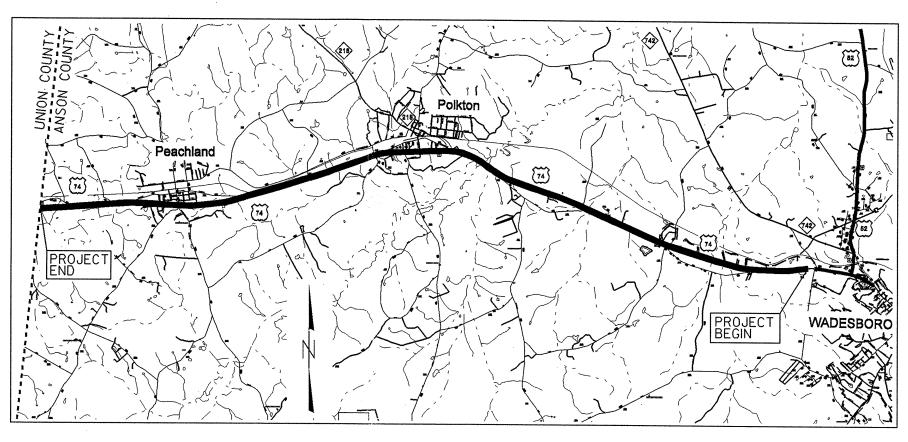
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

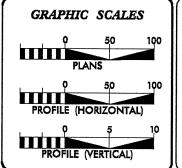
ANSON COUNTY

LOCATION: WBL US74 FROM 1500' WEST OF SR-1423 (KITTY BENNETT RD)
TO THE UNION COUNTY LINE

TYPE OF WORK: WIDENING, RESURFACING, MILLING, & SHOULDER RECONSTRUCTION



VICINITY MAP NOT TO SCALE



DESIGN DATA

ADT = ADT = DHV = %
D = %
T = %
V = MPH

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT R-5192 = 10.8 MILES

Prepared in the Office of:

DIVISION OF HIGHWAYS

DIVISION TEN

DIVISION DESIGN / CONSTRUCT UNIT

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

__NA___

LETTING DATE:
__Ctober 20, 2009

PROJECT DESIGN ENGINEER

OF BIO NORTH CONTROL OF THE STATE OF THE STA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

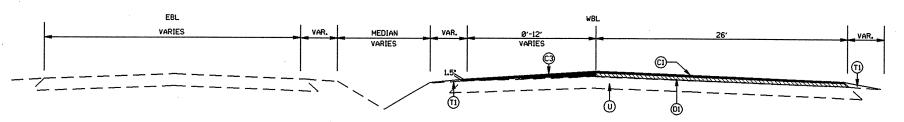
STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

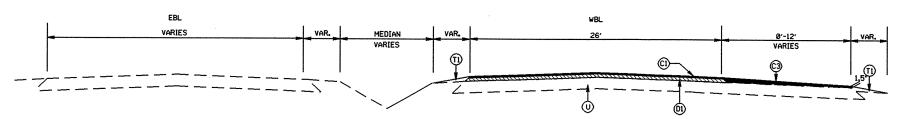
N ADMINISTRATOR

S-AUG-2009 09:08

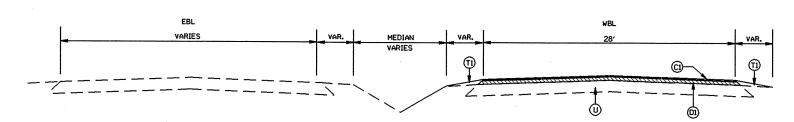
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5192	2	
E A PROJECT NO			



TYPICAL SECTION NO. 3
FOR LEFT TURNLANES



TYPICAL SECTION NO. 2
FOR RIGHT TURNLANES



TYPICAL SECTION NO. 1 STA.0+00 TO 31+00 -L-STA.55+50 TO 100+40 -L-

NOTES: NO CONSTRUCTION IS NECESSARY AT BROWN CREEK FROM THE PAVEMENT JOINT AT STA 236+20 TO THE PAVEMENT JOINT AT STA 278+70.

MILL O'TO 4" OF THE EXISTING PAVEMENT APPROXIMATELY 200' BEFORE & AFTER THE CONCRETE BRIDGE FOR LANES CREEK,
AT THE OVERPASS FOR SR 1240, AT THE PAVEMENT JOINT BEFORE AND AFTER BROWNS CREEK AND AT THE BEGINNING AND
ENDING OF THE PROJECT TO PROVIDE A SMOOTH TIE IN.

NO ADDITIONAL ASPHALT SHALL BE PLACED ACROSS THE EXISTING BRIDGE FOR GOULDS CREEK (STA 54+50-55+50).
THE CONTRACTOR SHALL MILL 2" OF THE EXISTING ASPHALT ACROSS THE BRIDGE AND MILL 0" TO 2" APPROX.
200' ON THE EAST SIDE TO TRANSITION FROM TYPICAL *7 TO TYPICAL *8 AND 0" TO 4" ON THE WEST SIDE TO TRANSITION FROM TYPICAL *7.

	PAVEMENT SCHEDULE FINAL PAVEMENT DESIGN
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD.
СЗ	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	* PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.OC, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD. IN ONE LAYER.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT.
V1	PROFILE MILLING BITUMINOUS PAVEMENT, 0" TO 2" IN DEPTH.

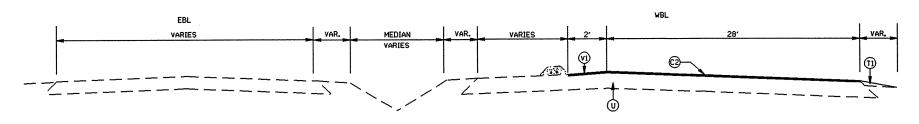
^{*} DESIGN EXCEPTION GRANTED BY PAVEMENT MANAGEMENT UNIT

WBL OF US 74 FROM THE PAVEMENT JOINT 1500' WEST OF SR 1423 (KITTY BENNETT RD) TO THE UNION COUNTY LINE

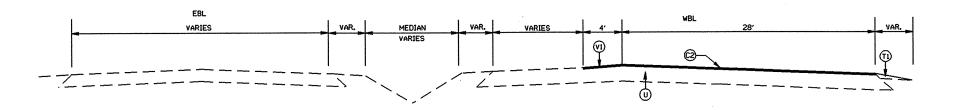
SCALE	-NA-
DATE	7-09
DWG. BY	TWB
DESIGN BY	TWB
APPROVED	OWO



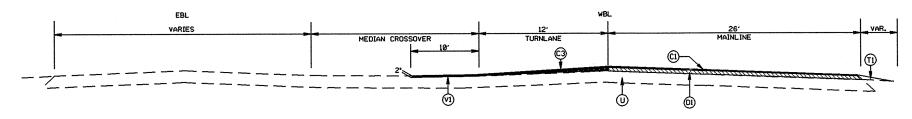
REVIS	SIONS



TYPICAL SECTION NO. 6 STA.34+00 TO 35+36 -L-



TYPICAL SECTION NO. 5 STA.31+00 TO 34+00 -L-STA.37+20 TO 41+20 -L-



TYPICAL SECTION NO. 4
FOR MEDIAN CROSSOVERS

STATE"	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5I92	2A	
F.A. PROJECT NO.			

	PAVEMENT SCHEDULE FINAL PAVEMENT DESIGN
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.8C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD.
СЗ	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER 8G. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	* PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF B12 LBS. PER SQ. YD. IN ONE LAYER.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT.
V1	PROFILE MILLING BITUMINOUS PAVEMENT, 0" TO 2" IN DEPTH.

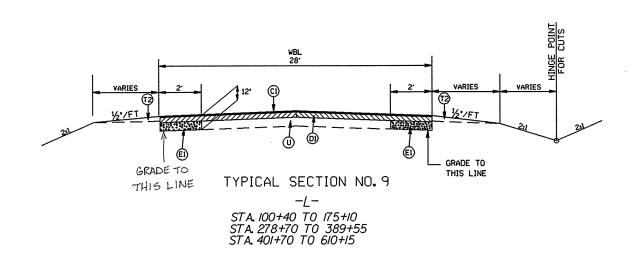
^{*} DESIGN EXCEPTION GRANTED BY PAVEMENT MANAGEMENT UNIT

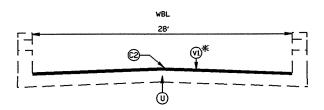
WBL OF US 74 FROM THE PAVEMENT JOINT 1500' WEST OF SR 1423 (KITTY BENNETT RD) TO THE UNION COUNTY LINE

l	
SCALE	-NA-
DATE	7-09
DWG. BY	TWB
DESIGN BY	TWB
APPROVED	RWR



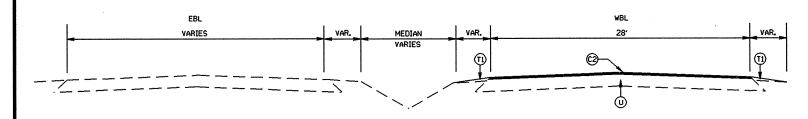
I	REVISIONS		
L			
-			





TYPICAL SECTION NO. 8 STA.52+50 TO 55+50 -L-

* 2" MILLING ON THE BRIDGE PAID FOR AS INCIDENTAL MILLING 54+50 to 55+50 O"-2" MILLING AT EAST APPROACH 52+50 to 54+50



TYPICAL SECTION NO. 7 STA.35+36 TO 37+20 -L-STA.41+20 TO 52+50 -L-

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5I92	2B	
F.A. PROJECT NO.			

	PAVEMENT SCHEDULE FINAL PAVEMENT DESIGN
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5C, At an average rate of 188 lbs. Per SQ. yd.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE SS.SC, At an average rate of 112 LBS. Per SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5C, AT AN AVERAGE RATE OF 112 LBS. PER 8G. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	* PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 012 LBS. PER SQ. YD. IN ONE LAYER.
Т1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT.
V1	PROFILE MILLING BITUMINOUS PAVEMENT, 0" TO 2" IN DEPTH.

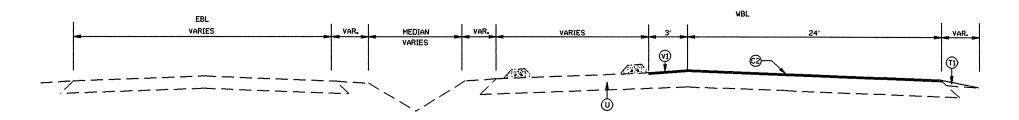
* DESIGN EXCEPTION GRANTED BY PAVEMENT MANAGEMENT UNIT

WBL OF US 74 FROM THE PAVEMENT JOINT 1500' WEST OF SR 1423 (KITTY BENNETT RD) TO THE UNION COUNTY LINE

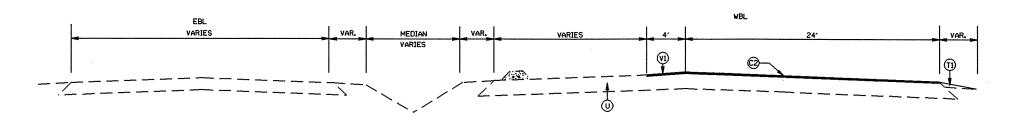
SCALE	-NA-	
DATE	7-09	
DWG. BY	TWB	
DESIGN BY	TWB	
APPROVED	RWB	

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A CHARLES	

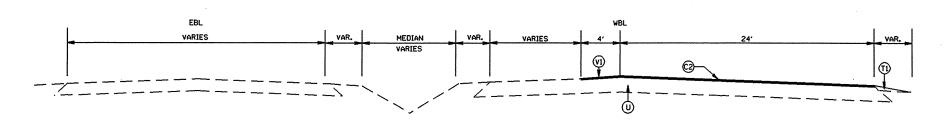
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5I92	2C	
 F.A. PRO	JECT NO.		



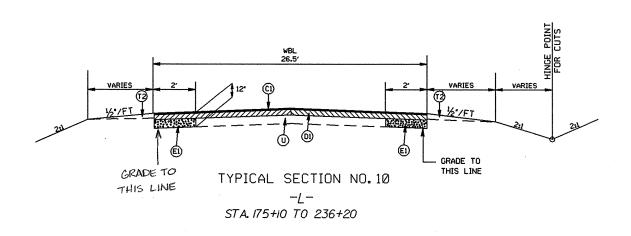
TYPICAL SECTION NO. 13 STA.393+75 TO 395+20 -L-STA.400+20 TO 401+70 -L-



TYPICAL SECTION NO. 12 STA.392+85 TO 393+75 -L-STA.398+50 TO 400+20 -L-



TYPICAL SECTION NO. 11 STA.389+55 TO 392+85 -L-STA.395+20 TO 398+50 -L-



	PAVEMENT SCHEDULE FINAL PAVEMENT DESIGN
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 59.5C, At an average rate of 168 LBS. Per 8Q. yd.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.8C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD.
СЗ	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.8C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	* PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.OC, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD. IN ONE LAYER.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT.
V1	PROFILE MILLING BITUMINOUS PAVEMENT, 0" TO 2" IN DEPTH.

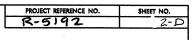
* DESIGN EXCEPTION GRANTED BY PAVEMENT MANAGEMENT UNIT

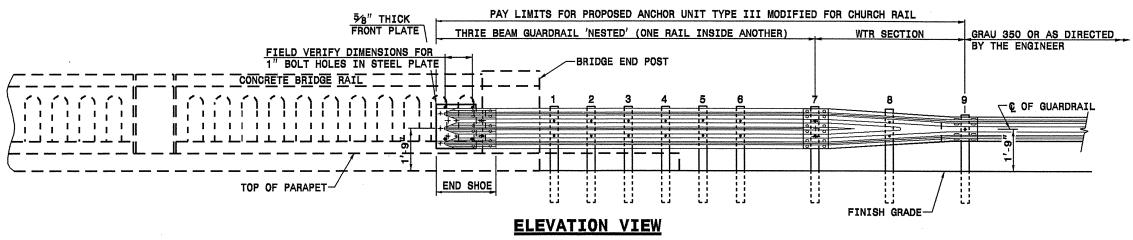
WBL OF US 74 FROM THE PAVEMENT JOINT I500' WEST OF SR I423 (KITTY BENNETT RD) TO THE UNION COUNTY LINE

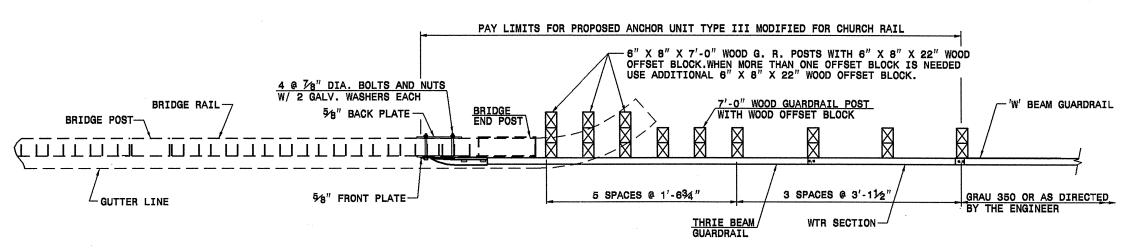
SCALE	-NA-
DATE	7-09
DWG. BY	T₩B
DESIGN BY	TWB
APPROVED	RWR



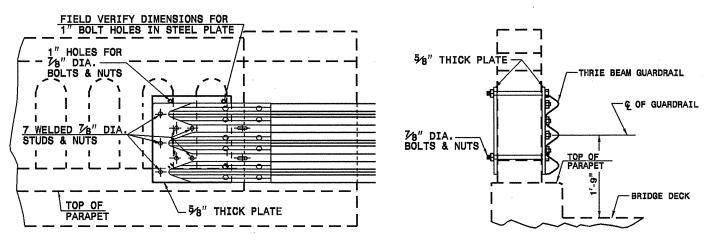
 REVIS	SIONS







PLAN VIEW



ELEVATION VIEW

SECTION VIEW

GUARDRAIL ATTACHMENT TO BRIDGE POST

- GENERAL NOTES:

 1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.

 2. TAP NUTS FOR THE 1/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.

 4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.

 5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.

 6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.

 7. ATTACH THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.

 8. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.

- 9. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- 10. SEE ROADWAY STANDARD DRAWING 862.03 SHEET 4 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT.



PROJECT SERVICES UNIT STANDARDS AND SPECIAL DESIGN Office 919-250-4128 FAX 919-250-4119 **GUARDRAIL ANCHOR UNIT**

TYPE III MODIFIED FOR CHURCH RAIL

ORIGINAL BY: E.E. WARD
MODIFIED BY: E.E. WARD
CHECKED BY:
FILE SPEC.: \user\details\s

22-JUL-2009 ||:07 s:\contracts\contracts\si jhowerton AT PS237501

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5192	3	

SUMMARY OF QUANTITIES

PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	FINAL	LENGTH	WIDTH	INCIDENTAL	SHOULDER	SHOULDER	DITCHING	4" TO 0"	2" TO 0"	INCIDENTAL	BASE	INTERMEDIATE	SURFACE	PG 64-22	PG 70-22	PATCHING
						SURFACE			STONE BASE	CON-	RECON-		MILLING	MILLING	MILLING	COURSE,	COURSE, 119.0C	COURSE,	PLANT MIX	PLANT MIX	EXISTING
						TESTING				STRUCTION	STRUCTION					B25.0C		S9.5C			PAVEMENT
						REQUIRED															ŀ
NO		NO			NO		MI	FT	TONS	SMI	SMI	LF	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS
				FROM PAVEMENT JOINT 1500' WEST																	
				OF SR1423 (KITTY BENNETT RD) TO	1 1																
R-5192	Anson	1 1	WBL US 74	UNION COUNTY LINE	ll	NO	10.8	28	345	17.24	4.28	800	5,885	15,325	600	9,875	25,200	17,250	1,609	1,035	600
TO	OTAL FOR I	MAP NO	D. 1				10.8		345	17.24	4.28	800	5,885	15,325	600	9,875	25,200	17,250	1,609	1,035	600
TOTA	L FOR PRO	OJ NO. F	R-5192				10.8		345	17.24	4.28	800	5,885	15,325	600	9,875	25,200	17,250	1,609	1,035	600

	GRAND 1	TOTAL					10.8		345	17.24	4.28	800	5,885	15,325	600	9,875	25,200	17,250	1,609	1.035	600

PROJECT	COUNT	TY MA	\P	ROUTE	DESCRIPTION		6"	ADJ. OF	ADJ. OF	STEEL BEAM	ANCHORAGE	GUARDRAIL	GUARDRAIL	GUARDRAIL	REMOVE	STEEL	REMOVE &	TEMPORARY	STONE FOR	SEDIMENT	MATTING	SEED &
						DRIV	EWAYS	MANHOLES	METER OR	GUARDRAIL	FOR	ANCHOR	ANCHOR	ANCHOR	EXISTING	BEAM	RESET	SILT FENCE	EROSION	CONTROL	(EROSION	MULCHING
	ı		- 1				1		VALVE BOX		GUARDRAIL	UNITS, TYPE	UNITS, TYPE	UNITS,TYPE	GUARDRAIL	GUARDRAIL	EXISTING		CONTROL,	STONE	CONTROL)	1
										·	POST ON BOX	III MODIFIED	CAT-1	350		W/ 8' POST	ANCHOR		CLASS B		•	1
											CULVERT						UNITS,					
		ı				İ	l										TYPE 350					1
NO		N	0				SY	EA	EA	LF	EA	EA	EA	EA	LF	LF	EA	LF	TN	TN	SY	AC
					FROM PAVEMENT JOINT 1500' WEST																	
	ļ		1		OF SR1423 (KITTY BENNETT RD) TO		1		•													
R-5192	Anson	า 1	ı l v	NBL US 74	UNION COUNTY LINE		96	1	1	1,230	8.	4	12	6	6,914	6,250	7	1,000	150	70	1,800	10.5
T	TOTAL FOR	R MAF	P NO. 1	1			96	1	1	1,230	8	4	12	6	6,914	6,250	7	1,000	150	70	1,800	10.5
TOT	AL FOR PI	ROJ N	10. R-5	5192			96	1	1	1,230	8	4	12	6	6,914	6,250	7	1,000	150	70	1,800	10.5
	GRANE	D TOT	AL				96	1	1	1,230	8	4	12	6	6,914	6,250	7	1,000	150	70	1,800	10.5

THERMOPLASTIC AND PAINT QUANTITIES

					4400000000-E	4415000000-N	4420000000-N	4430000000-N	468500	0000-E	4686000000-E	4710000000-E	4721000000-E	472500	0000-E	4810000000-E	490000000-N
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	STATIONARY	FLASHING	CHANGEABLE	DRUMS	4" X 90 M	4" X 90 M	4" X 120 M	24" X 120 M	THERMO MSG	THERMO	THERMO	4" WHITE PAINT	CRYSTAL &
					WORK ZONE	ARROW	MESSAGE		WHITE	YELLOW	WHITE	WHITE	SCHOOL 120M	LT	RT	1	RED
					SIGN	PANELS,	SIGNS	1	THERMO	THERMO	THERMO	THERMO	(CHARACTERS)	ARROW	ARROW	İ	MARKERS
						TYPE C						•		90 M	90 M		
NO		NO			SF	EA	EA	EA	LF	LF	LF	LF	EA	EA	EA	LF	EA
				FROM PAVEMENT JOINT 1500' WEST OF SR1423 (KITTY BENNETT RD) TO													
R-5192	Anson	1 1	WBL US 74	UNION COUNTY LINE	720	1	1 1	150	59,875	59,875	19,589	575	6	27	12	20,000	950
Т	OTAL FOR	MAP N	0.1		720	1	1	150	59,875	59,875	19,589	575	6	27	12	20,000	950
TOT	AL EOD DD) I NO	D 5102		720	1	1	150	59,875	59,875	19,589	575	6	27	12	20,000	950
TOTAL FOR PROJ NO. R-5192									119,750					39			
	GRAND	TOTAL			720	1	1 1	150	59,375	59,875	19,589	575	6	27	12	20,000	950
GRAND TOTAL									119	,750				39	9		

2006 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.

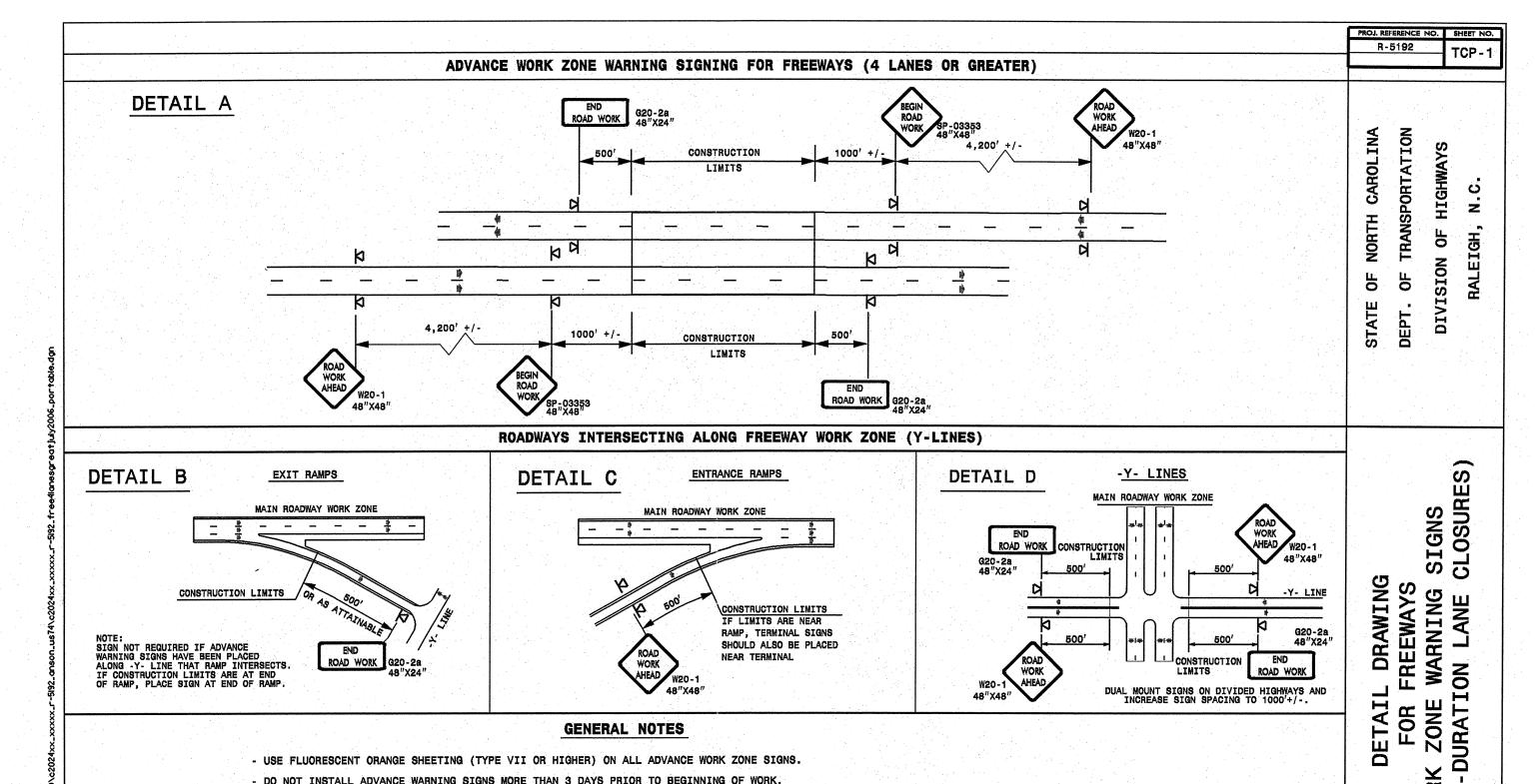
TITLE

DIVISION 8 - INCIDENTALS

862.01 Guardrail Placement

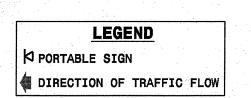
862.02 Guardrail Installation

862.03 Structure Anchor Units



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



SHEET 1 OF 1

WORK

SHORT

