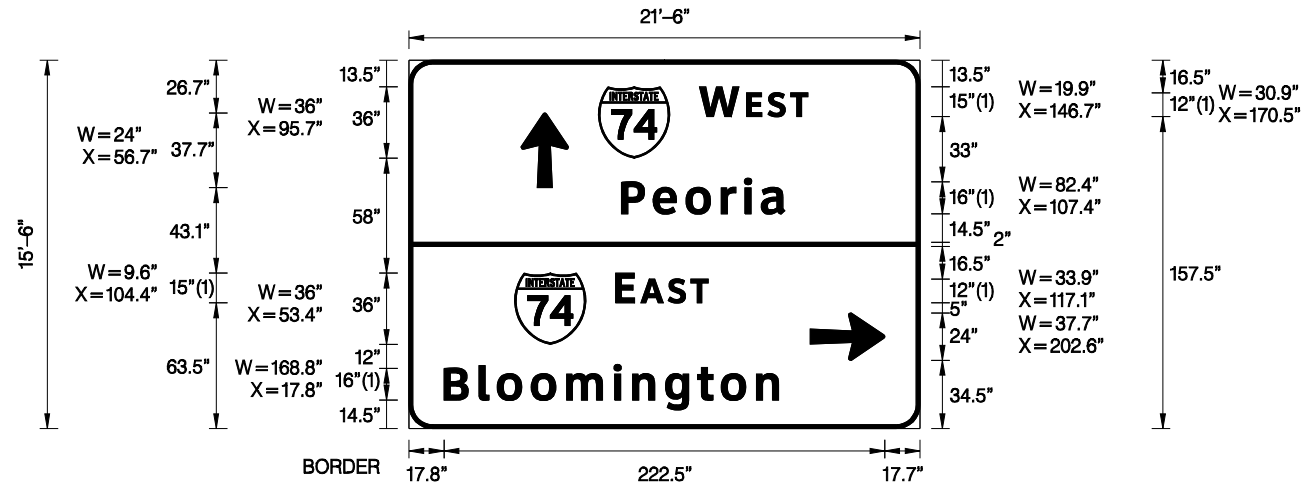


SIGN DETAIL
1:100



Panel Style: guide_fwy_intermediate_clearview.ssi
Dimensions are in inches.tenths

BORDER
R=12"
TH=2"
FONT:
(1) ClearviewHwy-5-W
M.U.T.C.D.: 2009 Edition

Letter locations are panel edge to lower left corner

SIGN NUMBER	29+00
WIDTH x HGHT.	21'-6" x 15'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Ground
BACKGROUND	TYPE: ZZ Retro Reflective COLOR: Color 24
LEGEND/BORDER	TYPE: ZZ Retro Reflective COLOR: Color 92/Color 92

SYMBOL	ROT	X	Y	WID	HT
M1_1	0	95.7	136.5	36	36
AR_Type A	0	56.7	121.6	24	37.7
M1_1	0	53.4	42.5	36	36
AR_Type A	270	202.6	34.5	24	37.7

LETTER POSITIONS (X)

											LENGTH	SERIESSIZE
W	E	S	T									ClearviewHwy-5-W
146.7	170.5	181.3	192.7								54.7	15,12
P	e	o	r	i	a							ClearviewHwy-5-W
107.4	123.3	139.9	157.7	169.4	177.9						82.4	16/13
E	A	S	T									ClearviewHwy-5-W
104.4	117.1	130.9	142.4								46.7	15,12
B	l	o	o	m	i	n	g	t	o	n		ClearviewHwy-5-W
17.8	35.4	44.7	61.8	79.6	103.5	113	129.5	145.7	157.7	175.5	168.8	16/13

FILE NAME =	DESIGNED - SMS	REVISED -
...D468620-shd-signdetail25.dgn	DRAWN - SMS	REVISED -
USER NAME = IDDT	CHECKED - LDC	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -



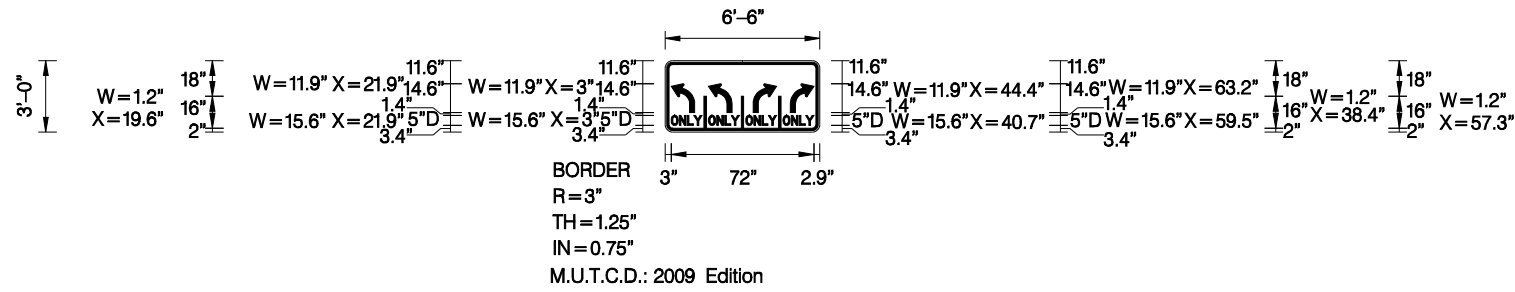
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL DETAILS

SCALE: SHEET NO. 25 OF 37 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 90-[14R;14HB-4,14,14HVB]BR	TAZEWELL	ILLINOIS	2433	1608
CONTRACT NO. 68620				

SIGN DETAIL
1:100



SIGN NUMBER	1016+00, LT
WIDTH x HGHT.	6'-6" x 3'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Retro Reflective COLOR: Color 92
LEGEND/BORDER	TYPE: ZZ Retro Reflective COLOR: Color 218/Color 241

SYMBOL	ROT	X	Y	WID	HT
AR LEFT_Regulatory	0	3	9.8	11.9	14.6
AR LEFT_Regulatory	0	21.9	9.8	11.9	14.6
AR LEFT_Regulatory	180	44.4	9.8	11.9	14.6
AR LEFT_Regulatory	180	63.2	9.8	11.9	14.6

Panel Style: regulatory.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)										LENGTH	SERIESSIZE
O	N	L	Y								D
3	7.2	11.2	14.4							15.6	5
O	N	L	Y								D
21.9	26	30	33.2							15.6	5
O	N	L	Y								D
40.7	44.8	48.8	52							15.6	5
O	N	L	Y								D
59.5	63.6	67.6	70.9							15.6	5

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
F_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

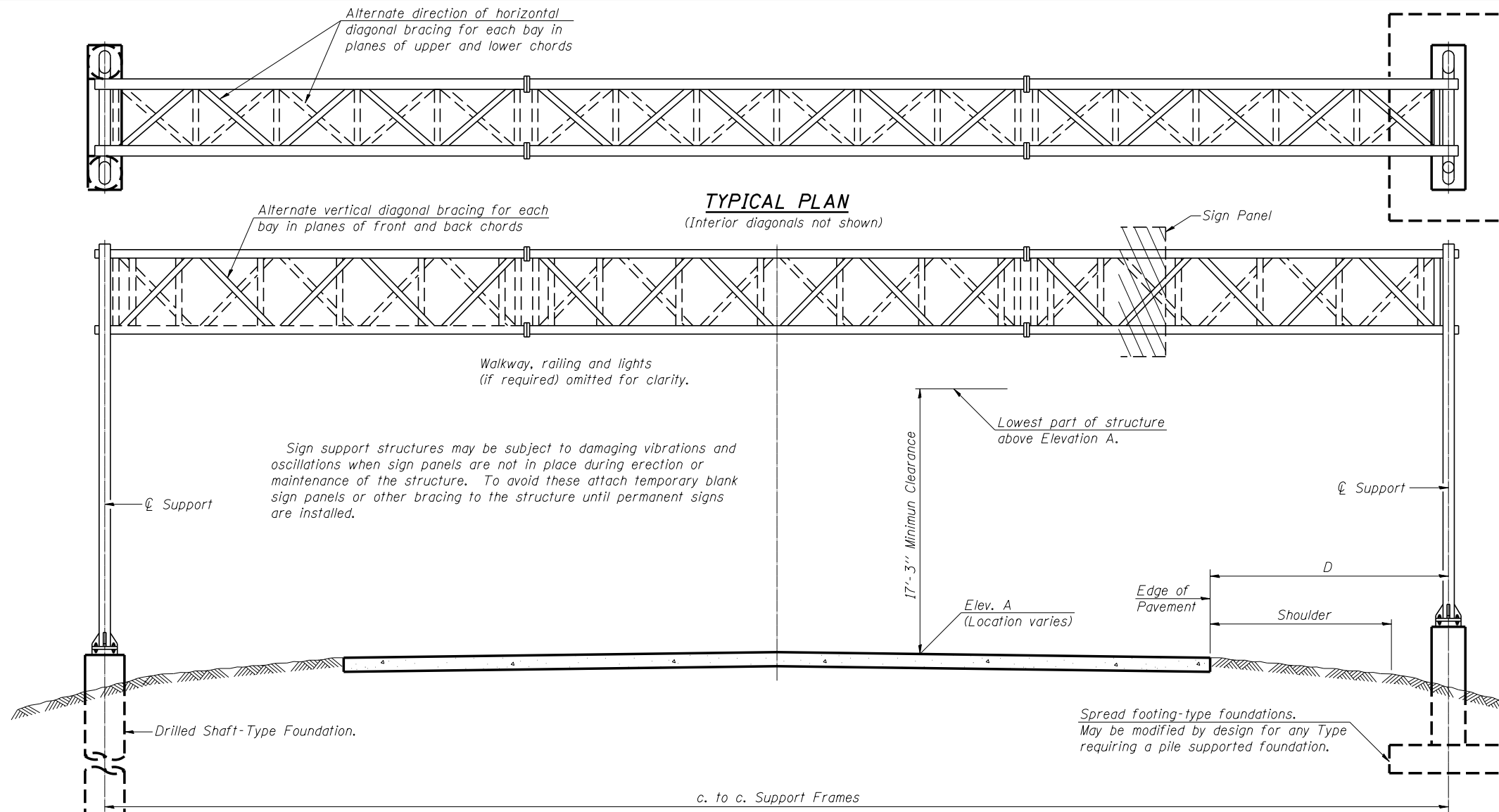
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

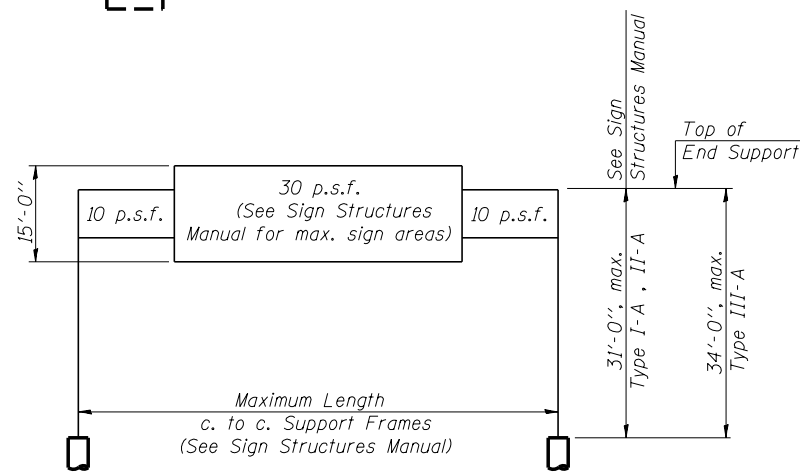
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	204
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	155
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	152
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	343
CONCRETE FOUNDATIONS	Cu. Yds.	0
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	200.8



TYPICAL ELEVATION
(Looking at Face of Signs)**

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
4S090I074L100.0	482+66.50	I-A	64	729.91	16'-3"	17'-0"	596 SF
4S090I074L100.3	495+10.00	III-A	76	733.66	16'-6"	8'-0"	208 SF
4S090I074R100.3	498+50.00	II-A	76	734.69	16'-6"	14'-6"	673 SF
4S090I074L100.5	508+15.00	III-A	76	737.60	16'-6"	19'-6"	756 SF
4S090I074R100.6	515+50.00	II-A	79	736.69	16'-1"	14'-6"	673 SF
4S090I155R031.9	17+68.62	I-A	80	733.21	12'-4"	10'-6"	361 SF
4S090I155R031.2	54+00.00	I-A	60	718.80	18'-0"	10'-0"	262 SF
4S090I074L104.3	see ITS plans	III-A	74	N/A	16'-9"	7'-10"	144.25 SF



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

*If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

**Looking upstation for structures with signs both sides.

***Elevations taken from existing plans. All elevations shall be verified in the field prior to ordering of material for this sign structure.

****Relocated sign structure. See sheet 22 of ITS plans for more information. All elevations for this sign structure shall be determined in the field.

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

05-A-1

6-1-12

FILE NAME =	USER NAME = mbecker	DESIGNED - MFB	REVISED -
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	PLOT SCALE =	DRAWN - MFB	REVISED -
	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
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OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

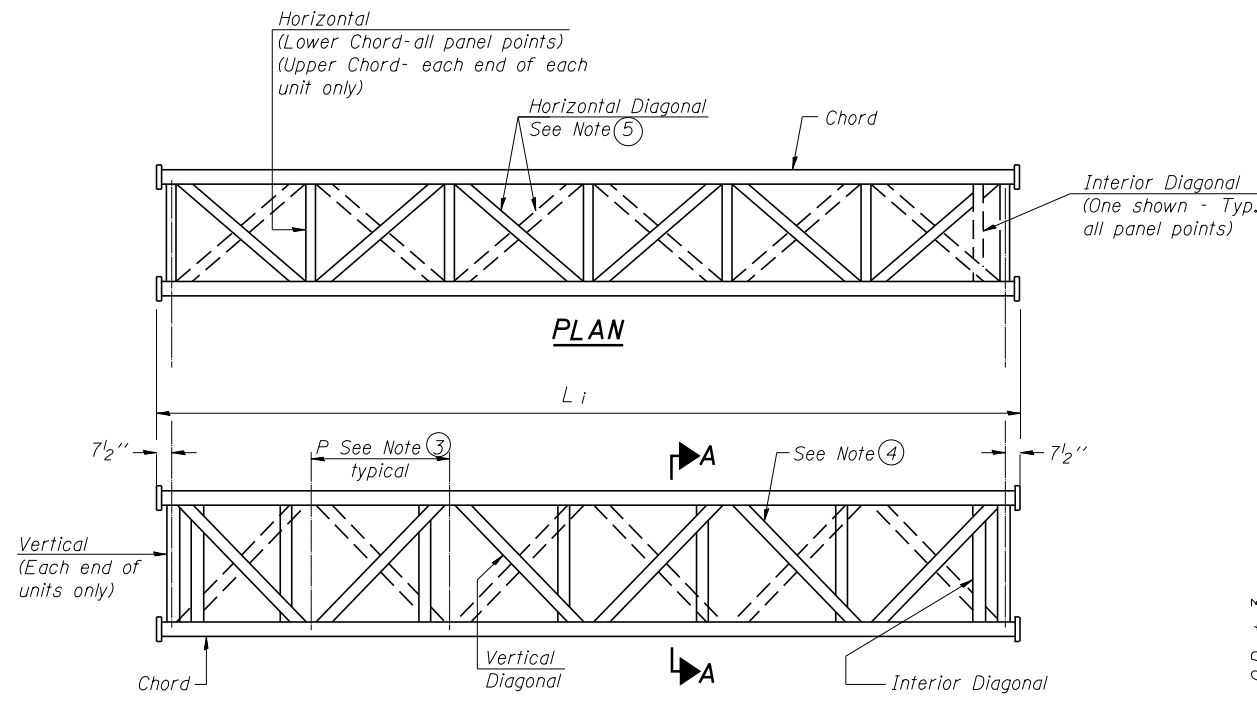
SHEET NO. SS1 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 68620	
			ILLINOIS FED. AID PROJECT	

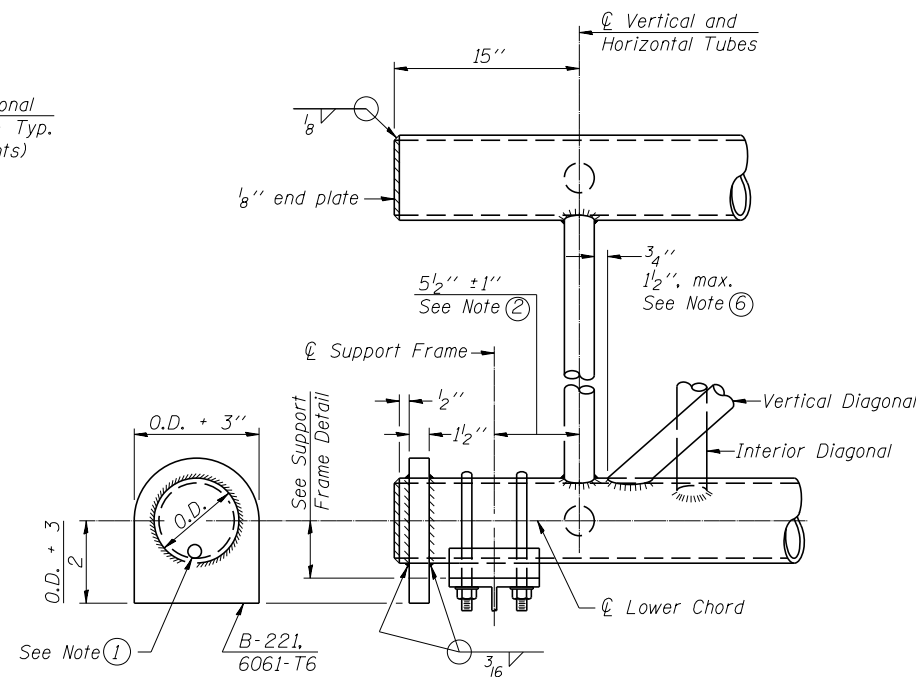
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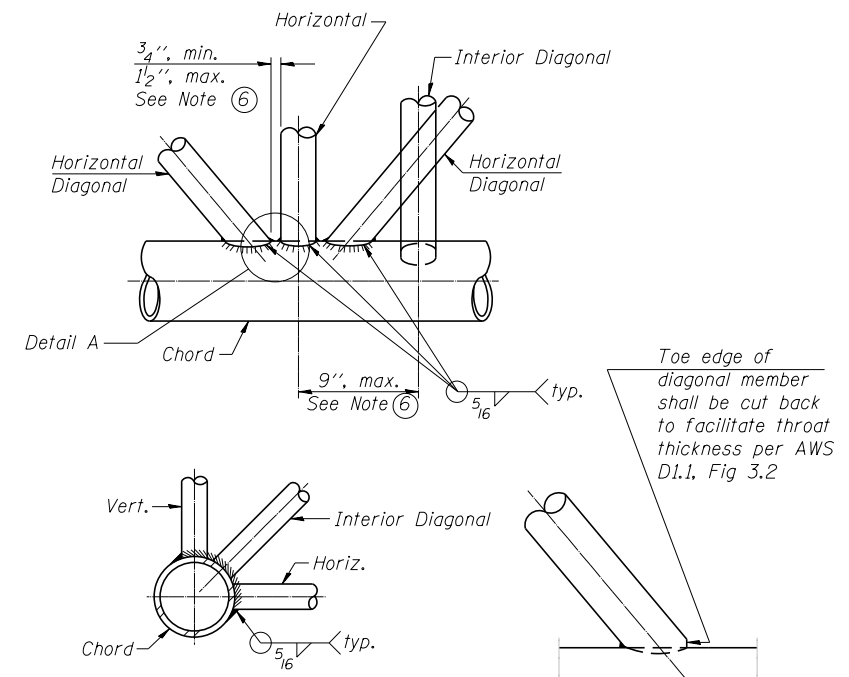
7/16/2012



**ELEVATION
TYPICAL INTERIOR UNIT**
Even number of panels/interior unit required.

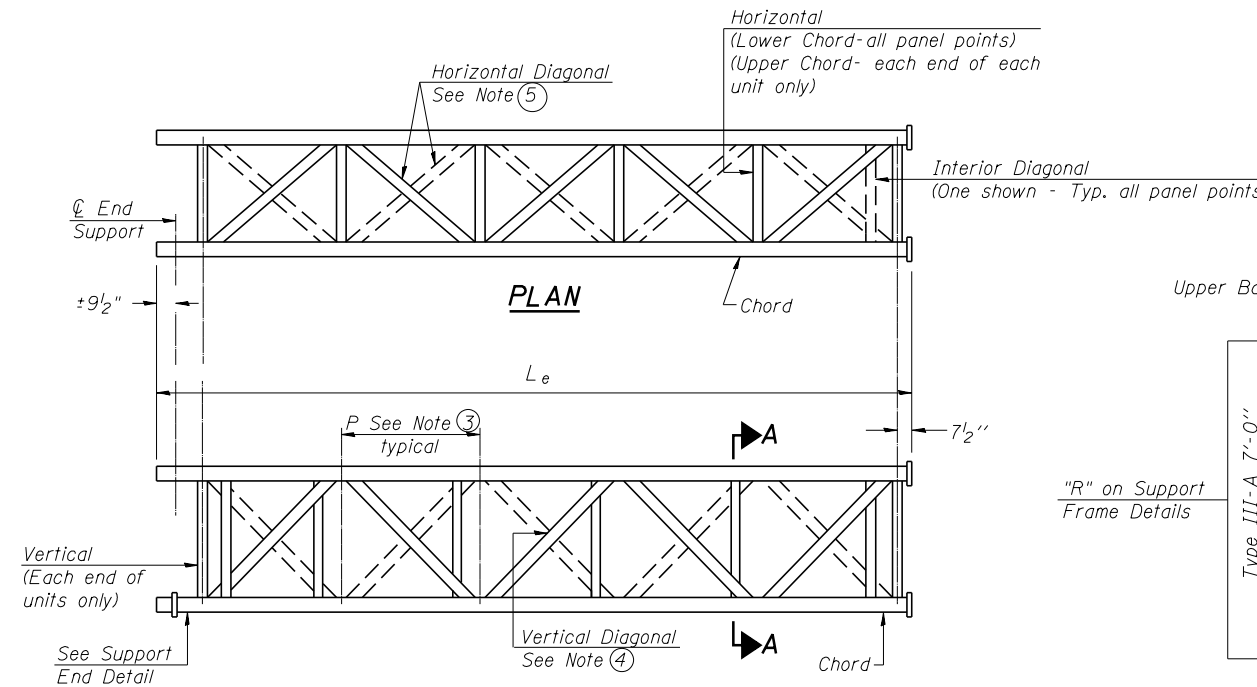


SUPPORT END DETAIL FOR EXTERIOR UNIT

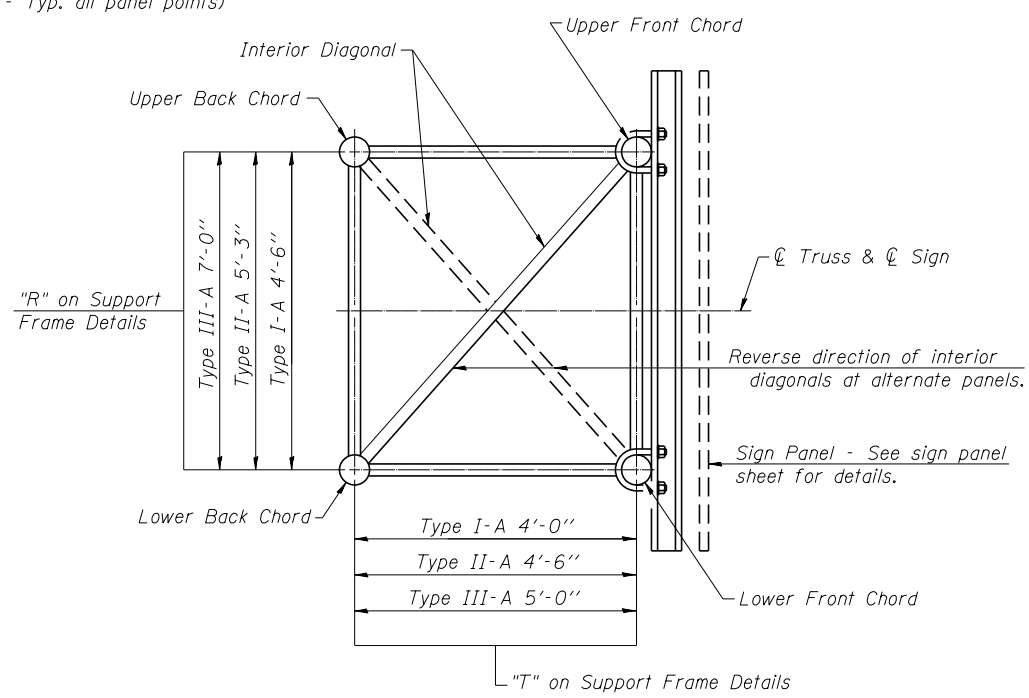


TYPICAL JOINT DETAILS

DETAIL A



**ELEVATION
TYPICAL EXTERIOR UNIT**
Even or odd number of panels/exterior units allowed.



SECTION A-A

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by $\pm 1"$ to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

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312-565-0450 Job No. 10056

OS-A-2 6-1-12

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	PLOT SCALE =	DRAWN - MFB	REVISED -
	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 68620	

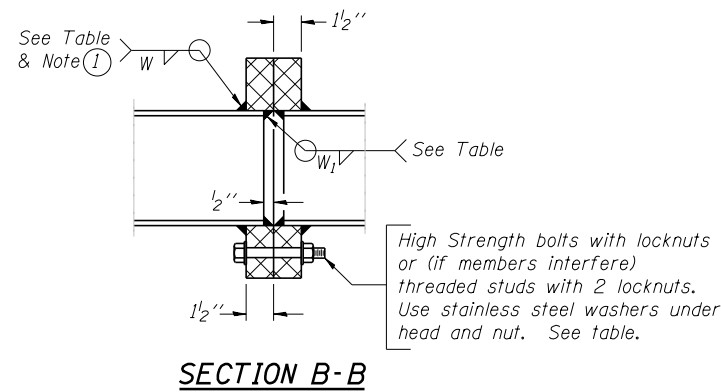
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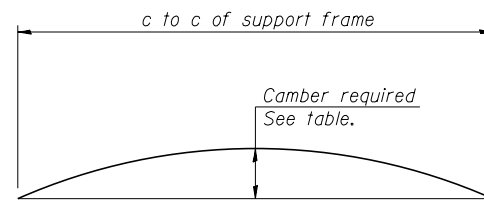
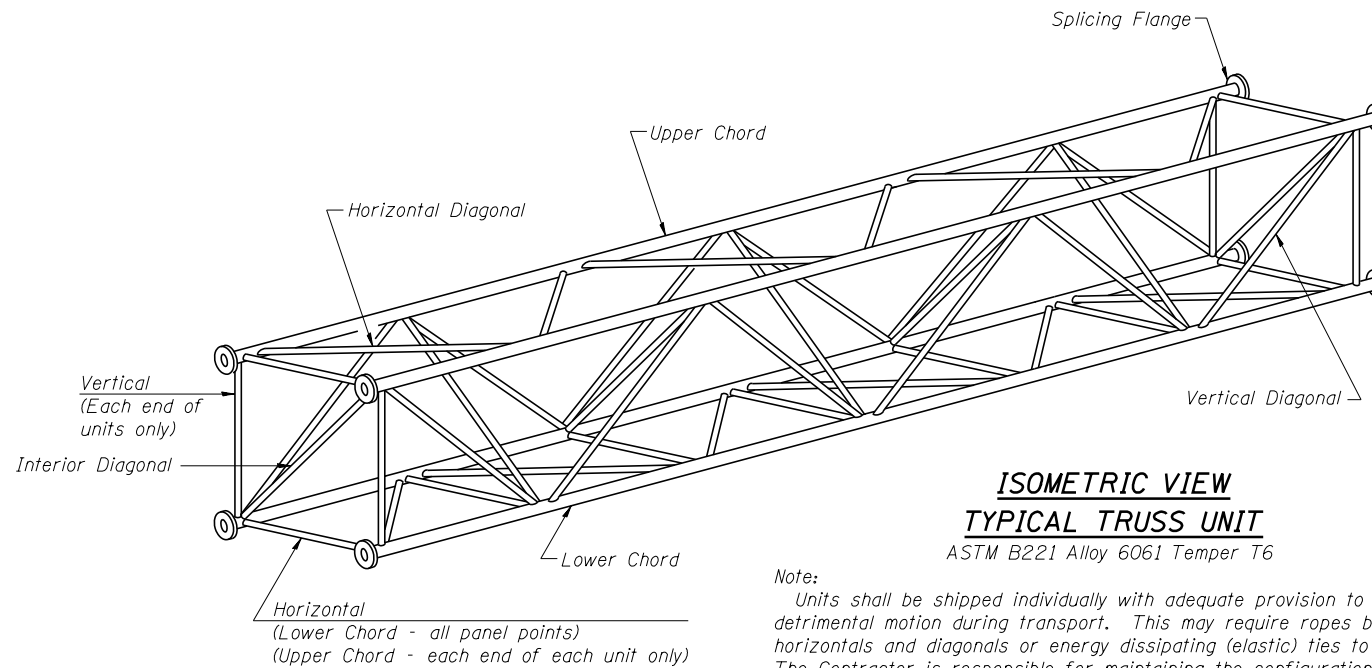
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L _E)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _I)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W ₁		
4S0901074L100.0	482+66.50	I-A	7	32'-9 1/2"	4'-5"	0	-	-	-	5"	5/16"	2 1/2"	5/16"	1.45"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"
4S0901074L100.3	495+10.00	III-A	7	38'-9 1/4"	5'-3 1/4"	0	-	-	-	7"	5/16"	3 1/4"	5/16"	0.91"	6	1"	7/16"	5/16"	11 1/2"	15"
4S0901074R100.3	498+50.00	II-A	7	38'-9 1/4"	5'-3 1/4"	0	-	-	-	7"	5/16"	3"	5/16"	1.72"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"
4S0901074L100.5	508+15.00	III-A	7	38'-9 1/4"	5'-3 1/4"	0	-	-	-	7"	5/16"	3 1/4"	5/16"	0.91"	6	1"	7/16"	5/16"	11 1/2"	15"
4S0901074R100.6	515+50.00	II-A	5	28'-10 1/4"	5'-4 3/4"	1	4	22'-10"	5'-4 3/4"	5 1/2"	5/16"	3"	5/16"	1.90"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"
4S0901155R031.9	17+68.62	I-A	5	25'-10"	4'-9 1/2"	1	6	30'-0"	4'-9 1/2"	5"	5/16"	2 1/2"	5/16"	2.25"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"
4S0901155R031.2	54+00.00	I-A	6	30'-10 1/2"	4'-10"	0	-	-	-	5"	1/4"	2 1/2"	1/4"	1.27"	6	7/8"	5/16"	1/4"	8 3/4"	11 3/4"
*4S0901074L104.3																				

*See ITS plans for existing plans for relocated sign structure.

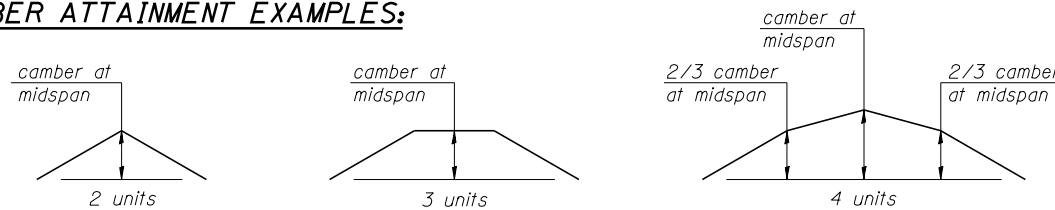


① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.

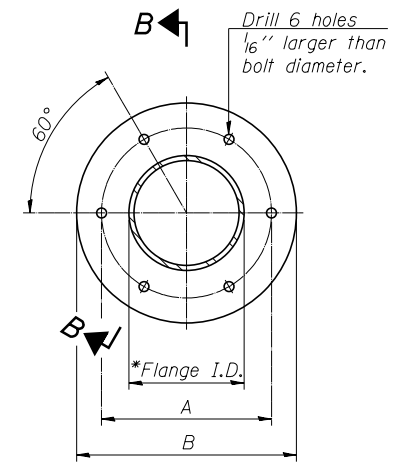


Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

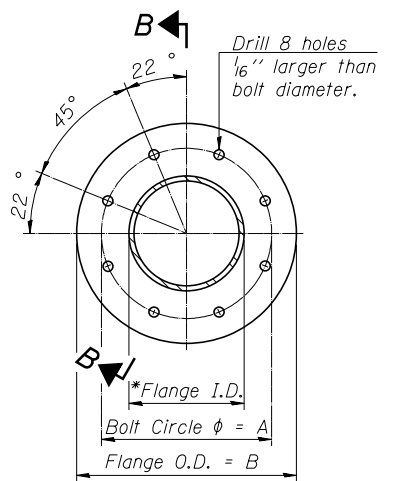
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPlicing FLANGES

ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651

*To fit O.D. of Chord with maximum gap of 1/16".



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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

OS4-A-2

6-1-12

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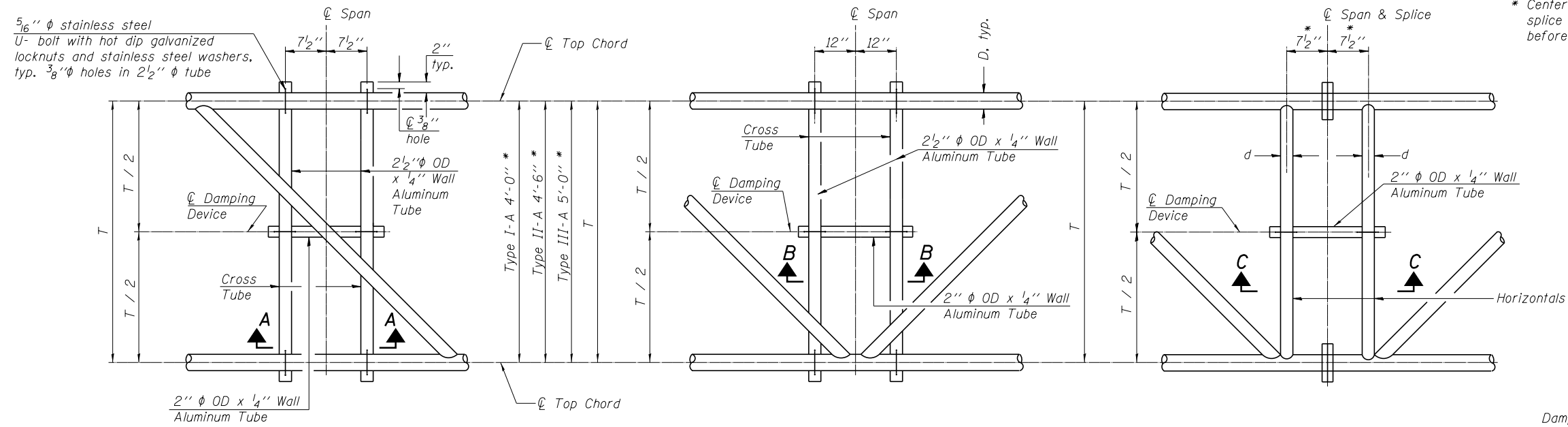
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CHECKED - KJN	REVISD -
DRAWN - MFB	REVISD -
CHECKED - KJN	REVISD -
PLOT DATE = 7/16/2012	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

SHEET NO. SS3 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1623
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

PLAN DETAIL "A"
 ☐ Span between Panel Points

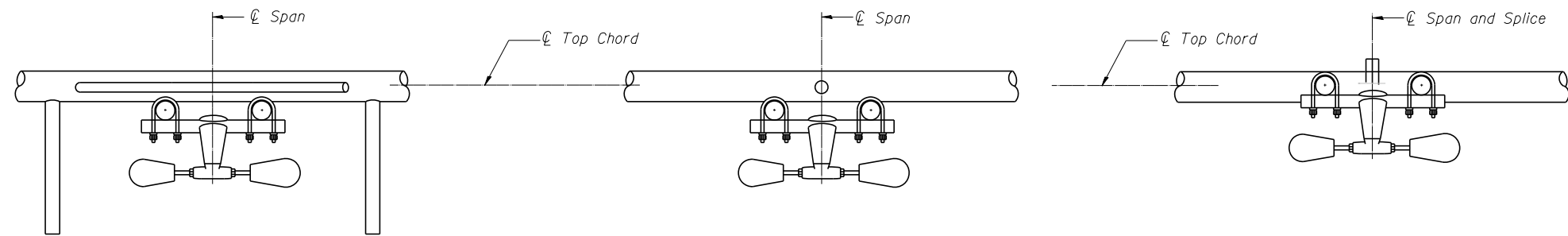
PLAN DETAIL "B"
 ☐ Span at Panel Point

PLAN DETAIL "C"
 ☐ Span at ☐ Chord Splice

NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

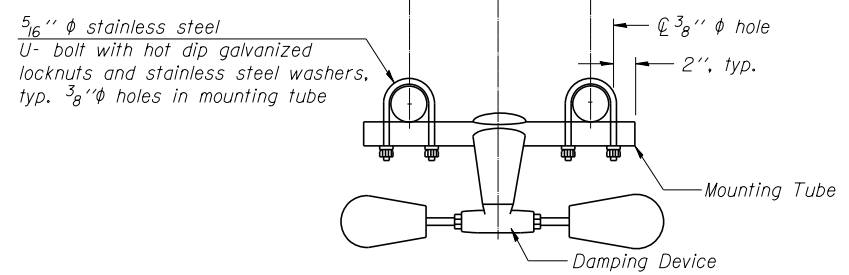
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



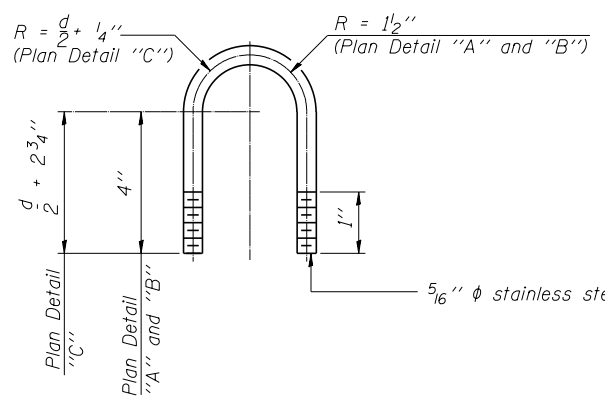
SECTION A-A

SECTION B-B

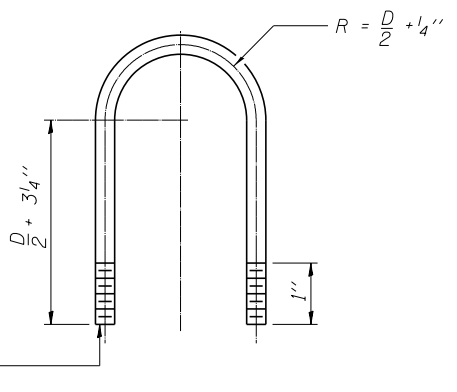
SECTION C-C



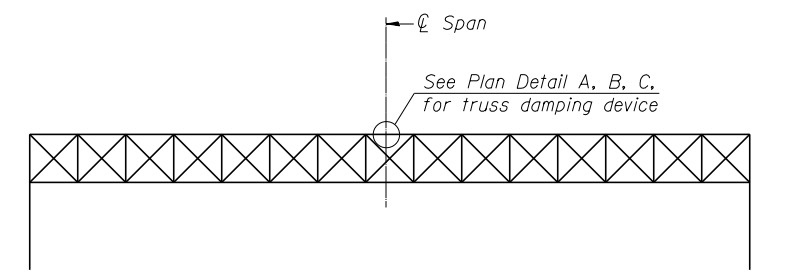
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
 (Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
 (Typical - Detail "A" and "B")



ELEVATION
 Aluminum Overhead Sign Truss

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 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

OS-A-D 6-1-12

FILE NAME =	USER NAME = mbecker	DESIGNED - MFB	REVISD -
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	PLOT SCALE =	DRAWN - MFB	REVISD -
	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISD -

STATE OF ILLINOIS
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OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

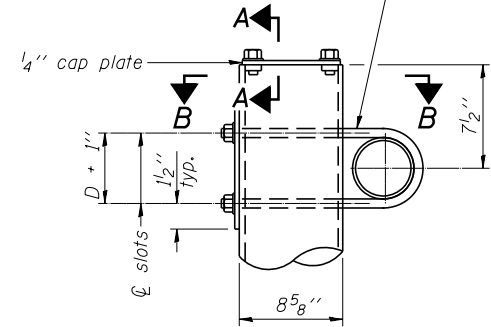
SHEET NO. SS4 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68620				

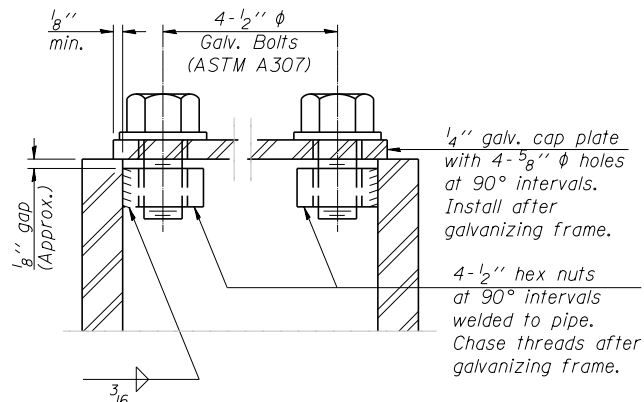
ILLINOIS FED. AID PROJECT

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 7/16/2012

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 8" φ pipe.
(4 slots required per pipe)

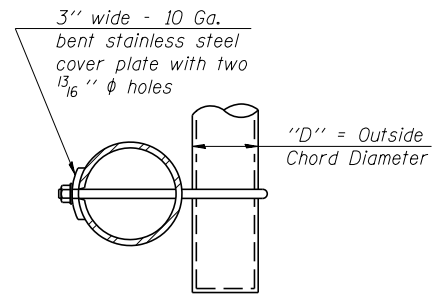


DETAIL A

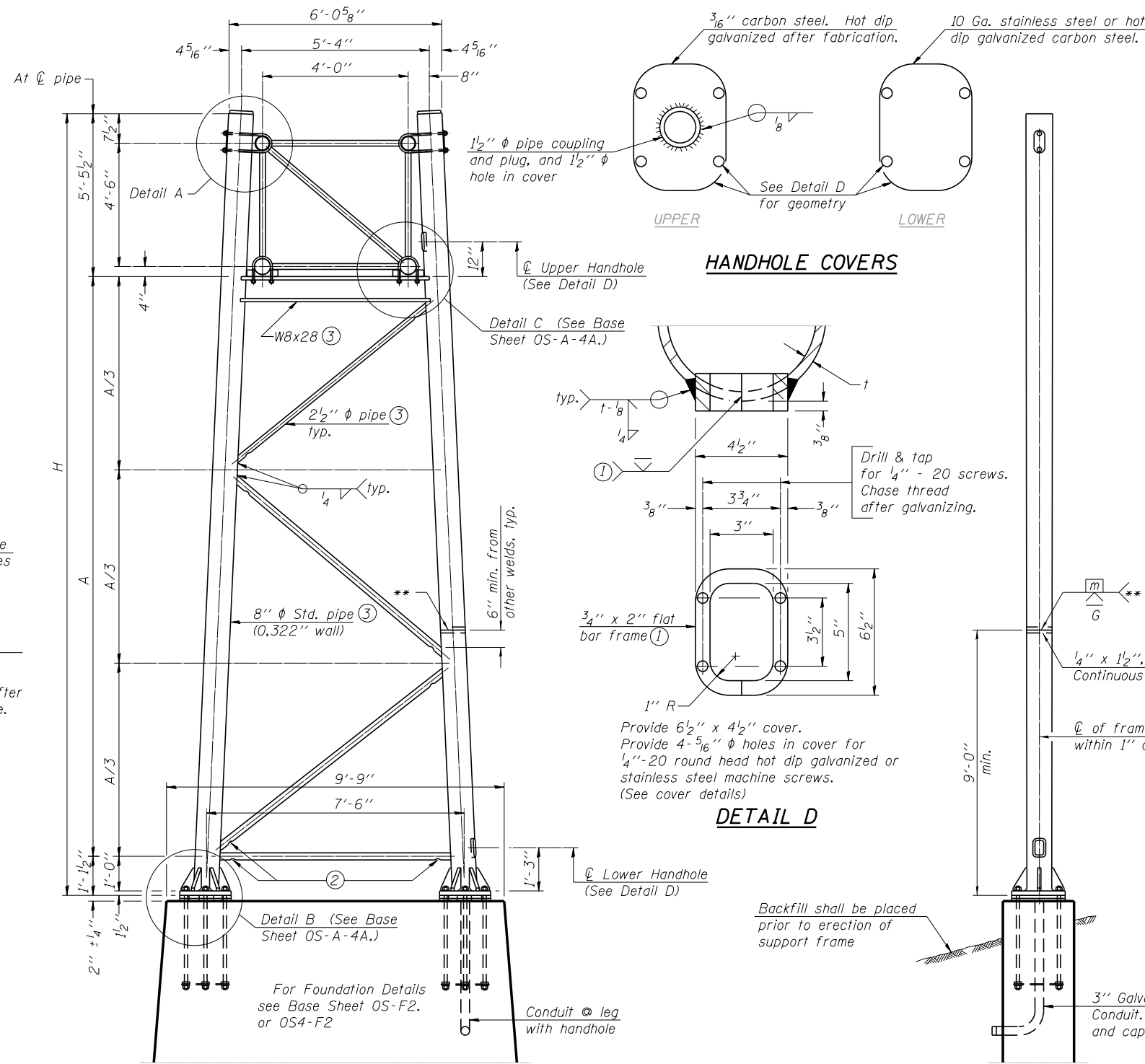


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



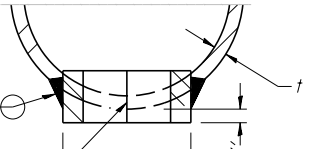
SECTION B-B



SIDE ELEVATION

END ELEVATION

HANDHOLE COVERS



DETAIL D

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

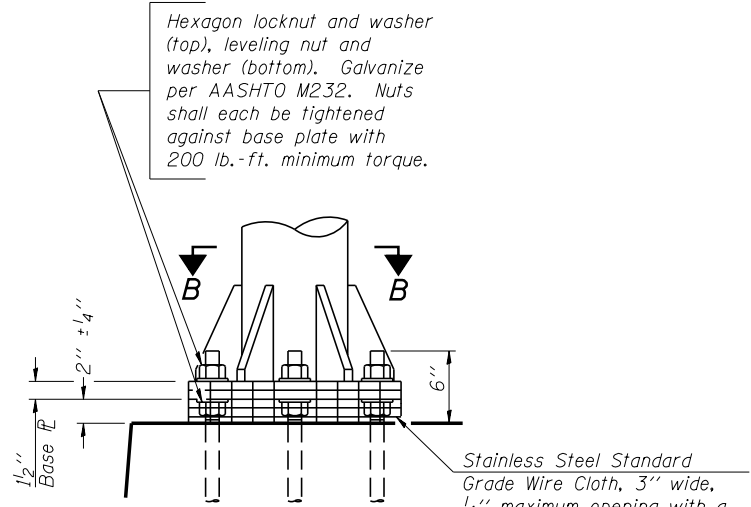
8" φ PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	Support		H ⑥	A
		Left	Right		
4S0901155R031.9	17+68.62	X		26.12'	19.54'
4S0901155R031.9	17+68.62		X	27.02'	20.44'
4S0901155R031.2	54+00.00	X		27.71'	21.13'
4S0901155R031.2	54+00.00		X	27.71'	21.13'

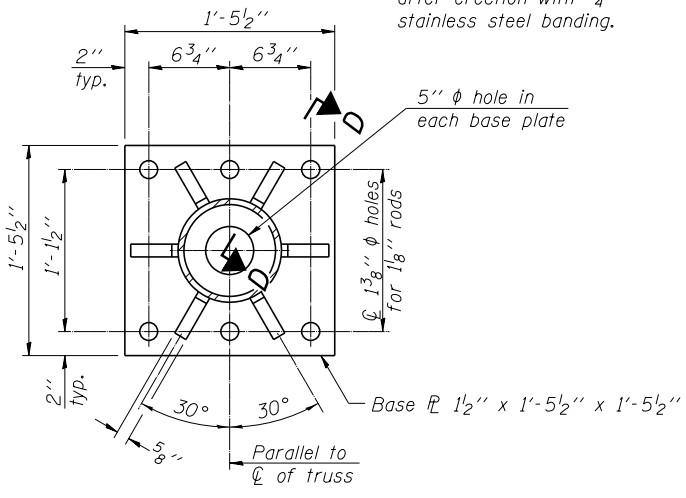
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	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1625
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

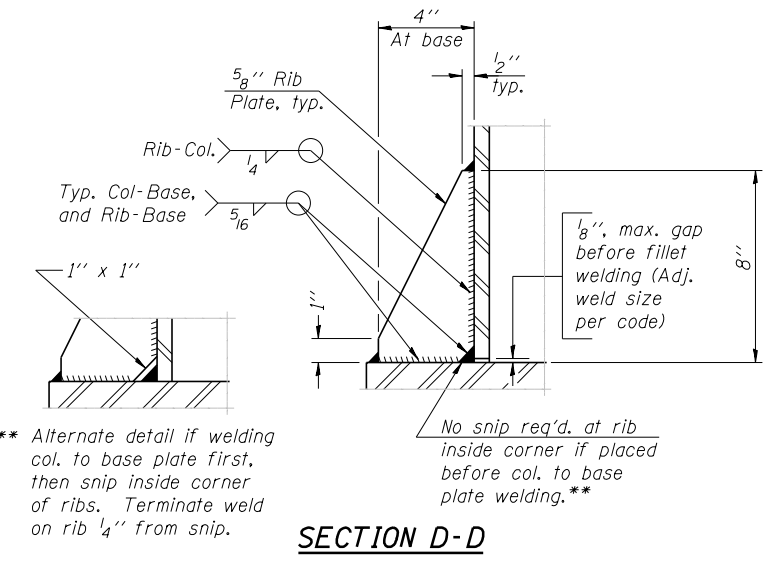


DETAIL B

Ribs shall be cut to fit slope of pipe. Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.

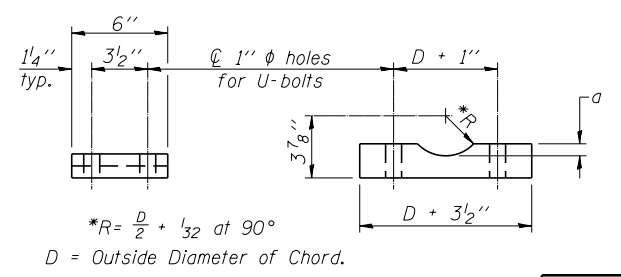


SECTION B-B



SECTION D-D

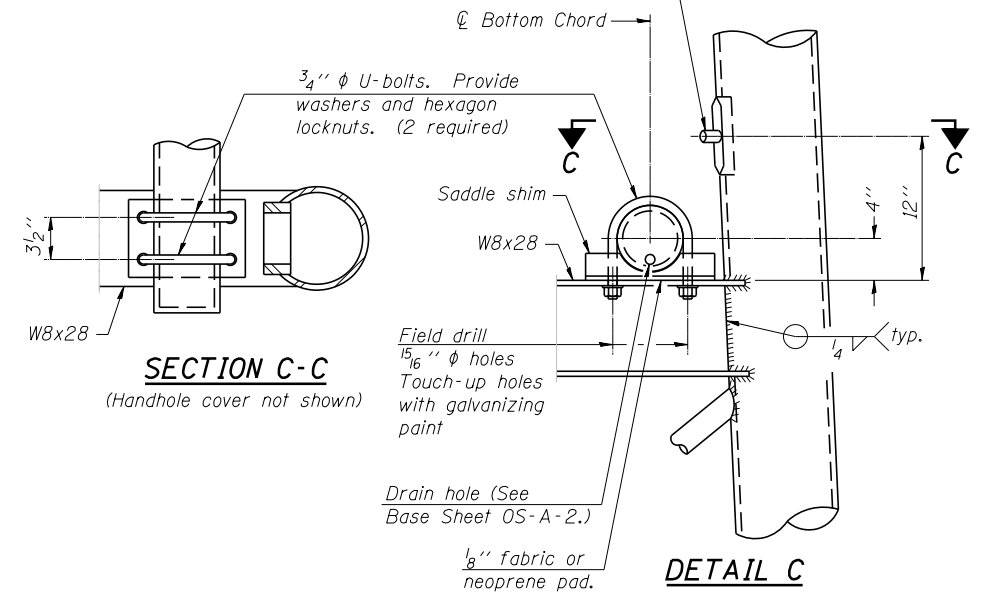
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip. No snip req'd. at rib inside corner if placed before col. to base plate welding.



SADDLE SHIM DETAIL

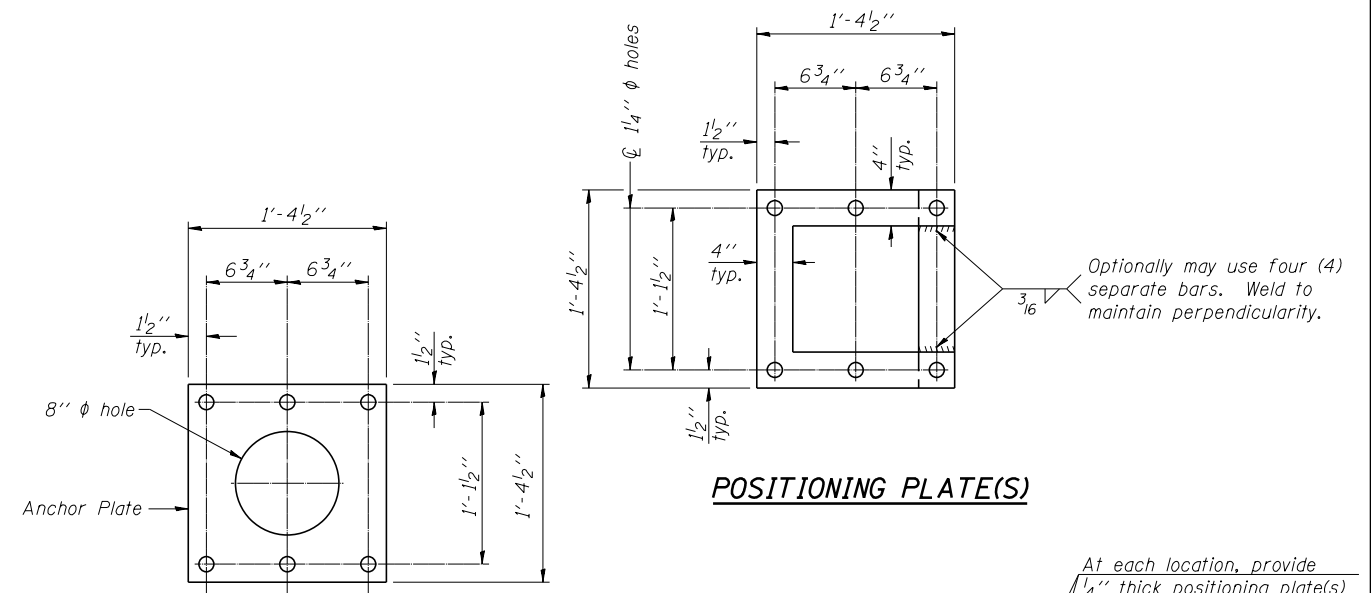
ASTM B26 Alloy 356-F or ASTM B209 Alloy 6061-T651 (4 required per sign truss)

Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"

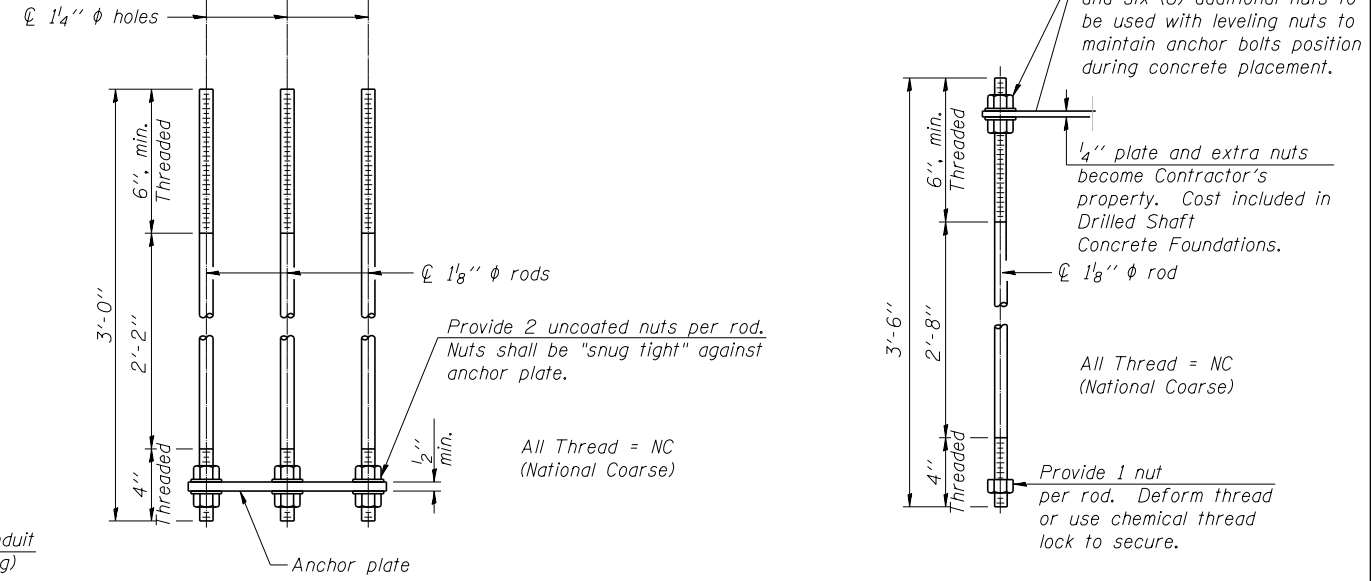


SECTION C-C

DETAIL C



POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Spread Footing Foundation

ANCHOR ROD DETAIL
Drilled Shaft Foundation

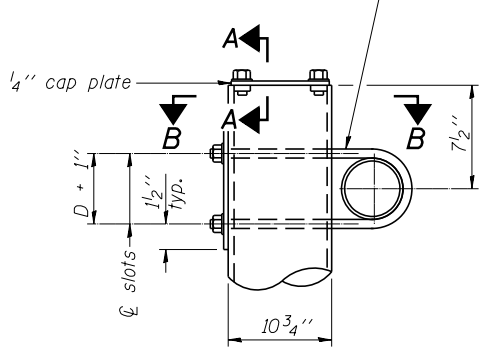
Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE I-A TRUSS
8" Ø PIPE SUPPORT FRAME DETAILS

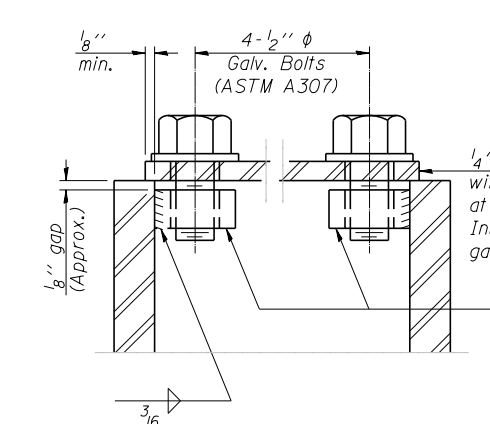
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		MFB	-
		KJN	-

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1626
CONTRACT NO. 68620				

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
13/16" x 2" slots on 10" φ pipe.
(4 slots required per pipe)

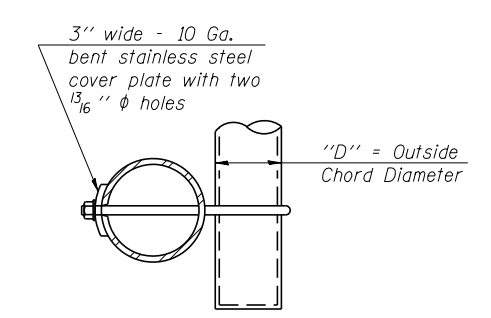


DETAIL A

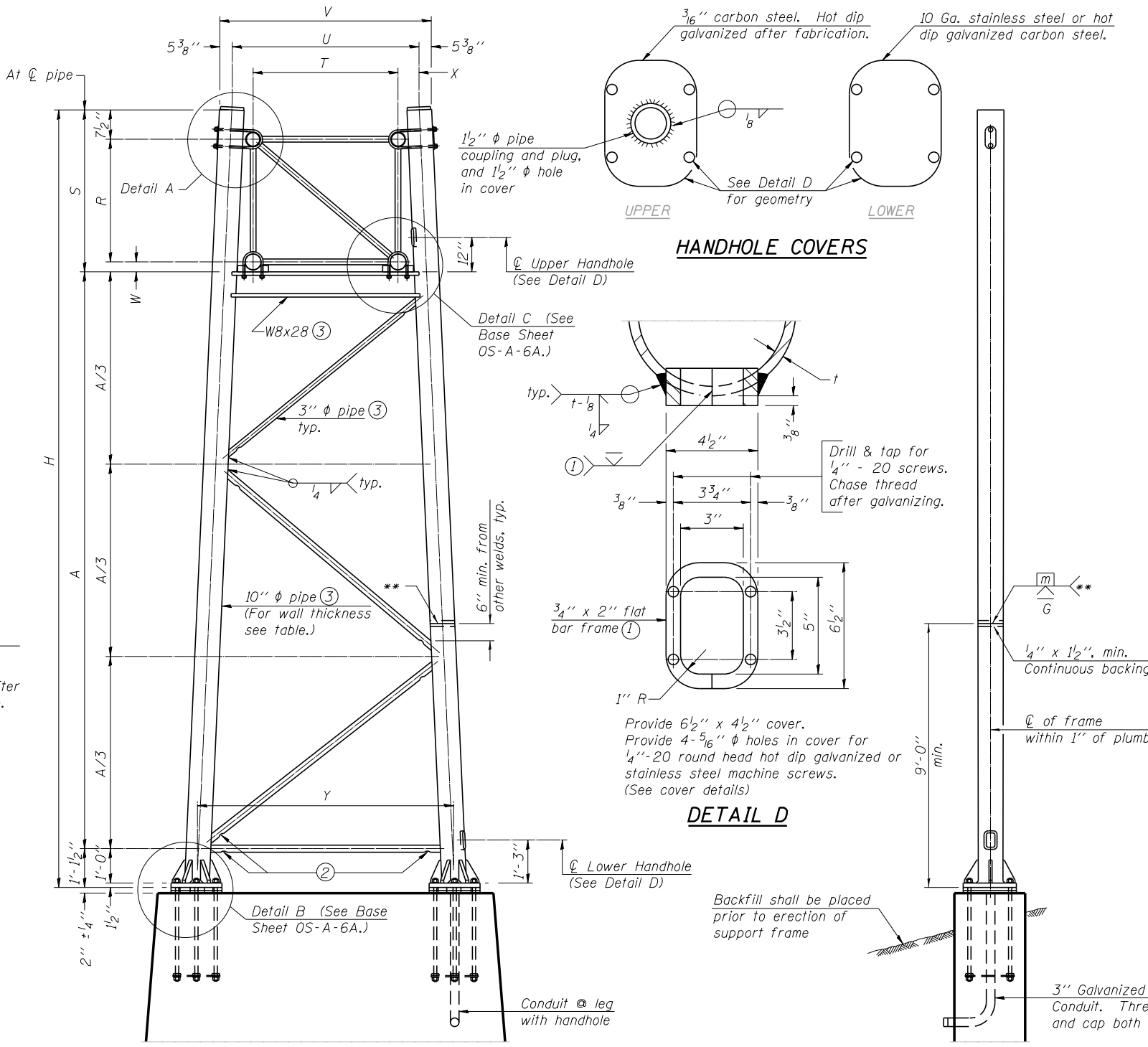


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



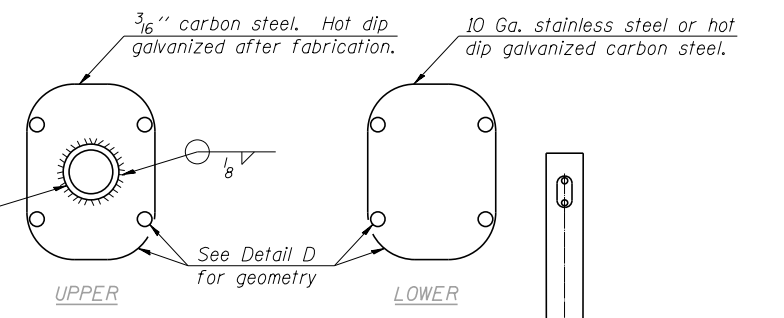
For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

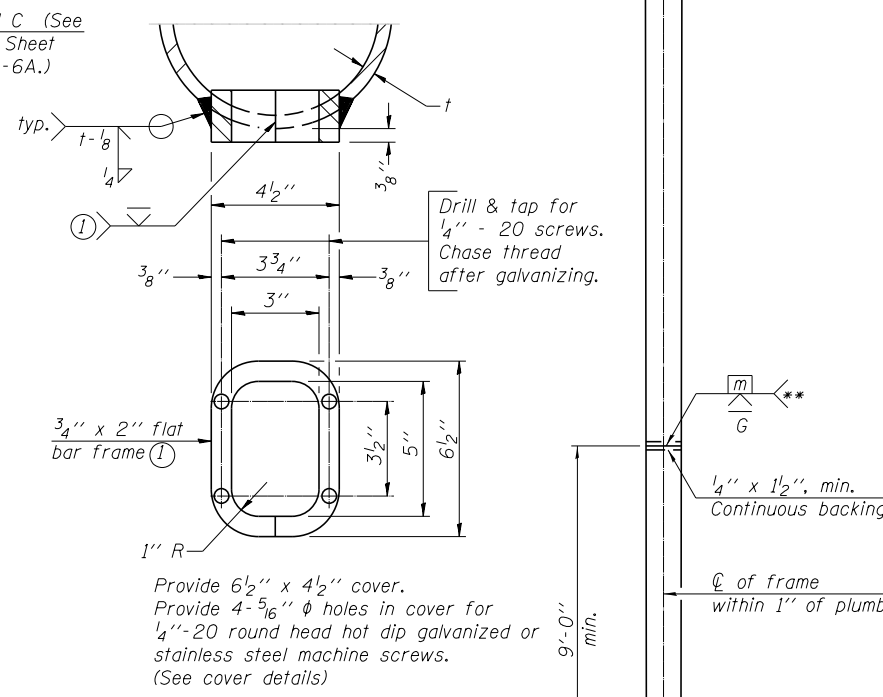
10" φ PIPE TRUSS SUPPORT FRAME

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

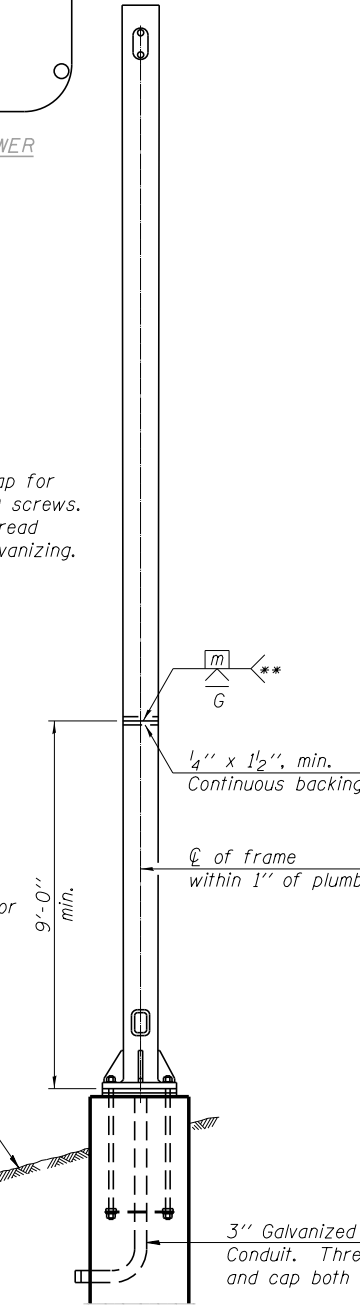
Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A (5)	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"



HANDHOLE COVERS



DETAIL D



END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				
4S090I074L100.0	482+66.50	X		I-A	0.279"	26.28'	19.70'
4S090I074L100.0	482+66.50		X	I-A	0.279"	28.17'	21.59'
4S090I074R100.3	498+50.00	X		II-A	0.365"	25.64'	18.24'
4S090I074R100.3	498+50.00		X	II-A	0.365"	28.09'	20.69'
4S090I074R100.6	515+50.00	X		II-A	0.365"	25.64'	18.24'
4S090I074R100.6	515+50.00		X	II-A	0.365"	27.87'	20.47'

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

OS-A-6 6-1-12

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	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

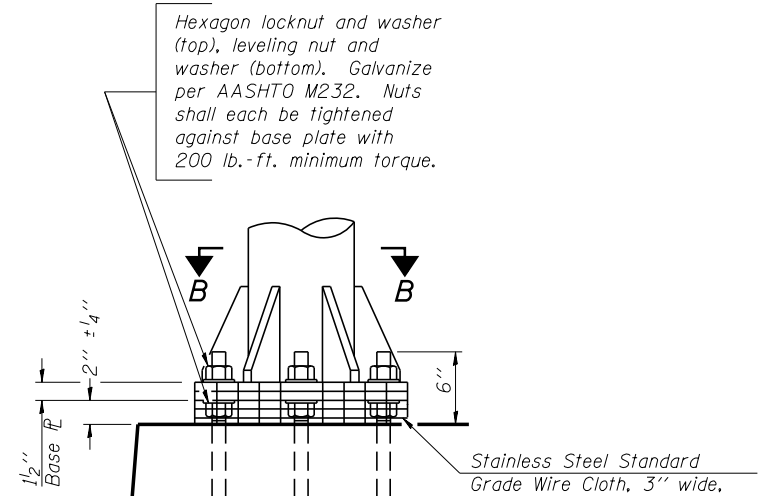
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1627
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

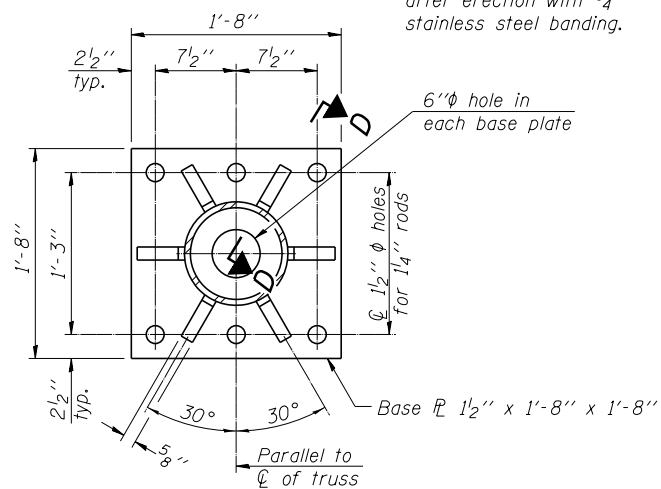
SHEET NO. SS7 OF SS32 SHEETS

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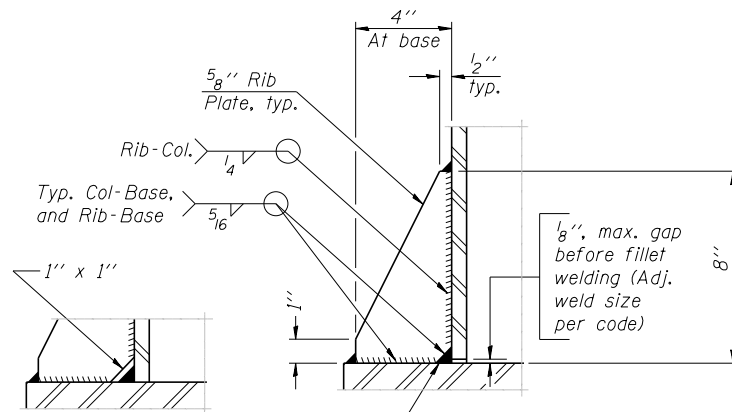


DETAIL B

Ribs shall be cut to fit slope of pipe.

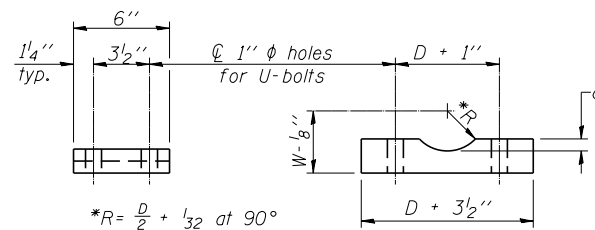


SECTION B-B



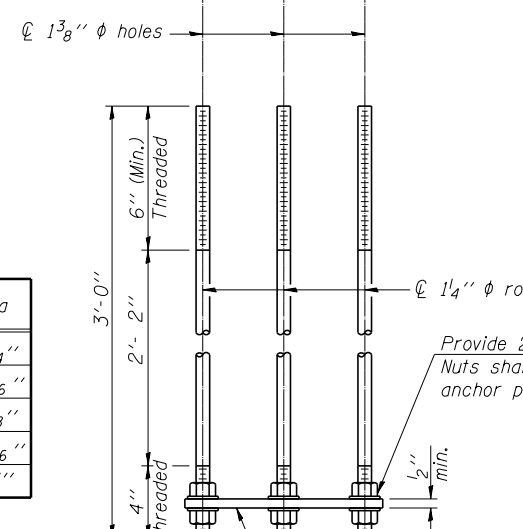
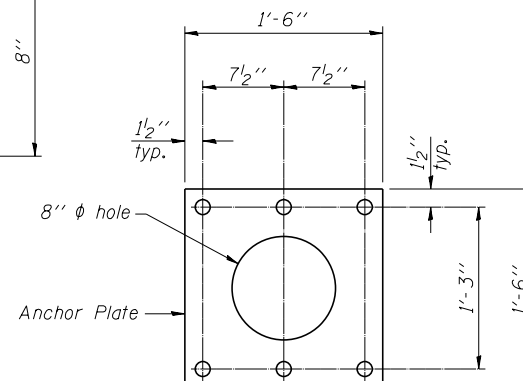
SECTION D-D

** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

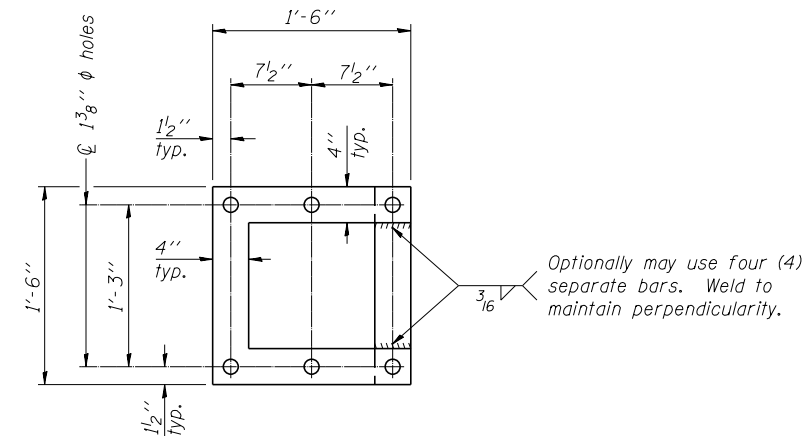


SADDLE SHIM DETAIL

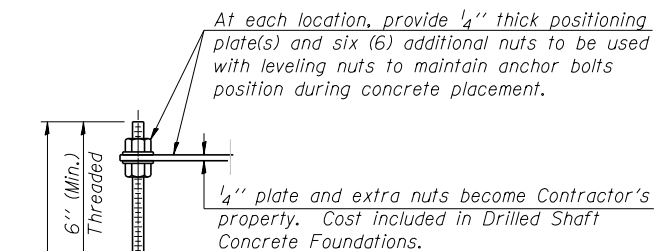
ASTM B26 Alloy 356-F or ASTM B209 Alloy 6061-T651 (4 required per sign truss)



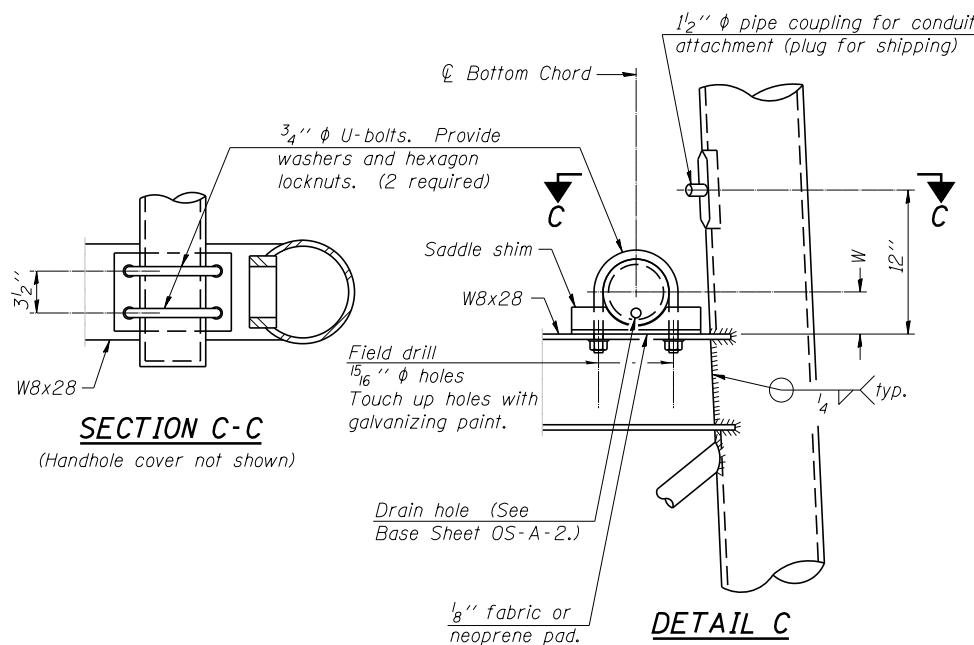
ANCHOR ROD DETAIL
Spread Footing Foundation



POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation



SECTION C-C

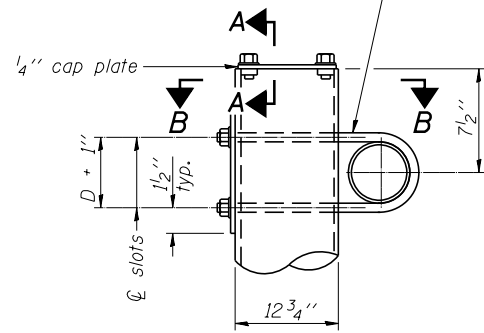
(Handhole cover not shown)

DETAIL C

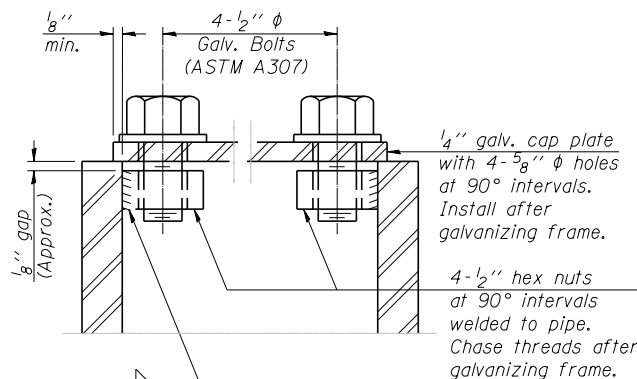
10" ϕ PIPE SUPPORT FRAME DETAILS

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

$\frac{3}{4}$ " ϕ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
 $\frac{13}{16}$ " x 2" slots on ϕ 12" ϕ pipe.
(4 slots required per pipe)

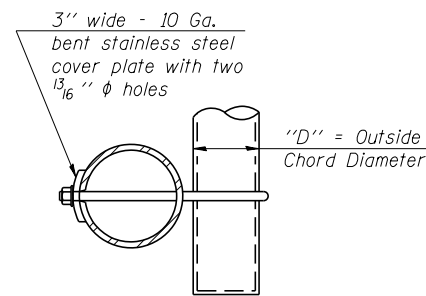


DETAIL A

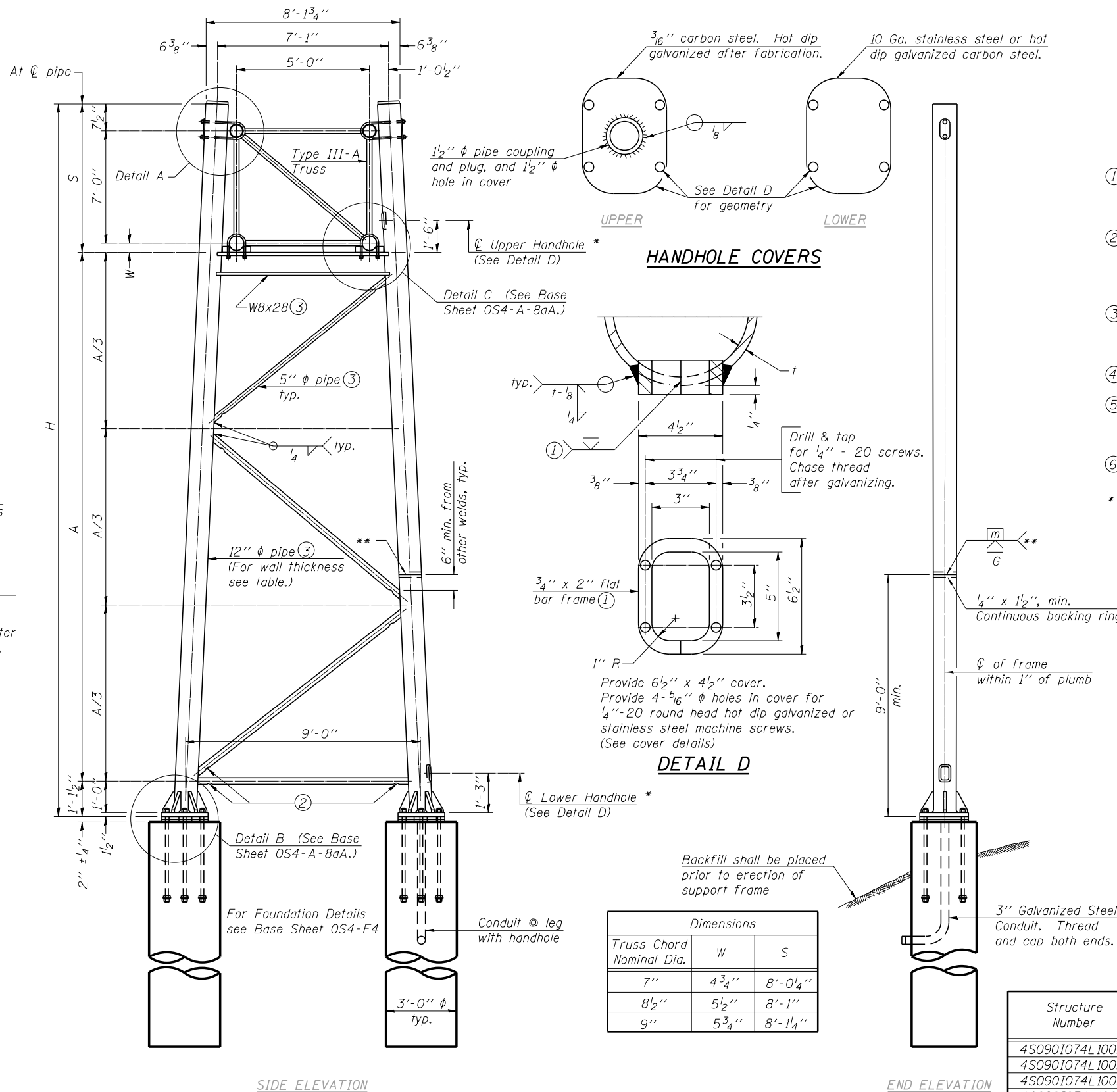


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION

END ELEVATION

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS

(12" ϕ Pipe-Type III-A Truss)
** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ m or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
4S0901074L100.3	495+10.00	X		0.33"	25.95'	16.80'
4S0901074L100.3	495+10.00		X	0.33"	28.12'	18.97'
4S0901074L100.5	508+15.00	X		0.33"	28.80'	19.65'
4S0901074L100.5	508+15.00		X	0.33"	30.95'	21.80'
*4S0901074L104.3						

*See ITS plans for existing plans for relocated sign structure.

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205 North Michigan Avenue, Suite 2400
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312-565-0450 Job No. 10056

OS4-A-8a 6-1-12

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		PLOT DATE :	REVISD :
		7/16/2012	-
		CHECKED :	REVISD :
		XXX	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SUPPORT FRAME
FOR TYPE III-A ALUMINUM TRUSS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1629
CONTRACT NO. 68620				

SHEET NO. SS9 OF SS32 SHEETS

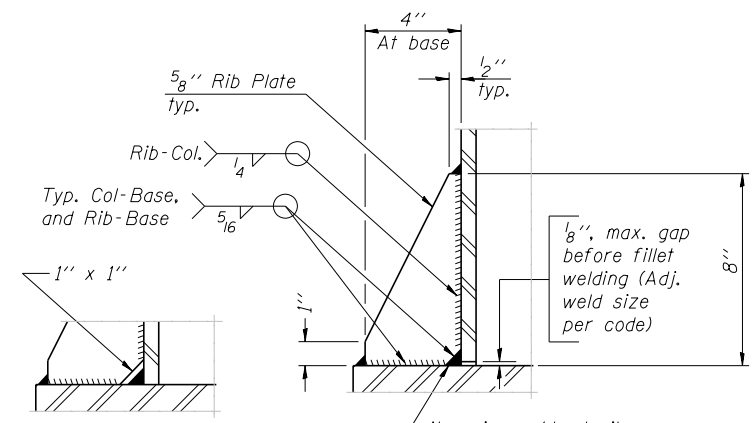
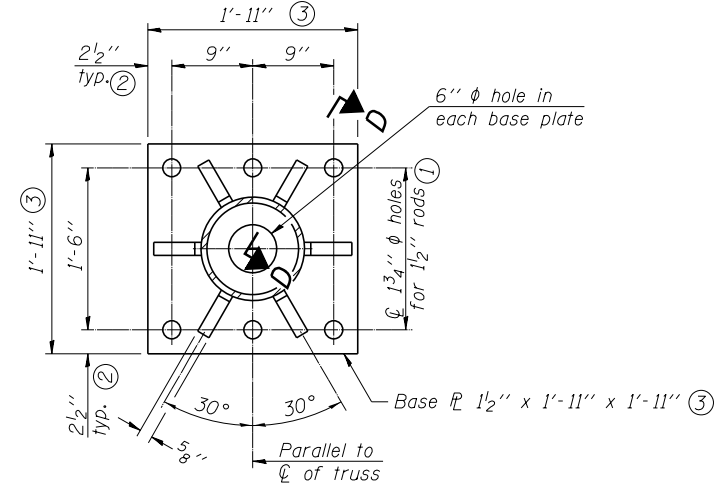
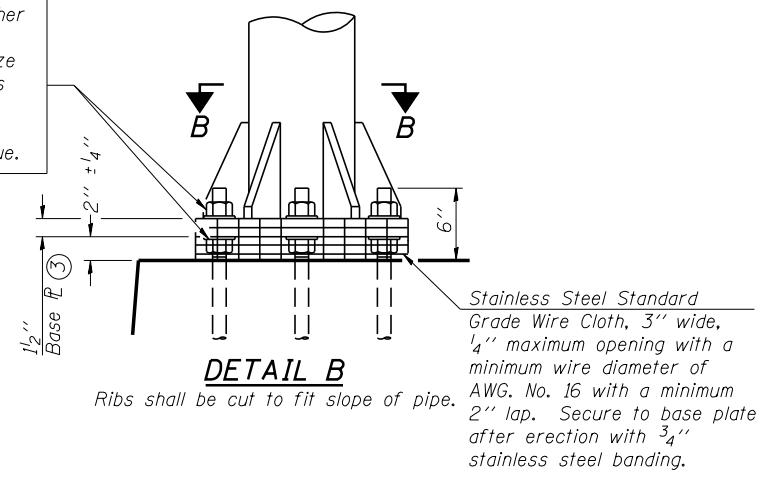
ILLINOIS FED. AID PROJECT

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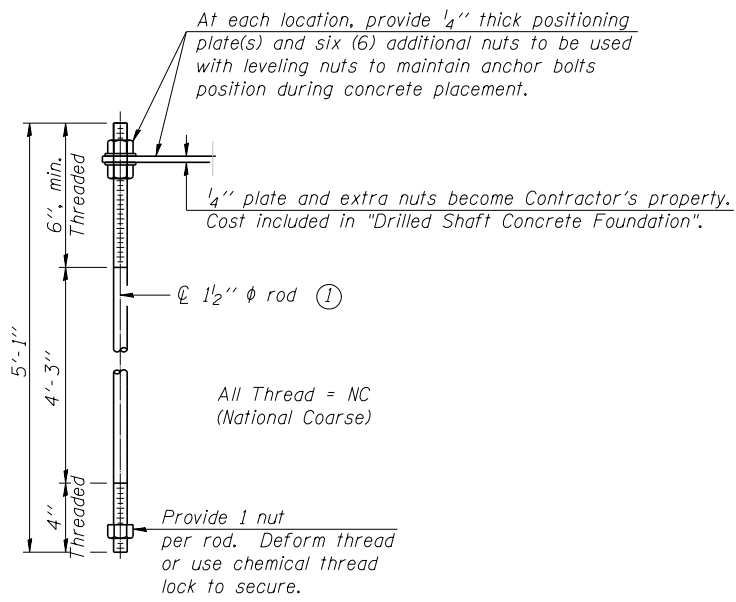
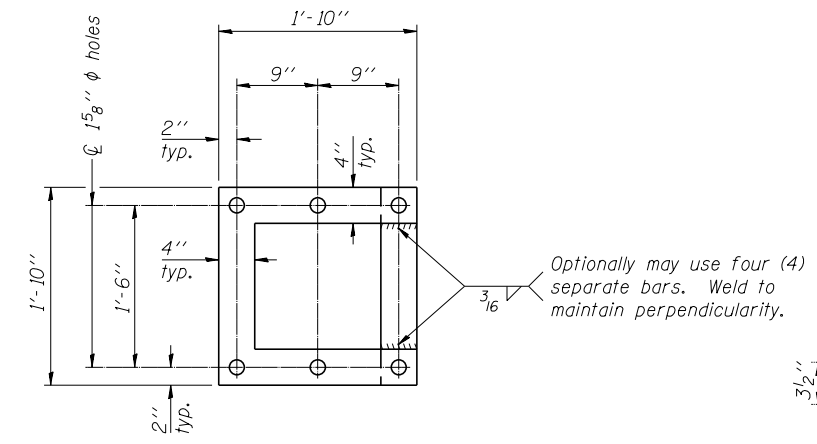
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7/16/2012

Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.



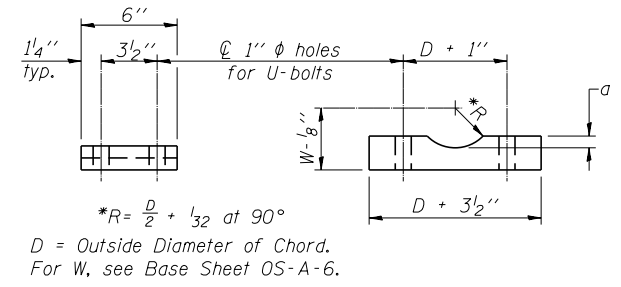
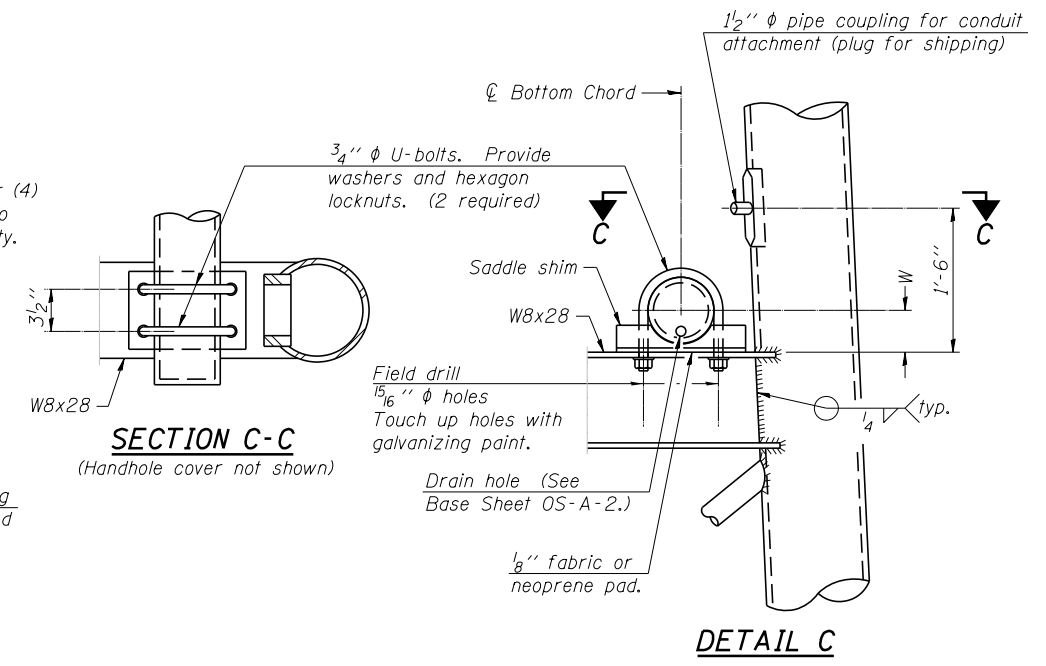
ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

**TYPE III-A TRUSS
12" ϕ PIPE SUPPORT FRAME DETAILS**

Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

- ① 1 3/4" ϕ rod, 2" ϕ holes
- ② 2 3/4" edge distance
- ③ Base Pl 1 5/8" x 1' - 11 1/2" x 1' - 11 1/2"

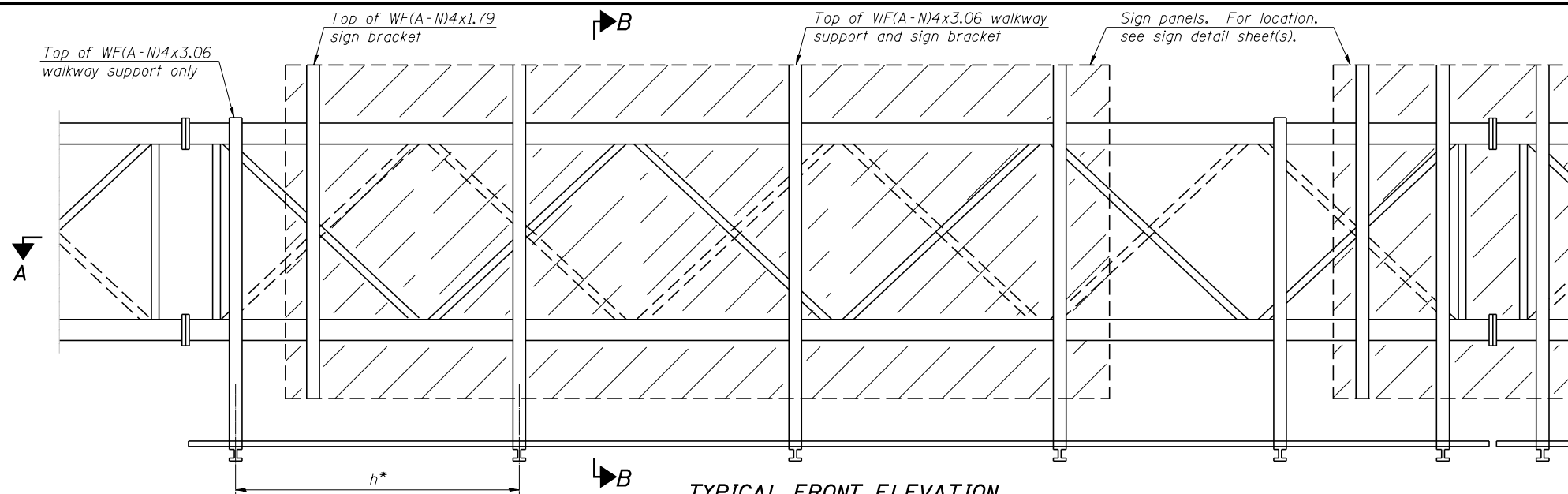


Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

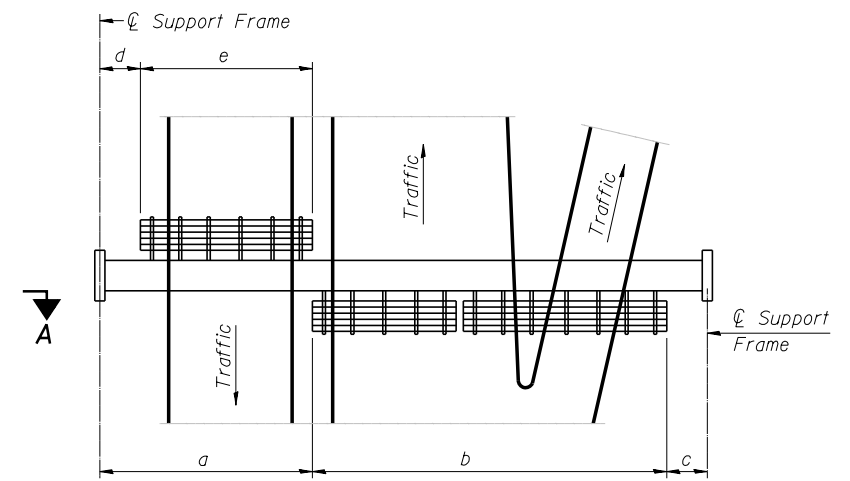
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1630
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	



TYPICAL FRONT ELEVATION

With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:

* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)

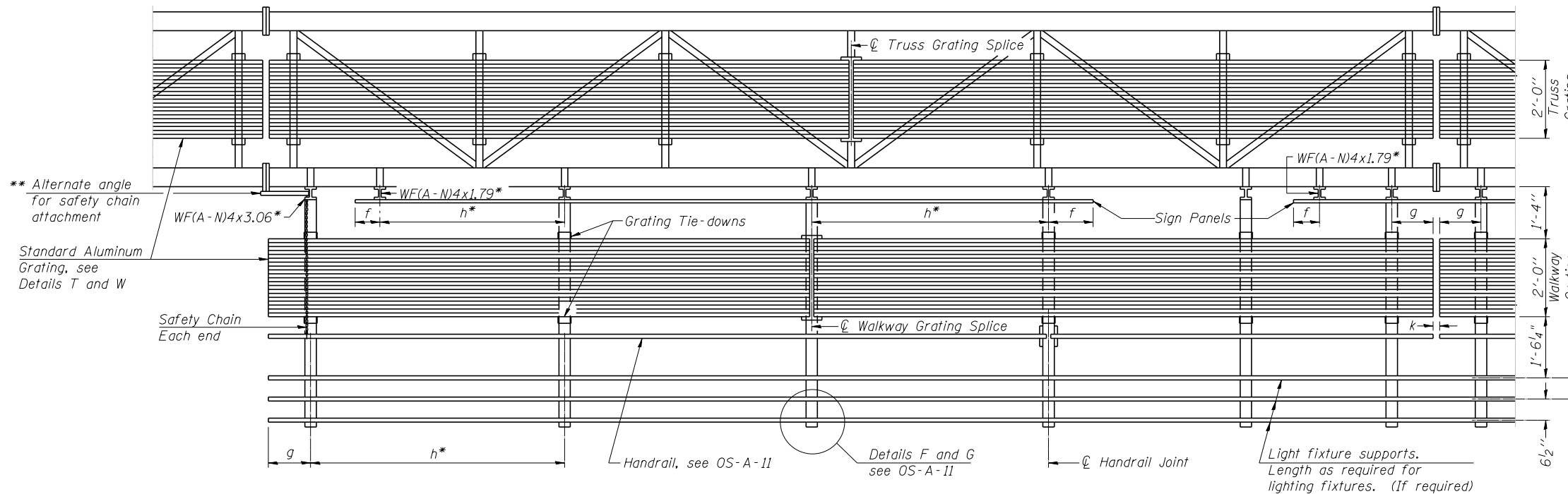
h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)

k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.

For Handrail Details see Base Sheet OS-A-11.



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Handrail joints, grating, and light support splices placed as needed.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
4S0901074L100.0	482+66.50	7'-9"	44'-0"	12'-3"	-	-	44'-0"
4S0901074R100.3	498+50.00	7'-6"	56'-0"	12'-6"	-	-	56'-0"
4S0901074L100.5	508+15.00	7'-6"	56'-0"	12'-6"	-	-	56'-0"
4S0901074R100.6	515+50.00	7'-6"	59'-5"	12'-1"	-	-	59'-5"
4S0901155R031.9	17+68.62	23'-9"	47'-11"	8'-4"	-	-	47'-11"
4S0901155R031.2	54+00.00	14'-0"	32'-0"	14'-0"	-	-	32'-0"

Truss grating to facilitate inspection shall run full length (center to center of support frames) $\pm 12"$ on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary $\pm 1/2"$ based on available standard widths.

OS-A-9

6-1-12



Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

FILE NAME =
xxxxxx_68620_11.w1.dgn

USER NAME = mbecker
DESIGNED - MFB
CHECKED - KJN
PLOT SCALE =
DRAWN - MFB
PLOT DATE = 7/16/2012
CHECKED - KJN

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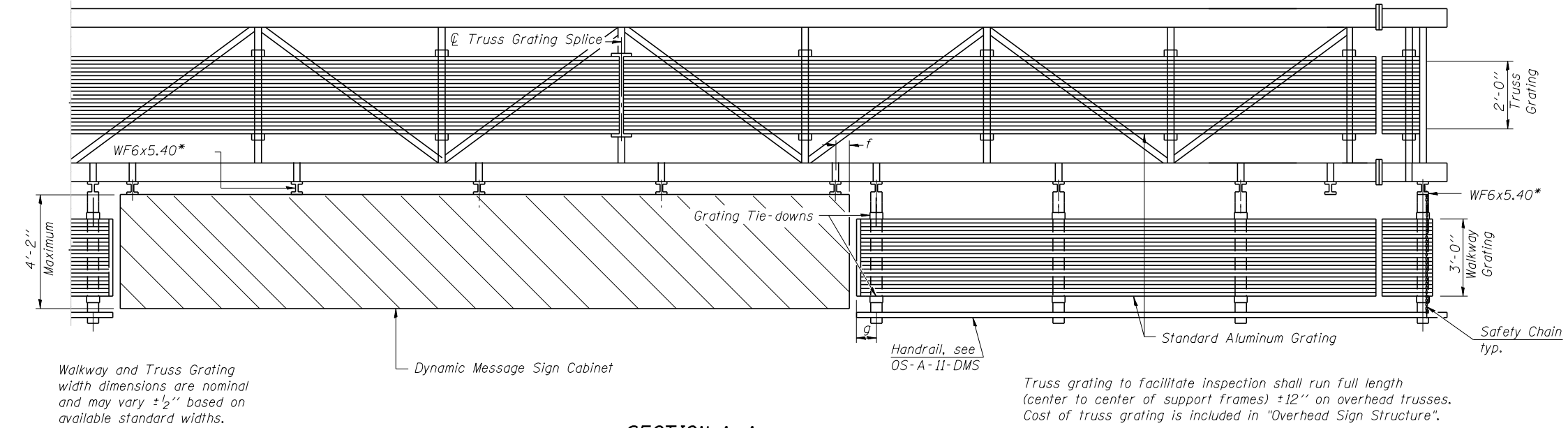
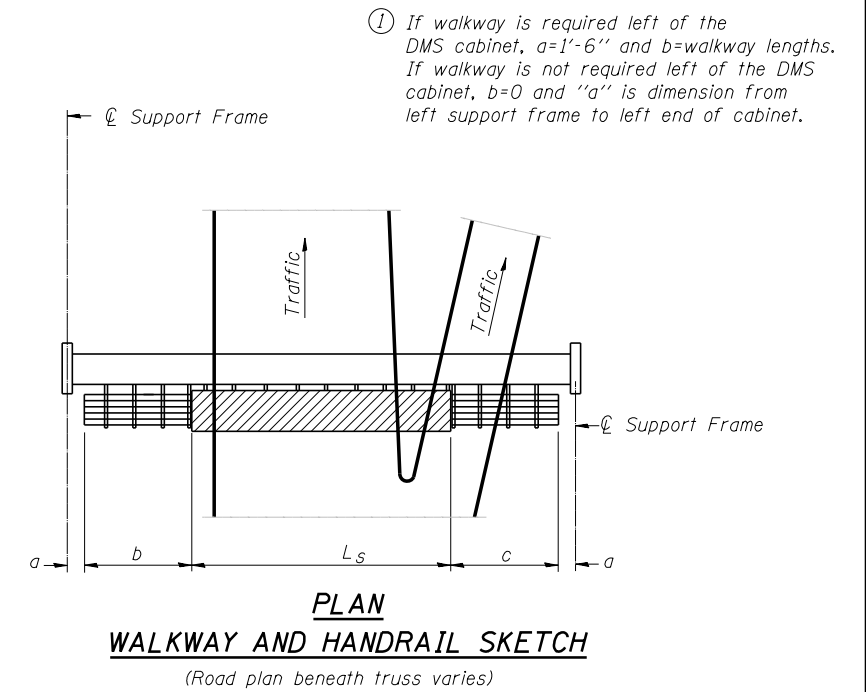
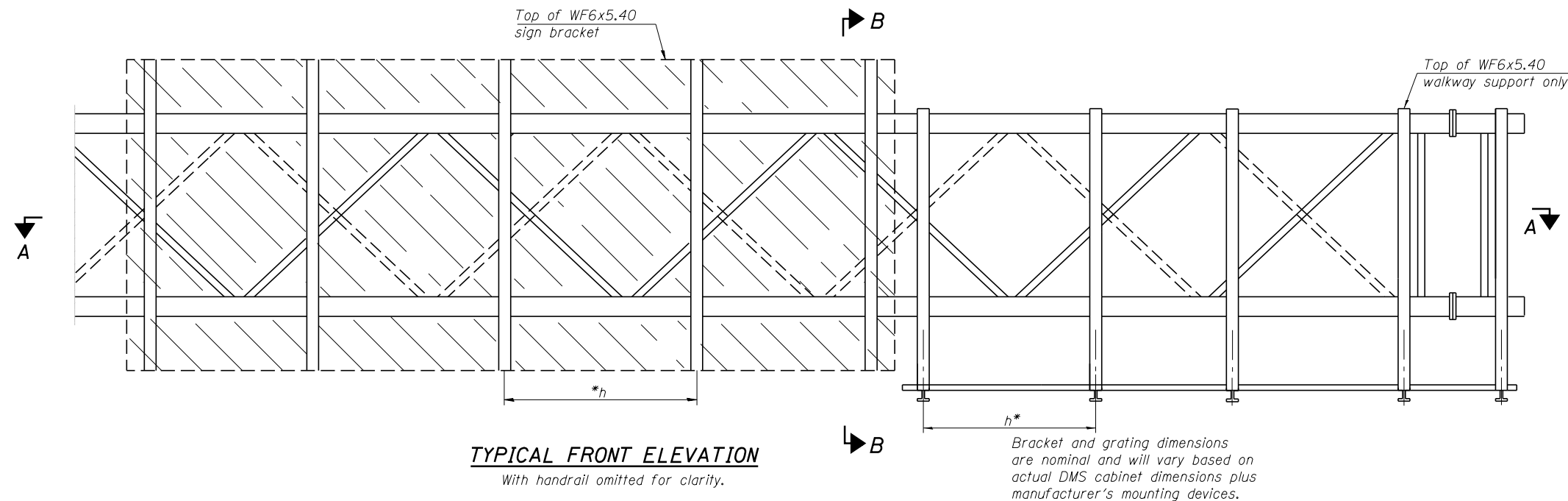
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SHEET NO. SS11 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R]14HB-4,14,14HVB BR	TAZEWELL	2433	1631
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

SECTION A-A
Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Notes:
* Space walkway brackets WF6x5.40 for efficiency and within limits shown:
f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

Structure Number	Station	a	b	c	L _s	Walkway Grating and Handrail Lengths
4S0901074L100.3	495+10.00	1'-6"	21'-0"	26'-0"	26'-0"	47'-0"
**4S0901074L104.3						

**See ITS plans for existing plans for relocated sign structure.

OS-A-9-DMS 6-1-12

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Chicago, Illinois 60601
312-565-0450 Job No. 10056

FILE NAME =	USER NAME = mbecker	DESIGNED - MFB	REVISD -
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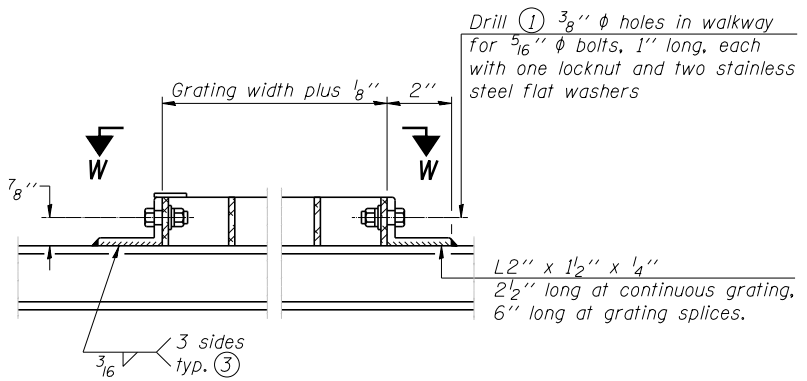
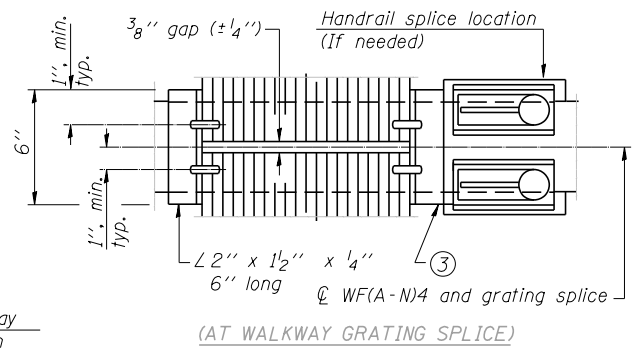
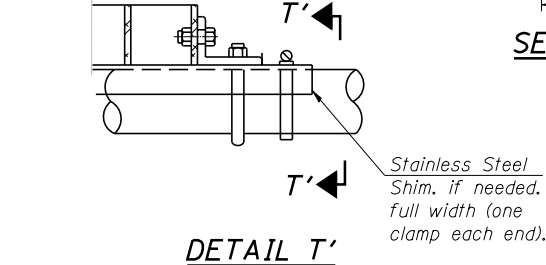
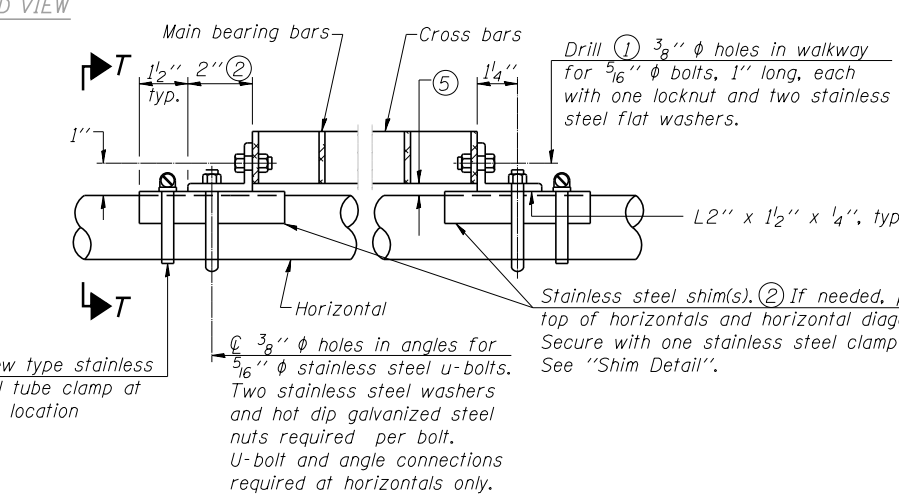
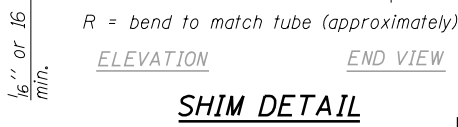
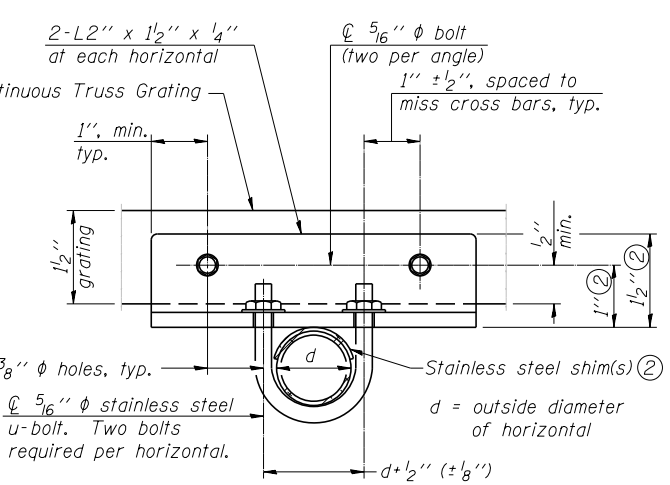
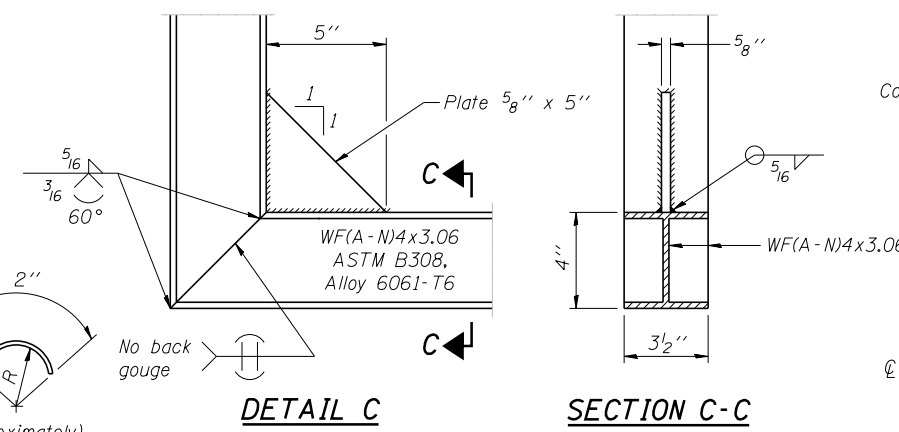
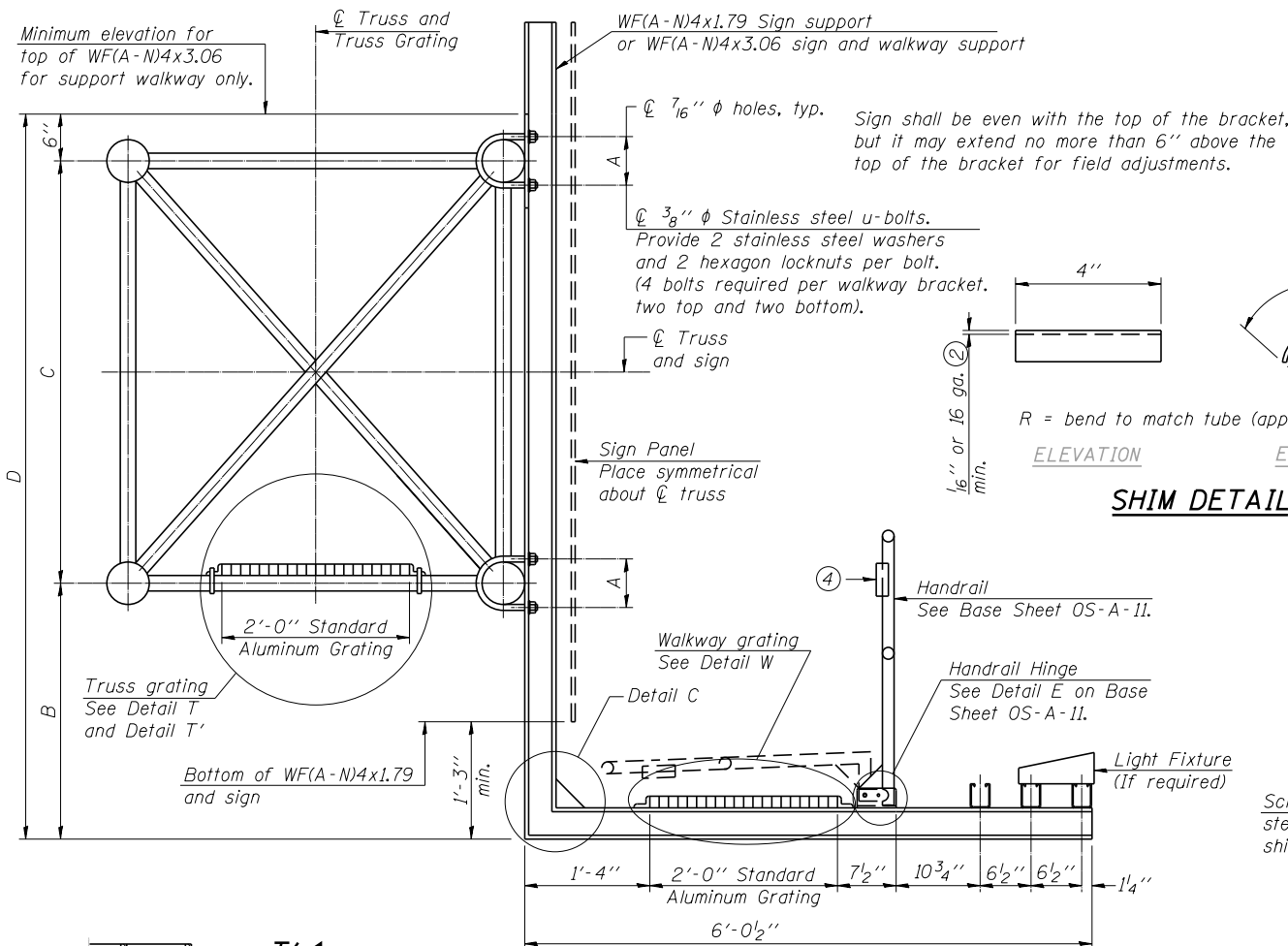
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS**

SHEET NO. SS12 OF SS32 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;14HB-4,14,14HVB]BR	TAZEWELL	2433	1632
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

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SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

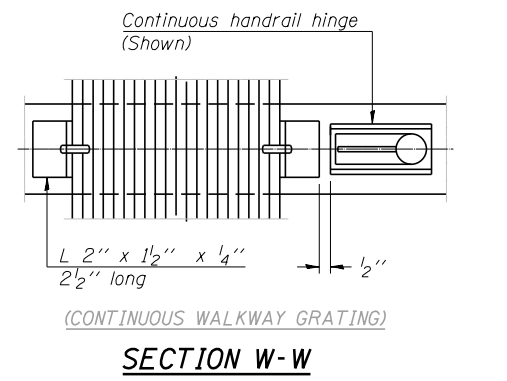
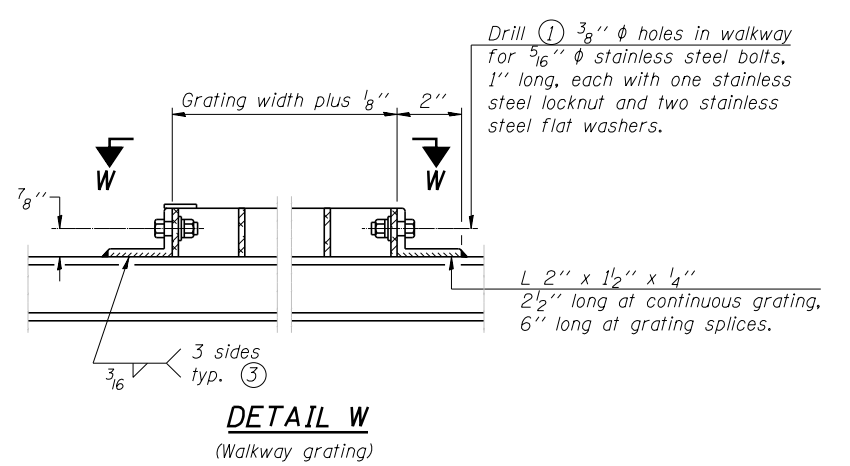
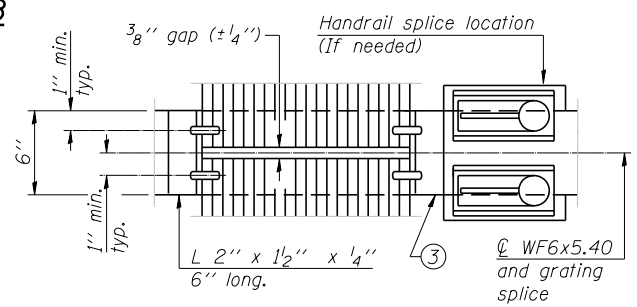
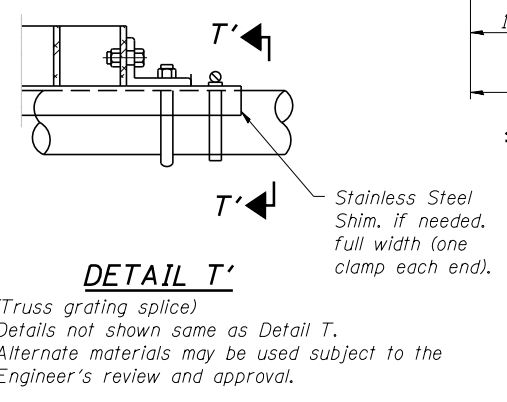
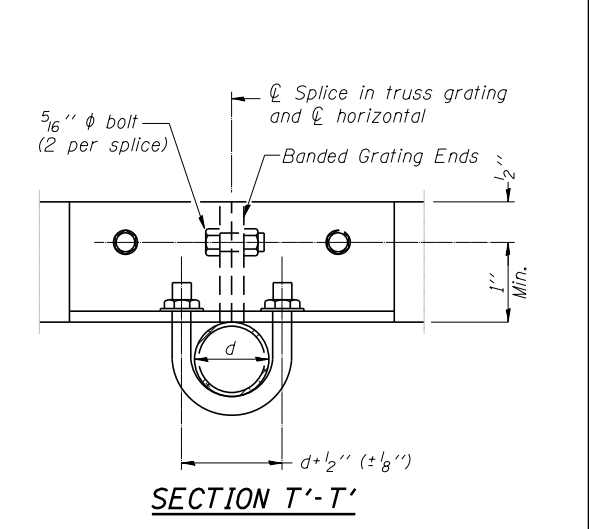
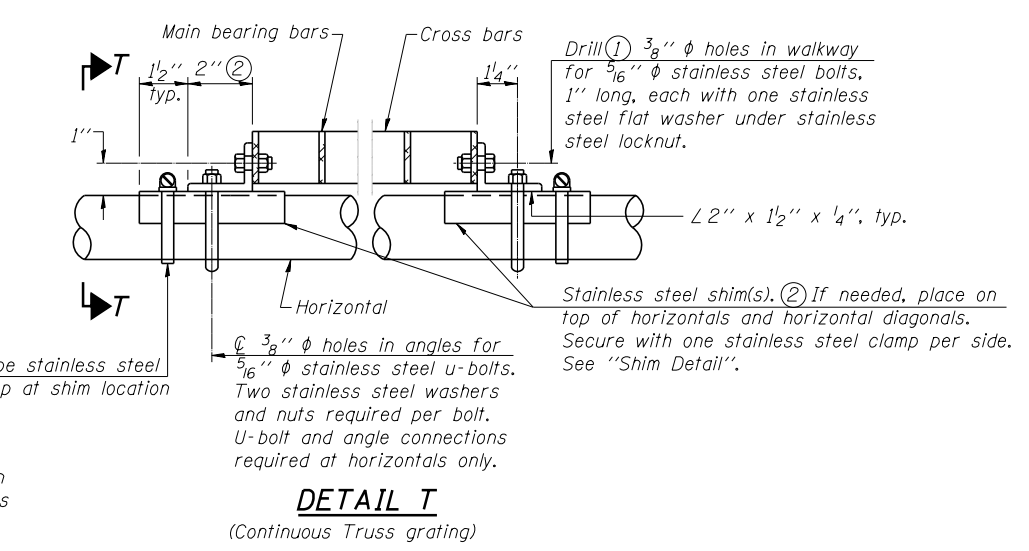
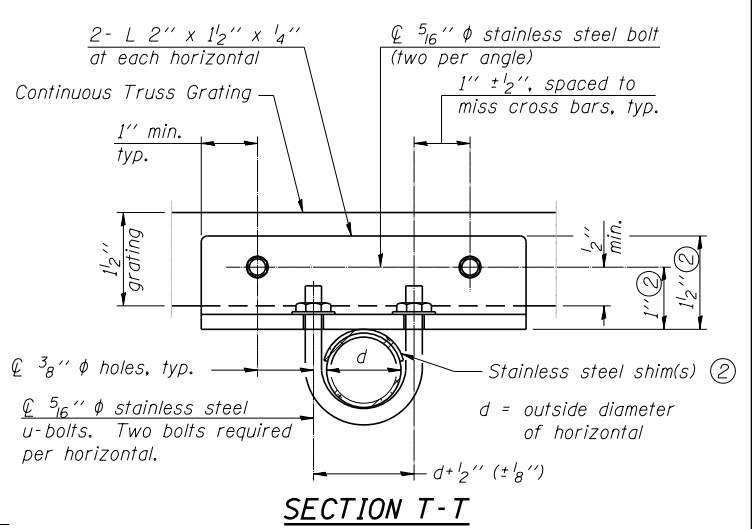
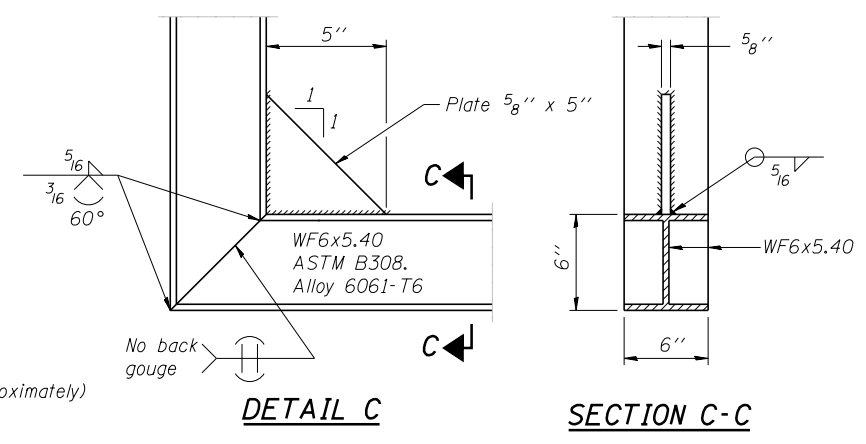
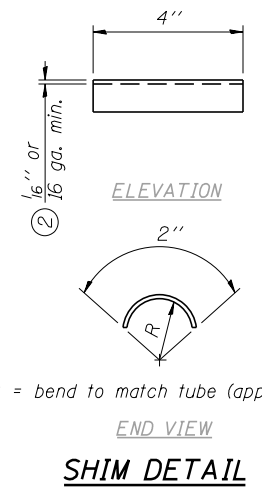
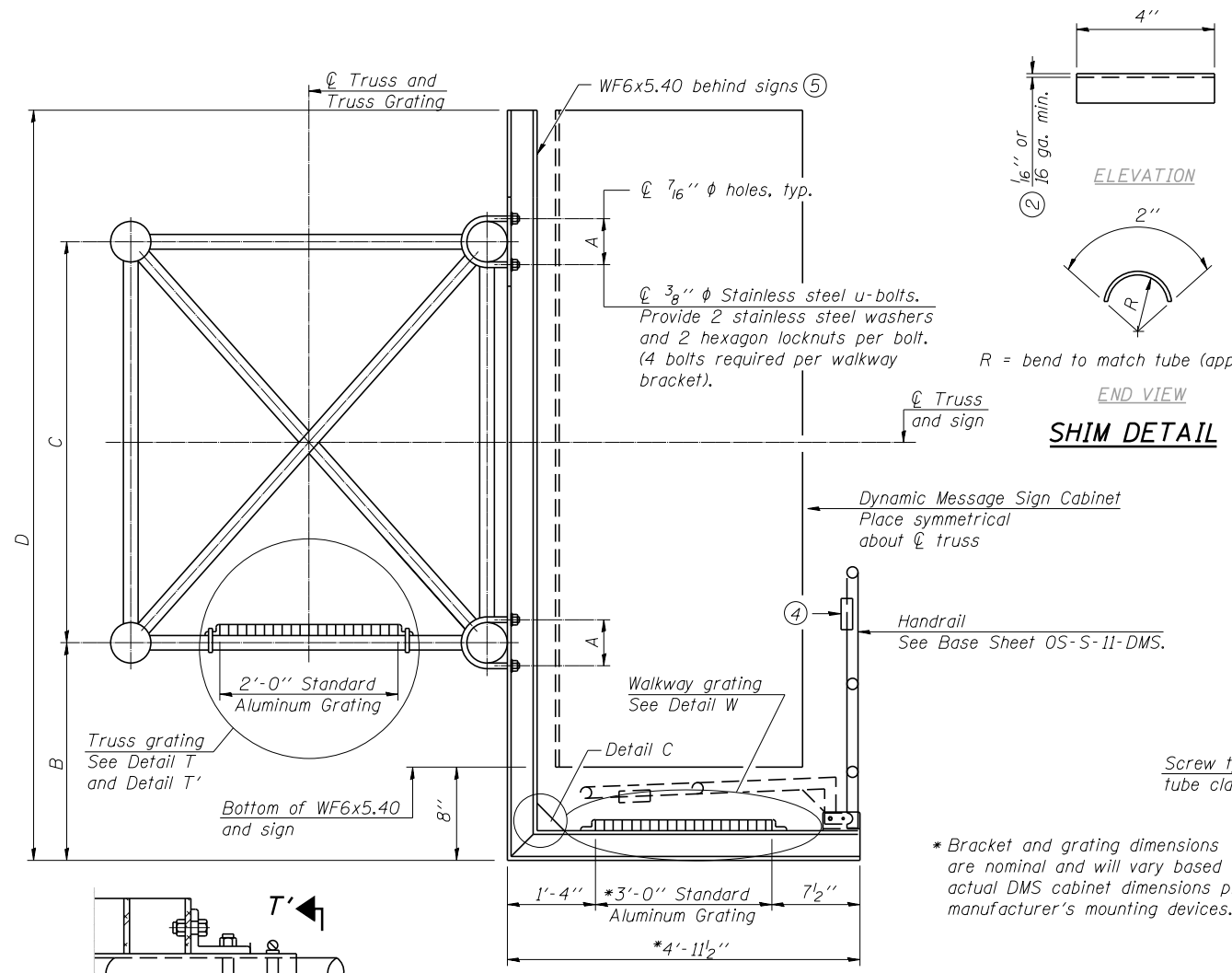
Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "4" sections for main bearing bars shall meet the following requirements:
 Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D
4S0901074L100.0	482+66.50	5 1/2"	7'-6"	4'-6"	12'-6"
4S0901074R100.3	498+50.00	6"	5'-10 1/2"	5'-3"	11'-7 1/2"
4S0901074L100.5	508+15.00	7 1/2"	7'-6"	7'-0"	15'-0"
4S0901074R100.6	515+50.00	6"	5'-10 1/2"	5'-3"	11'-7 1/2"
4S0901155R031.9	17+68.62	5 1/2"	4'-3"	4'-6"	9'-3"
4S0901155R031.2	54+00.00	5 1/2"	4'-0"	4'-6"	9'-0"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-II.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-1.



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.

Cross bars shall be 3/16" x 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in. per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D
4S0901074L100.3	495+10.00	7 1/2"	1'-2"	7'-0"	8'-8"
*4S0901074L104.3					

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- ④ \bar{C} 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.
- ⑥ Based on actual height of tallest sign given on OS-A-1.

*See ITS plans for existing plans for relocated sign structure.

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

OS-A-10-DMS 6-1-12

FILE NAME =	USER NAME = mbecker	DESIGNED - MFB	REVISED -
xxxxxx.68620.14_wv5.dgn		CHECKED - KJN	REVISED -
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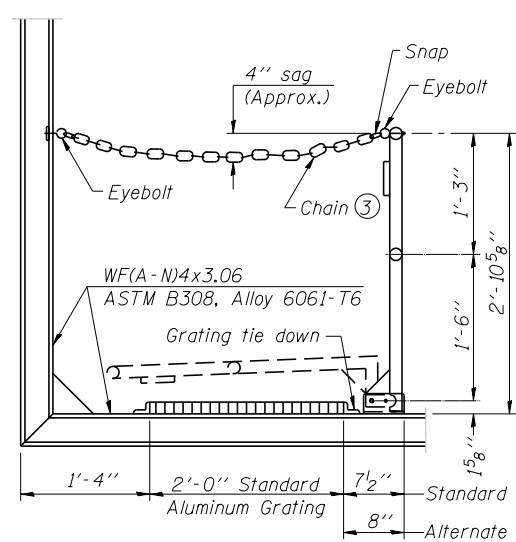
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R]14HB-4,14,14HB[BR]	TAZEWELL	2433	1634
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

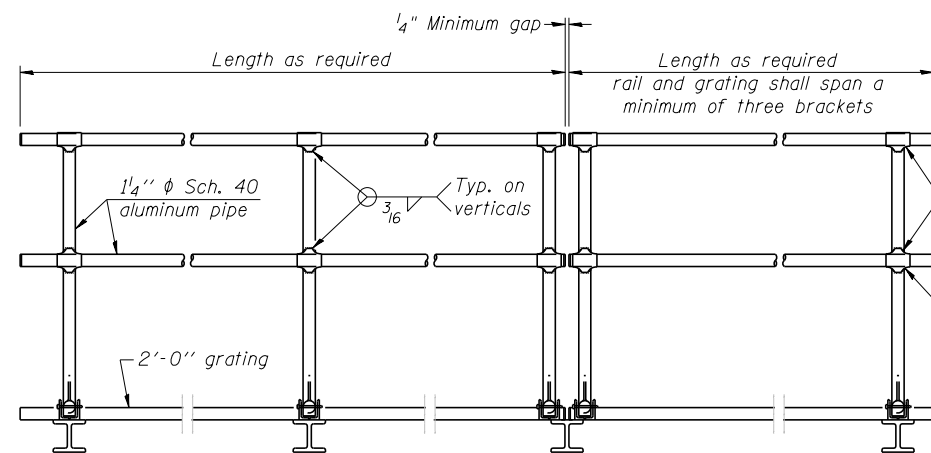
SHEET NO. SS14 OF SS32 SHEETS

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SIDE ELEVATION

(Showing safety chain w/o sign)

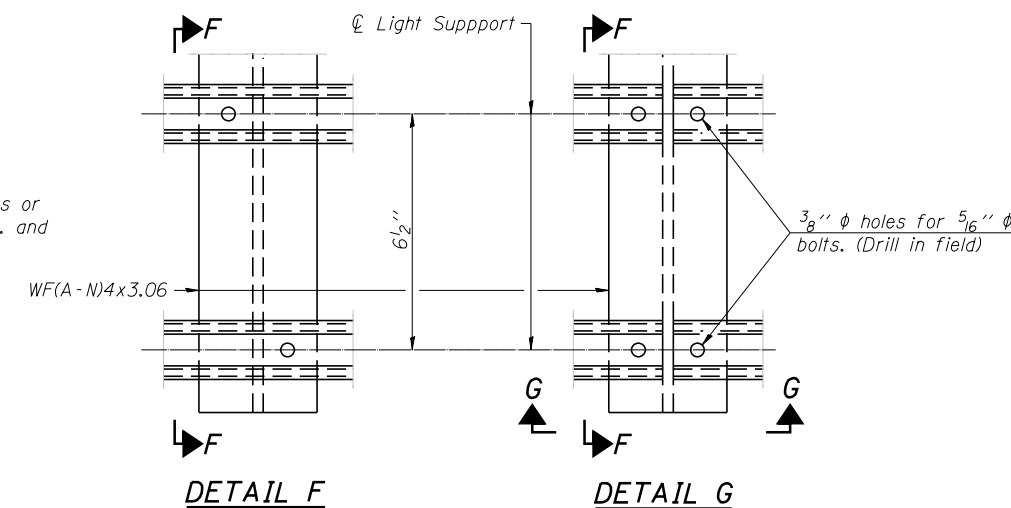


FRONT ELEVATION

HANDRAIL DETAILS

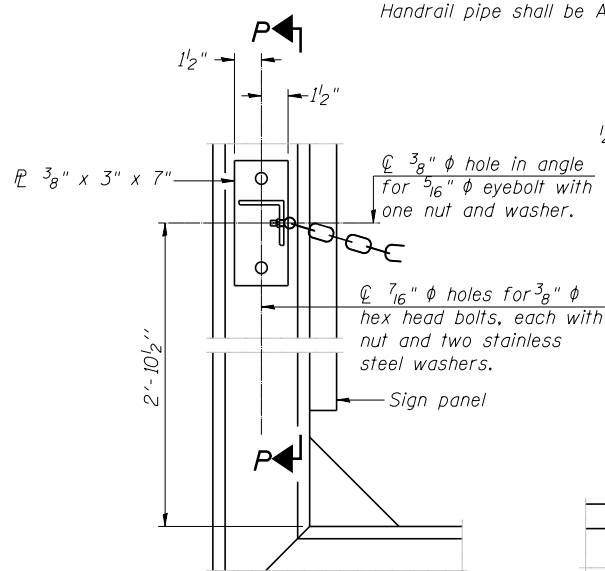
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

- ① Install standard force-fit end caps or weld 3/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
- ② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 7/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)



DETAIL F

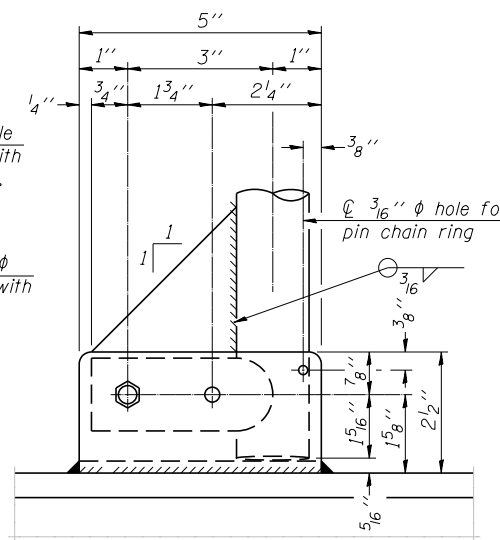
DETAIL G



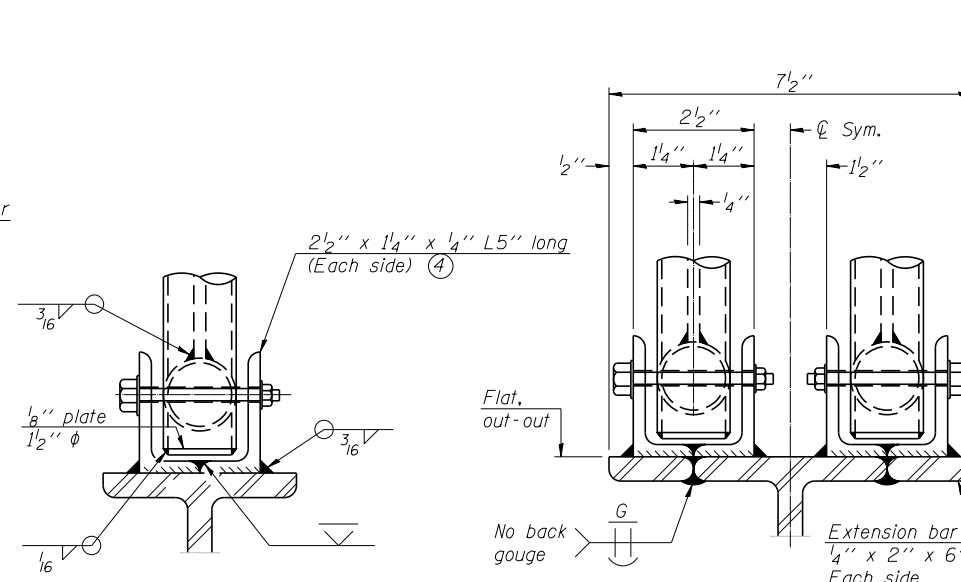
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"



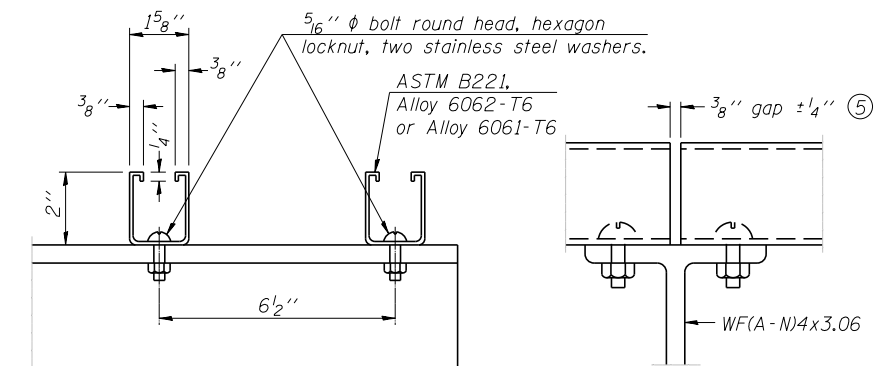
SIDE ELEVATION



FRONT ELEVATION

See "Elevation" at right for dimensions.

ELEVATION AT HANDRAIL JOINT ④

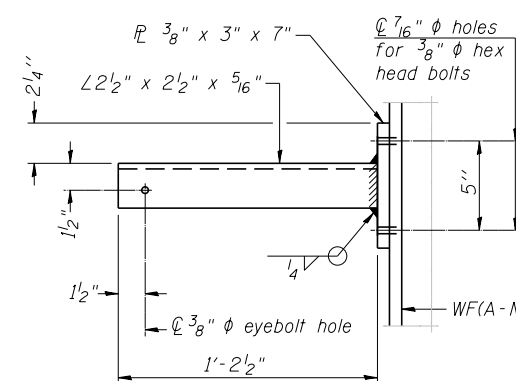


SECTION F-F

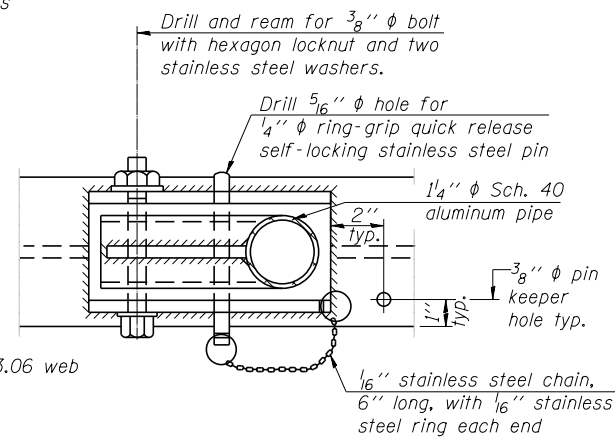
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

- ⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

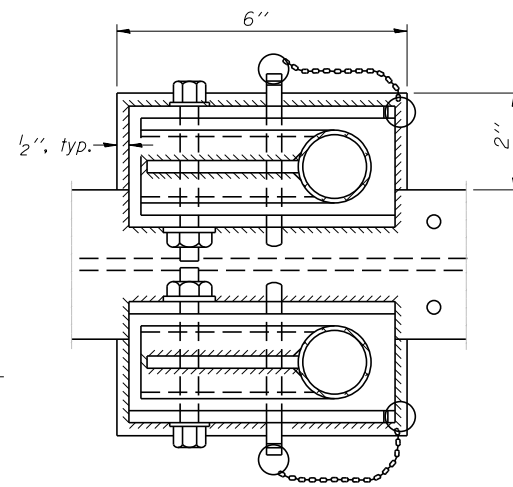


SECTION P-P



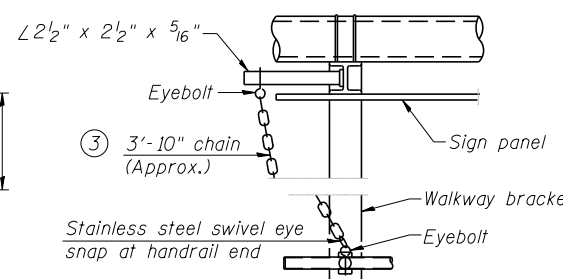
PLAN

DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

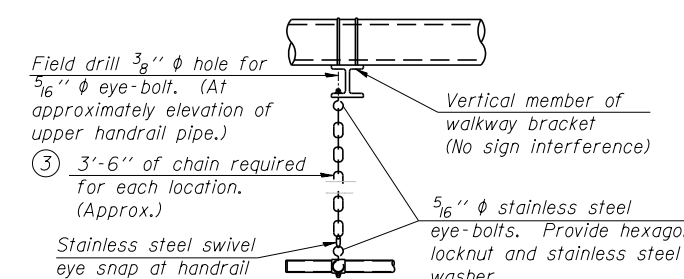


ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

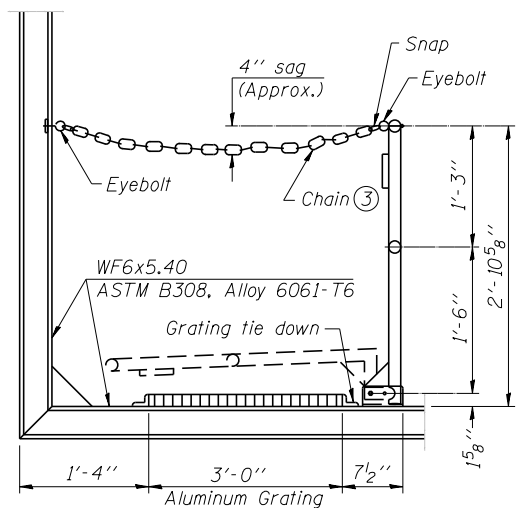
- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

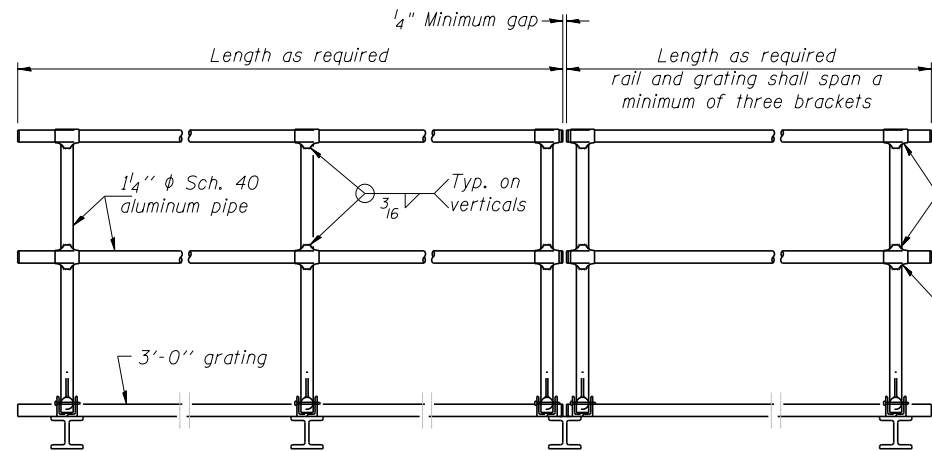


SAFETY CHAIN

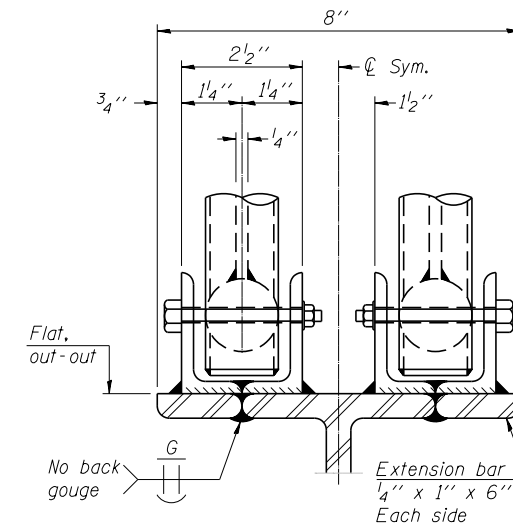
One required for each end of each walkway.



SIDE ELEVATION
(Showing safety chain w/o sign)



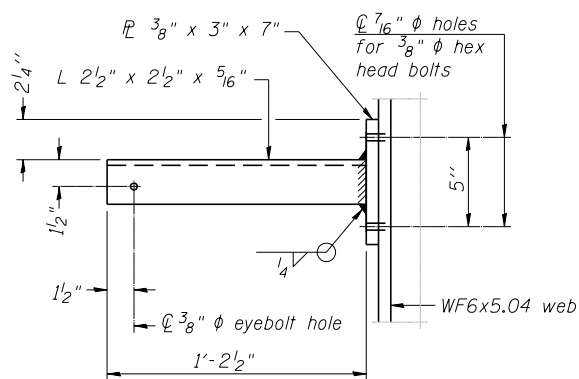
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT

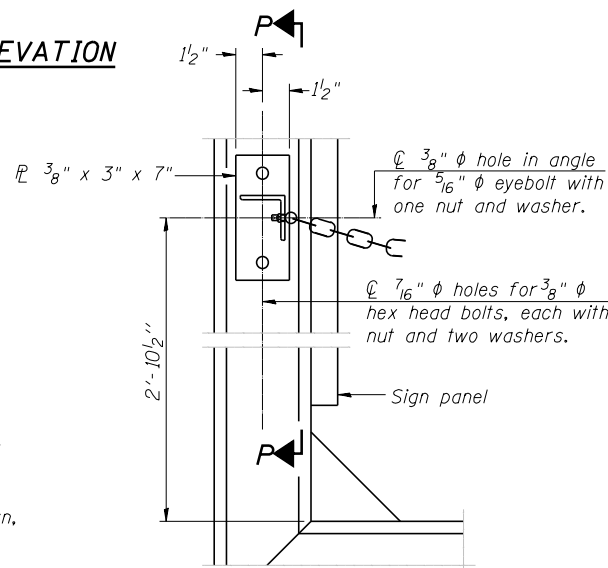
HANDRAIL DETAILS

Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.



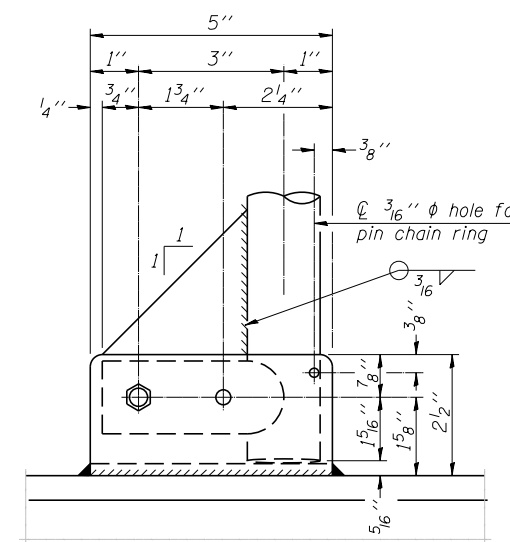
SECTION P-P

- ② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 7/16" hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)
- ③ 3/16" type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

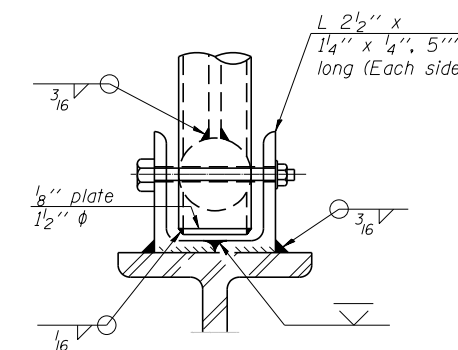


ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"

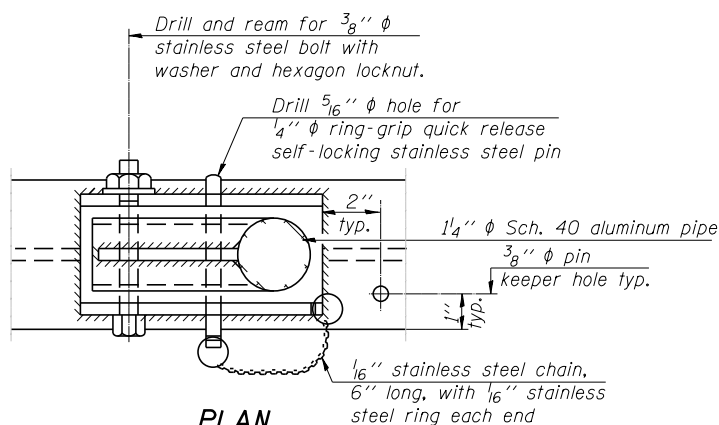


SIDE ELEVATION

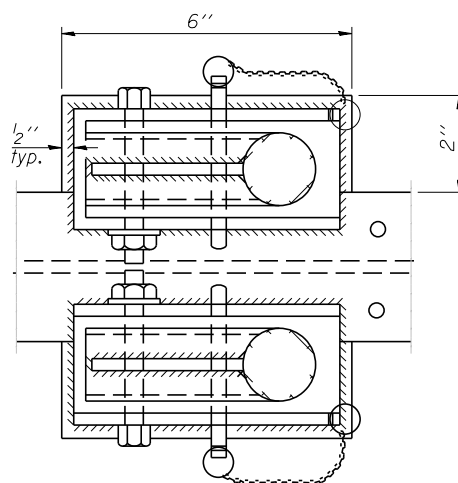


FRONT ELEVATION

See "ELEVATION" at right for dimensions.

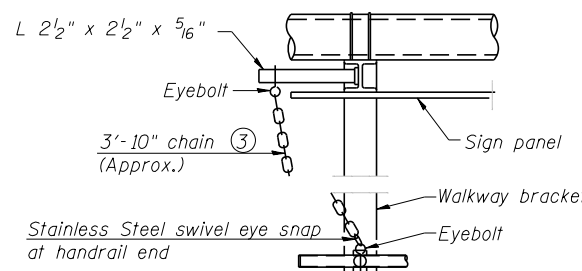


PLAN
DETAIL E HANDRAIL HINGE



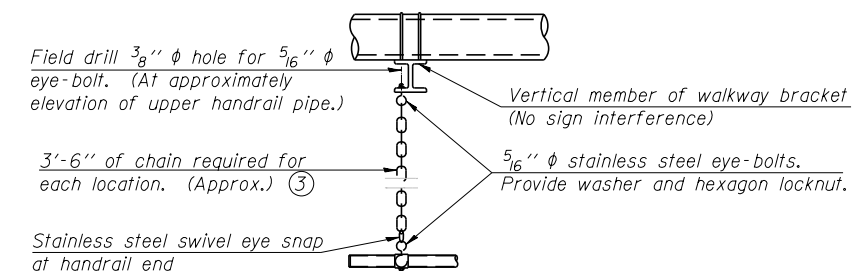
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN

One required for each end of each walkway.

FILE NAME =	USER NAME = mbecker	DESIGNED - MFB	REVISED -
xxxxxx_68620.16_hr2.dgn	PLOT SCALE =	CHECKED - KJN	REVISED -
	PLOT DATE = 7/16/2012	DRAWN - MFB	REVISED -
		CHECKED - KJN	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HV)B]BR	TAZEWELL	2433	1636
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

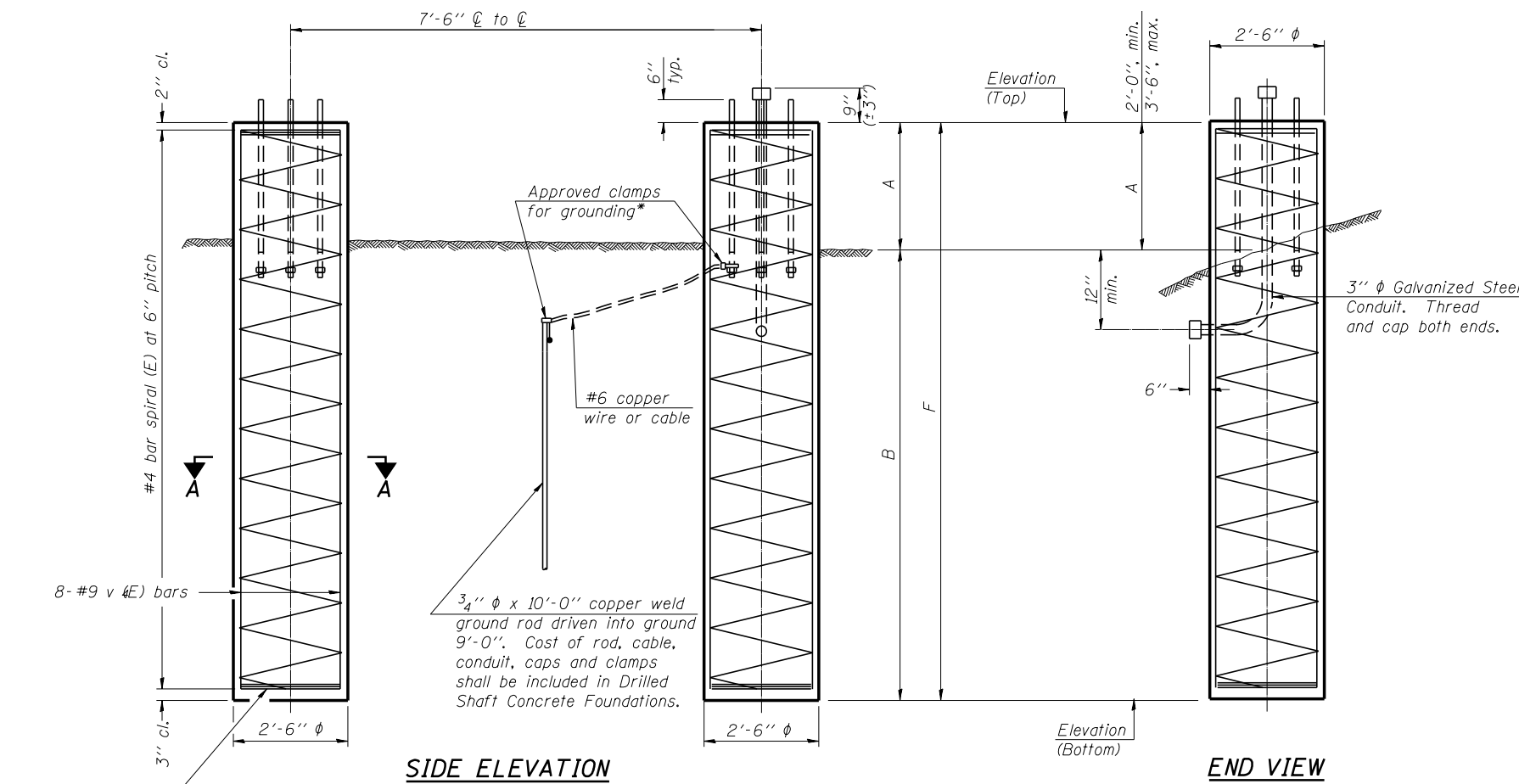
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

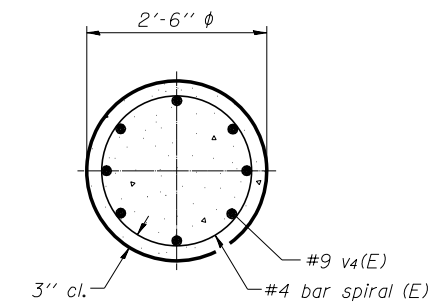
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

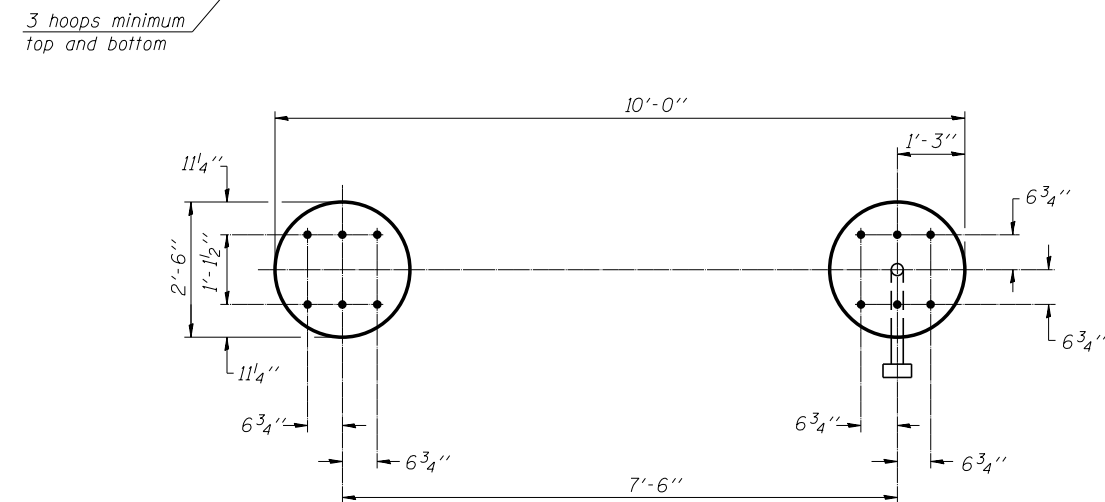


SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

**DETAILS FOR 8" Ø SUPPORT FRAME
TYPE I-A TRUSS**

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
4S0901155R031.9	17+68.62	-	-	-	-	-	734.90	717.40	3.0'	14.5'	17.5'	6.4
4S0901155R031.2	54+00.00	719.80	703.30	3.0'	13.5'	16.5'	719.80	703.30	3.0'	13.5'	16.5'	12.0

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

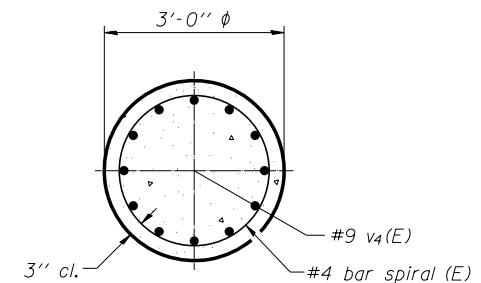
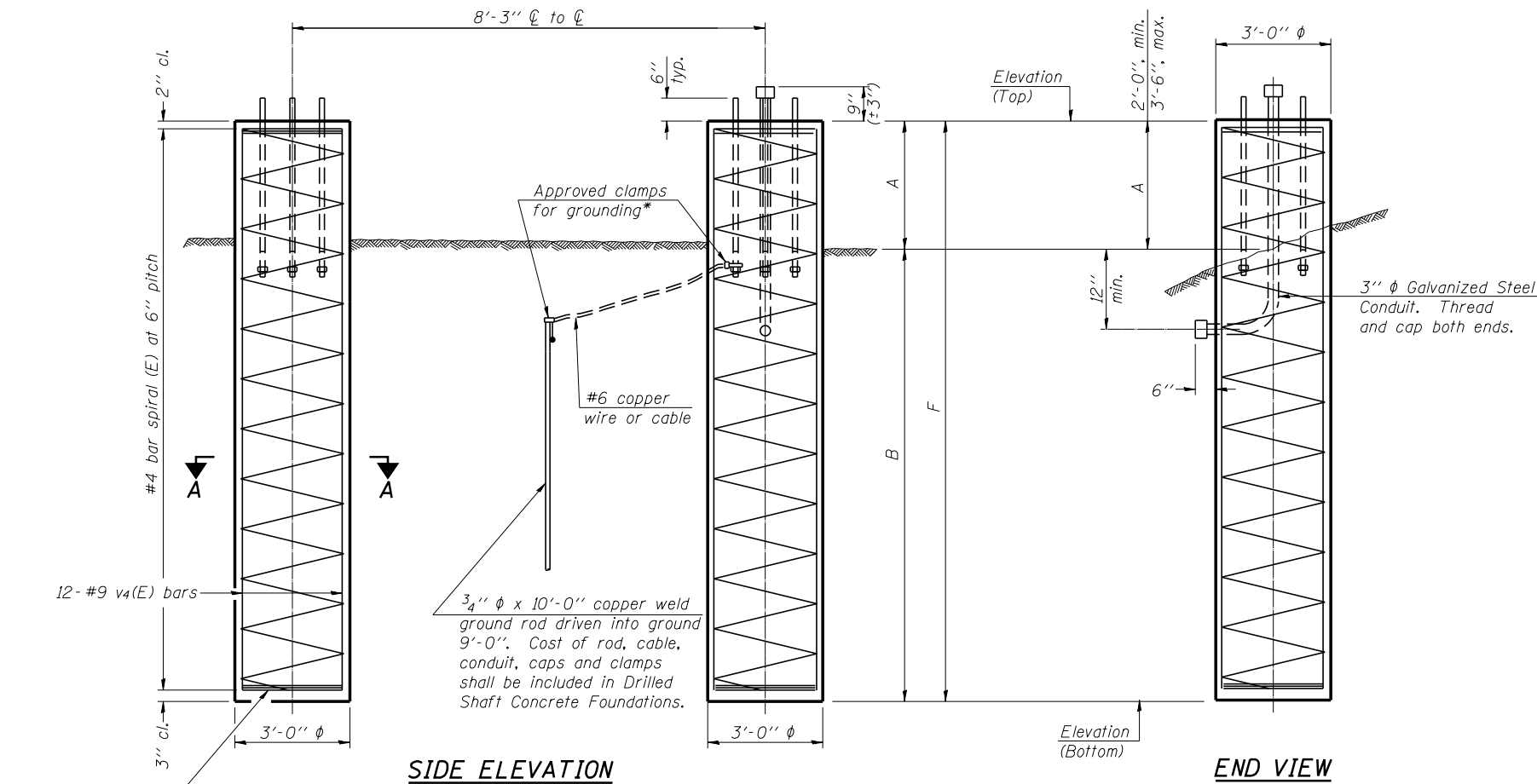
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

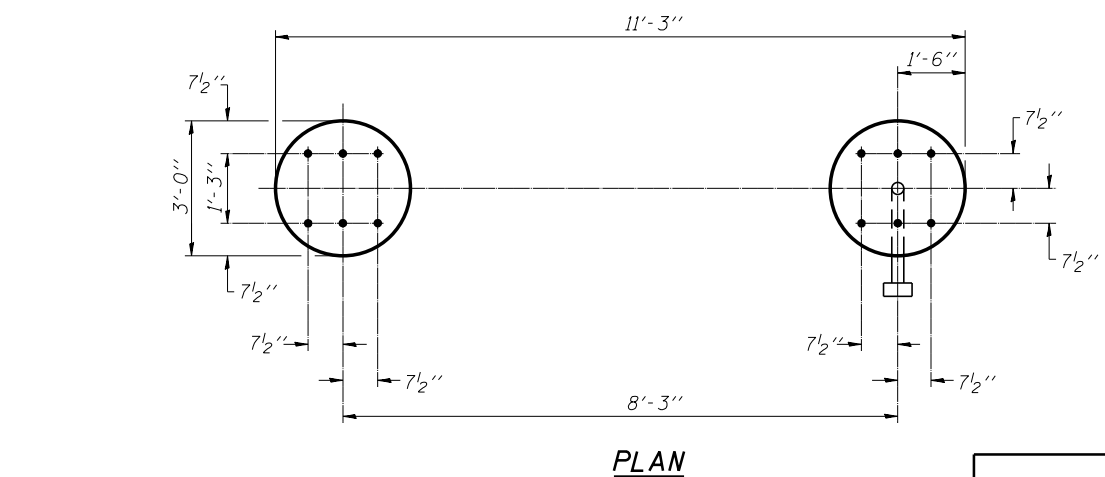
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



SECTION A-A



PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

**DETAILS FOR 10" Ø SUPPORT FRAME
TYPE I-A or II-A TRUSS**

Structure Number	Station	Left Foundation			Right Foundation			Class DS Concrete (Cu. Yds.)				
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top		Elevation Bottom	A	B	F
4S0901074L100.0	482+66.50	-	-	-	-	-	731.45	711.95	3.0'	16.5'	19.5'	10.2
4S0901074R100.3	498+50.00	-	-	-	-	-	735.69	715.19	3.0'	17.5'	20.5'	10.7
4S0901074R100.6	515+50.00	-	-	-	-	-	737.90	709.90	3.0'	25.0'	28.0'	14.7

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Chicago, Illinois 60601
312-565-0450 Job No. 10056

OS4-F3 6-1-12

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xxxxxx.68620.18.ds2.dgn		CHECKED - KJN	REVISD -
	PLOT SCALE =	DRAWN - MFB	REVISD -
	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SHEET NO. SS18 OF SS32 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1638
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

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7/16/2012

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

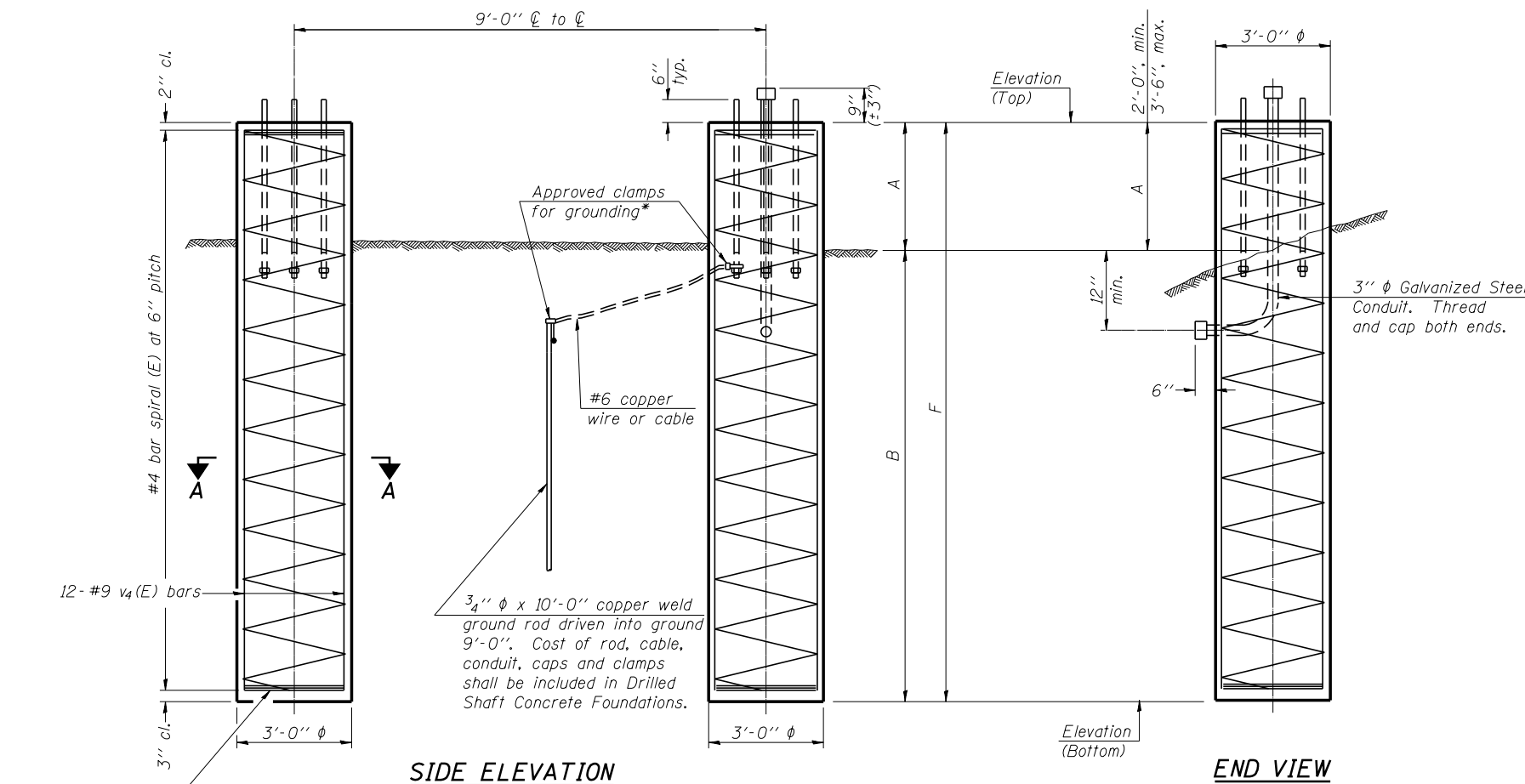
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

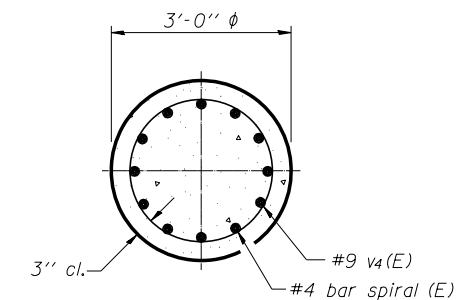
A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



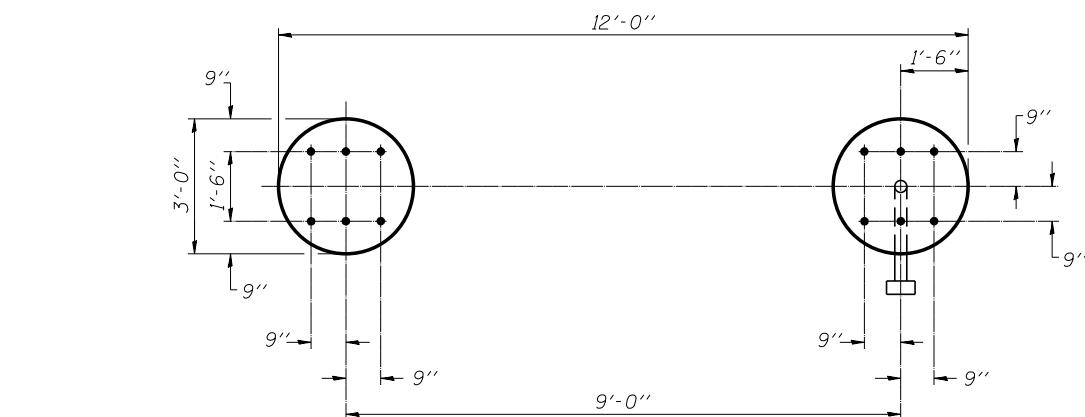
SIDE ELEVATION

END VIEW

3 hoops minimum top and bottom



SECTION A-A



PLAN

DETAILS FOR 12" φ SUPPORT FRAME TYPE III-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
4S0901074L100.3	495+10.00	-	-	-	-	-	734.92	713.92	3.0'	18.0'	21.0'	11.0
4S0901074L100.5	508+15.00	-	-	-	-	-	738.86	717.86	3.0'	18.0'	21.0'	11.0
4S0901074L104.3	N/A	**	**	3.0'	18.0'	21.0'	**	**	3.0'	18.0'	21.0'	22.0

**Elevations for this structure shall be determined in the field.

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OS4-F4

6-1-12

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PLOT DATE = 7/16/2012
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SHEET NO. SS19 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HV)BR]	TAZEWELL	2433	1639
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints. Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

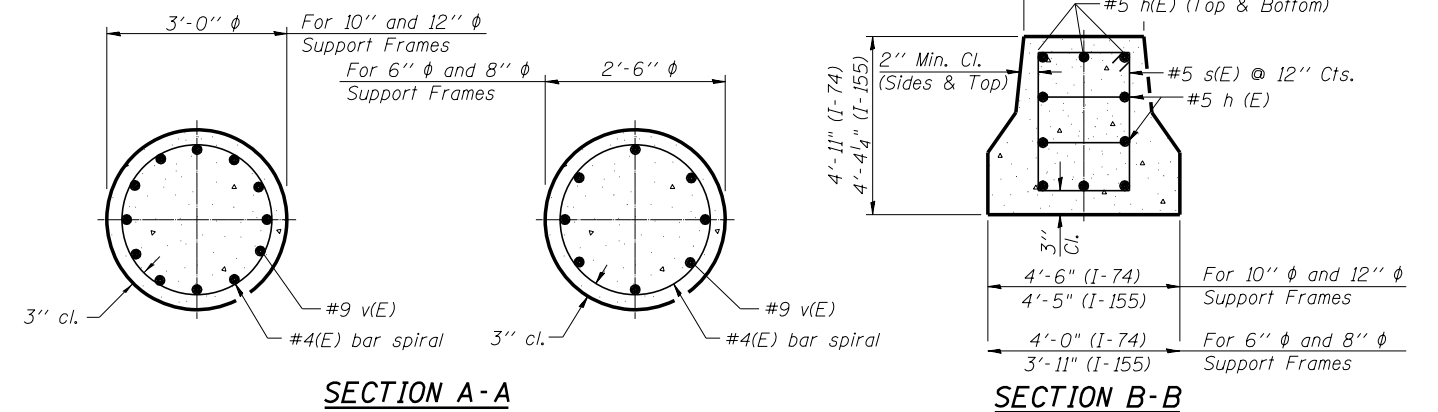
BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—
#4(E) bar spiral - see Side Elevation				

6" ϕ and 8" ϕ Support Frame
10" ϕ and 12" ϕ Support Frame

Pipe Support Frames	cc	M	a	a/2
6" ϕ	7'-0"	9'-6"	0'-11"	5 1/2"
8" ϕ	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10" ϕ	8'-3"	11'-3"	1'-3"	7 1/2"
12" ϕ	9'-0"	12'-0"	1'-6"	9"

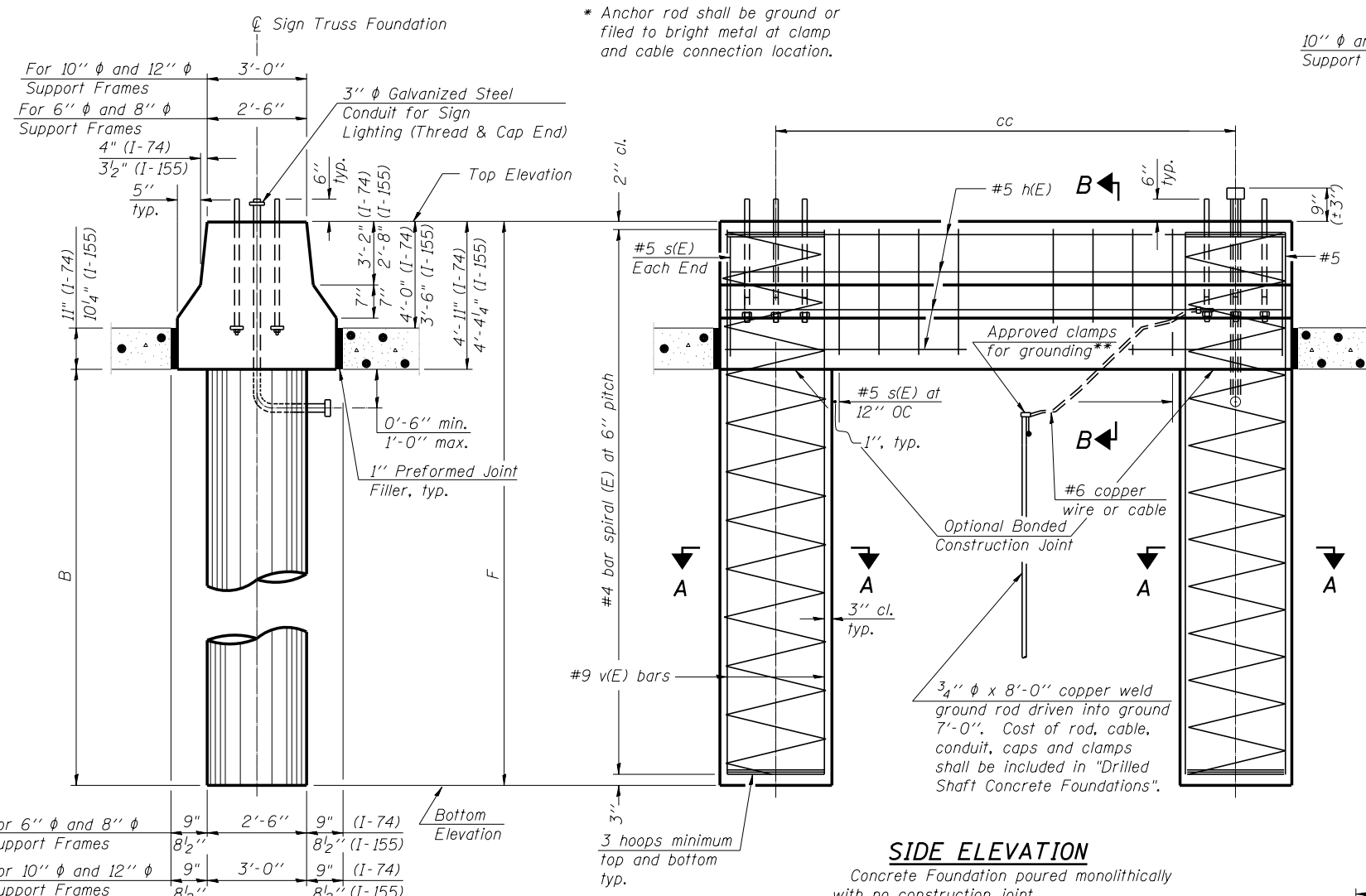
All dimensions in parenthesis are for 42" high barrier.



SECTION A-A

SECTION B-B

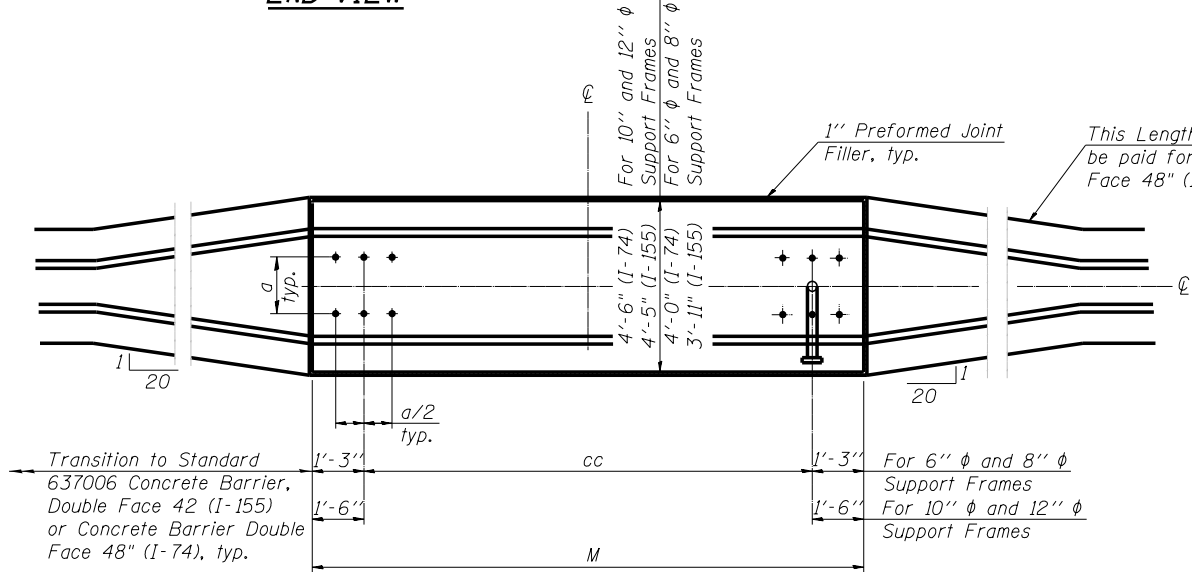
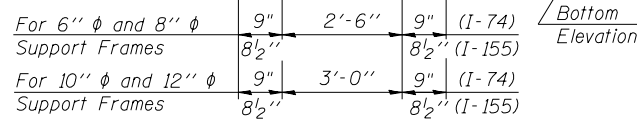
Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
4S0901074L100.0	482+66.50	733.34	711.93	16.5'	21.42'	-	-	-	-	16.8
4S0901074L100.3	495+10.00	737.08	714.17	18.0'	22.92'	-	-	-	-	18.2
4S0901074R100.3	498+50.00	738.13	715.72	17.5'	22.42'	-	-	-	-	17.4
4S0901074L100.5	508+15.00	741.01	718.09	18.0'	22.92'	-	-	-	-	18.2
4S0901074R100.6	515+50.00	740.13	710.21	25.0'	29.92'	-	-	-	-	21.3
4S0901155R031.9	17+68.62	735.79	716.94	14.5'	18.85'	-	-	-	-	10.9



SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.

END VIEW



PLAN

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

This Length of Barrier Transition will be paid for as Concrete Barrier, Double Face 48" (I-74) or 42" (I-155), typ.

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xxxxxx_68620_20.dwg	PLOT SCALE =	CHECKED - KJN	REVISED -
	PLOT DATE = 7/16/2012	DRAWN - MFB	REVISED -
		CHECKED - KJN	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1640
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

SHEET NO. SS20 OF SS32 SHEETS

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7/16/2012

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:

Field Units
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

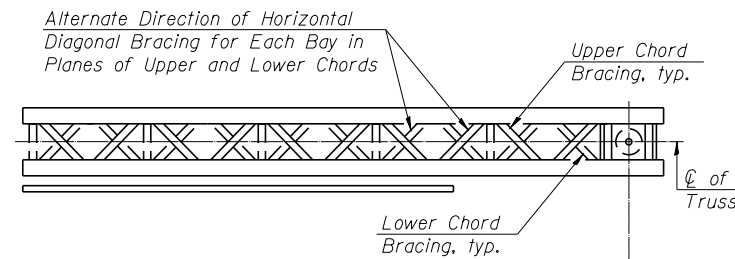
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

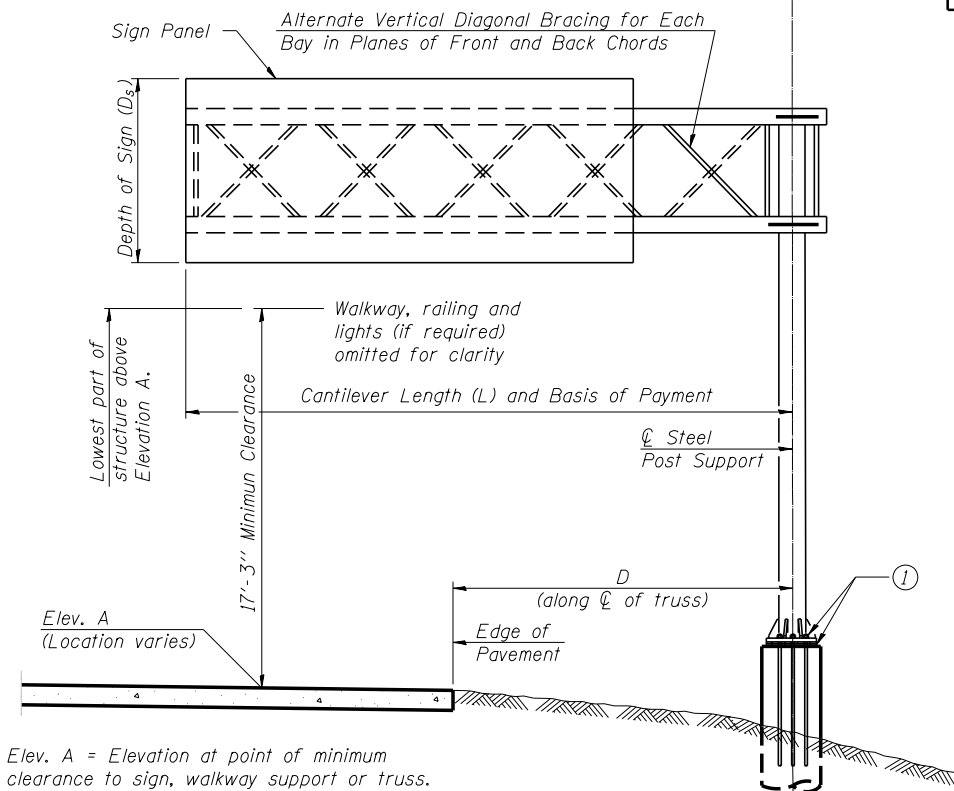
FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s	Total Sign Area
4C090J074L101.1	541+22.02	III-C-A	32	730.23	17.50	10.5	179 SF
4C090LM0RL102.2	47+50.00	I-C-A	24	722.43	12.50	10.5	124 SF

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



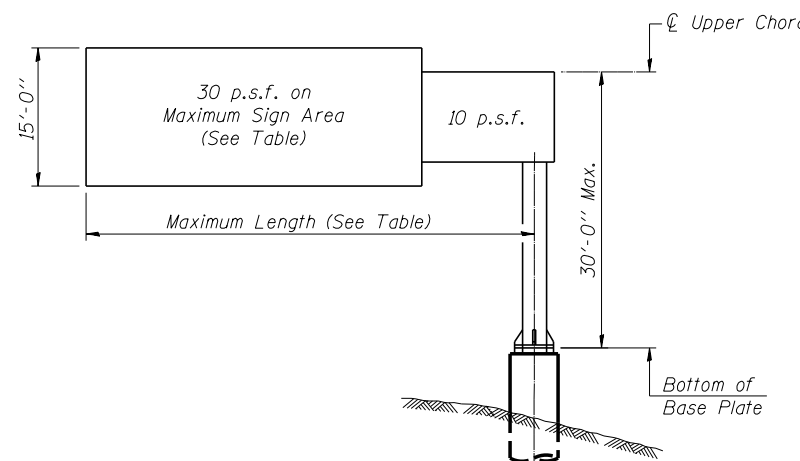
TYPICAL PLAN
(Walkway not shown)



Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
Looking in Direction of Traffic

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards. Installations not within dimensional limits shown require special analysis for all components.

Note:

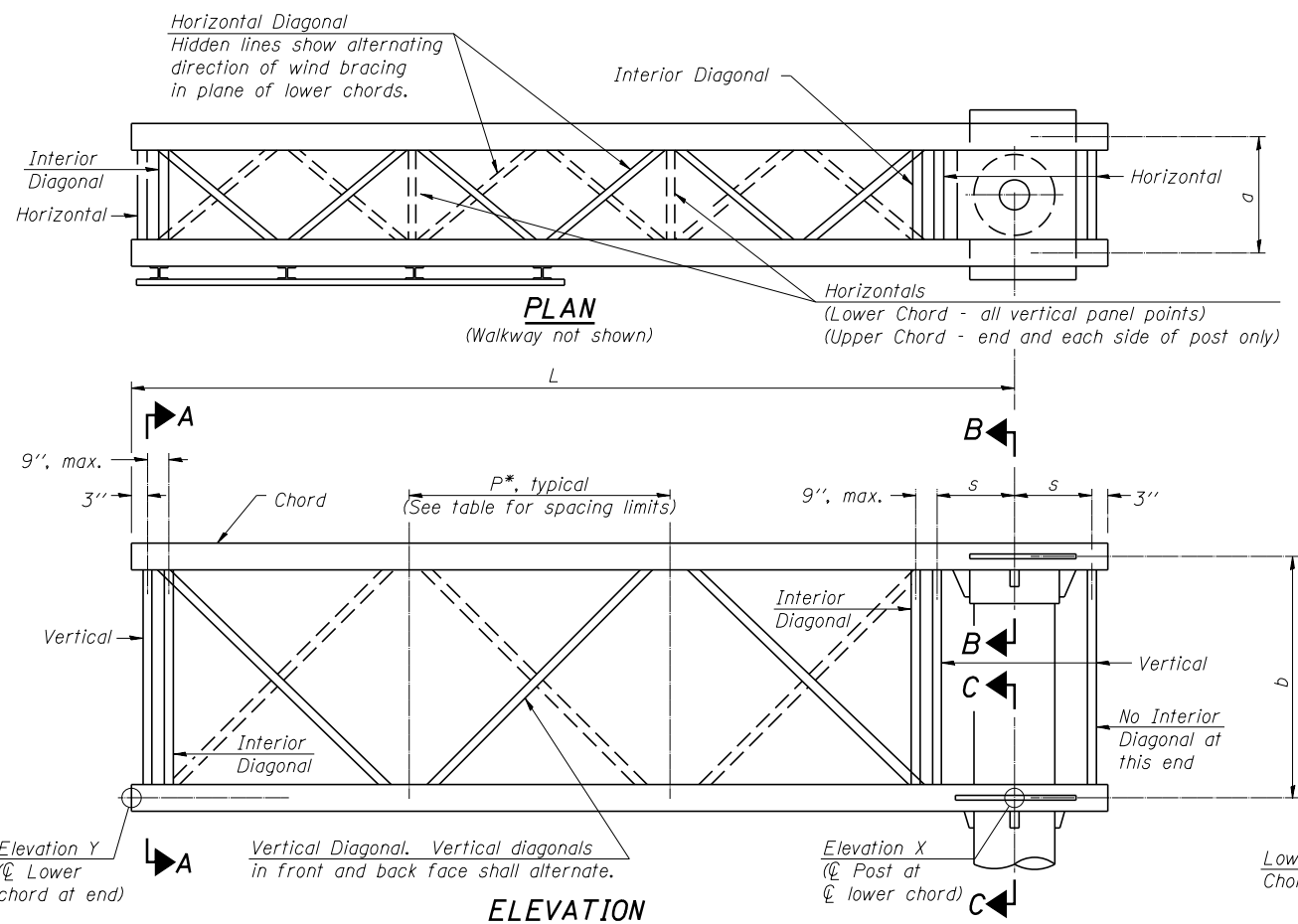
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	24
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	0
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	32
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	0
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	14.1



TYPICAL TRUSS UNIT
(Sign and walkway omitted for clarity)

Note: For Section B-B and Section C-C, see Base Sheet OSC-A-3.

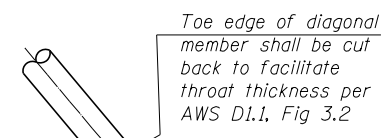
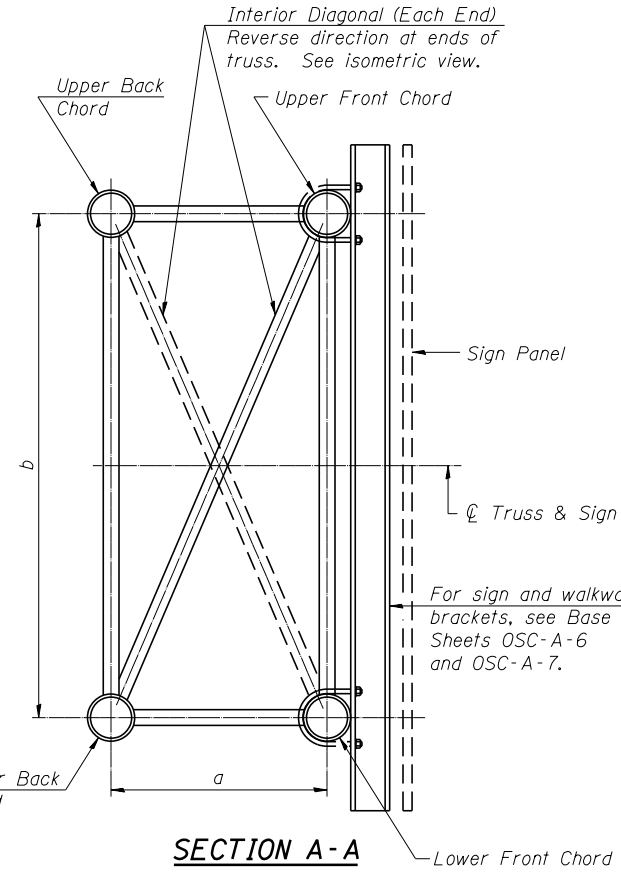
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

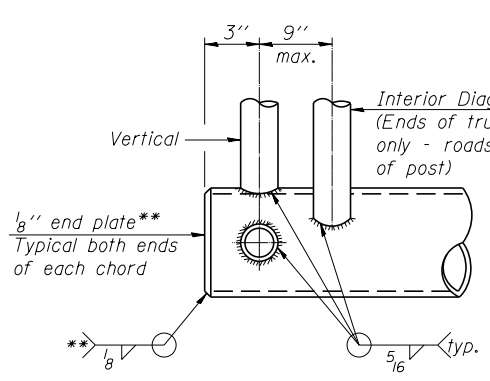
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

*P = $\frac{L-s-3"}{\# \text{ Panels}}$

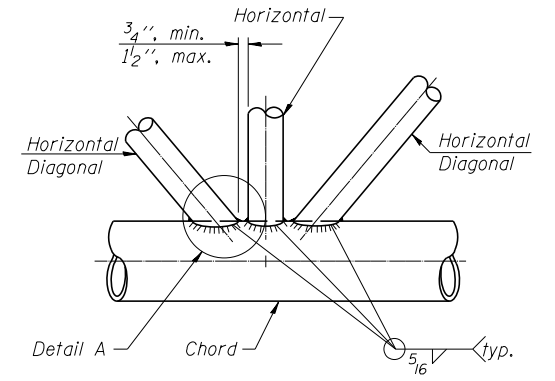
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
4C0901074L101.1	541+22.02	III-C-A	32	6	5'-0"
4C090LMORL102.2	47+50.00	I-C-A	24	6	3'-8 3/8"



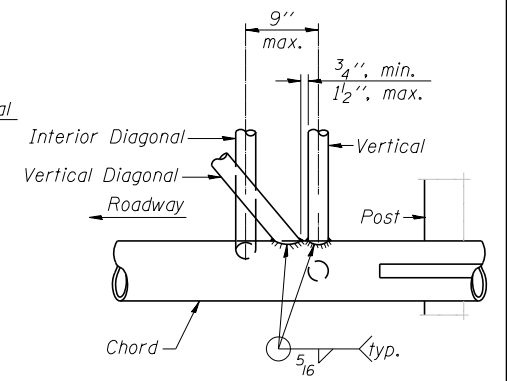
DETAIL A



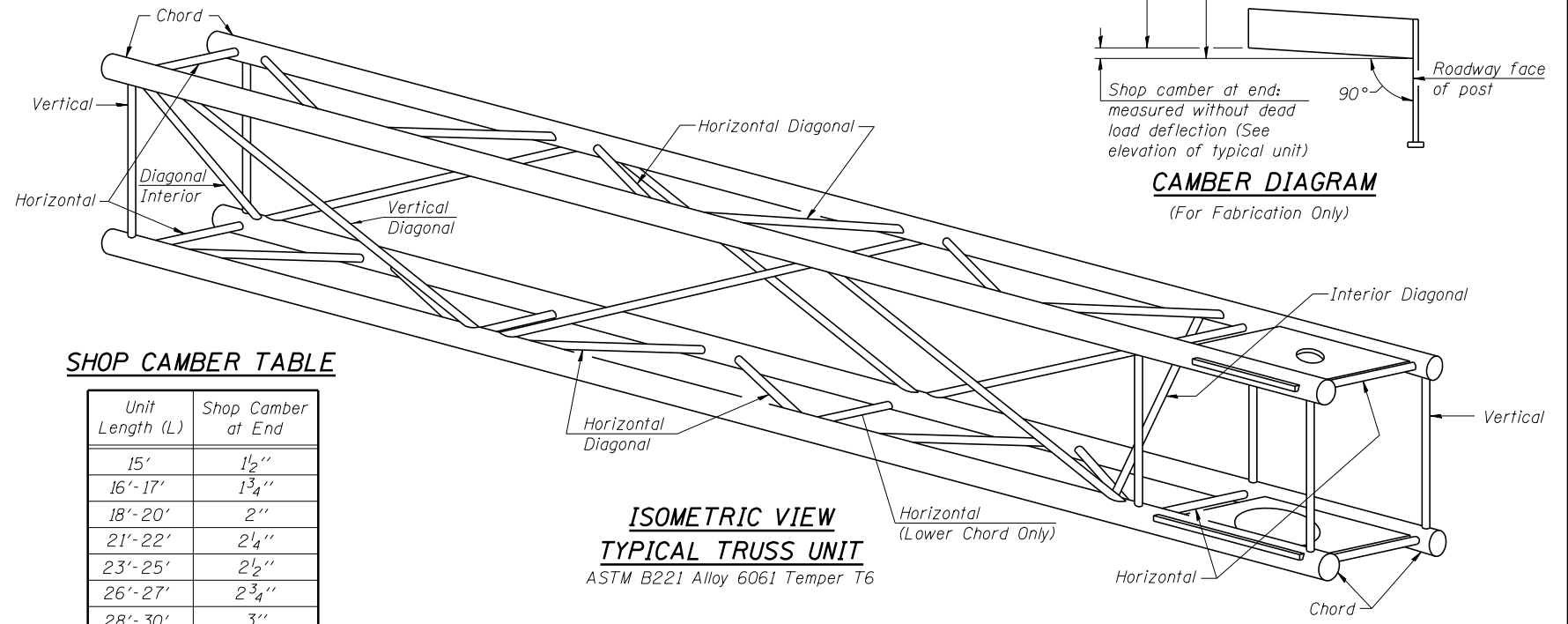
CANTILEVER END JOINT DETAIL



TRUSS INTERIOR JOINT DETAIL

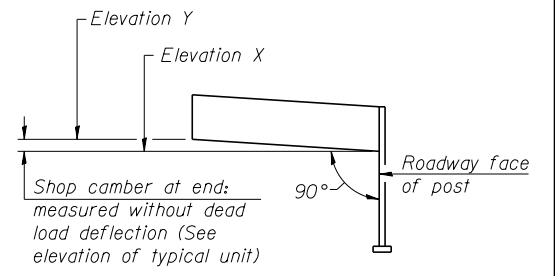


POST END JOINT DETAIL



SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



CAMBER DIAGRAM

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OSC-A-2 6-1-12

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	PLOT DATE = 7/16/2012	DRAWN - MFB	REVISED -
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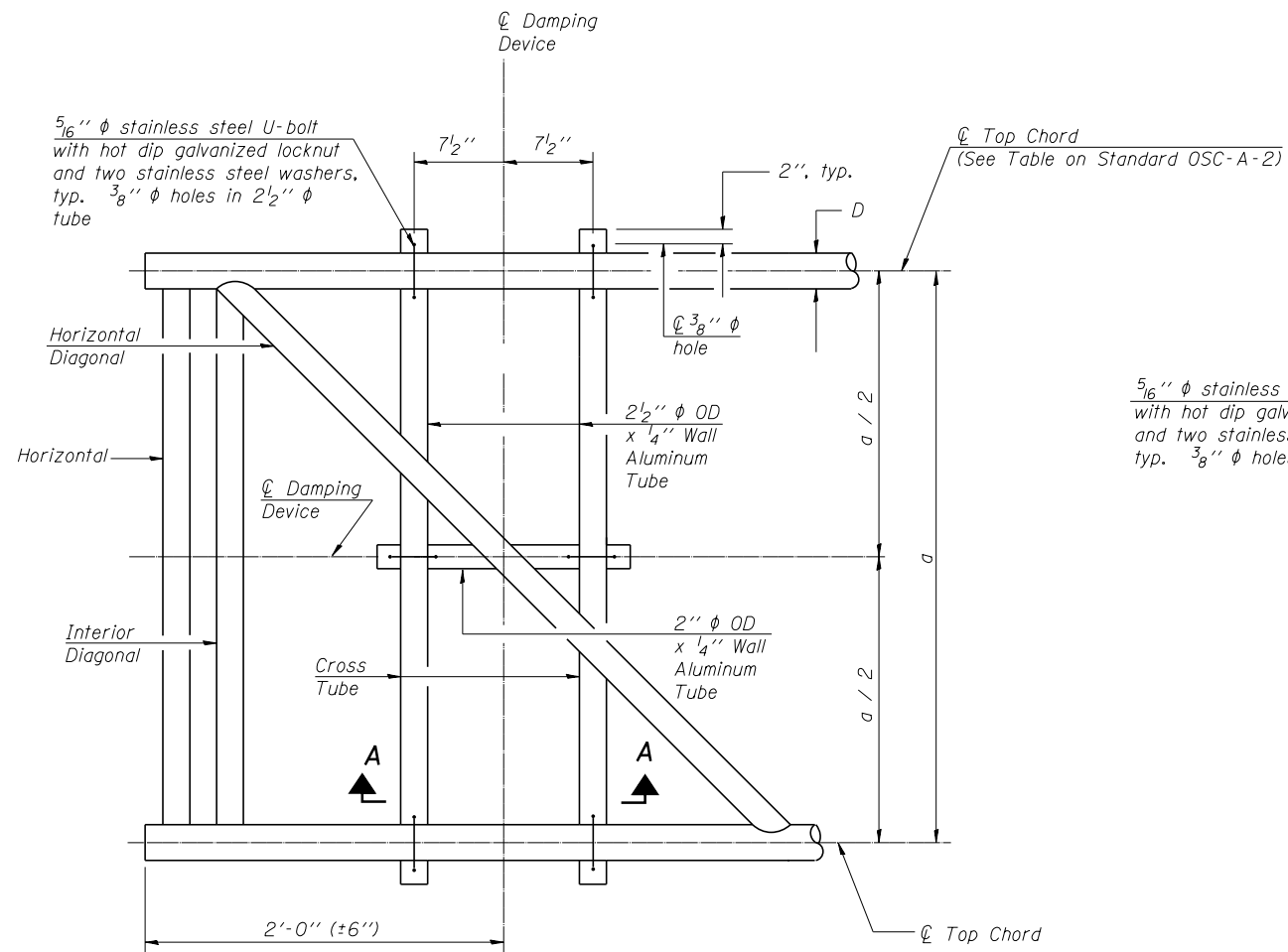
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

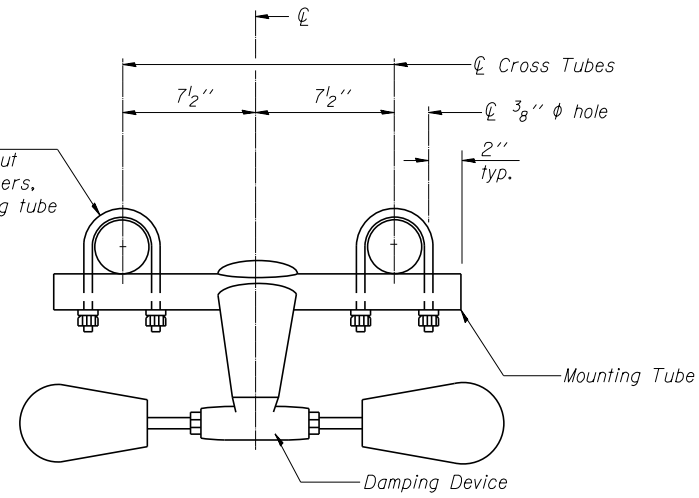
SHEET NO. SS22 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

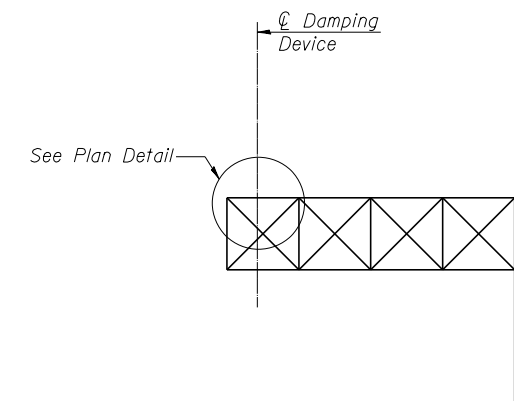
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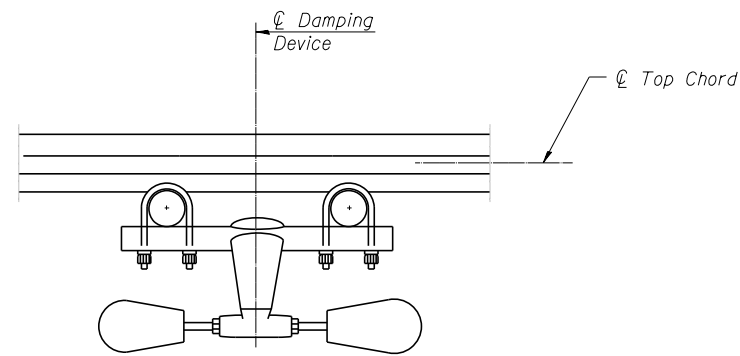
PLAN DETAIL



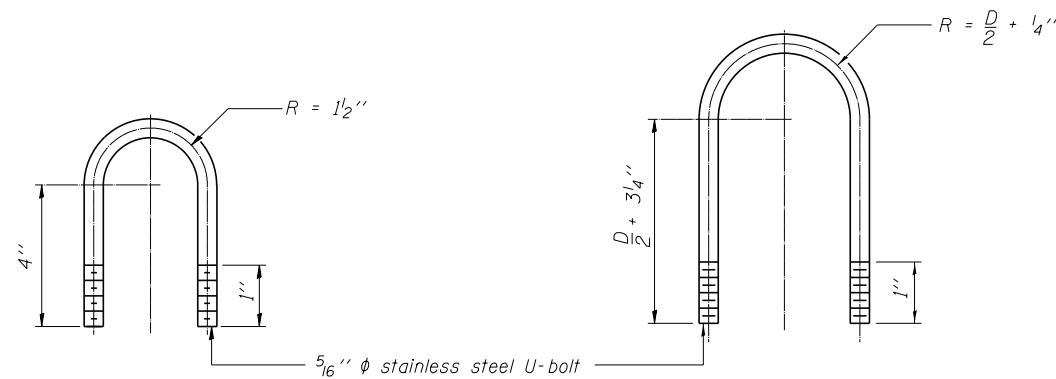
TRUSS DAMPING DEVICE CONNECTION DETAIL



ELEVATION
Aluminum Cantilever Sign Structure



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical)

GENERAL NOTES

- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
- Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10056

OSC-A-D

6-1-12

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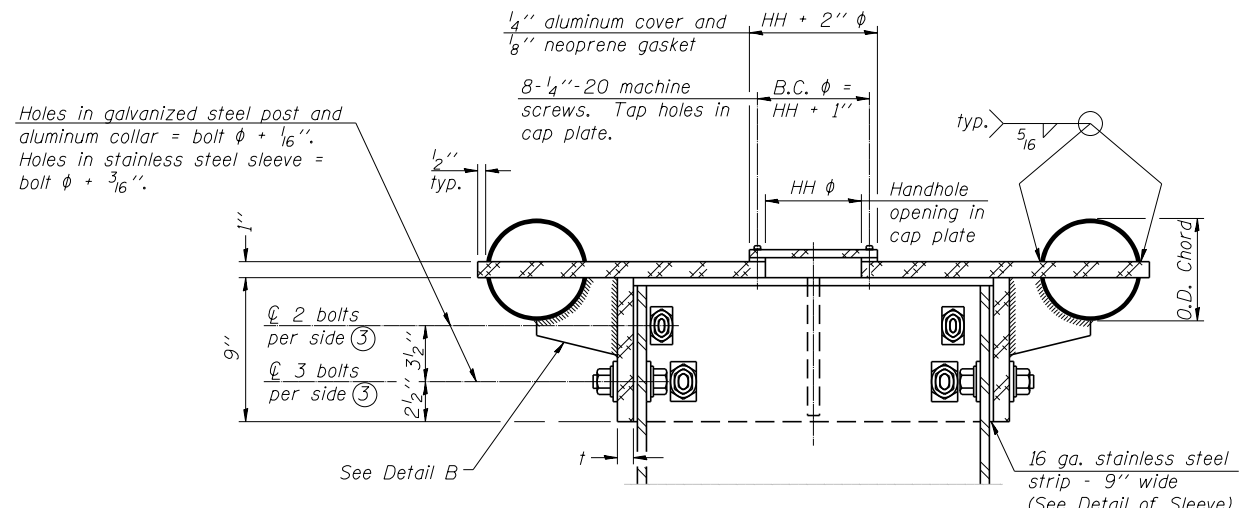
STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
CANTILEVER SIGN STRUCTURE	
DAMPING DEVICE	
SHEET NO. SS23 OF SS32 SHEETS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1643
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
CANTILEVER SIGN STRUCTURE	
DAMPING DEVICE	
SHEET NO. SS23 OF SS32 SHEETS	

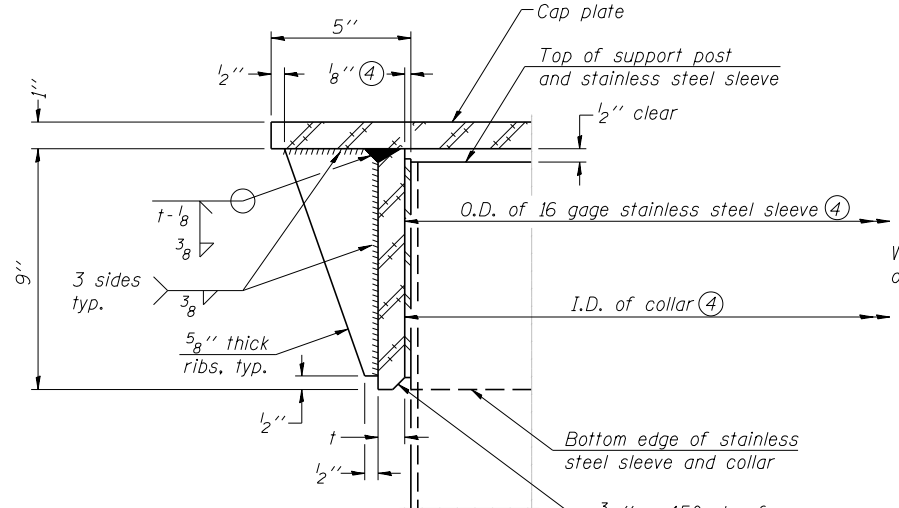
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74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1643
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

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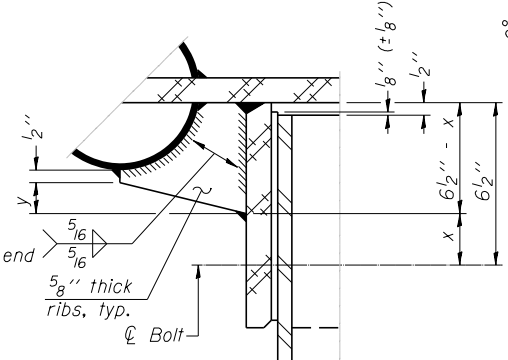


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (+1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

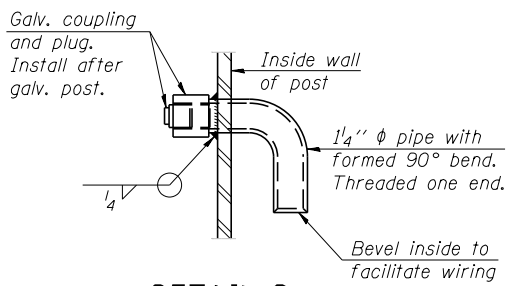
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



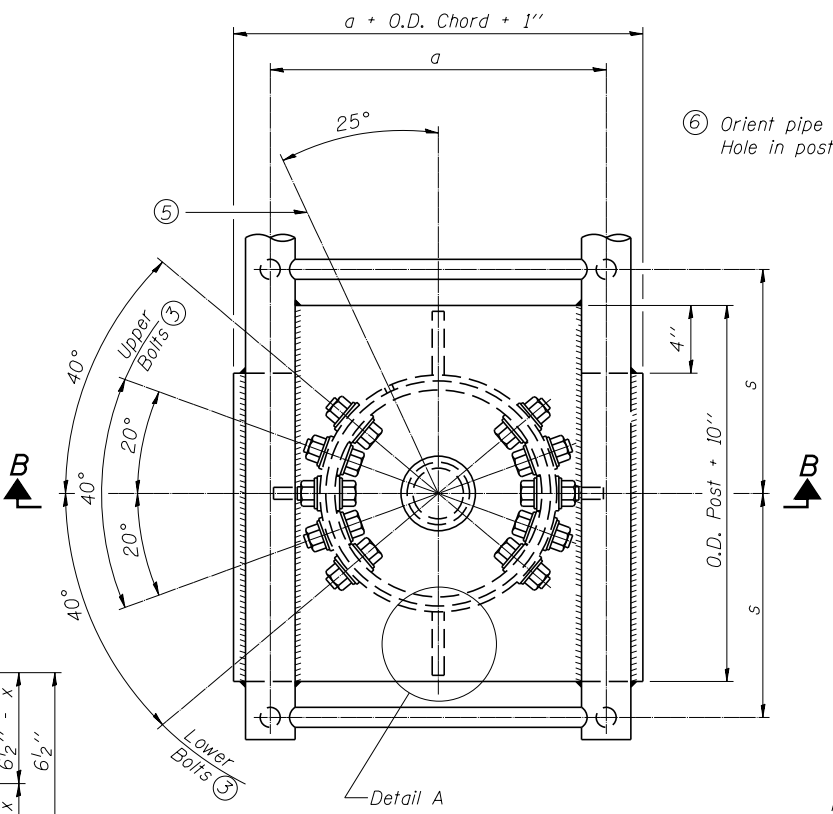
DETAIL A
(Two locations)



DETAIL B
Two locations
(For details not shown, see Detail C)

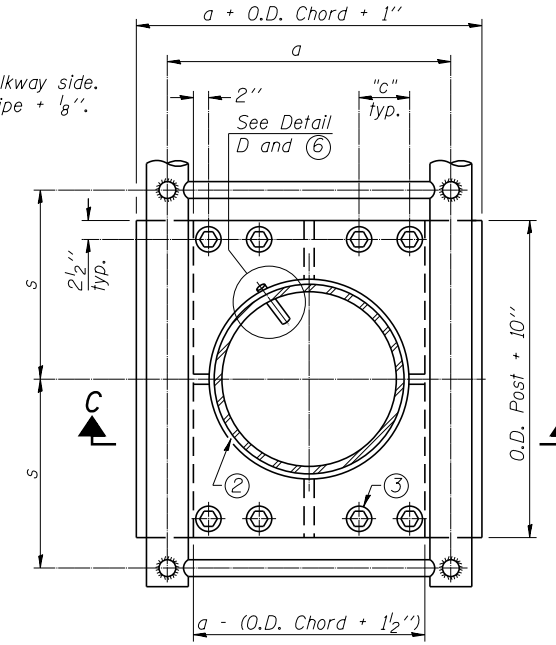


DETAIL D



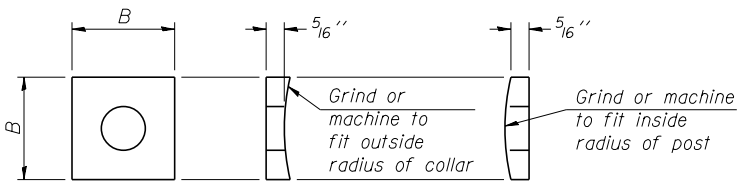
PLAN VIEW - TOP OF COLUMN

⑤ Optional full penetration weld in collar. (Two locations maximum....(180° apart)....X-ray or UT 100%)



SECTION THRU POST ABOVE LOWER CHORDS

Hole in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2"

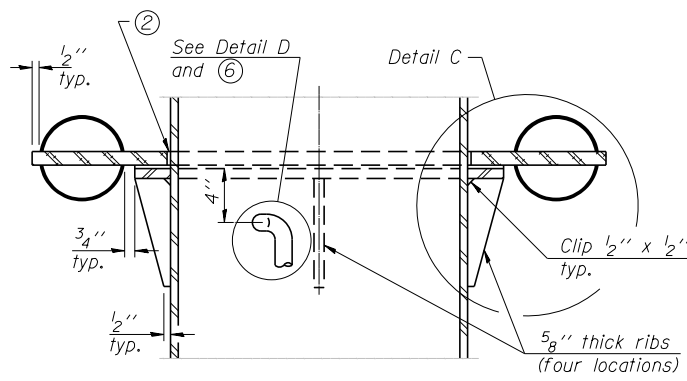


CONTOURED WASHERS

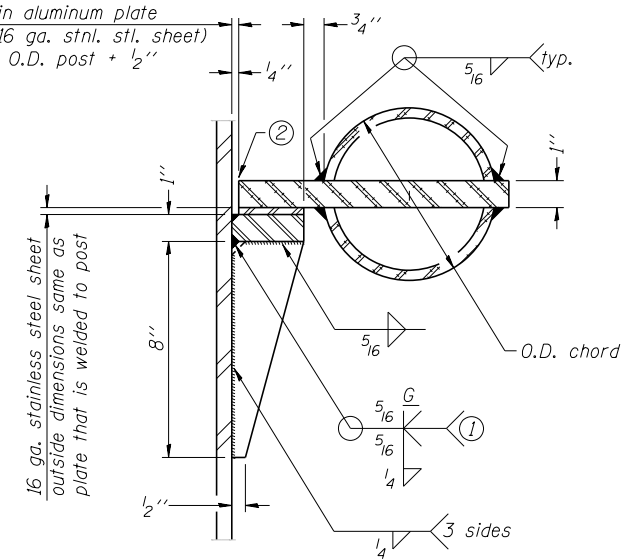
Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1/2" long at 6" cts. along top edge and at 1/4" opening.



SECTION C-C

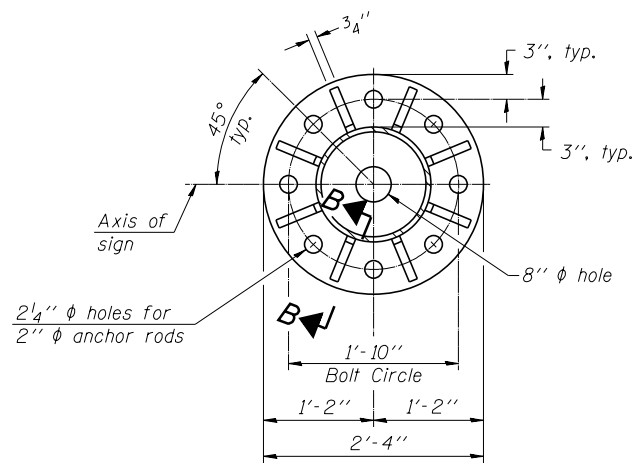


DETAIL C

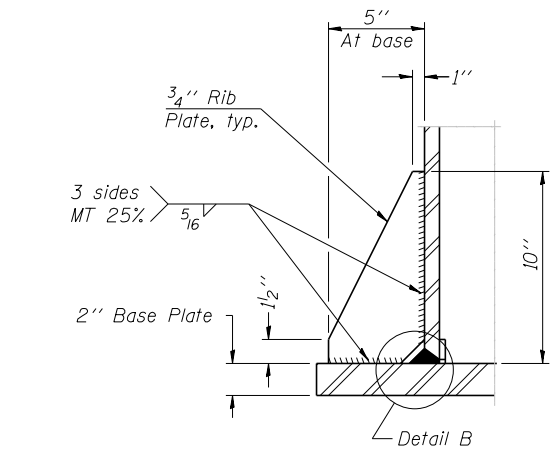
Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" φ (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" φ (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" φ (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" φ (171#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.
- ③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

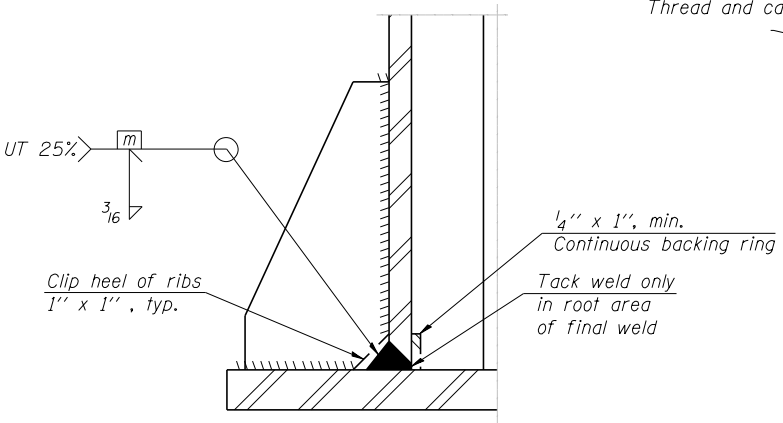
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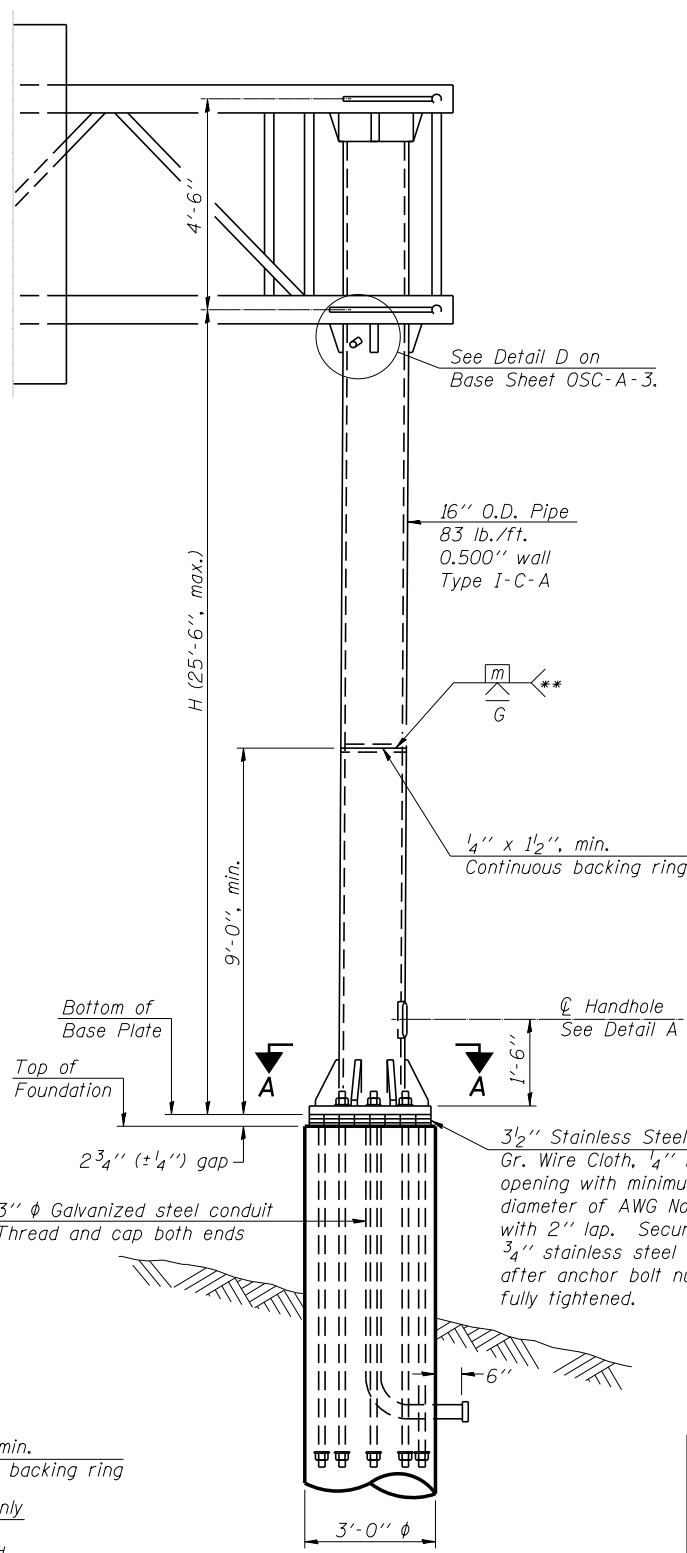
SECTION A-A



SECTION B-B

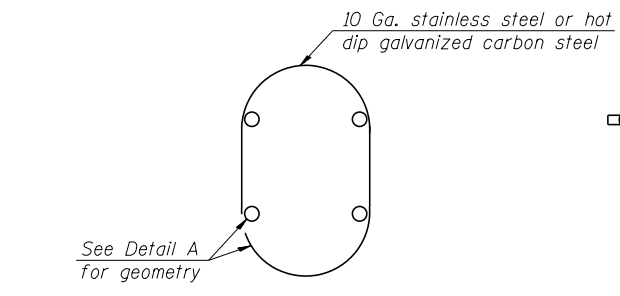


DETAIL B
(Typical rib)

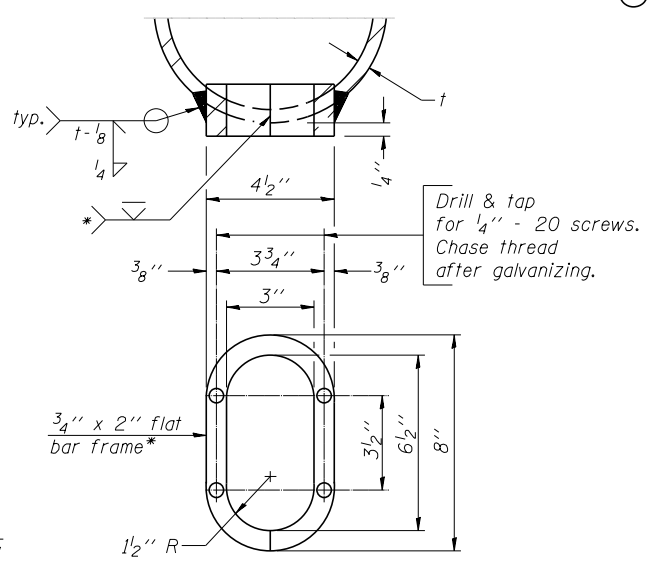


FRONT ELEVATION

For Foundation Details see Base Sheet OSC-A-9.



HANDHOLE COVER



DETAIL A

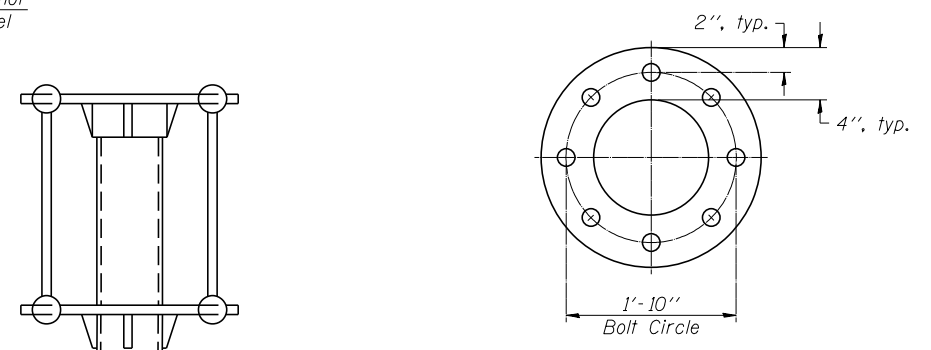
Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-5/16" holes in cover for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

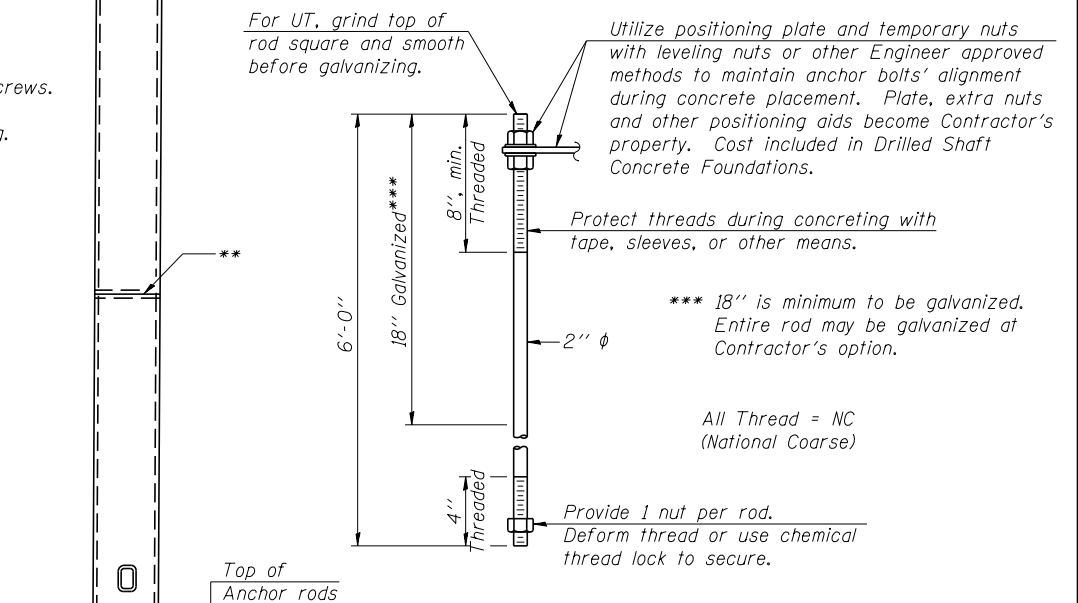
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
4C090LMORL102.2	47+50.00	22.15'

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



SUGGESTED POSITIONING PLATE



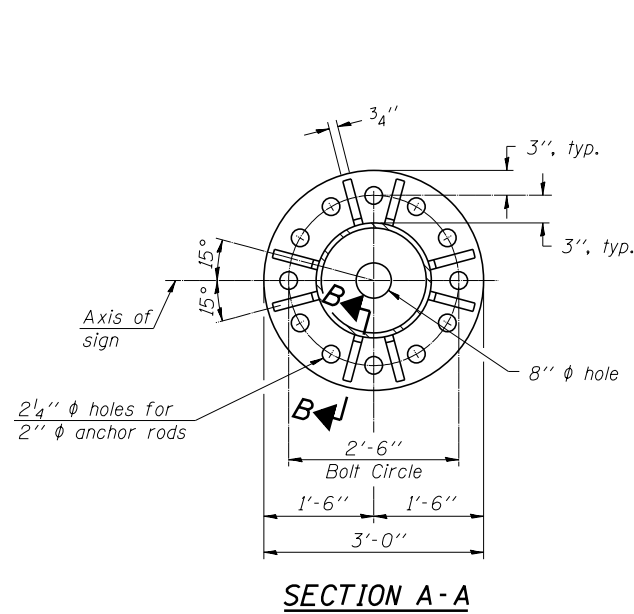
ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III Inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

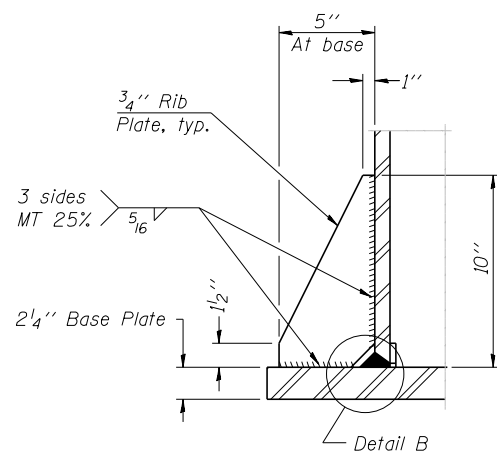
SIDE ELEVATION

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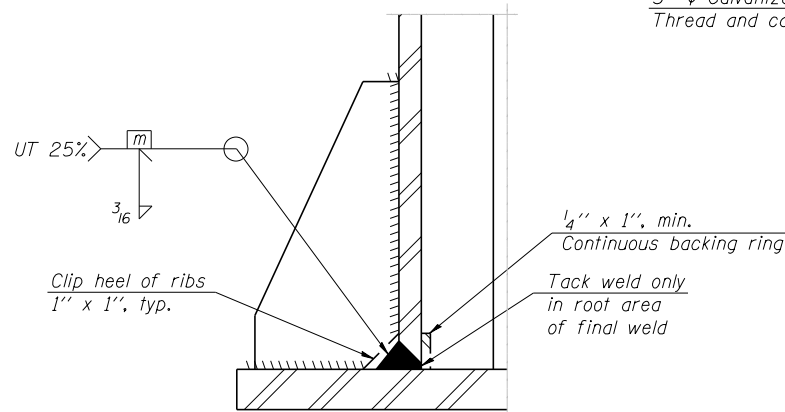
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



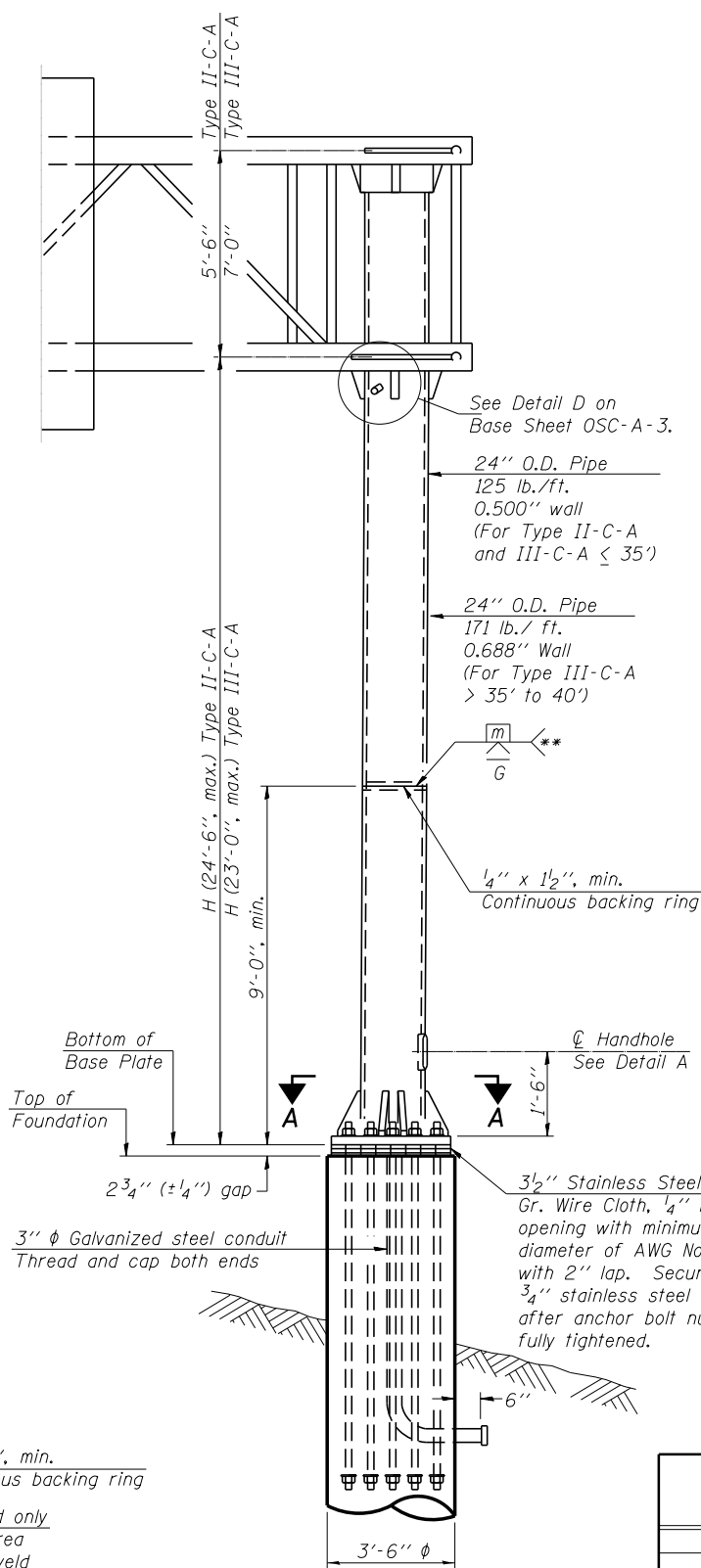
SECTION A-A



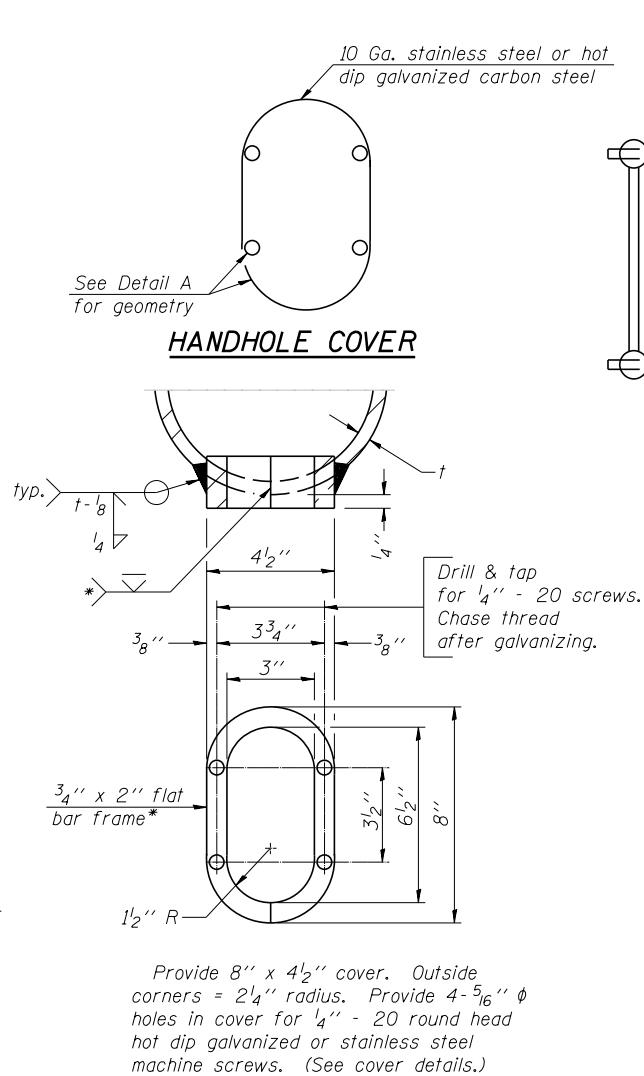
SECTION B-B



DETAIL B
(Typical rib)



FRONT ELEVATION
For Foundation Details
see Base Sheet OSC-A-9.

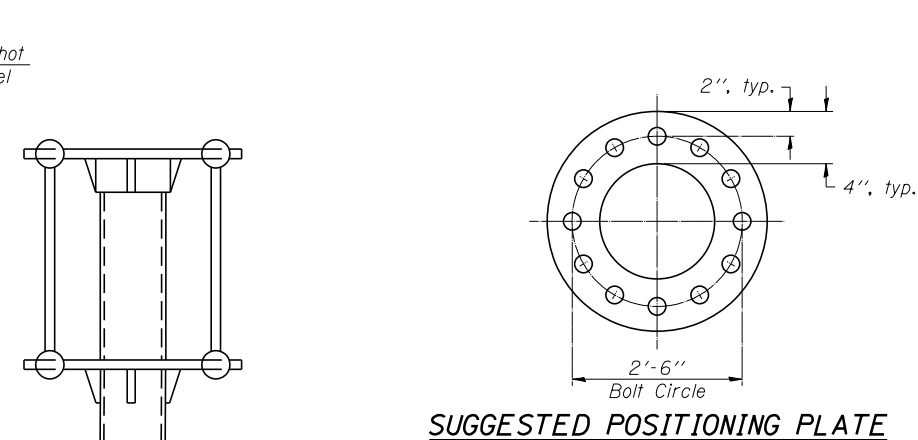


DETAIL A

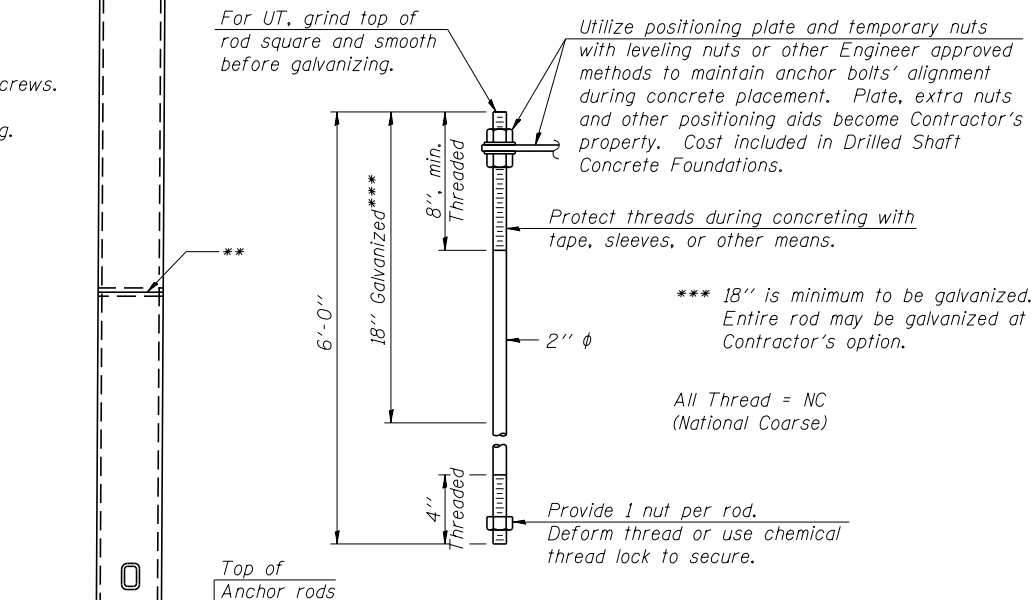
- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
4C0901074L101.1	541+22.02	21.32'

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



SUGGESTED POSITIONING PLATE

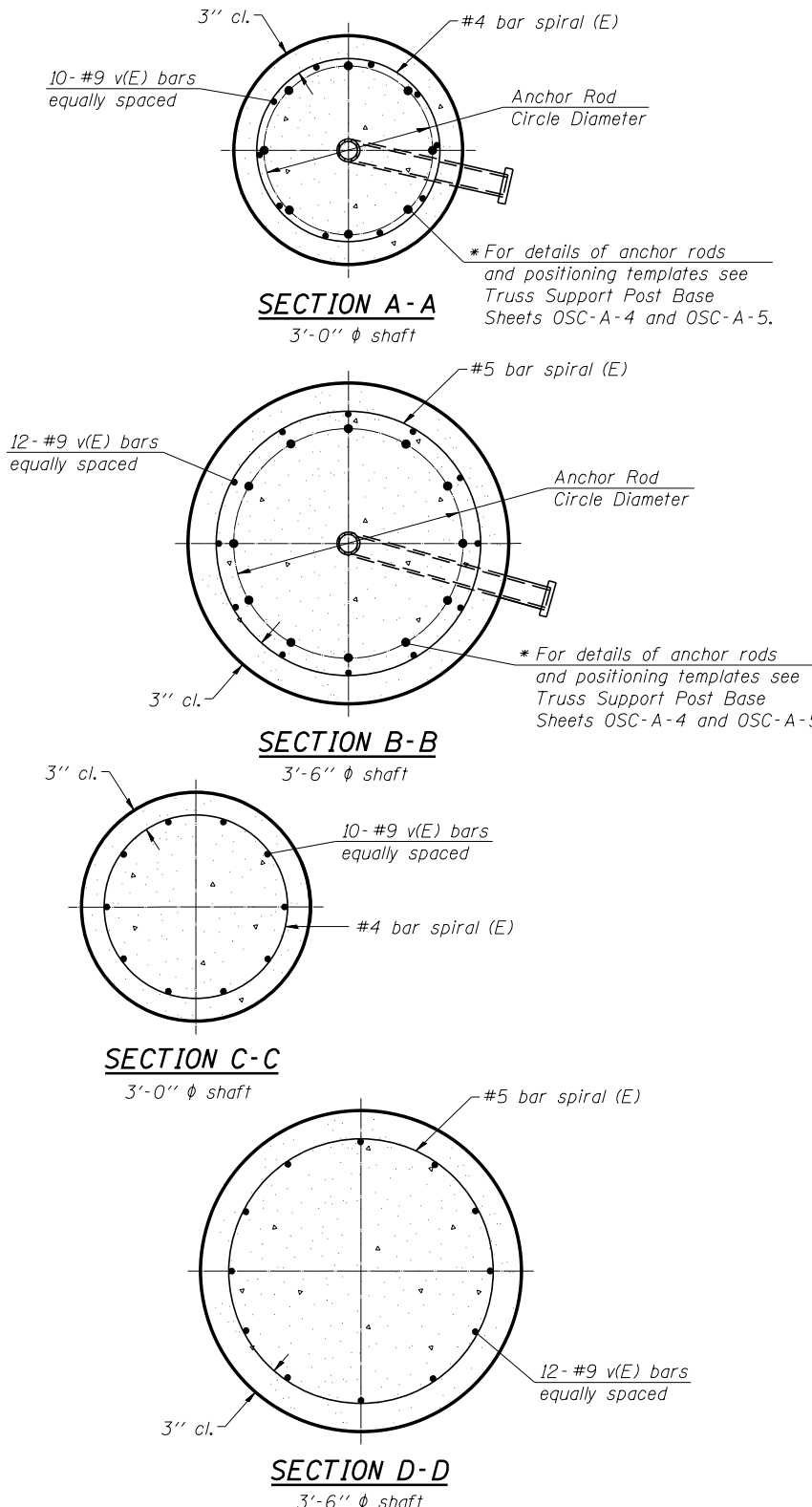
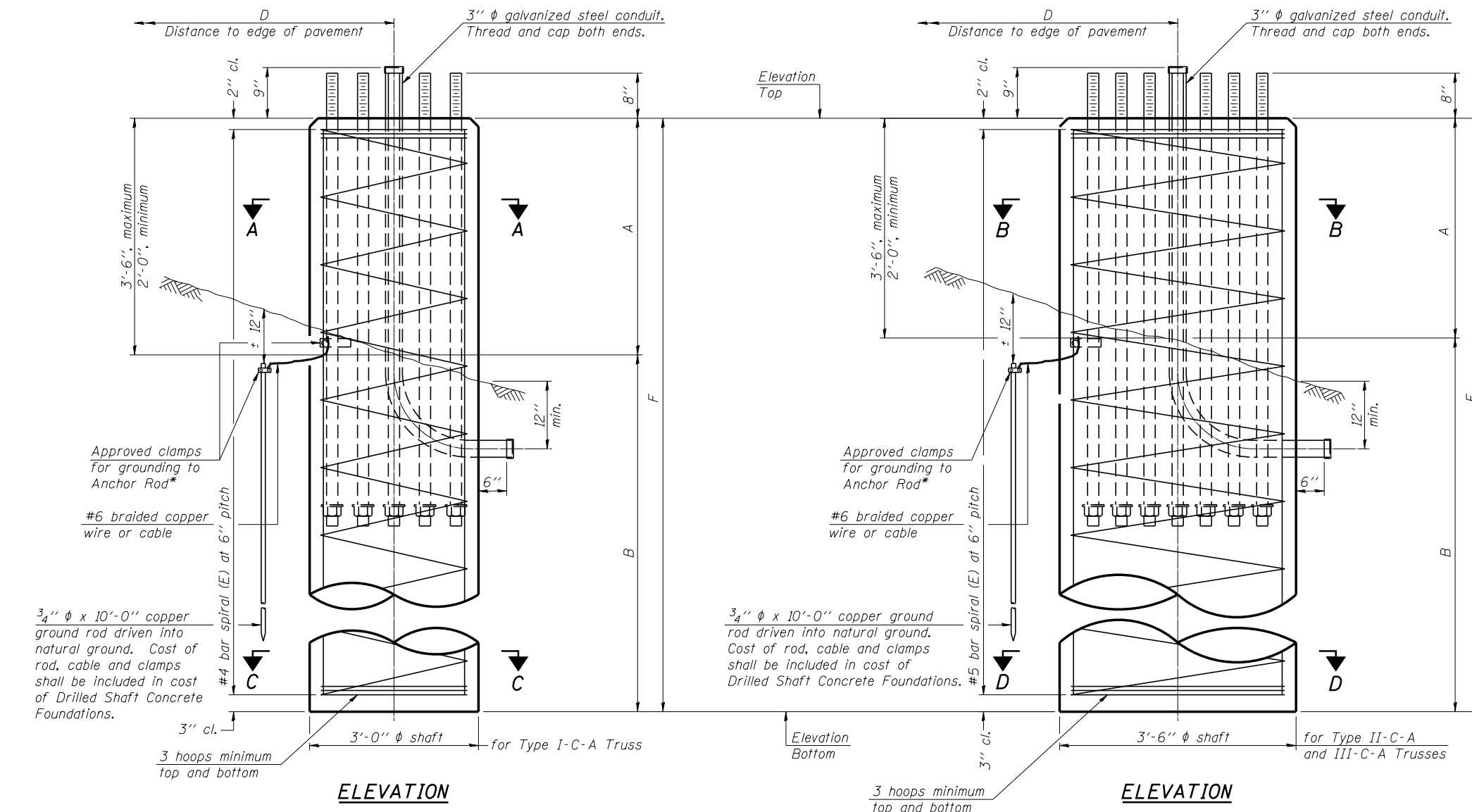


ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum***) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III Inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

SIDE ELEVATION

* Grind anchor rod to bright finish at ground clamp location before installing clamp.



NOTES:
 The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
4C090I074L101.1	541+22.02	III-C-A	3.5	731.18	706.68	2.32	3.0'	22.5'	25.5'	9.1
4C090LMORL102.2	47+50.00	I-C-A	3.0	723.80	704.80	1.55	3.0'	16.0'	19.0'	5.0

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 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

OSC-A-9 6-1-12

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

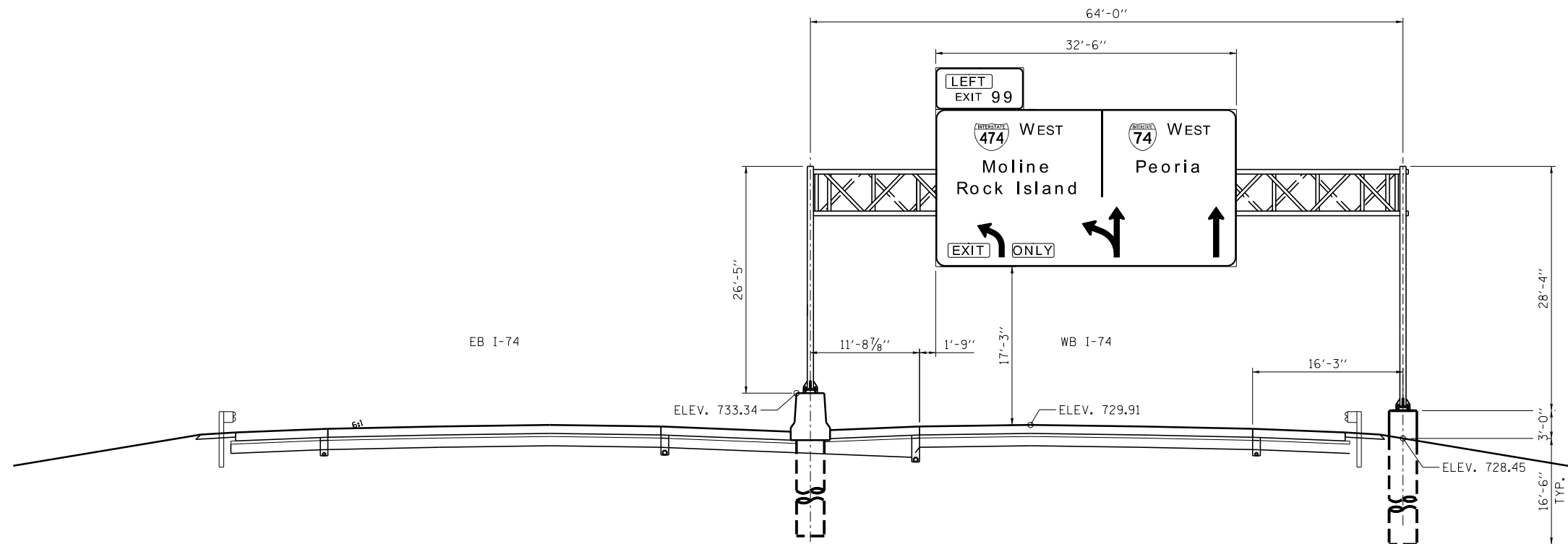
CANTILEVER SIGN STRUCTURES - DRILLED SHAFT
 ALUMINUM TRUSS & STEEL POST

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68620				

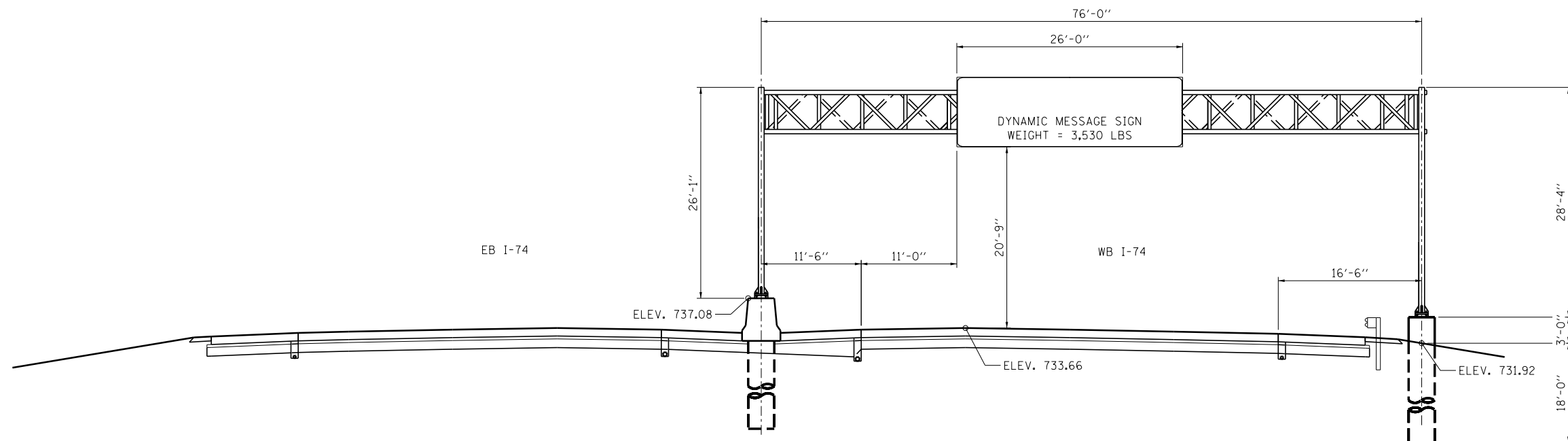
SHEET NO. SS27 OF SS32 SHEETS

ILLINOIS FED. AID PROJECT

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PROPOSED SIGN TRUSS
WB I-74 STA 482 + 66.50
STR 4S0901074L100.0
(LOOKING WEST)



PROPOSED SIGN TRUSS
WB I-74 STA 495 + 10.00
STR 4S0901074L100.3
(LOOKING WEST)

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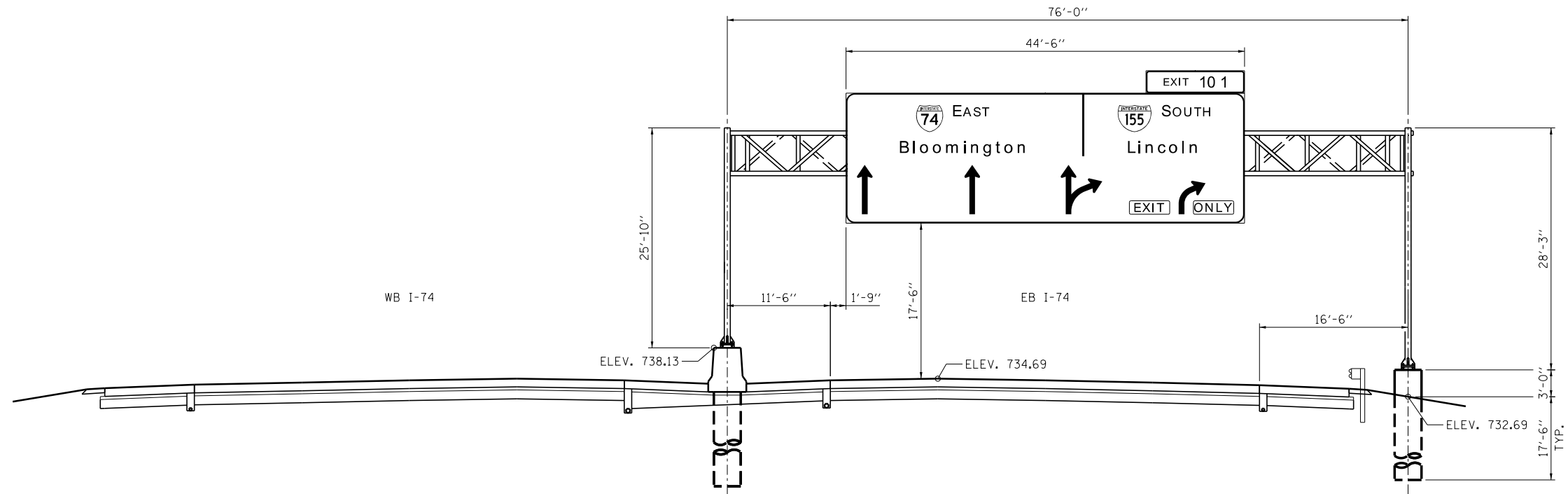
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

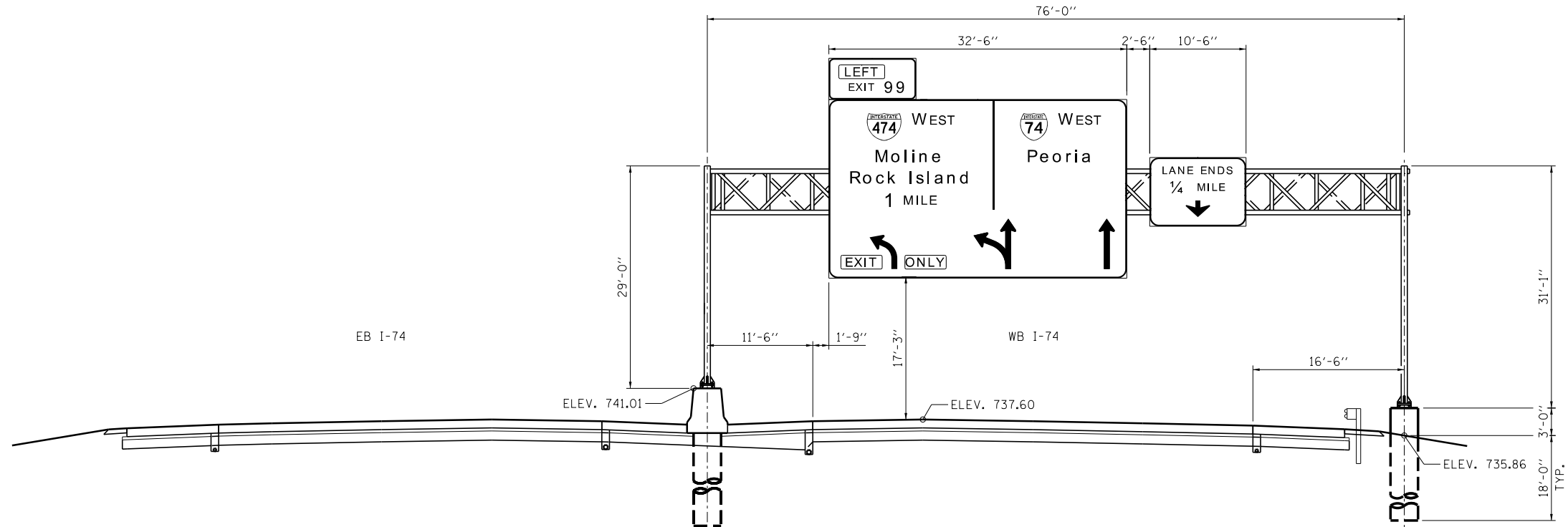
SIGN PANEL PLACEMENT
OVERHEAD SIGN STRUCTURES

SHEET NO. SS28 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



PROPOSED SIGN TRUSS
EB I-74 STA 498 + 50.00
STR 4S090I074R100.3
(LOOKING EAST)



PROPOSED SIGN TRUSS
WB I-74 STA 508 + 15.00
STR 4S090I074L100.5
(LOOKING WEST)

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 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

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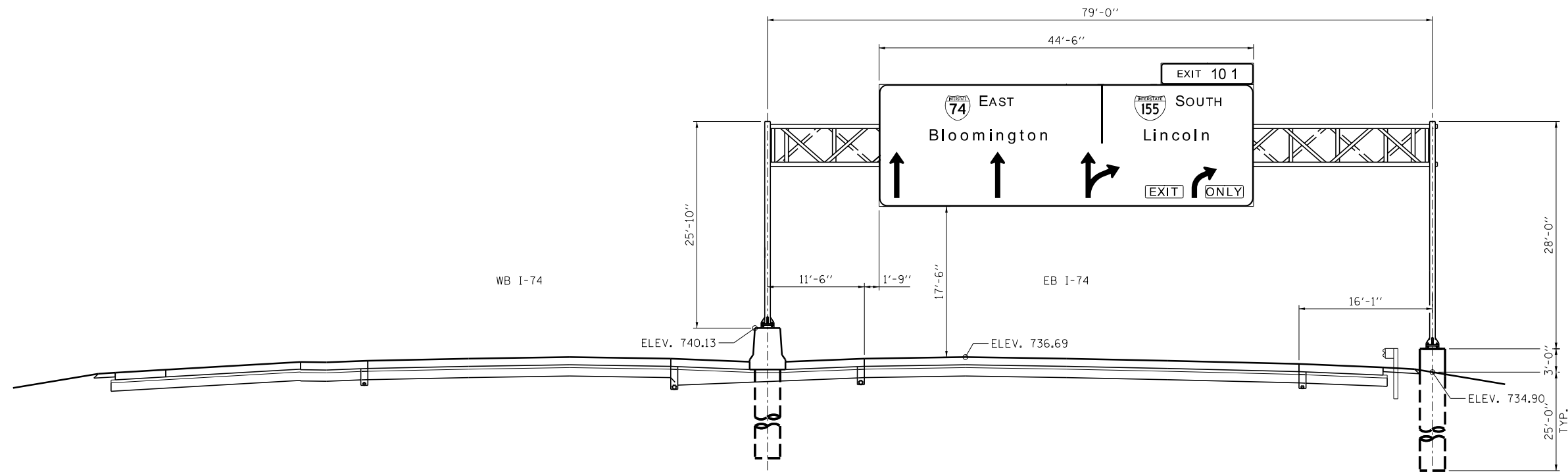
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL PLACEMENT
OVERHEAD SIGN STRUCTURES

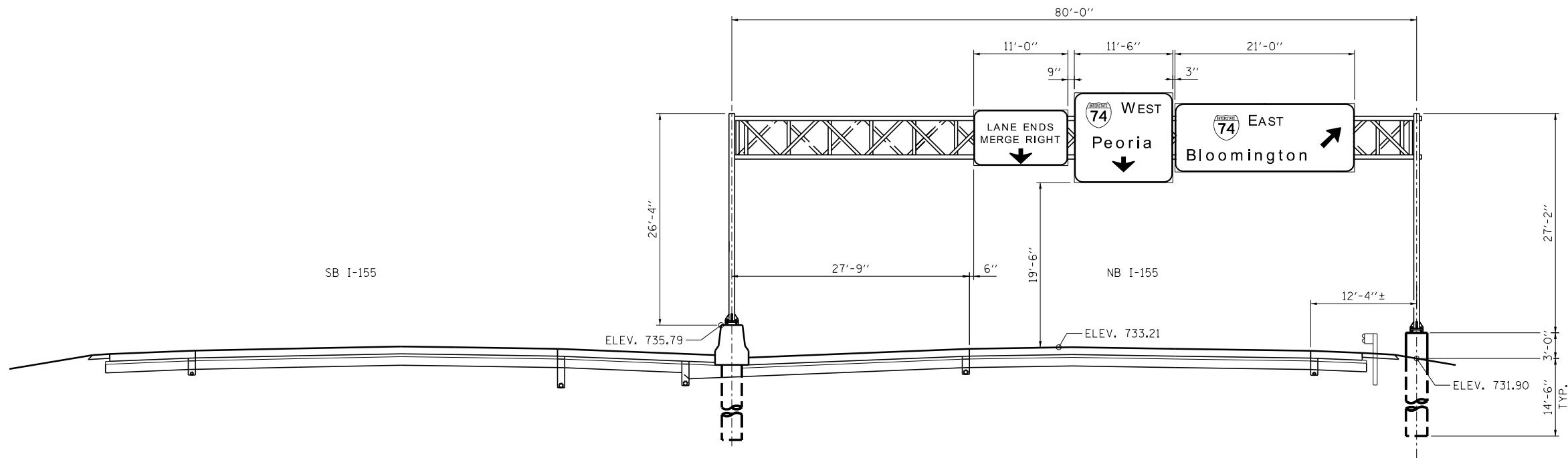
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CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

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PROPOSED SIGN TRUSS
EB I-74 STA 515 + 50.00
STR 4S090I074R100.6
(LOOKING EAST)



PROPOSED SIGN TRUSS
NB I-155 STA 17 + 68.62
STR 4S090I155R031.9
(LOOKING NORTH)

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 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

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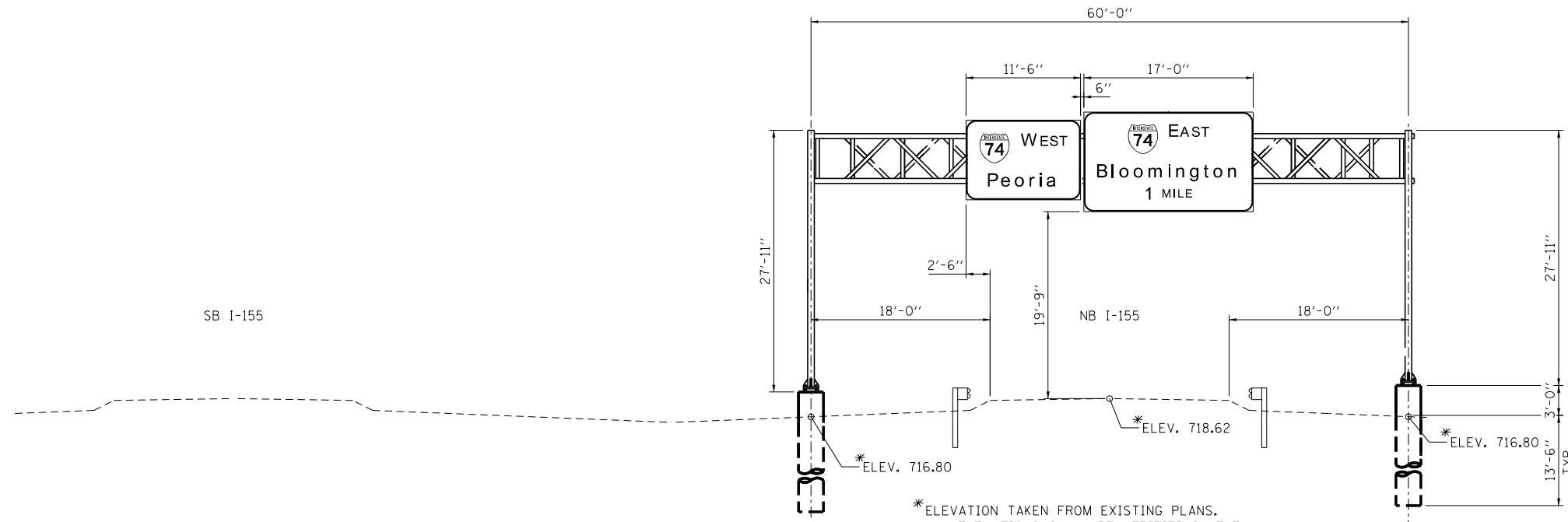
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL PLACEMENT
OVERHEAD SIGN STRUCTURES

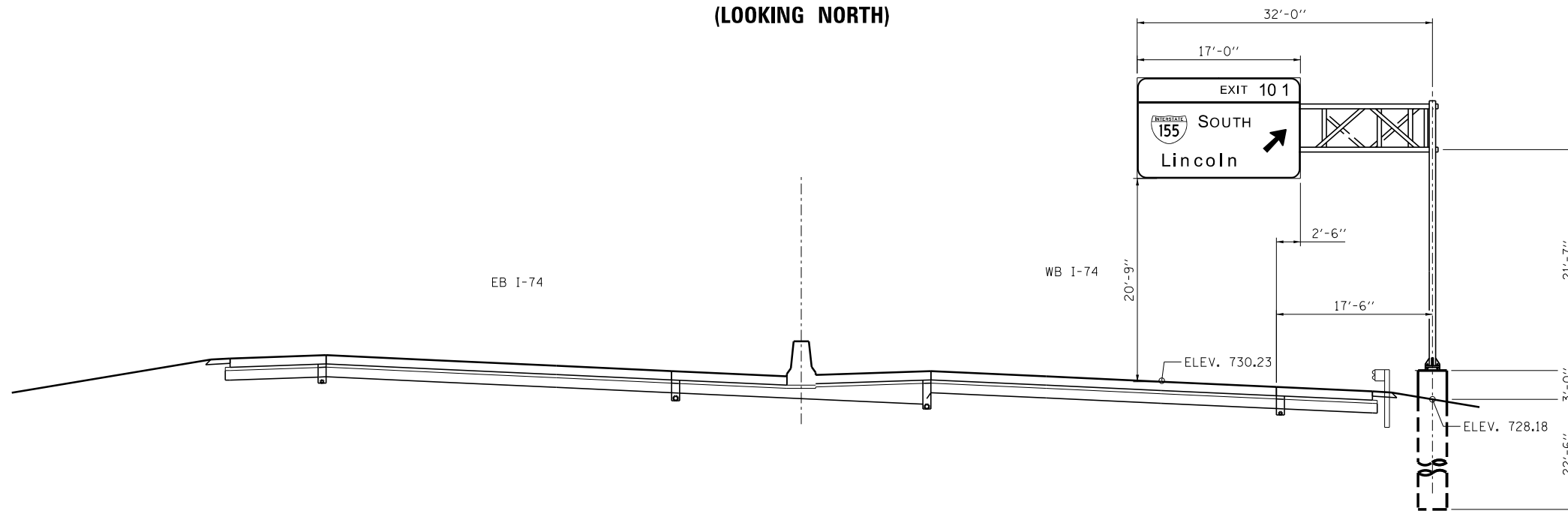
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ILLINOIS FED. AID PROJECT				

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PROPOSED SIGN TRUSS
NB I-155 STA 54 + 00.00 (EXISTING I-155)
STR 4S0901155R031.2
(LOOKING NORTH)



PROPOSED SIGN TRUSS
WB I-74 STA 541 + 22.02
STR 4C0901074L101.1
(LOOKING WEST)

benesch
 engineers · scientists · planners
 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

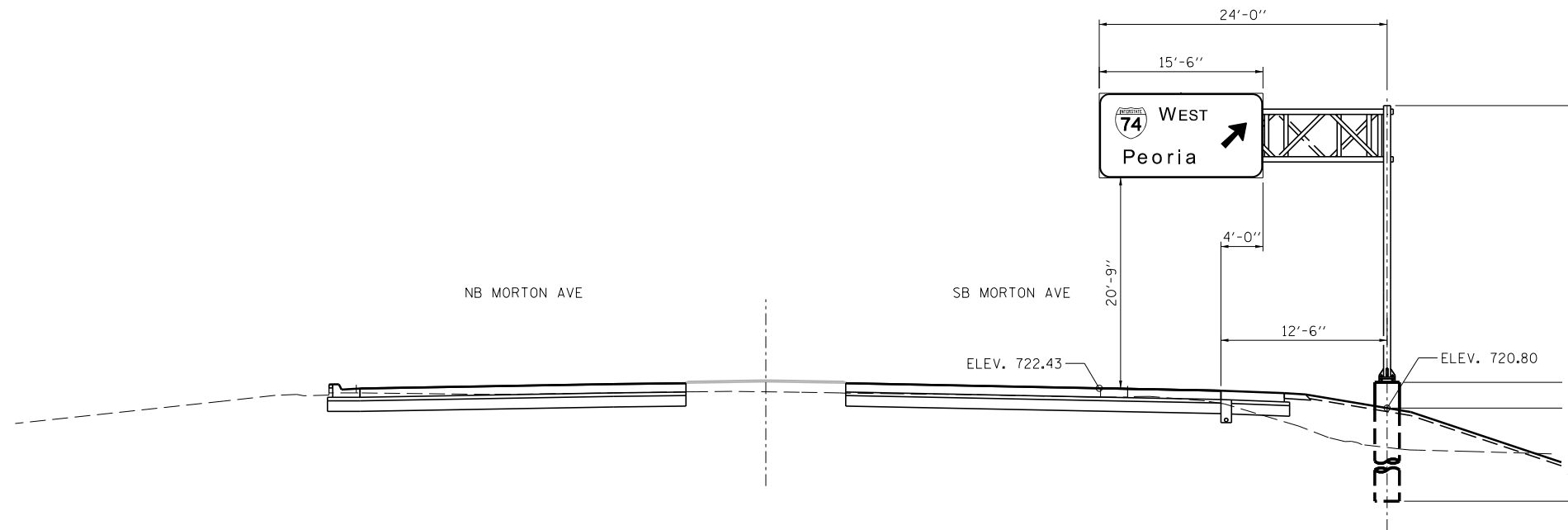
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	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL PLACEMENT
OVERHEAD SIGN STRUCTURES

SHEET NO. SS31 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1651
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



PROPOSED SIGN TRUSS
SB MORTON AVE STA 47+50.00
STR 4C090LMORL102.2
(LOOKING SOUTH)

benesch
 engineers · scientists · planners
 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10056

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	PLOT DATE = 7/16/2012	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL PLACEMENT
OVERHEAD SIGN STRUCTURES

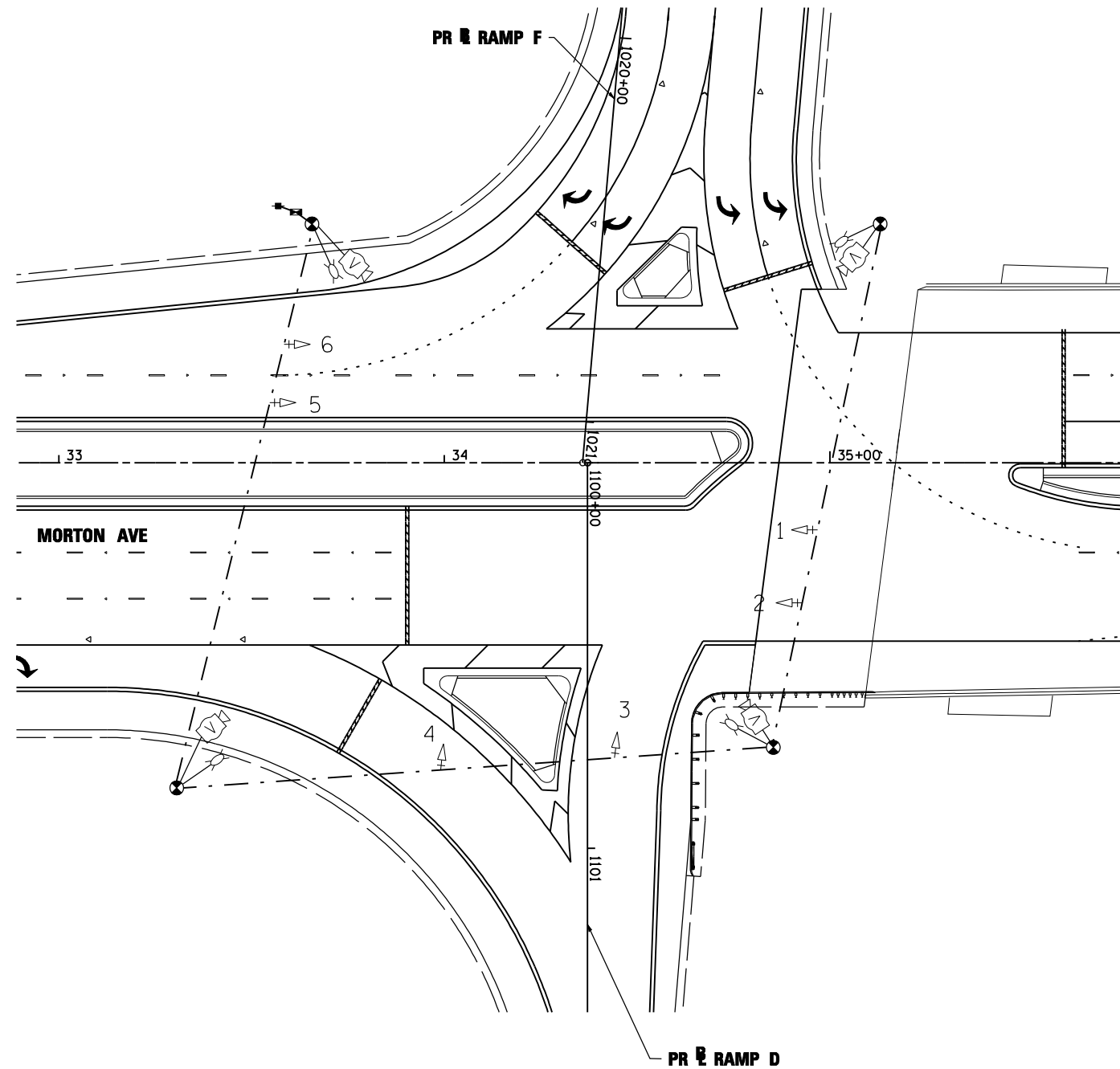
SHEET NO. SS32 OF SS32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;14HB-4,14,14HVB]BR	TAZEWELL	2433	1652
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



TEMPORARY TRAFFIC SIGNAL CONSTRUCTION NOTES

- T1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT WITH RESPECT TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THIS SHALL INCLUDE ALL CABLES, CONDUIT, WOOD POLES, GUY WIRE, VIDEO DETECTION, SERVICE, 4 250W HPS LUMINAIRES WITH PHOTOCCELL CONTROL, AND ALL OTHER EQUIPMENT REQUIRED FOR THE INSTALLATION. THE DEPARTMENT WILL SUPPLY CONTROLLER CABINETS AND SIGNAL HEADS TO THE CONTRACTOR FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION IF NEEDED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRANSPORTING EQUIPMENT AND EQUIPMENT REPAIR AND MAINTENANCE.
- T2. A FOUR CAMERA VEHICLE VIDEO DETECTION SYSTEM SHALL BE USED TO PROVIDE DETECTION FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL FURNISH A FOUR CAMERA VIDEO DETECTION SYSTEM (CAMERAS WITH BRACKETS AND PROCESSOR) FOR USE WITH THE TEMPORARY INSTALLATION. THE CONTRACTOR SHALL FURNISH ALL CABLE, HARDWARE, BRACKETS, AND ACCESSORIES REQUIRED FOR A COMPLETELY FUNCTIONAL SYSTEM.
- T3. AERIAL TRAFFIC SIGNAL CABLE SHALL BE FURNISHED AND INSTALLED AS SHOWN ON THE PLAN SHEETS.
- T4. THE TEMPORARY TRAFFIC SIGNAL SPAN WIRES AND CABLES SHALL BE ATTACHED TO THE WOOD POLES IN A MANNER APPROVED BY THE ENGINEER. ALL CABLES SHALL MAINTAIN A 18 FT. MINIMUM CLEARANCE ABOVE THE HIGHEST POINT OF THE ROADWAY.
- T5. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" LENSES.
- T6. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- T7. THE CONTRACTOR SHALL FURNISH ENOUGH SLACK CABLE TO RELOCATE THE HEADS TO ANY POSITION REQUIRED FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNALS SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS.
- T8. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO RELOCATE THE TEMPORARY TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH THE PROPOSED CONSTRUCTION STAGING.
- T9. THE TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL APPLICABLE MUTCD STANDARDS.
- T10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING THE VIDEO DETECTION SYSTEM TO ACCOMMODATE CONSTRUCTION STAGING (INCLUDING CAMERA AIMING AND PROGRAMMING).
- T11. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLY WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE PRICE FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- T12. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNALS, THE VIDEO DETECTION SYSTEM SHALL BECOME THE PROPERTY OF THE DEPARTMENT AND SHALL BE DELIVERED IN FULL WORKING CONDITION TO THE IDOT TRAFFIC BUILDING LOCATED AT 1025 W. DETWEILLER DR., PEORIA. THE CONTRACTOR SHALL NOTIFY PAUL GRANT AT (309)259-7481 FORTY EIGHT HOURS PRIOR TO DELIVERY.



THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF WOOD POLES, GUY WIRES, AND OTHER TEMPORARY TRAFFIC SIGNAL EQUIPMENT WITH THE ENGINEER TO PREVENT CONFLICTS WITH CONSTRUCTION STAGING, PROPOSED TRAFFIC SIGNAL STRUCTURES, AND OVERHEAD UTILITIES.

TEMPORARY TRAFFIC SIGNAL LEGEND

- - TEMPORARY TRAFFIC SIGNAL SPAN WIRE AND CABLE
- ⊗ TEMPORARY WOOD POLE
- TEMPORARY TRAFFIC SIGNAL HEAD
- + TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- + TEMPORARY PEDESTRIAN SIGNAL HEAD
- Ⓜ TEMPORARY VIDEO CAMERA (FURNISHED BY DEPT.)
- ⊗ TEMPORARY LUMINAIRE, 250W HPS, MULTI-MOUNT, 45 FT. MOUNTING HEIGHT

FILE NAME =	DESIGNED - LDC	REVISED -
...D468620-sh1-temp.dgn	DRAWN - SMS	REVISED -
USER NAME = IDOT	CHECKED - GEB	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -



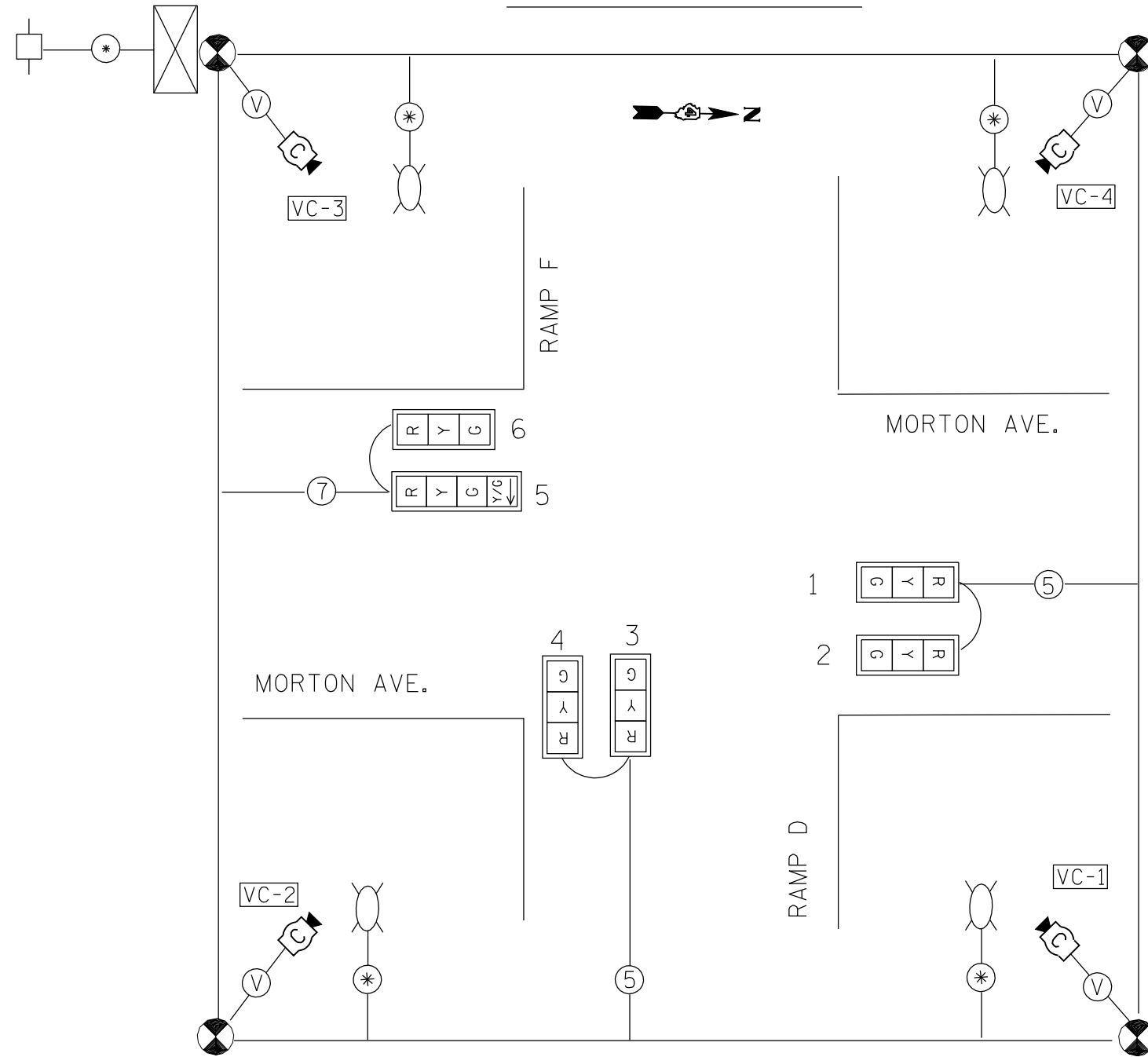
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNALS
I-74 EB RAMPS & N. MORTON AVE.

SCALE: 1"=20' SHEET NO. 1 OF 4 SHEETS STA. TO STA.

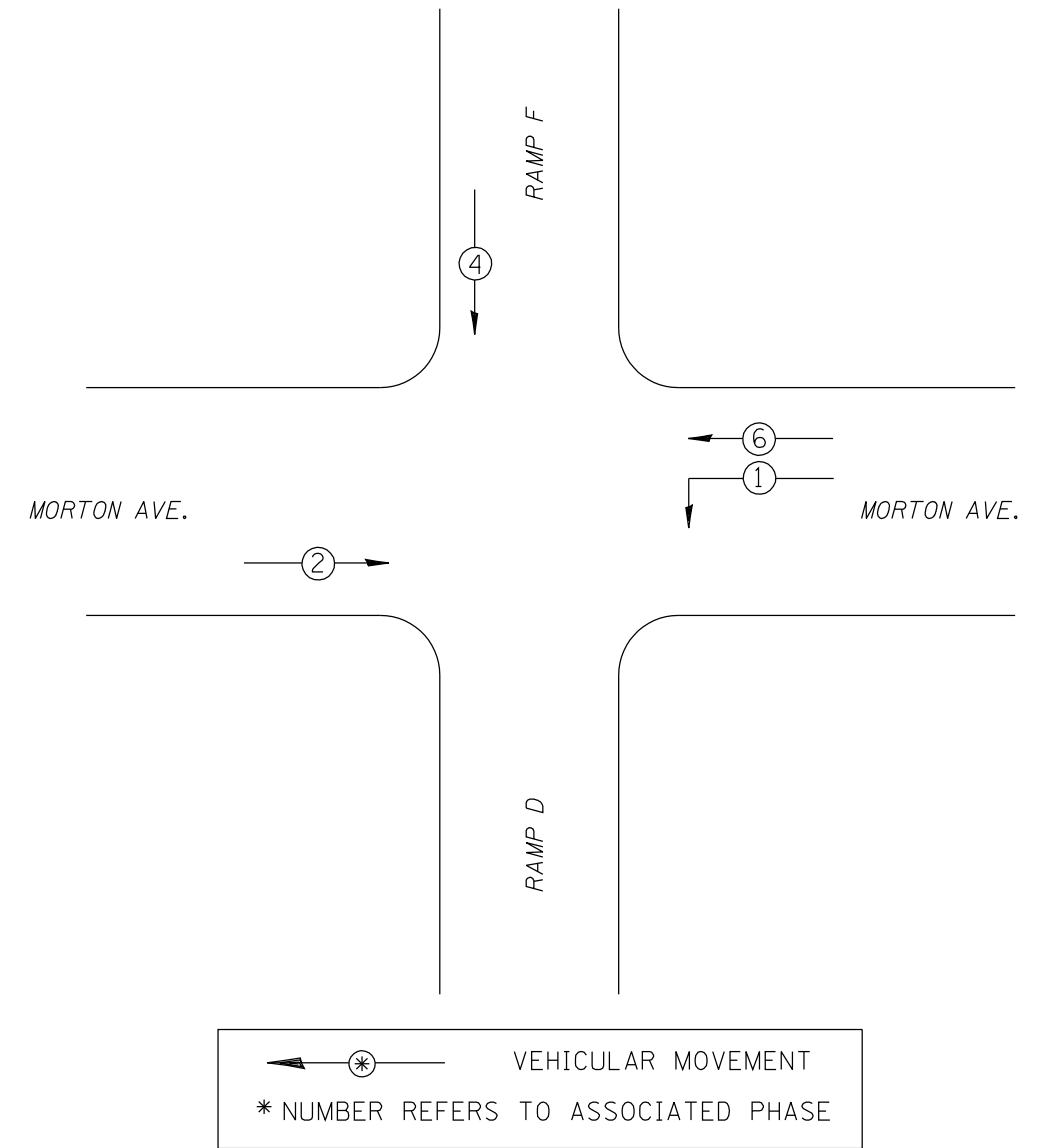
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 90-I14R(14HB-4,14,14HVB)BR		TAZEWELL	2433	1653
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

TEMPORARY CABLE DIAGRAM



TEMPORARY PHASE DIAGRAM

NAME OF INTERSECTION MORTON AVE. & RAMPS D & F



TRAFFIC SIGNALS LEGEND

- | | | | | | |
|--|-------------------------------|--|-------------------------------|--|---|
| | TEMP. CONTROLLER (SIGNAL) | | TEMP. 5/C NO. 14 SIGNAL CABLE | | TEMP. SERVICE INSTALLATION |
| | TEMP. SIGNAL HEAD W/BACKPLATE | | TEMP. 7/C NO. 14 SIGNAL CABLE | | TEMP. VIDEO DETECTION CAMERA |
| | TEMP. SIGNAL HEAD | | TEMP. VIDEO DETECTION CABLE | | TEMP. LUMINAIRE (PC CONTROL)
250W HPS, MULTI-MOUNT |
| | | | TEMP. CABLE (1/C NO. 6) X 3 | | |

FILE NAME =	DESIGNED - LDC	REVISED -
...\\D468620-sh1-tsl-temp.dgn	DRAWN - SMS	REVISED -
USER NAME = IDOT	CHECKED - GEB	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

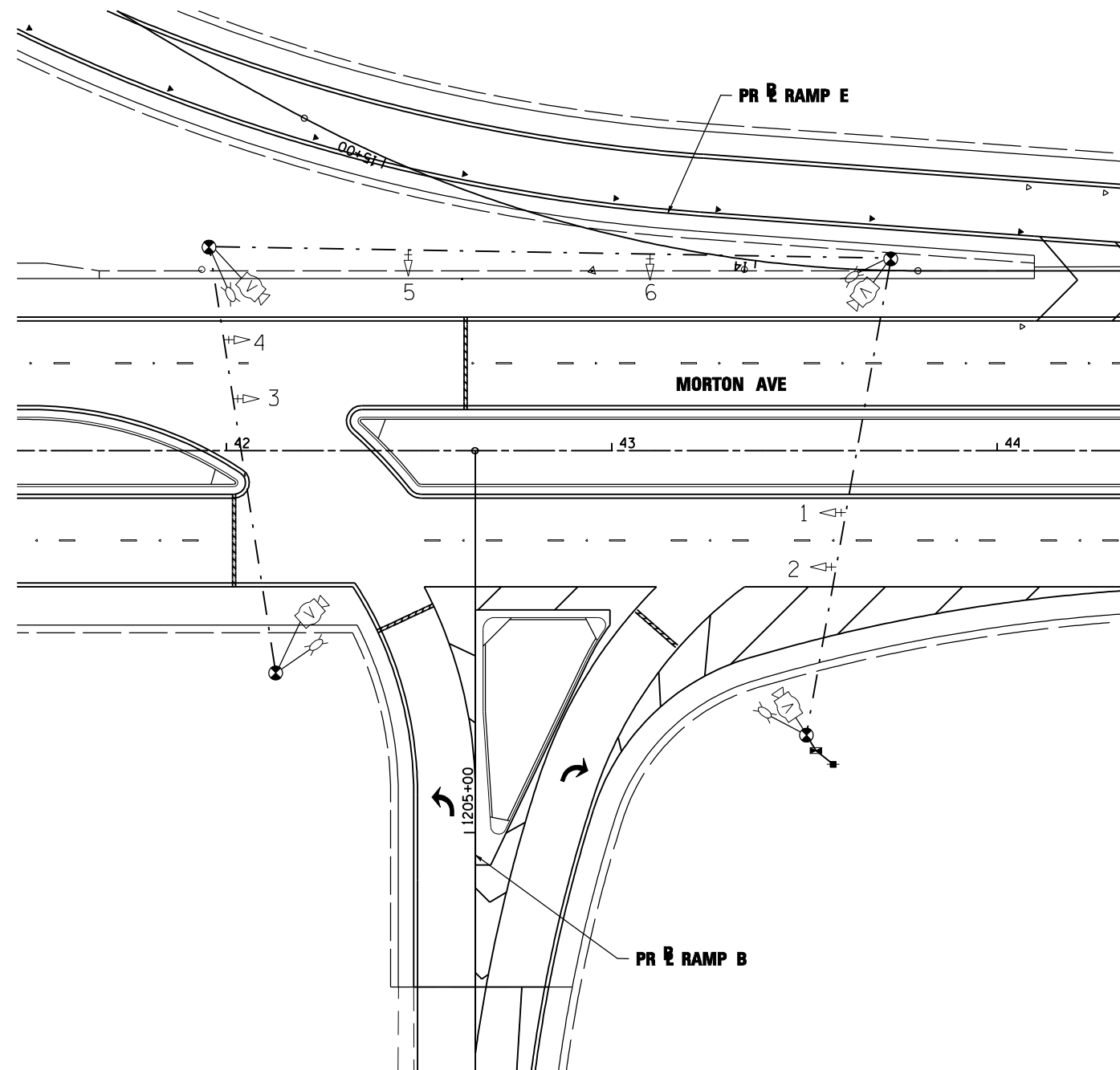
TEMPORARY TRAFFIC SIGNAL CABLE AND PHASE DIAGRAMS
I-74 EB RAMPS & N. MORTON AVE.

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90-I14R(14HB-4,14,14HVB)BR		TAZEWELL	2433	1654
CONTRACT NO. 68620				



TEMPORARY TRAFFIC SIGNAL CONSTRUCTION NOTES



- T1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT WITH RESPECT TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THIS SHALL INCLUDE ALL CABLES, CONDUIT, WOOD POLES, GUY WIRE, VIDEO DETECTION, SERVICE, 4 250W HPS LUMINAIRES WITH PHOTOCELL CONTROL, AND ALL OTHER EQUIPMENT REQUIRED FOR THE INSTALLATION. THE DEPARTMENT WILL SUPPLY CONTROLLER CABINETS AND SIGNAL HEADS TO THE CONTRACTOR FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION IF NEEDED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRANSPORTING EQUIPMENT AND EQUIPMENT REPAIR AND MAINTENANCE.
- T2. A FOUR CAMERA VEHICLE VIDEO DETECTION SYSTEM SHALL BE USED TO PROVIDE DETECTION FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE CONTRACTOR SHALL FURNISH A FOUR CAMERA VIDEO DETECTION SYSTEM (CAMERAS WITH BRACKETS AND PROCESSOR) FOR USE WITH THE TEMPORARY INSTALLATION. THE CONTRACTOR SHALL FURNISH ALL CABLE, HARDWARE, BRACKETS, AND ACCESSORIES REQUIRED FOR A COMPLETELY FUNCTIONAL SYSTEM.
- T3. AERIAL TRAFFIC SIGNAL CABLE SHALL BE FURNISHED AND INSTALLED AS SHOWN ON THE PLAN SHEETS.
- T4. THE TEMPORARY TRAFFIC SIGNAL SPAN WIRES AND CABLES SHALL BE ATTACHED TO THE WOOD POLES IN A MANNER APPROVED BY THE ENGINEER. ALL CABLES SHALL MAINTAIN A 18 FT. MINIMUM CLEARANCE ABOVE THE HIGHEST POINT OF THE ROADWAY.
- T5. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" LENSES.
- T6. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- T7. THE CONTRACTOR SHALL FURNISH ENOUGH SLACK CABLE TO RELOCATE THE HEADS TO ANY POSITION REQUIRED FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNALS SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS.
- T8. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO RELOCATE THE TEMPORARY TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH THE PROPOSED CONSTRUCTION STAGING.
- T9. THE TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL APPLICABLE MUTCD STANDARDS.
- T10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING THE VIDEO DETECTION SYSTEM TO ACCOMMODATE CONSTRUCTION STAGING (INCLUDING CAMERA AIMING AND PROGRAMMING).
- T11. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLY WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE PRICE FOR TEMPORARY TRAFFIC SIGNAL INSTALLATION.
- T12. UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNALS, THE VIDEO DETECTION SYSTEM SHALL BECOME THE PROPERTY OF THE DEPARTMENT AND SHALL BE DELIVERED IN FULL WORKING CONDITION TO THE IDOT TRAFFIC BUILDING LOCATED AT 1025 W. DETWEILLER DR., PEORIA. THE CONTRACTOR SHALL NOTIFY PAUL GRANT AT (309)259-7481 FORTY EIGHT HOURS PRIOR TO DELIVERY.

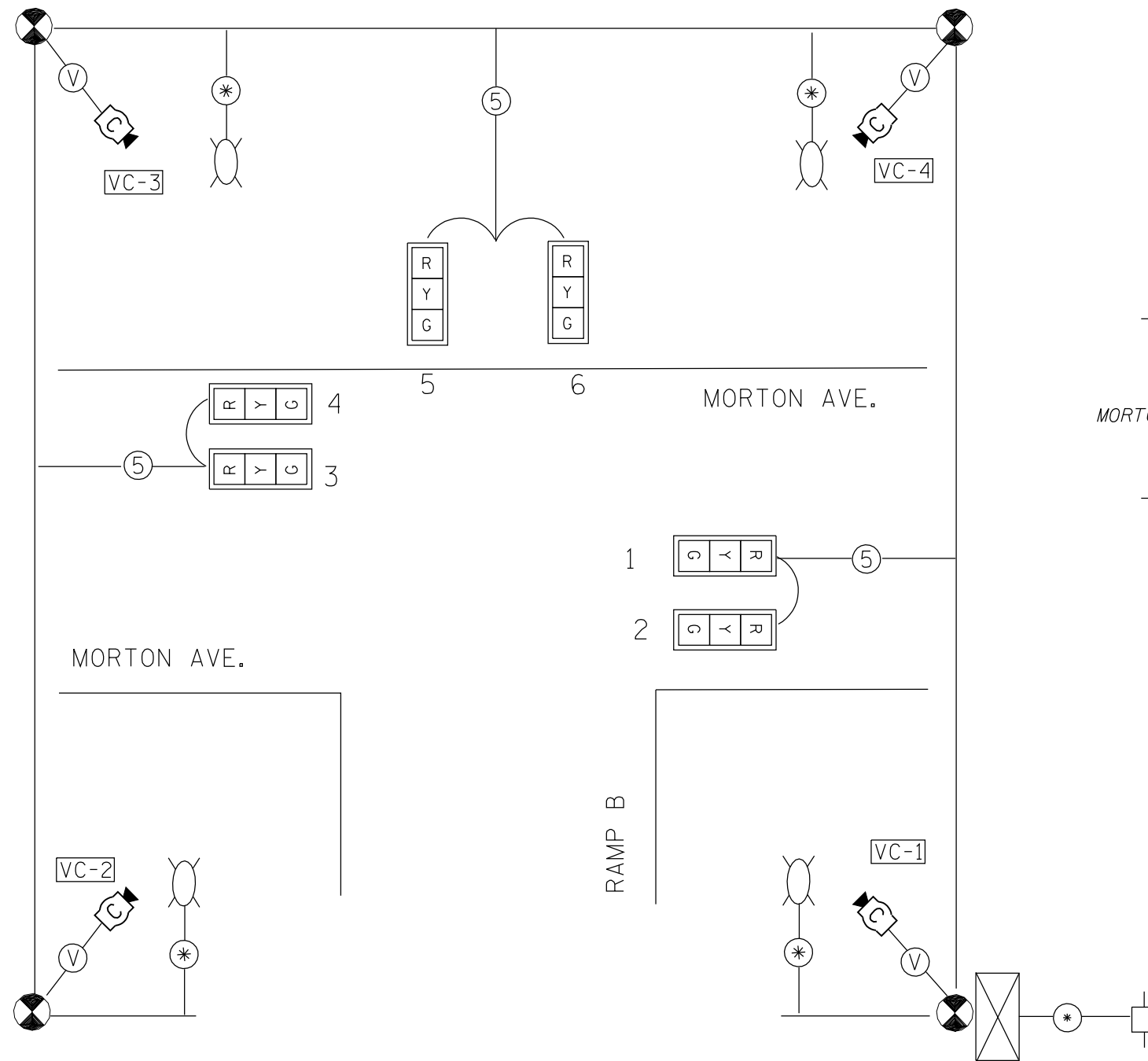
THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF WOOD POLES, GUY WIRES, AND OTHER TEMPORARY TRAFFIC SIGNAL EQUIPMENT WITH THE ENGINEER TO PREVENT CONFLICTS WITH CONSTRUCTION STAGING, PROPOSED TRAFFIC SIGNAL STRUCTURES, AND OVERHEAD UTILITIES.

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY TRAFFIC SIGNAL SPAN WIRE AND CABLE
- ⊗ TEMPORARY WOOD POLE
- TEMPORARY TRAFFIC SIGNAL HEAD
- +→ TEMPORARY TRAFFIC SIGNAL HEAD WITH BACKPLATE
- +▷ TEMPORARY PEDESTRIAN SIGNAL HEAD
- ⓧ TEMPORARY VIDEO CAMERA (FURNISHED BY DEPT.)
- ⊗ TEMPORARY LUMINAIRE, 250W HPS, MULTI-MOUNT, 45 FT. MOUNTING HEIGHT

FILE NAME = ...D468620-sh1-ts2-temp.dgn	DESIGNED - LDC	REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNALS I-74 WB RAMPS & N. MORTON AVE.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
USER NAME = IDOT	DRAWN - SMS	REVISED -				90-I14R(14HB-4,14,14HVB)BR	TAZEWELL	2433	1655	
PLOT DATE = 7/16/2012	CHECKED - GEB	REVISED -				CONTRACT NO. 68620				
	DATE - JULY 20, 2012	REVISED -				SCALE: 1"=20'	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

TEMPORARY CABLE DIAGRAM

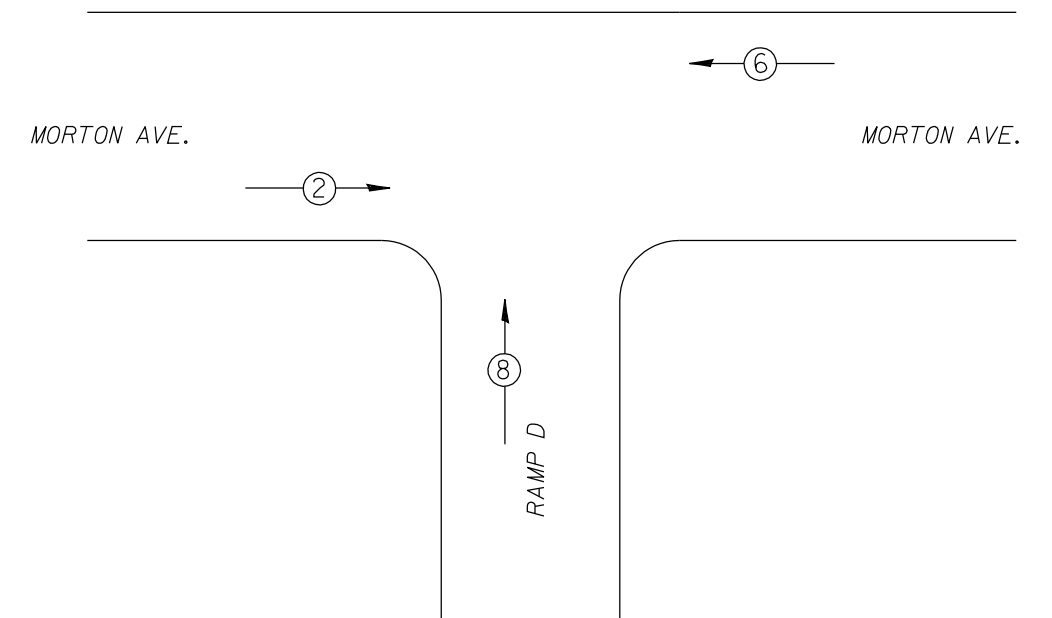


TRAFFIC SIGNALS LEGEND

- | | | | | | |
|--|-------------------------------|--|-------------------------------|--|---|
| | TEMP. CONTROLLER (SIGNAL) | | TEMP. 5/C NO. 14 SIGNAL CABLE | | TEMP. SERVICE INSTALLATION |
| | TEMP. SIGNAL HEAD W/BACKPLATE | | TEMP. 7/C NO. 14 SIGNAL CABLE | | TEMP. VIDEO DETECTION CAMERA |
| | TEMP. SIGNAL HEAD | | TEMP. VIDEO DETECTION CABLE | | TEMP. LUMINAIRE (PC CONTROL)
250W HPS, MULTI-MOUNT |
| | | | TEMP. CABLE (1/C NO. 6) X 3 | | |

TEMPORARY PHASE DIAGRAM

NAME OF INTERSECTION MORTON AVE. & RAMP B



- VEHICULAR MOVEMENT
* NUMBER REFERS TO ASSOCIATED PHASE

FILE NAME =	DESIGNED - LDC	REVISED -
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USER NAME = IDOT	CHECKED - GEB	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

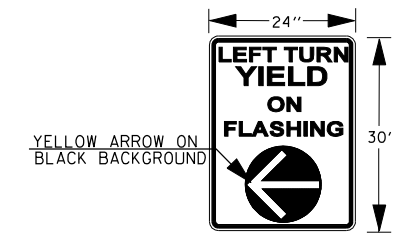
TEMPORARY TRAFFIC SIGNAL CABLE AND PHASE DIAGRAMS
I-74 WB RAMPS & N. MORTON AVE.

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90-I14R(14HB-4,14,14HVB)BR		TAZEWELL	2433	1656
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

ELECTRICAL GENERAL NOTES

1. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" SINGLE LED LENSES.
2. THE RED SECTIONS OF THE SIGNAL HEADS SHARING THE SAME MAST ARM SHALL BE LEVEL WITH ONE ANOTHER AND MAINTAIN A 16 FT. MINIMUM CLEARANCE FROM THE HIGHEST POINT OF THE ROADWAY.
3. THE PROPOSED MAST ARM MOUNTED TRAFFIC SIGNAL HEADS SHALL BE MOUNTED DIRECTLY OVER THE CENTER OF THEIR RESPECTIVE LANES.
4. ALL TRAFFIC SIGNAL HEAD BRACKETS ARE TO BE ALUMINUM WITH A NATURAL FINISH.
5. ALL TRAFFIC SIGNAL POSTS ARE TO BE GALVANIZED STEEL.
6. THE #18 3-PAIR TWISTED/SHELDLED CABLE SHALL HAVE THE SAME SLACK AS OTHER SIGNAL CABLE AND WILL BE MEASURED FOR PAYMENT.
7. ALL DETECTOR LOOPS SHALL UTILIZE A SEPARATE PAIR OF LEAD-INS.
8. A TYPE II SPLICE SHALL BE USED FOR ALL DETECTOR LEAD-INS.
9. THE PROPOSED DETECTOR LOOPS SHALL BE CUT IN THE EXISTING PAVEMENT, MILLED SURFACE, OR BINDER COURSE BEFORE THE FINAL OVERLAY. THE RISER AREA SHALL BE CHIPPED OUT AND FILLED WITH EPOXY. THIS WORK SHALL BE INCLUDED IN PRICE FOR DETECTOR LOOPS.
10. ALL DETECTOR LOOPS SHALL BE INSTALLED IN THE CENTER OF THEIR RESPECTIVE TRAVEL LANES. THE ENGINEER OF TRAFFIC SHALL BE NOTIFIED FOR VERIFICATION OF DETECTOR PLACEMENT BEFORE INSTALLATION.
11. PROPOSED HANDHOLES SHALL BE CAST IN PLACE CONCRETE HANDHOLES.
12. THE HANDHOLE SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE MEDIAN, SIDEWALK, OR GROUND LINE.
13. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY TRAFFIC SIGNAL COMPONENTS.
14. COILABLE POLYETHYLENE DUCT MAY BE SUBSTITUTED FOR PVC PUSHED OR TRENCHED.
15. THE TRAFFIC SIGNAL CONTROLLER SHALL BE ORIENTED SO THAT THE DOOR IS FACING AWAY FROM TRAFFIC.
16. THE DOUBLE HANDHOLE SHALL NOT BE USED IN LIEU OF THE CONTROLLER FOUNDATION PAD.
17. THE LOCATIONS FOR HANDHOLES, TRAFFIC SIGNAL POST FOUNDATIONS, AND MAST ARM FOUNDATIONS ARE PROVIDED FOR REFERENCE ONLY. THE ENGINEER OF TRAFFIC SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.
18. ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATION.
19. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
20. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THIS COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR THE CONDUITS.
21. ALL TRAFFIC SIGNAL MAST ARMS, POSTS, HANDHOLE LIDS AND RINGS, HANDHOLE FRAMES, CONTROLLER CABINETS, AND PHOTOCELL RELAYS SHALL BE GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING DEPARTMENT LIGHTING, ITS, AND TRAFFIC SIGNAL FACILITIES. THIS WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE.

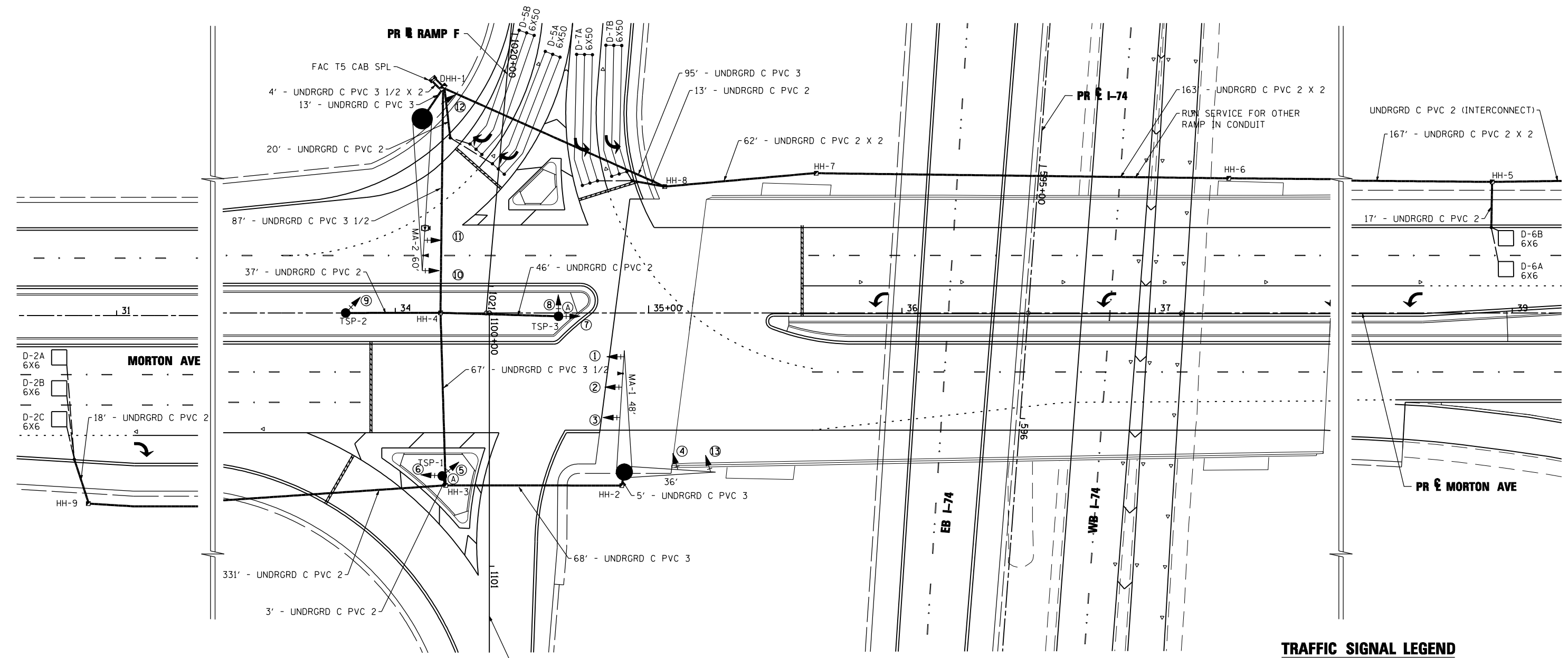


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FURNISH & INSTALL TWO (2) EACH SIGN
SIGN BACKGROUND : WHITE
SIGN LETTERING: BLACK

DETAIL OF
SIGN PANEL - TYPE 1
(NOT TO SCALE)

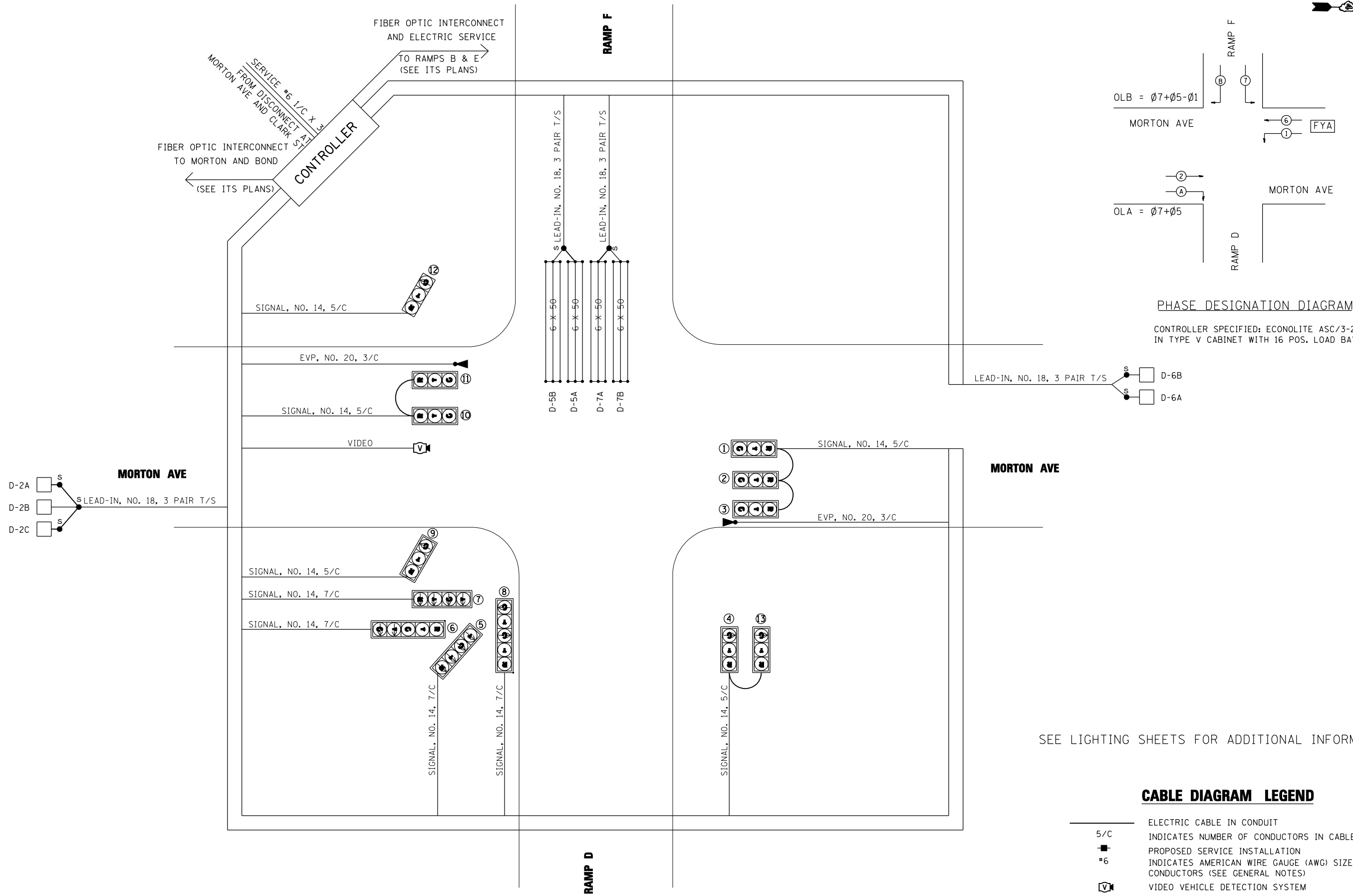
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...D468620-sh1-tsl.dgn	DRAWN - SMS	REVISED -					• 90-114R(14HB-4,14,14HVB)BR	TAZEWELL	2433	1657	
USER NAME = IDOT	CHECKED - GEB	REVISED -			CONTRACT NO. 68620						
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -			SCALE:	SHEET NO. 1 OF 8 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			



NOTE:
ADVANCED LOOPS SHALL BE LOCATED
330 FEET FROM STOP BAR

- TRAFFIC SIGNAL LEGEND**
- ▲ PROPOSED SIGNAL HEAD WITH BACKPLATE
 - ▼ PROPOSED SIGNAL HEAD WITHOUT BACKPLATE
 - PROPOSED HANDHOLE
 - ▣ PROPOSED DOUBLE HANDHOLE
 - ▬ PROPOSED CONDUIT
 - PROPOSED MAST ARM (LENGTH SPECIFIED)
 - PROPOSED TRAFFIC SIGNAL POST
 - PROPOSED SERVICE POLE
 - ▣ PROPOSED CONTROLLER WITH CONCRETE FOUNDATION, TYPE D
 - ▼ PROPOSED EMERGENCY VEHICLE PREEMPTION SYSTEM
 - ◻ PROPOSED VIDEO VEHICLE DETECTION SYSTEM
 - ▭ 6' x 50' PROPOSED DETECTOR LOOP
 - ◊ 6' x 6' PROPOSED DETECTOR LOOP

FILE NAME = ...D468620-sh1-tsl.dgn	DESIGNED - LDC DRAWN - SMS	REVISED - REVISED - REVISED -	<p>Kaskaskia Engineering Group, LLC Professional Engineering Firm Illinois License No. 021-000000</p>	<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p>TRAFFIC SIGNAL PLAN I-74 EB RAMPS & N. MORTON AVE.</p>			F.A.I. RTE. 90-[14R(14HB-4,14,14HB)BR]	SECTION TAZEWELL	COUNTY TAZEWELL	TOTAL SHEETS 2433	SHEET NO. 1659	
USER NAME = IDOT	CHECKED - GEB	DATE - JULY 20, 2012			SCALE: 1"=20'	SHEET NO. 3 OF 8 SHEETS	STA. TO STA.	CONTRACT NO. 68620		ILLINOIS FED. AID PROJECT			
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -			• 74 & 155								



SEE LIGHTING SHEETS FOR ADDITIONAL INFORMATION

CABLE DIAGRAM LEGEND

- 5/C ELECTRIC CABLE IN CONDUIT
- INDICATES NUMBER OF CONDUCTORS IN CABLE
- PROPOSED SERVICE INSTALLATION
- #6 INDICATES AMERICAN WIRE GAUGE (AWG) SIZE 6 CONDUCTORS (SEE GENERAL NOTES)
- V VIDEO VEHICLE DETECTION SYSTEM

FILE NAME =	DESIGNED - LDC	REVISED -
...D468620-sh1-tsl.dgn	DRAWN - SMS	REVISED -
USER NAME = IDOT	CHECKED - GEB	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -

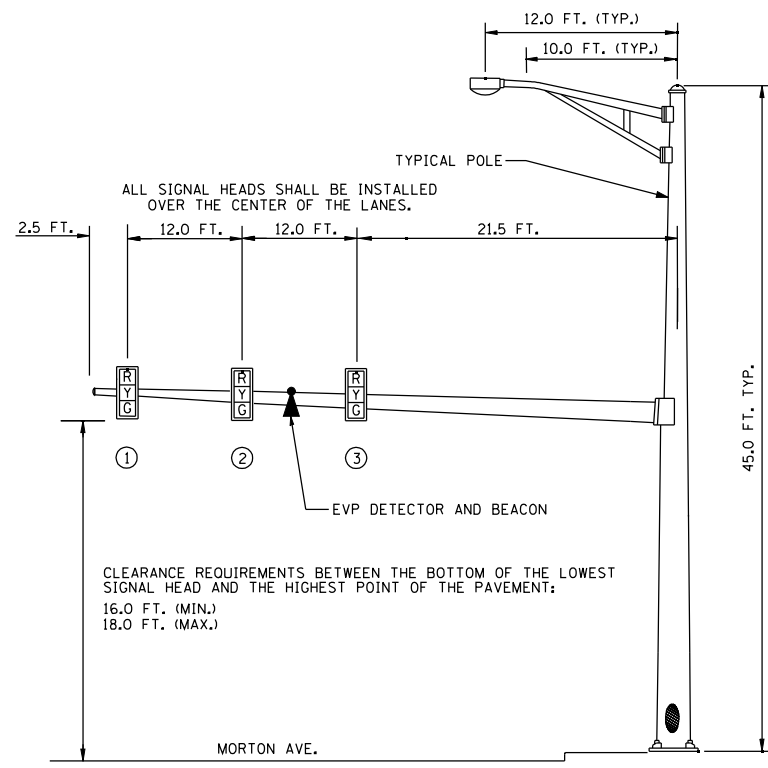


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

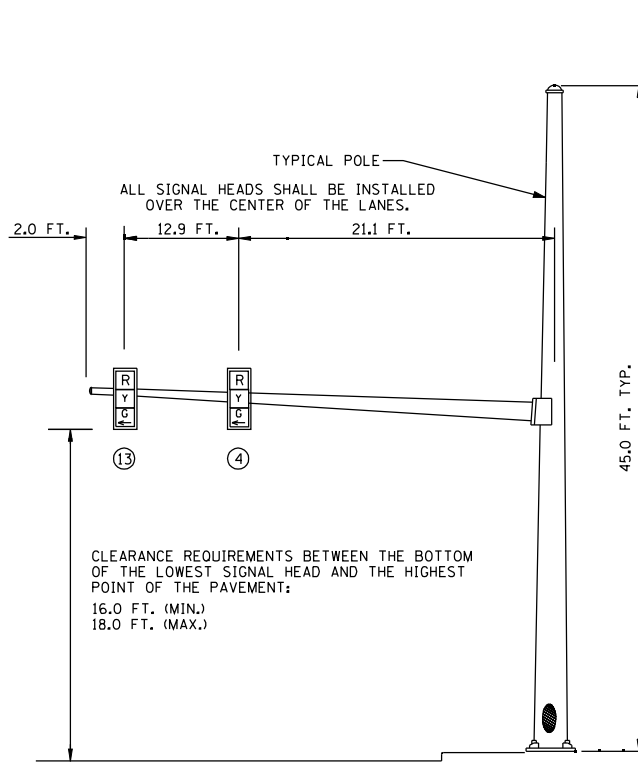
TRAFFIC SIGNAL CABLE AND PHASE DIAGRAMS
I-74 EB RAMPS & N. MORTON AVE.

SCALE: SHEET NO. 4 OF 8 SHEETS STA. TO STA.

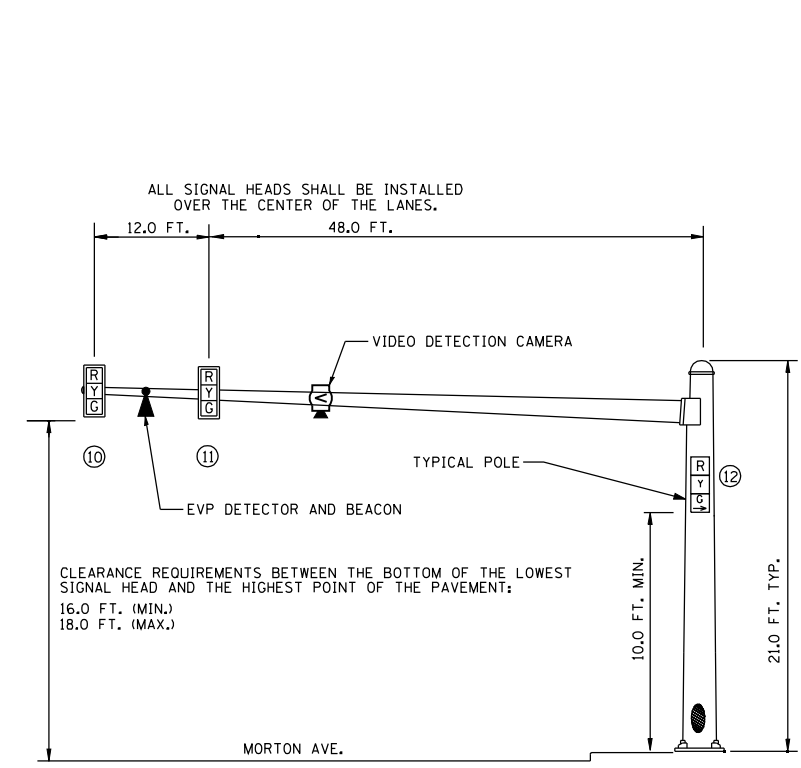
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• 90-[14R(14HB-4,14,14HVB)BR]		TAZEWELL	2433	1660
			CONTRACT NO. 68620	



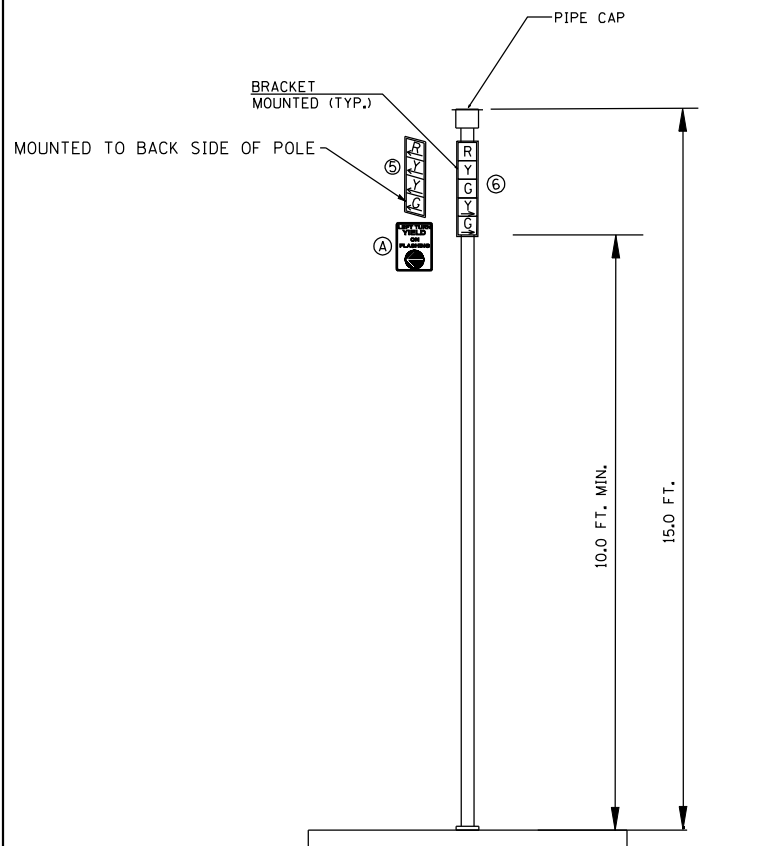
**NORTHBOUND TRAFFIC SIGNAL
MORTON AVE. AND RAMP D**



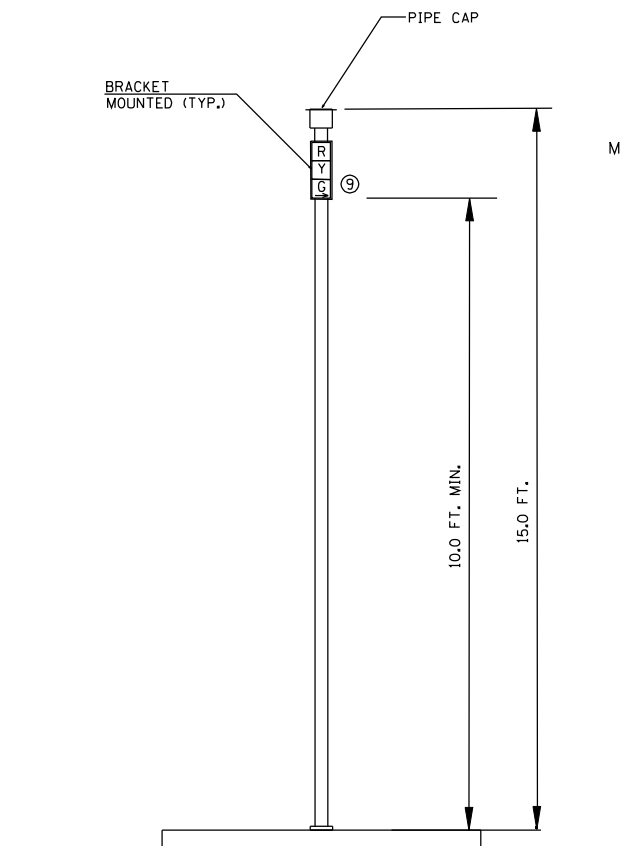
**RAMP F TRAFFIC SIGNAL
MORTON AVE. AND RAMP D**



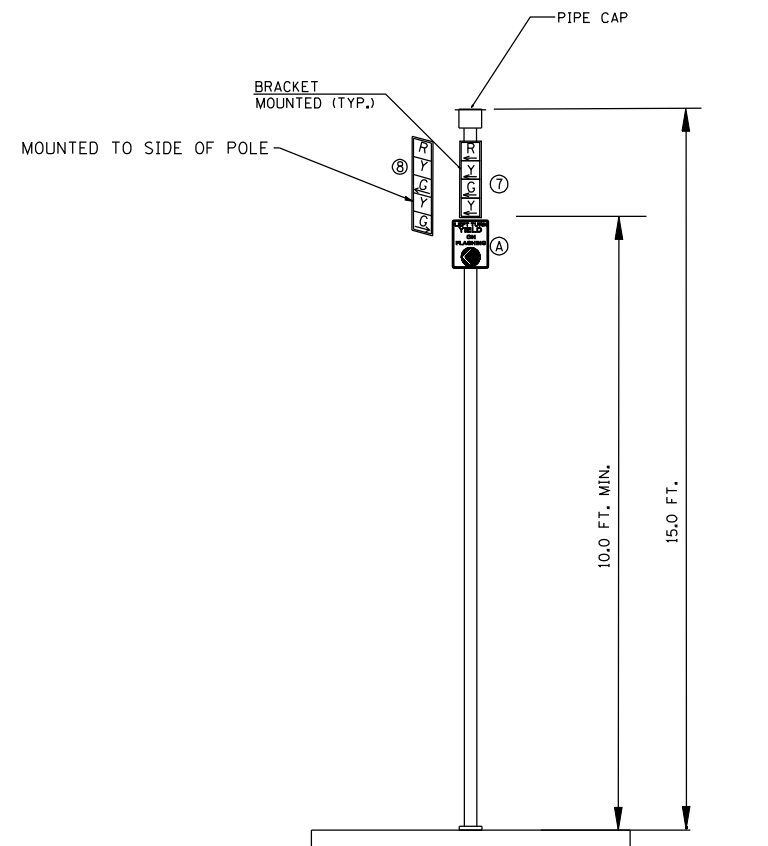
**SOUTHBOUND TRAFFIC SIGNAL
MORTON AVE. AND RAMP F**



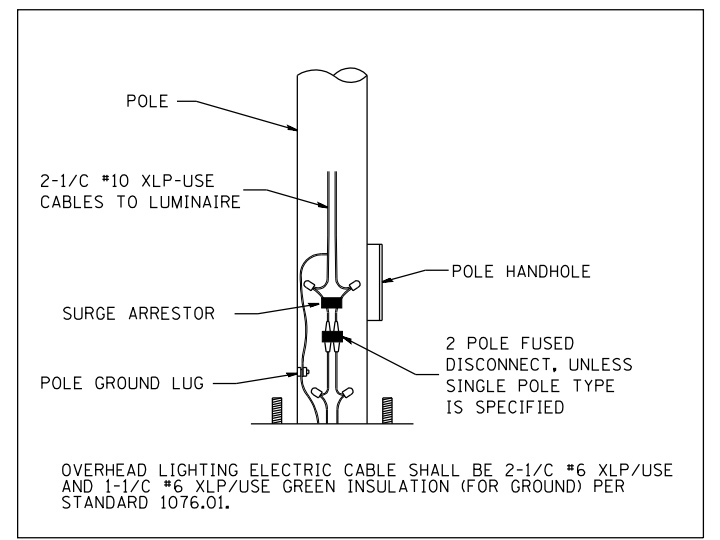
**TS-1
MORTON AVE. AND RAMP D EAST ISLAND**



**TS-2
MORTON AVE. AND RAMP D SOUTH MEDIAN**



**TS-3
MORTON AVE. AND RAMP D SOUTH MEDIAN**



FILE NAME =	DESIGNED - LDC	REVISED -
...D468620-sh1-ts1.dgn	DRAWN - SMS	REVISED -
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PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -

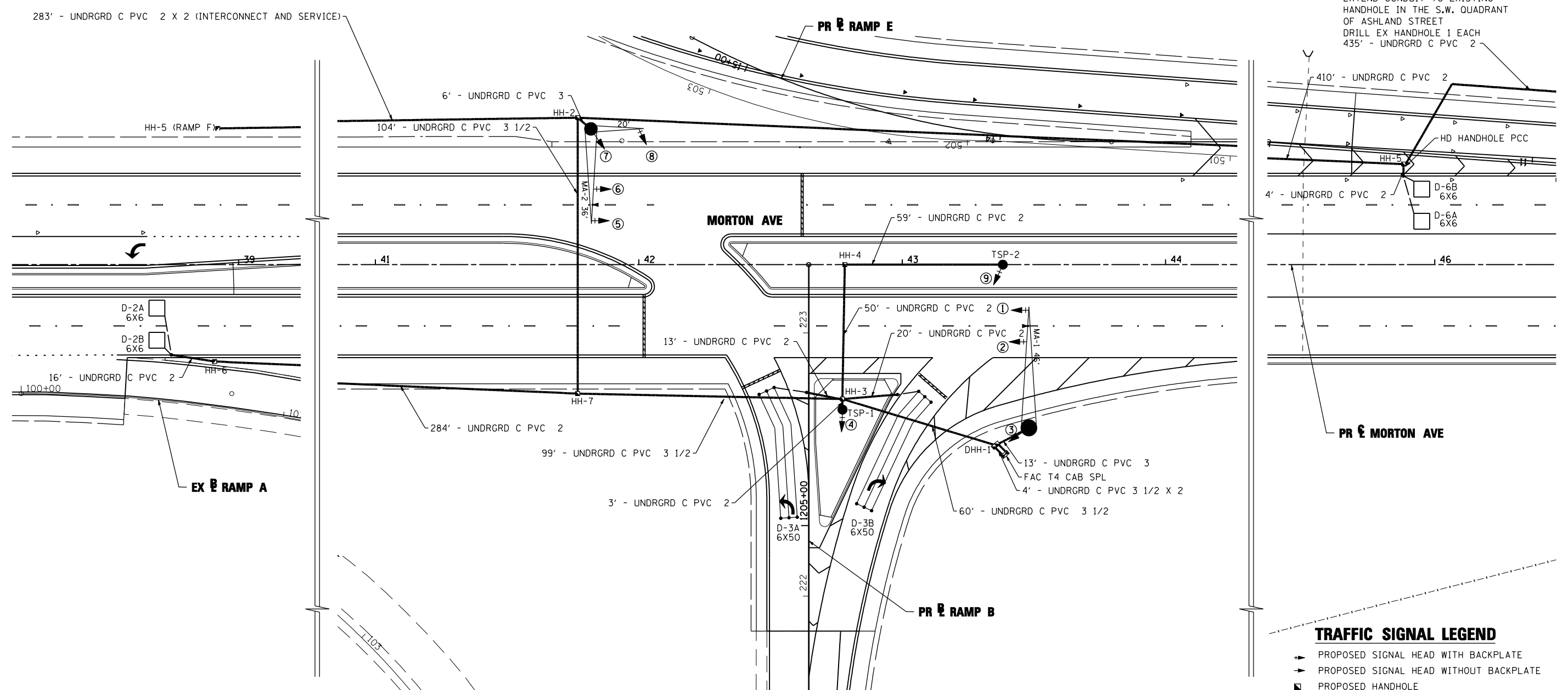


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

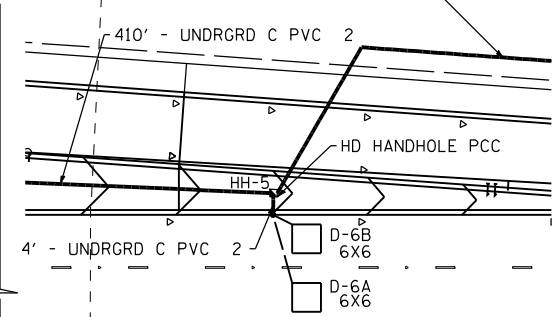
**MAST ARM AND TRAFFIC SIGNAL POST DETAILS
I-74 EB RAMPS & N. MORTON AVE.**

SCALE: SHEET NO. 5 OF 8 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90-[14Rz(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1661	
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



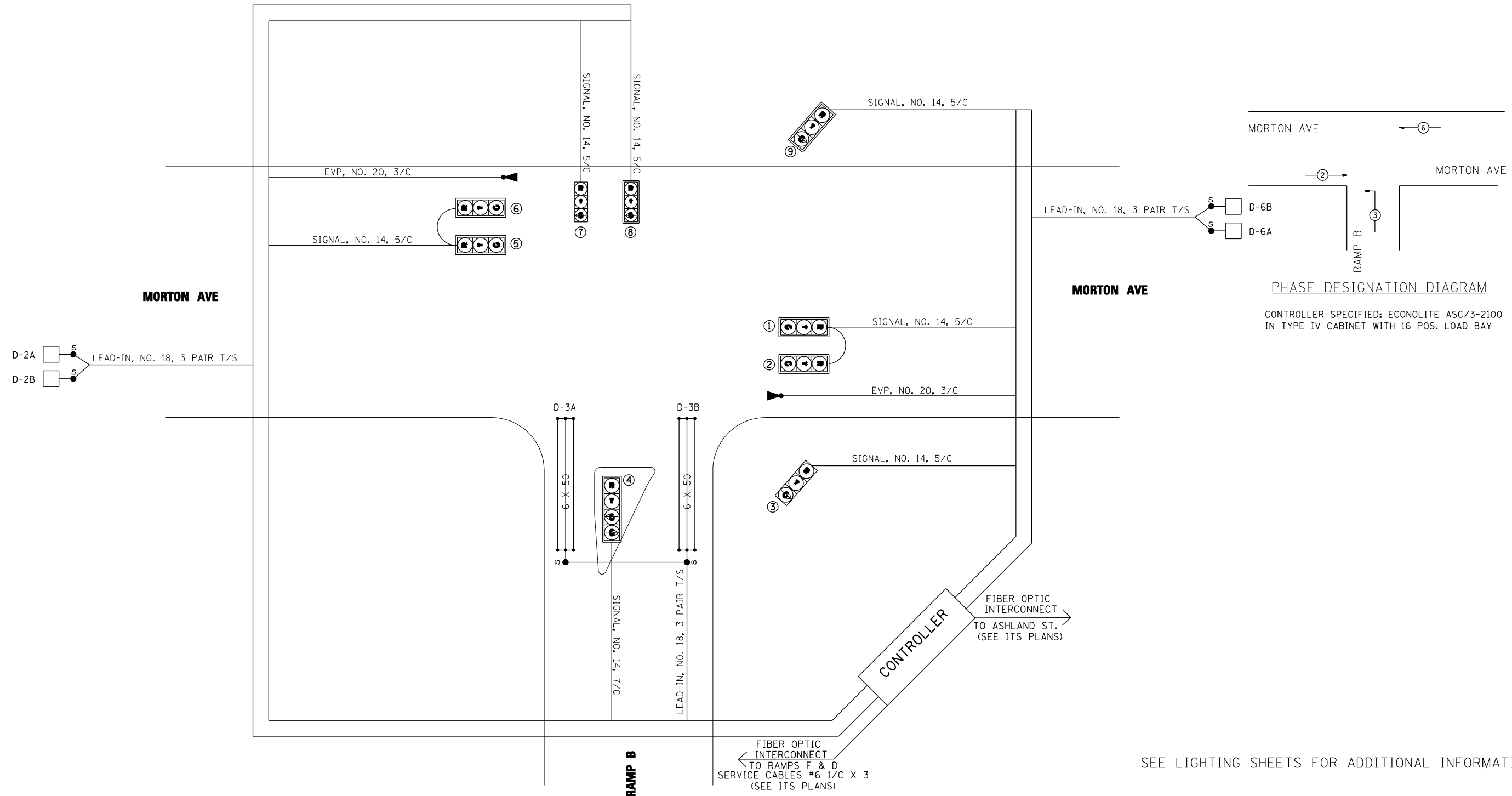
EXTEND CONDUIT TO EXISTING HANDHOLE IN THE S.W. QUADRANT OF ASHLAND STREET
 DRILL EX HANDHOLE 1 EACH
 435' - UNDRGRD C PVC 2



NOTE:
 ADVANCED LOOPS SHALL BE LOCATED
 330 FEET FROM STOP BAR

- TRAFFIC SIGNAL LEGEND**
- ▶ PROPOSED SIGNAL HEAD WITH BACKPLATE
 - ◀ PROPOSED SIGNAL HEAD WITHOUT BACKPLATE
 - PROPOSED HANDHOLE
 - ▣ PROPOSED DOUBLE HANDHOLE
 - ══ PROPOSED CONDUIT
 - PROPOSED MAST ARM (LENGTH SPECIFIED)
 - PROPOSED TRAFFIC SIGNAL POST
 - PROPOSED SERVICE POLE
 - ▣ PROPOSED CONTROLLER WITH CONCRETE FOUNDATION, TYPE D
 - ▶ PROPOSED EMERGENCY VEHICLE PREEMPTION SYSTEM
 - ◻ PROPOSED VIDEO VEHICLE DETECTION SYSTEM
 - ▭ 6' X 50' PROPOSED DETECTOR LOOP
 - ◻ 6' X 6' PROPOSED DETECTOR LOOP

FILE NAME =	DESIGNED - LDC	REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL PLAN I-74 WB RAMPS & N. MORTON AVE.			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
... \D468620-sh1-ts2.dgn	DRAWN - SMS	REVISED -						90-I14R(14HB-4,14,14HVB)BR	TAZEWELL	2433	1662	
USER NAME = IDOT	CHECKED - GEB	REVISED -			CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT				
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -			SCALE: 1"=20'	SHEET NO. 6 OF 8 SHEETS	STA. TO STA.	• 74 & 155				

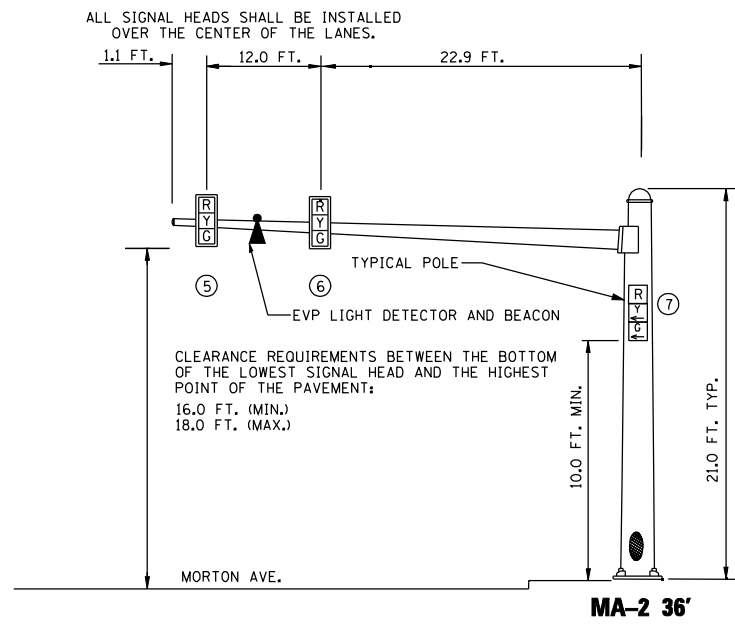


SEE LIGHTING SHEETS FOR ADDITIONAL INFORMATION

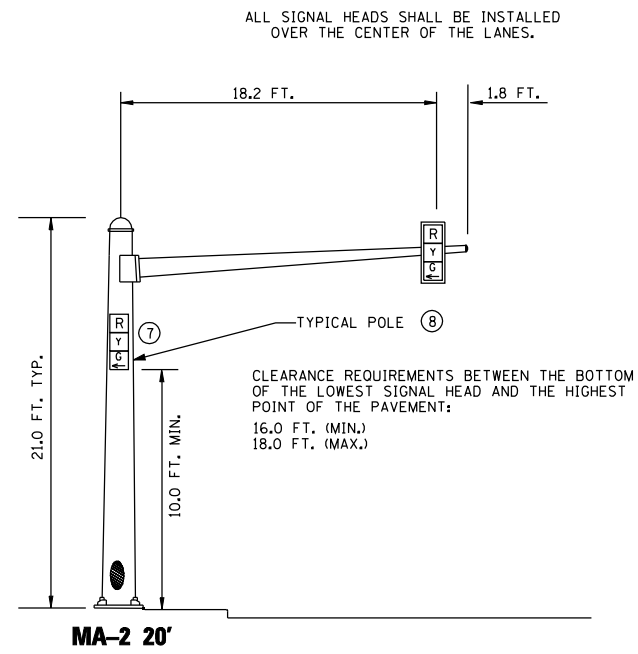
CABLE DIAGRAM LEGEND

- ELECTRIC CABLE IN CONDUIT
- 5/C INDICATES NUMBER OF CONDUCTORS IN CABLE
- PROPOSED SERVICE INSTALLATION
- #6 INDICATES AMERICAN WIRE GAUGE (AWG) SIZE 6 CONDUCTORS (SEE GENERAL NOTES)
- ◻ VIDEO VEHICLE DETECTION SYSTEM

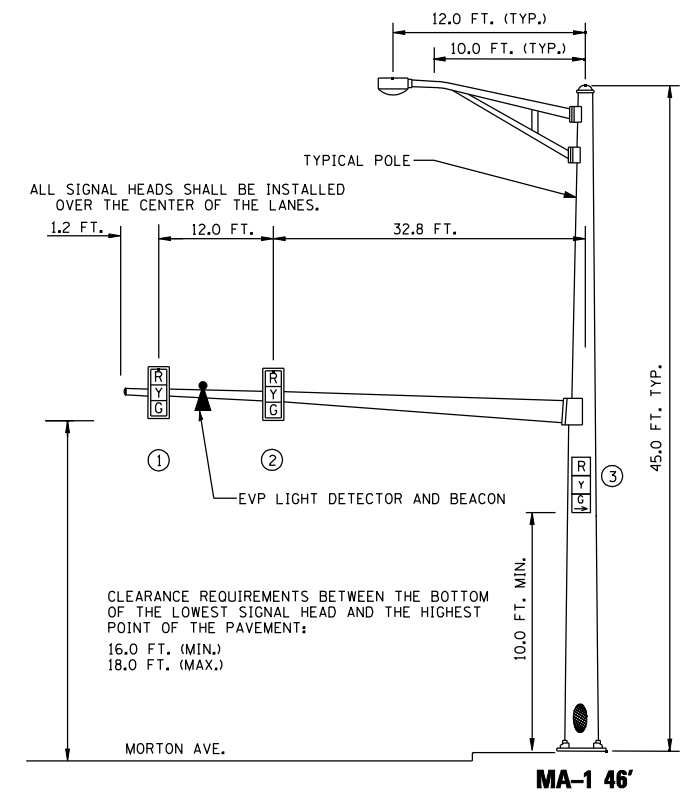
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USER NAME = IDOT	DRAWN - SMS	REVISED -				90-I14R(14HB-4,14,14HVB)BR	TAZEWELL	2433	1663	
PLOT DATE = 7/16/2012	CHECKED - GEB	REVISED -				CONTRACT NO. 68620				
DATE - JULY 20, 2012	REVISIONS	REVISED -				ILLINOIS FED. AID PROJECT				



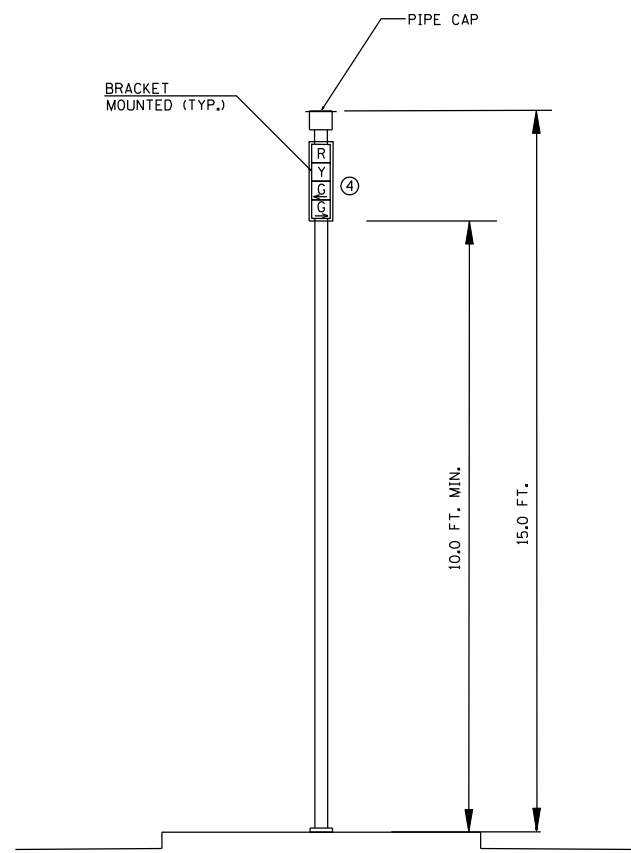
**SOUTHBOUND TRAFFIC SIGNAL
MORTON AVE. AND RAMP B**



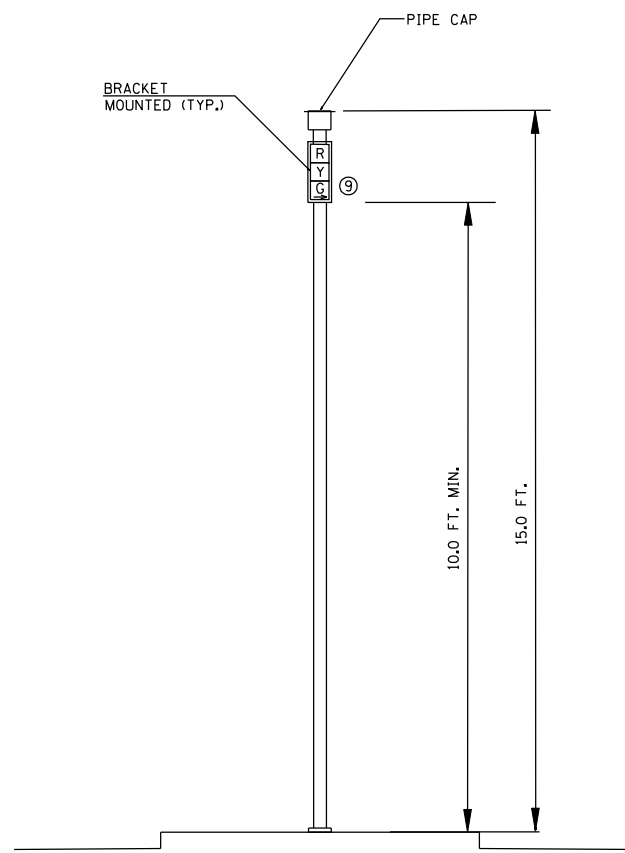
**RAMP B TRAFFIC SIGNAL
MORTON AVE. AND RAMP B**



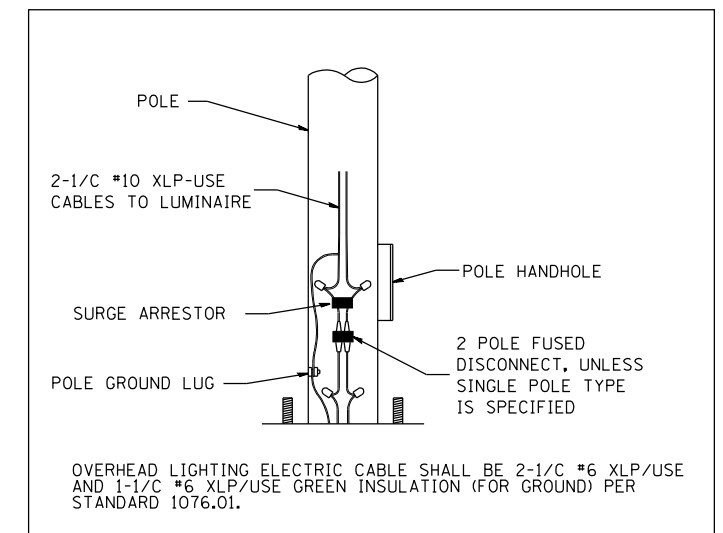
**NORTHBOUND TRAFFIC SIGNAL
MORTON AVE. AND RAMP B**



MORTON AVE. AND RAMP B EAST ISLAND



MORTON AVE. AND RAMP B NORTH MEDIAN



FILE NAME =	DESIGNED - LDC	REVISED -
...\\D468620-sh1-ts2.dgn	DRAWN - SMS	REVISED -
USER NAME = IDOT	CHECKED - GEB	REVISED -
PLOT DATE = 7/16/2012	DATE - JULY 20, 2012	REVISED -



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAST ARM AND TRAFFIC SIGNAL POST DETAILS
I-74 WB RAMPS & N. MORTON AVE.**







SCALE: SHEET NO. 8 OF 8 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 90-[I4R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1664	
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

ITEM DESCRIPTION	UNIT	TOTAL QTY.
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
ATTENUATOR BASE	SQ YD	102
ELECTRIC SERVICE INSTALLATION	EACH	1
SERVICE INSTALLATION, TYPE B	EACH	2
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	45,711
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	17,088
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	230
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	1,120
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	2
HEAVY-DUTY HANDHOLE	EACH	20
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	9,653
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	5,342
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60.0
DRILL EXISTING HANDHOLE	EACH	5.0
TRAFFIC COUNTER	EACH	5
DATA NETWORK PORT ADAPTER	EACH	8
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	2
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1
CAT 5 ETHERNET CABLE	FOOT	249
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	4
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED (MATERIAL ONLY)	EACH	3
CELLULAR MODEM	EACH	2
SUPPORT EQUIPMENT AND MAINTENANCE	L SUM	1
CAMERA POLE, 55 FT	EACH	3
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	17,729
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	13
CONCRETE FOUNDATION (SPECIAL)	FOOT	11
COMMUNICATIONS VAULT	EACH	6
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
CABINET, MODEL 334	EACH	3
WIRELESS ETHERNET RADIO	EACH	1
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	4
RELOCATE OVERHEAD SIGN STRUCTURE - SPAN, SPECIAL	L SUM	1

FIBER OPTIC CABLE SLACK
DOUBLE HANDHOLE: 30.0 FT.
COMMUNICATIONS VAULT: 30.0 FT
JUNCTION BOX: 10.0 FT.
HANDHOLE: 10.0 FT.
ITS OR SIGNAL CABINET: 10.0 FT.
EQUIPMENT CABINET: 3.0 FT

CONSTRUCTION NOTES	
1. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES AND PRIVATELY OWNED FACILITIES PRIOR TO THE INSTALLATION OF ANY COMPONENTS. THE CONTRACTOR SHALL VERIFY EXISTING FIELD CONDITIONS PRIOR TO COMMENCING WORK ON THE PROJECT.	
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO IDOT FACILITIES RESULTING FROM INACCURATE LOCATING.	
3. ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES.	
4. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE SLACK IN ACCORDANCE WITH ARTICLE 873.03 UNLESS SPECIFIED OTHERWISE.	
5. ELECTRICAL CABLE WILL BE MEASURED FOR PAYMENT IN ACCORDANCE WITH ARTICLE 873.04.	
6. ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATION.	
7. THE LOCATIONS FOR CAMERA POLES, TRAFFIC COUNTER POLES, AND CONCRETE FOUNDATIONS ARE PROVIDED FOR REFERENCE ONLY. THE ENGINEER OF TRAFFIC SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.	
8. THE COMMUNICATION VAULTS AND CONCRETE HANDHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE MEDIAN, SIDEWALK, OR GROUND LINE. COMMUNICATION VAULTS AND HANDHOLES SHALL BE INSTALLED AT 1200 FOOT INTERVALS.	
9. COILABLE POLYETHYLENE DUCT MAY BE SUBSTITUTED FOR UNDERGROUND CONDUIT.	
10. POTHOLES TO LOCATE EXISTING UNDERGROUND UTILITIES SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE UNDERGROUND CONDUIT PAY ITEMS.	
11. REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, AND ISLANDS FOR UTILITY LOCATING PURPOSES WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE CONDUIT PAY ITEMS.	
12. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.	
13. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THIS COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR THE CONDUITS.	
14. THE CONTRACTOR SHALL INSTALL A #12 (XLP-TYPE USE) TRACER WIRE ALONG WITH THE FIBER OPTIC CABLE FOR LOCATING PURPOSES. THE TRACER WIRE SHALL BE CONTINUOUS AND BE ACCESSIBLE FROM THE HANDHOLES. THE COST OF FURNISHING AND INSTALLING THE TRACER WIRE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE FIBER OPTIC CABLE IN CONDUIT PAY ITEM.	
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING FIELD TILE AND UNDERDRAIN LOCATIONS. THE CONTRACTOR SHALL MAKE AN EFFORT TO MINIMIZE DAMAGE TO THESE FACILITIES DURING THE INSTALLATION OF CONDUIT AND COMMUNICATION VAULTS. IN THE EVENT THAT THESE FACILITIES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING REPAIRS TO THESE ITEMS TO RESTORE FUNCTIONALITY TO THE SATISFACTION OF THE ENGINEER.	
16. THE CONTRACTOR SHALL STUB OUT TWO 1-1/2" DIA. PVC CONDUITS OUT OF ALL COMMUNICATION VAULTS AND HEAVY DUTY HANDHOLES THAT ARE INSTALLED UNDER CONCRETE OR BITUMINOUS SHOULDERS OR PAVEMENT TO PROVIDE FUTURE ACCESS TO THESE FACILITIES. THE CONDUITS SHALL BE EXTENDED TWO FEET BEYOND THE LIMITS OF THE SHOULDER OR PAVEMENT AND CAPPED. THE COST OF INSTALLING THESE CONDUITS SHALL BE INCLUDED IN THE UNIT BID PRICES FOR "COMMUNICATIONS VAULT" AND "HEAVY-DUTY HANDHOLE".	

LEGEND	
	PROP. SERVICE INSTALLATION
	PROP. TYPE 334 OR TYPE B CABINET
	PROP. CCTV DOME CAMERA
	PROP. CAMERA POLE
	PROP. COMMUNICATIONS VAULT
	PROP. TRAFFIC COUNTER

FILE NAME =
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PLOT DATE = 7/26/2012	DATE -	REVISED -

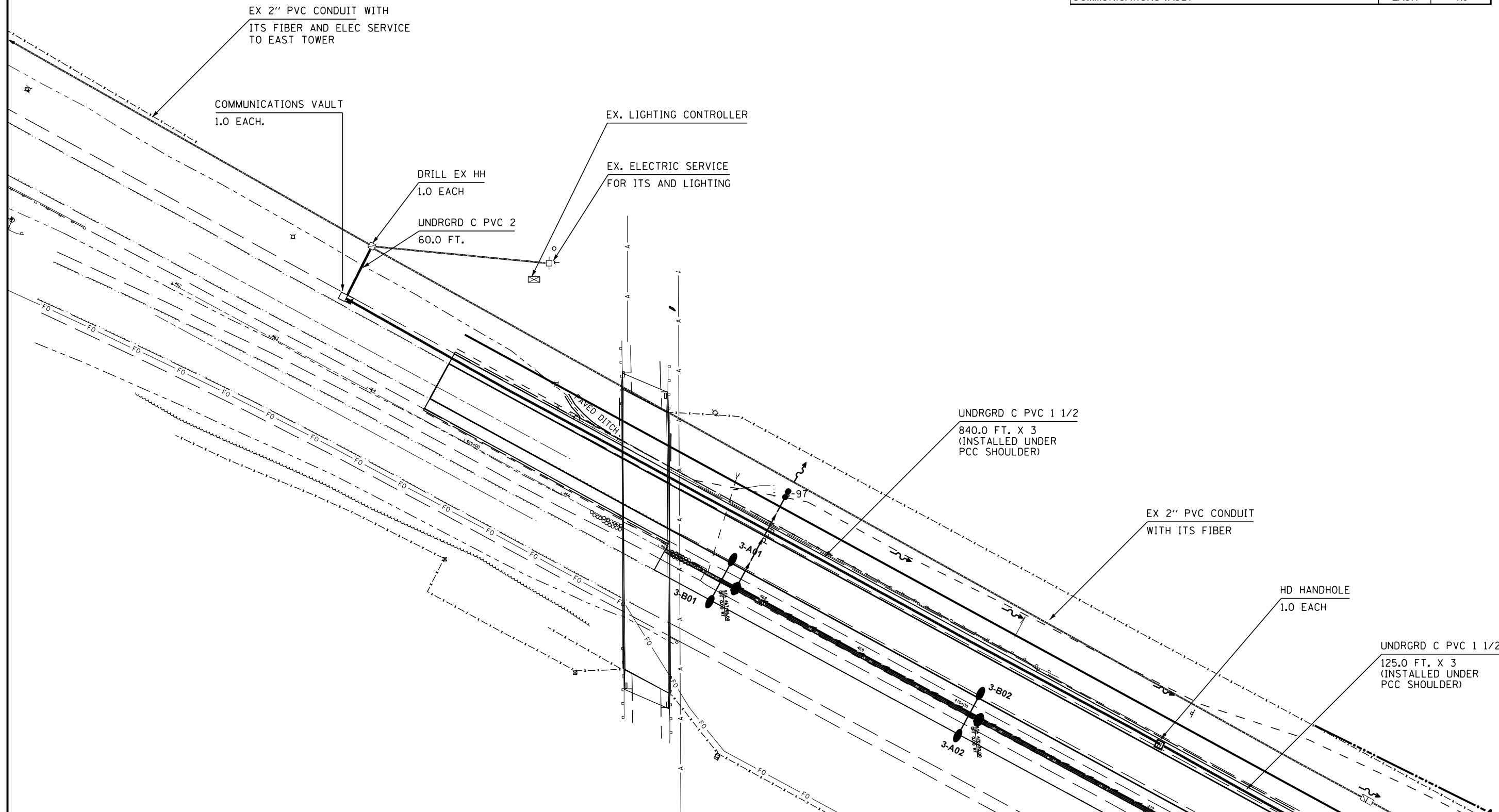
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ITS FIBER SCHEDULE OF QUANTITIES AND CONSTRUCTION NOTES			
SCALE: NONE	SHEET NO. 1 OF 50 SHEETS	STA.	TO STA.

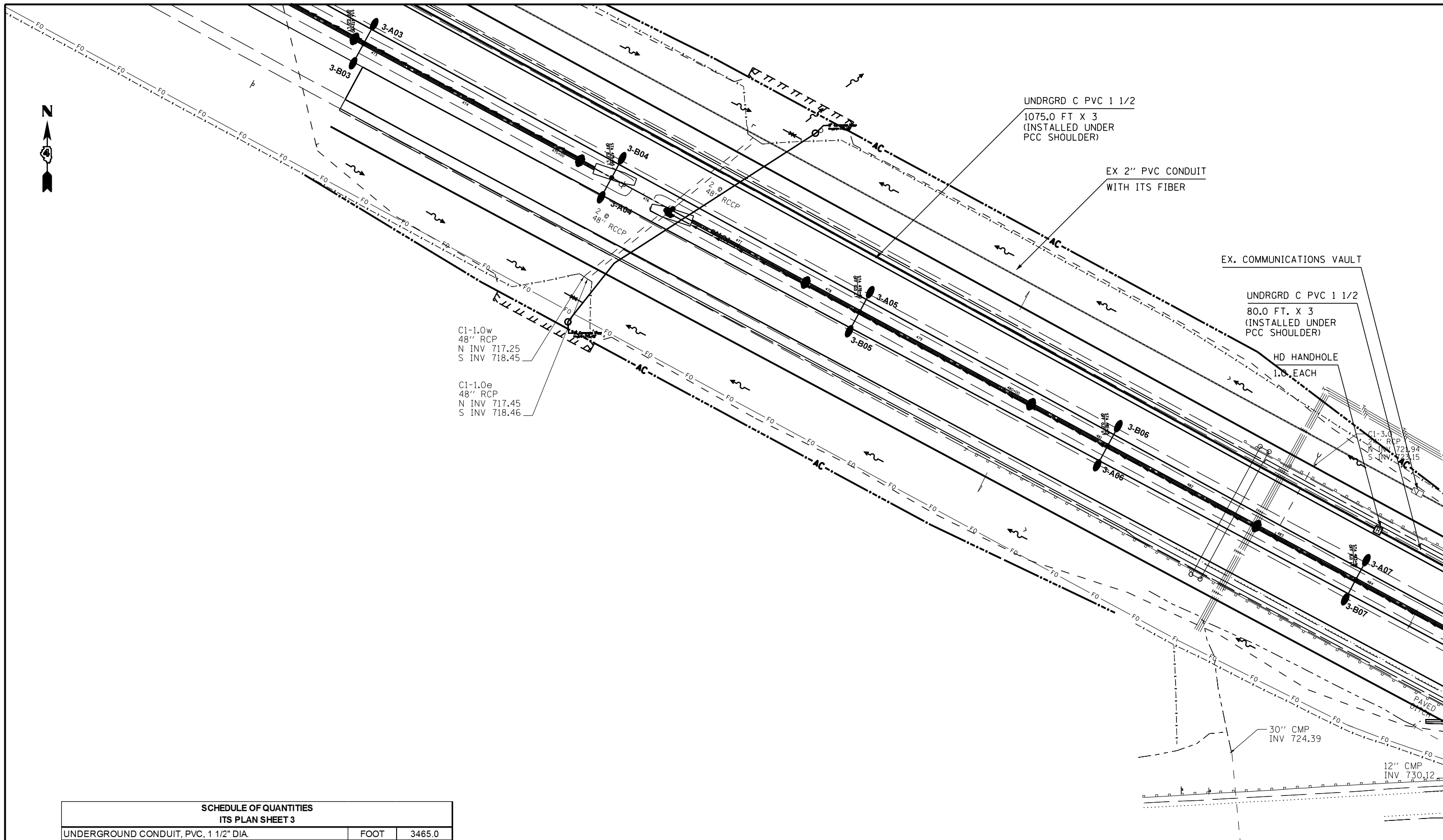
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1665
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES ITS PLAN SHEET 2		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	2895.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	60.0
DRILL EXISTING HANDHOLE	EACH	1.0
HEAVY-DUTY HANDHOLE	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0



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	PLOT SCALE =	DRAWN -	REVISED -		74	90-[14Rz(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1666			
	PLOT DATE = 7/17/2012	CHECKED -	REVISED -		SCALE: NONE SHEET NO. 2 OF 50 SHEETS STA. TO STA.			CONTRACT NO. 68620				
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



C1-1.0w
48" RCP
N INV 717.25
S INV 718.45

C1-1.0e
48" RCP
N INV 717.45
S INV 718.46

SCHEDULE OF QUANTITIES ITS PLAN SHEET 3		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	3465.0
HEAVY-DUTY HANDHOLE	EACH	1.0

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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

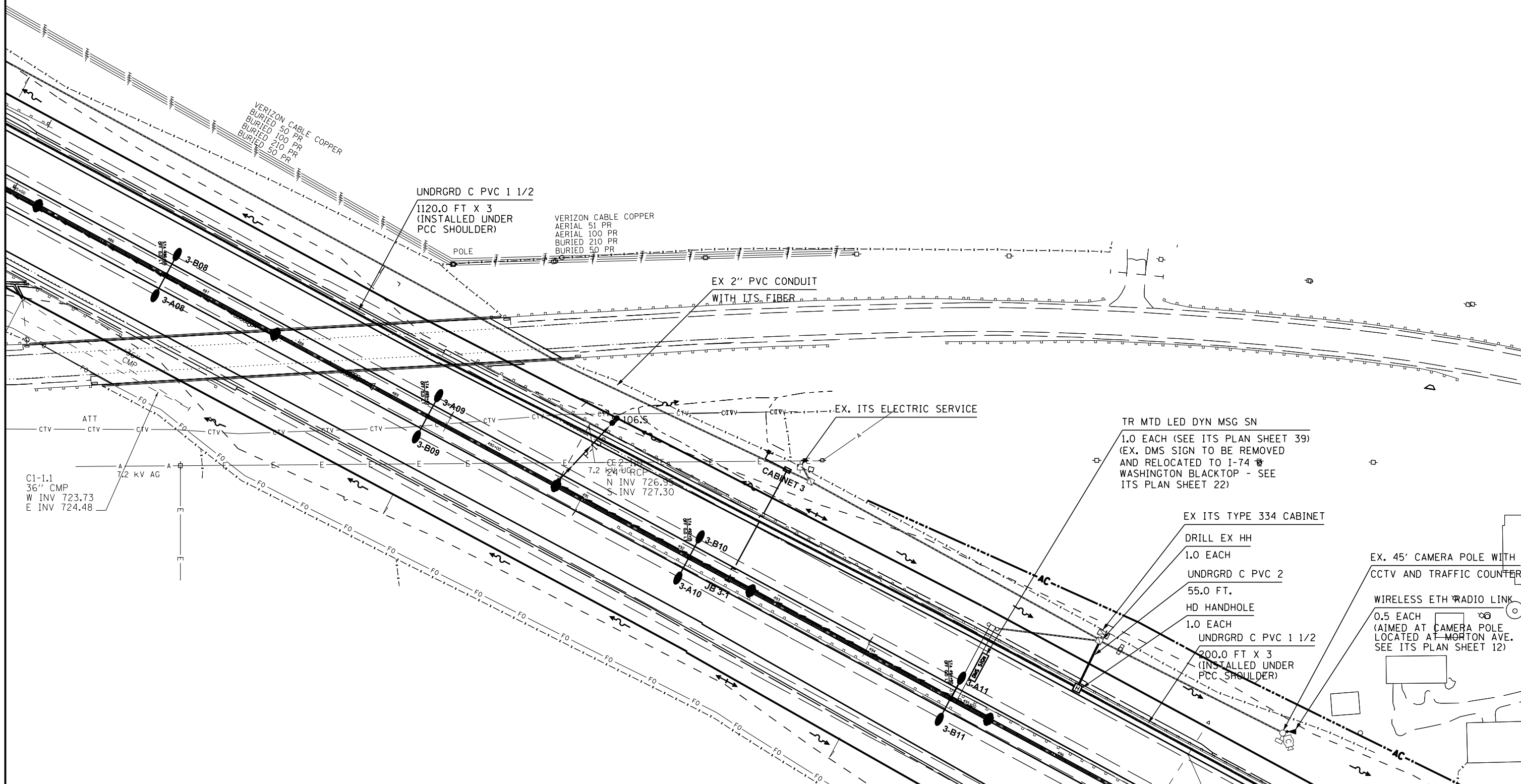
**ITS FIBER PLANS
I-74 TO I-155 INTERCHANGE (CONTINUED)**

SCALE: NONE SHEET NO. 3 OF 50 SHEETS STA. TO STA.

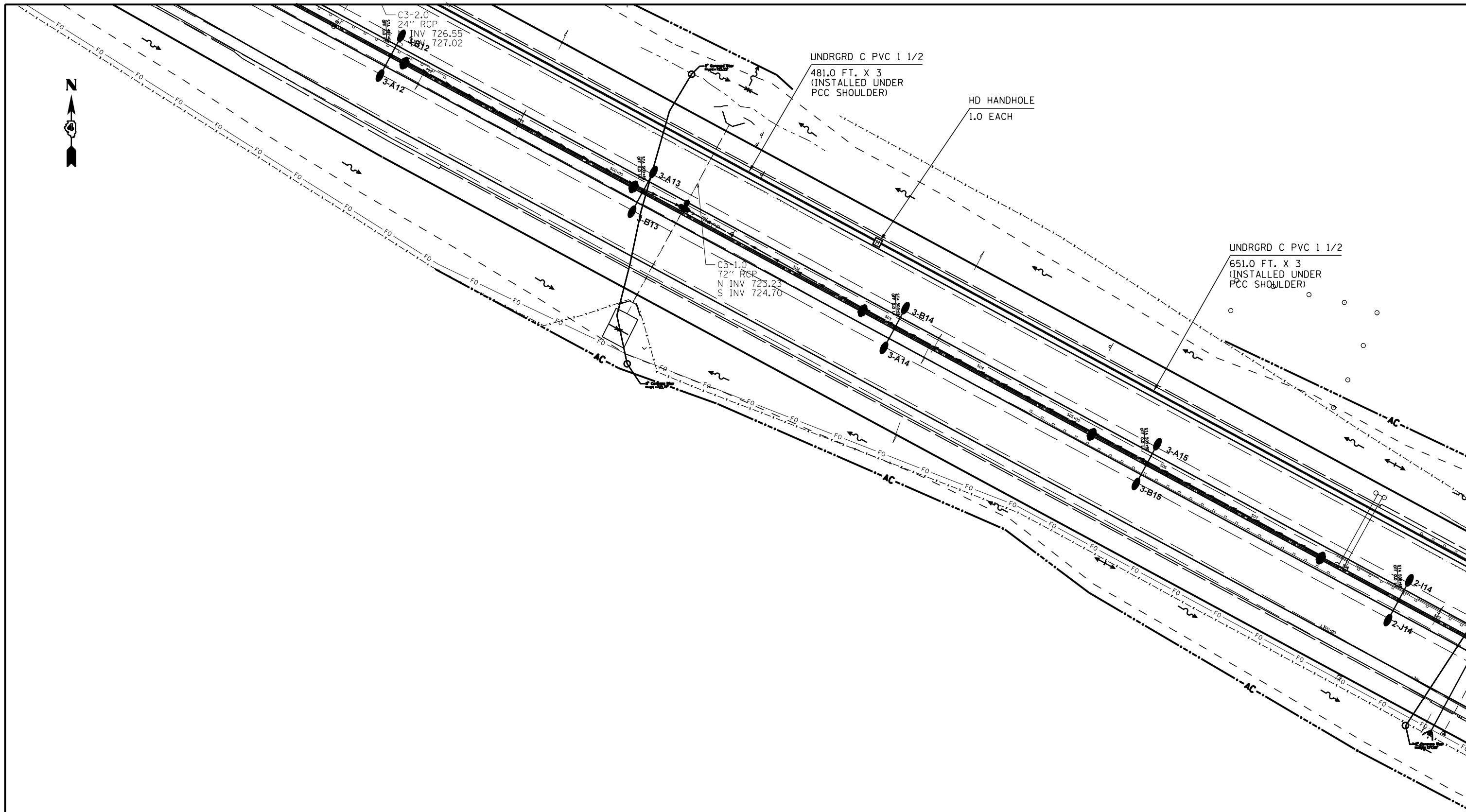
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1667
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES ITS PLAN SHEET 4		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	3960.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	55.0
HEAVY-DUTY HANDHOLE	EACH	1.0
DRILL EXISTING HANDHOLE	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
WIRELESS ETHERNET RADIO LINK	EACH	0.5
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	283.0



FILE NAME = ...ITS (DDT)\D468620-ITS-04.dgn	USER NAME = tblank	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ITS FIBER PLANS I-74 TO I-155 INTERCHANGE (CONTINUED)			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN -	REVISED -		74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1668			
	PLOT DATE = 7/17/2012	CHECKED -	REVISED -		SCALE: NONE SHEET NO. 4 OF 50 SHEETS STA. TO STA.			CONTRACT NO. 68620				
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							



**SCHEDULE OF QUANTITIES
ITS PLAN SHEET 5**

UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	3396.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1142.0

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

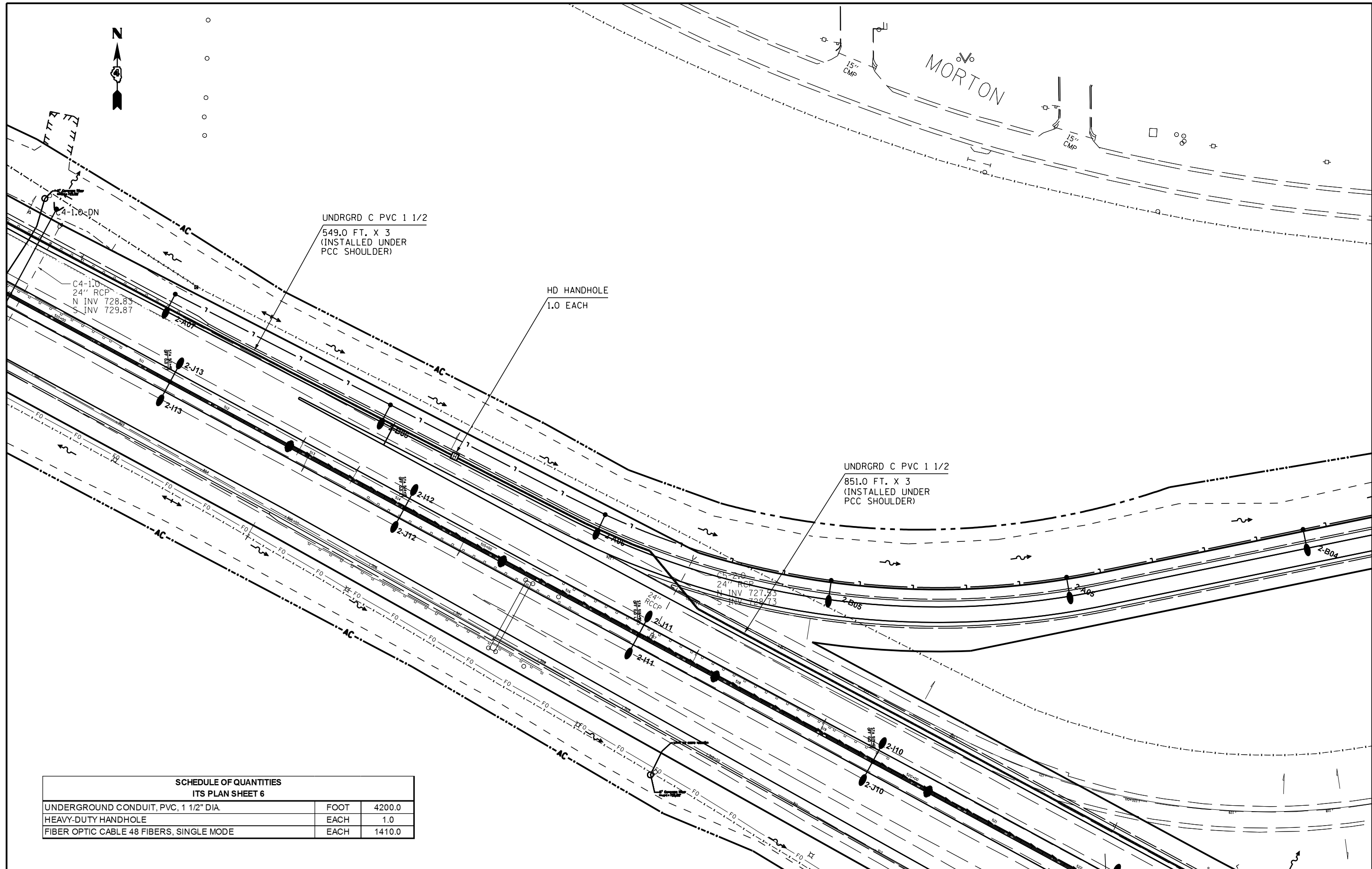
**ITS FIBER PLANS
I-74 TO I-155 INTERCHANGE (CONTINUED)**

SCALE: NONE SHEET NO. 5 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R]14HB-4,14,14HB[BR]	TAZEWELL	2433	1669
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



MORTON



SCHEDULE OF QUANTITIES
ITS PLAN SHEET 6

UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4200.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1410.0

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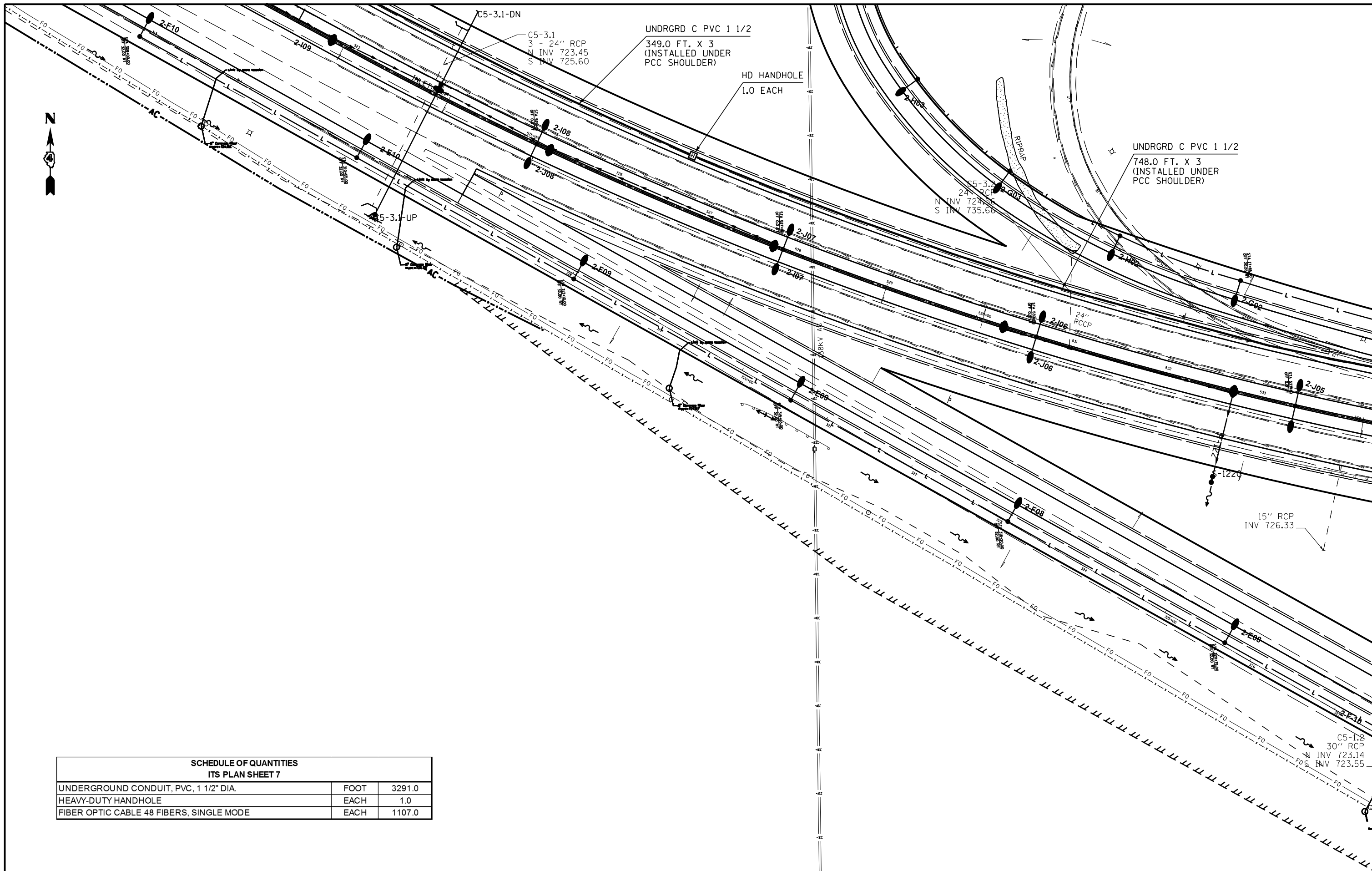
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ITS FIBER PLANS
I-74 TO I-155 INTERCHANGE (CONTINUED)

SCALE: NONE SHEET NO. 6 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1670
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



**SCHEDULE OF QUANTITIES
ITS PLAN SHEET 7**

UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	3291.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1107.0

FILE NAME =
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USER NAME = tblank
PLOT SCALE =
PLOT DATE = 7/17/2012

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ITS FIBER PLANS
I-74 TO I-155 INTERCHANGE (CONTINUED)**
SCALE: NONE SHEET NO. 7 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1671
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

THE CAMERA POLE AND CONCRETE FOUNDATION SHALL BE INSTALLED BEHIND PROPOSED GUARD RAIL.

POLE MT EQUIP CAB TB
1.0 EACH
CAMERA POLE, 55 FT.
1.0 EACH
CONC FDN TY E 36D
20.0 FT.
UNDRGRD C PVC 2
77.0 FT.
HD HANDHOLE
1.0 EACH

UNDRGRD C PVC 1 1/2
452.0 FT. X 3
(INSTALLED UNDER
PCC SHOULDER)

TRAFFIC COUNTER
1.0 EACH

CCTV DOME CAMERA IP BASED
1.0 EACH

UNDRGRD C PVC 2
4.0 FT.
CONC FDN SPL
3.5 FT.
CABINET, MODEL 334
1.0 EACH

UNDRGRD C PVC 2
60.0 FT.
CONC FDN TY E 30D

5.0 FT.
TC POST GALVS
1.0 EACH

TRAFFIC COUNTER
1.0 EACH

UNDRGRD C PVC 1 1/2
108.0 FT. (PUSHED) X 3

UNDRGRD C PVC 2
80.0 FT. 24" RCP
E INV 724.13
W INV 723.98

310.0 FT. X 4
(INSTALLED UNDER
PCC SHOULDER)
HD HANDHOLE
1.0 EACH

UNDRGRD C PVC 1 1/2
1137.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
1137.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
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UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

UNDRGRD C PVC 1 1/2
506.0 FT. X 3

SCHEDULE OF QUANTITIES
ITS PLAN SHEET 8

UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	7083.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	1461.0
HEAVY-DUTY HANDHOLE	EACH	3.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1539.0
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	5.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	3097.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	504.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	3.0
TRAFFIC COUNTER	EACH	2.0
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	1.0
CONCRETE FOUNDATION (SPECIAL)	FOOT	3.5
CABINET, MODEL 334	EACH	1.0
DATA NETWORK PORT ADAPTER	EACH	2.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT	EACH	1.0

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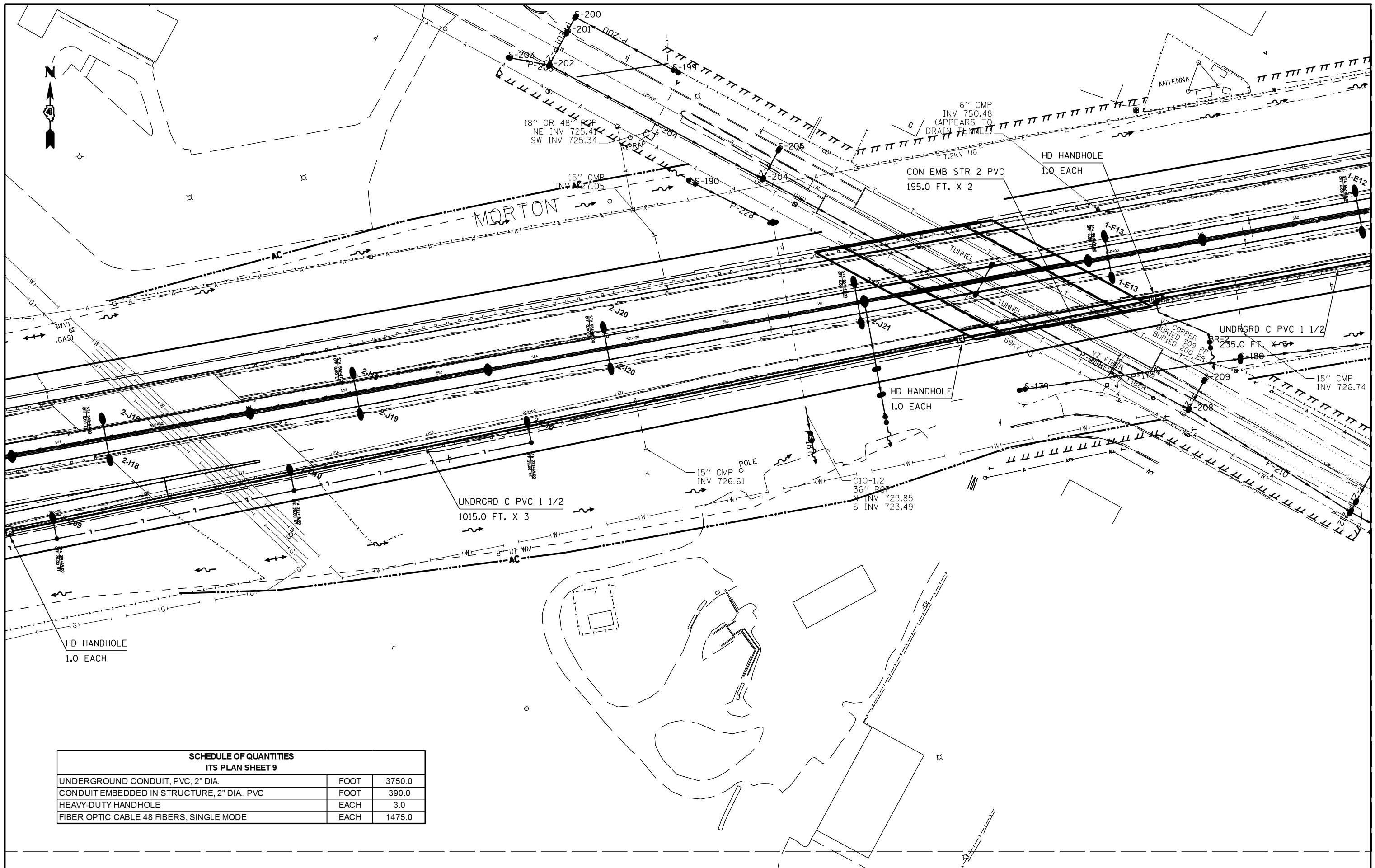
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ITS FIBER PLANS
I-74 TO I-155 INTERCHANGE (CONTINUED)

SCALE: NONE SHEET NO. 8 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R]14HB-4,14,14HVB[BR]	TAZEWELL	2433	1672
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



**SCHEDULE OF QUANTITIES
ITS PLAN SHEET 9**

UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	3750.0
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	390.0
HEAVY-DUTY HANDHOLE	EACH	3.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1475.0

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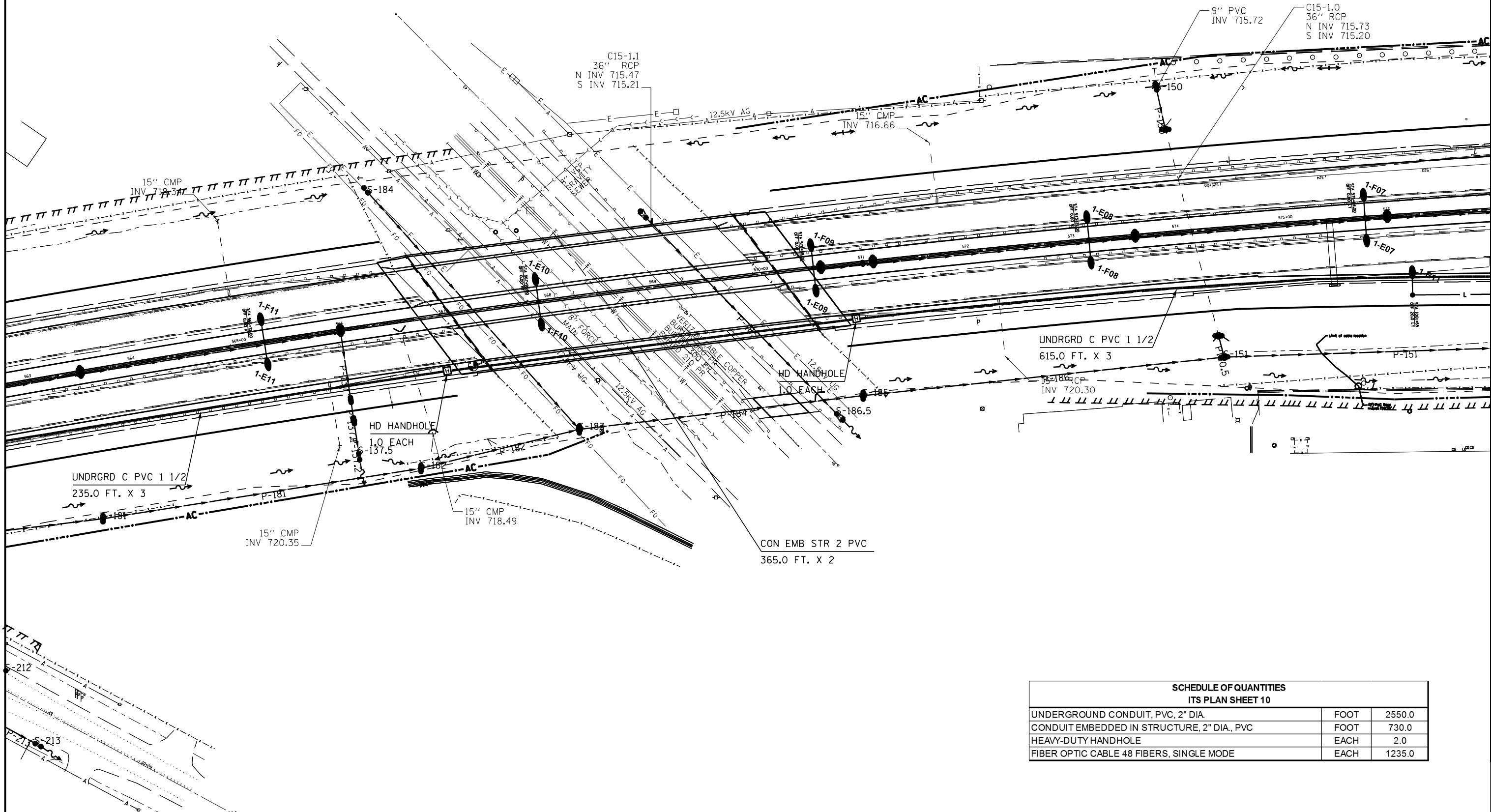
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

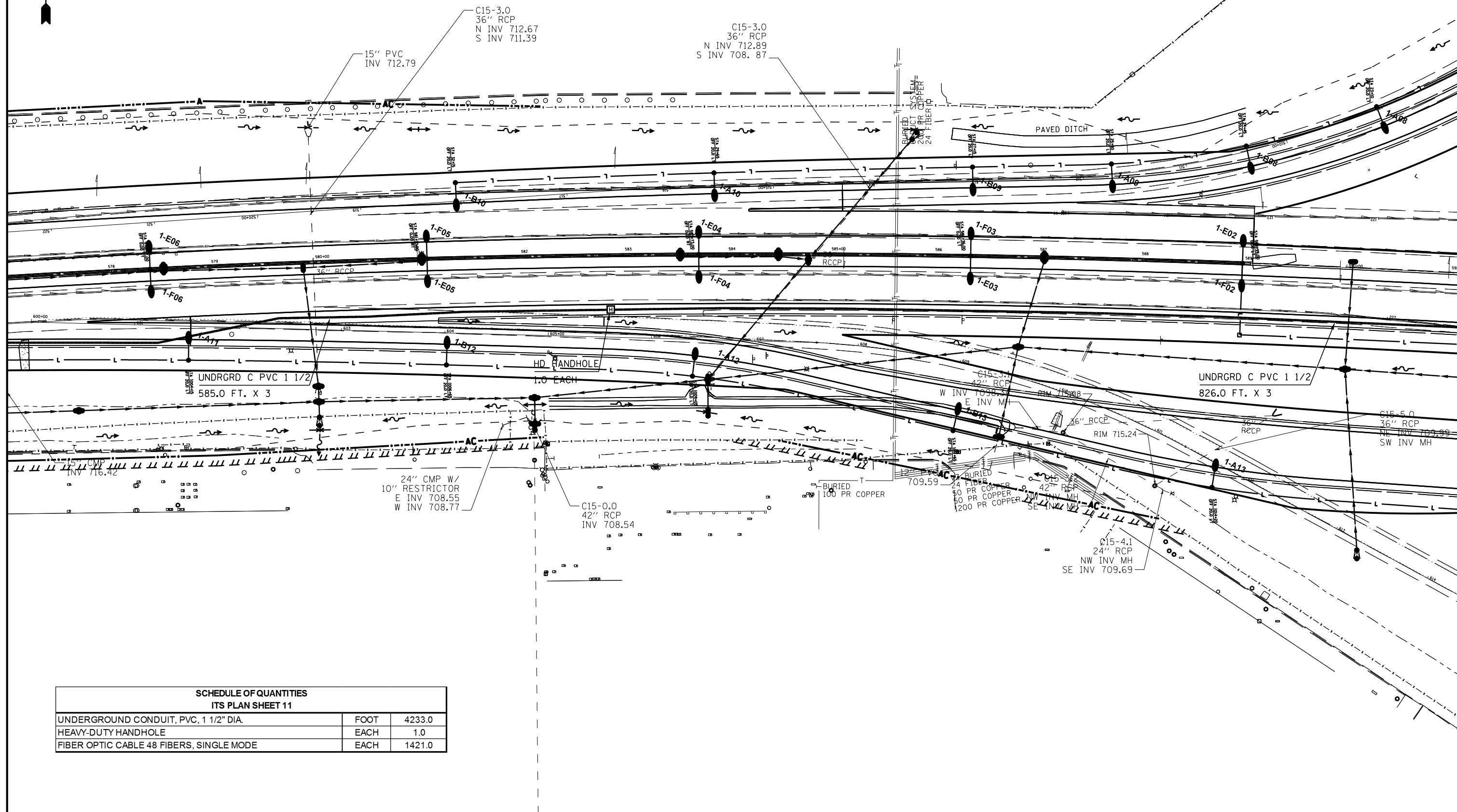
**ITS FIBER PLANS
I-74 TO MORTON AVE. INTERCHANGE**

SCALE: NONE SHEET NO. 9 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HB)/BR]	TAZEWELL	2433	1673
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES ITS PLAN SHEET 10		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	2550.0
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA, PVC	FOOT	730.0
HEAVY-DUTY HANDHOLE	EACH	2.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1235.0



**SCHEDULE OF QUANTITIES
ITS PLAN SHEET 11**

UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4233.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1421.0

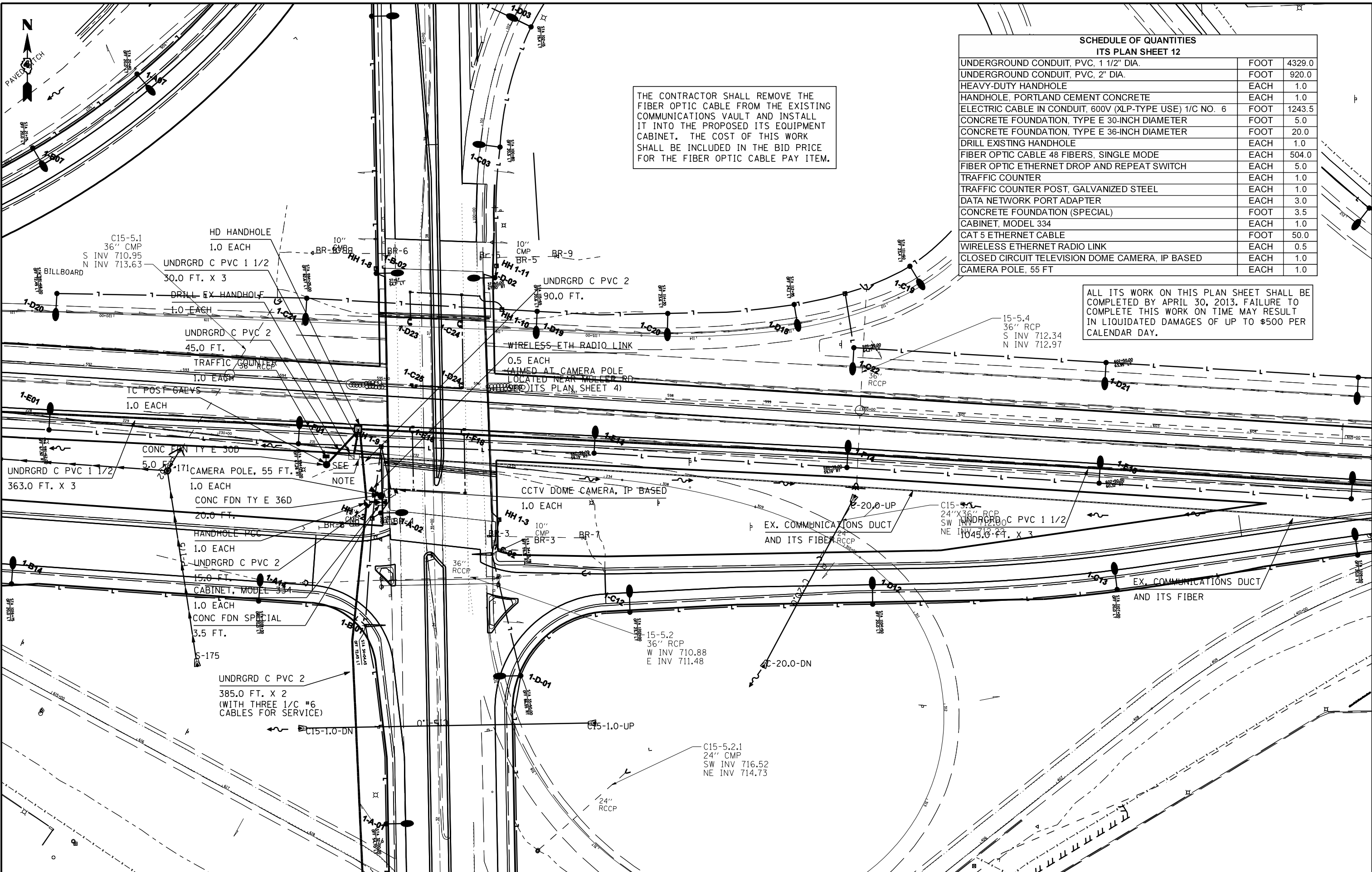
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ITS FIBER PLANS
I-74 TO MORTON AVE. INTERCHANGE (CONTINUED)**

SCALE: NONE SHEET NO. 11 OF 50 SHEETS STA. TO STA.

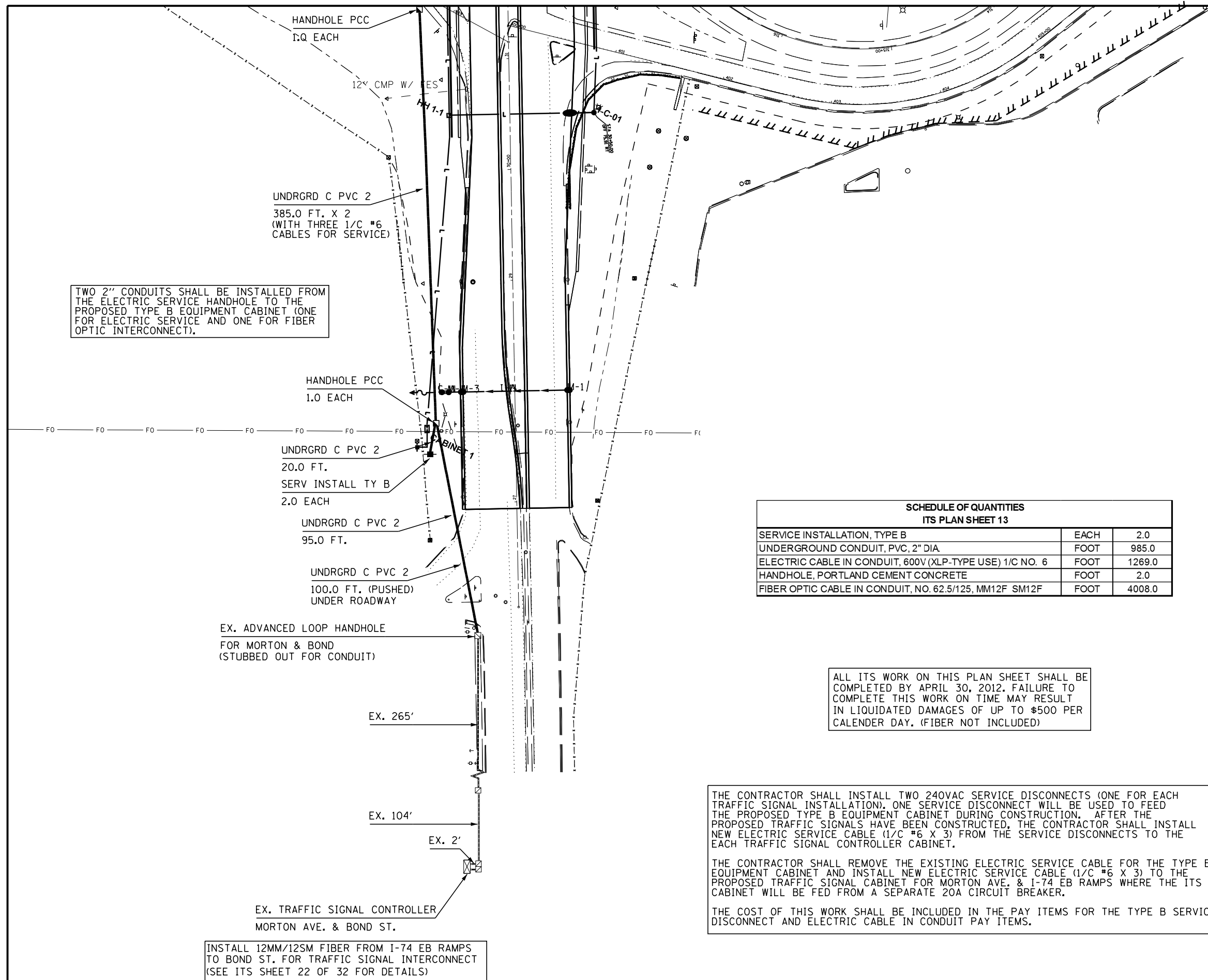
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[I4R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1675
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



THE CONTRACTOR SHALL REMOVE THE FIBER OPTIC CABLE FROM THE EXISTING COMMUNICATIONS VAULT AND INSTALL IT INTO THE PROPOSED ITS EQUIPMENT CABINET. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE FIBER OPTIC CABLE PAY ITEM.

SCHEDULE OF QUANTITIES ITS PLAN SHEET 12		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	4329.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	920.0
HEAVY-DUTY HANDHOLE	EACH	1.0
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1243.5
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	5.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
DRILL EXISTING HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	504.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	5.0
TRAFFIC COUNTER	EACH	1.0
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	1.0
DATA NETWORK PORT ADAPTER	EACH	3.0
CONCRETE FOUNDATION (SPECIAL)	FOOT	3.5
CABINET, MODEL 334	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
WIRELESS ETHERNET RADIO LINK	EACH	0.5
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT	EACH	1.0

ALL ITS WORK ON THIS PLAN SHEET SHALL BE COMPLETED BY APRIL 30, 2013. FAILURE TO COMPLETE THIS WORK ON TIME MAY RESULT IN LIQUIDATED DAMAGES OF UP TO \$500 PER CALENDAR DAY.



TWO 2" CONDUITS SHALL BE INSTALLED FROM THE ELECTRIC SERVICE HANDHOLE TO THE PROPOSED TYPE B EQUIPMENT CABINET (ONE FOR ELECTRIC SERVICE AND ONE FOR FIBER OPTIC INTERCONNECT).

SCHEDULE OF QUANTITIES ITS PLAN SHEET 13		
SERVICE INSTALLATION, TYPE B	EACH	2.0
UNDERGROUND CONDUIT, PVC, 2" DIA	FOOT	985.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1269.0
HANDHOLE, PORTLAND CEMENT CONCRETE	FOOT	2.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	4008.0

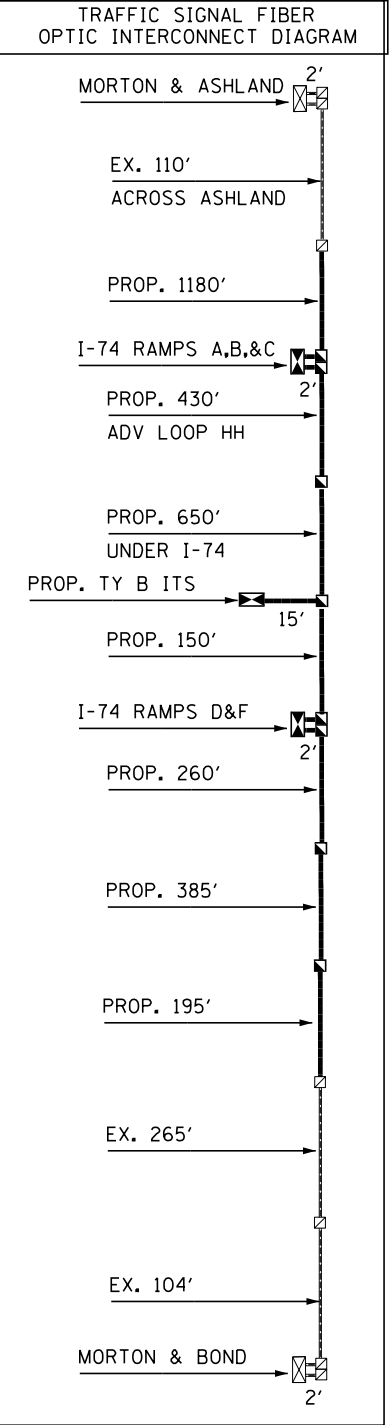
ALL ITS WORK ON THIS PLAN SHEET SHALL BE COMPLETED BY APRIL 30, 2012. FAILURE TO COMPLETE THIS WORK ON TIME MAY RESULT IN LIQUIDATED DAMAGES OF UP TO \$500 PER CALENDER DAY. (FIBER NOT INCLUDED)

THE CONTRACTOR SHALL INSTALL TWO 240VAC SERVICE DISCONNECTS (ONE FOR EACH TRAFFIC SIGNAL INSTALLATION). ONE SERVICE DISCONNECT WILL BE USED TO FEED THE PROPOSED TYPE B EQUIPMENT CABINET DURING CONSTRUCTION. AFTER THE PROPOSED TRAFFIC SIGNALS HAVE BEEN CONSTRUCTED, THE CONTRACTOR SHALL INSTALL NEW ELECTRIC SERVICE CABLE (1/C #6 X 3) FROM THE SERVICE DISCONNECTS TO THE EACH TRAFFIC SIGNAL CONTROLLER CABINET.

THE CONTRACTOR SHALL REMOVE THE EXISTING ELECTRIC SERVICE CABLE FOR THE TYPE B EQUIPMENT CABINET AND INSTALL NEW ELECTRIC SERVICE CABLE (1/C #6 X 3) TO THE PROPOSED TRAFFIC SIGNAL CABINET FOR MORTON AVE. & I-74 EB RAMP WHERE THE ITS CABINET WILL BE FED FROM A SEPARATE 20A CIRCUIT BREAKER.

THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEMS FOR THE TYPE B SERVICE DISCONNECT AND ELECTRIC CABLE IN CONDUIT PAY ITEMS.

INSTALL 12MM/12SM FIBER FROM I-74 EB RAMP TO BOND ST. FOR TRAFFIC SIGNAL INTERCONNECT (SEE ITS SHEET 22 OF 32 FOR DETAILS)

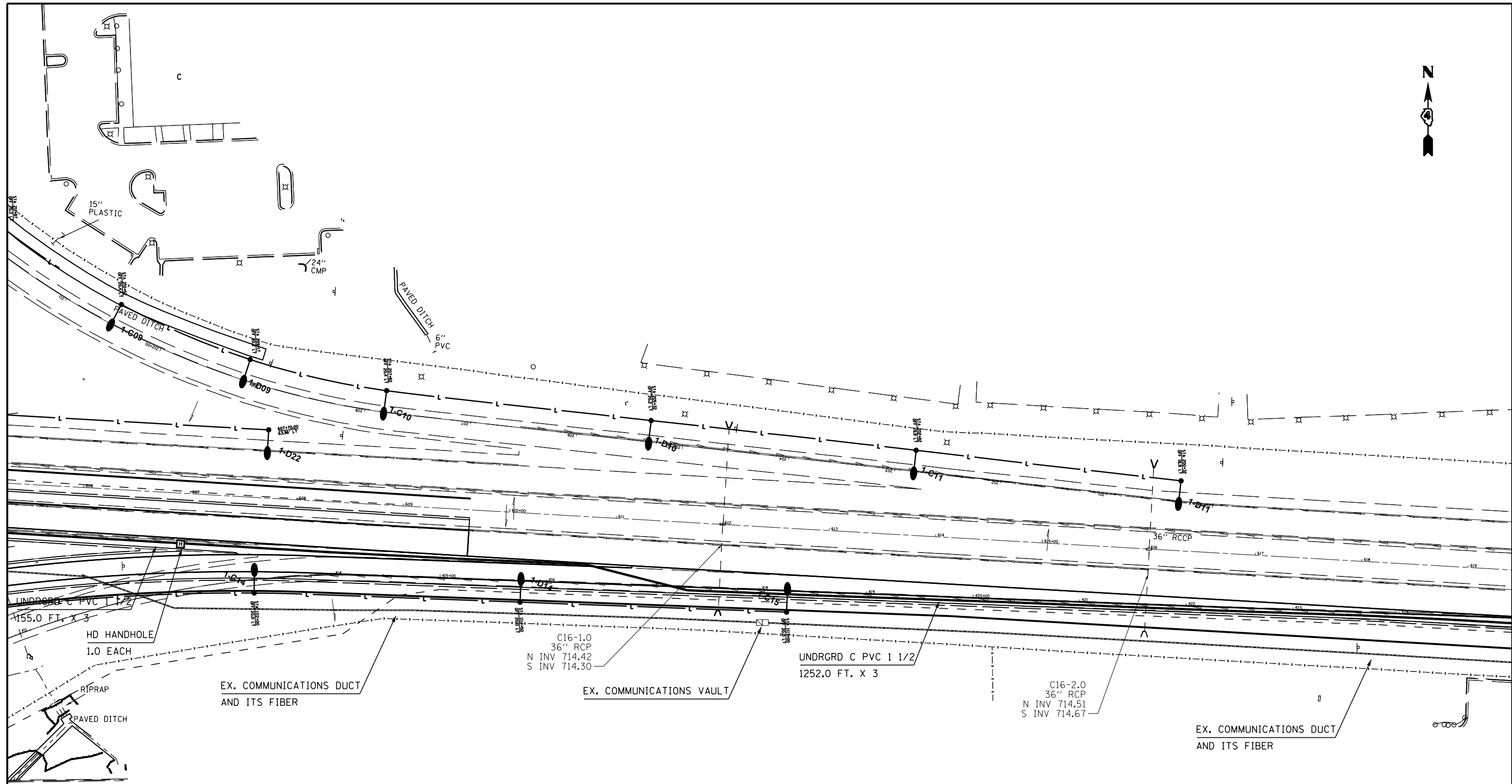


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ITS FIBER PLANS
I-74 TO MORTON AVE. INTERCHANGE (CONTINUED)
SCALE: NONE SHEET NO. 13 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1677
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				

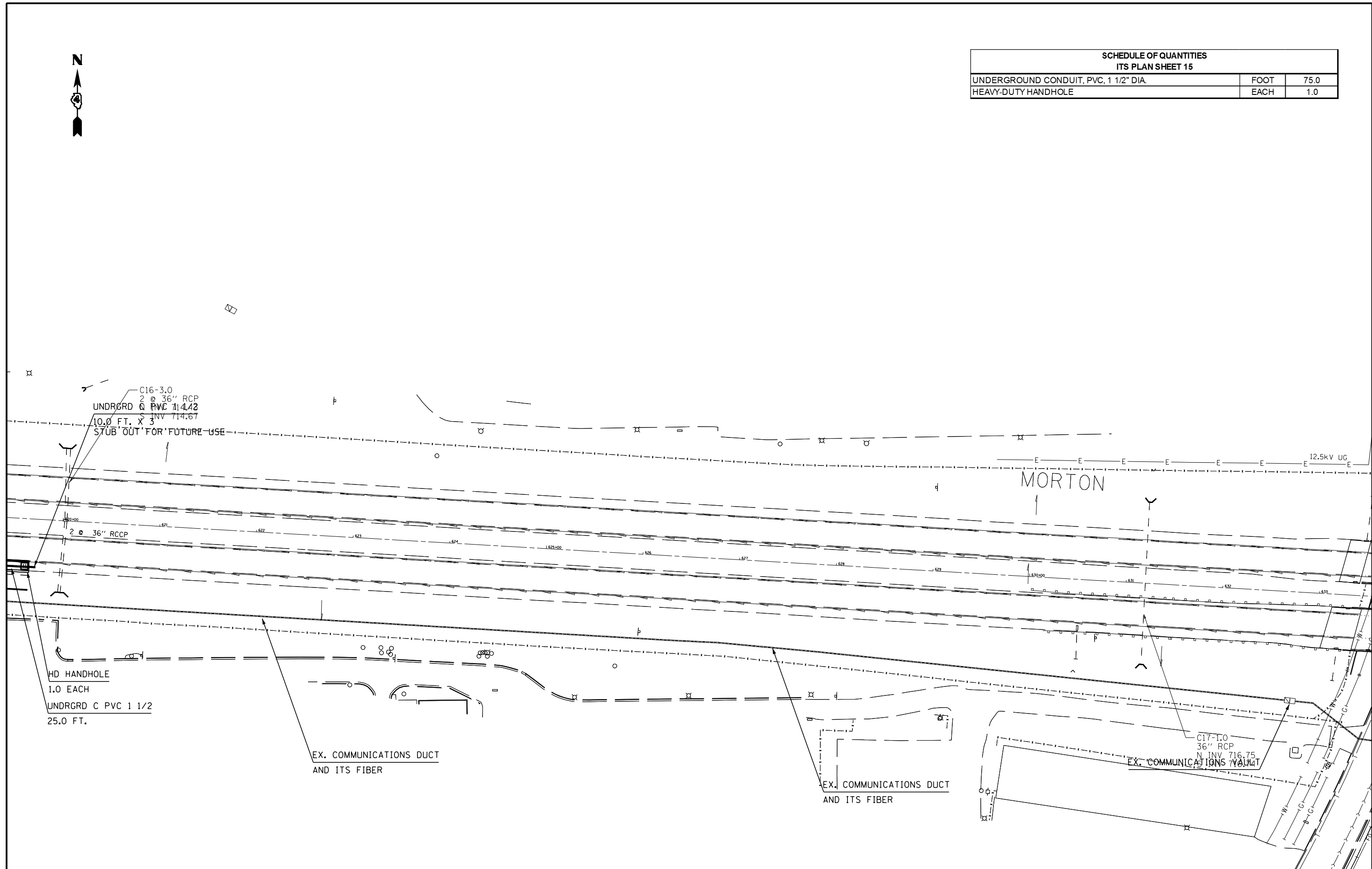


SCHEDULE OF QUANTITIES		
ITS PLAN SHEET 14		
UNDERGROUND CONDUIT, PVC, 2" DIA	FOOT	4221.0
HEAVY-DUTY HANDHOLE	EACH	1.0

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	PLOT SCALE =	DRAWN -	REVISED -			74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1678	
	PLOT DATE = 7/17/2012	CHECKED -	REVISED -			CONTRACT NO. 68620					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: NONE	SHEET NO. 14 OF 50 SHEETS	STA.	TO STA.			



SCHEDULE OF QUANTITIES ITS PLAN SHEET 15		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	75.0
HEAVY-DUTY HANDHOLE	EACH	1.0



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	PLOT SCALE =	DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 15 OF 50 SHEETS	STA.	TO STA.	74	90-[14R(14HB-4,14,14HB)BR]	TAZEWELL	2433	1679
	PLOT DATE = 7/17/2012	CHECKED -	REVISED -					CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -										

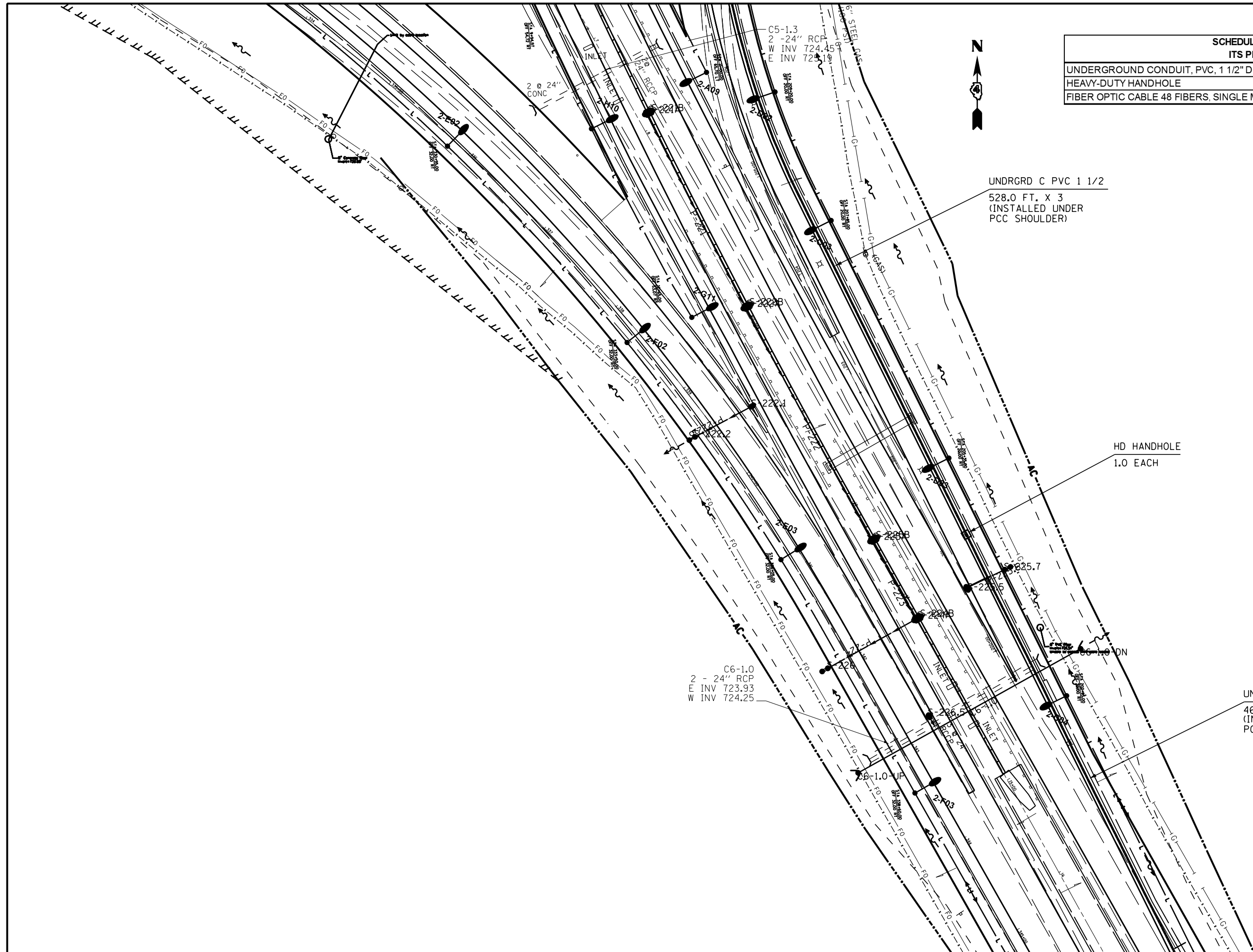
SCHEDULE OF QUANTITIES ITS PLAN SHEET 16		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	2970.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1000.0



UNDRGRD C PVC 1 1/2
528.0 FT. X 3
(INSTALLED UNDER
PCC SHOULDER)

HD HANDHOLE
1.0 EACH

UNDRGRD C PVC 1 1/2
462.0 FT. X 3
(INSTALLED UNDER
PCC SHOULDER)



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

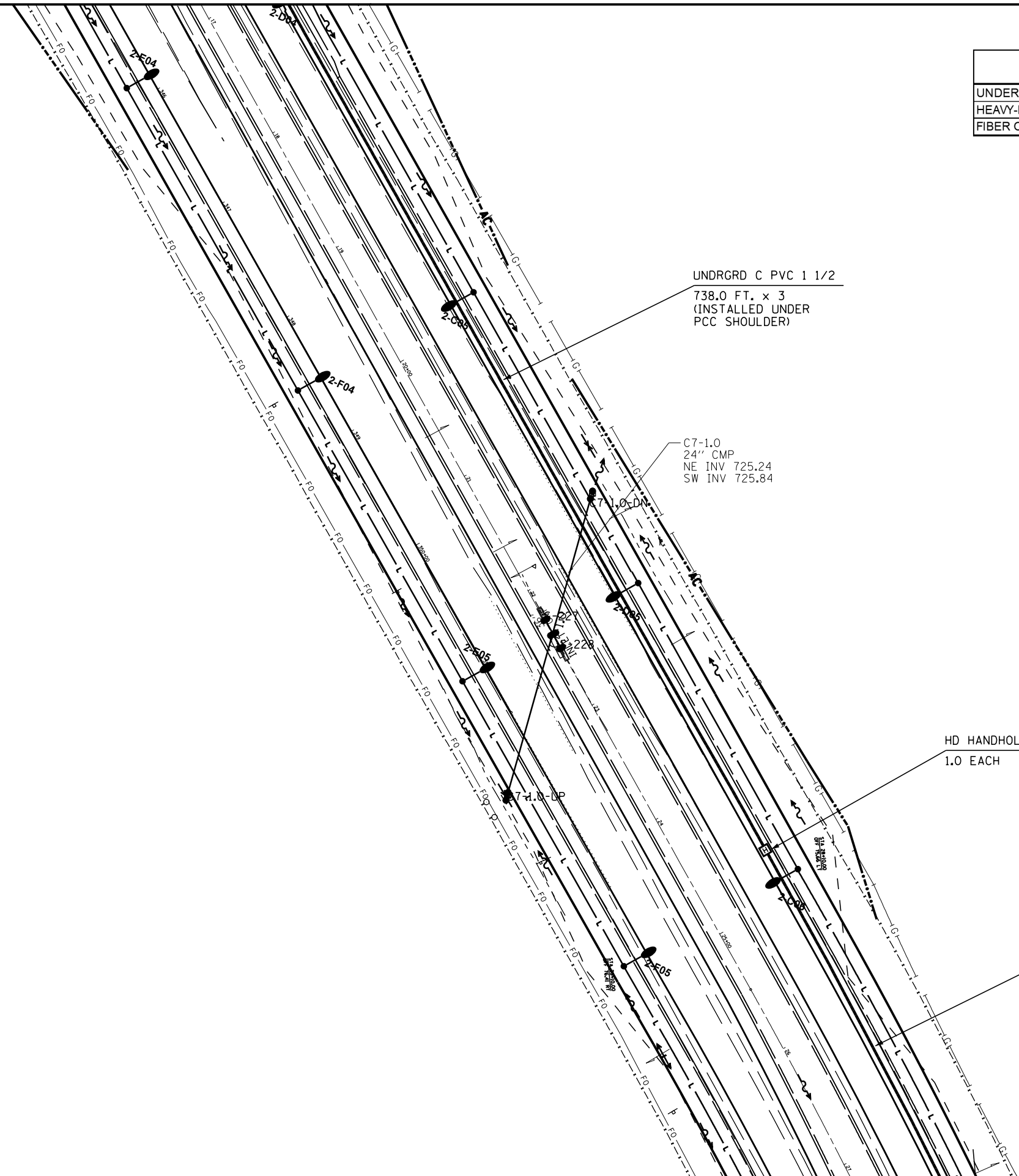
**ITS FIBER PLANS
I-74 & I-155 INTERCHANGE TO IL 98 (BIRCHWOOD)**

SCALE: NONE SHEET NO. 16 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HB)/BR]	TAZEWELL	2433	1680
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES ITS PLAN SHEET 17		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	3075.0
HEAVY-DUTY HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1035.0



UNDRGRD C PVC 1 1/2
738.0 FT. x 3
(INSTALLED UNDER
PCC SHOULDER)

C7-1.0
24" CMP
NE INV 725.24
SW INV 725.84

HD HANDHOLE
1.0 EACH

UNDRGRD C PVC 1 1/2"
287.0 FT. x 3
(INSTALLED UNDER
PCC SHOULDER)

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

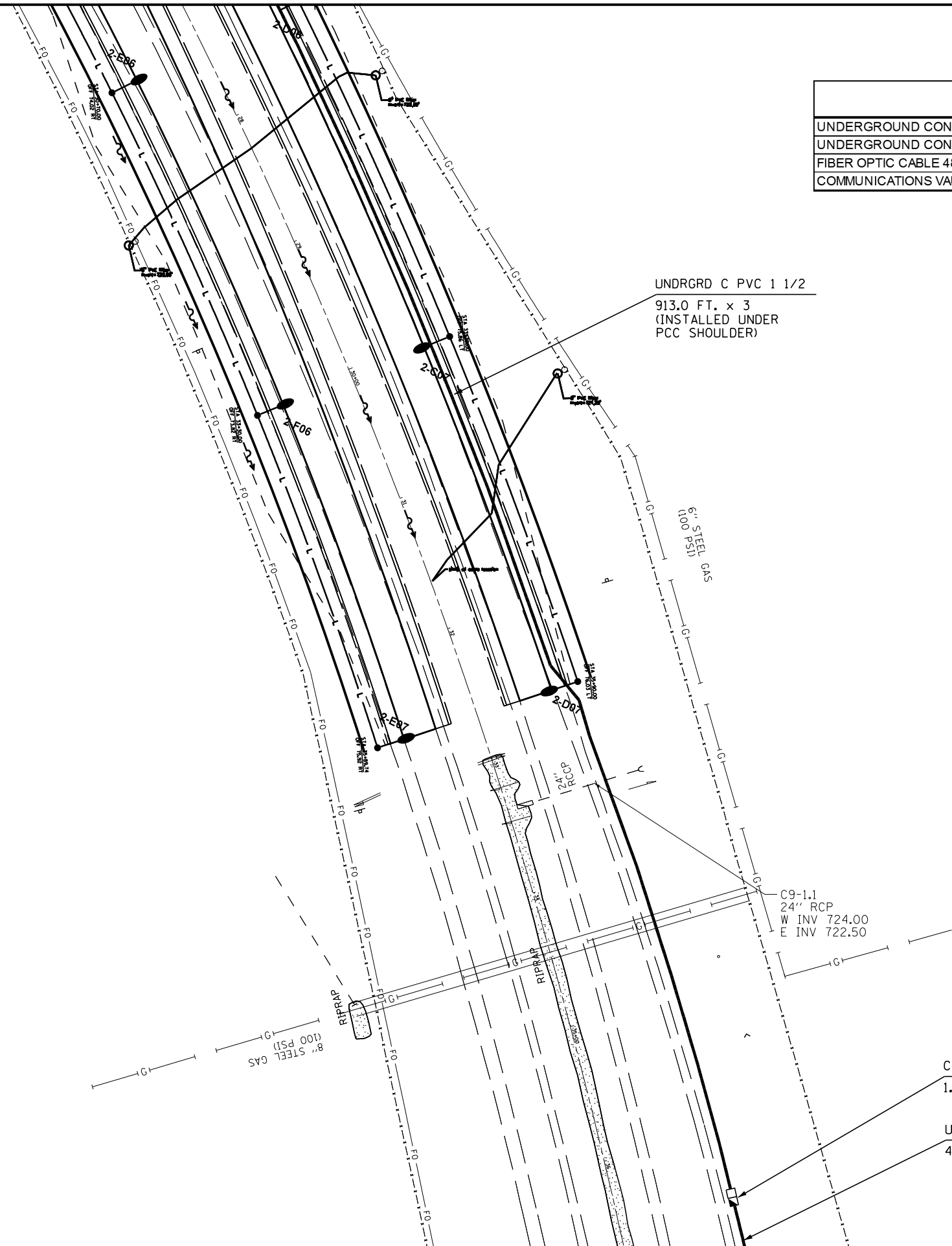
**ITS FIBER PLANS
I-74 & I-155 INTERCHANGE TO IL 98 (BIRCHWOOD) (CONTINUED)**

SCALE: NONE SHEET NO. 17 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1681
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	



SCHEDULE OF QUANTITIES ITS PLAN SHEET 18		
UNDERGROUND CONDUIT, PVC, 1 1/2" DIA.	FOOT	2739.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	48.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	991.0
COMMUNICATIONS VAULT	EACH	1.0



UNDRGRD C PVC 1 1/2
913.0 FT. x 3
(INSTALLED UNDER
PCC SHOULDER)

6" STEEL GAS
(100 PSI)

C9-1.1
24" RCP
W INV 724.00
E INV 722.50

8" STEEL GAS
(100 PSI)

COMMUNICATIONS VAULT
1.0 EACH

UNDRGRD C PVC 2
48.0 FT.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

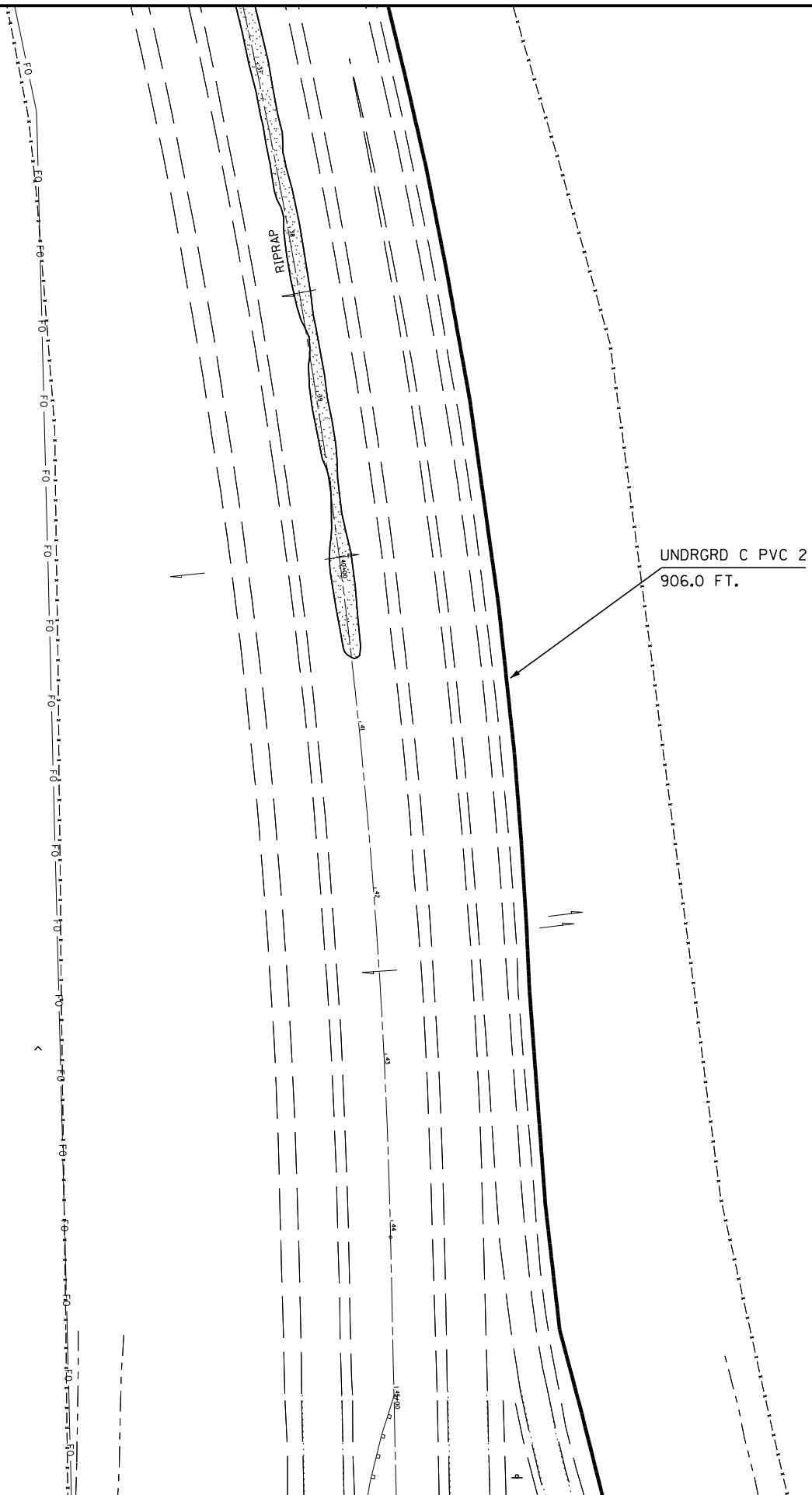
**ITS FIBER PLANS
I-74 & I-155 INTERCHANGE TO IL 98 (BIRCHWOOD) (CONTINUED)**

SCALE: NONE SHEET NO. 18 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1682
CONTRACT NO. 68620				
ILLINOIS FED. AID PROJECT				



SCHEDULE OF QUANTITIES ITS PLAN SHEET 19		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	906.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	906.0



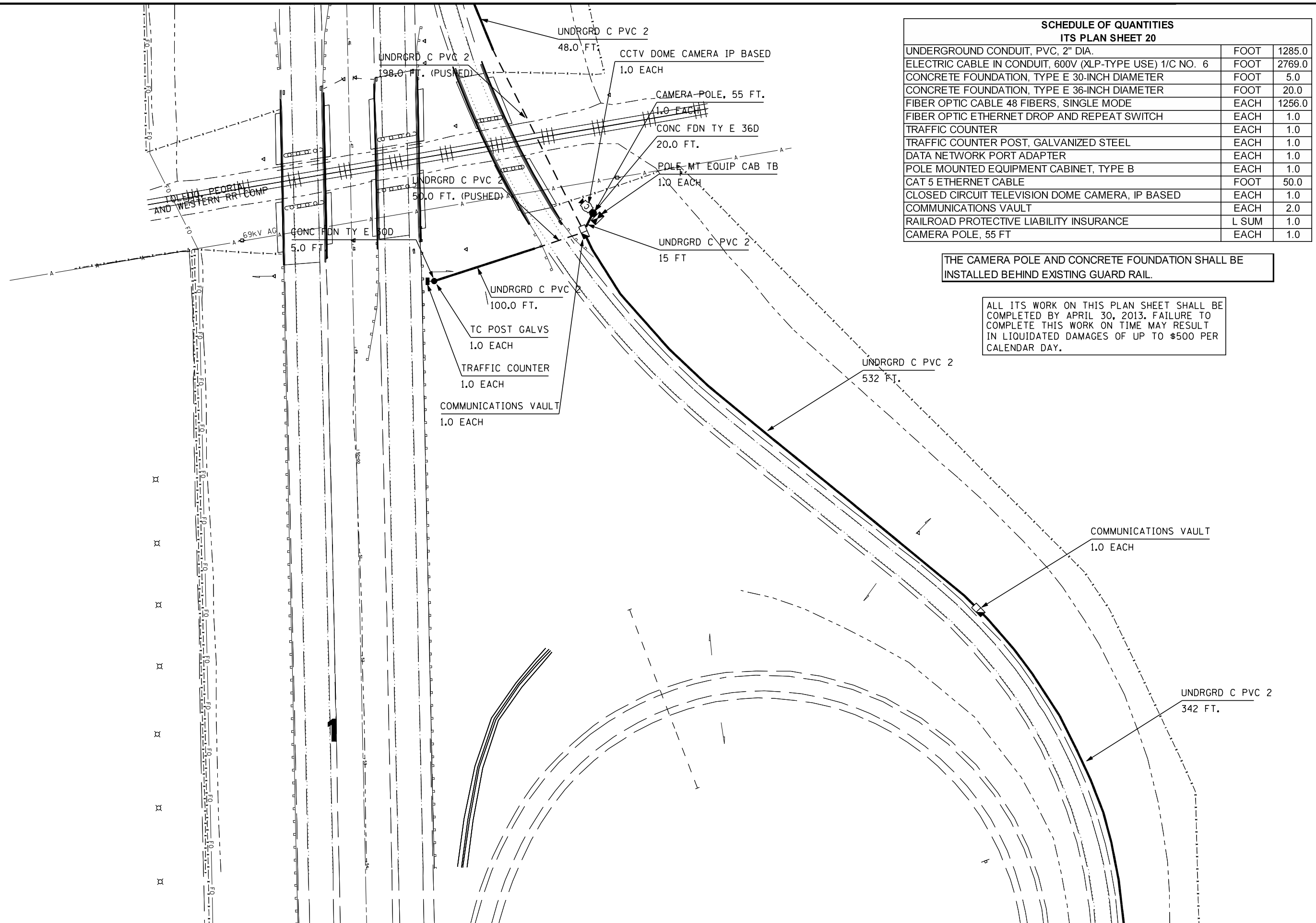
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ITS FIBER PLANS
I-74 & I-155 INTERCHANGE TO IL 98 (BIRCHWOOD) (CONTINUED)**

SCALE: NONE SHEET NO. 19 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1683
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68620	



SCHEDULE OF QUANTITIES ITS PLAN SHEET 20		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	1285.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	2769.0
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	5.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	1256.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
TRAFFIC COUNTER	EACH	1.0
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	1.0
DATA NETWORK PORT ADAPTER	EACH	1.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	2.0
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1.0
CAMERA POLE, 55 FT	EACH	1.0

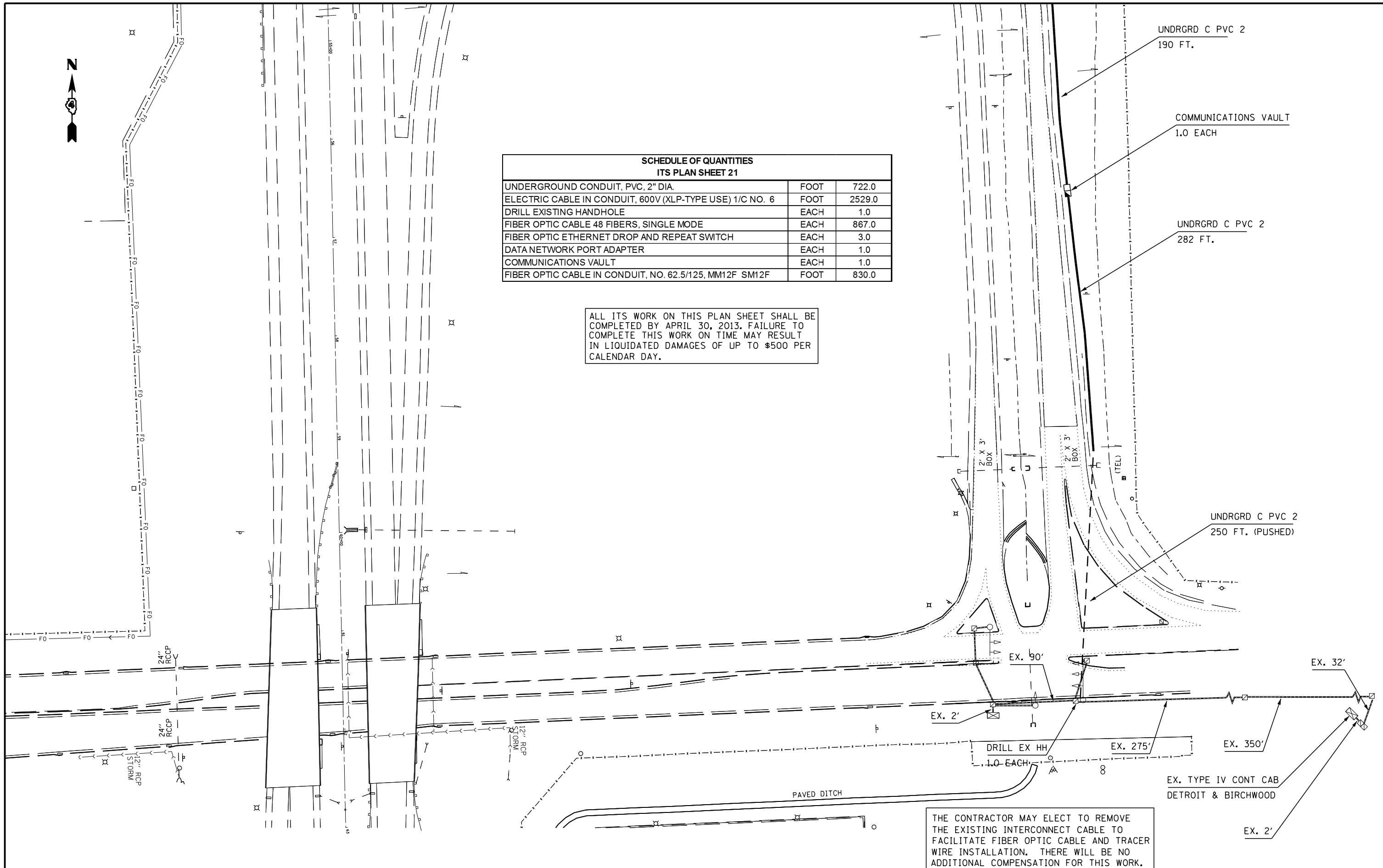
THE CAMERA POLE AND CONCRETE FOUNDATION SHALL BE INSTALLED BEHIND EXISTING GUARD RAIL.

ALL ITS WORK ON THIS PLAN SHEET SHALL BE COMPLETED BY APRIL 30, 2013. FAILURE TO COMPLETE THIS WORK ON TIME MAY RESULT IN LIQUIDATED DAMAGES OF UP TO \$500 PER CALENDAR DAY.



SCHEDULE OF QUANTITIES ITS PLAN SHEET 21		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	722.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	2529.0
DRILL EXISTING HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 48 FIBERS, SINGLE MODE	EACH	867.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	3.0
DATA NETWORK PORT ADAPTER	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	830.0

ALL ITS WORK ON THIS PLAN SHEET SHALL BE COMPLETED BY APRIL 30, 2013. FAILURE TO COMPLETE THIS WORK ON TIME MAY RESULT IN LIQUIDATED DAMAGES OF UP TO \$500 PER CALENDAR DAY.



THE CONTRACTOR MAY ELECT TO REMOVE THE EXISTING INTERCONNECT CABLE TO FACILITATE FIBER OPTIC CABLE AND TRACER WIRE INSTALLATION. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THIS WORK.

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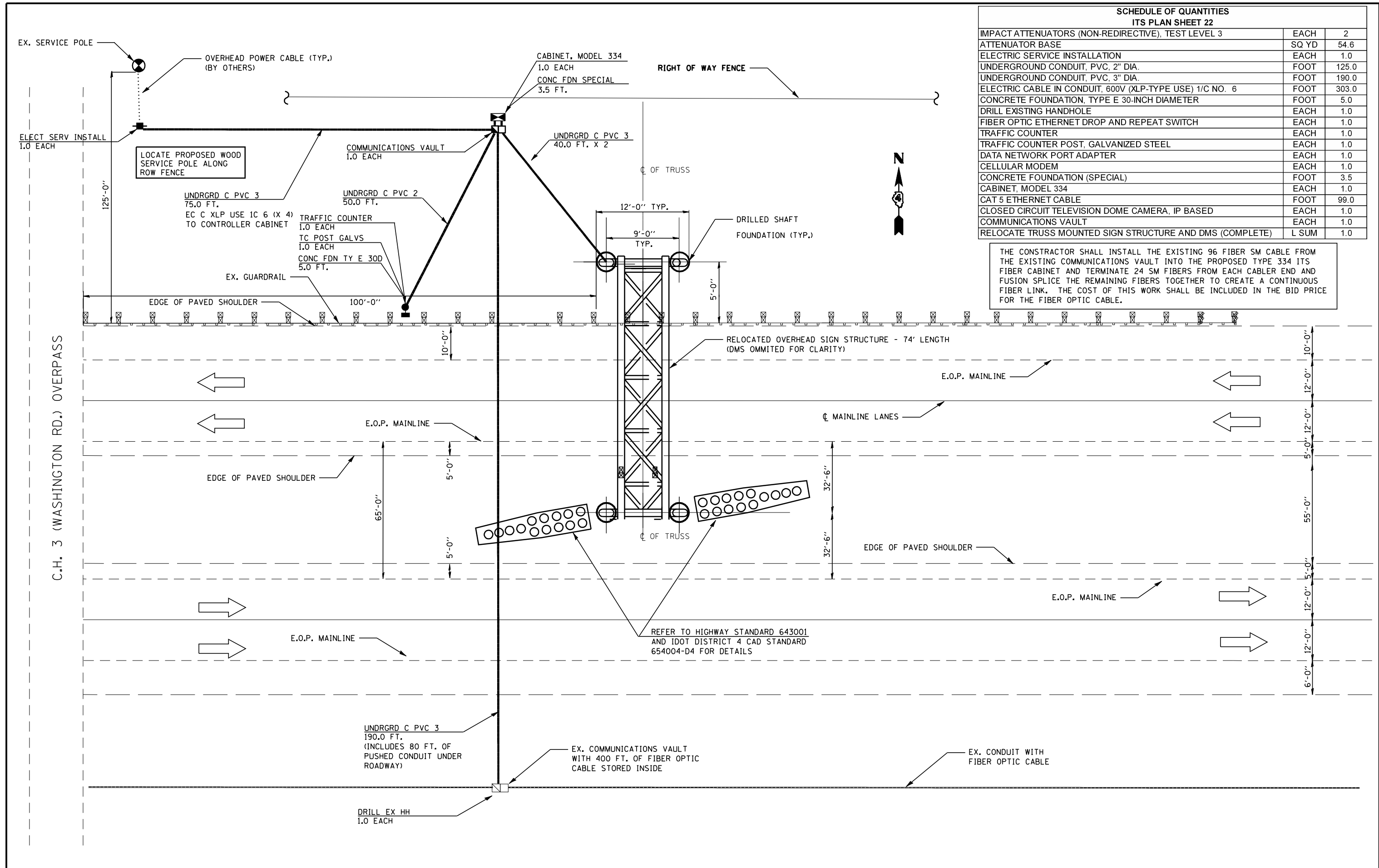
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ITS FIBER PLANS
I-74 & I-155 INTERCHANGE TO IL 98 (BIRCHWOOD) (CONTINUED)
SCALE: NONE SHEET NO. 21 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1685
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

SCHEDULE OF QUANTITIES ITS PLAN SHEET 22		
IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
ATTENUATOR BASE	SQ YD	54.6
ELECTRIC SERVICE INSTALLATION	EACH	1.0
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	125.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	190.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	303.0
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	5.0
DRILL EXISTING HANDHOLE	EACH	1.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
TRAFFIC COUNTER	EACH	1.0
TRAFFIC COUNTER POST, GALVANIZED STEEL	EACH	1.0
DATA NETWORK PORT ADAPTER	EACH	1.0
CELLULAR MODEM	EACH	1.0
CONCRETE FOUNDATION (SPECIAL)	FOOT	3.5
CABINET, MODEL 334	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	99.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
RELOCATE TRUSS MOUNTED SIGN STRUCTURE AND DMS (COMPLETE)	L SUM	1.0

THE CONSTRUCTOR SHALL INSTALL THE EXISTING 96 FIBER SM CABLE FROM THE EXISTING COMMUNICATIONS VAULT INTO THE PROPOSED TYPE 334 ITS FIBER CABINET AND TERMINATE 24 SM FIBERS FROM EACH CABLER END AND FUSION SPLICE THE REMAINING FIBERS TOGETHER TO CREATE A CONTINUOUS FIBER LINK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE FIBER OPTIC CABLE.



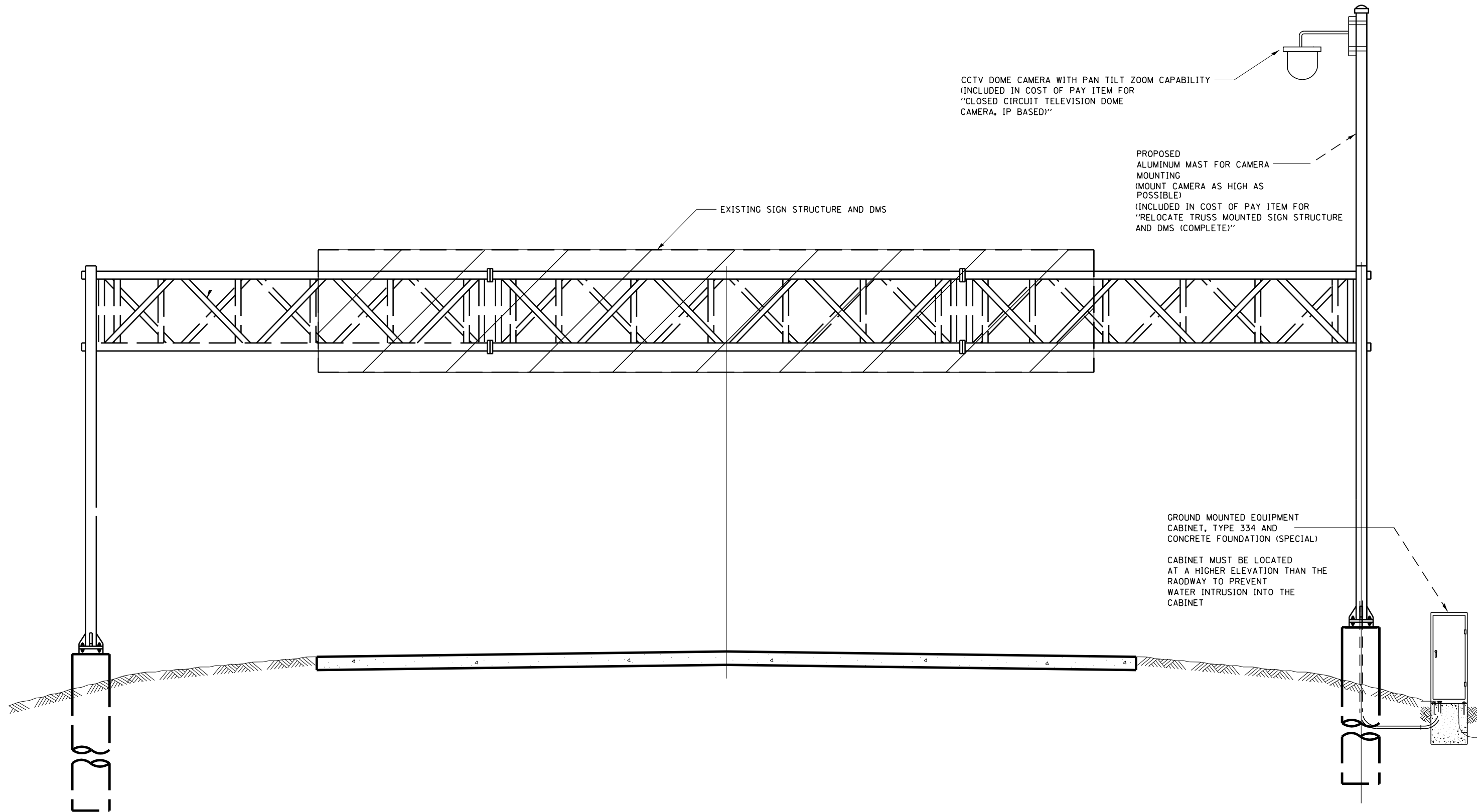
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RELOCATED SIGN STRUCTURE AND DMS SITE PLAN
I-74 & WASHINGTON BLACKTOP**

SCALE: NONE SHEET NO. 22 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;14HB-4,14,14HB]BR	TAZEWELL	2433	1686
			CONTRACT NO. 68620	
ILLINOIS FED. AID PROJECT				



CCTV DOME CAMERA WITH PAN TILT ZOOM CAPABILITY
 (INCLUDED IN COST OF PAY ITEM FOR
 "CLOSED CIRCUIT TELEVISION DOME
 CAMERA, IP BASED")

PROPOSED
 ALUMINUM MAST FOR CAMERA
 MOUNTING
 (MOUNT CAMERA AS HIGH AS
 POSSIBLE)
 (INCLUDED IN COST OF PAY ITEM FOR
 "RELOCATE TRUSS MOUNTED SIGN STRUCTURE
 AND DMS (COMPLETE)")

EXISTING SIGN STRUCTURE AND DMS

GROUND MOUNTED EQUIPMENT
 CABINET, TYPE 334 AND
 CONCRETE FOUNDATION (SPECIAL)

CABINET MUST BE LOCATED
 AT A HIGHER ELEVATION THAN THE
 ROADWAY TO PREVENT
 WATER INTRUSION INTO THE
 CABINET

FILE NAME =
 ... \ITS (DDT)\D468620-ITS-23.dgn

USER NAME = tblank
 PLOT SCALE =
 PLOT DATE = 7/17/2012

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DMS SIGN STRUCTURE AND CCTV DETAIL
 I-74 & WASHINGTON BLACKTOP

SCALE: NONE SHEET NO. 23 OF 50 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1687
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

ALUMINUM POLE CAP

CCTV CAMERA

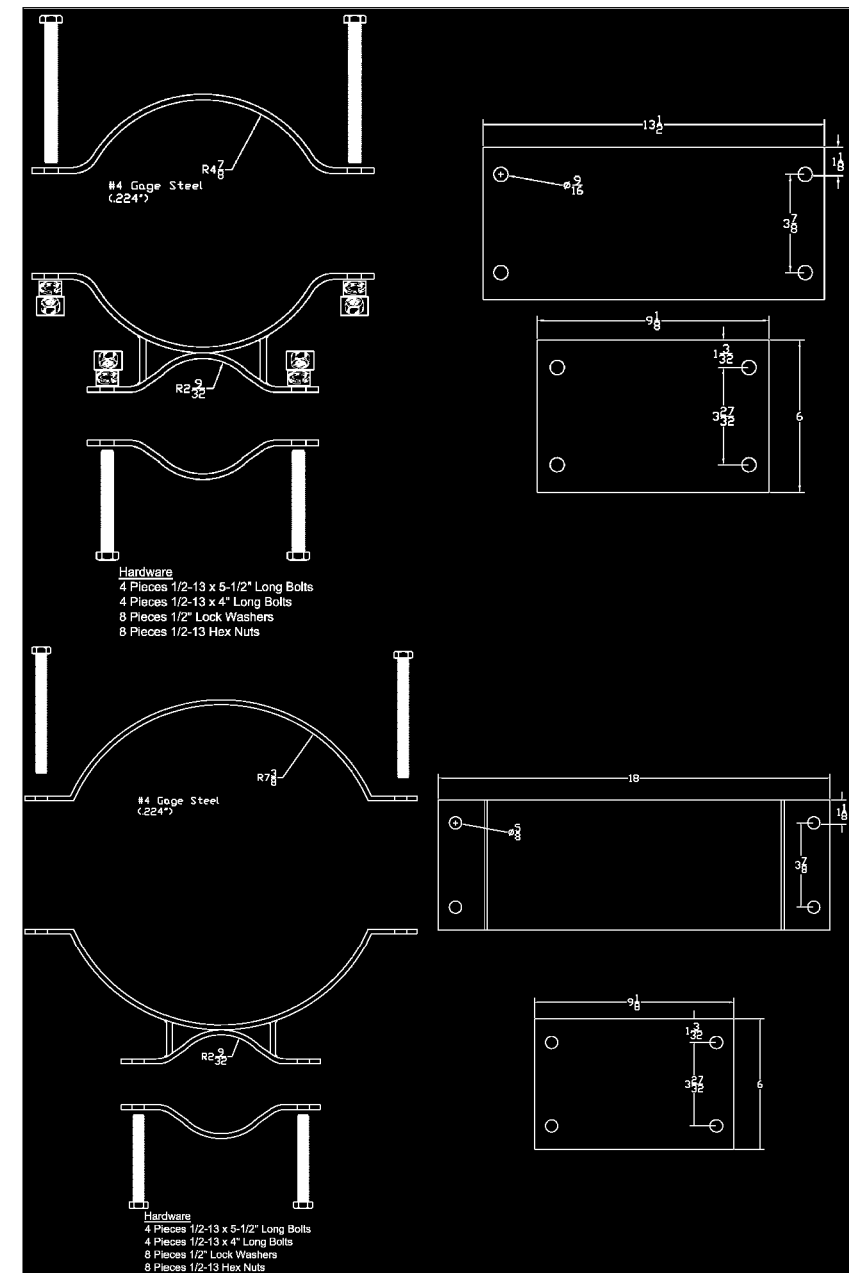
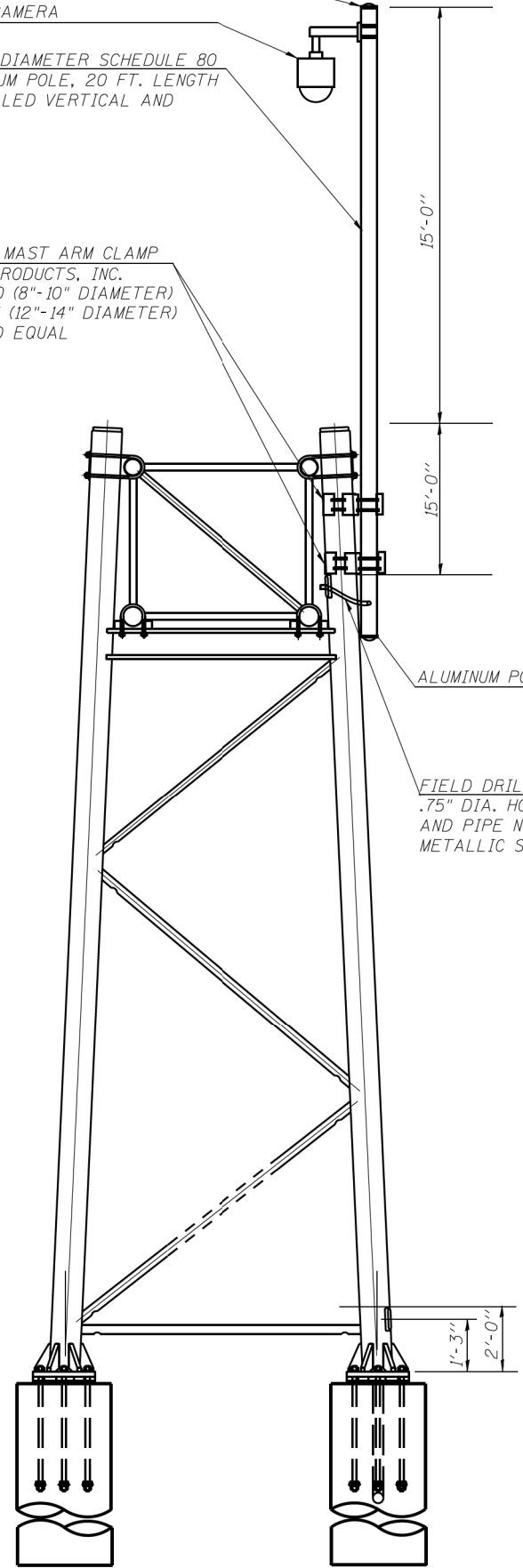
4-1/2" DIAMETER SCHEDULE 80
ALUMINUM POLE, 20 FT. LENGTH
(INSTALLED VERTICAL AND
PLUMB)

ADJUSTABLE MAST ARM CLAMP
COMPONENT PRODUCTS, INC.
CPI-MAB-1070 (8"-10" DIAMETER)
CPI-MAB-1071 (12"-14" DIAMETER)
OR APPROVED EQUAL

ALUMINUM POLE CAP

FIELD DRILL
.75" DIA. HOLE WITH GROMMET
AND PIPE NIPPLES AND NON
METALLIC SEAL-TITE (TYP.)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE CAMERA MAST COMPONENTS FIT CORRECTLY AND ARE COMPATIBLE WITH THE EXISTING SIGN STRUCTURE. THE COST OF FURNISHING AND INSTALLING THE CAMERA MAST SHALL BE INCLUDED IN THE BID PRICE FOR THE PAY ITEM "RELOCATE TRUSS MOUNTED SIGN STRUCTURE AND DMS (COMPLETE)".



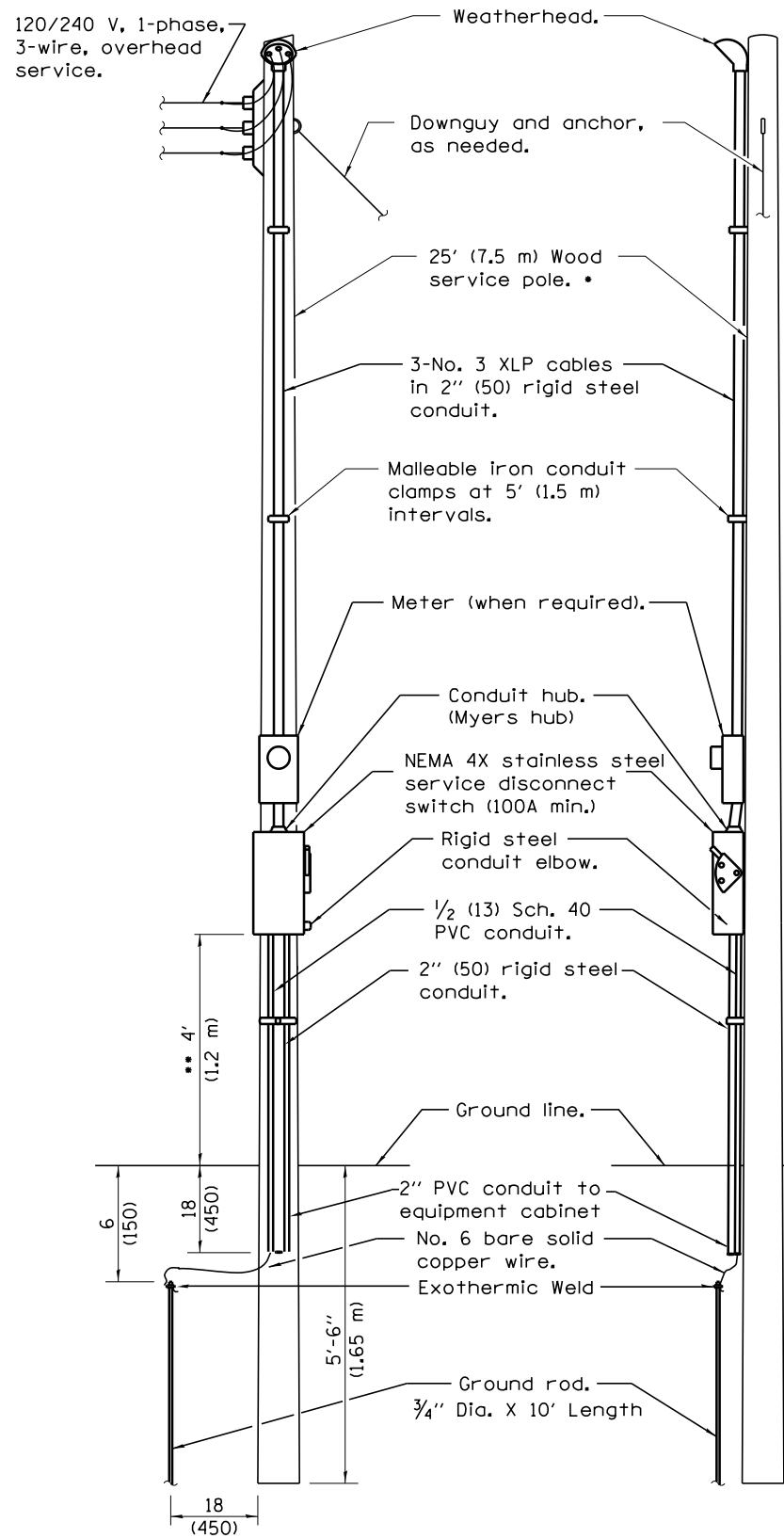
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pt\1-74 & 1-155 interchange\its plans\68620 - I-155 @ I-74 Interchange ITS (Final 6-12-12)		DRAWN -	REVISED -
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CCTV MAST FOR EXISTING SIGN STRUCTURE DETAIL
I-74 & WASHINGTON BLACKTOP**

SCALE: NONE SHEET NO. 24 OF XX SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[I4R(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1688
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	



The Contractor shall install fuses in the service disconnect that are rated for the wire size in accordance with NEC requirements (60A fuses for #6 cable).

FRONT

SIDE

ELECTRIC SERVICE INSTALLATION

- Size larger as needed.
- Or as directed by Utility Company.

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		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ELECTRIC SERVICE DETAIL FOR RELOCATED SIGN STRUCTURE
I-74 & WASHINGTON BLACKTOP**

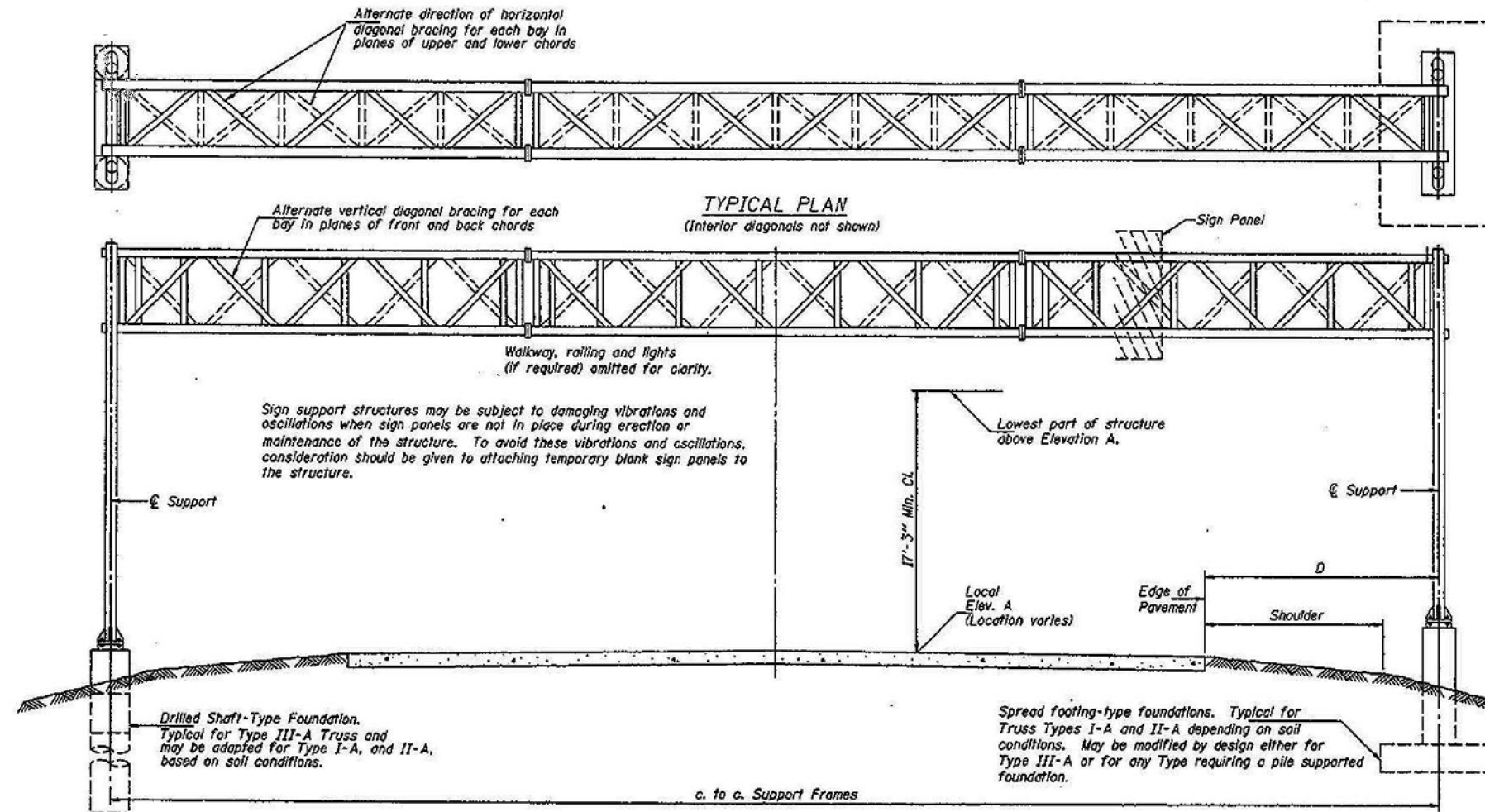
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-[14R;(14HB-4,14,14HVB)BR]	TAZEWELL	2433	1690
CONTRACT NO. 68620			ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

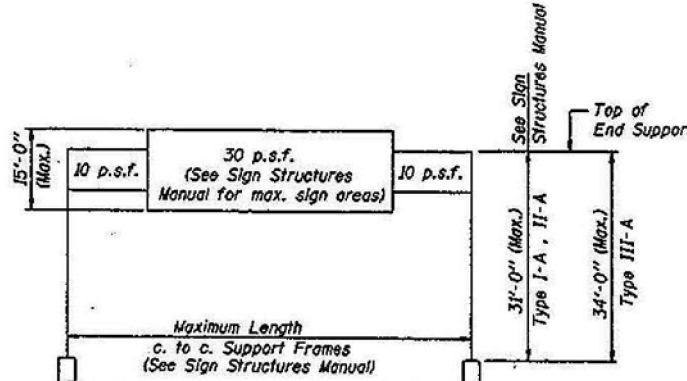
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74	90-114R(1)4B-4,1,4,14HVB(BR)	TAZEWELL	2433	1691
STA.	TO STA.	ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



GENERAL NOTES

- SPECIFICATIONS:**
- DESIGN:** AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")
 - CONSTRUCTION:** Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")
 - LOADING:** 90 M.P.H. WIND VELOCITY
WIND LOADING: 30 p.s.f. normal to Sign Panel Area and truss elements not behind sign Loading Diagram.
WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.
 - ALLOWABLE UNIT STRESSES:**
Structural Steel - 20,000 p.s.i.
Reinforcing Steel - 20,000 p.s.i.
Class SI Concrete - 1,400 p.s.i.
Structural Aluminum - per AASHTO Specifications.
Allowable unit stresses due to wind load in combination with other forces, are increased 1.33.
 - MINIMUM CLEARANCE:** Vertical Roadway Clearance = 17'-3" (All Obstructions)
 - WELDING:** All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D11 and D12 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.
 - MATERIALS:** Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W* (M183, M223 Gr. 50, or M222). Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs of the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.
 - FASTENERS FOR ALUMINUM TRUSSES:** Unless otherwise specified, all round or heavy hex head bolts shall be stainless steel conforming to ASTM A193, Grade B8 or B8M, Class 1. Eye and U-bolts shall be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished, or an equivalent material acceptable to the Engineer. All nuts shall be stainless steel conforming to ASTM A194, Grade B (AISI Type 304) or Grade 8F (AISI Type 303). The nuts shall be "locknuts" with nylon or steel inserts and semifinished hexagonal heads equivalent to the finished heavy hex series of the American National Standard. All washers shall be stainless steel conforming to ASTM A240, Type 302 or 304.
 - GALVANIZING:** All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.
 - ANCHOR RODS:** Shall conform to AASHTO M314 Gr. 36 or 55 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F.
 - CONCRETE SURFACES:** All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seal Sealer in accordance with the Standard Specifications.
 - REINFORCEMENT BARS:** Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.
 - FOUNDATIONS:** The contract unit price for "Concrete Foundations" or "Drilled Shaft Concrete Foundations" shall include: All necessary excavation or drilling (except in rock); backfilling with excavated material; disposal of unsuitable or surplus material; formwork; and furnishing and placing the Class SI Concrete, reinforcement bars, conduit, anchor bolts, nuts, washers and ground rods complete in place.
- *If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



TYPICAL ELEVATION
(Looking at Face of Signs)**

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
450901074R101.3	495+00	IIIA	74'-0"	103.13	12'-0"	7'-10"	144.25
430721074L083.5	188+25	IIIA	65'-0"	104.19	9'-0"	7'-10"	144.25

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

**Looking upstation for structures with signs both sides.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE TYPE I-A (4'-0" x 4'-6")	Foot	
OVERHEAD SIGN STRUCTURE TYPE II-A (4'-6" x 5'-3")	Foot	
OVERHEAD SIGN STRUCTURE TYPE III-A (5'-0" x 7'-0")	Foot	139
OVERHEAD SIGN WALKWAY TYPE A	Foot	52.58
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	42

NUMBER	REVISION	DATE

DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

OS-A-1 7/1/2001

OVERHEAD SIGN STRUCTURES
GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL SUPPORTS

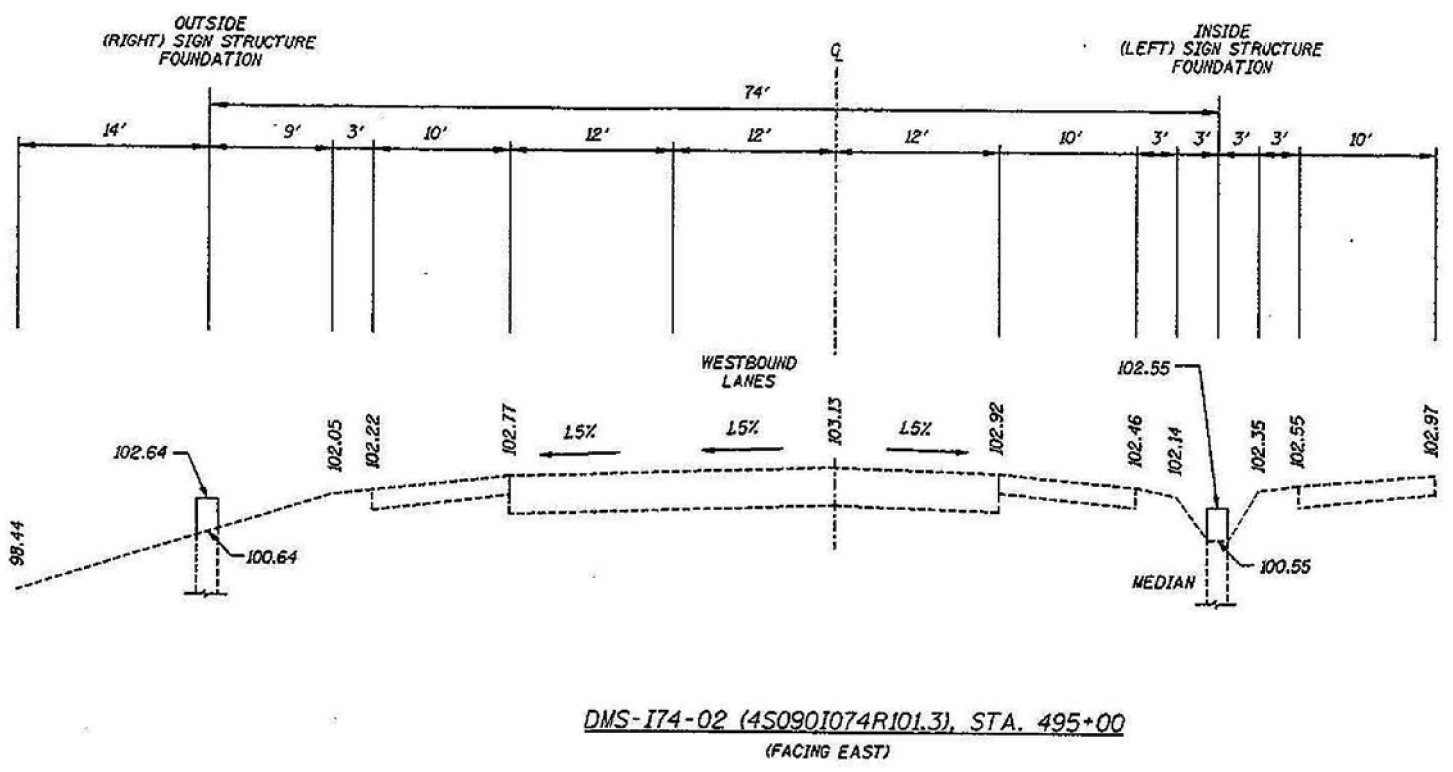
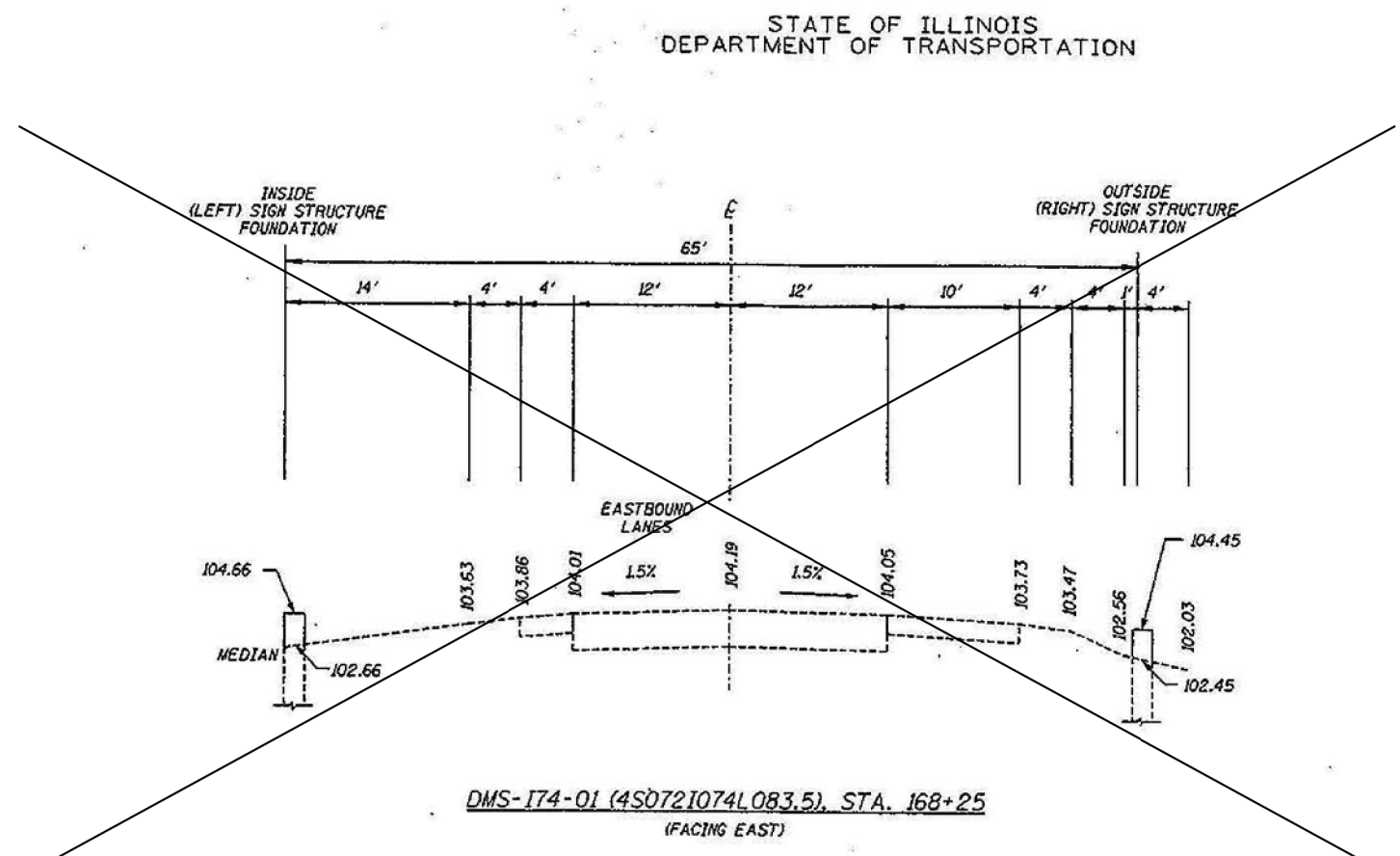
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

10/14/02

EDWARDS AND KELCEY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	94 I-74 ITS SYSTEM-1	PEORIA & TAZEWELL	98	26
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY



- NOTES:**
- Elevations shown based on local datum.
 - For minimum structure clearance, see Overhead Sign Structures General Plan & Elevation At, Truss & Steel Supports (Sheet 25).
 - For foundation elevations, see Overhead Sign Structures Drilled Shaft Details (Sheet 36).

ITS SHEET 26 OF 98

**OVERHEAD SIGN STRUCTURES
GROUND CROSS SECTIONS**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

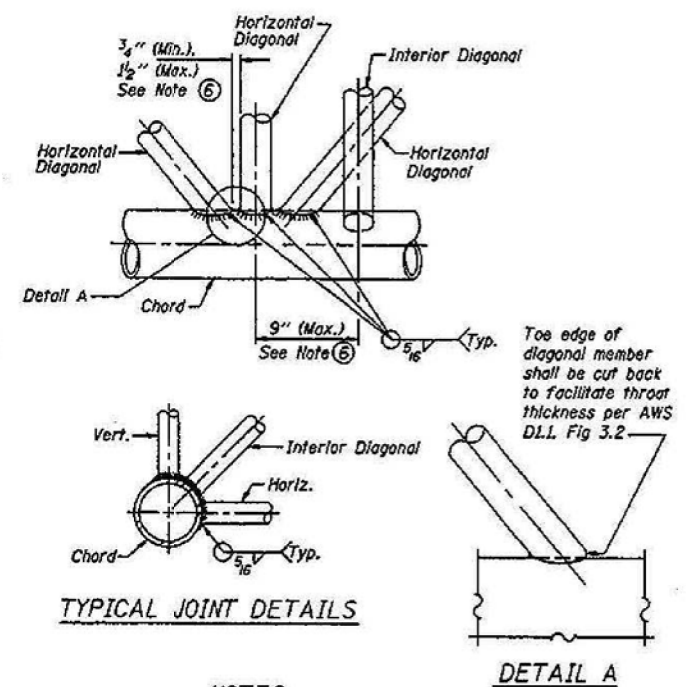
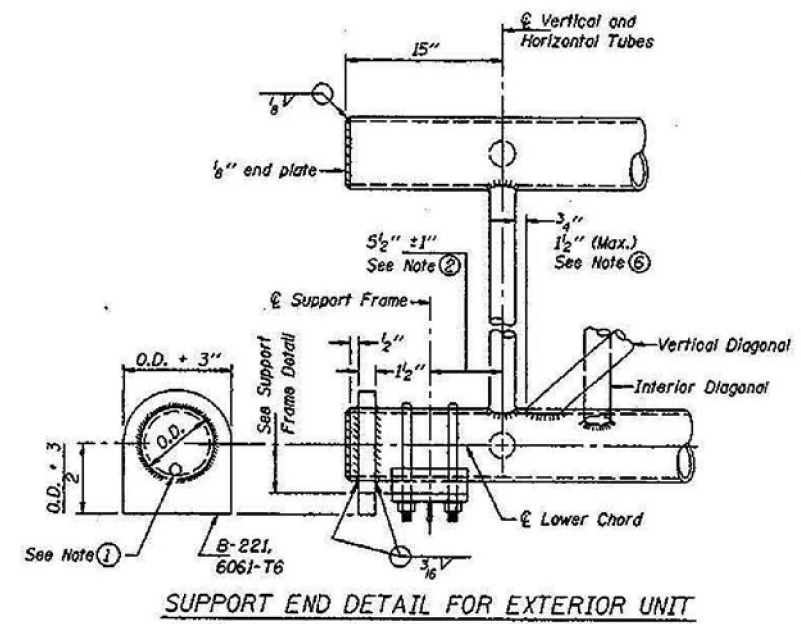
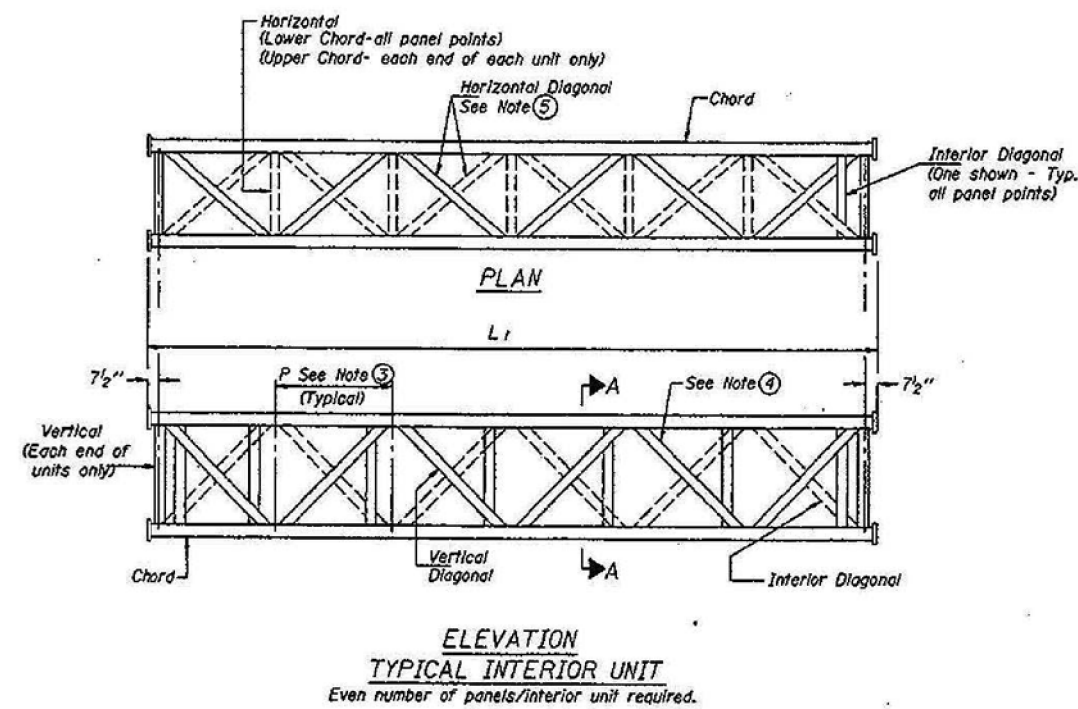
10/14/02

EDWARDS AND KELCEY

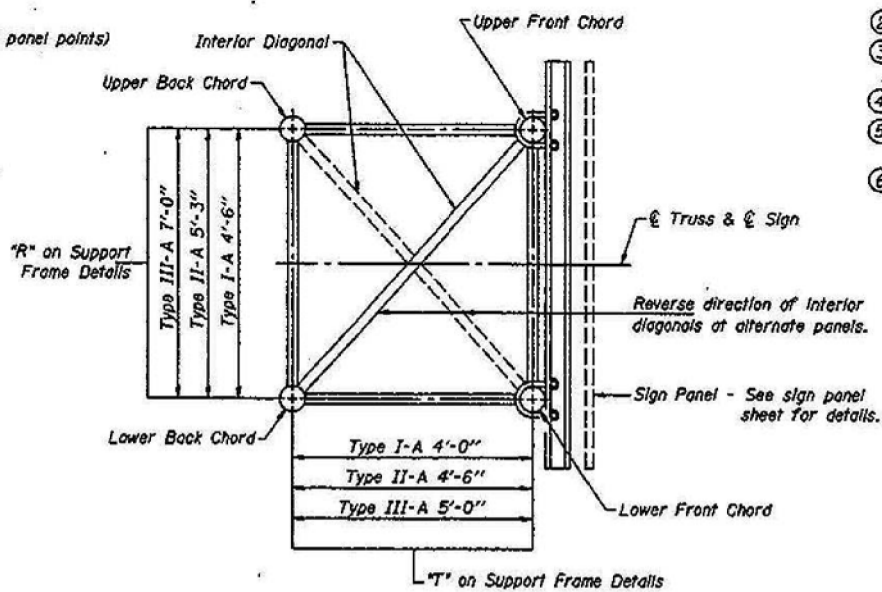
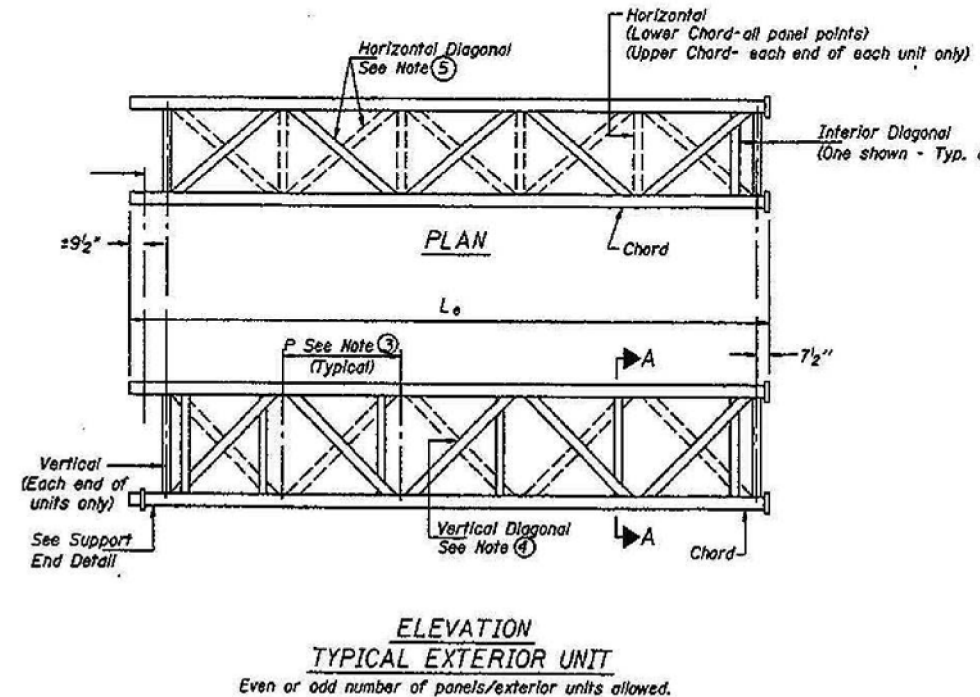
DESIGNED	TCG
CHECKED	A.J.N.
DRAWN	ABW
CHECKED	TCG

CONTRACT SCI

FOR INFORMATION ONLY



- NOTES**
- Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" diameter drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
 - 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
 - Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
 - Vertical Diagonals in front and back face shall alternate.
 - Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
 - All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway-brackets.



DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

OS-A-2 7/1/2001

NUMBER	REVISION	DATE

ITS SHEET 28 OF 98

**OVERHEAD SIGN STRUCTURES
ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A and III-A**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

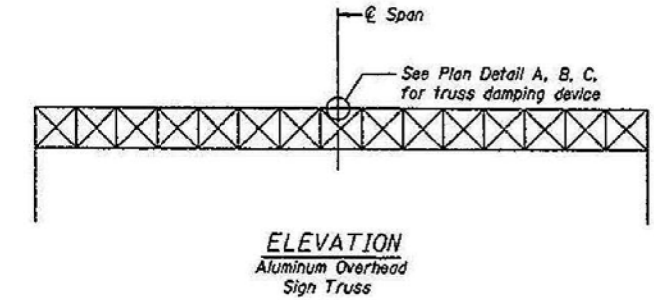
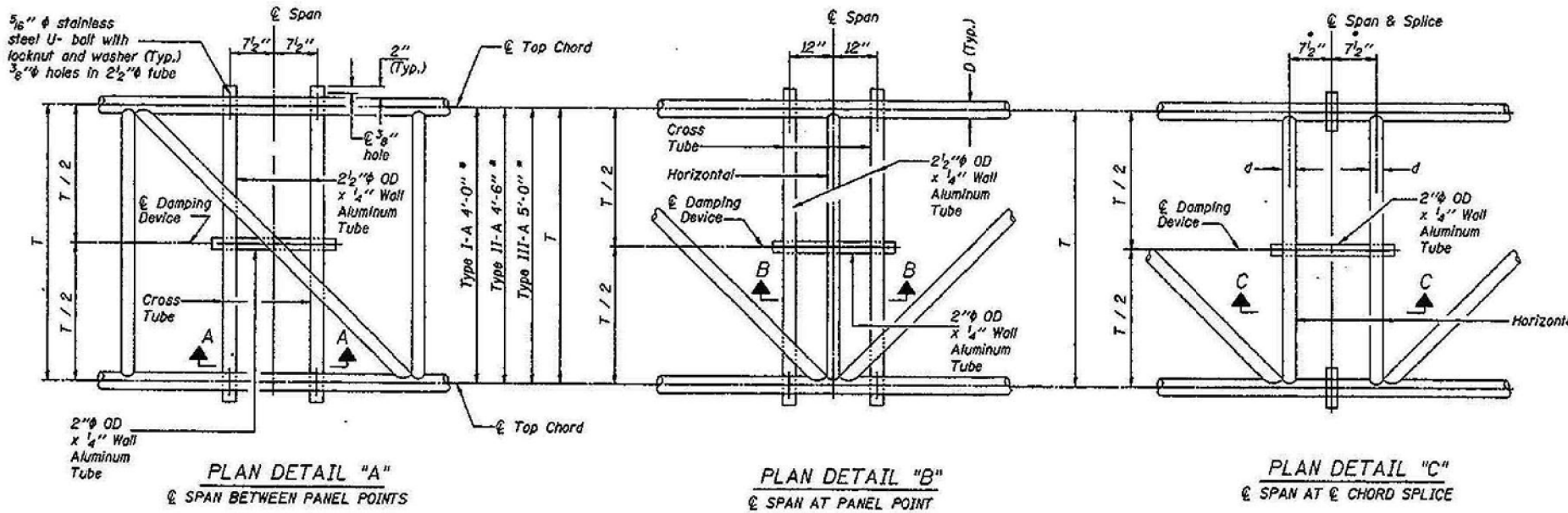
10/14/02

EDWARDS AND KELCEY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 I-74 ITS SYSTEM-1	PEORIA & TAZEWELL	98	30
STA. TO STA.		ILLINOIS FED. AID PROJECT		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

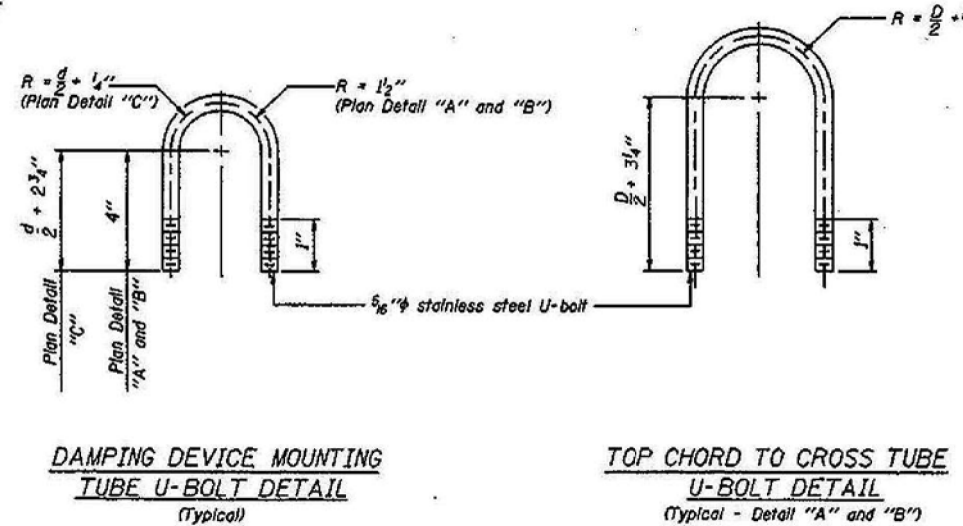
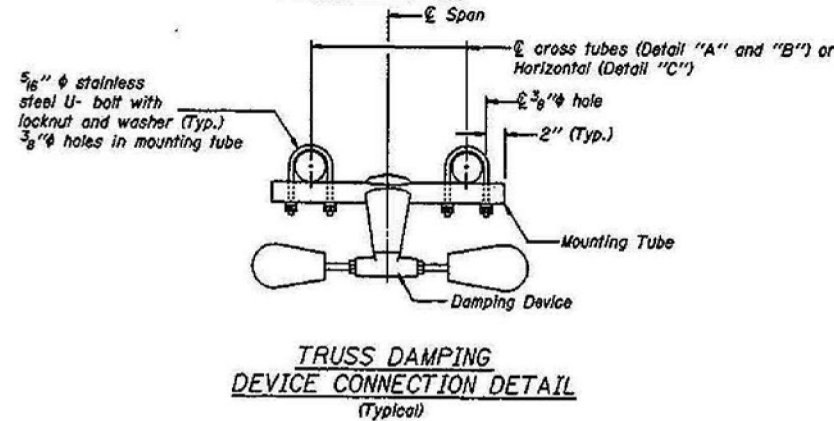
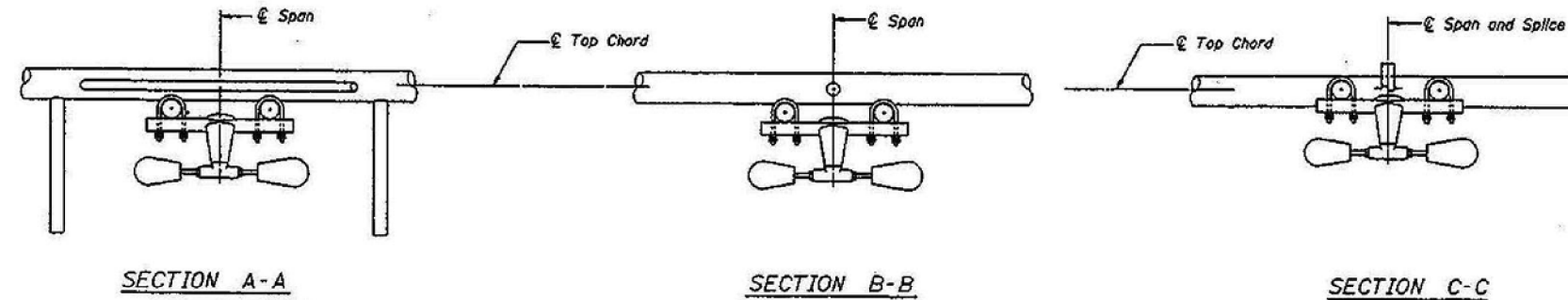
* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.



NOTES

Damper: One damper per truss.
(31 lbs. Stockbridge-Type Aluminum)
Cost included in "Overhead Sign Structure..."

Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in "Overhead Sign Structure..."



ITS SHEET 30 OF 98

**OVERHEAD SIGN STRUCTURE
DAMPING DEVICE**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

10/14/02

EDWARDS AND KELCEY

DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

OS-A-D 7/1/2001

FILE NAME	USER NAME	DESIGNED	REVISED
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		CHECKED	REVISED
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		DATE	REVISED
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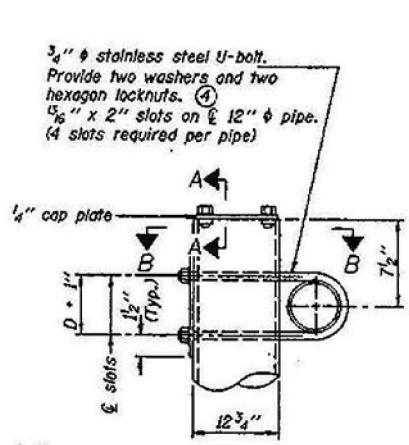
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING SIGN STRUCTURE AND DMS DETAILS
I-74 & WASHINGTON BLACKTOP (CONTINUED)

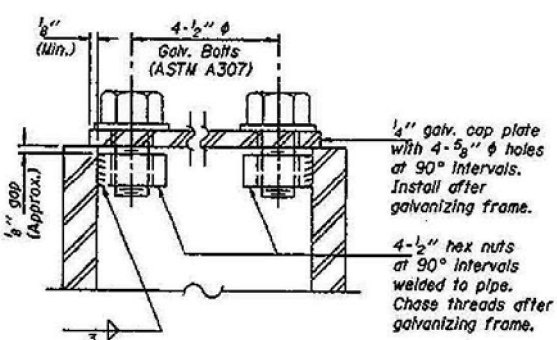
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-I14R(14HB-4,14,14HVB)BR	TAZEWELL	2433	1696
CONTRACT NO. 68620		ILLINOIS FED. AID PROJECT		

FOR INFORMATION ONLY

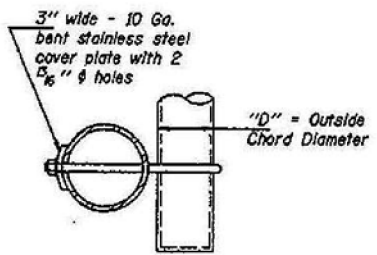


DETAIL A

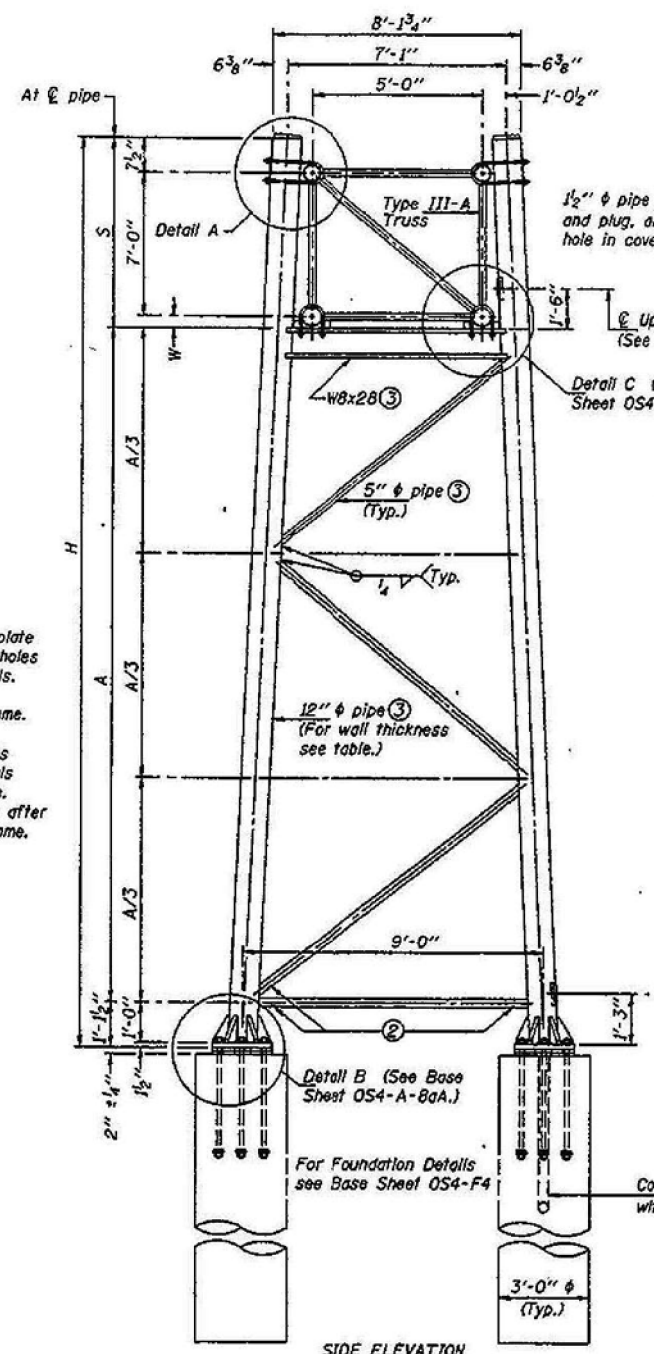


SECTION A-A

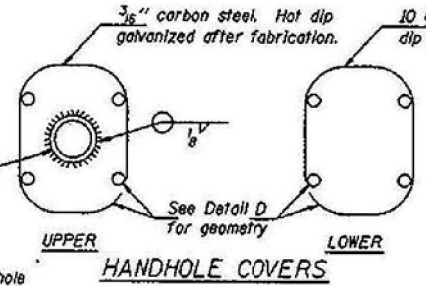
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



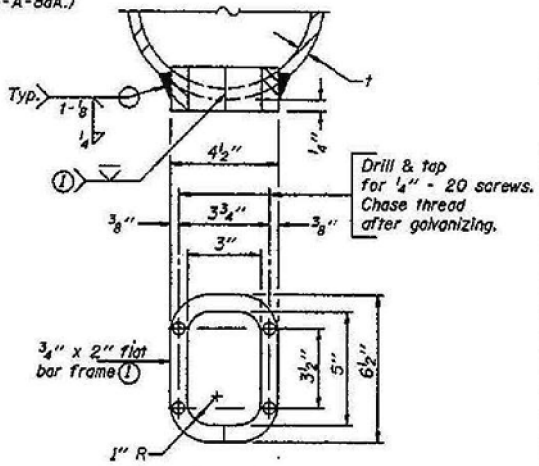
SECTION B-B



SIDE ELEVATION



HANDHOLE COVERS

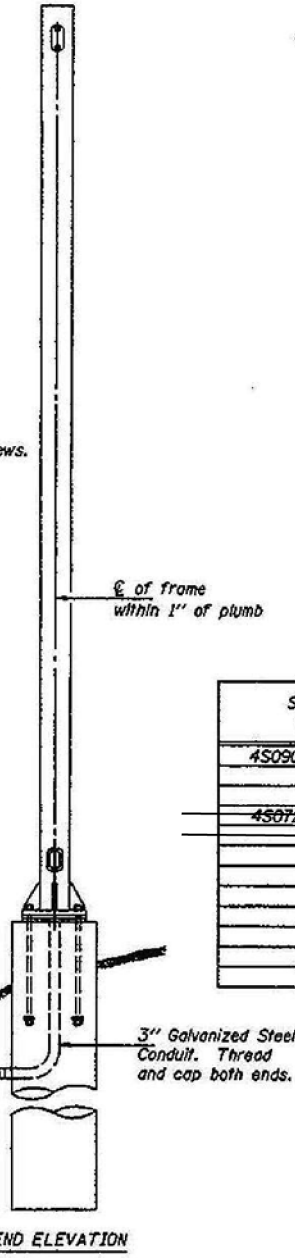


DETAIL D

Provide 6 1/2 inch x 4 1/2 inch cover. Provide 4-5/8 inch diameter holes in cover for 1/4 inch - 20 round head brass or stainless steel machine screws. (See cover details)

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS
(12" φ Pipe-Type III-A Truss)



END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 4 in or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred. (Typ.)
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

Structure Number	Station	Support		Pipe Wall Thickness	H	A
		Left	Right			
450901074R10L3	495+00	X		.33	26.62	17.47
			X	.33	26.53	17.39
450721074L083.5	166+25	X		.33	25.57	16.42
			X	.33	25.78	16.63

ITS SHEET 31 OF 98

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME for
TYPE III-A ALUMINUM TRUSS

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

10/14/02

EDWARDS AND KELCEY

PRINTED: 10/12/02

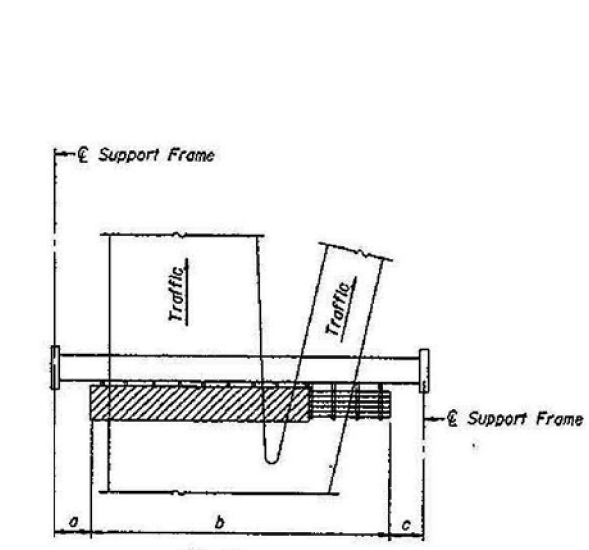
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DRAWN	ABW
CHECKED	TCG

OS4-A-8a 7/1/2001

NUMBER	REVISION	DATE

FOR INFORMATION ONLY



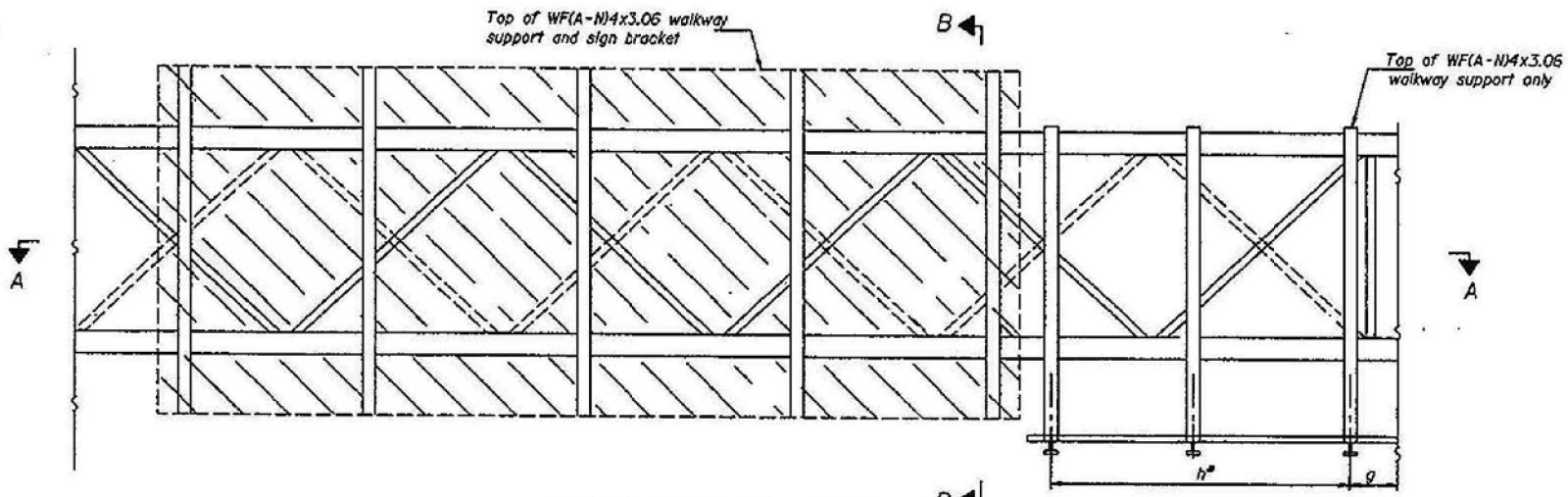
PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

BRACKET TABLE

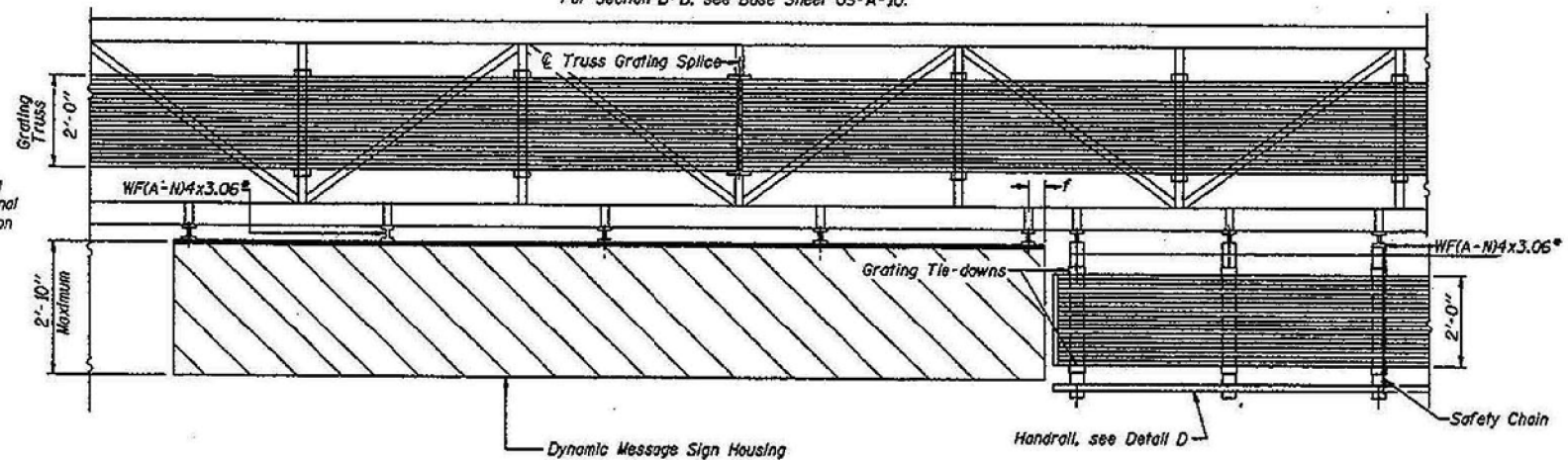
WF(A)-N4x3.06
ASTM B308, Alloy 6061-T6

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
10'-0"	10'-0"	2
16'-0"	16'-0"	3
22'-0"	22'-0"	4
28'-0"	28'-0"	5
28'-0"	34'-0"	6

Walkway and Truss Grating width dimensions are nominal and may vary ±1/2" based on available standard widths.



TYPICAL FRONT ELEVATION
With handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Notes: *Space walkway brackets WF(A)-N4x3.06 and sign brackets WF(A)-N4x3.06 for efficiency and within limits shown:
f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A)-N4xL79 or WF(A)-N4x3.06)
**If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details, see Base Sheet OS-A-10.
For Details D, F, G and P and Handrail Splice Details, see Base Sheet OS-A-11.

Structure Number	Station	a	b	c	Walkway Grating and Handrail Lengths
450901074R10L3	495+00	24'-9 1/2"	59'-2 1/2"	0	30'-9 1/2"
456721074L063.5	168+25	24'-9 1/2"	49'-2 1/2"	0	21'-9 1/2"

DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

NUMBER	REVISION	DATE

OS-A-9-DMS 7/1/2001

ITS SHEET 33 OF 98

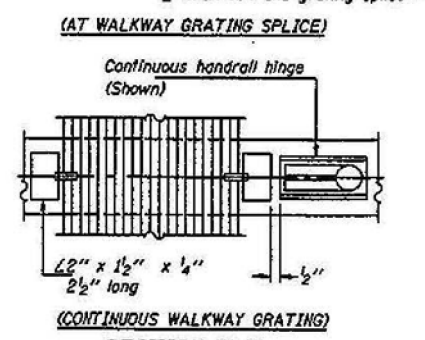
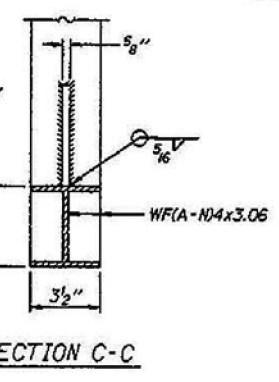
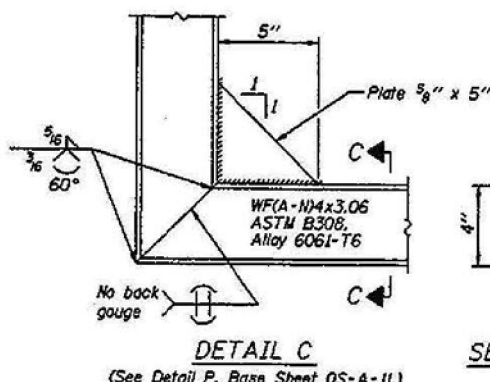
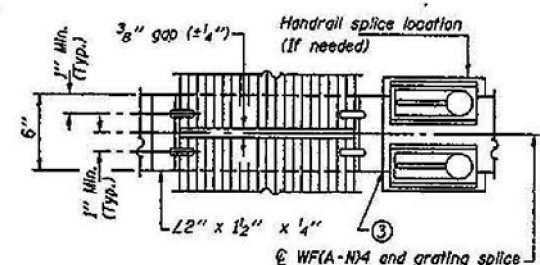
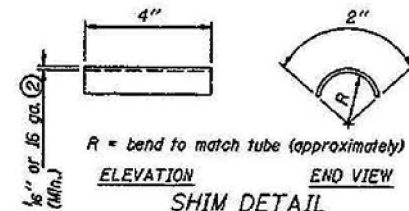
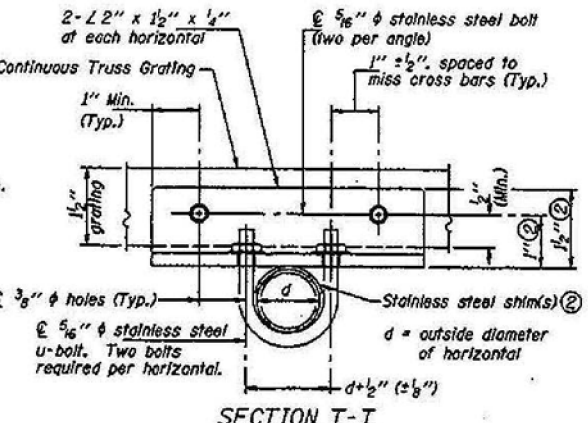
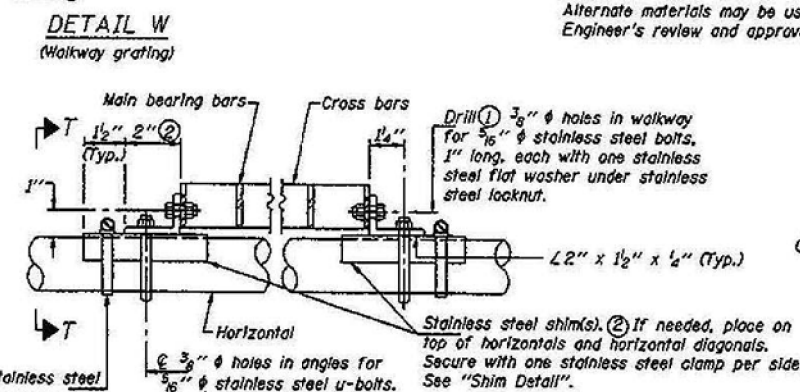
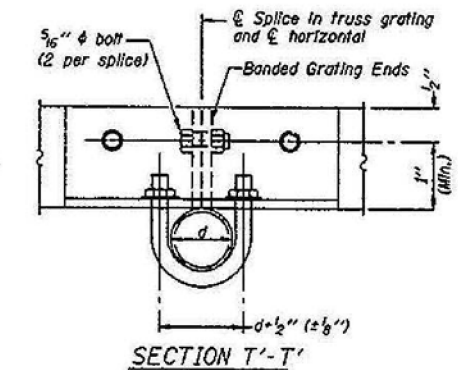
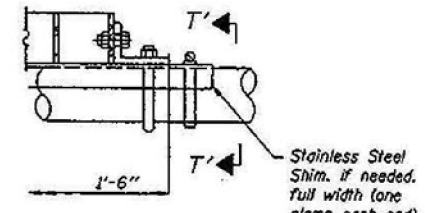
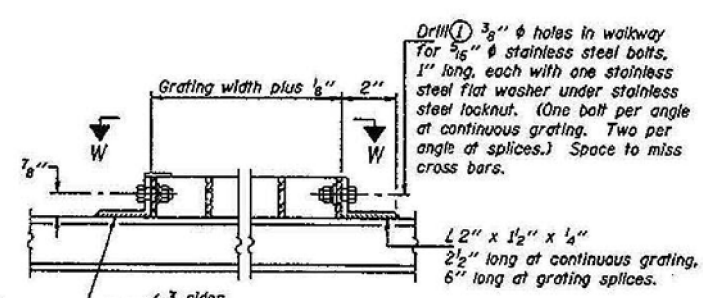
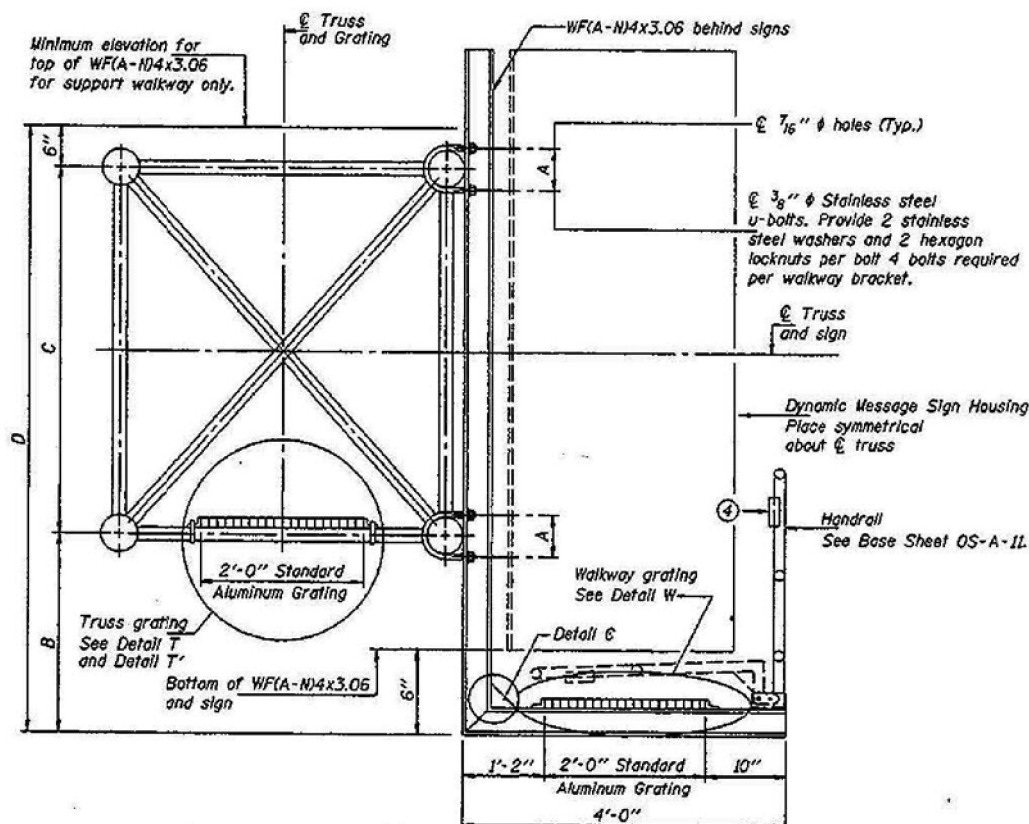
**OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
D4 I-74 ITS SYSTEM-1
PEORIA & TAZEWELL COUNTIES

10/14/02

EDWARDS AND KELCEY

FOR INFORMATION ONLY



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/8" x 1/2" on 1 3/8" centers and conform to ASTM B211 Alloy 6061-T6.
Cross bars shall be 3/16" x 1/2" on 4" centers and conform to ASTM B211 Alloy 6063-T5 or 6061-T6.
OR
Aluminum Grating with modified "M" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B211 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/8" centers.
Cross bars shall conform to ASTM B211 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N4) and 1/4" extension bars. (See Base Sheet OS-A-11.)
- 2" x 1/2" x 1/4" welded to handrail posts to protect locations that contact grating.

Structure Number	Station	A	B	C	D
450901074R101.3	495+00	7 3/8"	12"	7'-0"	8'-6"
430721074L003.5	168+25	7 3/8"	12"	7'-0"	8'-8"

DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

OS-A-10-DMS 7/1/2001

NUMBER	REVISION	DATE

ITS SHEET 34 OF 98

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

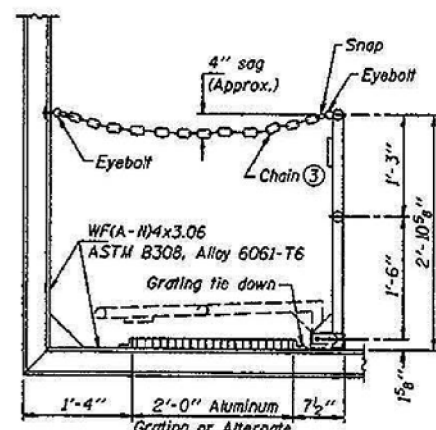
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
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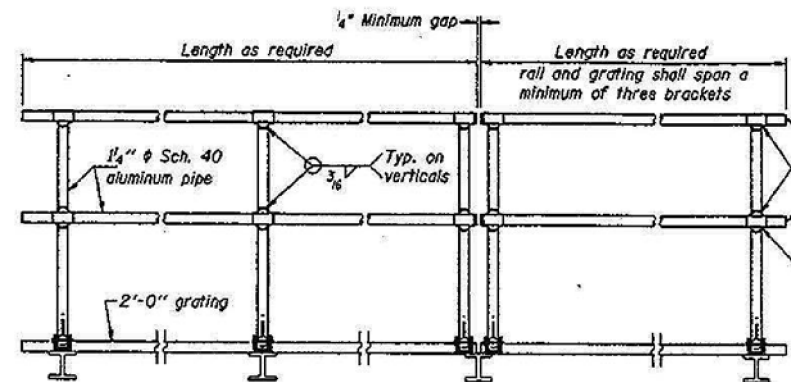
EDWARDS AND KELCEY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	D4 I-74 ITS SYSTEM-1	PEORIA & TAZEWELL	98	35
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



SIDE ELEVATION
(Showing safety chain w/o sign)



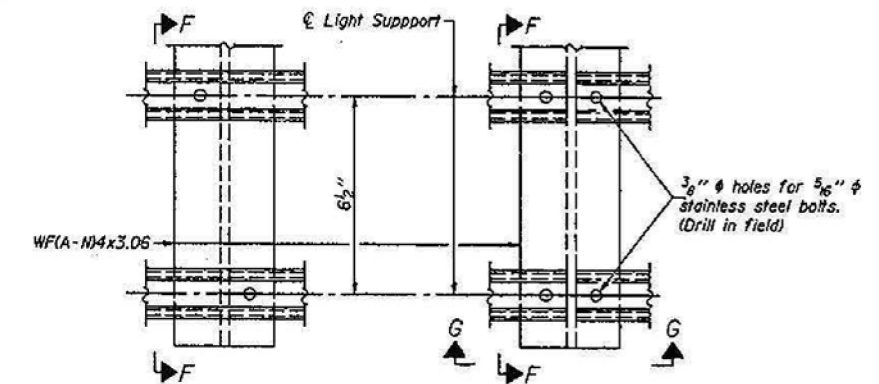
FRONT ELEVATION

HANDRAIL DETAILS

Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.

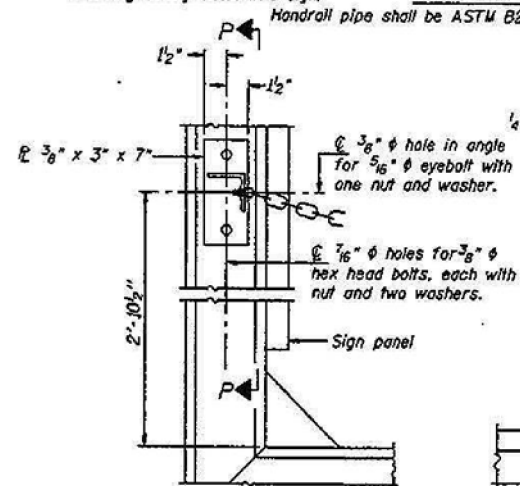
① Install standard force-fit end caps or weld 1/2" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 1/8" hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)



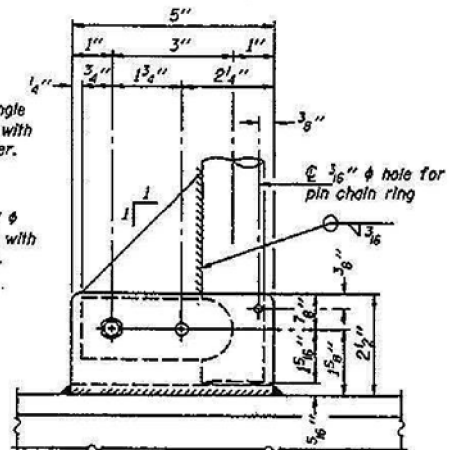
DETAIL F

DETAIL G

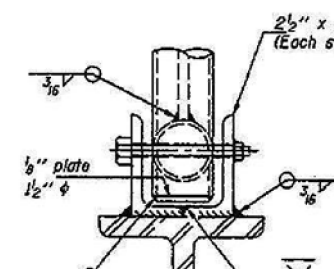


ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"

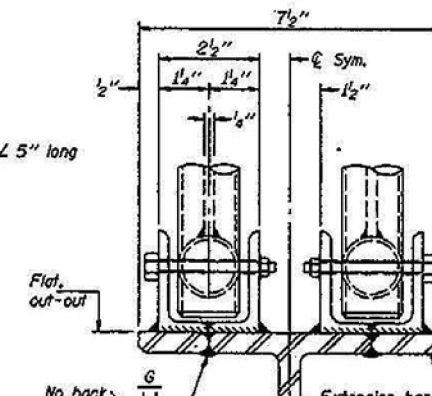


SIDE ELEVATION

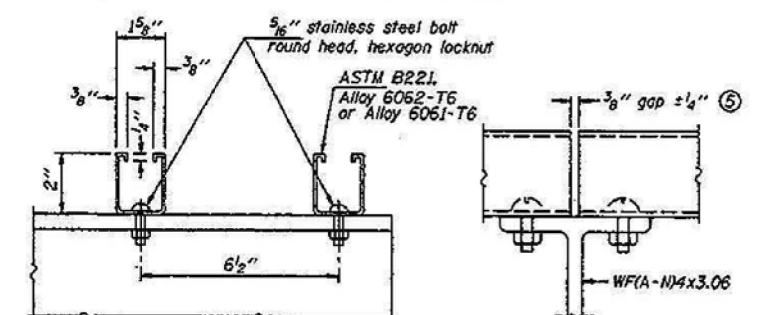


FRONT ELEVATION

See "ELEVATION" at right for dimensions.



ELEVATION AT HANDRAIL JOINT

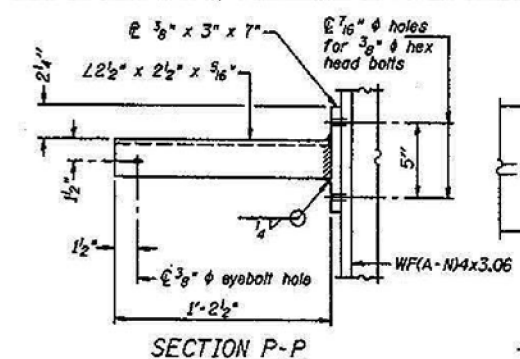


SECTION F-F

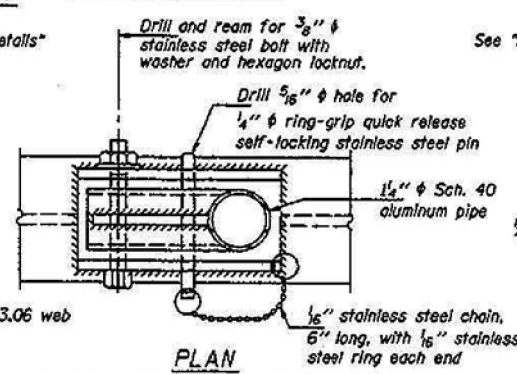
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

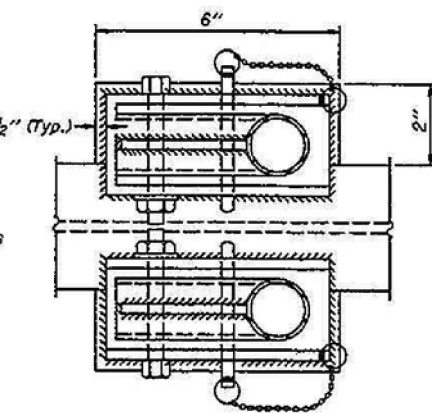
⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



SECTION P-P

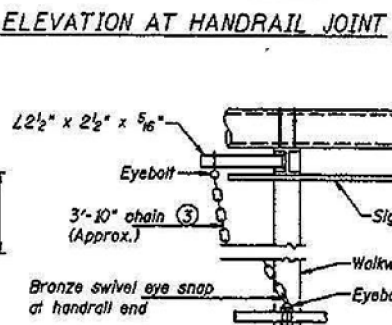


DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

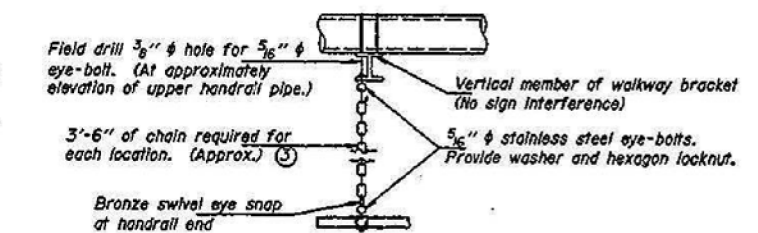


ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

③ 3/16" galvanized steel chain, approximately 12 links per foot. Chain to be hot dip galvanized after manufacture and suitable for prolonged exterior exposure. Alternate materials may be substituted with the Engineer's approval.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN

One required for each end of each walkway.

ITS SHEET 35 OF 98

**OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS**

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 74
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10/14/02

EDWARDS AND KELCEY

PRINTED: 10/12/02

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DESIGNED	TCG
CHECKED	AJN
DRAWN	ABW
CHECKED	TCG

OS-A-11 7/1/2001

NUMBER	REVISION	DATE