

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO. 43796.1.1	SHEET NO. SIGN-1
APPROVED: _____	
DATE: _____	
SEAL	
	

SIGNING PLAN
HENDERSON COUNTY

LOCATION: I-26 SPEED DETECTION SYSTEMS

PROJECT: 43796.1.1

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
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION
901.10	TYPE 'A' SIGNS
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIALS.
- 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.			
0001000000	800	MOBILIZATION	1	L.S.
3030000000	862	STEEL BEAM GUARDRAIL	1146	L.F.
3210000000	862	GUARDRAIL ANCHOR UNIT, TYPE CAT-1	2	EA.
3270000000	SP	GUARDRAIL ANCHOR UNIT, TYPE 350	3	EA.
4057000000	SP	OVERHEAD FOOTING	60	C.Y.
4082100000	SP	SUPPORTS, OVERHEAD SIGN STRUCTURE "A"	1	L.S.
4082100000	SP	SUPPORTS, OVERHEAD SIGN STRUCTURE "B"	1	L.S.
4109000000	904	SIGN ERECTION, TYPE A (OVERHEAD)	4	EA.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	SIGN DESIGNS
SIGN-3-3A	OVERHEAD DETAILS
SIGN-4-5	SIGNING PLAN SHEETS

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

K. L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
J. G. MARTINEZ SIGNING & DELINEATION PROJECT DESIGN ENGINEER





SIGN NUMBER: 1,3 BACKG COLOR: White
 TYPE: A COPY COLOR: Black

DESIGN BY: JgM CHECKED BY: DATE: Dec 04, 2013
 PROJECT ID: 43796.1.1 DIV: 14

QUANTITY: 2

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 9'-6"
 HEIGHT: 6'-0"
 TOTAL AREA: 57.0 Sq.Ft.

BORDER TYPE: FLUSH
 RECESS: 0"
 WIDTH: 1.75"
 RADII: 9"

NO. Z BARS: 2 MAT'L: 0.125" (3.2 mm) ALUMINUM
 LENGTH: 106.0

USE NOTES: 1,2

- Legend and border(except those that are colored black) shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields: A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and decountable.

BORDER R=9" TH=1.75"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Letter	N	O	T	R	U	C	K	S	Series/Size
NO TRUCKS	13.8	10.4	8.4	10	9.2	10.1	10.4	10.4	E 2000
3 AXLES	30.5	6.5	8	9	8.6	7.4	7.1	8.5	86.3
OR MORE	29.5	8.6	6.5	8	9.4	8.6	8.1	6	E 2000
THIS LANE	24.8	7.4	8.6	3	6.5	8	6.5	9.5	55
									64.2

FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2,4 BACKG COLOR: Yellow
 TYPE: A COPY COLOR: Black

DESIGN BY: JgM CHECKED BY: DATE: Sep 26, 2013
 PROJECT ID: 43796.1.1 DIV: 14

QUANTITY: 2

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 11'-6"
 HEIGHT: 5'-0"
 TOTAL AREA: 57.5 Sq.Ft.

BORDER TYPE: FLUSH
 RECESS: 0.5"
 WIDTH: 0.75"
 RADII: 1.38"

NO. Z BARS: 2 MAT'L: 0.125" (3.2 mm) ALUMINUM
 LENGTH: 130.0

USE NOTES:

- Legend and border(except those that are colored black) shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields: A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and decountable.

BORDER R=9" TH=1.75"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Letter	T	R	U	C	K	S	P	E	E	D	Series/Size
TRUCK SPEED	16.3	9.2	10.1	10.4	10.4	8.3	10	10.1	9.8	9.5	E 2000
WHEN FLASHING	7.5	12.3	10.7	9.5	8.1	10	9.2	8.3	11.3	10.1	105.4
											74
											E 2000
											123.1

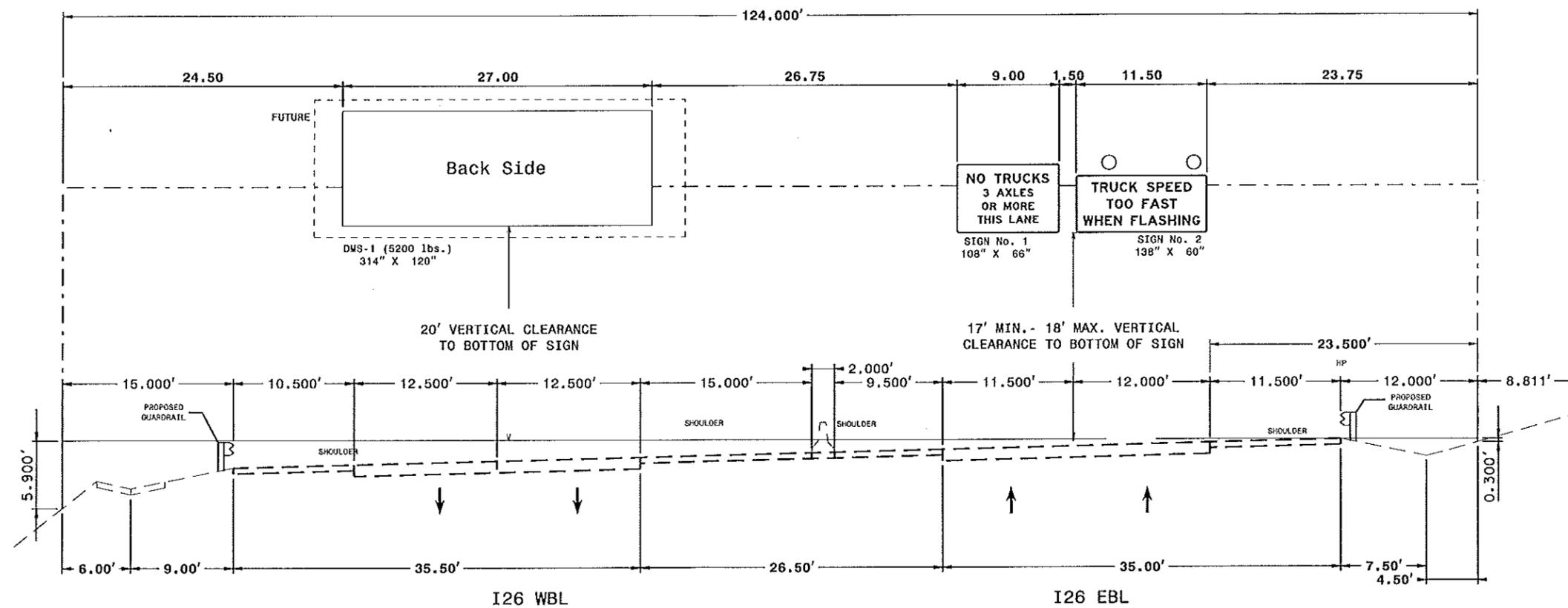
FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

29-DEC-2013 14:15
 C:\Data\Projects\2013\Speed Detection Divs.13&14\01esdgn
 jammer@ncz AT 12/27/13

NOTE:
OVERHEAD SIGN STRUCTURE WAS FIELD VERIFIED. 10-22-13

STATE	PROJECT NO.	SHEET NO.	TOTAL SHTS.
N.C.	43798.1.1	SIGN-3	

APPROVED: _____
DATE: _____
SEAL

OVERHEAD SIGN ASSEMBLY "A"

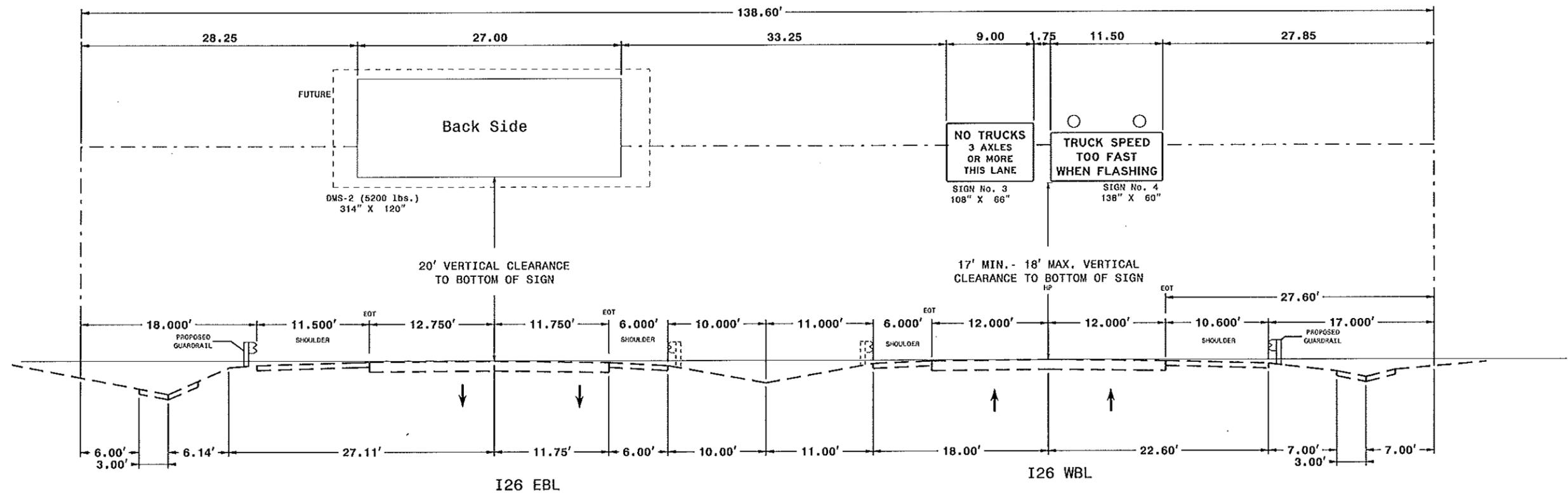
NOTES:

- IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
- MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
- FIELD VERIFICATION SHALL BE REQUIRED FOR ALL FOOTING ELEVATIONS, PER THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. PROVIDE FIELD VERIFICATION TO THE SIGNING SECTION.
- THE TOP OF THE FOOTING SHALL EXTEND AT LEAST 4 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
- SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
- DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF 90 M.P.H.

OVERHEAD SIGN ASSEMBLY "A"
+- 545' EAST FROM MILEMARKER 55
(I-26-EBL)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHTS.
N.C.	43786.1.1	SIGN-3A	
APPROVED: _____			
DATE: _____			
SEAL			

NOTE:
OVERHEAD SIGN STRUCTURE WAS FIELD VERIFIED. 10-22-13



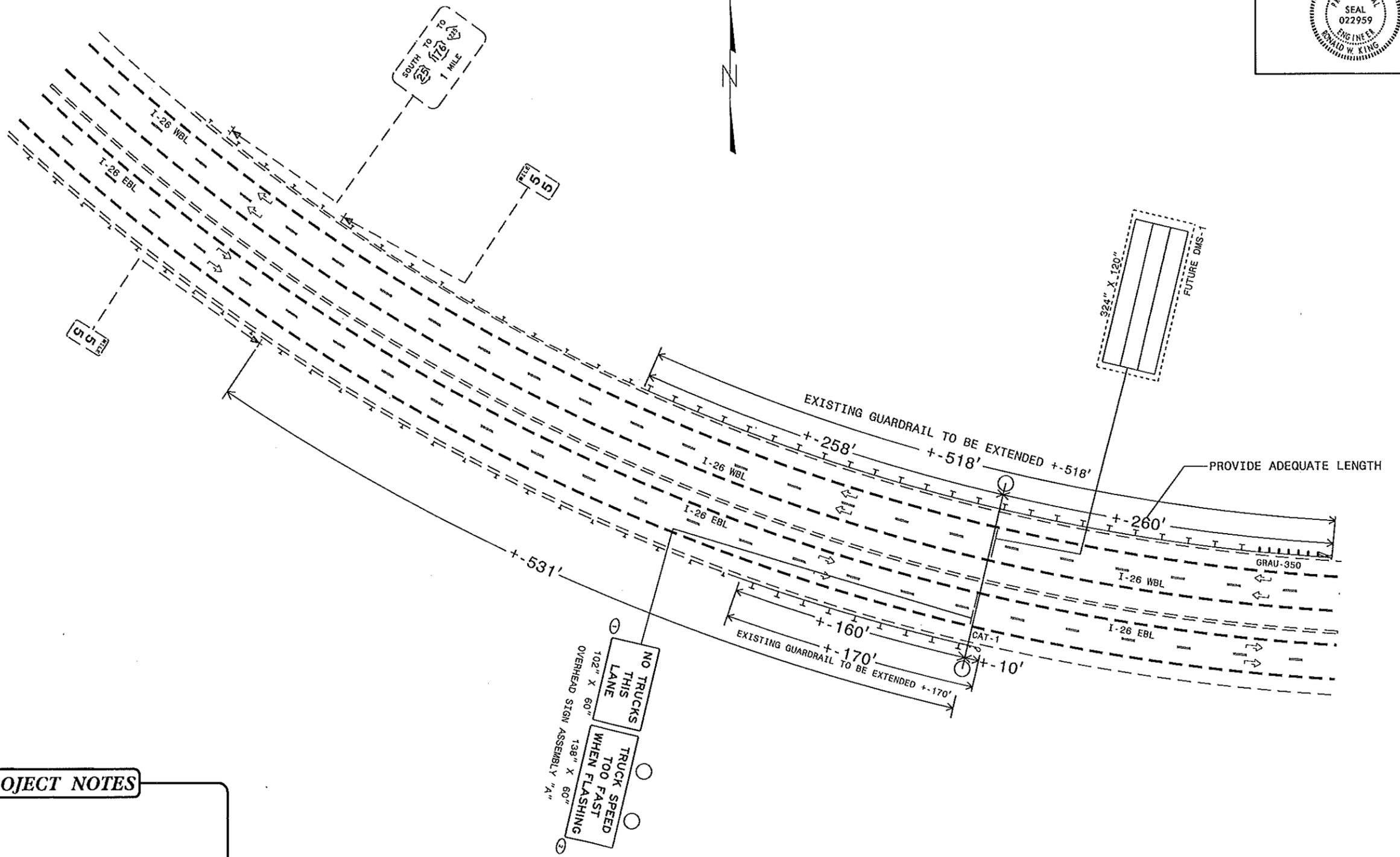
NOTES:

- IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
- MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
- FIELD VERIFICATION SHALL BE REQUIRED FOR ALL FOOTING ELEVATIONS, PER THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. PROVIDE FIELD VERIFICATION TO THE SIGNING SECTION.
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- SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
- DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF 90 M.P.H.

OVERHEAD SIGN ASSEMBLY "B"

OVERHEAD SIGN ASSEMBLY "B"
+1200' WEST FROM "NO TRUCKS" SIGN
(I-26 -WBL)

TIP NO.	SHEET NO.
SPEED DETECTION	SIGN-4
APPROVED: _____	
DATE: _____	
SEAL	

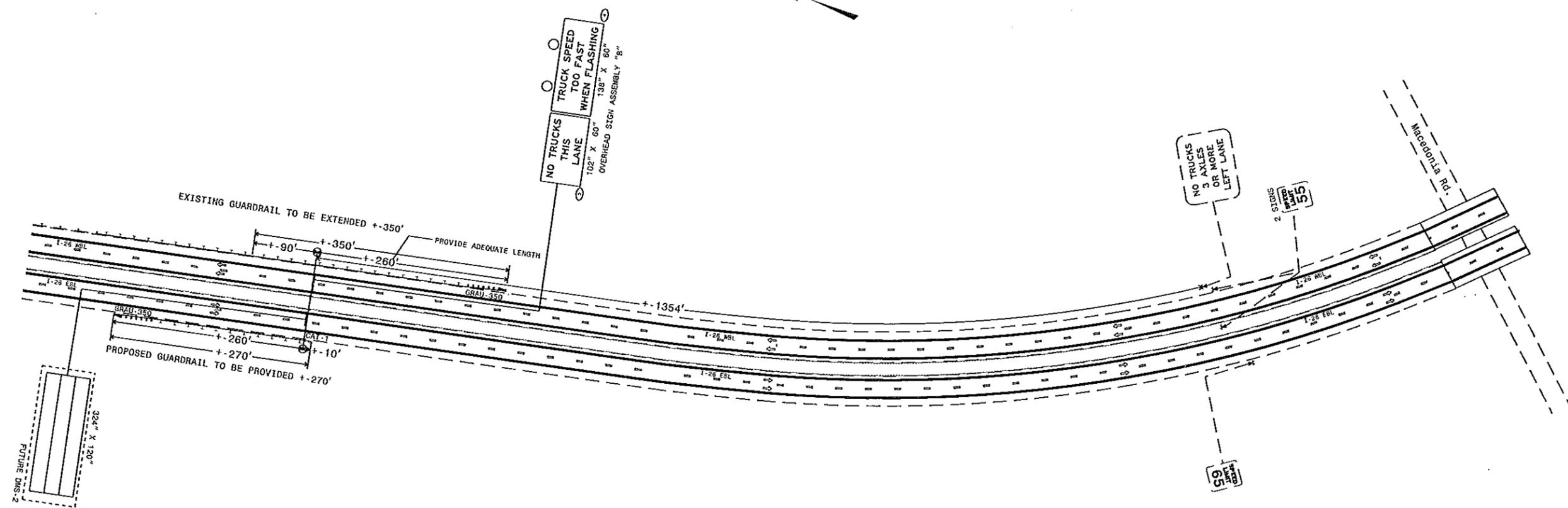


PROJECT NOTES

**PROPOSED OVERHEAD
+545 FROM MM-55 (I-26)**

05 DEC 2013 14:20
 J:\mop\11002\11002.dgn
 J:\mop\11002\11002.dgn
 J:\mop\11002\11002.dgn
 J:\mop\11002\11002.dgn

TIP NO.	SHEET NO.
SPEED DETECTION	SIGN-5
APPROVED: _____	
DATE: _____	
SEAL	
	



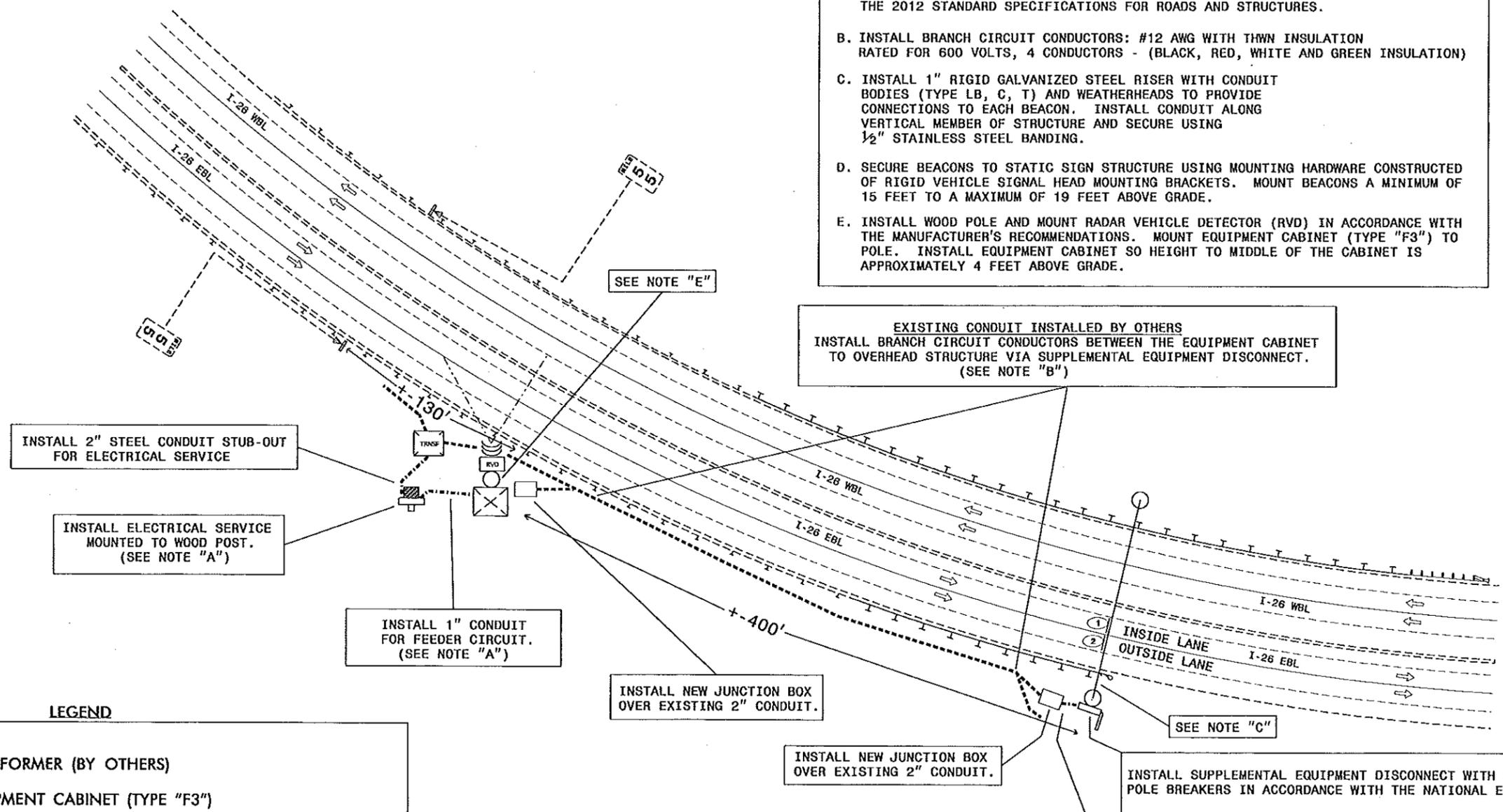
03-DEC-2013 14:21
 C:\Data\Projects\Speed Detection Divs. 13&14.dgn
 13&14.dwg

PROJECT NOTES

**PROPOSED OVERHEAD
 NORTH/WEST OF MACEDONIA RD. ON I-26**

- A. INSTALL METER BASE COMBINATION PANEL WITH 200 AMP, 240 VOLT, DOUBLE POLE MAIN BREAKER**
- INSTALL FEEDER CIRCUIT CONDUCTORS: #12 AWG WITH THWN INSULATION RATED FOR 600 VOLTS, 3 CONDUCTORS - (BLACK, WHITE AND GREEN INSULATION)
INSTALL FEEDER CIRCUIT BREAKER: 20 AMP SINGLE POLE.
- INSTALL ELECTRICAL SERVICE GROUNDING SYSTEM IN ACCORDANCE WITH THE 2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- B. INSTALL BRANCH CIRCUIT CONDUCTORS: #12 AWG WITH THWN INSULATION RATED FOR 600 VOLTS, 4 CONDUCTORS - (BLACK, RED, WHITE AND GREEN INSULATION)**
- C. INSTALL 1" RIGID GALVANIZED STEEL RISER WITH CONDUIT BODIES (TYPE LB, C, T) AND WEATHERHEADS TO PROVIDE CONNECTIONS TO EACH BEACON. INSTALL CONDUIT ALONG VERTICAL MEMBER OF STRUCTURE AND SECURE USING 1/2" STAINLESS STEEL BANDING.**
- D. SECURE BEACONS TO STATIC SIGN STRUCTURE USING MOUNTING HARDWARE CONSTRUCTED OF RIGID VEHICLE SIGNAL HEAD MOUNTING BRACKETS. MOUNT BEACONS A MINIMUM OF 15 FEET TO A MAXIMUM OF 19 FEET ABOVE GRADE.**
- E. INSTALL WOOD POLE AND MOUNT RADAR VEHICLE DETECTOR (RVD) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MOUNT EQUIPMENT CABINET (TYPE "F3") TO POLE. INSTALL EQUIPMENT CABINET SO HEIGHT TO MIDDLE OF THE CABINET IS APPROXIMATELY 4 FEET ABOVE GRADE.**

EXISTING CONDUIT INSTALLED BY OTHERS
INSTALL BRANCH CIRCUIT CONDUCTORS BETWEEN THE EQUIPMENT CABINET TO OVERHEAD STRUCTURE VIA SUPPLEMENTAL EQUIPMENT DISCONNECT.
(SEE NOTE "B")



INSTALL 2" STEEL CONDUIT STUB-OUT FOR ELECTRICAL SERVICE

INSTALL ELECTRICAL SERVICE MOUNTED TO WOOD POST.
(SEE NOTE "A")

INSTALL 1" CONDUIT FOR FEEDER CIRCUIT.
(SEE NOTE "A")

INSTALL NEW JUNCTION BOX OVER EXISTING 2" CONDUIT.

INSTALL NEW JUNCTION BOX OVER EXISTING 2" CONDUIT.

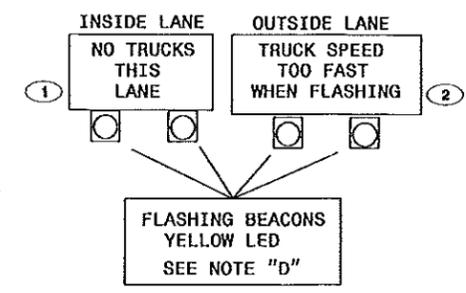
SEE NOTE "C"

INSTALL SUPPLEMENTAL EQUIPMENT DISCONNECT WITH 2 - 15 AMP SINGLE POLE BREAKERS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

INSTALL 1" CONDUIT TO BOTTOM OF SUPPLEMENTAL EQUIPMENT DISCONNECT.

LEGEND

- TRANSFORMER (BY OTHERS)
- EQUIPMENT CABINET (TYPE "F3")
- JUNCTION BOX (STANDARD SIZE)
- WOOD POST (6" x 6" x 10')
- SERVICE DISCONNECT (COMBINATION PANEL)
- WOOD POLE (CLASS IV)
- EXISTING CONDUIT
- PROPOSED CONDUIT
- RADAR VEHICLE DETECTOR (RVD)
- SUPPLEMENTAL EQUIPMENT DISCONNECT
- YELLOW LED BEACON
- OVERHEAD STRUCTURE



SYSTEM #1 - EASTBOUND I-26

	SPEED DETECTION SYSTEM NEAR OVERHEAD STRUCTURE +130 FROM MM-55 ON I-26		
	DIVISION 14 HENDERSON CO. NEAR MM 55 (I-26) PLAN DATE: JANUARY 2014 PREPARED BY: H.T. BERGGREN SCALE: 1" = 400'	REVIEWED BY: I. N. AVERY REVIEWED BY:	

