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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Johnson, Mirmiran, & Thompson Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC, 27609
License No: C-3097

PROJECT REFERENCE NO.	SHEET NO.
I-5880	3B-1

REMOVAL OF EXISTING PAVEMENT
IN SQUARE YARDS

STATION	STATION	LOCATION	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L- 27+75.00	-L- 38+05.00	LT			2,581.22	
-L- 27+75.00	-L- 38+05.00	RT			2,191.89	
-L- 35+05.00	-L- 40+40.00	OLD RAMP LT			1,646.22	
-L- 31+69.00	-L- 37+49.00	OLD RAMP RT			2,146.22	
-L- 39+97.00	-L- 50+75.00	RT	1,045.56			
-L- 40+46.00	-L- 50+75.00	LT	1,047.78			
-L- 38+15.00	-L- 52+21.00	OLD RAMP RT	3,701.11			
-L- 41+07.00	-L- 54+73.00	N. FRONT ROAD	3,857.22			
-RPC- 27+00.00	-RPC- 27+87.00		386.00			
-RPA- 12+63.00	-RPA- 16+42.00	RT	228.56			
-RPA- 10+00.00	-RPA- 16+42.00	LT	344.44			
-RPD- 14+50.00	-RPD- 20+73.00		1,556.78			
-Y1- 8+00.00	-Y1- 11+00.00		1,308.00			
-Y2- 13+49.00	-Y2- 14+19.00		46.56			
-RPC- 16+44.00	-RPC- 27+00.00			3,042.44		
	TOTAL		13,522.01	3,042.44	8,565.56	
	SAY		13,530	3,050	8,570	

SHOULDER BERM GUTTER SUMMARY

LINE	SIDE	BEG. STATION	END STATION	LENGTH (LF)
L	RT	37+82.00	38+10.00	28′
L	RT	39+85.00	40+50.00	65′
RP C	RT	16+25.00	18+50.00	225′
L	LT	38+72.00	38+90.00	18′
L	LT	40+65.00	41+05.00	40′
			TOTAL	376′
			SAY	380′

Note: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, Breaking of Existing Asphalt Pavement, Removal of Existing Asphalt Pavement and Removal of Existing Concrete Pavement will be paid for at the contract lump sum price for "Grading."

SUMMARY OF CHAIN LINK FENCE, 48" FABRIC

STATION TO STATION	LT. OR RT.	A FABRIC L.F.	B END BRACE	C CORNER BRACE	D LINE BRACE	E LINE POSTS	F TERMINAL POSTS
Y1 31+07.03 TO 34+48.26	RT	361.20	1	2	1	30	4
Y1 34+28.13 TO 34+29.35	LT	16.35	2			1	2
Y1 19+43.73 TO 20+60.00	RT	120.16	1	2		10	3
RP B 18+02.16 TO 19+32.04	LT	129.88	1	1		11	2
L 32+55.66 TO 18+15.03 Y2A	LT	827.30	2	2	2	69	6
RP C 14+85.17 TO 22+61.08	RT	773.86	2	1	1	64	4
RPC 26+91.80 TO 31+07.83 Y1	RT	146.28	1	1		12.19	2
TOTAL		2375.03				198	23
SAY		**2380.00**				**200.00**	**25.00**

EST. DDE	=	700 CY
TOTAL SHALLOW UNDERCUT	=	4,650 CY
STABILIZER AGGREGATE	=	500 TONS
CLASS IV SUBGRADE STABILIZATION	=	15,975 TONS
GEOTEXTILE FOR SOIL STABILIZATION	=	2,500 SY
GEOTEXTILE FOR SUBGRADE STABILIZATION	=	26,750 SY
ADDITIONAL UNDERCUT	=	2,300 CY

Earthwork quantities are calculated by the Roadway Designer. These quantities are based in part on subsurface data provided by the Geotechnical Engineer.

SHOULDER DRAIN SUMMARY

LINE	BEG. STATION	END STATION	SHOULDER DRAIN PIPE (LF)	SHOULDER DRAINS (LF)	OUTLET PIPE (LF)	CONCRETE PADS (EA)
L LT	31+90.00 (OUTSIDE)	38+72.00 (OUTSIDE)	682′	682′	25′	2
L LT	41+05.00 (OUTSIDE)	44+05.00 (OUTSIDE)	300′	300′	12′	1
L RT	30+75.00 (OUTSIDE)	37+82.00 (OUTSIDE)	707′	707′	25′	1 (1 @ 2GI)
L RT	40+50.00 (OUTSIDE)	43+50.00 (OUTSIDE)	300′	300′	12′	1
		TOTAL	1989′	1989′	74′	5
		SAY	2000′	2000′	80′	6

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
-L- 27+75.00 RT	-L- 38+46.00 RT	1,180	87	923		243
-Y2A- 14+26.14	-Y2A- 15+12.51	34		131	97	
SUBTOTAL		1,214	87	1,054	97	243
-L- 27+75.00 LT	-L- 38+46.00 LT	1,558	88	889		757
-Y1- 6+15.00	-Y1- 9+30.00	445		176		269
-Y2- 10+67.87	-Y2- 14+38.00	133		309	176	
-Y2- 15+68.00	-Y2- 19+56.47	277		231		46
-Y2A- 15+12.51	-Y2A- 19+50.00	41		131	90	
-C1- 1+00.00	-C1- 3+95.31	161		996	835	
SUBTOTAL		2,615	88	2,732	1,101	1,072
-L- 40+21.00 RT	-L- 50+75.00 RT	1,011	263	21,172	20,161	263
-RPC- 16+60.78	-RPC- 27+85.38	1,452	125	22,969	21,517	125
-RPD- 11+35.00	-RPD- 20+78.83	1,543		1,097		446
-Y1- 27+95.00	-Y1- 35+40.00	575		795	220	
SUBTOTAL		4,581	388	46,033	41,898	834
-L- 40+21.00 LT	-L- 50+75.00 LT	1,202	262	6,883	5,681	262
-Y1- 10+60.50	-Y1- 24+65.00	1,208	75	2,114	906	75
-RPB- 14+67.64	-RPB- 20+65.98	423	100	7,246	6,823	100
-RPA- 10+00.00	-RPA- 16+82.46	853		159		694
SUBTOTAL		3,686	437	16,402	13,410	1,131
TOTAL		12,096	1,000	66,221	56,506	3,381
SHOULDER MATERIAL				3,358	3,358	
ADDITIONAL UNDERCUT			1,300	1,495	1,495	1,300
WASTE IN LIEU OF BORROW					-2,381	-2,381
PROJECT TOTAL		12,096	2,300	71,074	58,978	2,300
5% TO REPLACE BORROW PIT					2,949	
GRAND TOTAL		12,096	2,300	71,074	61,927	2,300
SAY		12,100			61,950	

GUARDRAIL SUMMARY

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350
"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.

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS GREU TL-3	ANCHORS B-77	ANCHORS CAT-1	ANCHORS TL-2	ANCHORS TYPE III					IMPACT ATTENUATOR TYPE 350 NO.	PERMITTED G	PERMITTED NG	REMOVE EXISTING GUARDRAIL			REMARKS
-L-	27+34.49	28+65.61	LT	131.12			27+34.49		14	17	50		1		1	1											312.50			TIE TO CONCRETE BARRIER
-L-	29+83.71	38+09.45	RT	825.74			32+09.85 (SIGN)	38+09.45 (BRIDGE)	14	17	50		1		1	1											212.50			
-L-	33+50.75	38+89.46	LT	538.71			38+89.46 (BRIDGE)		14	17						1	1													
-L-/-RPC-	39+84.34	20+73.65	RT	1484.51			39+84.34 (BRIDGE)		14	17						1	1										1412.50			
-L-/-RPB-	40+65.35	13+04.98	LT	624.40				40+65.35 (BRIDGE)	14	17	50		1		1	1											112.50			
-RPB-/-Y1-	19+58.44	24+22.14	RT	172.30	106.20			24+22.14 (BRIDGE)	12.5	15.5					1				1								100			
-Y1-	23+30.02	25+05.02	RT																								112.50			
	27+41.38	29+16.38	RT																								112.50			
-Y1-	28+46.07	29+90.88	LT	144.81				28+46.07 (BRIDGE)	12.5	15.5					1				1								112.50			
-Y2A-	13+17.21	13+98.47	LT	81.26			13+98.47		10.0	13.0						1	1										100			TIE TO CONCRETE BARRIER
-Y2A-	13+34.67	14+44.53	RT	109.86				14+44.53	10.5	13.5						1		1									100			TIE TO CONCRETE BARRIER
-Y2A-	15+90.75	17+03.03	LT	112.28				15+90.75	10.5	13.5						1		1									100			TIE TO CONCRETE BARRIER
-Y2A-	16+36.88	17+23.53	RT	86.65			16+36.88		12.0	15.0						1	1										100			TIE TO CONCRETE BARRIER
-L-	52+00.00	54+00.00	RT	200			53+79.17								1		1													
-L- /Y2A	34+88.91	18+48.43	LT																								612.50			
			SUBTOTALS	4511.64	106.20						ANCHOR DEDUCTIONS				6	9	5	2	2								3500			
			ANCHOR DEDUCTION	-624.63	0						TL-3: 6 @ 50 = -300																			
			TOTAL	3887.01	106.20						B-77: 9 @ 22.875 = -205.88																			
			SAY	3900′	125′						CAT-1: 5 @ 6.25 = -31.25				6	9	5	2	2								3500			
											TL-2: 2 @ 25 = -50																3550′			
											Type III: 2 @ 18.75 = -37.5																			
											GRAND TOTAL = -624.63																			
											ADDITIONAL GUARDRAIL POSTS = 10																			

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