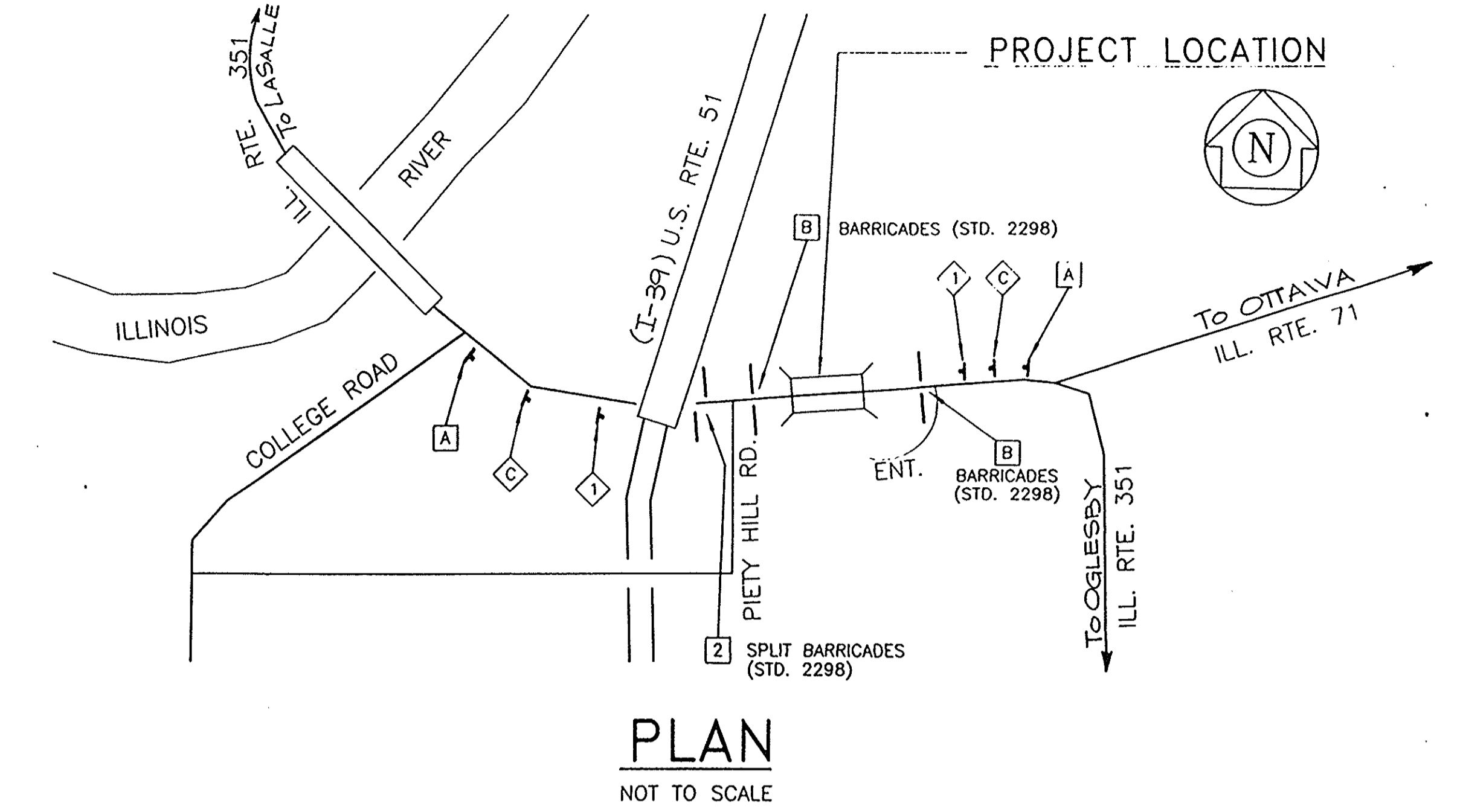
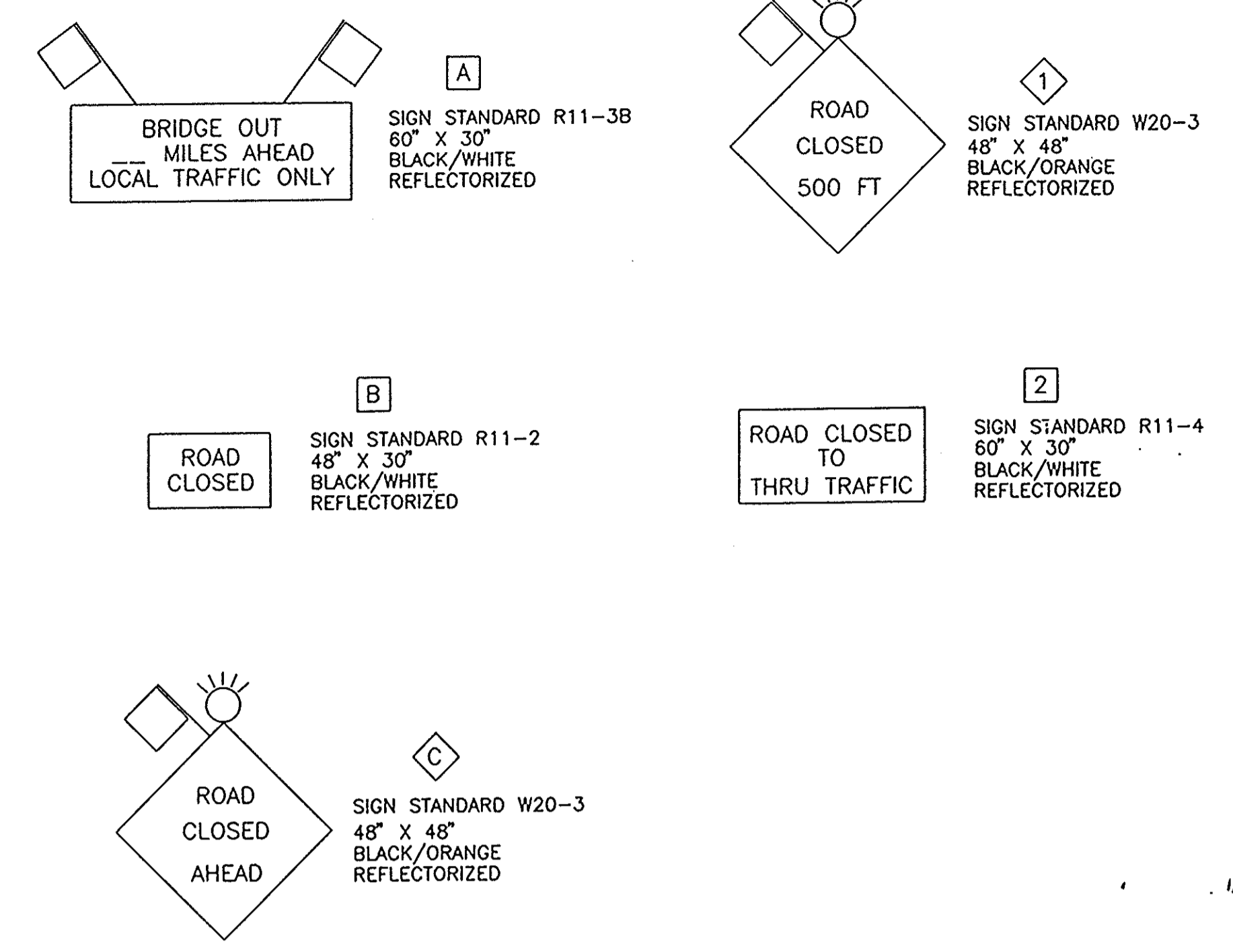


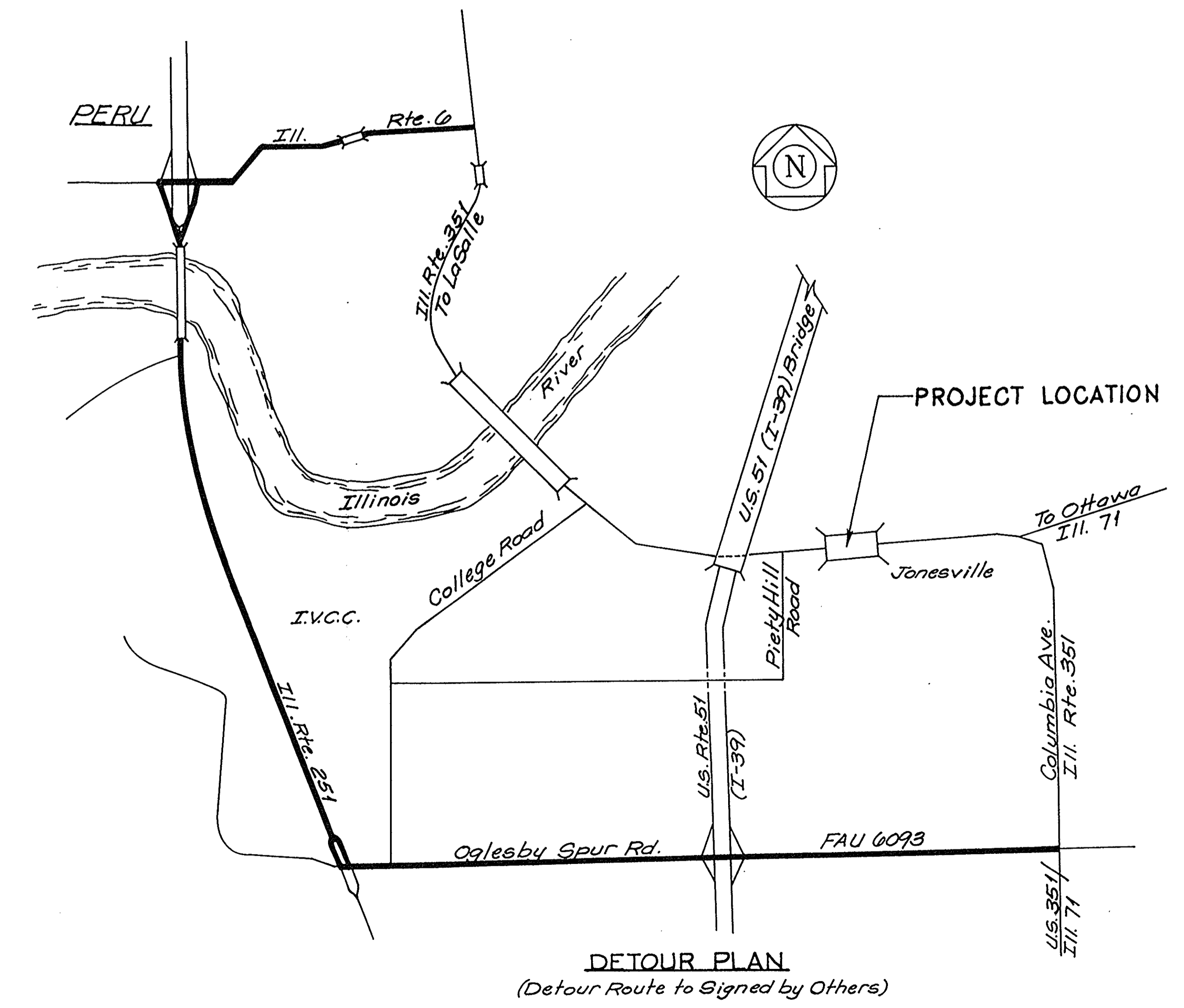
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	70-VBR-1	LASALLE	30	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS PROJECT NO.			



**MAINTENANCE OF TRAFFIC  
GENERAL NOTES**

1. ALL TRAFFIC CONTROL DEVICES SHOWN SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR. THIS WORK TO BE PAID FOR AT THE CONTRACT PRICE LUMP SUM, FOR TRAFFIC CONTROL AND PROTECTION.
2. ALL SIGNS NOT ATTACHED TO TYPE III BARRICADES SHALL BE POST MOUNTED.

- INDICATES TYPE III BARRICADES CONFORMING TO STD. 2298 WITH 2 FLASHING LIGHTS PER BARRICADE (BI-DIRECTIONAL ON SPLIT OR HALF BARRICADES).
- INDICATES FLASHING LIGHT ABOVE SIGN.
- INDICATES 18" X 18" ORANGE FLAG.

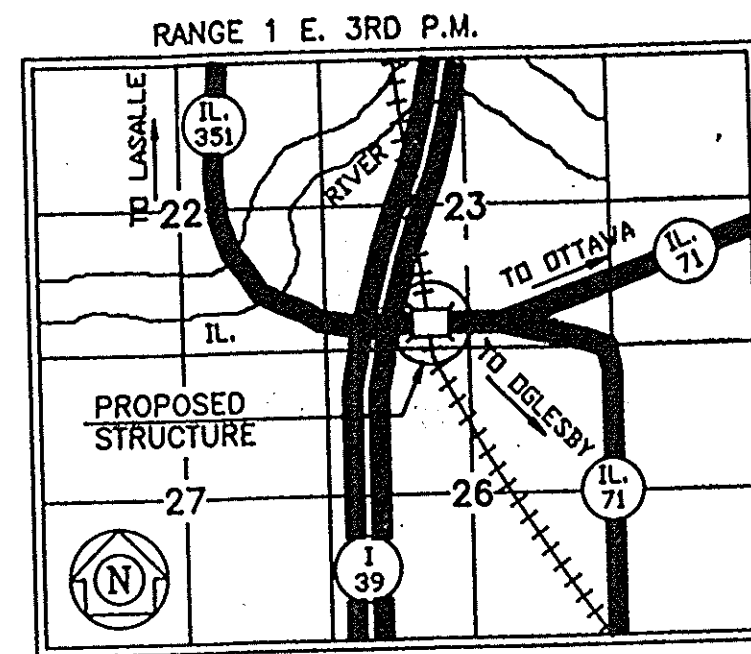


Bench Mark: U.S.G.S. B.M. No. N-230 Brass Disk Set In West Face Of Pier 2 At El. 518.17 Above M.S.L.  
 Existing Structure: SN 050-0019 Three Span Cont. Steel Beam Bridge With A Total Length Of 176'-6"  
 Back To Back Of Abutments. Abutments To Be Removed And Replaced  
 With A Widened Substructure and Superstructure. New Guardrail To Be Installed As Required.  
 Traffic: Structure Will Be Closed And Detours Will Be Provided During Construction.

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	70-VBR-1	LASALLE	30	9
FED. ROAD DIST. NO. 3		ILLINOIS PROJECT		P-93-052-90

SHEET NO. 1  
19 SHEETS



LOCATION SKETCH

**DESIGN SPECIFICATIONS**

1992 AASHTO Specifications

**LOADING HS 20-44**

Allow 25#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

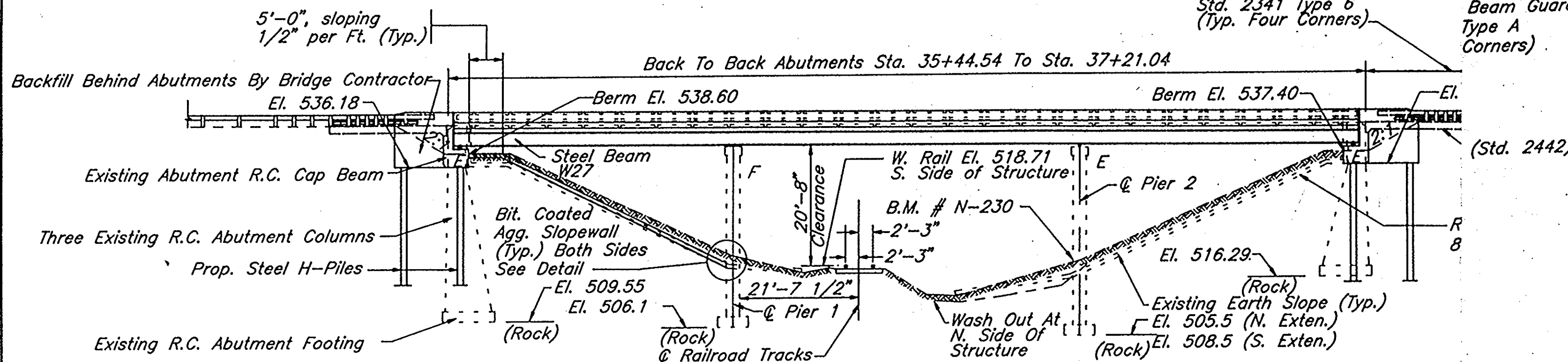
$f'_c = 3500$  psi  
 $f_y = 60,000$  psi (Reinf.)  
 $f_y = 50,000$  psi (Struct.) (M-270, Gr. 50)  
 $f_y = 36,000$  psi (Struct.) (M-270, Gr. 36)

**SEISMIC DATA**

S.P.C.: A  
 $A = 0.04$   
 $S = 1.2$

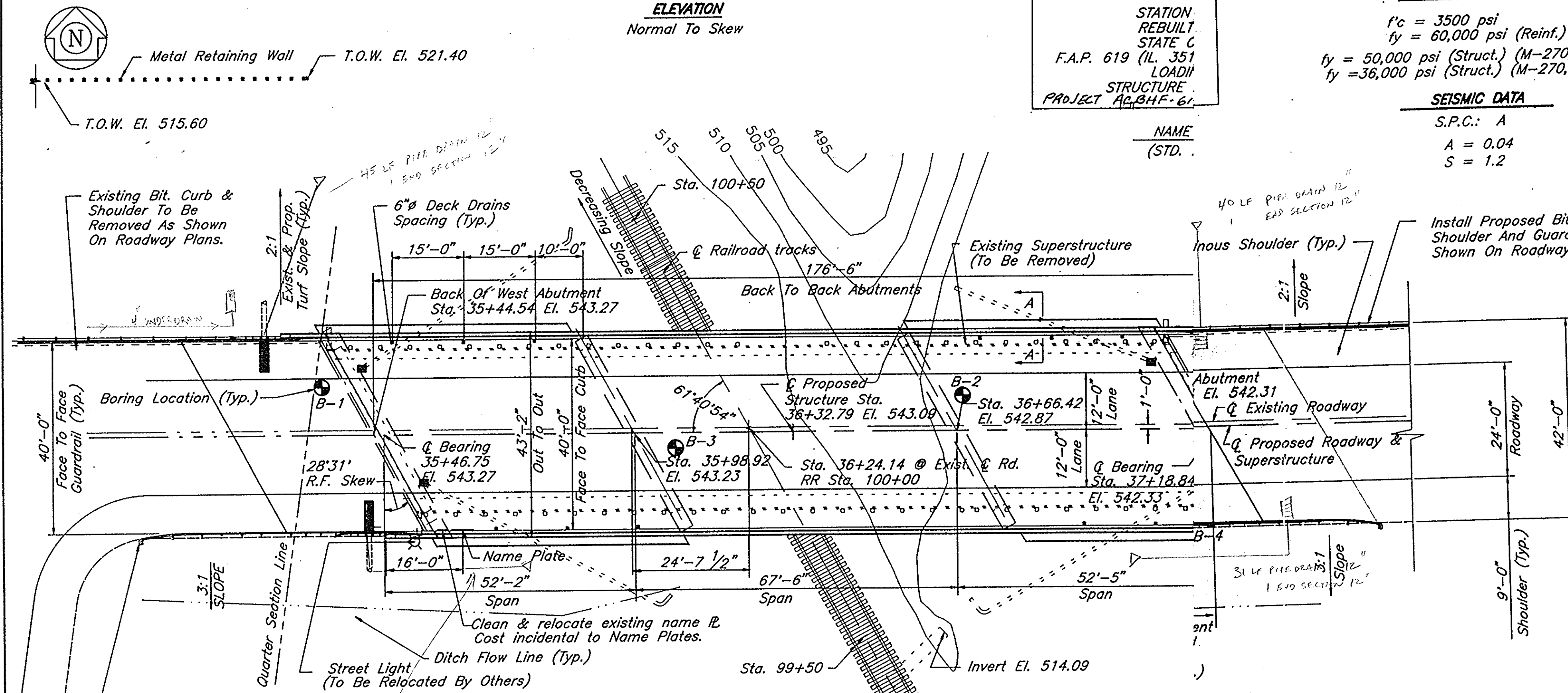
**GENERAL NOTES**

- Fasteners Shall Be High Strength Bolts. Bolts 7/8"  $\phi$ , Open Holes 15/16"  $\phi$ , Unless Otherwise Noted.
- Calculated Weight Of Structural Steel:  
M270 Gr.36= 22,420 lbs.  
M270 Gr.50= 130,650 lbs.
- The Inorganic Zinc-Silicate / Acrylic / Acrylic Paint System shall be used for shop and field painting of structure steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green Munsell No. 7.5G 4/8.
- 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 Supports. Field Welding In Other Areas Will Be Permitted Only When Approved By The Engineer.
- Anchor Bolts Shall Be Set Before Bolting Diaphragms Over Supports.
- The Structural Steel Bearing Plates Of The Elastomeric Bearing Assembly Shall Conform To The Requirements Of AASHTO M 270 Grade 50.
- 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 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.
- 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 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.
- Bearing Seat Surfaces Shall Be Constructed or Adjusted To The Designated Elevations Within A Tolerance Of 1/8 Inch. Adjustment Shall Be made Either By Grinding The Surface Or By Shimming The Bearing. Two 1/8 Inch 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 Contractor Shall Drive Two (2) HP10x42 Test Piles In A Permanent Location At North End of East and West Abutments As Directed By The Engineer Before Ordering The Remainder of Piles.
- Bridge Seat Sealer Shall Be Applied To The Seat Area Of East and West Abutments.



**ELEVATION**  
Normal To Skew

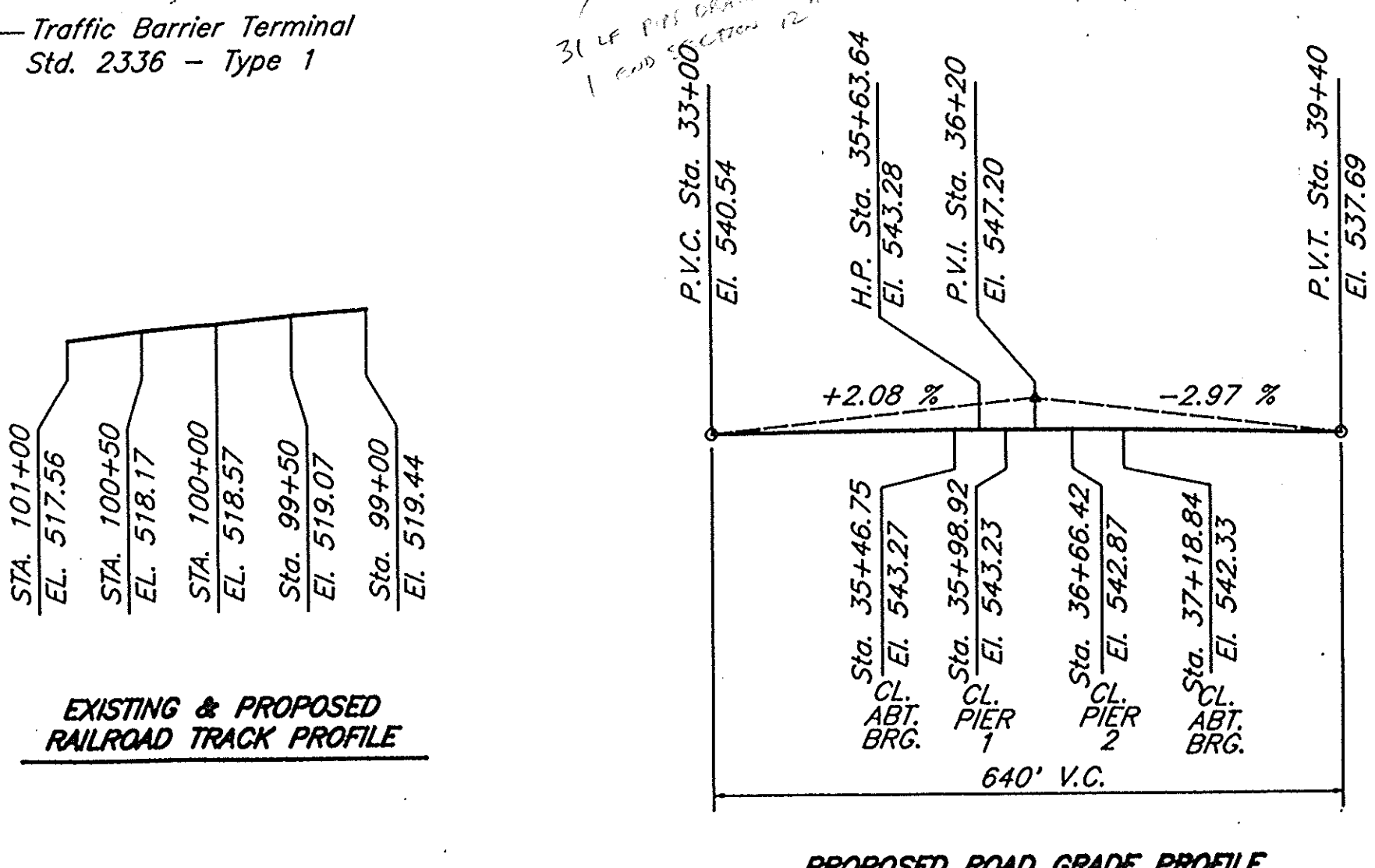
STATION	REBUILD	STATE C
F.A.P. 619 (IL 351)		
LOADING		
STRUCTURE		
PROJECT ACBHF-61		



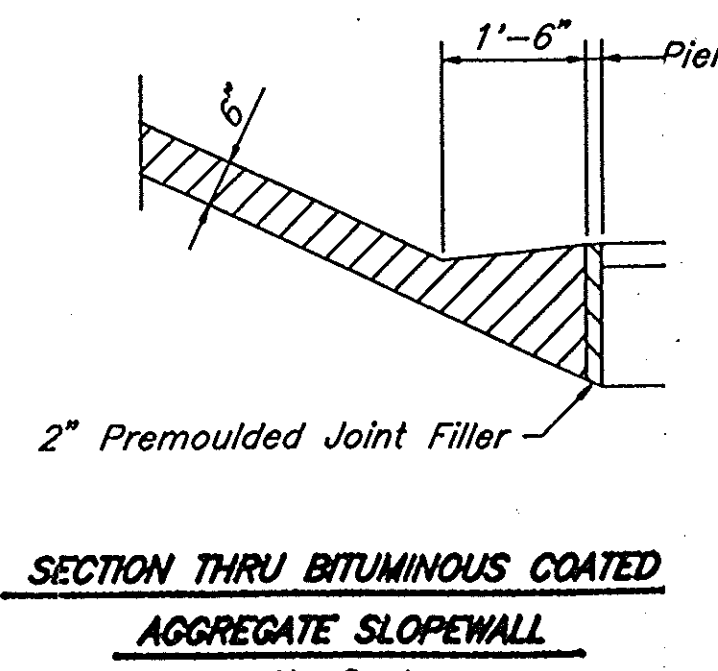
**PLAN**

Note:  
Refer To Roadway Plans For Curve Data,  
R.O.W. Location, Typical Road Section, Etc.

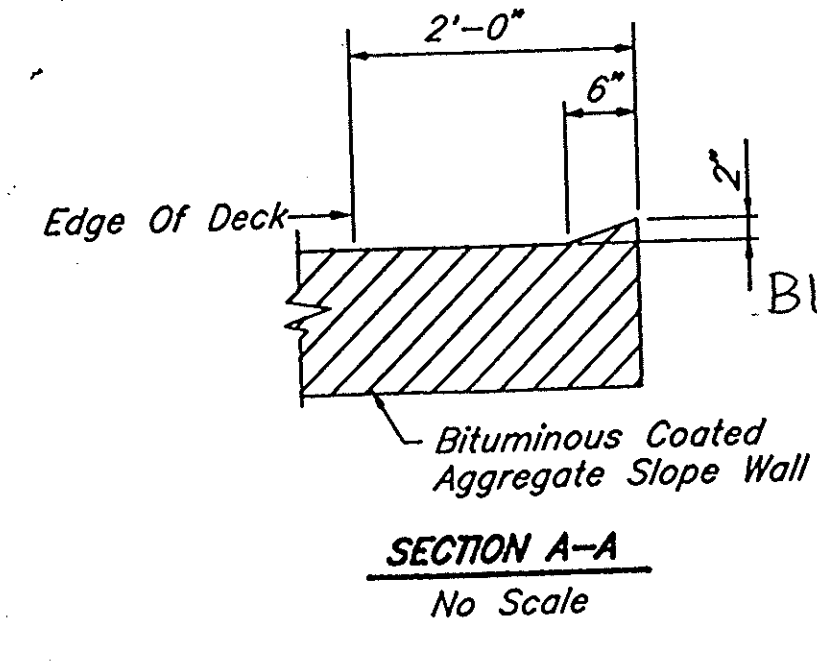
TOTAL BILL OF MATERIALS				
Item	Unit	Super	Sub	Total
Removal of Existing Superstructure	Each	1		1
Bituminous Coated Aggregate Slopewall 6"	Sq. Yds.		526	526
Floor Drains	Each	12		12
Concrete Super Structure	Cu. Yds.	223.5		223.5
Concrete Structures	Cu. Yds.		132	132
Protective Coat	Sq. Yds.	928		928
Preformed Joint Seal, 4"	Ft.	50		50
Preformed Joint Seal, 2 1/2"	Ft.	50		50
Elastomeric Bearing Assembly, Ty. I	Each	14		14
Elastomeric Bearing Assembly, Ty. II	Each	7		7
Furnishing and Erecting Structural Steel	L.S.	1		1
Reinforcement Bars, Epoxy Coated	Lbs.	52,950	16,850	69,800
Name Plates	Each	1		1
Bridge Deck Grooving	Sq. Yds.	732		732
Stud Shear Connectors	Each		3,367	3,367
Furnishing Steel Piles, HP 10x42	Ft.		189	189
Driving Steel Piles	Ft.		189	189
Test Pile, Steel HP 10x42	Each		2	2
Concrete Removal	Cu. Yds.		41.1	41.1
Structure Excavation	Cu. Yds.		282	282
Rock Excavation For Structures	Cu. Yds.		6	6
Bridge Seat Sealer	Sq. Ft.		195	195
Graffiti Removal	Sq. Yds.		79	79
Formed Concrete Repair $\leq 5"$	Sq. Ft.		120	120



PROPOSED ROAD GRADE PROFILE



SECTION THRU BITUMINOUS COATED AGGREGATE SLOPEWALL  
No Scale

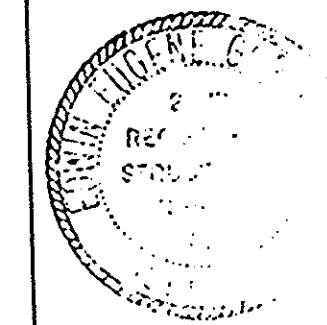


SECTION A-A  
No Scale

BUILT TO PLAN DIMENSIONS

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY.

*Ralph E. Anderson*  
Engineer of Bridges and Structures



*Cynthia Anderson* Date: 2-25-94  
 For WALTER E. DEUCHLER ASSOC., INC.  
 S.E. No. 081-002873  
 Expiration Date: 11-30-94

**WALTER E. DEUCHLER ASSOCIATES, INC.**  
Consulting Engineers - Aurora, Illinois

DESIGNED RP	DRAWN GWR	APPROVED	DATE 2/25/94	CAD DWS: \IL\93030\351GP-E	JOB NO. 222/93030
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GENERAL PLAN & ELEVATION  
 F.A.P. Route 619 (IL Route 351) OVER RAILROAD TRACK, LASALLE COUNTY  
 SECTION 70-VBR-1 STATION 36+32.25 S.N. 050-0019

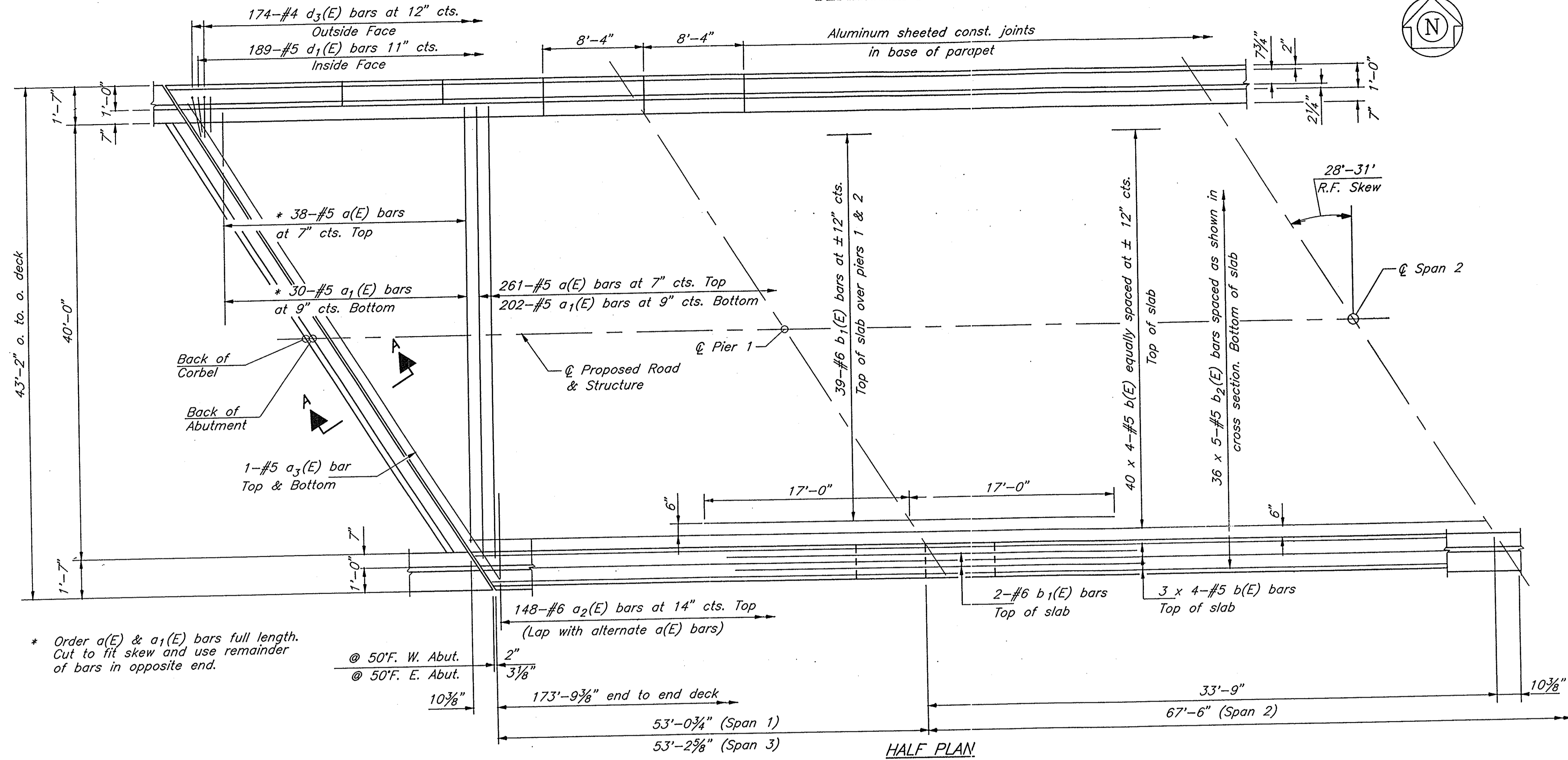
SHEET  
9  
OF 30



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

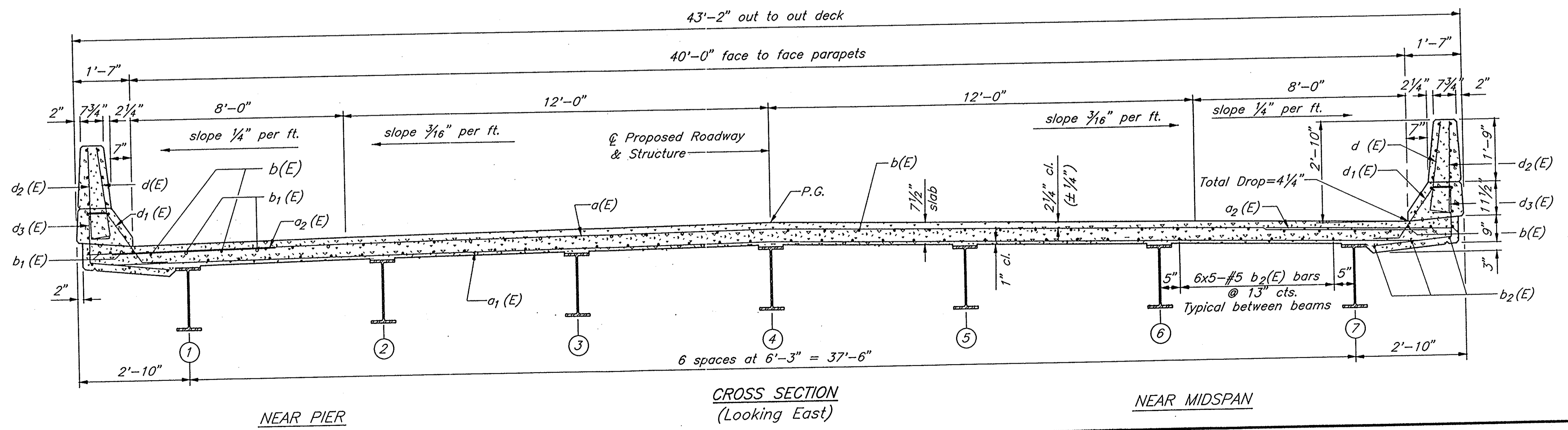
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	70-VBR-1	LASALLE	30	11
FED. ROAD DIST. NO.	ILLINOIS PROJECT NO.			

SHEET NO. 3  
19 SHEETS



NOTES : See Sheet # 5 of 19 for Superstructure 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 # 4 of 19 for Section A-A.  
#5 bars shall have 2'-2" min. lap.

\* Order a(E) & a1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



DESIGNED
CHECKED
DRAWN
CHECKED

WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

REVISIONS					
DESIGNED	EEG	DRAWN	JES	APPROVED	
DATE	1/13/94	BOOK		SCALE	
CAD DWG.	IL\93030\351SUPER	JOB NO.	222/93030/00		

SUPERSTRUCTURE  
F.A.P. 619 (IL. RT. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STA. 36+32.25 S.N. 050-0019

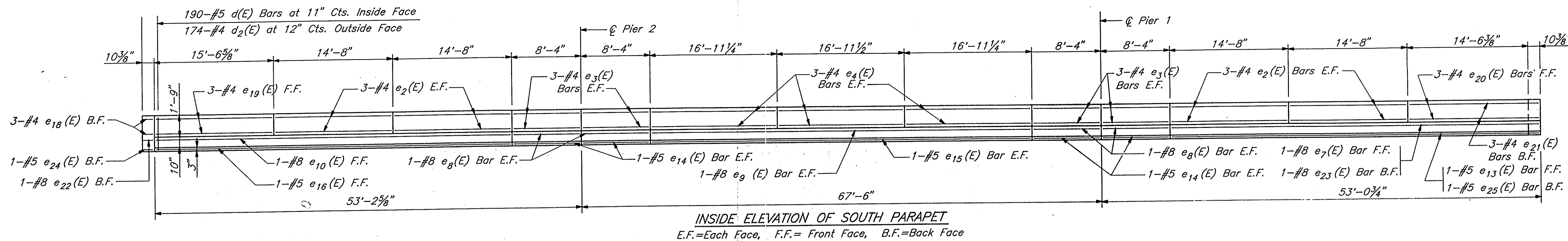
SHEET 11  
OF 30



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	70-VBR-1	LASALLE	30	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS PROJECT NO.			

SHEET NO. 5  
19 SHEETS



SUPERSTRUCTURE BILL OF MATERIALS

Bar	No.	Size	Length	Shape
a(E)	299	#5	41'-2"	—
a <sub>1</sub> (E)	232	#5	41'-2"	—
a <sub>2</sub> (E)	296	#6	4'-0"	—
a <sub>3</sub> (E)	4	#5	46'-10"	—
b(E)	184	#5	45'-1"	—
b <sub>1</sub> (E)	86	#6	34'-0"	—
b <sub>2</sub> (E)	180	#5	36'-6"	—
d(E)	380	#5	3'-0"	┌
d <sub>1</sub> (E)	378	#5	2'-7"	└
d <sub>2</sub> (E)	348	#4	3'-0"	┌
d <sub>3</sub> (E)	348	#4	3'-10"	└
e(E)	3	#4	16'-0"	—
e <sub>1</sub> (E)	3	#4	15'-2"	—
e <sub>2</sub> (E)	51	#4	14'-5"	—
e <sub>3</sub> (E)	48	#4	8'-1"	—
e <sub>4</sub> (E)	36	#4	16'-8"	—
e <sub>5</sub> (E)	3	#4	15'-3"	—
e <sub>6</sub> (E)	1	#8	45'-4"	—
e <sub>7</sub> (E)	2	#8	44'-6"	—
e <sub>8</sub> (E)	16	#8	8'-1"	—

Bar	No.	Size	Length	Shape
e <sub>9</sub> (E)	4	#8	50'-7"	—
e <sub>10</sub> (E)	2	#8	44'-7"	—
e <sub>11</sub> (E)	1	#8	43'-9"	—
e <sub>12</sub> (E)	1	#5	45'-4"	—
e <sub>13</sub> (E)	2	#5	44'-6"	—
e <sub>14</sub> (E)	16	#5	8'-1"	—
e <sub>15</sub> (E)	4	#5	50'-7"	—
e <sub>16</sub> (E)	2	#5	44'-7"	—
e <sub>17</sub> (E)	1	#5	43'-9"	—
e <sub>18</sub> (E)	3	#4	16'-2"	—
e <sub>19</sub> (E)	3	#4	15'-3"	—
e <sub>20</sub> (E)	3	#4	15'-2"	—
e <sub>21</sub> (E)	3	#4	14'-4"	—
e <sub>22</sub> (E)	1	#8	45'-6"	—
e <sub>23</sub> (E)	1	#8	43'-7"	—
e <sub>24</sub> (E)	1	#5	45'-6"	—
e <sub>25</sub> (E)	1	#5	43'-7"	—
Reinforcement Bars Epoxy Coated		Lbs.	52,390	
Concrete Super Structure		Cu. Yds.	217	

Reinforcement Bars Designated (E)  
shall be Epoxy Coated.

WALTER E. DEUCHLER ASSOCIATES, INC.  
Consulting Engineers — Aurora, Illinois

DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	CAD DWG.	ILLINOIS PROJECT NO.	JOB NO.
EEG	JES		10/16/93			IL\93030\351-BM	70-VBR-1	222/93030

PARAPET DETAILS & SUPERSTRUCTURE BILL OF MATERIAL  
F.A.P. 619 (IL. RT. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STATION 36+32.25 S.N. 050-0019

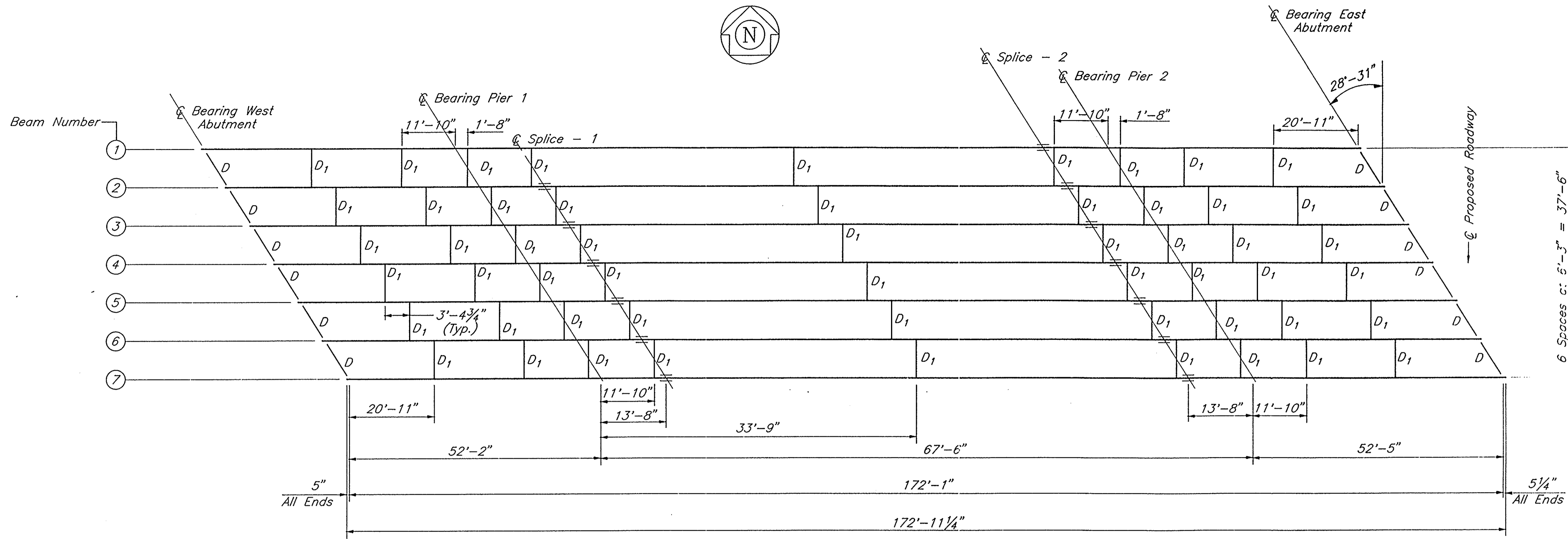
SHEET  
13  
OF 30



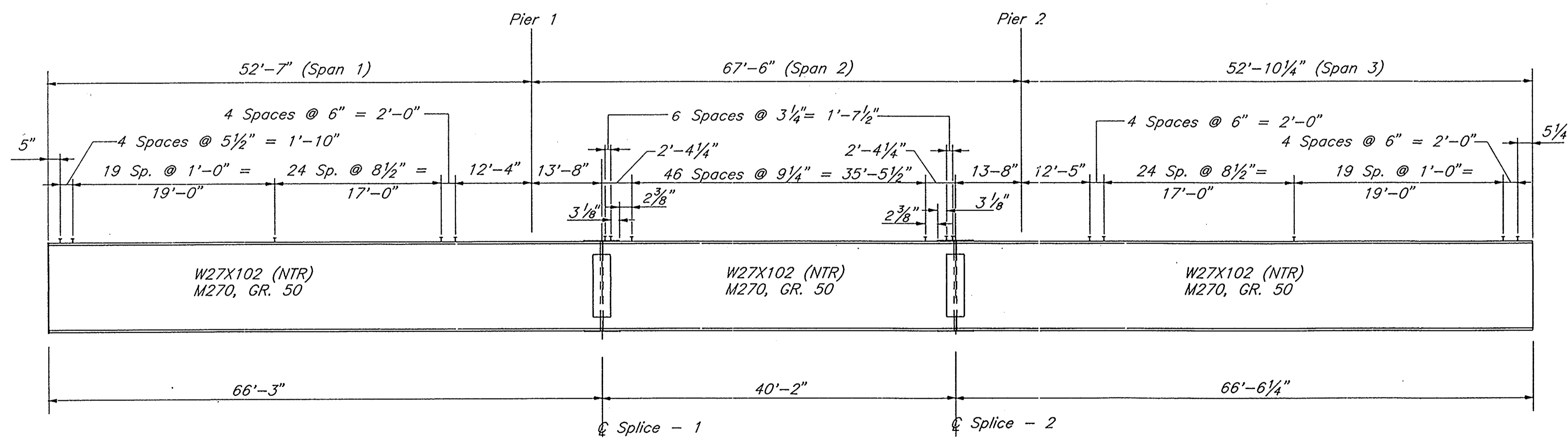
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	70-VBR-1	LASALLE	30	14
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

SHEET No. 6  
19 SHEETS

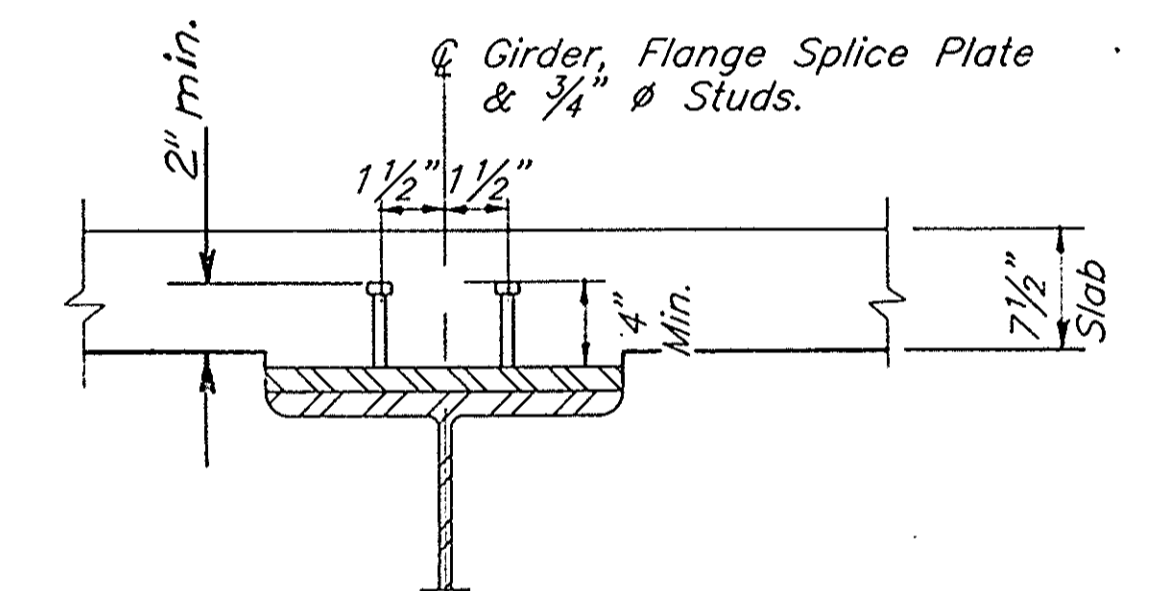


FRAMING PLAN

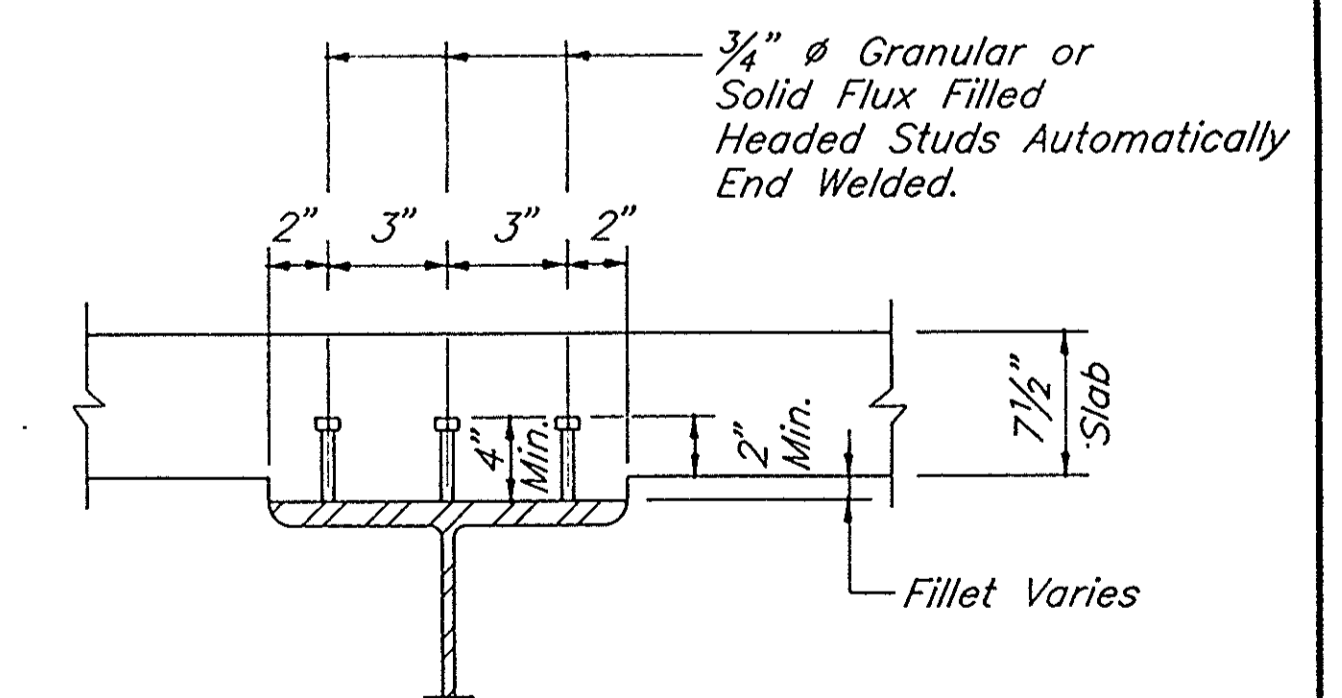


BEAM ELEVATION

NTR Denotes - Notch Toughness Requirements



TOP OF FLANGE SPLICE PLATE  
(No. Req'd. = 196)



TOP OF GIRDER  
(No. Req'd. = 3171)

STUD SHEAR CONNECTOR DETAILS

WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

DESIGNED	EKG	DRAWN	JES	APPROVED	DATE	1/20/94	BOOK	SCALE	CAD DWG.	IL_93030_351FRAME	JOB NO.	222/93030/00
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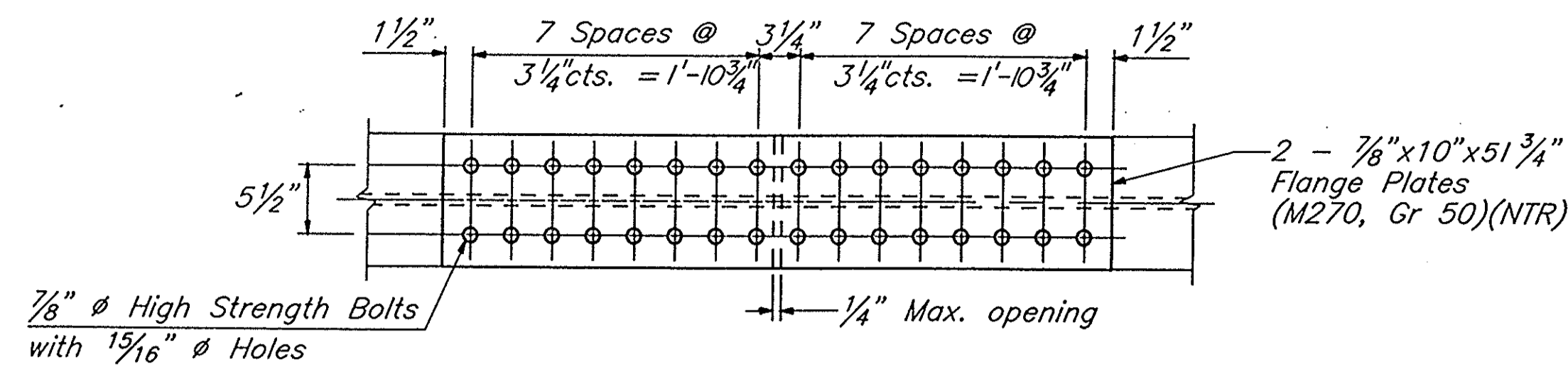
STEEL FRAMING PLAN  
F.A.P. 619 (IL. RT. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STA. 36+32.25 S.N. 050-0019

SHEET  
14  
OF  
30

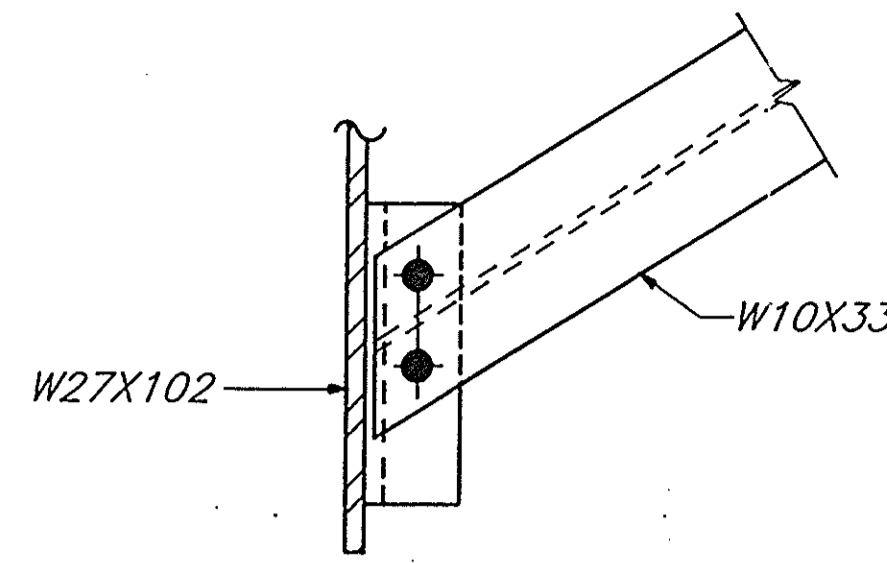
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 619	70-VBR-1	LASALLE	30	15
FED. ROAD DIST. NO.		ILLINOIS PROJECT		

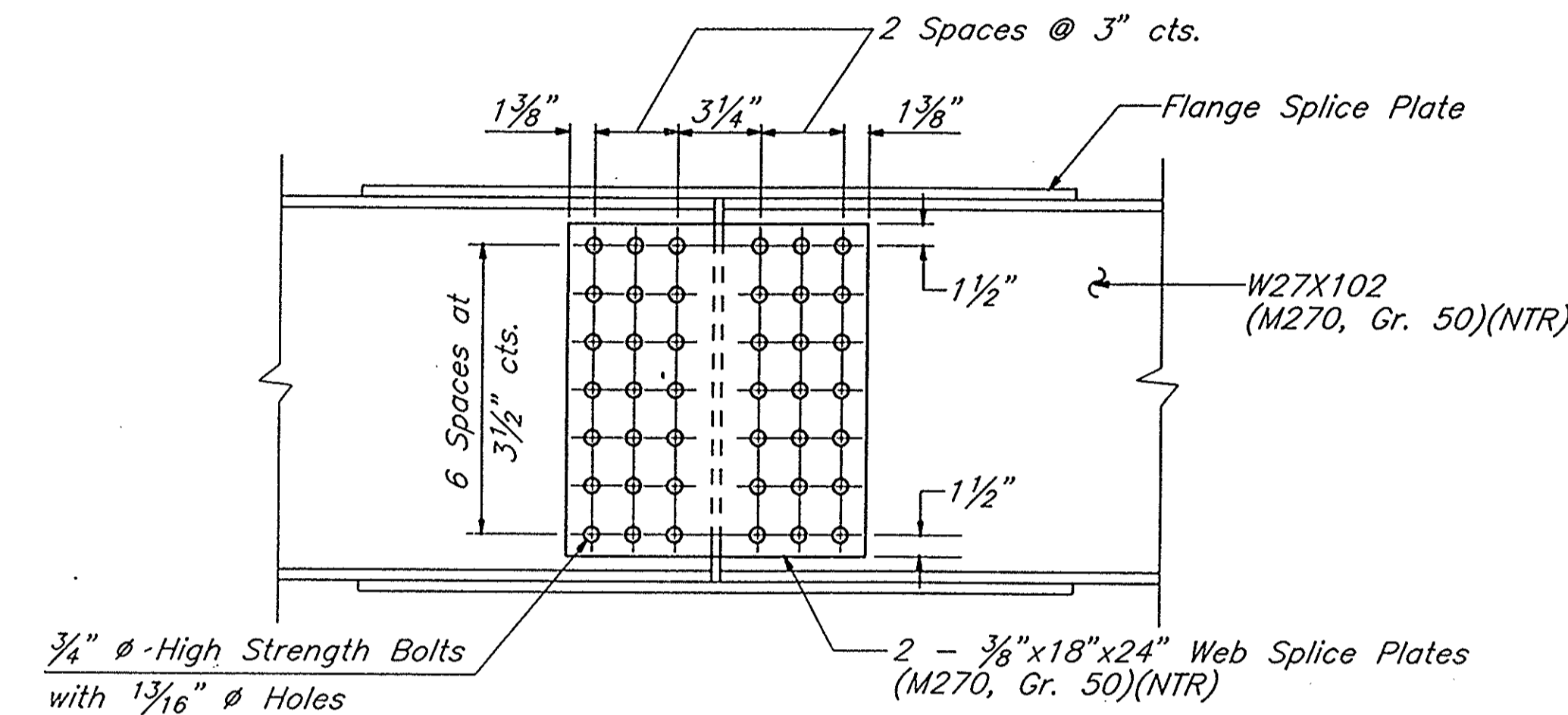
SHEET No. 7  
19 SHEETS



TOP VIEW OF FLANGE SPLICE PLATE

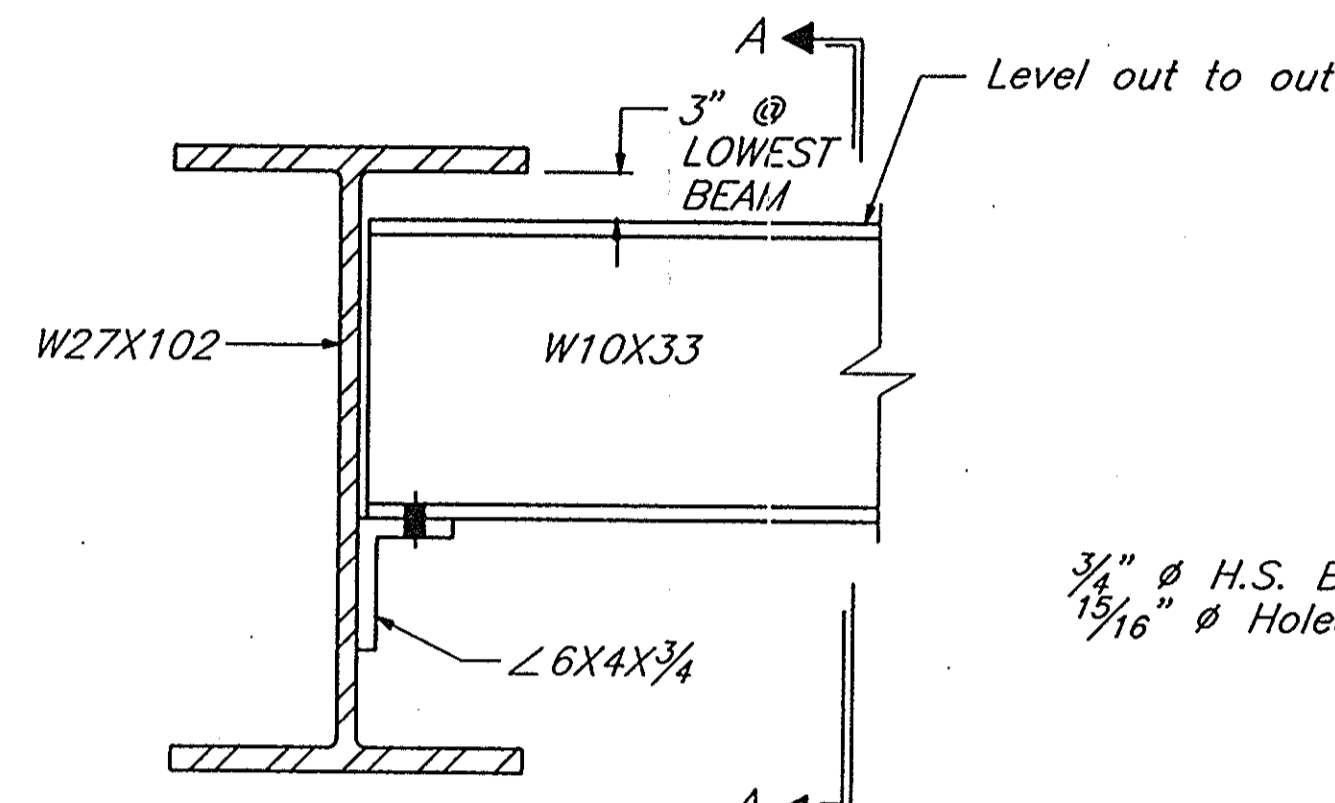


TOP VIEW



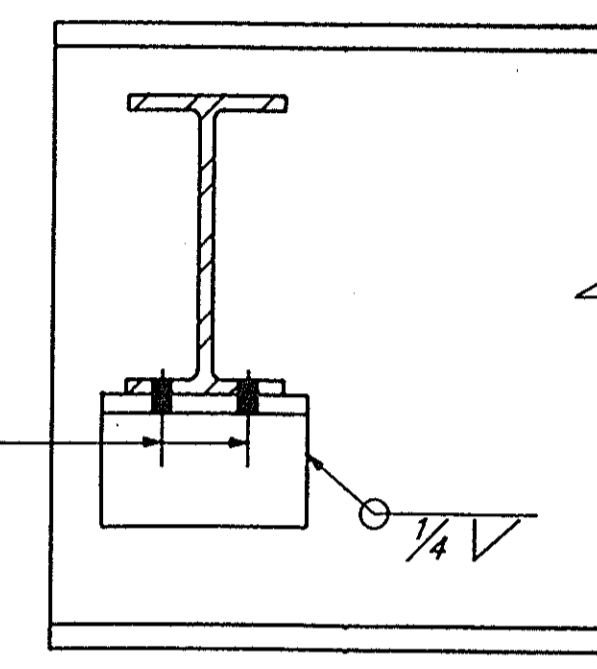
ELEVATION

FIELD SPLICE DETAIL



ELEVATION

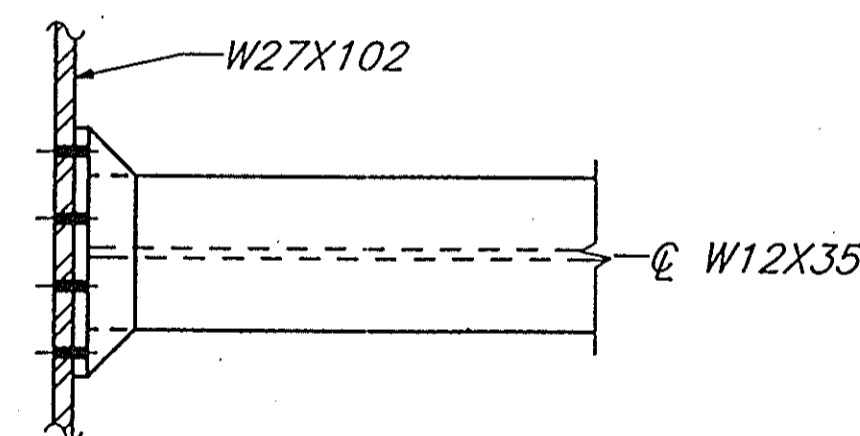
DIAPHRAGM D  
(12 - Required)



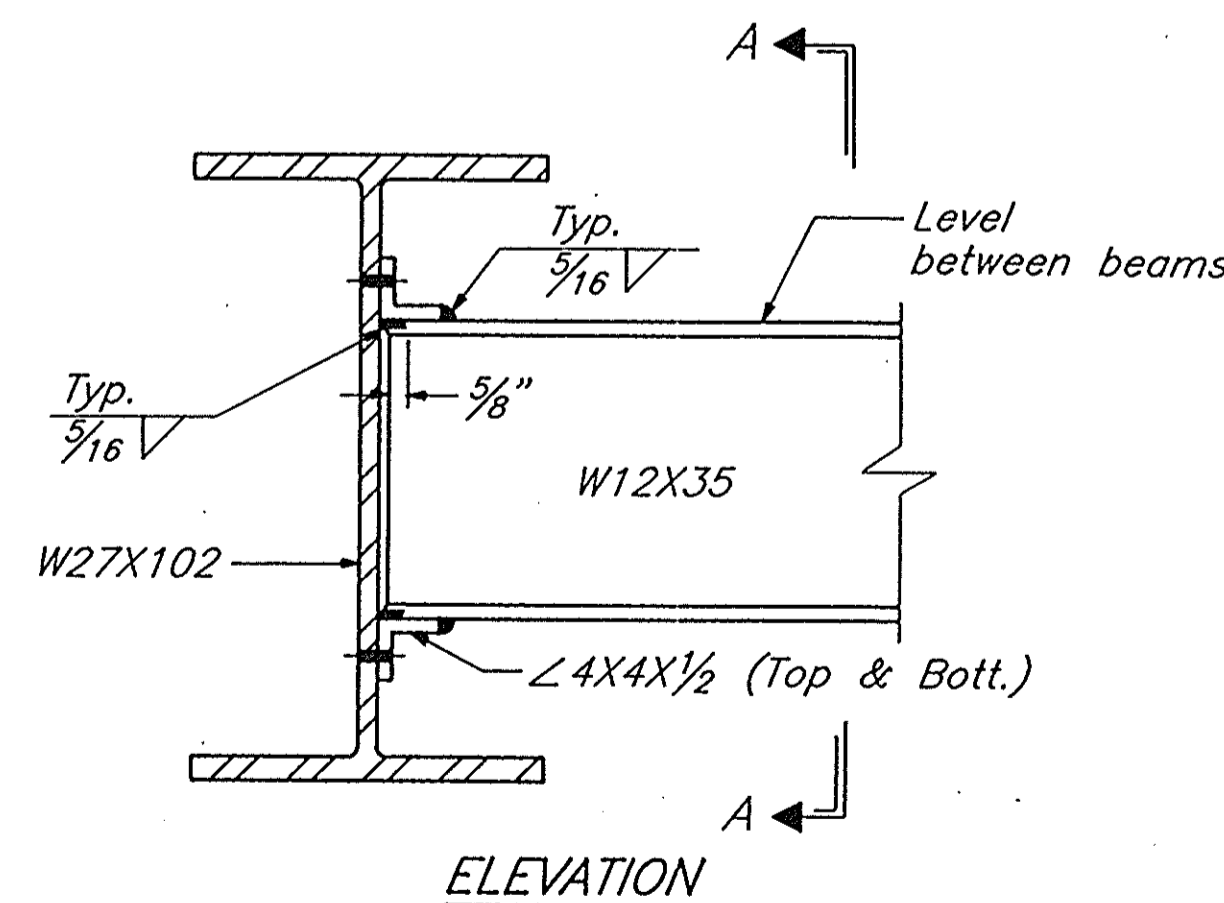
	0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp. 2
$I_s$ (in <sup>4</sup> )	3620	3620	3620
$I_c$ (n) (in <sup>4</sup> )	10528		10528
$I_c$ (3n) (in <sup>4</sup> )	7730		7730
$S_s$ (in <sup>3</sup> )	267	267	267
$S_c$ (n) (in <sup>3</sup> )	409		409
$S_c$ (3n) (in <sup>3</sup> )	369		369
$Q$ (K/ft.)	0.732	1.009	0.732
$M_Q$ (K)	134	355	149
$S_Q$ (K/ft.)	0.277		0.277
$M_S Q$ (K)	57		79
$M_L$ (K)	329	194	387
$M$ (Imp) (K)	93	52	101
$5/3 [M_L + M(\text{Imp})]$ (K)	704	411	813
$M_a$ (K)	1165	996	1353
$f_s Q$ non-comp (k.s.i.)	6.0	16.0	6.7
$f_s Q$ (comp) (k.s.i.)	1.9		2.6
$f_s^{5/3} (L + \text{Imp})$ (k.s.i.)	20.7	18.5	23.9
$f_s$ (Overload) (k.s.i.)	28.6	34.5	33.2
$f_s$ (Total) (k.s.i.)	37.2	44.9	
VR (K)	48.2		48.3

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c$  and  $S_c$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$  (Total & Overload).  
 $VR$  is the maximum Live Load + Impact shear range in span.  
 $M_a$  (Applied Moment) =  $1.3 [M_Q + M_S Q + 5/3 (M_L + I)]$ .  
 $f_s$  (Overload) is the sum of the stresses due to  $M_Q + M_S Q + 5/3 (M_L + I)$ .  
 $f_s$  (Total) is the sum of the stresses due to  $1.3 [M_Q + M_S Q + 5/3 (M_L + I)]$ .

NOTE :  
NTR denotes Notch Toughness Requirements.

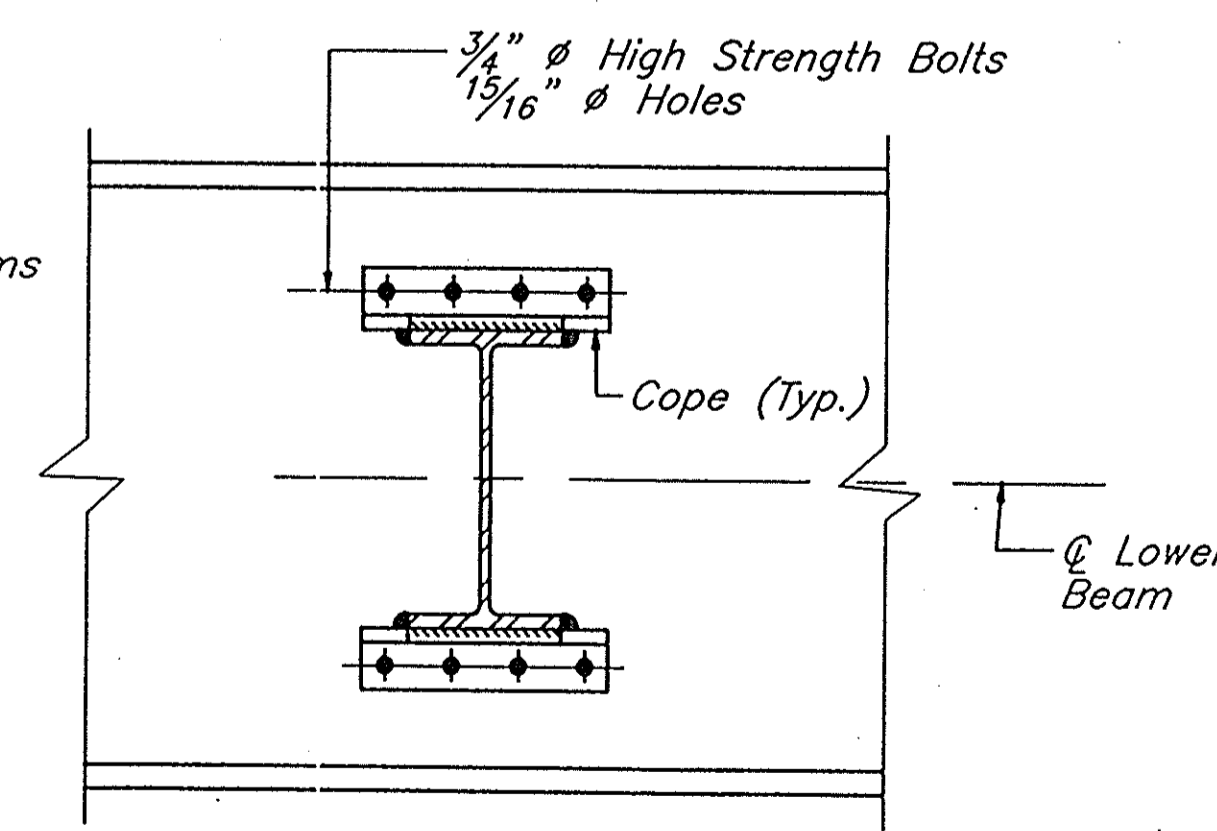


TOP VIEW



ELEVATION

DIAPHRAGM D1  
(54 - Required)



NOTE : Two hardened washers shall be required over all oversize holes for diaphragms.

	E. or W. Abut.	Pier 1 or 2
$R_Q$ (K)	19.7	67.3
$R_L$ (K)	32.7	39.5
Imp. (K)	9.2	10.1
$R$ (Total) (K)	61.6	116.9

Beam No.	$\phi$ Bearing W-Abutment	$\phi$ Bearing Pier-1	$\phi$ Splice-1	$\phi$ Splice-2	$\phi$ Bearing Pier-2	$\phi$ Bearing E-Abutment
1	542.24	542.23	542.23	542.04	541.92	541.44
2	542.38	542.36	542.35	542.15	542.02	541.53
3	542.48	542.45	542.44	542.23	542.10	541.59
4	542.58	542.54	542.53	542.30	542.17	541.65
5	542.49	542.43	542.41	542.18	542.04	541.51
6	542.39	542.32	542.30	542.06	541.91	541.36
7	542.27	542.18	542.15	541.90	541.75	541.19

\* For Fabrication Only

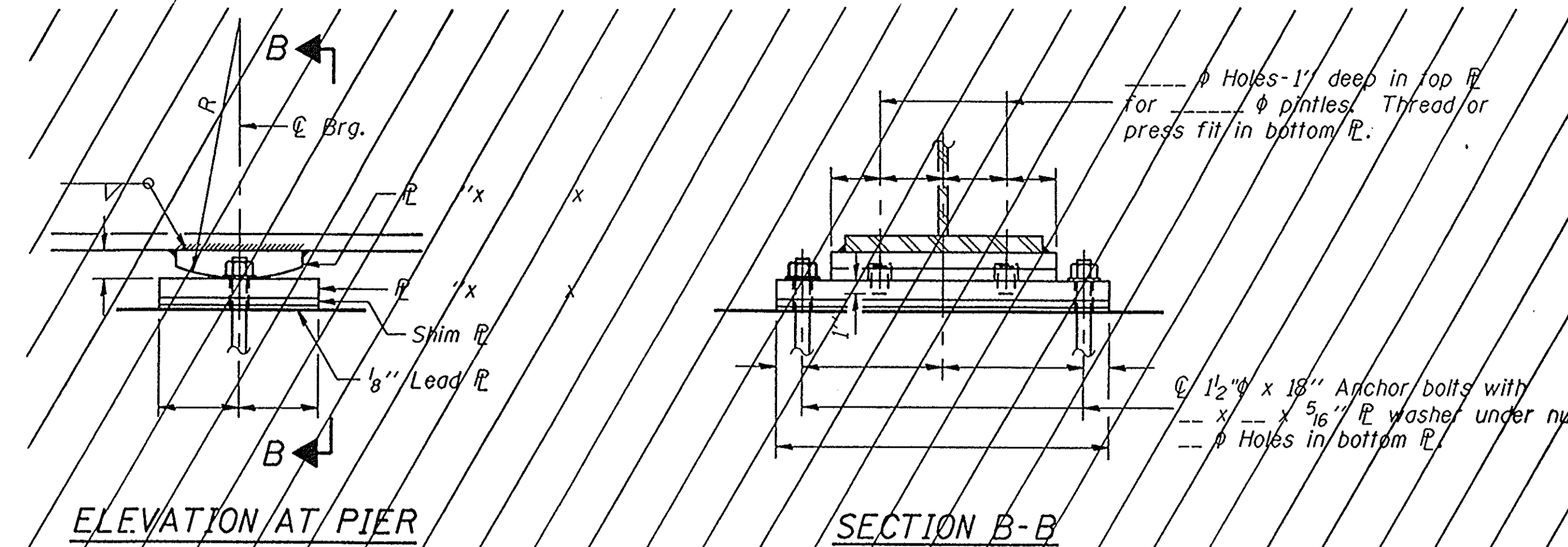
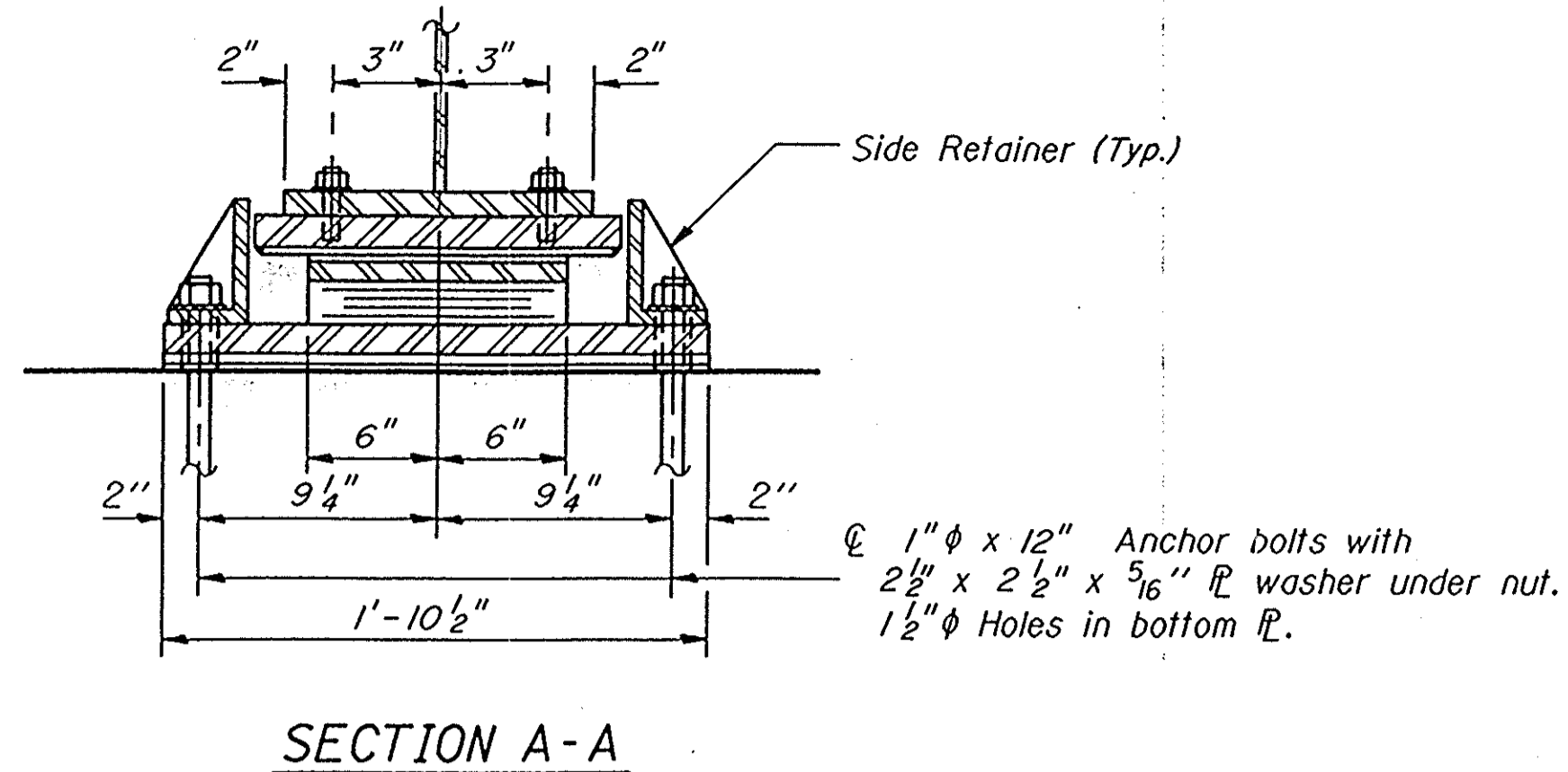
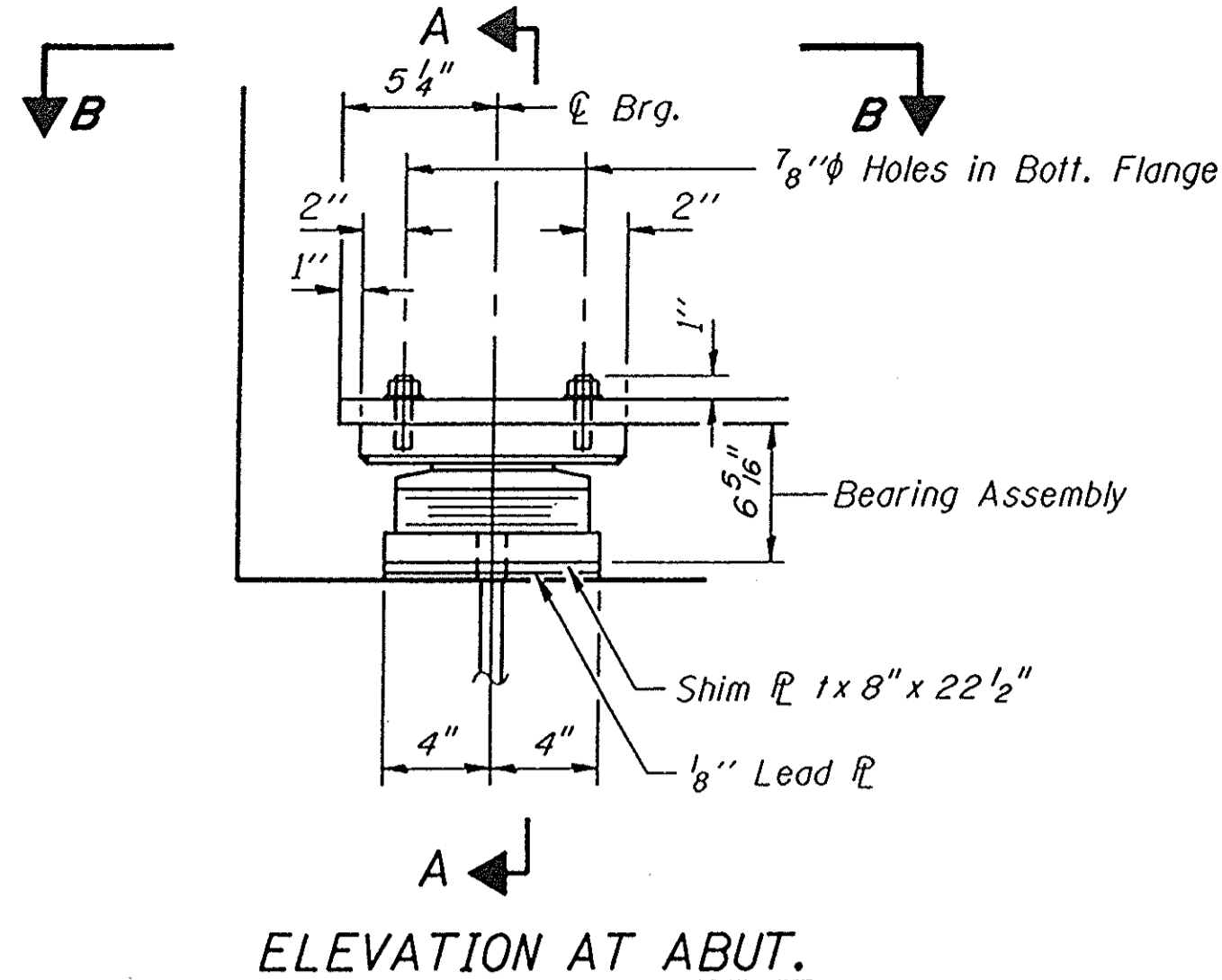
WALTER E. DEUCHLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

REVISIONS  
15 GWR-5/20/94-REVISED PER I.D.O.T REVIEW

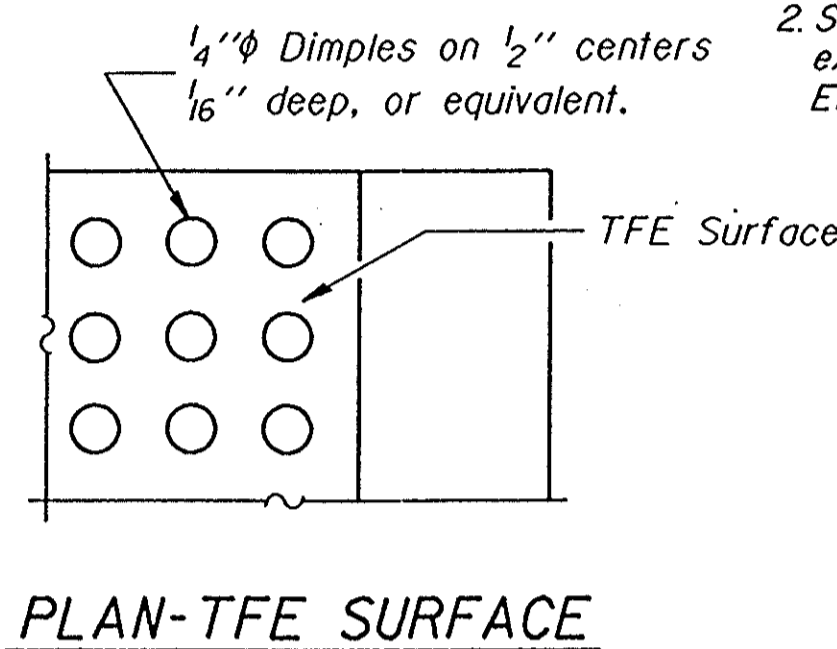
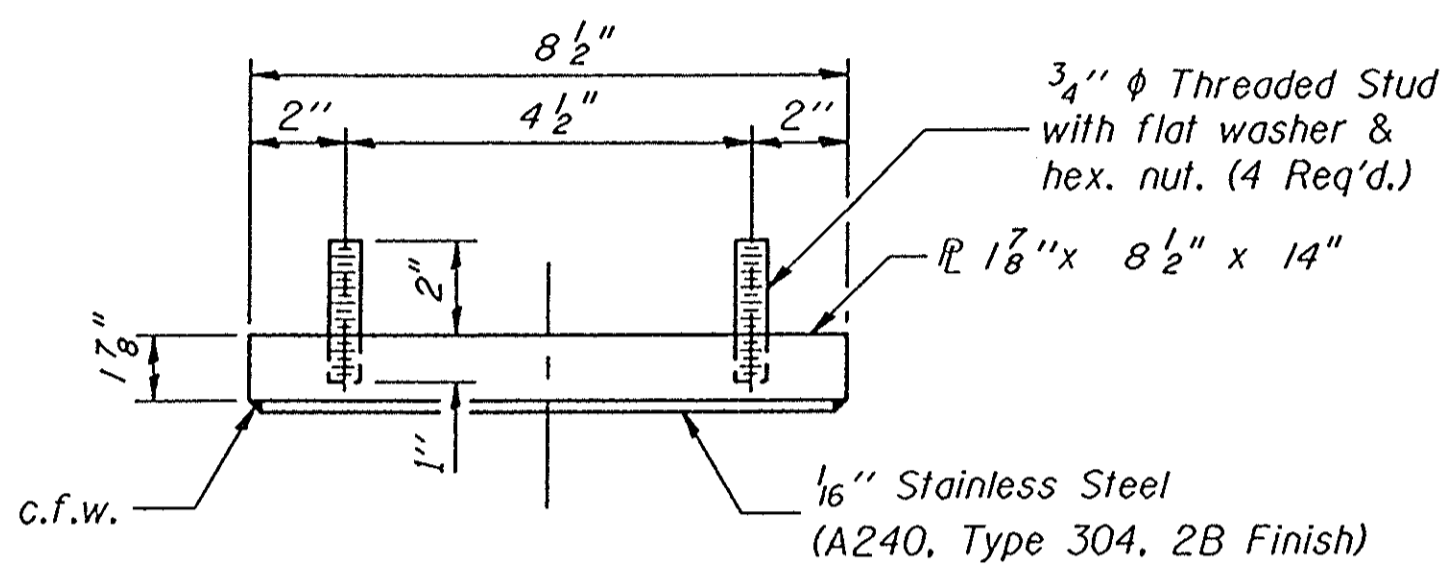
DESIGNED EEG DRAWN JES APPROVED DATE 2/1/94 BOOK SCALE N.T.S. CAD DWG. IL\93030\351DIAPH JOB NO. 222/93030/00

DIAPHRAGM CONNECTION & SPLICE DETAILS  
F.A.P. 619 (IL. RT. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STA. 36+32.25 S.N. 050-0019

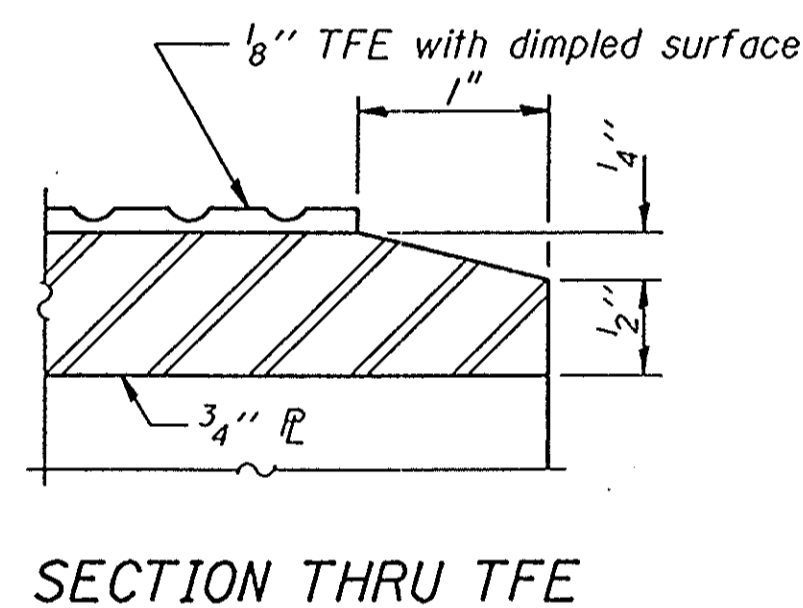
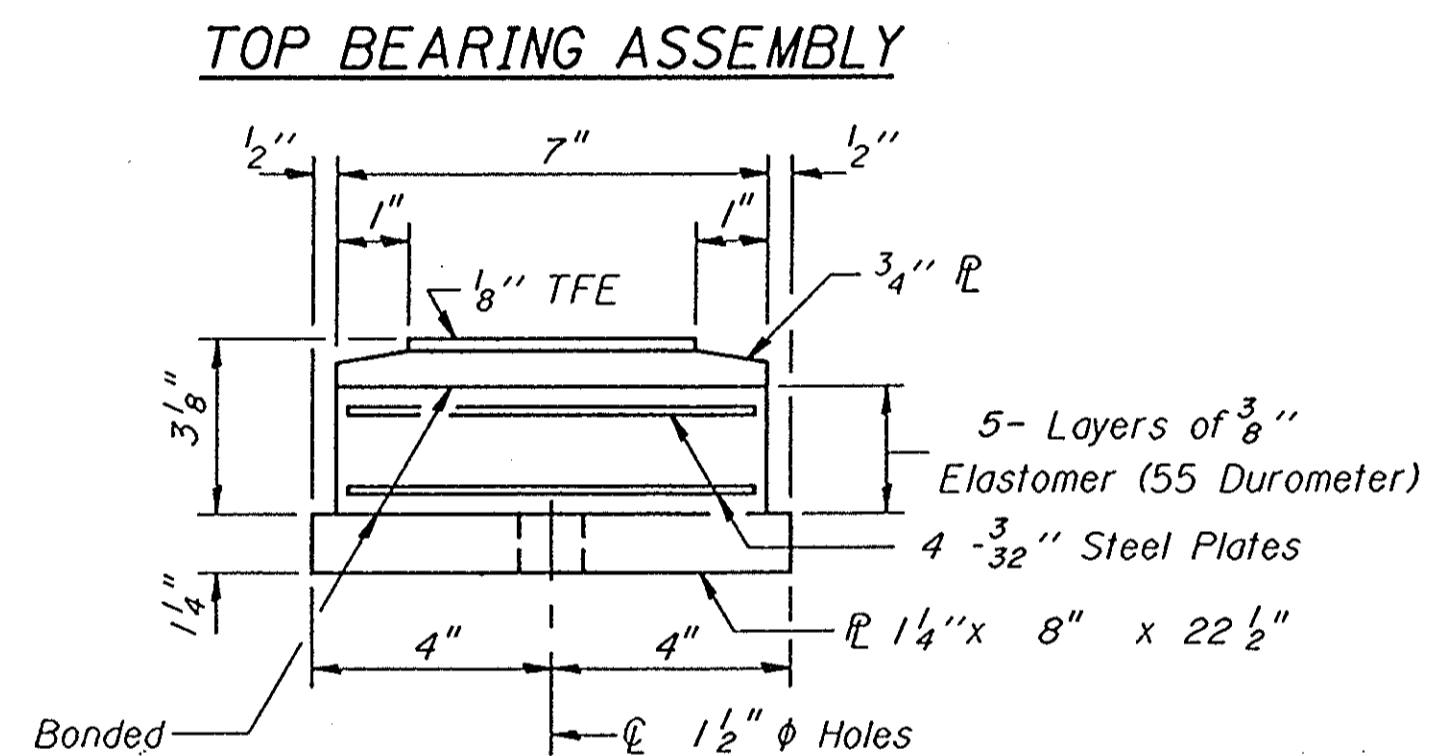
SHEET  
15  
OF 30



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

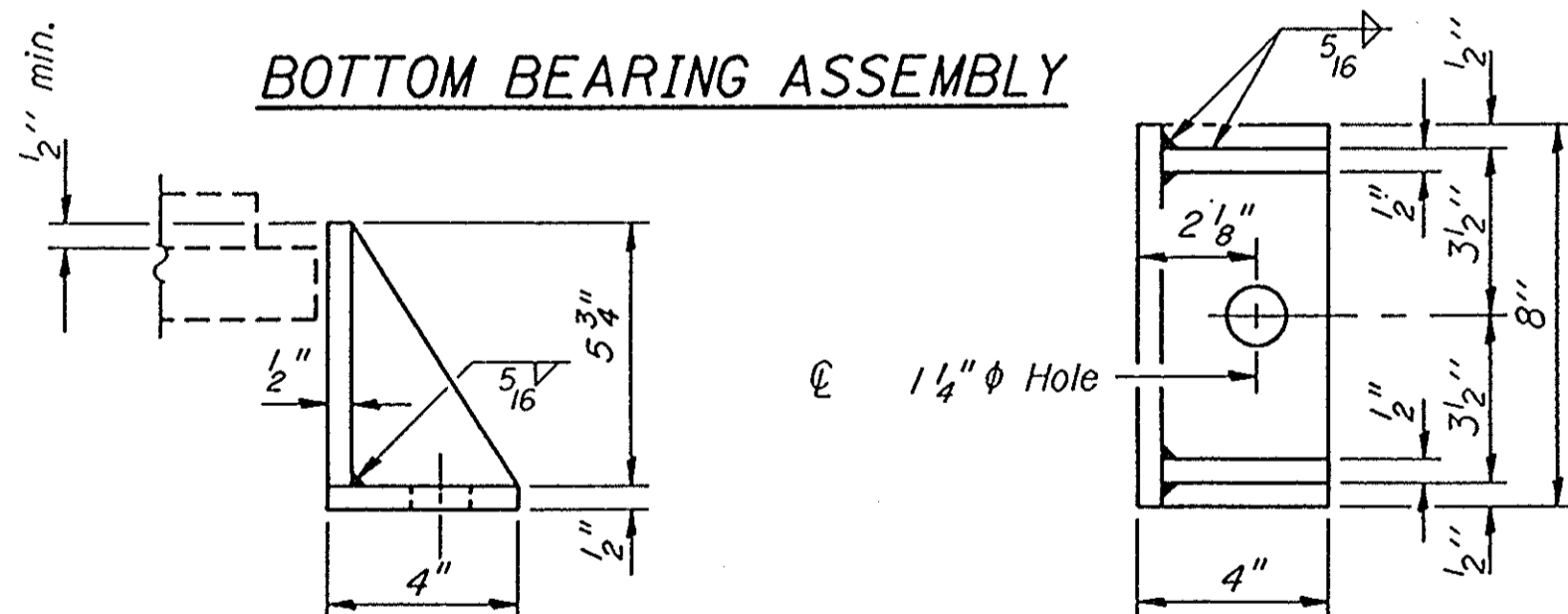


Notes:  
1. See sheet 16 of 19 for Anchor Bolt installation.  
2. Side retainers, shim plate and anchor bolts for expansion bearings are incidental to the cost of Elastomeric Bearing Assembly Type II.

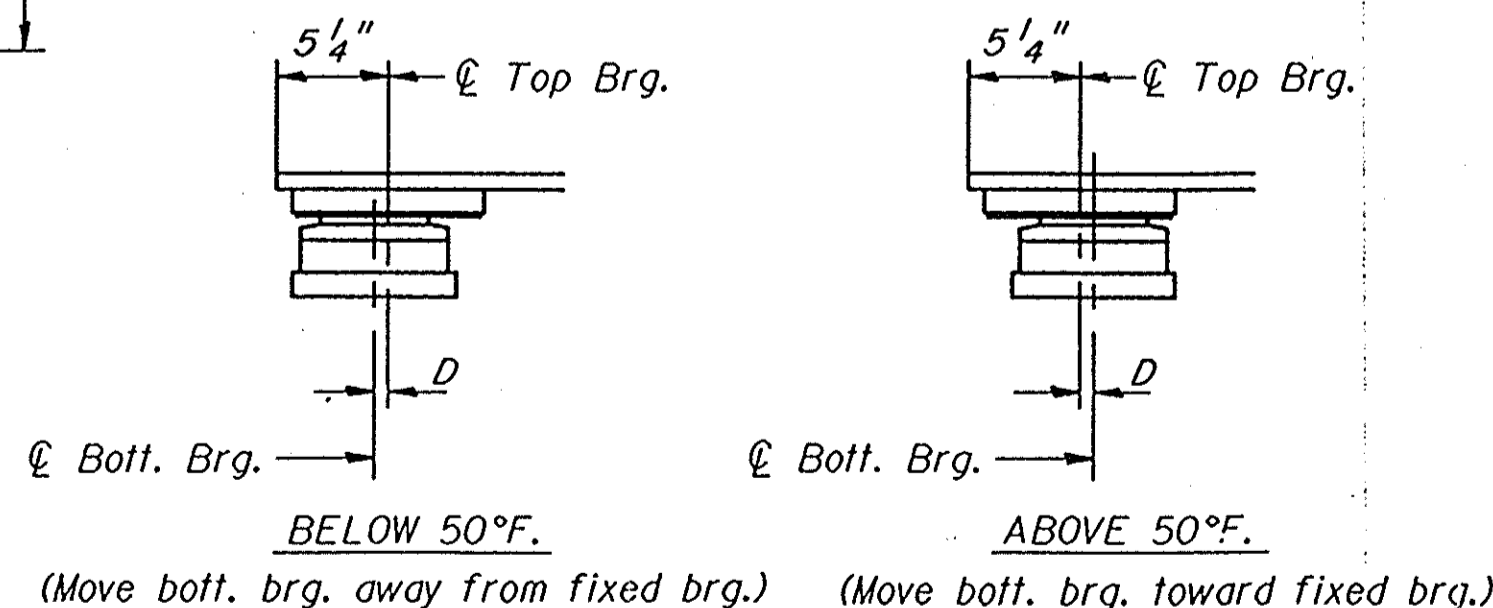


Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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.



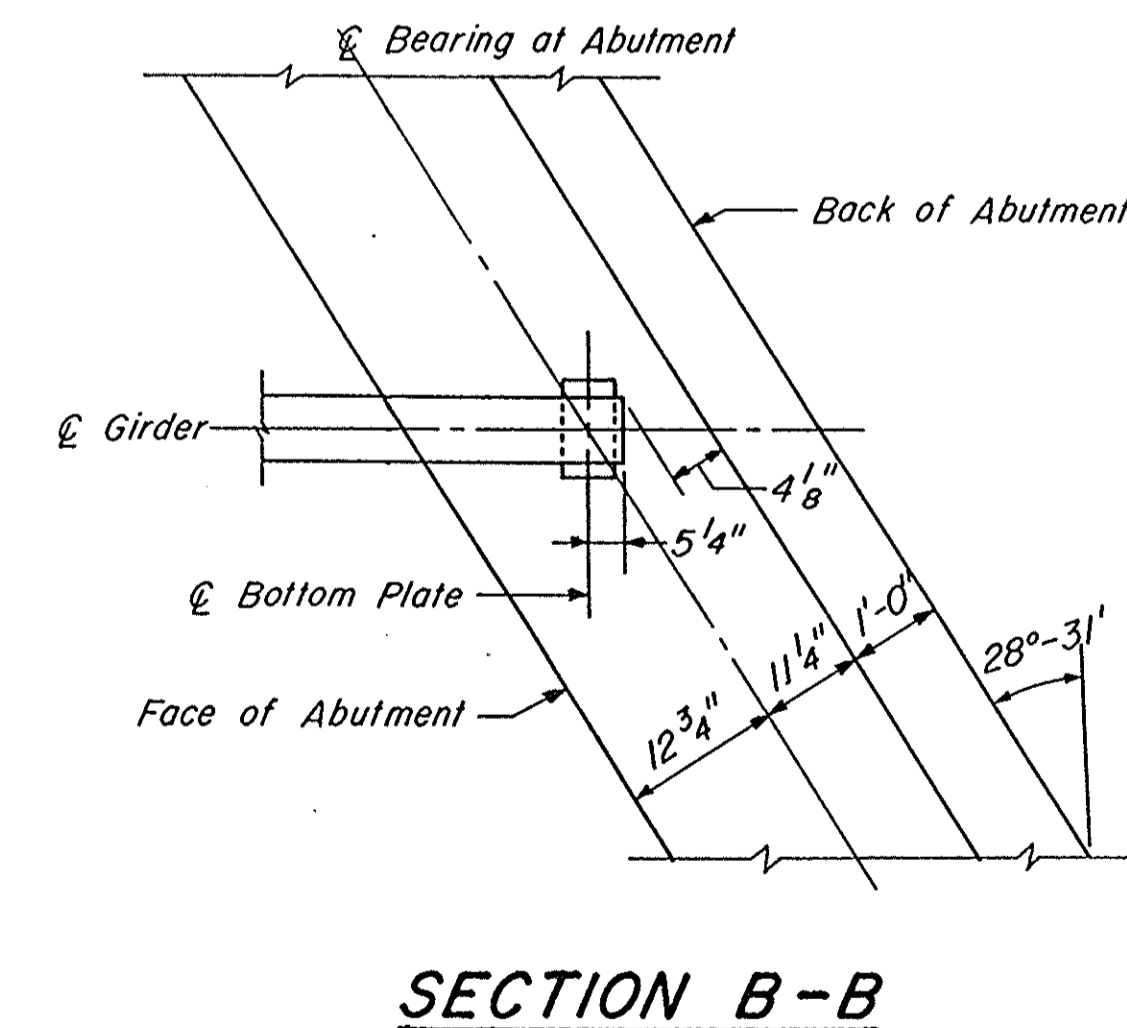
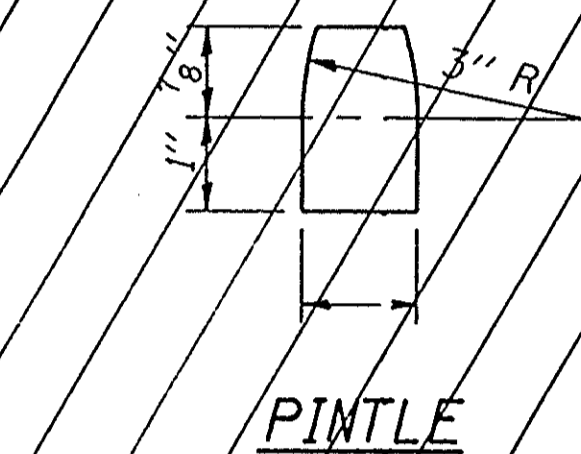
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



**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.

**FIXED BEARING**



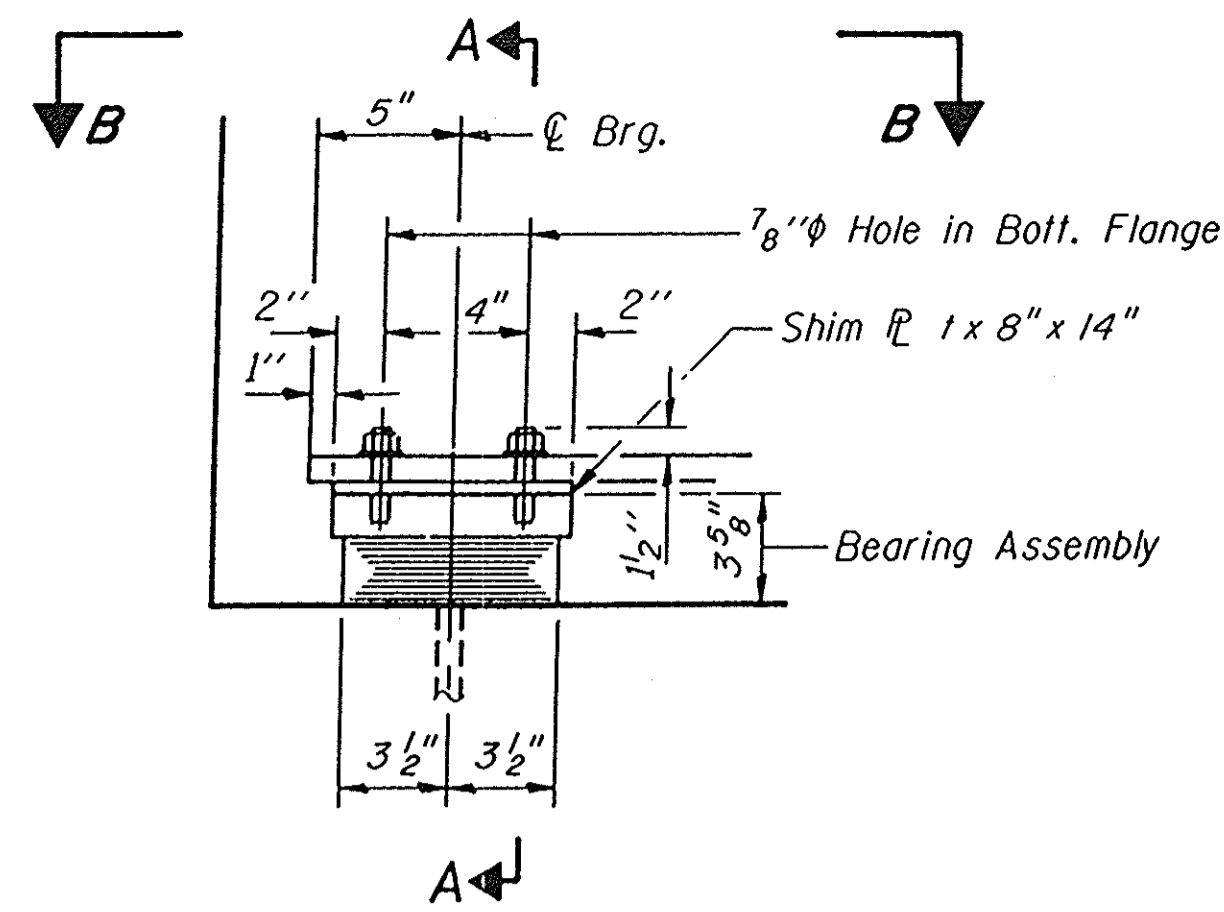
**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	7

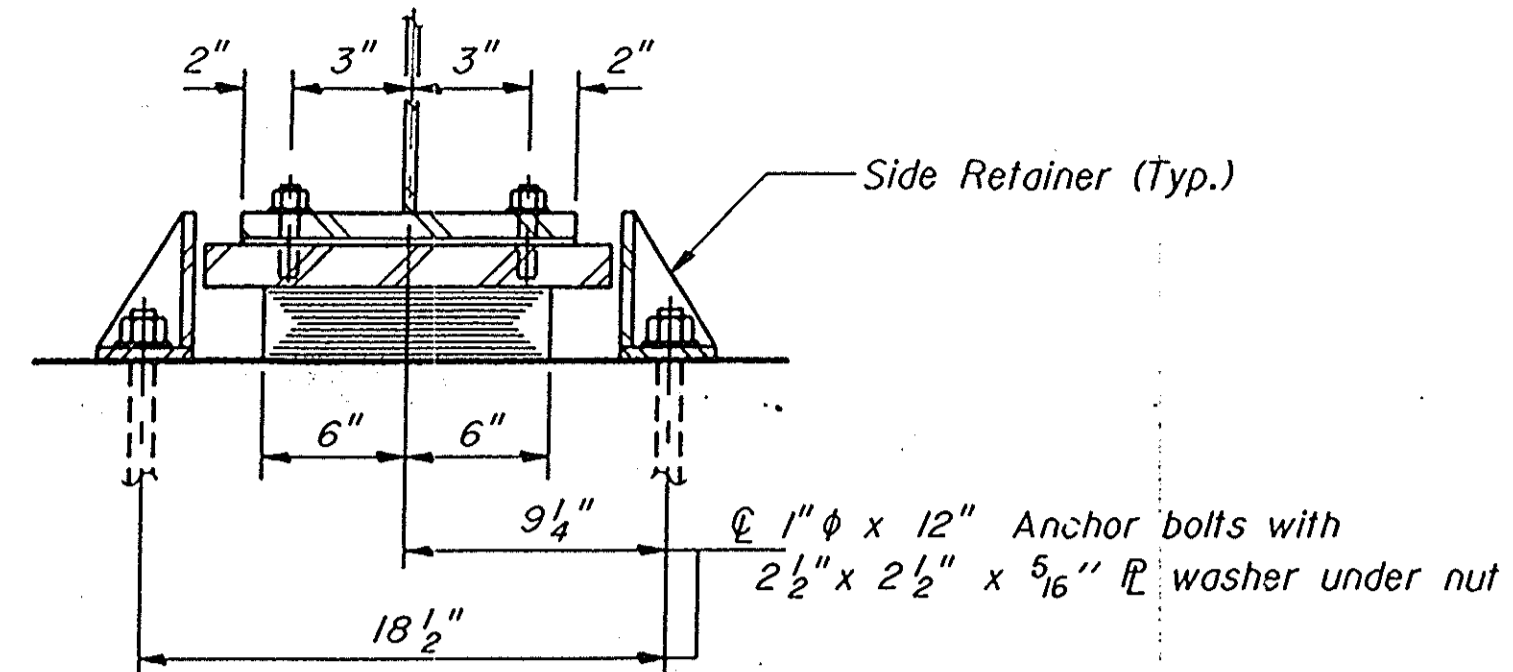
DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E2 2-26-93



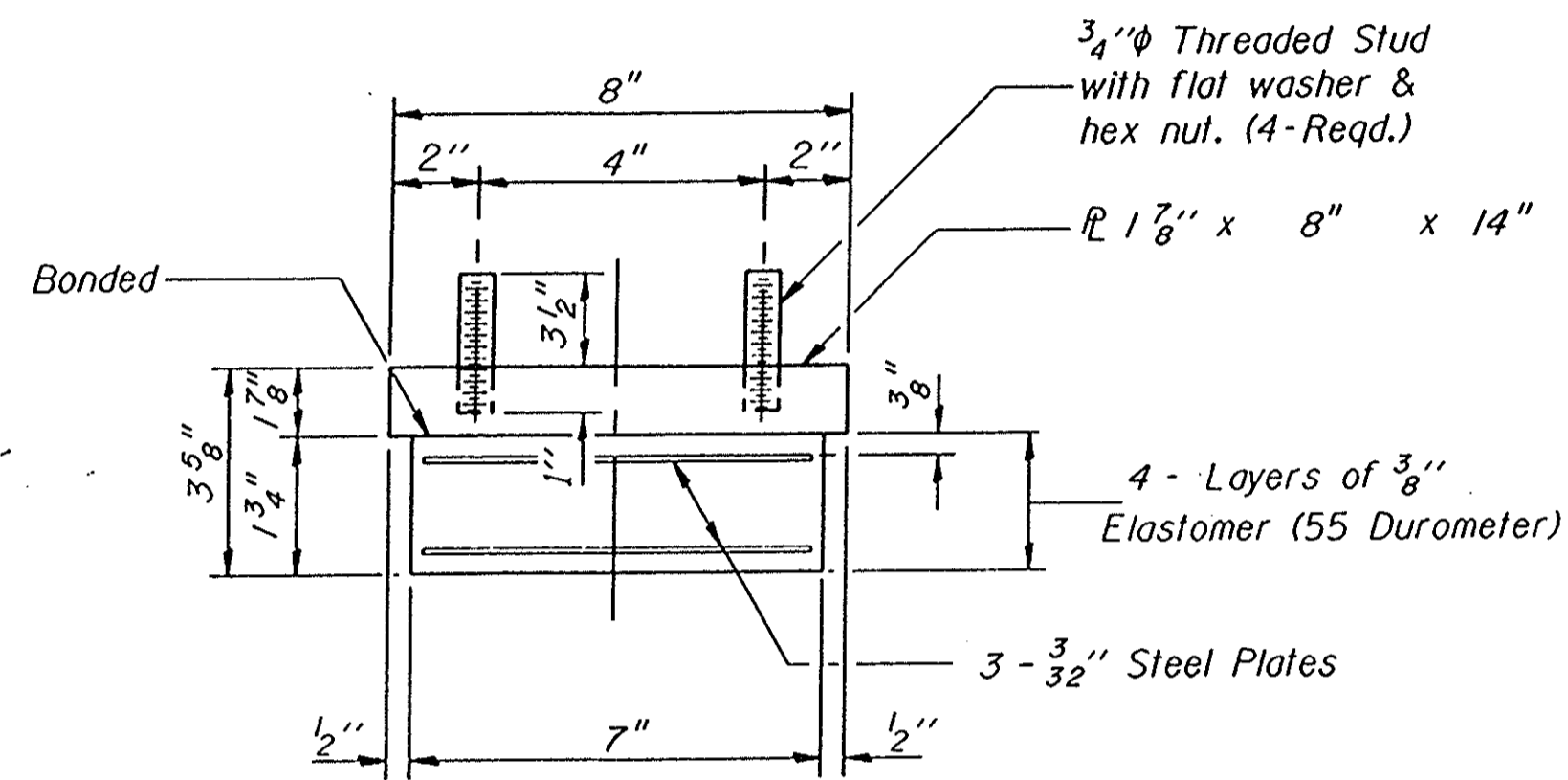


ELEVATION AT ABUT.



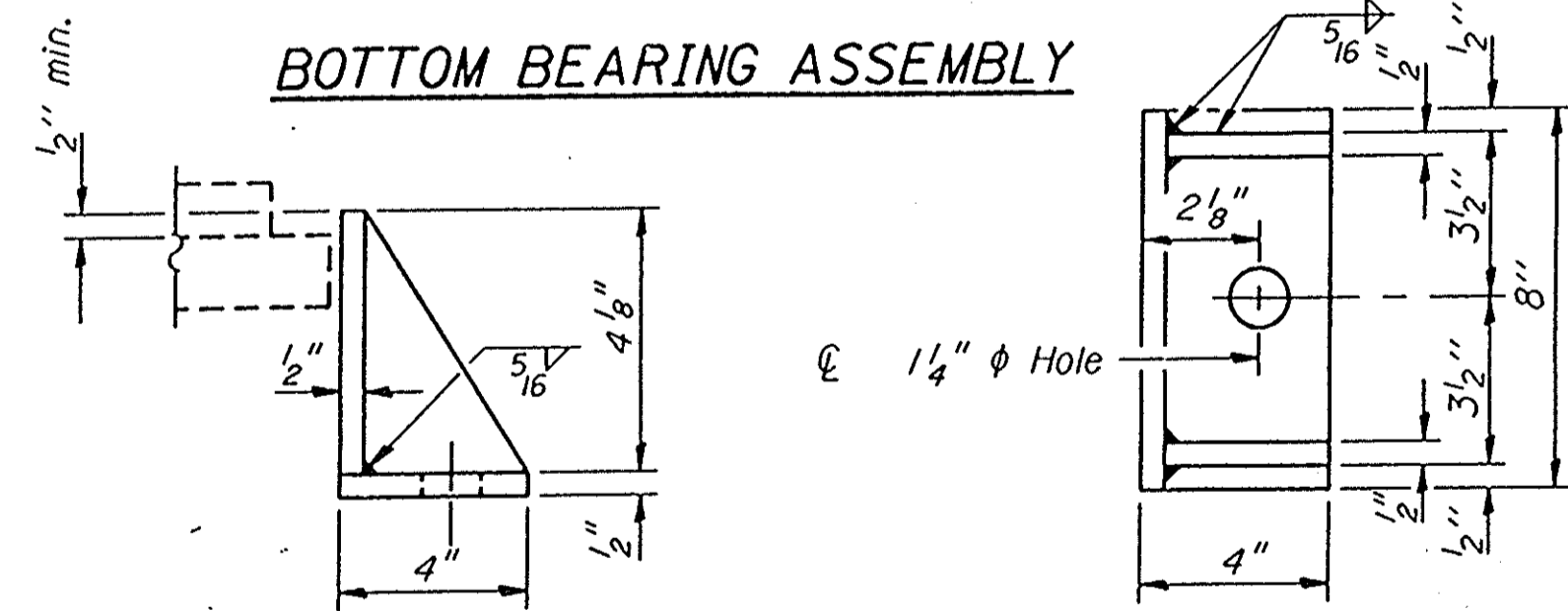
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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



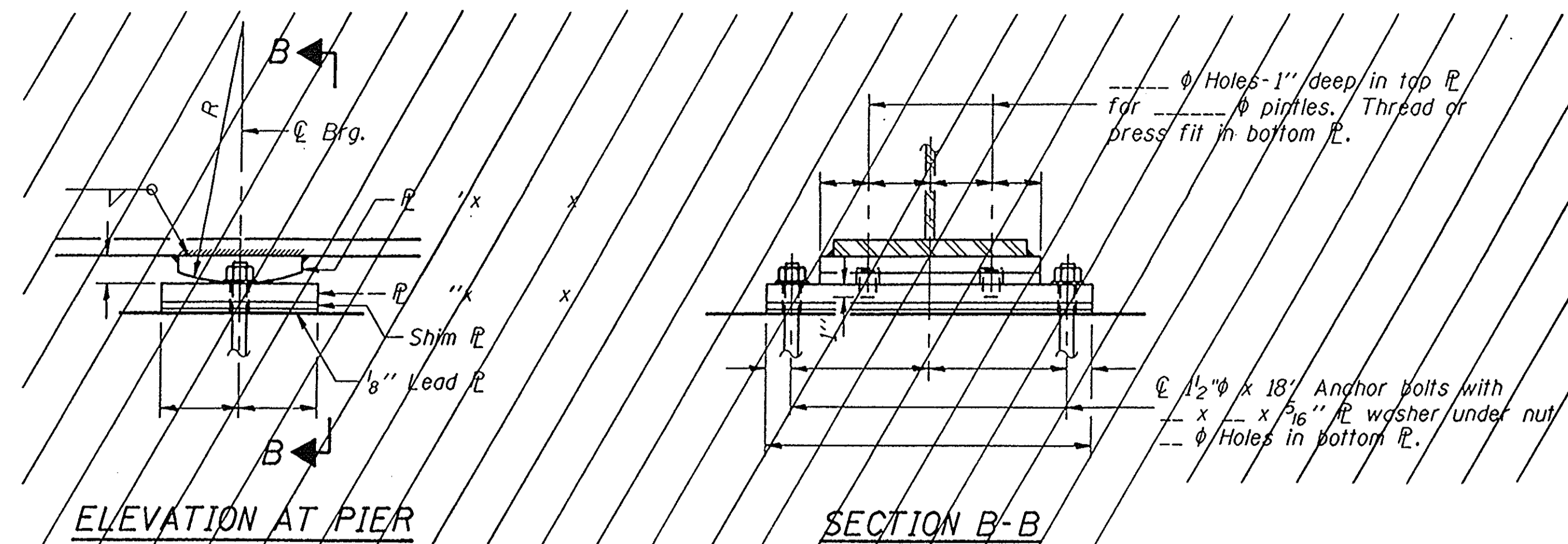
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E1 2-26-93

- Notes:  
1. See sheet 16 of 19 for Anchor Bolt installation.  
2. Side retainers, shim plate and anchor bolts for expansion bearings are incidental to the cost of Elastomeric Bearing Assembly Type I.

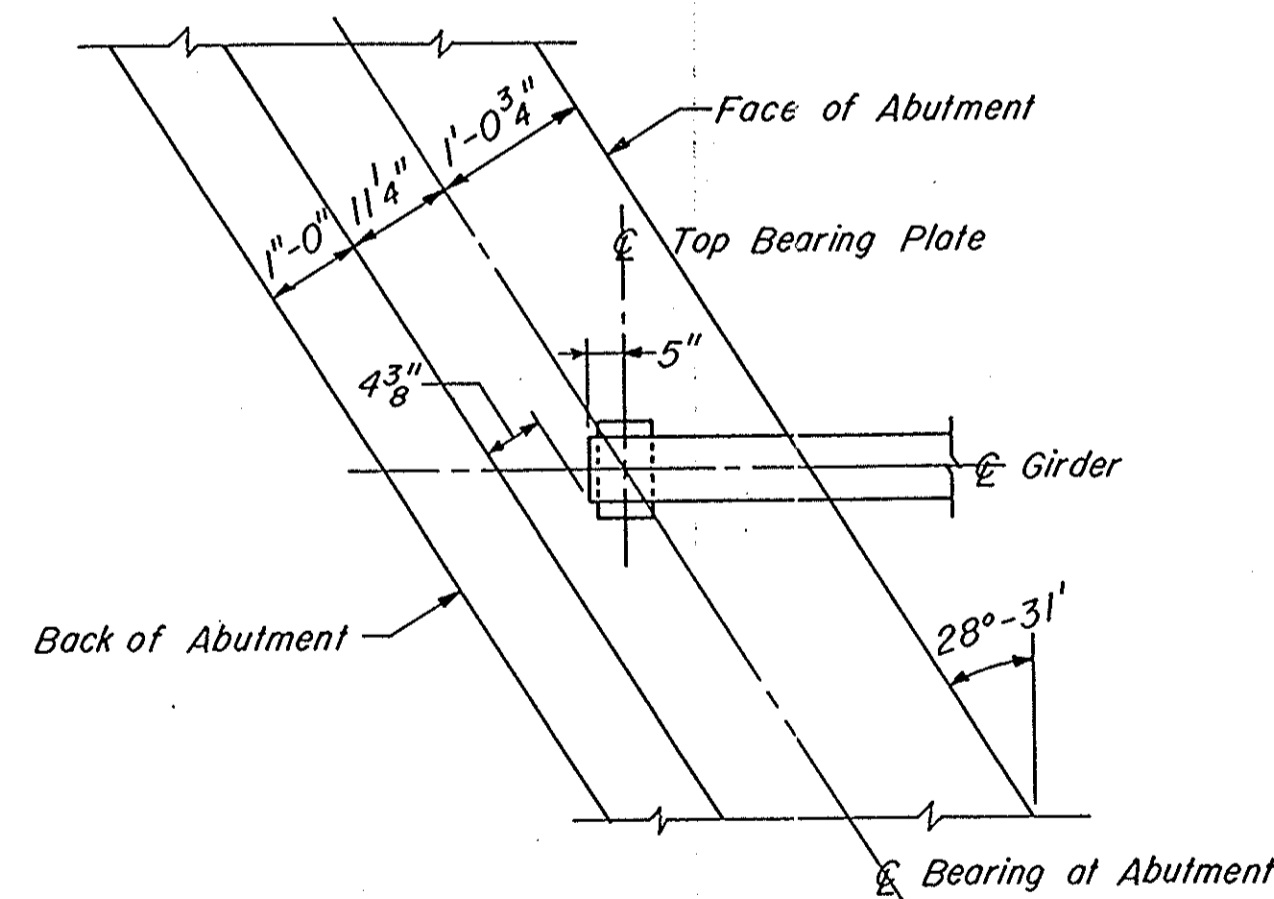


ELEVATION AT PIER

SECTION B-B

FIXED BEARING

PINTLE



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7

**WALTER E. DEUCLER ASSOCIATES, INC.**  
Consulting Engineers - Aurora, Illinois

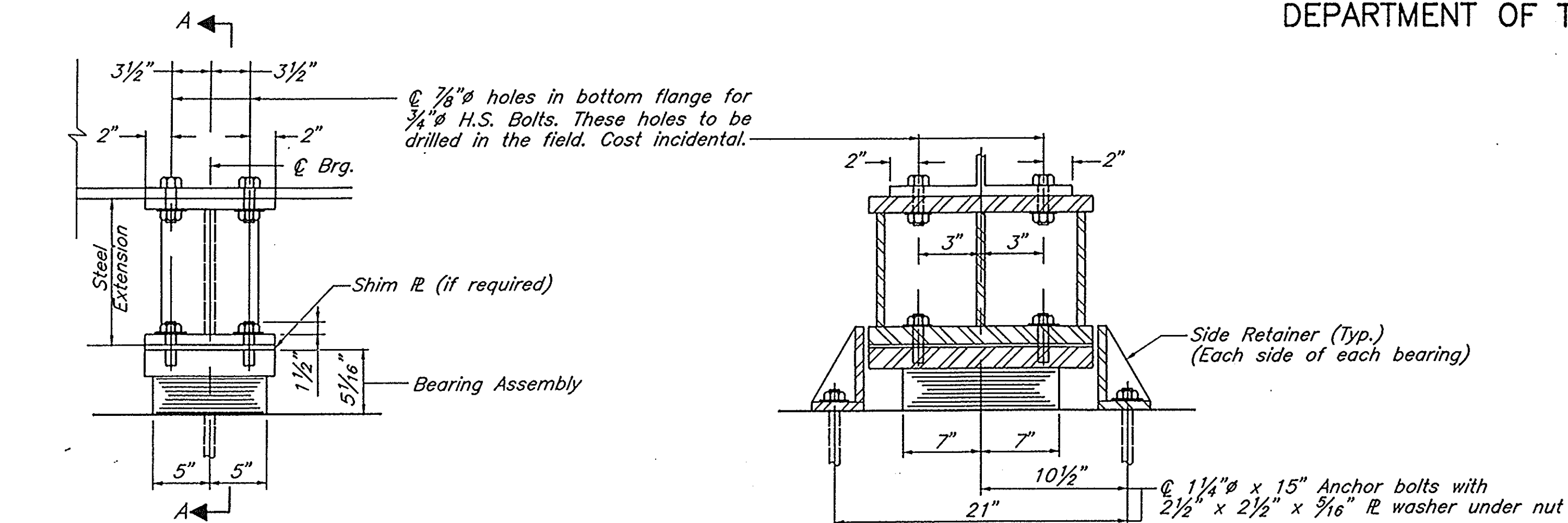
REVISIONS						
DESIGNED	RTP	DRAWN	JES	APPROVED	DATE 2/7/94	BOOK
				SCALE	JOB NUMBER 222-93030	

BEARING DETAILS - WEST ABUTMENT  
F.A.P. RT. 619 (IL. 351) OVER RAILROAD TRACK, LASALLE COUNTY  
SECTION 70-VBR-1 STA. 36+32.5 S.N. 050-0019

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	70-VBR-1	LASALLE	30	18
TO STA.				
FED. ROAD DIST. NO. ILLINOIS PROJECT NO.				

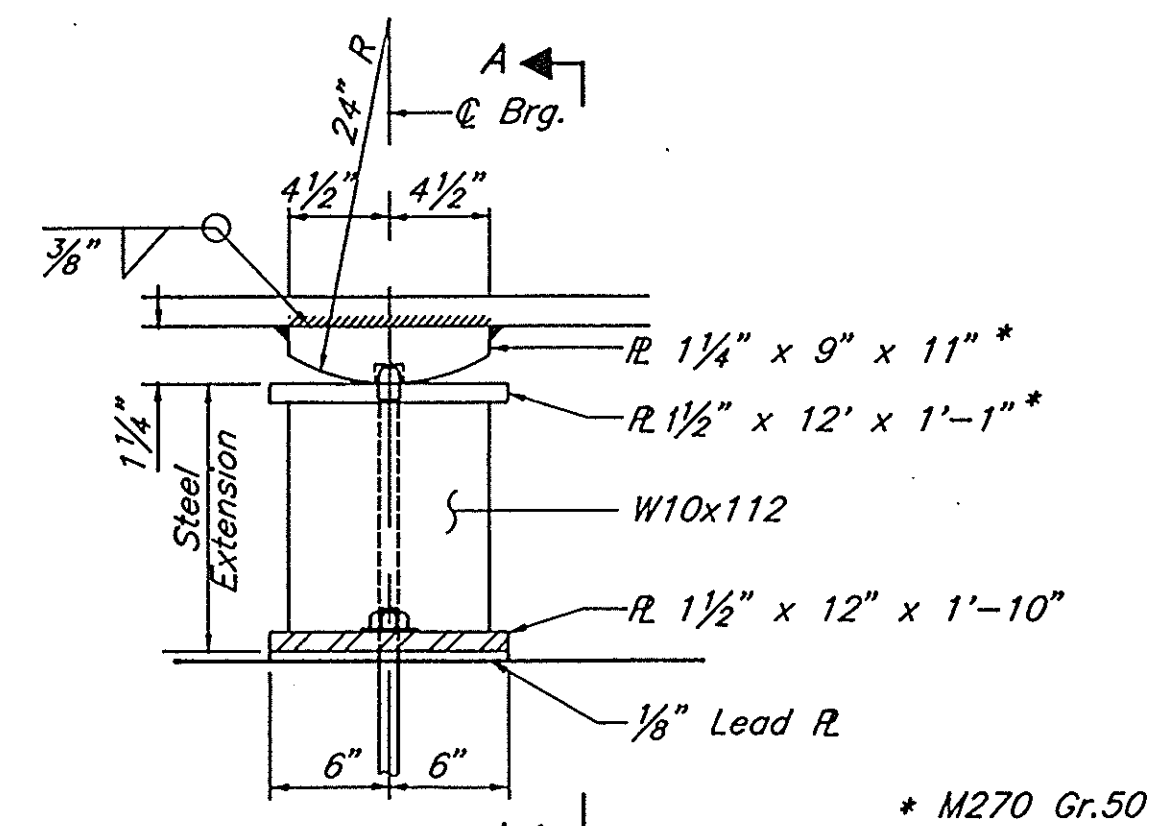
SHEET NO. 10  
19 SHEETS



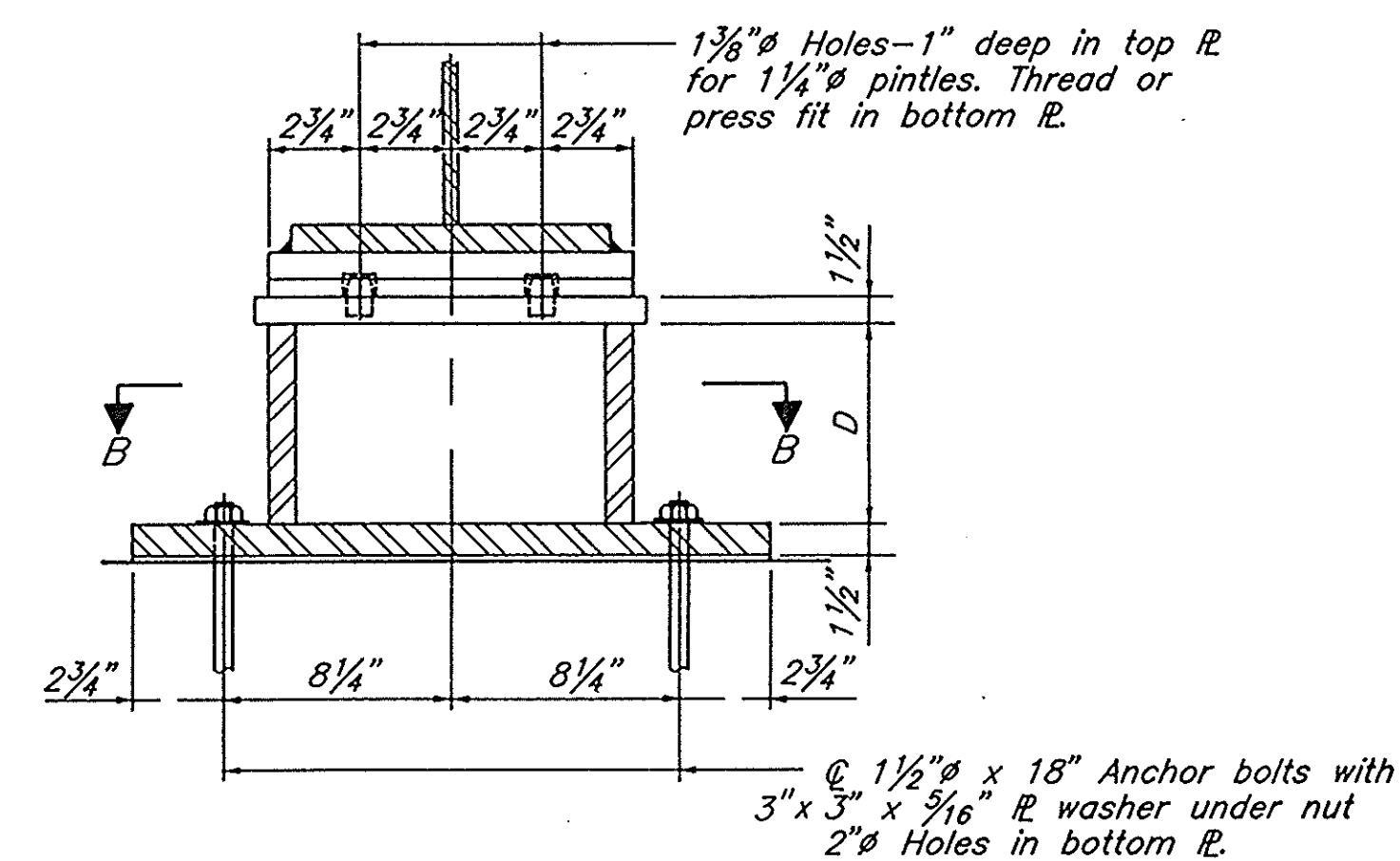
ELEVATION AT PIER NO. 2

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

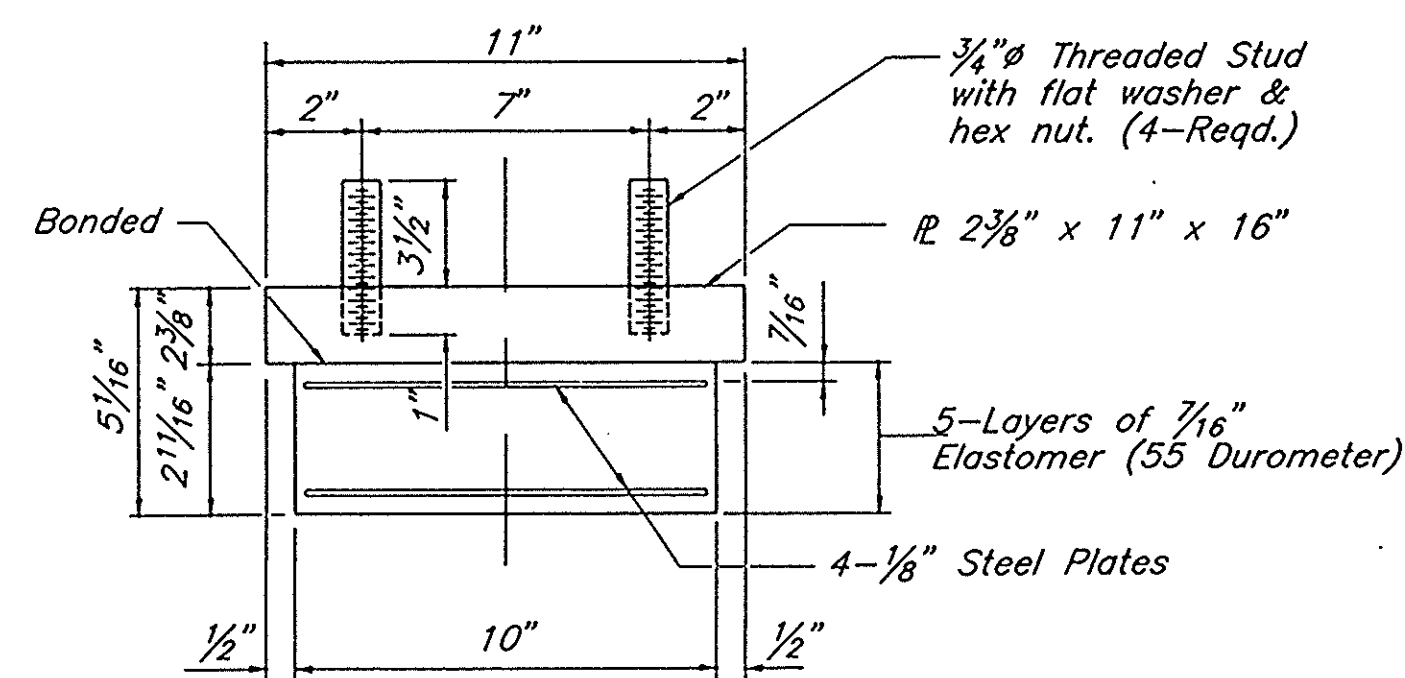


ELEVATION AT PIER NO. 1



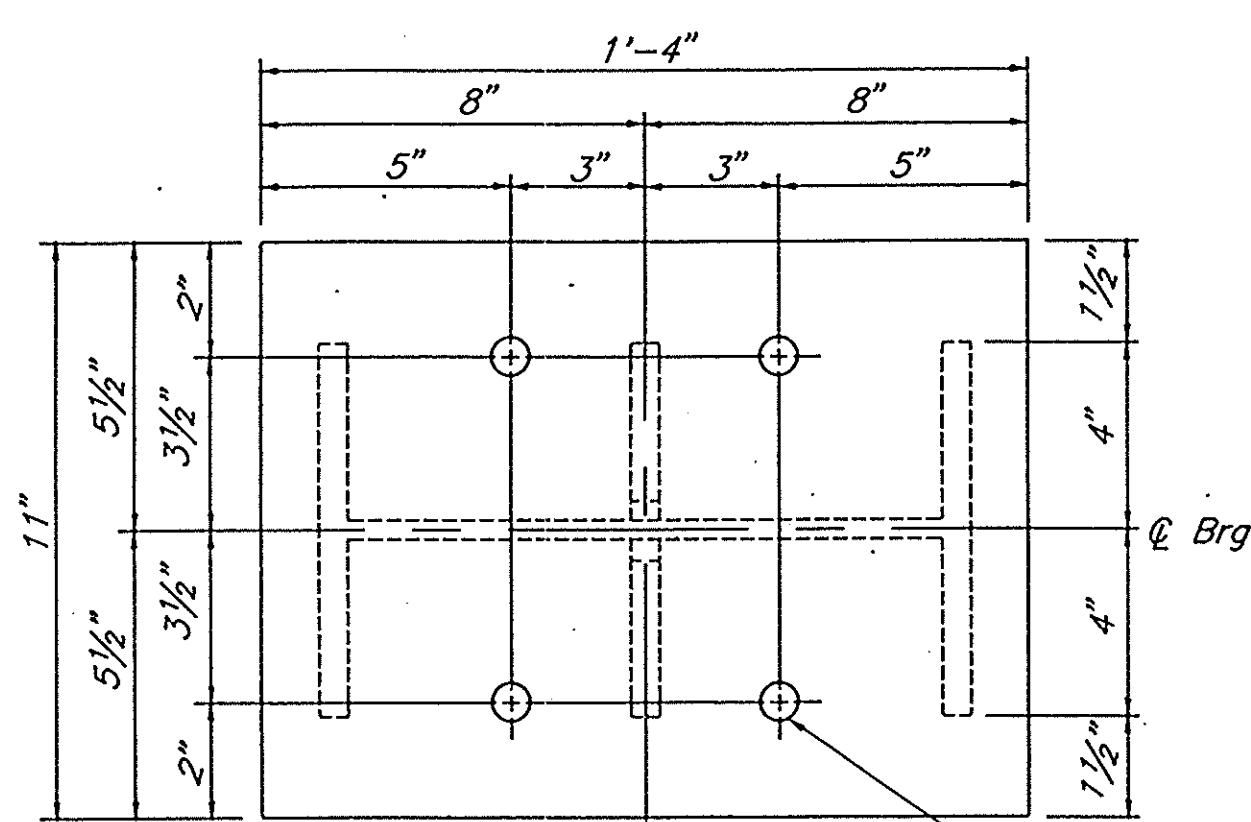
SECTION A-A

Beam No.	1	2	3	4	5	6	7
Steel Extension Height	9 5/8"	11 1/8"	12 1/8"	12 1/4"	11 7/8"	10 5/8"	8 7/8"
D	6 5/8"	8 1/8"	9 1/8"	9 1/4"	8 7/8"	7 5/8"	5 7/8"

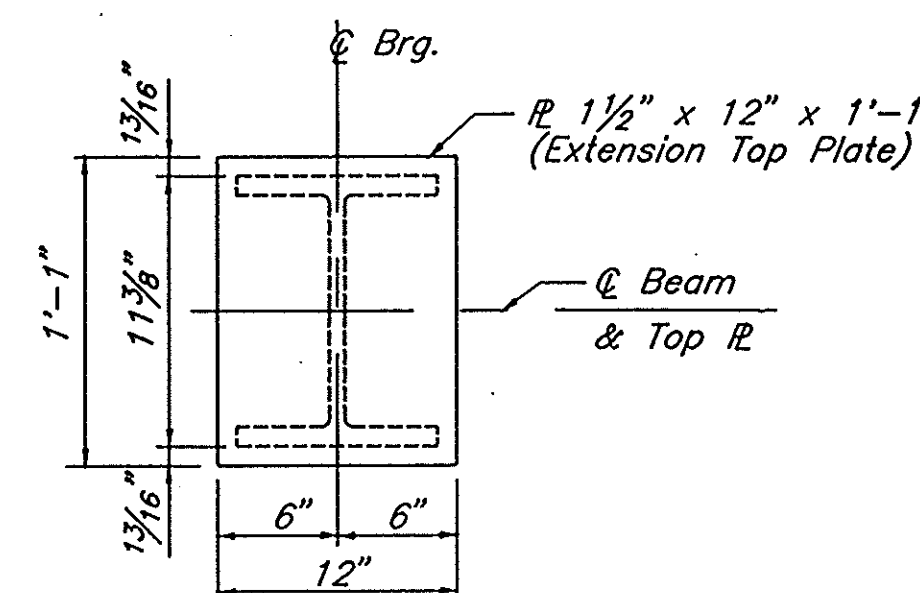


BEARING ASSEMBLY

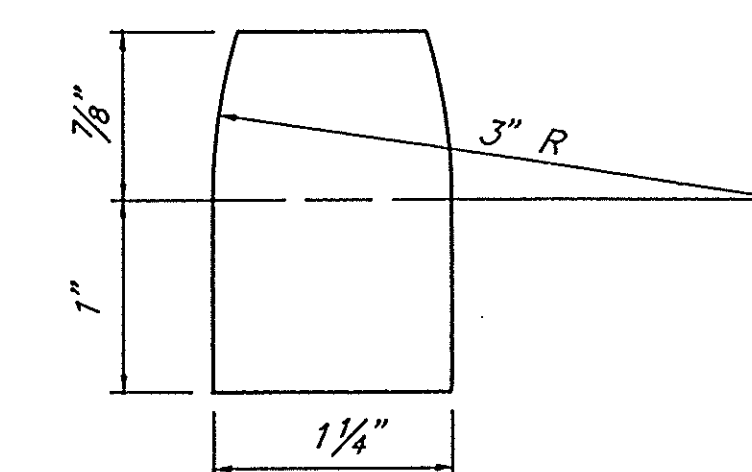
Note: Shim plates shall not be placed under Bearing Assembly.



PLAN-TOP PLATE

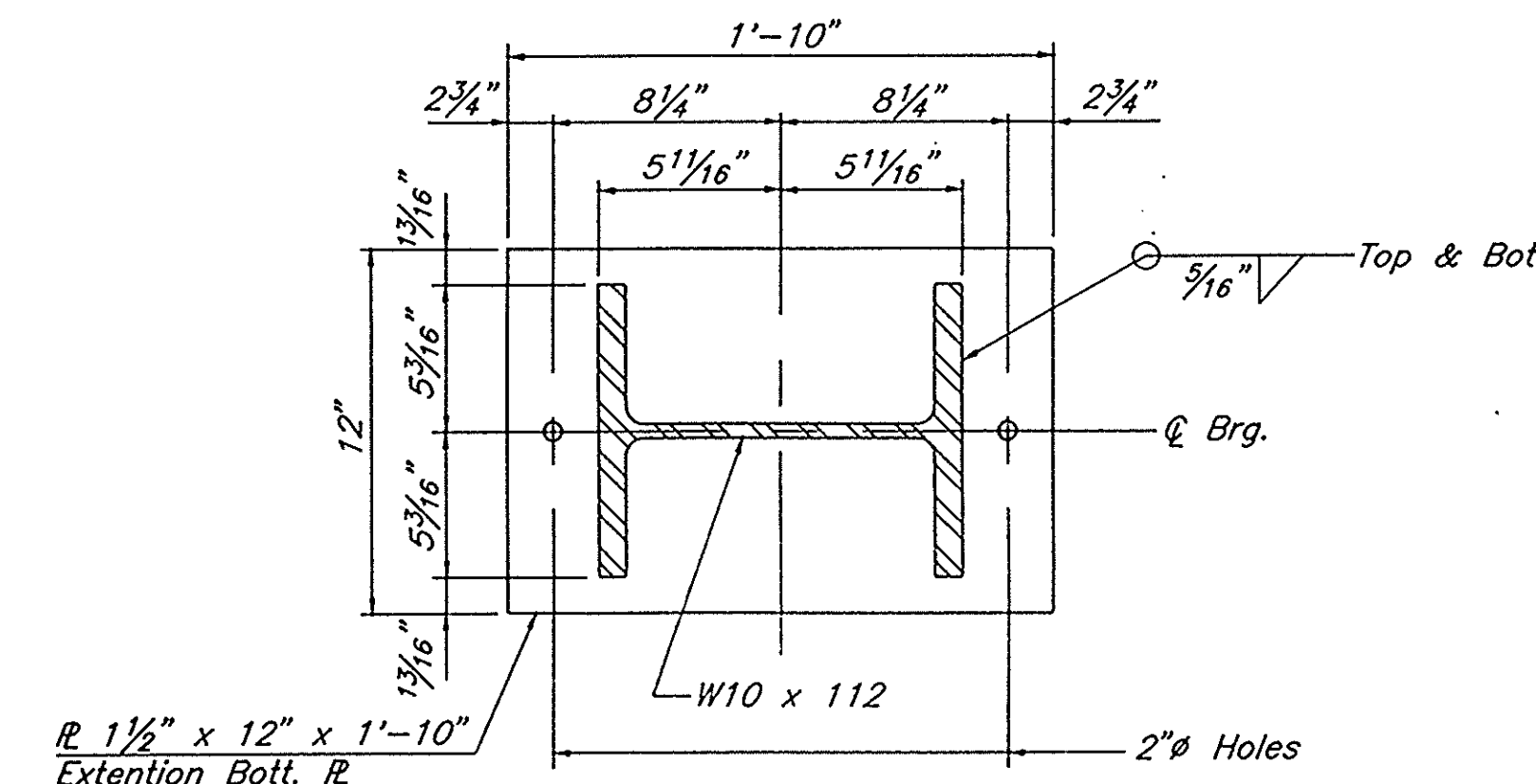


PLAN-TOP PLATE

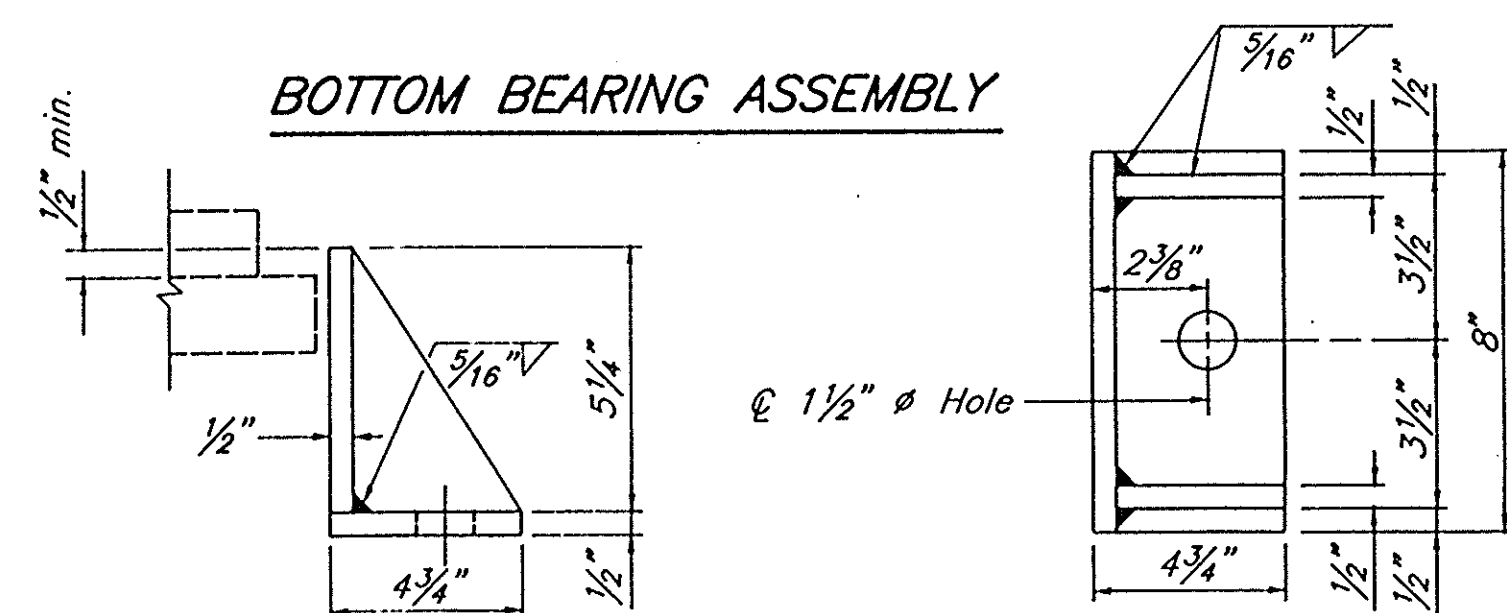


PINTLE

FIXED BEARING  
(7 Assembly Required)

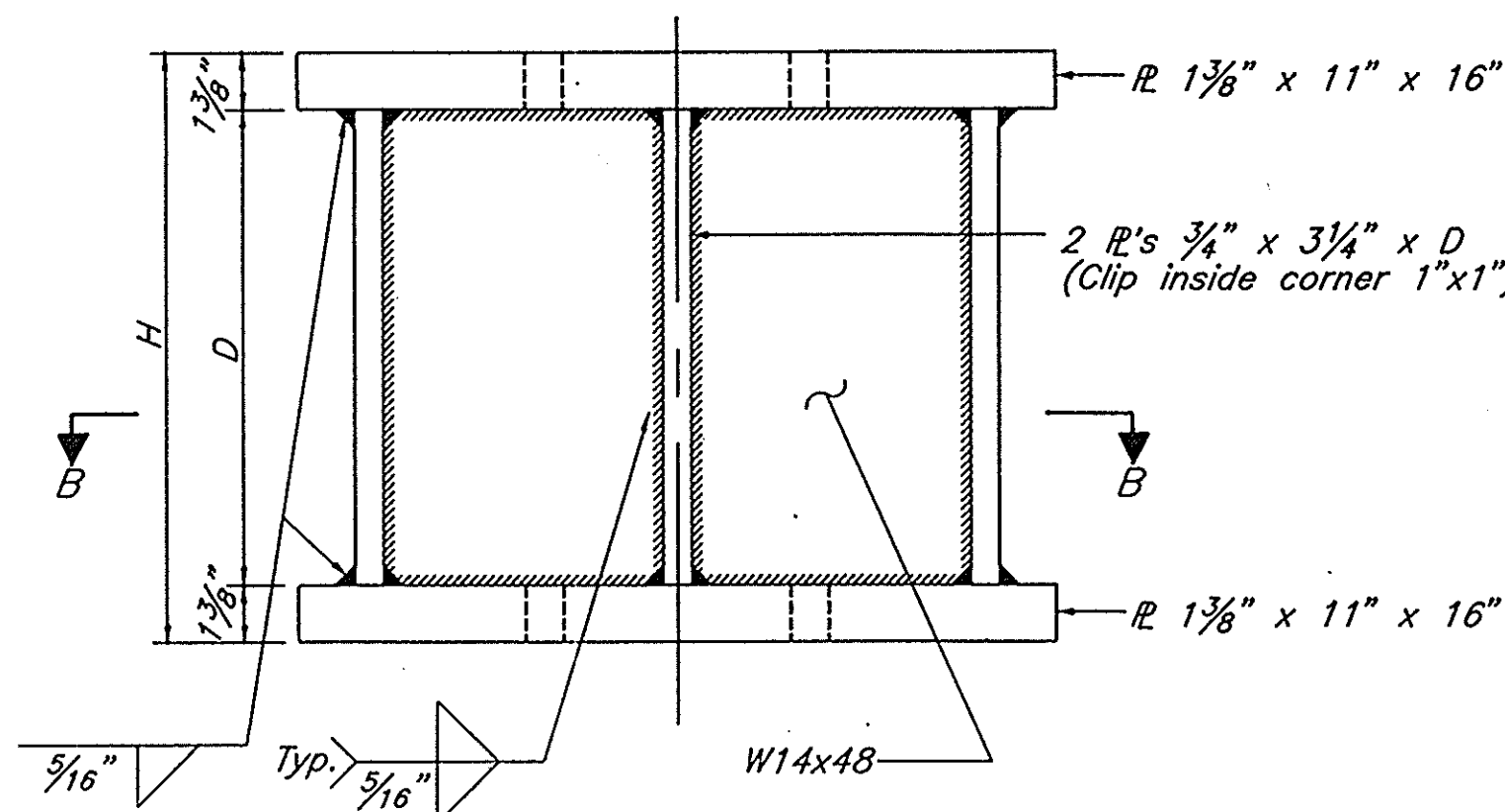


SECTION B-B



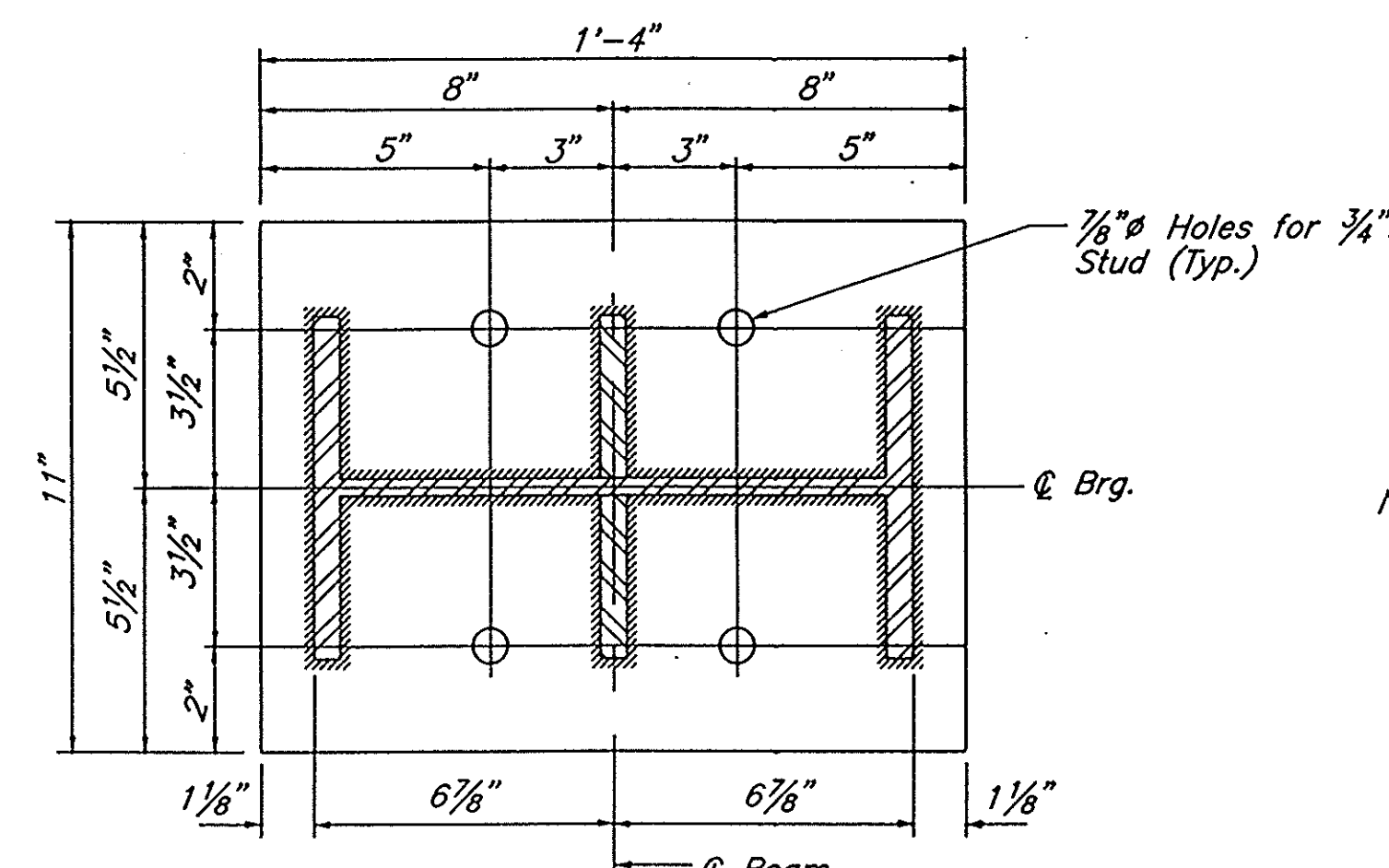
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



STEEL EXTENSION AT PIER 2

Equivalent welded plates will be allowed in lieu of W14x48 section.



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7

Notes:

- Anchor bolts at fixed bearings may be built into the masonry.
- See sheet 16 of 19 for Anchor Bolt installation.
- Side retainers, shim plates, extension steel, H.S. bolts and anchor bolts for expansion bearings are incidental to the cost of Elastomeric Bearing Assembly Type I.
- The Fixed Bearing Assemblies shown for Pier No. 1 are included in the Cost of Furnishing & Erecting Structural Steel.

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

Beam No.	1	2	3	4	5	6	7
H	16 1/2"	17 3/4"	18 3/4"	19 1/2"	18"	16 3/8"	14 1/2"
D	13 3/4"	15"	16"	16 3/4"	15 1/4"	13 5/8"	11 3/4"

WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

REVISIONS  
GWR-5/20/94 - REVISED PER I.D.O.T. REVIEW  
RAM-6/6/94 - ADDED PER IDOT REVIEW

DESIGNED RTP DRAWN JES APPROVED DATE 2/18/94 BOOK SCALE N.T.S. CAD DWG. D:/ACAD/IL/93030/351BRG JOB NO. 222-93030

BEARING DETAILS-PIER NO. 1 & 2  
F.A.P. RT. 619 (IL. 351) OVER RAILROAD TRACK, LASALLE COUNTY  
SECTION 70-VBR-1 STA. 36+32.5 S.N. 050-0019

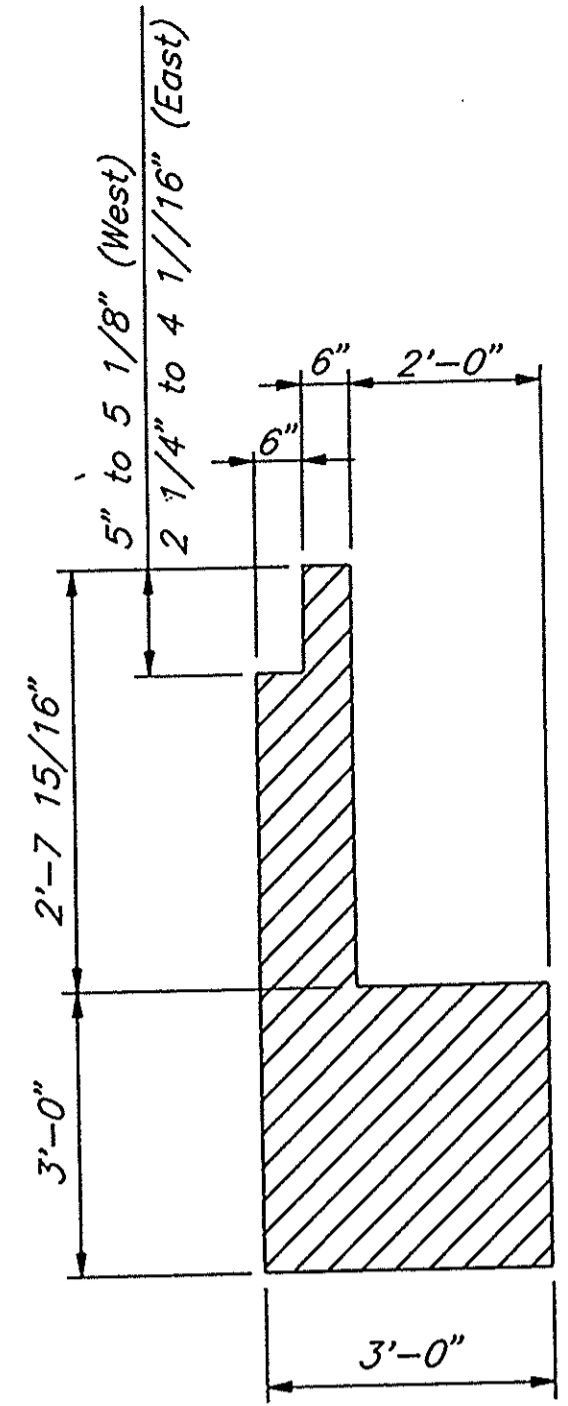
SHEET  
18  
OF 30



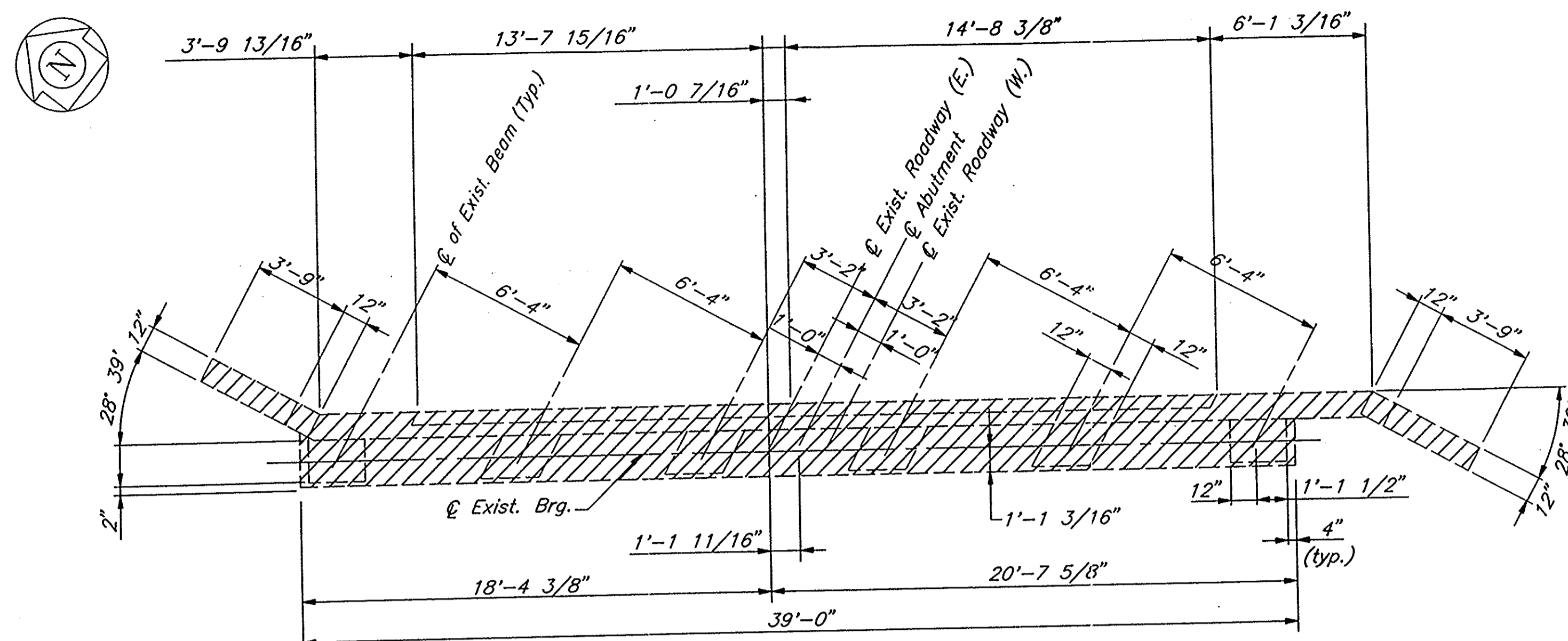
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	70 VBR-1	LASALLE	30	19
STA. 36+32.25		TO STA. 36+32.25		
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT NO. P-93-053-90				

SHEET NO. 11  
19 SHEETS



SECTION A-A



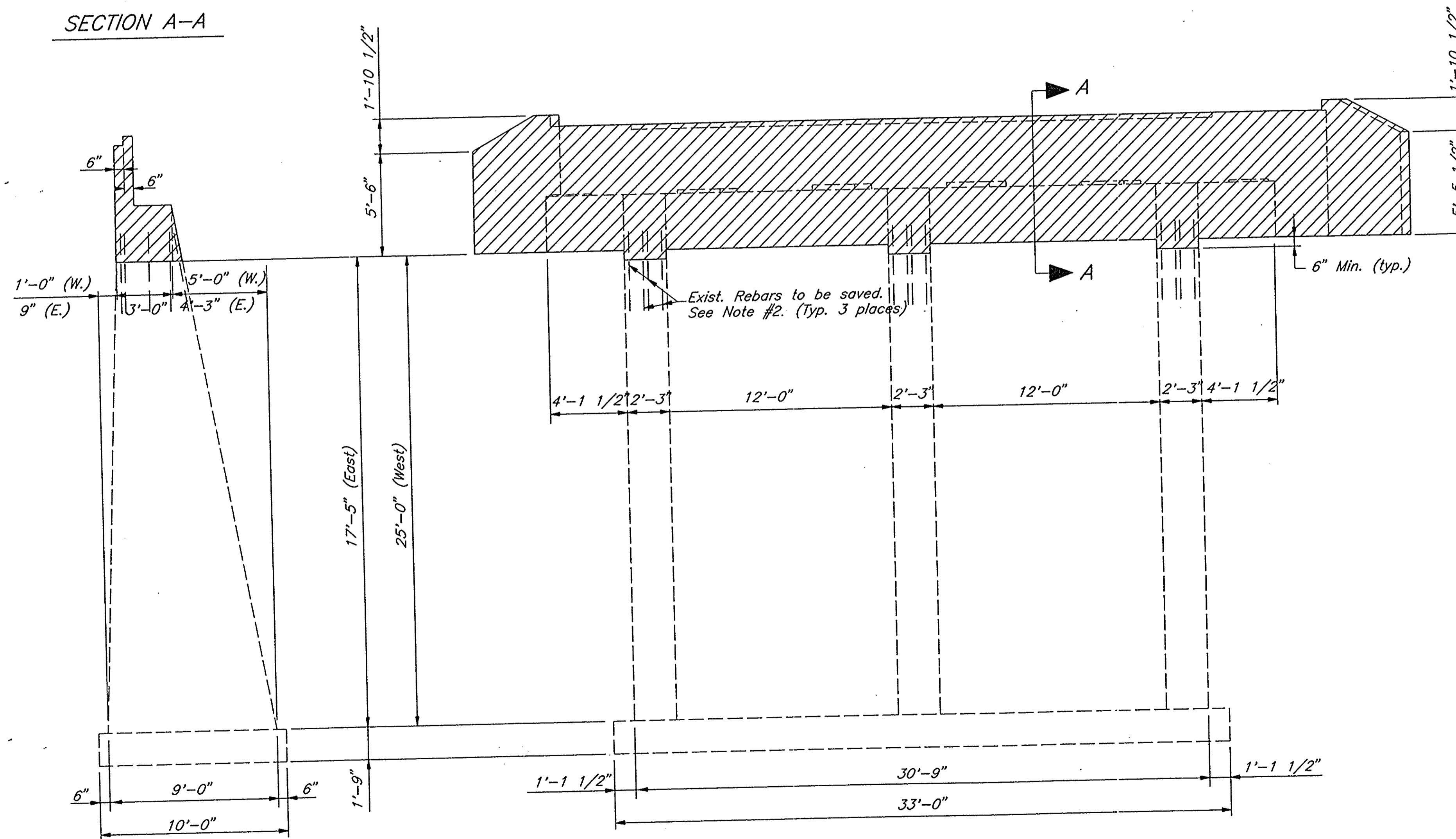
PLAN - EAST ABUTMENT  
(WEST ABUTMENT SIMILAR BY 180° ROTATION)

NOTES

1. Hatched areas indicate concrete sections to be removed.
2. Existing reinforcement shall be cleaned, straightened and incorporated into new construction. Cost incidental to "Concrete Removal".
3. E. indicates East Abutment; W. indicates West Abutment.
4. Dimensions are similar for both abutments except as noted.

BILL OF MATERIALS

Item	Unit	Quantity
Concrete Removal (For two abutments)	Cu. Yds.	41.1



ELEVATION

END VIEW

WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED EEG DRAWN GWR APPROVED DATE 1/13/94 BOOK SCALE CAD DWG/L\93030\351AB-RE JOB NO. 222/93030

EAST & WEST ABUTMENT CONCRETE REMOVAL  
F.A.P. 619 (IL. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STATION 36+32.25 S.N. 050-0019

SHEET  
19  
OF 30





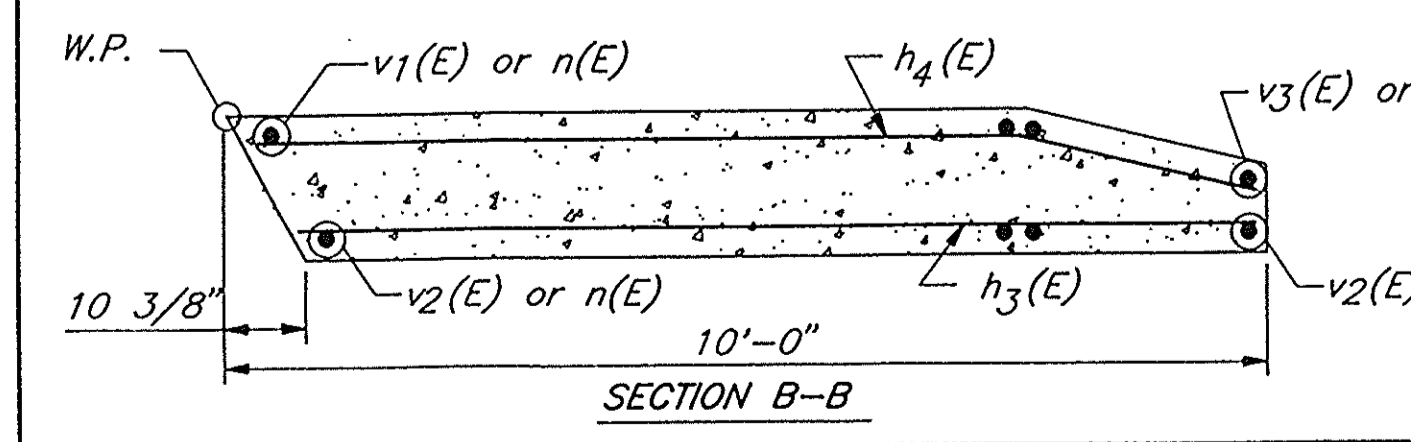
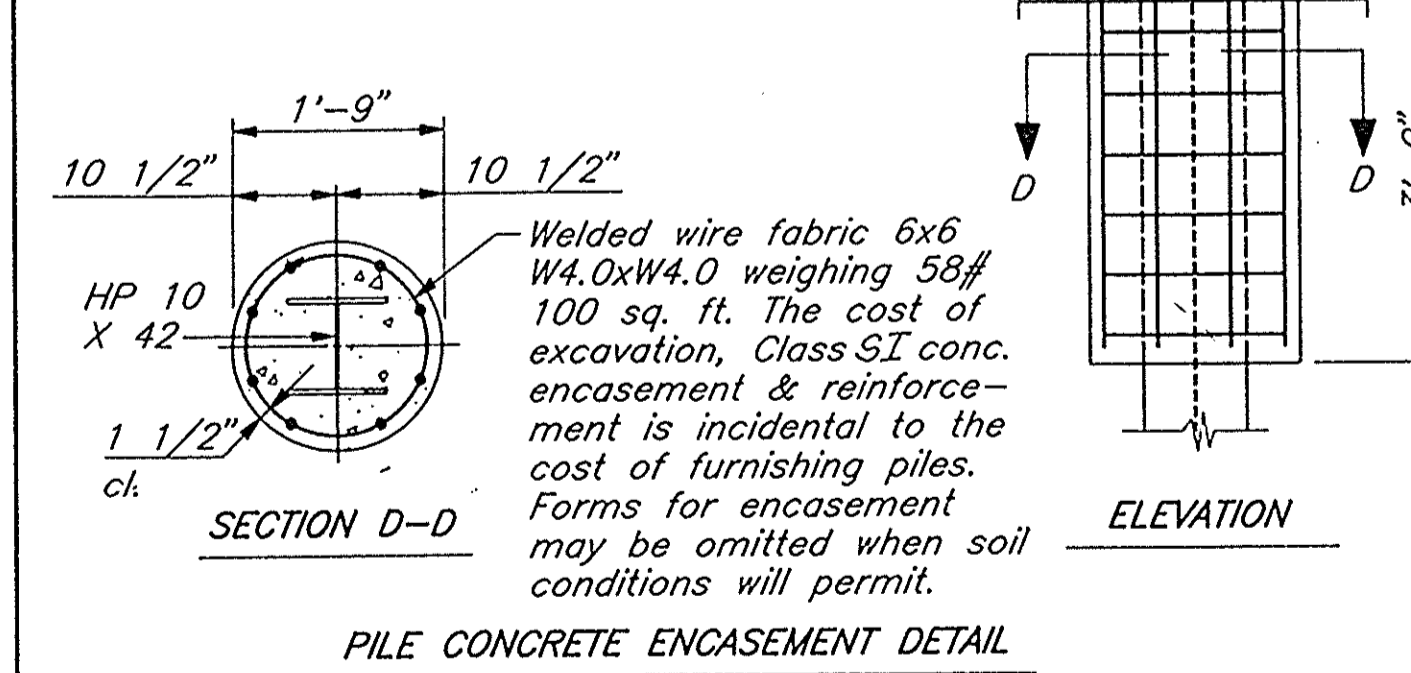
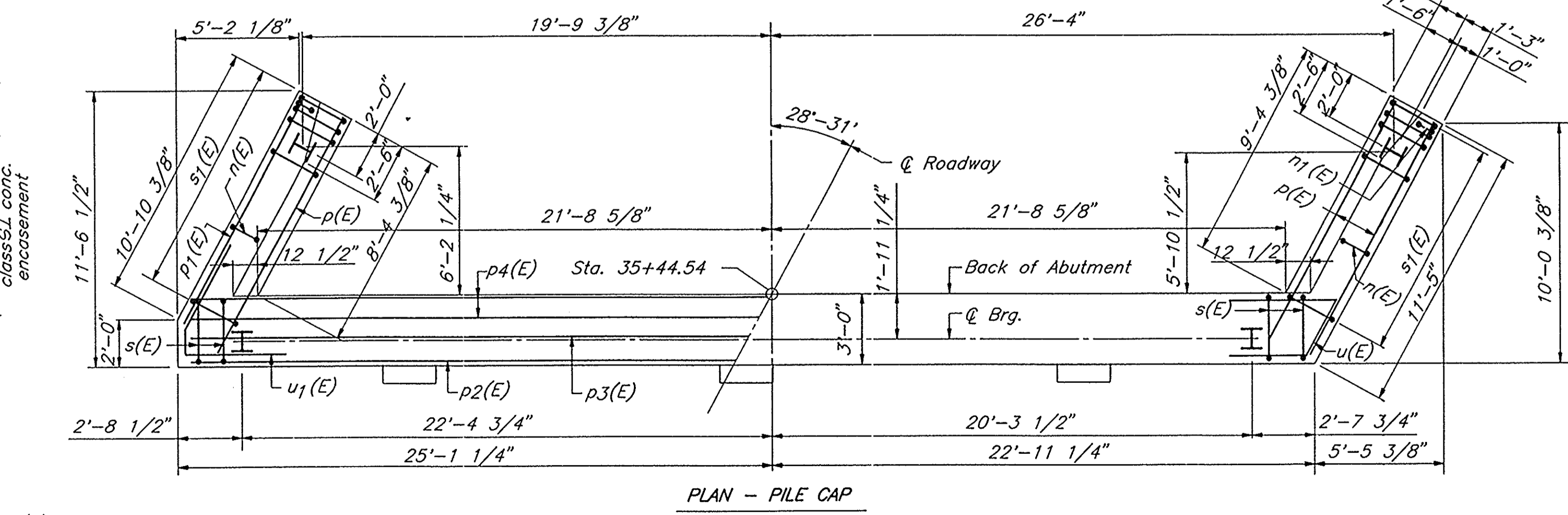
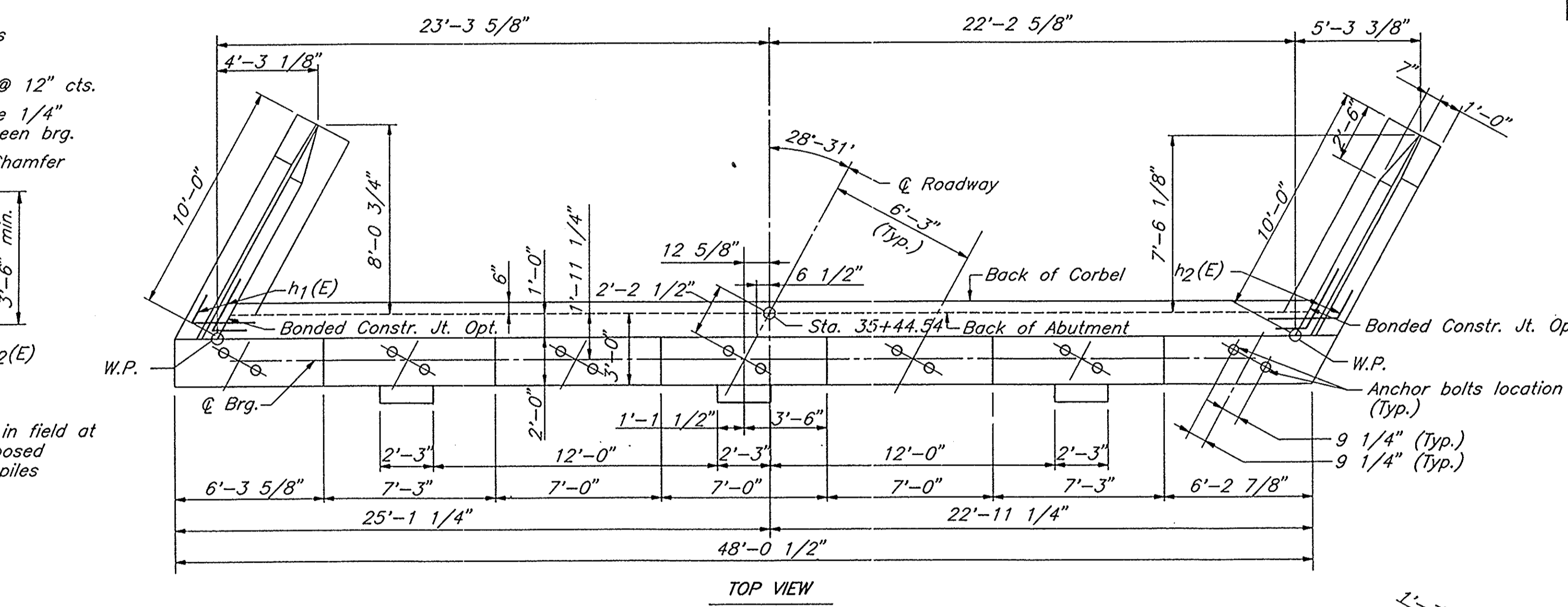
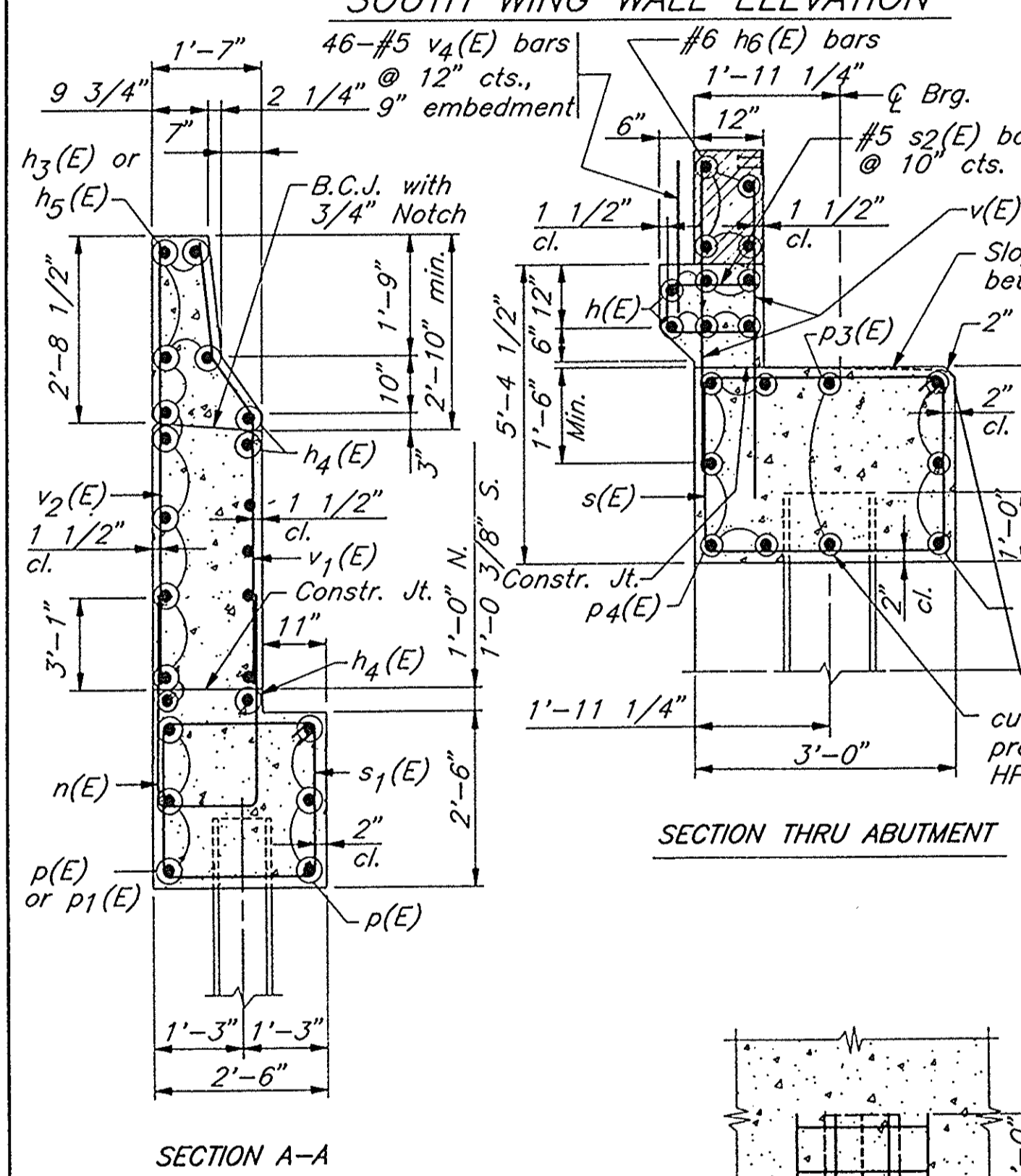
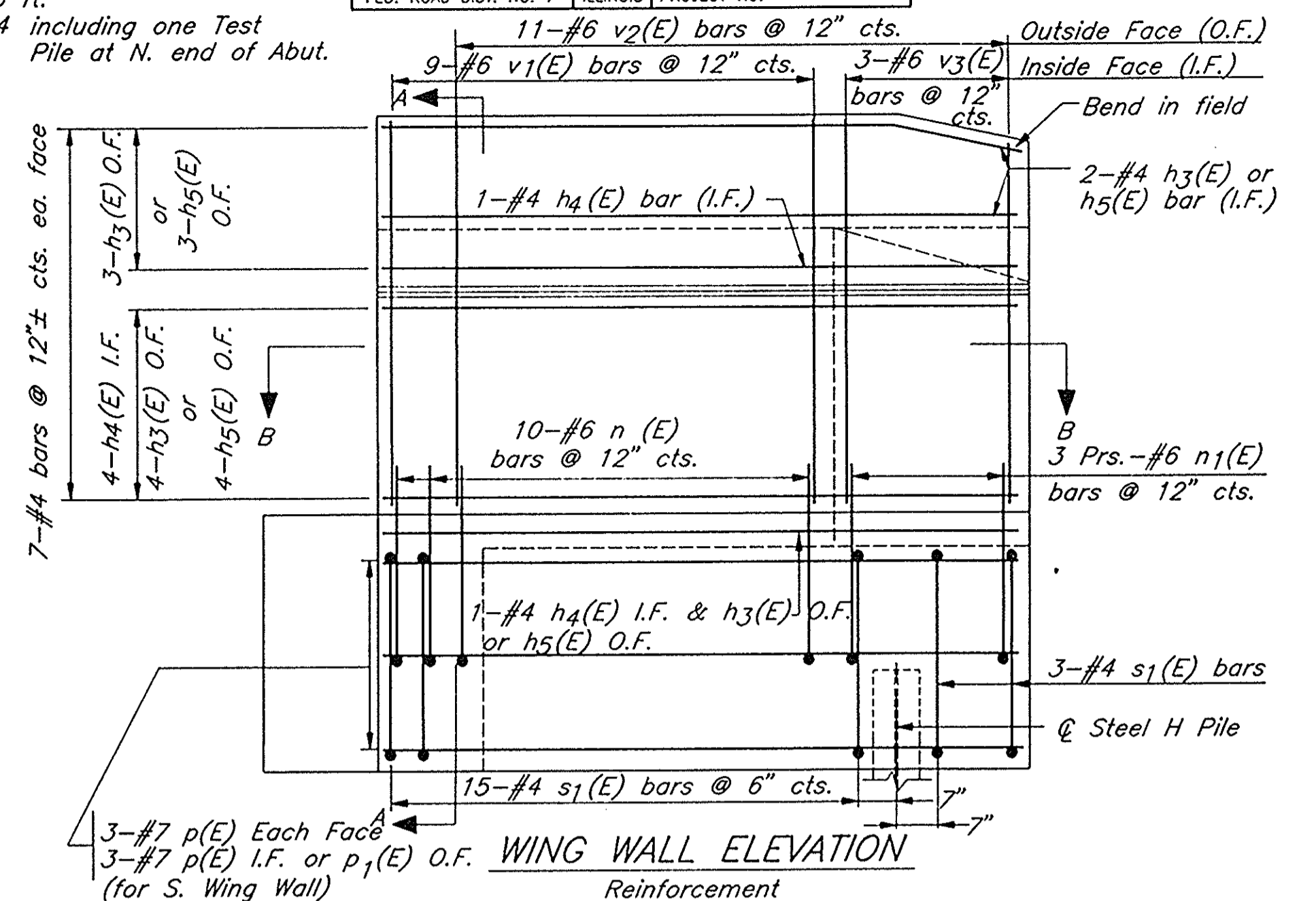
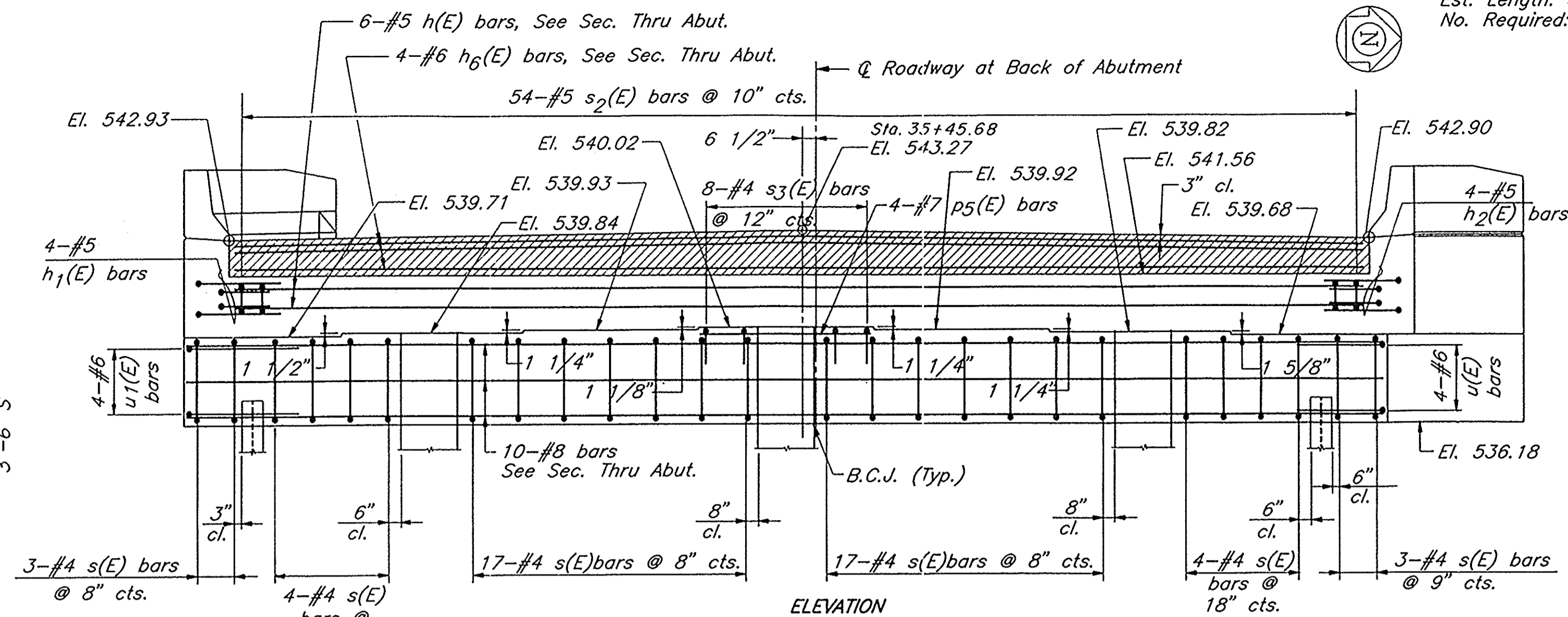
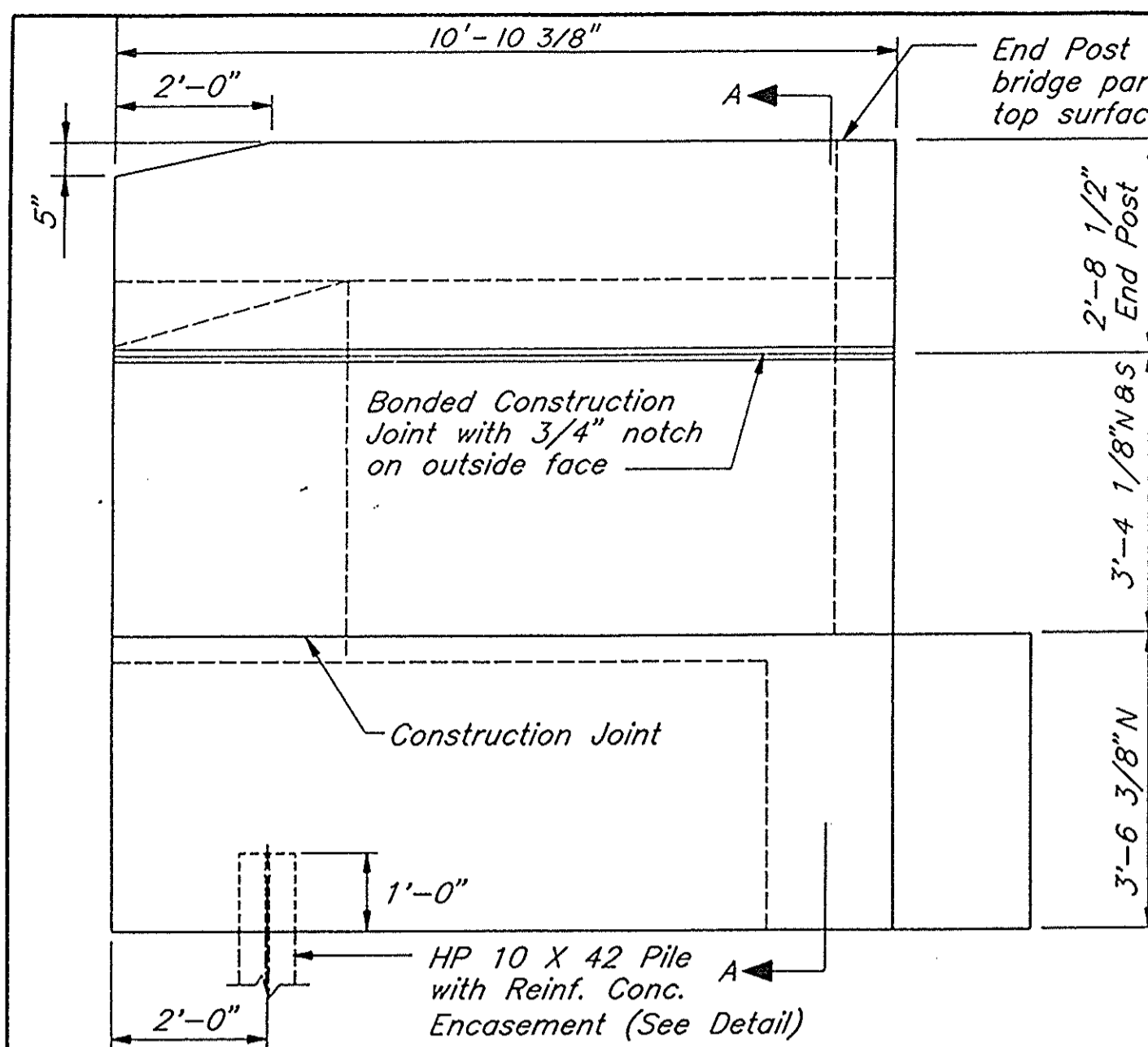
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PILE DATA

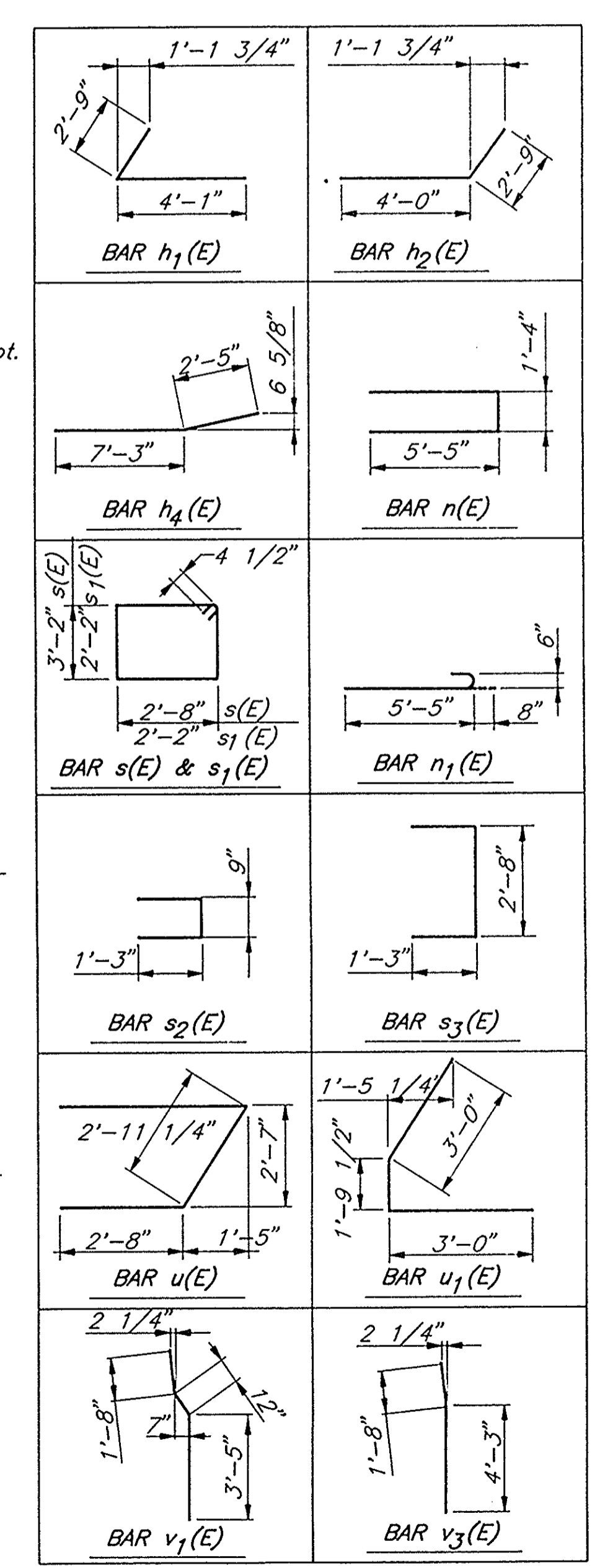
Type: HP 10x42  
Capacity: Driven to refusal  
Est. Length: 33 ft.  
No. Required: 4 including one Test Pile at N. end of Abut.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	70 VBR-1	LASALLE	30	21
STA. TO STA.		ILLINOIS PROJECT NO.		
FED. ROAD DIST. NO. 7				

SHEET No. 13  
19 SHEETS



- Notes:
- 1) Space reinforcement in cap to miss anchor bolts.
  - 2) Reinforcement bars designated (E) shall be epoxy coated.
  - 3) Hatched area to be poured after superstructure forms have been removed.
  - 4) "Concrete Super Structure" and h<sub>6</sub>(E) bars in hatched area are billed with Superstructure.
  - 5) All edges shall have standard 3/4" chamfer unless noted.
  - 6) B.C.J. denotes Bonded Construction Joints in accordance with Art. 503.09(a)(2) of the Standard Specifications.



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Consulting Engineers - Aurora, Illinois

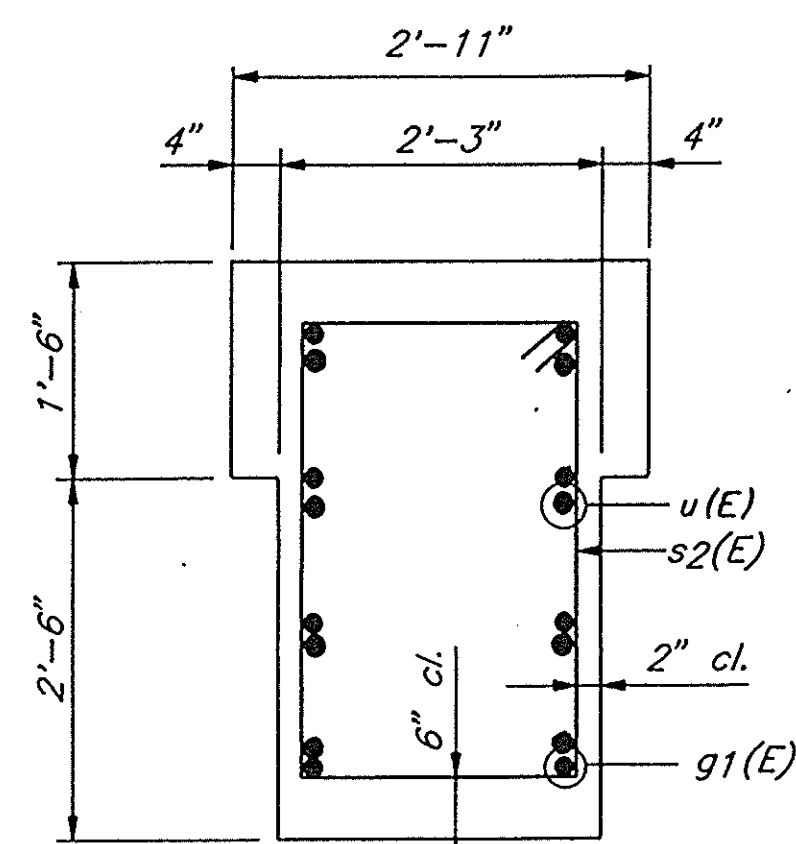
DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	CAD DWG/L	JOB NO.
RM	GWR		2/22/94			93030\351W-AB	222/93030

WEST ABUTMENT  
F.A.P. 619(IL. RT. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70 VBR-1 STATION 36+32.25 S.N. 050-0019

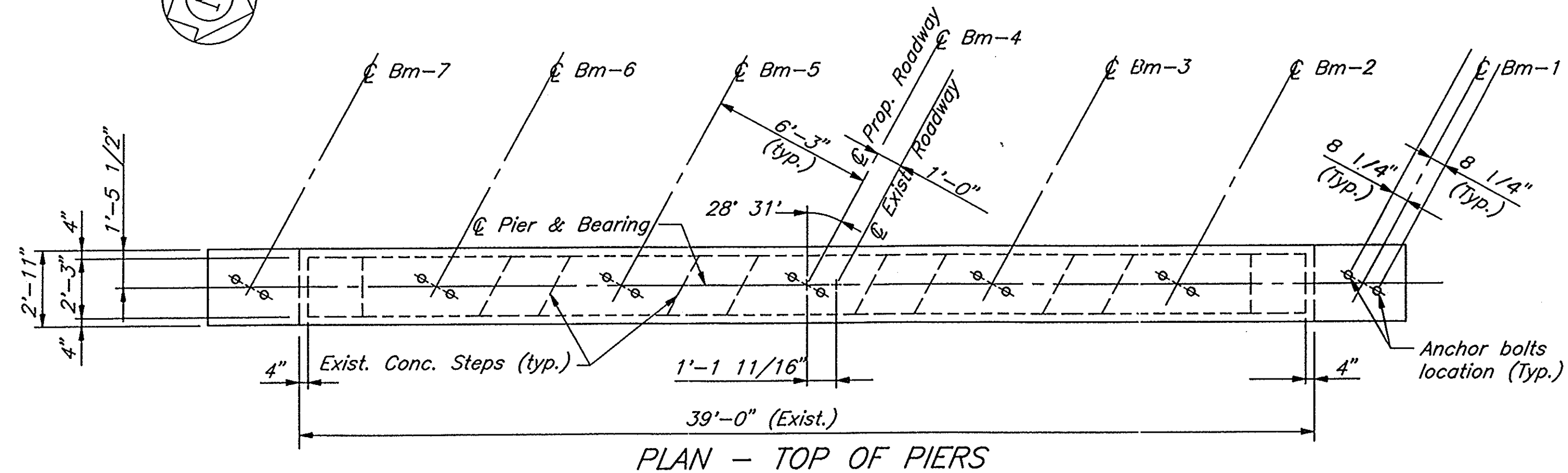
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	70 VBR-1	LASALLE	30	22
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT NO. P-93-053-90		

SHEET NO. 14  
19 SHEETS



SECTION A-A



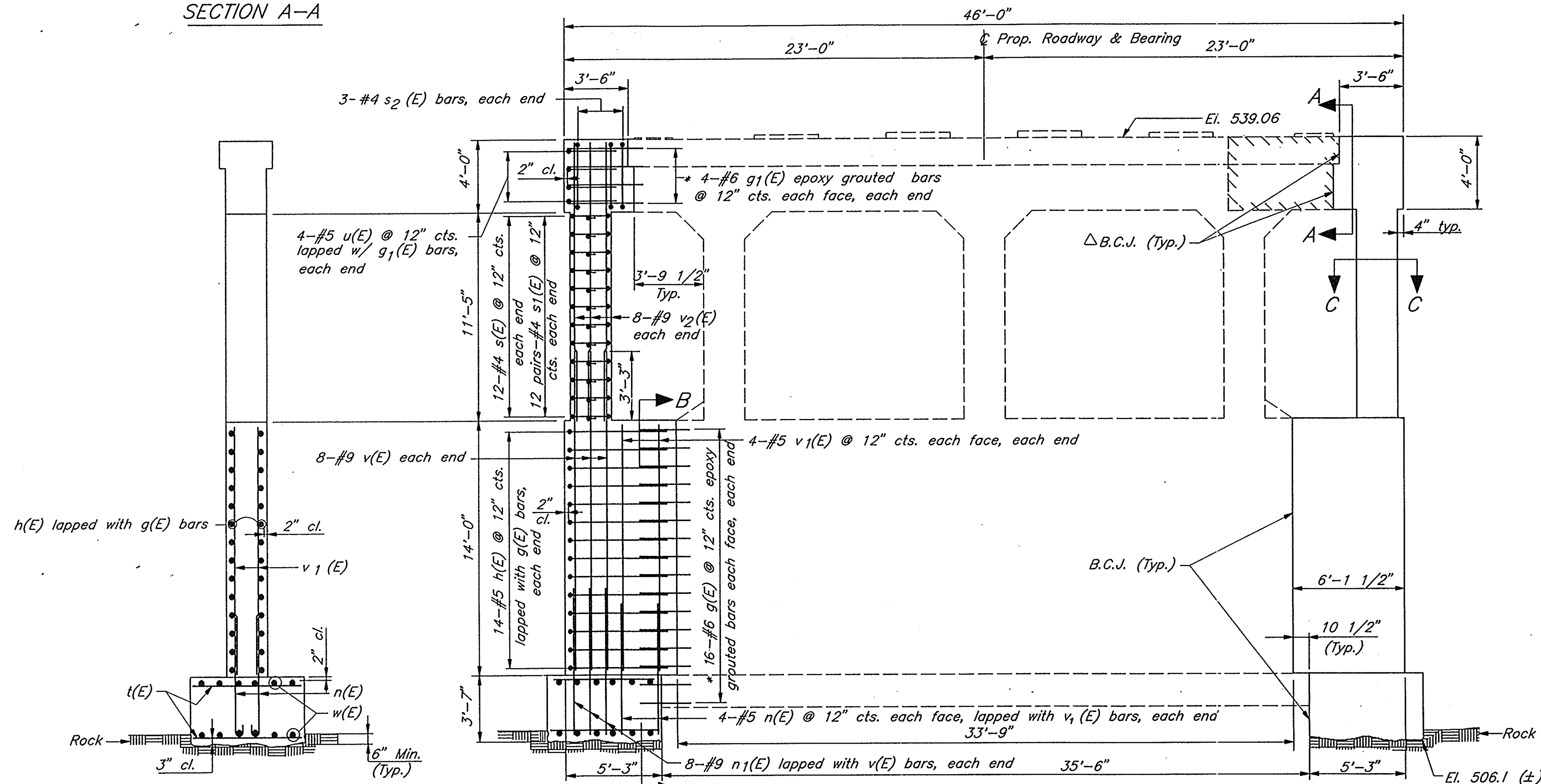
PLAN - TOP OF PIERS

Remove Deteriorated Concrete North & South Ends, Salvage and Clean Existing Rebars. Cost Included in Concrete Structures.

Formed Concrete Repair  $\leq 5"$ . (Each Face). Also to be used at New Bearing Locations as Necessary.  
\* Epoxy grout bars in minimum 9" deep drilled holes. Cost incidental to Reinforcement Bars (Epoxy Coated).

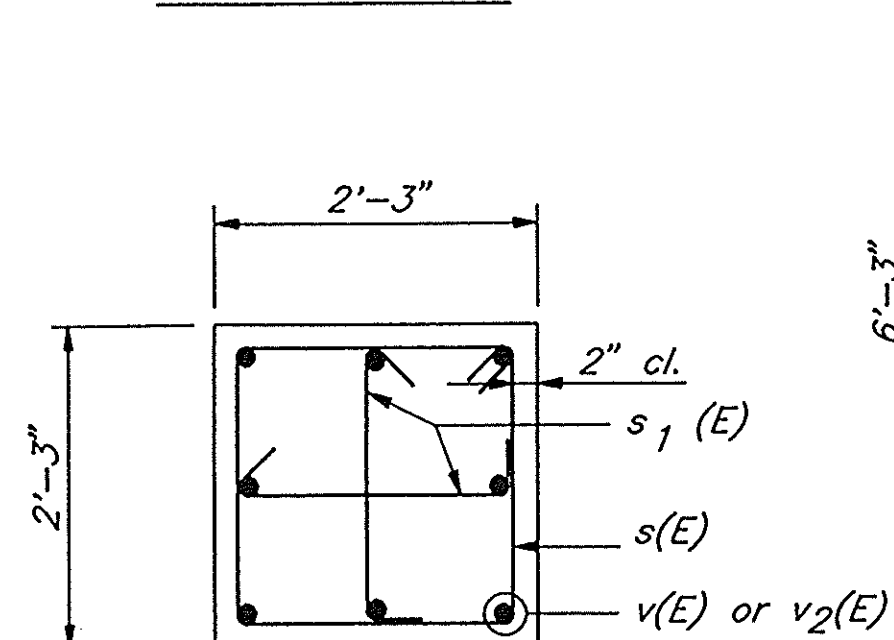
NOTES

- All edges shall have standard 3/4" chamfer except as noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- Set bases of footings 6" min. into sound in-place rock.
- Do not form basal 6" of footing - pour against in-place rock.
- B.C.J. denotes Bonded Construction Joint, in accordance with Art. 503.09 (a)(2) of the Standard Specifications.
- Minimum Lap: #5 bars = 2'-2"  
#6 bars = 2'-11"  
#9 bars = 3'-3"
- Pier Cap to be Cleaned of existing Bituminous Sealer, Ground Level and Smooth of the New Bearing Locations. Cost included in New Bearings.
- Maximum Soil Bearing Pressure ~ 3Tons/Sq.Ft.

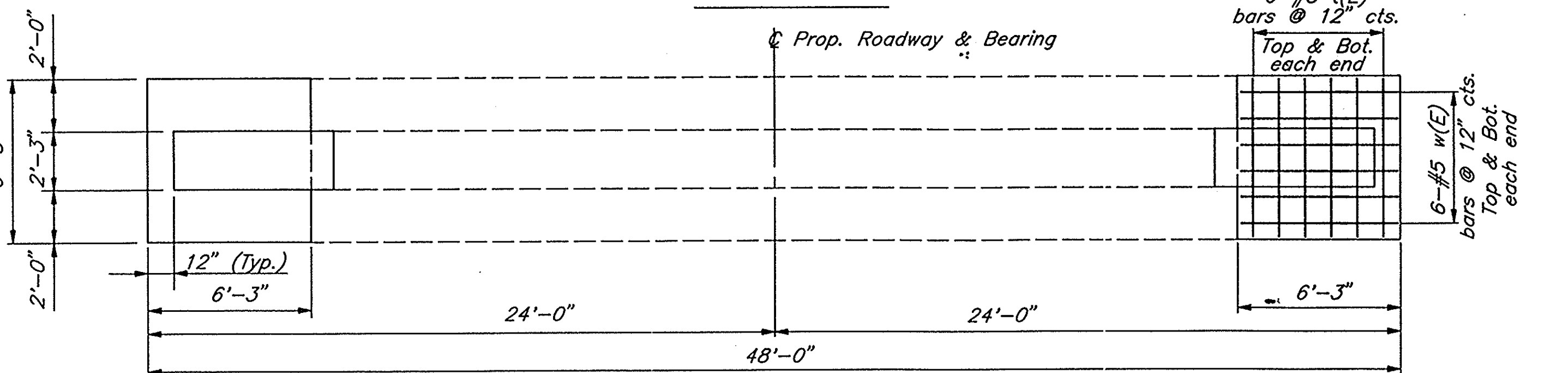


ELEVATION

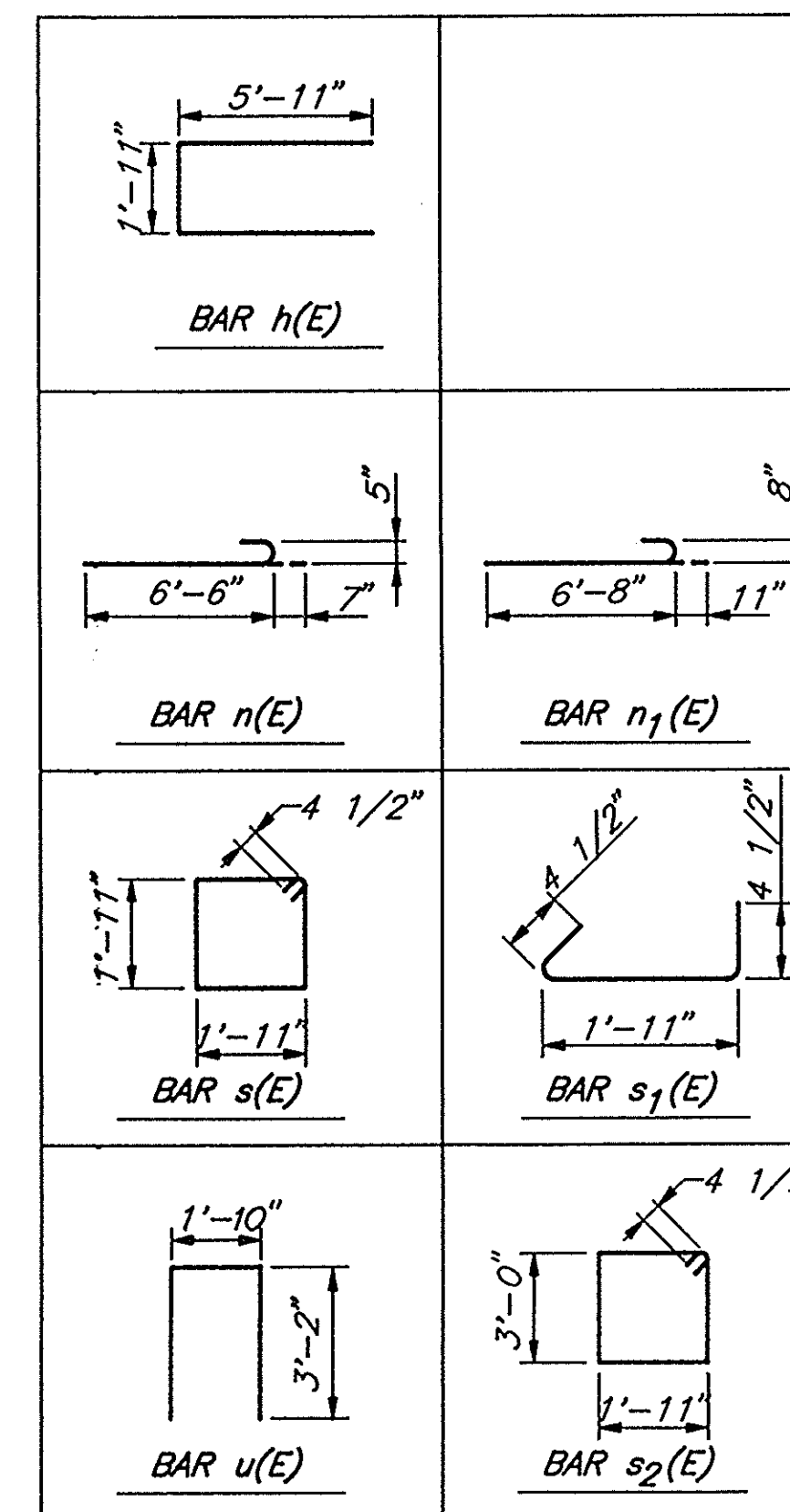
SECTION B-B



SECTION C-C



FOOTING PLAN



BILL OF MATERIALS

Bar	No.	Size	Length	Shape
g(E)	64	#6	3'-9"	—
g1(E)	16	#6	4'-2"	—
h(E)	28	#5	13'-9"	□
n(E)	16	#5	6'-1"	—
n1(E)	16	#9	7'-10"	—
s(E)	24	#4	8'-5"	□
s1(E)	48	#4	2'-8"	—
s2(E)	6	#4	10'-7"	□
t(E)	24	#5	5'-11"	—
u(E)	8	#5	8'-2"	□
v(E)	16	#9	17'-3"	—
v1(E)	16	#5	13'-10"	—
v2(E)	16	#9	15'-3"	—
w(E)	24	#5	5'-11"	—
Graffiti Removal		Sq. Yds.	30	
Concrete Structures		Cu. Yds.	33	
Reinforcement Bars Epoxy Coated		Lbs.	4020	
Rock Excavation For Structure		Cu. Yds.	3	
Structure Excavation		Cu. Yds.	89	
Formed Concrete Repair $\leq 5"$		Sq. Ft.	60	

WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

DESIGNED EEG	DRAWN GWR/UES	APPROVED	DATE 2/14/94	BOOK	SCALE	CAD DWG. IL 93030\351P1-1	JOB NO. 222/93030
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PIER No. 1 (FIXED BEARING)  
F.A.P. 619 (IL. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STATION 36+32.25 S.N. 050-0019

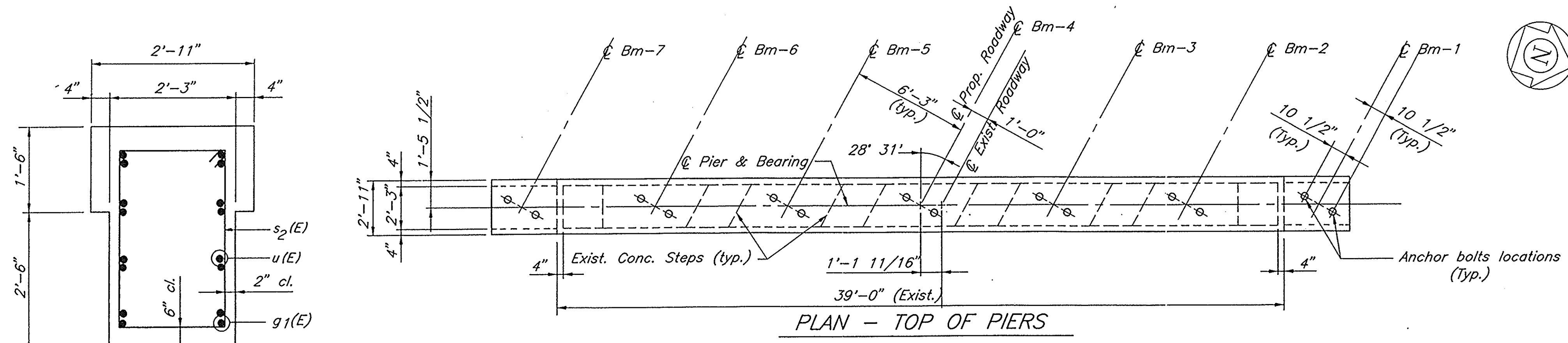
SHEET  
22  
OF 30



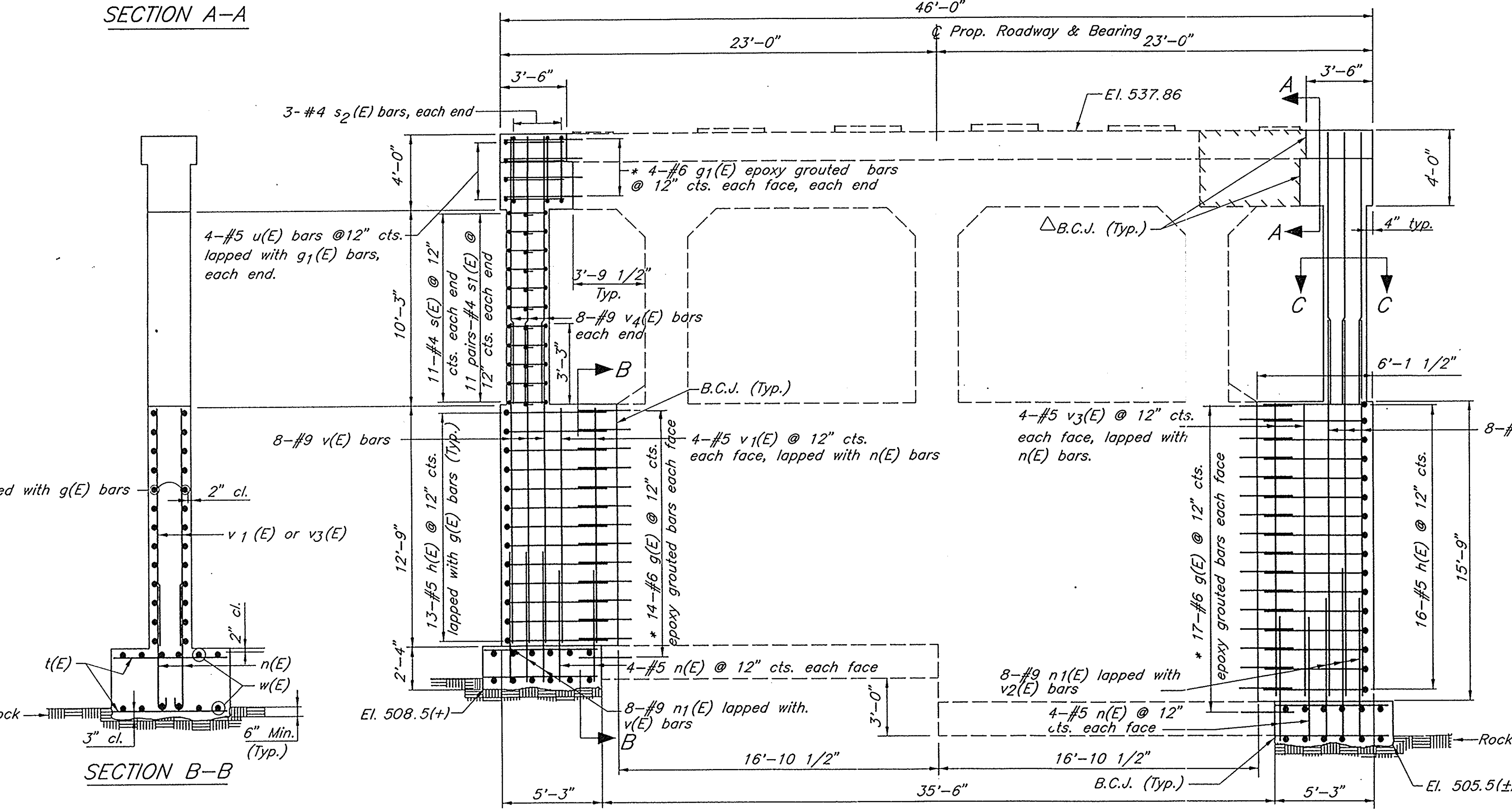
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 619	VBR-1	LASALLE	30	23
STA. TO STA.				
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT NO. P-93-053-90				

SHEET NO. 15  
19 SHEETS

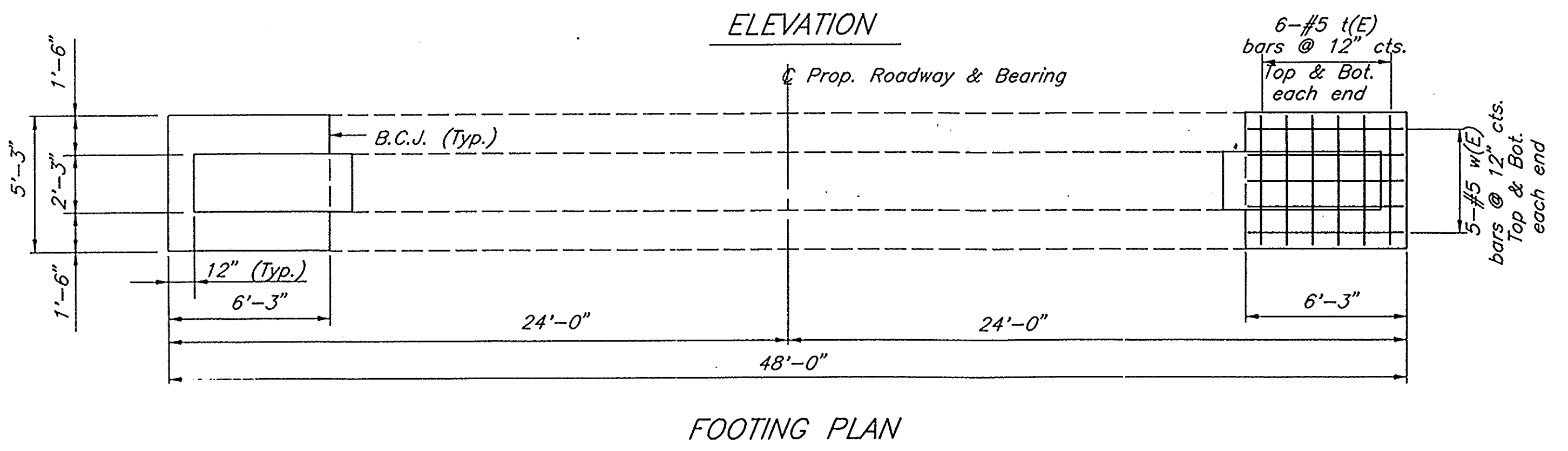


SECTION A-A



SECTION B-B

SECTION C-C



FOOTING PLAN

Remove Deteriorated Concrete North and South Ends, Salvage and Clean Existing Re-bars. Cost Included in Concrete Structures.

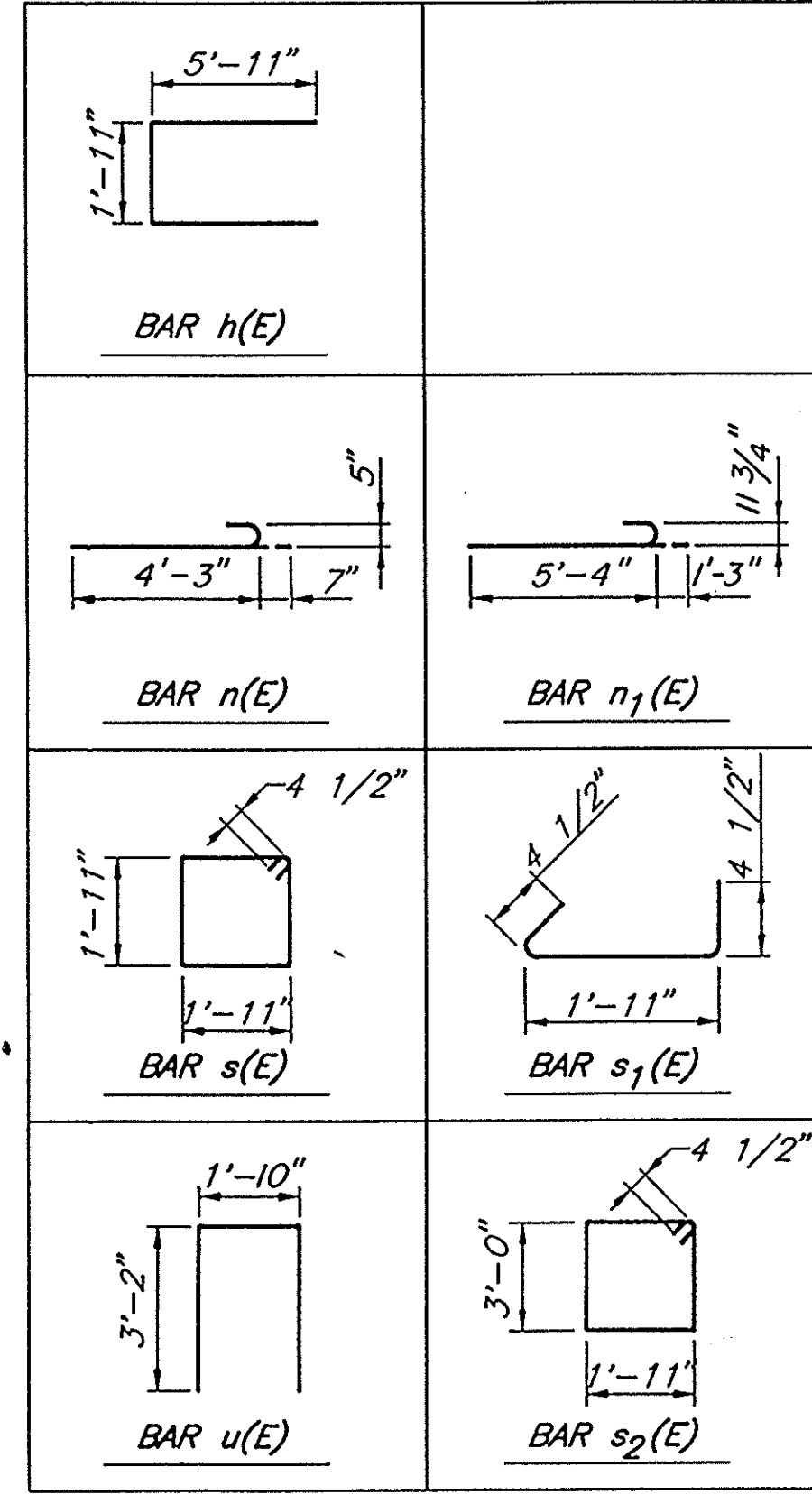
Formed Concrete Repair  $\leq 5"$  (Each Face). Also to be used at New Bearing Locations as Necessary. \* Epoxy grout bars in minimum 9" deep drilled holes. Cost incidental to Reinforcement Bars (Epoxy Coated).

NOTES

- All edges shall have standard 3/4" chamfer except as noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- Set bases of footings 6" min. into sound in-place rock.
- Do not form basal 6" of footing - pour against in-place rock.
- B.C.J. denotes Bonded Construction Joint, in accordance with Art. 503.07 (a)(2) of the Standard Specifications.
- Minimum lap: #5 bars = 2'-2"  
#6 bars = 2'-11"  
#9 bars = 3'-3"
- Pier Cap to be Cleaned of Existing Bituminous Sealer, Ground Level and Smooth at the New Bearing Locations. Cost Included in New Bearings.
- Maximum Soil Bearing Pressure ~ 4.3 Tons/Sq.Ft.

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
g(E)	62	#6	3'-9"	—
g <sub>1</sub> (E)	16	#6	4'-2"	—
h(E)	29	#5	13'-9"	□
n(E)	16	#5	4'-10"	C
n <sub>1</sub> (E)	16	#9	6'-7"	C
s(E)	22	#4	8'-5"	□
s <sub>1</sub> (E)	44	#4	2'-8"	□
s <sub>2</sub> (E)	6	#4	10'-7"	□
t(E)	24	#5	4'-11"	—
u(E)	8	#5	8'-2"	□
v(E)	8	#9	16'-0"	—
v <sub>1</sub> (E)	8	#5	12'-7"	—
v <sub>2</sub> (E)	8	#9	19'-0"	—
v <sub>3</sub> (E)	8	#5	15'-7"	—
v <sub>4</sub> (E)	16	#9	14'-1"	—
w(E)	20	#5	5'-11"	—
Graffiti Removal		Sq. Yds.	49	
Concrete Structures		Cu. Yds.	28	
Reinforcement Bars Epoxy Coated		Lbs.	3820	
Rock Excavation For Structure		Cu. Yds.	3	
Structure Excavation		Cu. Yds.	43	
Formed Concrete Repair $\leq 5"$		Sq. Ft.	60	



WALTER E. DEUCLER ASSOCIATES, INC.  
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED	EEG	DRAWN	cmv/acs	APPROVED	DATE	2/14/94	BOOK	SCALE	CAD DWG.	IL 93030 351P2-1	JOB NO.	222/93030
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PIER No. 2 (EXPANSION BEARING)  
F.A.P. 619 (IL. 351) OVER RAILROAD TRACKS, LASALLE COUNTY  
SECTION 70-VBR-1 STATION 36+32.25 S.N. 050-0019