

T.I.P.: R-2719A

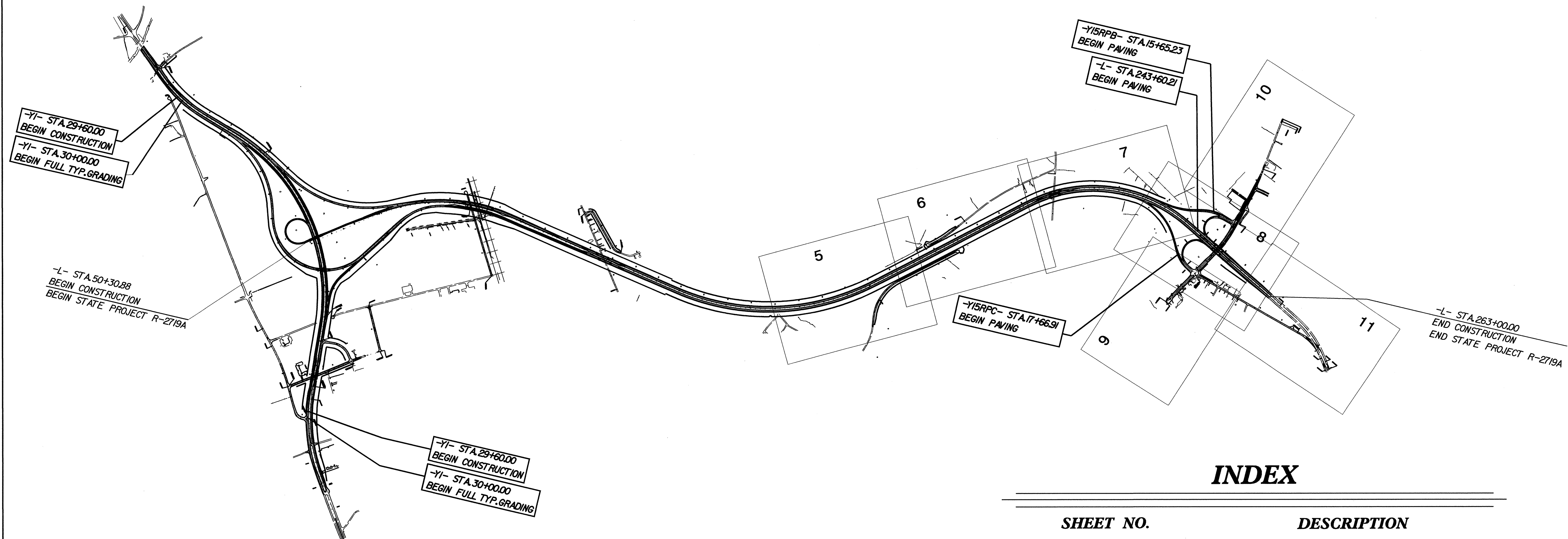
CONTRACT: C201965

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS
LENOIR COUNTY

LOCATION: CRESCENT RD. IN KINSTON FROM US 70 TO US 258

TIP NO. R-2719A	SHEET NO. SIGN-1
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DATE: 2/4/09	
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INDEX

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4E	TYPE "F" SIGN SHEET
5-11	SIGN ROADWAY SHEETS

PLAN PREPARED BY: N.C.D.O.T. SIGNING SECTION

- RON KING, P.E. SIGNING ENGINEER
- A. ALQUDWAH, P.E. SIGNING PROJECT ENGINEER
- D. M. EATON SIGNING PROJECT DESIGN ENGINEER
- D. PILLAR SIGNING DESIGNER

TIP NO. R-2719A	SHEET NO. SIGN-2
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SIGNS

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATION	6	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM	3726	LB.
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL (X-BRACE)	8	L.F.
4082000000	903	SUPPORTS, WOOD	725	L.F.
4096000000	904	SIGN ERECTION, TYPE D	4	EA.
4102000000	904	SIGN ERECTION, TYPE E	42	EA.
4108000000	904	SIGN ERECTION, TYPE F	3	EA.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	5	EA.
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	1	EA.
4152000000	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	2	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	10	EA.

**ROADWAY STANDARD DRAWINGS
APPLICABLE TO THESE SIGNING PLANS**

901.10	903.20
901.20	904.20
901.50	904.10
901.70	904.50

NOTES

Pay Item Notes:


1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
2	DISPOSAL OF SIGN SYSTEM, STEEL BEAM

General Notes:

- . SIGNS FURNISHED BY STATE
- . ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO WOOD POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC CONTROL PLANS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE GRADE 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.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

**SUMMARY OF QUANTITIES
AND NOTES**

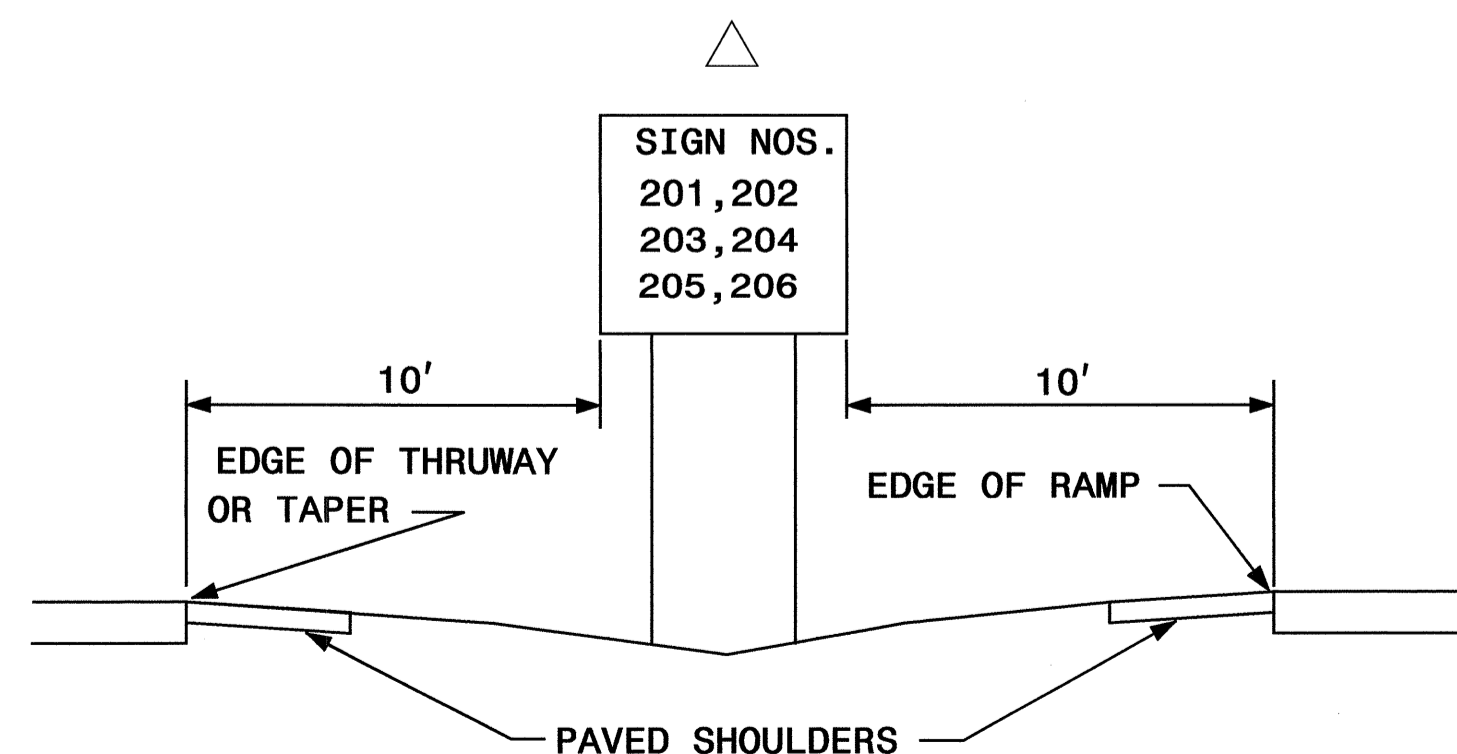
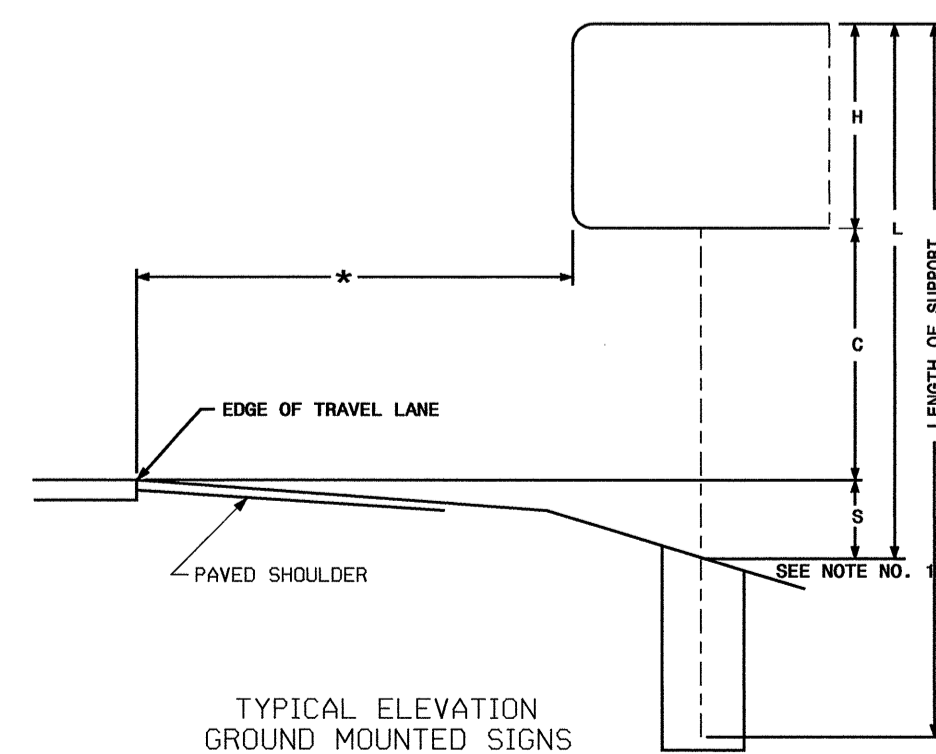
TIP NO. R-2719A	SHEET NO. SIGN-3
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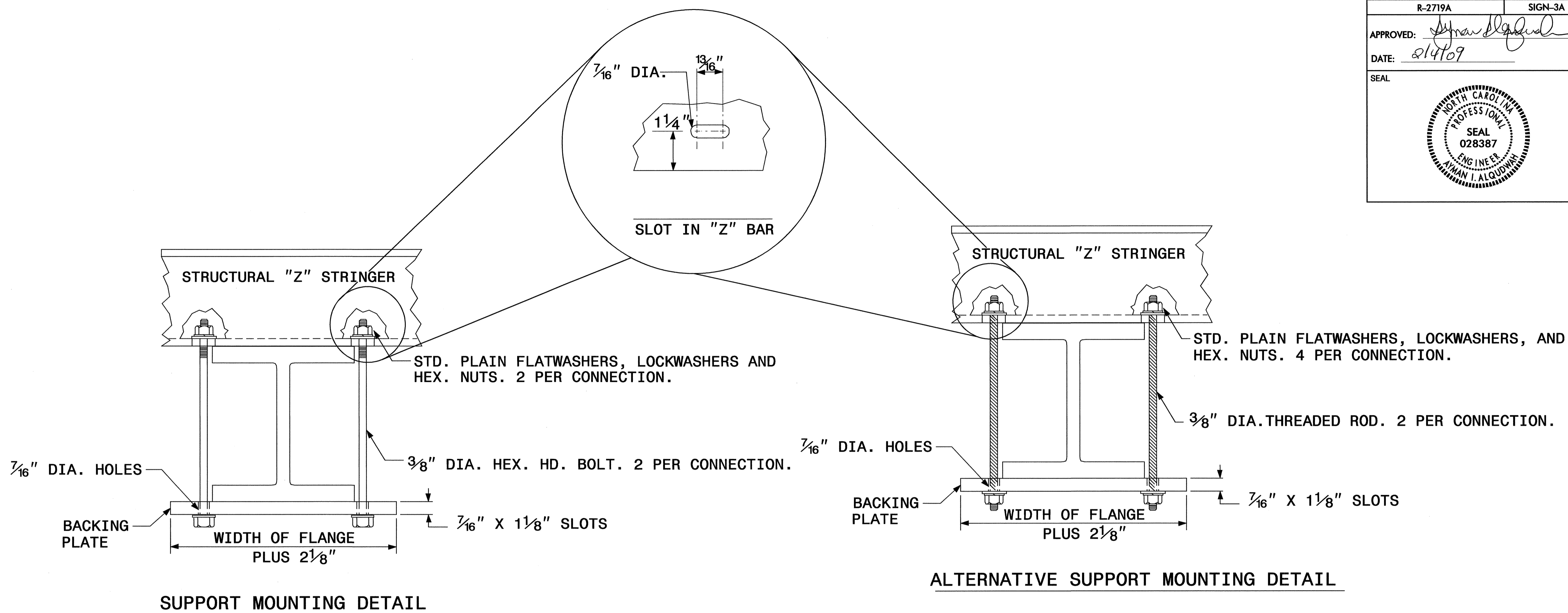
NOTES

1. DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF PAVEMENT.
2. 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
3. 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.

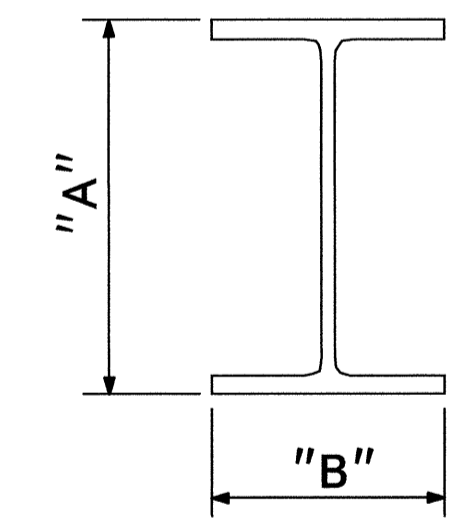
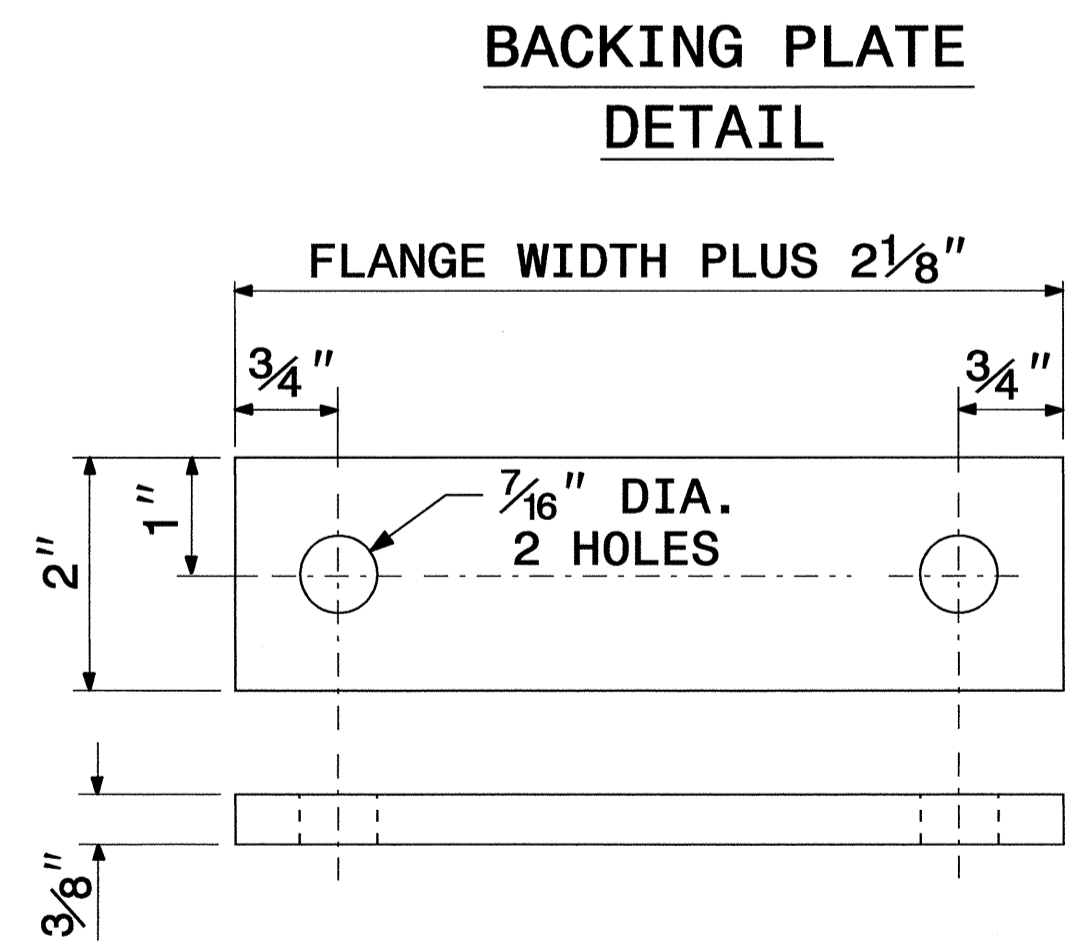
SIGN NO.	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NO. OF SUP.	BEAM SECTION	SUPPORT TYPE BA or S	ATTACH METHOD	MOUNTING METHOD	HORIZ. CLR.* (ft.)	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			FOOTING DIAMETER (ft.)	FOOTING DEPTH (ft.)	B/A SUPPORT WEIGHTS (lbs.)	SIMPLE SUPPORT WEIGHTS (lbs.)	REINF. FTGS. (c.y.)	FIELD VERIFIED SEE NOTE 2 (mm/dd/yy)																				
		w	x	h								SNS HT H	MTG HT C	EMBED-MENT	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH																										
108A	A	156	X	24	L 273+40	2	W8x21	BA	1-R	N/A	30.00	12.50	7.00	7	0.86	20.36	27.36	0.00	0.00	0.00	1.80	21.30	28.30	2	7.5	1354.48	0.00	1.75																					
108B	A	156	X	150																																													
109A	A	156	X	24	L 252+27	2	W10x26	BA	1-R	N/A	30.00	10.50	7.00	7.5	6.00	23.50	31.00	0.00	0.00	0.00	9.10	26.60	34.10	2.5	8	1980.74	0.00	2.91																					
109B	A	198	X	126																																													
110	B	126	X	24	Y24 30+00	2	S3x5.7	BA	N/A	N/A	12.00	2.00	7.00	3	0.21	9.21	12.21	0.00	0.00	0.00	0.30	9.30	12.30	1	3.5	175.24	0.00	0.20																					
205	A	60	X	60	L 244+35	2	S3x5.7	BA	N/A	N/A	10.00	5.00	7.00	3.5	0.10	12.10	15.60	0.00	0.00	0.00	0.31	12.31	15.81	1	4	214.57	0.00	0.23																					
																							TOTAL	TOTAL	TOTAL																								
																							3725.03	0.00	5.09																								
																							USE:	3726	0	6																							



**TYPE "A" AND TYPE "B"
GROUND MOUNTED SIGNS**



SIGN SUPPORTS SECTION DIMENSIONS

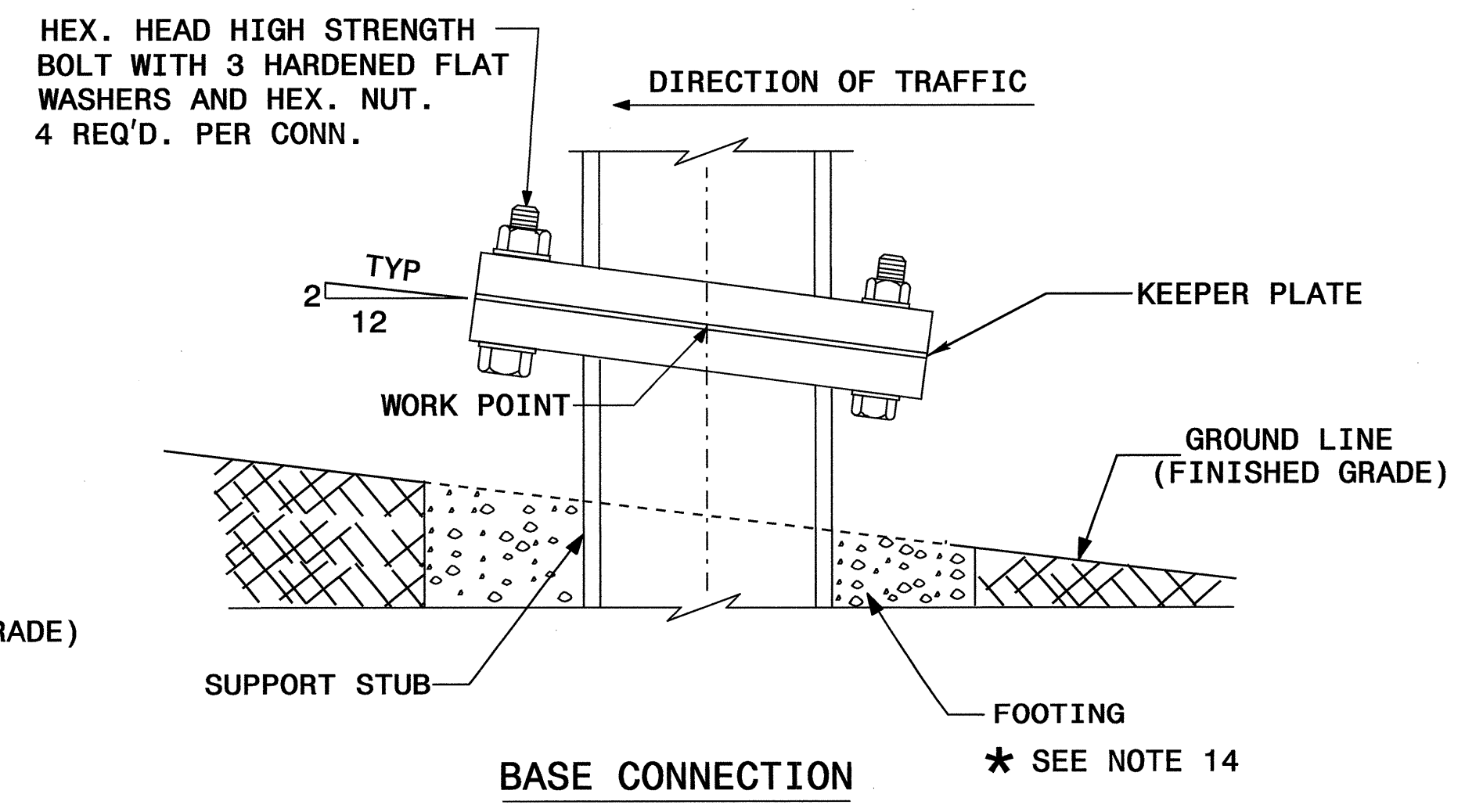
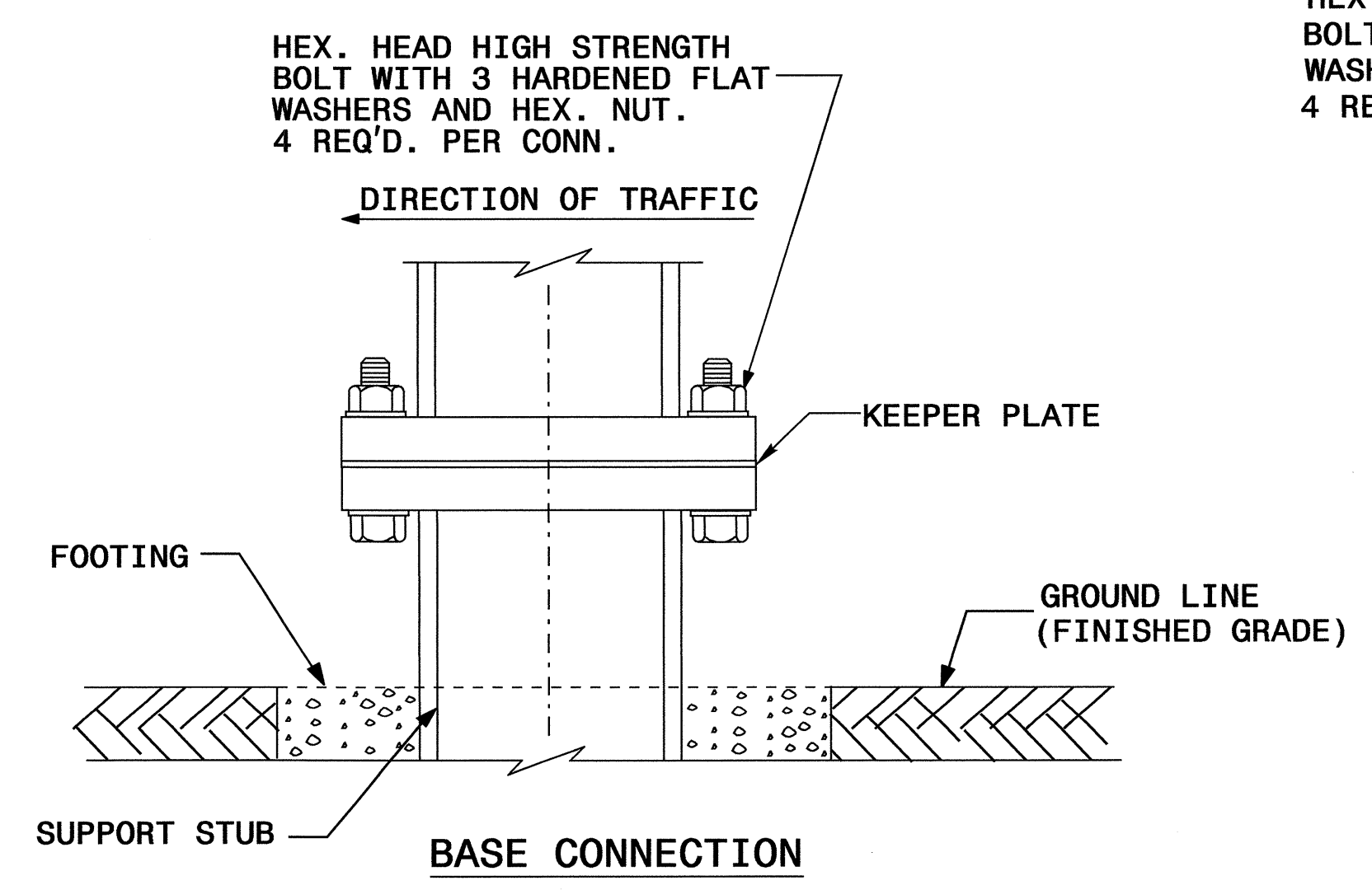
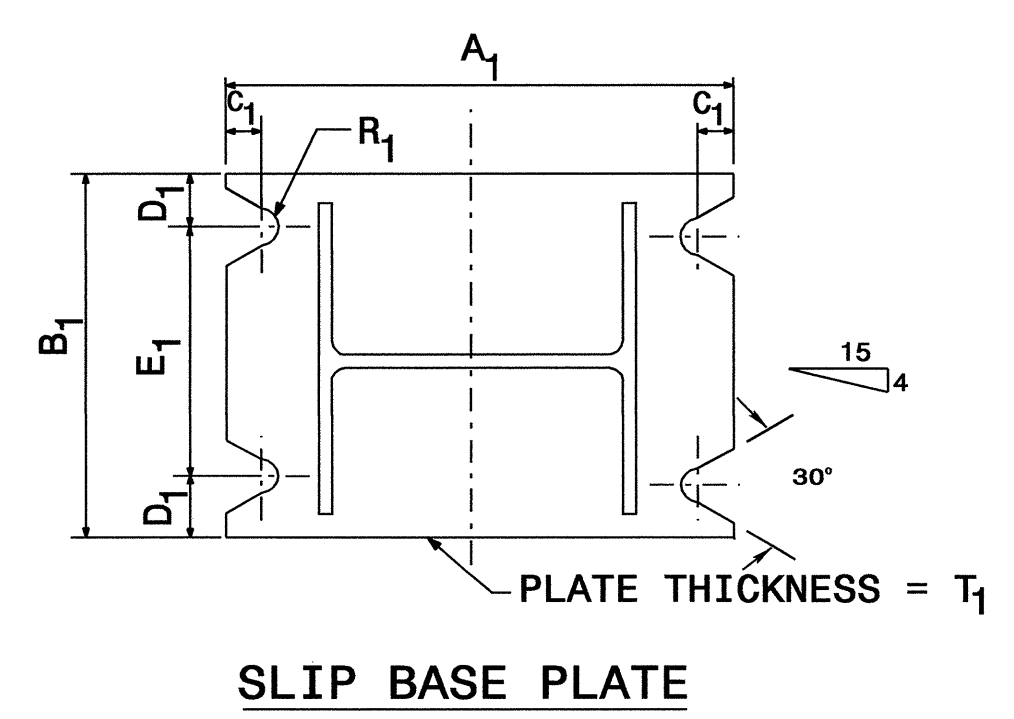
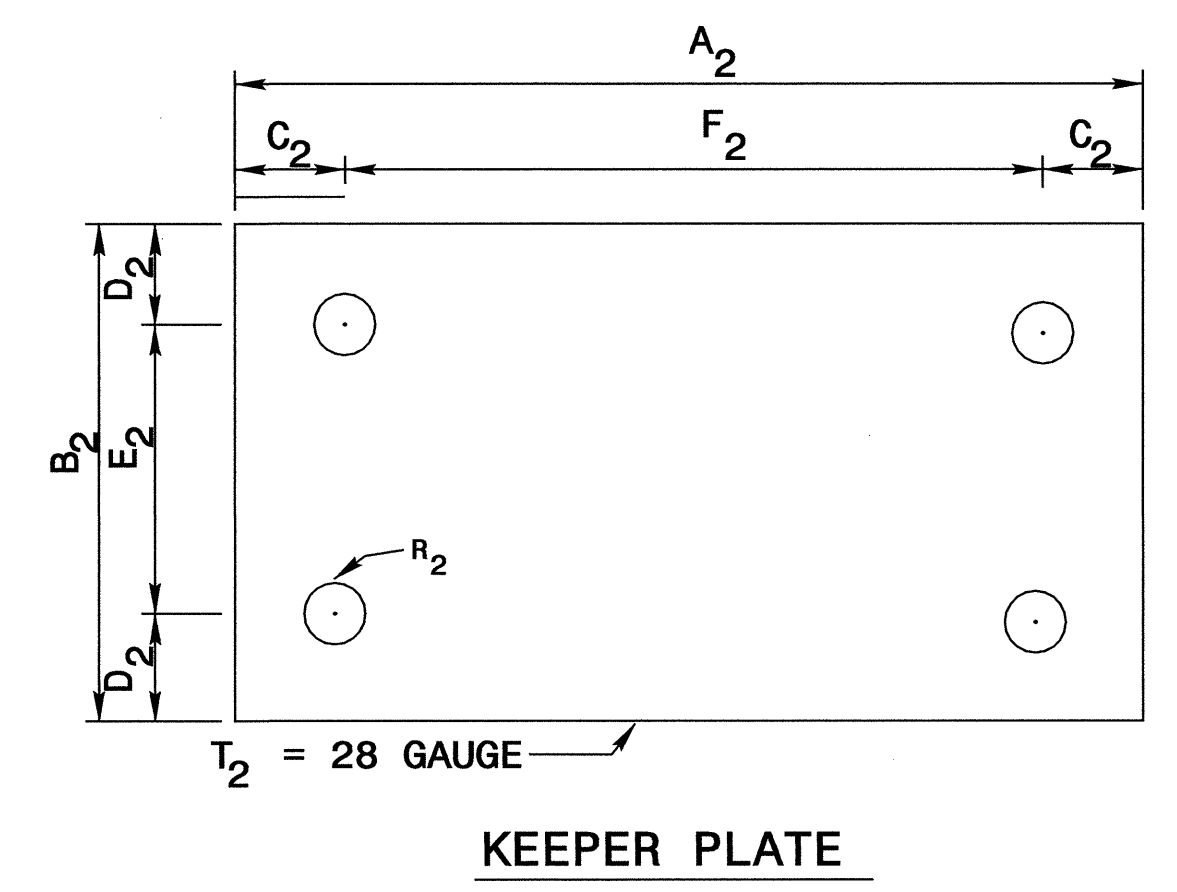
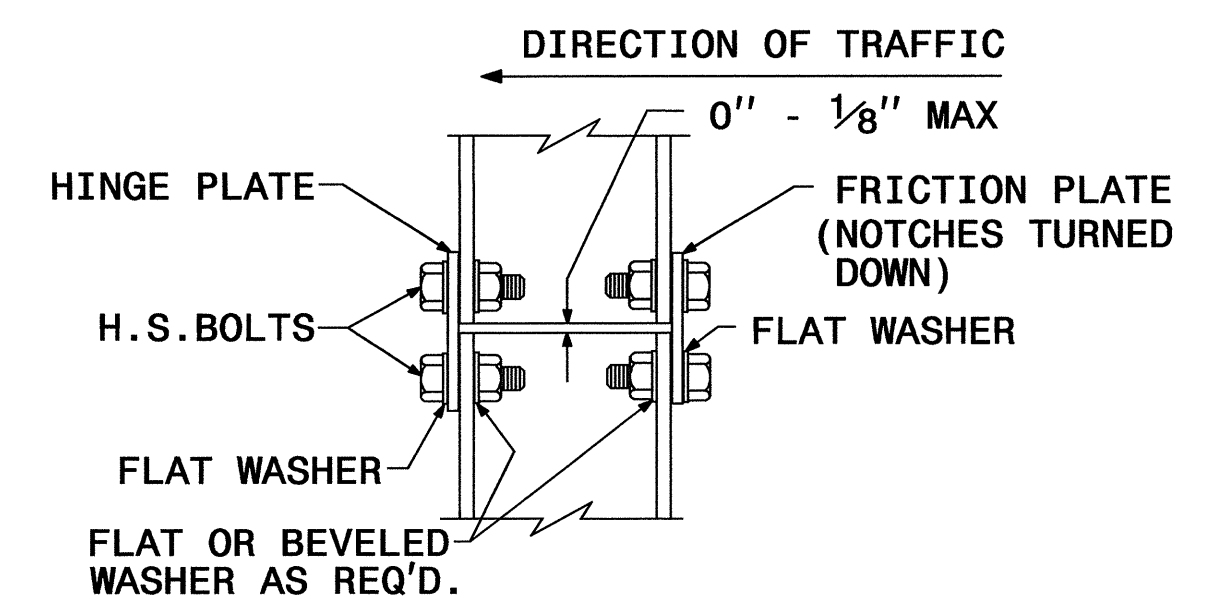
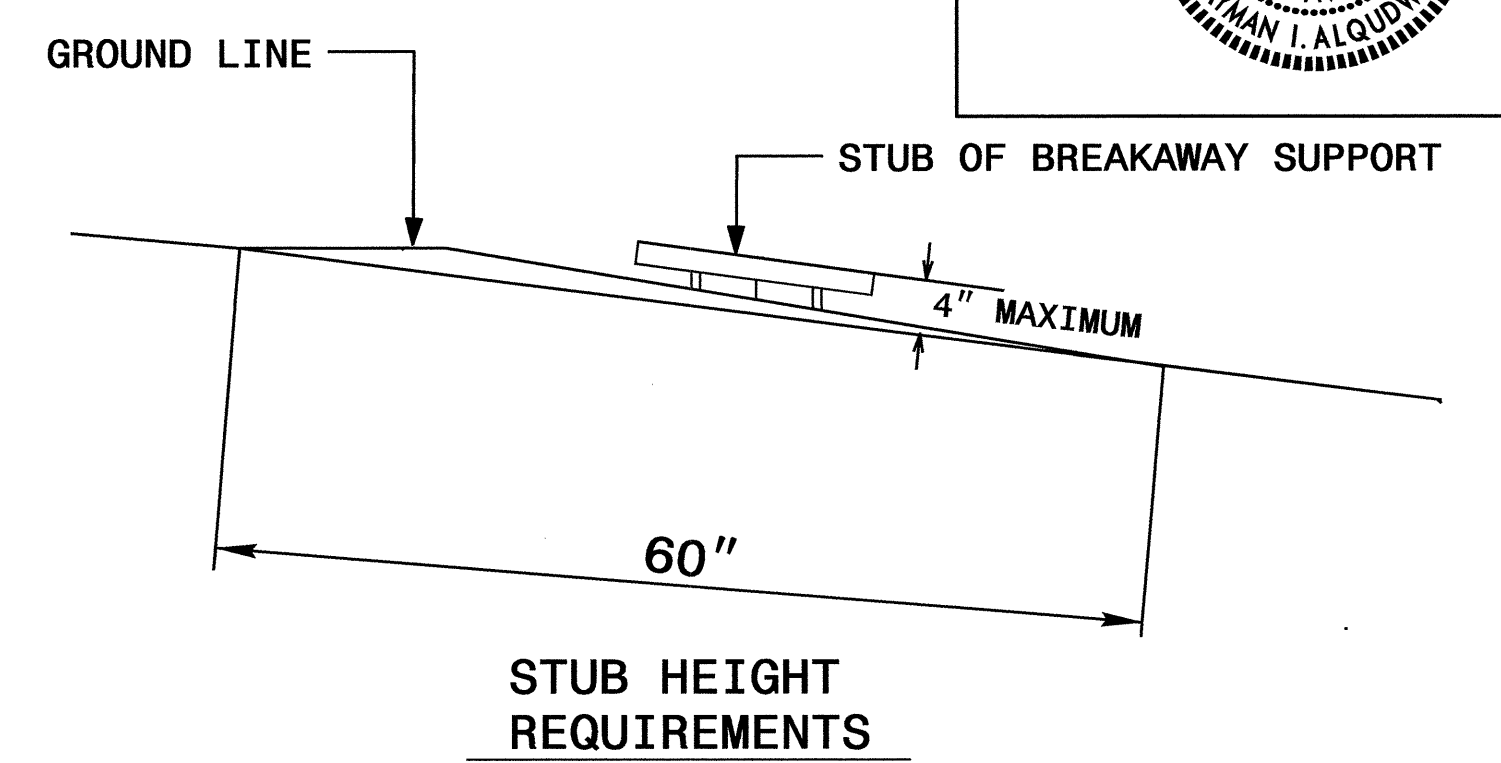
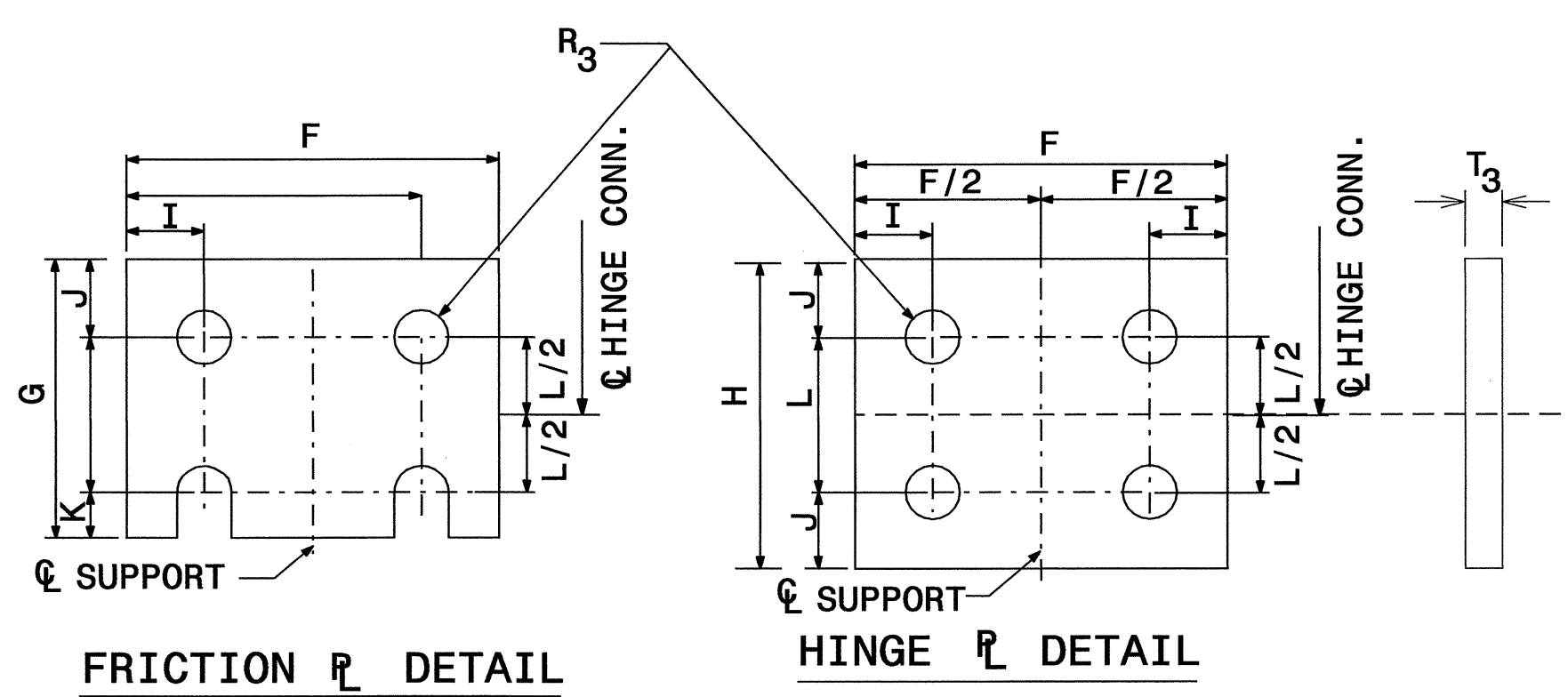
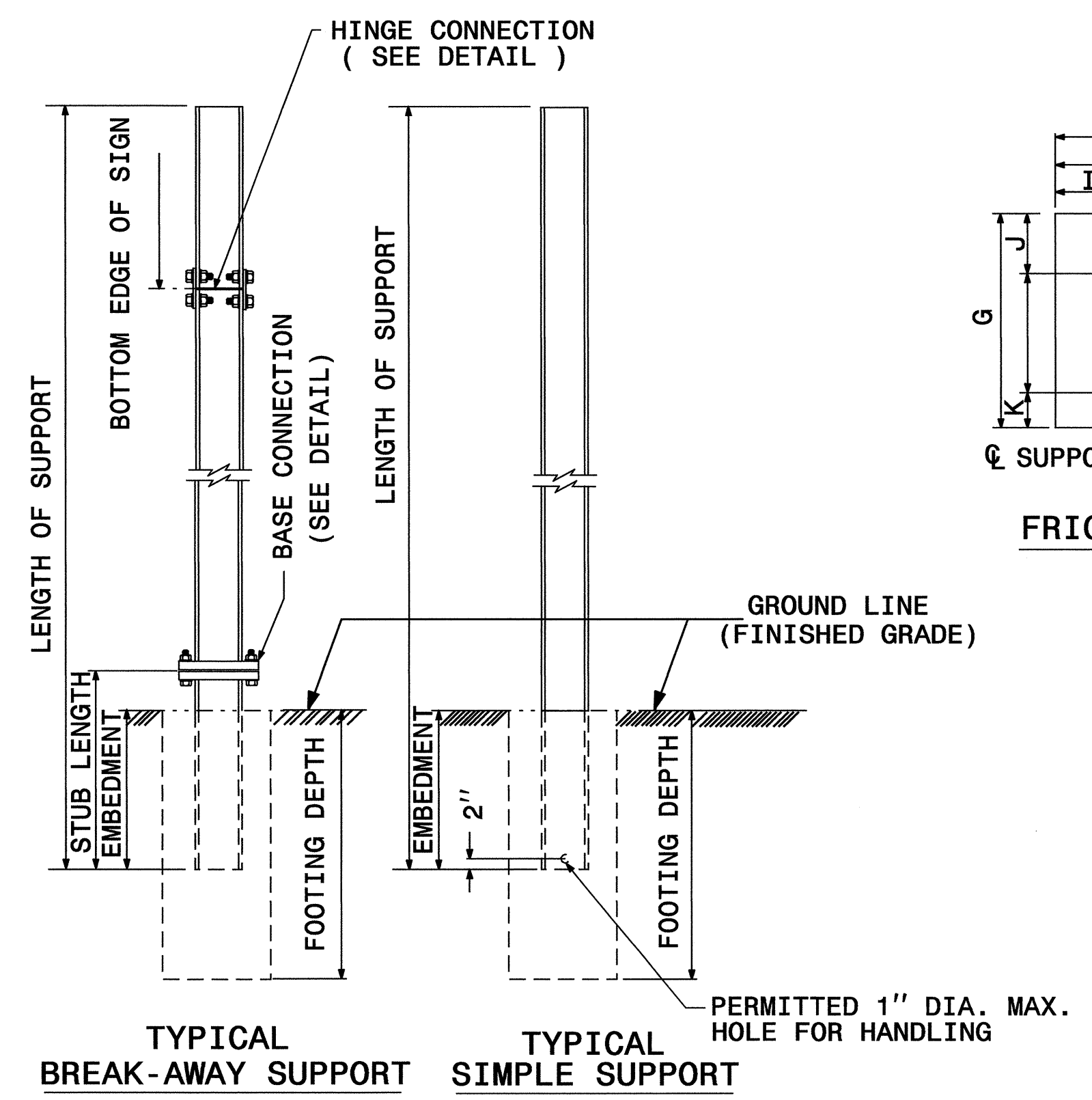


SECTION	A	B
S3 X 5.7	3"	2 3/8"
S4 X 7.7	4"	2 5/8"
W6 X 9	6"	4"
W6 X 12	6"	4"
W6 X 16	6 1/4"	4"
W8 X 18	8 1/8"	5 1/4"
W8 X 21	8 1/4"	5 1/4"
W10 X 22	10 1/8"	5 3/4"
W10 X 26	10 3/8"	5 3/4"
W12 X 26	12 1/4"	6 1/2"
W14 X 30	13 7/8"	6 3/4"
W16 X 31	15 7/8"	5 1/2"
W18 X 35	17 3/4"	6"
W18 X 40	17 7/8"	6"
W21 X 44	20 5/8"	6 1/2"

1. THE SUPPORT MOUNTING DETAIL SHOWS A "W" OR "S" BEAM. THIS DETAIL IS ALSO USED FOR MOUNTING SIGNS TO WOOD OR SQUARE TUBE SUPPORTS.
2. USE GALVANIZED STEEL FOR BACKING PLATES AND MOUNTING BOLTS IN ACCORDANCE WITH ASTM A123.
3. SEE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES FOR TYPE OF MATERIAL TO BE USED FOR SIGN HANGER ASSEMBLIES AND SUPPORTS.
4. USE GALVANIZED STEEL FOR MOUNTING BOTS AND THREADED RODS IN COMPLIANCE WITH ASTM A307 AND ASTM A153.

SIGN MOUNTING DETAILS


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SEE SHEET SIGN-3C FOR DIMENSIONS.
SEE SHEET SIGN-3D FOR NOTES.

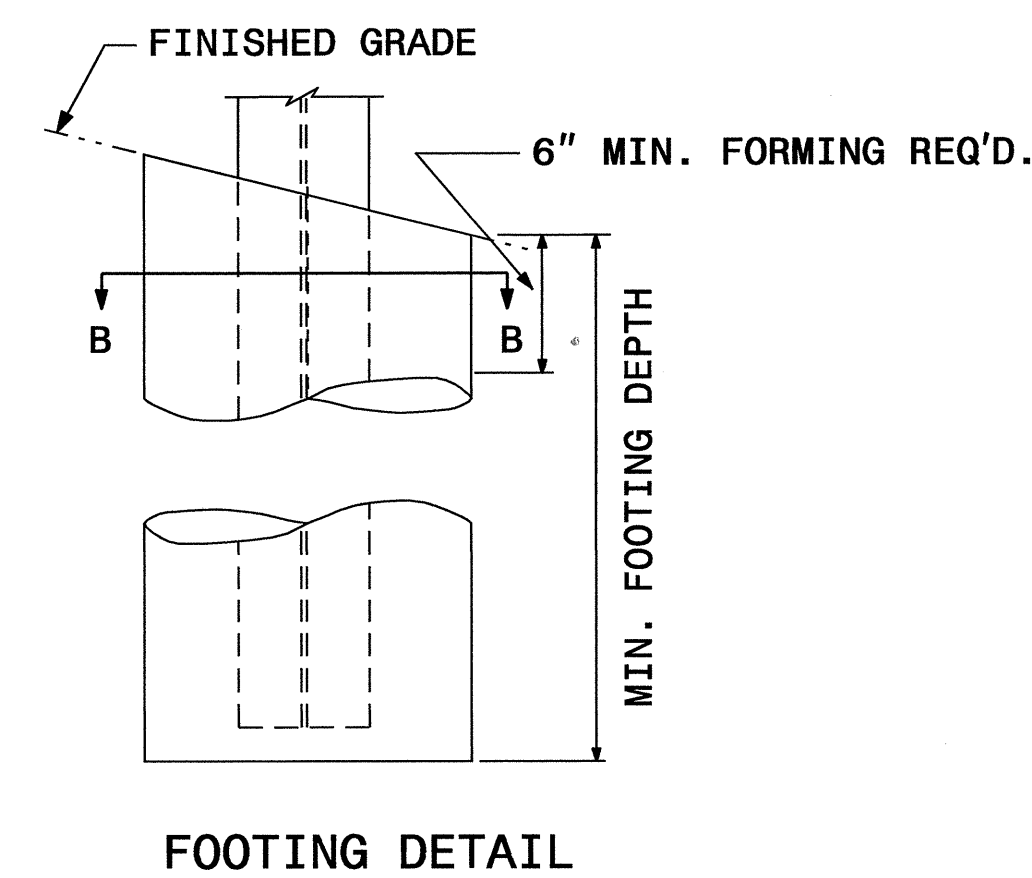
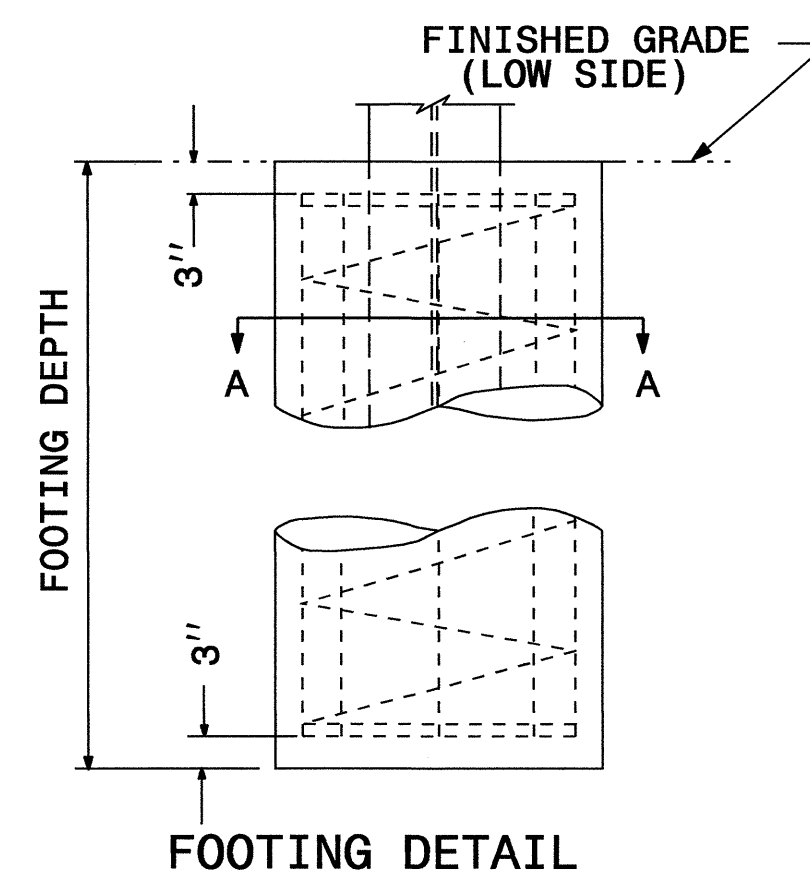
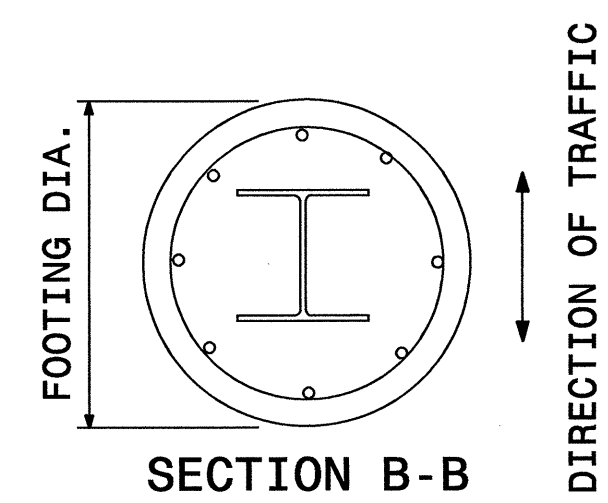
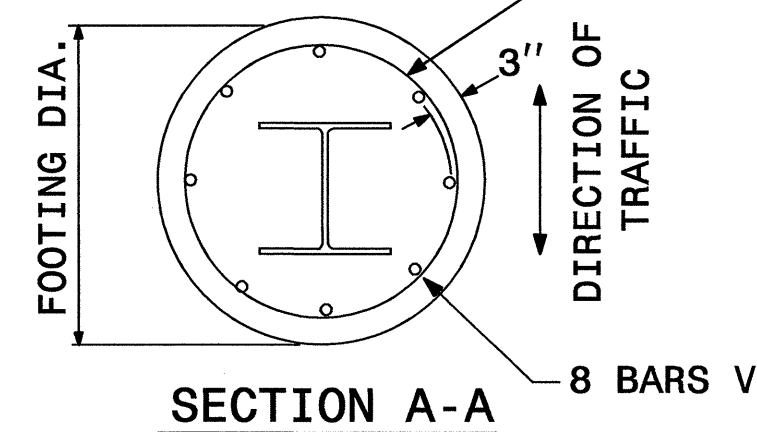
GROUND MOUNTED SIGN SUPPORT

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BEAM SHAPE	SLIP BASE PLATE DATA								KEEPER PLATE DATA							HINGE CONNECTION DATA							BREAK AWAY SUPPORT WEIGHT CONSTANT LBS.			
	BOLT SIZE	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
S3X5.7	1/2"DIA.X 3"	7"	4"	1"	3/4"	2 1/2"	1"	9/32"	7"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA.X1 1/4"	2 1/4"	3 1/2"	4"	1 1/2"	1"	1 1/2"	2"	9/32"	3/8"	18
S4X7.7	1/2"DIA.X 3"	8"	4"	1"	3/4"	2 1/2"	1"	9/32"	8"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA.X1 1/4"	2 5/8"	3 1/2"	4"	1 1/2"	1"	1 1/2"	2"	9/32"	3/8"	20
W6X9	1/2"DIA.X 3"	10"	5"	1"	3/4"	3 1/2"	1"	9/32"	10"	5"	1"	3/4"	3 1/2"	9/32"	28 GAUGE	1/2"DIA.X1 1/4"	4"	3 1/2"	4"	3/4"	1"	1 1/2"	2"	9/32"	3/8"	32
W6X12	5/8"DIA.X3 3/4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	11/32"	11"	5"	1 1/4"	7/8"	3 1/4"	11/32"	28 GAUGE	5/8"DIA.X2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	39
W6X16	5/8"DIA.X3 3/4"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	11/32"	12"	6"	1 1/4"	7/8"	4 1/4"	11/32"	28 GAUGE	5/8"DIA.X2 1/2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	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"	11/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	11/32"	28 GAUGE	5/8"DIA.X2 1/2"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	11/32"	1/2"	70
W8X21	3/4"DIA.X 4 1/4"	14"	7"	1 1/2"	1"	5"	1 1/2"	13/32"	14"	7"	1 1/2"	1"	5"	13/32"	28 GAUGE	3/4"DIA.X2 3/4"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1/2"	73
W10X22	3/4"DIA.X 4 1/4"	16"	8"	1 1/2"	1"	6"	1 1/2"	13/32"	16"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA.X2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1/2"	119
W10X26	3/4"DIA.X4 3/4"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	13/32"	16 1/2"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA.X2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	5/8"	140
W12X26	3/4"DIA.X4 3/4"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	13/32"	18 1/2"	9"	1 1/2"	1"	7"	13/32"	28 GAUGE	3/4"DIA.X2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	5/8"	176
W14X30	1"DIA.X 5"	22"	9"	2"	1 1/2"	6"	2"	17/32"	22"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA.X3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	17/32"	5/8"	205
W16X31	1"DIA.X 5"	24"	9"	2"	1 1/2"	6"	2"	17/32"	24"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA.X3 1/4"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	223
W18X35	1"DIA.X 5"	25"	9"	2"	1 1/2"	6"	2"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA.X3 1/4"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	243
W18X40	1"DIA.X5 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	17/32"	26"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA.X3 3/4"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	278
W21X44	1"DIA.X5 1/2"	29"	9"	2"	1 1/2"	6"	2 1/2"	17/32"	29"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA.X3 3/4"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	310

2" FLAT TURNS
TOP AND BOTTOM
(SEE NOTE 10)




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

* FOUNDATION DIMENSIONS ARE SHOWN IN PLANS
SEE SHEET SIGN-3D FOR NOTES.

GROUND MOUNTED SIGN SUPPORT

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TIP NO. R-2719A	SHEET NO. SIGN-3D
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NOTES:

1. DESIGN CONFORMS WITH THE SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS - A.A.S.H.T.O.
2. USE MATERIALS, FABRICATE AND ERECT SIGNS AND SUPPORTS THAT CONFORM TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
3. USE HIGH STRENGTH BOLTS, NUTS AND WASHERS THAT CONFORM TO A.S.T.M. A-325 AND THAT ARE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153.
4. USE BACKING PLATES, SLIP BASE PLATES, FRICTION PLATES, AND HINGE PLATES THAT CONFORM TO A.S.T.M. A-36 AND THAT ARE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-123 PRIOR TO GALVANIZING, GRIND SMOOTH ANY METAL PROJECTION BEYOND THE PLATE FACE. KEEPER PLATES SHALL BE MANUFACTURED FROM 28 GAUGE SHEET STEEL THAT CONFORMS TO A.S.T.M. A-36 AND IS GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-123
5. ASSEMBLE HINGE CONNECTIONS IN THE SHOP. SHOP TIGHTEN BOLTS BY USE OF EITHER A CALIBRATED POWER WRENCH OR A MANUAL TORQUE WRENCH. TIGHTEN EACH HINGE CONNECTION BOLT TO 1/3 PAST SNUG.
6. BASE PLATES DETAILS ARE FOR INSTALLATIONS ON THE RIGHT SHOULDER AND IN GORE AREAS.
7. ASSEMBLE UPPER SUPPORT TO STUB AS SHOWN IN DETAIL. SLIP BASE PLATES SHALL BE FILLET WELDED ONTO POSTS ALL AROUND THE STRUCTURAL SHAPE SO AS TO INSURE NO LOSS OF STRENGTH. ASSEMBLE IN EITHER SHOP OR FIELD. 28 GAUGE KEEPER PLATE IS PLACED BETWEEN SLIP BASE PLATES TO PREVENT BOLT SLIPPING. TIGHTEN BOLTS TO THE FOLLOWING PRESCRIBED TORQUE:

BOLT DIAMETER	TORQUE (LB. FT.)
1/2"	9
5/8"	22
3/8"	37
1"	48

COMPLETELY ASSEMBLE B/A POSTS PRIOR TO ERECTION. B/A POST TO BE SET IN ONE PIECE. AFTER SUPPORT HAS BEEN ERECTED AND THE CONCRETE FOOTINGS HAS CURED AT LEAST 48 HRS., CLEAN CONCRETE FROM BASE CONNECTION BOLTS THEN LOOSEN AND RETIGHTEN EACH BOLT IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. DO NOT OVERTIGHTEN. BURR ALL BOLT THREADS OF BASE CONNECTIONS TO PREVENT LOOSENING.

8. USE REINFORCED FOOTINGS WITH DIMENSIONS AS SHOWN IN PLANS. WHERE SOLID ROCK IS ENCOUNTERED, THE ENGINEER DIRECTS WHETHER TO PLACE THE FOOTING AT THE PRESCRIBED DEPTH OR EXTEND IT AT LEAST TWO FEET INTO THE ROCK. CONSTRUCT ALL FOOTINGS OF CLASS A CONCRETE.
9. FORM TOP 6" OF FOOTINGS. ENGINEER APPROVES THE METHOD USED.
10. THE FINAL FLAT TURN OF SPIRAL OR HOOPS NO. 3 OR LARGER PLACED 3" FROM TOP AND BOTTOM OF FOOTING MAY BE WELDED TO VERTICAL REINFORCING BARS. NO OTHER WELDING WILL BE PERMITTED.
11. ELIMINATE HINGE CONNECTION FOR ALL SINGLE SUPPORT SIGNS.
12. DETAIL IS FOR ONE DIRECTION BREAKAWAY. WHEN PLANS REQUIRE A TWO DIRECTION BREAKAWAY, TWO FRICTION PLATES SHALL BE USED IN LIEU OF ONE FRICTION PLATE AND ONE HINGE PLATE.
13. SHAPE THE TOPS OF THE FOOTINGS TO CONFORM WITH FINISHED GROUND ELEVATIONS SUCH THAT WATER WILL NOT COLLECT AGAINST THE SUPPORTS.
14. IF THE GROUNDWATER IS ENCOUNTERED AT AN DEPTH SHALLOWER THAN 7 FEET, THE SIGN FOUNDATION MUST BE REDESIGNED BASED UPON THE ACTUAL FIELD CONDITIONS. THE FOUNDATION DESIGN DOES NOT APPLY TO VERY SOFT OR LOOSE SOIL, MUCK, WEATHERED ROCK, OR HARD ROCK.

GROUND MOUNTED SIGN SUPPORT

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TIP NO. R-2719A	SHEET NO. SIGN-4A
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DATE: 2/4/09	
SEAL	

SIGN NUMBER: 108B TYPE: A QUANTITY: 1 SIGN WIDTH: 13'-0" HEIGHT: 12'-6" TOTAL AREA: 162.5 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 4 LENGTH: 148.0	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT M1_4 55.7 97.2 45.4 36 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
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USE NOTES: 1,2,3,4

- Legend and border shall be direct applied C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade C sheeting.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Letter positions											Series/Size	
Letter spacings are to start of next letter											Text Length	
	K	i	n	s	t	o	n					EM 2000
28	16.6	9.6	15.2	13.9	12	15.8	10.6	94.2				93.8
	S	n	o	w	H	i	l	l				EM 2000
17.7	17.9	15.5	14.1	16.3	16	18.4	9.6	9.6	3.2	17.7		120.6
	E	X	I	T								E 2000
19	8.9	10.7	3.5	7.5	106.4							30.6
	M	X	L	E								E 2000
104	12	4.4	9.2	7.5	18.9							33.1
	1/2											E 2000
65.7	22	68.3										22

FILENAME: Signs_OverheadsR2719a NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMR: 108A, 109A TYPE: A Ground QUANTITY: 2 SIGN WIDTH: 13'-0" HEIGHT: 2'-0" TOTAL AREA: 26.0 Sq.Ft. MAT'L: 0.125" ALUMINUM BORDER TYPE: FLUSH RECESS: 0.94" WIDTH: 1.25" RADII: 3" NO. Z BARS: 2 LENGTH: 148.0"	BACKG. COLOR: White COPY COLOR: Black SYMBOL X Y WID HT MAT'L: 0.125" ALUMINUM	DESIGN BY: DME PROJECT ID: R-2719A CHK BY: DIV: 2 STD #: SSTN DATE: Feb 03, 2009
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USE NOTES: 1,4

- Legend and border shall be direct applied Non-reflective sheeting.
- Legend and border shall be direct applied Grade C reflective sheeting.
- Shields shall be Grade C reflective sheeting on 0.032" aluminum and demountable.
- Background shall be Grade C reflective sheeting.
- Background shall be Grade A reflective sheeting.
- Center arrow(s) vertically on sign.

Letter positions											Series/Size							
Letter spacings are to start of next letter											Text Length							
	A	L	L	T	R	A	F	F	I	C	E	X	I	T	D 2000			
9.9	12	9.2	7.4	8	9.2	9.1	12	9.2	9.2	4.6	8.2	8	8.6	10.2	3.7	7.4	9.9	136.2

Spacing Factor is 1 unless specified otherwise
FILENAME: 0808 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 109B TYPE: A QUANTITY: 1 SIGN WIDTH: 16'-6" HEIGHT: 10'-6" TOTAL AREA: 173.3 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 3 LENGTH: 190.0	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT M1_4 54.4 73.7 45.4 36 ARMED 154.1 27.9 22.5 35.4 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
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USE NOTES: 1,2,3,4

- Legend and border shall be direct applied C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade C sheeting.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

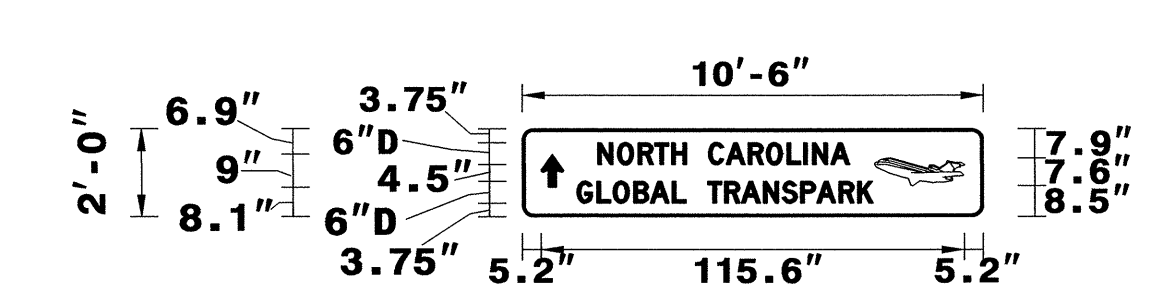
Letter positions											Series/Size	
Letter spacings are to start of next letter											Text Length	
	K	i	n	s	t	o	n					EM 2000
26.7	16.6	9.6	15.2	13.9	12	15.8	10.6	77.5				93.8
	S	n	o	w	H	i	l	l				EM 2000
16.4	17.9	15.5	14.1	16.3	16	18.4	9.6	9.6	3.2	61		120.6

FILENAME: signs_overheads2719a NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED SIGN DESIGNS

TIP NO. R-2719A	SHEET NO. SIGN-4B
APPROVED: <i>[Signature]</i>	
DATE: 2/4/09	
SEAL	
	

SIGN NUMBER: 110 TYPE: B QUANTITY: 1 SIGN WIDTH: 10'-0" HEIGHT: 2'-0" TOTAL AREA: 21.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 3" NO. Z BARS: 2 LENGTH: 118.0	BACKG COLOR: Green COPY COLOR: White <table border="1"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr> <td>ARUP</td> <td>5.2</td> <td>8.1</td> <td>6</td> <td>9</td> </tr> <tr> <td></td> <td>96.3</td> <td>8.5</td> <td>24.5</td> <td>7.6</td> </tr> </table>	SYMBOL	X	Y	WID	HT	ARUP	5.2	8.1	6	9		96.3	8.5	24.5	7.6	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
SYMBOL	X	Y	WID	HT													
ARUP	5.2	8.1	6	9													
	96.3	8.5	24.5	7.6													



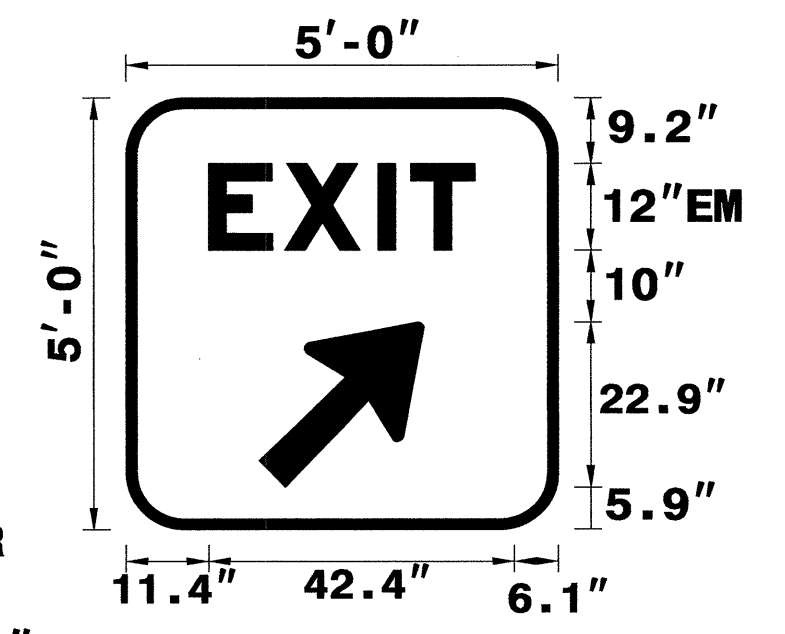
BORDER
R=3"
TH=0.75"

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter															Series/Size
															Text Length
N	O	R	T	H	C	A	R	O	L	I	N	A			D 2000
20.7	5.4	5.6	4.6	4.6	4.1	6	4.9	6	5	5.6	4.6	2.4	5	5.1	36.5
G	L	O	B	A	L	T	R	A	N	S	P	A	R	K	D 2000
15	5.4	4.5	5.6	4.6	6	3.7	6	4.6	4.6	6	5.1	5.1	4.4	6	5.1
															4.2
															30.2

FILENAME: signs_overheads2719a NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 205 TYPE: A QUANTITY: 1 SIGN WIDTH: 5'-0" HEIGHT: 5'-0" TOTAL AREA: 25.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 1.5" RADII: 8" NO. Z BARS: 2 LENGTH:	BACKG COLOR: Green COPY COLOR: White <table border="1"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr> <td>ARMED</td> <td>18.4</td> <td>6</td> <td>18.7</td> <td>29.5</td> </tr> </table>	SYMBOL	X	Y	WID	HT	ARMED	18.4	6	18.7	29.5	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
SYMBOL	X	Y	WID	HT								
ARMED	18.4	6	18.7	29.5								



BORDER
R=8"
TH=1.5"

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter						Series/Size
						Text Length
E	X	I	T			EM 2000
11.4	10.6	13	4.6	8.9	11.6	37

FILENAME: signs_overheads2719a NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED SIGN DESIGNS



SIGN NUMBER: 302 TYPE: D QUANTITY: 1 SIGN WIDTH: 6'-0" HEIGHT: 2'-6" TOTAL AREA: 15.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADIUS: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT ARUP 50.2 19.1 8 9 ARUP 6.9 4.9 8 9 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
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USE NOTES: 1,2
1. Legend and border shall be direct applied C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade A, B, or C sheeting.
5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter											Series/Size
											Text Length
K	I	N	S	T	O	N					D 2000
12.8	5.2	2.4	5.1	4.6	4.5	5.6	4.1	27.8			31.4
S	N	O	W	H	I	L	L				D 2000
21.9	5.1	5.4	5	5.3	6	5.5	2.4	4.6	3.7	6.9	43.1

FILENAME: Signs_OverheadsR2719a NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 304 TYPE: D QUANTITY: 1 SIGN WIDTH: 8'-0" HEIGHT: 3'-0" TOTAL AREA: 24.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADIUS: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT ARUP 20.5 4.4 24.5 7.6 ARUP 69.7 4.8 6 9 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
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USE NOTES: 1,2
1. Legend and border shall be direct applied C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade A, B, or C sheeting.
5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter											Series/Size							
											Text Length							
N	O	R	T	H	C	A	R	O	L	I	N	A	D 2000					
13.3	5.4	5.6	4.6	4.6	4.1	6	4.9	6	5.6	4.6	2.4	5	5.1	13.9	68.8			
G	L	O	B	A	L	T	R	A	N	S	P	A	R	K	D 2000			
7.6	5.4	4.5	5.6	4.6	6	3.7	6	4.6	4.6	6	5.1	5.1	4.4	6	5.1	4.2	7.6	80.9

FILENAME: signs_overheadsR2719a NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 303 TYPE: D QUANTITY: 1 SIGN WIDTH: 8'-0" HEIGHT: 3'-0" TOTAL AREA: 24.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADIUS: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT ARUP 18.8 4.8 6 9 ARUP 52.6 4.4 24.5 7.6 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Jul 15, 2008
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USE NOTES: 1,2
1. Legend and border shall be direct applied C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade A, B, or C sheeting.
5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter											Series/Size							
											Text Length							
N	O	R	T	H	C	A	R	O	L	I	N	A	D 2000					
13.3	5.4	5.6	4.6	4.6	4.1	6	4.9	6	5.6	4.6	2.4	5	5.1	13.9	68.8			
G	L	O	B	A	L	T	R	A	N	S	P	A	R	K	D 2000			
7.6	5.4	4.5	5.6	4.6	6	3.7	6	4.6	4.6	6	5.1	5.1	4.4	6	5.1	4.2	7.6	80.9

FILENAME: signs_overheadsR2719a NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 306 TYPE: D QUANTITY: 1 SIGN WIDTH: 8'-0" HEIGHT: 2'-0" TOTAL AREA: 16.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADIUS: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT ARUP 83.6 7.8 6 9 MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: D.P. PROJECT ID: R-2719A CHECKED BY: D.M.E. DIV: 2 DATE: Sept. 07, 2008
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USE NOTES: 1,2
1. Legend and border shall be direct applied C sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade A, B, or C sheeting.
5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

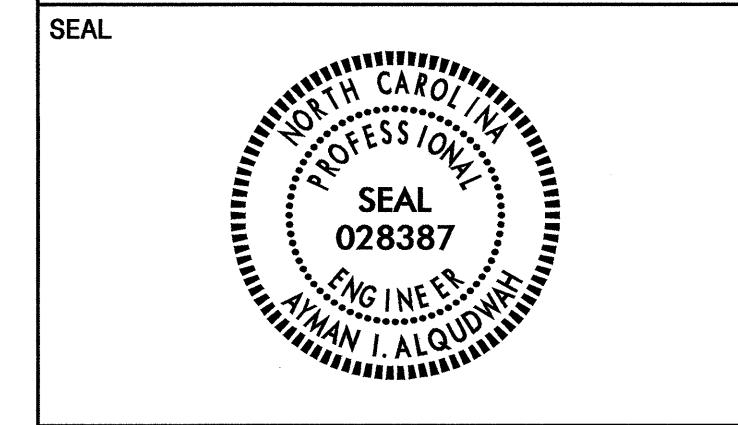
Spacing Factor is 1 unless specified otherwise

Letter spacings are to start of next letter											Series/Size							
											Text Length							
E	A	S	T								D 2000							
32.5	4.2	5.6	4.6	3.7	45.4						18.1							
C	F										D 2000							
3.4	4.9	2	4.1	1.1	6	5	6	4.6	5.5	4.2	5.2	6	5	4.7	5.7	5.2	17.5	75.1

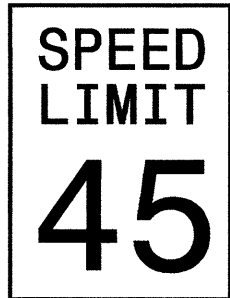
FILENAME: Signs_OverheadsR2719a NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED SIGN DESIGNS

APPROVED: *[Signature]*
DATE: 2/11/89




(402) QUANTITY REQ'D 2



48 X 60
R2-1

TWO WOOD POSTS PER SIGN

(414) QUANTITY REQ'D 2

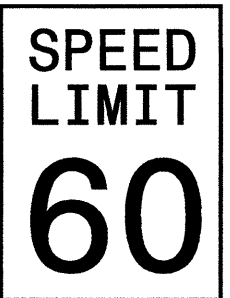


54 X 18
R6-1 (L)

MOUNT BACK TO BACK WITH SIGN #413
IN 1 INSTALLATIONS

TWO WOOD POSTS PER SIGN


(469) QUANTITY REQ'D 1



48 X 60
R2-1

TWO WOOD POSTS PER SIGN

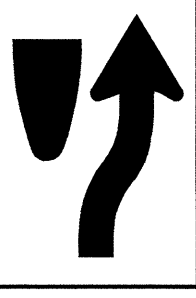
(408) QUANTITY REQ'D 3



36 X 36
R1-1

ONE WOOD POST PER SIGN

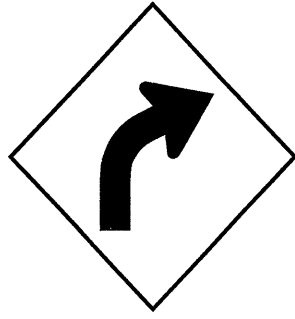
(416) QUANTITY REQ'D 7



24 X 30
R4-7

ONE WOOD POST PER SIGN


(444) QUANTITY REQ'D 1



36 X 36
W1-2R

ONE WOOD POST PER SIGN

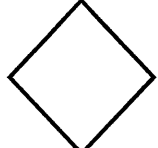
(410) QUANTITY REQ'D 6



36 X 24
R5-1a

ONE WOOD POST PER SIGN


(417) QUANTITY REQ'D 7



18 X 18
W23-15

MOUNT BELOW SIGN 416
IN 7 INSTALLATIONS


(458) QUANTITY REQ'D 2



30 X 30
W14-2

ONE WOOD POST PER SIGN

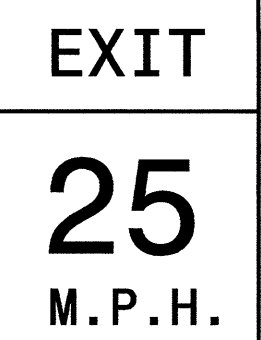
(411) QUANTITY REQ'D 6



30 X 30
R5-1

ONE WOOD POST PER SIGN

(418) QUANTITY REQ'D 1



48 X 60
W13-3

TWO WOOD POSTS PER SIGN


(462) QUANTITY REQ'D 2



30 X 30

ONE WOOD POST PER SIGN


(413) QUANTITY REQ'D 1



54 X 18
R6-1 (R)

TWO WOOD POSTS PER SIGN

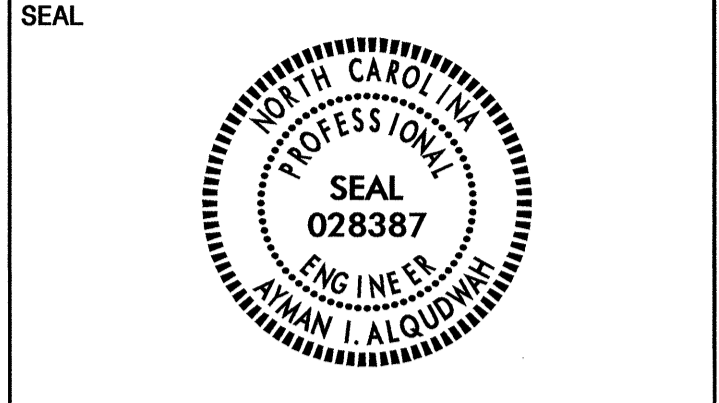
(456) QUANTITY REQ'D 1



30 X 30
R3-7

ONE WOOD POST PER SIGN

TYPE "E" SIGNS



504

NORTH	SOUTH	2 - 30 X 15
258	258	2 - 45 X 36
←	→	2 - 21 X 15

TWO WOOD POSTS

505

NORTH	1 - 30 X 15
258	1 - 45 X 36

ONE WOOD POST

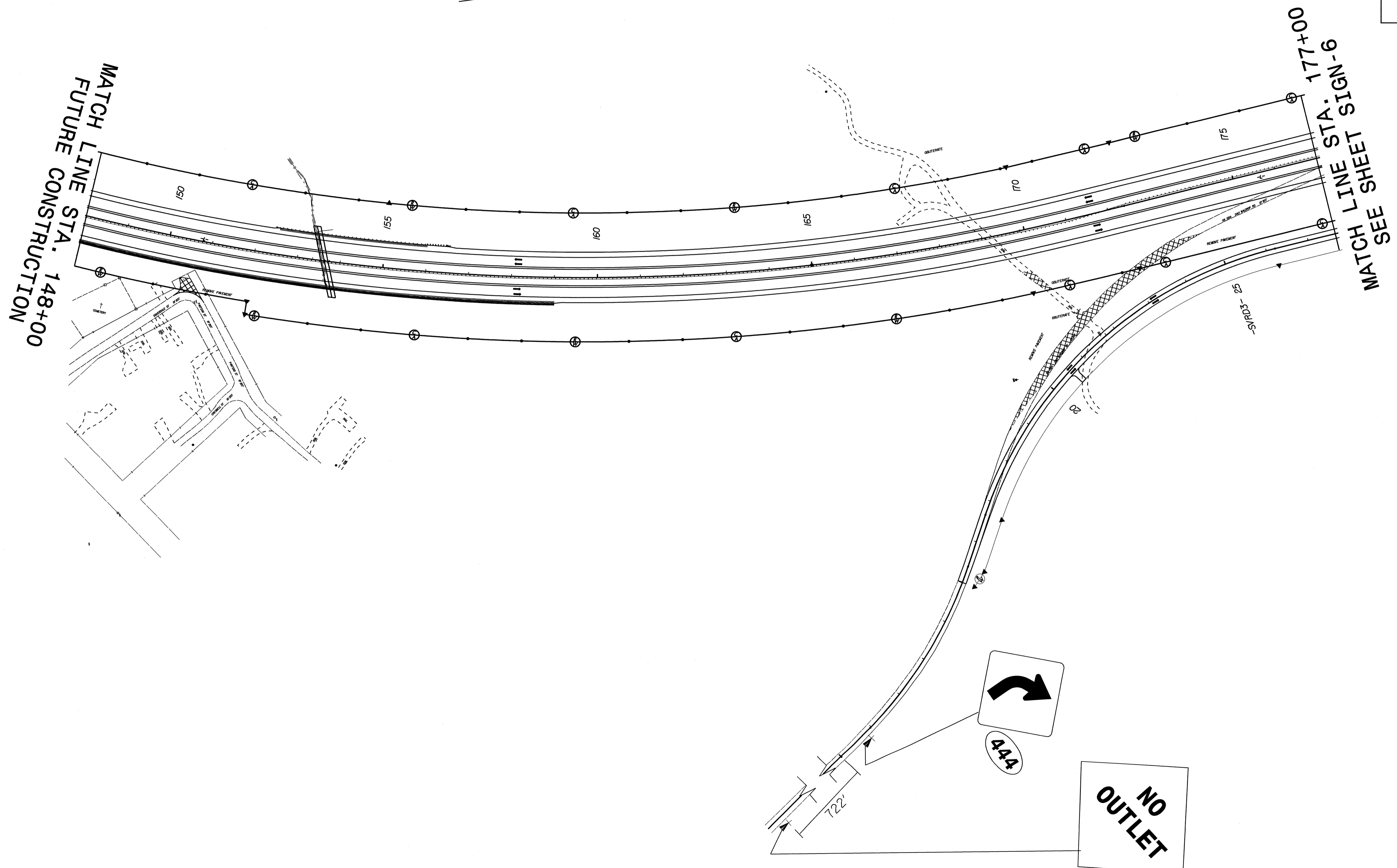
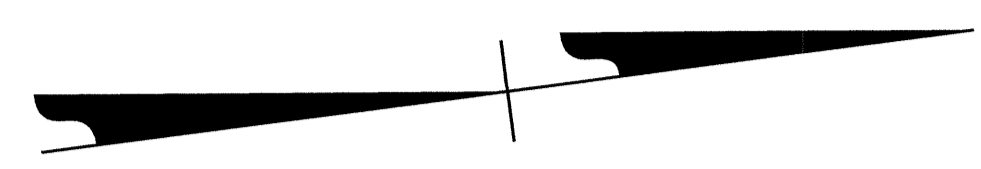
506

SOUTH	1 - 30 X 15
258	1 - 45 X 36

ONE WOOD POST


TYPE "F" SIGNS

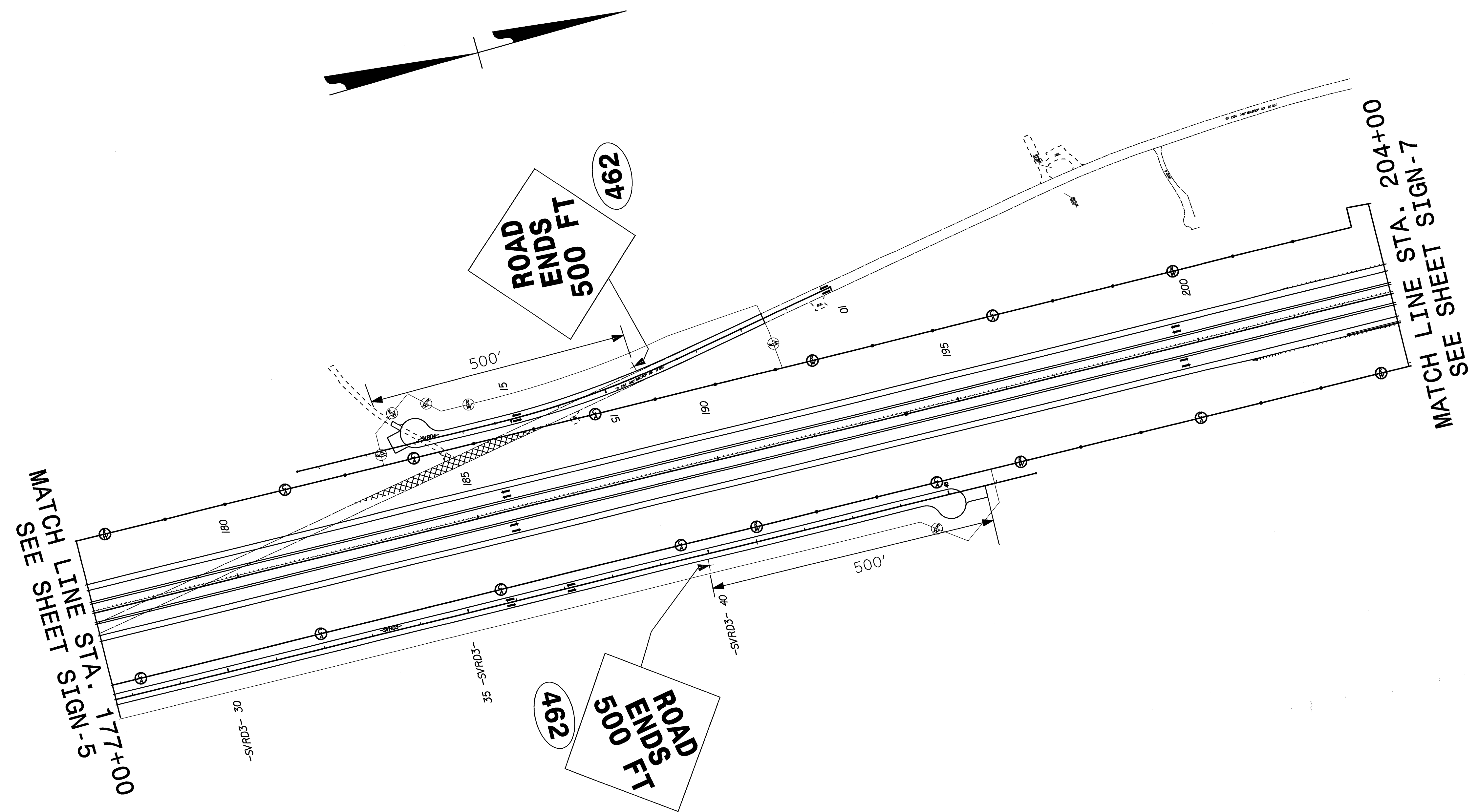
TIP NO. R-2719A	SHEET NO. SIGN-5
APPROVED: <i>[Signature]</i>	
DATE: 2/4/09	
SEAL	



PROPOSED SIGNS
 U.S. 70 STA. 148+00 TO STA 177+00

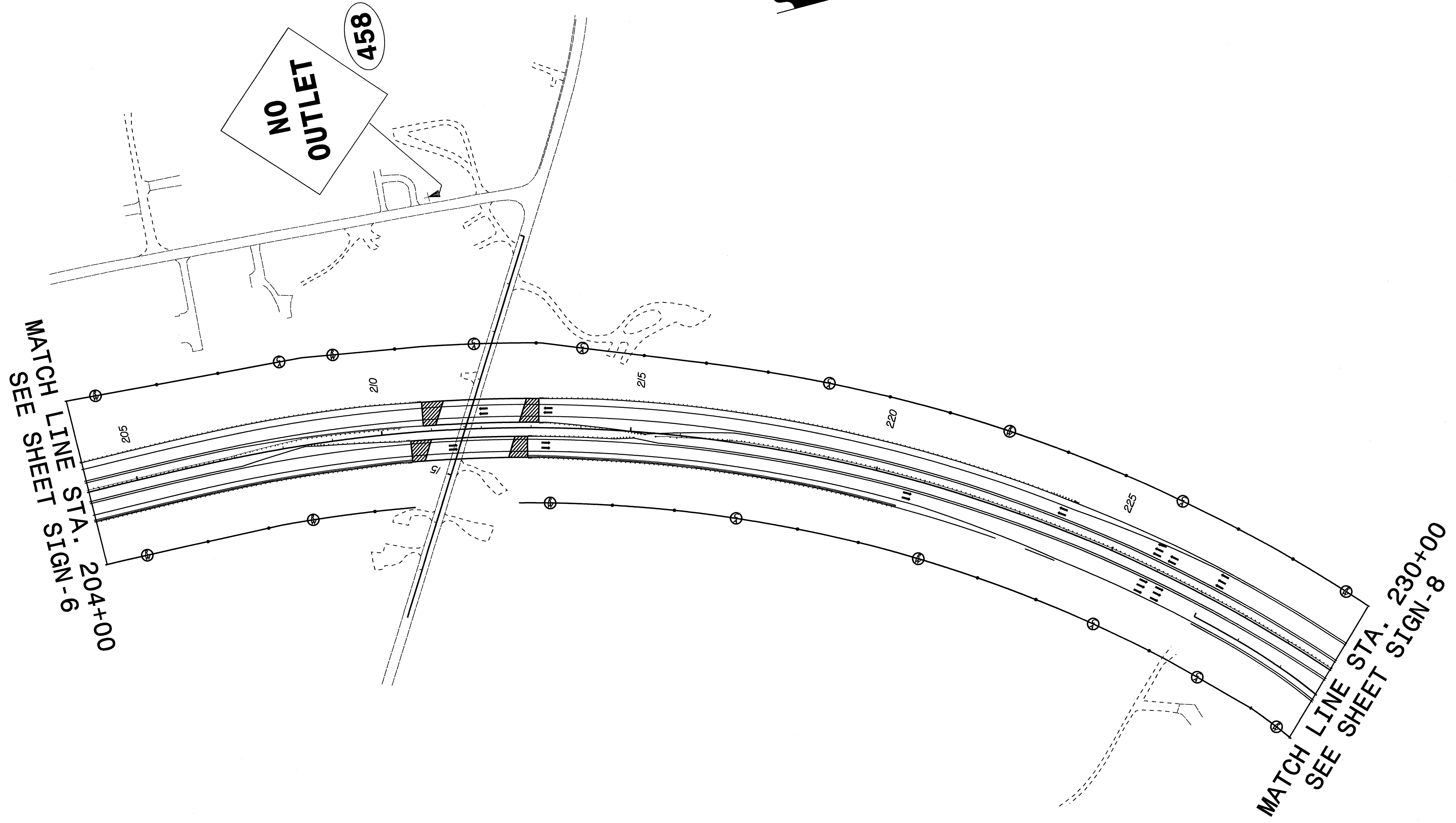
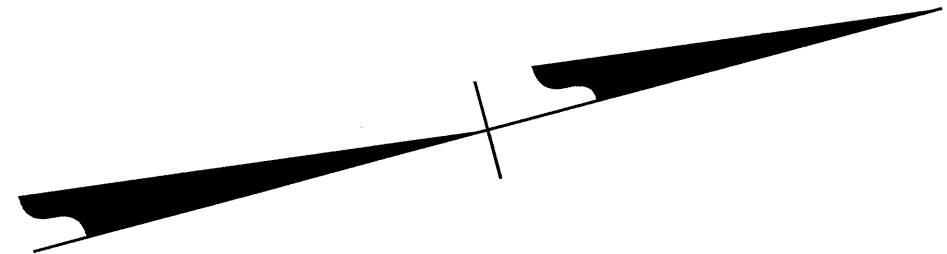
TIP NO. R-2719A	SHEET NO. SIGN-6
APPROVED: <i>Yuan Blendach</i>	
DATE: 2/4/09	
SEAL	






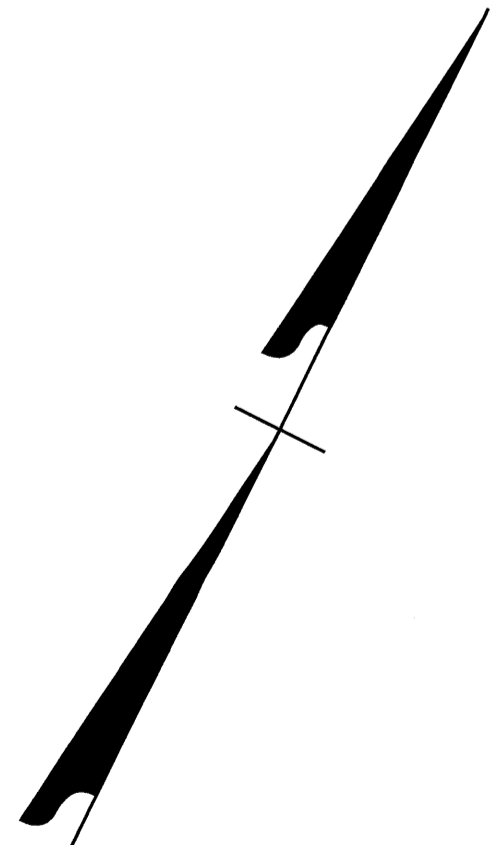
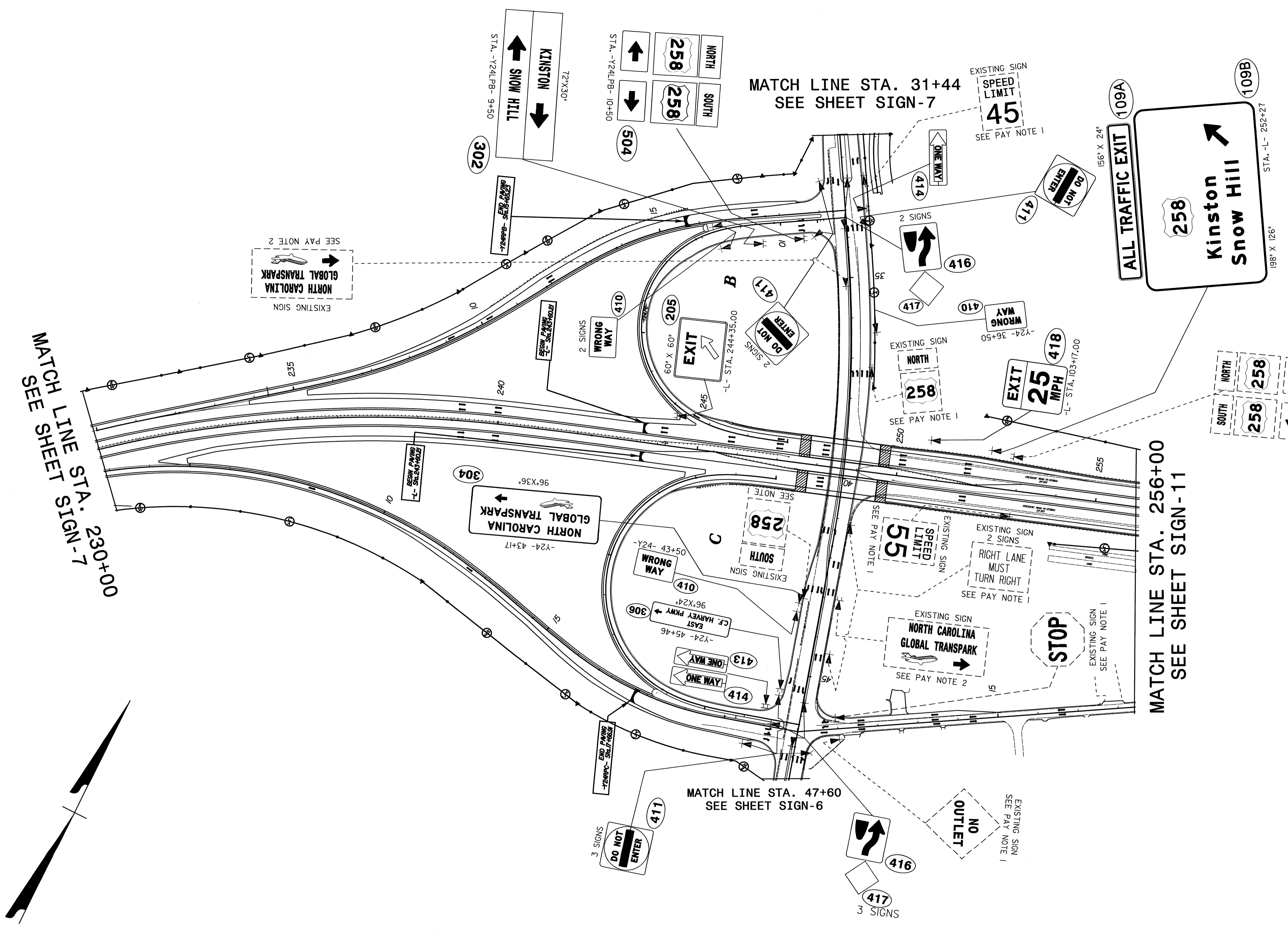
PROPOSED SIGNS
 U.S. 70 STA. 177+00 TO STA 204+00

TIP NO. R-2719A	SHEET NO. SIGN-7
APPROVED: <i>Alwan I. Alqudwini</i>	
DATE: 2/4/09	
SEAL	



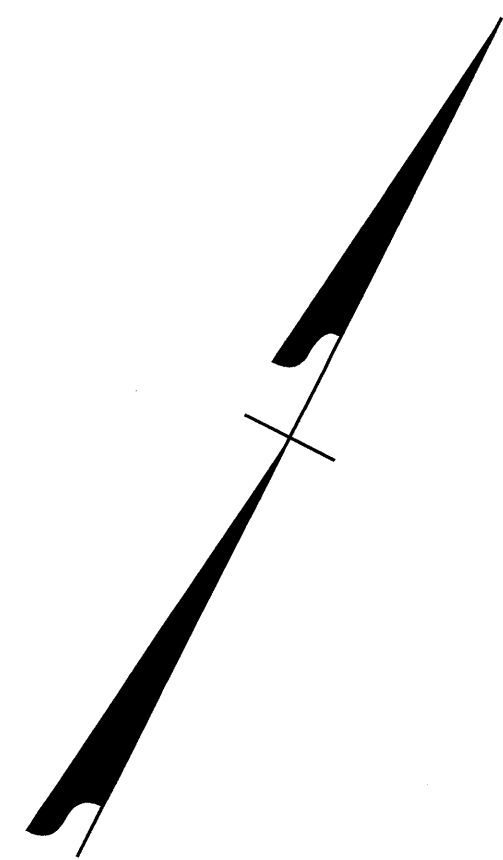
PROPOSED SIGNS
U.S. 70 STA. 204+00 TO STA 230+00

TIP NO. R-2719A	SHEET NO. SIGN-8
APPROVED: <i>[Signature]</i>	
DATE: 2/4/09	
SEAL	
	

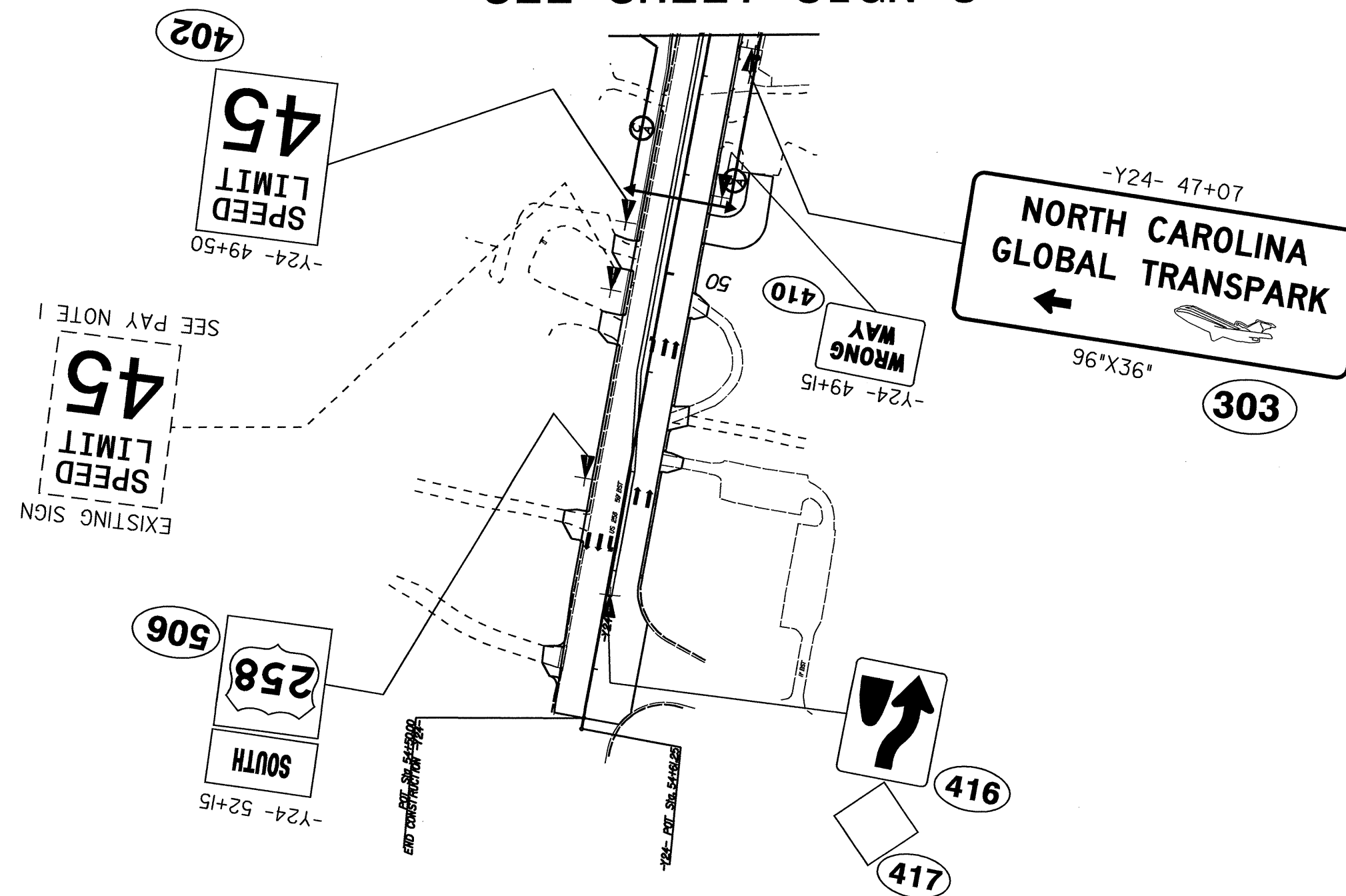


EXISTING & PROPOSED SIGNS
 U.S. 70 STA. 230+00 TO STA 256+00
 -Y24- STA. 31+44 TO STA 47+60

TIP NO. R-2719A	SHEET NO. SIGN-9
APPROVED: <i>[Signature]</i>	
DATE: 2/4/09	
SEAL	

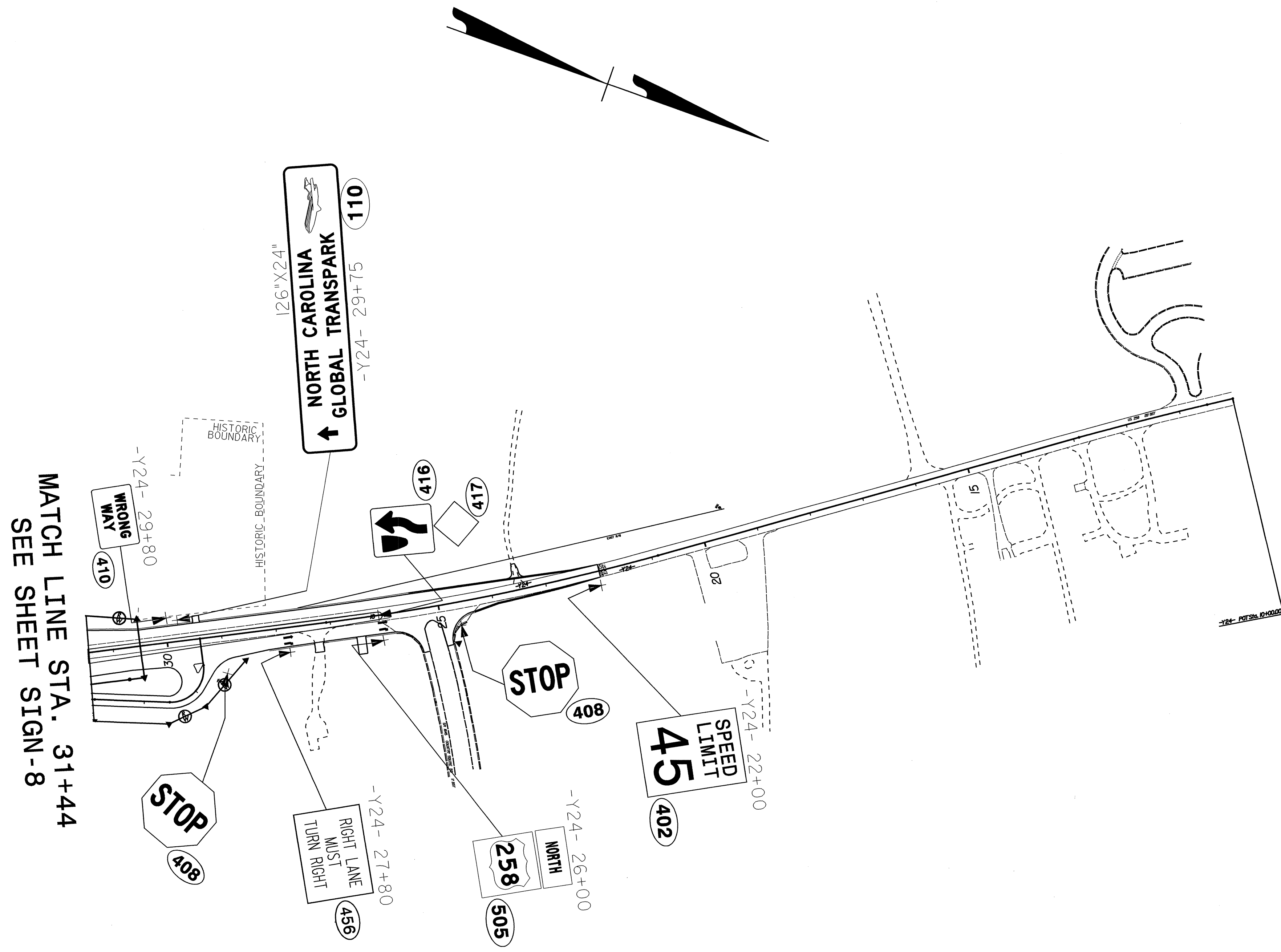
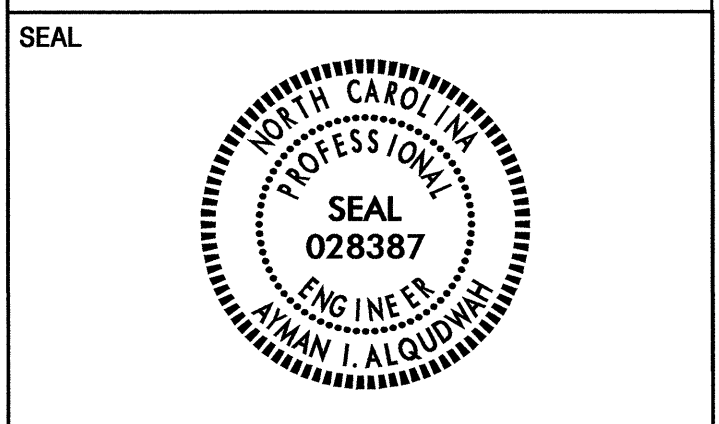


MATCH LINE STA. 47+60
SEE SHEET SIGN-8



EXISTING & PROPOSED SIGNS
-Y24- STA. 47+60 TO STA 54+61

APPROVED: *[Signature]*
 DATE: 2/4/09



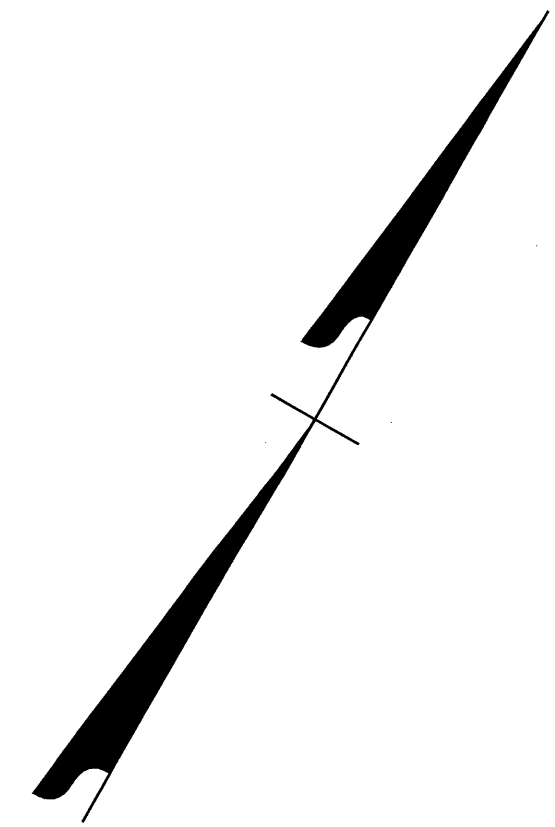
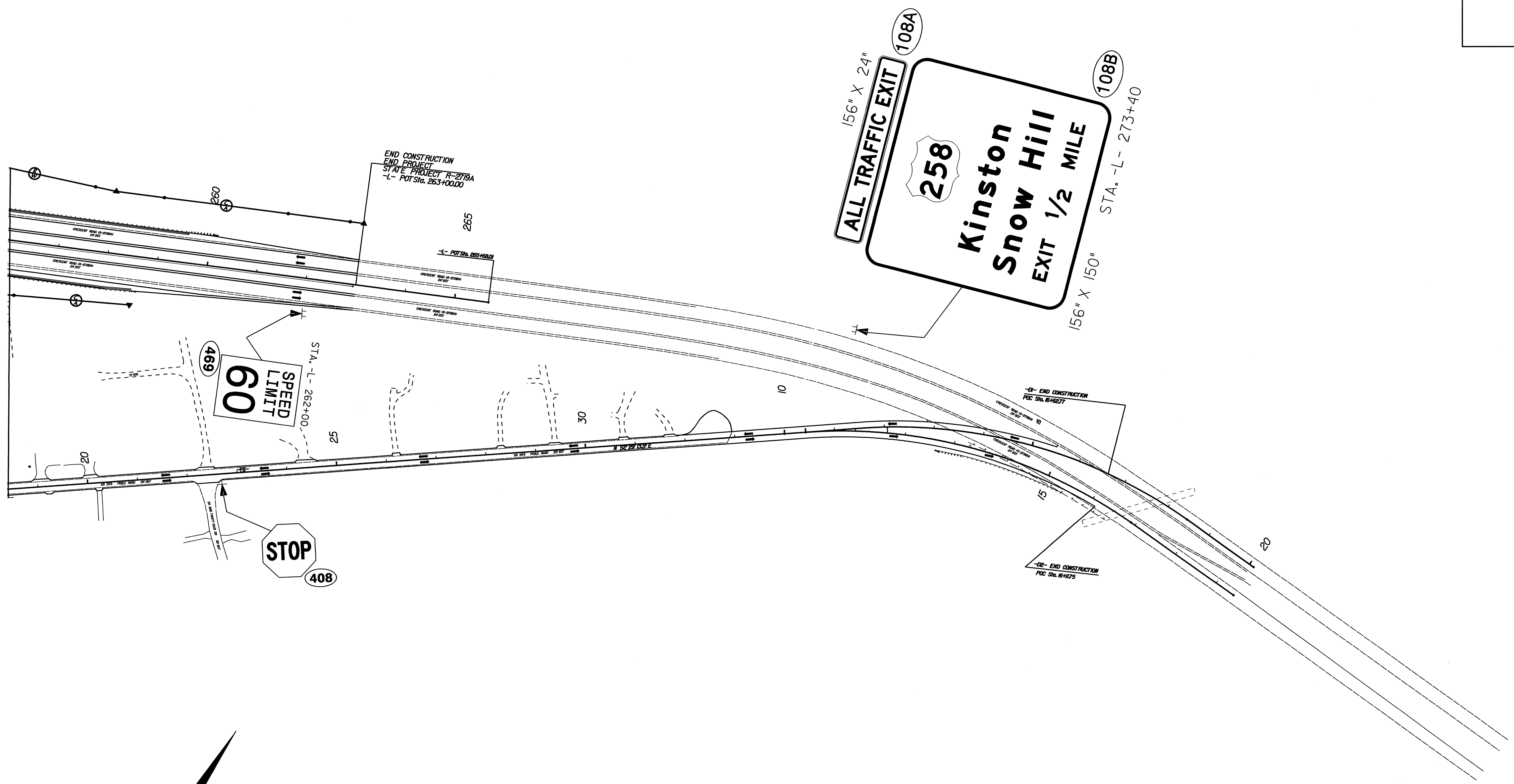
MATCH LINE STA. 31+44
 SEE SHEET SIGN-8

PROPOSED SIGNS
 -Y24- STA. 31+44 TO STA 10+00

TIP NO. R-2719A	SHEET NO. SIGN-11
APPROVED: <i>[Signature]</i>	
DATE: 2/4/09	
SEAL	



MATCH LINE STA. 256+00
SEE SHEET SIGN-8



PROPOSED SIGNS
U.S. 70 STA. 256+00 TO STA 282+00