

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

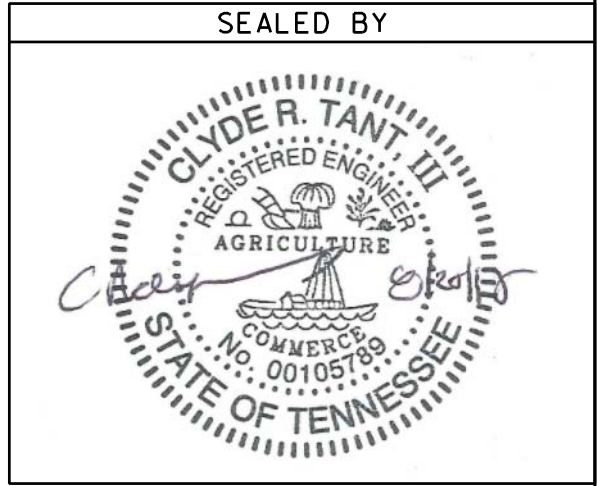
SOIL TEST BORING SAMPLE LOCATIONS AND TYPE				
SOIL TEST BORING	SAMPLE NUMBER	DEPTH (ft)	SAMPLE TYPE	SAMPLE TESTED
R1-15	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
R1-15-CA	1	11.0 - 12.5	SS	
	2	14.0 - 15.5	SS	
	3	16.0 - 17.5	SS	
	4	19.0 - 20.5	SS	
	5	21.0 - 22.5	SS	
R1-16	1	0 - 3.5	Grab	
R1-17	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
R1-18	1	0 - 5.0	Grab	
	2	5.0 - 6.4	Grab	
R1-19	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
R1-20	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
R1-20-CA	1	3.5 - 5.0	SS	
R1-21	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
R1-22	1	1.0 - 2.5	SS	
	2	3.0 - 5.0	UD	X
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 14.0	SS	
R1-23	1	0 - 3.5	Grab	
R1-24	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 12.0	Grab	
R1-25	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
R1-26	1	1.0 - 2.5	SS	
	2	3.0 - 5.0	UD	X
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
R1-27	1	1.0 - 2.5	SS	
R1-28	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
R2-1	1	1.0 - 2.5	SS	
	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
R2-3	1	3.0 - 15.0	Bulk	X
R2-4	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
	4	15.0 - 20.0	Grab	
R2-5	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
R2-6	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.0	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
	6	18.5 - 20.0	SS	
R2-7	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.0	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
	6	18.5 - 20.0	SS	
	7	23.5 - 25.0	SS	

SOIL TEST BORING SAMPLE LOCATIONS AND TYPE				
SOIL TEST BORING	SAMPLE NUMBER	DEPTH (ft)	SAMPLE TYPE	SAMPLE TESTED
R2-8	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.0	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
	6	18.5 - 20.0	SS	
	7	23.5 - 25.0	SS	
	8	28.5 - 30.0	SS	
	9	33.5 - 35.0	SS	
R2-9	1	5.0 - 15.0	Bulk	X
R2-10	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
	4	15.0 - 20.0	Grab	
	5	20.0 - 25.0	Grab	
R2-11	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
	4	15.0 - 20.0	Grab	
	5	20.0 - 25.0	Grab	
	6	25.0 - 30.0	Grab	
R2-12A	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
	4	15.0 - 20.0	Grab	
	5	20.0 - 25.0	Grab	
R2-13	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
R2-14	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
R2-15	1	0 - 5.0	Grab	
R2-17	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
R2-17-CA	1	15.0 - 16.5	SS	
	2	16.5 - 18.0	SS	
	3	20.0 - 21.5	SS	
	4	21.5 - 23.0	SS	
R3-1	1	0 - 4.5	Grab	
R3-2	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
	3	10.0 - 15.0	Grab	
R3-3	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	5.0 - 7.0	UD	X
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
R3-4	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	X
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
R3-7	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	X
	5	13.5 - 15.0	SS	
	6	18.5 - 20.0	SS	
AR-1	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 6.5	SS	
AR-2	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	X
AR-3	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
AR-4	1	0 - 5.0	Grab	
	2	5.0 - 10.0	Grab	
AR-5	1	3.0 - 5.0	UD	X
	2	0.3 - 20.0	Bulk	X

SOIL TEST BORING SAMPLE LOCATIONS AND TYPE				
SOIL TEST BORING	SAMPLE NUMBER	DEPTH (ft)	SAMPLE TYPE	SAMPLE TESTED
AR-6	1	1.0 - 2.5	SS	
	2	3.0 - 5.0	UD	X
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
	5	13.5 - 15.0	SS	
	6	18.5 - 20.0	SS	
AR-7	1	0 - 5.0	Grab	
NAR-1	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
NAR-2	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	
	3	6.0 - 7.5	SS	
	4	8.5 - 10.0	SS	
NAR-3	1	1.0 - 2.5	SS	X
	2	3.5 - 5.0	SS	X
	3	6.0 - 7.5	SS	X
	4	8.5 - 10.0	SS	X
	5	13.5 - 15.0	SS	X
NAR-5	1	1.0 - 2.5	SS	
	2	3.5 - 5.0	SS	X
	3	6.0 - 7.5	SS	X
	4	8.5 - 10.0	SS	X
	5	13.5 - 15.0	SS	X
	6	18.5 - 20.0	SS	X
	7	23.5 - 25.0	SS	X
	8	28.5 - 30.0	SS	X
NAR-7	1	1.0 - 2.5	SS	X
	2	3.5 - 5.0	SS	X
	3	6.0 - 7.5	SS	X
	4	8.5 - 10.0	SS	X

SUMMARY OF SOIL LABORTORY TESTING SOIL TEST BORINGS R1-15 THROUGH R1-28, R2-1 THROUGH R2-17-CA, R3-1 THROUGH R3-7, AR-1 THROUGH AR-7, AND NAR-1 THROUGH NAR-7										
SOIL TEST BORING	SAMPLE NO.	SAMPLE DESCRIPTION	STANDARD PROCTOR DENSITY (lb/ft³)	OPTIMUM MOISTURE (%)	NATURAL MOISTURE CONTENT (%)	LL	PI	Specific Gravity	AASHTO CLASS	USCS CLASS
R1-22	2	Light brown to brown silty CLAY	---	---	18.2	---	---	2.718	---	---
R1-26	2	Light brown and maroon clayey SILT	---	---	20.7	---	---	2.519	---	---
R2-3	1	Brown weathered SHALE	108.6	18	12.5	35	18	2.762	A-6(9)	CL
R2-9	1	Brown silty CLAY	105.8	19.1	24.7	39	21	2.724	A-6(16)	CL
R3-3	3	Dark gray sandy CLAY	---	---	21.7	---	---	2.637	---	---
R3-4	3	Brown to dark brown silty CLAY	---	---	17.6	29	16	---	A-6(9)	CL
R3-7	4	Brown to dark brown silty CLAY	---	---	24.9	38	20	---	A-6(9)	CL
AR-2	4	Brown silty CLAY with SHALE frags	---	---	40.8	60	36	---	A-7-6(35)	CH
AR-5	1	Brown to reddish brown silty CLAY	95.8	26	26.4	60	35	---	A-7-6(33)	CH
AR-5	2	Brown to dark brown silty CLAY	---	---	16.1	---	---	2.731	---	---
AR-6	2	Light brown to brown and gray silty CLAY	---	---	33.9	---	---	2.749	---	---
NAR-3	1	Brown to dark brown silty CLAY	---	---	17.2	---	---	---	---	---
	2	Brown silty CLAY to CLAY	---	---	18.9	23	11	---	A-6(1) / SC	SC
	3	Brown silty CLAY to CLAY	---	---	21.3	---	---	---	---	---
	4	Brown silty CLAY to CLAY	---	---	36.4	70	44	---	A-7-6(41)	CH
	5	Brown silty CLAY to CLAY	---	---	46.5	---	---	---	---	---
NAR-5	2	Light brown to brownish red silty CLAY	---	---	38.2	52	20	---	A-7-5(13)	MH
	3	Light brown to brownish red silty CLAY	---	---	43.5	---	---	---	---	---
	4	Light brown to brownish red silty CLAY	---	---	40.5	---	---	---	---	---
	5	Light brown to brownish red silty CLAY	---	---	49.6	47	20	---	A-7-6(18)	CL
	6	Light brown to brown silty CLAY	---	---	16.3	---	---	---	---	---
	7	Brown to brownish red silty CLAY	---	---	54.2	57	35	---	A-7-6(31)	CH
	8	Brown to bluish gray weathered SHALE	---	---	30.2	---	---	---	---	---
NAR-7	1	Brown to dark brown silty CLAY	---	---	23.4	---	---	---	---	---
	2	Light brown to brown weathered SHALE	---	---	20.5	NP	NP	---	A-3(0)	SM
	3	Light brown to brown weathered SHALE	---	---	16	---	---	---	---	---
	4	Light brown to brown weathered SHALE	---	---	22.1	---	---	---	---	---

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2015	NH-1-640-7 (161)	28K



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOIL
STA. 138+00
TO
STA. 148+50
1-640
KNOX COUNTY