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21	Sign Box Truss Structure Extended Span Type F, G, H Alternate Drilled Shaft Foundations Quantities	

IERAL NOTES:

l truss members, walkways, bearing elements, and wire outlets are uminum. End-support members are steel.

D. plate is required on each end-support column.

inimum concrete strength f'c = 3500 psi.

read and cap both ends of steel conduits.

INDIANA DEPARTMENT OF TRANSPORTATION

SIGN BOX TRUSS STRUCTURE EXTENDED SPAN DRAWING INDEX AND GENERAL NOTES

EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

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1. Maximum deviation of any chord from a straight line in any section shall be 1/8 in. for box truss to be a maximum of 3/8 in. out of a straight line over the entire length of the structure in the vertical

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SIGN BOX TRUSS STRUCTURE **EXTENDED SPAN PLAN & ELEVATION**

EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

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MAX.	MAX. MOUNTING HEIGHT	СНО	ORD	TRUS	S MEM	BERS, HORIZ	ALUM ONTAL		1 FICAL	HORIZ		HORIZ	E	END-S	UPPO ONAL	RT ME	MBER UMN	S, STEEL	E
SPAN	Н		a)	(DIAC (DIAG (DIA	f		g		<u>ן</u>	j	
FT.	FT.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.	DIA. IN.	IHK IN.		
130	28'-6"	7.00	0.500	3.00	0.375	4.00	0.375	3.00	0.500	4.00	0.500	5.00	0.375	8.00	0.593	18.00	0.562		
142	28'-6"	7.50	0.500	4.00	0.375	4.00	0.375	4.00	0.500	4.00	0.500	5.00	0.375	8.00	0.593	18.00	0.562	W 10 x 68 or	
154	28'-6"	9.00	0.500	4.00	0.500	4.00	0.375	4.00	0.500	4.00	0.500	5.00	0.375	8.00	0.593	18.00	0.562	HSS 10" X 10" X 1/2"	RECURR

MAX.

SIGN

AREA

SQ. FT.

1200

TRUSS

TYPE

F

G

Н

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SIGN BOX TRUSS STRUCTURE EXTENDED SPAN TRUSS SECTIONS IN ISOMETRIC VIEWS, TABLE WITH MEMBER SIZES

IVE FOR LETTINGS ON OR AFTER 03-01-20

RING PLAN DETAIL NO.

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NOTES:

2. Use minimum number of sections for each box truss structure.

DIMENSIONS FOR SIGN BOX TRUSSES (130' THRU 154')									
SPAN	EXTERIOR SECTIONS					INTERIOR SECTIONS			
SPAN-TRUSS LENGTH, (FT)	NO. OF EXT. SECTIONS	NO. OF PANELS PER SECTION	VARIABLE END DIMEN.	PANEL LENGTH	SECTION LENGTH	NO. OF INT. SECTIONS	NO. OF PANELS PER SECTION	PANEL LENGTH	SECTION LENGTH
130	2	5	0" - 6 1/2"	6'-1 3/4"	33'-0 1/4"	2	5	6'-1 3/4"	32'-8 3/4"
131	2	5	0" - 6 1/4"	6'-2 3/8"	33'-3 1/8"	2	5	6'-2 3/8"	32'-11 7/8"
132	2	5	0" - 6"	6'-3"	33'-6"	2	5	6'-3"	33'-3"
133	2	5	0" - 7"	6'-3 1/2"	33'-9 1/2"	2	5	6'-3 1/2"	33'-5 1/2"
134	2	5	0" - 6 3/4"	6'-4 1/8"	34'-0 3/8"	2	5	6'-4 1/8"	33'-8 5/8"
135	2	5	0" - 6 1/2"	6'-4 3/4"	34'-3 1/4"	2	5	6'-4 3/4"	33'-11 3/4"
136	2	5	0" - 6 1/4"	6'-5 3/8"	34'-6 1/8"	2	5	6'-5 3/8"	34'-2 7/8"
137	2	5	0" - 6"	6'-6"	34'-9"	2	5	6'-6"	34'-6"
138	2	6	0" - 6 7/8"	5'-11 3/8"	38'-0 1/8"	2	5	5'-11 3/8"	31'-8 7/8"
139	2	6	0" - 7 3/8"	5'-11 7/8"	38'-3 5/8"	2	5	5'-11 7/8"	31'-11 3/8"
140	2	6	0" - 6 1/2"	6'-0 1/2"	38'-6 1/2"	2	5	6'-0 1/2"	32'-2 1/2"
141	2	6	0" - 7"	6'-1"	38'-10"	2	5	6'-1"	32'-5"
142	2	6	0" - 6 1/8"	6'-1 5/8"	39'-0 7/8"	2	5	6'-1 5/8"	32'-8 1/8"
143	2	6	0" - 6 5/8"	6'-2 1/8"	39'-4 3/8"	2	5	6'-2 1/8"	32'-10 5/8"
144	2	6	0" - 7 1/8"	6'-2 5/8"	39'-7 7/8"	2	5	6'-2 5/8"	33'-1 1/8"
145	2	6	0" - 6 1/4"	6'-3 1/4"	39'-10 3/4"	2	5	6'-3 1/4"	33'-4 1/4"
146	2	6	0" - 6 3/4"	6'-3 3/4"	40'-2 1/4"	2	5	6'-3 3/4"	33'-6 3/4"
147	2	6	0" - 5 7/8"	6'-4 3/8"	40'-5 1/8"	2	5	6'-4 3/8"	33'-9 7/8"
148	2	6	0" - 6 3/8"	6'-4 7/8"	40'-8 5/8"	2	5	6'-4 7/8"	34'-0 3/8"
149	2	6	0" - 6 7/8"	6'-5 3/8"	41'-0 1/8"	2	5	6'-5 3/8"	34'-2 7/8"
150	2	6	0" - 7 1/2"	5'-11 3/8"	38'-0 3/4"	2	6	5'-11 3/8"	37'-8 1/4"
151	2	6	0" - 7 1/2"	5'-11 7/8"	38'-3 3/4"	2	6	5'-11 7/8"	37'-11 1/4"
152	2	6	0" - 6"	6'-0 1/2"	38'-6"	2	6	6'-0 1/2"	38'-3"
153	2	6	0" - 6"	6'-1"	38'-9"	2	6	6'-1"	38'-6"
154	2	6	0" - 6"	6'-1 1/2"	39'-0"	2	6	6'-1 1/2"	38'-9"

1. All panels on a truss shall be the same length. The minimum panel length is 5 ft. 0 in. and the maximum is 6 ft. 6 in.

3. Camber diagrams for truss structures with 4 sections is shown. Cambers shown are for fabrication only and are measured with trusses fully supported at no-load conditions. Allowable camber tolerance for truss is 25% of specific camber value.



INDIANA DEPARTMENT OF TRANSPORTATION

SIGN BOX TRUSS STRUCTURE EXTENDED SPAN TABLE OF DIMENSIONS, SPANS 130' THRU 154' AND CAMBER

EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

RECURRING PLAN DETAIL NO. 802-T-222d

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EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

SIGN BOX TRUSS STRUCTURE EXTENDED SPAN FLANGE, CHORD END PLATE, AND WIRE OUTLET DETAILS

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DIMENSION									
١	В	С	D						
"	10"	5 1/2"	1 3/4"						
/2"	10 1/2"	6"	2"						
"	12"	7 1/2"	2"						





	SPACER ASSEMBLY DIMENSIONS										
TRUSS TYPE	END-SUPPORT COLUMN SIZE O.D (h)	CHORD O. D. (a)	Ø OF U-BOLT BEND (D)	E	Z	L					
F	18"	7"	7 1/16"	8"	2"	26"					
G	18"	7 1/2"	7 9/16"	8 1/2"	1 3/4"	26"					
Н	18"	9"	9 1/16"	10"	1"	26"					

ELEVATION END SUPPORT SPACER ASSEMBLY DETAIL



NOTES:

(1) Provide isolation from steel-dissimilar metal as required.

(2) For trusses, type F, the 1 in. stem plate is not required. Fillet weld front and rear plates together. Spacer assembly is not required for Truss Type G & H.

(3) Dimension E is equal to the diameter of chord (a) plus 1 in.

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SIGN BOX TRUSS STRUCTURE EXTENDED SPAN END-SUPPORT

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UPPER CHORD CONNECTION DETAILS

EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

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(1) Toe edge of diagonal member shall be cut back to facilitate throat thickness. See Standard Drawing E 802-SBTX-05, detail F.

(2) Cut holes in end support columns for W-beams to pass through. Holes have 1/8 in. maximum clearance to W-beam. Hole in opposite sides of column to be checked for proper alignment prior to cutting.

(3) Provide neoprene pads at all chord-to-W-beam bearing surfaces.

(4) A corner brace is required on each of the eight external corners of exterior and interior sections. Each brace shall be 1 ft. 9 in. x 3 in. x 1/2 in. See Standard Drawing E 802-SBTX-05, detail E.

SS TYPE	D	а	b
F	7"	25/32"	31/32"
G	7 1/2"	25/32"	31/32"
Н	9"	25/32"	31/32"

R = D/2 + 1/32"

R + b = Offset

D = Outside Diameter of Chord(a).

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SIGN BOX TRUSS STRUCTURE EXTENDED SPAN END-SUPPORT LOWER CHORD CONNECTION AND SADDLE SHIM DETAILS

EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

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(1) Toe edge of diagonal member shall be cut back to facilitate throat thickness. See Standard Drawing E 802-SBTX-05, Detail F.

(2) Cut holes in end support columns for square beams to pass through. Holes to have 1/8 in. maximum clearance to square beam. Holes in opposite sides of column to be checked for proper alignment prior to

(3) Provide neoprene pads at all chord-to-square-beam bearing surfaces.

(4) A corner brace is required on each of the eight external corners of exterior and interior sections. See Standard Drawing E 802-SBTX-05,

TRUSS TYPE	D	а	b
F	7"	25/32"	31/32"
G	7 1/2"	25/32"	31/32"
Н	9"	25/32"	31/32"

R = D/2 + 1/32''

R + b = Offset

D = Outside Diameter of Chord(a).

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SIGN BOX TRUSS STRUCTURE EXTENDED SPAN END-SUPPORT LOWER CHORD CONNECTIONS, ALTERNATE HSS BEAM, AND SADDLE SHIM DETAILS

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EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

SIGN BOX TRUSS STRUCTURE EXTENDED SPAN END-SUPPORT BASE PLATE

INDIANA DEPARTMENT OF TRANSPORTATION

•Type B-14 base plate for end-support column diameter of 14 in.
•Type B-18 base plate for end-support column diameter of 18 in.



I.D PLATE

I.D PLATE CHANNEL



NOTES:

Α

1. I.D. plate is required on each end-support column. I.D. plate is a 1/8 in. thick stainless steel plate.

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EXTENDED SPAN I.D. PLATE DETAILS

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SIGN BOX TRUSS STRUCTURE







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SPREAD FOUNDATION AT 33" CONCRETE BARRIER WALL							
EPOXY-0	EPOXY-COATED REINFORCING BARS						
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT				
501	32	7'-6"					
502	64	3'-9"					
#5	64	6'-6"					
#5	28	30'-8"					
Total #5			1830 LBS				
#4	64	7'-8"					
Total #4			328 LBS				
Total Epoxy-Co Reinforcing Bar	ated 's		2158 LBS				
CONCRETE, CLASS A							
Total Concrete, Class A 37.0 CYS							
MISCELLANEOUS							
Surface Seal			28.5 SYS				

SPREAD FOUNDATION AT 45" CONCRETE BARRIER WALL							
EPOXY-0	EPOXY-COATED REINFORCING BARS						
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT				
501	32	7'-6"					
502	64	3'-9"					
#5	64	7'-6"					
#5	30	30'-8"					
Total #5			1961 LBS				
#4	64	7'-8"					
Total #4			328 LBS				
Total Epoxy-Co Reinforcing Bai	oated rs		2289 LBS				
	CONCRETE, CLASS A						
Total Concrete,	Total Concrete, Class A 38.9 CYS						
MISCELLANEOUS							
Surface Seal	Surface Seal 35.4 SYS						

SPREAD FOUNDATION							
FOR MEDIAN OR SHOULDER, 36" HEIGHT							
EPOXY-0	COATED RE	INFORCING	G BARS				
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT				
501	32	7'-6"					
502	64	3'-9"					
#5	64	7'-6"					
#5	30	30'-8"					
Total #5			1961 LBS				
#4	64	7'-8"					
Total #4			328 LBS				
Total Epoxy-Co Reinforcing Bar	ated s		2289 LBS				
CONCRETE, CLASS A							
Total Concrete,	36.1 CYS						
MISCELLANEOUS							
Surface Seal			29.2 SYS				

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EFFECTIVE FOR LETTINGS ON OR AFTER 03-01-20

SIGN BOX TRUSS STRUCTURE EXTENDED SPAN TYPE F, G, H SPREAD FOUNDATIONS QUANATITIES

INDIANA DEPARTMENT OF TRANSPORTATION







ALTERNATE DRILLED SHAFT FOUNDATION AT 33" CONCRETE BARRIER WALL							
EPOXY-COATED REINFORCING BARS							
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT				
901	4	20'-8"					
#9	4	18'-2"					
#9	22	32'-9"					
Total #9			2978 LBS				
503	19	8'-0"					
504	38	3'-4"					
505	38	4'-11"					
#5	6	18'-2"					
Total #5			599 LBS				
401	62	10'-0"					
Total #4			415 LBS				
Total Epoxy-Co Reinforcing Bar	ated 's		3992 LBS				
CONCRETE, CLASS A							
Total Concrete, Class A 25.2 CYS							
	MISCELLANEOUS						
Surface Seal		17.6 SYS					

ALTERNATE DRILLED SHAFT FOUNDATION								
AT 45"	AT 45" CONCRETE BARRIER WALL							
EPOXY-0	EPOXY-COATED REINFORCING BARS							
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT					
901	4	20'-8"						
#9	4	18'-2"						
#9	22	33'-9"						
Total #9			3053 LBS					
503	19	8'-0"						
505	38	4'-11"						
506	38	4'-4"						
#5	8	18'-2"						
Total #5			677 LBS					
401	62	10'-0"						
Total #4			415 LBS					
Total Epoxy-Co Reinforcing Bar	ated 's		4145 LBS					
	CONCRETE, CLASS A							
Total Concrete,	Total Concrete, Class A 26.0 CYS							
MISCELLANEOUS								
Surface Seal	Surface Seal 21.7 SYS							
· · · · ·								

ALTERNATE FOR MEDIA	E DRILLED AN OR SHC	SHAFT FOL ULDER, 36	INDATION " HEIGHT
EPOXY-0	COATED RE	INFORCING	G BARS
MARK OR SIZE	NO. OF BARS	LENGTH	WEIGHT
901	4	20'-8"	
902	10	10'-5"	
#9	4	18'-2"	
#9	12	10'-5"	
#9	22	29'-6"	
Total #9			3514 LBS
507	38	8'-2"	
#5	8	18'-2"	
Total #5			475 LBS
401	62	10'-0"	
Total #4			415 LBS
Total Epoxy-Coated Reinforcing Bars			4404 LBS
	CONCRETE	, CLASS A	
Total Concrete, Class A			21.5 CYS
	MISCELL	ANEOUS	
Surface Seal			21.6 SYS

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SIGN BOX TRUSS ST EXTENDED SPAN TYF ALTERNATE DRILLEI FOUNDATIONS QUA
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SIGN BOX TRUSS STRUCTURE EXTENDED SPAN TYPE F, G, H ALTERNATE DRILLED SHAFT FOUNDATIONS QUANTITIES

NDIANA DEPARTMENT OF TRANSPORTATION