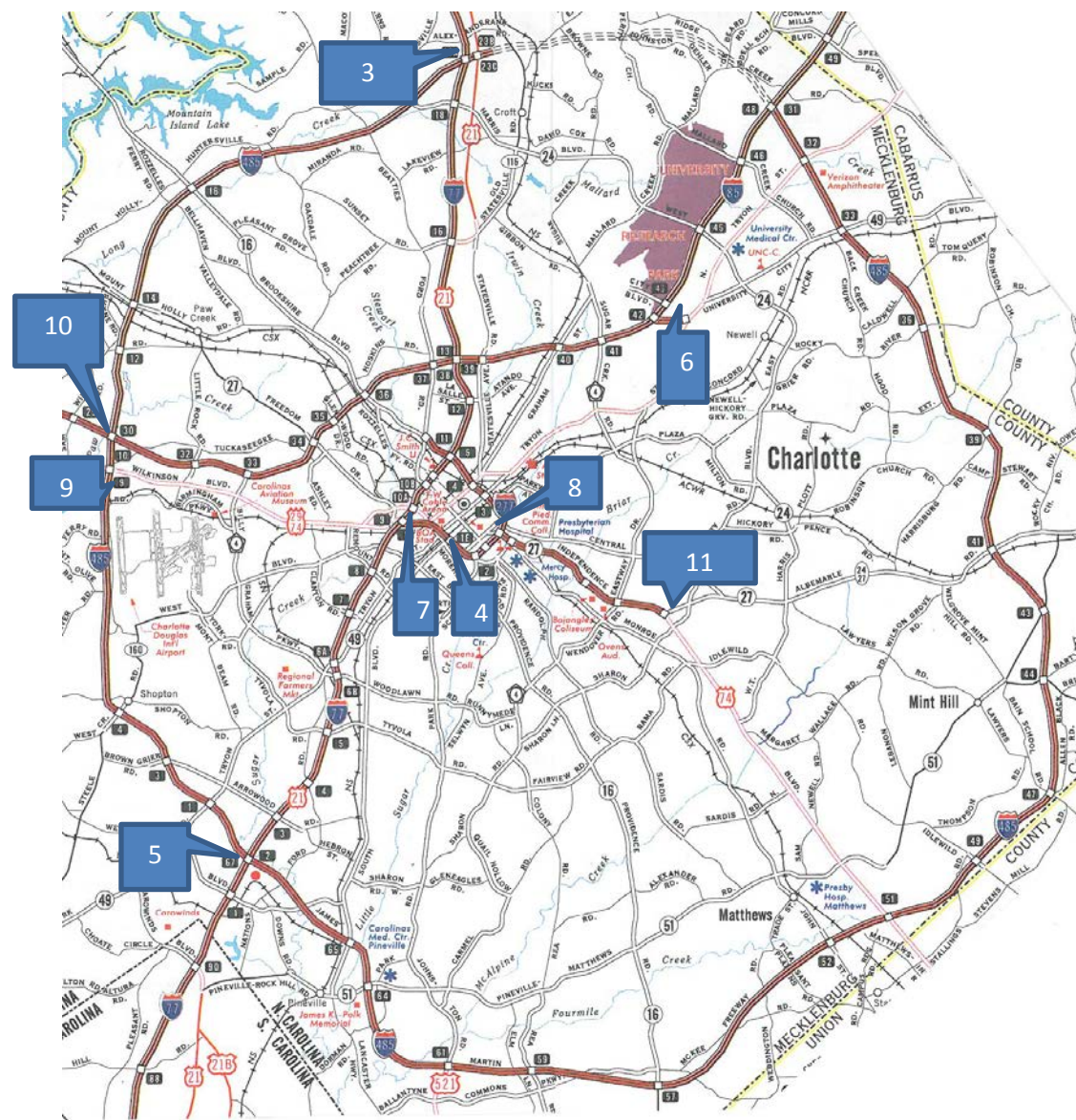


STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

***SIGNING AND PAVEMENT
 MARKING PLAN***



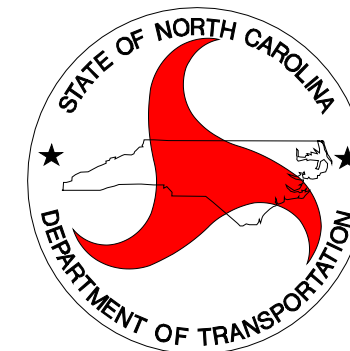
MECKLENBURG COUNTY

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
1	TITLE SHEET AND INDEX OF SHEETS
2A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL AND LOCAL NOTES, ETC.
2B	SUMMARY OF QUANTITIES
3A THRU 3G	I-485 TO I-77 RAMP SIGNING IN N. MECK
3H THRU 3J	I-485 TO I-77 RAMP PAVEMENT MARKING IN N. MECK
4	I-277 INNER TO SOUTH BLVD/CALDWELL ST.
5	I-77 SB EXIT 1 TO I-485
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7A THRU 7B	I-277 INNER EXIT 1
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9	I-485 OUTSIDE LANE AT EXIT 9
10	I-485 OUTSIDE LANE AT EXIT 10
11	US 74 EB EXIT 246 TO NC 27

Division 10

**Bid Opening:
 October 16th, 2013**



ROADWAY STANDARD DRAWINGS

- 901.10 TYPE 'A' SIGNS – WELDED STUD CONSTRUCTION
- 901.20 TYPE 'B' SIGNS – WELDED STUD CONSTRUCTION
- 901.50 ARROWS AND SHIELDS
- 901.60 RIVET SPACING FOR OVERLAYED SIGNS
- 901.70 SIGN STRINGERS AND SUPPORT SPACING
- 901.80 SIGN MOUNTING DETAILS – TYPE 'A' AND 'B' SIGNS
- 903.10 GROUND MOUNTED SIGN SUPPORTS
- 904.10 ORIENTATION OF GROUND MOUNTED SIGNS
- 904.20 SECONDARY SIGN MOUNTING
- 904.50 MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
- 1101.02 TEMPORARY LANE CLOSURES
- 1101.03 TEMPORARY LANE CLOSURES
- 1101.04 TEMPORARY SHOULDER CLOSURES
- 1101.11 TRAFFIC CONTROL DESIGN TABLES
- 1110.02 PORTABLE WORK ZONE SIGNS
- 1115.01 FLASHING ARROW BOARDS
- 1130.01 DRUM
- 1130.01 CONES
- 1160.01 TRUCK MOUNTED ATTENUATOR – DELINEATION
- 1180.01 SKINNY DRUM
- 1205.01 PAVEMENT MARKINGS – LINE TYPES AND OFFSETS
- 1205.02 PAVEMENT MARKINGS – DIVIDED AND UNDIVIDED ROADWAYS
- 1205.03 PAVEMENT MARKINGS – INTERCHANGES
- 1205.04 PAVEMENT MARKINGS - INTERSECTIONS
- 1205.05 PAVEMENT MARKINGS – TURN LANES
- 1205.06 PAVEMENT MARKINGS – THRU LANE DROPS
- 1205.08 PAVEMENT MARKINGS – SYMBOLS AND WORD MESSAGES
- 1205.09 PAVEMENT MARKINGS – PAINTED ISLANDS
- 1205.12 PAVEMENT MARKINGS – BRIDGES
- 1250.01 RAISED PAVEMENT MARKERS – INSTALLATION SPACING
- 1251.01 RAISED PAVEMENT MARKERS –PERMANENT AND TEMPORARY
- 1253.01 RAISED PAVEMENT MARKERS – SNOWPLOWABLE

GENERAL NOTES

SHEET NO
2A

CHANGES MAY BE REQUIRED WHEN THE PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY STANDARD DRAWINGS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE PROJECT EXCEPT WHEN OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

- 1) ALL SIGNS SHALL BE FURNISHED BY THE CONTRACTOR
- 2) WHEN NOT STATIONED OR DIMENSIONED, ALL SIGNS SHALL BE FIELD VERIFIED BY THE ENGINEER
- 3) WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL
- 4) THE BACKGROUND SHEETING FOR TYPES E AND F SIGNS SHALL BE REFLECTIVE
- 5) DO NOT BEGIN FABRICATION FOR TYPES A AND B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL "S" DIMENSIONS HAVE BEEN FIELD VERIFIED.
- 6) TIE PROPOSED MARKINGS TO EXISTING
- 7) REMOVE / REPLACE ANY DAMAGED AND OR CONFLICTING PAVEMENT MARKINGS AND/OR MARKERS
- 8) WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- 9) NOTIFY THE ENGINEER (WHO WILL ALSO NOTIFY PUBLIC INFORMATION AND TMC) 7 DAYS PRIOR OF ANY CLOSURE.
- 10) PROVIDE SIGNING AND DEVICES TO INSTALL SHOULDER OR LANE CLOSURES. ENSURE ALL TEMPORARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN
- 11) WORK LIGHTING FOR NIGHT OPERATIONS SHALL BE PLACED AND DIRECTED SO AS NOT TO OBSTRUCT MOTORIST'S VISION
- 12) CONTRACTOR SHALL COORDINATE OPERATIONS WITH ADJOINING CONTRACTORS AND MAINTENANCE CREWS TO PROVIDE SEAMLESS TRANSITIONS BETWEEN WORKZONES.

PAVEMENT MARKINGS

SHEET NO
2B

DESC NO	SECT				TOTAL	LOCATION 3												
						3-PMP2	3-PMP3	4-PMP1	5-PMP1	6-PMP10	7-PMP1&2	8-PMP1	9-PMP1	10-PMP1	11-PMP1			
4785000000	1205 CU	COLD APPLIED PLASTIC (12")	WHITE DIAGONAL	LF	107		107											
4702000000	1205 T14	THERMO (12", 120 MILS)	3FT-9FT/ SP WHITE MINISKIP	LF	170	170												
4702000000	1205 TT	THERMO (12", 120 MILS)	WHITE SOLID LANE LINE	LF	300	300												
4700000000	1205 TS	THERMO (12", 90 MILS)	WHITE GORELINE	LF	1075	950	125											
4700000000	1205 TU	THERMO (12", 90 MILS)	WHITE DIAGONAL	LF	590		590											
4775000000	1205 C6	COLD APPLIED PLASTIC (6")	WHITE EDGELINE	LF	325		325											
4688000000	1205 T6	THERMO (6", 90 MILS)	WHITE EDGELINE	LF	2250		2250											
4865000000	1205 V1	POLYUREA (12")	WIDE SOLID WHITE LANE LINE	LF	6387				440	800	1425	522	850	1400	950			
4865000000	1205 V2	POLYUREA (12")	3 FT - 9 FT/ SP WHITE SKIP	LF	3689				140	250	1167	97	710	625	700			
4855000000	1205 VJ	POLYUREA (6")	10 FT. WHITE SKIP	LF	80			80										
4855000000	1205 VK	POLYUREA (6")	3 FT - 9 FT/ SP WHITE SKIP	LF	39			39										
4725000000	1205 UA	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	LEFT TURN ARROW	EA	12			3					3	3	3			
4725000000	1205 UB	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	RIGHT TURN ARROW	EA	7			1			3	3						
4725000000	1205 UC	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	STRAIGHT ARROW	EA	3			3										
4725000000	1205 UD	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. STRAIGHT/LEFT	EA	9								3	3	3			
4725000000	1205 UE	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. STRAIGHT/ RIGHT	EA	12			3			6	3						
4725000000	1205 UF	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. LEFT/ RIGHT ARROW	EA	1			1										
4725000000	1205 UI	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	ALPHANUMERIC CHARACTERS	EA	24						8	4	4	4	4			
4855000000	1205	REMOVAL OF PAVEMENT MARKING LINES (6")		LF	2694													
4865000000	1205	REMOVAL OF PAVEMENT MARKING LINES (12")		LF	12318													

QUANTITIES PAID WILL BE FOR QUANTITIES INSTALLED AND MEASURED

SUMMARY OF QUANTITIES

T.I.P.: SS-4910BH

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO. SS-4910BH	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 5/2/13	
SEAL 	

SIGNING PLAN
MECKLENBURG COUNTY

LOCATION: SIGNING AND MARKING PROJECT
FOR RAMP FROM I-485 TO I-77

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
901.10	TYPE 'A' SIGNS
901.20	TYPE 'B' SIGNS
901.50	ARROWS AND SHIELDS
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.20	SECONDARY SIGN MOUNTING
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . DO NOT BEGIN FABRICATION FOR TYPES A & B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL "S" DIMENSIONS HAVE BEEN FIELD VERIFIED.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATION	1	C.Y.
4066000000	903	SUPPORTS, SIMPLE STEEL BEAM	490	LB.
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	63	L.F.
4102000000	904	SIGN ERECTION, TYPE E	2	EA.
4109000000	904	SIGN ERECTION, TYPE A (OVERHEAD)	2	EA.
4109000000	904	SIGN ERECTION, TYPE B (OVERHEAD)	2	EA.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	1	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	3	EA.
4234000000	907	DISPOSAL OF SIGN, A OR B (OVERHEAD)	2	EA.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2 & 2A	SUPPORT INFORMATION
SIGN-3-5	OVERHEAD DETAILS AND SIGN DESIGNS
SIGN-6-7	TYPE 'E' SHEET AND EXISTING AND PROPOSED SIGNS

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER

DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



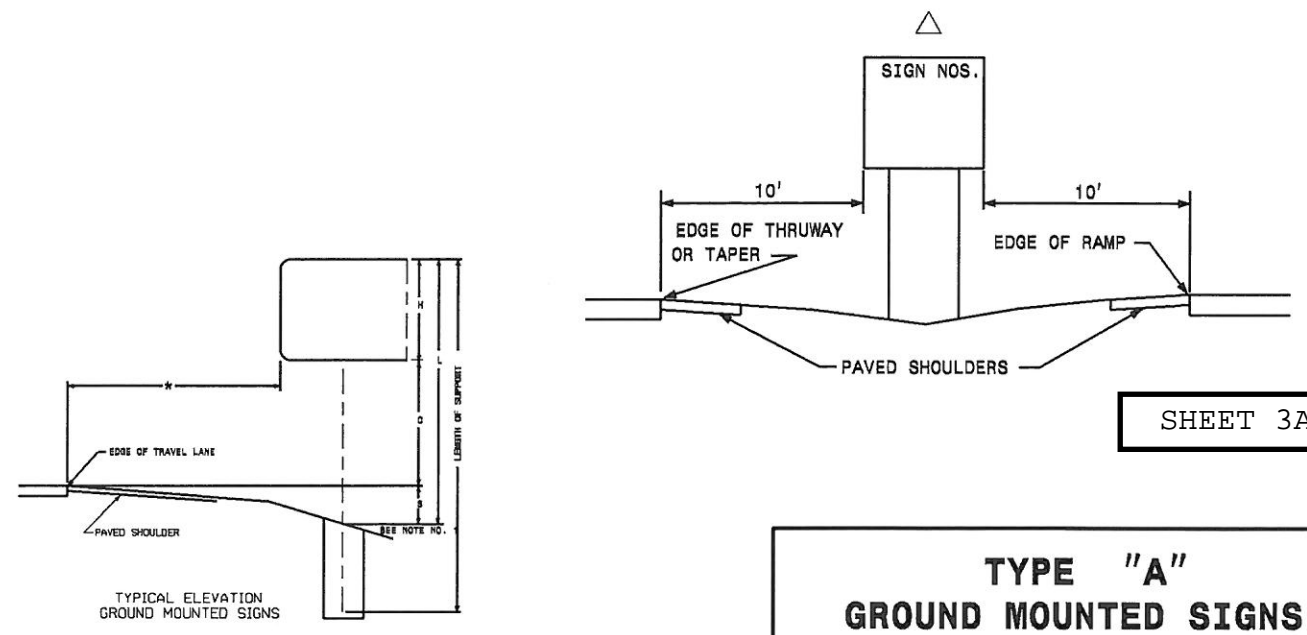
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C:\JUNK\SS-485-1-77_Charlotte\NEW-R2248D-SIGN -2.dgn
dhbeard

TIP NO.	SHEET NO.
SS-4910BH	SIGN-2
APPROVED:	<i>[Signature]</i>
DATE:	5/2/13
SEAL	

SIGN NO.	SIGN TYPE	SIGN SIZE (in. w x h)	ROADWAY STATION	NO. OF SUP.	BEAM SECTION	SUPPORT TYPE	ATTACH METHOD	MOUNTING METHOD	HORIZ. CLR. (ft.)	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			FOOTING DIAMETER (ft.)	FOOTING DEPTH (ft.)	B/A SUPPORT WEIGHTS (lbs.)	SIMPLE SUPPORT WEIGHTS (lbs.)	REINF. FTGS. (c.y.)	PLAIN FTGS. (c.y.)	FIELD VERIFIED (mm/dd/yy)			
										SNS HT	MTG HT	EMBED-MENT	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH										
101	A	144 X72	See Plans	2	W6x12	S	N/A	N/A	20.00	6.00	7.00	4.5	2.10	15.10	19.60	0.00	0.00	0.00	3.70	16.70	21.20	1.5	5	0.00	489.60	0.65	0.00				
																							TOTAL	TOTAL	TOTAL	TOTAL					
																							0.00	489.60	0.65	0.00					
																							USE:	0	490	1	0				

NOTES

- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF PAVEMENT.
- FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (*) ARTICLE 1072-1. (*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES
- PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.



SHEET 3A-2

TYPE "A" GROUND MOUNTED SIGNS

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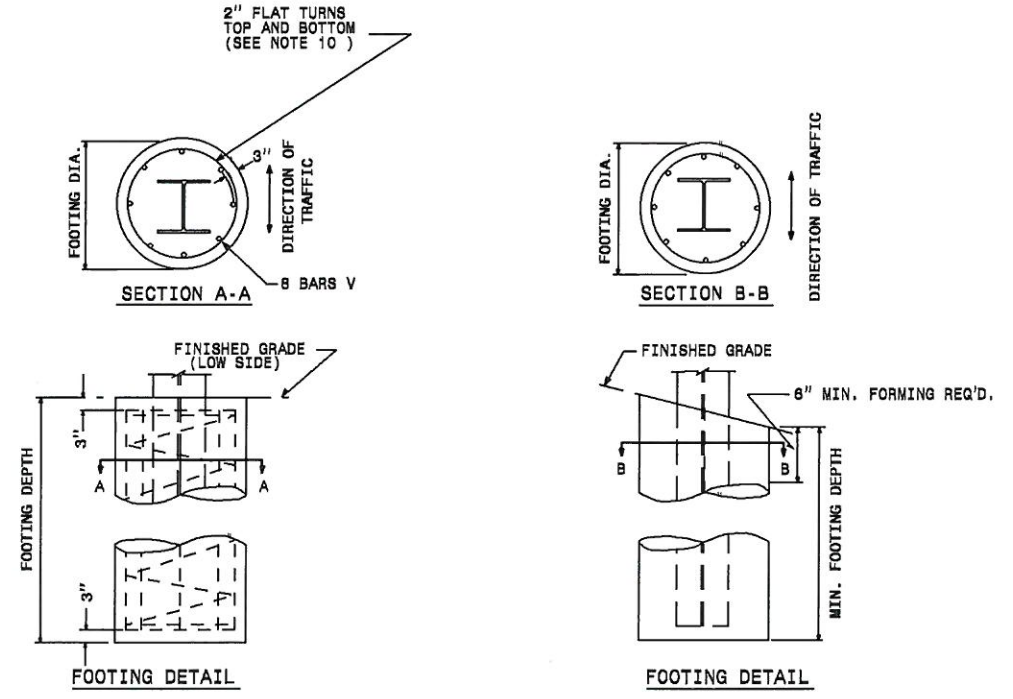
TIP NO.	SHEET NO.
SS-4910BH	SIGN-2A
APPROVED:	<i>[Signature]</i>
DATE:	5/21/13
SEAL	

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 2 OF 3
903D10

BEAM SHAPE	BOLT SIZE	SLIP BASE PLATE DATA							KEEPER PLATE DATA							HINGE CONNECTION DATA							BREAK AWAY SUPPORT WEIGHT CONSTANT LBS.			
		A ₁	B ₁	C ₁	D ₁	E ₁	T ₁	R ₁	A ₂	B ₂	C ₂	D ₂	E ₂	R ₂	T ₂	BOLT SIZE	F	G	H	I	J	K		L	R ₃	T ₃
S8X6.7	1/2" DIA. X 3"	7"	4"	1"	3/4"	2 1/2"	1"	5/32"	7"	4"	1"	3/4"	2 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	2 1/4"	3 1/2"	4"	1/2"	1"	1/2"	2"	5/32"	3/8"	18
S4X7.7	1/2" DIA. X 3"	8"	4"	1"	3/4"	2 1/2"	1"	5/32"	8"	4"	1"	3/4"	2 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	5/32"	3/8"	20
W8X9	1/2" DIA. X 3"	10"	5"	1"	3/4"	3 1/2"	1"	5/32"	10"	5"	1"	3/4"	3 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	5/32"	3/8"	32
W8X12	5/8" DIA. X 3 3/4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	1 1/32"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	3/8"	39
W8X16	5/8" DIA. X 3 3/4"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	1 1/32"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	1/2"	47
W8X18	5/8" DIA. X 4 1/4"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/2"	1 1/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/2"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	1 1/32"	1/2"	70
W8X21	3/4" DIA. X 4 1/4"	14"	7"	1 1/2"	1"	5"	1 1/2"	1 3/32"	14"	7"	1 1/2"	1"	5"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	1/2"	73
W10X22	3/4" DIA. X 4 1/4"	16"	8"	1 1/2"	1"	6"	1 1/2"	1 3/32"	16"	8"	1 1/2"	1"	6"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	1/2"	119
W10X28	3/4" DIA. X 4 3/4"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	1 3/32"	16 1/2"	8"	1 1/2"	1"	6"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	5/8"	140
W12X26	3/4" DIA. X 4 3/4"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	1 3/32"	18 1/2"	9"	1 1/2"	1"	7"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	5/8"	176
W14X30	1" DIA. X 5"	22"	9"	2"	1 1/2"	6"	2"	1 7/32"	22"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	5/8"	205
W16X31	1" DIA. X 5"	24"	9"	2"	1 1/2"	6"	2"	1 7/32"	24"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 1/4"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	223
W18X35	1" DIA. X 5"	25"	9"	2"	1 1/2"	6"	2"	1 7/32"	25"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 1/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	243
W18X40	1" DIA. X 5 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	1 7/32"	26"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 3/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	278
W21X44	1" DIA. X 5 1/2"	29"	9"	2"	1 1/2"	6"	2 1/2"	1 7/32"	29"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 3/4"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	310



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1' 6"	8 # 8 BARS	#3 BAR, 6" PITCH
2'	8 # 7 BARS	#3 BAR, 6" PITCH
2' 6"	8 # 9 BARS	#3 BAR, 6" PITCH
3'	8 # 11 BARS	#3 BAR, 6" PITCH
3' 6"	8 # 12 BARS	#3 BAR, 6" PITCH
4'	8 # 14 BARS	#3 BAR, 6" PITCH

* FOUNDATION DIMENSIONS ARE SHOWN IN PLANS

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

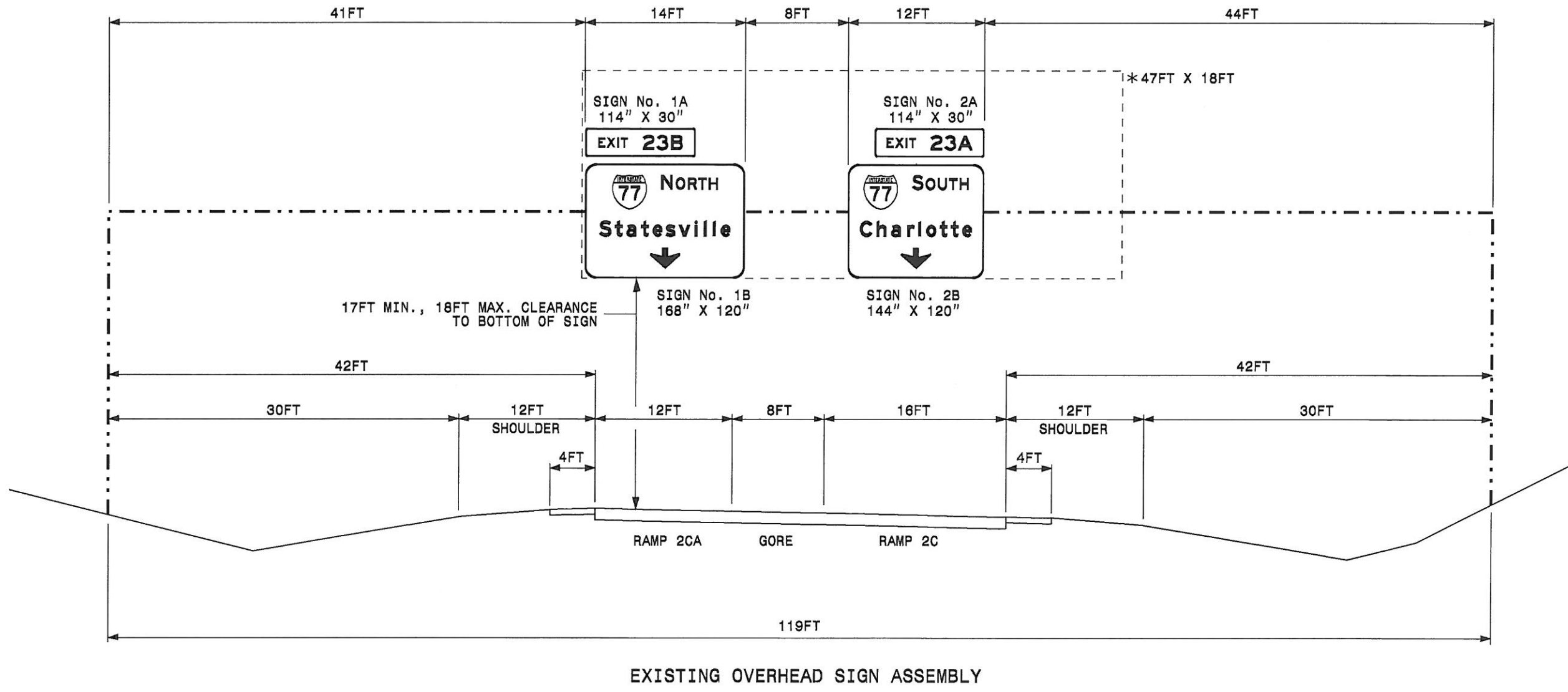
SHEET 2 OF 3
903D10

SHEET 3B

**REVISED SIGNING
ROADWAY STANDARD DRAWING**

30-APR-2013 15:24
 C:\JUNK\SS-1-485-1-17-Char101\NEW-R2248D-SIGN -2.dgn
 dhbeard AT TE265832

* THESE DIMENSIONS SHALL BE USED FOR WIND LOAD AND DEAD LOAD COMPUTATIONS IN DESIGN OF STRUCTURE AND FOOTING. DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF 90 M.P.H.



EXISTING OVERHEAD SIGN ASSEMBLY

30-APR-2013 15:51:40 E:\177-Charlotte\OH-21.dgn

PROJECT NOTES

1. THE BOTTOM EDGE OF ALL SIGNS IN EACH ASSEMBLY SHALL BE LOCATED ON A HORIZONTAL PLANE.

EXISTING OVERHEAD SIGN ASSEMBLY



SIGN NUMBER: 1A TYPE: B QUANTITY: 1 SIGN WIDTH: 9'-6" HEIGHT: 2'-6" TOTAL AREA: 23.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: 2 LENGTH: 106.0 BACKG COLOR: Green COPY COLOR: White SYMBOL: [Table with columns X, Y, WID, HT] NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
E	X	I	T	2	3	B					Text Length
13.4	8.9	10.7	5.5	7.5	14.3	18.2	12.2	13.4			87.2
											EN 2000
											88

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2A TYPE: B QUANTITY: 1 SIGN WIDTH: 9'-6" HEIGHT: 2'-6" TOTAL AREA: 23.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: 2 LENGTH: 106.0 BACKG COLOR: Green COPY COLOR: White SYMBOL: [Table with columns X, Y, WID, HT] NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
E	X	I	T	2	3	A					Text Length
12.5	8.9	10.7	5.5	7.5	14.3	13.8	13.5	12.5			88
											EN 2000
											88

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 1B TYPE: A QUANTITY: 1 SIGN WIDTH: 14'-0" HEIGHT: 10'-0" TOTAL AREA: 140.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 3 LENGTH: 180.0 BACKG COLOR: Green COPY COLOR: White SYMBOL: [Table with columns X, Y, WID, HT] NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
N	O	R	T	H							Text Length
79.8	12.2	3.1	12.8	11	11	9.7	28.5				89.8
											EN 2000
											138.1

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2B TYPE: A QUANTITY: 1 SIGN WIDTH: 12'-0" HEIGHT: 10'-0" TOTAL AREA: 120.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 3 LENGTH: 138.0 BACKG COLOR: Green COPY COLOR: White SYMBOL: [Table with columns X, Y, WID, HT] NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---


USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
S	O	U	T	H							Text Length
87.8	12.2	2.2	12.8	11.6	11	9.7	16.6				88.8
											EN 2000
											118.6

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

20 APR 2013 15:33
 chbeard AT 11255832
 20 APR 2013 15:33
 chbeard AT 11255832

TIP NO.	SHEET NO.
SS-4910BH	SIGN-5
APPROVED: <i>[Signature]</i>	
DATE: 5/2/13	
SEAL	
	

SIGN NUMBER: 101 TYPE: A QUANTITY: 1 SIGN WIDTH: 12'-0" HEIGHT: 6'-0" TOTAL AREA: 72.0 Sq.Ft.	BACKG COLOR: Green COPY COLOR: White	DESIGN BY: DHB PROJECT ID: SS-4910BH	CHECKED BY: KLJ DIV: 10	DATE: Mar 12, 2013
--	---	---	----------------------------	--------------------

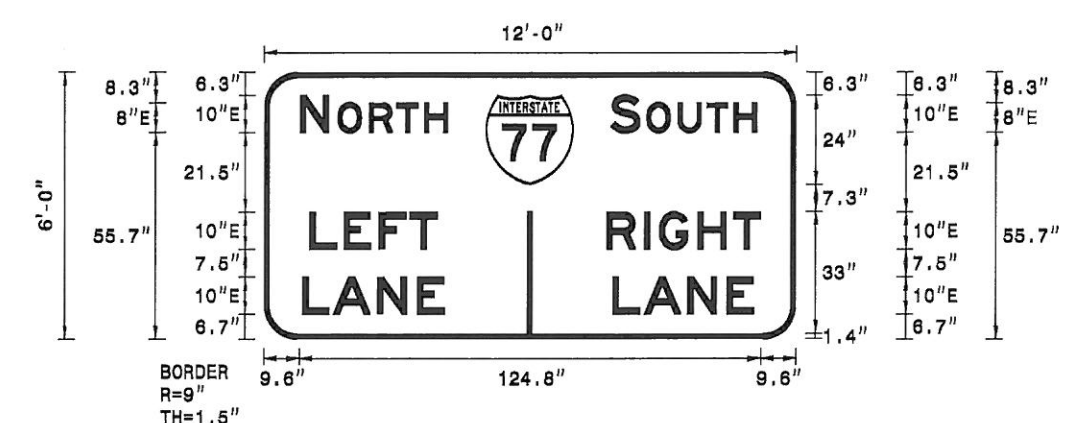
SYMBOL	X	Y	WID	HT
N1_1	59.5	41.8	24	24

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1.5"
RADII: 9"

NO. Z BARS: 2
LENGTH: 136.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES:
1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

	N	O	R	T	H																Series/Size Text Length
	9.6	8.1	2.1	8.6	7.4	7.4	6.5	94.5													E 2000 40
	93.5	8.1	1.5	8.6	7.8	7.4	6.5	10.6													E 2000 39.8
	12.3	9.2	9.5	8.3	7.5	97.2															E 2000 34.5
	92.5	10.1	4.1	10.4	9.8	7.5	9.6														E 2000 41.9
	10.4	8.3	11.9	10.7	7.5	95.2															E 2000 38.4
	94.3	8.3	11.9	10.7	7.5	11.3															E 2000 38.4

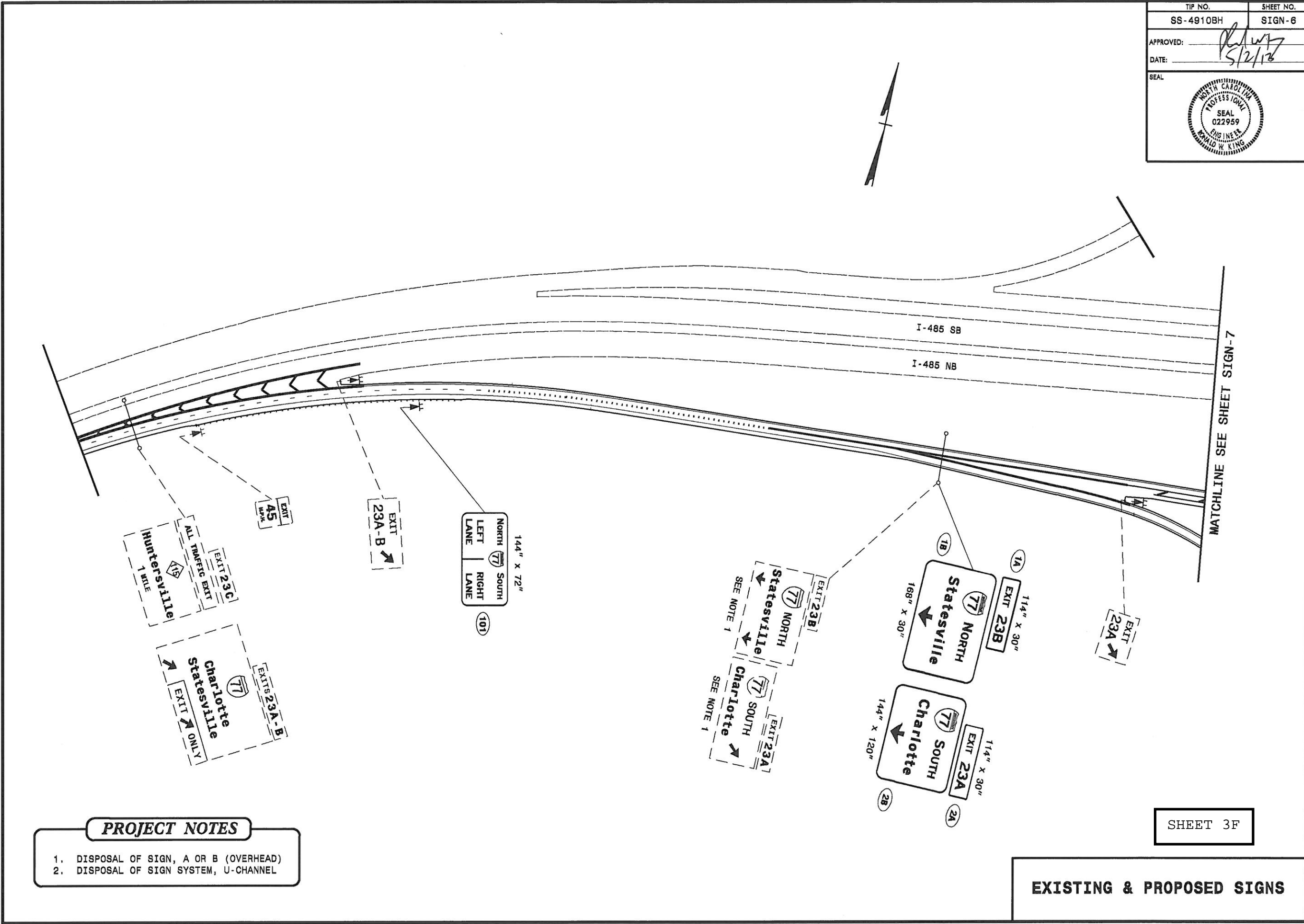
FILENAME: I-5000

NORTH CAROLINA D.O.T. SIGN DETAIL

20-APR-2013 15:56
ghb@ncss AT 1922658
Chorlotte, NC-22480-SGN_Design.dgn

SHEET 3E

SIGN DESIGNS



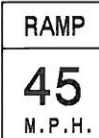


PROJECT NOTES

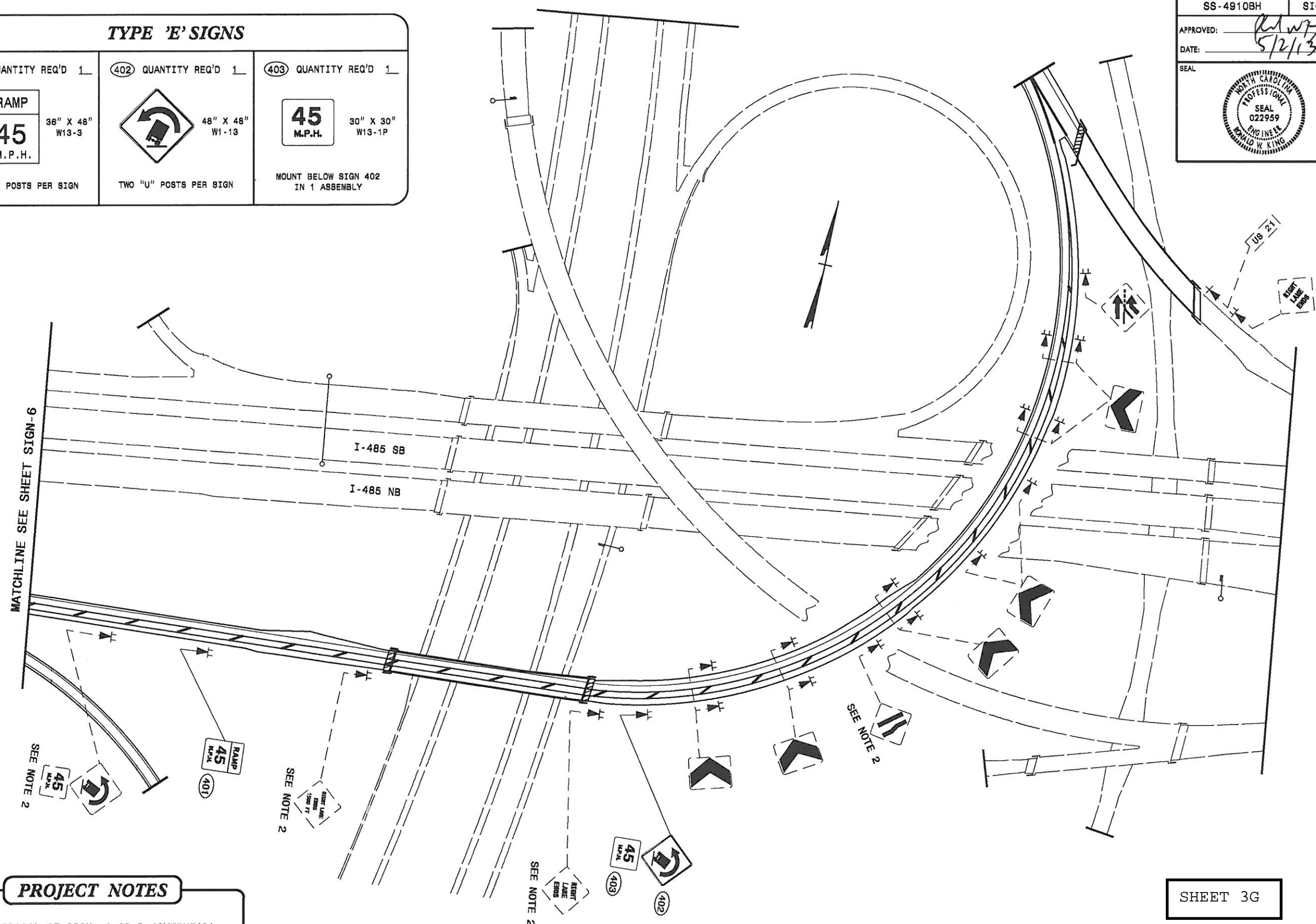
1. DISPOSAL OF SIGN, A OR B (OVERHEAD)
2. DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SHEET 3F

EXISTING & PROPOSED SIGNS

30-APR-2013 15:50
 I:\Projects\SS-4910BH\77-Charlotte\NEW-R2248D-SIGN-I.dgn
 User: dhw
 Plot: 1

TYPE 'E' SIGNS		
(401) QUANTITY REQ'D 1  36" X 48" W13-3 TWO "U" POSTS PER SIGN	(402) QUANTITY REQ'D 1  48" X 48" W1-13 TWO "U" POSTS PER SIGN	(403) QUANTITY REQ'D 1  30" X 30" W13-1P MOUNT BELOW SIGN 402 IN 1 ASSEMBLY



- PROJECT NOTES**
- DISPOSAL OF SIGN, A OR B (OVERHEAD)
 - DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SHEET 3G

EXISTING & PROPOSED SIGNS

TO: APR-2013 15:56
 C:\JUNK\SS-4910BH-T7-Charlotte\NEW-R2248D-SIGN-2.dgn
 dbbeard

T.I.P.: SS-4910BH

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
MECKLENBURG COUNTY**

**LOCATION: SIGNING AND MARKING PROJECT
FOR RAMP FROM I-485 TO I-77**

<small>TIP NO.</small> SS-4910BH	<small>SHEET NO.</small> PMP-1
<small>APPROVED:</small>	
<small>DATE:</small> 5/2/13	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWFLOWABLE

FINAL PAVEMENT MARKING SCHEDULE

<u>SYMB</u>	<u>DESCRIPTION</u>
	FINAL PAVEMENT MARKINGS
	COLD APPLIED PLASTIC (12") Type 2 - Permanent High Performance
CU	WHITE DIAGONAL
	THERMO (12", 120 MILS)
T14	3 FT. - 9 FT./SP WHITE MINISKIP
TT	WHITE SOLID LANE LINE
	THERMO (12", 90 MILS)
TS	WHITE GORELINE
TU	WHITE DIAGONAL
	COLD APPLIED PLASTIC (6") Type 2 - Permanent High Performance
C6	WHITE EDGELINE
	THERMO (6", 90 MILS)
T6	WHITE EDGELINE

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
RAMP	THERMOPLASTIC	
BRIDGE	COLD APPLIED PLASTIC	
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING COLD APPLIED PLASTIC PAVEMENT MARKING MATERIAL.
- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
- F) TYPE III COLD APPLIED PLASTIC MAY BE USED IN LIEU OF TYPE II COLD APPLIED PLASTIC. IF TYPE III COLD APPLIED PLASTIC IS USED, IT SHALL BE PAID FOR USING THE TYPE II COLD APPLIED PLASTIC PAY ITEM.

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2-3	PAVEMENT MARKING DETAIL


PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER

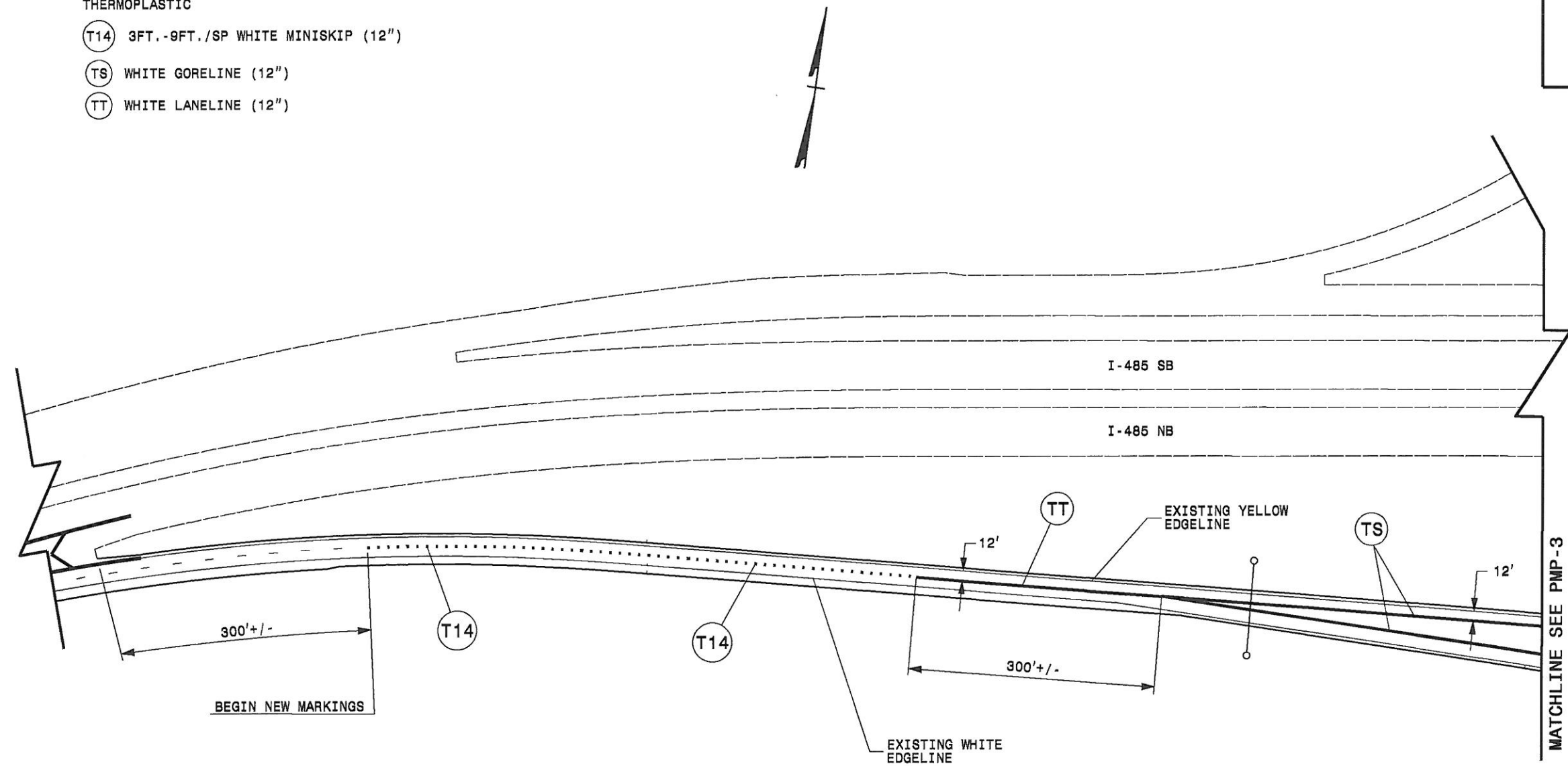
DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



20-Apr-2013 14:47
C:\Users\SS-4910BH\Desktop\AT-12255832\Char-Lotte\NEW-R22480-PMP-1.dgn

TIP NO.	SHEET NO.
SS-4910BH	PMP-2
APPROVED:	<i>[Signature]</i>
DATE:	5/21/13
SEAL	

- THERMOPLASTIC
- (T14) 3FT.-9FT./SP WHITE MINISKIP (12")
 - (TS) WHITE GORELINE (12")
 - (TT) WHITE LANELINE (12")




NOTE:
 1) REMOVE ANY SNOWPLOWABLE PAVEMENT MARKER AFFECTED BY THE PROPOSED MARKINGS AND REFILL HOLES WITH EPOXY.

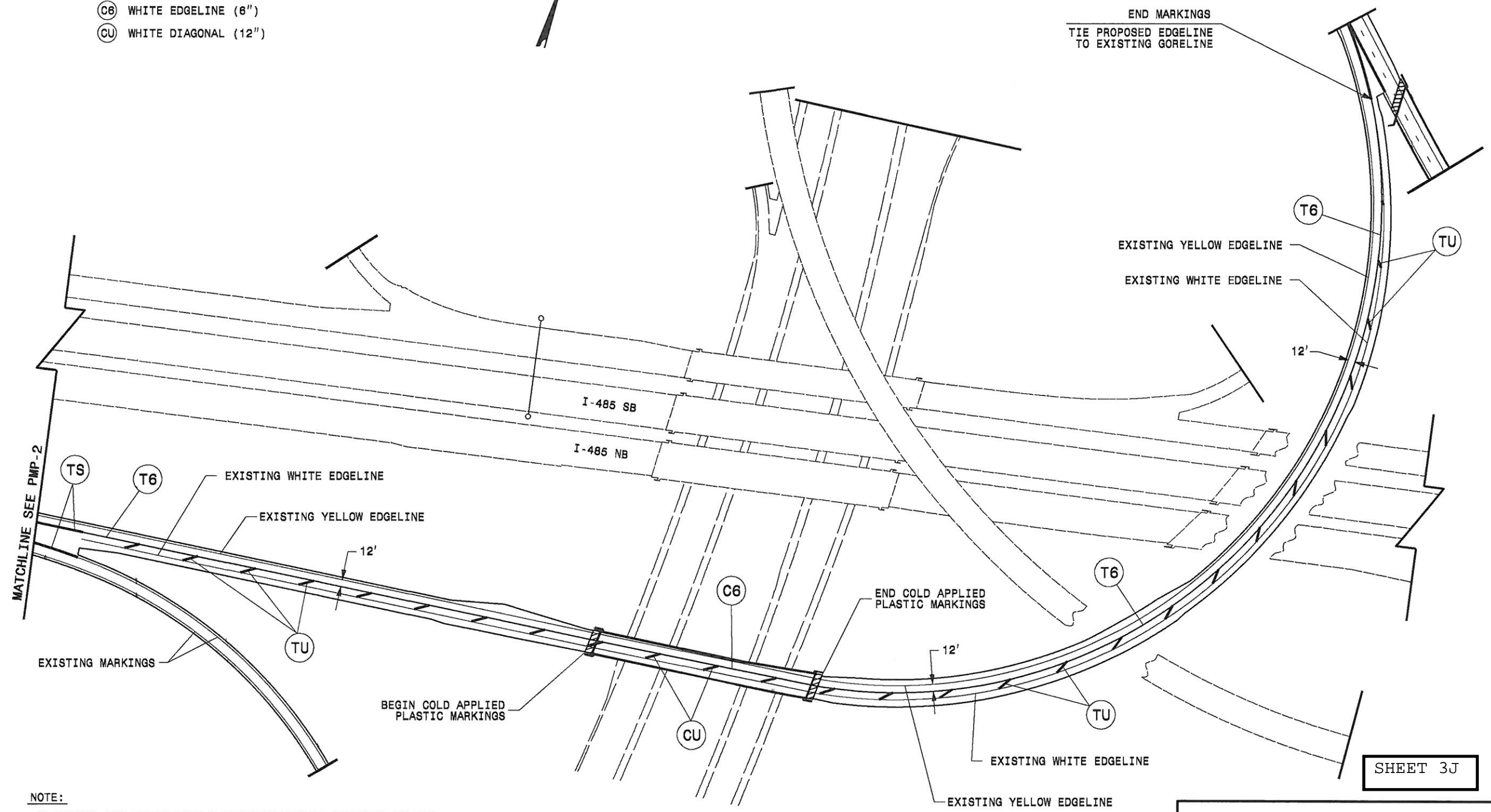
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 dbbeard

SHEET 3I

PAVEMENT MARKING DETAIL

TIP NO. SS-4910BH	SHEET NO. PMP-3
APPROVED: <i>[Signature]</i>	
DATE: <i>[Signature]</i>	
SEAL	
	

- THERMOPLASTIC
- (T6) WHITE EDGELINE (8")
 - (TS) WHITE GORELINE (12")
 - (TU) WHITE DIAGONAL (12")
- COLD APPLIED PLASTIC
- (C6) WHITE EDGELINE (8")
 - (CU) WHITE DIAGONAL (12")



NOTE:
 1) REMOVE ANY SNOWPLOWABLE PAVEMENT MARKER AFFECTED BY THE PROPOSED MARKINGS AND REFILL HOLES WITH EPOXY.

SHEET 3J

PAVEMENT MARKING DETAIL

30-APR-2013 14:46
 C:\JUNK\SS-4910BH-17-Charlotte\NEW-R22480-PMP-2.dgn
 dhbeard

T.I.P.: SS-4910BH

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
MECKLENBURG COUNTY**

LOCATION: RAMP OFF OF I-277 TO SOUTH BLVD/CALDWELL ST.

TIP NO. SS-4910BH	SHEET NO. PMP-1
APPROVED: <i>[Signature]</i>	
DATE: 5/21/13	
	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

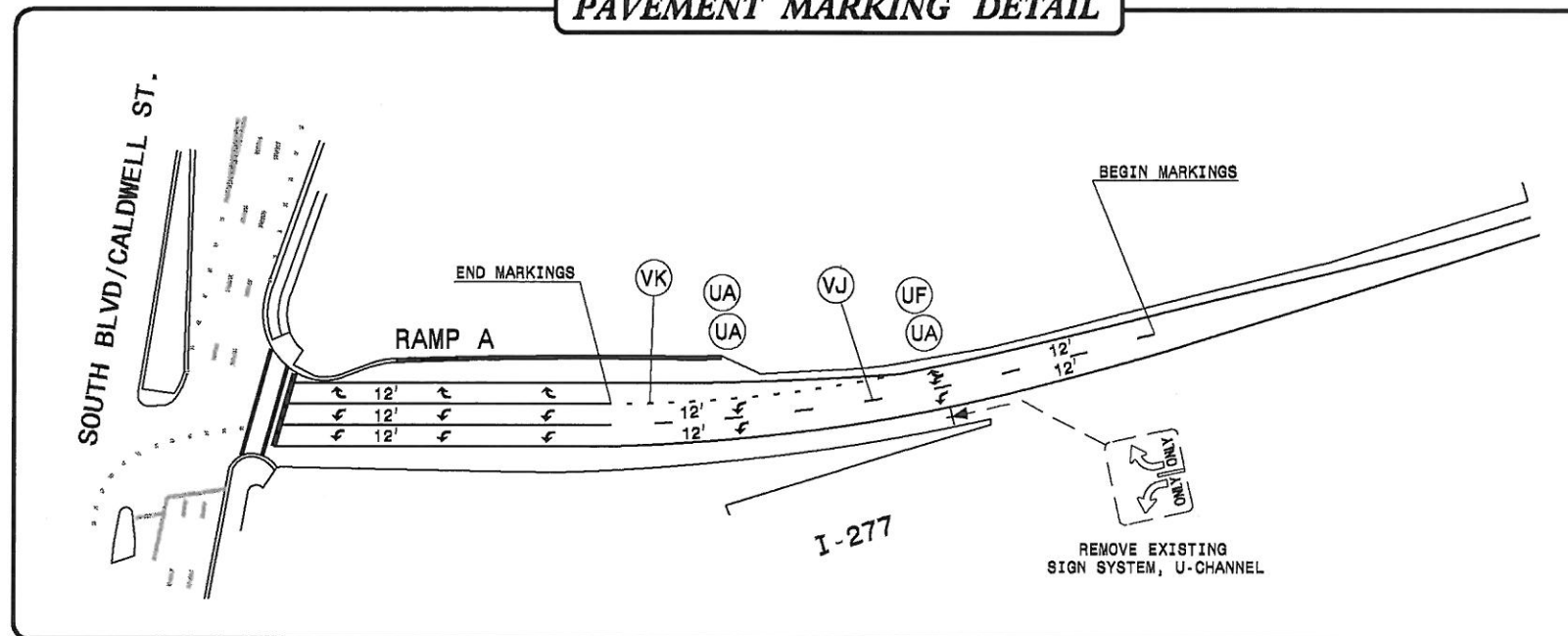
STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | ROAD NAME | MARKING | MARKER |
|-----------|----------|--------|
| RAMP A | POLYUREA | NONE |
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

PAVEMENT MARKING DETAIL



PAVEMENT MARKING SCHEDULE

SYMB	DESCRIPTION
FINAL PAVEMENT MARKINGS	
POLYUREA (6") Highly Reflective Elements	
VJ	10 FT. WHITE SKIP
VK	3 FT. - 9 FT./SP WHITE MINISKIP
THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW
UF	COMBO. LEFT/RIGHT ARROW

SHEET 4

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET & PAVEMENT MARKING DETAIL

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

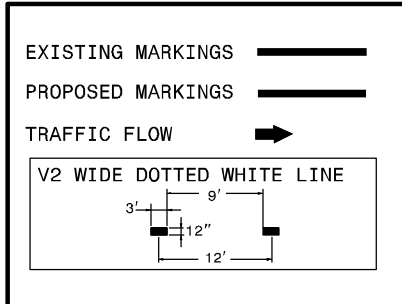
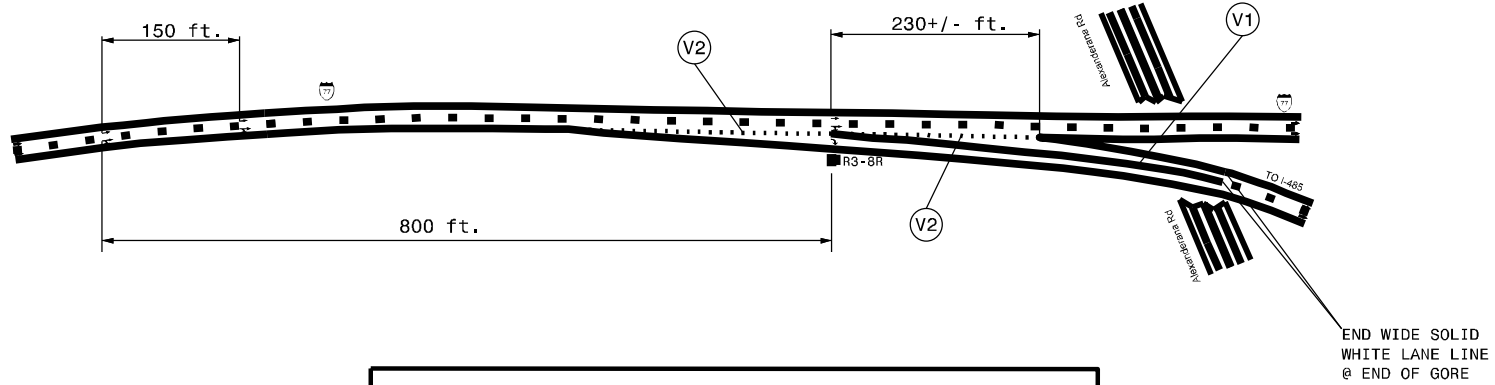
KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



D:\M\2013\1646\1-277 CharLotte\RAMP_CHARLOTTE.dgn
AT: 12285632
chbeard

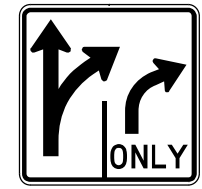
I-77 SB EXIT 1 TO I-485

APPROVED: _____
 DATE: _____
 SEAL

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	440 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	140 ft
HEATED - IN PLACED THERMOPLASTIC (90 MIL)		
UB	RIGHT TURN ARROW	1 ea
UE	COMBO. STRAIGHT/RIGHT	3 ea
UC	STRAIGHT ARROW (OPTIONAL)	3 ea
SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"X30")	1 ea



R3-8R

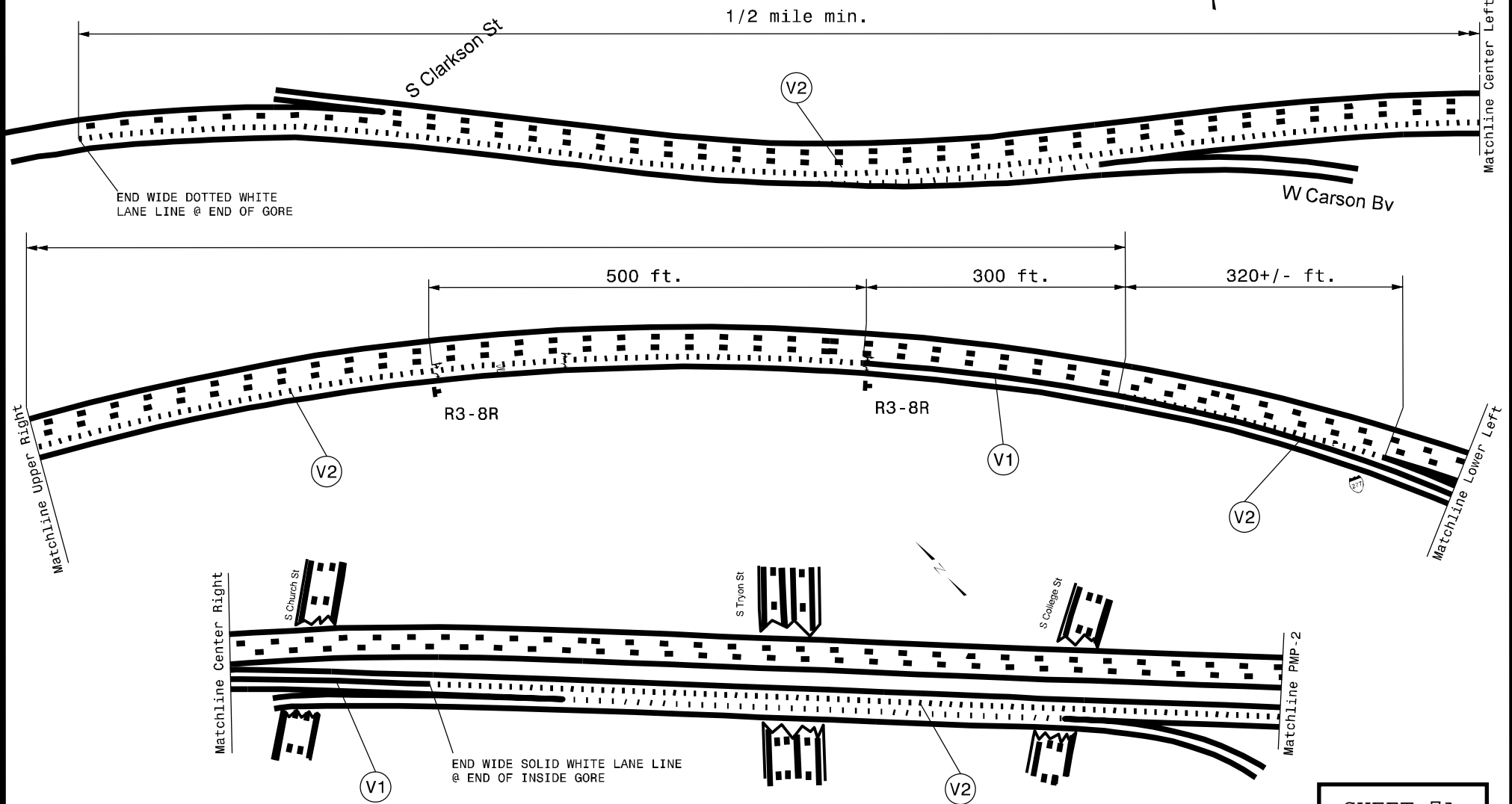
SHEET 5

REPRODUCTION OF THIS SHEET IS PROHIBITED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER OF RECORD

I-277 INNER EXIT 1 TO SOUTH BLVD

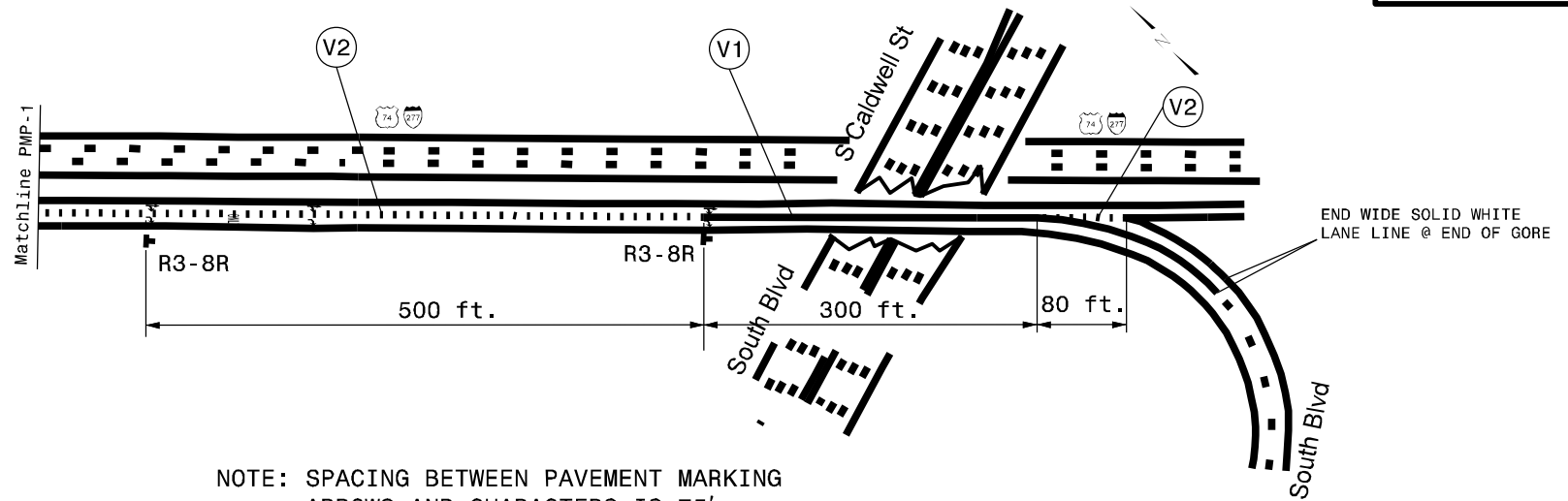
DATE:	
APPROVED:	

SEAL

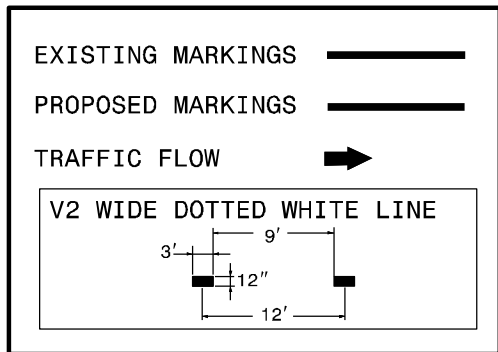


I-277 INNER EXIT 1 TO SOUTH BLVD

APPROVED: _____
 DATE: _____
 SEAL

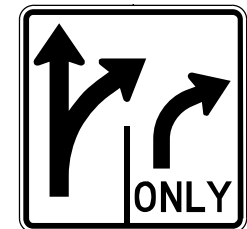


NOTE: SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'



PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS


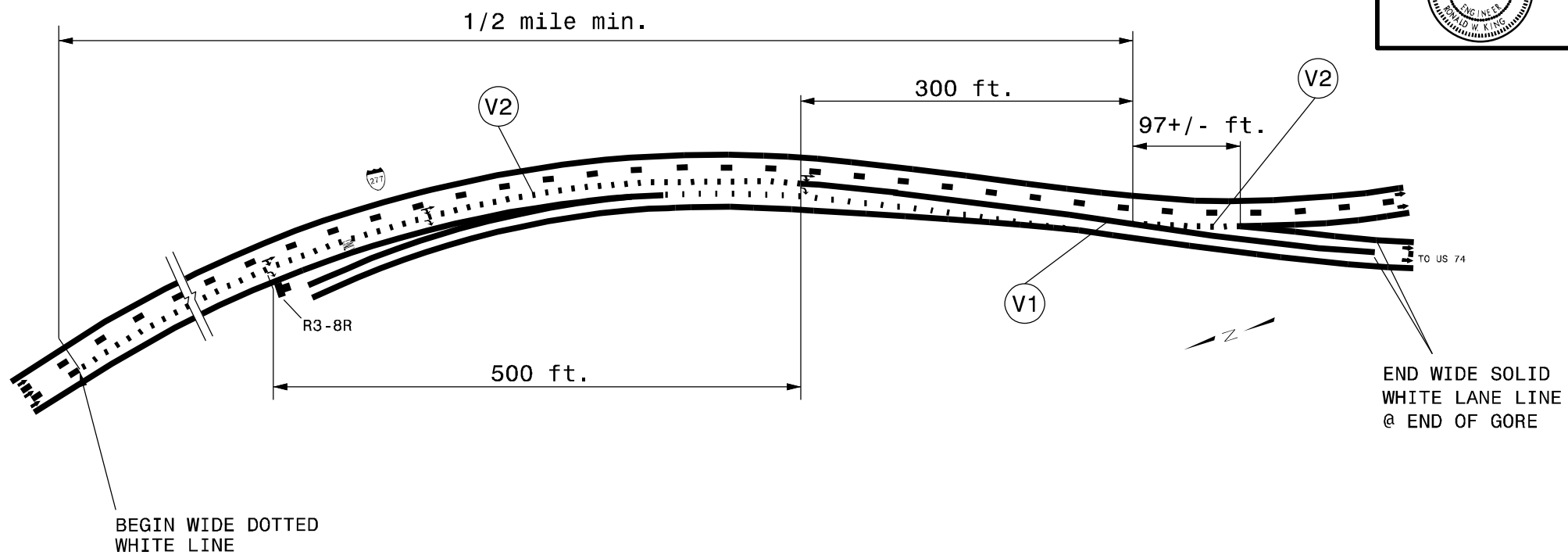
SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	1425 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	1167 FT
HEATED -IN PLACED THERMOPLASTIC (90 MIL)		
UB	RIGHT TURN ARROW	6 ea
UE	COMBO. STRAIGHT/RIGHT	6 ea
UI	ALPHANUMERIC CHARACTERS	8 ea
SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"X30")	4 ea



R3-8R

I-277 INNER EXIT 2 TO US 74

APPROVED: _____
 DATE: _____
 SEAL

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

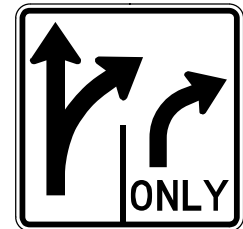
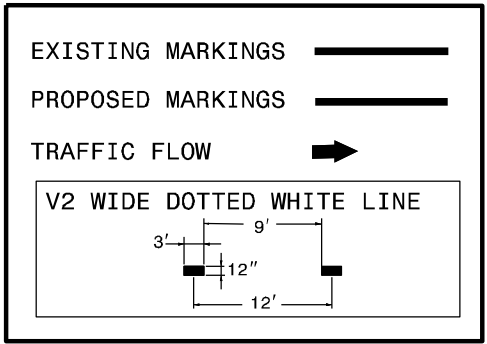
SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	522 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	97 ft

HEATED -IN PLACED THERMOPLASTIC (90 MIL)

UB	RIGHT TURN ARROW	3 ea
UE	COMBO.STRAIGHT/RIGHT	3 ea
UI	ALPHANUMERIC CHARACTER	4 ea

SIGN MATERIAL: GRADE C SHEETING

R3-8	SIGN (30"X30")	1 ea
------	----------------	------



R3-8R

NOTE:
 SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'.

