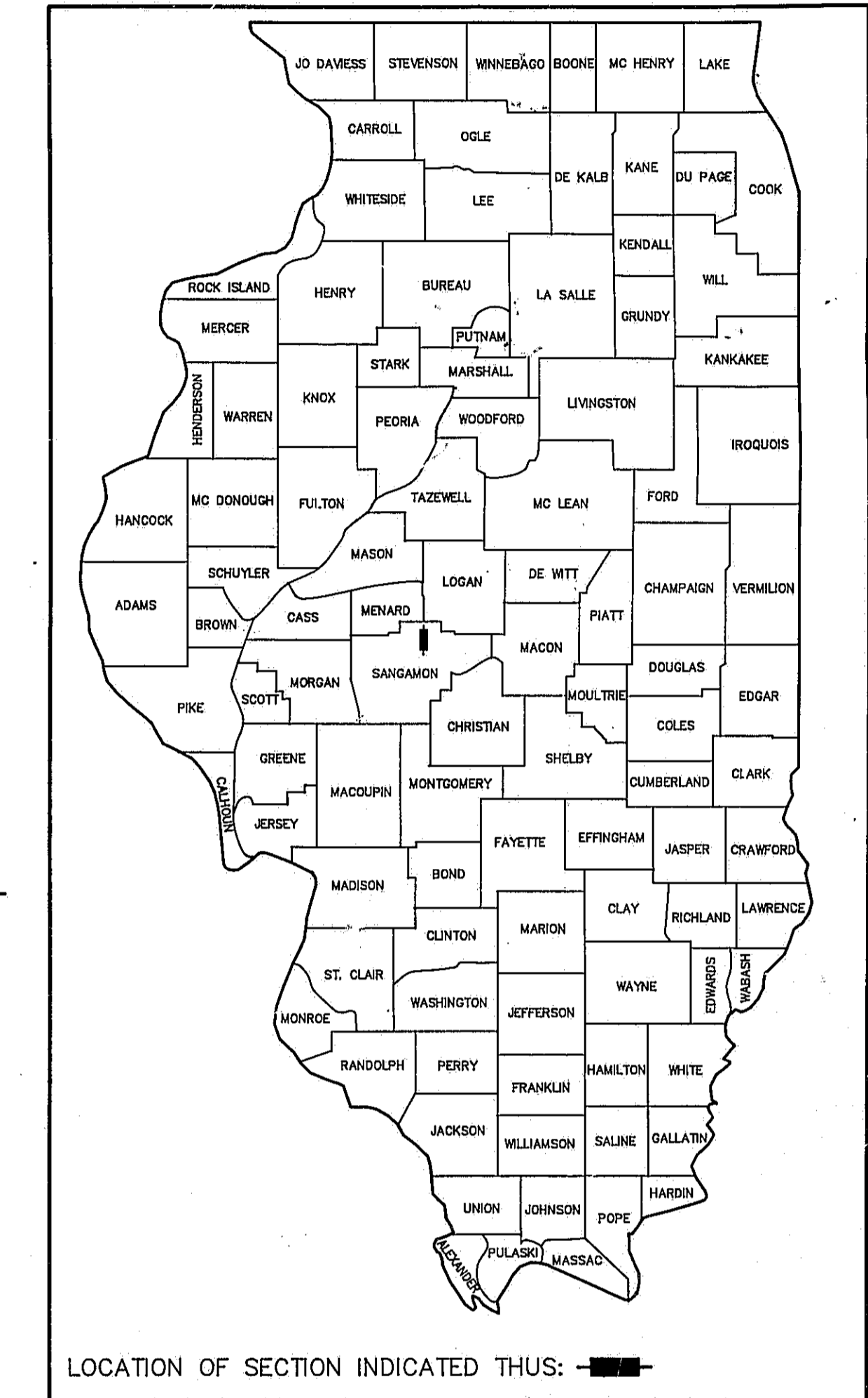


# 1992 Bridge Widening Plans

## STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

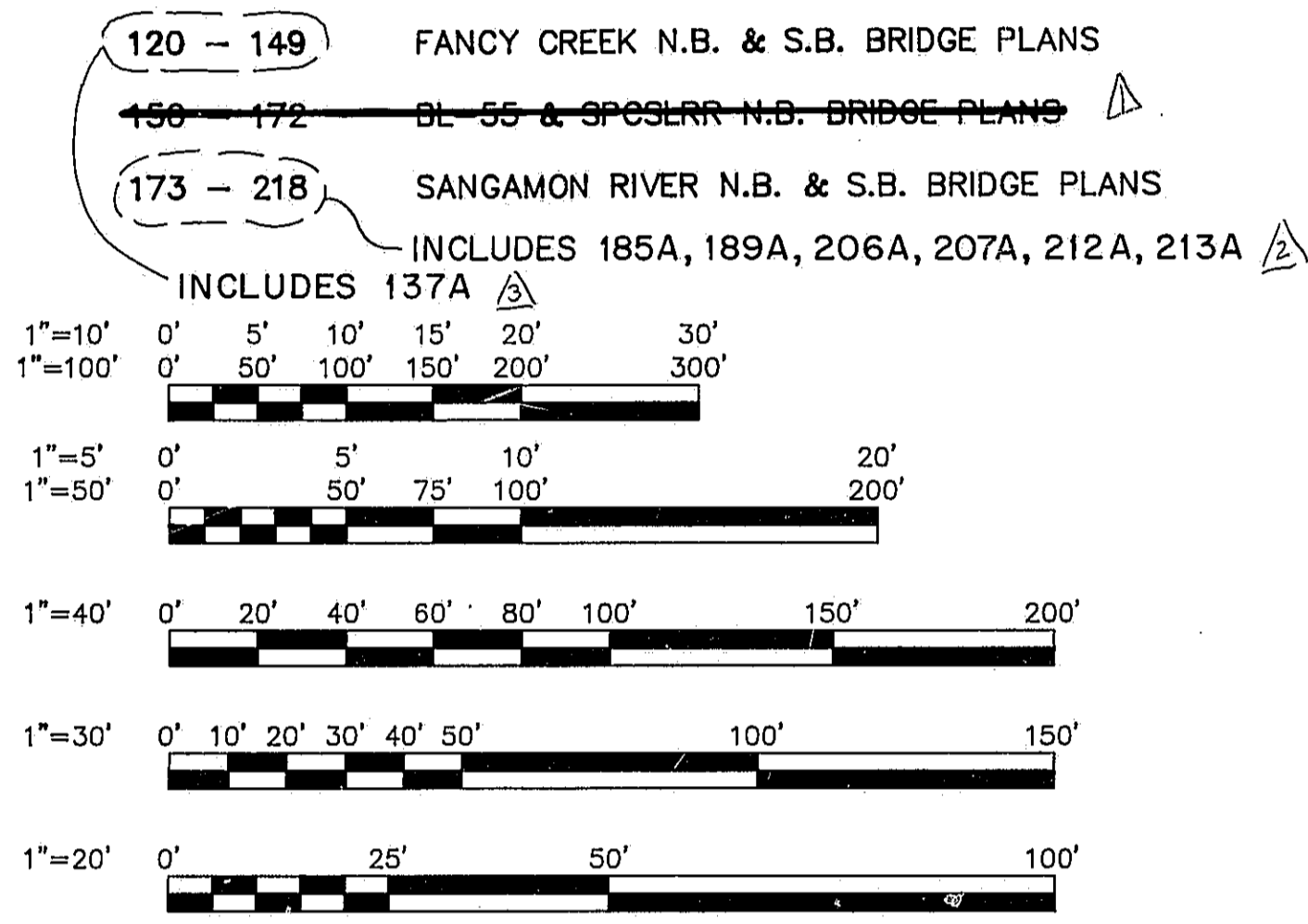
**F.A.I. ROUTE 55  
SECTION 84-2 (BR-1, HVBR-2, BR-2)  
PROJECT NHI-55-3(121)106  
SANGAMON COUNTY  
C-96-517-92**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	SANGAMON	218	18
STA.		TO STA.		
FORMA. REGION 4		LARGE PROJECT NHI-55-3(121)106		
* 84-2 (BR-1, HVBR-2, BR-2)				
JOB NO. D-96-508-91				



### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
(18)	COVER SHEET
2 - 7	TYPICAL SECTIONS
8 - 10	SUMMARY OF QUANTITIES
11	SCHEDULE OF QUANTITIES
12 - 23	PLAN AND PROFILE - BRIDGE APPROACHES
24 - 30	PLAN AND PROFILE - CROSSOVERS
31 - 32	PLAN AND PROFILE - CONST. ACCESS ROADS
33 - 44	MAINTENANCE OF TRAFFIC DETAILS
44A	PAVEMENT ELEVATION AND PAVEMENT MARKING DETAILS
45 - 50	PAVEMENT DETAILS
51 - 52	LIGHTING DETAILS
53 - 119	CROSS SECTIONS
120 - 149	FANCY CREEK N.B. & S.B. BRIDGE PLANS
150 - 172	OL-55 & SPOSLER N.B. BRIDGE PLANS
173 - 218	SANGAMON RIVER N.B. & S.B. BRIDGE PLANS



FULL SCALE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS THE ABOVE SCALES MAY BE USED.

**THE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (J.U.L.I.E.) SYSTEM PHONE NUMBER IS (800) 892-0123.**

#### STANDARD DRAWINGS

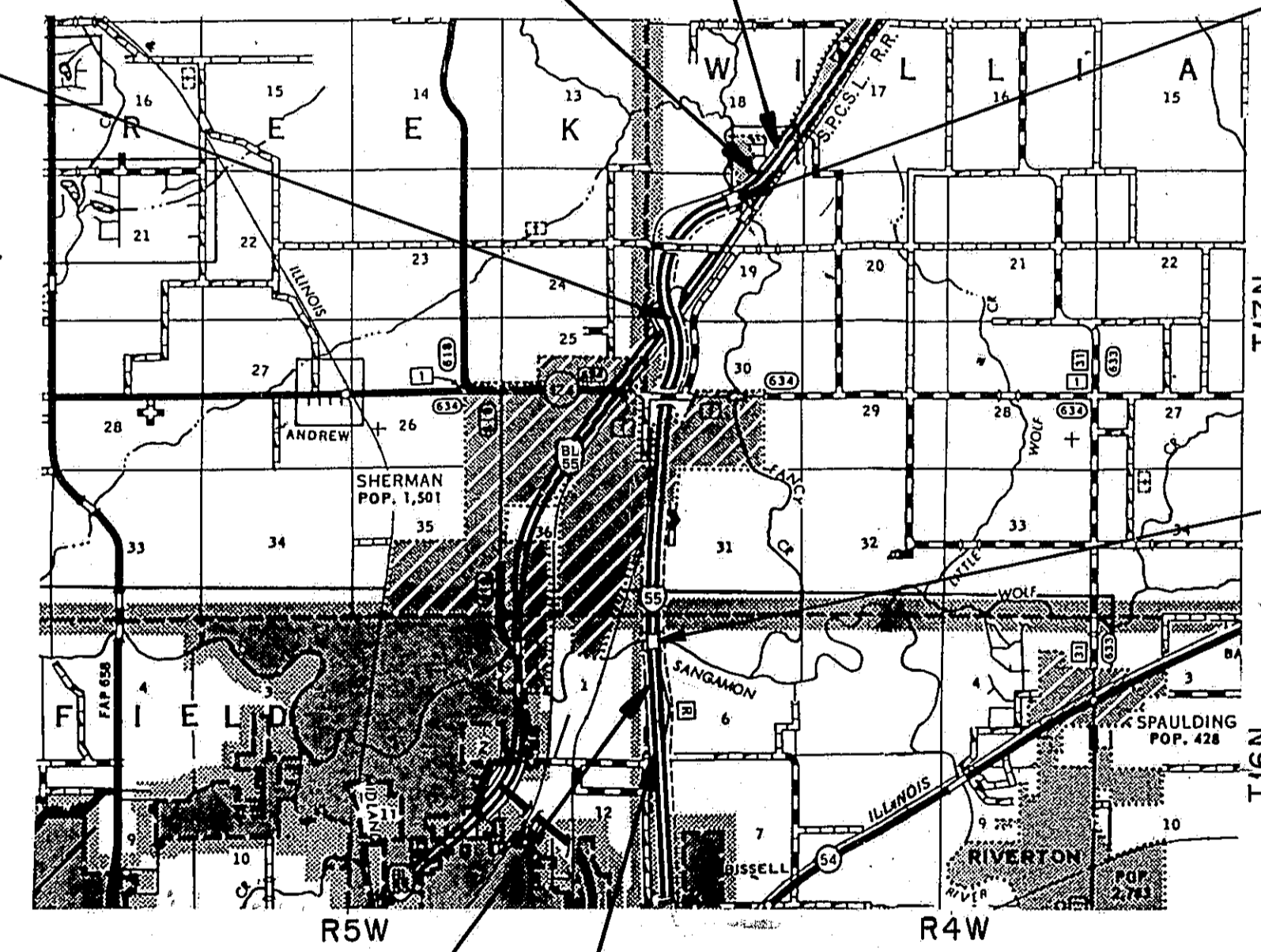
1683-4	2313-5
1686-4	2314-6
2122-15	2315-8
2130-12	2316-13
2149-11	2324-7
2213-4	2336-4
2217-3	2339-2
2228-4	2340-4
2230-16	2341-4
2237-11	2362-3
2250-2	2381
2298-9	2383-3
2299-13	2388-1
2300-3	2396
2301-5	2397-1
2302-5	2430
2304-7	2438
2308-5	

#### STATION EQUATIONS

STA. 270+00.00 SURVEY @ BK. = STA. 269+90.25 CONST. @ AH.	STA. 298+90.25 CONST. @ BK. = STA. 299+00.00 SURVEY @ AH.
STA. 334+00.00 SURVEY @ BK. = STA. 333+00.37 CONST. @ AH.	STA. 354+00.37 CONST. @ BK. = STA. 355+00.00 SURVEY @ AH.
STA. 452+00.00 SURVEY @ BK. = STA. 451+95.20 CONST. @ AH.	STA. 474+45.20 CONST. @ BK. = STA. 474+50.00 SURVEY @ AH.

PROJ. NHI-55-3(121)106  
SECTION 84-2 (BR-1, HVBR-2, BR-2)  
ENDS STA. 473+20.20

**SECTION CHANGE:**  
THE CONTRACTOR SHALL NOTE THAT THE PLANS HAVE BEEN REVISED AND THE SECTION NUMBER HAS CHANGED. ANY REFERENCE IN THE PLANS TO SECTION 84-2 (BR-1, HVBR-2, BR-2) SHALL BE DISREGARDED AND UNDERSTOOD TO BE SECTION 84-2 (BR-1, BR-2).



**LAYOUT MAP**  
1 MILE 0 1 MILE  
GRAPHIC SCALE

PROJ. NHI-55-3(121)106  
SECTION 84-2 (BR-1, HVBR-2, BR-2)  
BEGINS STA. 270+96.00

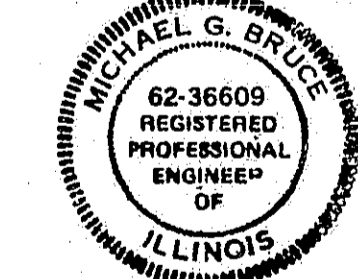
IMPROVEMENT  
BEGINS STA. 256+50.00

**SECTION 84-2 (BR-2) INCLUDES:**  
N.B. STRUCTURE AT STA. 291+20.00 (SN 084-0022) CARRYING F.A.I. RTE. 55 OVER FANCY CREEK. DECK TO BE REMOVED AND STRUCTURE WIDENED, REUSING STRUCTURAL STEEL. SUPERELEVATION CORRECTION AND RESURFACING OF N.B. F.A.I. RTE. 55 FROM STA. 270+96.00 TO STA. 297+90.25.  
S.B. STRUCTURE AT STA. 291+20.00 (SN 084-0023) CARRYING F.A.I. RTE. 55 OVER FANCY CREEK. DECK TO BE REMOVED AND STRUCTURE WIDENED, REUSING STRUCTURAL STEEL UTILIZING STAGE CONSTRUCTION. SUPERELEVATION CORRECTION AND RESURFACING OF S.B. F.A.I. RTE. 55 FROM STA. 284+90.25 TO STA. 298+40.25.

**SECTION 84-2 (BR-1) INCLUDES:**  
N.B. STRUCTURE AT STA. 462+25.00 (SN 084-0018) CARRYING F.A.I. RTE. 55 OVER SANGAMON RIVER. DECKS TO BE REMOVED AND STRUCTURES WIDENED, REUSING STRUCTURAL STEEL. RESURFACING OF N.B. F.A.I. 55 FROM STA. 452+95.20 TO STA. 473+20.20 AND S.B. F.A.I. RTE. 55 FROM STA. 452+62.20 TO STA. 472+70.00.

PLANS PREPARED BY:  
**JOHNSON, DEPP & QUISENBERRY**  
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

SIGNED: *Michael D. Bruce*  
DATE: June 19, 1992



**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

SUBMITTED: JUNE 25, 1992  
EXAMINED: \_\_\_\_\_ 19\_\_\_\_  
PASSED: July 31, 1992  
APPROVED: July 31, 1992

DISTRICT ENGINEER  
ENGINEER OF PLANS AND CONTRACTS  
ENGINEER OF DESIGN  
DIRECTOR, DIVISION OF HIGHWAYS

NET LENGTH OF SECTIONS =  
BR-1 = 2744.25 FEET = 0.520 MILES  
HVBR-2 = 1966.00 FEET = 0.360 MILES  
BR-2 = 2058.00 FEET = 0.390 MILES

NET LENGTH OF PROJECT = 20224 FEET = 3.830 MILES

**AS REVISED**

PROJECT ENGINEER: CECIL COPENHAVER PHONE NO. (217)782-4761  
SQUAD LEADER: JOHN NEGANGARD PHONE NO. (217)524-0946  
DRAWING NAME: 880711E

**BENCHMARK:** - CHISELED 'C' ON NORTHEAST CORNER OF GATE INLET IN MEDIAN APPROXIMATELY 0.2 MILES SOUTH OF BRIDGE, STA. 476, ELEVATION = 553.744  
 - CHISELED 'C' ON NORTHEAST CORNER OF THE NORTHWEST WINGWALL OF THE NORTHBOUND BRIDGE, STA. 456+45, ELEV. 541.054

**DESCRIPTION OF EXISTING STRUCTURE:**

STA. 462+25, F.A.I. RTE. 55, BUILT IN 1963 AS SEC. 84-2B-2F. STRUCTURE NUMBERS 084-0018(N.B.) AND 084-0019(S.B.). SUPERSTRUCTURE CAST IN PLACE CONCRETE DECK ON WIDE FLANGE STEEL BEAMS AND BUILT-UP STEEL GIRDERS, SUBSTRUCTURE PILE BENT ABUTMENTS AND SOLID PIERS. HORIZONTAL CLEARANCE 30.2 FEET. TOTAL LENGTH 1125.0 FEET BACK TO BACK OF APPROACH SPAN ABUTMENTS. DECK TO BE REMOVED AND STRUCTURE WIDENED, REUSING STRUCTURAL STEEL. TRAFFIC TO BE MAINTAINED UTILIZING MEDIAN CROSSOVER DETOURS. SALVAGE: CONTRACTOR SHALL REMOVE EXISTING THREE BEAM BRIDGE RAIL AND STORE ON SITE TO BE REUSED BY I.D.O.T.

**DESIGN SPECIFICATIONS**

1989 AASHTO, 1990, 1991 INTERIM AND SEISMIC RETROFITTING GUIDELINES FOR HIGHWAY BRIDGE

**LOADING HS 20-44, AND ALTERNATE LOADING**

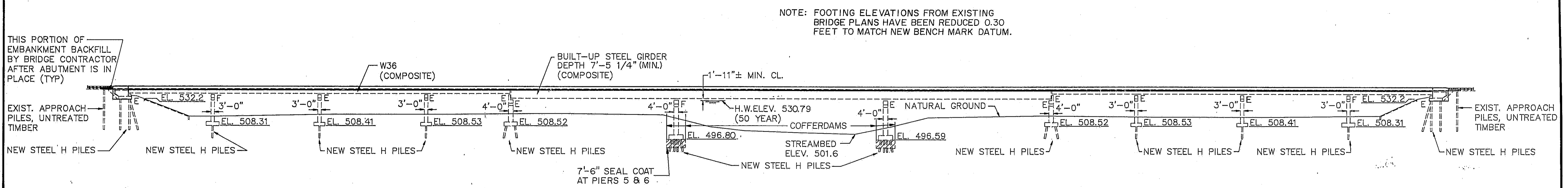
ALLOW 25#/SQ. FT. FOR FUTURE WEARING SURFACE

**DESIGN STRESSES**

$f'_c = 3,500$  psi (CLASS X CONCRETE)  
 $f_y = 60,000$  psi (REINFORCEMENT)  
 $f_y = 50,000$  psi (M270 GR. 50 STRUCTURAL STEEL)  
 $f_y = 36,000$  psi (M270 GR. 36 STRUCTURAL STEEL)

SHEET 1 OF 45.

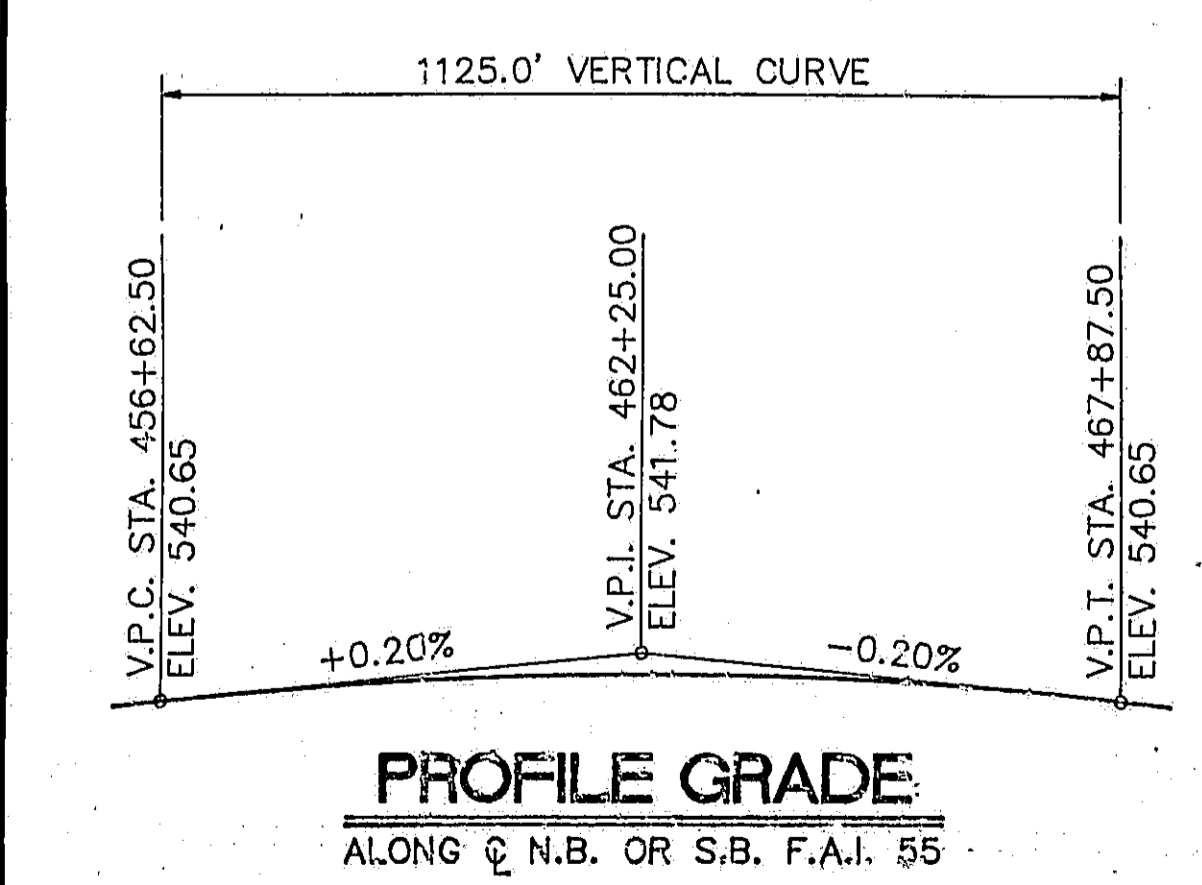
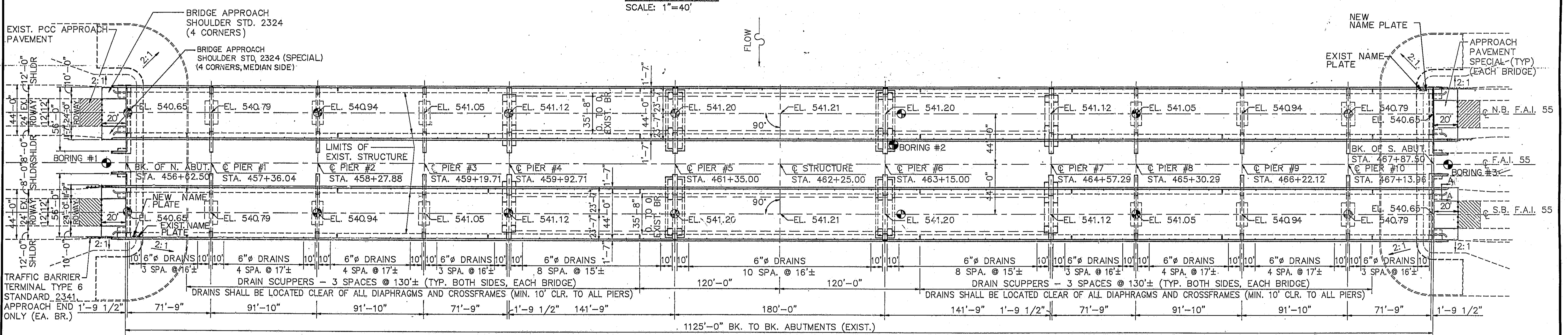
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	84-2BR-1	SANGAMON	218	173
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



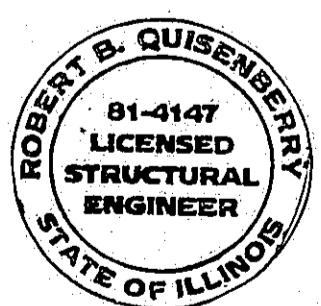
NOTE: FOOTING ELEVATIONS FROM EXISTING BRIDGE PLANS HAVE BEEN REDUCED 0.30 FEET TO MATCH NEW BENCH MARK DATUM.

**ELEVATION**

SCALE: 1"=40'



**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY  
 Robert B. Quisenberry  
 Licensed Structural Engineer  
 Tammy Parvati Associates



Robert B. Quisenberry  
 4/23/92 Exp. 11/30/92

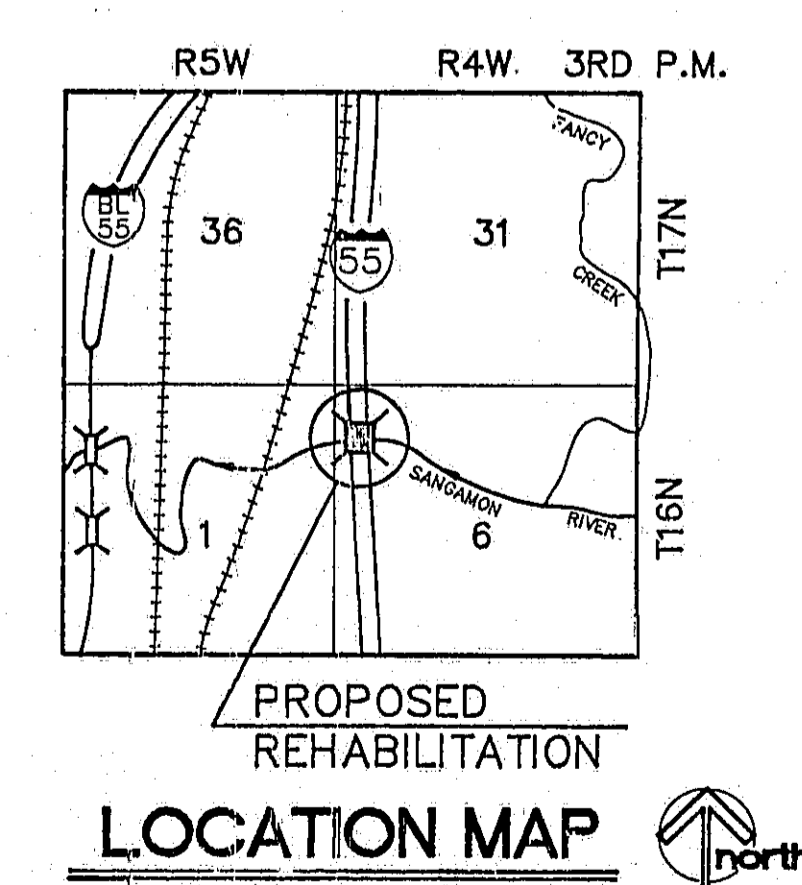
INDICATES LOCATION OF SOIL BORING

**PLAN**  
 SCALE: 1"=40'

**WATERWAY INFORMATION**

DRAINAGE AREA = 2730 SQ. MI. LOW GRADE ELEV. = 540.1 @ STA. 471+00

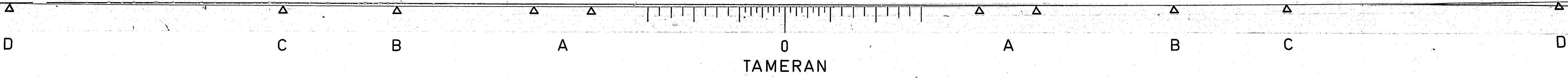
FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT.		NAT. H.W.E.		HEAD - FT.		HEADWATER EL.	
			EXIST.	PROP.	EXIST.	PROP.	EXIST.	PROP.	EXIST.	PROP.
DESIGN	50	45,400	15,900	15,900	530.4	0.4	0.4	530.8	530.8	530.8
BASE	100	50,100	17,300	17,300	531.8	0.4	0.4	532.2	532.2	532.2
OVERTOPPING										
MAX. CALC.	500	64,200	19,900	19,900	535.5	0.4	0.4	535.9	535.9	535.9



Johnson, Depp & Quisenberry  
 Consulting Engineers, Springfield, Illinois

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019



**GENERAL NOTES**

Fasteners shall be high strength bolts  $\frac{7}{8}$ " $\phi$ , open holes  $\frac{9}{16}$ " $\phi$ , unless otherwise noted.

Calculated weight of New Structural Steel = 134,100 Lbs. (AASHTO M 270 Gr. 36; 1,041,600 Lbs. AASHTO M 270 Grade 50).

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier or bent supports. Field welding in other areas will be permitted only when approved by the Engineer.

Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The roadway expansion plates shall be flame cut as provided in Article 507.04(1) of the Standard Specifications.

Anchor bolts shall be set before bolting diaphragms and crossframes over supports.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two  $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, plate girder tension flanges, webs, cover plates and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The structural steel bearing plates of the Elastomeric Bearing Assemblies shall conform to the requirements of AASHTO M 270 Grade 50.

Cast steel shall be Class 70. Structural steel weldments of equal sections and meeting AASHTO M 270 Gr. 36 may be substituted for castings at the option of the Contractor, subject to approval by the Engineer prior to fabrication. No additional compensation will be allowed the Contractor for this substitution.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Paint color designation shall be Interstate Green in accordance with Munsell Color Standard 7.5G 4/8.

All contact surface areas between new and existing structural steel shall be free of paint or lacquer.

The estimated quantity of Bridge Seat Sealer = 1454 Sq. Ft.

The Lead and Chromate Free Alkyd Paint System shall be used for shop and field painting of new and existing structural steel.

Structural steel shall only be cleaned and painted as required by the special provision "Cleaning and Painting Existing Steel Structures Partial Removal" (Mod. SSPC SP3) Surface Preparation" See Sheets 45A & 45B For "Spot Painting Details"

Prior to Welding Studs and pouring the new concrete for the deck, all loose rust, loose mill scale and all other foreign material shall be removed from the embedded portions of flanges of stringers. The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP-11 for power tool cleaning. Cost shall be incidental to "Removal of Existing Concrete Deck."

The Contractor shall drive 1 test pile in a permanent location, at Eastside of North Abutment, Westside of Pier 5, Eastside of Pier 8 on the Northbound Bridge and at Eastside of Pier 3, Westside of Pier 6 and Westside of South Abutment on the Southbound Bridge as directed the Engineer before ordering the remainder of the piles.

STATION 462 + 25  
REBUILT 199 BY  
STATE OF ILLINOIS  
F.A.I. RT.55 SEC. 84-2BR-1  
F.A. PROJ. I-55-3 ( ) 103  
LOADING HS20 & ALT.  
STR. NO. 084-0018

STATION 462 + 25  
REBUILT 199 BY  
STATE OF ILLINOIS  
F.A.I. RT.55 SEC. 84-2BR-1  
F.A. PROJ. I-55-3 ( ) 103  
LOADING HS20 & ALT.  
STR. NO. 084-0019

**NORTHBOUND STRUCTURE**

**SOUTHBOUND STRUCTURE**

**NAME PLATES**

Clean & Relocate Existing Name Plates  
Near New (Cost Incidental)  
See Std. 2113

DESIGNED	PLH
CHECKED	RBO
DRAWN	P. Ray
CHECKED	PLH

Dwg. Name: GENNOTE.COR

SHEET 2  
OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	174
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

\* Quantity includes concrete deck.

\*\* Jacking reactions: (with deck removed)  
Abutments = 5.6 Kips  
Piers 1,3,8 & 10 = 20.6 Kips  
Piers 2 & 9 = 20.9 Kips  
Pier 6 = 66.2 Kips  
Piers 4 & 7 Approach Spans = 5.6 Kips  
Piers 4 & 7 Main Spans = 17.1 Kips

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yds.		199.6	199.6
Structure Excavation	Cu. Yds.		1614	1614
Jacking and Cribbing	Each	52		52
Temporary Support System	L. S.	1		1
** Jack and Remove Existing Bearing	Each	102		102
Class X Concrete	Cu. Yds.		2609.8	2609.8
Class X Concrete Superstructure	Cu. Yds.	3030.6		3030.6
Reinforcement Bars	Lbs.		10320	10320
Reinforcement Bars, Epoxy Coated	Lbs.	740600	146620	887220
Elastomeric Bearing Assembly Type I	Each	78		78
Elastomeric Bearing Assembly Type II	Each	46		46
Elastomeric Bearing Assembly Type III	Each	46		46
Furnishing and Erecting Structural Steel	L. S.	0.86		0.86
Structural Steel Removal	Lbs.	8500		8500
Structural Steel Repair	Lbs.	107400		107400
Floor Drains	Each	260		260
Drainage Scuppers	Each	32		32
Stud Shear Connectors	Each	35312		35312
Preformed Joint Seal (2 1/2")	Lin. Ft.	187.2		187.2
Reinf. Neoprene Exp. Jt. Treatment	Lin. Ft.	184		184
Name Plates	Each	2		2
Bridge Seat Sealer	L. S.		1	1
*Protective Coat	Sq. Yd.	12752		12752
Bridge Deck Grooving	Sq. Yd.	10500		10500
Steel Piles (HP 10 x 57)	Lin. Ft.		10589	10589
Steel Piles (HP 12 x 63)	Lin. Ft.		2666	2666
Cofferdam Pier 5 N.B. Str.	Each		1	1
Cofferdam Pier 5 S.B. Str.	Each		1	1
Cofferdam Pier 6 N.B. Str.	Each		1	1
Cofferdam Pier 6 S.B. Str.	Each		1	1
Cofferdam Excavation	Cu. Yds.		1616	1616
Seal Coat Concrete	Cu. Yds.		446.8	446.8
PWR. TOOL CL. RES. CONT. & DISP. NO. 4	L. SUM	1		1
PWR. TOOL CL. RES. CONT. & DISP. NO. 5	L. SUM	1		1
CLEANING AND PAINTING STEEL BR. NO. 4	L. SUM	1		1
CLEANING AND PAINTING STEEL BR. NO. 5	L. SUM	1		1
REMOVAL OF EXISTING CONC. DECK, NO. 4	L. SUM	1		1
REMOVAL OF EXISTING CONC. DECK, NO. 5	L. SUM	1		1
TEST PILES, STEEL HP 10 X 57	EACH	4		4
TEST PILES, STEEL HP 12 X 63	EACH	2		2

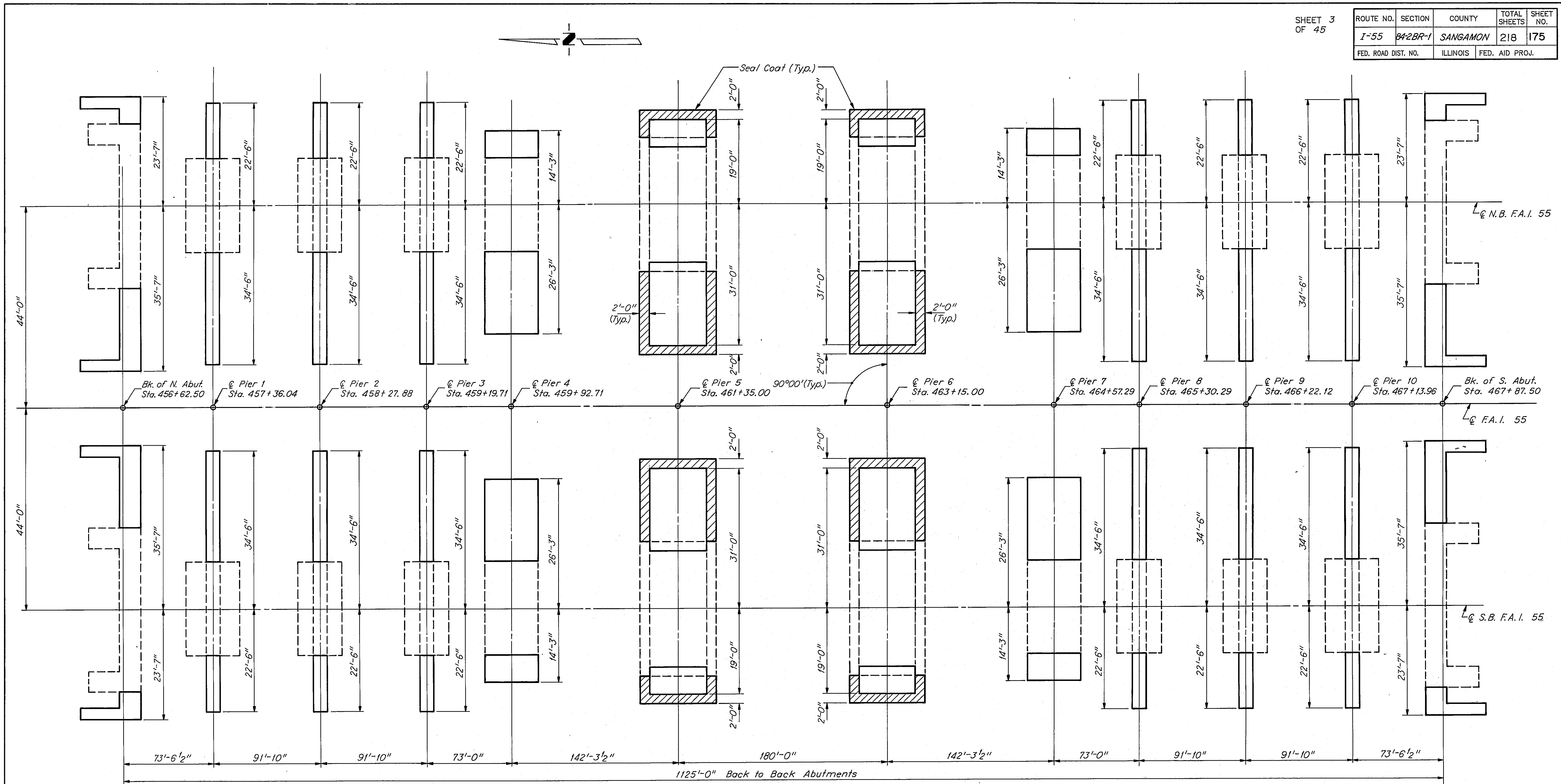
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84 - 2BR - 1  
SANGAMON COUNTY  
STATION 462 + 25.00  
STRUCTURE NOS. 084-0018, 084-0019

TAMERAN

SHEET 3  
OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	175
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



**FOOTING LAYOUT**

DESIGNED	PLH
CHECKED	RSB
DRAWN	P. Roy
CHECKED	PLH

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
FOOTING LAYOUT  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

TAMERAN









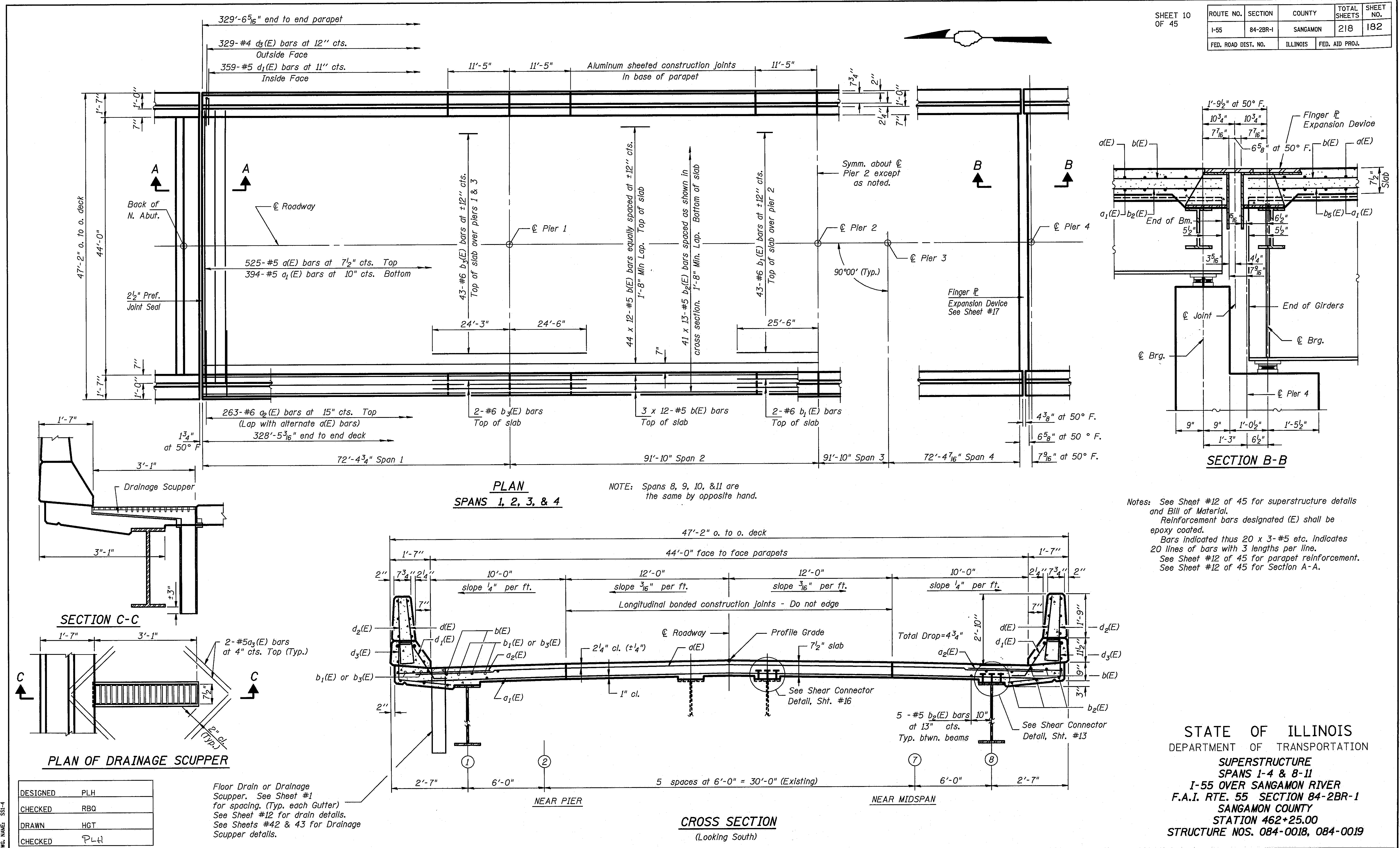






SHEET 10  
OF 45

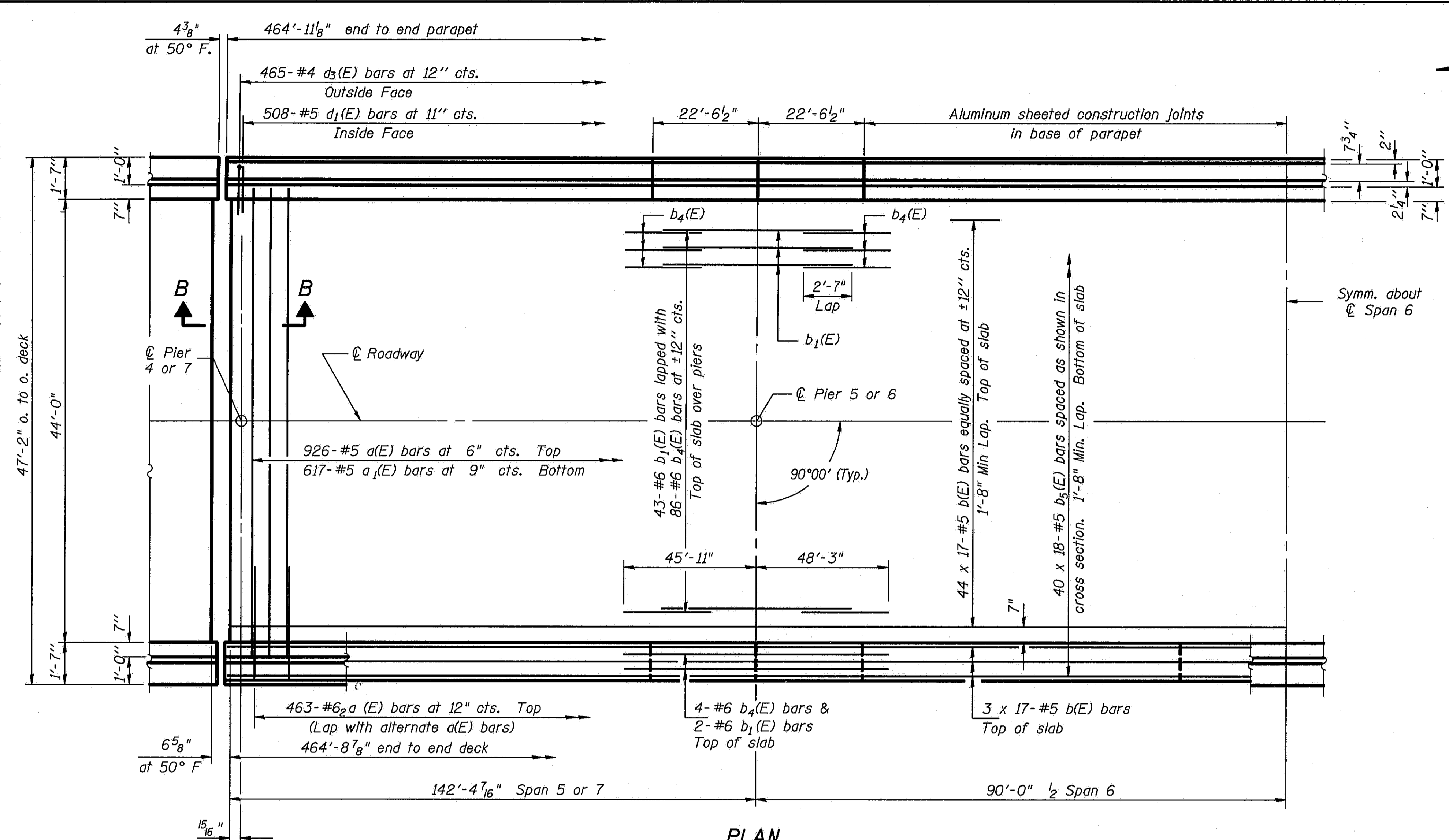
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	182
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



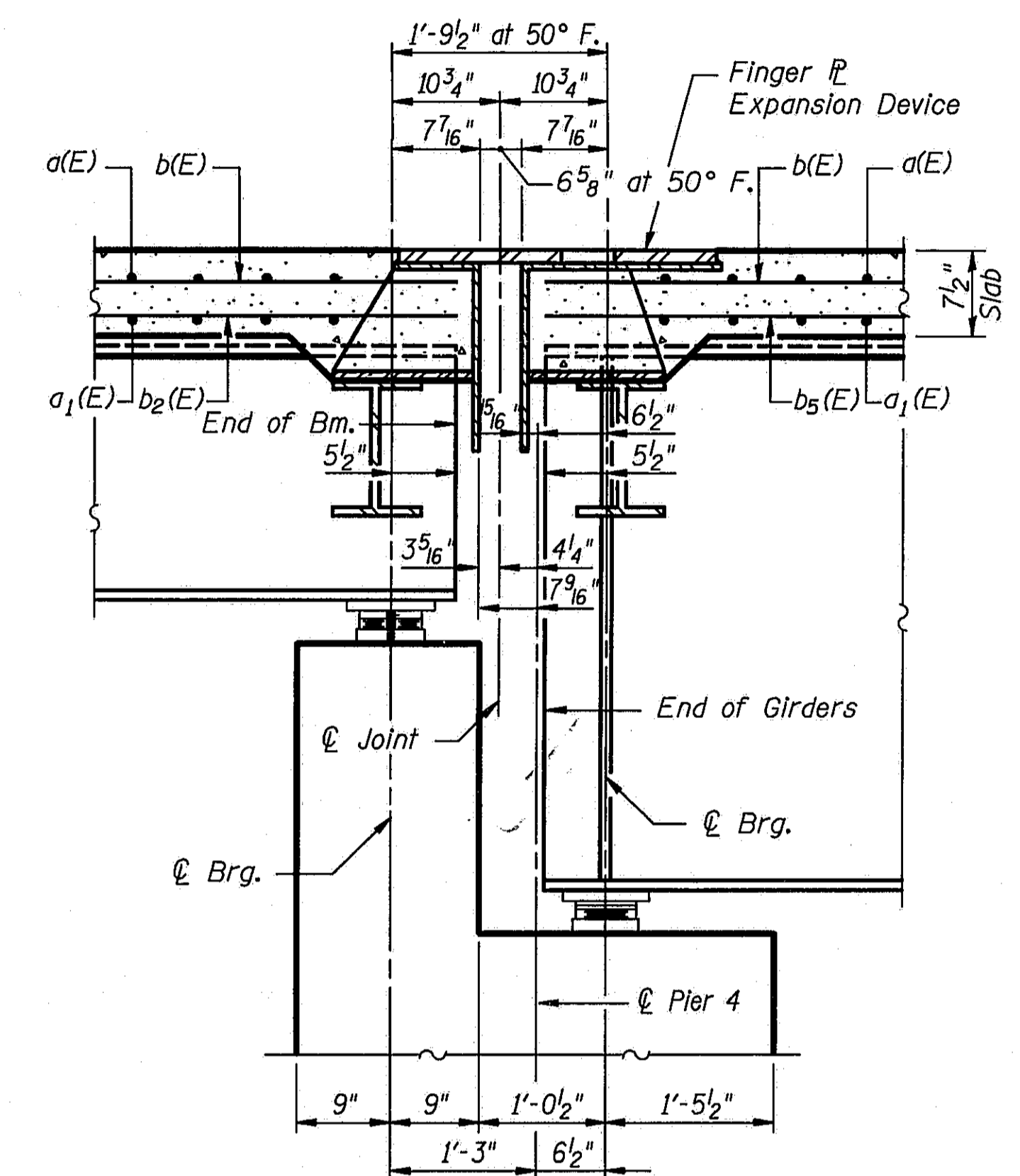
S-1-0 12-31-87

TAMERAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	183
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

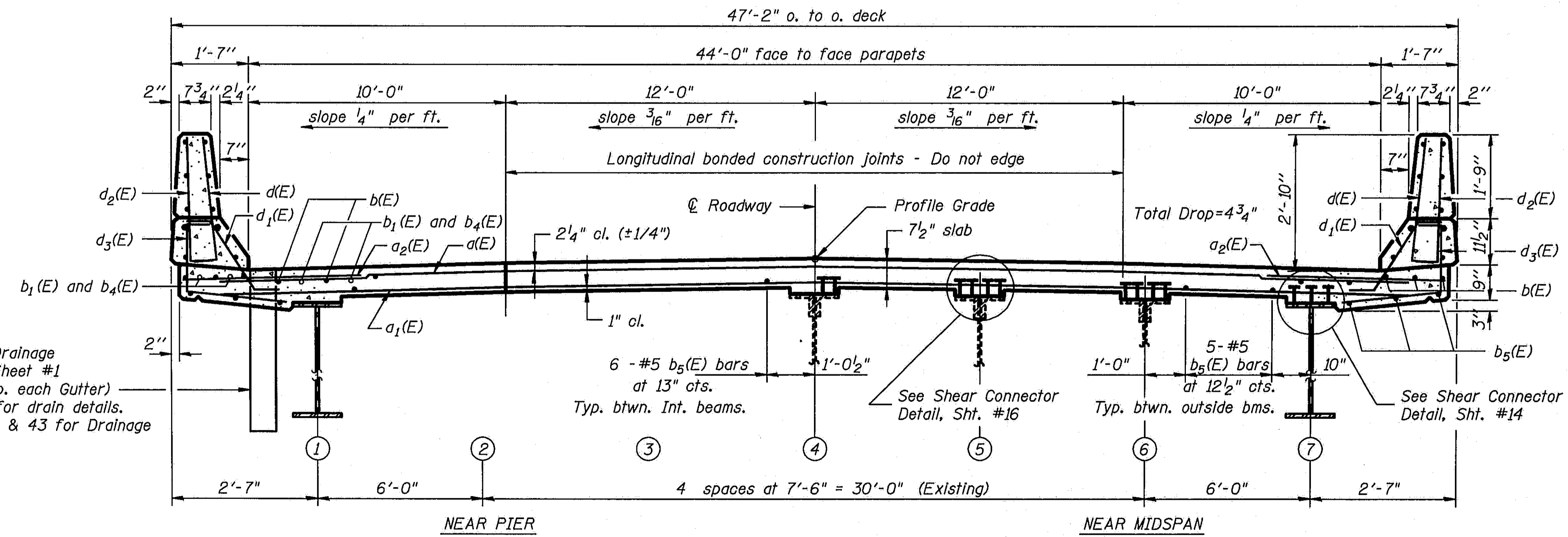


**PLAN**  
**SPANS 5, 6, & 7**



**SECTION B-B**

Notes: See Sheet #12 of 45 for superstructure details and Bill of Material.  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet #12 of 45 for parapet reinforcement.  
See Sheet #7 of 45 for Deck Pouring Sequence.

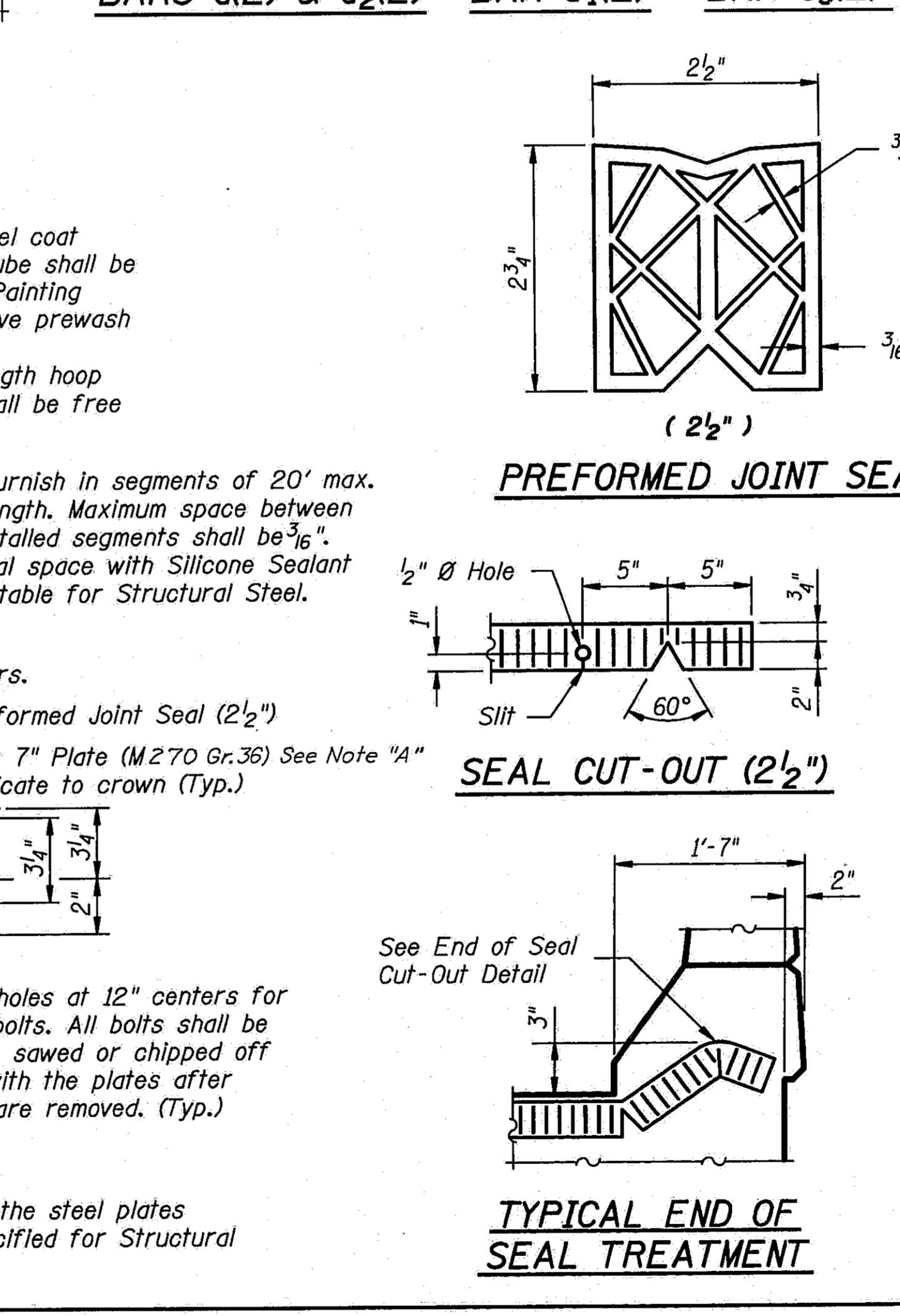
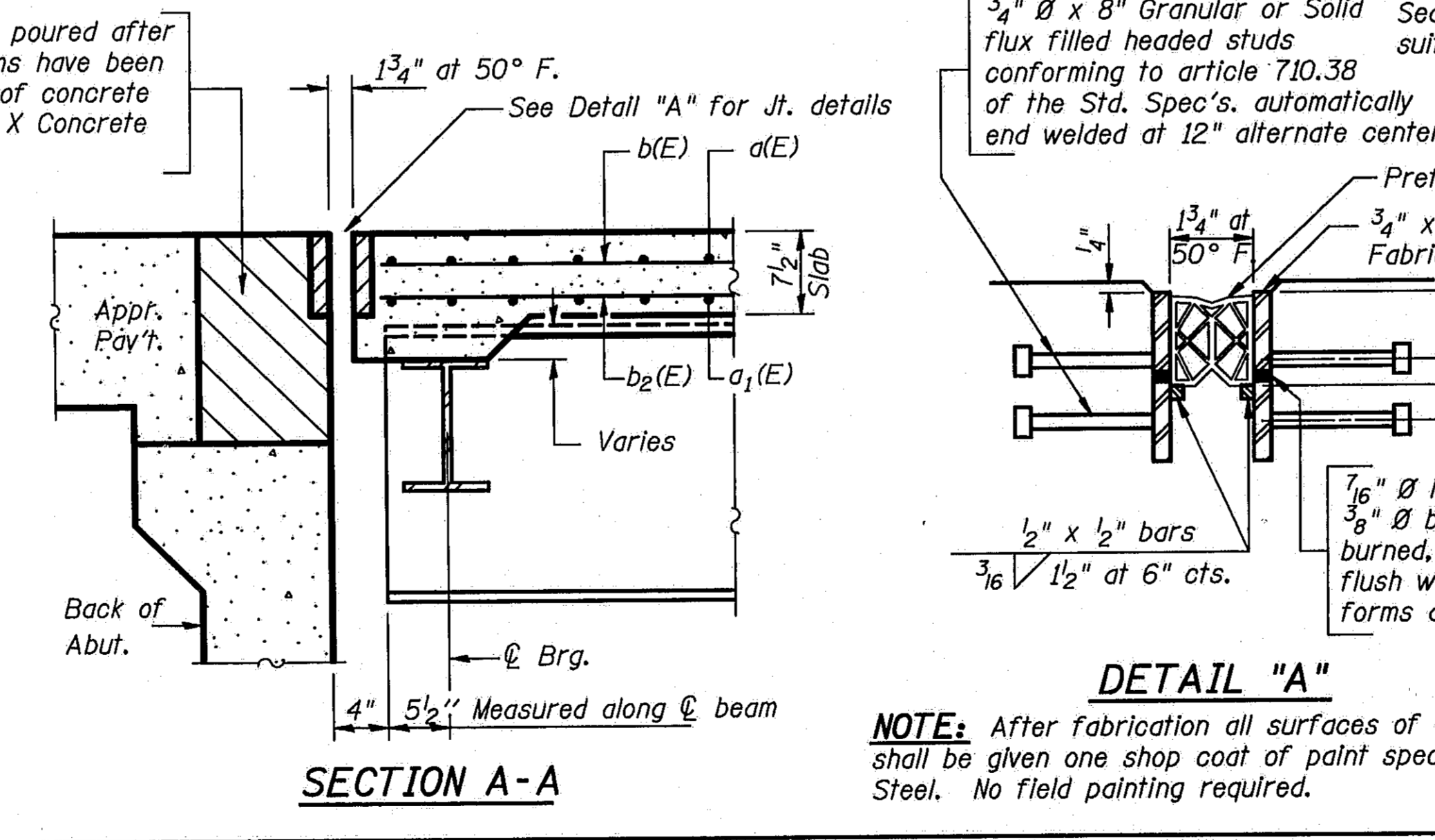
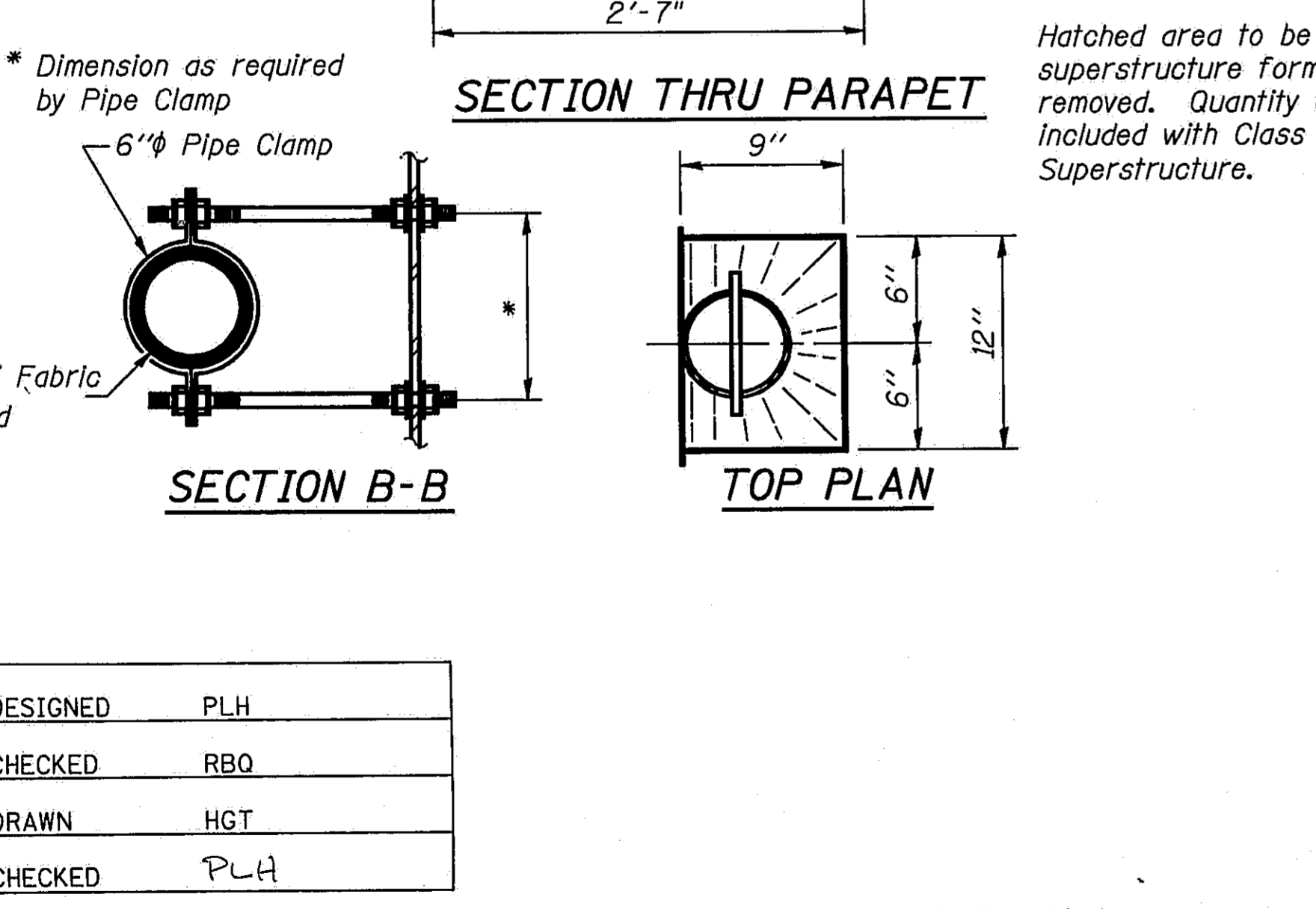
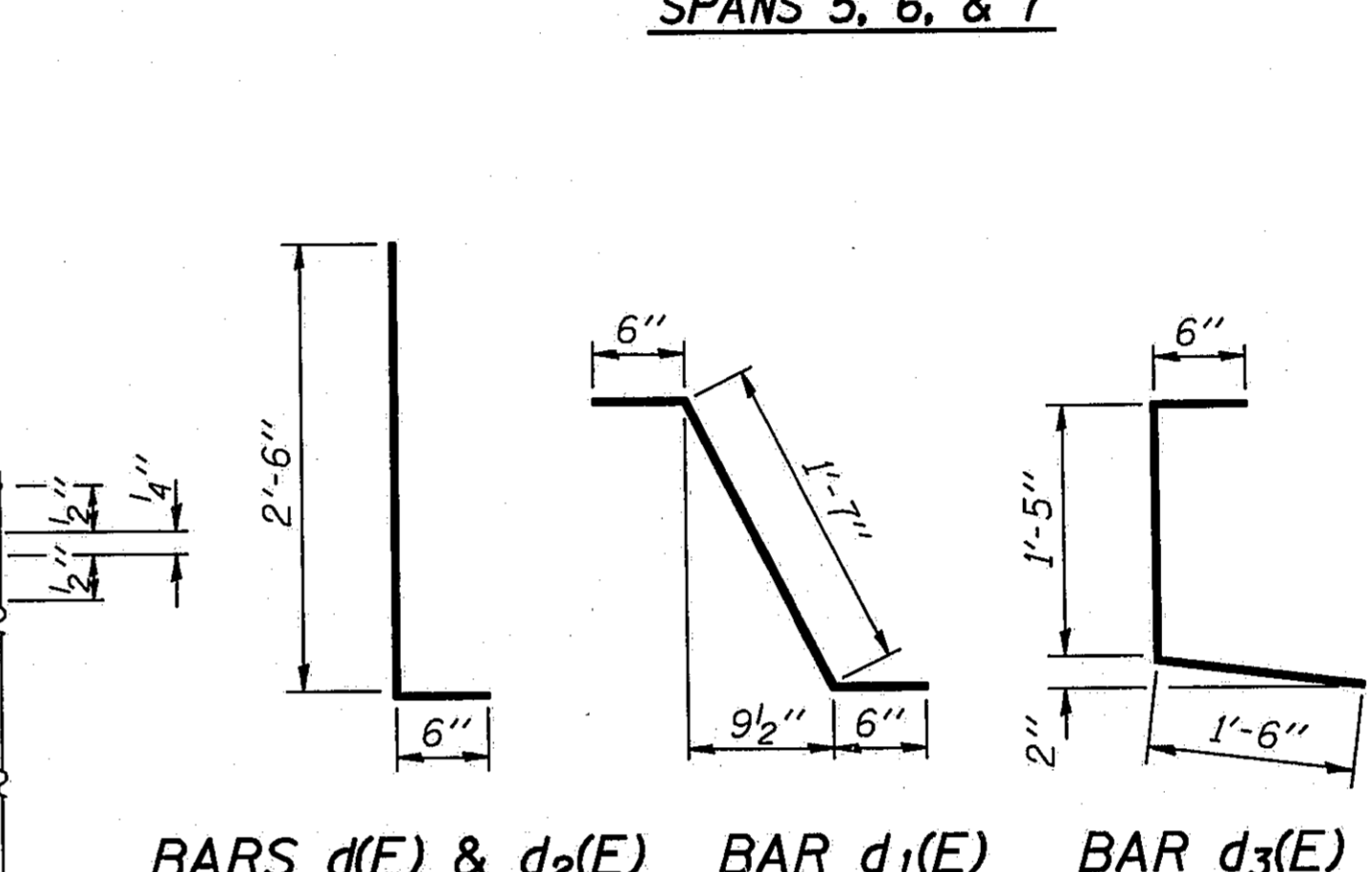
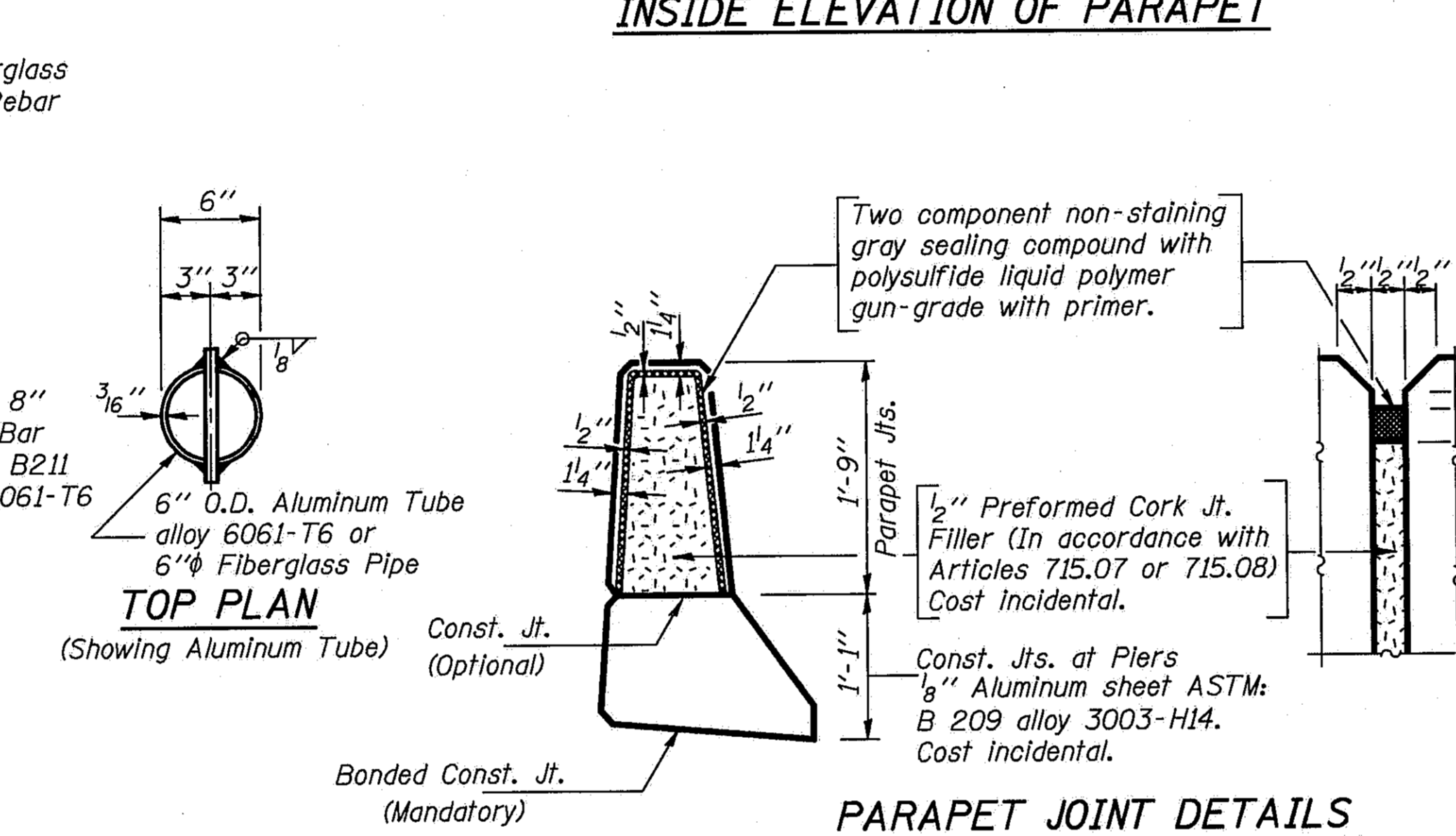
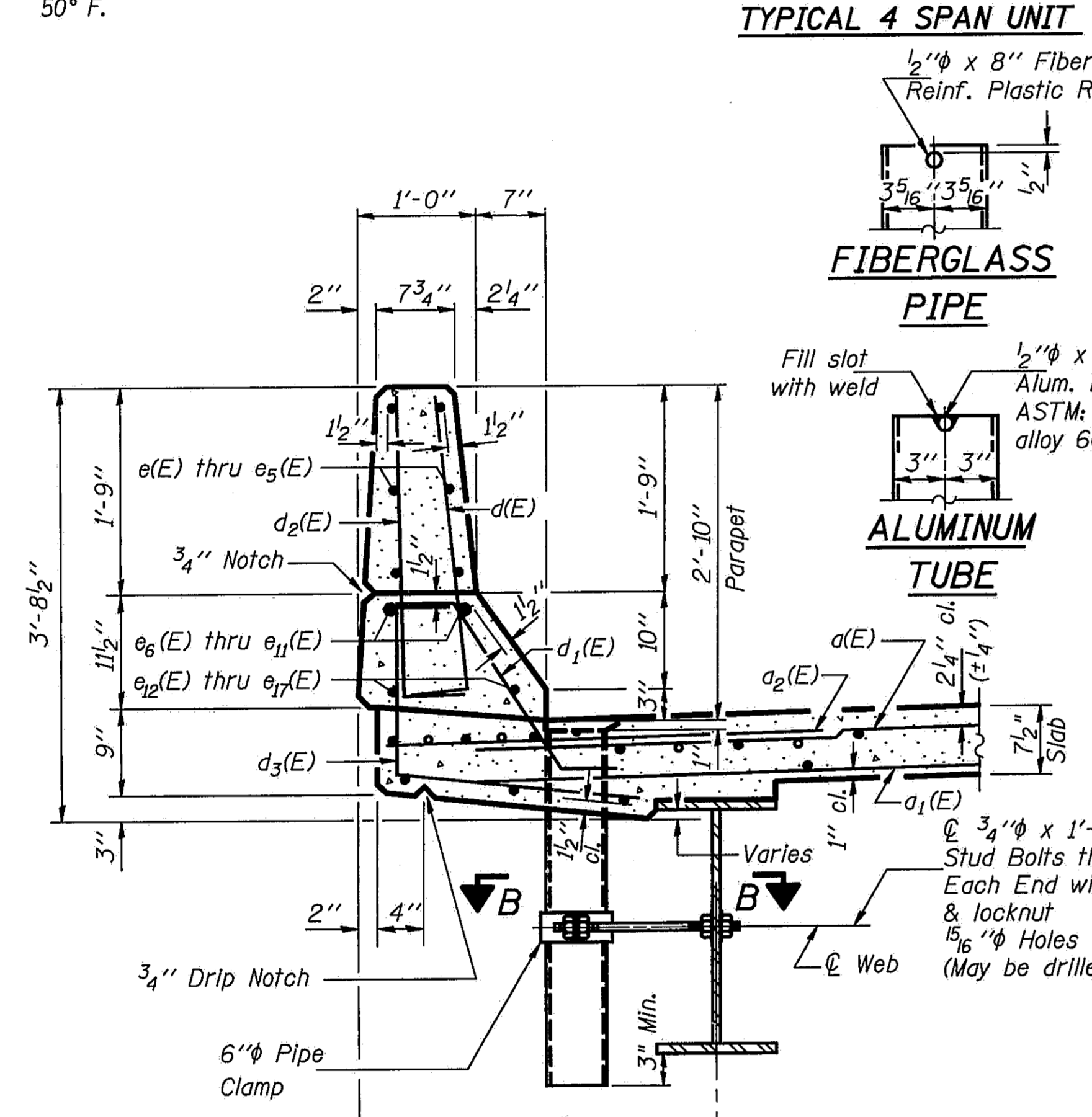
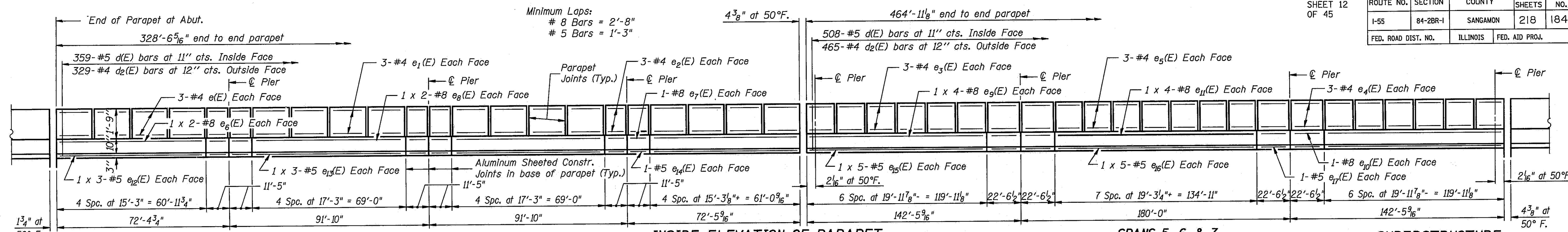


**CROSS SECTION**  
(Looking South)

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

S-1-0 12-31-87

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**SUPERSTRUCTURE**  
**SPANS 5, 6, & 7**  
**I-55 OVER SANGAMON RIVER**  
**F.A.I. RTE. 55 SECTION 84-2BR-1**  
**SANGAMON COUNTY**  
**STATION 462+25.00**  
**STRUCTURE NOS. 084-0018, 084-0019**



**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	1976	#5	46'-0"	—
a1(E)	1405	#5	45'-0"	—
a2(E)	1978	#6	4'-0"	—
a3(E)	128	#5	4'-0"	—
b(E)	2050	#5	28'-11"	—
b1(E)	188	#6	51'-0"	—
b2(E)	1066	#5	26'-10"	—
b3(E)	188	#6	48'-9"	—
b4(E)	188	#6	24'-2"	—
b5(E)	720	#5	27'-5"	—
d(E)	2452	#5	3'-0"	—
d1(E)	2452	#5	2'-7"	—
d2(E)	2246	#4	3'-0"	—
d3(E)	2246	#4	3'-5"	—
e(E)	192	#4	14'-11"	—
e1(E)	192	#4	16'-11"	—
e2(E)	144	#4	11'-1"	—
e3(E)	144	#4	19'-8"	—
e4(E)	48	#4	22'-3"	—
e5(E)	84	#4	18'-11"	—
e6(E)	32	#8	31'-8"	—
e7(E)	48	#8	11'-1"	—
e8(E)	32	#8	35'-8"	—
e9(E)	32	#8	31'-11"	—
e10(E)	16	#8	22'-3"	—
e11(E)	16	#8	35'-8"	—
e12(E)	48	#5	21'-1"	—
e13(E)	48	#5	23'-9"	—
e14(E)	48	#5	11'-1"	—
e15(E)	40	#5	24'-11"	—
e16(E)	20	#5	27'-11"	—
e17(E)	16	#5	22'-3"	—
Reinforcement Bars (Epoxy Coated)				Lbs. 370300
Class X Concrete Superstructure				Cu. Yds. 1515.3

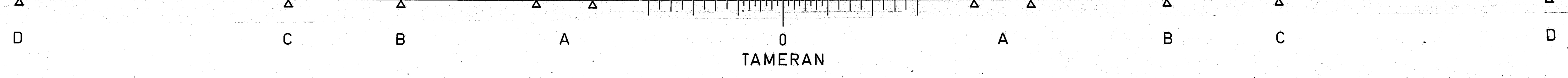
Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1 x 5-#5 etc. indicates 1 line of bars with 5 lengths per line.  
 \* Bill of Material for one structure. Two are req'd.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

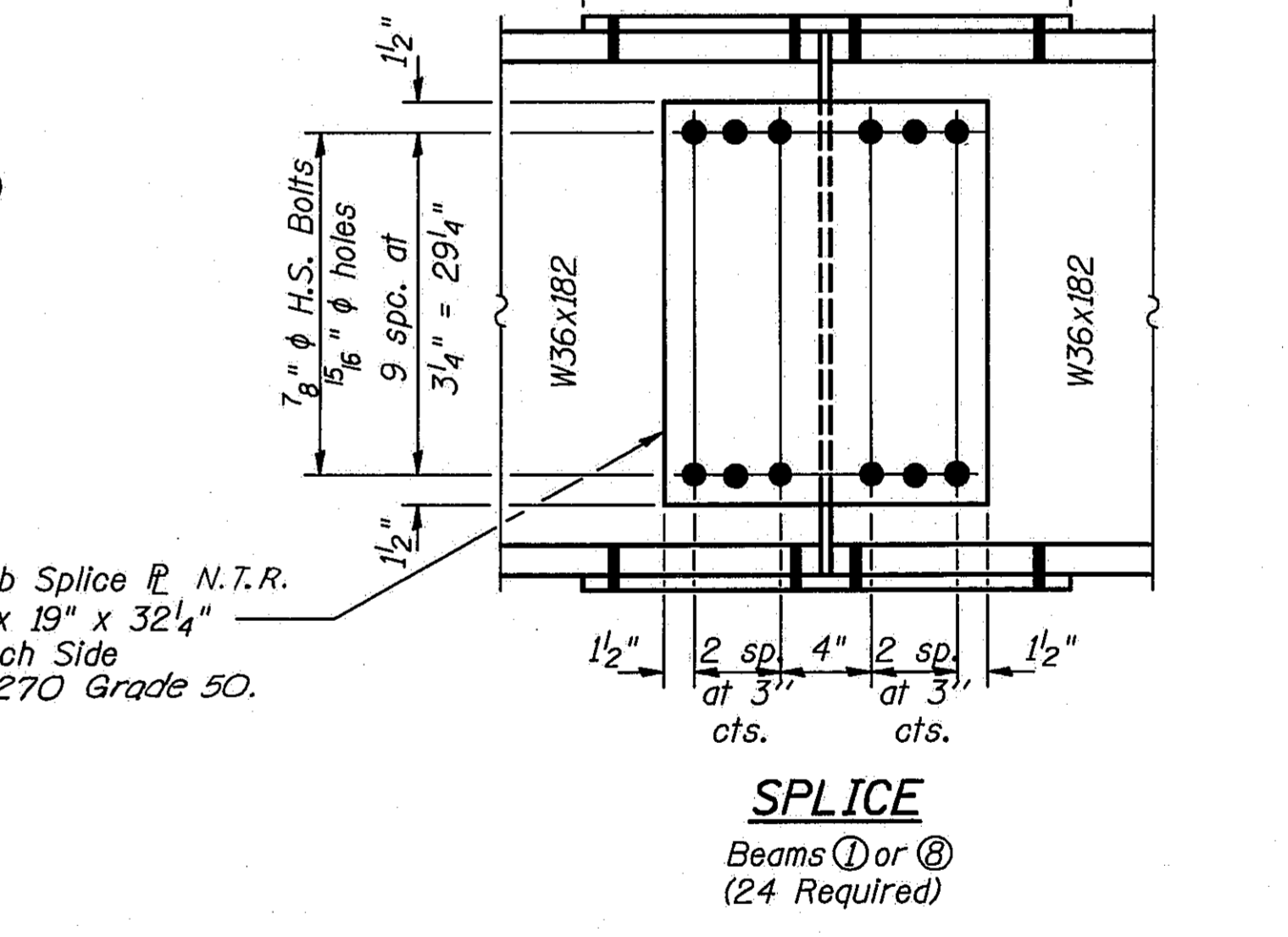
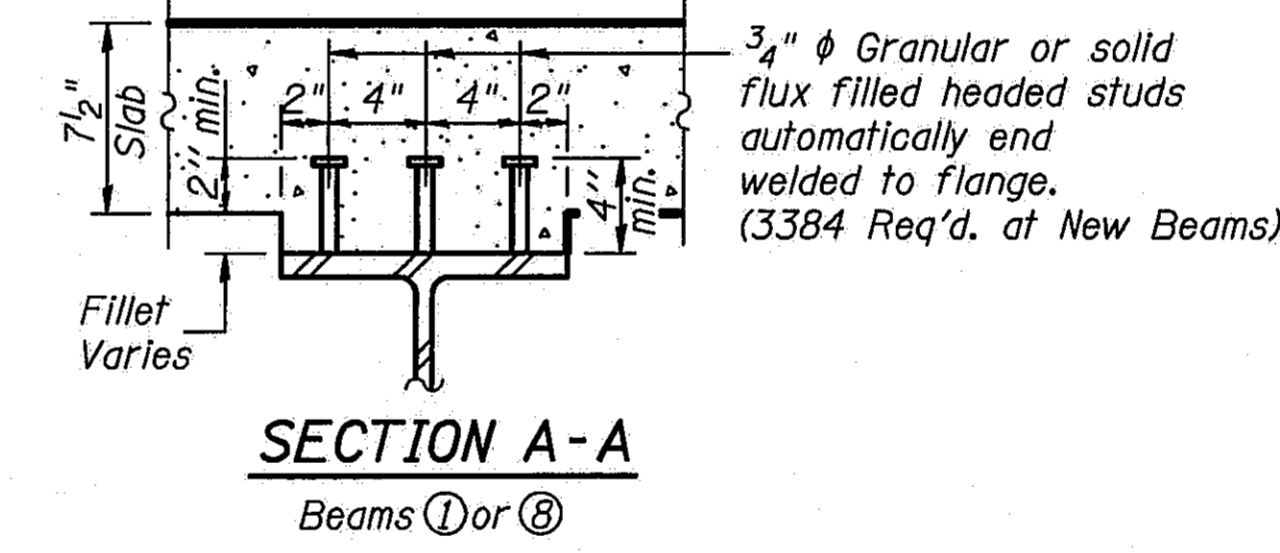
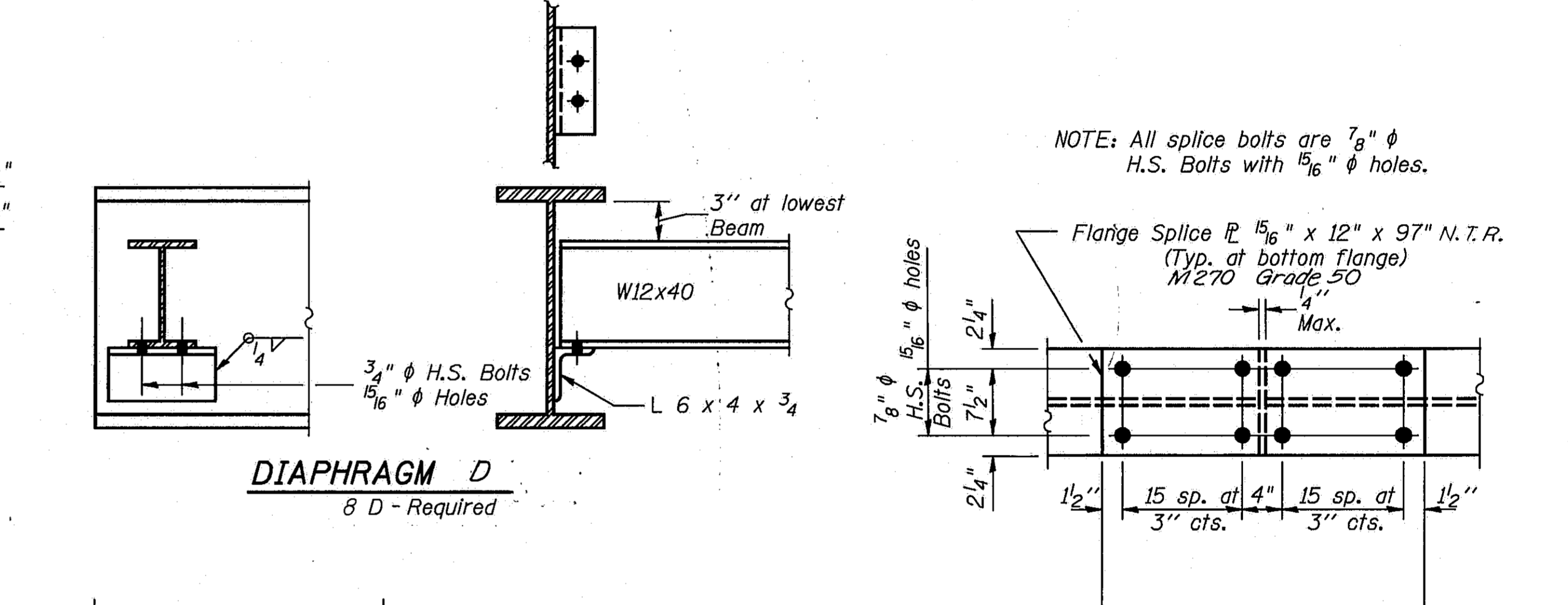
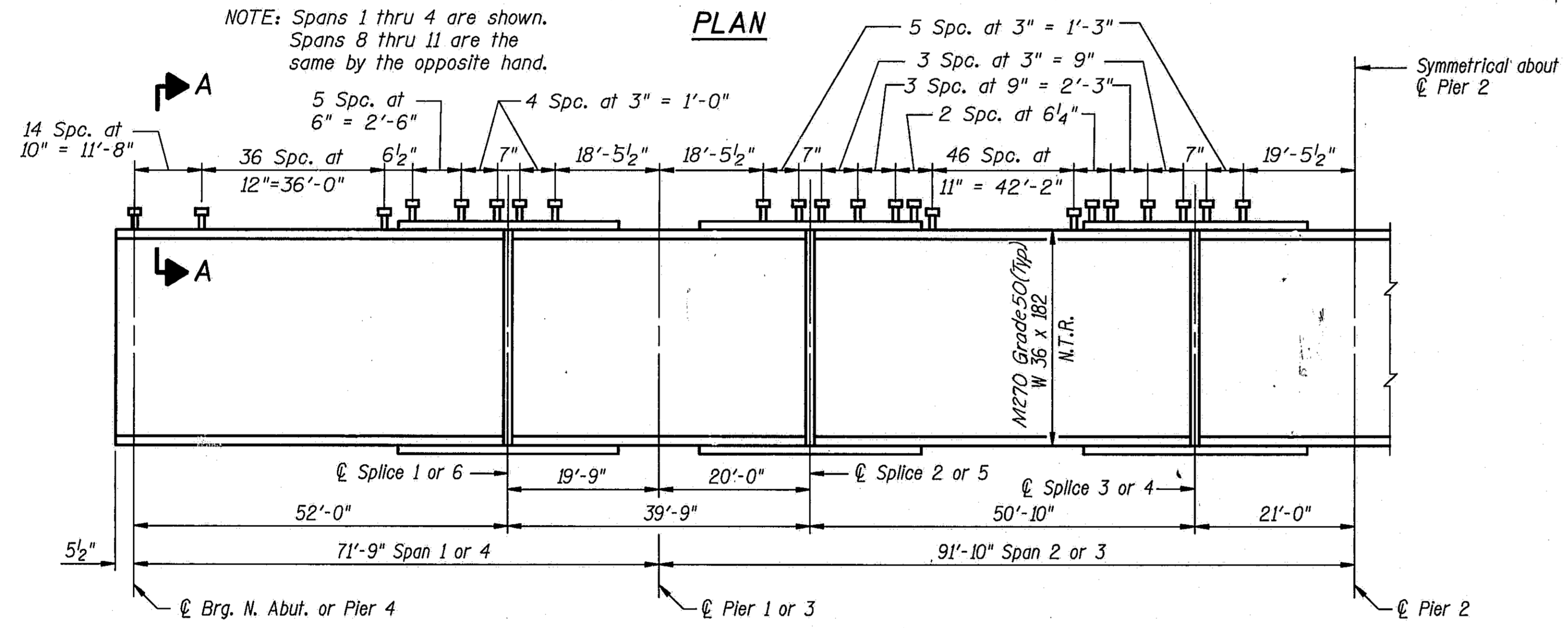
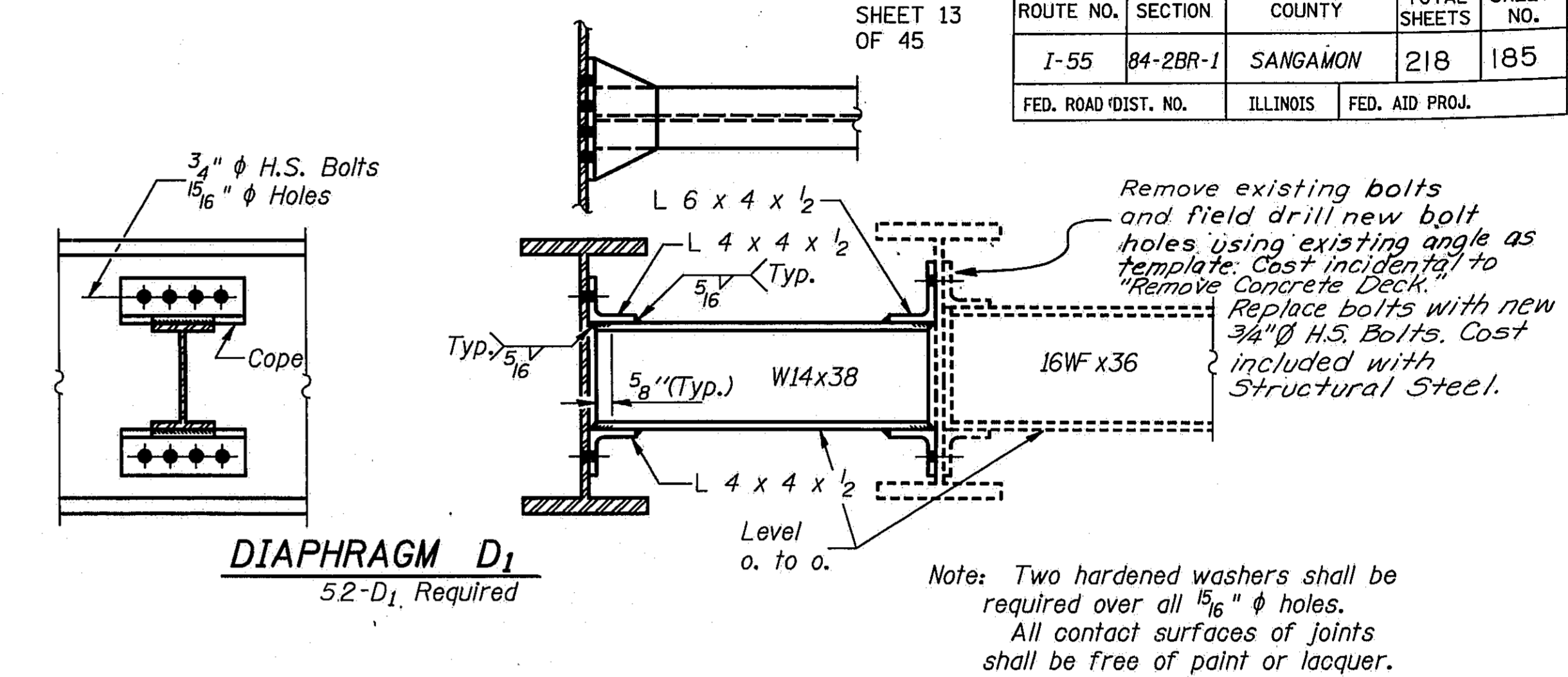
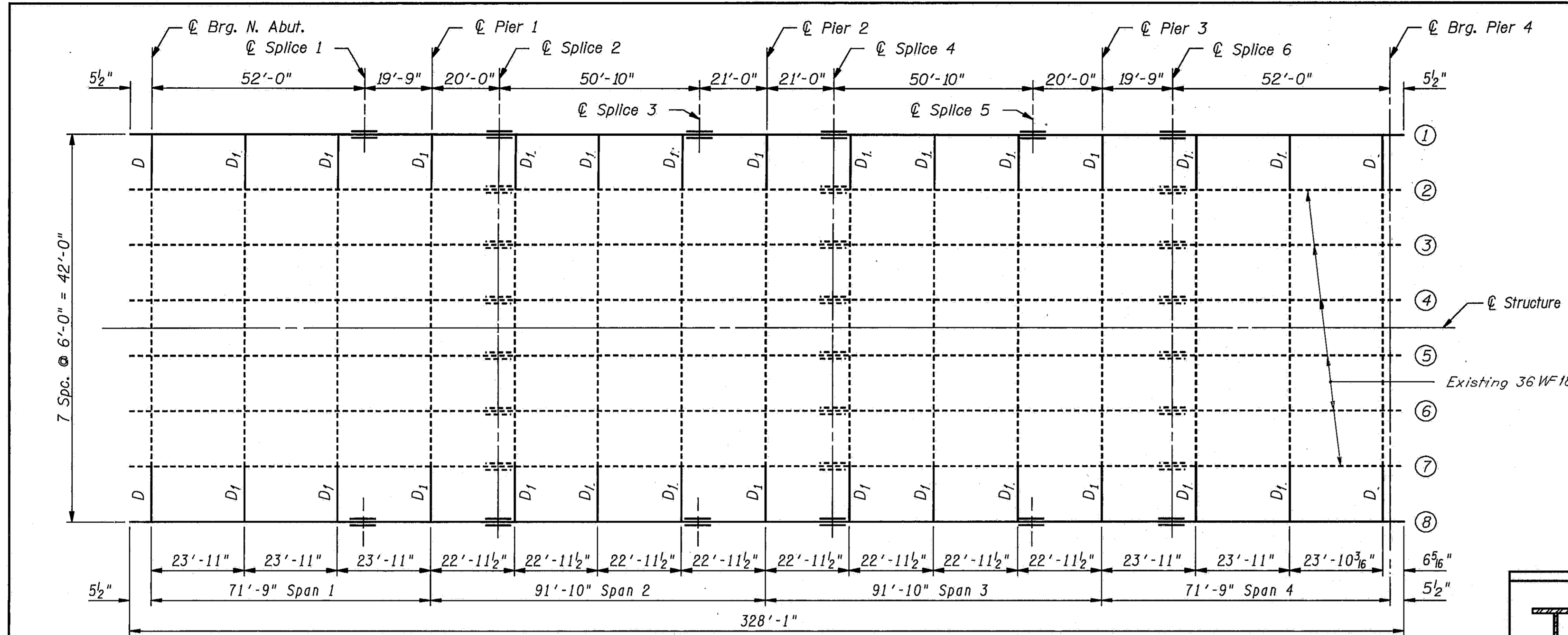
SUPERSTRUCTURE  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

S-1-D 12-31-87



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	185
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJ.	

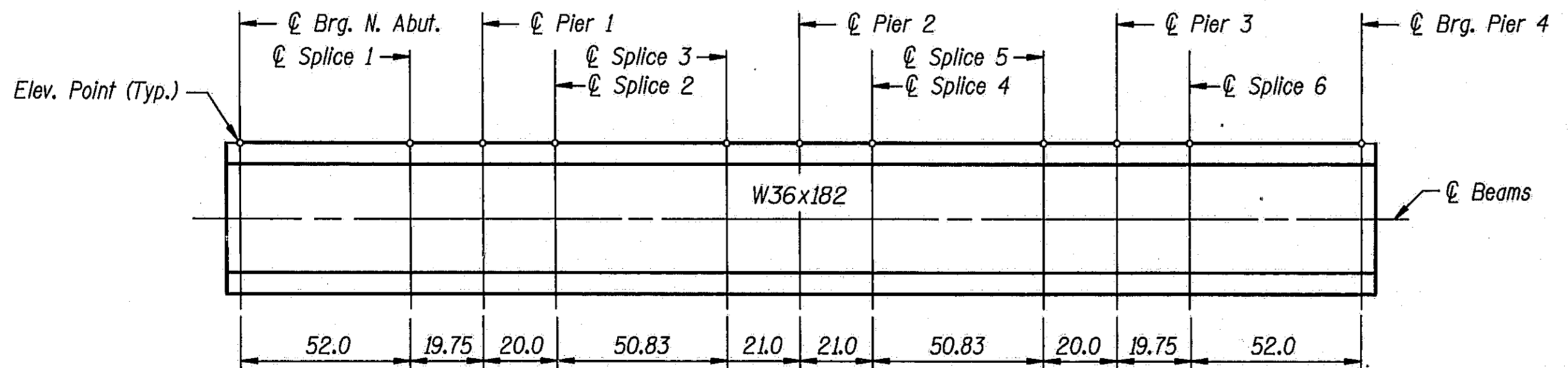


ELEVATION OF TOP OF BEAMS  
Beams ① or ② (For fabrication only)

Location	Elevation
Brig. N. Abut.	539.62
Splice 1	539.65
Pier 1	539.67
Splice 2	539.70
Splice 3	539.77
Pier 2	539.80
Splice 4	539.83
Splice 5	539.90
Pier 3	539.93
Splice 6	539.96
Brig. Pier 4	540.08

NOTE: Beam 1 & 8 elevations are the same. Spans 8, 9, 10 & 11 are the same by opposite hand.

NOTES:  
Quantities shown are for one structure. Two structures are required.  
See Sheet #16 of 45 for shear connectors at existing beams.  
See Sheet #19 for Plan View of Splice Plate.

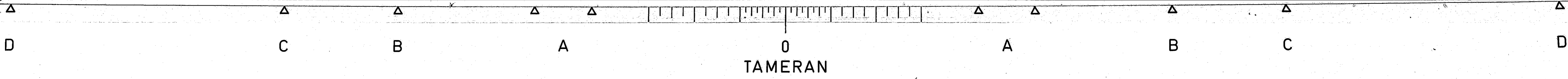


ELEVATION POINT LOCATIONS  
Beams ① or ②

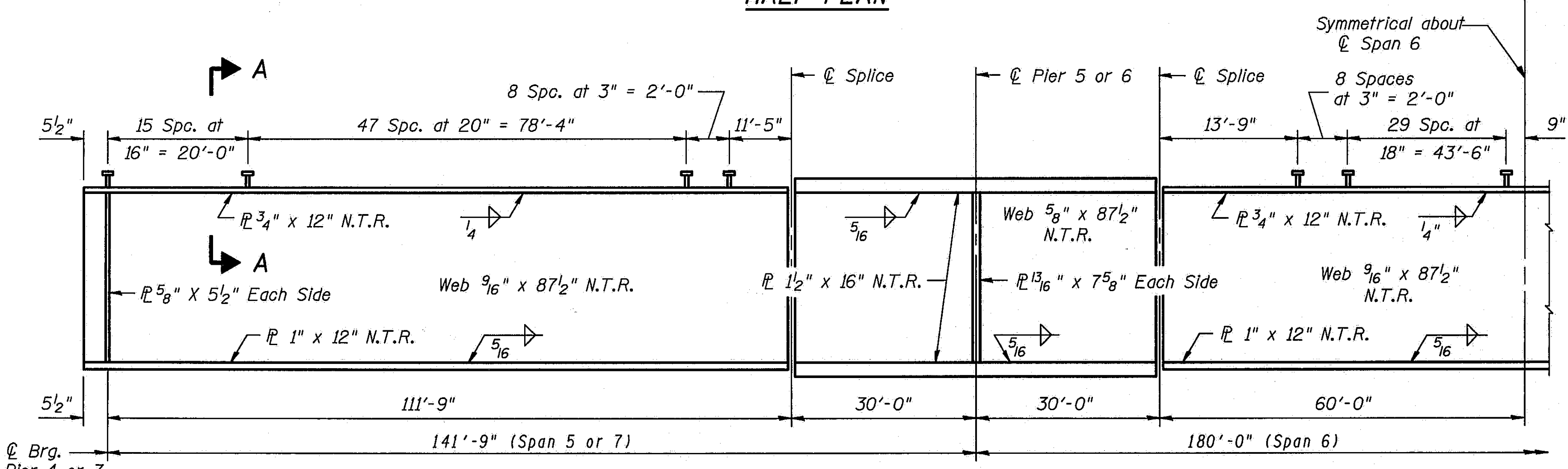
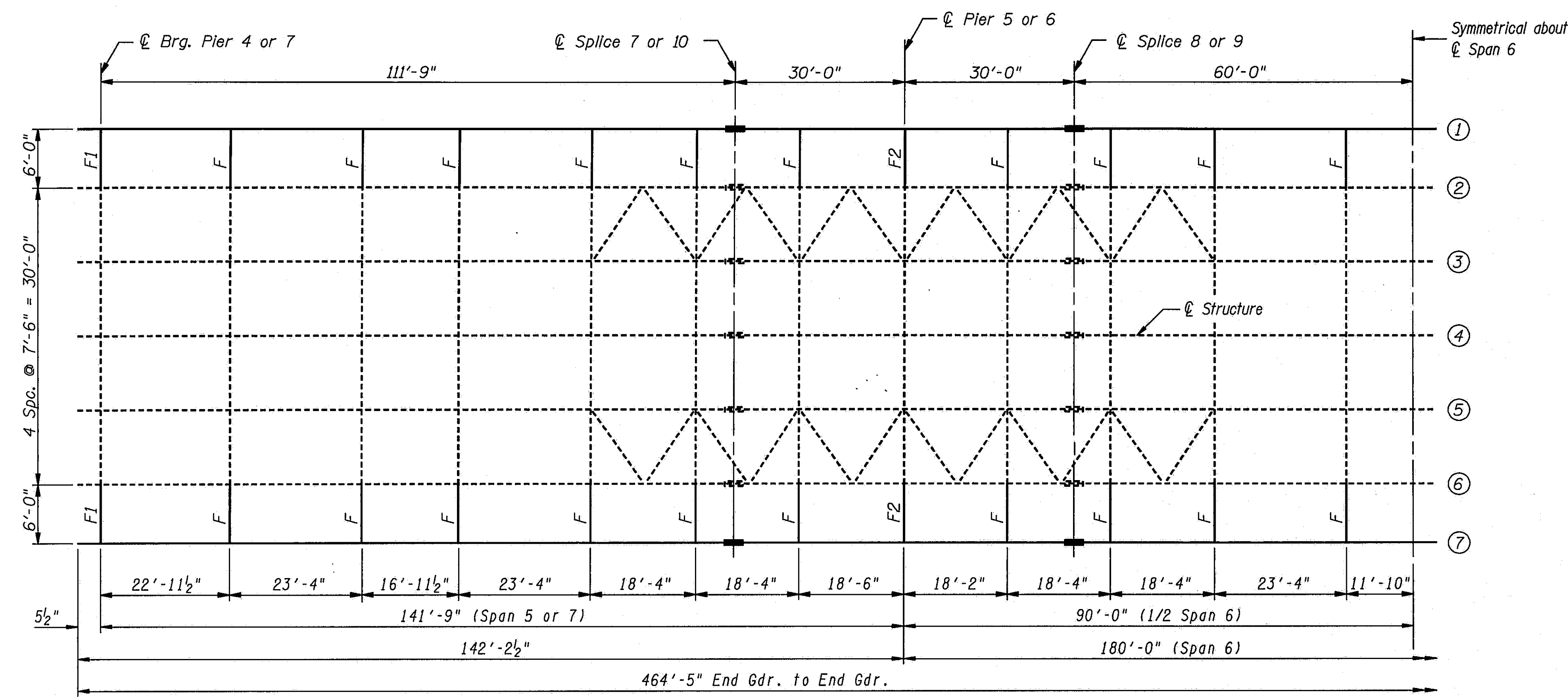
DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

I-2-D 8-30-80

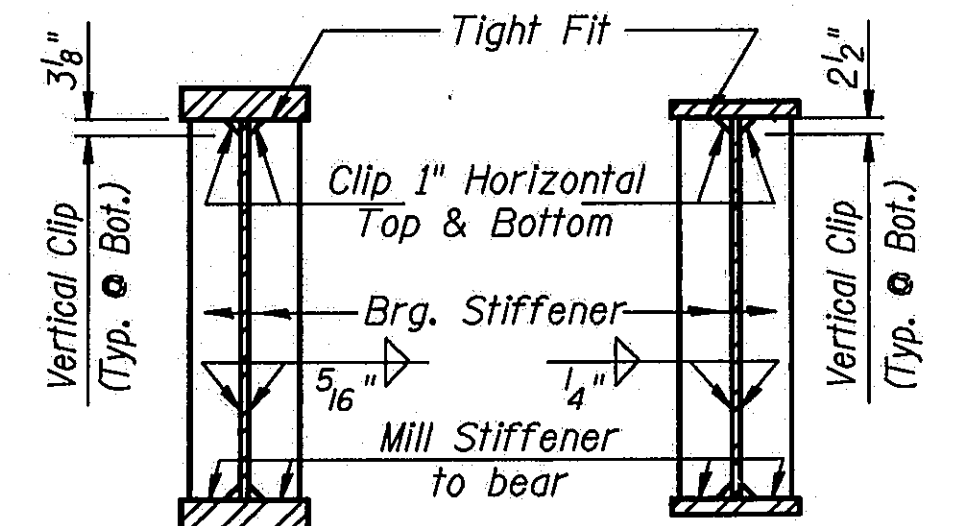
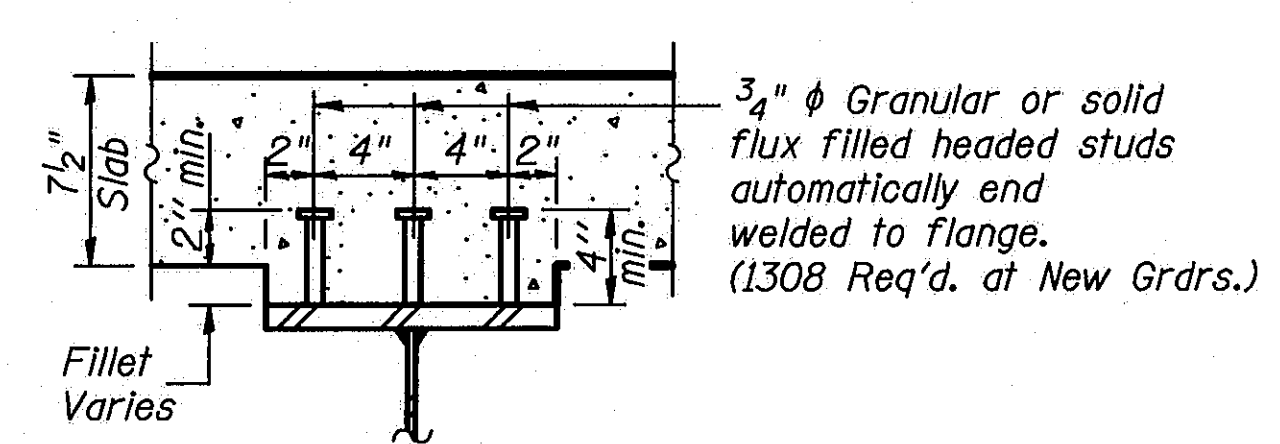
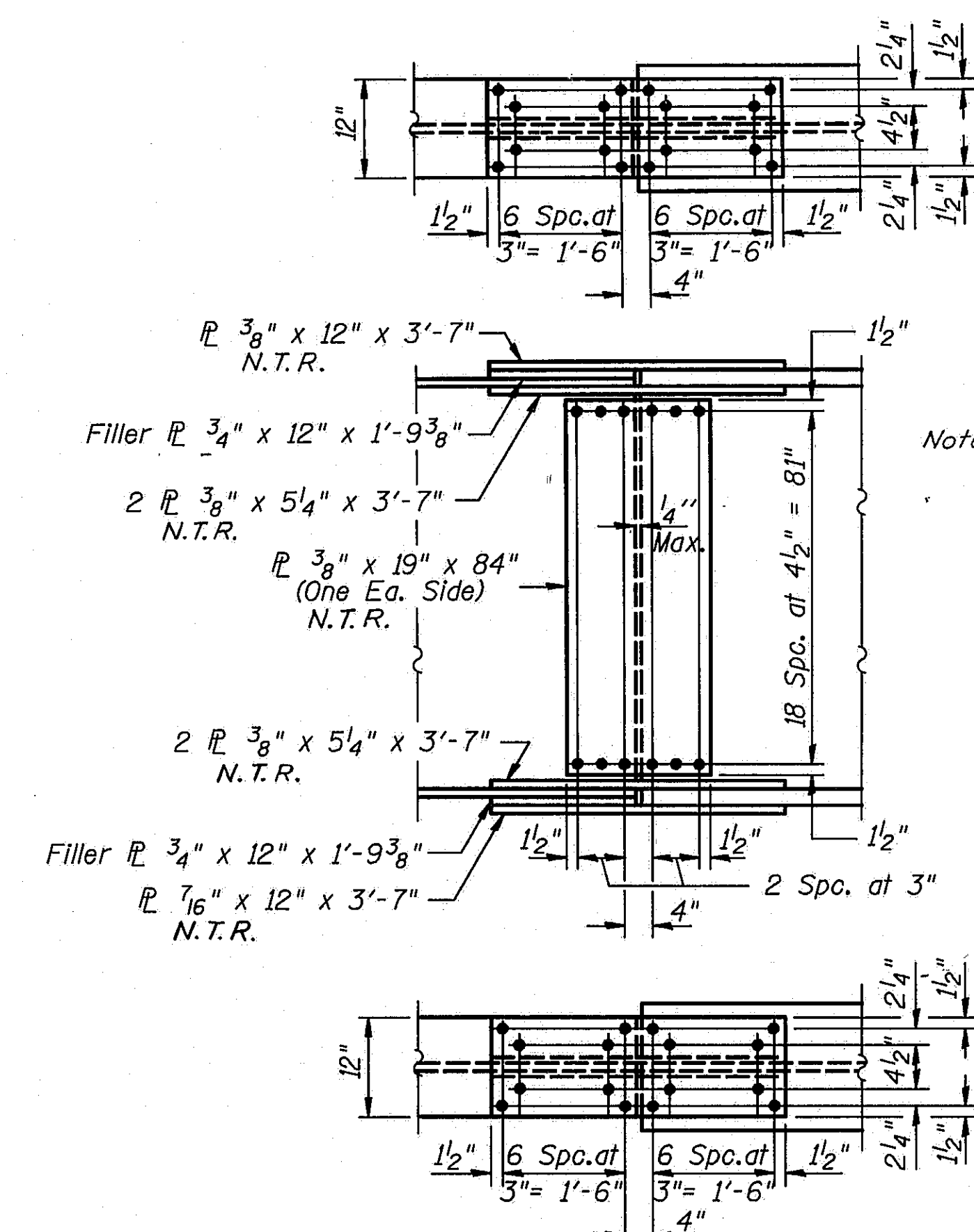
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
STRUCTURAL STEEL DETAILS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	186
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



"NTR" denotes plates to which notch toughness requirements are applicable. (Girders  $\odot$  or  $\ominus$ )



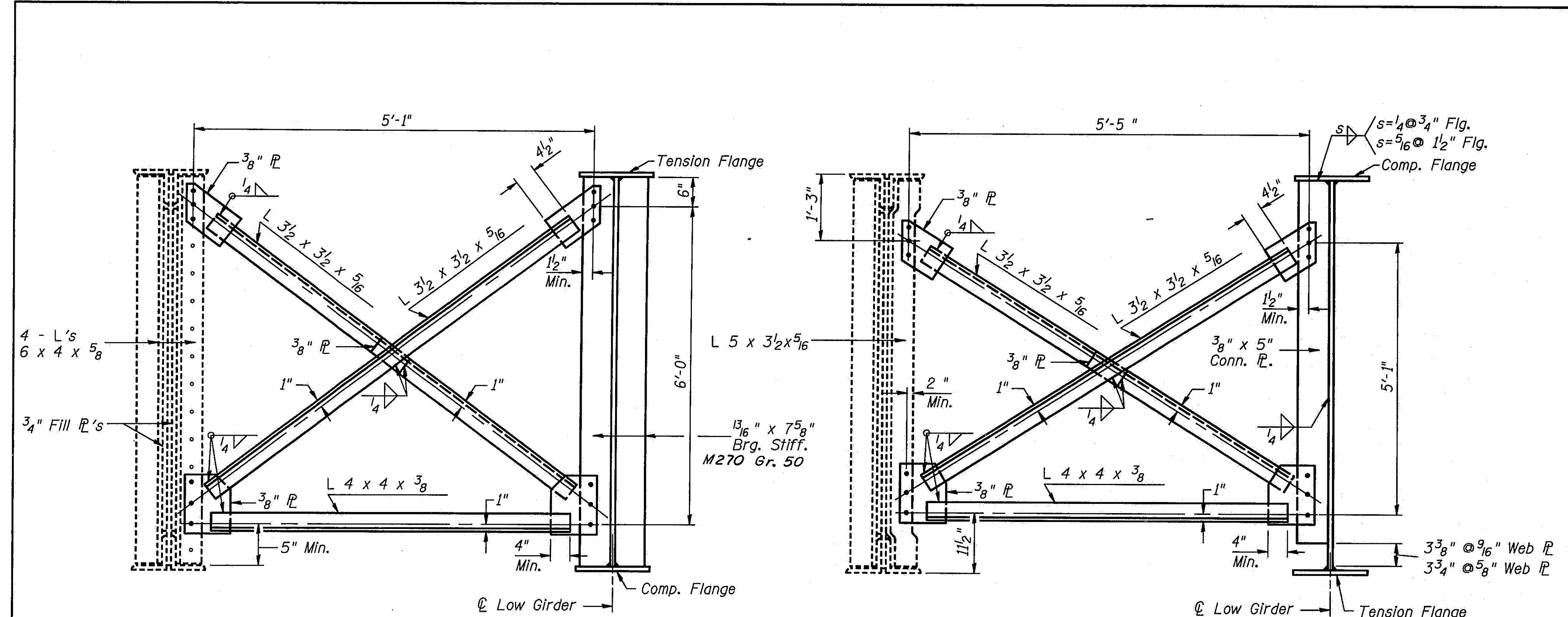
NOTES:  
Quantities shown are for one structure. Two structures are required.  
All new structural steel to be M270 Grade 50, Except as noted.  
See Sheet #16 of 45 for shear connectors at existing girders.

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	P-H

G-1 4-1-79

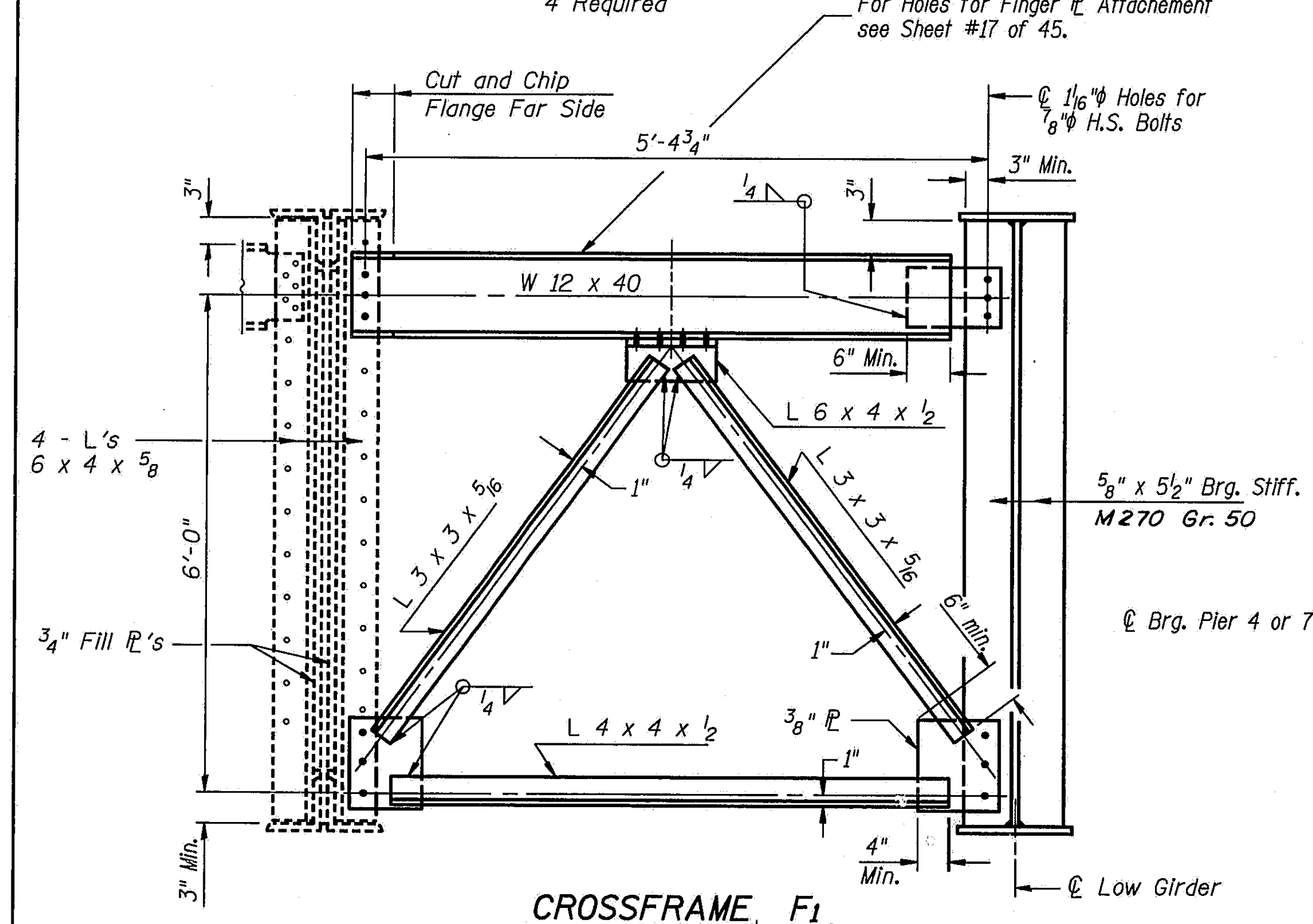
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
STRUCTURAL STEEL DETAILS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	187
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



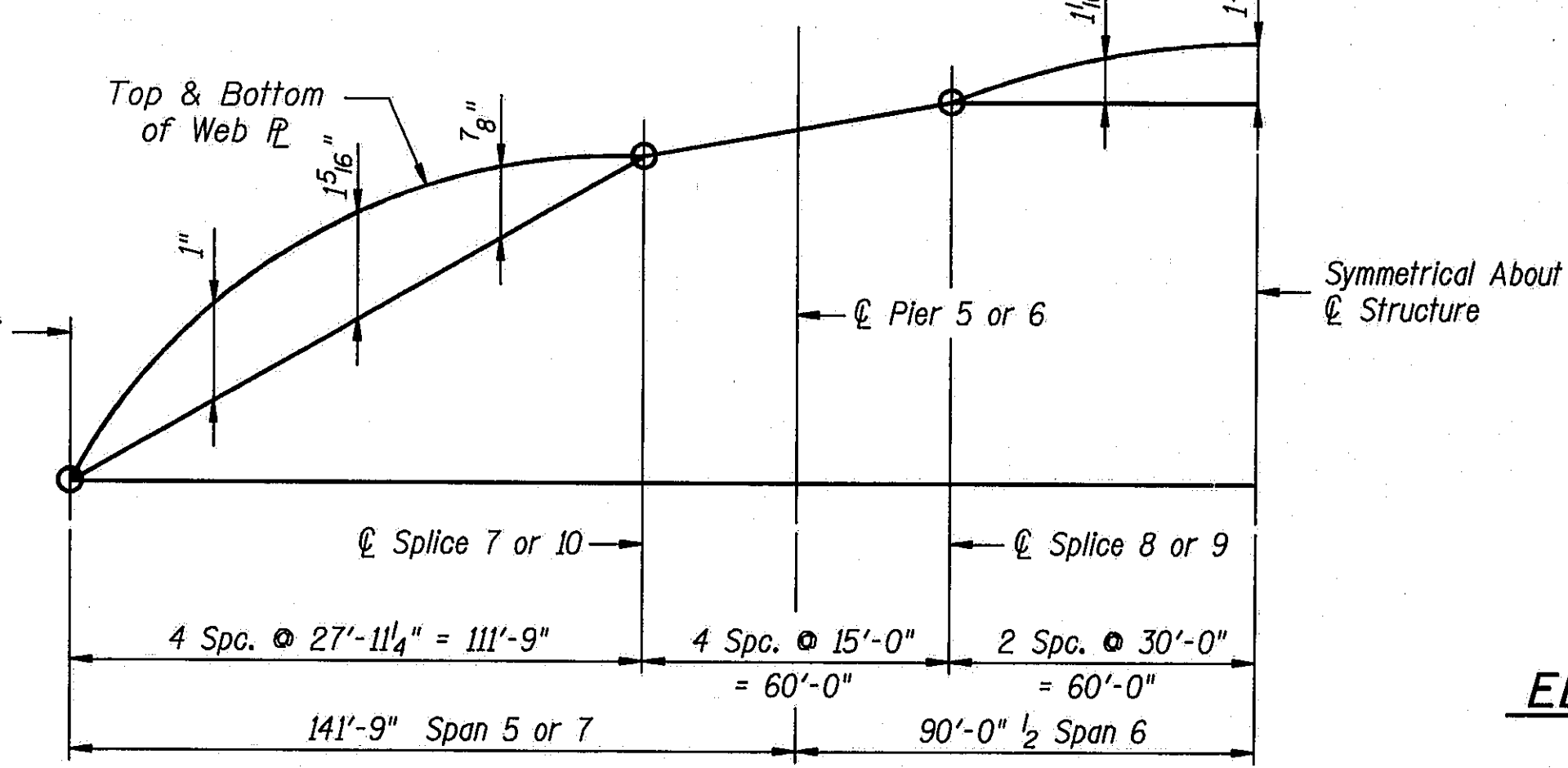
CROSSFRAME F<sub>2</sub>  
4 Required

CROSSFRAME F  
40 Required



CROSSFRAME F<sub>1</sub>  
4 Required

NOTES: Remove existing rivets as required to place new crossframes and plug weld rivet holes before field drilling new holes in existing bearing stiffeners or transverse stiffeners.  
Two hardened washers shall be required at all holes in all crossframes.  
All bolts are 7/8" H.S. with 1/16" Holes.  
All new structural steel for crossframes to be M270 Gr. 50.  
Quantities shown are for one structure. Two structures are required.



CAMBER DIAGRAM

**BEAM/GIRDER REACTIONS (KIPS)**

EXISTING BEAMS & GIRDERS						NEW BEAMS & GIRDERS				
SPANS 1, 2, 3 & 4*						SPANS 1, 2, 3 & 4*				
LD.	LOC.	PIER 1	PIER 2	PIER 3	PIER 4	N. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4
R Dead Ld.	27.3	95.9	97.6	95.9	27.3	27.8	94.0	96.7	94.0	27.8
R Live Ld.	37.1	47.7	49.8	47.7	37.1	37.2	47.2	49.4	47.2	37.2
Impact	8.9	11.5	11.9	11.5	8.9	8.9	11.3	11.8	11.3	8.9
R Total	73.3	155.1	159.3	155.1	73.3	73.9	152.5	157.9	152.5	73.9

SPANS 5, 6 & 7						SPANS 5, 6 & 7			
LD.	LOC.	PIER 4	PIER 5	PIER 6	PIER 7	PIER 4	PIER 5	PIER 6	PIER 7
R Dead Ld.	68.7	248.9	248.9	68.7	65.1	242.4	242.4	65.1	65.1
R Live Ld.	50.9	100.1	100.1	50.9	50.9	100.2	100.2	50.9	50.9
Impact	8.9	17.5	17.5	8.9	8.9	17.5	17.5	8.9	8.9
R Total	128.5	366.5	366.5	128.5	124.9	360.1	360.1	124.9	124.9

**BEAM/GIRDER MOMENT TABLES**

EXISTING BEAMS & GIRDERS					NEW BEAMS & GIRDERS			
SPANS 1, 2, 3 & 4 (SYMMETRICAL)*					SPANS 1, 2, 3 & 4 (SYMM.)*			
	0.4 Sp. 1	1/2 Pler 1	0.5 Sp. 2	1/2 Pler 2	0.4 Sp. 1	1/2 Pler 1	0.5 Sp. 2	1/2 Pler 2
I <sub>s</sub> (in. 4)	11282	16459	11282	16459	11300	11300	11300	11300
I <sub>c</sub> (in. 4)	24352	---	24352	---	24377	---	24377	---
S <sub>s</sub> (in. 3)	621	873	621	873	622	622	622	622
S <sub>c</sub> (in. 3)	833	---	833	---	752	---	752	---
U (k/')	0.800	0.860	0.800	0.860	0.800	0.800	0.800	0.800
M <sub>U</sub> (k)	267	574	261	601	279	538	287	574
f <sub>s non-comp</sub> (k.s.l.)	5.17	7.88	5.04	8.26	5.38	10.38	5.54	11.08
S <sub>U</sub> (k/')	0.240	---	0.240	---	0.240	---	0.240	---
M <sub>s</sub> (k)	87	155	92	167	91	144	102	158
M <sub>L</sub> (k)	464	370	512	409	473	333	533	371
M <sub>imp</sub> (k)	111	89	123	98	113	80	128	89
Total (k)	662	614	727	674	677	557	763	618
f <sub>s comp</sub> (k.s.l.)	9.67	8.44	10.61	9.28	9.89	10.75	11.14	11.92
f <sub>s total</sub> (k.s.l.)	14.83	16.32	15.66	17.54	15.27	21.13	16.68	23.00
VR (k)	52.6	---	38.9	---	46.1	---	40.4	---

SPANS 5, 6 & 7 (SYMMETRICAL)				SPANS 5, 6 & 7 (SYMM.)		
	0.4 Sp. 5	1/2 Pler 5	0.5 Sp. 6	0.4 Sp. 5	1/2 Pler 5	0.5 Sp. 6
I <sub>s</sub> (in. 4)	102983	189082	102983	72173	129956	72173
I <sub>c</sub> (in. 4)	185217	---	185217	149995	---	149995
S <sub>s</sub> (in. 3)	2354	4179	2354	1685	2872	1685
S <sub>c</sub> (in. 3)	2874	---	2874	2308	---	2308
U (k/')	1.074	1.248	1.074	1.019	1.149	1.019
M <sub>U</sub> (k)	1362	3089	1284	1252	3070	1115
f <sub>s non-comp</sub> (k.s.l.)	6.94	8.87	6.55	8.92	12.83	7.94
S <sub>U</sub> (k/')	0.274	---	0.274	0.274	---	0.274
M <sub>s</sub> (k)	367	734	376	361	748	361
M <sub>L</sub> (k)	1289	1562	1420	1286	1577	1406
M <sub>imp</sub> (k)	225	273	249	225	276	246
Total (k)	1881	2569	2045	1872	2601	2013
f <sub>s comp</sub> (k.s.l.)	7.99	7.38	8.67	9.98	10.87	10.72
f <sub>s total</sub> (k.s.l.)	14.93	16.25	15.22	18.90	23.70	18.66
VR (k)	67.9	---	61.8	68.0	---	61.9

\* Spans 8, 9, 10 & 11 are the same by opposite hand.  
I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section used in computing f<sub>s</sub> (Total).  
I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing f<sub>s</sub> (Total).  
VR is the maximum L \* Impact shear range in span.  
Structure is composite in positive moment regions only.

ELEVATION OF TOP OF WEBS

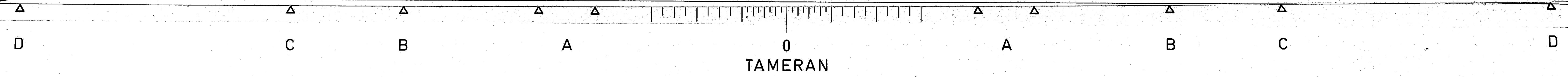
Girders ① or ⑦  
For Fabrication Only

Location	Elevation
1/2 Brg. Pier 4	540.00
1/2 Splice 7	540.01
1/2 Pler 5	540.02
1/2 Splice 8	540.03
1/2 Splice 9	540.03
1/2 Pler 6	540.02
1/2 Splice 10	540.01
1/2 Brg. Pier 7	540.00

NOTE: Girder 1 & 7 elevations are the same.

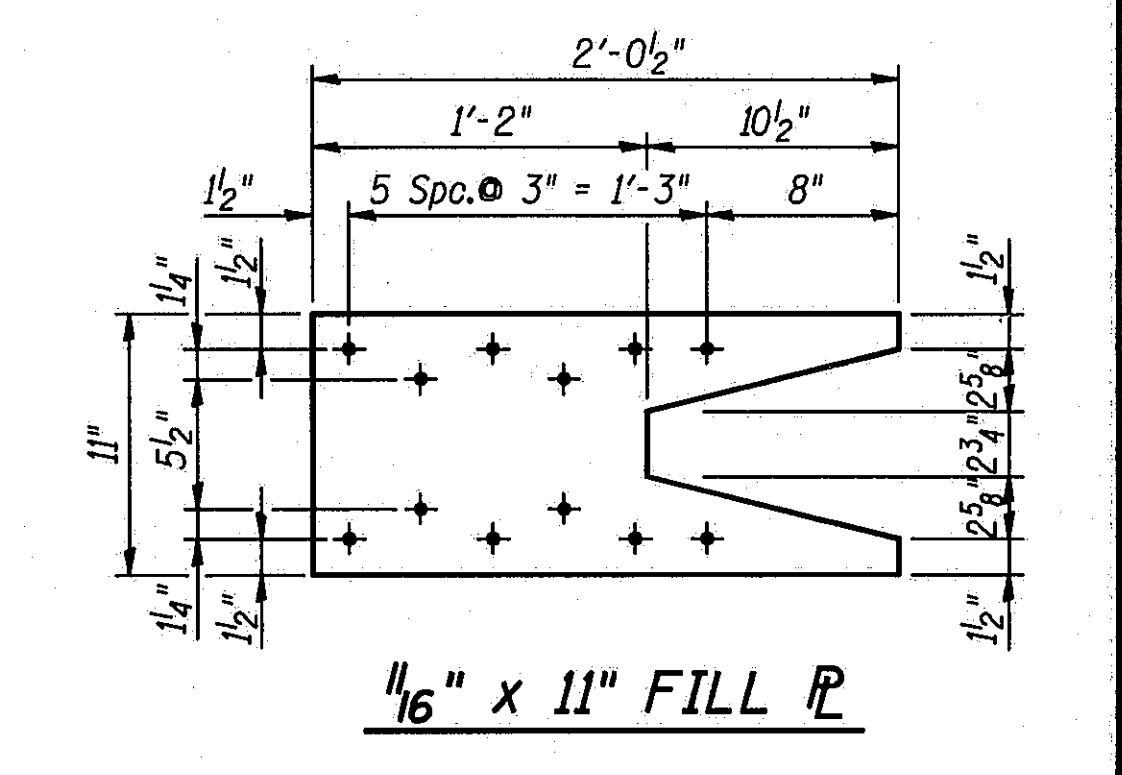
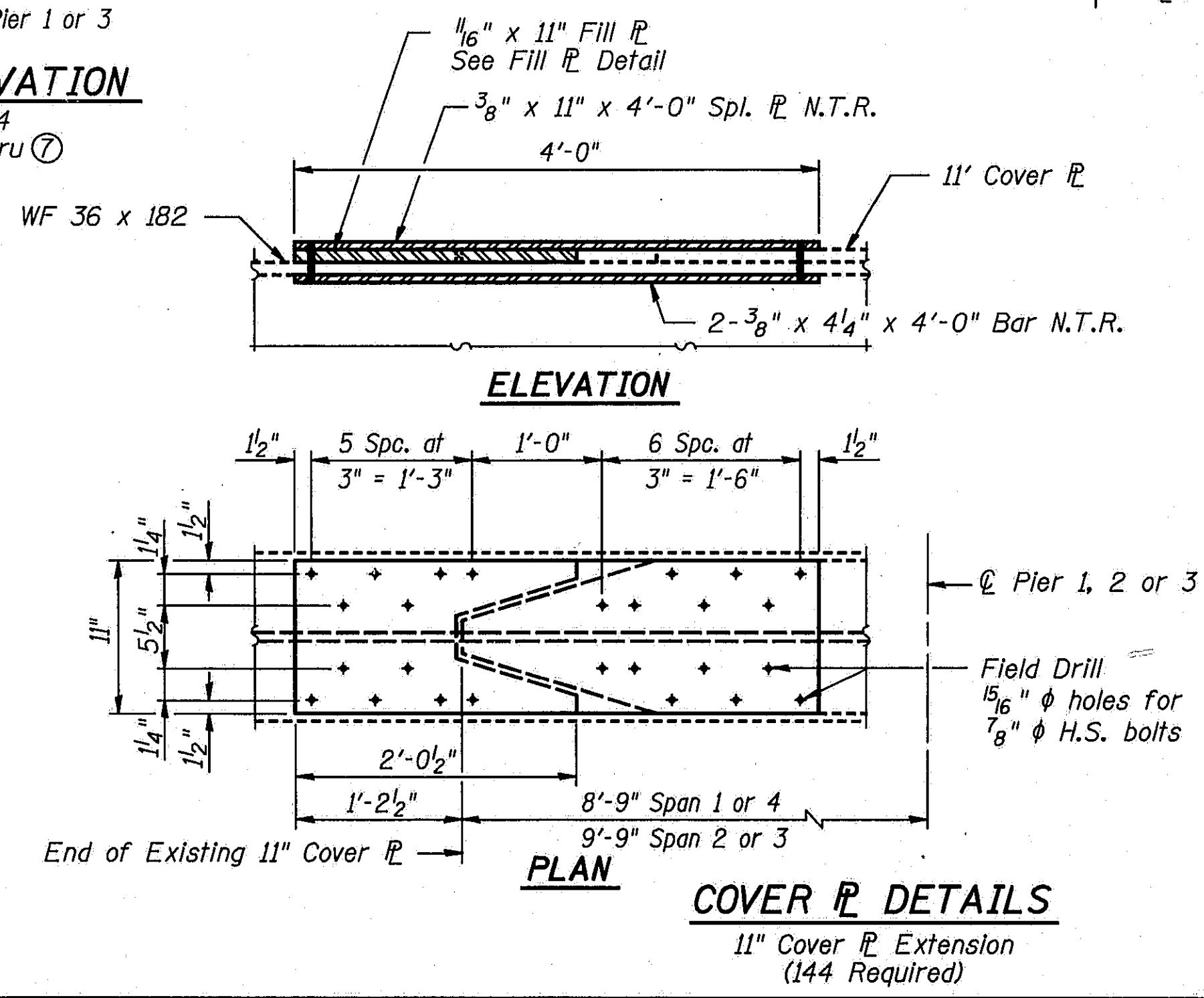
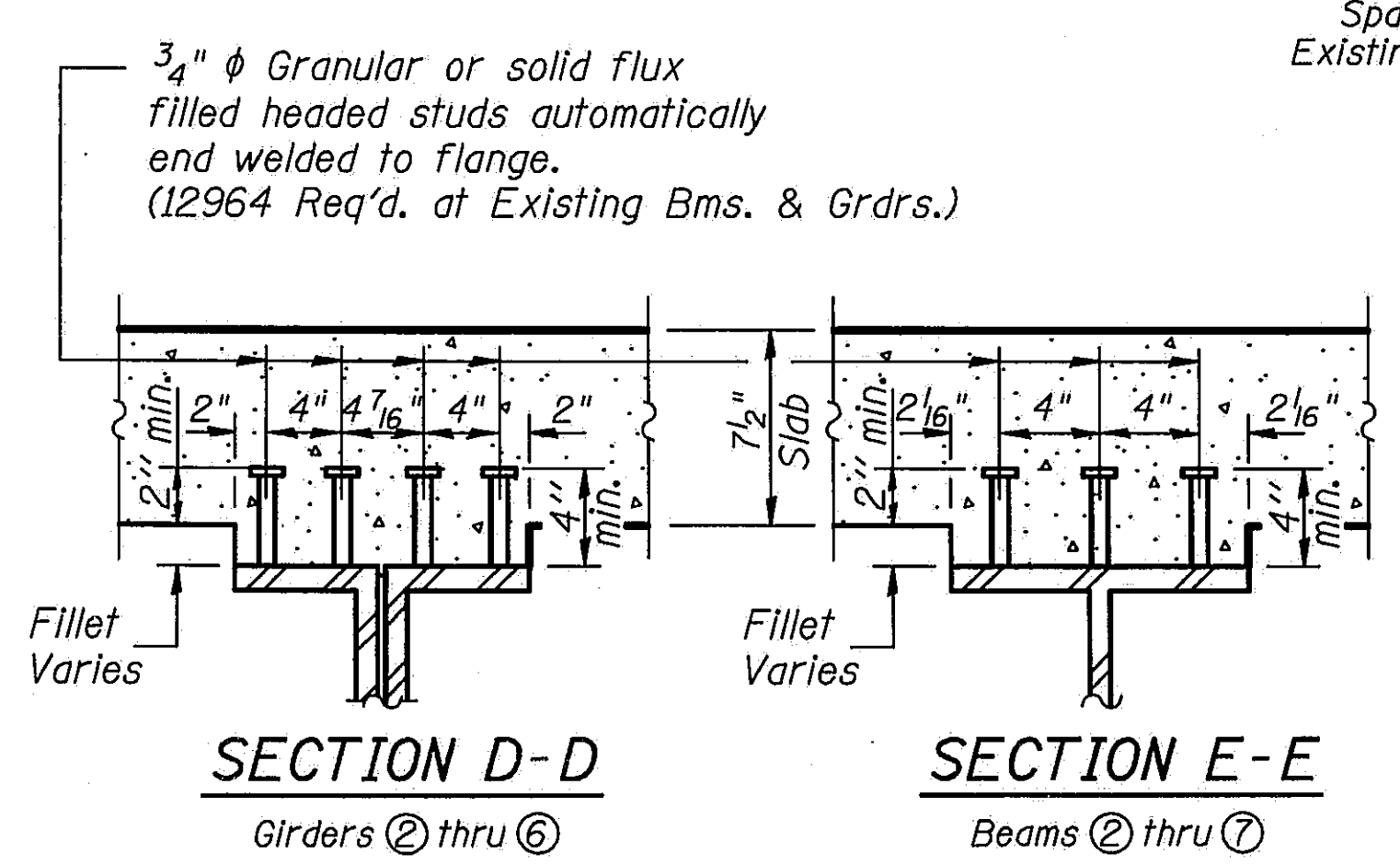
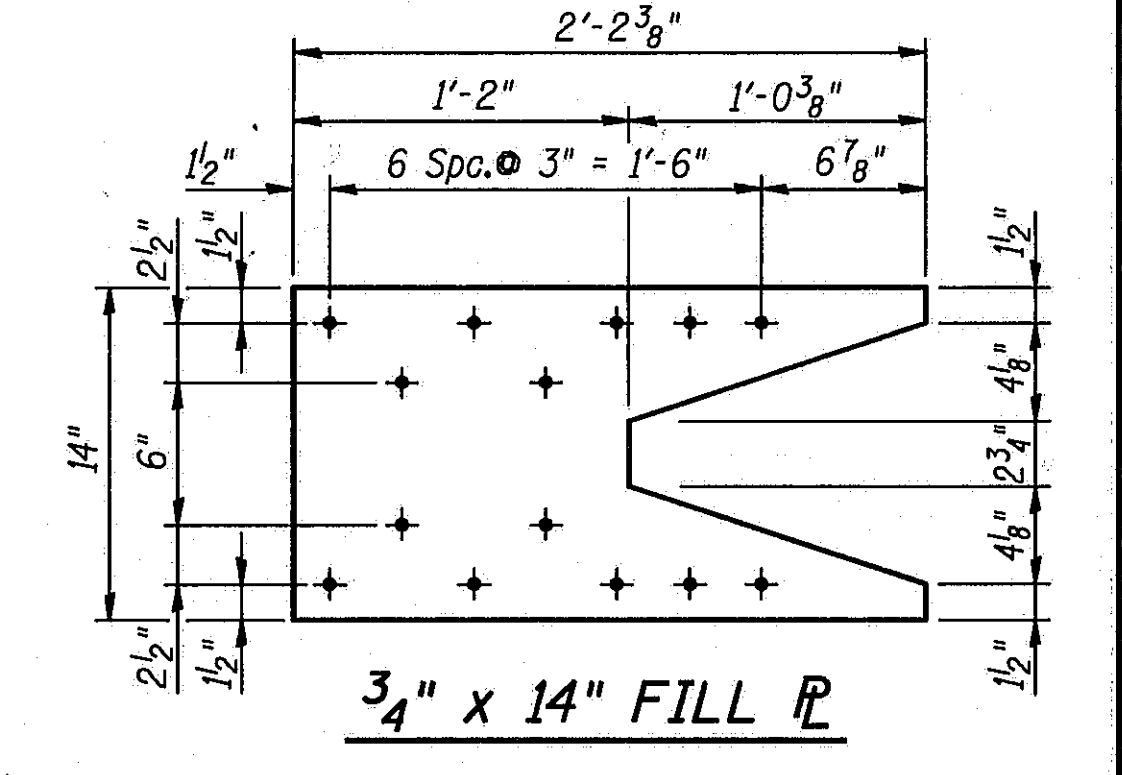
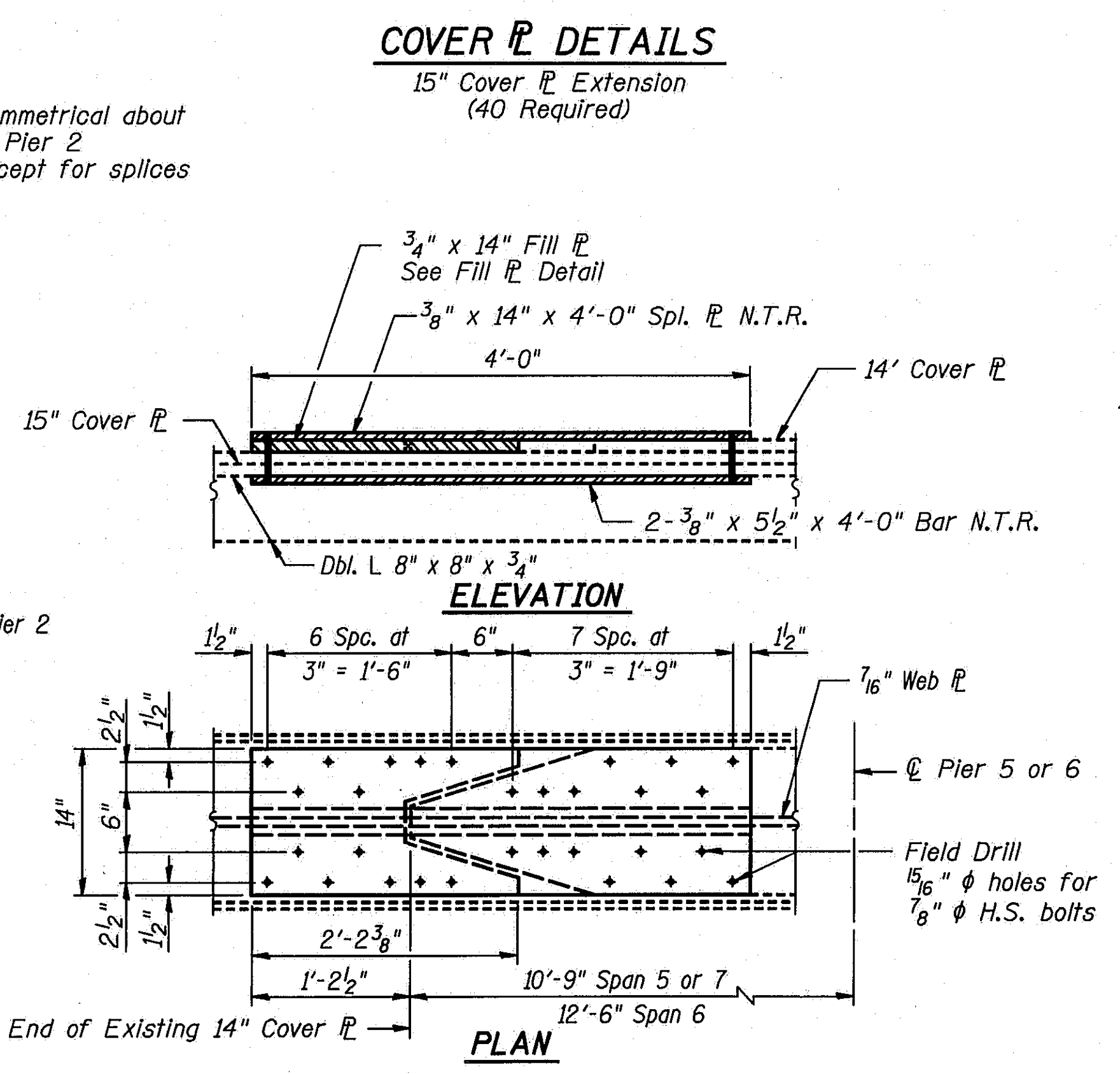
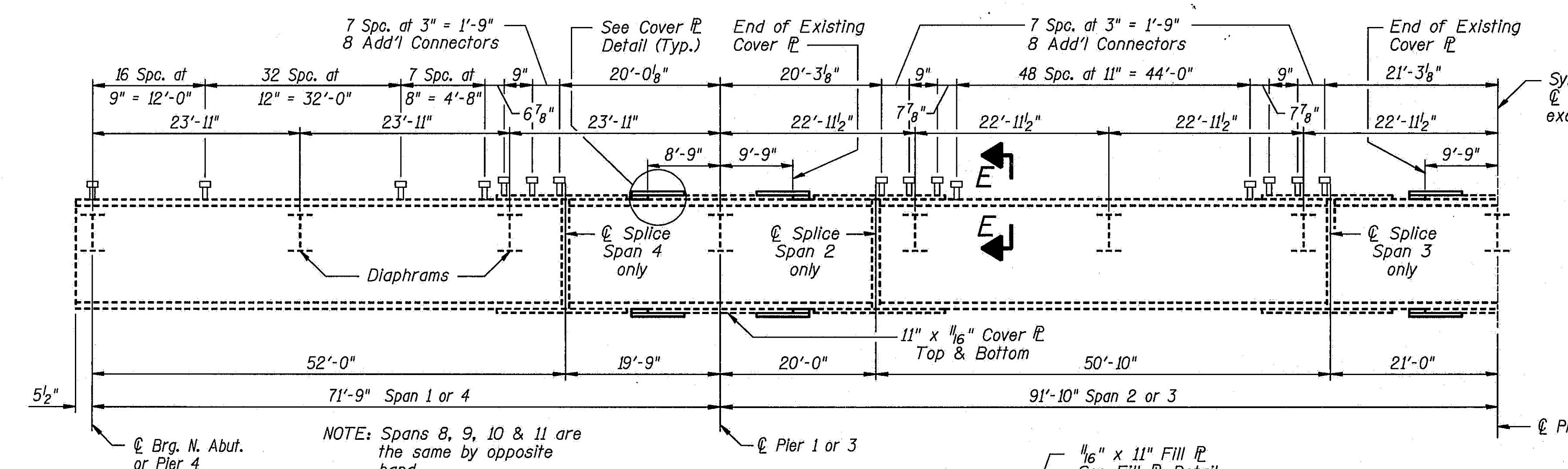
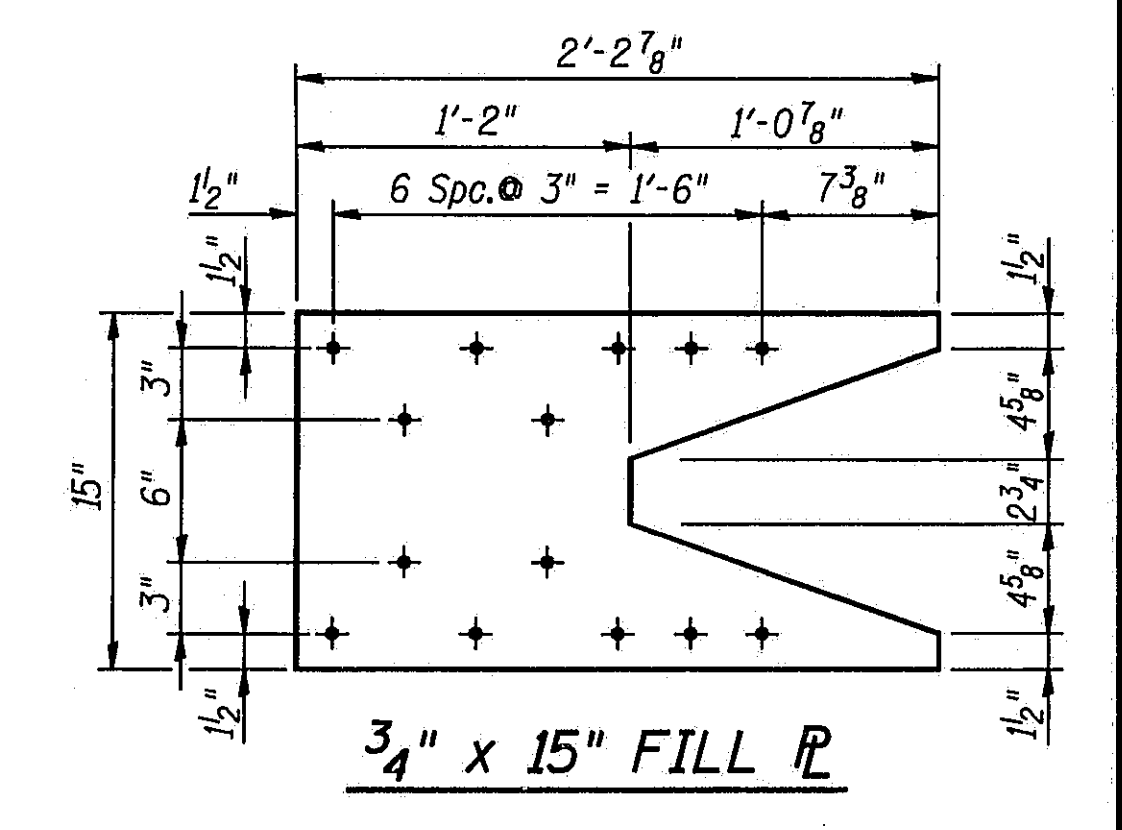
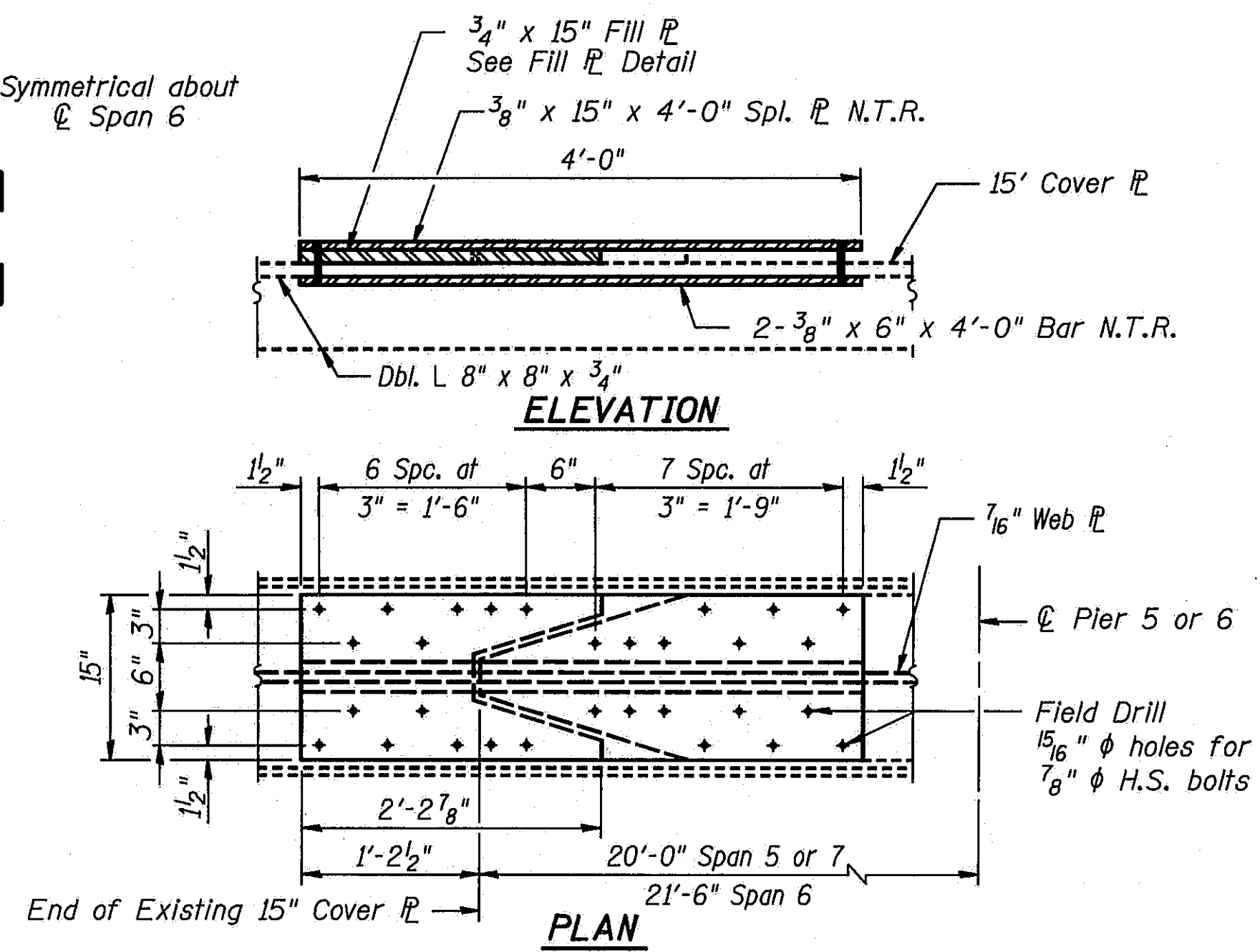
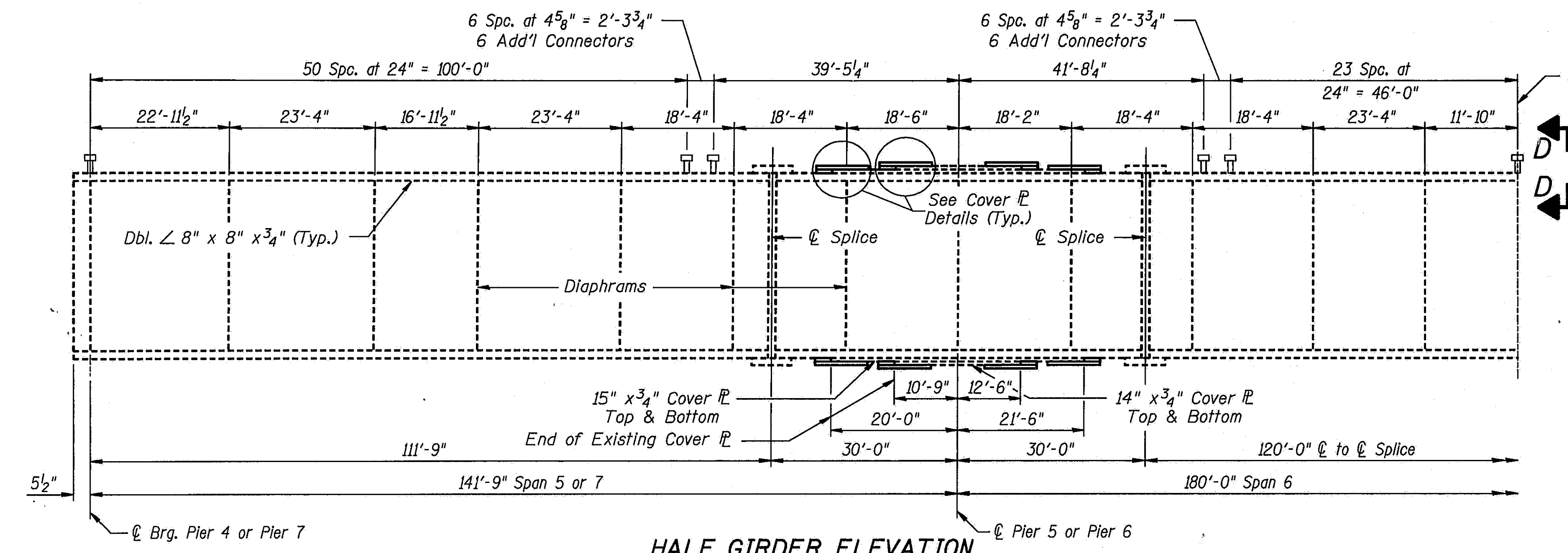
DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
  
STRUCTURAL STEEL DETAILS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019





ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	188.
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

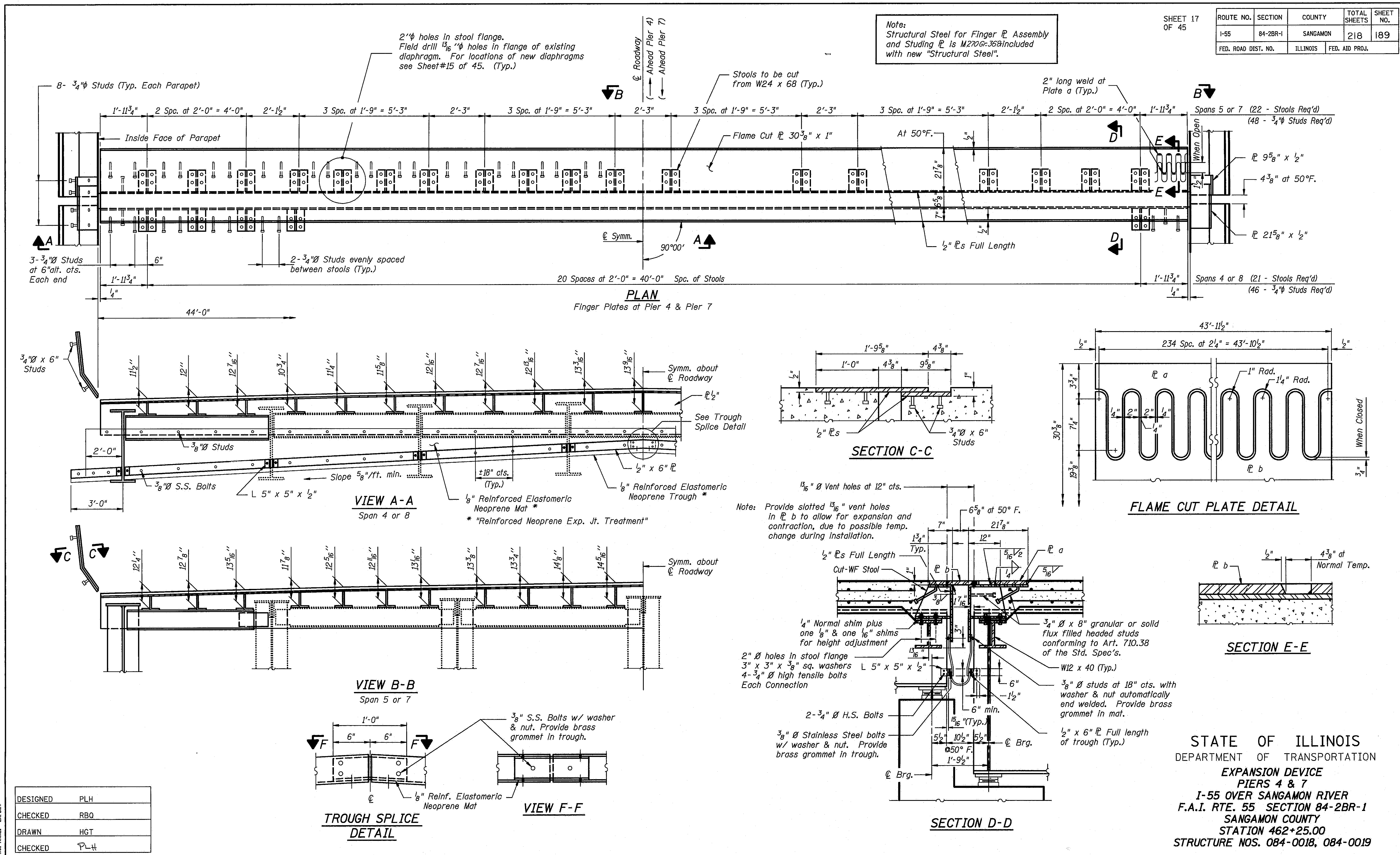
NOTES:  
Quantities shown are for one structure. Two structures are required.  
N.T.R. denotes plates to which notch toughness requirements are applicable.  
Structural Steel used in Cover PL Details included in "Structural Steel Repair".  
All new structural steel for "Structural Steel Repair" to be M270 Grade 50.  
Cost of field drilling holes is incidental.  
See Sheet #19 for Plan View of Splice Plate.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**STRUCTURAL STEEL DETAILS**  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

SHEET 17 OF 45	ROUTE NO. I-55	SECTION 84-2BR-1	COUNTY SANGAMON	TOTAL SHEETS 218	SHEET NO. 189
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

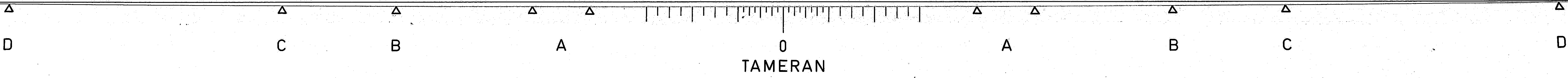
Note:  
Structural Steel for Finger  $\bar{P}$  Assembly  
and Studing  $\bar{P}$  is M270-368 included  
with new "Structural Steel".

2"  $\phi$  holes in stool flange.  
Field drill  $\frac{1}{8}$ "  $\phi$  holes in flange of existing  
diaphragm. For locations of new diaphragms  
see Sheet #15 of 45. (Typ.)

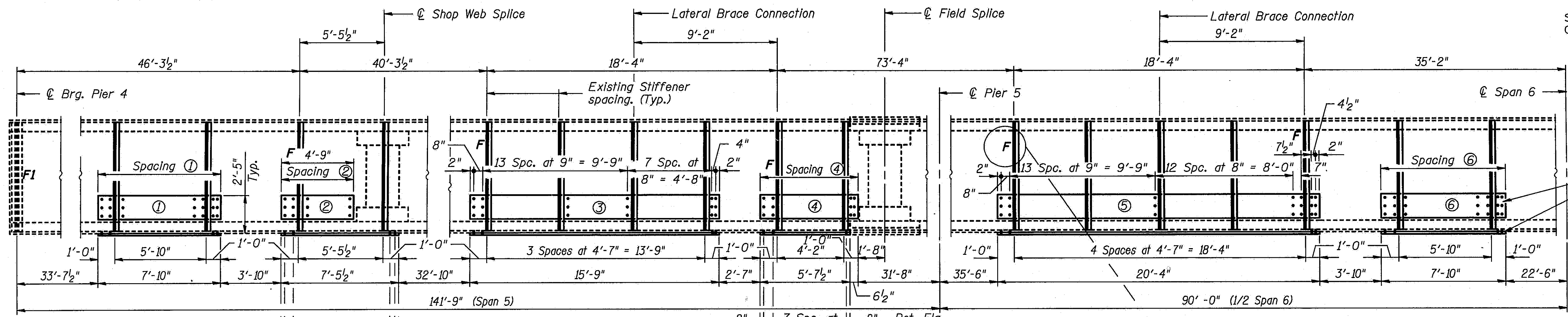


DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

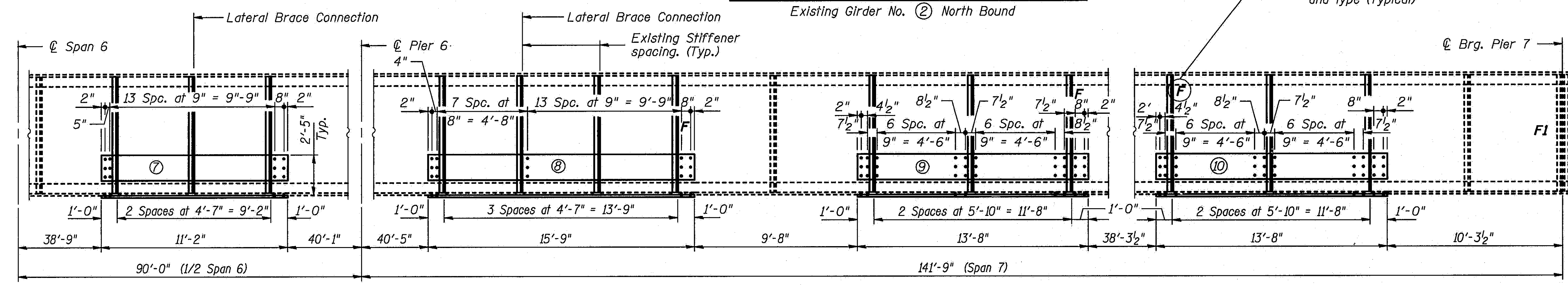
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
EXPANSION DEVICE  
PIERS 4 & 7  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019



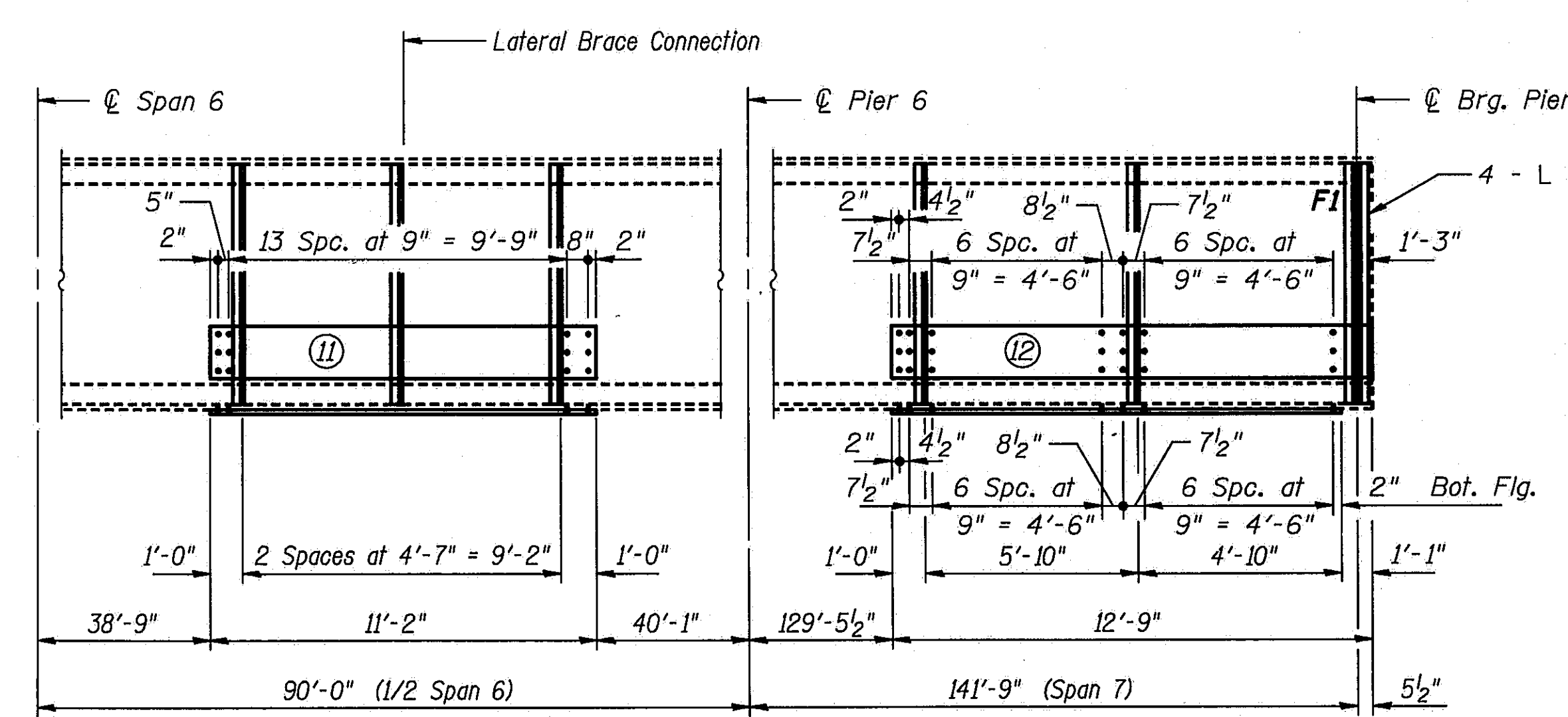
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	190
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



**HALF ELEVATION - GIRDER REPAIRS**  
Existing Girder No. ② North Bound



**HALF ELEVATION - GIRDER REPAIRS**  
Existing Girder No. ② North Bound

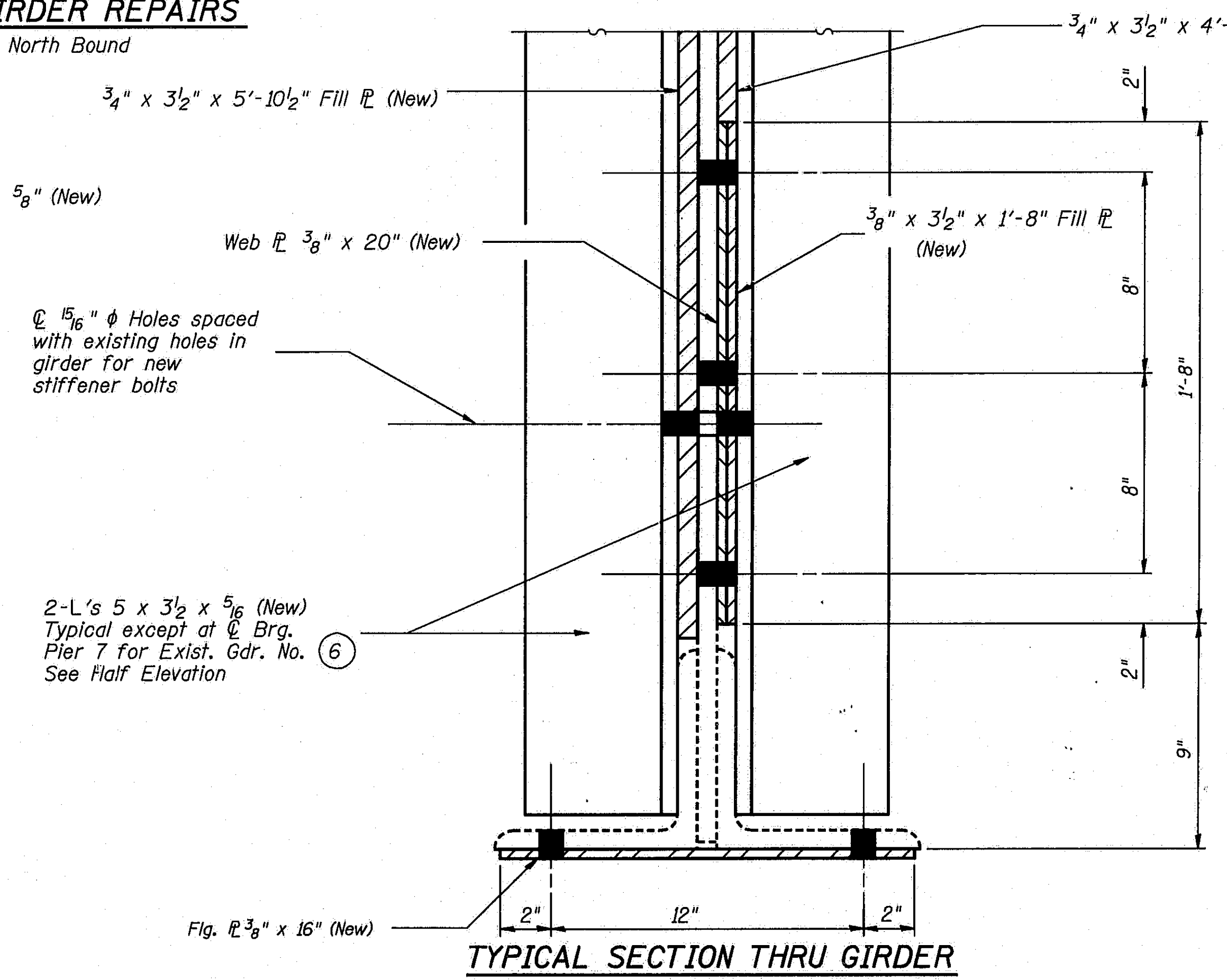


**HALF ELEVATION - GIRDER REPAIRS**  
Existing Girder No. ⑥ North Bound

**HOLE SPACING**

- ① 2", 8", 7 1/2", 6 Spc. at 9" = 4'-6", 8 1/2", 7 1/2", 4 1/2", 2"
- ② 2", 8", 5 Spc. at 9" = 3'-9", 2"
- ④ 2", 7 3/4", 7 Spc. at 8 1/4" = 4'-10 3/4", 4 1/2", 2"
- ⑥ 2", 8", 7 1/2", 6 Spc. at 9" = 4'-6", 8 1/2", 7 1/2", 4 1/2", 2"

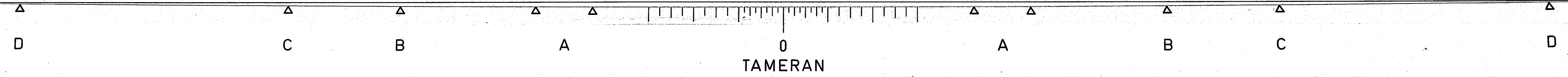
DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT & P. Ray
CHECKED	PLH



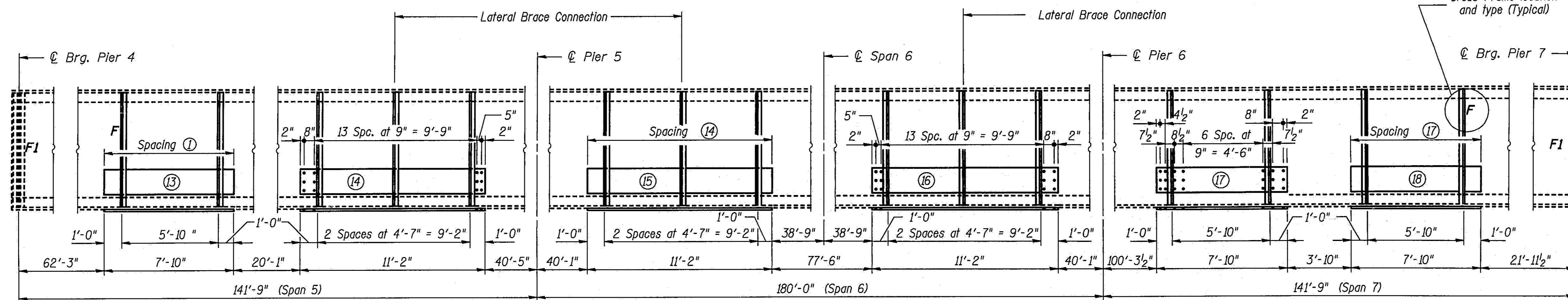
**TYPICAL SECTION THRU GIRDER**

Note:  
Bolt spacings shown are typical for web and flange plates unless otherwise given. See Girder Repair Notes on Sheet 19 of 45.  
For Bill of Material, see Sheet 19 of 45.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
"STRUCTURAL STEEL REPAIR"  
GIRDER REPAIR DETAILS  
N.B. I-55 EXISTING FASCIA GIRDERS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019



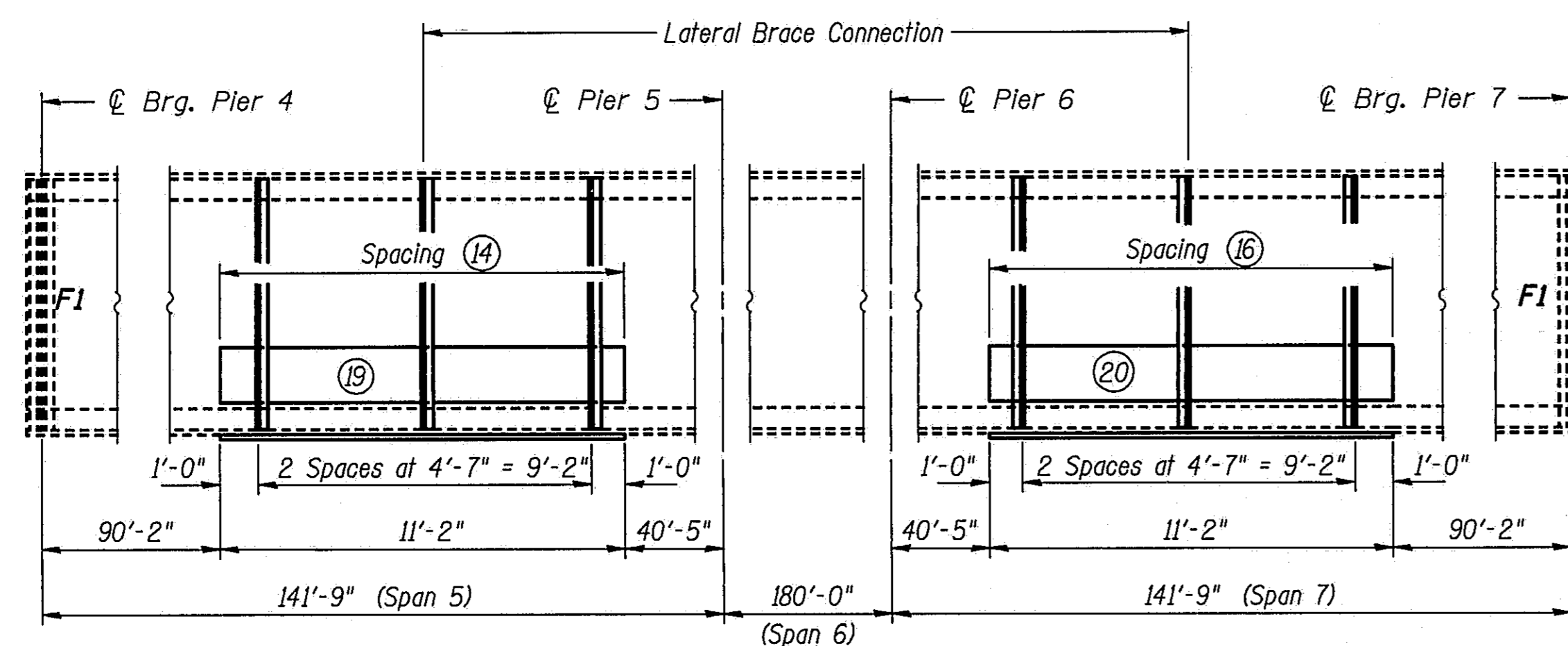
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	191
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



Note: 14-7/8"  $\phi$  Bolts at each pair of stiffeners  
22-7/8"  $\phi$  Bolts at Crossframe F  
61-7/8"  $\phi$  Bolts at Crossframe FL

**ELEVATION — GIRDER REPAIRS**

Existing Girder No. (2) South Bound



Note: Bolt spacings shown are typical for web and flange plates.

**ELEVATION — GIRDER REPAIRS**

Existing Girder No. (6) South Bound

REPAIR NO.	BILL OF MATERIALS "STRUCTURAL STEEL REPAIR" (BOTH STRUCTURES)		STIFFENERS			FILL PL'S			7/8" $\phi$ BOLTS	
	WEB PL	FLANGE PL	L 5 x 3 1/2 x 5/16	L 6 x 4 x 5/8	3/4" x 5'-10 1/2"	3/4" x 4'-2"	3/8" x 1'-8"	STIFF. L	SPL. PL	
(1) (6) (13) (17) (18)	5 x 7'-10"	5 x 7'-10"	20 x 7'-1"	—	10 (3/2")	10 (3/2")	10 (3/2")	164	300	
(2)	1 x 4'-9"	1 x 7'-5 1/2"	4 x 7'-1"	—	2 (3/2")	2 (3/2")	2 (3/2")	36	42	
(3) (8)	2 x 15'-9"	2 x 15'-9"	16 x 7'-1"	—	8 (3/2")	8 (3/2")	8 (3/2")	122	230	
(4)	1 x 6'-2"	1 x 5'-7 1/2"	4 x 7'-1"	—	2 (3/2")	2 (3/2")	2 (3/2")	36	48	
(5)	1 x 20'-4"	1 x 20'-4"	10 x 7'-1"	—	5 (3/2")	5 (3/2")	5 (3/2")	78	150	
(7) (11) (14) (15) (16) (19) (20)	7 x 11'-2"	7 x 11'-2"	42 x 7'-1"	—	21 (3/2")	21 (3/2")	21 (3/2")	294	560	
(9) (10)	2 x 13'-8"	2 x 13'-8"	12 x 7'-1"	—	6 (3/2")	6 (3/2")	6 (3/2")	100	100	
(12)	1 x 12'-9"	1 x 11'-8"	4 x 7'-1"	4 x 7'-2"	1 (8")	1 (8")	1 (8")	61	85	

**GIRDER REPAIR NOTES:**

All Intermediate and Bearing Stiffeners in repair areas to be replaced. Removal included in "Structural Steel Removal". Replacement included in "Structural Steel Repair".

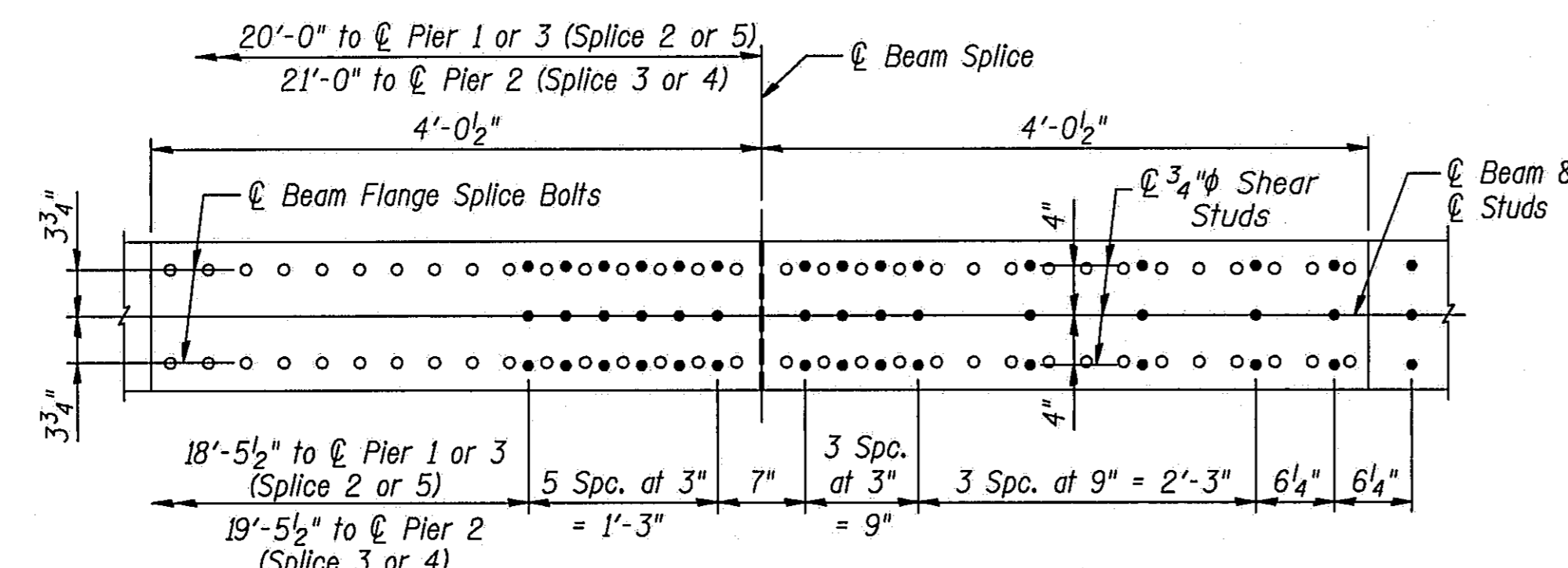
All crossframe and lateral brace members and connections are to be cleaned of all rust and reused unless repair and/or replacement is deemed necessary by the Engineer. Repair or replacement to be done as directed by the Engineer and paid at the unit price for "Structural Steel Repair".

Bottom flange bolt spacing to be adjusted as required to accommodate lateral brace members. Maintain 9" maximum spacing.

All bolts are 7/8"  $\phi$  H.S. Bolts with 15/16"  $\phi$  holes.

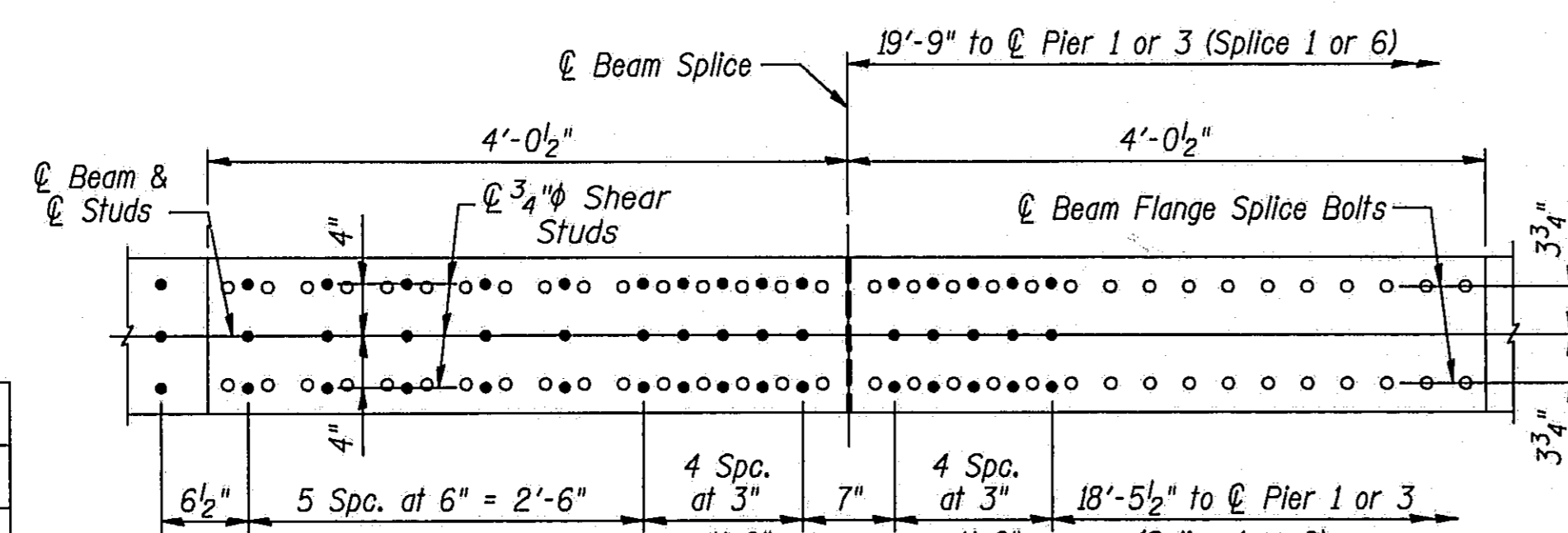
All new structural steel shown for "Structural Steel Repair" to be M270 Grade 50.

Notch Toughness Requirements are applicable for all web and flange plates.

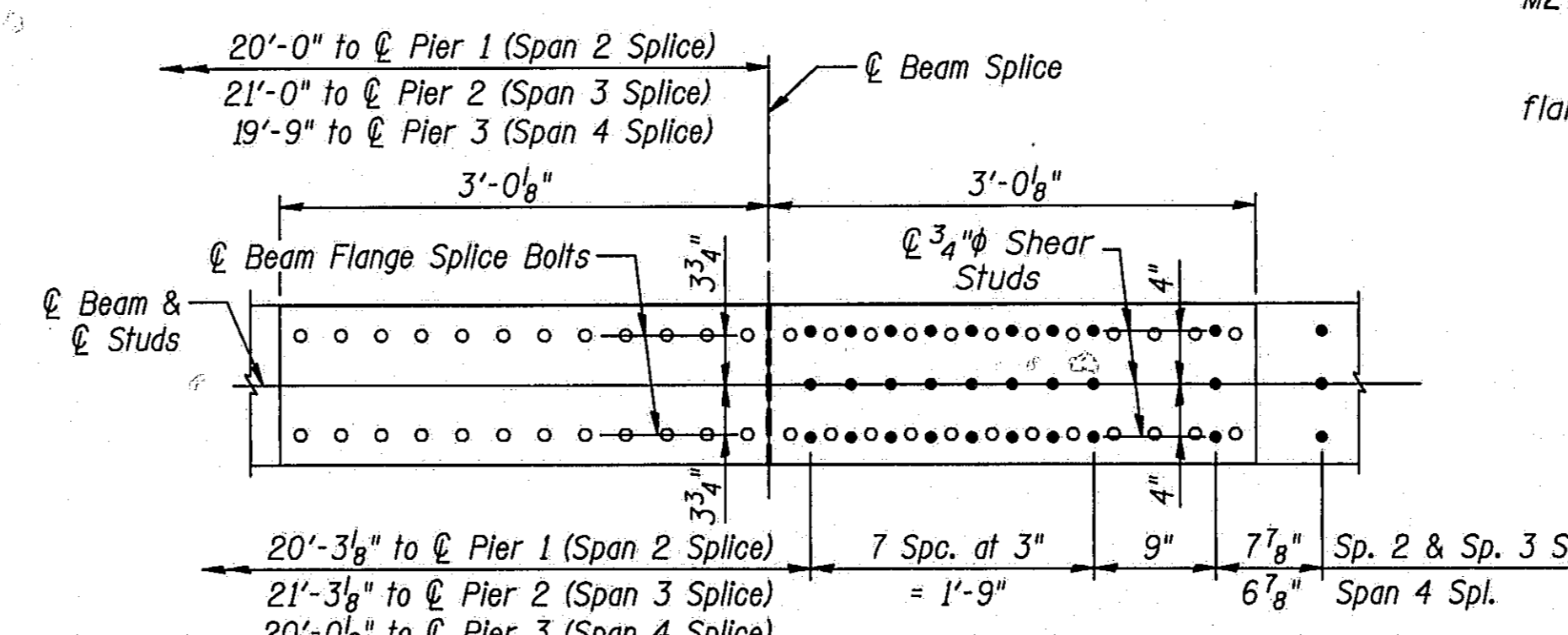


**SHEAR STUDS AT NEW SPLICES 2 THRU 5**

Splice Note: Spans 1 thru 4 are shown. Spans 8 thru 11 are same by opposite hand. Work these details with sheets 13 and 16 of 45.



**SHEAR STUDS AT NEW SPLICES 1 AND 6**

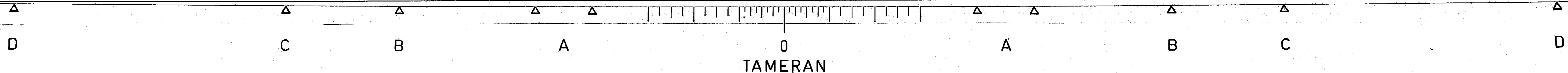


**SHEAR STUDS AT EXISTING SPLICES, SPANS 2, 3 & 4**

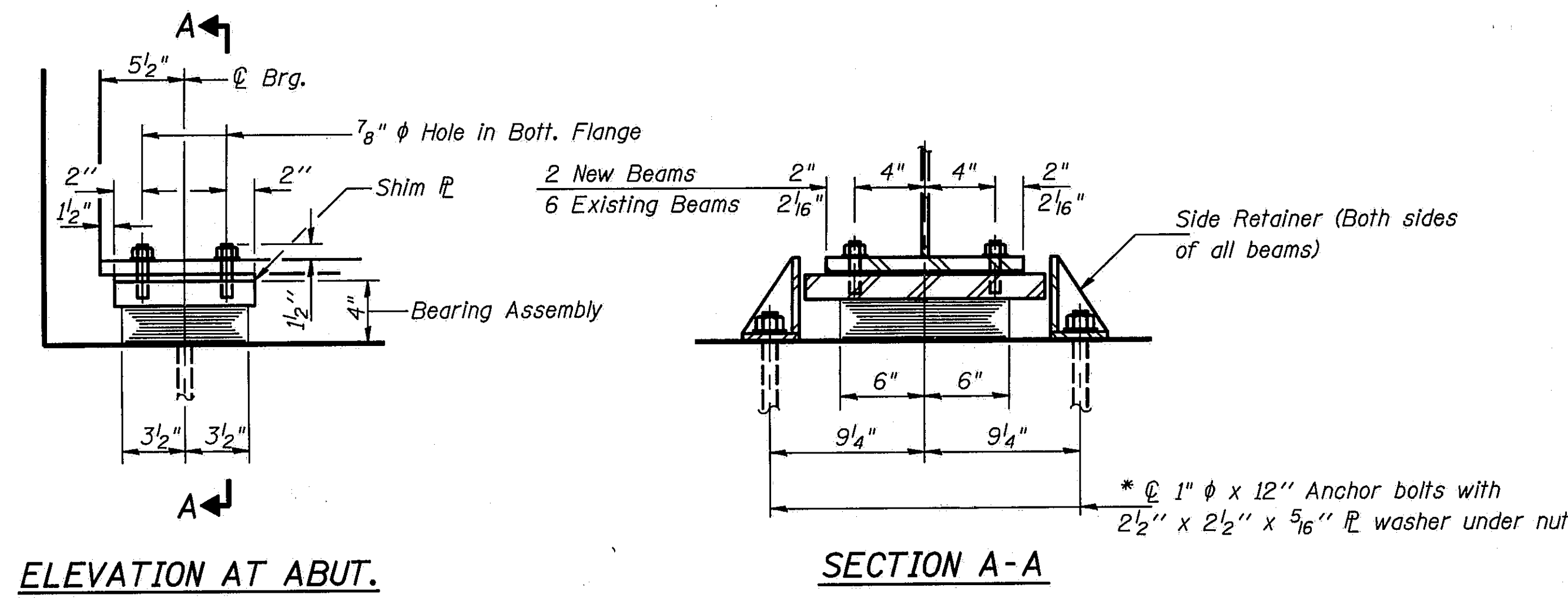
DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT & P. Ray
CHECKED	PLH

AS REV. RTB 7-31-92

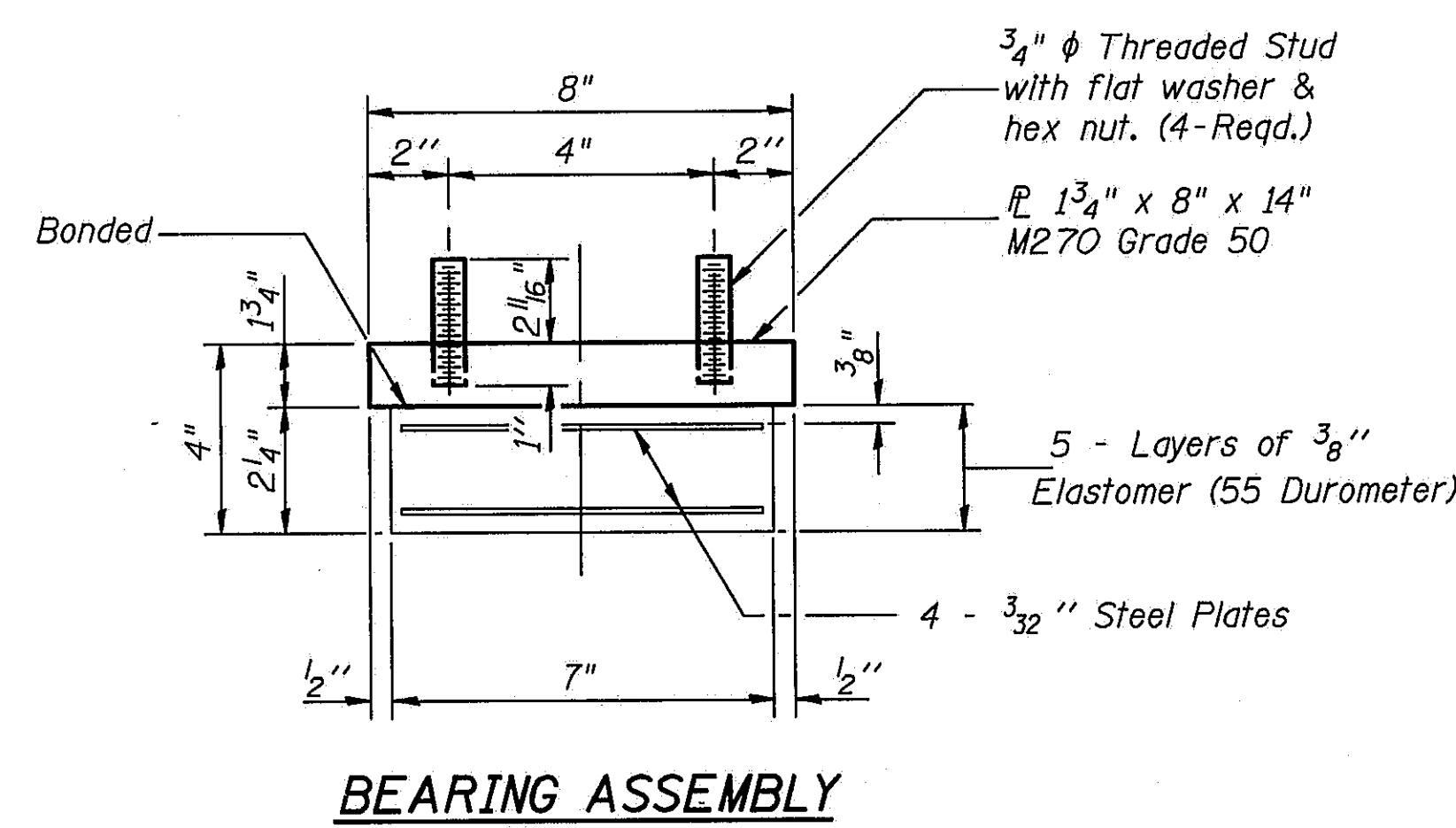
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
"STRUCTURAL STEEL REPAIR"  
GIRDER REPAIR DETAILS  
S.B. I-55 EXISTING FASCIA GIRDERS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019



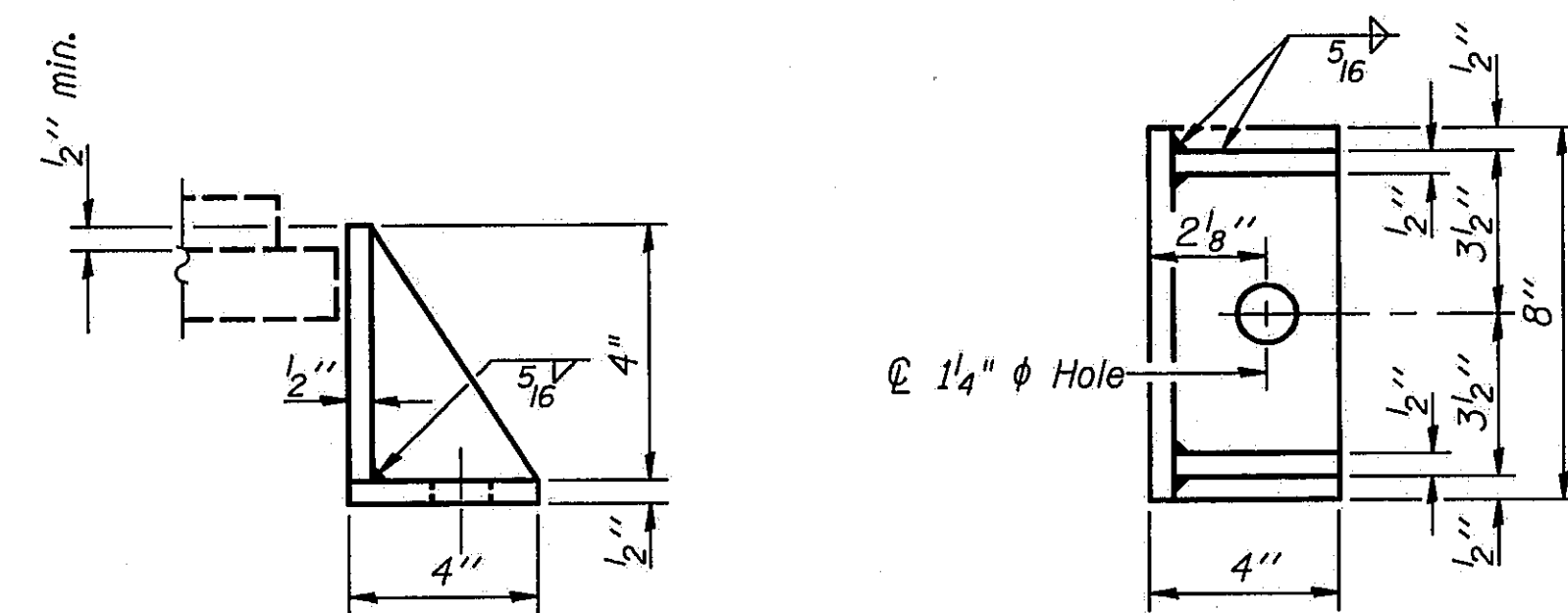
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	192.
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



**TYPE I ELASTOMERIC EXP. BRG.**  
Used at N. & S. Abut. — 16 Required

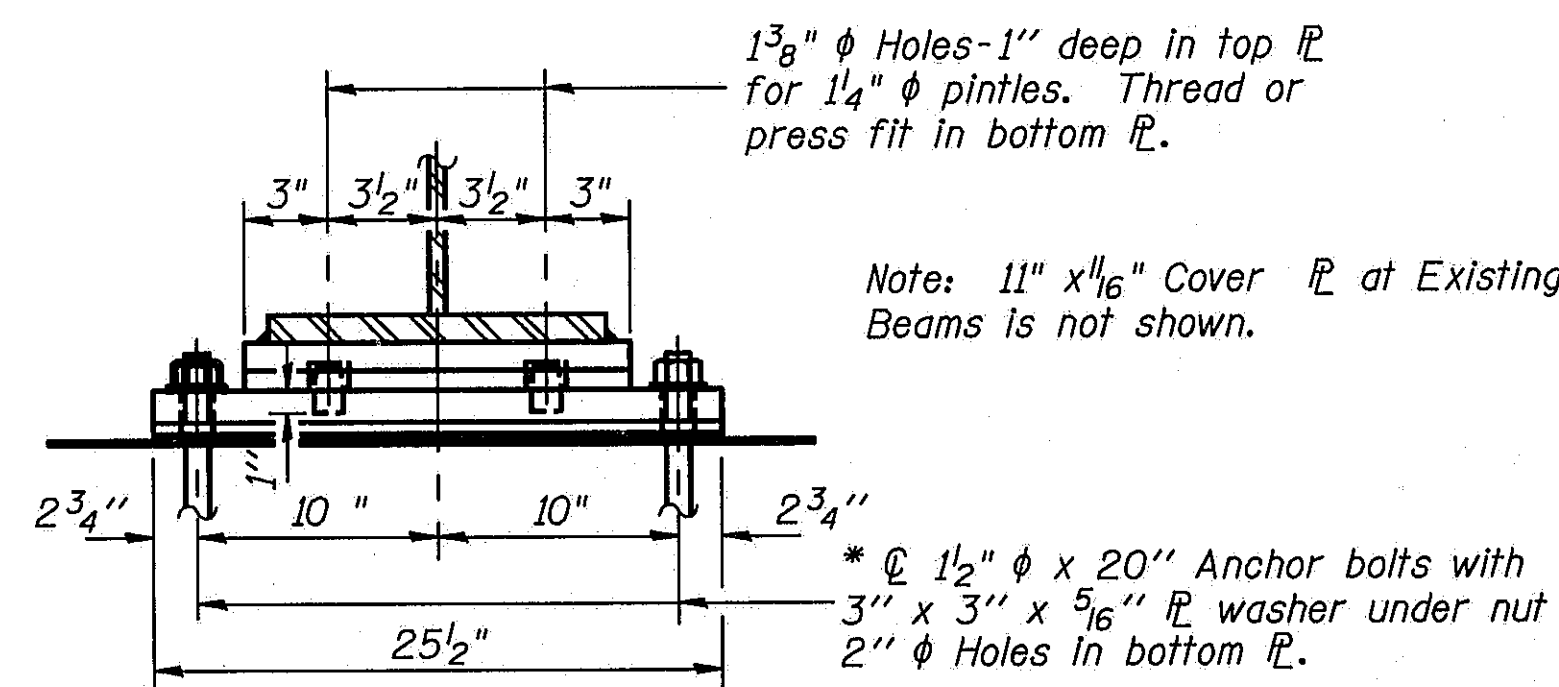


Note: Shim plates shall not be placed under Bearing Assembly.

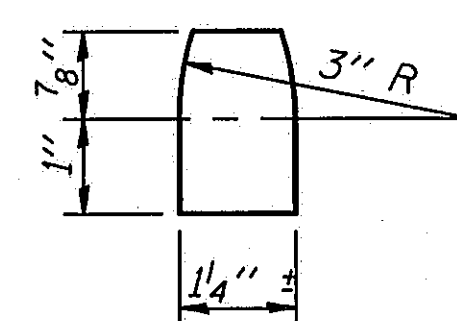


Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.  
N. & S. Abut. — 32 Required

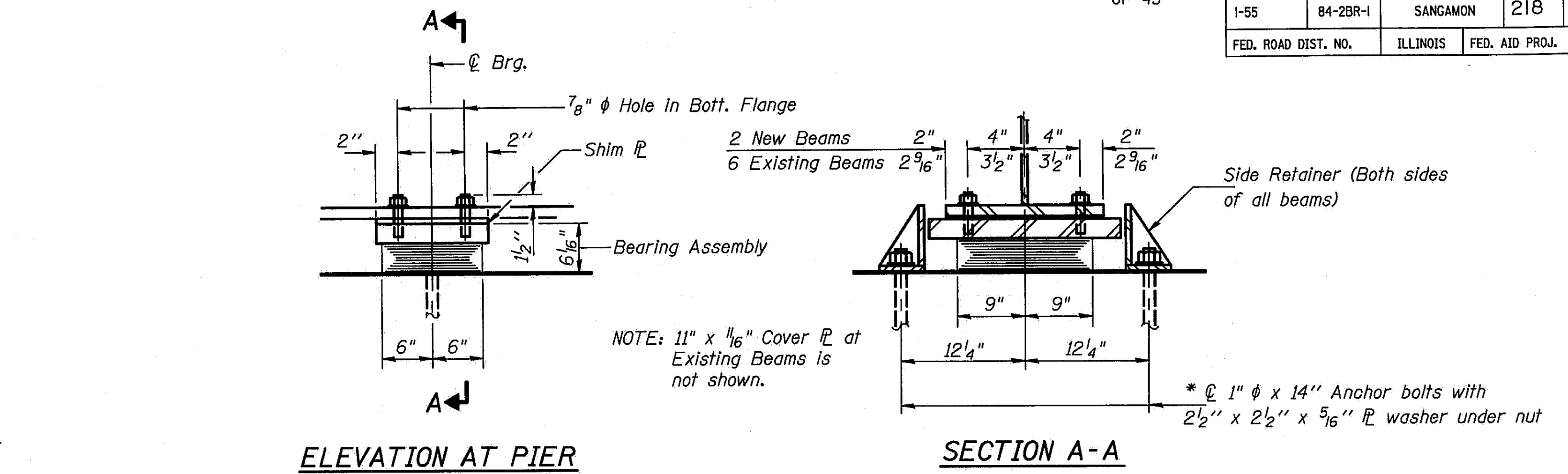
\* Notes: Anchor bolts at fixed bearings may be built into the masonry at new construction. See sheet #44 of 45 for Anchor Bolt Installation.



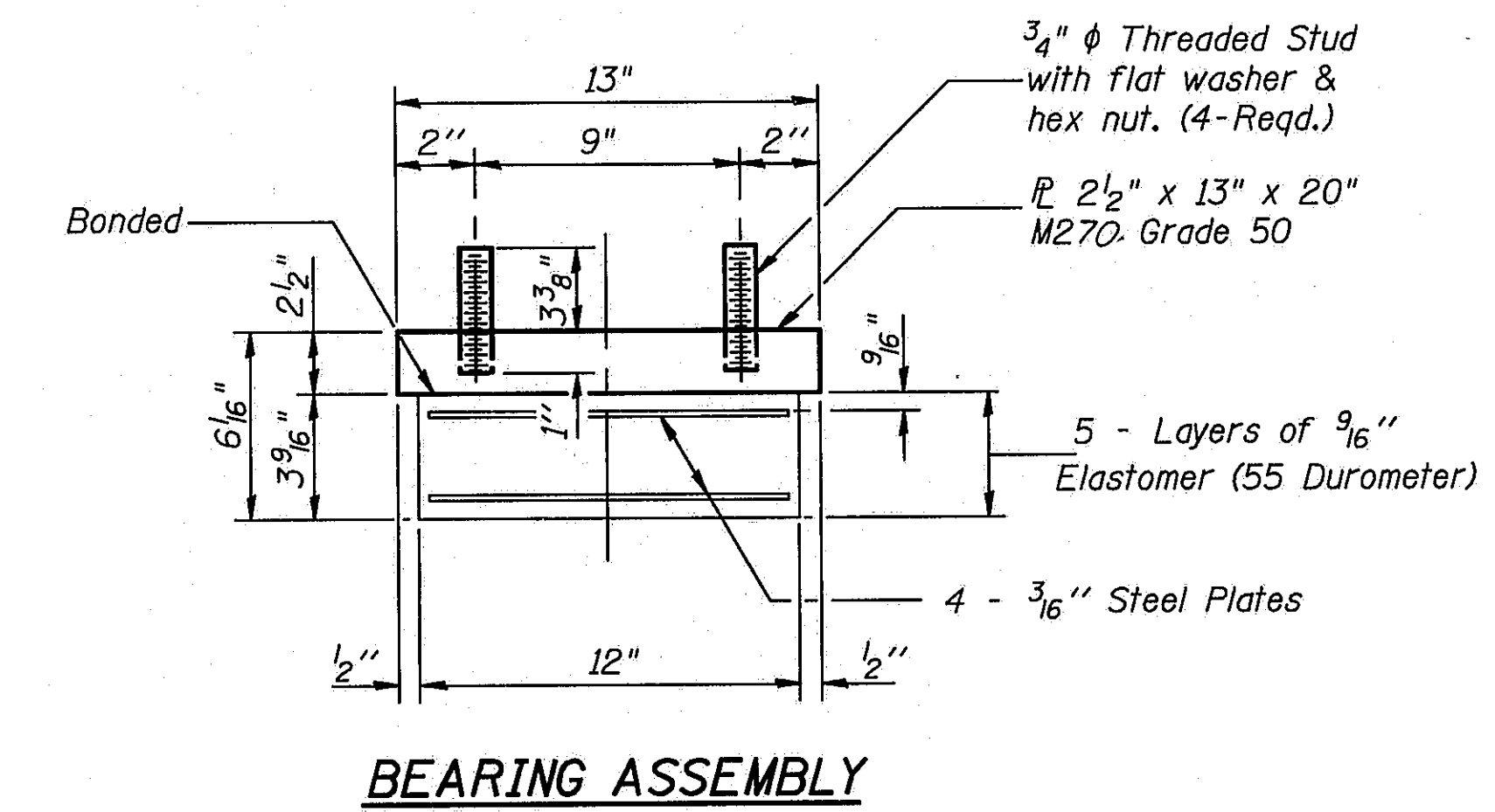
**SECTION B-B**



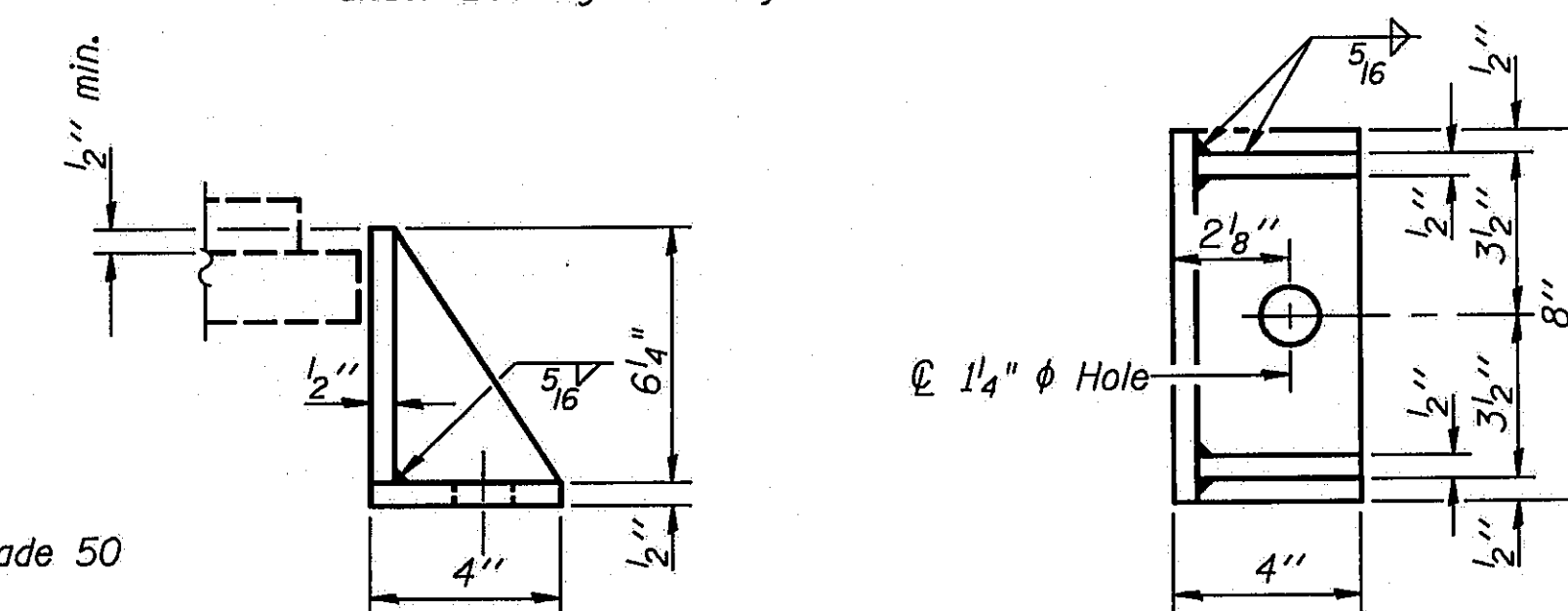
**PINTLE**



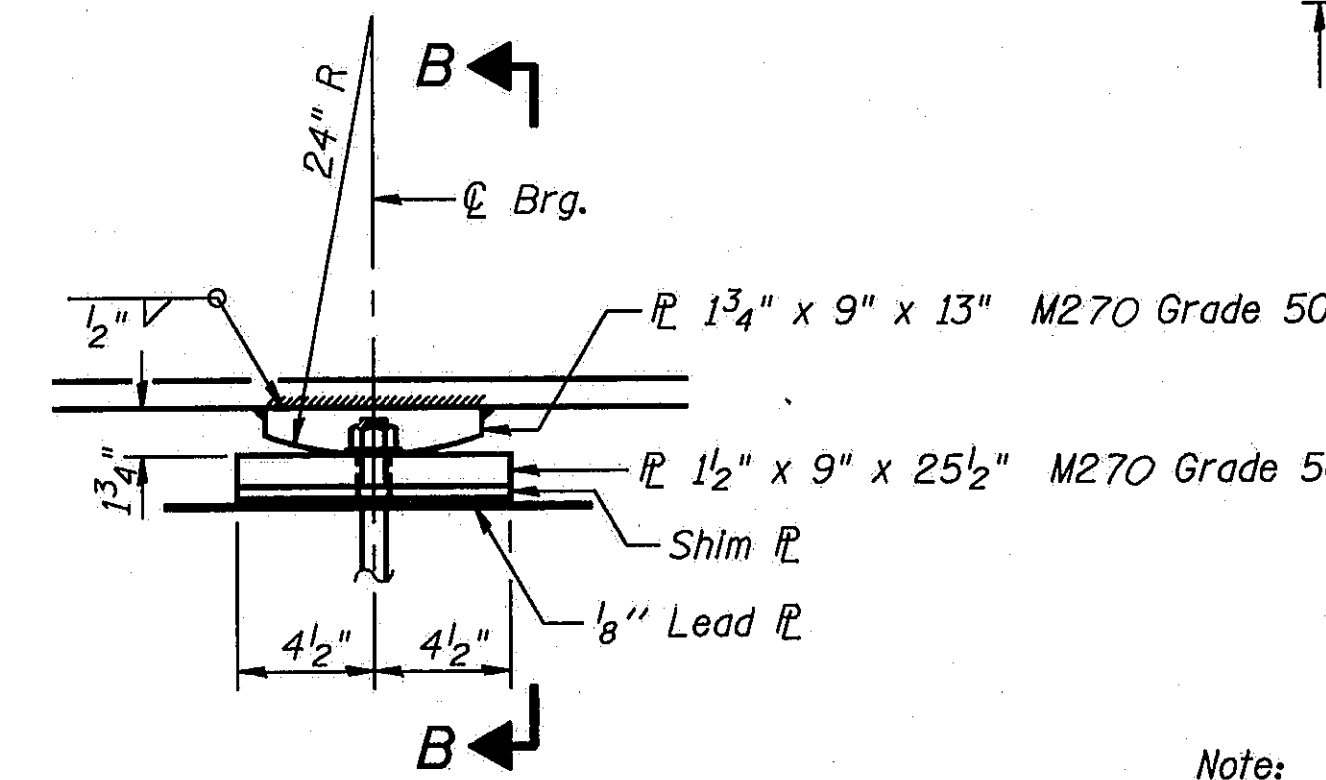
**TYPE I ELASTOMERIC EXP. BRG.**  
Used at Pier 2 & Pier 9 - 16 Required



Note: Shim plates shall not be placed under Bearing Assembly.



Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.  
Pier 2 & 9 - 32 Required



**FIXED BEARING**  
Used at Pier 1 & Pier 10  
16 Required

Note: Quantities shown are for one structure. Two structures are required.

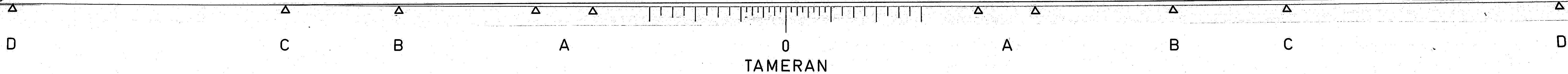
See Sheet #23 of 45 for Bill of Material.

\*\* Weight of adjusting shims, lead plates, side retainers and anchor bolts shall be included in "Structural Steel".

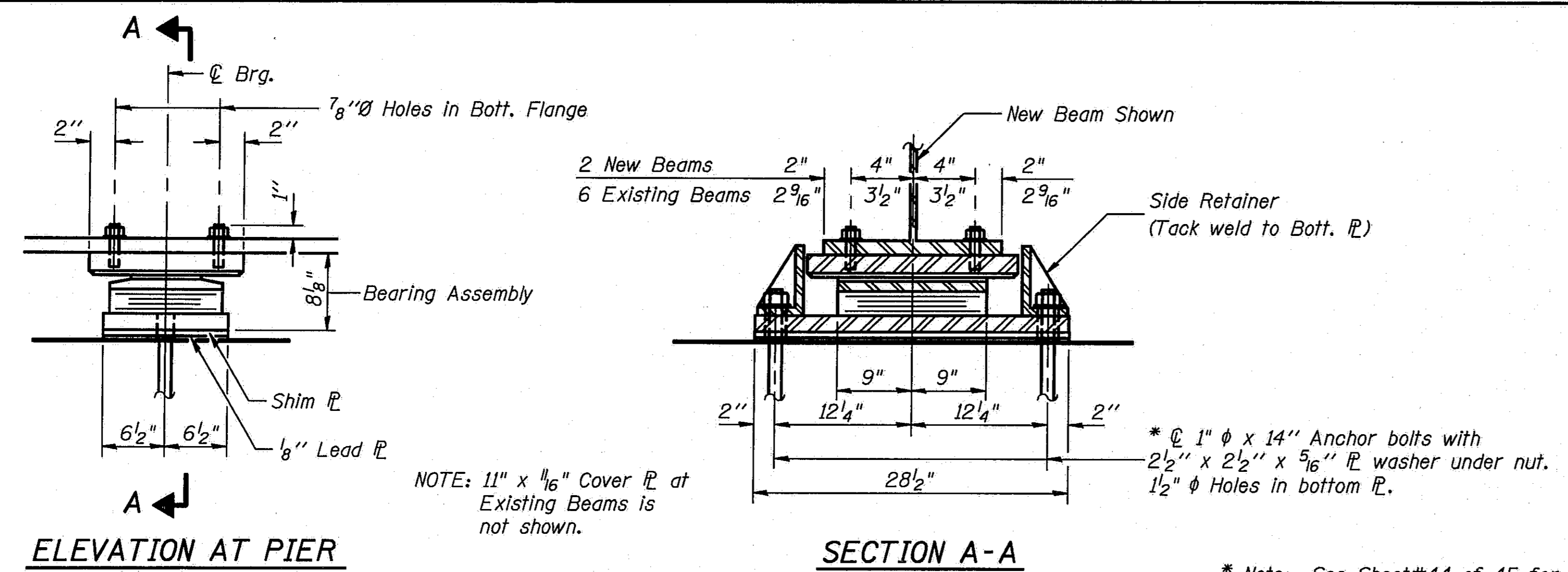
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**TYPE I & FIXED BEARING ASSEMBLY**  
N. & S. ABUT., PIERS 1 & 10, PIERS 2 & 9  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

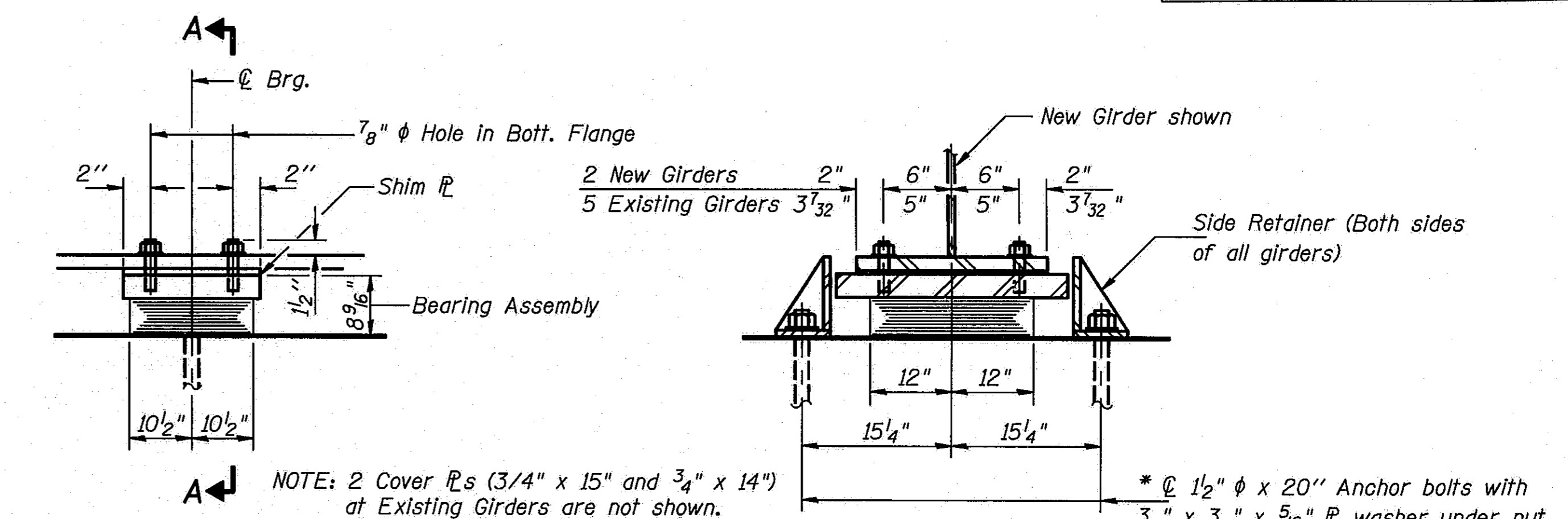
I-2-E1 12-1-83



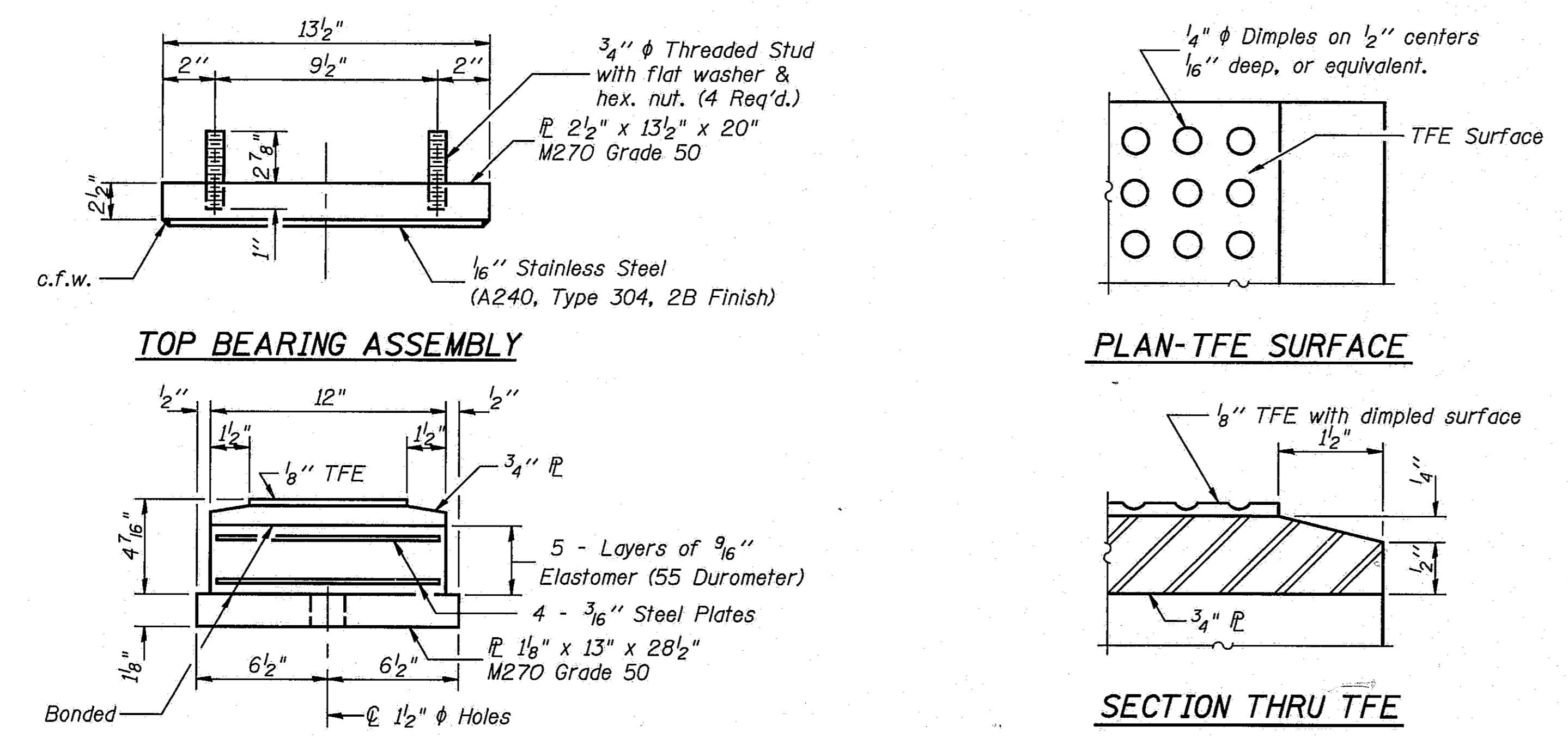
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	193
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



**TYPE II TFE ELASTOMERIC EXP. BRG.**  
Used at Pier 3 & Pier 8 - 16 Required



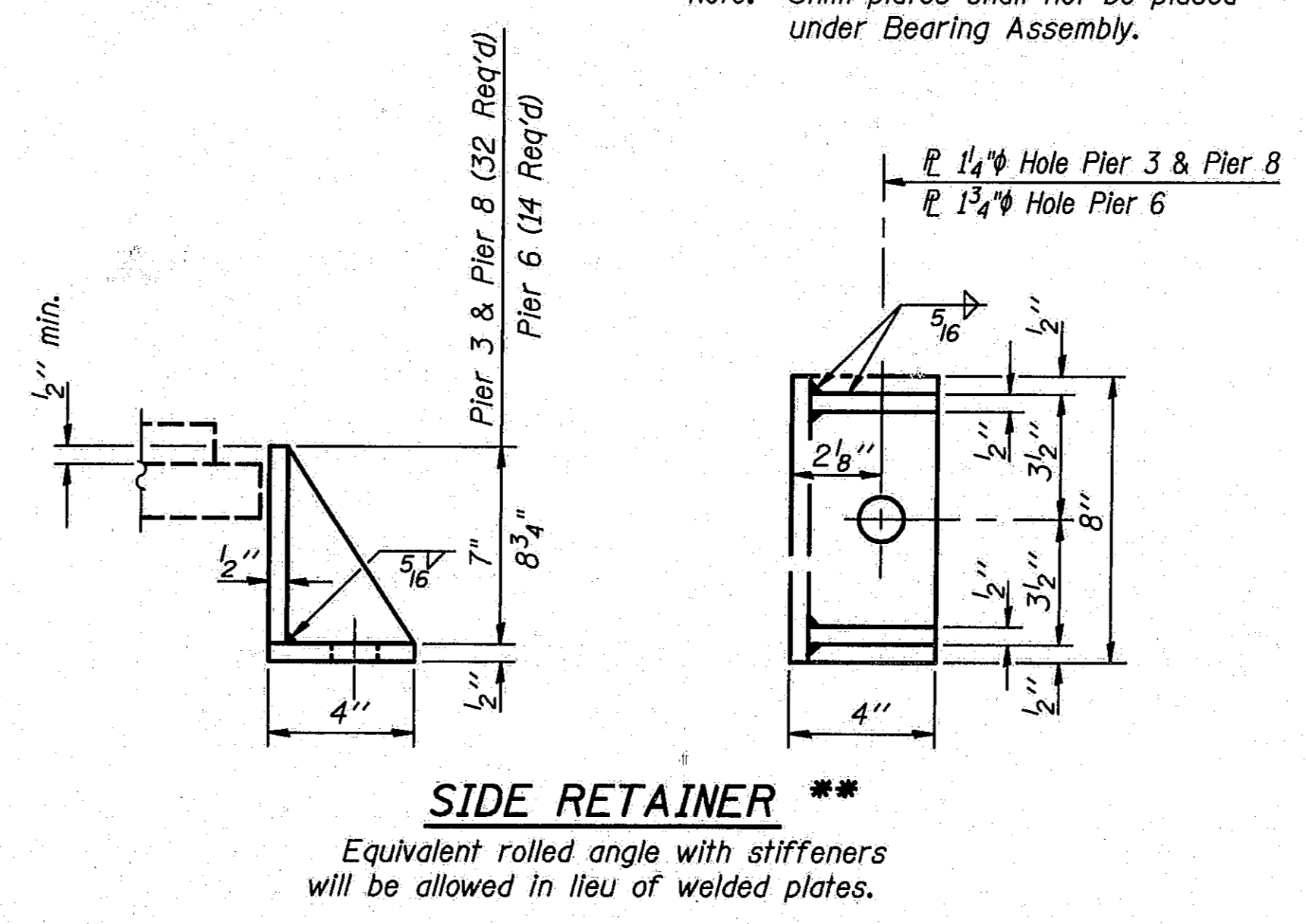
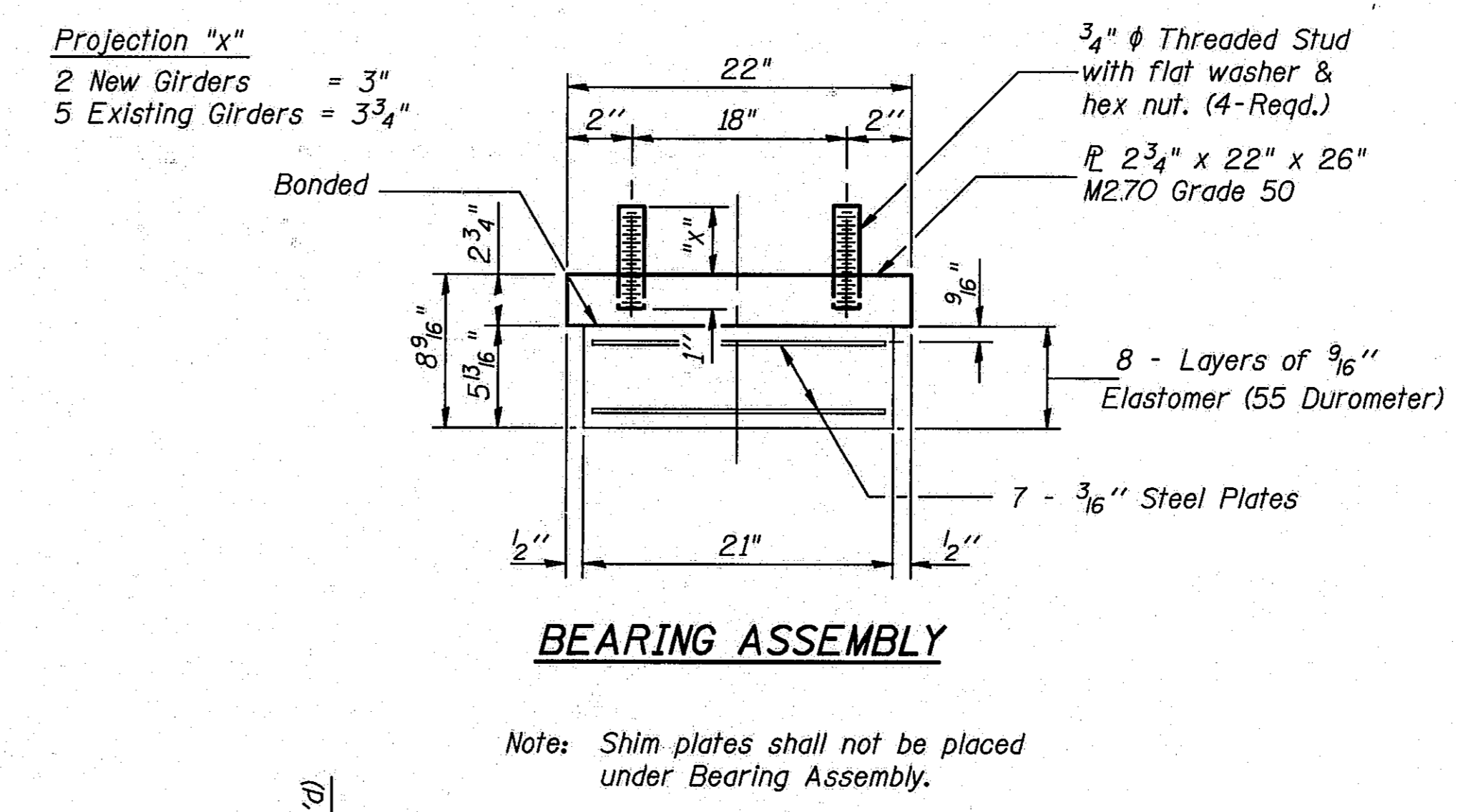
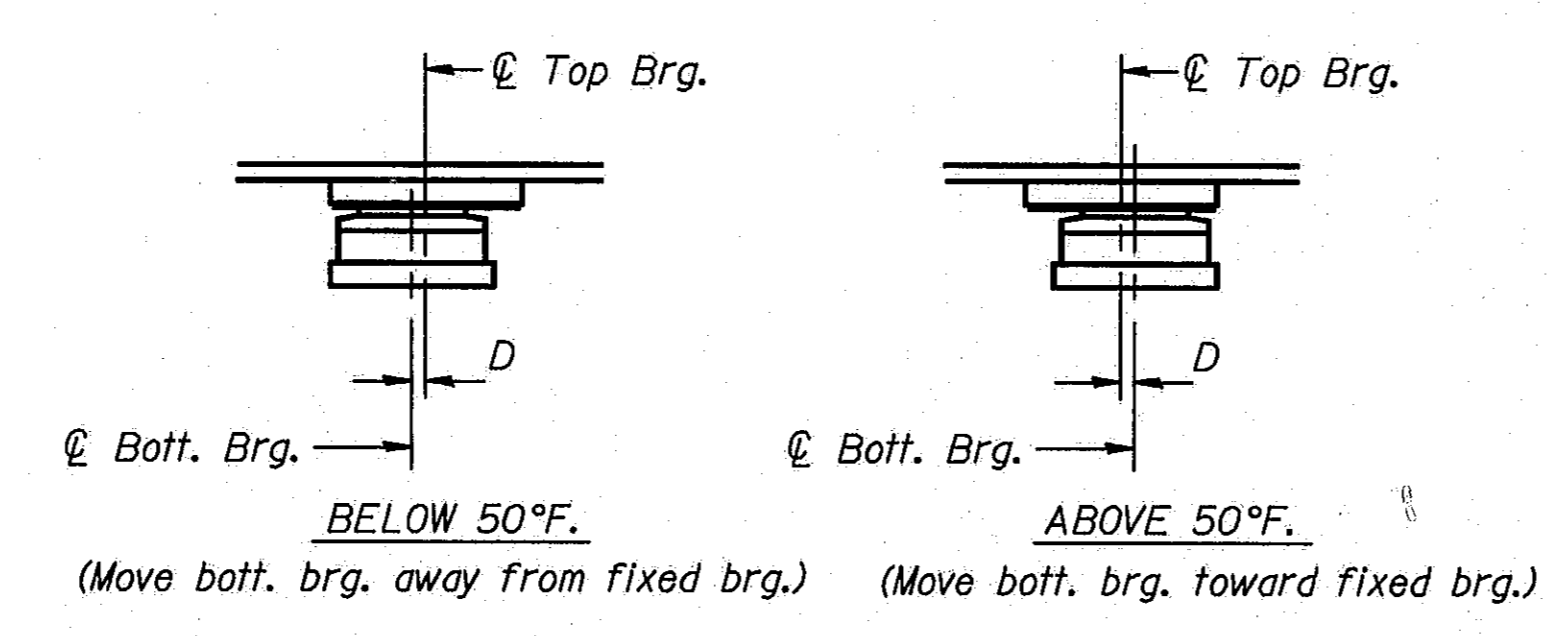
**TYPE I ELASTOMERIC EXP. BRG.**  
Used at Pier 6 - 7 Required



**BOTTOM BEARING ASSEMBLY**

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

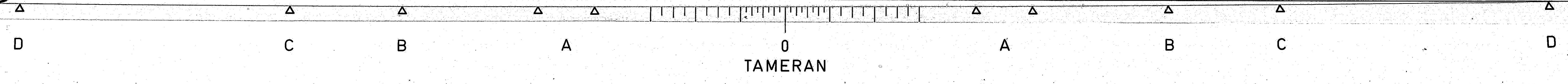


Note: Quantities shown are for one structure. Two structures are required.  
See Sheet #23 of 45 for Bill of Material.  
\*\*\* Weight of adjusting shims, lead plates, side retainers and anchor bolts shall be included in "Structural Steel".

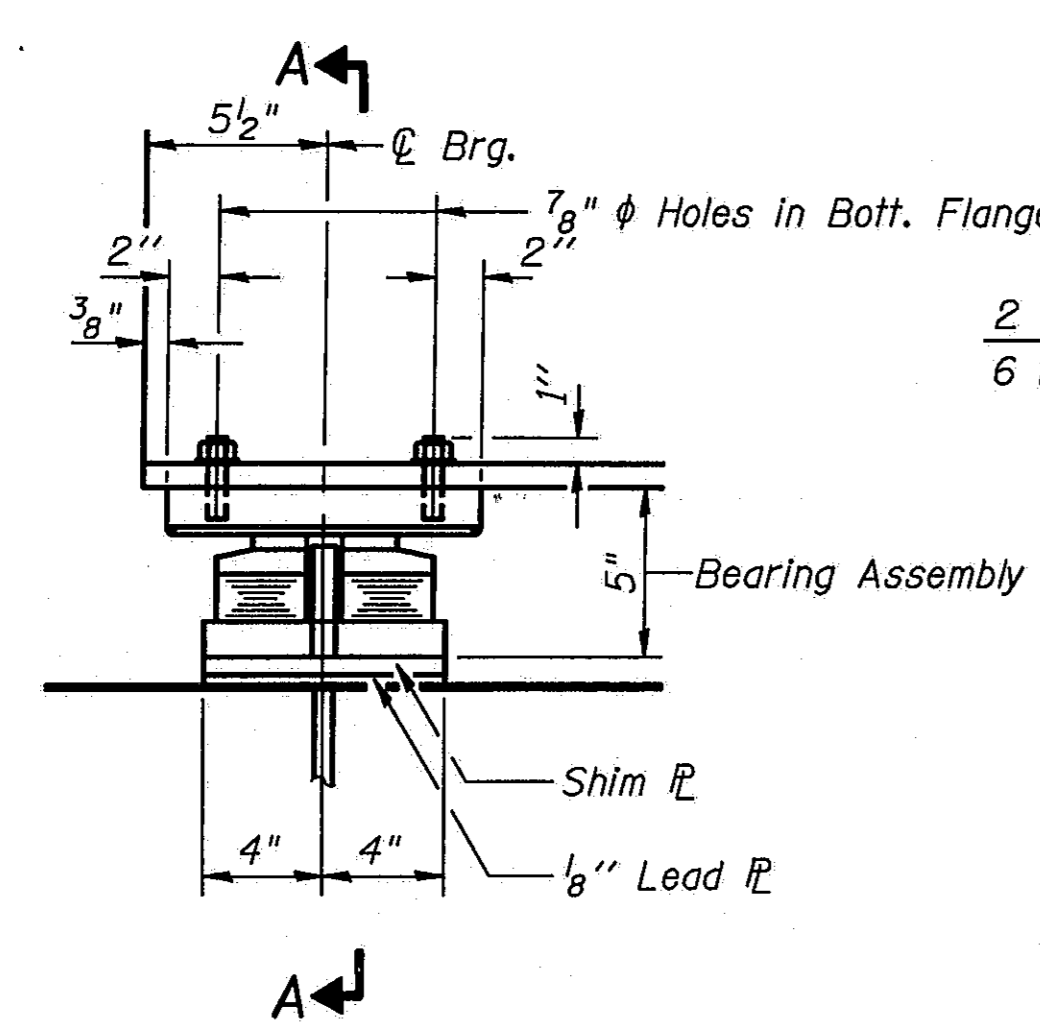
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
BEARING ASSEMBLY  
PIERS 3 & 8, PIER 6  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

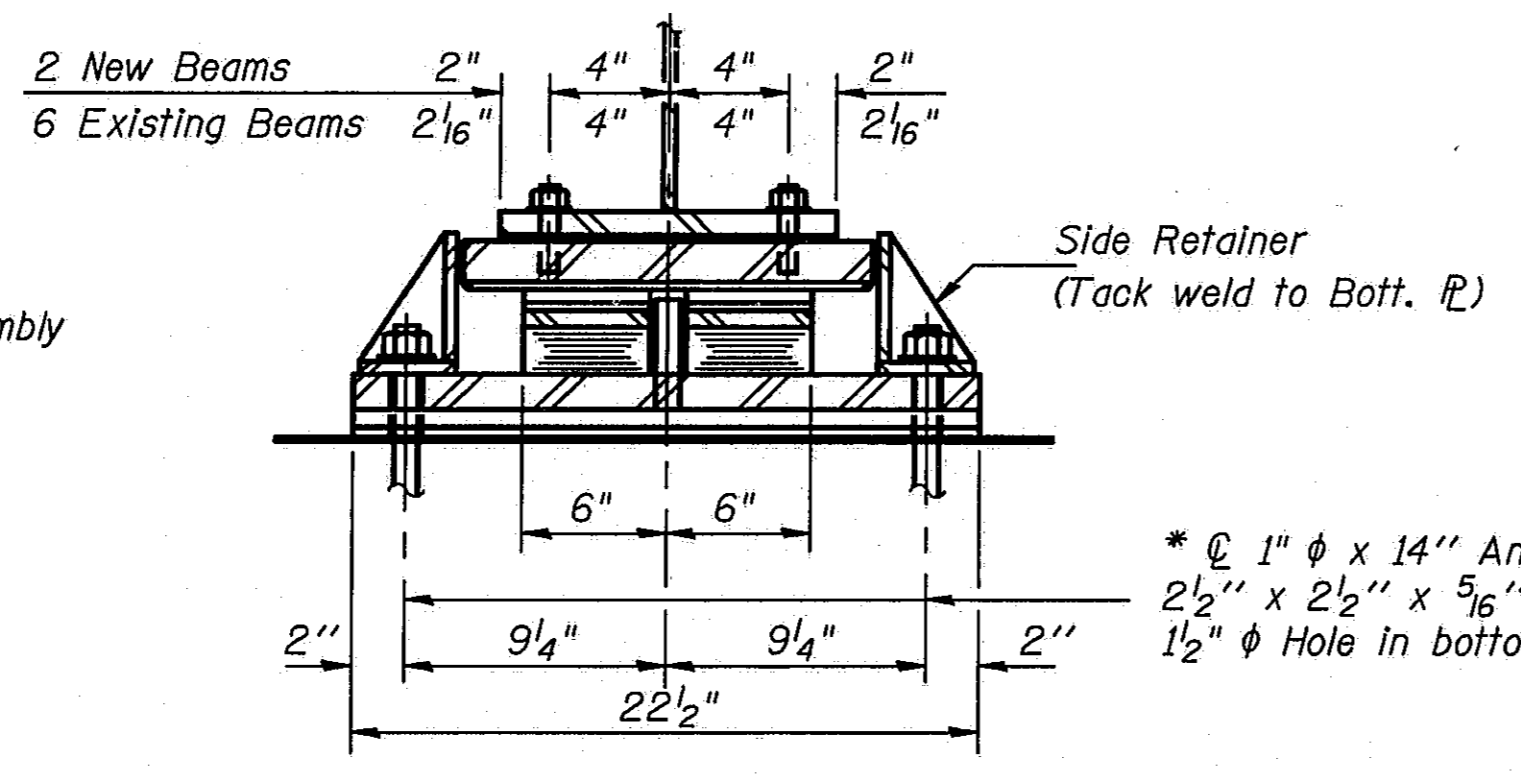
I-2-E2 12-1-83



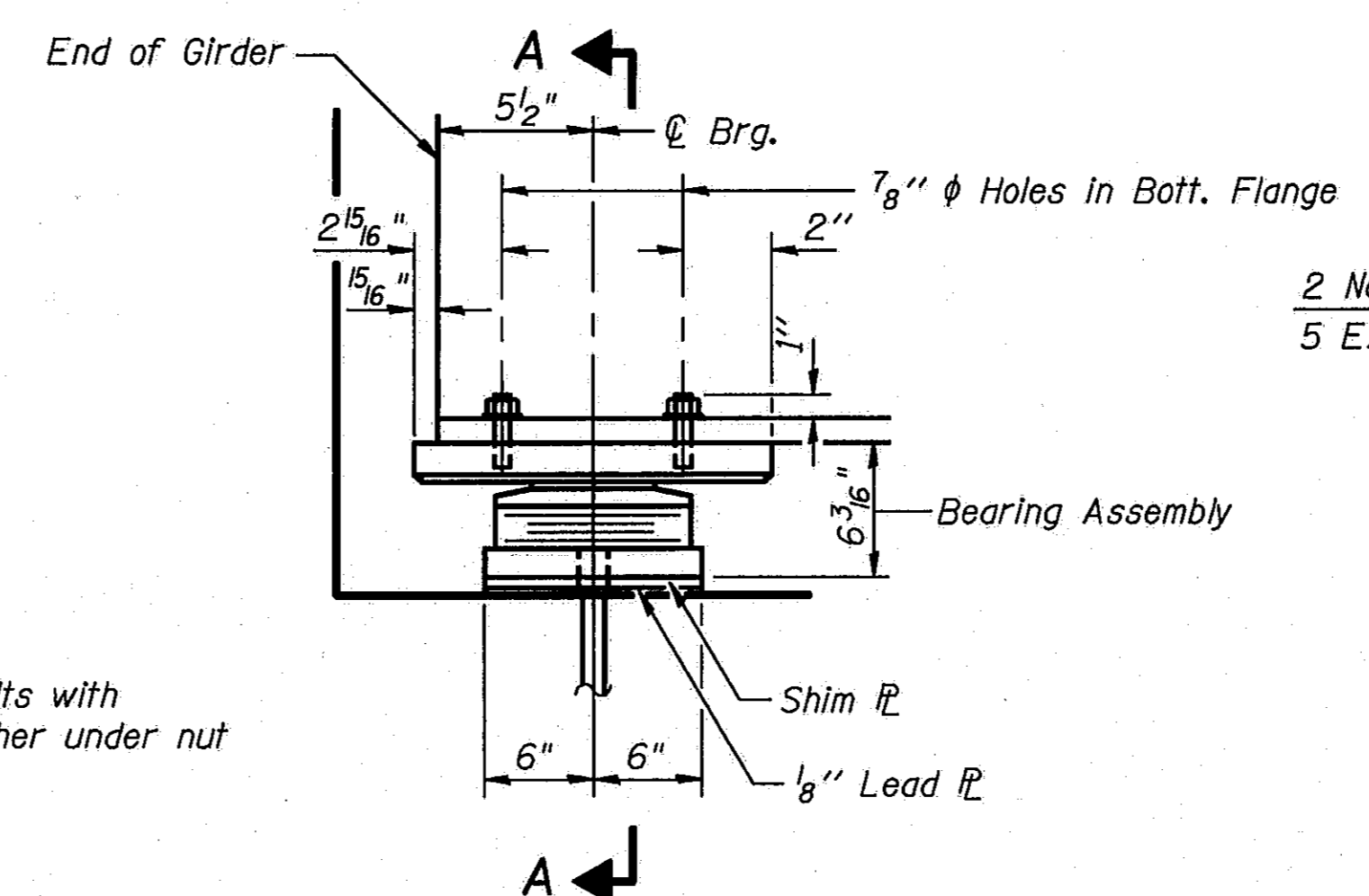
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	194
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



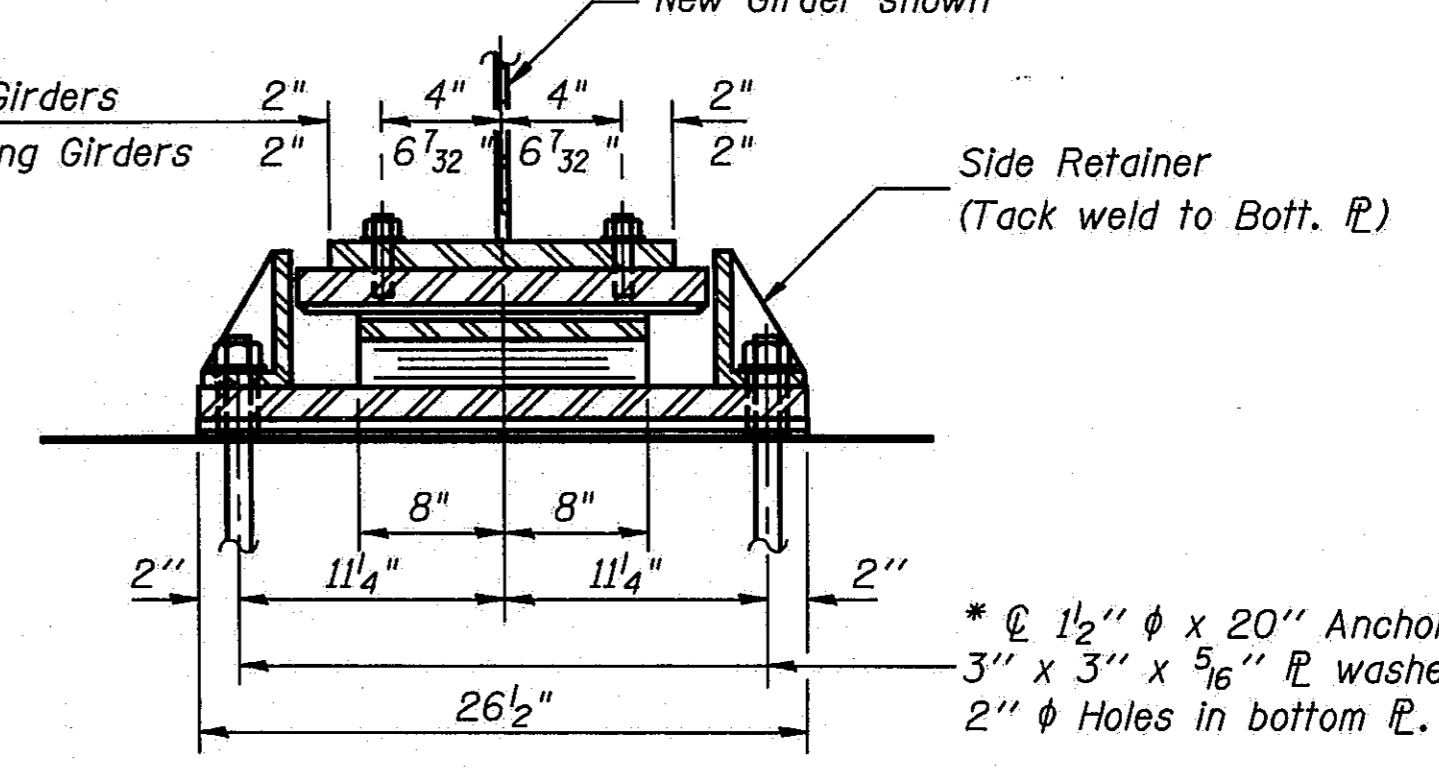
ELEVATION AT PIER



SECTION A-A



ELEVATION AT PIER



SECTION A-A

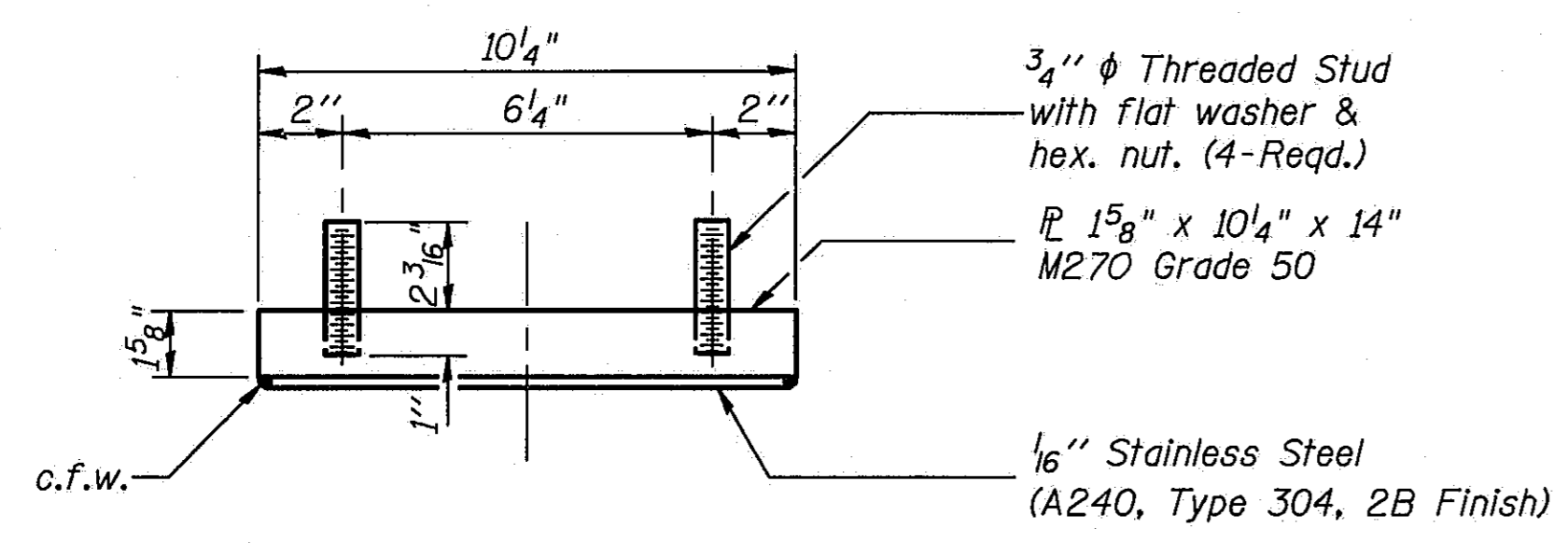
**TYPE III ELASTOMERIC EXP. BRG.**

Used at Pier 4 in Span 4 - 8 Required  
Used at Pier 7 in Span 8 - 8 Required

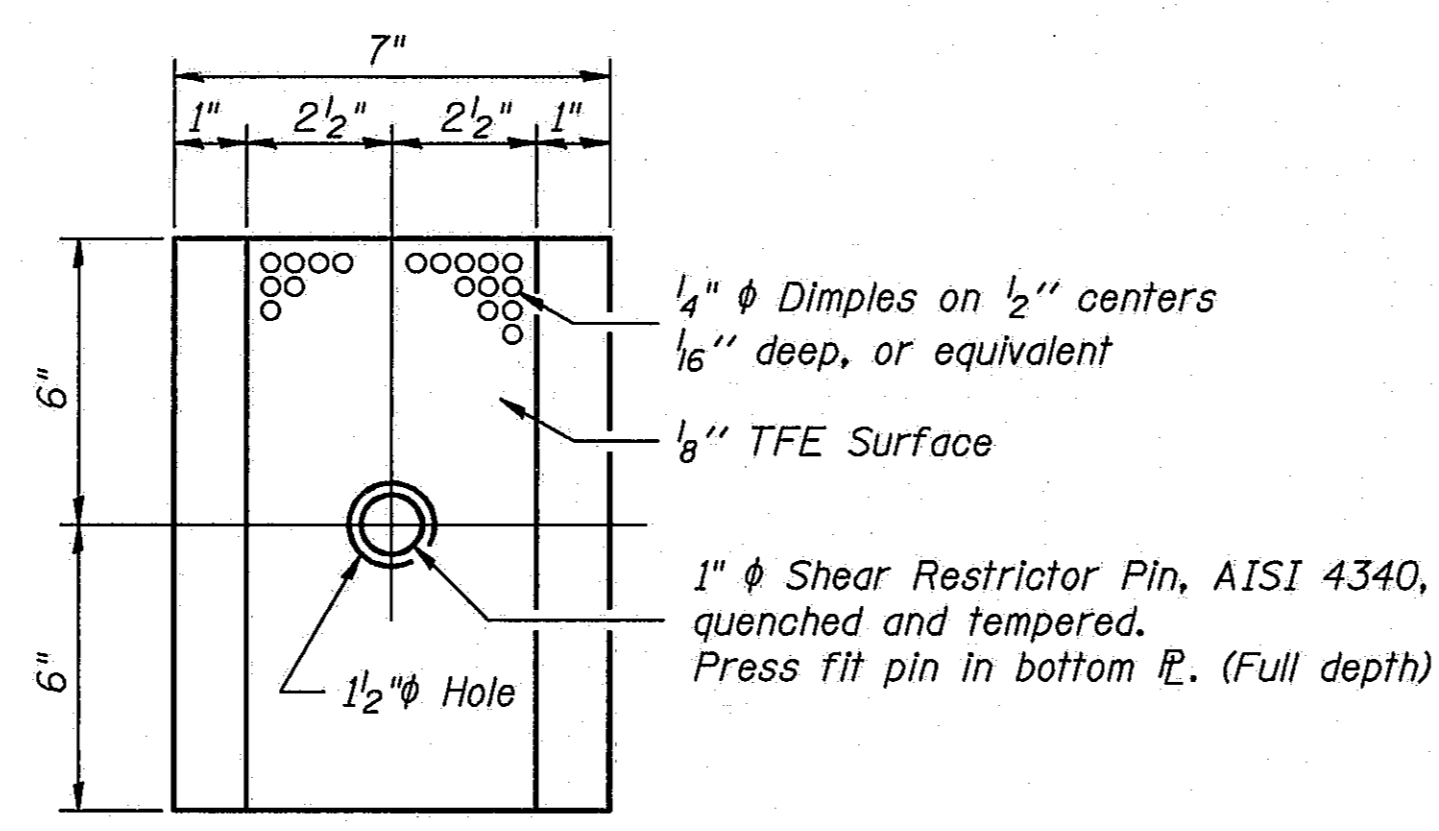
\* Note:  
See Sheet #44 of 45 for anchor bolt installation.

**TYPE II TFE ELASTOMERIC EXP. BRG.**

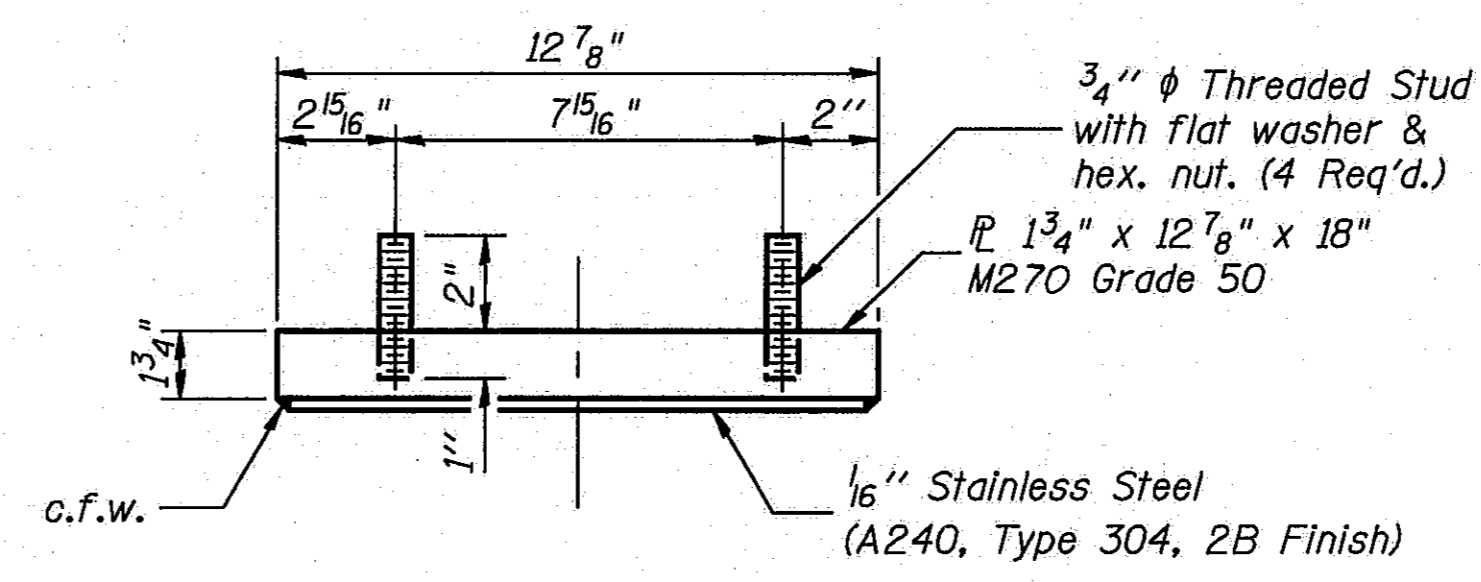
Used at Pier 4 in Span 5 - 7 Required



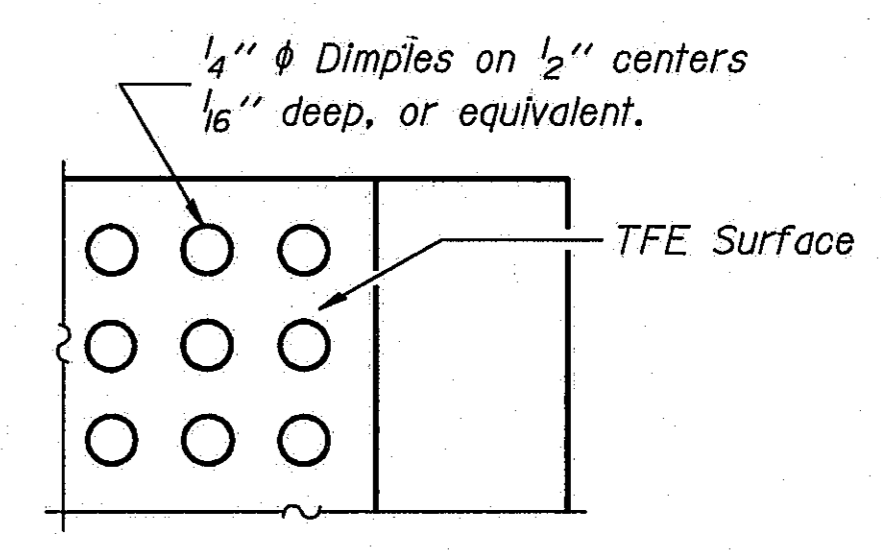
TOP BEARING ASSEMBLY



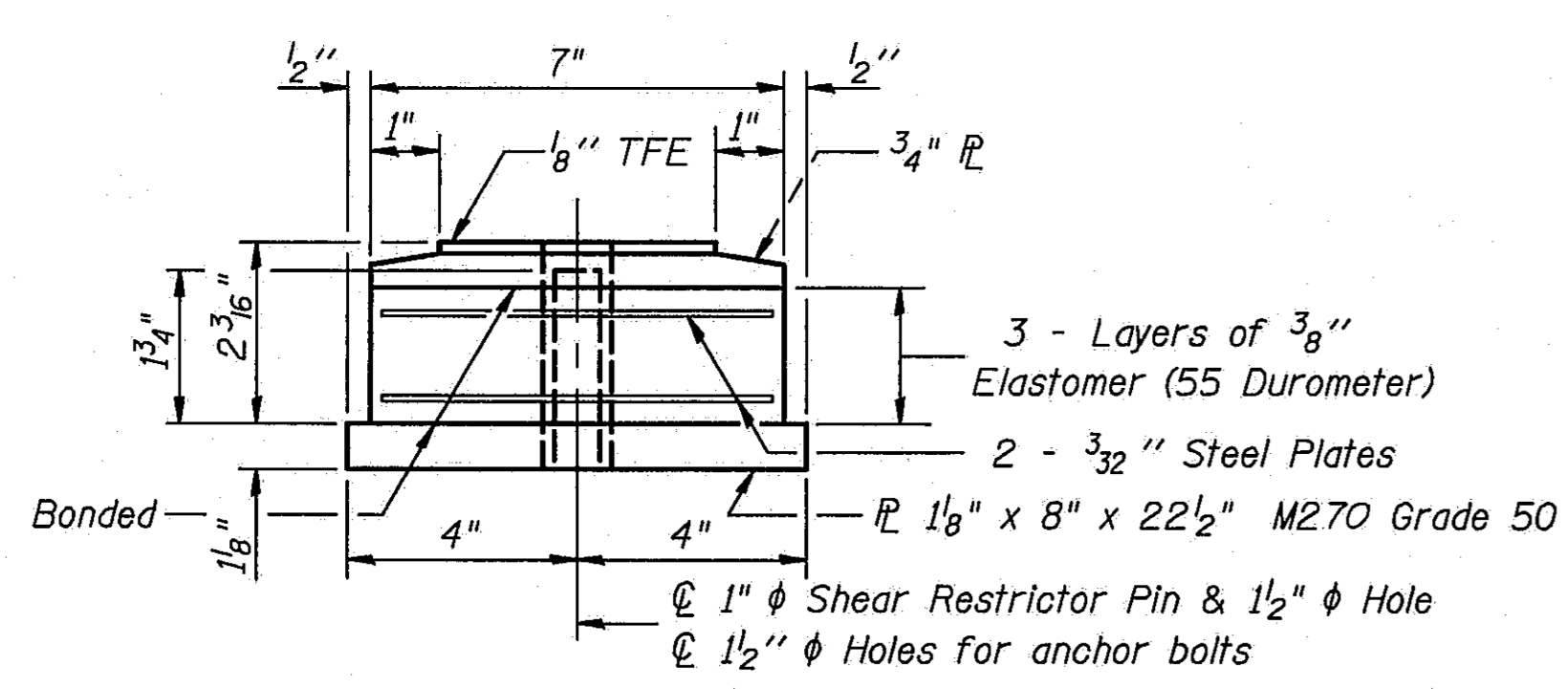
PLAN-TFE ELASTOMERIC BRG.



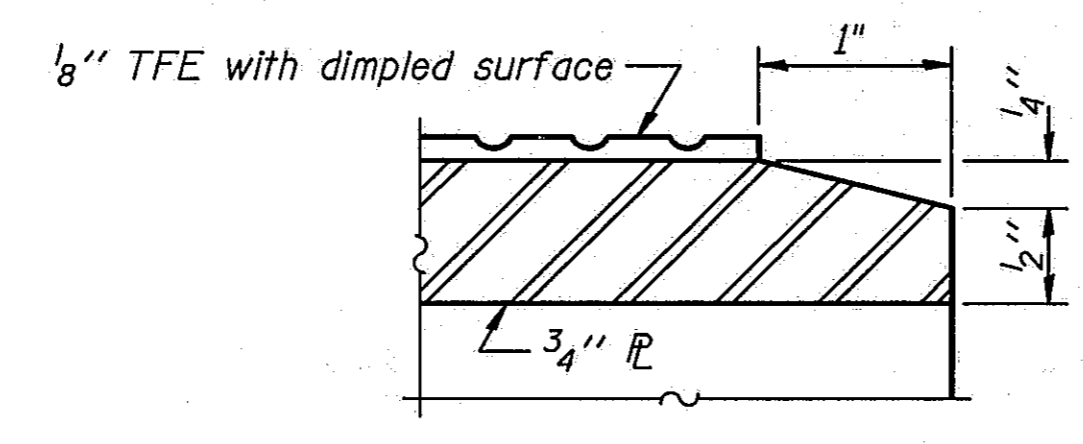
TOP BEARING ASSEMBLY



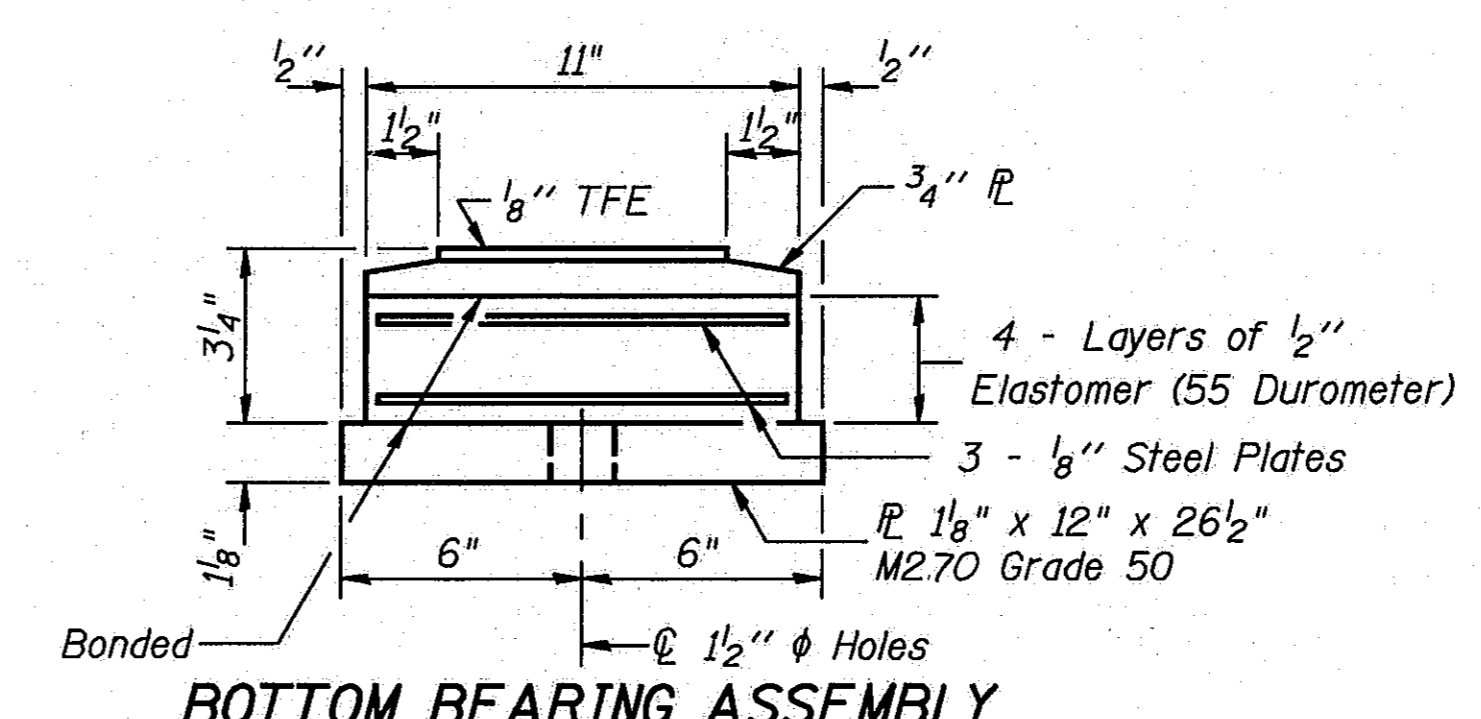
PLAN-TFE SURFACE



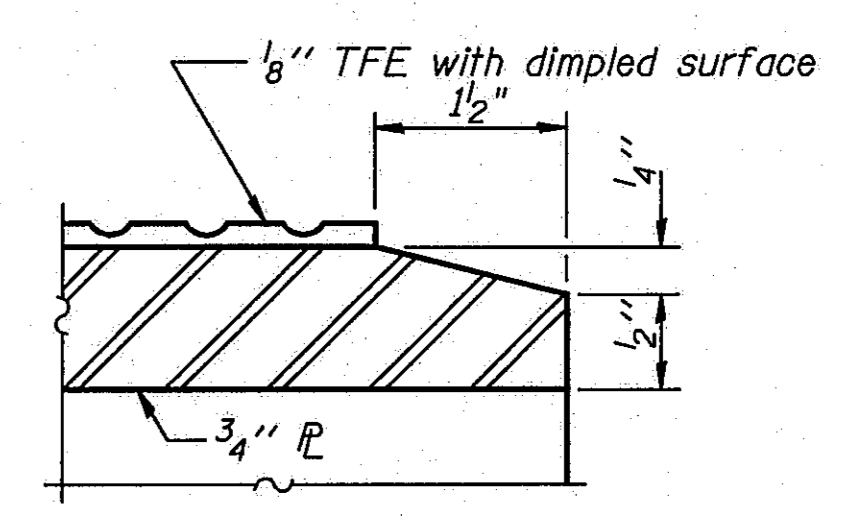
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE



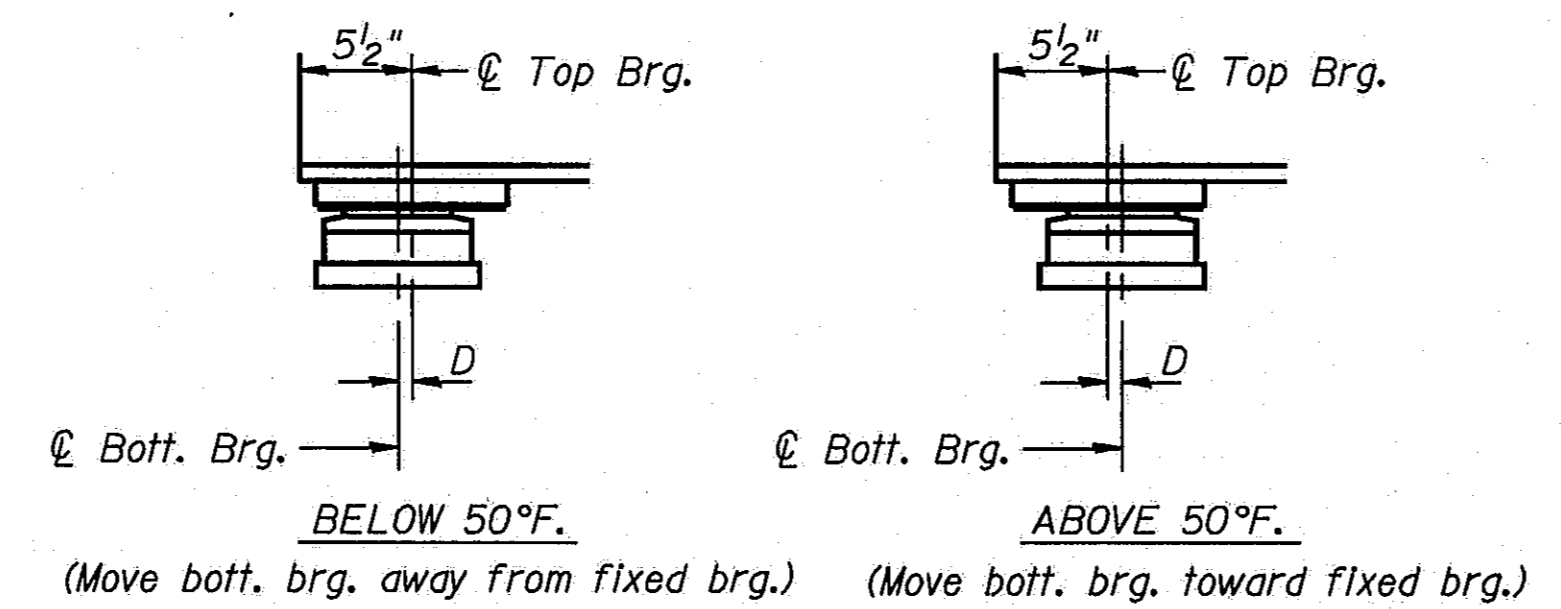
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

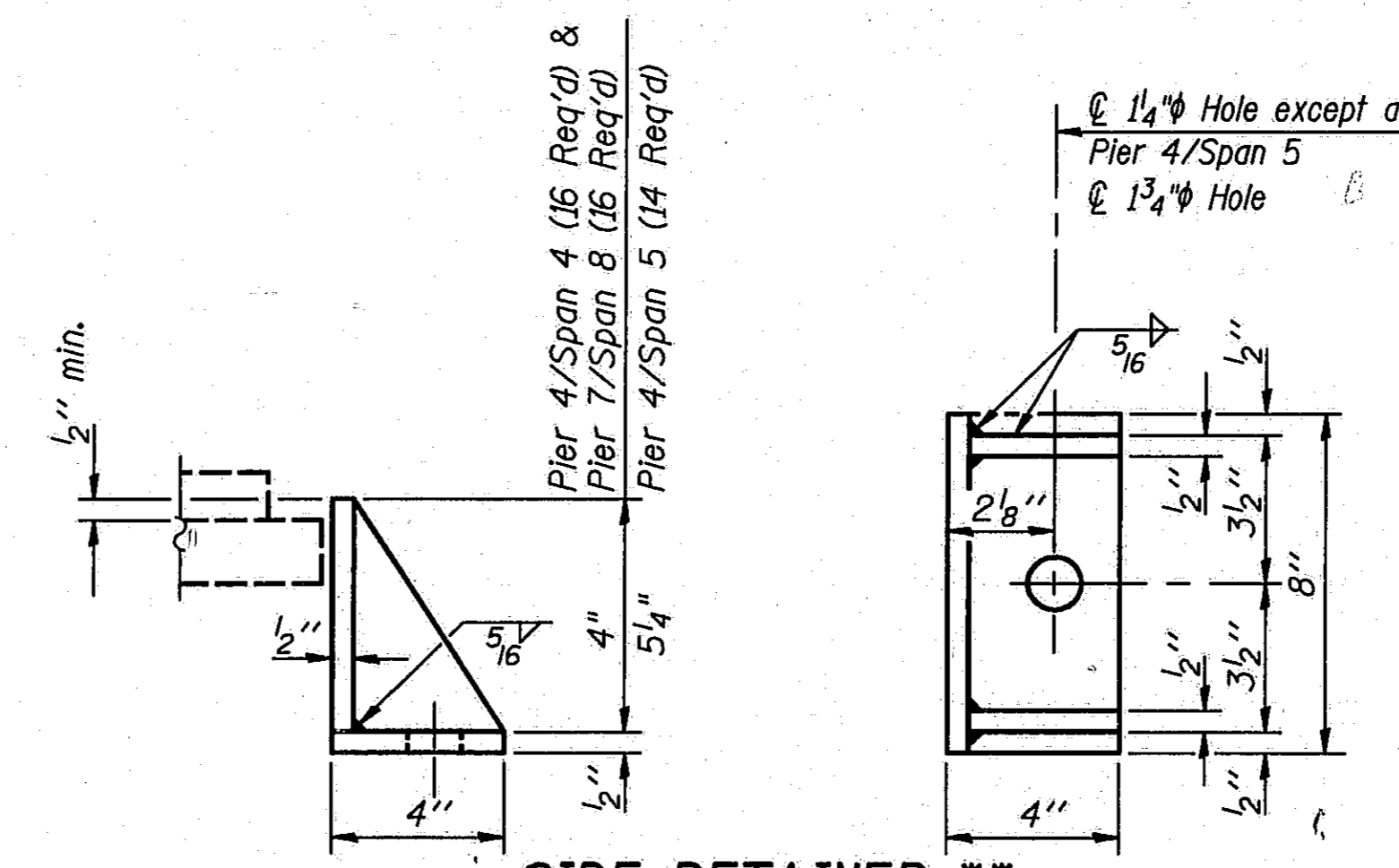
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



SIDE RETAINER \*\*\*

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

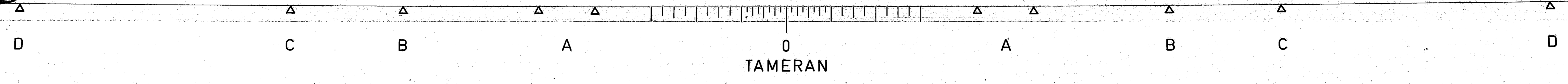
Note:  
Quantities shown are for one structure. Two structures are required.  
See Sheet #23 of 45 for Bill of Material.

\*\* Weight of adjusting shims, lead plates, side retainers and anchor bolts shall be included in "Structural Steel".

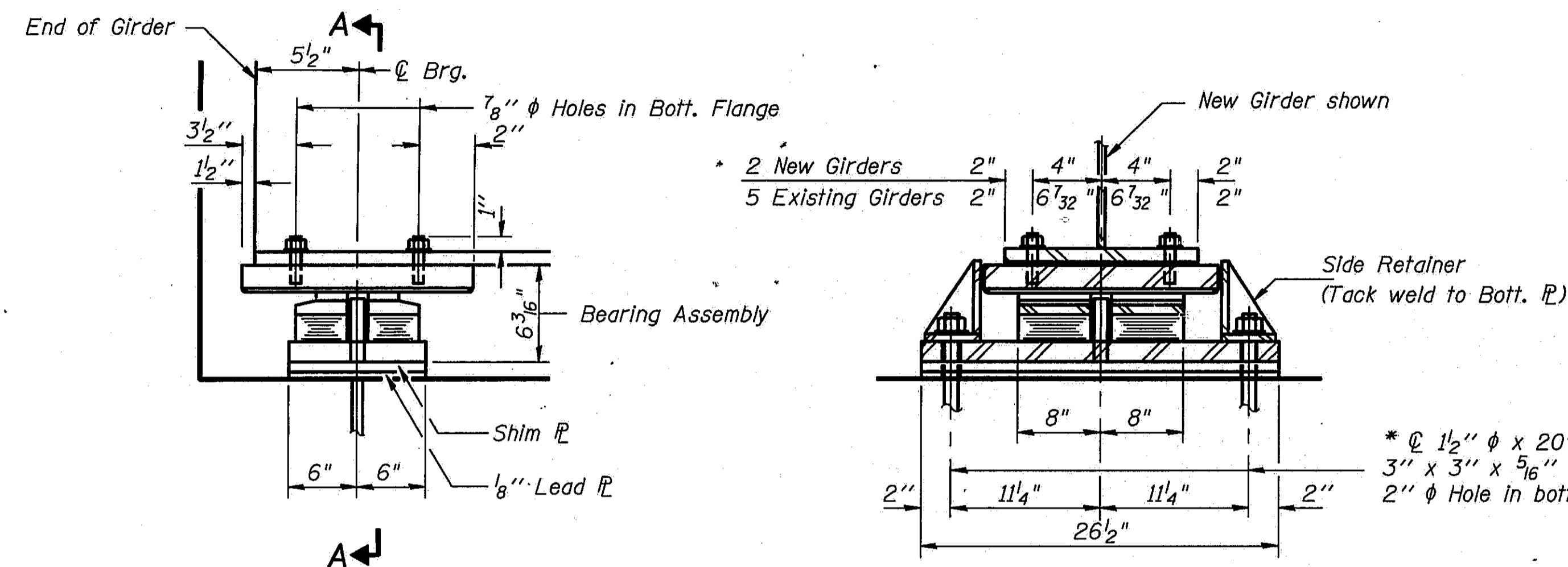
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
BEARING ASSEMBLY  
PIER 4, SPAN 4 & SPAN 5  
PIER 7, SPAN 8  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-001B, 084-0019

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

I-2-E3 12-1-83



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	195
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

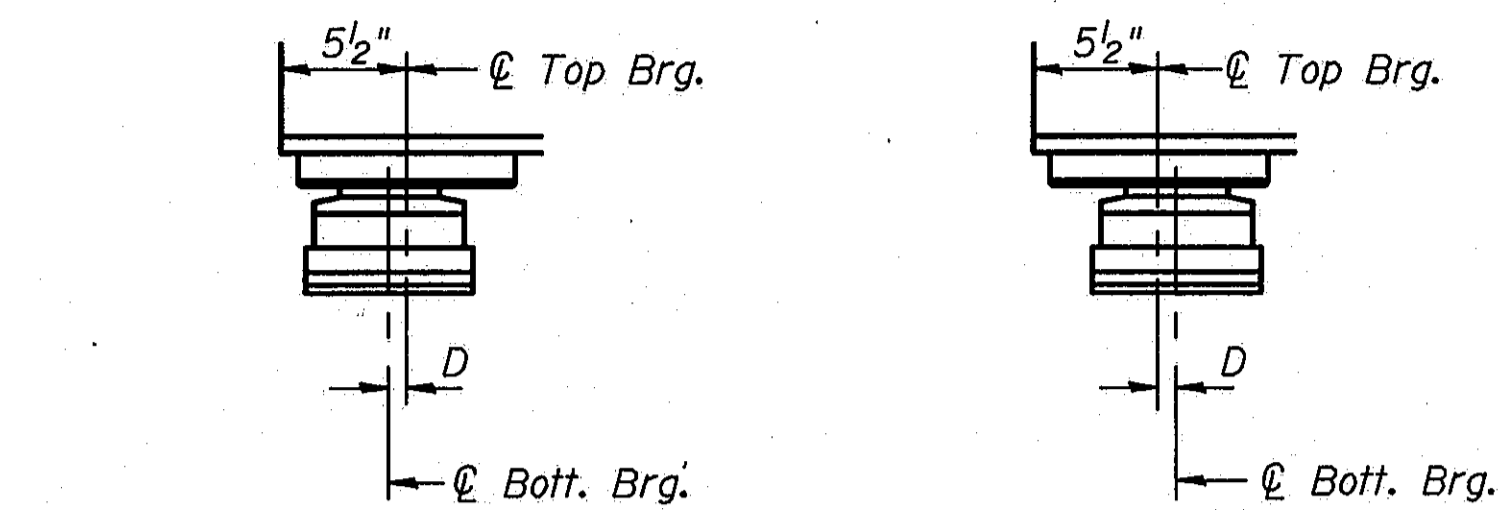


**ELEVATION AT PIER**

**TYPE III ELASTOMERIC EXP. BRG.**

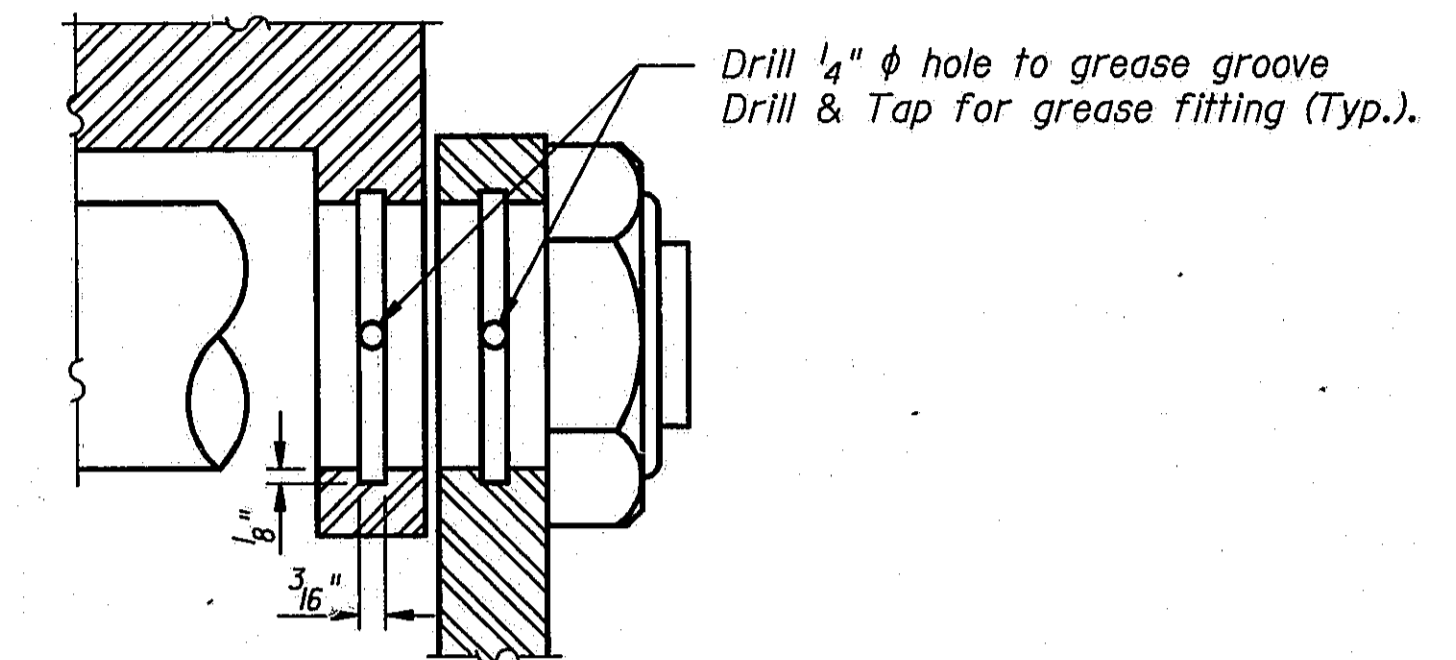
Used at Pier 7, Span 7 - 7 Required

\* Note: See Sheet #44 of 45 for anchor bolt installation.



**SETTING ANCHOR BOLTS AT EXP. BRG.**

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

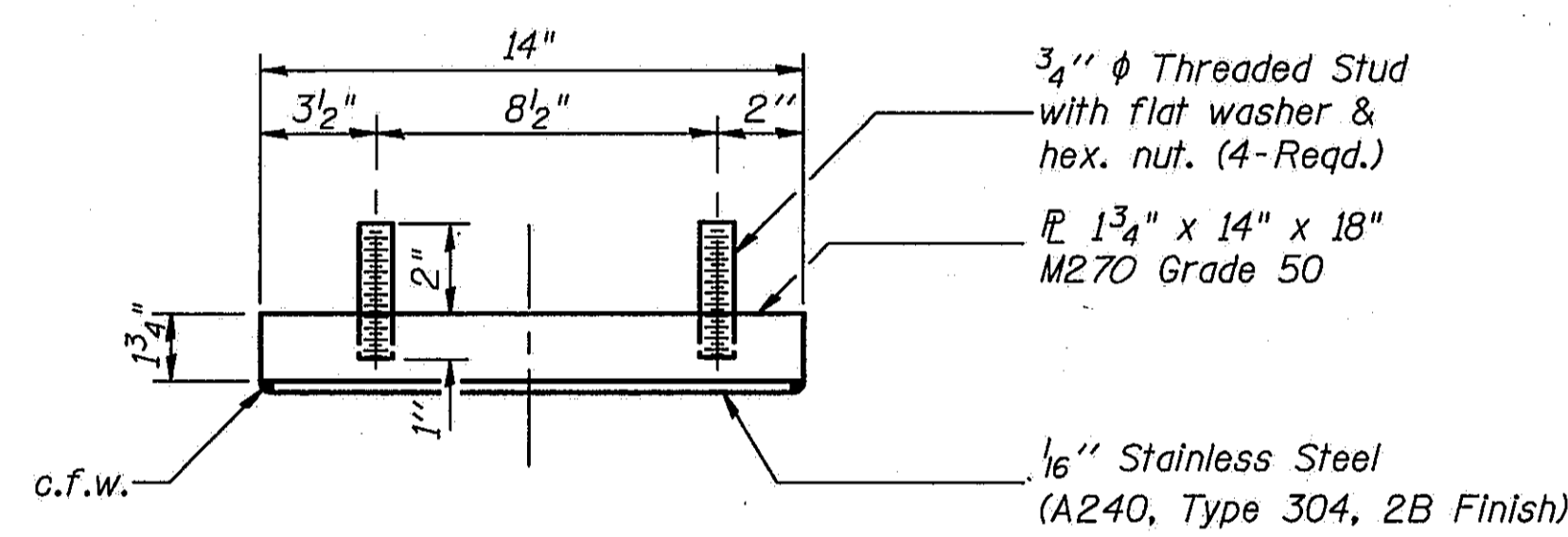


**SECTION A-A**

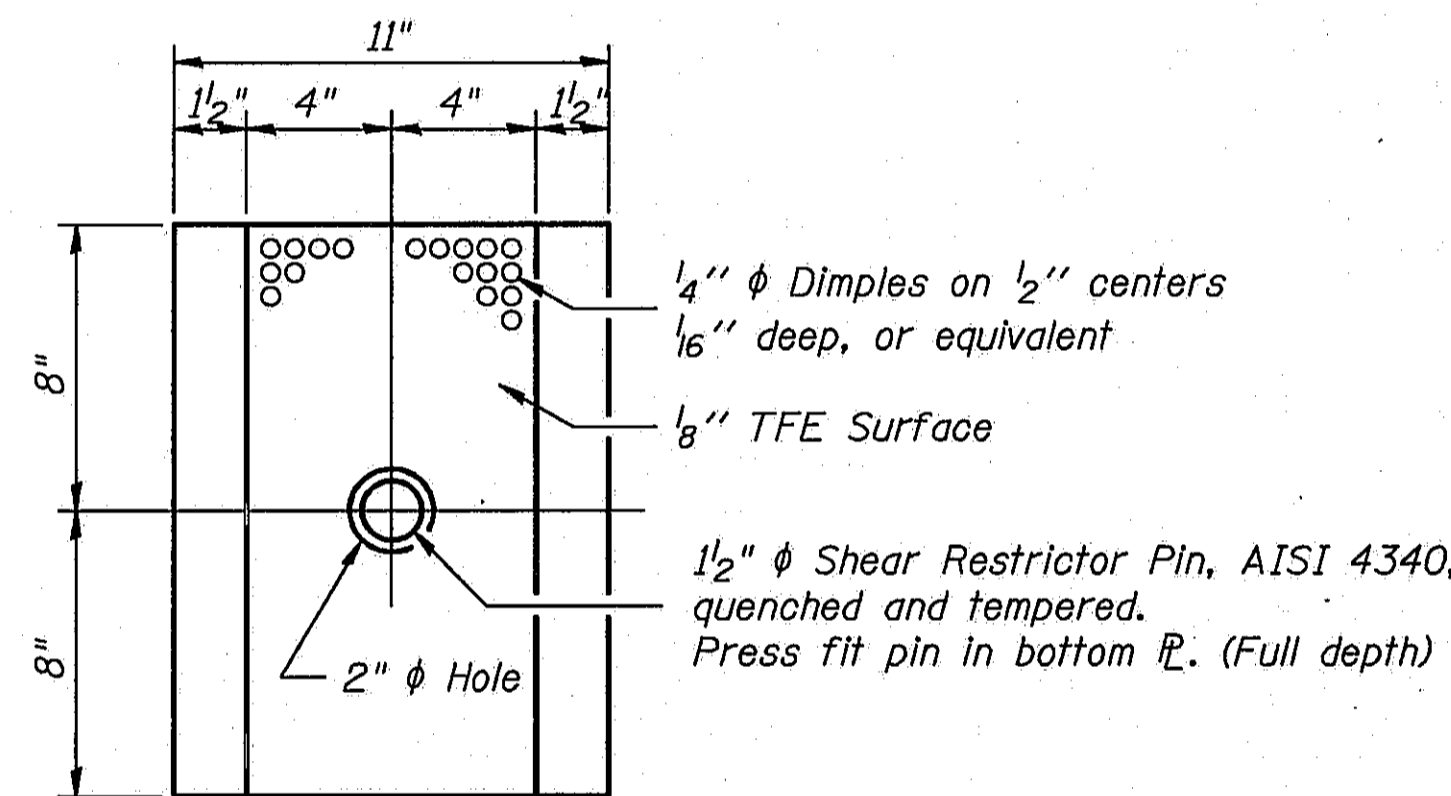
Typical Grease Groove

NOTE: Structural steel weldments of equal sections (M270 Gr. 36 Str. Steel) may be substituted for the castings. Fillet or partial penetration weld shall be used for weldments. Minimum weld size shall be 1/4" thickness of plate being welded, except maximum size of weld need not exceed 3/4".

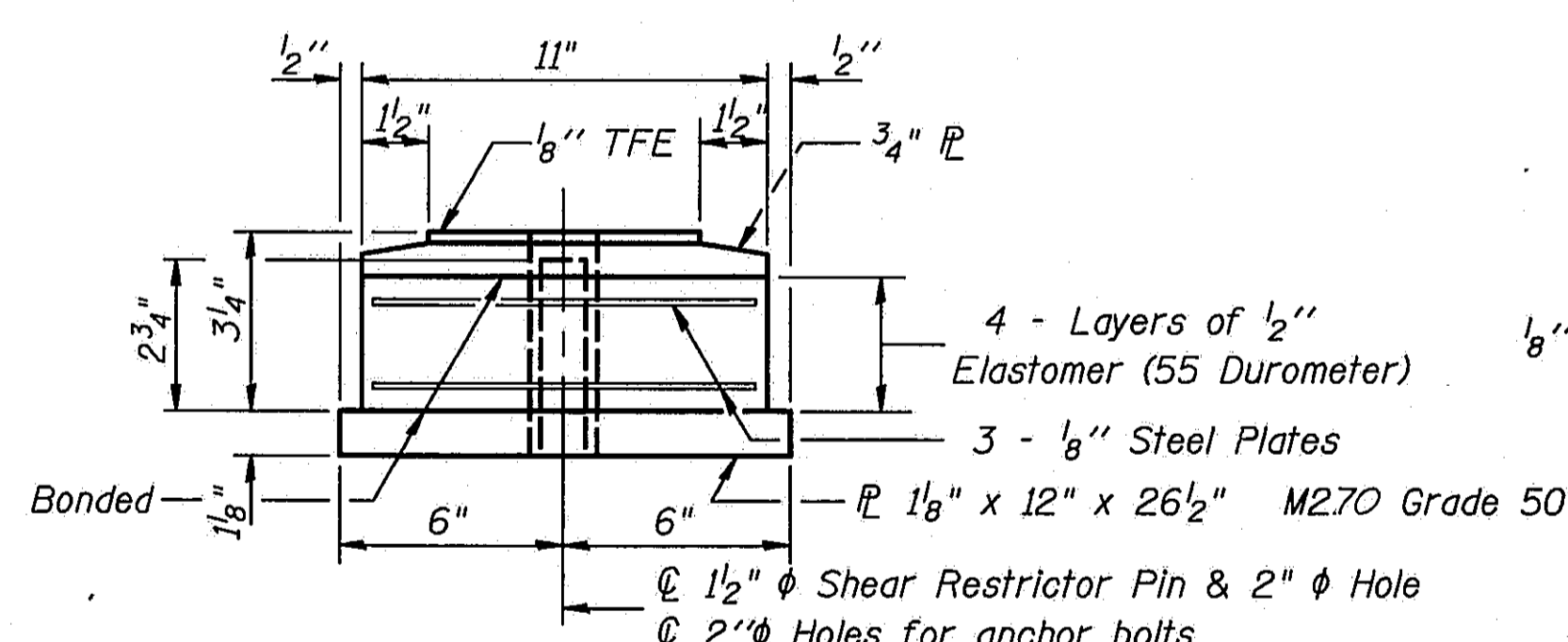
NOTE: Grease bearing assembly with molybdenum grease before installation.



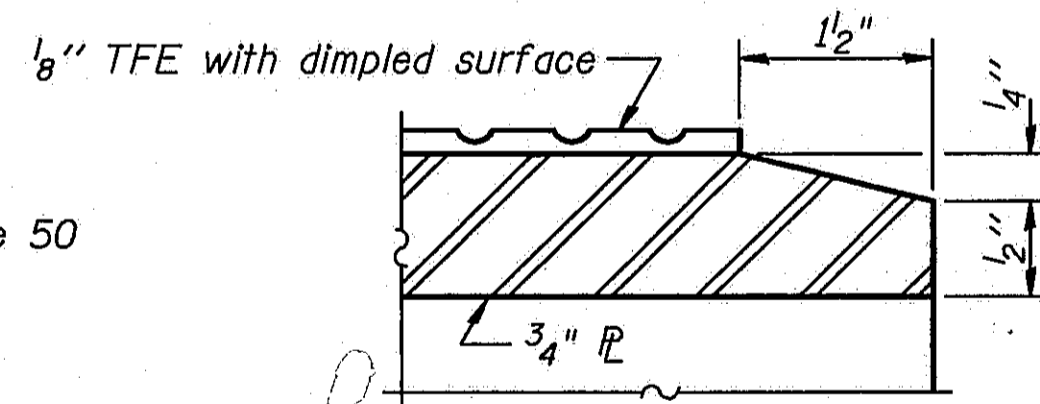
**TOP BEARING ASSEMBLY**



**PLAN-TFE ELASTOMERIC BRG.**



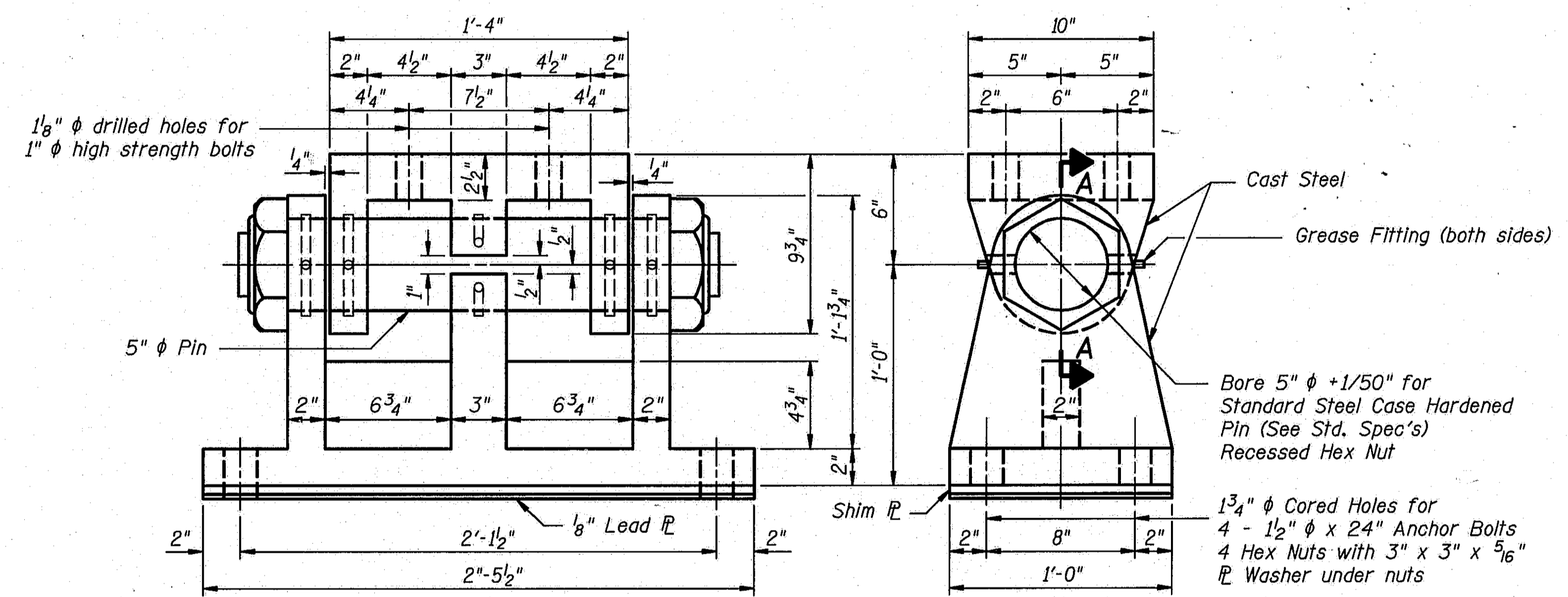
**BOTTOM BEARING ASSEMBLY**



**SECTION THRU TFE**

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



**ELEVATION**

**END VIEW**

Note: Existing bearings at girders 2 thru 6 are to remain in place. (Pier 5 only)

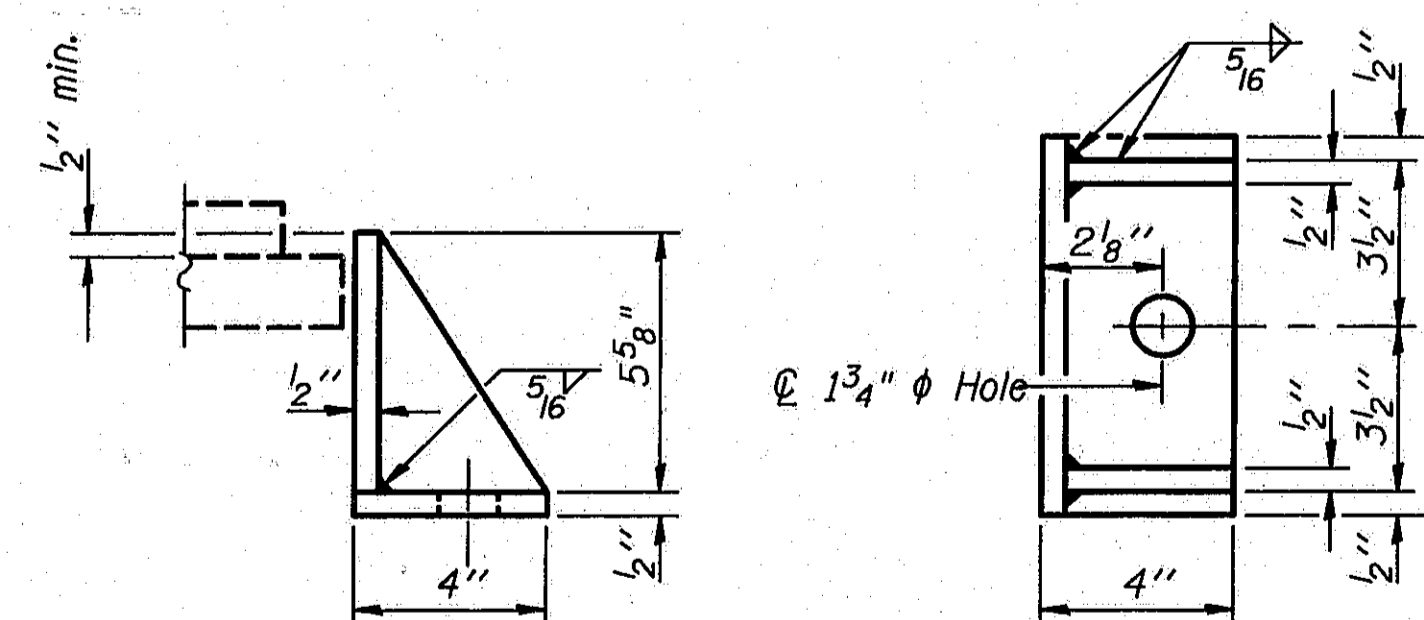
**FIXED BEARING**

Used at Pier 5 - 2 Required  
 Weight of Fixed Bearings at Pier 5 included with M270 Gr. 36 Structural Steel.

Bill of Material is total for one structure. Two structures are required.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	39
Elastomeric Bearing Assembly Type II	Each	23
Elastomeric Bearing Assembly Type III	Each	23



**SIDE RETAINERS**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Pier 7 at Span 7 - 14 Required

\*\*Note: Weight of adjusting shims, lead plates, side retainers and anchor bolts shall be included in "Structural Steel".

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

I-2-E3 12-1-83

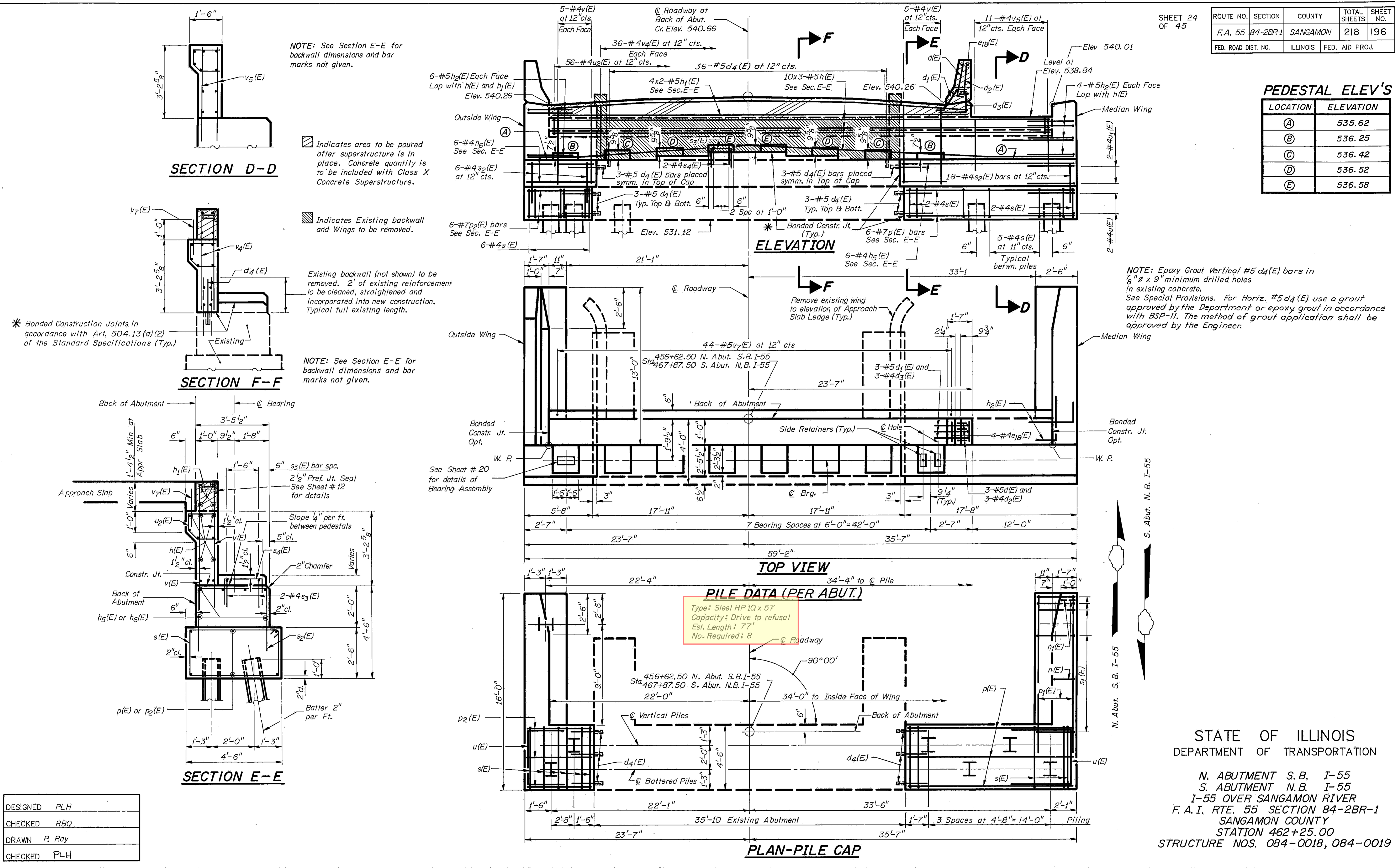
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 BEARING ASSEMBLY  
 PIER 5 & PIER 7, SPAN 7  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 55	84-2BR-1	SANGAMON	218	196
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

**PEDESTAL ELEV'S**

LOCATION	ELEVATION
(A)	535.62
(B)	536.25
(C)	536.42
(D)	536.52
(E)	536.58



NOTE: See Section E-E for backwall dimensions and bar marks not given.

Indicates area to be poured after superstructure is in place. Concrete quantity is to be included with Class X Concrete Superstructure.

Indicates Existing backwall and Wings to be removed.

Existing backwall (not shown) to be removed. 2' of existing reinforcement to be cleaned, straightened and incorporated into new construction. Typical full existing length.

\* Bonded Construction Joints in accordance with Art. 504.13(a)(2) of the Standard Specifications (Typ.)

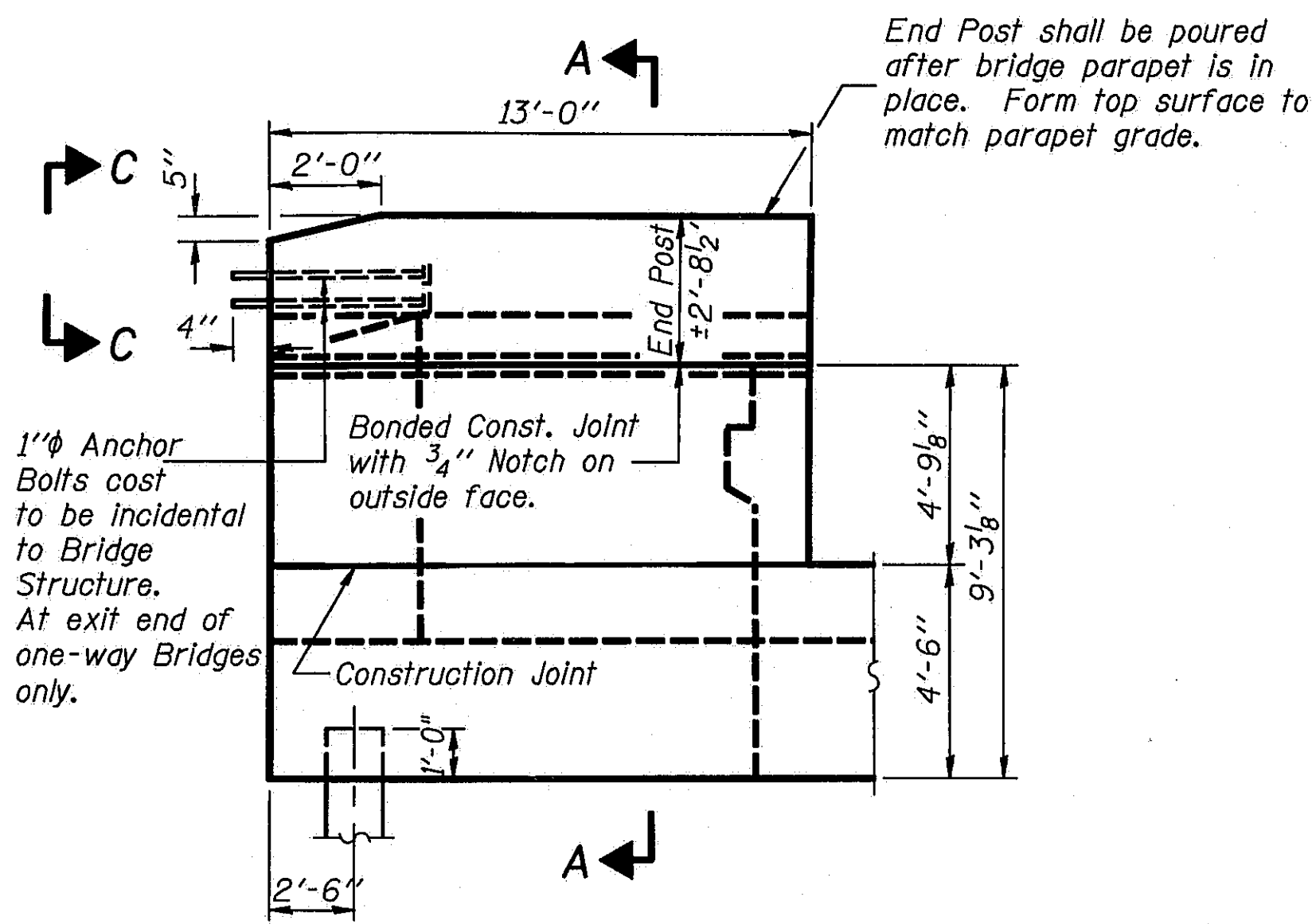
NOTE: See Section E-E for backwall dimensions and bar marks not given.

NOTE: Epoxy Grout Vertical #5 d4(E) bars in 8" x 9" minimum drilled holes in existing concrete. See Special Provisions. For Horiz. #5 d4(E) use a grout approved by the Department or epoxy grout in accordance with BSP-11. The method of grout application shall be approved by the Engineer.

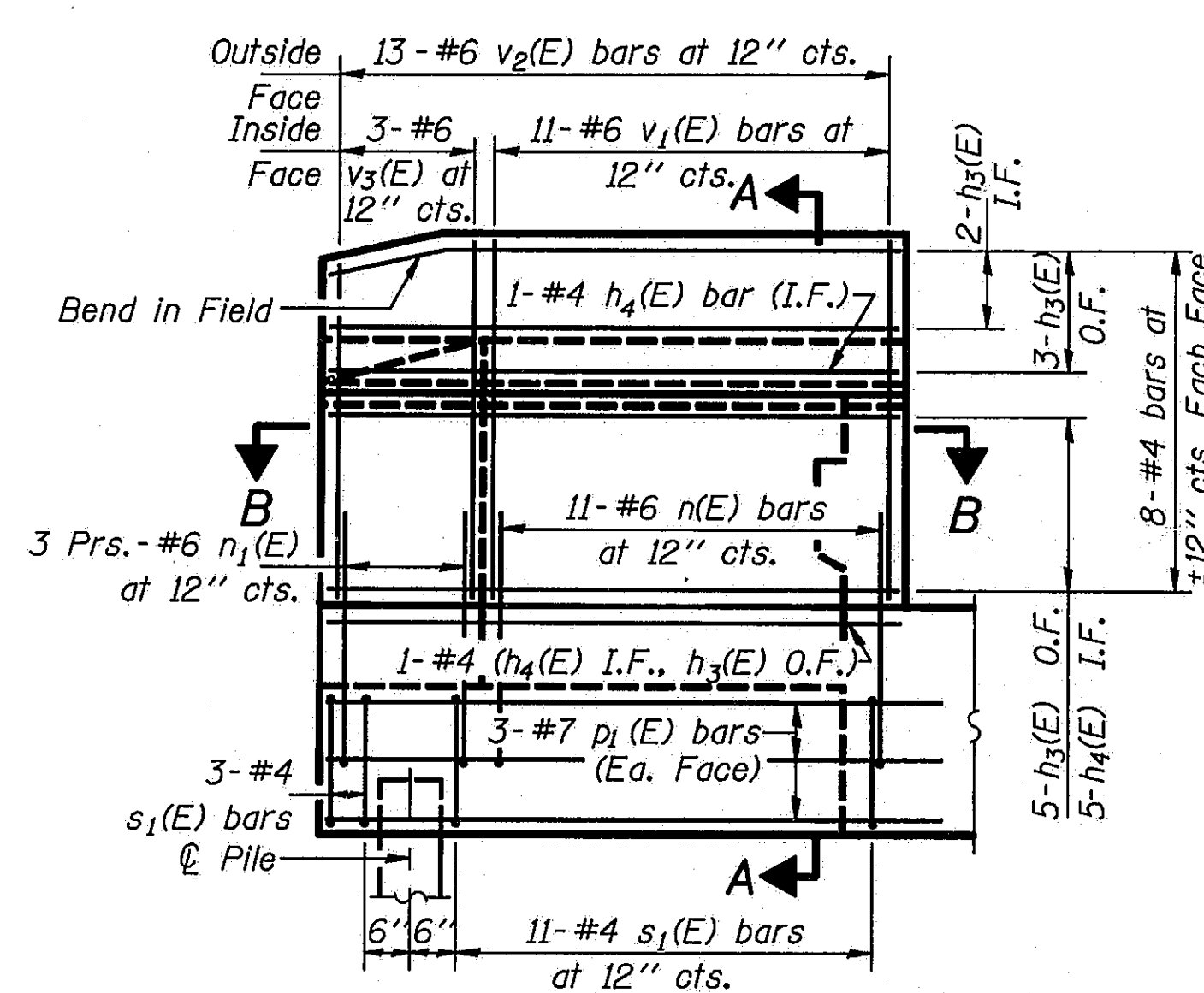
DESIGNED PLH  
CHECKED RBQ  
DRAWN P. Ray  
CHECKED PLH

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
N. ABUTMENT S.B. I-55  
S. ABUTMENT N.B. I-55  
I-55 OVER SANGAMON RIVER  
F. A. I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

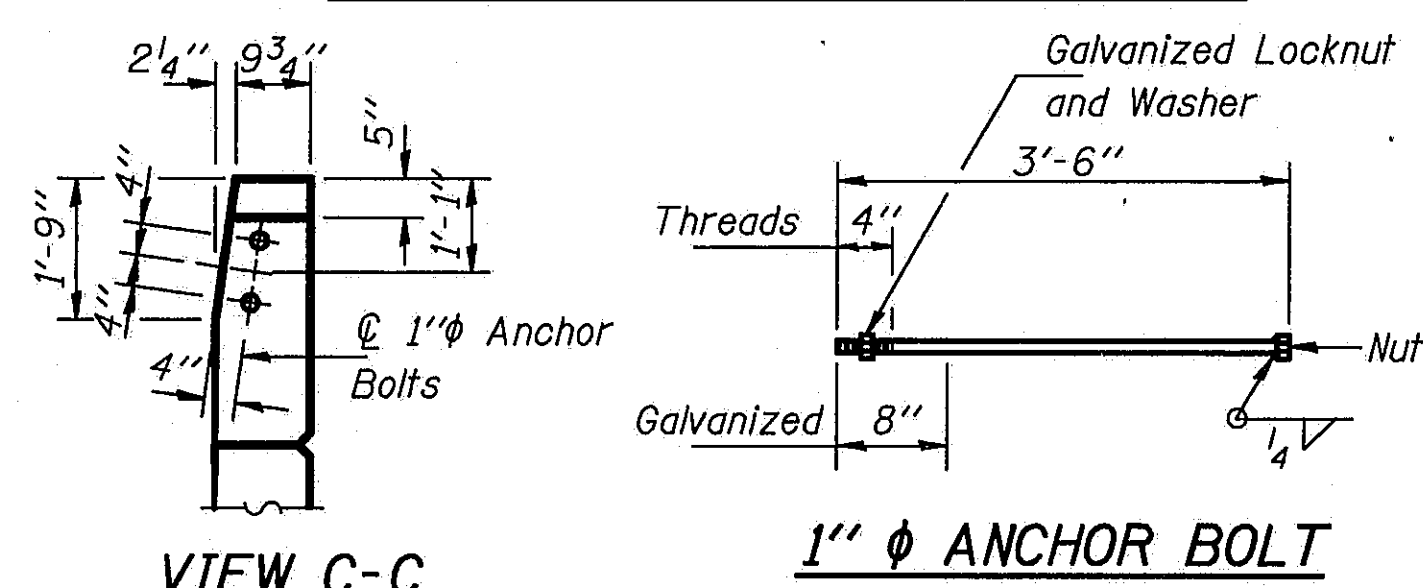
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	-218	197
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	



OUTSIDE WING WALL ELEVATION

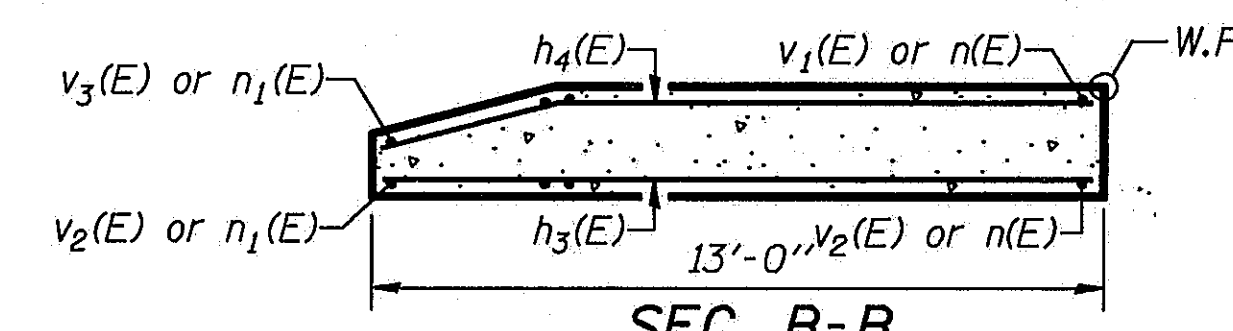


OUTSIDE WING WALL ELEVATION Reinforcement

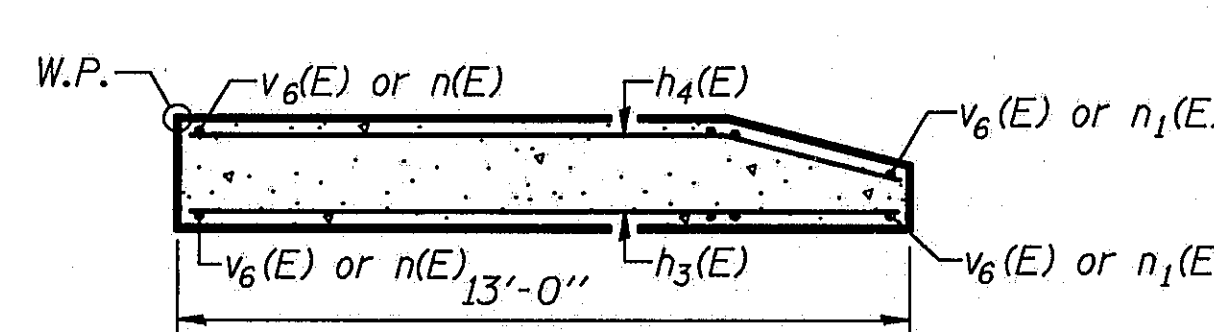


VIEW C-C

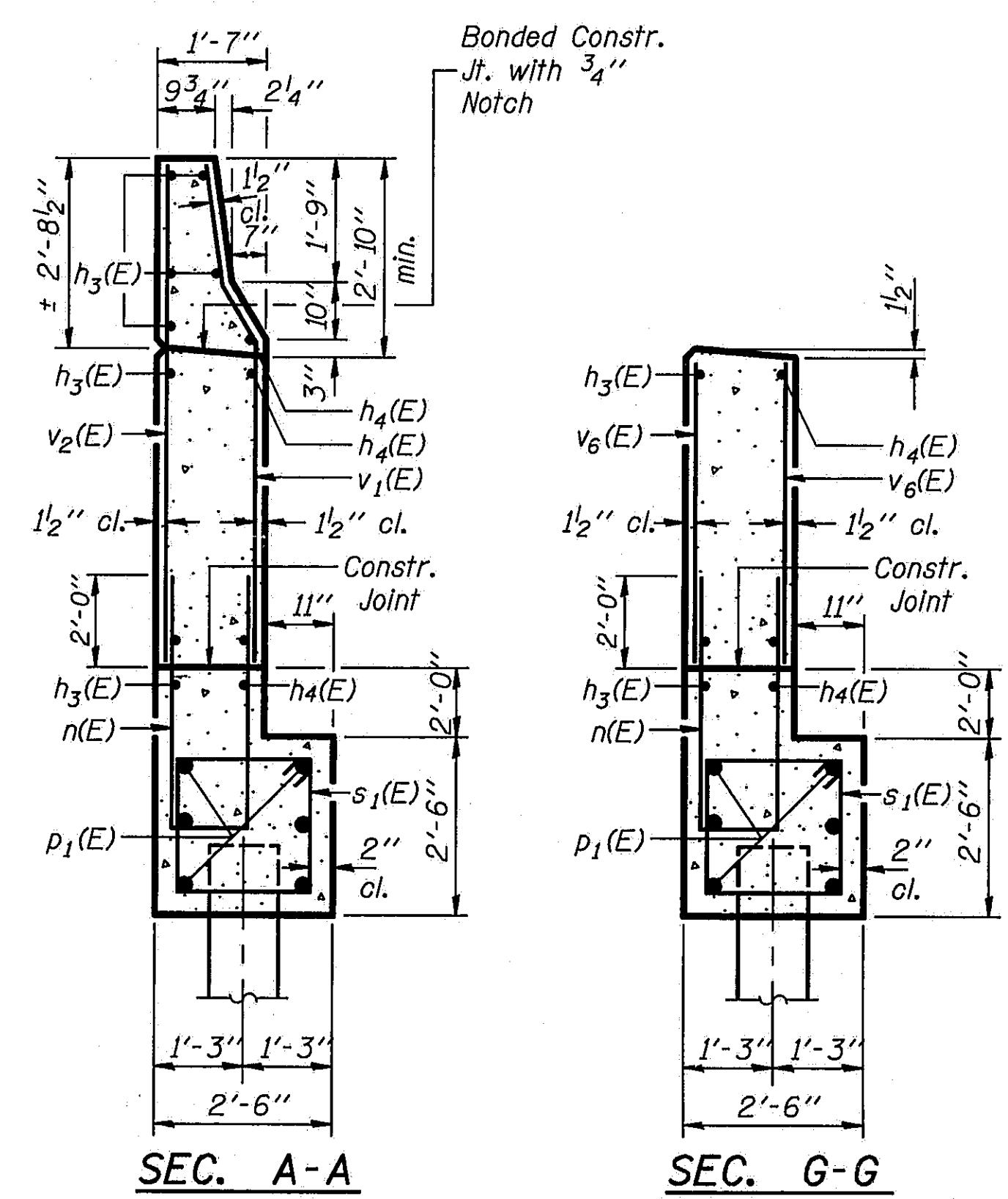
1" φ ANCHOR BOLT



SEC. B-B

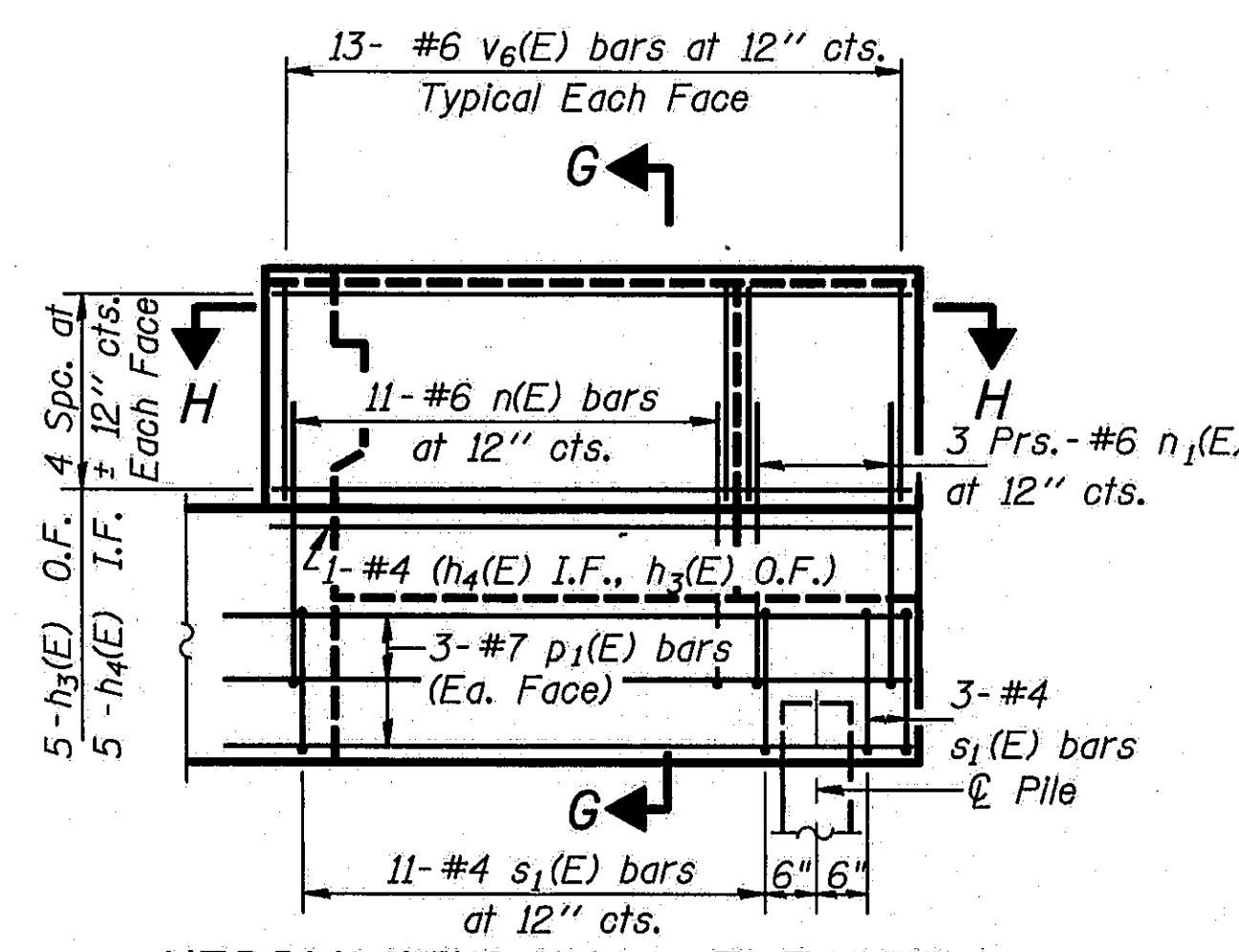


SEC. H-H

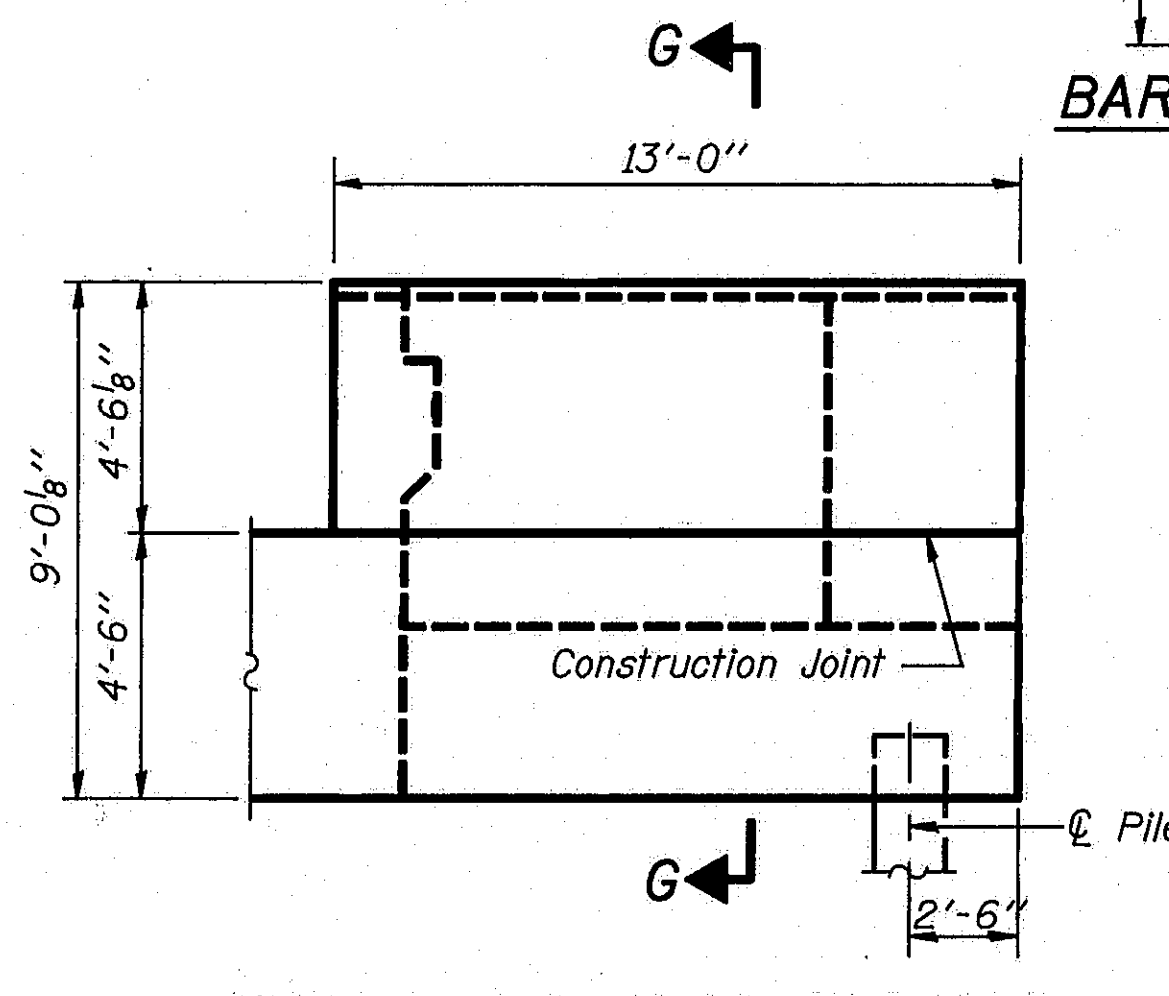


SEC. A-A

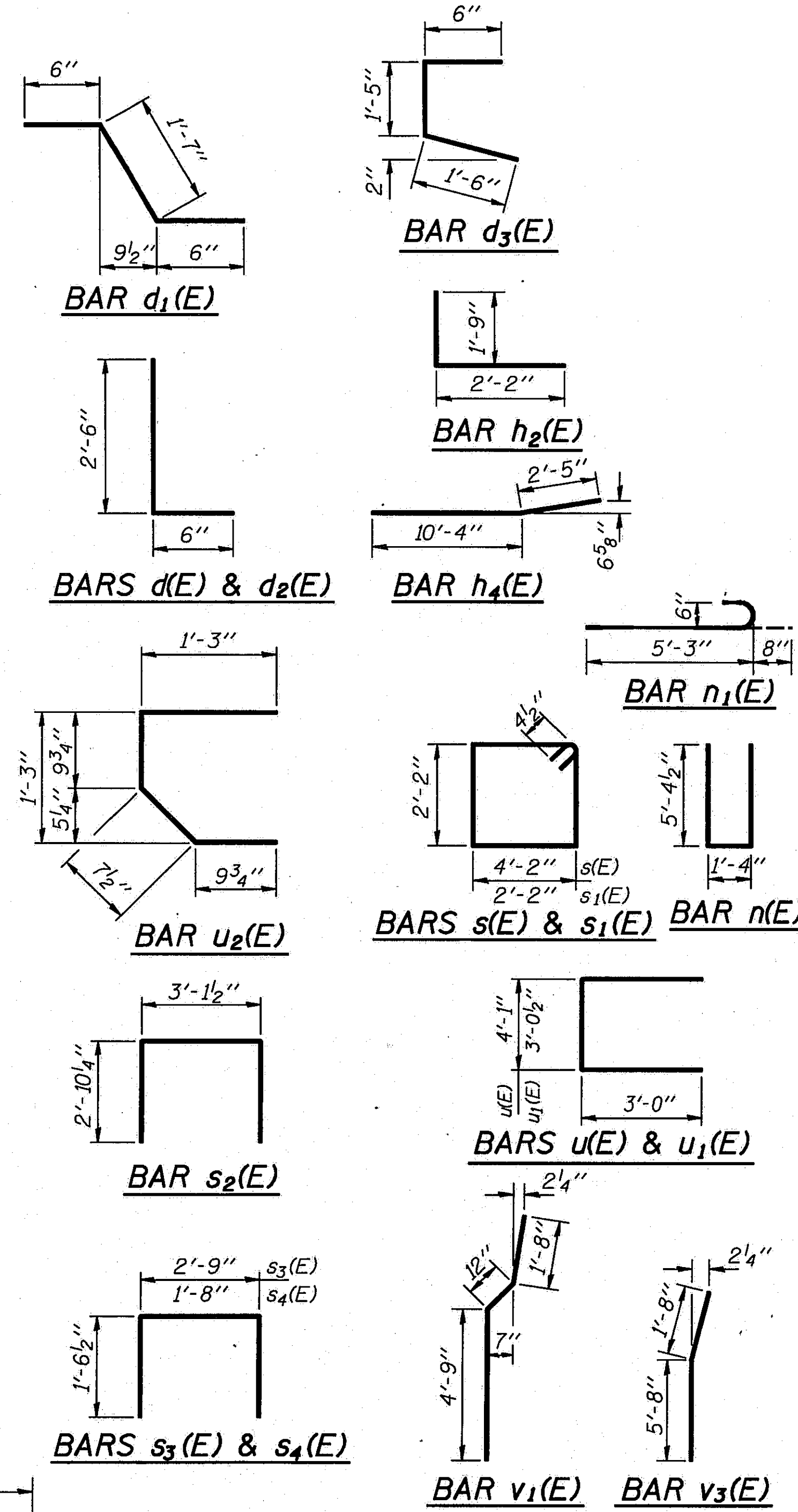
SEC. G-G



MEDIAN WING WALL ELEVATION Reinforcement



MEDIAN WING WALL ELEVATION



Notes: Reinforcement bars designated (E) shall be epoxy coated.  
Pour pedestals monolithically with cap at cap extensions.  
Epoxy grout #4 s3(E) and #4 s4(E) bars in 3/4" φ x 9" minimum drilled holes into existing cap or riser, see Special Provisions.  
Space reinforcement to miss anchor bolts.  
Cut existing anchor bolts off flush with top of existing concrete.

TWO ABUTMENTS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	6	#5	3'-0"	
d1(E)	6	#5	2'-7"	
d2(E)	6	#4	3'-0"	
d3(E)	6	#4	3'-5"	
d4(E)	108	#5	2'-6"	
g(E)	8	#4	9"	
h(E)	60	#5	21'-1"	
h1(E)	16	#5	24'-6"	
h2(E)	40	#5	3'-11"	
h3(E)	34	#4	12'-8"	
h4(E)	26	#4	12'-9"	
h5(E)	12	#4	17'-8"	
h6(E)	12	#4	5'-8"	
n(E)	44	#6	12'-1"	
n1(E)	24	#6	5'-11"	
p(E)	12	#7	17'-5"	
p1(E)	24	#7	13'-5"	
p2(E)	12	#7	5'-5"	
s(E)	50	#4	13'-5"	
s1(E)	56	#4	9'-5"	
s2(E)	48	#4	8'-10"	
s3(E)	32	#4	5'-10"	
s4(E)	32	#4	4'-9"	
u(E)	8	#6	10'-1"	
u1(E)	8	#6	9'-0"	
u2(E)	112	#4	3'-6"	
v(E)	40	#4	5'-7"	
v1(E)	22	#6	7'-5"	
v2(E)	26	#6	7'-4"	
v3(E)	6	#6	7'-4"	
v4(E)	144	#4	4'-7"	
v5(E)	44	#4	4'-1"	
v6(E)	52	#6	4'-4"	
v7(E)	88	#5	2'-0"	

Concrete Removal	Cu. Yd.	18.4
Structure Excavation	Cu. Yd.	244
Class X Concrete	Cu. Yd.	83.2
Reinforcement Bars (Epoxy Coated)	Lbs.	8790
Steel Piles (HP 10x57)	Lin. Ft.	1232

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
N. ABUTMENT S.B. I-55  
S. ABUTMENT N.B. I-55  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

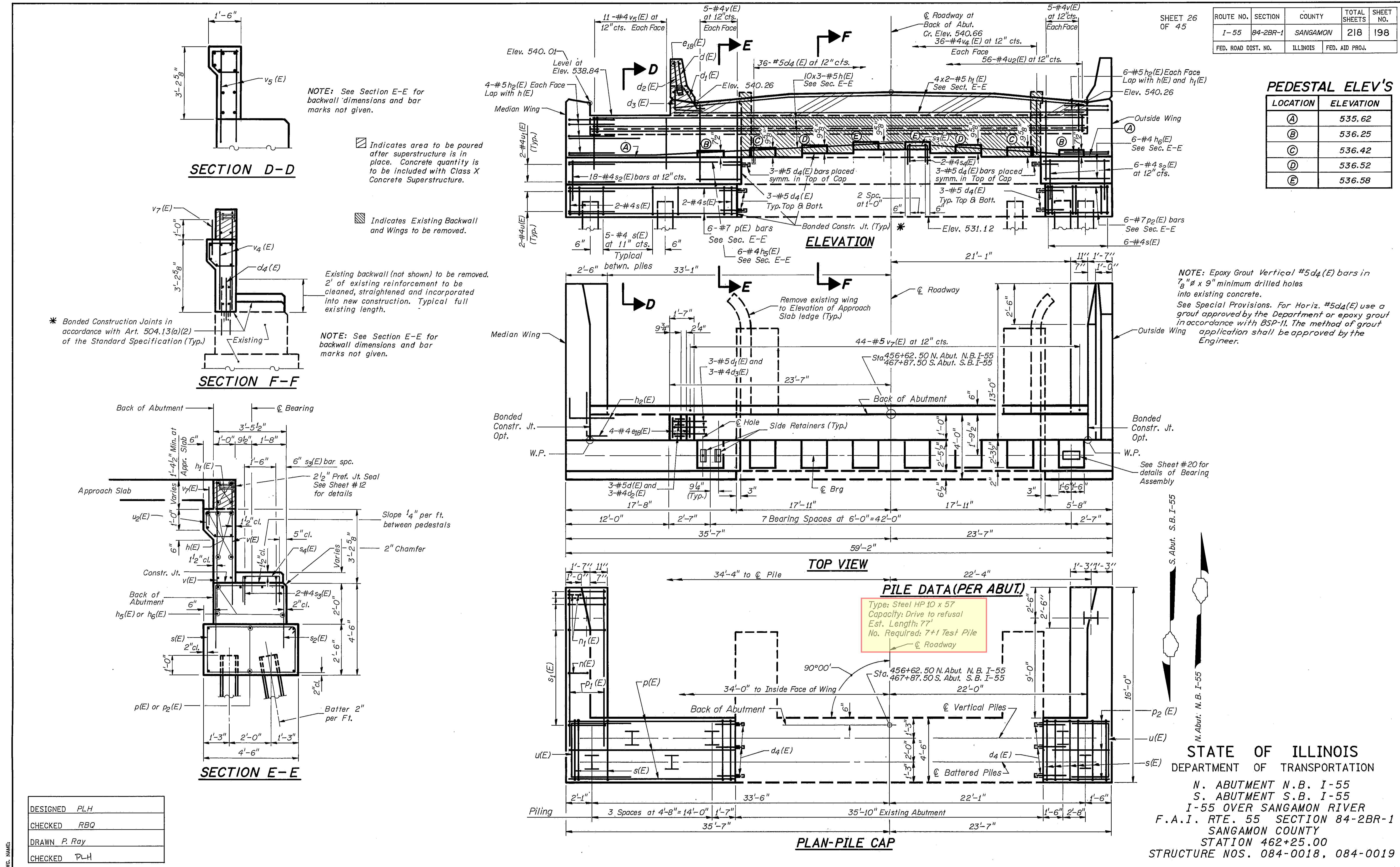
DESIGNED	PLH
CHECKED	RBQ
DRAWN	P. Ray
CHECKED	PLH

A-1 6-1-89

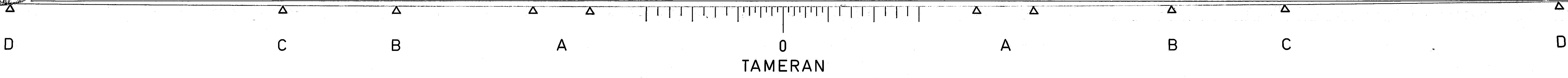
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	198
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

**PEDESTAL ELEV'S**

LOCATION	ELEVATION
④	535.62
③	536.25
②	536.42
①	536.52
⑤	536.58

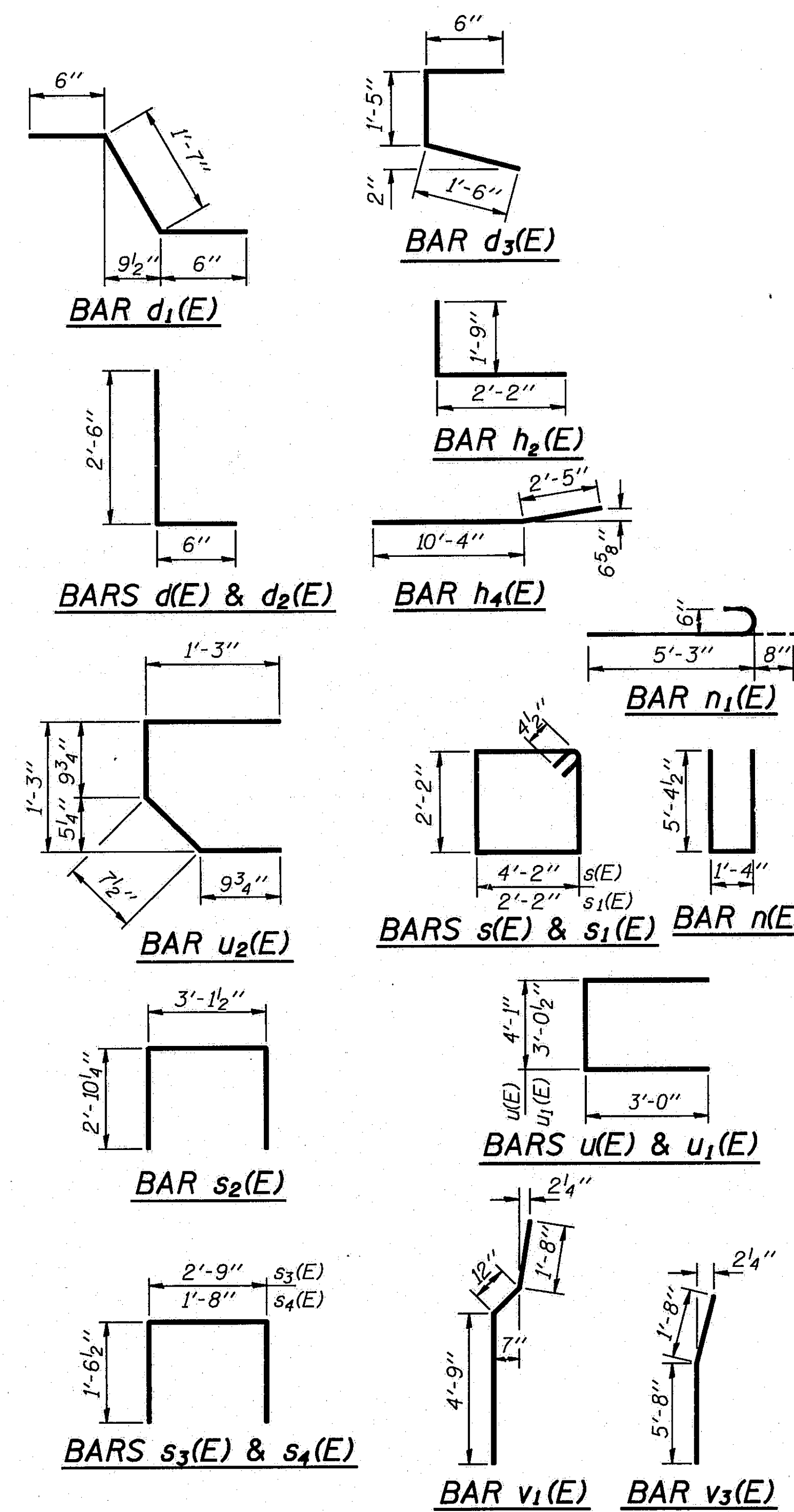
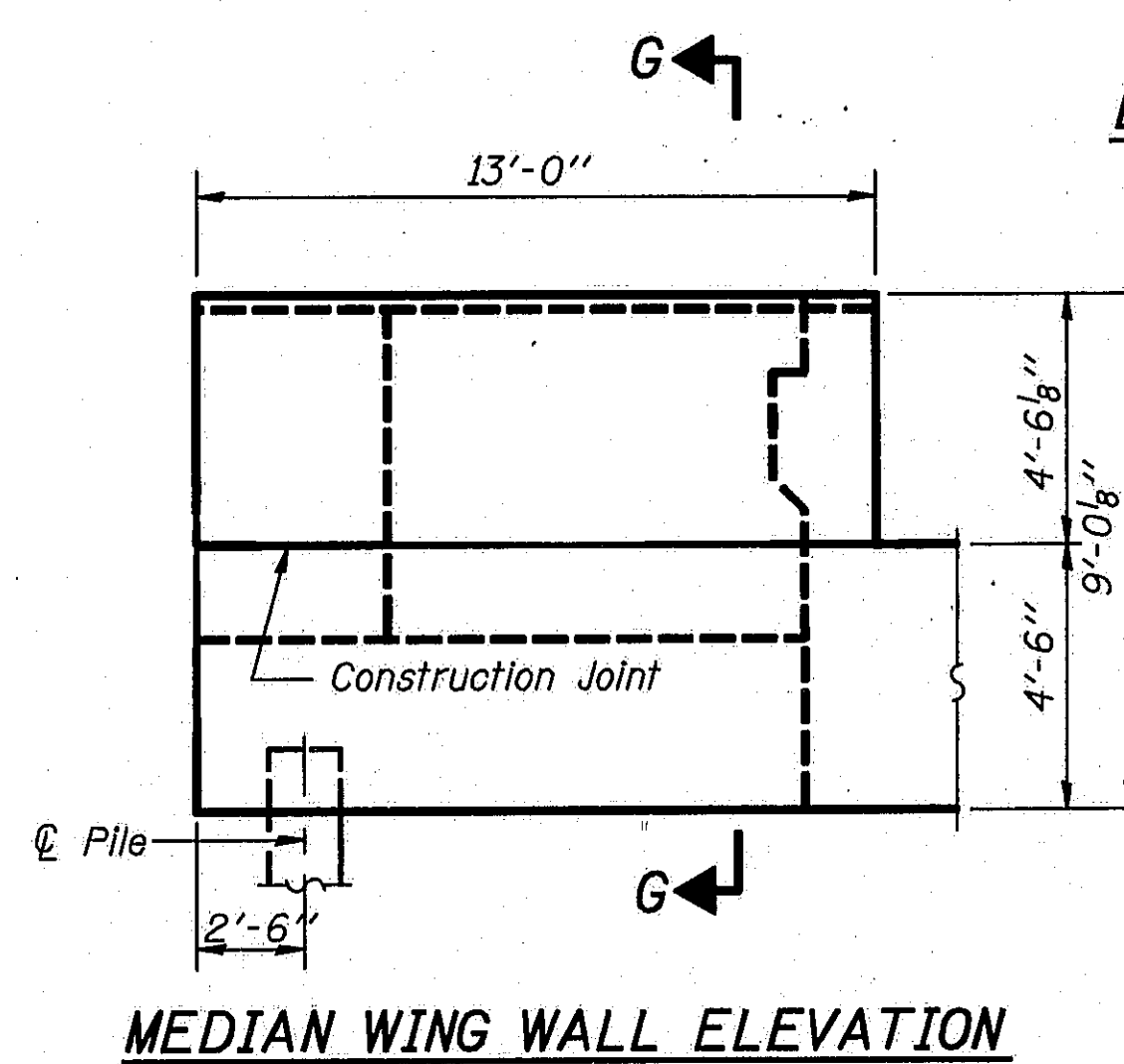
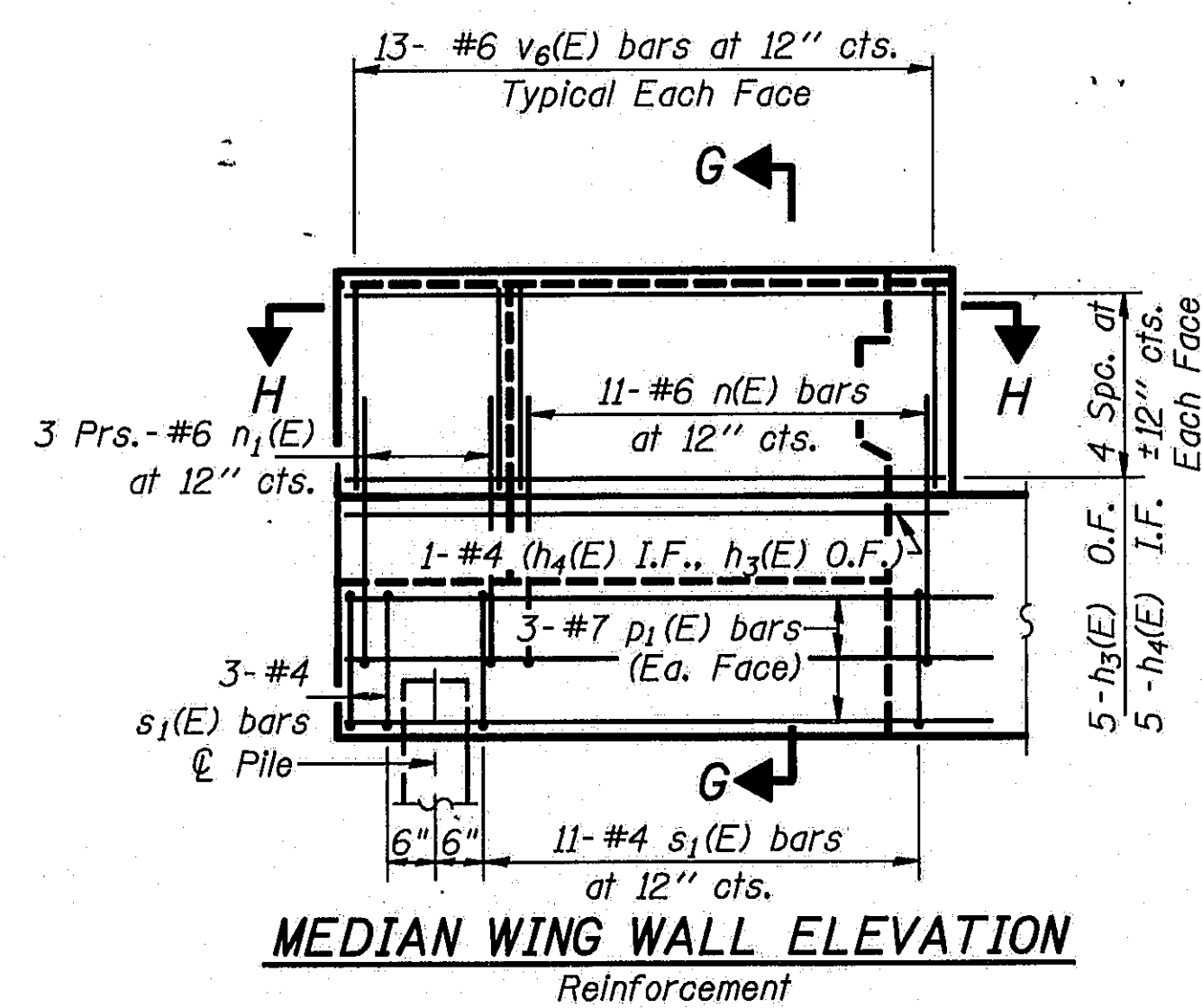
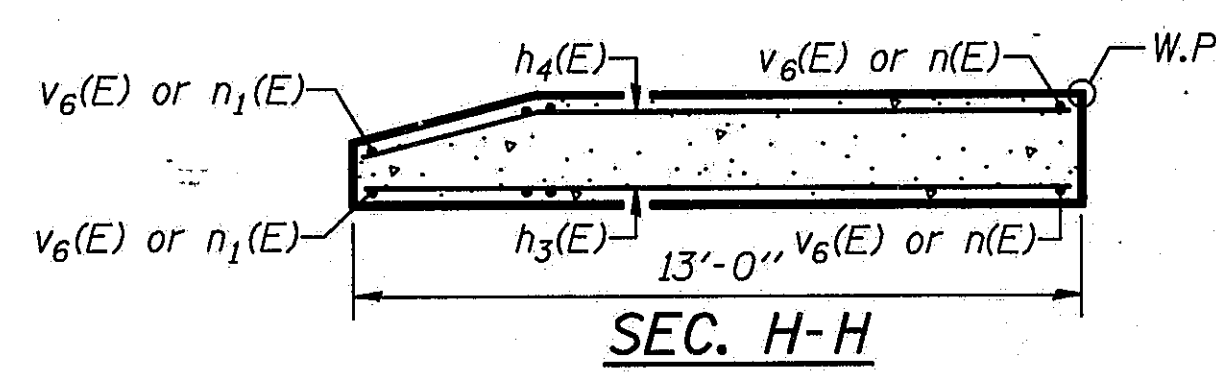
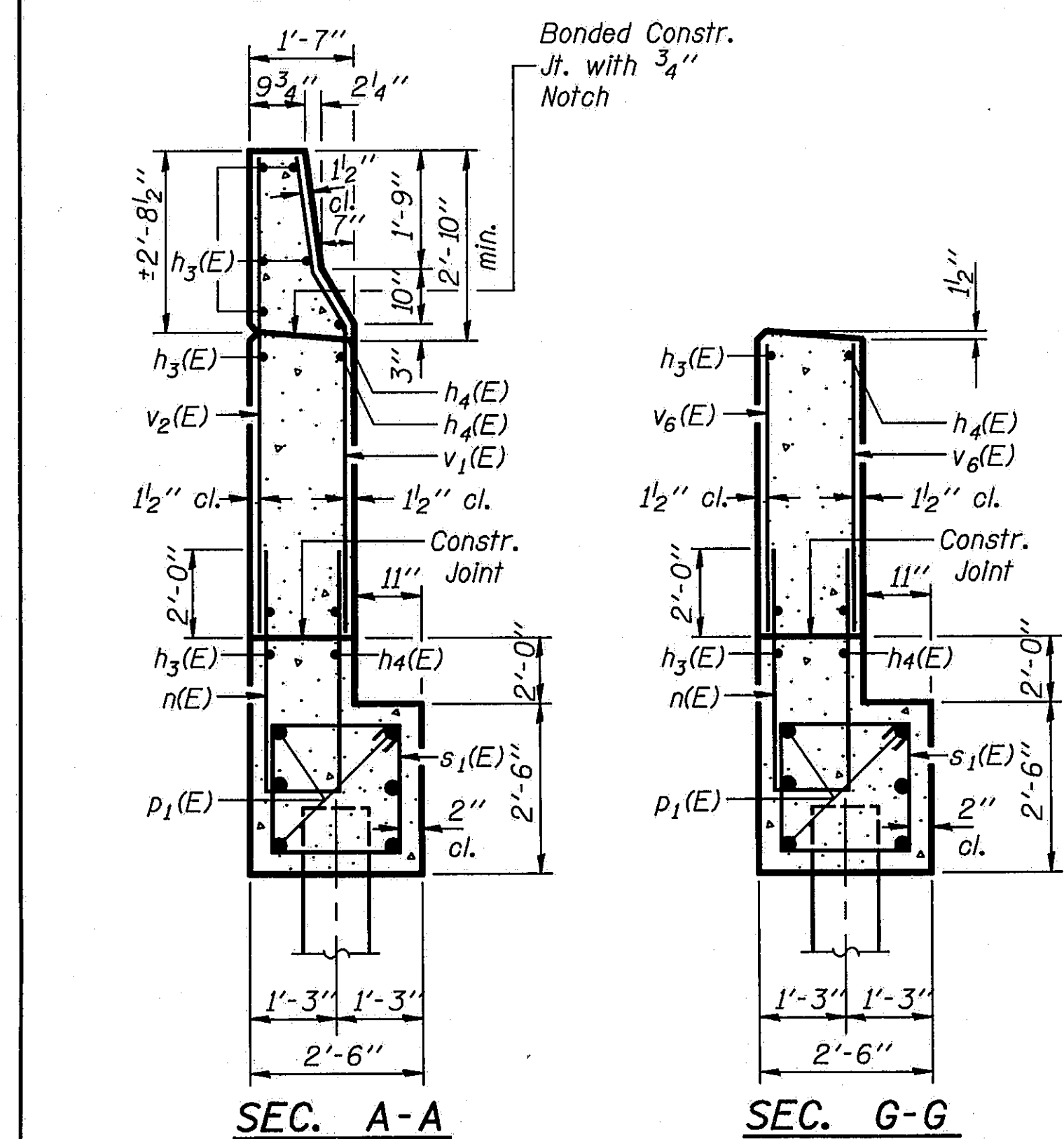
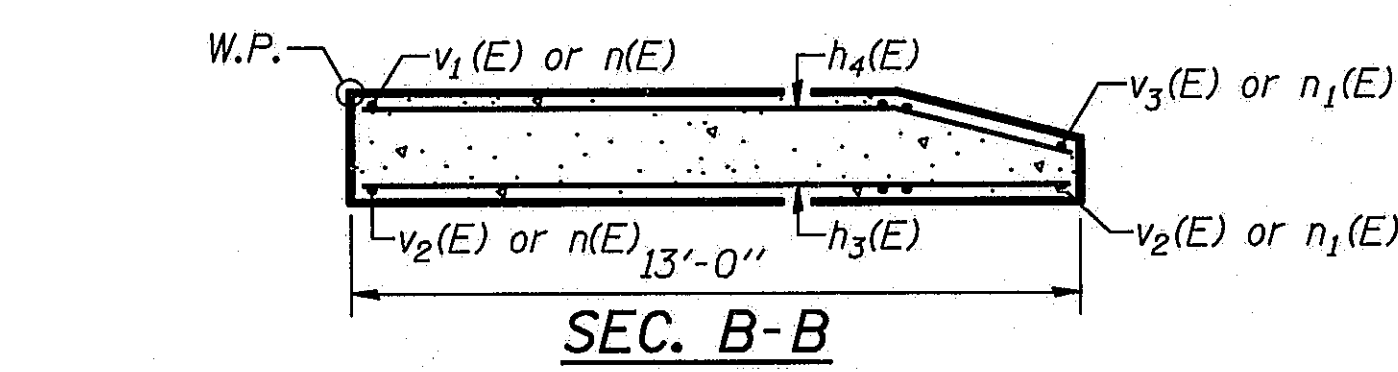
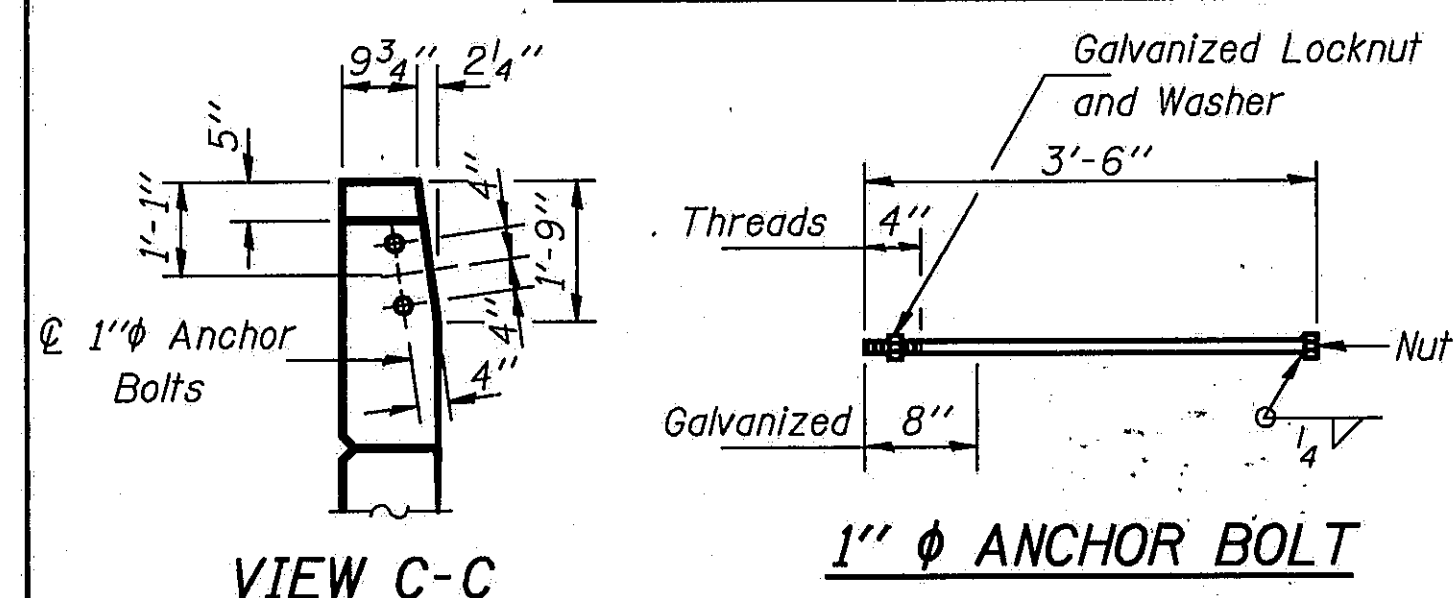
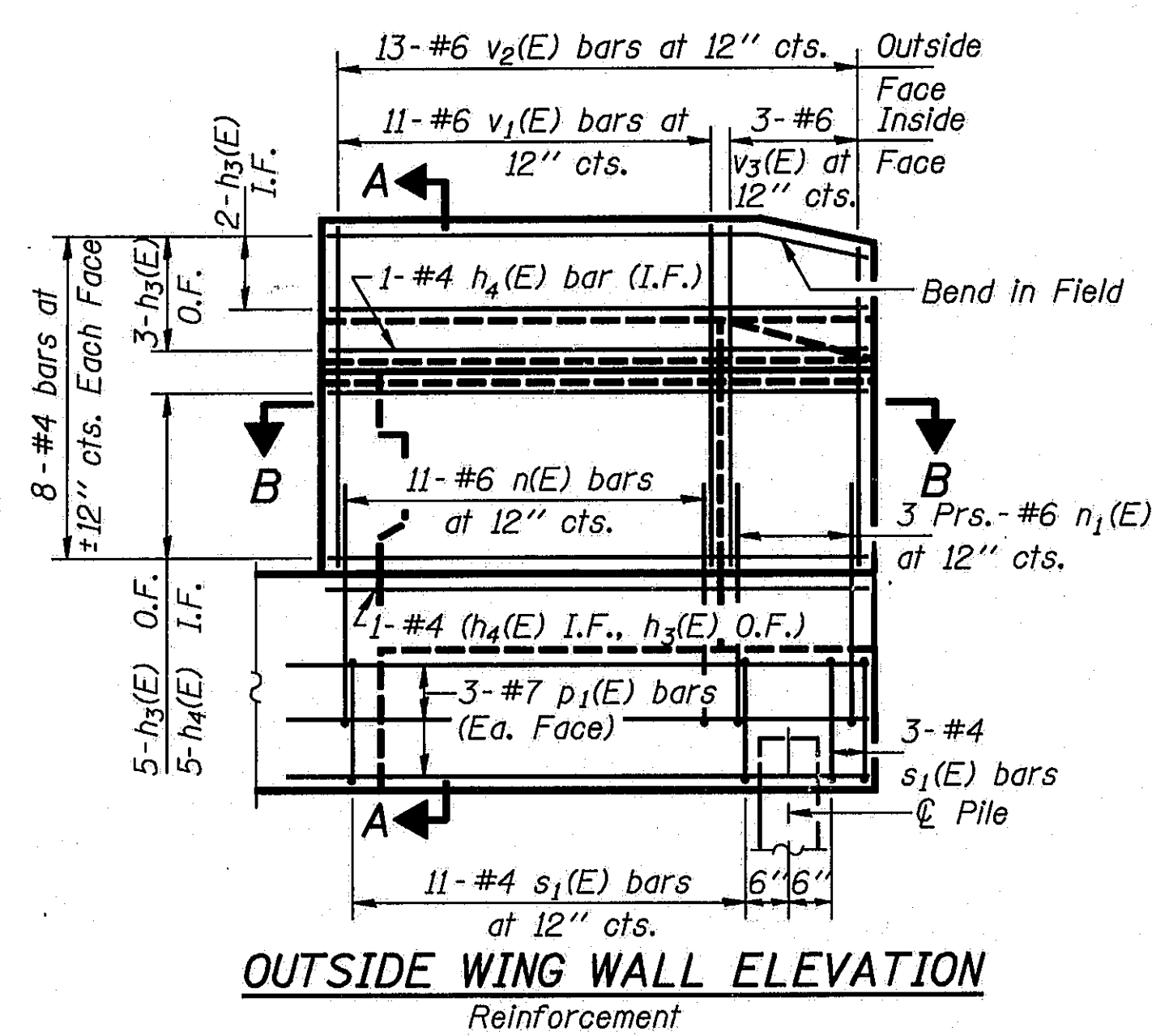
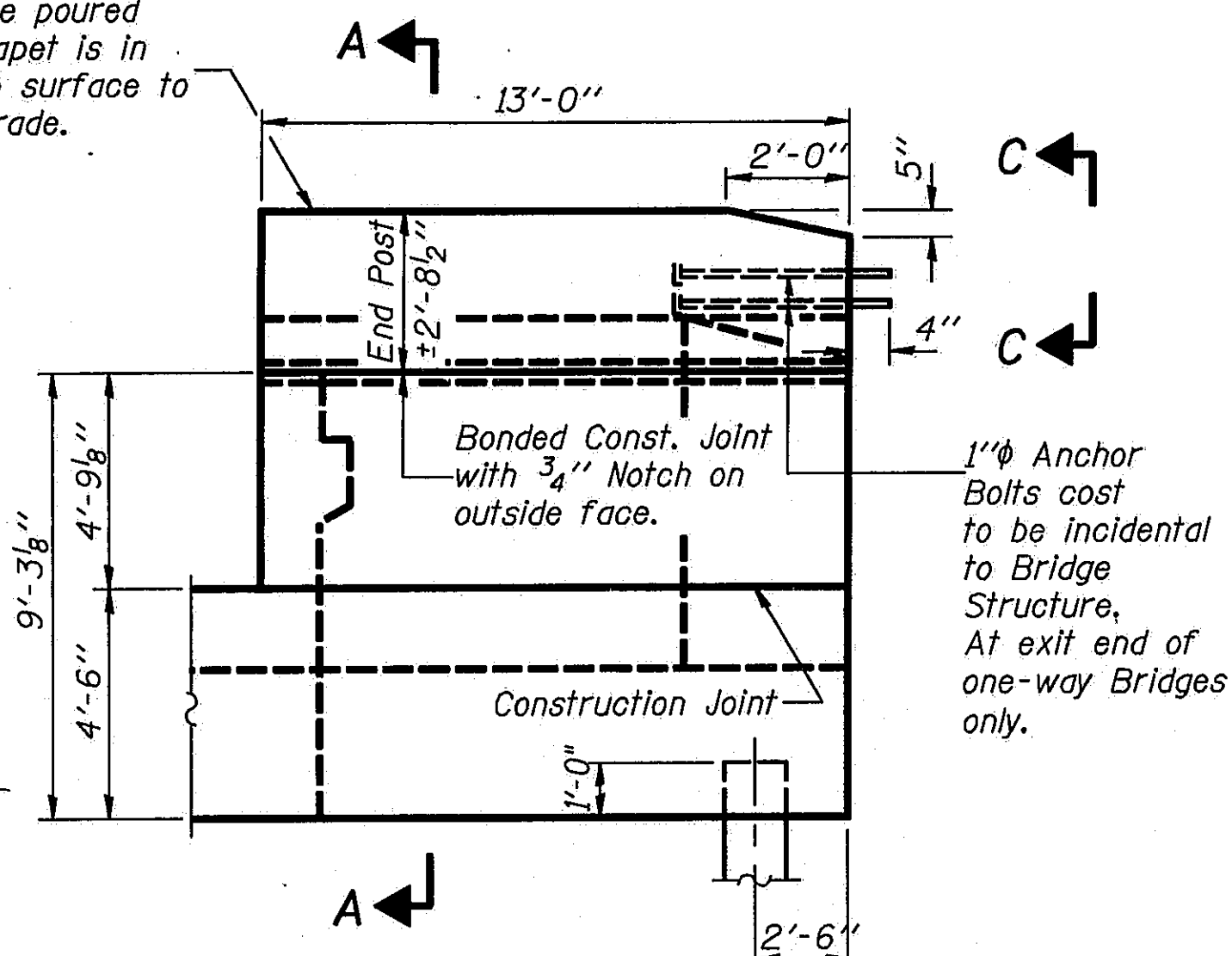


DRG. NAME:



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	199
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



Notes: Reinforcement bars designated (E) shall be epoxy coated.  
Pour pedestals monolithically with cap at cap extensions.  
Epoxy grout #4 s<sub>3</sub>(E) and #4 s<sub>4</sub>(E) bars in 2"  $\phi$  x 9" minimum drilled holes into existing cap or riser, see Special Provisions.  
Space reinforcement to miss anchor bolts.  
Cut existing anchor bolts off flush with top of existing concrete.

**TWO ABUTMENTS  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	6	#5	3'-0"	
d <sub>1</sub> (E)	6	#5	2'-7"	
d <sub>2</sub> (E)	6	#4	3'-0"	
d <sub>3</sub> (E)	6	#4	3'-5"	
d <sub>4</sub> (E)	108	#5	2'-6"	
h <sub>2</sub> (E)	8	#4	9"	
n(E)	60	#5	21'-1"	
n <sub>1</sub> (E)	16	#5	24'-6"	
h <sub>2</sub> (E)	40	#5	3'-11"	
h <sub>3</sub> (E)	34	#4	12'-8"	
h <sub>4</sub> (E)	26	#4	12'-9"	
h <sub>5</sub> (E)	12	#4	17'-8"	
h <sub>6</sub> (E)	12	#4	5'-8"	
n(E)	44	#6	12'-1"	
n <sub>1</sub> (E)	24	#6	5'-11"	
d(E)	12	#7	17'-5"	
d <sub>1</sub> (E)	24	#7	13'-5"	
d <sub>2</sub> (E)	12	#7	5'-5"	
s(E)	50	#4	13'-5"	
s <sub>1</sub> (E)	56	#4	9'-5"	
s <sub>2</sub> (E)	48	#4	8'-10"	
s <sub>3</sub> (E)	32	#4	5'-10"	
s <sub>4</sub> (E)	32	#4	4'-9"	
u(E)	8	#6	10'-1"	
u <sub>1</sub> (E)	8	#6	9'-0"	
u <sub>2</sub> (E)	112	#4	3'-6"	
v(E)	40	#4	5'-7"	
v <sub>1</sub> (E)	22	#6	7'-5"	
v <sub>2</sub> (E)	26	#6	7'-4"	
v <sub>3</sub> (E)	6	#6	7'-4"	
v <sub>4</sub> (E)	144	#4	4'-7"	
v <sub>5</sub> (E)	44	#4	4'-1"	
v <sub>6</sub> (E)	52	#6	4'-4"	
v <sub>7</sub> (E)	88	#5	2'-0"	
Concrete Removal		Cu. Yd.	18.4	
Structure Excavation		Cu. Yd.	244	
Class X Concrete		Cu. Yd.	83.2	
Reinforcement Bars (Epoxy Coated)		Lbs.	8790	
Steel Piles (HP 10x57)		Lin. Ft.	1078	
Test Pile (HP 10x57)		Each	2	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
N. ABUTMENT N.B. I-55  
S. ABUTMENT S.B. I-55  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	PLH
CHECKED	RBO
DRAWN	P. Ray
CHECKED	PLH

A-1 6-1-89

**PIER 1 PILE DATA**

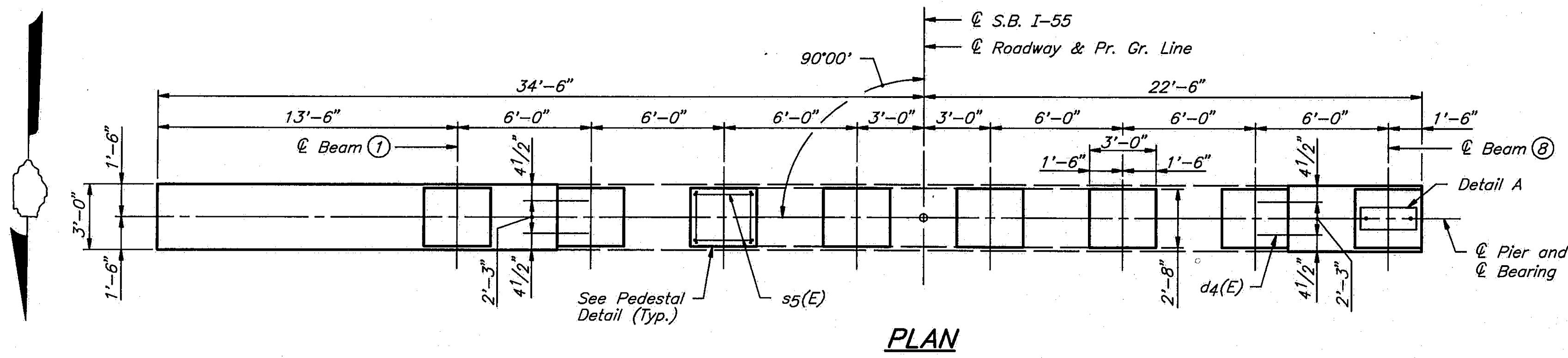
Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 82'  
No. Required ..... 7

**PIER 10 PILE DATA**

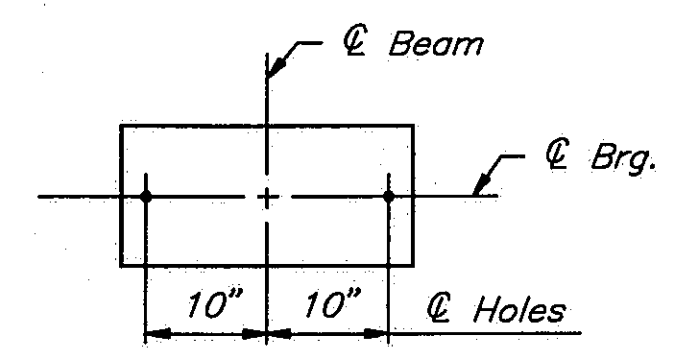
Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 77'  
No. Required ..... 7

SHEET 28  
OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	200
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

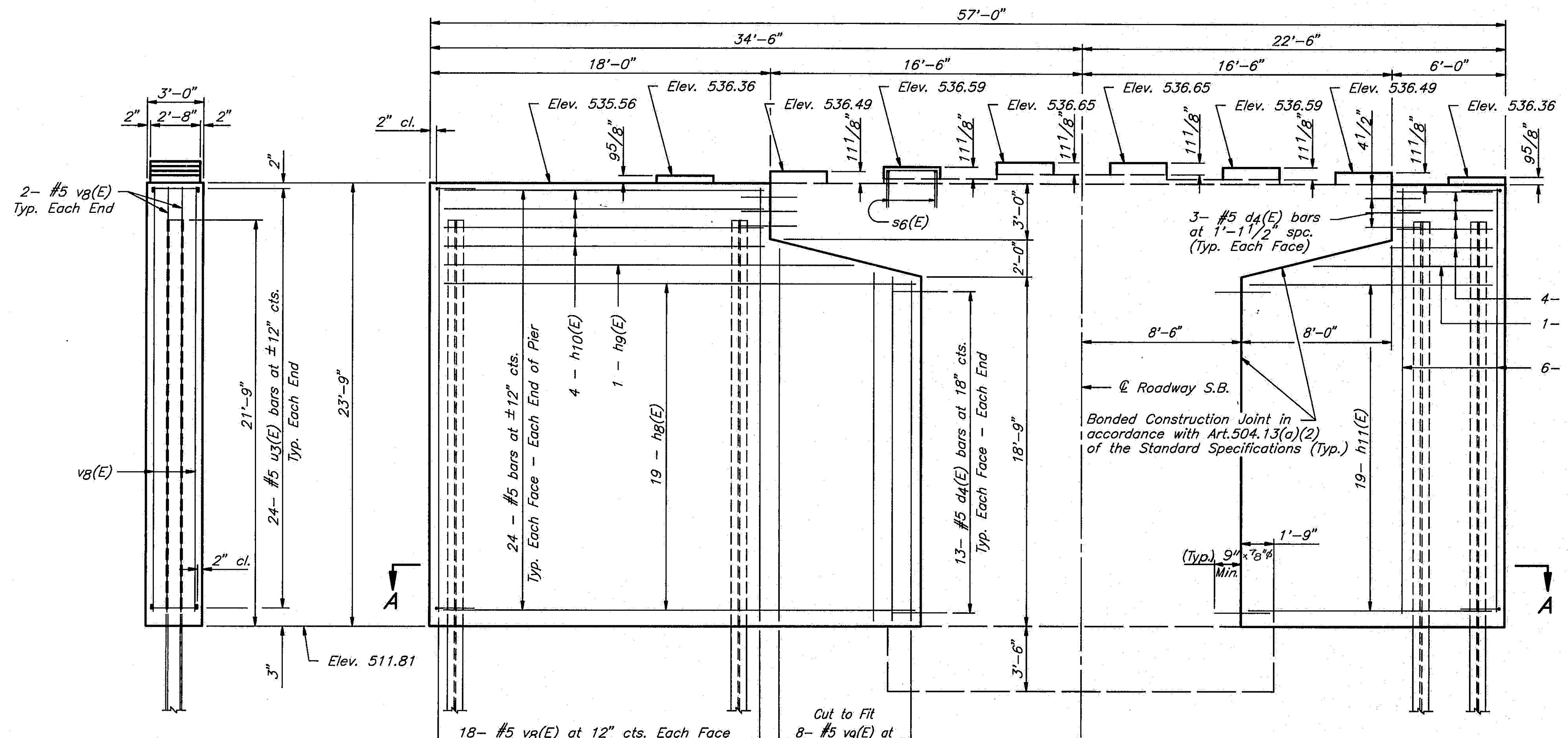


**PLAN**



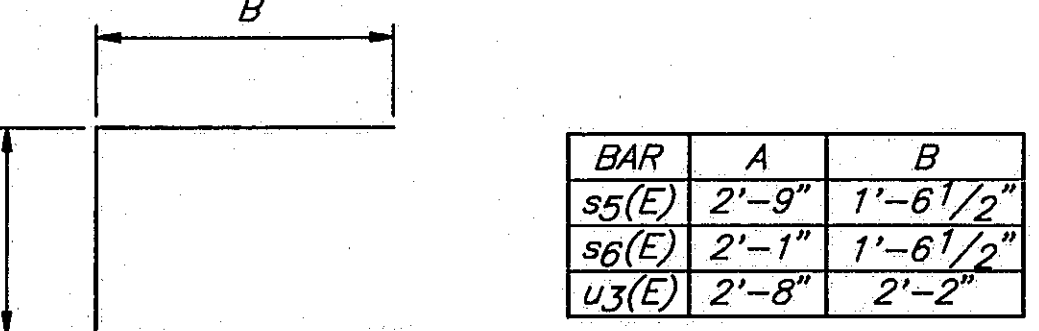
**DETAIL A**  
See Sheet #20 of 45  
for Fixed Bearing

Notes:  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
Pour pedestals monolithically with cap at cap extensions.  
Reinforcement bars designated (E) shall be epoxy coated.  
Cut existing anchor bolts off flush with top of existing concrete.



**ELEVATION**  
(Looking South)

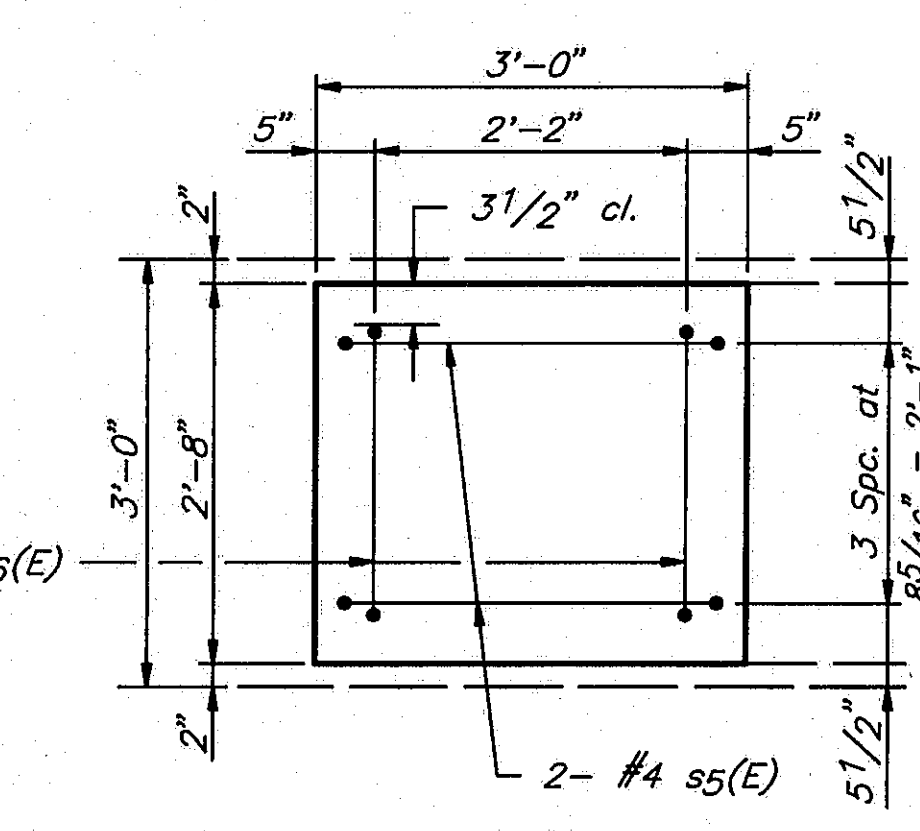
**END VIEW**



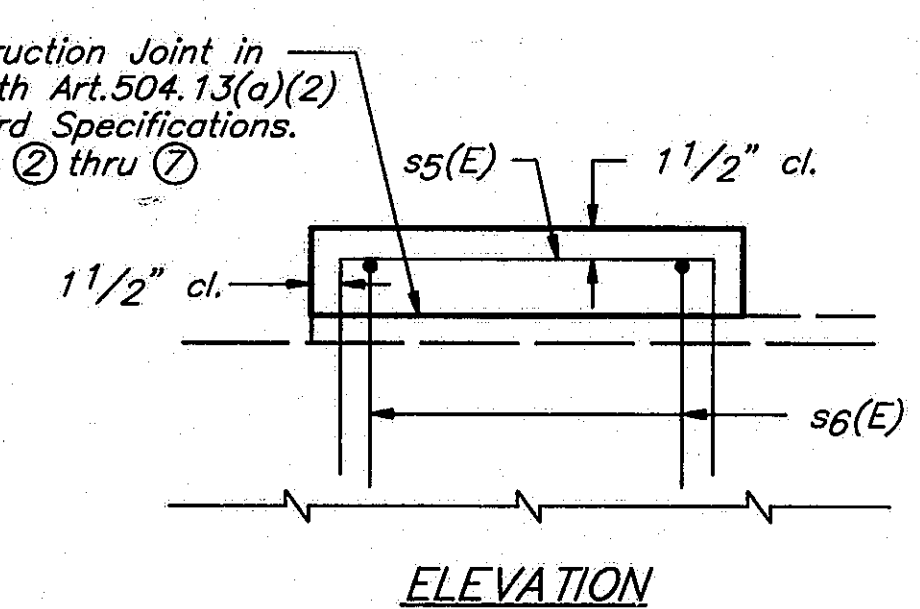
BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s6(E)	2'-1"	1'-6 1/2"
u3(E)	2'-8"	2'-2"

**BAR s5(E), s6(E) & u3(E)**

NOTE: Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



**PLAN**



**PEDESTAL DETAILS**

**TWO PIERS  
BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	
h7(E)	#5	5'-9"	
h8(E)	#5	25'-9"	
h9(E)	#5	22'-5"	
h10(E)	#5	17'-9"	
h11(E)	#5	13'-9"	
h12(E)	#5	10'-5"	
s5(E)	#4	5'-10"	
s6(E)	#4	5'-2"	
u3(E)	#5	7'-0"	
vg(E)	#5	23'-5"	
vg(E)	#5	20'-5"	
Structure Excavation			Cu.Yds. 68
Class X Concrete			Lbs. 201.2
Reinforcement Bars Epoxy Coated			Lbs. 8830
Steel Piles (HP10x57)			Lin.Ft. 1113

\* Pier 1 = 32 Cu.Yds.  
\* Pier 10 = 36 Cu.Yds.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PIER 1 S.B. 1-55**  
**PIER 10 S.B. 1-55**  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-001B, 084-0019

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

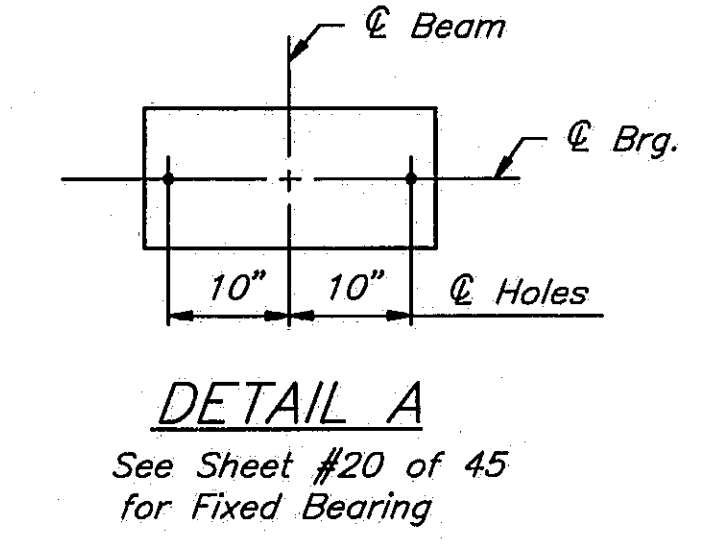
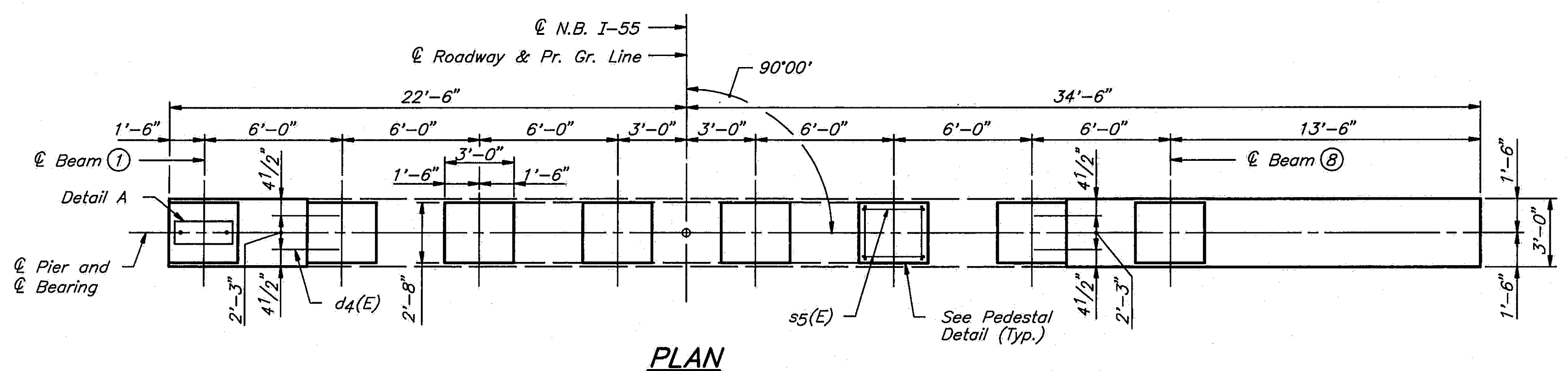
DWS, NAME, PREST-10, 6/84

**PIER 1 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 82'  
 No. Required ..... 7

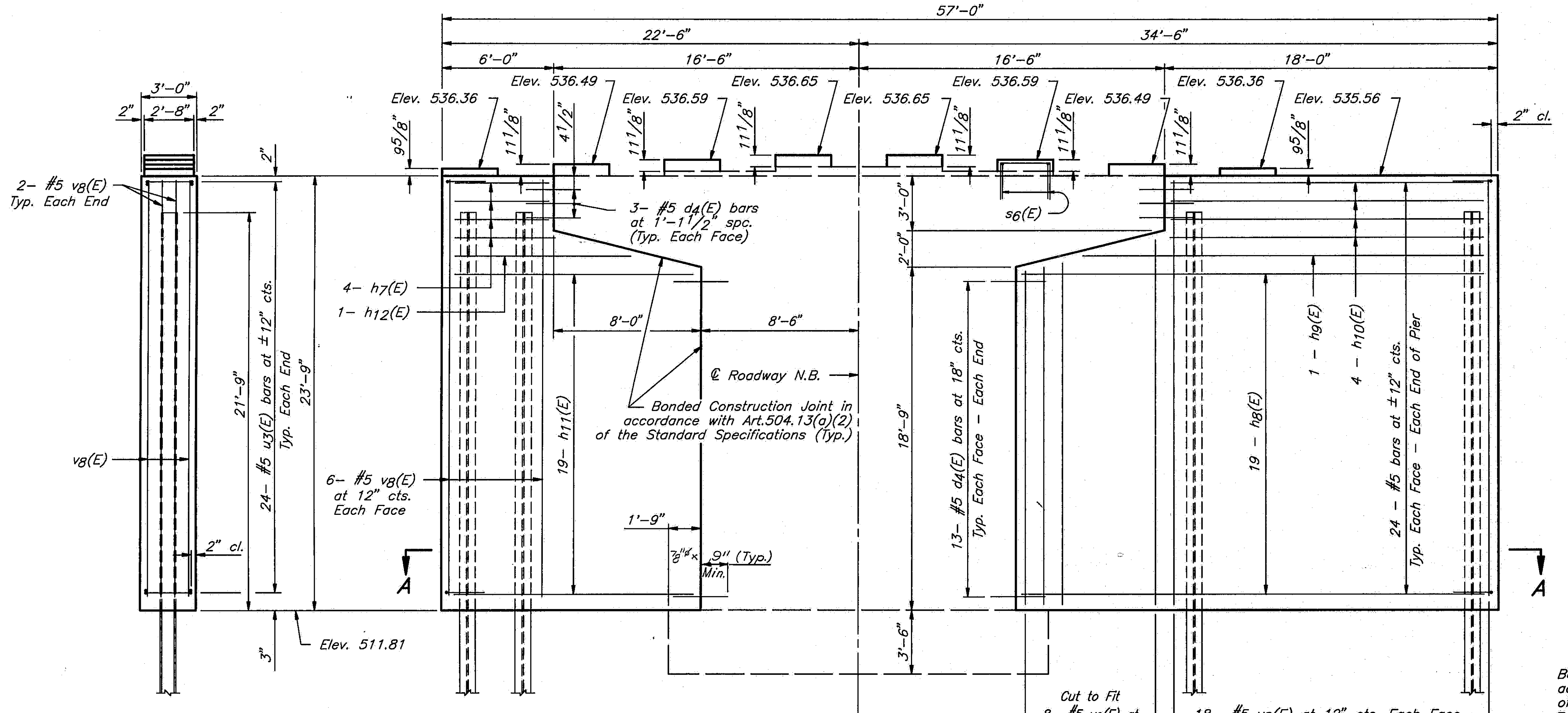
**PIER 10 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 77'  
 No. Required ..... 7

SHEET 29  
 OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	201
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



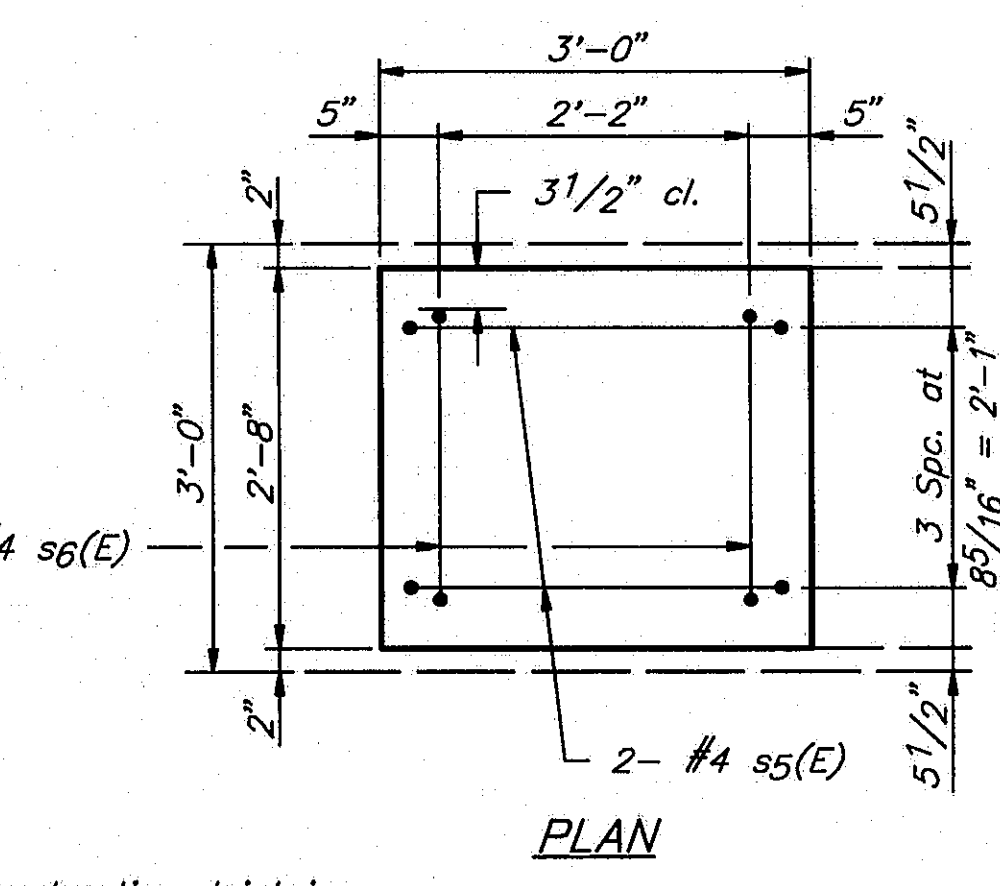
**Notes:**  
 Space reinforcement to miss anchor bolts.  
 All edges shall have standard 3/4" chamfers except as noted.  
 Pour pedestals monolithically with cap at cap extensions.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Cut existing anchor bolts off flush with top of existing concrete.



BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s6(E)	2'-1"	1'-6 1/2"
u3(E)	2'-8"	2'-2"

**BAR s5(E), s6(E) & u3(E)**

**NOTE:** Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



**TWO PIERS  
 BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	—
h7(E)	#5	5'-9"	—
h8(E)	#5	25'-9"	—
h9(E)	#5	22'-5"	—
h10(E)	#5	17'-9"	—
h11(E)	#5	13'-9"	—
h12(E)	#5	10'-5"	—
s5(E)	#4	5'-10"	□
s6(E)	#4	5'-2"	□
u3(E)	#5	7'-0"	□
vg(E)	#5	23'-5"	—
vg(E)	#5	20'-5"	—
Structure Excavation	Cu.Yds.	68	
Class X Concrete	Lbs.	201.2	
Reinforcement Bars Epoxy Coated	Lbs.	8830	
Steel Piles (HP10x57)	Lin.Ft.	1113	

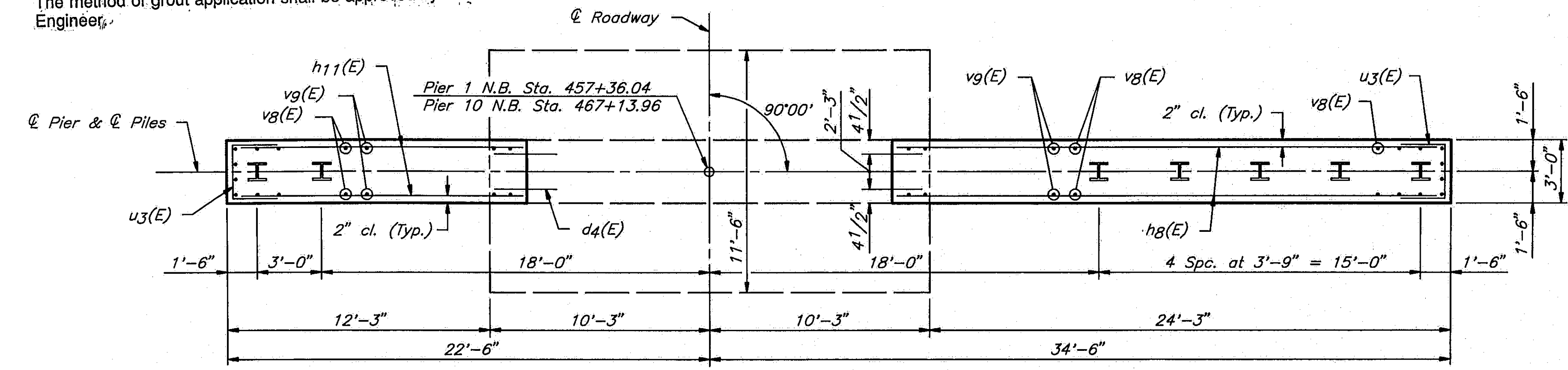
\* Pier 1 = 32 Cu.Yds.  
 \* Pier 10 = 36 Cu.Yds.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PIER 1 N.B. I-55  
 PIER 10 N.B. I-55  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019**

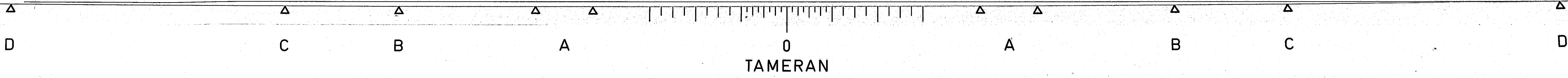
DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

DWS, NAME: PBN1-10, 095

**Note:**  
 For horizontal #5 d4(E) bars use a grout approved by the Department of epoxy grout in accordance with BSP 111. The method of grout application shall be approved by the Engineer.



**SECTION A-A**



**PIER 2 PILE DATA**

Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 82'  
No. Required ..... 7

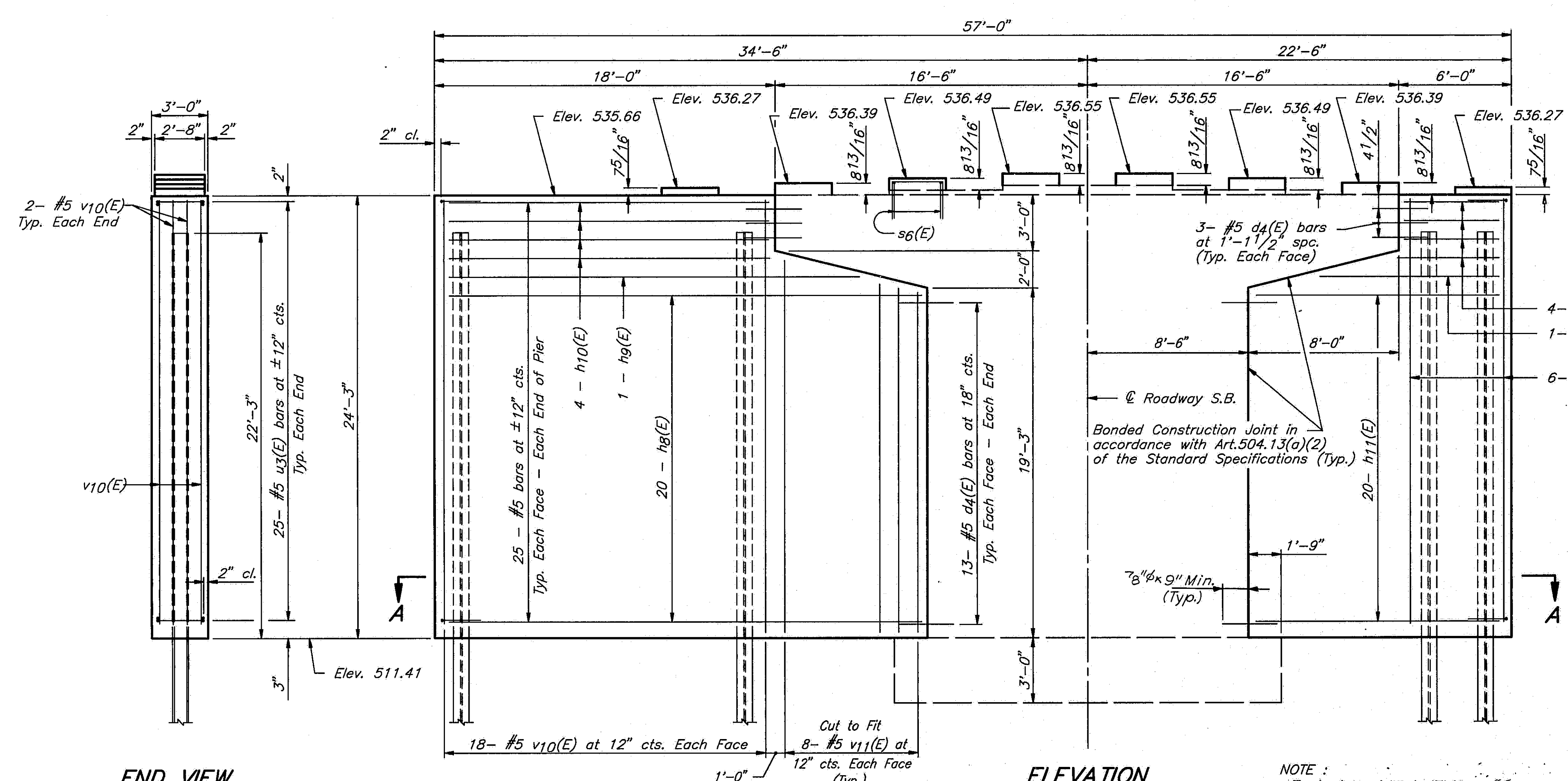
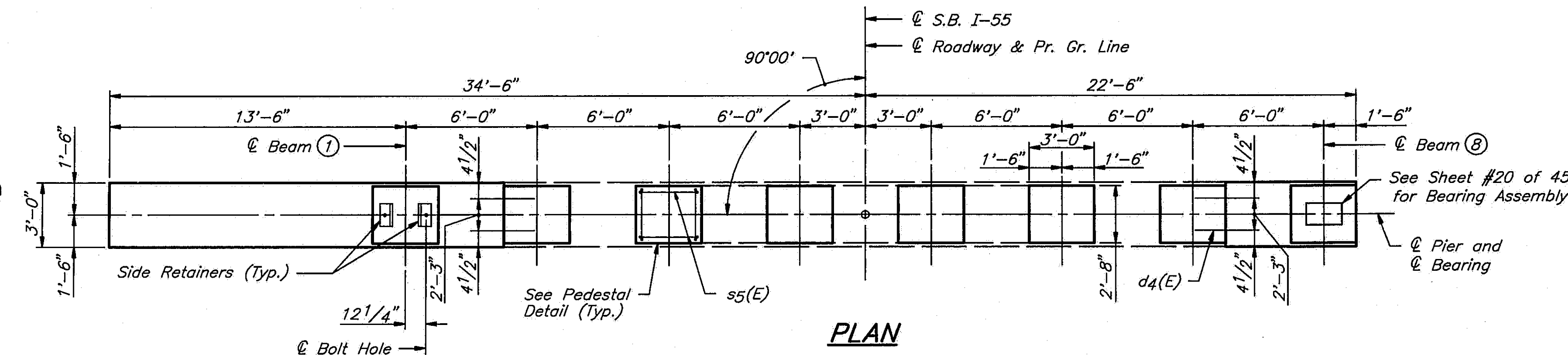
**PIER 9 PILE DATA**

Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 77'  
No. Required ..... 7

SHEET 30  
OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	202
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

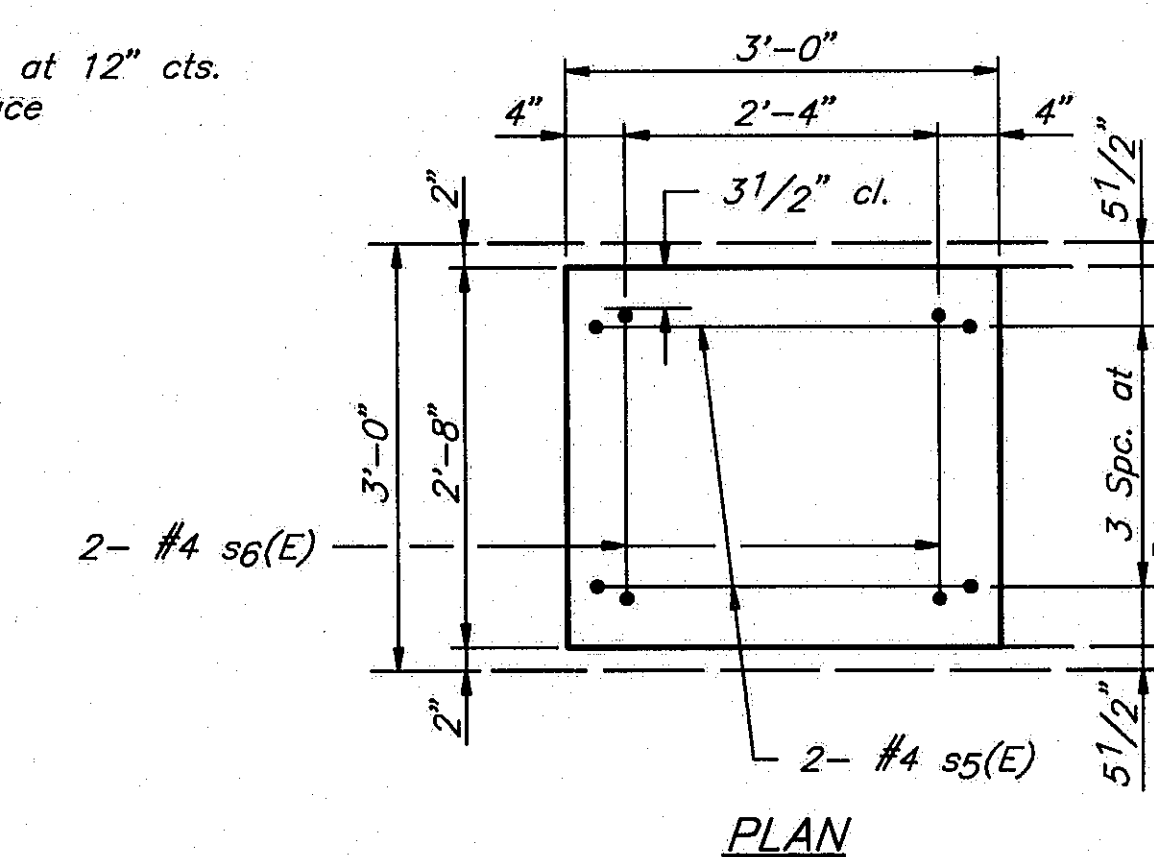
Notes:  
Space reinforcement to miss anchor bolts.  
All edges shall have standard 3/4" chamfers except as noted.  
Four pedestals monolithically with cap at cap extensions.  
Reinforcement bars designated (E) shall be epoxy coated.  
Cut existing anchor bolts off flush with top of existing concrete.



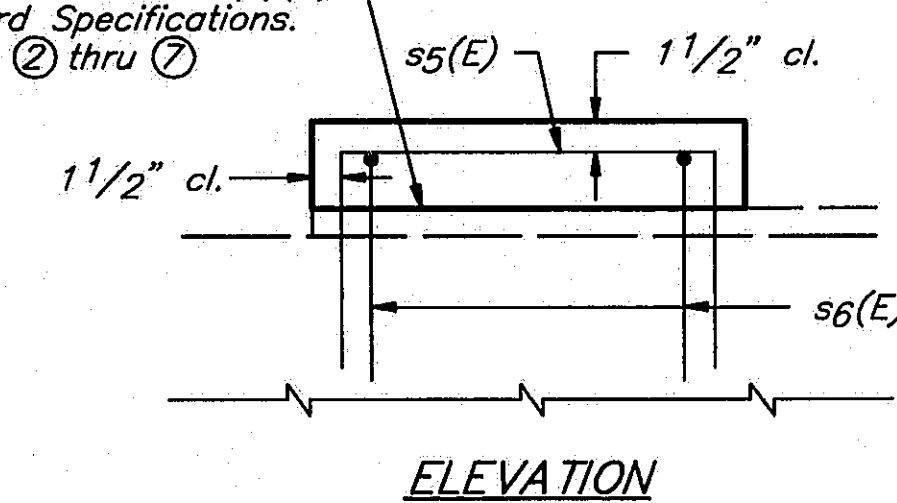
BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s6(E)	2'-1"	1'-6 1/2"
u3(E)	2'-8"	2'-2"

BAR s5(E), s6(E) & u3(E)

NOTE: Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



Bonded Construction Joint in accordance with Art. 504.13(a)(2) of the Standard Specifications. Typ. at Beams 2 thru 7.



PEDESTAL DETAILS

**TWO PIERS  
BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	128	#5	2'-6"	—
h7(E)	16	#5	5'-9"	—
h8(E)	80	#5	25'-9"	—
h9(E)	4	#5	22'-5"	—
h10(E)	16	#5	17'-9"	—
h11(E)	80	#5	13'-9"	—
h12(E)	4	#5	10'-5"	—
s5(E)	32	#4	5'-10"	—
s6(E)	32	#4	5'-2"	—
u3(E)	100	#5	7'-0"	—
v10(E)	104	#5	23'-11"	—
v11(E)	64	#5	20'-11"	—
Structure Excavation		Cu.Yds.	82	
Class X Concrete		Lbs.	204.6	
Reinforcement Bars Epoxy Coated		Lbs.	9110	
Steel Piles (HP10x57)		Lin.Ft.	1113	

\* Pier 2 = 46 Cu.Yds.  
\* Pier 9 = 36 Cu.Yds.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PIER 2 S.B. I-55**  
**PIER 9 S.B. I-55**  
**I-55 OVER SANGAMON RIVER**  
**F.A.I. RTE. 55 SECTION 84-2BR-1**  
**SANGAMON COUNTY**  
**STATION 462+25.00**  
**STRUCTURE NOS. 084-0018, 084-0019**

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

DWG. NAME: PIER-2-5-09

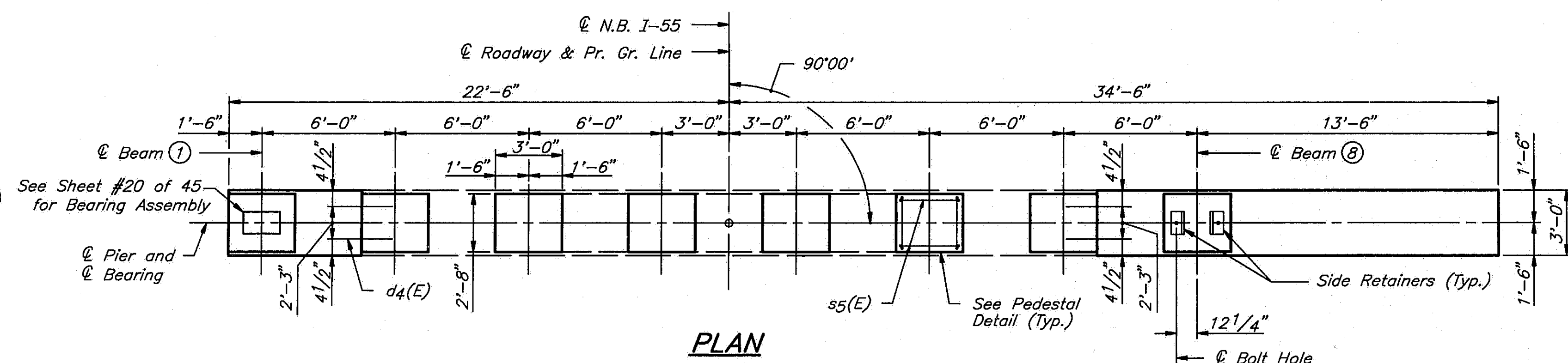
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	203.
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

**PIER 2 PILE DATA**

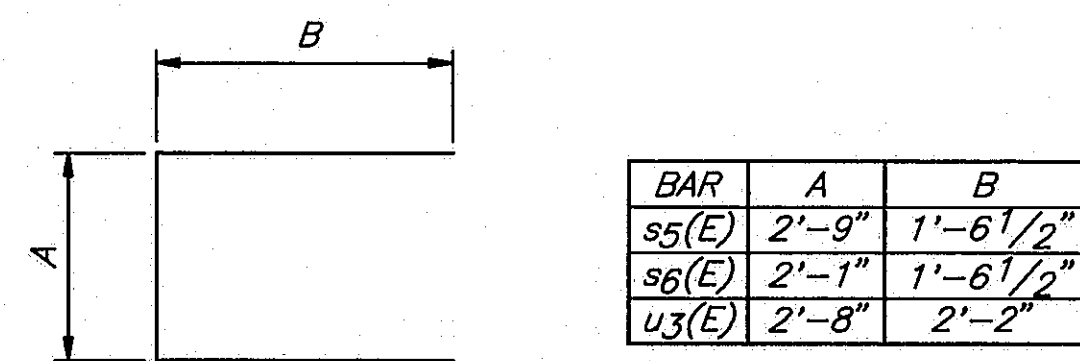
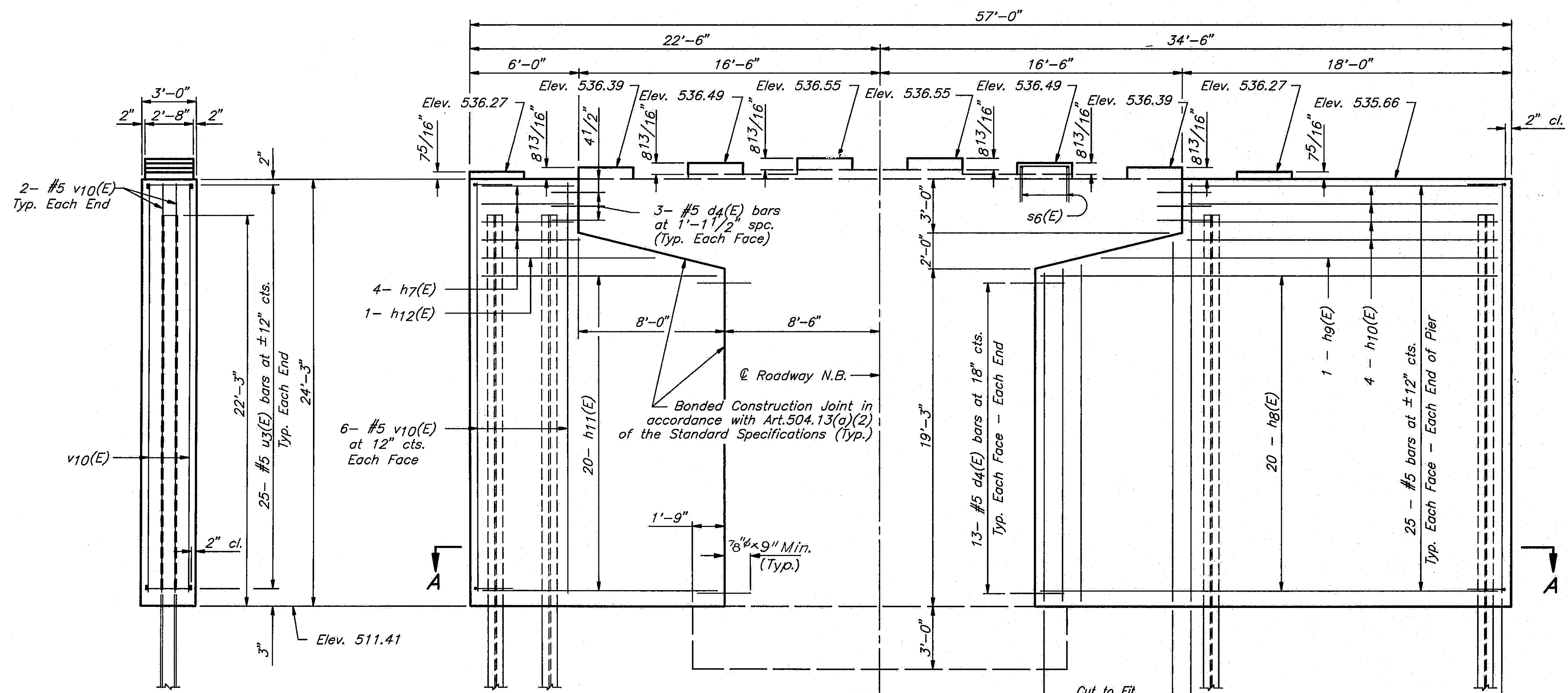
Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 82'  
No. Required ..... 7

**PIER 9 PILE DATA**

Type ..... Steel HP10 x 57  
Capacity ..... Drive to Refusal  
Est. Length ..... 77'  
No. Required ..... 7

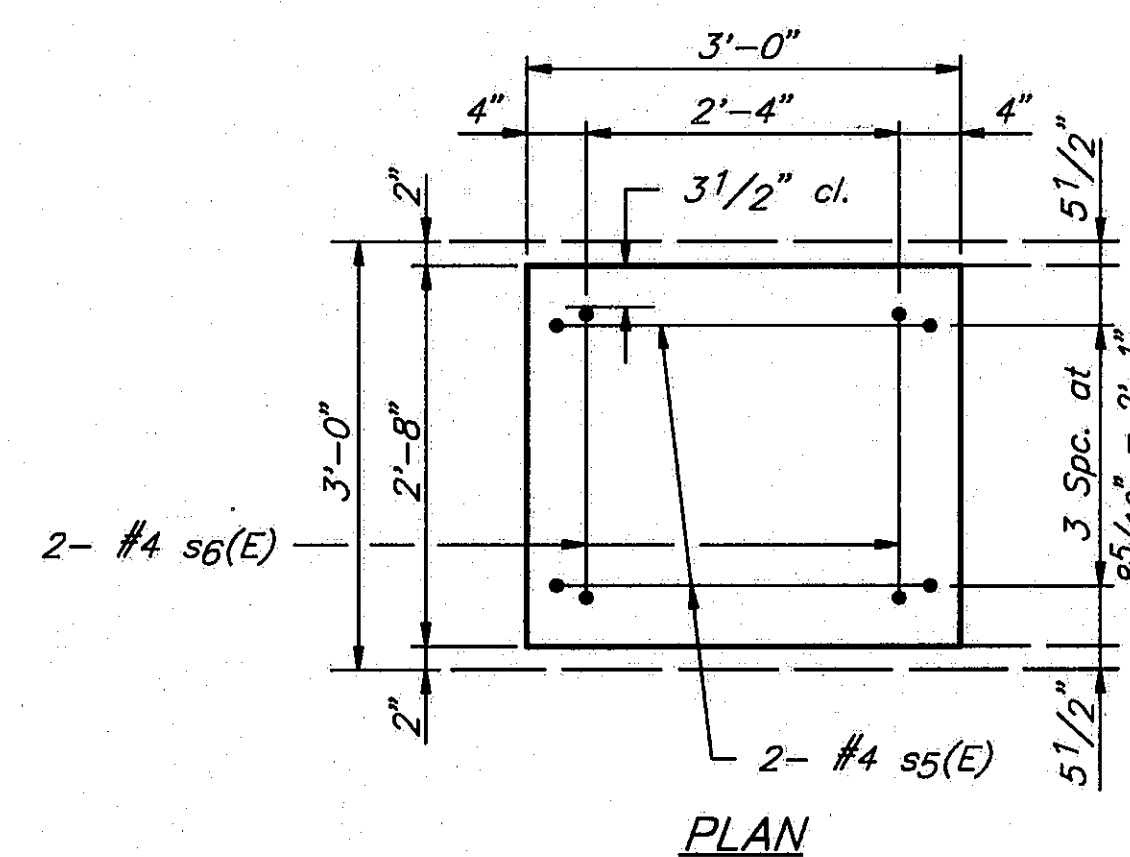


Notes:  
Space reinforcement to miss anchor bolts.  
All edges shall have standard 3/4" chamfers except as noted.  
Pour pedestals monolithically with cap at cap extensions.  
Reinforcement bars designated (E) shall be epoxy coated.  
Cut existing anchor bolts off flush with top of existing concrete.

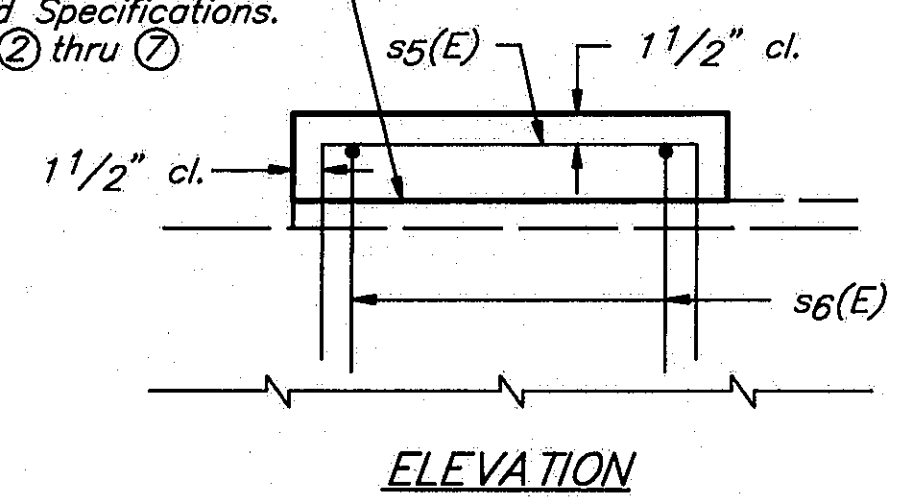


BAR s5(E), s6(E) & u3(E)

NOTE: Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



Bonded Construction Joint in accordance with Art.504.13(a)(2) of the Standard Specifications. Typ. at Beams ② thru ⑦



PEDESTAL DETAILS

**TWO PIERS  
BILL OF MATERIAL**

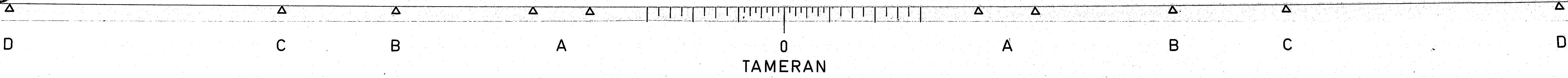
BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	128	#5	2'-6"	
h7(E)	16	#5	5'-9"	
h8(E)	80	#5	25'-9"	
h9(E)	4	#5	22'-5"	
h10(E)	16	#5	17'-9"	
h11(E)	80	#5	13'-9"	
h12(E)	4	#5	10'-5"	
s5(E)	32	#4	5'-10"	
s6(E)	32	#4	5'-2"	
u3(E)	100	#5	7'-0"	
v10(E)	104	#5	23'-11"	
v11(E)	64	#5	20'-11"	
Structure Excavation		Cu.Yds.	82	
Class X Concrete		Lbs.	204.6	
Reinforcement Bars Epoxy Coated		Lbs.	9110	
Steel Piles (HP10x57)		Lin.Ft.	1113	

\* Pier 2 = 46 Cu.Yds.  
\* Pier 9 = 36 Cu.Yds.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PIER 2 N.B. 1-55**  
**PIER 9 N.B. 1-55**  
1-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	P-LH

DIMS. NAME: PR12-3-83

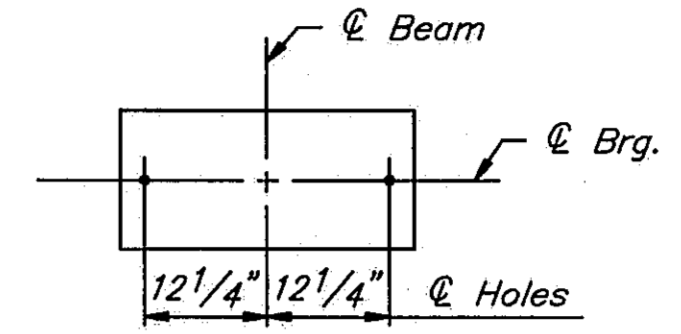
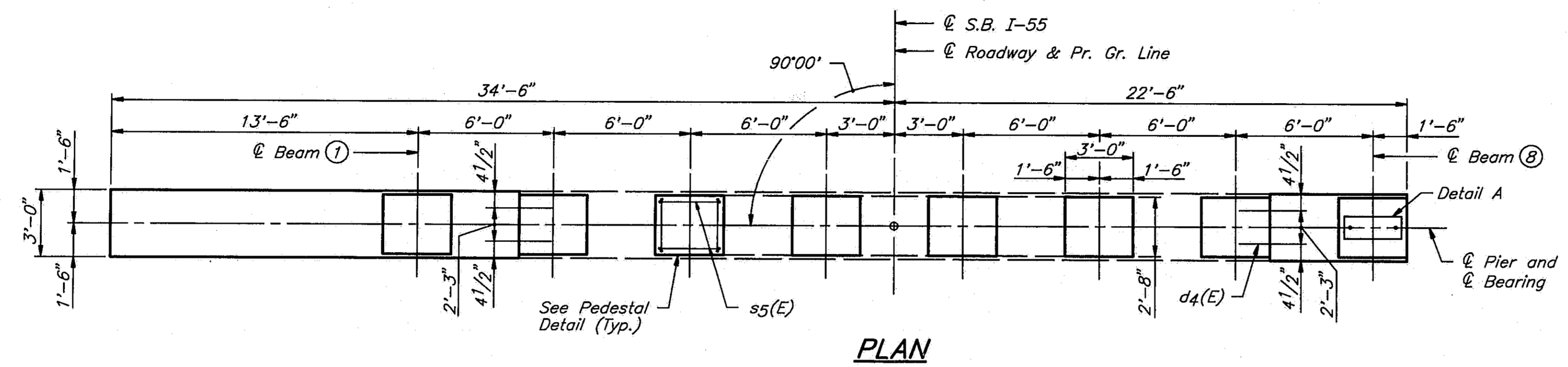




**PIER 3 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 82'  
 No. Required .... 6 + 1 Test Pile

**PIER 8 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 77'  
 No. Required .... 6 + 1 Test Pile

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	204
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJ.	



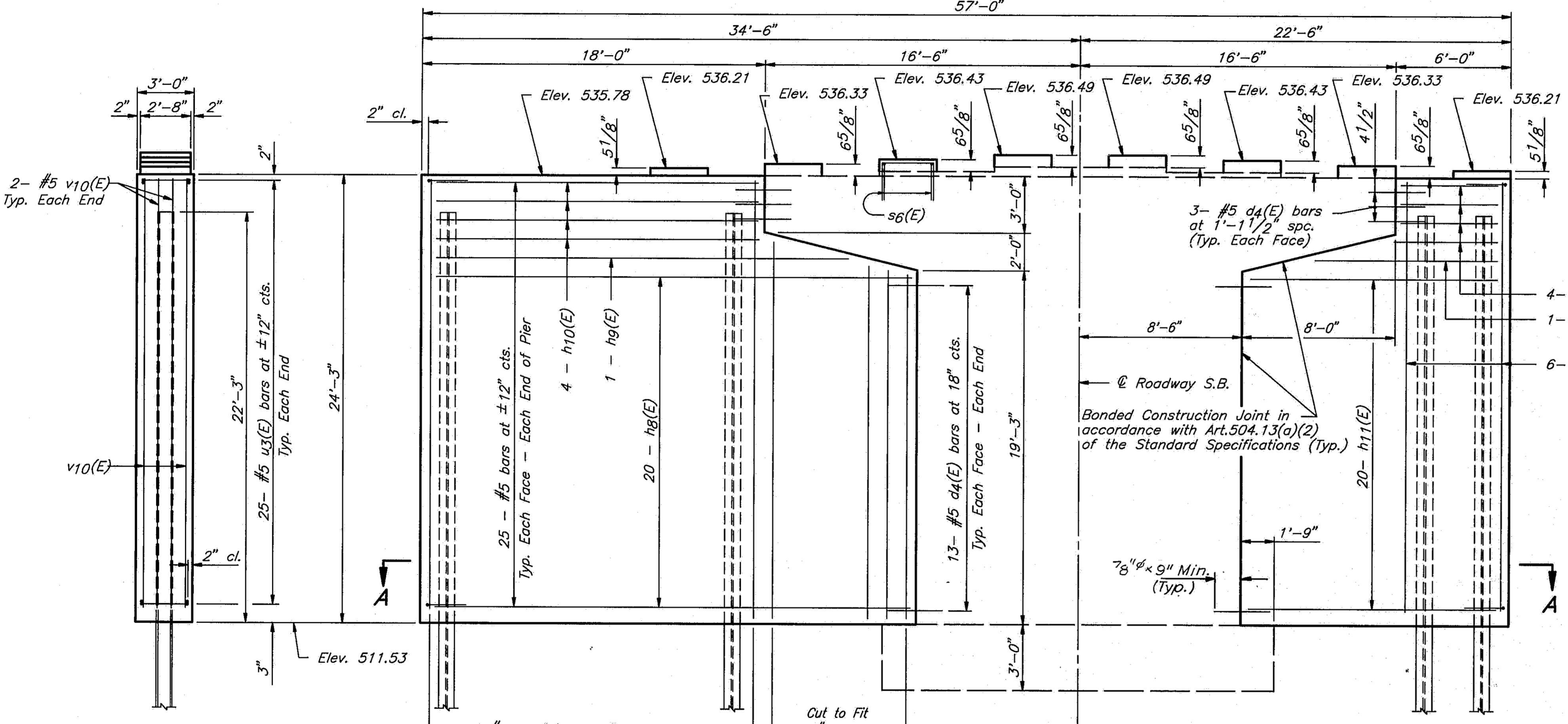
**DETAIL A**  
 See Sheet #21 of 45 for Bearing Assembly

Notes:  
 Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
 Pour pedestals monolithically with cap at cap extensions.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Cut existing anchor bolts off flush with top of existing concrete.

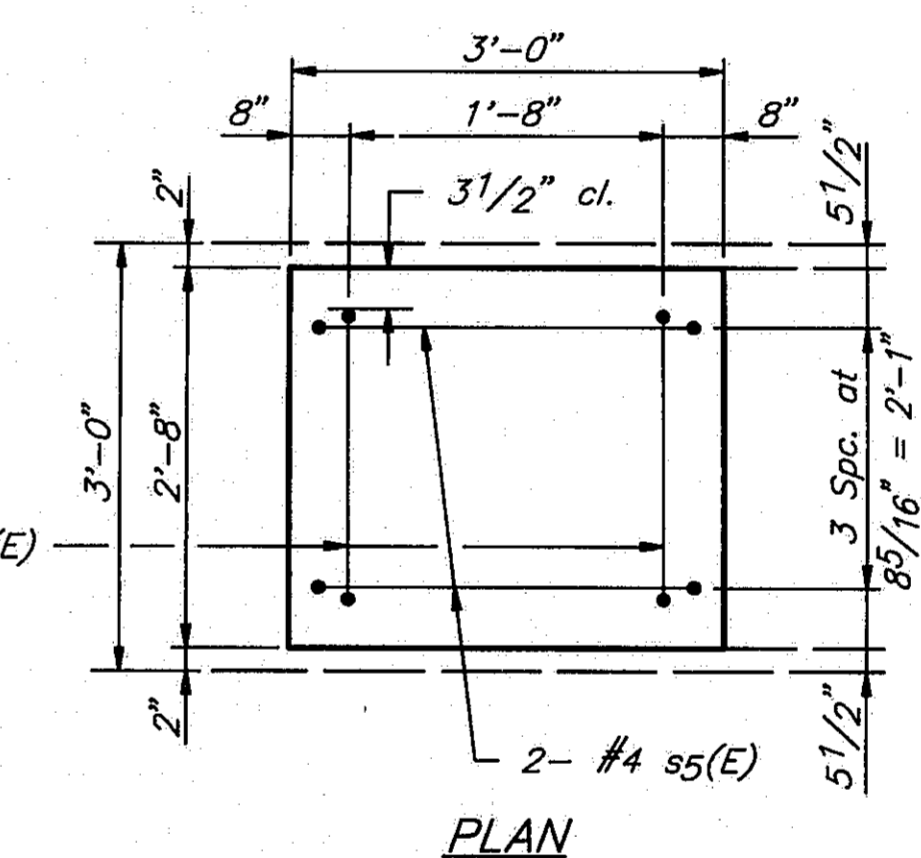
BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s6(E)	2'-1"	1'-6 1/2"
u3(E)	2'-8"	2'-2"

**BAR s5(E), s6(E) & u3(E)**

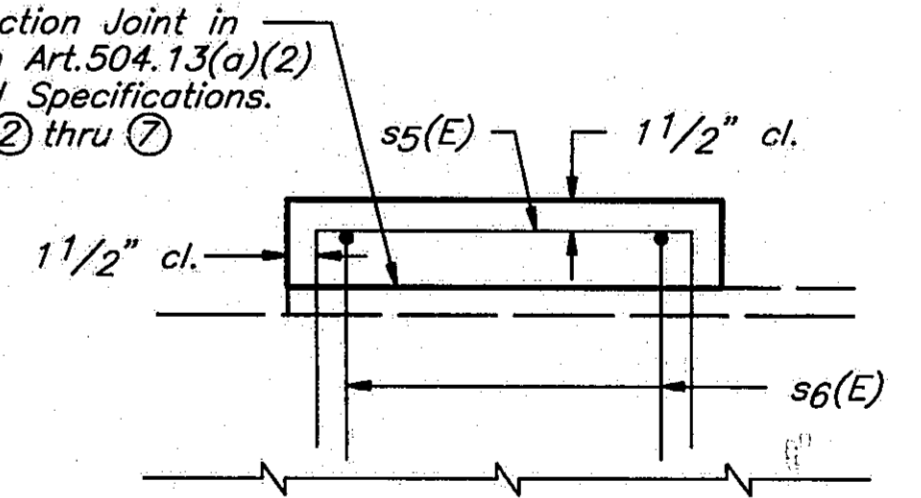
NOTE: Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



**ELEVATION**  
 (Looking South)

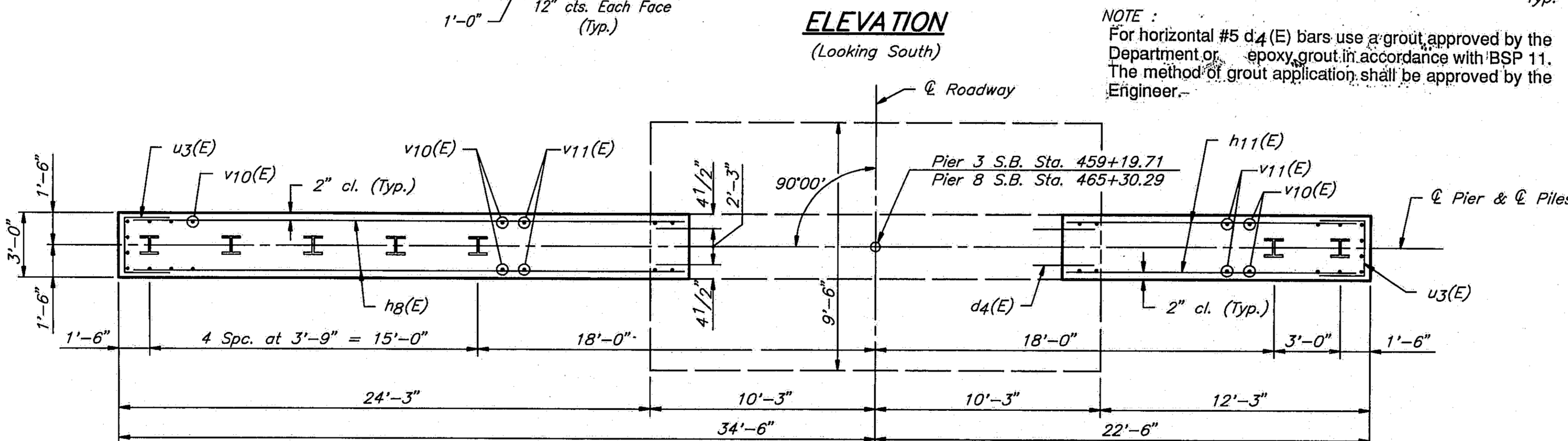


**PLAN**



**ELEVATION**  
**PEDESTAL DETAILS**

**END VIEW**



**SECTION A-A**

NOTE:  
 For horizontal #5 d4(E) bars use grout approved by the Department or epoxy grout in accordance with BSP 11. The method of grout application shall be approved by the Engineer.

Bonded Construction Joint in accordance with Art.504.13(a)(2) of the Standard Specifications. Typ. at Beams ② thru ⑦

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

**TWO PIERS**  
**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	128	#5	2'-6"	---
h7(E)	16	#5	5'-9"	---
h8(E)	80	#5	25'-9"	---
h9(E)	4	#5	22'-5"	---
h10(E)	16	#5	17'-9"	---
h11(E)	80	#5	13'-9"	---
h12(E)	4	#5	10'-5"	---
s5(E)	32	#4	5'-10"	---
s6(E)	32	#4	5'-2"	---
u3(E)	100	#5	7'-0"	---
v10(E)	104	#5	23'-11"	---
v11(E)	64	#5	20'-11"	---
Structure Excavation			Cu. Yds.	82
Class X Concrete			Lbs.	203.8
Reinforcement Bars Epoxy Coated			Lbs.	9110
Steel Piles (HP10x57)			Lin. Ft.	954
Test Pile (HP10x57)			Each	2

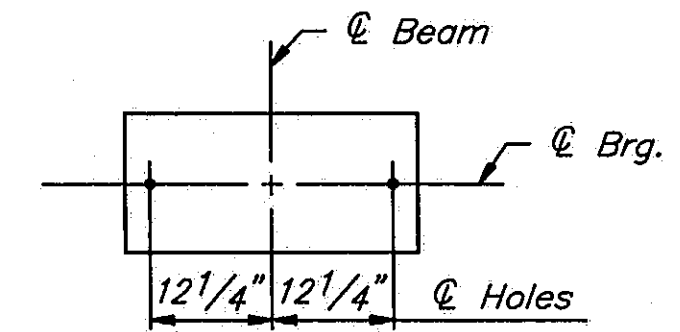
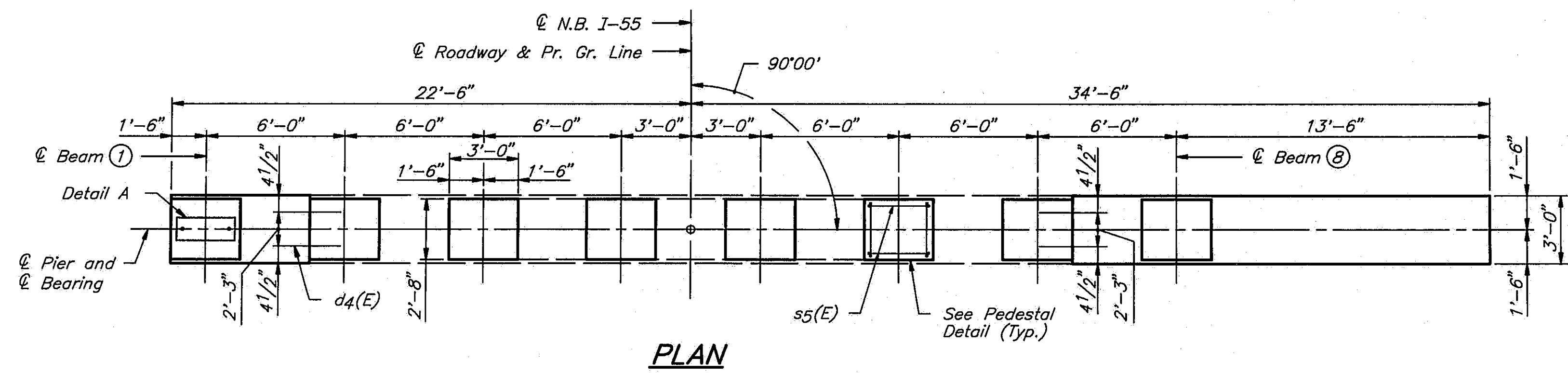
\* Pier 3 = 46 Cu. Yds.  
 \* Pier 8 = 36 Cu. Yds.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PIER 3 S.B. I-55**  
**PIER 8 S.B. I-55**  
**I-55 OVER SANGAMON RIVER**  
**F.A.I. RTE. 55 SECTION 84-2BR-1**  
**SANGAMON COUNTY**  
**STATION 462+25.00**  
**STRUCTURE NOS. 084-0018, 084-0019**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	205
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

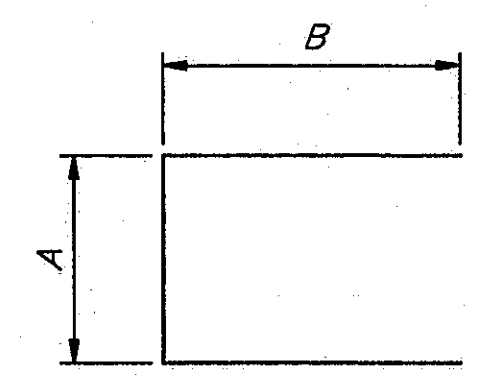
**PIER 3 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 82'  
 No. Required .... 7

**PIER 8 PILE DATA**  
 Type ..... Steel HP10 x 57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 77'  
 No. Required .... 7



**DETAIL A**  
See Sheet #21 of 45 for Bearing Assembly

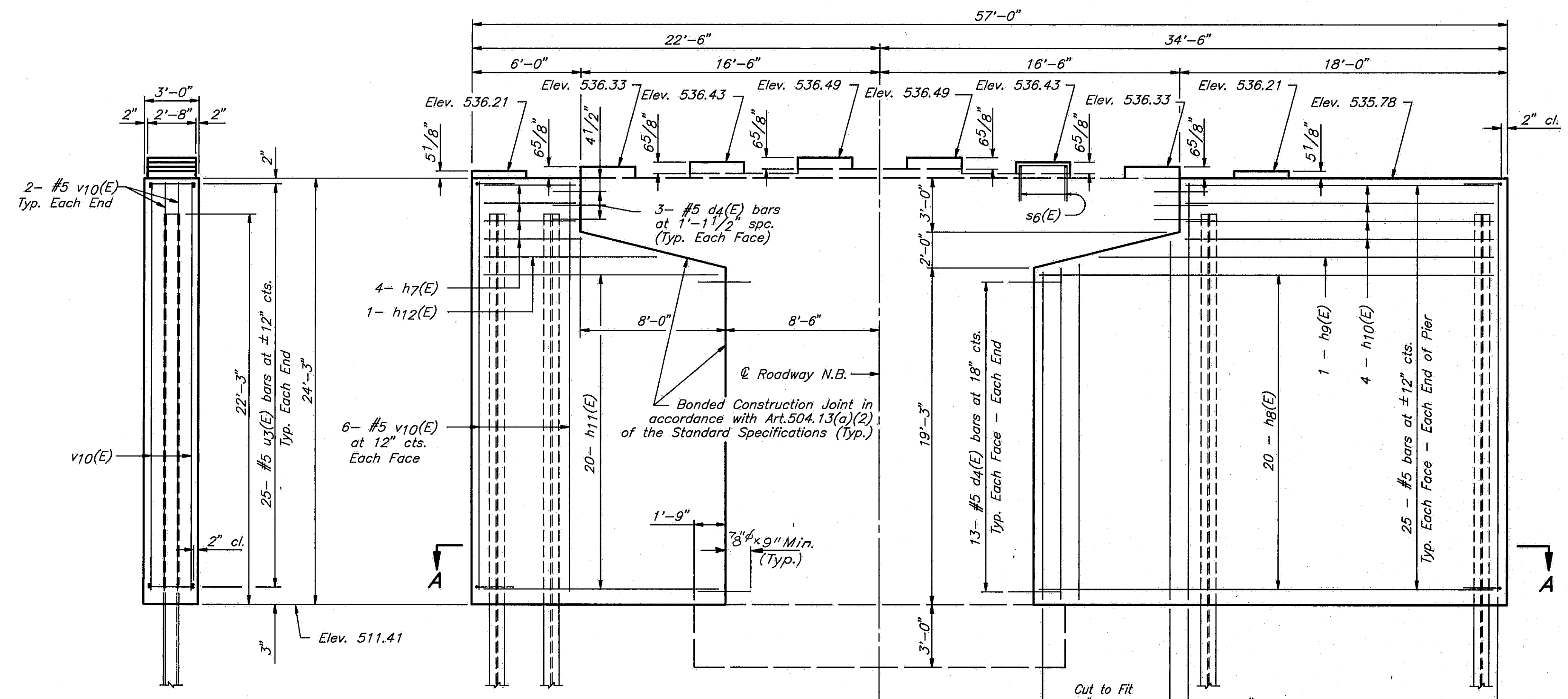
Notes:  
 Space reinforcement to miss anchor bolts.  
 All edges shall have standard 3/4" chamfers except as noted.  
 Four pedestals monolithically with cap at cap extensions.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Cut existing anchor bolts off flush with top of existing concrete.



BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s6(E)	2'-1"	1'-6 1/2"
u3(E)	2'-8"	2'-2"

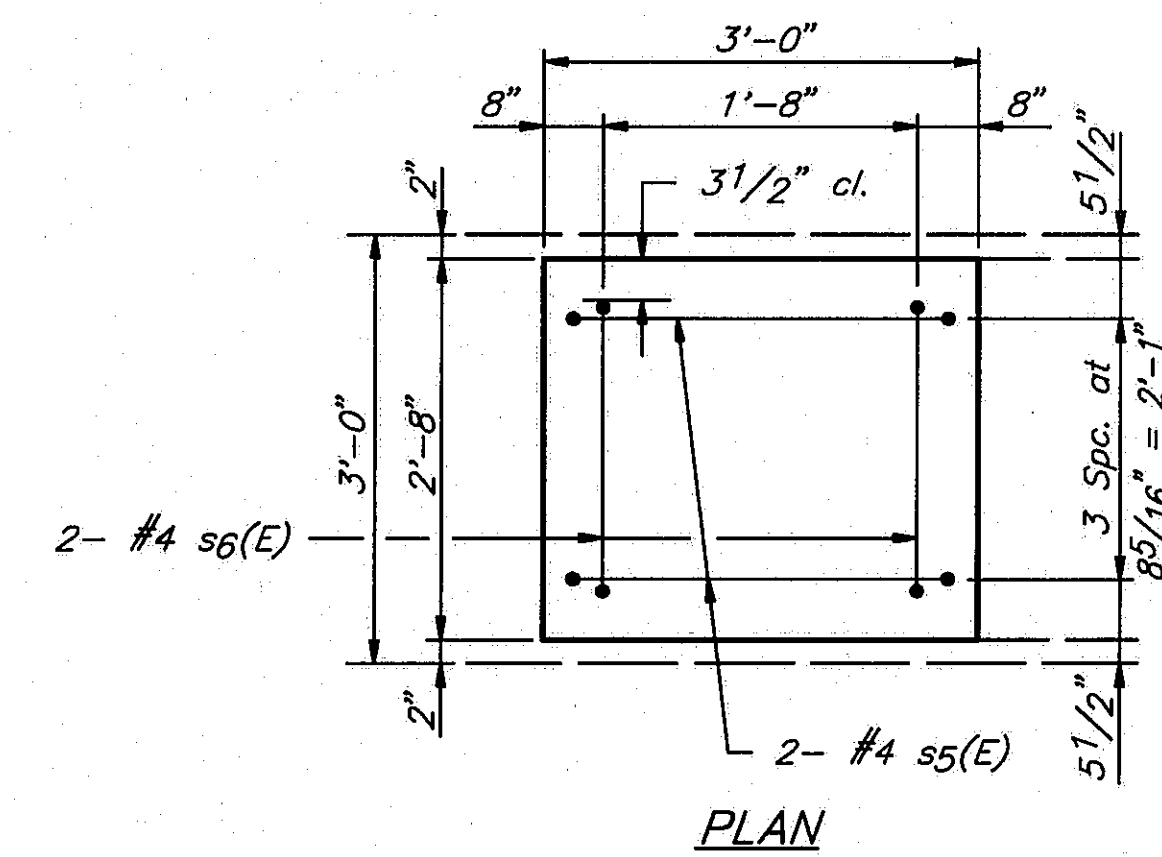
**BAR s5(E), s6(E) & u3(E)**

NOTE: Epoxy Grout #4 s5(E) and #4 s6(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.

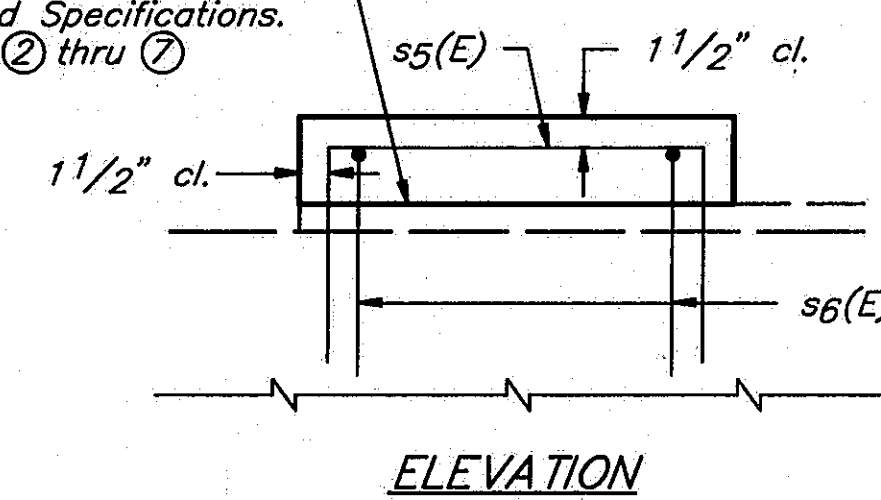


**END VIEW**

Note:  
 For horizontal #5 d4(E) bars use a grout approved by the Department or epoxy grout in accordance with BSP-11. The method of grout application shall be approved by the Engineer.



Bonded Construction Joint in accordance with Art. 504.13(a)(2) of the Standard Specifications. Typ. at Beams 2 thru 7



**PEDESTAL DETAILS**

**TWO PIERS  
BILL OF MATERIAL**

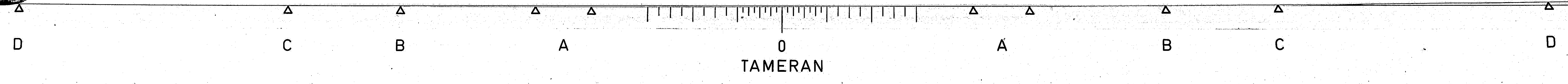
BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	128	#5	2'-6"	
h7(E)	16	#5	5'-9"	
h8(E)	80	#5	25'-9"	
h9(E)	4	#5	22'-5"	
h10(E)	16	#5	17'-9"	
h11(E)	80	#5	13'-9"	
h12(E)	4	#5	10'-5"	
s5(E)	32	#4	5'-10"	
s6(E)	32	#4	5'-2"	
u3(E)	100	#5	7'-0"	
v10(E)	104	#5	23'-11"	
v11(E)	64	#5	20'-11"	
Structure Excavation	Cu.Yds.		82	
Class X Concrete	Lbs.		203.8	
Reinforcement Bars Epoxy Coated	Lbs.		9110	
Steel Piles (HP10x57)	Lin.Ft.		1113	

\* Pier 3 = 46 Cu.Yds.  
 \* Pier 8 = 36 Cu.Yds.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PIER 3 N.B. I-55**  
**PIER 8 N.B. I-55**  
**I-55 OVER SANGAMON RIVER**  
**F.A.I. RTE. 55 SECTION 84-2BR-1**  
**SANGAMON COUNTY**  
**STATION 462+25.00**  
**STRUCTURE NOS. 084-0018, 084-0019**

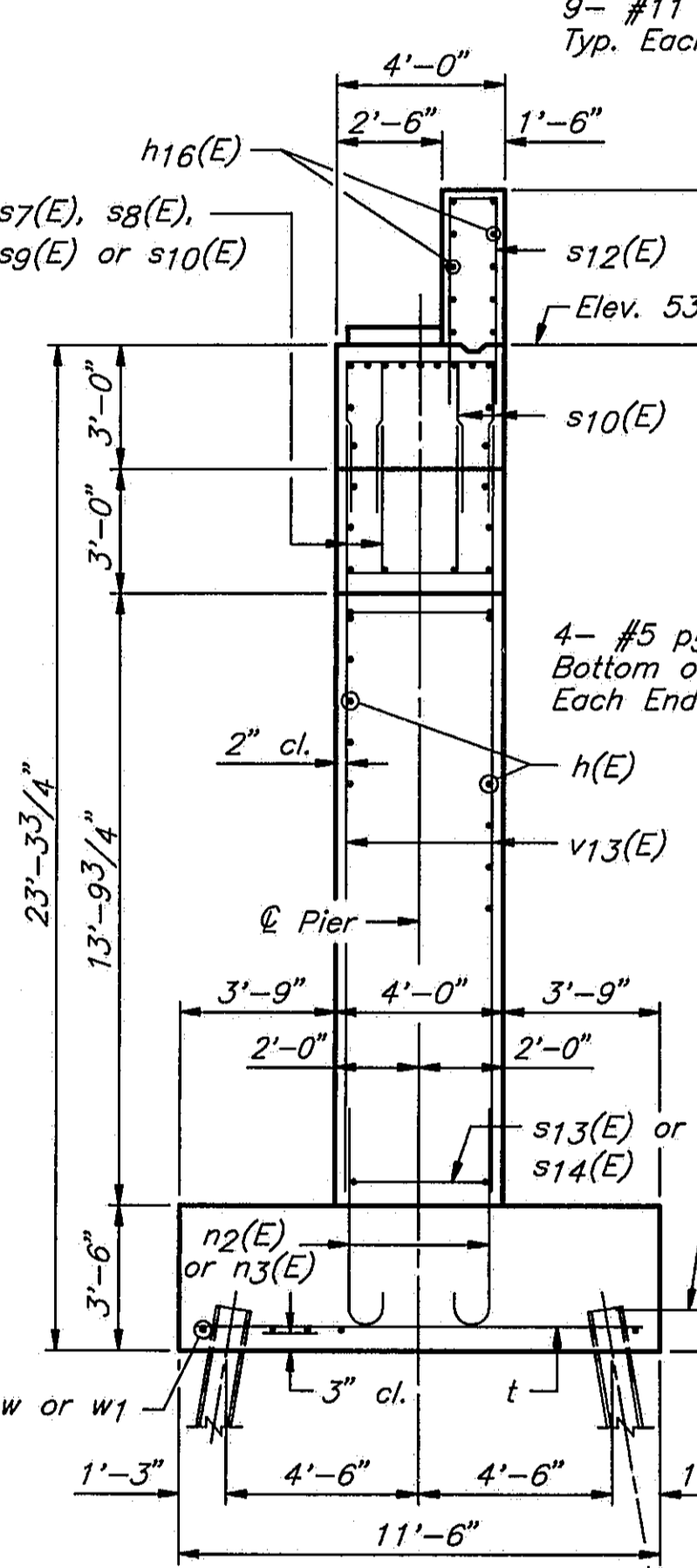
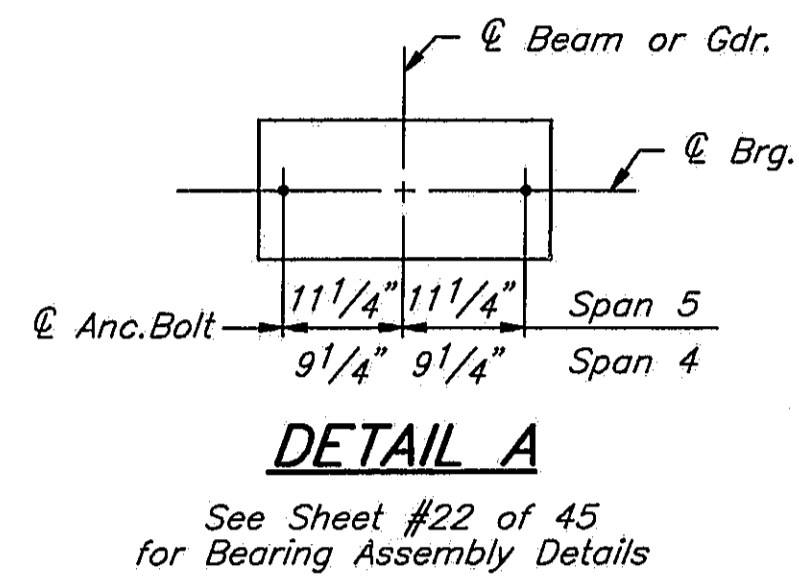
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

DWG. NAME: PIR3-8-84



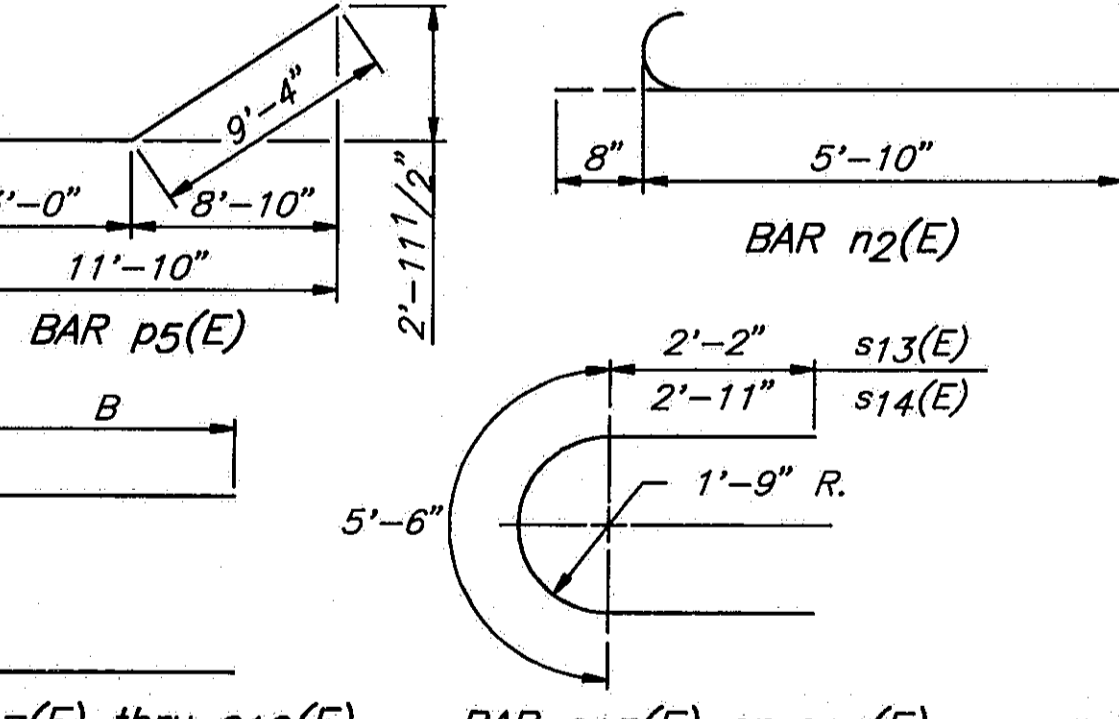
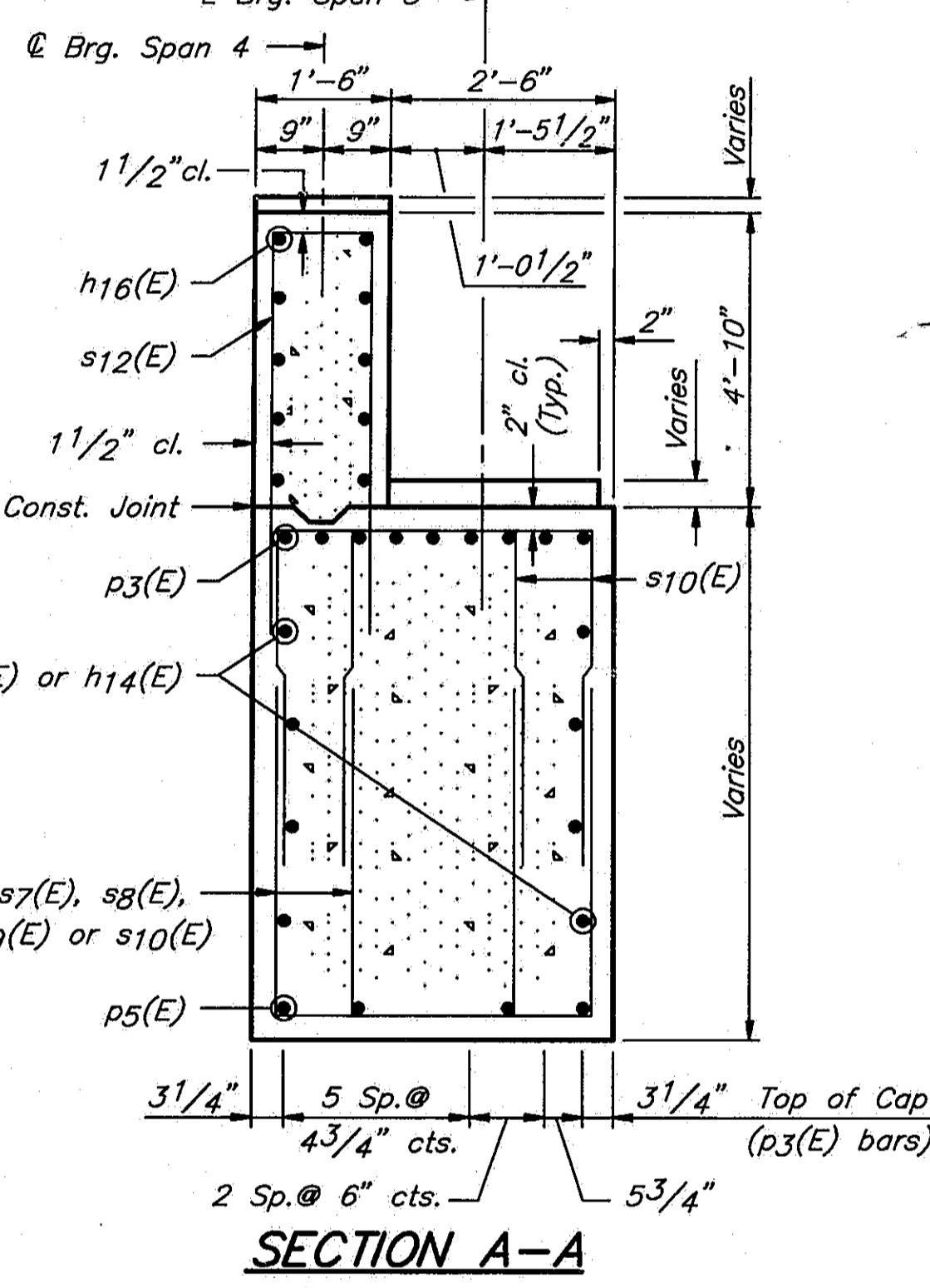
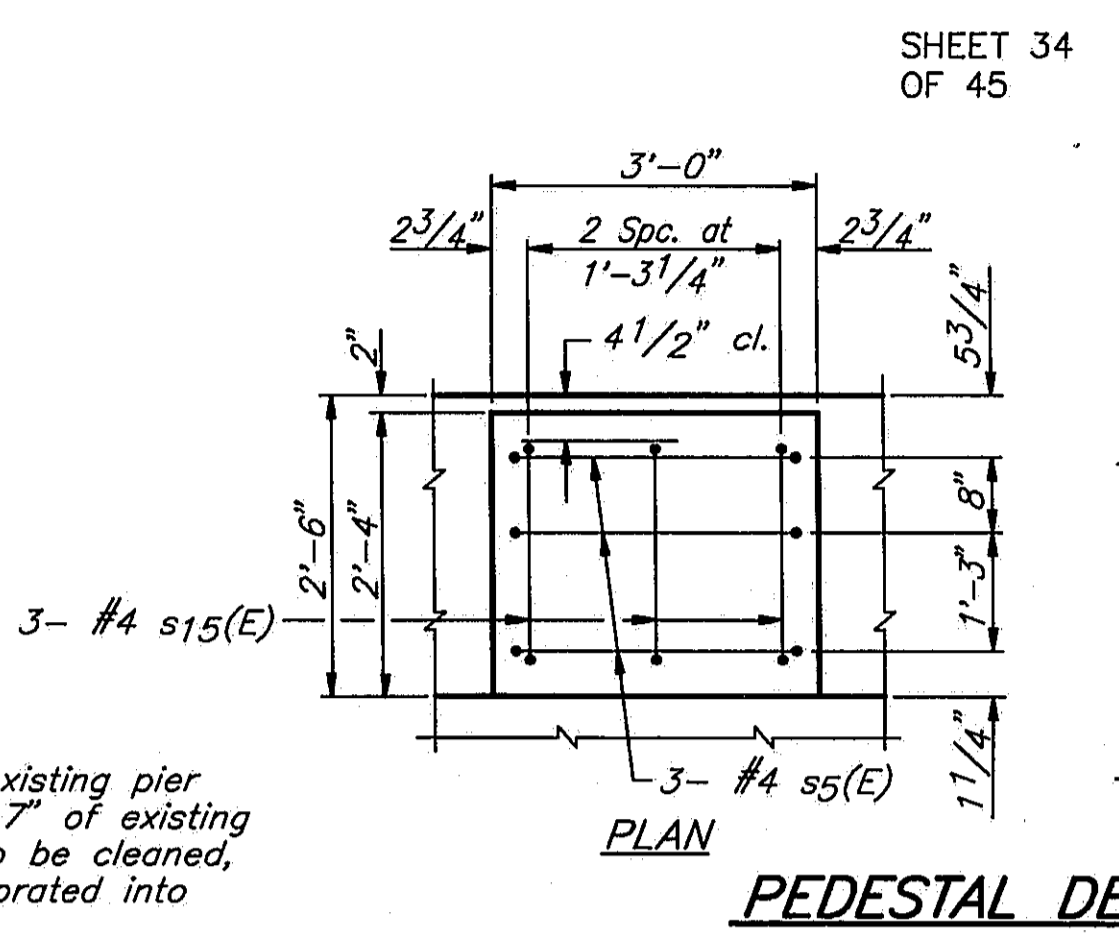
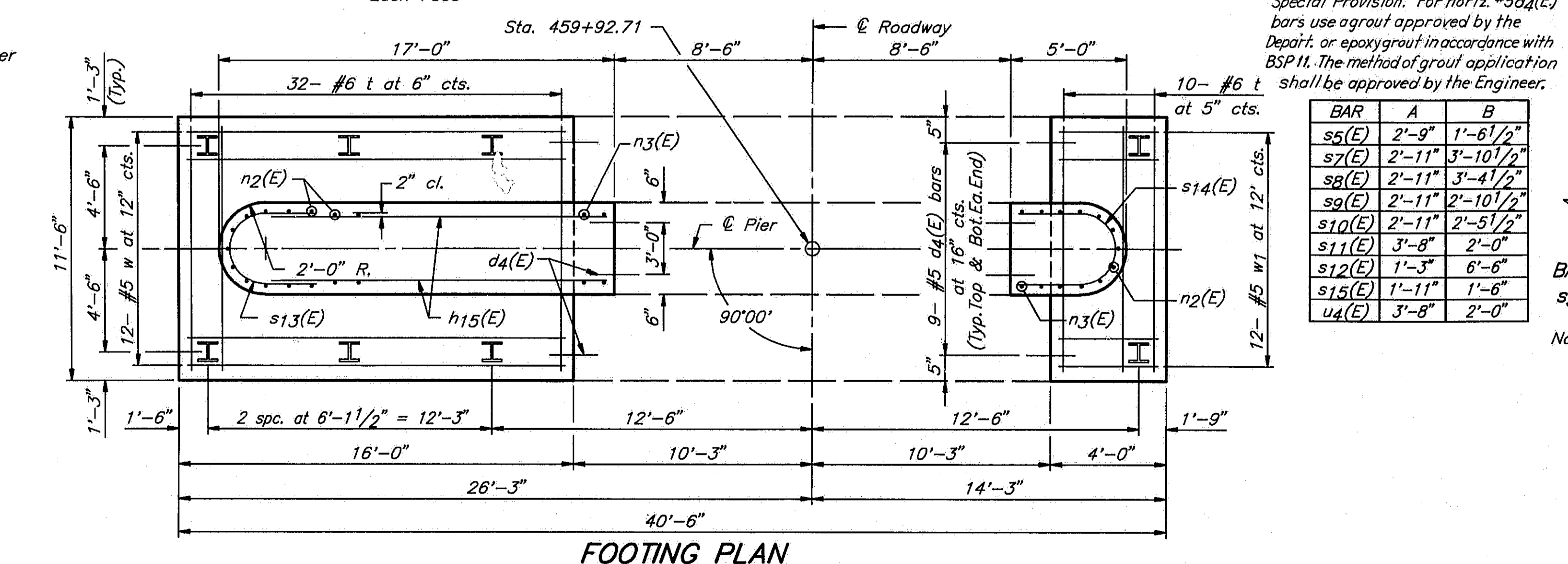
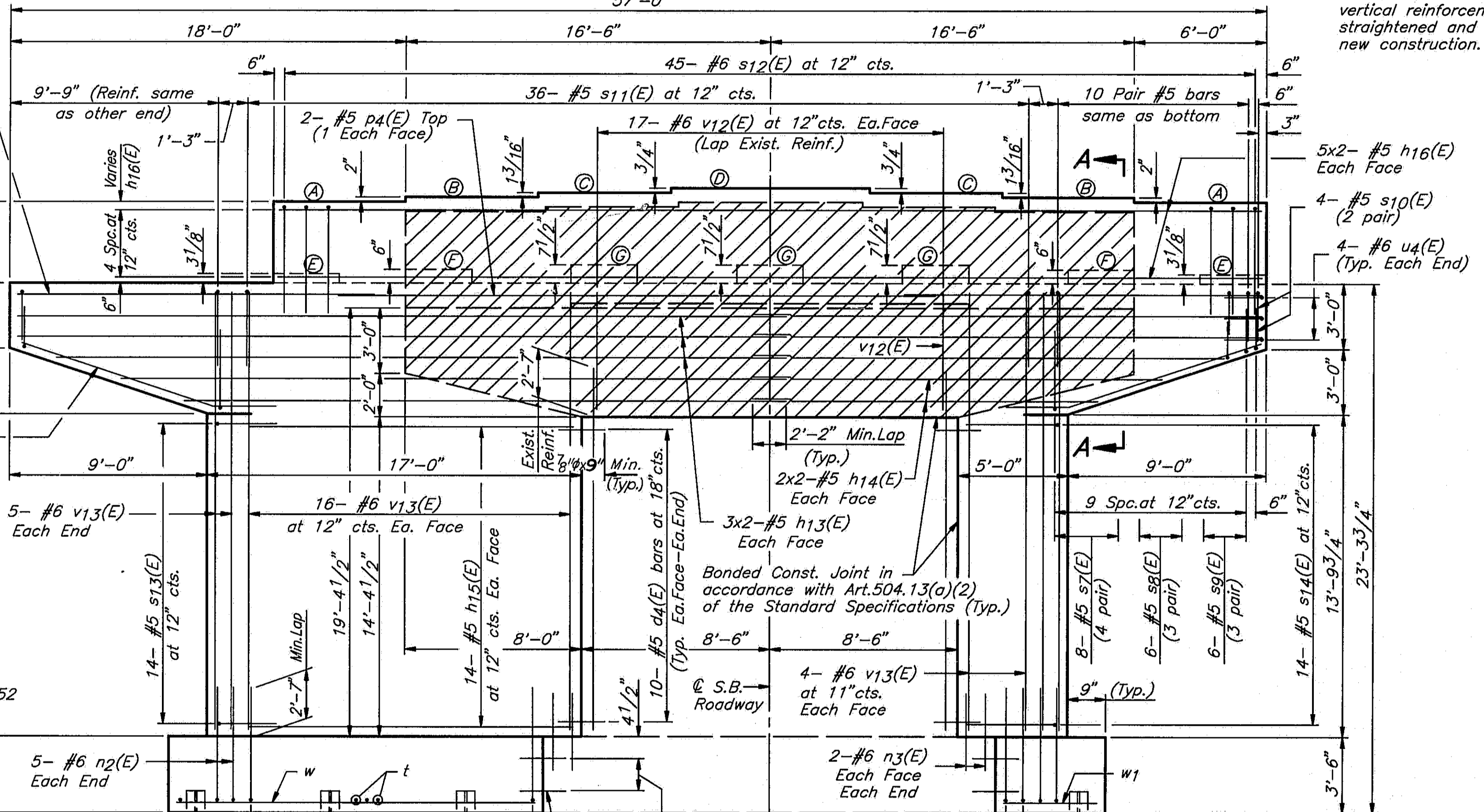
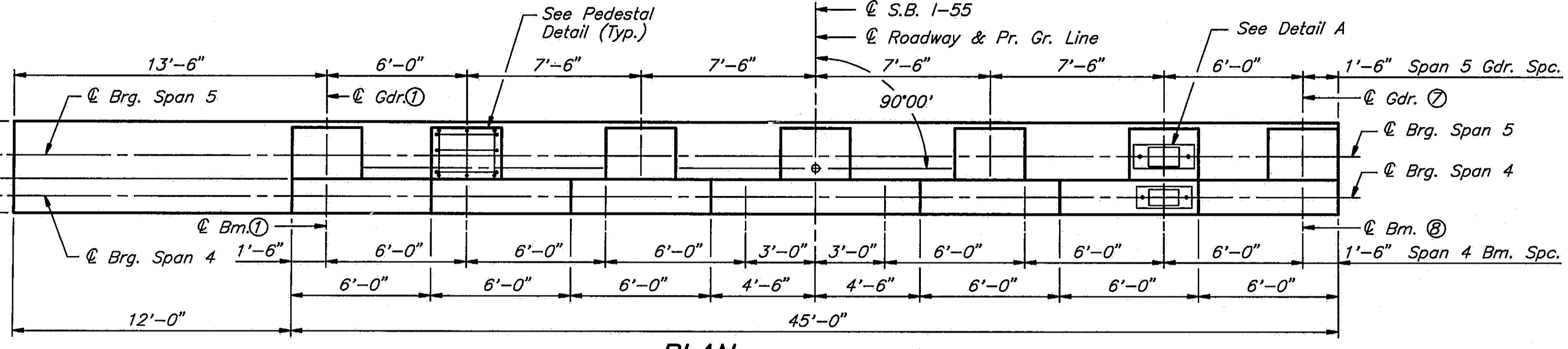
**PIER 4 PILE DATA**

Type ..... Steel HP 10x57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 55'  
 No. Required ..... 8



LOCATION	ELEVATION
SPAN 4 RISERS	
(A)	536.62
(B)	536.79
(C)	536.89
(D)	536.95
SPAN 5 PEDESTALS	
(E)	532.09
(F)	532.33
(G)	532.45

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s7(E)	2'-11"	3'-10 1/2"
s8(E)	2'-11"	3'-4 1/2"
s9(E)	2'-11"	2'-10 1/2"
s10(E)	2'-11"	2'-5 1/2"
s11(E)	3'-8"	2'-0"
s12(E)	1'-3"	6'-6"
s15(E)	1'-11"	1'-6"
u4(E)	3'-8"	2'-0"

Notes:  
 Space reinforcement to miss anchor bolts.  
 All edges shall have standard 3/4" chamfers except as noted.  
 Pour pedestals monolithically with cap.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.  
 Minor spalling on faces of existing stem to be repaired. Cost incidental to concrete removal.

NOTE: Crosshatched area of existing pier to be removed and 2'-7" of existing vertical reinforcement to be cleaned, straightened and incorporated into new construction.

NOTE: Epoxy Grout #6 n3(E) bars in 1" x 9" minimum drilled holes into existing footing. See Special Provision. For horiz. #5d4(E) bars use grout approved by the Dept. or epoxygrout in accordance with BSP II. The method of grout application shall be approved by the Engineer.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	206

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.

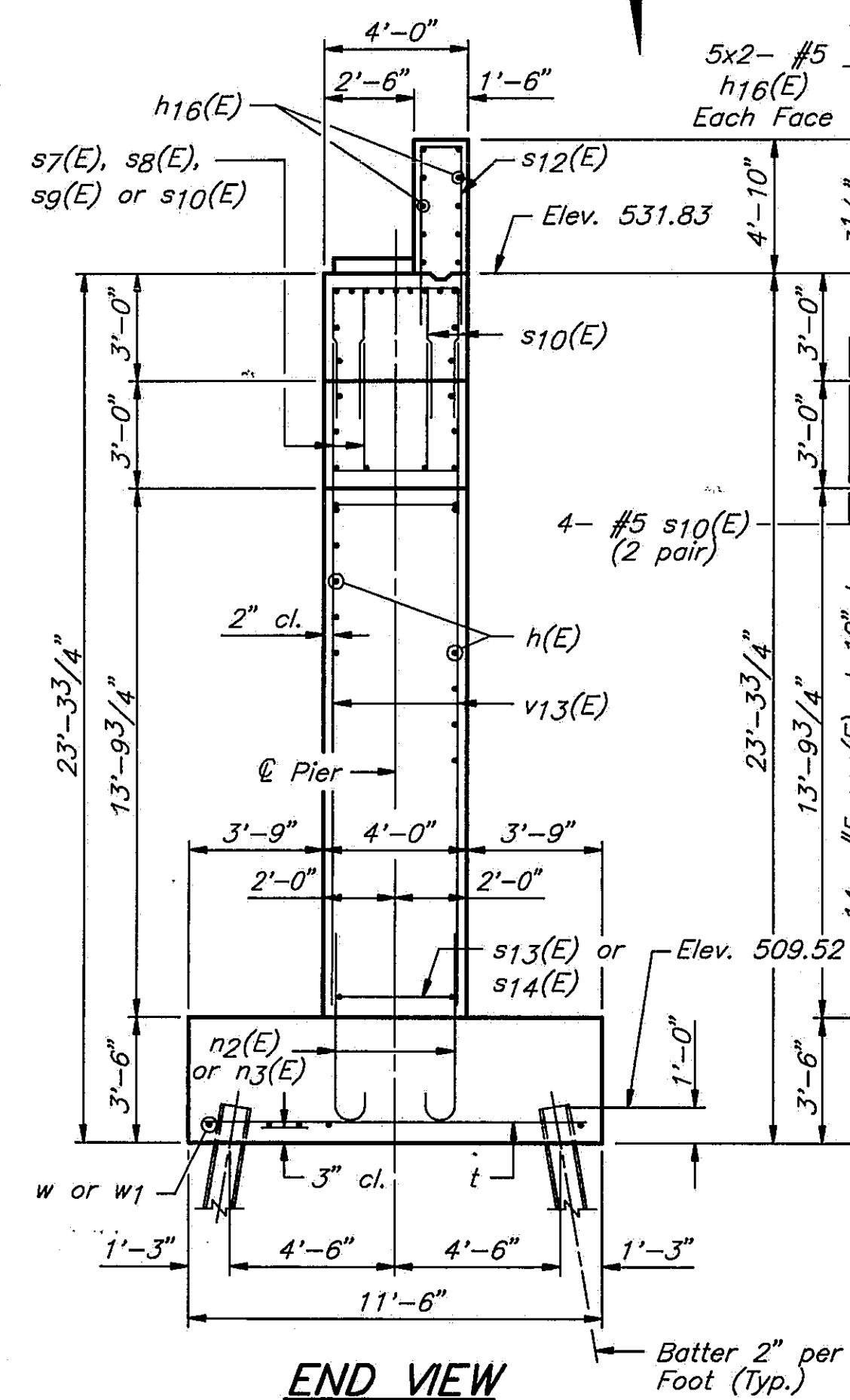
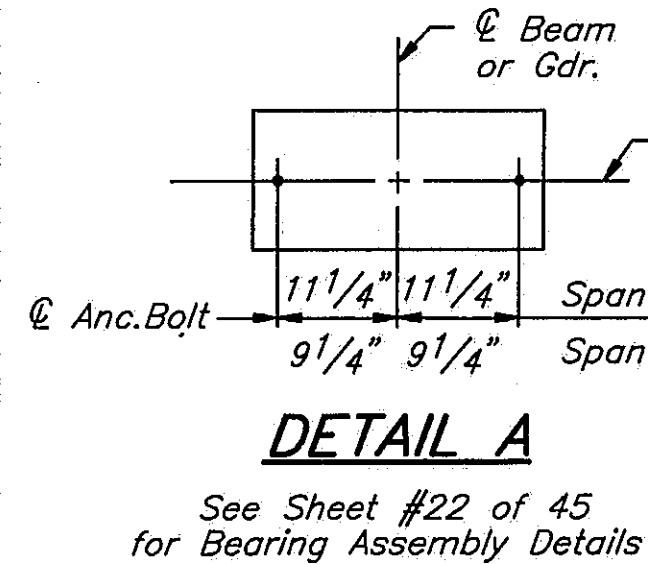
**BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	
h13(E)	#5	29'-5"	
h14(E)	#5	25'-3"	
h15(E)	#5	14'-11"	
h16(E)	#5	23'-5"	
n2(E)	#6	6'-6"	
n3(E)	#6	4'-1"	
p3(E)	#11	16'-3"	
p4(E)	#5	28'-6"	
p5(E)	#5	12'-4"	
s5(E)	#4	5'-10"	
s7(E)	#5	10'-8"	
s8(E)	#5	9'-8"	
s9(E)	#5	8'-8"	
s10(E)	#5	7'-10"	
s11(E)	#5	7'-8"	
s12(E)	#6	14'-3"	
s13(E)	#5	9'-10"	
s14(E)	#5	11'-4"	
s15(E)	#4	4'-11"	
t	#6	11'-2"	
u4(E)	#6	7'-8"	
v12(E)	#6	5'-2"	
v13(E)	#6	19'-7"	
w	#5	15'-9"	
w1	#5	3'-9"	
Structure Excavation	Cu.Yds.	183	
Class 'X' Concrete	Cu.Yds.	131.7	
Concrete Removal	Cu.Yds.	31.0	
Reinforcement Bars	Lbs.	950	
Reinforcement Bars Epoxy Coated	Lbs.	8290	
Steel Piles(HP10x57)	Lin.Ft.	440	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PIER 4 S.B. 1-55  
 1-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019**

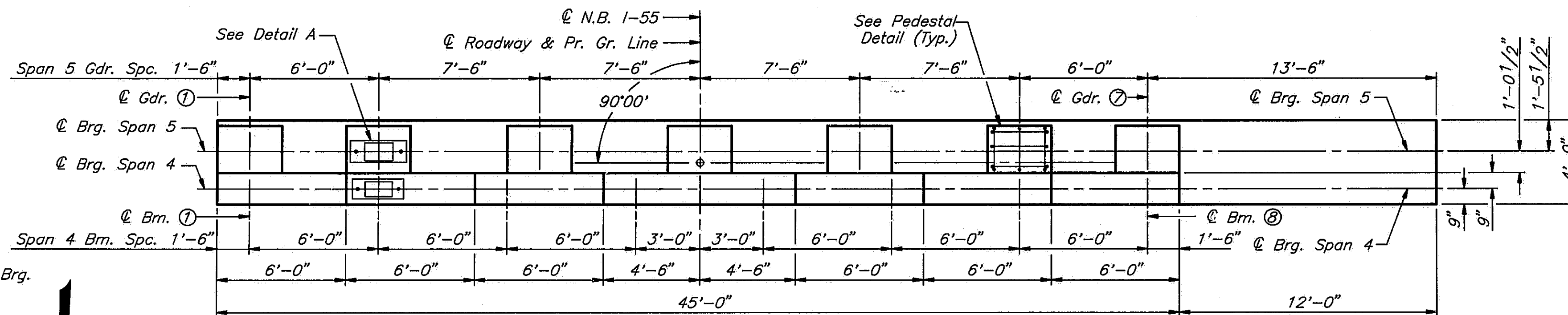
**PIER 4 PILE DATA**

Type ..... Steel HP 10x57  
Capacity ..... Drive to Refusal  
Est. Length ..... 53'  
No. Required ..... 8

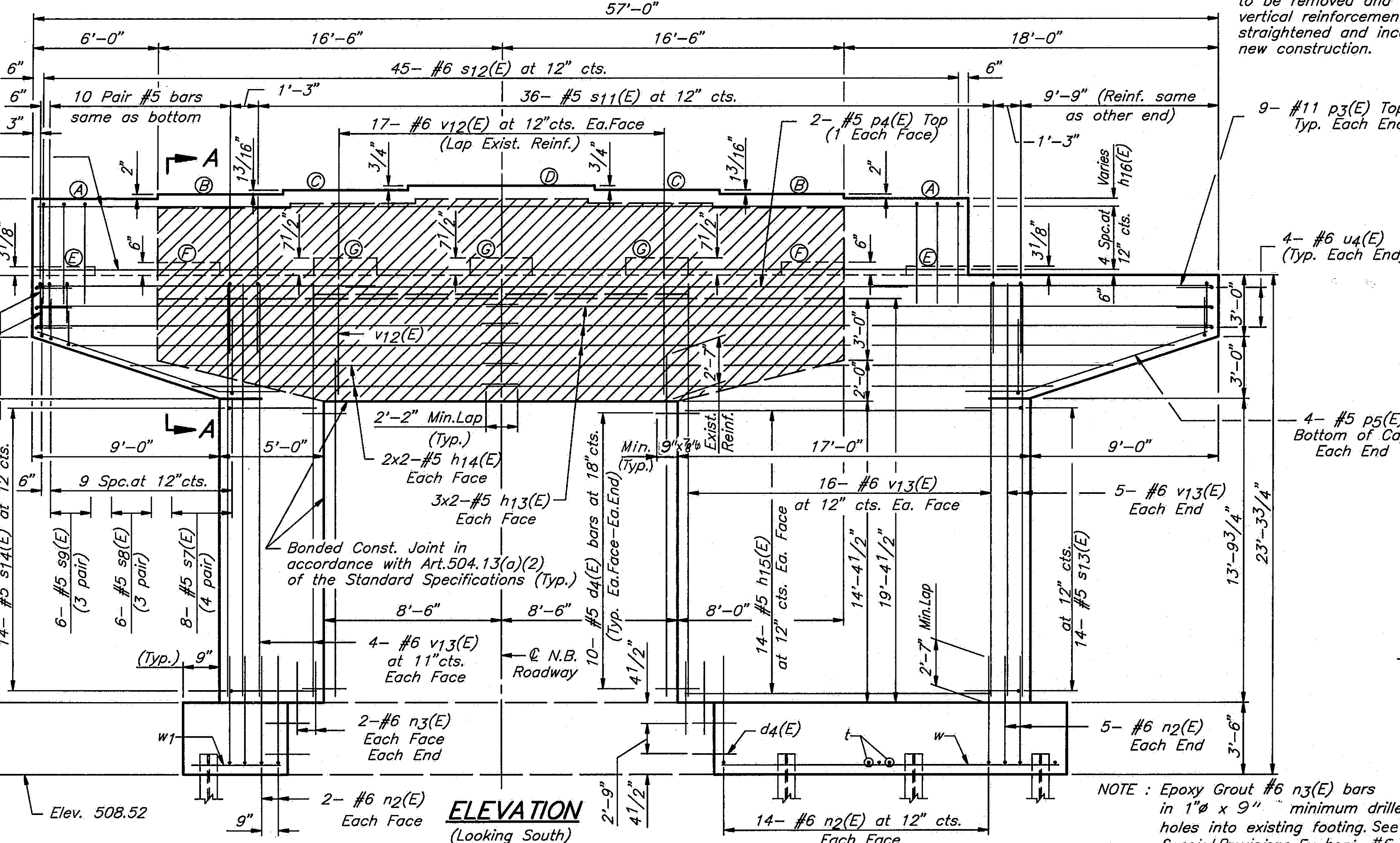


LOCATION	ELEVATION
SPAN 4 PEDESTALS	
Ⓐ	536.62
Ⓑ	536.79
Ⓒ	536.89
Ⓓ	536.95
SPAN 5 PEDESTALS	
Ⓔ	532.09
Ⓕ	532.33
Ⓖ	532.45

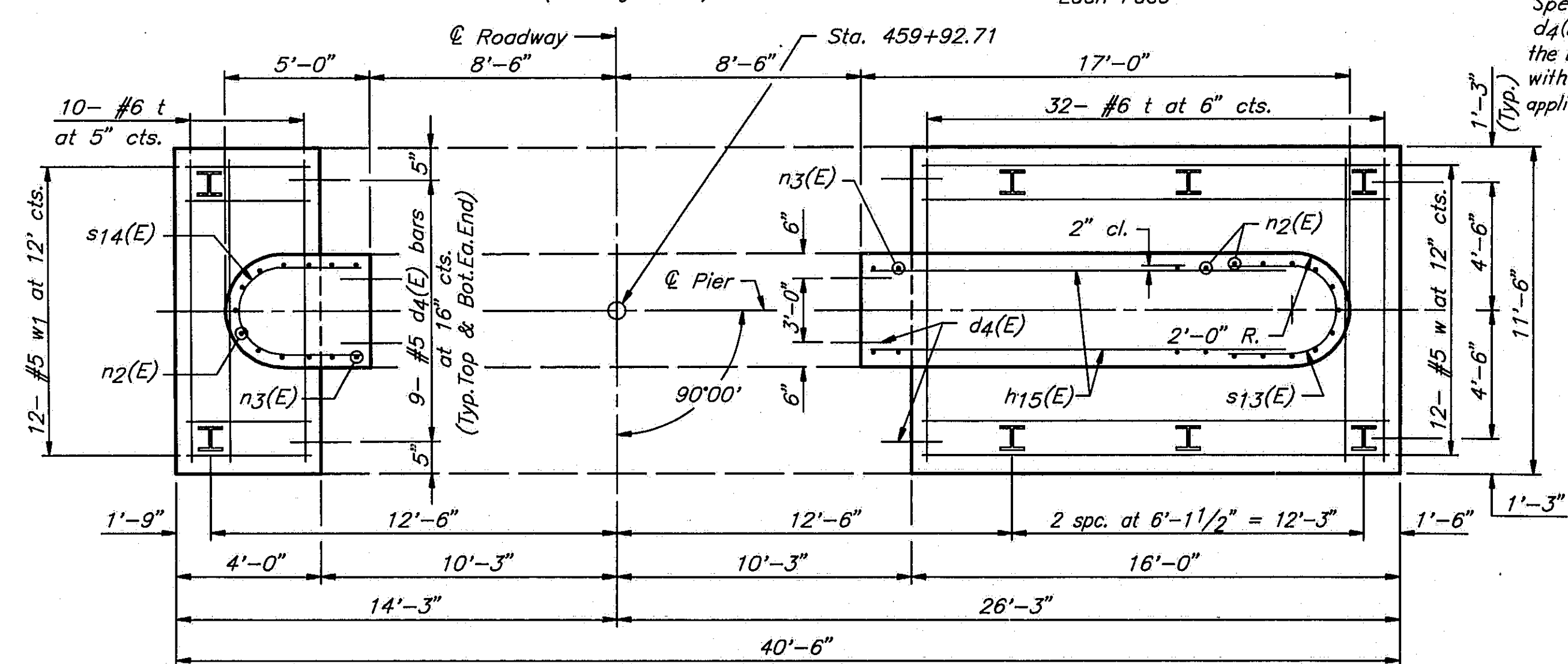
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



**PLAN**

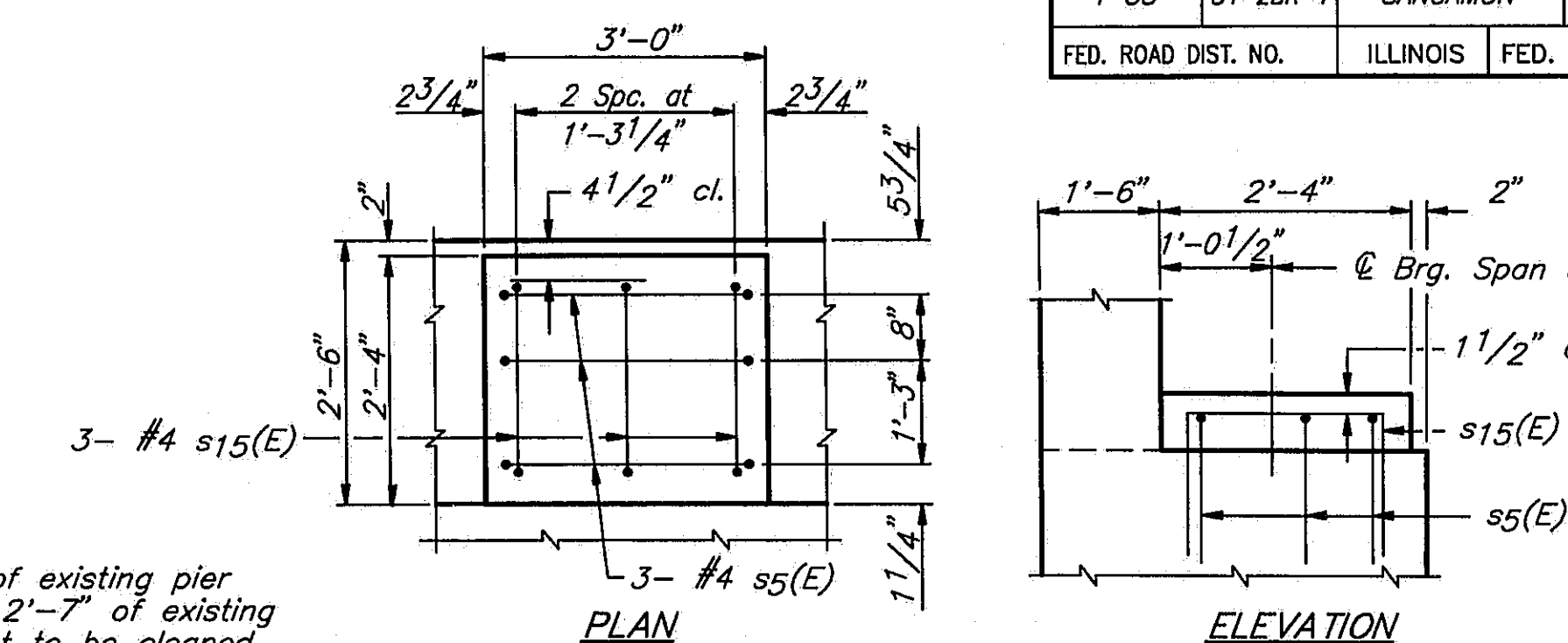


**ELEVATION**  
(Looking South)

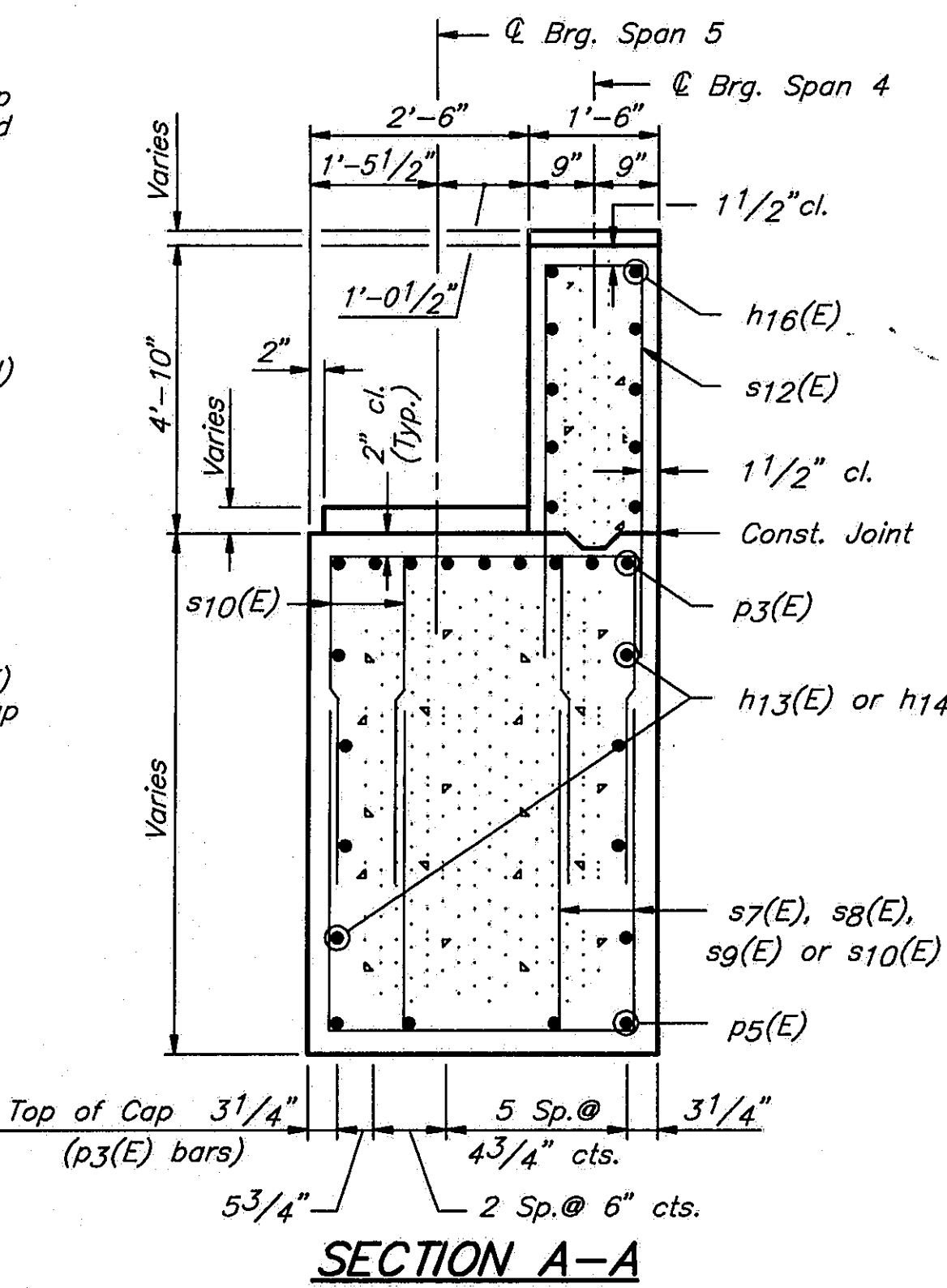


**FOOTING PLAN**

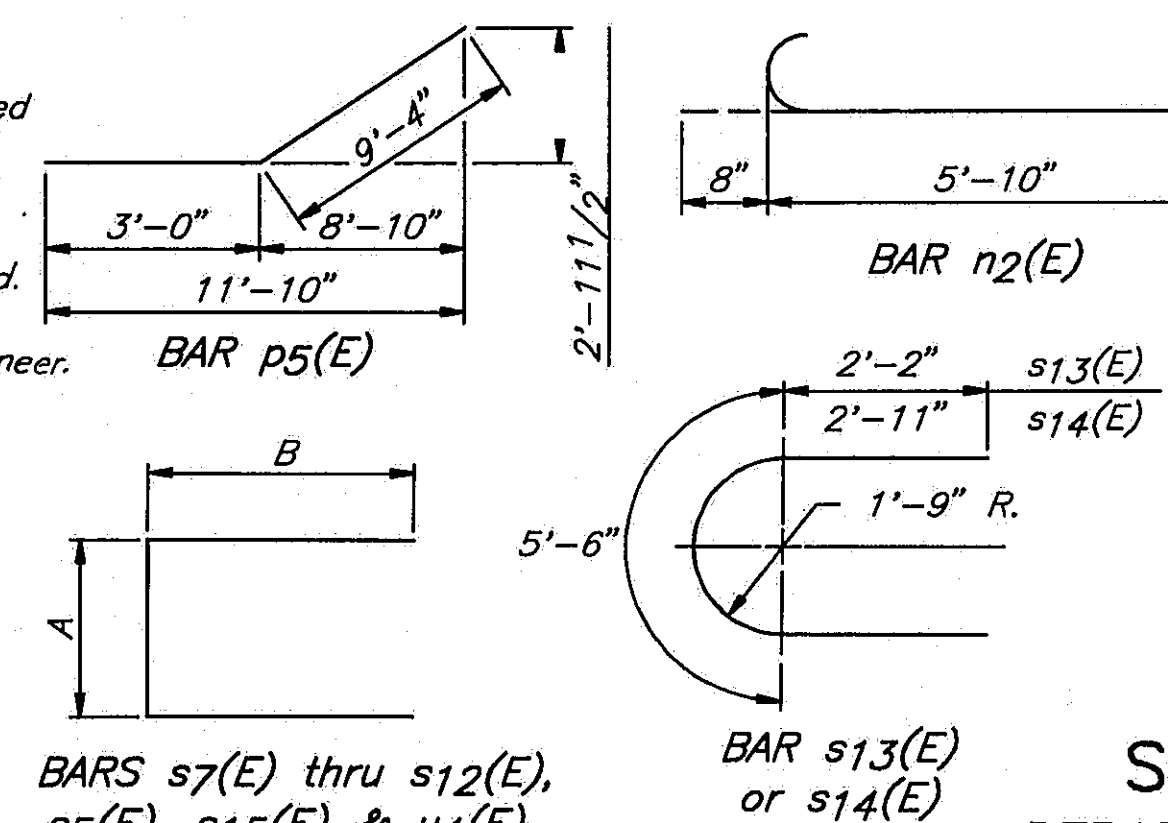
NOTE: Crosshatched area of existing pier to be removed and 2'-7" of existing vertical reinforcement to be cleaned, straightened and incorporated into new construction.



**PEDESTAL DETAILS**



**SECTION A-A**



Notes:  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
Pour pedestals monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1x2- #5 etc. indicates 1 line of bars with 2 lengths per line.  
Minor spalling on faces of existing stem to be repaired. Cost incidental to concrete removal.

SHEET 35 OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	207
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

**BILL OF MATERIAL**

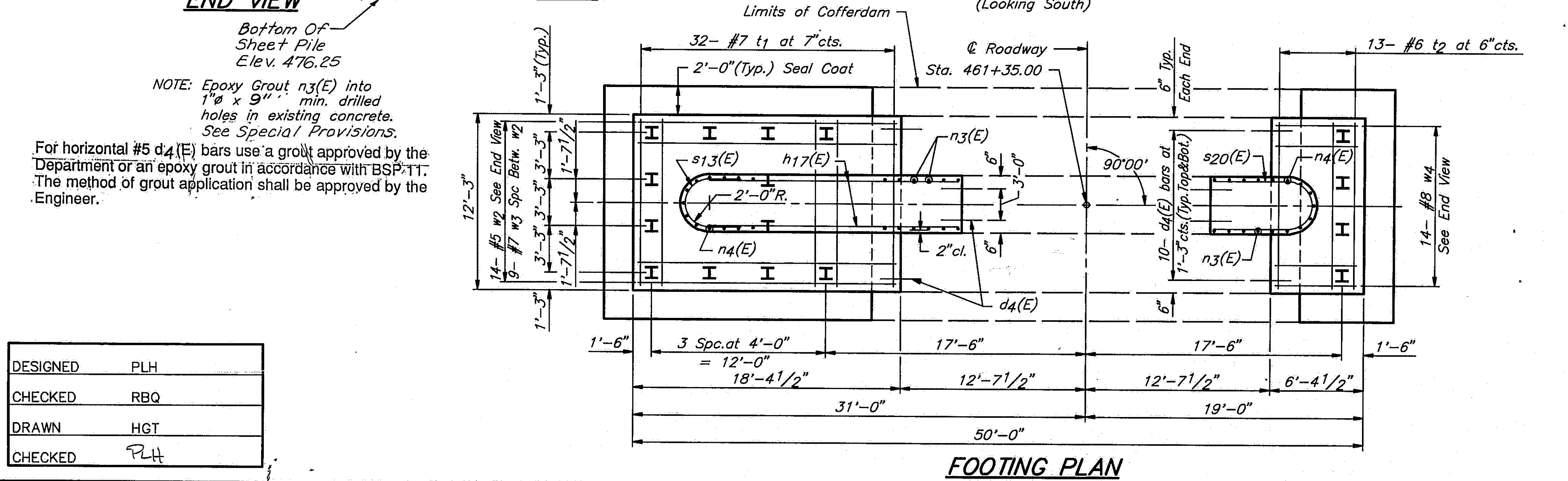
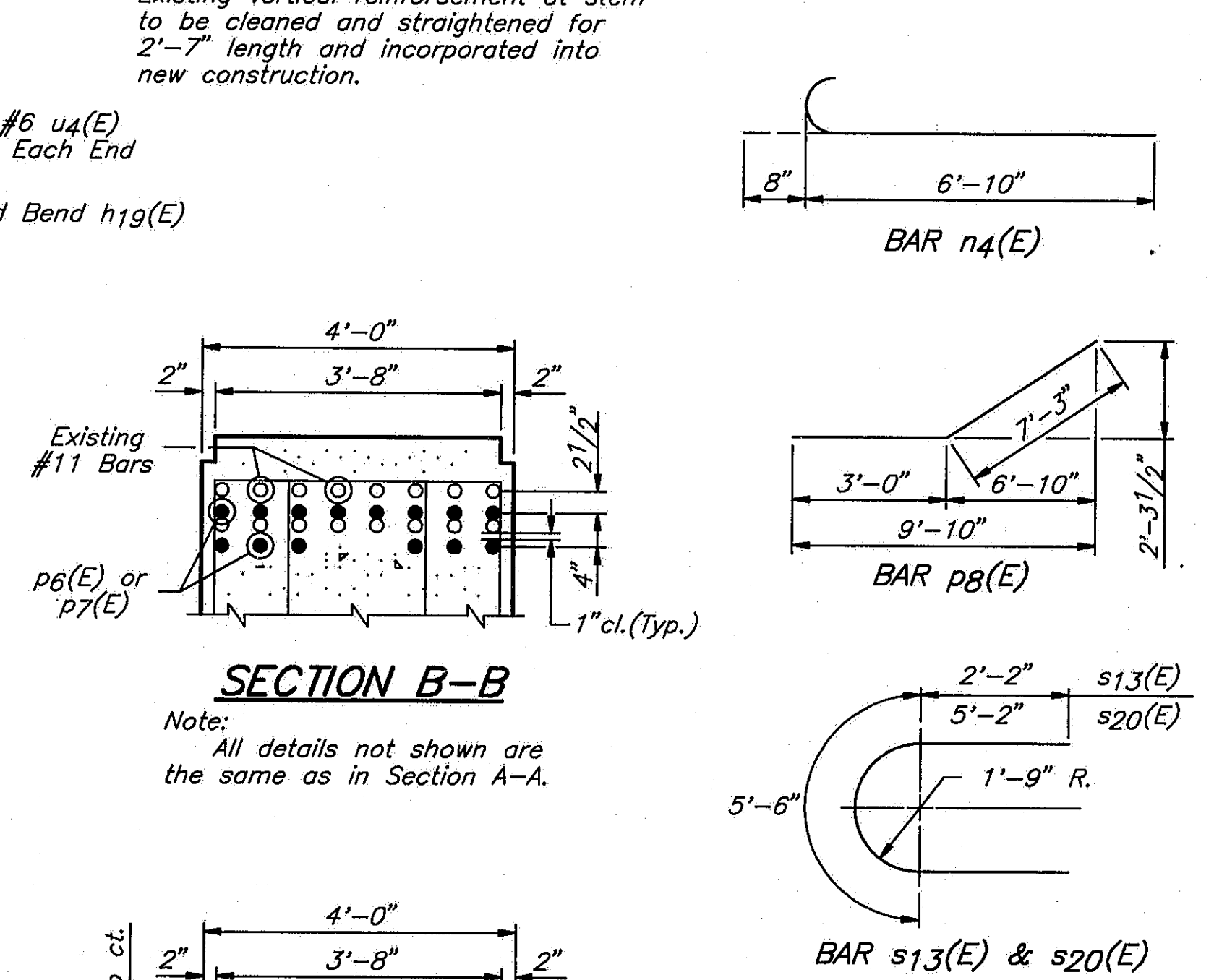
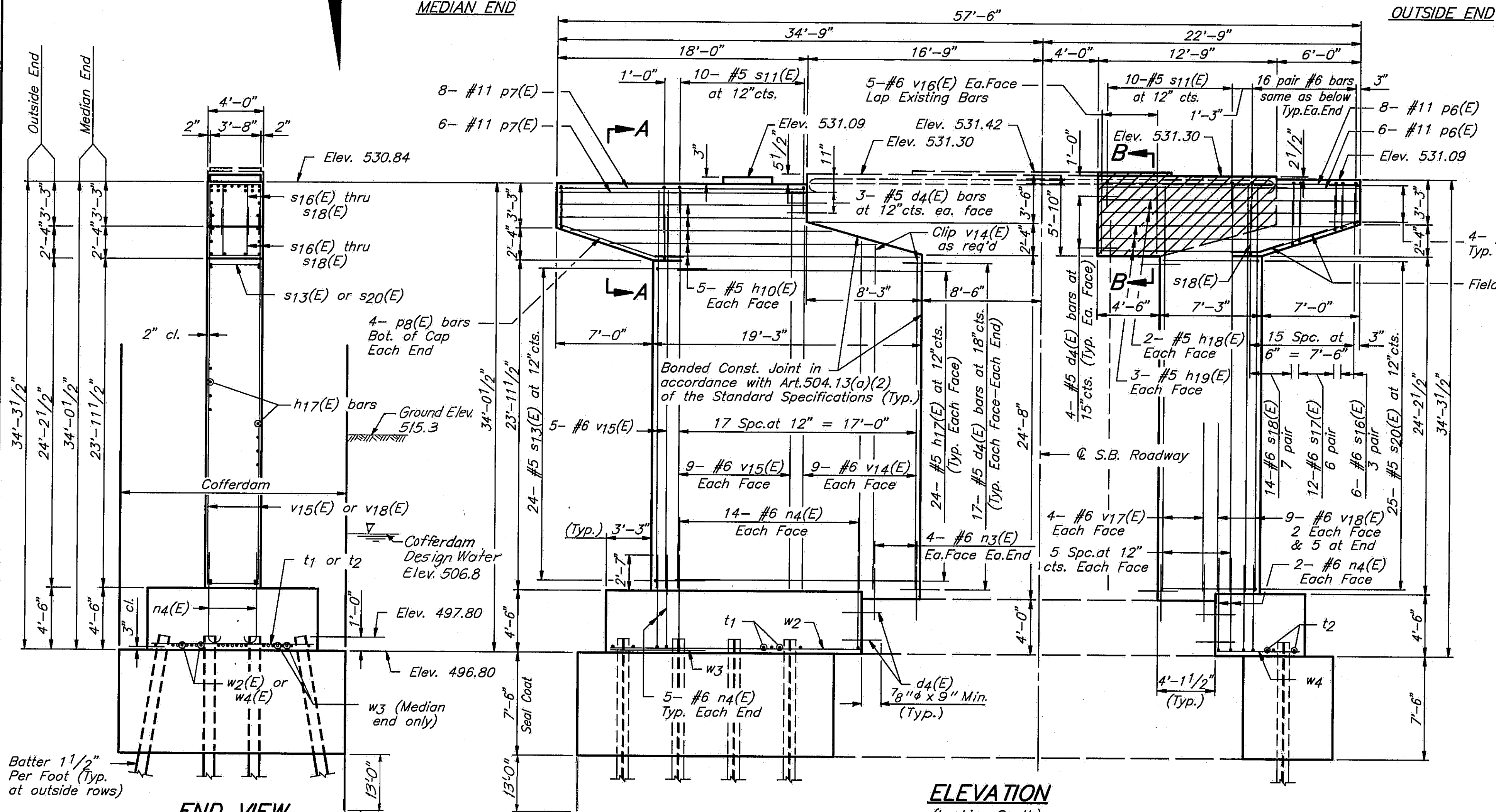
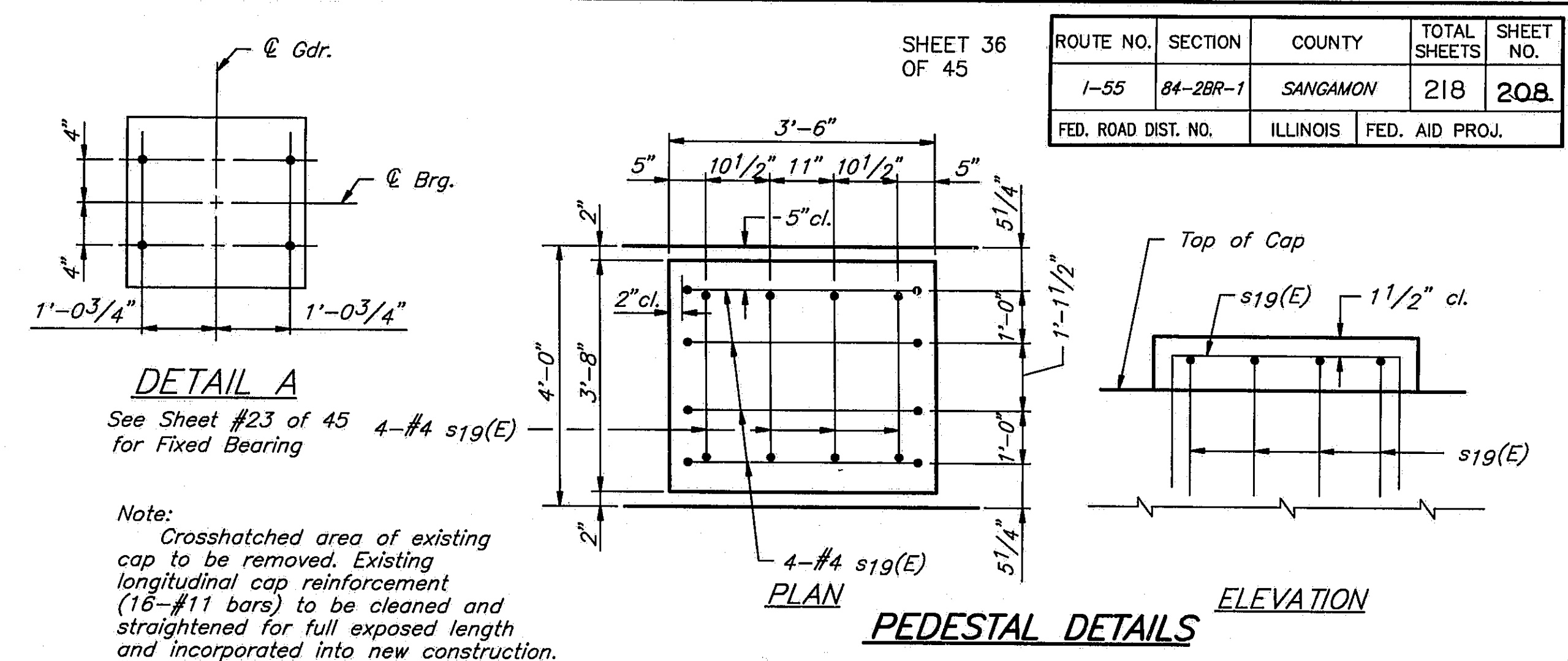
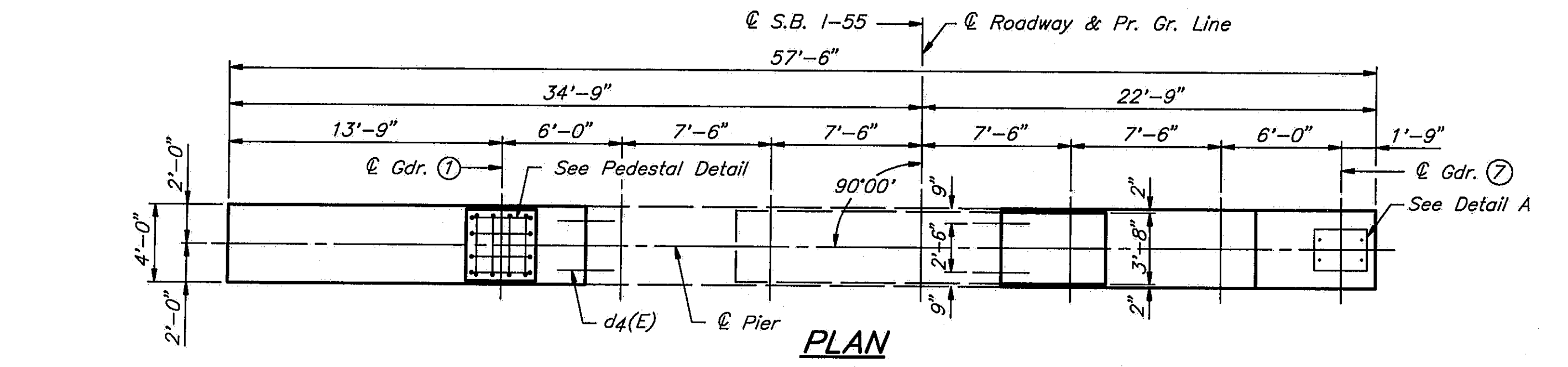
BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	76	#5	2'-6"	—
h13(E)	12	#5	29'-5"	—
h14(E)	8	#5	25'-3"	—
h15(E)	28	#5	14'-11"	—
h16(E)	20	#5	23'-5"	—
n2(E)	42	#6	6'-6"	—
n3(E)	8	#6	4'-1"	—
p3(E)	18	#11	16'-3"	—
p4(E)	2	#5	28'-6"	—
p5(E)	8	#5	12'-4"	—
s5(E)	21	#4	5'-10"	—
s7(E)	32	#5	10'-8"	—
sg(E)	24	#5	9'-8"	—
sg(E)	24	#5	8'-8"	—
s10(E)	8	#5	7'-10"	—
s11(E)	36	#5	7'-8"	—
s12(E)	45	#6	14'-3"	—
s13(E)	14	#5	9'-10"	—
s14(E)	14	#5	11'-4"	—
s15(E)	21	#4	4'-11"	—
t	42	#6	11'-2"	—
u4(E)	8	#6	7'-8"	—
v12(E)	34	#6	5'-2"	—
v13(E)	50	#6	19'-7"	—
w	12	#5	15'-9"	—
w1	12	#5	3'-9"	—
Structure Excavation		Cu.Yds.	183	
Class "X" Concrete		Cu.Yds.	131.7	
Concrete Removal		Cu.Yds.	31.0	
Reinforcement Bars		Lbs.	950	
Reinforcement Bars Epoxy Coated		Lbs.	8290	
Steel Piles(HP10x57)		Lin.Ft.	440	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER 4 N.B. 1-55  
1-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

**PIER 5 PILE DATA**  
 Type ..... Steel HP 12x63  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 43'  
 No. Required ..... 16

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	208
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



**BILL OF MATERIALS**

BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	122	#5	2'-6"	
h10(E)	10	#5	17'-9"	
h17(E)	48	#5	17'-3"	
h18(E)	4	#5	18'-6"	
h19(E)	6	#5	17'-7"	
n3(E)	16	#6	4'-1"	
n4(E)	42	#6	7'-6"	C
p6(E)	14	#11	18'-6"	
p7(E)	14	#11	17'-9"	
p8(E)	8	#5	10'-3"	
s11(E)	20	#5	7'-8"	
s13(E)	24	#5	9'-10"	
s16(E)	24	#6	8'-6"	
s17(E)	48	#6	9'-7"	
s18(E)	56	#6	10'-9"	
s19(E)	8	#4	5'-6"	
s20(E)	25	#5	15'-10"	C
t1	32	#7	11'-11"	
t2	13	#6	11'-11"	
u4(E)	8	#6	7'-8"	
v14(E)	18	#6	26'-4"	
v15(E)	23	#6	29'-4"	
v16(E)	10	#6	5'-8"	
v17(E)	8	#6	30'-3"	
v18(E)	9	#6	29'-9"	
w2	14	#5	18'-2"	
w3	9	#7	6'-6"	
w4	14	#8	6'-2"	
Class 'X' Concrete				Cu.Yds. 172.7
Reinforcement Bars				Lbs. 1630
Reinforcement Bars Epoxy Coated				Lbs. 10330
Cofferdam Excavation				Cu.Yds. 488
Concrete Removal				Cu.Yds. 9.7
Steel Piles (HP12x63)				Lin.Ft. 688
Seal Coat Concrete				Cu.Yds. 111.7

BAR	A	B
s11(E)	3'-8"	2'-0"
s16(E)	2'-8 1/2"	2'-11"
s17(E)	2'-8 1/2"	3'-5 1/2"
s18(E)	2'-8 1/2"	4'-0 1/2"
s19(E)	3'-2"	1'-2"
u4(E)	3'-8"	2'-0"

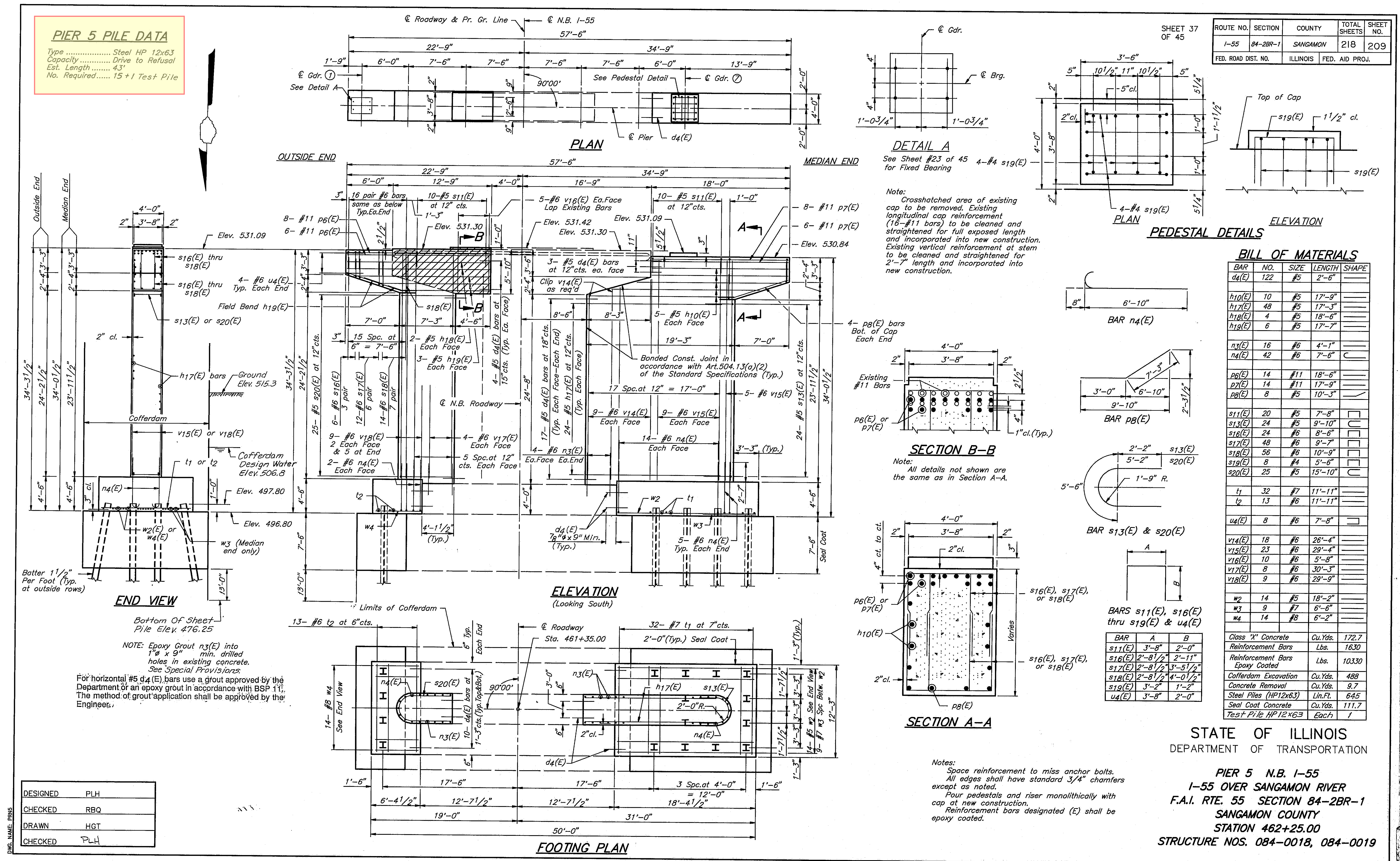
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

Notes:  
 Space reinforcement to miss anchor bolts.  
 All edges shall have standard 3/4" chamfers except as noted.  
 Four pedestals and riser monolithically with cap at new construction.  
 Reinforcement bars designated (E) shall be epoxy coated.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 PIER 5 S.B. I-55  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

**PIER 5 PILE DATA**

Type ..... Steel HP 12x6.3  
Capacity ..... Drive to Refusal  
Est. Length ..... 43'  
No. Required ..... 15 + 1 Test Pile



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	209
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJ.	

SHEET 37 OF 45

**BILL OF MATERIALS**

BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	122	#5	2'-6"	
h10(E)	10	#5	17'-9"	
h17(E)	48	#5	17'-3"	
h18(E)	4	#5	18'-6"	
h19(E)	8	#5	17'-7"	
n3(E)	16	#6	4'-1"	
n4(E)	42	#6	7'-6"	
p6(E)	14	#11	18'-6"	
p7(E)	14	#11	17'-9"	
p8(E)	8	#5	10'-3"	
s11(E)	20	#5	7'-8"	
s13(E)	24	#5	9'-10"	
s16(E)	24	#6	8'-6"	
s17(E)	48	#6	9'-7"	
s18(E)	56	#6	10'-9"	
s19(E)	8	#4	5'-6"	
s20(E)	25	#5	15'-10"	
t1	32	#7	11'-11"	
t2	13	#6	11'-11"	
u4(E)	8	#6	7'-8"	
v14(E)	18	#6	26'-4"	
v15(E)	23	#6	29'-4"	
v16(E)	10	#6	5'-8"	
v17(E)	8	#6	30'-3"	
v18(E)	9	#6	29'-9"	
w2	14	#5	18'-2"	
w3	9	#7	6'-6"	
w4	14	#8	6'-2"	

BAR	A	B
s11(E)	3'-8"	2'-0"
s16(E)	2'-8 1/2"	2'-11"
s17(E)	2'-8 1/2"	3'-5 1/2"
s18(E)	2'-8 1/2"	4'-0 1/2"
s19(E)	3'-2"	1'-2"
u4(E)	3'-8"	2'-0"

Class 'X' Concrete Cu.Yds. 172.7  
Reinforcement Bars Lbs. 1630  
Epoxy Coated  
Cofferdam Excavation Cu.Yds. 488  
Concrete Removal Cu.Yds. 9.7  
Steel Piles (HP12x6.3) Lin.Ft. 645  
Seal Coat Concrete Cu.Yds. 111.7  
Test Pile HP12x6.3 Each 1

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PIER 5 N.B. 1-55  
1-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019**

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

DWS. NAME: PRHS

NOTE: Epoxy Grout n3(E) into 1" x 9" min. drilled holes in existing concrete. See Special Provisions.  
For horizontal #5 d4(E) bars use a grout approved by the Department of an epoxy grout in accordance with BSP 11. The method of grout application shall be approved by the Engineer.

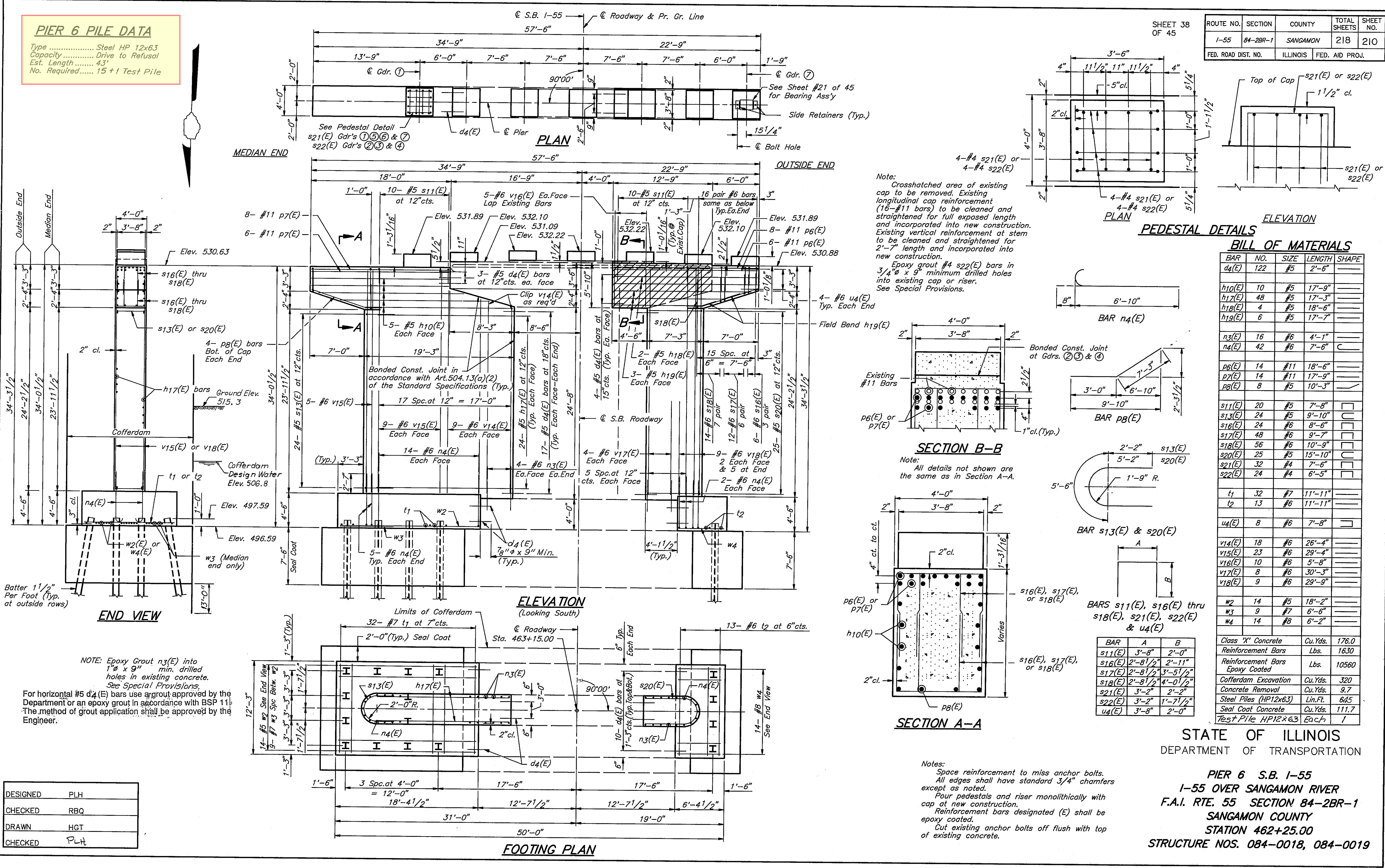
Notes:  
Space reinforcement to miss anchor bolts.  
All edges shall have standard 3/4" chamfers except as noted.  
Four pedestals and riser monolithically with cap at new construction.  
Reinforcement bars designated (E) shall be epoxy coated.

**PIER 6 PILE DATA**

Type ..... Steel HP 12x63  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 43'  
 No. Required ..... 15 + 1 Test Pile

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

NOTE: Epoxy Grout n3(E) into 1" x 9" min. drilled holes in existing concrete. See Special Provisions.  
 For horizontal #5 d4(E) bars use a grout approved by the Department or an epoxy grout in accordance with BSP 11. The method of grout application shall be approved by the Engineer.



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	210
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

SHEET 38 OF 45

**PEDESTAL DETAILS**

**BILL OF MATERIALS**

BAR NO.	NO.	SIZE	LENGTH	SHAPE	
d4(E)	122	#5	2'-6"		
h10(E)	10	#5	17'-9"		
h17(E)	48	#5	17'-3"		
h18(E)	4	#5	18'-6"		
h19(E)	6	#5	17'-7"		
n3(E)	16	#6	4'-1"		
n4(E)	42	#6	7'-6"		
p6(E)	14	#11	18'-6"		
p7(E)	14	#11	17'-9"		
p8(E)	8	#5	10'-3"		
s11(E)	20	#5	7'-8"		
s13(E)	24	#5	9'-10"		
s16(E)	24	#6	8'-6"		
s17(E)	48	#6	9'-7"		
s18(E)	56	#6	10'-9"		
s20(E)	25	#5	15'-10"		
s21(E)	32	#4	7'-6"		
s22(E)	24	#4	6'-5"		
t1	32	#7	11'-11"		
t2	13	#6	11'-11"		
u4(E)	8	#6	7'-8"		
v14(E)	18	#6	26'-4"		
v15(E)	23	#6	29'-4"		
v16(E)	10	#6	5'-6"		
v17(E)	8	#6	30'-3"		
v18(E)	9	#6	29'-9"		
w2	14	#5	18'-2"		
w3	9	#7	6'-6"		
w4	14	#8	6'-2"		
Class 'X' Concrete				Cu.Yds.	176.0
Reinforcement Bars				Lbs.	1630
Reinforcement Bars Epoxy Coated				Lbs.	10560
Cofferdam Excavation				Cu.Yds.	320
Concrete Removal				Cu.Yds.	9.7
Steel Piles (HP12x63)				Lin.Ft.	645
Seal Coat Concrete				Cu.Yds.	111.7
Test Pile HP12x63				Each	1

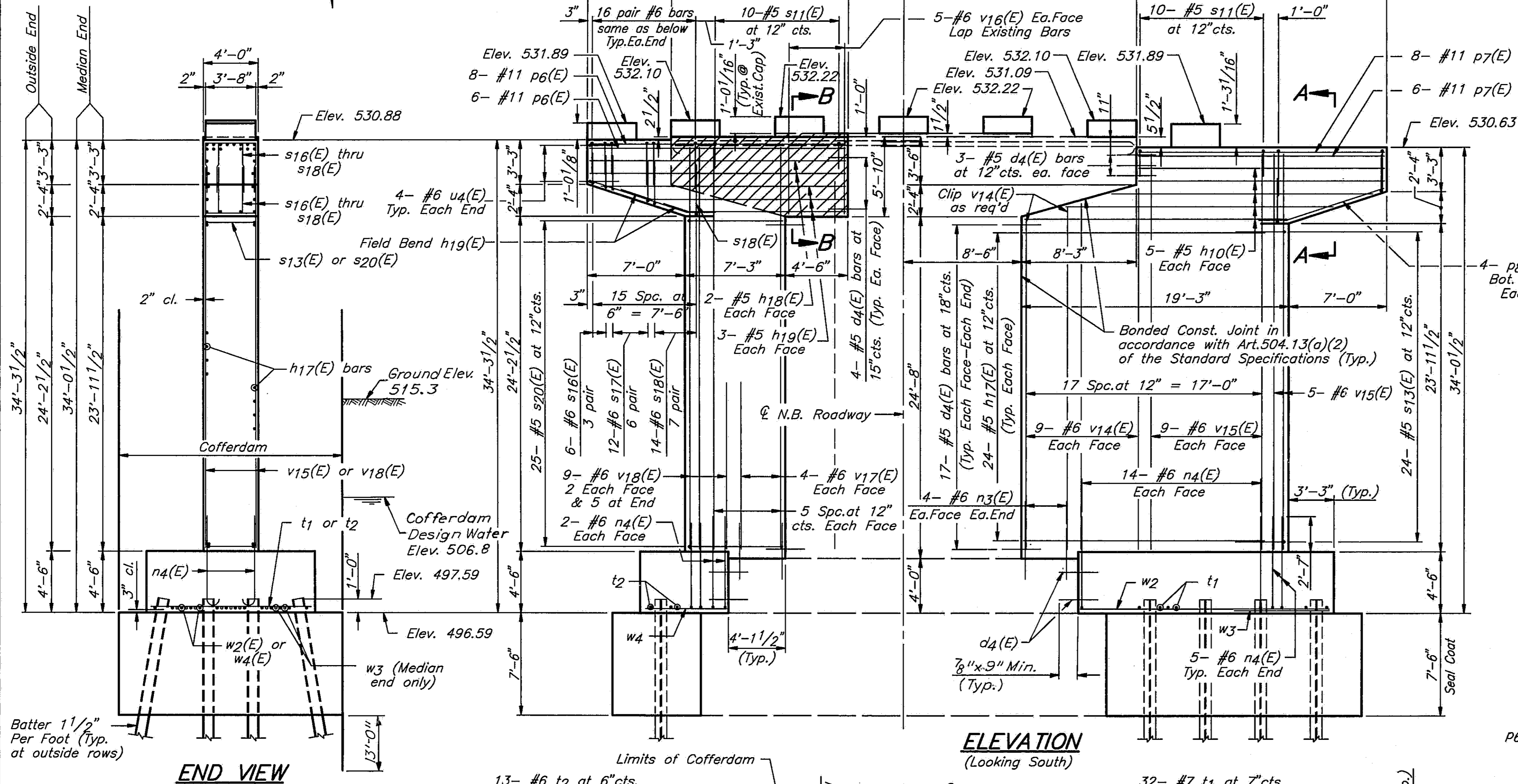
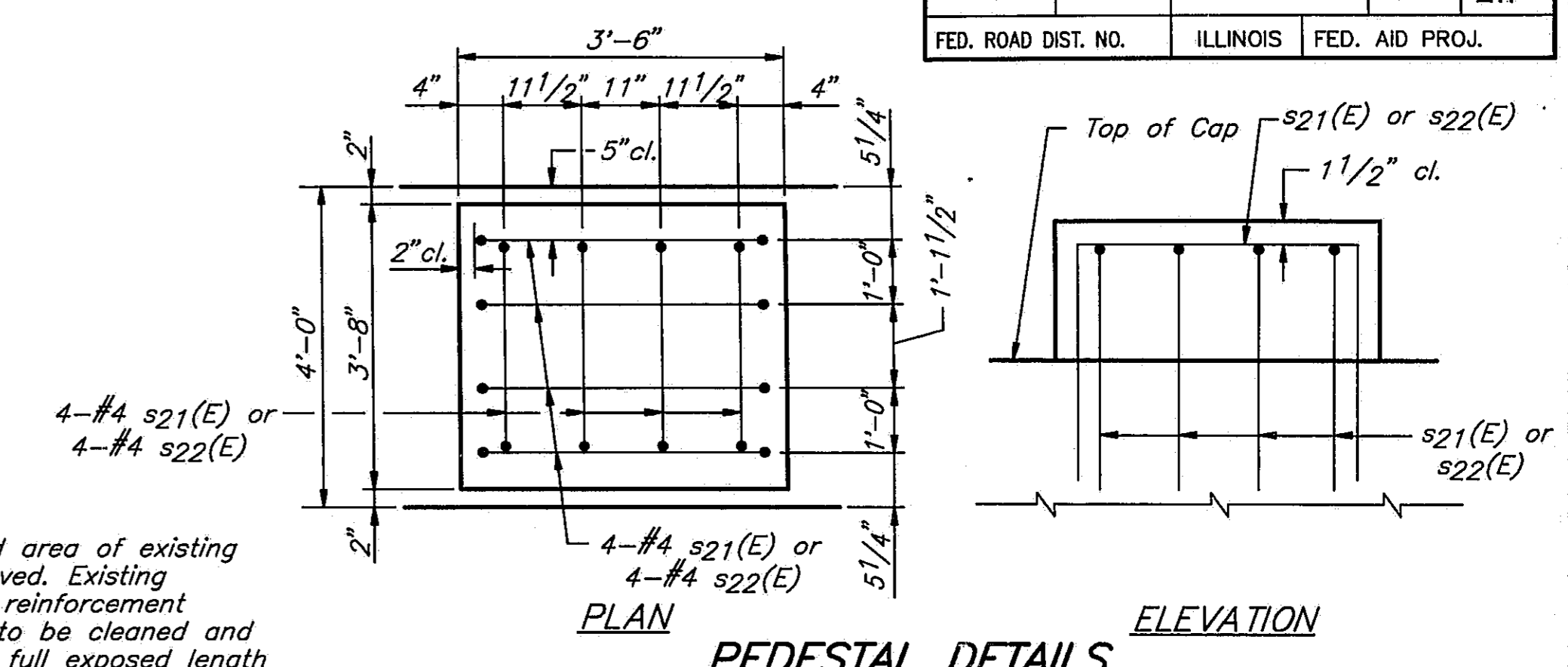
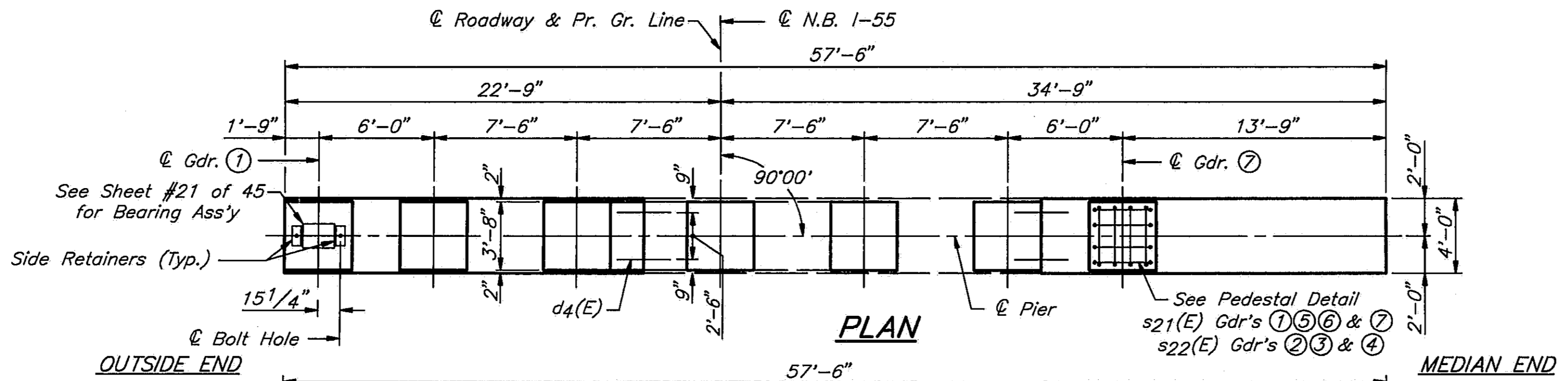
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER 6 S.B. 1-55  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

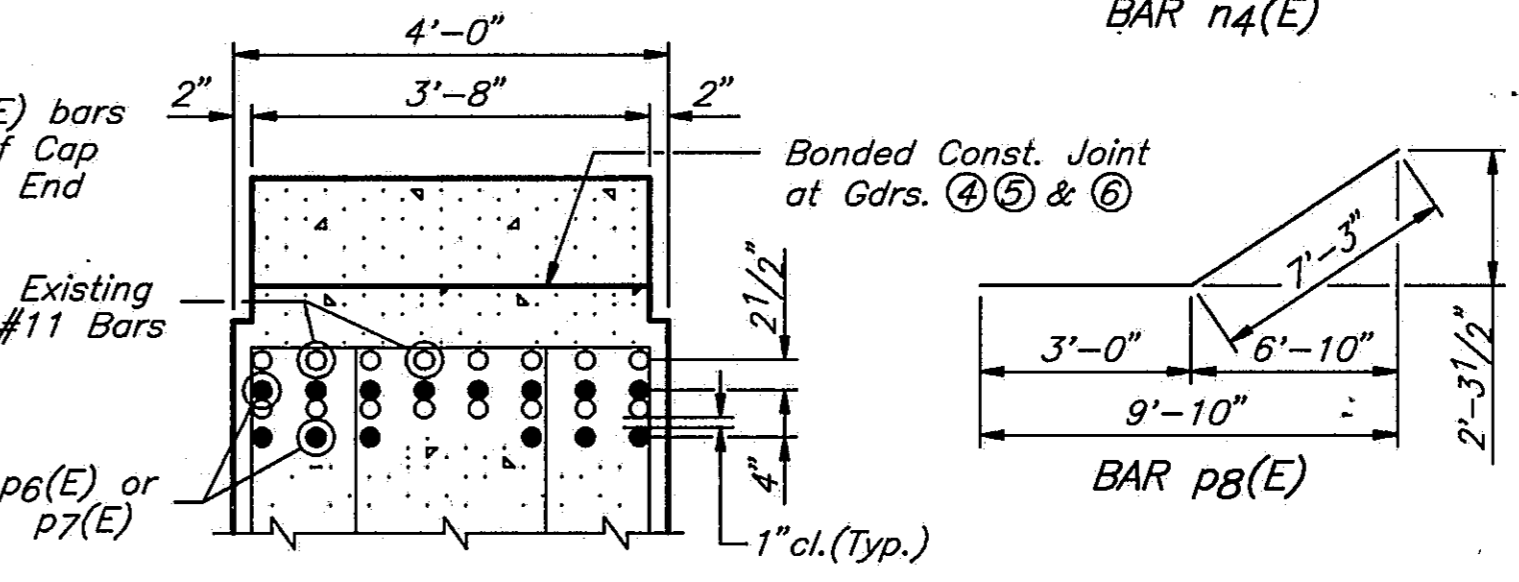
Notes:  
 Space reinforcement to miss anchor bolts.  
 All edges shall have standard 3/4" chamfers except as noted.  
 Pour pedestals and riser monolithically with cap at new construction.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Cut existing anchor bolts off flush with top of existing concrete.

**PIER 6 PILE DATA**  
 Type ..... Steel HP 12x63  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 43'  
 No. Required ..... 16

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	211
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

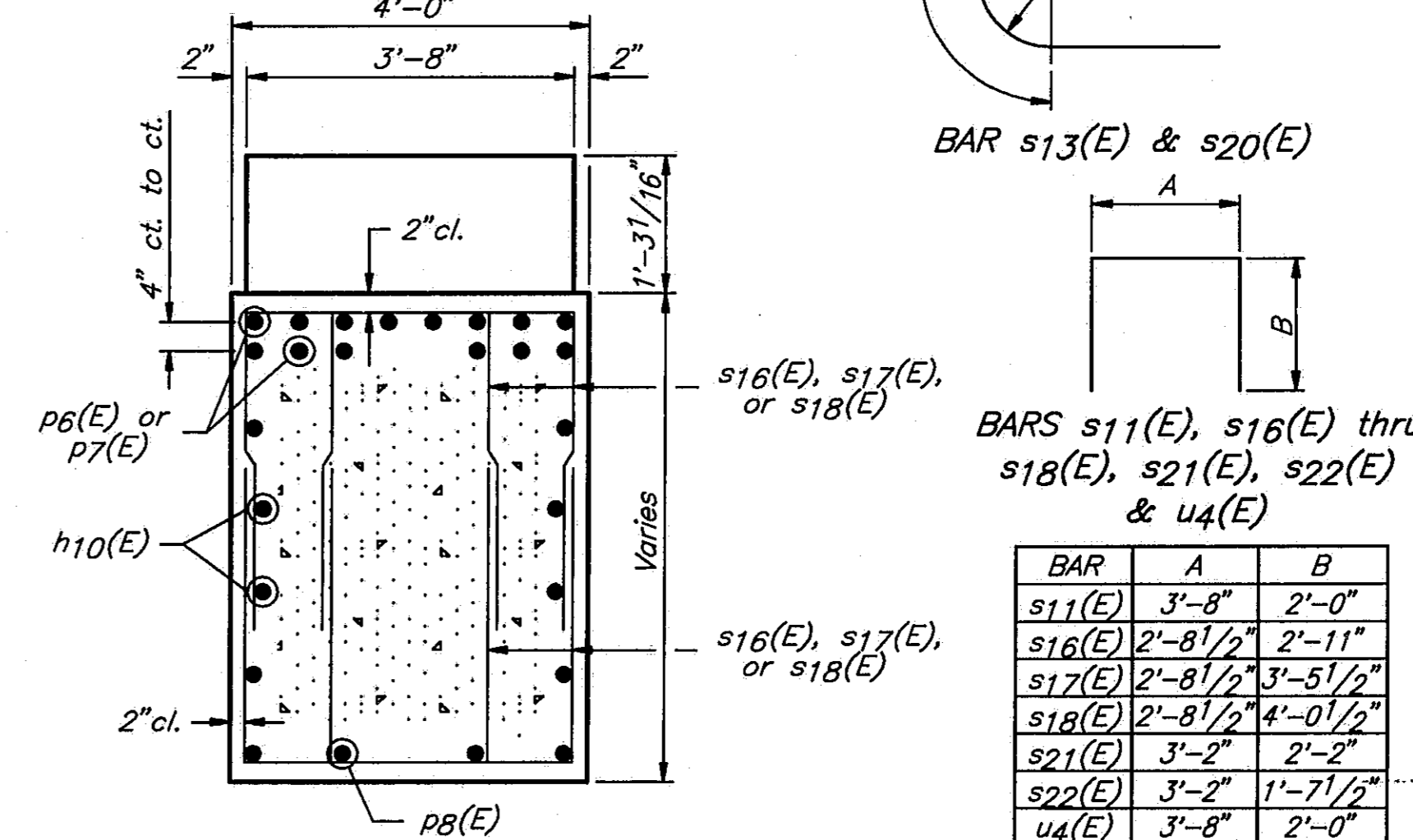


Note:  
 Crosshatched area of existing cap to be removed. Existing longitudinal cap reinforcement (16-#11 bars) to be cleaned and straightened for full exposed length and incorporated into new construction. Existing vertical reinforcement at stem to be cleaned and straightened for 2'-7" length and incorporated into new construction.  
 Epoxy grout #4 s22(E) bars in 3/4" x 9" minimum drilled holes into existing cap or riser. See Special Provisions.



**SECTION B-B**

Note: All details not shown are the same as in Section A-A.



**SECTION A-A**

Notes:  
 Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
 Four pedestals and riser monolithically with cap at new construction.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Cut existing anchor bolts off flush with top of existing concrete.

**BILL OF MATERIALS**

BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	
h10(E)	#5	17'-9"	
h17(E)	#5	17'-3"	
h18(E)	#5	18'-6"	
h19(E)	#5	17'-7"	
n3(E)	#6	4'-1"	
n4(E)	#6	7'-6"	
p6(E)	#11	18'-6"	
p7(E)	#11	17'-9"	
p8(E)	#5	10'-3"	
s11(E)	#5	7'-8"	
s13(E)	#5	9'-10"	
s16(E)	#6	8'-6"	
s17(E)	#6	9'-7"	
s18(E)	#6	10'-9"	
s20(E)	#5	15'-10"	
s21(E)	#4	7'-6"	
s22(E)	#4	6'-5"	
t1	#7	11'-11"	
t2	#6	11'-11"	
u4(E)	#6	7'-8"	
v14(E)	#6	26'-4"	
v15(E)	#6	29'-4"	
v16(E)	#6	5'-8"	
v17(E)	#6	30'-3"	
v18(E)	#6	29'-9"	
w2	#5	18'-2"	
w3	#7	6'-6"	
w4	#8	6'-2"	

BAR	A	B
s11(E)	3'-8"	2'-0"
s16(E)	2'-8 1/2"	2'-11"
s17(E)	2'-8 1/2"	3'-5 1/2"
s18(E)	2'-8 1/2"	4'-0 1/2"
s21(E)	3'-2"	2'-2"
s22(E)	3'-2"	1'-7 1/2"
u4(E)	3'-8"	2'-0"

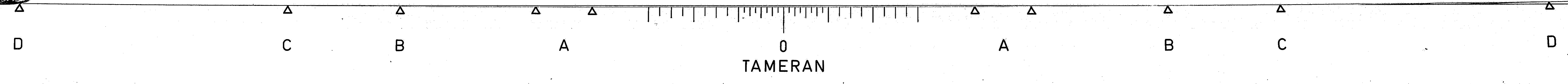
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

PIER 6 N.B. I-55  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

NOTE: Epoxy Grout n3(E) into 1" x 9" min. drilled holes in existing concrete. See Special Provisions.  
 For horizontal #5 d4(E) bars use a grout approved by the Department of an epoxy grout in accordance with BSP 11. The method of grout application shall be approved by the Engineer.

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

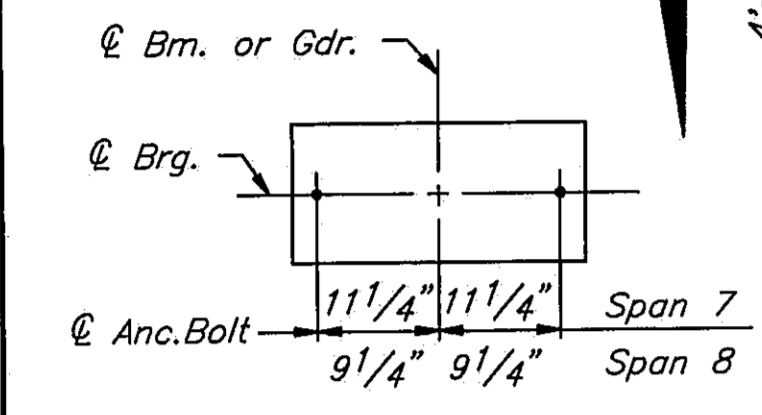
DATE, NAME, PRINT



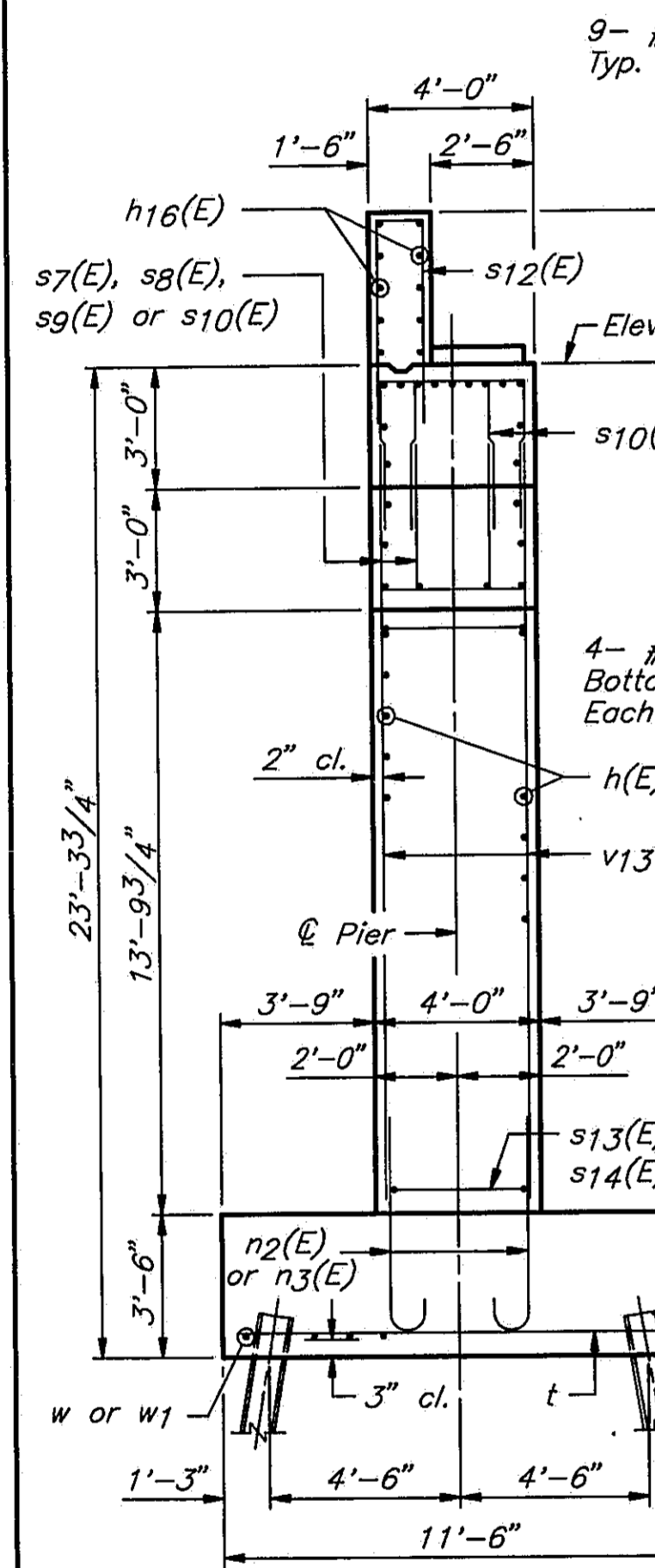


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218.	212
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

**PIER 7 PILE DATA**  
 Type ..... Steel HP 10x57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 55'  
 No. Required ..... 8



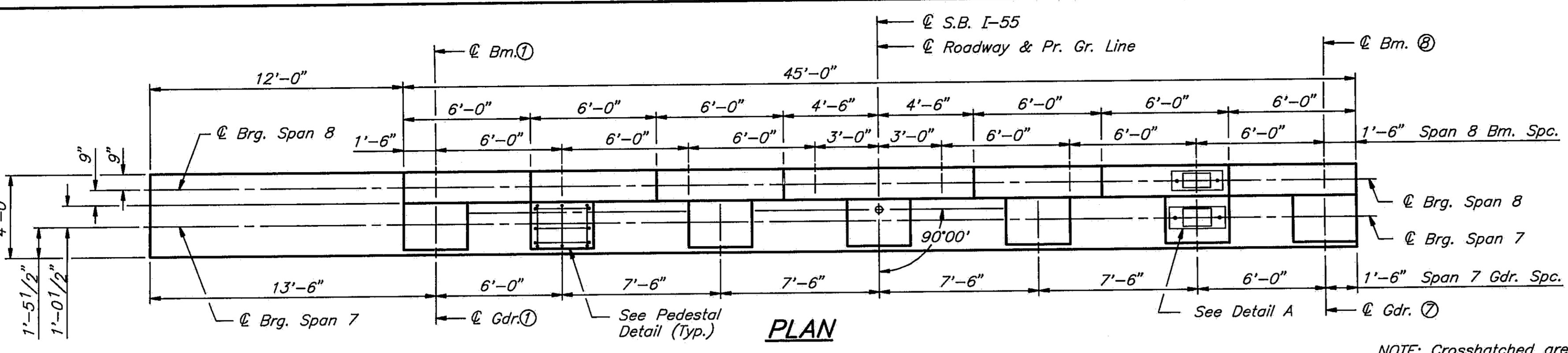
**DETAIL A**  
 See Sheet #23 of 45 for Bearing Assembly Details



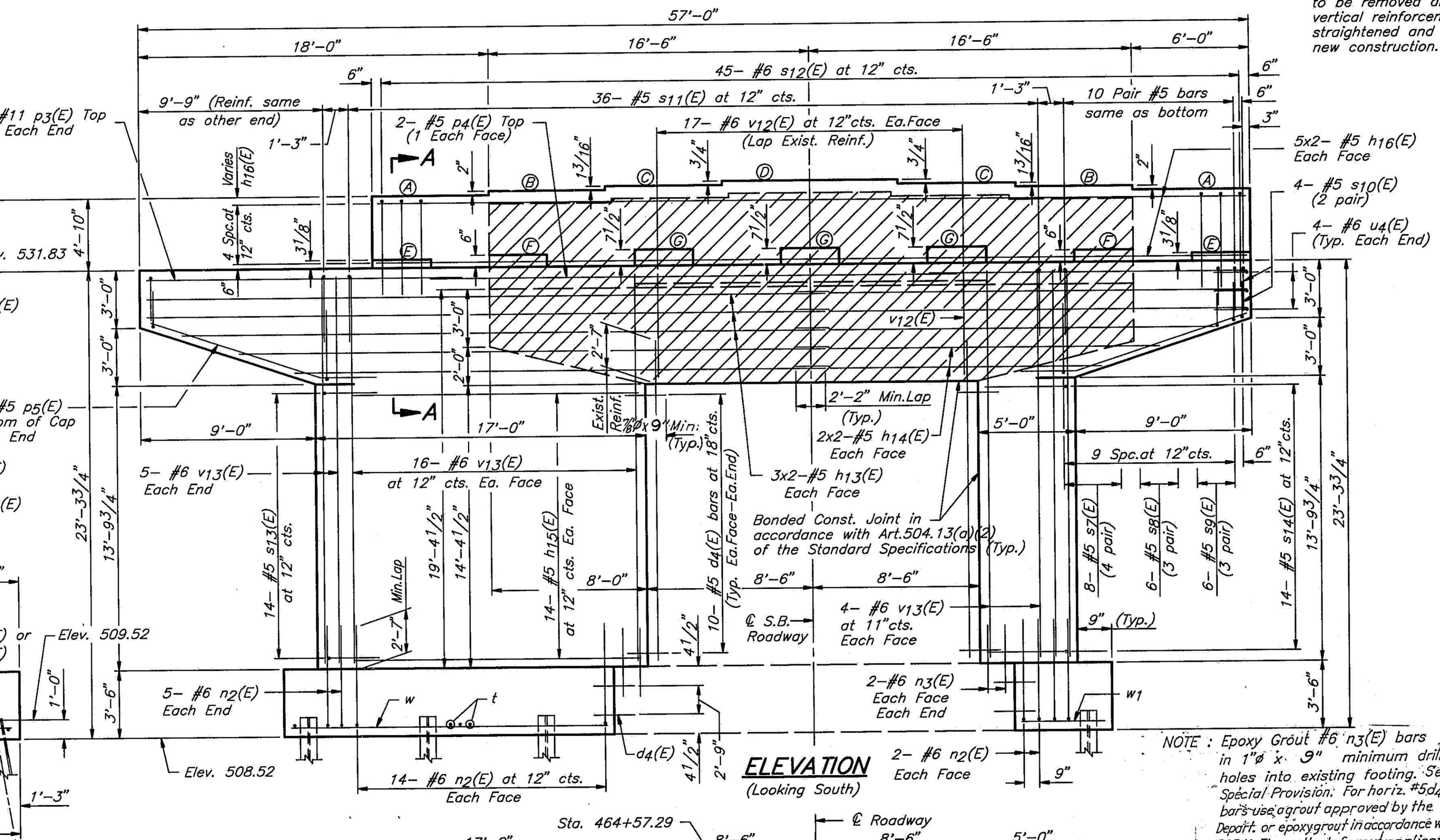
**END VIEW**

LOCATION	ELEVATION
SPAN 8 RISERS	
Ⓐ	536.62
Ⓑ	536.79
Ⓒ	536.89
Ⓓ	536.95
SPAN 7 PEDESTALS	
Ⓔ	532.09
Ⓕ	532.33
Ⓖ	532.45

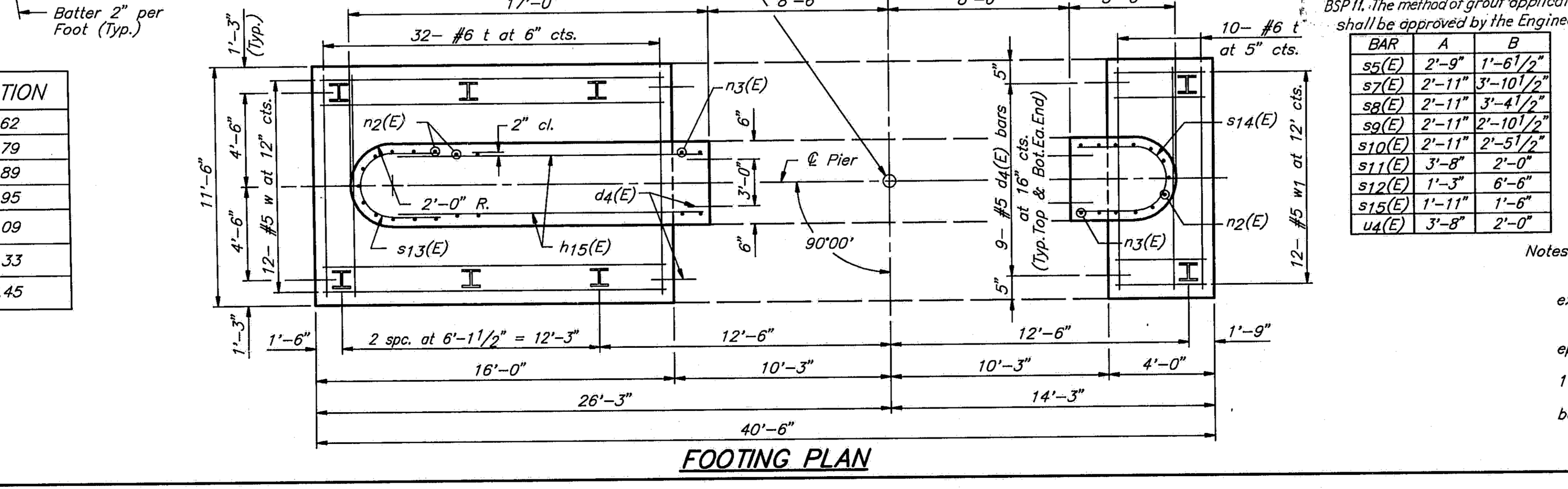
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



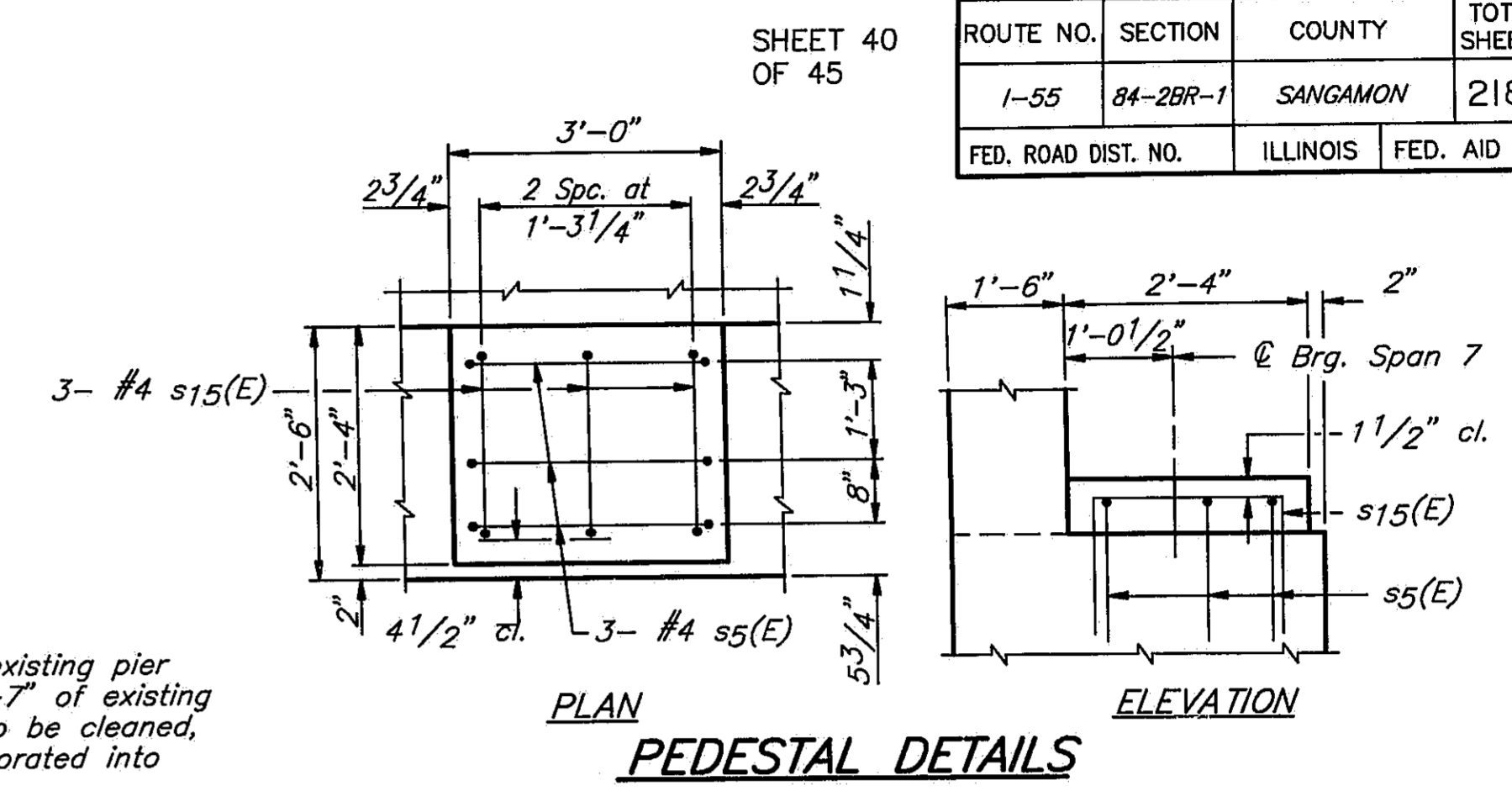
**PLAN**



**ELEVATION**  
 (Looking South)

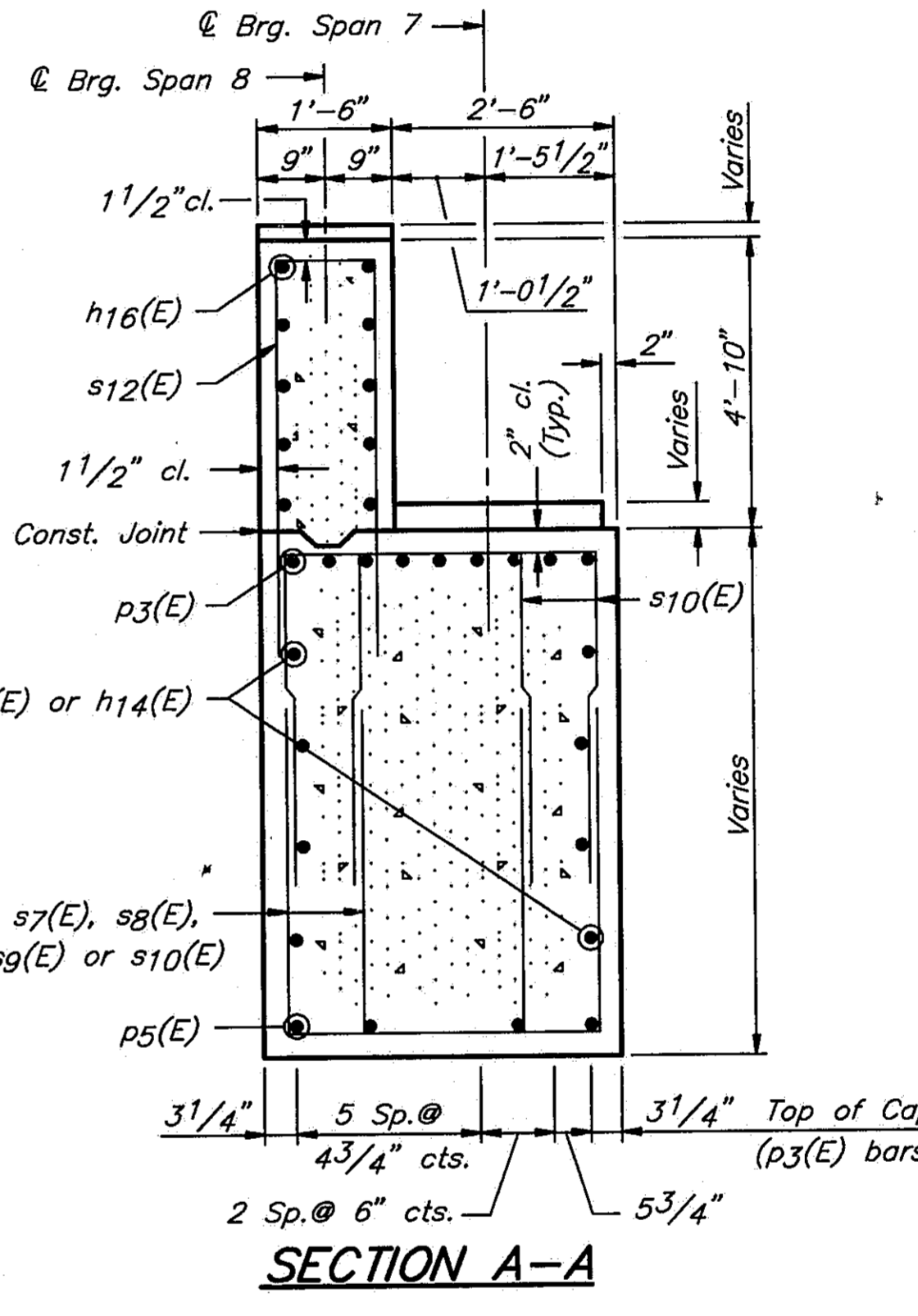


**FOOTING PLAN**



**PEDESTAL DETAILS**

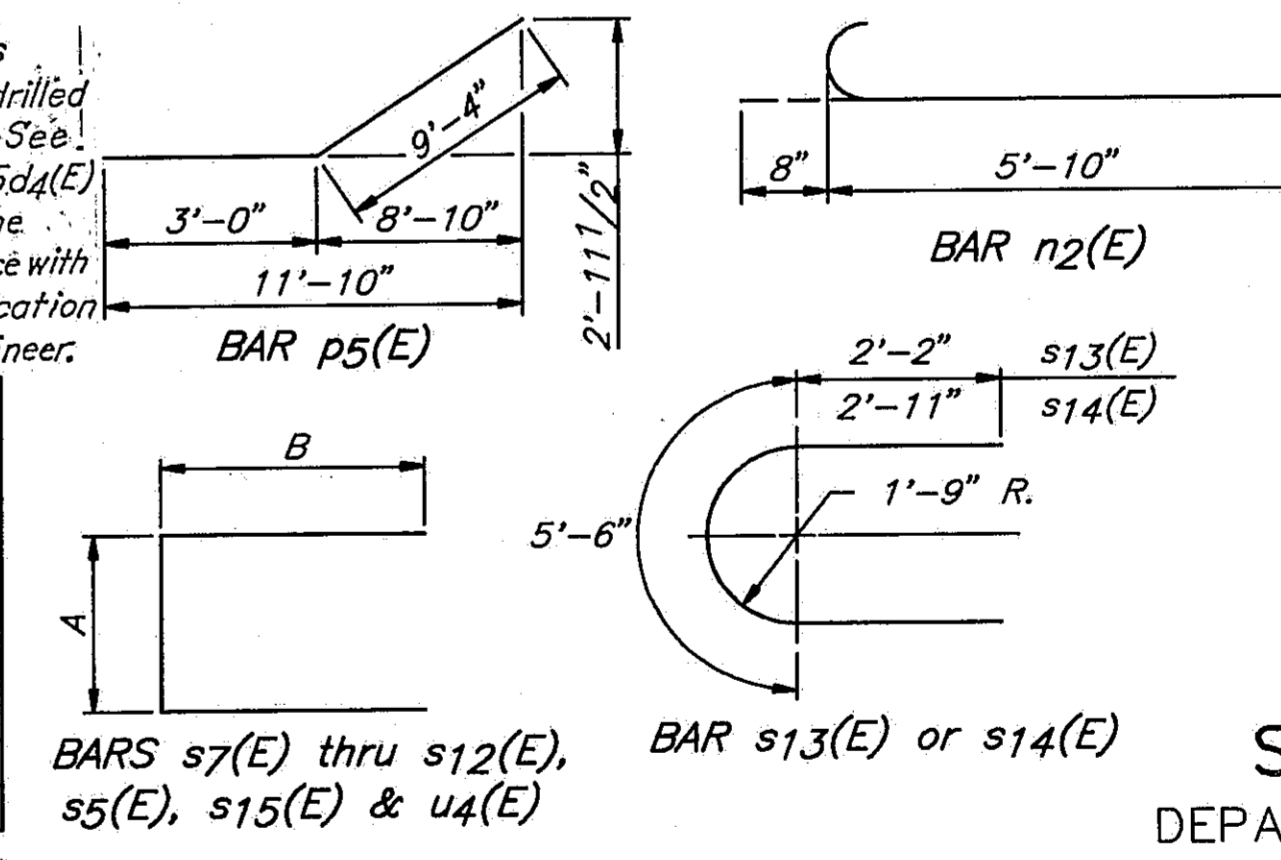
NOTE: Crosshatched area of existing pier to be removed and 2'-7" of existing vertical reinforcement to be cleaned, straightened and incorporated into new construction.



**SECTION A-A**

NOTE: Epoxy Grout #6 n3(E) bars in 1" x 9" minimum drilled holes into existing footing. See Special Provision: For horiz. #5d4(E) bars use layout approved by the Dept. or epoxygrout in accordance with BSP II. The method of grout application shall be approved by the Engineer.

BAR	A	B
s5(E)	2'-9"	1'-6 1/2"
s7(E)	2'-11"	3'-10 1/2"
s9(E)	2'-11"	3'-4 1/2"
s10(E)	2'-11"	2'-10 1/2"
s11(E)	3'-8"	2'-0"
s12(E)	1'-3"	8'-6"
s15(E)	1'-11"	1'-6"
u4(E)	3'-8"	2'-0"



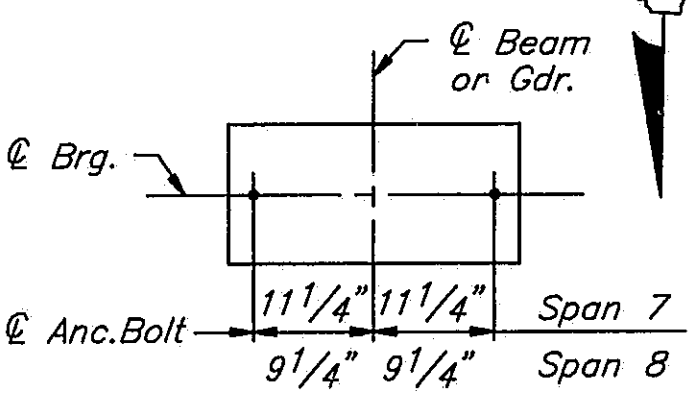
**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	76	#5	2'-6"	
h13(E)	12	#5	29'-5"	
h14(E)	8	#5	25'-3"	
h15(E)	28	#5	14'-11"	
h16(E)	20	#5	23'-5"	
n2(E)	42	#6	6'-6"	
n3(E)	8	#6	4'-1"	
p3(E)	18	#11	16'-3"	
p4(E)	2	#5	28'-6"	
p5(E)	8	#5	12'-4"	
s5(E)	21	#4	5'-10"	
s7(E)	32	#5	10'-8"	
s8(E)	24	#5	9'-8"	
s9(E)	24	#5	8'-8"	
s10(E)	8	#5	7'-10"	
s11(E)	36	#5	7'-8"	
s12(E)	45	#6	14'-3"	
s13(E)	14	#5	9'-10"	
s14(E)	14	#5	11'-4"	
s15(E)	21	#4	4'-11"	
t	42	#6	11'-2"	
u4(E)	8	#6	7'-8"	
v12(E)	34	#6	5'-2"	
v13(E)	50	#6	19'-7"	
w	12	#5	15'-9"	
w1	12	#5	3'-9"	
Structure Excavation			Cu.Yds.	148
Class 'X' Concrete			Cu.Yds.	131.7
Concrete Removal			Cu.Yds.	31.0
Reinforcement Bars			Lbs.	950
Reinforcement Bars Epoxy Coated			Lbs.	8290
Steel Piles(HP10x57)			Lin.Ft.	440

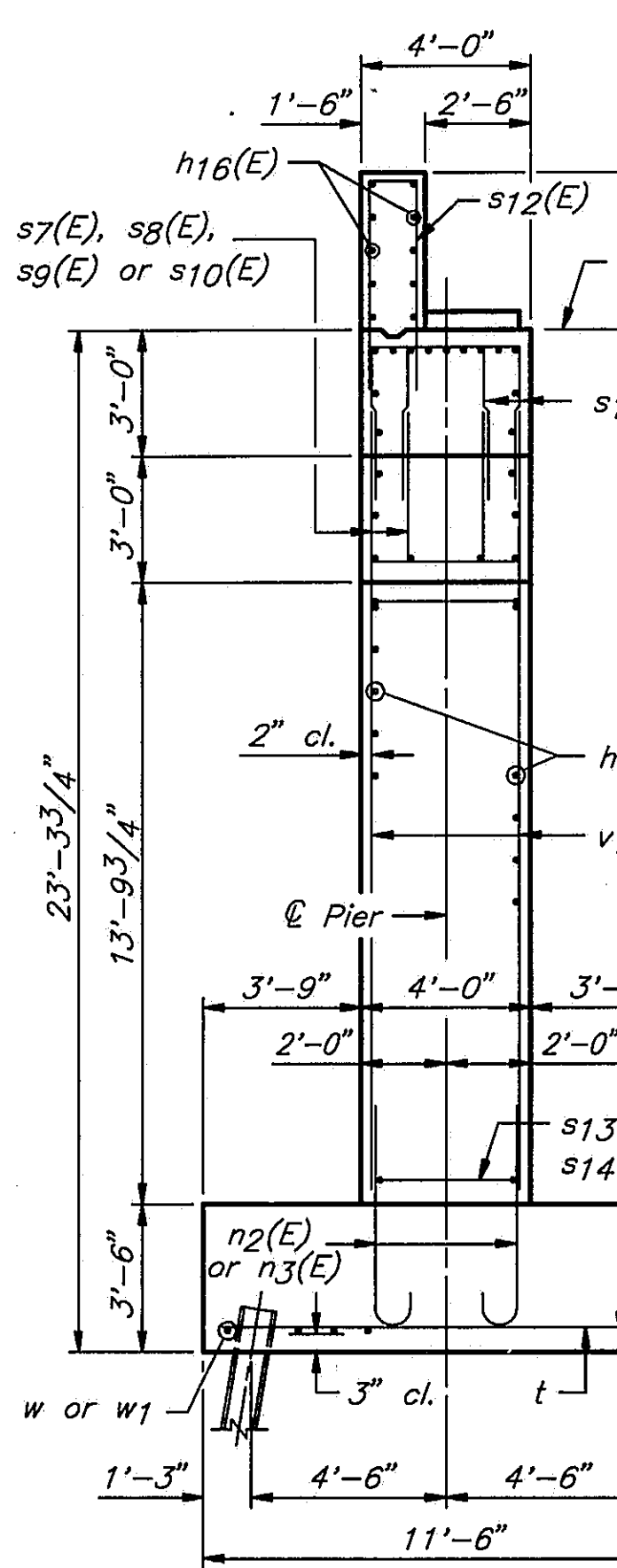
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PIER 7 S.B. 1-55  
 1-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

**PIER 7 PILE DATA**  
 Type ..... Steel HP 10x57  
 Capacity ..... Drive to Refusal  
 Est. Length ..... 55'  
 No. Required ..... 8



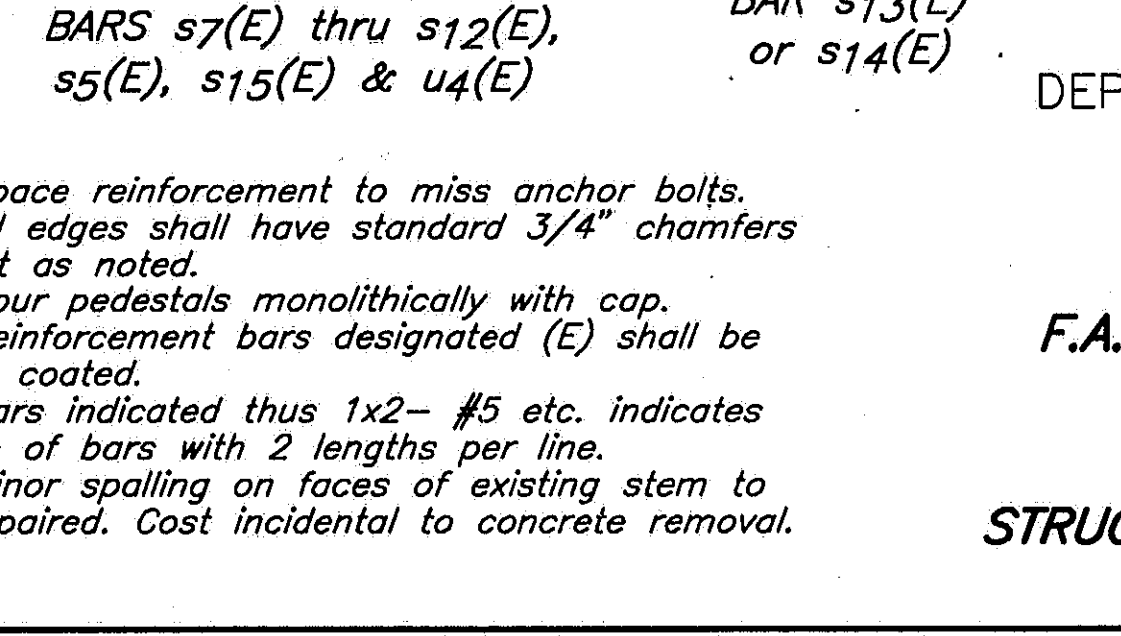
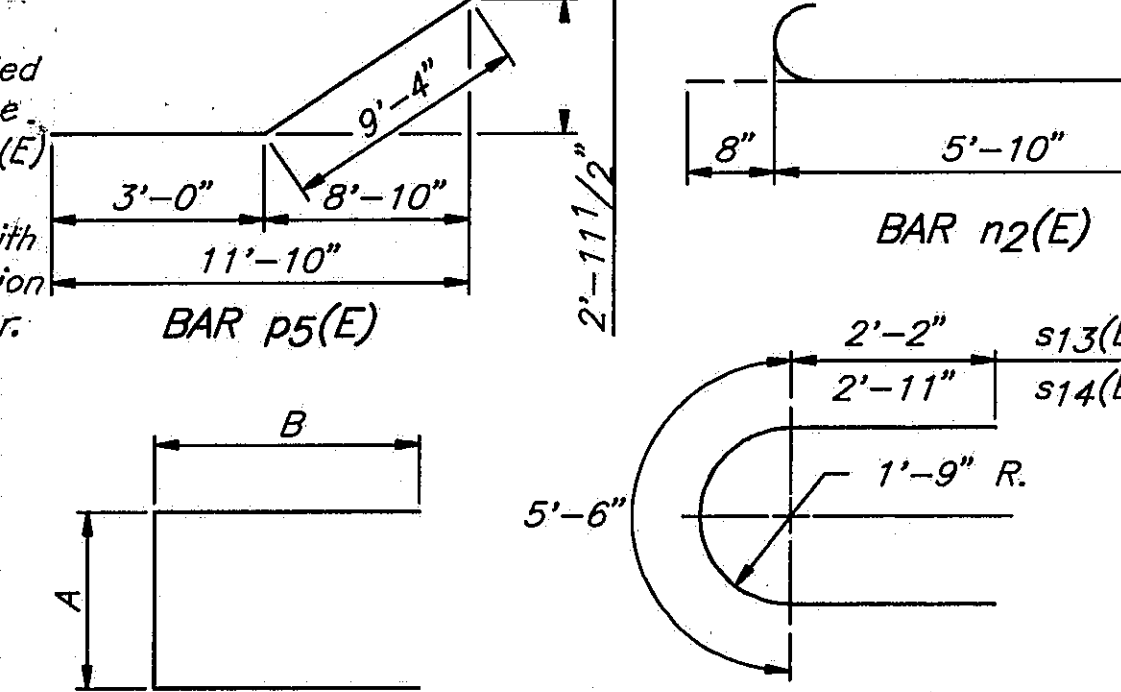
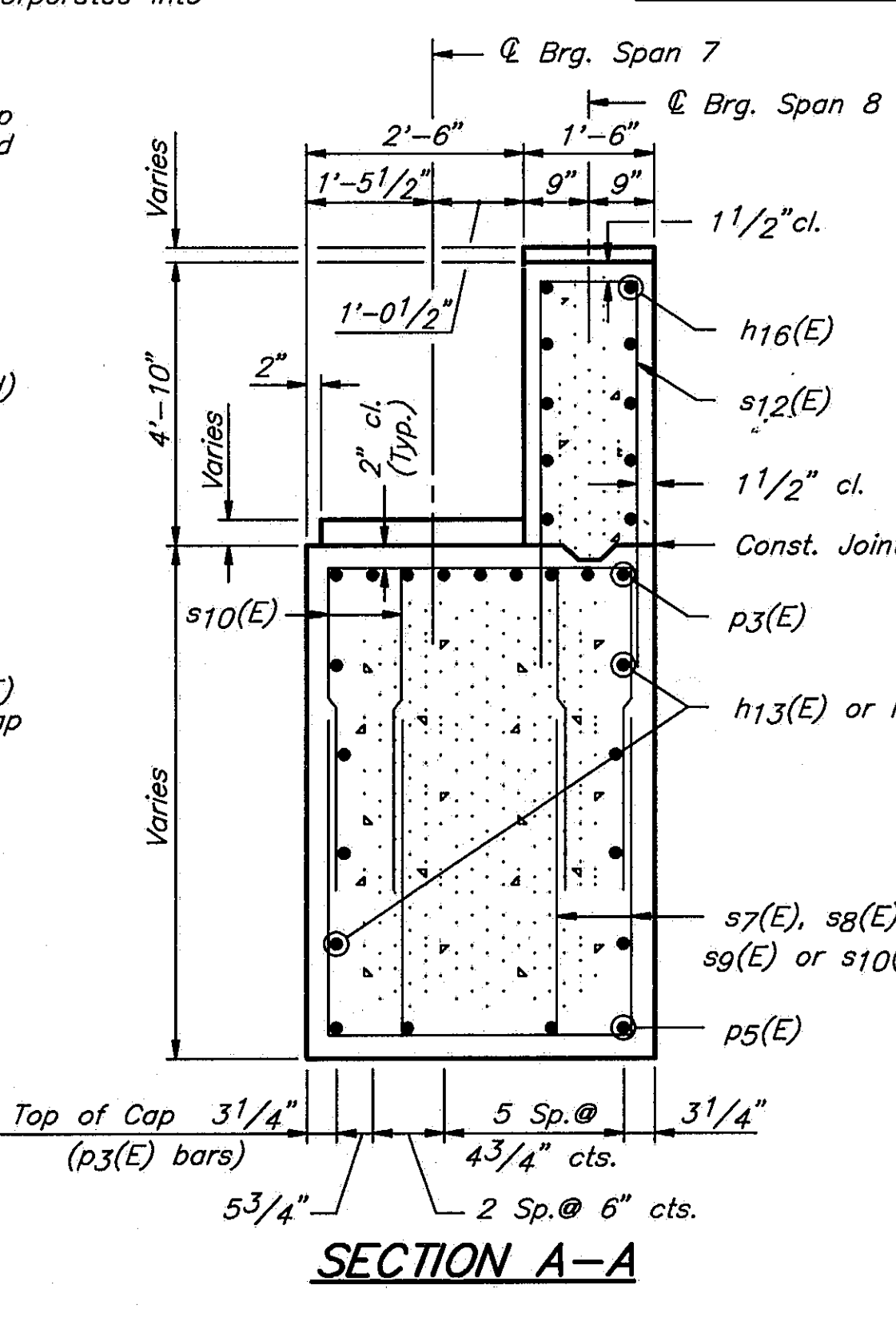
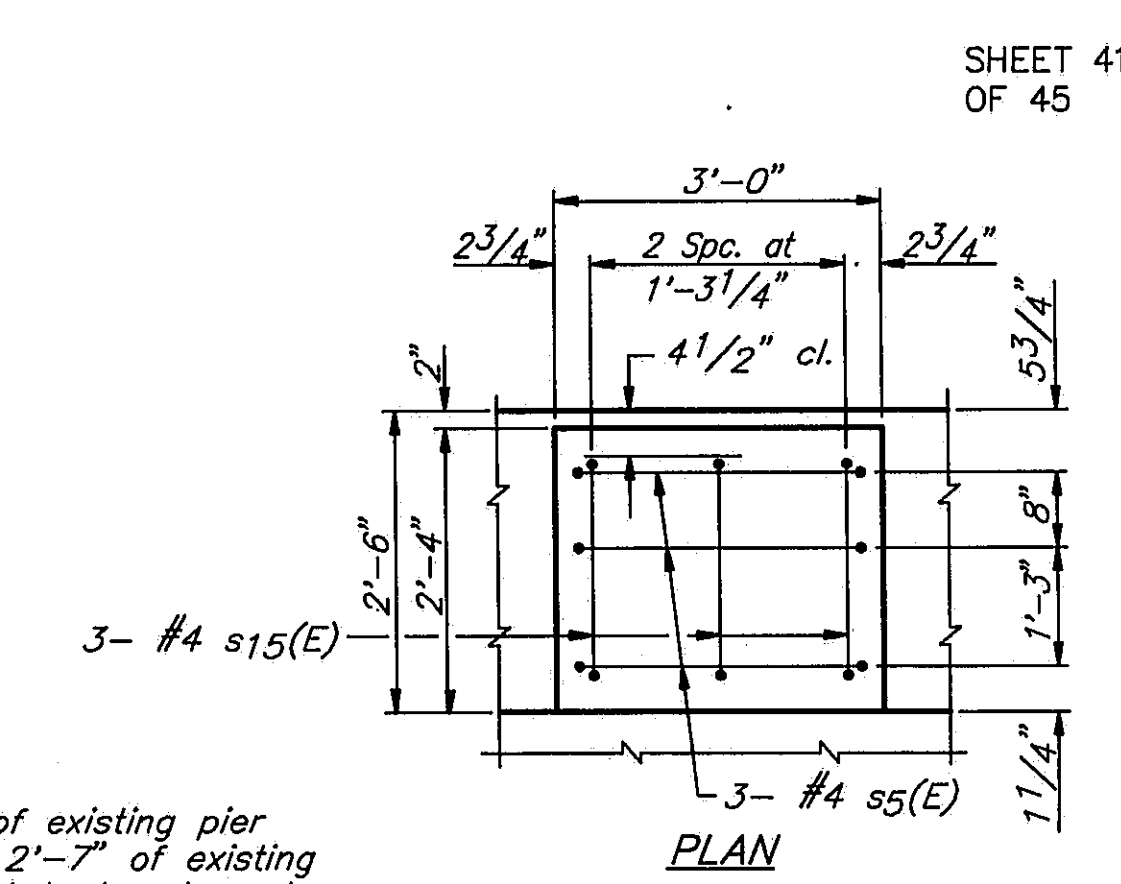
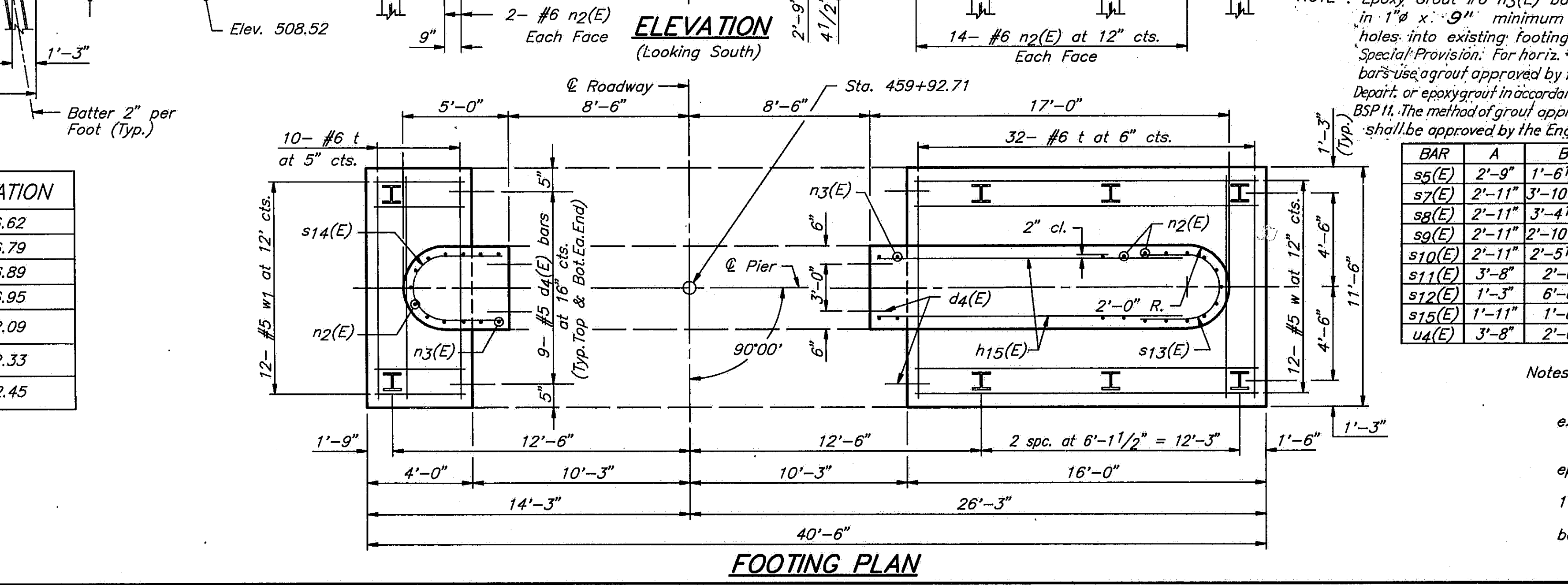
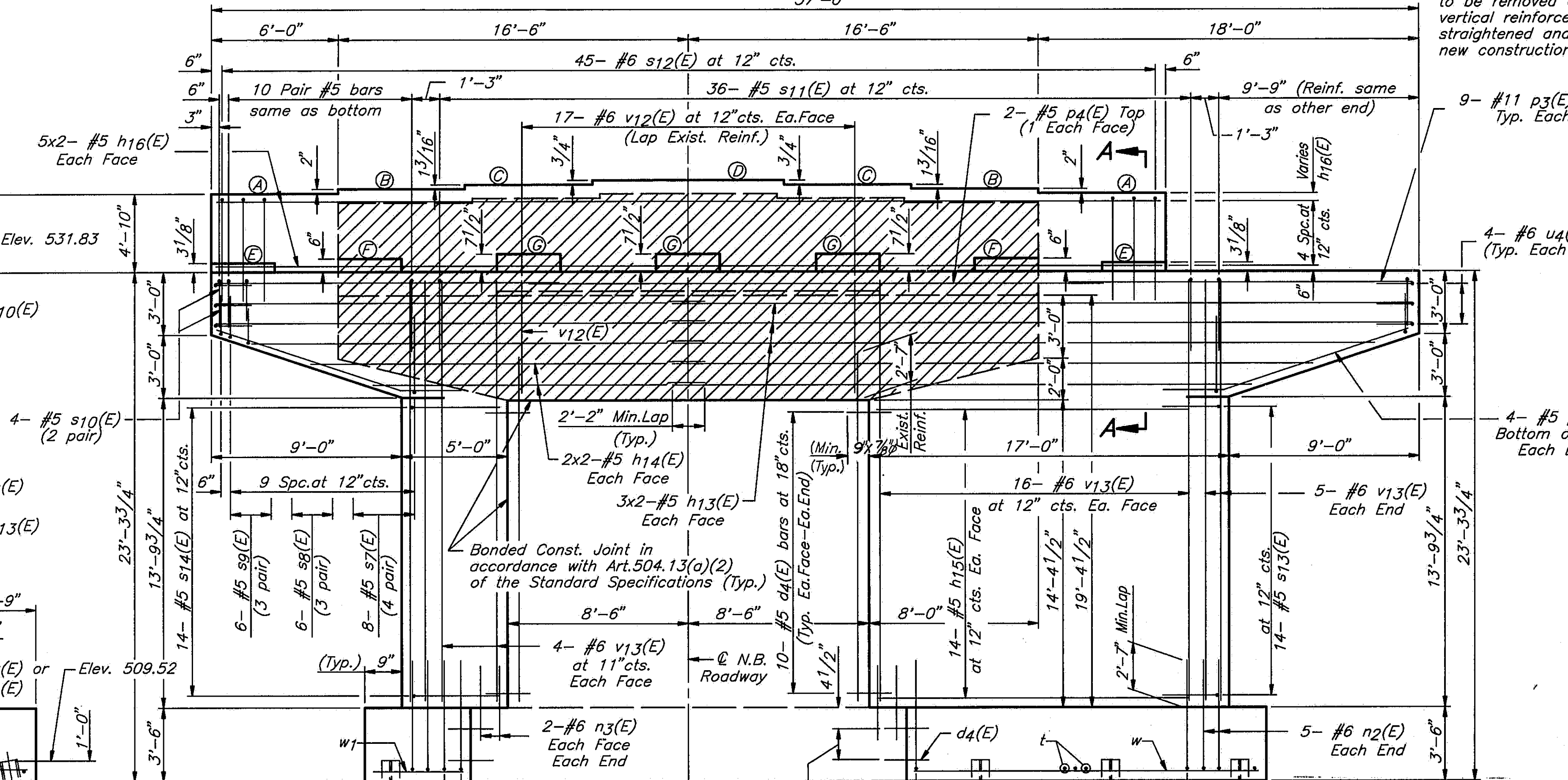
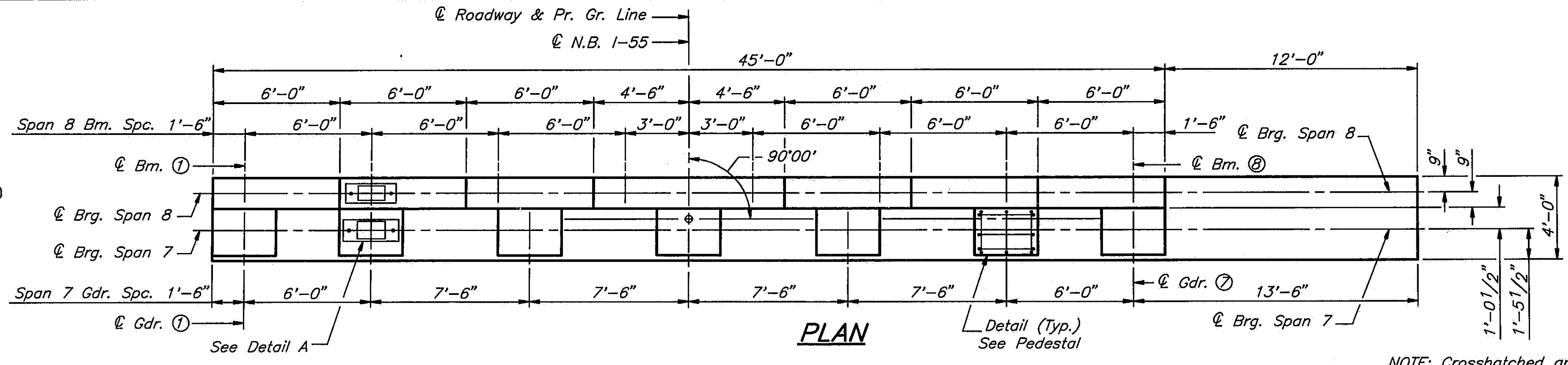
See Sheet #23 of 45 for Bearing Assembly Details



**END VIEW**

LOCATION	ELEVATION
SPAN 8 RISERS	
Ⓐ	536.62
Ⓑ	536.79
Ⓒ	536.89
Ⓓ	536.95
SPAN 7 PEDESTALS	
Ⓔ	532.09
Ⓜ	532.33
Ⓝ	532.45

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



Notes:  
 Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
 Four pedestals monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.  
 Minor spalling on faces of existing stem to be repaired. Cost incidental to concrete removal.

SHEET 41 OF 45

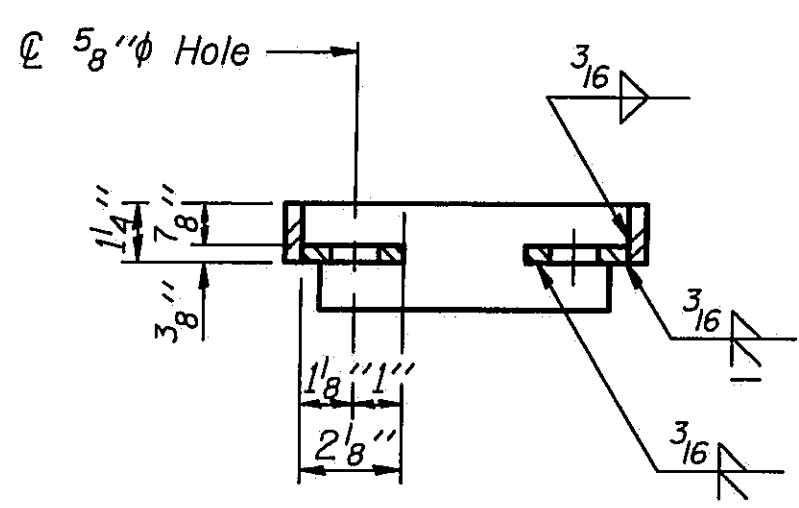
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	213
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

**BILL OF MATERIAL**

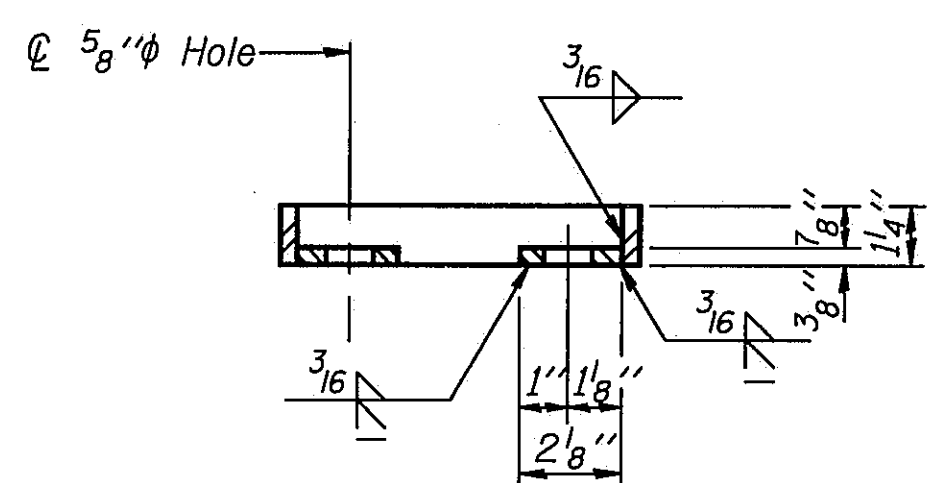
BAR NO.	NO.	SIZE	LENGTH	SHAPE
d4(E)	76	#5	2'-6"	
p13(E)	12	#5	29'-5"	
p14(E)	8	#5	25'-3"	
p15(E)	28	#5	14'-11"	
p16(E)	20	#5	23'-5"	
n2(E)	42	#6	6'-6"	
n3(E)	8	#6	4'-1"	
p3(E)	18	#11	16'-3"	
p4(E)	2	#5	28'-6"	
p5(E)	8	#5	12'-4"	
s5(E)	21	#4	5'-10"	
s7(E)	32	#5	10'-8"	
s8(E)	24	#5	9'-8"	
s9(E)	24	#5	8'-8"	
s10(E)	8	#5	7'-10"	
s11(E)	36	#5	7'-8"	
s12(E)	45	#6	14'-3"	
s13(E)	14	#5	9'-10"	
s14(E)	14	#5	11'-4"	
s15(E)	21	#4	4'-11"	
t	42	#6	11'-2"	
u4(E)	8	#6	7'-8"	
v12(E)	34	#6	5'-2"	
v13(E)	50	#6	19'-7"	
w	12	#5	15'-9"	
w1	12	#5	3'-9"	
Structure Excavation		Cu.Yds.	148	
Class 'X' Concrete		Cu.Yds.	131.7	
Concrete Removal		Cu.Yds.	31.0	
Reinforcement Bars		Lbs.	950	
Reinforcement Bars Epoxy Coated		Lbs.	8290	
Steel Piles(HP10x57)		Lin.Ft.	440	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
**PIER 7 N.B. I-55  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019**

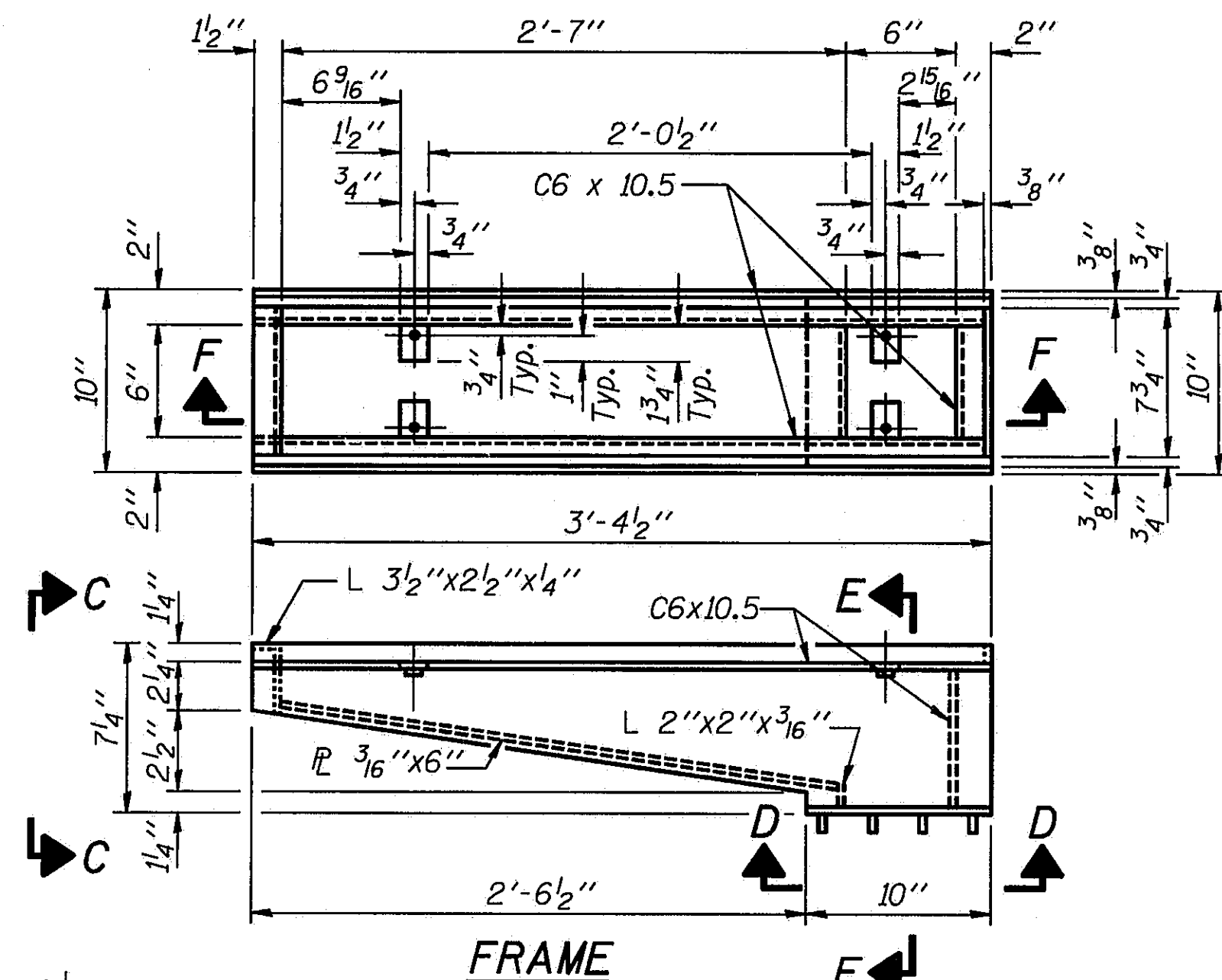
SHEET 42 OF 45	ROUTE NO. I-55	SECTION 84-2BR-1	COUNTY SANGAMON	TOTAL SHEETS 218	SHEET NO. 214
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



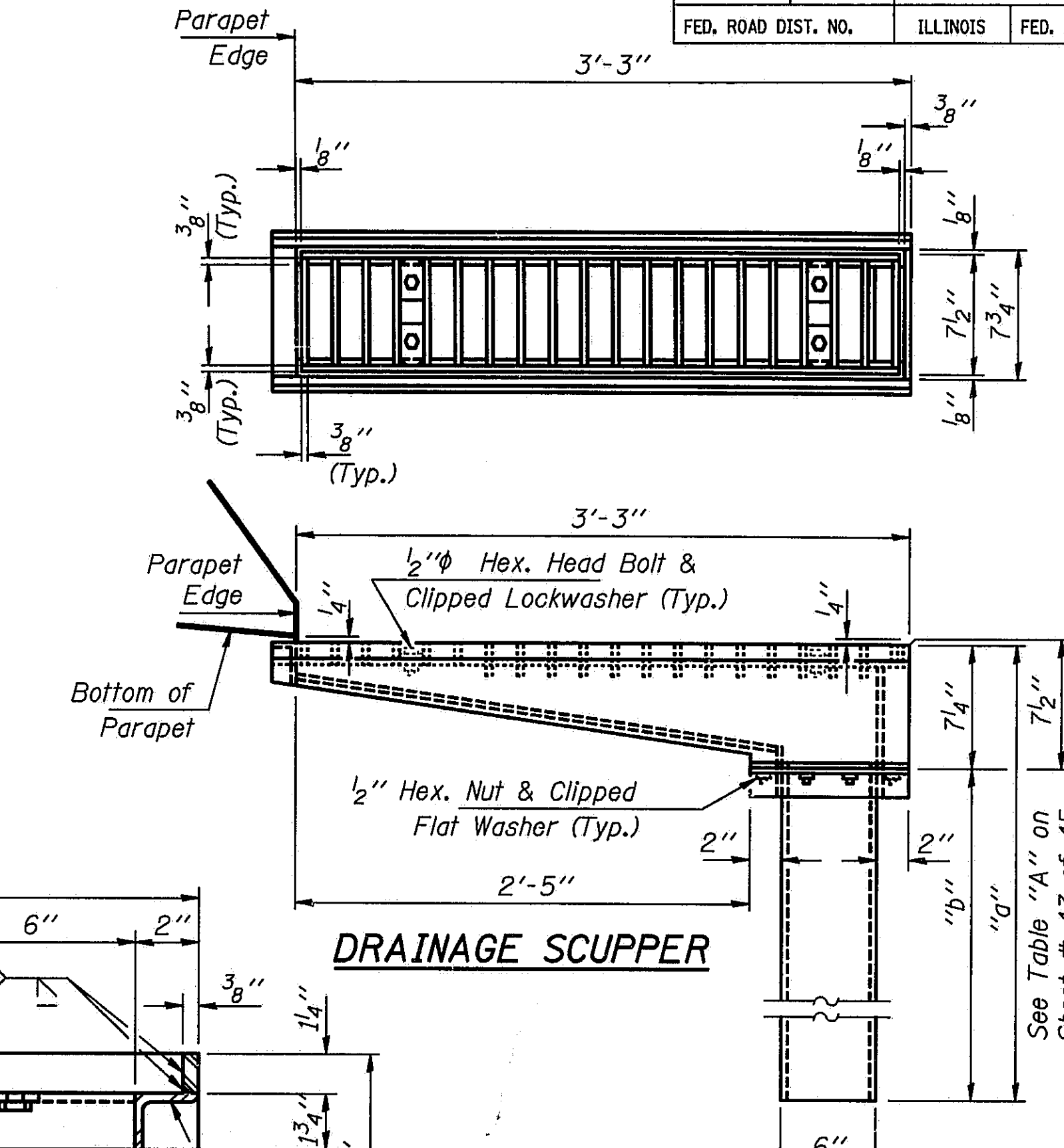
SECTION A-A



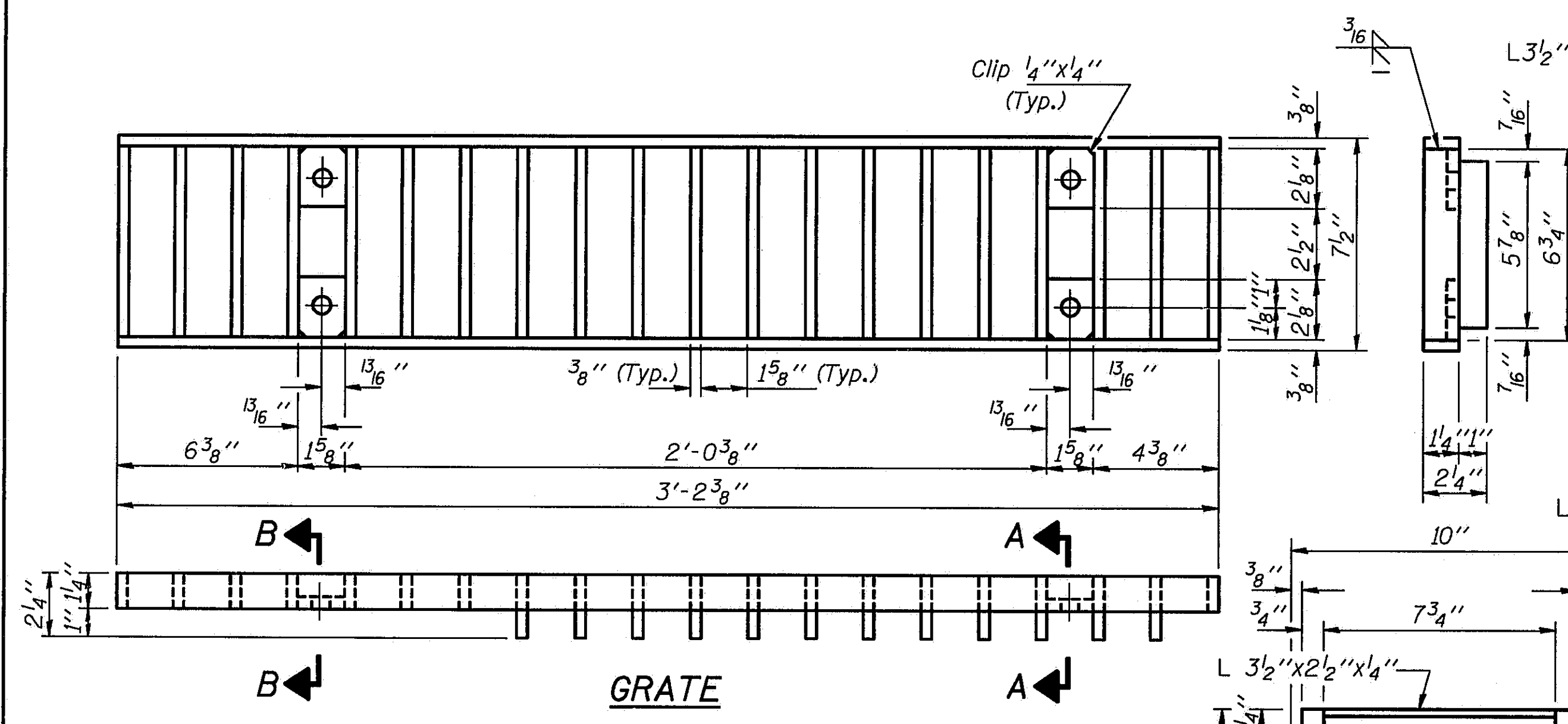
SECTION B-B



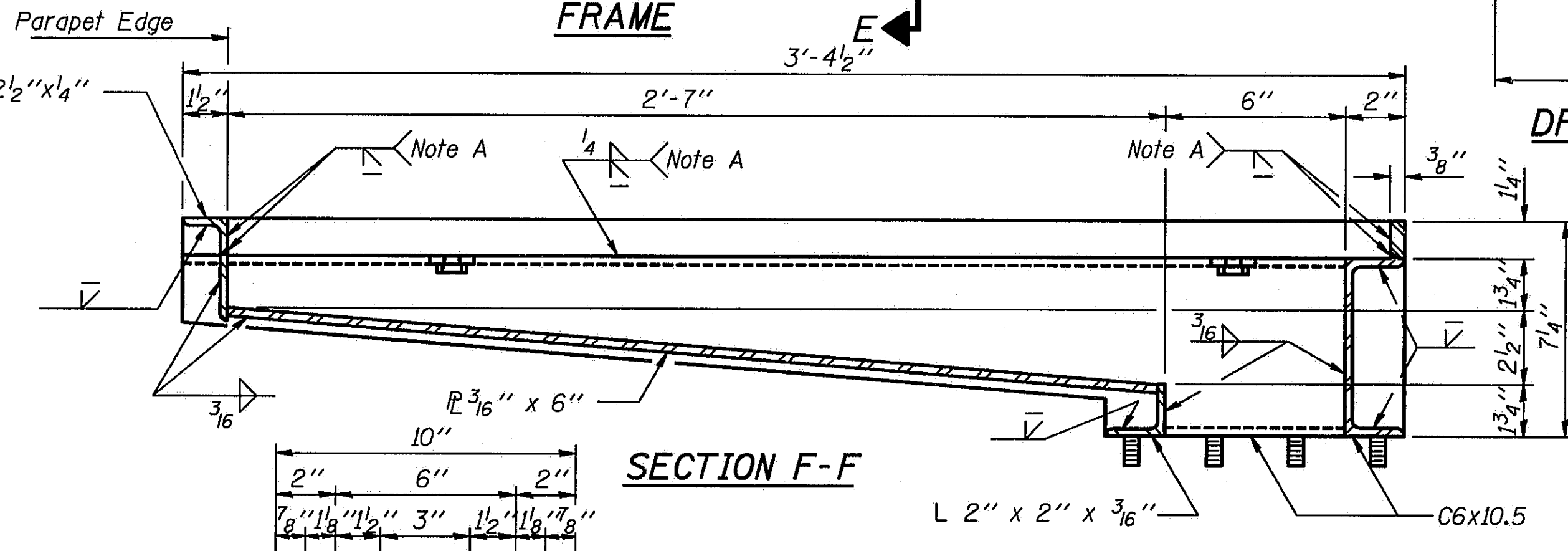
FRAME



DRAINAGE SCUPPER

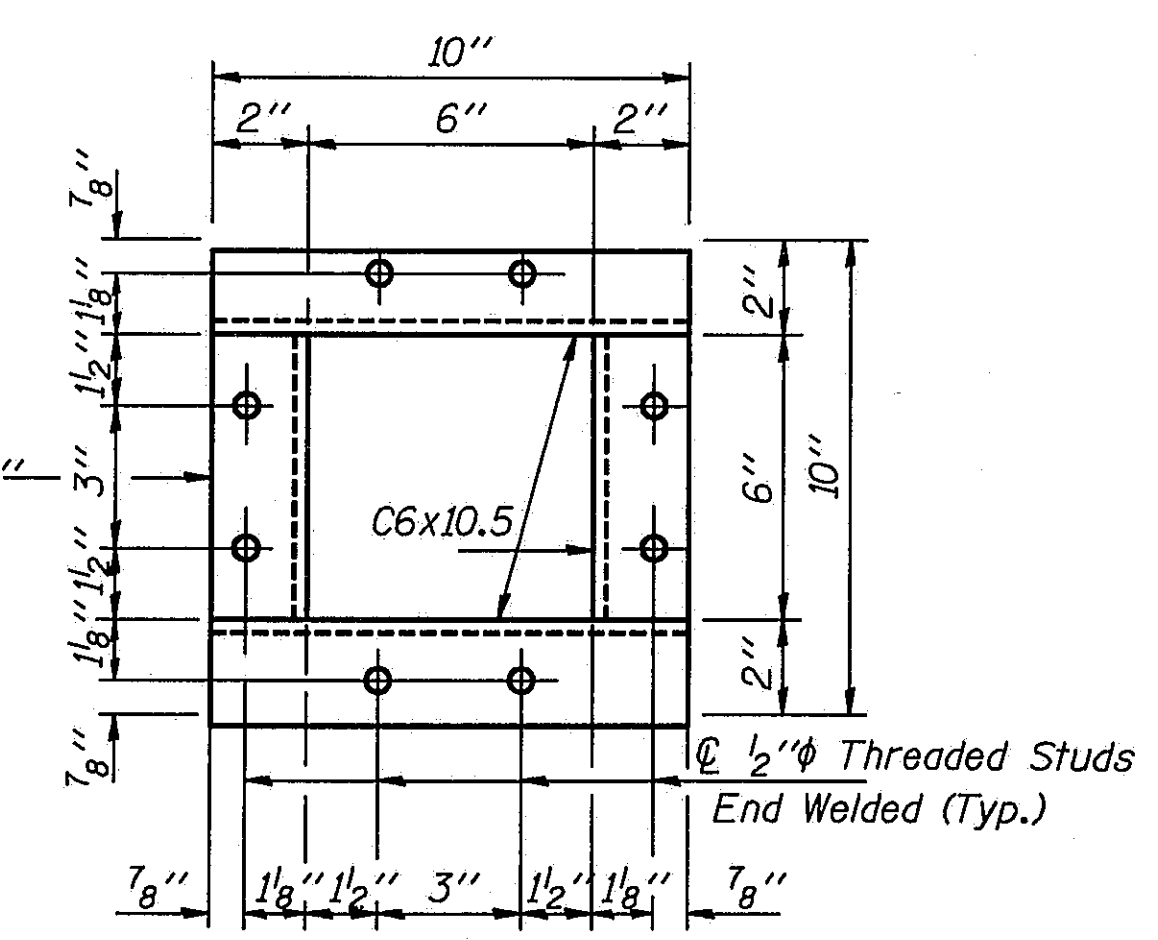


GRATE



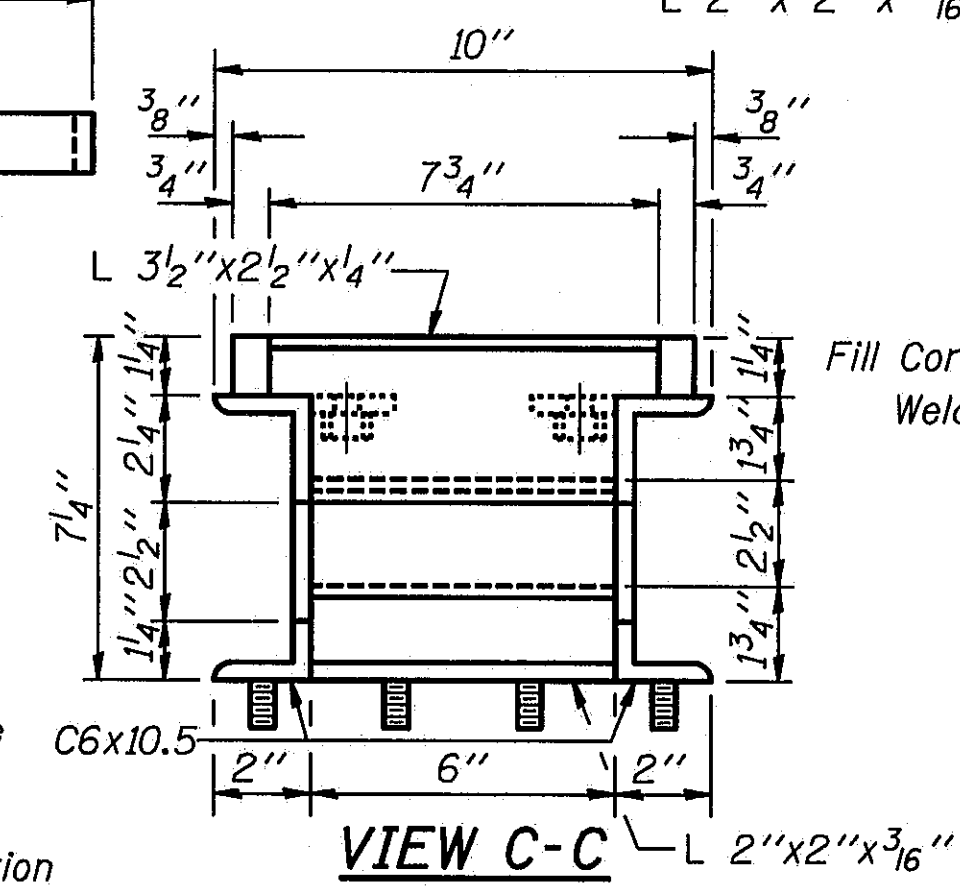
SECTION F-F

Note A: Surface of welds shall be recessed 1/16" Max. or placed flush with inside face of bars to provide clearance for Grate.

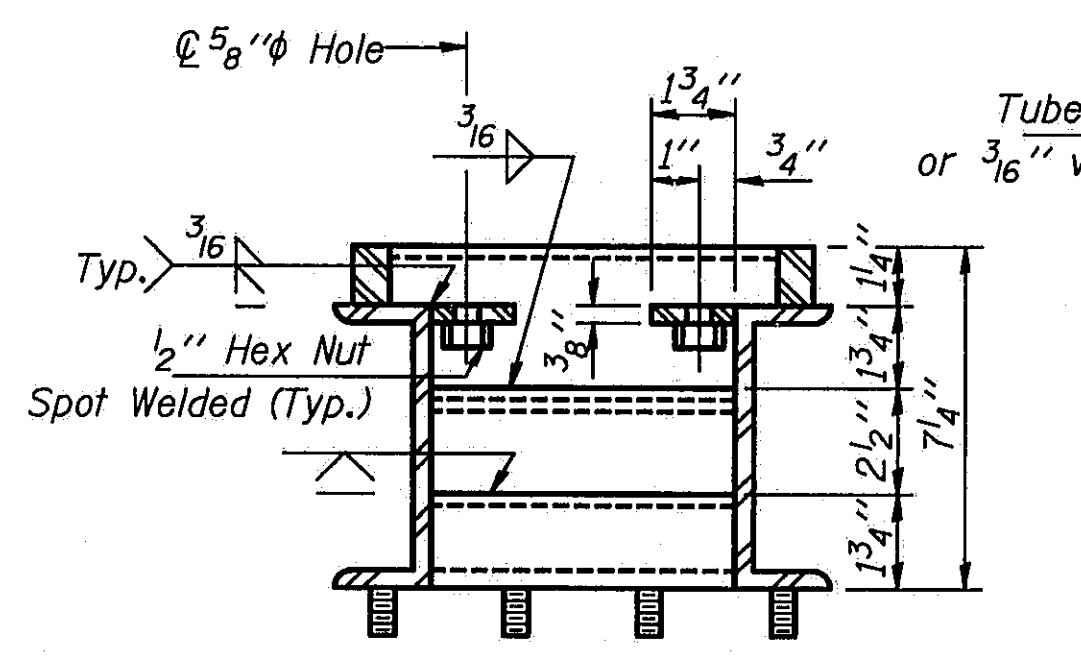


VIEW D-D

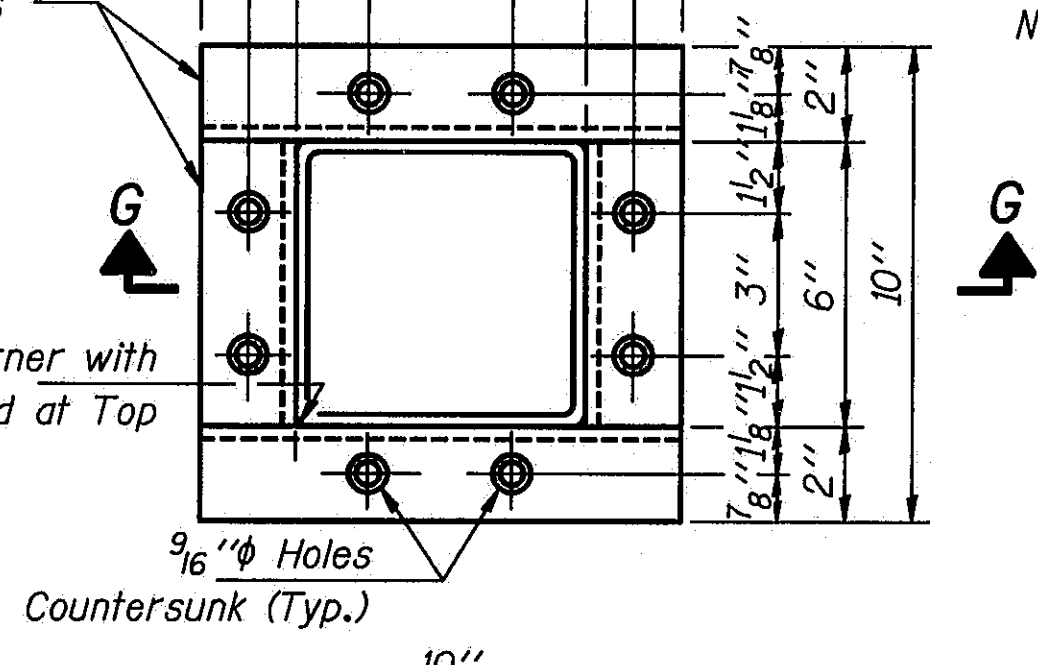
Notes: Hollow structural steel tubing shall conform to the requirements of ASTM designation A500 Grade B, or A501 Structural Steel Tubing. All other shapes, plates and bars shall conform to the requirements of AASHTO M270, Gr. 36. Bolts, studs, washers and nuts shall conform to the requirements of ASTM A307. The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M111 & ASTM A385. All bolts, washers and nuts shall be galvanized in accordance with AASHTO M232. Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price for "DRAINAGE SCUPPERS."



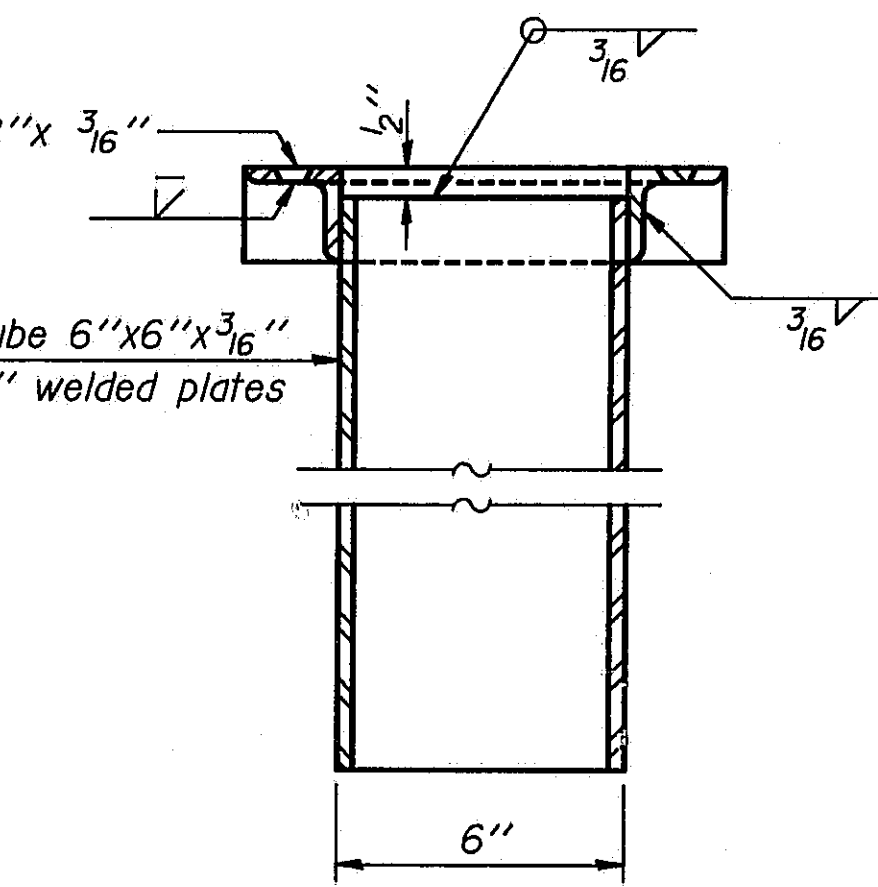
VIEW C-C



SECTION E-E



DOWNSPOUT



SECTION G-G

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	16

Quantity for one structure. Two structures are required.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
STEEL DRAINAGE SCUPPER (Sht. 1 of 2)  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

DESIGNED	
CHECKED	
DRAWN	HGT
CHECKED	PLH

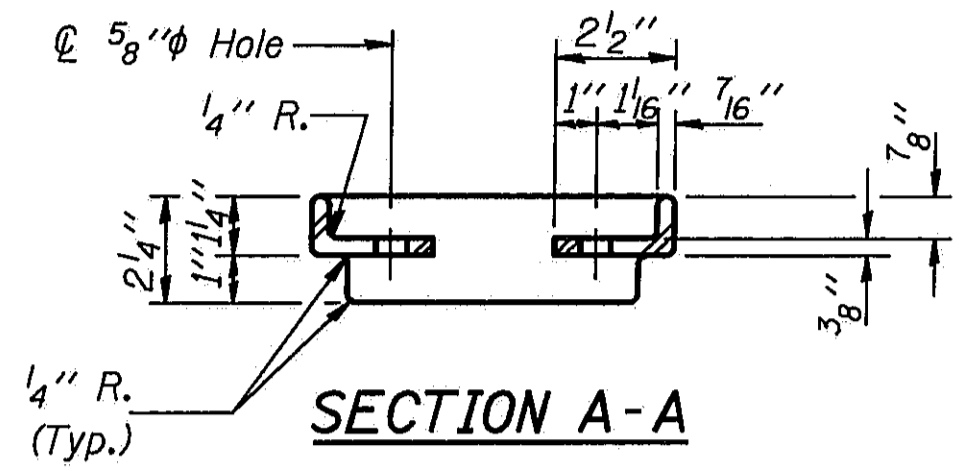
(W.T. to inside of exterior stringer flange shall not be > 3'-11")

DS-3 12-1-83

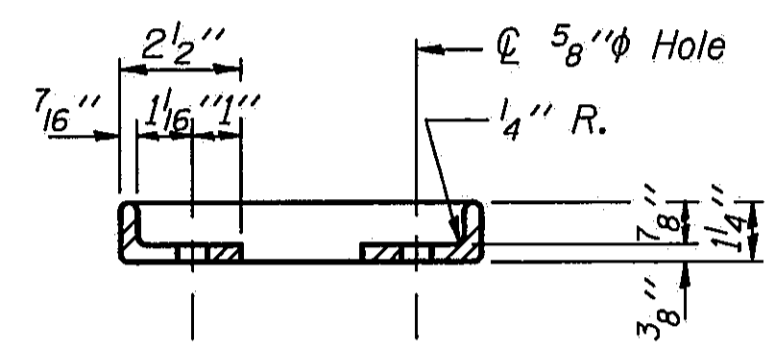
TAMERAN

SHEET 43  
OF 45

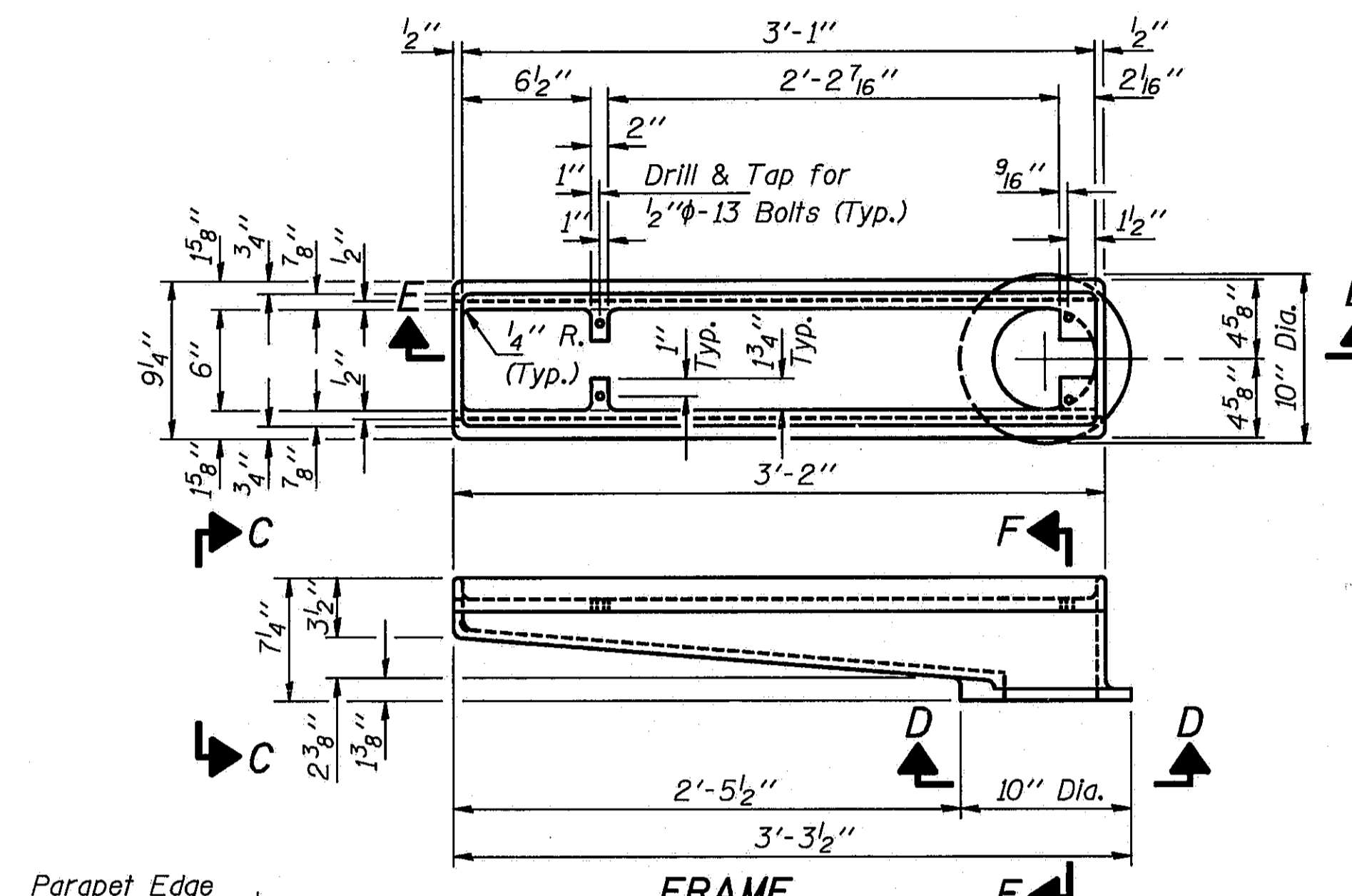
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	215
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



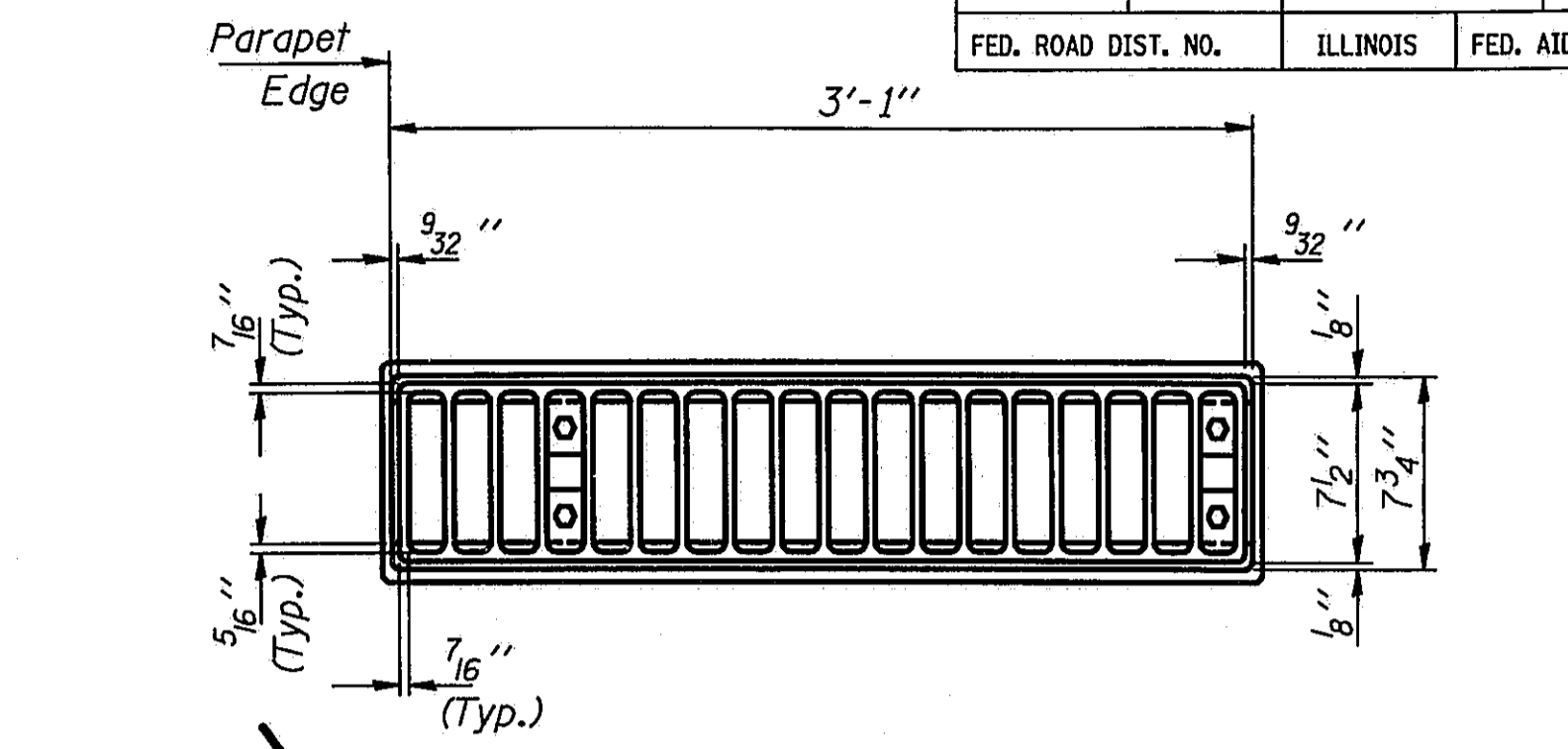
SECTION A-A



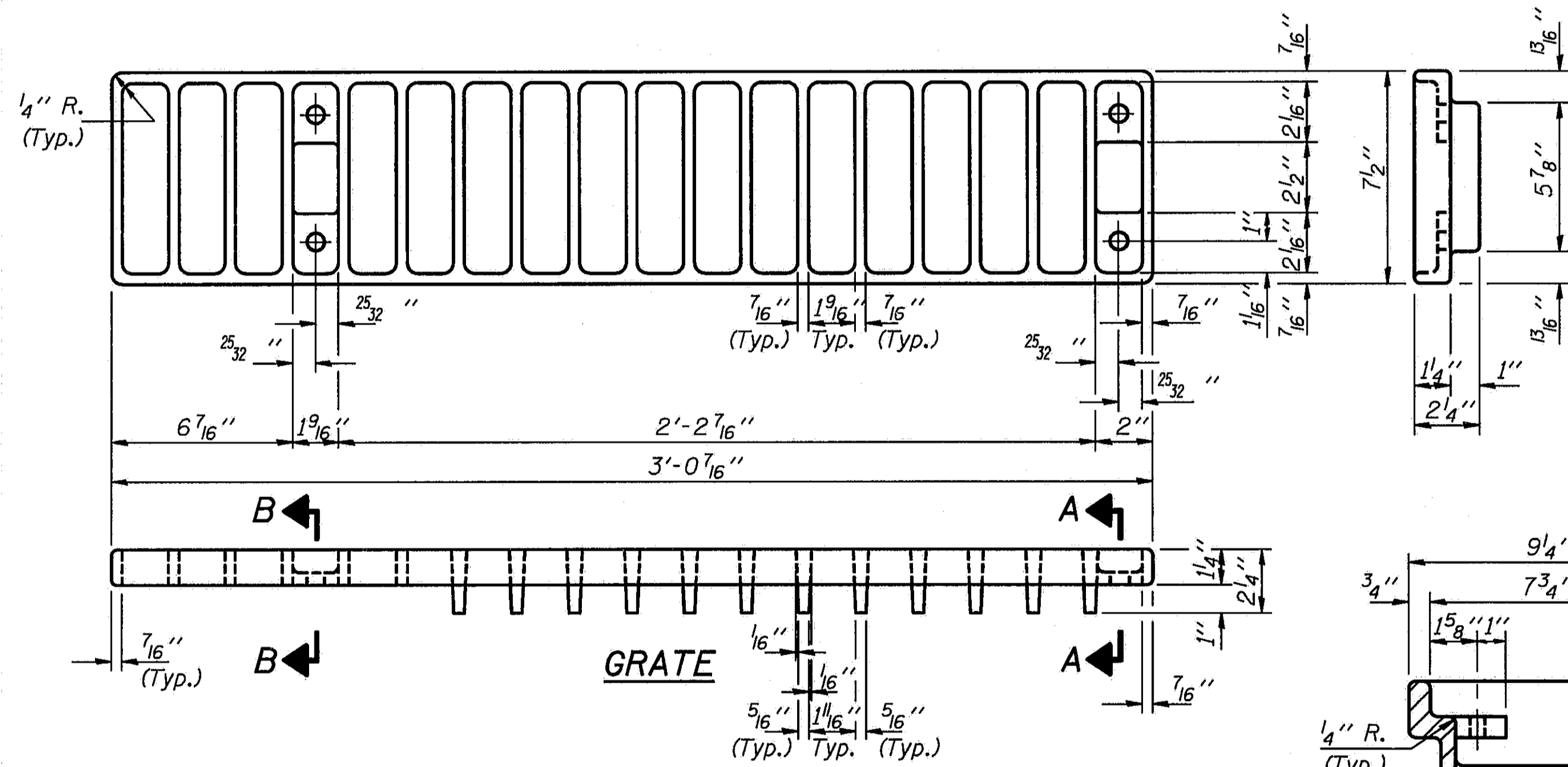
SECTION B-B



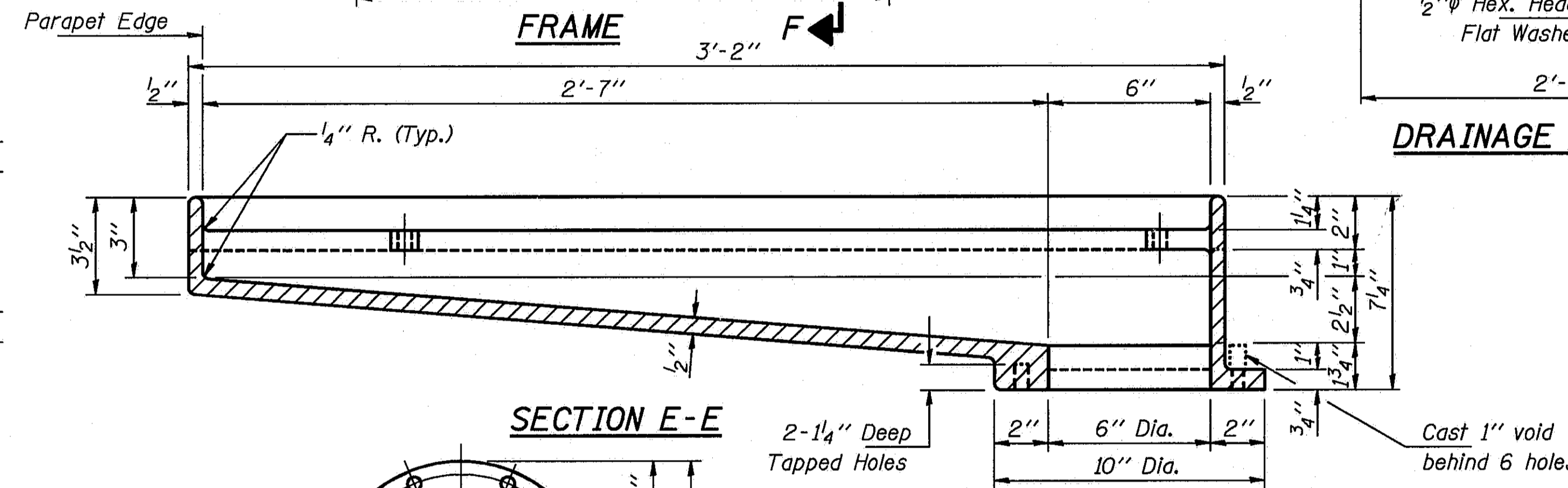
FRAME



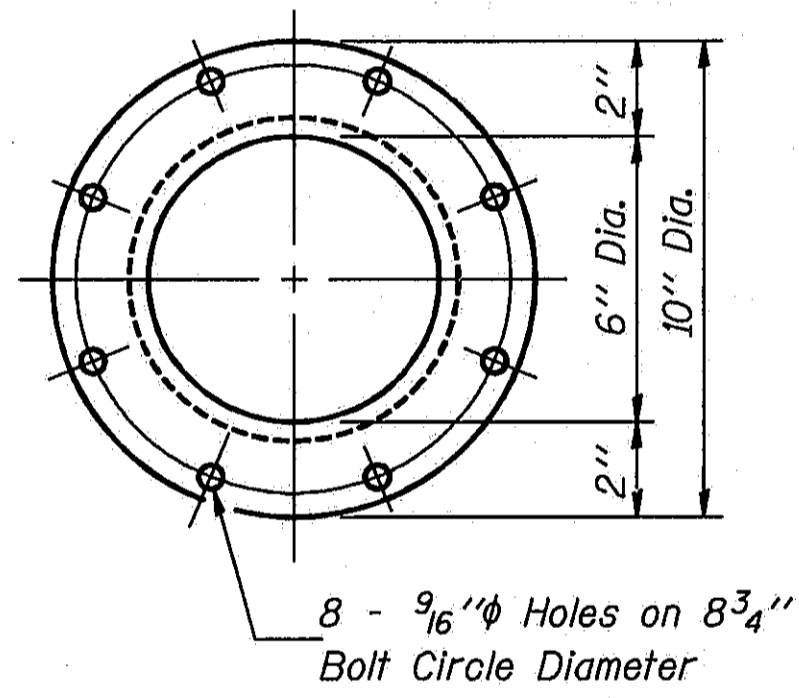
DRAINAGE SCUPPER



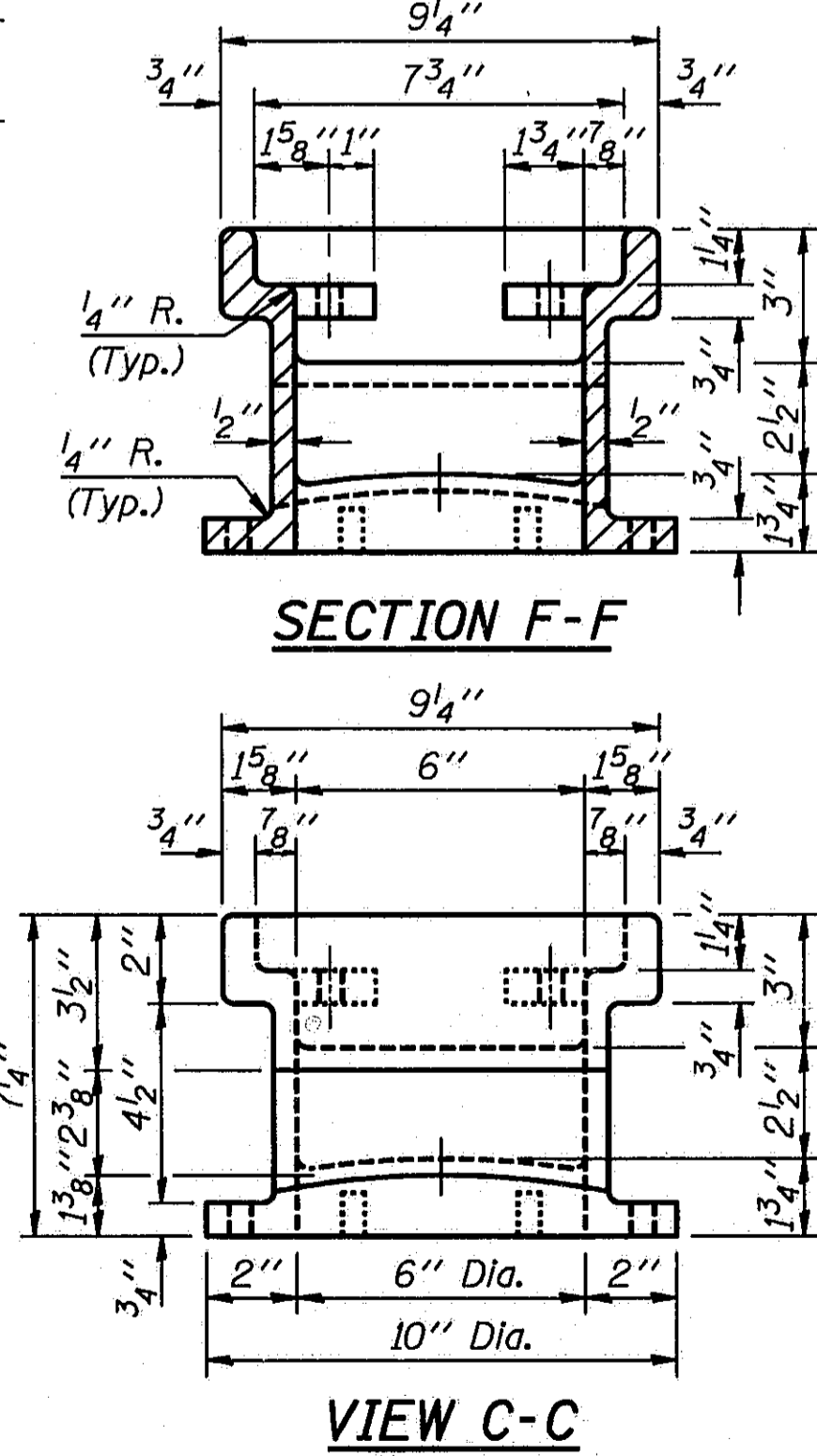
GRATE



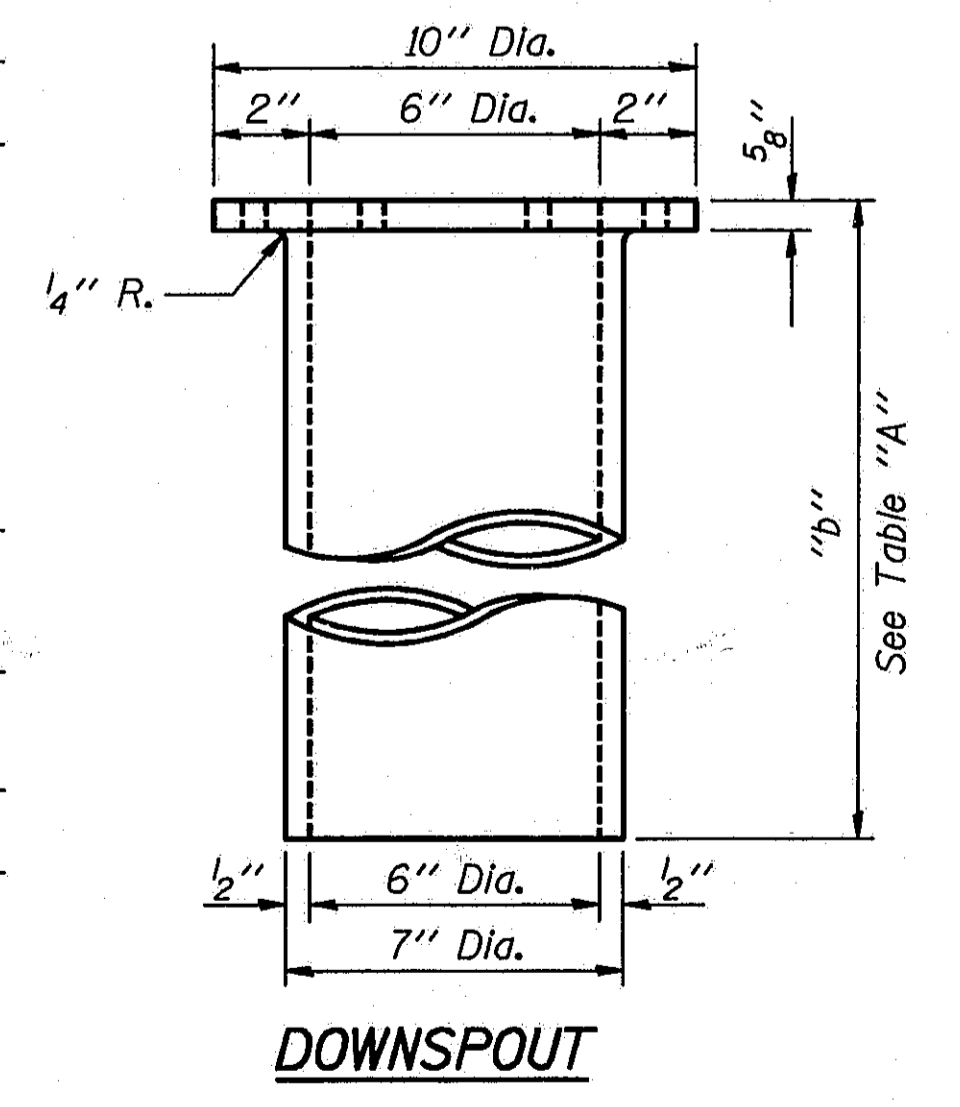
SECTION E-E



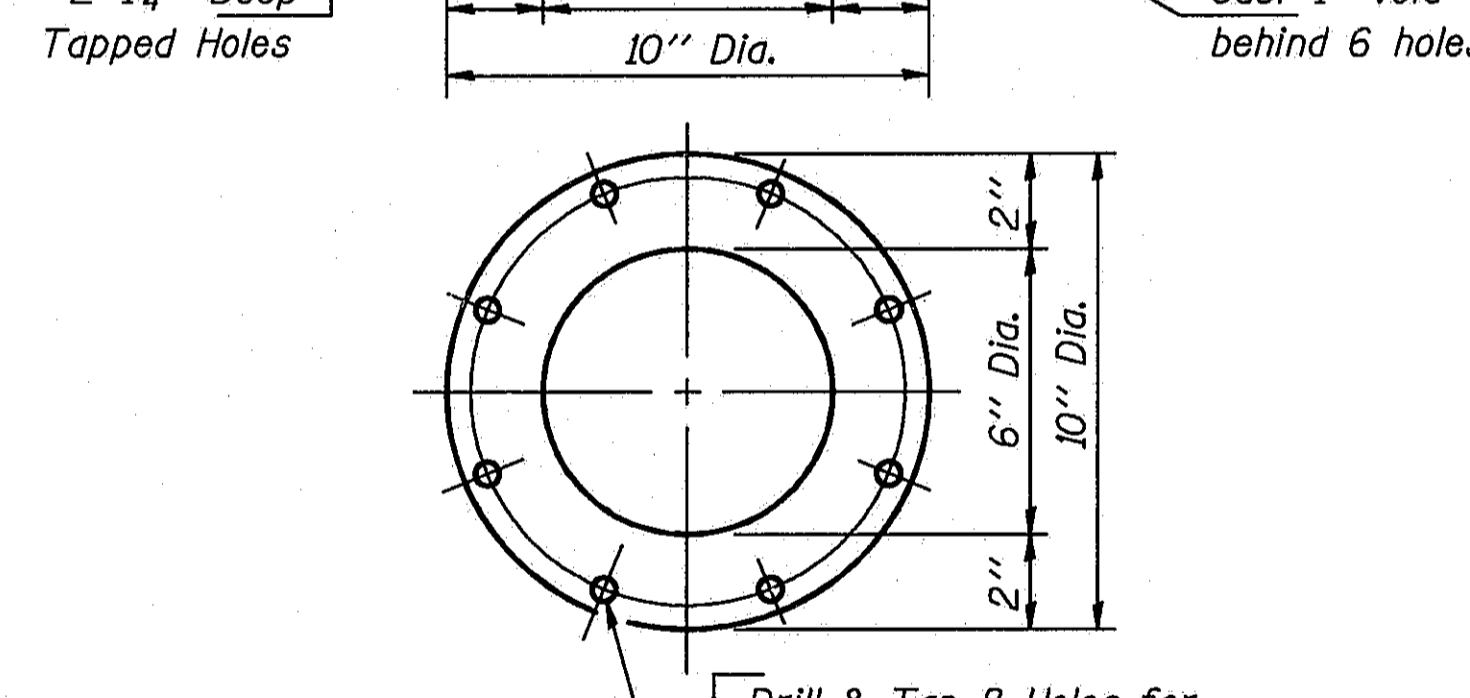
VIEW D-D



SECTION F-F



VIEW C-C



DOWNSPOUT

LOCATION	DIMENSION			NO.
	a	b	c	
36" Beam Spans	3'-11"	3'-3 1/4"	3'-13 1/4"	12
12" Gdr. Spans	8'-5"	7'-9 1/4"	7'-7 3/4"	4

Number req'd is for one structure. Two structures are required.

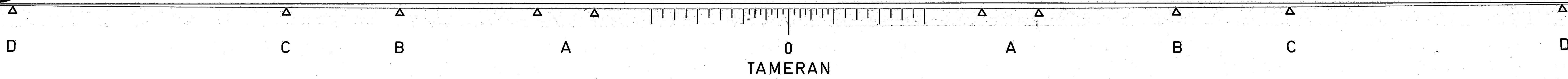
Notes:  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.  
 Bolts and washers shall conform to the requirements of ASTM A307.  
 All bolts and washers shall be galvanized in accordance with AASHTO M232.  
 As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193, Type 304.  
 Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price for "DRAINAGE SCUPPERS."  
 The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DESIGNED	
CHECKED	
DRAWN	HGT & P. Roy
CHECKED	PLH

(W.T. to inside of exterior stringer flange shall not be > 3'-11")

DS-4 12-1-83

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 ALTERNATE CAST DRAINAGE SCUPPER  
 (Sht. 2 of 2)  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

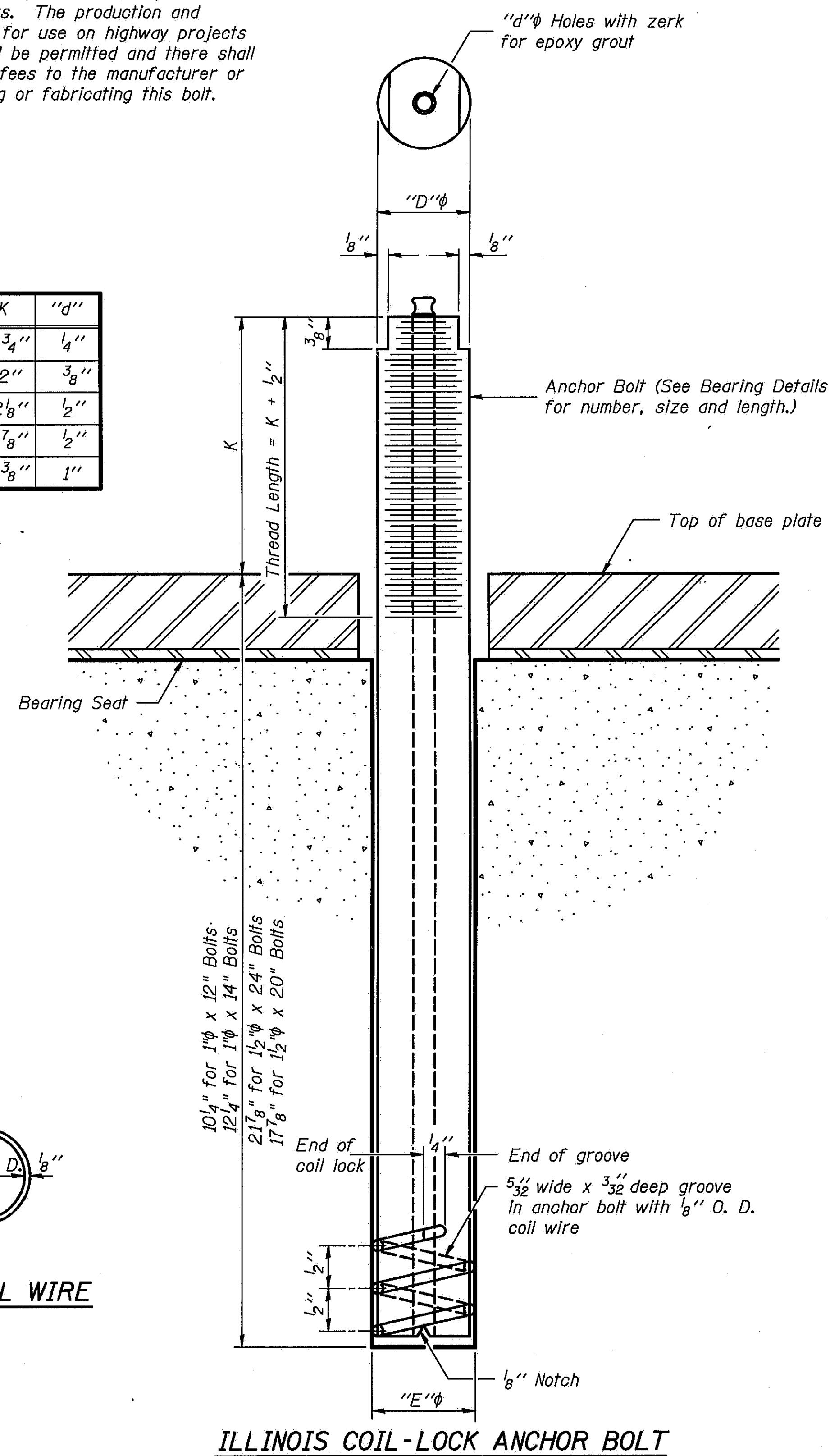


TAMERAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	216
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 5/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 5/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



### MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

### INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

### ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer conforming to ASTM A307.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

### GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DWG. NAME: ANCHOR BOLT

DESIGNED	PLH
CHECKED	RBR
DRAWN	HGT
CHECKED	PLH

ABB-1 12-1-83

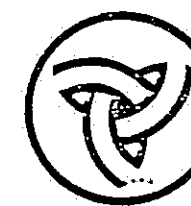
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
ANCHOR BOLT DETAILS FOR BEARINGS  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019











MICROFILM

Illinois Department of Transportation

Memorandum

To: ROGER WRIGHT Attn: JACK DAVIDSON  
From: Ralph E. Anderson By: Irej I. Kaspar  
Subject: AS REVISED PLANS  
Date: 12-15, 1992

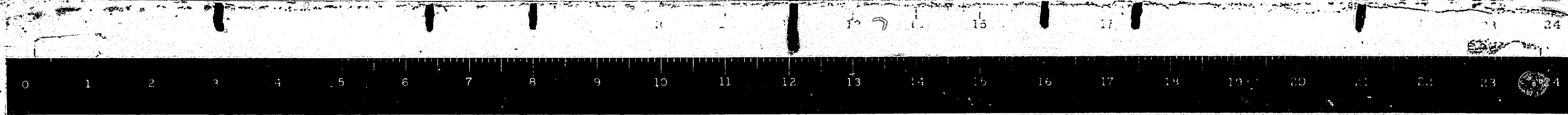
FAI Route 55 C-96-517-92  
Section 84-2BR-1 SN 084-0018, 0019  
SANGAMON county

State Contract No. 92347  
ITEM # 82 LETTING DATE 8-28-92

RETURN MYLARS TO DISTRICT 6.  
ATTN: JERRY PARSONS 5-5314  
Transmitted with this memorandum are eight (8) sets of prints each  
of revised sheets 1A, 18SA, 189A, 206A, 207A,  
212A and 213A of 218.  
for the above mentioned structure. Reel 6195

These revisions include STRUCTURAL STEEL DETAILS  
FOR SPLICES & DIAPHRAGMS & DIMENSIONAL  
ERRORS ON FINGER PLATES & PIER SEATS

RIB  
cc-James Easterly (2 sets of prints)  
3020B

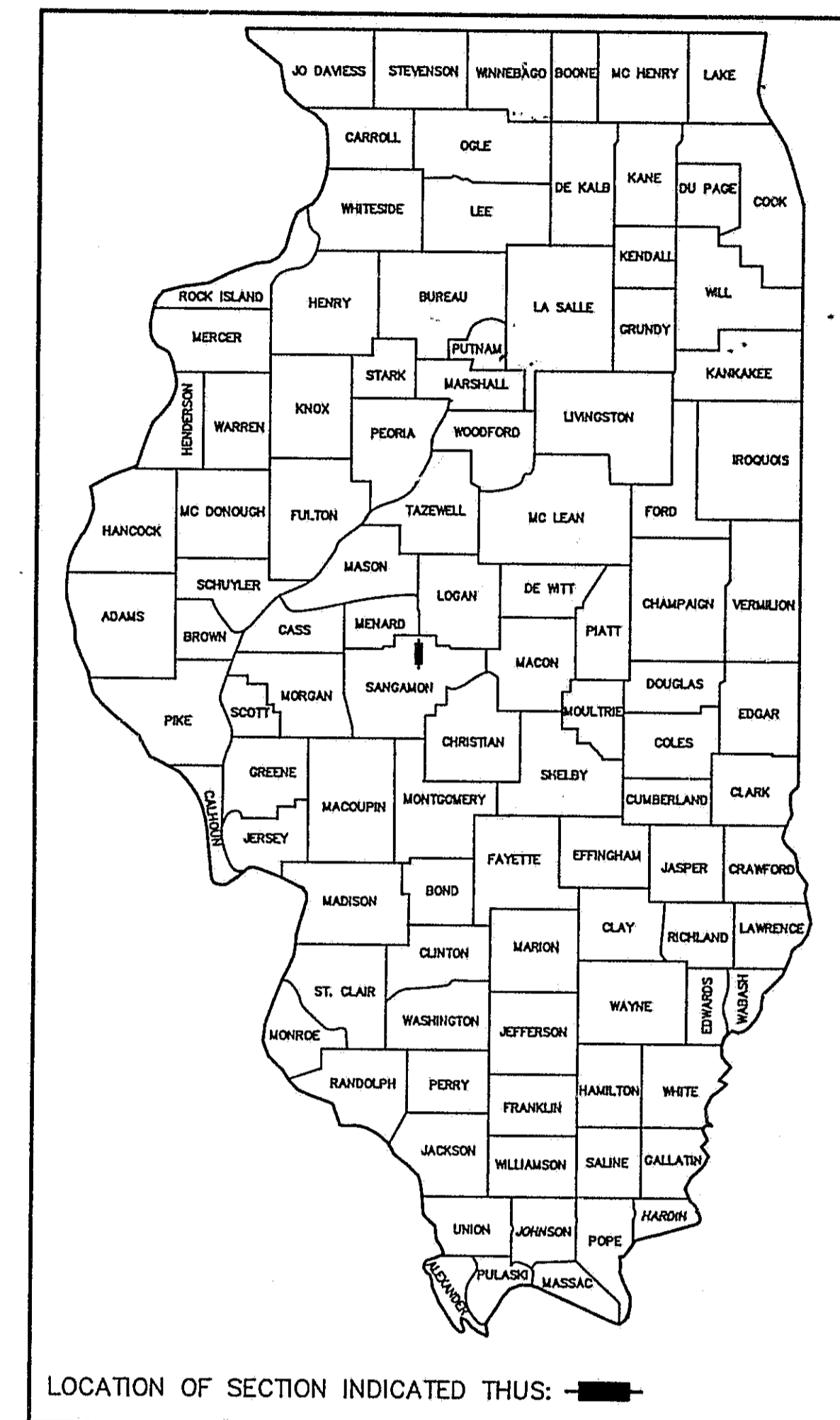


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY**

F.A.I. ROUTE 55  
SECTION 84-2 (BR-1, HVBR-2, BR-2)  
PROJECT NHI-55-3(121)106  
SANGAMON COUNTY  
C-96-517-92

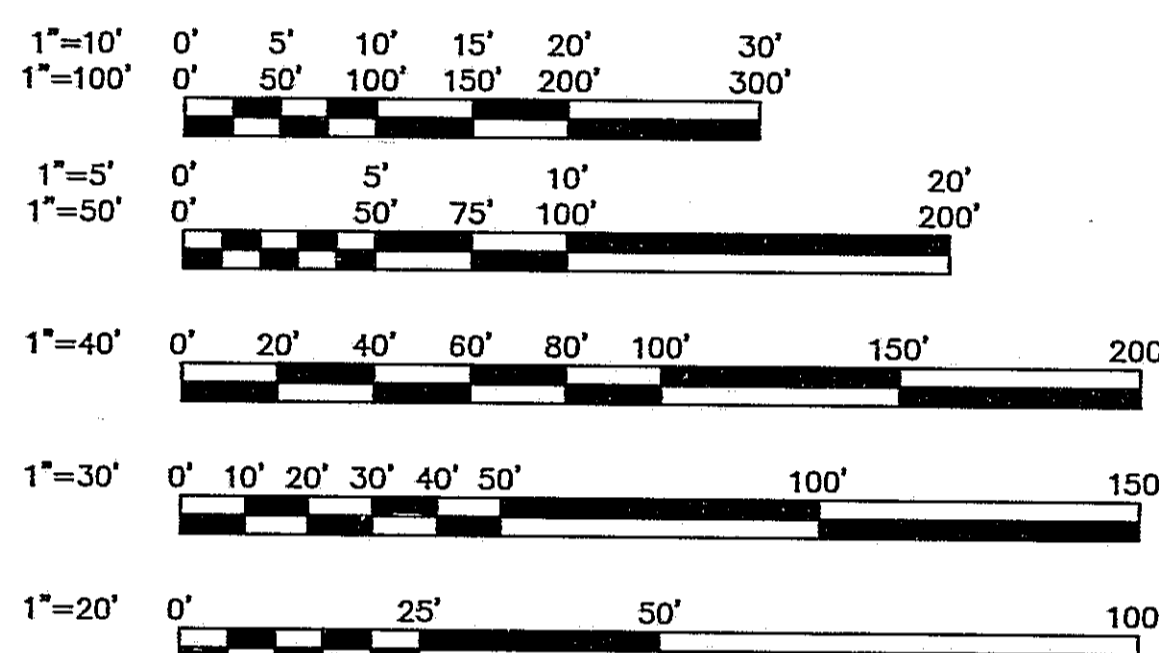
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	*	SANGAMON	219	74
STA.	TO STA.			
* 84-2 (BR-1, HVBR-2, BR-2)				

JOB NO. D-96-508-91



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
(1A)	COVER SHEET
2 - 7	TYPICAL SECTIONS
8 - 10	SUMMARY OF QUANTITIES
11	SCHEDULE OF QUANTITIES
12 - 23	PLAN AND PROFILE - BRIDGE APPROACHES
24 - 30	PLAN AND PROFILE - CROSSOVERS
31 - 32	PLAN AND PROFILE - CONST. ACCESS ROADS
33 - 44	MAINTENANCE OF TRAFFIC DETAILS
44A	PAVEMENT ELEVATION AND PAVEMENT MARKING DETAILS
45 - 50	PAVEMENT DETAILS
51 - 52	LIGHTING DETAILS
53 - 119	CROSS SECTIONS
120 - 149	FANCY CREEK N.B. & S.B. BRIDGE PLANS
150 - 172	OL-55 & SPECIAL N.B. BRIDGE PLANS
(173 - 218)	SANGAMON RIVER N.B. & S.B. BRIDGE PLANS INCLUDES 185A, 189A, 206A, 207A, 212A, 213A



FULL SCALE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS THE ABOVE SCALES MAY BE USED.

**THE JOINT UTILITY LOCATING  
INFORMATION FOR EXCAVATORS  
(J.U.L.I.E.) SYSTEM PHONE  
NUMBER IS (800) 892-0123.**

**STANDARD DRAWINGS**

1683-4	2313-5
1686-4	2314-6
2122-15	2315-8
2130-12	2316-13
2149-11	2324-7
2213-4	2336-4
2217-3	2339-2
2228-4	2340-4
2230-16	2341-4
2237-11	2362-3
2250-2	2381
2298-9	2383-3
2299-13	2388-1
2300-3	2396
2301-5	2397-1
2302-5	2430
2304-7	2438
2308-5	

**CONTRACT NO. 92347**

**SECTION 84-2 (HVBR-2) INCLUDES:**

N.B. STRUCTURE AT STA. 346+93.36 (SN 084-0020)  
CARRYING F.A.I. RTE. 55 OVER BUSINESS LOOP-55  
AND S.P.C.S.L. RAILROADS  
DECK TO BE REMOVED AND STRUCTURE WIDENED,  
REUSING STRUCTURAL STEEL AND RESURFACING OF  
N.B. F.A.I. RTE. 55 FROM STA. 334+90.37 TO STA. 343+90.37.

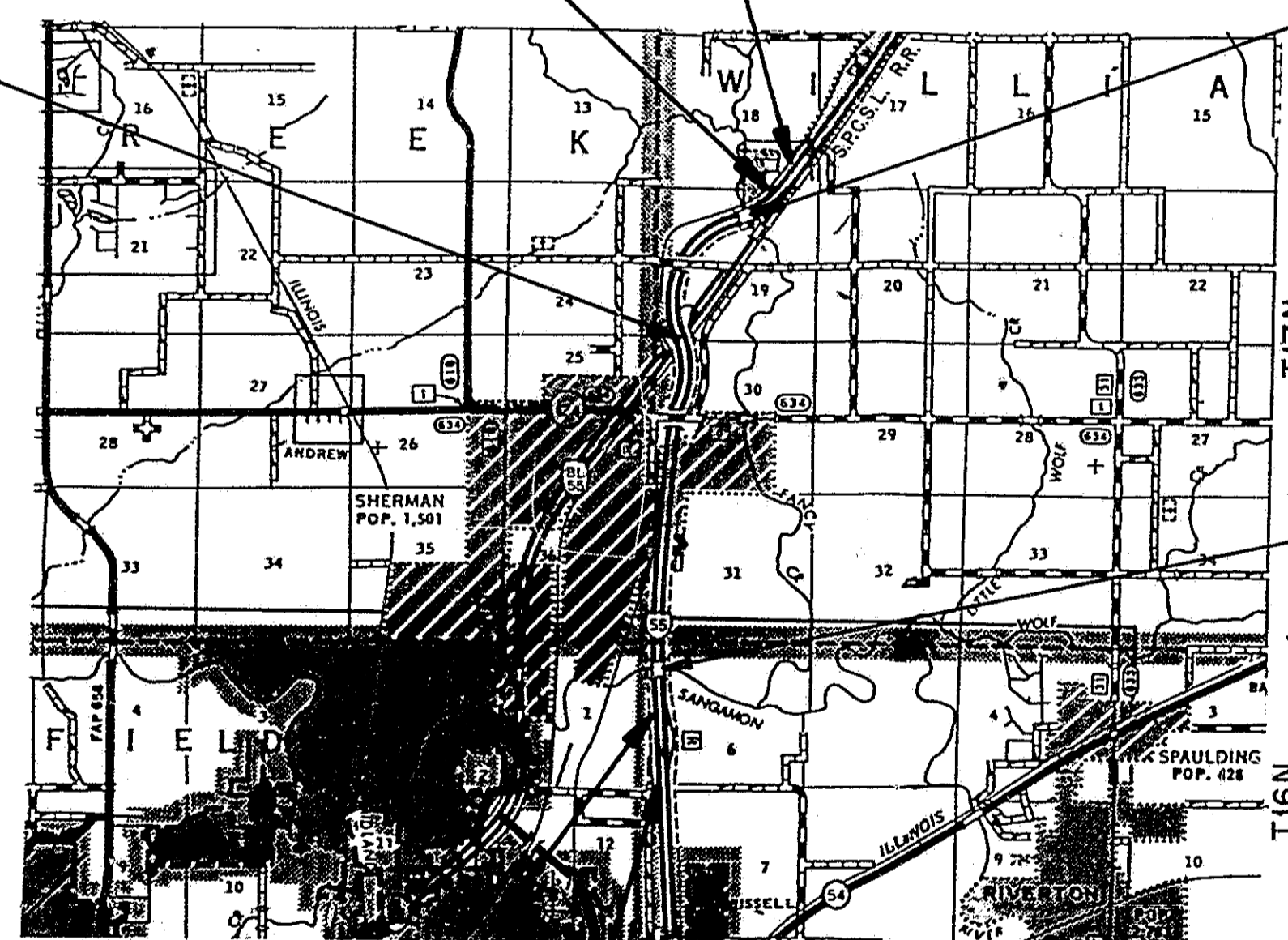
**STATION EQUATIONS**

STA. 270+00.00 SURVEY @ BK. = STA. 269+90.25 CONST. @ AH.  
STA. 298+90.25 CONST. @ BK. = STA. 299+00.00 SURVEY @ AH.  
STA. 334+90.00 SURVEY @ BK. = STA. 333+90.37 CONST. @ AH.  
STA. 354+90.37 CONST. @ BK. = STA. 355+00.00 SURVEY @ AH.  
STA. 452+00.00 SURVEY @ BK. = STA. 451+95.20 CONST. @ AH.  
STA. 474+45.20 CONST. @ BK. = STA. 474+50.00 SURVEY @ AH.

PROJ. NHI-55-3(121)106  
SECTION 84-2 (BR-1, HVBR-2, BR-2)  
ENDS STA. 473+20.20

**SECTION CHANGE:**

THE CONTRACTOR SHALL NOTE THAT THE PLANS HAVE BEEN REVISED AND THE SECTION NUMBER HAS CHANGED. ANY REFERENCE IN THE PLANS TO SECTION 84-2 (BR-1, HVBR-2, BR-2) SHALL BE DISREGARDED AND UNDERSTOOD TO BE SECTION 84-2 (BR-1, BR-2).



**LAYOUT MAP**

1 MILE 0 1 MILE  
GRAPHIC SCALE

IMPROVEMENT  
BEGINS STA. 256+50.00

IMPROVEMENT  
ENDS STA. 504+75.60

**SECTION 84-2 (BR-2) INCLUDES:**

N.B. STRUCTURE AT STA. 291+20.00 (SN 084-0022)  
CARRYING F.A.I. RTE. 55 OVER FANCY CREEK.  
DECK TO BE REMOVED AND STRUCTURE WIDENED,  
REUSING STRUCTURAL STEEL, SUPERELEVATION  
CORRECTION AND RESURFACING OF N.B. F.A.I. RTE. 55  
FROM STA. 270+96.00 TO STA. 297+90.25.  
S.B. STRUCTURE AT STA. 291+20.00 (SN 084-0023)  
CARRYING F.A.I. RTE. 55 OVER FANCY CREEK.  
DECK TO BE REMOVED AND STRUCTURE WIDENED,  
REUSING STRUCTURAL STEEL UTILIZING STAGE  
CONSTRUCTION. SUPERELEVATION CORRECTION  
AND RESURFACING OF S.B. F.A.I. RTE. 55  
FROM STA. 284+90.25 TO STA. 298+40.25.

**SECTION 84-2 (BR-1) INCLUDES:**

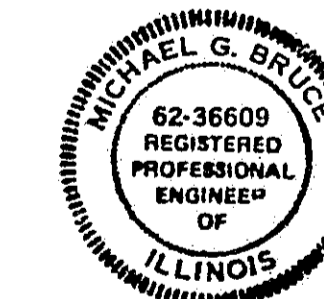
N.B. STRUCTURE AT STA. 462+25.00 (SN 084-0018)  
S.B. STRUCTURE AT STA. 462+25.00 (SN 084-0019)  
CARRYING F.A.I. RTE. 55 OVER SANGAMON RIVER  
DECKS TO BE REMOVED AND STRUCTURES WIDENED,  
REUSING STRUCTURAL STEEL. RESURFACING OF N.B. F.A.I. 55  
FROM STA. 452+95.20 TO STA. 473+20.20 AND  
S.B. F.A.I. RTE. 55 FROM STA. 452+62.20 TO STA. 472+70.00.

PLANS PREPARED BY:

JOHNSON, DEPP & QUISENBERRY  
CONSULTING ENGINEERS - SPRINGFIELD, ILLINOIS

SIGNED: *Michael G. Bruce*

DATE: June 19, 1992

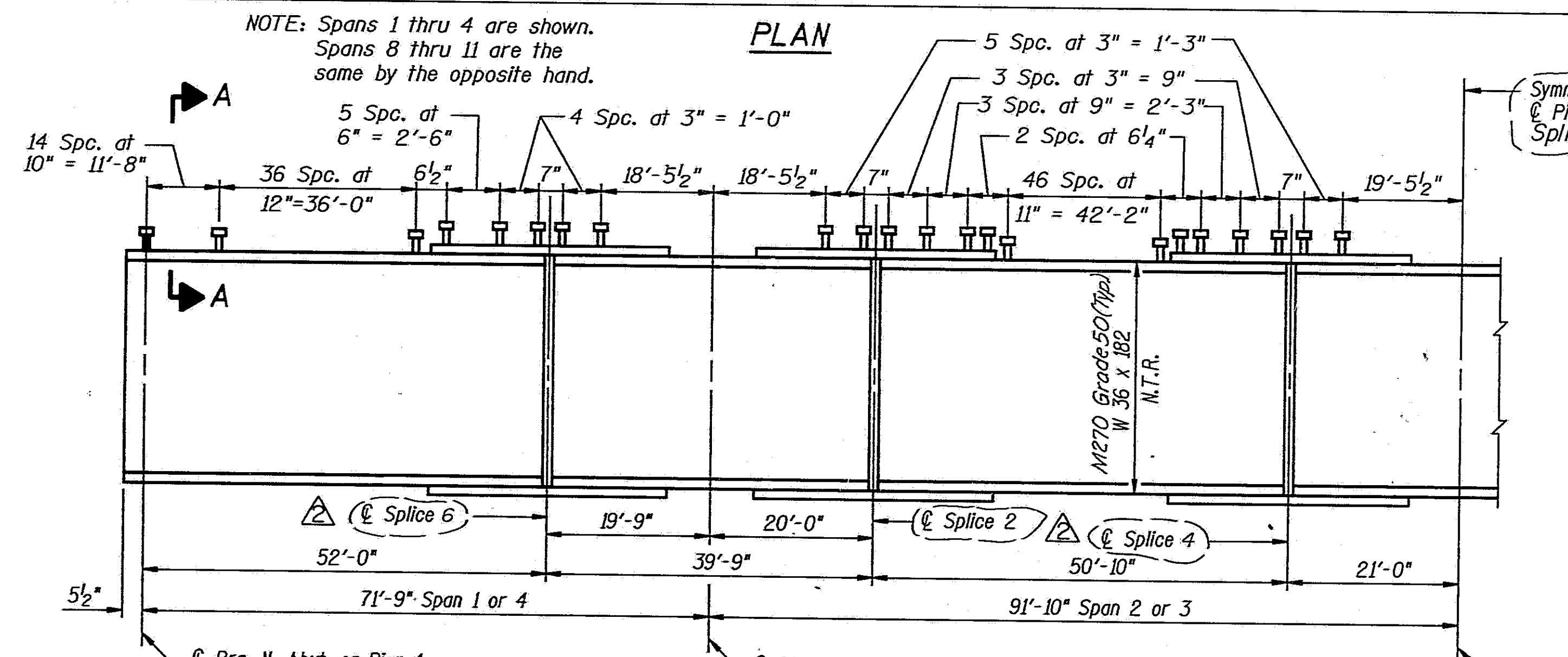
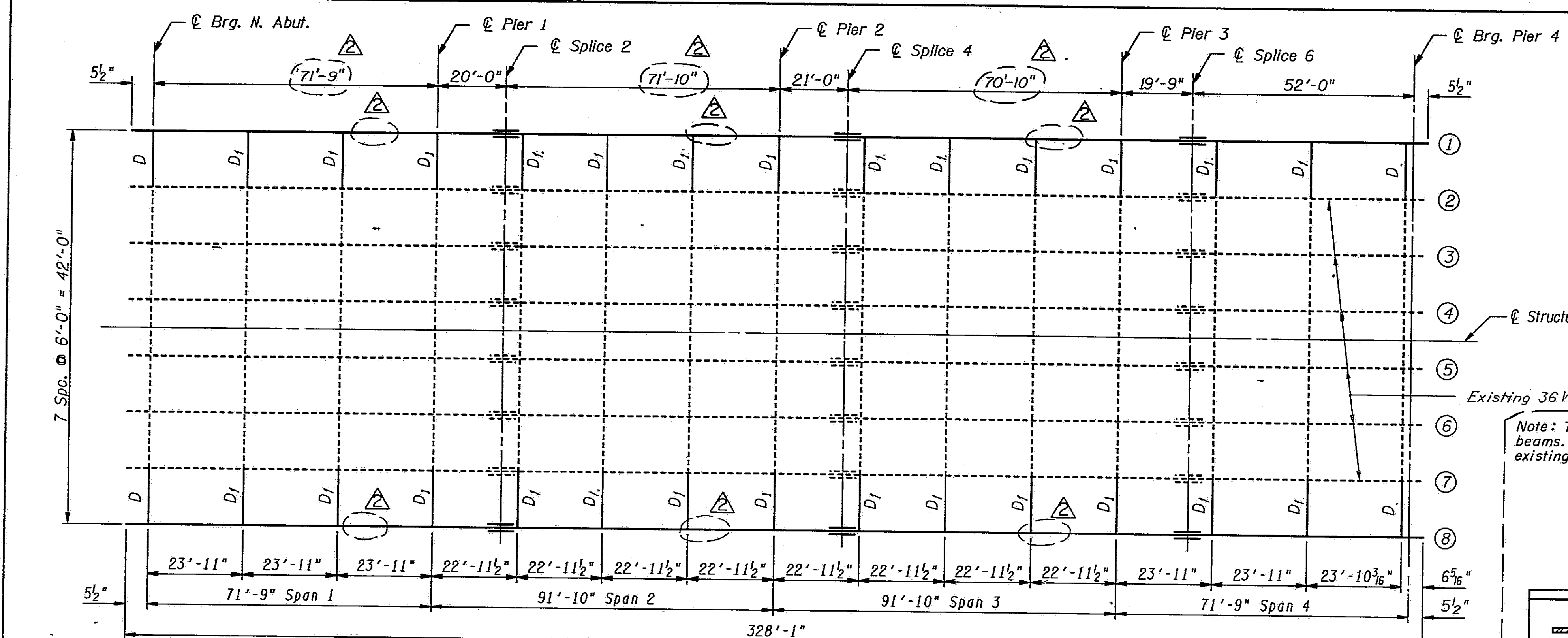


NET LENGTH OF SECTIONS =  
BR-1 = 2744.25 FEET = 0.520 MILES  
HVBR-2 = 1900.00 FEET = 0.360 MILES  
BR-2 = 2058.00 FEET = 0.390 MILES

NET LENGTH OF PROJECT = 20224 FEET = 3.830 MILES

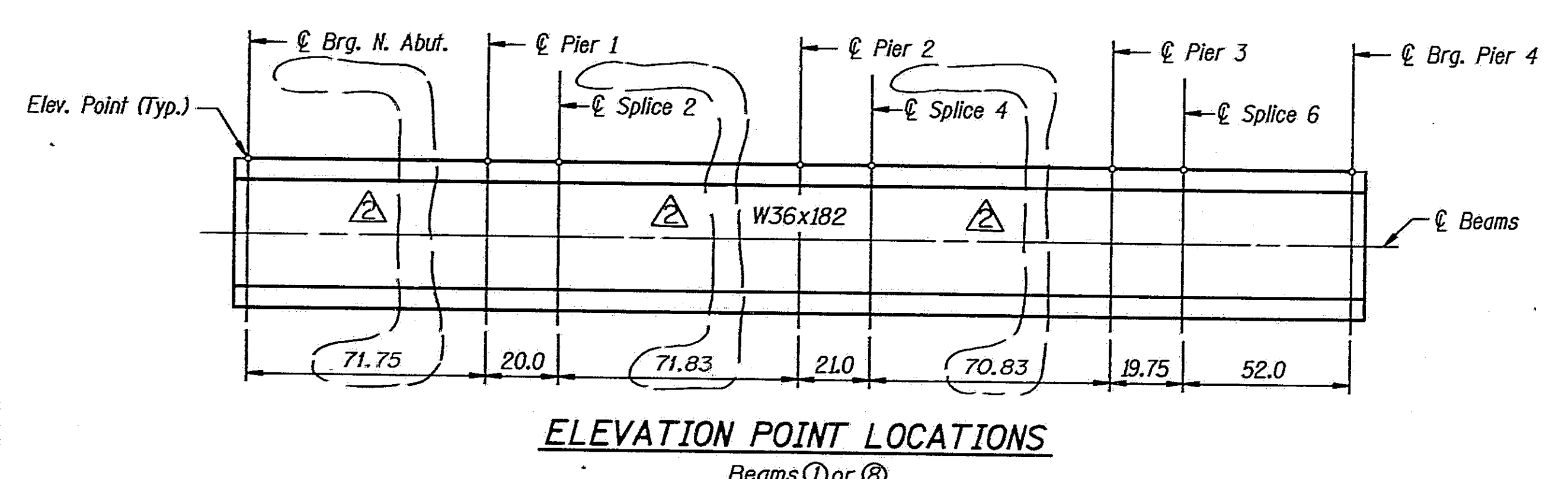
**AS REVISED**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	185A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



Note: Splices 1, 3 & 5 not used

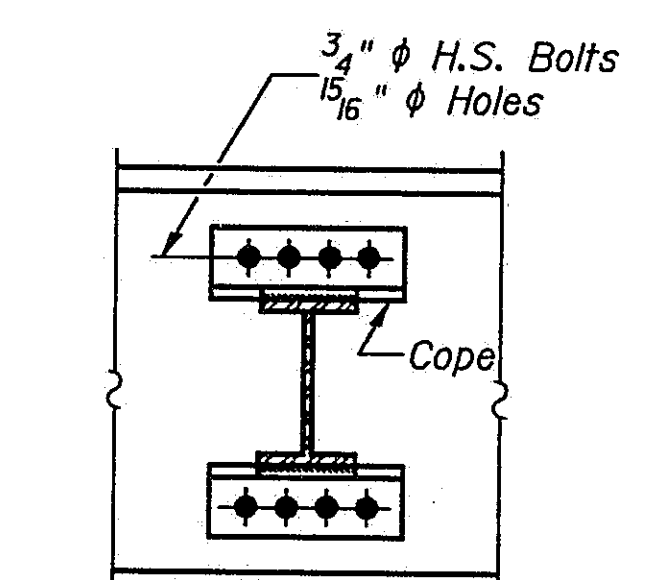
**HALF BEAM ELEVATION**  
 "N.T.R." denotes plates to which notch toughness requirements are applicable.  
 (Beams ① or ②)



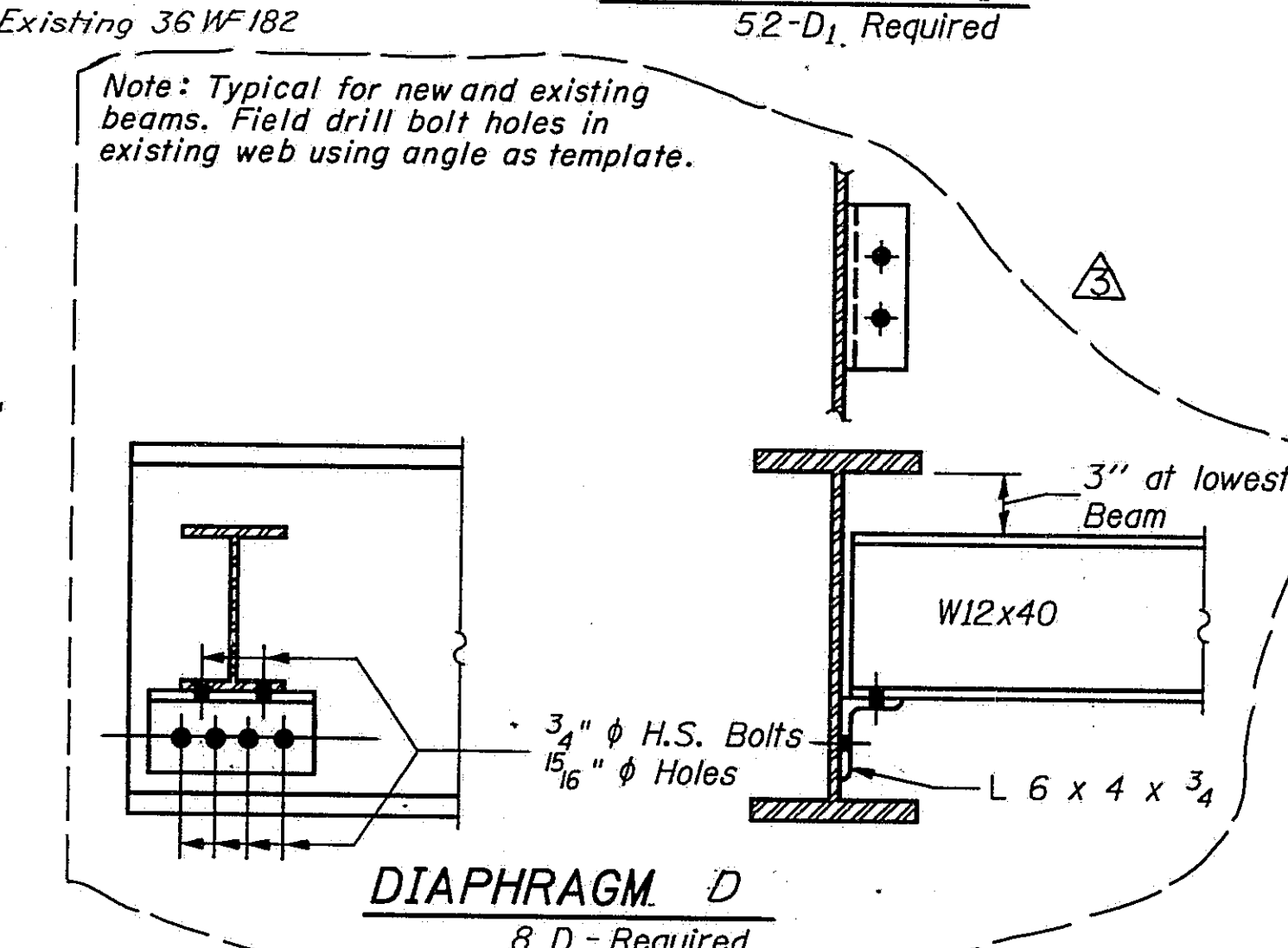
**ELEVATION POINT LOCATIONS**  
 Beams ① or ②

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

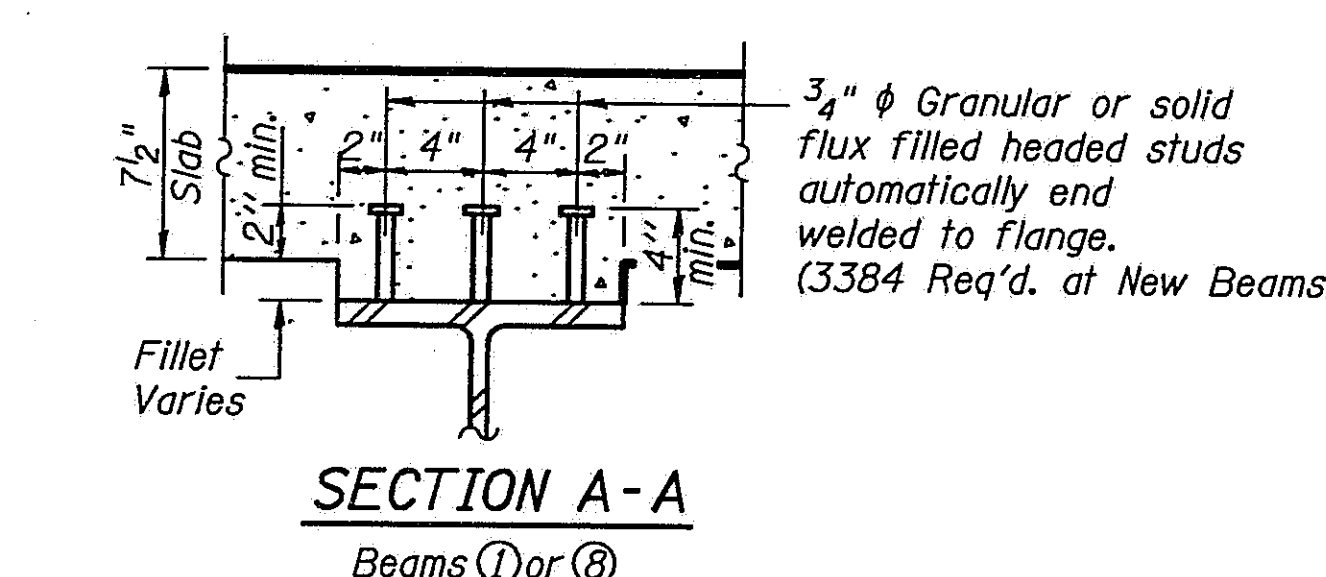
I-2-D 8-30-80



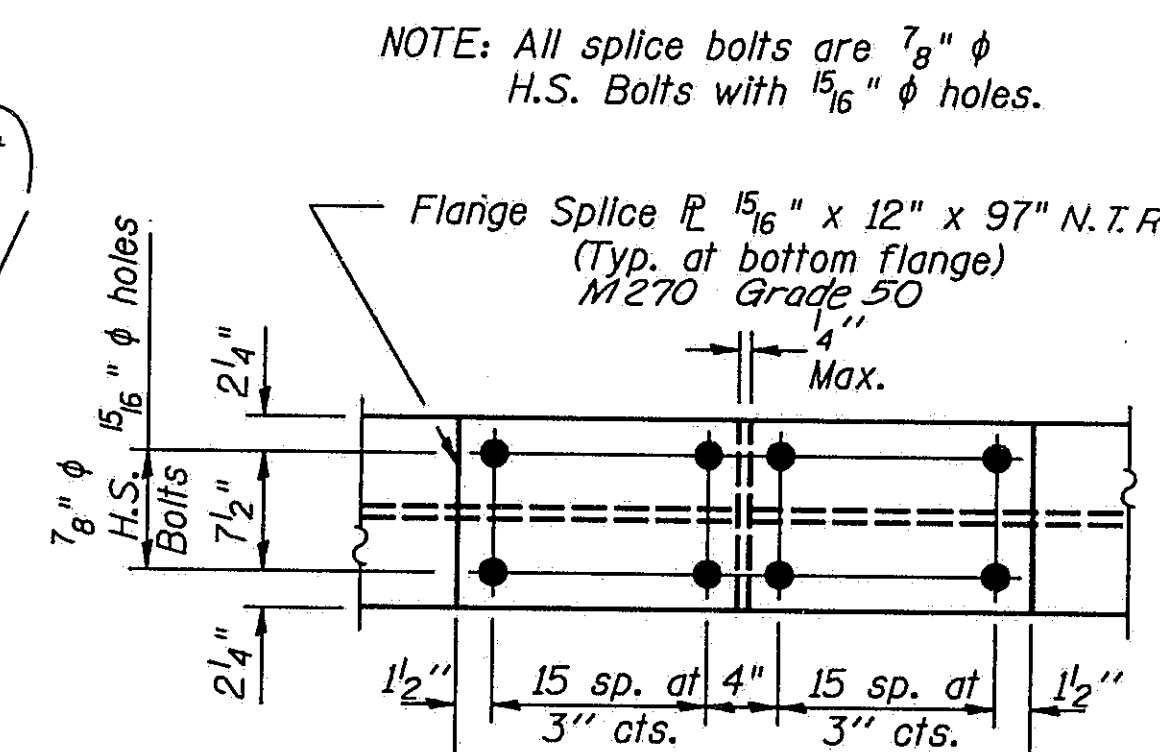
**DIAPHRAGM D1**  
 52-D1 Required



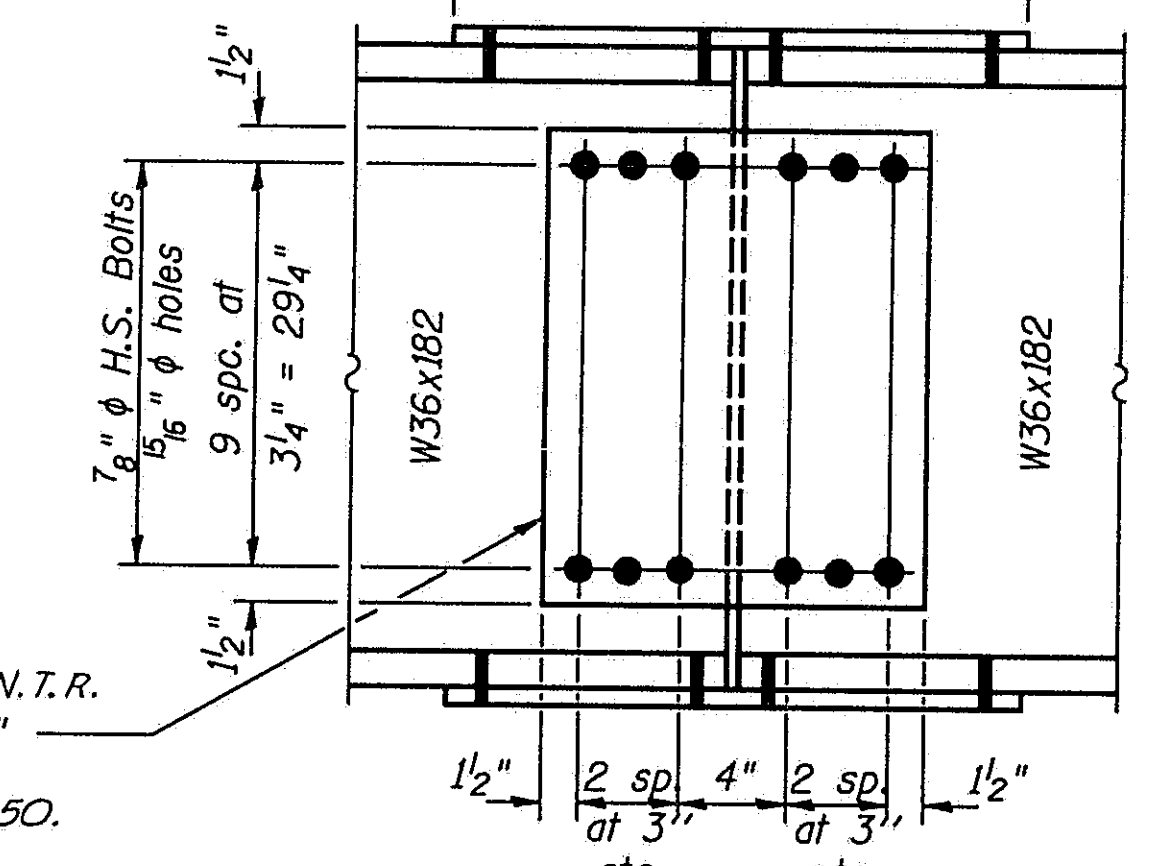
**DIAPHRAGM D**  
 8 D - Required



**SECTION A-A**  
 Beams ① or ②



NOTE: All splice bolts are 7/8" H.S. Bolts with 1 1/2" holes.



Web Splice R N.T.R. 1 1/2" x 19" x 32 1/4" Each Side M270 Grade 50.

**SPLICE**  
 Beams ① or ②  
 (12) Required

**ELEVATION OF TOP OF BEAMS**  
 Beams ① or ② (For fabrication only)

Location	Elevation
① Brg. N. Abut.	539.62
① Pier 1	539.67
① Splice 2	539.70
① Pier 2	539.80
① Splice 4	539.83
① Pier 3	539.93
① Splice 6	539.96
① Brg. Pier 4	540.08

NOTE: Beam 1 & 8 elevations are the same. Spans 8, 9, 10 & 11 are the same by opposite hand.

**AS REVISED**

NOTES:  
 Quantities shown are for one structure. Two structures are required.

See Sheet #16 of 45 for shear connectors at existing beams.  
 See Sheet #19 for Plan View of Splice Plate.

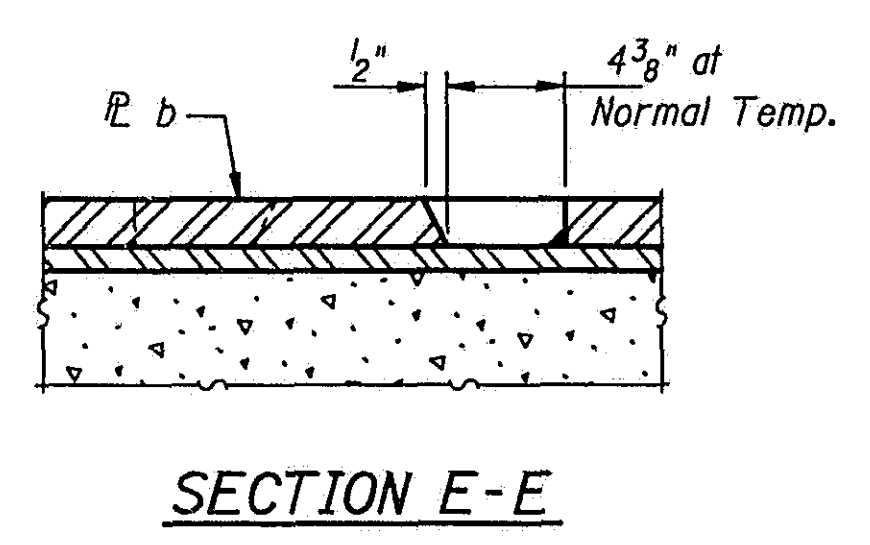
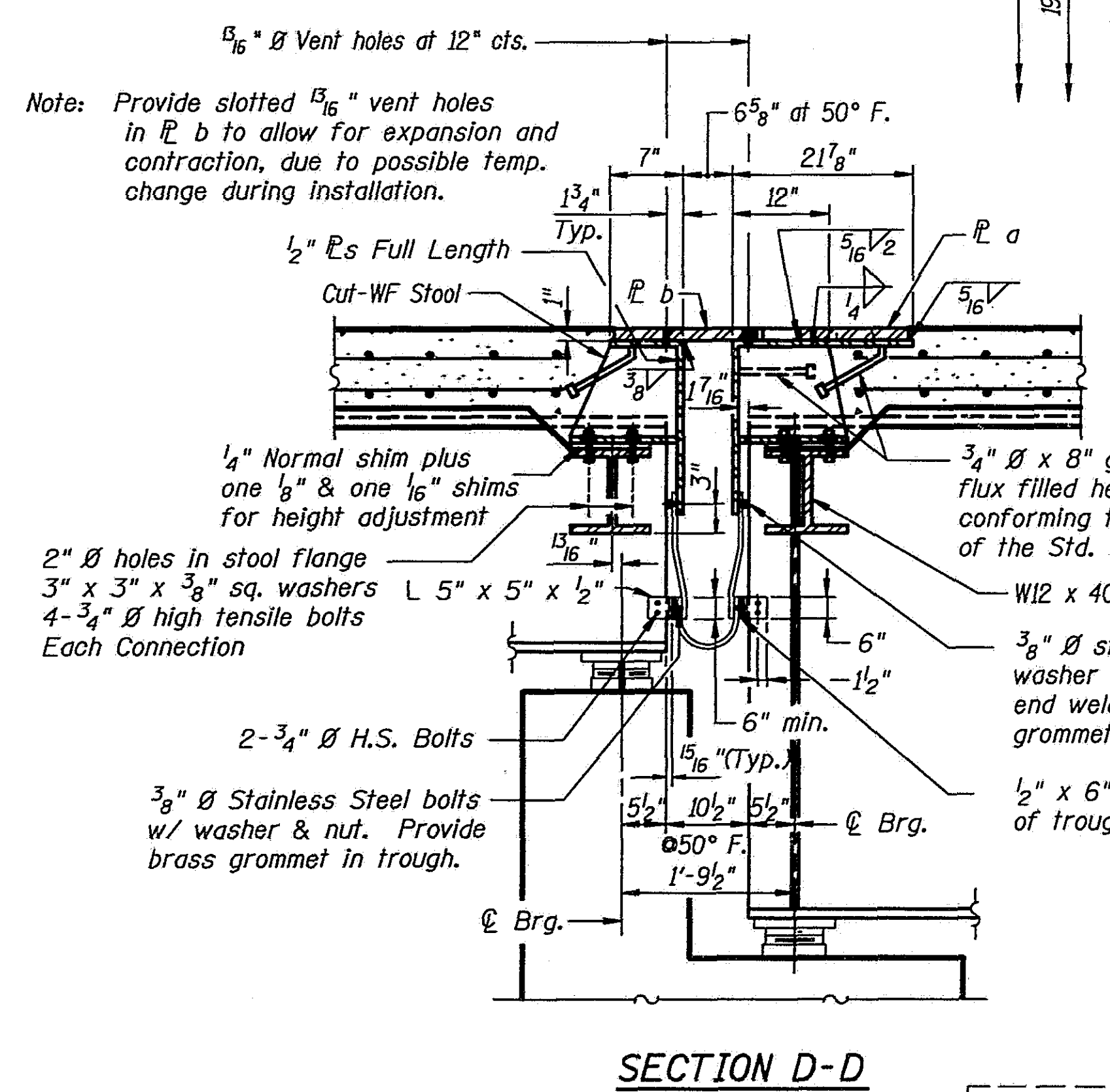
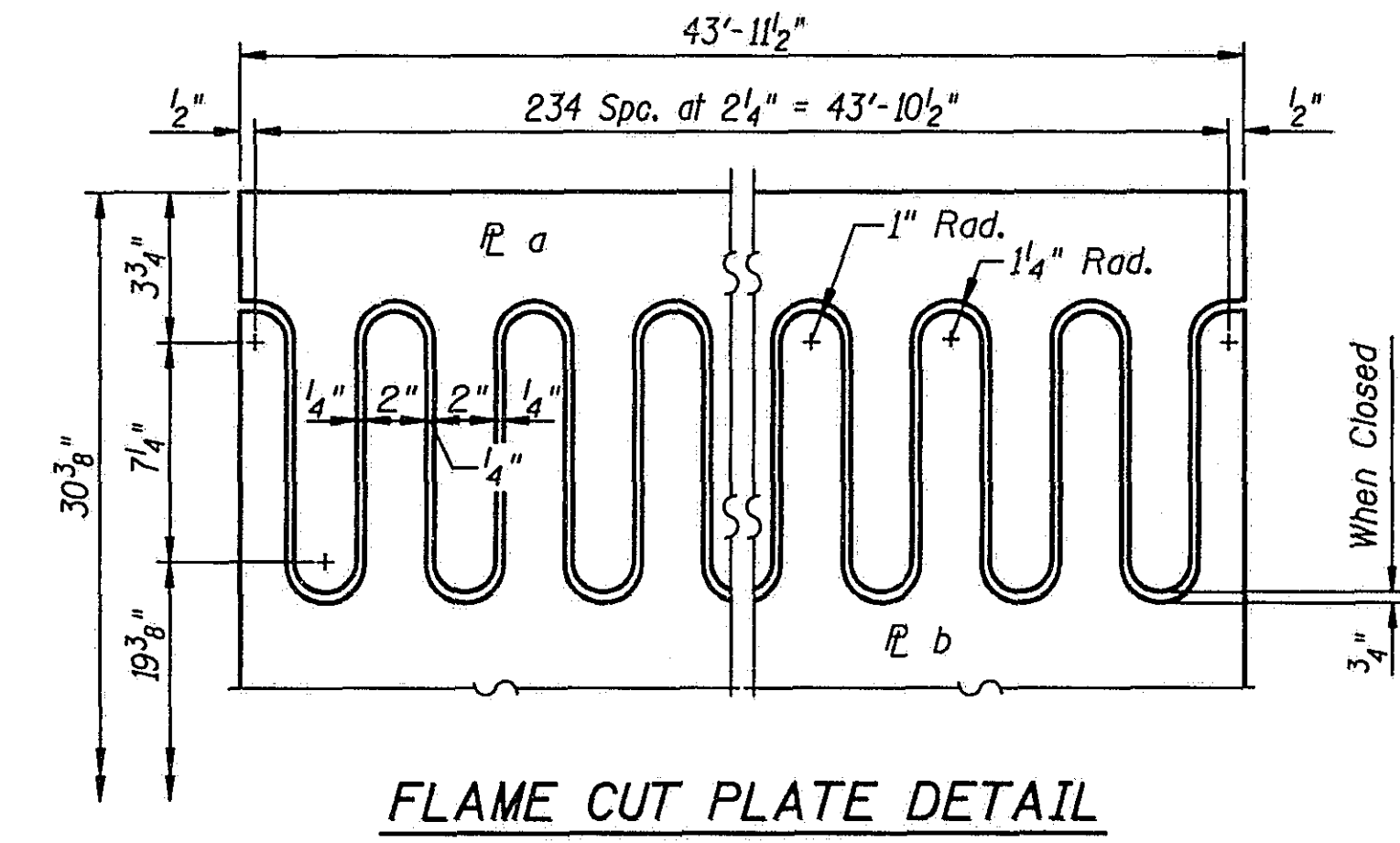
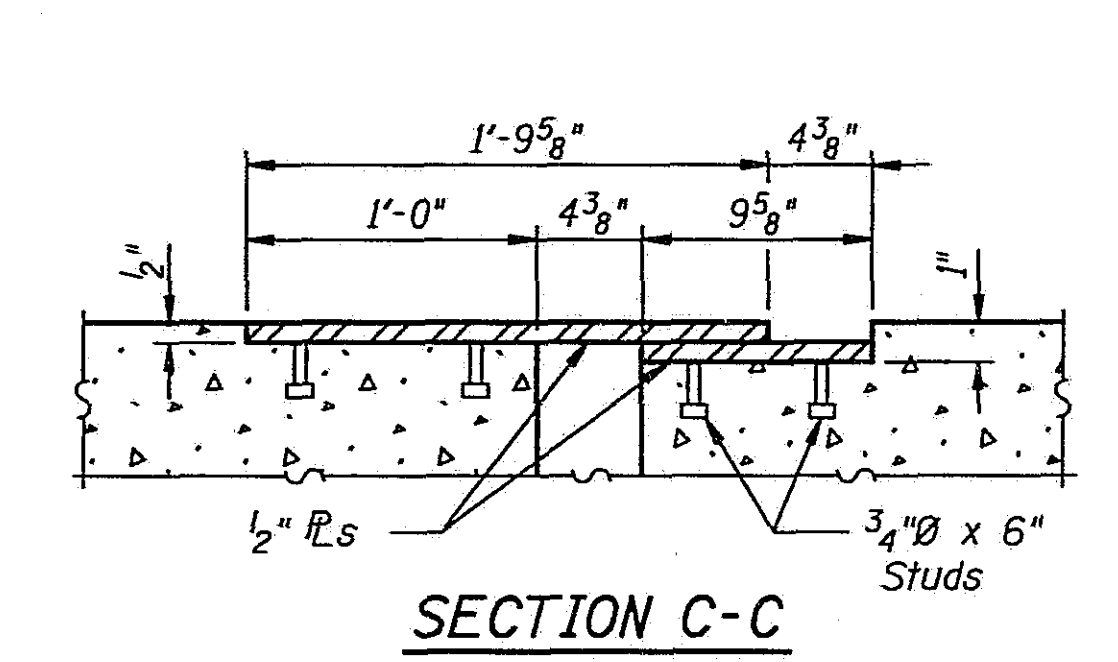
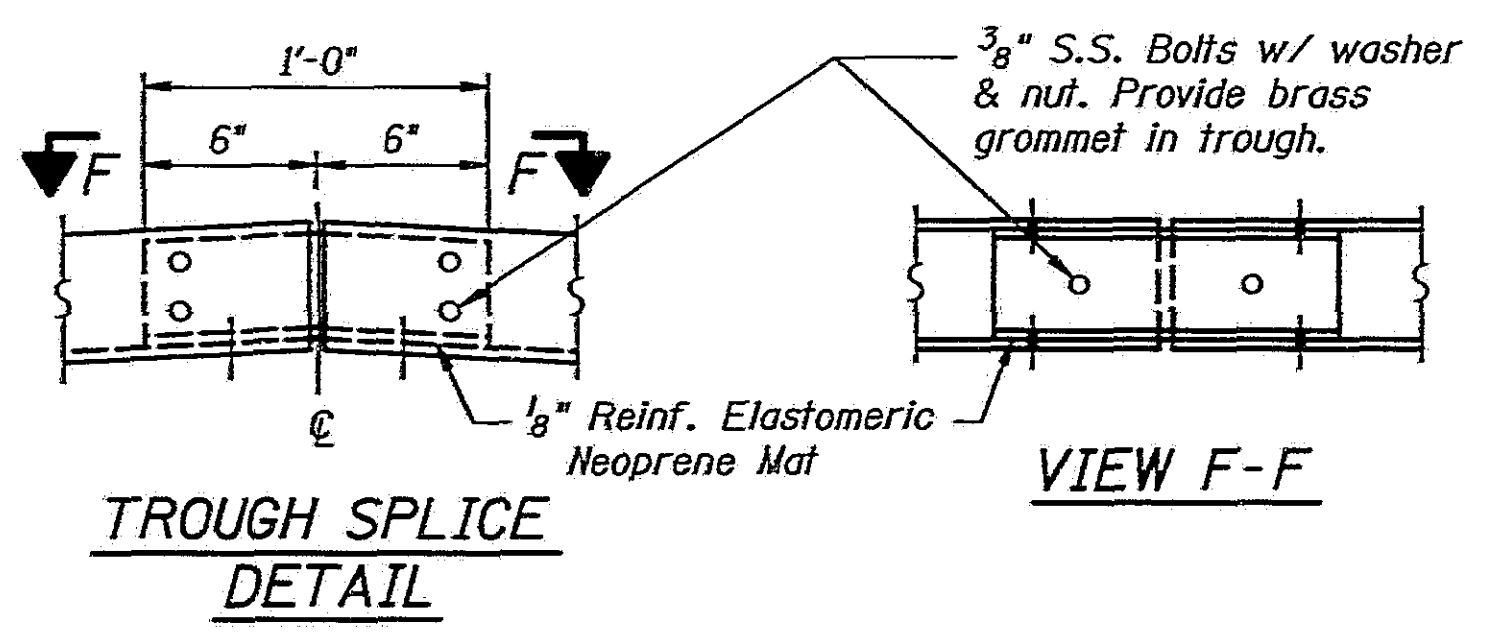
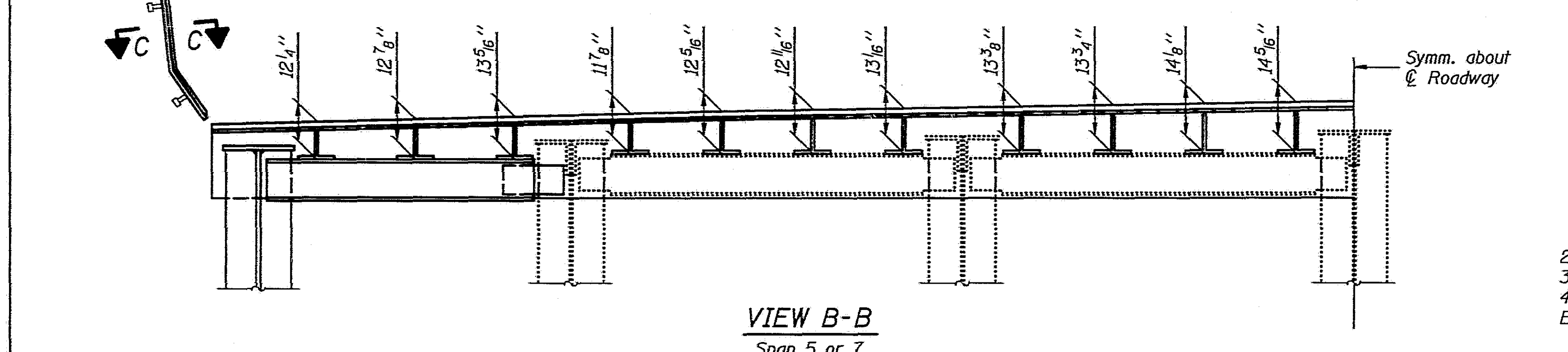
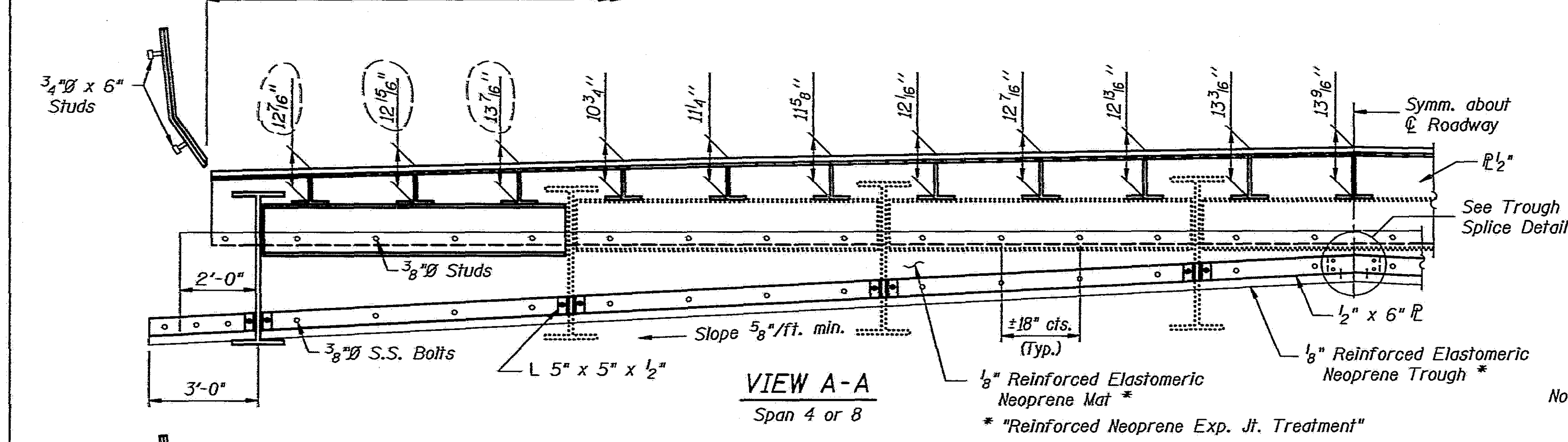
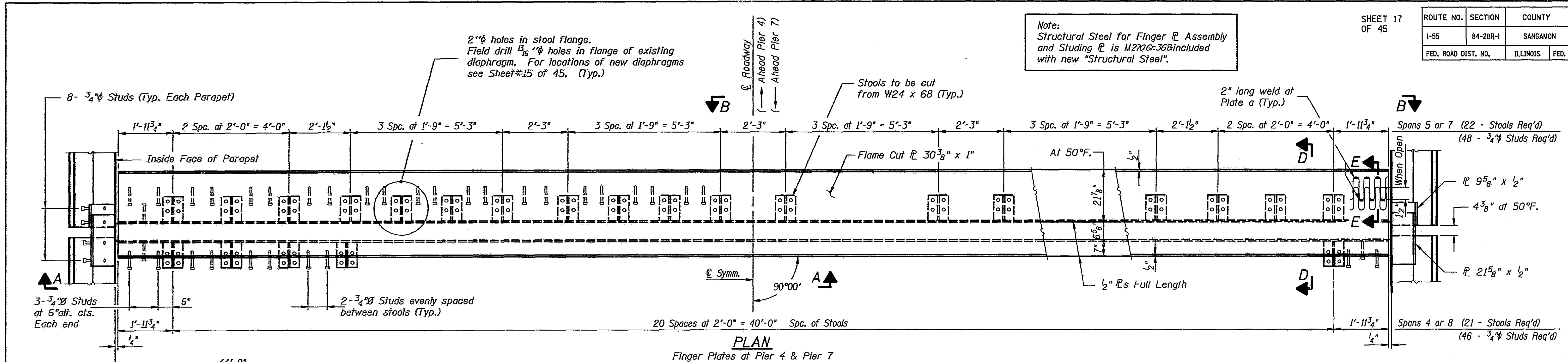
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS  
 I-55 OVER SANGAMON RIVER  
 F.A.I. RTE. 55 SECTION 84-2BR-1  
 SANGAMON COUNTY  
 STATION 462+25.00  
 STRUCTURE NOS. 084-0018, 084-0019

SHEET 17  
OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-55	84-2BR-1	SANGAMON	218	189A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

Note:  
Structural Steel for Finger  $\bar{R}$  Assembly  
and Studing  $\bar{R}$  is M2706-388 included  
with new "Structural Steel".



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
EXPANSION DEVICE  
PIERS 4 & 7  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

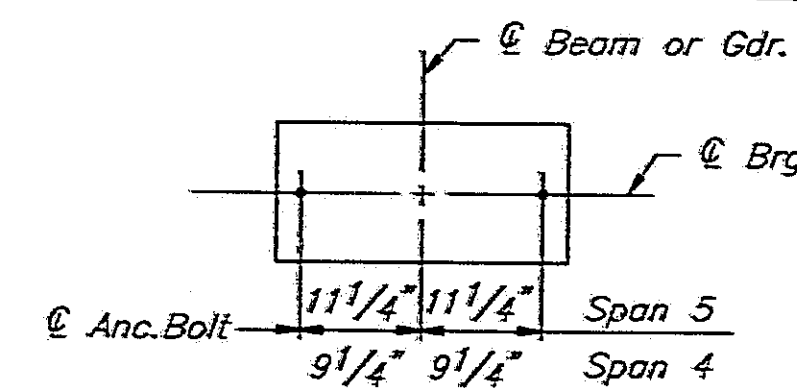
AS REVISED

DESIGNED	PLH
CHECKED	RBO
DRAWN	HGT
CHECKED	PLH

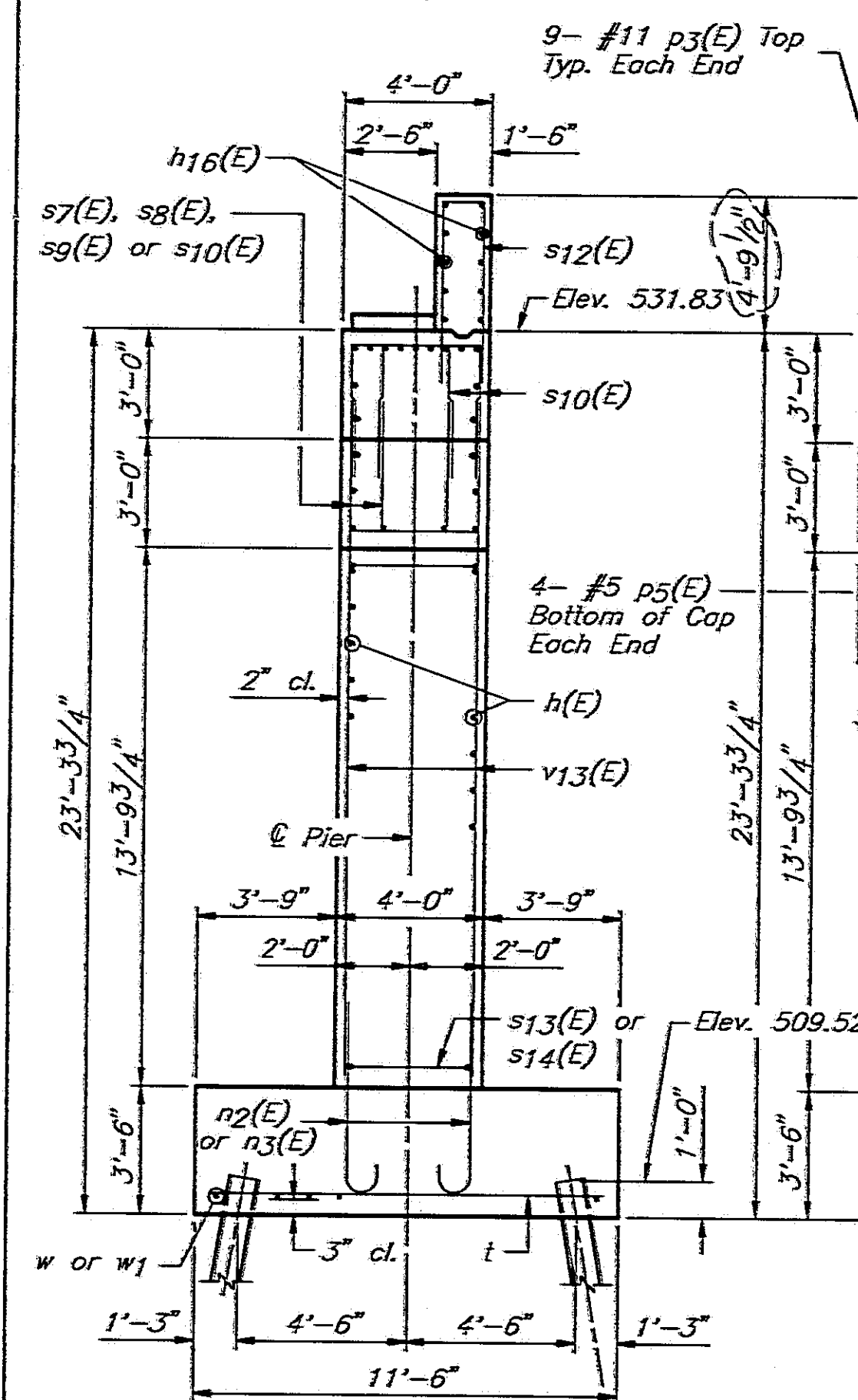
Rev. 11-18-92 RBQ

**PIER 4 PILE DATA**

Type..... Steel HP 10x57  
Capacity..... Drive to Refusal  
Est. Length..... 55'  
No. Required..... 8



**DETAIL A**  
See Sheet #22 of 45  
for Bearing Assembly Details

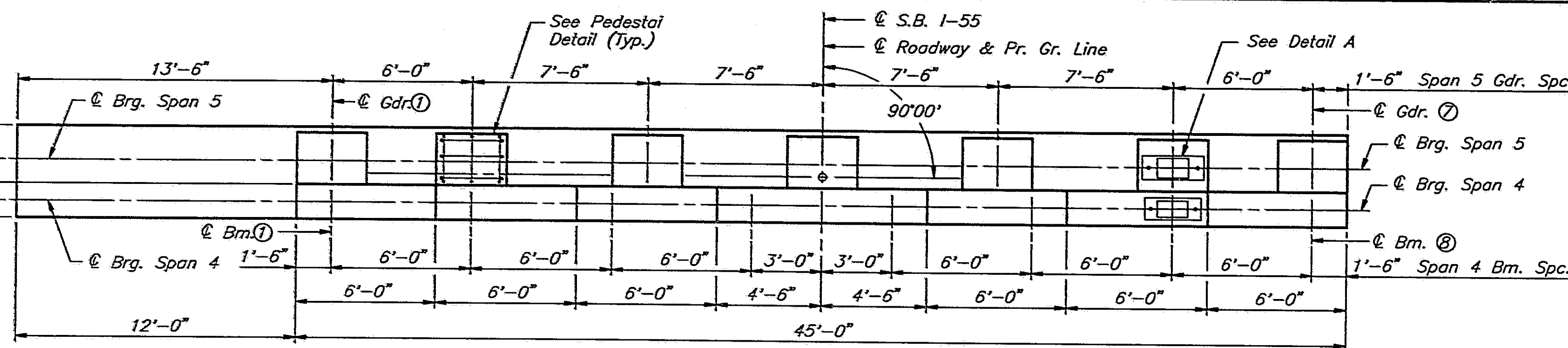


**ELEVATION**  
(Looking South)

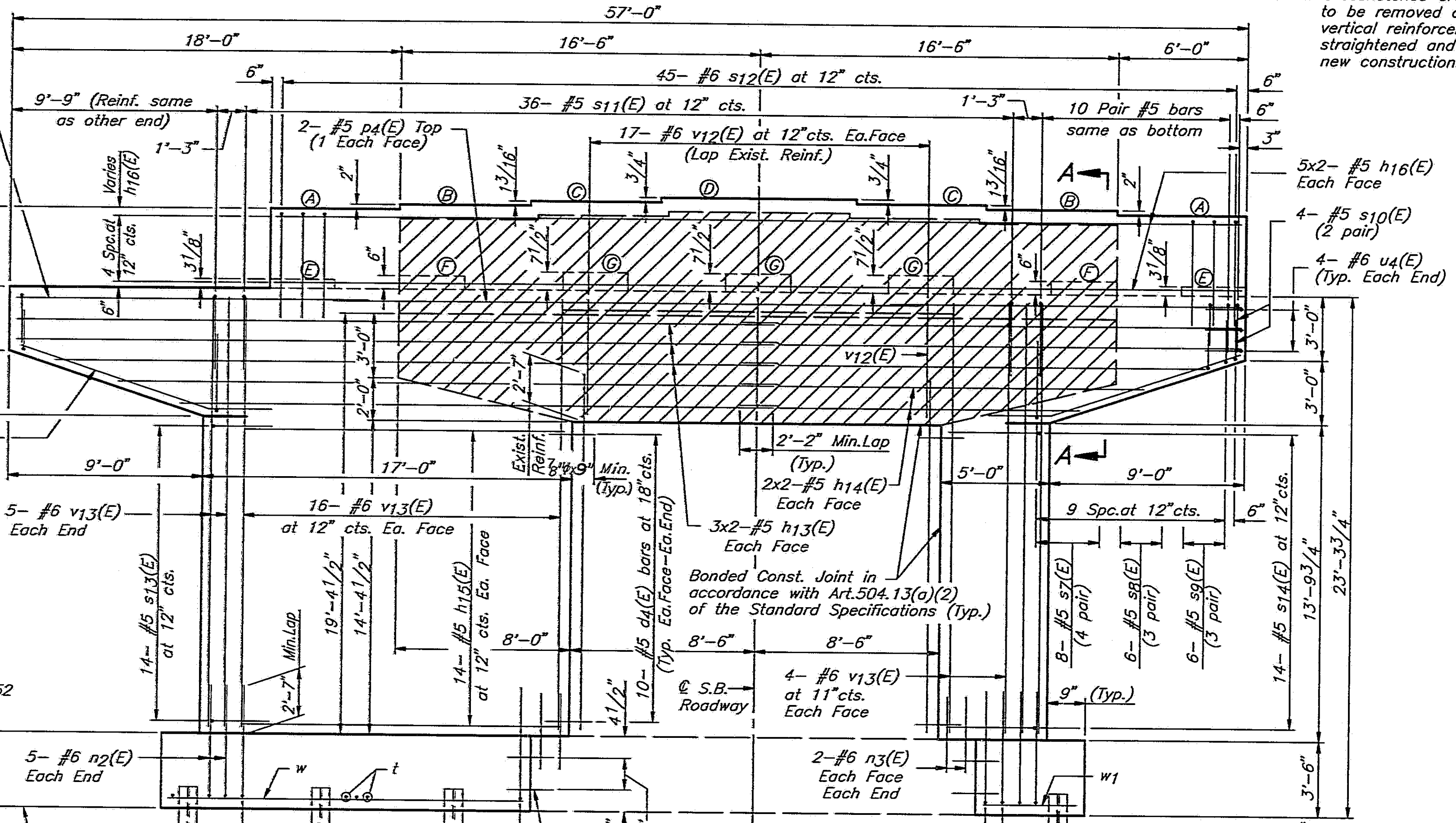
NOTE: Crosshatched area of existing pier to be removed and 2'-7" of existing vertical reinforcement to be cleaned, straightened and incorporated into new construction.

LOCATION	ELEVATION
SPAN 4 RISERS	
Ⓐ	536.62
Ⓑ	536.79
Ⓒ	536.89
Ⓓ	536.95
SPAN 5 PEDESTALS	
Ⓔ	532.09
Ⓕ	532.33
Ⓖ	532.45

DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

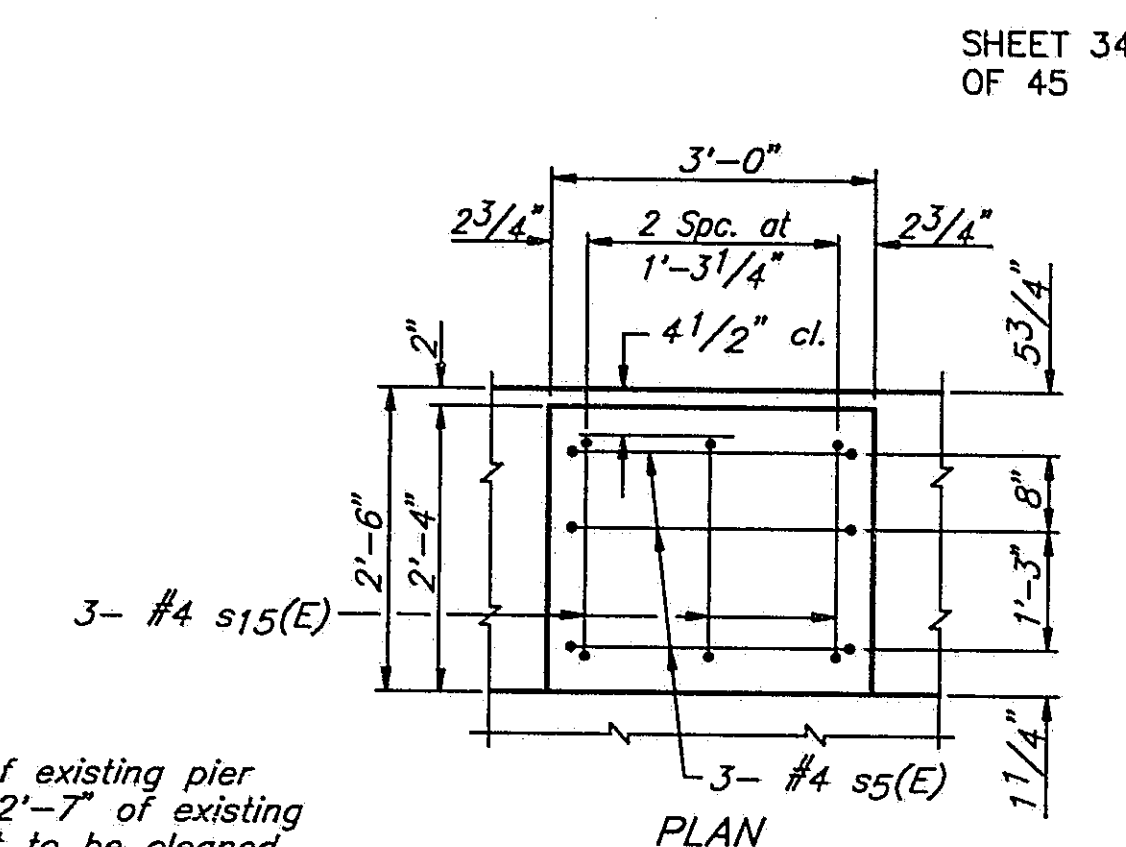


**PLAN**

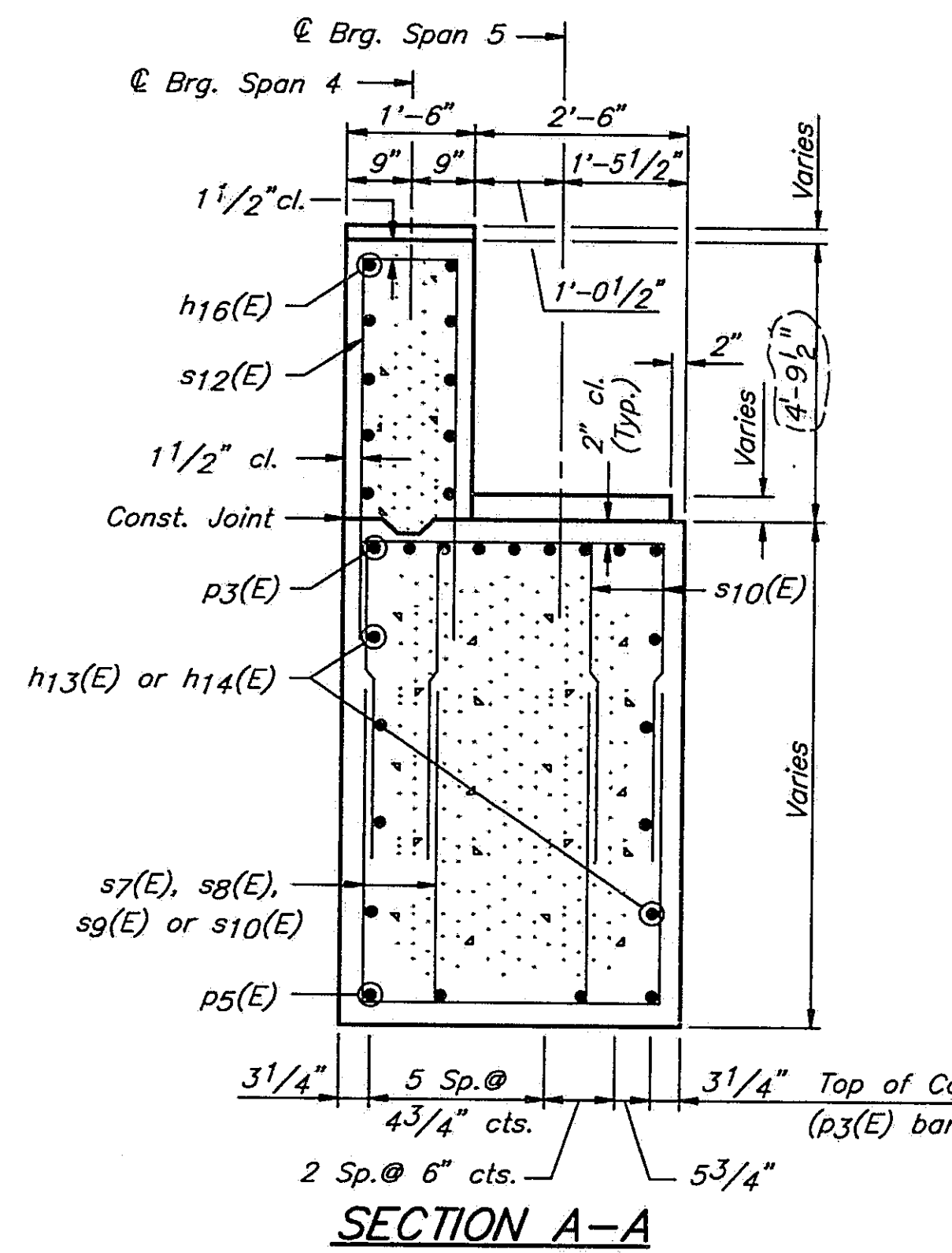


**FOOTING PLAN**

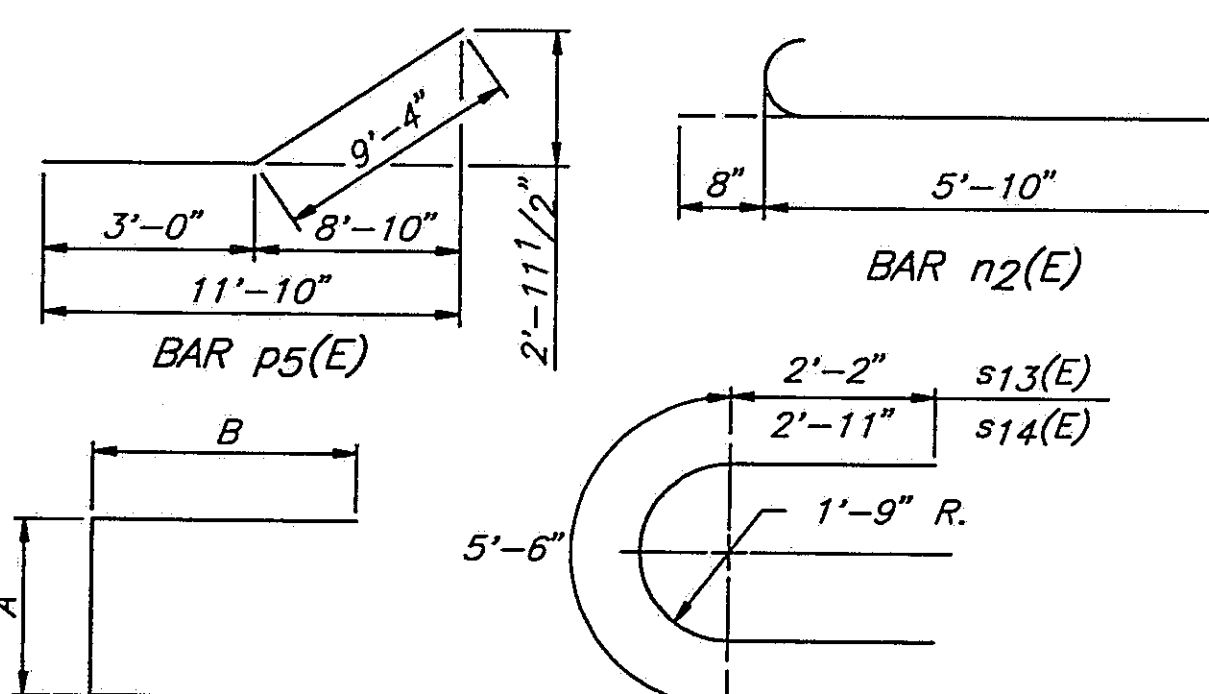
**AS REVISED**



**PEDESTAL DETAILS**



**SECTION A-A**



**BARS s7(E) thru s12(E), s5(E), s13(E) or s14(E)**

Notes:  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
Four pedestals monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.  
Minor spalling on faces of existing stem to be repaired. Cost incidental to concrete removal.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	206A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

SHEET 34 OF 45

**BILL OF MATERIAL**

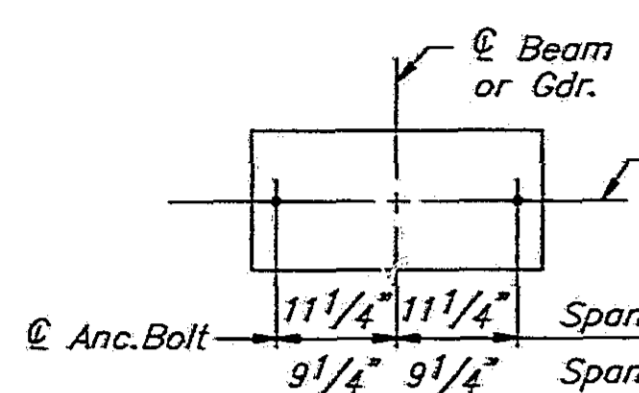
BAR	NO.	SIZE	LENGTH	SHAPE
d4(E)	76	#5	2'-6"	
h13(E)	12	#5	29'-5"	
h14(E)	8	#5	25'-3"	
h15(E)	28	#5	14'-11"	
h16(E)	20	#5	23'-5"	
n2(E)	42	#6	6'-6"	
n3(E)	8	#6	4'-1"	
p3(E)	18	#11	16'-3"	
p4(E)	2	#5	28'-6"	
p5(E)	8	#5	12'-4"	
s5(E)	21	#4	5'-10"	
s7(E)	32	#5	10'-8"	
sg(E)	24	#5	9'-8"	
sg(E)	24	#5	8'-8"	
s10(E)	8	#5	7'-10"	
s11(E)	36	#5	7'-8"	
s12(E)	45	#6	14'-3"	
s13(E)	14	#5	9'-10"	
s14(E)	14	#5	11'-4"	
s15(E)	21	#4	4'-11"	
t	42	#6	11'-2"	
u4(E)	8	#6	7'-8"	
v12(E)	34	#6	5'-2"	
v13(E)	50	#6	19'-7"	
w	12	#5	15'-9"	
w1	12	#5	3'-9"	
Structure Excavation		Cu.Yds.	183	
Class 'X' Concrete		Cu.Yds.	131.7	
Concrete Removal		Cu.Yds.	31.0	
Reinforcement Bars		Lbs.	950	
Reinforcement Bars Epoxy Coated		Lbs.	8290	
Steel Piles(HP10x57)		Lin.Ft.	440	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER 4 S.B. 1-55  
I-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

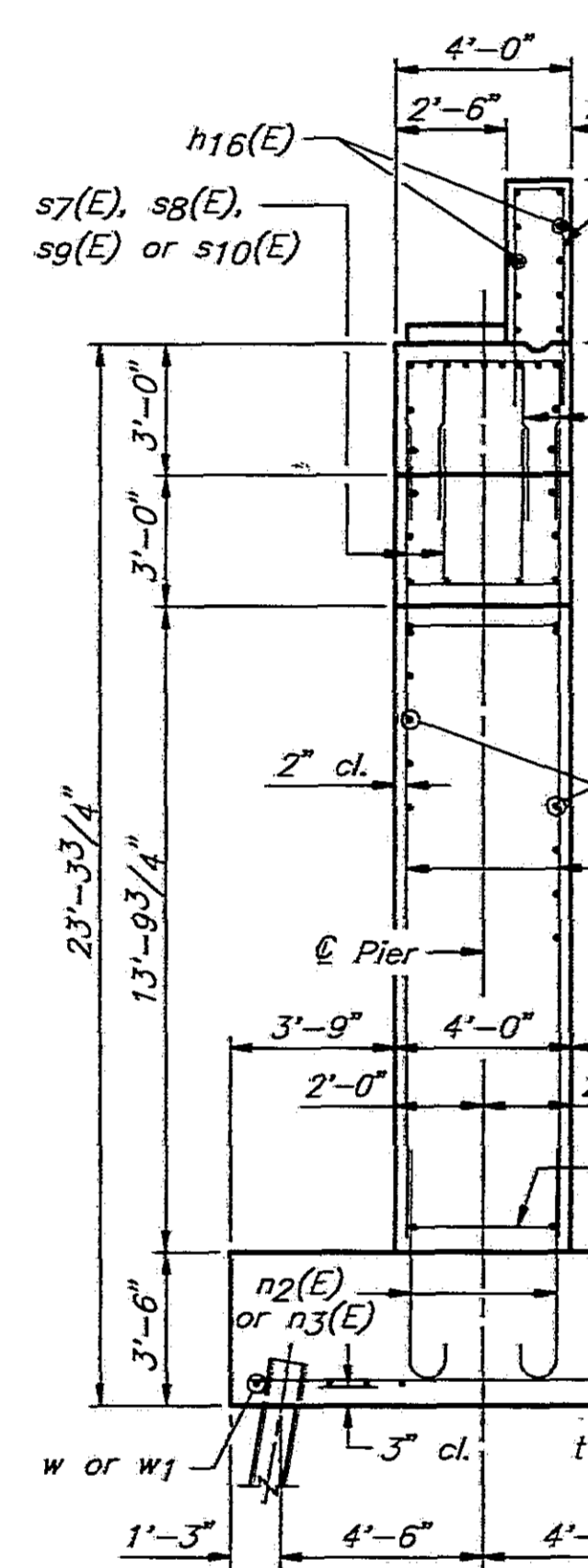
**PIER 4 PILE DATA**

Type..... Steel HP 10x57  
Capacity..... Drive to Refusal  
Est. Length..... 55'  
No. Required..... 8



**DETAIL A**

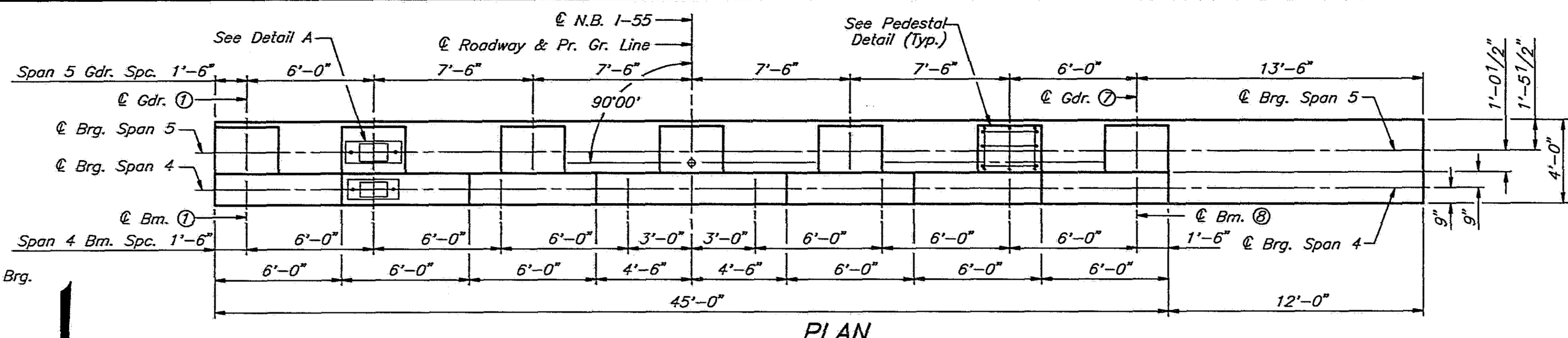
See Sheet #22 of 45  
for Bearing Assembly Details



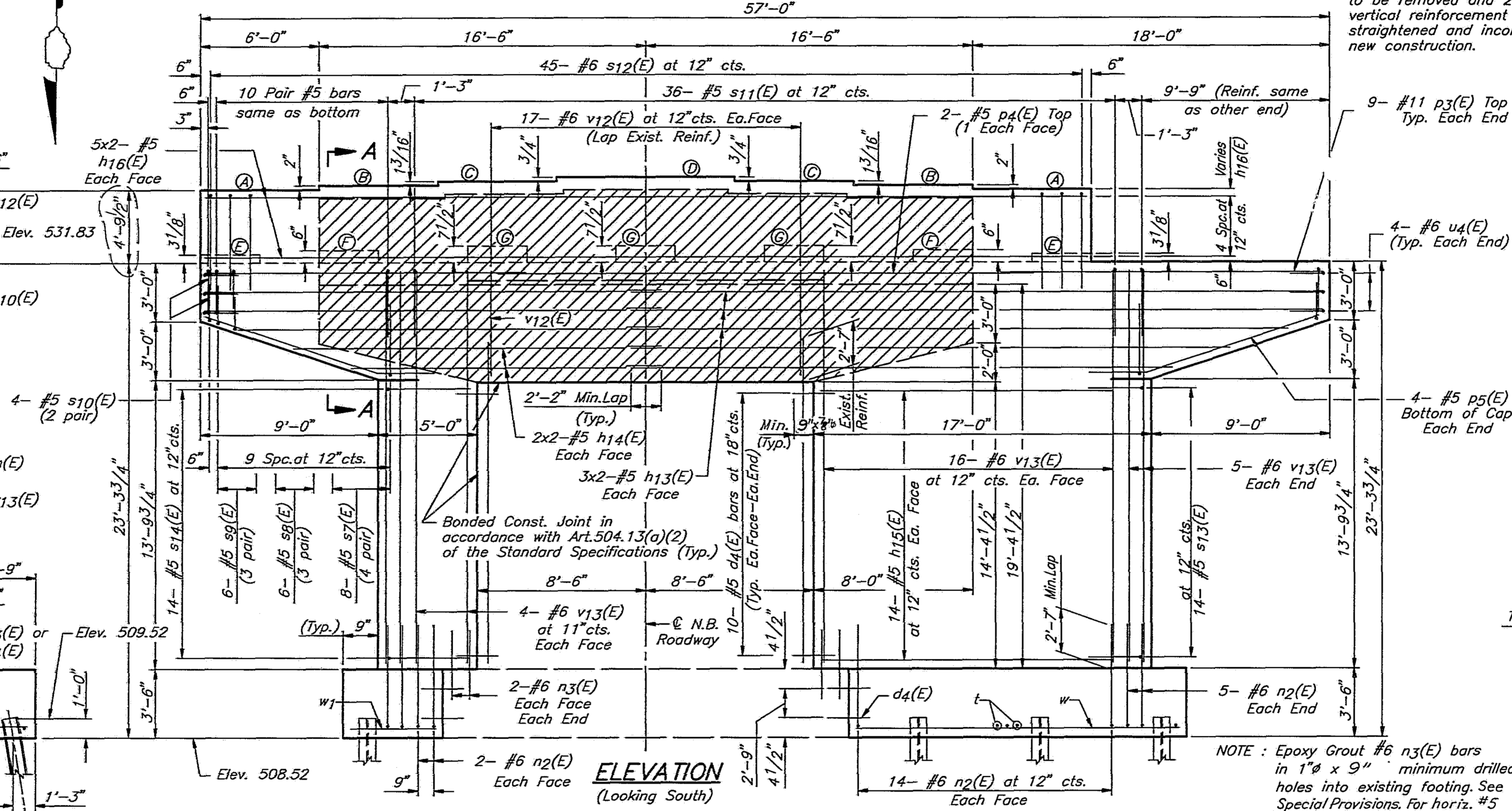
**END VIEW**

LOCATION	ELEVATION
SPAN 4 RISERS	(A) 536.62
	(B) 536.79
	(C) 536.89
	(D) 536.95
SPAN 5 PEDESTALS	(E) 532.09
	(F) 532.33
	(G) 532.45

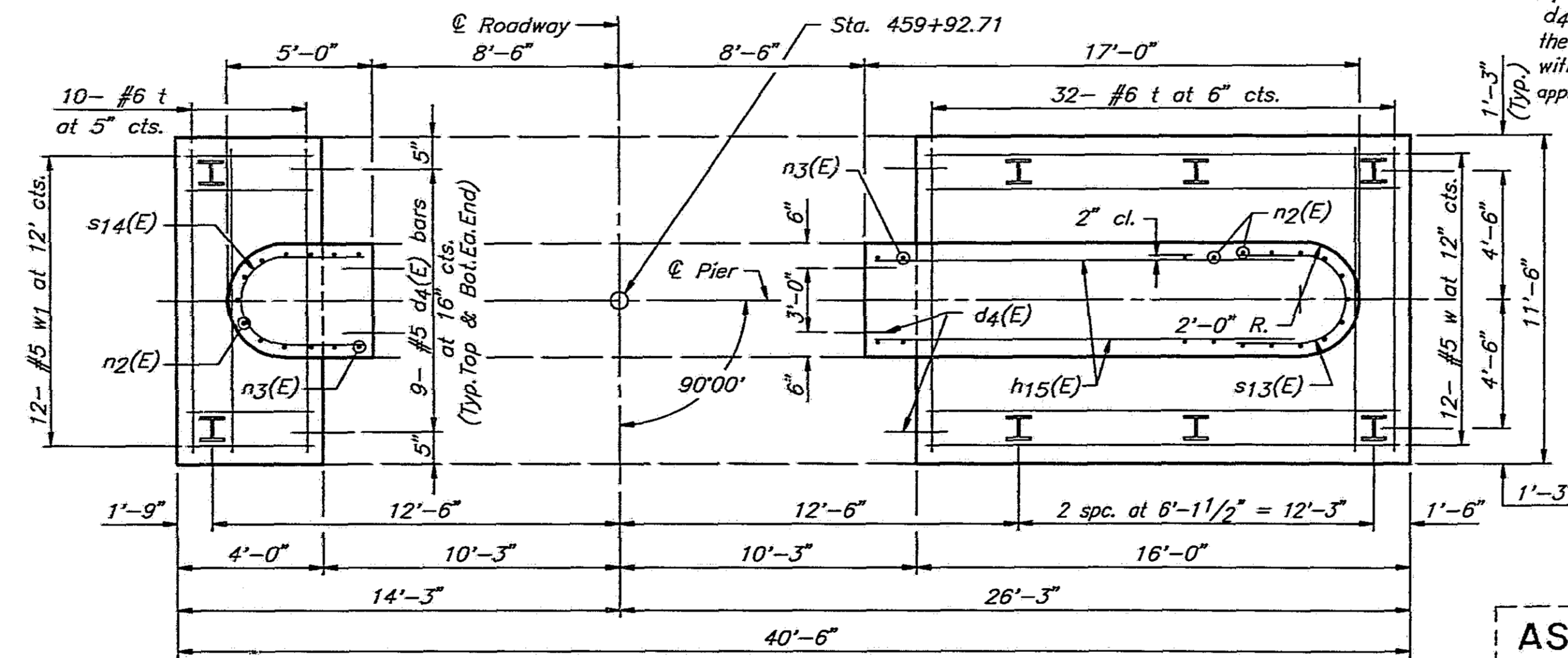
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



**PLAN**

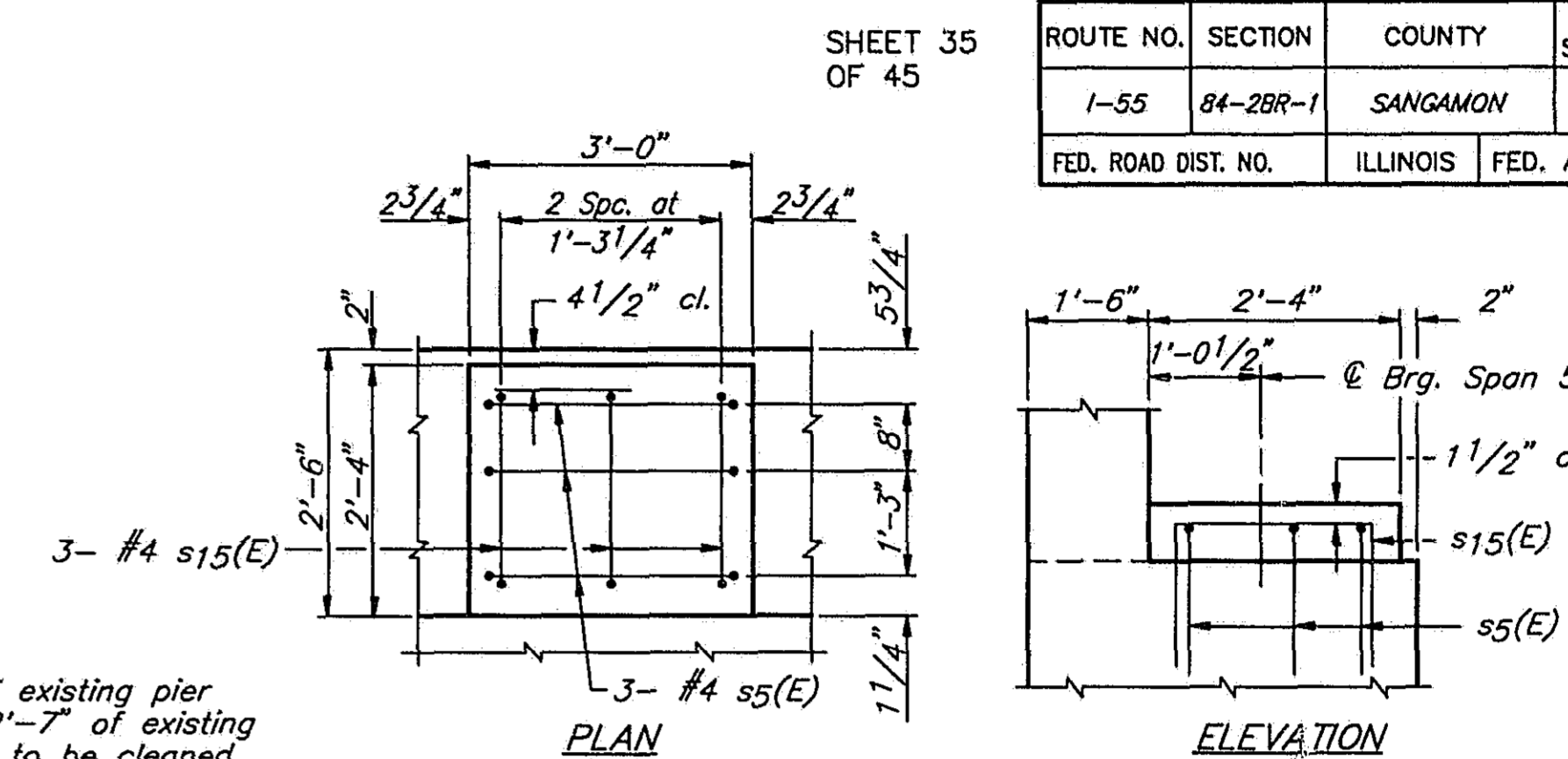


**ELEVATION**  
(Looking South)

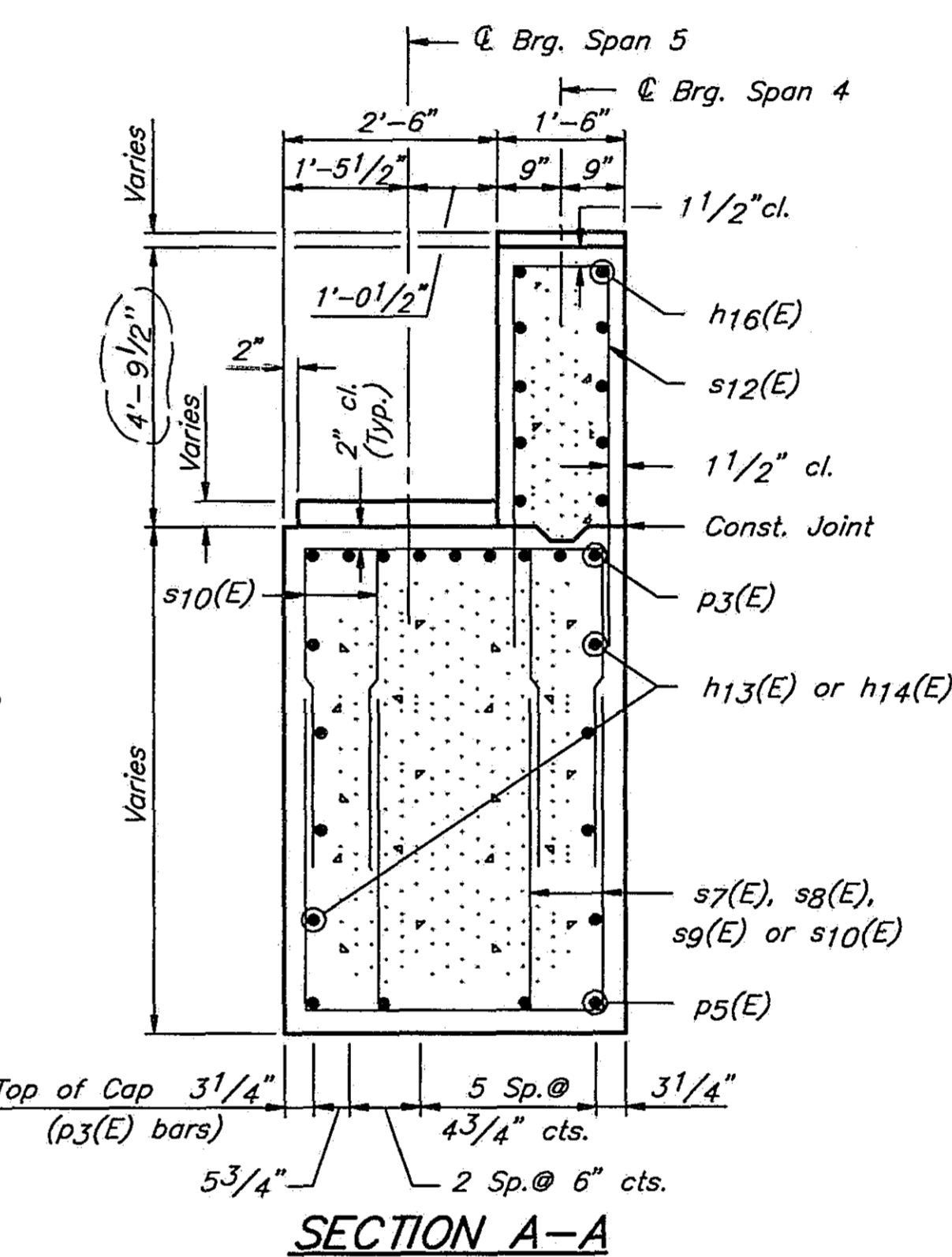


**FOOTING PLAN**

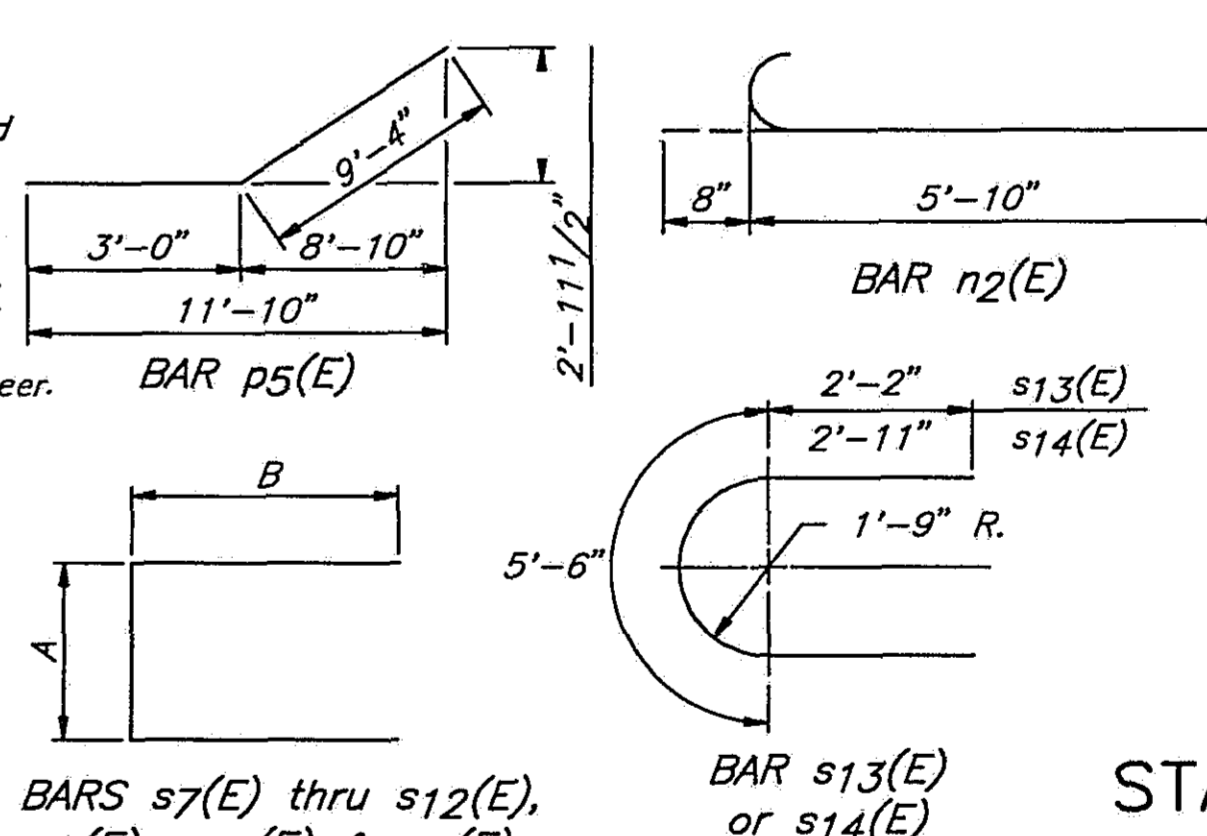
**AS REVISED**



**PEDESTAL DETAILS**



**SECTION A-A**



**Notes:**  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4\"/>

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	207A

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.

**BILL OF MATERIAL**

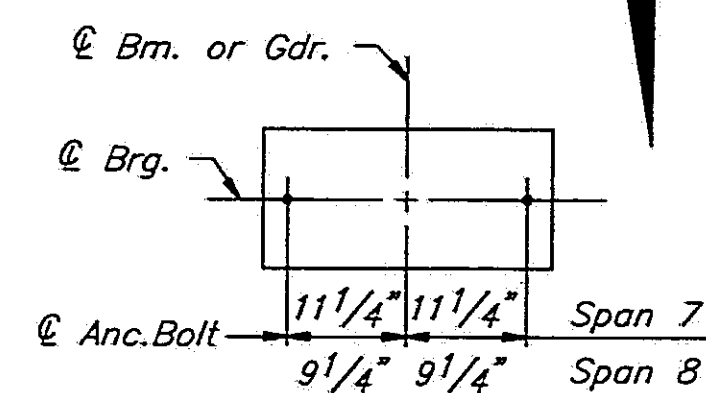
BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	
h13(E)	#5	29'-5"	
h14(E)	#5	25'-3"	
h15(E)	#5	14'-11"	
h16(E)	#5	23'-5"	
n2(E)	#6	8'-6"	
n3(E)	#6	4'-1"	
p3(E)	#11	16'-3"	
p4(E)	#5	28'-6"	
p5(E)	#5	12'-4"	
s5(E)	#4	5'-10"	
s7(E)	#5	10'-8"	
s8(E)	#5	9'-8"	
s9(E)	#5	8'-8"	
s10(E)	#5	7'-10"	
s11(E)	#5	7'-8"	
s12(E)	#6	14'-3"	
s13(E)	#5	9'-10"	
s14(E)	#5	11'-4"	
s15(E)	#4	4'-11"	
t	#6	11'-2"	
u4(E)	#6	7'-8"	
v12(E)	#6	5'-2"	
v13(E)	#6	19'-7"	
w	#5	15'-9"	
w1	#5	3'-9"	
Structure Excavation	Cu.Yds.	183	
Class 'X' Concrete	Cu.Yds.	131.7	
Concrete Removal	Cu.Yds.	31.0	
Reinforcement Bars	Lbs.	950	
Epoxy Coated	Lbs.	8290	
Steel Piles(HP10x57)	Lin.Ft.	440	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER 4 N.B. 1-55  
1-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

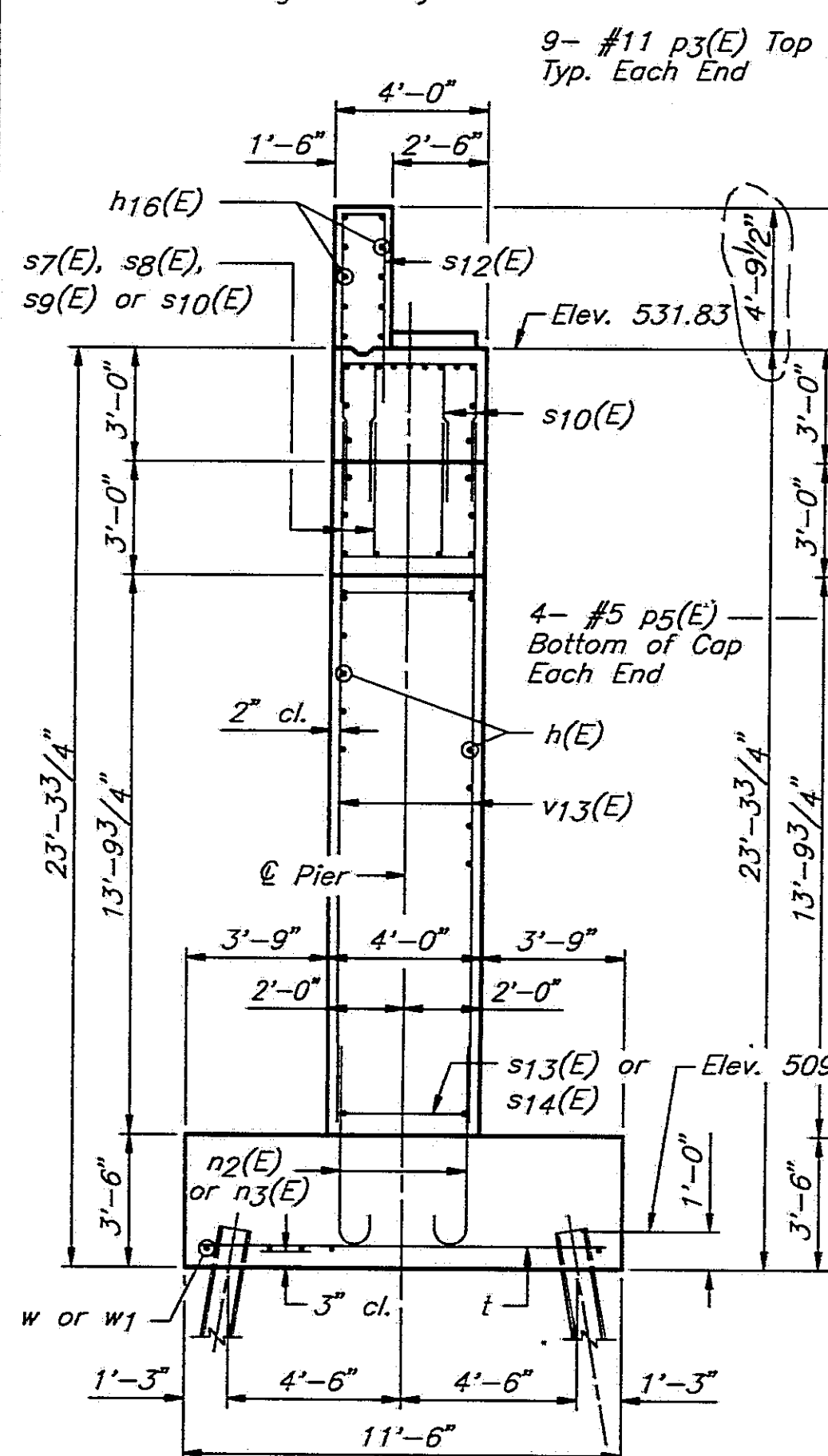
**PIER 7 PILE DATA**

Type ..... Steel HP 10x57  
Capacity ..... Drive to Refusal  
Est. Length ..... 55'  
No. Required ..... 8



**DETAIL A**

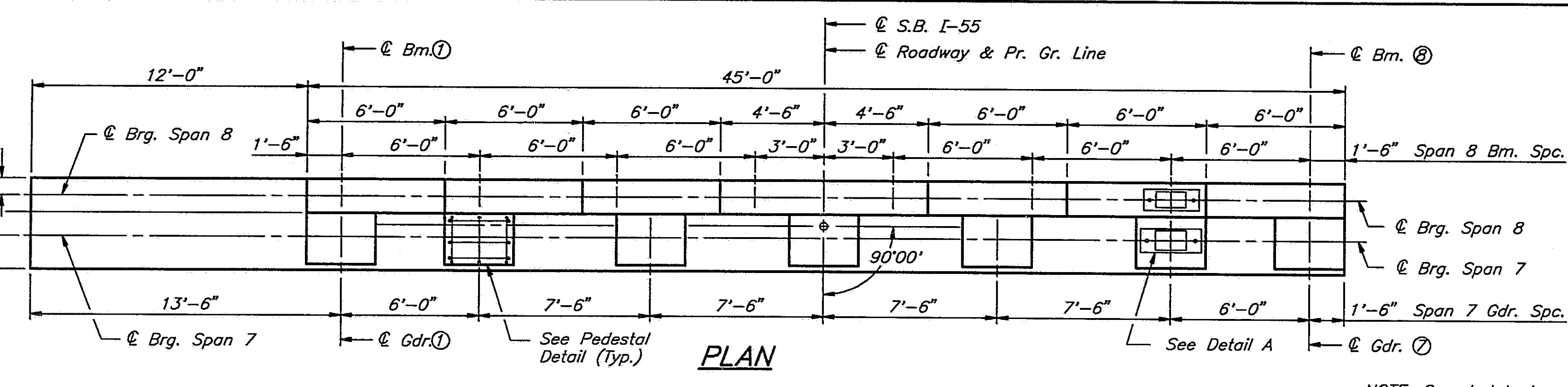
See Sheet #23 of 45 for Bearing Assembly Details



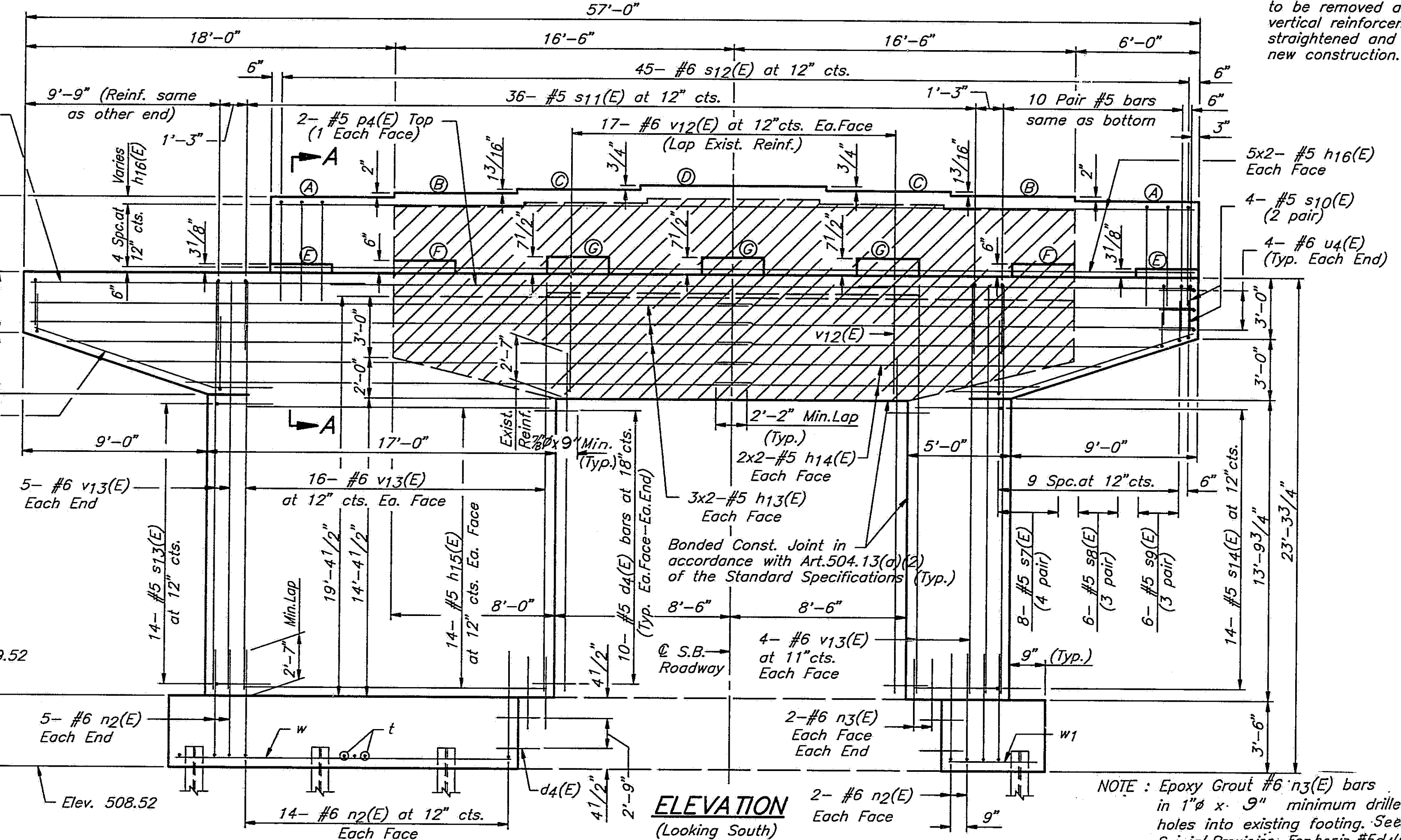
**END VIEW**

LOCATION	ELEVATION
SPAN 8 RIGERS	
(A)	536.62
(B)	536.79
(C)	536.89
(D)	536.95
SPAN 7 PEDESTALS	
(E)	532.09
(F)	532.33
(G)	532.45

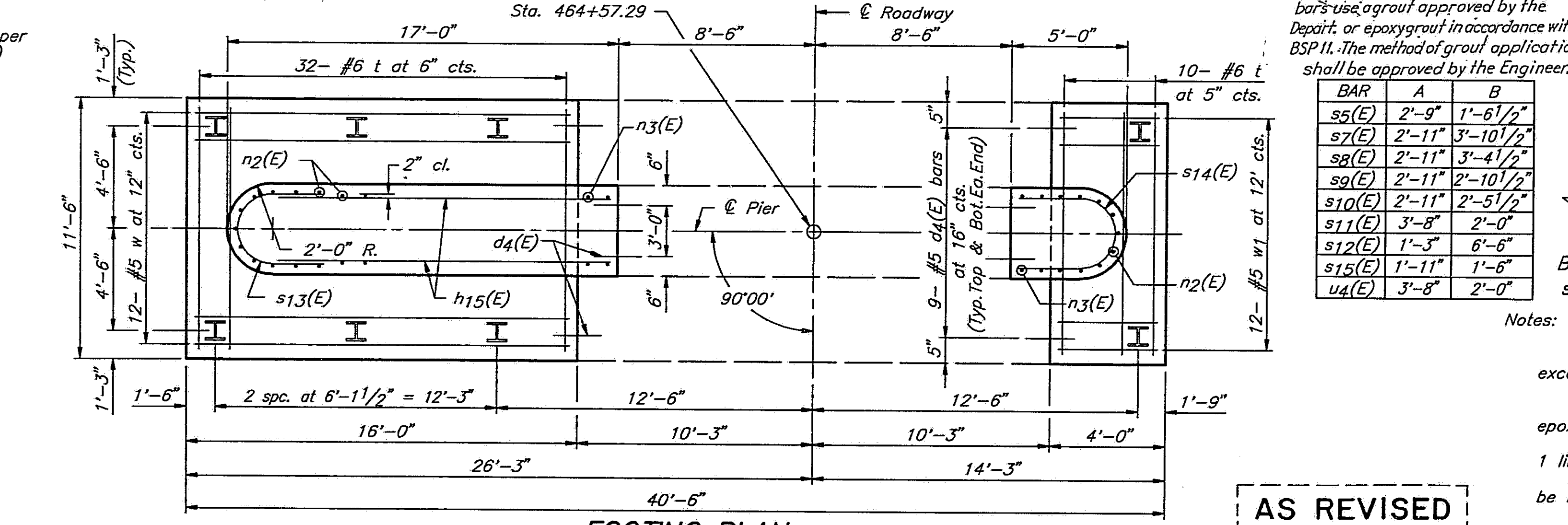
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH



**PLAN**

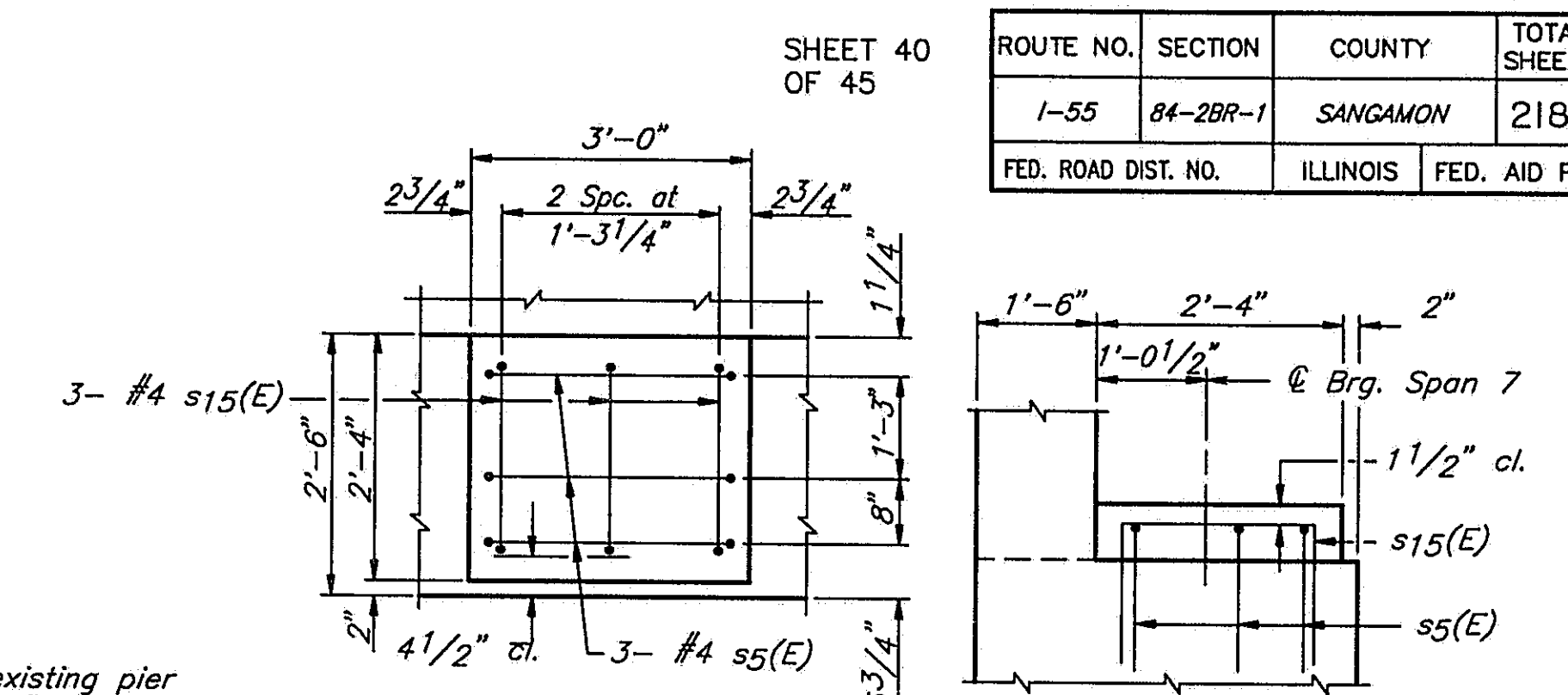


**ELEVATION**  
(Looking South)

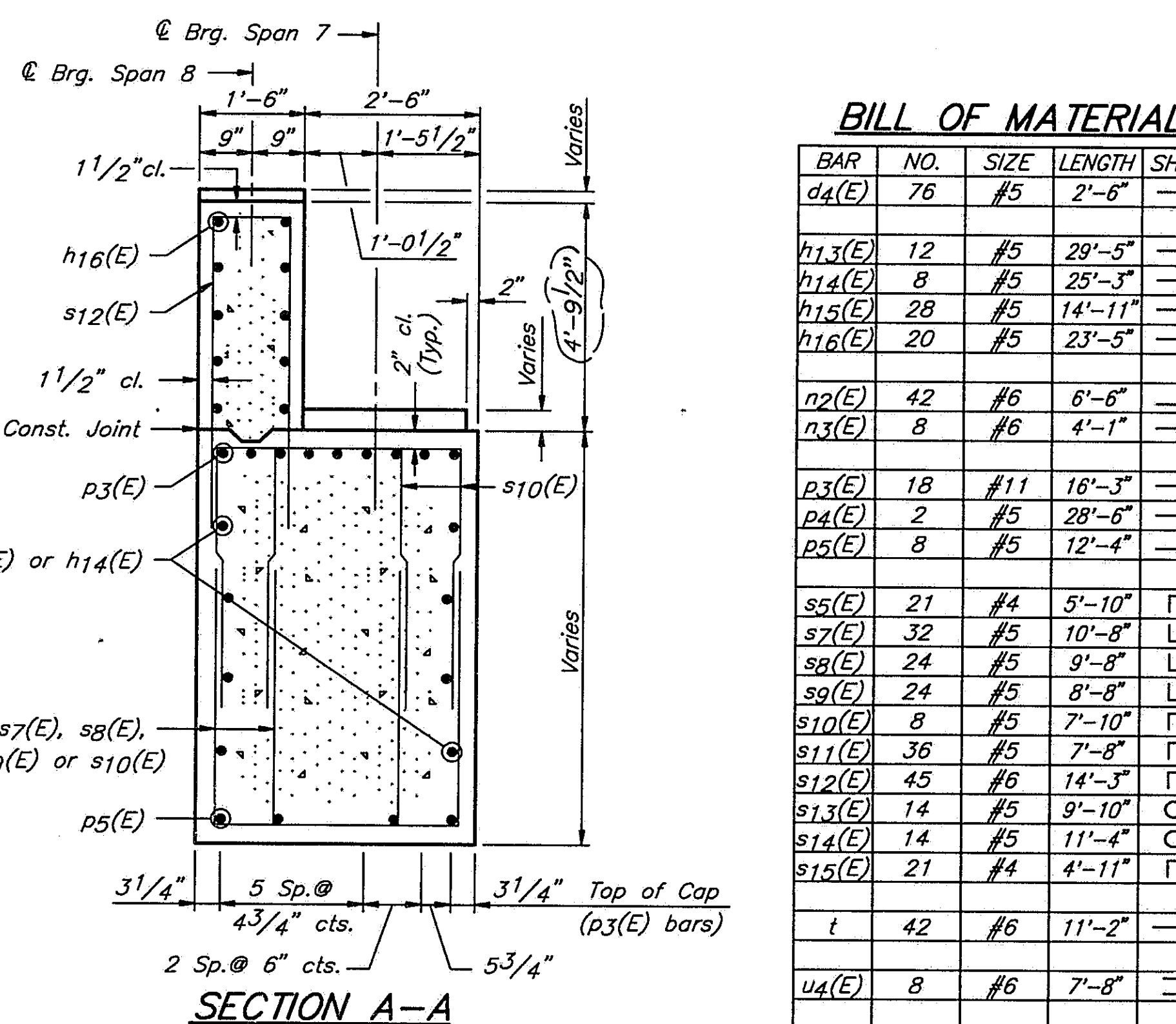


**FOOTING PLAN**

**AS REVISED**

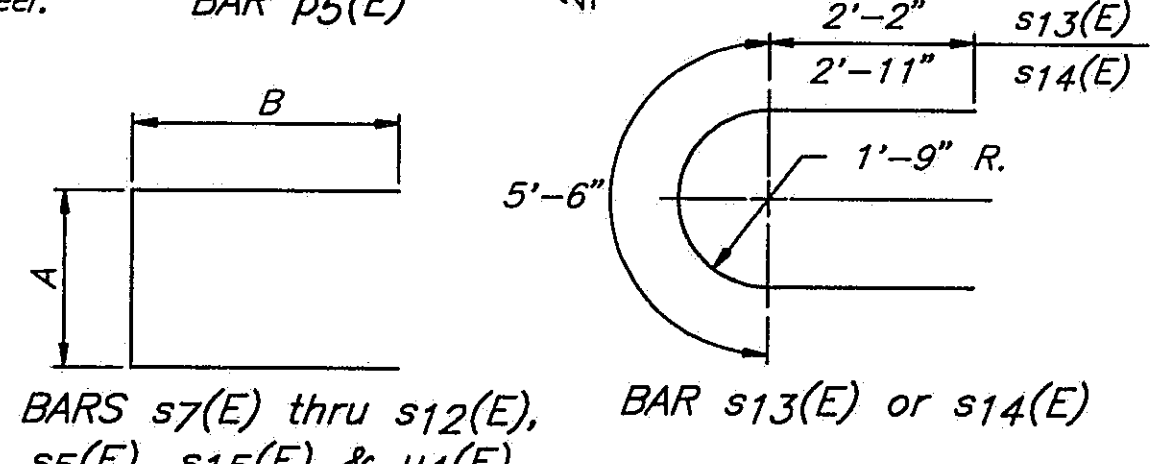


**PEDESTAL DETAILS**



**SECTION A-A**

NOTE: Epoxy Grout #6 n3(E) bars in 1" x 9" minimum drilled holes into existing footing. See Special Provision. For horiz. #5d4(E) bars use a grout approved by the Dept. or epoxy grout in accordance with BSP 11. The method of grout application shall be approved by the Engineer.



Notes:  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4" chamfers except as noted.  
Pour pedestals monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.  
Minor spalling on faces of existing stem to be repaired. Cost incidental to concrete removal.

SHEET 40 OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-55	84-2BR-1	SANGAMON	218	212 A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

**BILL OF MATERIAL**

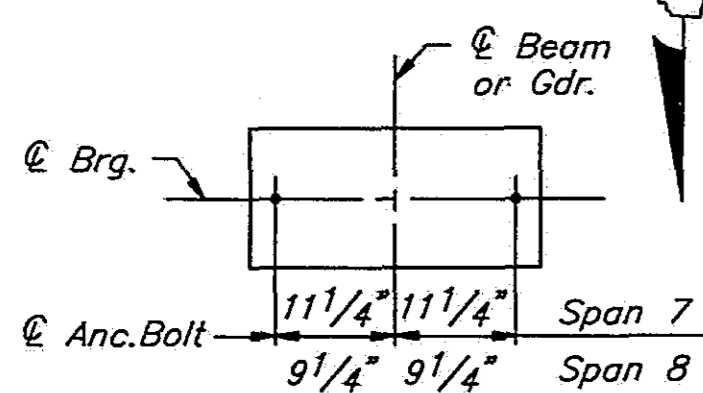
BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#6	2'-6"	
h13(E)	#5	29'-5"	
h14(E)	#5	25'-3"	
h15(E)	#5	14'-11"	
h16(E)	#5	23'-5"	
n2(E)	#6	6'-6"	
n3(E)	#6	4'-1"	
p3(E)	#11	16'-3"	
p4(E)	#5	28'-6"	
p5(E)	#5	12'-4"	
s5(E)	#4	5'-10"	
s7(E)	#5	10'-8"	
s8(E)	#5	9'-8"	
s9(E)	#5	8'-8"	
s10(E)	#5	7'-10"	
s11(E)	#6	7'-8"	
s12(E)	#6	14'-3"	
s13(E)	#5	9'-10"	
s14(E)	#5	11'-4"	
s15(E)	#4	4'-11"	
t	#6	11'-2"	
u4(E)	#6	7'-8"	
v12(E)	#6	5'-2"	
v13(E)	#6	19'-7"	
w	#5	15'-9"	
w1	#5	3'-9"	
Structure Excavation	Cu.Yds.	148	
Class 'X' Concrete	Cu.Yds.	131.7	
Concrete Removal	Cu.Yds.	31.0	
Reinforcement Bars	Lbs.	950	
Reinforcement Bars Epoxy Coated	Lbs.	8290	
Steel Piles (HP10x57)	Lin.Ft.	440	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
PIER 7 S.B. 1-55  
1-55 OVER SANGAMON RIVER  
F.A.I. RTE. 55 SECTION 84-2BR-1  
SANGAMON COUNTY  
STATION 462+25.00  
STRUCTURE NOS. 084-0018, 084-0019

Rev. 11-18-92 RBQ

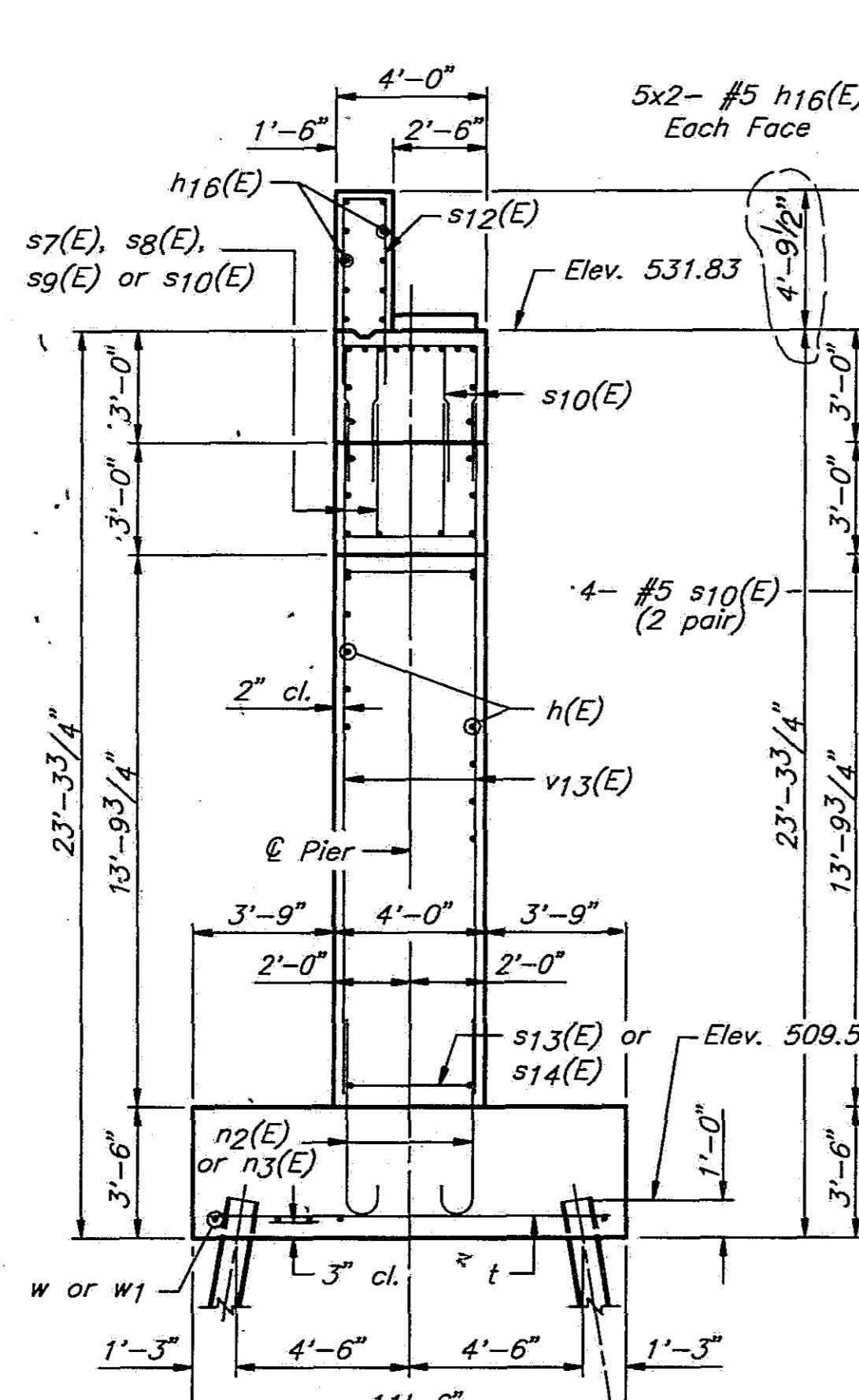
**PIER 7 PILE DATA**

Type ..... Steel HP 10x57  
Capacity ..... Drive to Refusal  
Est. Length ..... 35'  
No. Required ..... 8



**DETAIL A**

See Sheet #23 of 45 for Bearing Assembly Details

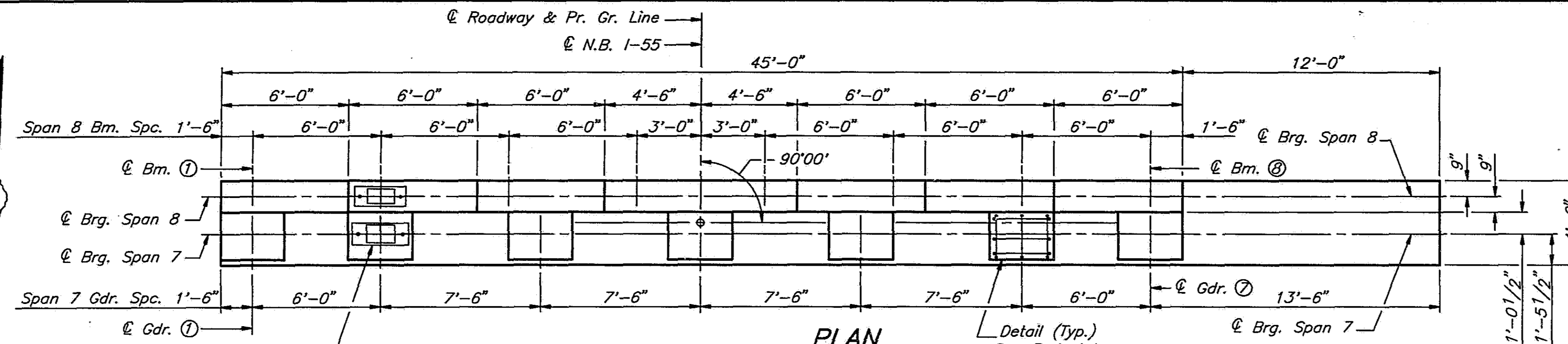


**END VIEW**

LOCATION	ELEVATION
SPAN 8 RISERS	
(A)	536.62
(B)	536.79
(C)	536.89
(D)	536.95
SPAN 7 PEDESTALS	
(E)	532.09
(F)	532.33
(G)	532.45

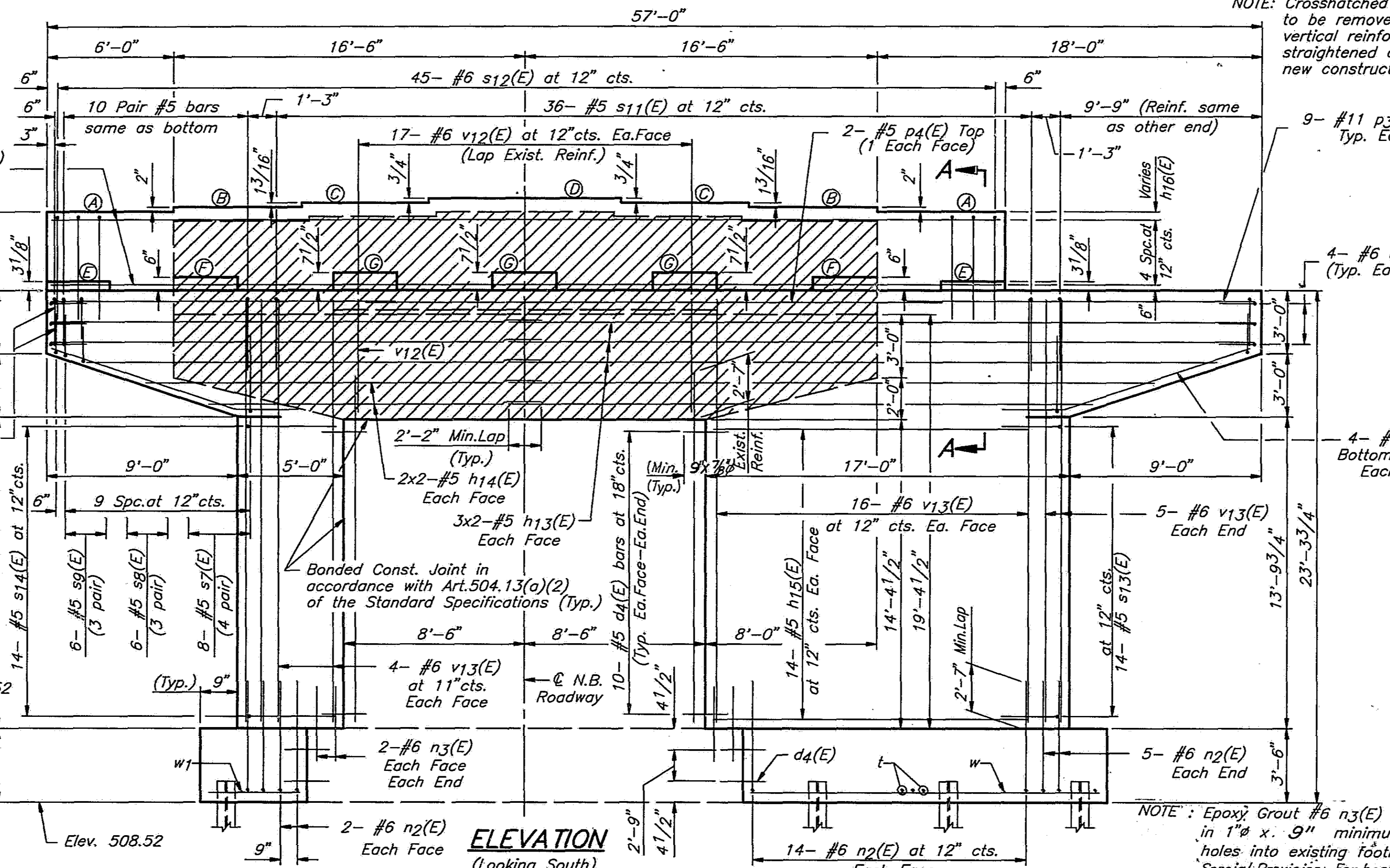
DESIGNED	PLH
CHECKED	RBQ
DRAWN	HGT
CHECKED	PLH

DWG. NAME: BR12.dwg



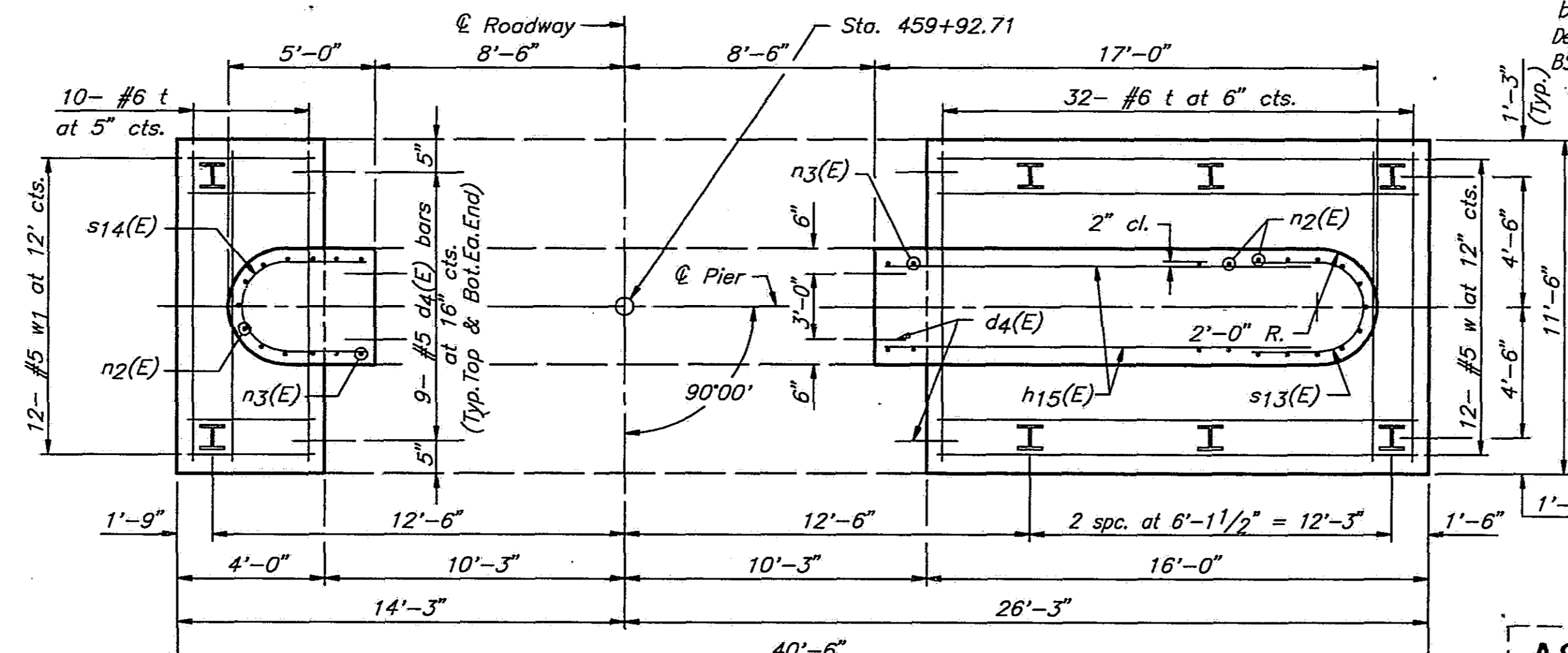
**PLAN**

Detail (Typ.) See Pedestal



**ELEVATION**

(Looking South)

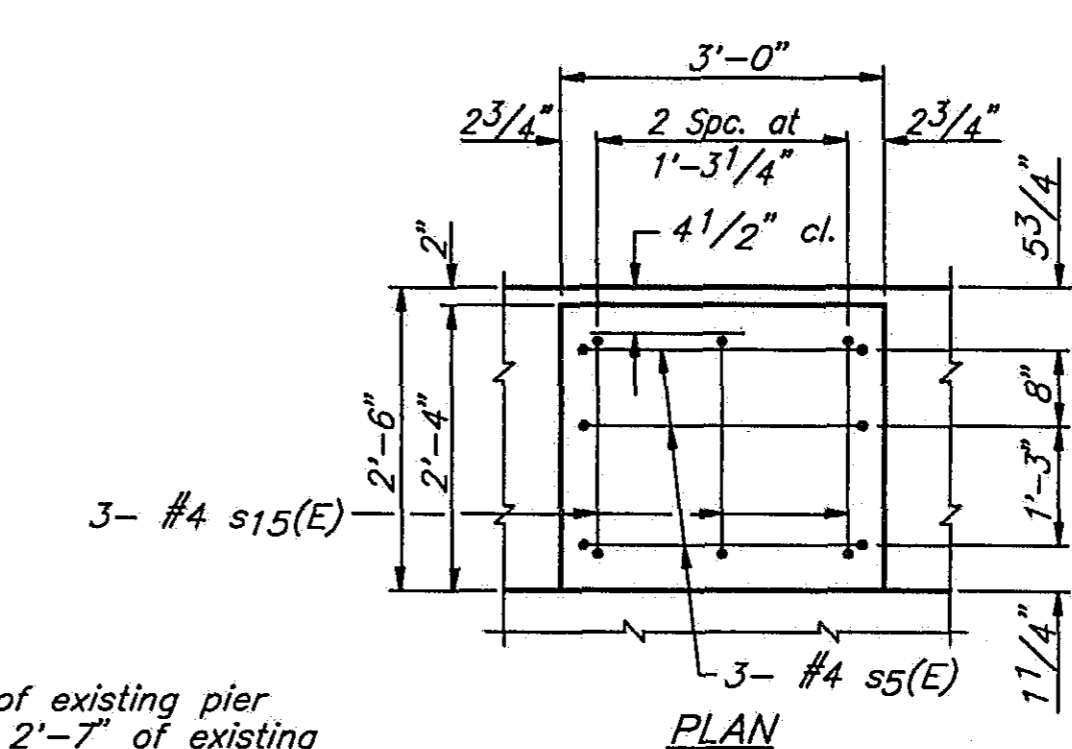


**FOOTING PLAN**

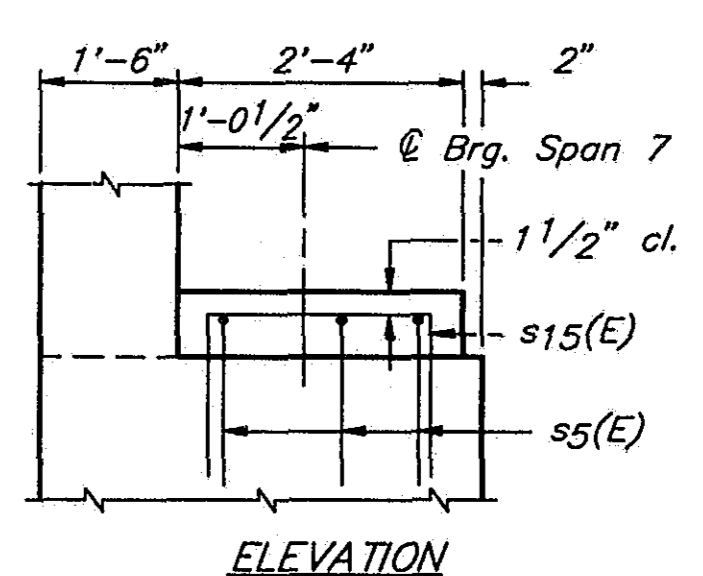
**AS REVISED**

SHEET 41 OF 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	(SHEET NO.)
I-55	84-2BR-1	SANGAMON	218	213A
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

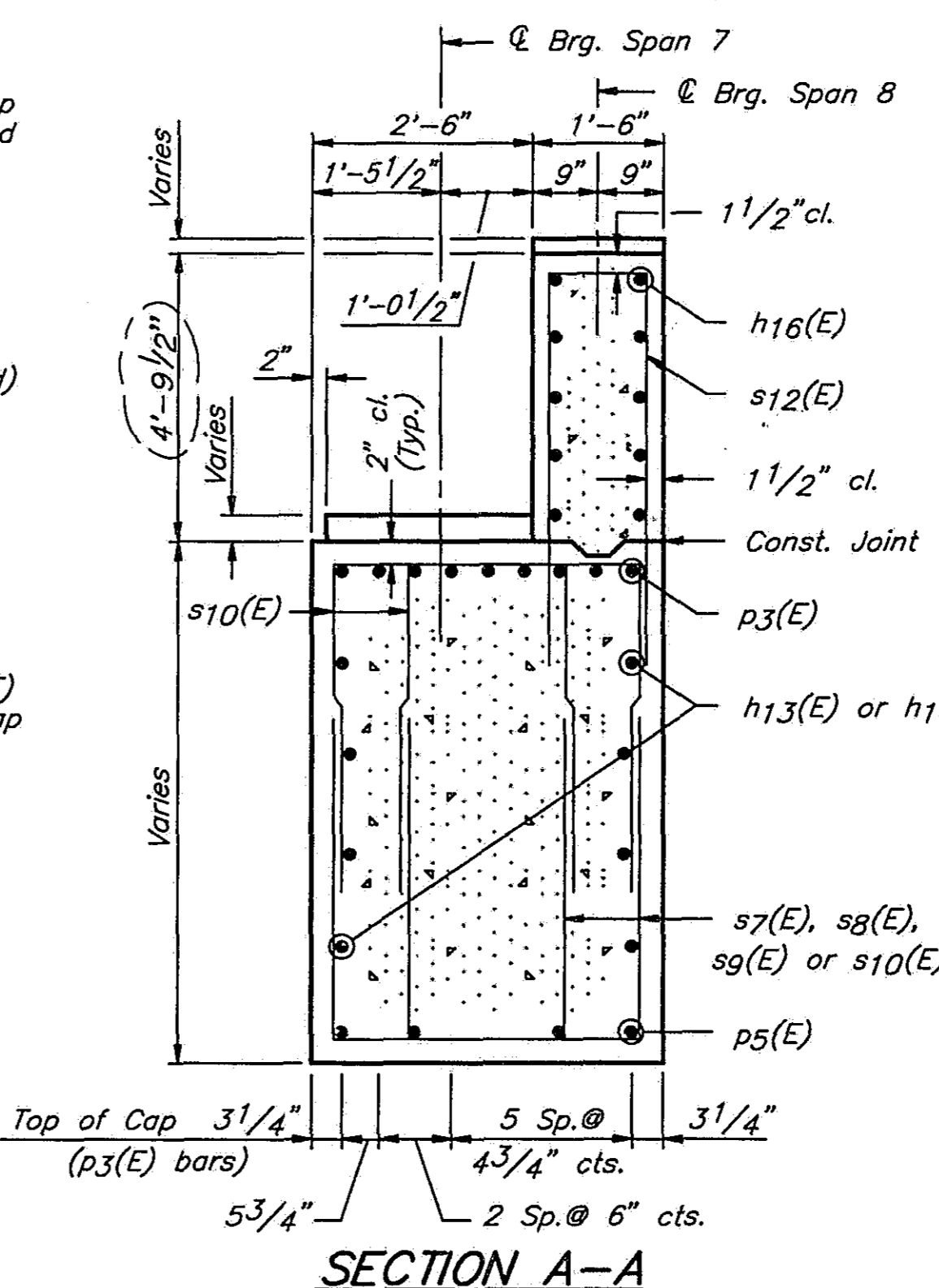


**PLAN**



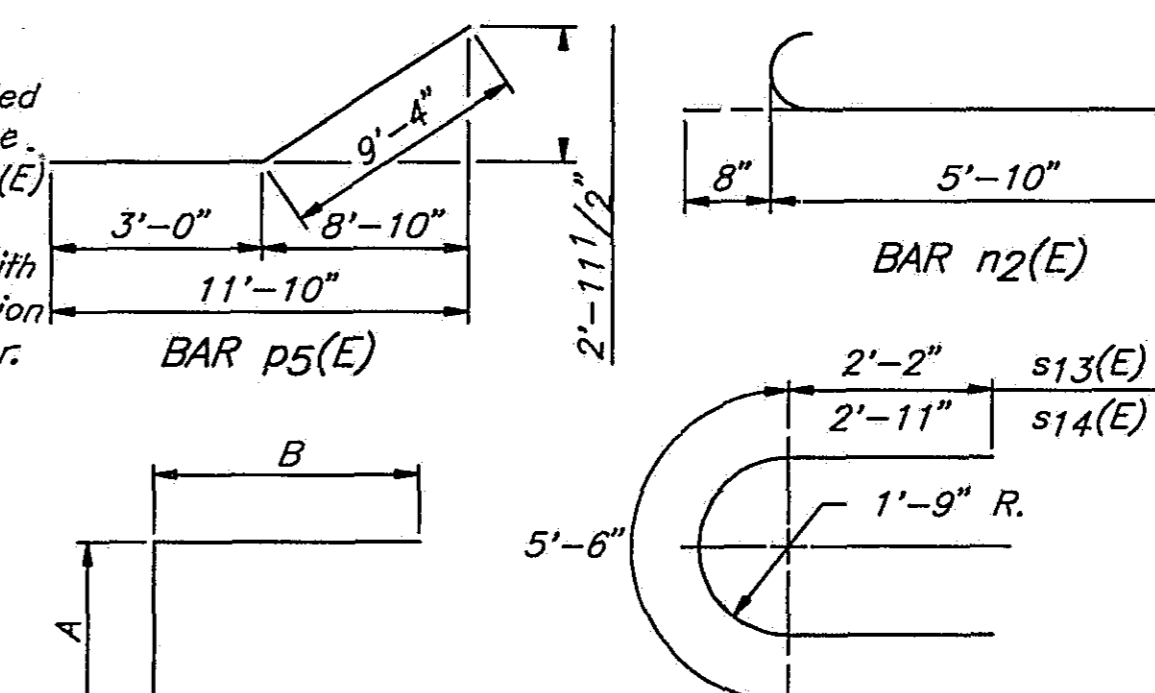
**ELEVATION**

**PEDESTAL DETAILS**



**SECTION A-A**

NOTE: Epoxy Grout #6 n3(E) bars in 1 1/4 x 9\"/>



BARS s7(E) thru s12(E), s5(E), s15(E) & u4(E)

Notes:  
Space reinforcement to miss anchor bolts. All edges shall have standard 3/4\"/>

**BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
d4(E)	#5	2'-6"	
h13(E)	#5	29'-5"	
h14(E)	#5	25'-3"	
h15(E)	#5	14'-11"	
h16(E)	#5	23'-5"	
n2(E)	#6	6'-6"	
n3(E)	#6	4'-1"	
p3(E)	#11	16'-3"	
p4(E)	#5	28'-6"	
p5(E)	#5	12'-4"	
s5(E)	#4	5'-10"	
s7(E)	#5	10'-8"	
s8(E)	#5	9'-8"	
s9(E)	#5	8'-8"	
s10(E)	#5	7'-10"	
s11(E)	#6	7'-8"	
s12(E)	#6	14'-3"	
s13(E)	#5	9'-10"	
s14(E)	#5	11'-4"	
s15(E)	#4	4'-11"	
t	#6	11'-2"	
u4(E)	#6	7'-8"	
v12(E)	#6	5'-2"	
v13(E)	#6	19'-7"	
w	#5	15'-9"	
w1	#5	3'-9"	
Structure Excavation		Cu.Yds.	148
Class 'X' Concrete		Cu.Yds.	131.7
Concrete Removal		Cu.Yds.	31.0
Reinforcement Bars		Lbs.	950
Reinforcement Bars Epoxy Coated		Lbs.	8290
Steel Piles (HP10x57)		Lin.Ft.	440

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