

T.I.P.:K-3807

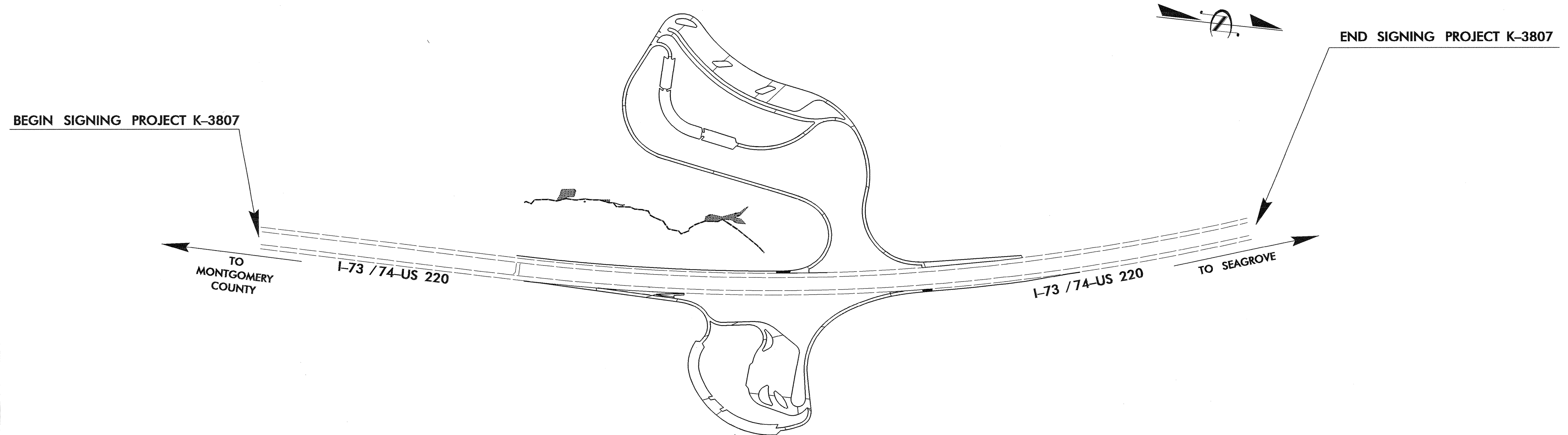
CONTRACT: C201776

25-OCT-2007 15:05
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gate-11z1 AT TEC221636

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS
RANDOLPH COUNTY

LOCATION: SOUTH OF SEAGROVE — I-73/74 AND U.S. 220 BYPASS NORTHBOUND
AND SOUTHBOUND REST AREAS



TIP NO. K-3807	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	



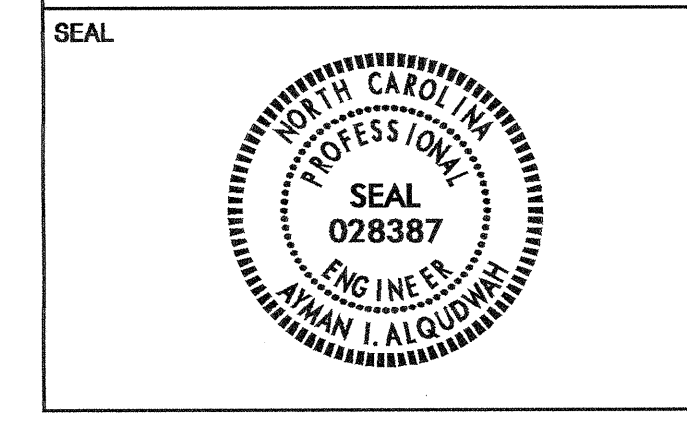
INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUMMARY OF QUANTITIES & NOTES
3-6	SUPPORT INFORMATION
7	'A' SIGN SHEET
8-9	'D' SIGN SHEETS
10	'E' and Milemarker SHEET
11	SUPPORT CHART
12-15	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
 KELVIN JORDAN SIGNING PROJECT DESIGN ENGINEER
 GEORGE TERLIZZI SIGNING DESIGN ENGINEER

APPROVED: *[Signature]*
DATE: 10-26-07



Pay Item Notes:	
1	DISPOSAL OF SIGN SYSTEM, STEEL BEAM
2	DISPOSAL OF SIGN SYSTEM, U-CHANNEL

General Notes:

- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL 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
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- 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 III 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.


Project Notes:	
A	SIGNS 901 & 902 SUPPLIED BY COUNTY

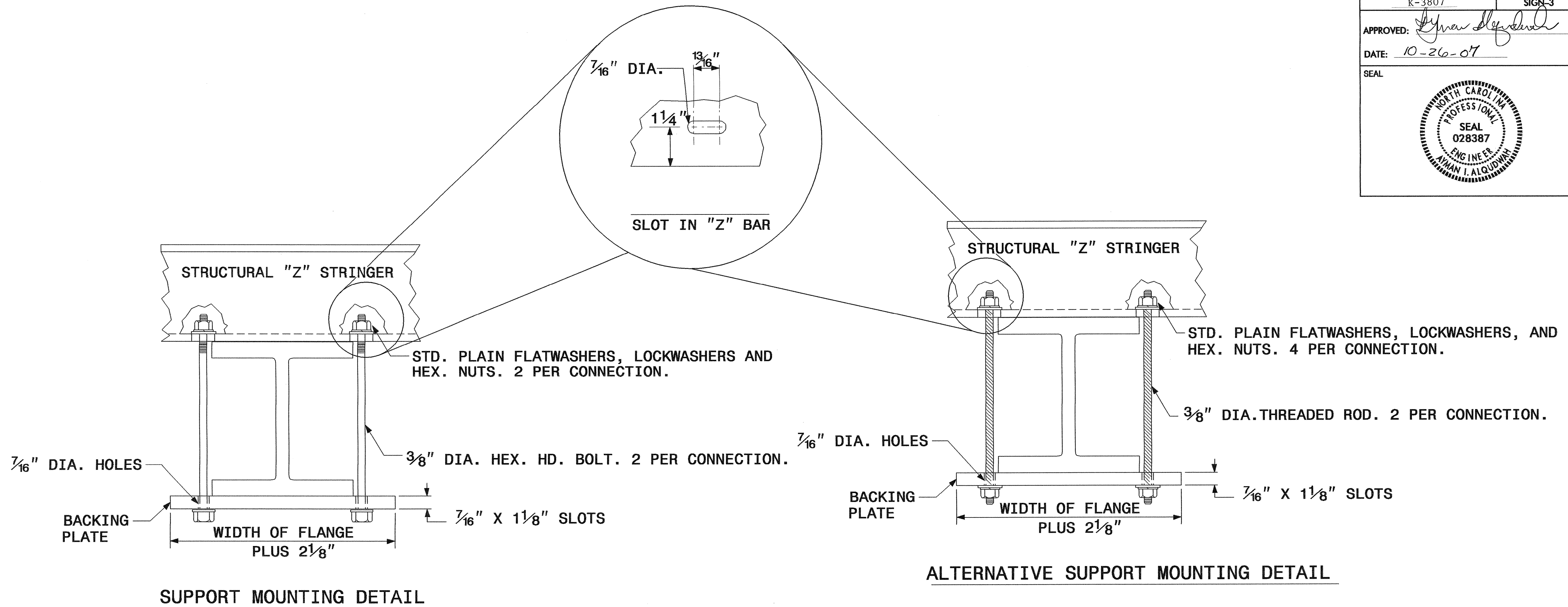
ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATION.....	6	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM.....	719	LB.
4066000000	903	SUPPORTS, SIMPLE STEEL BEAM.....	3839	LB.
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL.....	939	L.F.
4078000000	903	SUPPORTS, 2 LB STEEL U-CHANNEL.....	2	EA.
4096000000	904	SIGN ERECTION, TYPE D.....	6	EA.
4102000000	904	SIGN ERECTION, TYPE E.....	36	EA.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED).....	7	EA.
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED).....	1	EA.
4114000000	904	SIGN ERECTION, MILEMARKERS.....	2	EA.
4138000000	907	DISPOSAL OF SUPPORT, STEEL BEAM.....	2	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL.....	4	EA.

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

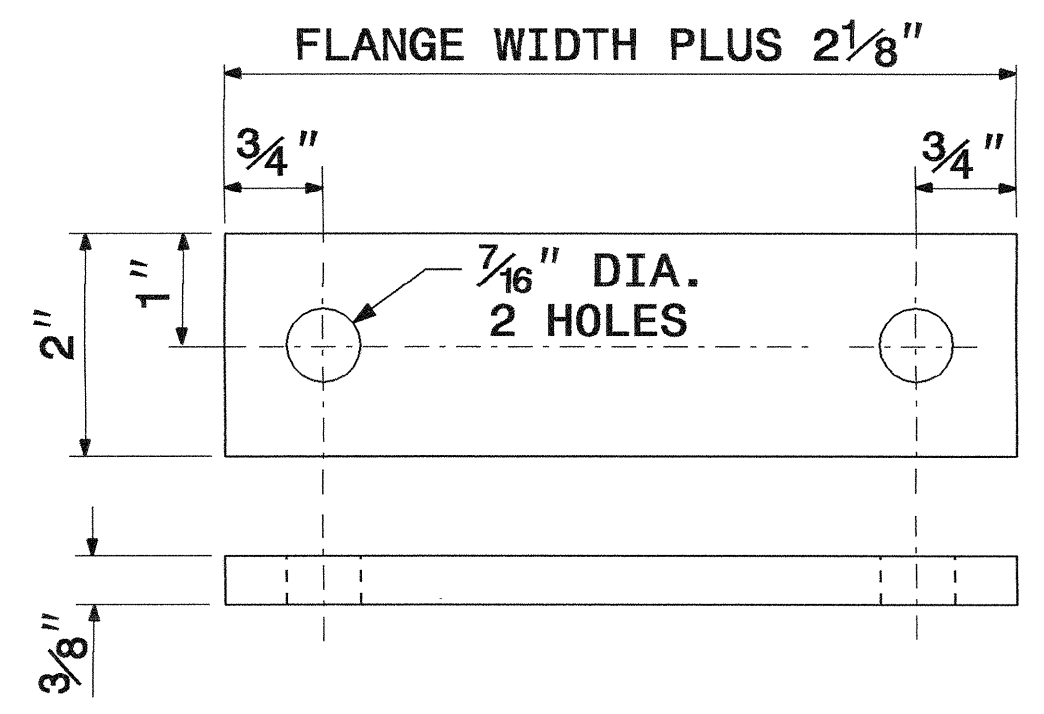
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901.20	903.10	904.50
901.50	904.10	

**SUMMARY OF QUANTITIES
& NOTES**

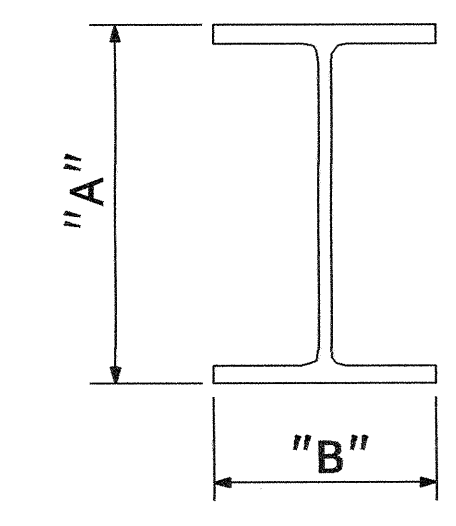
TIP NO. K-3807	SHEET NO. SIGN-3
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	
	



**BACKING PLATE
DETAIL**



SIGN SUPPORTS SECTION DIMENSIONS

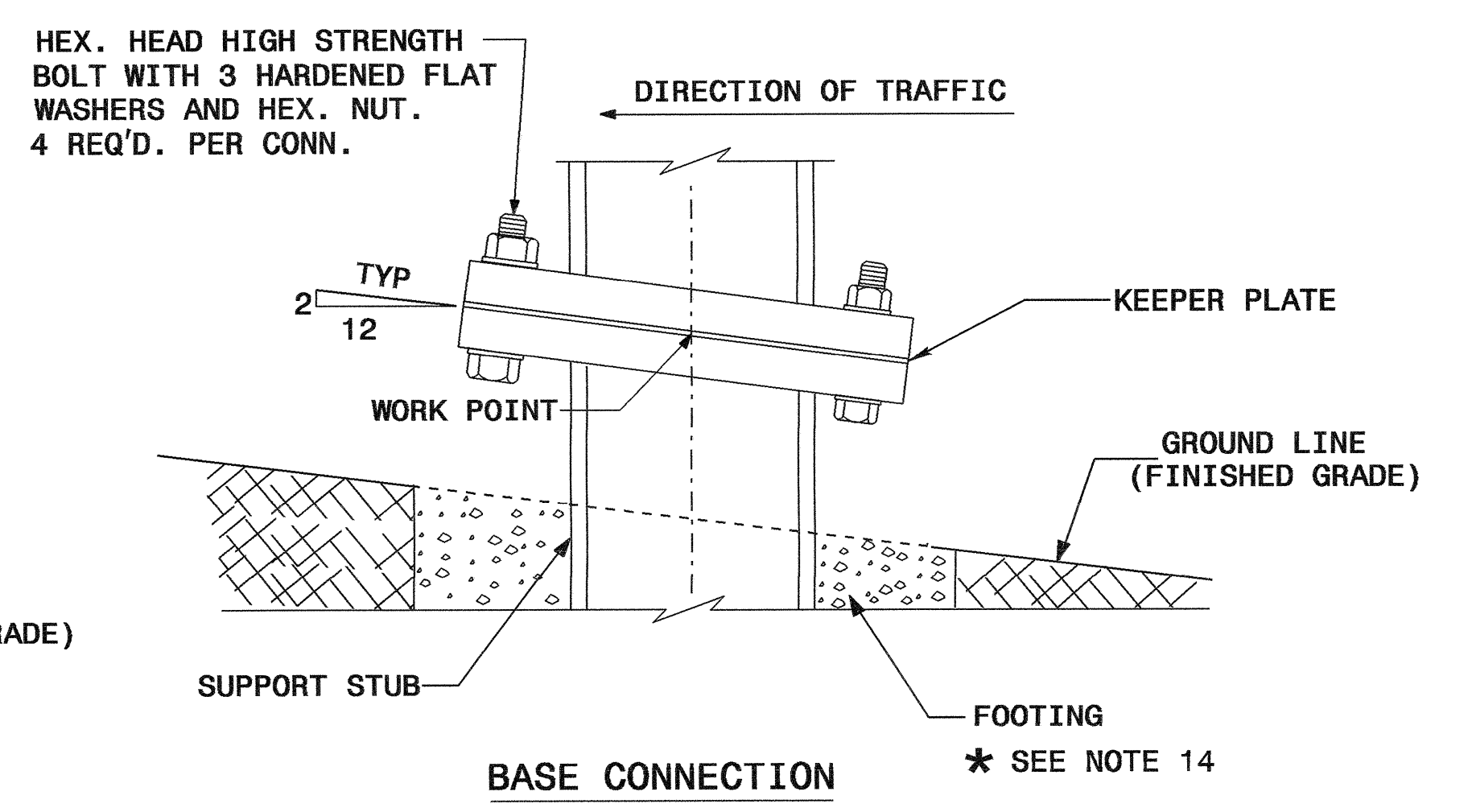
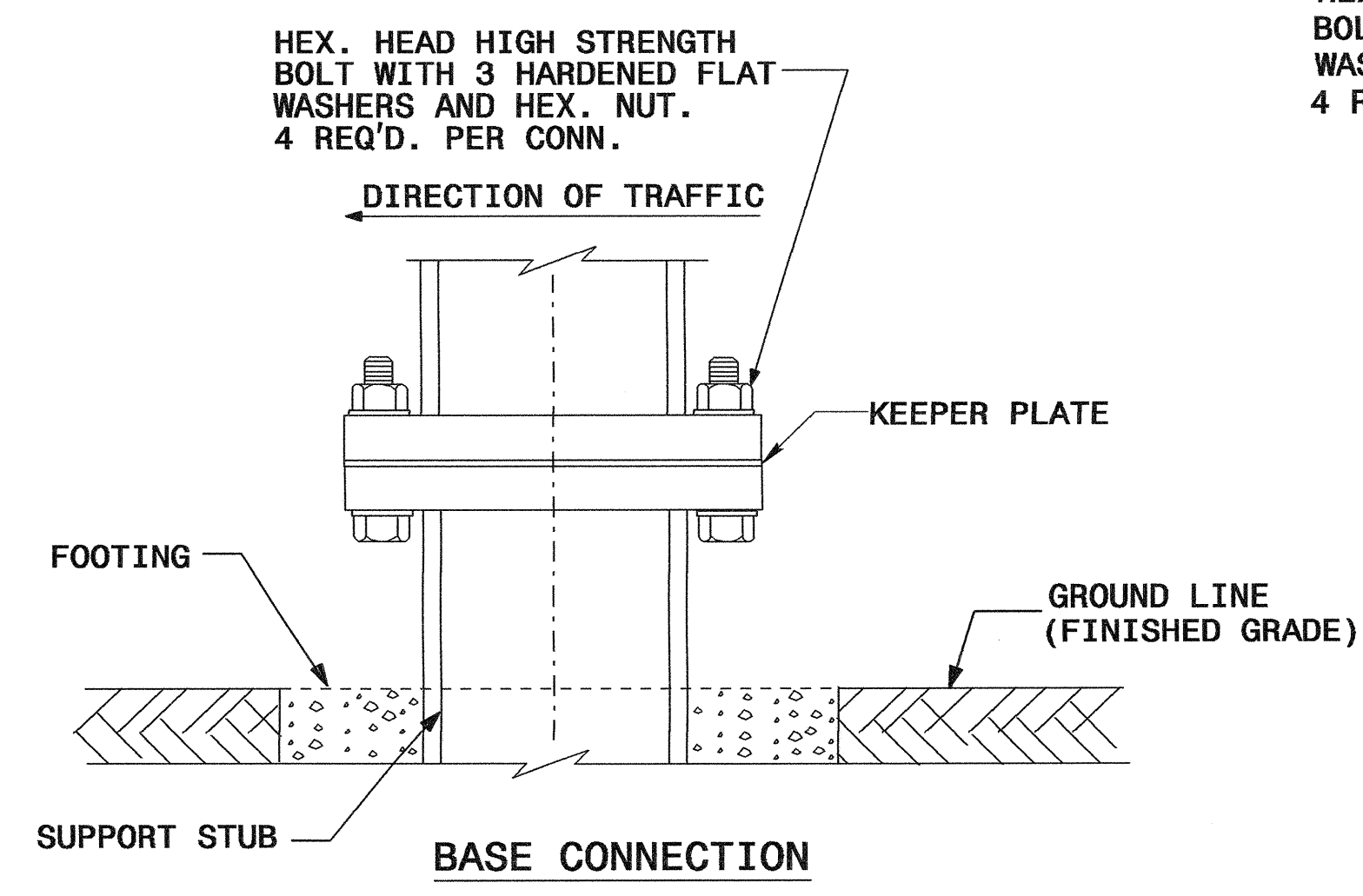
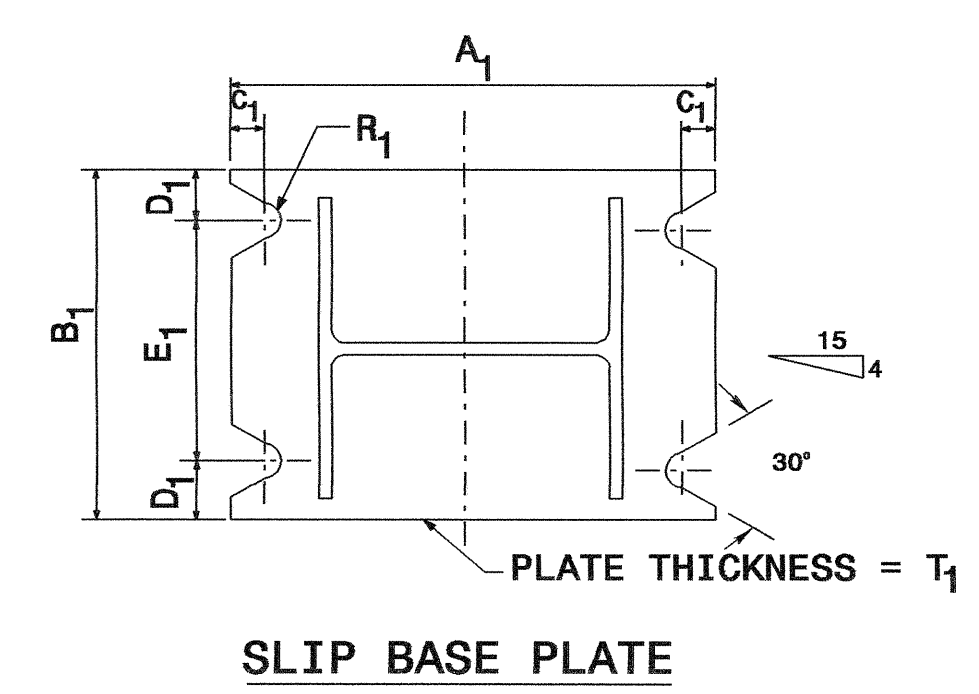
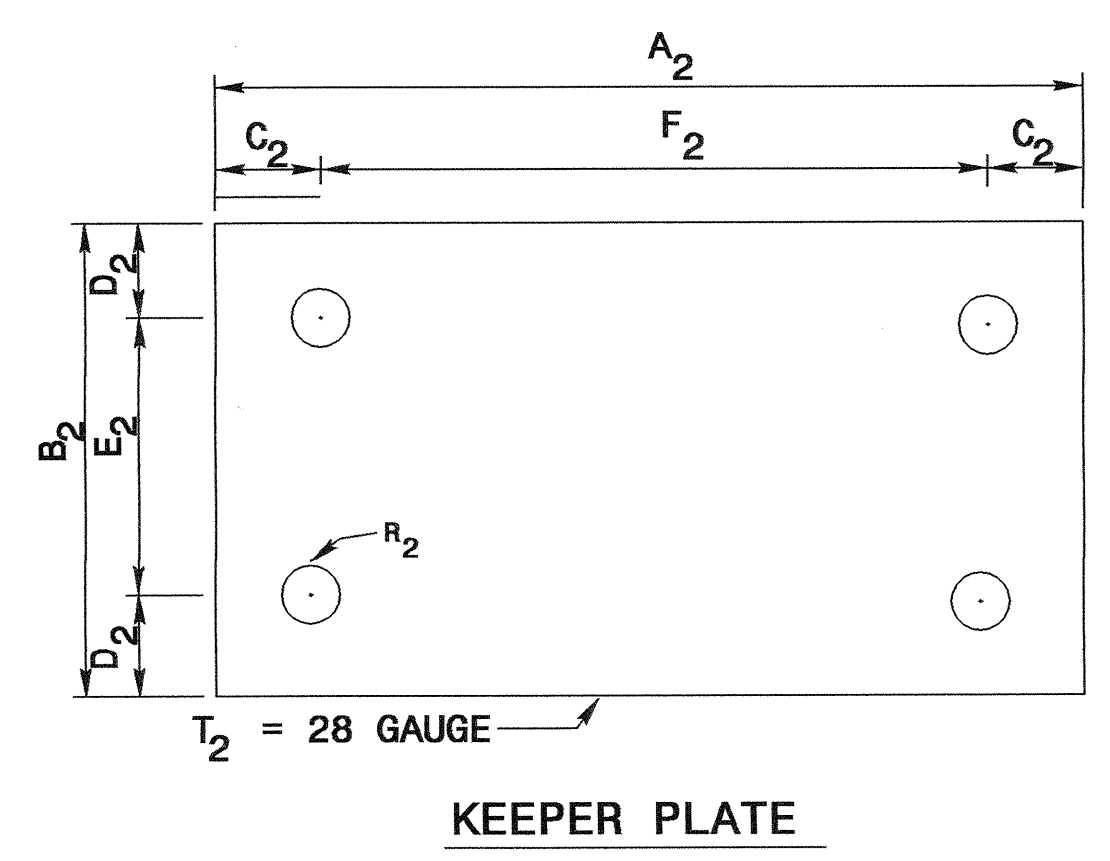
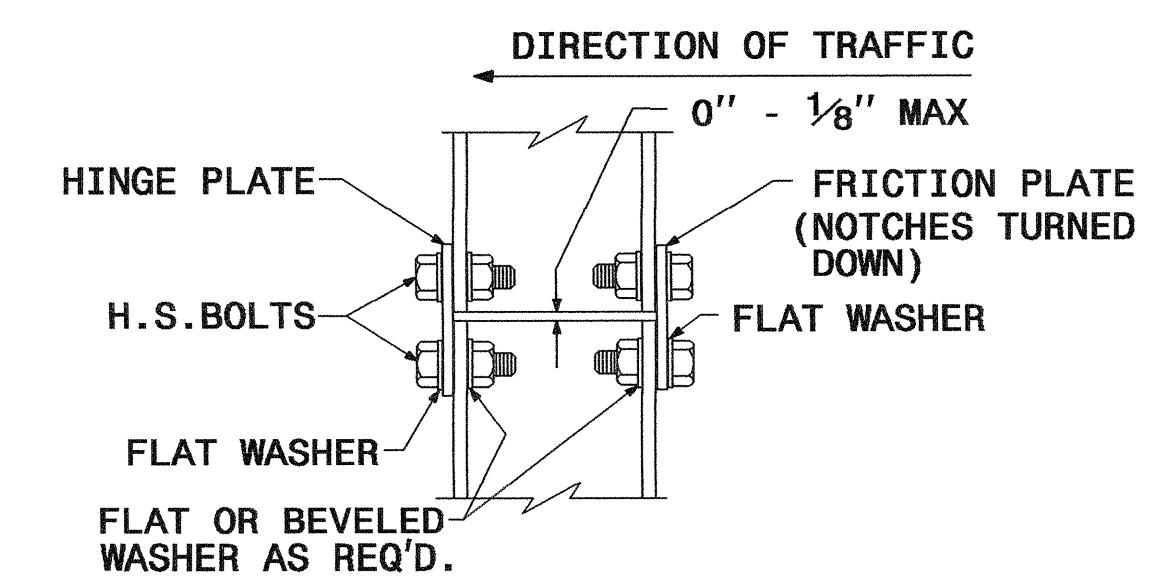
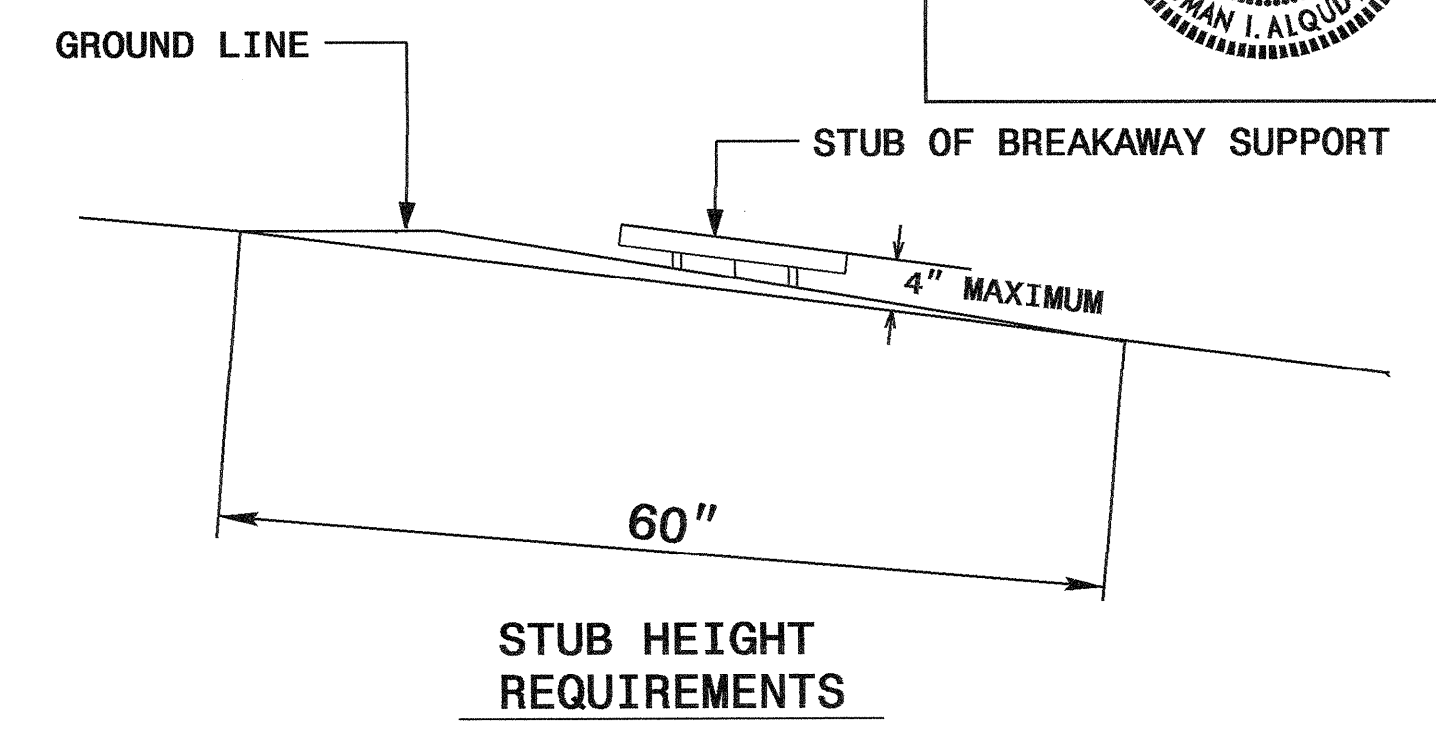
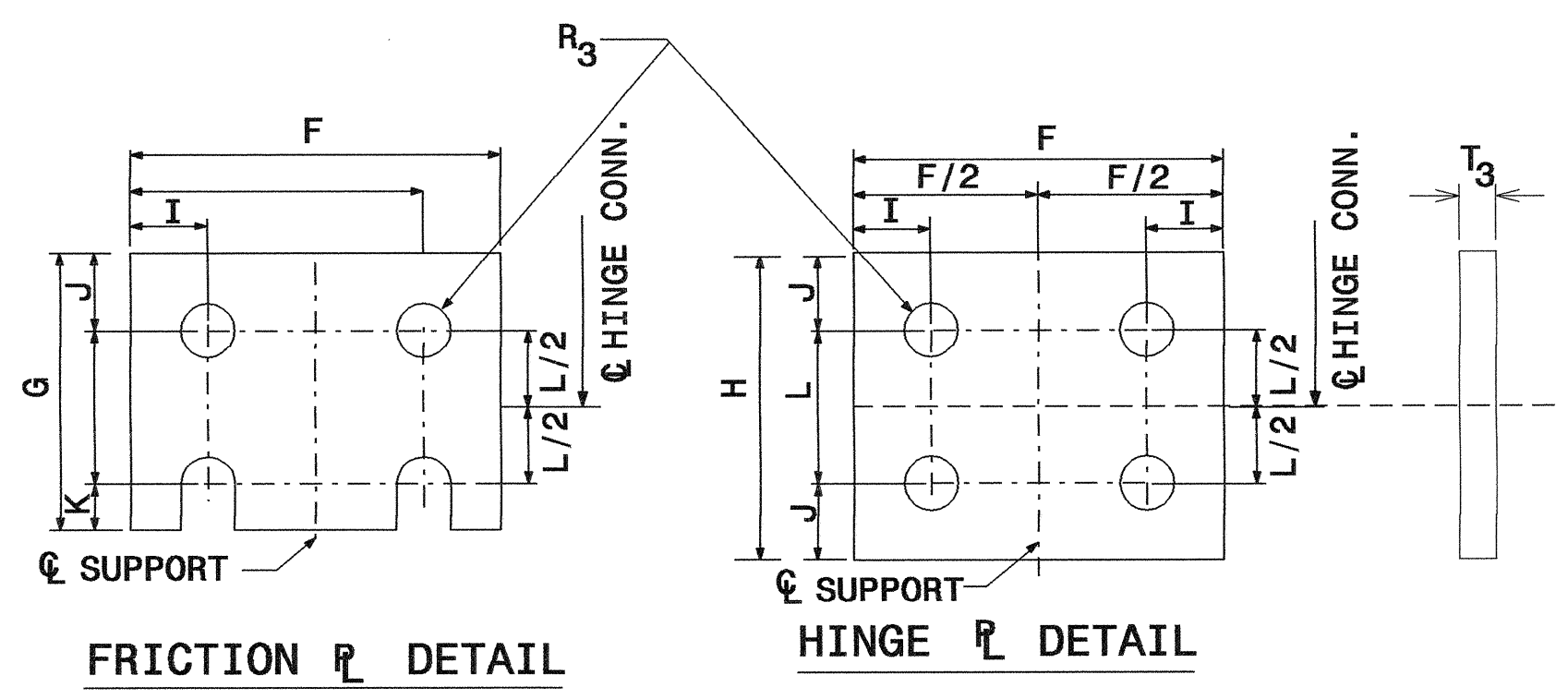
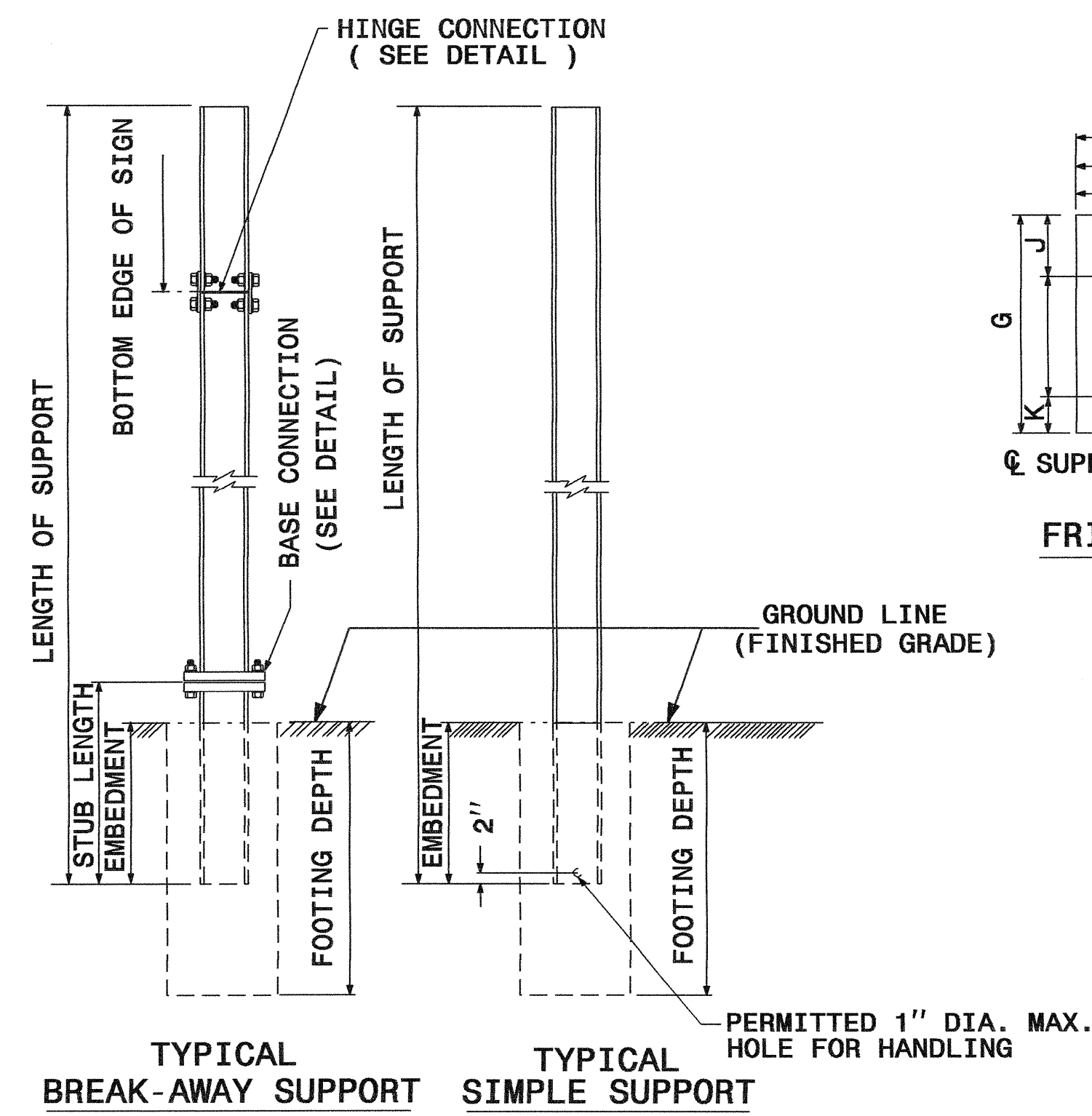


SECTION	A	B
S3 X 5.7	3"	2 3/8"
S4 X 7.7	4"	2 5/8"
W6 X 9	6"	4"
W6 X 12	6"	4"
W6 X 16	6 1/4"	4"
W8 X 18	8 1/8"	5 1/4"
W8 X 21	8 1/4"	5 1/4"
W10 X 22	10 1/8"	5 3/4"
W10 X 26	10 3/8"	5 3/4"
W12 X 26	12 1/4"	6 1/2"
W14 X 30	13 7/8"	6 3/4"
W16 X 31	15 7/8"	5 1/2"
W18 X 35	17 3/4"	6"
W18 X 40	17 7/8"	6"
W21 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 BOLTS AND THREADED RODS IN COMPLIANCE WITH ASTM A307 AND ASTM A153.


SIGN MOUNTING DETAILS

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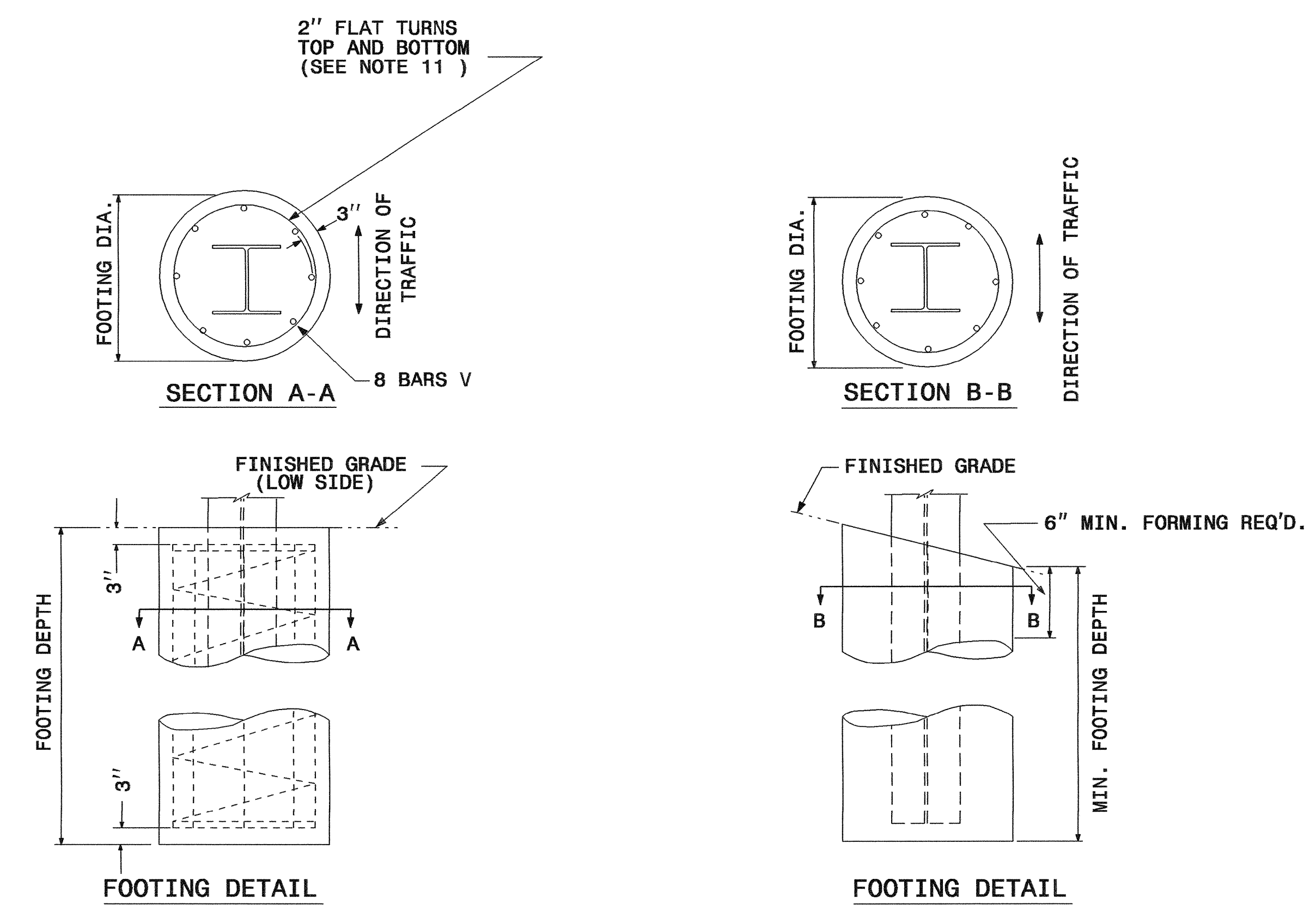


GROUND MOUNTED SIGN SUPPORT

25-OCT-2007 15:29
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 gater-1121 AT TEC221636

TIP NO. K-3807	SHEET NO. SIGN-5
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	
	

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. X 1 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. X 1 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. X 1 1/4"	4"	3 1/2"	4"	3/4"	1"	1 1/2"	2"	9/32"	3/8"	32
W6X12	5/8"DIA. X 3 3/4"	10"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	11/32"	10"	5"	1 1/4"	7/8"	3 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	39
W6X16	5/8"DIA. X 3 3/4"	10"	6"	1 1/4"	7/8"	4 1/4"	1 1/4"	11/32"	10"	6"	1 1/4"	7/8"	4 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	1/2"	47
W8X18	5/8"DIA. X 4 1/4"	12 1/2"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	11/32"	12 1/2"	6"	1 1/4"	7/8"	4 1/4"	11/32"	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"	11/32"	1/2"	70
W8X21	3/4"DIA. X 4 1/4"	12 1/2"	6"	1 1/2"	1"	4"	1 1/2"	13/32"	12 1/2"	6"	1 1/2"	1"	4"	13/32"	28 GAUGE	3/4"DIA. X 2 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. X 2 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. X 4 3/4"	16"	8"	1 1/2"	1"	6"	1 3/4"	13/32"	16"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA. X 2 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. X 4 3/4"	18"	9"	1 1/2"	1"	7"	1 3/4"	13/32"	18"	9"	1 1/2"	1"	7"	13/32"	28 GAUGE	3/4"DIA. X 2 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"	21"	9"	2"	1 1/2"	6"	1 3/4"	17/32"	21"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	17/32"	5/8"	205
W16X31	1"DIA. X 5"	23"	9"	2"	1 1/2"	6"	1 3/4"	17/32"	23"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 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"	1 3/4"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 1/4"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	243
W18X40	1"DIA. X 5 1/2"	25"	9"	2"	1 1/2"	6"	2"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 3/4"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	278
W21X44	1"DIA. X 5 1/2"	28"	9"	2"	1 1/2"	6"	2"	17/32"	28"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 3/4"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	310




FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1'	8 # 4 BARS	#3 BAR, 3" PITCH
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

GROUND MOUNTED SIGN SUPPORT

25-OCT-2007 15:28
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 gter-liz1

TIP NO. K-3807	SHEET NO. SIGN-6
APPROVED: <i>Ahmed Alqoud</i>	
DATE: 10-26-07	
SEAL	
	

NOTES:

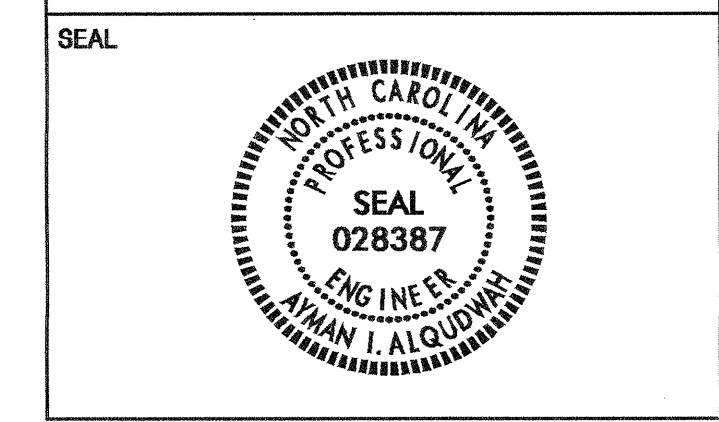
- DESIGN CONFORMS WITH THE SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS - A.A.S.H.T.O.
- USE MATERIALS, FABRICATE AND ERECT SIGNS AND SUPPORTS THAT CONFORM TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- 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.
- 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
- 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.
- BASE PLATES DETAILS ARE FOR INSTALLATIONS ON THE RIGHT SHOULDER AND IN GORE AREAS.
- 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
3/4"	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.

- 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.
- FORM TOP 6" OF FOOTINGS. ENGINEER APPROVES THE METHOD USED.
- 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.
- ELIMINATE HINGE CONNECTION FOR ALL SINGLE SUPPORT SIGNS.
- 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.
- SHAPE THE TOPS OF THE FOOTINGS TO CONFORM WITH FINISHED GROUND ELEVATIONS SUCH THAT WATER WILL NOT COLLECT AGAINST THE SUPPORTS.
- 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



SIGN NUMBER: 101, 102
TYPE: A
QUANTITY: 2
BACKG COLOR: Blue
COPY COLOR: White
DESIGN BY: GMT
CHECKED BY: KLJ
PROJECT ID: K-3807
DIV: 8
DATE: Sep 21, 2007

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 18'-0"
HEIGHT: 7'-6"
TOTAL AREA: 135.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 12"
NO. Z BARS: 3
LENGTH: 208.0
MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size				
											Text Length				
R	e	s	t	A	r	e	a				EM 2000				
46.6	15.8	13.8	13.9	8.3	16	20	10.4	14.1	10.6	46.6	122.9				
V	i	s	i	t	o	r	C	e	n	t	e	r	EM 2000		
15.9	18.6	7.8	15.5	8	12	15.8	8	16	15.5	15.4	12	15.5	8	15.9	184.2
1	M	I	L	E											E 2000
81.7	4.5	15	12	4.4	9.2	7.5	81.7								52.6

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 103, 104
TYPE: A
QUANTITY: 2
BACKG COLOR: Blue
COPY COLOR: White
DESIGN BY: GMT
CHECKED BY: KLJ
PROJECT ID: K-3807
DIV: 8
DATE: Sept 21, 2007

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 18'-0"
HEIGHT: 8'-0"
TOTAL AREA: 144.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 12"
NO. Z BARS: 3
LENGTH: 208.0
MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size				
											Text Length				
R	e	s	t	A	r	e	a				EM 2000				
46.6	15.8	13.8	13.9	8.3	16	20	10.4	14.1	10.6	46.6	122.9				
V	i	s	i	t	o	r	C	e	n	t	e	r	EM 2000		
15.9	18.6	7.8	15.5	8	12	15.8	8	16	15.5	15.4	12	15.5	8	15.9	184.2
N	E	X	T	R	I	G	H	T							E 2000
64.7	12.8	10.7	11.8	9	12	12.1	4.9	12.6	11.8	9	54.7				106.6

FILENAME: ground mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 201, 202
TYPE: A
QUANTITY: 2
BACKG COLOR: Blue
COPY COLOR: White
DESIGN BY: GMT
CHECKED BY: KLJ
PROJECT ID: K-3807
DIV: 8
DATE: Sep 12, 2007

SYMBOL	X	Y	WID	HT
AR	27.5	10.9	18.8	29.5

SIGN WIDTH: 6'-6"
HEIGHT: 8'-0"
TOTAL AREA: 52.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1.5"
RADII: 8"
NO. Z BARS: 3
LENGTH: 70.0
MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

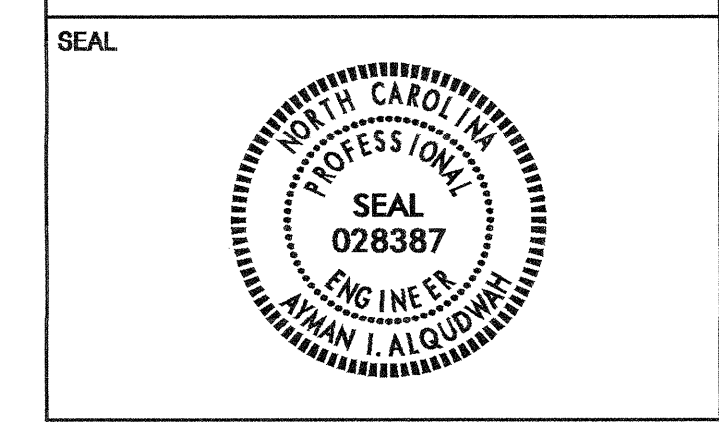
LETTER POSITIONS

Letter spacings are to start of next letter					Series/Size
					Text Length
R	E	S	T		D 2000
16.9	12.8	10.8	11.4	9.3	44.3
A	R	E	A		D 2000
13.5	15	12.8	10.5	12.8	51

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

25-OCT-2007 15:00
 p:\tippro\jects\k-3807\traffic\signing\codd\sign designs\ground mounted.dgn
 gater-lizzi AT TEC221638

'A' SIGN DESIGNS



SIGN NUMBER: 301 **BACKG COLOR:** Green **DESIGN BY:** GNT **CHECKED BY:** KLJ **DATE:** Sep 21, 2007
TYPE: D **COPY COLOR:** White **PROJECT ID:** K-3807 **DIV:** 8

QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 7'-0" **HEIGHT:** 3'-6" **TOTAL AREA:** 24.5 Sq.Ft.
BORDER TYPE: FLUSH **RECESS:** 0"
WIDTH: 1" **RADIUS:** 6"

NO. Z BARS: **MAT'L:** 0.125" (3.2 mm) ALUMINUM
LENGTH: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size	Text Length		
W	E	L	C	O	N	E	T	O					C 2000	22.1		
31	2.7	2	1.9	2.2	2.4	2.6	1.5	3	1.9	1.8	31				D 2000	56.2
13.9	4.6	6	5.5	5.3	5.6	4.6	5	4.1	6	5.3	4.3	13.9			C 2000	13.2
35.4	2	1.8	2.1	2.3	1.1	2.3	1.7	35.4							D 2000	68
8	6	5.6	5	4.5	5.3	5.6	6.1	4.7	4.6	5.2	6	5.3	4.3	8		

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 302 **BACKG COLOR:** Green **DESIGN BY:** GNT **CHECKED BY:** KLJ **DATE:** Sep 21, 2007
TYPE: D **COPY COLOR:** White **PROJECT ID:** K-3807 **DIV:** 8

QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 7'-0" **HEIGHT:** 3'-6" **TOTAL AREA:** 24.5 Sq.Ft.
BORDER TYPE: FLUSH **RECESS:** 0"
WIDTH: 1" **RADIUS:** 6"

NO. Z BARS: **MAT'L:** 0.125" (3.2 mm) ALUMINUM
LENGTH: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size	Text Length		
W	E	L	C	O	N	E	T	O					C 2000	22.1		
31	2.7	2	1.9	2.2	2.4	2.6	1.5	3	1.9	1.8	31				D 2000	56.2
13.9	4.6	6	5.5	5.3	5.6	4.6	5	4.1	6	5.3	4.3	13.9			C 2000	13.2
35.4	2	1.8	2.1	2.3	1.1	2.3	1.7	35.4							D 2000	68
8	6	5.6	5	4.5	5.3	5.6	6.1	4.7	4.6	5.2	6	5.3	4.3	8		

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 303 **BACKG COLOR:** Blue **DESIGN BY:** GNT **CHECKED BY:** KLJ **DATE:** Sep 24, 2007
TYPE: D **COPY COLOR:** White **PROJECT ID:** K-3807 **DIV:** 8

QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	37.6	30.1	6	9
ARUP	95.5	9.4	6	9

SIGN WIDTH: 9'-0" **HEIGHT:** 3'-6" **TOTAL AREA:** 31.5 Sq.Ft.
BORDER TYPE: FLUSH **RECESS:** 0"
WIDTH: 0.75" **RADIUS:** 6"

NO. Z BARS: **MAT'L:** 0.125" (3.2 mm) ALUMINUM
LENGTH: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size	Text Length							
C	A	R	S										D 2000	19.6							
50.8	4.9	6	4.7	4.1	37.6								D 2000	23.7							
41.6	5.1	5.1	5.1	4.3	4.1	42.7							D 2000	84.1							
5.4	4.9	6	4.7	4.1	6	6.2	1.9	4.6	4.1	6	4.6	4.6	6	2.4	4.6	4.7	4.7	4.1	18.5		

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

25-OCT-2007 15:01
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 sater-lzzj\AI-TEC221636


'D' SIGN DESIGNS

TIP NO. K-3807 SHEET NO. SIGN-9

APPROVED: *[Signature]*

DATE: 10-26-07

SEAL



SIGN NUMBER: 304 TYPE: D BACKG COLOR: Blue COPY COLOR: White

DESIGN BY: GNT CHECKED BY: KLJ DATE: Sep 25, 2007

PROJECT ID: K-3807 DIV: 8

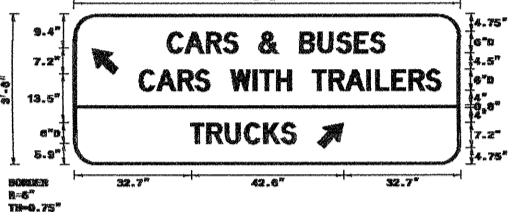
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	5.4	25.4	6	9
ARUP	68.1	4.8	6	9

SIGN WIDTH: 9'-0" HEIGHT: 3'-6" TOTAL AREA: 31.5 Sq.Ft.

BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 6"

NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM



USE NOTES: 1,4

- Legend and border shall be direct applied Type III reflective sheeting.
- Legend and border shall be direct applied non-reflective sheeting.
- Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
- Background shall be Type III reflective sheeting.
- Background shall be Type I reflective sheeting.
- Center arrow(s) vertically on sign.
- Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size Text Length							
C	A	R	S	A	B	U	S	E	S				D 2000							
26.3	4.9	6	4.7	4.1	6	5.3	6	5.1	5.1	5.1	4.3	4.1	21	60.7						
C	A	R	S	W	I	T	H	T	R	A	I	L	E	R	S	D 2000				
18.5	4.9	6	4.7	4.1	6	6.2	1.9	4.6	4.1	6	4.6	4.6	6	2.4	4.6	4.7	4.7	4.1	5.4	84.1
T	R	U	C	K	S															D 2000
32.7	4.6	5.1	5.4	5.4	4.8	4.1	45.9													29.4

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 305 TYPE: D BACKG COLOR: Blue COPY COLOR: White

DESIGN BY: GNT CHECKED BY: KLJ DATE: Sep 24, 2007

PROJECT ID: K-3807 DIV: 8

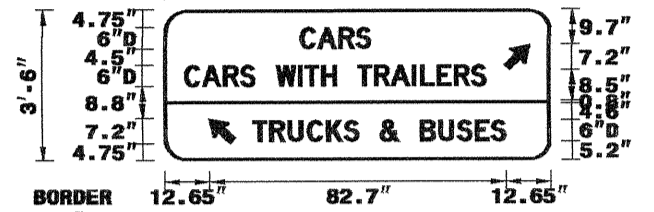
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	95	25.2	6	9
ARUP	12.6	4.8	6	9

SIGN WIDTH: 9'-0" HEIGHT: 3'-6" TOTAL AREA: 31.5 Sq.Ft.

BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 6"

NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM



USE NOTES: 1,4

- Legend and border shall be direct applied Type III reflective sheeting.
- Legend and border shall be direct applied non-reflective sheeting.
- Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
- Background shall be Type III reflective sheeting.
- Background shall be Type I reflective sheeting.
- Center arrow(s) vertically on sign.
- Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size Text Length							
C	A	R	S										D 2000							
38.1	4.9	6	4.7	4.1	50.3								19.6							
C	A	R	S	W	I	T	H	T	R	A	I	L	E	R	S	D 2000				
5.9	4.9	6	4.7	4.1	6	6.2	1.9	4.6	4.1	6	4.6	4.6	6	2.4	4.6	4.7	4.7	4.1	18	84.1
T	R	U	C	K	S	A	B	U	S	E	S									D 2000
24.9	4.6	5.1	5.4	5.4	4.8	4.1	6	5.3	6	5.1	5.1	5.1	4.3	4.1	12.6					70.4

FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 306 TYPE: D BACKG COLOR: Blue COPY COLOR: White

DESIGN BY: GNT CHECKED BY: KLJ DATE: Sep 21, 2007

PROJECT ID: K-3807 DIV: 8

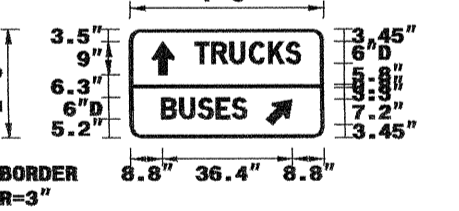
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	6.3	17.5	6	9
ARUP	38	3.5	6	9

SIGN WIDTH: 4'-6" HEIGHT: 2'-6" TOTAL AREA: 11.3 Sq.Ft.

BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 3"

NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM



USE NOTES: 1,4

- Legend and border shall be direct applied Type III reflective sheeting.
- Legend and border shall be direct applied non-reflective sheeting.
- Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
- Background shall be Type III reflective sheeting.
- Background shall be Type I reflective sheeting.
- Center arrow(s) vertically on sign.
- Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Spacing Factor is 1 unless specified otherwise

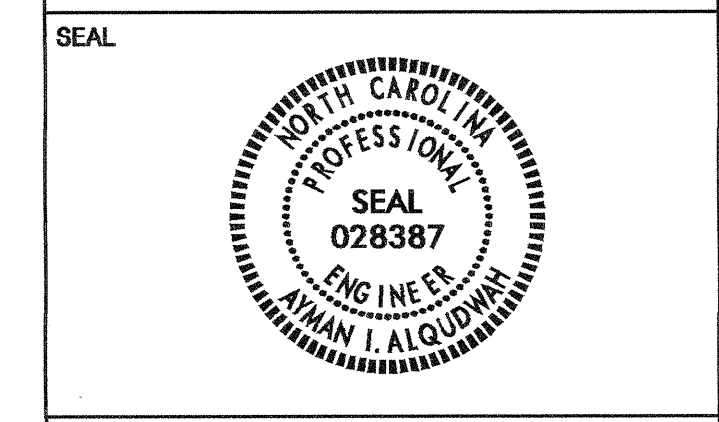
LETTER POSITIONS

Letter spacings are to start of next letter													Series/Size Text Length
T	R	U	C	K	S								D 2000
18.3	4.6	5.1	5.4	5.4	4.8	4.1	6.3						29.4
B	U	S	E	S									D 2000
8.8	5.1	5.1	5.1	4.3	4.1	21.5							23.7

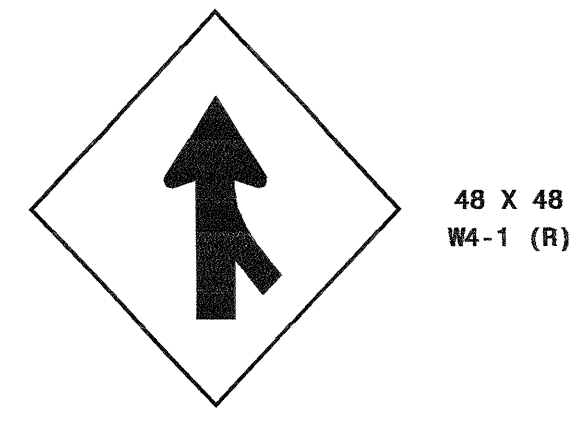
FILENAME: Ground Mounted NORTH CAROLINA D.O.T. SIGN DETAIL

25-OCT-2007 15:01
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 sater-lizz AT TEC221636

'D' SIGN DESIGNS

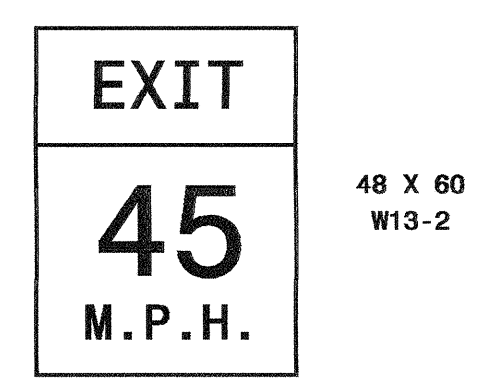


406 QUANTITY REQ'D 2



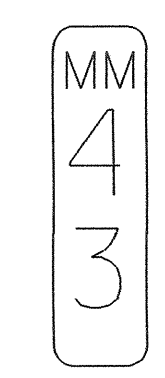
TWO "U" POSTS PER SIGN

418 QUANTITY REQ'D 2



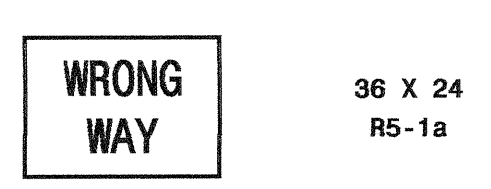
TWO "U" POSTS PER SIGN

QUANTITY REQ'D 2



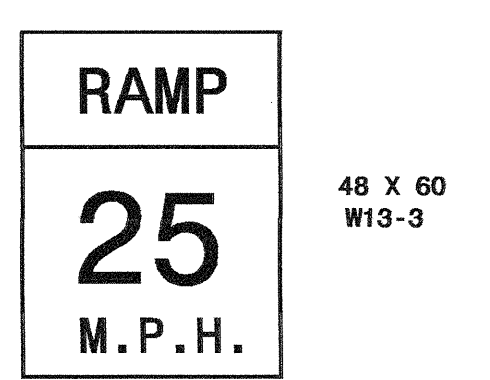
ONE "U" POST PER SIGN

410 QUANTITY REQ'D 4



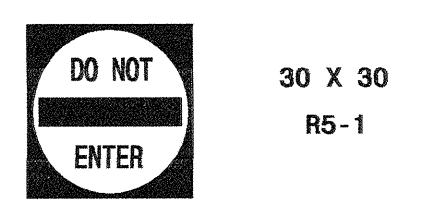
ONE "U" POST PER SIGN

455 QUANTITY REQ'D 2



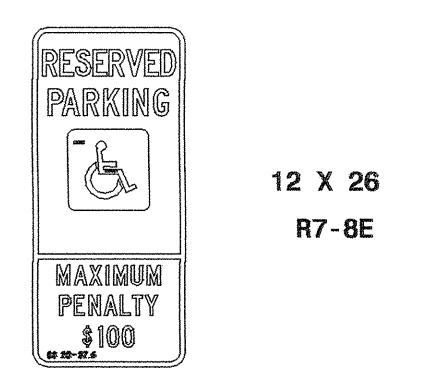
TWO "U" POSTS PER SIGN

411 QUANTITY REQ'D 10



ONE "U" POST PER SIGN

463 QUANTITY REQ'D 4



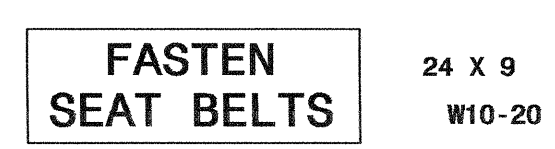
ONE "U" POST PER SIGN

412 QUANTITY REQ'D 3



ONE "U" POST PER SIGN

464 QUANTITY REQ'D 2



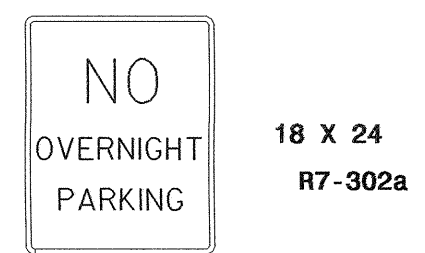
ONE "U" POST PER SIGN

414 QUANTITY REQ'D 3



TWO "U" POSTS PER SIGN


465 QUANTITY REQ'D 4



ONE "U" POST PER SIGN

TYPE "E" and MILEMARKER SIGNS

25-OCT-2007 15:03
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 gater.liz21 AT TEC221636

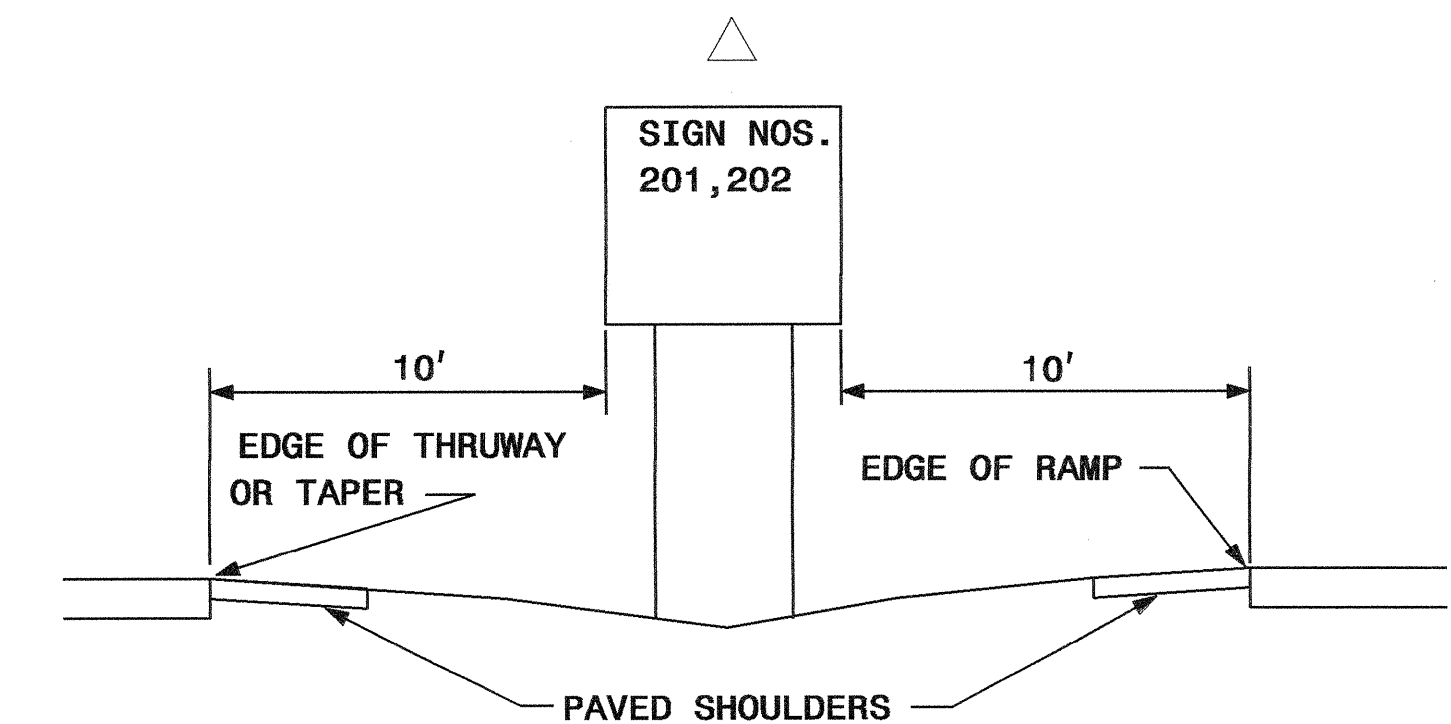
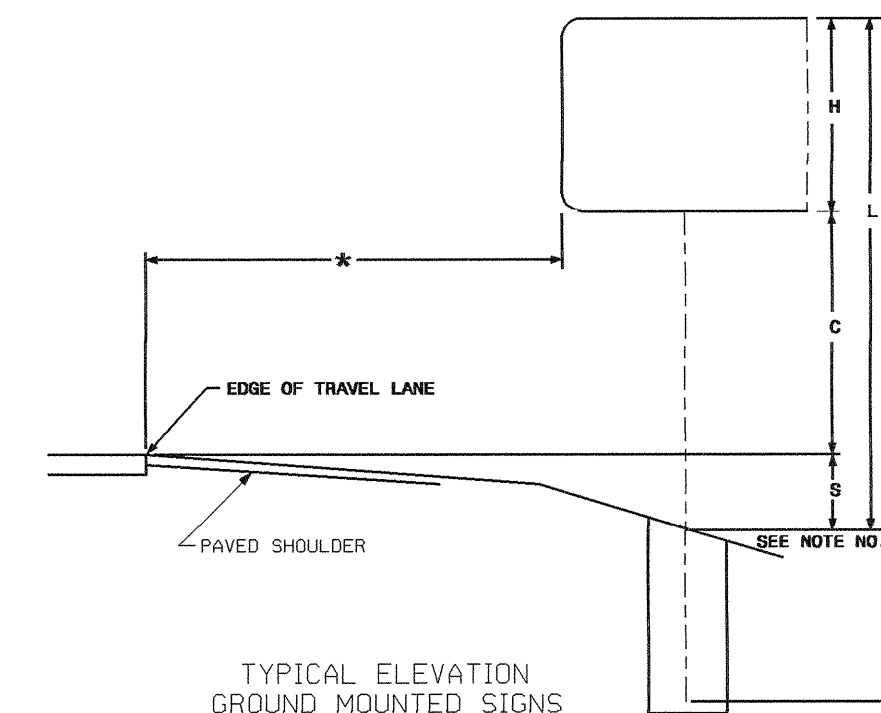
TIP NO. K-3807	SHEET NO. SIGN-11
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	
	

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 H	MTG HT C	EMBED-MENT	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH						
101	A	216	X	90	SEE PLAN SHEET 12	2	W6x16	S	N/A	N/A	20.00	7.50	7.00	6	2.03	16.53	22.53	0.00	0.00	0.00	4.20	18.70	24.70	1.5	6.5	0.00	755.68	0.85	
102	A	216	X	90	SEE PLAN SHEET 15	2	W6x16	S	N/A	N/A	20.00	7.50	7.00	6	2.82	17.32	23.32	0.00	0.00	0.00	7.39	21.89	27.89	1.5	6.5	0.00	819.36	0.85	
103	A	216	X	96	34+00 NB	2	W6x16	S	N/A	N/A	20.00	8.00	7.00	6	2.22	17.22	23.22	0.00	0.00	0.00	3.18	18.18	24.18	1.5	6.5	0.00	758.40	0.85	
104	A	216	X	96	73+20 SB	2	W8x18	S	N/A	N/A	20.00	8.00	7.00	6	1.86	16.86	22.86	0.00	0.00	0.00	9.59	24.59	30.59	2	6.5	0.00	962.10	1.51	
201	A	78	X	96	49+00 NB	2	S4x7.7	BA	N/A	N/A	△	8.00	7.00	4.5	0.19	15.19	19.69	0.00	0.00	0.00	0.51	15.51	20.01	1	5	346.30	0.00	0.29	
202	A	78	X	96	60+75 SB	2	S4x7.7	BA	N/A	N/A	△	8.00	7.00	4.5	1.30	16.30	20.80	0.00	0.00	0.00	2.78	17.78	22.28	1	5	372.32	0.00	0.29	
901	A	144	X	60	43+75 NB	2	S4x7.7	S	N/A	N/A	20.00	5.00	7.00	4.5	0.31	12.31	16.81	0.00	0.00	0.00	3.31	15.31	19.81	1	5	0.00	281.99	0.29	
902	B	144	X	48	34+70 SB	2	S4x7.7	S	N/A	N/A	20.00	4.00	7.00	4	1.10	12.10	16.10	0.00	0.00	0.00	2.85	13.85	17.85	1	4.5	0.00	261.42	0.26	

	TOTAL	TOTAL	TOTAL
	718.62	3838.94	5.20
USE:	719	3839	6


NOTES

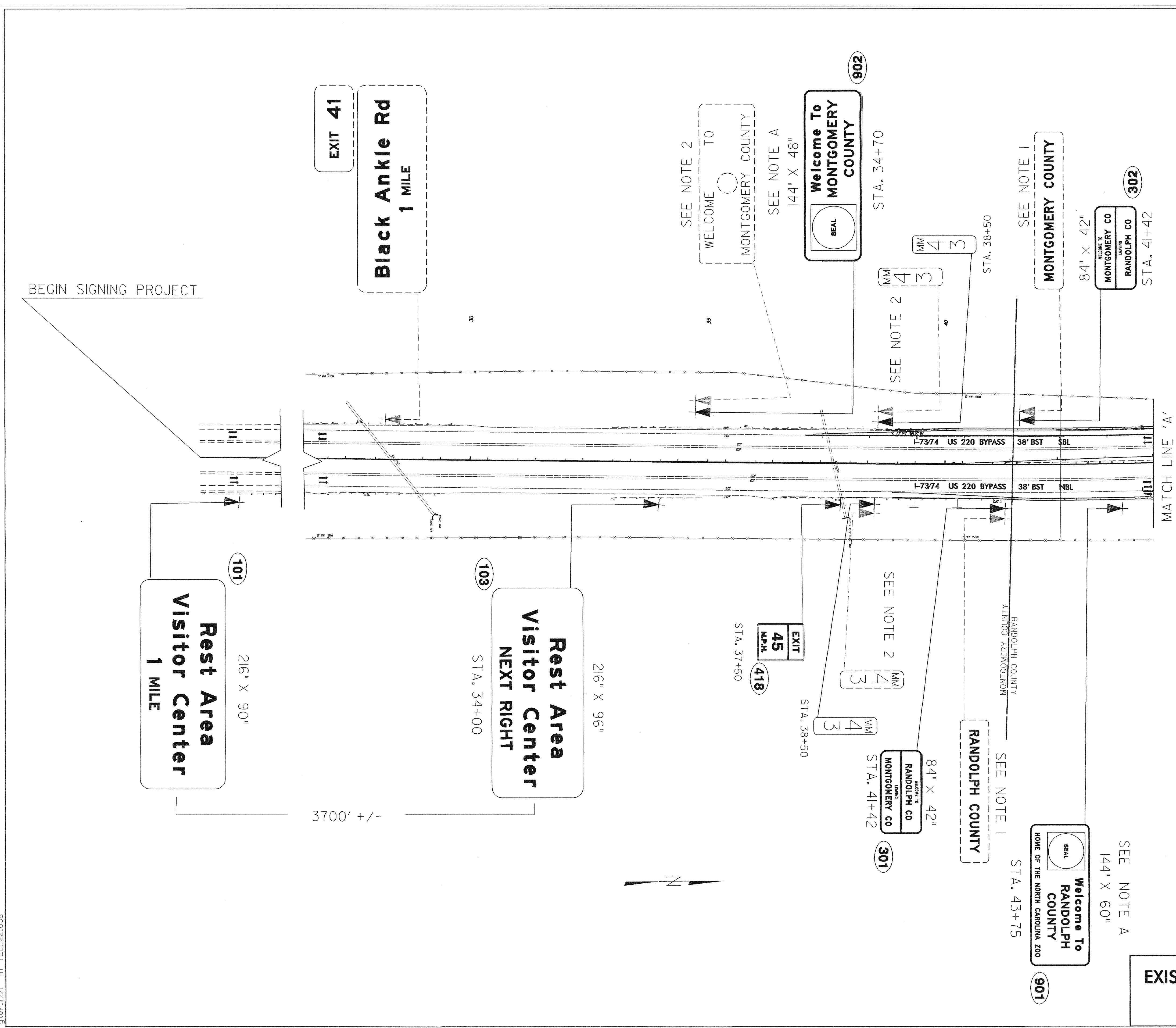
- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF PAVEMENT.
- FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (*) ARTICLE 1072-1. (*) = N.C.D.O.T. 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.



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


25-OCT-2007 15:02
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 gate-1121 AT TEC221636

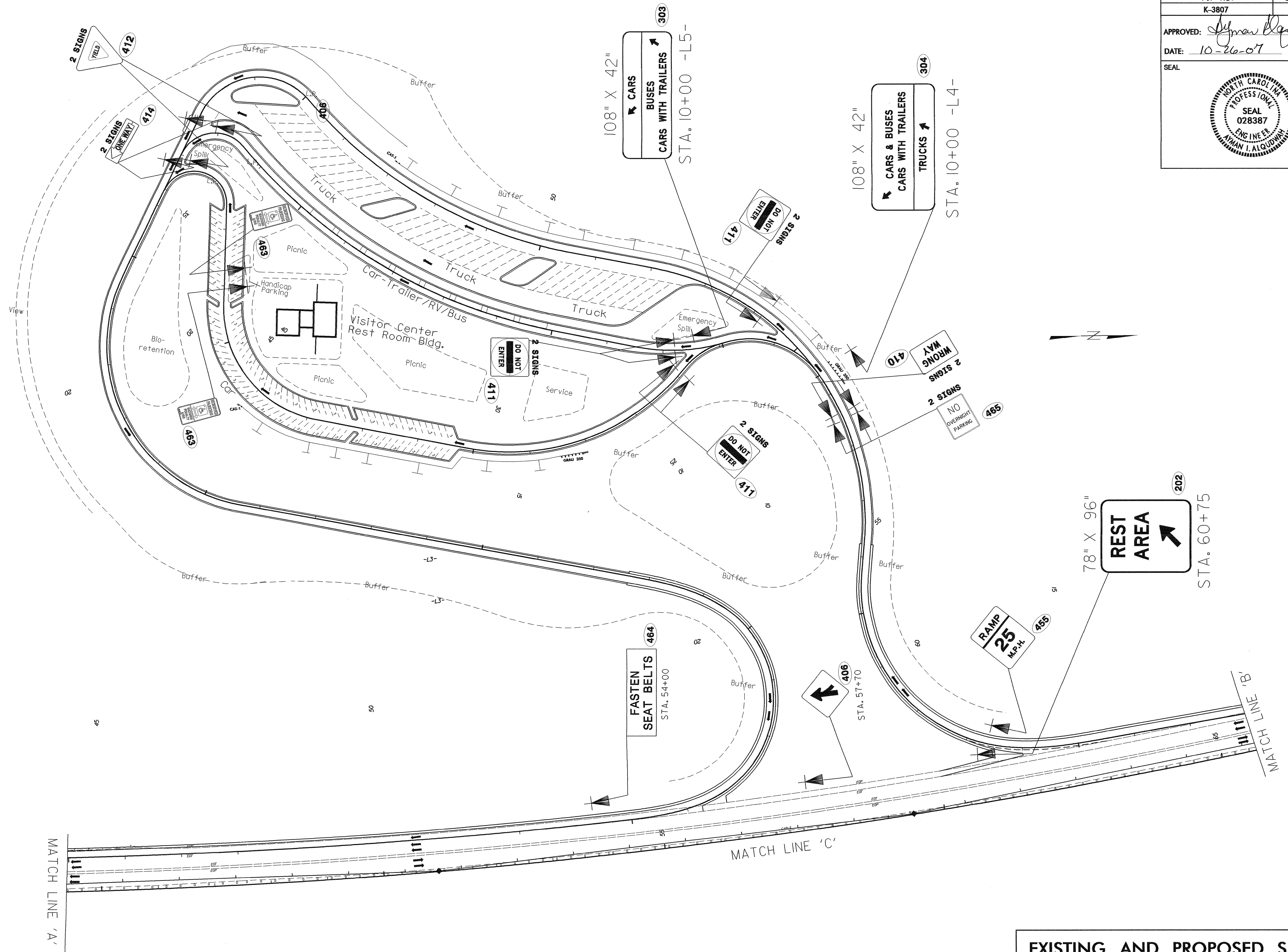
TIP NO. K-3807	SHEET NO. SIGN-12
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	
	



**EXISTING AND PROPOSED SIGNS
I-73/74 US 220 BYPASS**

25-OCT-2007 14:51
 p:\projects\k-3807\office\signing\CADD\signing\Layout Plans\Signing Plans\Sheet 1.dgn
 gster11221 AL TELCC221636

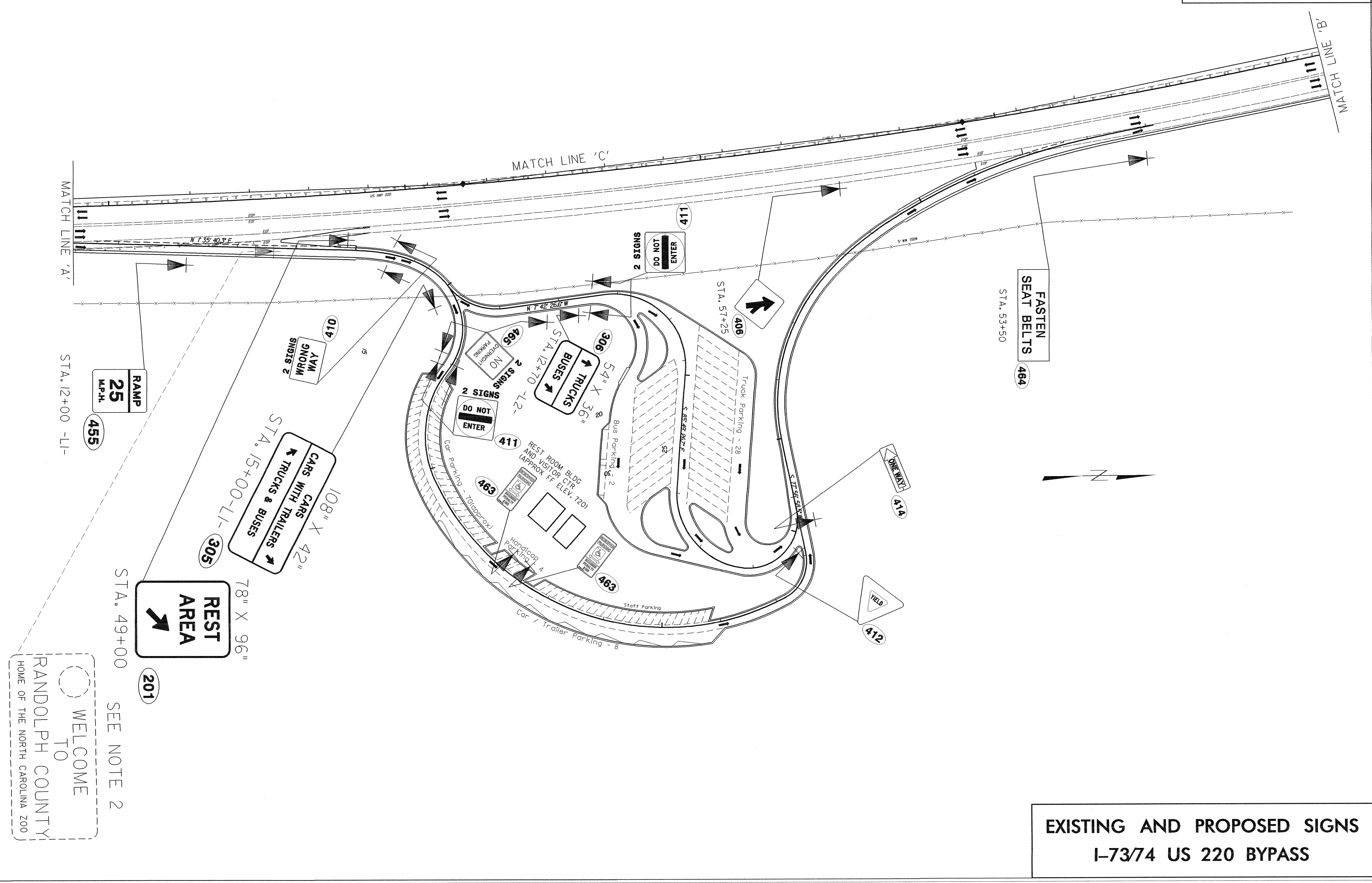
TIP NO. K-3807	SHEET NO. SIGN-13
APPROVED: <i>Signer Signature</i>	
DATE: 10-26-07	
SEAL	
	



**EXISTING AND PROPOSED SIGNS
I-73/74 US 220 BYPASS**

25-OCT-2007 14:50
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 gater1221 AL TEC221636

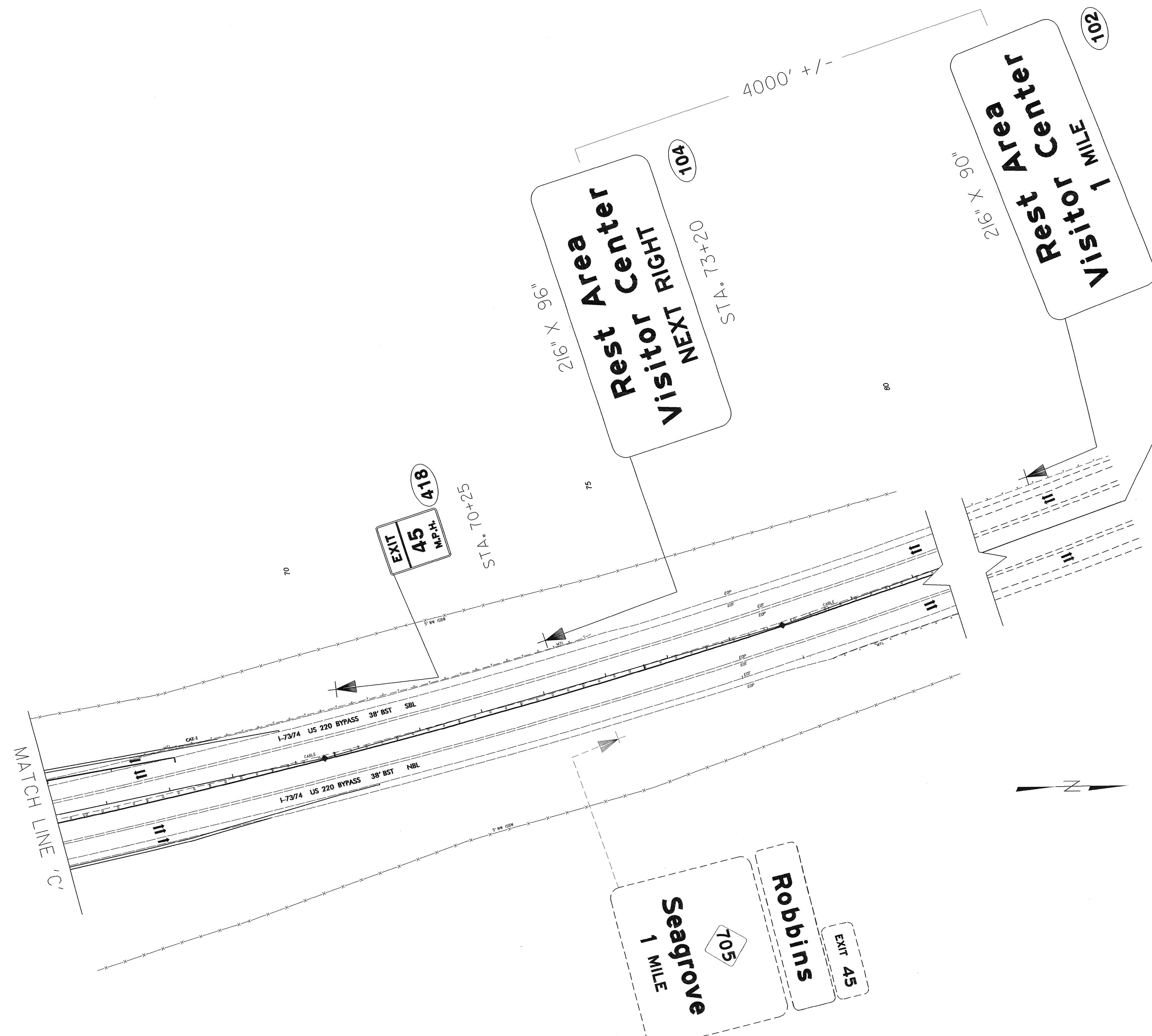
TIP NO. K-3807	SHEET NO. SIGN-14
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	



**EXISTING AND PROPOSED SIGNS
I-73/74 US 220 BYPASS**

25-OCT-2007 14:49
 p:\tipproj\lepis-kk3807\traffic\signing\CADD\Signing Layout Plans\Signing Plans\Sheet_3.dgn
 gater-11221 AT TECC221636

TIP NO. K-3807	SHEET NO. SIGN-15
APPROVED: <i>[Signature]</i>	
DATE: 10-26-07	
SEAL	



**EXISTING AND PROPOSED SIGNS
I-73/74 US 220 BYPASS**

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