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280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-06	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
20.0	UNIT	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	20100110
80.0	UNIT	TREE REMOVAL (OVER 15 UNITS DIAMETER)	20100210
0.1	ACRE	TREE REMOVAL, ACRES	20100500
536.0	CU YD	EARTH EXCAVATION	20200100
215.0	CU YD	CHANNEL EXCAVATION	20300100
1273.0	CU YD	FURNISHED EXCAVATION	20400800
21.0	FOOT	TEMPORARY DITCH CHECKS	28000305
1060.0	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
505.0	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.0	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
48.2	CU YD	CONCRETE STRUCTURES	50300225
15.4	CU YD	CONCRETE ENCASEMENT	50300280
2160.0	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	50400305
5330.0	POUND	REINFORCEMENT BARS, EPOXY COATED	50800205
176.0	FOOT	STEEL RAILING, TYPE S1	50900205 Δ
480.0	FOOT	FURNISHING STEEL PILES HP10X42	51201400
240.0	FOOT	DRIVING PILES	51202305
8.0	EACH	PILE SHOES	51204650
1.0	EACH	NAME PLATES	51500100
40.0	FOOT	PIPE CULVERTS, CLASS D, TYPE 1 15"	54200220
302.0	SQ FT	CONCRETE SEALER	58700300
1.0	L SUM	MOBILIZATION	67100100
4.0	EACH	TERMINAL MARKER - DIRECT APPLIED	72501000 Δ
0.6	ACRE	SEEDING, CLASS 2 (SPECIAL)	X2501000
8.0	EACH	SETTING PILES IN ROCK	Z0065000

Δ SPECIALTY ITEMS

DESIGN DESIGNATION:
DESIGN SPEED: 30 MPH
HIGHWAY CLASS - LOCAL ROAD
EXISTING STRUCTURE NO.: 093-3047
PROPOSED STRUCTURE NO.: 093-3139
CURRENT A.D.T. = 75



Know what's below.
Call before you dig.

STATE OF ILLINOIS

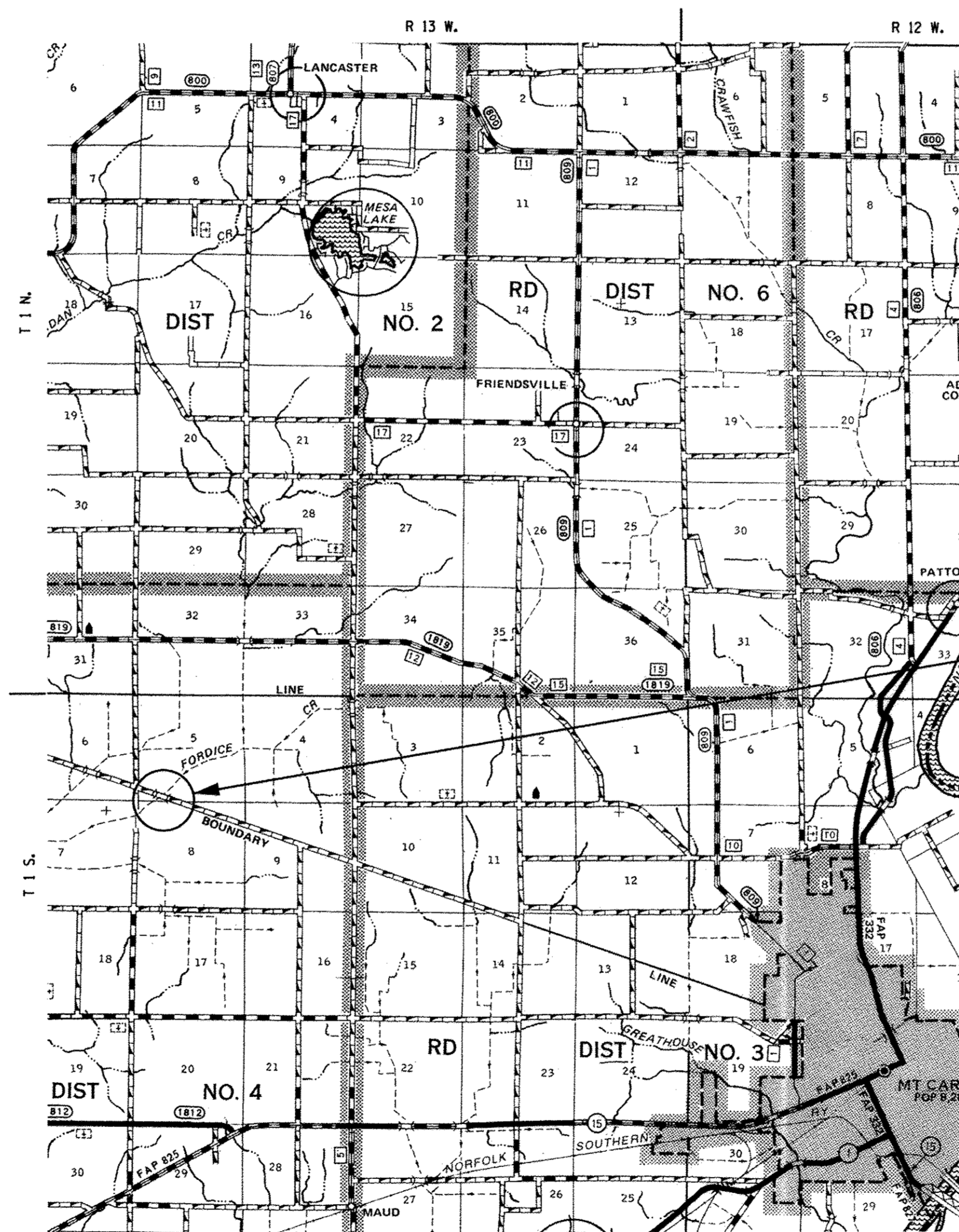
DEPARTMENT OF TRANSPORTATION

**PLANS FOR PROPOSED
FEDERAL AID - S.T.P. BRIDGE**

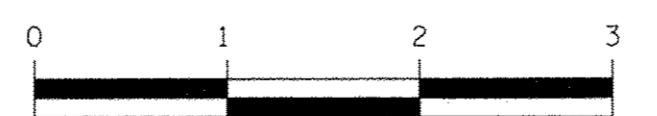
T.R. 101 WABASH COUNTY SECTION 11-04115-00-BR

PROJECT NO. BROS-0185(039) JOB NO. C-97-008-17

CONTRACT #95802 FORDICE CREEK



LAYOUT
APPROXIMATE SCALE 1 INCH = 1 MILE



GROSS LENGTH	645.00 FT	0.122 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	645.00 FT	0.122 MILES

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101	11-04115-00-BR	WABASH	16	1

FED. ROAD DIST. NO. 7 ILLINOIS
PROJECT # BROS-0185(039) CONTRACT # 95802
HLR JOB # 15.1127 FORDICE CREEK

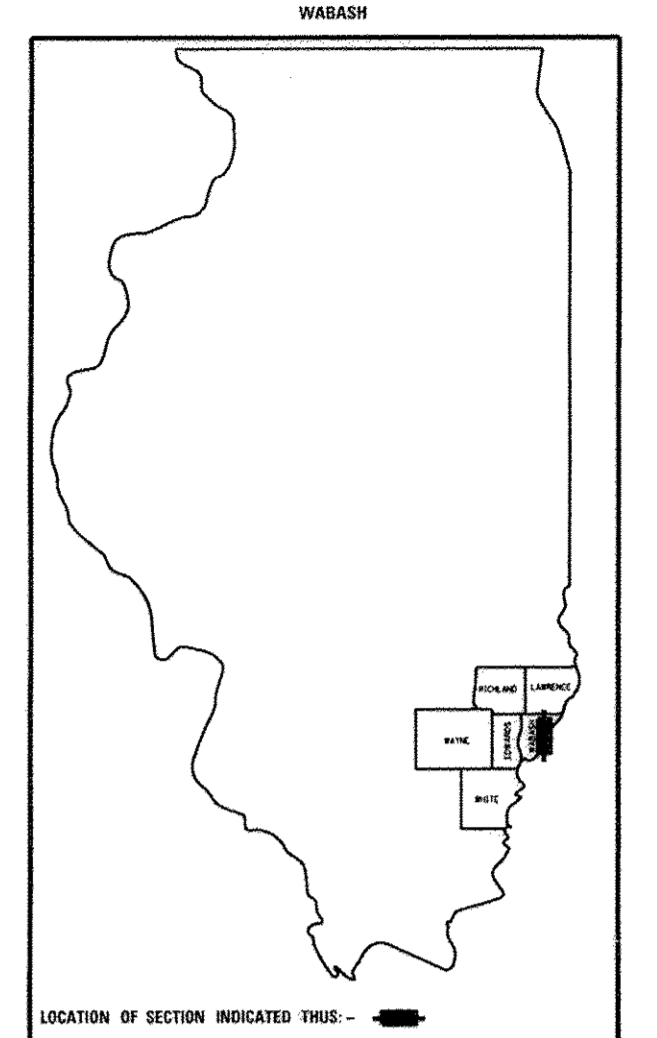
323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62863
PHONE:
(618)-262-8651
FAX:
(618)-263-3327

ILLINOIS
PROFESSIONAL
DESIGN
FIRM
LAND SURVEY,
PROFESSIONAL
ENGINEERING &
STRUCTURAL
ENGINEERING
CORPORATION
184-000959

LAMAC
ENGINEERING
A Division of Hampton, Lenzini and Renwick, Inc.



AARON M. MEFFORD
NAME
SIGNATURE
3-14-17
DATE
11-30-17
EXPIRES



PLAN	1" = 50'	0 50' 100'
PROFILE	1" = 50'	0 50' 100'
PROFILE VERT.	1" = 5'	0 5' 10'
CROSS SECTION	1" = 5'	0 5' 10'

SECTION 11-04115-00-BR
BEGINS STATION 1+80

STATION 5+00, STRUCTURE NO. 093-3139
A 90' LONG TRIPLE SPAN (25', 40', 25') P.P.C.D.B. BRIDGE
WITH 17" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
24' ROADWAY, 0.00% GRADE, 35° LEFT FORWARD SKEW.

SECTION 11-04115-00-BR
ENDS STATION 8+25

APPROVED MARCH 14 2017
A. O. B. D.
COUNTY ENGINEER

PASSED MARCH 29 2017
Tim Morrison
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review MARCH 29 2017
Debra A. Jankovic
DEPUTY DIRECTOR OF HIGHWAYS,
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOWNSHIP ROUTE 101
OVER FORDICE CREEK
WABASH COUNTY, ILLINOIS

SHEET TITLE:
TITLE SHEET

SCALE: VARIES
BY: A.M.M.
DATE: 3/9/17
REV:

1 OF 16
SHEETS

SHEET NO.
1

GENERAL NOTES:

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED APRIL 1, 2016.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 90 FOOT LONG TRIPLE SPAN PRECAST, PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

ALL ELEVATIONS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

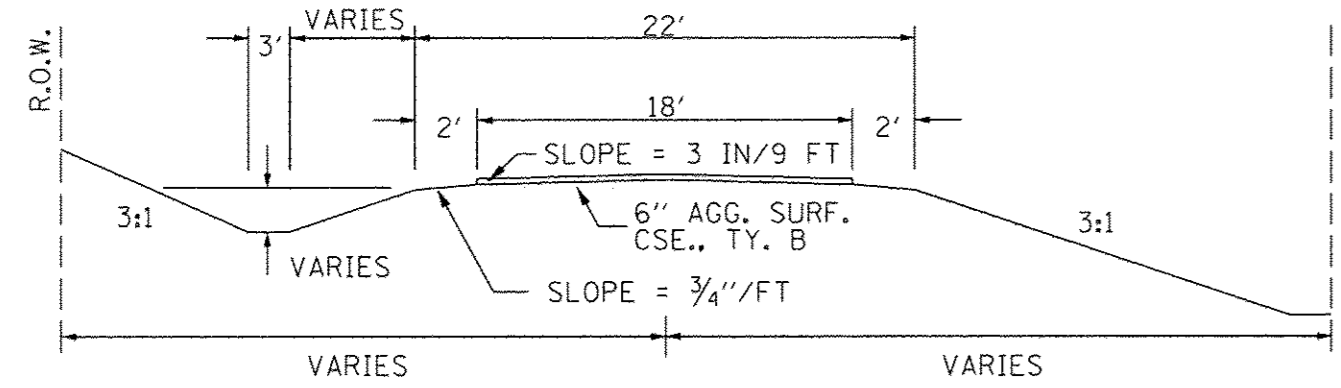
UTILITIES SHOWN WERE LOCATED PER QUALITY LEVEL "C", A.S.C.E. STANDARD C1/38-02, STANDARD GUIDELINE FOR COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA FARE FROM SURFACE MARKINGS ONLY. UTILITIES SHALL BE FIELD LOCATED HORIZONTALLY AND VERTICALLY PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE FIELD LOCATION OF THESE UTILITIES.

AGGREGATE SURFACE COURSE, TYPE B INCLUDES 24 TON FOR FILL NEXT TO THE BRIDGE, 81 TON FOR THE ENTRANCES, AND 400 TON FOR THE ROADWAY.

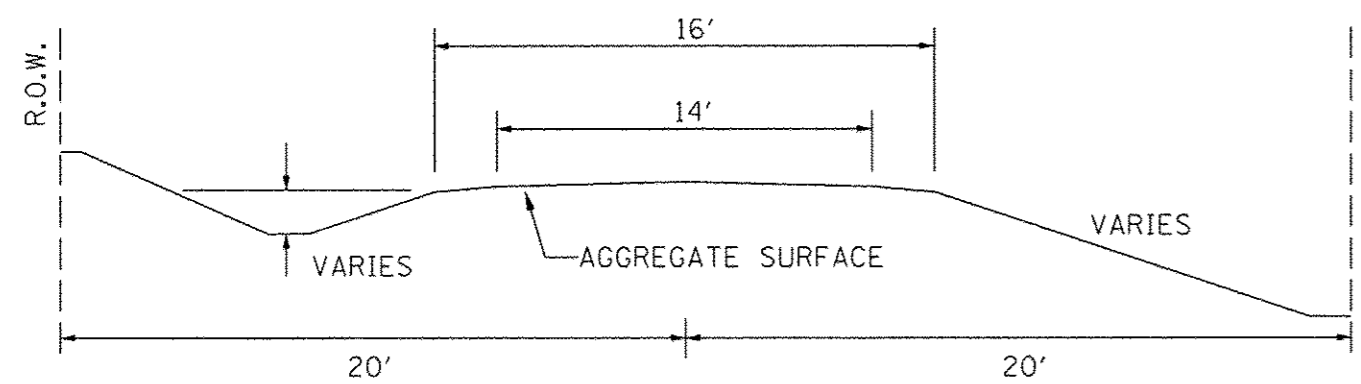
TREES SUITABLE FOR FIREWOOD SHALL BE STOCK PILED ALONG THE SOUTHWEST ROW. THE STOCK PILED TREES SHALL BECOME THE PROPERTY OF THE COUNTY OR OTHERWISE DIRECTED BY THE ENGINEER.

THE CONCRETE SLABS AND I-BEAMS SHALL REMAIN THE PROPERTY OF THE COUNTY.

TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



NOTE: CONSTRUCT SPECIAL DITCH

LOCATION	SIZE
STA 1+80 TO STA 4+00 LT	8
STA 2+50 TO STA 4+00 RT	12
STA 5+26 TO STA 8+00 RT	20 UNITS
STA 5+38 TO STA 6+00 LT	
STA 7+50 TO STA 8+25 LT	

NOTE: TREE REMOVAL, ACRES

LOCATION	SIZE
STA 2+50 TO STA 4+00 RT	0.1
STA 5+30 RT	0.1 ACRES

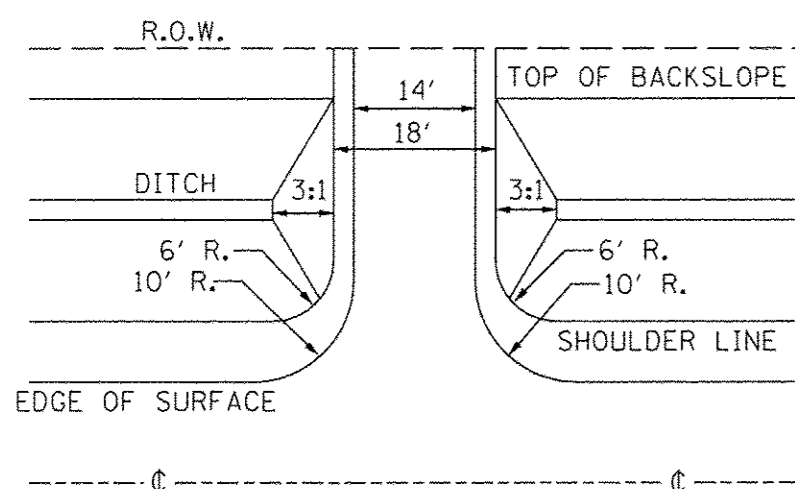
NOTE: TREE REMOVAL (6 TO 15 UNITS DIAMETER)

LOCATION	SIZE
STA 5+60 LT	8
STA 5+63 LT	12
	20 UNITS

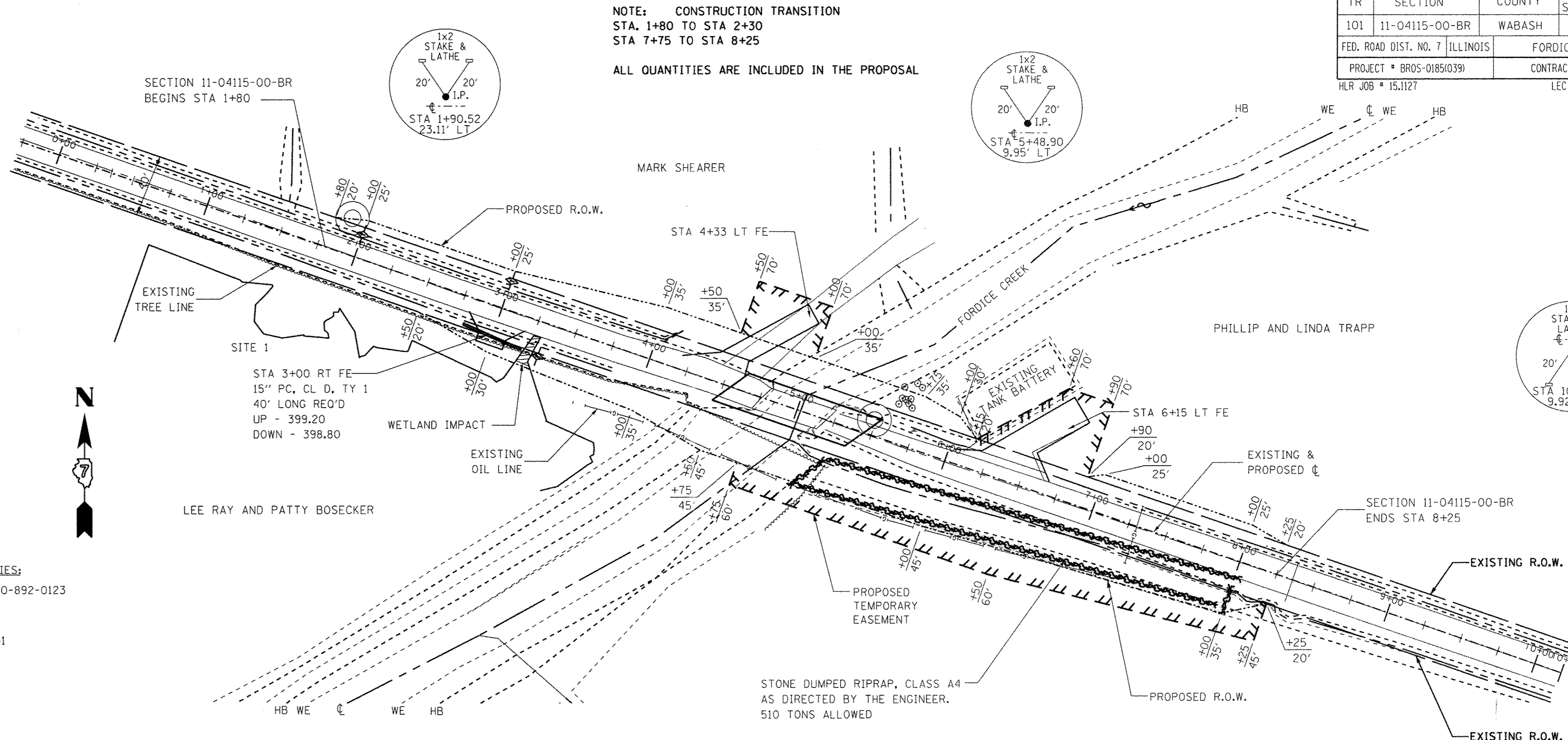
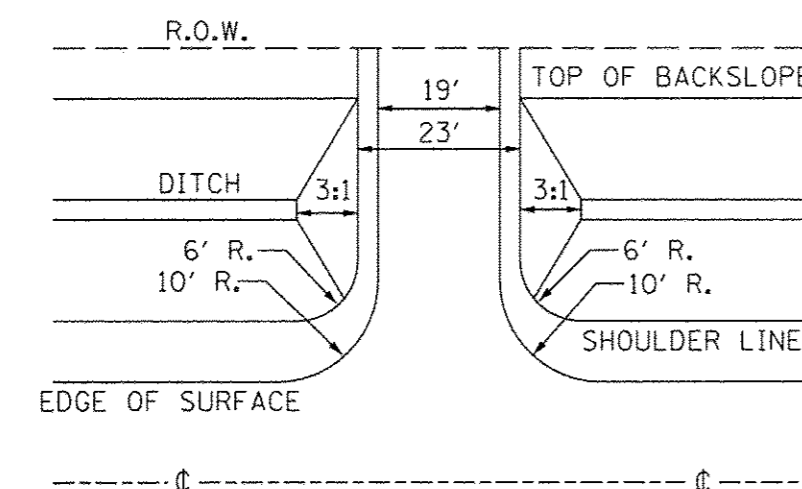
NOTE: TREE REMOVAL (OVER 15 UNITS DIAMETER)

LOCATION	SIZE
STA 5+61 LT	16
STA 5+66 LT	26
STA 5+67 LT	20
STA 5+69 LT	18
	80 UNITS

FIELD ENTRANCE DETAIL
STA 3+00 RT & STA 4+33 LT



FIELD ENTRANCE DETAIL
STA 6+15 LT



UTILITIES:
J.U.L.L.I.E. 1-800-892-0123
COUNTRYMARK
1-812-838-8501

EXISTING STRUCTURE: NO. 093-3047, STA 4+98
44' LONG 6" CONCRETE DECK ON 7-18" I-BEAMS WITH
CONCRETE MUDWALLS AND WINGWALLS, 25' LT. FWD SKEW.

ONE (1) EACH-REMOVAL OF EXISTING STRUCTURES ALLOWED IN
THIS PROPOSAL.

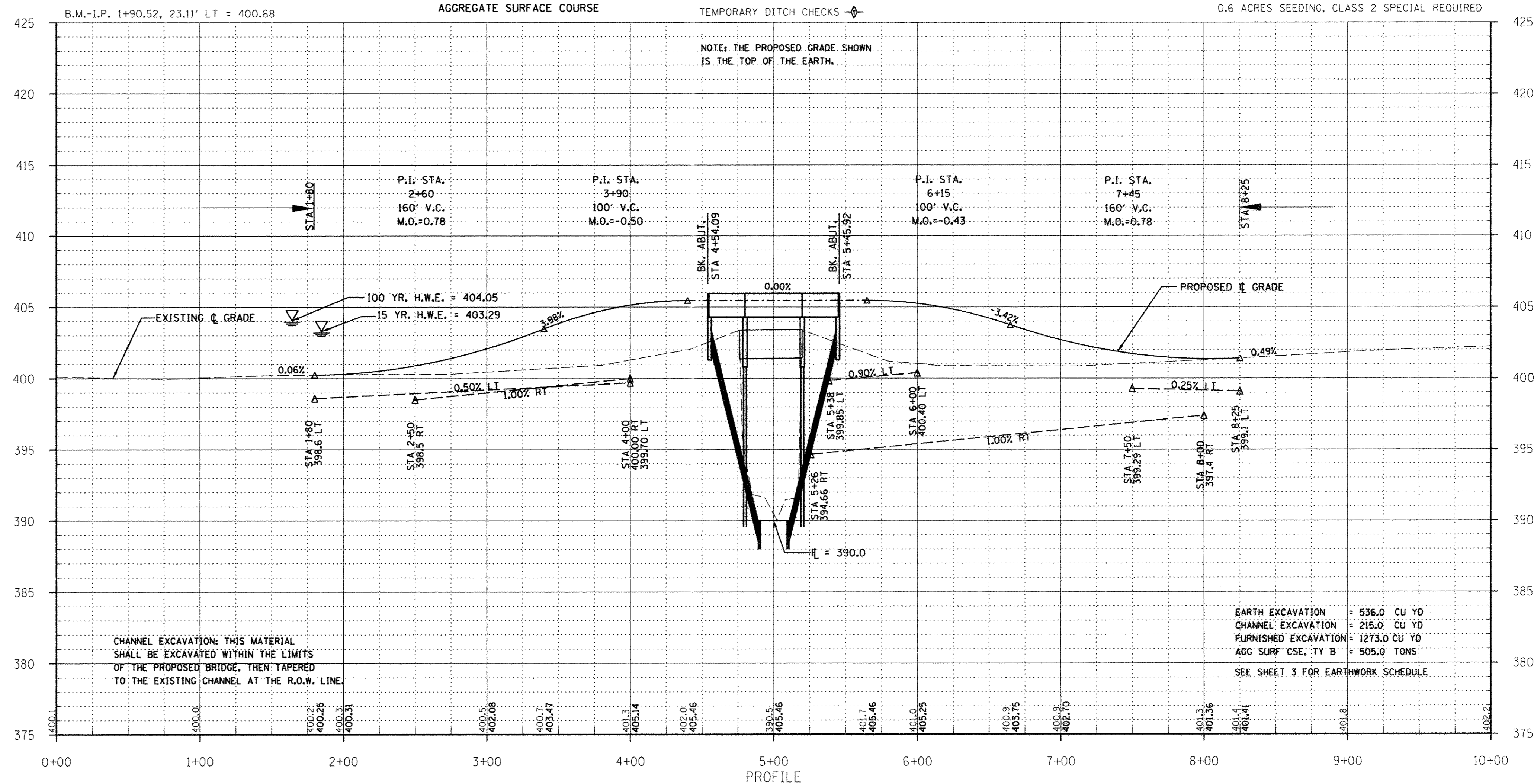
PROPOSED STRUCTURE: NO. 093-3139, STA 5+00.
A 90' LONG TRIPLE SPAN (25', 40', 25') P.P.C.D.B.
BRIDGE WITH 17" DEPTH BEAMS, SPILL THROUGH TYPE
ABUTMENTS, 24' WIDTH, 35' LT. FWD SKEW.

SEE SHEETS 5-16 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE
AGGREGATE SURFACE COURSE

TEMPORARY DITCH CHECKS

0.1 ACRE OF TREE REMOVAL, ACRES
0.6 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



CHANNEL EXCAVATION: THIS MATERIAL
SHALL BE EXCAVATED WITHIN THE LIMITS
OF THE PROPOSED BRIDGE, THEN TAPERED
TO THE EXISTING CHANNEL AT THE R.O.W. LINE.

EARTH EXCAVATION = 536.0 CU YD
CHANNEL EXCAVATION = 215.0 CU YD
FURNISHED EXCAVATION = 1273.0 CU YD
AGG SURF CSE, TY B = 505.0 TONS
SEE SHEET 3 FOR EARTHWORK SCHEDULE

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101	11-04115-00-BR	WABASH	16	2
FED. ROAD DIST. NO. 7 ILLINOIS		FORDCICE CREEK		
PROJECT * BR05-0185(039)		CONTRACT * 95802		
HLR JOB * 15.1127		LEC JOB * H41410078		

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL
62863
PHONE: (618)-262-8651
FAX: (618)-263-3327

ILLINOIS PROFESSIONAL DESIGN FIRM
LAND SURVEY: PROFESSIONAL ENGINEERING & STRUCTURAL ENGINEERING CORPORATION
184-000959

LAMAC ENGINEERING
A Division of Hampton, Lenzini and Renwick, Inc.

AARON M. MEFFORD
56284 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

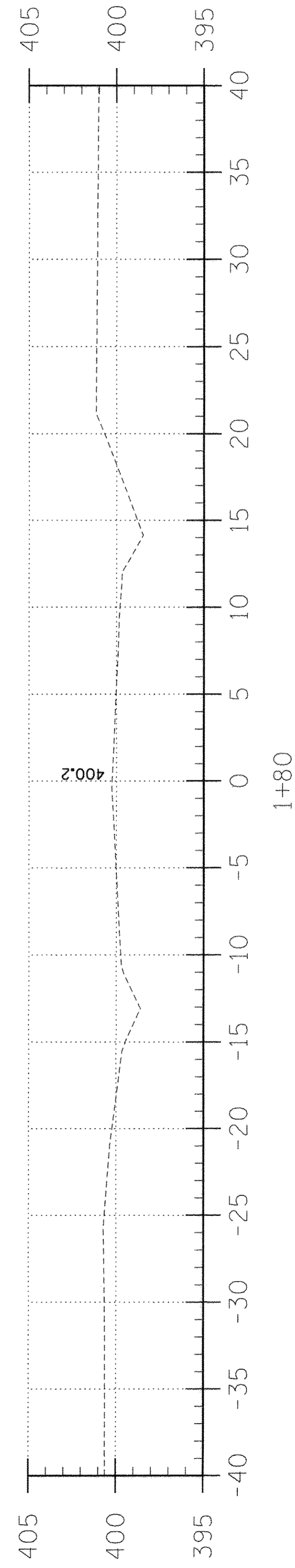
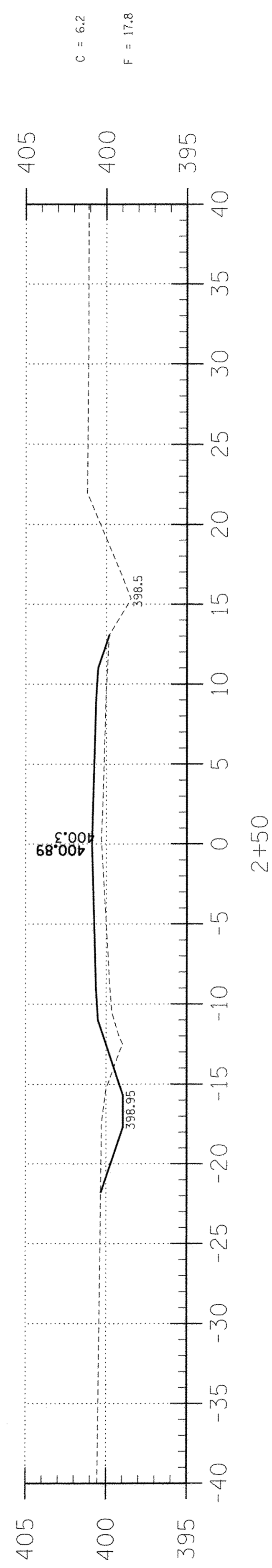
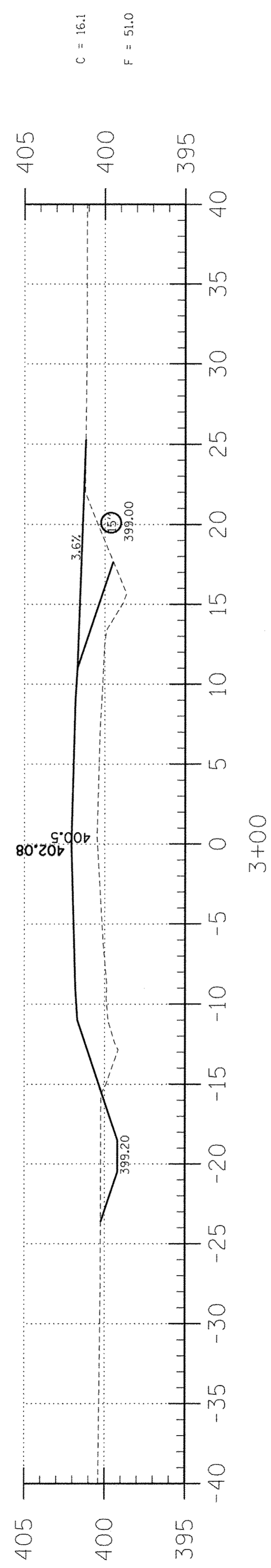
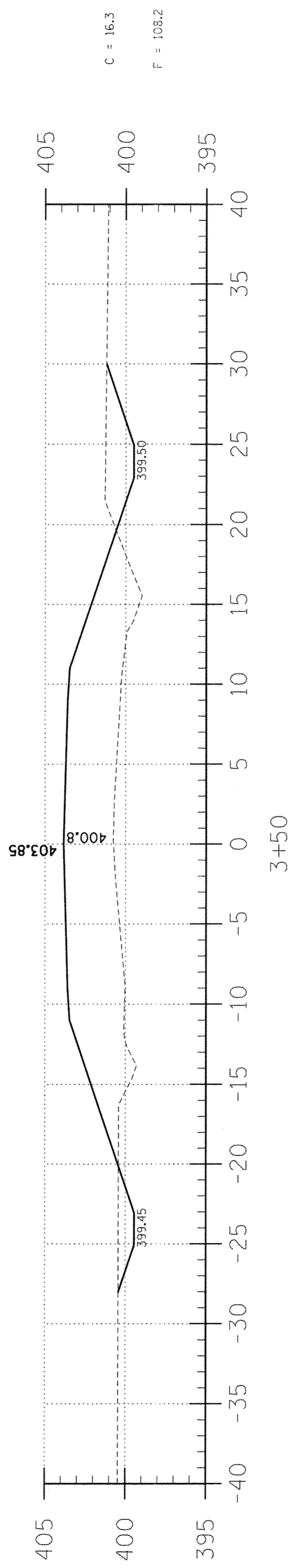
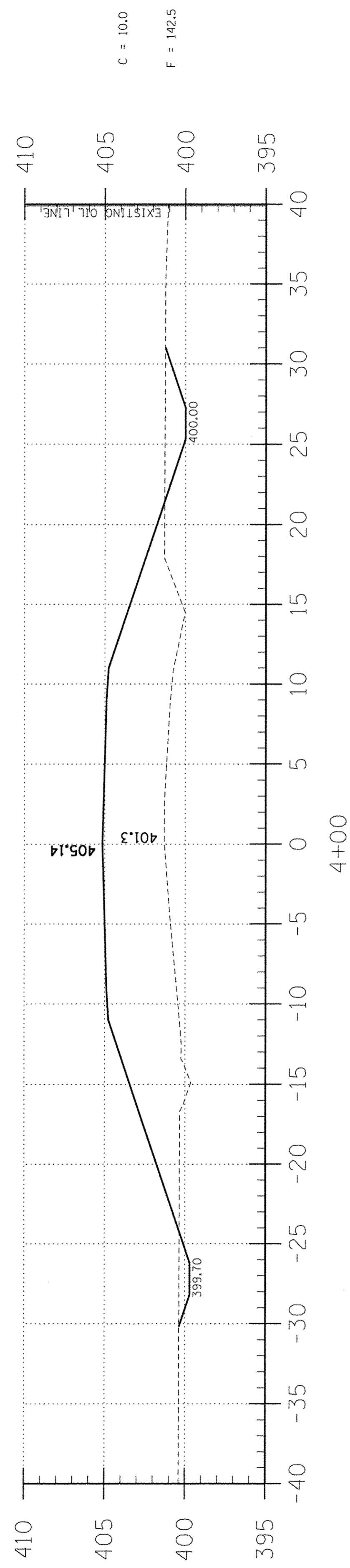
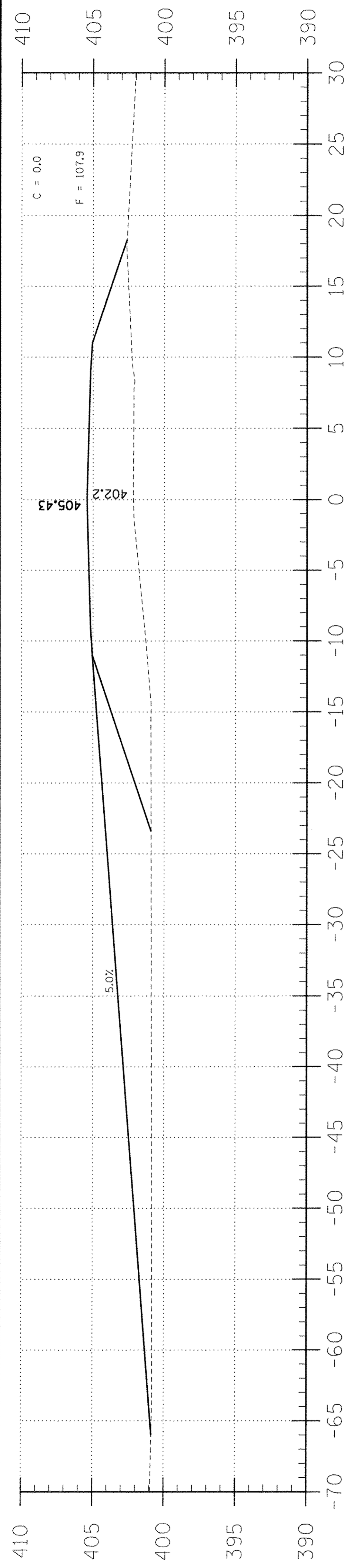
AARON M. MEFFORD
NAME
SIGNATURE
3-14-17
DATE
11-30-17 EXPIRES

TOWNSHIP ROUTE 101
OVER FORDCICE CREEK
WABASH COUNTY, ILLINOIS

SHEET TITLE:
PLAN & PROFILE

SCALE: VARIES
BY: A.M.M.
DATE: 3/3/17
REV:

2 OF 16 SHEETS
SHEET NO. 2



EARTHWORK SCHEDULE

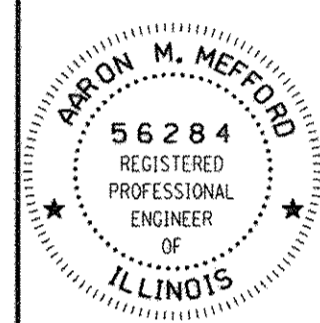
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	ESTIMATED UNSUITABLE MATERIAL	SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA 0+00 TO 4+54.1	97.2	0.0	0.0	72.9	674.0	-601.1
STA 4+54.1 TO 5+45.9	0.0	215.0	107.5	80.6	0.0	+80.6
STA 5+45.9 TO 10+00	435.2	0.0	0.0	329.4	913.1	-583.7
3 FIELD ENTRANCES	0.0	0.0	0.0	0.0	168.5	-168.5
TOTAL	536.4	215.0	107.5	482.9	1755.6	-1272.7

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101	11-0415-00-BR	WABASH	16	3
FED. ROAD DIST. NO. 7		ILLINOIS	FORDICE CREEK	
PROJECT# BROS-0185(039)		CONTRACT# 95802		
HLR JOB # 15.1127		LEC JOB # H14L007WB		

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LAND SURVEY, PROFESSIONAL ENGINEERING, STRUCTURAL ENGINEERING CORPORATION
184-000959

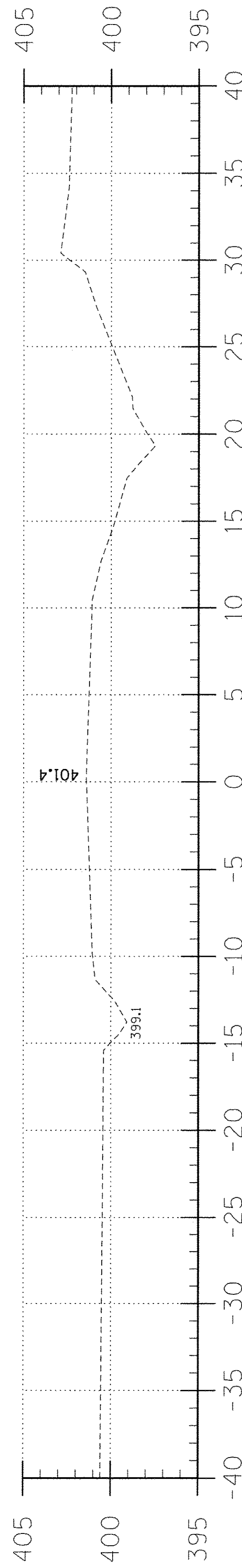
LAMAC
ENGINEERING
A division of Hampton, Lenzini and Renwick, Inc.



AARON M. MEFFORD
NAME
SIGNATURE
3-14-17
DATE
11-30-17
EXPIRES

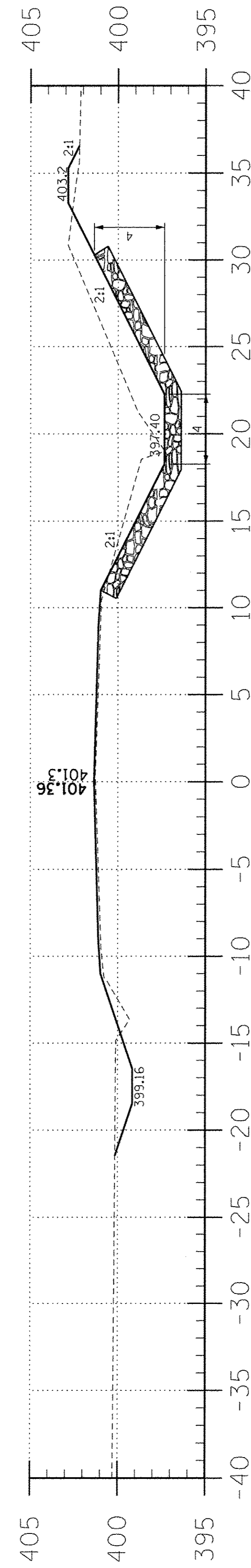
TOWNSHIP ROUTE 101
OVER FORDICE CREEK
WABASH COUNTY, ILLINOIS

SHEET TITLE:
CROSS-SECTIONS
SCALE: 1" = 5'
BY: AMM
DATE: 3/17
REV:
3 OF 16 SHEETS
SHEET NO. 3

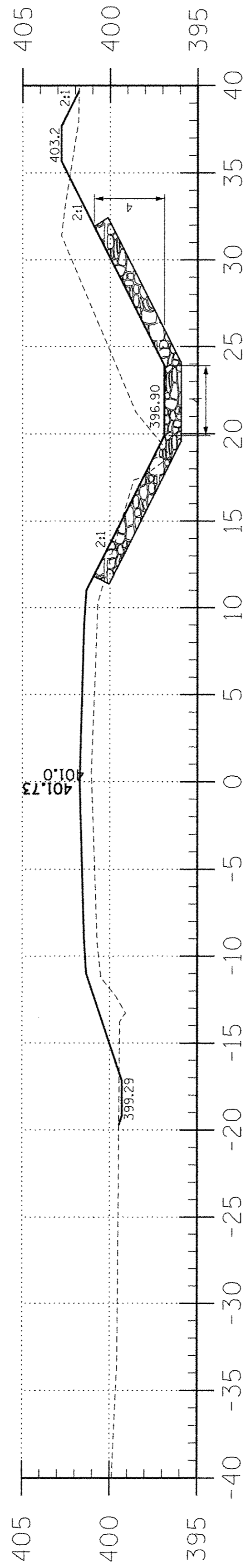


8+25

C = 27.8
F = 5.2

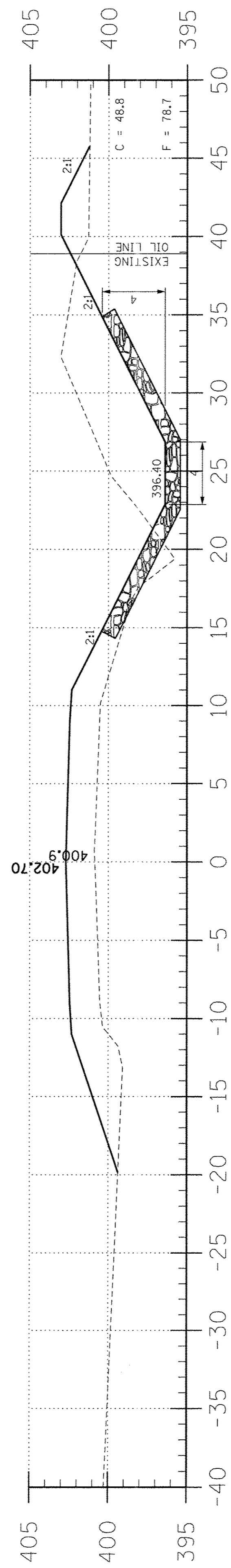


8+00

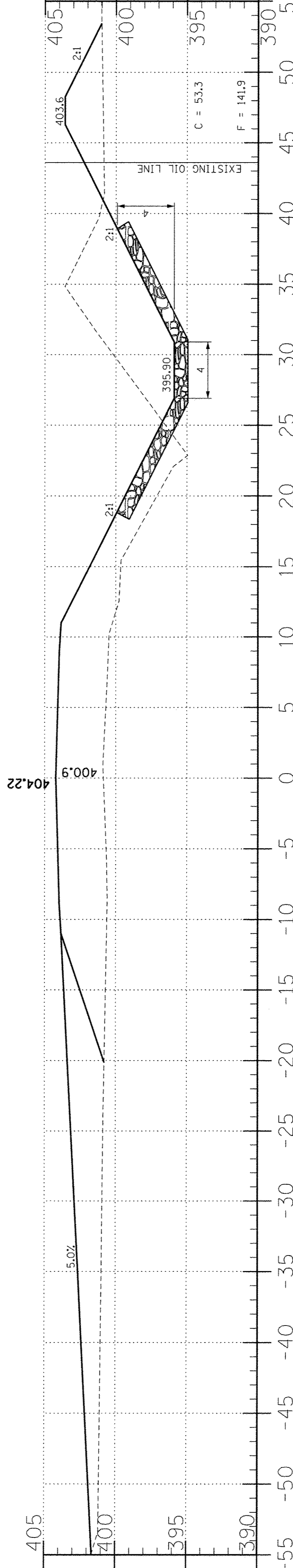


7+50

C = 30.4
F = 25.9

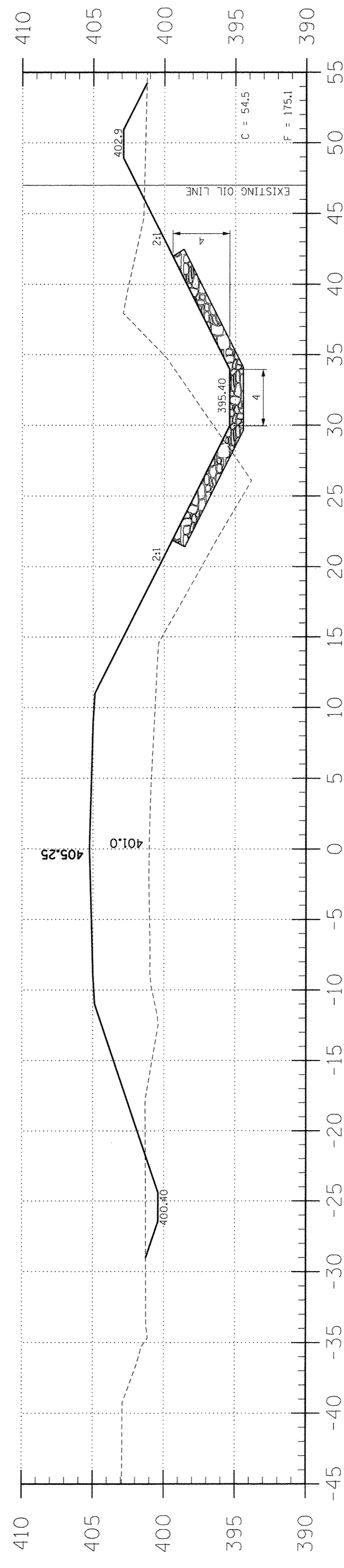


7+00



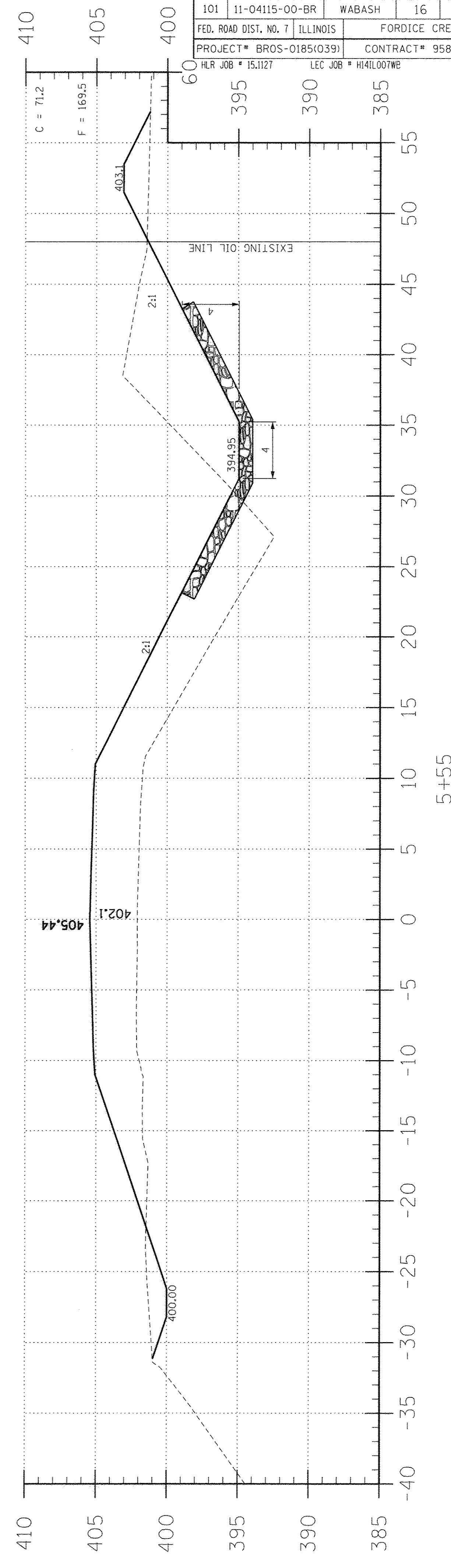
6+50

C = 53.3
F = 141.9



6+00

C = 54.5
F = 175.1



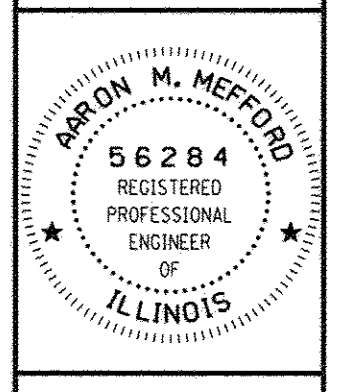
5+50

C = 71.2
F = 169.5

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101	11-04115-00-BR	WABASH	16	4
FED. ROAD DIST. NO. 7		ILLINOIS	FORDICE CREEK	
PROJECT# BROS-0185(039)		CONTRACT# 95802		
HLR JOB # 15.1127		LEC JOB # H141007W		

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ENGINEERING
&
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ENGINEERING
CORPORATION
184-000959



AARON M. MEFFORD
NAME
Aaron M. Mefford
SIGNATURE
3-14-17
DATE
11-30-17
EXPIRES

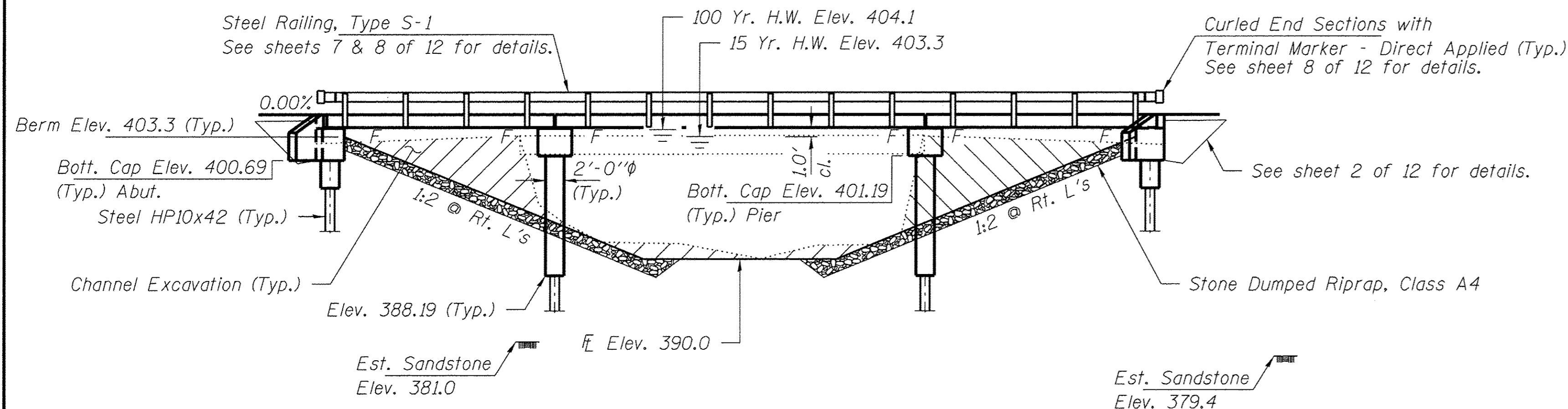
TOWNSHIP ROUTE 101
OVER FORDICE CREEK
WABASH COUNTY, ILLINOIS

SHEET TITLE:
CROSS-SECTIONS
SCALE: 1" = 5'
BY: A.M.M.
DATE: 3/3/17
REV:
4 OF 16 SHEETS
SHEET NO. 4

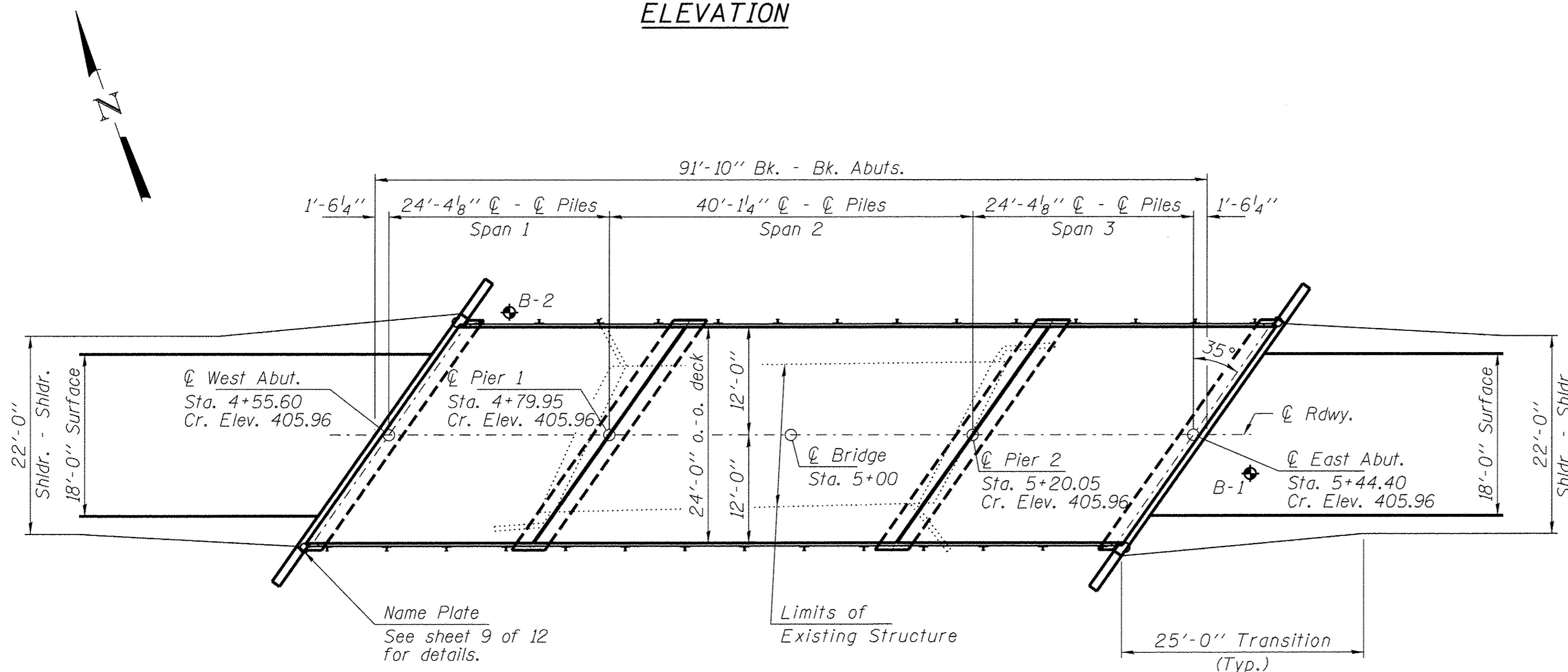
EXISTING STRUCTURE NO. 093-3047: Sta: 4+98 44' long 6" concrete deck on 7-18" I-beams with closed concrete abutments, wingwalls, and concrete slopewall, 25° Lt. skew. 44.0' bk.-bk. abutments, 15.9' o.-o. deck.

Structure closed to traffic during construction.

Steel I-beams to be salvaged during removal. To become property of township.



ELEVATION



PLAN

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	400.6	386.4	386.4	400.6	8
Q500	400.6	387.0	387.0	400.6	
Design	400.6	386.4	386.4	400.6	
Check	400.6	387.0	387.0	400.6	

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2" φ low lax. strands)
fpbt = 201,960 psi (1/2" φ low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.256g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.609g
Soil Site Class = D

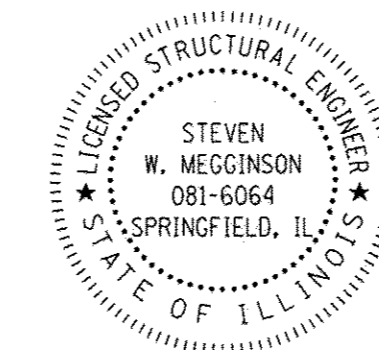
WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	15	2895	392	554.5	403.29				
Base/Max. Calc.	100	4870	385	604.5	404.05	0.03	0.05	404.08	404.10

* Low approach flow to remain

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 03/07/2017
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



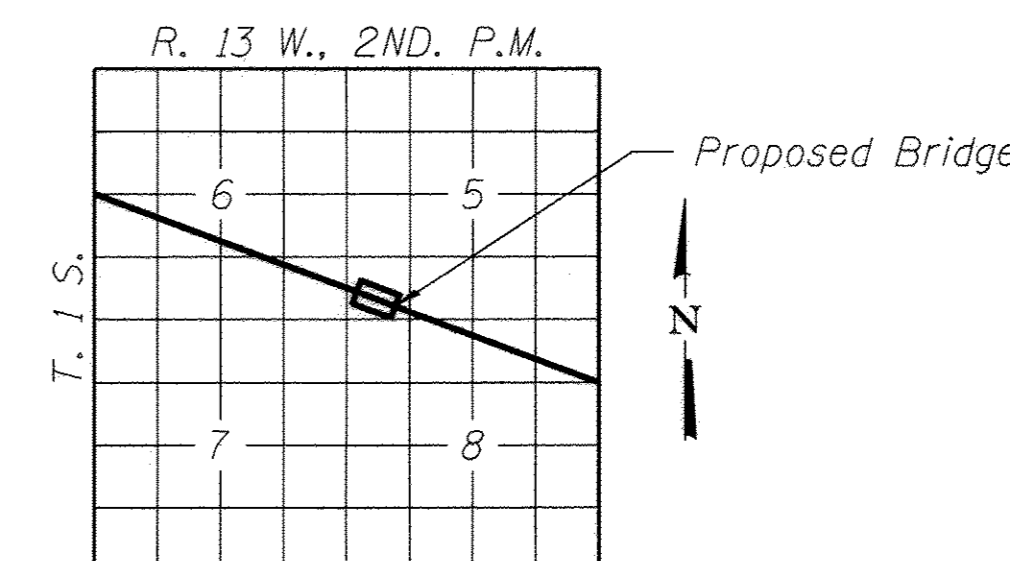
Expires 11-30-2018

GENERAL NOTES

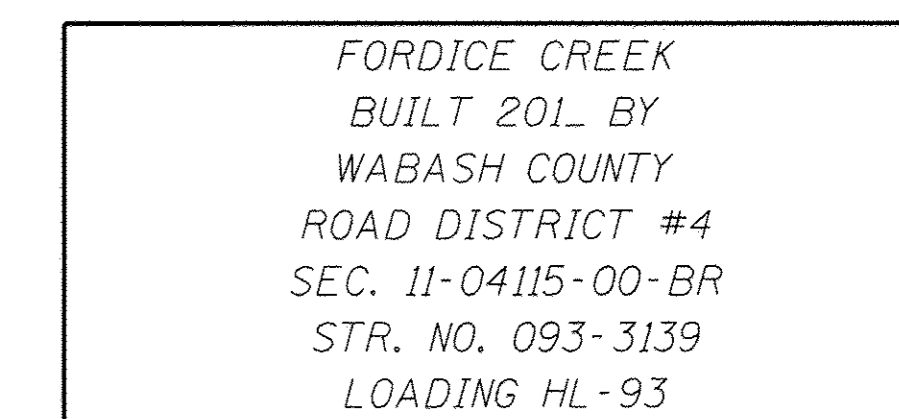
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Reinforcement bars designated (E) shall be epoxy coated.
Excavation required to construct the Abutments and Piers shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
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 IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
Concrete sealer shall be applied to the designated areas of the abutments and piers.
All portions of the existing structure that interfere with proposed construction shall be removed. The cost to complete this work shall be included in the cost of Removal of Existing Structures and no additional compensation will be allowed.

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. Riprap Details
3. 17"x48" PPC Deck Beam - Spans 1 & 3
4. 17"x48" PPC Deck Beam Details - Spans 1 & 3
5. 17"x48" PPC Deck Beam - Span 2
6. 17"x48" PPC Deck Beam Details - Span 2
7. Superstructure Details
8. Steel Railing, Type S-1
9. Abutments
10. Piers
11. HP Pile Details
12. Borings



LOCATION SKETCH



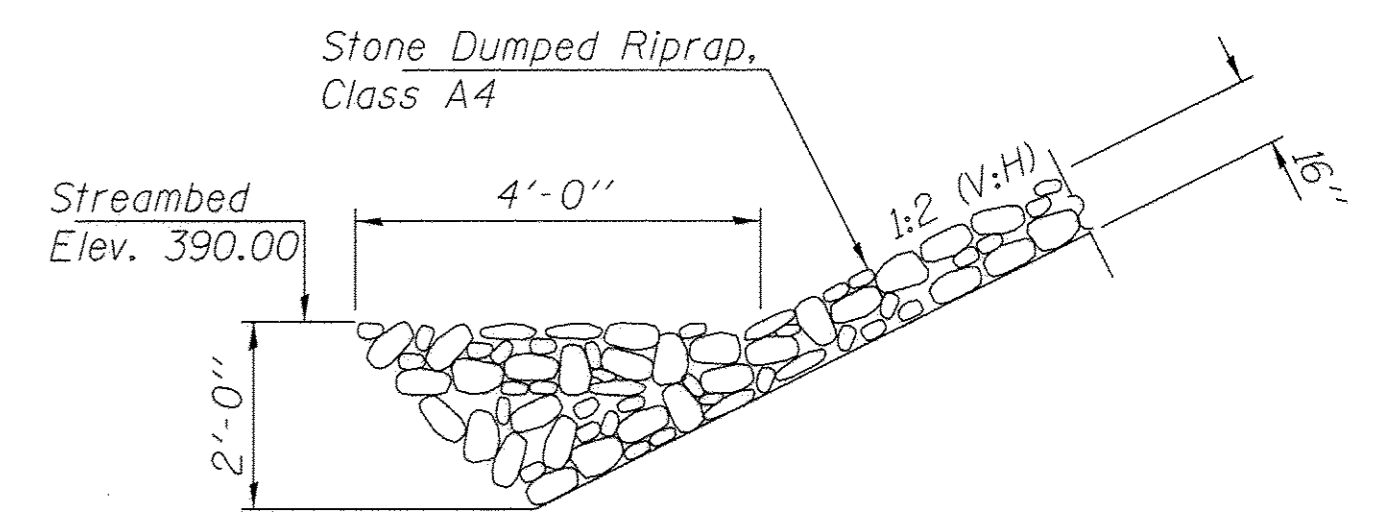
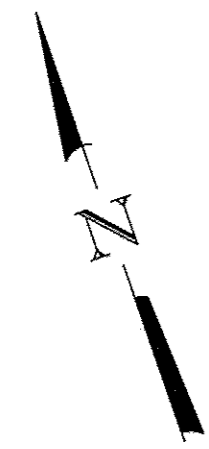
NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

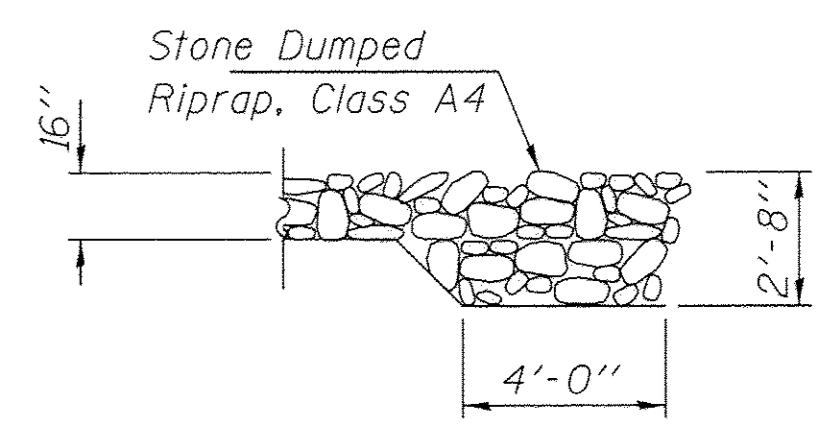
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			215
Stone Dumped Riprap, Class A4	Ton			550
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		48.2	48.2
Concrete Encasement	Cu. Yd.		15.4	15.4
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	2,160		2,160
Reinforcement Bars, Epoxy Coated	Pound		5,330	5,330
Steel Railing, Type S-1	Foot	176		176
Furnishing Steel Piles HP10x42	Foot		480	480
Driving Piles	Foot		240	240
Pile Shoes	Each		8	8
Name Plates	Each		1	1
Concrete Sealer	Sq. Ft.		302	302
Terminal Marker - Direct Applied	Each		4	4
Setting Piles in Rock	Each		8	8

FILE NAME = 148074-shr-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	GENERAL PLAN & ELEVATION STRUCTURE NO. 093-3139 SHEET NO. 1 OF 12 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	5
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000959	PLLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4	CONTRACT NO. 95802		ILLINOIS FED. AID PROJECT	
		CHECKED - S.W.M.	REVISED -							

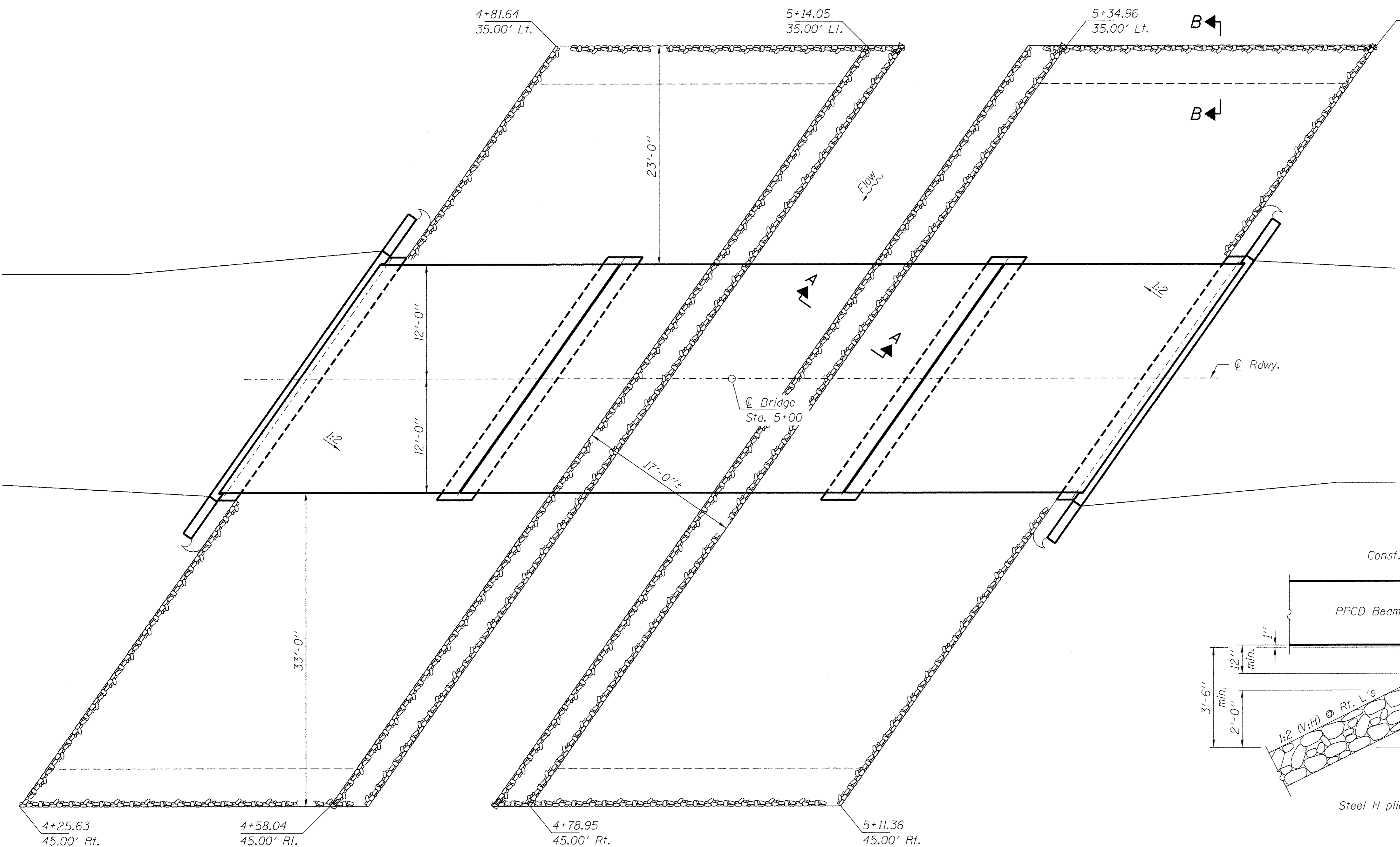


SECTION A-A

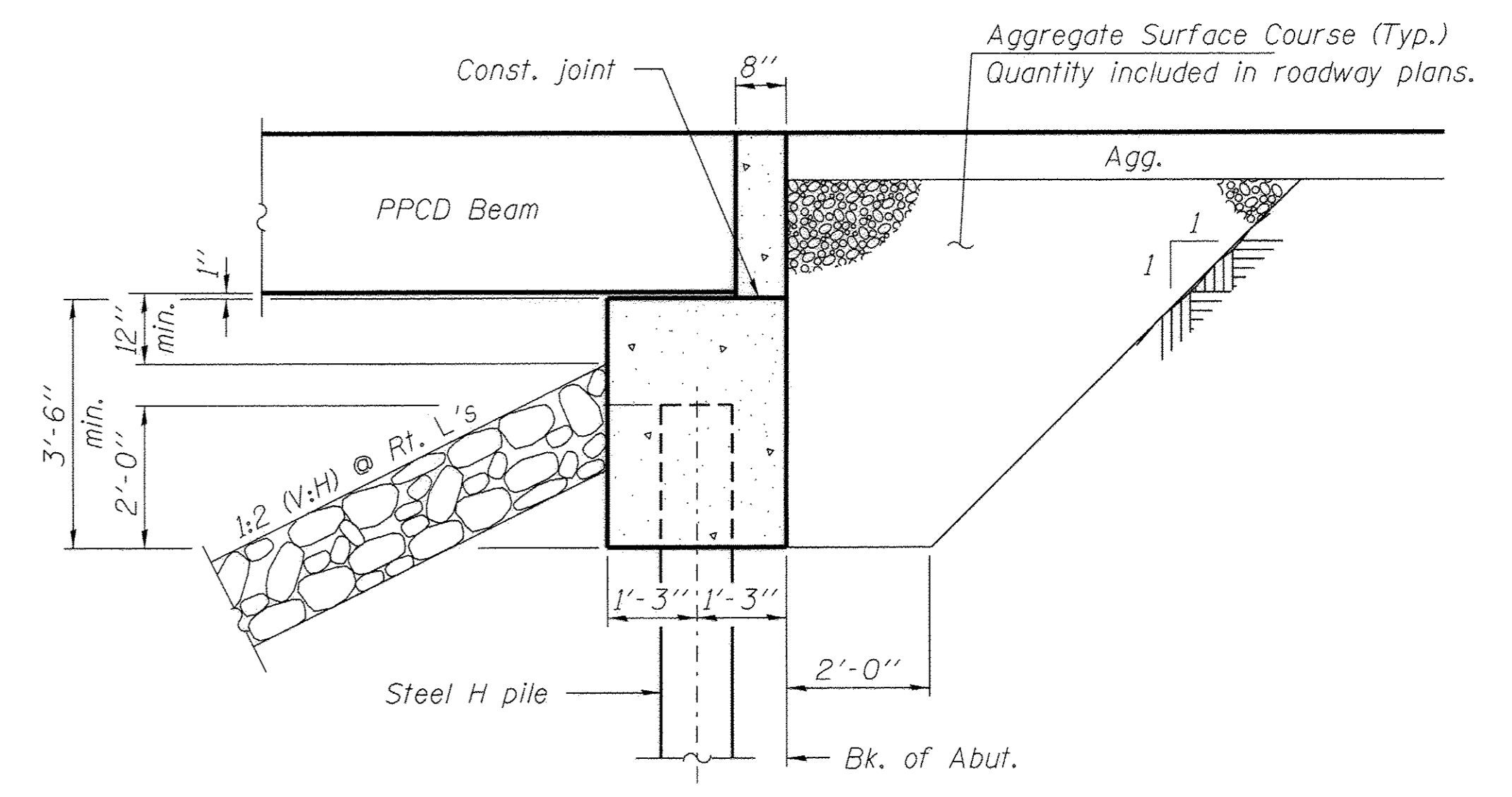
Note: See Special Provisions for Stone Dumped Riprap, Class A4.



SECTION B-B



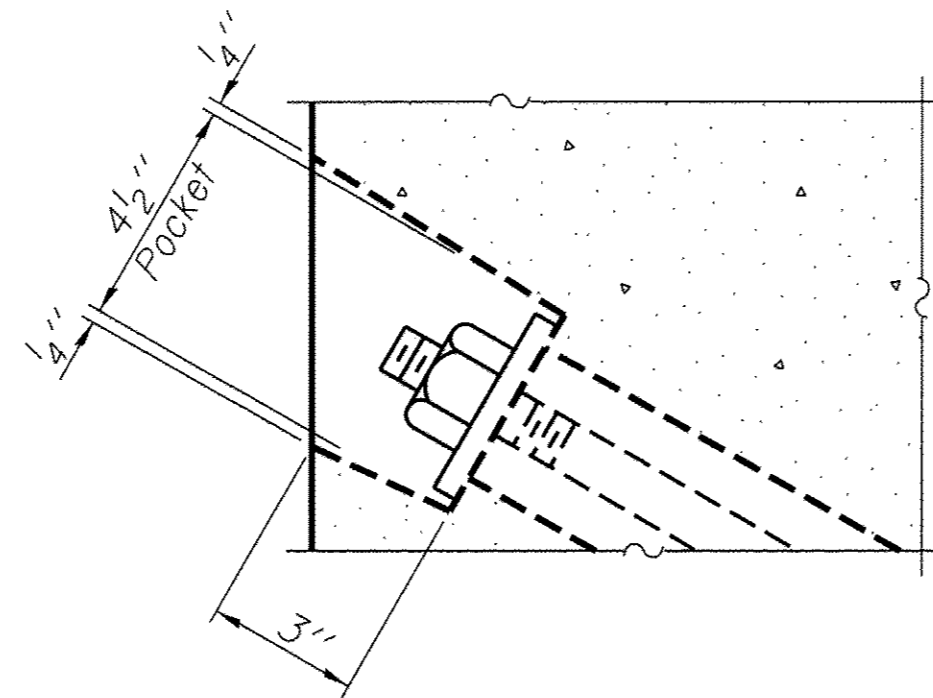
PLAN



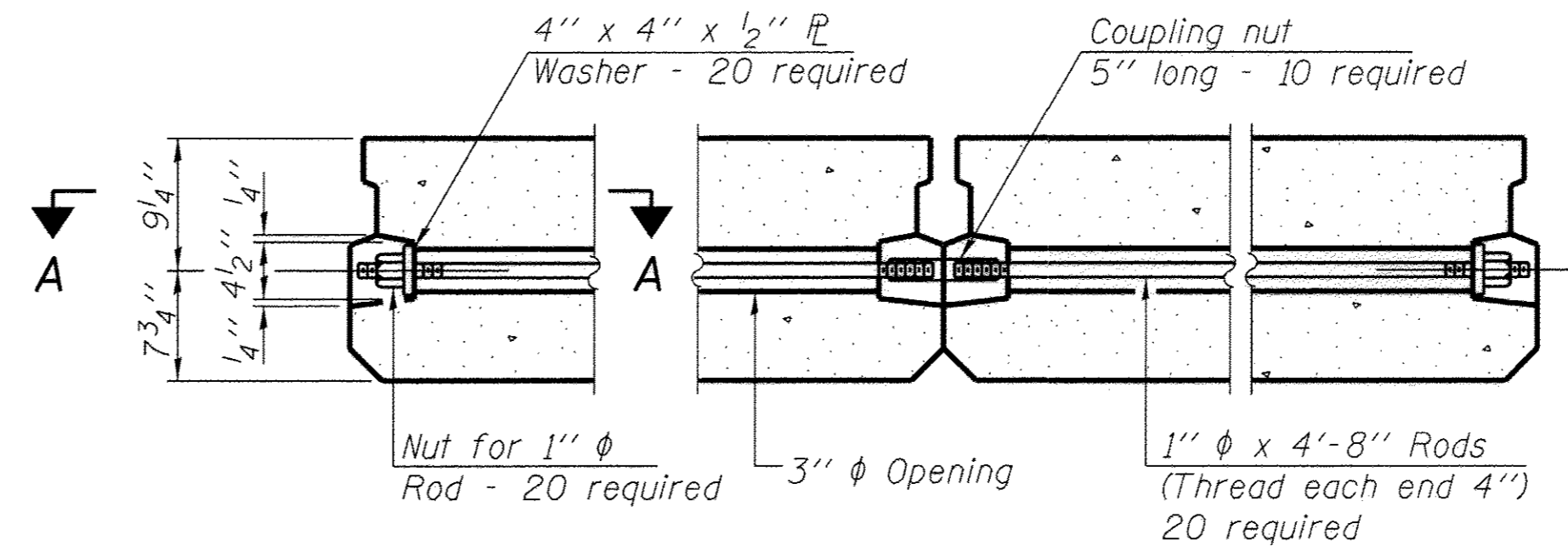
SECTION THRU ABUTMENT

(Horiz. dim. @ Rt. L's)

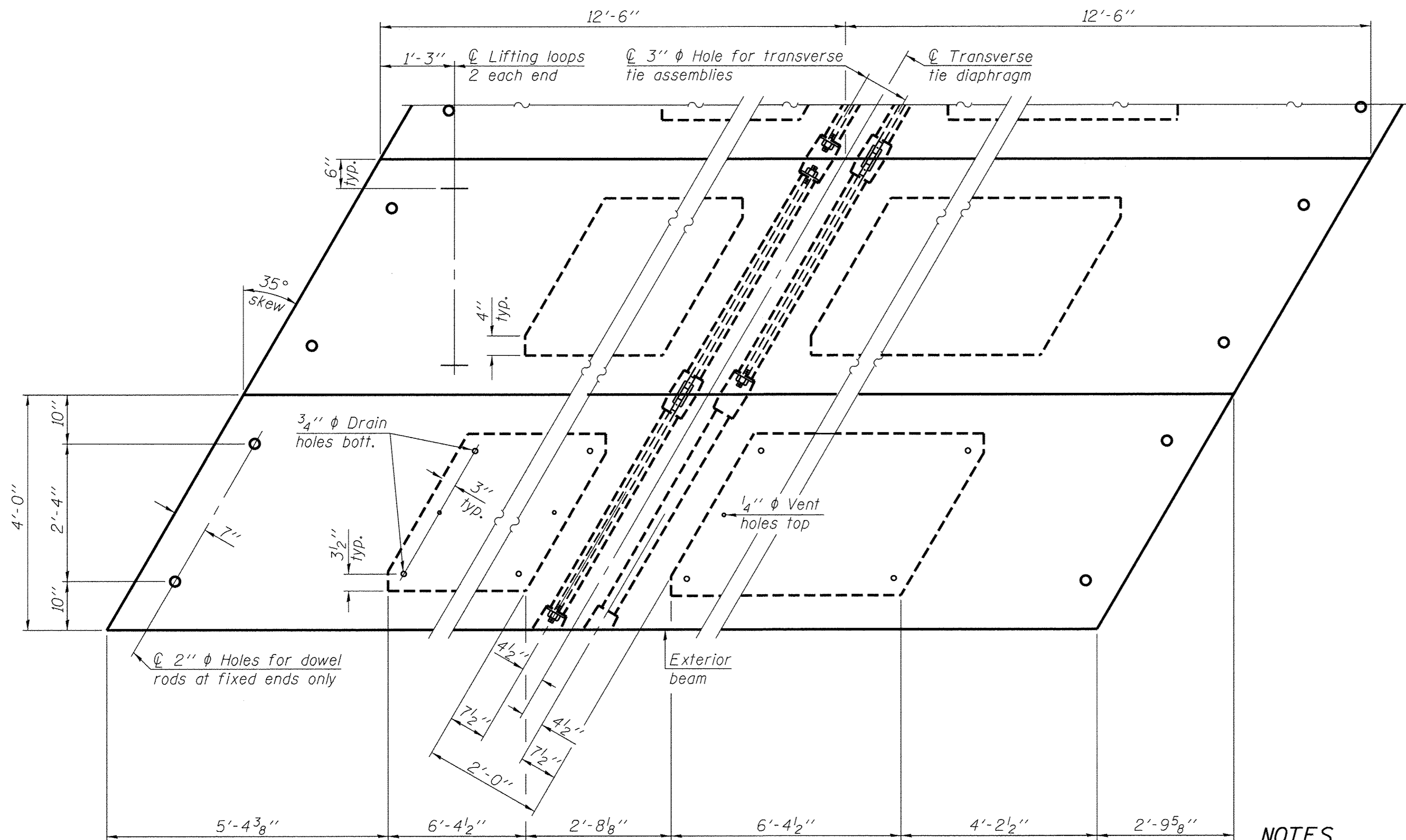
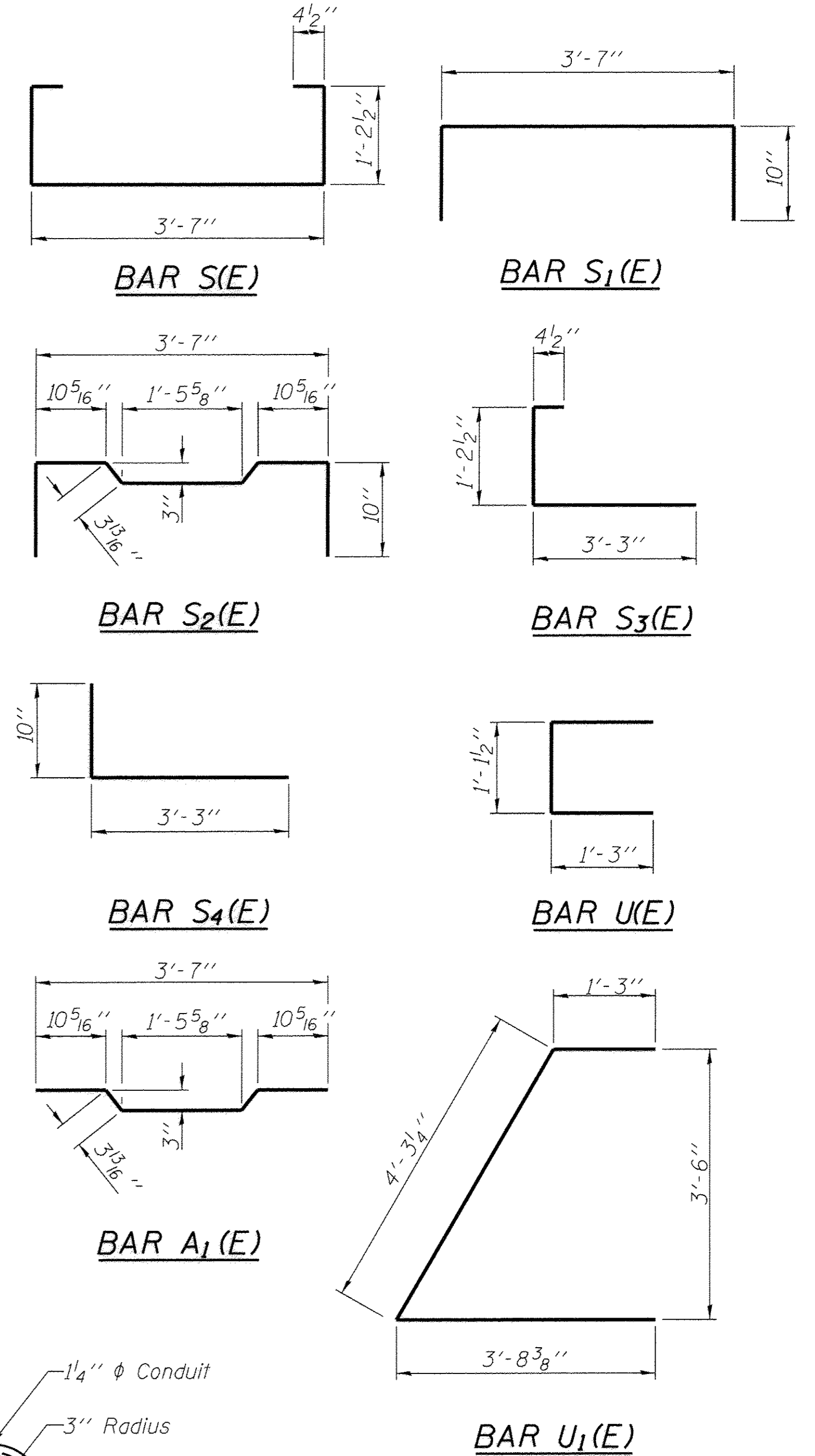
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HAMPTON, LENZINI AND RENWICK, INC. 3985 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	6	
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00999	PLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4		CONTRACT NO. 95802			
		CHECKED - S.W.M.	REVISED -			SHEET NO. 2 OF 12 SHEETS		[ILLINOIS] FED. AID PROJECT			



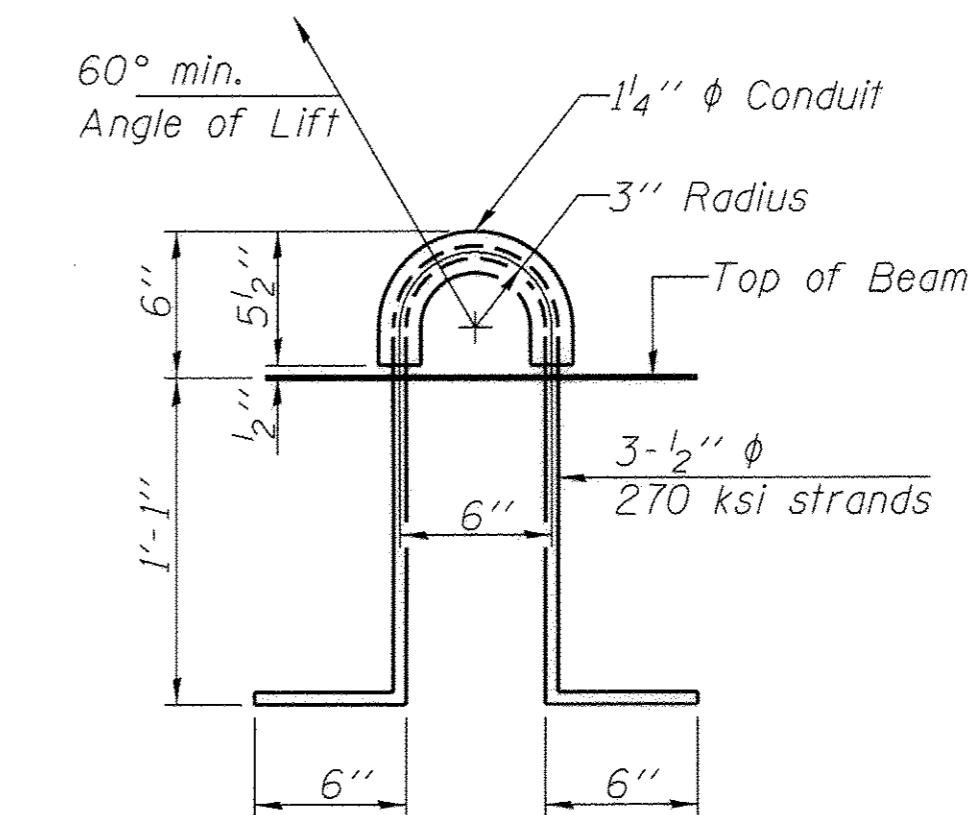
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,200
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Note: Connect beams in pairs with the transverse tie configuration shown.

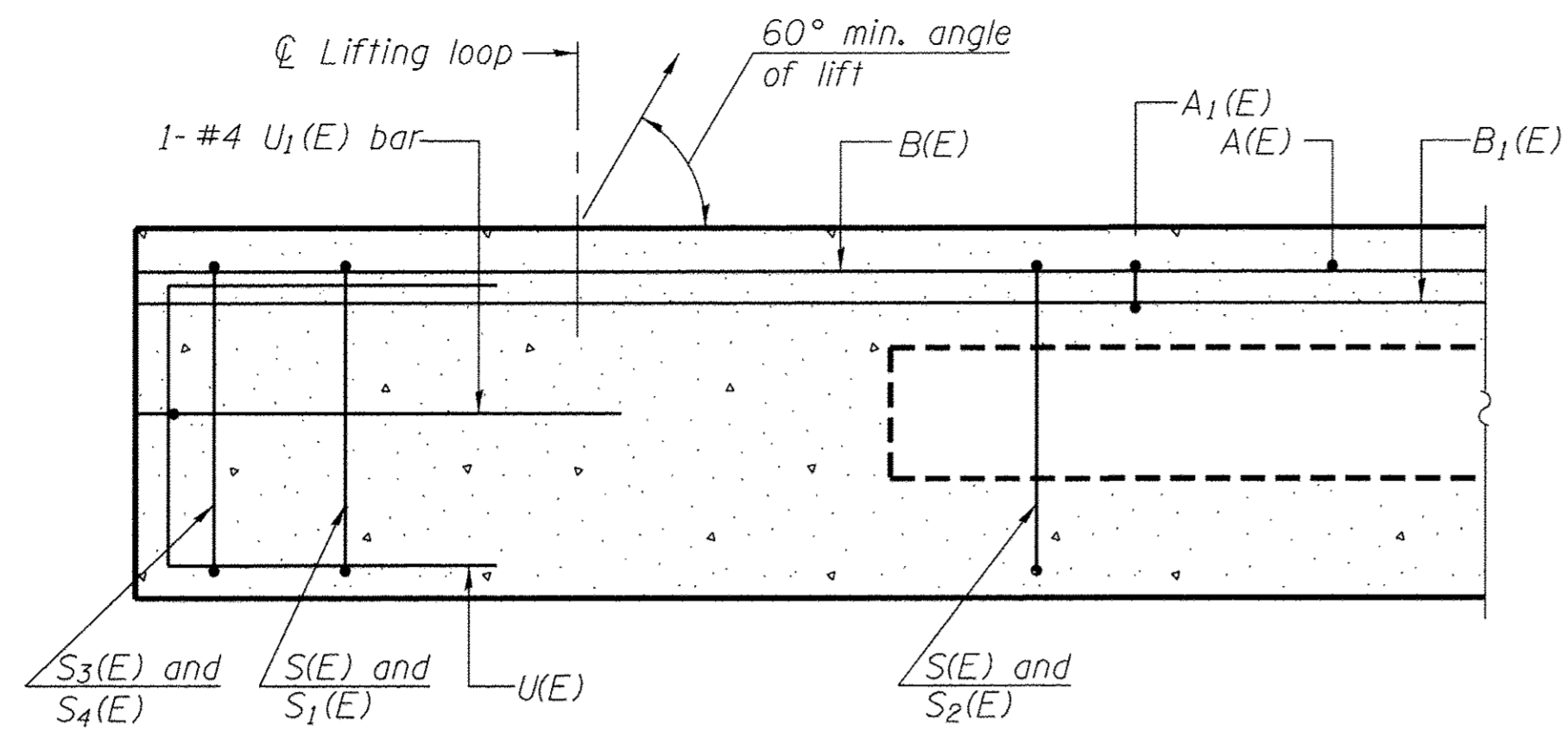
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Reinforcement bars designated (E) shall be epoxy coated.

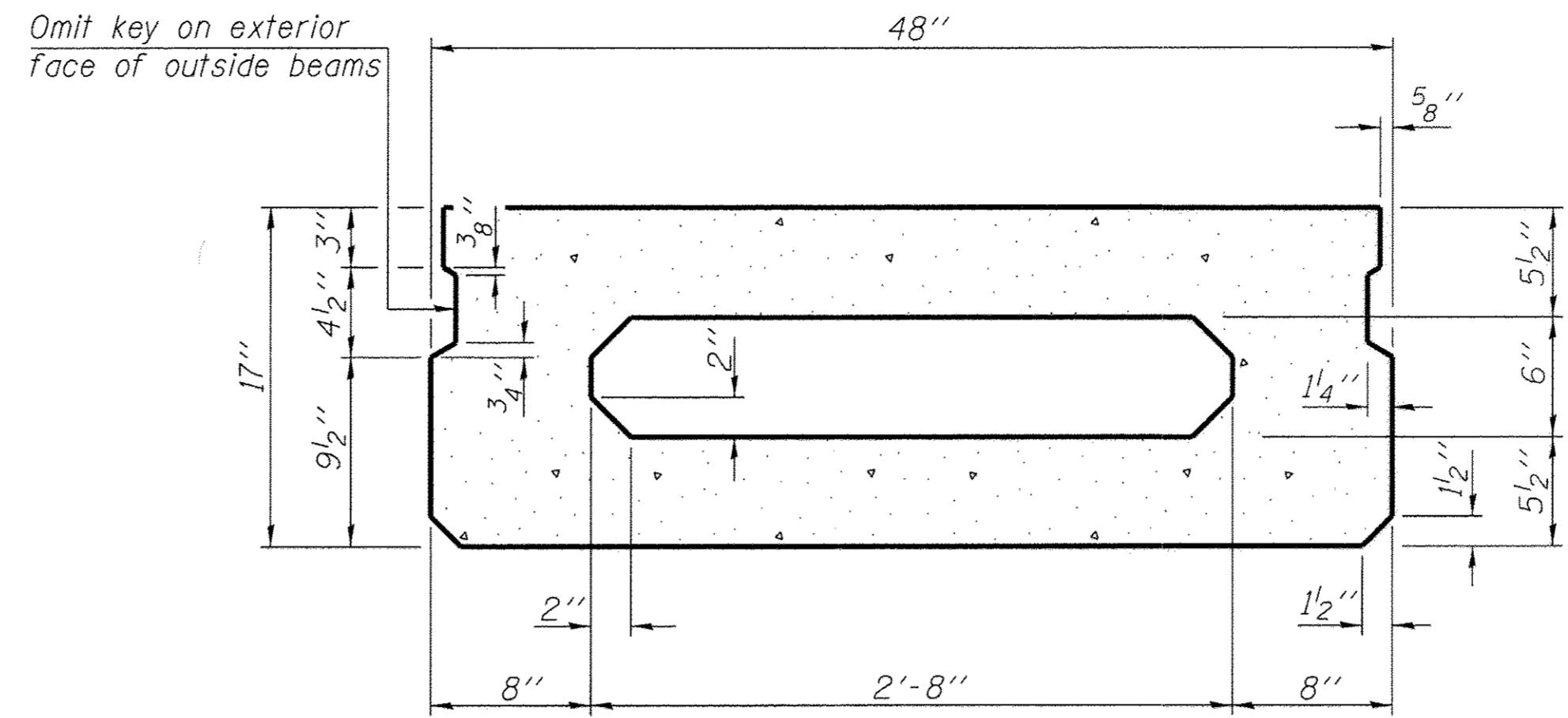
PD-1748-LD

6-01-16

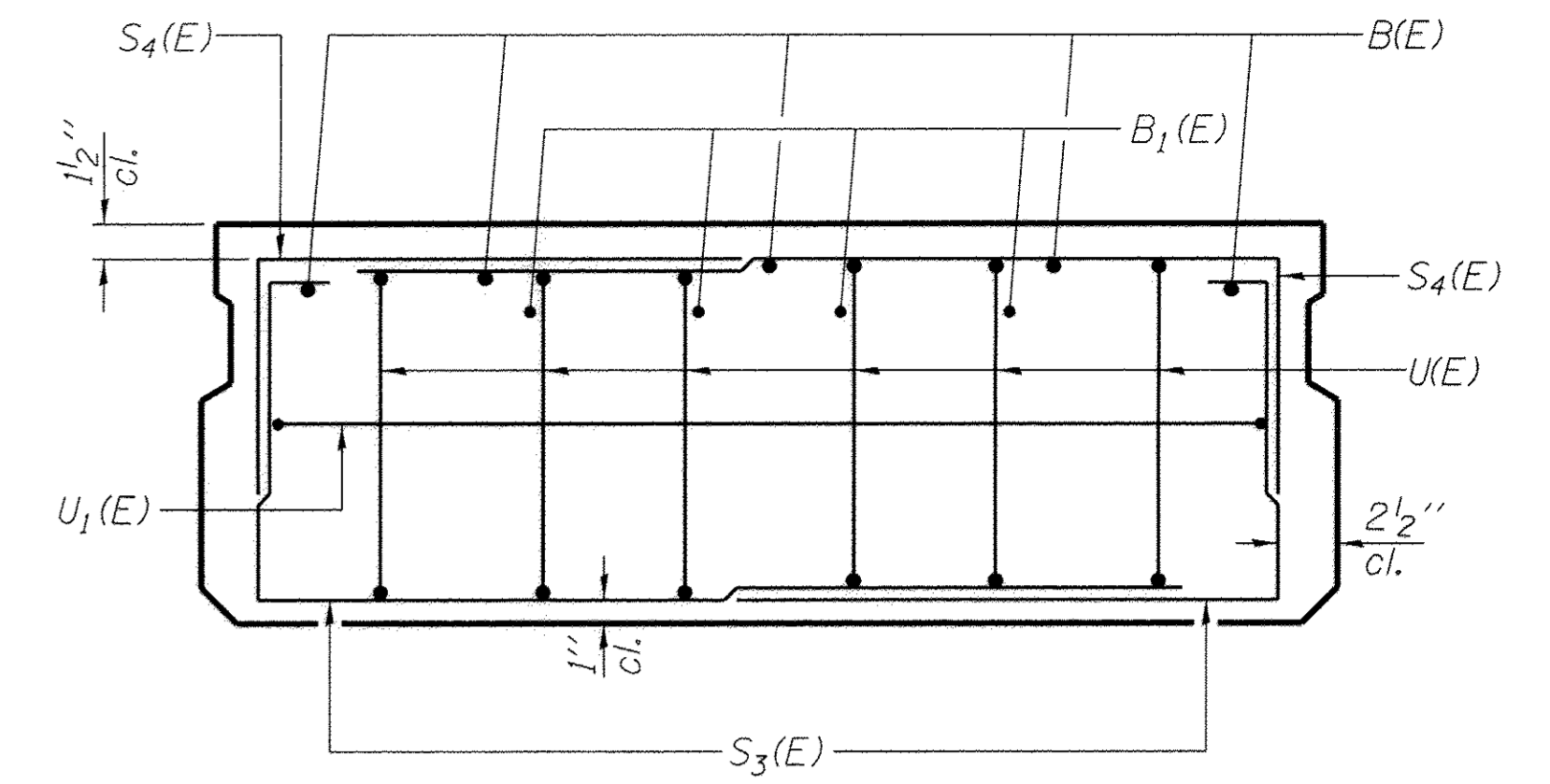
FILE NAME = 140874-sht-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM DETAILS - SPANS 1 & 3 STRUCTURE NO. 093-3139	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	8		
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000299	PLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4	CONTRACT NO. 95802					
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT						
SHEET NO. 4 OF 12 SHEETS												



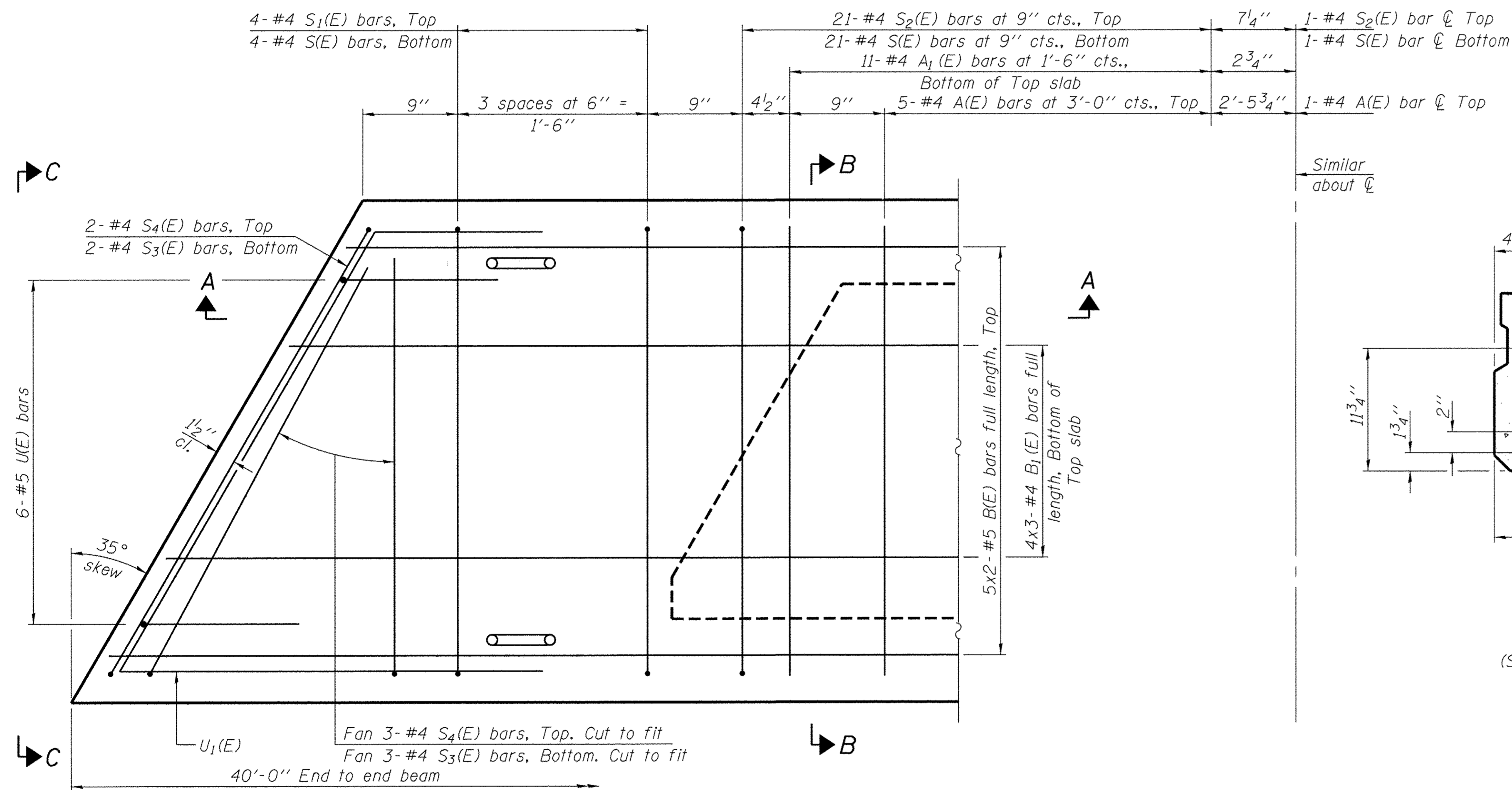
SECTION A-A



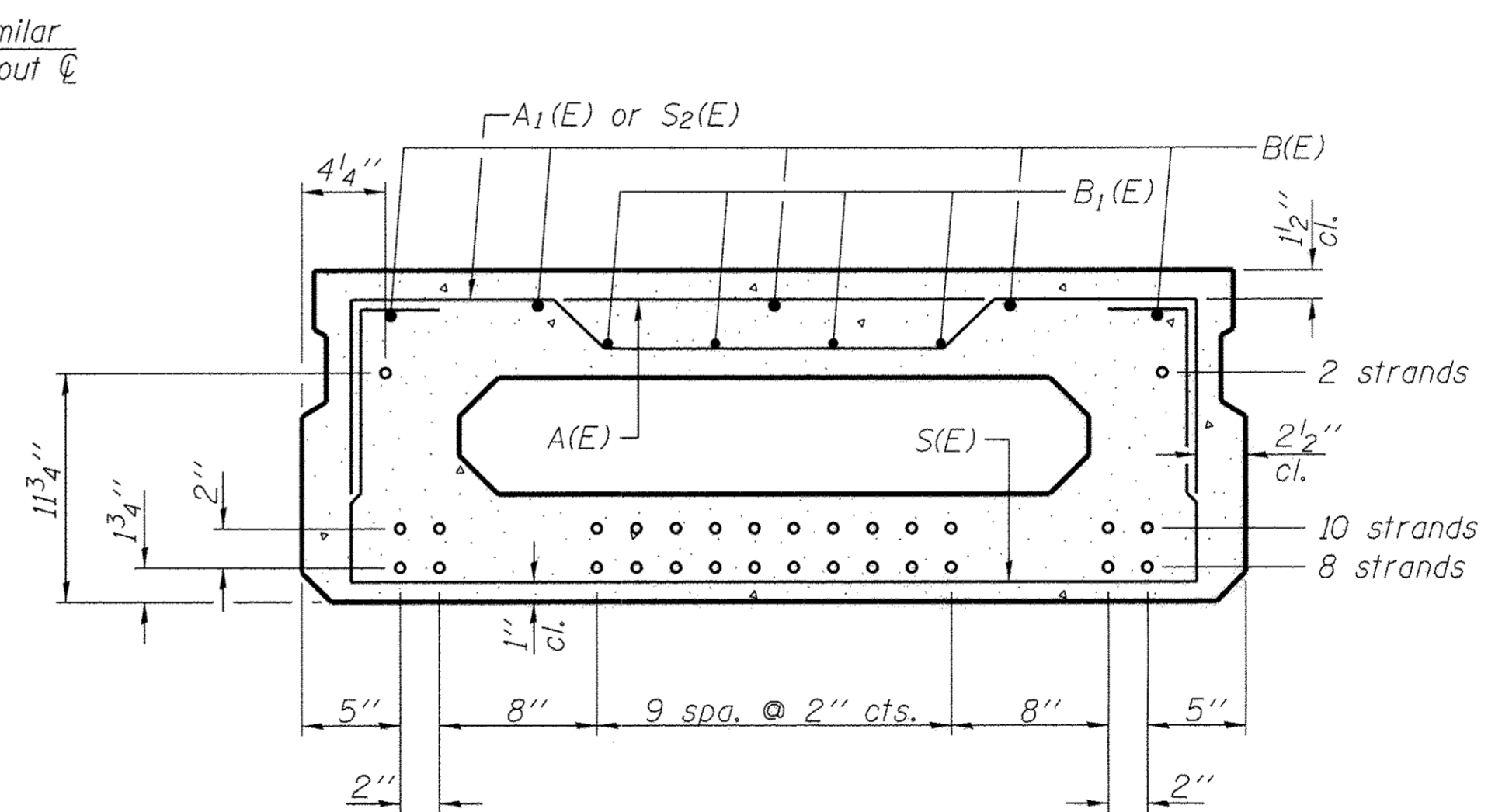
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	11	#4	3'-7"	—
A1(E)	22	#4	3'-10"	~
B(E)	10	#5	21'-2"	—
B1(E)	12	#4	14'-7"	—
S(E)	51	#4	6'-9"	⌈
S1(E)	8	#4	5'-3"	⌈
S2(E)	43	#4	5'-6"	⌈
S3(E)	10	#4	4'-10"	⌈
S4(E)	10	#4	4'-1"	⌈
U(E)	12	#5	3'-8"	⌈
U1(E)	2	#4	9'-3"	⌈

Note: See sheet 6 & 7 of 12 for additional details and Bill of Material.

MINIMUM BAR LAP

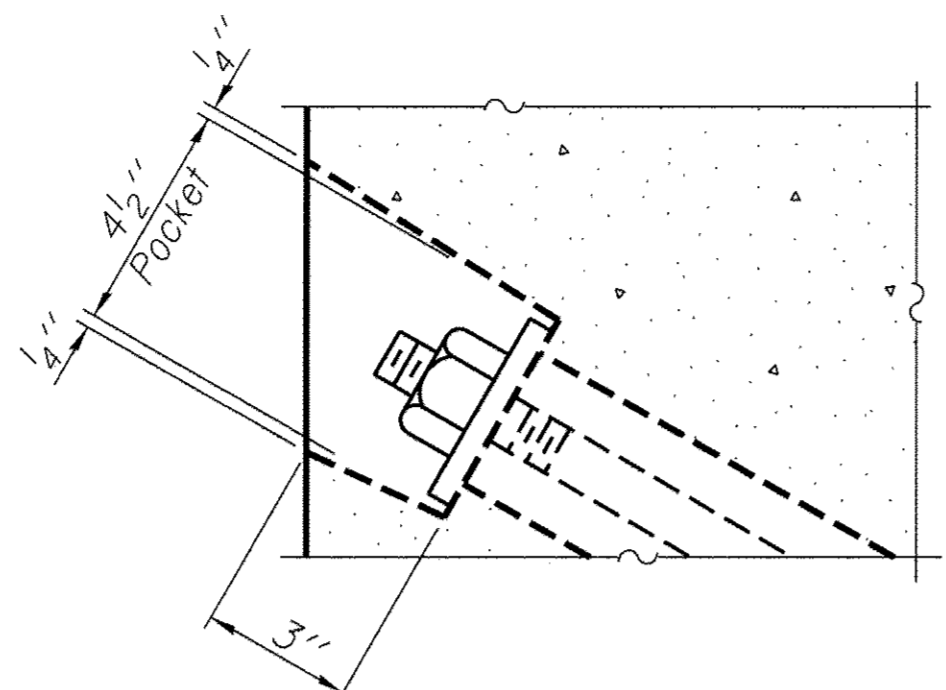
#4 bar = 1'-11"
#5 bar = 2'-6"

Notes:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

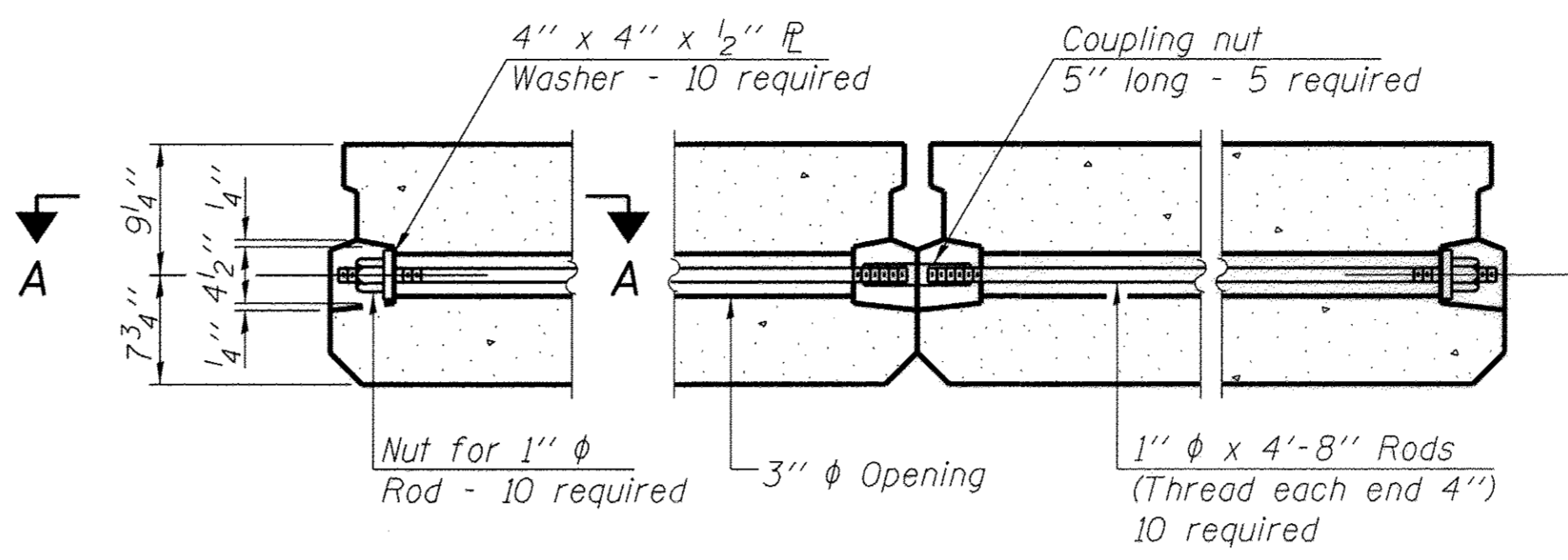
PD-1748-L

06-01-16

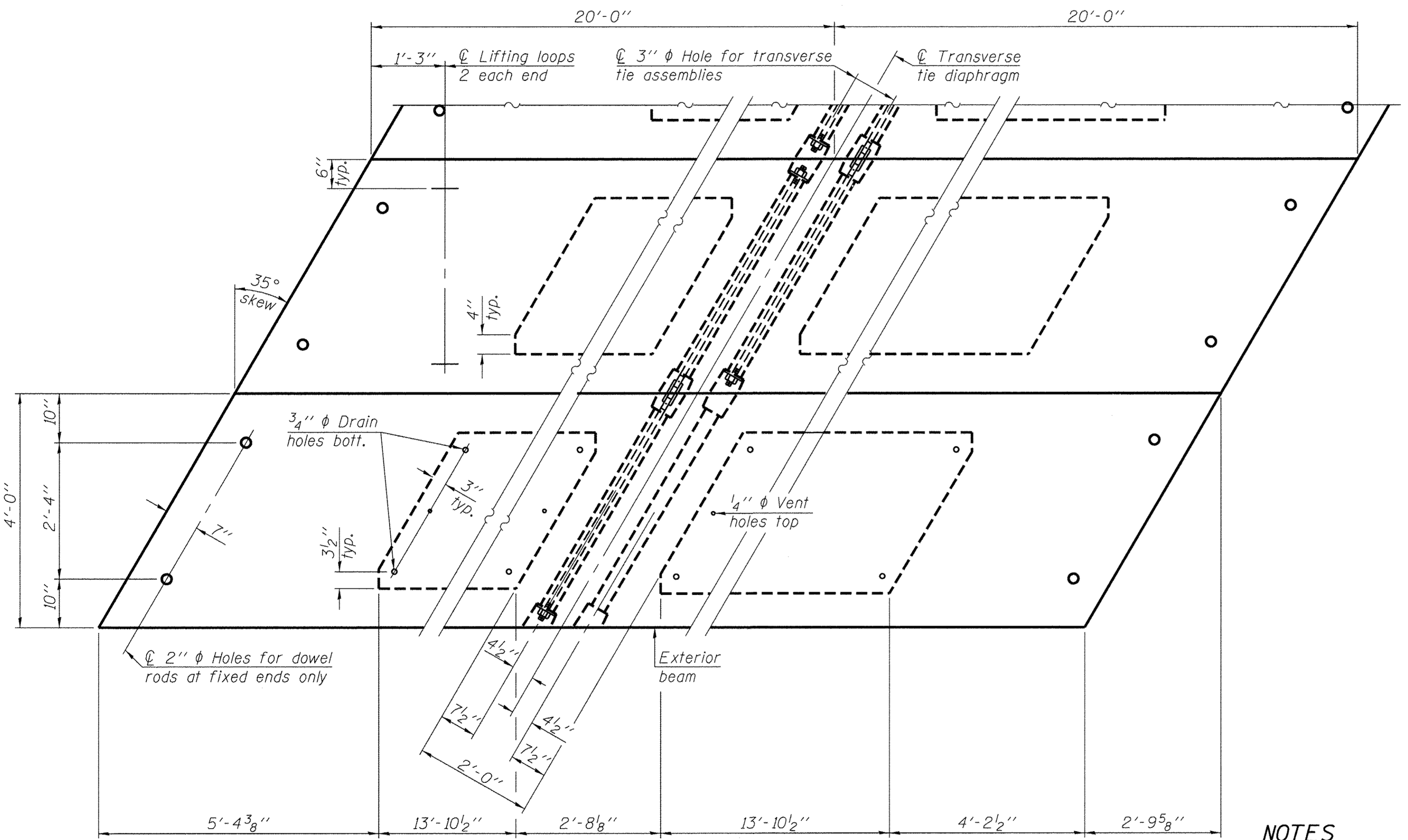
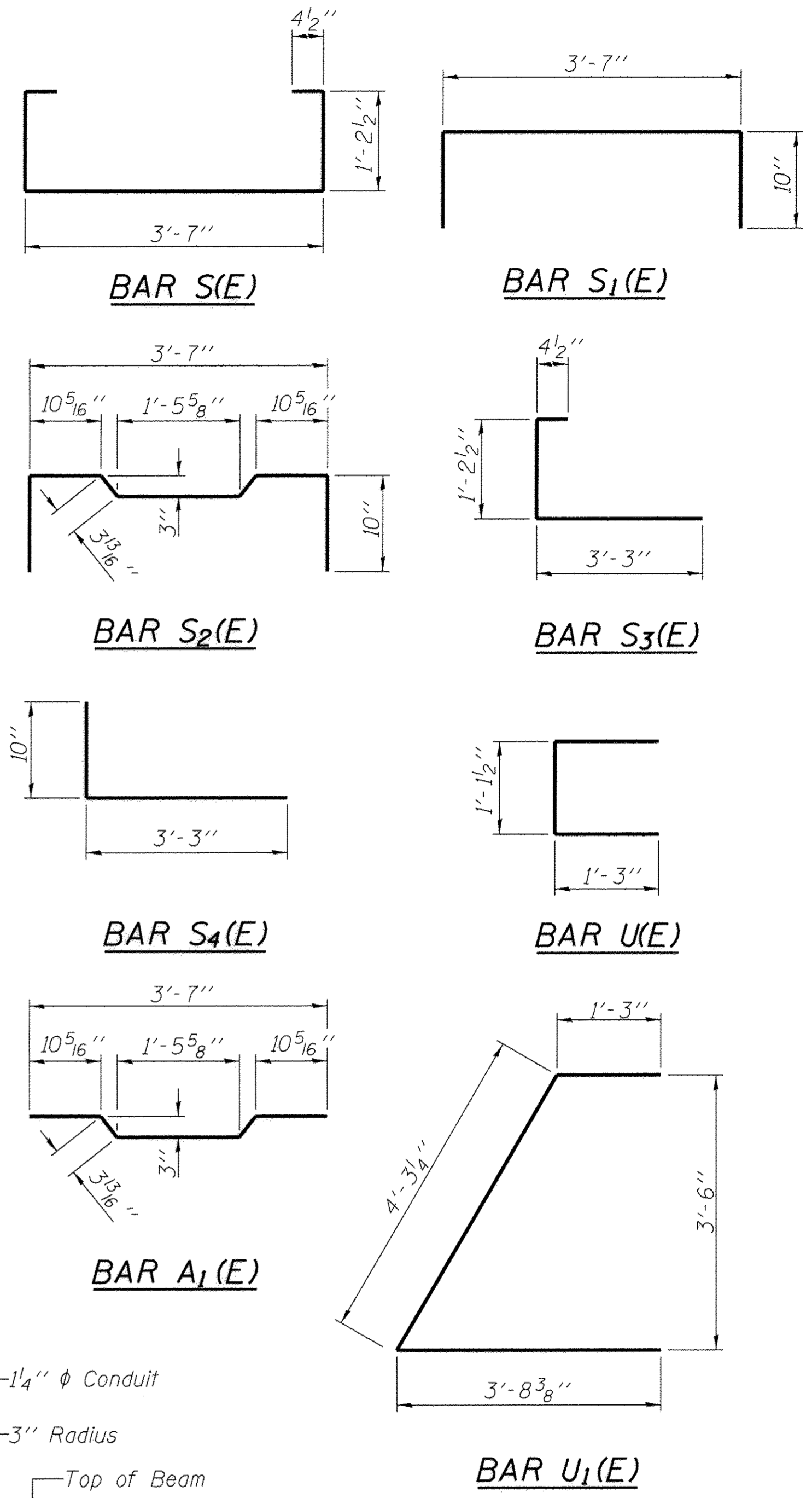
FILE NAME = 140074-sht-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM - SPAN 2 STRUCTURE NO. 093-3139	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	9	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4	CONTRACT NO. 95802				
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT					



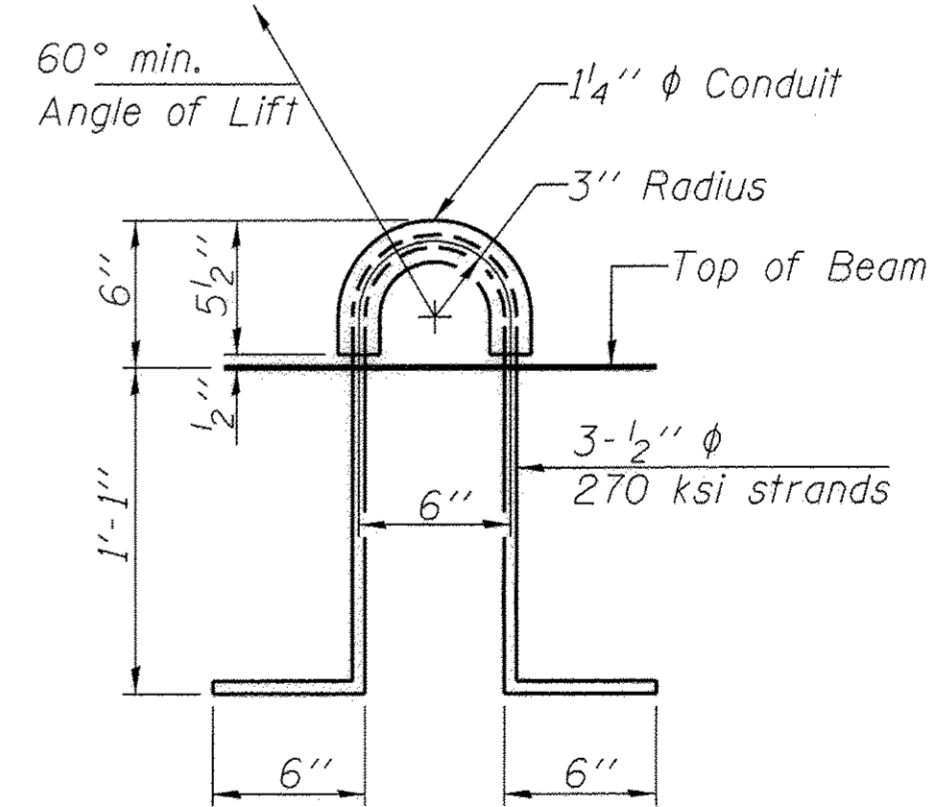
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, $f'c$, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, $f'ci$, shall be 5000 psi.
- Reinforcement bars designated (E) shall be epoxy coated.

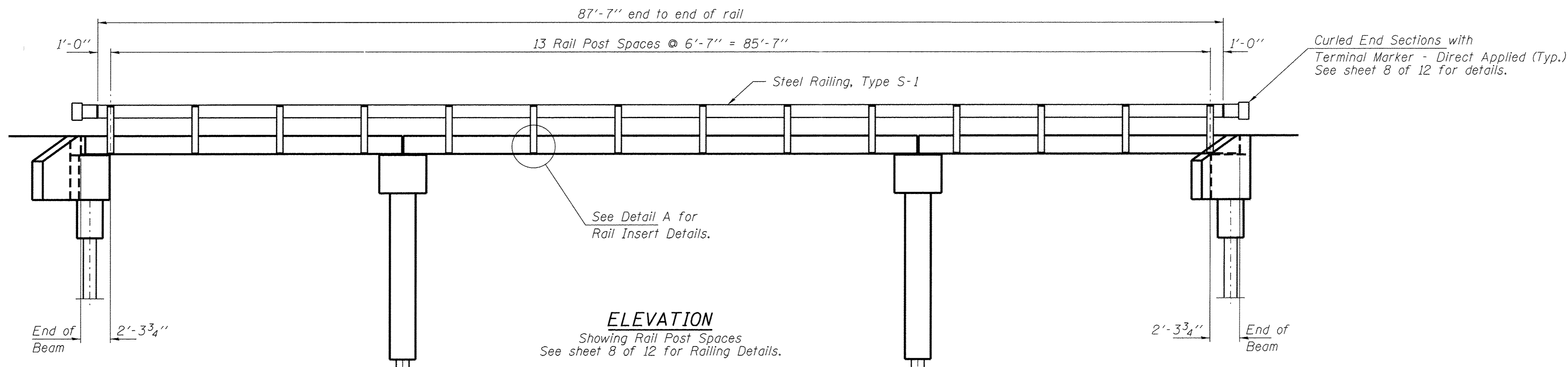
Note: Connect beams in pairs with the transverse tie configuration shown.

BILL OF MATERIAL

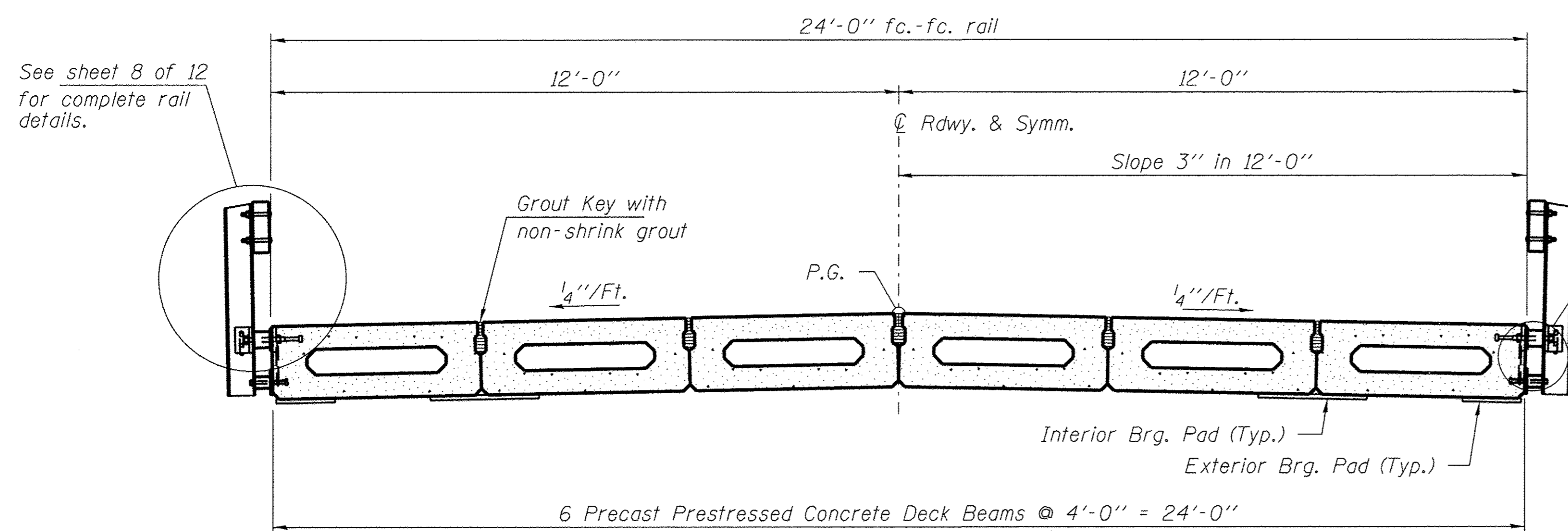
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	960
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PD-1748-LD 6-01-16

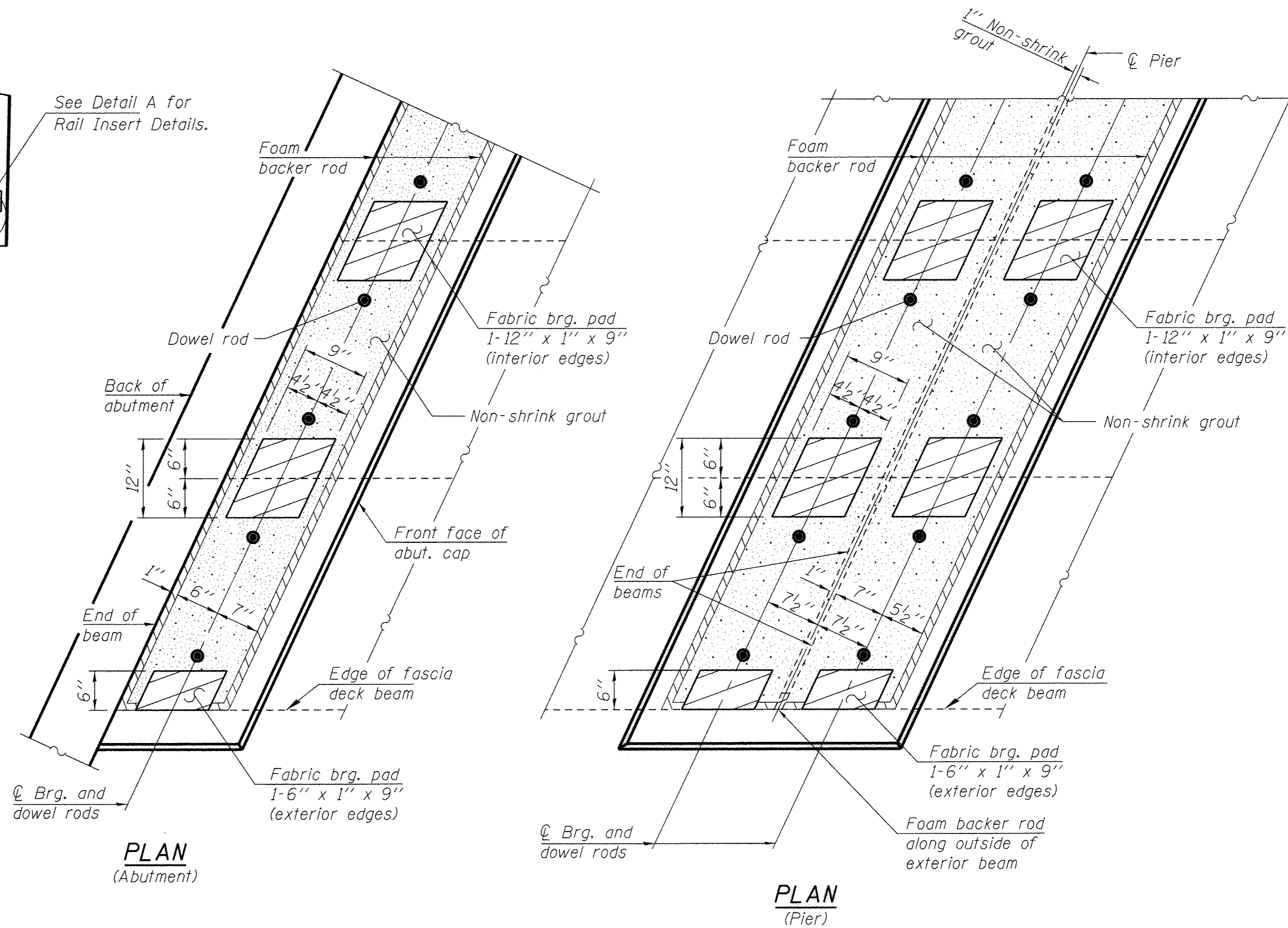
FILE NAME = 148874-sht-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM DETAILS - SPAN 2 STRUCTURE NO. 093-3139	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	10	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000959	PLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4	CONTRACT NO. 95802				
		CHECKED - S.W.M.	REVISED -			SHEET NO. 6 OF 12 SHEETS		ILLINOIS FED. AID PROJECT			



ELEVATION
Showing Rail Post Spaces
See sheet 8 of 12 for Railing Details.

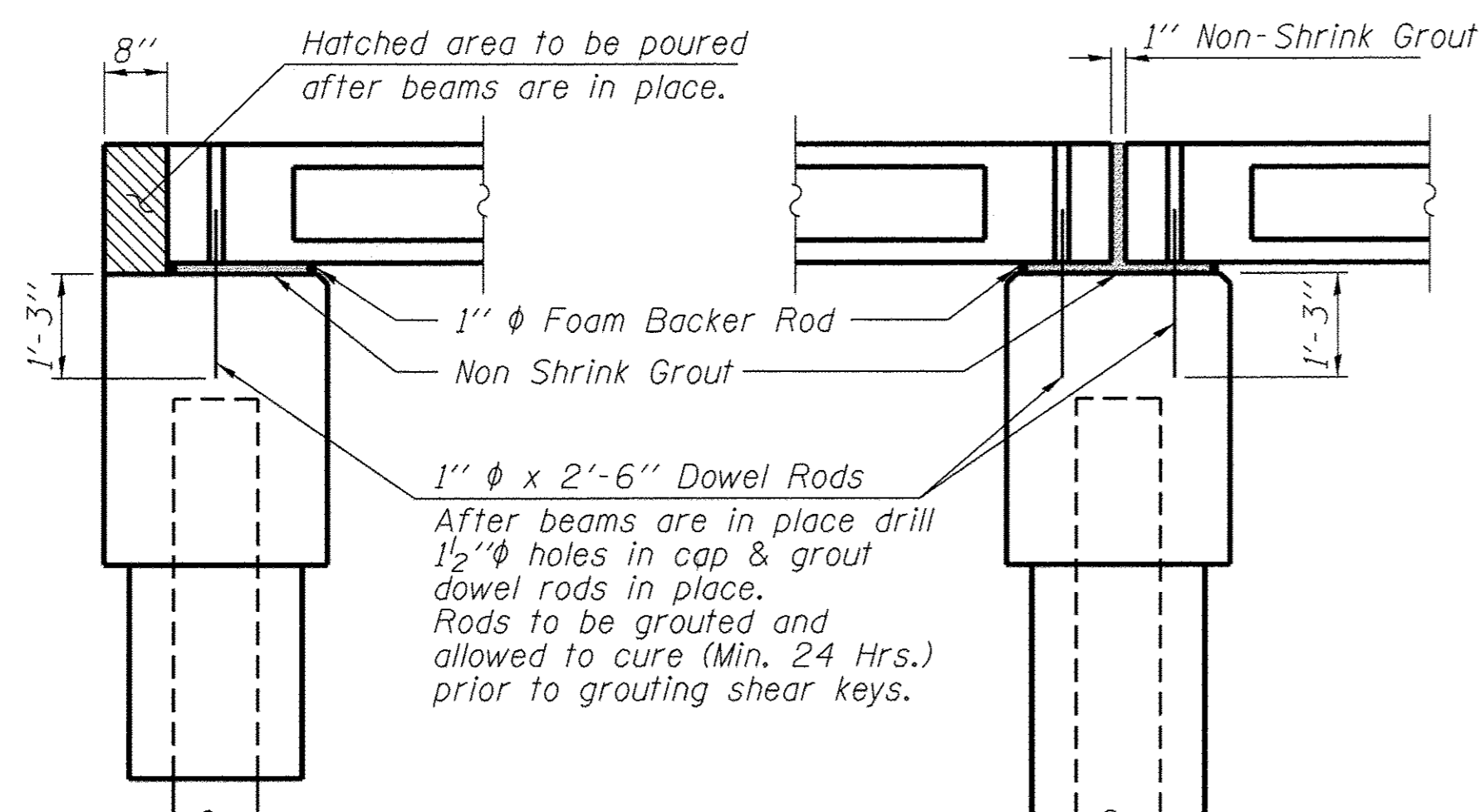


CROSS SECTION
See sheets 3 thru 6 of 12 for Superstructure.



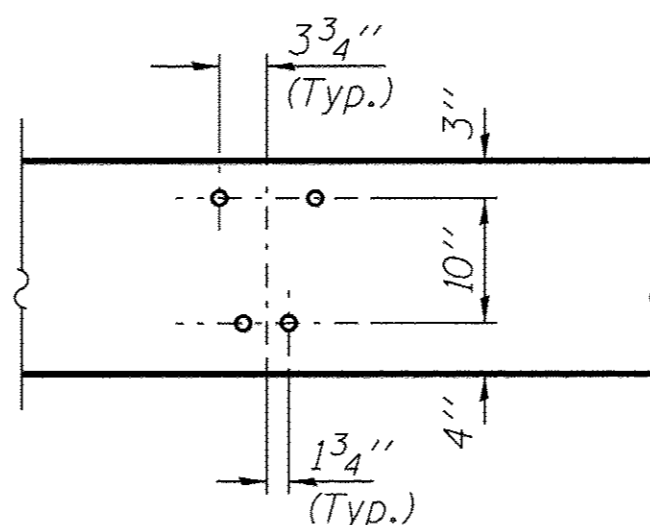
PLAN
(Abutment)

PLAN
(Pier)



SECTION AT ABUTMENTS
© Rt. L's

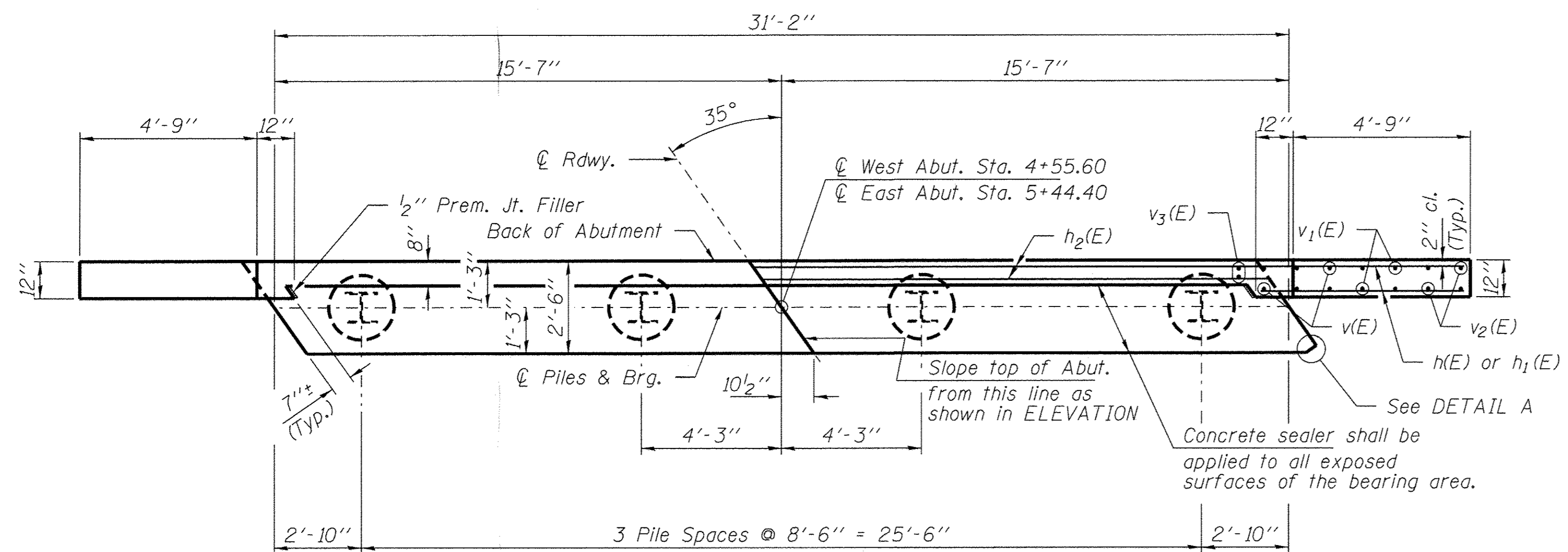
SECTION AT PIERS
© Rt. L's



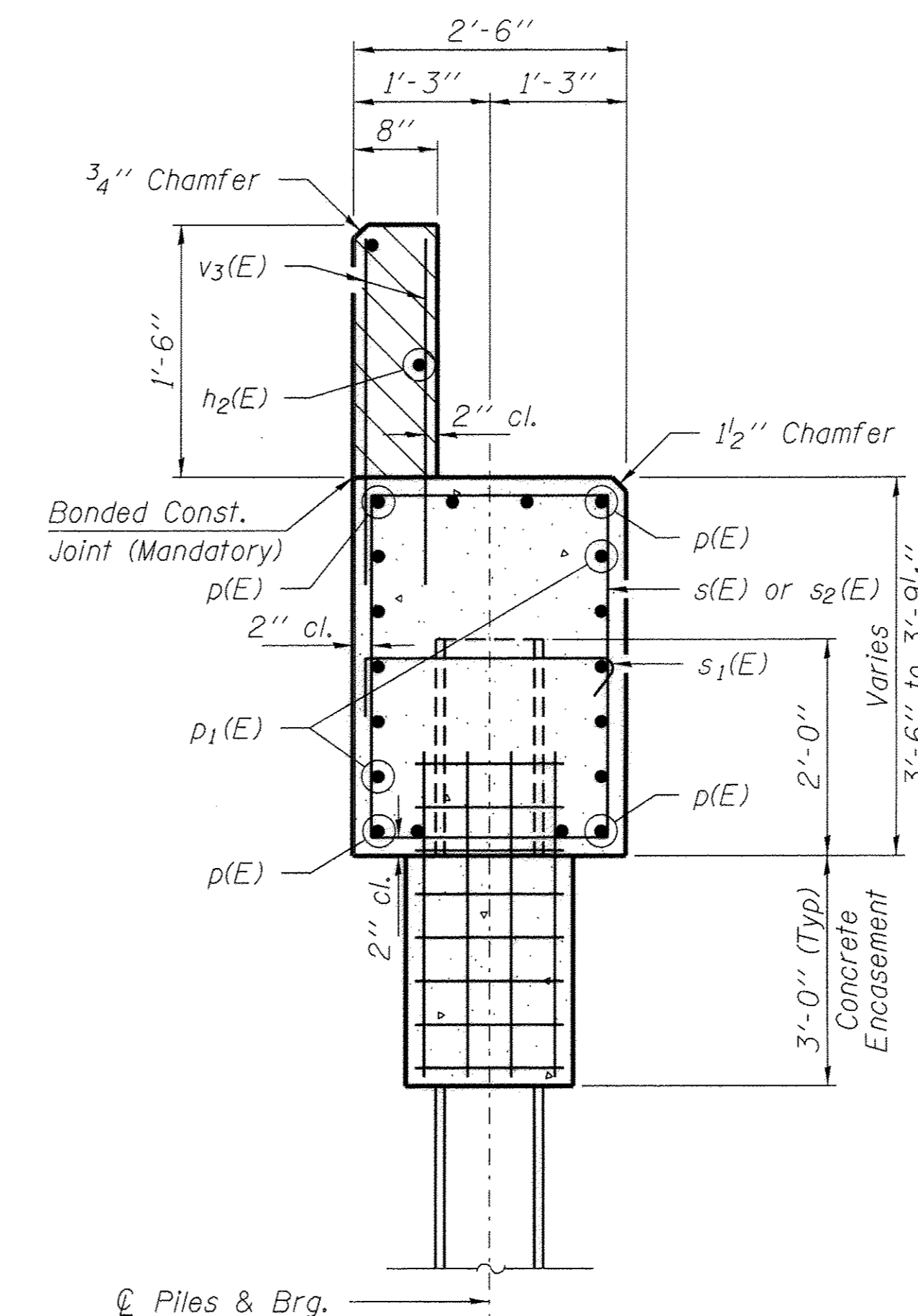
DETAIL A

Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

FILE NAME = 140074-shr-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 093-3139	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3098 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	11	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184 00999	PLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4		CONTRACT NO. 95802		ILLINOIS FED. AID PROJECT	
		CHECKED - S.W.M.	REVISED -			SHEET NO. 7 OF 12 SHEETS					

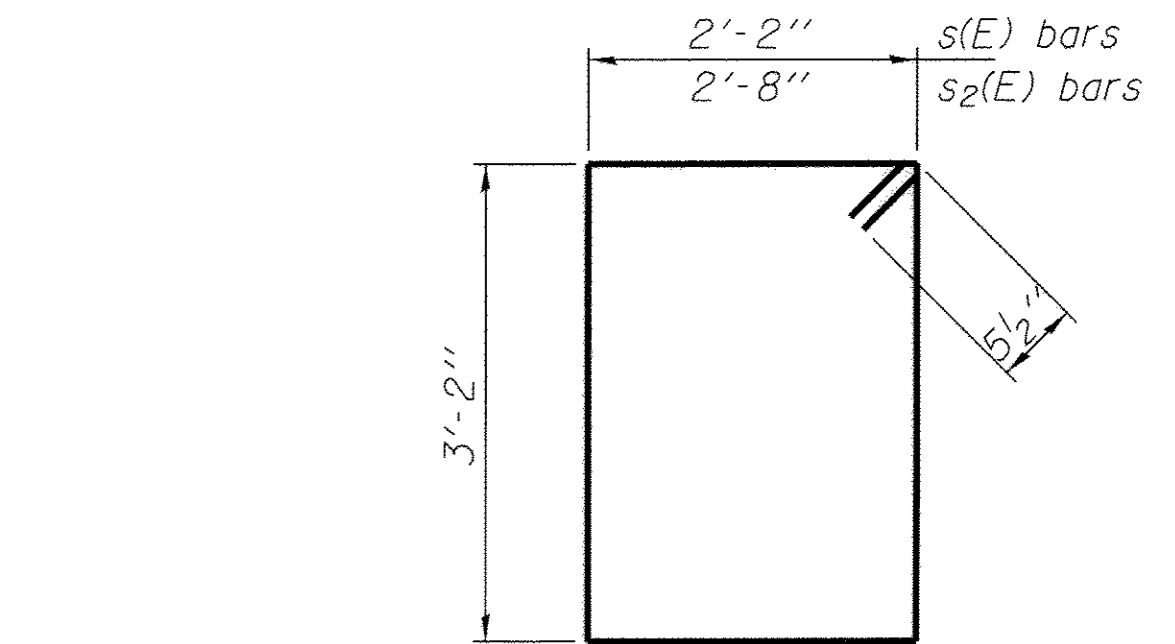


PLAN

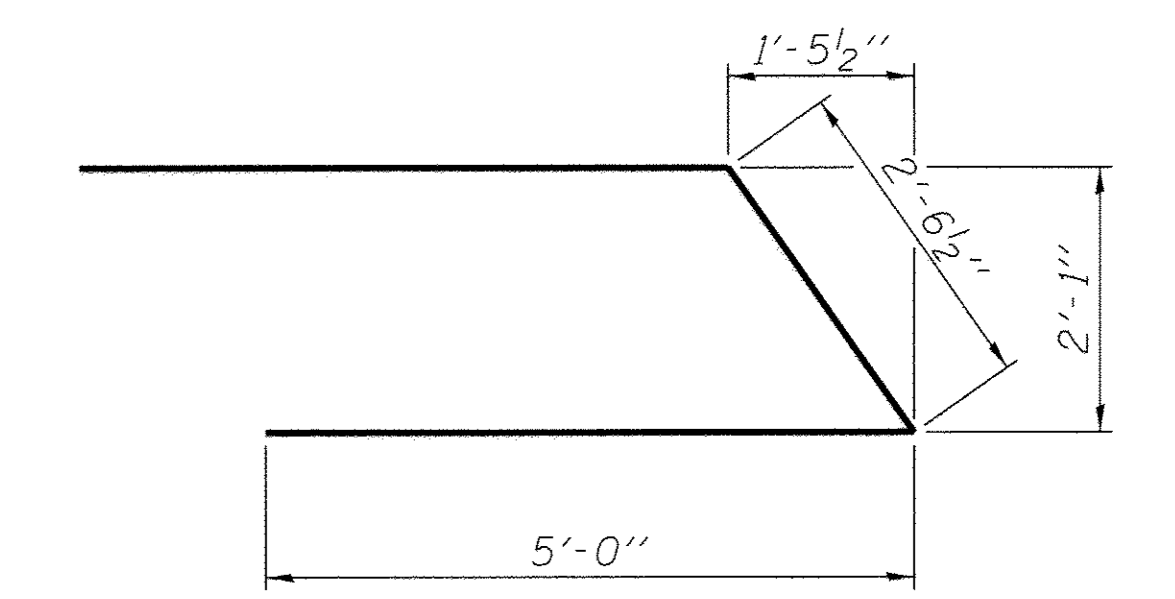


SECTION A-A

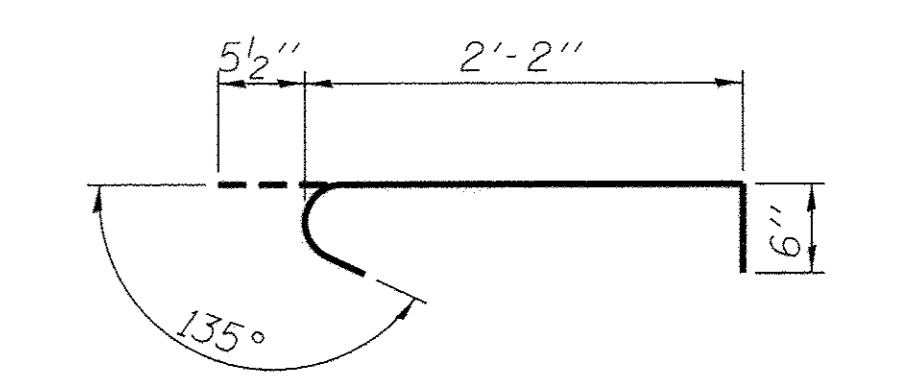
Hatched area to be poured after beams are in place.



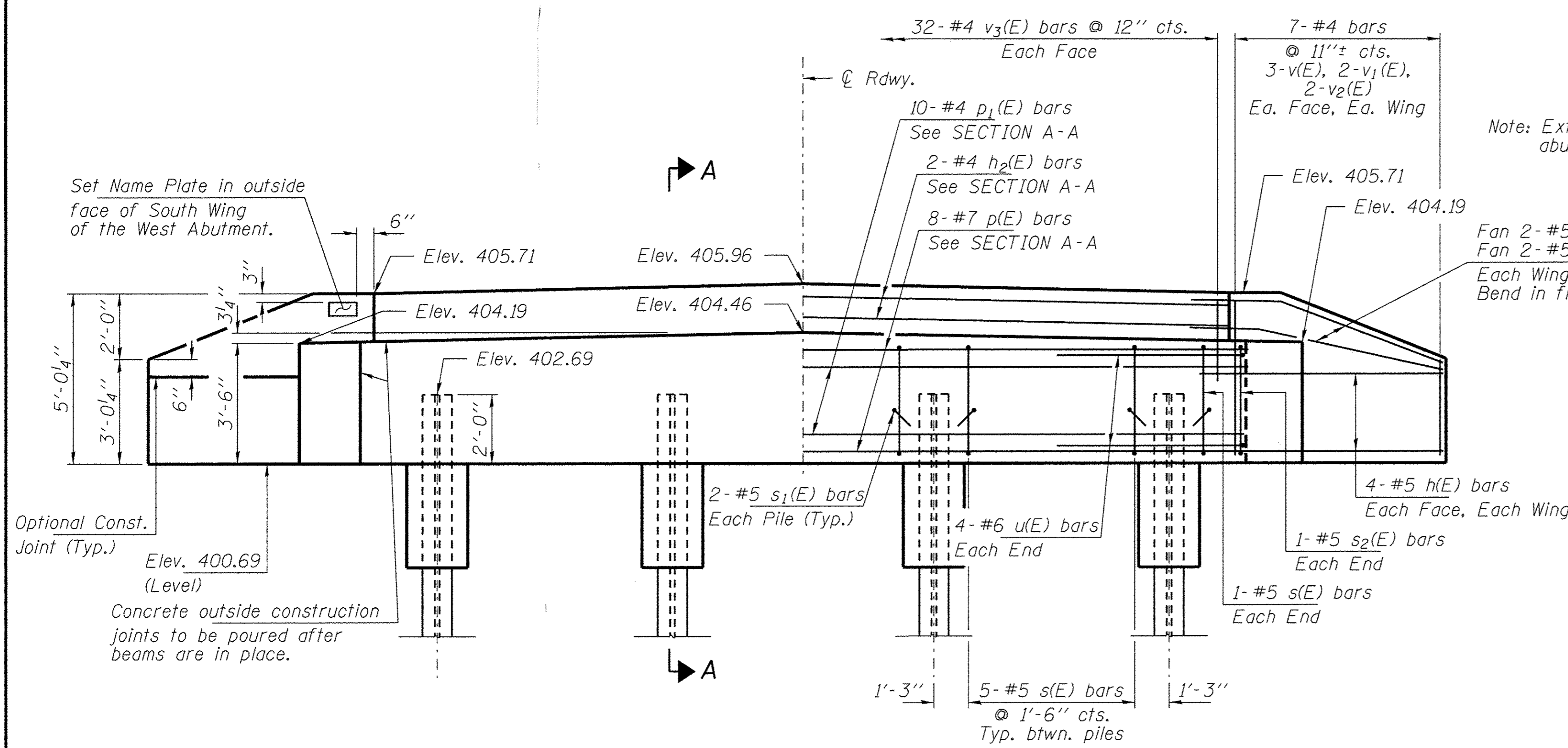
BAR s(E) & s2(E)



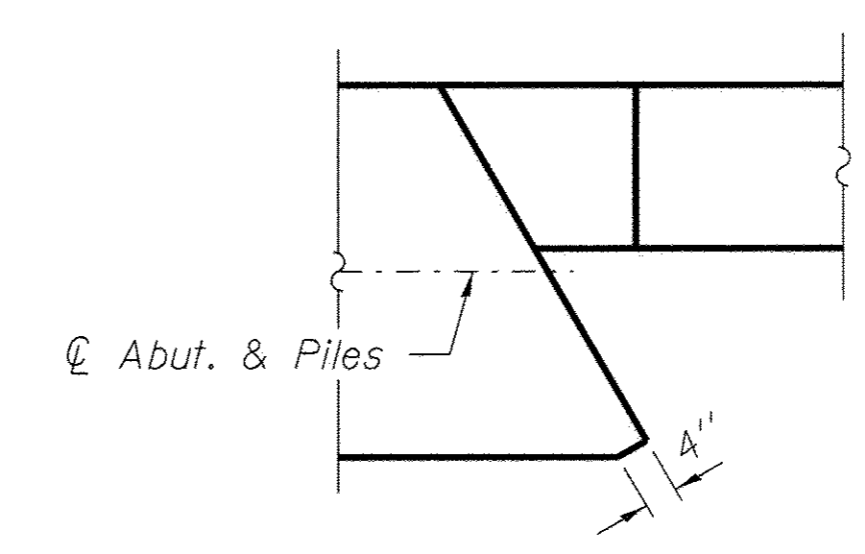
BAR u(E)



BAR s1(E)



ELEVATION



DETAIL A

PILE DATA

Type Steel HPI0x42 w/Pile Shoes
 No. Req'd. (2 Abuts.) 8
 Factored Resistance Available 184 Kips/Pile
 Nominal Req'd Bearing 335 Kips/Pile
 Est. Length 30 Ft/Pile

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	40	#5	7'-0"	—
h1(E)	8	#5	5'-6"	—
h2(E)	4	#4	30'-10"	—
p(E)	16	#7	30'-10"	—
p1(E)	20	#4	30'-10"	—
s(E)	34	#5	11'-7"	□
s1(E)	16	#5	3'-2"	┌┐
s2(E)	4	#5	12'-7"	□
u(E)	16	#6	12'-7"	┌┐
v(E)	24	#4	4'-4"	—
v1(E)	16	#4	3'-7"	—
v2(E)	16	#4	2'-10"	—
v3(E)	128	#4	2'-4"	—

Concrete Structures	Cu. Yd.	26.6
Concrete Encasement	Cu. Yd.	2.8
Reinforcement Bars, Epoxy Coated	Pound	3,000
Furnishing Steel Piles HPI0x42	Foot	240
Pile Shoes	Each	8
Name Plates	Each	1
Concrete Sealer	Sq. Ft.	114

FILE NAME = 148074-sht-bridge.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3088 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62763
 ILLINOIS PROFESSIONAL DESIGN FIRM
 187 PE / SE CORP. 184.000959

USER NAME =
 DESIGNED - A.M.C.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 PLOT SCALE =
 PLOT DATE = 3/7/2017

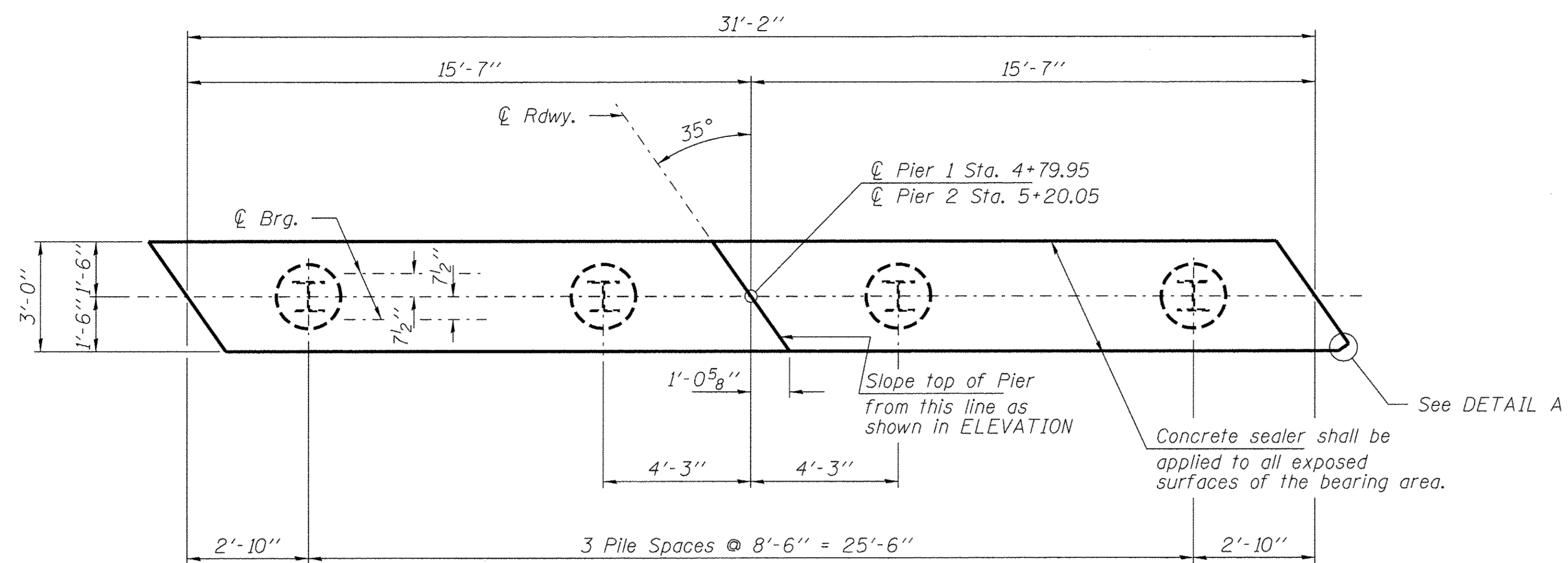
DESIGNED - A.M.C.
 CHECKED - S.W.M.
 DRAWN - R.D.H.
 CHECKED - S.W.M.
 REVISIONS:
 REVISIONS -
 REVISIONS -
 REVISIONS -

STATE OF ILLINOIS
 WABASH COUNTY HIGHWAY DEPARTMENT

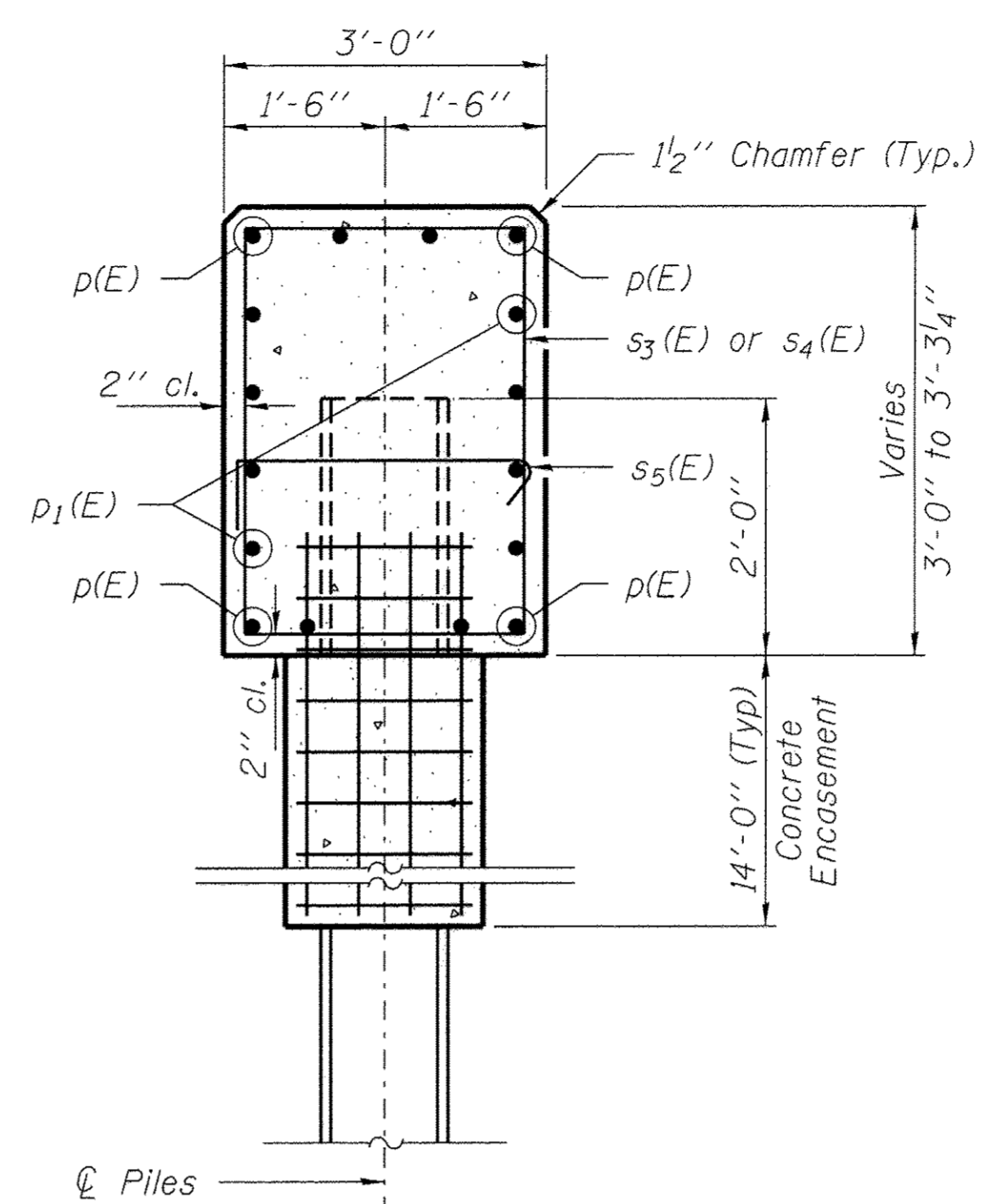
ABUTMENTS
 STRUCTURE NO. 093-3139

SHEET NO. 9 OF 12 SHEETS

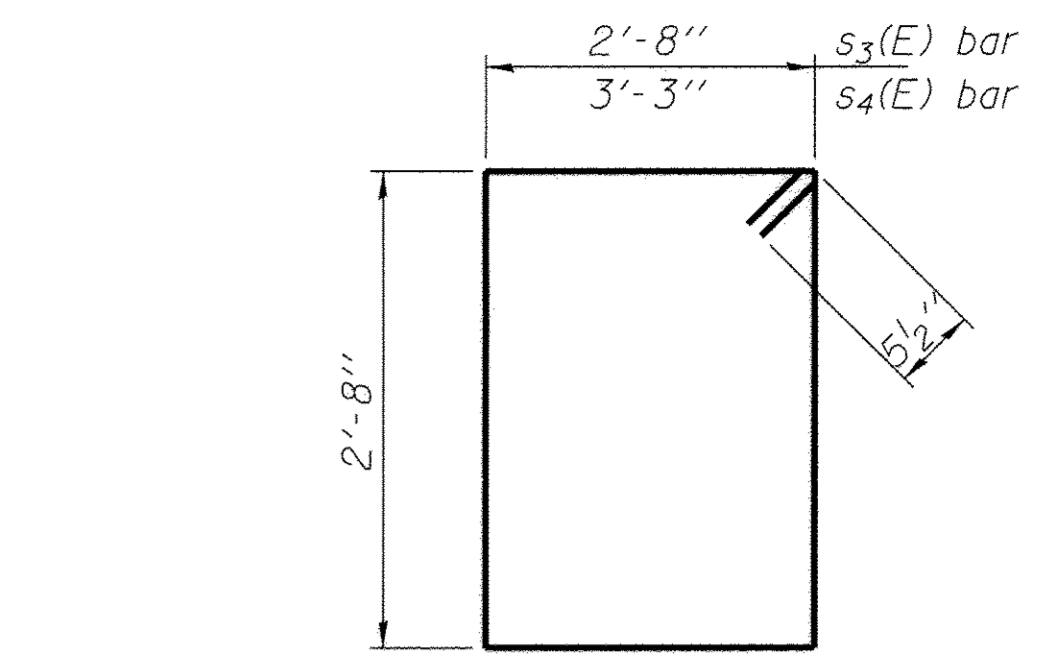
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
101	11-04115-00-BR	WABASH	16	13
ROAD DISTRICT #4			CONTRACT NO. 95802	
ILLINOIS FED. AID PROJECT				



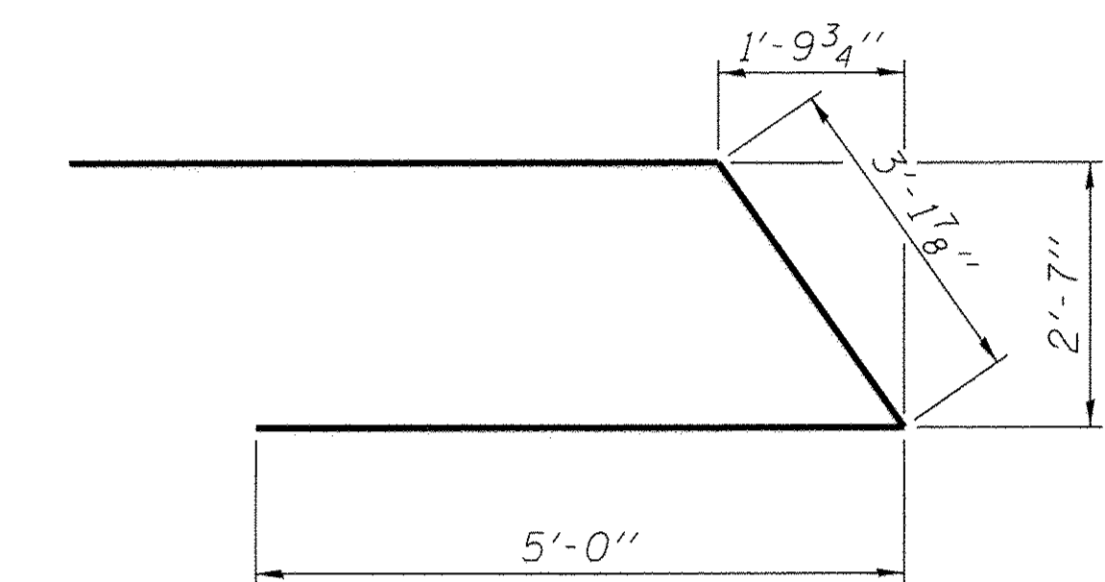
PLAN



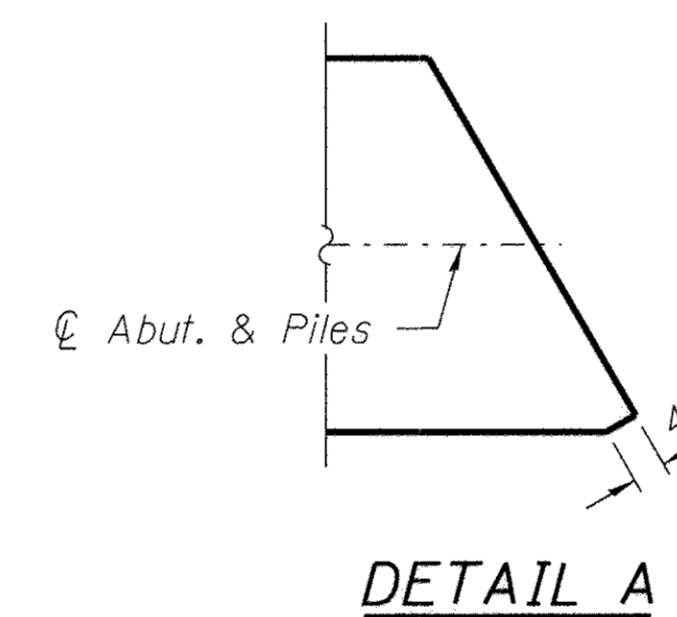
SECTION A-A



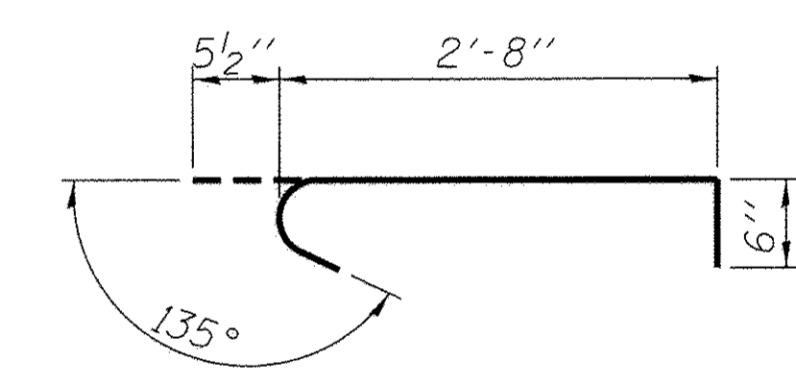
BAR s3(E) & s4(E)



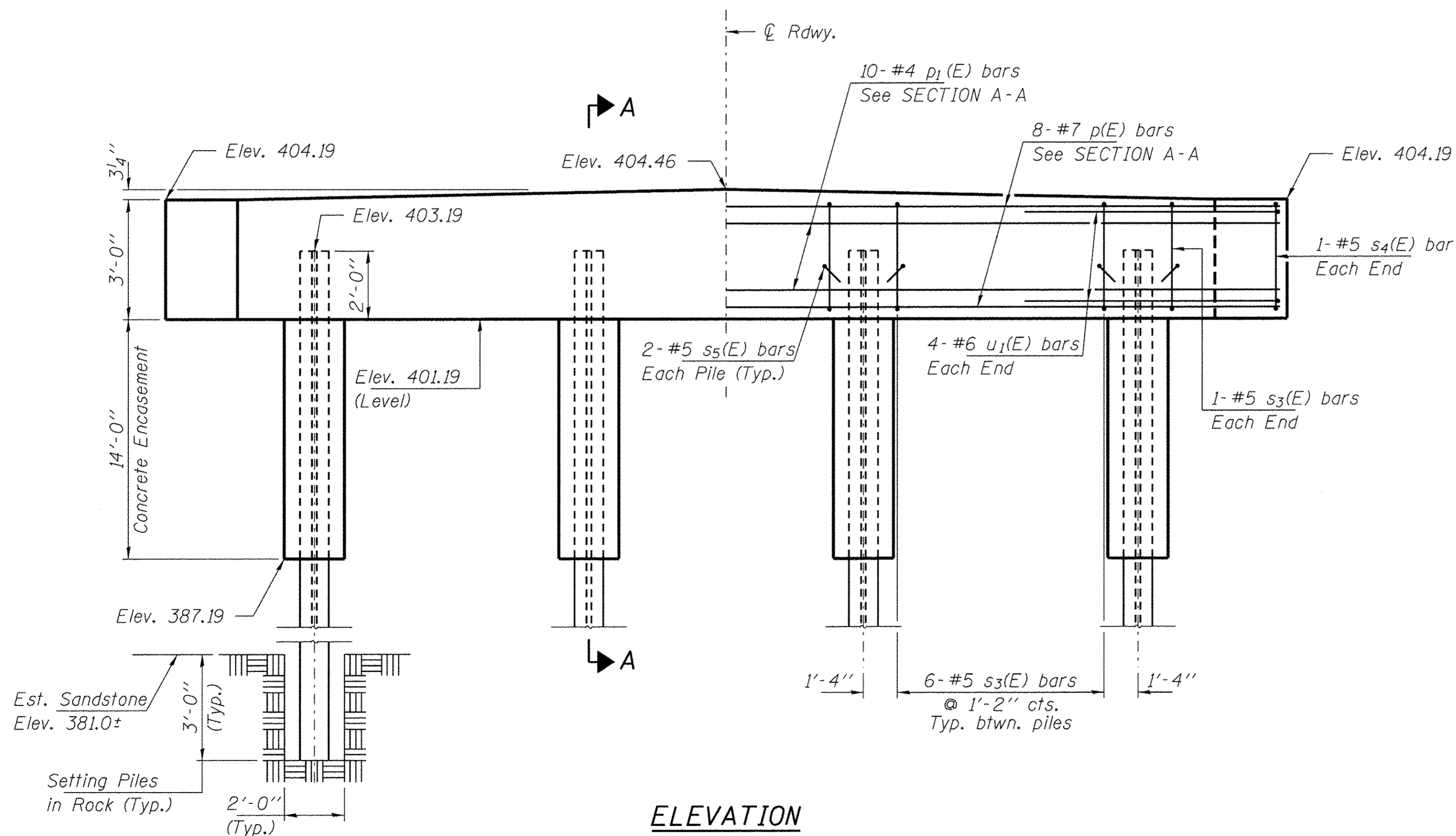
BAR u1(E)



DETAIL A



BAR s5(E)



ELEVATION

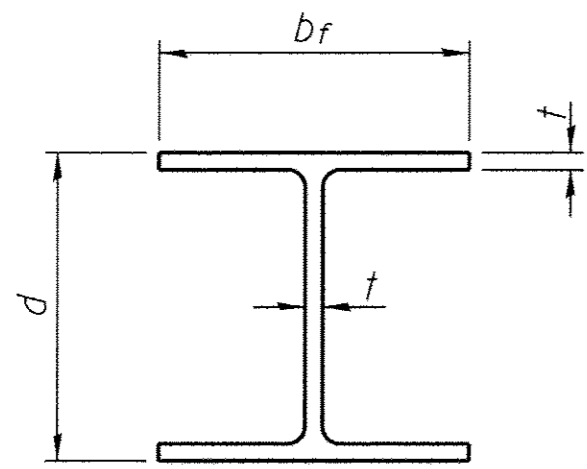
PILE DATA

Type ----- Steel HPI0x42
 No. Req'd. (2 Piers) ----- 8
 Factored Resistance Available ----- 184 Kips/Pile
 Nominal Req'd Bearing ----- 335 Kips/Pile
 Est. Length ----- 30 Ft/Pile

BILL OF MATERIAL - 2 PIERS

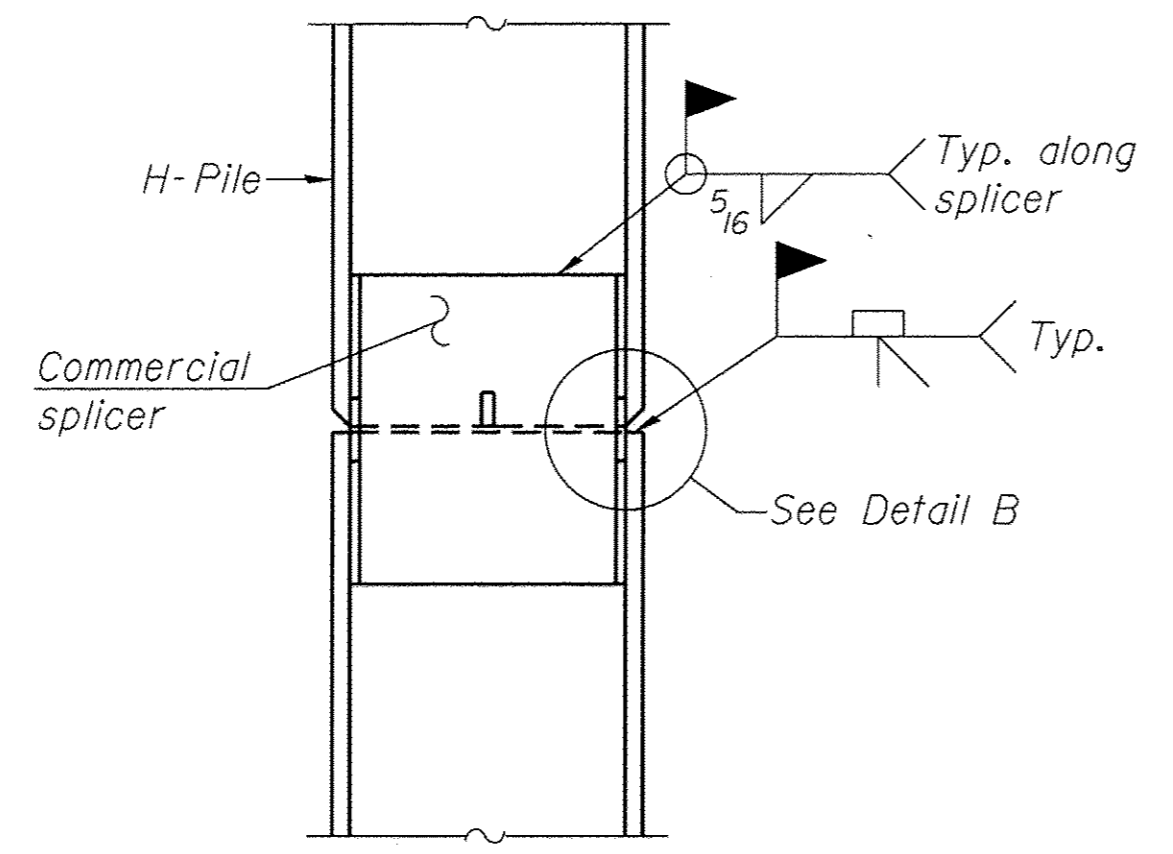
BAR	NO.	SIZE	LENGTH	SHAPE
p(E)	16	#7	30'-10"	—
p1(E)	20	#4	30'-10"	—
s3(E)	40	#5	11'-7"	□
s4(E)	4	#5	12'-9"	□
s5(E)	16	#5	3'-8"	┌
u1(E)	16	#6	13'-2"	└
Concrete Structures			Cu. Yd.	21.6
Concrete Encasement			Cu. Yd.	12.6
Reinforcement Bars, Epoxy Coated			Pound	2,330
Furnishing Steel Piles HPI0x42			Foot	240
Concrete Sealer			Sq. Ft.	188
Setting Piles in Rock			Each	8

Note:
 Place p bars in top of cap to miss
 dowel rod holes for PPC deck beams.

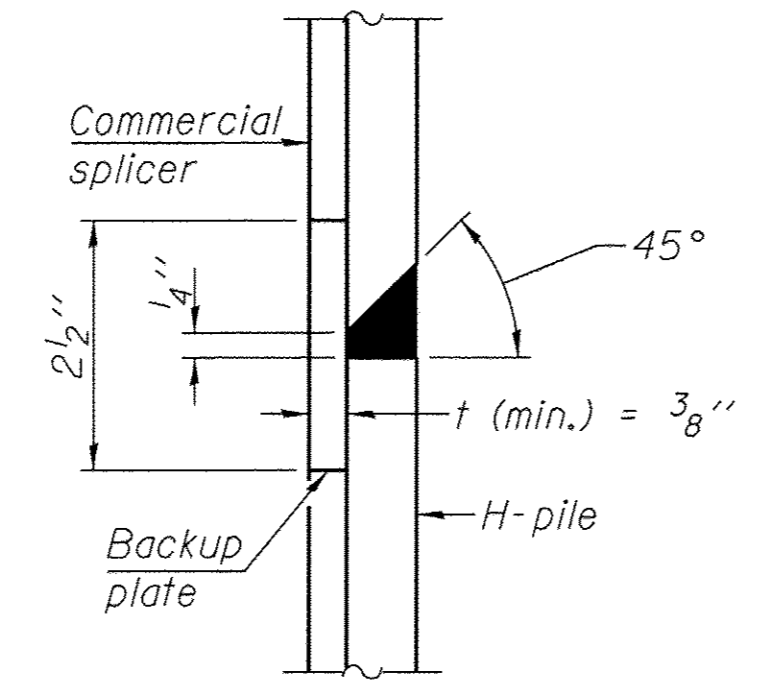


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	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 ⁵ / ₈ "	30"
x73	13 ⁵ / ₈ "	14 ⁵ / ₈ "	1 ¹ / ₂ "	30"
HP 12x84	12 ¹ / ₄ "	12 ¹ / ₄ "	1 ¹ / ₁₆ "	24"
x74	12 ¹ / ₈ "	12 ¹ / ₄ "	5 ⁵ / ₈ "	24"
x63	12"	12 ¹ / ₈ "	1 ¹ / ₂ "	24"
x53	11 ³ / ₄ "	12"	7 ¹ / ₁₆ "	24"
HP 10x57	10"	10 ¹ / ₄ "	9 ⁹ / ₁₆ "	24"
x42	9 ³ / ₄ "	10 ¹ / ₈ "	7 ¹ / ₁₆ "	24"
HP 8x36	8"	8 ¹ / ₈ "	7 ¹ / ₁₆ "	18"

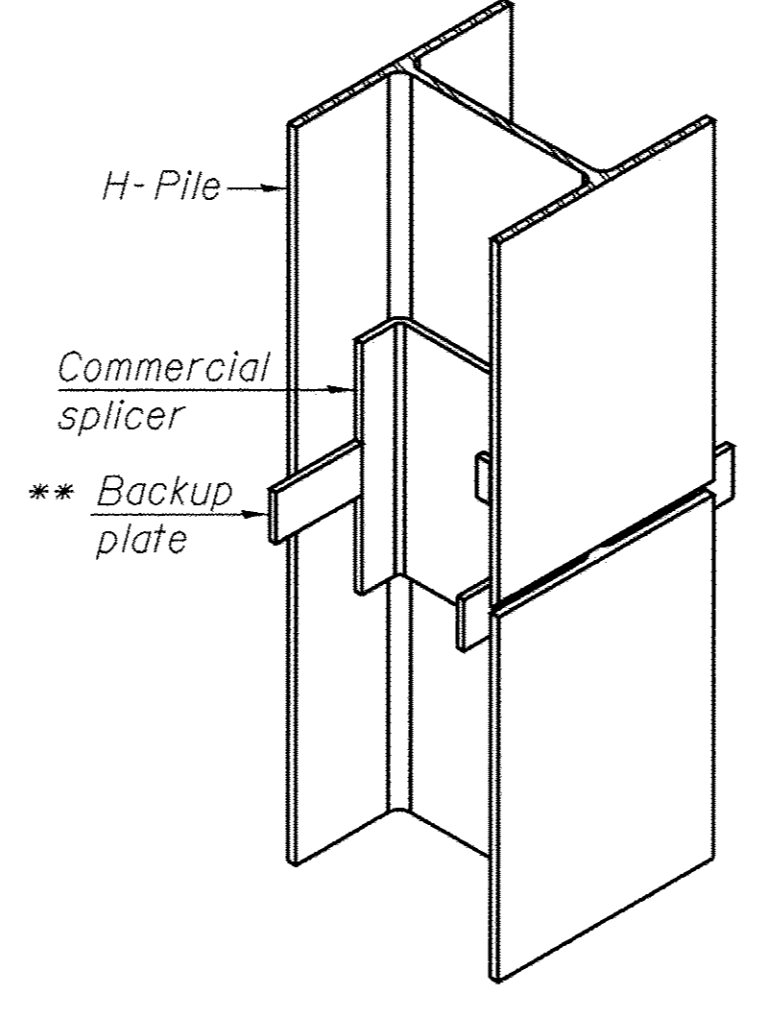


ELEVATION

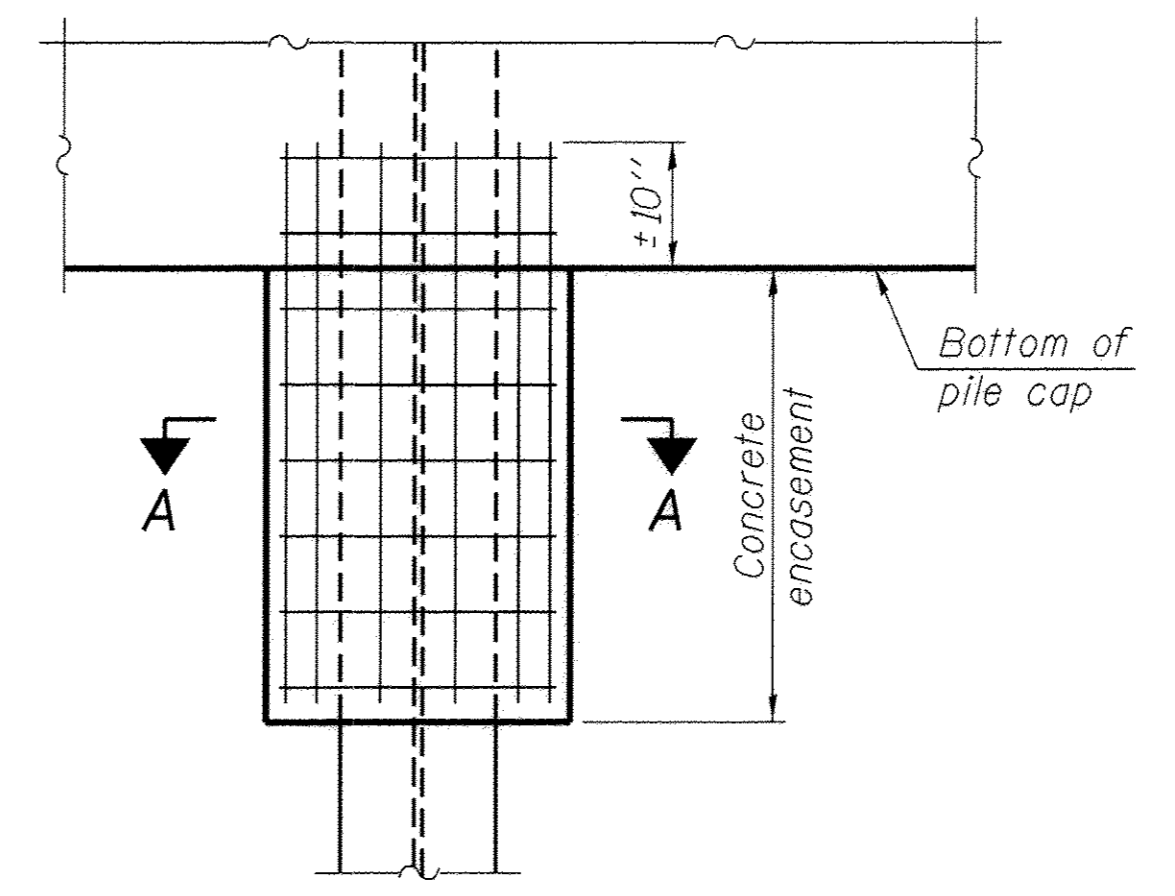


DETAIL "B"

WELDED COMMERCIAL SPLICE

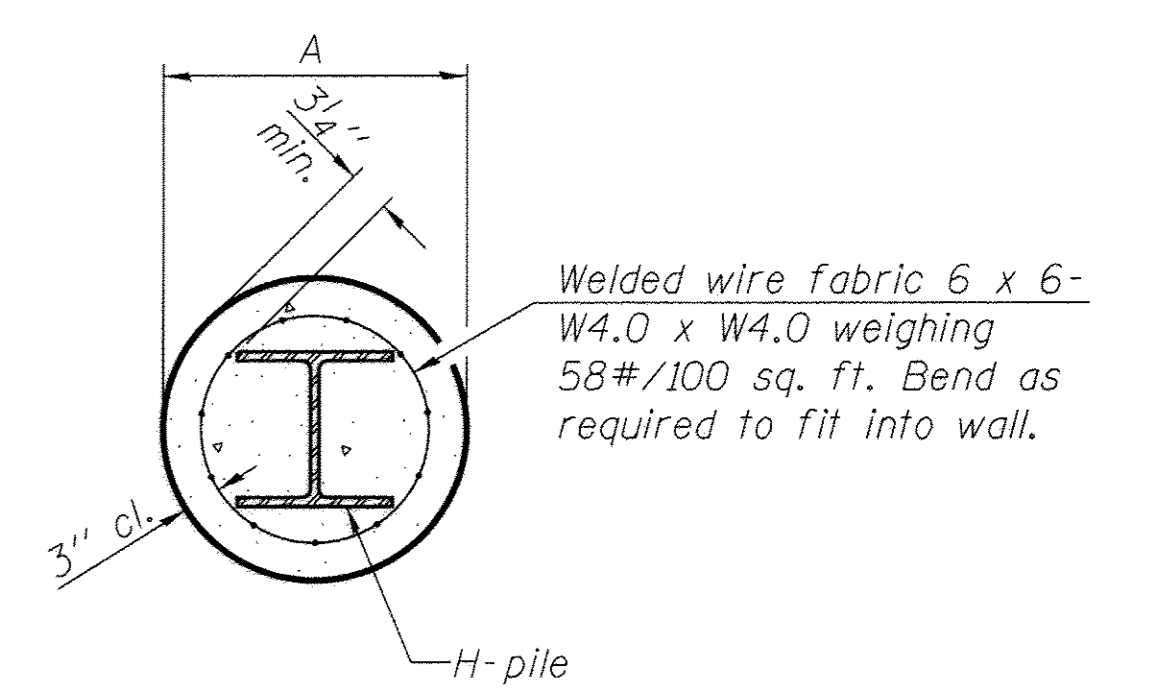


ISOMETRIC VIEW



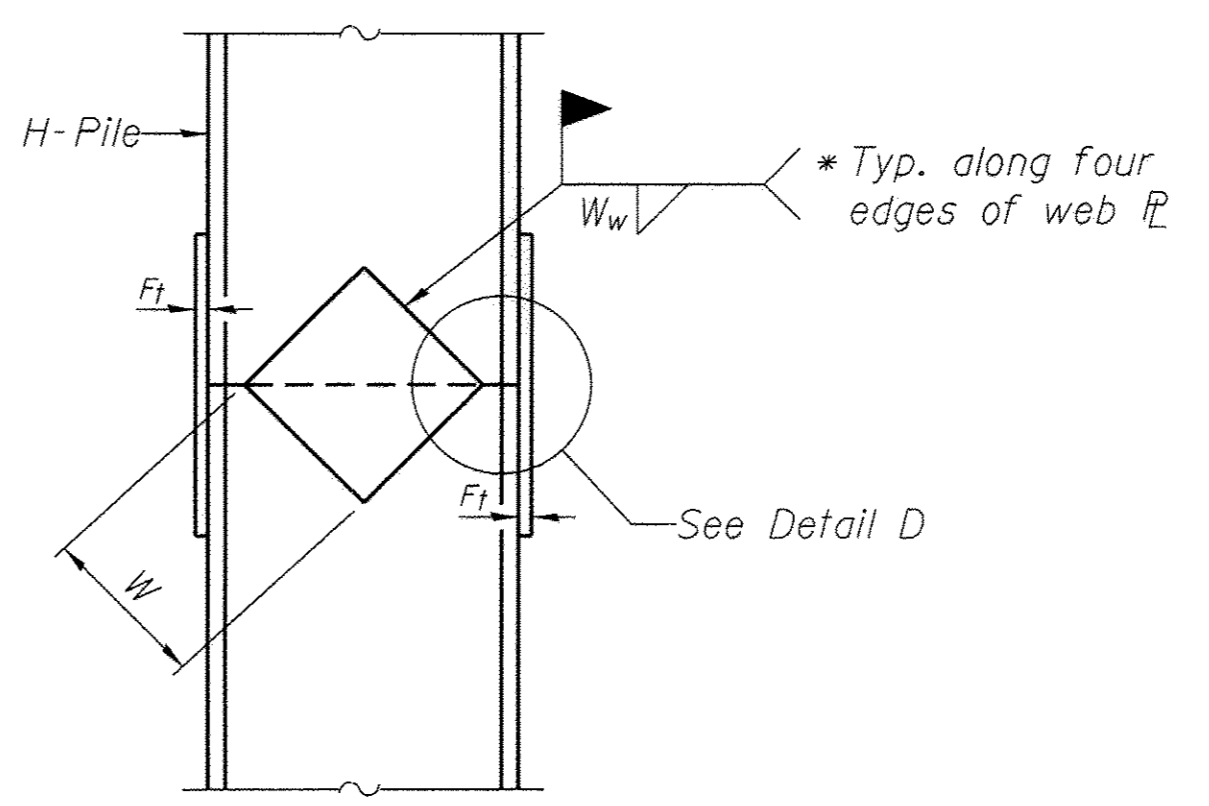
ELEVATION

PILE ENCASEMENT



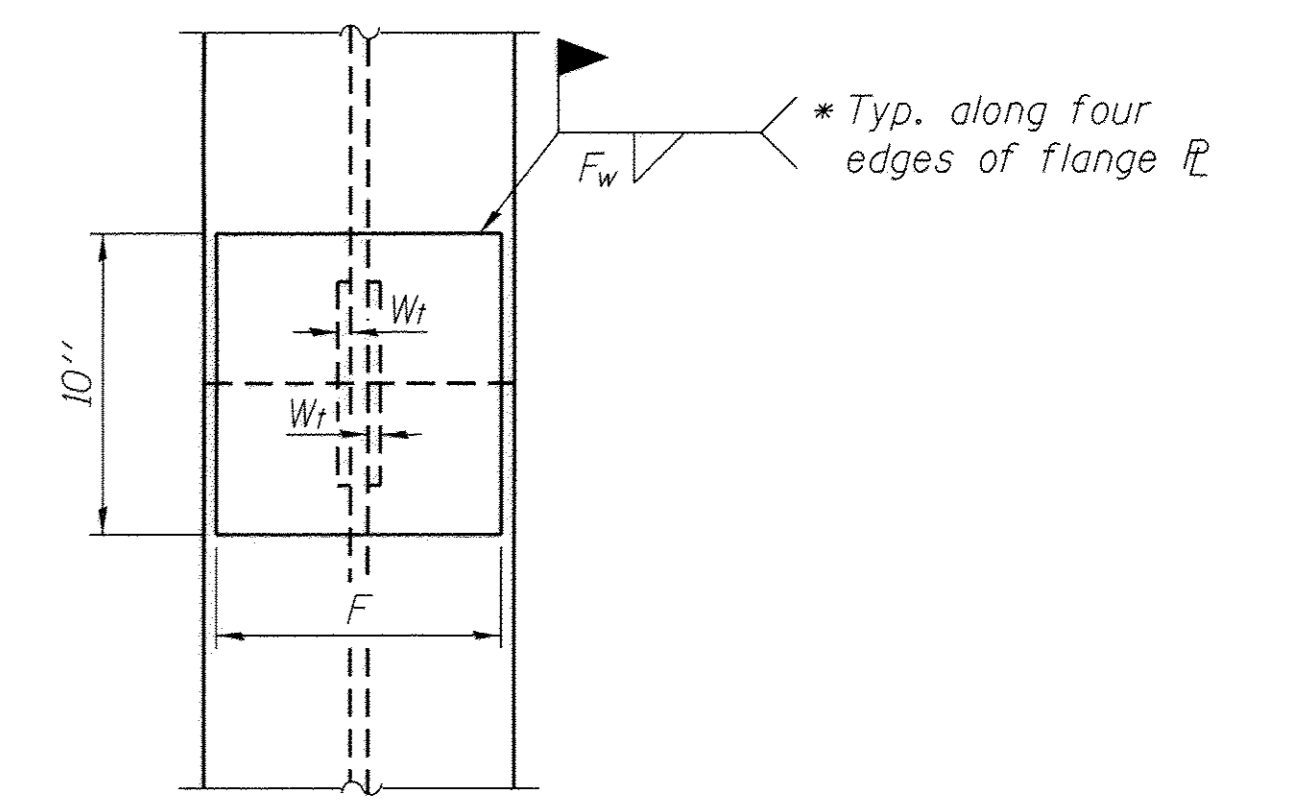
SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.



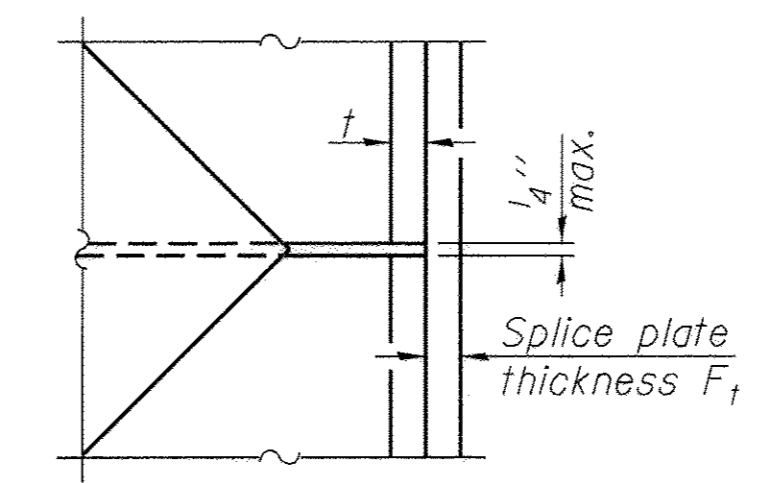
ELEVATION

WELDED PLATE FIELD SPLICE

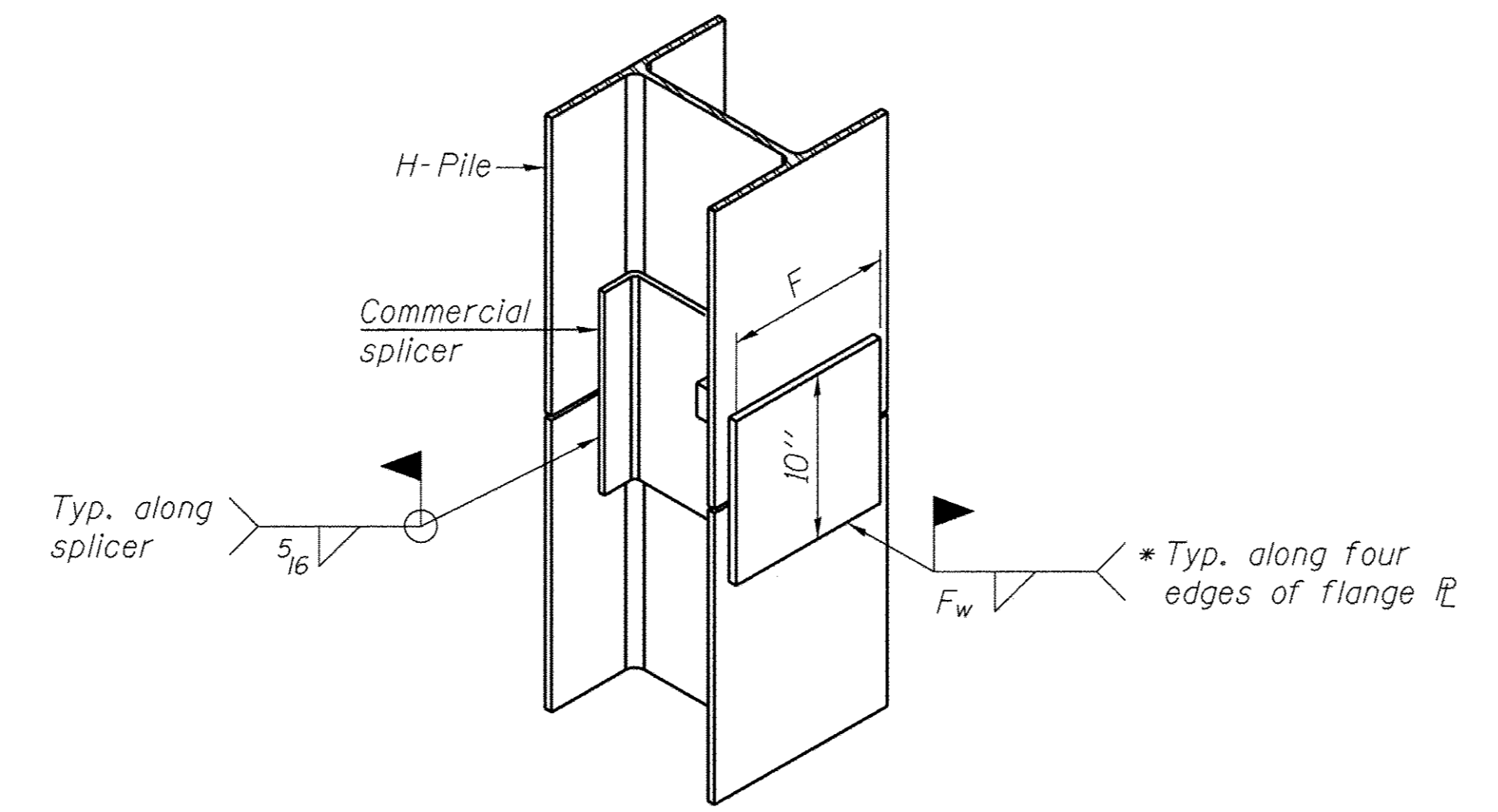


END VIEW

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



DETAIL D

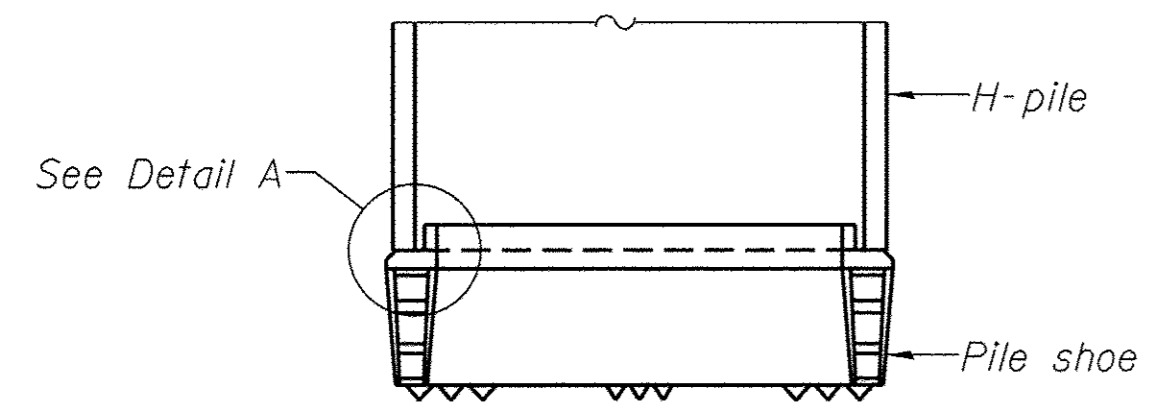


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

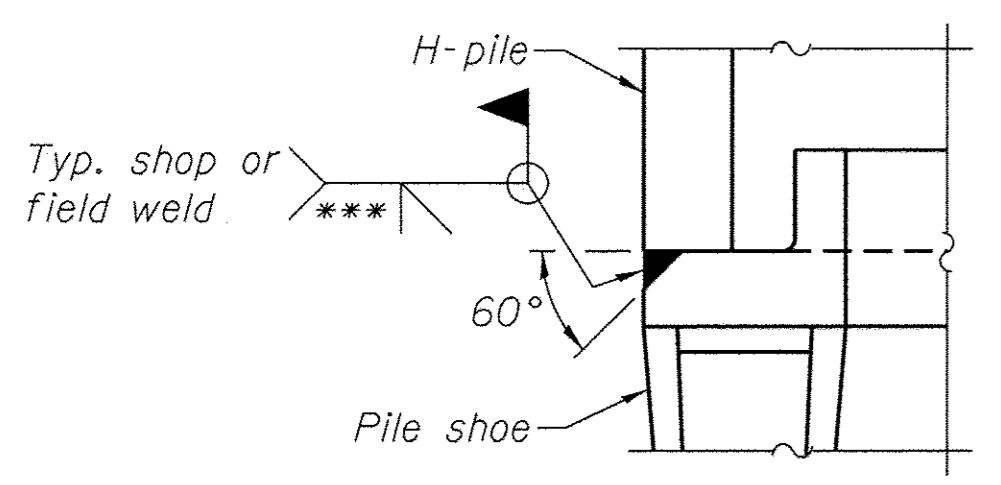
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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



ELEVATION

H-PILE SHOE ATTACHMENT



DETAIL A

F-HP 1-27-12

FILE NAME = 140074-sht-bridge.dgn	USER NAME =	DESIGNED - A.M.C.	REVISED	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 093-3139	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3095 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	CHECKED - S.W.M.	REVISED -			101	11-04115-00-BR	WABASH	16	15
ILR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000999	PLLOT DATE = 3/7/2017	DRAWN - R.D.H.	REVISED -			ROAD DISTRICT #4		CONTRACT NO. 95802		
		CHECKED - S.W.M.	REVISED -			SHEET NO. 11 OF 12 SHEETS		ILLINOIS FED. AID PROJECT		

