

06-14-2019 LETTING ITEM 241

INDEX OF SHEETS

1	COVER SHEET
2	PLAN & PROFILE
3	CROSS SECTIONS
4-12	BRIDGE PLANS
13	BORINGS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM-OFF SYSTEM BRIDGE
CRAWFORD COUNTY
SECTION 16-07132-00-BR
STRUCTURE NO. 017-3756
TR 54 OVER DOGWOOD CREEK
PROJECT NO. FRAR(804)
JOB NO. C-97-053-18

STANDARDS: 280001-07 - EROSION CONTROL
515001-03 - NAME PLATES
725001-01 - REFLECTOR & TERM. MKR. PLACEMENT
701901-08 - TRAFFIC
BLR 21-9 - TRAFFIC

SCALES
PLAN 1 INCH = 50 FEET
CROSS SECTIONS 1 INCH = 5 FEET
PROFILE HORZ. 1 INCH = 50 FEET
PROFILE VERT. 1 INCH = 10 FEET

SUMMARY OF QUANTITIES

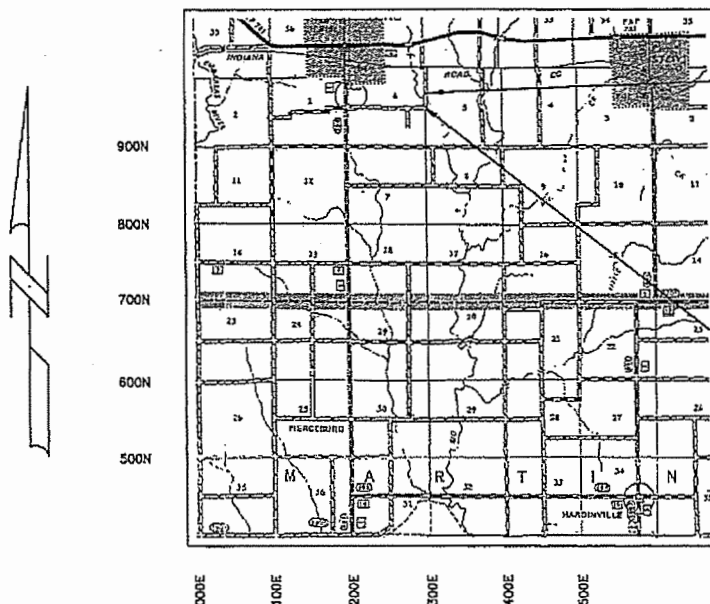
CODE NO.	QUANTITY	UNIT	ITEM
X7010216	1	L SUM	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)
20300100	60	CU YD	CHANNEL EXCAVATION
20700110	95	TON	POROUS GRANULAR EMBANKMENT
28000400	60	FOOT	PERIMETER EROSION BARRIER
28100807	200	TON	STONE DUMPED RIPRAP, CLASS A4
50100100	1	EACH	REMOVAL OF EXISTING STRUCTURES
50300225	36.6	CU YD	CONCRETE STRUCTURES
50300255	56.2	CU YD	CONCRETE SUPERSTRUCTURE
50300280	7.4	CU YD	CONCRETE ENCASEMENT
50300300	176	SQ YD	PROTECTIVE COAT
50800205	25,610	POUND	REINFORCEMENT BARS, EPOXY COATED
* 50900205	92	FOOT	STEEL RAILING, TYPE S1
51201400	560	FOOT	FURNISHING STEEL PILES HP 10X42
51202305	560	FOOT	DRIVING PILES
51203400	2	EACH	TEST PILES STEEL HP 10X42
51500100	1	EACH	NAME PLATES
67100100	1	L SUM	MOBILIZATION
* 72501000	4	EACH	TERMINAL MARKER - DIRECT APPLIED

* SPECIALTY ITEMS

FUNCTIONAL CLASS: RURAL LOCAL ROAD
ADT = 100
DESIGN SPEED = 30 MPH

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
TELEPHONE NO. 1-800-892-0123

R14W, 2ND P.M. | R13W, 2ND P.M.



LOCATION MAP

APPROXIMATE SCALE: 1 INCH = 1 MILE
NET LENGTH = 47.66 FT. = 0.009 MILES

SECTION 16-07132-00-BR
ENDS STA. 4+16.83

STA. 3+93 -- SPECIAL BRIDGE DESIGN
PROPOSED CONTINUOUSLY REINFORCED
CONCRETE SLAB BRIDGE, 3 SPANS @ 13'-6", 18'-0", 13'-6"
28' RDWY, SKEW = 20° R.F.
PROPOSED STR. NO. 017-3756
EXISTING STR. NO. 017-3731

SECTION 16-07132-00-BR
BEGINS STA. 3+69.17



John A. Stoe 2/22/2019
ILLINOIS REGISTERED PROFESSIONAL ENGINEER # 55012
LICENSE EXPIRES NOVEMBER 30, 2019
PROFESSIONAL DESIGN FIRM #184-000832

CRAWFORD COUNTY

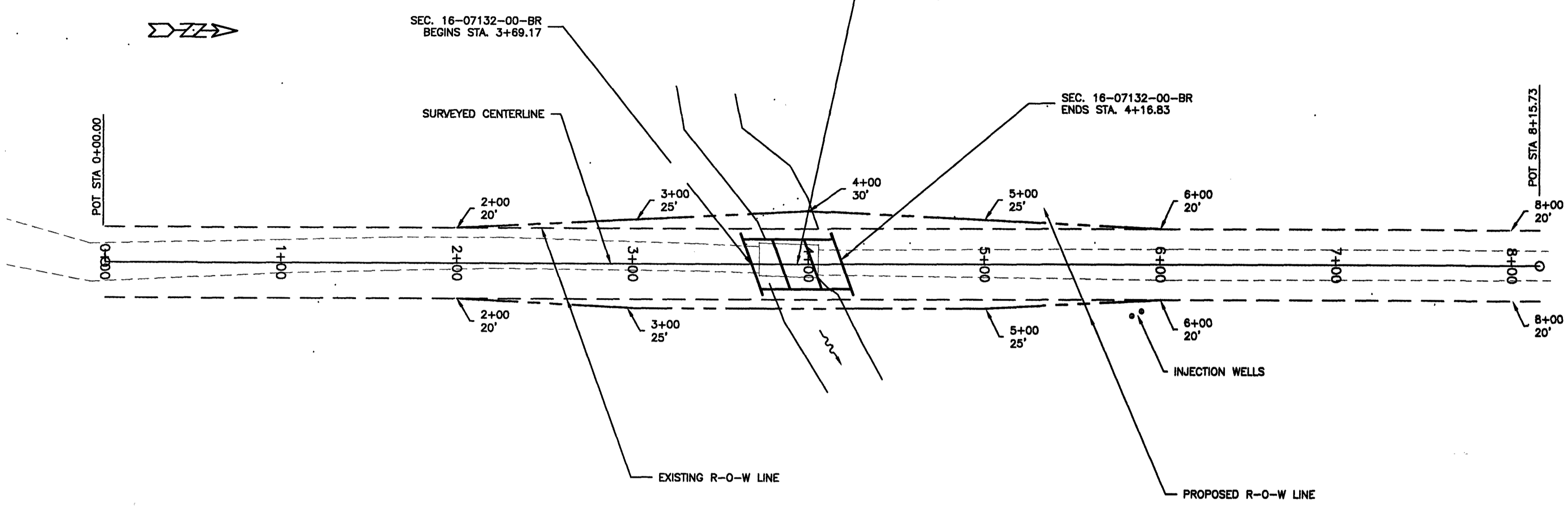
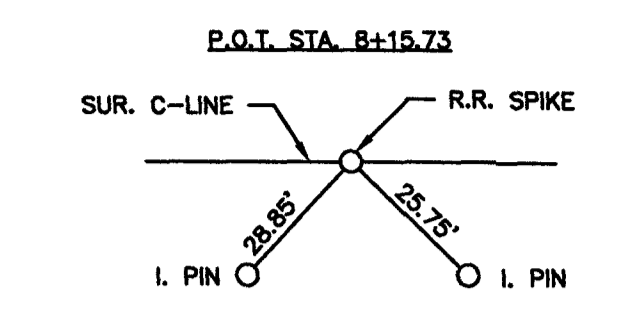
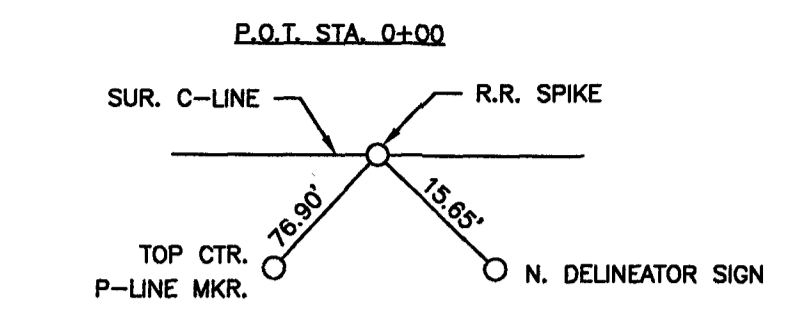
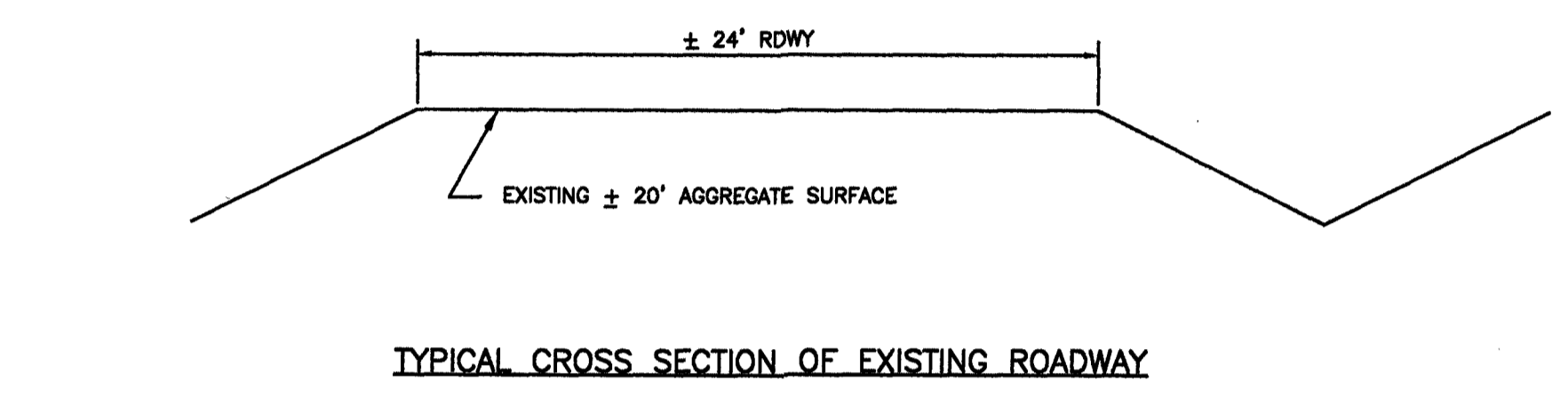
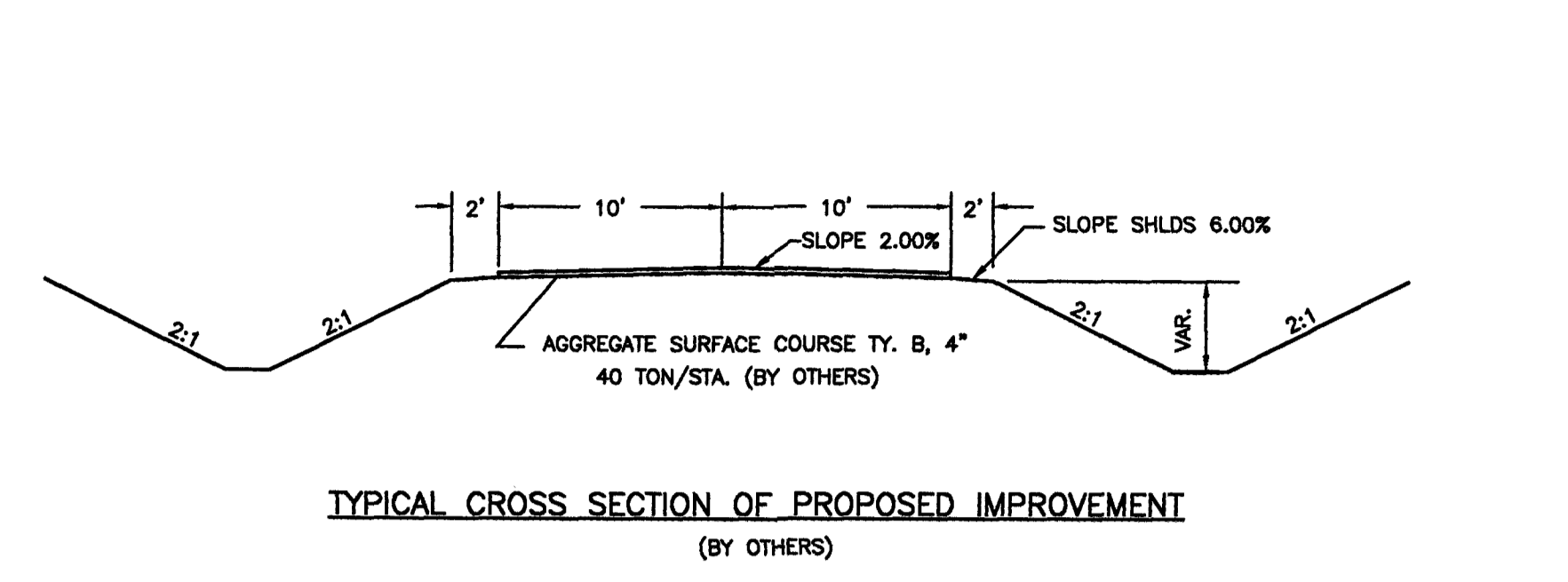
APPROVED: *February 22, 2019*
John R. Clark
CRAWFORD COUNTY ENGINEER

PASSED: *April 4, 2019*
John R. Clark
DISTRICT SEVEN ENGINEER
OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW: *April 4, 2019*
Jeffrey M. South
REGION FOUR ENGINEER

SECTION	16-07132-00-BR	TOTAL SHEETS	13	SHEET NO.	2
COUNTY	CRAWFORD	ROAD DIST.	OBLONG ROAD DIST.	STA. 0+00	TO STA. 9+00

JACK R. JENKINS AND CINDY S. JENKINS

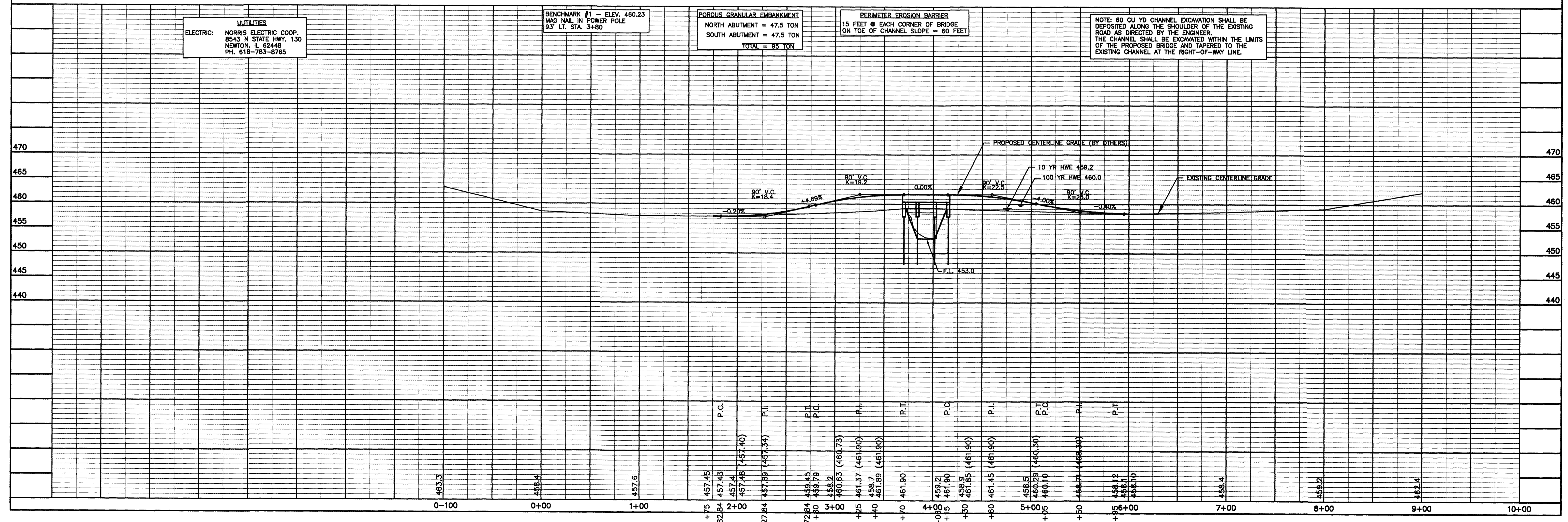


EXISTING STRUCTURE 017-3731
 STA. 3+89 - EXISTING CONCRETE THRU-ORDER BRIDGE WITH CLOSED CONCRETE ABUTMENTS AND WINGS.
 1 SPAN @ 30', 18' RDWY., SKEW = 0°
 1 EACH REMOVAL OF EXISTING STRUCTURES

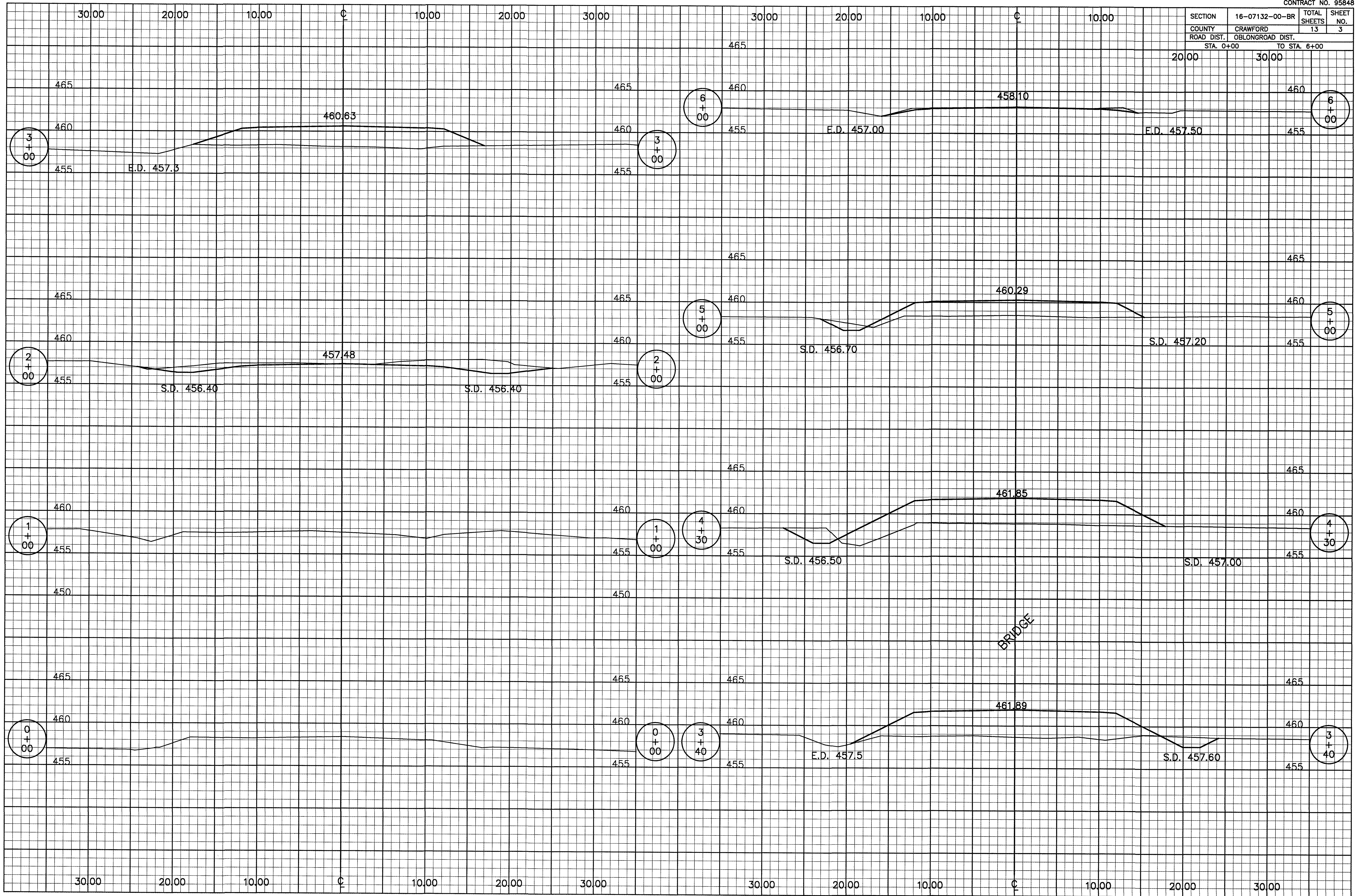
SCALES:
 1" = 50' HOR
 1" = 10' VER

NOTE: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE CRAWFORD COUNTY HIGHWAY DEPARTMENT AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER.

JACK R. JENKINS AND CINDY S. JENKINS



SECTION	16-07132-00-BR	TOTAL SHEETS	6
COUNTY	CRAWFORD	SHEET NO.	3
ROAD DIST.	OBLONGROAD DIST.		
STA. 0+00	TO STA. 6+00		



BENCHMARK:

EXISTING STRUCTURE NO. 017-3731: Single span concrete thru girder bridge with closed concrete abutments and wingwalls. 30.0 fc. - fc. abuts. and 18.0' o. - o. deck.

Structure closed to traffic during construction.

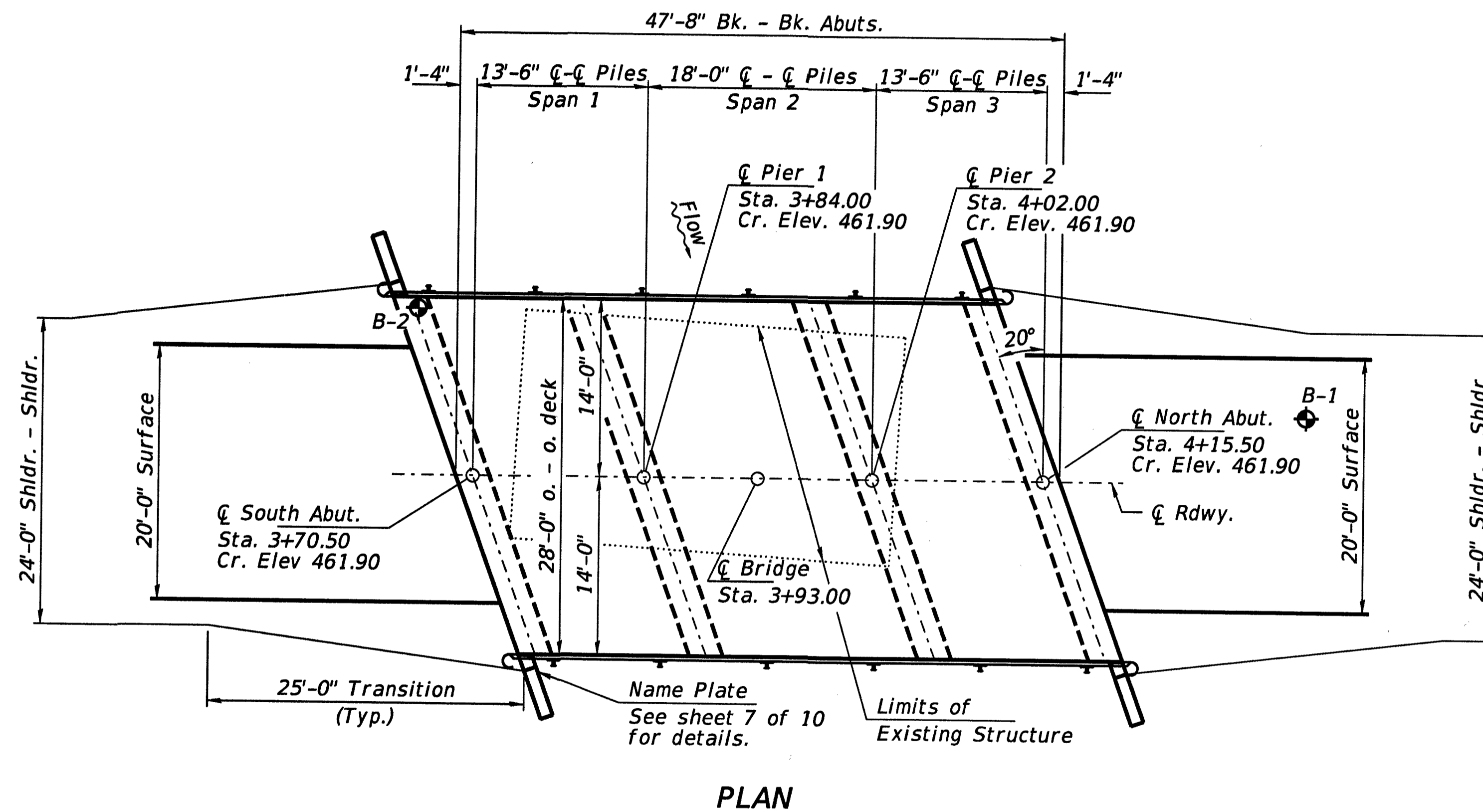
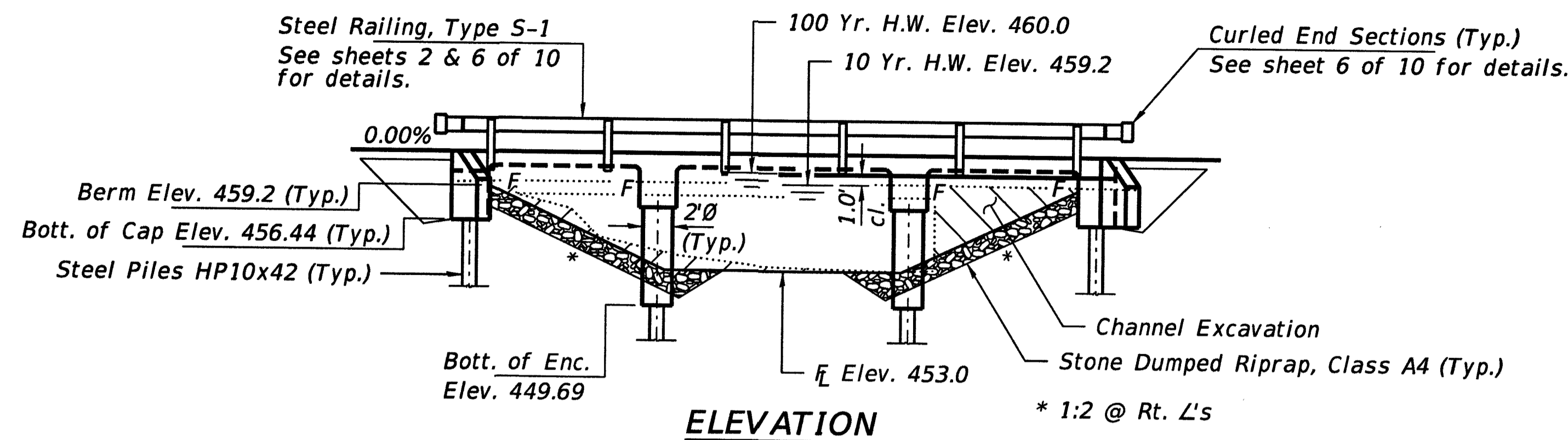
No Salvage

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at North Abutment and Pier 1 or approved by the Engineer before ordering the remainder of piles.
 All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
 The Contractor shall make allowance for the deflection of forms, shrinkage, and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.
 Protective Coat shall be applied to the top surface and the sides of the concrete deck and wingwalls.
 Reinforcement bars designated (E) shall be epoxy coated.
 Excavation required to construct the Abutments and Piers shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation or Cofferdam Excavation.

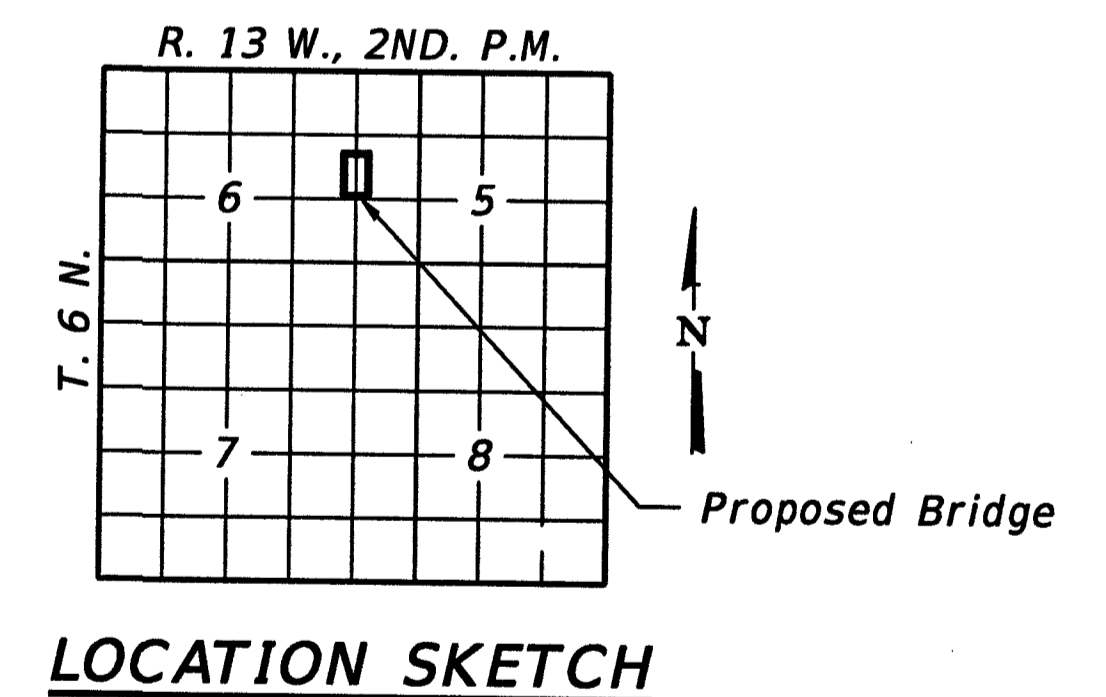
INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. General Data
3. Top of Slab Elevations
4. Superstructure
5. Superstructure Details
6. Steel Railing, Type S-1
7. Abutments
8. Piers
9. HP Pile Details
10. Borings



DOGWOOD CREEK
 BUILT 201_ BY
 CRAWFORD COUNTY
 SEC. 16-07132-00-BR
 OBLONG ROAD DISTRICT
 STR. NO. 017-3756
 LOADING HL-93

NAME PLATE
 See Std. 515001



SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.211g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.480g
 Soil Site Class = D

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition with all interims.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 4,000 psi (Superstructure)
 f'c = 3,500 psi (Substructure)
 fy = 60,000 psi (Reinf.)
 fy = 50,000 psi (Steel H-Pile) (M270 Gr. 50)

WATERWAY INFORMATION

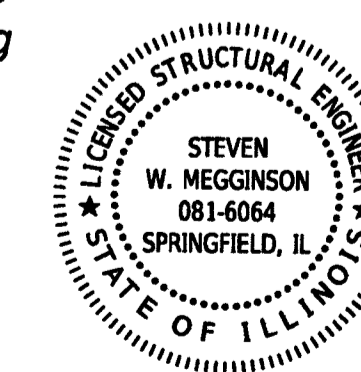
Drainage Area = 13.0 MI ²		Existing Low Grade Elev. 457.40 @ Sta. 6+00		Proposed Low Grade Elev. 457.94 @ Sta. 6+00	
Flood	Freq. Yr.	Q C.F.S.	Opening Ft ² Exist.	Nat. H.W.E. Prop.	Head - Ft. Headwater El. Prop.
Design	10	1940	119	157	459.2
Base	100	3590	119	194	460.0

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elev. (ft.)				Item
	S. Abut.	Pier 1	Pier 2	N. Abut.	
Q100	456.44	450.44	450.44	456.44	5
Q200	456.44	450.44	450.44	456.44	
Design	456.44	450.44	450.44	456.44	
Check	456.44	450.44	450.44	456.44	

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

Steven W. Megginson 02/11/2019
 ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2020

GENERAL PLAN & ELEVATION

T.R. 54
 OVER DOGWOOD CREEK
 SECTION 16-07132-00-BR
 CRAWFORD COUNTY
 STATION 3+93.00
 STRUCTURE NO. 017-3756

STATE OF ILLINOIS
 CRAWFORD COUNTY HIGHWAY DEPARTMENT

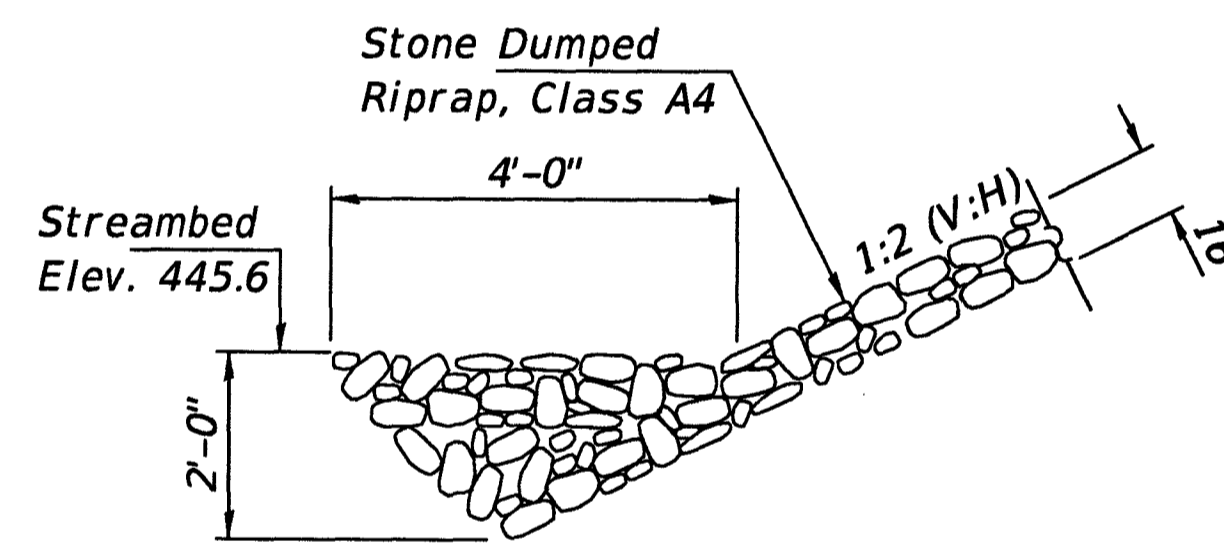
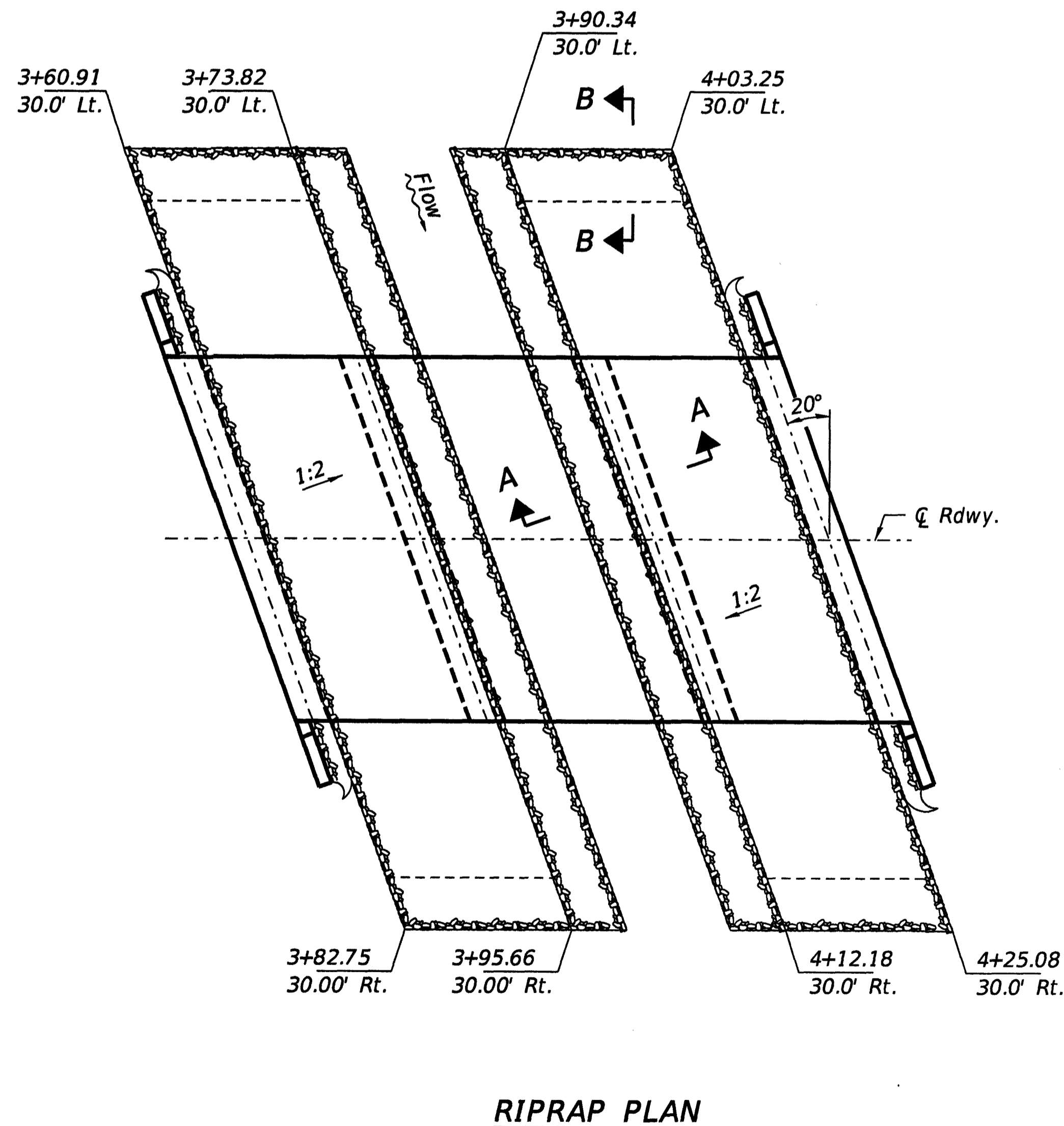
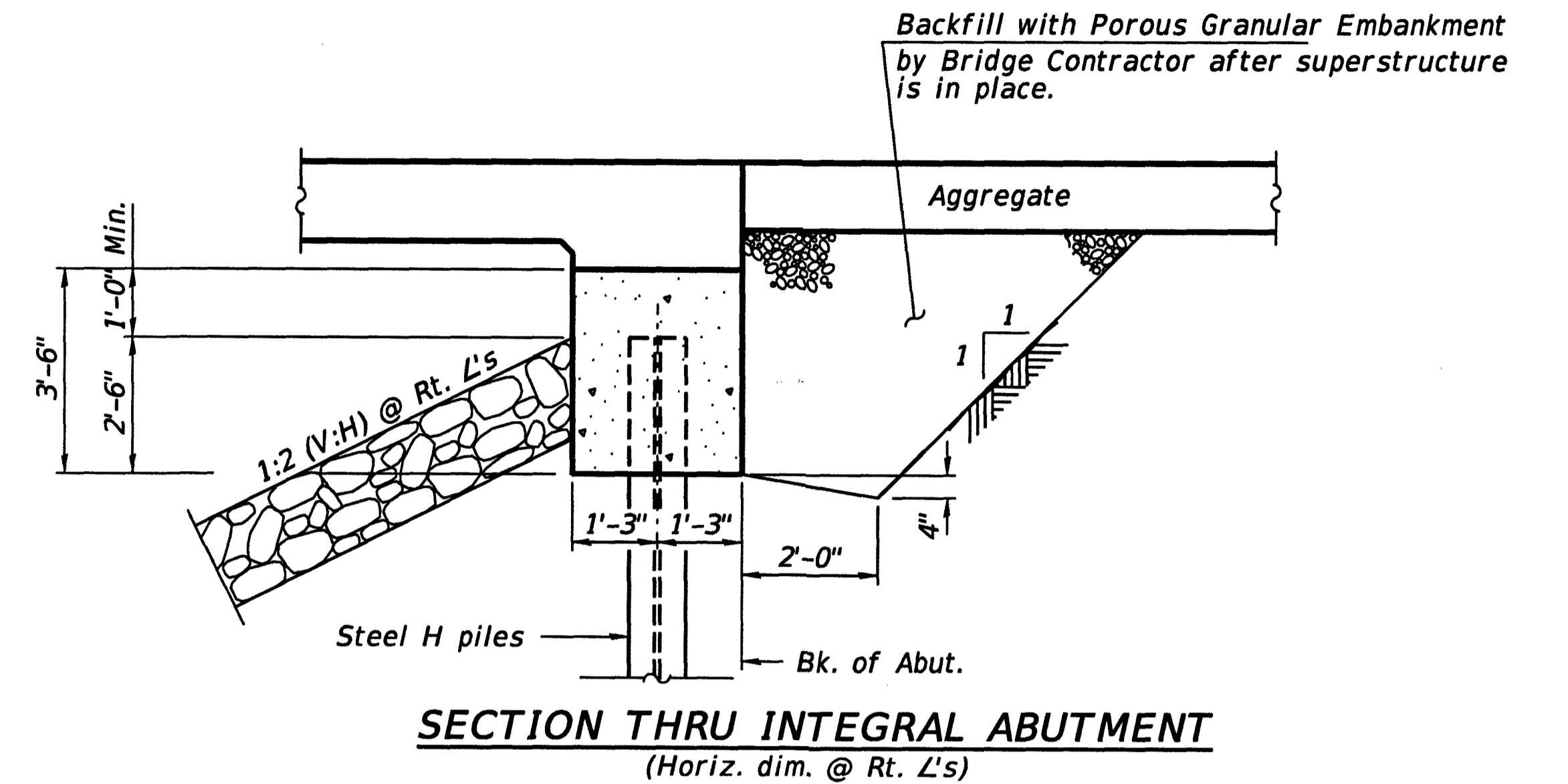
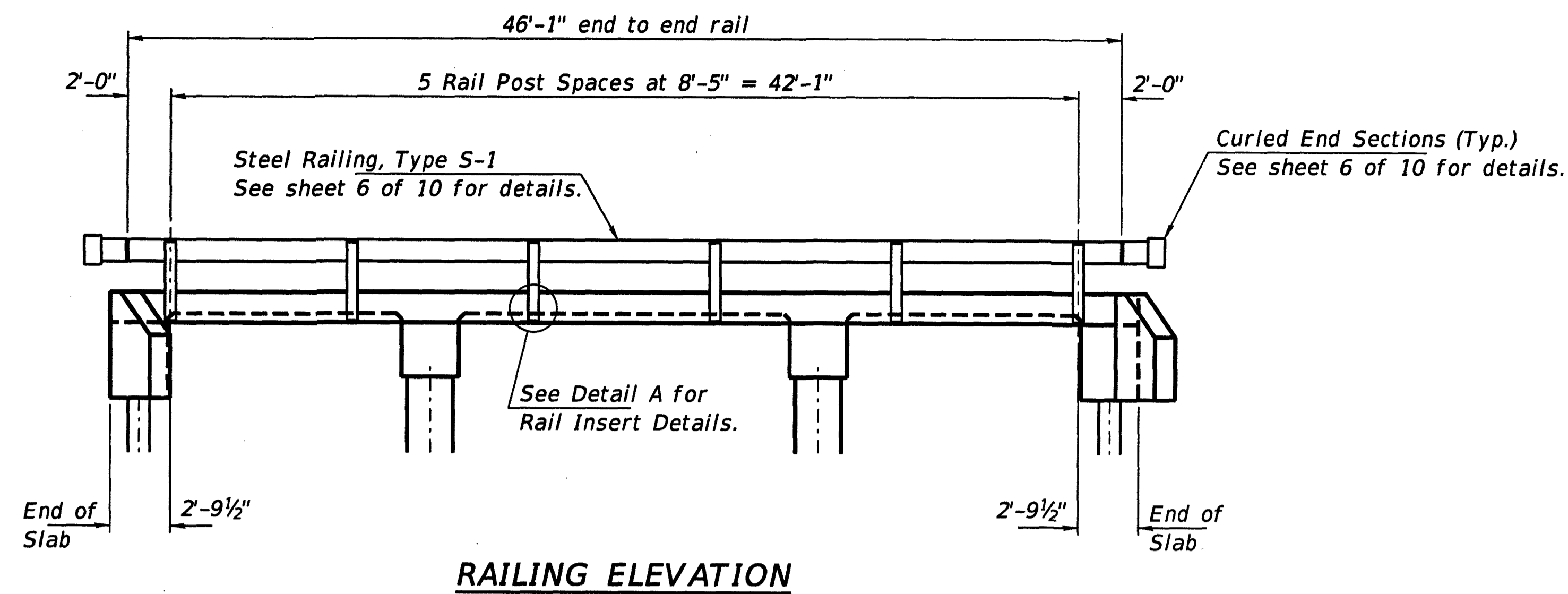
GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 017-3756

SHEET NO. 1 OF 10 SHEETS

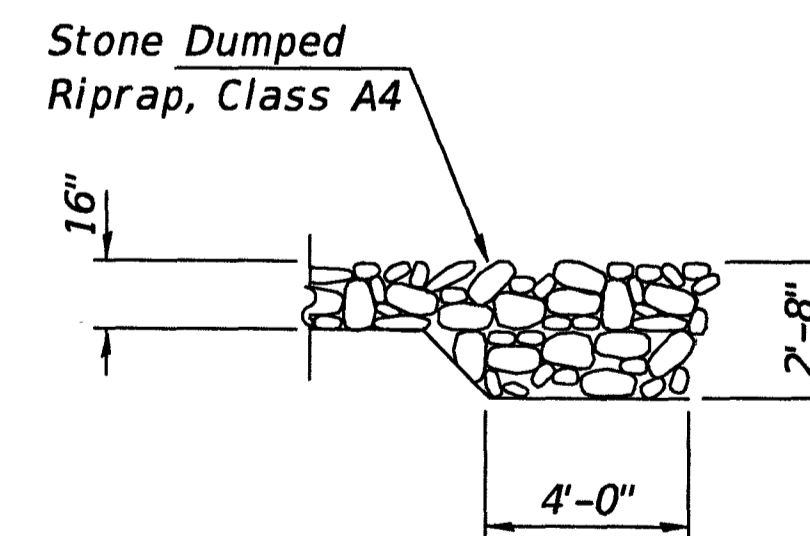
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
54	16-07132-00-BR	CRAWFORD	13	4

OBLONG ROAD DISTRICT CONTRACT NO. 95848
 ILLINOIS FED. AID PROJECT

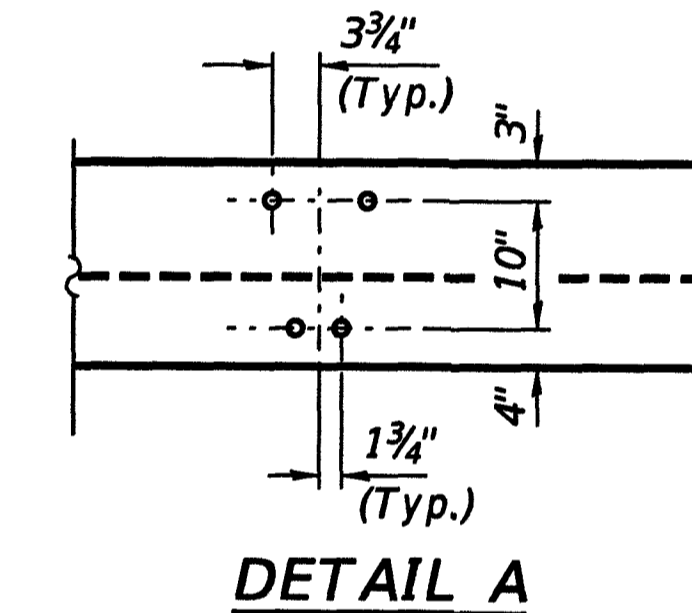
FILE NAME = 170436-ah-bridge.dgn	USER NAME = rmoack	DESIGNED - J.R.B.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3048 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761 ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-000958	PLOT SCALE = \$SCALES	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 2/11/2019	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -



SECTION A-A



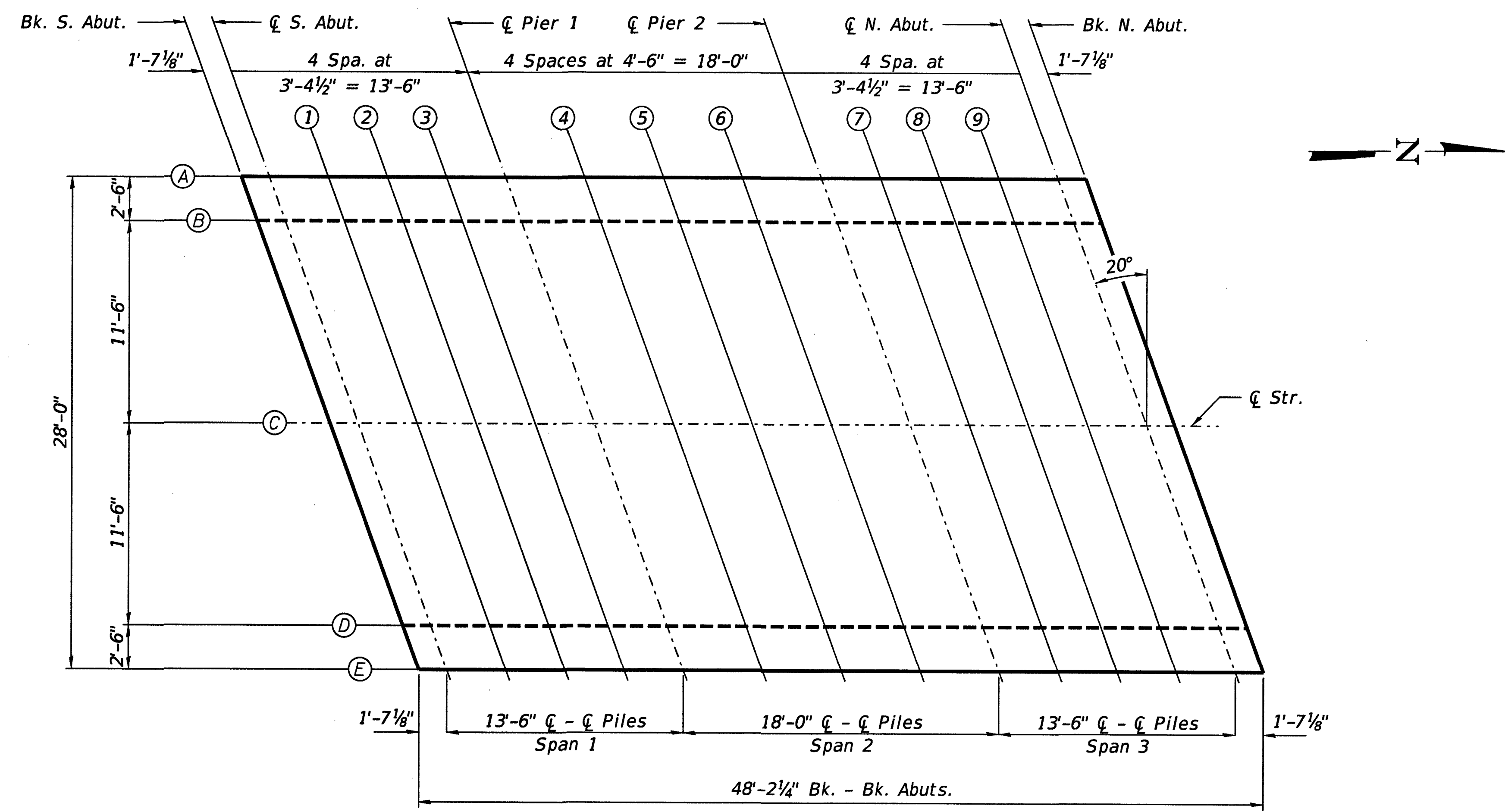
SECTION B-B



DETAIL A

TOTAL BILL OF MATERIAL

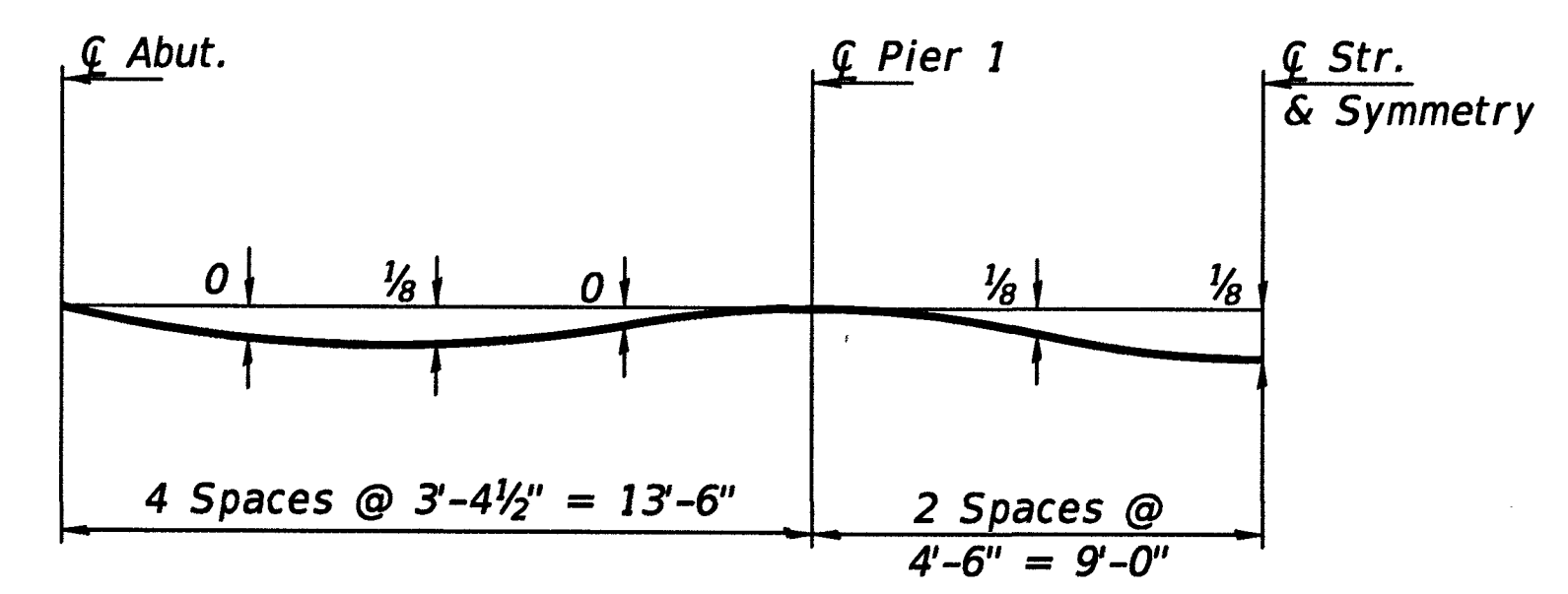
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			60
Porous Granular Embankment	Ton			95
Stone Dumped Riprap, Class A4	Ton			200
Protective Coat	Sq. Yd.	163	13	176
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		36.6	36.6
Concrete Superstructure	Cu. Yd.	56.2		56.2
Concrete Encasement	Cu. Yd.		7.4	7.4
Reinforcement Bars, Epoxy Coated	Pound	20,250	5,360	25,610
Steel Railing, Type S1	Foot	92		92
Furnishing Steel Piles HP10x42	Foot		560	560
Driving Piles	Foot		560	560
Test Pile Steel HP10x42	Each		2	2
Name Plates	Each	1		1
Terminal Marker - Direct Applied	Each	4		4



PLAN

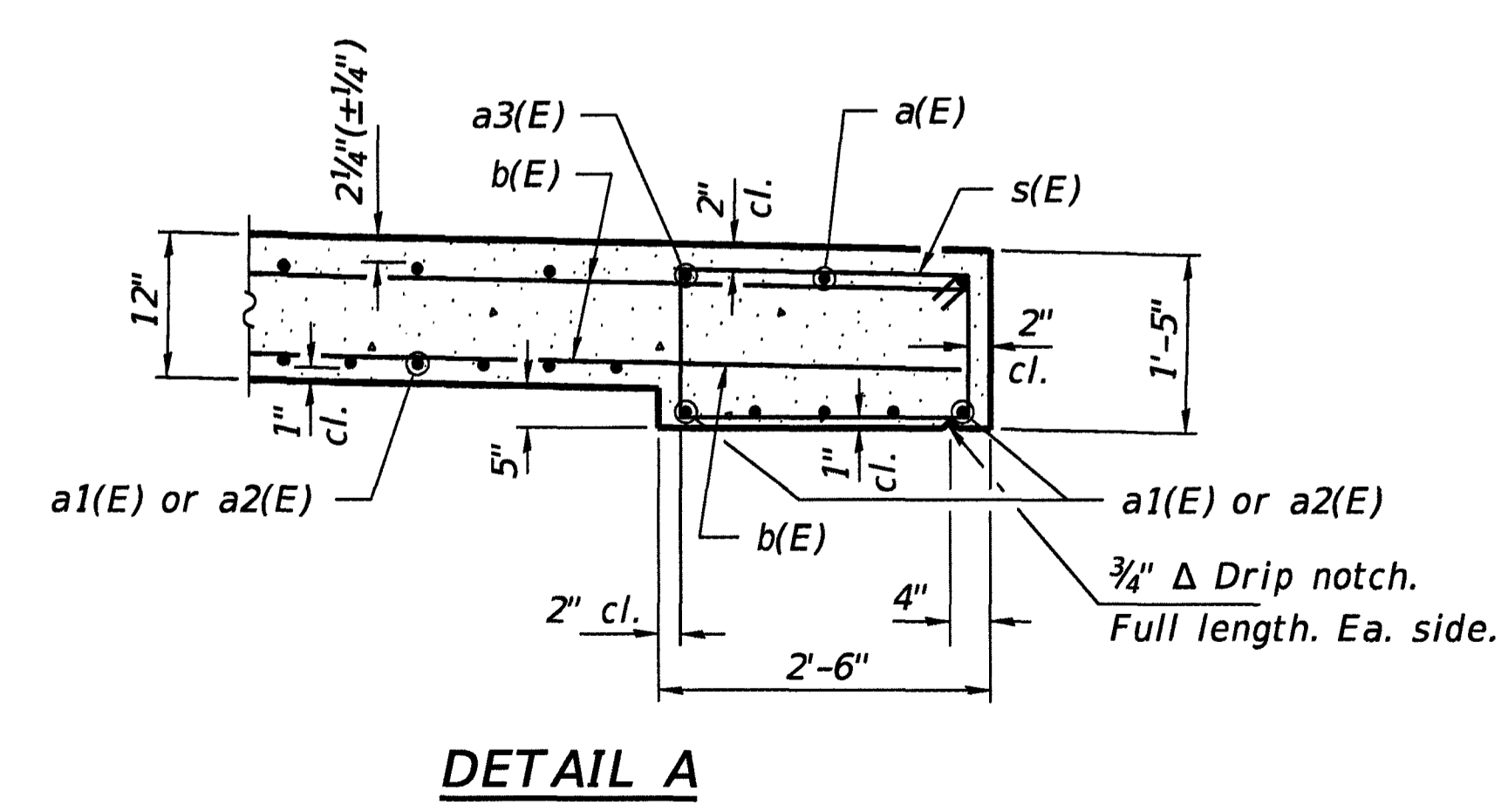
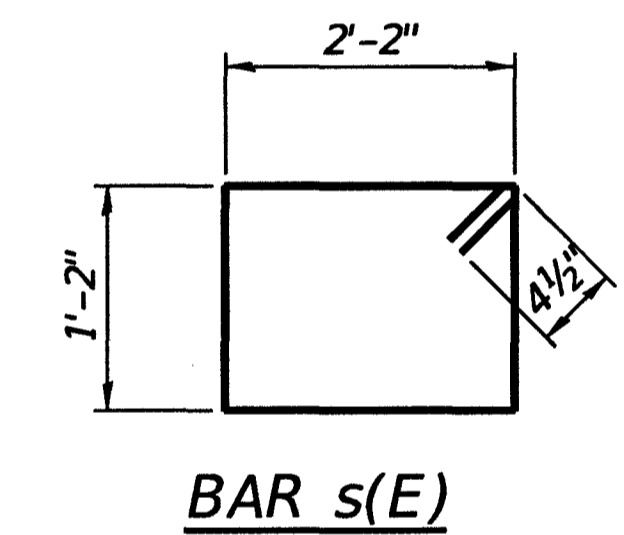
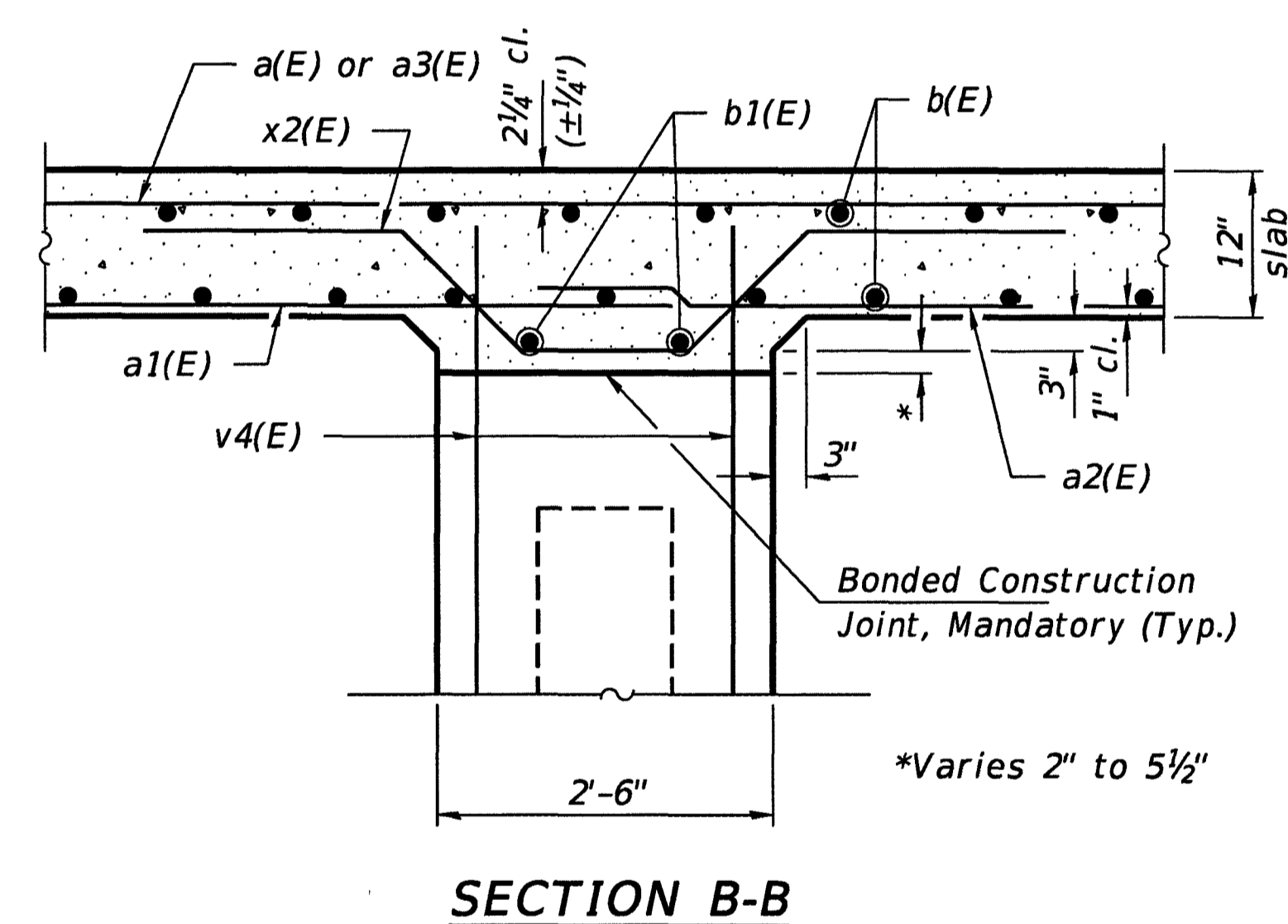
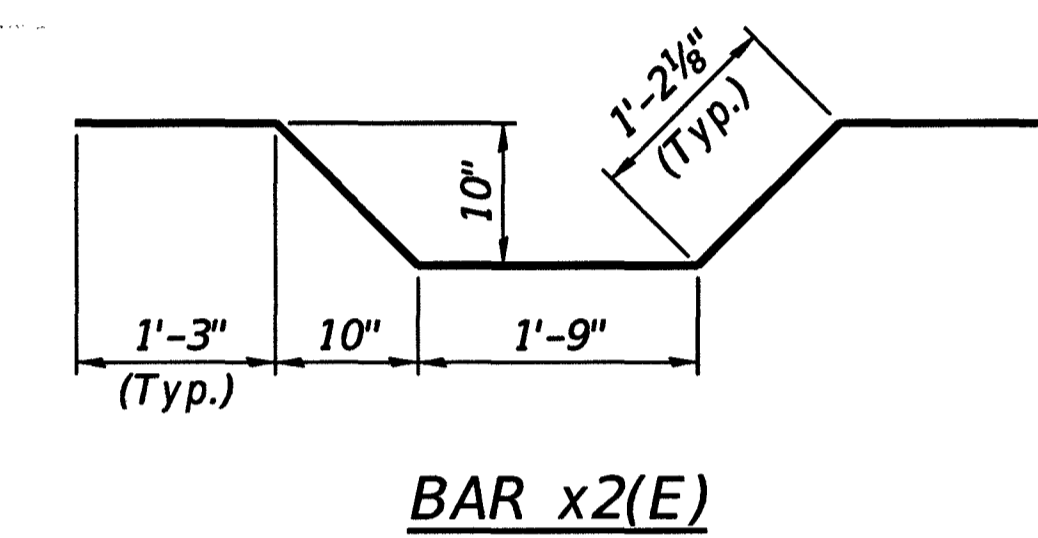
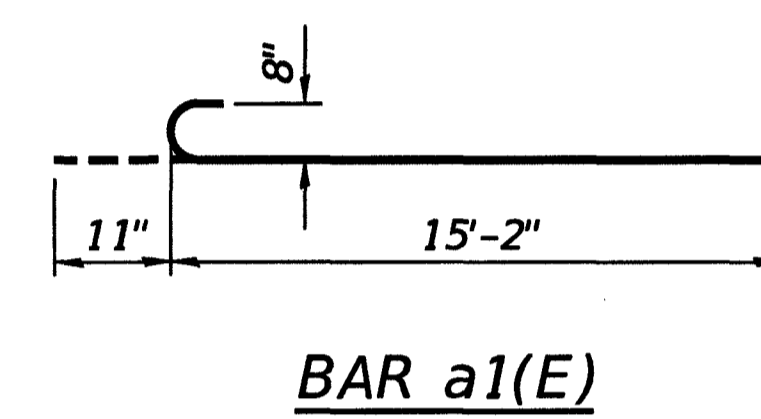
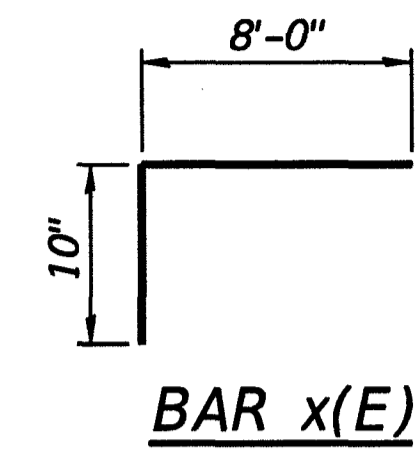
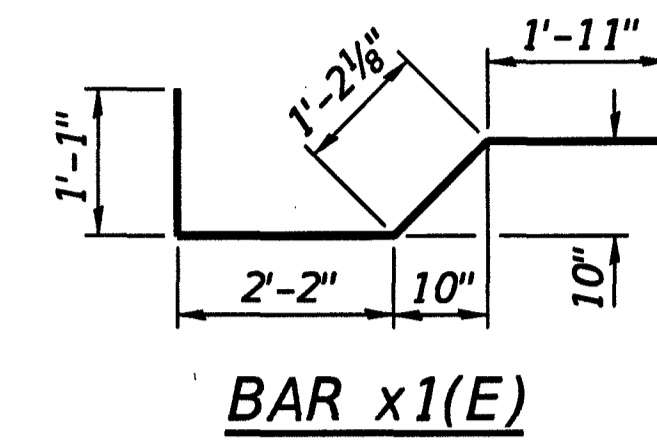
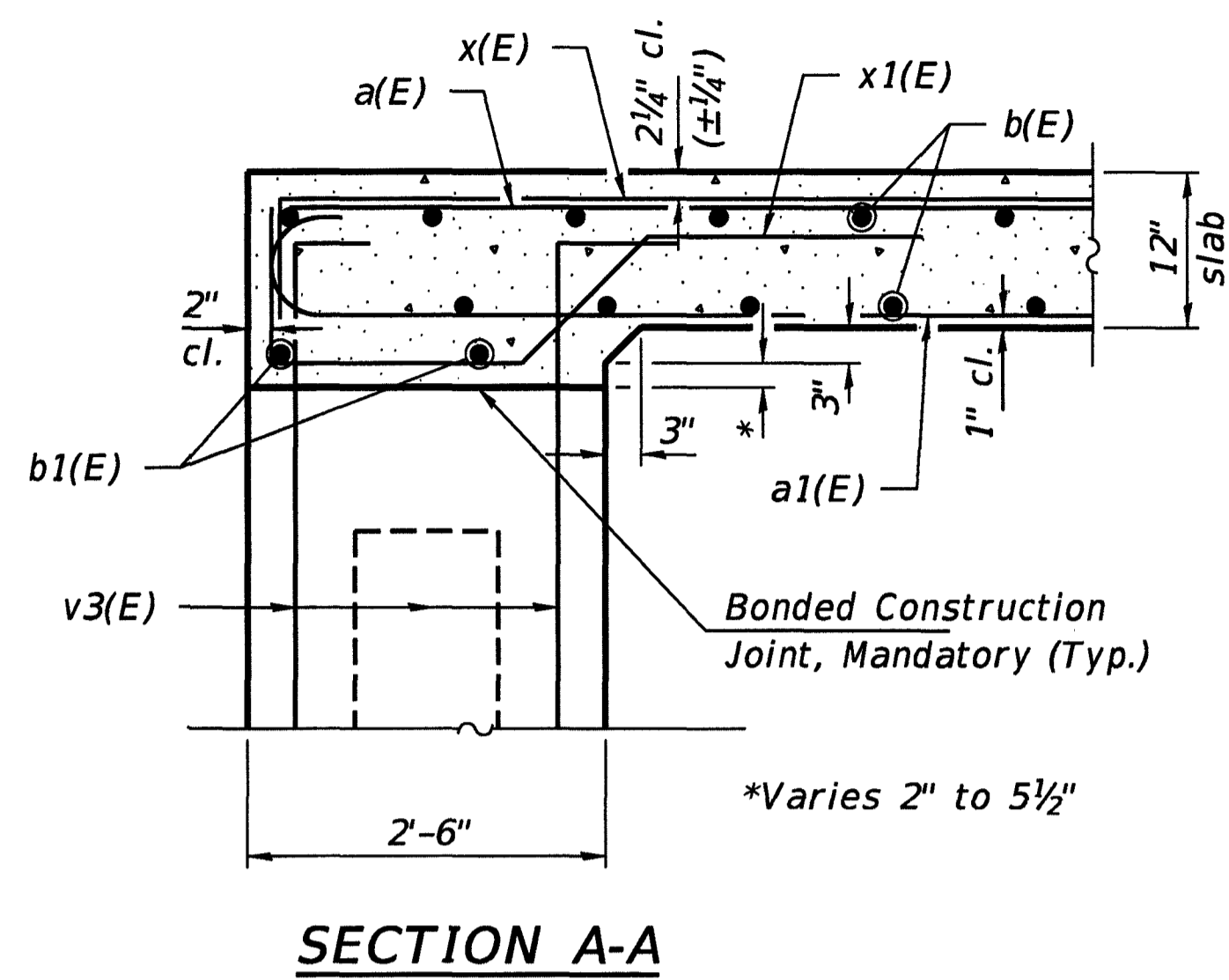
LOCATION		BK. W.	CL. W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
A	ADJ.	461.605	461.606	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.616	461.622	461.616	461.608	461.608
	Bott. of Slab	460.188	460.190	460.201	460.202	460.197	460.192	460.199	460.205	460.199	460.192	460.199	460.204	460.197	460.192	460.192
B	T.	461.658	461.659	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660
	ADJ.	461.658	461.659	461.670	461.670	461.665	461.660	461.668	461.674	461.668	461.660	461.668	461.673	461.665	461.660	461.660
	Bott. of Slab	460.658	460.659	460.670	460.670	460.665	460.660	460.668	460.674	460.668	460.660	460.668	460.673	460.665	460.660	460.660
C	T.	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900	461.900
	ADJ.	461.900	461.900	461.909	461.910	461.905	461.900	461.908	461.913	461.908	461.900	461.908	461.913	461.905	461.900	461.900
	Bott. of Slab	460.900	460.900	460.909	460.910	460.905	460.900	460.908	460.913	460.908	460.900	460.908	460.913	460.905	460.900	460.900
D	T.	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660	461.660
	ADJ.	461.660	461.660	461.670	461.670	461.665	461.660	461.668	461.674	461.668	461.660	461.668	461.673	461.665	461.660	461.660
	Bott. of Slab	460.660	460.660	460.670	460.670	460.665	460.660	460.668	460.674	460.668	460.660	460.668	460.673	460.665	460.660	460.660
E	T.	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608	461.608
	ADJ.	461.608	461.608	461.618	461.618	461.613	461.608	461.616	461.622	461.616	461.608	461.616	461.621	461.613	461.608	461.608
	Bott. of Slab	460.192	460.192	460.201	460.202	460.197	460.192	460.199	460.205	460.199	460.192	460.199	460.204	460.197	460.192	460.192

T. - Theoretical elevation at top of slab
 Adj. - T adjusted for dead load deflection
 * Bottom of slab elevation equals bottom of edge beam



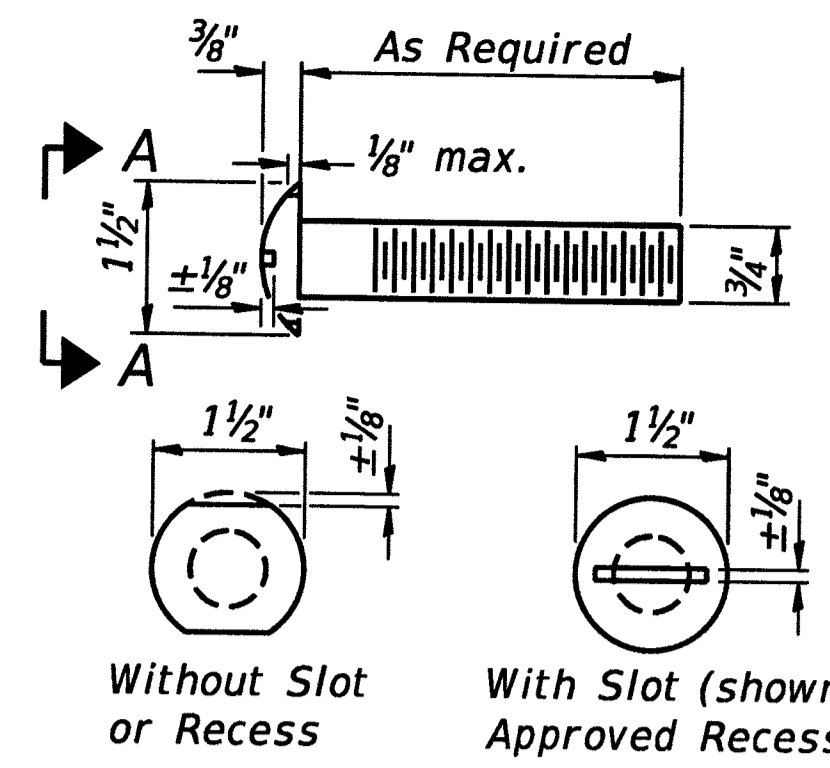
DEAD LOAD DEFLECTION DIAGRAM
 (Includes weight of concrete only.)

Notes:
 The deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.
 The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework in addition to allowance for dead load deflection.

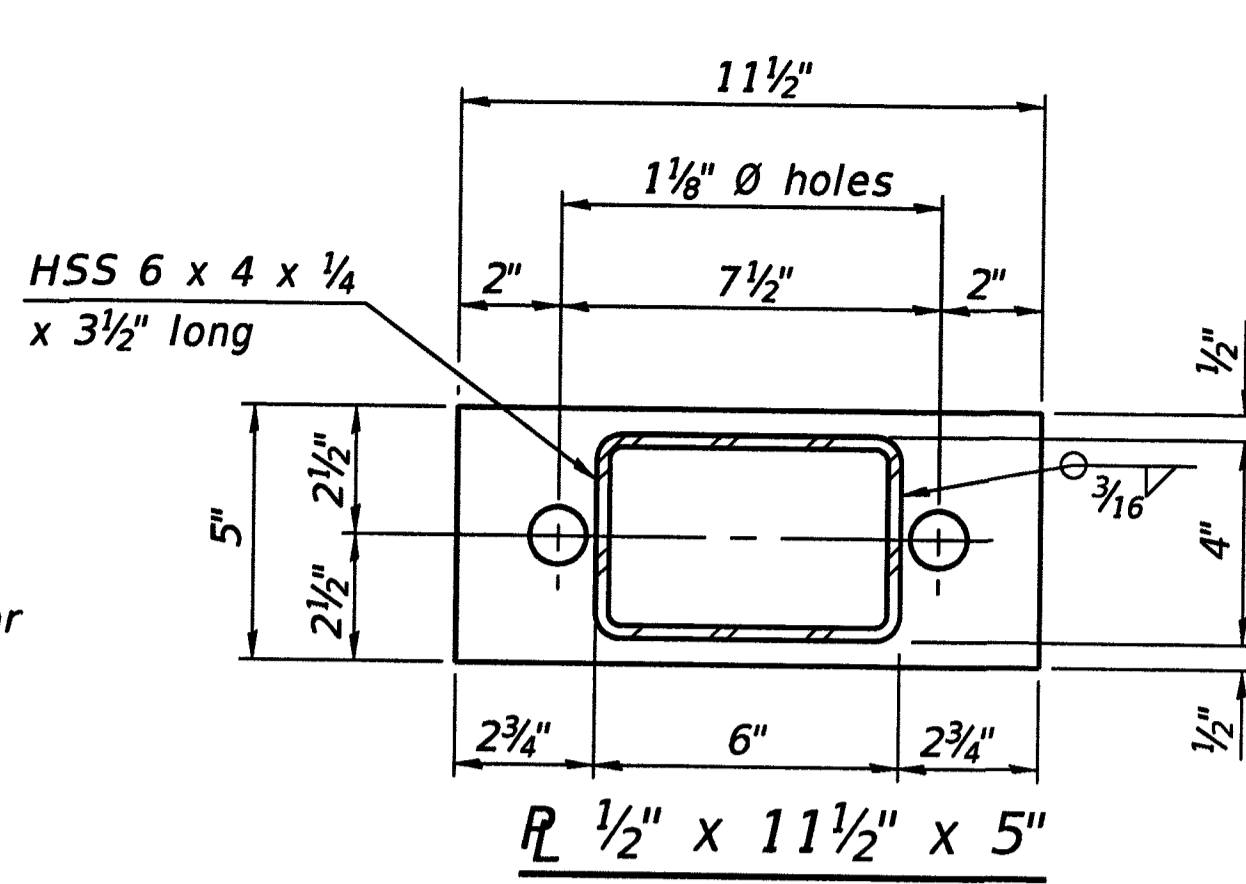


SUPERSTRUCTURE BILL OF MATERIAL

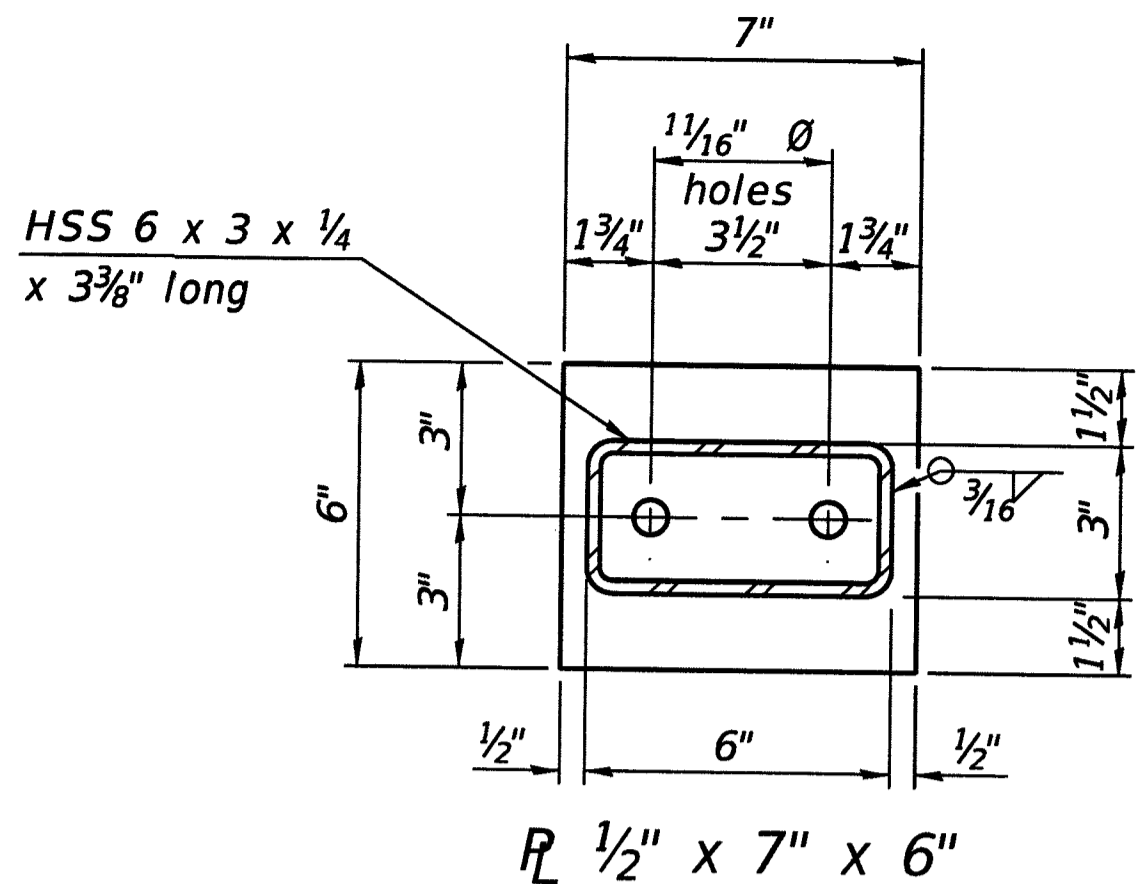
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	40	#8	26'-7"	—
a1(E)	88	#8	16'-1"	—
a2(E)	44	#8	19'-0"	—
a3(E)	34	#8	14'-0"	—
b(E)	144	#7	27'-8"	—
b1(E)	8	#5	29'-6"	—
s(E)	94	#4	7'-5"	□
x(E)	56	#5	8'-10"	—
x1(E)	56	#5	6'-4"	—
x2(E)	56	#5	6'-7"	—
Protective Coat			Sq. Yd.	163
Concrete Superstructures			Cu. Yd.	56.2
Reinforcement Bars, Epoxy Coated			Pound	20,250



**VIEW A-A
ROUND HEAD BOLT**

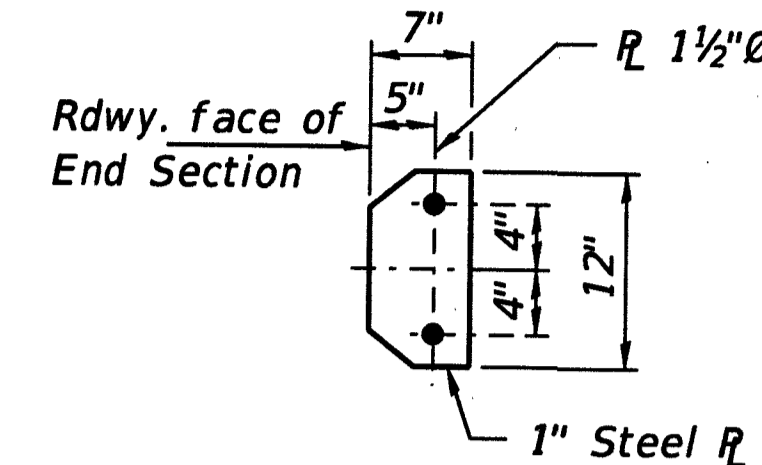


SECTION B-B

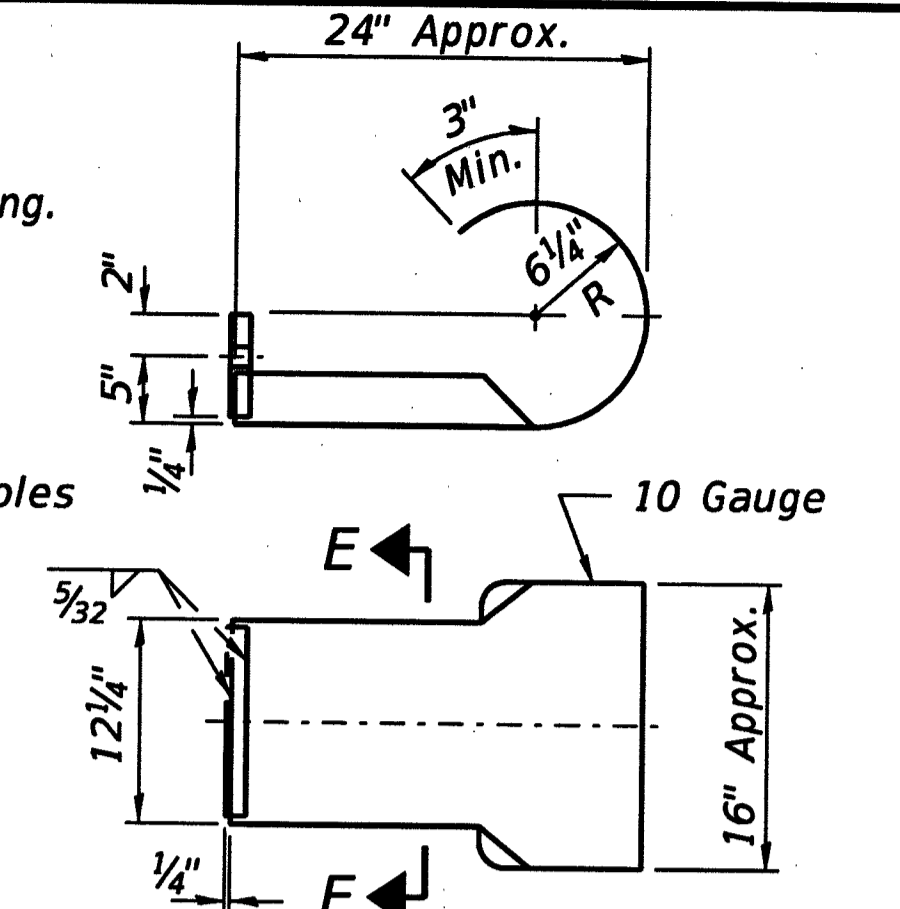


SECTION C-C

Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



SECTION E-E



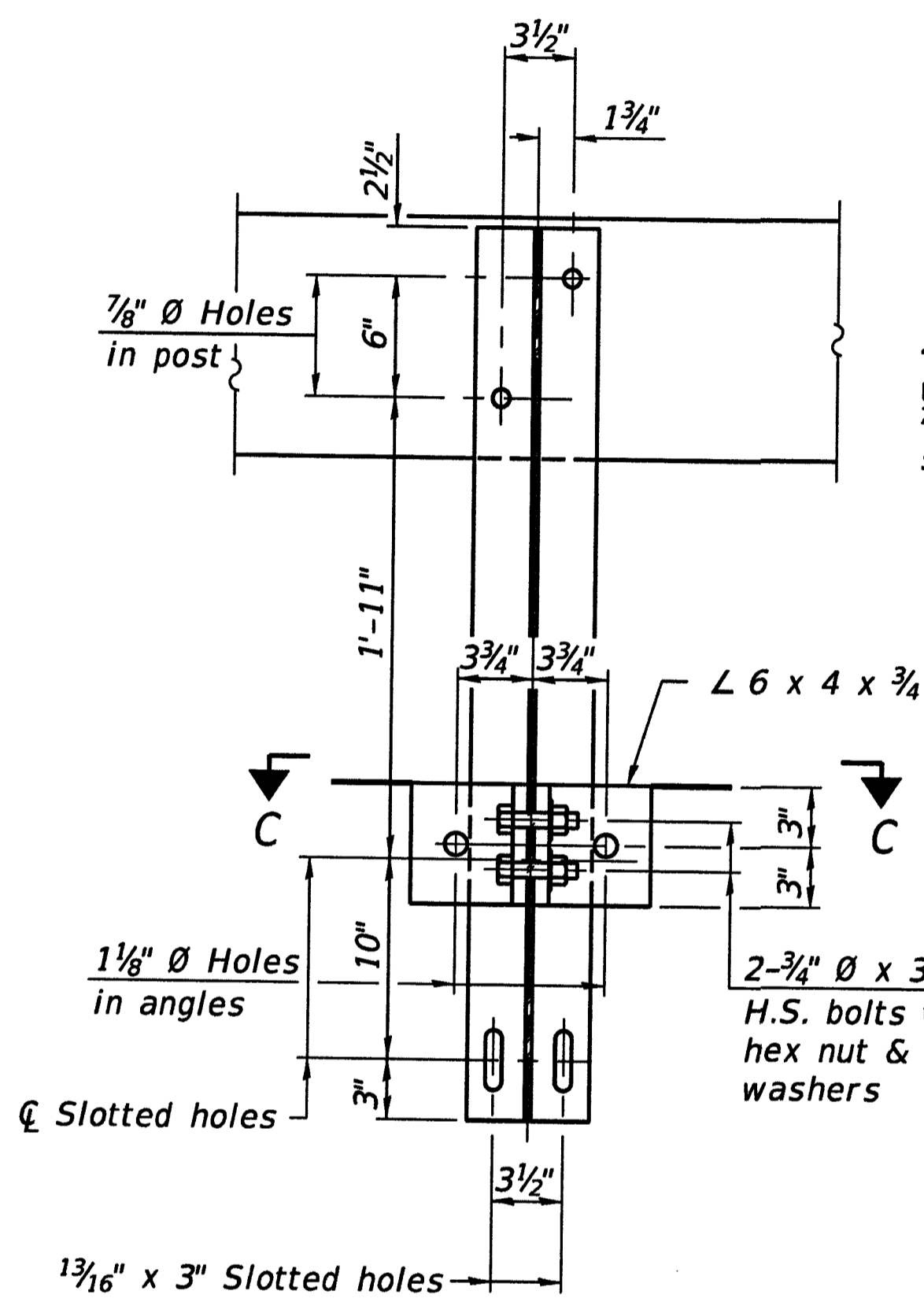
CURLED END SECTION DETAILS

SPLICE DIMENSIONS

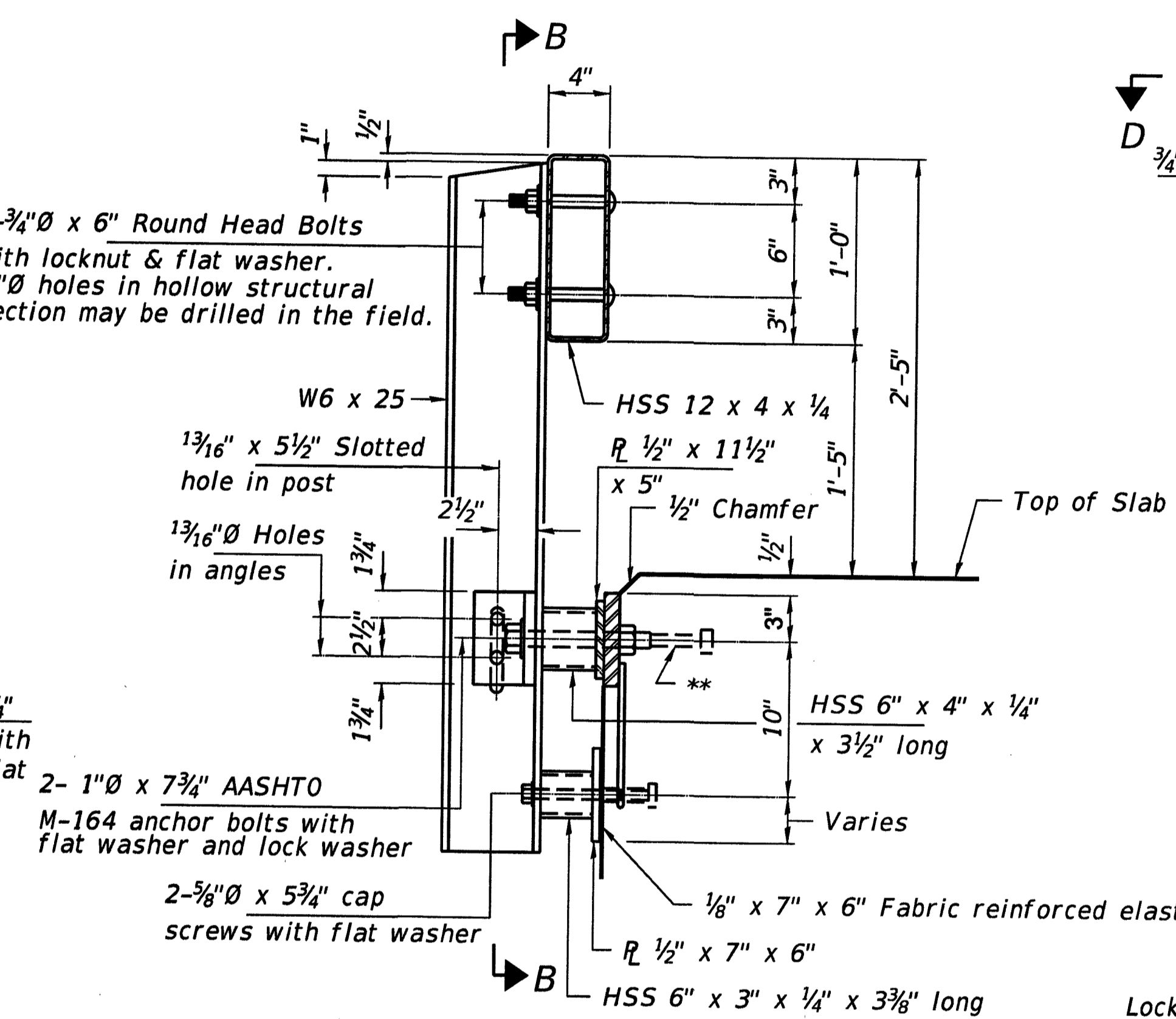
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	

T = Total movement at expansion joint as shown on the design plans.

Notes:
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

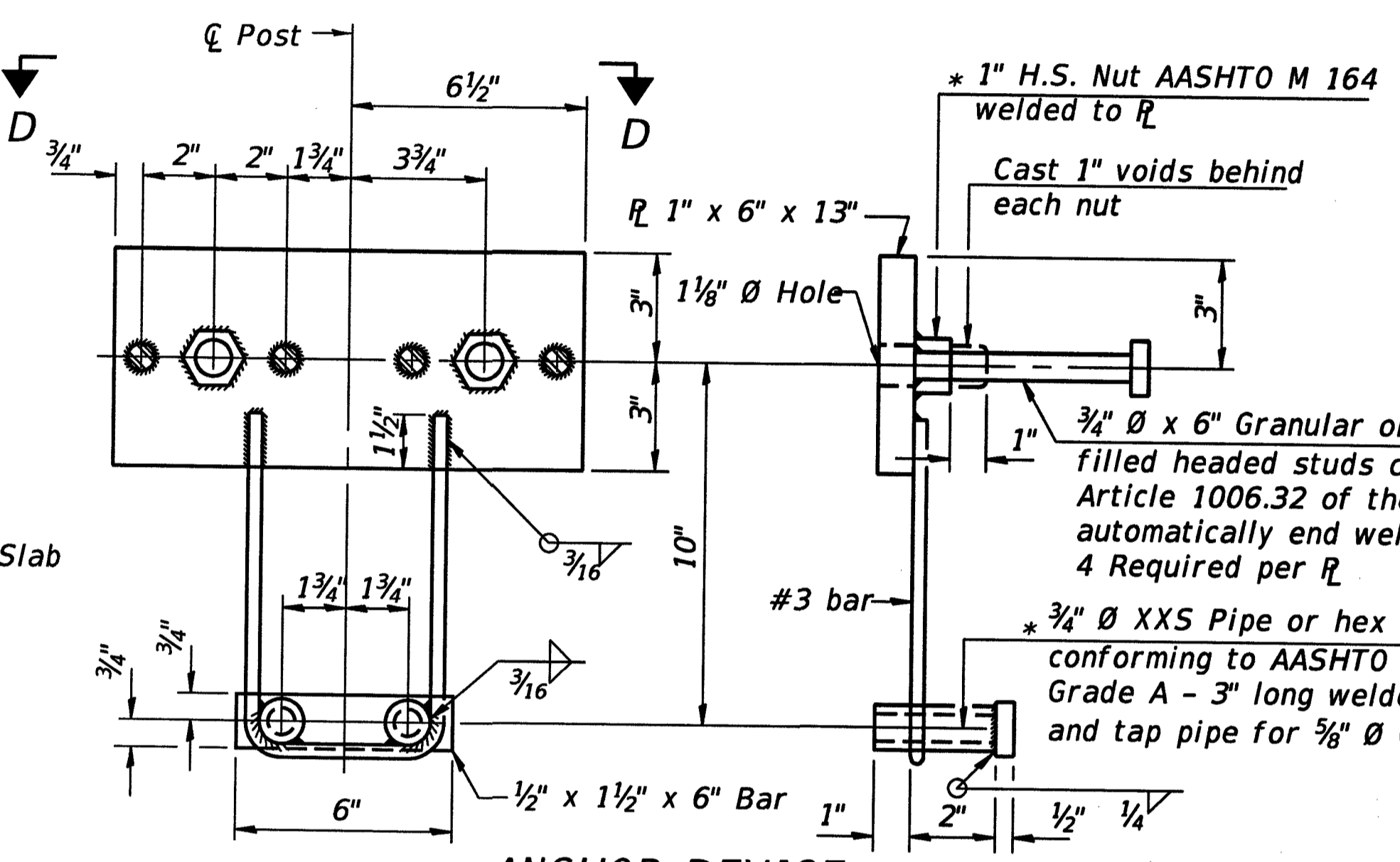


SECTION B-B



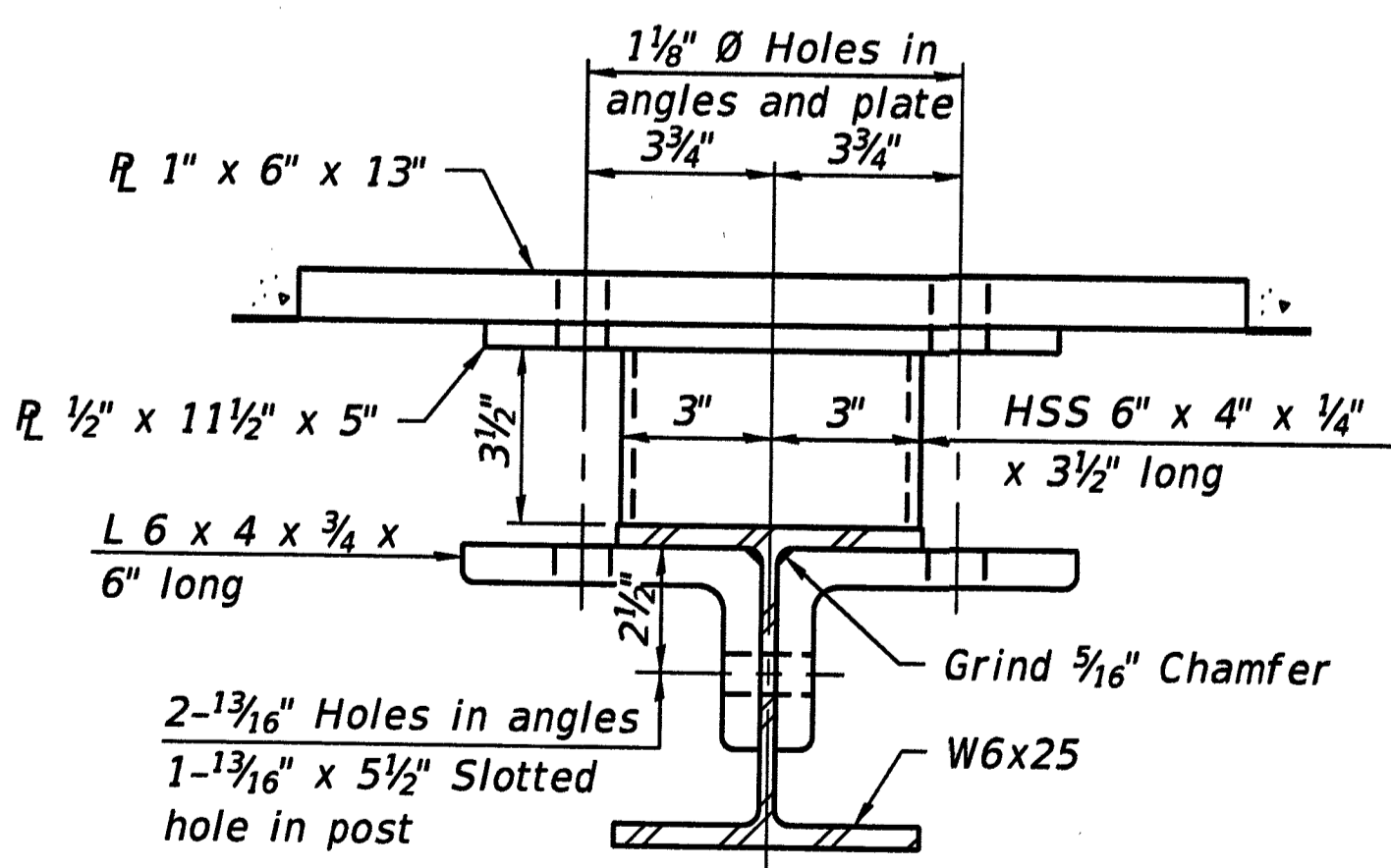
SECTION AT RAILING POST

Reinforcement bars in the top of the slab may be placed with a 1/2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

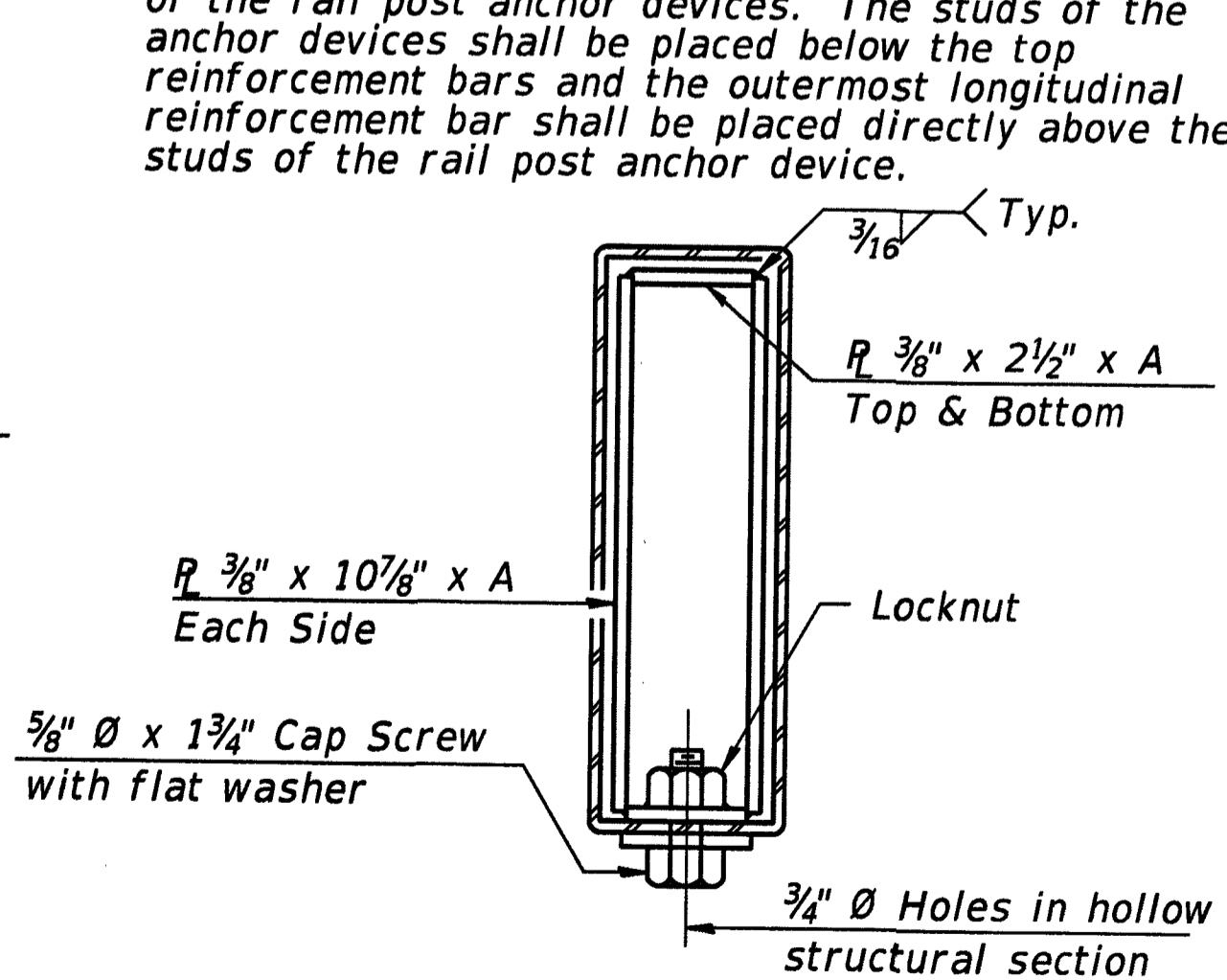


ANCHOR DEVICE

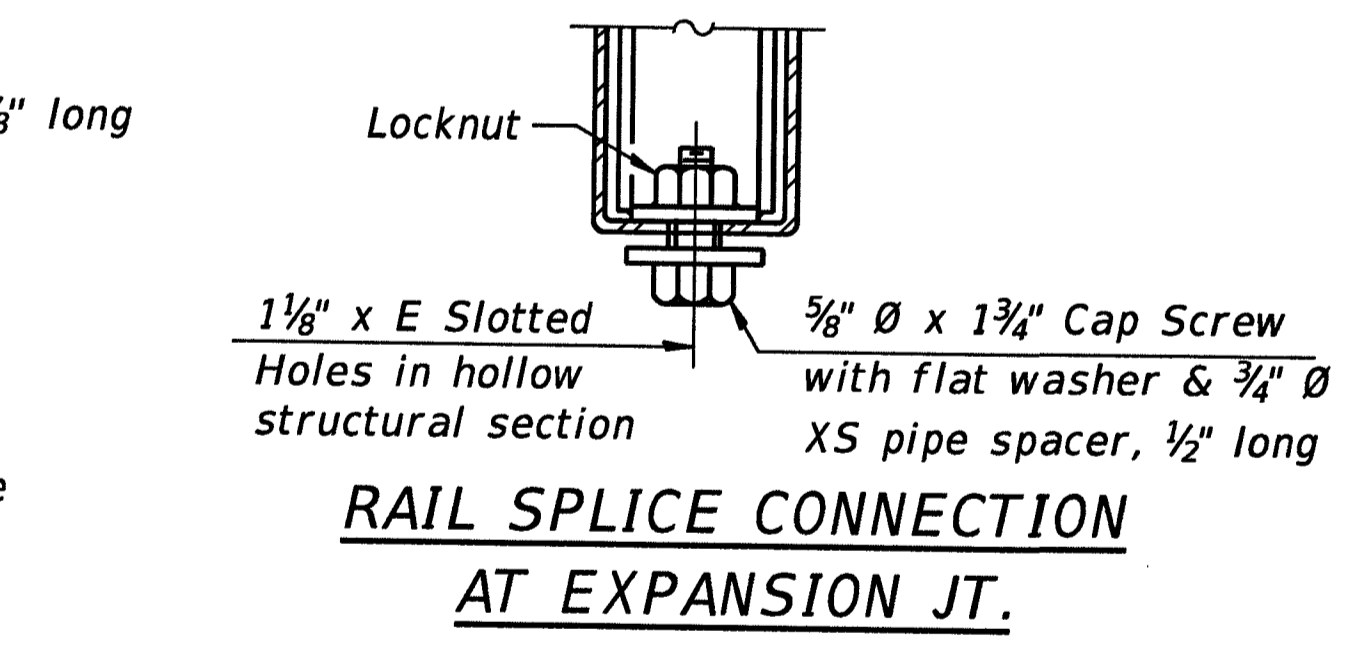
* Threaded areas shall be plugged or blocked off during casting of beam.



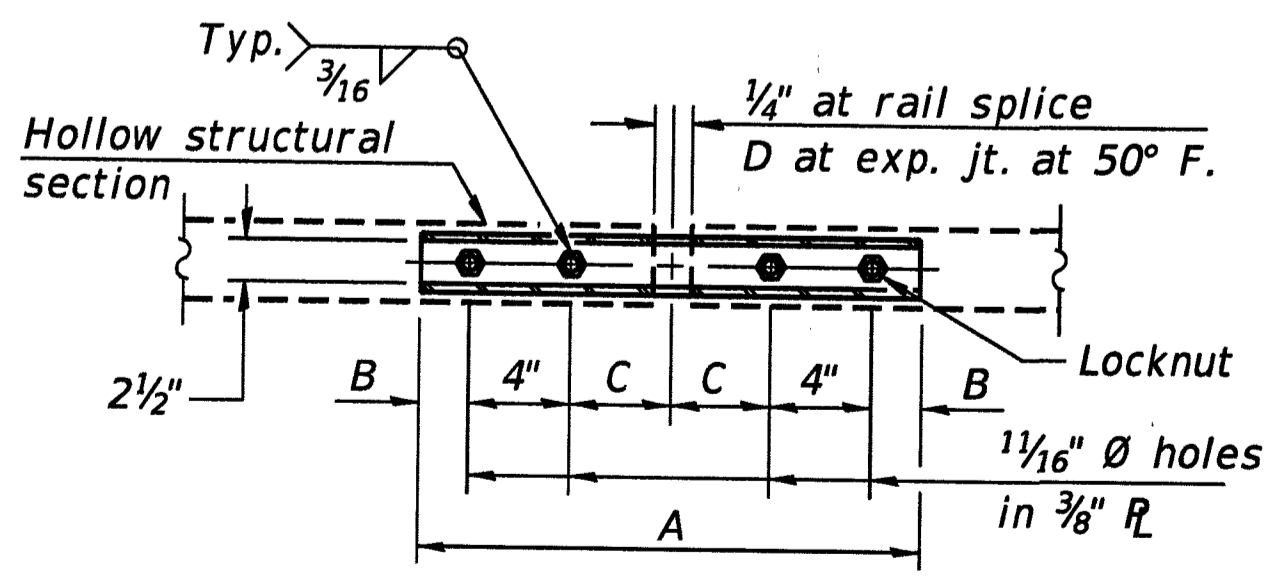
SECTION C-C



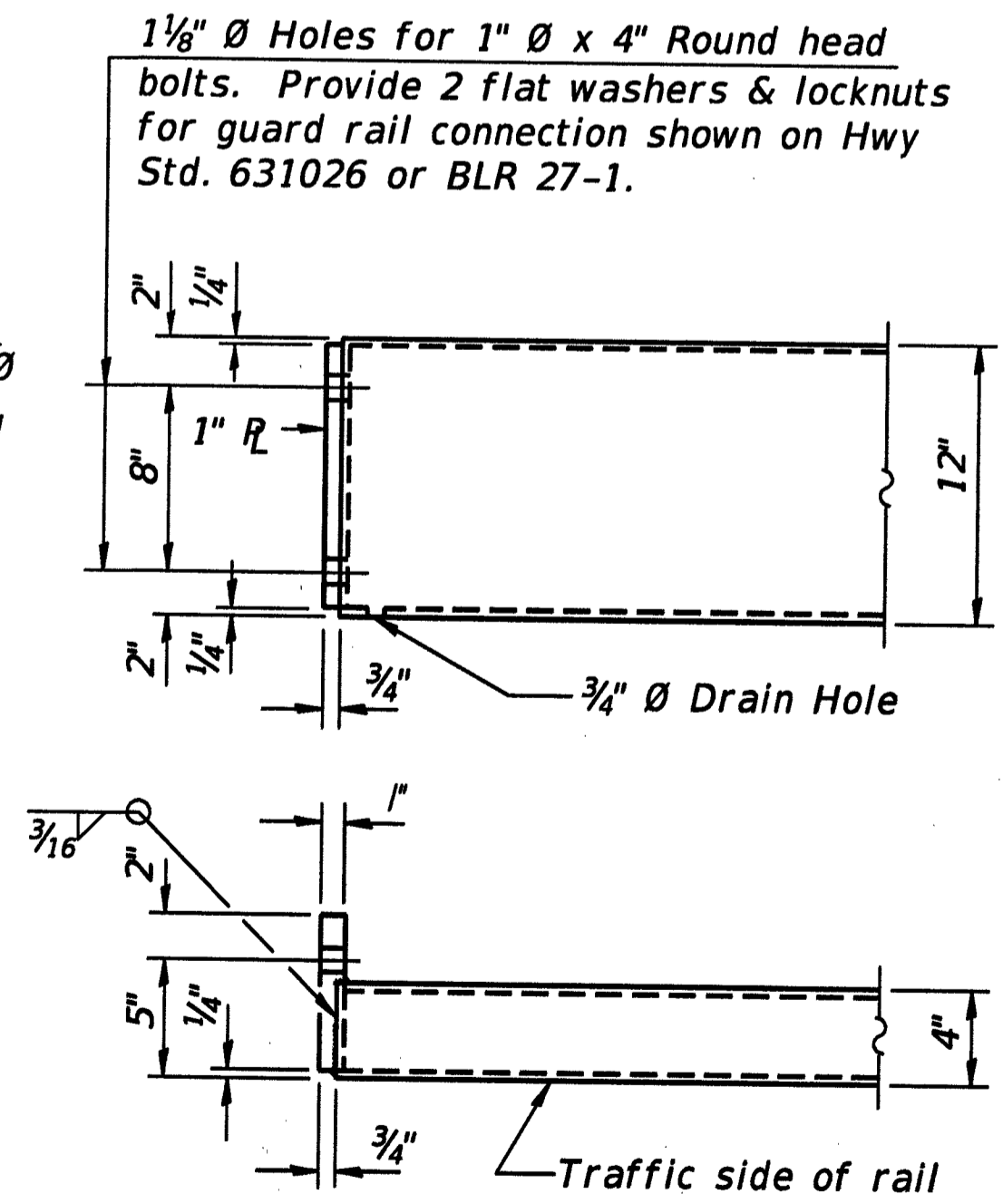
SECTIONS AT RAIL SPLICE



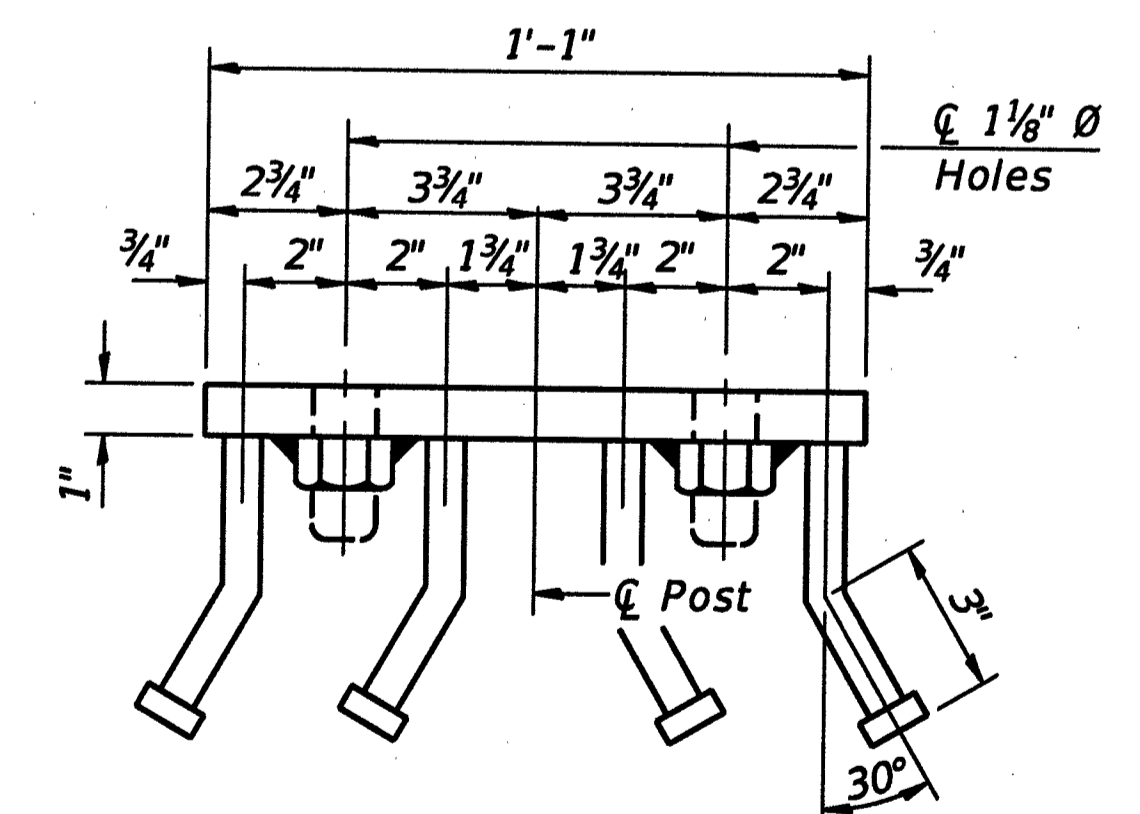
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	92
Terminal Marker - Direct Applied	Each	4

R-23A 8-11-2017 (10'-9" Maximum Post Spacing)

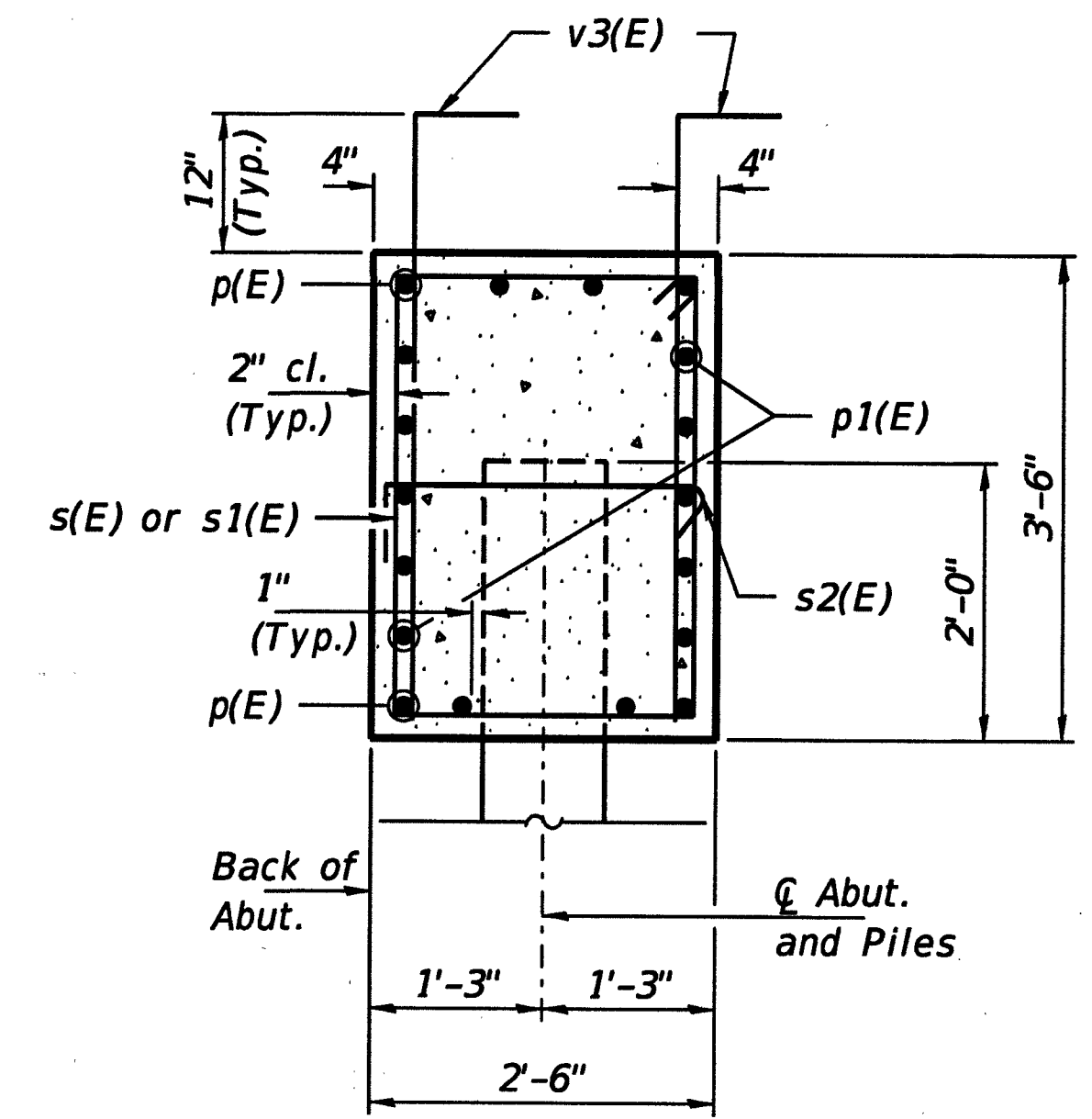
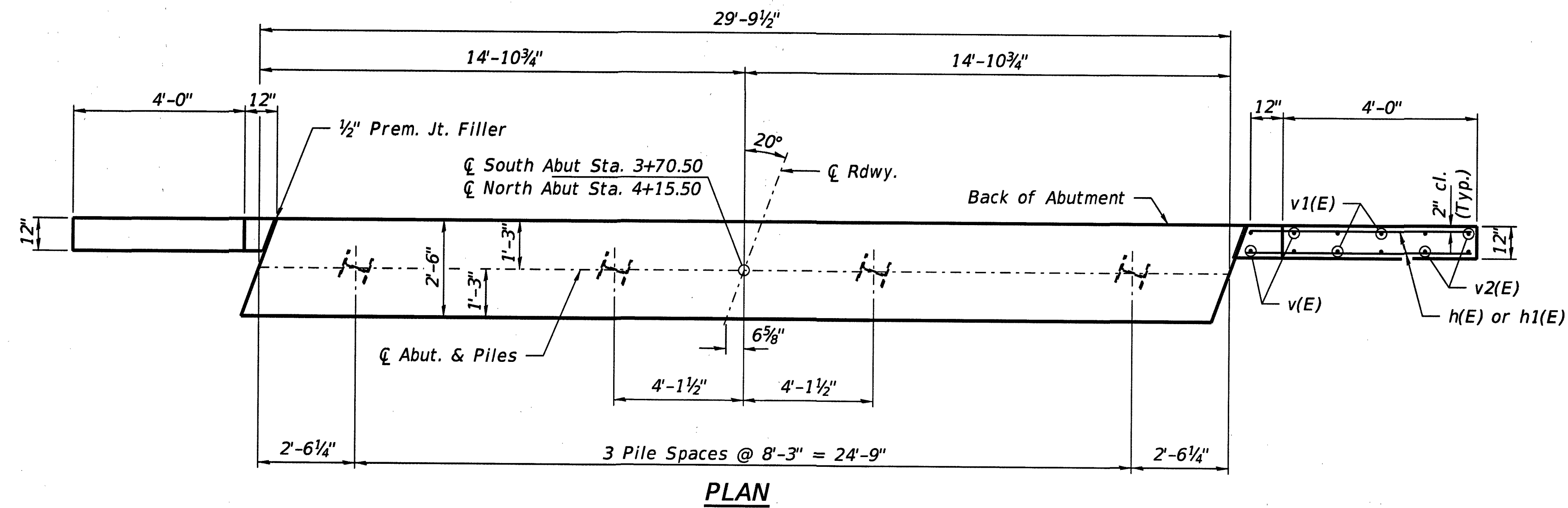
STATE OF ILLINOIS
CRAWFORD COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 017-3756

SHEET NO. 6 OF 10 SHEETS

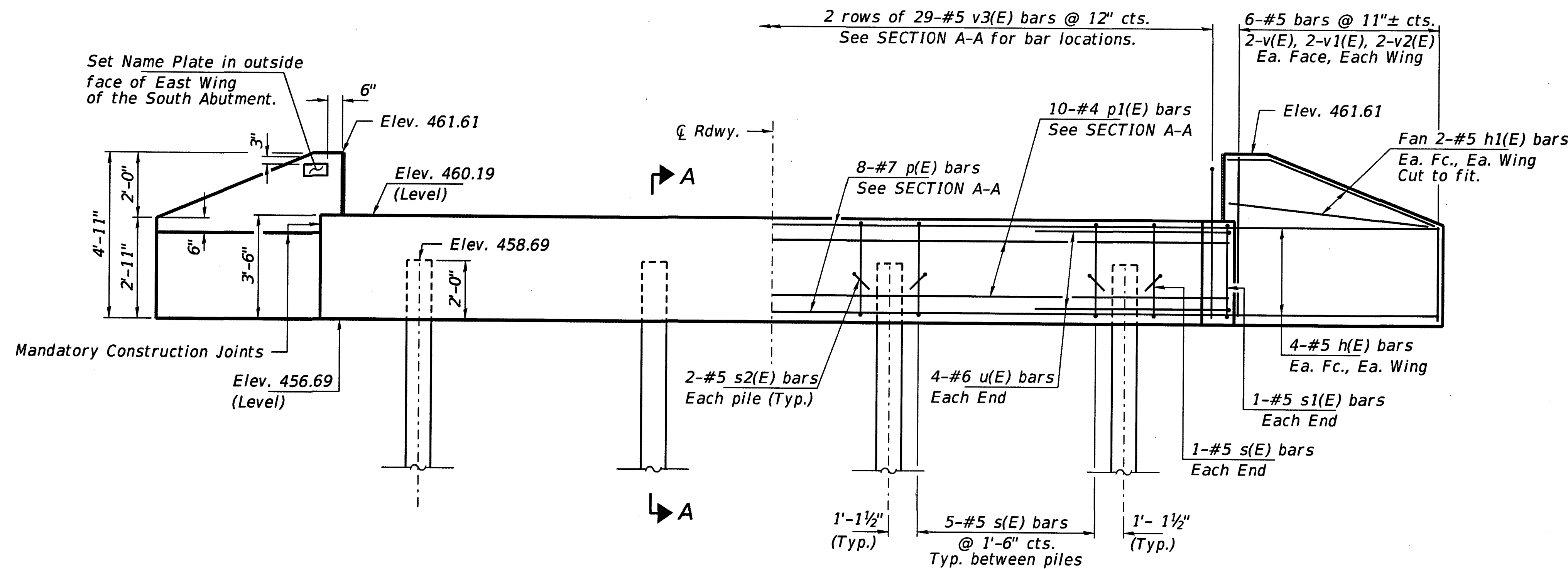
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
54	16-07132-00-BR	CRAWFORD	13	9
OBLONG ROAD DISTRICT		CONTRACT NO. 95848		
ILLINOIS FED. AID PROJECT				

FILE NAME = 170438-eh-bridge.dgn	USER NAME = rthoick	DESIGNED - J.R.B.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 308 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = \$SCALES	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / BE CORP. 164.000268	PLOT DATE = 2/11/2019	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -



SECTION A-A
Dimensions at right angles to abutment.

Note: Extend h(E) bars into abutment cap and superstructure.



ELEVATION

BILL OF MATERIAL - 2 ABUTS.

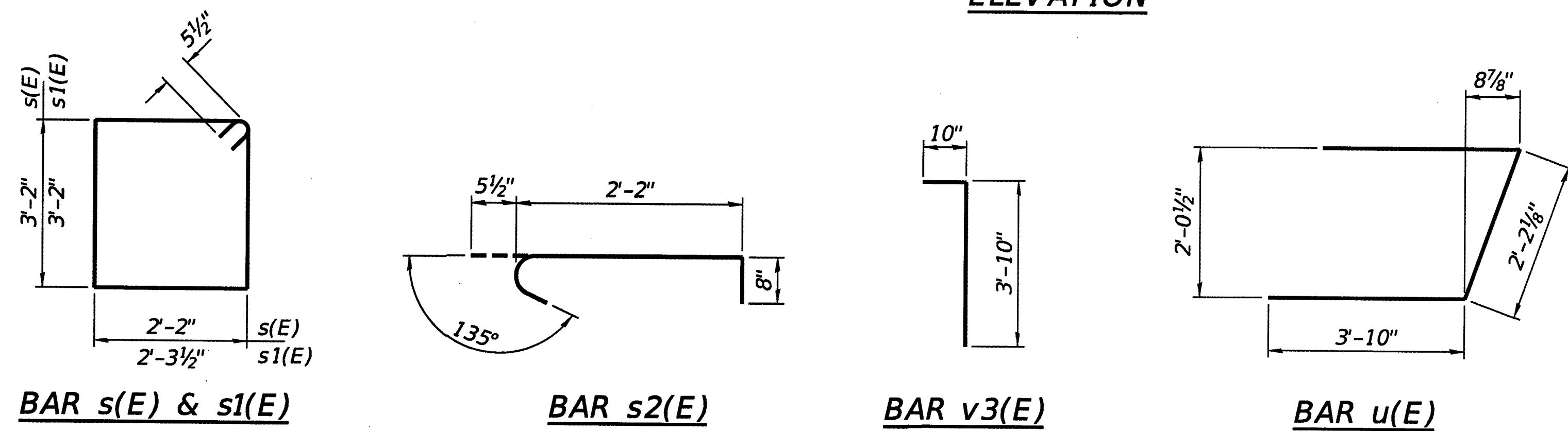
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	32	#5	6'-3"	—
h1(E)	16	#5	4'-9"	—
p(E)	16	#7	29'-6"	—
p1(E)	20	#4	29'-6"	—
s(E)	34	#5	11'-7"	□
s1(E)	4	#5	11'-10"	□
s2(E)	16	#5	3'-4"	┌┐
u(E)	16	#6	9'-10"	┌┐
v(E)	16	#5	4'-6"	—
v1(E)	16	#5	3'-7"	—
v2(E)	16	#5	2'-7"	—
v3(E)	116	#5	4'-8"	—
Concrete Structures			Cu. Yd.	22.6
Protective Coat			Sq. Yd.	13
Reinf. Bars, Epoxy Coated			Pound	3,140
Furnishing Steel Piles HP10x42			Foot	280
Driving Piles			Foot	280
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

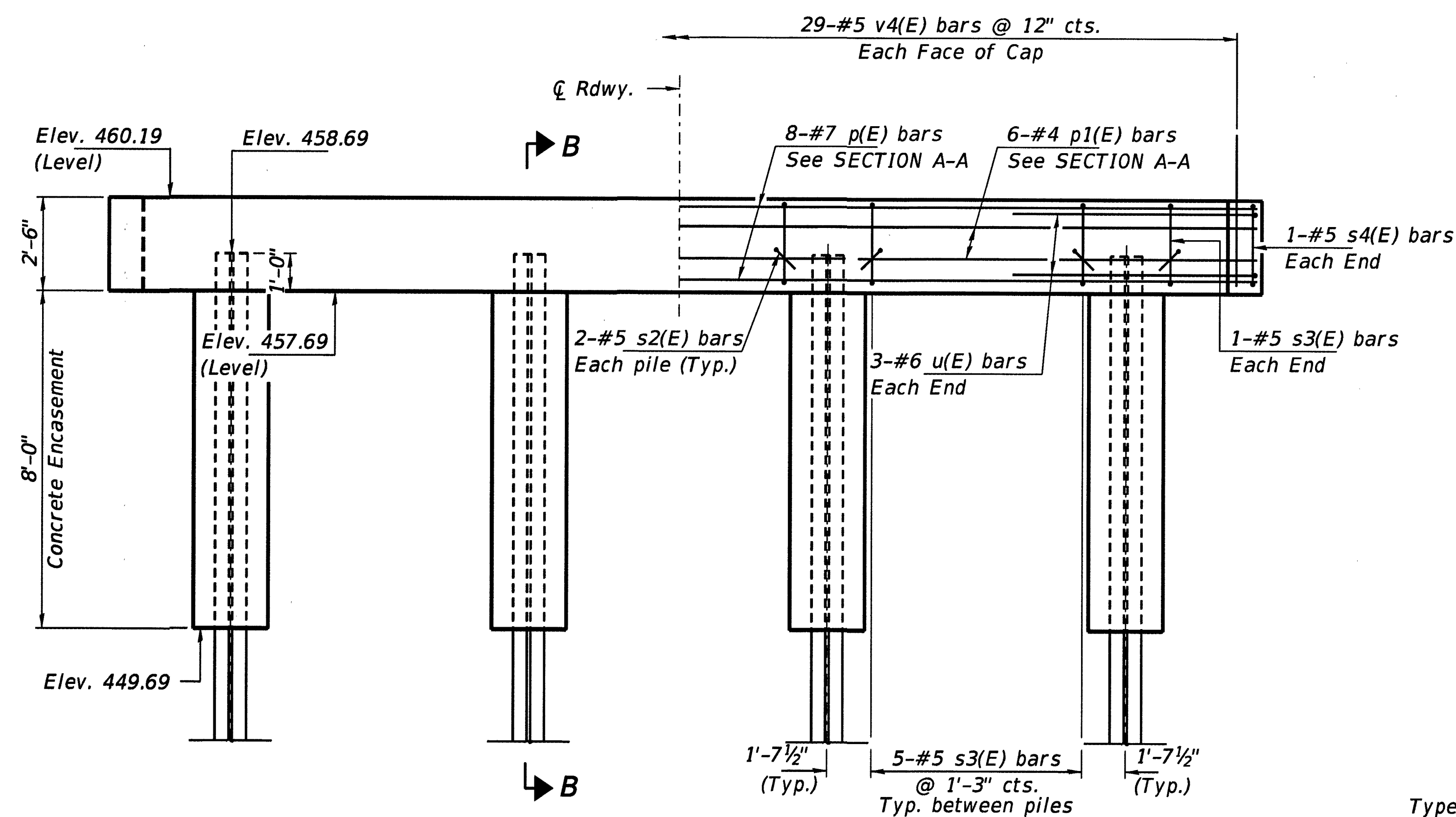
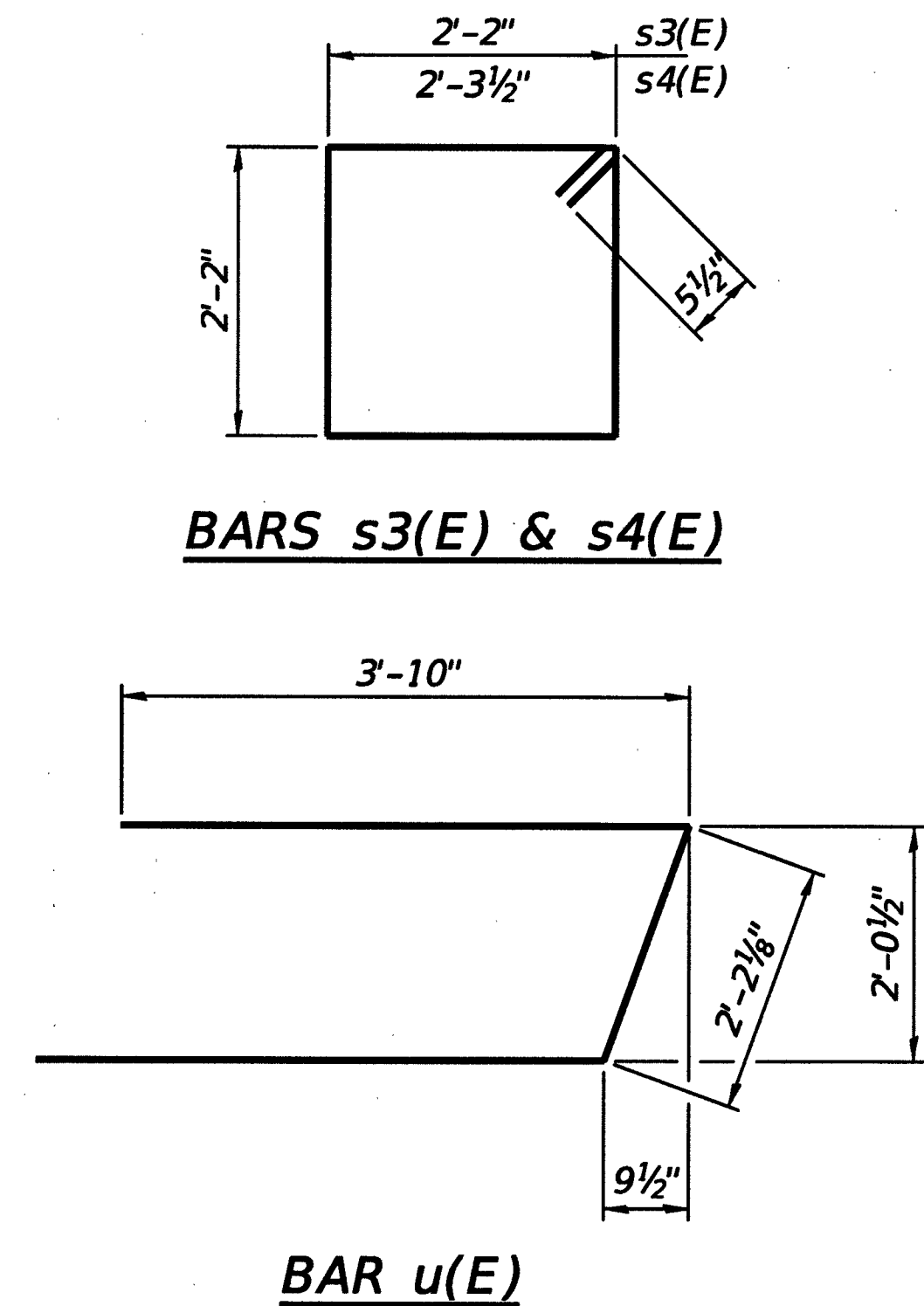
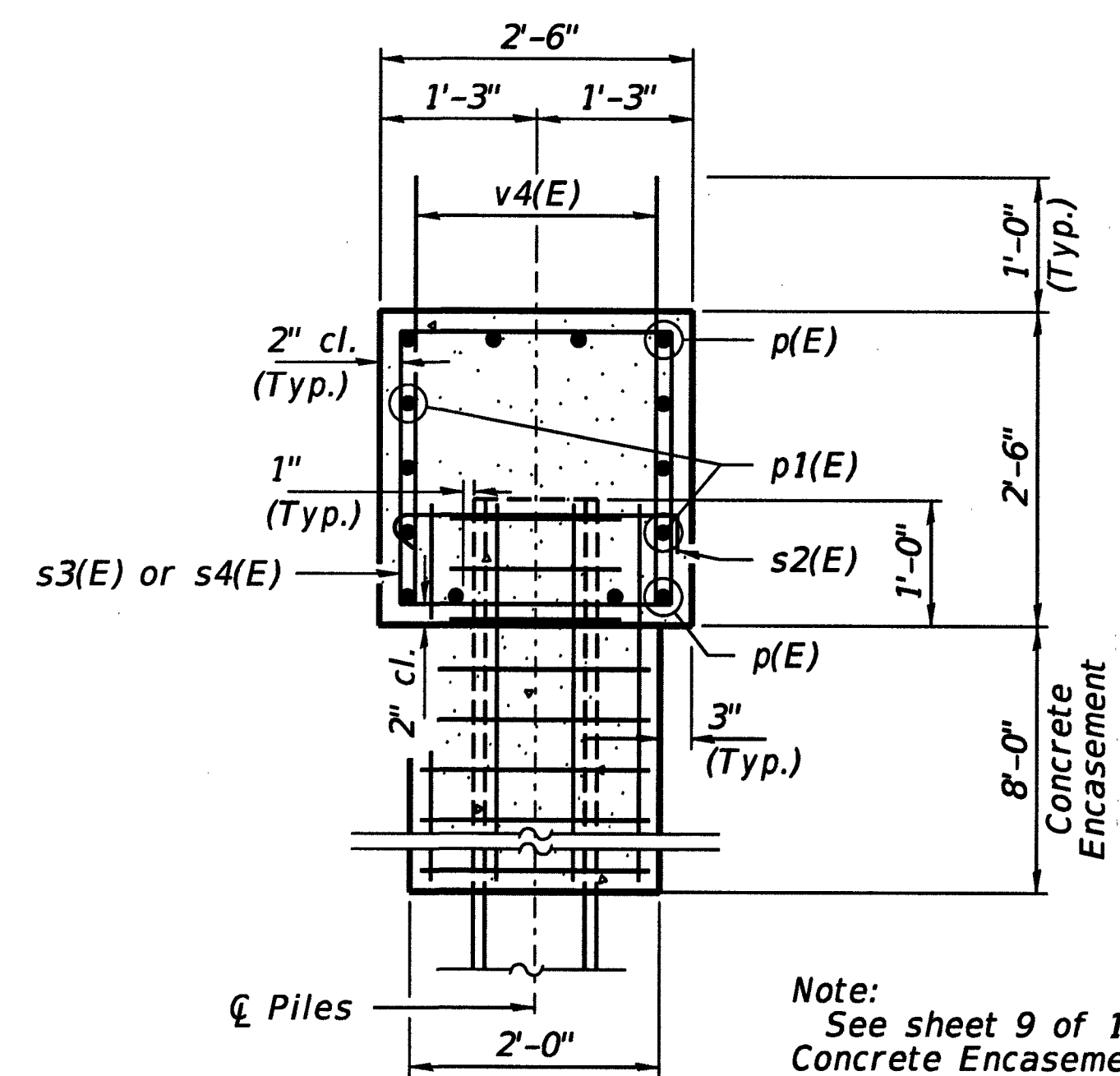
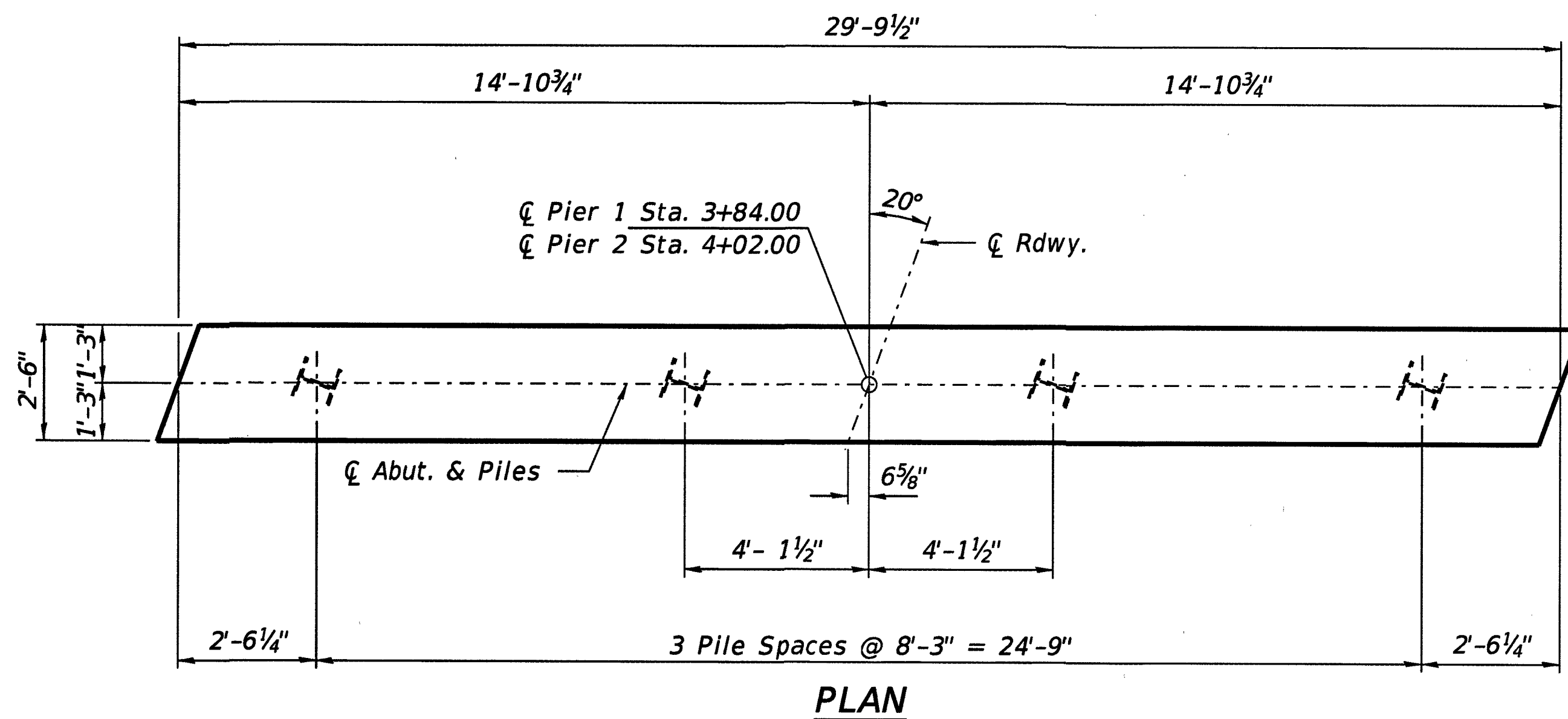
PILE DATA

Type _____ Steel HP10x42
 No. Req'd. (2 Abuts.) _____ *8
 Factored Resistance Available (Rf) _____ 167 Kips/Pile
 Nominal Required Bearing (Rn) _____ 335 Kips/Pile
 Est. Length _____ 40 Ft/Pile

Notes: *Includes one test pile to be driven in a permanent location at the North Abutment.

Notes:
 For details of piles, see sheet 9 of 10.
 Bottom of wing shall be poured monolithic with the abutment cap. Entire quantity included with Concrete Structures.
 Extend h(E) bars into abutment cap.





SECTION B-B
Dimensions at right Z's to Pier.

ELEVATION
(Looking North)

PILE DATA

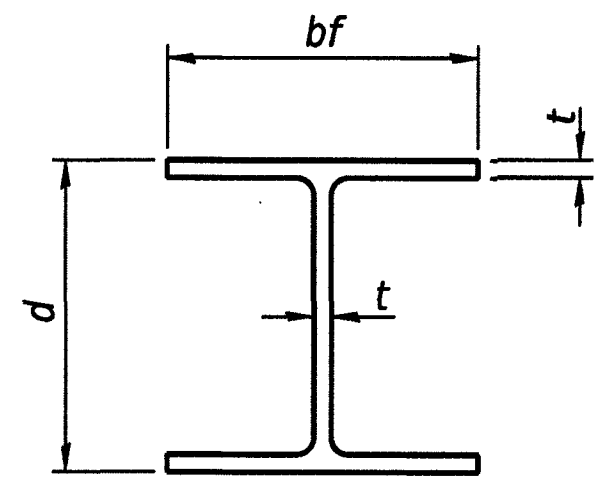
Type ----- Steel HP10x42
 No. Req'd. (2 Piers) ----- *8
 Factored Resistance Available (Rf) ----- 167 Kips/Pile
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile
 Est. Length ----- 40 Ft/Pile

Notes: *Includes one test pile to be driven in a permanent location at Pier 1.

BILL OF MATERIAL - 2 PIERS

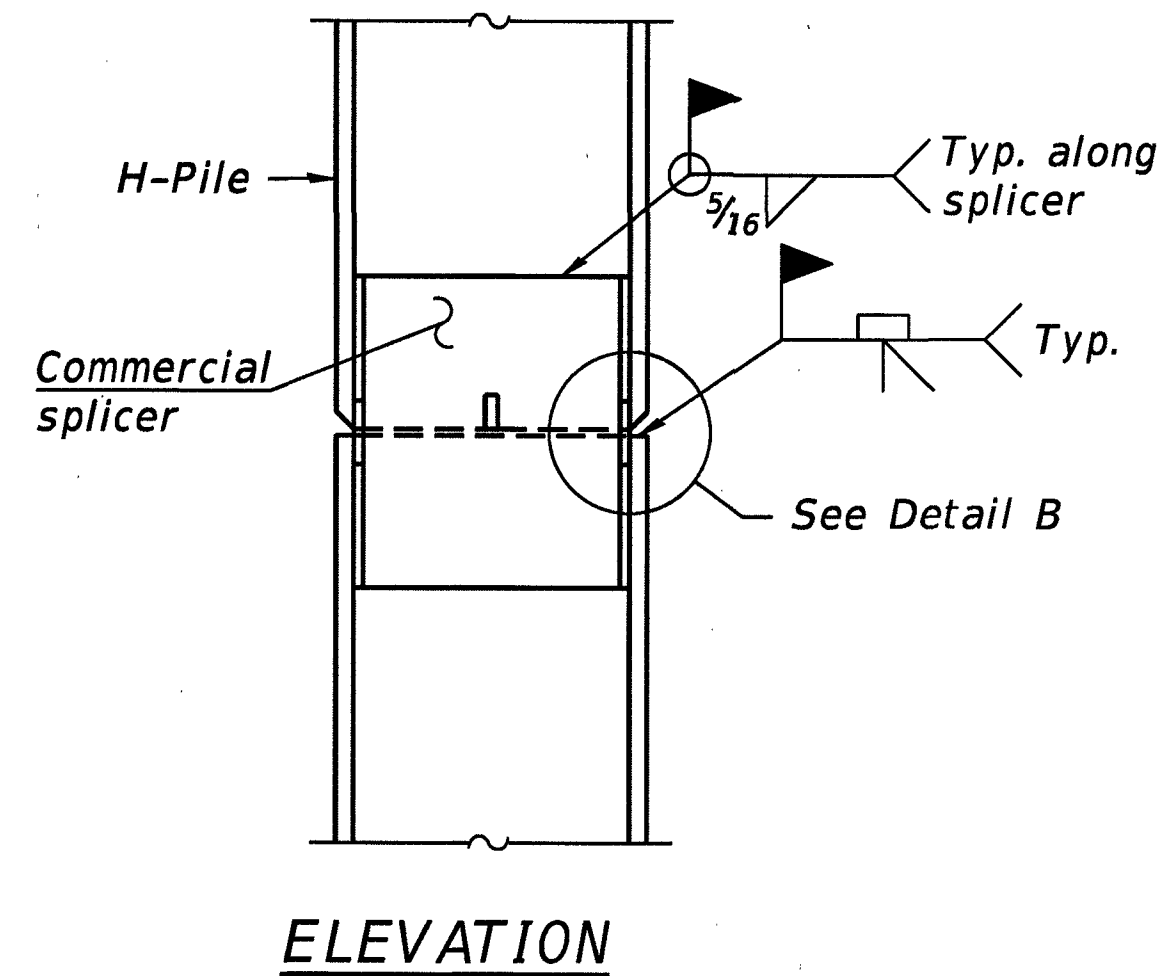
BAR	NO.	SIZE	LENGTH	SHAPE
p(E)	16	#7	29'-6"	—
p1(E)	12	#4	29'-6"	—
s2(E)	16	#5	3'-4"	┌
s3(E)	34	#5	9'-7"	□
s4(E)	4	#5	9'-10"	□
u(E)	12	#6	9'-10"	—
v4(E)	116	#5	3'-4"	—
Concrete Structures			Cu. Yd.	14.0
Concrete Encasement			Cu. Yd.	7.4
Reinf. Bars, Epoxy Coated			Pound	2,220
Furnishing Steel Piles HP10x42			Foot	280
Driving Piles			Foot	280
Test Pile Steel HP10x42			Each	1

Note:
For details of piles, see sheet 9 of 10.

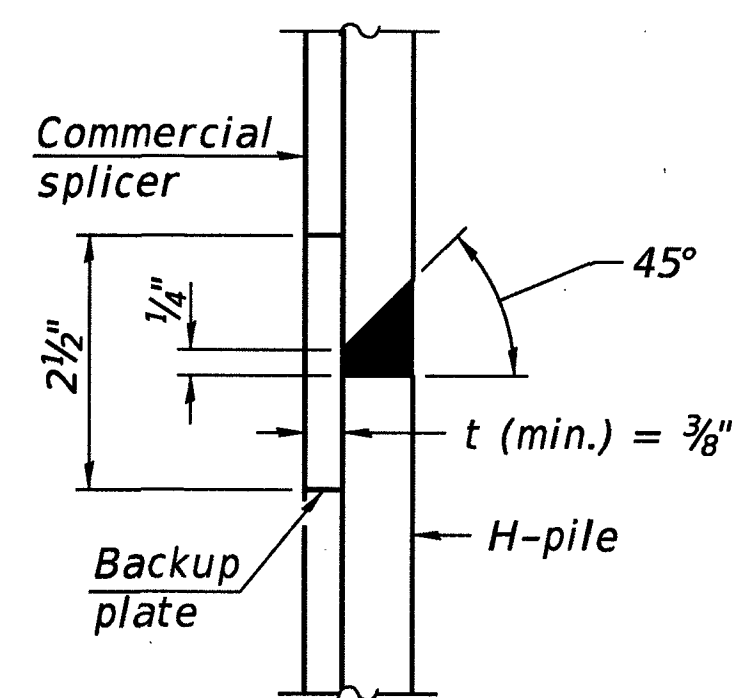


STEEL PILE TABLE

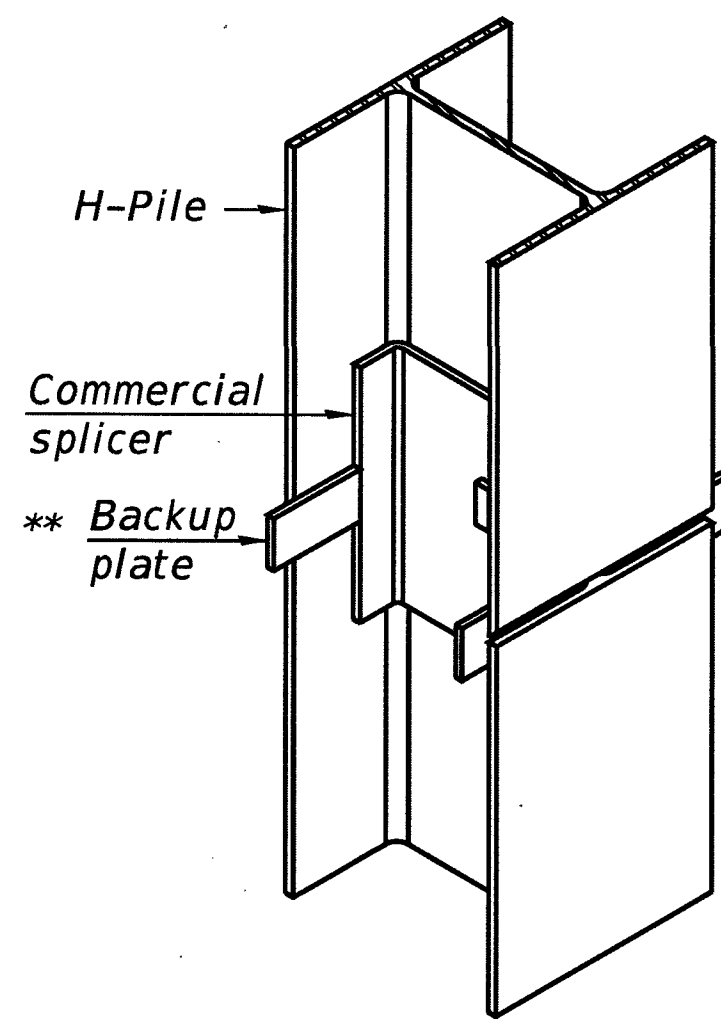
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

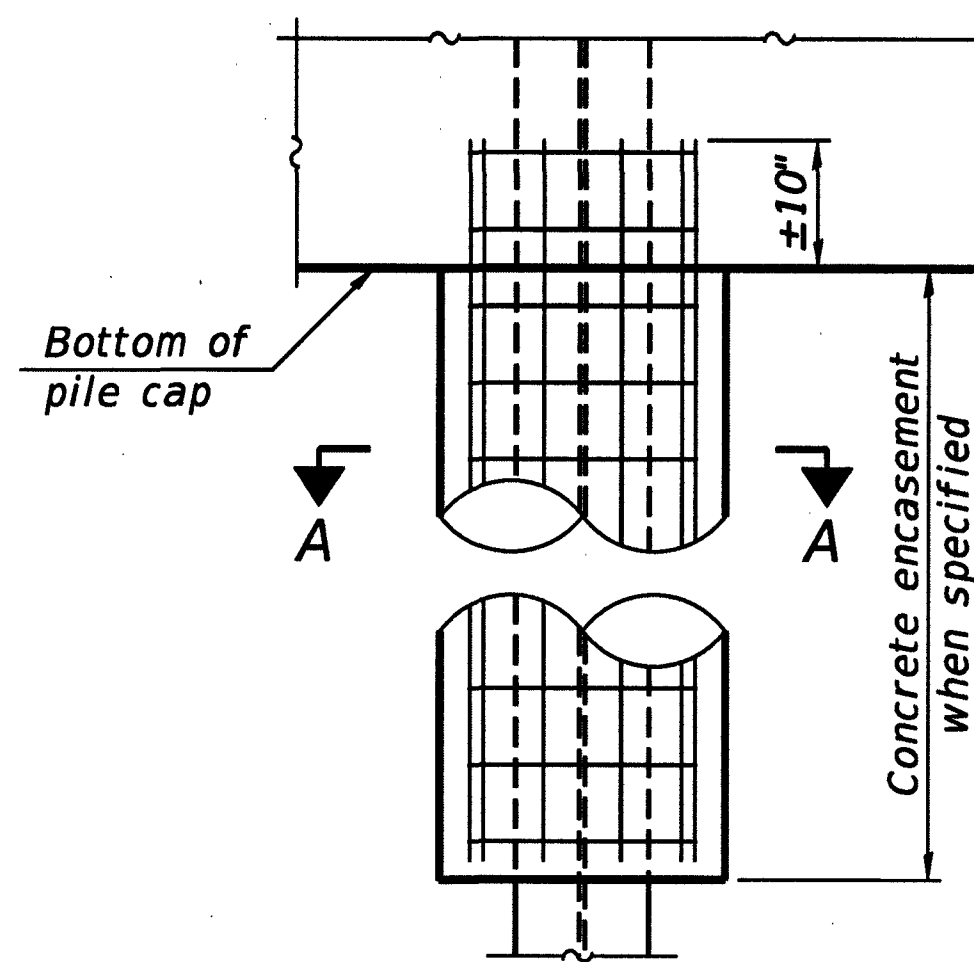


DETAIL "B"

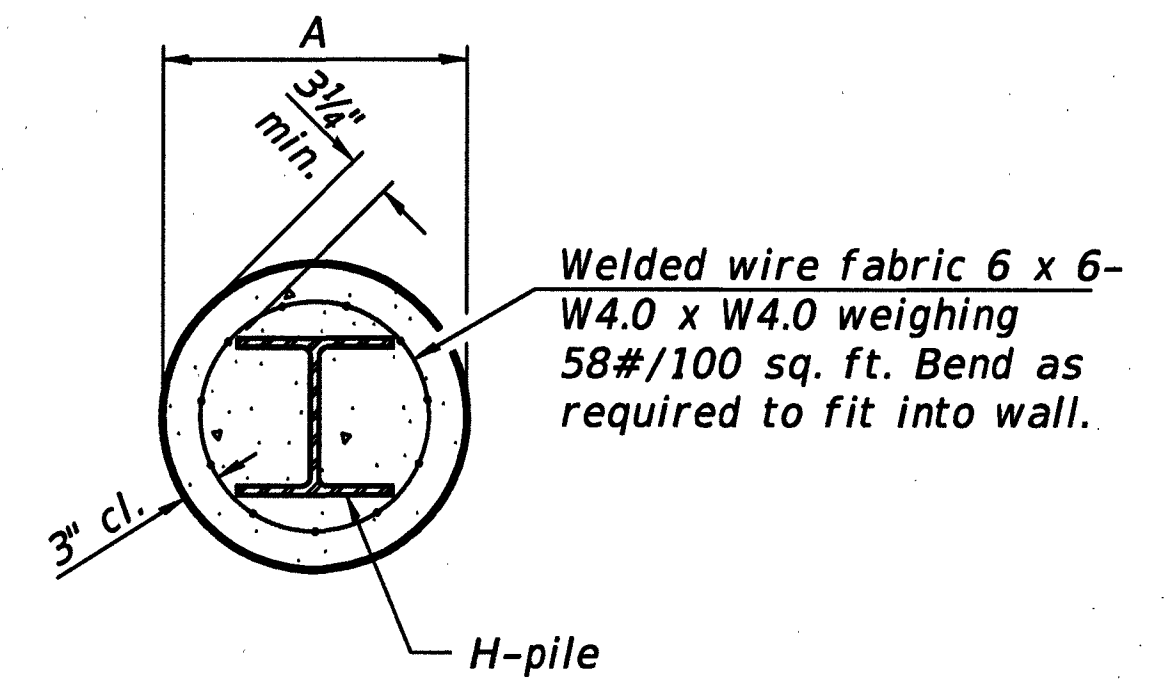


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

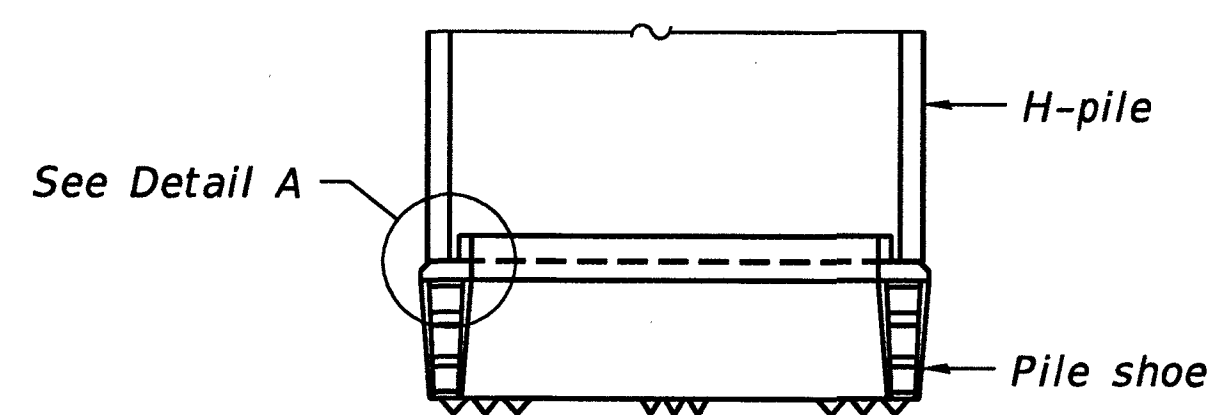


ELEVATION

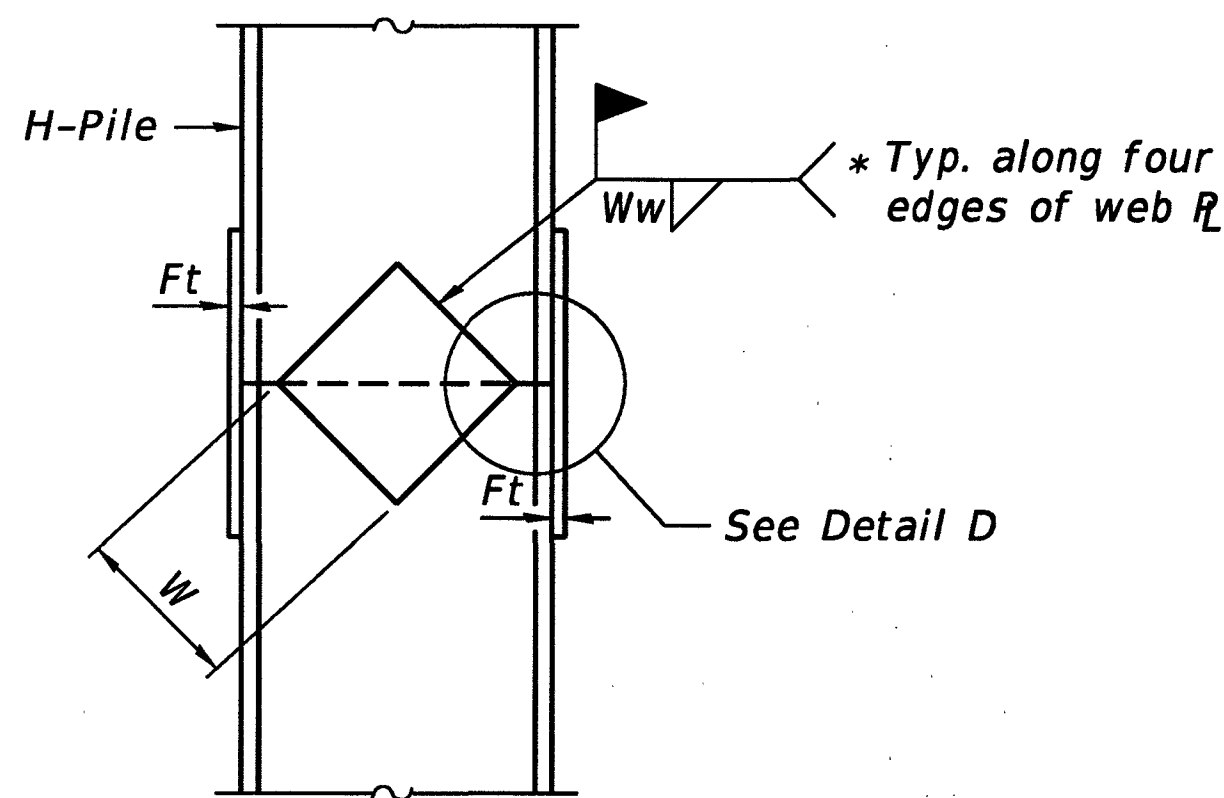


SECTION A-A

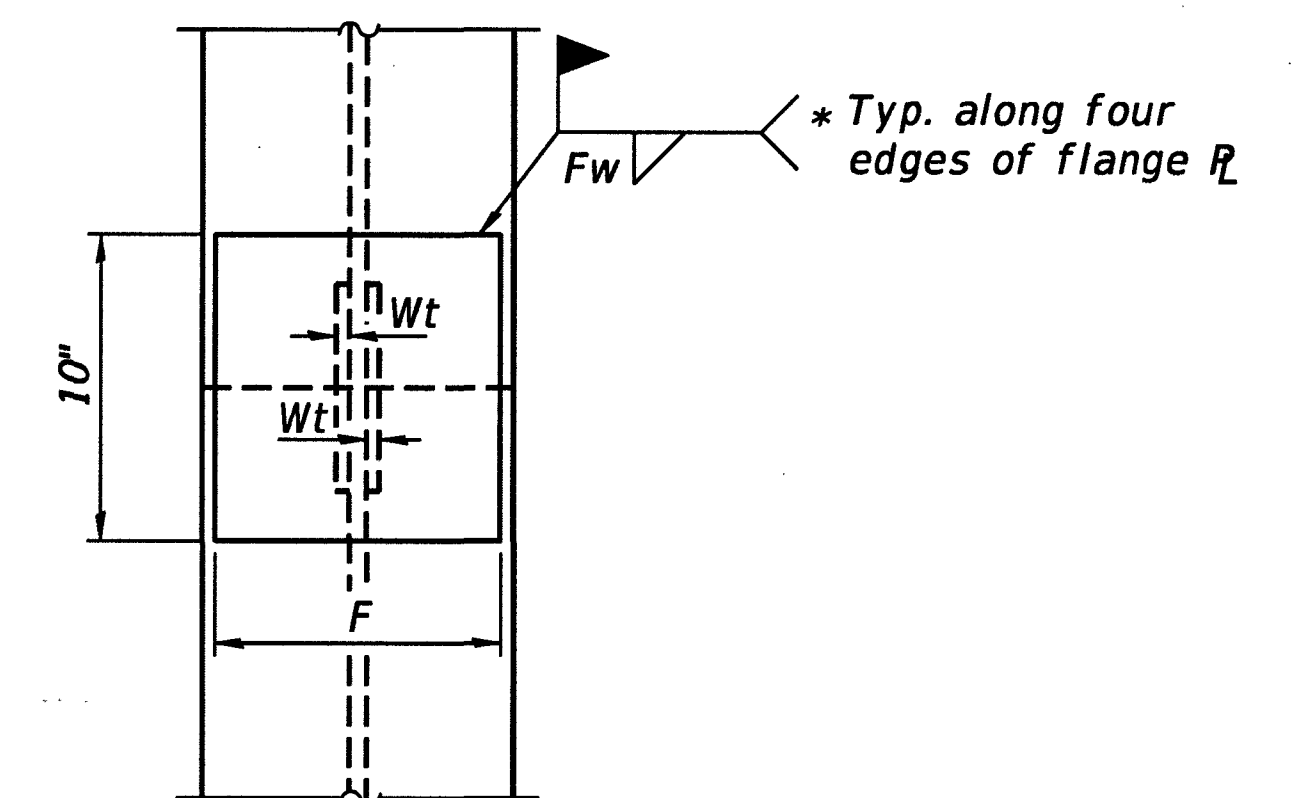
INDIVIDUAL PILE CONCRETE ENCASUREMENT
(Forms for encasement may be omitted when soil conditions permit).



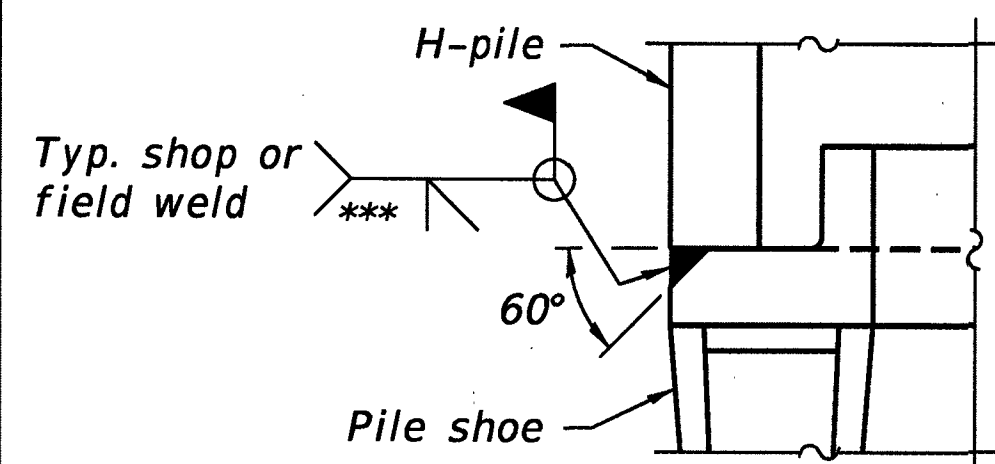
ELEVATION



ELEVATION

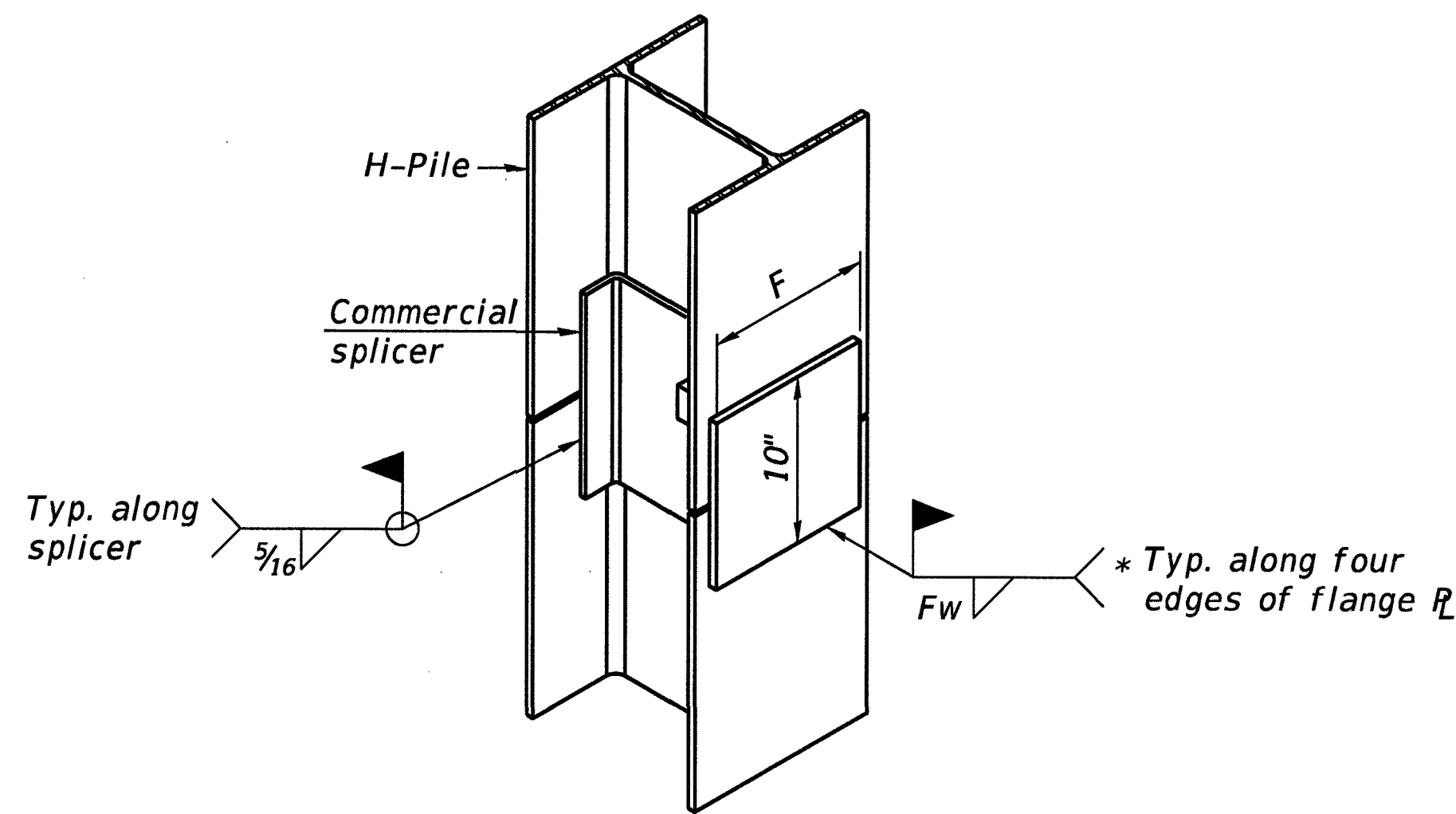


END VIEW



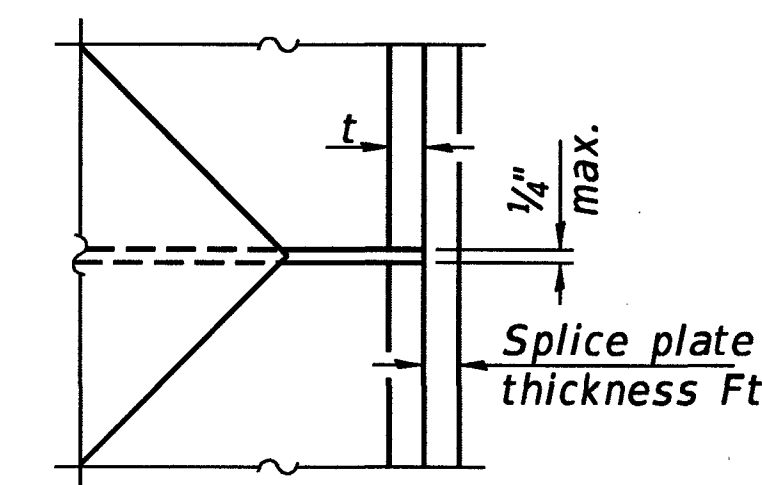
DETAIL A

SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

F-HP 8-11-2017

HOLCOMB FOUNDATION ENGINEERING INC.
 393 Wood Rd 618-529-5262
 Carbondale, IL 62901 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: 16259 Bridge TR 54 over Creek Date: 12/27/2016
 Section: 16-07132-00-BR Station 3+89
 Structure: 017-3731 Bored by: B. Schwartz
 County: Crawford Checked by: T. Holcomb

Boring No:	Station:	Offset:	Elevation	N	Qu	w	Surface Water Elev.	Elevation	N	Qu	w
1	3+65	11' LT									
			459.2	0							
							453.2				
			455.7								
			453.2								
			447.2								
			445.7								
			443.2								
			440.7								
			438.2								

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
 Qu - Unconfined Compressive Strength in tons/sq.ft.
 w - Water Content - percentage of oven dry weight-%
 B = Bulge Failure
 S = Shear Failure
 E = Estimated Value
 P = Penetrometer

BORING B-1

HOLCOMB FOUNDATION ENGINEERING INC.
 393 Wood Rd 618-529-5262
 Carbondale, IL 62901 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: 16259 Bridge TR 54 over Creek Date: 12/27/2016
 Section: 16-07132-00-BR Station 3+89
 Structure: 017-3731 Bored by: B. Schwartz
 County: Crawford Checked by: T. Holcomb

Boring No:	Station:	Offset:	Elevation	N	Qu	w	Surface Water Elev.	Elevation	N	Qu	w
2	4+31	11 LT									
			458.8	0							
							450.3				
			434.8								
			455.3								
			447.3								
			445.3								
			442.8								
			442.8								
			419.8								
			440.7								
			438.2								

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
 Qu - Unconfined Compressive Strength in tons/sq.ft.
 w - Water Content - percentage of oven dry weight-%
 B = Bulge Failure
 S = Shear Failure
 E = Estimated Value
 P = Penetrometer

BORING B-2