

REFERENCE: U-2524D

PROJECT: 34820

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY GUILFORD
PROJECT DESCRIPTION GREENSBORO WESTERN LOOP
FROM OLD BATTLEGROUND ROAD TO
LAWDALE DRIVE
SITE DESCRIPTION SOUND BARRIER WALL 2:
FROM -RPDY4- LEFT TO -L- 434+06 RIGHT

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3-5	SITE PLAN(S)
6-7	PROFILE(S)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2524D	1	7

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

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- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

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B. WORLEY, PG

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T. ALLRED

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DRAWN BY B. SMITH, PG

CHECKED BY B. WORLEY, PG

SUBMITTED BY Summit Design and Engineering Services, PLLC

DATE NOVEMBER, 2015



DocuSigned by:

Brett C. Smith

1/15/2016

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SIGNATURE

DATE

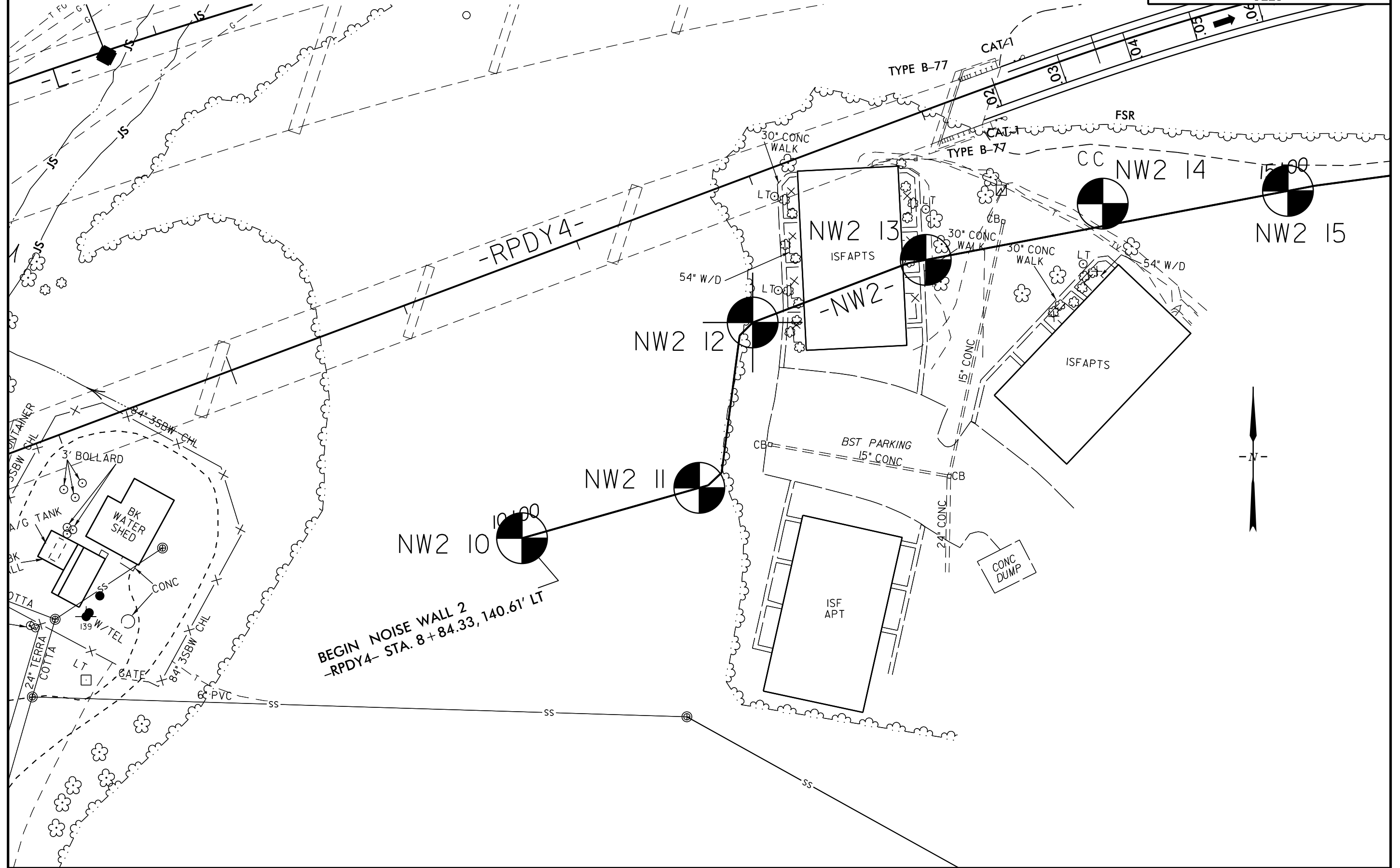
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, and BENCH MARK.

SOUND BARRIER WALL 2

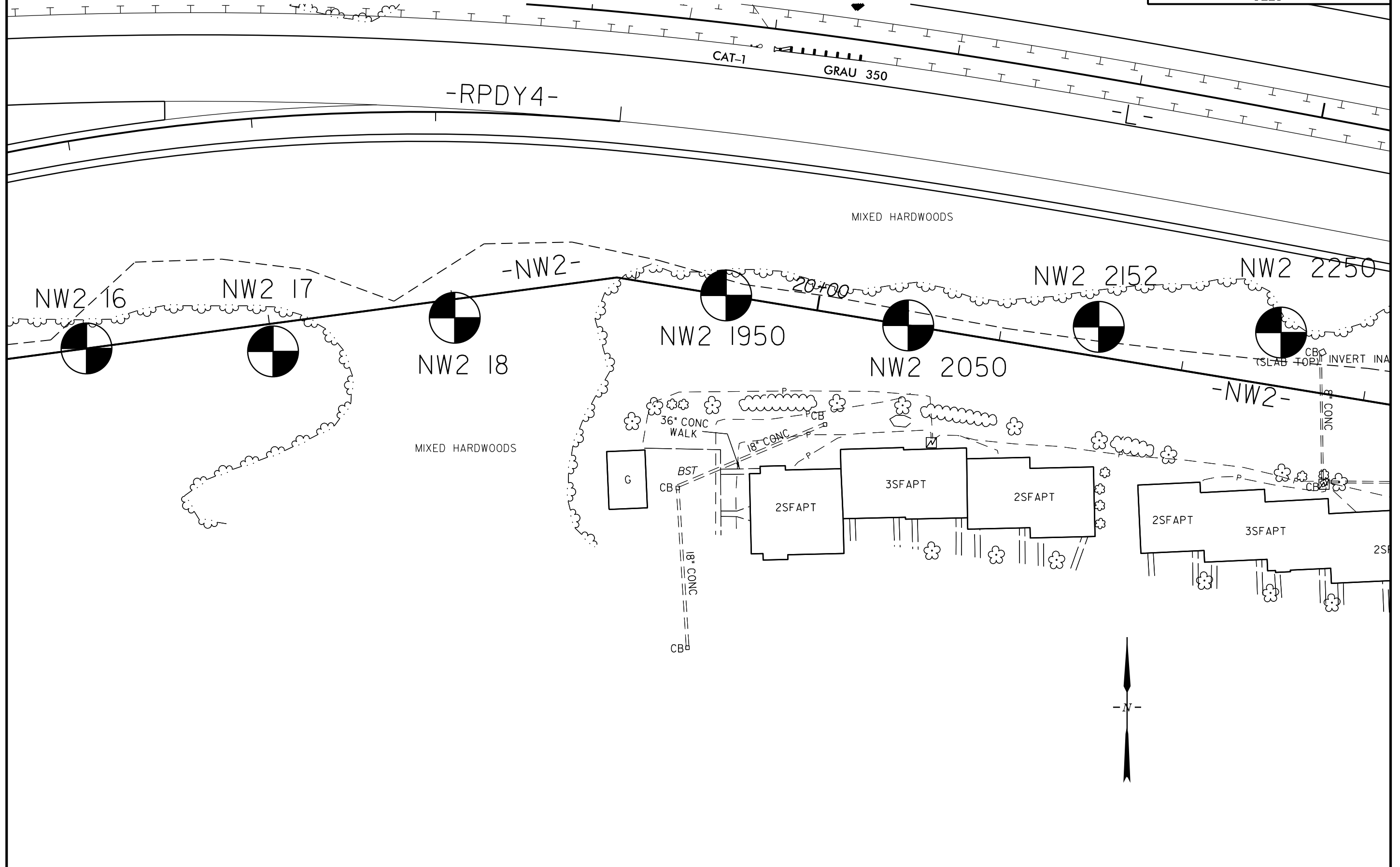
PROJECT REFERENCE NO.	SHEET NO.
U-2524D(25572)	3
SITE PLAN	
 0 50 100 FEET	



BEGIN NOISE WALL 2
-RPDY4- STA. 8+84.33, 140.61' LT

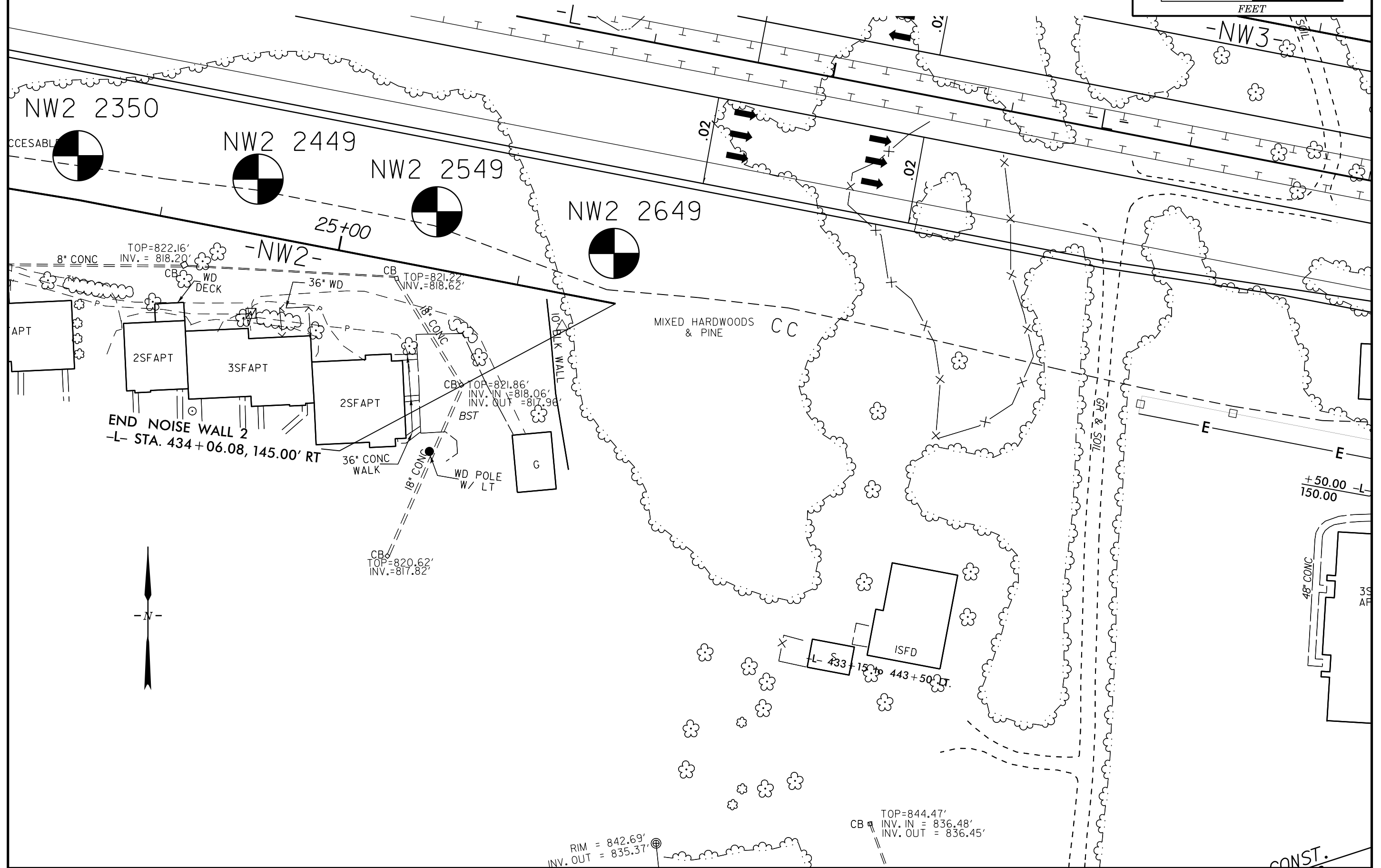
SOUND BARRIER WALL 2

PROJECT REFERENCE NO.	SHEET NO.
U-2524D(25572)	4
SITE PLAN	
0 50 100 FEET	



SOUND BARRIER WALL 2

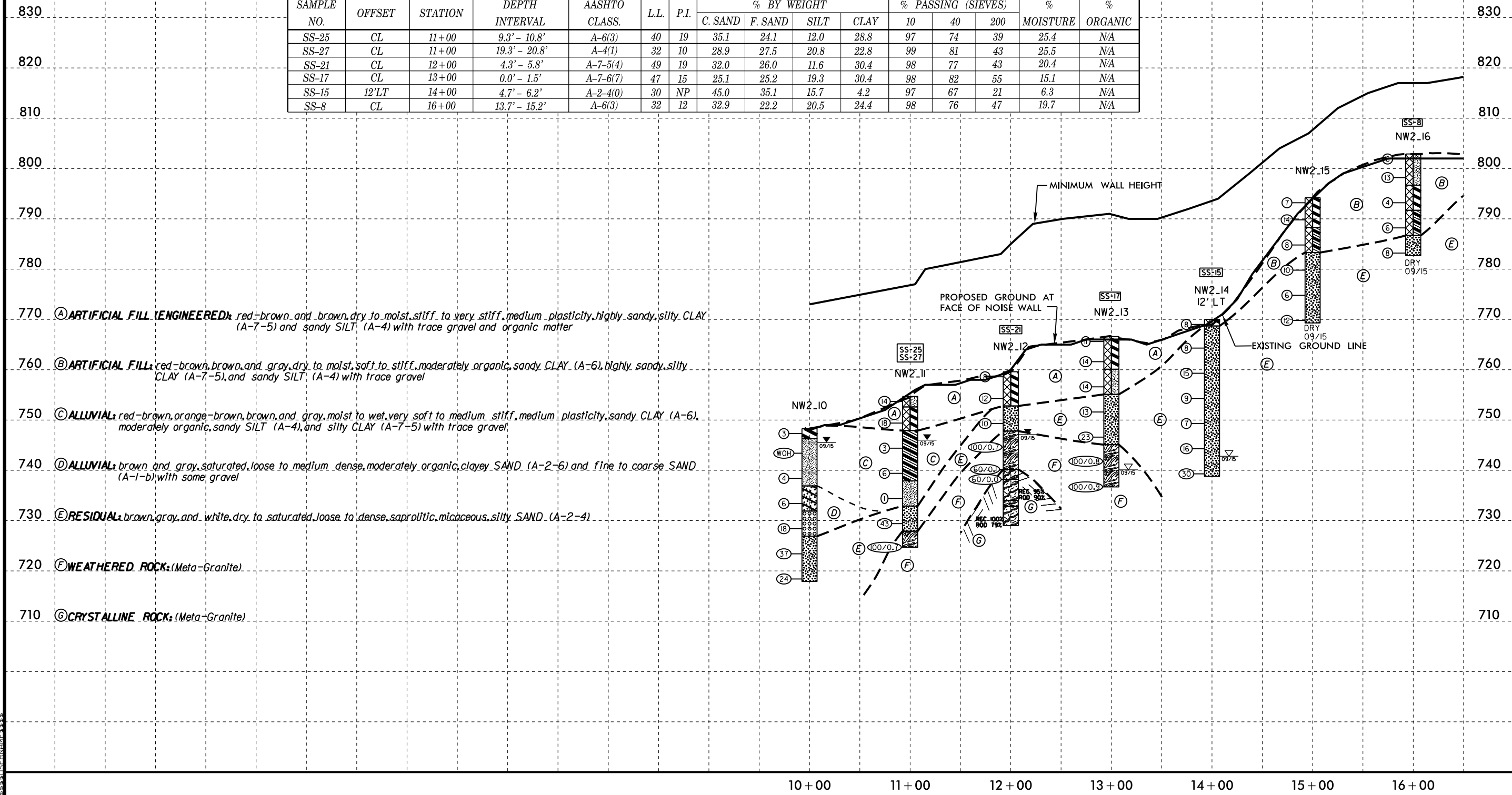
PROJECT REFERENCE NO.	SHEET NO.
U-2524D(25572)	5
SITE PLAN	
 0 50 100 FEET	



SOUND BARRIER WALL 2 PROFILE

PROJECT REFERENCE NO. U-2524D	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-25	CL	11+00	9.3' - 10.8'	A-6(3)	40	19	35.1	24.1	12.0	28.8	97	74	39	25.4	N/A
SS-27	CL	11+00	19.3' - 20.8'	A-4(1)	32	10	28.9	27.5	20.8	22.8	99	81	43	25.5	N/A
SS-21	CL	12+00	4.3' - 5.8'	A-7-5(4)	49	19	32.0	26.0	11.6	30.4	98	77	43	20.4	N/A
SS-17	CL	13+00	0.0' - 1.5'	A-7-6(7)	47	15	25.1	25.2	19.3	30.4	98	82	55	15.1	N/A
SS-15	12'LT	14+00	4.7' - 6.2'	A-2-4(0)	30	NP	45.0	35.1	15.7	4.2	97	67	21	6.3	N/A
SS-8	CL	16+00	13.7' - 15.2'	A-6(3)	32	12	32.9	22.2	20.5	24.4	98	76	47	19.7	N/A



- 770 (A) **ARTIFICIAL FILL (ENGINEERED):** red-brown and brown, dry to moist, stiff to very stiff, medium plasticity, highly sandy, silty CLAY (A-7-5) and sandy SILT (A-4) with trace gravel and organic matter
- 760 (B) **ARTIFICIAL FILL:** red-brown, brown and gray, dry to moist, soft to stiff, moderately organic, sandy CLAY (A-6), highly sandy, silty CLAY (A-7-5), and sandy SILT (A-4) with trace gravel
- 750 (C) **ALLUVIAL:** red-brown, orange-brown, brown and gray, moist to wet, very soft to medium stiff, medium plasticity, sandy CLAY (A-6), moderately organic, sandy SILT (A-4), and silty CLAY (A-7-5) with trace gravel
- 740 (D) **ALLUVIAL:** brown and gray, saturated, loose to medium dense, moderately organic, clayey SAND (A-2-6) and fine to coarse SAND (A-1-b) with some gravel
- 730 (E) **RESIDUAL:** brown, gray and white, dry to saturated, loose to dense, saprolitic, micaceous, silty SAND (A-2-4)
- 720 (F) **WEATHERED ROCK:** (Meta-Granite)
- 710 (G) **CRYSTALLINE ROCK:** (Meta-Granite)

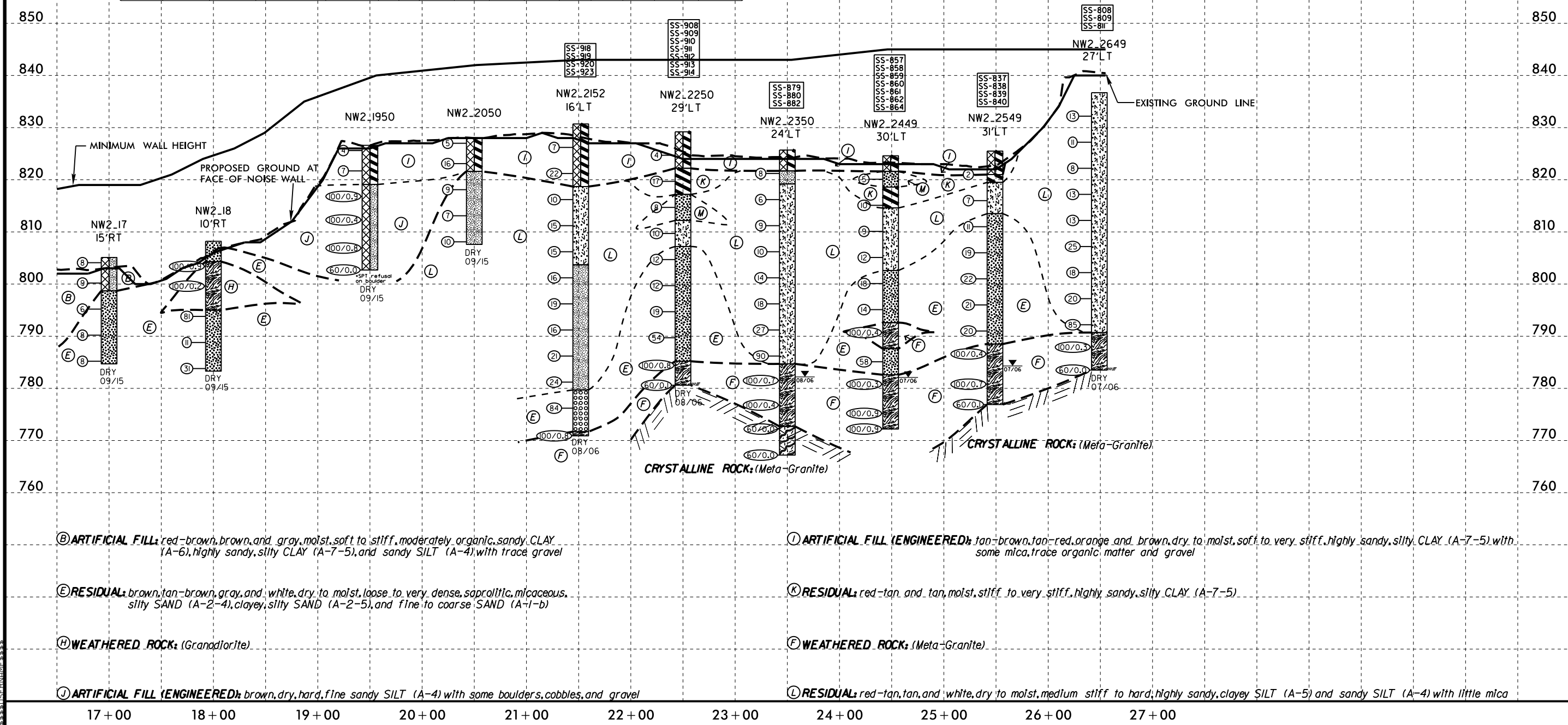
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SOUND BARRIER WALL 2 PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2524D	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
							SS-918	16'LT	21+52	3.5' - 5.0'	A-7-5(2)	57	20		
SS-919	16'LT	21+52	8.5' - 10.0'	A-7-5(15)	59	28	21.4	23.5	14.7	40.4	100	87	60	NA	NA
SS-920	16'LT	21+52	13.5' - 15.0'	A-5(1)	48	6	24.7	37.2	17.9	20.2	100	87	45	NA	NA
SS-923	16'LT	21+52	28.5' - 30.0'	A-4(0)	38	NP	32.4	38.6	18.9	10.1	99	76	37	NA	NA
SS-908	29'LT	22+50	3.5' - 5.0'	A-7-5(10)	54	16	17.4	28.3	24.0	30.3	100	90	61	NA	NA
SS-909	29'LT	22+50	8.5' - 10.0'	A-7-5(3)	41	11	27.9	27.9	24.0	20.2	100	82	50	NA	NA
SS-910	29'LT	22+50	13.5' - 15.0'	A-2-4(0)	40	NP	50.6	31.3	14.1	4.0	100	63	24	NA	NA
SS-911	29'LT	22+50	18.5' - 20.0'	A-5(3)	48	10	20.0	41.1	30.8	8.1	100	89	49	NA	NA
SS-912	29'LT	22+50	23.5' - 25.0'	A-2-4(0)	36	NP	39.0	34.6	20.3	6.1	96	72	32	NA	NA
SS-913	29'LT	22+50	28.5' - 30.0'	A-2-5(0)	43	NP	42.5	35.0	16.5	6.1	98	74	27	NA	NA
SS-914	29'LT	22+50	33.5' - 35.0'	A-2-4(0)	36	NP	41.1	36.6	16.3	6.1	98	70	29	NA	NA
SS-879	24'LT	23+50	3.5' - 5.0'	A-4(0)	40	NP	11.7	58.4	19.7	10.1	100	96	40	NA	NA
SS-880	24'LT	23+50	8.5' - 10.0'	A-5(0)	45	NP	14.2	57.8	21.9	6.1	98	94	36	NA	NA
SS-882	24'LT	23+50	18.5' - 20.0'	A-5(0)	45	NP	28.9	41.9	21.1	8.1	100	84	37	NA	NA

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
							SS-857	30'LT	24+49	3.5' - 5.0'	A-2-5(0)	53	NP		
SS-858	30'LT	24+49	8.5' - 10.0'	A-7-5(5)	59	11	13.8	42.9	31.2	12.1	100	98	51	NA	NA
SS-859	30'LT	24+49	13.5' - 15.0'	A-5(0)	55	NP	18.8	41.1	30.0	10.1	99	92	48	NA	NA
SS-860	30'LT	24+49	18.5' - 20.0'	A-5(0)	55	NP	17.6	47.9	26.4	8.1	100	90	45	NA	NA
SS-861	30'LT	24+49	23.5' - 25.0'	A-2-4(0)	40	NP	43.9	35.4	12.6	8.1	97	69	26	NA	NA
SS-862	30'LT	24+49	28.5' - 30.0'	A-2-5(0)	44	NP	26.7	49.5	17.7	6.1	99	88	31	NA	NA
SS-864	30'LT	24+49	38.5' - 40.0'	A-2-4(0)	29	NP	38.8	40.0	15.1	6.1	98	77	27	NA	NA
SS-837	31'LT	25+49	3.5' - 5.0'	A-7-5(5)	51	12	20.2	35.4	20.0	24.3	100	90	51	NA	NA
SS-838	31'LT	25+49	8.5' - 10.0'	A-5(0)	54	NP	21.1	40.3	24.5	14.2	100	89	46	NA	NA
SS-839	31'LT	25+49	13.5' - 15.0'	A-2-5(0)	41	NP	30.7	46.1	15.1	8.1	99	87	29	NA	NA
SS-840	31'LT	25+49	18.5' - 20.0'	A-2-5(0)	45	NP	33.0	42.7	16.3	8.1	92	78	30	NA	NA
SS-808	27'LT	26+49	3.5' - 5.0'	A-5(3)	53	10	28.5	27.9	17.2	26.3	99	81	47	NA	NA
SS-809	27'LT	26+49	8.5' - 10.0'	A-5(5)	59	8	11.1	41.1	29.6	18.2	100	94	56	NA	NA
SS-811	27'LT	26+49	18.5' - 20.0'	A-5(0)	53	NP	28.5	40.9	22.5	8.1	100	86	40	NA	NA



ⓑ **ARTIFICIAL FILL:** red-brown, brown, and gray, moist, soft to stiff, moderately organic, sandy CLAY (A-6), highly sandy, silty CLAY (A-7-5), and sandy SILT (A-4), with trace gravel

ⓔ **RESIDUAL:** brown, tan-brown, gray, and white, dry to moist, loose to very dense, saprolitic, micaceous, silty SAND (A-2-4), clayey, silty SAND (A-2-5), and fine to coarse SAND (A-1-b)

ⓓ **WEATHERED ROCK:** (Granodiorite)

ⓙ **ARTIFICIAL FILL (ENGINEERED):** brown, dry, hard, fine sandy SILT (A-4) with some boulders, cobbles, and gravel

Ⓛ **ARTIFICIAL FILL (ENGINEERED):** tan-brown, tan-red, orange and brown, dry to moist, soft to very stiff, highly sandy, silty CLAY (A-7-5) with some mica, trace organic matter and gravel

Ⓚ **RESIDUAL:** red-tan and tan, moist, stiff to very stiff, highly sandy, silty CLAY (A-7-5)

ⓕ **WEATHERED ROCK:** (Meta-Granite)

Ⓛ **RESIDUAL:** red-tan, tan, and white, dry to moist, medium stiff to hard, highly sandy, clayey SILT (A-5) and sandy SILT (A-4) with little mica

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