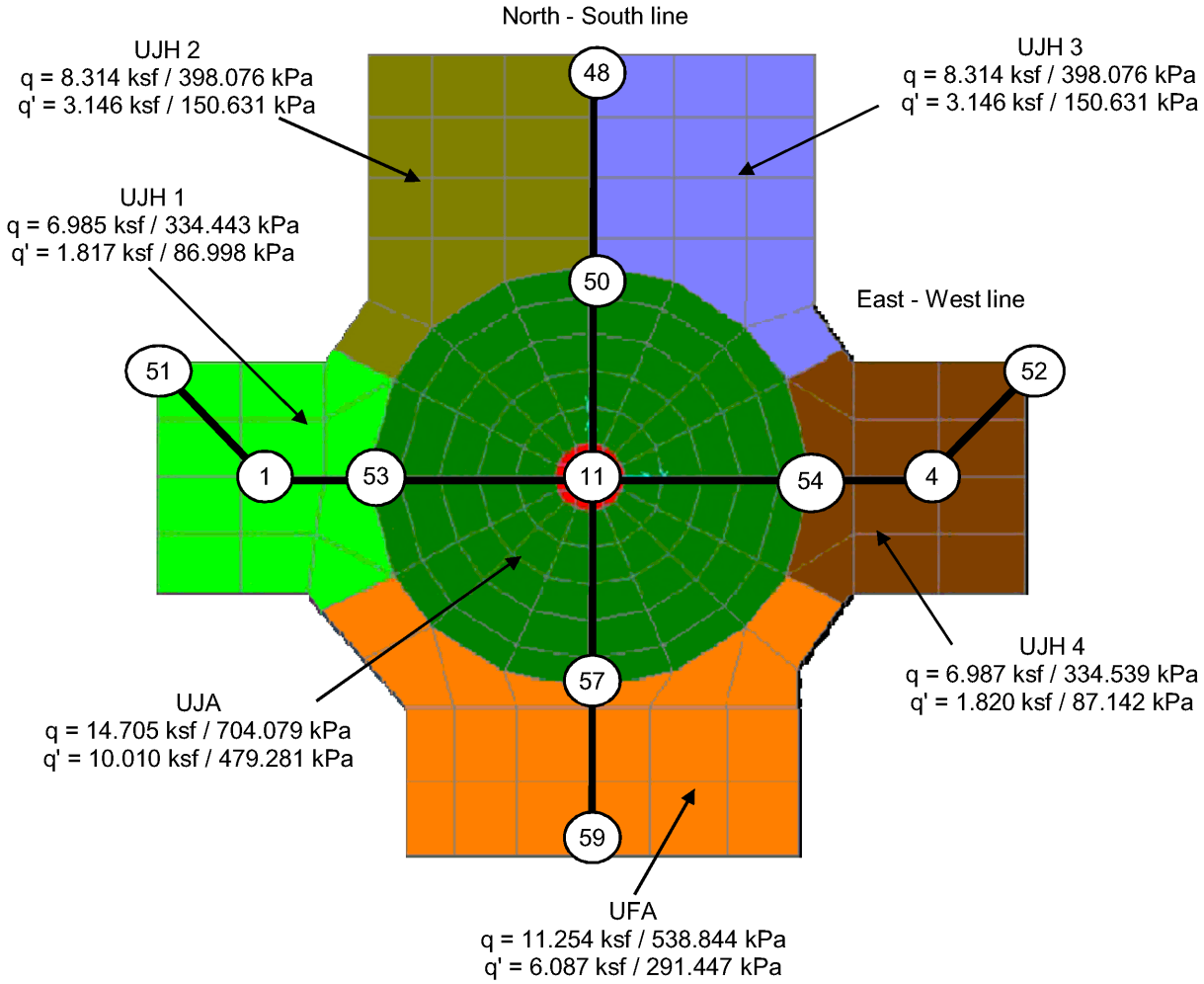
Figure 2.5-173—{NI Settlement Analysis Service Loads}



LEGENED:

UJA:	Reactor building
1-4 UJH:	Safeguard building
UFA:	Fuel building

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Figure 2.5-174—{NI Settlement Analysis Results}

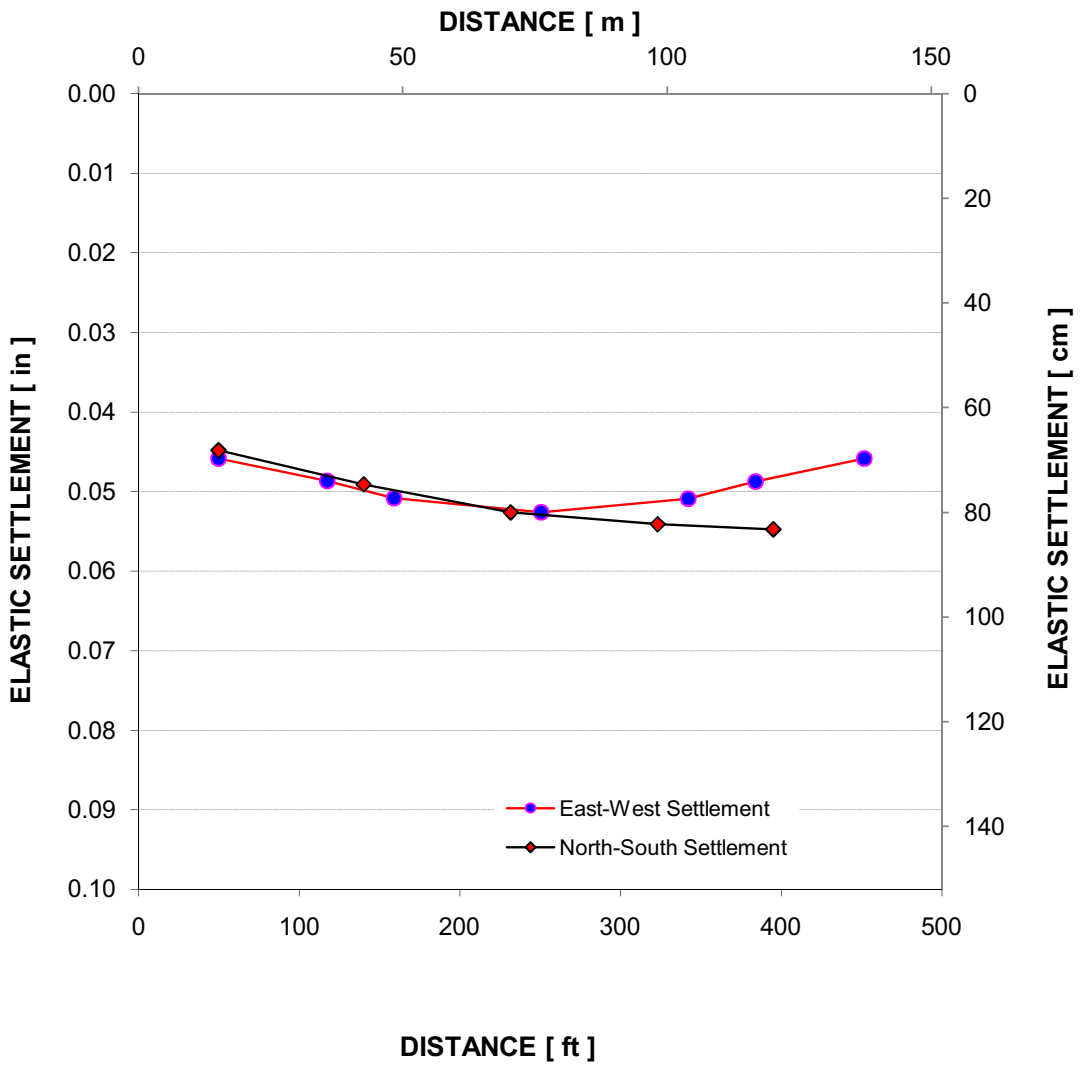

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Figure 2.5-175—{Examples of Earth Pressure Diagrams}

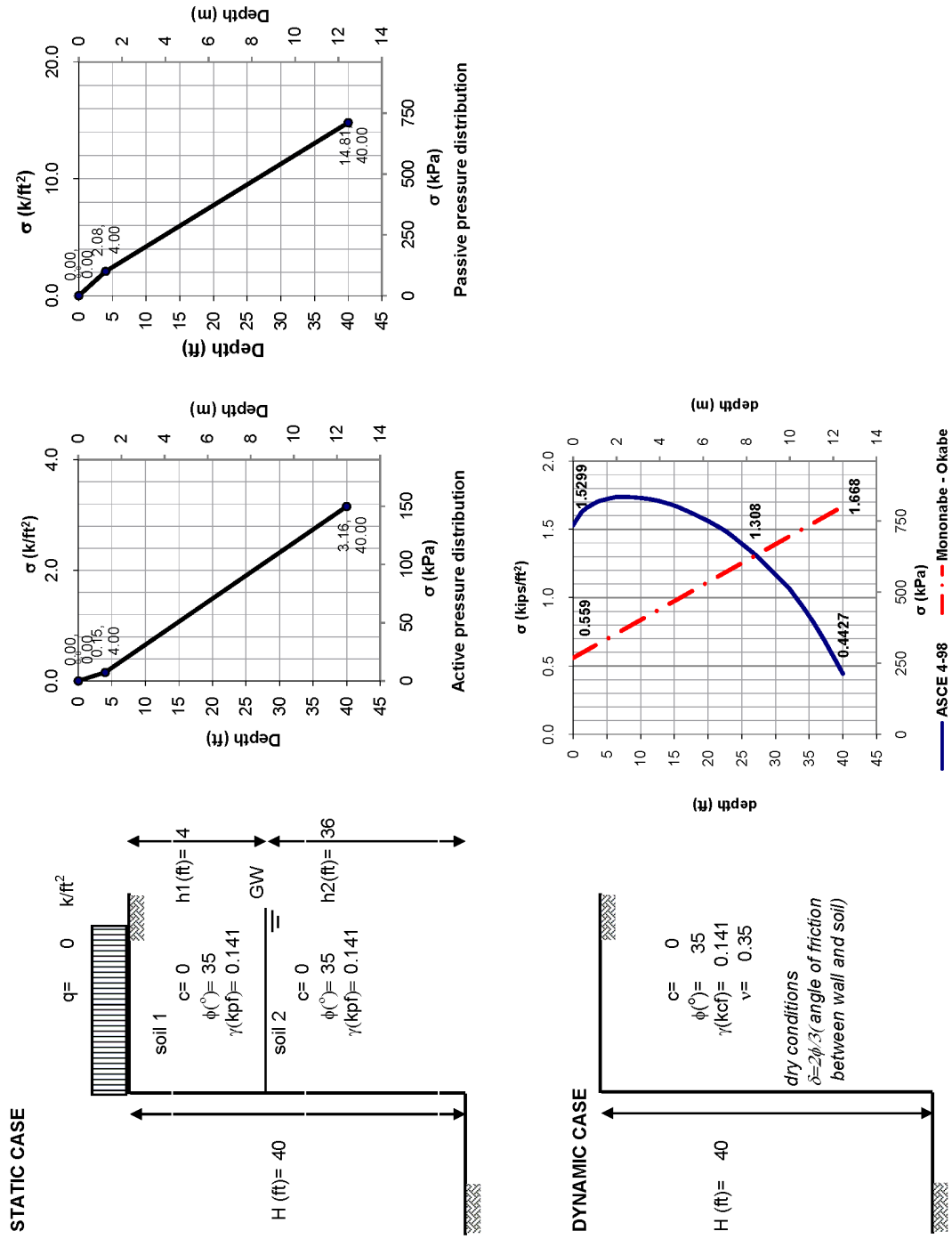

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Figure 2.5-176—{ESWEMS and Cross Sections}

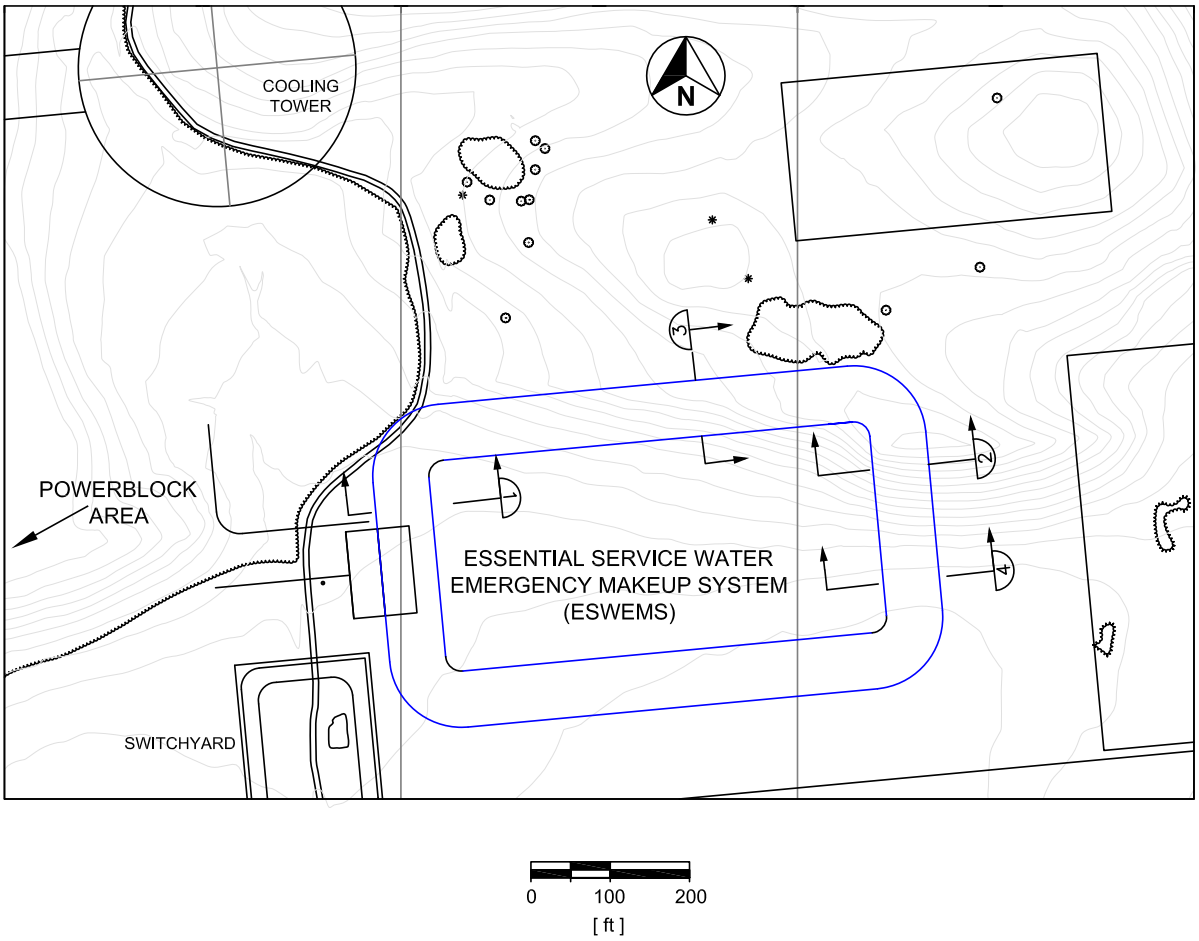

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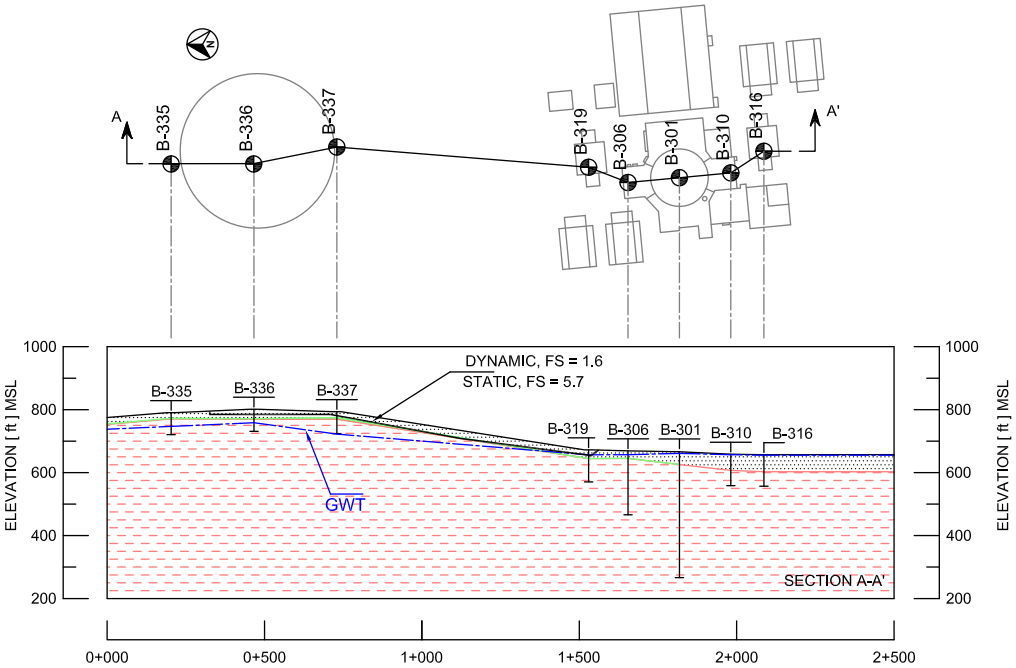
Figure 2.5-177—{North Side Natural Slope}



OVERBURDEN

WEATHERED ROCK

ROCK

0 200 400
[ft]

BORING	SURFACE [ft] MSL	DEPTH TO ROCK [ft]	GW DEPTH [ft]	BORING DEPTH [ft]
B-335	793.7	19.0	43.7	70.0
B-336	801.3	30.0	42.8	70.0
B-337	790.6	19.0	71.3	99.5
B-319	672.2	28.2	15.6	101.7
B-306	669.1	20.0	10.5	203.0
B-301	666.4	41.0	5.2	400.0
B-310	658.5	51.0	1.5	100.0
B-316	656.8	54.0	1.4	100.0

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Figure 2.5-178—{Permanent Slope Cross Sections}

PERMANENT SLOPES

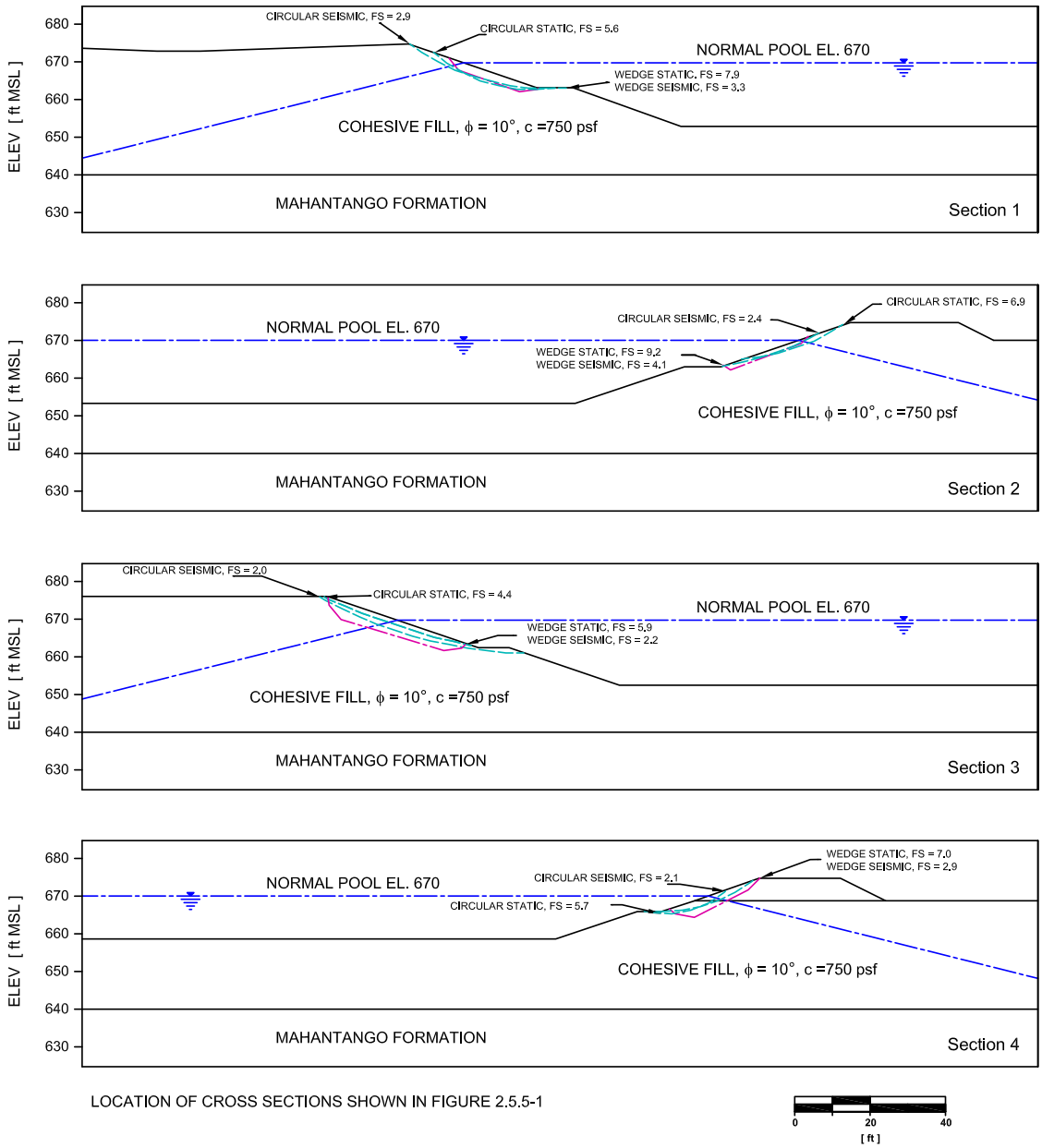

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Figure 2.5-179—{Temporary Slopes Cross Sections}

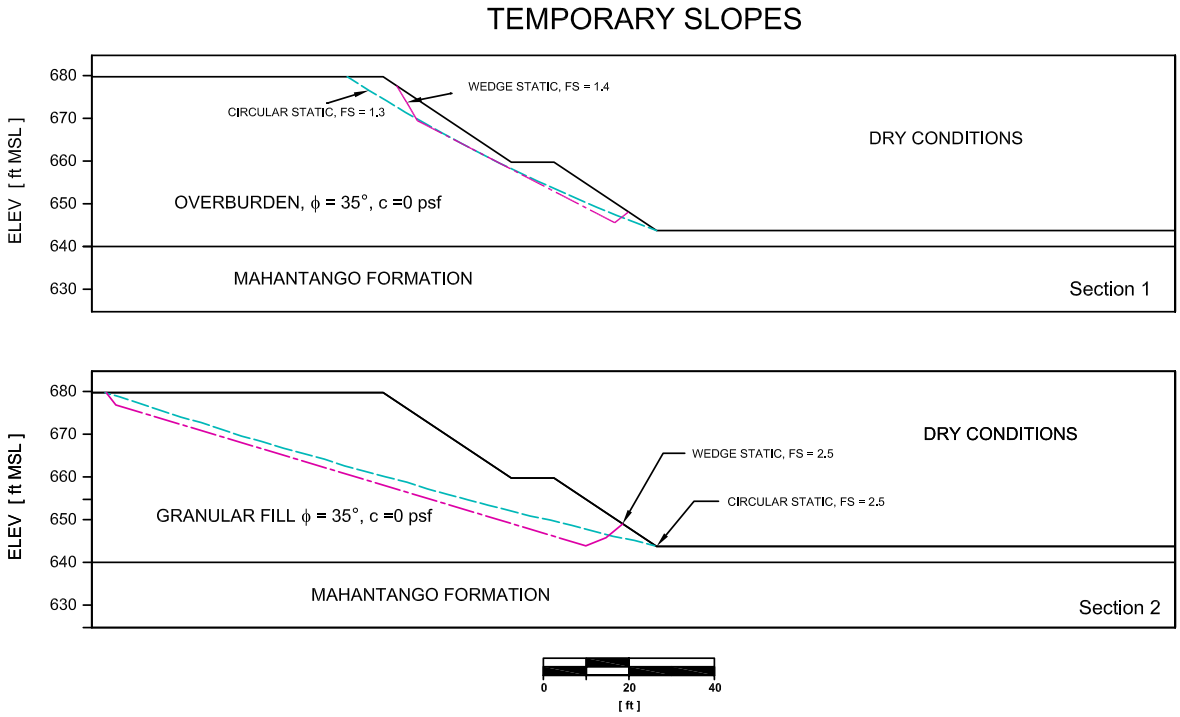

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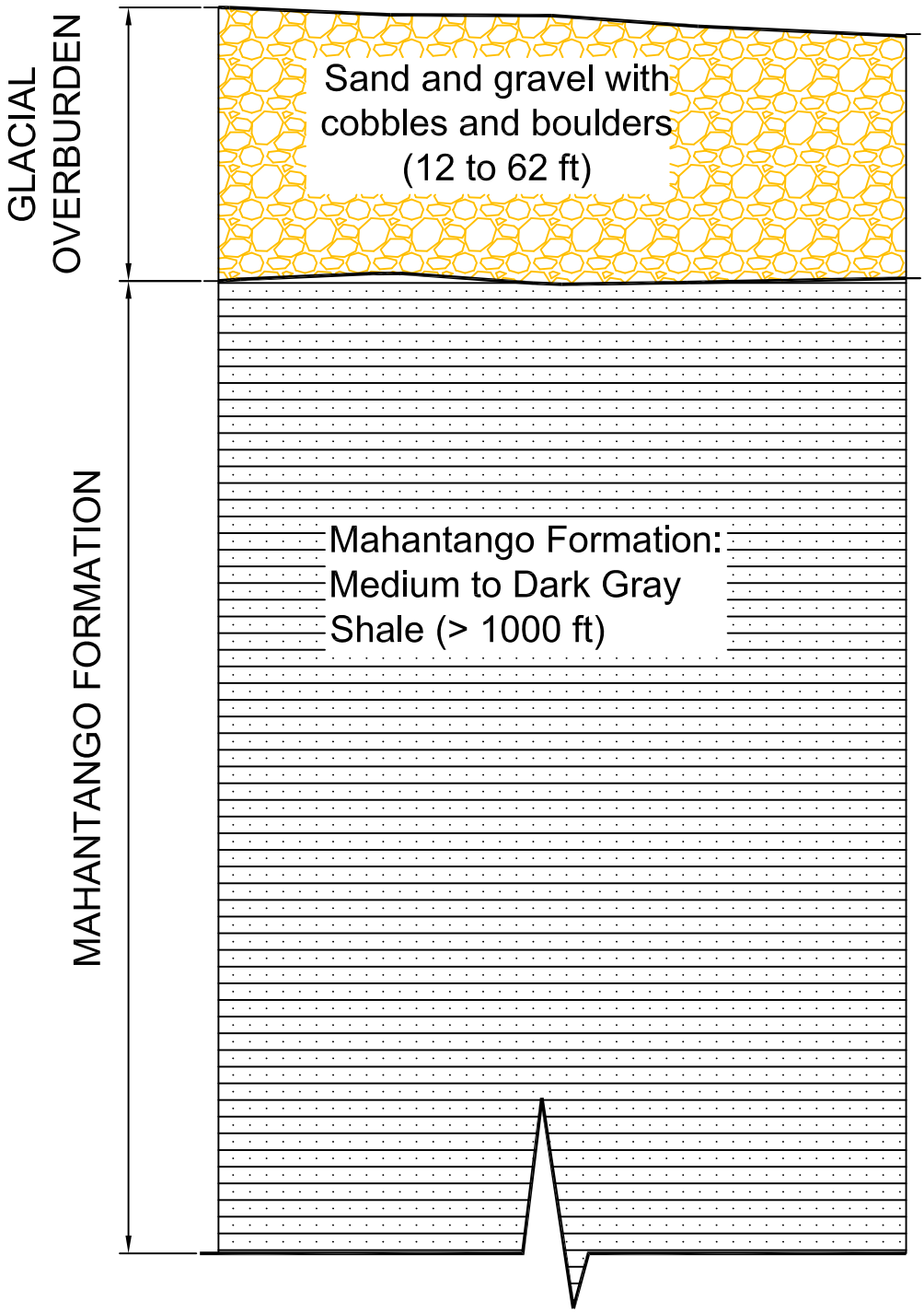
Figure 2.5-180—{Generic Soil Profile}



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