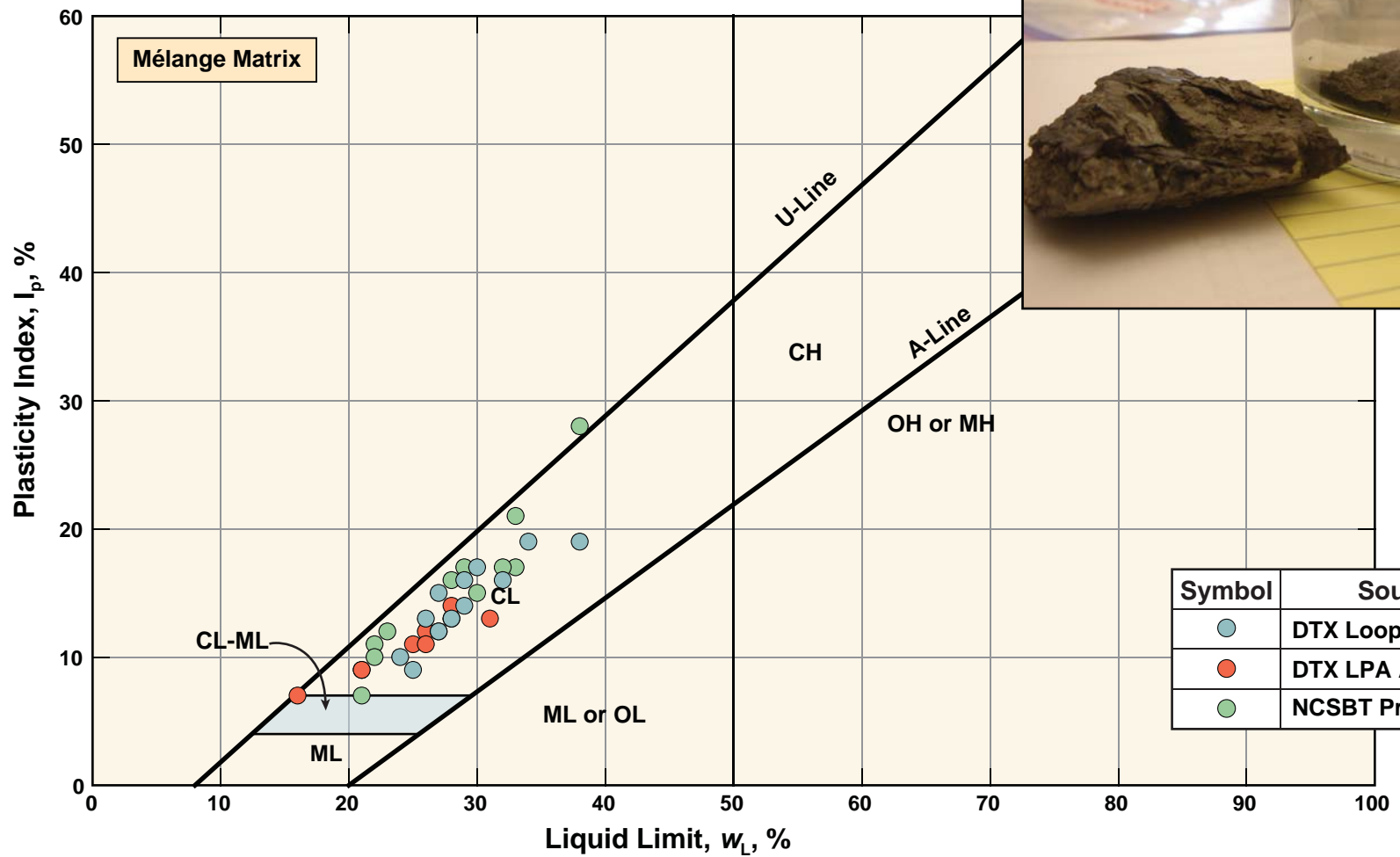
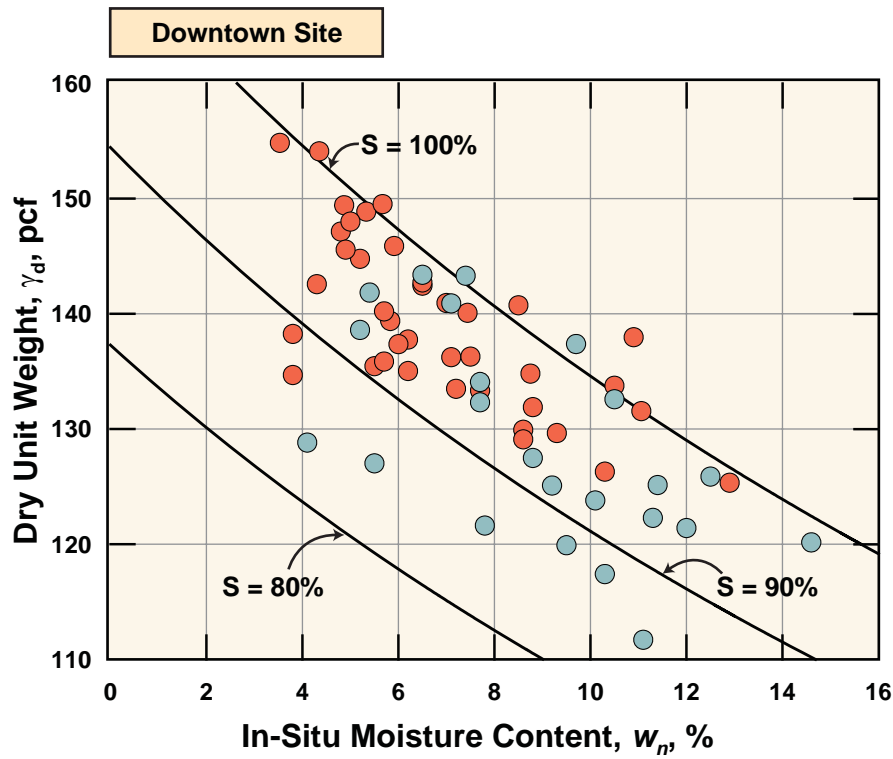


Mélange Matrix

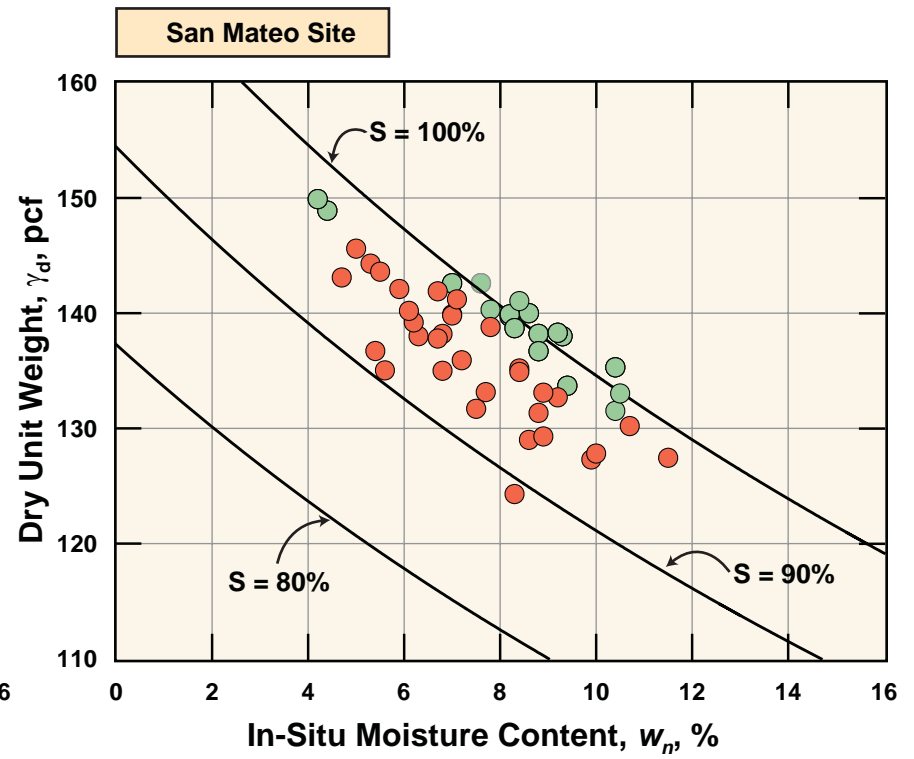


Symbol	Source
● (Blue)	DTX Loop Alignment
● (Red)	DTX LPA Alignment
● (Green)	NCSBT Project

FIG_123A: Plasticity Chart for Melange Matrix

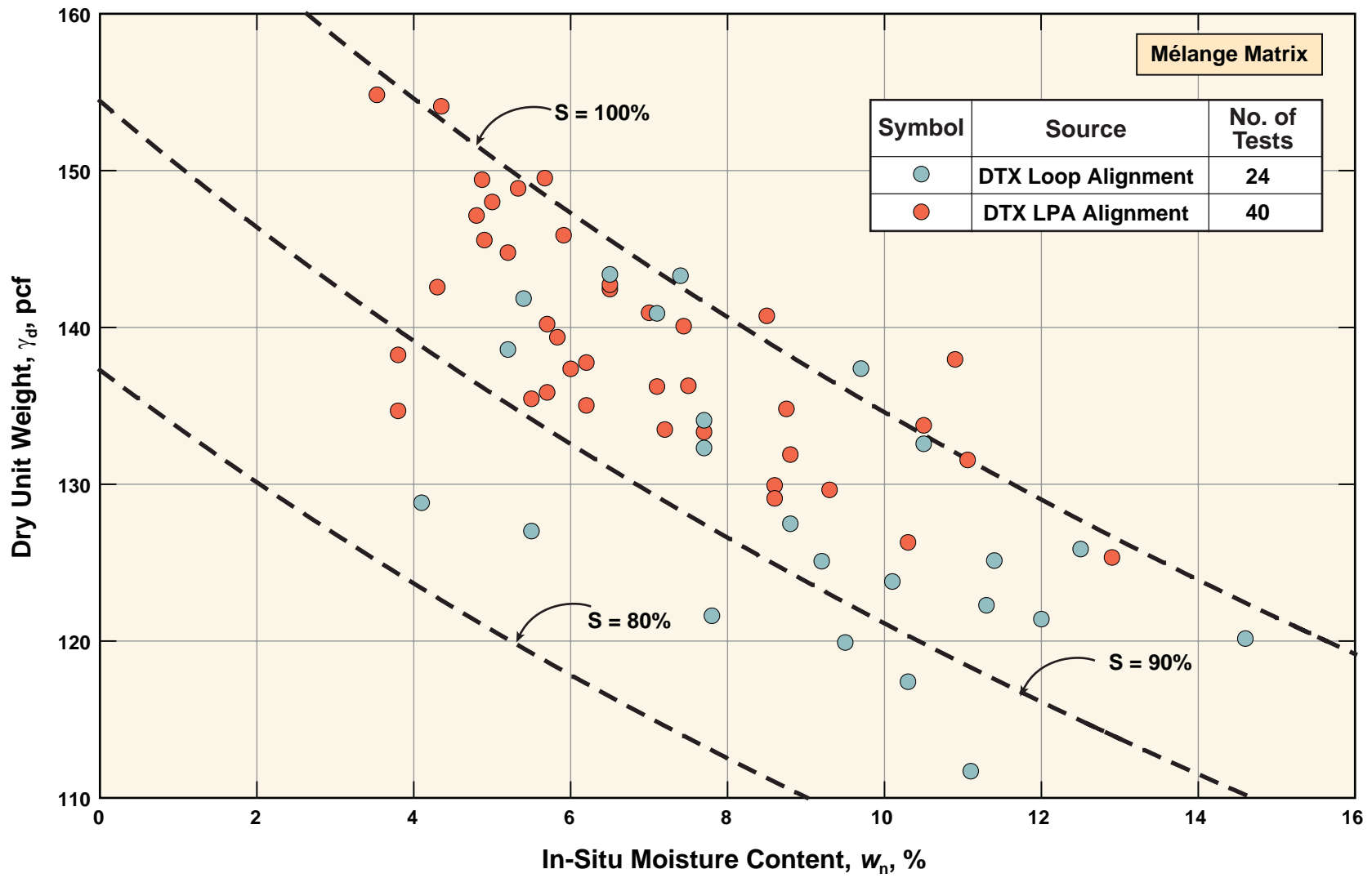


Symbol	Source	No. of Tests
●	DTX Loop Alignment	24
●	DTX LPA Alignment	40

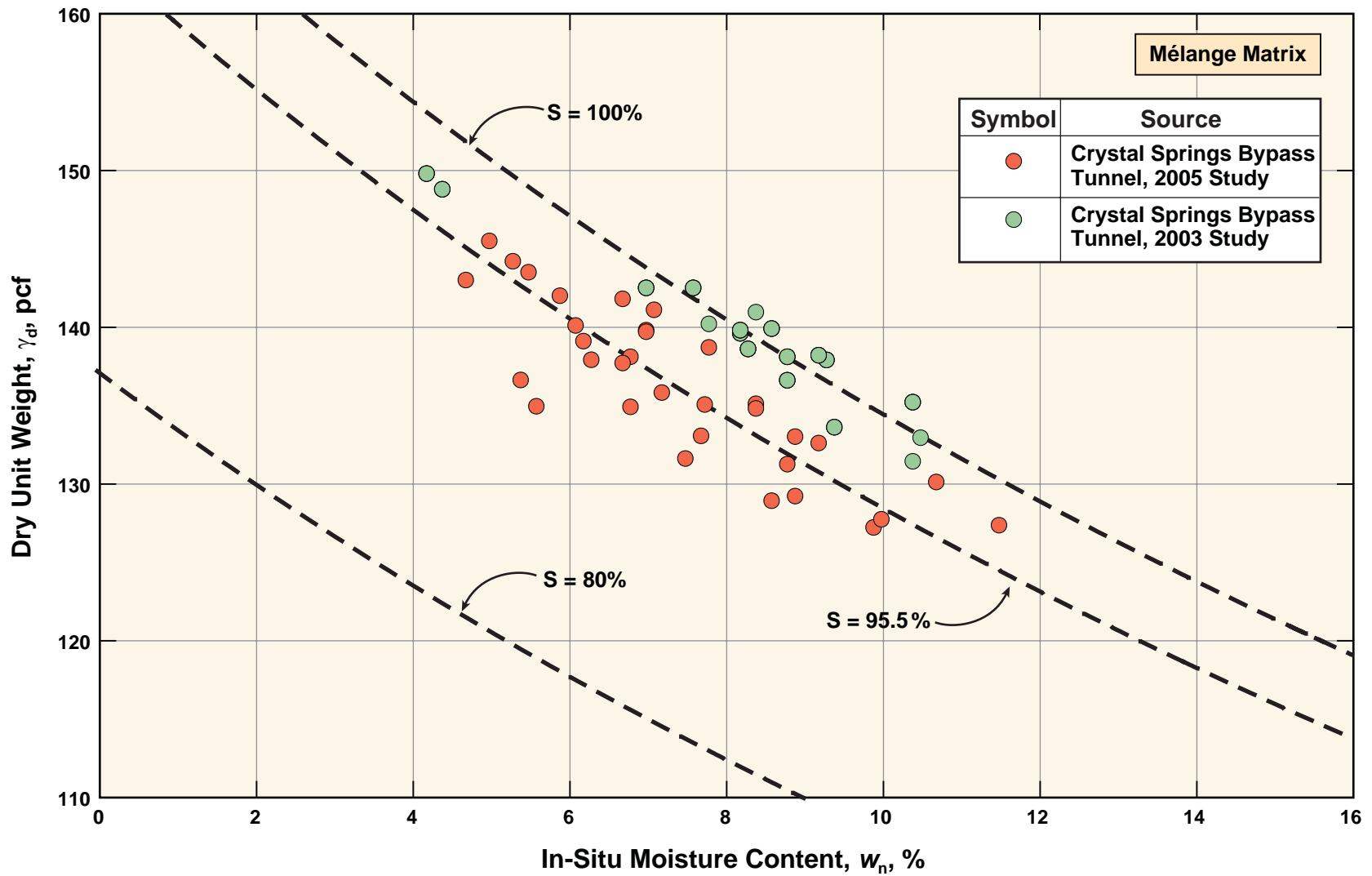


Symbol	Source
●	Crystal Springs Bypass Tunnel, 2005 Study
●	Crystal Springs Bypass Tunnel, 2003 Study

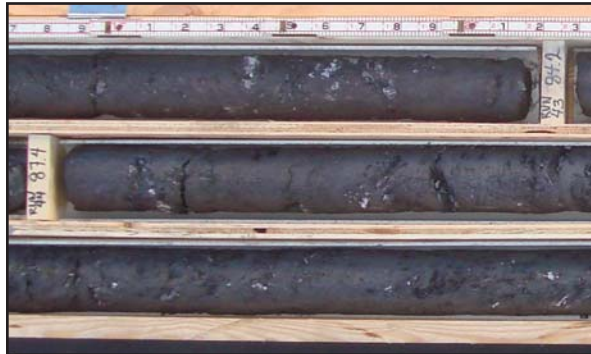
FIG_124A: Dry Unit Weight Versus Moisture Content of Mélange Matrix Downtown Site – Rincon Hill and San Mateo Site



FIG_124: Dry Unit Weight Versus Moisture Content of Mélange Matrix Downtown Site – Rincon Hill



FIG_125: Dry Density Versus Moisture Content of Mélange Matrix San Mateo Site



Picture 1:
Typical core of Mélangé Matrix, as recovered in the field.



Picture 2:
Close-up view of core recovered from borehole LB-03.



Picture 3:
View of core cross-section illustrating irregular contacts between different materials, and laminated structure.



Picture 4:
Close-up view illustrating contorted and laminated structure.



Picture 5:
Close-up view illustrating evidence of shear deformations and slickensides.



Picture 6:
Close-up view that shows the presence of slickensides.



FIG_127: Good Recoveries in Mélange

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FIG_128: Close-Up Views of Mélange Matrix Material

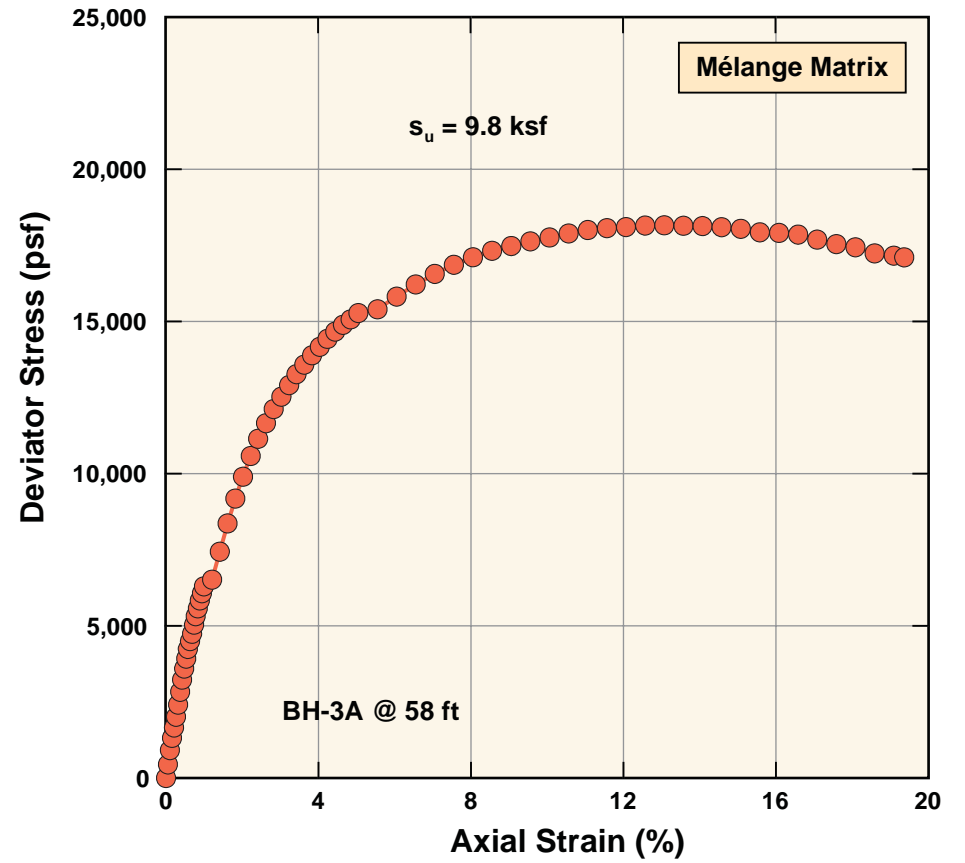
W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\06 MELANGE MATRIX (123-145)\FIG_128.ai



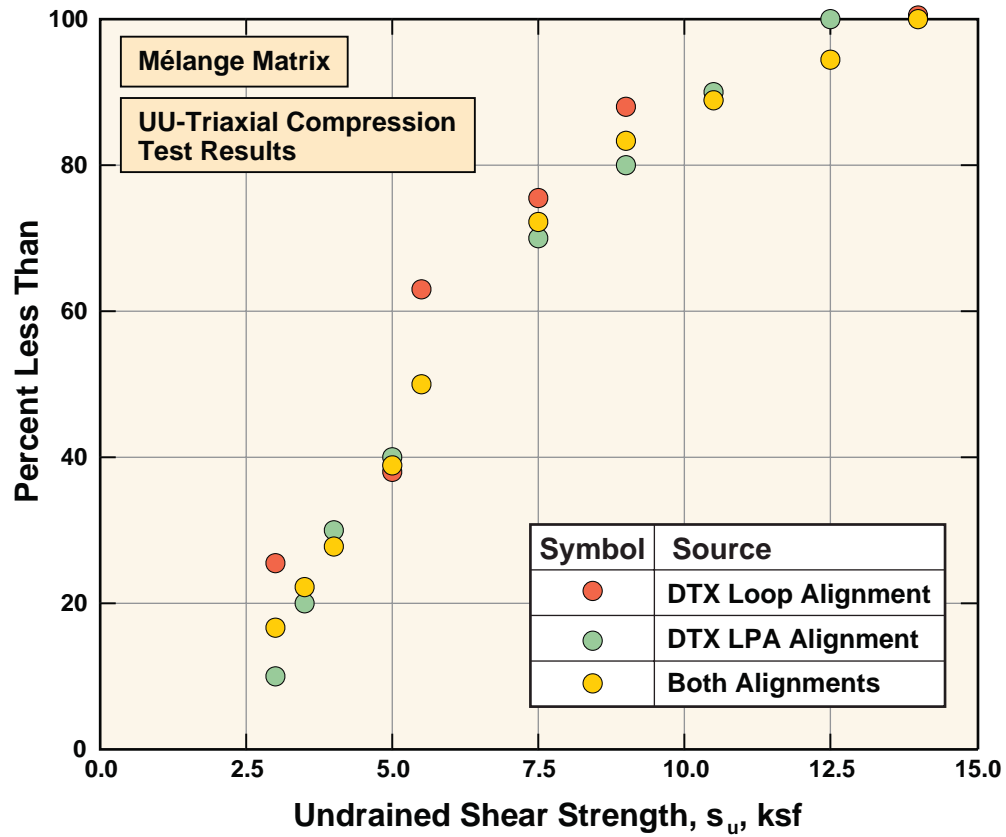
Prior to Testing



After Testing

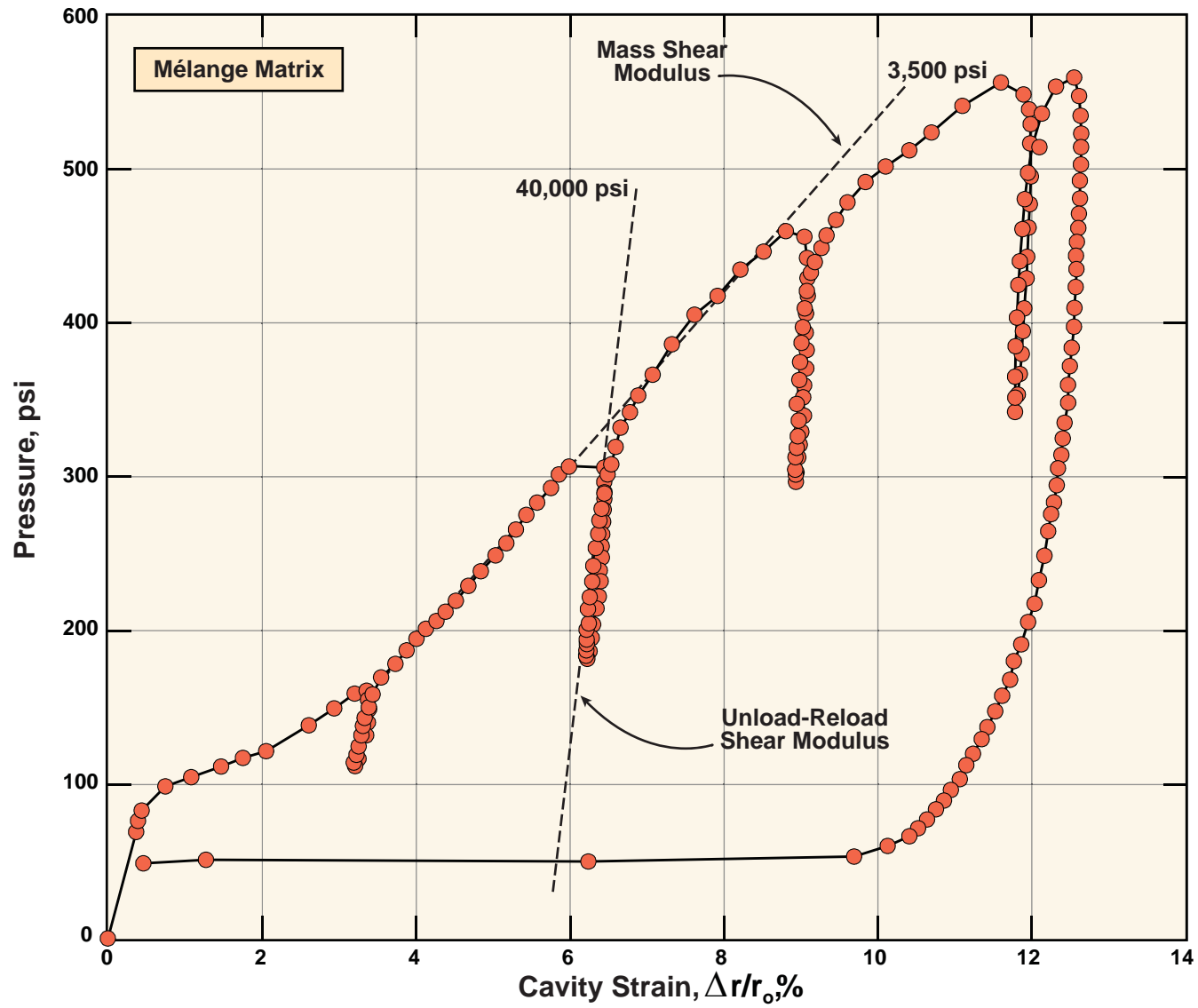


FIG_129: Results of TXUU Tests on "Undisturbed" Samples of Mélange

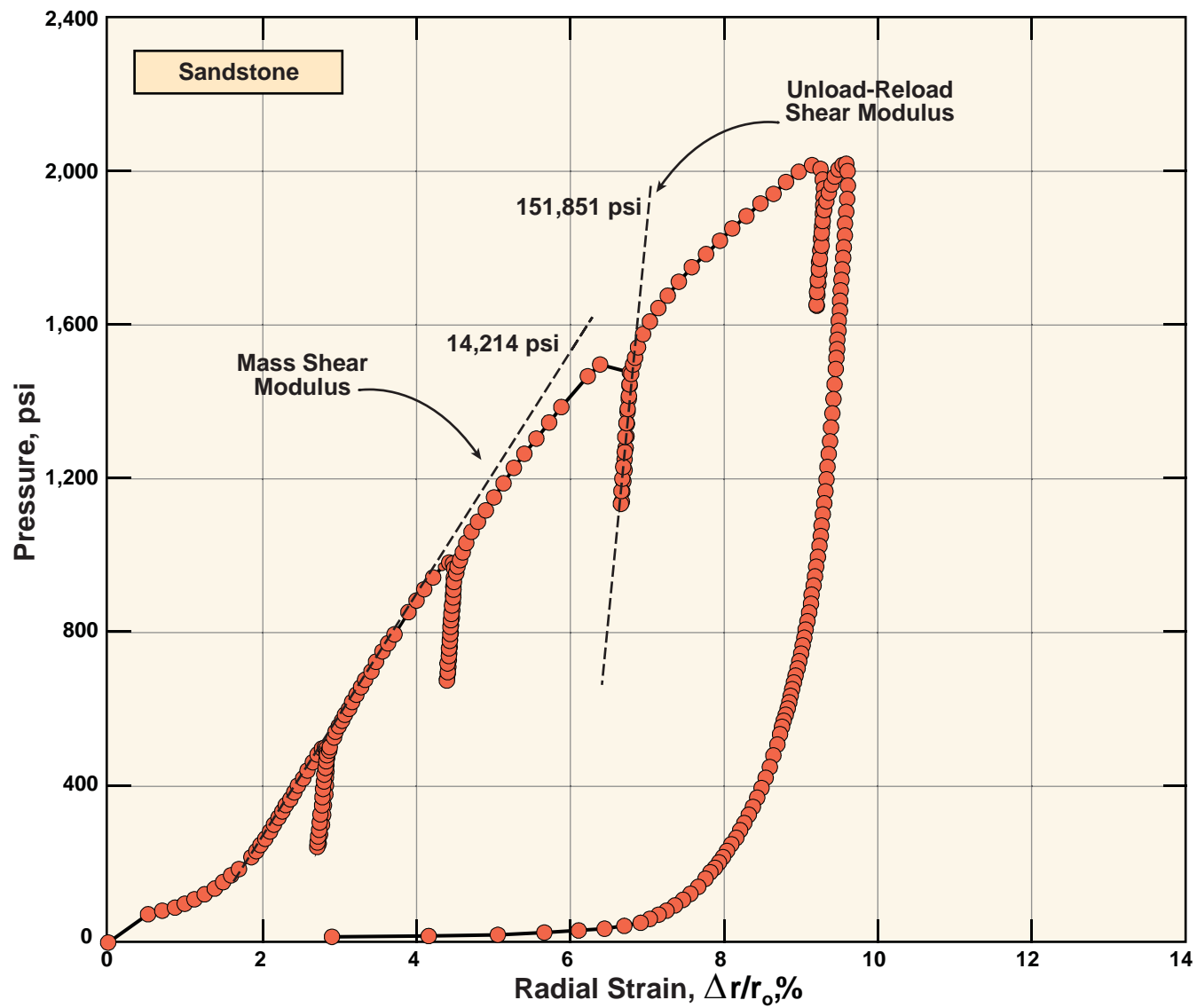


Statistical Results			
	DTX Loop Alignment	DTX LPA Alignment	Both Alignments
Symbol	● (Red)	● (Green)	● (Yellow)
Sample Size, N	8	10	18
Mean, μ (ksf)	6.1	6.7	6.5
Standard Deviation, σ (ksf)	3.8	3.1	3.4

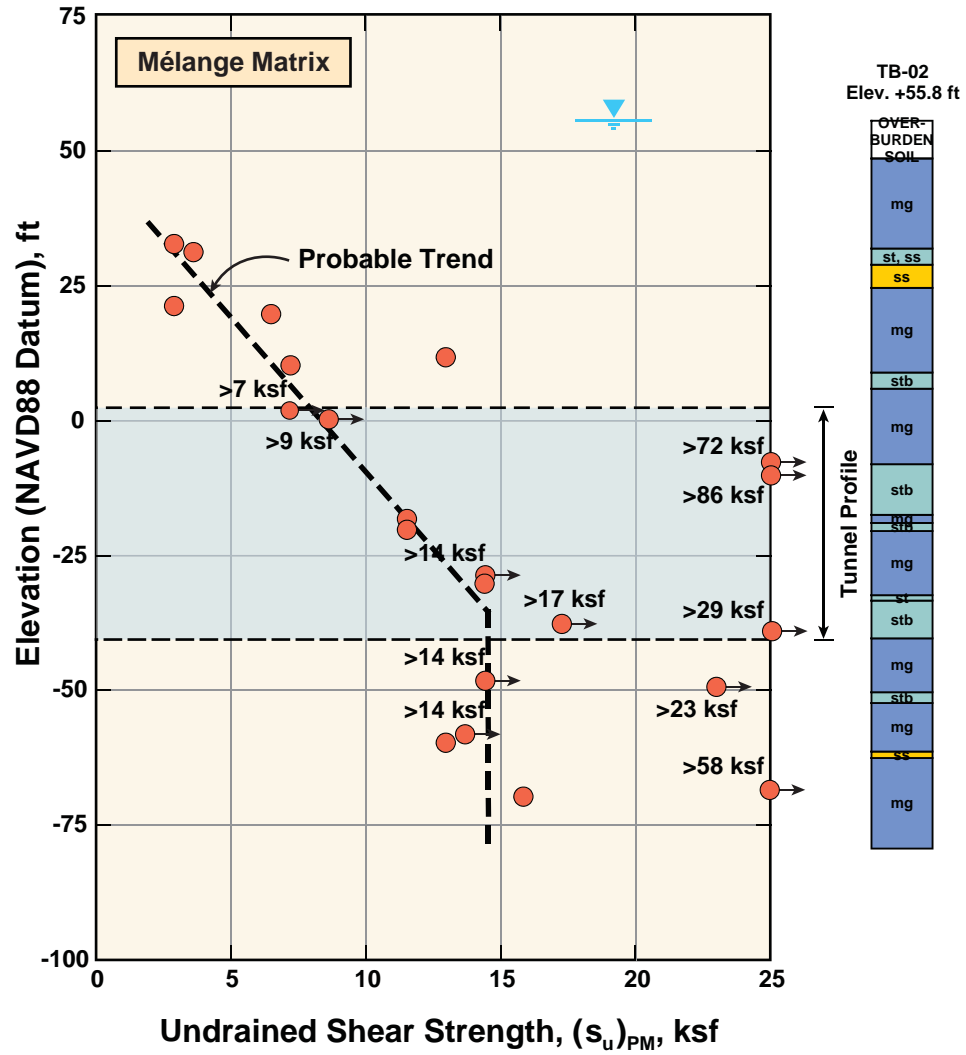
FIG_130: Statistical Summary of Undrained Shear Strength of Mélange Matrix from UU Tests Downtown Site – Rincon Hill



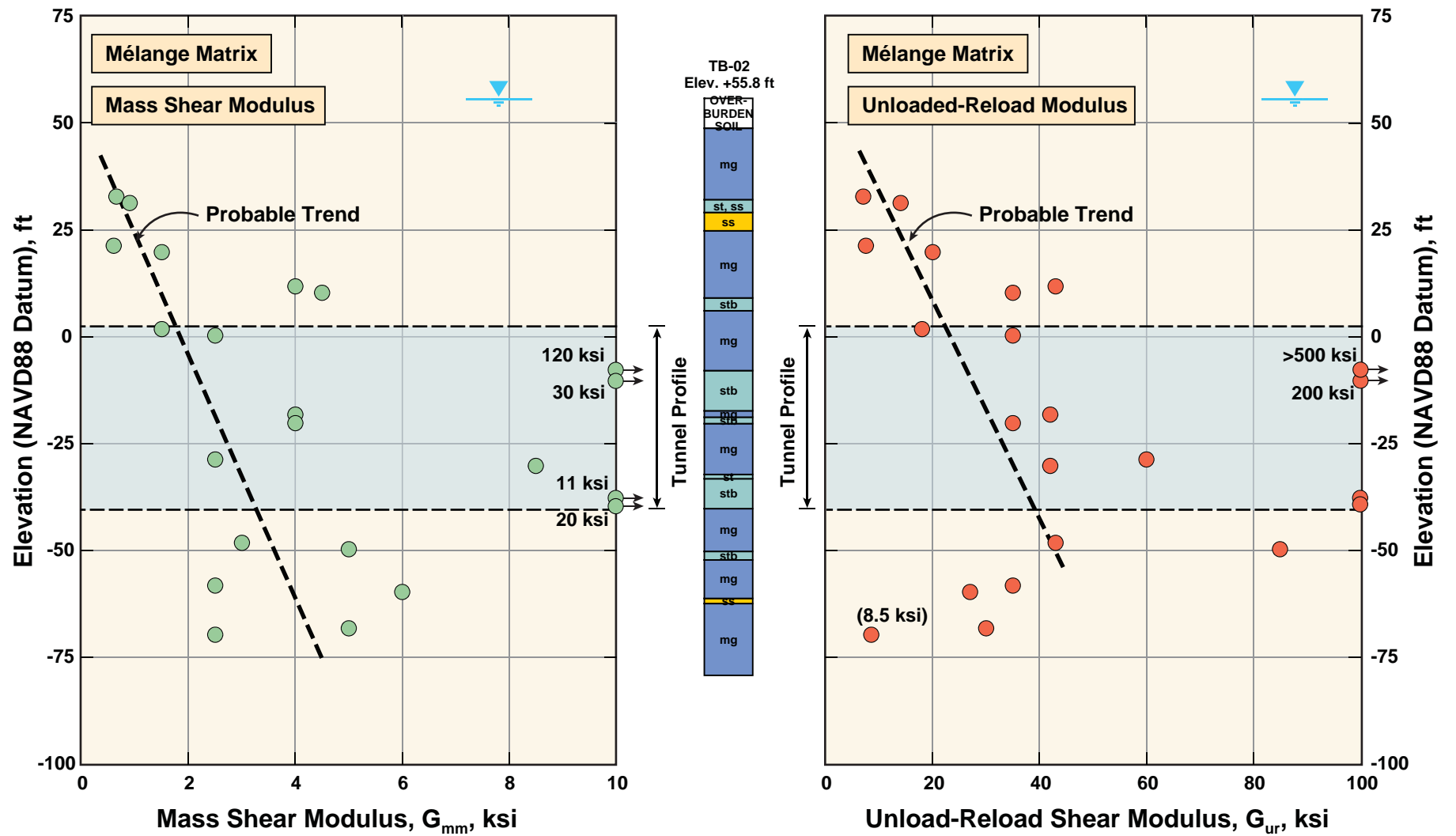
FIG_131: Typical Results of Pressuremeter Tests on Mélange Matrix



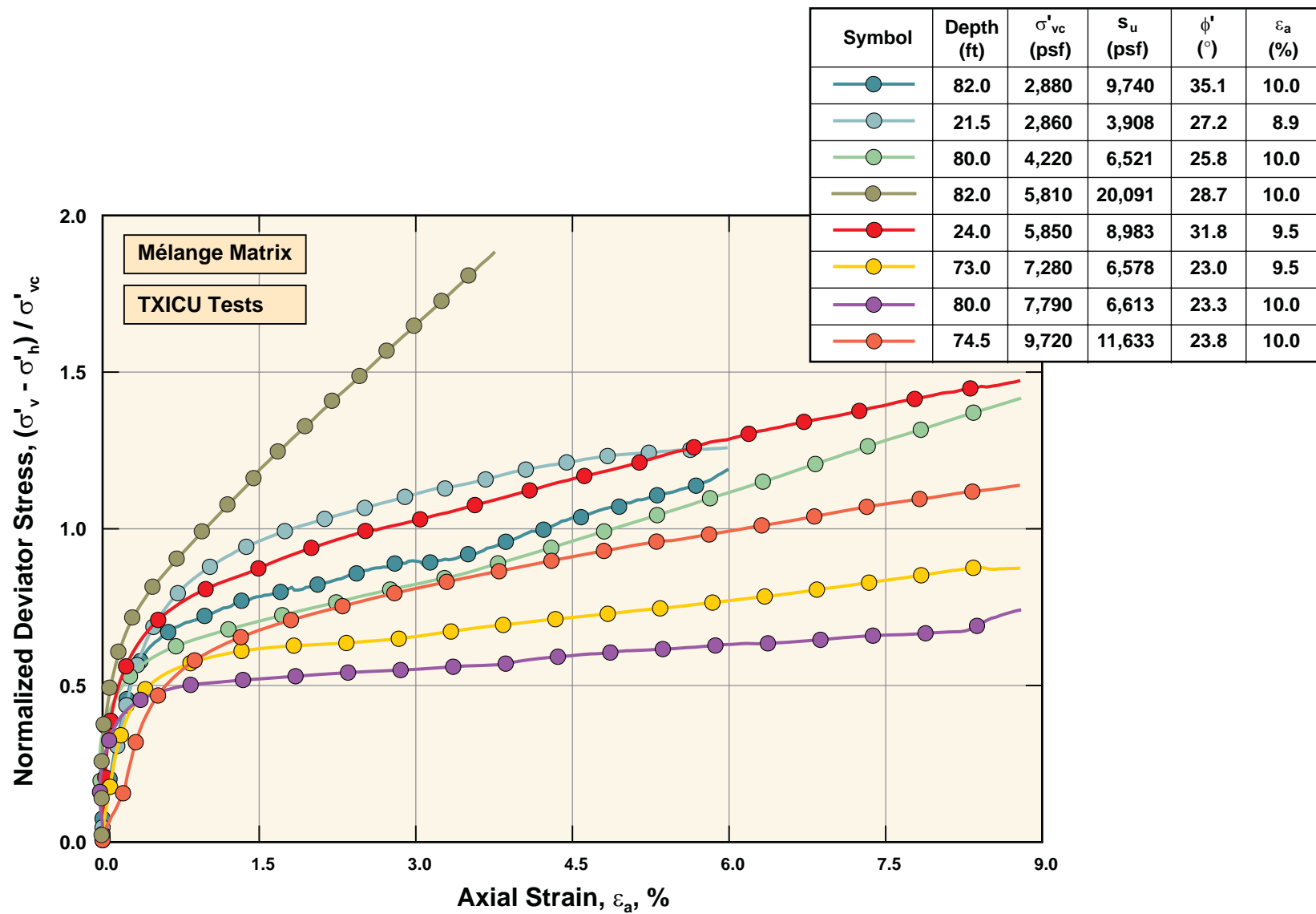
FIG_132: Typical Results of Pressuremeter Tests on Sandstone



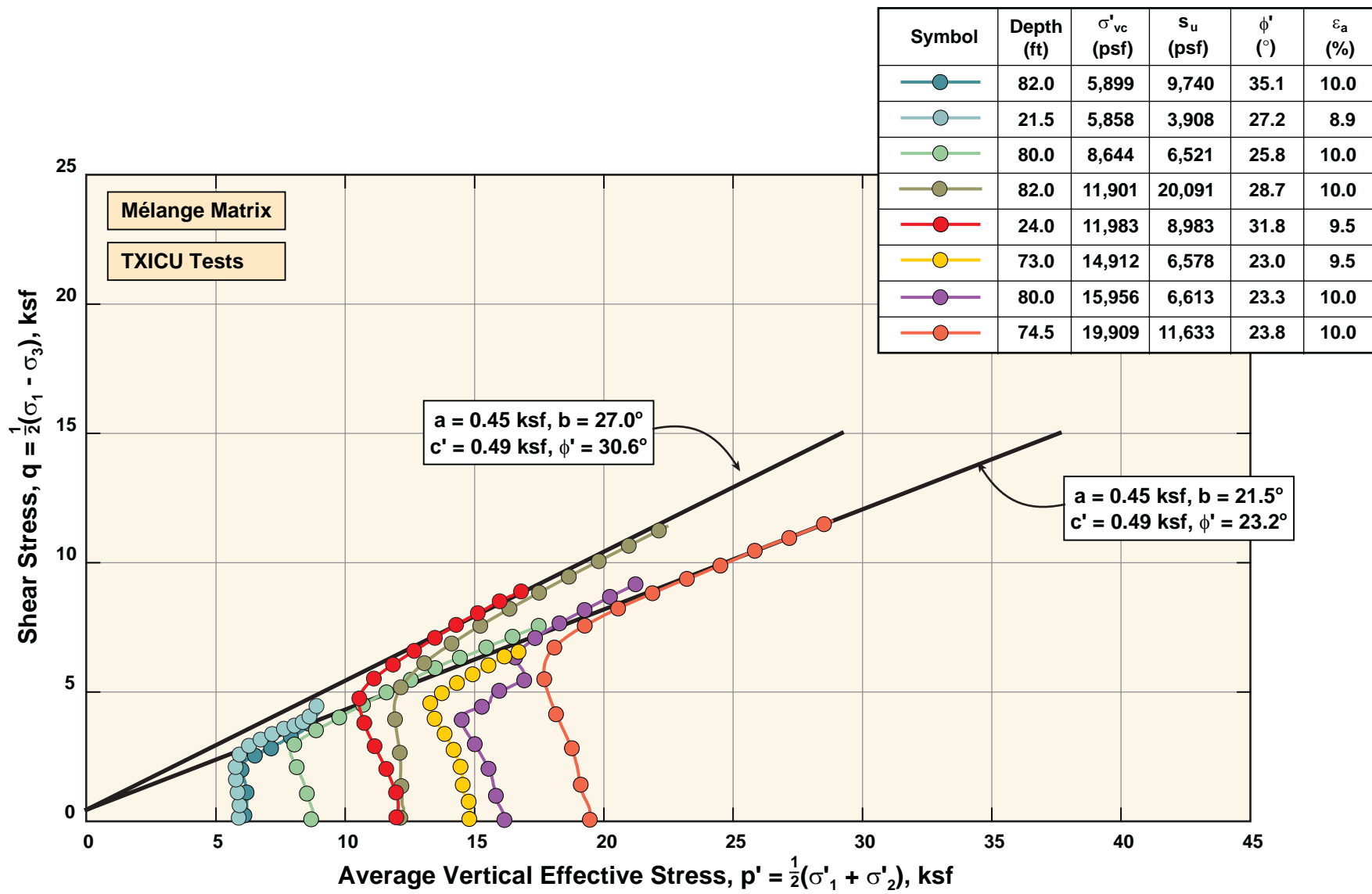
FIG_133: Undrained Shear Strengths on Mélange Matrix Determined from Pressuremeter Tests



FIG_134: Shear Moduli of Mélange Matrix from Pressuremeter Tests

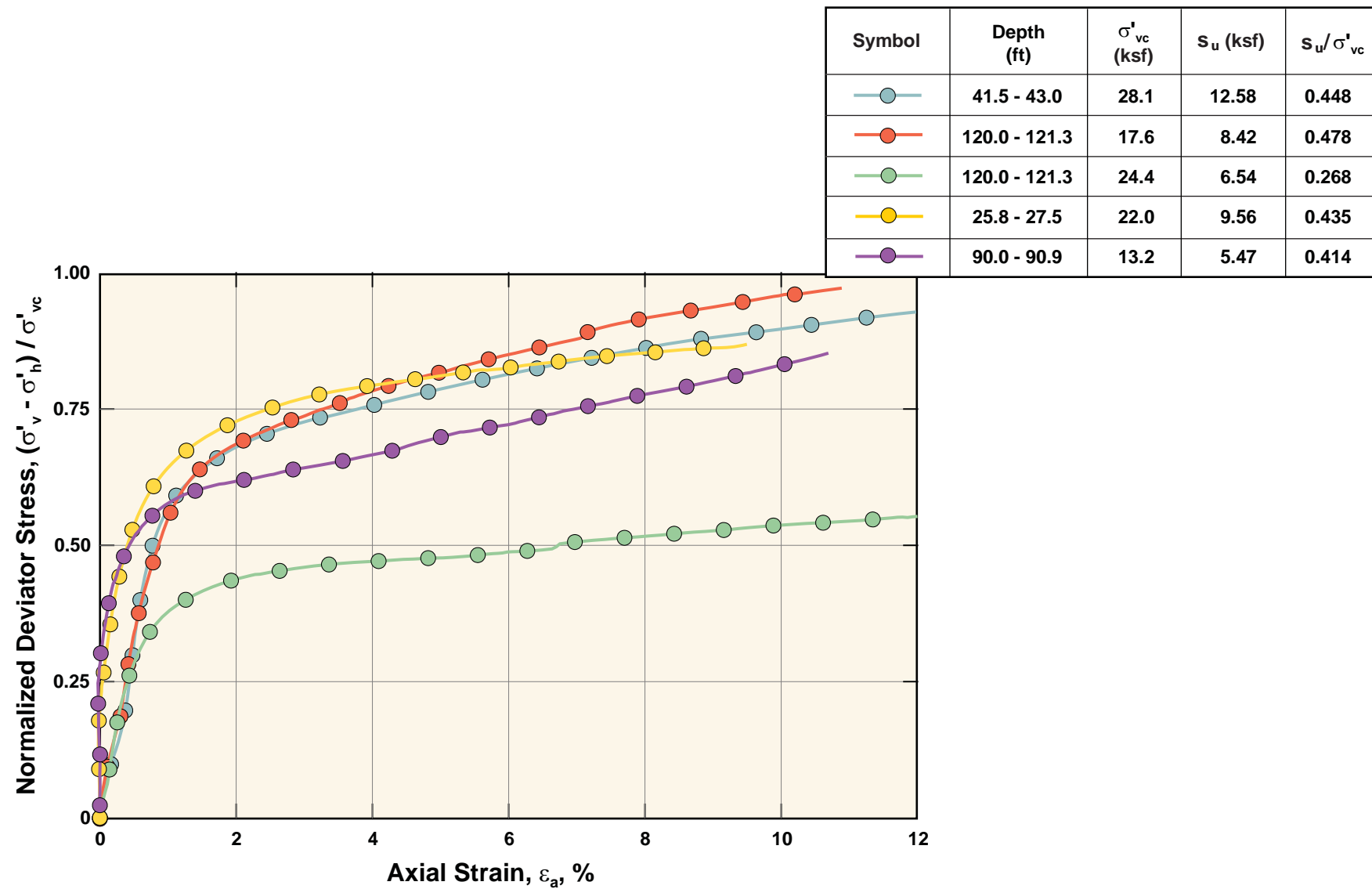


FIG_135: Normalized Stress-Strain Data from Triaxial Compression Tests on Mélange Matrix Downtown Site – Rincon Hill

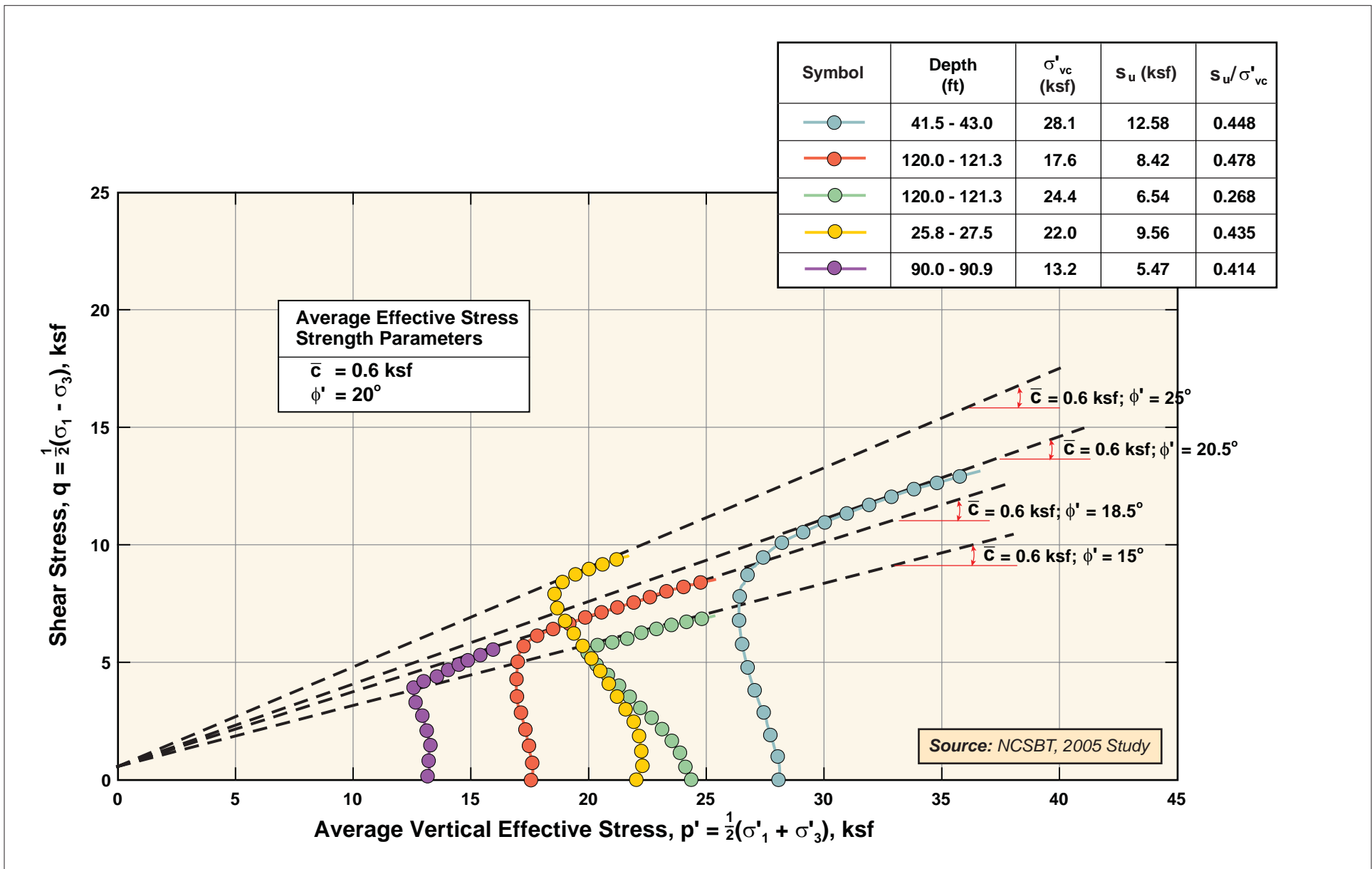


FIG_136: Effective Stress Paths from Triaxial Compression Tests on Mélangé Matrix Downtown Site – Rincon Hill

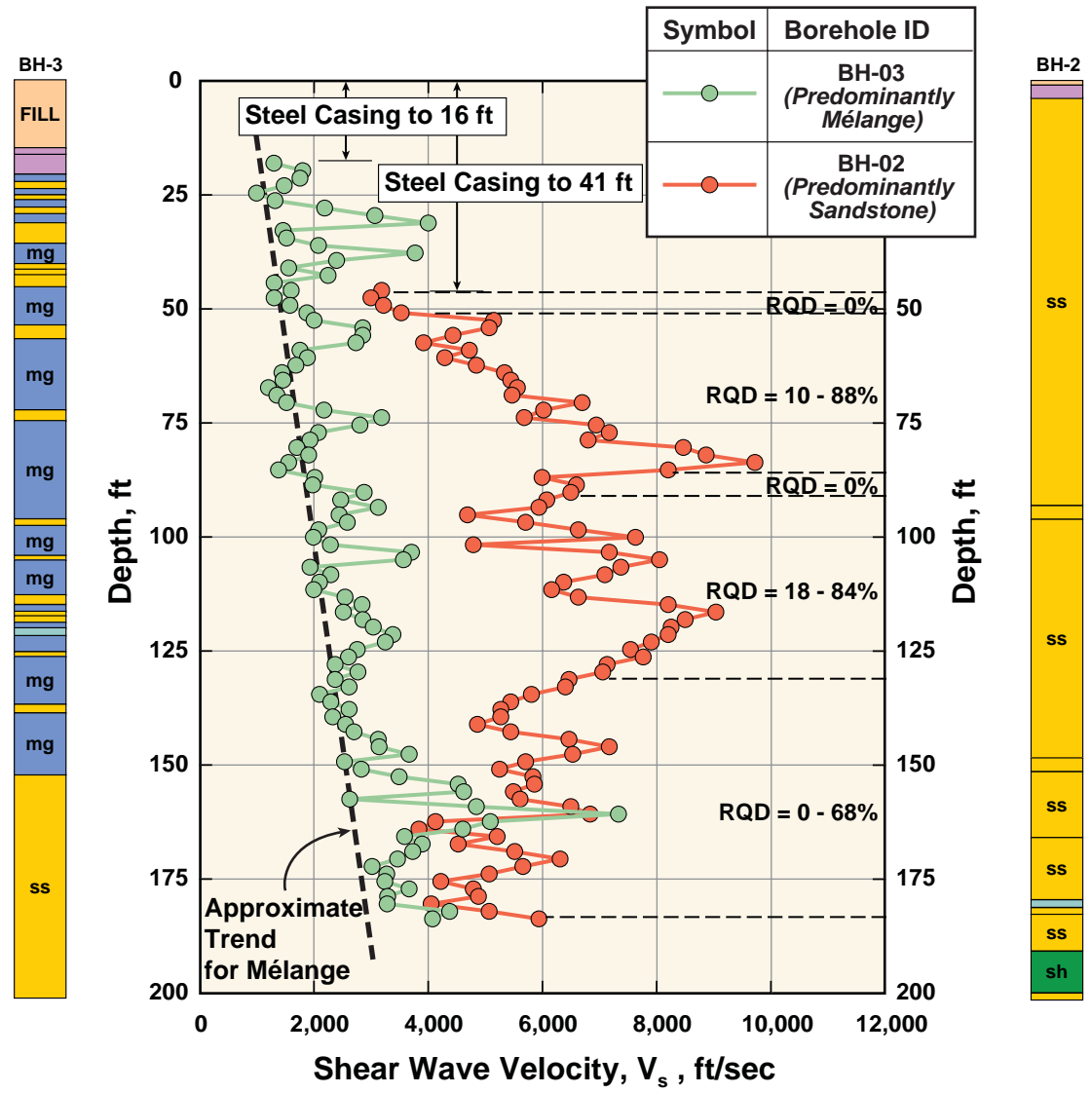
W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\06 MELANGE MATRIX (123-145)\FIG_136.ai



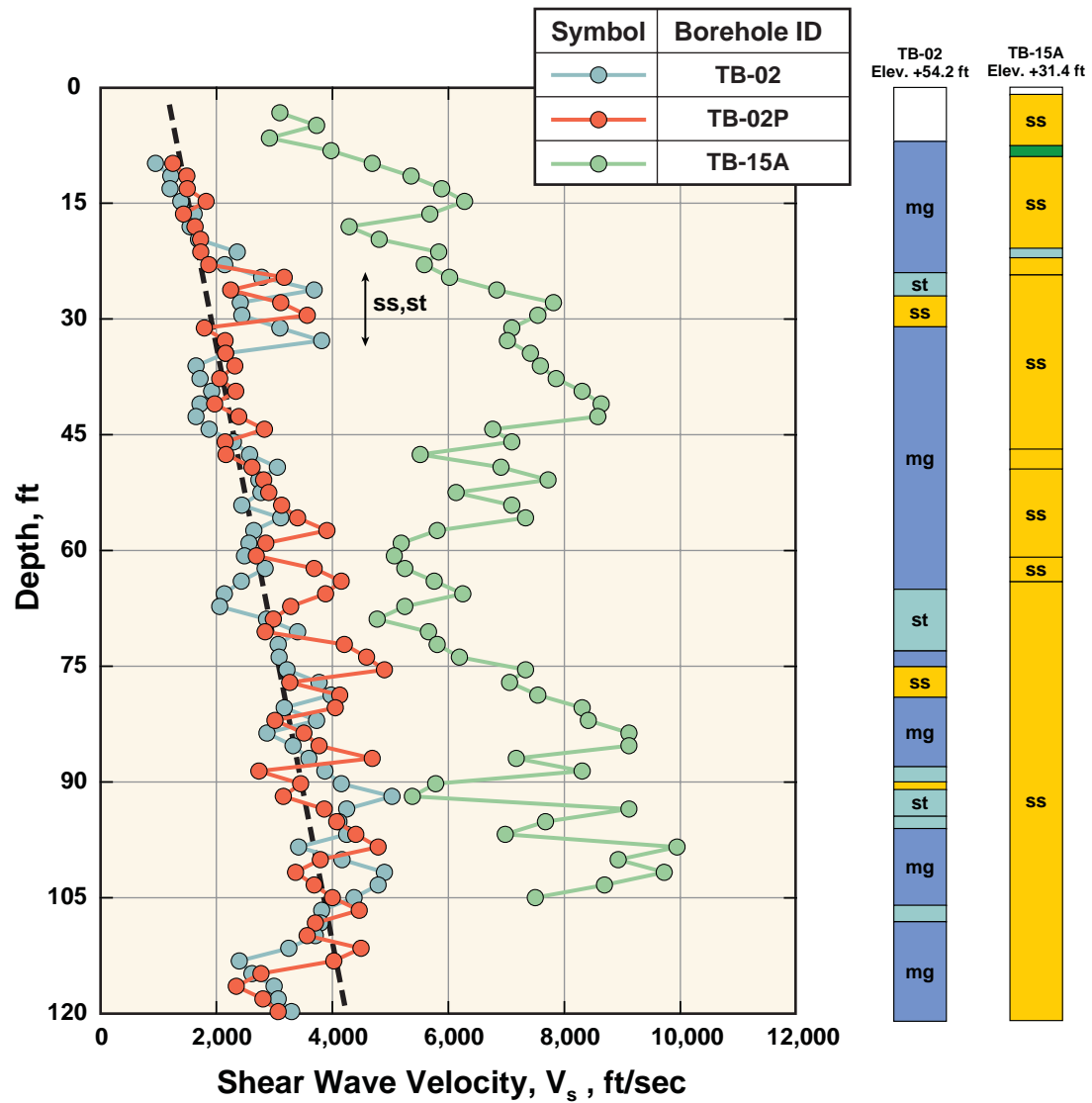
FIG_137: Normalized Stress-Strain Data from TXICU Compression Tests on Mélange Matrix: San Mateo Site



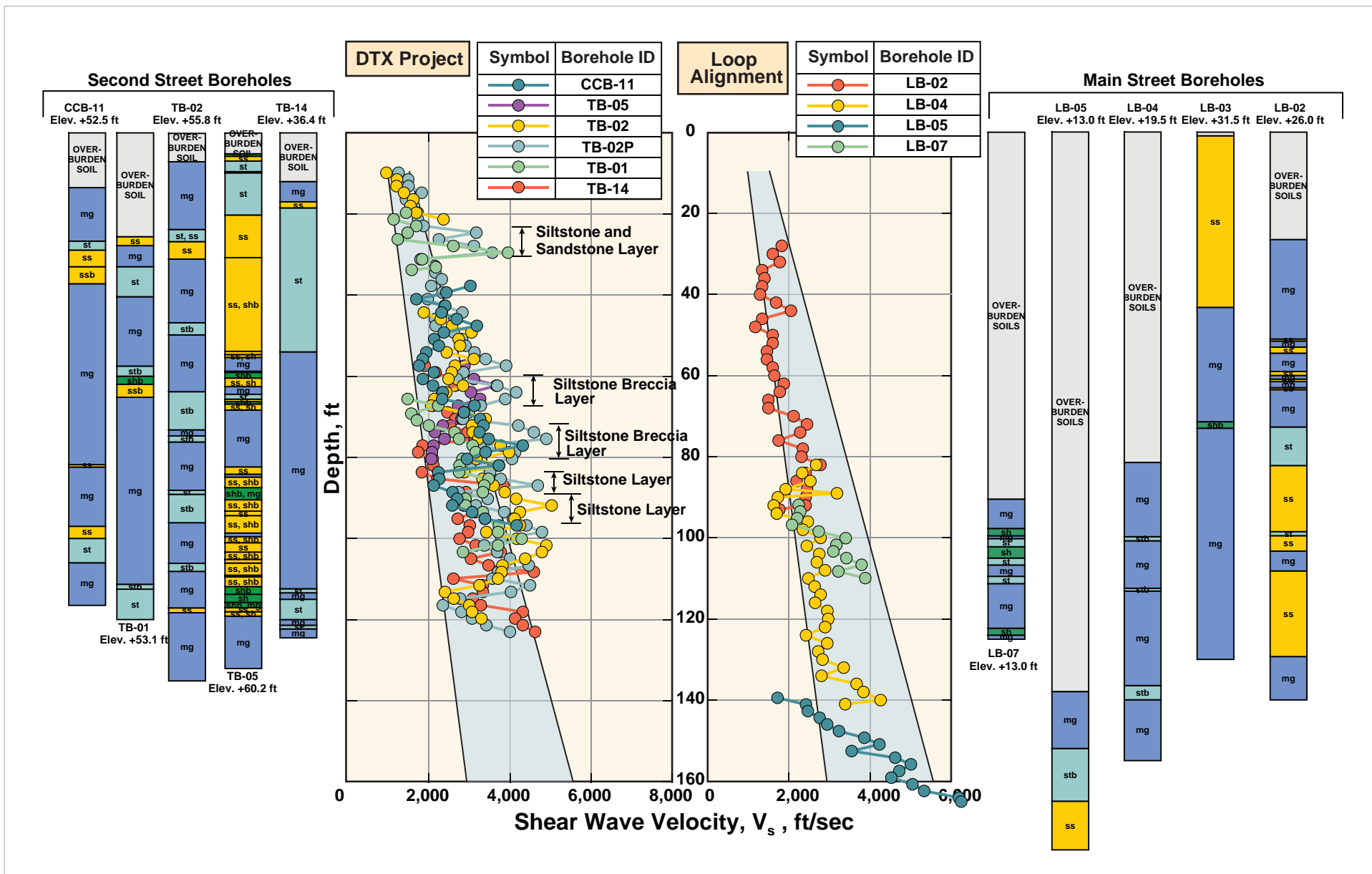
FIG_138: Effective Stress Paths from Triaxial Compression Tests on Mélange Matrix San Mateo Site



FIG_139: Typical Shear Wave Velocity Profiles Mélange Matrix and Good Quality Sandstone San Mateo Site

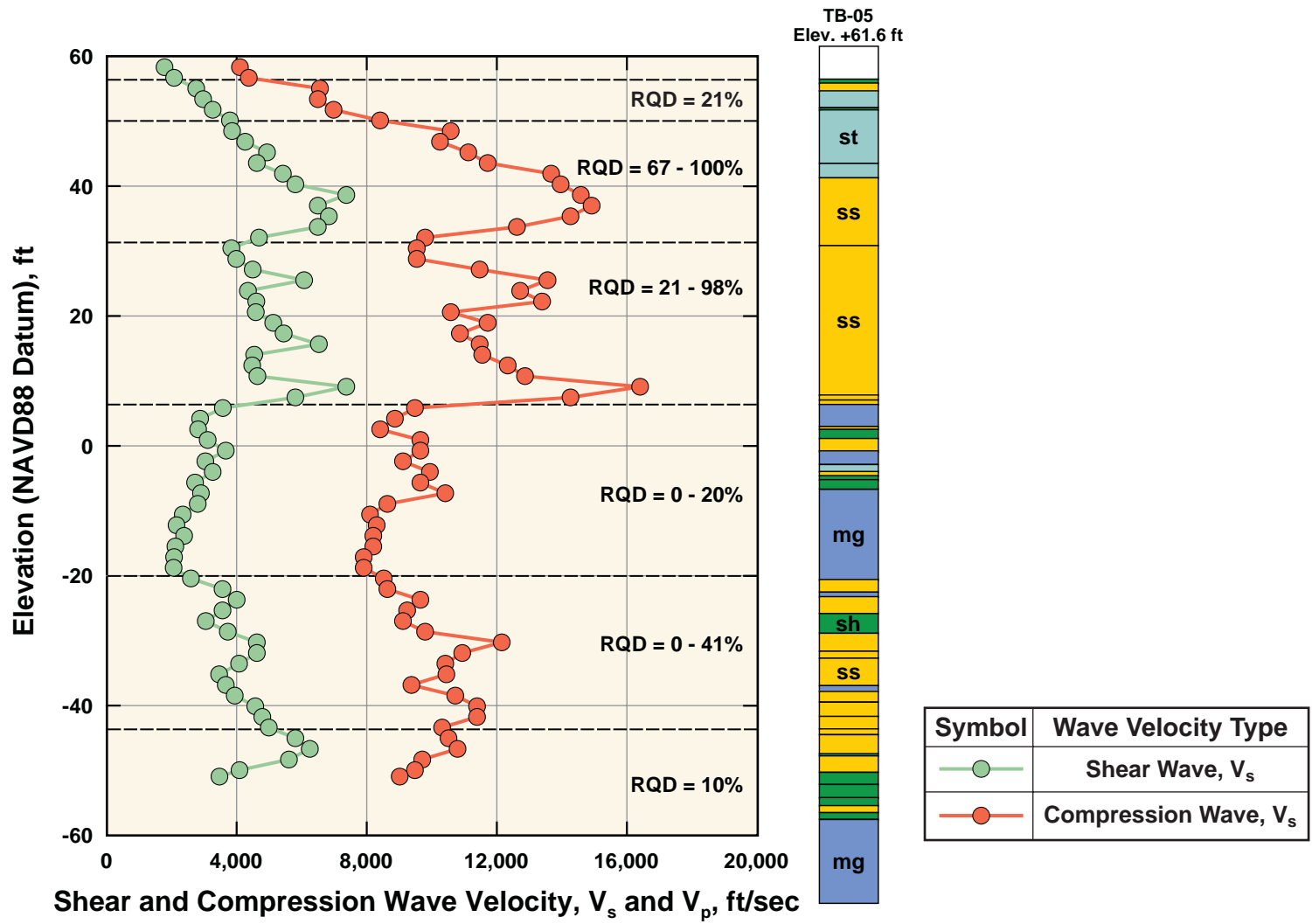


FIG_140: Range of Shear Wave Velocities Mélange Matrix and Sandstone Downtown Site – Rincon Hill



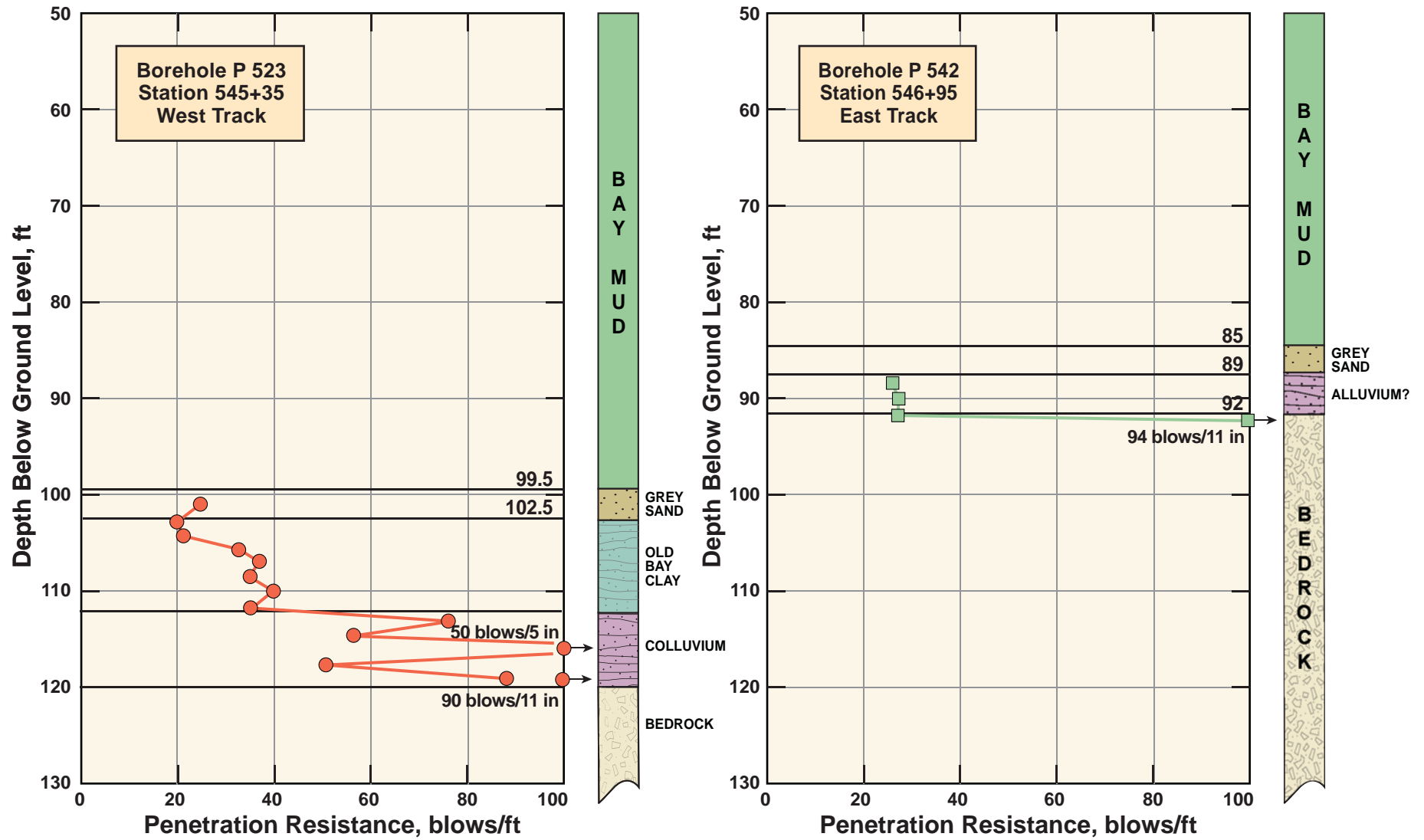
FIG_141: Comparison of Shear Wave Velocities of Mélange Matrix Two Sites Near Rincon Hill

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\06 MELANGE MATRIX (123-145)\FIG_141.ai

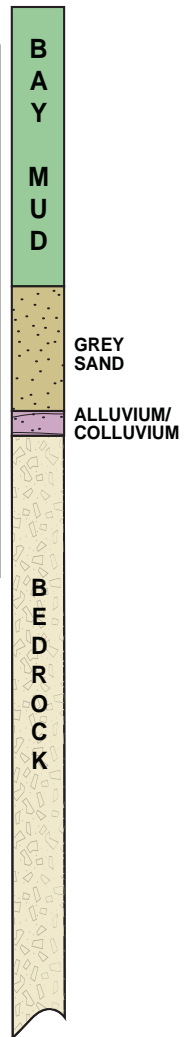
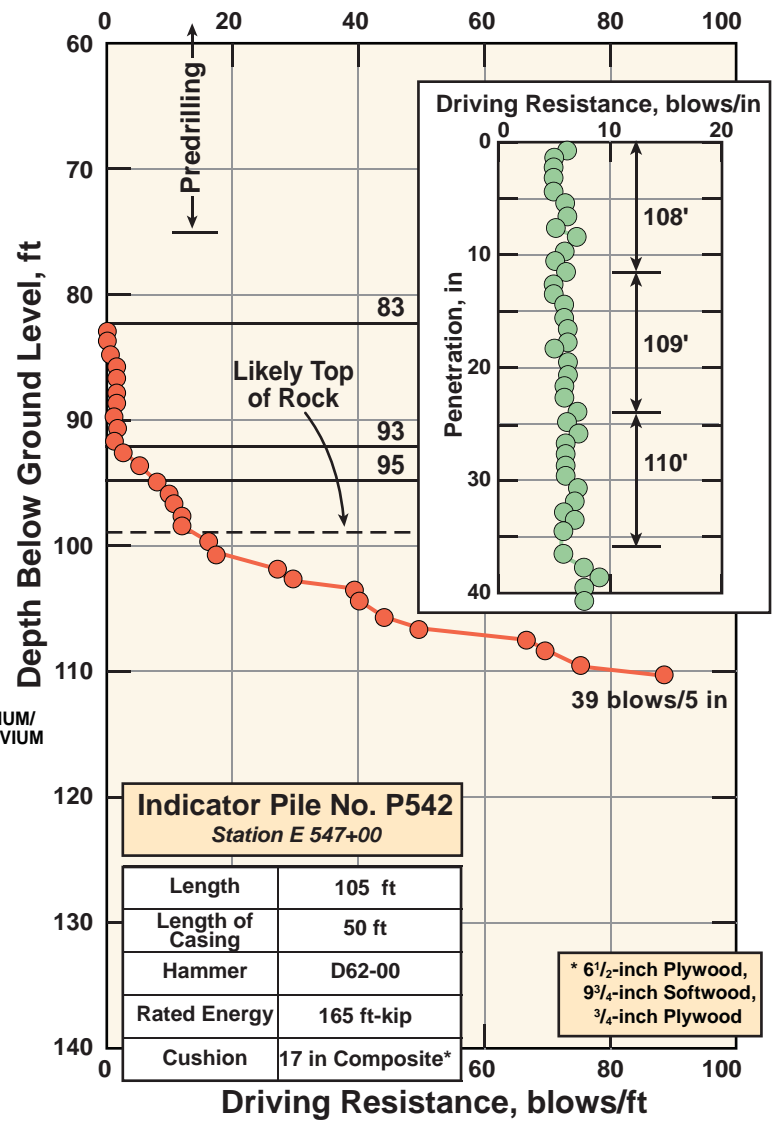
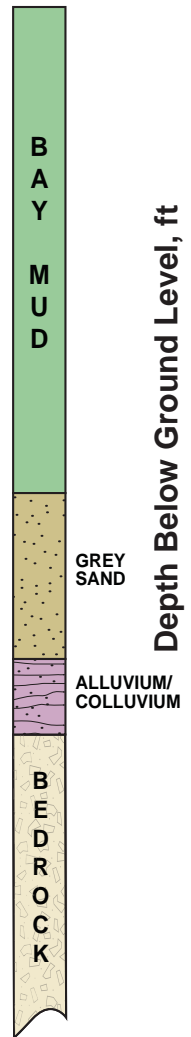
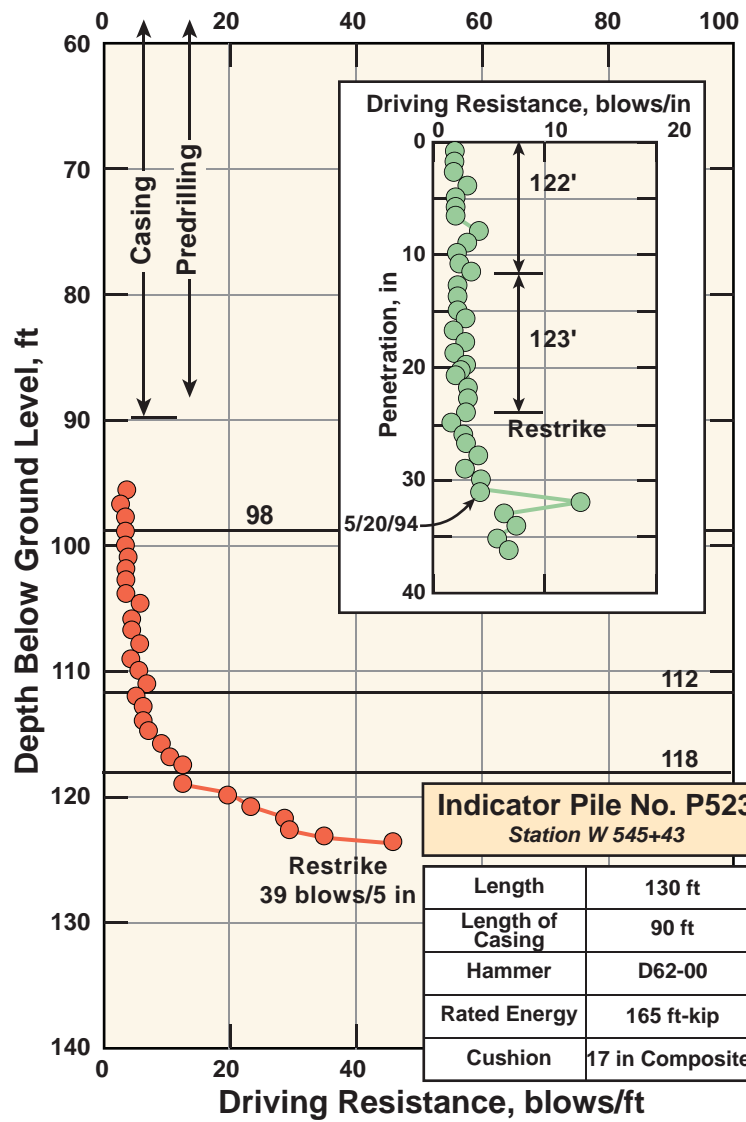


FIG_142: S- and P-Wave Velocity Profiles and RQD Values - Borehole TB-05: Melange Matrix Between Sandstone

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\06 MELANGE MATRIX (123-145)\FIG_142.ai

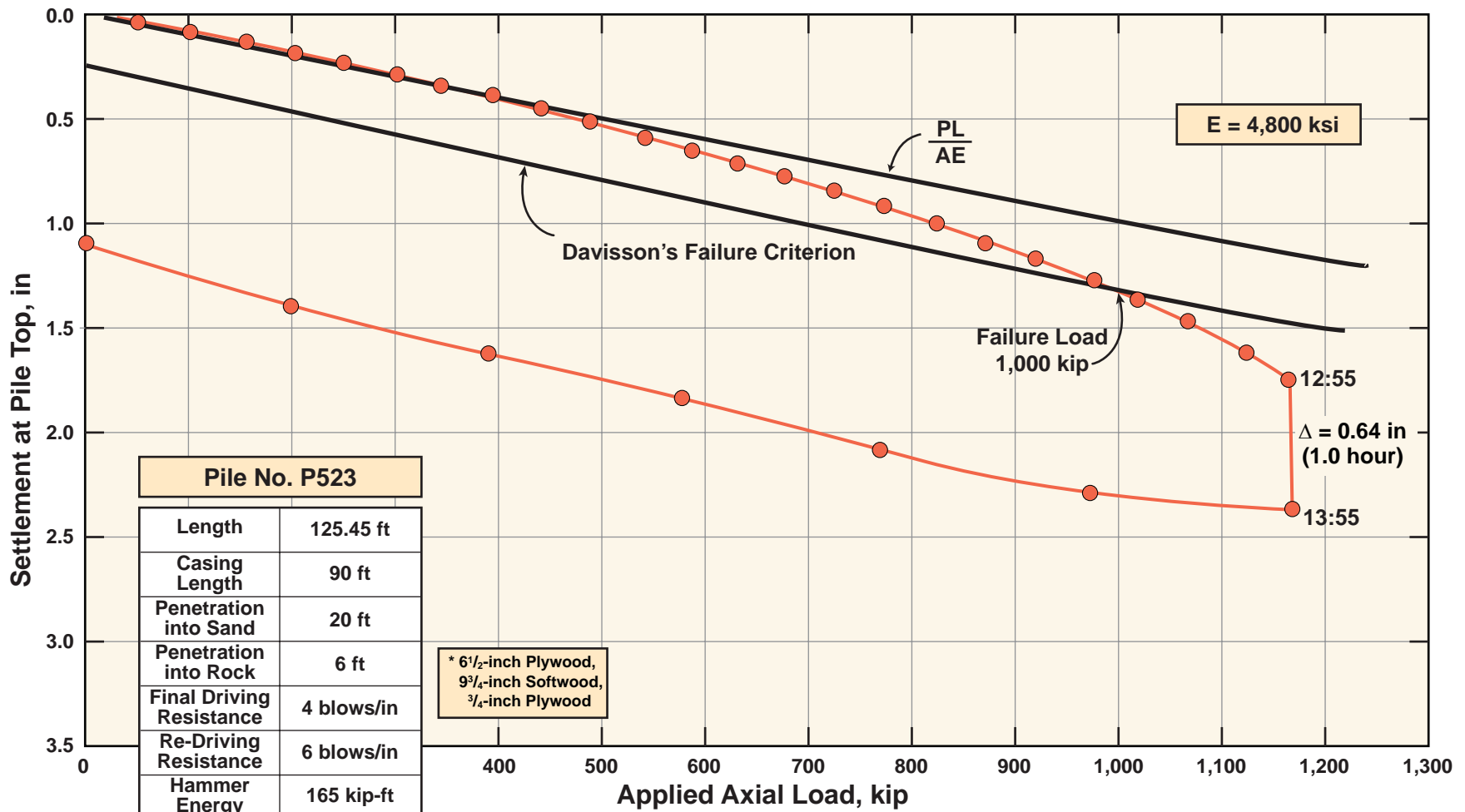


FIG_143: Stratigraphy and SPT Data Near the Embarcadero and Howard Street where Mélange Matrix was Encountered



FIG_144: Driving Resistance Versus Depth Indicator Piles Driven into Mélange Matrix

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FIG_145: Load-Deflection Diagram: Test Pile Driven into Mélange Matrix