



LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
3301 ATLANTIC AVENUE  
RALEIGH, NC 27604

N.C.D.O.T./AASHTO CLASSIFICATIONS

REPORT ON SAMPLES OF: SOILS FOR QUALITY

Law Project Name and Number: Clayton Bypass Over Austin Pond (30725-1-4791)

Project: 8.T 311002 (R-2552AB) County: Johnston Owner: N.C.D.O.T.  
Date Sampled: July to August 01 Received: 8/21/01 Reported: 8/27/01  
Sampled from: B6-ALL, B7-ALL, B7-BLL, EB1-ALL, EB1-BLL By: LAW ENGINEERING  
Submitted by: Law Engineering and Environmental Services, Inc. 1992 Standard Specifications

TEST RESULTS

Lab Sample No.		SS-1	SS-2	SS-3	SS-30	SS-31	SS-32
Retained 4.75 mm Sieve (%)		0.0	0.2	0.0	0.0	0.0	0.4
Passing 2.00 mm Sieve (%)		100.0	98.4	96.8	100.0	100.0	98.2
Passing 425 µm Sieve (%)		98.2	87.3	60.3	99.6	96.3	83.8
Passing 75 µm Sieve (%)		29.5	11.7	21.9	93.8	76.8	53.4

MINUS 2.00mm FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - 250 µm (%)		13.7	38.8	52.6	1.3	9.3	26.2
Fine Sand Ret - 53 µm (%)		66.1	52.4	31.0	6.1	15.9	23.1
Silt 0.05 - 0.005 mm (%)		16.1	4.9	12.5	30.9	48.8	16.0
Clay < 0.005 mm (%)		4.1	3.9	3.9	61.7	26.0	34.7

Moisture Content (%)		40.3	ND	20.9	56.2	71.5	19.5
Liquid Limit, L.L.		42	24	32	88	73	40
Plasticity Index, P.I.		NP	NP	NP	25	32	20
AASHTO Classification		A-2-5(0)	A-2-4(0)	A-2-4(0)	A-7-5(38)	A-7-5(29)	A-6(7)
Organic Content (%)		ND	ND	ND	ND	ND	ND

Boring No.		B6-ALL	B7-ALL	B7-BLL	EB1-AaLL	EB1-AaLL	EB1-BLL
Station		41+08.7	41+33.5	41+41.3	39+58.8	39+58.8	39+67.0
Offset		21.7m LT	21.6m LT	8.8m LT	23.8m LT	23.8m LT	7.8m LT
Alignment		-L-	-L-	-L-	-L-	-L-	-L-
Depth (m)	From	4.48	2.90	5.91	0.72	3.78	0.00
	to	4.93	3.35	6.36	1.17	4.23	0.45

REMARKS: ND=Not Determined



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Law Project Name and Number: Clayton Bypass Over Austin Pond (30725-1-4791)

Project: 8.T311002 (R-2552AB) County: Johnston Owner: N.C.D.O.T.  
Date Sampled: August to Sept. Received: 9/12/01 Reported: 9/24/01  
Sampled from: EB1-BLL, B1-BLL By: LAW ENGINEERING  
Submitted by: Law Engineering and Environmental Services, Inc. 1992 Standard Specifications

TEST RESULTS

Lab Sample No.		SS-33	SS-34	SS-35	SS-36	SS-37	SS-38
Retained 4.75 mm Sieve (%)		0.0	0.0	0.0	0.1	35.8	0.0
Passing 2.00 mm Sieve (%)		97.4	99.6	98.9	95.8	57.8	96.5
Passing 425 µm Sieve (%)		64.7	90.3	88.4	69.9	36.2	67.4
Passing 75 µm Sieve (%)		32.8	40.9	44.2	27.8	16.8	30.1

MINUS 2.00mm FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - 250 µm (%)		45.4	21.5	18.6	44.8	70.2	44.4
Fine Sand Ret - 53 µm (%)		25.6	41.2	43.3	31.1	14.7	29.6
Silt 0.05 - 0.005 mm (%)		15.9	14.8	24.8	16.8	6.9	15.1
Clay < 0.005 mm (%)		13.1	22.5	13.3	7.3	8.2	10.9

Moisture Content (%)		ND	56.4	51.2	25.9	ND	22.4
Liquid Limit, L.L.		47	63	50	33	33	29
Plasticity Index, P.I.		NP	NP	NP	NP	NP	NP
AASHTO Classification		A-2-5(0)	A-5(0)	A-5(0)	A-2-4(0)	A-1-b	A-2-4(0)
Organic Content (%)		ND	ND	ND	ND	ND	ND

Boring No.		EB1-BLL	EB1-BLL	EB1-BLL	EB1-BLL	B1-BLL	B1-BLL
Station		39+67.0	39+67.0	39+67.0	39+67.0	39+90.9	39+90.9
Offset		7.8m LT	7.8m RT	7.8m RT	7.8m RT	10.4m LT	10.4m LT
Alignment		-L-	-L-	-L-	-L-	-L-	-L-
Depth (m)	From	2.47	4.09	8.65	13.15	1.39	7.48
	to	2.92	4.54	9.10	13.60	1.84	7.93

REMARKS: ND=Not Determined