COMPUTED BY: L.N. MAGUIRE DATE: 1/26/03
CHECKED BY: J.W. MOORE DATE: 1/30/03

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-3651 SHEET NO. 3-B

Kimley-Horn and Associates, Inc.
P.O. BOX 33068
RALEIGH, N.C. 27636-3068

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024436 JEFFREY W. MOORE 3-26-04

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	CRITICAL SLOPE	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) 12" .064	15" .064	18" .064	24" .064	24"	30" .079	30"	36" .079	36"	42" .109	42"	48" .109	48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.
19+79 -L-	RT	13		640.77	632.95																												
19+79 -L-	RT	13	14		632.95	636.23	0.051		64																								
10+91 -Y2-	RT	14		639.47	636.23																												
10+91 -Y2-	RT	14	15		636.23	636.51	0.009		32																								
10+91 -Y2-	LT	15		639.47	636.51																												
20+00 -L-	LT	16		640.79	636.52																												
20+00 -L-	LT	16	13		636.52	632.95	0.074		48																								
13+01 -Y3-	RT	17		651.85	646.90																												
13+01 -Y3-	RT	17	18		646.90	647.08	0.006		28																								
13+31 -Y3-	RT	18		651.41	647.08																												
13+31 -Y3-	RT	18	19		647.08	647.29	0.008		28																								
13+31 -Y3-	LT	19		651.41	647.29																												
13+31 -Y3-	LT	19	20		647.29	649.15	0.047		40																								
22+98 -L-	LT	20		655.25	649.15																												
22+98 -L-	LT	20	21		649.15	649.35	0.050		4																								
23+00 -L-	LT	21		654.70	649.35																												
23+00 -L-	LT	22		653.50	649.75																												
23+00 -L-	LT	22	20		649.75	649.15	0.050		12																								
24+05 -L-	RT	23																															
26+04 -L-	LT	24																															
SHEET TOTAL									256																								
TOTAL									772	376	160								76														
SAY																																	

STATION	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	LIN. *FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	TYPE OF CONSTRUCTION PERMITTED BRICK	BLOCK	CONCRETE	PRECAST	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES & HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	M.D.I. TYPE "A" STD. 840.17 OR 840.26	M.D.I. TYPE "B" STD. 840.18 OR 840.27	M.D.I. TYPE "D" STD. 840.19 OR 840.28	M.D.I. FRAME WITH GRATE STD. 840.22	M.D.I. FRAME WITH TWO GRATES STD. 840.22	M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	ADJUSTMENT OF CATCH BASINS	CONV. EXIST. C.B. TO J.B.	T.B.J.B. STD. 840.34	M.H. FRAME & COVER STD. 840.54	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
19+79 -L-	1	2.82		X	X	X	X																	1	1					
19+79 -L-																													180	REMOVE EXISTING SYSTEM
10+91 -Y2-	1			X	X	X	X	1	1																					
10+91 -Y2-																														
10+91 -Y2-	1			X	X	X	X	1	1																					
20+00 -L-	1			X	X	X	X	1		1																				
20+00 -L-																														
13+01 -Y3-																						1								
13+01 -Y3-																														TIE PROP RCP TO EXIST CB
13+31 -Y3-	1			X	X	X	X	1	1																					
13+31 -Y3-																														
13+31 -Y3-	1			X	X	X	X	1	1																					
13+31 -Y3-																														
22+98 -L-				X	X	X	X																1		1				92	REMOVE EXISTING CB
22+98 -L-																														
23+00 -L-	1	0.35		X	X	X	X	1		1																				
23+00 -L-	1			X	X	X	X						1	1																
23+00 -L-																														
24+05 -L-																												0.045		REMOVE EXISTING CB
26+04 -L-																						1								
SHEET TOTAL	8	3.17						6	4	2			1	1								2	1	1	2			0.045	272	
TOTAL	19	12.00						16	8	6	2		2	2								2	1	1	2	4-24"		0.045	824	
SAY		12																										0.5		

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I. (N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUCTION BOX

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