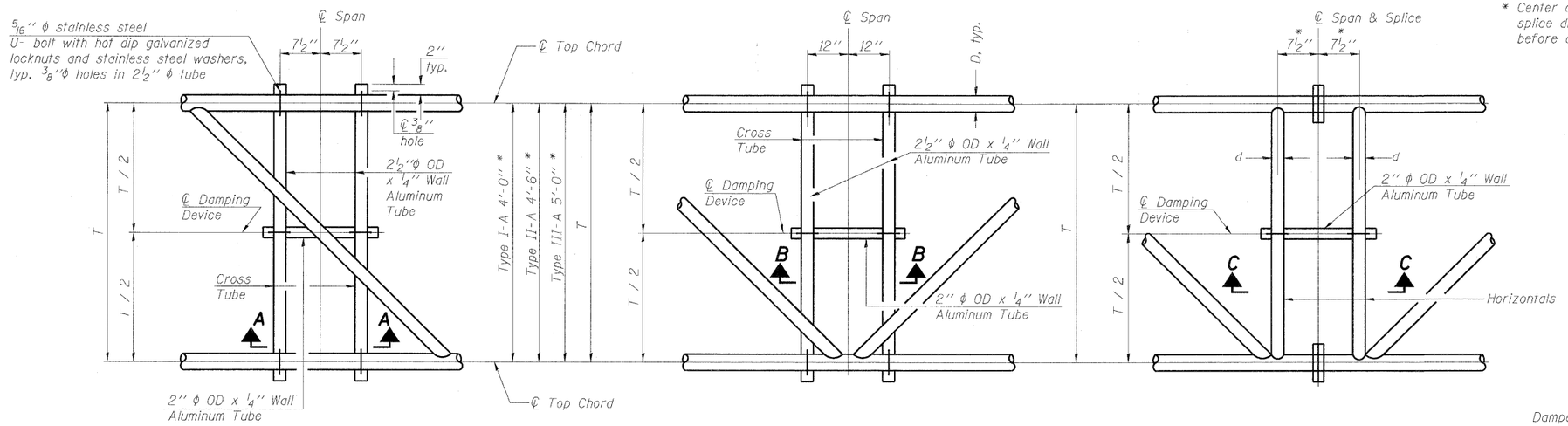


* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

PLAN DETAIL "A"
℄ Span between Panel Points.

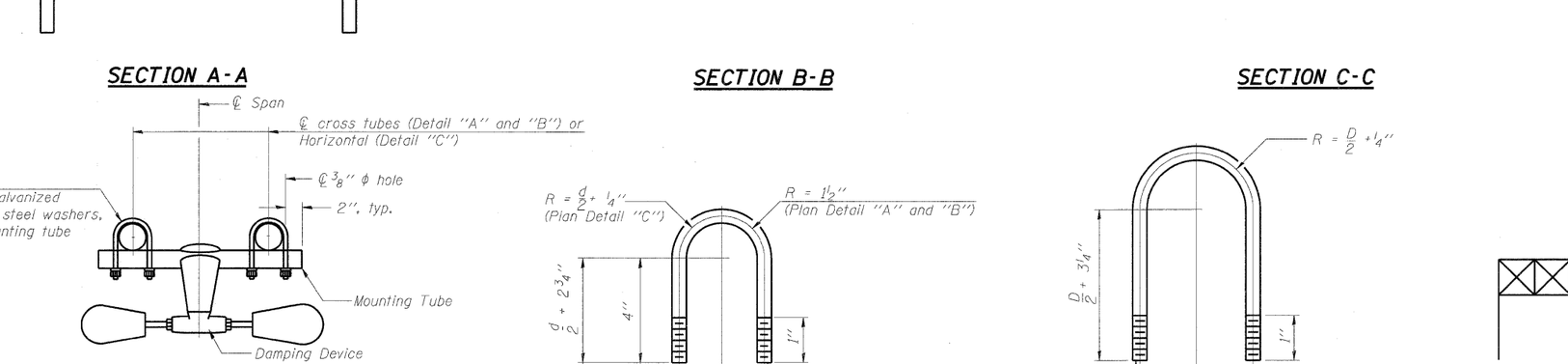
PLAN DETAIL "B"
℄ Span at Panel Point

PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

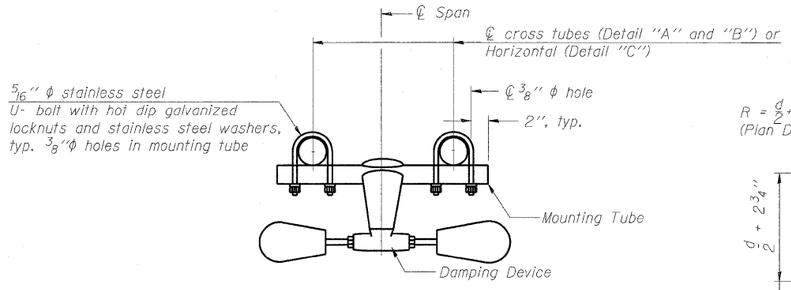
NOTES

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...

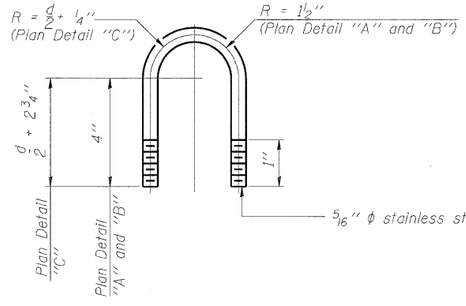


SECTION A-A



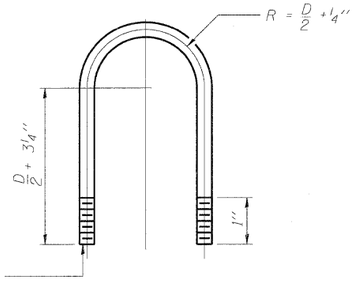
TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)

SECTION B-B

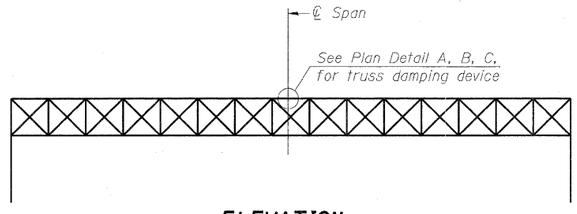


DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

SECTION C-C



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

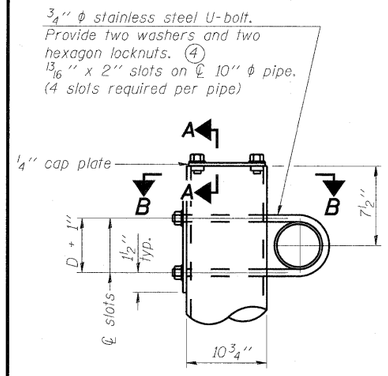


ELEVATION
Aluminum Overhead Sign Truss

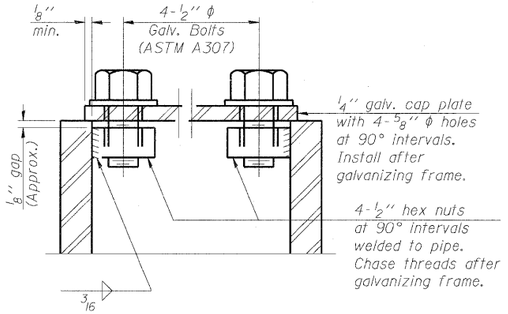
OS-A-D 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURE DAMPING DEVICE
		CHECKED - MPW	REVISED -		
	PLOT SCALE =	DRAWN - PMK	REVISED -		SHEET NO. 5 OF 17 SHEETS
	PLOT DATE =	CHECKED - MPW	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	401
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

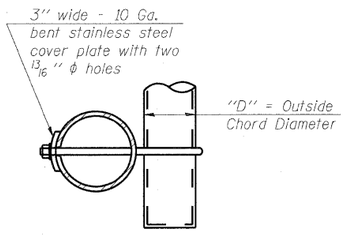


DETAIL A

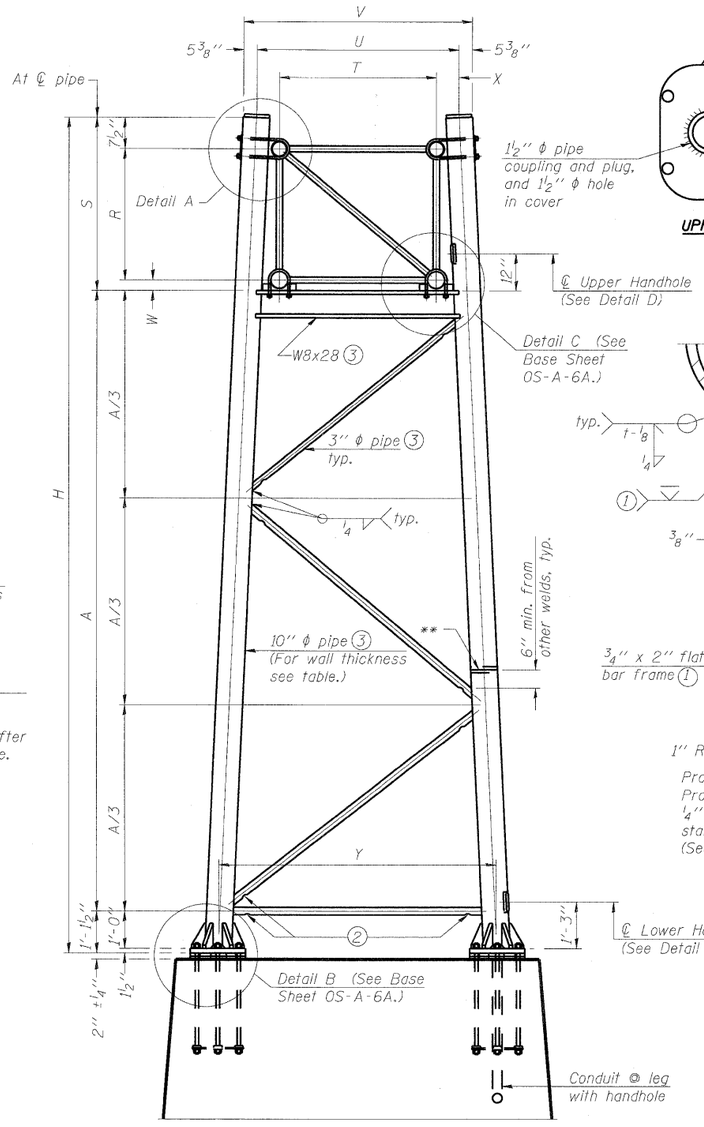


SECTION A-A

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

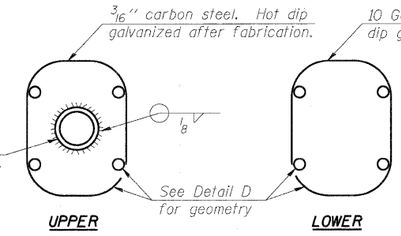


SECTION B-B

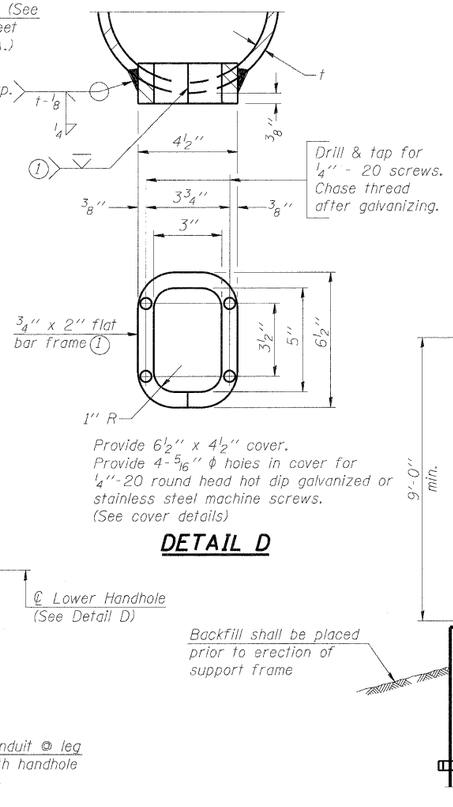


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

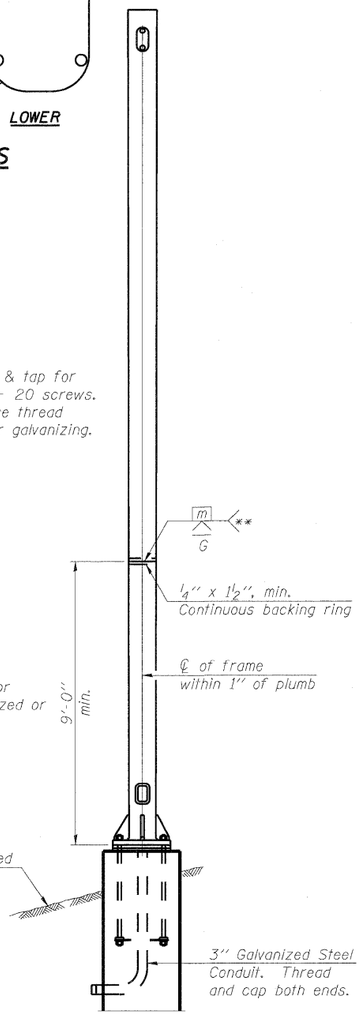
SIDE ELEVATION



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

(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.

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"

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.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				
8S082105SL003.0	78+19.81	X		II-A	0.365"	29.00'	21.60'
8S082105SL003.0	78+19.81		X	II-A	0.365"	26.00'	18.60'

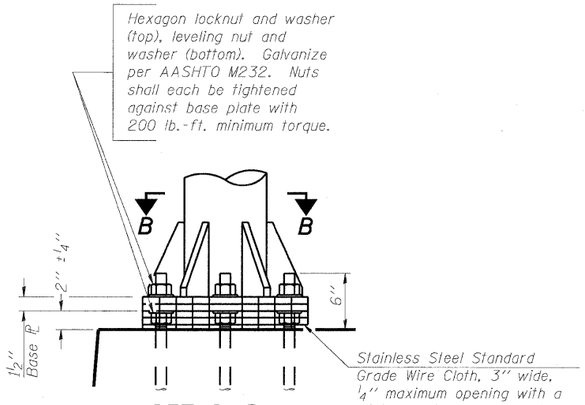
OS-A-6 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

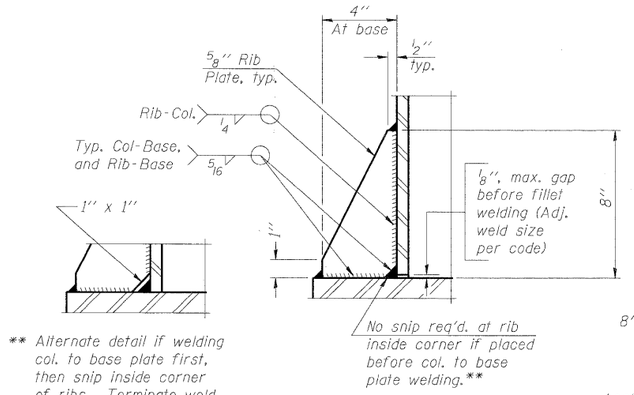
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS
SHEET NO. 6 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	402
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



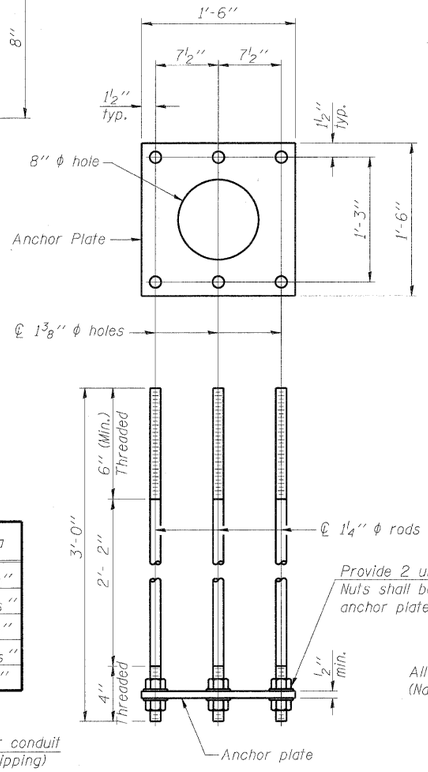
DETAIL B

Ribs shall be cut to fit slope of pipe.



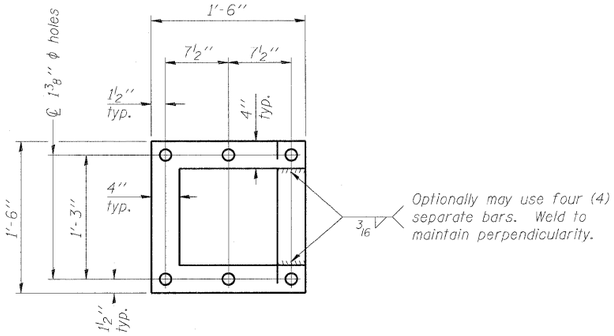
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

SECTION D-D

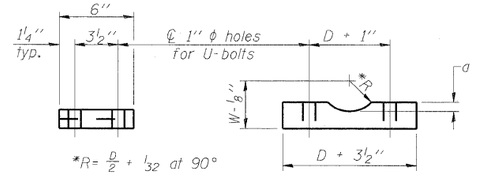


ANCHOR ROD DETAIL

Spread Footing Foundation



POSITIONING PLATE(S)



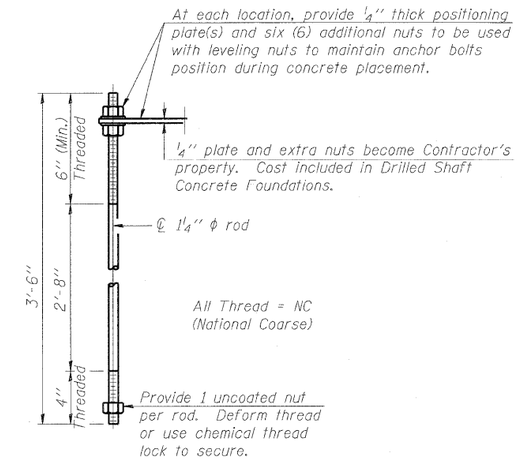
*R = D/2 + 1/32 at 90°

D = Outside Diameter of Chord.
For W, see Base Sheet OS-A-6.

SADDLE SHIM DETAIL

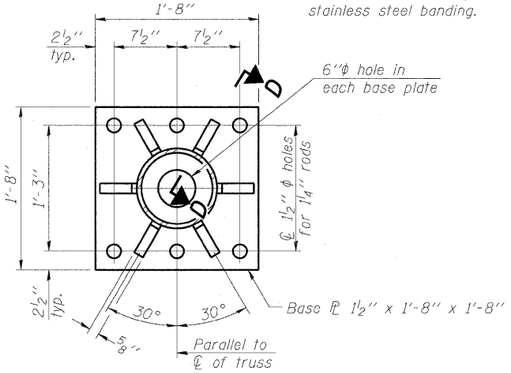
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

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

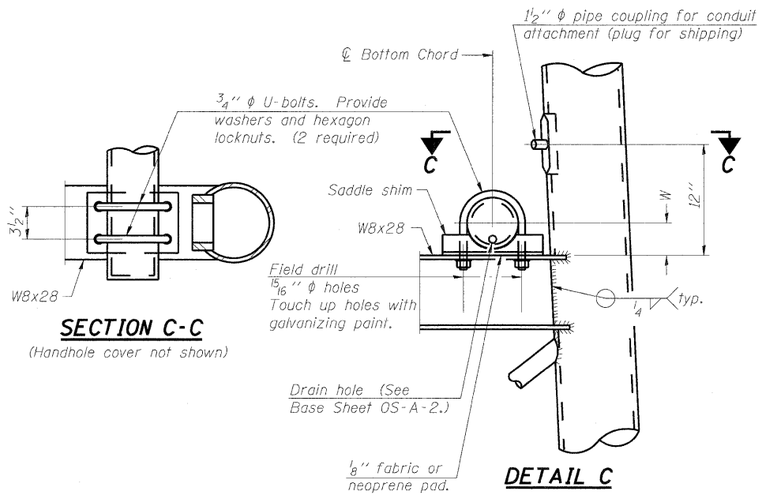


ANCHOR ROD DETAIL

Drilled Shaft Foundation



SECTION B-B



SECTION C-C

(Handhole cover not shown)

DETAIL C

Anchor rods shall conform to AASHTO M314 Grade 36 or 50 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12" per AASHTO M232. No welding shall be permitted on rods.

10" ϕ PIPE SUPPORT FRAME DETAILS

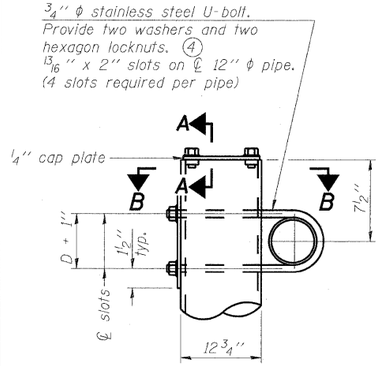
OS-A-6A 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

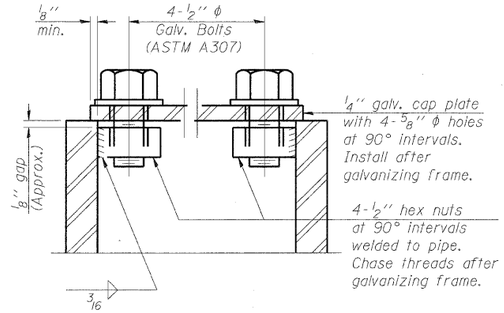
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS – ALUMINUM TRUSS
SHEET NO. 7 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	403
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

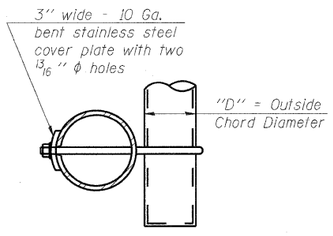


DETAIL A

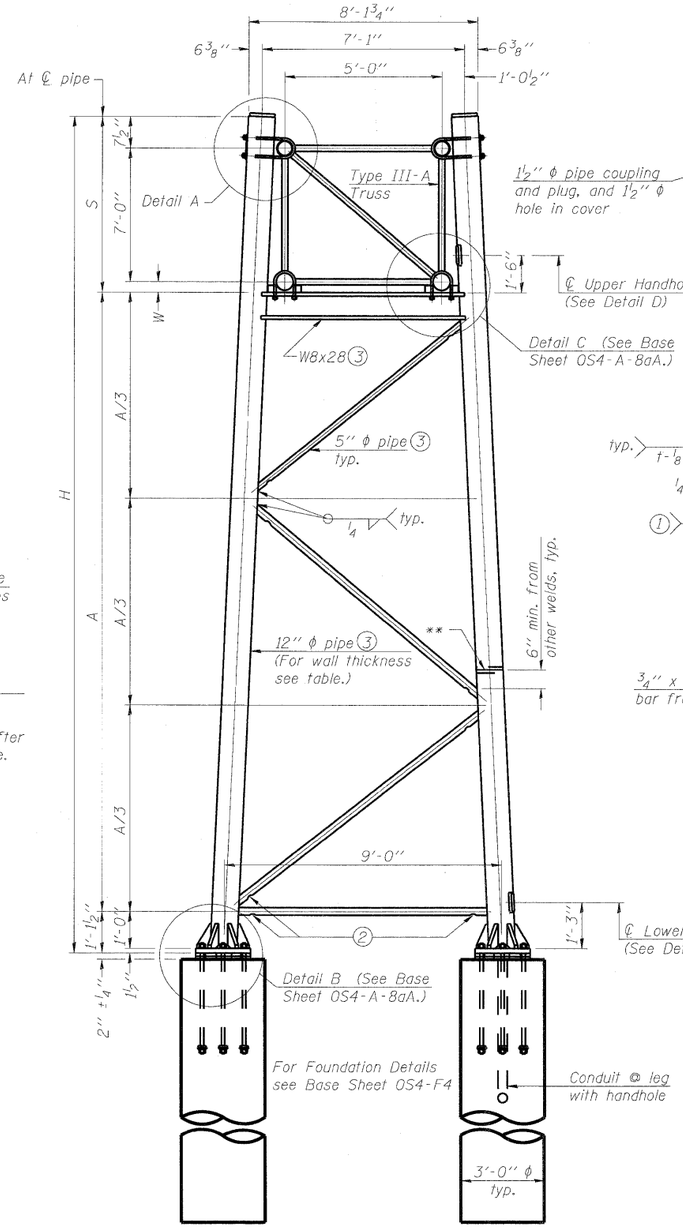


SECTION A-A

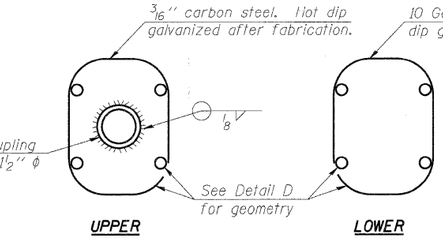
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



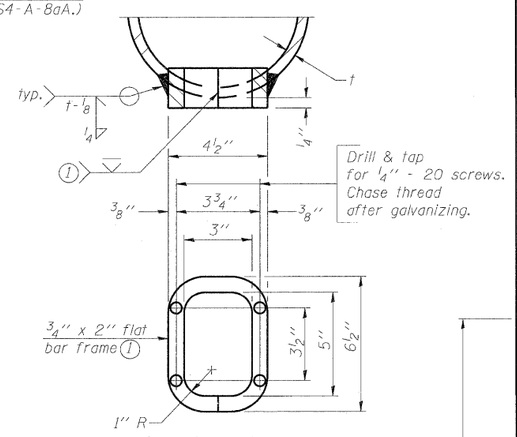
SECTION B-B



SIDE ELEVATION



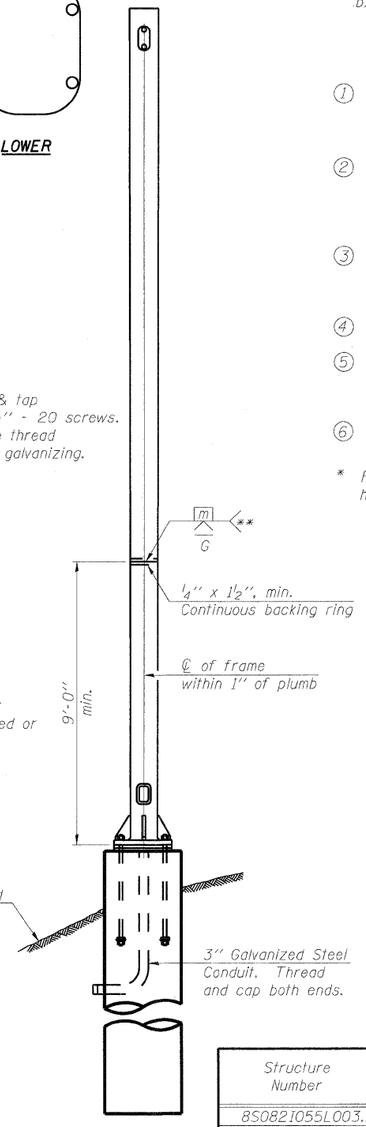
HANDHOLE COVERS



Provide 6 1/2" x 4 1/2" cover.
Provide 4-5/16" ϕ holes in cover for 1/4"-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D

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"



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

(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.

* 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			
8S082I055L003.2	68+75.00		X	0.333"	33.50'	24.35'
8S082I055L003.2	68+75.00	X		0.333"	28.50'	19.35'
8S082I055R003.1	88+00.00		X	0.333"	30.50'	21.35'
8S082I055R003.1	88+00.00	X		0.333"	30.00'	20.85'
8S082I064L003.0	110+12.00	X		0.375"	29.00'	19.85'
8S082I064L003.0	110+12.00		X	0.375"	25.00'	15.85'

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.

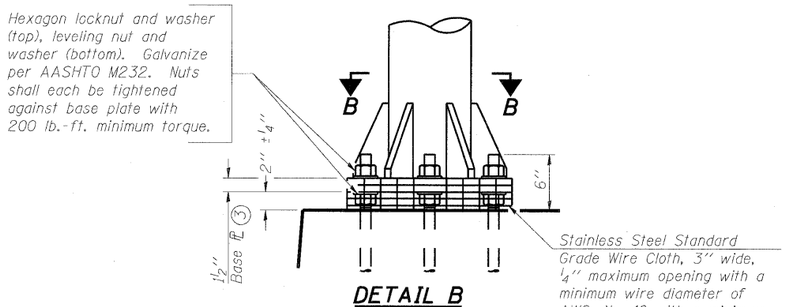
OS4-A-8a 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

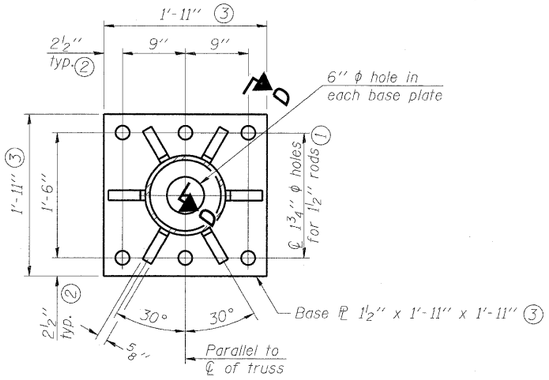
OVERHEAD SIGN STRUCTURES – SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS
SHEET NO. 8 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	404
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

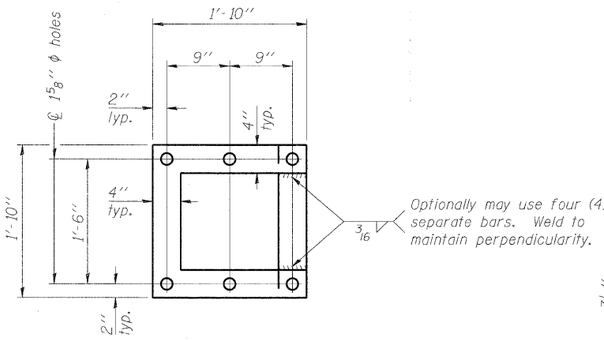


DETAIL B

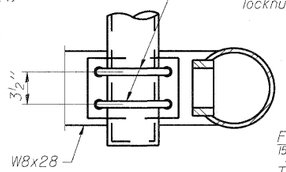
Ribs shall be cut to fit slope of pipe.



SECTION B-B

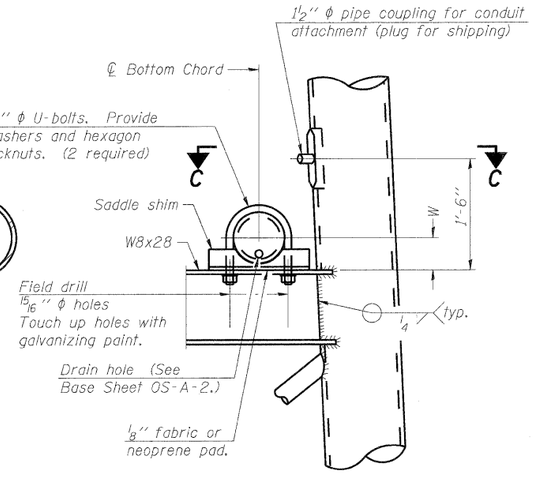


POSITIONING PLATE(S)

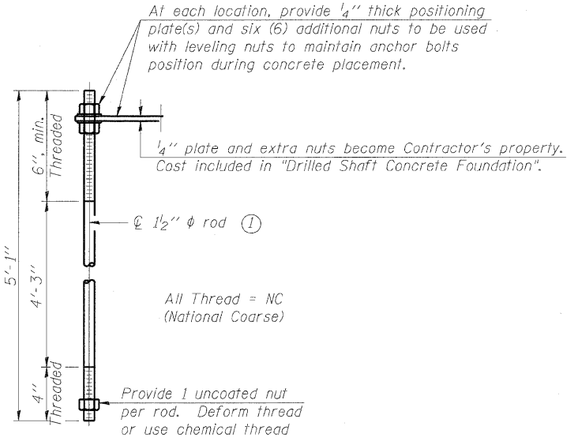


SECTION C-C

(Handhole cover not shown)

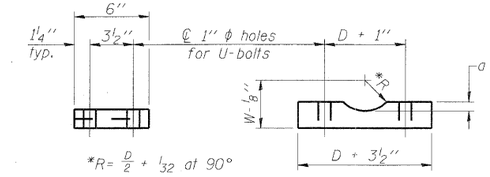


DETAIL C



ANCHOR ROD DETAIL

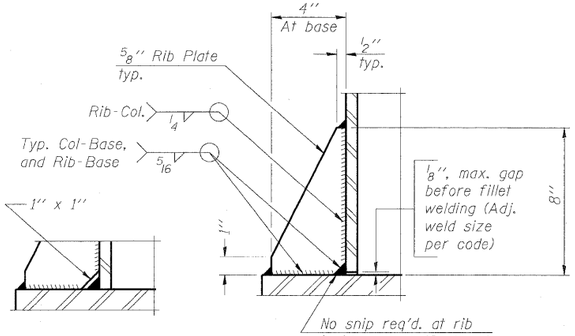
Anchor rods shall conform to AASHTO M314 Grade 36 or 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



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)



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

SECTION D-D

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''

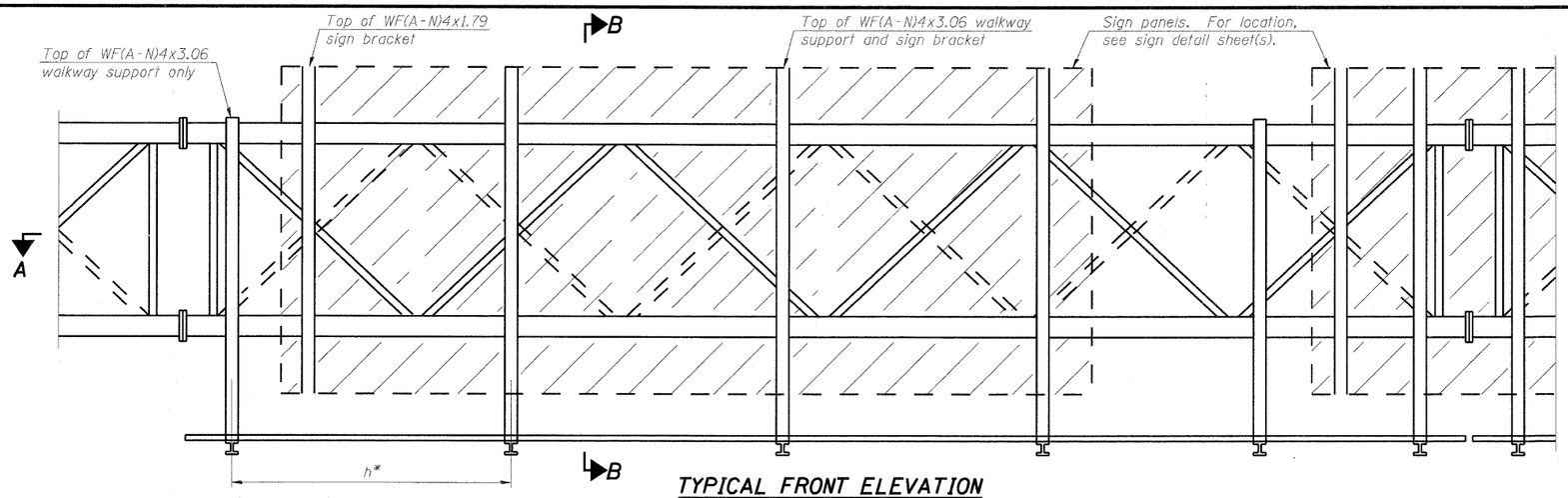
OS4-A-8aA 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

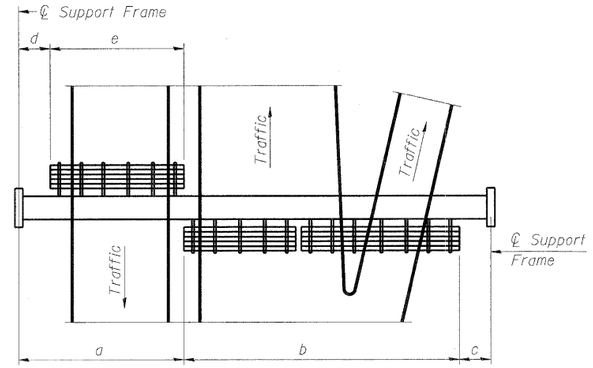
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS
SHEET NO. 9 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	405
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



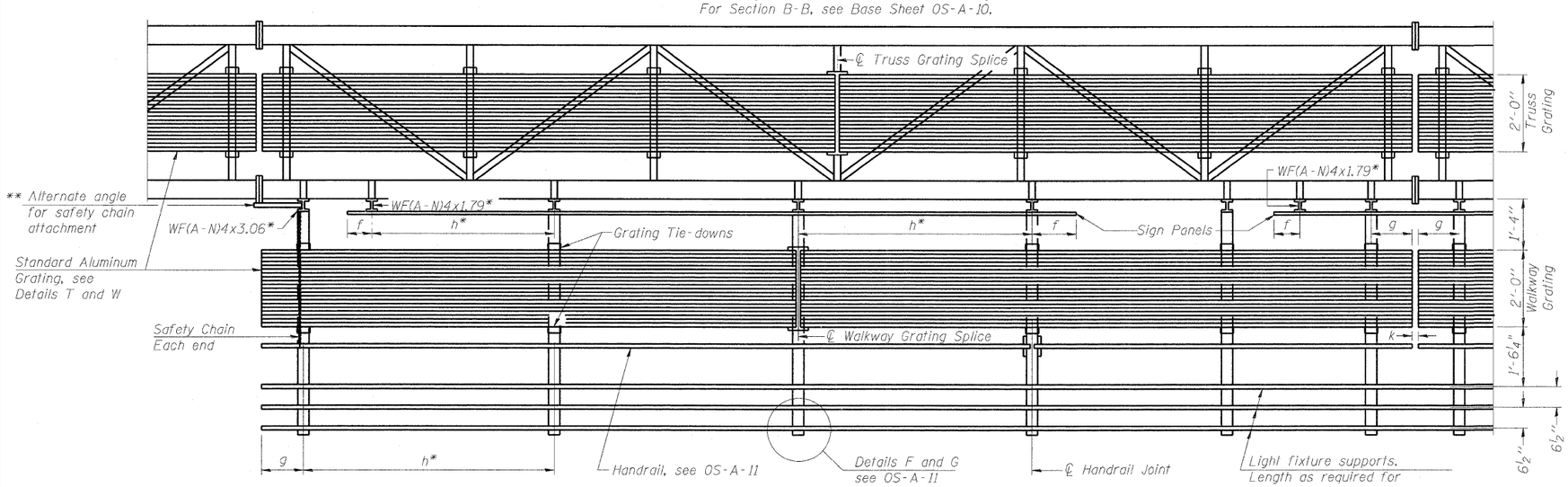
TYPICAL FRONT ELEVATION

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)



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.

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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ 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.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
BS082I055R003.1	88+00.00	11.5'	53.0'	12.5'	-	-	53.0'
BS082I055L003.2	68+75.00	1.5'	60.0'	9.5'	-	-	60.0'
BS082I055L003.0	78+19.81	2.0'	45.0'	24.0'	-	-	45.0'
BS082I064L003.0	110+12.00	14.0'	66.5'	27.5'	-	-	66.5'

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".

Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

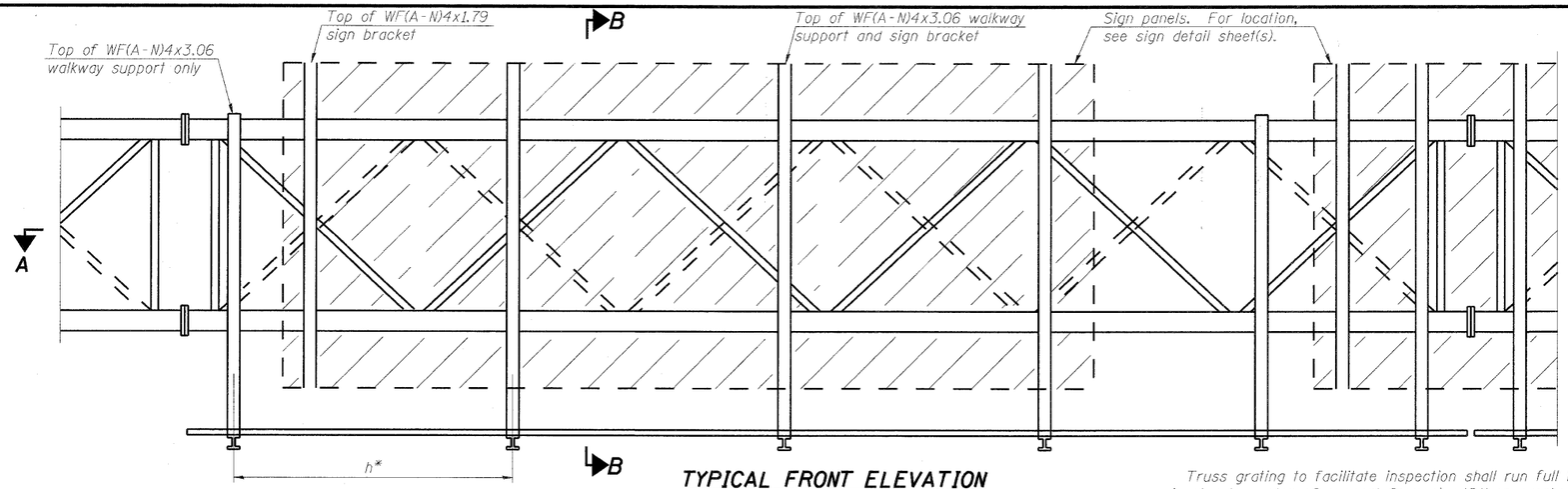
OS-A-9 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

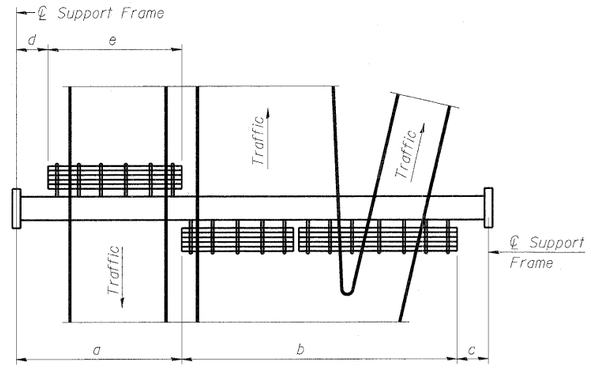
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS
SHEET NO. 10 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	406
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



TYPICAL FRONT ELEVATION

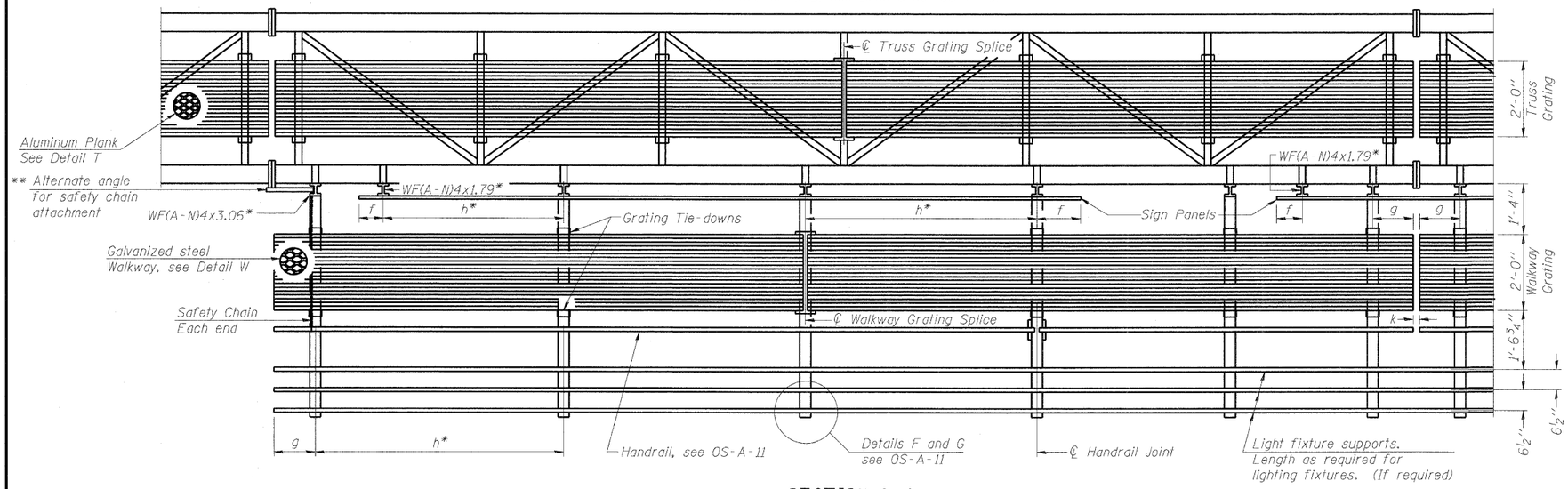
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)

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".



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.

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 ℄ of nearest bracket)
g = 12″ maximum, 4″ minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6′-0″ maximum (℄ to ℄ 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.

Note:

Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-9, and may be substituted by Contractor at no change in contract cost.

Walkway and Truss Grating width dimensions are nominal and may vary ±½″ based on available standard widths.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
8S082I055R003.1	88+00.00	11.5′	53.0′	12.5′	-	-	53.0′
8S082I055L003.2	68+75.00	1.5′	60.0′	9.5′	-	-	60.0′
8S082I055L003.0	78+19.81	2.0′	45.0′	24.0′	-	-	45.0′
8S082I064L003.0	110+12.00	14.0′	66.5′	27.5′	-	-	66.5′

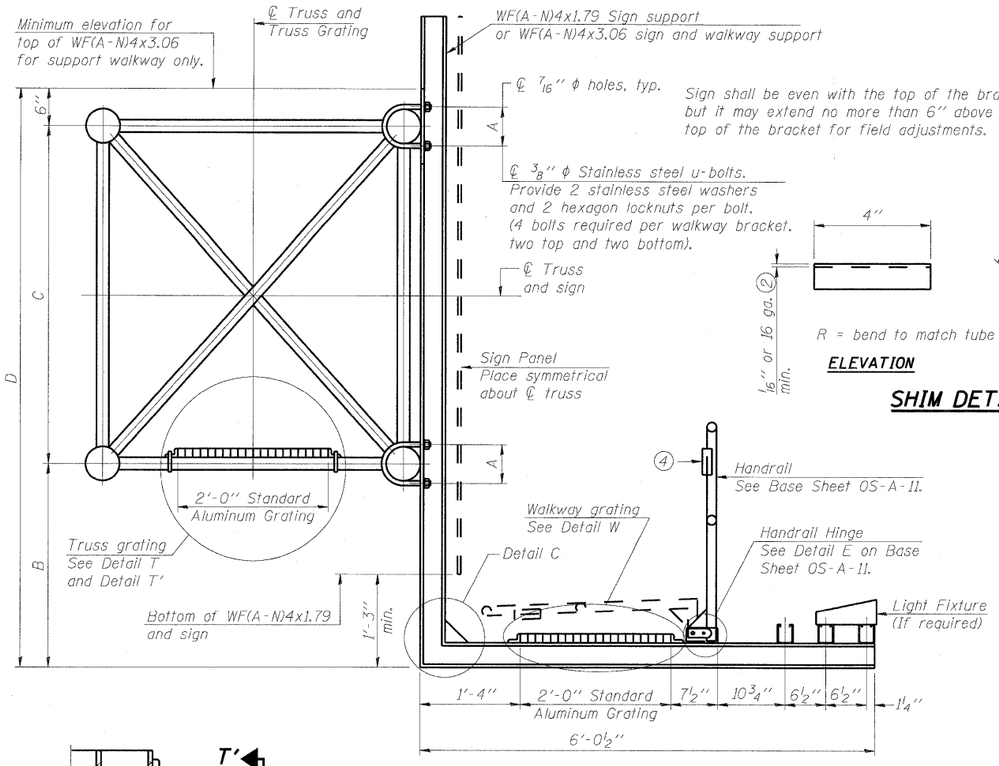
OS-A-9S 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

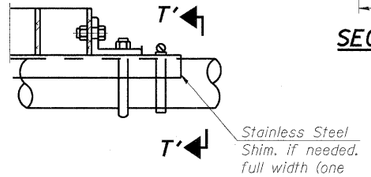
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS
SHEET NO. 11 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	407
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

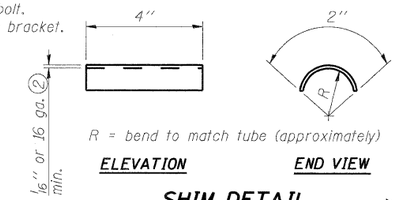


SECTION B-B

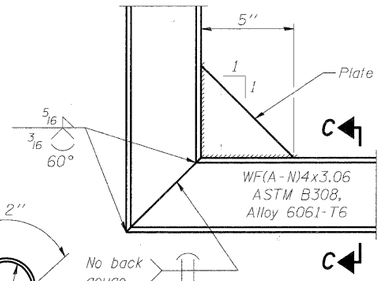


DETAIL T'

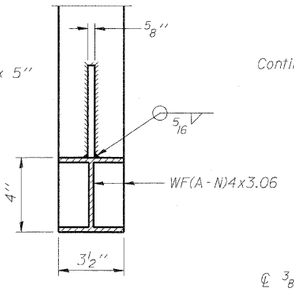
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



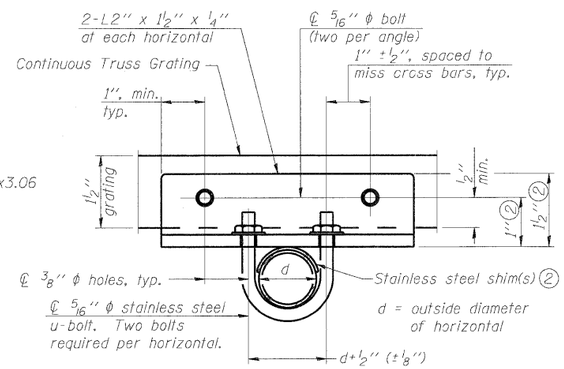
SHIM DETAIL



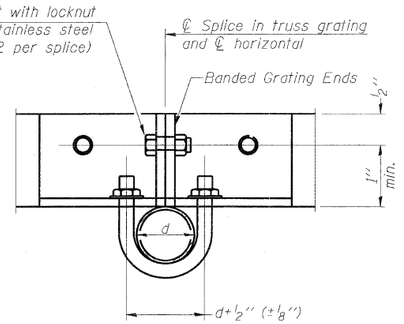
DETAIL C



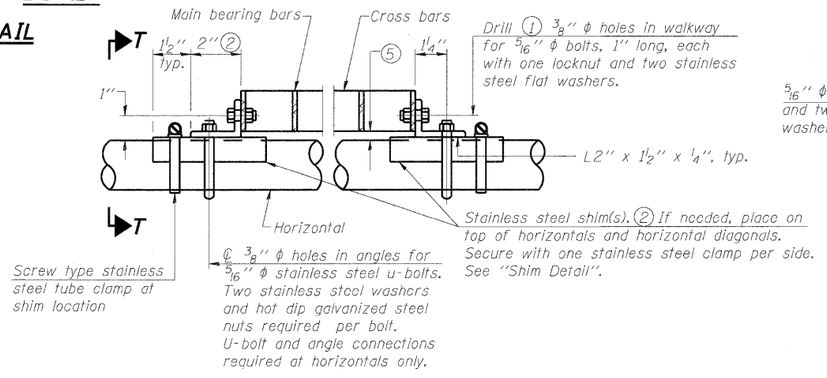
SECTION C-C



SECTION T-T

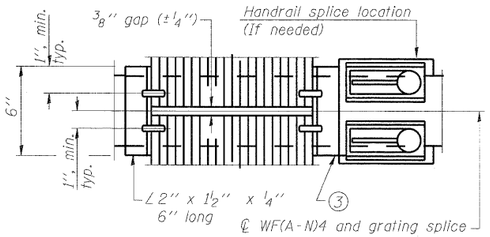


SECTION T'-T'

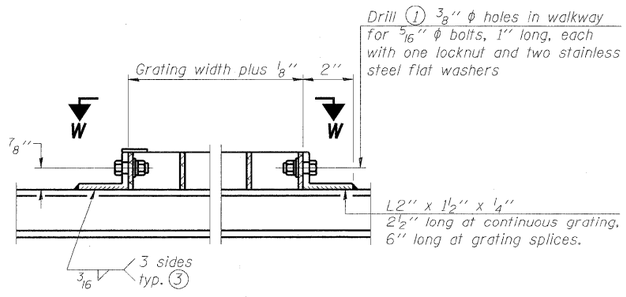


DETAIL T

(Continuous Truss grating)

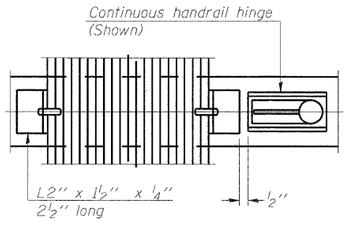


(AT WALKWAY GRATING SPLICE)



DETAIL W

(Walkway grating)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1½" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1½" 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.³ per bar, a depth of 1½", 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
8S0821055R003.1	88+00.00	7½"	7'-9"	5'-6"	13'-9"
8S0821055L003.2	68+75.00	7½"	6'-6"	7'-0"	14'-0"
8S0821055L003.0	78+19.81	6"	8'-10½"	5'-3"	14'-7½"
8S0821064L003.0	110+12.00	7½"	6'-3"	7'-0"	13'-9"

(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 ¼" extension bars. (See Base Sheet OS-A-11.)

(4) ℄ ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

(5) Tube to grating gap may vary from 0 to ½", max. to align walkway, allow for camber, etc.

(6) Based on actual height of tallest sign given on OS-A-1.

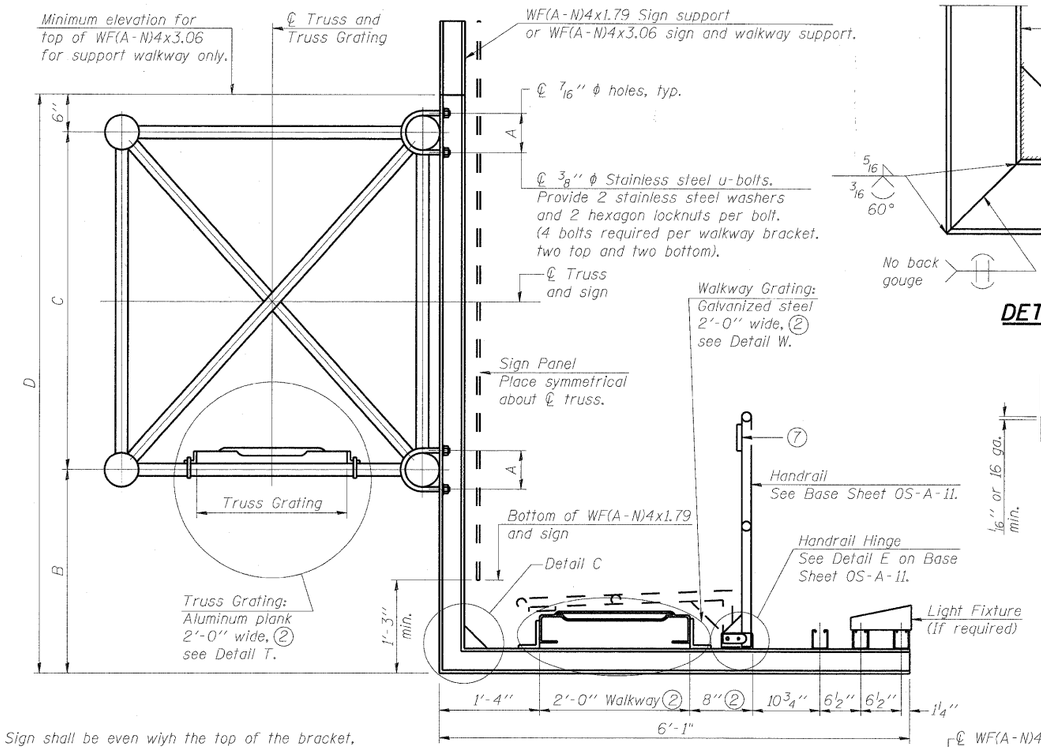
OS-A-10 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

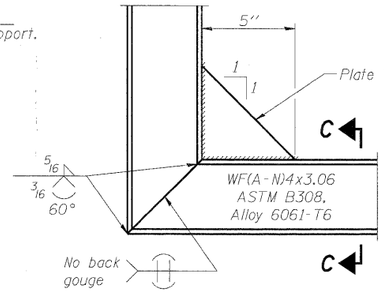
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS
SHEET NO. 12 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	408
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

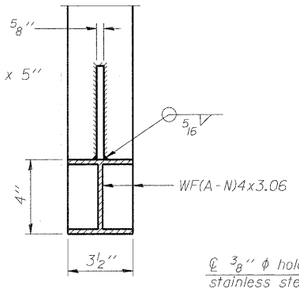


Sign shall be even wiyh the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

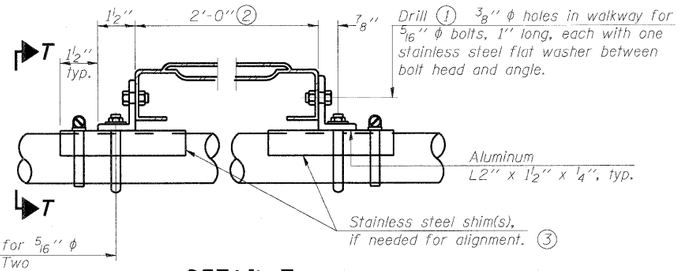
SECTION B-B



DETAIL C



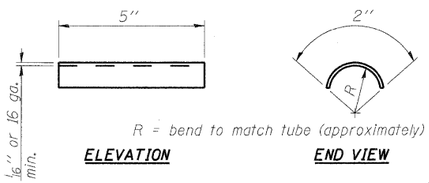
SECTION C-C



℄ 3/8" ϕ holes in angles for 5/16" ϕ stainless steel u-bolts. Two stainless steel washers and hot dip galvanized steel nuts required per bolt. U bolt and angle connections required at horizontals only.

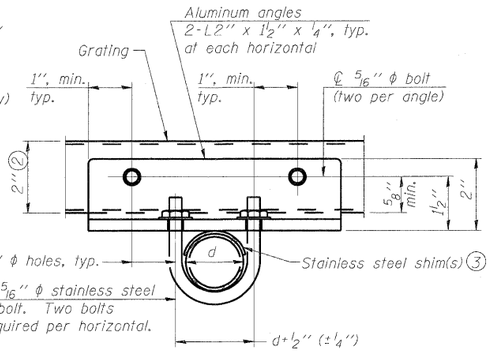
DETAIL T

(Truss grating at horizontal)



ELEVATION END VIEW

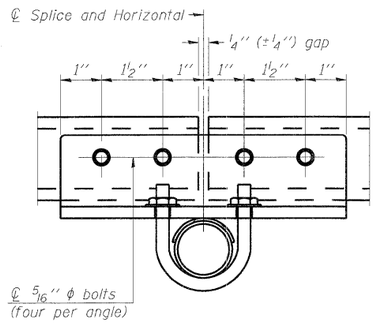
SHIM DETAIL



SECTION T-T

(Truss Grating Continuous)

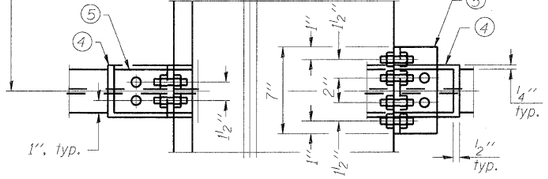
d = outside diameter of horizontal



SECTION T-T

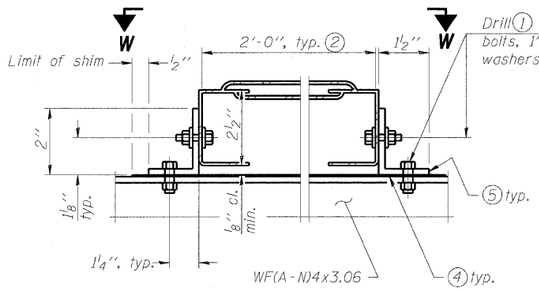
(Truss Grating Splice)

Alternate splice details and locations may be used subject to the Engineer's review and approval.



WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

SECTION W-W



DETAIL W
GALVANIZED STEEL WALKWAY GRATING

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(3) Stainless steel shims shall be placed under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.

(4) 1/16" (or 16 ga.) x 2 1/2" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle. Adhesives for shims shall be suitable for materials joined and full exposure conditions.

(5) Galvanized steel L2" x 2" x 1/4", 3 1/2" long with continuous grating, 7" long at grating splice.

(6) Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-10 and may be substituted by Contractor at no change in contract cost.

(7) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(8) Based on actual height of tallest sign given on OS-A-1.

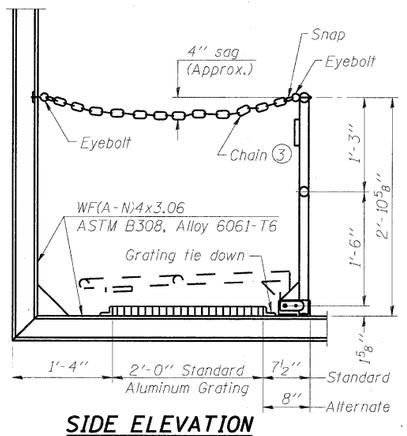
Structure Number	Station	A	(8) B	C	(8) D
8S082I055R003.1	88+00.00	7 1/2"	7'-9"	5'-6"	13'-9"
8S082I055L003.2	68+75.00	7 1/2"	6'-6"	7'-0"	14'-0"
8S082I055L003.0	78+19.81	6"	8'-10 1/2"	5'-3"	14'-7 1/2"
8S082I064L003.0	110+12.00	7 1/2"	6'-3"	7'-0"	13'-9"

ALUMINUM TRUSS GRATING

OS-A-10S 7-1-10

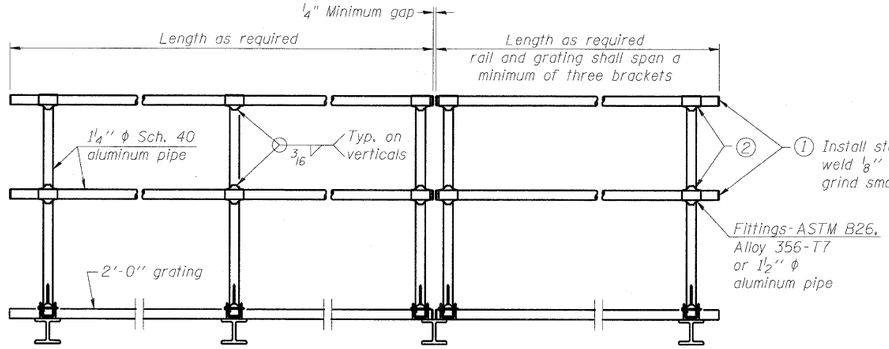
FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES ALTERNATE WALKWAY DETAILS
		CHECKED - MPW	REVISED -		SHEET NO. 13 OF 17 SHEETS
	PLOT SCALE =	DRAWN - PMK	REVISED -		
	PLOT DATE =	CHECKED - MPW	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	409
•64/998/70		CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



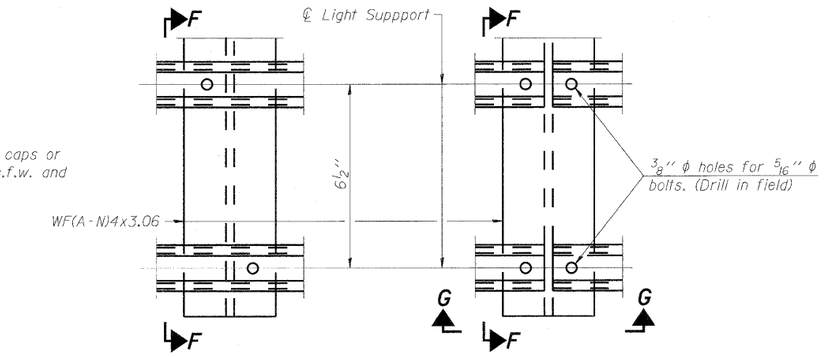
SIDE ELEVATION

(Showing safety chain w/o sign)



FRONT ELEVATION

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

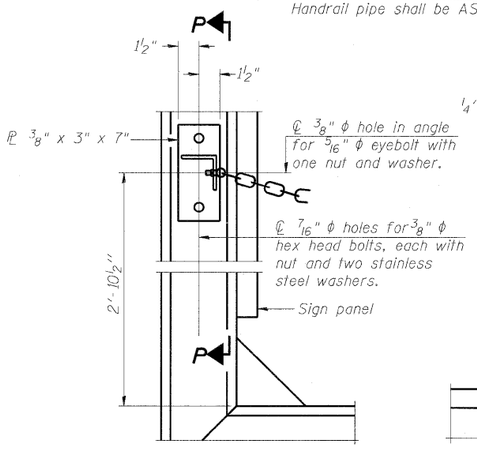


DETAIL F

DETAIL G

HANDRAIL DETAILS

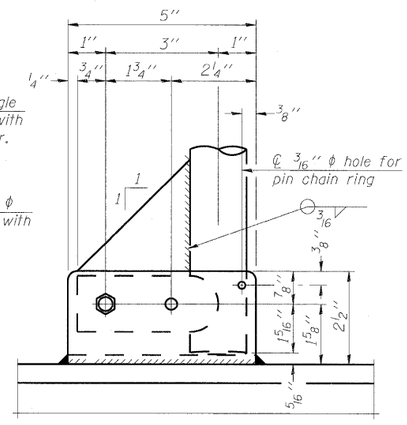
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.



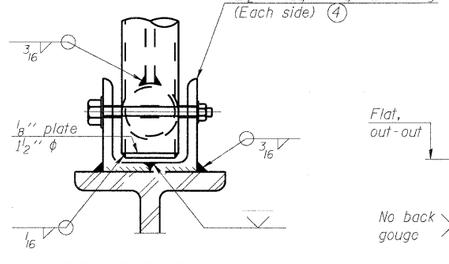
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

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

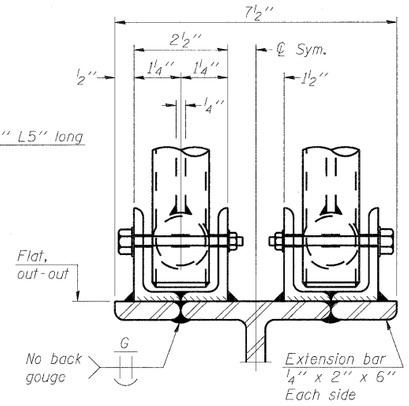


SIDE ELEVATION

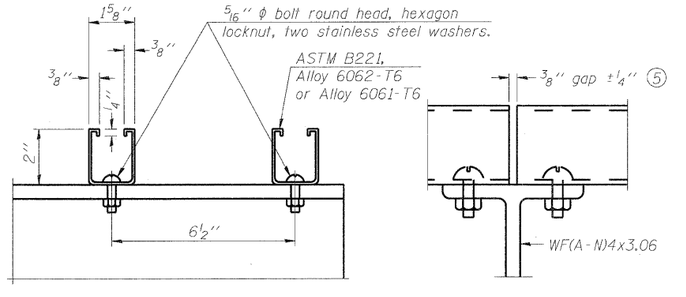


FRONT ELEVATION

See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT (4)

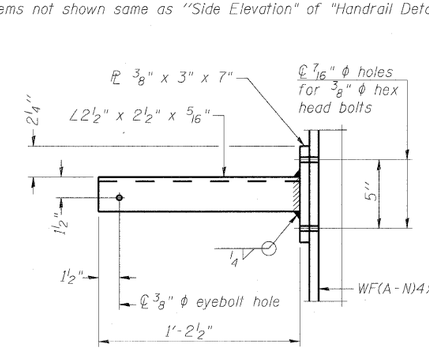


SECTION F-F

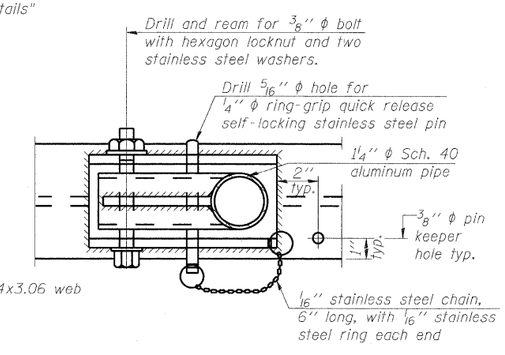
SECTION G-G

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.

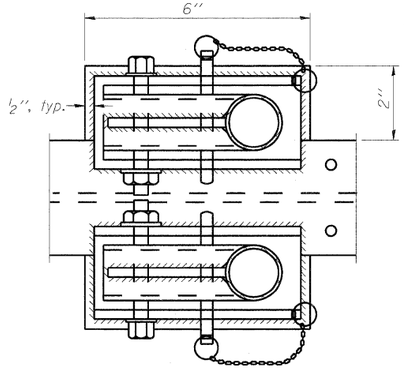


SECTION P-P



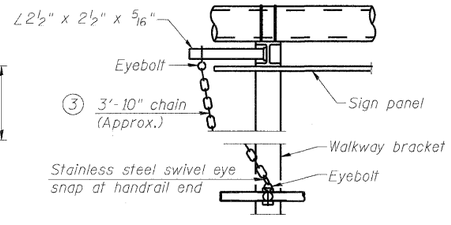
PLAN

DETAIL E HANDRAIL HINGE



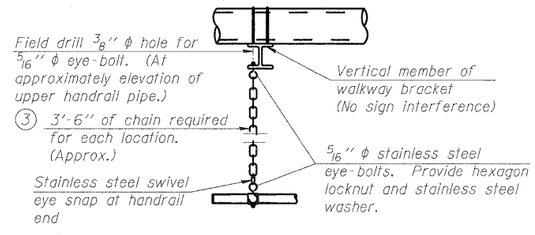
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

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



SAFETY CHAIN

One required for each end of each walkway.

(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.

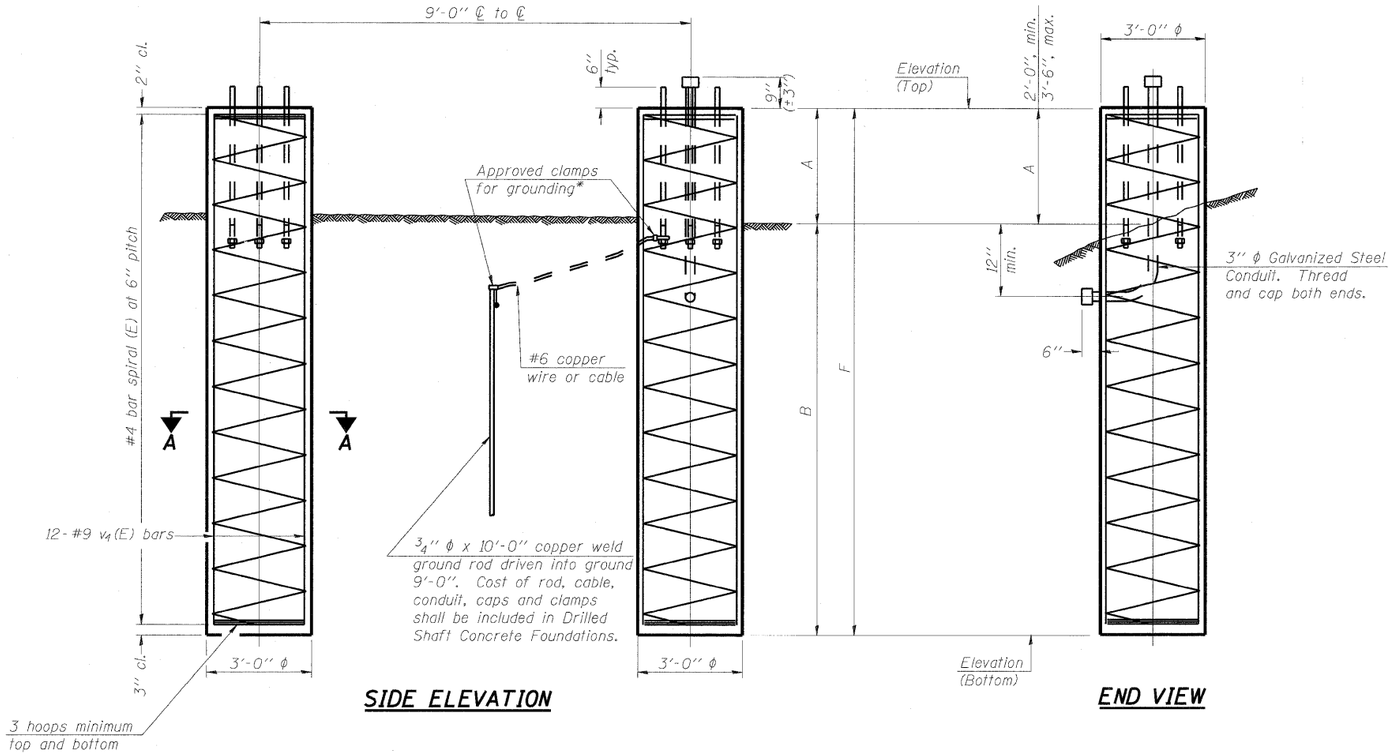
OS-A-11 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

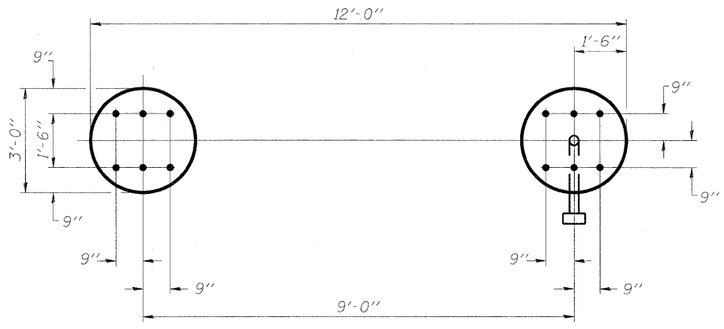
OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS
SHEET NO. 14 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	410
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



SIDE ELEVATION

END VIEW



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.

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.

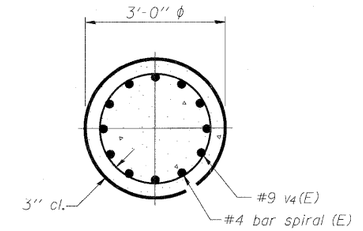
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

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

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	
8S082I055L003.2	68+75.00	-	-	-	-	-	437.42	405.00	2'-5"	30'-0"	32'-5"	17.0
8S082I055R003.1	88+00.00	-	-	-	-	-	433.71	410.79	2'-11"	20'-0"	22'-11"	12.0
8S082I064L003.0	110+12.00	-	-	-	-	-	407.65	357.56	2'-1"	48'-0"	50'-1"	26.2

OS4-F4

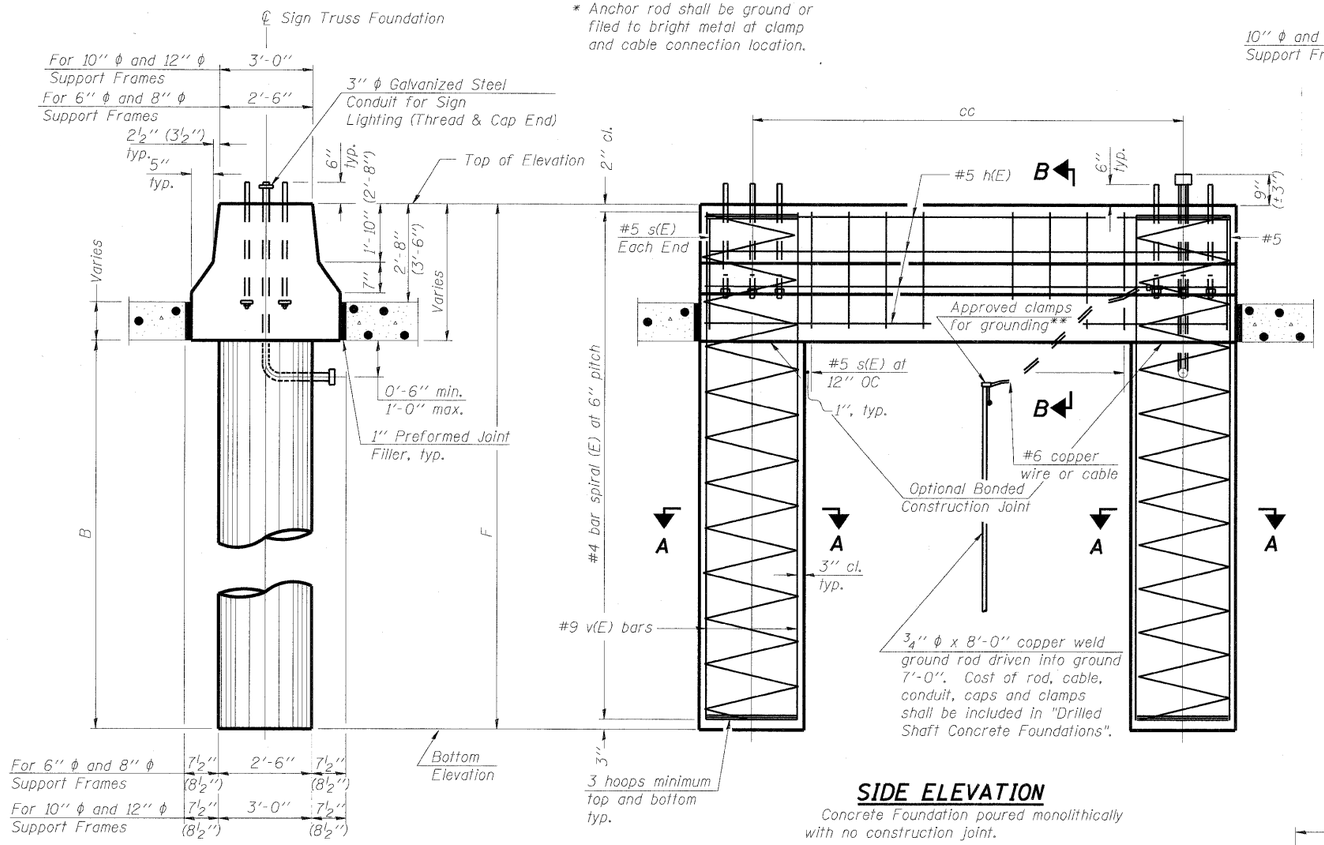
7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS
SHEET NO. 15 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	411
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

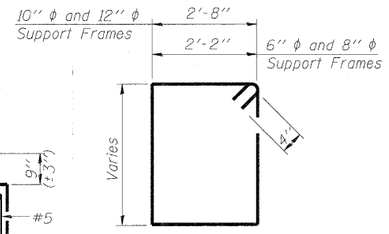


END VIEW

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

SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.



BAR s(E)

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.

* Quanity of concrete for median support foundation is incidental.

BAR LIST - EACH FOUNDATION

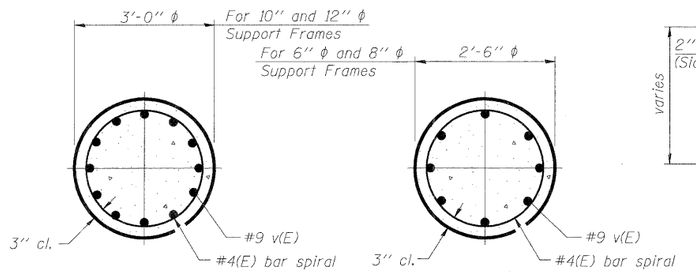
Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	——
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	——
v(E)	24	#9	F less 0'-5"	——
#4(E) bar spiral _ see Side Elevation				

6" ϕ and 8" ϕ Support Frame

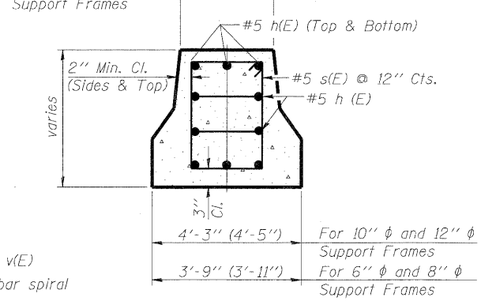
10" ϕ and 12" ϕ Support Frame

Pipe Support Frames	cc	M	a	a/2
6"ϕ	7'-0"	9'-6"	0'-11"	5½"
8"ϕ	7'-6"	10'-0"	1'-1½"	6¾"
10"ϕ	8'-3"	11'-3"	1'-3"	7½"
12"ϕ	9'-0"	12'-0"	1'-6"	9"

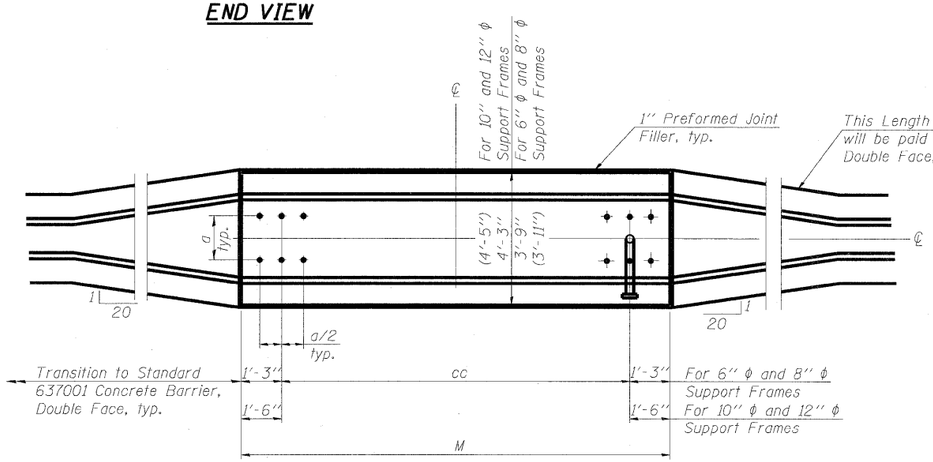
All dimensions in parenthesis are for 42" high barrier.



SECTION A-A



SECTION B-B



PLAN

Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
8S082I055R003.1	88+00.00	434.21	408.19	20'-0"	26'-0"	-	-	-	-	13.6
8S082I055L003.0	78+19.81	407.10	371.78	30'-0"	35'-4"	-	-	-	-	18.5
8S082I055L003.2	68+75.00	442.42	406.86	30'-0"	35'-6¾"	-	-	-	-	18.6
8S082I064L003.0	110+12.00	403.65	351.91	48'-0"	51'-9"	-	-	-	-	27.1

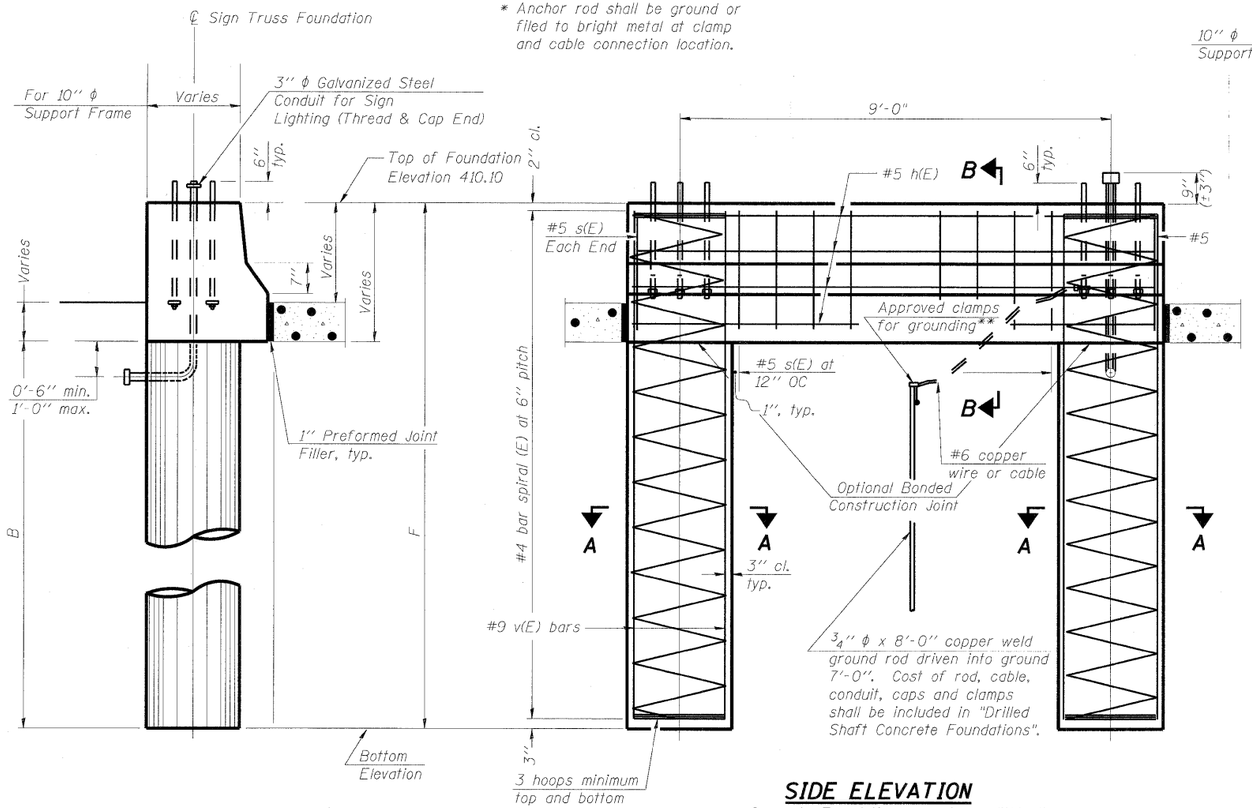
OS4-MED 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

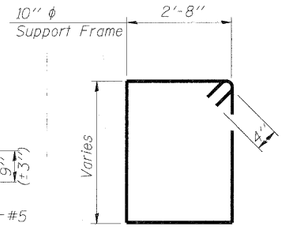
OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS
SHEET NO. 16 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	412
•64/998/70		CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.



BAR s(E)

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.

* Quanity of concrete for median support foundation is incidental.

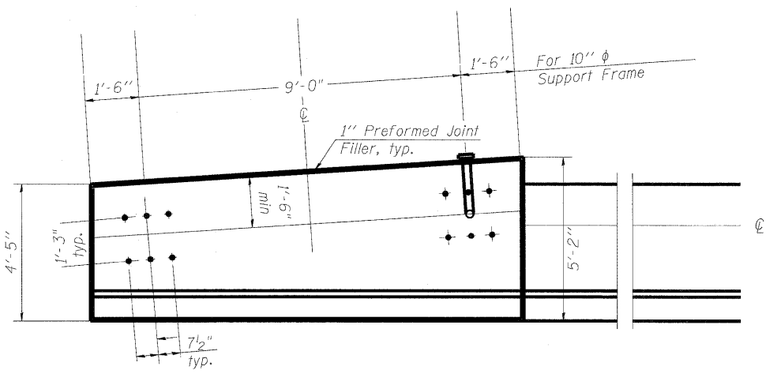
BAR LIST - EACH FOUNDATION

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				

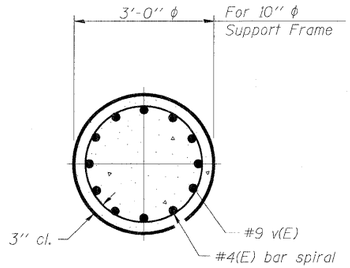
6" ϕ and 8" ϕ Support Frame

10" ϕ and 12" ϕ Support Frame

END VIEW



PLAN



SECTION A-A

Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
8S0821055L003.0	78+19.81	-	-	-	-	410.10	375.58	30'-0"	34'-6¼"	18.1

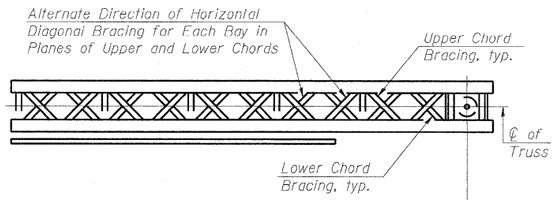
OS4-MED SPECIAL

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

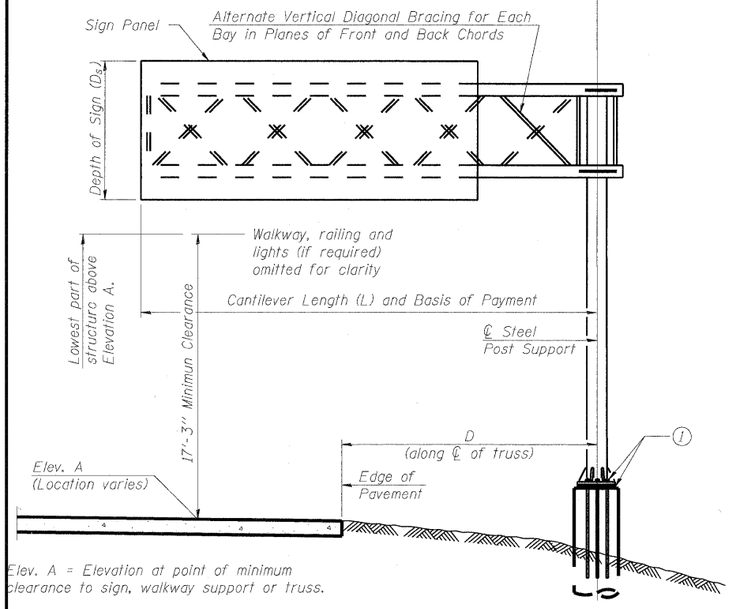
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SPECIAL MEDIAN SUPPORT FOUNDATION DETAILS
SHEET NO. 17 OF 17 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	413
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



TYPICAL PLAN
(Walkway not shown)



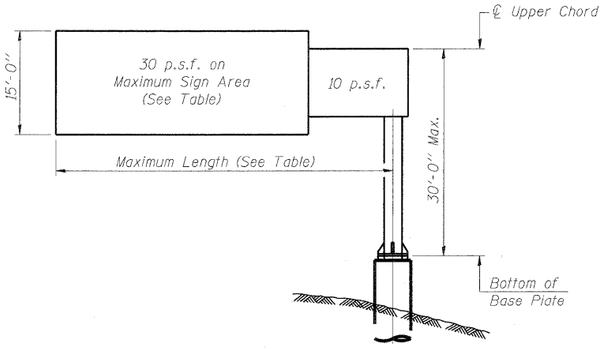
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

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.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D_s	Total Sign Area
8C082I055L002.7	91+32.00	III-C-A	34'-0"	411.79	21'-3"	12'-6"	156 SQ FT
8C082I055R002.2	120+97.00	II-C-A	25'-6"	415.94	12'-0"	7'-6"	71 SQ FT
8C082LBAUGHR	14+03.00	I-C-A	22'-0"	415.51	13'-0"	5'-6"	77 SQ FT

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.



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.

(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.

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.

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.
fy = 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 Specificiations.

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 AASHTO M314 Gr. 105 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° 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 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.

* 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	22
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	25.5
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	34
OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	Foot	54.0
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	22.8
DRILLED SHAFT CONCRETE FOUNDATIONS (SPECIAL)	Cu. Yds.	11.9

NUMBER	REVISION	DATE

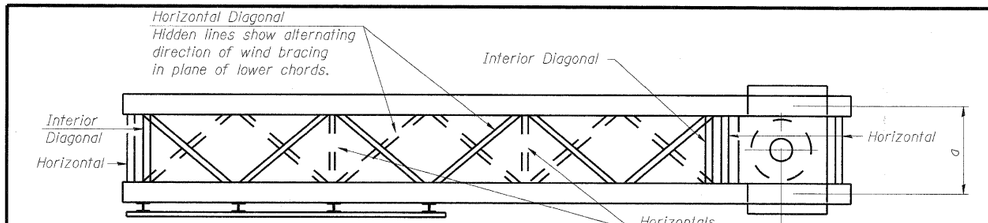
OSC-A-1 12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

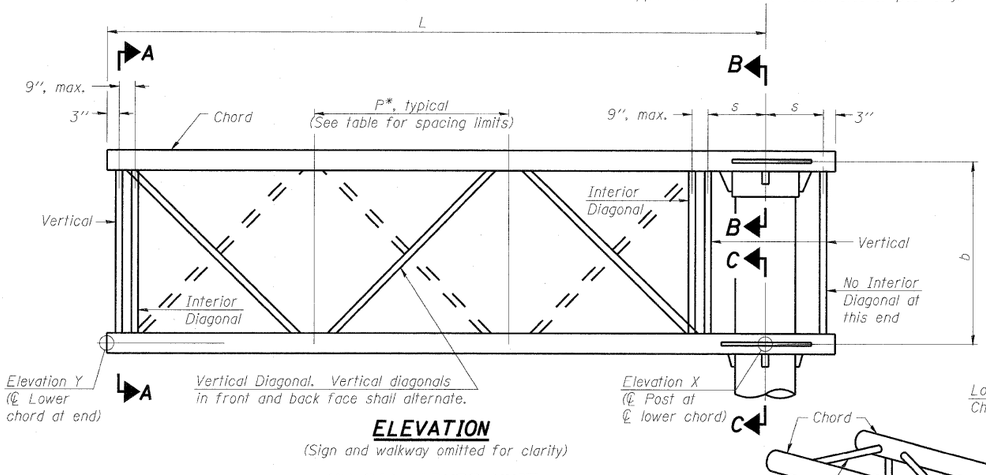
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
GENERAL PLAN & ELEVATION
SHEET NO. 1 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	414
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

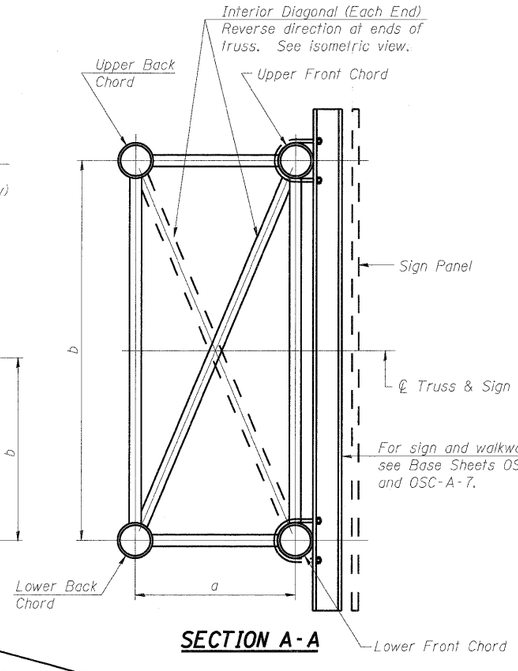


PLAN
(Walkway not shown)

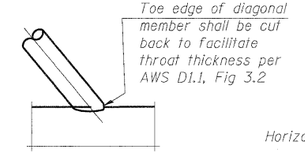


ELEVATION
(Sign and walkway omitted for clarity)

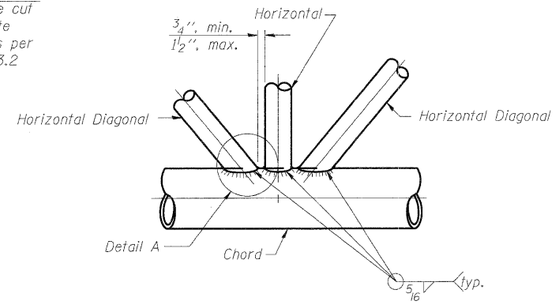
TYPICAL TRUSS UNIT
For Section B-B and Section C-C, see Base Sheet OSC-A-3.



SECTION A-A



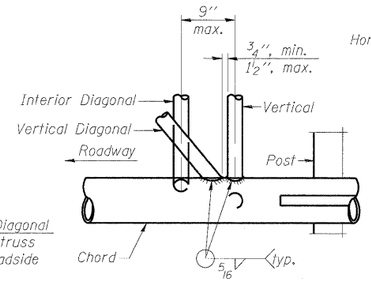
DETAIL A



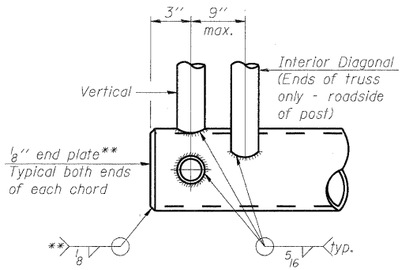
TRUSS INTERIOR JOINT DETAIL

Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
8C082I055L002.7	91+32.00	III-C-A	34'-0"	6	5'-4"
8C082I055R002.2	120+97.00	II-C-A	25'-6"	6	3'-11"
8C082LBAUGHR	14+03.00	I-C-A	22'-0"	6	3'-4"

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



POST END JOINT DETAIL

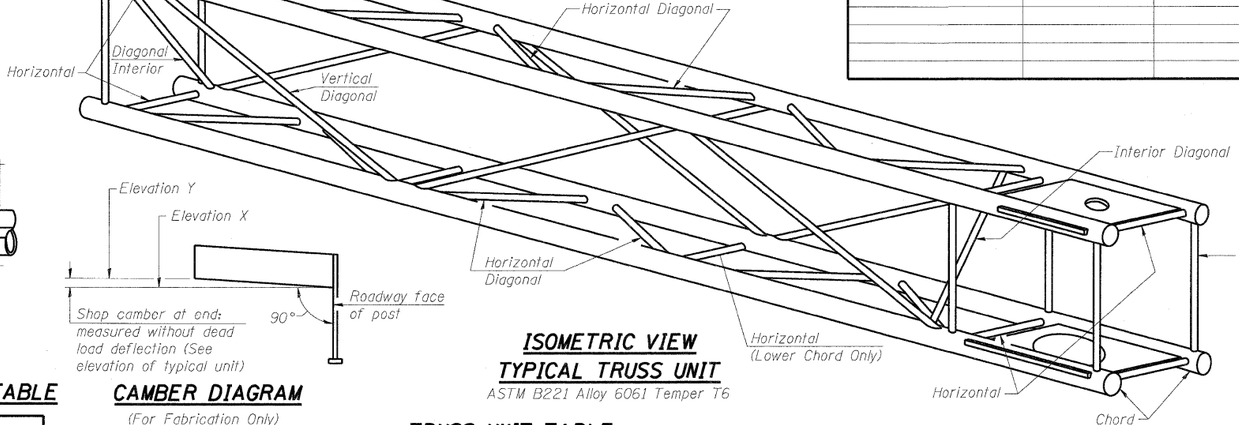


CANTILEVER END JOINT DETAIL
** Contractor may alternatively use standard aluminum drive-fit cap to close ends.

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
(For Fabrication Only)



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

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"

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

NUMBER	REVISION	DATE

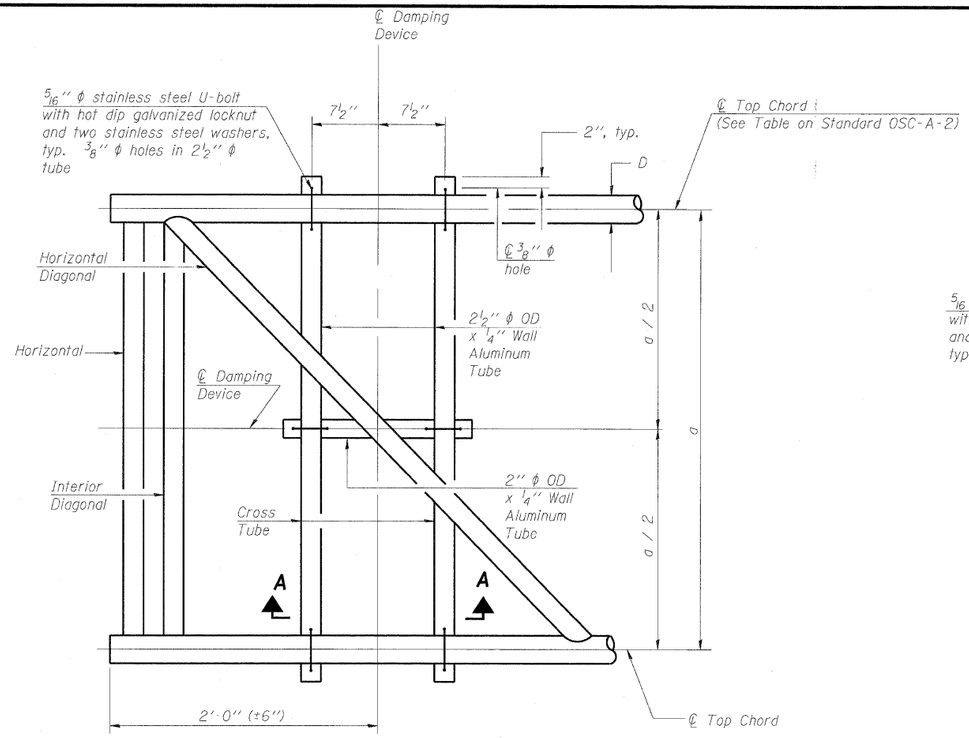
OSC-A-2 12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

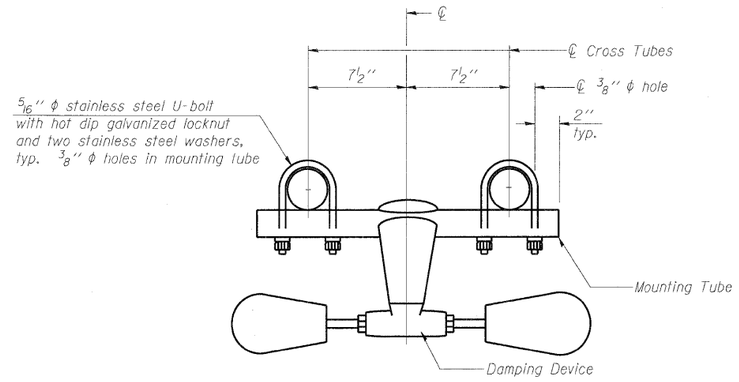
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
TRUSS DETAILS
SHEET NO. 2 OF 13 SHEETS

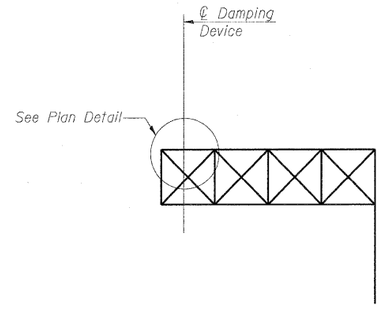
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	415
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



PLAN DETAIL



TRUSS DAMPING DEVICE CONNECTION DETAIL



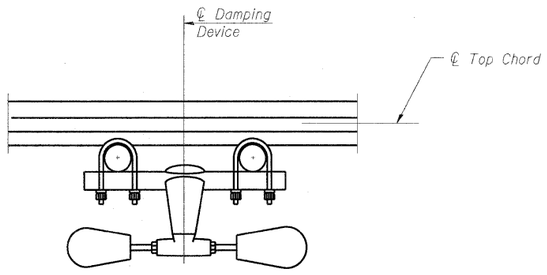
ELEVATION

Aluminum Cantilever Sign Structure

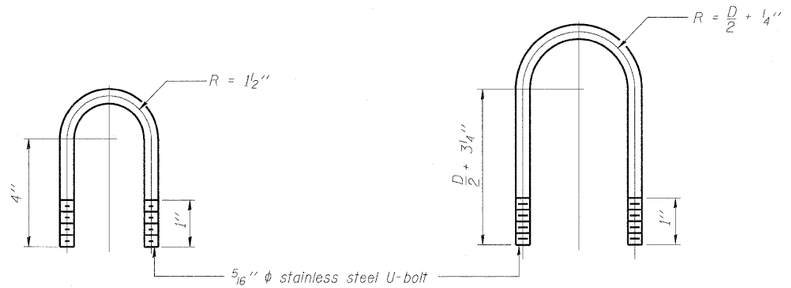
GENERAL NOTES

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



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

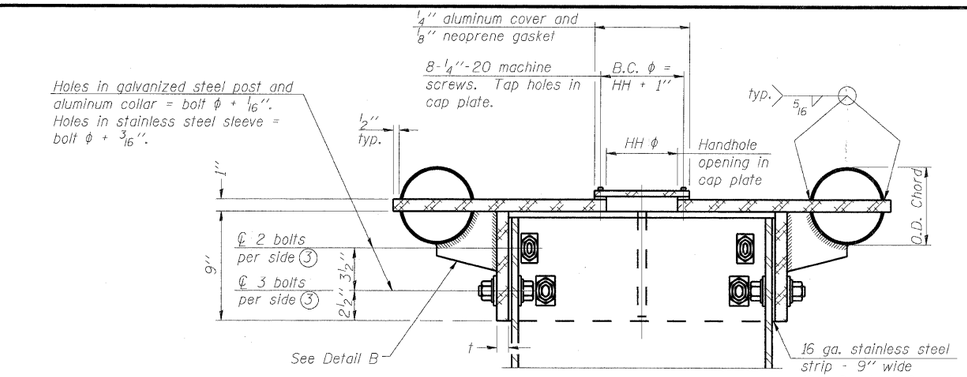
(Typical)

TOP CHORD TO CROSS TUBE U-BOLT DETAIL

(Typical)

OSC-A-D 12-1-08

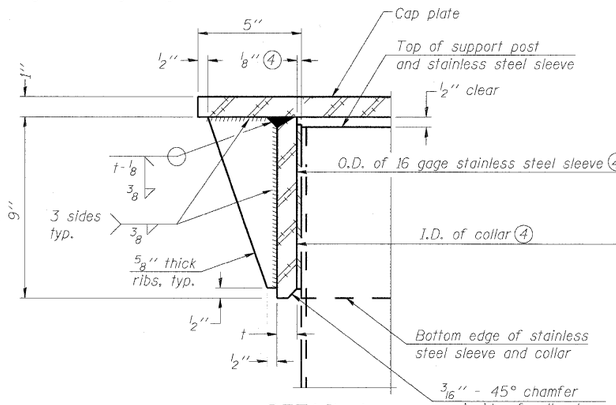
FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURE DAMPING DEVICE	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MPW	REVISED -			•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	416
	PLOT SCALE =	DRAWN - PMK	REVISED -		SHEET NO. 3 OF 13 SHEETS	•64/998/70		CONTRACT NO. 76C52		
	PLOT DATE =	CHECKED - MPW	REVISED -				ILLINOIS	FED. AID PROJECT		



SECTION B-B

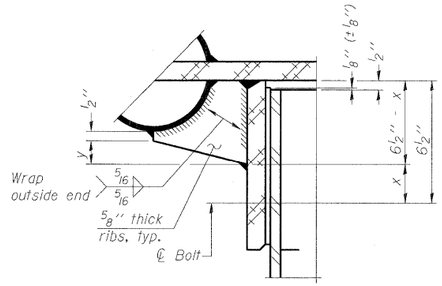
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

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.



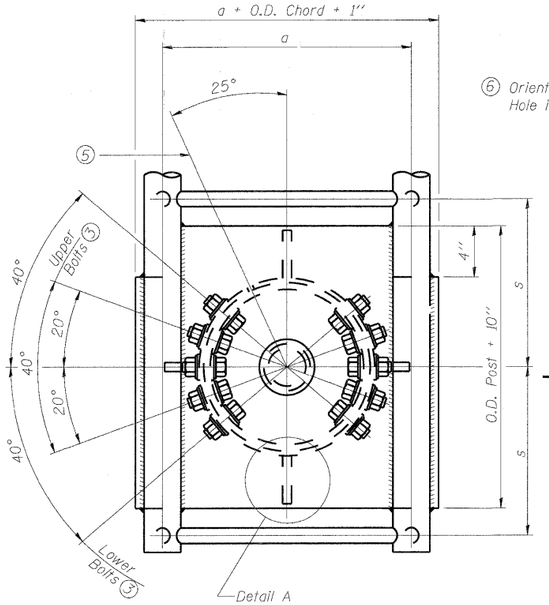
DETAIL A

(Two locations)



DETAIL B

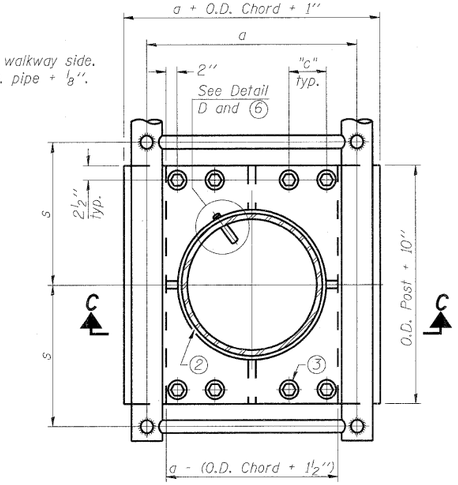
Two locations
(For details not shown, see Detail C)



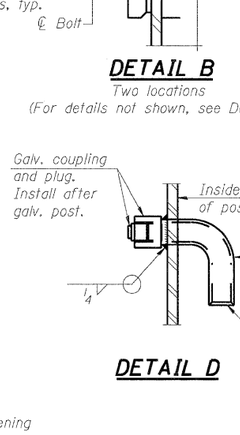
PLAN VIEW - TOP OF COLUMN

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

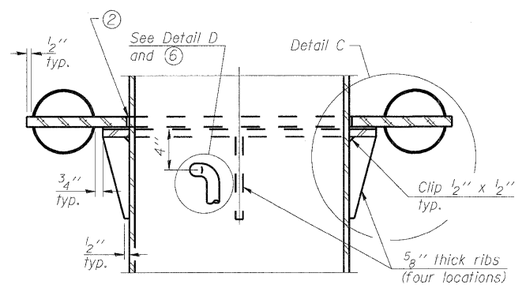
⑥ Orient pipe toward walkway side.
Hole in post = O.D. pipe + 1/8".



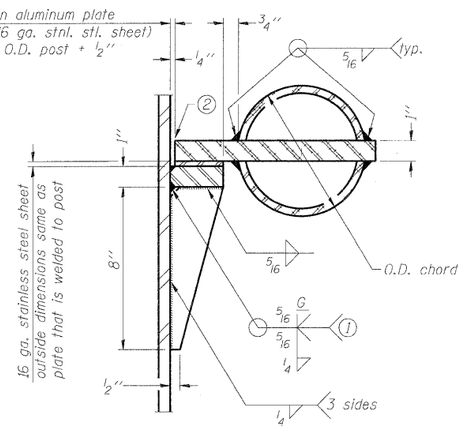
SECTION THRU POST ABOVE LOWER CHORDS



DETAIL D



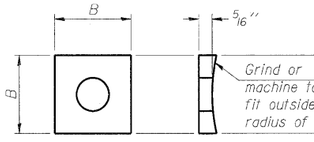
SECTION C-C



DETAIL C

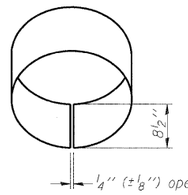
① Grind top if required to fully seat aluminum plate and stainless steel sheet.

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.



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 1/2" long at 6" cts. along top edge and at 1/4" opening.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "Hf"	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"

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.

NUMBER	REVISION	DATE

OSC-A-3

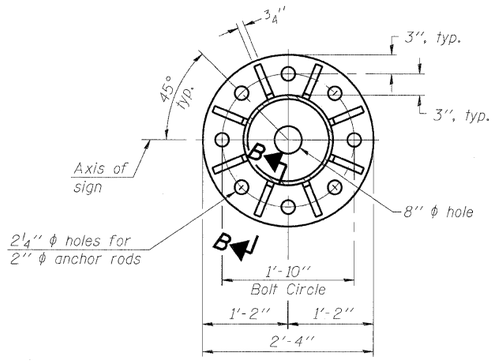
12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

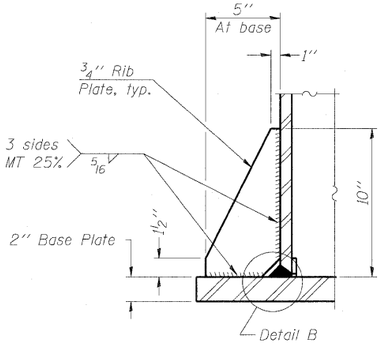
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
JUNCTURE DETAILS
SHEET NO. 4 OF 13 SHEETS

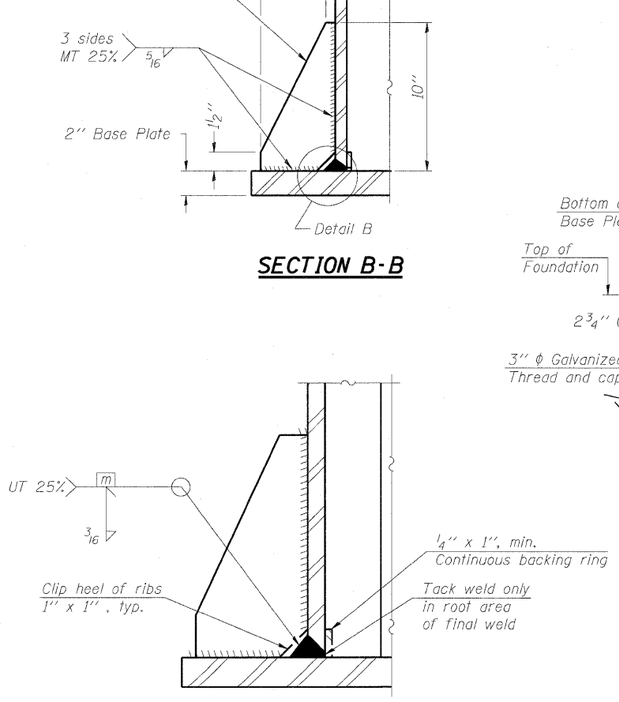
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	417
	*64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



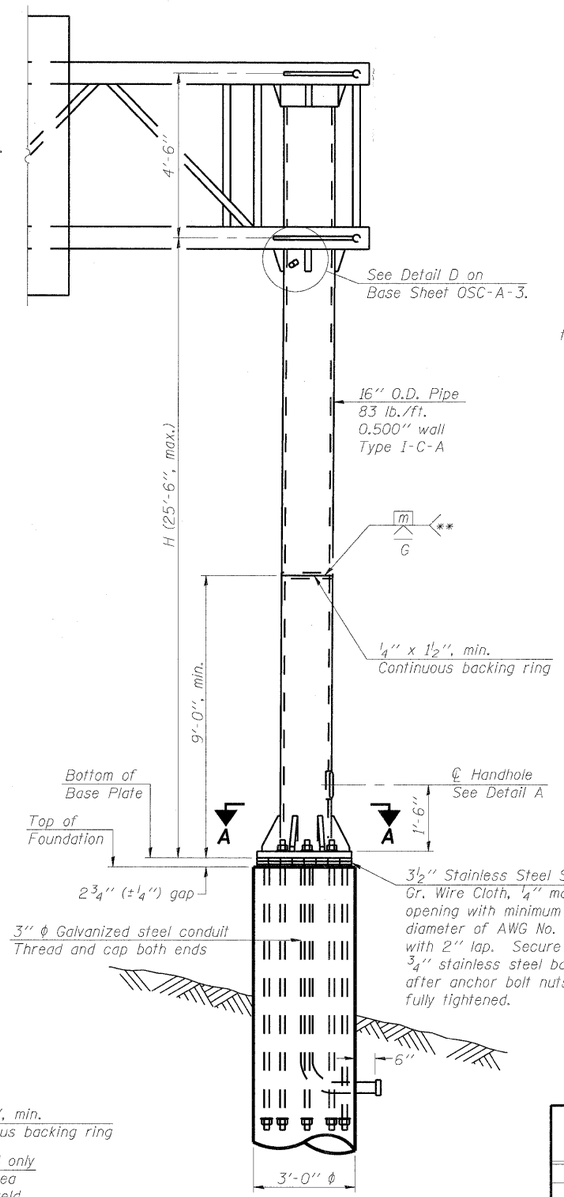
SECTION A-A



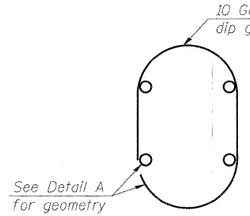
SECTION B-B



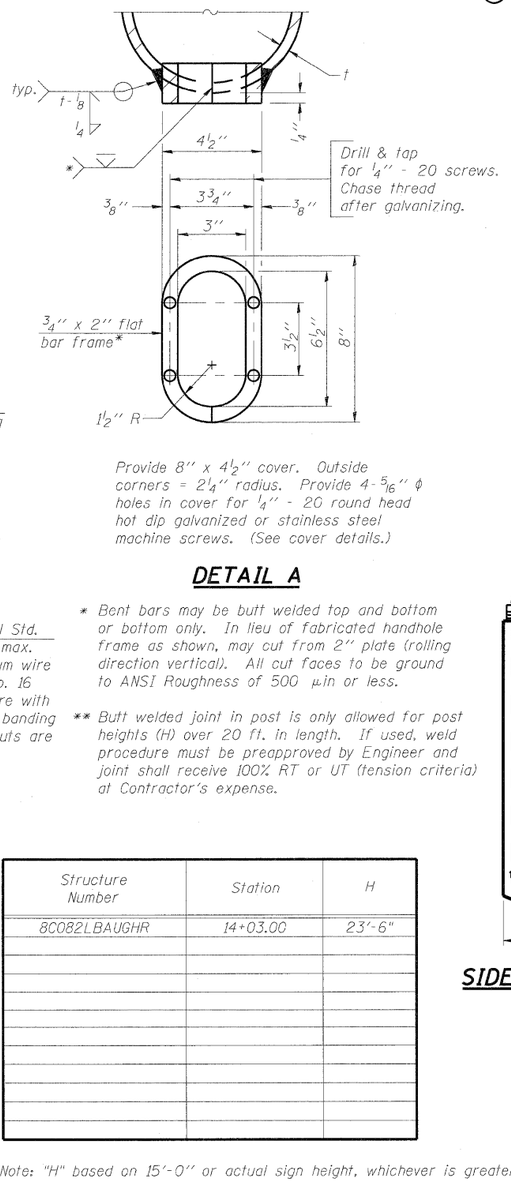
DETAIL B
(Typical rib)



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



HANDHOLE COVER



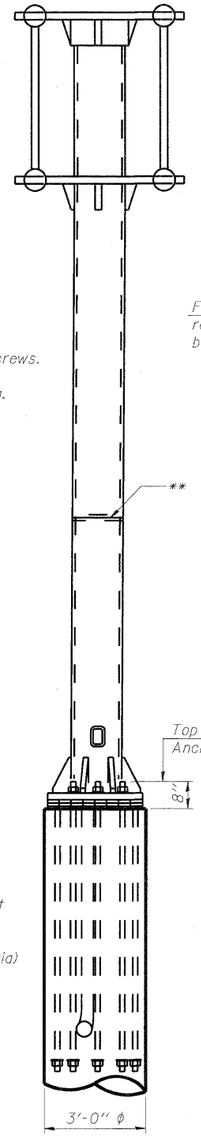
Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-5/16" ϕ holes in cover for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

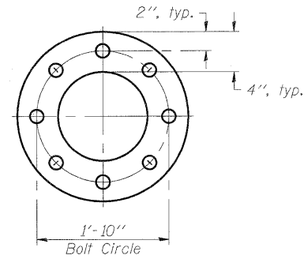
* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

** 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.

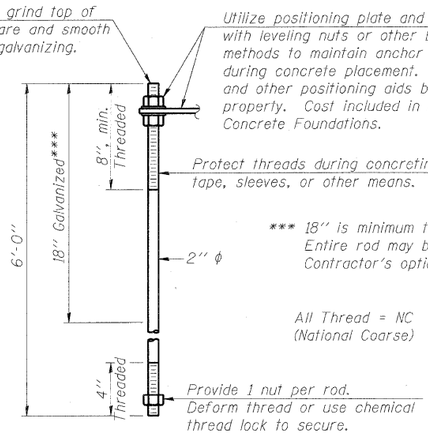
Structure Number	Station	H
8C082LBAUGHR	14+03.00	23'-6"



SIDE ELEVATION



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.

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

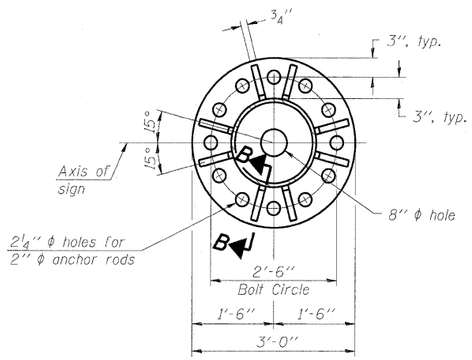
OSC-A-4 9-15-11

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	
		CHECKED - MPW	REVISED -	
	PLOT SCALE =	DRAWN - PMK	REVISED -	
	PLOT DATE =	CHECKED - MPW	REVISED -	

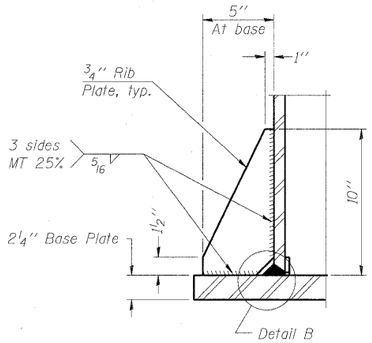
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TYPE I-C-A TRUSS
SUPPORT POST – ALUMINUM TRUSS & STEEL POST
SHEET NO. 5 OF 13 SHEETS

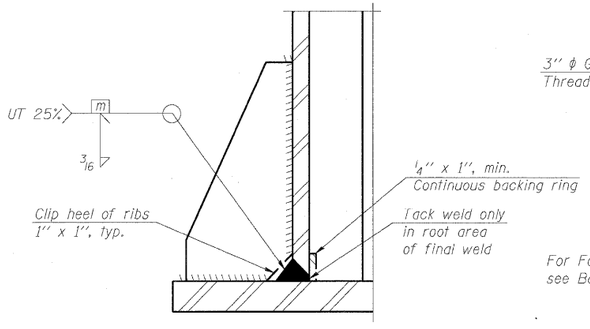
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	418
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



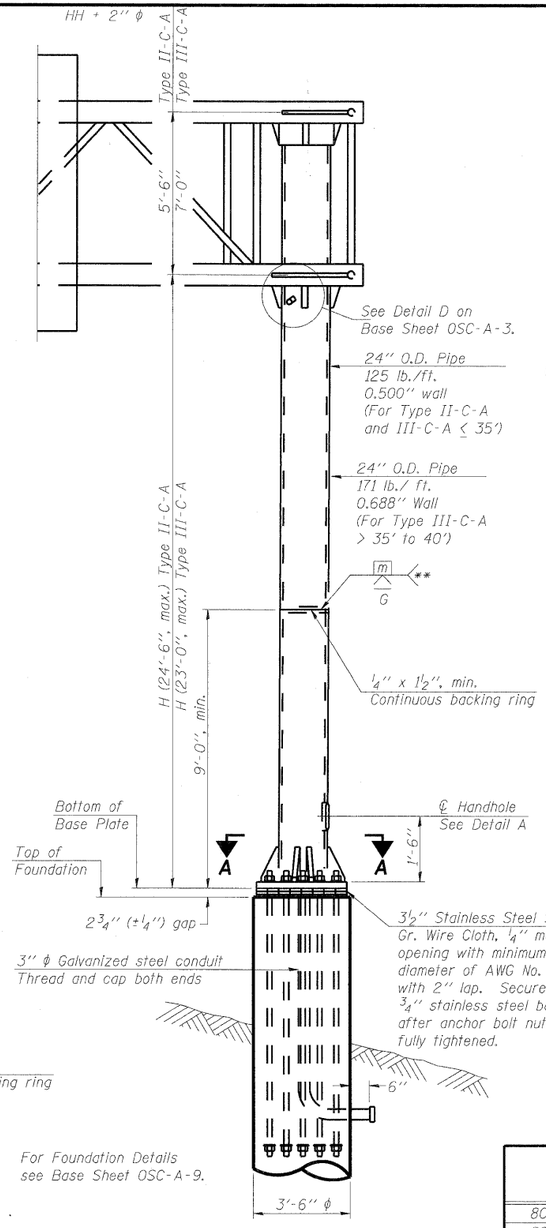
SECTION A-A



SECTION B-B

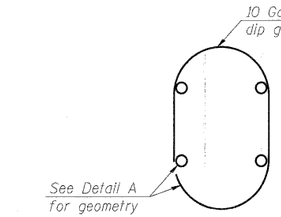


DETAIL B
(Typical rib)

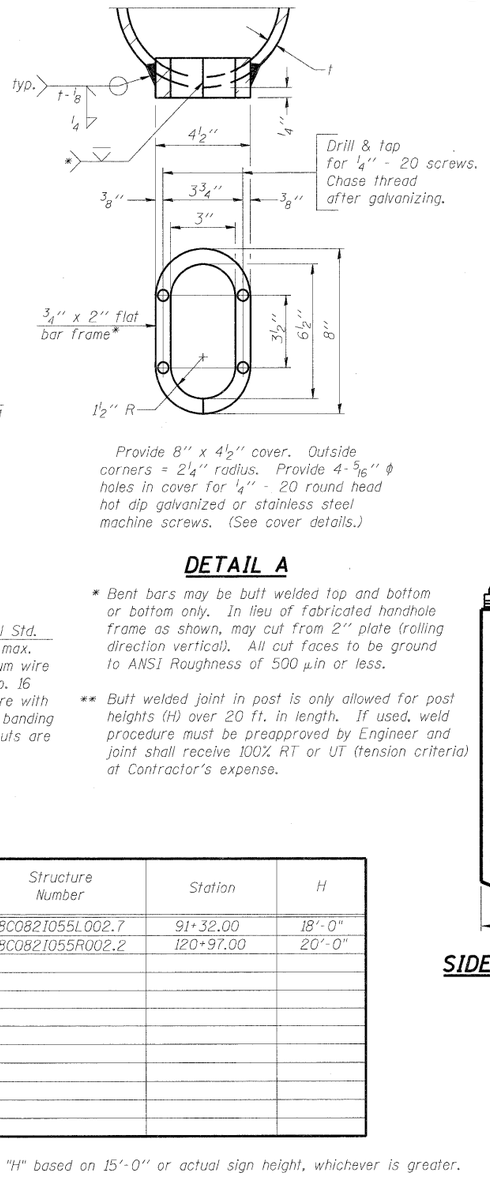


For Foundation Details see Base Sheet OSC-A-9.

FRONT ELEVATION



HANDHOLE COVER

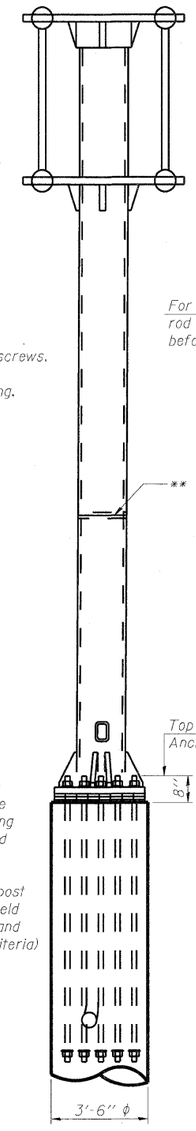


Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-5/16" ϕ holes in cover for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

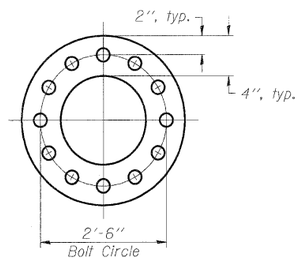
DETAIL A

* 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.

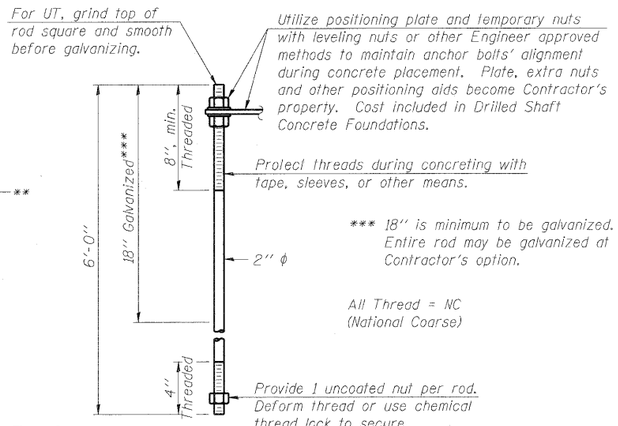
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.



SIDE ELEVATION



SUGGESTED POSITIONING PLATE



ANCHOR ROD DETAIL

Anchor rods shall conform to AASHTO M314 Grade 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F. before galvanizing. Galvanize the upper 18" (minimum***) and associated M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide an unfinished 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, using a straight beam, 1/2" ϕ 3.5 mhz. transducer, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

Structure Number	Station	H
8C0821055L002.7	91+32.00	18'-0"
8C0821055R002.2	120+97.00	20'-0"

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

NUMBER	REVISION	DATE

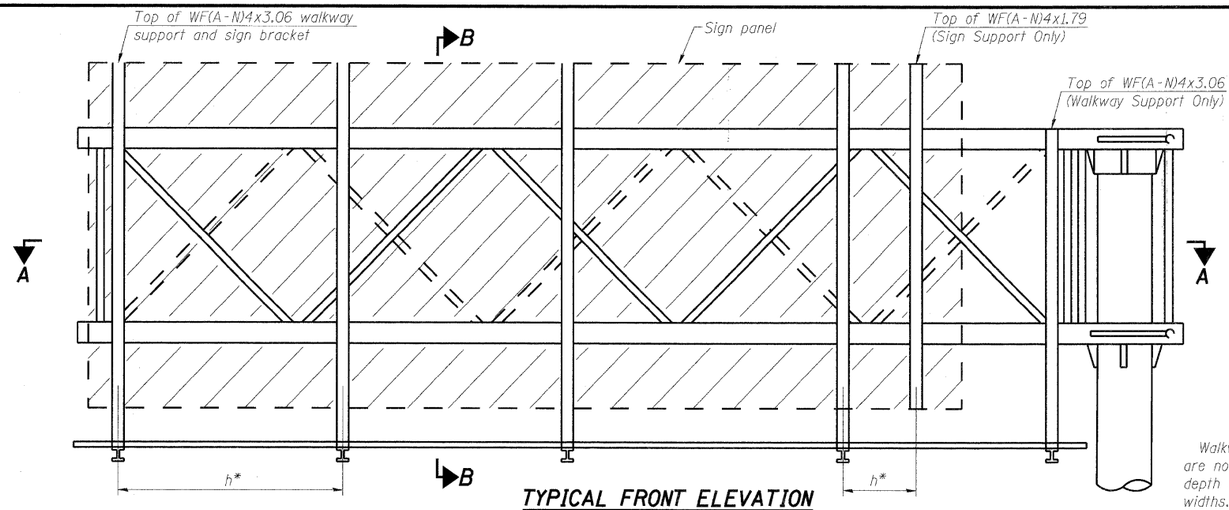
OSC-A-5 12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
TYPE II-C-A & III-C-A TRUSS SUPPORT POST
SHEET NO. 6 OF 13 SHEETS

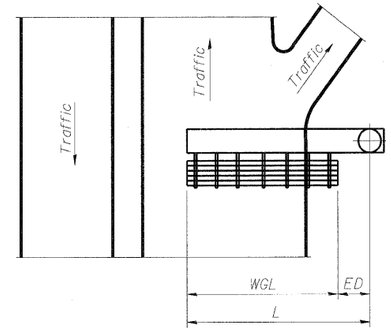
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	419
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



TYPICAL FRONT ELEVATION

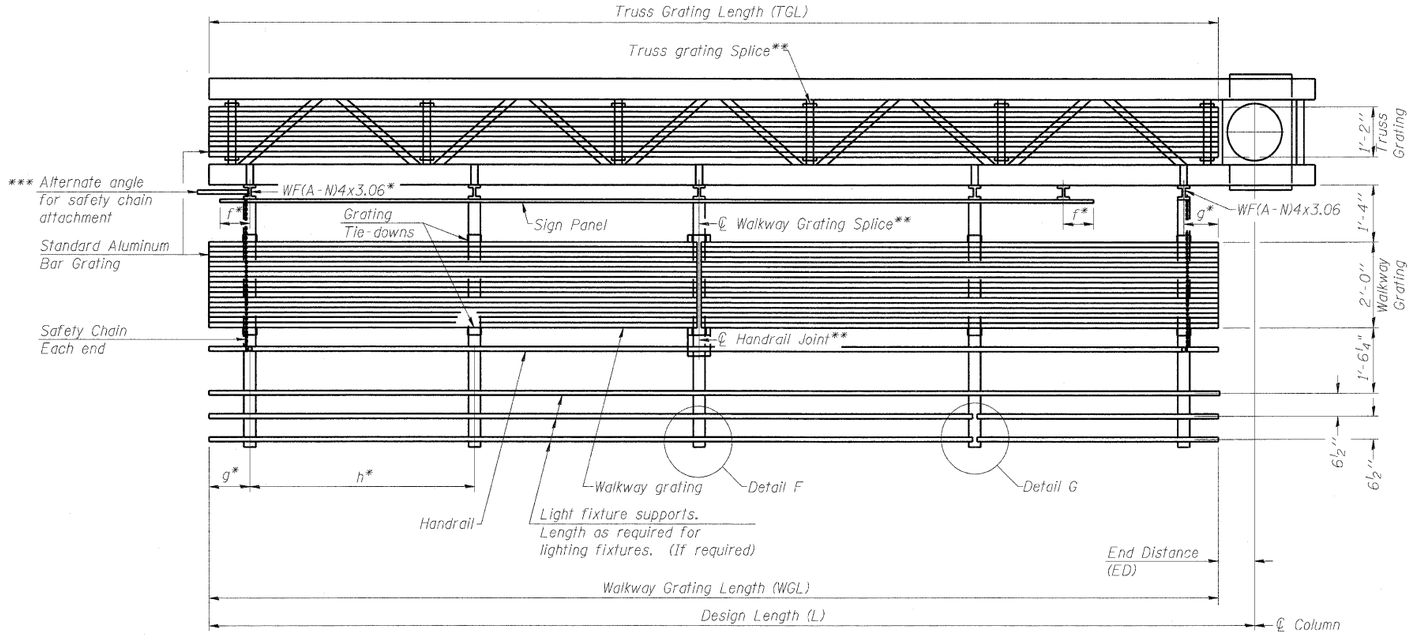
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±½") based on available standard widths.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



Structure Number	Station	WGL	ED	TGL
8C0821055L002.7	91+32.00	16'-6"	17'-6"	16'-6"
8C0821055R002.2	120+97.00	17'-6"	8'-0"	17'-6"
8C082LBAUGHR	14+03.00	15'-0"	7'-0"	15'-0"

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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to ℄ of nearest bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)

*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8

For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

SECTION A-A

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6''\right)$$

NUMBER	REVISION	DATE

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

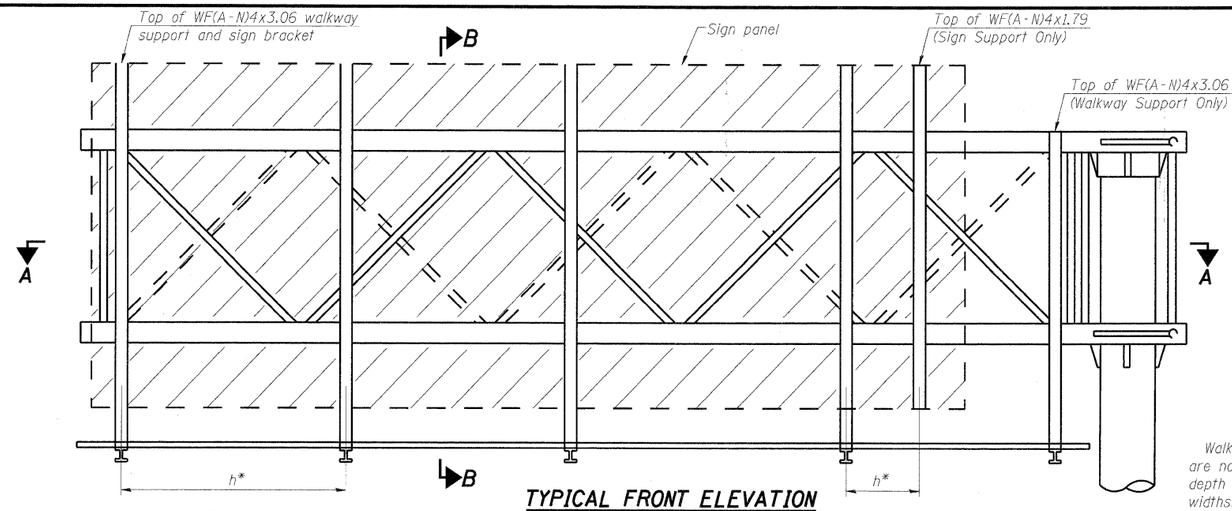
OSC-A-6 12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS
SHEET NO. 7 OF 13 SHEETS

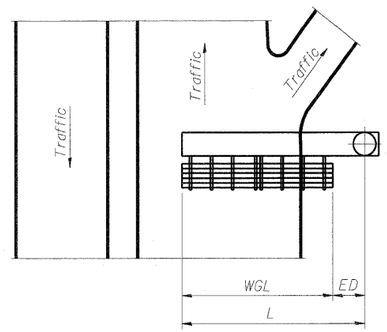
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	420
		CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



TYPICAL FRONT ELEVATION

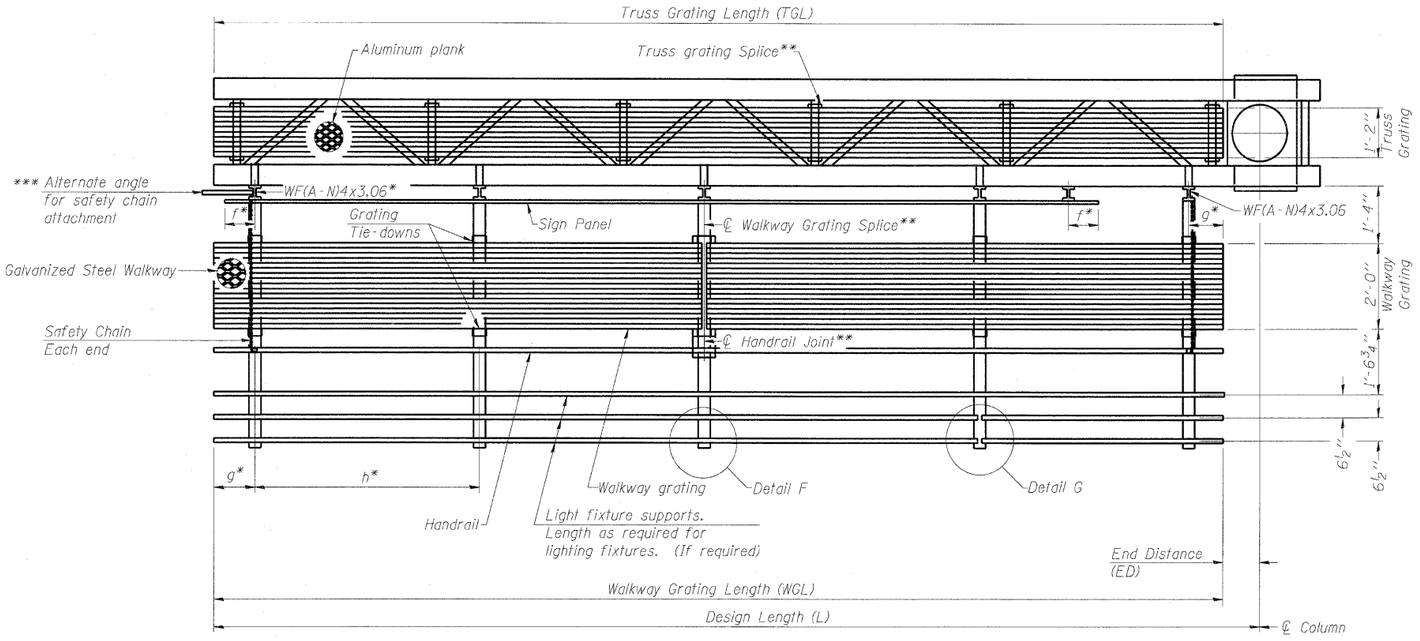
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±½") based on available standard widths.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6''\right)$$

NUMBER	REVISION	DATE

Structure Number	Station	WGL	ED	TGL
8C0821055L002.7	91+32.00	16'-6"	17'-6"	16'-6"
8C0821055R002.2	120+97.00	17'-6"	8'-0"	17' 6"
8C082LBAUGHR	14+03.00	15'-0"	7'-0"	15'-0"

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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to ℄ of nearest bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)

*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.

For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7S.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

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

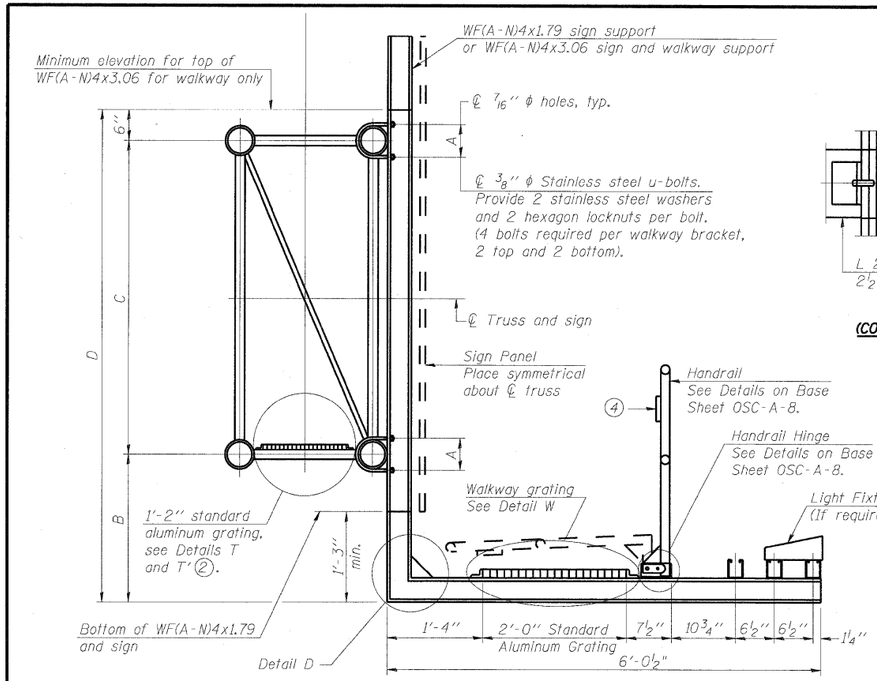
OSC-A-6S 12-1-08

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

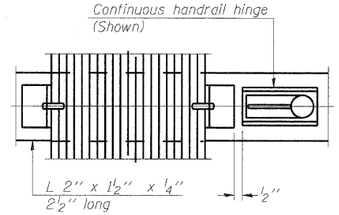
CANTILEVER SIGN STRUCTURES
ALTERNATE STEEL WALKWAY DETAILS
SHEET NO. 8 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	421
	*64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

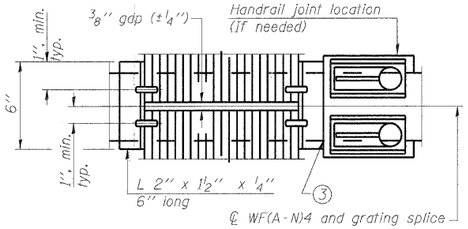


SECTION B-B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

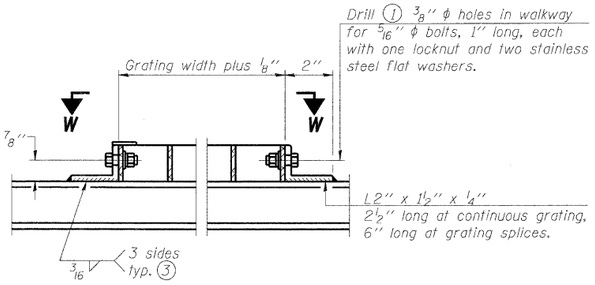


(CONTINUOUS WALKWAY GRATING)



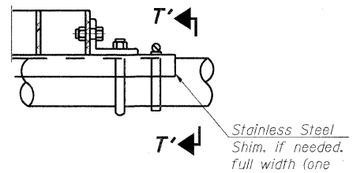
(AT WALKWAY GRATING SPLICE)

SECTION W-W



DETAIL W

(Walkway grating)



DETAIL T'

(Truss grating splice)

Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

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

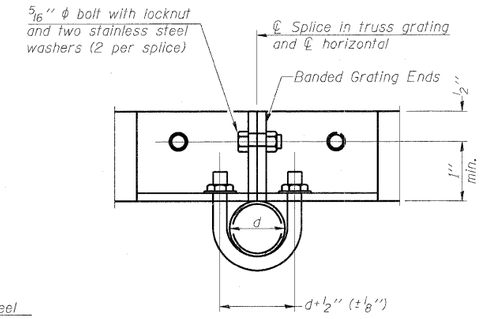
Cross bars (CB) shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

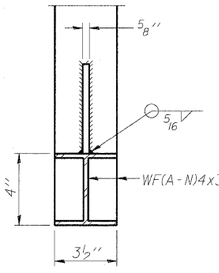
Aluminum Grating with modified "1" sections for main bearing bars shall meet the following requirements:

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.

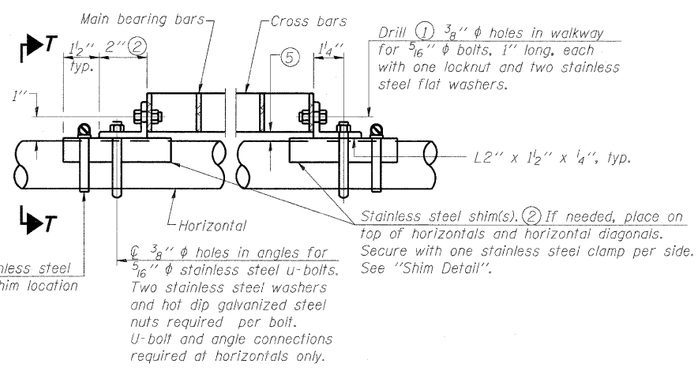


SECTION T'-T'



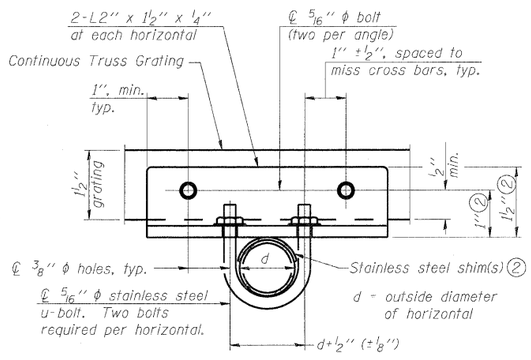
SECTION D-D

Screw type stainless steel tube clamp at shim location

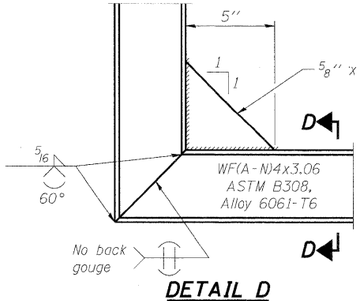


DETAIL T

(Continuous Truss grating)



SECTION T-T



DETAIL D

ELEVATION END VIEW

SHIM DETAIL

NUMBER	REVISION	DATE

Structure Number	Station	A	(6) B	C	(6) D
8C0821055L002.7	91+32.00	0'-7 1/2"	5'-3"	7'-0"	12'-9"
8C0821055R002.2	120+97.00	0'-7"	6'-0"	5'-6"	12'-0"
8C082LBAUGHR	14+03.00	0'-5"	6'-6"	4'-6"	11'-6"

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 OSC-A-8.)
4. ℄ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
5. Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
6. Based on actual sign height, D_S, given on OSC-A-1.

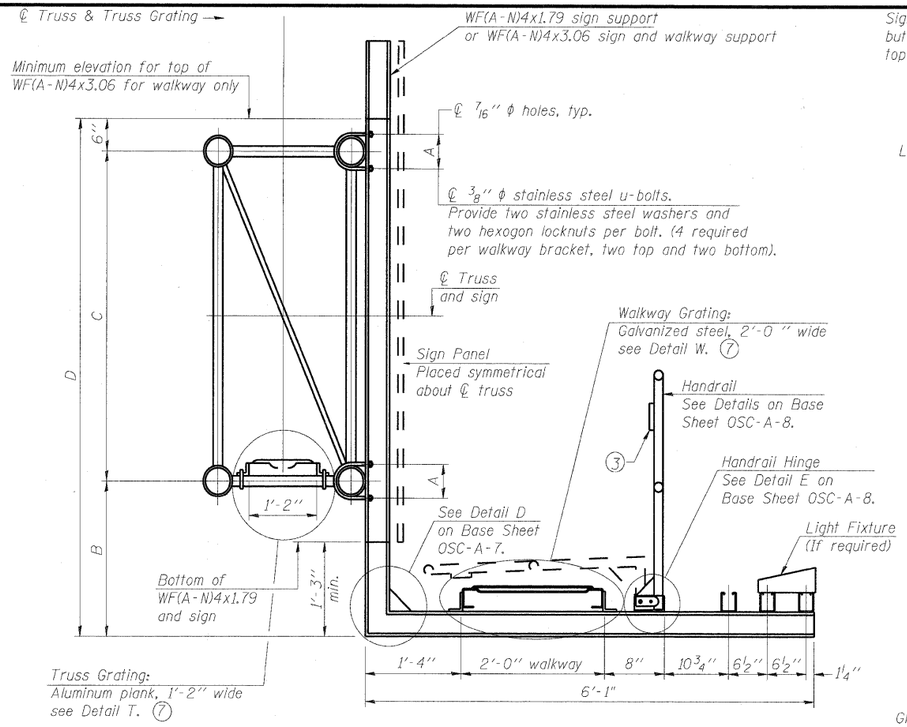
OSC-A-7 6-1-09

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

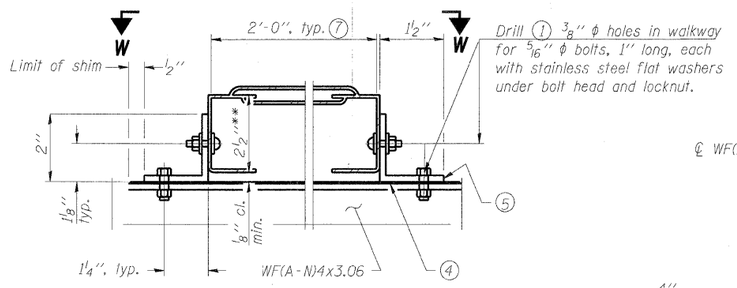
CANTILEVER SIGN STRUCTURES
WALKWAY DETAILS ALUMINUM TRUSS & STEEL POST
SHEET NO. 9 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	422
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

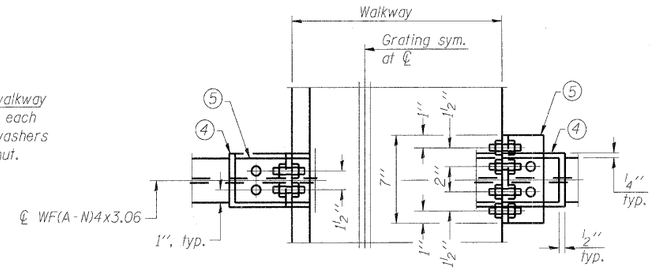


SECTION B-B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

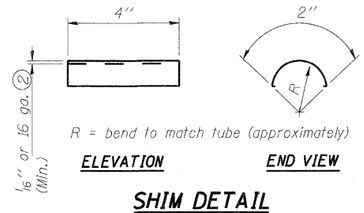


DETAIL W
GALVANIZED STEEL WALKWAY GRATING

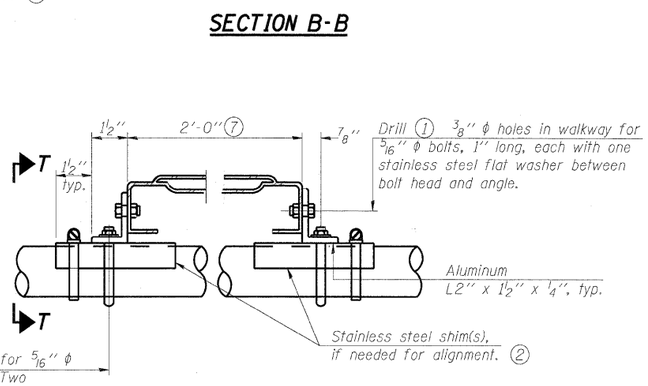


WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

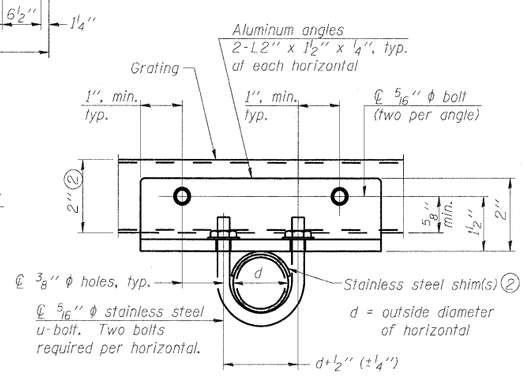
SECTION W-W



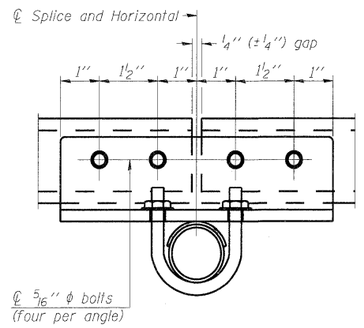
SHIM DETAIL



DETAIL T
(Truss grating at horizontal)



SECTION T-T
(Truss Grating Continuous)



SECTION T-T
(Truss Grating Splice)
Alternate splice details and locations may be used subject to the Engineer's review and approval.

ALUMINUM TRUSS GRATING

Structure Number	Station	A	(8) B	C	(8) D
8C082I055L002.7	91+32.00	0'-7 1/2"	5'-3"	7'-0"	12'-9"
8C082I055R002.2	120+97.00	0'-7"	6'-0"	5'-6"	12'-0"
8C082LBAUGHR	14+03.00	0'-5"	6'-6"	4'-6"	11'-6"

NUMBER	REVISION	DATE

(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 under angles at horizontals and horizonal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, se "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.

(3) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(4) 1/16" (or 16 ga.) x 2 1/2" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle, typ. Adhesives for shims shall be suitable for materials joined and full exposure conditions.

(5) Galvanized steel L2" x 2" x 1/4", 3 1/2" long with continuous grating 7" long at grating splice.

(6) Details shown are considered equal alternatives to Aluminum Walkway Details and may be substituted by Contractor at no charge in contract cost.

(7) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width +1/2", depth +1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(8) Based on actual sign height, D_S, given on OSC-A-1.

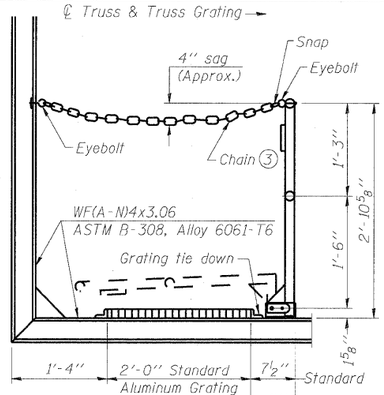
OSC-A-7S 6-1-09

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

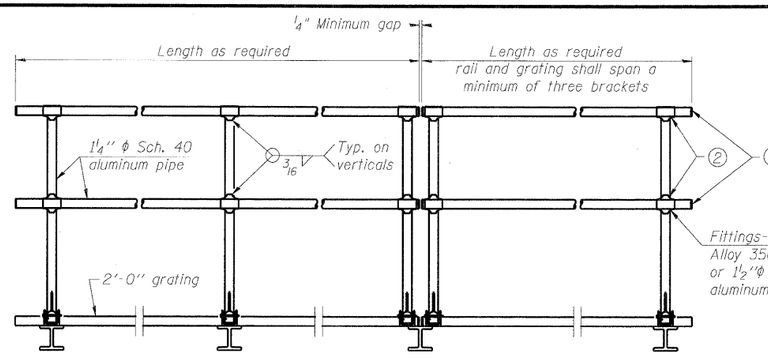
CANTILEVER SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS
SHEET NO. 10 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	423
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



SIDE ELEVATION

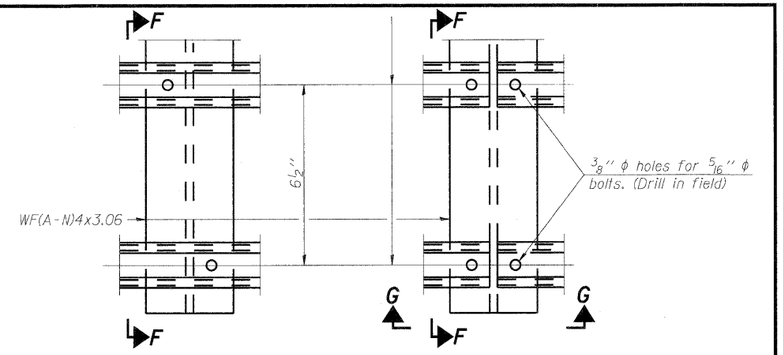
(Showing Safety Chain W/O Sign)



FRONT ELEVATION

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

Fittings-ASTM B26, Alloy 356-T7 or 1 1/2"ϕ aluminum pipe



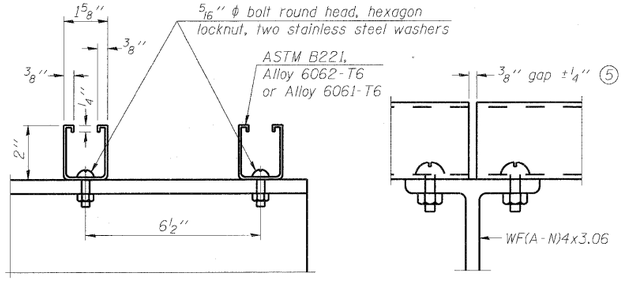
DETAIL F

DETAIL G

HANDRAIL DETAILS

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

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

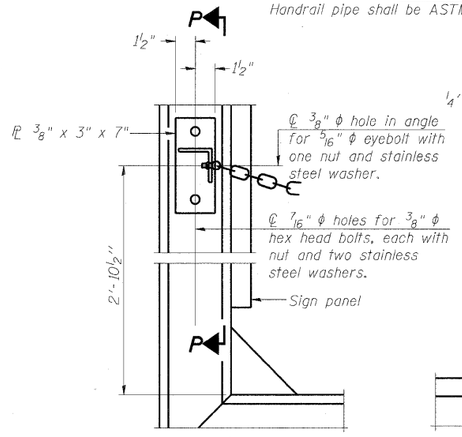


SECTION F-F

SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

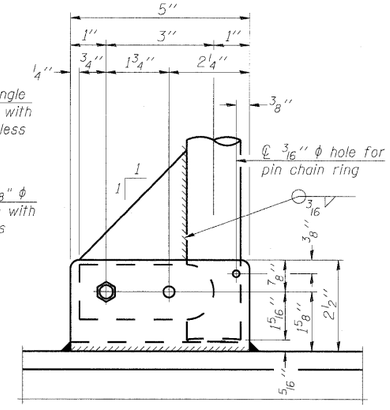
(5) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



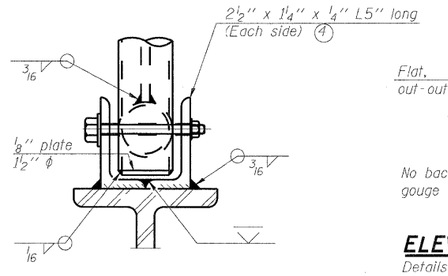
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

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

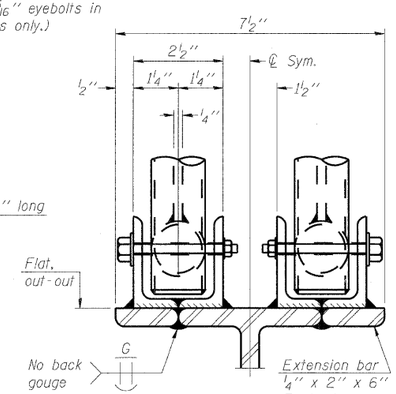


SIDE ELEVATION



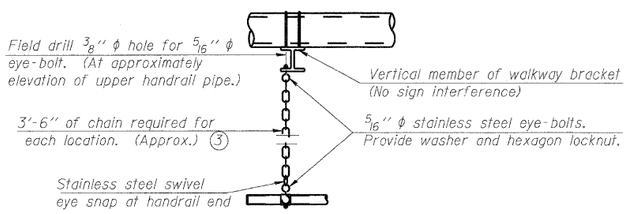
FRONT ELEVATION

Details not shown same as "ELEVATION" at right.



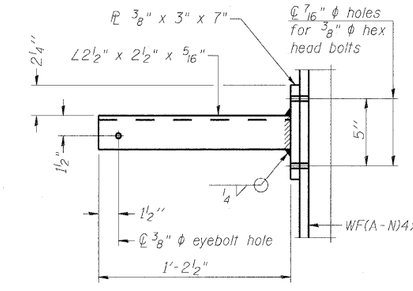
ELEVATION AT HANDRAIL JOINT (4)

Details not shown same as "FRONT ELEVATION"

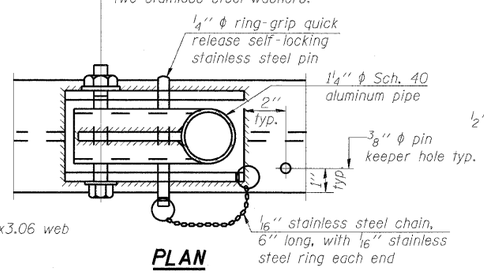


SAFETY CHAIN

One required for each end of each walkway.

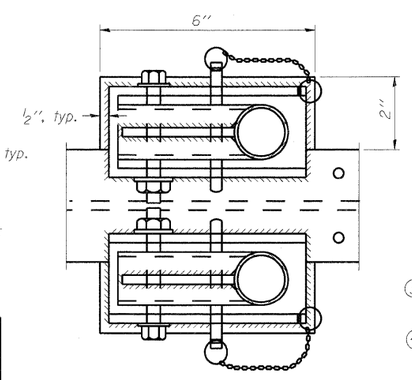


SECTION P-P



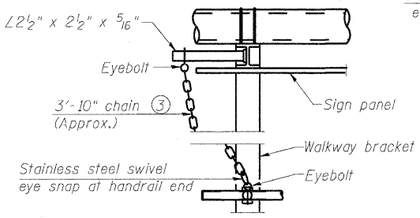
PLAN

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.

NUMBER	REVISION	DATE

OSC-A-8 12-1-08

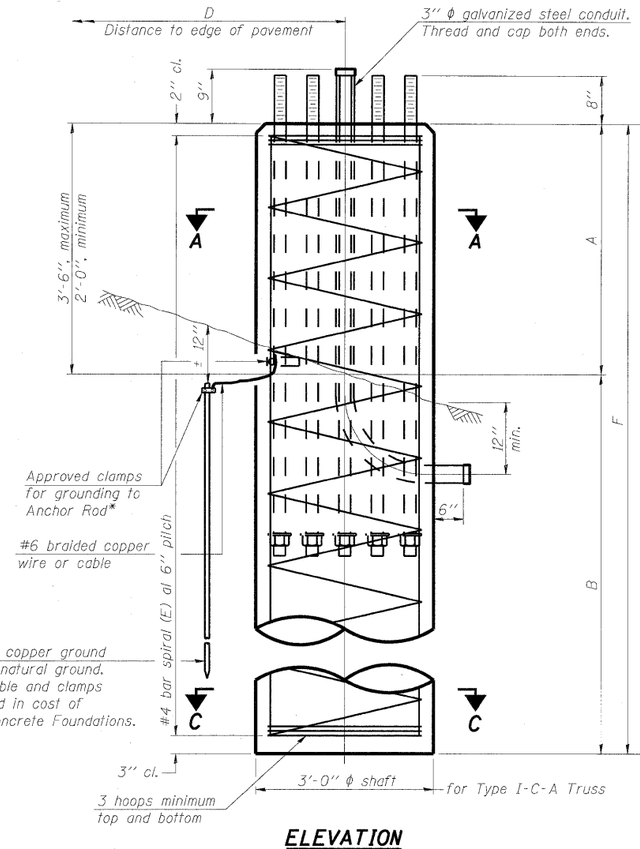
FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

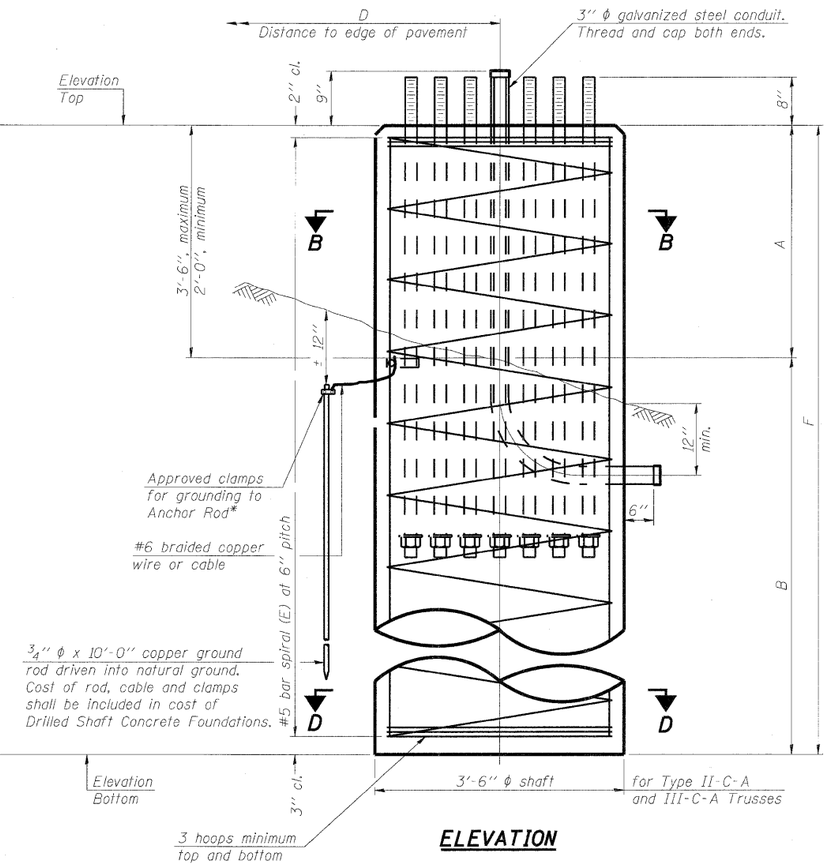
CANTILEVER SIGN STRUCTURES
HANDRAIL DETAILS ALUMINUM TRUSS & STEEL POST
SHEET NO. 11 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	424
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

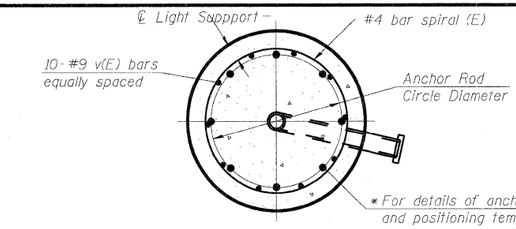
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



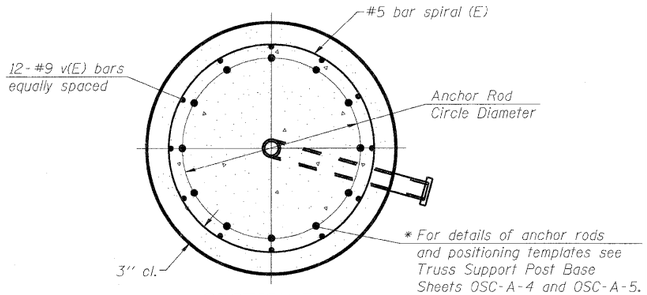
ELEVATION



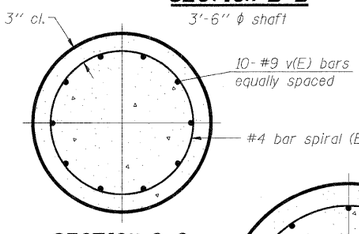
ELEVATION



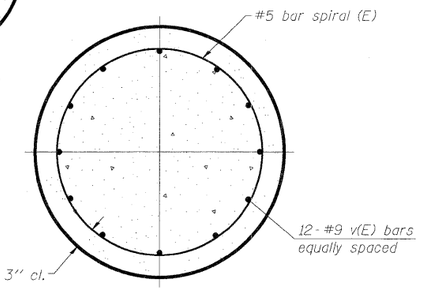
SECTION A-A
3'-0" ϕ shaft



SECTION B-B
3'-6" ϕ shaft



SECTION C-C
3'-0" ϕ shaft



SECTION D-D
3'-6" ϕ shaft

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".

FOUNDATION DATA TABLE

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
8C082I055L002.7	91+32.00	III-C-A	3.5'	416.32	375.84	<1.25	2'-6"	38'-0"	40'-6"	14.4
8C082LBAUGHR	14+03.00	I-C-A	3.0'	415.81	383.81	<1.25	2'-0'	30'-0"	32'-0"	8.4

FOUNDATION DESIGN TABLE

Truss Type	Post Base Sheet	Maximum CantileverLength (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods No.	Anchor Rods Diameter (in)	Anchor Rod Circle 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

NUMBER	REVISION	DATE

OSC-A-9

12-1-08

FILE NAME =	USER NAME =	DESIGNED - VAM	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

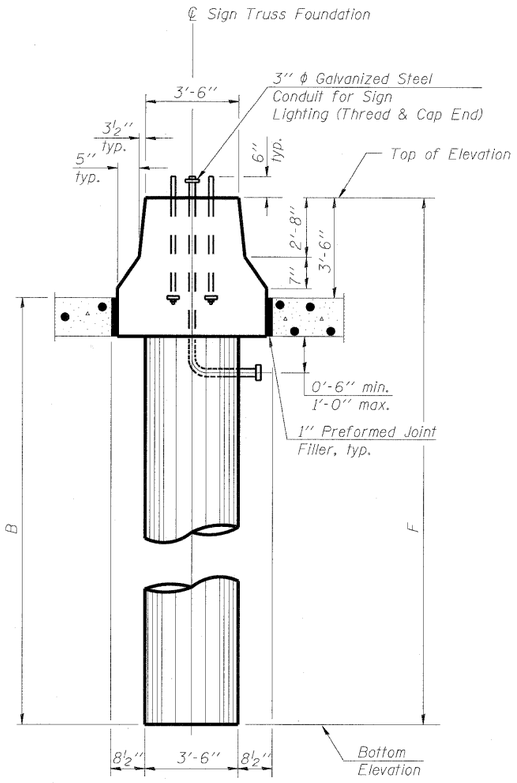
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES
DRILLED SHAFT ALUMINUM TRUSS & STEEL POST

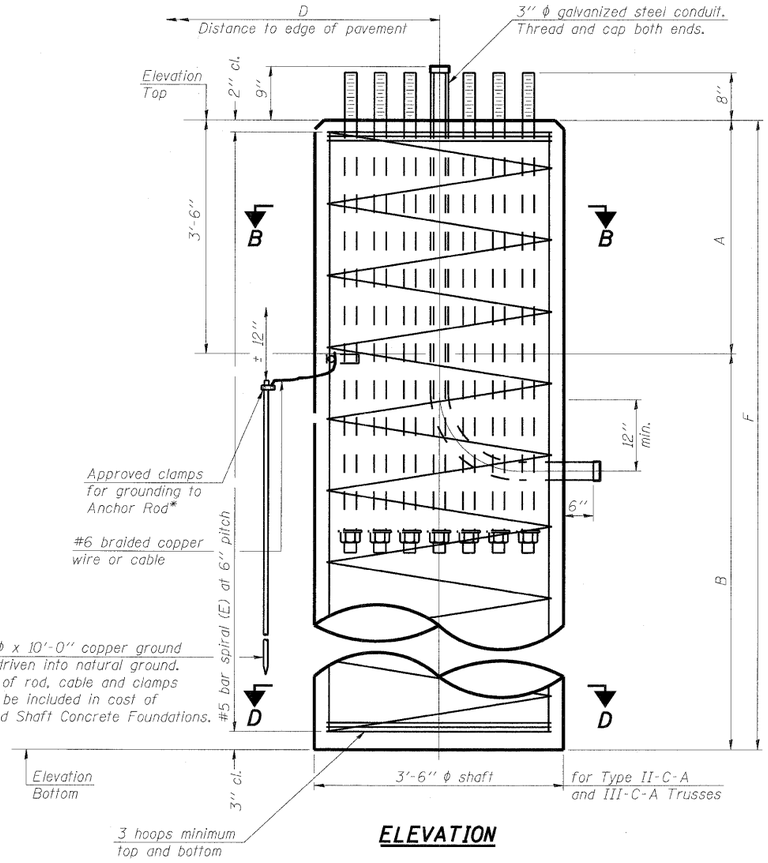
SHEET NO. 12 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	425
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

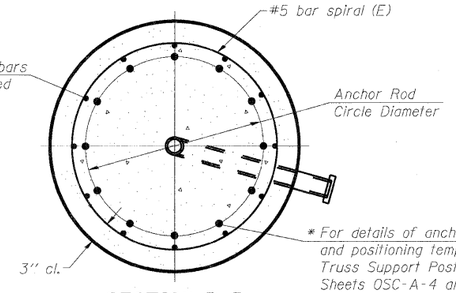
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



END VIEW

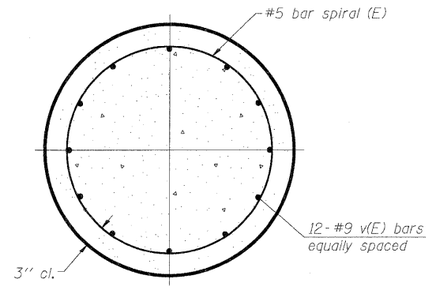


ELEVATION



SECTION B-B

3'-6" ϕ shaft



SECTION D-D

3'-6" ϕ shaft

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 Seal Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

NUMBER	REVISION	DATE

FOUNDATION DATA TABLE

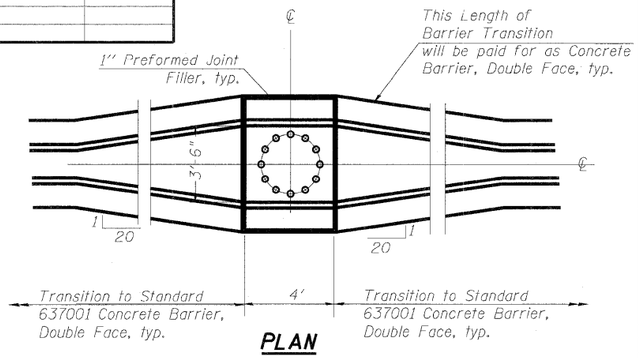
Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
8C0821055R002.2	120+97.00	II-C-A	3.5'	419.41	385.91	<1.25	3'-6"	30'-0"	33'-6"	11.9

NOTES:

See soil boring sheets for additonal information, foundations are designed based AASHTO principals.

FOUNDATION DESIGN TABLE

Truss Type	Post Base Sheet	Maximum CantileverLength (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods No.	Anchor Rods Diameter (in)	Anchor Rod Circle 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



PLAN

OSC-A-9 SPECIAL

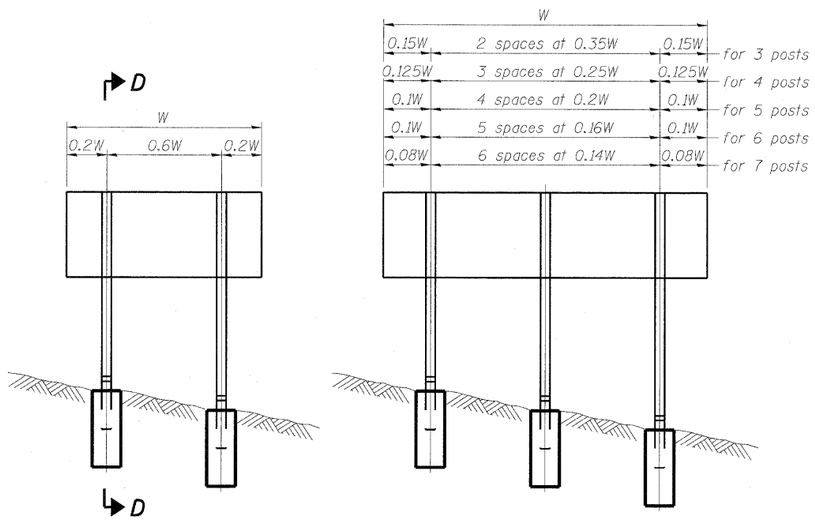
FILE NAME =	USER NAME =	DESIGNED - AGF	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - AGF	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

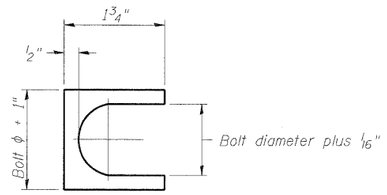
CANTILEVER SIGN STRUCTURES
SPECIAL MEDIAN SUPPORT CANTILIVERED FOUNDATION

SHEET NO. 13 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	426
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS	FED. AID PROJECT		

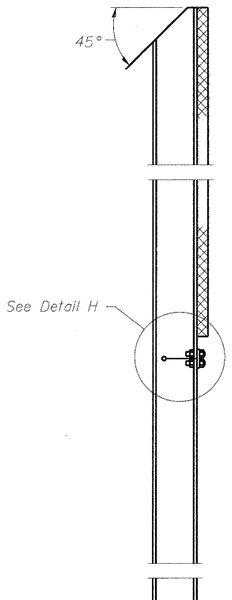


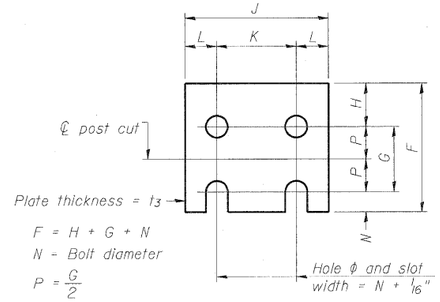
ELEVATION



SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

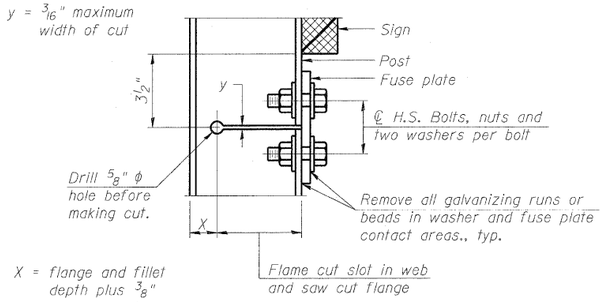




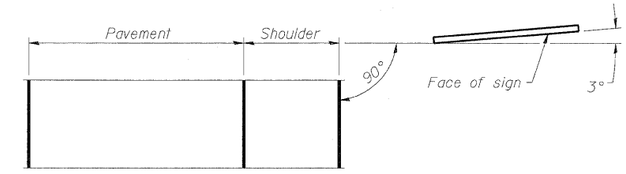
FUSE PLATE DETAIL

(Install with notches down.)

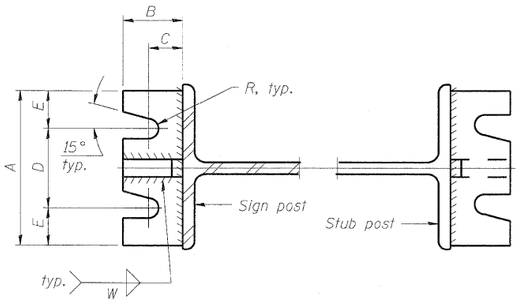
FUSE PLATE DATA		
N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



DETAIL H

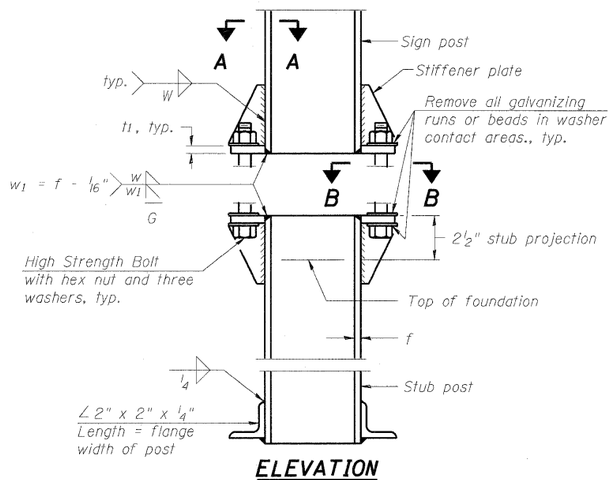


LOCATION SKETCH

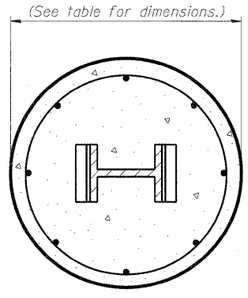


SECTION A-A

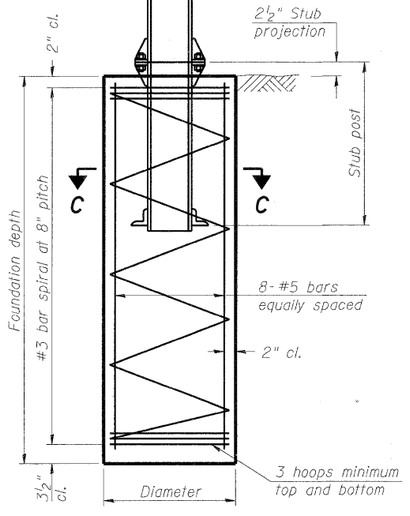
SECTION B-B



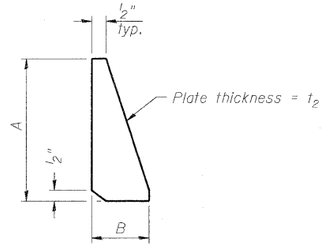
ELEVATION
SIGN POST & STUB POST



SECTION C-C



SECTION D-D



STIFFENER PLATE DETAIL

Diameter

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
Structural steel - 20,000 p.s.i.
Reinforcing steel - 20,000 p.s.i.
Concrete - 1,400 p.s.i.
Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.

BAW-A-1 7-1-10

(Sheet 1 of 2)

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE STEEL SIGN POST DETAILS

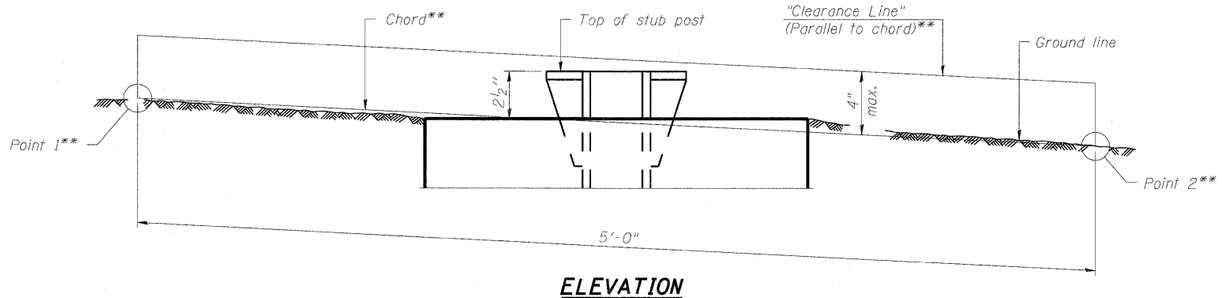
SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	427
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

POST	CONCRETE FOUNDATION TABLE							POST TO STUB POST CONNECTION DATA										FUSE PLATE DATA			
	Foundation			Reinforcement			Stub Post														
	Diameter	*Minimum Depth	Concrete (1) cu. yds.)	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length	lbs. (2)	Length	Bolt Size	A	B	C	D	E	t_1	t_2	R	W	J	K	L	t_3
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	11/32"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	11/32"	1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	13/32"	5/16"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	13/32"	5/16"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	15/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	15/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	15/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	17/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	17/32"	3/8"	7"	3 1/2"	1 3/4"	1/2"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE — Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	—	—	—	—	—	—	—	—	—	—	—	—
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	—	—	—	—	—	—	—	—	—	—	—
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	—	—	—	—	—	—	—	—
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	—	—	—	—	—	—	—
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	—	—	—	—	—	—
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	—	—	—	—
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"
W16x45	—	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"



ELEVATION
GROUND LINE & STUB POST

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

(1) Quantity includes all concrete necessary for one foundation.

(2) Includes reinforcement bars and spiral hooping for one foundation.

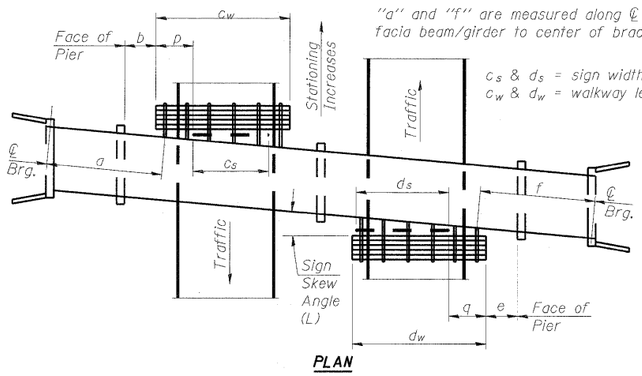
BAW-A-2

7-1-10

(Sheet 2 of 2)

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BREAK-AWAY WIDE FLANGE STEEL SIGN POST TABLES
		CHECKED - MPW	REVISED -		
	PLOT SCALE =	DRAWN - PMK	REVISED -		SHEET NO. 2 OF 2 SHEETS
	PLOT DATE =	CHECKED - MPW	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	428
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

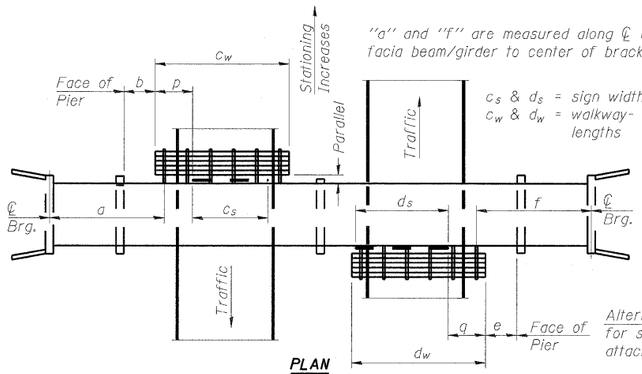


PLAN

(Left Sign Skew > 15°)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

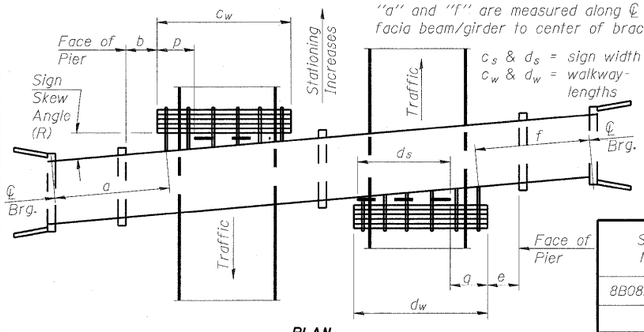


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

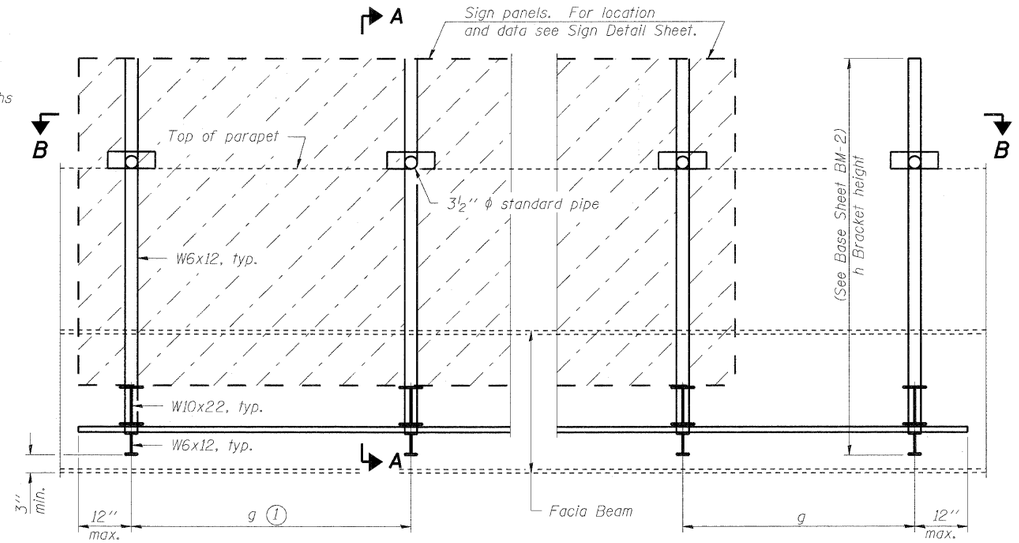


PLAN

(Right Sign Skew > 15°)

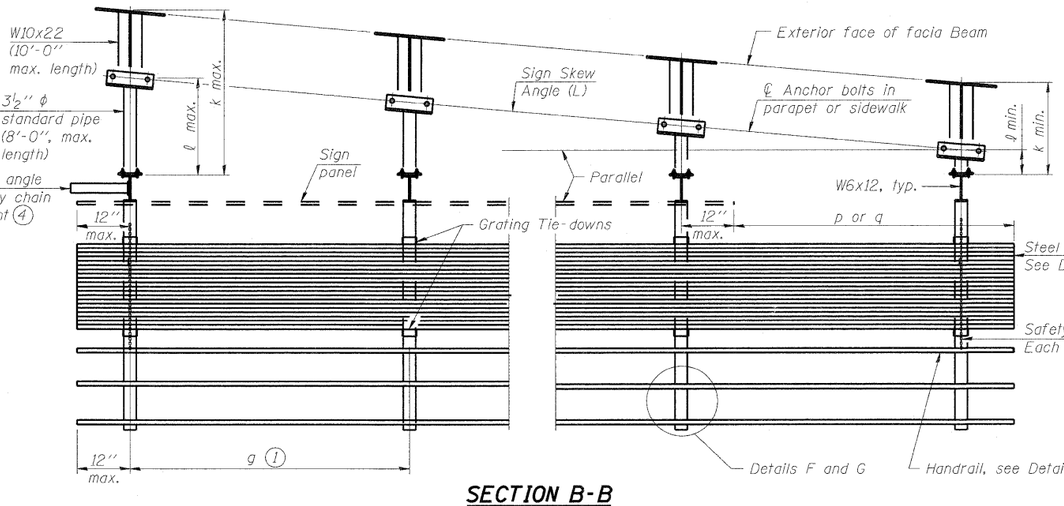
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew > 15°)

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c_s	c_w	d_s	d_w	e	f	g	No. of Brackets (Total)	p	q	Total Grating/ Hndrl. Lengths (c_w + d_w)
8B0821064R003.0	8° 2' 58"	15+26.38	082-0326	64E	-	-	-	-	52'-7"	56'-7"	45'-1"	46'-10"	5'-5½"	11	-	4'-0"	56'-7"

Dimensions a, b, e, f & g may vary as approved by the Engineer, see (1).
When c_w < c_s and/or d_w < d_s, use alternate brackets without walkway supports where applicable, see (3).

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

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.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

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

MATERIALS: 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 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

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: All-threaded rod conforming to ASTM A307, ¾" ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on grating length (cw, dw) unless otherwise specified. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

TOTAL BILL OF MATERIAL

(3) OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	56' 7"

BM-1

7-1-10

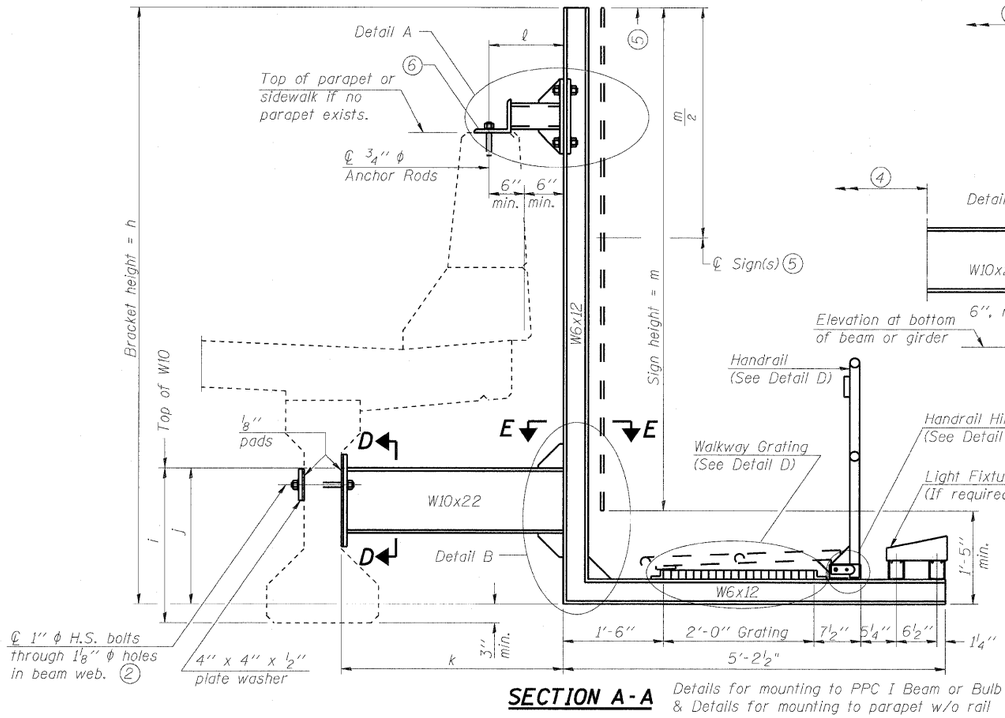
FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
GENERAL PLAN AND ELEVATION

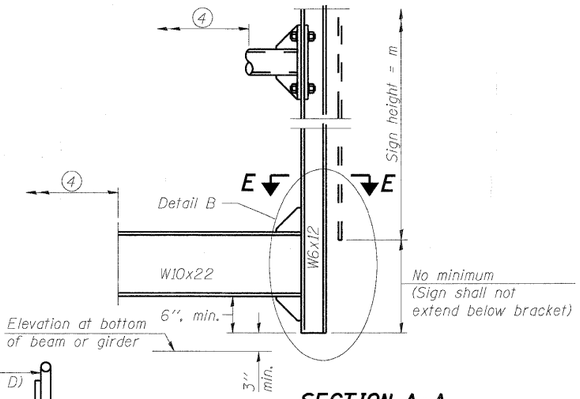
SHEET NO. 1 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	429
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



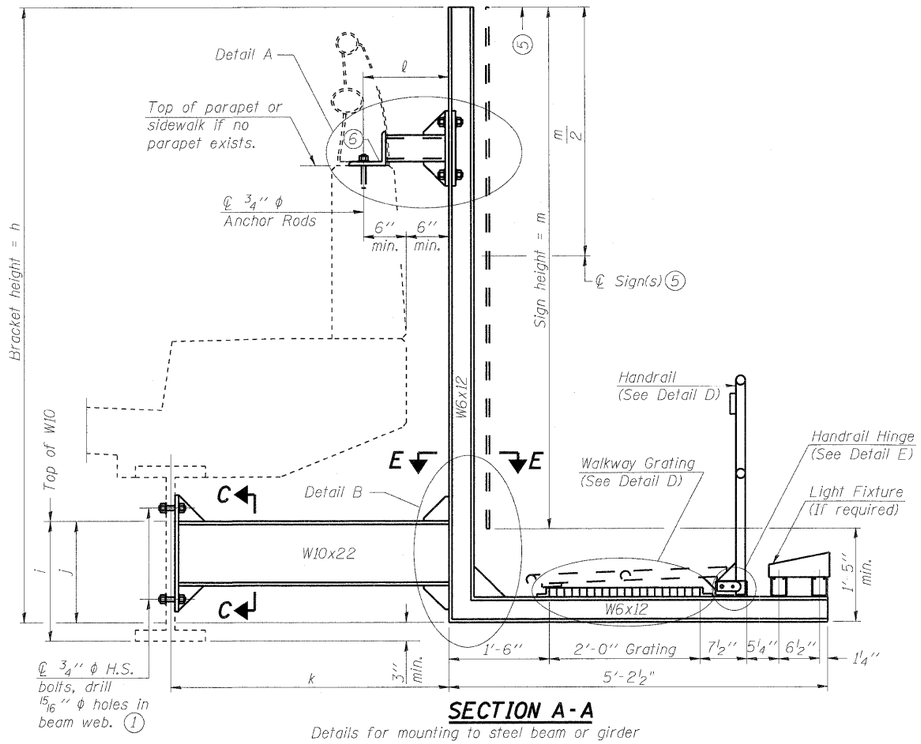
SECTION A-A

Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



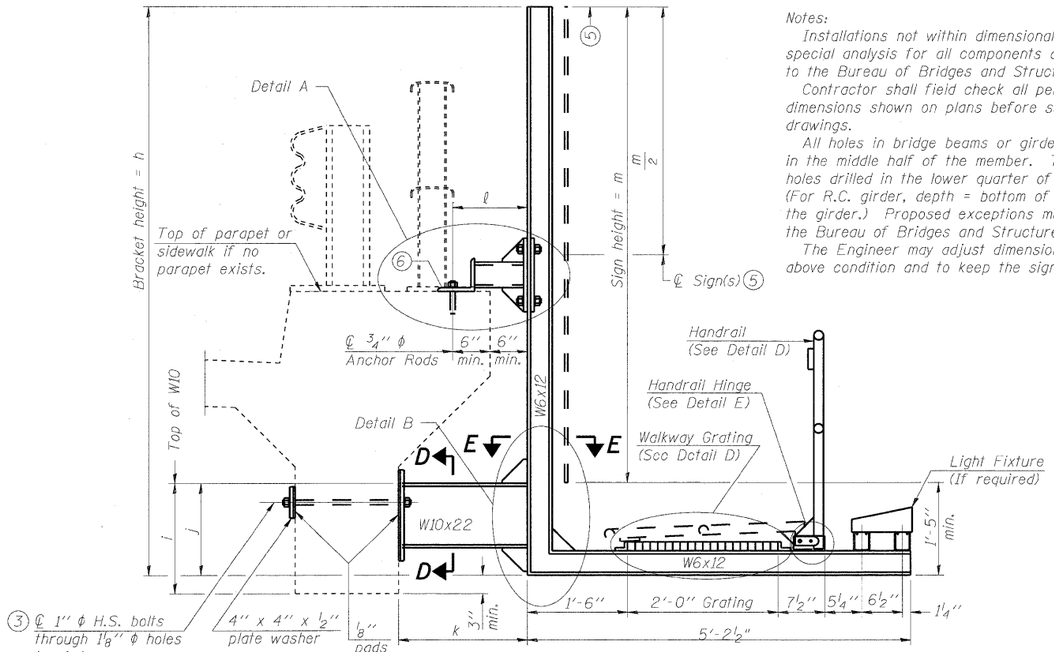
SECTION A-A

Alternate with no lights or walkways



SECTION A-A

Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail



SECTION A-A

Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail

Notes:

Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.

Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.

All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.

The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

(1) *Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.*

(2) *For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during field drilling of existing beams.*

(3) *For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over 1/4" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.*

(4) *For attachment details of 3 1/2" pipe and W10x22, see other sections as applicable.*

(5) *Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)*

(6) *For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.*

Structure Number	Station	h	i	j	k max. (10'-0" max.)	ℓ max. (8'-0" max.)	m (15'-0" max.)
8B0821064R003.0	15+26.38	16'-6"	3'-0"	2'-9"	4'-7 1/2"	1'-6"	15'-0"

For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.
For Details D & E, see Base Sheet BM 4.

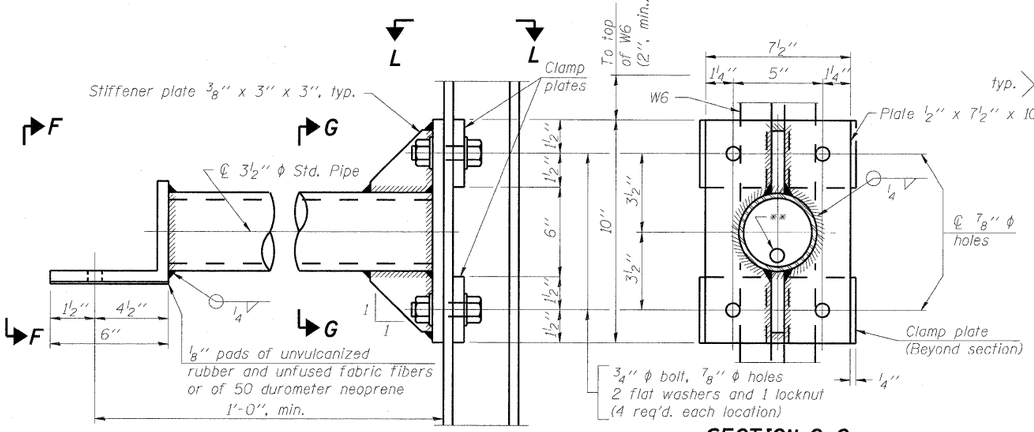
BM-2 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

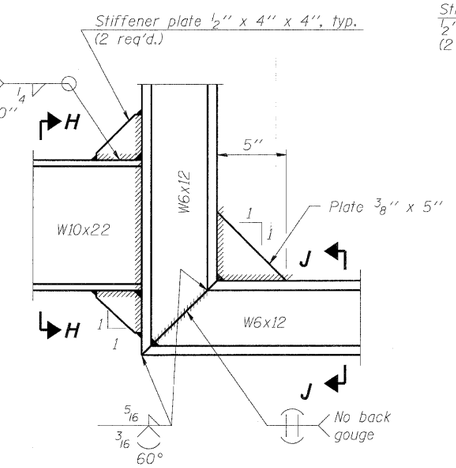
BRIDGE MOUNT SIGN STRUCTURES
WALKWAY AND CONNECTION DETAILS
SHEET NO. 2 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	430
	*64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			

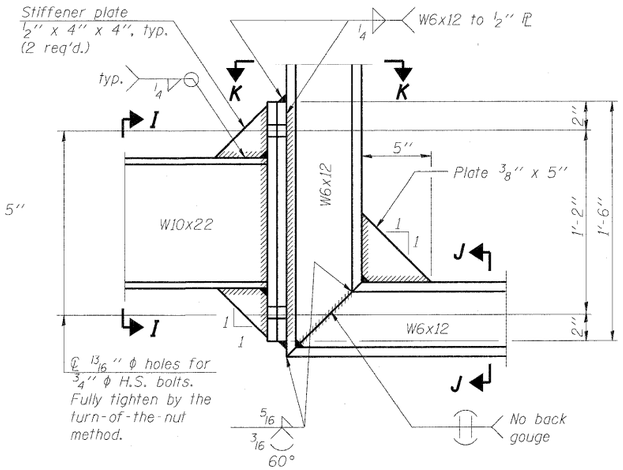


DETAIL A

SECTION G-G

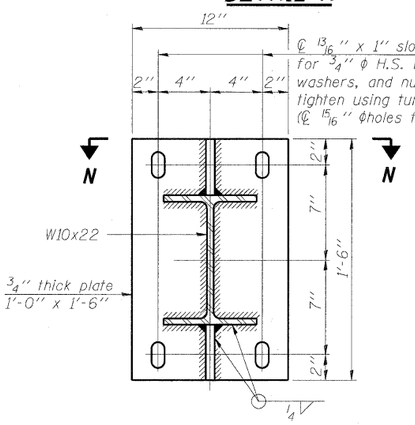


DETAIL B - WELDED W10x22 TO W6x12 CONNECTION



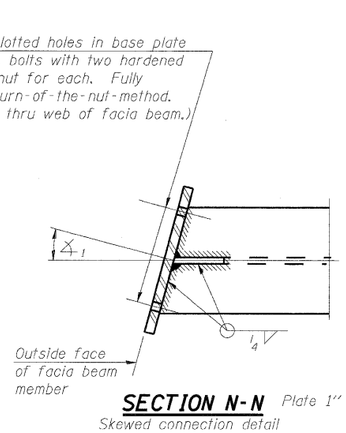
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



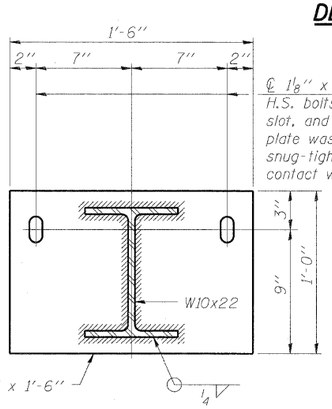
SECTION C-C

Steel beam or girder connection plate details



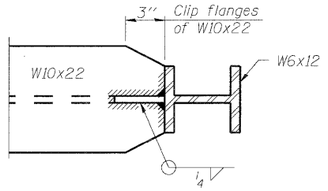
SECTION N-N

Skewed connection detail for W10x22 to facia beam.

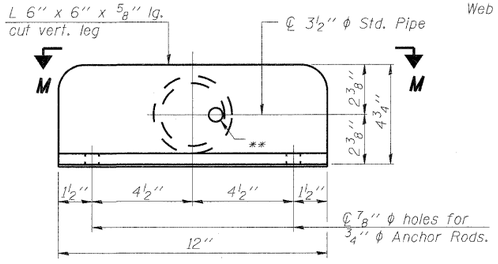


SECTION D-D

Concrete beam or girder connection plate details.

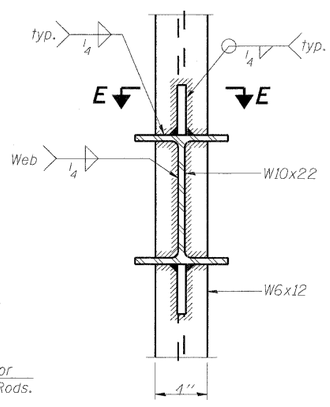


SECTION E-E

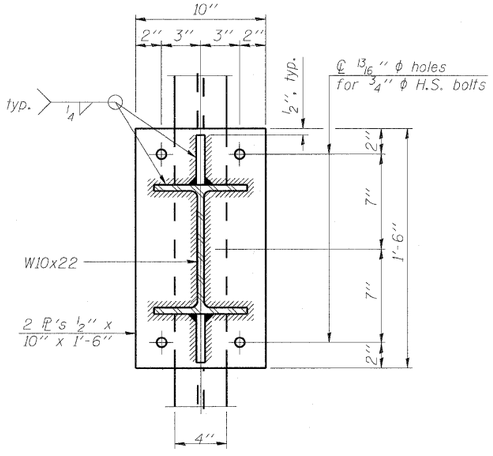


VIEW F-F

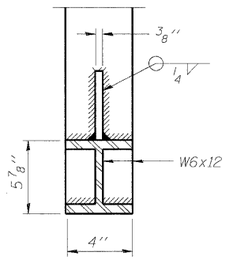
** 13/16" ϕ holes for galvanizing. After galvanizing, install 7/8" ϕ A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in 1/2" plate.)



SECTION H-H

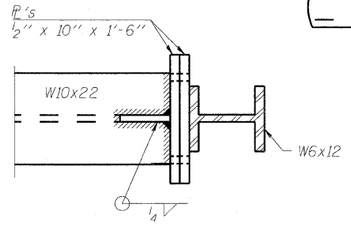


SECTION I-I

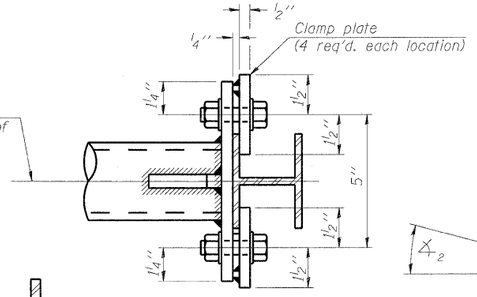


SECTION J-J

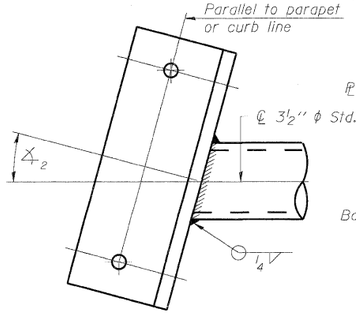
Note: For constant slab overhang at facia beam, ∠1 = ∠2 = sign angle. For flared beams or other special cases where ∠1 ≠ ∠2, ∠1 = sign angle.



SECTION K-K

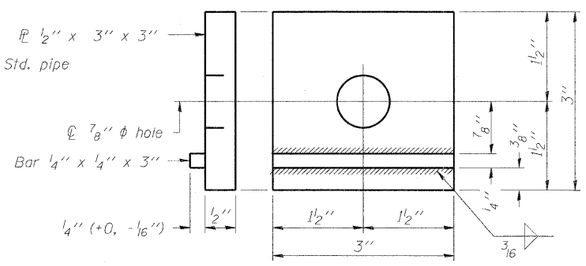


SECTION L-L



SECTION M-M

Skewed connection detail for 3 1/2" ϕ pipe to parapet.



CLAMP PLATE DETAILS

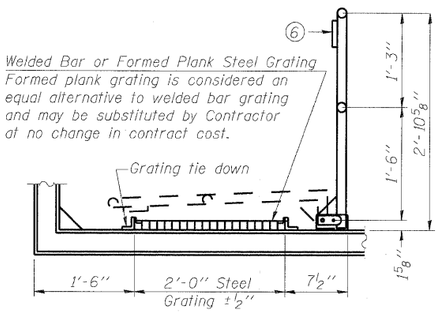
BM-3 7-1-10

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -
		CHECKED - MPW	REVISED -
	PLOT SCALE =	DRAWN - PMK	REVISED -
	PLOT DATE =	CHECKED - MPW	REVISED -

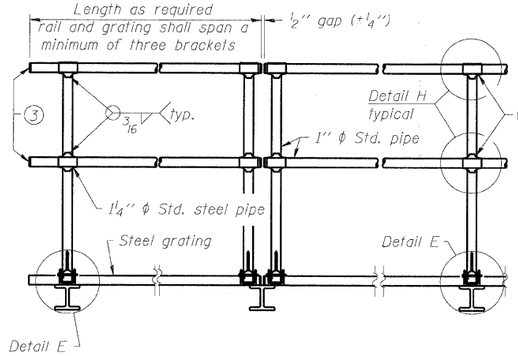
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
CONNECTION DETAILS
SHEET NO. 3 OF 4 SHEETS

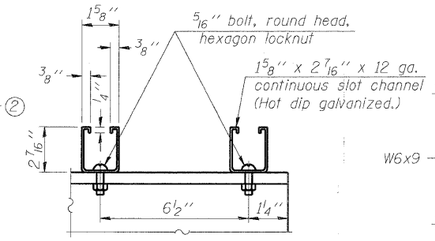
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	431
	•64/998/70	CONTRACT NO. 76C52		
	ILLINOIS FED. AID PROJECT			



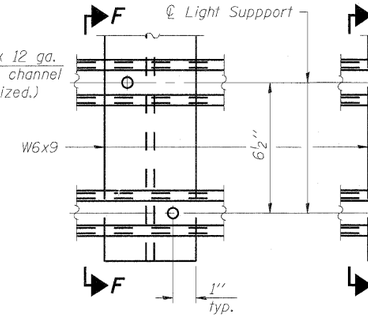
SIDE ELEVATION



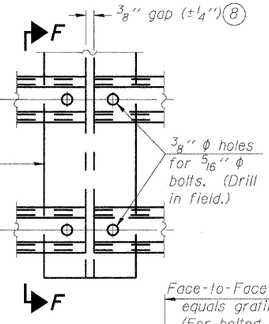
DETAIL D HANDRAIL FRONT ELEVATION



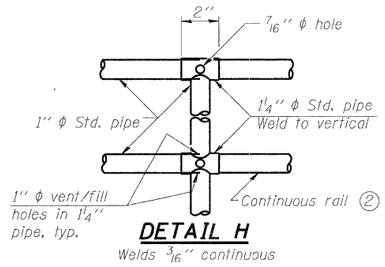
SECTION F-F
LIGHTING FIXTURE MOUNTS
(If required)



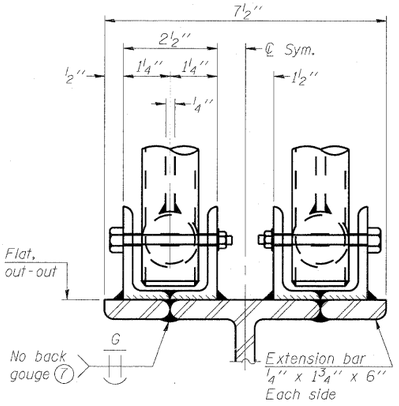
DETAIL F



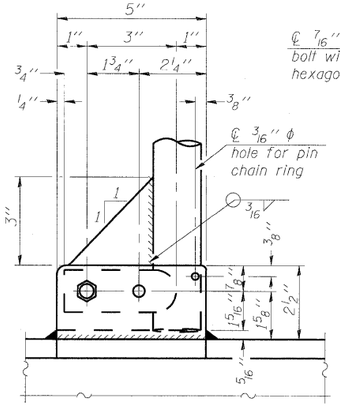
DETAIL G



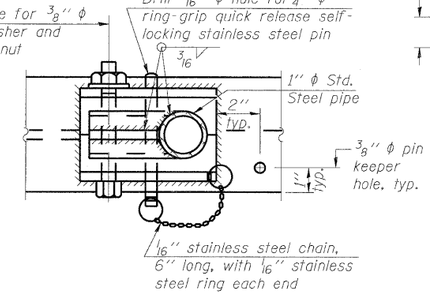
DETAIL H
Welds 3/16" continuous



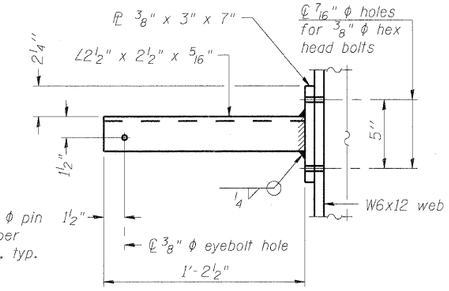
ELEVATION AT HANDRAIL JOINT
(Details not shown same as "FRONT ELEVATION")



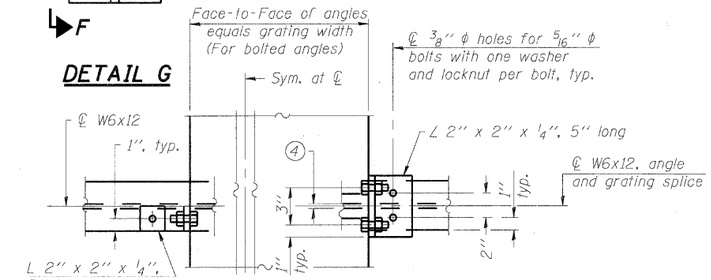
SIDE ELEVATION



PLAN AT SINGLE HANDRAIL HINGE
DETAIL E

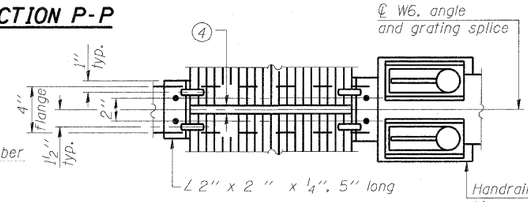


SECTION P-P

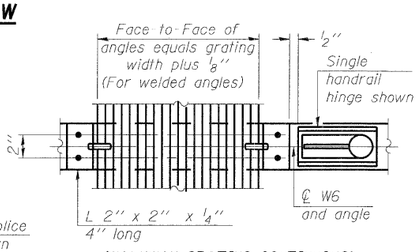


GRATING CONTINUOUS AT GRATING SPLICE

VIEW W-W

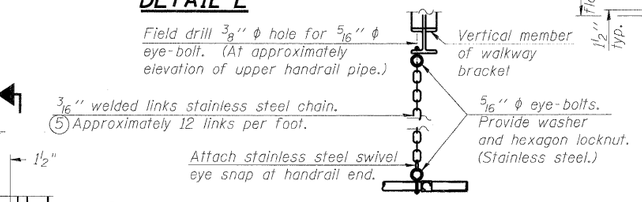


(AT WALKWAY GRATING SPLICE)

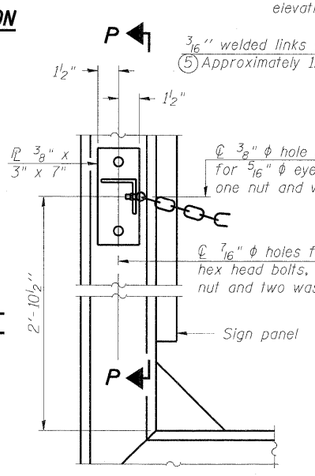


(WALKWAY GRATING CONTINUOUS)

PLAN

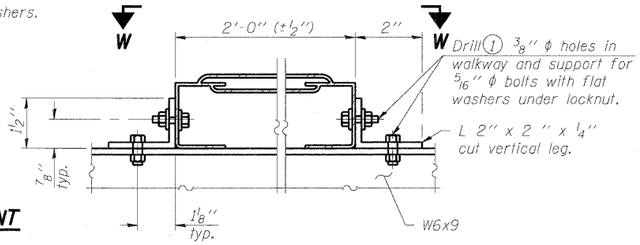


SAFETY CHAIN
One (1) required for each end of each walkway.

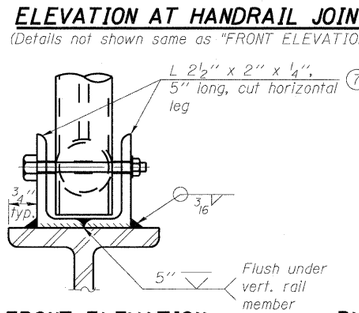


No Sign at Bracket

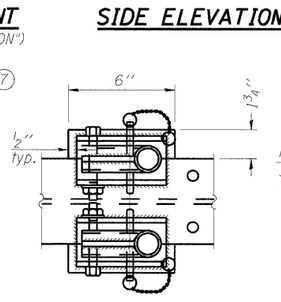
SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "SIDE ELEVATION" and "SAFETY CHAIN"



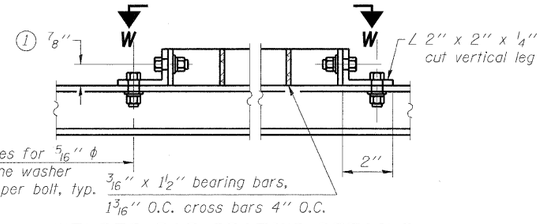
ALTERNATE FORMED PLANK GRATING DETAILS
Plank Grating: nominal depth = 2½" (±½"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.



FRONT ELEVATION
(See above Elevations for dimensions.)



PLAN AT HANDRAIL JOINT
(For Details, see Elevations.)



WELDED BAR GRATING DETAILS

NOTES

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.

(2) Horizontal rail member shall be continuous thru 1¼" ϕ pipe. Provide 7/16" ϕ hole in 1¼"ϕ pipe for ⅜" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" ϕ holes on top rail at ends only.)

(3) Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.f.w. and grind smooth. (All rail ends.)

(4) ⅜" (±¼") gap between grating panels at splice.

(5) Chain to be type 304L stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".

(6) ℄ ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

(7) Extrusions may be used in lieu of details shown, with approval by Engineer.

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

BM-4
1-20-11

FILE NAME =	USER NAME =	DESIGNED - PMK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES WALKWAY DETAILS
		CHECKED - MPW	REVISED -		
	PLOT SCALE =	DRAWN - PMK	REVISED -		SHEET NO. 4 OF 4 SHEETS
	PLOT DATE =	CHECKED - MPW	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	432
	•64/998/70	CONTRACT NO. 76C52		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 3/24/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8C082I055R002.2
Station SB 120+97.00

BORING NO. ST-10
Station Mile Marker 2.2
Offset
Ground Surface Elev. 415.68 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt – 4 inches 415.38			
Gravel (FILL), with sand, cinders, and rubble 414.88	3		
Blackish brown, SILTY CLAY (FILL), trace cinders	5 6		19
412.68			
Soft to medium stiff, brown, SILT	3 3		
	3 3		18
-5			
	2		
	2 3		18
	1		
	2 2		19
-10			
Grain Size Distribution Conducted	1		
	2 2		20
	2		
	3 3		19
-15			
	1		
	1 2	0.7 B	31
	2		
	2 3	0.4 B	34
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Soft to medium stiff, brown, SILT (continued)	0		
	1 1		33
	0		
	0 1	0.6 B	34
-25			
	0		
	0 1	0.6 B	33
386.68	0		
Medium stiff, gray, CLAY	1 1	0.9 B	45
-30			
	0		
381.18	1 2	1.1 B	28
Soft, gray, SILTY LOAM -35			
Grain Size Distribution Conducted	1		
	1 2		
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 3/24/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8C082I055R002.2
Station SB 120+97.00

BORING NO. ST-10
Station Mile Marker 2.2
Offset
Ground Surface Elev. 415.68 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Soft, gray, SILTY LOAM (continued)			
373.68			
Loose, gray, SANDY LOAM	3		
	4 5		
370.68 -45			
End of Boring			
-50			
-55			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

FILE NAME = DBTRI-76C52-sht-truss-details-SOIL_BORING.dgn	USER NAME = mraconachie	DESIGNED - AECOM	REVISED -
		DRAWN - PMK	REVISED -
	PLOT SCALE = 3.1676 ' / in.	CHECKED - MPW	REVISED -
	PLOT DATE = 1/19/2012	DATE - 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 1 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	433
•64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 3/19/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY EED

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 25 ft HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8C082I055L002.7
Station SB 91+30.00

BORING NO. ST- 6
Station Mile Marker 3.6
Offset
Ground Surface Elev. 411.90 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 390.9 ft ▼
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
411.57			
Topsoil – 4 inches			
Brown to gray, SILTY LOAM (FILL)	1		
	2 1	0.5 B	23
	2		
	4 5	0.7 S	22
-5			
406.40			
Gray, CLAY LOAM (FILL), with brick, slag, concrete, and glass	2		
	3 3	0.9 S	26
	1		
	3 4	0.8 S	22
-10			
	4		
	5 6	1.8 S	24
	5		
	5 4	1.1 S	23
-15			
396.40			
Medium stiff, gray, CLAY	1		
	2 3	1.0 S	41
	2		
	2 3	0.9 B	33
-20			
Medium stiff, gray, CLAY (continued)			
▼	0		
	1 1	0.7 B	33
	0		
	0 1	0.7 B	34
-25			
	0		
	0 1	0.5 B	49
	0		
382.40			
	8 18		40
-30			
Dense, gray, FINE GRAINED SAND			
Grain Size Distribution Conducted	11		
	19 16		
376.90 -35			
End of Boring			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

FILE NAME = D8TRI-76C52-sht-truss-details-SOIL_BORING.dgn	USER NAME = mmcconachie	DESIGNED - AECOM	REVISED -
		DRAWN - PMK	REVISED -
	PLOT SCALE = 3.1676 ' / in.	CHECKED - MPW	REVISED -
	PLOT DATE = 1/19/2012	DATE - 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 2 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	434
•64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 11/2/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY KB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 8S082I055L003.0
Station SB 78+35.00

BORING NO. B- 19ST
Station 19+55.11 Ground Surface Elev. 419.50 ft Tube Length 24 in
Offset 57.69ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	TRIAXIAL DATA: MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	TRIAXIAL DATA: PHI ANG. (deg)	TRIAXIAL DATA: TEST TYPE
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)		1-1	67						
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)		1-2	100						
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL)		1-3	100	131	1.3	17			Qu
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL)		1-4	100	128	1.6	17			Qu
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)		2-1	50						
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)		2-2	100			33			
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL)		2-3	100	128	2.4	33			Qu
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL)		2-4	100	124	0.7	33			Qu
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)		3-1	100						
Gray and brown, SILTY CLAY with trace sand and coarse gravel (FILL) (disturbed)	-5	3-2	33						
Brown, SILTY CLAY (disturbed)		4-1	67						
Brown, SILTY CLAY		4-2	100	115	1.2	30			Qu
Brown, SILTY CLAY		4-3	100	116		29			Con
Brown, SILTY CLAY (disturbed)		5-1	100						
Brown, SILTY CLAY (disturbed)		5-2	100						
Brown, SILTY CLAY		5-3	33	115	0.7	29			Qu
	-10								
Brown, SILTY CLAY (disturbed)		6-1	100						
Brown, SILTY CLAY		6-2	100	113	0.9	33			Qu
Brown, SILTY CLAY (disturbed)		7-1	17						
Brown, SILTY CLAY (disturbed)		7-2	100						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 11/2/00

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY KB

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO.
Station

BORING NO. B- 19ST
Station 19+55.11 Ground Surface Elev. 419.50 ft Tube Length 24 in
Offset 57.69ft Left Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	TRIAXIAL DATA: MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	TRIAXIAL DATA: PHI ANG. (deg)	TRIAXIAL DATA: TEST TYPE
Brown, SILTY CLAY		7-3	100	115		33			Con
Brown, SILTY CLAY, trace of sand		7-4	100	111	0.5	27			Qu
Brown, SILTY CLAY (disturbed)		8-1	67						
	-15								
Brown, SILTY CLAY		9-1	100	115		34	0.1	30	CU
Brown, SILTY CLAY (disturbed)		9-2	100						
Brown, SILTY CLAY (disturbed)		9-3	100						
Brown, SILTY CLAY (disturbed)		9-4	100						
Brown, SILTY CLAY (disturbed)		10-1	33						
Brown and gray, CLAY LOAM (disturbed)		10-2	100						
Brown and gray, CLAY LOAM		10-3	100	116	0.6	31			Qu
Brown and gray, CLAY LOAM, trace of sand (disturbed)	-20	10-4	100						
Brown, SANDY LOAM		11-1	100						
Brown, SANDY LOAM		12-1	100						
	-25								

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 3 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-RA1, 82-1-RB1)	ST. CLAIR	629	435
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 76C52	

*64/998/70

FILE NAME = 38IRT-76C52-sht-cross-details-SOIL BORING.dgn
USER NAME = mcconnaha
PLOT SCALE = 3.875 ' / in.
PLOT DATE = 1/19/2012

DESIGNED	-	AECOM
DRAWN	-	PMK
CHECKED	-	MPW
DATE	-	1-20-12

REVISED	-	
REVISED	-	
REVISED	-	

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Date 2/18/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 8S082I055R003.2
Station NB 88+00.00

BORING NO. RW-408ST
Station 34+34.82 Ground Surface Elev. 415.20 ft Tube Length 24 in
Offset 86.78ft Right Begin Sampling Depth -0.5 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	SPECIMEN (no)	RECOVERY (%)	UNIT WEIGHT (pcf)	TRIAXIAL DATA: STRENGTH (tsf)	TRIAXIAL DATA: MOISTURE (%)	TRIAXIAL DATA: COHESION (tsf)	TRIAXIAL DATA: PHI ANG. (deg)	TRIAXIAL DATA: TEST TYPE
Black, SILTY CLAY, with porceline and brick fragments (FILL)		1-1	100						
Black, SILTY CLAY, with porceline and brick fragments (FILL)		1-2	100	103	0.9	31			Uc
Black, SILTY CLAY, with porceline and brick fragments (FILL)		1-3	50						
Black, CLAY LOAM, with glass and brick fragments (FILL)		2-1	100						
Black, CLAY LOAM, with glass and brick fragments (FILL)		2-2	100			40			
Black, CLAY, with wood and coal fragments, trace gravel (FILL)		3-1	100						
Black, CLAY, with wood and coal fragments, trace gravel (FILL)	-5	3-2	100	98		41			
Black, CLAY, with wood and coal fragments, trace gravel (FILL)		4-1	100			51			
Black, CLAY, with wood and coal fragments, trace gravel (FILL)		4-2	100						
Black, CLAY, with wood and coal fragments, trace gravel (FILL)		4-3	67						
Brown, SILTY LOAM		5-1	100						
Brown, SILTY LOAM		5-2	100						
Brown, SILTY LOAM		5-3	100	104		37	0.1	34	CU
Brown, SILTY LOAM	-10	5-4	100						

The "Unit Weight" column indicates the "wet" or 'moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

FILE NAME = D:\TR\76C52\sht\roundabout\SOIL BORING.dgn
USER NAME = mmcconnachie
PLOT SCALE = 3.1676 ' / in.
PLOT DATE = 1/19/2012

DESIGNED - AECOM
DRAWN - PMK
CHECKED - MPW
DATE - 1-20-12

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 4 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE. • | SECTION 82-1-RIA), 82-1-RIB) | COUNTY ST. CLAIR | TOTAL SHEETS 629 | SHEET NO. 436

FED. ROAD DIST. NO. ILLINOIS | FED. AID PROJECT

CONTRACT NO. 76C52

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 3/22/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8S082I055L003.2
Station SB 68+75.00

BORING NO. ST- 1
Station 68+75
Offset
Ground Surface Elev. 435.87 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Grayish brown, CLAY (FILL), with gravel
434.37	3			
	3		27	Brown, CLAY LOAM (FILL), with brick fragments
	4			
	2			
	2	1.5	28	
-5	3			
	3			
	3	1.0	17	
	4			
	4			
	5	1.1	18	
-10	7			
424.37	5			
	7		15	Brown to gray, SANDY LOAM (FILL), with brick and gravel fragments
	11			
	5			Grain Size Distribution Conducted
	5	1.1	16	
-15	7			
	4			
	6		17	
	10			
	6			
	10	0.9	17	
-20	11			
412.87	8			Brown to gray, SANDY LOAM (FILL), with brick and gravel fragments (continued) Grain Size Distribution Conducted
	10	0.5	18	
	11			
	50/0"			Brick and concrete rubble (FILL)
-25				
410.37	2			Medium stiff, grayish brown, CLAY
	2	0.6	31	
	3			
407.87	2			Stiff, brown and gray, SILTY LOAM
	2	1.3	23	
-30	3			
403.87	6			Medium dense, brown, FINE GRAINED SAND, with silt
	6			Grain Size Distribution Conducted
	7			
-35	7			
	7			
-40	11			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Date 3/22/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY RFW

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8S082I055L003.2
Station SB 68+75.00

BORING NO. ST- 1
Station 68+75
Offset
Ground Surface Elev. 435.87 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium dense, brown, FINE GRAINED SAND, with silt (continued)
	7			
	11			
390.87 -45	11			
				End of Boring
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

FILE NAME = D8TR1-76C52-sht-truss-details-SOIL_BORING.dgn	USER NAME = mmcconachie	DESIGNED - AECOM	REVISED -
	PLOT SCALE = 3.1676 ' / in.	DRAWN - PMK	REVISED -
	PLOT DATE = 1/19/2012	CHECKED - MPW	REVISED -
		DATE - 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 5 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	437
	•64/998/70	CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 3/16/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY BJS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 18, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME 55 TRK

STRUCT. NO. 8C082L"BAUGH"R
Station BAUGH AVE 14+03.00

BORING NO. HM- 8
Station 84+47.00
Offset 72.20ft RT
Ground Surface Elev. 419.11 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter ** ft
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt – 12 inches			
418.11			
Brown, SILTY CLAY (FILL), trace brick and limestone fragments	2		
	2		23
	5		
	2		
	3	3.1	30
-5	5	B	
	2		
	3	2.9	18
	5	S	
	2		
	4		19
409.11 -10	9		
Very stiff, brown, CLAY			
	2		
	3	2.9	30
	5	S	
406.11			
Soft, brown, CLAY LOAM	1		
	1	0.2	35
-15	2	B	
403.61			
Very stiff, brown, CLAY	1		
	1	2.2	33
	2	S	
401.11			
Medium stiff, brown, LOAM Grain Size Distribution Conducted	1		
	1	0.5	29
399.11 -20	2	B	
Stiff, brown, CLAY			
	1		
	2	1.7	29
	2	S	
396.11			
Medium Stiff, brown, SILTY LOAM Grain Size Distribution Conducted	1		
	1		24
394.11 -25	4		
End of Boring			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 3/17/10

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY EED

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA with MR below 13 ft HAMMER TYPE CME 750X / 73%

STRUCT. NO. 8S082I064L003.0
Station 64W STA 110+12.00

BORING NO. ST- 9
Station 110+10
Offset
Ground Surface Elev. 402.63 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 389.6 ft ▼
Upon Completion ** ft
After ____ Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt – 11 inches			
401.71			
Medium dense to loose, brown, FINE GRAINED SAND	5		
	7		
	8		
	2		
	4		
-5	5		
	1		
	3	0.5	27
	4	S	
	2		
Grain Size Distribution Conducted	2		
	4	0.5	24
-10	2	B	
	1		
	2	0.5	30
	4	S	
▼			
	3		
	4		
-15	5		
387.13			
Very loose to medium dense, gray, SANDY LOAM	1		
	2	0.5	31
	2	B	
Grain Size Distribution Conducted	1		
	2	0.4	39
-20	4	B	
382.13			
Medium dense, gray, FINE GRAINED SAND	1		
	5	0.3	23
	7	B	
	10		
	9	0.4	
-25	12	S	
	3		
	4		26
loose	5		
	6		
	9		
-30	12		
	5		
	7		
367.63 -35	12		
End of Boring			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

FILE NAME = D8TRI-76C52-sht-truss-details-SOIL_BORING.dgn	USER NAME = mmcconachie	DESIGNED - AECOM	REVISED -
		DRAWN - PMK	REVISED -
	PLOT SCALE = 3.1676 ' / in.	CHECKED - MPW	REVISED -
	PLOT DATE = 1/19/2012	DATE - 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING

SCALE: NA | SHEET NO. 6 OF 6 SHEETS | STA. NA | TO STA. NA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	438
•64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ELECTRICAL SYMBOLS FOR PROPOSED WORK

- CONVENTIONAL LIGHTING UNIT: 45'-0" MOUNTING HEIGHT, 15'-0" MAST ARM(S), 250 WATT HPS M-C-III LUMINAIRE(S), GROUND MOUNTED ON A BREAKAWAY TRANSFORMER BASE
- TEMPORARY LIGHTING UNIT: 400 WATT HPS LUMINAIRE (TYPE M-C-III); 15 FOOT MAST ARM; 60 FOOT, CLASS 4, WOOD POLE
- TEMPORARY WOOD POLE: 50 FOOT LENGTH (10 FOOT BURIED, 40 FOOT INSTALLED HEIGHT)
- RECORDER WELL
- DEEP WELL
- EXISTING DEEP WELL TO BE ADJUSTED
- AC — TEMPORARY AERIAL CABLE
- RACEWAY OR DIRECT BURIAL CABLE UNDERGROUND WITHOUT ENCASEMENT
- SCHEDULE 80 PVC CONDUIT SLEEVE
- RACEWAY ATTACHED TO STRUCTURE
- RACEWAY EMBEDDED IN CONCRETE STRUCTURE

ELECTRICAL SYMBOLS FOR EXISTING CONDITIONS

- EXISTING HIGH MAST LIGHTING UNIT TO REMAIN
- EXISTING CONVENTIONAL LIGHTING UNIT TO REMAIN
- EXISTING LIGHTED SIGN STRUCTURE TO REMAIN- CANTILEVER TYPE
- EXISTING LIGHTED SIGN STRUCTURE TO REMAIN- TRUSS TYPE
- EXISTING LIGHTING CONTROLLER TO REMAIN
- EXISTING ELECTRIC SERVICE TO REMAIN
- EXISTING JUNCTION BOX TO REMAIN
- EXISTING HANDHOLE TO REMAIN
- EXISTING RACEWAY OR DIRECT BURIED CABLE
- EXISTING CONDUIT SLEEVE
- EXISTING DEEP WELL TO REMAIN
- EXISTING TEMPORARY WOOD POLE TO REMAIN

ELECTRICAL SYMBOLS FOR REMOVAL WORK

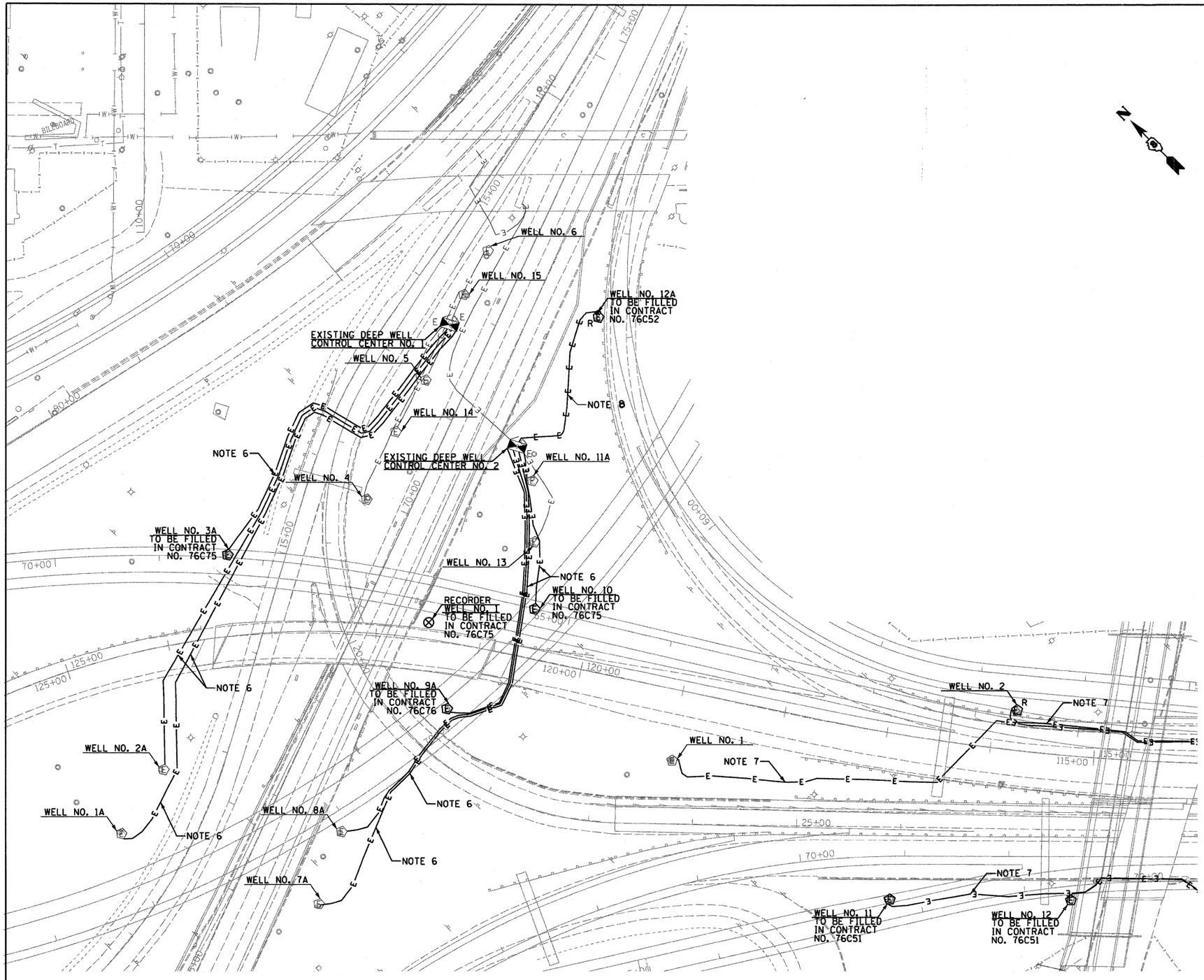
- EXISTING CONVENTIONAL LIGHTING UNIT AND CONCRETE FOUNDATION TO BE REMOVED
- EXISTING LIGHTED SIGN STRUCTURE TO BE REMOVED: CANTILEVER TYPE
- EXISTING LIGHTED SIGN STRUCTURE TO BE REMOVED: TRUSS TYPE
- EXISTING RECORDER WELL TO BE FILLED
- EXISTING DEEP WELL TO BE FILLED
- AC — EXISTING AERIAL CABLE TO BE REMOVED
- EXISTING RACEWAY OR DIRECT BURIED CABLE TO BE ABANDONED
- EXISTING CONDUIT SLEEVE TO BE ABANDONED

ABBREVIATIONS

A	AMPERES	NTS	NOT TO SCALE
AC	ALTERNATING CURRENT	PH	PHASE
A/C	AERIAL CABLE	PIN	PROJECT IDENTIFICATION NUMBER
ATS	ATTACHED TO STRUCTURE	PNL	PANEL
C	CONDUCTOR	PROP	PROPOSED
CKT	CIRCUIT	PVC	POLYVINYL CHLORIDE
CNC	COILABLE NON-METALLIC CONDUIT	PVCC	POLYVINYL CHLORIDE COATED
CONC	CONCRETE	R	EXISTING UNIT TO BE REMOVED
℄, CL	CENTERLINE	RGC	RIGID GALVANIZED STEEL CONDUIT
DIA	DIAMETER	ROW	RIGHT OF WAY
DWG	DRAWING	RL	EXISTING RELOCATED UNIT
E	EXISTING UNIT TO REMAIN	RR	EXISTING UNIT TO BE REMOVED AND REINSTALLED
EA	EACH	RT	RIGHT
EB	EASTBOUND	SB	SOUTHBOUND
ECA	ELECTRICAL CABLE ASSEMBLY	SCH 40	SCHEDULE 40
EOR	EDGE OF ROADWAY	SCH 80	SCHEDULE 80
FT	FOOT, FEET	SHT	SHEET
FDN	FOUNDATION	SS	STAINLESS STEEL
GND, GRD	GROUND	STA	STATION
HPS	HIGH PRESSURE SODIUM	STD	STANDARD
I	INTERSTATE	STRUCT	STRUCTURE
IDOT	ILLINOIS DEPARTMENT OF TRANSPORTATION	T	TEMPORARY
IN	INCHES	TEL	TELEPHONE
J, JB	JUNCTION BOX	TS	TRAFFIC SIGNAL
KVA	KILOVOLT-AMPERE	TYP	TYPICAL
KW	KILOWATT	UD	UNIT DUCT
LF	LINEAR FEET	UNO	UNLESS NOTED OTHERWISE
LT	LEFT	V	VOLT
MA	MAST ARM(S)	W	WATT, WIRE
NB	NORTHBOUND	WB	WESTBOUND
NIC	NOT IN CONTRACT	WM	WALL MOUNTED
NO	NUMBER	WP	WOOD POLE
		XFMR	TRANSFORMER

ME-01

FILE NAME = D8TRI-76C52-sht-Wells-01.dgn	USER NAME = stermerb	DESIGNED WDS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ELECTRICAL SYMBOLS AND ABBREVIATIONS**	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN TCL	REVISED -			•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	439
	PLOT SCALE = 2.0000 ' / in.	CHECKED JPC	REVISED -			• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/18/2012	DATE 1-20-12	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. N/A | TO STA. N/A	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE DRAWING ME-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. SEE DRAWING DW-04 FOR EXISTING DEEP WELL DETAILS.
3. LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. PROTECT AND TAKE CARE NOT TO DAMAGE EXISTING UTILITIES FOR THE DURATION OF THE CONSTRUCTION.
4. VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
5. COORDINATE ALL WORK WITH CIVIL WORK, STRUCTURAL WORK, AND SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLANS.
6. EXISTING CABLE AND RACEWAY TO BE DISCONNECTED IN CONTRACT 76C75 AND BE ABANDONED.
7. EXISTING CABLE AND RACEWAY TO BE DISCONNECTED IN CONTRACT 76C51 AND BE ABANDONED.
8. EXISTING CABLE AND RACEWAY TO BE DISCONNECTED AND ABANDONED IN THIS CONTRACT.

DW-01

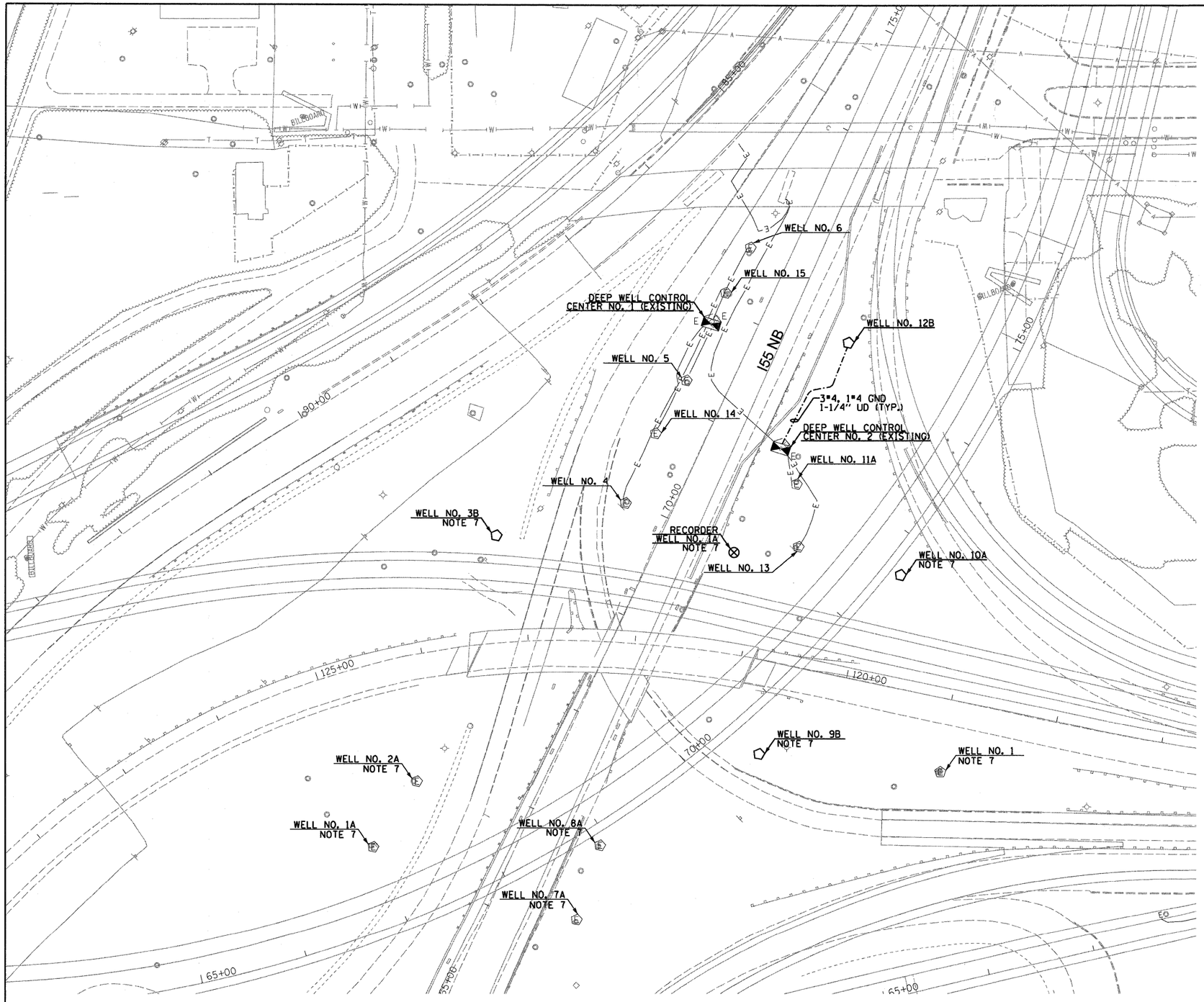
FILE NAME = D8TRI-76C52-sht-Wells-02.dgn	USER NAME = stermerb	DESIGNED	JPC	REVISED -
		DRAWN	TCL	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED	WDS	REVISED -
	PLOT DATE = 1/18/2012	DATE	1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEEP WELL ELECTRICAL PLANS
EXISTING CONDITION AND DEMOLITION

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 38+00.00 | TO STA. 51+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	440
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE DRAWING ME-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. NOT USED
3. SEE DRAWING DW-05 FOR PROPOSED DEEP WELL DETAILS.
4. LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. PROTECT AND TAKE CARE NOT TO DAMAGE EXISTING UTILITIES FOR THE DURATION OF THE CONSTRUCTION.
5. VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
6. COORDINATE ALL WORK WITH CIVIL WORK, STRUCTURAL WORK, AND SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLANS.
7. SEE CONTRACT 76C75 FOR WORK ASSOCIATED WITH NEW WELLS 3B, 9B AND 10A; RECORDER WELL 1A; AND NEW FEEDERS TO WELLS 1, 1A, 2A, 7A AND 8A.

50' 0' 25' 50' 75' 100'
SCALE: 1" = 50'

DW-02

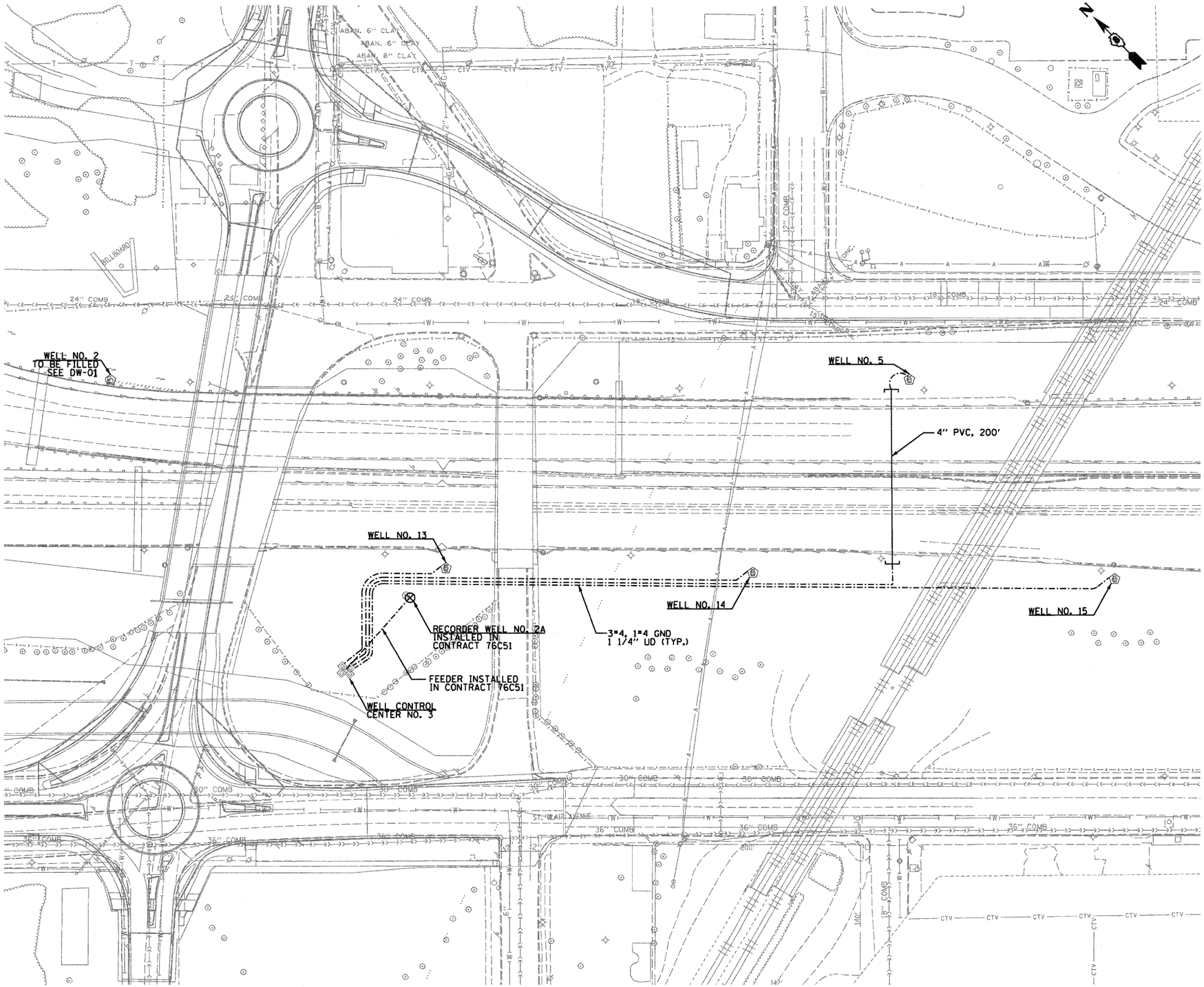
FILE NAME = D8TRI-76C52-sht-Wells-03.dgn	USER NAME = stermerb	DESIGNED	JPC	REVISED	-
		DRAWN	TCL	REVISED	-
	PLOT SCALE = 100.0000 ' / in.	CHECKED	WDS	REVISED	-
	PLOT DATE = 1/18/2012	DATE	1-20-12	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEEP WELL ELECTRICAL PLANS
PROPOSED WORK

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 38+00.00 TO STA. 51+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	441
* 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SEE DRAWING ME-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. SEE DRAWING DW-04 FOR CONNECTION AT EXISTING DEEP WELL.
3. LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. PROTECT AND TAKE CARE NOT TO DAMAGE EXISTING UTILITIES FOR THE DURATION OF THE CONSTRUCTION.
4. VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
5. COORDINATE ALL WORK WITH CIVIL WORK, STRUCTURAL WORK, AND SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLANS.
6. MODIFY WELL CONTROL CENTER 3 TO ACCOMMODATE THE FEEDERS TO DEEP WELLS 5, 13, 14 AND 15 IN ACCORDANCE WITH THE SPECIFICATIONS.

DW-03

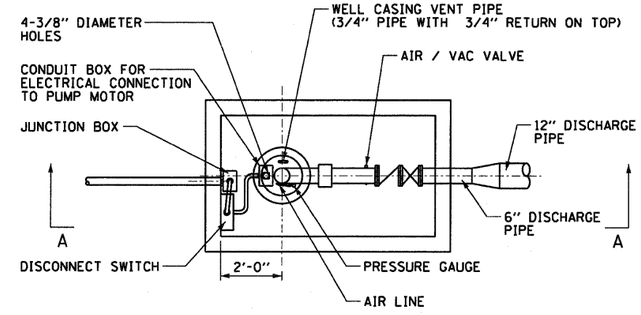
FILE NAME = D8TRI-76C52-sht-Wells-04.dgn	USER NAME = stermerb	DESIGNED JPC	REVISED -
		DRAWN TCL	REVISED -
	PLOT SCALE = 100.0001 ' / in.	CHECKED WDS	REVISED -
	PLOT DATE = 1/18/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

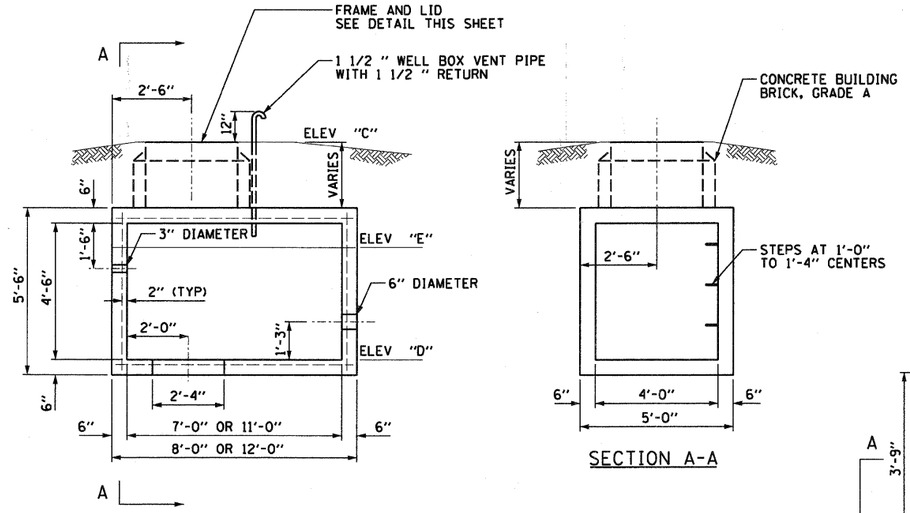
DEEP WELL ELECTRICAL PLANS
PROPOSED WORK

SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 38+00.00 | TO STA. 51+50.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	442
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



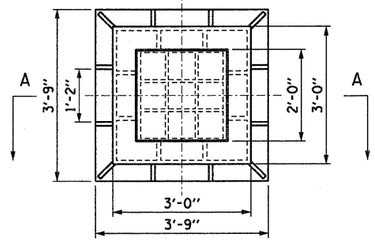
TYPICAL EXISTING WELL ENCLOSURE BOX

(NOT TO SCALE)

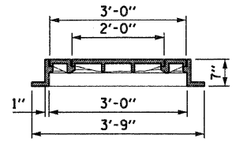
SECTION A-A

NOTES:

1. REMOVE THE WELL HEAD AND ASSOCIATED PIPING WITHIN THE WELL ENCLOSURE BOX FOR EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR DEEP WELL SEALING AND FILLING PROCEDURES.
2. FILL THE EXISTING PIEZOMETER WELL LOCATED IN CLOSE PROXIMITY TO EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR PIEZOMETER WELL FILLING PROCEDURES.
3. INTERCEPT EXISTING FEEDER APPROXIMATELY 5 FEET FROM THE WELL ENCLOSURE BOX. UTILIZE EXISTING RACEWAY FOR NEW FEEDER BY SPLICING NEW RACEWAY TO EXISTING RACEWAY.
4. RUN NEW FEEDER CABLES TO EXISTING DISCONNECT SWITCH. FEEDER WILL BE MEASURED AS THE DISTANCE BETWEEN THE ENCLOSURE BOX AND THE WELL CONTROL CENTER PLUS 10 FEET AT EACH END FOR TERMINATIONS.



PLAN



FRAME AND LID
TOTAL WEIGHT: 990 LBS

SECTION A-A

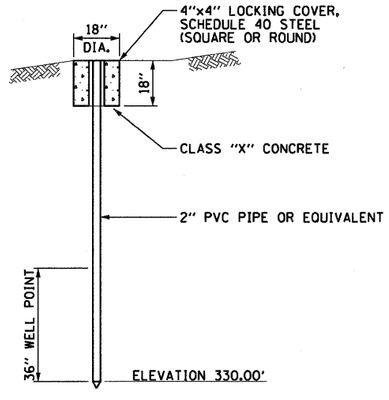
TYPICAL EXISTING WELL ENCLOSURE BOX FRAME & LID

(NOT TO SCALE)

SECTION A-A

TYPICAL EXISTING DEEP WELL

(NOT TO SCALE)



TYPICAL EXISTING PIEZOMETER WELL

(NOT TO SCALE)

EXISTING WELL ENCLOSURE MODIFICATIONS

WELL NUMBER	ENCLOSURE LID ELEV. "C"	ENCLOSURE FLOOR ELEV. "D"	REMOVAL DEPTH ELEV. "E"	SPECIAL INSTRUCTIONS
WELL NO.1	407.24	-	NONE	EXISTING WELL TO REMAIN
WELL NO.1A	414.56	-	NONE	EXISTING WELL TO REMAIN
WELL NO.2	401.84	-	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.2A	413.56	-	NONE	EXISTING WELL TO REMAIN
WELL NO.3A	407.25	-	-	EXISTING WELL TO BE FILLED IN CONTRACT 76C75 (BY OTHERS)
WELL NO.3B	-	-	-	WELL INSTALLED IN CONTRACT 76C75 (BY OTHERS)
WELL NO.4	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.5 (I-55)	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.5 (I-64)	400.32	-	NONE	EXISTING WELL TO REMAIN, PROVIDE NEW FEEDER (SEE NOTES 3 & 4)
WELL NO.6	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.7A	389.83	-	NONE	EXISTING WELL TO REMAIN
WELL NO.8A	387.11	-	NONE	EXISTING WELL TO REMAIN
WELL NO.9A	407.55	-	-	EXISTING WELL TO BE FILLED IN CONTRACT 76C76 (BY OTHERS)
WELL NO.9B	-	-	-	WELL INSTALLED IN CONTRACT 76C75 (BY OTHERS)
WELL NO.10	-	-	-	EXISTING WELL TO BE FILLED IN CONTRACT 76C75 (BY OTHERS)
WELL NO.10A	-	-	-	WELL INSTALLED IN CONTRACT 76C75 (BY OTHERS)
WELL NO.11	-	-	NONE	EXISTING WELL TO BE FILLED IN CONTRACT 76C51 (BY OTHERS)
WELL NO.11A	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.12	-	-	NONE	EXISTING WELL TO BE FILLED IN CONTRACT 76C51 (BY OTHERS)
WELL NO.12A	-	-	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.13 (I-55)	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.13 (I-64)	398.85	-	NONE	EXISTING WELL TO REMAIN, PROVIDE NEW FEEDER (SEE NOTES 3 & 4)
WELL NO.14 (I-55)	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.14 (I-64)	400.25	-	NONE	EXISTING WELL TO REMAIN, PROVIDE NEW FEEDER (SEE NOTES 3 & 4)
WELL NO.15 (I-55)	398.43	-	NONE	EXISTING WELL TO REMAIN
WELL NO.15 (I-64)	400.20	-	NONE	EXISTING WELL TO REMAIN, PROVIDE NEW FEEDER (SEE NOTES 3 & 4)

DW-04

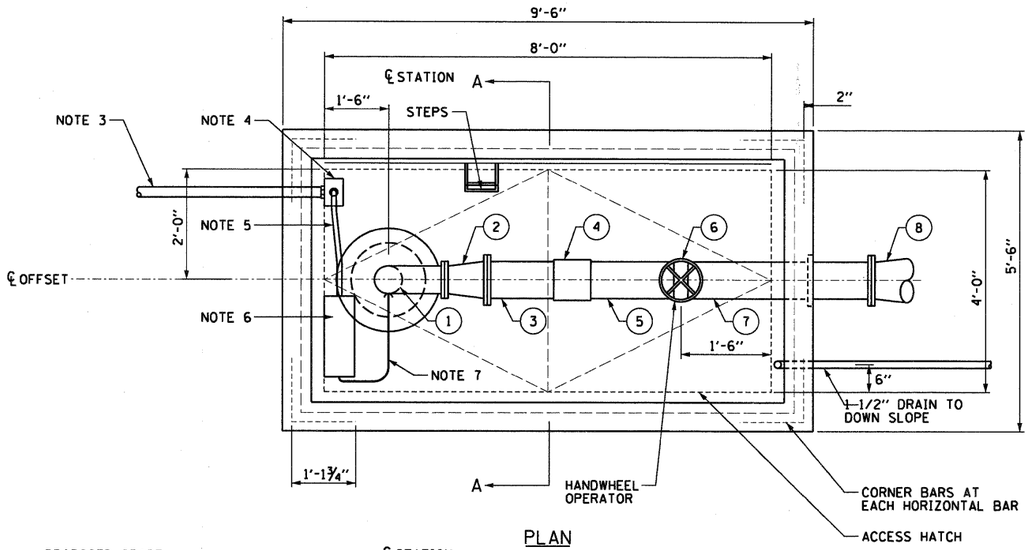
FILE NAME = D8TRI-76C52-sht-Wells-05.dgn	USER NAME = stermerb	DESIGNED JPC	REVISED -
		DRAWN TCL	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED WDS	REVISED -
	PLOT DATE = 1/18/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

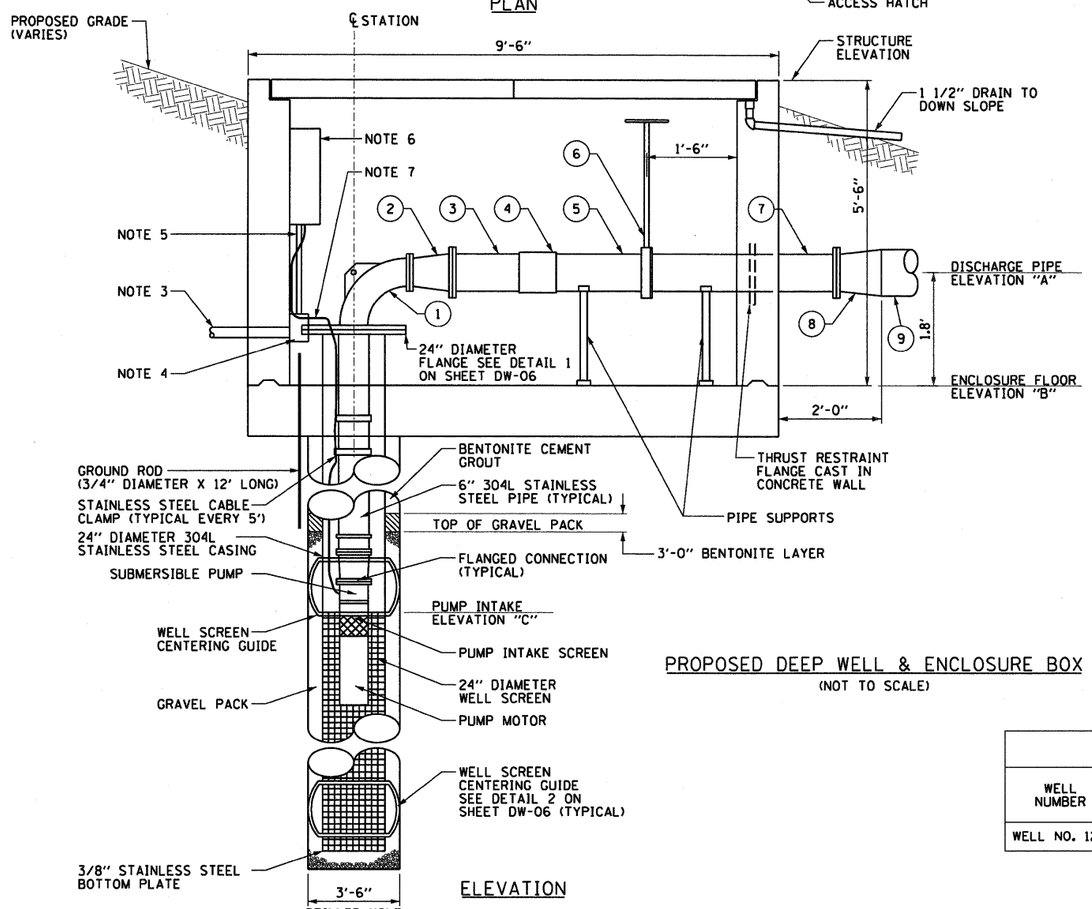
DEEP WELL DETAILS
EXISTING DEEP WELLS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	443
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



ELEVATION

PROPOSED DEEP WELL & ENCLOSURE BOX

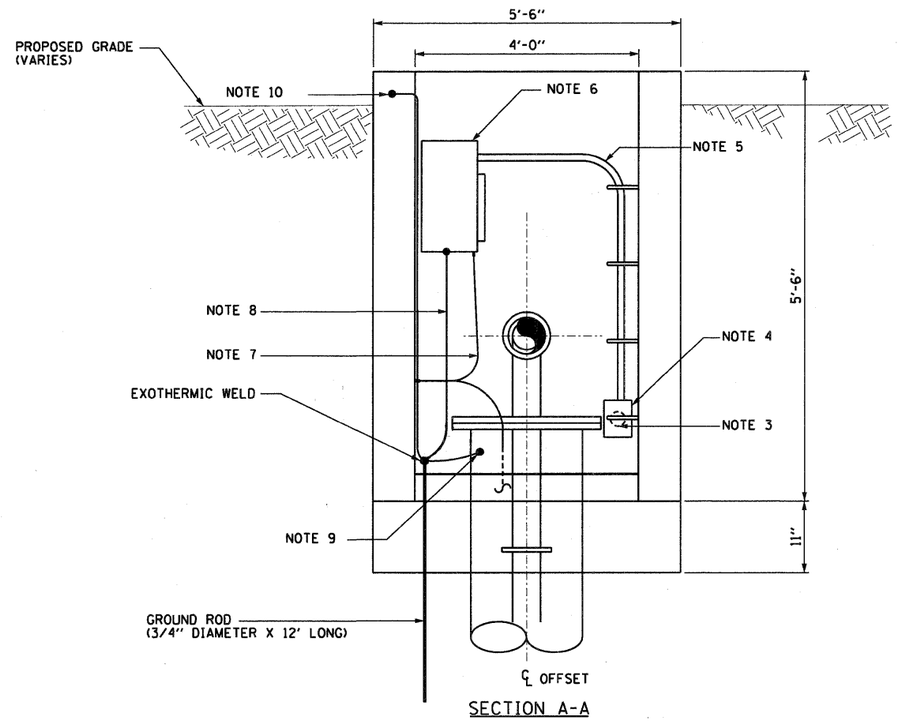
(NOT TO SCALE)

BILL OF MATERIAL

1. 6" 304L STAINLESS STEEL LONG RADIUS 90 ELBOW
2. 6"x8" 304L STAINLESS STEEL CONC. REDUCER, FLANGED
3. 8" HDPE PIPE & FLANGE x PE
4. 8" STAINLESS STEEL COUPLING
5. 8" 304L STAINLESS STEEL PIPE & FLANGES
6. 8" KNIFE GATE VALVE (TILT AS REQUIRED)
7. 8" 304L STAINLESS STEEL PIPE & FLANGES
8. 8"x12" HDPE REDUCER, FLANGE x PE
9. 12" HDPE PIPE (BY OTHERS, SEE DRAINAGE PLANS)

NOTES:

1. CONSTRUCT THE PROPOSED DEEP WELLS AT THE LOCATIONS INDICATED ON THIS DRAWING. REFER TO SPECIAL PROVISIONS FOR INSTALLATION PROCEDURES.
2. CONSTRUCT A NEW PIEZOMETER WELL FOR EACH PROPOSED DEEP WELL. SEE DRAWING DW-06 FOR PROPOSED PIEZOMETER WELL DETAILS.
3. EXTEND 3 INCH RIGID GALVANIZED CONDUIT 5 FEET FROM THE PROPOSED WELL ENCLOSURE BOX TO FACILITATE THE UNIT DUCT INSTALLATION INTO THE ENCLOSURE.
4. 6 INCHES WIDE BY 8 INCHES HIGH BY 4 INCHES DEEP STAINLESS STEEL PULL BOX. DO NOT SPLICE THE CONDUCTORS WITHIN THE PULL BOX.
5. 2 INCH LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR PUMP FEEDER CONDUCTORS.
6. 100 AMPERE, 3 POLE, NON-FUSED, HEAVY DUTY DISCONNECT SWITCH.
7. PUMP POWER CABLE (FURNISHED WITH PUMP).
8. NO.6 AWG GROUNDING ELECTRODE CONDUCTOR ROUTED FROM THE DISCONNECT SWITCH TO THE GROUND ROD.
9. NO.6 AWG BONDING CONDUCTOR ROUTED FROM THE GROUND ROD TO THE WELL CASING. BOND CONDUCTOR TO WELL CASING.
10. NO.6 AWG BONDING CONDUCTOR ROUTED FROM THE GROUND ROD TO THE ACCESS HATCH FRAME. BOND CONDUCTOR TO THE ACCESS HATCH FRAME.



SECTION A-A

PROPOSED DEEP WELL INSTALLATION

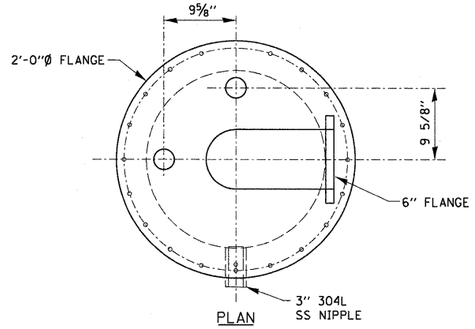
WELL NUMBER	STATION 55N BL	OFFSET	PROPOSED STRUCTURE ELEVATION	DISCHARGE PIPE ELEV. "A"	ENCLOSURE FLOOR ELEV. "B"	PUMP INTAKE ELEV. "C"	TOP OF SCREEN ELEVATION	BOTTOM OF SCREEN ELEVATION	TOP OF BEDROCK ELEVATION	TOP OF GRAVEL PACK ELEVATION	WELL PACK TYPE	SLOT SIZE
WELL NO. 12B	72+19.72	83.4 RT	389.67'	385.97'	381.17'	331.0'	332.0'	302.0'	301.0'	342.0'	WB-40	50

DW-05

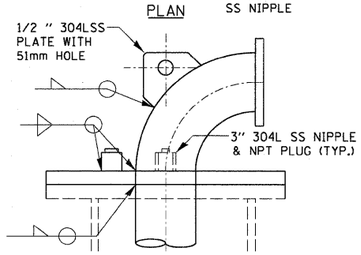
FILE NAME = D8TRI-76C52-sht-Wells-06.dgn	USER NAME = stermerb	DESIGNED	JPC	REVISED	-	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DEEP WELL DETAILS PROPOSED DEEP WELL
		DRAWN	TCL	REVISED	-		
	PLOT SCALE = 2.0000 ' / in.	CHECKED	WDS	REVISED	-		
	PLOT DATE = 1/18/2012	DATE	1-20-12	REVISED	-		

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. N/A | TO STA. N/A

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	444
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



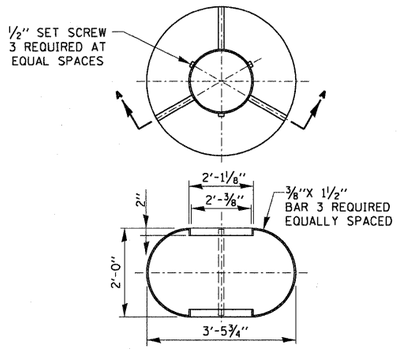
PLAN



ELEVATION

DETAIL 1

N.T.S.

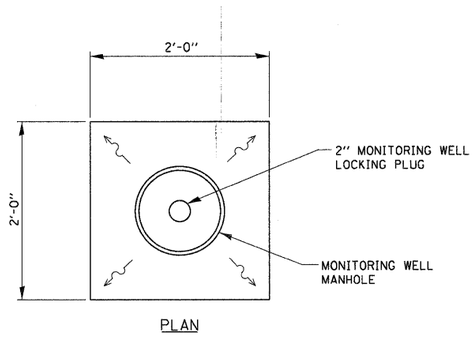


SECTION A-A

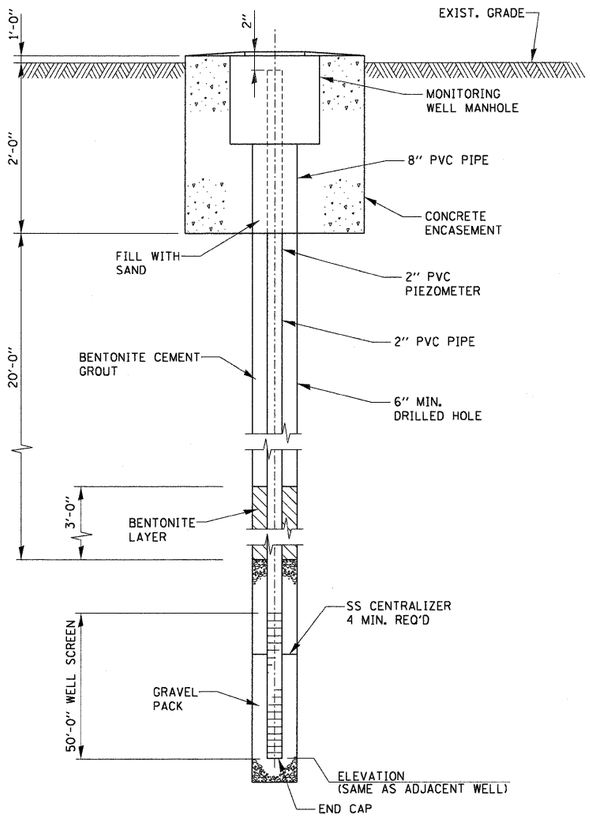
DETAIL 2

N.T.S.

WELL SCREEN CENTERING GUIDE



PLAN



DETAIL 3

PROFILE OF NEW PIEZOMETER

N.T.S.

NOTES:

1. LOCATE THE PROPOSED PIEZOMETER WELL WITHIN A 10'-0" RADIAL DISTANCE FROM EACH PROPOSED DEEP WELL. SEE DRAWING DW-05 FOR PROPOSED DEEP WELL STATION AND OFFSET DIMENSIONS.
2. SEE DW-05 FOR GRADE ELEVATIONS AND WELL POINT ELEVATIONS.

DW-06

FILE NAME = D8TRI-76C52-sht-Wells-07.dgn	USER NAME = stermerb	DESIGNED JPC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DEEP WELL DETAILS PROPOSED PIEZOMETER WELL	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN TCL	REVISED -			•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	445
	PLOT SCALE = 2.0000 '/ in.	CHECKED WDS	REVISED -			• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/18/2012	DATE 1-20-12	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. N/A TO STA. N/A	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING WATER MAIN BRIDGE
REMOVED BY OTHERS

REMAINING CONCRETE TO BE
REMOVED IN THIS CONTRACT
AS "CONCRETE REMOVAL"
ALSO SEE SPECIAL PROVISION

EXISTING L&N RR SOUTH ABUTMENT TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING STRUCTURE NO. 1

EXISTING RETAINING WALL "P" TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING STRUCTURE NO. 2

EXISTING RETAINING WALL "R" TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING STRUCTURE NO. 3

EXISTING RETAINING WALL "S2" TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING STRUCTURE NO. 5

EXISTING RETAINING WALL "S1" TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING
STRUCTURE NO. 4

BOWMAN YARD

EXCHANGE AVENUE

BOWMAN AVENUE

N

LEGEND:

WALL REMOVAL

BRIDGE REMOVAL

NOTE:

SEE SPECIAL PROVISIONS
FOR ADDITIONAL INFORMATION.

100 0 100 200
SCALE IN FEET

1/25/2012
1:49:10 PM

FILE NAME = *FILEL	USER NAME = searsb	DESIGNED - CRH	REVISED -
		DRAWN - CRH	REVISED -
	PLOT SCALE = 200.0000 ' / in.	CHECKED - AB	REVISED -
	PLOT DATE = 1/25/2012	DATE - 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE REMOVAL PLAN

SCALE: 1"=100' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

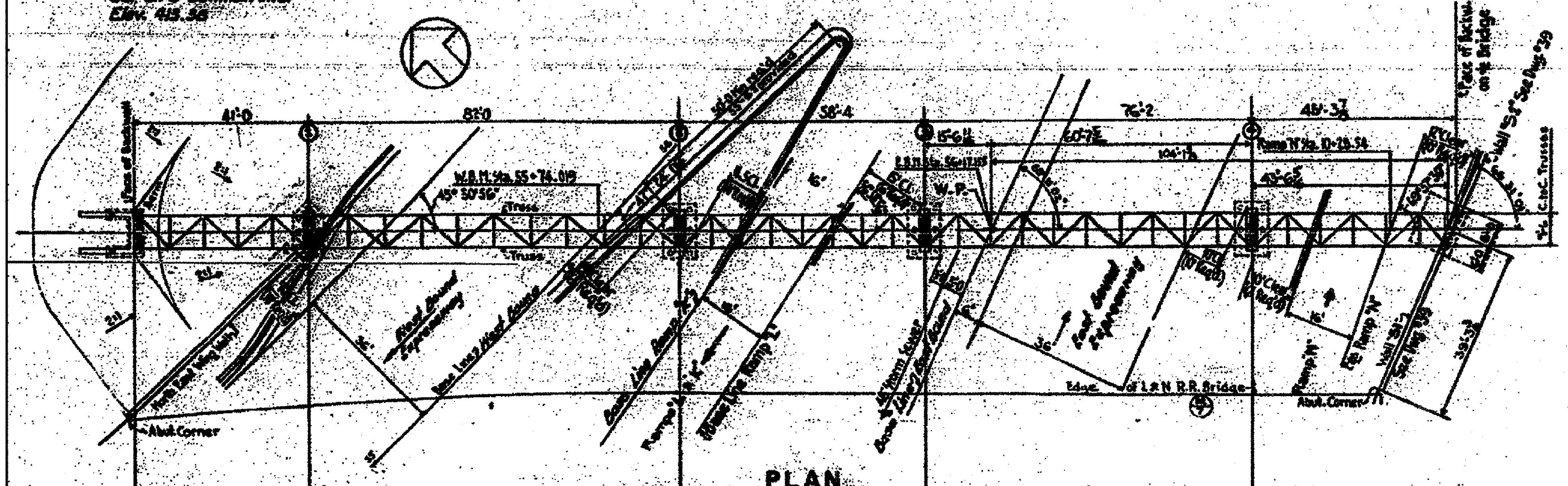
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	446
•	64/998/70	CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

P: \P60046609\900_CAD\901_DRAWINGS\76C52_CONTRACT\SHEET\EXIST_STRUCT_DWGS\SHEET\D8TRI-76C52-SHT-REMOVAL_KEYPLN.DGN

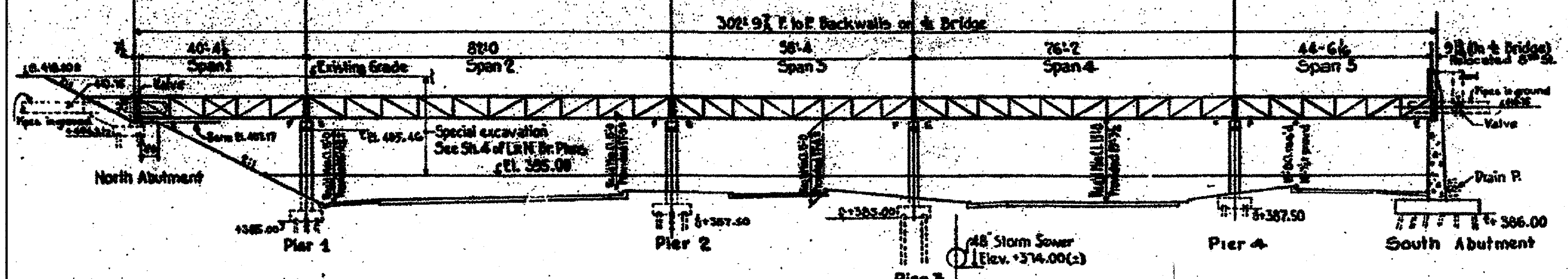
FOR INFORMATION ONLY

FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-238 / 82-237	ST.CLAIR	77 / 35	43 / 22
FED. ROAD DIV. NO. 7	ILLINOIS	PROJECT		

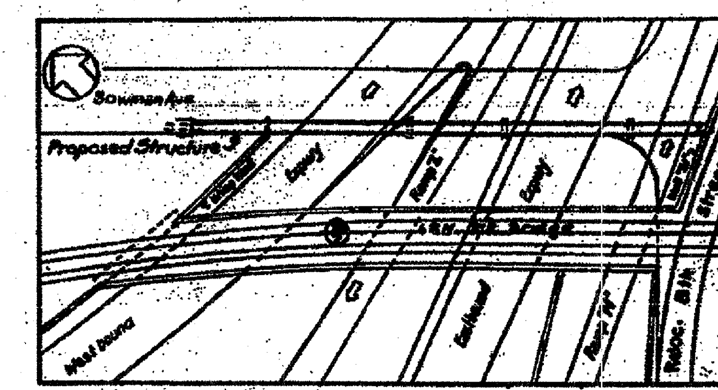
B.M. No. 13
East side of Bowman Ave.
South side of 8th St.
Iron pin on S.E. corner of 8th St. & Bowman Ave.
Elev. 413.36



PLAN
Scale 1/16" = 1'-0



ELEVATION
Scale 1/16" = 1'-0



LOCATION PLAN

GENERAL NOTES

MATERIAL & WORKMANSHIP
State of Illinois "Standard Specifications for Road and Bridge Construction" adopted January 2, 1958.

DESIGN
Superstructure: A.I.S.C. "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings" Revised June, 1949
Substructure: A.A.S.H.O. "Standard Specifications for Highway Bridges - 1957

LOADING
Per foot of bridge: Dead & Live: 1.1^K, Wind 0.2^K

CONCRETE
Class "X" concrete shall be used throughout.

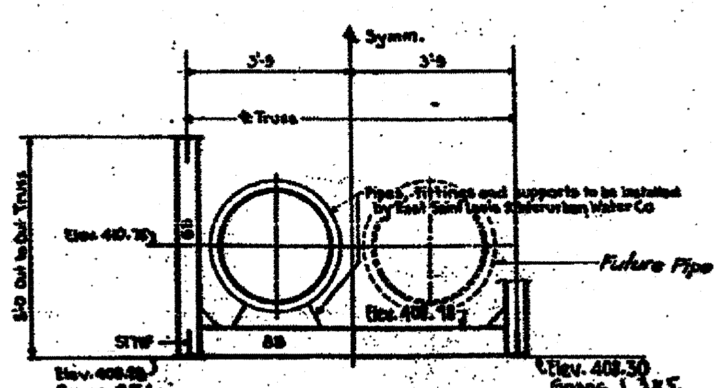
DESIGN UNIT STRESSES
Concrete: E = 1400 psi., fs = 20 000 psi., n = 10, Footings v = 75 psi., Substructure with Earth Pressure: fc = 1000 psi.
Structural Steel fs = 20 000 psi.

PILES
The contractor shall drive 6 test piles in permanent locations as directed by the Engineer, before ordering remainder of piles. One test pile shall be located under each Abutment and Pier. All piles shall be creosoted.

SUPERSTRUCTURE
To be all shopwelded. A.S.T.M. designation A373 steel shall be used in all members designed to carry stress. Shop to tack weld temporary bracing between top chords of trusses. This bracing to remain in place until field erection of bridge is complete.

PAINT
Except as otherwise provided all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Articles 56.1 to 56.5 inclusive of the Standard Specifications. All paint shall be furnished and applied by the Contractor involved.

WATERPROOFING
The following surfaces of the bridge shall be waterproofed: Back of backwall and backs of wingwalls at North Abutment, and back of South Abutment. Waterproofing shall be done in accordance with Article 51.21 of the Standard Specifications.



TYPICAL CROSS SECTION.
Scale 1/2" = 1'-0

Designed by J.V.
Drawn by J.V.
Checked by H.H.

TOTAL BILL OF MATERIAL FOR PIPE BRIDGE

UNIT	DESCRIPTION	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
CY	CLASS "X" EXCAVATION FOR STRUCTURES		388	388
CY	CLASS "X" CONCRETE		127.0	127.0
LB	REINFORCEMENT BARS		14880	14880
LB	STRUCTURAL STEEL	38840		38840
Ea.	TEST PILES (CREOSOTED)		6	6
LF	FURNISHING CREOSOTED PILES (8&10 3/8)		1269	1269
LF	DRIVING TIMBER PILES		1269	1269
LF	8" PERF. CORR. GALV. METAL PIPE		12	12
LF	CHAIN LINK FENCE		12	12
CY	POROUS GRANULAR EMBANKMENT		39	39

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
EAST ST. LOUIS & INTERURBAN WATER CO.
EAST ST. LOUIS EXPRESSWAY
BRIDGE FOR 2 30"⌀ WATER PIPES OVER F.A.I.-70
GENERAL PLAN
H. W. LOCHNER, INC. ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 28

FILE NAME = DBTRI-76C52-Sht-Rem-WM-01.dgn	USER NAME = searsb	DESIGNED	REVISED -
		DRAWN	REVISED -
	PLOT SCALE = 20.0000 '/ in.	CHECKED	REVISED -
	PLOT DATE = 1/25/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – 30" WATER PIPES OVER I-55/I-70

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	446A
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-1-R(A), 82-1-R(B)	ST. CLAIR	629	4468
64/998/70		CONTRACT NO. 76C52	
F.A.I.-70	ILLINOIS PROJECT		

PILE DATA

Creosoted Piles
Capacity : 20 Tons
Estimated Length : 27 Ft.
Piles Required : 22 (for 4 Piers)
Test Piles : 4

P 503

P 501

ELEVATION

Concrete cover over this coping only.
10-A 503 (E.F.)
8-A 502 (E.F.)
Backfill behind wall
Pipes ℄ Elev. 410.75
10-A 501 @12"
10-F 501 @12" Dowels
F 502
F 601
F 401
℄ Bridge
℄ Pier
Slope ¼ Conc. Pav'g.
El. 407.71
2'-6 Key Jt.
A 501
A 502
F 501
Elev. 404.21

SECTION C-C

41'-0 to ℄ Pier 1

PILE DATA

Creosoted Piles
Capacity : 20 Tons
Estimated Length : 27 Ft.
Piles Required : 4
Test Pile : One

TOP PLAN

A 509
A 501
A 502
Bridge
Face of backwall
Face of wingwall
2'-6 Key Jt.
℄ Brg's.
Anchor Bolts 2 ea. Brg. 1"ϕ x 12" (2'6 Proj.)
℄ Truss
℄ Truss

WINGWALL ELEVATION

12-3
5' ± Series A 511 @12" 12' 6-A 510 @6"
1 Series E.F.
6 E.F.
3-6
4-A 509 @6" 4 E.F.
A 506
2-A 508 (1 E.F.)
4-A 501 (2 E.F.)
4-F 501 4-E.F.
F 502
7-1
Batter end piles
1-3
4-6
7-0

BAR LIST

Bar	No. Req'd	Size	Length	Shape
F 401	5	#6	3-0	
F 402	4	#6	2-2	
F 501	26	#5	2-10	
F 502	20	#5	6-4	
F 601	6	#6	10-6	
F 602	6	#6	6-6	
A 501	6	#5	3-2	
A 502	10	#5	4'-6	
A 503	12		3-2	
A 506	12		6-6	
A 509	6		3-6	
A 506	24		5-0	
A 507	8		7-6	
A 508	4		10-0	
A 509	16		11-11	
A 510	16		7-10	
A 511	4 Series @ 3 bars	#5	Varies 2-2 to 8-10	

BILL OF MATERIAL

Class 'A' Concrete	Cu. Yds.	8.7
Reinforcement Bars	Lbs.	1010
Creosoted Piles (20 Ton)	Lin. Ft.	189
Test Piles (Furnished)	Ea.	1
Class 'A' Excavation & Structures	Cu. Yds.	36

FOOTING PLAN

3-F 602 @12"
2-6
6-0
2-6
F 501 @12" Dowels
3-F 601 @12", 1-3
F 602
Test Pile
F 501 @12" Dowels
1-3
4-3
4-3
1-3
11-0
℄ Bridge
A 501
A 506
1-6
2-0

Designed by : J. K.
Drawn by : A. B.
Checked by : H. R.

NORTH ABUTMENT

Scale: ¾" = 1'-0

TOP PLAN

9-6
4-3
4-3
1-0
3-9
3-9
1-0
¾" ϕ Pier
5-P 701 @ 6"
± Truss
± Bridge
± Truss
Anchor Bolts 4 ea. Brg. 1"ϕ x 12" (2'6 Proj.)

ELEVATION

11'6 11'6 9" 6 6 6"
5 P 401
P 701 @ 6"
1-P 402 ea. end
1-P 403 "
2-P 503 ea. end
1-P 405 ea. end
1-P 404 "
2-P 501 12 E.F.
2-P 501 12 E.F.
2-7½
6-7½
Elev. 407.71
12-P 502 @12" for Pier #1 & 3
12-P 502 @12" for Pier #2 & 4
12-P 501 @12" for Pier #1 & 3
12-P 501 @12" for Pier #2 & 4
13 Pairs P 501 @12" for Pier #1 & 3
13 Pairs P 501 @12" for Pier #2 & 4
17-11 for Pier #1 & 3
16-8½ for Pier #2 & 4
B
A
3-6
F 701 @ 6"
2-6
1'-6
F 501 @ 12"
11-F 501 Dowels See Sec. A-A
F 501 @ 12" Lay 5 at top of piles (Typ.)
F 601 @ 12"
Bridge & Pier
5-0
5-0
1-3
1-3
12-6

END VIEW

P 701
P 502
P 501
P 405
P 901 or P 902
F 701
F 501
F 601
Pier
1-3
2-6
2-6
1-3
7-6

P 501

5-6
9"

P 301

1-11
1-11½

P 302

5'
1-11
5'

1-11	P 401
1-9	P 402
1-7	P 403
1-6	P 404
1-3	P 405

BAR LIST

Bar	No. Req'd for Pier No. 1	No. 2	No. 3	No. 4	Size	Length	Shape
F 501	–	20	20	20	#5	7-0	
F 701	–	10	10	10	#7	12-0	
F 503	14	–	–	–	#5	6-6	
F 504	8	–	–	–	#5	5-7	
F 1001	2	–	–	–	#10	12-6	
F 1002	2	–	–	–	#10	10-2	
F 1003	2	–	–	–	#10	7-10	
F 801	–	8	8	8	#8	11-0	
F 802	2	–	–	–	#8	12-6	
F 803	2	–	–	–	#8	10-2	
F 804	2	–	–	–	#8	7-10	
P 501	12	12	12	12	#5	6-4	
P 301	36	30	36	30	#5	5-0	
P 302	24	21	24	21	#5	2-3	
P 401	5	5	5	5	#4	8-6	
P 402	2	2	2	2	#4	6-2	
P 403	2	2	2	2	#4	7-10	
P 404	2	2	2	2	#4	7-6	
P 405	2	2	2	2	#4	7-2	
P 501	2	2	2	2	#5	5-3	
P 502	2	2	2	2	#5	9-8	
P 503	4	4	4	4	#5	4-4	
P 701	5	5	5	5	#7	9-8	
P 901	12	–	12	–	#9	15-9	
P 902	–	12	–	12	#9	17-3	

BILL OF MATERIAL

		Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Total
Class 'A' Concrete	Cu. Yds.	12.8	13.6	14.3	13.6	54.7
Reinforcement Bars	Lbs.	1940	1910	2020	1910	7780
Creosoted Piles (20 Ton)	Lin. Ft.	189	135	135	135	594
Test Piles (Furnished)	Ea.	1	1	1	1	4
Class 'A' Excavation & Structures	Cu. Yds.	60	53	70	53	236

FOOTING PLAN FOR PIERS 2, 3 & 4

12-6
℄ Bridge & Pier
1-3
5-0
1-3
Test Pile
2-F 501 Dowels See Sec. A-A
7-F 501 @ 2-0 Top
13-F 501 @ 12" Bolt
7-6
2-6
10-F 501 @ 12" Dowels
℄ Pier
1-3
8-F 601 @ 1'-0" Bolt

SECTION A-A

3-3
1-1½
6"
6"
1-1½
2-3
1-1½
P 302
P 301
℄ Pier
Dowels F 501

SECTION B-B

℄ Pier & Bridge
F 501
P 301
P 901 or P 902
P 302
℄ Pier
2'-0 ℄

PIERS

Scale: ¾" = 1'-0 unless noted

for details of footing for Pier #1 see Sheet #1

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
EAST ST. LOUIS & INTERURBAN WATER CO.

EAST ST. LOUIS EXPRESSWAY

BRIDGE FOR 2 30" ϕ WATER PIPES OVER F.A.I.-70
NORTH ABUTMENT AND PIERS No. 1, 2, 3 & 4

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO ILLINOIS SHEET NO. 2A

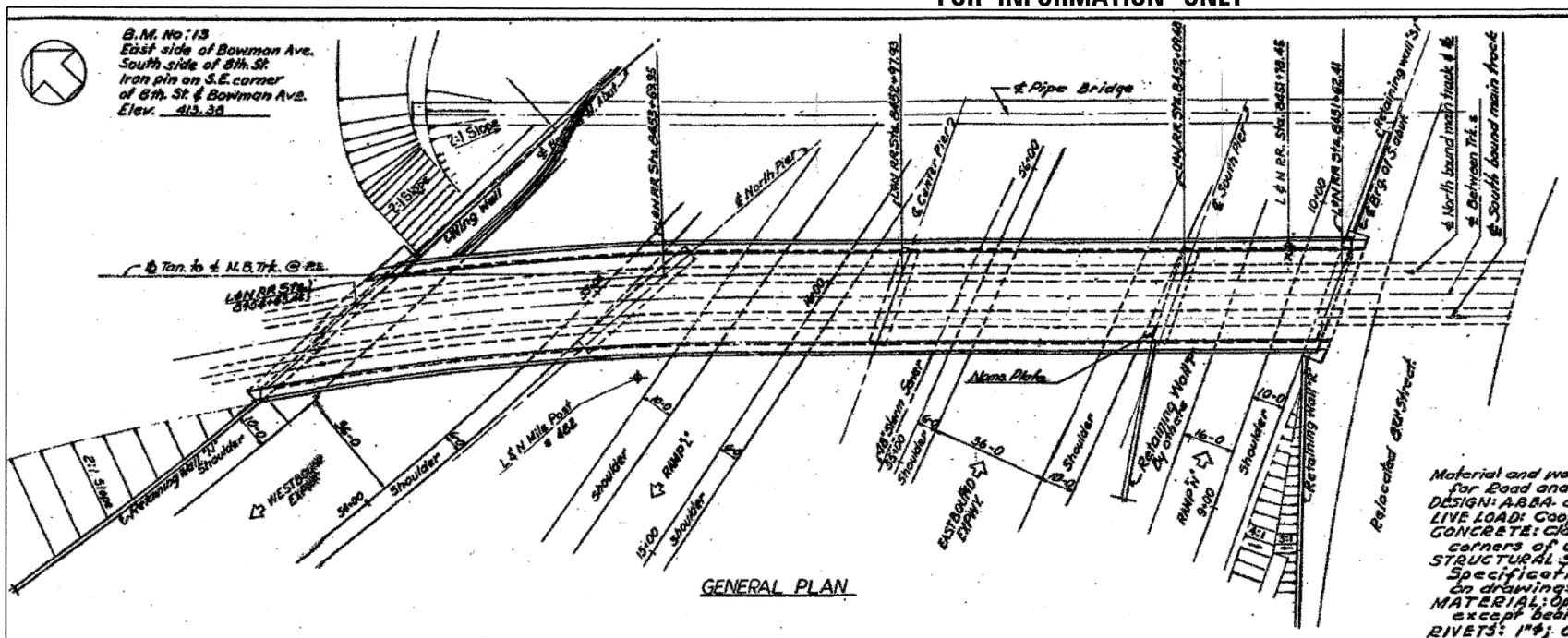
FILE NAME = D8TRI-76C52-Sht-Rem-WM-02.dgn	USER NAME = searsb	DESIGNED	REVISED -
		DRAWN	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED	REVISED -
	PLOT DATE = 1/25/2012	DATE 1-20-12	REVISED -

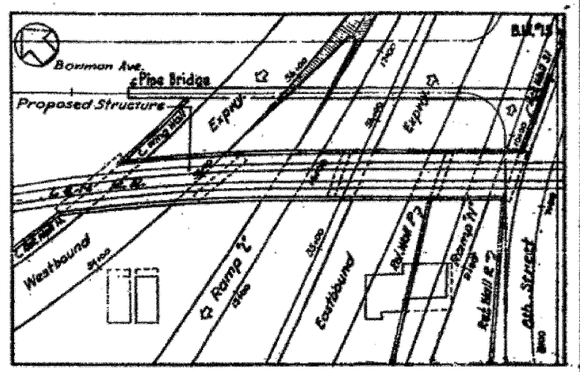
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – 30" WATER PIPES OVER I-55/I-70

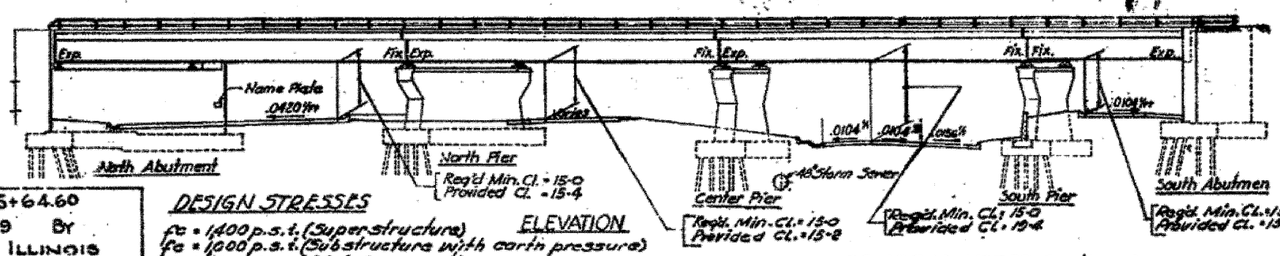
SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

FOR INFORMATION ONLY





LOCATION PLAN



ELEVATION

STA. 55+64.60
BUILT 19 BY
STATE OF ILLINOIS
FAI RT. 70 SEC. 82-2 SB
FA PROJECT RTG-70-1 (19) V
LOADING E 72

LETTERING FOR NAME PLATE
See Standard 251001

DESIGN STRESSES

fc = 1,400 p.s.i. (Superstructure)
fc = 1,000 p.s.i. (Substructure with earth pressure)
fs = 20,000 p.s.i. (Reinforcement)
fs = 18,000 p.s.i. (Structural Steel)
n = 10
v = 75 p.s.i. (Footings)

TOTAL BILL OF MATERIAL
FOR BRIDGE NO. 7, PIPE BRIDGE AND WALLS "N", "Q", "R" & "S"

UNIT	DESCRIPTION	SECTION 82-2SB SUPER STRUCTURE	SECTION 82-2SB SUB-STRUCTURE	SECTION 82-2SB TOTAL	SEC. 82-2SF TOTAL
C Y	SPECIAL EXCAVATION		61,520	61,520	
C Y	CLASS "A" EXCAVATION FOR STRUCTURES		4,597	4,597	
C Y	CLASS "X" CONCRETE	534	4,166	4,700	
L B	REINFORCEMENT BARS	83,565	348,765	432,330	
L B	STRUCTURAL STEEL	2,154,240		2,154,240	2,154,240
L F	PIPE HANDRAIL (GALVANIZED)	699		699	
E a	TEST PILES (CONCRETE)		5	5	
L F	FURNISHING CONCRETE PILES		14,643	14,643	
L F	DRIVING CONCRETE PILES		14,643	14,643	
E a	TEST PILE (CREOSOTED)		11	11	
L F	FURNISHING CREOSOTED PILES		27,642	27,642	
L F	DRIVING TIMBER PILES		27,642	27,642	
E a	NAME PLATES		2	2	
L F	6" C.M.P., PERFORATED, GALVANIZED		4,288	4,288	
S F	MEMBRANE WATER PROOFING	9,170		9,170	
Month	PUMPING	18		18	
L S	WROUGHT IRON PIPE DRAIN SYSTEM			LUMP SUM	
L S	TEMPORARY SHEETING & BRACING			LUMP SUM	
L F	CHAIN LINK FENCE		737	737	
C Y	POROUS GRANULAR EMBANKMENT		965	965	

GENERAL NOTES

Material and workmanship shall be in accordance with "Standard Specifications for Road and Bridge Construction," State of Illinois, adopted January 2, 1958.
DESIGN: A.R.E.A. current specifications, except as noted below and shown on drawings.
LIVE LOAD: Cooper E 72.
CONCRETE: Class "X" concrete shall be used throughout. All exposed edges and corners of concrete shall be chamfered ¾".
STRUCTURAL STEEL shall be fabricated in accordance with A.R.E.A. Specifications for Steel Railway Bridges (current), except as noted on drawings.
MATERIAL: Open hearth structural and rivet steel, A.S.T.M. A 7 and A 141 current, except bearings shall be of cast steel annealed as noted.
RIVETS: 1" ϕ in open holes 1⅛".
FIELD CONNECTIONS to be riveted.
COVER PLATES: Universal Mill Plates with both edges rolled shall be used for cover pls.
Bottoms of end stiffener angles and their fills shall be milled to bear on bottom flange angles. The stiffener angles shall be ground to fit the fillets of the flange angles.
The backs of the bottom flange angles at end bearings shall be in a true plane (perpendicular to center line of web) for the full width of the flange and the full length of the sole plate, so the flange angles will have a full bearing on the sole plate or cover plate.
Diaphragm webs shall be flush with the backs of the top and bottom diaphragm angles to avoid grooves that will hold water.
No welding of steel will be permitted except as noted.
REAMING: All holes in cover plates, flange angles, web plates, web splice plates and end stiffeners (except OSL) and their fills shall be sub-punched 1/16" and reamed to 1/16" while assembled. Holes in laterals, lateral plates, diaphragms, Ink stiffeners and their fills, and OSL of end stiffeners may be punched to 1/16".
ANCHOR BOLTS: 1¼"ϕ, 18" in masonry; 10" sweage.
PAINT: See Article 56.1 to 56.5 inclusive of the Standard Specifications.
Shop Paint:- One coat Red lead and Linseed Oil except for finished surfaces of pedestal which shall be coated with White Lead and Tallow applied hot as soon as the surfaces have been finished and accepted by the Inspector.
Field Paint:- First and second field coats shall be Aluminum paint.

All paint shall be furnished and applied by the contractor involved.
All roller pins, bearing plates, pintles and anchor bolts shall be fabricated and set in accordance with A.R.E.A. Specifications for Steel Railway Bridges (current) and are included for payment as Structural Steel. Estimated Weight, 48,750 lbs.
All steel expansion devices between slabs and of piers and abutments and the perforated drainage angles shall be fabricated and set in accordance with Standard Specifications and are included for payment as Structural Steel. Estimated Weight, 39,460 lbs.

GENERAL NOTES - Continued

REINFORCEMENT: All reinforcement shall be deformed bars (A305), new billet steel, intermediate grade A.S.T.M.-A15 (current).
PILES shall be concrete and timber with a minimum load capacity as shown on the plans.
TEST PILES: (concrete and timber), shall be driven in permanent locations shown on the plans as directed by the Engineer, before ordering remainder of piles.
BORING DATA is shown on the drawings as a guide to bidders in estimating soil conditions which may be encountered in the work.
The back and ends of abutment walls, wingwalls and retaining walls shall be water proofed from top of footing to ground surface in accordance with Article 51.01 of the Standard Specifications. The bitumen used shall be asphalt.
Membrane Waterproofing shall be in accordance with Section 53 of the Standard Specifications. The bitumen used shall be asphalt.
EARTH PRESSURE: The horizontal pressure shall be that of fluid weighing 40 p.c.f and the vertical pressure in such instance that of a fill weighing 100 p.c.f.
The live load surcharge shall be 1030 pounds p.s.f., 14 feet wide per track on a material with an angle of repose of 30°.
Provide 3 feet of Porous Granular Embankment behind the shafts of the North and South abutments, and the Stems of Wall "N", Northeast Wing Wall, Walls "R" and "S", as called for on drawings.
The 6"ϕ Corrugated Metal Pipe, Perforated, shall be galvanized.

Note:
For General Note covering the Bridge for 2-30"ϕ water pipes see Sh. No. 25.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "N" (BR 7)

GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 1

FILE NAME = D8TRI-76C52-SHT-LNRRBridge.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

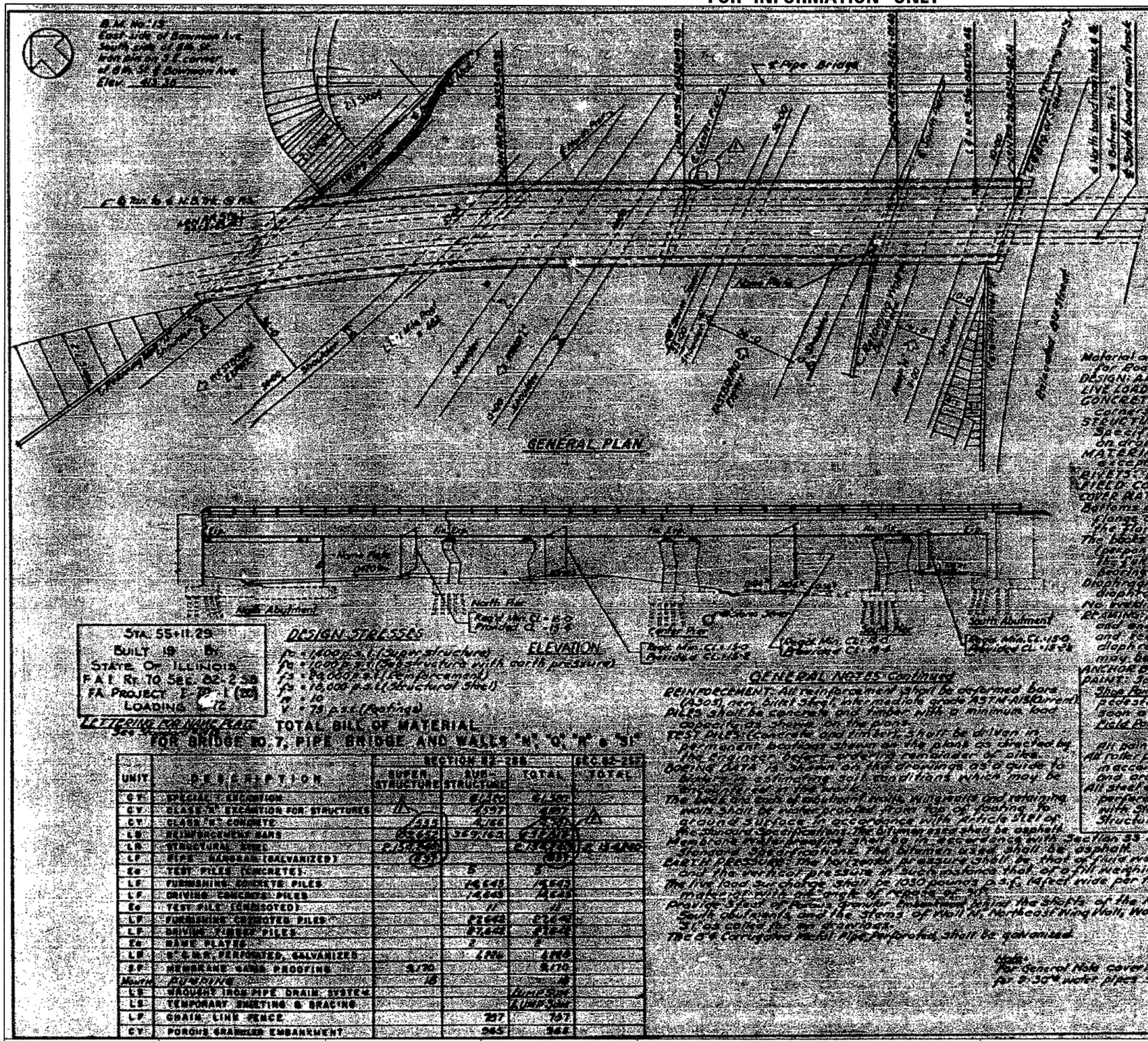
EXISTING BRIDGE PLAN – L&N RR BRIDGE

SCALE: NONE | SHEET NO. 1 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	447
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

PROGRAM OR PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	B-III	ST. CLAIR		448
FED. ROAD DIST. NO.	ILLINOIS	PROJECT X-70-(120)		



GENERAL PLAN

LOCATION PLAN

DESIGN STRESSES

f_c = 1400 p.s.i. (Superstructure)
f_{ca} = 1000 p.s.i. (Substructure with earth pressure)
f_s = 24,000 p.s.i. (Reinforcement)
f_s = 12,000 p.s.i. (Structural Steel)
n = 10
v = 75 p.s.i. (Roadway)

LETTERING FOR NAME PLATE See Standard 606001

TOTAL BILL OF MATERIAL FOR BRIDGE NO. 7, PIPE BRIDGE AND WALLS "N", "O", "P" & "S"

UNIT	DESCRIPTION	SECTION 82-2B&C SUPER STRUCTURE	SECTION 82-2B&C SUB STRUCTURE	SECTION 82-2B&C TOTAL	SEC 82-2D TOTAL
C.Y.	SPECIAL EXCAVATION		2150	2150	
C.Y.	CLASS A EXCAVATION FOR STRUCTURES	11	1297	1308	
C.Y.	CLASS A1 CONCRETE	1015	4788	5803	
LBS.	REINFORCEMENT BARS	85457	389162	474619	
LBS.	STRUCTURAL STEEL	2134		2134	2134
L.F.	PIPE HANDRAIL (GALVANIZED)	151		151	
Ea.	TEST PILES (CONCRETE)		5	5	
L.F.	FURNISHING CONCRETE PILES		14648	14648	
L.F.	DRIVING CONCRETE PILES		14648	14648	
Ea.	TEST PILE (ENCASED)		11	11	
L.F.	FURNISHING CORRUGATED PILES		2648	2648	
L.F.	DRIVING TUBULAR PILES		2648	2648	
Ea.	BOWL PLATES		2	2	
LBS.	6" CAST-IRON PIPE, GALVANIZED		4196	4196	
S.F.	MEMBRANE WATER PROOFING	5730		5730	
Month	RUNNING	18		18	
LS.	VARIOUS IRON PIPE DRAIN SYSTEM			Lump Sum	
LS.	TEMPORARY SHEETING & BRACING			Lump Sum	
L.F.	CHAIN LINK FENCE		737	737	
C.Y.	POROUS GRANULAR EMBANKMENT		965	965	

GENERAL NOTES

Material and workmanship shall be in accordance with "Standard Specifications for Road and Bridge Construction, State of Illinois, adopted January 1, 1956."
DESIGN: A.R.A. Special specifications except as noted below and shown on drawings.
LIVE LOAD: Cooper E-72.
CONCRETE: Class "A" concrete shall be used throughout. All exposed edges and corners of concrete shall be chamfered 3/4".
STRUCTURAL STEEL shall be fabricated in accordance with A.R.A. Specifications for Steel Railway Bridges (Current), except as noted on drawings.
MATERIAL: Open hearth structural and rivet steel, A.S.T.M. A7 and A141 current, except bearings shall be of cast steel annealed as noted.
RIVETS: 7/8" Ø open hole 1/16".
FIELD CONNECTIONS: To be riveted.
COVER PLATES: Where cover plates with both edges rolled shall be used for cover plates, bottoms of end stiffener angles and their fills shall be milled to bear on bottom flanges angles. The stiffener angles shall be ground to fit the fillets of the flange angles.
The backs of the bottom flange angles of end bearings shall be in a true plane (perpendicular to center line of web) for the full width of the flange, and for the full length of the web plate so the flange angles will have a full bearing surface. All exposed corners of cover plates, diaphragm, web, shall be flush with the backs of the top and bottom flange angles to avoid grooves that will hold water.
No welding of steel will be permitted except as noted.
REAMING: All holes in cover plates, flange angles, web plates, web splice plates, and end stiffeners (except OSL) and their fills shall be sub-punched 3/16" and reamed to 1/16" while assembled. Holes in laterals, lateral plates, diaphragms, intermediate stiffeners and their fills, and OSL of end stiffeners may be punched 1/16" larger.
ANCHOR BOLTS: 1 1/2" Ø in masonry, 10" average.
PAINT: See Article 36.5 inclusive of the Standard Specifications.
Shop Paint: One coat Red lead and Linseed oil except for finished surfaces of pedestal which shall be coated with White lead and Tallow applied hot as soon as the surfaces have been finished and accepted by the Inspector.
Field Paint: First and second field coats shall be Aluminum paint.
All paint shall be furnished and applied by the contractor involved.
All rolled plates, bearing plates, anchor bolts shall be fabricated and set in accordance with A.R.A. Specifications for Steel Railway Bridges (Current) and are included for payment as Structural Steel Estimated Weight 48,130 lbs.
All shoe expansion devices between slabs and of piers and abutments and the perforated drainage angles shall be fabricated and set in accordance with Standard Special details and are included for payment as Structural Steel Estimated Weight 33,460 lbs.

GENERAL NOTES Continued

REINFORCEMENT: All reinforcement shall be deformed bars (A305) new billet steel, intermediate grade (33 ksi minimum yield point).
PILES shall be concrete and timber with a minimum load capacity as shown on the plans.
TEST PILES: Concrete and timber shall be driven in permanent bridge locations as the plans or as directed by the Engineer. Before ordering remainder of piles, the Engineer shall determine the length of piles required as shown on the drawings or to provide for anticipated soil conditions which may be encountered at the bridge.
The back face of abutment walls, Wingwalls and retaining walls shall be waterproofed from top of footing to ground surface in accordance with Article 3141 of the Standard Specifications. The bituminous material shall be applied at the rate of 1 gal. per sq. yd.
Membrane waterproofing shall be in accordance with Section 33 of the Standard Specifications. The bituminous material shall be asphalt.
EARTH PRESSURE: The formula to assure shall be that of fluid weighing 30 pcf and the vertical pressure in such balance that of fill weighing 100 pcf.
The live load surcharge shall be 1050 pounds p.s.f. (4 feet wide per track on a minimum width of 2 tracks of 24 ft.).
Provide 3/4" Ø reinforcing bars embedded in the slabs of the North and South abutments and the stems of Wall N, Northeast Wing Wall, Walls P and S, 3'-3" center to center.
The C.M. Corrugated Metal Pipe Perforations shall be galvanized.

Note:
For General Note covering the Bridge for 8'-3" Model place see Sh. No. 25.

Revision 6-28-61
Added Bracket

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS
EAST ST. LOUIS EXPRESSWAY
L & N.R.R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "M"
GENERAL PLAN
H.W. LOCHNER, INC. ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 1 A

FILE NAME = D8TRI-76C52-SHT-LNRRBridge_01.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

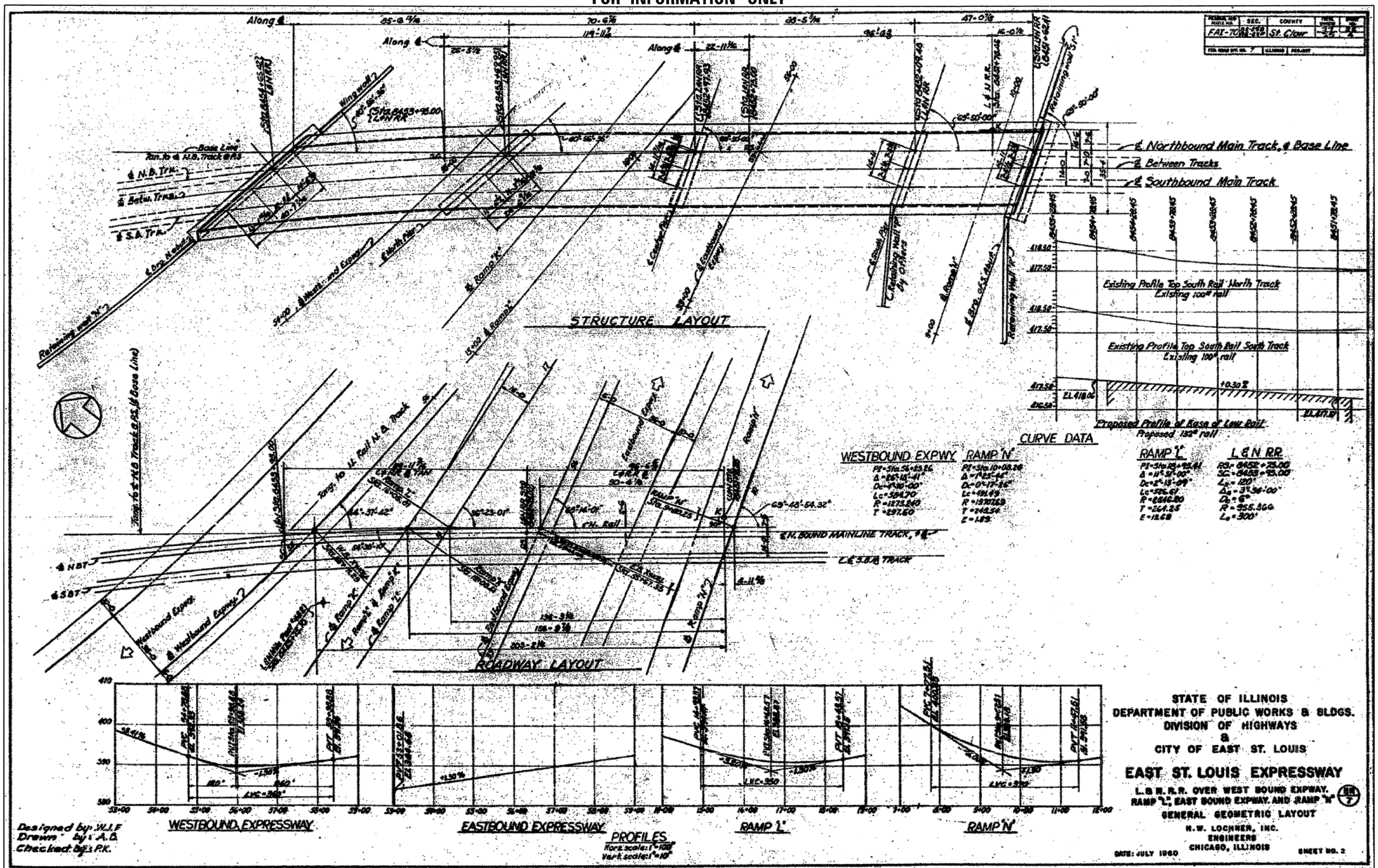
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 01

SCALE: NONE | SHEET NO. 2 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	448
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



FILE NAME = DBTRI-76C52-SHT-LNRRBridge_02.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 02

SCALE: NONE | SHEET NO. 3 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	449
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-2(A)	St. Clair	77	23
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

ELEV. 425

NO. B2-12

Ground surface 0'-0"

Elev. 418.0		
Cinder & coal fill.	4	3'-0"
Brown silty clay.	10	5'-0"
Brown sandy silty clay.	12	8'-0"
Brown very fine to fine sand.	6	13'-0"
Brown & grey silty clay.	4	16'-0"
Brown fine sand trace silt.	20	22'-0"
Grey clayey silty & very fine sand.	3	26'-6"
Grey very fine to fine sand.	15	34'-0"
Grey fine to medium sand.	32	W.L.
	10	43'-0"
Brown fine to coarse sand trace small gravel.	15 *	
	8	
	17	57'-0"
Grey fine to medium sand.	30	60'-0"

Boring stopped by client.

Used 59' of 2½" casing.

Water level 39' below ground surface 24 hrs. after completion.

Date: 4-24-56

NO. B2-13

Ground surface 0'-0"

Elev. 418.0		
Cinders & clay fill.	6	4'-0"
Brown & grey silty clay.	5	6'-0"
Brown very fine to fine sand in clay.	5	
	4	30'-0"
Brown silty clay w/very fine sand.	ST	31'-0"
	4	34'-0"
Brown very fine to fine silty sand.	ST	37'-0"
	4	41'-0"
Grey clayey silt & very fine sand.	20	Note
	4	* 26'-0"
Grey fine to medium sand w/clay.	11	28'-0"
Grey fine sand.	24	32'-0"
Grey fine to medium sand.	28	39'-0"
Grey fine to coarse sand fr. sm. gravel.	5	44'-0"
Grey fine to medium sand.	21	46'-0"
Grey fine to coarse sand tr. sm. gravel.	5	54'-0"
Grey fine to coarse sand.	22	*
	32	60'-0"

Boring stopped by client.

Notes: ST #4 (cont'd 16'-7"

9	Total rec. 18"
11	19'-6"

Used 59' of 2½" casing.

Water level 39' below ground surface 1 hr. after completion.

Date: 4-25-56.

NO. B2-14

Ground surface 0'-0"

Elev. 418.0		
Cinders & clay fill.	6	2'-6"
Brown silty clay w/very fine sand.	14	
	14	8'-0"
Brown very fine to fine silty sand trace clay.	4	
	6	
	4	22'-0"
Grey clayey silt & very fine sand.	4	26'-0"
Grey silty clay.	4	29'-0"
Grey fine to medium sand.	12	32'-0"
Grey fine to coarse sand.	67	32'-6"
Grey fine to coarse sand trace sm. gravel.	9	W.L.
	12	
	13	
	17	58'-0"
Note A	20	60'-0"

Boring stopped by client.

Note A:
Grey fine to medium sand w/clay.

Used 59' of 2½" casing.

Date: 4-26-56.

NO. B-12

Ground surface 0'-0"

Elev. 416.8		
Brown silty clay	11	4'-0"
Brown silt & very fine sand trace clay	6	
	5	
	5	
	11	
	4	22'-0"
Gray silt & very fine sand	3	26'-6"
Gray silty very fine sand	18	33'-0" W.L.
Gray fine sand *	20	37'-0"
Gray coarse sand & small gravel *	18	42'-0"
Gray medium to coarse sand *	6	
	15	
	14	57'-0"
Gray fine sand *	8	
	6	64'-0"

Boring stopped by client at El. 326.8
From El. 348.8 to El. 344.8
Gray very fine to fine sand. 20 blows per ft.
From El. 344.8 to El. 338.8
Gray medium to coarse sand, trace small gravel 9 blows per ft.
From El. 338.8 to El. 336.8
Gray fine sand, trace clay. 76 blows per ft.
From El. 336.8 to El. 326.8
Gray medium to coarse sand with small gravel 8 to 18 blows per ft.
In all cases circulating water lost in strata
Bailed to 48'-0"
Date: 3-10-1950

NO. B-16

Ground surface 0'-0"

Elev. 418.3		
Sandy silty clay & cinder fill	7	3'-0"
Brown silty clay with very fine sand	8	6'-0"
Fine silty grey sand	7	9'-0"
Fine silty brown sand, trace clay	4	
	4	* 17'-0"
Brown grey silty clay with very fine sand	4	W.L. 18'-0"
	4	23'-0"
Fine silty grey sand	6	
	12	
	23	
	10	44'-0"
Fine to coarse grey sand with small to large gravel	17	
	24	44'-0"
Fine to coarse silty grey sand	25	
	23	61'-0"

S.T. Denotes shelby tube samples
* Circulating water lost
Used 60' of 2½" casing.
Waterlevel is 34'-8" below ground surface 1 hour after completion.
Date: 5-28-1953

KEY:
W.L. - Water line.
* - Indicates water loss in strata.
ST - Indicates shelby tube.

Drawn by: V.O.
Checked by: B.S.T.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWY.
RAMP L, EAST BOUND EXPWY AND RAMP N
BORING LOGS

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: JULY 1960 SHEET NO. 3

FILE NAME = D8TRI-76C52-SHT-LNRRBridge_03.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 03

SCALE: NONE | SHEET NO. 4 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	450
* 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-2,3R	ST. CLAIR	77	24
Engr. report dated Nov. 30, 1959				

NO. B-6

ELEV. 425

Ground surface Elev. 417.6 — 0'-0"

Brown silty clay topsoil	12		3'-0"
Brown silty clay	9		6'-0"
Brown silt & very fine sand trace clay	9 6		13'-0"
Brown very fine sand	10		18'-6"
Gray silt	2		19'-0"
Brown silt & very fine sand	3		25'-0"
* Gray fine sand	6		27'-0"
* Gray fine to coarse sand	29		32'-0"
* Gray medium to coarse sand trace clay & small gravel	51		36'-0"
* Gray medium to coarse sand trace small gravel	9 10 21 W.L. 18'		52'-0"
* Gray fine sand	95 65		61'-6"
* Gray fine to coarse sand	20		66'-6"
* Gray fine to coarse sand	20 116 64 51		
Gray fine to medium sand	51		92'-0"

Boring stopped by Mr. Hanson

Used 68'-0" of 2½" casing.

Water levels below ground surface
17'-0" with casing at 68'-0"
41'-0" with casing at 64'-0"
21'-0" with casing at 53'-0"
51'-0" 1½ hours after completion.

NO. B-7

Ground surface Elev. 416.2 — 0'-0"

Cinder fill	8 7		2'-0"
Brown silty clay			6'-0"
Brown silt & very fine sand with clay	4 3 3		17'-0"
* Brown fine to medium sand, trace clay	10 32 19		34'-0"
* Brown medium to coarse sand	10 7		44'-0"
* Gray fine sand	38 22 6 W.L. 8'		62'-0"
* Gray medium sand	12 6		68'-0"
* Gray fine sand	12 15 31 31 42		66'-7"

Refusal: Rock or boulder
Boring bailed to 70'-0"

Used 66'-7" of 2½" casing.

Water levels below ground surface
53'-0" 1½ hours
caved- 23'-0" 24 hours after completion

NO. B-8

Ground surface Elev. 417.7 — 0'-0"

Dark brown silty clay topsoil	10		3'-0"
Brown silty clay	8		6'-0"
Brown very fine silty sand	6 5		13'-0"
Brown silt & very fine sand	4		18'-0"
Brown & gray clayey silt with thin sand seams	5		25'-6"
Brown fine sand, trace silt	28		26'-6"
Gray clayey silt with very fine sand	3		55'-0"
Gray clayey silt & very fine sand	18		51'-0"
* Gray medium to coarse sand with small gravel	52 45		48'-0"
* Gray medium to coarse sand, trace large gravel	13 W.L.		55'-6"
* Gray, very fine silty sand	17		56'-6"
* Gray fine sand with silt	40 40		66'-6"
* Gray fine to coarse sand with sm. to lge. gravel	40		72'-0"
* Gray fine sand	51 31 21 43		92'-0"

Boring stopped by Mr. Hanson
Boring bailed to 53'-0"

Used 60'-0" of 2½" casing.

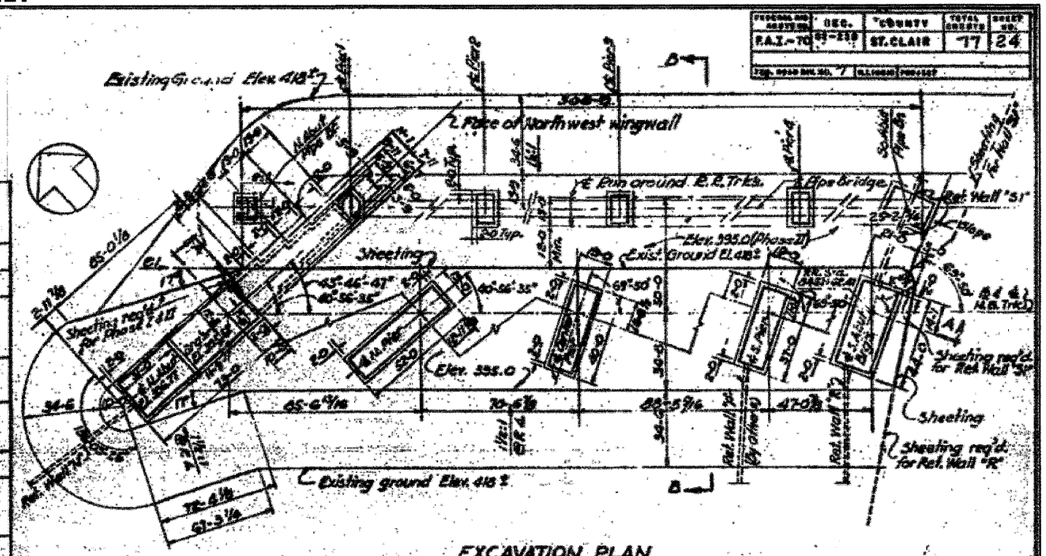
Water levels below ground surface.
53'-0" 1 hour
caved- 36'-0" 2½ hours after completion

* Circulating water loss in strata

Date: March 10, 1958

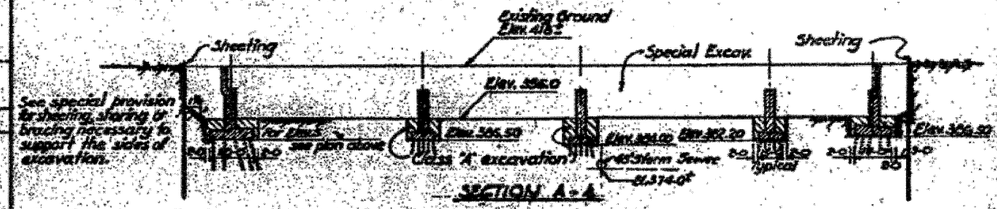
EXCAVATION QUANTITIES FOR BRIDGE & NORTH EAST RAMS WALL		
Class 'A' Excav. for Structure	C.Y.	2,500
Special Excav. (Phase I)	C.Y.	82,500
Special Excav. (Phase II)	C.Y.	14,800

NOTES:
- Classifications are made by visual inspection.
- Water levels (W.L.) Figure indicates time of reading taken after completion of boring. Water levels indicated are those observed when borings were made or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.
- Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb weight falling 30 inches.

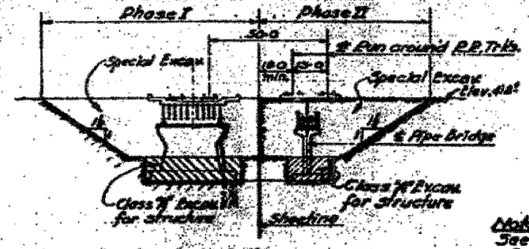


EXCAVATION PLAN

Note: For excavation and sheeting required for Ret. Walls, see highway plans.

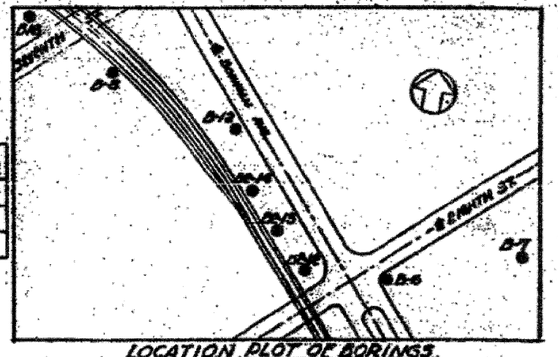


SECTION A-A



SECTION B-B

Note: See 'Special Provisions' for sequence of construction.



LOCATION PLOT OF BORINGS

Designed by: A.D.
Drawn by: A.B.
Checked by: L.B.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L" EAST BOUND EXPWAY AND RAMP "N"

BORING LOGS & EXCAVATION PLAN

H. W. LOCHNER, INC.
ENGINEERS

DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 4

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_04.dgn	USER NAME = searsb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN – L&N RR BRIDGE 04
		DRAWN - GF	REVISED -		
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -		SCALE: NONE / SHEET NO. 5 OF 26 SHEETS / STA. / TO STA.
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -		

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	451
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

TOP PLAN

ELEVATION

FOOTING PLAN

CONSTRUCTION JOINT DETAIL

SECTION A-A

DETAIL 'A' (TYP.)

TYPICAL SECTION THRU ABUTMENT

PLAN

SECTION B-B

W. CORNER REINF. DETAIL

BAR SCHEDULE

Mark	Wt Req'd	Size	Length	Shape	Mark	Wt Req'd	Size	Length	Shape
F501	35	#5	3-0		A 509	6	#5	7-6	
F502	6	#5	34-9		A 510	1		8-4	
F503	6	#5	39-0		A 511	2		3-0	
					A 512	2		3-6	
F601	20	#6	34-9		A 513	2		10-4	
F603	20	#6	39-0		A 514	2		10-11	
					A 515	2		3-6	
					A 516	1		11-10	
F801	110	#8	12-0		A 517	1		3-6	
F802	88	#8	19-6		A 518	3		6-3	
					A 519	1		2-5	
					A 520	1		5-3	
F1101	69	#11	12-3		A 521	3		3-6	
F1102	91	#11	18-6		A 522	3		6-3	
F1103	69	#11	17-2		A 523	12		3-9	
F1104	47	#11	19-6		A 524	10		7-6	
					A 525	39		33-9	
					A 526	40		4-0	
					A 527	1		33-3	
A 501	16	#5	14-6		A 528	2	5	4-11	
A 502	15		15-5						
A 503	2		21-2		A 601	16	#6	34-9	
A 504	2		28-4		A 602	66	#6	7-5	
A 505	39		34-9						
A 506	25		12-0		A 701	198	#7	15-0	
A 507	7		16-0		A 801	35	#8	14-10	
A 508	38	#5	3-10		A 802	34	#8	16-1	

A 508 & 528	1-6		
A 510	2-4		
A 511	3-0		
A 512	3-6	A 516	6-6
A 513	4-4	A 701	12-4
A 514 & 602	4-11	A 518	3-8
A 520	3-3	A 524	5-5
		A 525	8-10

A 508, A 520, A 602

A 509, A 510 to A 514 incl. & A 516

A 516	10-1	
A 517	1-9	
A 521	1-9	

BILL OF MATERIAL

Class 'A' concrete	Cu.Yd.	451
Reinforcement bars	lbs.	41,035
Furnishing concrete piles	L.F.	4560
Driving concrete piles	L.F.	4560
Test piles (concrete)	Ea.	1
Porous Granular Embankment	C.Y.	176
③ Membrane Waterproofing	S.F.	45
3" C.M.P. Perforated, (16 ga.)	L.F.	69

③ Incidental to cost of Class 'A' Concrete

PILE DATA

Type	Concrete
Length	40 Ft.
Capacity	40 Tons
No. Required	114 Ea.
Test Pile	1 Ea.

NOTES

See Sh. #1 for Gen. Notes
See Sh. #2 for Location
See Sh. #25 for Drainage Details
See Sh. #7 for Expansion Joint Detail at ends of abutments.
For pile details see sheet No. 24
Care shall be taken in placing reinforcement bars so as to clear anchor bolts.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY, RAMP "L", EAST BOUND EXPWAY AND RAMP "N" (BR 7)

NORTH ABUTMENT

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 5

Designed by: J. V.
Drawn by: R. B.
Checked by: L. K.

FILE NAME = DBTRI-76C52-SHT-LNRRB-ridge_05.dgn	USER NAME = sear-sb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

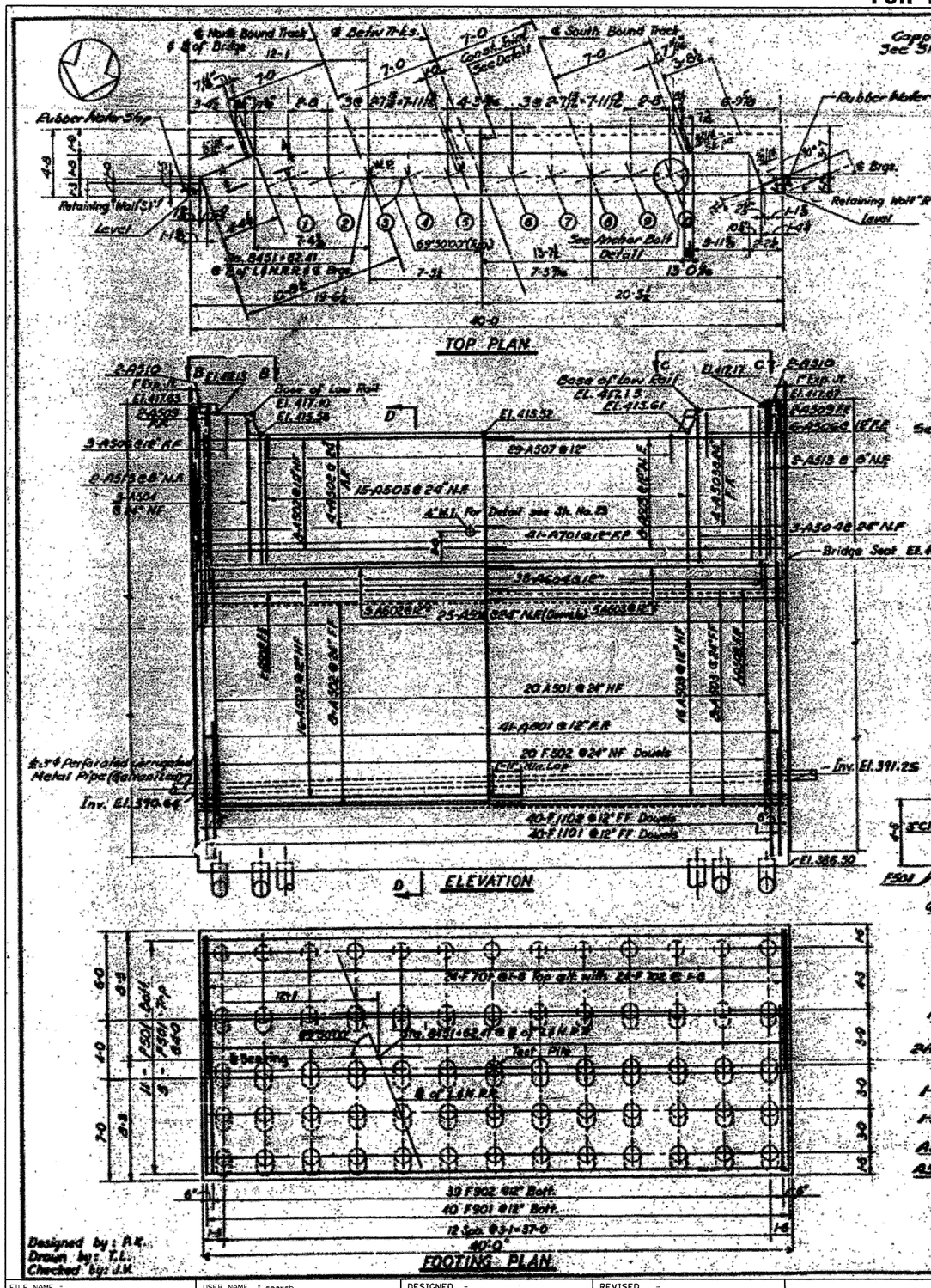
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

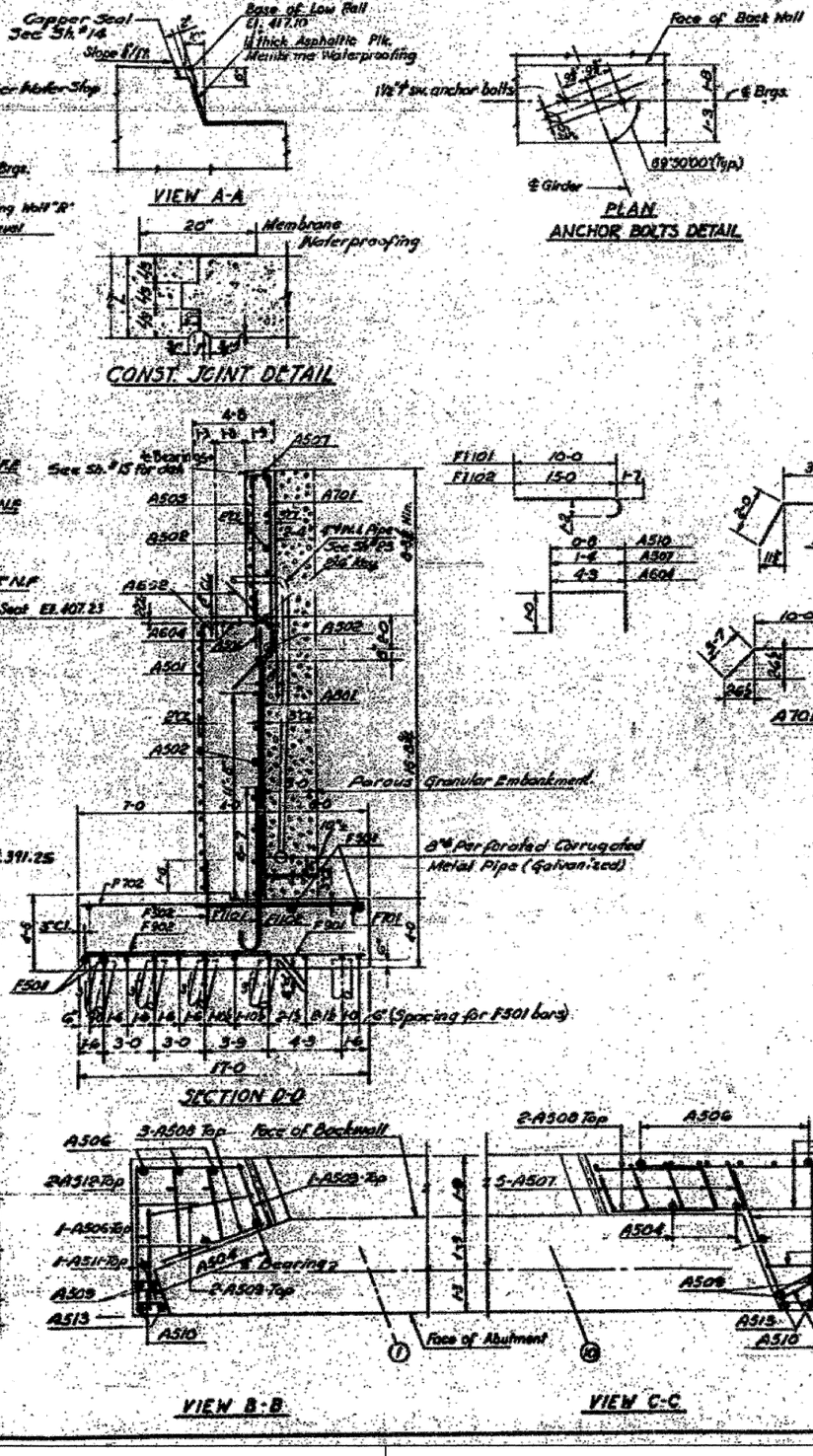
EXISTING BRIDGE PLAN – L&N RR BRIDGE 05

SCALE: NONE | SHEET NO. 6 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	452
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY





BAR SCHEDULE				
Mark	No. Req'd	Size	Length	Shape
F 301	16	5	39-6	
F 302	20	5	3-0	
F 701	24	7	9-0	
F 901	40	9	16-6	
F 902	39	9	11-0	
F 1101	40	11	11-7	
F 1102	40	11	16-7	
F 702	26	7	16-6	
A 501	20	5	16-0	
A 502	37	5	21-3	
A 503	37	5	20-2	
A 504	6	5	9-6	
A 505	15	5	8-1	
A 506	35	5	3-0	
A 507	35	5	3-4	
A 508	5	5	3-1	
A 509	8	5	1-10	
A 510	4	5	2-8	
A 511	3	5	4-3	
A 512	2	5	2-8	
A 513	4	5	10-2	
A 514	2	5	5-0	
A 605	5	6	21-7	
A 603	5	6	20-2	
A 604	58	6	6-5	
A 701	41	7	13-7	
A 801	41	8	16-6	

BILL OF MATERIAL		
Class "X" Concrete	C.Y.	234
Reinforcement Bars	Lbs.	17,730
Furnishing Concrete Piles	Lin. Ft.	2,432
Driving Concrete Piles	Lin. Ft.	2,432
Test Pile (Concrete)	Each	1
Porous Granular Embankment	C.Y.	104
● Membrane Waterproofing	S.Y.	47
8"ø C.M.P. Perforated (Galv.)	L.F.	40

● Incidental to cost of Class X Concrete

PILE DATA	
Type	Concrete
Length	39 Ft.
Capacity	40 Ton
No. Required	64 Ea.
Test Pile	1 Ea.

Notes:
For pile details see Sh. # 24.
Care shall be taken in placing reinforcement bars so as to clear anchor bolts.
For General Notes see Sh. # 1.
For Location see Sh. # 2.
See Sh. # 7 for Expansion Joint Details at ends of abutments.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "K" (SN 7)

SOUTH ABUTMENT

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 6

FAI-70	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	7	St. Clair		

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_06.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

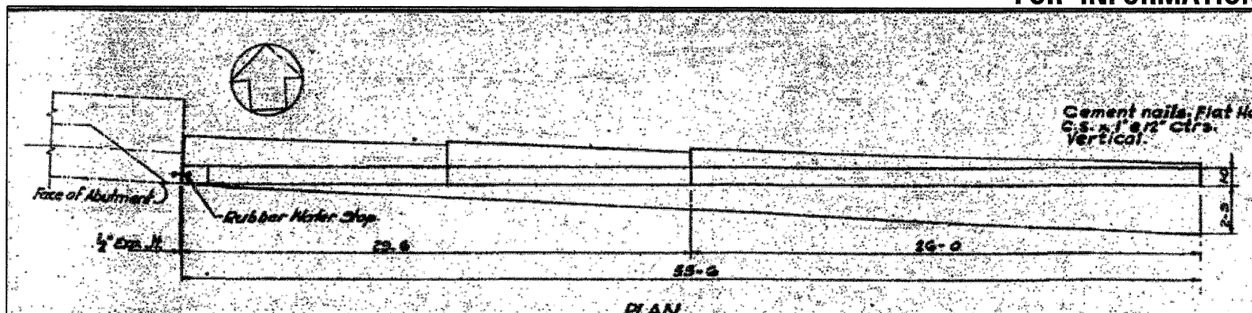
EXISTING BRIDGE PLAN – L&N RR BRIDGE 06

SCALE: NONE | SHEET NO. 7 OF 26 SHEETS | STA. | TO STA.

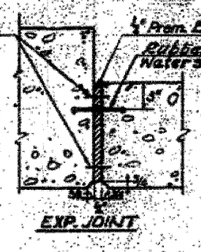
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	453
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

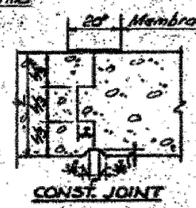
SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 702 (82-2)R	St. Clair	77	27
F.A.I. RTE. 7	ILLINOIS	PROJECT	



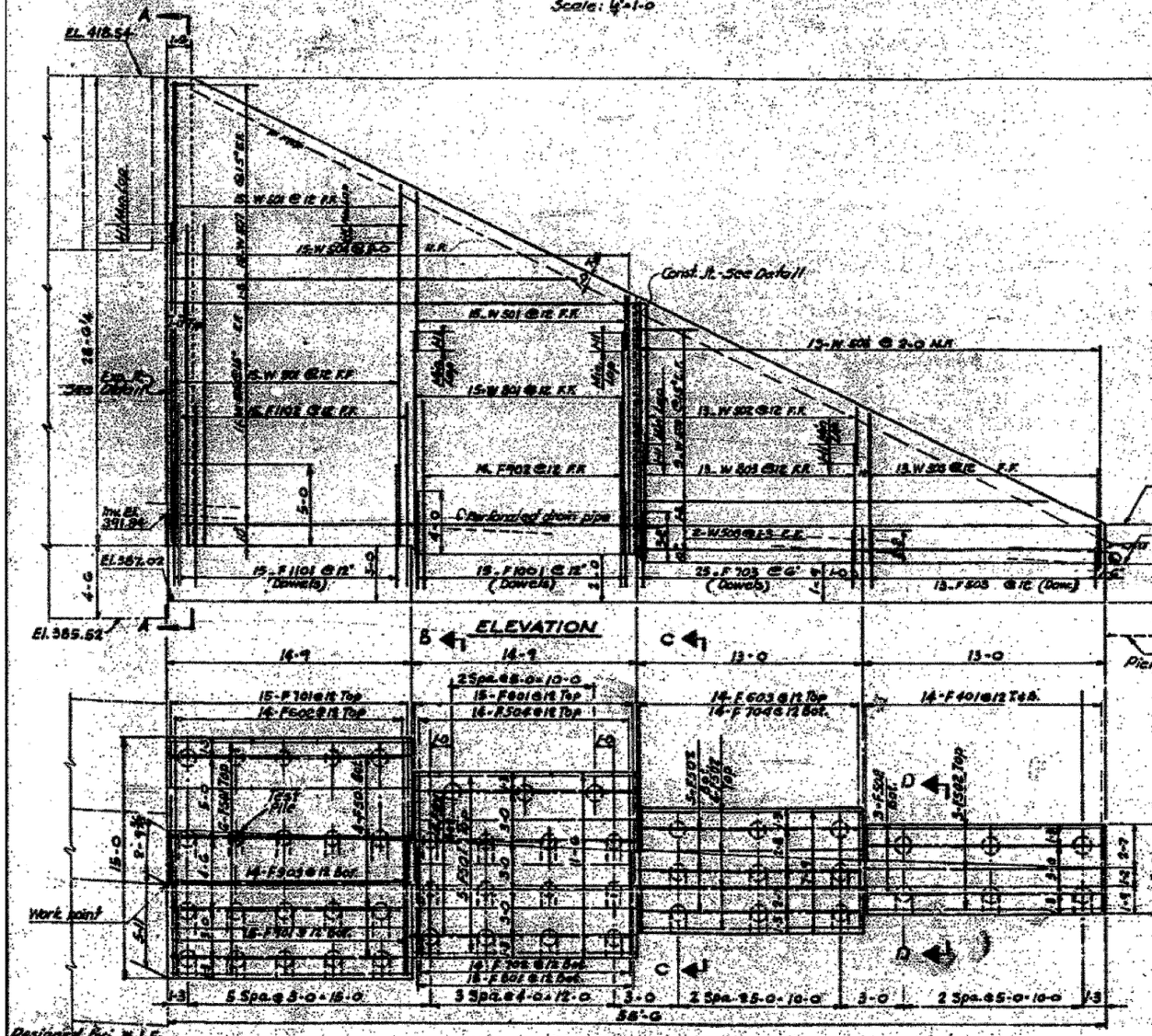
PLAN
Scale: ½"-1-0



EXP. JOINT

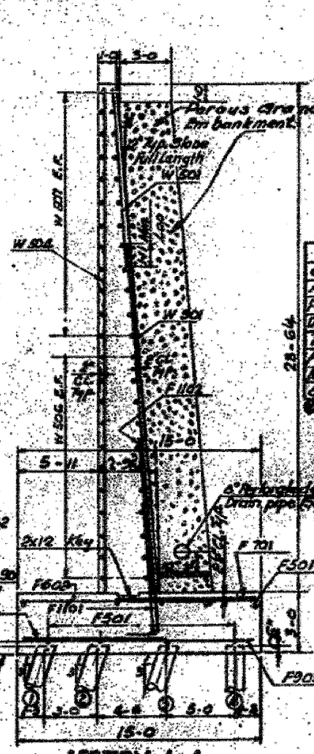


CONST. JOINT

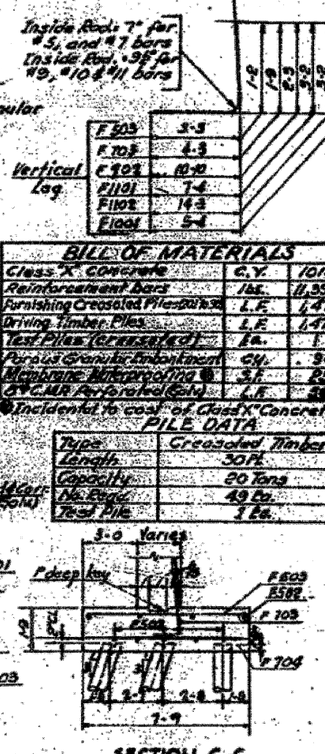


ELEVATION

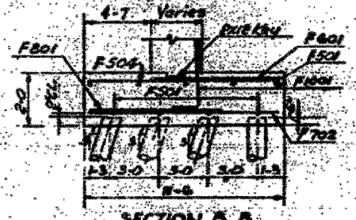
FOOTING PLAN



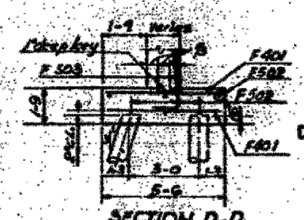
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

Inside Rad. 7" for #5, and #7 bars
Inside Rad. 9" for #9, #10 & #11 bars

F 503	5-5
F 703	4-3
F 603	10-10
F 1101	7-4
F 1103	14-3
F 1001	5-4

Vertical Leg

BILL OF MATERIALS

Class 'X' Concrete	C.Y.	101.4
Reinforcement Bars	lbs.	11,390
Furnishing Creosoted Piles-20 ft. & 30 ft.	L.F.	1,470
Driving Timber Piles	L.F.	1,470
Test Piles (Creosoted) (20')	Ea.	1
Porous Granular Embankment	C.Y.	94
Membrane Waterproofing @	S.F.	23
8" C.M.P. Perforated (Slit)	L.F.	28

@ Incidental to cost of Class 'X' Concrete

PILE DATA

Type	Creosoted Timber
Length	30 Ft.
Capacity	20 Tons
No. Reqd.	49 Ea.
Test Pile	1 Ea.

BAR SCHEDULE

Mark	No. Req.	Size	Length	Shape
F 401	28	4	5-2	
F 501	19	5	14-6	
F 502	13	5	18-3	
F 503	13	5	4-2	
F 504	14	5	11-5	
F 601	15	6	7-0	
F 602	14	6	14-9	
F 603	14	6	7-8	
F 701	15	7	9-0	
F 702	14	7	11-3	
F 703	28	7	5-6	
F 704	14	7	7-6	
F 801	15	8	7-8	
F 901	18	9	9-7	
F 902	14	9	14-9	
F 1001	15	10	7-8	
F 1101	15	11	10-1	
F 1102	15	11	17-0	
W 501	2 series ea. 15 bars	#	3-6 to 15-6 incr. 6"	
W 502	1 series ea. 15 bars	"	3-0 to 3-0 incr. 6"	
W 503	1 series ea. 15 bars	"	2-9 to 3-3 incr. 6"	
W 504	1 series ea. 15 bars	"	11-2 to 28-2 incr. 1-0	
W 505	1 series ea. 13 bars	"	2-9 to 14-9 incr. 1-0	
W 506	22	"	30-9	
W 507	2 series ea. 12 bars	"	7-6 to 29-0 incr. 2-6	
W 508	4	"	25-9	
W 509	2 series ea. 9 bars	"	4-6 to 34-6 incr. 2-6	
W 601	15	8	13-9	
W 603	13	8	7-6	
W 901	18	9	20-0	

NOTES
For General Notes See Sh. #1
For Location See Sh. #2

Designed By: W.J.F.
Drawn By: A.B.
Checked By: R.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWAY, RAMP "L", EAST BOUND EXPWAY AND RAMP "N"

NORTHEAST WINGWALL

H. W. LOCHNER, INC.
ENGINEERS

DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 7

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_07.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 07

SCALE: NONE | SHEET NO. 8 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	454
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	64-1-18	St Clair	629	455
FED. AID PROJ. NO. 7	ILLINOIS	PROJECT		

BAR SCHEDULE

Mark	No. Reqd.	Size	Length	Shape
P 701	90	#7	7-4	
P 702	30	#7	25-1	
P 801	82	#8	14-6	
P 501	2	#8	12-2	
P 502	2	#8	15-0	
P 503	46	#8	3-8	
P 504	16	#8	8-0	
P 505	28	#8	23-10	
P 506	40	#8	21-5	
P 507	8	#8	17-8	
P 508	2	#8	20-6	
P 509	2	#8	8-8	
P 701	76	#7	16-0	
P 702	10	#7	11-9	
P 703	10	#7	10-3	
P 1001	24	#10	23-1	

BILL OF MATERIALS

Class 'X' Concrete	C.Y.	258
Reinforcement Bars	Lbs.	73,840
Furnishing Concrete Piles	L.F.	4,230
Driving Concrete Piles	L.F.	3,230
Test Pile (Concrete)	ea.	1

Note: All anchor bolts are 1½" ϕ sw. anch. bolts.

PLAN A-1

PLAN A-2

ANCHOR BOLT DETAILS

SECTION A-A

ELEVATION

END VIEW

FOOTING PLAN

PILE DATA

No. Required	76
Estimated Length	as ft.
Capacity	60 tons
Type: Concrete Piles	
Test pile	1

NOTES

For general notes see sh. #1
For Location see sh. # 2
For Drainage see sh. # 23
Care shall be taken in placing reinforcement bars so as to clear anchor bolts.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N. R. R. OVER WESTBOUND EXPWAY., RAMP "L", EASTBOUND EXPWAY AND RAMP "N"

NORTH PIER

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE JULY 1960

SHEET NO. 8

Designed by: M.J.F.
Drawn by: R.N.
Checked by: J.V.

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_08.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 08

SCALE: NONE | SHEET NO. 9 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	455
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAP Route	Sect.	County	Total Sheets	Sheet No.
FAP-702	82-1-R(A) 82-1-R(B)	St. Clair	629	456

BAR LIST

Mark	No. Req'd	Size	Length	Shape
FG01	32	#	15-0	
FG02	108	#6	6-8	
F701	71	#7	14-6	
F702	28	#7	10-3	
PS01	6	#5	10-0	
PS02	20	#5	8-0	
PS03	20	#5	16-8	
PS44	36	#5	8-10	
PS05	12	#5	14-0	
PS06	24	#5	13-8	
PS07	20	#5	14-8	
PS08	16	#5	10-3	
PS10	2	#5	11-0	
PS11	2	#5	14-6	
PS12	46	#5	8-6	
PS13	2	#5	17-0	
PS14	2	#5	19-8	
PS15	2	#5	8-7	
PG01	43	#6	14-9	
P901	8	#8	34-6	

BILL OF MATERIALS

Class "A" Concrete	C.Y.	186.8
Reinforcement bars	lbs.	34,170
Furnishing concrete piles	L.F.	2,360
Driving concrete piles	L.F.	2,360
Test Pile (Concrete)	Ea.	1

CENTER PIER CAP

ELEVATION

FOOTING PLAN

END VIEW

PLAN A-1

PLAN A-2

ANCHOR BOLT DETAILS

SECTION A-A

P502 P504 P515

P510 P511 P513 P514

P501

Notes
See Sh#1 for Gen. Notes
See Sh#2 for Location
See Sh#23 for Drainage Details
Care shall be taken in placing reinforcement bars so as to clear anchor bolts.
For pile details see Sheet No. 24

PILE DATA

Type: Concrete Piles	
Estimated Length	40
Capacity	40 Tons
No. Required	59
Test Pile	1

Designed by: B.M.
Drawn by: WEK
Checked by: J.W.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L" EAST BOUND EXPWAY AND RAMP "N"

CENTER PIER

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 9

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_09.dgn	USER NAME = sear-sb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

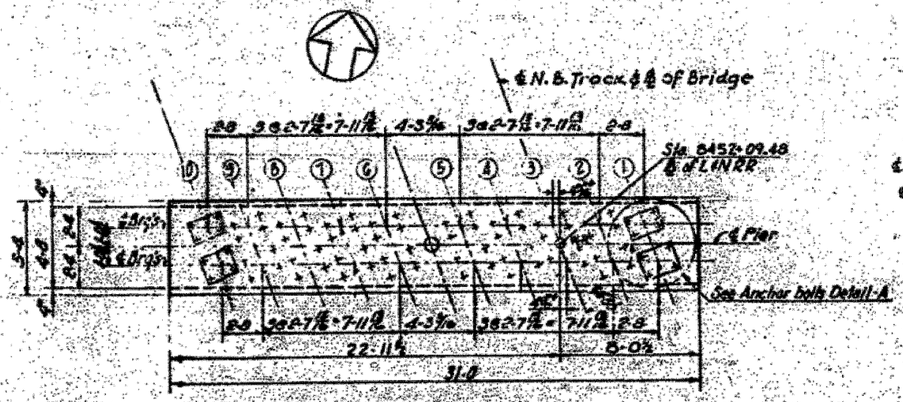
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 09

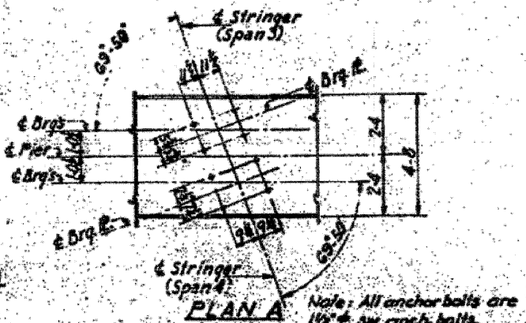
SCALE: NONE | SHEET NO. 10 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	456
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

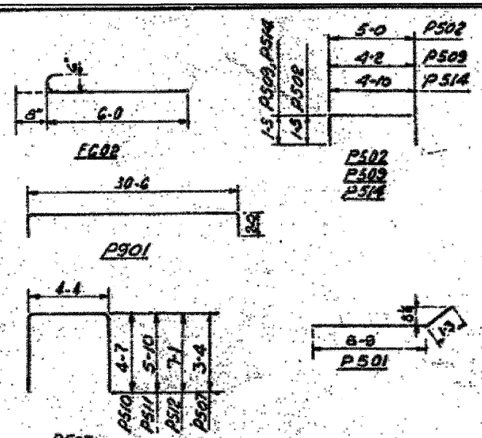


SOUTH PIER CAP

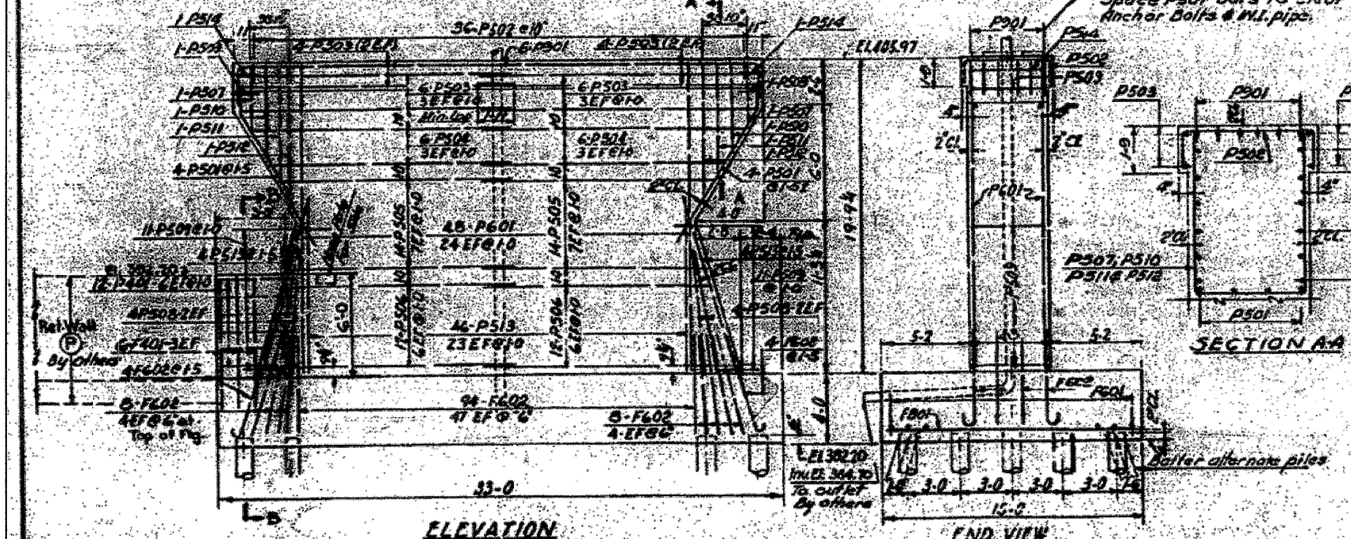


PLAN A

ANCHOR BOLTS DETAIL



BAR SCHEDULE				
Mark	No. Reqd	Size	Length	Shape
F501	7	#5	18-9	
F401	6	#4	7-10	
F601	65	#8	14-6	
FC01	30	#6	10-3	
FC02	118	#6	6-8	
P501	8	#5	10-0	
P502	36	#5	7-10	
P503	20	#5	14-6	
P504	12	#5	15-8	
P505	28	#5	13-0	
P506	24	#5	14-6	
P507	2	#5	11-0	
P508	6	#5	4-8	
P509	24	#5	6-8	
P510	2	#5	15-6	
P511	2	#5	16-0	
P512	2	#5	15-6	
P513	34	#5	18-9	
P514	2	#5	7-4	
PC01	48	#6	19-7	
P901	6	#7	34-6	
P401	12	#4	49	



BILL OF MATERIALS		
Class "X" Concrete	C.Y.	166.5
Reinforcement Bars	Lbs.	9,250
Furnishing concrete piles	L.F.	2052
Driving Concrete piles	L.F.	2052
Test Pile (Concrete)	Ea.	1

NOTES:
See Sheet #1 for Gen. Notes
See Sheet #2 for Location
See Sheet #23 for Drainage Details
See Sheet # 7 for Exp. Joint details.
Care shall be taken in placing reinforcement bars so as to clear anchor bolts.
For pile details see Sh. #24

PILE DATA

Type: Concrete Piles	
Estimated Length	38 Ft.
Capacity	40 Tons
No. Required	34 Ea.
Test Pile	1 Ea.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N. R.R. OVER WEST BOUND EXPWAY, RAMP "L", EAST BOUND EXPWAY AND RAMP "N" (BR 7)

SOUTH PIER

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 10

Designed by: DAR
Drawn by: WCK
Checked by: AW

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_10.dgn	USER NAME = sear-sb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 10

SCALE: NONE | SHEET NO. 11 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	457
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAP RTE.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-70	82-1-RB 82-1-RA	St. Clair	77 629	10

SECTION E-E

BARS IN TOP OF SLAB

BARS IN BOTTOM OF SLAB

PLAN OF DECK "A"

TYPICAL DETAIL

SECTION A-A

BARS IN TOP OF SLAB

CHANNELS

DECK

JOINT DETAIL (TYPICAL)

Designed By PAE
Drawn By J.C.S.
Checked By W.J.F

NOTES:
For Handrail Post spacing see Sh. No. 22.
For Bar Schedule and Bill of Materials see Sh. No. 12.
For Deck Drainage and El. Top Deck see Sh. No. 23.
For General Notes see Sh. "I"

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N.R.R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "M" (SB 7)
DECK "N" AND DETAILS
H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 10

FILE NAME =	USER NAME = seersb	DESIGNED -	REVISED -
D8TR1-76C52-SHT-LNRRBridge_11.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

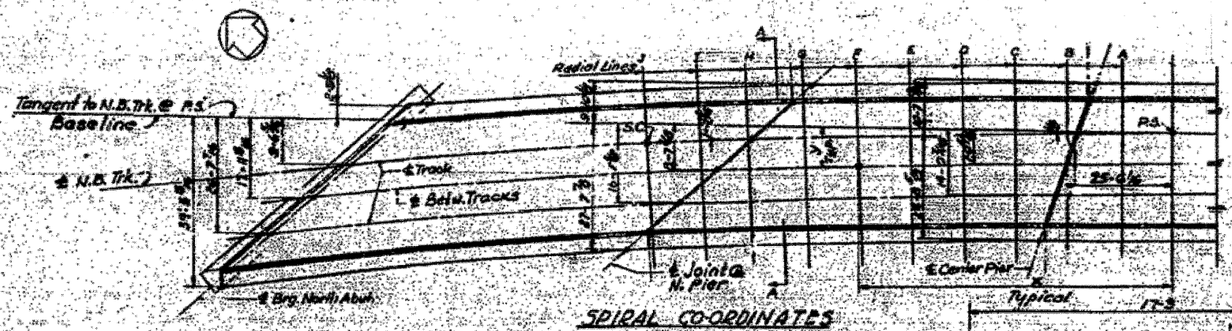
EXISTING BRIDGE PLAN – L&N RR BRIDGE 11

SCALE: NONE | SHEET NO. 12 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	458
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

PROJECT SECTION NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-2 & 3R 82-4 & 5R	St Clair	459 -"-	5-R 11
FED. RD. DIV. No. 7	ILLINOIS PROJECT			



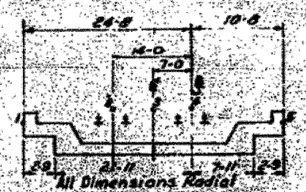


TABLE OF OFFSETS FOR FORMING CONCRETE DECK

A	X	Y
1	11-11⅝	84-8
2	11-11⅝	14-0
3	11-11⅝	7-0
4	12-0	0-0
5	12-0⅛	-10-6

B	X	Y
1	23-11⅝	84-8⅛
2	23-11⅝	14-0⅛
3	23-11⅝	7-0⅛
4	24-0	0-0⅛
5	24-0⅛	-10-7⅝

C	X	Y
1	35-10⅝	84-8⅝
2	35-11⅛	14-0⅝
3	35-11⅛	7-0⅝
4	36-0	0-0⅝
5	36-0⅛	-10-7⅛

D	X	Y
1	47-9	84-9⅜
2	47-10⅜	14-1⅜
3	47-11⅜	7-1⅜
4	48-0	0-2
5	48-1⅜	-10-6⅜

E	X	Y
1	59-7⅜	24-11⅜
2	59-9⅜	14-3⅜
3	59-10⅜	7-7⅜
4	60-0	0-3⅜
5	60-2	-10-4⅜

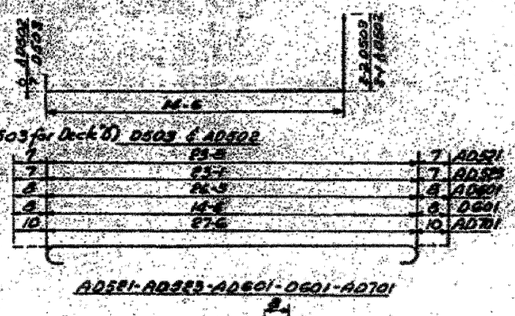
F	X	Y
1	71-5⅜	25-2⅜
2	71-8⅜	14-8⅜
3	71-10⅜	7-8⅜
4	71-11⅜	0-8⅜
5	72-2⅜	-10-1⅜

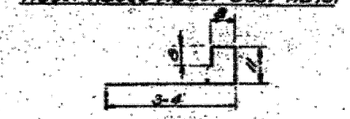
G	X	Y
1	83-2⅜	25-6⅛
2	83-6⅛	14-10⅛
3	83-9⅛	7-10⅛
4	83-10⅛	0-10⅛
5	84-3⅛	-9-9⅜

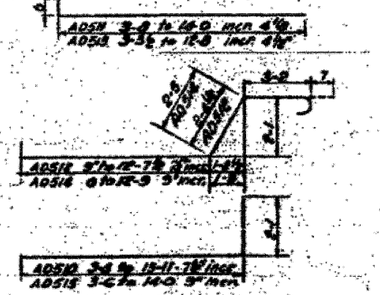
H	X	Y
1	94-11⅞	25-11⅝
2	95-3⅛	15-3⅛
3	95-6⅛	8-3⅛
4	95-7⅛	1-3⅛
5	96-0⅛	-9-4⅜

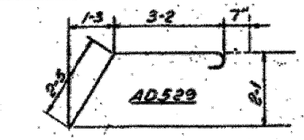
I	X	Y
1	106-8⅝	26-5⅞
2	107-3⅛	15-9⅛
3	107-7⅛	8-9⅛
4	107-11⅛	1-10
5	108-6⅛	-8-9⅛

J	X	Y
1	116-4⅝	27-1⅜
2	119-0⅜	16-5⅜
3	119-4⅜	9-5⅜
4	119-11⅜	2-6⅜
5	120-7⅜	-5-2⅜

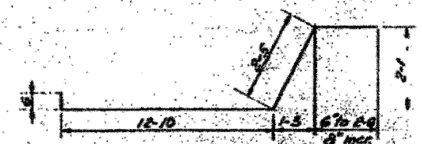


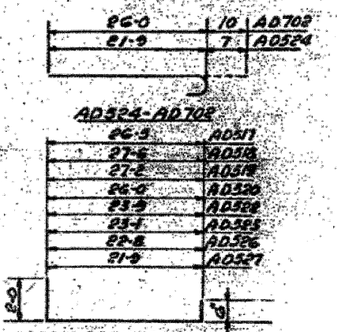






AD528-AD703





BAR SCHEDULE

Mark	No Req.	Size	Length	Shape
D501	194	#5	5-7	
AD501	153		19-6	
AD502	159		17-1	
AD503	72		34-6	
AD504	72		36-0	
AD505	40		18-6	
AD506	50		18-6	
AD507	10		17-3	
AD508	6 Series as 5 bars		Varies Mid incr 1-2	
AD509	1 Series 4 bars		16-3 to 16-9 incr 6"	
AD510	1 Series 18 bars		5-5 to 16-9 incr 7½"	
AD511	1 Series 31 bars		8-2 to 14-6 incr 6"	
AD512	1 Series 20 bars		6-11½ to 16-9 incr 7½"	
AD513	1 Series 26 bars		3-10½ to 13-6 incr 4½"	
AD514	1 Series 18 bars		4-0 to 8-11 incr 5"	
AD515	1 Series 15 bars		3-7 to 14-3 incr 8"	
AD516	4		3-4	
AD517	3	1	28-11	
AD518	3	#5	30-0	
AD519	1		29-8	
AD520	1		28-6	
AD521	3		24-11	
AD522	3		24-3	
AD523	4		24-3	
AD524	1		22-4	
AD525	3		25-7	
AD526	1		25-2	
AD527	1		24-5	
AD528	1	1	3-3	
AD529	2	#5	6-2	
D601	317	#6	15-10	
AD601	5		27-9	
AD602	1 Series 28 bars		4-0 to 13-4 incr 4½"	
AD603	1 Series 34 bars		3-11 to 14-3 incr 4"	
AD604	1 Series 31 bars		4-6 to 14-3 incr 4½"	
AD605	1 Series 30 bars	#6	4-1 to 14-3 incr 4½"	
AD701	4	#7	29-2	
AD702	1	#7	26-10	
AD703	1	#7	9-1	

BILL OF MATERIAL - SUPERSTRUCTURE		
Structural Steel	lbs.	2,115A00
Class 'K' Concrete	C.Y.	534
Reinforcement Bars	lbs.	83,365
Membrane Waterproofing	S.Y.	3,170
Hand Rail	L.F.	623

Notes
For Gen. Notes See Sh. #1
For Location See Sh. #2

Design : E.L.
Drawn : J.S.C.
Checked : W.J.F.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N.R.R. OVER WEST BOUND EXPWAY, RAMP "L" EAST BOUND EXPWAY AND RAMP "N" (BR 7)

DECK "A" BAR LIST AND DETAILS

H.W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 12

FILE NAME =	USER NAME = searsb	DESIGNED -	REVISED -
DBTRI-76C52-SHT-LNRRBridge_12.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

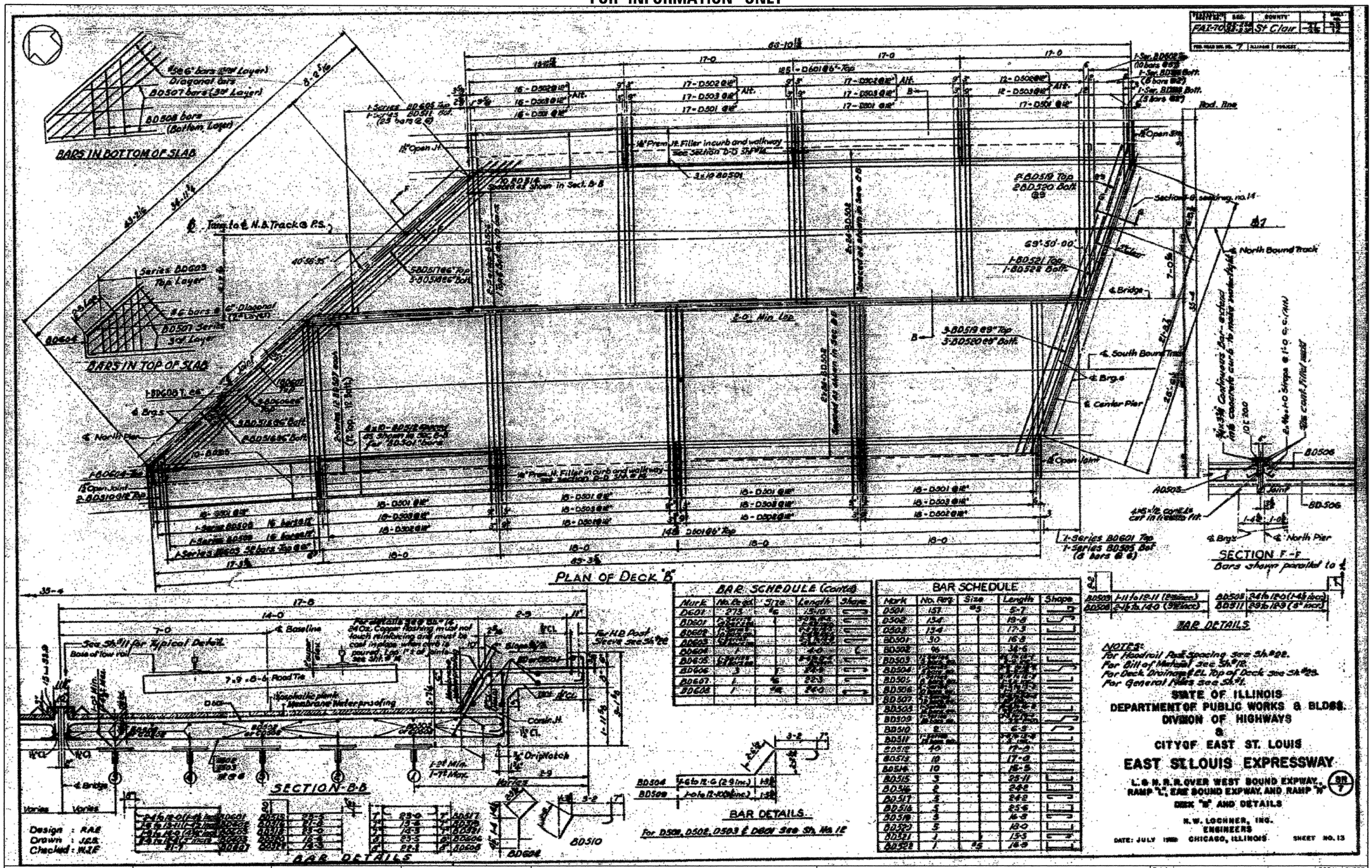
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 12

SCALE: NONE | SHEET NO. 13 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	459
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



FILE NAME = DBTRI-76C52-SHT-LNRRBridge_13.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 13

SCALE: NONE | SHEET NO. 14 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	460
•	64/998/70	CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	SEC. 82-1-R(A), 82-1-R(B)	COUNTY St.Clair	TOTAL SHEETS 629	SHEET NO. 461
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

PLAN OF DECK "C"

SECTION D-D

SECTION G-G

PART SECTION SHOWING BAR CLEARANCE

COPPER WATER SEAL - 24 oz. 10" wide before bending

COPPER FLASHING - 24 oz. 7"x 8'-0"
To be spliced by lapping 1" and carefully soldering laps.

24 Oz. Copper Water Seal must not touch reinforcing and must be cast in place when curb is poured

Designed by : PAE
Drawn by : JCS
Checked by : WJF

BAR SCHEDULE

Mark	No. Req.	Size	Length	Shape
D501	178	#5	5-7	
D502	168		19-8	
D503	168		17-3	
CD501	80		17-7	
CD502	144		31-0	
CD503	2 Ser. in 3 bars		1-9 to 2-0	
CD504	2 Ser. in 3 bars		2-0 to 2-3	
CD505	2 Ser. in 3 bars		2-3 to 2-5	
CD506	18		16-7	
CD507	12		18-0	
CD508	20	#5	16-7	
CD601	2 Series 6 bars ea.	#6	2-6 to 11-3 1-4½ incr.	
CD602	2 Series 9 bars ea.	#6	3-5 to 14-5 1-4½ incr.	
D601	334	#6	13-10	

For D501, D502, D503 & D601 See Sh. #10

Note:
The cost of furnishing and installing copper flashing and copper water seal is incidental to the cost of Class 'X' concrete

NOTES
For handrail post spacing see Sht. # 28
For Bill of Materials see Sh. #12
For Deck Drainage and CL Top Deck see Sht. # 25.
For Section D-D See Sh No. 13
For General Notes see Sh. #1

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "N"

DECK "C" AND DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 14

BR 7

FILE NAME =	USER NAME = sear-sb	DESIGNED -	REVISED -
D8TRI-76C52-SHT-LNRRBridge_14.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

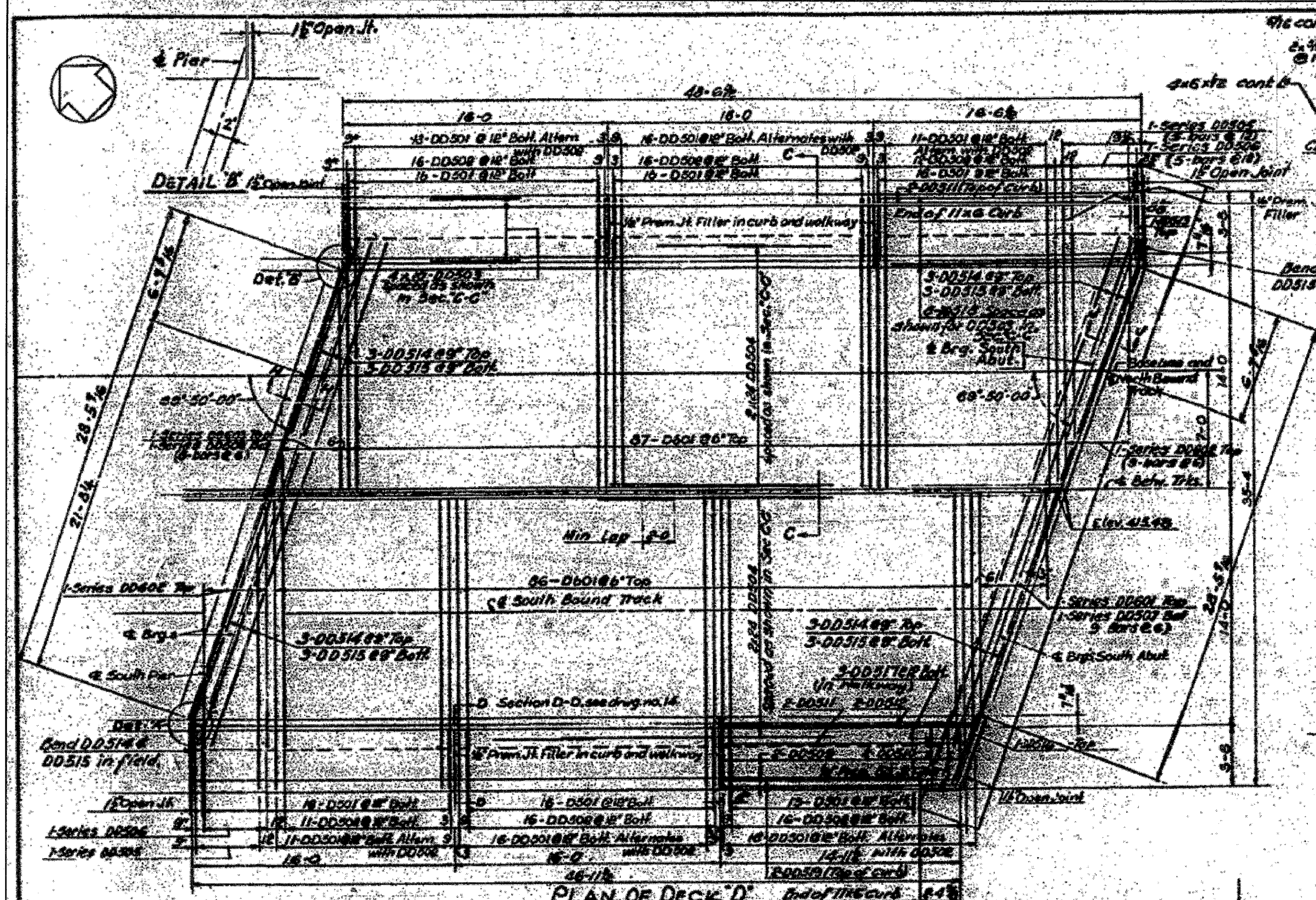
EXISTING BRIDGE PLAN – L&N RR BRIDGE 14

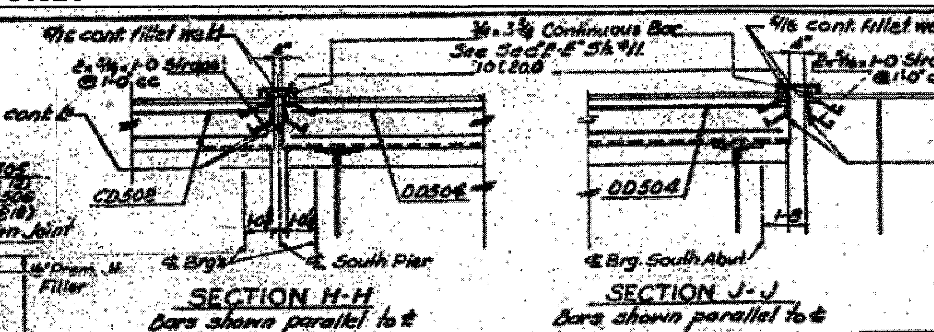
SCALE: NONE | SHEET NO. 15 OF 26 SHEETS | STA. | TO STA.

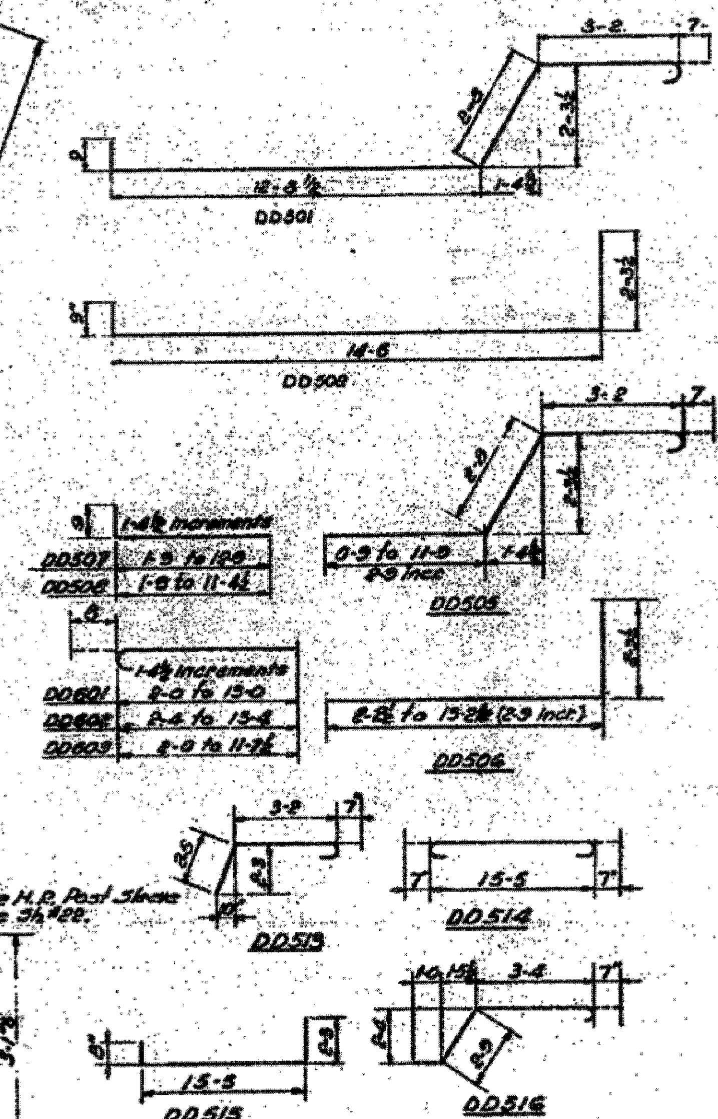
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	461
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-1-R(A) 82-1-R(B)	St. Clair		



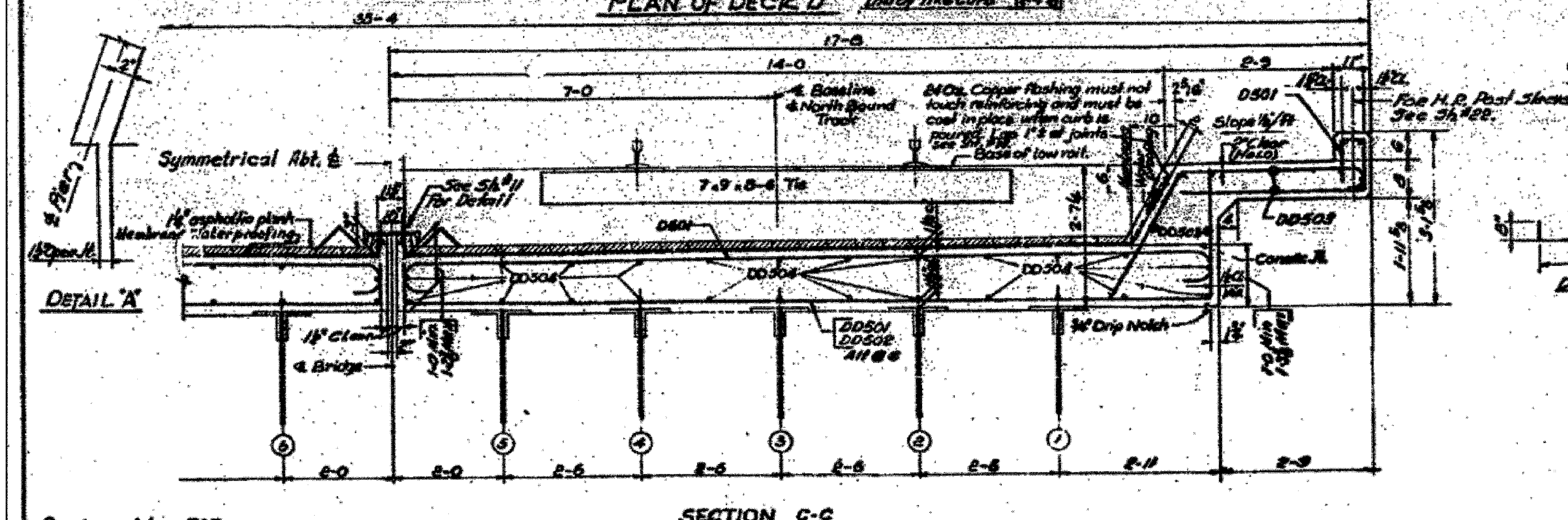




BAR SCHEDULE

Mark	No. Req.	Size	Length	Shape
DD501	86	#5	19-11	
DD502	87		17-6	
DD503	40		15-8	
DD504	96		25-0	
DD505	2-Series ea. 5 bars		7-2 to 18-2 incr. 2-9	
DD506	2-Series ea. 5 bars		4-6 to 15-6 incr. 2-9	
DD507	1-Series ea. 9 bars		8-6 to 19-6 incr. 1-4½	
DD508	1-Series ea. 8 bars		2-6 to 12-1 incr. 1-4½	
DD509	2		14-9	
DD510	2		15-1	
DD511	4		15-7	
DD512	2		15-10	
D501	83		5-7	
DD513	1		6-8	
DD514	12		16-7	
DD515	12		18-4	
DD516	1		7-8	
DD517	3		3-6	
DD518	8		16-3	
DD519	2	#5	18-3	
D601	173	#6	15-10	
DD601	1-Series 9 bars		2-8 to 13-8 incr. 1-4½	
DD602	2-Series 9 bars ea.		3-4 to 14-0 incr. 1-4½	
DD603	1-Series 8 bars	#6	2-8 to 12-8 incr. 1-4½	

For Detail of D501 & D601 See Sh. #12.



Designed by: PAE
Drawn by : JCS
Checked by: WJF

NOTES

For handrail post spacing see Sht. #22
For Bill of Material See Sheet #12
For Deck Drainage and EL. Top Deck see Sht. # 23
For General Notes see Sh. #1

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY. AND RAMP "N" (8R/7)

DECK "D" AND DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 13

FILE NAME = D8TRI-76C52-SHT-LNRRBridge_15.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 '/ in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

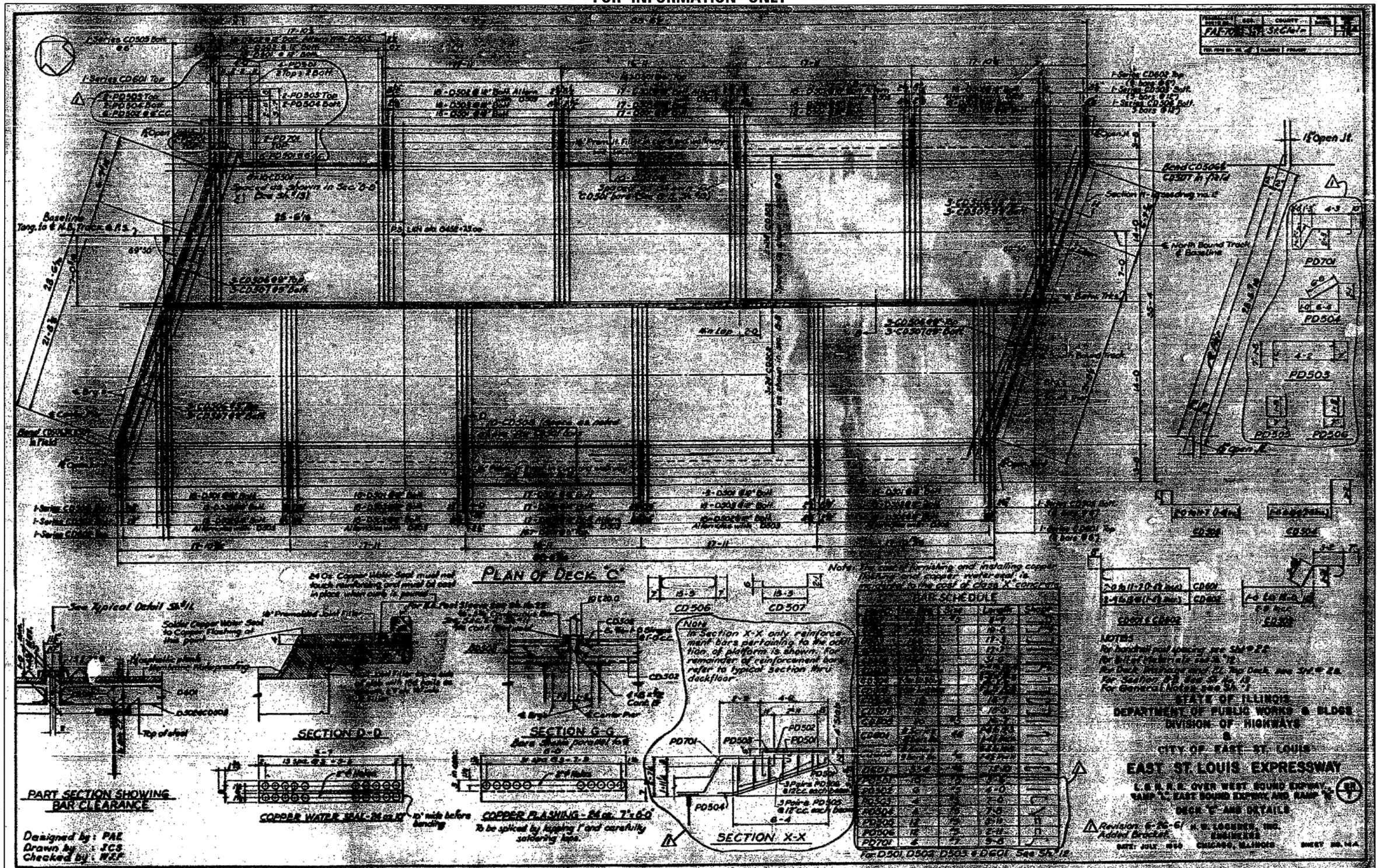
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 15

SCALE: NONE | SHEET NO. 16 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	462
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



FILE NAME = DBTRI-76C52-SHT-LNRRBridge_16.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 16

SCALE: NONE | SHEET NO. 17 OF 26 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	463
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

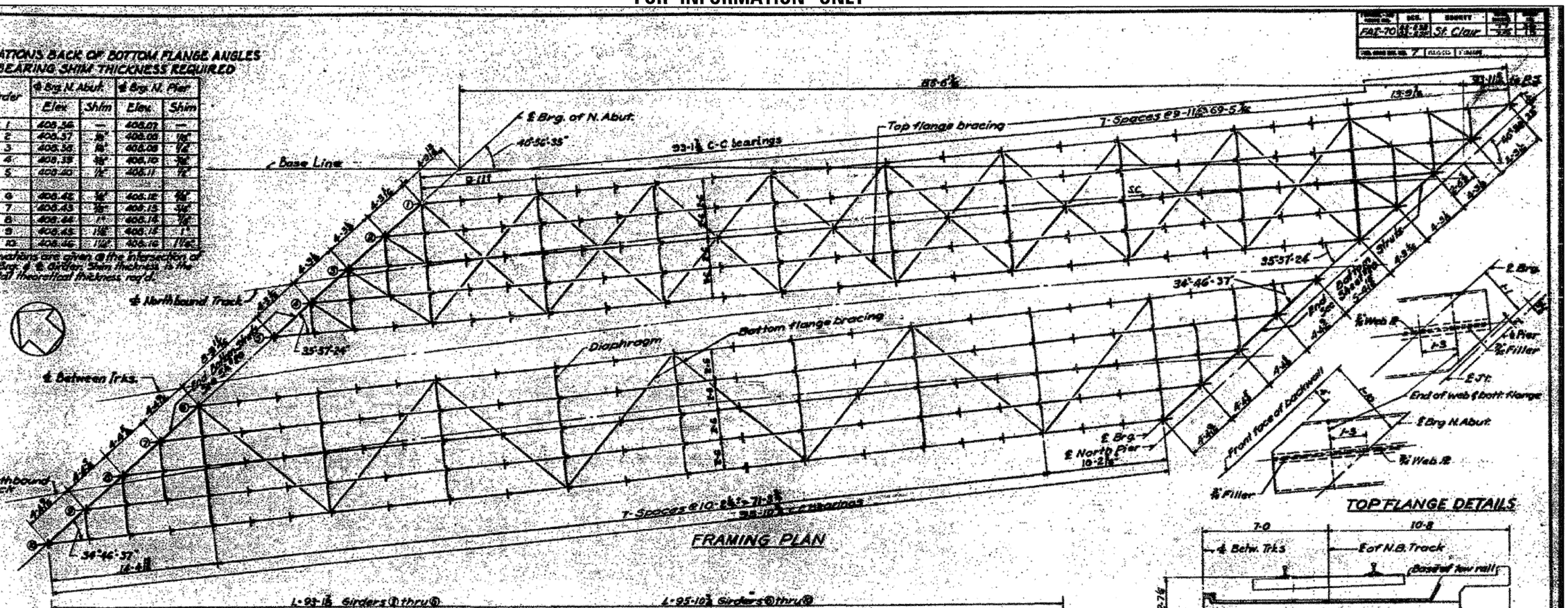
FOR INFORMATION ONLY

FAI-70	SEC. 82-1-R(A) 82-1-R(B)	COUNTY St. Clair	TOTAL SHEETS 629	SHEET NO. 464
			CONTRACT NO. 76C52	

ELEVATIONS BACK OF BOTTOM FLANGE ANGLES & BEARING SHIM THICKNESS REQUIRED

Girder	@ Brg N. Abut. Elev	@ Brg N. Abut. Shim	@ Brg N. Pier Elev	@ Brg N. Pier Shim
1	408.36	—	408.07	—
2	408.37	1/16"	408.08	1/16"
3	408.38	1/8"	408.09	1/8"
4	408.39	3/16"	408.10	3/16"
5	408.40	1/4"	408.11	1/4"
6	408.41	5/16"	408.12	5/16"
7	408.43	3/8"	408.13	3/8"
8	408.44	1/16"	408.14	7/16"
9	408.45	1/2"	408.15	1"
10	408.46	1 1/16"	408.16	1 1/16"

Elevations are given @ the intersection of ℄ Brg. & ℄ Girder. Shim thickness is the total theoretical thickness req'd.



DEAD LOAD PER TRACK

		Gir. 1 ecc 1.71	Gir. 6 ecc -.37
Ballast, Ties & Rails	2.73%		
Slab, Waterproof & Walk	3.00%		
	5.73%		
D.L.	1.15%	1.15%	
D.L. ecc. 2.73 x .606	.78%	- .17%	
D.L. Steel	.71%	.73%	
	2.64%	1.71%	

IMPACT

	Gir. 1 thru 5	Gir. 6 thru 10
Vertical 50-(L+7)	42.7%	41.6%
Rolling 82 / (L+38)	20.0%	20.0%
	62.7%	61.6%

MOMENTS & SHEAR FOR GIRDER NO. 1 & 6

End Shear	Gir. 1	Gir. 6	Max. Moment	Gir. 1	Gir. 6
D.L.	124.1 K	82.1 K	D.L.	2916 ft-k	1970 ft-k
L.L.	102.5 K	104.1 K	L.L.	2071 ft-k	2156 ft-k
Imp.	69.6 K	64.0 K	L.L. ecc.	324 ft-k	336 ft-k
Centri.	35.7 K	36.2 K	Imp.	1431 ft-k	1468 ft-k
Total	329.9 K	286.4 K	Centri.	723 ft-k	750 ft-k
Frame Transfer	27.6 K	30.3 K	Total	7471 ft-k	6680 ft-k
Total	357.3 K	316.7 K			

CENTRIFUGAL

2 1/2" super

1.755(2 1/2 + 3) = 9.65%

SECTION ALL GIRDERS BOTH FLANGES

	Gross	Net
1/2 Web 84" x 7/16"	4.60	4.60
2 Fls 8" x 7/8"	26.46	22.52
1 PL 17" x 7/8"	14.88	12.91 Full lg. top & bott
1 PL 17" x 7/8"	14.88	12.91 65-3/8 lg. Gir. 1 to 5
1 PL 17" x 7/8"	14.88	12.91 51-0 lg. Gir. 1 to 5
Total	75.70 Gross	65.85 Net

Gross I = 275,865 in⁴ Gross S.M. = 6,147 in³

Net I = 235,369 in⁴ Net S.M. = 5,245 in³

Allow. Stress = 17,200 lbs/in² Gir. 1 thru 5; 15,800 lbs/in² Gir. 6 thru 10

Unit Stress - Gir. 1 = 17,100 lbs/in²

Gir. 6 = 15,300 lbs/in²

Edge distances on flange angles shall not be more than 2" or less than 1 1/2"

ADDITIONAL MATERIAL

Web 84" x 7/16" - 36.75 tons

End Stiff 4 Ls 7" x 4" x 5/8"

Use 20 Rivets per pair

2 End Fills 14" x 5/8"

Inter. Stiff. 2 Ls 6" x 3 1/2" x 5/8" on fills at Diaphragms. 2 Ls 6" x 3 1/2" x 7/16" on fills elsewhere.

Cover Pls - Girder 6 to 10

2 Pls 17" x 7/8" Full length

2 Pls 17" x 7/16" x 69'-6"

2 Pls 17" x 7/16" x 52'-0"

End Diaphragm & Inter. Diaph.

2 Ls top & bott 4" x 4" x 5/16" to Web.

Lateral Rs. & Horizontal Gussets 7/16"

Top Laterals - 2 Ls 4" x 3 1/2" x 5/16" & Rivets.

Bott. Laterals - 1 L 4" x 4" x 5/16" & 3 Rivets.

End Bottom Struts 2 @ 4" x 4" x 5/16"

Locate Web Splice @ or near 1/4 Point.

Max. distance c.c. rivets on outside gage line of cover plates shall be 9"

Min. pitch 3" in bottom cover plate near ℄ of span on account of net section

Notes:

For details of Diaphragm, Lateral bracing & Connections see sh. no. 20

For details of bearings see sh. no. 21

For General Notes see sh. no. 1.

For Framing Notes see sh. no. 1.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS
EAST ST. LOUIS EXPRESSWAY
L & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L" EAST BOUND EXPWAY AND RAMP "M"
FRAMING PLAN SPAN 1

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 18

Designed by: LK
Drawn by: ES
Checked by: PK & FAE

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_17.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 17

SCALE: NONE | SHEET NO. 18 OF 26 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	464
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	St. Clair		

PLAN

ELEVATION (Girders "C-"10)

ELEVATION (Girders "1-"5)

SECT. A-A

TOP FLANGE AT PIERS (Expansion bearing)

TOP FLANGE AT PIER

ELEVATIONS BACK OF BOTTOM FLANGE ANGLES & BEARING SHIM THICKNESS REQUIRED

Girder	@ Brg. N. Pier Elev.	@ Brg. N. Pier Shim	@ Brg. Center Pier Elev.	@ Brg. Center Pier Shim
1	406.08	1/8"	407.61	3/16"
2	406.09	1/8"	407.61	1/16"
3	406.07	1/16"	407.65	1/16"
4	406.08	1/16"	407.65	1/16"
5	406.08	1/16"	407.65	1/16"
6	406.11	1/16"	407.65	1/16"
7	406.12	1"	407.69	1/16"
8	406.13	1 1/16"	407.68	1/16"
9	406.14	1 1/16"	407.68	1/16"
10	406.15	1 1/16"	407.70	1/16"

Elevations are given @ the intersection of ℄ Brg. & ℄ Girder. Shim thickness is the total theoretical thickness req'd.

Span lengths (C-C bearings)

①	66-10 1/2	⑥	76-8
②	66-11	⑦	78-8 1/2
③	68-11 1/2	⑧	80-9
④	70-11 1/2	⑨	82-9 1/2
⑤	72-11 1/2	⑩	84-10

Edge distances on flange angles shall not be more than 6" or less than 1 1/2"

Gage on FLG.

Notes:
① For details of diaphragms, lateral bracing & connections, see Sh. "20.
② For details of bearings see Sh. "21
③ For Notes see Sh. "1
Max. distance c.c. rivets on outside gage line of cover-plates shall be 6 1/2".
In bottom cover plate near ℄ span on account of net section Min. pitch 3 1/2".

GIRDER SHEARS (Kips)

Girder	No.10	No.9	No.8	No.7	No.6	No.5	No.4	No.3	No.2	No.1
D.L.	95.8	67.6	62.5	58.5	54.5	79.1	75.2			
L.L.	94.6	90.9	86.7	83.2	79.1	75.2	53.7			
Imp	61.8	60.4	59.1	57.6	54.9	53.7	33.0			
C.F.	0.0	0.0	39.5	0.0	0.0	0.0	22.9			
Total	251.8	218.9	247.6	199.1	188.5	227.4	184.8			

IMPACT

	Girder No.1	Girder No.10
Vertical	31.4%	43.4%
Rolling	20.0%	20.0%
	71.4%	63.4%

DEAD LOAD PER TRACK

Ballast, Ties & Rail	2.75
Slab, Waterproof & Walk	3.00
Total	5.75 k/ft
D.L. Girder	.15
D.L. acc. Girder "2	.5k
D.L. Steel	.35
	2.8k/ft

SECTION BOTH FLANGES

Girders "1-"5

	Gross	Net
1 Web 84-3/8	4.60 in²	4.60 in²
2 PL 8-3/4	13.50 in²	2 PL 8-3/4
1 L 17-5/8 Full length top & bott.	9.93 in²	1 L 17-5/8 Full length top & bott.
Total	28.11 in²	28.11 in²

Girders "6-"10

	Gross	Net
1 Web 84-3/8	4.60 in²	4.60 in²
2 PL 8-3/4	27.00 in²	2 PL 8-3/4
1 L 17-5/8 Full length top & bott.	10.63 in²	10.63 in²
1 L 17-5/8 x 5" x 5/8	10.43 in²	10.43 in²
Total	52.74 in²	52.74 in²

GIRDER MOMENTS (Ft-Kips)

Girder	No.10	No.9	No.8	No.7	No.6	No.5	No.4	No.3	No.2	No.1
D.L.	2025.2	1387.0	1806.9	1079.0	9400	1105.0				
L.L.	1152.	1608.	1456.	1337.	1213.	1099.				
L.L. acc.	0	0.	102.	0.	0.	37.				
Imp.	1145.	1082.	950.	926.	834.	799.				
C.F.	0.	0	550.	0	0.	486.				
Total	4900.0	4083.0	4868.0	3342.0	2997.0	3580.0				

CENTRIFUGAL

$1.752(\frac{1}{2}+3) = 7.9\%$

ADDITIONAL MATERIAL

Web 84x7/16 = 36.75#
End Shift 4# 7x4x7/16
Use 18 Rivets per panel min.
2 End Fills 14# (see elev.)
Inter. Stiff. 2 PL 3 1/2 x 1/2 on fills at Diaphragms. 2 PL 3 1/2 x 1/2 on fills elsewhere.
End Bottom Shufs 2 L 4x4x1/2 = 15.3#

End & Inter. Diaphragms
2# Top & bott. 4x4x1/2 Web
Lateral Rs. & horizontal Gussets 2#
Top laterals 2 L 4x4x1/2 Rivets.
Bott. laterals 1 L 4x4x1/2 Rivets.
Locate Web Splices near 1/4 span.

GIRDERS "1-"5

Gross I = 1334.4 Gross S.M. = 51.9
Net I = 1062.0 Net S.M. = 46.9
Allow. Stress = 18.0 ksi
Unit Stress = 15.0 ksi

GIRDERS "6-"10

Gross I = 1734.2 Gross S.M. = 59.0
Net I = 1462.3 Net S.M. = 53.6
Allow. Stress = 18.0 ksi
Unit Stress = 15.0 ksi

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWAY., RAMP "L" EAST BOUND EXPWAY AND RAMP "N"

FRAMING PLAN SPAN 2

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE JULY 1960

SHEET NO. 17

Designed by L.K.
Drawn by R.S.
Checked by F.D.E & R.K.

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_18.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

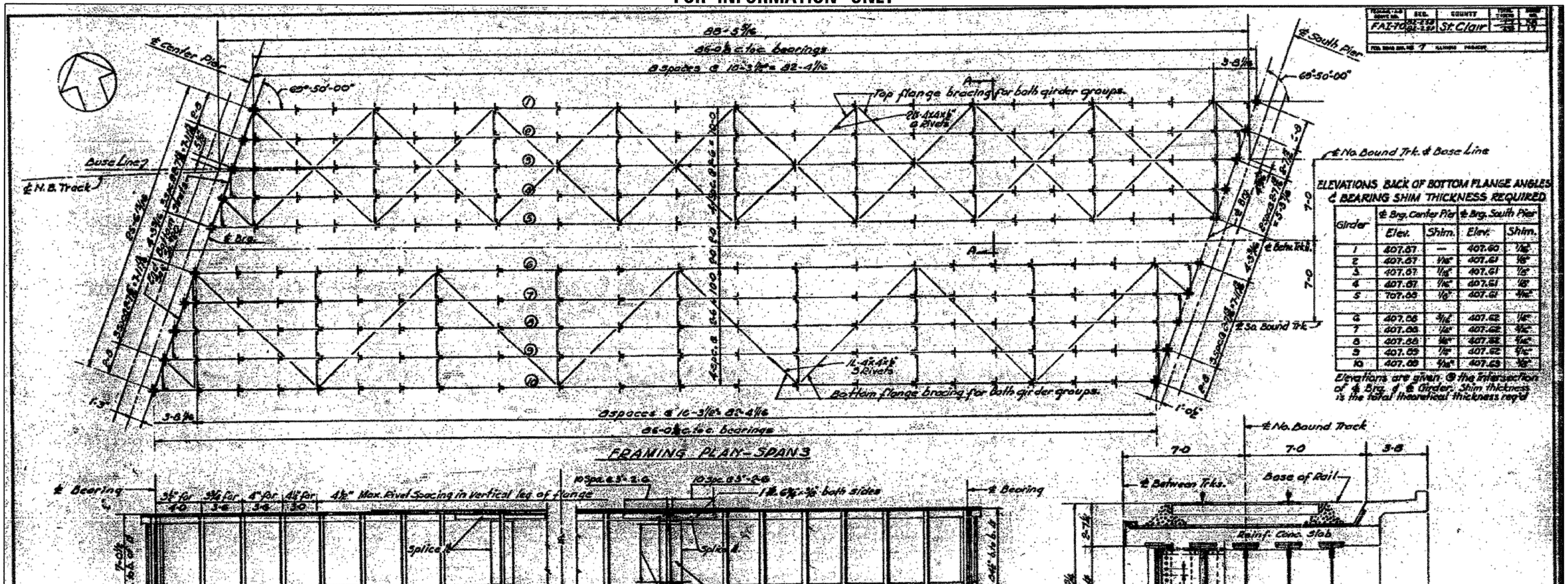
EXISTING BRIDGE PLAN – L&N RR BRIDGE 18

SCALE: NONE | SHEET NO. 19 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	465
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	64-7 P	St. Clair	629	466
	64-7 P			
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



Designed By - L.K.
Drawn By - H.M.K.
Checked By - R.K. & P.A.E.

FILE NAME = D8TRI-76C52-SHT-LNRRBridge_19.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 19

SCALE: NONE | SHEET NO. 20 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	466
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAS: 70 | ST. 1-19 | St. Clair

DEAD LOAD PER TRACK
Ballast, Ties & Rails 2.73
Slab, Waterproof. & Walk 3.00
5.73 k/l

DEAD LOAD FOR GIRDER #1
D.L. = 5.73/5 1.15
D.L. Ecc. = 5.73 × 1.04/12.5 = .48
D.L. Girder 1.33
1.86 k/l

IMPACT
Vert. 60 − 42²/300 = 33.6
Roll. 20 × 2.5 × 5/12.5 = 20.0
53.6%

Girders
Web # 76 × ⅜ = 28.50 in²
Flg. 4 # 6 × 6 × ⅝
Org. Stiff. 12.5 × 4 × ½ (Cut from 6 × 4 L)
Fill # 8 B = ⅜
(Use 13 Rivets Per Pair (Min)
Int. Stiff. 2 # 5 × 3½ × ½ on fills @ Diaphragms.
2 # 5 × 3½ × ½ on fills elsewhere.

Diaphragms
Web # ⅜ Thk.
Flg. 2 # 4 × 4 × ½
6 Rivets

Top Laterals
4 × 4 × ½ - 3 Rivets
Gusset # ⅜

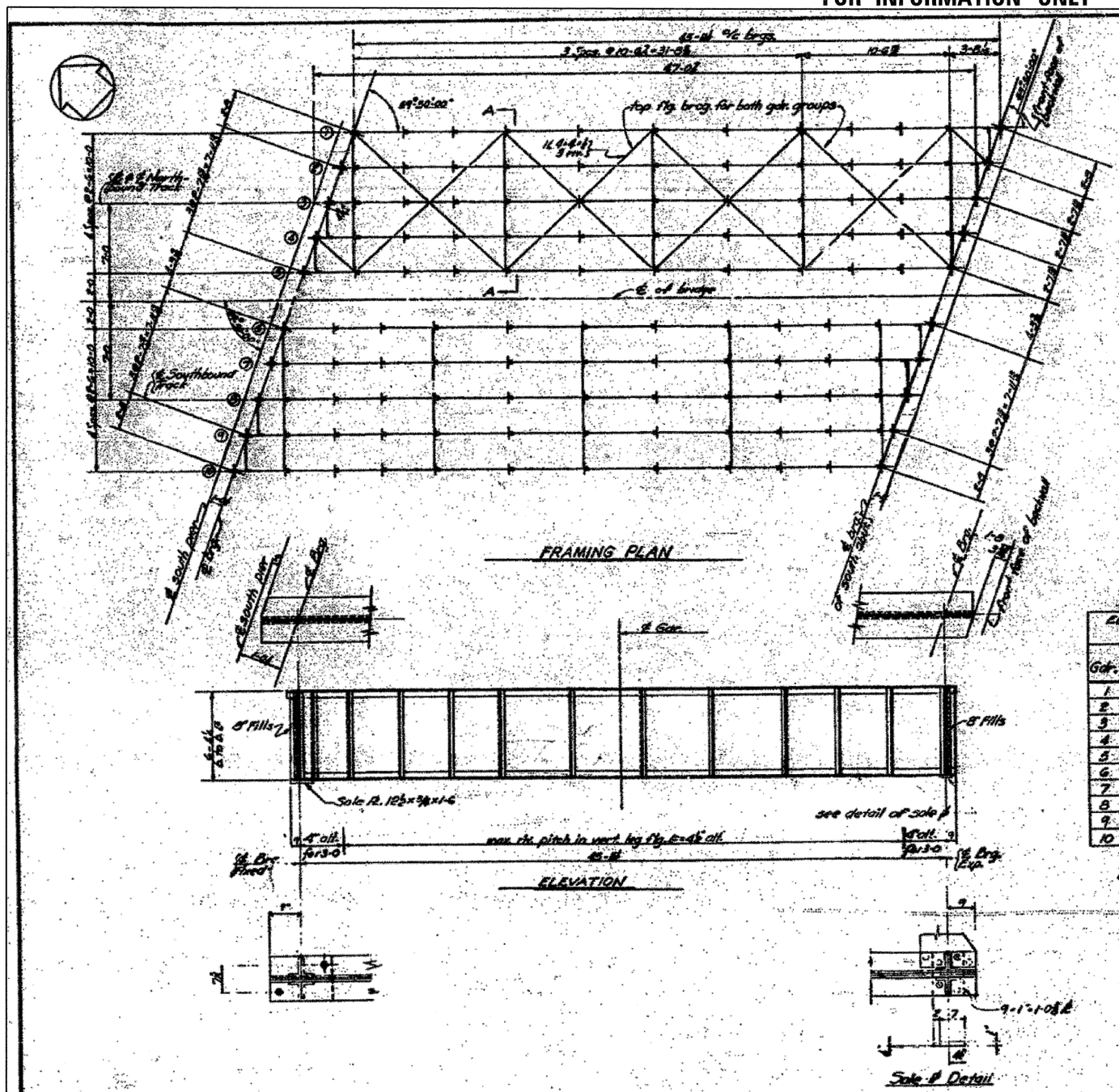
MOMENTS & SHEAR FOR GIRDER #1

End Shear		Max. Moment	
D.L.	42.8	D.L.	492
L.L.	59.8	L.L.	599
Imp.	45.2 / 147.8 k	Imp.	454 / 1545 ft-k

SECTION ALL GIRDERS BOTH FLGS.

	Gross	Net
Web 76 × ⅜	28.50	28.50
2 # 6 × 6 × ⅝	16.88 / 20.44 in²	13.00 / 16.56 in²

Gross I = 58,410 in⁴ Gross S.M. = 1617 in³
Net I = 45,240 in⁴ Net S.M. = 1272 in³
Allowable Stress = 18,000 #/in²
Unit Stress = 1545 × 1000 × 12 / 1272 = 14,600 #/in²



ELEV'S. BACK OF BOTT. FLG. & BRG. SHIM REQUIRED.

Gdr.	℄ Brg. 5. Pier Elev.	Shim	℄ Brg. 5. Abut. Elev.	Shim
1	408.29	0	408.15	0
2	408.29	0	408.15	0
3	408.29	⅛	408.15	⅛
4	408.29	⅛	408.16	⅛
5	408.30	¼	408.16	¼
6	408.30	¼	408.16	¼
7	408.30	¼	408.17	¼
8	408.31	½	408.17	½
9	408.31	½	408.17	½
10	408.31	½	408.17	½

Elevs. are given @ the intersection of ℄ Brg. & ℄ girder. Shim thickness is the total theoretical thickness req'd.

NOTES:
① - For details of diaphragm, lateral bracing & connections see sht. #20.
② - For details of bearings see sht. #21.
③ - For General Notes see Sht. #1.
④ - Rivets 1" ø. Open Holes 1⅛" ø.
⑤ - For Reaming Notes see Sht. #1.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWAY RAMP "L", EAST BOUND EXPWAY AND RAMP "M" (SR 7)

FRAMING PLAN SPAN 4

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 19

Designed By L.K.
Drawn By AL.
Checked By RK. & P.N.E.

FILE NAME = D8TRI-76C52-SHT-LNRRBridge_20.dgn	USER NAME = searab	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

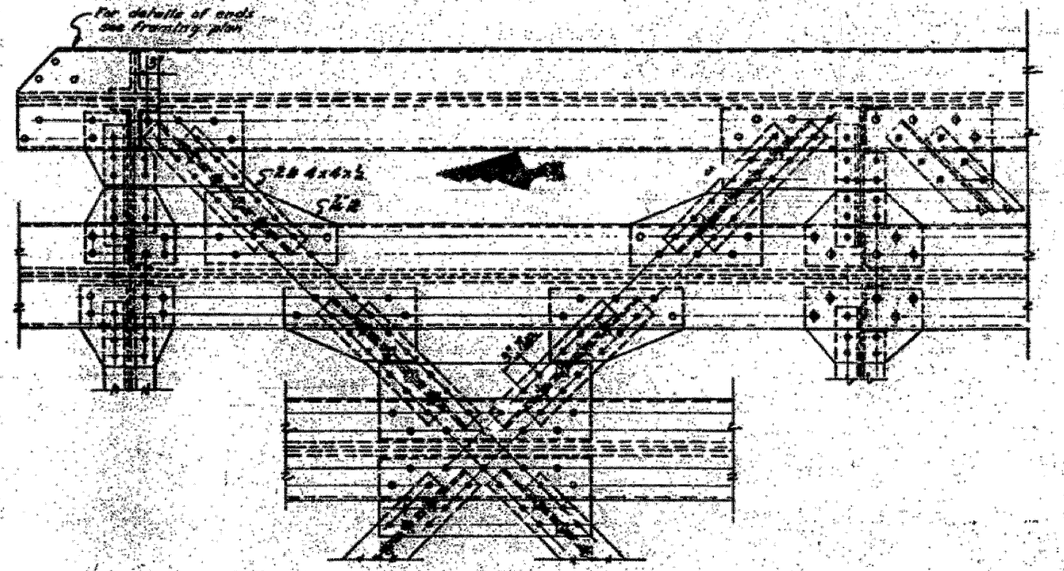
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 20

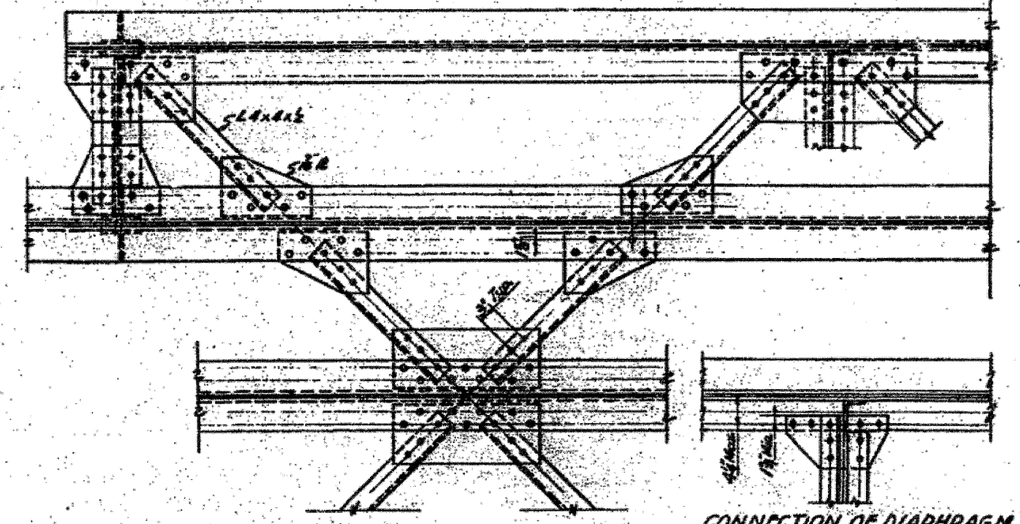
SCALE: NONE | SHEET NO. 21 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	467
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

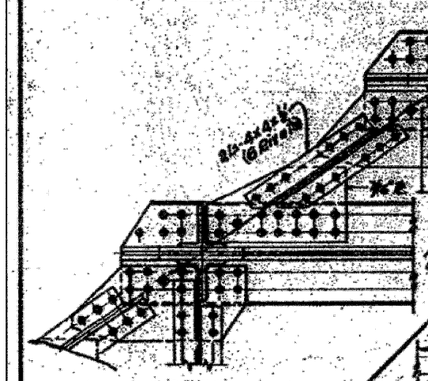


TOP LATERAL BRACING SPAN 1, 2 & 3

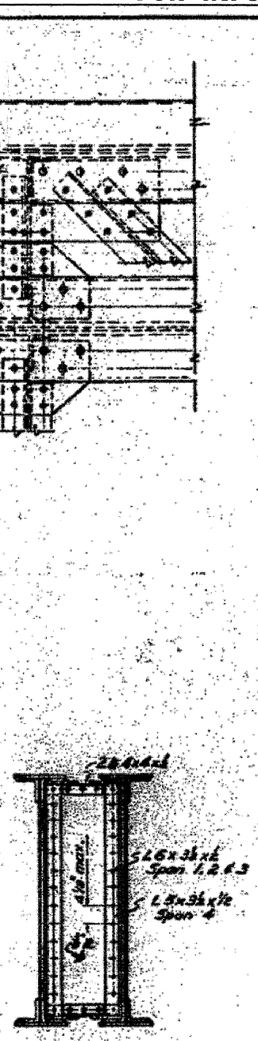


TOP LATERAL BRACING SPAN 4

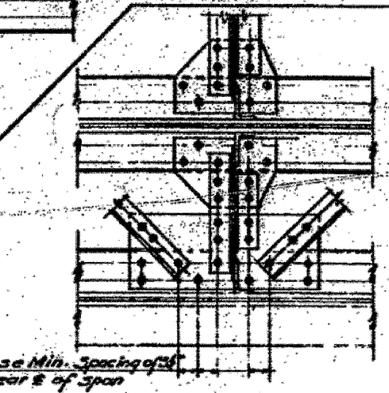
CONNECTION OF DIAPHRAGM TO BOTTOM FLANGE FOR SPAN 4



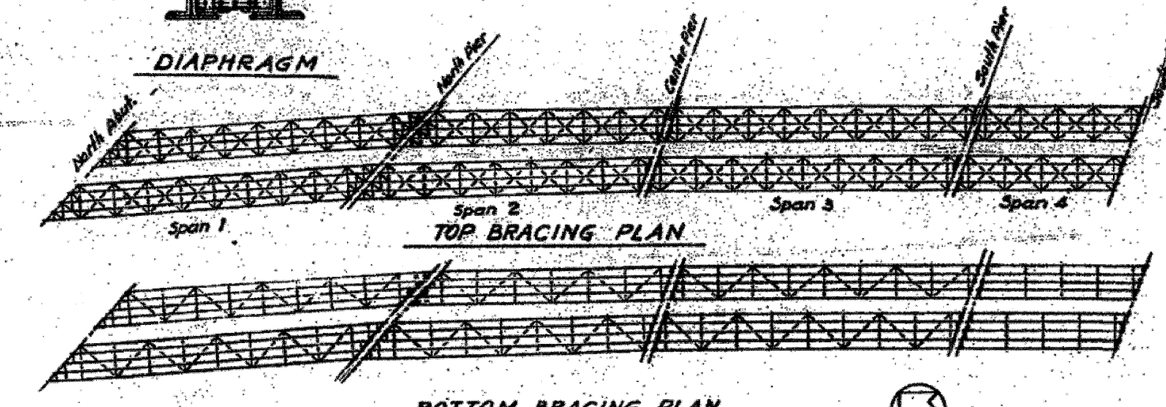
END BOTTOM STRUTS
At Span ends over North Abutment, North and Center Piers



DIAPHRAGM



BOTTOM LATERAL BRACING SPAN 1 & 3



TOP BRACING PLAN

BOTTOM BRACING PLAN

NOTES

Edge distance not more than 2" or less than 1⅝" Laterals shall have one rivet pass through lateral and flange.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWY., RAMP 'L' EAST BOUND EXPWY. AND RAMP 'N' (SR 7)

LATERAL DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 20

Designed by
Drawn by E.A.
Checked by H.W.L.

FILE NAME = D8TR1-76C52-SHT-LNRRBridge_21.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 21

SCALE: NONE | SHEET NO. 22 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	468
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-1-R(A), 82-1-R(B)	St. Clair	41	21
	64/998/70		CONTRACT NO. 76C52	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Total number of shims req'd for all R1 { 10 Shims ½", ¼" and ⅛"

Note: All joints to be made air tight with packing (tar 18" thick). At corners, packing to be scarfed.

Cut to clear head (Typical)

Set Grade Bolt

℄ Bearings

Bolts 6"ø x 1'-11½" Hex. Hd. ⅞"ø Thread. Drill & tap 1" in Base plate

PLAN

Pin For R1 & R2

1-12"ø hole for 12"ø Turned bolt

Bolts 6"ø

Bolts ¾"ø x 1" Hex. Hd. Screw. Drill & tap Pin Plates.

Pin 36lb

3"x2"x⅜" L Typ.

Packing see note above.

SECTION A-A

EXPANSION BEARING R1

Sect B-B

Girder

Pin

Holes to center mfg. 1"ø Pipe. Plug Top in ℄ Pin hood at ℄ Pin

1-1½"ø hole for 1½"ø Turned Bolt

Core 3½"ø Bore 4"ø + ƒo

Countersore 5½"ø

Total number of Shims req'd for all F1 & F2 { 20 Shims ½", ¼" & ⅛"

PIN FOR F1 & F2

FIXED BEARING F1

(ANNEALED CAST STEEL)

(FOR NORTH & CENTER PIERS) (SPAN 1) (SPAN 2) - 20 REQ'D

2-12½"ø Cored holes for 2-12"ø Anchor bolts

PIN FOR F3

Note:- Size of Shims = Size of Base Plates or Castings.

Note:
All material shall be Open-Hearth Structural Steel ASTM A7 unless noted otherwise.
Expansion shoes shall be detailed so that they can be disassembled for inspection.

L1½"-1½"-⅜" Typ. Csk. Rivets ins. (Mill Bolt end)

Total number of Shims req'd for all R2 { 20 Shims ½", ¼" & ⅛" (For North Abut.) 10 Req'd

Note:- Top Slab, Pin & Sect B-B on R2 And Similar on R1

℄ R2

12½"ø Cored hole 12"ø Anchor bolt

Bolts 6"ø x 1'-11½" Hex. Hd. ⅞"ø Thread. Drill & tap 1" in Base Plate

Round Top Casting

25"Rad. cut ½" deep for Pin hole

Pin hole Rad. 2"+ƒo

Rad to clear head (Typical)

Pin

Bolts 3"ø x 1'-0" Rad. Turned

Bolts 2"ø x 1'-0" Rad. Turned

Girder

Pin 36lb

Bearing see note above.

Holes 3"ø Cored (Typ.)

Girder

Pin hole Rad. 2"+ƒo

Pin

Girder

Pin

Girder

Total number of Shims req'd for all C1 : - 10 Shims ½", ¼" & ⅛"

Total number of Shims req'd for all F3 : - 10 Shims ½", ¼" & ⅛"

Total number of shims req'd for all F2 : - 10 Shims ½", ¼" & ⅛"

EXPANSION BEARING R2

(FOR NORTH & CENTER PIERS) - 20 REQ'D

(SPAN 2) (SPAN 3)

1-12"ø Hole for 12"ø Turned bolt

12½"ø Cored Hole for 12"ø Anchor bolt

Core 3½"ø Bore 4"ø + ƒo

Countersore 5½"ø

2-12½"ø Cored holes for 2-12"ø Anchor bolts

FIXED BEARING F2

ANNEALED CAST STEEL

(FOR SOUTH PIER) - SPAN 3 - 10 REQ'D

EXPAN. BEARING C1

ANNEALED CAST STEEL

(FOR SOUTH ABUTMENT)

10 REQ'D

℄ Brgt

Face of Backwall

PLAN

FIXED BEARING F3

ANNEALED CAST STEEL

(FOR SOUTH PIER)

(SPAN 3)

10 REQ'D

℄ Casting or Slab

℄ Girder

TYPICAL TOP VIEW

DESIGNED BY	R.B.
DRAWN BY	R.B.
CHECKED BY	P.M.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R.R. OVER WEST BOUND EXPWAY, RAMP "L", EAST BOUND EXPWAY AND RAMP "M"

BEARING DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 21

FILE NAME =	USER NAME = searsb	DESIGNED -	REVISED -
D8TR1-76C52-SHT-LNRRBridge_22.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

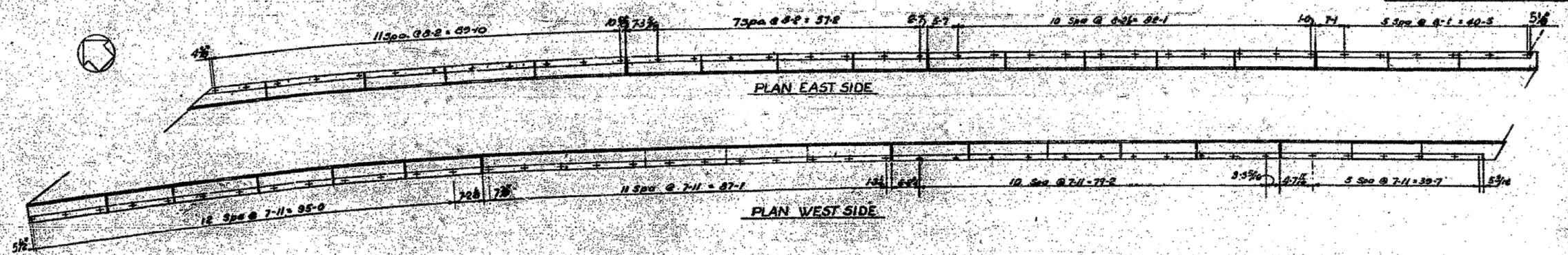
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

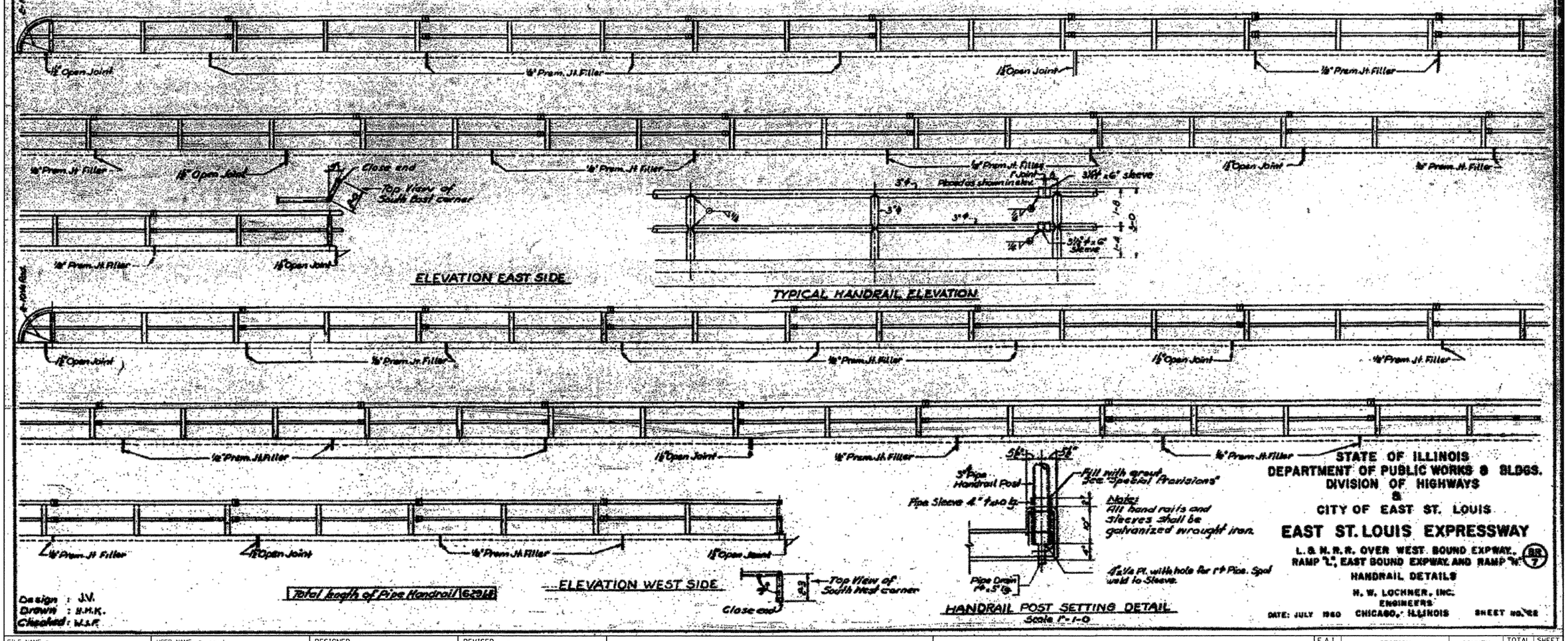
EXISTING BRIDGE PLAN – L&N RR BRIDGE 22

SCALE: NONE	SHEET NO. 23 OF 26 SHEETS	STA.	TO STA.

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAZ-70		82-2-70	St. Clair		42
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT			





STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L. & N. R. R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "M" (SR 7)

HANDRAIL DETAILS

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: JULY 1960 SHEET NO. 42

FILE NAME =	USER NAME = searsb	DESIGNED -	REVISED -
D8TRI-76C52-SHT-LNRRBridge_23.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 23

SCALE: NONE | SHEET NO. 24 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	470
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	82-1-R(A)	St Clair	42A

PLAN EAST SIDE

PLAN WEST SIDE

Removable handrail. (See detail)

Removable handrail

Close end

Top View of South East corner

ELEVATION EAST SIDE

TYPICAL HANDRAIL ELEVATION

ELEVATION WEST SIDE

Top View of South West corner

Close end

Total length of Pipe Handrail 6376 Lf.

Design : J.V.
Drawn : R.H.K.
Checked : M.S.F.

REMOVABLE HANDRAIL DETAIL

Section A-A

HANDRAIL POST SETTING DETAIL
Scale 1"=1'-0

Fill with grout See "Special Provisions"

Note: All hand rails and sleeves shall be galvanized wrought iron.

Revision 6-28-61
Added Handrail for Bracket

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N.R.R. OVER WEST BOUND EXPWAY, RAMP "L", EAST BOUND EXPWAY AND RAMP "M" (BR 7)

HANDRAIL DETAILS

H. W. LOCHNER, INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

SHEET NO. 22A

FILE NAME = D8TR1-76C52-SHT-LNRRBridge_24.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

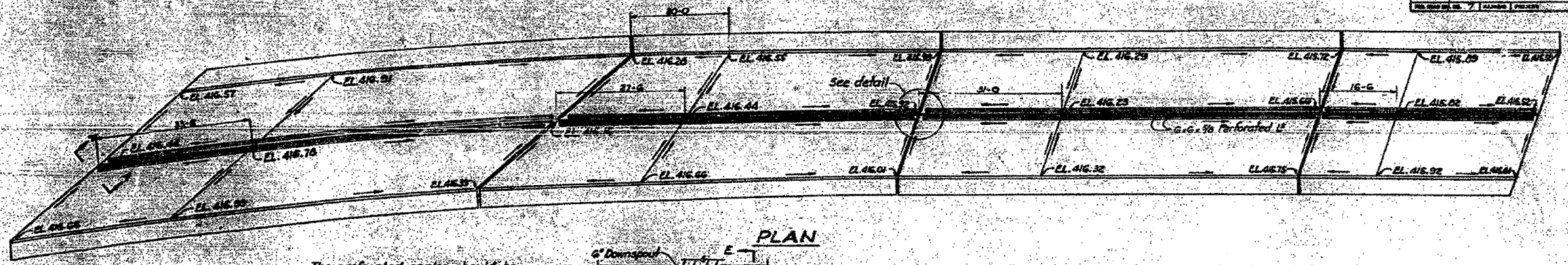
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – L&N RR BRIDGE 24

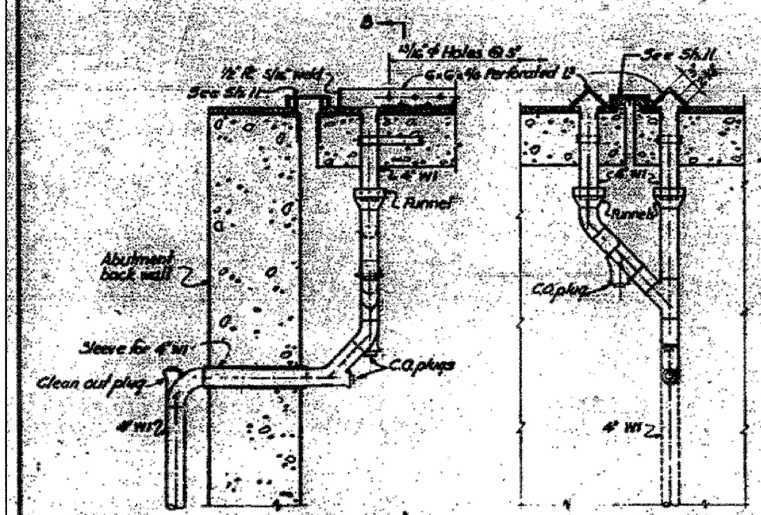
SCALE: NONE | SHEET NO. 25 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	471
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

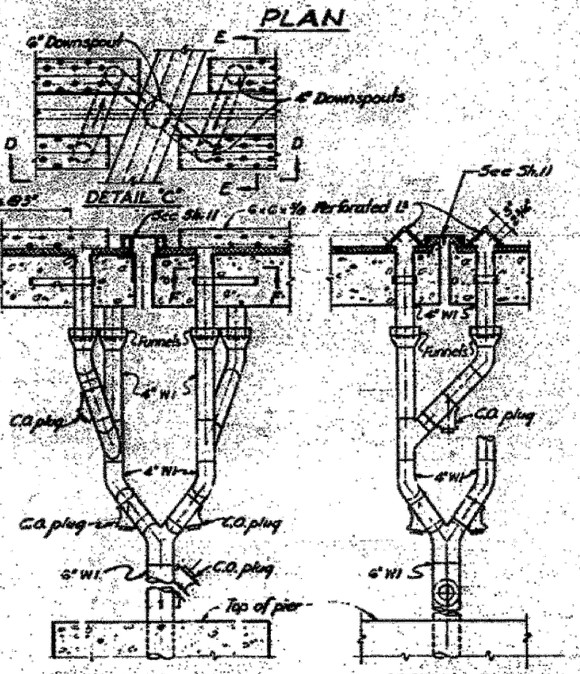


The perforated angles should be furnished in 10'-0 increments on curved slabs.



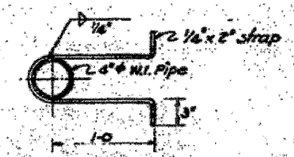
SECTION A-A SECTION B-B

DOWNSPOUT AT ABUTMENTS



SECTION D-D SECTION E-E

DOWNSPOUT AT PIERS



SECTION F-F

NOTE:
All Wrought iron pipe shall be standard weight, fittings shall be either screw joint or welded joint See special provisions.

Designed by : R.B.
Drawn by : R.B.
Checked by : P.D.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

L & N. R.R. OVER WEST BOUND EXPWAY., RAMP "L", EAST BOUND EXPWAY AND RAMP "N" (SR 9)

DECK DRAINAGE DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE JULY 1966 CHICAGO, ILLINOIS SHEET NO. 25

FILE NAME = DBTRI-76C52-SHT-LNRRBridge_25.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

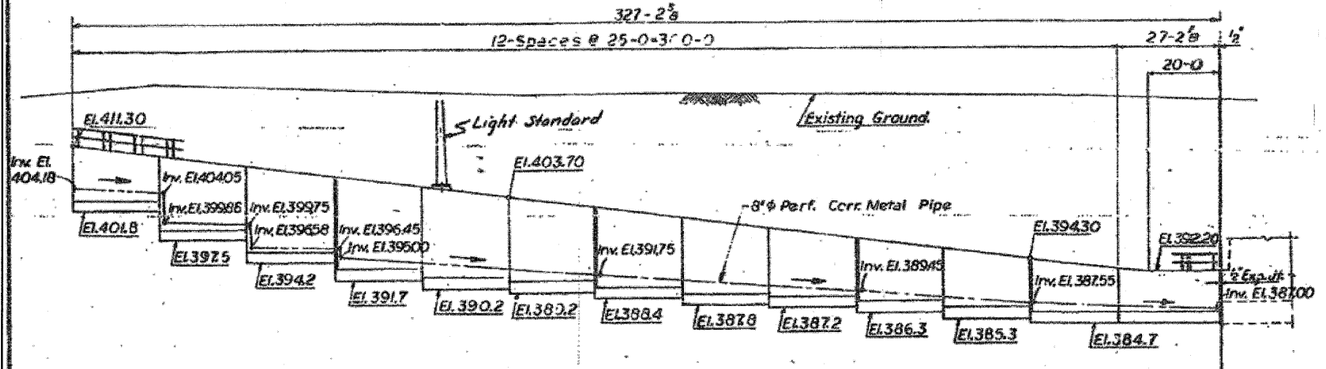
EXISTING BRIDGE PLAN – L&N RR BRIDGE 25

SCALE: NONE | SHEET NO. 26 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	472
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

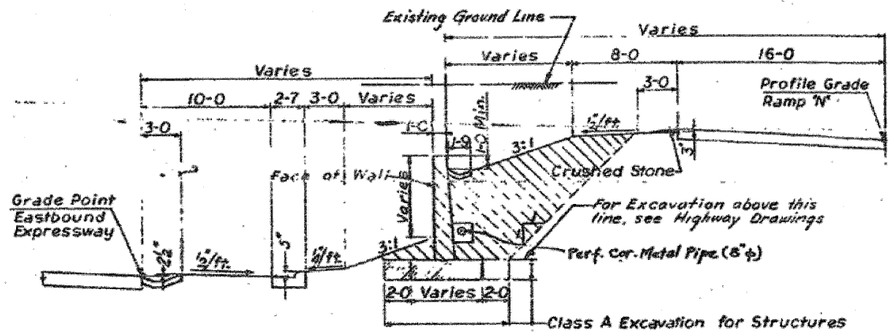
FOR INFORMATION ONLY

FAI-70	(82-1-R(A), 82-1-R(B))	St. Clair	184	76

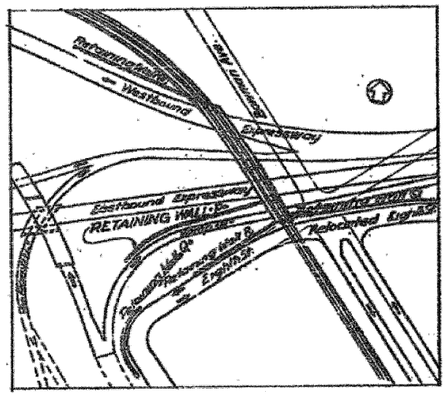


ELEVATION.
Horizontal Scale 1"=20'-0"
Vertical Scale 1"=10'-0"

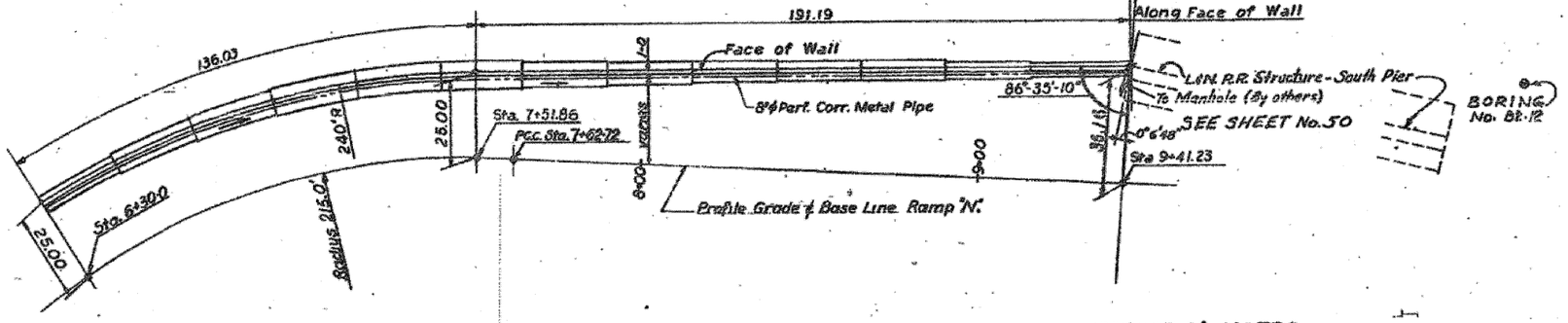
Note: All dimensions are along face of wall.



TYPICAL SECTION
Looking East



LOCATION PLAN



PLAN.
Scale 1"=20'-0"

PROFILE GRADE & BASE LINE RAMP "N"

CURVE DATA

P.I. Sta. = 6+40.00
Δ = 90°00' 00"
Dc = 26°38' 57"
R = 215.00
L = 337.72
T = 215.00

BILL OF MATERIALS

Class "X" Concrete	Cu. Yds.	253.5
Reinforcement Bars	Lbs.	15,810
Furn. Creosoted Piles (Up to 20')	Lin. Ft.	1,640
Furn. Creosoted Piles (20' to 38')	Lin. Ft.	1,647
Test Piles (Timber)	Ea.	1
Class "A" Excavation for Structures	Cu Yds.	203
Perf. Corr. Metal Pipe (8"ϕ)	Lin. Ft.	337
Driving Timber Piles	Lin. Ft.	3287
Metal Handrail	Lin. Ft.	326

Drawn by: E.W.
Checked by: A.T.

GENERAL NOTES

Material and workmanship shall be in accordance with "Standard Specifications for Road and Bridge Construction" State of Illinois, adopted January 2, 1958.
DESIGN: - A.A.S.H.O. 1951 Specifications, except as noted below.
Class "X" concrete shall be used throughout.
EARTH PRESSURE: The horizontal pressure shall be that of Fluid weighing 40p.c.f. and the vertical pressure in such instance that of a fill weighing 120 p.c.f.
PILES: - They shall be timber piles with a minimum load capacity as shown on the plans.
TEST PILES: (Timber) Shall be driven in permanent locations shown on the plans as directed by the engineer before ordering remainder of piles.
The back of retaining walls shall be waterproofed from top of footing to ground surface in accordance with Article 51.21 of the Standard Specifications.

STRESSES:
fc = 1000 p.s.i. (Substructure with earth pressure)
fs = 20,000 p.s.i.
n = 10
v = 75 p.s.i.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "P"
GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1958 CHICAGO, ILLINOIS SHEET NO. 1

FILE NAME = DBTRI-76C52-SHT-Wall-P.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL–P

SCALE: NONE | SHEET NO. 1 OF 5 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	473
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAE 70	SEC. 82-1R2-B	COUNTY St. Clair	TOTAL SHEETS 144	SHEET NO. 71

ELEVATION

PLAN

SECTION C-C, J-J

SECTION B-B

SECTION A-A

SECTION E-E

SECTION D-D

NOTES

All dimensions measured along face of wall.
For General Notes see Sh. No. 1
For Construction Jt., Expansion Jt. & Drainage Details see Sh. No. 4

Match Line "A"

For continuation see Sheet No. 3

Designed by: S.K.
Drawn by: V.B.
Checked by: A.T

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "P" DETAILS

N. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1956 CHICAGO, ILLINOIS SHEET NO. 2

FILE NAME = DBTRI-76C52-SHT-Wall-P_01.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

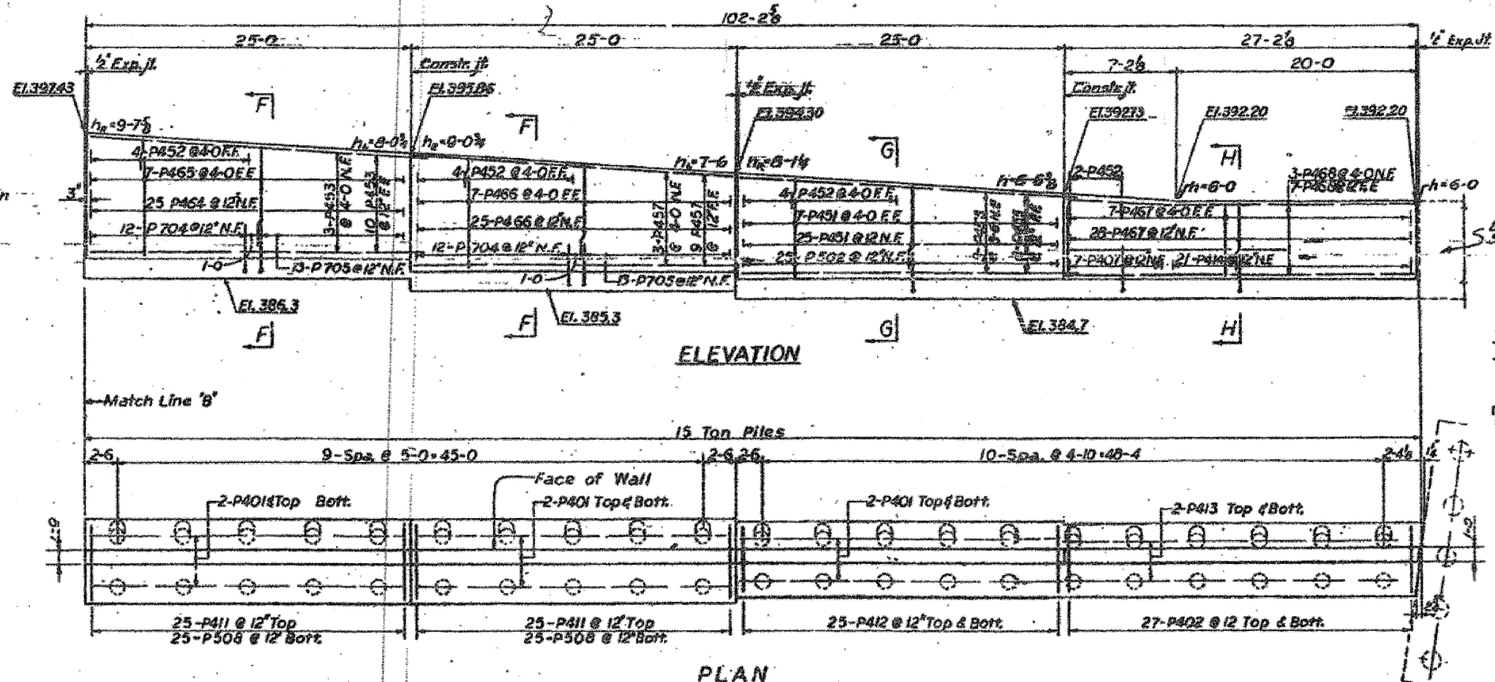
EXISTING BRIDGE PLAN – WALL-P 01

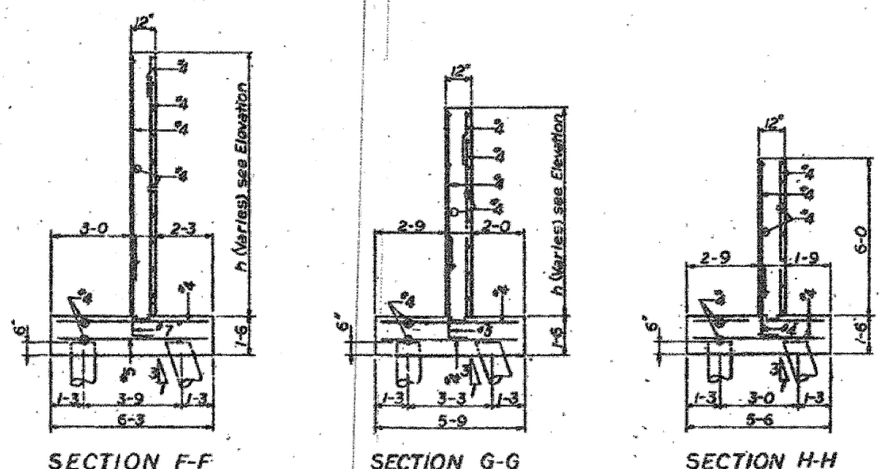
SCALE: NONE | SHEET NO. 2 OF 5 SHEETS | STA. | TO STA.

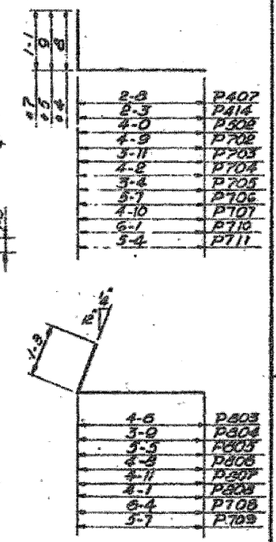
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	474
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAETO (82-1RA)-1	St. Clair	144	72	







PILE DATA

82 — 15 Ton Piles
Estimated average length 20 ft.
61 — 20 Ton Piles
Estimated average length 27 ft.
Test piles indicated thus ⊗

BILL OF MATERIALS

Class "X" Concrete	Cu. Yds.	252.5
Reinforcement Bars	Lbs.	15,810
Furn. Creosoted Piles (Up to 60')	Lin. Ft.	1840
Furn. Creosoted Piles (61' to 80')	Lin. Ft.	1647
Test Piles (Timber)	Ea.	1
Class "A" Excavation for Structures	Cu. Yds.	209
8"ϕ Perf. C.M.P.	Lin. Ft.	357
Driving Timber Piles	Lin. Ft.	3287

MINIMUM LAP OF DOWELS & MAIN STEM BARS

#5 Dowel & #4 Bars 1-3
#7 Dowel & #4 Bars 1-6
#6 Dowel & #4 Bars 1-8
#8 Dowel & #5 Bars 1-11

BAR SCHEDULE

LOCATION	MARK	NO. REQ'D	SIZE	LENGTH	SHAPE
FOOTING 104	P401	14	#4	24-6	
	P402	104		3-0	
	P407	7		3-4	L
	P203	30		6-0	
	P408	30		7-0	
	P410	25		6-6	
	P411	30		5-9	
	P412	30		5-9	
	P413	4		17-0	
	P414	21	#4	2-11	L
	P501	30	#4	6-9	
	P502	30	#5	4-9	L
	P302	29	#5	7-6	
	P508	30	#5	3-8	
	P601	29	#6	7-8	
	P602	25	#6	6-6	
	P701	30	#7	7-0	
	P702	18	#7	5-10	
	P703	18	#7	4-10	
	P704	24	#7	5-3	
	P705	26	#7	4-8	
	P706	17	#7	6-11	L
	P707	17	#7	3-11	
	P708	17	#7	7-11	L
	P709	17	#7	6-10	
	P710	17	#7	7-2	
	P711	17	#7	6-5	
	P803	17	#8	5-9	L
	P804	17		3-0	
	P805	34		6-3	L
	P806	34		5-11	
	P807	17		6-2	
	P808	17	#8	5-4	L
STEM	P451	64	#4	6-4	
	P452	30		2-8	
	P453	110		20-0	
	P454	25		7-9	
	P455	7		9-1	
	P456	7		10-10	
	P457	64		24-3	
	P458	14		11-7	
	P459	7		11-0	
	P461	7		10-6	
	P462	7		9-6	
	P463	7		8-7	
	P464	63		7-10	
	P465	7		3-0	
	P466	7		7-4	
	P467	35		5-10	
	P468	10	#4	28-10	
	P501	64	#5	10-0	
	P506	64	#5	4-0	
	P509	34	#5	7-8	
	P510	17	#5	8-3	
	P610	4	#6	10-0	
	P418	8	#4	4-8	
	P419	8	#4	4-8	

NOTE
For Notes see Sheet No. 2

Designed by: S.K
Drawn by: V.B.
Cheked by: A.T.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "P"
DETAILS

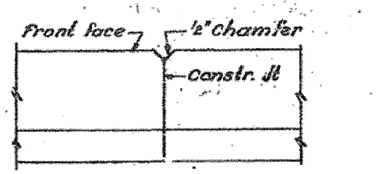
H. W. LOCHNER, INC.
ENGINEERS

DATE: JULY 1959 CHICAGO, ILLINOIS SHEET NO. 3

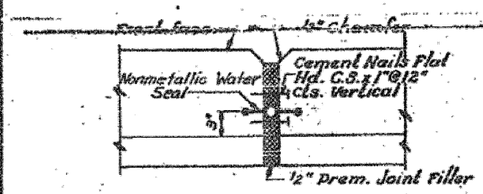
FILE NAME = D8TR1-76C52-SHT-Wall-P_02.dgn	USER NAME = seersb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN – WALL–P 02			F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - GF	REVISED -					•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	475
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -					•	64/998/70	CONTRACT NO. 76C52		
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -		SCALE: NONE	SHEET NO. 3 OF 5 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

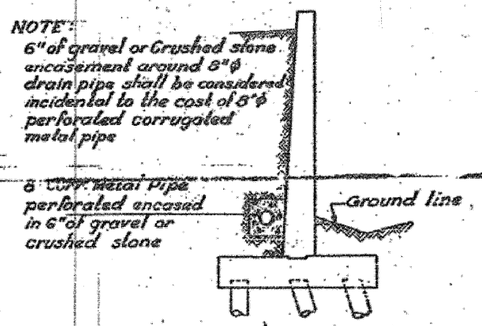
FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I - 70	(82-1R-2)	St. Clair	144	75
FED. Road Dist. No. 4	ILLINOIS	PROJECT		



TYPICAL CONSTR. JOINT

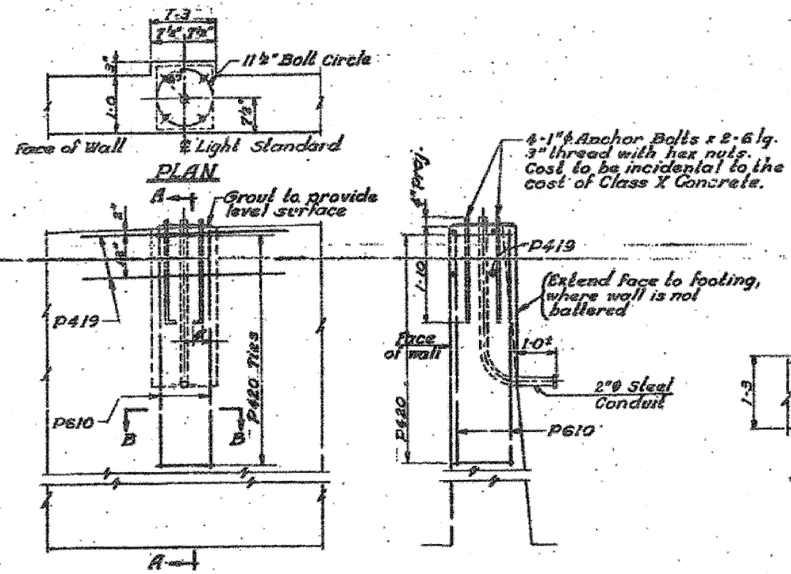


TYPICAL EXPANSION JT



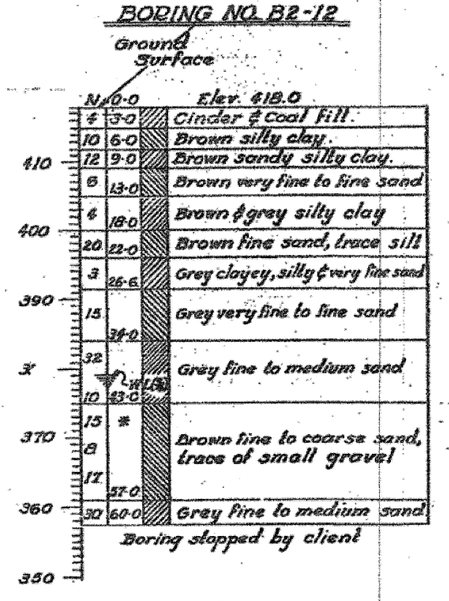
TYPICAL DRAINAGE DETAIL

For Drainage Layout see General Plan



LIGHT STANDARD BASE DETAIL

BORING NO. B2-12



NOTE:

Classifications are made by visual inspection. Water level (W.L.) figure indicates time of reading (hours) after completion of boring. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.
"N" indicates number of blows required to drive 2"O.D. sampling pipe one foot, using 140 lb. weight falling 30 inches. For location of boring see Sh. No. 1.
*-Indicates water loss in Strata.

Drawn by: M.V.D.
Checked by:

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "P"
DETAILS & BORING DATA

H. W. LOCHNER, INC.
ENGINEERS
DATE: FEBRUARY 1999 CHICAGO, ILLINOIS SHEET NO. 4

FILE NAME =	USER NAME = searsb	DESIGNED -	REVISED -
DBTRI-76C52-SHT-Wall-P_03.dgn		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

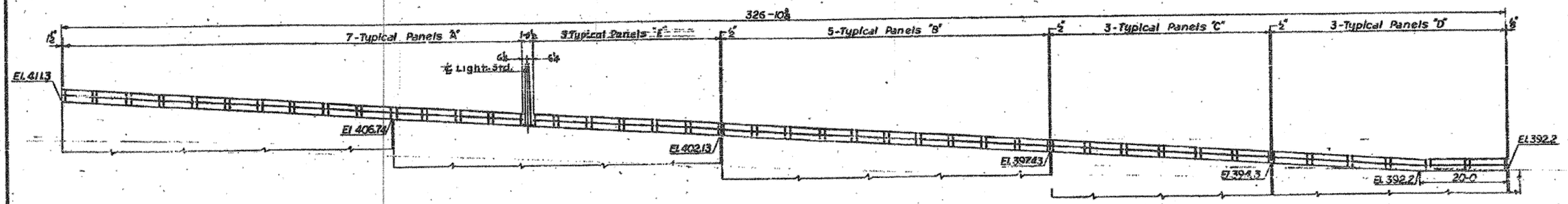
EXISTING BRIDGE PLAN – WALL-P 03

SCALE: NONE | SHEET NO. 4 OF 5 SHEETS | STA. | TO STA.

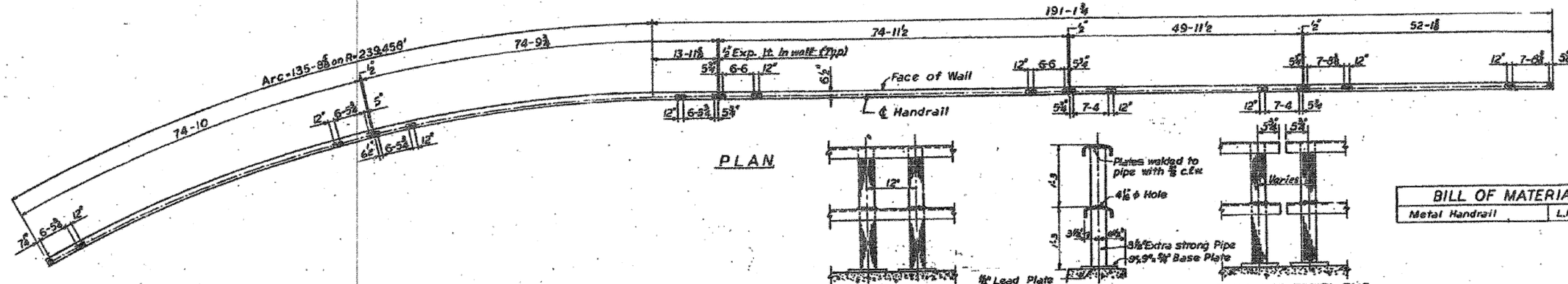
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	476
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAP RTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 970	(82-1-R(A), 82-1-R(B))	St. Clair	144	76



ELEVATION



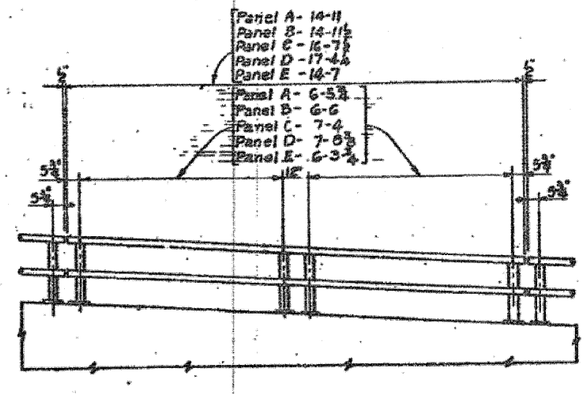
PLAN

TYP. DOUBLE POSTS

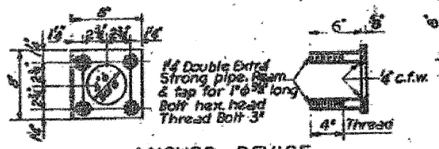
TYP. CROSS SECTION

POSTS AT PANEL END

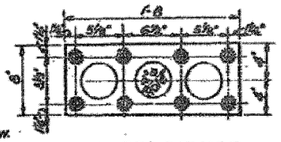
BILL OF MATERIAL		
Metal Handrail	L.F.	326



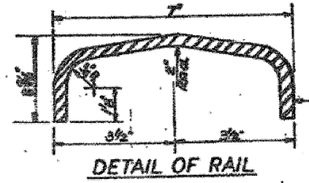
TYPICAL PANEL

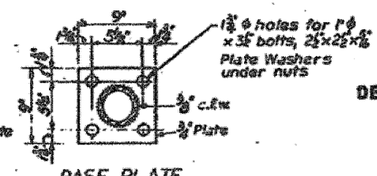


ANCHOR DEVICE
At Single Post



ANCHOR DEVICE
At Double Posts





BASE PLATE
ALL POSTS - SUPERSTRUCTURE

NOTE:

All dimensions are measured along ℄ Handrail.
Handrail Posts to be plumb.
Marks of Panels are set considering the post spacing only.

Designed by: A.T.
Drawn by: A.S.
Checked by: A.T.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "P"
RAILING

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1958 . CHICAGO, ILLINOIS . SHEET NO. 5

FILE NAME = DBTRI-76C52-SHT-Wall-P_04.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL-P 04

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	477
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-2R(B)	St. Clair	77	36

214-11⅜

14-11⅜ | 8-Spaces @ 25-0 = 200-0 | 2

Fence

El. 420.09 | El. 412.96 | Existing Ground Line | El. 419.56 | El. 417.67

Invert El. 414.90

Inv. El. 414.75 | Inv. El. 410.38 | Inv. El. 410.25 | Inv. El. 406.13 | Inv. El. 406.00 | Inv. El. 401.63 | Inv. El. 401.50 | Inv. El. 397.38 | Inv. El. 397.25 | Inv. El. 393.38 | Inv. El. 393.25 | Inv. El. 391.63 | Inv. El. 391.25

El. 412.50 | El. 408.00 | El. 403.50 | El. 398.75 | El. 394.00 | El. 389.25 | El. 386.25

8" ϕ Perforated Corrugated Metal Pipe (Galv.)

8" ϕ Perforated Corrugated Metal Pipe (Galv.)

℄ N. R.R. Structure South Abutment

NOTE
All dimension are along face of wall.

ELEVATION
Scale: 1"=10'

Sta 9+53.795

80-11⅜

Ramp "N"

134-0

Face of wall

19-0⅜

2-11⅜

112°-38'-01"

2°-32'-33"

8" ϕ Perforated Corrugated Metal Pipe

Connect to South Abutment Drain Pipe

Limits of Porous Granular Embankment See Sh. No 38 - Section G-G

65.0'

10:0

60'

Sheeting

Sta 7+75.96 P.T.

65.0'

27.486

Top Guidelines of Sheeting See Sh. No. 6

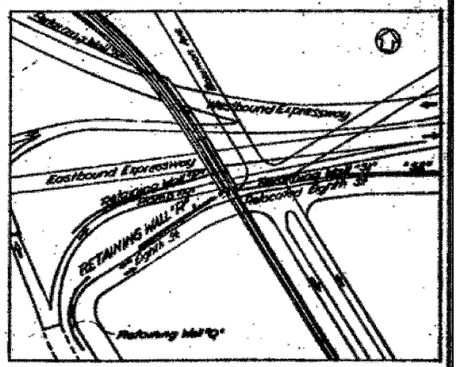
Sta 9+09.96

RELOCATED 8TH STREET

℄ Profile Grade

Sta 7+08.294

PLAN
Scale: 1"=10'-0



Varies | Varies

12-0 | 10-0 | 4-8 | Varies | Varies | Varies

10-0

RAMP "N"

1:0 | 1:7

Varies (3' Minimum) (See Cross Sections) RELOCATED 8TH. STREET

Face of Wall

Existing Ground Line

½/ft.

Limits of Special Excavation

Sheeting (See Special Provisions)

Profile Grade

4:1

1:0

1:1

Retaining Wall "R"

℄ Profile Grade

2-0 | Varies | 2-0

Class "A" Excavation for Structure

TYPICAL SECTION
LOOKING NORTHEAST

BILL OF MATERIAL		
CHAIN LINK FENCE	L.F	215

LOCATION PLAN

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "R"
GENERAL PLAN

H. W. LOCHNER, INC
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 36

Drawn by: EF
Checked by: A.C.

FILE NAME = DBTRI-76C52-SHT-Wall-R.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

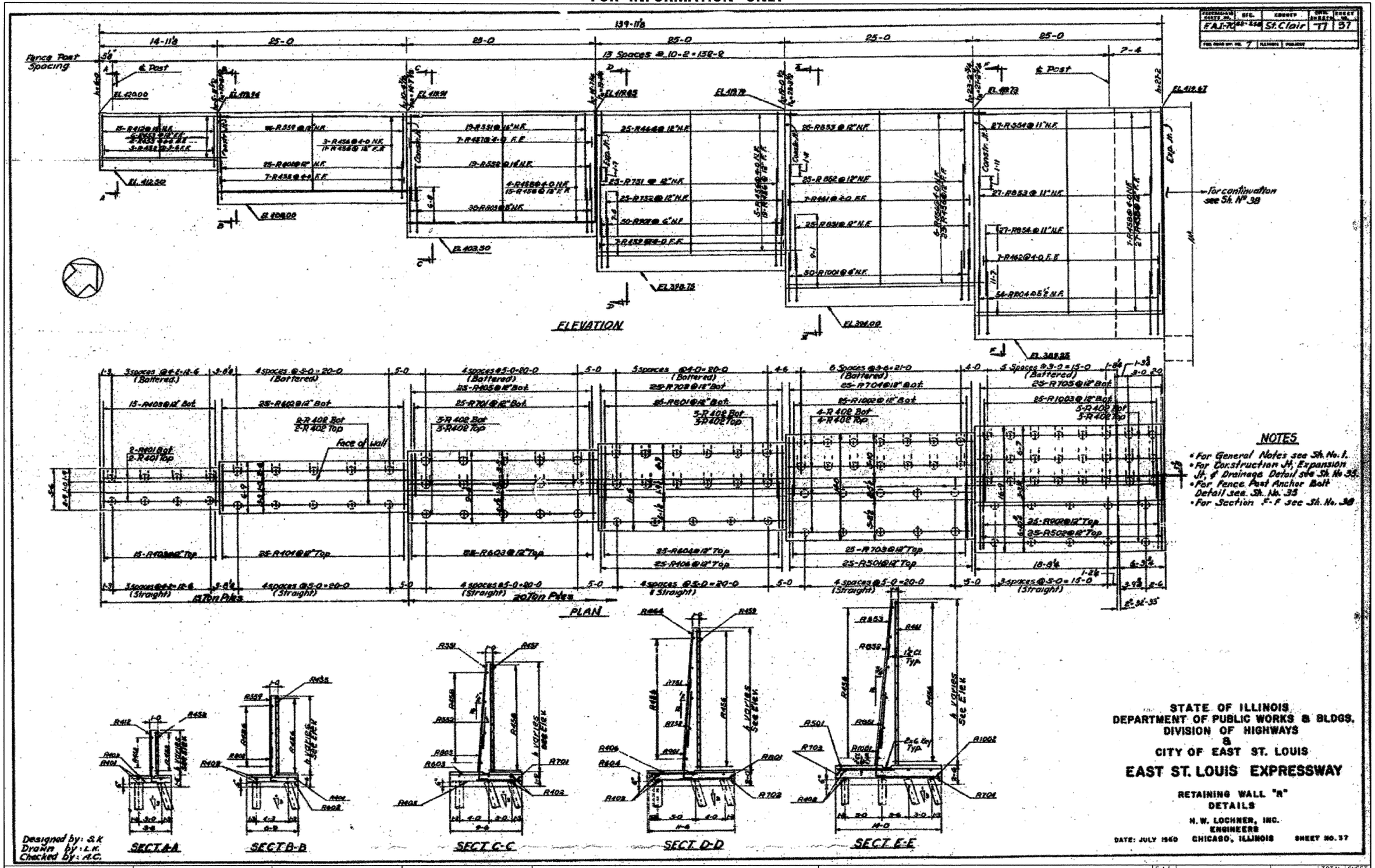
EXISTING BRIDGE PLAN – WALL-R

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	478
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-RTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-RTE	82-2&4	St. Clair	71	57



NOTES

- For General Notes see Sh. No. 1.
- For Construction Jt, Expansion Jt. & Drainage Detail see Sh. No. 33.
- For Fence Post Anchor Bolt Detail see Sh. No. 33
- For Section E-F see Sh. No. 38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "R" DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 37

FILE NAME = DBTRI-76C52-SHT-Wall-R_01.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

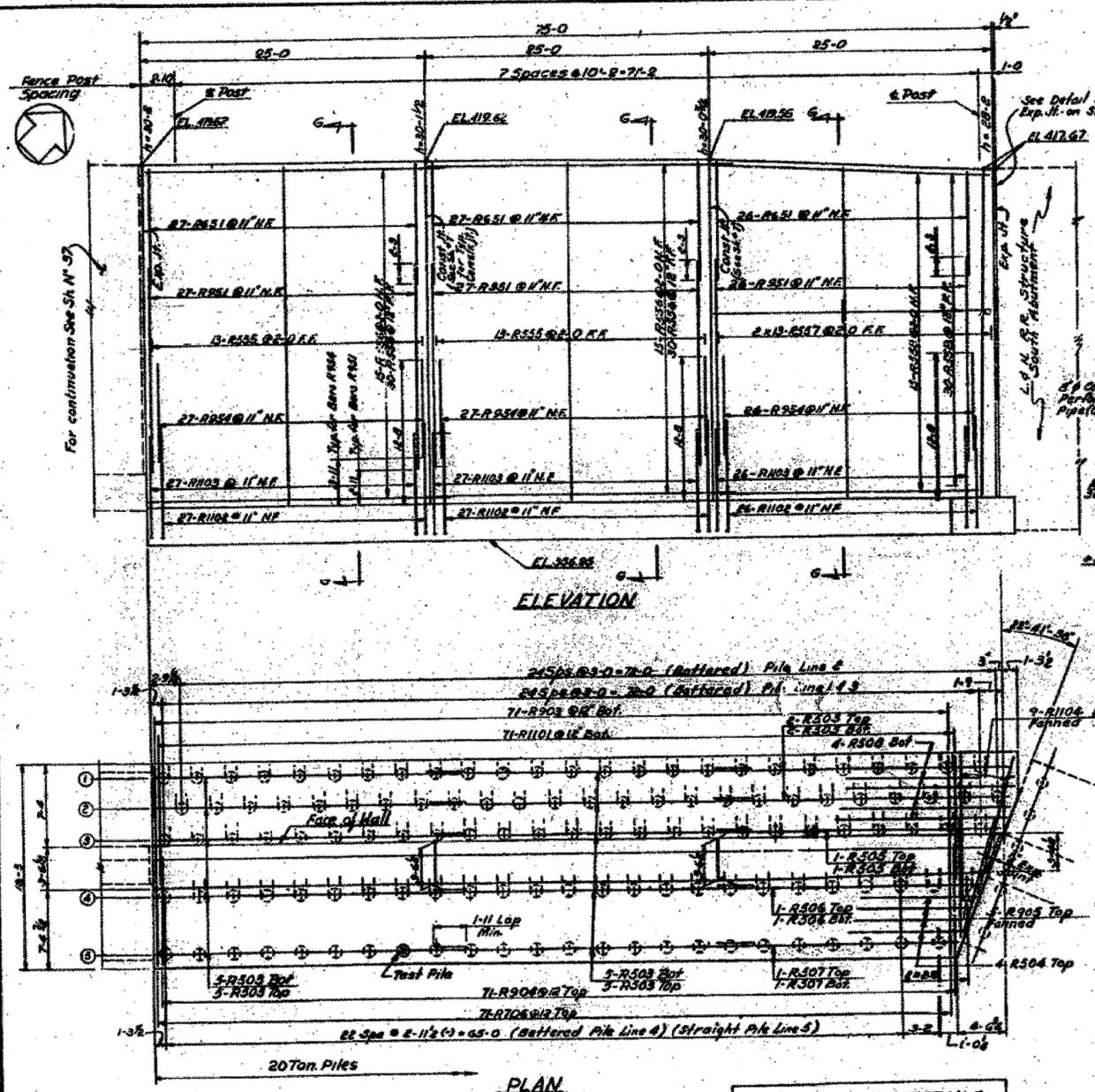
EXISTING BRIDGE PLAN – WALL-R 01

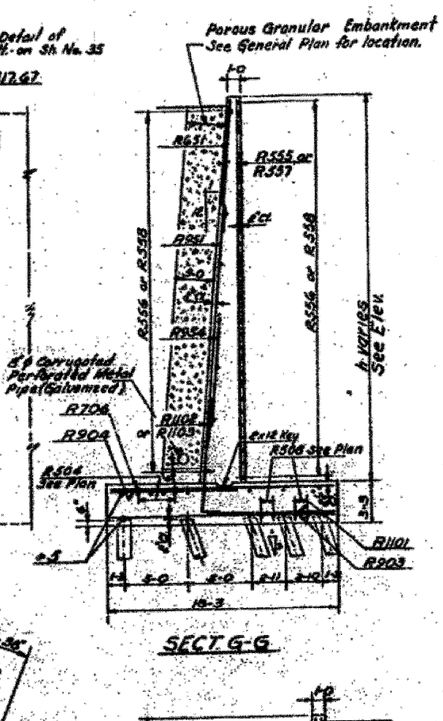
SCALE: NONE | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

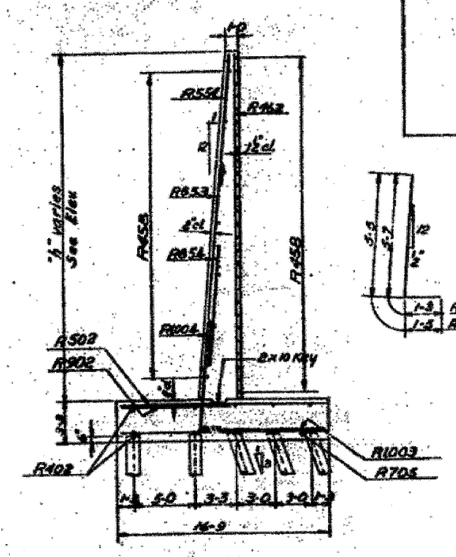
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	479
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

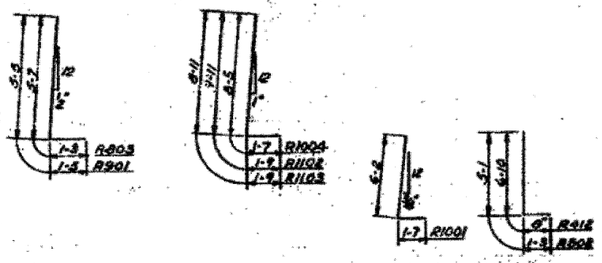
FOR INFORMATION ONLY

FED. ROAD DIST. NO.	STATE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS-70	82-R(A)	St. Clair	11	58	
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT			









BAR SCHEDULE

LOCATION	MARK	N° REQ'D	SIZE	LENGTH	SHAPE	MARK	N° REQ'D	SIZE	LENGTH	SHAPE
FOOTING	R401	4	#4	14-0	—	R703	25	#7	7-8	—
	R402	36		24-6	—	R704	25		13-8	—
	R403	90		5-2	—	R705	25		16-5	—
	R404	25		6-3	—	R706	71	#7	17-11	—
	R405	25		9-2	—	R801	25	#8	7-0	—
	R406	25		11-2	—	R802	25	#8	6-4	L
	R412	15	4	7-6	L	R803	56	#8	6-10	L
	R501	25	5	15-8	—	R901	50	#9	6-10	L
	R502	25		16-5	—	R902	25		9-6	—
	R503	24		27-0	—	R903	71		17-11	—
	R504	4		10-0	—	R904	71		10-0	—
	R505	2		25-0	—	R905	3	#9	13-0	—
	R506	2		23-6	—	R1001	50	#10	7-9	L
	R507	2		21-6	—	R1002	25	#10	8-10	—
	R508	4	#5	15-0	—	R1003	25	#10	9-6	—
	R602	25	#6	6-3	—	R1004	54	#10	10-0	L
	R603	25	#6	9-2	—	R1101	71	#11	12-0	—
	R604	25	#6	6-10	—	R1102	80	#11	11-6	L
	R701	25	#7	5-10	—	R1103	80	#11	10-8	L
	R702	25	#7	11-2	—	R1104	3	#11	18-0	—
STEM	R452	3	#8	5-10	—	R556	45	#8	24-6	—
	R453	8		16-0	—	R559	25	#8	8-0	—
						R651	80	#6	16-9	—
	R455	7		10-3	—	R751	25	#11	10-5	—
	R456	67		26-0	—	R752	25	#7	6-0	—
	R457	7		14-5	—	R851	25	#8	7-7	—
	R458	53		24-6	—	R858	25	#8	12-9	—
	R459	7		18-10	—	R853	27	#8	13-10	—
						R854	27	#8	8-6	—
	R461	7		23-1	—					
	R462	7		21-0	—	R951	80	#9	16-7	—
						R954	80	#9	8-9	—
	R465	25	#4	6-6	—					
	R551	19	#5	12-1	—					
	R552	19		4-5	—					
	R553	18		10-10	—					
	R554	27		12-0	—					
	R555	86		29-10	—					
	R556	90		26-0	—					
	R557	86	#5	12-0	—					

NOTE: For Notes see Sh. No. 37

BILL OF MATERIALS

Class 'A' Concrete	C.Y.	421.0
Reinforcement Bars	lbs.	40910
Test Piles (creosoted)	EA.	1
Creosoted Piles (20 Ton)	L.F.	360
Creosoted Piles (20 Ton)	L.F.	3151
Class 'A' Excavation for Structures	C.Y.	384
6" Perf. C.M.P. (Galv.)	L.F.	234
Porous Granular Embankment	C.Y.	240
Special Excavation	C.Y.	3173

PILE DATA

213-20 Ton Piles Estimated average length 27 Ft.
18-15 " " " " " 20 Ft.
Test Pile indicated thus ⊗

Designed by: S.K.
Drawn by: L.K.
Checked by: R.C.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "R"
DETAILS

H.W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 38

FILE NAME = DBTRI-76C52-SHT-Wall-R_02.dgn	USER NAME = searsb	DESIGNED -	REVISED -	
		DRAWN - GF	REVISED -	
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -	
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL-R 02

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	480
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	82-2&B	St. Clair	77	59

306-11½

9 spaces @ 25-0 = 225-0

27-3 | 27-4 | 27-4

El. 417.65 | El. 419.50 | El. 419.00 | El. 418.75 | El. 418.75 | El. 419.00 | El. 419.50

Fence

Existing Ground

Exp. Jt. | Const. Jt.

Ref. Wall S2 (by others)

Sta. Abut at Bridge for 2-30" Water Pipes

Inv. El. 390.64

Invert El. 389.66

8"ϕ Perforated Corrugated Metal Pipe (Galv)

Inv. El. 394.0 | Inv. El. 393.00 | Inv. El. 393.19

Inv. El. 391.66

El. 386.50 | El. 386.00 | El. 383.50 | El. 383.00 | El. 383.50 | El. 385.00 | El. 386.50 | El. 386.75 | El. 387.25 | El. 387.50 | El. 390.00 | El. 391.65

ELEVATION
Scale 1"=10'-0"

Note: All dimensions are along vertical face of wall.

Sta. Abut at Ramp "N"

Profile Grade & Base Line Ramp "N"

200-5½

Curve "1"

106-6

To Inlet (by others)

Vertical Face of Wall

8"ϕ Perforated Corrugated Metal Pipe (Galv)

93°16'-52"

84°54'-08"

Limits of Porous Granular Embankment See Sh. No. 4, Sec. A-A

Sta. 6+66.046

Sheeting

P.C.2 Sta. 6+43.604

R=350-0

Profile Grade & Base Line Relocated 8th St.

For Continuation of Sheeting see Sh. No. 4.

P.I. Sta. 4+91.604

R=350-0

Sta. 4+67.868

R=250-0

P.C.1 Sta. 3+65.068

PLAN
Scale 1"=10'-0"

CURVE DATA
Curve "1"

P.I. Sta.	4+28.49
Δ	9°40'00"
D_c	7°38'23"
R	750.00
L	126.54
T	63.42
E	2.66

varies | varies | varies | 3-0 | 2-7 | 10-0

20-0

3' Minimum See Cross Sections

Profile Grade Relocated 8th St.

1-0

Existing Ground line

Vertical face of wall @ Sta. 6+66.046

Limits of Special Excavation

Profile Grade Ramp "N"

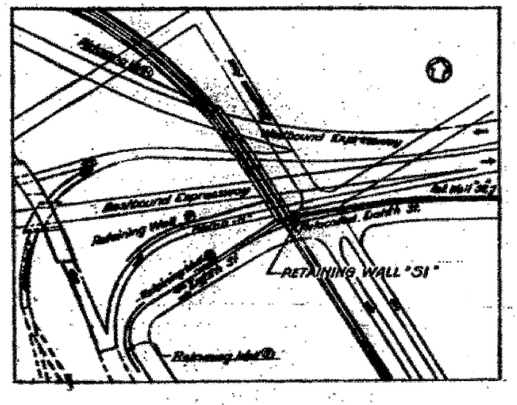
Sheeting See Special Provisions

Varies | Varies

Class "A" Excavation for Structures

TYPICAL SECTION
Looking West

Drawn by: E.M.
Checked by: A.T.



LOCATION PLAN

BILL OF MATERIAL		
CHAIN LINK FENCE	L.F.	295

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S1"
GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 39

FILE NAME = DBTRI-76C52-SHT-Wall-S1.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

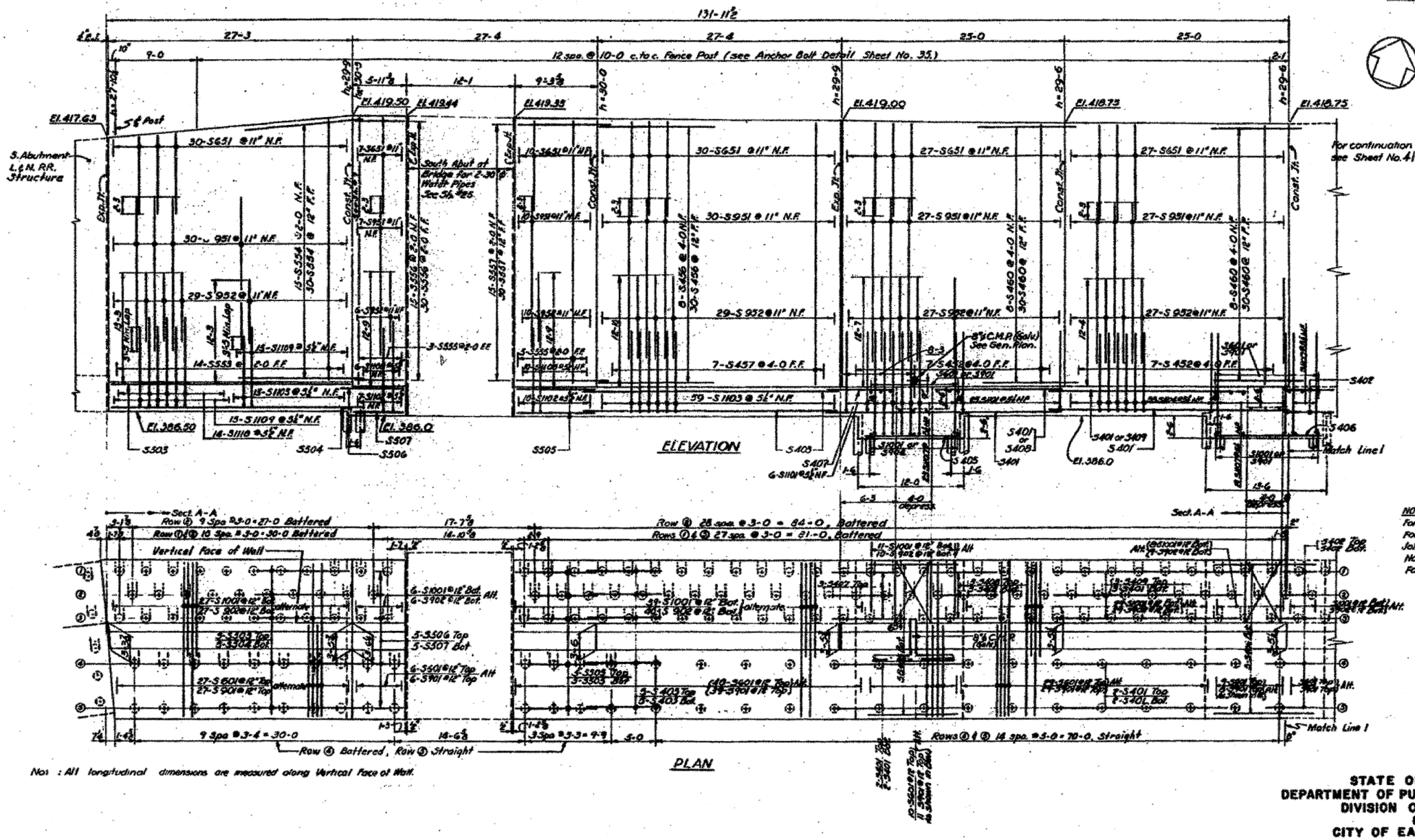
EXISTING BRIDGE PLAN – WALL–S1

SCALE: NONE | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	481
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	82-1-R(A)	St. Clair	77	60



NOTES:
For General Notes see Sheet No. 1.
For Construction Joint, Expansion Joint & Drainage Details see Sheet No. 35, except as shown.
For Section A-A see Sheet No. 41.

Note: All longitudinal dimensions are measured along Vertical Face of Wall.

Designed by: F.Z.
Drawn by: E.L.C.
Checked by: S.M.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S1" DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 40

FILE NAME = DBTRI-76C52-SHT-Wall-S1.01.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

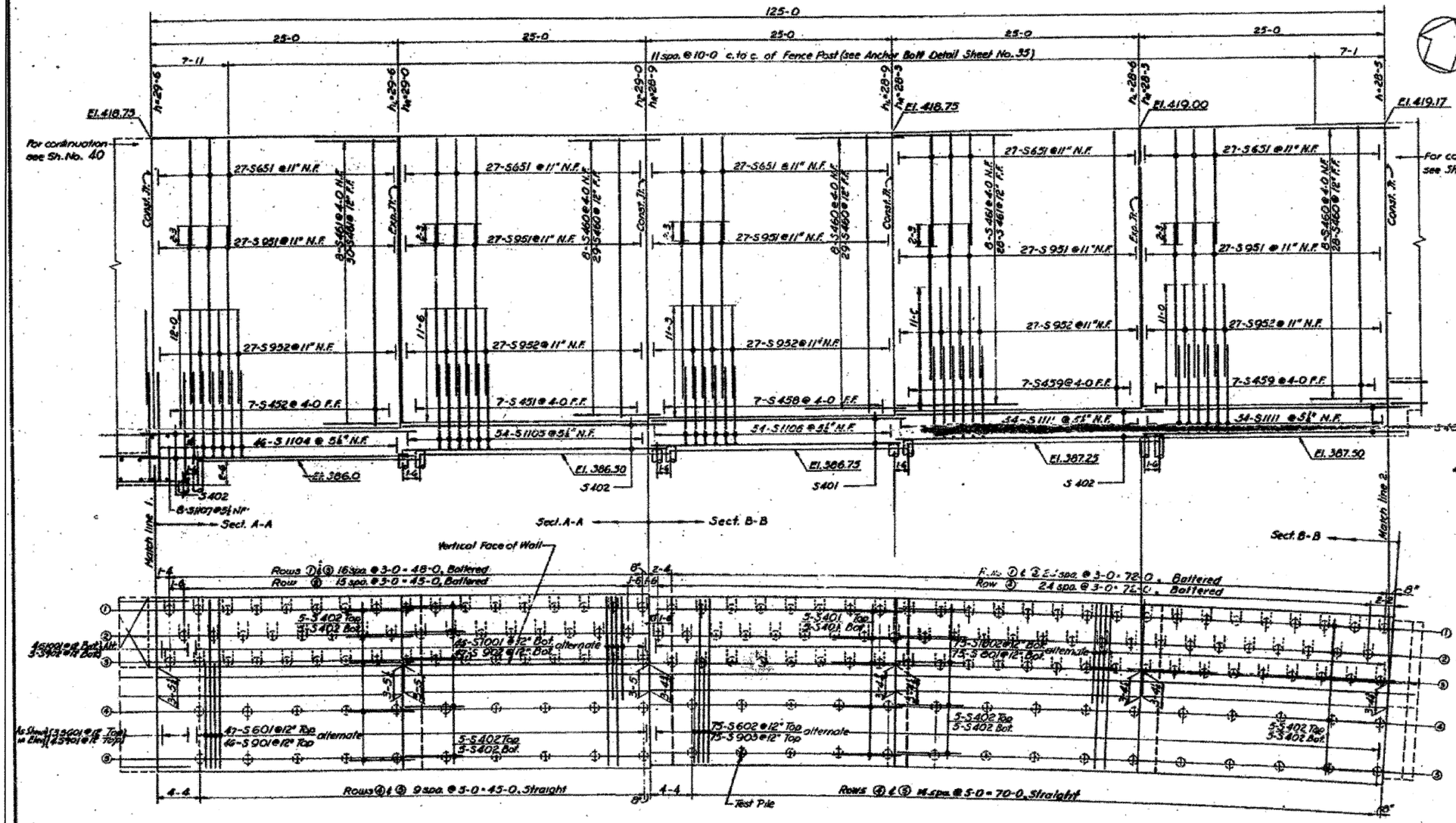
EXISTING BRIDGE PLAN – WALL-S1 01

SCALE: NONE | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	482
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

FAI-70	80-258	St. Clair	7	61



Note: / ngitudinal dimensions are measured along Vertical Face of Wall.

NOTE
For Notes see Sheet No. 40.
For Section B-B see Sheet No. 42.

Designed by: F.Z. & S.K.
Drawn by: E.L.C.
Checked by: S.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S1"
DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 41

FILE NAME = D8TRI-76C52-SHT-Wall-S1_02.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

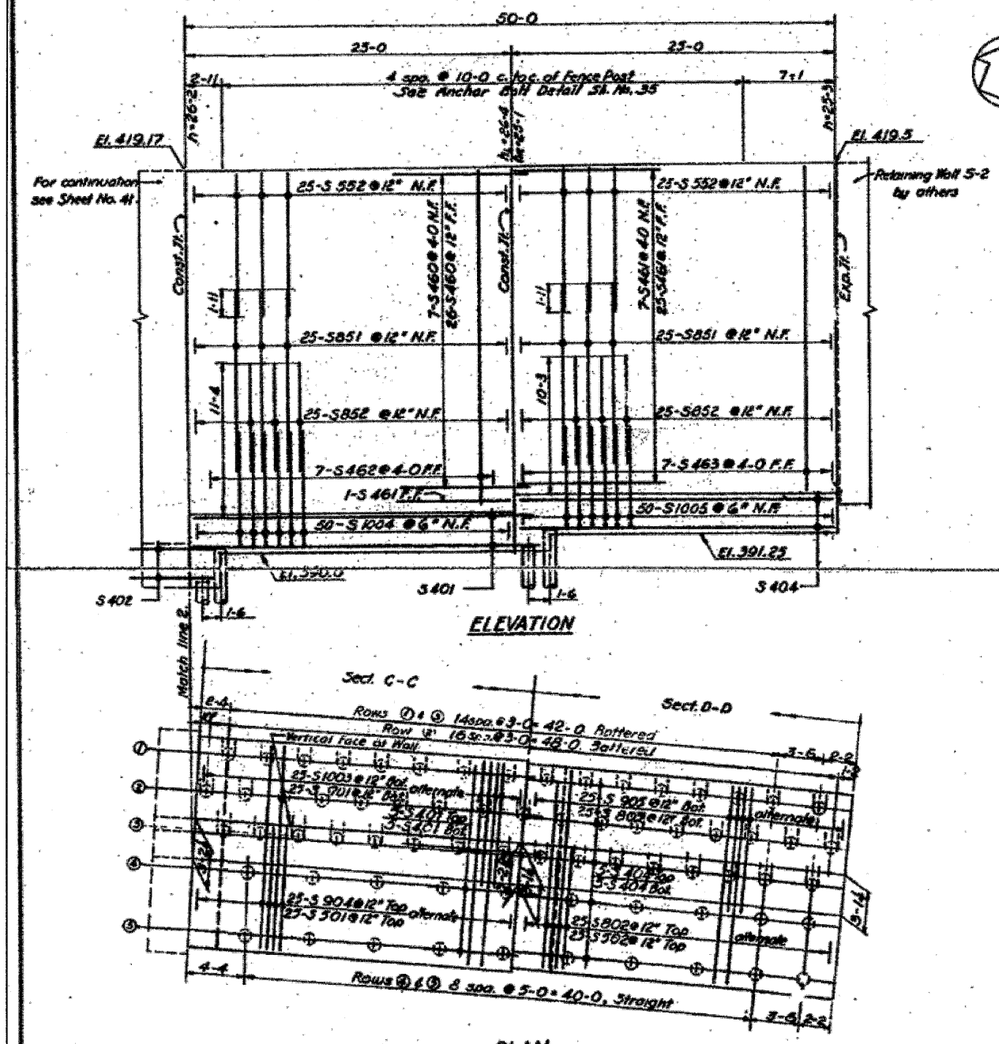
EXISTING BRIDGE PLAN – WALL–S1 02

SCALE: NONE | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

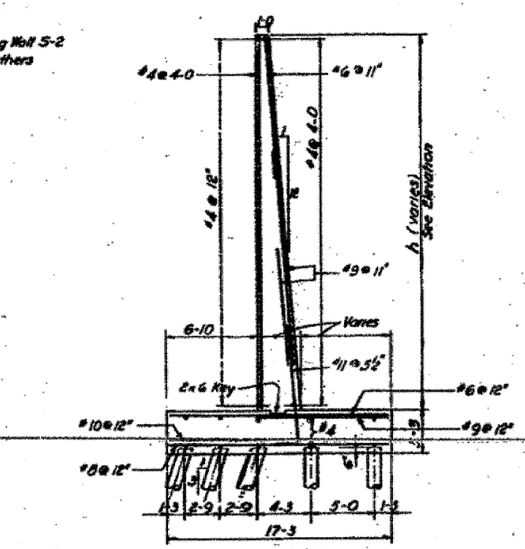
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	483
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

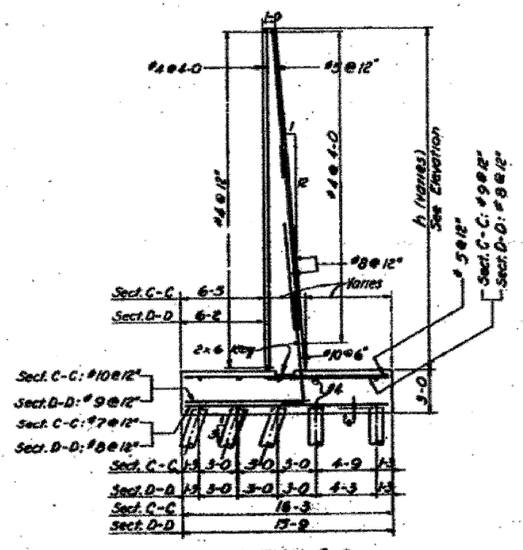
FOR INFORMATION ONLY

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-1-R(A)	ST. Clair	71	62



Note: All longitudinal dimensions are measured along Vertical Face of Wall.





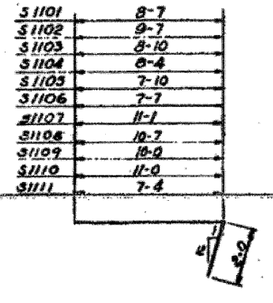
BAR SCHEDULE

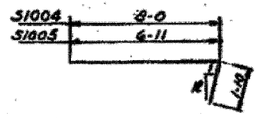
LOCATION	MARK	NO. REQ.	SIZE	LENGTH	SHAPE
FOOTING	S 401	34	#4	26-0	
	S 402	40		27-0	
	S 403	10		28-4	
	S 404	10		24-6	
	3405	5		10-6	
	3406	5		12-0	
	3407	3		7-3	
	3408	3		14-9	
	3409	3		21-4	
	3501	35	#5	15-9	
	3502	25	#5	18-3	
	3503	5	#5	27-0	
	3504	5	#5	28-4	
	3505	10	#5	9-0	
	3506	5	#5	8-0	
	3507	5	#5	5-6	
	3601	171	#6	17-3	
	3602	75	#6	16-9	
	3701	25	#7	13-9	
	3801	75	#8	16-9	
	S 802	25	#8	9-0	
	S 803	25	#8	15-3	
	S 901	170	#9	10-0	
	S 902	171		17-3	
	S 903	75		9-10	
	S 904	25		9-6	
	S 905	25	#9	9-0	
	S1001	170	#10	11-1	
	S1002	75		10-0	
	S1003	25		9-8	
	S1004	50		9-10	
	S1005	50	#10	8-9	
	S 1101	31	#11	10-7	
	S 1102	17		11-7	
	S 1103	74		10-10	
	S 1104	81		10-8	
	S 1105	54		9-10	
	S1106	54		9-7	
	S1107	30		13-1	
	S1108	16		12-7	
	S1109	30		12-0	
	S1110	18		13-0	
	S1111	108	#11	9-4	
STEM	S 451	7	#4	28-10	
	S 452	21		29-4	
	S 436	38		26-10	
	S 457	7		29-7	
	S 458	7		28-7	
	S 459	14		28-1	
	S 460	219		26-0	
	S 461	107		24-6	
	S 462	7		26-1	
	S 463	7	#4	24-11	
	S 552	50	#5	11-9	
	S 553	14		Note "A"	
	S 554	45		29-3	
	S 555	6		29-10	
	S 556	45		5-9	
	S 557	45	#5	11-0	
	3651	266	#6	14-0	
	3851	50	#8	13-10	
	3852	50	#8	6-10	
	3951	666	#9	13-0	
	3952	263	#9	9-6	

Note "A" = 1 Series of 14 bars - 27-9 to 29-7½ - 1½" Incr.

BILL OF MATERIALS

CLASS "X" CONCRETE	C.Y.	1330.2
REINFORCEMENT BARS	LBS.	123190
TEST PILES (creosoted)	EA.	1
CREOSOTED PILES 20 ft to 38 ft	LIN. FT.	11340
SPECIAL EXCAVATION	C.Y.	11742
CLASS "A" EXCAV. FOR STRUCT.	C.Y.	820
8"ø PERF. C.M.P. (GALV.)	LIN. FT.	310
POROUS GRANULAR EMBANKMENT	C.Y.	137





PILE DATA

420 - 20 Ton Piles. Estimated average length 27 ft.
Test pile is indicated thus ⊗

Note

For Notes see Sheet No. 40

Designed by: F.Z. & S.K.
Drawn by: E.L.C.
Checked by: S.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S1"
DETAILS

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: JULY 1960 SHEET NO. 42

FILE NAME = D8TRI-76C52-SHT-Wall-S1.03.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

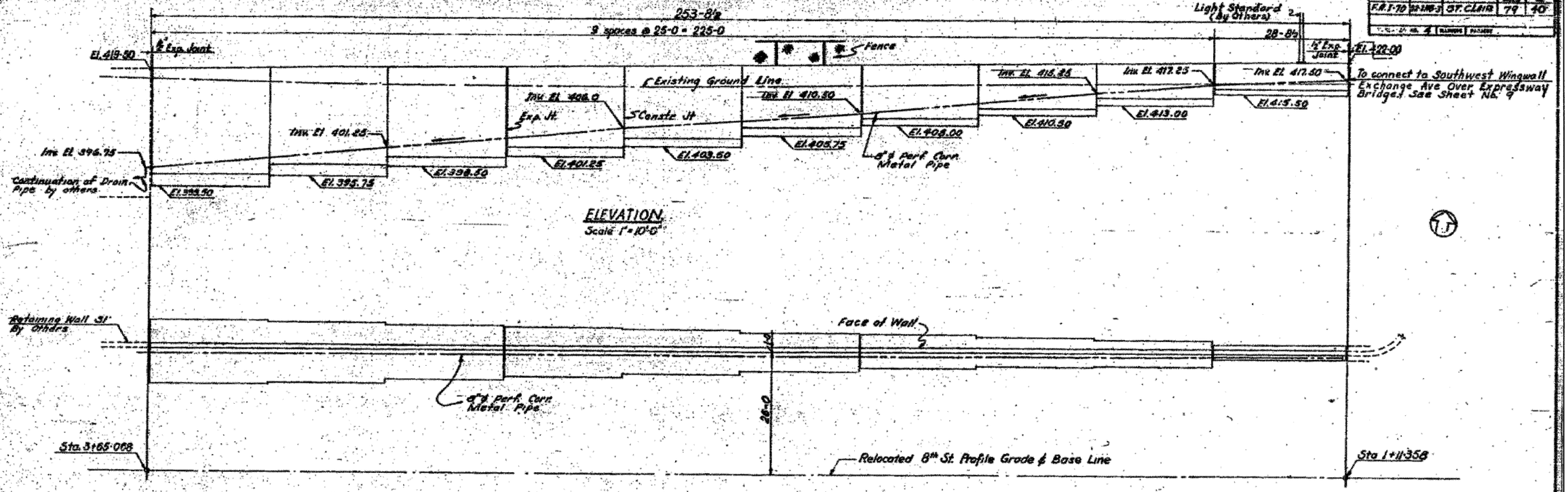
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL–S1 03

SCALE: NONE | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	484
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



Drawn by - E.W.
Checked by - M.T.

LOCATION PLAN

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S2"
GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
DATE: APRIL 1958 CHICAGO, ILLINOIS SHEET NO. 16

FILE NAME = D8TRI-76C52-SHT-Wall-S2.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

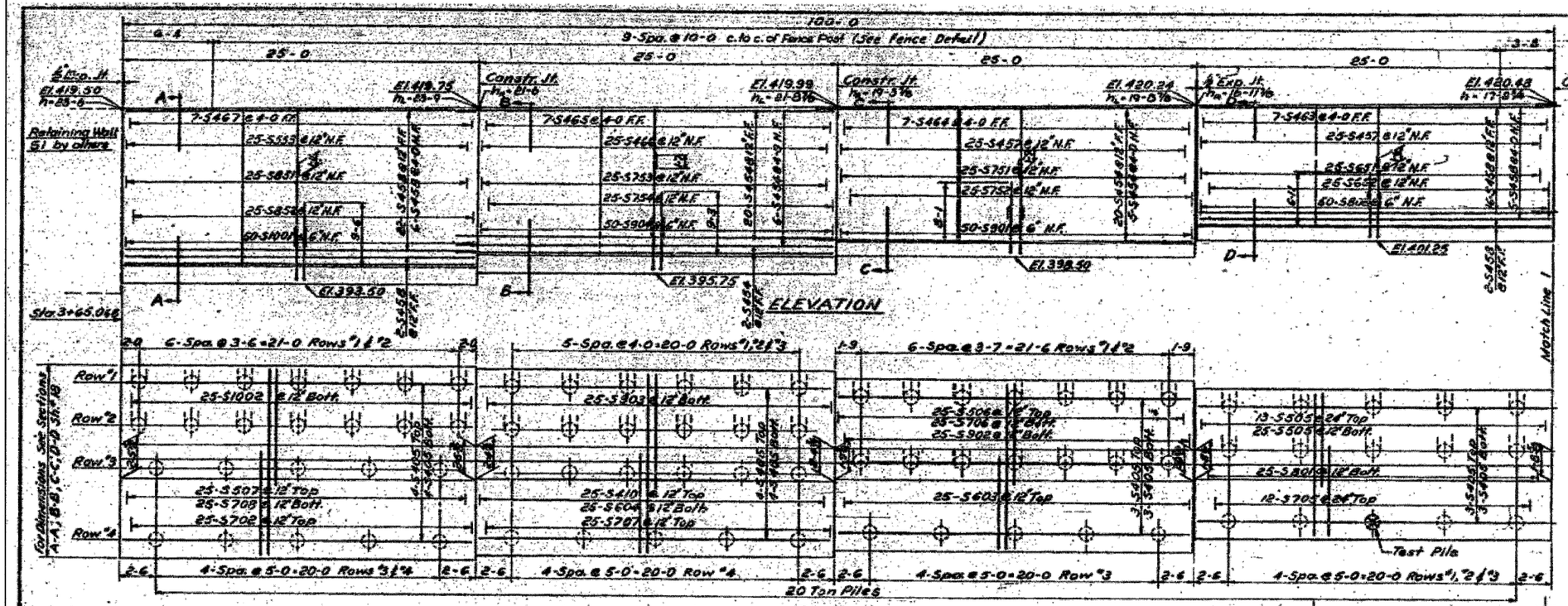
EXISTING BRIDGE PLAN – WALL-S2

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	485
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-1-R(A), 82-1-R(B)	ST. CLAIR	79	41



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S2" DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: APRIL 1956 CHICAGO, ILLINOIS SHEET NO. 17

FILE NAME = D8TRI-76C52-SHT-Wall-S2_01.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

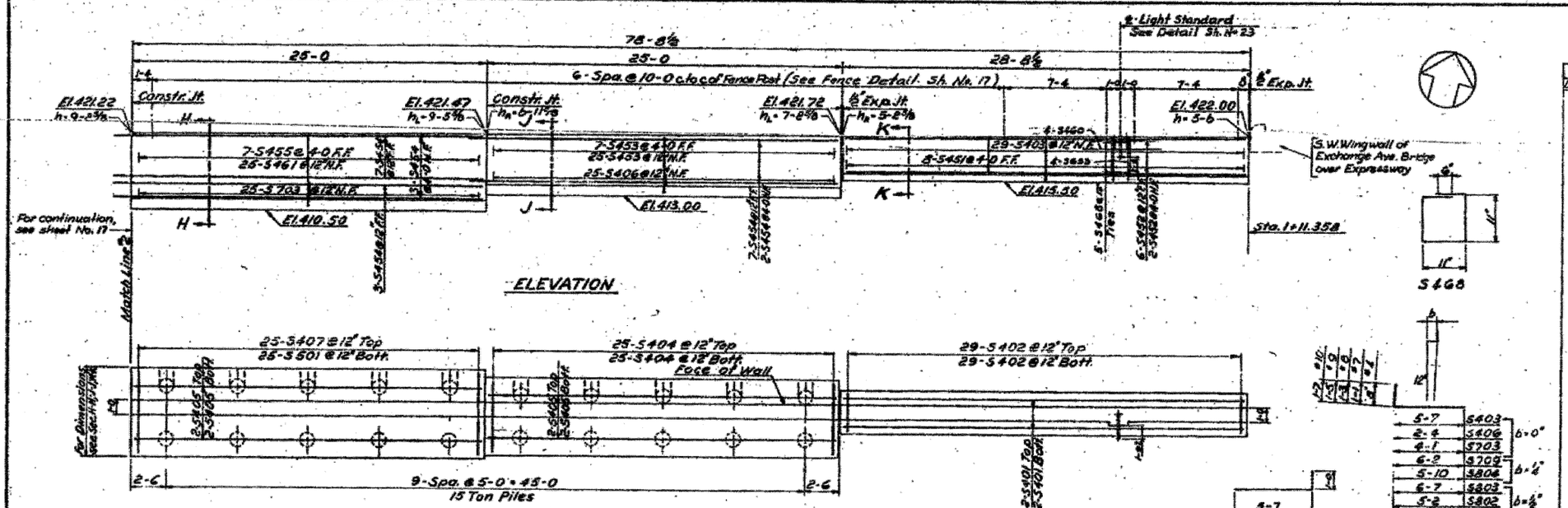
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL–S2 01

SCALE: NONE | SHEET NO. 2 OF 3 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	486
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



PILE DATA

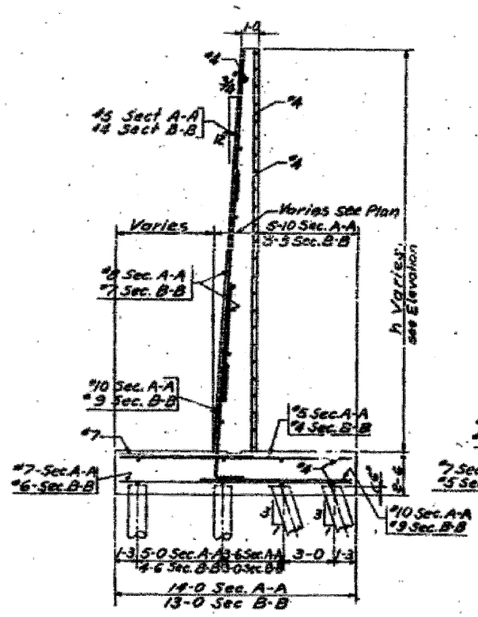
118-20 Ton Piles Estimated Length 27 ft.
80-15 Ton Piles Estimated Length 20 ft.
Test Pile indicated thus ⊗

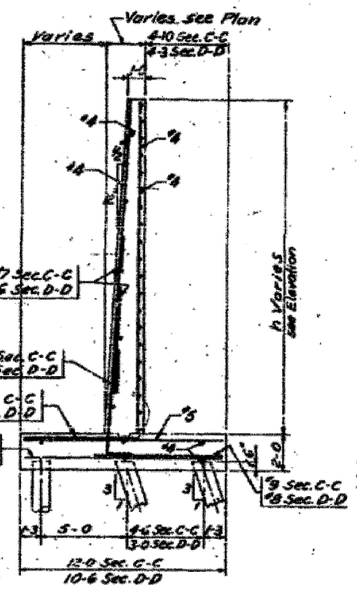
BILL OF MATERIALS

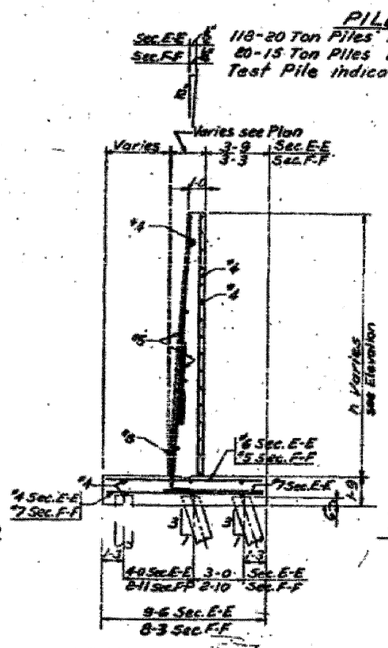
Class "A" Concrete	C.Y.	345.0
Reinforcement Bars	Lbs.	87,210
Furn. Creosoted Piles (Up to 20')	Lin. Ft.	400
Furn. Creosoted Piles (20.1' to 30')	Lin. Ft.	3186
Special Excavation	C.Y.	2016
Class "A" Excavation For Structures	C.Y.	230
8"ϕ Perf. C.M.P.	Lin. Ft.	236
Test Piles (Timber)	Ea.	1
Chain Link Fence	Lin. Ft.	250
Driving Timber Piles	Lin. Ft.	3586

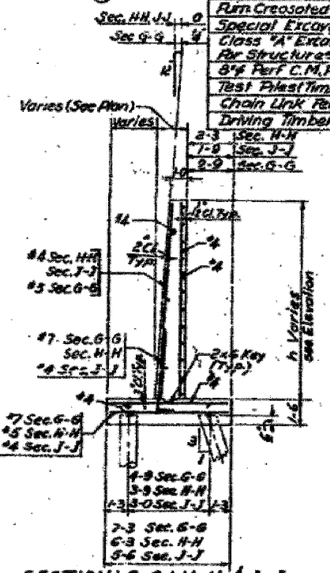
BAR SCHEDULE

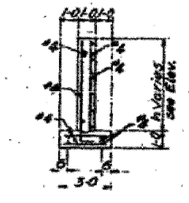
Location	Mark	No. Reqd.	Size	Length	Shape
FOOTING	S401	4	#8	28-2	
	S402	58		2-6	
	S403	29		6-3	
	S404	50		5-0	
	S405	56		24-6	
	S406	25		3-0	L
	S407	25		5-9	
	S408	25		6-9	
	S409	25		9-0	
	S410	25	#4	12-6	
	S501	25	#5	5-9	
	S503	25		7-9	
	S505	38		10-0	
	S506	25		11-6	
	S507	25	#5	13-6	
	S602	25	#6	9-0	
	S603	25	#6	7-0	
	S604	25	#6	12-6	
	S701	25	#7	6-9	
	S702	50		7-9	
	S703	25		5-2	
	S704	25		5-8	
	S705	12		6-6	
	S706	25		11-6	
	S707	25		7-3	
	S708	25		13-6	
	S709	34	#7	7-3	L
	S801	25	#8	6-6	
	S802	50		6-5	L
	S803	37		7-10	L
	S804	34	#8	7-1	L
	S901	50	#9	7-6	L
	S902	25		7-3	
	S903	25		6-0	
	S904	50	#9	6-4	L
	S1001	50	#10	8-3	L
	S1002	25	#10	8-10	
STEM	S451	8	#4	5-1	
	S452	8		20-2	
	S453	32		6-10	
	S454	113		24-6	
	S455	7		8-1	
	S456	7		11-4	
	S457	50		6-8	
	S458	68		24-6	
	S459	7		13-1	
	S460	4		5-0	
	S461	25		7-10	
	S462	7		13-1	
	S463	7		16-10	
	S464	7		19-4	
	S465	7		21-9	
	S466	25		8-3	
	S467	7	#4	23-6	
	S468	5	#4	4-2	
	S551	13	#5	12-1	
	S552	18		4-3	
	S553	42		10-10	
	S554	13		4-0	
	S555	25	#5	8-2	
	S651	25	#6	3-4	
	S652	25	#6	6-4	
	S653	4	#6	6-7	L
	S751	25	#7	10-5	
	S752	25		6-0	
	S753	25		11-3	
	S754	22	#7	6-8	
	S851	25	#8	12-3	
	S852	25	#8	7-9	











Designed by: A.T.
Drawn by: E.M.
Checked by: J.K.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "S2"
DETAILS

H. W. LOCHNER, INC.
ENGINEERS
DATE: APRIL 1958 CHICAGO, ILLINOIS SHEET NO. 18

F.A.I-70	82-1-R(A)	ST. CLAIR	79	42

FILE NAME = D8TRI-76C52-SHT-Wall-S2_02.dgn	USER NAME = searsb	DESIGNED -	REVISED -
		DRAWN - GF	REVISED -
	PLOT SCALE = 2.0000 ' / in.	CHECKED - DD	REVISED -
	PLOT DATE = 1/23/2012	DATE - 07/21/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL-S2 02

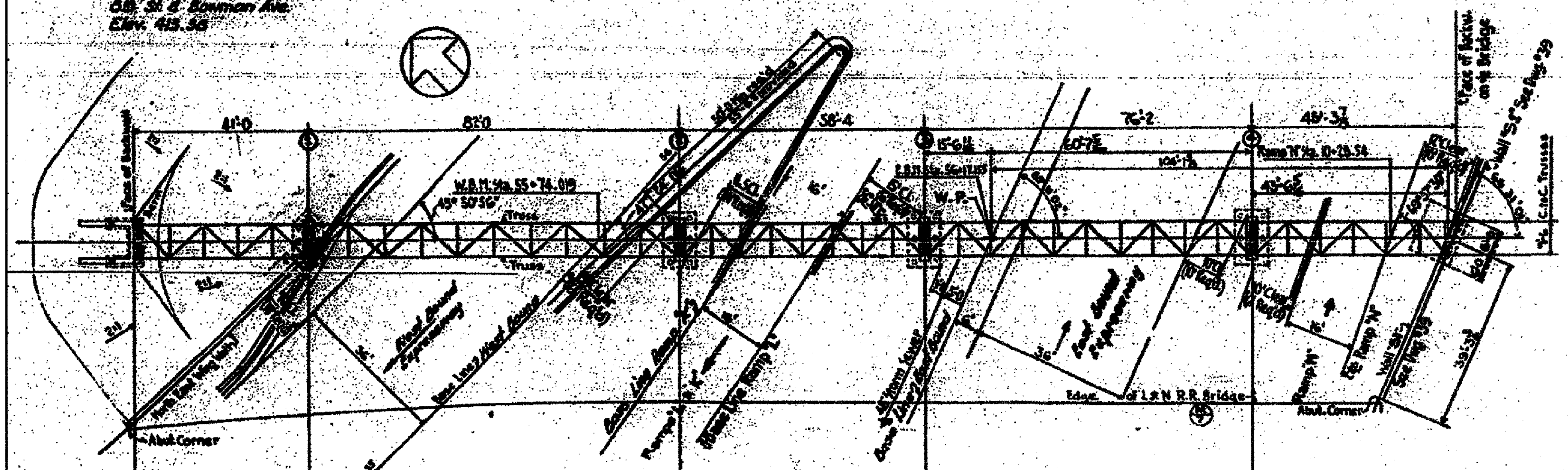
SCALE: NONE | SHEET NO. 3 OF 3 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	487
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

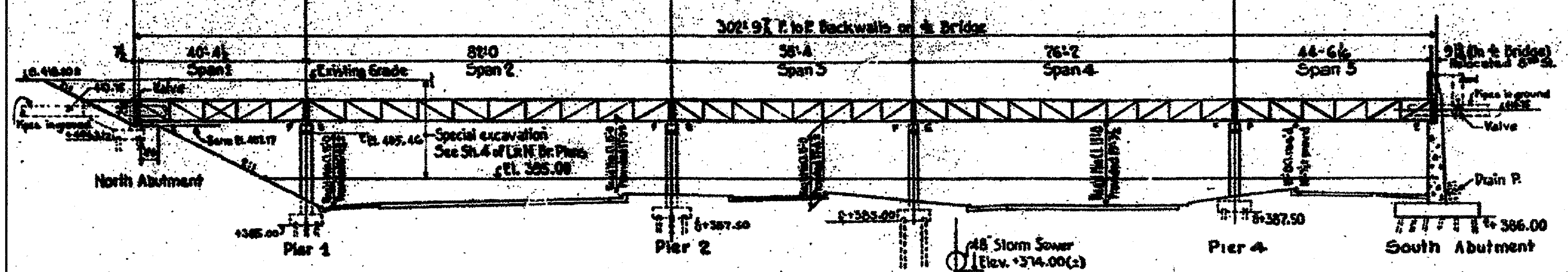
FOR INFORMATION ONLY

FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	[illegible]	ST. CLAIR	[illegible]	[illegible]
FED. ROAD DIV. NO. 7	ILLINOIS	PROJECT		

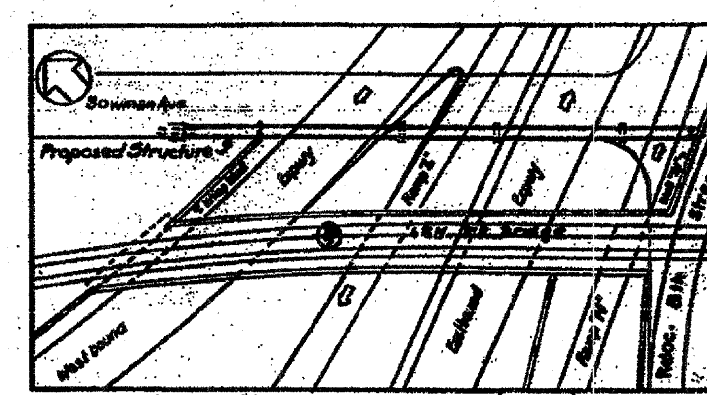
B.M. No. 13
East side of Bowman Ave.
South side of 8th St.
Iron pin on S.E. corner of
8th St. & Bowman Ave.
Elev. 415.56



PLAN
Scale 1/16" = 1'-0



ELEVATION
Scale 1/16" = 1'-0



LOCATION PLAN

GENERAL NOTES

MATERIAL & WORKMANSHIP
State of Illinois "Standard Specifications for Road and Bridge Construction" adopted January 2, 1958.

DESIGN
Superstructure: A.I.S.C. "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings." Revised June, 1949
Substructure: A.A.S.H.O.: "Standard Specifications for Highway Bridges - 1957

LOADING
Per foot of bridge: Dead & Live: 1.1K, Wind 0.2K

CONCRETE
Class "X" concrete shall be used throughout.

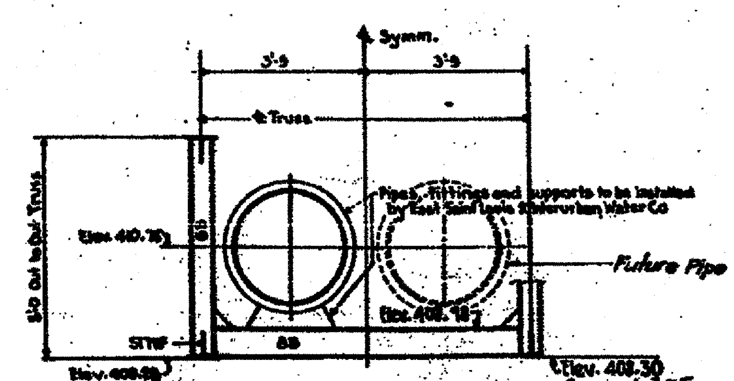
DESIGN UNIT STRESSES
Concrete: E=1400 psi., fs=20 000 psi., n=10, Footings v=75 psi., Substructure with Earth Pressure: fc=1000 psi.
Structural Steel fs = 20 000 psi.

PILES
The contractor shall drive 6 test piles in permanent locations as directed by the Engineer, before ordering remainder of piles. One test pile shall be located under each Abutment and Pier. All piles shall be creosoted.

SUPERSTRUCTURE
To be all shopwelded. A.S.T.M. designation A373 steel shall be used in all members designed to carry stress. Shop to tack weld temporary bracing between top chords of trusses. This bracing to remain in place until field erection of bridge is complete.

PAINT
Except as otherwise provided all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Articles 56.1 to 56.5 inclusive of the Standard Specifications. All paint shall be furnished and applied by the Contractor involved.

WATERPROOFING
The following surfaces of the bridge shall be waterproofed: Back of backwall and backs of wingwalls at North Abutment, and back of South Abutment. Waterproofing shall be done in accordance with Article 51.21 of the Standard Specifications.



TYPICAL CROSS SECTION.
Scale 1/2" = 1'-0

Designed by J.V.
Drawn by J.V.
Checked by H.H.

TOTAL BILL OF MATERIAL FOR PIPE BRIDGE

UNIT	DESCRIPTION	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
CY	CLASS "X" EXCAVATION FOR STRUCTURES		388	388
CY	CLASS "X" CONCRETE		127.0	127.0
LB	REINFORCEMENT BARS		14880	14880
LB	STRUCTURAL STEEL	38840		38840
Ea.	TEST PILES (CREOSOTED)		6	6
LF	FURNISHING CREOSOTED PILES (12 1/2 D 35)		1269	1269
LF	DRIVING TIMBER PILES		1269	1269
LF	8" PERF. CORR. GALV. METAL PIPE		12	12
LF	CHAIN LINK FENCE		12	12
CY	POROUS GRANULAR EMBANKMENT		39	39

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
EAST ST. LOUIS & INTERURBAN WATER CO.
EAST ST. LOUIS EXPRESSWAY
BRIDGE FOR 2 30"ø WATER PIPES
OVER F.A.I.-70
GENERAL PLAN
H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO, ILLINOIS SHEET NO. 29

FILE NAME =	USER NAME = searsb	DESIGNED	REVISED -
DBTRI-76C52-Sht-Rem-WM-01.dgn		DRAWN	REVISED -
	PLOT SCALE = 20.0000 '/ in.	CHECKED	REVISED -
	PLOT DATE = 1/25/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 30" WATER PIPES OVER I-55/I-70

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

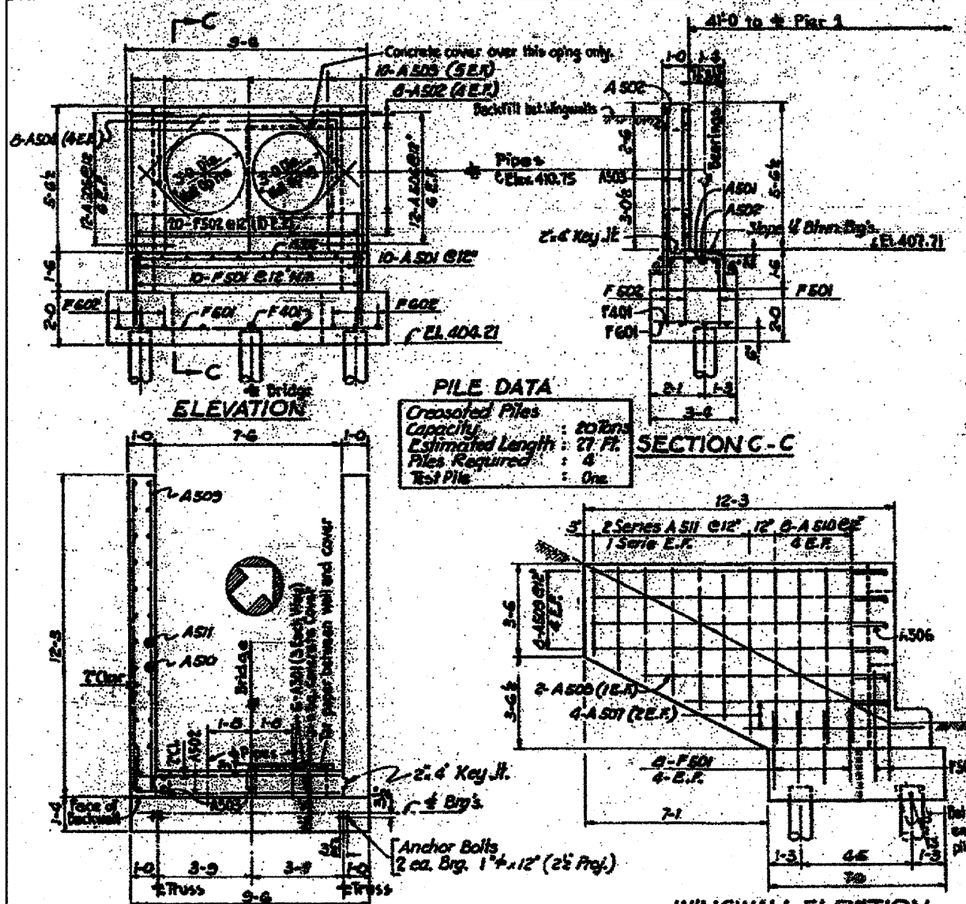
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	487A
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY

PROJECT-SAP ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-1-R(A) 82-1-R(B)	ST.CLAIR	629	487B
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

PILE DATA

Cassoated Piles
Capacity : 20 Tons
Estimated Length : 27 Ft.
Piles Required : 22 (for 4 Piers)
Test Piles : 4 (" ")



BAR LIST

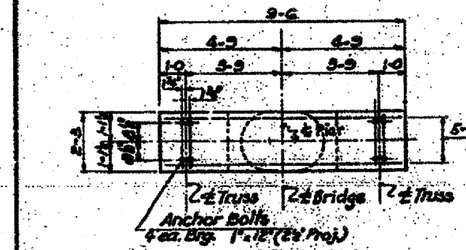
Bar	No. Reqd.	Size	Length	Shape
F 401	5	#8	3-0	
F 402	4	#8	2-2	
F 501	26	#5	2-10	
F 502	20	#5	6-4	
F 601	4	#6	10-8	
F 602	6	#6	6-0	
A 501	6	#5	3-3	
A 502	10	#5	4'-6	
A 503	12	1	3-2	
A 505	12		5-8	
A 506	6		3-6	
A 507	28		5-0	
A 509	8		7-6	
A 510	4		10-0	
A 511	16		11-11	
A 512	12		7-10	
A 511	4 Series @ 1 Bars	#5	Diam. 3-2 Radius 2-7	

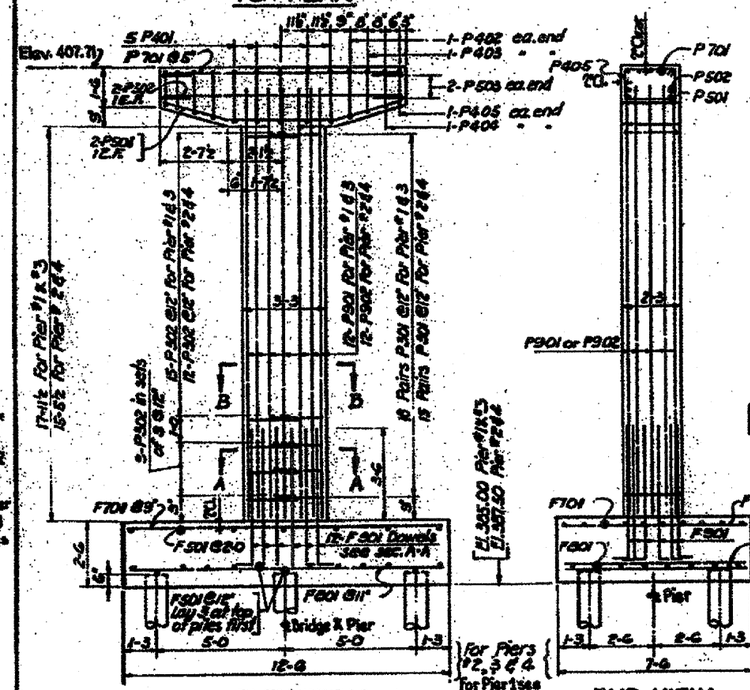
BILL OF MATERIAL

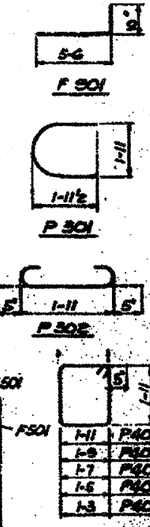
Class 'A' Concrete	Cu. Yds.	5.7
Reinforcement Bars	Lbs.	1020
Cassoated Piles (20 Tons)	Ln. Ft.	108
Test Piles (Furnished)	Ea.	1
Class 'A' Concrete for Structures	Cu. Yds.	57

NORTH ABUTMENT
Scale: 3/8" = 1'-0

Designed by : J.K.
Drawn by : A.B.
Checked by : H.H.





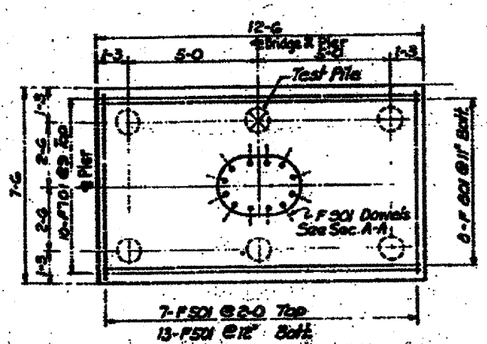


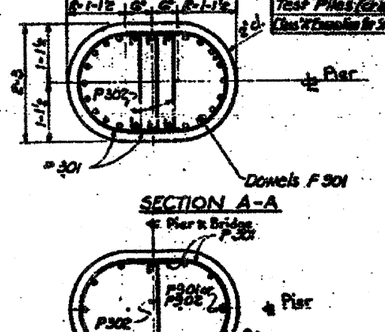
BAR LIST

Bar	No. Reqd. for Pier No. 1	No. 2	No. 3	No. 4	Size	Length	Shape
F 501	–	20	20	20	#5	7-0	
F 701	–	10	10	10	#7	12-0	
F 503	14	–	–	–	#5	6-6	
F 504	8	–	–	–	#5	5-7	
F 1001	2	–	–	–	#10	13-6	
F 1002	2	–	–	–	#10	10-2	
F 1003	2	–	–	–	#10	7-10	
F 801	–	8	8	8	#8	12-0	
F 802	2	–	–	–	#8	11-6	
F 803	2	–	–	–	#8	10-2	
F 804	2	–	–	–	#8	7-10	
P 501	12	12	12	12	#5	6-4	
P 301	36	30	36	30	#5	5-0	
P 302	24	21	24	21	#5	2-3	
P 401	5	5	5	5	#4	6-6	
P 402	2	2	2	2	#4	6-2	
P 403	2	2	2	2	#4	7-10	
P 404	2	2	2	2	#4	7-6	
P 405	2	2	2	2	#4	7-2	
P 501	2	2	2	2	#5	3-3	
P 502	2	2	2	2	#5	9-2	
P 503	4	4	4	4	#5	4-4	
P 701	5	5	5	5	#7	9-2	
P 901	12	–	12	–	#9	15-3	
P 902	–	12	–	12	#9	17-3	

BILL OF MATERIAL

		Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Total
Class 'A' Concrete	Cu. Yds.	11.8	13.6	14.3	13.6	54.7
Reinforcement Bars	Lbs.	1940	1910	2120	1910	7880
Cassoated Piles (20 Tons)	Ln. Ft.	189	135	198	135	594
Test Piles (Furnished)	Ea.	1	1	1	1	4
Class 'A' Concrete for Structures	Cu. Yds.	60	53	72	53	236





For details of footing for Pier #1 see Sheet #7

PIERS
Scale: ¾" = 1'-0 unless noted

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
EAST ST. LOUIS & INTERURBAN WATER CO.

EAST ST. LOUIS EXPRESSWAY

BRIDGE FOR 2 30" ϕ WATER PIPES OVER F.A.I.-07

NORTH ABUTMENT AND PIERS No. 1, 2, 3 & 4

H. W. LOCHNER, INC.
ENGINEERS
DATE: JULY 1960 CHICAGO ILLINOIS SHEET NO. 2G

FILE NAME = DBTRI-76C52-Sht-Rem-WM-02.dgn	USER NAME = searsb	DESIGNED	REVISED -
		DRAWN	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED	REVISED -
	PLOT DATE = 1/25/2012	DATE 1-20-12	REVISED -

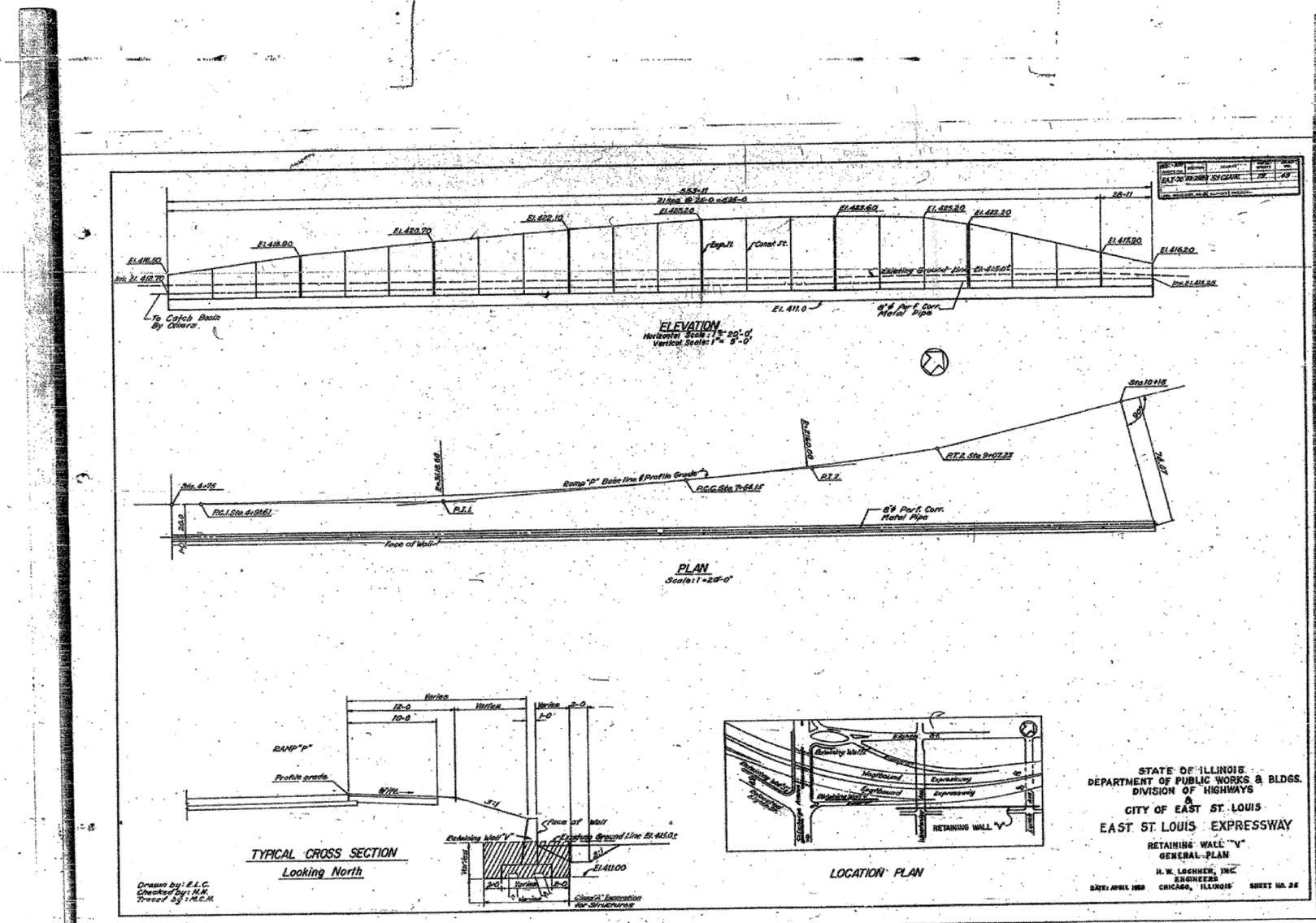
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – 30" WATER PIPES OVER I-55/I-70

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	487B
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "V"
GENERAL PLAN

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: APRIL 1958 SHEET NO. 26

FILE NAME = DBTRI-76C52-sht-Wall-V_01.dgn	USER NAME = searsb	DESIGNED OP	REVISED -
		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED ATB	REVISED -
	PLOT DATE = 1/23/2012	DATE 1-20-12	REVISED -

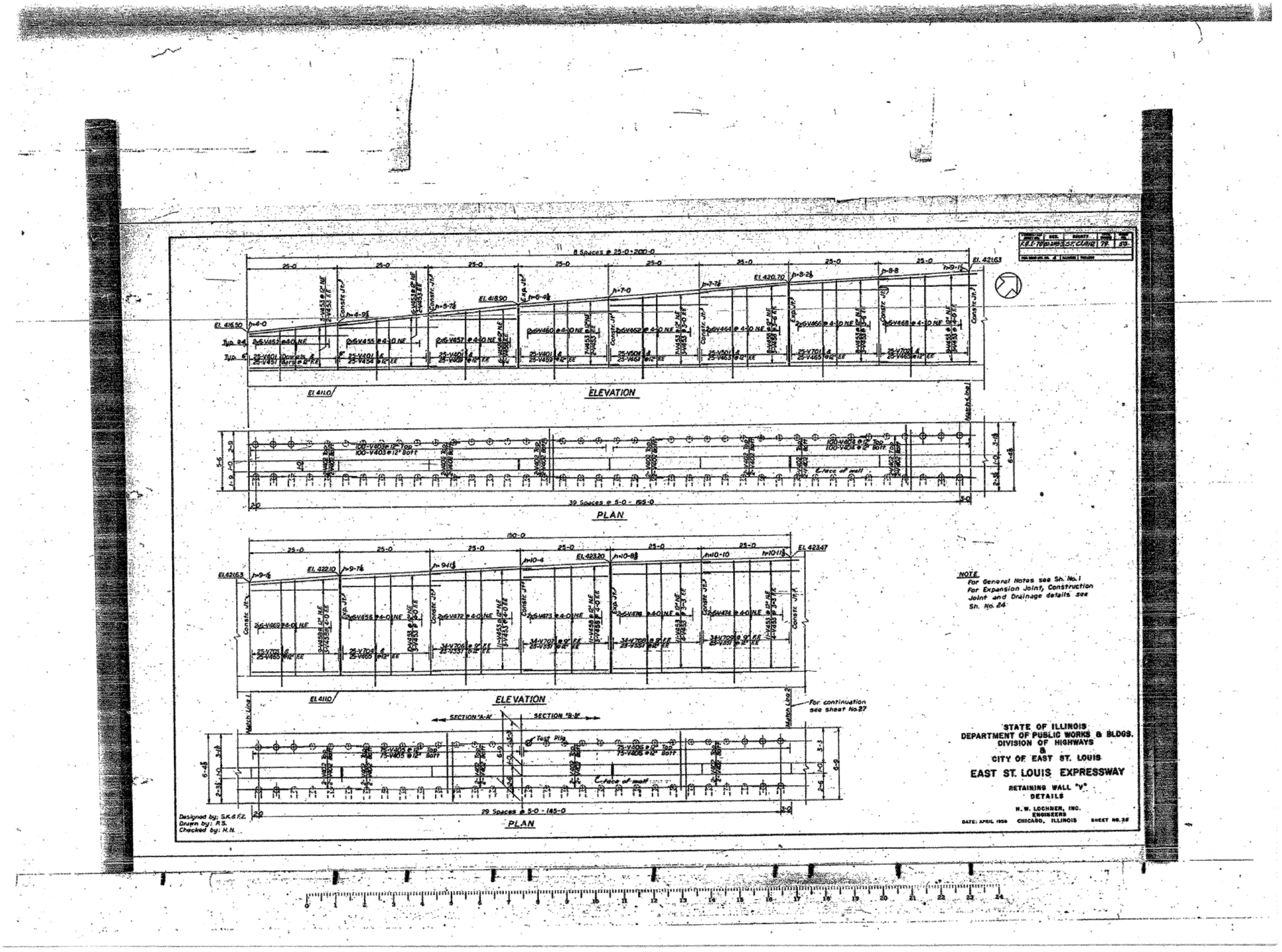
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL-V 01

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

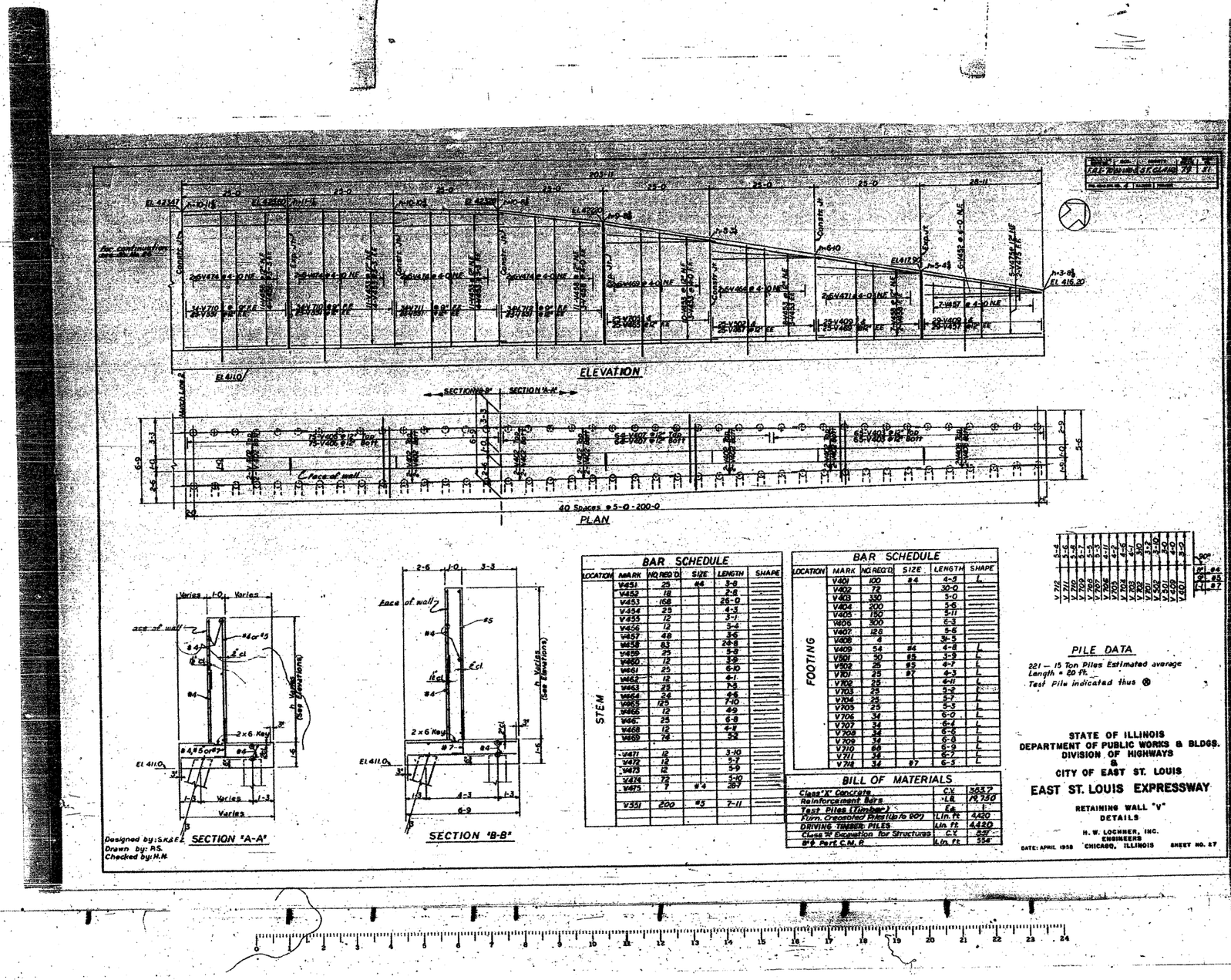
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	488
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



FILE NAME = DBTRI-76C52-sht-Wall-V_02.dgn	USER NAME = searsb	DESIGNED OP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN – WALL-V 02			F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN OP	REVISED -					•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	489
	PLOT SCALE = 20.0000 ' / in.	CHECKED ATB	REVISED -					• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/23/2012	DATE 1-20-12	REVISED -		SCALE: NONE	SHEET NO. 2 OF 3 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INFORMATION ONLY



BAR SCHEDULE

LOCATION	MARK	NO. REQ'D	SIZE	LENGTH	SHAPE
STEM	V451	25	#4	3-9	
	V452	18		2-8	
	V453	168		26-0	
	V454	25		4-5	
	V455	12		3-1	
	V456	12		5-4	
	V457	48		3-5	
	V458	83		24-8	
	V459	25		5-8	
	V460	12		3-8	
	V461	25		6-10	
	V462	12		6-1	
	V463	25		7-5	
	V464	24		4-6	
	V465	129		7-10	
	V466	12		4-9	
	V467	25		6-8	
	V468	12		4-8	
	V469	74		5-2	
	V471	12		3-10	
	V472	12		5-7	
	V473	12		5-9	
	V474	72		5-10	
	V475	7	#4	28-7	
	V351	200	#5	7-11	

BAR SCHEDULE

LOCATION	MARK	NO. REQ'D	SIZE	LENGTH	SHAPE
FOOTING	V401	100	#4	4-5	L
	V402	72		30-0	
	V403	330		5-0	
	V404	200		5-6	
	V405	150		5-11	
	V406	300		6-3	
	V407	128		5-6	
	V408	4		34-5	
	V409	54	#4	4-8	L
	V501	50	#5	3-3	L
	V502	25	#5	4-7	L
	V101	25	#7	6-3	L
	V702	25		6-11	L
	V703	25		5-3	L
	V704	25		5-7	L
	V705	25		5-3	L
	V706	34		6-0	L
	V707	34		6-4	L
	V708	34		6-5	L
	V709	34		6-8	L
	V710	68		6-9	L
	V711	34		6-7	L
	V714	34	#7	6-5	L

BILL OF MATERIALS

Class "X" Concrete	C.Y.	3657
Reinforcement Bars	LB.	19,750
Test Piles (Timber)	EA.	7
Furn. Cresoted Piles (Up to 90')	Lin. Ft.	4420
DRIVING TIMBER PILES	Lin. Ft.	4420
Class 'B' Excavation for Structures	C.Y.	547
8"ø Perf. C.M.P.	Lin. Ft.	554

PILE DATA

221 — 15 Ton Piles Estimated average Length = 20 Ft.
Test Pile indicated thus ⊗

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
&
CITY OF EAST ST. LOUIS

EAST ST. LOUIS EXPRESSWAY

RETAINING WALL "V"
DETAILS

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DATE: APRIL 1958 SHEET NO. 27

FILE NAME = DBTRI-76C52-sht-Wall-V_03.dgn	USER NAME = seersb	DESIGNED OP	REVISED -
		DRAWN OP	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED ATB	REVISED -
	PLOT DATE = 2/3/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN – WALL-V 03

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	490
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

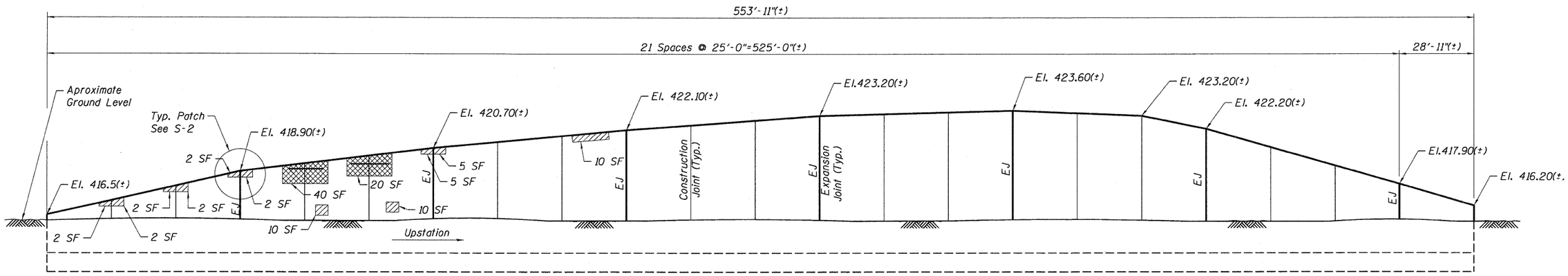
Existing Structure
Existing Retaining Wall "V" was constructed in 1959. Existing wall is cantilever T-type wall with reinforced concrete footing and stem. Existing concrete footing is supported on creosoted timber piles. Existing stem is 12" thick and the approximate length of wall is 553'-11".

INDEX OF SHEETS

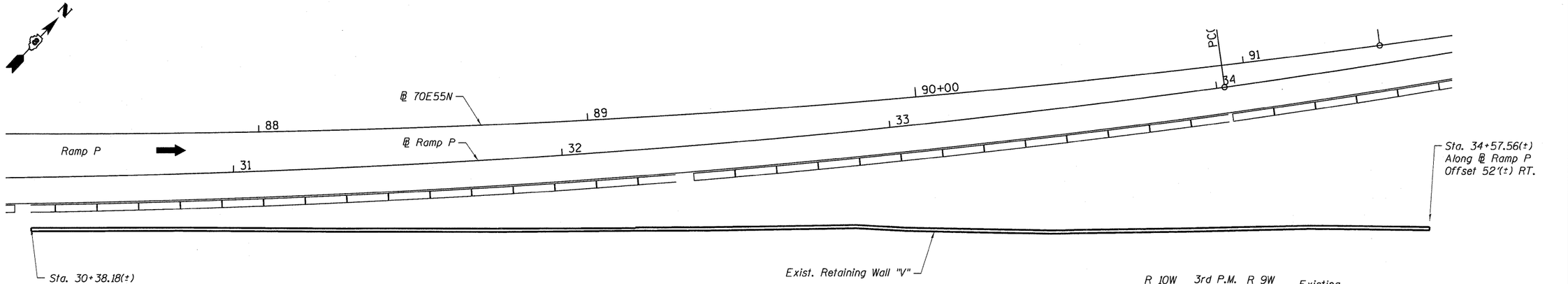
S-1 GENERAL PLAN, ELEVATION & BILL OF MATERIAL
S-2 GENERAL NOTES & TYPICAL SECTION

BILL OF MATERIAL

Items	Unit	Quantity
Structural repair of concrete (depth equal to or less than 5")	Sq Ft	52
Structural repair of concrete (depth greater than 5")	Sq Ft	60



ELEVATION
(Looking North)



PLAN

LEGEND

Area of structural repair of concrete (depth equal to or less than 5")

Area of structural repair of concrete (depth greater than 5")

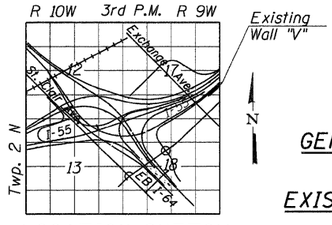
STATE OF ILLINOIS
AMISH T. BHATT
081-006249
LICENSED STRUCTURAL ENGINEER

Amish T. Bhatt

DATE: 1-18-2012
EXPIRES: 11-30-2012

SCOPE OF WORK

* Structural repair of retaining wall.



LOCATION SKETCH

GENERAL PLAN, ELEVATION & BILL OF MATERIAL EXISTING RETAINING WALL "V" F.A.I. RTE. 70/998 SECTION 82-1-R(B) ST. CLAIR COUNTY

FILE NAME = RW-V_76C52_S01_GP-01.dgn	USER NAME = searsb	DESIGNED	REVISED -
		DRAWN	REVISED -
	PLOT SCALE = 0.2 '' / in.	CHECKED	REVISED -
	PLOT DATE = 1/23/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
EXISTING RETAINING WALL "V"

SCALE: | SHEET NO. S-1 OF S-2 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	491
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES:

1. Wall repair locations are approximate and were determined from field inspection performed at the time of plan preparation. The necessary adjustments based on current field conditions will be made at time of construction. Such variations shall not be cause for additional compensation for a change in the scope of work. However, the Contractor will be paid for the actual quantity furnished at the unit price bid for the work.

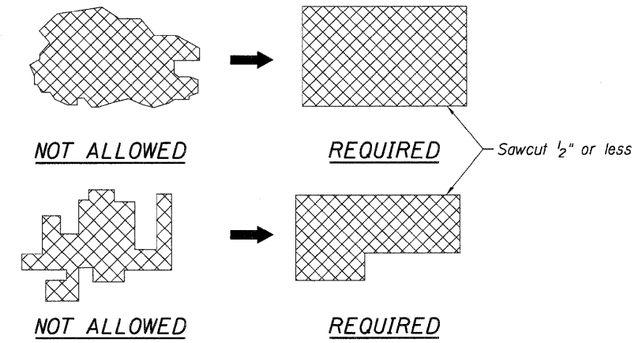
2. The Contractor shall remove all grass, weeds, tree limbs, bushes from the top of retaining wall, within limits as shown. Cost included with Structural Repair of Concrete.

3. All exposed concrete edges shall have $\frac{3}{4}$" x 45° chamfers except where shown otherwise. Chamfers on vertical edges where appropriate shall be continued a minimum of one foot below finished ground level.

4. Existing reinforcing steel which is exposed by the concrete removal process, but is to remain embedded in the existing structure and reused in the new concrete, shall be cleaned to be free of existing concrete and rust, and straightened if necessary. Existing reinforcing steel which is cut, stretched or damaged by the Contractor during the concrete removal process shall be replaced by embedded reinforcing steel or anchorage, equal to or greater than the size of original reinforcing steel, at no cost to the contract.

5. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

6. See Sheet No. 421 thru. 423 for existing wall "V" plans. The existing plans, however, may not show all modifications that have been made to the wall over the years. The completeness of these plans is not guaranteed and no responsibility is assumed by the IDOT for their accuracy.

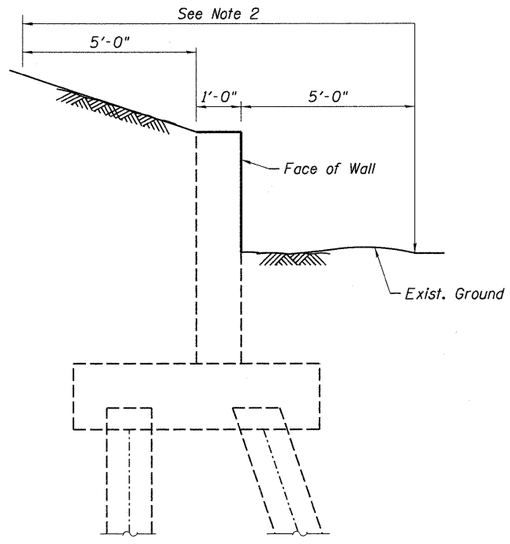


NOTES:

A. Do not feather edges.

B. Finish and color to match existing adjacent surfaces.

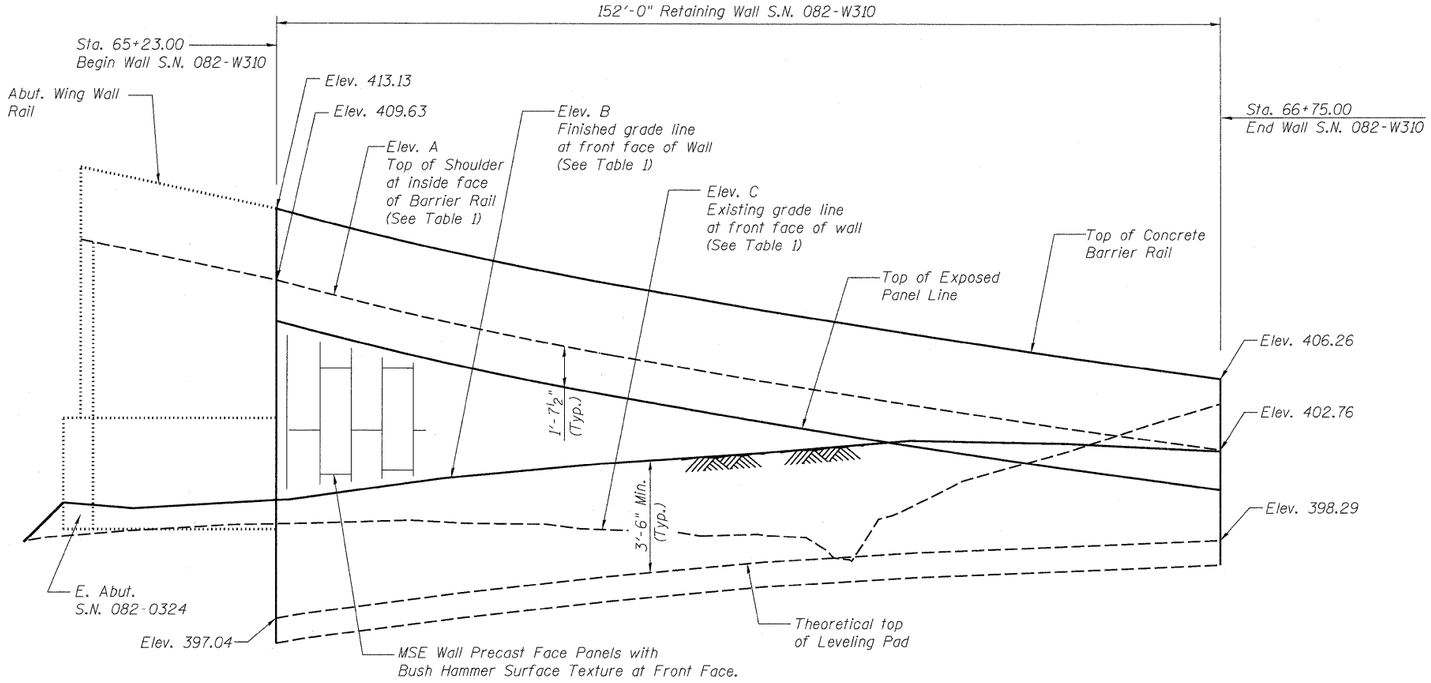
TYPICAL PATCH CONFIGURATIONS



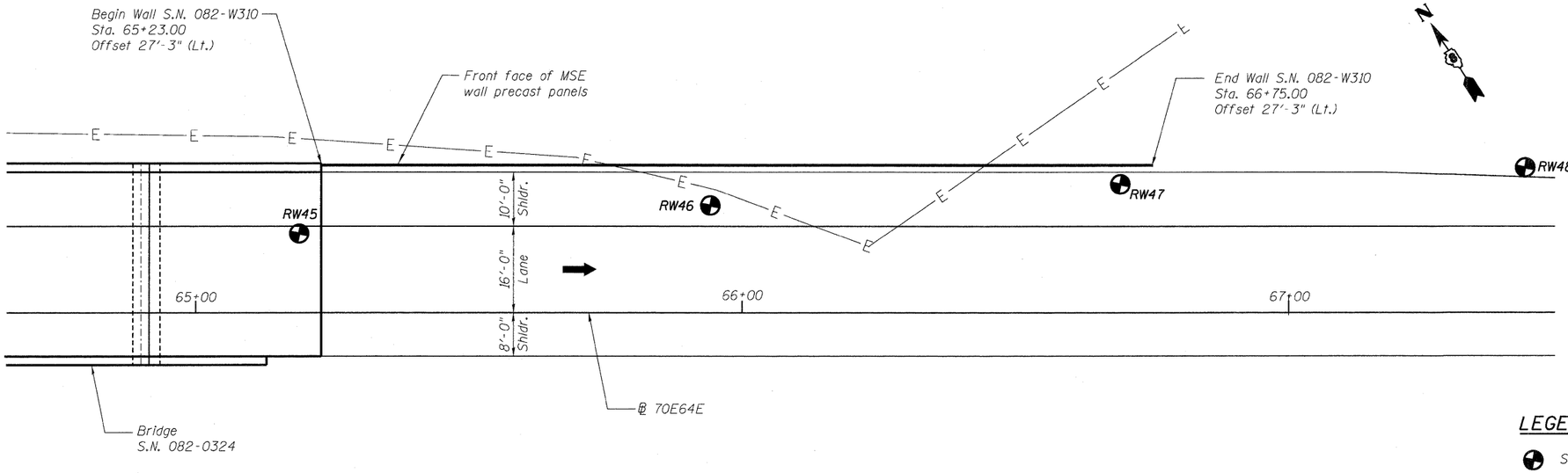
TYPICAL SECTION
(Looking Upstation)

FILE NAME = RW-V_76C52_S01_GP-02.dgn	USER NAME = searsb	DESIGNED	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & TYPICAL SECTION EXISTING RETAINING WALL "V"			F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN	REVISED -					•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	492
	PLOT SCALE = 0.2 '' / in.	CHECKED	REVISED -					• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/23/2012	DATE 1-20-12	REVISED -		SCALE:	SHEET NO. S-2 OF S-2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Bench Mark: Chiseled "square" on top of the crashwall along eastbound I-55/I-70 at the northeast corner of the St. Clair Avenue Bridge Pier, Elev. 397.22
Existing Structure: None



ELEVATION
(Looking North at back face of wall)



PLAN

SB91

LEGEND

- Soil Boring Location
- E — Existing Electrical Line

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DIPAL P. VIMAWALA
081-005766
LICENSED STRUCTURAL ENGINEER

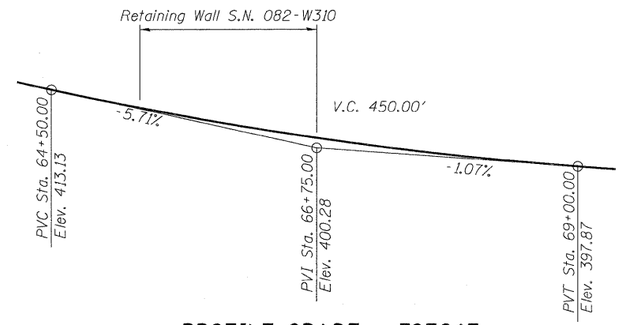
DATE: 1-18-2012
EXPIRATION DATE: 11-30-2012

DESIGN SPECIFICATIONS
2002 AASHTO - Load Factor Design

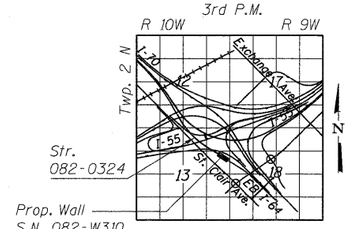
DESIGN STRESSES
f'c = 3,500 psi
f'c = 4,500 psi (Precast Panels)
fy = 60,000 psi (Reinforcement)

INDEX OF SHEETS:

1. General Plan & Elevation
2. General Notes & Bill of Material
3. Parapet & Anchorage Slab
4. Details
5. Soil Boring Logs



PROFILE GRADE - 70E64E



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. RTE. 70E & 64E
SECTION 82-1-R(A)
ST. CLAIR COUNTY
STA. 65+23.00 TO 66+75.00
STRUCTURE NO. 082-W310

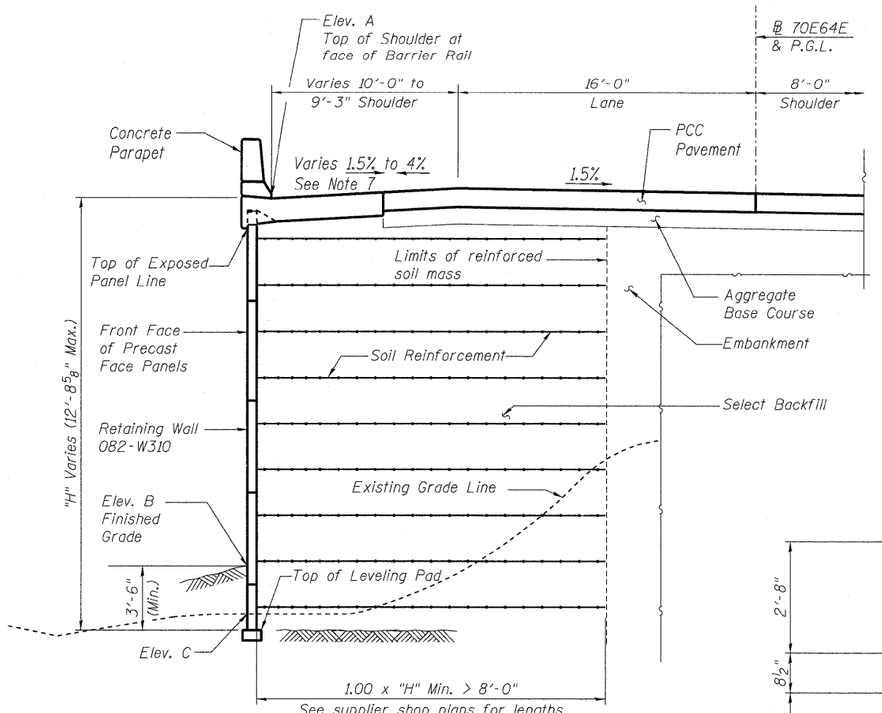
FILE NAME = 082-W310.76C52_S01_GPE.dgn	USER NAME = searsb	DESIGNED DEV	REVISED -
		DRAWN GF	REVISED -
	PLOT SCALE = 0:2.00000 '1' / in.	CHECKED ATB	REVISED -
	PLOT DATE = 1/23/2012	DATE JUNE 10, 2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RETAINING WALL 082-W310
GENERAL PLAN & ELEVATION

SCALE: N.T.S. | SHEET NO. S-1 OF S-5 SHEETS | STA. 65+23.00 TO STA. 66+75.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	493
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



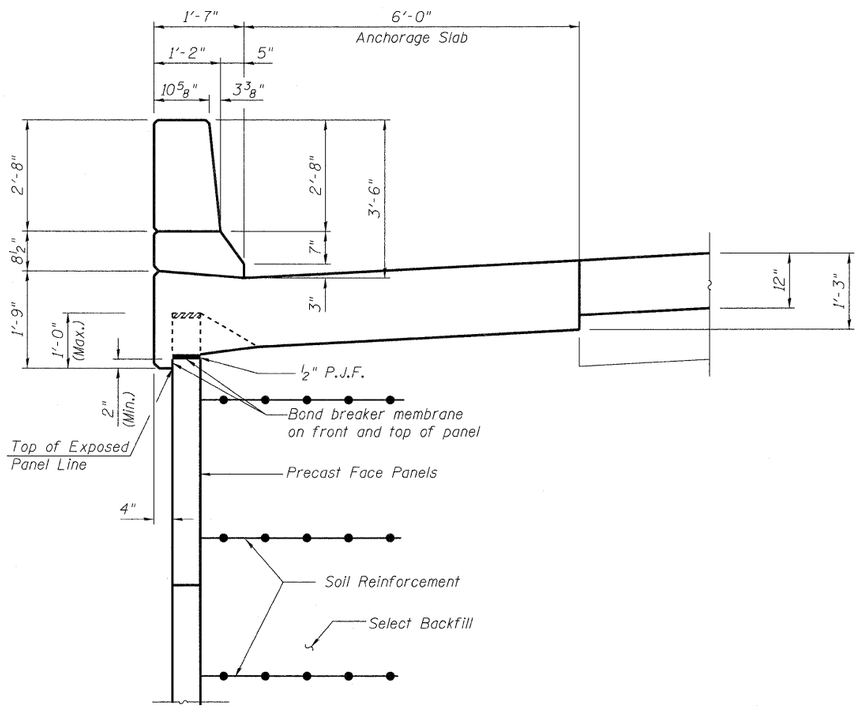
TYPICAL SECTION

N.T.S.
(Looking Upstation)

TABLE 1

Station	Offset at Front Face of Wall	Elevation A (feet)	Elevation B (feet)	Elevation C (feet)
65+23.00	27'-3" Lt.	409.63	400.54	399.70
65+25.00	27'-3" Lt.	409.52	400.55	399.69
65+50.00	27'-3" Lt.	408.19	400.71	399.78
65+75.00	27'-3" Lt.	406.93	401.30	399.49
66+00.00	27'-3" Lt.	405.73	401.87	399.30
66+25.00	27'-3" Lt.	404.59	402.13	400.41
66+50.00	27'-3" Lt.	403.62	402.23	402.63
66+75.00	27'-3" Lt.	402.76	401.79	404.60

Elev. A -Top of Shoulder at inside face of Barrier Rail
Elev. B -Finished grade line at front face of Wall
Elev. C -Existing grade line at front face of Wall



TYPICAL CROSS SECTION

N.T.S.

The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

GENERAL NOTES:

1. Station and offsets are measured from the Baseline of 70E64E to the front face of MSE wall panels.
2. All construction joints shall be bonded.
3. See Special Provision for Mechanically Stabilized Earth Retaining Wall design and construction requirements.
4. Design and construction of MSE wall must coordinate with removal of Temporary Soil Retention System in Contract 76C76. Limits of Temporary Soil Retention System are from Sta. 65+20.20 to Sta. 65+56.23 of the 70E64E alignment.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Slip forming of the parapets is not allowed.
7. Cross slope of north shoulder and anchorage slab varies from 1.5% downward south at Sta. 65+23.00 to 4.0% downward north at Sta. 66+33.00. Anchorage slab remains constant 6'-0" width.
8. Anchorage slab and parapet concrete shall be paid for as Concrete Superstructure.

TOTAL BILL OF MATERIAL

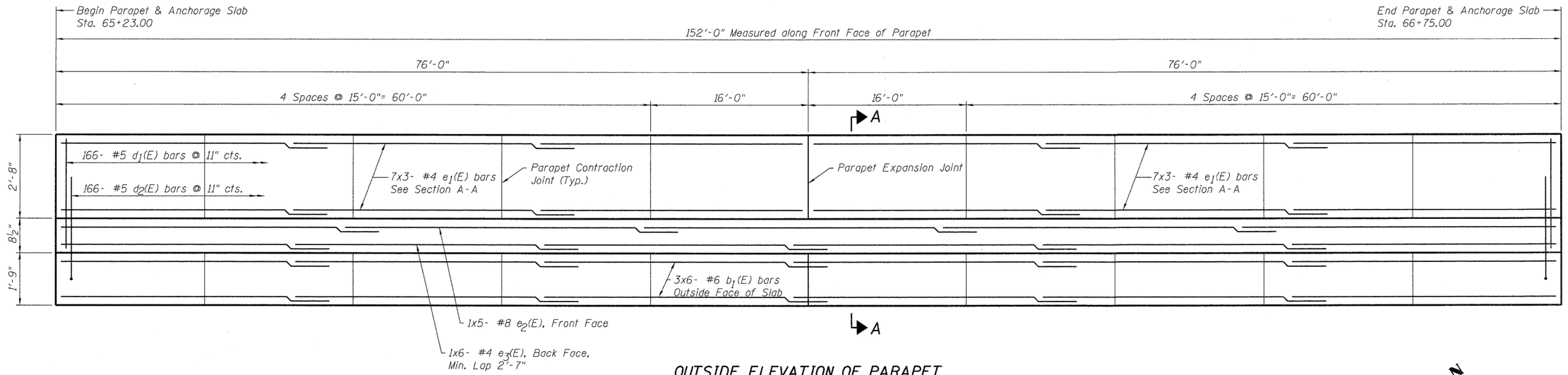
Pay Item	Unit	Total
Structure Excavation	Cu. Yd.	184
Concrete Superstructure	Cu. Yd.	74
Reinforcement Bars, Epoxy Coated	Pound	15,430
Protective Coat	Sq. Yd.	176
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	940
Name Plate	Each	1

STATION 65+23
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 64/998 SEC. 82-1-R(A)
LOADING HS-20
STRUCTURE NO. 082-W310

NAME PLATE S.N. 082-W310

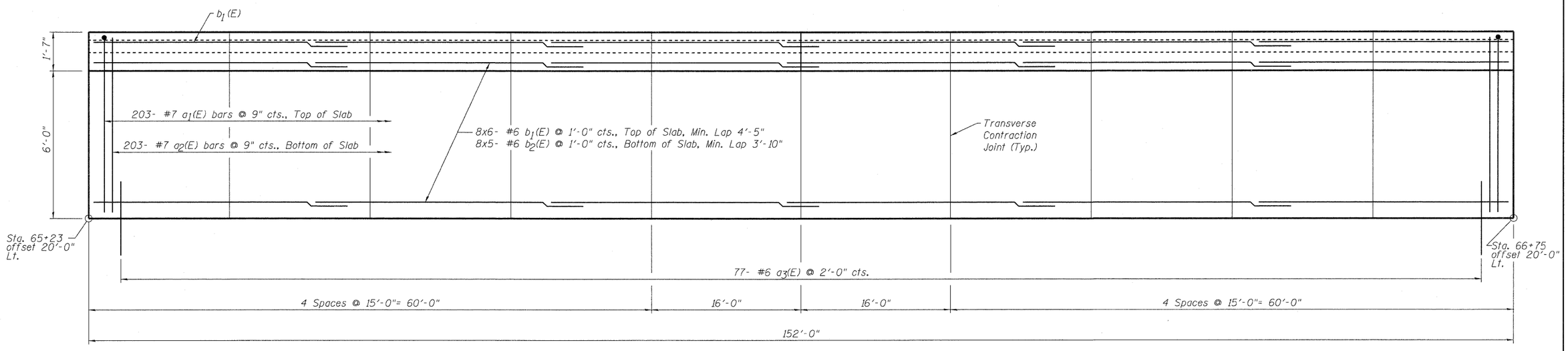
See Std. 515001

FILE NAME = 082-W310_76C52_S02_BOM.dgn	USER NAME = searsb	DESIGNED DEV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RETAINING WALL 082-W310 GENERAL NOTES & BILL OF MATERIAL	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN GF	REVISED -			•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	494
	PLOT SCALE = 0:2.00000 ':' / in.	CHECKED ATB	REVISED -			• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/23/2012	DATE JUNE 10, 2011	REVISED -		SCALE: N.T.S. SHEET NO. S-2 OF S-5 SHEETS STA. 65+23.00 TO STA. 66+75.00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



OUTSIDE ELEVATION OF PARAPET

(N.T.S.)



PLAN - PARAPET & ANCHORAGE SLAB

(N.T.S.)

MIN. BAR LAPS

(U.N.O.)

Bar	Length
#4	2'-11"
#6	4'-5"
#8	6'-9"

NOTES:

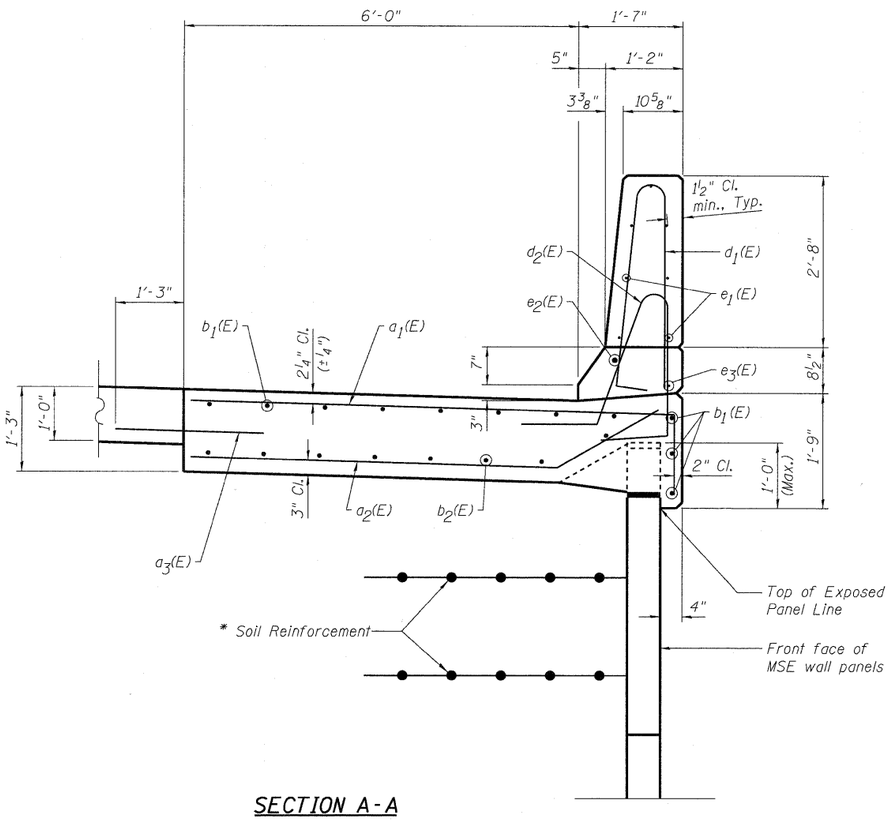
1. Optional full depth construction joints with ½" chamfers may be placed in anchorage slab and parapet at contraction joint location(s).
2. Bars indicated thus 7x6- #5 etc. indicates 7 lines of bars with 6 lengths per line.
3. For Section A-A see sheet S-4.

FILE NAME = 082-W310.76C52.S03.MomSlab.dgn	USER NAME = searsb	DESIGNED DEV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN GF	REVISED -	
	PLOT SCALE = 0:2.00000 '1' / in.	CHECKED ATB	REVISED -	
	PLOT DATE = 1/23/2012	DATE JUNE 10, 2011	REVISED -	

RETAINING WALL 082-W310
PARAPET & ANCHORAGE SLAB

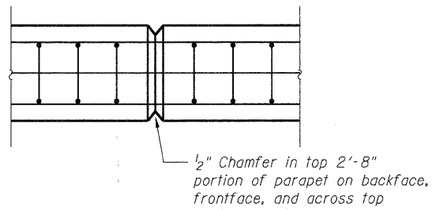
SCALE: N.T.S. | SHEET NO. S-3 OF S-5 SHEETS | STA. 65+23.00 TO STA. 66+75.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	495
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

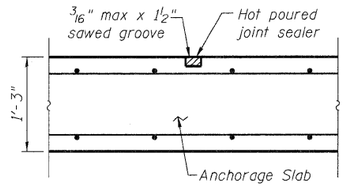


SECTION A-A

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

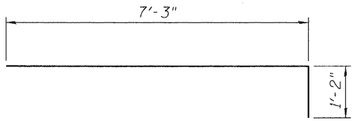


PARAPET CONTRACTION JOINT

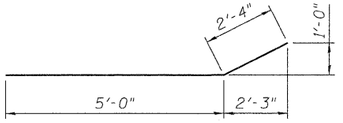


TRANSVERSE CONTRACTION JOINT

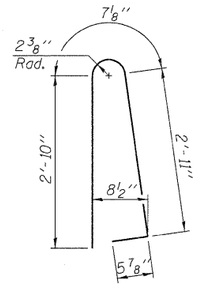
See Article 420.05 & 420.12 of the Standard Specifications



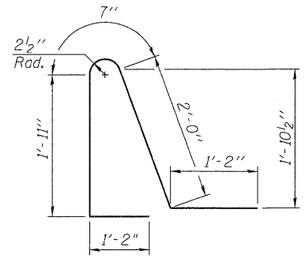
BAR a1(E)



BAR a2(E)



BAR d1(E)

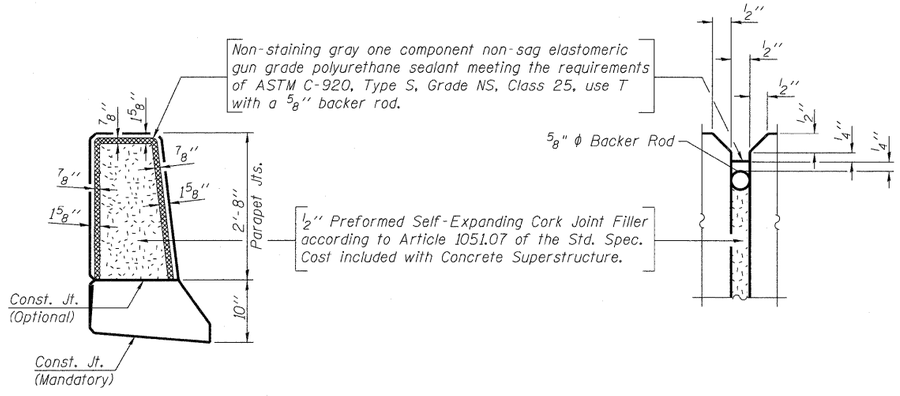


BAR d2(E)

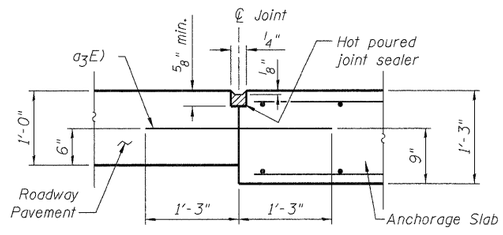
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	203	#7	8'-5"	
a2(E)	203	#7	7'-4"	
a3(E)	77	#6	2'-6"	
b1(E)	66	#6	29'-0"	
b2(E)	40	#6	33'-5"	
d1(E)	166	#5	6'-10"	
d2(E)	166	#5	6'-10"	
e1(E)	42	#4	27'-2"	
e2(E)	5	#8	35'-10"	
e3(E)	6	#4	27'-6"	

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	15,430
Concrete Superstructure	Cu. Yds.	74
Protective Coat	Sq. Yds.	176



PARAPET EXPANSION JOINT DETAILS



LONGITUDINAL CONSTRUCTION JOINT

See Article 420.05 & 420.12 of the Standard Specifications

FILE NAME = 082-W310_76C52_S04_Details.dgn	USER NAME = searsb	DESIGNED DEV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN GF	REVISED -	
	PLOT SCALE = 0:2.00000 '1' / in.	CHECKED ATB	REVISED -	
	PLOT DATE = 1/23/2012	DATE JUNE 10, 2011	REVISED -	

RETAINING WALL 082-W310 DETAILS

SCALE: N.T.S. | SHEET NO. S-4 OF S-5 SHEETS | STA. 65+23.00 TO STA. 66+75.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	496
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BORING NO. RW-45

Illinois Department of Transportation — Division of Highways, Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 3/29/02

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY KMP

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. RW-W310
Station NA

BORING NO. RW-45
Station 65+20
Offset 15ft left
Ground Surface Elev. 410.8 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 397.8 ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Brown, SILTY LOAM, with sand seams and crushed limestone gravel (FILL)
	1			
	3		25	
408.3	3			
				Medium stiff, brown, SILT
	1			
	2		34	
-5	3			
405.3				
				Medium stiff, gray and brown mottled, SILTY CLAY
	0			
	2		41	
402.8	3			
				Very soft to medium stiff, brown, SILT
	1			
	0		33	
-10	1			
	2			
	2		36	
397.8 ▼	3			
				Loose, gray, SANDY LOAM, with silt and silty clay seams
	3			
	4		19	
-15	3			
395.3				
				Loose, brown, FINE GRAINED SAND
	4			
	4			
	2			See Gradation Test Results
392.8				
				Soft to very soft, brown, SILT
	1			
	1		39	
-20	2			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Soft to very soft, brown, SILT *(continued)*
				See Gradation Test Results
388.8				Medium dense, brown, SANDY LOAM
	0			
	6			
	8			
-25	9			
	5			
	7			
	11			
				See Gradation Test Results
	8			
380.8	8			
-30	8			
				End of Boring
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING NO. RW-46

Illinois Department of Transportation — Division of Highways, Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 4/1/02

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY KMP

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. RW-W310
Station NA

BORING NO. RW-46
Station 65+95
Offset 20ft left
Ground Surface Elev. 403.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 394.9 ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Topsoil - 12 inches
402.4				
	2			Stiff to very soft, brown and gray, SILT, with fine grained sand seams
	4		20	
	5			
	2			
	3		26	
-5	2			
	1			
	0		24	
	2			
▼				
	2			
	2		26	
-10	2			
392.9				
	1			Medium stiff, gray, SILT
	0	0.8	42	
	1	S		
	0			
	2	0.8	44	
-15	3	S		
387.9				
	6			Medium dense, brown, FINE GRAINED SAND
	8			
	9			
	5			
	8			
-20	11			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
382.9				Medium dense, brown, SANDY LOAM
	4			
	5			
	7			See Gradation Test Results
	4			
	10			
-28	11			
377.4				
	4			Very loose to dense, gray, FINE GRAINED SAND
	6			
	7			
	0			
	2			
	2			
-30	2			See Gradation Test Results
	4			
	2			
	2			
	30			
	27			
-35	9			
	13			
	15			
363.4	16			See Gradation Test Results
-40				End of Boring

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)

BORING NO. RW-47

Illinois Department of Transportation — Division of Highways, Geotechnology, Inc

SOIL BORING LOG

Page 1 of 1

Date 4/1/02

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY KMP

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. RW-W310
Station NA

BORING NO. RW-47
Station 66+70
Offset 25ft left
Ground Surface Elev. 407.0 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft

Groundwater Elev.:
First Encounter 396.0 ft
Upon Completion ** ft
After ** Hrs. ** ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Topsoil - 12 inches
406.0				
	2			Medium stiff to soft, brown, SILT, with fine grained sand seams
	3		27	
	5			
	1			
	1	0.7	27	
-5	1	S		
	1			with silty clay seams from 6 to 7.5 feet
	1		44	
	2			
	2			
	2		26	
-10	2			
▼				
	1			
	1	0.5	45	
	1	S		See Gradation Test Results
394.0				
	2			Medium stiff, gray, SILTY CLAY
	1	0.6	61	
-15	2	S		
391.5				
	5			Medium dense, brown, SANDY LOAM
	7			
	9			
	4			with silt seams from 18.5 to 20 feet
	4			
-20	8			See Gradation Test Results

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
386.5				Medium dense, brown to gray, FINE GRAINED SAND
	6			
	7			
	9			
	6			
	7			
-25	8			
	7			
	11			
	12			See Gradation Test Results
	10			
	11			
377.0	14			
-30				End of Boring
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

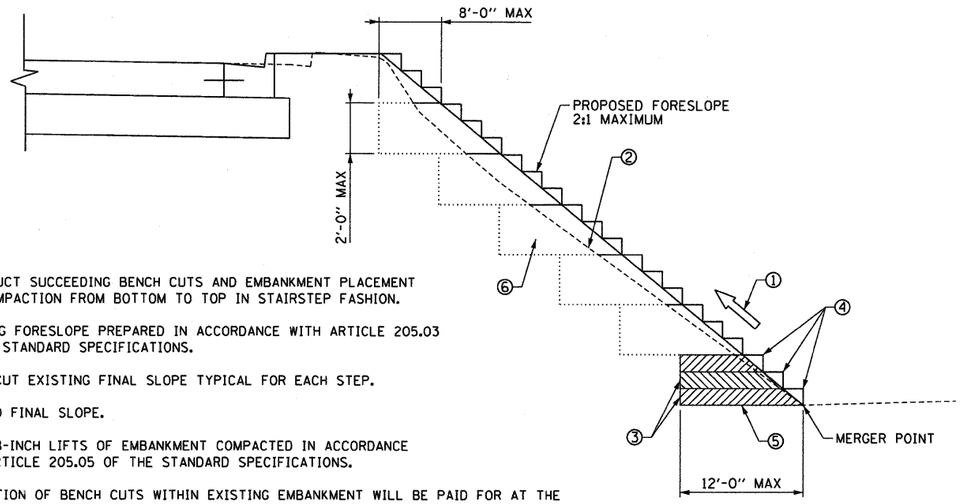
BBS, from 137 (Rev. 8-99)

FILE NAME = 082-W310_76C52_S05_BoringLog.dgn	USER NAME = seersb	DESIGNED DEV	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN GF	REVISED -	
	PLOT SCALE = 0:2.00000 '/ in.	CHECKED ATB	REVISED -	
	PLOT DATE = 1/23/2012	DATE JUNE 10, 2011	REVISED -	

RETAINING WALL 082-W310
SOIL BORING LOGS

SCALE: N.T.S. | SHEET NO. S-5 OF S-5 SHEETS | STA. 65+23.00 TO STA. 66+75.00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	497
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.

② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.

③ BENCH CUT EXISTING FINAL SLOPE TYPICAL FOR EACH STEP.

④ TRIM TO FINAL SLOPE.

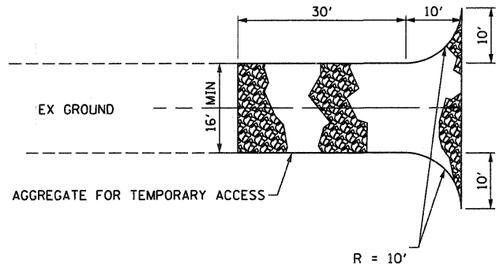
⑤ EQUAL 8-INCH LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.

⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5'.

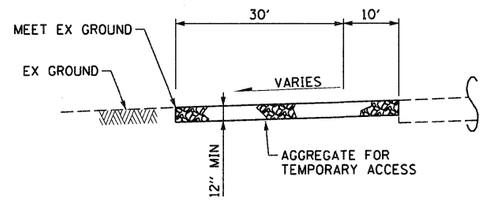
TYPICAL BENCHING DETAIL FOR EMBANKMENT

SCALE: NONE



PLAN VIEW

SCALE: NONE



PROFILE

SCALE: NONE

NOTES:

1. STONE

   A. AGGREGATE FOR TEMPORARY ACCESS
   B. LENGTH - AS REQUIRED, BUT NOT MORE THAN 30 FEET.
   C. THICKNESS - 12" MINIMUM

2. WIDTH - 16 FOOT MINIMUM FOR ONE WAY TRAFFIC; 24 FOOT MINIMUM FOR TWO WAY TRAFFIC; BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

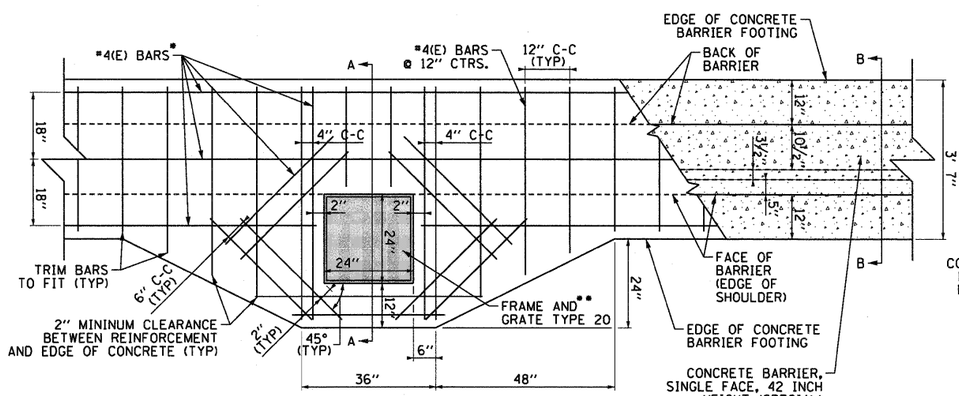
3. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY. THIS WILL BE INCLUDED IN THE COST OF THE CONTRACT.

4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER HEAVY USE AND EACH RAINFALL EVENT.

5. COST OF EARTH EXCAVATION USED TO CONSTRUCT THE CONSTRUCTION ENTRANCE SHALL BE INCLUDED IN THE UNIT PRICE FOR AGGREGATE FOR TEMPORARY ACCESS.

6. THE LOCATIONS AND DIMENSIONS OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE APPROVED BY THE ENGINEER.

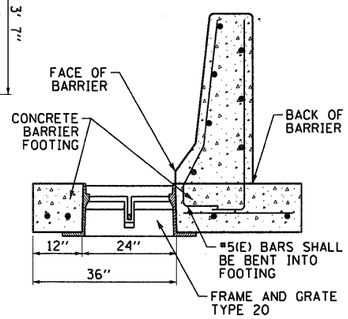
TYPICAL STABILIZED CONSTRUCTION ENTRANCE DETAIL (AGGREGATE FOR TEMPORARY ACCESS)



PLAN VIEW
TYPICAL DETAIL FOR CONCRETE BARRIER FOOTING TRANSITION AROUND DRAINAGE STRUCTURE

SCALE: NONE

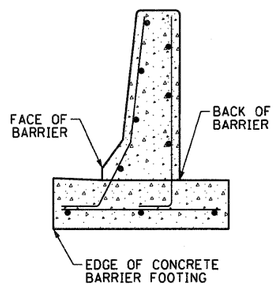
* *4(E) BARS ARE TO BE USED FOR ALL REINFORCEMENT IN THE CONCRETE BARRIER FOOTING.
** SEE PLANS FOR DRAINAGE STRUCTURE DETAILS AND LOCATIONS.
*** THE COST OF REINFORCEMENT AND FOOTING TRANSITION SHALL BE INCLUDED IN THE COST OF CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL).



SECTION A–A
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) AT DRAINAGE STRUCTURE

SCALE: NONE

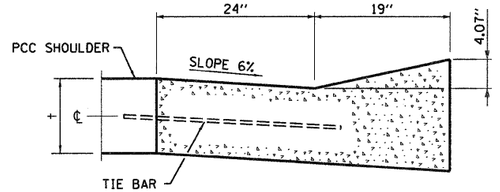
* 2" MINIMUM CLEARANCE BETWEEN REINFORCEMENT AND EDGE OF CONCRETE.
** SEE SHEET 499 OF 629 FOR DIMENSIONS AND REINFORCEMENT DETAILS.



SECTION B–B
CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL)

SCALE: NONE

* 2" MINIMUM CLEARANCE BETWEEN REINFORCEMENT AND EDGE OF CONCRETE.
** SEE SHEET 499 OF 629 FOR DIMENSIONS AND REINFORCEMENT DETAILS.



COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)

ALIGNMENT	FROM STA	TO STA	OFFSET
I-55 NB	64+50.00	67+12.88	RT
I-55 NB	69+57.16	73+75.20	RT
I-55 SB	74+96.57	78+25.00	RT
I-55 SB	84+43.23	85+75.00	LT
I-64 WB	98+56.82	101+54.87	RT
RAMP 64W70W / RAMP 64W55N	51+94.72	52+00.55	RT
RAMP 70E64E	69+02.73	69+27.79	RT
RAMP 70E64E / I-64 EB	70+31.41	35+85.00	RT
I-64 EB	39+01.00	42+00.12	RT
RAMP 64W55N	54+25.00	54+92.97	RT
RAMP 64W55N	55+94.04	56+75.00	RT
RAMP 64W55N	63+90.00	71+65.13	RT
RAMP 55N64E	58+73.85	63+11.92	RT

NOTES:

1. EXCEPT FOR DIMENSIONS OF CURB AND GUTTER SHOWN HERE, ALL OTHER DETAILS IN STANDARD 606001 SHALL APPLY.

2. UNLESS NOTED OTHERWISE, ALL COMBINATION CONCRETE CURB AND GUTTER SHALL BE "DEPRESSED".

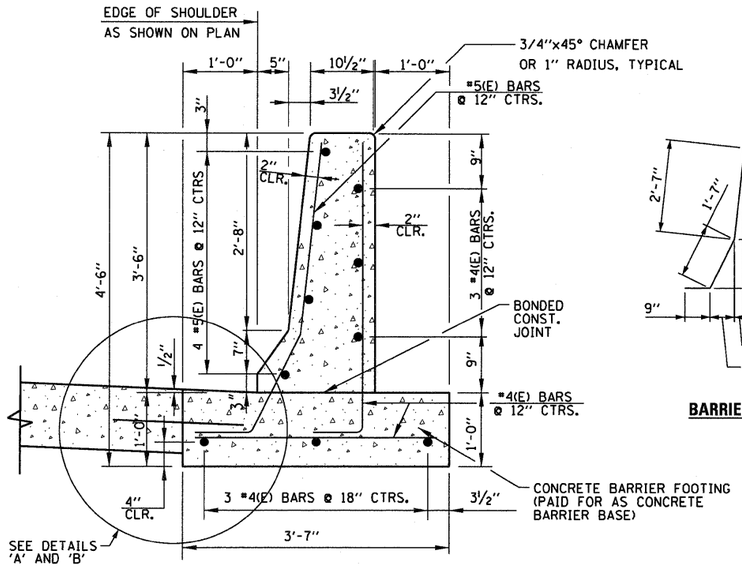
FILE NAME = DBTri-76C52-sht-details_01.dgn	USER NAME = searsb	DESIGNED OP	REVISED -
		DRAWN OP	REVISED -
	PLOT SCALE = 20.000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 1/24/2012	DATE 1-20-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 1 OF 26 SHEETS | STA. | TO STA.

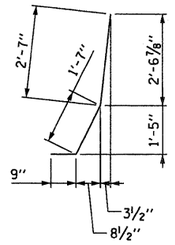
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	498
* 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



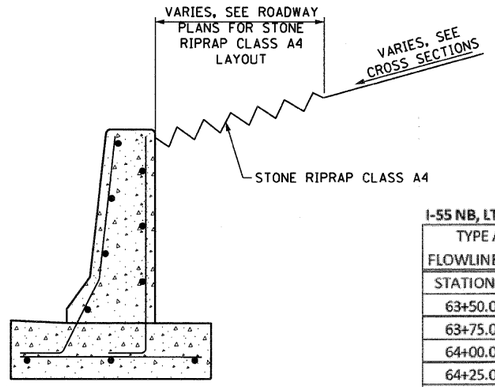
CONCRETE BARRIER, SINGLE FACE,
42 INCH HEIGHT (SPECIAL)

ALIGNMENT	FROM STA	TO STA	OFFSET RT OR LT
55N64E	62+82.71	64+70.00	LT
55N64E	64+58.92	66+70.67	RT
70E64E	66+75.00	66+85.00	LT
64W55S	120+09.49	120+73.23	RT
64W55S	128+81.65	131+56.95	RT
64W55N	60+36.65	61+00.00	LT
RAMP P	28+94.28	37+24.71	RT
55NB	68+13.60	69+57.16	RT

NOTE: DIMENSIONS AND REINFORCEMENT DETAILS APPLY TO ALL CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) SHOWN IN THE PLANS



BARRIER BARS



CONCRETE BARRIER, SINGLE FACE,
42 INCH HEIGHT (SPECIAL)
WITH STONE RIPRAP CLASS A4

ALIGNMENT	FROM STA	TO STA	OFFSET RT OR LT
64W55S	117+72.77	120+09.49	RT
64W70W	62+51.36	64+87.96	LT
55NB	67+12.87	68+13.60	RT
55NB	68+99.24	76+06.34	LT
55S64E	12+25.43	15+89.98	LT
64W55N	61+60.00	62+70.00	RT
RAMP P	24+75.25	25+70.87	RT

I-55 NB, LT

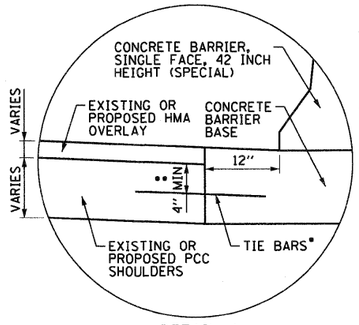
TYPE A GUTTER FLOWLINE ELEVATIONS	
STATION	ELEVATION
63+50.00	392.10
63+75.00	391.79
64+00.00	391.47
64+25.00	390.46
64+50.00	389.44
64+75.00	389.08
65+00.00	388.71
65+25.00	388.35
65+50.00	387.99
65+75.00	387.63
66+00.00	387.26
66+25.00	387.62
66+26.87	387.64

I-55 NB, LT

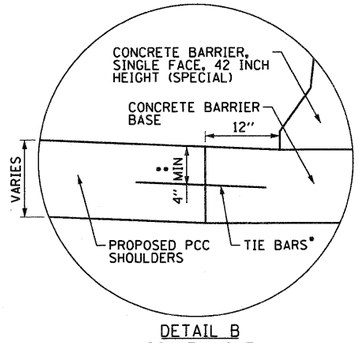
TYPE A GUTTER FLOWLINE ELEVATIONS	
STATION	ELEVATION
66+34.75	386.69
66+50.00	386.54
66+75.00	386.18
67+00.00	385.81
67+25.00	385.45
67+50.00	385.09
67+75.00	384.73
68+00.00	384.36
68+22.00	384.15
68+25.00	384.45
68+50.00	384.75
68+52.24	384.77

RAMP P, RT

TYPE A GUTTER FLOWLINE ELEVATIONS	
STATION	ELEVATION
26+14.00	410.27
26+25.00	410.22
26+50.00	410.09
26+75.00	409.97
27+00.00	409.84
27+05.00	409.81
27+25.00	410.27
27+50.00	410.87
27+75.00	411.47
28+00.00	412.07
28+25.00	412.67
28+50.00	413.27
28+75.00	413.87
28+94.28	414.34



DETAIL A
SCALE: NONE



DETAIL B
SCALE: NONE

- HORIZONTAL TIE BARS SHALL BE NO. 6 EPOXY COATED, 24" LONG, 24" C-C AND SHALL BE INCLUDED IN THE COST OF THE BARRIER BASE.
- •• THE TIE IN BETWEEN THE EXISTING OR PROPOSED SHOULDERS AND THE CONCRETE BARRIER BASE SHALL BE AT THE MIDDLE OF THE PCC SHOULDERS, OTHERWISE A MINIMUM OF 4" CLEARANCE FROM THE BOTTOM OF EXISTING OR PROPOSED OVERLAY SHALL BE PROVIDED AT THE TIE-IN.

64W55N, LT

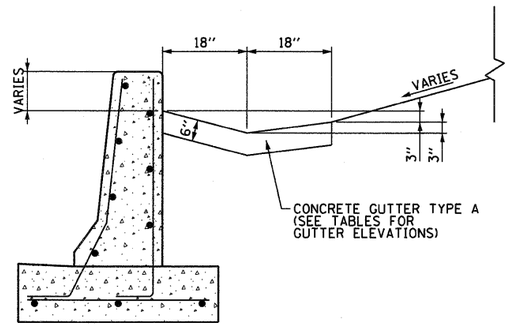
PAVED DITCH, TYPE A-15 FLOWLINE ELEVATIONS	
STATION	ELEVATION
59+41.51	403.71
59+50.00	403.41
59+60.00	403.11
59+70.00	402.81
59+80.00	402.51
59+90.00	402.21
60+00.00	401.91
60+10.00	401.61
60+20.00	401.31
60+25.00	401.16
60+30.00	401.19
60+36.65	401.22

RAMP 64W55N, RT

TYPE A GUTTER FLOWLINE ELEVATIONS	
STATION	ELEVATION
62+70.00	391.58
62+80.00	391.24
62+90.00	390.91
63+00.00	390.57
63+10.00	390.23
63+20.00	389.89
63+30.00	389.56
63+40.00	389.22
63+50.00	388.88
63+60.00	388.54
63+70.00	388.20
63+80.00	387.87
63+90.00	387.53

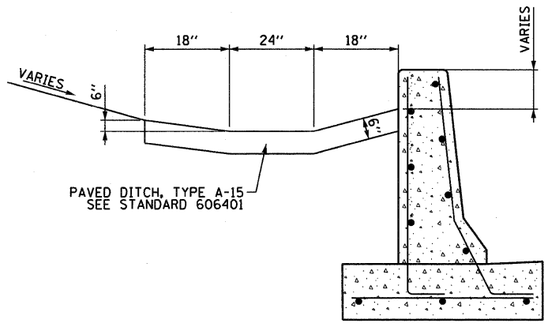
RAMP 64W55N, RT

TYPE A GUTTER FLOWLINE ELEVATIONS	
STATION	ELEVATION
61+00.00	394.46
61+02.00	394.42
61+10.00	394.51
61+20.00	394.63
61+30.00	394.74
61+40.00	394.85
61+50.00	394.98
61+60.00	395.08



CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT
(SPECIAL) WITH CONCRETE GUTTER TYPE A

ALIGNMENT	FROM STA	TO STA	OFFSET RT OR LT
55NB	63+50.00	66+26.87	LT
55NB	66+34.75	68+52.24	LT
64W55N	61+00.00	61+60.00	RT
64W55N	62+70.00	63+90.00	RT
RAMP P	26+14.00	28+94.28	RT



CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT
(SPECIAL) WITH PAVED DITCH, TYPE A-15

ALIGNMENT	FROM STA	TO STA	OFFSET RT OR LT
64W55N	59+41.51	60+36.65	LT

NOTES:

1. DIMENSIONS AND REINFORCEMENT DETAILS APPLY TO ALL CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL) (SPECIAL) SHOWN IN THE PLANS
2. THERE SHALL BE A MINIMUM 6" OVERLAP BETWEEN CONCRETE THICKNESS IN BARRIER WALL BASE AND CONCRETE THICKNESS IN ADJACENT SHOULDER TO PROVIDE ADEQUATE CONCRETE ABOVE AND BELOW THE TIE BAR.
3. TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
4. CONCRETE BARRIER FOOTING SHALL EXTEND 1' INTO THE SHOULDER AND THE FACE OF BARRIER SHALL BE CONSIDERED THE EDGE OF SHOULDER.
5. CONTRACTION AND EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH ARTICLE 637.08 OF THE STANDARD SPECIFICATIONS.
6. REINFORCING BARS SHALL MEET THE REQUIREMENTS OF AASHTO M31 (ASTM A615), GRADE 60, AND SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
7. REINFORCING BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
8. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ", ACI 315, LATEST EDITION.
9. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
10. ¾" PREFORMED JOINT FILLER SHALL BE USED WHERE CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT MEETS CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL). PAYMENT SHALL BE INCLUDED IN COST OF CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT

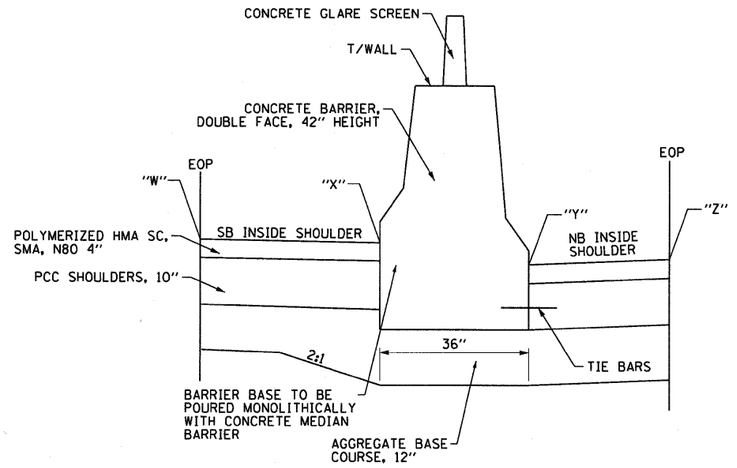
FILE NAME = D8Tr1-76C52-sht-details_02.dgn	USER NAME = searsb	DESIGNED CRH	REVISED -
		DRAWN CRH	REVISED -
	PLOT SCALE = 20.000 ' / in.	CHECKED DBM	REVISED -
	PLOT DATE = 1/24/2012	DATE 1-2012-12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

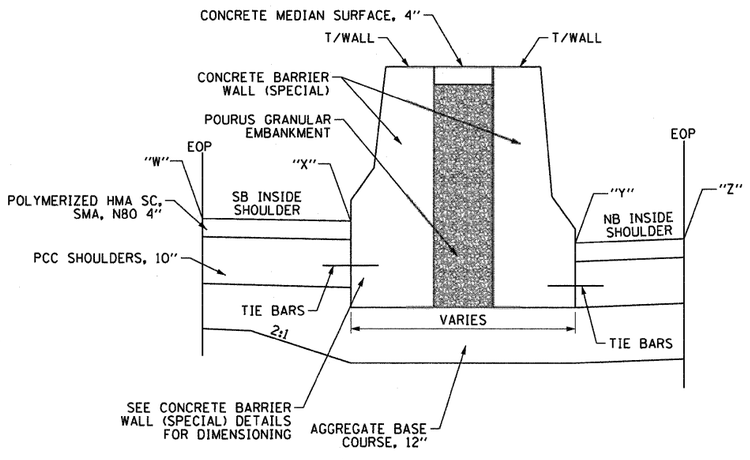
SCALE: NONE | SHEET NO. 2 OF 26 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	499
• 64/998/70		CONTRACT NO. 76C52		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT

SCALE: NONE



CONCRETE BARRIER WALL (SPECIAL) AROUND EXCHANGE AVENUE BRIDGE PIER

SCALE: NONE

DOUBLE FACE BARRIER WALL AND EDGE OF SHOULDER ELEVATIONS AND OFFSETS (I-55)

	I-55 NB Station	W		X		Y		Z		T/WALL
		EL.	O/S	EL.	O/S	EL.	O/S	EL.	O/S	EL.
	BEGIN CONCRETE BARRIER TRANSITION									
*	76+09.86	391.35	-19.01	391.19	-15.01	390.77	-10.00	391.17	0.00	394.69
*	76+25.00	391.51	-18.34	391.35	-14.34	390.96	-10.00	391.36	0.00	394.85
*	76+50.00	391.80	-17.40	391.64	-13.40	391.28	-10.00	391.68	0.00	395.14
	END CONCRETE BARRIER TRANSITION AND BEGIN CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT									
*	76+62.91	391.95	-17.00	391.79	-13.00	391.44	-10.00	391.84	0.00	395.29
	76+75.00	392.11	-16.68	391.95	-12.67	391.61	-9.67	392.00	0.00	395.45
	77+00.00	392.59	-16.15	392.43	-12.15	391.94	-9.15	392.31	0.00	395.93
	77+25.00	393.13	-15.84	392.97	-11.84	392.31	-8.84	392.66	0.00	396.47
	77+50.00	393.83	-15.73	393.67	-11.73	392.70	-8.73	393.05	0.00	397.17
	77+75.00	394.28	-15.82	394.12	-11.82	393.15	-8.82	393.50	0.00	397.62
	78+00.00	394.82	-16.13	394.66	-12.13	393.66	-9.13	394.03	0.00	398.16
	78+25.00	395.41	-16.44	395.25	-12.44	394.23	-9.44	394.61	0.00	398.75
	78+50.00	396.09	-16.62	395.93	-12.62	394.89	-9.62	395.27	0.00	399.43
	END CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT AND BEGIN CONCRETE BARRIER TRANSITION									
*	78+73.06	396.63	-16.66	396.47	-12.66	395.54	-9.66	395.93	0.00	399.97
*	78+75.00	396.68	-16.65	396.52	-12.67	395.60	-9.65	395.99	0.00	400.02
*	79+00.00	397.51	-16.55	397.36	-12.84	396.43	-9.43	396.81	0.00	400.98
*	79+25.00	398.29	-16.30	398.16	-12.98	397.33	-8.86	397.68	0.00	401.91
	BEGIN CONCRETE BARRIER WALL (SPECIAL) USED AROUND EXCHANGE AVENUE BRIDGE PIER. (SEE ROADWAY DETAIL)									
*	79+26.26	398.34	-16.28	398.21	-12.99	397.38	-8.82	397.73	0.00	401.96
	79+50.00	399.29	-15.91	399.18	-13.09	398.30	-7.94	398.62	0.00	402.93
	79+75.00	400.31	-15.62	400.21	-13.16	399.27	-6.68	399.54	0.00	403.96
	79+76.68	400.38	-15.63	400.28	-13.16	399.34	-6.58	399.60	0.00	404.03
	80+00.00	401.27	-15.72	401.16	-13.06	400.25	-6.48	400.51	0.00	404.91
	80+15.92	401.87	-15.76	401.75	-12.82	400.88	-6.24	401.13	0.00	405.50
	80+25.00	402.20	-15.78	402.08	-12.85	401.20	-6.70	401.47	0.00	405.83
	80+50.00	403.11	-15.82	402.99	-12.70	402.10	-7.75	402.41	0.00	406.74
	END CONC BAR WALL SPL USED AROUND EXCHANGE AVE BRIDGE PIER AND BEGIN CONC BAR TRANS. (SEE ROADWAY DETAIL)									
*	80+51.14	403.15	-15.82	403.02	-12.69	402.15	-7.79	402.46	0.00	406.77
	END CONC BAR TRANS AT SIGN STRUCTURE FOUNDATION. (SEE ROADWAY DETAIL)									
*	80+61.20	404.05	-15.82	403.91	-12.43	403.02	-8.22	403.35	0.00	407.41
	END SIGN STRUCTURE FOUNDATION AND BEGIN CONC BAR TRANS . (SEE ROADWAY DETAIL)									
*	80+72.51	403.95	-15.82	403.82	-12.52	402.94	-8.11	403.26	0.00	407.32
*	80+75.00	404.05	-15.82	403.91	-12.43	403.02	-8.22	403.35	0.00	407.41
	END CONCRETE BARRIER TRANSITION AND BEGIN CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT									
*	80+89.29	404.58	-15.81	404.42	-11.81	403.54	-8.81	403.89	0.00	407.92
	81+00.00	404.97	-15.79	404.81	-11.79	403.94	-8.79	404.29	0.00	408.31
	81+25.00	405.89	-15.73	405.73	-11.73	404.86	-8.73	405.21	0.00	409.23
	81+50.00	406.76	-15.65	406.60	-11.65	405.76	-8.65	406.11	0.00	410.10
	81+75.00	407.54	-15.53	407.38	-11.53	406.69	-8.53	407.03	0.00	410.88
	82+00.00	408.26	-15.40	408.10	-11.40	407.65	-8.40	407.99	0.00	411.60
	82+25.00	409.20	-15.26	409.04	-11.26	408.62	-8.26	408.95	0.00	412.54
	82+50.00	410.49	-15.11	410.33	-11.11	409.57	-8.11	409.89	0.00	413.83
	82+75.00	411.69	-14.94	411.53	-10.94	410.50	-7.94	410.82	0.00	415.03
	83+00.00	412.64	-14.76	412.48	-10.76	411.45	-7.76	411.76	0.00	415.98
	83+25.00	413.55	-14.57	413.39	-10.57	412.40	-7.57	412.70	0.00	416.89
	83+50.00	414.46	-14.37	414.30	-10.37	413.36	-7.37	413.65	0.00	417.80
	83+75.00	415.35	-14.15	415.19	-10.15	414.30	-7.15	414.59	0.00	418.69
	84+00.00	416.27	-13.92	416.11	-9.92	415.20	-6.92	415.48	0.00	419.61
	84+25.00	417.26	-13.67	417.10	-9.67	416.13	-6.67	416.40	0.00	420.60
	84+50.00	418.30	-13.42	418.14	-9.42	417.08	-6.42	417.34	0.00	421.64
	84+75.00	419.33	-13.15	419.17	-9.15	418.04	-6.15	418.29	0.00	422.67
	85+00.00	420.24	-12.87	420.08	-8.87	419.01	-5.87	419.24	0.00	423.58
	85+25.00	421.17	-12.58	421.01	-8.58	419.95	-5.58	420.17	0.00	424.51
	85+50.00	422.14	-12.27	421.98	-8.27	420.85	-5.27	421.06	0.00	425.48
	85+75.00	423.12	-11.95	422.96	-7.95	421.78	-4.95	421.98	0.00	426.46
	86+00.00	424.08	-11.62	423.92	-7.62	422.75	-4.62	422.93	0.00	427.42

I-55 NB Station	W		X		Y		Z		T/WALL
	EL.	O/S	EL.	O/S	EL.	O/S	EL.	O/S	EL.
86+25.00	425.02	-11.28	424.86	-7.28	423.72	-4.28	423.89	0.00	428.36
86+50.00	425.96	-10.93	425.80	-6.98	424.69	-3.98	424.85	0.00	429.30
86+75.00	426.87	-10.56	426.72	-6.85	425.59	-3.85	425.74	0.00	430.22
87+00.00	427.74	-10.18	427.60	-6.71	426.47	-3.71	426.62	0.00	431.10
87+25.00	428.56	-9.79	428.43	-6.55	427.39	-3.55	427.53	0.00	431.93
87+50.00	429.36	-9.39	429.24	-6.38	428.29	-3.38	428.43	0.00	432.74
END CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT AND BEGIN CONCRETE BARRIER TRANSITION									
87+70.00	429.94	-9.06	429.83	-6.23	429.02	-3.23	429.15	0.00	433.33
87+75.00	430.09	-8.97	429.98	-6.33	429.21	-3.04	429.33	0.00	433.48
END CONC BAR TRANS AT SIGN STRUCTURE FOUNDATION. (SEE ROADWAY DETAIL)									
87+94.37	430.64	-8.65	430.56	-6.63	429.94	-2.22	430.03	0.00	434.06
END SIGN STRUCTURE FOUNDATION AND BEGIN CONC BAR TRANS . (SEE ROADWAY DETAIL)									
88+05.64	430.98	-8.46	430.91	-6.63	430.37	-2.22	430.46	0.00	434.41
END CONCRETE BARRIER TRANSITION AND BEGIN CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT									
88+19.87	431.44	-8.24	431.34	-5.84	430.89	-2.84	431.00	0.00	434.84
88+25.00	431.60	-8.16	431.51	-5.80	431.08	-2.80	431.19	0.00	435.01
88+50.00	432.38	-7.78	432.29	-5.63	432.02	-2.63	432.13	0.00	435.79
88+75.00	433.22	-7.37	433.14	-5.47	432.96	-2.47	433.06	0.00	436.64
89+00.00	434.08	-7.03	434.01	-5.33	433.89	-2.33	433.98	0.00	437.51
89+25.00	434.93	-6.76	434.87	-5.20	434.76	-2.20	434.85	0.00	438.37
89+50.00	435.85	-6.57	435.79	-5.09	435.63	-2.09	435.71	0.00	439.29
89+75.00	436.75	-6.45	436.69	-4.99	436.61	-1.99	436.69	0.00	440.19
90+00.00	437.69	-6.41	437.63	-4.90	437.59	-1.90	437.67	0.00	441.13
END CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT AND BEGIN CONCRETE BARRIER TRANSITION									
90+07.93	437.97	-6.41	437.91	-4.88	437.88	-1.88	437.96	0.00	441.41
END CONC BAR TRANS AT SIGN STRUCTURE FOUNDATION. (SEE ROADWAY DETAIL)									
90+25.24	438.64	-6.44	438.60	-5.54	438.62	-1.12	438.66	0.00	442.12
END SIGN STRUCTURE FOUNDATION AND BEGIN CONC BAR TRANS . (SEE ROADWAY DETAIL)									
90+37.26	439.09	-6.49	439.05	-5.54	439.09	-1.12	439.13	0.00	442.59
90+50.00	439.55	-6.33	439.49	-4.83	439.58	-1.61	439.64	0.00	443.08
END CONCRETE BARRIER TRANSITION AND BEGIN CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT									
90+52.28	439.63	-6.33	439.56	-4.69	439.66	-1.69	439.73	0.00	443.16
90+75.00	440.42	-6.29	440.36	-4.68	440.45	-1.68	440.52	0.00	443.95
END CONCRETE BARRIER, DOUBLE FACE, 42 INCH HEIGHT AND BEGIN CONCRETE BARRIER TRANSITION									
90+93.84	441.08	-6.24	441.02	-4.64	441.10	-1.76	441.16	-0.16	444.60
91+00.00	441.31	-6.23	441.24	-4.51	441.30	-1.85	441.37	-0.14	444.80
91+03.84	MATCH EXISTING (SEE ROADWAY DETAIL)								

•ELEVATIONS AND OFFSETS LOCATED AT EXISTING SIGN FOUNDATION OR PIER TRANSITIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

NOTES:

1. SEE IDOT HIGHWAY STANDARD 637006 FOR CONCRETE BARRIER, DOUBLE FACE, 42" HEIGHT DIMENSIONS. FOR VARIABLE SHOULDER ELEVATIONS MAINTAIN A 36" WIDTH AND ADJUST THE ANGLE OF THE BARRIER FACE ON THE LOW SIDE OF THE SHOULDER.
2. TWO VERTICAL EPOXY COATED, NO. 6 TIE BARS, 12" LONG, SHALL BE PLACED AT EQUIDISTANT SPACING ALONG THE CONCRETE BARRIER TRANSITION. TIE BARS SHALL BE INCLUDED IN THE COST OF CONCRETE BARRIER TRANSITION.
3. HORIZONTAL TIE BARS SHALL BE NO. 6 EPOXY COATED, 24" LONG, 24" C-C AND SHALL BE INCLUDED IN THE COST OF THE BARRIER BASE.

FILE NAME = DBTri-76C52-sht-details_03.dgn	USER NAME = searsb	DESIGNED CRH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ROADWAY DETAILS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN CRH	REVISED -			•	82-1-R(A), 82-1-R(B)	ST. CLAIR	629	500
	PLOT SCALE = 20.000 ' / in.	CHECKED DBM	REVISED -			• 64/998/70		CONTRACT NO. 76C52		
	PLOT DATE = 1/24/2012	DATE 1-20-12	REVISED -		SCALE: NONE SHEET NO. 3 OF 26 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		