

**PARKER HARDING PLAZA
SOILS REPORT & GEOTECHNICAL
INVESTIGATION FINDINGS**

04/13/2023

LANGAN

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Log of Boring **LB-01**

Sheet 1 of 1

Project Reconnecting the Riverfront: Parker Harding Plaza			Project No. 140251201		
Location Parker Harding Plaza, Westport, CT			Elevation and Datum Approx. el. 8.0 (NAVD 88)		
Drilling Company Associated Borings Company, Inc.			Date Started 2/22/2023	Date Finished 2/22/2023	
Drilling Equipment CME 45B truck-mounted rig			Completion Depth 5.5 ft	Rock Depth N/E	
Size and Type of Bit 2-1/4in hollow-stem auger			Number of Samples 3	Disturbed 3	Undisturbed 0
Casing Diameter (in)		Casing Depth (ft)	Water Level (ft.) First ∇ N/E	Completion ∇ N/A	24 HR. ∇ N/A
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Jamie Lloret		
Sampler 2in OD Split Spoon			Field Engineer Matthew Wendland		
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30			

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft) 10 20 30 40	
	+8.0		0						
▲▲▲▲	+7.7	4" asphalt							
▨		Gray fine to coarse SAND, some fine to coarse gravel, some silt (moist) [FILL]	1	S-1	SS	6	46 61	61	Auger to 2ft. Hard augering. Light rig to moderate rig chatter. Light brown cuttings
▨		Light brown Silty fine to coarse SAND, some coarse to fine gravel (moist) [FILL]	2	S-2	SS	5	25 50/2"	50/2"	
▨		Light brown Silty fine to coarse SAND, some fine to coarse gravel (moist) [FILL]	4	S-3	SS	3	20 0/5"	100/5"	
	+2.5	End of Boring at 5.5ft.	5						Auger to 5.5ft. Hard augering to 5ft. Very hard augering from 5ft to 5.5ft Light rig chatter. Brown cuttings. Auger refusal at 5.5ft. Boring terminated at 5.5ft. Boring backfilled to grade with cuttings. Boring sealed with asphalt
			6						
			7						
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Project Reconnecting the Riverfront: Parker Harding Plaza			Project No. 140251201		
Location Parker Harding Plaza, Westport, CT			Elevation and Datum Approx. el. 8.0 (NAVD 88)		
Drilling Company			Date Started 2/22/2023	Date Finished 2/22/2023	
Drilling Equipment			Completion Depth 22.0 ft	Rock Depth N/E	
Size and Type of Bit 2-1/4in hollow-stem auger			Number of Samples	Disturbed 8	Undisturbed 0
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.) First ∇ 8.0	Completion ∇ 5.5
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Jamie Lloret		
Sampler 2in OD Split Spoon			Field Engineer Matthew Wendland		
Sampler Hammer Donut	Weight (lbs) 140	Drop (in) 30			

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr-resist BL/6in	
	+8.0	3" asphalt	0					
	+7.8	Light brown fine to coarse SAND, some fine to coarse gravel, some silt, trace asphalt (moist)[FILL]	1	S-1	SS		60/2"	50/2"
		Light brown fine to coarse SAND, some fine to coarse gravel, trace silt (moist) [FILL]	2				21	Auger to 2ft. Medium to hard augering. Light rig chatter. Light brown cuttings
		Grayish brown to brown fine to coarse SAND, some fine gravel, trace silt (moist) [FILL]	3	S-2	SS	4	50	
		No Recovery	4				30	Auger to 4ft. Medium augering. Light rig chatter. Light brown cuttings
		Light brown fine to coarse SAND, some silt, trace fine to coarse gravel (wet) [FILL]	5	S-3	SS	5	26	
			6				29	Auger to 8ft. Hard augering to 7ft. Medium augering from 7ft to 8ft. Light rig chatter. Brown cuttings
			7	S-4	SS	0	10	
			8				7	Auger to 10ft. Medium augering. Light rig chatter. Light brown cuttings
			9	S-5	SS	4	16	
			10				11	Auger to 15ft. Medium augering. Light brown cuttings
			11	S-6	SS	4	3	
			12				4	Auger to 20ft. Medium augering. Brown
			13					
			14					Auger to 20ft. Medium augering. Brown
			15					
			16	S-7	SS	2	4	20
			17				4	Auger to 20ft. Medium augering. Brown
			18					
			19					Auger to 20ft. Medium augering. Brown
			20					
							45	


Project	Reconnecting the Riverfront: Parker Harding Plaza	Project No.	140251201
Location		Elevation and Datum	8.0

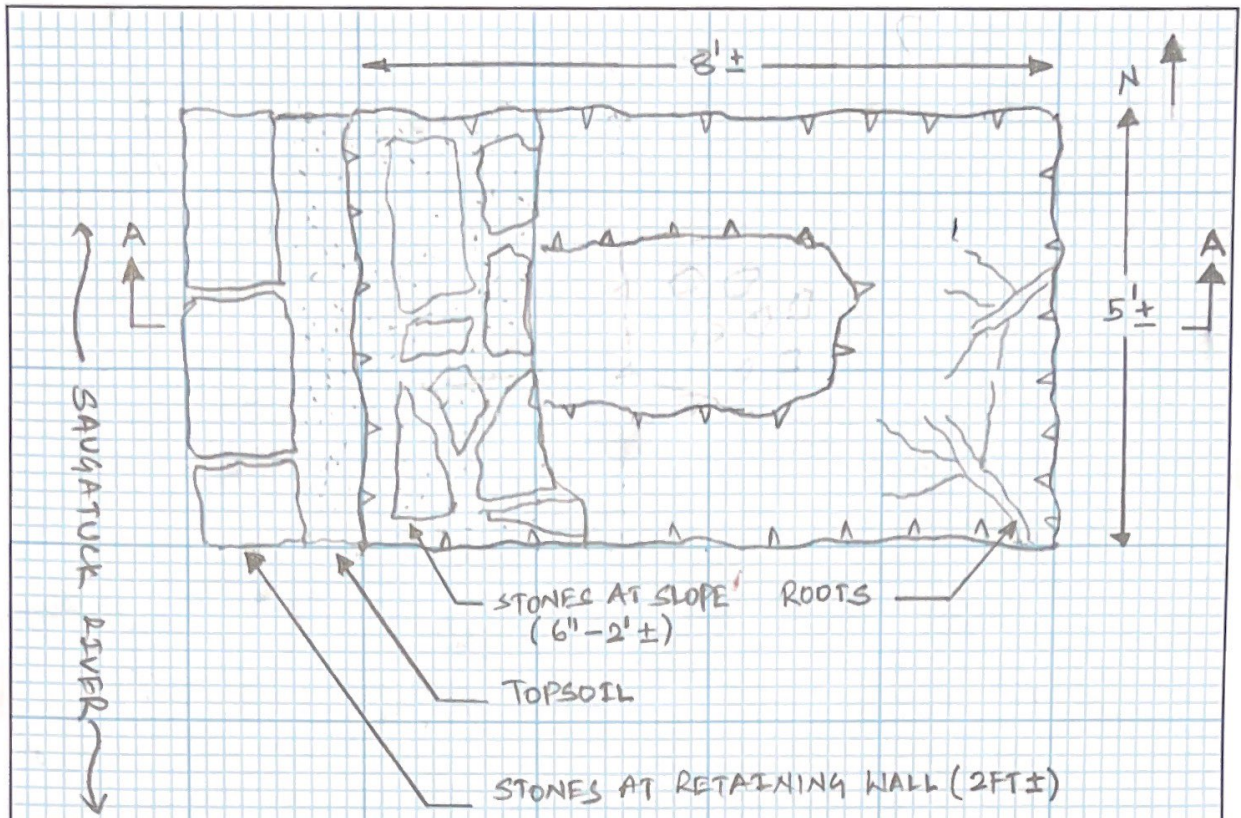
Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr-resist BL/6in	N-Value (Blows/ft)	
	-12.4		20.4						
	-14.0	Grayish brown coarse to fine SAND, some silt, some coarse to fine gravel (wet)	21	S-8A	SS	10	7	28	cuttings Boring terminated at 22ft. Boring backfilled to grade with cuttings and sand. Boring sealed with asphalt
		End of Boring at 22ft.	22	S-8B			7		
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Project Reconnecting the Riverfront: Parker Harding Plaza			Project No. 140251201		
Location Parker Harding Plaza, Westport, CT			Elevation and Datum Approx. el. 8.0 (NAVD 88)		
Drilling Company			Date Started 2/22/2023	Date Finished 2/22/2023	
Drilling Equipment			Completion Depth 22.0 ft	Rock Depth N/E	
Size and Type of Bit 2-1/4in hollow-stem auger			Number of Samples	Disturbed 8	Undisturbed 0
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.) First ∇ 6.5	Completion ∇ 6.0
Casing Hammer N/A	Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Jamie Lloret		
Sampler 2in OD Split Spoon			Field Engineer Matthew Wendland		
Sampler Hammer Donut	Weight (lbs) 140	Drop (in) 30			

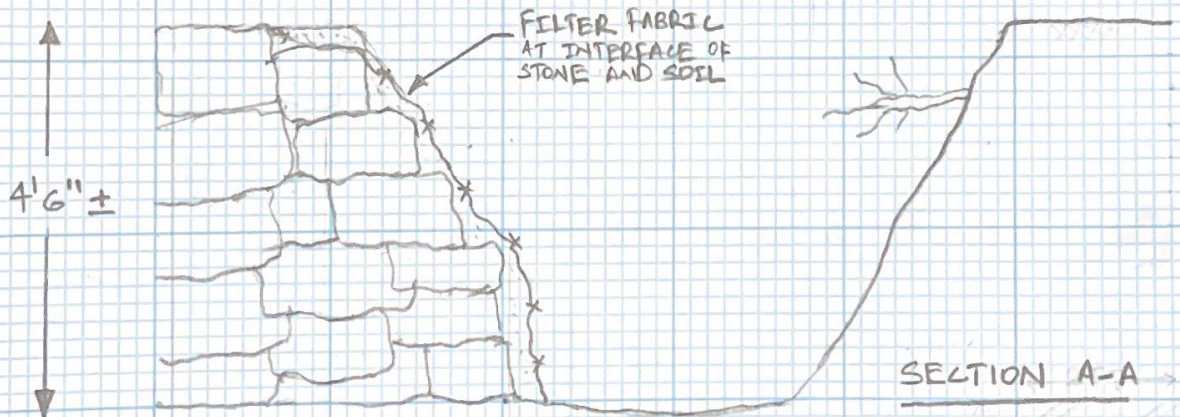
Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr-resist BL/6in	N-Value (Blows/ft) 10 20 30 40		
	+8.0	8" asphalt	0							
	+7.3	Light brown fine to coarse SAND, some silt, trace fine gravel, trace asphalt (moist) [FILL]	1	S-1	SS	6	65	44	44	Auger to 2ft. Hard augering. Light rig chatter. Light brown cuttings
		Brown to light brown fine to coarse SAND, some silt, trace fine gravel (moist) [FILL]	2				20			
		No Recovery	3	S-2	SS	5	21	40	61	Auger to 5ft. Medium to hard augering. Light rig chatter. Light brown cuttings
		No Recovery	4				11			
		No Recovery	5				17			Auger to 9ft. No visible cuttings
		No Recovery	6	S-3	SS	0	12	8	20	
		Brown coarse to fine SAND, some fine gravel, some silt, trace woody vegetation (wet) [FILL]	7				10			Auger to 11ft. Light rig chatter. Light brown cuttings
		Brown coarse to fine SAND, some fine gravel, some silt, trace woody vegetation (wet) [FILL]	8	S-4	SS	0	4	1	5	
		Dark gray sandy CLAY, trace fine gravel, some organics (wet)	9				1			Auger to 15ft. Light rig chatter. Light brown cuttings
		Dark gray sandy CLAY, trace fine gravel, some organics (wet)	10	S-5	SS	3	1	WOH	1	
	-3.0	Gray Silty fine to coarse SAND, some fine to coarse gravel, trace organics (wet)	11				3			Auger to 20ft. Light rig chatter. Light
		Gray Silty fine to medium SAND, trace fine gravel (wet)	12	S-6	SS	6	33	24	44	
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	13				21			Auger to 20ft. Light rig chatter. Light
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	14							
		Gray Silty fine to coarse SAND, some fine to coarse gravel, trace organics (wet)	15	S-7A	SS	7	10	11	24	Auger to 20ft. Light rig chatter. Light
		Gray Silty fine to medium SAND, trace fine gravel (wet)	16	S-7B	SS	7	13	10	24	
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	17							Auger to 20ft. Light rig chatter. Light
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	18							
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	19							Auger to 20ft. Light rig chatter. Light
		Grayish brown fine to coarse SAND, trace fine to coarse gravel, trace silt (wet)	20							

Project Reconnecting the Riverfront: Parker Harding Plaza		Project No. 140251201	
Location		Elevation and Datum 8.0	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr-resist BL/6in	N-Value (Blows/ft)			
	-12.4	Dark brown Gravelly coarse to fine SAND, some silt (wet)	20.4	S-8A	SS	10	29	29	10 20 30 40 58	brown cuttings Boring terminated at 22ft. Boring backfilled to grade with cuttings and sand. Boring sealed with asphalt	
	-14.0	Light brown Silty fine to coarse SAND, trace fine gravel (wet)	21	S-8B							29
		End of Boring at 22ft.	22	S-8C							27
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PLAN



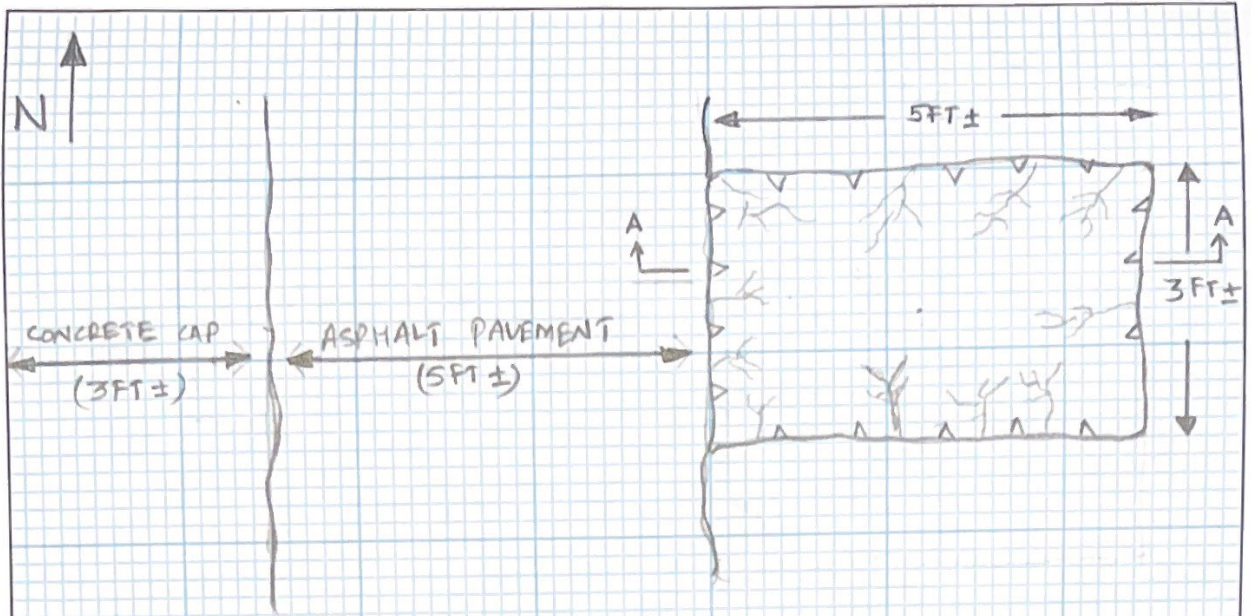
NOTES:

- 1) THE SLOPE OF THE STONE WALL WAS OBSERVED TO BE AT ABOUT 1H:1V.

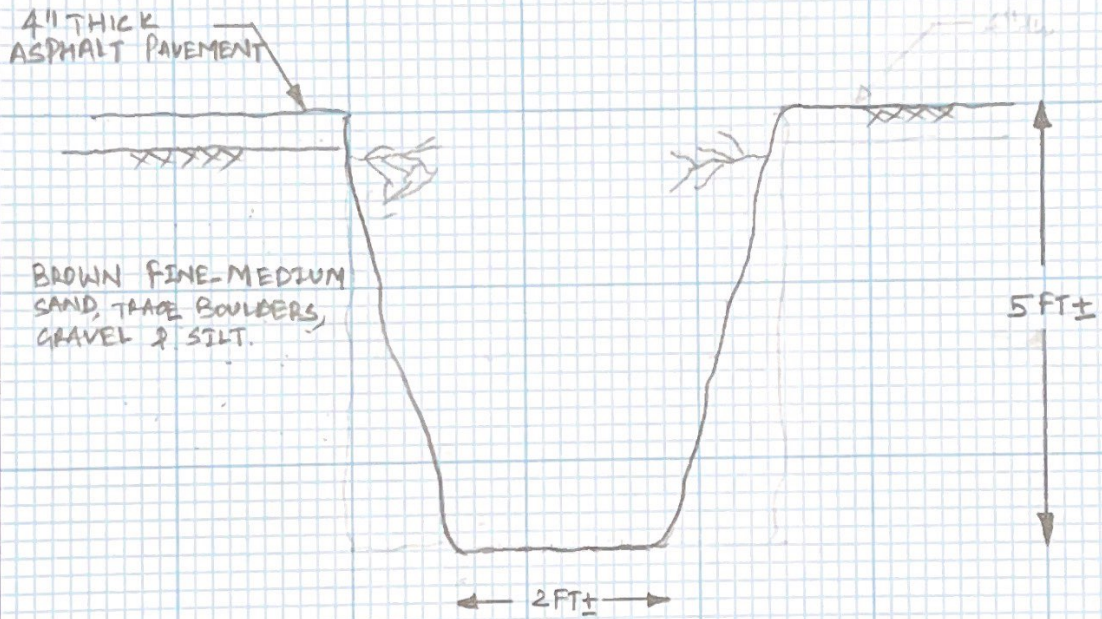
WESTPORT RETAINING WALL
INSPECTION (TEST PIT-1)

BY PP DATE _____
CKD _____ DATE _____

PROJ. NO. 140251201
SHEET _____ OF _____



PLAN

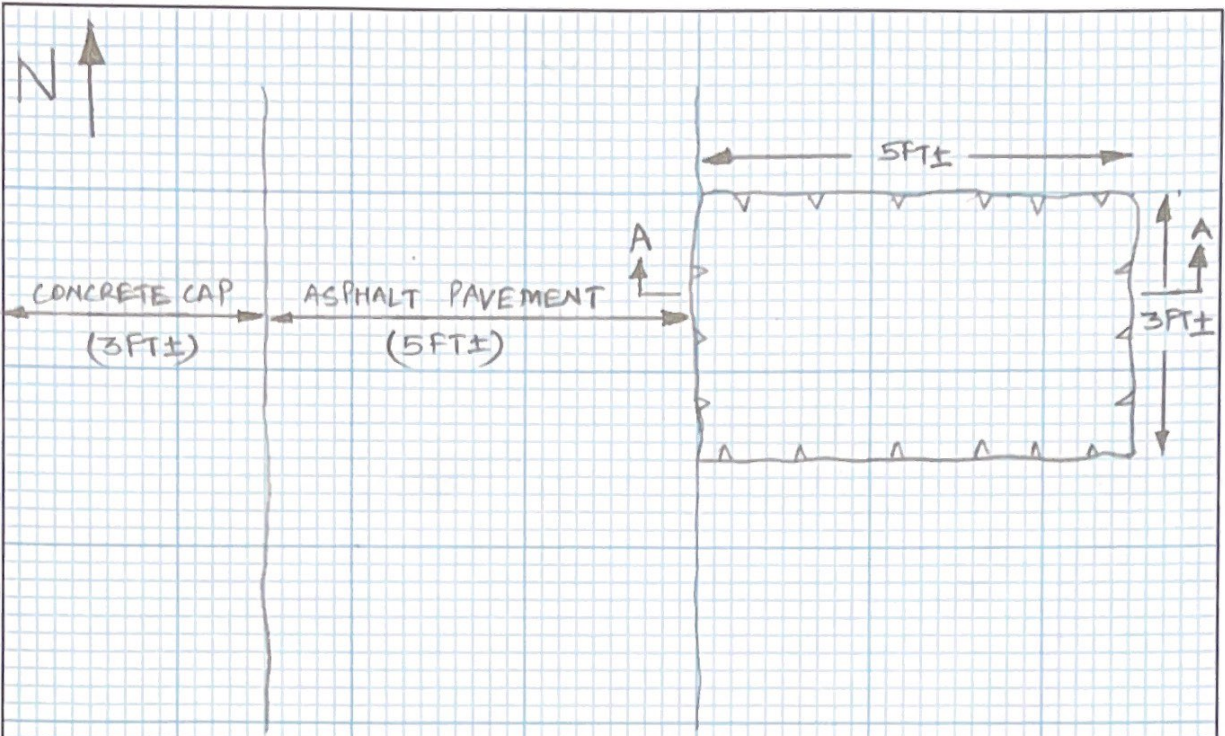


SECTION A-A

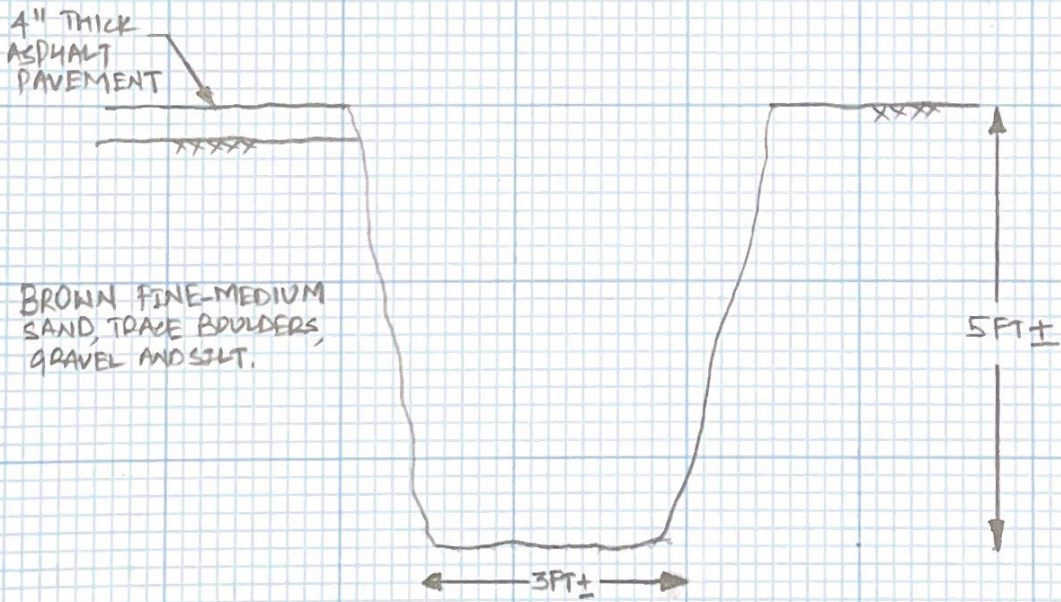
WESTPORT RETAINING WALL
INSPECTION (TR-2)

BY PP DATE _____
CKD. _____ DATE _____

PROJ. NO. 1A0251201
SHEET _____ OF _____



PLAN



SECTION A-A

WESTPORT RETAINING WALL
INSPECTION (TP-3)

BY PP DATE _____
CKD. _____ DATE _____

PROJ. NO. 140251201
SHEET _____ OF _____



Photo 1: Test Pit TP-1, looking northeast from the seawall.



Photo 2: Test Pit TP-1, looking southwest toward the back of the seawall.



Photo 3: Test Pit TP-1, looking southwest toward the back of the seawall.



Photo 4: Test Pit TP-1, looking northwest



Photo 5: Test Pit TP-1, looking east.



Photo 6: Test Pit TP-2, looking northwest from the walkway.



Photo 7: Test Pit TP-2, looking southwest toward the seawall.



Photo 8: Test Pit TP-2, looking northeast.



Photo 9: Test Pit TP-2, looking southeast.



Photo 10: Test Pit TP-3, looking southwest from the walkway.



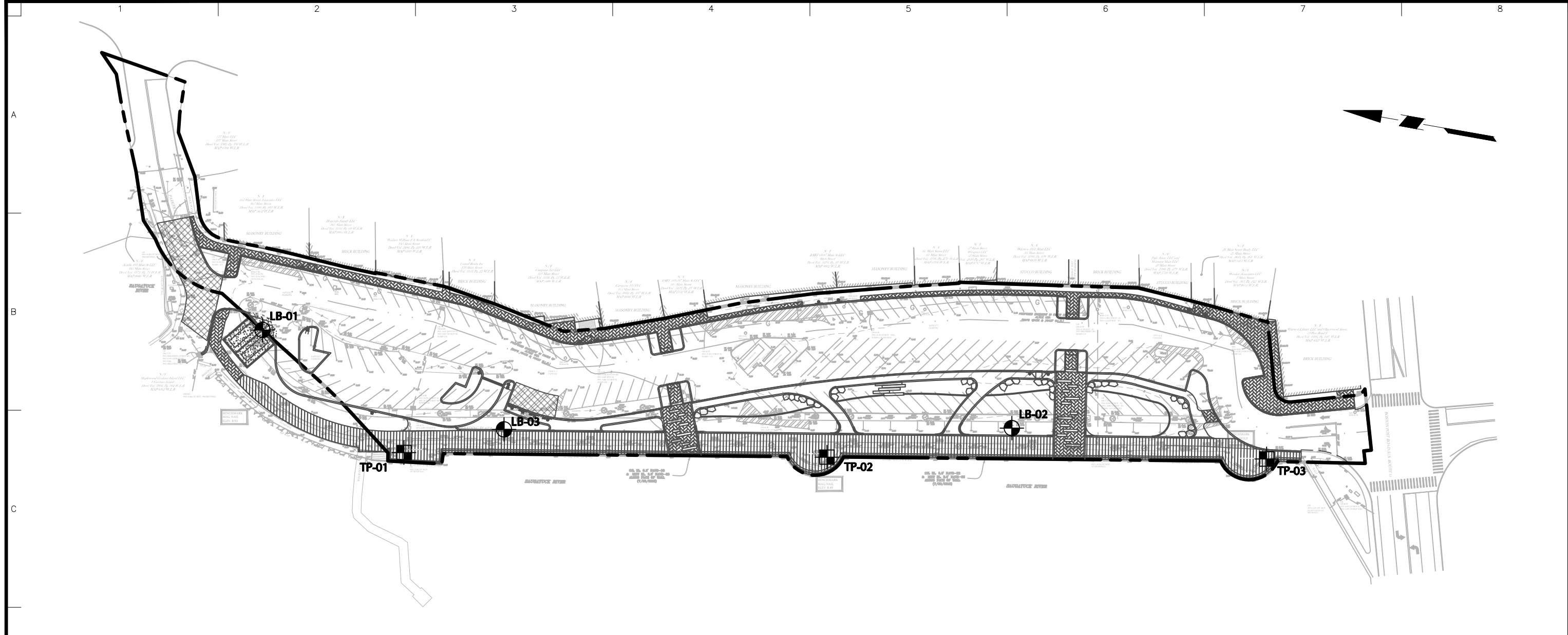
Photo 11: Overview of Test Pit 3, looking northwest.



Photo 12: Test Pit TP-3, concrete seawall cap and asphalt walkway, looking northwest



Photo 13: Test Pit TP-3, looking southwest.

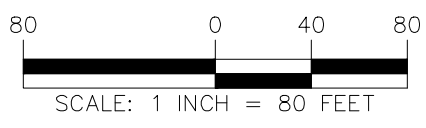


GENERAL NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION OBTAINED FROM PLANS TITLED "LIMITED PROPERTY & TOPOGRAPHIC SURVEY" PREPARED BY DIMARZO & BERECKZY, INC., DATED 6 DECEMBER 2022.
2. PROPOSED DEVELOPMENT DRAWINGS OBTAINED FROM SCHEMATIC DESIGN SET TITLED "RECONNECTING THE RIVERFRONT: PARKER HARDING PLAZA" PREPARED BY LANGAN, DATED 23 JANUARY 2023.
3. ALL EXPLORATION LOCATIONS ARE APPROXIMATE. EXPLORATION LOCATIONS HAVE NOT BEEN SURVEYED.
4. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
5. LANGAN BORINGS (LB-01 TO LB-03) WERE PERFORMED BY ASSOCIATED BORINGS COMPANY, INC. ON 22 FEBRUARY 2023, UNDER THE FULL-TIME OBSERVATION OF A LANGAN FIELD ENGINEER.
6. LANGAN TEST PITS (TP-01 TO TP-03) WERE PERFORMED BY THE WESTPORT HIGHWAY DEPARTMENT ON 22 FEBRUARY 2023, UNDER THE FULL-TIME OBSERVATION OF A LANGAN FIELD ENGINEER.

LEGEND

LB-## LANGAN BORING LOCATION
TP-## LANGAN TEST PIT LOCATION
 PROPERTY LINE



Langan Engineering and Environmental Services, Inc. 555 Long Wharf Drive New Haven, CT 06511 T: 203.562.5771 F: 203.789.6142 www.langan.com	Project RECONNECTING THE RIVERFRONT: PARKER HARDING PLAZA WESTPORT FAIRFIELD COUNTY CONNECTICUT	Drawing Title EXPLORATION LOCATION PLAN	Project No. 140251201 Date 03/02/2023 Drawn By AHM Checked By TDS	Figure 5