



**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. 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: EB2-ARL, EB2-BRL By: LAW ENGINEERING  
 Submitted by: Law Engineering and Environmental Services, Inc. 1992 Standard Specifications

**TEST RESULTS**

Lab Sample No.	SS-50	SS-51	SS-52	SS-53		
Retained 4.75 mm Sieve (%)	2.3	0.0	0.0	0.0		
Passing 2.00 mm Sieve (%)	94.0	99.8	97.5	99.9		
Passing 425 µm Sieve (%)	69.4	73.7	80.3	86.5		
Passing 75 µm Sieve (%)	28.0	28.6	27.8	38.9		

SOIL MORTAR - 100%						
Coarse Sand Ret - 250 µm (%)	42.1	40.6	38.6	27.2		
Fine Sand Ret - 53 µm (%)	34.4	30.8	37.5	40.0		
Silt 0.05 - 0.005 mm (%)	16.8	19.7	17.0	24.8		
Clay < 0.005 mm (%)	6.7	8.9	6.9	8.0		

Moisture Content (%)	22.3	21.9	ND	38.0		
Liquid Limit, L.L.	32	37	42	42		
Plasticity Index, P.I.	NP	NP	NP	NP		
AASHTO Classification	A-2-4(0)	A-2-4(0)	A-2-5(0)	A-5(0)		
Organic Content (%)	ND	ND	ND	ND		

Boring No.	EB2-ARL	EB2-BRL	EB2-BRL	EB2-BRL		
Station	41+94.1	42+04.0	42+04.0	42+04.0		
Offset	8.0m RT	23.1m RT	23.1m RT	23.1m RT		
Alignment	-L-	-L-	-L-	-L-		
Depth (m) From	5.80	2.72	5.76	8.80		
to	6.25	3.17	6.21	9.25		

REMARKS: ND=Not Determined

Reviewed by: Michael B. L.



**MACTEC ENGINEERING AND CONSULTING, INC.**  
 3301 ATLANTIC AVENUE  
 RALEIGH, NORTH CAROLINA 27604

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

REPORT ON SAMPLES OF: SOILS FOR QUALITY

MACTEC PROJECT NAME: Dual structures on Clayton Bypass (-L-) over White Oak Creek (Austin Pond)

PROJECT: 8.T311002 (R-2552AB) COUNTY: Johnston OWNER: N.C.D.O.T.  
 DATE SAMPLED: SEPTEMBER 2003 RECEIVED: 9/10/03 REPORTED BY: MACTEC  
 SAMPLED FROM: EB1-B RL REV  
 SUBMITTED BY: MACTEC ENGINEERING AND CONSULTING, INC.  
 1992 STANDARD SPECIFICATIONS

**TEST RESULTS**

Lab Sample No.	SS-56	SS-57			
Retained 4.75 mm Sieve (%)	0.0	0.0			
Passing 2.00 mm Sieve (%)	100.0	99.7			
Passing 425 µm Sieve (%)	98.1	77.3			
Passing 75 µm Sieve (%)	91.5	35.6			

**MINUS 2.00mm FRACTION**

SOIL MORTAR - 100%						
Coarse Sand Ret - 250 µm (%)	4.0	36.5				
Fine Sand Ret - 53 µm (%)	5.9	35.1				
Silt 0.05 - 0.005 mm (%)	78.2	22.8				
Clay < 0.005 mm (%)	11.9	5.6				
	100.0	100.0				

Moisture Content (%)	27.1	25.5				
Liquid Limit, L.L.	34	30				
Plasticity Index, P.I.	4	0				
AASHTO Classification	A-4(5)	A-4(0)				
Organic Content (%)	ND	ND				

Boring No.	EB1-B RL REV	EB1-B RL REV			
Station	39+82.1	39+82.1			
Offset	21.9m LT	21.9m LT			
Alignment	-L-	-L-			
Depth (m) From	2.66	8.74			
to	3.11	9.19			

REMARKS: ND = Not Determined

Reviewed by: E. Sebold