5/28/99

COMPUTED BY: DBE DATE: 8-12-2014
CHECKED BY: RWP DATE: 06-09-2015

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-2603	3B-2

M A Engineering Consultants, Inc. NC License: F-0160
598 East Chatham Street Suite 137 Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221

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

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS							IMPACT ATTENUATOR TYPE 350				REMOVE EXISTING GUARDRAIL (LF)	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TYPE 350 TL-3	CAT-1	AT-1	TYPE III	B-77	TYPE 350 TL-2				NO. (EA)	PERMITTED G	PERMITTED NG		
-L-	30+81.64	33+56.25	RT	262.50	50.00		31+00	33+50	14'	14' BERM	6.25'	NA	4'	NA		1	1									DRIVEWAY AFFECTS APPROACH WARRANT
-L-	49+51.41	53+56.53	LT																						403	
-L-	57+67.50	60+64.50	RT	306.25			58+25	60+64.50	14'	14' BERM	50'	NA	1'	NA	1	1										DRIVEWAY AFFECTS APPROACH WARRANT
-L-	60+83.00	61+03.62	RT																						53	
-L-	74+85.00	79+05.00	RT	412.50			74+75	79+00	14'	14' BERM	50'	NA	1'	NA	1	1										DRIVEWAY AFFECTS APPROACH WARRANT
-L- /-DRIVE6-	94+75.00	11+60.00	RT /RT	375.00	75.00		95+75	11+50.00	14' or 2'	14' BERM or 5'	50'	NA	1'	NA	1	1										DRIVEWAY AFFECTS TRAILING WARRANT
-L-	113+73.75	116+42.50	LT	268.75				113+75	8'	11'	NA	NA	NA	NA		1										TIE TO EXISTING STRUCTURE ANCHOR UNIT
-L-	114+30.00	116+43.10	MED																						213	
-L-	114+92.06	116+43.10	MED LT	150.00					VARIES	VARIES	NA	NA	NA	NA									1		X	15:1 TRANSITION; TIE TO EXISTING STRUCTURE ANCHOR UNIT
-L-	114+92.06	116+60.00	MED RT	168.75			116+60		VARIES	VARIES	NA	NA	NA	NA					1							15:1 TRANSITION
-L-	113+75.29	116+60.00	RT	287.50	37.50		116+60		8'	11'	6.25'	NA	4'	NA			1	1								DRIVEWAY AFFECTS APPROACH WARRANT
-L-	115+54.43	116+49.17	LT																						95	
-L-	118+21.94	120+40.08	LT																						218	
-L-	118+21.38	119+15.66	MED																						87	
-L-	118+28.00	125+25.00	LT	700.00			118+10.00		8'	11'	50'	NA	1'	NA	1											TIE TO EXISTING STRUCTURE ANCHOR UNIT
-L-	118+28.25	119+61.80	MED LT	137.50			118+09.51		VARIES	VARIES	NA	NA	NA	NA									1		X	15:1 TRANSITION; TIE TO EXISTING STRUCTURE ANCHOR UNIT
-L-	118+10.00	119+61.80	MED RT	150.00					VARIES	VARIES	NA	NA	NA	NA					1							15:1 TRANSITION
-L-	118+10.00	124+35.00	RT	625.00				124+25	8'	11'	NA	NA	NA	NA		1		1								
-L-	129+25.00	137+78.00	RT	862.50			130+25	137+75	8'	11'	50'	NA	1'	NA	1	1										
-DRIVE4-	10+98.00	14+00.00	RT	287.50	25.00		11+25	14+00	2'	5'	25'	25'	0.5'	0.5'						2						
-L-	150+75.00	161+81.25	RT	1,112.50			151+75	161+75	8'	11'	50'	NA	1'	NA	1	1										
-L-	169+56.40	171+81.25	RT	212.50	50.00		170+04	171+75	8'	11'	6.25'	NA	4'	NA		1	1									DRIVEWAY AFFECTS APPROACH WARRANT
-L- /-Y18-	177+25.00	31+64.00	RT /RT	487.50	62.50		178+25	180+75	8'	11'	50'	NA	1'	NA	1	1										EXTENDED TRAILING END TO PROTECT POLES
-L- /-Y18-	180+20.00	29+35.00	LT /RT	162.50	87.50		181+75	180+25	8'	11'	6.25'	NA	4'	NA		1	1									-Y18- AFFECTS APPROACH WARRANT
-Y18-	20+25.00	26+31.25	RT	612.50			20+75	26+25	8'	11'	50'	NA	1'	NA	1	1										DRIVEWAY AFFECTS APPROACH WARRANT
		SUBTOTAL (LF)		7,581.25	387.50								TOTAL ANCHORS OR ATTENUATORS (EA)		8	12	4	2	2	2				2			1,069	TOTAL
		LESS ANCHORS (LF)		625.00									ANCHOR UNIT LENGTH (LF)		50	6.25	6.25	18.75	18.75	25								
		TOTAL GUARDRAIL (LF)		6,956.25	387.50								DEDUCTION PER TYPE (LF)		400	75	25	37.5	37.5	50				2 EA			1,075 LF	SAY
		SAY GUARDRAIL (LF)		7,000.00	400.00		ADDITIONAL GUARDRAIL POSTS: SAY 10 EA						TOTAL DEDUCTION (LF)		625.00												

7/2/2015
S:\Roadway\proj\R2603_rdy_psh03B-2_Sum_Guardrail.dgn