

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 AND NUMBER: Bridge on SBL US 421(-L-) over Bear Creek (6468-03-0124)

NCDOT PROJECT: 6.529005T (R-2610B(1)) COUNTY: CHATHAM

OWNER: NCDOT

DATE SAMPLED: April 2003

RECEIVED: APRIL 8 & 15, 2003

REPORTED BY: MACTEC

SAMPLED FROM: EB1-B, B1-A, B1-B, B2-A, EB2-B, CHANNEL

SUBMITTED BY: MACTEC ENGINEERING & CONSULTING, INC.

1992 STANDARD SPECIFICATIONS

TEST RESULTS

Lab Sample No.	SS-1	SS-2	SS-3	SS-4	SS-5	S-1
Retained 4.75 mm Sieve (%)	7.9	0.0	1.6	3.8	4.9	41.2
Passing 2.00 mm Sieve (%)	89.5	100.0	97.5	95.6	91.3	46.3
Passing 425 µm Sieve (%)	83.8	98.6	87.8	94.1	81.4	24.7
Passing 75 µm Sieve (%)	73.9	71.6	50.7	76.7	58.8	3.7

MINUS 2.00mm FRACTION

SOIL MORTAR - 100%						
Coarse Sand Ret - 250 µm (%)	9.6	6.7	24.6	3.5	17.2	74.7
Fine Sand Ret - 53 µm (%)	10.4	25.6	26.6	21.4	24.8	18.1
Silt 0.05 - 0.005 mm (%)	38.8	34.2	20.0	41.1	37.0	2.4
Clay < 0.005 mm (%)	41.2	33.5	28.8	34.0	21.0	4.8
	100.0	100.0	100.0	100.0	100.0	100.0

Moisture Content (%)	20.6	31.4	24.7	19.2	14.6	ND
Liquid Limit, L.L.	36	31	24	27	32	24
Plasticity Index, P.I.	15	10	6	9	13	NP
AASHTO Classification	A-6(10)	A-4(6)	A-4(0)	A-4(5)	A-6(5)	A-1-a
Organic Content (%)	ND	ND	ND	ND	ND	ND

Boring No.	EB1-B	B1-A	B1-B	B2-A	EB2-B	CHANNEL	
Station	22+50.1	22+72.8	22+68.6	22+98.6	23+17.4	22+75.0	
Offset	5.8m LT	15.9m LT	6.9m LT	15.9m LT	5.8m LT	0.5m LT	
Alignment	-L-	-L-	-L-	-L-	-L-	-L-	
Depth (m)	From	0.00	1.10	1.32	1.01	1.43	0.00
	to	0.45	1.55	1.77	1.46	1.88	0.15

REMARKS: ND = Not Determined, NP = Non-Plastic