10/26/98

COMPUTED BY: C. W. HYATT, JR. DATE: 04/12/04
CHECKED BY: R. D. HURLBUT DATE: 04/12/04

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Carter-Burgess
Consultants in Planning, Engineering, Architecture, Construction Management and Related Services
5811 Glenwood Avenue, Suite 300
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PROJECT REFERENCE NO.	SHEET NO.
B-3445	3B

SIDE DRAIN PIPES (FOR PIPES 24" & UNDER)

RIGHT OF WAY AREA DATA

PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPORARY DRAINAGE EASEMENT
1	US DEPT OF INTERIOR	NA	53,593 SF	NA	NA	NA	NA	NA

PAVEMENT REMOVAL SUMMARY

SUMMARY STATION	STATION	LOCATION	QUANTITY	DESCRIPTION
20+04	23+67	CL	726 SF	SHORING
22+27	23+67	LT	1125 SF	OUTSIDE OF EX.TRAVEL LANES, BETWEEN EX. & PROP. BRIDGES, & AT UNDERCUT
20+67	23+67	RT	2570 SF	OUTSIDE OF EX.TRAVEL LANES, BETWEEN EX. & PROP. BRIDGES, & AT UNDERCUT
24+61	27+00	CL	478 SF	SHORING
24+61	25+70	LT	895 SF	OUTSIDE OF EX.TRAVEL LANES, BETWEEN EX. & PROP. BRIDGES, & AT UNDERCUT
24+61	27+62	RT	1755 SF	OUTSIDE OF EX.TRAVEL LANES, BETWEEN EX. & PROP. BRIDGES, & AT UNDERCUT
8 MISCL.	LOC.'S	CL	1480 SF	36" CAA PIPE LOCATIONS
			9029 SF	TOTAL PAVEMENT REMOVAL
			x 1/9	SQUARE YARDS PER SQUARE FEET
			1003 SY	TOTAL PAVEMENT REMOVAL
		SAY	1100 SY	OF PAVEMENT REMOVAL

STATION	LOCATION	PLAIN CONCRETE PIPE CULVERTS 15"	18"	24"	CORRUGATED STEEL PIPE CULVERTS THICKNESS 0.064 15"	18"	24"	PARALLEL PIPE RC END SECT. NO.	SIZE	PARALLEL PIPE PREFAB. STEEL END SECT. NO.	SIZE	PIPE REMOVAL (LIN. FT.)
SIZE												

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

STATION	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	TO	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) SIZE	12"	15"	18"	24"	30"	36"	42"	48"
-L- 22+00	RT	1										
		1	2			36						
-L- 22+00	LT	2										
		2	3			20						
-L- 25+46	RT	4										
		4	5			36						
-L- 25+46	LT	5										
		5	6			20						
3 W.LOC'S												
1.081 MI.												
1.548 MI.												
1.863 MI.												
2.122 MI.												
2.339 MI.												
TOTAL					112							

BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) 12" .064	15" .064	18" .064	24" .064	30" .079	36" CAA .079	36" .06	42" .109	48" .109	SHOP ELONGATED	ENDWALLS STD. 838.01 (UNLESS NOTED OTHERWISE) CU. YDS. USING CONC. R.C.P.	C.S.P.	STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YDS. USING BRICK R.C.P.	C.S.P.
					120								
					40								
					40								
					40								
					40								
					40								
					40								
					320								

QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') * LIN. FT. A	B	TYPE OF CONSTRUCTION PERMITTED BRICK	BLOCK	CONCRETE	PRECAST	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES & HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	STD. 840.18 OR 840.27	FRAME WITH TWO GRATES STD. 840.29	STD. 840.35	PIPE REMOVAL
PER EACH (0' THRU 5.0')	5.0' THRU 10.0'	10.0' AND ABOVE											
1	-	-											
1	-	-											
1	-	-											
1	-	-											
4	-	-											

TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	M.D.I. TYPE "B" STD. 840.18	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	T.B.D.I. STD. 840.35	REMARKS
7.12	4.62			1	1		2 GI M.D.I.(N.S.)
	4.62	4.22					
7.12	4.02			1	1		2 GI M.D.I.(N.S.)
	4.02	3.00					
6.79	4.19				1	1	2 GI T.B.D.I.
	4.19	3.89					
6.69	3.69				1	1	2 GI T.B.D.I.
	3.69	3.00					
							0.936 MI., 0.605 MI., 0.292 MI.
				2	4	2	

ABBREVIATIONS

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

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	SHOP CURVED	DOUBLE FACED	WARRANT POINT APPROACH END	TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	TRAILING END	W APPROACH END	TRAILING END
-L-	21+09.55	23+34.55	RT	225			23+34.55		6.0	9.0	225		4.0	
-L-	20+96.45	23+21.45	LT	225				23+21.45	6.0	9.0		225		4.0
-L-	25+01.35	27+26.35	RT	225			25+01.35		6.0	9.0	225		4.0	
-L-	25+14.75	27+39.75	LT	225				25+14.75	6.0	9.0		225		4.0
SUBTOTAL				900										
LESS ANCHORS				275										
	TYPE III @	18.75	4 EACH	75										
	GRAU 350 @	50	4 EACH	200										
PROJECT TOTAL				625	(NOTE: 5 ADDITIONAL GUARDRAIL POSTS)									

ANCHORS XI MOD	III	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	IMPACT ATTENUATOR TYPE 350	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
	1	1											
	1	1											
	1	1											
	1	1											
	4	4											
	4	4											

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