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TGSLTW1014

COMPUTED BY: REL DATE: 07/28/2022

CHECKED BY: BJH DATE: 07/28/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-2

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

| LINE & STATION | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS III SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A: 0' THRU 5' EACH | B: 5' THRU 10' LIN. FT. | B: 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5 | SEE DETAIL SHEET 2C-15 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING C.B. TO D.I. | CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9 | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B. | ADJUST D.I. | CONVERT D.I. TO C.B., SEE DETAIL 2C-10 | 15" C.S. ELBOW | 18" C.S. ELBOW | 24" C.S. ELBOW | 30" C.S. ELBOW | 36" C.S. ELBOW | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-3

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

| LINE & STATION | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS III SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY | QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A: 0' THRU 5' EACH | B: 5' THRU 10' LIN. FT. | B: 10' AND ABOVE LIN. FT. | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5 | SEE DETAIL SHEET 2C-15 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING C.B. TO D.I. | CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9 | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B. | ADJUST D.I. | CONVERT D.I. TO C.B., SEE DETAIL 2C-10 | 15" C.S. ELBOW | 18" C.S. ELBOW | 24" C.S. ELBOW | 30" C.S. ELBOW | 36" C.S. ELBOW | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-4

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
			1309	1310		304.8	301.6														
L 378+62	41	LT	1313		315.3																
			1313	1315		312.1	311.3														
L 380+00	44	LT	1314		318.0																
			1314	1313		314.8	312.1														
L 378+60	41	RT	1315		315.3																
			1315	1317		311.3	307.6			44											
L 380+00	44	RT	1316		318.0																
			1316	1315		314.8	311.3														
L 393+02	4	LT	1401		334.8																
			1401	1461		326.3	326.0														
L 392+55	4	RT	1403		334.0																
			1403	1401		328.4	328.2														
L 392+08	12	RT	1405		333.2																
			1405	1403		328.6	328.4														
L 391+30	13	RT	1407		332.2																
			1407	1405		329.0	328.6														
L 390+00	17	RT	1409		330.5																
			1409	1411		327.3	325.7														
L 388+90	17	RT	1411		328.9																
			1411	1413		325.7	325.0														
L 388+10	17	RT	1413		328.2																
			1413	1415		325.0	324.5														
L 387+20	17	RT	1415		327.7																
			1415	1417		324.5	324.1														
L 386+30	17	RT	1417		327.3																
			1417	1419		324.1	323.6														
L 385+40	17	RT	1419		326.8																
			1419	1421		323.6	323.2														
L 384+50	17	RT	1421		326.4																
			1421	1425		323.2	322.6														
L 383+00	17	RT	1423		325.2																
			1423	1429		320.7	320.1	0.4													
L 383+60	17	RT	1425		325.8																
			1425	1423		322.6	320.7														
Y8 10+70	18	LT	1469		326.1																
			1469	1427		322.5	322.0														
Y8 10+65	3	RT	1470		325.7																
			1470	1469		322.6	322.5														
Y8 10+82	45	RT	1427		325.0																
			1427	1441		321.7	317.6														
L 382+33	1	RT	1429		323.7																
			1429	1431		320.1	317.8	0.5													
L 381+84	17	RT	1431		323.0																
			1431	1441		317.8	317.4	0.7													
L 383+00	13	LT	1433		324.2																
			1433	1423		321.0	320.7														
L 387+20	45	LT	1437		325.0																
			1437	1445		321.8	321.1														
L 381+84	55	RT	1441		323.0																
							SHEET TOTALS			44											

LINE & STATION	FROM	TO	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
	1309	1310																								184
L 378+62	1313																									
	1313	1315																		80						
L 380+00	1314																									
	1314	1313																		136						
L 378+60	1315																									
	1315	1317																								
L 380+00	1316																									
	1316	1315																		140						
L 393+02	1401																									
	1401	1461																								40
L 392+55	1403																									
	1403	1401																		42						
L 392+08	1405																									
	1405	1403																		51						
L 391+30	1407																									
	1407	1405																		70						
L 390+00	1409																									
	1409	1411																		108						
L 388+90	1411																									
	1411	1413																		80						
L 388+10	1413																									
	1413	1415																		88						
L 387+20	1415																									
	1415	1417																		88						
L 386+30	1417																									
	1417	1419																		88						
L 385+40	1419																									
	1419	1421																		88						
L 384+50	1421																									
	1421	1425																		88						
L 383+00	1423																									
	1423	1429																		68						
L 383+60	1425																									
	1425	1423																		60						
Y8 10+70	1469																									
	1469	1427																		66						
Y8 10+65	1470																									
	1470	1469																		14						
Y8 10+82	1427																									
	1427	1441																		40						
L 382+33	1429																									
	1429	1431																		52						
L 381+84	1431																									
	1431	1441																			40					
L 383+00	1433																									
	1433	1423																		28						
L 387+20	1437																									
	1437	1445																		140						
L 381+84	1441																									
SHEET TOTALS																				1615	40					224

LINE & STATION	FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15
	1309	1310	6.000									
L 378+62	1313			1			1		1			
	1313	1315										
L 380+00	1314			1			1		1			
	1314	1313										
L 378+60	1315			1			1			1		
	1315	1317										
L 380+00	1316			1			1			1		
	1316	1315										
L 393+02	1401			1	3.5						1	
	1401	1461										
L 392+55	1403			1	0.3						1	
	1403	1401										
L 392+08	1405			1							1	
	1405	1403										
L 391+30	1407			1							1	
	1407	1405										
L 390+00	1409			1							1	
	1409	1411										
L 388+90	1411			1							1	
	1411	1413										
L 388+10	1413			1							1	
	1413	1415										
L 387+20	1415			1							1	
	1415	1417										
L 386+30	1417			1							1	
	1417	1419										
L 385+40	1419			1							1	
	1419	1421										
L 384+50	1421			1							1	
	1421	1425										
L 383+00	1423			1							1	
	1423	1429										
L 383+60	1425			1							1	
	1425	1423										
Y8 10+70	1469			1							1	
	1469	1427										
Y8 10+65	1470			1							1	
	1470	1469										
Y8 10+82	1427			1			1			1		
	1427	1441										
L 382+33	1429			1							1	
	1429	1431										
L 381+84	1431			1	0.2							1
	1431	1441										
L 383+00	1433			1							1	
	1433	1423										
L 387+20	1437			1			1		1			
	1437	1445										
L 381+84	1441			1	0.6		1			1		
SHEET TOTALS			6.000	25	4.6		7		3	4	17	1

LINE & STATION	FROM	TO	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35
	1309	1310													
L 378+62	1313														
	1313	1315													
L 380+00	1314														
	1314	1313													
L 378+60	1315														
	1315	1317													
L 380+00	1316														
	1316	1315													
L 393+02	1401											1			1
	1401	1461													
L 392+55	1403											1			1
	1403	1401													
L 392+08	1405											1			1
	1405	1403													
L 391+30	1407											1			1
	1407	1405													
L 390+00	1409											1			1
	1409	1411													
L 388+90	1411											1			1
	1411	1413													
L 388+10	1413											1			1
	1413	1415													
L 387+20	1415											1			1
	1415	1417													
L 386+30	1417											1			1
	1417	1419													
L 385+40	1419											1			1
	1419	1421													
L 384+50	1421											1			1
	1421	1425													
L 383+00	1423											1			1
	1423	1429													
L 383+60	1425											1			1
	1425	1423													
Y8 10+70	1469											1			1
	1469	1427													
Y8 10+65	1470											1			1
	1470	1469													
Y8 10+82	1427														
	1427	1441													
L 382+33	1429											1			1
	1429	1431													
L 381+84	1431											1			1
	1431	1441													
L 383+00	1433											1			1
	1433	1423													
L 387+20	1437														
	1437	1445													
L 381+84	1441														
SHEET TOTALS												18			18

LINE & STATION	FROM	TO	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
	1309	1310																				
L 378+62	1313																					
	1313	1315																				
L 380+00	1314																					
	1314	1313																				
L 378+60	1315																					
	1315	1317																				
L 380+00	1316																					
	1316	1315																				
L 393+02	1401																					
	1401	1461																				
L 392+55	1403																					
	1403	1401																				
L 392+08	1405																					
	1405	1403																				
L 391+30	1407																					
	1407	1405																				
L 390+00	1409																					
	1409	1411																				
L 388+90	1411																					
	1411	1413																				
L 388+10	1413																					
	1413	1415																				
L 387+20	1415																					
	1415	1417																				
L 386+30	1417																					
	1417	1419																				
L 385+40	1419																					
	1419	1421																				
L 384+50	1421																					
	1421	1425																				
L 383+00	1423																					
	1423	1429																				
L 383+60	1425																					
	1425	1423																				
Y8 10+70	1469																					
	1469	1427																				
Y8 10+65	1470																					
	1470	1469																				
Y8 10+82	1427																					
	1427	1441																				
L 382+33	1429																					
	1429	1431																				
L 381+84	1431																					
	1431	1441																				
L 383+00	1433																					
	1433	1423																				
L 387+20	1437																					
	1437	1445																				
L 381+84	1441																					
SHEET TOTALS																						

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

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PROJECT NO.	SHEET NO.
R-5705B	3D-5

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
		1441	1318		317.4	316.9	0.8																																44																																																
L 384+50	45 LT	1443		323.7																																										1			1		1																																				
		1443	1447		320.5	318.4																																264																																																
L 385+75	45 LT	1445		324.4																																										1			1		1																																				
		1445	1443		321.1	320.5																																120																																															
L 381+82	45 LT	1447		321.6																																										1			1		1																																				
		1447	1431		318.4	318.0	0.4																															60																																																
		E301	1453		327.8	327.5	0.5																																			52																																													
L 394+70	51 RT	1453		337.5																																										1	5.0		1			1																																			
		1453	1455		327.5	327.2																																						48																																														
L 394+20	51 RT	1455		336.7																																										1	4.5		1			1																																			
		1455	1457		327.2	326.6																																						120																																														
L 393+00	58 RT	1457		335.6																																										1	4.0		1			1																																			
		1457	1401		326.6	326.3																																						60																																														
L 392+43	42 LT	1459		332.5																																										1	1.7		1		1																																				
		1459	1465		325.8	325.6																																						56																																														
L 392+88	41 LT	1461		333.7																																										1	2.7		1		1																																				
		1461	1459		326.0	325.8																																						44																																														
L 392+87	61 LT	1463		331.9																																										1										1	1																														
		1463	1461		327.8	327.7																																20																																																
Y20 11+10	18 RT	1464		332.8																																										1	0.7		1		1																																				
		1464	1457		327.1	326.6																																		56																																															
Y20 11+44	15 RT	1466		332.5																																										1	0.1		1	1																																					
		1466	1464		327.4	327.1																																		32																																																
Y20 11+44	17 LT	1467		332.5																																										1			1	1																																					
		1467	1466		329.4	328.1																																28																																																
L 394+27	57 LT	1468		335.9																																										1										1	1																														
Y22 17+23	46 RT	1471		324.5																																																																																				
		1471	1472		324.5	324.2																																51																																																
Y22 17+01	1 RT	1472		328.4																																										1							1												1			1																				
		1472	1473																																			22																																																
Y22 16+99	20 LT	1473		327.8																																										1			1		1		1																																		
		1473	1474		324.1	323.1			14																																																																																	
Y22 13+25	17 RT	1475		322.1																																										1			1			1																																			
		1475	2218		319.1	318.9																																25																																																
L 405+86	67 RT	1501		348.6																																										1			1			1																																			
		1501	1503		345.4	345.2																																36																																																
L 406+24	67 RT	1503		348.6																																										1			1		1																																				
		1503	1505		345.2	344.9																																32																																																
L 406+37	41 RT	1505		349.4																																										1			1		1																																				
		1505	1507		344.9	344.6																																88																																																
L 407+25	39 RT	1507		349.5																																										1			1		1																																				
		1507	1509		344.6	344.4																																40																																																
L 407+27	1 LT	1509		350.0																																										1	0.6						1												1			1																				
		1509	1617		344.4	343.8																																148																																																
L 406+85	51 LT	1511		349.0																																										1			1			1																																			
		1511	1513		345.7	345.6																																48																																																
L 407+34	48 LT	1513		348.9																																										1			1			1																																			
		1513	1515		345.6	345.4																																48																																																
L 407+82	42 LT	1515		348.9																																										1			1			1																																			
SHEET TOTALS									14																													1030	44	88		52		328		24	19.3		20	2	10	8	3			2	2							2			2																				

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-6

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
			1515	1631		345.4	343.3			152						
L405+21	51	LT	1502		349.2											
			1502	1517		346.2	345.8			118						
L 403+99	51	LT	1517		348.8											
			1517	1519		345.8	345.0			70						
L 403+25	51	LT	1519		348.2											
			1519	1521		345.0	343.9			148						
L 401+77	51	LT	1521		347.2											
			1521	1563		343.7	343.1				80					
L 401+78	76	LT	1523													
			1523	1521		344.2	343.7				28					
L 403+45	39	RT	1525		348.3											
			1525	1527		344.2	343.9				152					
L 401+93	39	RT	1527		347.5											
			1527	1531		343.9	343.1				116					
L 403+46	61	RT	1529		347.0											
			1529	1525		344.7	344.4			20						
L 400+75	41	RT	1531		346.6											
			1531	1543		342.6	342.5					32				
L 405+35	53	RT	1533		349.7											
			1533	1535		347.4	346.2			12						
L 405+35	39	RT	1535		349.5											
			1535	1525		346.2	344.4			188						
L 400+78	61	RT	1537													
			1537	1531		344.2	343.3			20						
L 400+65	6	RT	1539		347.6											
			1539	1541		344.4	344.1			30						
L 400+35	4	LT	1541		347.4											
			1541	1557		344.1	343.4			122						
Y9 12+60	53	LT	1543		346.2											
			1543	1545		342.5	342.4					27				
Y9 12+74	33	LT	1545		346.4											
			1545	1547		342.4	340.8					32				
Y9 13+14	19	LT	1547		345.9											
			1547	1551		340.8	340.5	0.4				40				
Y9 13+17	37	LT	1549		344.1											
			1549	1547		342.1	341.5			20						
Y9 13+20	24	RT	1551		345.5											
			1551	1553		340.5	340.2	0.4				44				
Y9 12+89	55	RT	1553		345.5											
			1553	1555		340.2	339.9	0.4				40				
L 398+96	54	RT	1555		345.3											
			1555	1559		339.9	339.2	0.4				124				
L 399+09	8	RT	1557		346.6											
			1557	1555		343.3	340.6			48						
L 397+72	51	RT	1559		344.4											
			1559	1453		338.7	329.0						300			
L 397+72	68	RT	1561		342.8											
			1561	1559		340.0	339.9	0.5		16						
L 400+96	56	LT	1563		346.6											
								SHEET TOTALS		964	376	339	300			

FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A: 5' THRU 10' LIN. FT.	B: 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35
1515	1631																								
1502			1			1		1																	
1502	1517																								
1517			1			1		1																	
1517	1519																								
1519			1			1		1																	
1519	1521																								
1521			1			1		1																	
1521	1563																								
1523																									
1523	1521																								
1525			1			1			1																
1525	1527																								
1527			1			1			1																
1527	1531																								
1529			1											1	1										
1529	1525																								
1531			1			1			1																
1531	1543																								
1533			1											1	1										
1533	1535																								
1535			1			1			1																
1535	1525																								
1537																									
1537	1531																								
1539			1								1											1			1
1539	1541																								
1541			1								1											1			1
1541	1557																								
1543			1			1			1																
1543	1545																								
1545			1			1			1																
1545	1547																								
1547			1	0.1		1			1																
1547	1551																								
1549			1														1					1			
1549	1547																								
1551			1			1			1																
1551	1553																								
1553			1	0.3		1			1																
1553	1555																								
1555			1	0.4		1			1																
1555	1559																								
1557			1								1											1			1
1557	1555																								
1559			1	0.7		1			1																
1559	1453																								
1561			1														1				1				
1561	1559																								
1563			1			1		1																	
SHEET TOTALS			23	1.5		16		5	11		3			2	2		2				1	4			3

Columns with no entries on this sheet:

Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC

C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48

M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
			1563	1567		342.6	341.2	0.3			44					
Y9 11+23	34	LT	1565		345.9											
			1565	1569		341.1	340.6	0.5			48					
Y9 11+00	34	LT	1567		344.2											
			1567	1565		344.2	342.9	0.4		23						
Y9 11+30	15	RT	1569		346.0											
			1569	1573		340.6	340.2	0.6			48					
Y9 11+01	14	RT	1571		346.1											
			1571	1569		342.9	342.6			28						
Y9 11+73	32	RT	1573		345.9											
			1573	1575		339.7	338.5					128				
L 398+48	39	LT	1575		345.3											
			1575	1581		338.5	338.0					104				
L 398+49	54	LT	1577		345.5											
			1577	1575		339.5	339.2			16						
L 397+45	56	LT	1579		343.7											
			1579	1581		340.0	338.7			16						
L 397+45	39	LT	1581		344.3											
			1581	1585		338.0	336.5					148				
L 395+97	60	LT	1583		339.7											
			1583	1585		337.4	337.2			20						
L 395+97	40	LT	1585		341.1											
			1585	1461		336.5	328.0					308				
Y9 14+56	23	LT	1586		345.6											
			1586	1587		342.3	342.1	0.3			20					
Y9 14+35	17	LT	1587		345.6											
			1587	1588		342.1	341.8	0.3			36					
Y9 13+97	17	LT	1588		345.4											
			1588	1590		341.8	341.6	0.4			24					
Y9 13+72	33	LT	1589		344.5											
			1589	1590		342.5	341.8			16						
Y9 13+72	17	LT	1590		345.4											
			1590	1547		341.6	341.3	0.5			56					
L 421+28	39	LT	1601		338.5											
			1601	1603		335.3	333.8			32						
Y13 12+46	53	LT	1603		337.0											
			1603	1605		333.8	332.8			76						
Y13 12+63	22	RT	1605		336.0											
			1605	1607		332.8	332.6			32						
L 419+87	39	LT	1607		335.8											
			1607	1609		332.6	328.9			136						
L 418+49	39	LT	1609		334.5											
L 421+50	40	RT	1611		339.1											
			1611	1615		335.4	330.8	0.9			248					
L 421+50	49	RT	1613		338.8											
			1613	1611		335.8	335.4	0.7			12					
L 419+00	40	RT	1615		334.8											
			1615	1665		330.8	330.3					68				
L 408+77	1	LT	1617		349.5											
			1617	1619		343.8	343.2			184						
								SHEET TOTALS		579	536	756				

SIZE / THICKNESS OR GAUGE	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48

FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35
1563	1567																								
1565			1			1	1																		
1565	1569																								
1567																									
1567	1565																								
1569			1	0.4		1	1																		
1569	1573																								
1571			1			1		1																	
1571	1569																								
1573			1	1.2		1			1																
1573	1575																								
1575			1	1.8		1		1																	
1575	1581																								
1577			1	1.0										1	1										
1577	1575																								
1579			1											1	1										
1579	1581																								
1581			1	1.3		1		1																	
1581	1585																								
1583			1											1	1										
1583	1585																								
1585			1			1		1																	
1585	1461																								
1586			1			1		1																	
1586	1587																								
1587			1			1		1																	
1587	1588																								
1588			1			1	1																		
1588	1590																								
1589			1														1					1			
1589	1590																								
1590			1			1			1																
1590	1547																								
1601			1			1		1																	
1601	1603																								
1603			1			1		1																	
1603	1605																								
1605			1			1			1																
1605	1607																								
1607			1			1		1																	
1607	1609																								
1609			1	2.3		1		1																	
1611			1			1			1																
1611	1615																								
1613			1														1				1				
1613	1611																								
1615			1			1			1																
1615	1665																								
1617			1	0.7							1											1			1
1617	1619																								
SHEET TOTALS			24	8.7		18	3	10	5		1			3	3		2				1	2			1

M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY: REL DATE: 07/28/2022

CHECKED BY: BJH DATE: 07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-8

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
L 410+65	2	LT	1619		348.3																																								
			1619	1621		343.0	342.6																																	124					
L 411+93	7	LT	1621		346.4																																							
			1621	1651		342.6	342.4																																	52					
Y10 14+70	19	RT	1627		347.3																																							
			1627	1629		343.8	343.6																																32						
Y10 14+70	13	LT	1629		347.4																																							
			1629	1631		343.6	343.3																																56						
L 409+39	39	LT	1631		348.0																																							
			1631	1633		343.3	342.5																																196						
L 411+45	39	LT	1633		345.7																																							
			1633	1639		342.5	336.9																																156						
Y11 14+00	21	RT	1635		340.8																																							
			1635	1637		337.6	337.3																																40						
Y11 14+00	20	LT	1637		340.7																																							
			1637	1639		337.3	336.9																																72						
L 413+08	39	LT	1639		342.5																																							
			1639	1641		336.9	336.0	0.3																															188						
L 415+03	40	LT	1641		339.3																																							
			1641	1643		335.8	325.4																																	192					
L 417+04	40	LT	1643		335.3																																							
Y12 10+67	57	RT	1645																																									
			1645	1647		343.4	342.7																																	32					
Y12 10+71	27	RT	1647		347.8																																							
			1647	1649		342.7	339.9																																	160					
L 413+77	42	RT	1649		343.4																																							
			1649	1659		339.9	337.1																																	104					
Y12 10+45	17	LT	1650		347.4																																							
			1650	1651		344.2	342.6																																48						
L 412+31	11	RT	1651		346.6																																							
			1651	1653		342.4	339.8																																	114					
L 413+48	7	LT	1653		343.3																																							
			1653	1655		339.8	338.5																																	84					
L 414+30	11	RT	1655		342.3																																							
			1655	1657		338.5	334.1																																	136					
L 415+75	11	RT	1657		337.5																																							
			1657	1660		334.1	333.6																																	28					
L 414+80	39	RT	1659		341.2																																							
			1659	1660		337.1	333.6																																	88					
L 415+75	39	RT	1660		338.0																																							
			1660	1661		333.6	331.3	0.5																																180					
L 417+55	39	RT	1661		334.8																																							
			1661	1663		330.8	330.5																																		68				
L 418+23	39	RT	1663		334.5																																							
			1663	1669		329.5	328.7																																				76		
L 418+32	39	RT	1665		334.5																																							
			1665	1663		330.3	330.2																																		8				
L 418+23	50	RT	1667		333.8																																							
			1667	1663		330.3	330.2	2.2																															12						
L 418+23	39	LT	1669		334.5																																							
SHEET TOTALS																																						800	1294	76		76		

STRUCTURE NUMBER FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	5' THRU 10' A LIN. FT.	10' AND ABOVE B LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
1619			1	0.3							1											1			1																				
1619	1621																																												
1621			1								1											1			1																				
1621	1651																																												
1627			1			1			1																																				
1627	1629																																												
1629			1			1		1																																					
1629	1631																																												
1631			1			1			1																																				
1631	1633																																												
1633			1			1			1																																				
1633	1639																																												
1635			1			1			1																																				
1635	1637																																												
1637			1			1		1																																					
1637	1639																																												
1639			1	0.6		1			1																																				
1639	1641																																												
1641			1			1			1																																				
1641	1643																																												
1643			1	4.9		1			1																																				
1645																																													
1645	1647																																												
1647			1	0.1		1			1																																				
1647	1649																																												
1649			1			1		1																																					
1649	1659																																												
1650			1								1											1			1																				
1650	1651																																												
1651			1								1											1			1																				
1651	1653																																												
1653			1								1											1			1																				
1653	1655																																												
1655			1								1											1			1																				
1655	1657																																												
1657			1								1											1			1																				
1657	1660																																												
1659			1			1		1																																					
1659	1660																																												
1660			1			1		1																																					
1660	1661																																												
1661			1			1		1																																					
1661	1663																																												
1663			1			1		1																																					
1663	1669																																												
1665			1			1	1																																						
1665	1663																																												
1667			1														1				1																								
1667	1663																																												
1669			1	0.8		1			1																																				
SHEET TOTALS			25	6.7		17	1	7	9		7						1				1	7			7																				

ABBREVIATIONS

- **C.A.A.** CORRUGATED ALUMINIUM ALLOY
- **C.B.** CATCH BASIN
- **C.S.** CORRUGATED STEEL
- **D.I.** DROP INLET
- **G.D.I.** GRATED DROP INLET
- **H.D.P.E.** HIGH DENSITY POLYETHYLENE
- **J.B.** JUNCTION BOX
- **M.H.** MANHOLE
- **N.S.** NARROW SLOT
- **P.V.C.** POLYVINYL CHLORIDE
- **R.C.** REINFORCED CONCRETE
- **T.B.D.I.** TRAFFIC BEARING DROP INLET
- **T.B.J.B.** TRAFFIC BEARING JUNCTION BOX
- **W.S.** WIDE SLOT

TGSLTW1014

COMPUTED BY: REL DATE: 07/28/2022

CHECKED BY: BJH DATE: 07/28/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-9

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12	15	18	24	30	36	42	48	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) THICKNESS OR GAUGE DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
		1669	1671		328.7	328.6														
L 418+32	39 LT	1671		334.5																
		1671	1609		328.6	327.2														
L 426+00	39 LT	1701		340.6																
		1701	1705		337.4	336.2														
L 428+13	39 LT	1703		339.4																
		1703	1743		335.2	333.9														
L 427+63	39 LT	1705		339.4																
		1705	1703		336.2	335.2														
L 426+00	39 RT	1707		340.6																
		1707	1709		337.4	336.4														
L 427+27	39 RT	1709		339.6																
		1709	1711		336.4	334.6														
L 429+28	39 RT	1711		338.4																
		1711	1731		333.9	333.6	0.4													
L 434+52	39 RT	1713		347.5																
		1713	1717		344.3	341.2														
L 434+50	9 RT	1715		348.3																
		1715	1713		345.1	344.3														
L 433+09	39 RT	1717		344.4																
		1717	1733		341.2	336.1														
L 434+00	8 LT	1719		347.6																
		1719	1721		344.4	342.2														
L 433+00	8 LT	1721		345.4																
		1721	1723		342.2	340.2														
L 432+09	8 LT	1723		343.4																
		1723	1725		340.2	338.3														
L 431+19	8 LT	1725		341.5																
		1725	1727		338.3	337.1														
L 430+42	8 LT	1727		340.3																
		1727	1729		337.1	336.6														
L 429+86	8 LT	1729		339.8																
		1729	1731		336.6	334.3														
L 429+30	8 LT	1731		339.6																
		1731	1745		333.6	333.2	0.5													
L 430+65	39 RT	1733		339.3																
		1733	1735		336.1	334.7	0.3													
L 429+35	39 RT	1735		338.4																
		1735	1711		334.0	333.9														
L 429+35	50 RT	1737		337.6																
		1737	1735		334.8	334.4	1.2													
L 435+96	39 LT	1739		351.0																
		1739	1741		347.8	347.5														
L 435+96	9 LT	1741		351.5																
		1741	1719		347.5	344.4														
L 428+88	39 LT	1743		339.5																
		1743	1747		333.0	332.7	0.7													
L 428+88	8 LT	1745		339.6																
		1745	1743		333.2	333.0	0.5													
L 439+15	40 LT	1801		351.0																
SHEET TOTALS																				

LINE & STATION	OFFSET	C. S. PIPE 12	15	18	24	30	36	42	48	C. S. PIPE THICKNESS OR GAUGE .064	.064	.064	.079	.079	.079	.109	.109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
																														8		
L 418+32	39 LT																															
																														16		
L 426+00	39 LT																															
L 428+13	39 LT																															
L 427+63	39 LT																															
L 426+00	39 RT																															
L 427+27	39 RT																															
L 429+28	39 RT																															
																														48		
L 434+52	39 RT																															
L 434+50	9 RT																															
L 433+09	39 RT																															
L 434+00	8 LT																															
L 433+00	8 LT																															
L 432+09	8 LT																															
L 431+19	8 LT																															
L 430+42	8 LT																															
L 429+86	8 LT																															
L 429+30	8 LT																															
																														40		
L 430+65	39 RT																															
L 429+35	39 RT																															
																														4		
L 429+35	50 RT																															
L 435+96	39 LT																															
L 435+96	9 LT																															
L 428+88	39 LT																															
																														36		
L 428+88	8 LT																															
																														28		
L 439+15	40 LT																															
SHEET TOTALS																														156	24	

LINE & STATION	OFFSET	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A 0' THRU 5' EACH	B 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
		1			1			1																																
L 418+32	39 LT	1	0.9		1	1																																
L 426+00	39 LT	1			1			1																																
L 428+13	39 LT	1			1			1																																
L 427+63	39 LT	1			1			1																																
L 426+00	39 RT	1			1		1																																
L 427+27	39 RT	1			1		1																																
L 429+28	39 RT	1			1	1																																
L 434+52	39 RT	1			1			1																																
L 434+50	9 RT	1							1																															
L 433+09	39 RT	1			1			1																																
L 434+00	8 LT	1							1																															
L 433+00	8 LT	1							1																															
L 432+09	8 LT	1							1																															
L 431+19	8 LT	1							1																															
L 430+42	8 LT	1							1																															
L 429+86	8 LT	1							1																															
L 429+30	8 LT	1	1.0						1								1																							
L 430+65	39 RT	1			1			1																																
L 429+35	39 RT	1			1	1																																
L 429+35	50 RT	1														1				1																			
L 435+96	39 LT	1			1		1																																
L 435+96	9 LT	1							1																															
L 428+88	39 LT	1	1.5		1			1																															
L 428+88	8 LT	1	1.4						1								1																							
L 439+15	40 LT	1			1			1																																
SHEET TOTALS		25	4.8		14	3	3	8	9	1				1			2	1	8		10																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-10

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION (SIZE / THICKNESS OR GAUGE)	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %
			1801	1803		347.8	346.5	
Y15 12+25	49	RT	1803		349.7			
			1803	1809		346.5	346.1	
Y15 11+75	32	RT	1805		350.6			
			1805	1807		347.4	347.1	
Y15 11+75	26	LT	1807		350.7			
			1807	1809		347.1	346.1	
Y15 12+24	43	LT	1809		349.8			
			1809	1811		346.1	345.9	0.4
L 441+00	39	LT	1811		349.7			
			1811	1813		345.9	345.6	0.4
L 441+00	8	LT	1813		349.5			
			1813	1819		345.6	345.0	0.4
L 442+50	8	LT	1815		347.7			
			1815	1865		344.5	339.9	
L 438+86	40	RT	1817		351.1			
			1817	1819		347.9	345.0	
L 441+00	40	RT	1819		348.3			
			1819	1821		344.8	340.5	0.3
L 443+63	40	RT	1821		344.1			
			1821	1873		338.5	336.1	
L 444+91	39	RT	1823		343.2			
			1823	1873		336.8	336.6	0.6
L 444+91	8	LT	1825		345.3			
			1825	1867		342.1	342.0	
L 449+71	59	LT	1827		351.7			
			1827	1829		349.4	348.9	
L 449+67	4	RT	1829		352.1			
			1829	1831		348.9	345.1	
L 447+86	9	RT	1831		348.3			
			1831	1849		345.1	344.6	
L 448+19	63	LT	1833		348.4			
			1833	1835		346.1	343.2	0.7
L 447+52	63	LT	1835		347.3			
			1835	1837		342.5	341.6	
L 446+70	54	LT	1837		346.4			
			1837	1839		341.6	341.3	0.5
L 446+69	11	LT	1839		347.0			
			1839	1841		341.3	341.1	0.6
L 446+69	12	RT	1841		346.1			
			1841	1857		340.6	338.6	
L 449+62	40	RT	1843		350.2			
			1843	1845		345.7	344.2	
L 449+02	50	RT	1845		348.7			
			1845	1847		344.2	340.9	
L 448+07	86	RT	1847		345.4			
			1847	1851		340.9	339.9	
L 447+39	1	LT	1849		347.8			
			1849	1841		344.6	342.9	
L 447+53	86	RT	1851		344.4			

FROM	TO	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
1801	1803																															64						
1803	1809																															92						
1805	1807																															56						
1807	1809																															52						
1809	1811																															32						
1811	1813																															28						
1813	1819																															48						
1815	1865																															112						
1817	1819																															212						
1819	1821																																256					
1821	1873																																				84	
1823	1873																																			40		
1825	1867																															4						
1827	1829																															60						
1829	1831																															180						
1831	1849																															48						
1833	1835																															68						
1835	1837																																	84				
1837	1839																																	44				
1839	1841																																	20				
1841	1857																																		68			
1843	1845																																		60			
1845	1847																																		96			
1847	1851																																		48			
1849	1841																															68						
SHEET TOTALS																																1124	256	148	272	40	84	

STRUCTURE (FROM)	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
1803		1			1	1																																						
1805		1			1		1																																					
1807		1			1			1																																				
1809		1			1			1																																				
1811		1			1			1																																				
1813		1								1											1			1																				
1815		1								1											1			1																				
1817		1			1		1																																					
1819		1			1		1																																					
1821		1	0.6		1		1																																					
1823		1	1.2		1	1																																						
1825		1								1										1				1																				
1827		1											1	1																														
1829		1								1										1				1																				
1831		1								1										1				1																				
1833		1											1	1																														
1835		1													1					1																								
1837		1													1					1																								
1839		1	0.7								1									1				1																				
1841		1	0.5								1									1				1																				
1843		1			1			1																																				
1845		1			1			1																																				
1847		1			1			1																																				
1849		1									1									1				1																				
1851		1			1	1																																						
SHEET TOTALS		25	3.0		13	3	4	6		5	3		2	2	2					8	2			8																				

ABBREVIATIONS

- C.A.A. CORRUGATED ALUMINIUM ALLOY
- C.B. CATCH BASIN
- C.S. CORRUGATED STEEL
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- H.D.P.E. HIGH DENSITY POLYETHYLENE
- J.B. JUNCTION BOX
- M.H. MANHOLE
- N.S. NARROW SLOT
- P.V.C. POLYVINYL CHLORIDE
- R.C. REINFORCED CONCRETE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX
- W.S. WIDE SLOT

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

TGSLTW1014

PROJECT NO.	SHEET NO.
R-5705B	3D-11

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109
		1851	1853		339.9	339.2																						
L 447+04	40 RT	1853		345.4																								
		1853	1859		339.2	338.0																						
L 446+00	12 RT	1857		345.1																								
		1857	1859		338.6	338.0																						
L 446+00	39 RT	1859		343.7																								
		1859	1861		337.4	336.8	0.6																					
L 444+99	40 RT	1861		343.2																								
		1861	1823		337.1	336.8	0.4																					
L 445+11	9 RT	1863		344.7																								
		1863	1861		341.5	338.8																						
L 443+64	8 LT	1865		346.1																								
		1865	1821		339.9	338.5																						
L 444+98	8 LT	1867		345.3																								
		1867	1863		342.0	341.5																						
L 443+63	39 LT	1869		347.2																								
		1869	1865		341.7	339.9																						
L 443+50	68 LT	1871																										
		1871	1869		343.6	341.7																						
L 444+49	39 RT	1873		343.3																								
		1873	1875		335.6	335.5	0.3																					
L 444+48	61 RT	1875		341.9																								
		1875	1877		335.5	334.8	0.3																					
L 457+46	40 LT	1901		365.9																								
		1901	1903		362.7	361.6																						
L 456+00	40 LT	1903		364.8																								
		1903	1905		361.6	360.8																						
L 455+56	40 LT	1905		364.1																								
		1905	1945		360.8	357.9																						
L 463+39	40 RT	1907		368.9																								
		1907	1911		363.5	362.5																						
L 463+39	9 RT	1909		369.7																								
		1909	1907		365.7	363.5																						
L 462+00	40 RT	1911		368.2																								
		1911	1913		362.5	361.0																						
L 460+26	40 RT	1913		367.3																								
		1913	1919		360.5	359.7																						
L 463+72	89 LT	1915		368.0																								
		1915	1925		364.8	352.0	0.4															76						
L 463+36	79 LT	1917		368.1																								
		1917	1915		364.9	364.8																						
L 460+26	40 LT	1919		367.3																								
		1919	1921		359.7	358.9																						
Y17 12+60	24 LT	1921		363.4																								
		1921	1923		358.4	355.6																						
L 458+49	39 RT	1927		366.4																								
		1927	1929		363.2	362.4																						
L 456+82	40 RT	1929		365.6																								
		1929	1931		362.4	360.6																						
L 455+46	39 RT	1931		363.9																								
							SHEET TOTALS															76						

FROM	TO	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	5' THRU 10' A LIN. FT.	10' AND ABOVE B LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	
1851	1853													68												
1853																			1	1.2		1			1	
1853	1859													100												
1857																			1	1.5						
1857	1859													28												
1859																			1	1.3		1			1	
1859	1861														96											
1861																			1	1.1		1	1			
1861	1823														8											
1863																			1							
1863	1861										32															
1865																			1	1.2						
1865	1821															48										
1867																			1							
1867	1863										20															
1869																			1	0.5		1			1	
1869	1865															28										
1871																		4.500								
1871	1869															32										
1873																			1	2.7		1		1		
1873	1875																20									
1875																			1	1.4						
1875	1877																136									
1901																			1			1		1		
1901	1903										144															
1903																			1			1		1		
1903	1905										44															
1905																			1			1		1		
1905	1945										128															
1907																			1	0.4		1			1	
1907	1911												140													
1909																			1							
1909	1907												32													
1911																			1	0.7		1			1	
1911	1913												172													
1913																			1	1.8		1			1	
1913	1919													76												
1915																			1			1	1			
1915	1925																									
1917																			1			1			1	
1917	1915										36															
1919																			1	2.6		1		1		
1919	1921													44												
1921																			1			1		1		
1921	1923													28												
1927																			1			1			1	
1927	1929										168															
1929																			1			1			1	
1929	1931										136															
1931																			1			1			1	
SHEET TOTALS											708		344	344	104	108	156	4.500	24	16.4		18	2	6	10	

FROM	TO	CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
1851	1853																																			
1853																																				
1853	1859																																			
1857			1									1				1																				
1857	1859																																			
1859																																				
1859	1861																																			
1861																																				
1861	1823																																			
1863		1											1			1																				
1863	1861																																			
1865		1											1			1																				
1865	1821																																			
1867		1										1				1																				
1867	1863																																			
1869																																				
1869	1865																																			
1871																																				
1871	1869																																			
1873																																				
1873	1875																																			
1875														1				1																		
1875	1877																																			
1901																																				
1901	1903																																			
1903																																				
1903	1905																																			
1905																																				
1905	1945																																			
1907																																				
1907	1911																																			
1909		1											1			1																				
1909	1907																																			
1911																																				
1911	1913																																			
1913																																				
1913	1919																																			
1915																																				
1915	1925																								2											ROD AND LUG WITH ELBOWS
1917																																				
1917	1915																																			
1919																																				
1919	1921																																			
1921																																				
1921	1923																																			
1927																																				
1927	1929																																			
1929																																				
1929	1931																																			
1931																																				
SHEET TOTALS		4	1									2	3	1		5		1								2										

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-12

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
		1931	1939		360.6	357.4																																124																																																		
Y16 10+72	24 LT	1933																																																																																							
		1933	1935		359.0	358.7																																		12																																																	
Y16 10+65	15 LT	1935		362.7																																										1			1			1																																						
		1935	1937		358.7	357.2																																		36																																																	
Y16 10+67	21 RT	1937		361.2																																										1			1		1																																							
		1937	1939		357.2	356.7																																		48																																																	
L 454+23	39 RT	1939		361.1																																										1			1			1																																						
		1939	1951		356.7	349.5																																		264																																																	
L 454+24	7 LT	1941		362.0																																										1								1										1				1																				
		1941	1943		358.8	358.6																																16																																																					
L 454+24	9 RT	1943		362.0																																										1								1										1				1																				
		1943	1939		358.6	357.4																																32																																																				
L 454+27	40 LT	1945		361.2																																										1			1		1																																							
		1945	1947		357.9	352.6																																232																																																					
L 451+94	40 LT	1947		355.8																																										1			1		1																																							
		1947	1949		352.6	350.7	0.5																															36																																																			
L 451+58	40 LT	1949		355.5																																										1	0.7		1		1																																							
		1949	1951		349.8	349.5																																		76																																																	
L 451+58	40 RT	1951		355.0																																										1	1.0		1			1																																						
		1951	1843		349.0	345.7																																			196																																																
L 451+22	55 LT	1953		353.4																																										1											1	1																																		
		1953	1955		351.1	350.7																																40																																																				
L 451+64	53 LT	1955		355.4																																										1											1	1																																		
		1955	1949		350.7	350.5																																16																																																				
09+42	22 LT	1957																																										4.500																																														
		1957	1959		346.7	346.2																																						48																																																
L 470+69	40 RT	2001		371.8																																										1			1			1																																						
		2001	2033		368.6	367.6																																192																																																				
L 466+75	39 RT	2003		369.9																																										1			1			1																																						
		2003	2029		366.7	365.6																																152																																																				
L 472+50	10 LT	2005		375.0																																										1																			1			1																				
		2005	2007		371.8	371.0																																152																																																					
L 471+00	10 LT	2007		374.2																																										1																			1			1																				
		2007	2009		371.0	370.2																																100																																																				
L 470+00	4 LT	2009		373.4																																										1																			1			1																				
		2009	2011		370.2	369.8																																40																																																				
L 469+58	3 RT	2011		373.0																																										1								1											1			1																				
		2011	2013		369.8	369.3																																56																																																					
L 469+00	2 RT	2013		372.6																																										1								1											1			1																				
		2013	2015		369.1	368.9																																	56																																																			
L 468+40	4 RT	2015		372.4																																										1								1											1			1																				
		2015	2017		368.9	368.6																																	60																																																			
L 467+77	4 RT	2017		372.1																																										1								1											1			1																				
		2017	2019		368.6	368.2																																	88																																																			
L 466+86	4 RT	2019		371.7																																										1								1											1			1																				
		2019	2021		368.2	367.9																																	52																																																			
L 466+33	4 RT	2021		371.4																																										1								1										1				1																				
		2021	2023		367.9	367.6																																	44																																																			
L 465+86	7 RT	2023		371.1																																										1								1											1			1																				
SHEET TOTALS																																						1188	300	436	196		48		4.500	23	1.7		9		4	5		9			2	2						3	9			12																				

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

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COMPUTED BY: REL DATE: 07/28/2022

CHECKED BY: BJH DATE: 07/28/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5705B	3D-13

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

| LINE & STATION | OFFSET | STRUCTURE NUMBER FROM | STRUCTURE NUMBER TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. S. PIPE SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS III SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV SIZE 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) | QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A: 0' THRU 5' | A: 5' THRU 10' | B: 10' AND ABOVE | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL SECTION: SEE DETAIL SHEET 2C-5 | SEE DETAIL SHEET 2C-15 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATES STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26 | G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27 | G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29 | J.B. STD. 840.31 OR STD. 840.32 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | M.H. STD. 840.51, STD. 840.52, OR STD. 840.53 | M.H. FRAME AND COVER STD. 840.54 | CONVERT EXISTING C.B. TO J.B. | CONVERT EXISTING C.B. TO D.I. | CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9 | CONVERT EXISTING J.B. TO D.I. | ADJUST C.B. | ADJUST D.I. | CONVERT D.I. TO C.B., SEE DETAIL 2C-10 | 15" C.S. ELBOW | 18" C.S. ELBOW | 24" C.S. ELBOW | 30" C.S. ELBOW | 36" C.S. ELBOW | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---

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PROJECT NO.	SHEET NO.
R-5705B	3D-14

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

Part 1: station, structure, elevations, drainage pipe

LINE & STATION (SIZE / THICKNESS OR GAUGE)	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
Y8 14+14	8	LT	2212		322.1																
			2212	2216		318.9	318.6														
Y8 14+78	8	LT	2216		321.7																
			2216	2206		318.6	313.7														
Y22 13+00	17	RT	2218		321.9																
			2218	2220		318.9	317.0														
Y22 13+00	19	LT	2220		321.1																
			2220	2222		317.0	316.8														
Y22 12+50	18	LT	2222		320.9																
			2222	2224		316.8	315.0			20											
Y22 11+98	16	RT	2230		322.0																
			2230	2231		319.0	317.0			31											
Y8 17+96	50	RT	2207																		
			2207	2210		320.8	314.7														
Y8 17+32	56	RT	2210		320.4																
			2210	2234		314.7	314.1														
Y22 11+20	45	RT	2225							68											
Y12_REV 12+32	24	RT	2300		343.5																
			2300	2302		341.3	341.2			12								X	X		
Y12_REV 12+34	13	RT	2302		344.5																
			2302	2304		341.2	336.8														
Y12_REV 14+23	13	RT	2304		339.9																
			2304	2320		336.8	336.5														
Y12_REV 14+22	23	RT	2306		339.1																
			2306	2304		336.9	336.8			12								X	X		
Y12_REV 16+76	17	RT	2308		333.4																
			2308	2312		329.8	325.4														
Y12_REV 16+28	27	RT	2309		333.6																
			2309	2310		331.3	329.9			44								X	X		
Y12_REV 16+76	28	RT	2310		332.1																
			2310	2308		329.9	329.8			12								X	X		
Y12_REV 18+28	17	RT	2312		329.4																
			2312	2316		325.4	324.7														
Y12_REV 18+27	29	RT	2314		327.7																
			2314	2312		325.5	325.4			12								X	X		
Y12_REV 18+90	17	RT	2316		327.7																
			2316	2318		324.7	324.5														
Y12_REV 18+90	17	LT	2318		327.7																
			2318	2330		324.5	324.1	0.6													
Y12_REV 14+27	24	LT	2320		339.5																
			2320	2322		336.5	332.6														
Y12_REV 15+27	17	LT	2322		337.2																
			2322	2326		332.6	329.7	0.4													
Y12_REV 15+38	32	LT	2324		334.9																
			2324	2322		332.7	332.6			20								X	X		
Y12_REV 16+43	17	LT	2326		334.3																
			2326	2318		329.7	324.5	0.7													
Y12_REV 16+46	32	LT	2328		332.0																
			2328	2326		329.8	329.7			16								X	X		
L 393+56	53	RT																			
								SHEET TOTALS		247											

Part 2: C. S. pipe and R. C. pipe

LINE & STATION	FROM	TO	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
Y8 14+14	2212																									
	2212	2216																	65							
Y8 14+78	2216																									
	2216	2206																	77							
Y22 13+00	2218																									
	2218	2220																	36							
Y22 13+00	2220																									
	2220	2222																	50							
Y22 12+50	2222																									
	2222	2224																								
Y22 11+98	2230																									
	2230	2231																								
Y8 17+96	2207																									
	2207	2210														57										
Y8 17+32	2210																									
	2210	2234														70										
Y22 11+20	2225																									
Y12_REV 12+32	2300																									
	2300	2302																								
Y12_REV 12+34	2302																									
	2302	2304																	188							
Y12_REV 14+23	2304																									
	2304	2320																	36							
Y12_REV 14+22	2306																									
	2306	2304																								
Y12_REV 16+76	2308																									
	2308	2312																	152							
Y12_REV 16+28	2309																									
	2309	2310																								
Y12_REV 16+76	2310																									
	2310	2308																								
Y12_REV 18+28	2312																									
	2312	2316																	60							
Y12_REV 18+27	2314																									
	2314	2312																								
Y12_REV 18+90	2316																									
	2316	2318																	32							
Y12_REV 18+90	2318																									
	2318	2330																		48						
Y12_REV 14+27	2320																									
	2320	2322																	100							
Y12_REV 15+27	2322																									
	2322	2326																	116							
Y12_REV 15+38	2324																									
	2324	2322																								
Y12_REV 16+43	2326																									
	2326	2318																	248							
Y12_REV 16+46	2328																									
	2328	2326																								
L 393+56																										
SHEET TOTALS																127			1160	48						

Part 3: endwalls, drainage structures, frames and grates

LINE & STATION	FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A: 5' THRU 10' LIN. FT.	B: 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54
Y8 14+14	2212			1								1											1			1		
	2212	2216																										
Y8 14+78	2216			1								1											1			1		
	2216	2206																										
Y22 13+00	2218			1			1			1																		
	2218	2220																										
Y22 13+00	2220			1																					1			1
	2220	2222																										
Y22 12+50	2222			1																					1			1
	2222	2224																										
Y22 11+98	2230			1			1	1																				
	2230	2231																										
Y8 17+96	2207		3.400																									
	2207	2210																										
Y8 17+32	2210			1	0.8												1						1					
	2210	2234																										
Y22 11+20	2225																											
Y12_REV 12+32	2300			1											1	1												
	2300	2302																										
Y12_REV 12+34	2302			1			1		1																			
	2302	2304																										
Y12_REV 14+23	2304			1			1		1																			
	2304	2320																										
Y12_REV 14+22	2306			1											1	1												
	2306	2304																										
Y12_REV 16+76	2308			1			1		1																			
	2308	2312																										
Y12_REV 16+28	2309			1											1	1												
	2309	2310																										
Y12_REV 16+76	2310			1											1	1												
	2310	2308																										
Y12_REV 18+28	2312			1			1		1																			
	2312	2316																										
Y12_REV 18+27	2314			1											1	1												
	2314	2312																										
Y12_REV 18+90	2316			1			1		1																			
	2316	2318																										
Y12_REV 18+90	2318			1			1			1																		
	2318	2330																										
Y12_REV 14+27	2320			1			1			1																		
	2320	2322																										
Y12_REV 15+27	2322			1			1			1																		
	2322	2326																										
Y12_REV 15+38	2324			1											1	1												
	2324	2322																										
Y12_REV 16+43	2326			1			1			1																		
	2326	2318																										
Y12_REV 16+46	2328			1											1	1												
	2328	2326																										
L 393+56																												
SHEET TOTALS			3.400	23	0.8		11	1	5	5		2			7	7	1						3		2	2		2

Part 4: conversions, adjustments, elbows, fill, collars, plugs, removal

LINE & STATION	FROM	TO	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y8 14+14	2212																			
	2212	2216																		
Y8 14+78	2216																			
	2216	2206																		
Y22 13+00	2218																			
	2218	2220																		
Y22 13+00	2220																			
	2220	2222																		
Y22 12+50	2222																			
	2222	2224																		
Y22 11+98	2230																			
	2230	2231																		
Y8 17+96	2207																			
	2207	2210																		
Y8 17+32	2210																			
	2210	2234																		
Y22 11+20	2225																			
Y12_REV 12+32	2300																			
	2300	2302																		
Y12_REV 12+34	2302																			
	2302	2304																		
Y12_REV 14+23	2304																			
	2304	2320																		
Y12_REV 14+22	2306																			
	2306	2304																		
Y12_REV 16+76	2308																			
	2308	2312																		
Y12_REV 16+28	2309																			
	2309	2310																		
Y12_REV 16+76	2310																			
	2310	2308																		
Y12_REV 18+28	2312																			
	2312	2316																		
Y12_REV 18+27	2314																			
	2314	2312																		
Y12_REV 18+90	2316																			
	2316	2318																		
Y12_REV 18+90	2318																			
	2318	2330																		
Y12_REV 14+27	2320																			
	2320	2322																		
Y12_REV 15+27	2322																			
	2322	2326																		
Y12_REV 15+38	2324																			
	2324	2322																		
Y12_REV 16+43	2326																			
	2326	2318																		
Y12_REV 16+46	2328																			
	2328	2326																		
L 393+56																			253	
SHEET TOTALS																			253	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY: REL DATE: 07/28/2022

CHECKED BY: BJH DATE: 07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-15

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

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

Column headings (all blank on this sheet unless shown in the table below): LINE & STATION / SIZE / THICKNESS OR GAUGE; OFFSET; STRUCTURE NUMBER (FROM, TO); TOP ELEVATION (FT.); INVERT ELEVATION (FT.); INVERT ELEVATION (FT.); MINIMUM REQUIRED SLOPE (%); Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12, 15, 18, 24, 30, 36, 42, 48, DO NOT USE RCP, DO NOT USE CSP, DO NOT USE CAAP, DO NOT USE HDPE, DO NOT USE PVC; C. S. PIPE 12 (.064), 15 (.064), 18 (.064), 24 (.064), 30 (.079), 36 (.079), 42 (.109), 48 (.109); R. C. PIPE CLASS III 12, 15, 18, 24, 30, 36, 42, 48; R. C. PIPE CLASS IV 12, 15, 18, 24, 30, 36, 42, 48; ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) (CY); QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)): 0' THRU 5' (EACH), A 5' THRU 10' (LIN. FT.), B 10' AND ABOVE (LIN. FT.); C.B. STD. 840.01 OR STD. 840.02; FRAME, GRATES, AND HOOD STD. 840.03 — GRATE TYPE E, F, G; CONCRETE TRANSITIONAL SECTION: SEE DETAIL SHEET 2C-5, SEE DETAIL SHEET 2C-15; OPEN THROAT C.B. STD. 840.04 OR STD. 840.05; D.I. STD. 840.14 OR STD. 840.15; D.I. FRAME AND GRATES STD. 840.16; G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26; G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27; G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28; G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20; G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22; G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24; G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29; J.B. STD. 840.31 OR STD. 840.32; T.B.J.B. STD. 840.34; T.B.D.I. STD. 840.35; M.H. STD. 840.51, STD. 840.52, OR STD. 840.53; M.H. FRAME AND COVER STD. 840.54; CONVERT EXISTING C.B. TO J.B.; CONVERT EXISTING C.B. TO D.I.; CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9; CONVERT EXISTING J.B. TO D.I.; ADJUST C.B.; ADJUST D.I.; CONVERT D.I. TO C.B., SEE DETAIL 2C-10; 15" C.S. ELBOW; 18" C.S. ELBOW; 24" C.S. ELBOW; 30" C.S. ELBOW; 36" C.S. ELBOW; FLOWABLE FILL (CY); CONCRETE COLLARS CL. "B" STD. 840.72 (CY); CONCRETE AND BRICK PIPE PLUG STD. 840.71 (CY); PIPE REMOVAL (LIN. FT.); REMARKS.

LINE & STATION	OFFSET		CONCRETE AND BRICK PIPE PLUG STD. 840.71 (CY)	PIPE REMOVAL (LIN. FT.)	REMARKS
L 394+29	46	RT		70	
L 392+44	59	RT		174	
Y20 11+11	19	RT		67	
Y21 10+39	18	RT	0.045		
Y21 10+40	0	CL		34	
Y12 16+53	31	LT		21	
Y12 15+62	33	LT		34	
L 390+94	2	RT		50	
L 392+66	8	RT		24	
L 393+29	4	RT		24	
L 393+14	46	LT		18	
L 392+70	44	LT		29	
L 388+15	124	RT		23	
L 394+61	4	LT		23	
L 395+66	5	LT		22	
L 395+96	30	LT		50	
L 395+92	4	LT		5	
L 396+57	4	LT		118	
L 397+33	13	RT		42	
L 397+84	2	LT		133	
L 398+50	25	LT		45	
L 399+45	1	LT		184	
L 400+38	21	RT		4	
L 400+38	10	RT		18	
L 401+15	1	LT		153	
L 401+93	31	LT		55	
L 402+86	7	RT		68	
L 406+07	20	RT		53	
L 408+73	31	RT		52	
Y12 14+31	2	RT		22	
Y12 16+37	14	RT		22	
Y12 18+40	21	RT		27	
Y10 14+95	6	RT		50	
Y10 14+95	15	LT		9	
Y15 12+33	5	RT		81	
L 444+52	8	RT		51	
L 444+43	124	RT		148	
L 447+06	11	LT		50	
L 447+94	7	LT		23	
Y17 09+45	1	RT		46	
Y17 09+38	76	LT		104	
Y17 12+69	7	RT		70	
Y17 12+74	40	RT		28	
L 458+20	35	LT		28	
L 455+58	22	LT		17	
L 455+27	40	LT		60	
L 453+99	7	LT		40	
Y16 10+74	0	CL		34	
L 451+37	7	LT		18	
L 450+97	7	LT		29	
SHEET TOTALS			0.045	2550	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	DATE:	07/28/2022
CHECKED BY:	BJH	DATE:	07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-16

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

Table A (Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) columns 12–48; columns DO NOT USE RCP / DO NOT USE CSP / DO NOT USE CAAP / DO NOT USE HDPE / DO NOT USE PVC are all empty)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	12	15	18	24	30	36	42	48
L 450+96	49	RT														
Y8 18+39	0	CL														
Y8 17+78	23	RT														
L 394+04	67	LT														
Y9 11+53	29	RT														
L 399+10	51	LT														
L 398+33	51	LT														
L 397+29	54	LT														
L 428+88	24	LT														
L 484+12	45	LT														
L 486+81	1	RT														
Y12 16+86	16	RT														
Y8 20+19	24	LT														
Y8 18+14	26	RT														
L 485+05	17	RT														
L 327+05	47	RT														
L 417+04	38	LT														
L 302+72	19	LT														
Y6 17+68	19	RT														
Y6 17+74	17	LT														
Y6 12+89	25	LT														
Y6 13+53	25	LT														
L 418+48	0	CL														
L 418+48	32	LT														
Y13 12+85	7	LT														
Y8 11+50	29	RT														
Y22 12+20	0	CL														
LDETNB 14+66	18	LT	2B01		332.5											
			2B01	2B02		327.6	327.2									
LDETNB 14+68	31	LT	2B02		332.0											
LDETNB 17+02	26	LT	2B04		335.5											
			2B04	2B03		333.4	332.7				76					
LDETNB 25+06	27	LT	2B05		338.2											
			2B05	2B06		332..9	332.7									
LDETNB 31+45	27	LT	2B07							52						
SHEET TOTALS										52	76					
PROJECT TOTALS										709	160					

Table B (C. S. PIPE, R. C. PIPE CLASS III, R. C. PIPE CLASS IV)

LINE & STATION	FROM	TO	C.S. 12 (.064)	C.S. 15 (.064)	C.S. 18 (.064)	C.S. 24 (.064)	C.S. 30 (.079)	C.S. 36 (.079)	C.S. 42 (.109)	C.S. 48 (.109)	R.C. III 12	R.C. III 15	R.C. III 18	R.C. III 24	R.C. III 30	R.C. III 36	R.C. III 42	R.C. III 48	R.C. IV 12	R.C. IV 15	R.C. IV 18	R.C. IV 24	R.C. IV 30	R.C. IV 36	R.C. IV 42	R.C. IV 48
	2B01	2B02																						12		
	2B05	2B06																				28				
SHEET TOTALS																						28		12		
PROJECT TOTALS				912	336											127				17476	3498	3215	1112	622	240	1760

Table C (Endwalls, Quantities for Drainage Structures, Frames, Inlets)

LINE & STATION	FROM	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54
LDETNB 14+68	2B02		1														1			1							
LDETNB 17+02	2B04		1															1		1							
LDETNB 25+06	2B05		1	0.3													1			1							
SHEET TOTALS			3	0.3													2	1		3							
PROJECT TOTALS		52.600	328	75.3		153	16	60	77		71	7		18	18	3	39	1	29	7	17	100	2	2	110		4

Table D (Conversions, Adjustments, Elbows, Fill, Collars, Plugs, Pipe Removal, Remarks)

LINE & STATION	FROM	TO	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B., SEE DETAIL 2C-9	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	CONVERT D.I. TO C.B., SEE DETAIL 2C-10	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 450+96																			26	
Y8 18+39																			45	
Y8 17+78																			23	
L 394+04																			63	
Y9 11+53																			33	
L 399+10																			119	
L 398+33																			29	
L 397+29																			27	
L 428+88																			101	
L 484+12																			30	
L 486+81																			46	
Y12 16+86																			25	
Y8 20+19																			23	
Y8 18+14																			20	
L 485+05																			63	
L 327+05																			32	
L 417+04																			9	
L 302+72																			25	
Y6 17+68																			25	
Y6 17+74																			22	
Y6 12+89																			64	
Y6 13+53																			34	
L 418+48																			51	
L 418+48																			11	
Y13 12+85																			72	
Y8 11+50																			42	
Y22 12+20																			50	
LDETNB 14+66	2B01				1															CONVERT DI TO TEMPORARY JB
	2B01	2B02																		TEMPORARY 36" RCP
LDETNB 14+68	2B02								1											TEMP. 2GI (TO BE CONVERTED TO CB IN FINAL)
LDETNB 17+02	2B04																			TEMPORARY 2GI-D
	2B04	2B03																	76	TEMPORARY 18"
LDETNB 25+06	2B05																			TEMPORARY 2GI
	2B05	2B06																		24" RCP (TO BE RETAINED FOR FINAL)
LDETNB 31+45	2B07																		52	TEMPORARY 15"
SHEET TOTALS					1				1										1238	
PROJECT TOTALS					1				1	27	4							0.045	4041	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

TGSLTW1014

COMPUTED BY:	REL	**DATE:**	07/28/2022
CHECKED BY:	BJH	**DATE:**	07/28/2022

PROJECT NO.	SHEET NO.
R-5705B	3D-17

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54 INCHES & OVER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 54–84	R. C. PIPE CLASS III 54–84	R. C. PIPE CLASS IV 54	60	66	72	78	84	STRUCTURAL PLATE PIPE 60 / 66 / 72	REINFORCED ENDWALLS CY	REMARKS
L 253+62	79	RT	0420															6.300	
			0420	0419		269.6	266.4						180						
L 346+66	111	RT	1100															5.600	
			1100	1101		273.9	269.9					248							
L 377+00	71	RT	1311															5.600	
			1311	1312		301.5	298.9					184							
Y8 13+90	62	LT	2202															5.600	
			2202	2201		311.2	309.6					132							
Y22 12+30	37	RT	2226															5.200	
			2226	2227		314.8	312.5				63								
SHEET TOTALS											63	564	180					28.300	
PROJECT TOTALS											63	564	180					28.300	

SIZE / THICKNESS OR GAUGE. Drainage Pipe columns: 54, 60, 66, 72, 78, 84; DO NOT USE RCP; DO NOT USE CSP; DO NOT USE CAAP; DO NOT USE HDPE; DO NOT USE PVC. R. C. PIPE CLASS III columns: 54, 60, 66, 72, 78, 84. STRUCTURAL PLATE PIPE columns: 60, 66, 72.

DRAINAGE STRUCTURE MASONRY CY	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION: SEE DETAIL SHEET 2C-5	SEE DETAIL SHEET 2C-15	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	SPRING BOX STD. 840.41	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

COMPUTED BY: Matt Snyder DATE: 11/21 CHECKED BY: Nathan Mohs DATE: 11/21	(5-15-18)	PROJECT NO. R-5705B	SHEET NO. 3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
-L-	248+00	252+00	RT	SD	400
-L-	256+00	259+00	RT	SD	300
-L-	273+00	279+00	LT & RT	SD	1200
-L-	303+00	307+00	LT	SD	400
-L-	318+00	325+00	LT & RT	SD	1400
-L-	329+00	342+00	LT & RT	SD	2600
-L-	384+00	389+00	LT & RT	SD	1000
-L-	400+00	406+00	LT & RT	SD	1200
-L-	413+00	424+00	LT & RT	SD	2200
-L-	428+00	432+00	LT & RT	SD	800
-L-	441+00	447+00	RT	SD	600
-L-	451+00	458+00	LT & RT	SD	1400
-L-	467+00	472+00	LT & RT	SD	1000
-Y7-	11+25	12+75	LT & RT	SD	300
-Y9-	10+25	11+50	LT & RT	SD	250
-Y10-	14+25	15+00	LT & RT	SD	150
-Y14-	11+25	12+25	LT & RT	SD	200
CONTINGENCY				SD	1000
				TOTAL LF:	16400

***UD = Underdrain**
***BD = Blind Drain**
***SD = Subsurface Drain**

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	405+75	431+75	ASU, Type 1	12	4150	12500	19250		
-L-	435+75	441+75	ASU, Type 1	12	680	2010	3100		
-L-	451+75	461+25	ASU, Type 1	12	1560	4100	6300		
-L-	483+75	485+75	ASU, Type 1	12	90	310	450		
-Y7-	13+60	15+10	ASU, Type 1	12	90	200	350		
-Y8-	17+25	22+25	ASU, Type 1	12	270	720	1100		
-Y9-	10+25	11+60	ASU, Type 1	12	50	130	200		
-Y9-	12+75	15+25	ASU, Type 1	12	65	210	350		
-Y12REV-	10+75	16+75	ASU, Type 1	12	235	910	1400		
-Y14-	11+25	12+25	ASU, Type 1	12	60	130	200		
CONTINGENCY			ASU, Type 1	12	500	1000	1500		
				TOTAL CY/TONS/SY:	7750	22220**	34200**		

***ASU(1/2) = Aggregate Subgrade (Type 1 or 2)**
***AST = Aggregate Stabilization**
****Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.**

SUMMARY OF ROCK PLATING

LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
-L-	2.5 : 1	312+25	2.5 : 1	313+25	RT	2		775
-L-	2.5 : 1	313+25	2.5 : 1	314+25	LT	2		685
							TOTAL SY:	1460

***Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.**

SUMMARY OF EMBANKMENT WAITING PERIODS

LINE	Station	Station	MONTHS
-L-	295+00	299+00	2

SUMMARY OF SETTLEMENT GAUGES

Gauge No.	LINE and Station	Offset	
		Distance FT	Direction LT/RT
1	-L- 296+00	0	-
2	-L- 298+00	0	-
	TOTAL GAUGES (EACH):		2

PROJ. REFERENCE NO.	SHEET NO.
R-5705B	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
98	4	ROY GARDNER (ACQUIRED UNDER NCDOT PROJECT R-5705A)
200	4 & 5	ROBERTA WOOLARD
201	4 & 5	WILLIAM WHEELER
202	5	LEOTERRA HONEYCUTT OAKS, LLC
203	5 & 6	RONALD E WHEELER (TIC) & REDDIN ADAMS WHEELER (TIC)
203A	5	REDDIN ADAM WHEELER & MEGHAN JORDAN ERICKSON
204	6 & 7	BARBARA ENNIS
205	6	LEOTERRA HONEYCUTT, LLC
206	6 & 7	JERRY SMITH
207	7 & 8	BARRY DOYLE
208	7	WILLIAM FARMER
209	8	RECIE FARMER
210	8	LAURA DICKENS
211	8	JERRY SMITH
212	8 & 9	LINWOOD MATTHEWS
213	8	DELETED
214	8	DELETED
215	8 & 9	DELETED
216	9	SUSAN CHRISCOE
217	9	DANNY HONEYCUTT
218	9 & 10	ANN BLALOCK
219	10 & 11	SUNFLIGHT LLC
220	11 & 12	DWIGHT STEPHENSON
221	12 & 13	ROBERTA WOOLARD
222	13	RICHARD BULLOCK
223	13 ,14 & 22	RUTH PETREA
224	22	NANCY GILES
225	22	MICKEY BARBOUR
226	22	RANDY SMITH
227	22	RICHARD BULLOCK
228	22	RICHARD BULLOCK
229	22	RICHARD BULLOCK
230	22	STUART L. MATTHEWS & MORRIS W. COATS
231	22	SUNNI SKYS LLC
232	15	KENNETH LAWRENCE
233	15	BRUNO PERALTA RANGEL AND WIFE, MARIA JANET PERALTA
234	15	KENNEBEC BAPTIST CHURCH
235	15	DELETED
236	15	NEAL EICHHORN
237	15	QUALITY OIL CO LLC
238	15	ALBERMARLE PROPERTIES LLC
239	15	LEIGH BALANCE
240	15	REBECCA MCDONALD
241	15	GEORGE KANESHIRO
242	15 & 16	BYRD PROPERTIES OF ANGIER LLC
243	15 & 16	MOHLER INVESTMENTS, LLC
244	16	BERYL ROAD PROPERTIES LLC
245	16	KDC CAPITAL, LLC
246	16 & 23	RUDINE BODDIE
247	23	DANIEL POOLE
248	23	MICHAEL MARSH
249	23	JOHN JANKENS
250	16	TC PROPERTY SOLUTIONS INC
251	16 ,17 & 18	KENNEBEC FLYING CLUB
252	16	JOHNSONS LANDING HOMEOWNERS ASSOC INC
253	16	JOSEPH SCUNZIANO
254	16	JAMES CLARKE
255	16 & 17	CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY
256	17	DELETED
257	17	RICHARD SCANLON
258	17	CHRISTOPHER CARVER
259	17	THEODORE PATEREK
260	17	DENNIS GOLDENSOHN
261	17	JANET BLACKMAN
262	17	DELETED
263	17	DELETED
264	17	JOHNSONS LANDING HOMEROWNERS ASSC
265	17	DELETED
266	17	DELETED
267	17	SHANE RUNDGREN
268	17	2015-3 IH2 BORROWER LP
269	17	JONATHAN MCLEAN
270	18	MICHAEL QUINTILONE
271	18	MITCHELL HAM
272	18	CHRISTOPHER LEE GRAINGER
273	18	BETHEL CHURCH INC
274	18	JEFFREY ZDENEK
275	18 & 19	KENNEBEC FLYING CLUB
276	18	JAMES HARTE
277	18 & 19	HARTE FINANCIAL, L.L.C.
278	19	WARREN BROOKS
279	19 & 20	A E SAUNDERS
280	19	PULTE HOME COMPANY
281	19	GIDEON BURNETT
282	19 & 20	HARTELAND LLC
283	19	DELETED
284	19	THOMAS TRUELOVE
285	20	RACHEL TURNER
286	20	JACK SEARCY
287	20	DELETED
288	20	PRENTICE MCLEAN
289	20 & 21	ANS TRUST THE
290	21	GLENN POND
291	21	DANA HALEY
292	21	ANS TRUST THE
293	21	DONALD HESTER
294	21	ALESSANDRO BIANCO
295	21	BRYAN ZIMMERMAN
296	21	JIMMIE HANKS
297	21	ALESSANDRO BIANCO
298	21	DELETED
299	21	DELETED
300	21	DELETED
301	23	BOBBY TERRY
302	23	RANDY GRIMES (NO CLAIM)
303	14	CAROLINA CHARTER ACADEMY HOLDINGS LLC
304	14 & 15	BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
305	14	DELETED
305A	14	SUMMER DISALVO & JUSTIN DISALVO
305B	14	PETER CAMPBELL
305C	14	ROBERT CRAIG EVANS
305D	14	NATASSIA SANTANA & JOEL J. GOMEZ
306	14	DAVID ALEXANDER BERNAL
307	14	UNKNOWN
308	14 & 15	BELLEWOOD HOMEOWNERS ASSOC. INC
309	22	RICHARD DWIGHT BULLOCK

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	4
RW SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER CLINTON T. REGISTER
5DAF0B0B6F0E4A0...
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

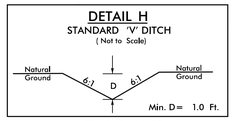
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RAJKUMAR C. PENDYALA
85F2260A...
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

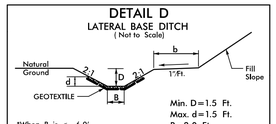
NAD 83/NA 2011

DETAIL H
STANDARD 'V' DITCH
(Not to Scale)



–L– STA. 246+83 RT

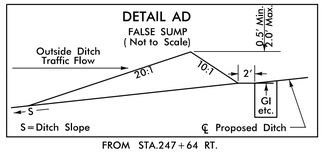
DETAIL D
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

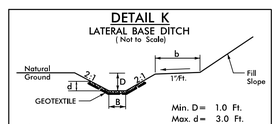
FROM STA.252+00 TO STA.253+11 –L– LT.

DETAIL AD
FALSE SUMP
(Not to Scale)



FROM STA.247+64 RT.

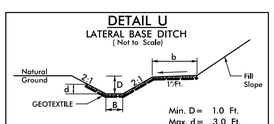
DETAIL K
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 5.0 Ft.
*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 254+16 TO STA. 255+50 RT

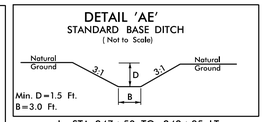
DETAIL U
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
Max. d= 3.0 Ft.
B= 4.0 Ft.
b= 10.0 Ft.
*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 253+67 TO STA. 254+18 RT

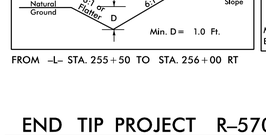
DETAIL 'AE'
STANDARD BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=3.0 Ft.

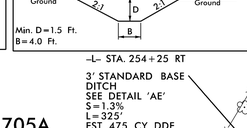
–L– STA. 247+50 TO 249+85 LT

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 255+50 TO STA. 256+00 RT

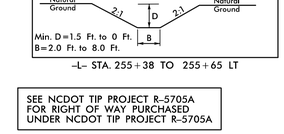
DETAIL 'B'
STANDARD BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=4.0 Ft.

–L– STA. 254+25 RT

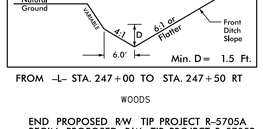
DETAIL 'Y'
VAR. WIDTH BASE DITCH
(Not to Scale)



Min. D=1.5 Ft. to 0 Ft.
B=2.0 Ft. to 8.0 Ft.

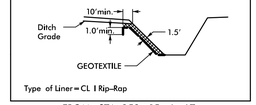
–L– STA. 255+38 TO 255+65 LT

DETAIL P
SPECIAL CUT DITCH w/HINGE
(Not to Scale)



FROM –L– STA. 247+00 TO STA. 247+50 RT

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL I Rip-Rap

FROM STA. 253+15 –L– LT.

ROY GARDNER
DB 814 PG 991

3' STANDARD BASE DITCH
SEE DETAIL 'AE'
S=1.3%
L=325'
EST. 475 CY DDE

SEE NCDOT TIP PROJECT R–5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R–5705A

END TIP PROJECT R–5705A
BEGIN TIP PROJECT R–5705B
–L– STA. 246+00.00

CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 14 SY

DRAIN POND

RIP RAP AT EMBANKMENT
SEE DETAIL 'N'
CL. 'I' RIP RAP
EST. 12 TONS
GEOTEXTILE
EST. 22 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
EST. 31 CY DDE

CLASS 'I' RIP RAP
EST. 48 TONS
GEOTEXTILE
EST. 87 SY

END PROPOSED R/W TIP PROJECT R–5705A
BEGIN PROPOSED R/W TIP PROJECT R–5705B
℄
100' LT

VAR. WIDTH BASE DITCH
SEE DETAIL 'Y'
L=36'
S=1.4%
EST. 16 CY DDE

CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

ROBERTA WOOLARD
DB 586 PG 209

PROPOSED 15" RCP COMING FROM CB#2104 (R–5705A) BY OTHERS

BEGIN FENCE (WW) +00

END FENCE (WW) +25

BEGIN FENCE (WW) +85

END FENCE (WW) +94 / 150'

BEGIN FENCE (WW) +92 / 100' / 123' RT

END FENCE (WW) +32 / 100'

END C/A +65.00 100' LT

BEGIN FENCE (WW) +25.00 100' LT

ACCESS POINT

GREU TL–3

CAT–1

TB 2GI

15" RCP–IV

24" RCP–IV

30" RCP–IV

18" RCP–IV

12' MID

30' MID.

2'–9" C&G

1'–6" C&G

200' R/W WIDTH

MATCHLINE SHEET 5
–L– STA. 259+00.00

FALSE SUMP
SEE DETAIL 'AD'

SPECIAL CUT DITCH w/HINGE
SEE DETAIL P

STANDARD 'V' DITCH
SEE DETAIL H
EST. DDE .5 CY
L= 63'
S= 5.9%

SEE NCDOT TIP PROJECT R–5705A FOR RIGHT OF WAY PURCHASED UNDER NCDOT TIP PROJECT R–5705A

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

END FENCE (WW) +96

BEGIN FENCE (WW) +16

LOW POINT
–L– STA. 253+70.00
EL. 283.75'

BURY PIPE 1.0'

HW

4.0' LATERAL BASE DITCH
SEE DETAIL U
CLASS 'I' RIP RAP
(54' STREAM RELOCATION)

STANDARD BASE DITCH
SEE DETAIL B

4.0' LAT. BASE DITCH
SEE DETAIL K
CLASS 'I' RIP RAP
EST. 350 TONS
GEOTEXTILE
EST. 410 SY
EST. 152 CY DDE

END PROPOSED R/W TIP PROJECT R–5705A
BEGIN PROPOSED R/W TIP PROJECT R–5705B
℄
111.85' RT

SPECIAL CUT DITCH
SEE DETAIL L

WILLIAM WHEELER
DB 3438 PG 741

–L– STA. 245+70.00
BEGIN CONSTRUCTION

PER GEOTECHNICAL REPORT DATED NOVEMBER 17, 2021: GEOTEXTILE FOR SOIL STABILIZATION MAY BE NEEDED TO ESTABLISH A WORKING PLATFORM FOR EMBANKMENT CONSTRUCTION DUE TO SOFT/WET SOILS IN ACCORDANCE WITH SECTION 270 OF THE 2018 STANDARD SPECIFICATINS FOR ROADS AND STRUCTURES AT THE FOLLOWING AREAS:

FROM –L– STA. 252+50 TO 254+00 LT & RT

–L–
PI Sta 251+52.68
Δ = 72° 05' 05.6" (RT)
D = 1° 32' 24.8"
L = 4,680.20'
T = 2,706.95'
R = 3,720.00'
SE= 0.04
RO = 240'

ROY GARDNER
DB 814 PG 991

JESUS GARCIA
DB 2299 PG 755

ROBERT PHELPS
DB 1368 PG 48

JAMES JOHNSON
DB 2310 PG 997

CLARENCE LYON
DB 2979 PG 572

SEE SHEET 24 FOR –L– PROFILE

8/4/2022
J:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_04.dgn
User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER

Docusigned by: Ronald E. Wheeler, Jr., P.E.
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

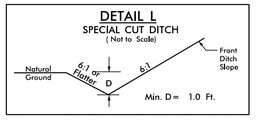
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER

Docusigned by: Reddin A. Wheeler, P.E.
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

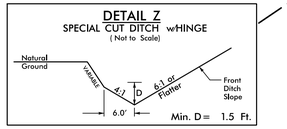
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 272+50 TO STA. 273+50 LT

DETAIL Z
SPECIAL CUT DITCH w/HINGE
(Not to Scale)



FROM –L– STA. 259+00 TO STA. 261+00 LT

NAD 83/NA 2011

MATCHLINE SHEET 4
–L– STA. 259+00.00

MATCHLINE SHEET 6
–L– STA. 273+00.00

260 265 270

200
ROBERTA WOOLARD
DB 586 PG 209

201
WILLIAM WHEELER
DB 3438 PG 741

202
LEOTERRA HONEYCUTT OAKS, LLC
DB 3882 PG 703

203
RONALD E WHEELER (TIC)
& REDDIN ADAMS WHEELER (TIC)
DB 3566 PG 722

203A
REDDIN ADAM WHEELER
& MEGHAN JORDAN ERICKSON
DB 3566 PG 722

Century Link, Copper

N 46°32'20" E
140.00'

WOODS

CULTIVATED

POND

BL-34

BL-35

CL 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY
±00.00
100' LT

±75.00
100' LT

±00.00
110' LT

SPECIAL CUT DITCH
W/HINGE
SEE DETAIL Z

END
FENCE (WW)
END C/A
+10.00
100' LT

BEGIN
FENCE (WW)
BEGIN
C/A
+70.00
100.00' LT

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 CY

ACCESS
POINT

0501
15" RCP-IV
TB 2GI

0502
2'-9" C&G
1'-6" C&G
12' 12'
MED.

0503
15" RCP-IV
TB 2GI

0504
2'-9" C&G TB 2GI
15" RCP-IV
TB 2GI

0508
15" RCP-IV
TB 2GI

200' RW WIDTH

–L–

N 02°29'05" W
996.60' (TOTAL)

±25.93
100' LT

60' TYP

SPECIAL CUT DITCH
SEE DETAIL L

BEGIN
FENCE
(WW)
BEGIN
C/A
+75.00
100.00' LT

END
FENCE (WW)
END C/A
+15.00
100' LT

N 02°29'05" W
N 35'

ISLD
GRANO

S 77°44'05" W
100.00'

N 12°00'55" E
100.00'

6:1
3,550.62
6:1
3,550.62
S

END C/A
+24.00
100' RT
END
FENCE (WW)

±38
100'

BEGIN
C/A
+84.00
100.00' RT
BEGIN
FENCE (WW)

±00
100'

±24.66
149'

±28
144'

±35
120'

±33
124'

±67
142'

±57
159'

PUE

HIGH POINT
–L– STA. 267+14.61
ELEV. = 313.09'

–L– CS Sta. 271+25.93

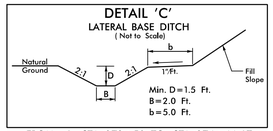
–L–
PIs Sta 272+05.94
Θs = 1° 50' 53.7"
Ls = 240.00'
LT = 160.01'
ST = 80.01'

SEE SHEET 24 FOR –L– PROFILE

8/1/2022
R:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_05.dgn
User:bevans

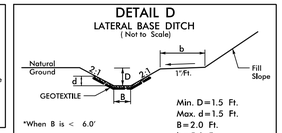
8/17/99

DETAIL 'C'
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 273+50 TO STA. 274+44 LT.
FROM –L– STA. 282+00 TO STA. 283+58 LT.

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

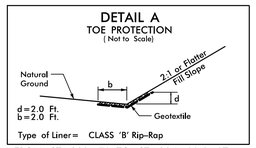


Type of Liner= CLASS 'B' Rip-Rap

FROM –L– STA. 281+72 TO STA. 283+81 RT
FROM –L– STA. 283+89 TO STA. 287+00 RT

CULTIVATED

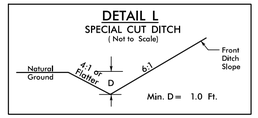
DETAIL A
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap

FROM STA.283+70 TO STA.284+00–L– LT.

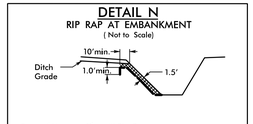
DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 272+50 TO STA. 273+50 LT
FROM –L– STA. 274+44 TO STA. 276+00 LT
FROM –L– STA. 274+00 TO STA. 274+60 RT
FROM –L– STA. 274+79 TO STA. 275+50 RT

CULTIVATED

DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 274+40 TO STA. 274+60 RT
FROM –L– STA. 275+00 TO STA. 275+50 RT

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER
8/30/2022 | 12:41 PM PDT

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TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

MATCHLINE SHEET 5
–L– STA. 273+00.00

MATCHLINE SHEET 7
–L– STA. 287+00.00

203
RONALD E WHEELER (TIC) &
REDDIN ADAMS WHEELER (TIC)
DB 3566 PG 722

204
BARBARA ENNIS
DB 2235 PG 534
MB 2006 PG 182

205
LEOTERRA HONEYCUTT LLC
DB 3882 PG 713
MB 2020 PG 367

202
LEOTERRA HONEYCUTT OAKS LLC
DB 3882 PG 703
MB 2020 PG 367

206
JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

POND

R5705-AZ34

Century Link Copper

N 10°01'59" W 390.69'

S 09°03'09" W 832.69'

S 10°01'59" E 236.44'

S 69°23'39" E 216.45'

N 19°09'56" W 281.22'

S 69°28'07" E 163.20'

S 11°07'07" W 350.00'

S 11°07'07" W 80.00'

S 11°07'07" W 60.00'

N 78°52'53" W 39.27'

25' R

S 78°52'53" E 39.27'

N 28°27'20.3" E

–L–

CULTIVATED

BEGIN SBG 281+96 LT. AND 281+70 RT.
END SBG 286+60 LT. AND 286+33 RT.

CLASS 'I' RIP RAP
EST. 17 TONS
GEOTEXTILE
EST. 38 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'C'
EST. 33 CY DDE
CLASS 'B' RIP RAP
EST. 2 TONS
GEOTEXTILE
EST. 7 SY

LATERAL BASE DITCH
SEE DETAIL C
EST. 24 CY DDE

CLASS 'B' RIP RAP
EST. 2 TONS LOW POINT
GEOTEXTILE –L– STA. 274+45.04
EST. 7 SY ELEV. = 306.82'

CLASS 'I' RIP RAP
EST. 26 TONS
GEOTEXTILE
EST. 50 SY

SPECIAL CUT DITCH
SEE DETAIL L

SPECIAL CUT DITCH
SEE DETAIL L

END FENCE (WW)
END C/A
+05.00
100' LT

BEGIN FENCE (WW)
BEGIN C/A
+65.00
100.00' LT

END FENCE (WW)
END C/A
+95.00
100' LT

BEGIN FENCE (WW)
BEGIN C/A
+55.00
100.00' LT

ACCESS POINT

+65.93
100' LT

+60.00
100' LT

+70.00
135' LT

+44
140'

+80
118.26'
135'

+66
128'

+00.00
100' LT

+66
100'

TOE PROTECTION
SEE DETAIL 'A'

+34
112.33'

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
EST. 93 TONS
GEOTEXTILE
EST. 209 SY
EST. 144 CY DDE

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
EST. 128 TONS
GEOTEXTILE
EST. 274 SY
EST. 187 CY DDE

15" CSP
ROD AND LUG CONNECTORS W/ELBOWS

15" RCP-IV

GREU TL-3

CAT-1

BURY PIPE 0.8'

RIP RAP AT EMBANKMENT
SEE DETAIL N
EST. 28 TONS
GEOTEXTILE
EST. 50 SY

SPECIAL CUT DITCH
SEE DETAIL L

RIP RAP AT EMBANKMENT
SEE DETAIL N
EST. 28 TONS
GEOTEXTILE
EST. 50 SY

SPECIAL CUT DITCH
SEE DETAIL L

END FENCE (WW)
END C/A
+65.93
100' RT

+25.93
100' RT
BEGIN FENCE (WW)

+89.00
100' RT

END C/A
+71.81
105.89' RT
END FENCE (WW)

BEGIN FENCE (WW)
+31.81
110.15' RT

+00.00
115' RT

+35.00
100' RT

+45
100'

+58.00
100' RT

END FENCE (WW)
+72

BEGIN FENCE (WW)
+92

+15
126'

+68.00
129' RT

+67
150'

+00.00
117' RT

+90
138'

–L– ST Sta. 273+65.93

50' TRANSITION CURB

1'–6" C&G

TBC 2'–9" C&G

12' 12' 200' R/W WIDTH

30' MED.

2GI

CULTIVATED

SEE SHEET 25 FOR –L– PROFILE

8/1/2022
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_06.dgn
User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER — Timothy C. Houlihan — DocuSigned by: — 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

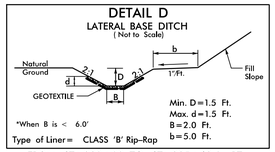
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER — Kendall C. Taylor — DocuSigned by: — 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

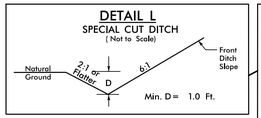
DETAIL D
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap

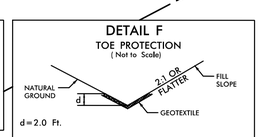
FROM STA.290+00 TO STA.295+63–L– RT.
FROM STA.290+00 TO STA.293+50–L– LT.
FROM STA.299+50 TO STA.301+17–L– LT.

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 287+00 TO STA. 287+50 RT

DETAIL F
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS I Rip-Rap

FROM –L– STA. 297+70 TO STA. 299+50 RT

PER GEOTECHNICAL REPORT DATED NOVEMBER 17, 2021: GEOTEXTILE FOR SOIL STABILIZATION MAY BE NEEDED TO ESTABLISH A WORKING PLATFORM FOR EMBANKMENT CONSTRUCTION DUE TO SOFTWET SOILS IN ACCORDANCE WITH SECTION 270 OF THE 2018 STANDARD SPECIFICATINS FOR ROADS AND STRUCTURES AT THE FOLLOWING AREAS:

FROM –L– STA. 297+00 TO 299+00 LT & RT

MATCHLINE SHEET 6
–L– STA. 287+00.00

MATCHLINE SHEET 8
–L– STA. 300+00.00

204 BARBARA ENNIS
DB 2235 PG 534
MB 2006 PG 182

207 BARRY DOLEY
DB 737 PG 829
MB 21PG 18

206 JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

208 WILLIAM FARMER
DB 1214 PG 551

207 BARRY DOLEY
DB 737 PG 829
MB 21PG 18

206 JERRY SMITH
DB 3087 PG 394
MB 2013 PG 63

CHALYBEATE SPRINGS OFF RD NC
DB 685 PG 947

CULTIVATED

BEGIN SBG 291+57 LT. AND 290+70 RT.
END SBG 301+19 LT. AND 301+03 RT.

TRANSITION STONE
CLASS 'B' RIP RAP
EST. 5 TONS
GEOTEXTILE
EST. 15 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
EST. 148 TONS
GEOTEXTILE
341 SY
EST. 148 CY DDE

CLASS 'B' RIP RAP
EST. 1 TON
GEOTEXTILE
EST. 5 SY

2' LATERAL BASE DITCH
SEE DETAIL D
CLASS 'B' RIP RAP
EST. 73 TONS
GEOTEXTILE
163 SY
EST. 39 CY DDE

CLASS 'I' RIP RAP
EST. 26 TONS
GEOTEXTILE
50 SY

2.0' LATERAL BASE DITCH
SEE DETAIL 'D'
CLASS 'B' RIP RAP
EST. 251 TONS
GEOTEXTILE
561 SY
EST. 200 CY DDE

TOE PROTECTION
SEE DETAIL 'F'
CLASS 'I' RIP RAP
EST. 64 TONS
GEOTEXTILE
160 SY

SPECIAL CUT DITCH
SEE DETAIL L

HIGH POINT
–L– STA. 287+79.61
ELEV. = 320.74'

ROD AND LUG CONNECTORS W/ELBOWS

BURY PIPE 0.8'

GREU TL-3

200' R/W WIDTH

30' MED.

12' 12' 02

1'-6" C&G

15" RCP-IV

15" CSP

2GI

4'R

100' TAPER

65'R

WOODS

POND

BL-37

BL-38

S 18°19'55" E 210.40'

S 00°45'15" W 171.00'

S 78°49'45" E 183.38'

N 87°24'45" W 376.80'

S 58°55'00" E 65.00'

S 01°41'11" W 86.51'

S 38°16'49" E 58.00'

S 01°22'06" E 839.03'

S 01°38'16" E 931.79'

N 28° 27' 20.3" E

–L–

SEE SHEET 25 FOR –L– PROFILE

8/1/2022
R:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_07.dgn
User:vgos

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TOMMY C. TAYLOR, JR. REGISTERED

8DAF86C0B4B4F0... 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RANDALL C. HENEGAR, JR. REGISTERED

B5F220A... 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL A
TOE PROTECTION
(Not to Scale)

Natural Ground, 2:1 or Flatter Fill Slope, b, d, Geotextile

d=2.0 Ft.
b=2.0 Ft.

Type of Liner= CL 'I' Rip-Rap

FROM STA.311+50 TO STA.312+60 LT
FROM STA.311+50 TO STA.312+50 RT

DETAIL P
SPECIAL CUT DITCH wHINGE
(Not to Scale)

Natural Ground, Variable, 4:1, D, 6:1 or Flatter, 6.0', Front Ditch Slope

Min. D= 1.5 Ft.

FROM –L– STA. 303+50 TO STA. 306+00 RT
FROM –L– STA. 307+50 TO STA. 309+00 RT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, D, 2:1, b, 1'Ft., Fill Slope, B

Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 300+68 TO STA. 302+50 RT

DETAIL I
FALSE SUMP
(Not to Scale)

0.5' Min. 1.0' Max.
Outside Ditch Traffic Flow, 20:1, 10:1, 2', GI etc.
S=Ditch Slope, ℄ Proposed Ditch

–L– STA.311+13 LT

DETAIL AC
FALSE SUMP
(Not to Scale)

0.5' Min. 1.0' Max.
Outside Ditch Traffic Flow, 10:1, 20:1, 2.0', GI etc.
S=Ditch Slope, ℄ Proposed Ditch

FROM STA.311+13 RT.

DETAIL D
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, d, GEOTEXTILE, D, 2:1, b, 1'Ft., Fill Slope, B

Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

*When B is < 6.0'
Type of Liner= CLASS 'B' Rip-Rap

FROM STA.299+50 TO STA.301+17–L– LT.

NAD 83/NA 2011

BY6-111
–Y6– POT Sta. 10+00.00

–Y6– STA. 12+25.00
BEGIN CONST.
BARRY DOYLE
DB 737 PG 829
207

BEGIN SBG 291+57 LT. AND 290+70 RT.
END SBG 301+19 LT. AND 301+03 RT.

REMOVE HW 24" RCP–IV

CLASS 'B' RIP RAP EST. 3 TONS GEOTEXTILE 11 SY

2' LATERAL BASE DITCH SEE DETAIL D CLASS 'B' RIP RAP

JB W/MH

209 RECIE FARMER DB 407 PG 480

ROD AND LUG CONNECTORS W/ELBOWS

15" CSP, 24" RCP–IV, 15" RCP–IV, 18" CSP, 48" CMP

GREU TL–3, 180'–60'–180' R

100' TAPER

1'–6" C&G, 2'–9" C&G, TB2GI, CAT–1

EXISTING R/W MONUMENT

–L– STA. 302+93.79
–Y6– STA. 15+46.05

LAURA DICKENS
DB 485 PG 202
210

JERRY SMITH
DB 755 PG 458
211

JERRY SMITH
DB 3139 PG 53

–Y6– STA. 18+00.00
END CONST.

–Y6– POT Sta. 19+42.34

–L– PC Sta. 303+16.42

BARRY DOYLE
DB 737 PG 829
207

ISFD, BK B, 2SBKG, 3SBFD, WOODS, CULTIVATED

Town of Angier, 8" PVC, SR 1441 (W. WILLIAMS ST.), Century Link, Copper, Spectrum, Copper, Piedmont Natural Gas Company, Inc.

ANNUAL AVERAGE DAILY TRAFFIC
(Vehicles per Day)

4600 / 9500
2100 / 4100
400 / 500
16000 / 25700
800 / 400
14900 / 24300
2300 / 3600
2022 / 2042

212 LINWOOD MATTHEWS
DB 617 PG 770
DB 918 PG 720
DB 1253 PG 191

CLASS 'B' RIP RAP EST. 2 TONS GEOTEXTILE EST. 7 SY

TRANSITION, REMOVE ISBFD, REMOVE ISBKD, 20' DR., 14' BST, 24' BST, 20' DR. IT

BEGIN FENCE (WW) +91.38 109'
END FENCE (WW) +74.00 100' RT
END FENCE (WW) +67
BEGIN FENCE (WW) +87

SPECIAL CUT DITCH W/HINGE SEE DETAIL P

FALSE SUMP SEE DETAIL
FALSE SUMP SEE DETAIL AC

TOE PROTECTION SEE DETAIL 'A'

ACCESS POINT, 2GI, FS, ELBOWS, 18" CSP

216 SUSAN CHRISCOE
WB 12E PG 114

SUSAN CHRISCOE
DB 3075 PG 893

BL–39= BY6
BL–40
BL–41

MATCHLINE SHEET 7
–L– STA. 300+00.00

MATCHLINE SHEET 9
–L– STA. 312+00.00

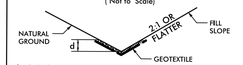
–L–
PI Sta 310+55.64
△ = 16° 49' 11.4" (LT)
D = 1° 08' 45.3"
L = 1,467.81'
T = 739.22'
R = 5,000.00'
SE = 03
RO = 180'

SEE SHEETS 25 THRU 26 FOR –L– PROFILE
SEE SHEET 33 FOR –Y6– PROFILE

8/4/2022
8:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_08.dgn
User:bevans

8/17/99

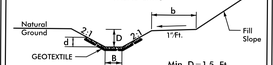
DETAIL F
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS I Rip-Rap

FROM –L– STA. 311+50 TO STA. 312+60 LT
FROM –L– STA. 311+50 TO STA. 312+50 RT

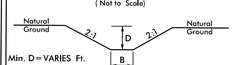
DETAIL G
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CLASS 'I' Rip-Rap

FROM –L– STA. 312+69 TO STA. 317+00 RT
FROM –L– STA. 313+63 TO STA. 317+50 LT

DETAIL 'X'
STANDARD BASE DITCH
(Not to Scale)



FROM –L– STA. 312+00 TO STA. 317+50 RT

–L–
PI Sta 310+55.64
Δ = 16° 49' 11.4" (LT)
D = 1° 08' 45.3"
L = 1,467.81'
T = 739.22'
R = 5,000.00'
SE = 0.03
e = 0.0

GEOTECHNICAL REPORT DATED NOVEMBER 03, 2021:
GEOTEXTILE FOR SOIL STABILIZATION MAY BE NEEDED TO ESTABLISH A WORKING PLATFORM FOR EMBANKMENT CONSTRUCTION DUE TO SOFT/WET SOILS IN ACCORDANCE WITH SECTION 270 OF THE 2018 STANDARD SPECIFICATINS FOR ROADS AND STRUCTURES AT THE FOLLOWING AREAS:

FROM –L– STA. 312+00 TO 315+00 LT & RT

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	9
RW SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

MATCHLINE SHEET 8
–L– STA. 312+00.00

MATCHLINE SHEET 10
–L– STA. 326+00.00

BEGIN SBG 311+77 LT. AND END SBG 315+90 LT.

–L– PT Sta. 317+84.22

N 11° 38' 08.9" E
–L–

212
LINWOOD MATTHEWS
DB 617 PG 770
DB 918 PG 720
DB 1253 PG 191

218
ANN BLALOCK
WB 93E PG 169

216
SUSAN CHRISCOE
DB 3075 PG 893

217
DANNY HONEYCUTT
DB 3127 PG 706
MB 2008 PG 171

2' STANDARD BASE DITCH
SEE DETAIL 'X'
EST. DDE=25 CY
L= 53'
S= 1.9%

CLASS 'B' RIP RAP
EST. 3 TONS
GEOTEXTILE
EST. 10 SY

CLASS 'B' RIP RAP
EST. 2 TONS

2' LAT. BASE DITCH
SEE DETAIL G
CLASS 'I' RIP RAP
EST. 500 TONS
GEOTEXTILE
EST. 610 SY
EST. 278 CY DDE

TOE PROTECTION
SEE DETAIL 'A'
CLASS 'I' RIP RAP
EST. 238 TONS
GEOTEXTILE
EST. 98 SY

ROD AND LUG ELBOWS

ROD AND LUG CONNECTORS W/ELBOWS

18" CSP

15" RCP-IV

1'-6" C&G

2'-9" C&G

TB 2GI

TB2GI

CAT-1

4'R

6.5'R

100' TAPER

180'

60' TYP

100.00'

ACCESS POINT

50' TRANSITION CURB

5.5' MED.

200' RW WIDTH

12' 12' 01 02 03

BEGIN FULL C/A +55.00 174' LT

END FULL C/A +84.22 100' LT

END FULL C/A +77.00 100' LT

BEGIN FULL C/A +75.00 100' LT

END FULL C/A +61.00 100' LT

BEGIN FULL C/A +55.00 160' RT

END FULL C/A +77.00 100' RT

BEGIN FULL C/A +75.00 100' RT

END FULL C/A +61.00 100' RT

+00 172.05'

+00 181'

+68 175'

+84.00 160' LT

+47 END FENCE (WW)

+75 BEGIN FENCE (WW)

+71 END FENCE (WW)

+99 BEGIN FENCE (WW)

+80.00 27.00' OFF.

+71.93 27.00' OFF.

+84.22 100' LT

END FENCE (WW) +84.22 100' LT

BEGIN FENCE (WW) +44.23 100' RT

END FENCE (WW) +84.22 100' RT

END FENCE (WW) +80.00 100' LT

BEGIN FENCE (WW) +40.00 100' LT

+00 125'

+00.00 100' LT

+55 100'

+30 100'

+83.75 107'

+55.00 164' RT

+05 157'

+61 110'

+90 100'

+97.13

+17.00 152' RT

+45 164'

+05.00 100' RT END FENCE (WW) +26

BEGIN FENCE (WW) +46

LOW POINT –L– STA. 316+14.21 ELEV. = 267.71'

+55.22

+24.22

+16.06

2R

3'

5.5'

PUE

BL-42

BL-43

BL-44

CULTIVATED

WOODS

BWP

N 30°39'57" E 1998.62'

S 30°16'07" E 118.58'

N 82°34'00" W 64.05'

N 27°13'49" W 91.29'

S 70°05'58" W 50.05'

N 64°37'37" W 57.58'

N 22°59'55" W 28.79'

SEE SHEETS C-1 THRU C-5 FOR CULVERT PLANS

SEE SHEET 26 FOR –L– PROFILE

8/1/2022
I:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_09.dgn
User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	10
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TOMMY C. TAYLOR REGISTERED

8DAF86C0... 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

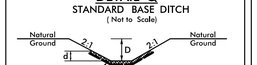
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RAMESH CHANDRA REGISTERED

B5F228A... 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

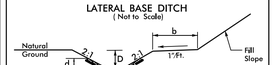
DETAIL Q
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 326+45 TO STA. 326+60 LT

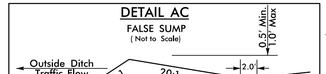
DETAIL D
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap

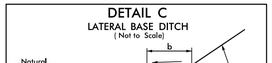
FROM –L– STA. 328+00 TO STA. 332+00 RT

DETAIL AC
FALSE SUMP
(Not to Scale)



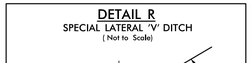
FROM STA.329+00 LT.

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 337+50 TO STA. 339+00 RT

DETAIL R
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



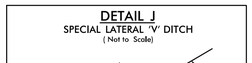
FROM –Y7– STA. 11+00 TO STA. 12+25 LT
FROM –Y7– STA. 14+00 TO STA. 16+00 LT
FROM –Y7– STA. 11+00 TO STA. 11+75 RT
FROM –Y7– STA. 14+00 TO STA. 16+00 RT

DETAIL F
TOE PROTECTION
(Not to Scale)

Type of Liner= CLASS I Rip-Rap

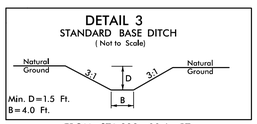
FROM –L– STA. 337+50 TO STA. 337+96 LT

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM –L– STA. 339+00 TO STA. 339+50 RT
FROM –L– STA. 331+50 TO STA. 332+00 RT

DETAIL 3
STANDARD BASE DITCH
(Not to Scale)



FROM STA.328+00–L– RT.

DETAIL AE
STANDARD BASE DITCH
(Not to Scale)

FROM STA.338+38–L– LT.

–Y7–
PI Sta 148+0.22
Δ = 4°05' 16.8" (RT)
D = 1° 15' 00.7"
L = 326.99'
T = 163.57'
R = 4,583.00'

–Y7– POT Sta. 10+00.00

–Y7– STA. 10+80.00
BEGIN CONST.

–Y7– STA. 15+00.00
END GRADE

–Y7– PT Sta. 16+43.65

–Y7– STA. 16+00.00
END CONST.

–L– STA. 332+45.75
–Y7– STA. 13+16.00

BY7-135

R5705-AZ36 = BY7

BEGIN SBG 326+06 LT. AND 326+45 RT.
END SBG 328+50 LT. AND 328+82 RT.

MATCHLINE SHEET 9
–L– STA. 326+00.00

MATCHLINE SHEET 11
–L– STA. 339+50.00

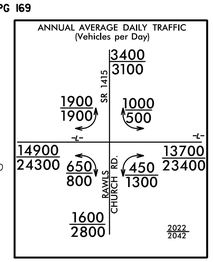
NAD 83/NA 2011

BOBBY ELKINS
DB 2488 PG 543
MB 2008 PG 126

218 ANN BLALOCK
WB 93E PG 169

219 SUNFLIGHT LLC
DB 2724 PG 826

ANNUAL AVERAGE DAILY TRAFFIC
(Vehicles per Day)



SEE SHEETS 26 & 27 FOR –L– PROFILE
SEE SHEET 33 FOR –Y7– PROFILE

8/4/2022
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_10.dgn
User: reyons

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	11
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER CHRISTOPHER T. REGISTER

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER KATHERINE A. HENEGAR

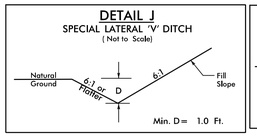
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

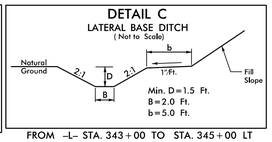
NAD 83/NA 2017

DETAIL J
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



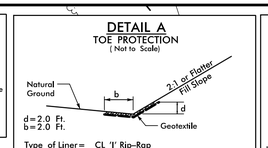
FROM –L– STA. 343+00 TO STA. 343+50 RT
FROM –L– STA. 342+50 TO STA. 343+00 LT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



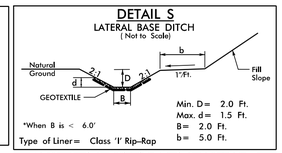
FROM –L– STA. 343+00 TO STA. 345+00 LT

DETAIL A
TOE PROTECTION
(Not to Scale)



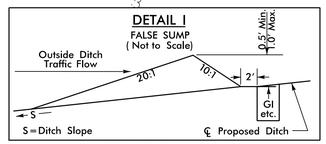
FROM STA.346+50 TO STA.348+50 LT

DETAIL S
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 346+68 TO STA. 354+00 RT
FROM –L– STA. 343+50 TO STA. 346+65 RT

DETAIL I
FALSE SUMP
(Not to Scale)



FROM STA.345+05 LT.

CULTIVATED

BL-47

BL-48

BL-49

BL-46

N 89°50'56" W 293.84'

WOODS

340

345

350

BEGIN SBG 344+76 LT. AND 344+15 RT.
END SBG 348+35 LT. AND 350+64 RT.

TDE +11 289'

219
SUNFLIGHT LLC
DB 2724 PG 826

220
DWIGHT STEPHENSON
DB 2179 PG 585

BEGIN FENCE (WW)
BEGIN FULL C/A +25.00 100' LT
END FENCE (WW)
END C/A +65.00 100' LT
ACCESS POINT
180'
+16.00 150' LT
+67.00 100' LT
+40.00 100' LT
+80.00 100' LT
+05 120.13'
+58 167'
+57.00 162' LT
+82 100' 125'
+65.00 100' LT

2' LATERAL BASE DITCH SEE DETAIL C EST. 68 CY DDE

SPECIAL LAT. 'V' DITCH END FULL C/A +40.00 100' LT SEE DETAIL J

FALSE SUMP SEE DETAIL I

CLASS 'B' RIP RAP EST. 1 TON GEOTEXTILE EST. 5 SY

CL 'I' RIP RAP EST. 464 TONS GEOTEXTILE EST. 56 SY

TOE PROTECTION SEE DETAIL A CL 'I' RIP RAP EST. 126 TONS GEOTEXTILE EST. 178 SY

TRANSITION STONE CLASS 'B' RIP RAP EST. 5 TONS GEOTEXTILE EST. 15 SY

ELBOWS ROD AND LUG CAT-1

GREU TL-3

15" RCP-IV

BURY PIPE 1.0'

HW

1100 1101 1102 1103 1104 1105 1106 1107 1108

MATCHLINE SHEET 10
–L– STA. 339+50.00

MATCHLINE SHEET 12
–L– STA. 353+50.00

100' TAPER
200' R/W WIDTH
1'–6" C&G
4'R
65'R
+18.34 27.00' OFF.
+93.13
+74.21
2GI
CSP
15" RCP-IV
–L–
N 11° 38' 08.9" E
+27.90
60' TYP
50' TRANSITION CURB
2'–9" C&G
30' MED.
12' 12' 15'

BEGIN FULL C/A +25.00 100' RT
+00 100'
+50 120'
LOW POINT –L– STA. 342+62.27 ELEV. = 293.61'
SPECIAL LAT. 'V' DITCH SEE DETAIL J
+13 100'
END FULL C/A +40.00 100' RT
+85 129'
+90 129'
+49.00 100' RT
+73.00 146' RT
+73 167'
+17 100'
+88 130'
PUE
SDE
2' LATERAL BASE DITCH DETAIL S CLASS 'I' RIP RAP EST. 535 TONS GEOTEXTILE EST. 650 SY EST. 373 CY DDE
2' LATERAL BASE DITCH DETAIL S CLASS 'I' RIP RAP EST. 960 TONS GEOTEXTILE EST. 1,195 SY EST. 464 CY DDE
N 53°11'20" W 218.25'

SEE SHEET 27 FOR –L– PROFILE

8/1/2022
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_11.dgn
User:bkvans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	12
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER CLINTON T. REGISTER

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

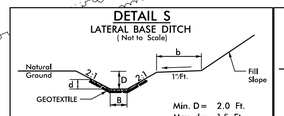
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RALEIGH, NORTH CAROLINA

8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL S
LATERAL BASE DITCH
(Not to Scale)

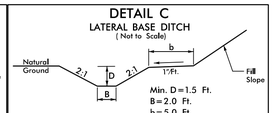


Min. D= 2.0 Ft.
Max. d= 1.5 Ft.
B= 2.0 Ft.
b= 5.0 Ft.

*When B is < 6.0'
Type of Liner= Class 'I' Rip-Rap

FROM –L– STA. 346+68 TO STA. 354+00 RT

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.

FROM –L– STA. 362+00 TO STA. 365+50 RT

NAD 83/NA 2011

360
355
365

220
DWIGHT STEPHENSON
DB 2179 PG 585

221
ROBERTA WOOLARD
DB 1275 PG 306

N 89°45'42" W
1283.55'

BEGIN FENCE (WW) BEGIN C/A +24.38 100' LT
END FENCE (WW) END C/A +65.54 100' LT
ACCESS POINT
+80 100'
+30 120'
+00 118'
+70 100'
+40.00 100' LT
+67.90 100' LT
+72.30 156' LT
CLASS 'B' RIP RAP EST. 5 TONS GEOTEXTILE EST. 14 SY
END FENCE (WW) END C/A +90.00 100' LT
BEGIN FENCE (WW) BEGIN C/A +50.00 100' LT
HIGH POINT –L– STA. 363+43.38 ELEV. = 329.12'
+71 100'
+78 114'
+94 100'
2' LATERAL BASE DITCH SEE DETAIL C EST. 250 CY DDE
END C/A +50.00 100' RT
END FENCE (WW)
BEGIN C/A +10.00 100' RT
BEGIN FENCE (WW)
BL-51
BL-50
BL-49
END C/A +69.27 100' RT
END FENCE (WW)
BEGIN C/A +30.52 100' RT
BEGIN FENCE (WW)
+67.90 100' RT
–L– PC Sta. 353+67.90

MATCHLINE SHEET 11 –L– STA. 353+50.00

MATCHLINE SHEET 13 –L– STA. 367+50.00

TB 2GI
15" RCP-IV
24" RCP-IV
2'-9" C&G
1'-6" C&G
200' R/W WIDTH
30' MED.
12' 12'
03
CULTIVATED
2' LATERAL BASE DITCH SEE DETAIL S
1200
1201
1202
1203
1204
1205
1206
1207

–L–
PI Sta 362+25.78
Δ = 19° 28' 17.8" (RT)
D = 1° 08' 45.3"
L = 1,699.22'
T = 857.88'
R = 5,000.00'
SE = 03
RO = 180'

SEE SHEET 27 THRU 28 FOR –L– PROFILE

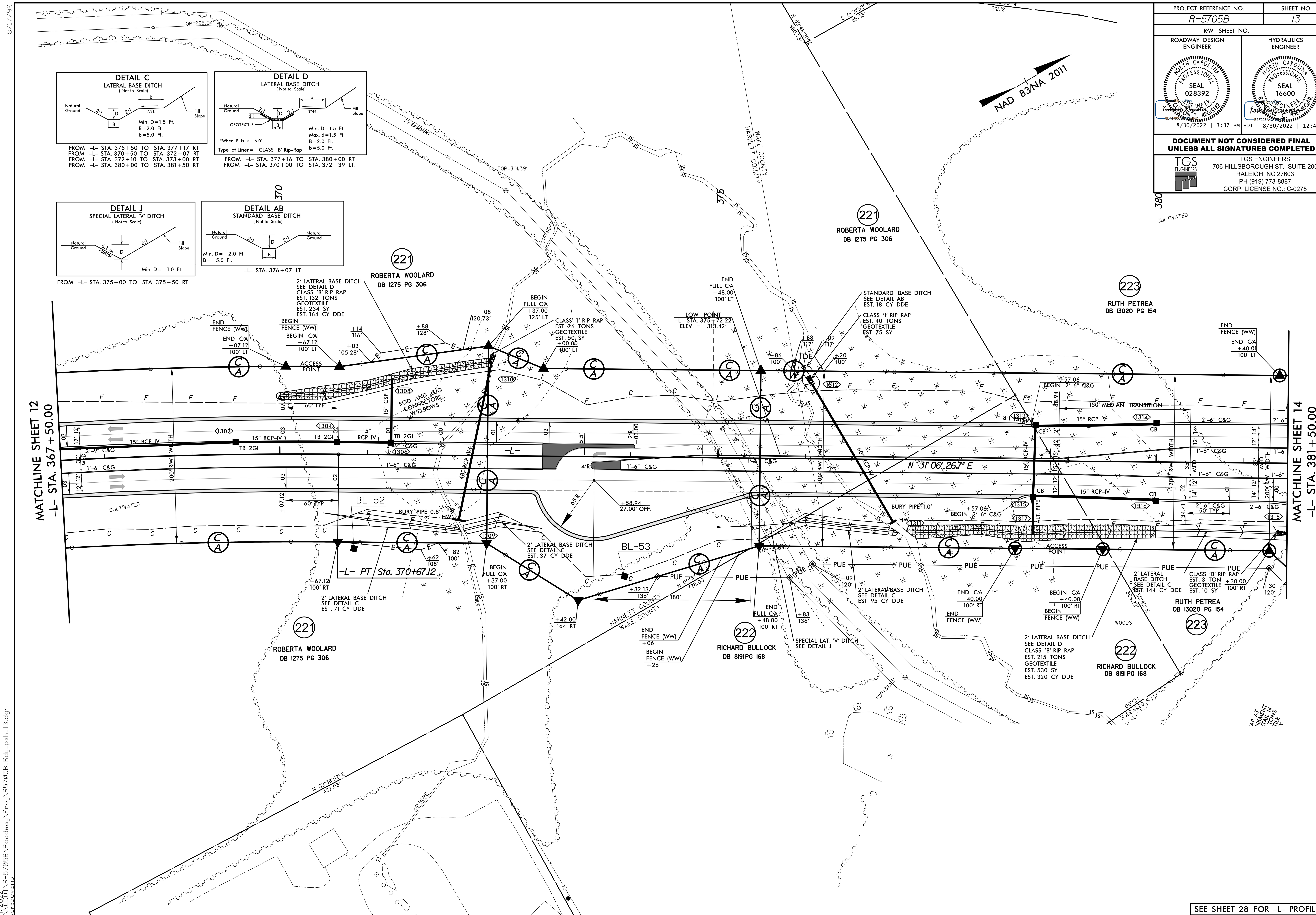
8/1/2022
R:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_12.dgn
User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	13
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER CLINTON T. REGISTER	NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RANDALL C. HENEGAR
DocuSigned by: Tommy Register 8DAF86CB... 8/30/2022 | 3:37 PM EDT	DocuSigned by: Randall Henegar B5F228A4... 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

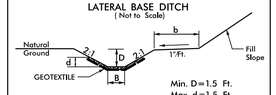
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275



8/17/99

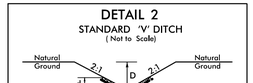
SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

DETAIL W
LATERAL BASE DITCH
(Not to Scale)



*When B is < 6.0'
Type of Liner= CLASS 'I' Rip-Rap
Min. D=1.5 Ft.
Max. d=1.5 Ft.
B=5.0 Ft.
b=5.0 Ft.
FROM –L– STA. 390+37 TO STA. 392+11 LT

DETAIL 2
STANDARD 'V' DITCH
(Not to Scale)



Type of Liner= CLASS 'B' Rip-Rap
Min. D=VAR. Ft.
Max. d=VAR. Ft.
FROM STA. 17+00 –Y22– LT.

–Y19–
PI Sta 10+95.22
Δ = 22° 07' 54.7" (LT)
D = 22° 55' 05.9"
L = 96.57'
T = 48.89'
R = 250.00'

NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	14
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TERRENCE C. LAWLER
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RANDALL C. HENEGAR
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

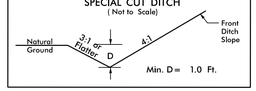
ANNUAL AVERAGE DAILY TRAFFIC
(Vehicles per Day)

13700 / 23400	28800 / 42200
400 / 1100	15500 / 19900
16000 / 21000	2022 / 2042

NC 55

–L–
PI Sta 387+98.92
Δ = 42° 06' 28.1" (LT)
D = 4° 35' 01.2"
L = 918.65'
T = 481.18'
R = 1,250.00'
SE = 04
R0 = 200'

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.
FROM –Y23– STA. 10+50 TO STA. 12+30 RT
FROM –Y22– STA. 14+63 TO STA. 16+50 RT.

MATCHLINE SHEET 13
–L– STA. 381+50.00

–L– STA. 382+59.43
–Y8– STA. 10+00.00

BEGIN FENCE (WW)
ACCESS POINT
–L– PC Sta. 383+17.74
–Y22– POT Sta. 18+29.53=
–L– POC Sta. 386+93.18
N 76° 06' 05.4" W
L = 1,354.41'
D = 6° 26' 24.4"
R = 890.00'

223 RUTH PETREA DB 13020 PG 154

END FENCE (WW)
–L– PT Sta. 392+36.39
N 78° 59' 58.5" E

–Y22– PT Sta. 17+46.09
BEGIN FENCE (WW)
ACCESS POINT
END FENCE (WW)

HIGH POINT
–Y8– STA. 11+41.96
ELEV. = 326.79'

BEGIN FENCE (WW)
END FENCE (WW)
END 5' SW
–Y22– STA. 17+04

STANDARD 'V' DITCH
SEE DETAIL 2
DDE- 5cu.yds.
GEOTEXTILE – 9sq.yds
CL. 'B' RIP RAP- 8 TONS
L=38 ft.
Begin Elev-323.2'
End Elev-322.8'

–Y22– PC Sta. 15+89.05
–Y22–
N 16° 06' 58.6" W

–Y23–
N 16° 20' 15.8" W

–Y23– PT Sta. 10+75.75
–Y23– PC Sta. 10+23.52
N 33° 32' 15.2" E

–Y23– POT Sta. 10+00.00=
–Y22– POC Sta. 16+94.67

–Y23– PT Sta. 12+33.87
–Y23– PC Sta. 11+55.00
N 74° 02' 34.4" E

–Y23– STA. 12+41.93
END CONST.
–Y23– POT Sta. 12+62.62

–Y19– POT Sta. 10+00.00
–Y19– PC Sta. 10+46.33
–Y19– STA. 11+00.00
BEGIN CONST.
–Y19– PT Sta. 11+42.90

–Y19– POT Sta. 12+00.00 =
–L– POT Sta. 393+50.42

–Y20– POT Sta. 10+00.00 =
–L– POT Sta. 393+67.05

–Y20– POT Sta. 12+00.00

–Y20– STA. 11+48.00
END CONST.

MATCHLINE SHEET 22
–Y8– STA. 13+00.00

MATCHLINE SHEET 22
–Y22– STA. 13+10.00

MATCHLINE SHEET 15
–L– STA. 395+00.00

BELLEWOOD HOMEOWNERS ASSOC. INC
DB 17585 PG 811
PB BM2019 PG 1565-1569
308

LENNAR CAROLINAS LLC
DB 17584 PG 186
PB BM2019 PG 1565-1569

MICHAEL LANCE REESE
DB 17928 PG 1579
PB BM2019 PG 1565-1569

KRYSTAL LAUREN MOORE
DB 17941 PG 2460
PB BM2019 PG 1565-1569

LACEY JO BAYALIT
DB 17944 PG 960
PB BM2019 PG 1565-1569

ROBERT CRAIG EVANS
DB 18053 PG 1170

PETER CAMPBELL
DB 18043 PG 1250

305A SUMMER DISALVO & JUSTIN DISALVO DB 18088 PG 1683
305B
305C
305D

NATASSIA SANTANA JOEL J. GOMEZ
DB 18047 PG 2563

DAVID ALEXANDER BERNAL
DB 17938 PG 1209
PB BM2019 PG 1984-1989
306

307

CAROLINA CHARTER ACADEMY HOLDINGS LLC
DB 18395 PG 1880
PB 2018 PG1240
303

304 BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
DB 17672 PG 600

5' LAT. BASE DITCH
SEE DETAIL W
CLASS 'I' RIP RAP
EST. 250 TONS
GEOTEXTILE
EST. 300 SY
EST. 118 CY DDE

PROPOSED DITCH CLEAN-OUT
LENGTH= +/-240'
EXCAVATION= +/-70cu.yds
TO ELEV= 324.0'

SPECIAL CUT DITCH
SEE DETAIL 1

STANDARD 'V' DITCH
SEE DETAIL 2
DDE- 5cu.yds.
GEOTEXTILE – 9sq.yds
CL. 'B' RIP RAP- 8 TONS
L=38 ft.
Begin Elev-323.2'
End Elev-322.8'

–Y23–
PI Sta 10+51.42
Δ = 49° 52' 31.1" (LT)
D = 95° 29' 34.7"
L = 52.23'
T = 27.90'
R = 60.00'

–Y23–
PI Sta 12+05.34
Δ = 90° 22' 50.2" (RT)
D = 114° 35' 29.6"
L = 78.87'
T = 50.33'
R = 50.00'

–Y22–
PI Sta 16+75.62
Δ = 59° 59' 06.9" (LT)
D = 38° 11' 49.9"
L = 157.04'
T = 86.58'
R = 150.00'

★ NEW SIGNAL

SEE SHEET 14A FOR R/W & EASEMENT DETAILS
SEE SHEETS 28 THRU 29 FOR –L– PROFILE
SEE SHEET 33 FOR –Y8– PROFILE
SEE SHEET 37 FOR –Y19–, –Y20–, –Y22– & –Y23– PROFILES

8/17/2022
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_14.dgn
User: kevans

8/17/99

R/W & EASEMENT DETAIL SHEET

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	14A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER — 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER — 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

-Y19-
PI Sta 10+95.22
Δ = 22° 07' 54.7" (LT)
D = 22° 55' 05.9"
L = 96.57'
T = 48.89'
R = 250.00'

-L-
PI Sta 387+98.92
Δ = 42° 06' 28.1" (LT)
D = 4° 35' 01.2"
L = 918.65'
T = 481.18'
R = 1,250.00'
SE = 04
RO = 200'

MATCHLINE SHEET 13 -L- STA. 381+50.00

-L- STA. 382+59.43
-Y8- STA. 10+00.00

-L- PC Sta. 383+17.74

-Y22- POT Sta. 18+29.53= -L- POC Sta. 386+93.18

N 76° 06' 05.4" W

N 31° 06' 26.4" E

BEGIN C/A +00.00 100' LT

+00.00 75' LT

+34.41

ACCESS POINT

+17.74 75' LT

50' TYP

END C/A -Y8- +65.00 60' RT

-Y8- +68.15 78'

-Y8- +46.45

-Y8- +85 60'

-Y8- +47.45 78'

+83.86 99'

BEGIN C/A -Y8- +65.00 60' LT

HIGH POINT -Y8- STA. 11+41.96 ELEV. = 326.79'

+10.00 75' RT

+00 98'

END C/A +25.00 75' RT

+36.02 92'

BEGIN C/A +68.12 75' RT

-Y22- +04.92 44'

-Y22- +00.00 40' LT -Y22- +00.00 EX. R/W

-Y22- +57 79'

-Y22- +33 61'

-Y22- +72.00 42.28'

-Y22- PC Sta. 15+89.05

-Y22- +67 EX. R/W

-Y22- +00 50'

-Y22- +59 EX. R/W 50'

-Y22- +95 40'

-Y22- +06 51'

-Y22- N 16° 06' 58.6" W

-Y23- N 16° 20' 15.8" W

-Y23- PT Sta. 10+75.75

-Y23- PC Sta. 10+23.52

N 33° 32' 15.2" E

-Y23- POT Sta. 10+00.00= -Y22- POC Sta. 16+94.67

-Y23- +71 EX. R/W

-Y23- +00 EX. R/W

-Y23- +27 27'

-Y23- +40 15'

-Y22- +44 20'

-Y22- +20 EX. R/W

-Y22- +21 EX. R/W

-Y22- +92 75'

+94.35

-Y22- 89' +96 99'

N 74° 02' 34.4" E

-Y23- PT Sta. 12+33.87

-Y23- POT Sta. 12+62.62

-Y23- PC Sta. 11+55.00

S 89° 37' 24.3" E

-Y19- POT Sta. 12+00.00 = -L- POT Sta. 393+50.42

-Y20- POT Sta. 10+00.00 = -L- POT Sta. 393+67.05

-Y20- POT Sta. 12+00.00

-Y20- STA. 11+48.00
END CONST.

-Y19- POT Sta. 10+00.00

-Y19- PC Sta. 10+46.33

-Y19- STA. 11+00.00
BEGIN CONST.

-Y19- PT Sta. 11+42.90

-L- PT Sta. 392+36.39

N 78° 59' 58.5" E

-Y19- END C/A +00.00 EX. R/W

+90.00 75' LT

+09 99'

+36.39 75' LT

PDE 300' MEDIAN TRANSITION

+20.00 75' RT

+95 95'

+10.00 75' RT

+00.00 EX. R/W

+17.00 75' LT

BEGIN C/A -Y19- +00.00 EX. R/W

-Y20- +25 42'

-Y20- +10.00 EX. R/W

-Y20- +57 32'

-Y20- +82 59'

-Y20- +64 92'

-Y20- +83 75'

BEGIN C/A +68 122'

+83 92'

+88 122'

-Y20- +59 EX. R/W

-Y20- +07 EX. R/W

+95.00 75' RT

+76 92' 108'

+95 92' 108'

-Y22- PT Sta. 17+46.09

END C/A +80.00 75' LT

BEGIN C/A +40.00 75' LT

ACCESS POINT

+34 103' 75'

MATCHLINE SHEET 22 -Y8- STA. 13+00.00

MATCHLINE SHEET 22 -Y22- STA. 13+10.00

MATCHLINE SHEET 15 -L- STA. 395+00.00

N 11° 00' 01.5" W

S 78° 52' 39.8" E

N 11° 00' 38" W 62.84'

S 11° 00' 38" E 68.84'

N 11° 00' 38" W 141.86'

S 11° 00' 38" E 151.86'

N 11° 00' 38" W 62.84'

S 11° 00' 38" E 68.84'

S 89° 45' 47" E 107.48'

S 89° 37' 09" E 135.38'

S 89° 37' 09" E 146.43'

S 89° 37' 09" E 135.25'

S 89° 37' 09" E 112.17'

S 10° 35' 28" W 20.00'

S 10° 35' 28" E 129.

S 10° 35' 28" E 20.00'

S 10° 35' 28" E 131.01'

S 10° 33' 27" E 58.60'

S 11° 09' 11" E 59.75'

S 11° 09' 11" E 59.75'

N 32° 43' 36" W 224.01'

N 32° 44' 09" E 51.01'

N 11° 09' 11" W 103.79'

S 32° 43' 36" W 224.01'

S 02° 50' 48" W 139.55'

N 44° 38' 59" E 16.25'

N 88° 44' 42" W 198.35'

N 88° 44' 42" W 198.35'

S 01° 15' 32" E 48.

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	15
RW SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER

8DAF86C0B4A4E3... DocuSigned by:
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER

85F226A4... DocuSigned by:
8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

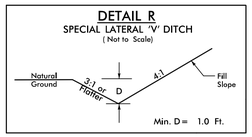
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

ANNUAL AVERAGE DAILY TRAFFIC (Vehicles per Day)

2100 / 4200
1000 / 850 — 800 / 2900
28900 / 42200 — 1550 / 1250 — 1200 / 1100 — 28300 / 44200
3100 / 2900
2022 / 2042

NAD 83/NA 2011

DETAIL R
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D = 1.0 Ft.

FROM –Y9– STA. 10+50 TO STA. 11+00 LT

MATCHLINE SHEET 14
–L– STA. 395+00.00

MATCHLINE SHEET 16
–L– STA. 408+00.00

–Y9– STA. 9+64.00
BEGIN CONST.

–Y9– PT Sta. 10+15.96

–L– PC Sta. 403+02.62

–L– STA. 400+00.01
–Y9– STA. 12+15.32

–Y9– PC Sta. 13+99.88

–Y9– PT Sta. 13+49.27

–Y9– STA. 15+25.00
END CONST.

–Y9– PT Sta. 16+80.36

–EY9– POT STA. 22+94.76

–L– DRV1–POT Sta. 9+95.44

–L– DRV1–POT Sta. 12+25.99

–L– DRV1–

N 77° 00' 27.0" E

BELLEWOOD HOMEOWNERS ASSOC. INC
DB 17585 PG 811
PB BM2019 PG 1565-1569

LENNAR CAROLINAS LLC
DB 17584 PG 186
PB BM2019 PG 1565-1569

BRUNO PERALTA RANGEL AND WIFE, MARIA JANET PERALTA
DB 18536 PG 236

KENNEBEC BAPTIST CHURCH
DB 3923 PG 244

NEAL EICHHORN
DB 17780 PG 2095

KENNETH LAWRENCE
DB 6763 PG 744

BELLEWOOD HOMEOWNERS ASSOCIATION, INC.
DB 17672 PG 600

DAVID SMITH
WILL 169-E
MB 1997 PG 473

DEBORAH MOORE
DB 7419 PG 140
MB 2017 PG 777

DEBORAH MOORE
DB 7419 PG 140
MB 2017 PG 777

QUALITY OIL CO LLC
DB 14570 PG 345
MB 2011 PG 1073

JASON EMERSON
DB 8891 PG 523
MB 2001 PG 673

CHARLES PRICE
DB 3136 PG 424
MB 1983 PG 640

CECIL PRICE
DB 5036 PG 837
MB 1983 PG 640

VIOLET MCCARTNEY HEIRS

MARY UPCHURCH
DB 3112 PG 767

ALBERMARLE PROPERTIES LLC
DB 12113 PG 1247
MB 2004 PG 2343

LEIGH BALANCE
DB 14638 PG 2228
MB 2011 PG 1073

REBECCA MCDONALD
DB 4911 PG 578

GEORGE KANESHIRO
DB 14228 PG 1663
MB 2008 PG 1734

BYRD PROPERTIES OF ANGIER LLC
DB 2011 PG 535 AI
MB 13635 PG 117

MOHLER INVESTMENTS, LLC
DB 17569 PG 1018

UPGRADE EXISTING SIGNAL

SEE SHEETS W-1 THRU W-3 FOR RETAINING WALL PLANS

SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

SEE SHEET 29 FOR –L– PROFILE
SEE SHEET 32 FOR –L–DRV1– PROFILE
SEE SHEET 34 FOR –Y9– PROFILE

–L–	–Y9–		
PI Sta 405+97.57	PI Sta 8+87.62	PI Sta 13+03.66	PI Sta 15+35.75
Δ = 3° 22' 43.8" (LT)	Δ = 10° 17' 43.8" (RT)	Δ = 2° 36' 50.2" (LT)	Δ = 40° 13' 39.7" (LT)
D = 0° 34' 22.6"	D = 4° 00' 00.0"	D = 2° 51' 53.2"	D = 15° 26' 37.0"
L = 589.72'	L = 257.39'	L = 91.24'	L = 260.48'
T = 294.94'	T = 129.04'	T = 45.63'	T = 135.87'
R = 10,000.00'	R = 1,432.39'	R = 2,000.00'	R = 371.00'
SE = NC			

8/1/2022
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_15.dgn
User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	16
RW SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER

Documents not considered final unless all signatures completed

Kathryn M. Revans, PE, CPM, DBIA, LEED AP, ENV SP, PMP, CPCM, CCM, CPSM, CPSD, CPSL, CPSC, CPSE, CPSH, CPSP, CPSR, CPSS, CPST, CPSV, CPSW, CPSX, CPSY, CPSZ, CPSA, CPSB, CPSC, CPSD, CPSE, CPSF, CPSG, CPSH, CPSI, CPSJ, CPSK, CPSL, CPSM, CPSN, CPSO, CPSP, CPSQ, CPSR, CPSS, CPST, CPSU, CPSV, CPSW, CPSX, CPSY, CPSZ

ROADWAY DESIGN ENGINEER

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER

Documents not considered final unless all signatures completed

Kaleigh C. Henegar, PE, CFM

HYDRAULICS ENGINEER

8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

ANNUAL AVERAGE DAILY TRAFFIC (Vehicles per Day)

500 / 800		
200 / 400	BITTER MELON ROAD	250 / 300
28300 / 44200	SR 2763	25700 / 37200
3250 / 7650		600 / 800
3900 / 8600	2022 / 2042	

CHRISTOPHER M. MURPHY AND SPOUSE, TABITHA L. MURPHY DB 17405 PG 1935

VIRGINIA EDWARDS MB 2005 PG 2248 DB 15663 PG 343

–Y11– POT Sta. 10+00.00

–Y13– POT Sta. 10+00.00

MATCHLINE SHEET 15 –L– STA. 408+00.00

MOHLER INVESTMENTS, LLC DB 17569 PG 1018

RETAIN

N 16° 37' 15.3" E

–Y10– STA. 14+50.00 BEGIN CONST.

DO NOT DISTURB SIGNS

KDC CAPITAL, LLC DB 17610 PG 2151

–L– STA. 408+77.03

–Y10– STA. 15+39.60

POT Sta. 10+00.00

TC PROPERTY SOLUTIONS INC DB 18814 PG 2185 PB 2021 PG 1638

–Y11– PC Sta. 13+27.04

–Y11– STA. 13+50.00 BEGIN CONST.

TC PROPERTY SOLUTIONS INC DB 18833 PG 2378 PB 2021 PG 1638

–YII– PT Sta. 14+30.38

PRIME I BUILDERS LLC DB 17429 PG 976 PB 2021 PG 1638

–L– STA. 412+35.12

–Y11– STA. 14+88.12

N 57° 07' 57.8" E

TC PROPERTY SOLUTIONS INC DB 18740 PG 1530 PB 2021 PG 1638

Hotwire Communications, FC

Century Link, Comm. Fo

REMOVE 9–LF OF 18" HDPE

REMOVE DI

REMOVE 12–LF

REMOVE

100' TAPER

DO NOT DISTURB CURB OR PARKING LOT

JOHNSONS LANDING HOMEOWNERS ASSOC INC DB 16581PG 1977 MB 2005 PG 347

–Y13– PC Sta. 11+55.51

–Y13– STA. 12+03.37

–Y13A– STA. 10+00.00

–Y13A– PC Sta. 10+44.43

–Y13A– PT Sta. 10+81.61

–Y13A– POT Sta. 11+17.49

JAMES CLARKE DB 16530 PG 1783 MB 2007 PG 2731

–Y13– STA. 10+40.00 BEGIN CONST.

JOSEPH SCUNZIANO DB 14846 PG 280 MB 2007 PG 2731

BEGIN C/A –Y13– +71.79 EX. R/W

–Y13– +78.34 35' +19.19 EX. R/W

–Y13– +53.67 EX. R/W

MATCHLINE SHEET 17 –L– STA. 422+00.00

–Y13– PT Sta. 12+59.50

N 55° 40' 51.1" E

–L– STA. 420+32.37

–Y13– STA. 13+10.60

MATCHLINE SHEET 23 –Y12_REV– STA. 12+07.69

–L– STA. 412+30.54

–Y12– STA. 9+84.16

–L– STA. 408+72 END RETAINING WALL OFFSET 49.50'

–L– STA. 412+57.05

–Y12_REV– STA. 10+00.00

–Y12_REV– PC Sta. 10+08.44

–Y12_REV– PT Sta. 11+67.86

–L– PT Sta 415+34.21 BK =

–L– POT Sta 415+42.21 AH

–L_DRV2– PT Sta. 12+17.98

N 74° 33' 51.0" E

POT Sta. 12+12.34

–L_DRV2– PC Sta. 10+37.57

–L_DRV2– PRC Sta. 11+27.78

–Y12= PC Sta. 11+10.31

–L– POT Sta. 415+42.21 AH

–L– STA. 415+34.21 BK

–L– PC Sta. 408+92.34

BERYL ROAD PROPERTIES LLC DB 13860 PG 198 MB 2006 PG 1754

BRD PROPERTIES OF ANGIER, LLC DB 20615 PG 935 DB 13655 PG 1414

SPECIAL LATERAL BASE DITCH SEE DETAIL AH

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL T

LOW POINT –L– STA. 418+32.26 ELEV. = 335.69'

ROBERT PEELE DB 16139 PG 1326 MB 2007 PG 487

NC PROPERTY NETWORK INC DB 16217 PG 1180 MB 2008 PG 2308

RUDINE BODDIE DB 16782 PG 1365 MB 2008 PG 2308

KENNEBEC FLYING CLUB DB 10991PG 2406 MB 2004 PG 1049

DO NOT DISTURB RUNWAY LIGHTS

AIRPORT

SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

SEE SHEETS 29 THRU 30 FOR –L– PROFILE
SEE SHEET 32 FOR –L–DRV2– PROFILE
SEE SHEET 34 FOR –Y10– & –Y11– PROFILES
SEE SHEET 35 FOR –Y12–, –Y13–, & –Y13A– PROFILES

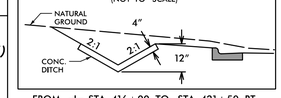
SEE SHEETS W–1 THRU W–3 FOR RETAINING WALL PLANS

–Y12–	–Y12_REV–
PI Sta 11+80.56	PI Sta 10+90.08
Δ = 14° 33' 28.7" (LT)	Δ = 30° 26' 50.5" (LT)
D = 16° 25' 02.7"	D = 19° 05' 54.9"
L = 139.75'	L = 159.42'
T = 70.25'	T = 81.64'
R = 550.00'	R = 300.00'

–L_DRV2–	
PI Sta 10+83.46	PI Sta 11+73.66
Δ = 25° 50' 31.0" (RT)	Δ = 25° 50' 31.0" (LT)
D = 28° 38' 52.4"	D = 28° 38' 52.4"
L = 90.21'	L = 90.21'
T = 45.88'	T = 45.88'
R = 200.00'	R = 200.00'

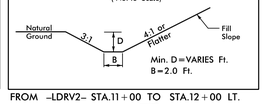
–L–	–YII–	–Y13–	–Y13A–
PI Sta 405+97.57	PI Sta 13+79.23	PI Sta 12+09.32	PI Sta 10+65.88
Δ = 3° 22' 43.8" (LT)	Δ = 19° 44' 16.9" (LT)	Δ = 36° 19' 57.2" (LT)	Δ = 71° 07' 09.5" (LT)
D = 0° 34' 22.6"	D = 19° 05' 54.9"	D = 34° 56' 11.2"	D = 190° 59' 09.4"
L = 589.72'	L = 103.35'	L = 104.00'	L = 37.24'
T = 294.94'	T = 52.19'	T = 53.81'	T = 21.45'
R = 10,000.00'	R = 300.00'	R = 164.00'	R = 30.00'
SE = NC			
RO = 200'			

DETAIL T
SPECIAL BACK OF CURB CUT DITCH
(Not to Scale)

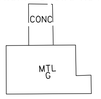


FROM –L– STA. 416+00 TO STA. 421+50 RT

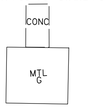
DETAIL AH
SPECIAL LATERAL BASE DITCH
(Not to Scale)

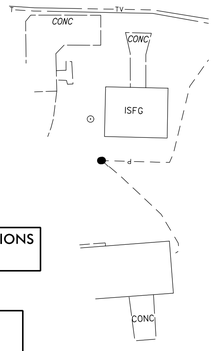


FROM –LDRV2– STA.11+00 TO STA.12+00 LT.



★ UPGRADE EXISTING OR NEW SIGNAL





8/30/2022
X:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_16.dgn
User:Revans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	17
RW SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER Tomas Hagemeyer REGISTERED 8DAF98C8B4... 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER Kaushal Patel REGISTERED 85F228A4... 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

MATCHLINE SHEET 16
–L– STA. 422+00.00

MATCHLINE SHEET 18
–L– STA. 436+00.00

N 87°27'13" W 85.25'

CHAD MOODY DB 15165 PG 102 MB 2008 PG 366

STEPHEN OMMS DB 15178 PG 241 MB 2007 PG 2731

N 01°52'04" E 135.17'

EX. EXISTING R/W

MICHAEL LAGNESE DB 15678 PG 685 MB 2008 PG 366

CHRIS THOMPSON DB 15434 PG 2602 MB 2008 PG 366

N 01°52'12" E 110.89'

S 01°52'12" W 110.89'

N 85°03'48" E 150.00'

S 85°03'48" W 150.00'

N 25°02'59" E 160.82'

CRAIG GOLDEN DB 15596 PG 198 MB 2007 PG 2730

ANTHONY VALLE DB 15662 PG 2546 MB 2007 PG 2731

DANIELLE HARRISON DB 15652 PG 730 MB 2007 PG 2731

RETAIN 18" CMP

RETAIN 60" WD

30" VG

COYOTE MELON DR 22' BST

60' CONC WALK

425

430

435

CLAUDE SIMMONS DB 15914 PG 57 MB 2007 PG 2730

MALAHAR LN 22' BST

JOHNSONS LANDING HOMEOWNERS ASSC DB 17131PG 1400 MB 2007 PG 2273

THEODORE FRANZESE DB 16875 PG 2030 MB 2007 PG 2273

TERRY RITCH DB 15798 PG 2080 MB 2007 PG 2273

SHANE RUNDGREN DB 15781PG 445 MB 2007 PG 2273

2015-3 1H2 BORROWER LP DB 16072 PG 310 MB 2006 PG 1060

DEREK LAWHORN DB 15813 PG 261 MB 2007 PG 2273

JONATHAN MCLEAN DB 13174 PG 1304 MB 2006 PG 1060

BRUCE WEITZ DB 16786 PG 1463 MB 2007 PG 2273

PHILIP BROWN DB 16498 PG 346 MB 2016 PG 227

CHRISTOPHER M. MURPHY AND SPOUSE TABITHA L. MURPHY DB 17405 PG 1935

RICHARD SCANLON DB 16692 PG 1538 MB 2007 PG 2273

CHRISTOPHER CARVER DB 16686 PG 495 MB 2007 PG 2731

THEODORE PATEREK DB 16560 PG 1268 MB 2007 PG 2273

DENNIS GOLDENSOHN DB 16702 PG 1021 MB 2007 PG 2273

JANET BLACKMAN DB 16664 PG 324 MB 2007 PG 2273

MATTHEW BAIRD DB 16485 PG 195 MB 2007 PG 2730

255 257 258 259 260 261 264 267 268 269

–Y14– POT Sta. 10+00.00

–Y14– STA. 11+15.00
BEGIN CONST.

–Y14– PC Sta. 11+21.15

–Y14– PT Sta. 12+02.39

END C/A BEGIN C/A

N 74°57'52" W 1406.77'

S 47°57'21" E 51.88'

S 29°26'43" W 57.90'

S 25°30'01" E 135.71'

N 25°30'01" W 141.19'

S 29°26'43" W 183.90'

N 29°26'43" E 73.90'

S 47°57'21" E 12.70'

N 25°30'01" W 135.71'

S 25°30'01" E 135.71'

N 29°26'43" E 57.90'

S 47°57'21" E 51.88'

N 74°57'52" W 1406.77'

S 42°12'15" E 456.44'

N 42°12'15" W 456.44'

S 37°58'08" E 380.60'

S 44°47'12" E 416.63'

S 45°01'36" W 294.59'

N 43°10'56" W 551.03'

N 45° 01' 34" W

NC 55 /N RALEIGH ST 34' BST

NC 55 34' BST

Century Link, Copper

Century Link, Fiber

Spectrum, FO

Town of Angier, 12" 15" RCP-IV

100' TAPER

REMOVE

HIGH POINT
–L– STA. 423+94.37
ELEV. = 342.99'

LOW POINT
–L– STA. 429+30.73
ELEV. = 339.44'

SPECIAL BACK OF CURB CUT DITCH
SEE DETAIL T

–L– PC Sta. 429+29.71

–L– PT Sta. 434+79.55

–L– STA. 435+18.61

–Y14– STA. 12+70.61

KENNEBEC FLYING CLUB DB 10991PG 2406 MB 2004 PG 1049

251

AIRPORT

BL-59

R5705-AZ16

R5705-AZ17

CONC MTL G

CONC MTL G

DETAIL T
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)

NATURAL GROUND, 4", 2:1, 2:1, 12", CONC. DITCH

FROM –L– STA. 424+00 TO STA. 434+50 RT

SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

SEE SHEET 30 FOR –L– PROFILE
SEE SHEET 35 FOR –Y14– PROFILE

–L–	–Y14–
PI Sta 432+04.95	PI Sta 11+62.05
Δ = 6° 48' 15.4" (RT)	Δ = 16° 16' 29.0" (LT)
D = 1° 14' 15.0"	D = 20° 02' 00.6"
L = 549.85'	L = 81.24'
T = 275.25'	T = 40.89'
R = 4,630.00'	R = 286.00'
SE = 02	
R0 = 100'	

8/17/2022
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User:bevans

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	18
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TOMMY C. TAYLOR REGISTERED — 8DAF8605... — 8/30/2022 | 3:37 PM EDT

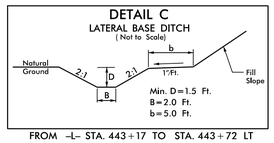
HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER KAITLIN A. CRAIG REGISTERED — E5F228A4... — 8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

8/17/99

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



FROM –L– STA. 443+17 TO STA. 443+72 LT

NAD 83/NA 2011

–Y15– POT Sta. 10+00.00

–Y15– STA. 11+50.00
BEGIN CONST.

–L– STA. 440+25.90
–Y15– STA. 12+75.00

MATCHLINE SHEET 17
–L– STA. 436+00.00

MATCHLINE SHEET 19
–L– STA. 450+00.00

–L– PC Sta. 441+49.51

–L– PT Sta. 449+60.45

BL-60

BL-61

271 PHILLIP BROWN DB 15421 PG 1588 MB 2006 PG 1060

271 MITCHELL HAM DB 16708 PG 1894 MB 1994 PG 1865

270 MICHAEL QUINTILONE DB 16405 PG 949 MB 2006 PG 1060

272 CHRISTOPHER LEE GRAINGER DB 15448 PG 1736 MB 1994 PG 1865

273 BETHEL CHURCH INC DB 10629 PG 1277

274 JEFFREY ZDENEK DB 11414 PG 697 MB 1995 PG 174

276 JAMES HARTE DB 16238 PG 2540

277 HARTE FINANCIAL, L.L.C. DB 12570 PG 895 MB 1990 PG 234

251 KENNEBEC FLYING CLUB DB 10991 PG 2406 MB 2004 PG 1049

275 KENNEBEC FLYING CLUB DB 12789 PG 2611 MB 1994 PG 1856

HIGH POINT
–L– STA. 437+35.59
ELEV. = 352.74'

LOW POINT
–L– STA. 444+94.65
ELEV. = 345.00'

CLASS 'I' RIP RAP
EST. 26 TONS
GEOTEXTILE
EST. 50 SY

SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

–L–
PI Sta 445+63.89
Δ = 29° 02' 22.4" (RT)
D = 3° 34' 51.6"
L = 810.94'
T = 414.38'
R = 1,600.00'
SE = 04
RO = 200'

SEE SHEETS 30 THRU 31 FOR –L– PROFILE
SEE SHEETS 36 FOR –Y15– PROFILE

8/17/99

8/4/2022
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User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	19
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TIMOTHY C. LANE REGISTERED

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RACHEL C. MENEGHINI REGISTERED

8/30/2022 | 12:41 PM PDT

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TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
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CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

MATCHLINE SHEET 18 –L– STA. 450+00.00

MATCHLINE SHEET 20 –L– STA. 464+00.00

JAMES HARTE
DB 16298 PG 2540

HARTE FINANCIAL, L.L.C.
DB 12570 PG 895
MB 1990 PG 234
277

278
ISBKD
ISFD

WARREN BROOKS

PULTE HOME COMPANY
DB 16984 PG 2790
MB 2011 PG 422
280

PULTE HOME COMPANY
DB 16984 PG 2790
MB 2011 PG 422
280

281
GIDEON BURNETT
DB 16868 PG 1805
MB 1976 PG 330

BENJAMIN DICKENS
DB 15685 PG 675

THOMAS TRUELOVE
DB 11307 PG 1058
MB 2002 PG 211
284

HARTELAND LLC
DB 15559 PG 213
MB 2000 PG 479
282

KENNEBEC FLYING CLUB
DB 12789 PG 261
MB 1994 PG 1856
275

A E SAUNDERS
MB 1989 PG 544
279

–Y21– POT Sta. 10+00.00

–Y21– STA. 10+05.00
BEGIN CONST.
–Y21– POT Sta. 11+00.00 =
–L– POT Sta. 454+87.65

N 80° 04' 13.1" E
–Y21–

–Y17– PT Sta. 13+13.38

N 80° 49' 03.8" E

–Y17– STA. 10+75.00
BEGIN ROAD CONST.

–Y17– PC Sta. 11+77.92

–Y17– STA. 9+44.62
BEGIN DRAINAGE

PROPOSED DITCH CLEAN-OUT
LENGTH– +/–35'
EXCAVATION– +/–20cu.yds
TO APPROX. ELEV– 341.3'

–Y17– PT Sta. 10+00.00

–Y16– STA. 10+00.00

–L– STA. 454+92.43

–Y16– STA. 11+25.00
END CONST.

–Y16– POT Sta. 11+96.72

–L– STA. 459+58.88
–Y17– STA. 13+44.09

BL-62

BL-63

–L–	–Y17–	–Y17–
PI Sta 445+63.89 Δ = 29° 02' 22.4" (RT) D = 3° 34' 51.6" L = 810.94' T = 414.38' R = 1,600.00' SE = 04 R0 = 200'	PI Sta 12+58.34 Δ = 77° 36' 35.0" (LT) D = 57° 17' 44.8" L = 135.45' T = 80.42' R = 100.00'	PI Sta 8+95.42 Δ = 12° 35' 58.8" (LT) D = 5° 59' 58.4" L = 210.01' T = 105.43' R = 955.00'

SEE PAVEMENT MARKING PLANS FOR EXACT LOCATIONS OF CROSSWALKS AND WHEEL CHAIR RAMPS

SEE SHEET 31 FOR –L– PROFILE
SEE SHEET 36 FOR –Y16 & –Y17– PROFILES
SEE SHEET 37 FOR –Y21– PROFILE

8/1/2022
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User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	20
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER CLINTON T. REGISTER

Clinton T. Register
8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER RANDALL C. HENEGAR

Randall C. Henegar
8/30/2022 | 12:41 PM PDT

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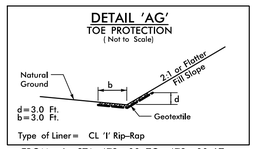
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

DETAIL 'AG'
TOE PROTECTION
(Not to Scale)



Type of Liner = CL 'I' Rip-Rap

FROM –L– STA. 472+00 TO 473+00 LT

-Y17- PC Sta. 7+89.99

-Y17- POT Sta. 7+75.00

THOMAS TRUELOVE
DB 11307 PG 1058
MB 2002 PG 211
465

WILLIAM BANISTER
DB 17081PG 1561
410

MARK HORSFIELD
DB 17056 PG 2755
MB 1997 PG 1258

RACHEL TURNER
DB 3229 PG 262
285

PRENTICE MCLEAN
DB 16904 PG 2492
MB 1983 PG 1382
288

ANS TRUST THE
DB 15463 PG 1242
289

JACK SEARCY
DB 1744 PG 405
286

HARTELAND LLC
DB 15559 PG 213
MB 2000 PG 479
282

A E SAUNDERS
MB 1989 PG 544
279

JACK SEARCY
DB 2475 PG 142
286

JACK SEARCY
DB 2798 PG 346

GLENN POND
DB 15271PG 1414
MB 1990 PG 464
290

MATCHLINE SHEET 19
–L– STA 464+00.00

MATCHLINE SHEET 21
–L– STA. 477+50.00

–L– PC Sta. 466+19.13

–L– PT Sta. 475+23.62

N 25°22'00.4" E

–L–
PI Sta 470+85.59
Δ = 34° 32' 56.7" (RT)
D = 3° 49' 11.0"
L = 904.49'
T = 466.47'
R = 1,500.00'
SE = 04
RO = 200'

TEMPORARY SHORING – SEE TRANSPORTATION MANAGEMENT PLANS FOR LOCATION.

SEE SHEETS 31 THRU 32 FOR –L– PROFILE

8/1/2022
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User:jbevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	21
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TONDA T. RAPPLEYE REGISTERED

8DAF96C4... 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER KAUSHIK C. PATEL REGISTERED

B9F2284... 8/30/2022 | 12:41 PM PDT

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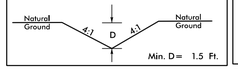
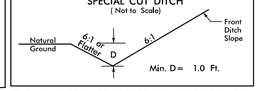
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

DETAIL AA
STANDARD 'V' DITCH
(Not to Scale)



FROM –L– STA. 485+50 TO STA. 486+80 LT

DETAIL L
SPECIAL CUT DITCH
(Not to Scale)



FROM –L– STA. 482+00 TO STA. 485+00 LT

NAD 83/NA 2011

MATCHLINE SHEET 20
–L– STA. 477+50.00

ANS TRUST THE
DB 15463 PG 1242
289

292
ANS TRUST THE
DB 15463 PG 1242
MB 1997 PG 217

ALESSANDRO BIANCO
DB 16667 PG 561
MB 2016 PG 361
294

ALESSANDRO BIANCO
DB 4976 PG 589
MB 1958 PG 91
297

END TIP PROJECT R-5705B
–L– STA. 485+57.00

292
ANS TRUST THE
DB 15463 PG 1242
MB 1997 PG 217
STANDARD 'V' DITCH
SEE DETAIL AA
EST. 91 CY DDE

–L– PC Sta. 480+20.81

–L– PT Sta. 485+54.32

–L– POT Sta. 486+80.31

–L– STA. 486+90.00
END CONSTRUCTION

290
GLENN POND
DB 15271 PG 1414
MB 1990 PG 464

PEGGY WATERS
DB 8568 PG 1614

291
DANA HALEY
DB 8060 PG 312

293
DONALD HESTER
DB 5150 PG 389
MB 2005 PG 372

BRYAN ZIMMERMAN
DB 11490 PG 1062
MB 2005 PG 372
295

R5705-AZ18

296
JIMMIE HANKS
DB 4890 PG 294
MB 1986 PG 56

LISA WILSHIRE
DB 14923 PG 1237
MB 1986 PG 56

CLAYTON FAMILY LLC
DB 13908 PG 1871
MB 2009 PG 1003

CITIMORTGAGE INC
DB 14649 PG 300

510.13' ROADWAY TRANSITION (LT/RT)
(USE 1500' RADIUS CURVES FOR PROPOSED EOT)

–L– PT Sta. 489+35.98

–L–	
PI Sta 482+90.42	PI Sta 488+08.47
Δ = 20° 22' 43.0" (LT)	Δ = 9° 59' 32.3" (LT)
D = 3° 49' 11.0"	D = 3° 54' 30.0"
L = 533.51'	L = 255.67'
T = 269.60'	T = 128.16'
R = 1,500.00'	R = 1,465.99'
SE = 04	
RO = 200'	

SEE SHEET 32 FOR –L– PROFILE
SEE SHEET 36 FOR –Y18– PROFILE

8/1/2022
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User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	22
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TONYA R. CUTLER REGISTERED PROFESSIONAL ENGINEER

8DAF66C0A4E4... 8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER KAILEY M. FINNEGAN REGISTERED PROFESSIONAL ENGINEER

B5F220A2A... 8/30/2022 | 12:41 PM PDT

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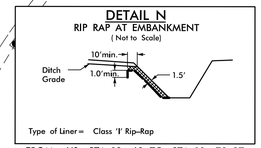
TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

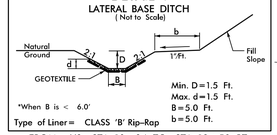
DETAIL N
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner = Class 'I' Rip-Rap

FROM –Y8– STA. 13+62 TO STA. 13+78 RT

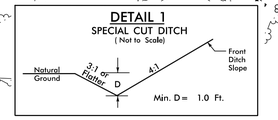
DETAIL V
LATERAL BASE DITCH
(Not to Scale)



Type of Liner = CLASS 'B' Rip-Rap

FROM –Y8– STA. 13+84 TO STA. 18+50 RT

DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)



FROM –Y22– STA. 11+50 TO STA. 12+30 RT

NAD 83/NA 2011

OCEAN 3 LLC
DB 2430 PG 397

LINDERMAN PROPERTIES LLC
DB 3329 PG 971
MB 2016 PG 135

RICHARD BULLOCK
DB 8191 PG 168

–Y8– STA. 22+38.00
END CONST.

NANCY GILES
DB 1018 PG 831

MICKEY BARBOUR
DB 16870 PG 1325
MB 2017 PG 287

400' UNIFORM TRANSITION
(RIGHT LANE DROP)

RICHARD BULLOCK
MB 2017 PG 287

–Y8– PT Sta. 18+36.50

–Y8– PC Sta. 13+88.55

STUART L. MATTHEWS
MORRIS W. COATS
DB 2684 PG 84-85

RUTH PETREA
DB 13020 PG 154

–Y8– POT Sta. 23+14.08

RANDY SMITH
DB 5189 PG 84

RICHARD DWIGHT BULLOCK
DB 17155 PG 2388
MB 2017 PG 287

RICHARD BULLOCK
DB 15410 PG 1000

–Y8– POC Sta. 15+27.66=
–Y22– POT Sta. 10+00.00

N 44° 23' 30.6" E

R5705-AZ14 = BY8

–Y22– PC Sta. 10+16.41

–Y22– PT Sta. 11+48.42

SUNNI SKYS LLC
DB 13623 PG 2473

CAROLINA CHARTER ACADEMY HOLDINGS LLC
DB 18395 PG 1880
PB 2018 PG 2240

MATCHLINE SHEET 13
–Y8– STA. 13+00.00

MATCHLINE SHEET 14
–Y22– STA. 13+10.00

–Y8–	–Y22–
PI Sta 16+23.54	PI Sta 10+89.32
Δ = 42° 46' 34.8" (RT)	Δ = 60° 30' 29.1" (LT)
D = 9° 32' 57.5"	D = 45° 50' 11.8"
L = 447.95'	L = 132.01'
T = 234.99'	T = 72.91'
R = 600.00'	R = 125.00'
SE = 04	
RO = 160'	

SEE SHEET 33 FOR –Y8– PROFILE
SEE SHEET 37 FOR –Y22– PROFILE

8/3/2022
K:\NCDOT\R-5705B\Roadway\Proj\R5705B_Rdy_psh_22.dgn
User:bevans

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	23
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER REGISTERED

Tommy Griffin

8DAF99CD1...

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER REGISTERED

Kevin Cameron

85F228A4...

8/30/2022 | 12:41 PM PDT

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TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

NAD 83/NA 2011

MATCHLINE SHEET 16
-Y12_REV- STA. 12+07.69

-Y12_REV- PC Sta. 15+81.47

-Y12- PT Sta. 12+50.05

-Y12_REV- STA. 12+94.64

-Y12A_REV- 10+00.00

-Y12_REV- PT Sta. 20+96.76

-Y12_REV- STA. 19+47.60
END CONST.

-Y12A_REV- STA. 11+88.00
END CONST.

-Y12A_REV- POT Sta. 12+56.07

-Y12_REV- PC Sta. 16+57.50

-Y12_REV- PT Sta. 19+09.66

-Y12_REV- POT Sta. 19+47.60

-Y12- PT Sta. 19+41.10

KENNEBEC FLYING CLUB
DB 10991 PG 2406
MB 2004 PG 1049

BOBBY TERRY
DB 16685 PG 561
MB 1981 PG 574

ANGELA MITCHELL
DB 8297 PG 1736
MB 1981 PG 975

RANDY GRIMES
DB 3247 PG 26
MB 1984 PG 262

JOHN JANKENS
DB 3939 PG 110
MB 1984 PG 262

DANIEL POOLE
DB 3389 PG 926
MB 1984 PG 262

MICHAEL MARSH
DB 3811 PG 915
MB 1984 PG 262

RUDINE BODDIE
DB 16782 PG 1368
MB 2008 PG 2308

UNIFORM TRANSITION
146.37'

UNIFORM TRANSITION
145.62'

100' TAPER

37.95' TAPER

BY12-117

DO NOT DISTURB RUNWAY LIGHTS

DO NOT DISTURB FENCE

CLASS I RIP RAP EST. 4 TONS GEOTEXTILE- 10sy

SR 2763 MAUDE STEWART RD

TRAM RD

POND

PIER

CANOPY

2SFD

ISFD

DECK

SBKD

N 29°16'09" E
335.85'

N 29°13'48" E
400.29'

N 29°12'17.1" E

N 27° 45' 36.1" E

N 28° 18' 13.9" E

N 29°28'53" E
335.17'

N 29°16'07" E
150.00'

N 29°16'07" E
235.00'

S 60°44'31" E

S 60°43'57" E
230.00'

N 60°43'57" W
230.00'

N 60°43'57" W
232.00'

-Y12-

PI Sta 11+80.56	PI Sta 17+61.34
Δ = 14° 33' 28.7" (LT)	Δ = 3° 26' 03.2" (RT)
D = 10° 25' 02.7"	D = 0° 57' 17.7"
L = 139.75'	L = 359.63'
T = 70.25'	T = 179.87'
R = 550.00'	R = 6,000.00'

-Y12_REV-

PI Sta 17+83.59
Δ = 1° 26' 41.0" (RT)
D = 0° 34' 22.6"
L = 252.15'
T = 126.08'
R = 10,000.00'

SEE SHEET 35 FOR -Y12_REV- & -Y12A_REV- PROFILES

8/1/2022
R:\NCDOT\R-5705B\Roadway\Prod\R5705B_Rdy_psh_23.dgn
User:evans

5/28/99

-L-

BEGIN CONST.
STA. 245+70.00
EL. 300.94'

BEGIN GRADE
STA. 246+00.00
EL. 302.30'

4:1

(-) 5.4800%

(-)3.5000%

BEGIN SPECIAL CUT DITCH
-L- STA.247+00.00 RT
ELEV.=293.84'

END SPECIAL CUT DITCH
-L- STA.247+50.00 RT
ELEV.=291.10'

PI = 253+70.00
EL = 275.35'
VC = 960'
K = 137

LOW POINT
STA. 253+70.00
ELEV. = 283.75'

BEGIN 2.0' LAT. BASE DITCH
-L- STA.252+00.00 LT
ELEV.279.53'

(-) 10.9200%

(-) 5.9242%

-L- STA.252+50.00 LT
ELEV.274.07'

66" RCP

END 2.0' LAT. BASE DITCH
-L- STA.253+00.00 LT
ELEV.270.16'

BEGIN 4.0' LAT. BASE DITCH
-L- STA.253+67.00 RT
ELEV.=269.70'

(+) 0.3922%

(+)3.5000%

(+) 5.9451%

-L- STA.254+18.000 RT
ELEV.=269.90'

END SPECIAL CUT DITCH
-L- STA.256+00.00 RT
ELEV.=280.72'

END 4.0' LAT. BASE DITCH
BEGIN SPECIAL CUT DITCH
-L- STA.255+50.00 RT
ELEV.=277.75'

UNDERCUT EXCAVATION

PIPE HYDRAULIC DATA		
0420 (66"RCP) Sta.253+45		
DRAINAGE AREA	= 120	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 120	CFS
DESIGN HW ELEVATION	= 275.3	FT
100 YEAR DISCHARGE	= 130	CFS
100 YEAR HW ELEVATION	= 275.6	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 280.3	FT

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	24

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER TIMOTHY J. MINTON REGISTERED

8/30/2022 | 3:37 PM EDT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16600 ENGINEER KRISTOPHER C. HENSLEY REGISTERED

8/30/2022 | 12:41 PM PDT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
PH (919) 773-8887
CORP. LICENSE NO.: C-0275

-L-

PI = 265+32.00
EL = 316.02'
VC = 700'
K = 152

BEGIN SPECIAL LAT. 'V' DITCH
-L- STA.259+00.00 LT
ELEV.=292.26'

(+)1.8400%

(+) 5.1600%

(+)3.5000%

END SPECIAL LAT. 'V' DITCH
-L- STA.261+00.00 LT
ELEV.=299.26'

UNDERCUT EXCAVATION

-L- STA.260+00.00 LT
ELEV.=294.10'

HIGH POINT
STA. 267+14.61
ELEV. = 313.09'

(-)1.1000%

UNDERCUT EXCAVATION

BEGIN SPECIAL CUT DITCH
-L- STA.272+50.00 LT
ELEV.=305.48'

BM # 12
-L- STA. 263+74.95
113.87' RT.
BENCH NAIL IN BASE OF 12" MAPLE TREE
ELEV. 303.27'

6/20/2022
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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	25

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028392 ENGINEER — 8/30/2022 | 3:37 PM EDT

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PIPE HYDRAULIC DATA
0601 (48" RCP) Sta. 274+57

DRAINAGE AREA	= 24	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 65	CFS
DESIGN HW ELEVATION	= 303.3	FT
100 YEAR DISCHARGE	= 70	CFS
100 YEAR HW ELEVATION	= 303.4	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 304.2	FT

PIPE HYDRAULIC DATA
0611 (48" RCP) Sta. 283+73

DRAINAGE AREA	= 19	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 60	CFS
DESIGN HW ELEVATION	= 301.4	FT
100 YEAR DISCHARGE	= 65	CFS
100 YEAR HW ELEVATION	= 301.6	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 314.2	FT

PI = 274+52.00
EL = 305.90'
VC = 320'
K = 139

BEGIN SPECIAL CUT DITCH
-L- STA. 274+00.00 RT
ELEV.=302.71'

END SPECIAL CUT DITCH
-L- STA. 274+59.64 RT
ELEV.=301.94'

BEGIN SPECIAL CUT DITCH
-L- STA. 274+79.42 RT
ELEV.=302.33'

END SPECIAL CUT DITCH
-L- STA. 275+50.00 RT
ELEV.=303.03'

(-)11.1000%

(-) 1.2909%

(-) 3.5979%

48" RCP

(+) 0.9970%

(+) 3.2051%

LOW POINT
STA. 274 + 45.04
ELEV. = 306.82'

UNDERCUT EXCAVATION

END SPECIAL CUT DITCH
-L- STA. 276+00.00 LT
ELEV.=303.50'

END 2' LAT. BASE DITCH
BEGIN SPECIAL CUT DITCH
-L- STA. 274+44.00 LT
ELEV.=298.50'

END SPECIAL CUT DITCH
BEGIN 2' LAT. BASE DITCH
-L- STA. 273+50.00 LT
ELEV.=301.88'

UNDERCUT EXCAVATION

(+)11.2000%

BEGIN 2' LAT. BASE DITCH
-L- STA. 281+72.00 RT
ELEV.=307.00'

BEGIN 2' LAT. BASE DITCH
-L- STA. 282+00.00 LT
ELEV.=301.52'

(-) 5.6632%

(-) 4.8800%

-L- STA. 282+50.00 LT
ELEV.=299.08'

-L- STA. 282+78.00 RT
ELEV.=301.00'

(-) 2.3502%

(-) 2.9444%

48" RCP

END 2' LAT. BASE DITCH
-L- STA. 283+88.50 RT
ELEV.=298.40'

END 2' LAT. BASE DITCH
-L- STA. 283+58.00 LT
ELEV.=295.90'

(+) 1.1310%

BEGIN 2' LAT. BASE DITCH
-L- STA. 283+91.50 RT
ELEV.=298.40'

END 2' LAT. BASE DITCH
BEGIN SPECIAL CUT DITCH
-L- 287+00.00 RT
ELEV.=313.27'

(+) 6.5239%

-L- STA. 284+89.00 RT
ELEV.=299.50'

-L-

PIPE HYDRAULIC DATA
0718 (48" RCP) Sta. 297+44

DRAINAGE AREA	= 17	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 45	CFS
DESIGN HW ELEVATION	= 289.9	FT
100 YEAR DISCHARGE	= 49	CFS
100 YEAR HW ELEVATION	= 290.1	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 297.5	FT

PIPE HYDRAULIC DATA
0812 (24" RCP) Sta. 300+28

DRAINAGE AREA	= 3.9	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 14	CFS
DESIGN HW ELEVATION	= 297.2	FT
100 YEAR DISCHARGE	= 15	CFS
100 YEAR HW ELEVATION	= 297.3	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 18	CFS
OVERTOPPING ELEVATION	= 297.5	FT

PI = 287+72.00
EL = 321.74'
VC = 350'
K = 152

(+)11.2000%

HIGH POINT
STA. 287 + 79.61
ELEV. = 320.74'

END SPECIAL CUT DITCH
-L- 287+50.00 RT
ELEV.=316.53'

BEGIN 2' LAT. BASE DITCH
-L- STA. 290+00.00 LT
ELEV.=315.05'

BEGIN 2' LAT. BASE DITCH
-L- STA. 290+00.00 RT
ELEV.=314.98'

-L- STA. 292+00.00 RT
ELEV.=302.58'

(-) 6.9350%

(-) 6.9867%

(-) 3.8400%

-L- STA. 293+50.00 RT
ELEV.=300.50'

(-) 1.2467%

-L- STA. 291+50.00 RT
ELEV.=304.50'

-L- STA. 292+00.00 LT
ELEV.=301.18'

(-) 5.6900%

(-) 2.1000%

-L- STA. 293+00.00 LT
ELEV.=295.49'

END 2' LAT. BASE DITCH
-L- STA. 293+50.00 LT
ELEV.=294.44'

(-) 5.0667%

END 2' LAT. BASE DITCH
-L- STA. 295+58.42 RT
ELEV.=289.94'

(-)11.1000%

48" RCP

BEGIN 2' LAT. BASE DITCH
-L- STA. 300+68.00 RT
ELEV.=295.30'

24" RCP

(+) 0.3125%

BEGIN 2' LAT. BASE DITCH
-L- STA. 299+50.00 LT
ELEV.=275.50'

(+) 2.0896%

(+) 0.5682%

(+) 5.3392%

-L- STA. 299+67.59 LT
ELEV.=275.60'

-L- STA. 300+50.00 LT
ELEV.=280.00'

BM # 13
-L- STA. 287 + 46.34
586.34' RT.
BENCH NAIL IN BASE OF 16" PINE TREE
ELEV. 325.95'

6/20/2022
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User:bevans

5/28/99

-L-

-L- STA. 302+93.79
-Y6- STA. 15+46.05

END 2' LAT. BASE DITCH
-L- STA. 302+50.00 RT
ELEV.=302.54'

(-) 11.1000%

-L- STA. 301+00.00 RT
ELEV.=295.40'

(+) 3.1200%

(+) 5.5800%

-L- 301+50.00 RT
ELEV.=296.96'

END 2' LAT. BASE DITCH
-L- STA. 301+17.00 LT
ELEV.=281.40'

(+) 2.0896%

BEGIN SPECIAL CUT DITCH
W/ HINGE
-L- 303+50.00 RT
ELEV.=302.31'

(-) 6.2200%

(-) 1.4150%

-L- STA. 304+00.00 RT
ELEV.=299.20'

END SPECIAL CUT DITCH
W/ HINGE
-L- STA. 306+00.00 RT
ELEV.=296.37'

PI = 305+92.00
EL = 301.72'
VC = 610'
K = 156

BEGIN SPECIAL CUT DITCH
W/ HINGE
-L- STA. 307+50.00 RT
ELEV.=291.00'

(-) 6.0000%

(-) 3.8100%

-L- STA. 308+00.00 RT
ELEV.=288.00'

(-) 15.0000%

END SPECIAL CUT DITCH
W/ HINGE
-L- STA. 309+00.00 RT
ELEV.=284.19'

BM # 14
-L- STA. 302+67.59
1.01' RT.
BENCH NAIL IN BASE OF 30" PINE TREE
ELEV. 305.20'

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 330	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 246.8	FT
BASE DISCHARGE	= 375	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 247.3	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 268.9	FT

PI = 314+50.00
EL = 258.82'
VC = 1,040'
K = 137

(+) 2.6000%

BEGIN 2' LAT. BASE DITCH
-L- STA. 313+82.00 LT
ELEV.=240.30'

(+) 0.3610%

BEGIN 2' LAT. BASE DITCH
-L- STA. 312+69.00 RT
ELEV.=243.30'

2@7'x7' RCBC

-L- STA. 313+83.00 RT
ELEV.=243.71'

(+) 6.9838%

(+) 6.0556%

(+) 7.7154%

-L- STA. 314+00.00
ELEV.=241.39'

PROJECT REFERENCE NO.	SHEET NO.
R-5705B	26

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LOW POINT
STA. 316+14.21
ELEV. = 267.71'

END 2' LAT. BASE DITCH
-L- STA. 317+00.00 RT
ELEV.=265.85'

(+) 4.1794%

END 2' LAT. BASE DITCH
-L- STA. 317+50.00 LT
ELEV.=263.99'

(+) 7.7154%

-L- STA. 316+00.00 LT
ELEV.=256.82'

(+) 2.6000%

48" RCP

BEGIN 2' LAT. BASE DITCH
-L- STA. 328+10.00 RT
ELEV=278.50'

BM # 15
-L- STA. 320+85.90
98.10' RT.
BENCH NAIL IN BASE OF 8" BIRCH TREE
ELEV. 280.73'

PIPE HYDRAULIC DATA
1003 (48" RCP) Sta. 327+40

DRAINAGE AREA	= 21	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 50	CFS
DESIGN HW ELEVATION	= 281.6	FT
100 YEAR DISCHARGE	= 55	CFS
100 YEAR HW ELEVATION	= 281.8	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 284.9	FT

6/20/2022
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PROJECT REFERENCE NO.	SHEET NO.
R-5705B	27

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-L-

PIPE HYDRAULIC DATA
1015 (36" RCP) Sta. 338+41

DRAINAGE AREA	= 8.4	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 32	CFS
DESIGN HW ELEVATION	= 291.1	FT
100 YEAR DISCHARGE	= 34	CFS
100 YEAR HW ELEVATION	= 291.2	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 296.7	FT

-L- STA. 332+45.75
-Y7- STA. 13+16.00

PI = 332+50.00
EL = 305.62'
VC = 846'
K = 217

(+)2.6000%
(+) 4.5333%
(-)1.3000%
(-) 7.8791%
(+) 4.1927%
(-) 0.7719%

UNDERCUT EXCAVATION

HIGH POINT
STA. 333+91.00
ELEV. = 301.95'

LOW POINT
STA. 342+62.27
ELEV. = 293.61'

END 2' LAT. BASE DITCH
BEGIN SPECIAL LAT. 'V' DITCH
-L- STA. 331+50.00 RT
ELEV.=294.45'

END SPECIAL LAT. 'V' DITCH
-L- STA. 332+00.00 RT
ELEV=296.72'

BEGIN 2' LAT. BASE DITCH
-L- STA. 337+50.00 RT
ELEV=294.94'

36" RCP

-L- STA. 338+41.00 RT
ELEV.=287.77'

END SPECIAL LAT. 'V' DITCH
-L- STA. 339+50.00 RT
ELEV.=292.34'

END 2' LAT. BASE DITCH
BEGIN SPECIAL LAT. 'V' DITCH
-L- STA. 339+00.00 RT
ELEV.=290.24'

BEGIN SPECIAL LAT. 'V' DITCH
-L- STA. 342+50.00 LT
ELEV.=288.54'

BM # 16
-L- STA. 337+25.54
297.84' LT.
BENCH NAIL IN BASE OF 14" BIRCH TREE
ELEV. 287.97'

-L-

PIPE HYDRAULIC DATA
1100 (60" RCP) Sta. 346+32

DRAINAGE AREA	= 102	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 110	CFS
DESIGN HW ELEVATION	= 279.4	FT
100 YEAR DISCHARGE	= 120	CFS
100 YEAR HW ELEVATION	= 279.7	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 297.3	FT

PI = 343+10.00
EL = 291.84'
VC = 450'
K = 136

(+)2.0000%
(+) 3.4250%
(+) 8.2000%
(+) 4.0143%
(-) 3.5751%
(-) 3.3050%
(-) 2.0700%
(-) 8.7692%
(+) 2.9687%

60" RCP

BEGIN SPECIAL LAT. 'V' DITCH
-L- STA. 343+50.00 RT
ELEV.=289.48'

-L- STA. 345+00.00 RT
ELEV.=282.87'

-L- STA. 346+65.00 RT
ELEV.=275.10'

BEGIN 2' LAT. BASE DITCH
-L- STA. 346+68.00 RT
ELEV.=275.10'

END SPECIAL LAT. 'V' DITCH
BEGIN 2' LAT. BASE DITCH
-L- STA. 343+50.00 RT
ELEV.=287.83'

-L- STA. 343+07.00 LT
ELEV.=288.10'

BEGIN SPECIAL LAT. 'V' DITCH
END 2' LAT. BASE DITCH
-L- STA. 343+00.00 LT
ELEV.=288.15'

-L- STA. 346+00.00 RT
ELEV.=280.80'

END 2' LAT. BASE DITCH
-L- STA. 345+00.00 LT
ELEV.=281.20'

-L- STA. 347+00.00 RT
ELEV.=276.05'

-L- STA. 350+00.00 RT
ELEV.=290.10'

-L- STA. 352+00.00 RT
ELEV.=302.40'

END 2' LAT. BASE DITCH
-L- STA. 354+00.00 RT
ELEV.=309.25'

UNDERCUT EXCAVATION

BM # 17
-L- STA. 353+58.01
240.00' RT.
BENCH NAIL IN BASE OF 18" OAK TREE
ELEV. 305.54'

6/20/2022
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