

11-08-13 LETTING ITEM 064
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET & SUMMARY OF QUANTITIES
2	PLAN & PROFILE, TYPICAL SECTIONS, GENERAL NOTES & STONE LINED DITCH DESIGN
3-4	ROADWAY CROSS SECTIONS
5-13	BRIDGE DESIGN

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED IN THE PROPOSAL:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-02	TRAFFIC CONTROL DEVICES
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO-WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	40.00
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	36.00
20200100	EARTH EXCAVATION	CU YD	216.00
20300100	CHANNEL EXCAVATION	CU YD	350.00
20400800	FURNISHED EXCAVATION	CU YD	716.00
28000305	TEMPORARY DITCH CHECKS	FOOT	7.00
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	815.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	380.00
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.00
50300225	CONCRETE STRUCTURES	CU YD	25.00
50300280	CONCRETE ENCASEMENT	CU YD	2.80
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SO FT	1680.00
50800105	REINFORCEMENT BARS	POUND	2680.00
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	136.00
51201400	FURNISHING STEEL PILES 10X42	FOOT	350.00
51202305	DRIVING PILES	FOOT	350.00
51203400	TEST PILE STEEL HPI0X42	EACH	1.00
51500100	NAME PLATES	EACH	1.00
54200229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	40.00
54200235	PIPE CULVERTS, CLASS D, TYPE 1 30"	FOOT	55.00
67100100	MOBILIZATION	L SUM	1.00
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4.00
*X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.50
*Z0068900	STONE LINED DITCH	TON	18.00

Δ SPECIALTY ITEMS

DESIGN DESIGNATION:
 DESIGN SPEED: 30 MPH
 HIGHWAY CLASS - LOCAL ROAD
 EXISTING STRUCTURE NO.: 033-3182
 PROPOSED STRUCTURE NO.: 033-3319
 CURRENT A.D.T. = 50
 CONTRACT NO. 99515



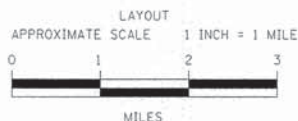
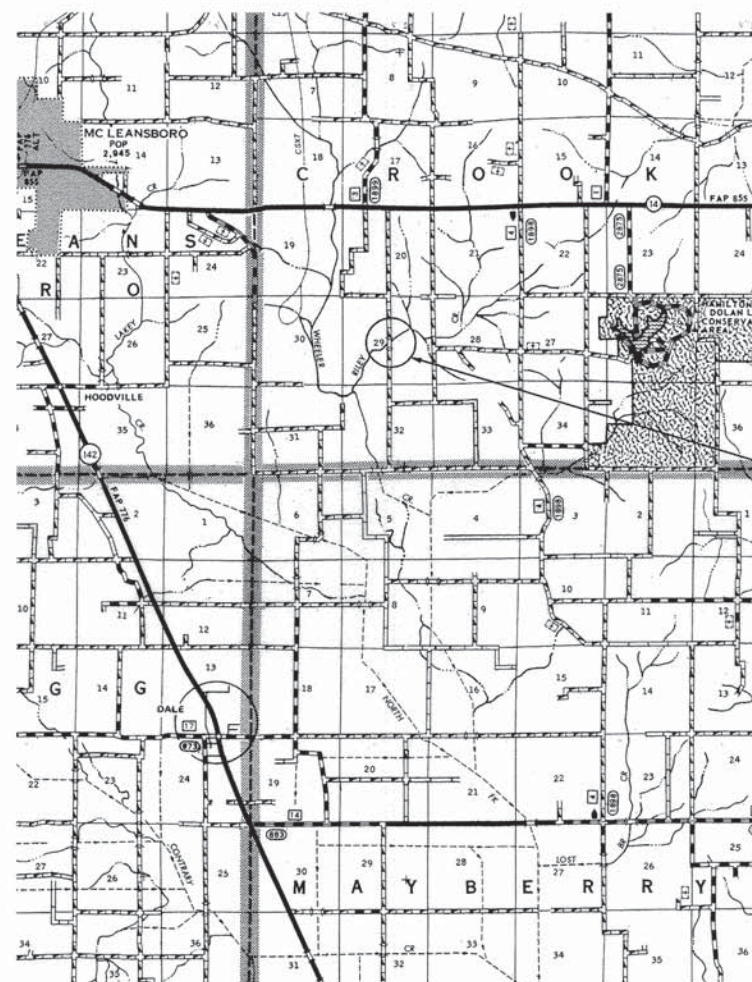
Know what's below.
 Call before you dig.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
**PLANS FOR PROPOSED
 FEDERAL AID - S.T.P. BRIDGE**

T.R. 388 HAMILTON COUNTY SECTION 07-02128-00-BR

PROJECT NO. BROS-065(055) JOB NO. C-99-525-13

CONTRACT # 99515 RILEY CREEK



GROSS LENGTH	550.00 FT	0.104 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	550.00 FT	0.104 MILES

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	1

FED. ROAD DIST. NO. 9 ILLINOIS FED. AID PROJECT
 PROJECT # BROS-065(055) CONTRACT # 99515
 JOB # C-99-525-13 RILEY CREEK
 LEC JOB # H12L017HM

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

PROFESSIONAL DESIGN FIRM
 LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
 184-000887
 (62-032435)(35-002769)



AARON M. MEFFORD
 NAME
 Signature
 SIGNATURE
 8-29-13
 DATE
 11-30-13 EXPIRES

TOWNSHIP ROUTE 388
 OVER RILEY CREEK
 HAMILTON COUNTY, ILLINOIS

SHEET TITLE:

TITLE SHEET

SCALE: VARS

BY: AMM

DATE: 8/29/13

REV:

1 OF 13

SHEETS

SHEET NO.

1

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 07-02128-00-BR
 BEGINS STATION 2+25

STATION 5+00, STRUCTURE NO. 033-3319
 A 70' LONG SINGLE SPAN PRECAST PRESTRESSED
 CONCRETE DECK BEAM BRIDGE (27" DEPTH),
 24' ROADWAY, 0.00% GRADE, 20° RT. FWD. SKEW.

SECTION 07-02128-00-BR
 ENDS STATION 7+75

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

APPROVED 8/29/2013
 Kevin Phillips
 COUNTY ENGINEER

PASSED 9/9/2013
 Dennis W. Hillebrand
 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW: 9/9/2013

Jeffrey L. Keirn
 JEFFREY L. KEIRN, P.E.
 ACTING DEPUTY DIRECTOR OF HIGHWAYS
 REGION FIVE ENGINEER

GENERAL NOTES:

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012.

THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 70 FOOT LONG SINGLE 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.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

THE DECK BEAMS SHALL REMAIN THE PROPERTY OF THE COUNTY.

AGGREGATE SURFACE COURSE, TYPE B INCLUDES 48 TON FOR FILL NEXT TO THE BRIDGE, 32 TON FOR THE FIELD ENTRANCE, AND 300 TON FOR THE ROADWAY.

NOTE: CONSTRUCTION TRANSITION
STA. 2+25 TO STA 2+75
STA 7+25 TO STA 7+75
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	2
FED. ROAD DIST. NO. 9		ILLINOIS	RILEY CREEK	
PROJECT # BR05-051055		CONTRACT # 9915		
LEC JOB # HZ101THW				

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

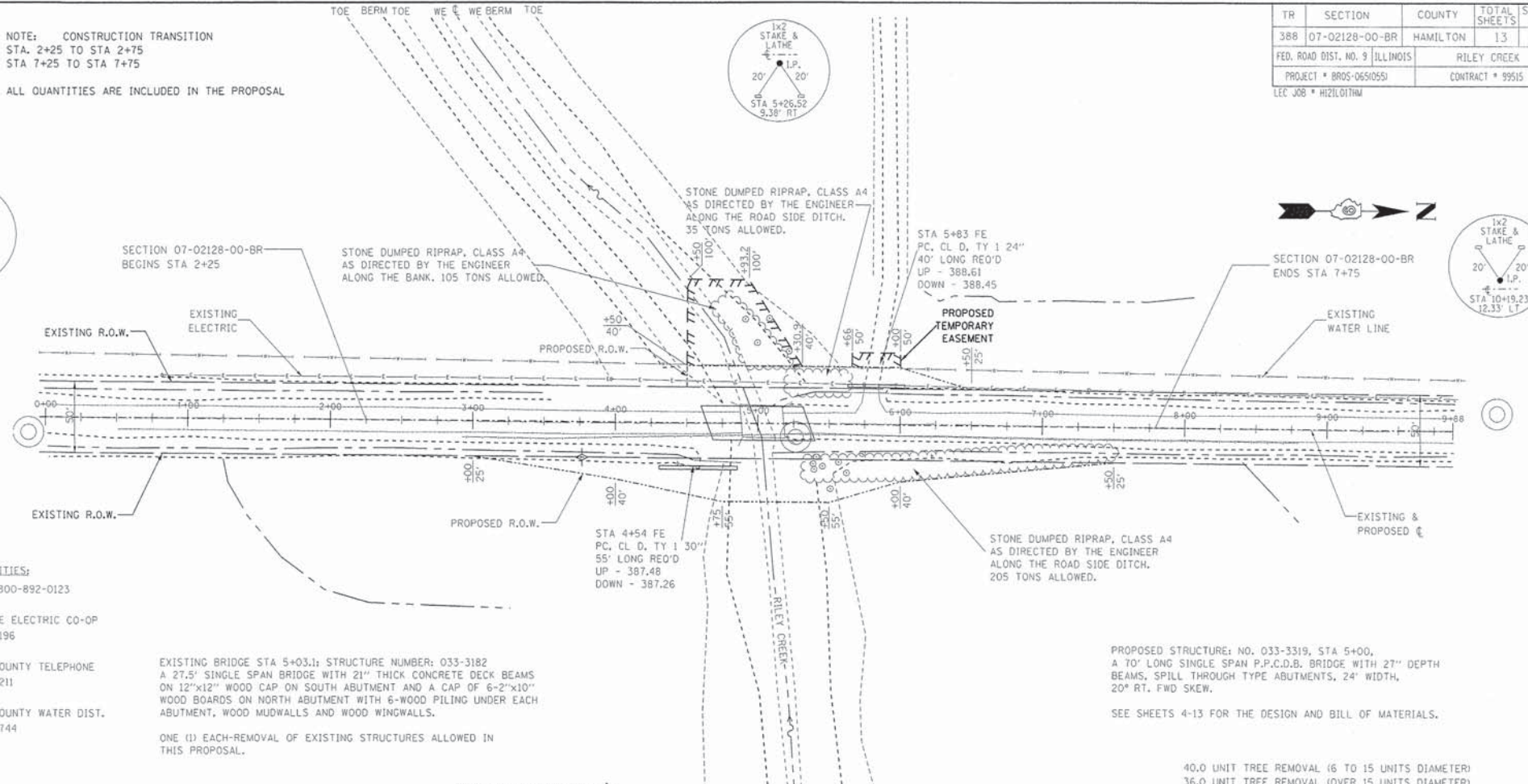
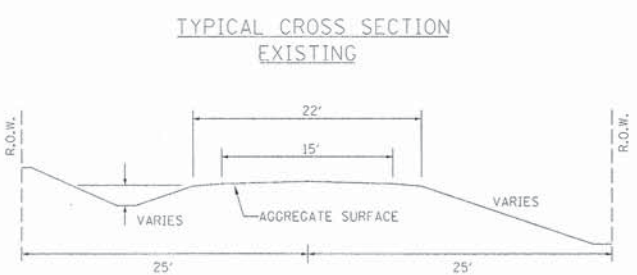
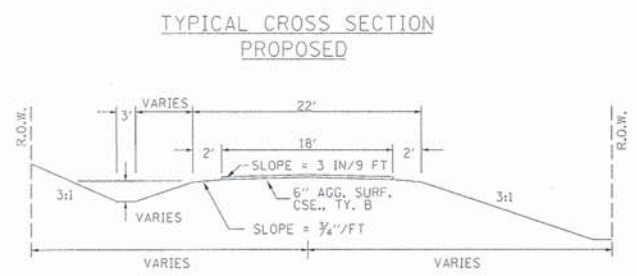
PROFESSIONAL DESIGN FIRM
LAND SURVEY &
PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032135)(35-002769)



AARON M. MEFFORD
NAME
Signature
SIGNATURE
8-29-13
DATE
11-30-13
EXPIRES

T.R. 388
OVER RILEY CREEK
HAMILTON COUNTY, ILLINOIS

SHEET TITLE:
PLAN & PROFILE
SCALE: VARS
BY: AMM
DATE: 8/29/13
REV:
2 OF 13 SHEETS
SHEET NO. 2



UTILITIES:
JUL.I.E. 1-800-892-0123
WAYNE-WHITE ELECTRIC CO-OP
1-618-842-2196
HAMILTON COUNTY TELEPHONE
1-618-736-2211
HAMILTON COUNTY WATER DIST.
1-618-643-4144

EXISTING BRIDGE STA 5+03.1; STRUCTURE NUMBER: 033-3182
A 27.5' SINGLE SPAN BRIDGE WITH 21" THICK CONCRETE DECK BEAMS ON 12"x12" WOOD CAP ON SOUTH ABUTMENT AND A CAP OF 6-2"x10" WOOD BOARDS ON NORTH ABUTMENT WITH 6-WOOD PILING UNDER EACH ABUTMENT, WOOD MUWALLS AND WOOD WINDWALLS.

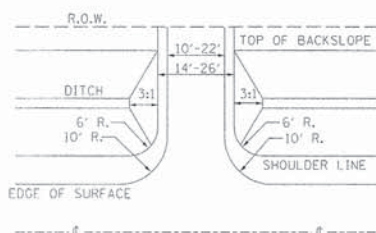
ONE (1) EACH-REMOVAL OF EXISTING STRUCTURES ALLOWED IN THIS PROPOSAL.

PROPOSED STRUCTURE: NO. 033-3319, STA 5+00, A 70' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH 27" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS, 24' WIDTH, 20° RT. FWD SKEW.

SEE SHEETS 4-13 FOR THE DESIGN AND BILL OF MATERIALS.

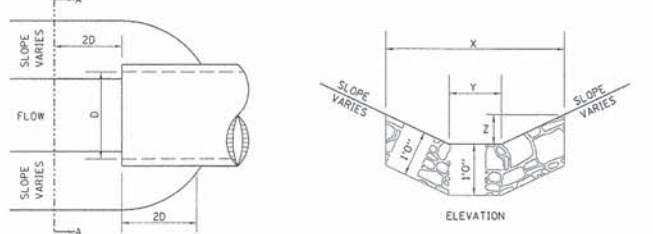
40.0 UNIT TREE REMOVAL (6 TO 15 UNITS DIAMETER)
36.0 UNIT TREE REMOVAL (OVER 15 UNITS DIAMETER)
7.0 FOOT TEMPORARY DITCH CHECKS
0.5 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED

FIELD ENTRANCE DETAIL



NOTE: CONSTRUCT SPECIAL DITCH
STA 3+00 TO STA 3+50 LT
STA 3+00 TO STA 4+85 RT
STA 5+27 TO STA 6+50 LT
STA 5+25 TO STA 7+50 RT
NOTE: CONSTRUCT STONE LINED DITCH
STA 4+15 TO STA 4+30 RT (0.62 TON/LIN FT)
STA 6+03 TO STA 6+18 LT (0.62 TON/LIN FT)
18 TON STONE LINED DITCH ALLOWED IN PROPOSAL.
SEE STONE LINED DITCH SECTION

STONE LINED DITCH DESIGN

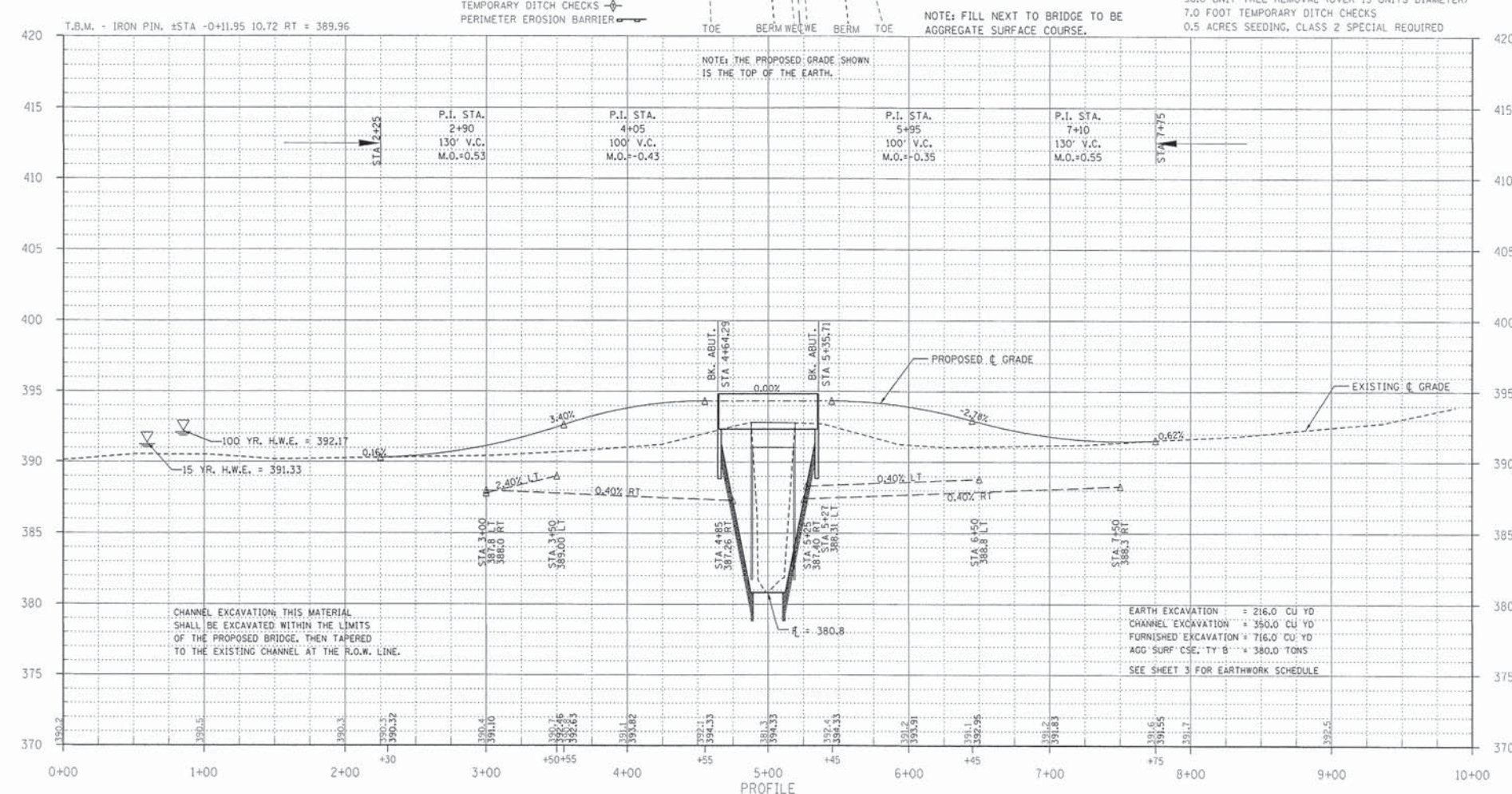


NOTE:

BOTTOM OF DITCH	SLOPE		
1 1/2ft	2ft	3ft	
2 FT	X= 5 FT	6 FT	8 FT
	Y= 2 FT	2 FT	2 FT
	Z= 1 FT	1 FT	1 FT
	0.40	0.48	0.62

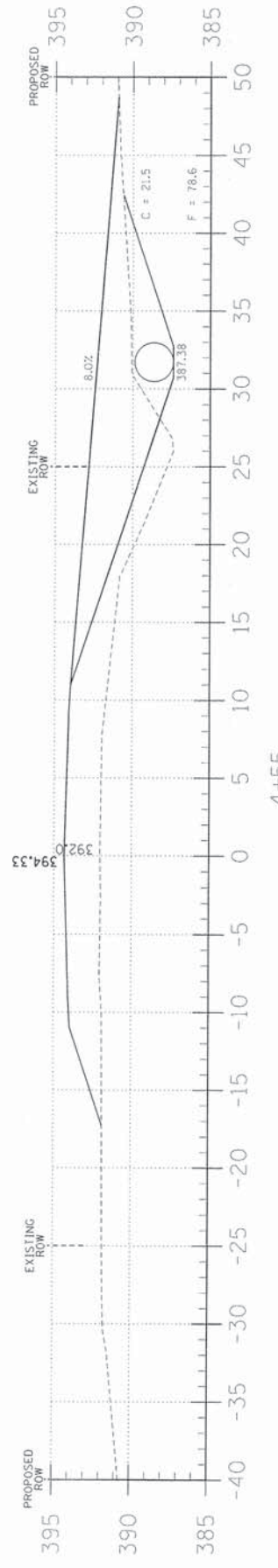
TON/LIN. FT

NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE LINED DITCH-SEE SPECIAL PROVISIONS.

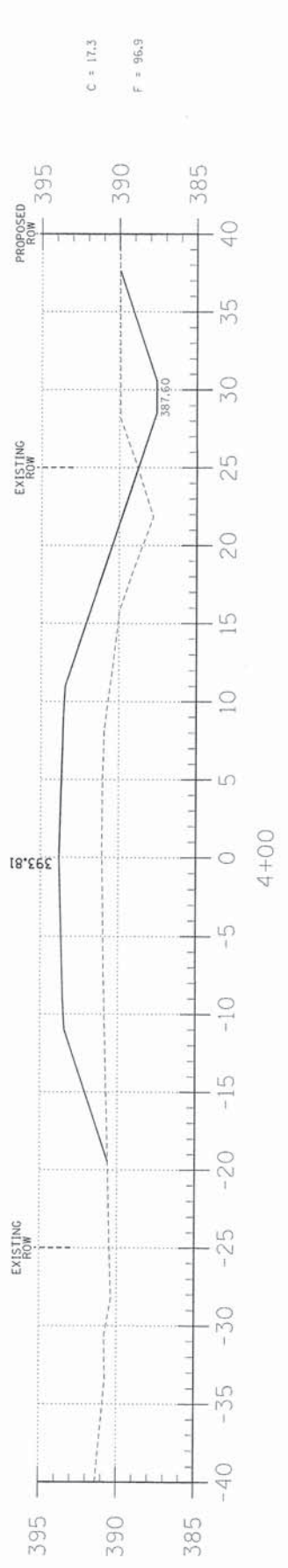


CHANNEL EXCAVATION; THIS MATERIAL SHALL BE EXCAVATED WITHIN THE LIMITS OF THE PROPOSED BRIDGE, THEN TAPERED TO THE EXISTING CHANNEL AT THE R.O.W. LINE.

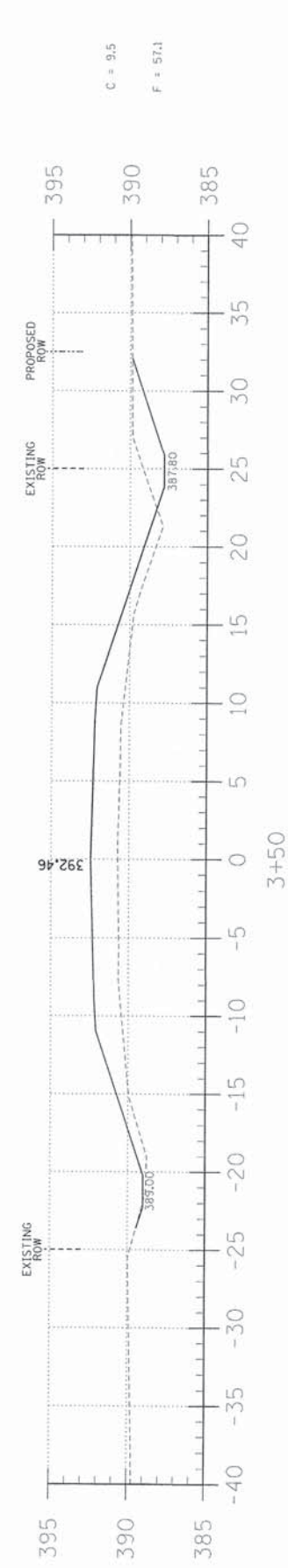
EARTH EXCAVATION = 216.0 CU YD
CHANNEL EXCAVATION = 360.0 CU YD
FURNISHED EXCAVATION = 716.0 CU YD
AGG SURF CSE: TY B = 380.0 TONS
SEE SHEET 3 FOR EARTHWORK SCHEDULE



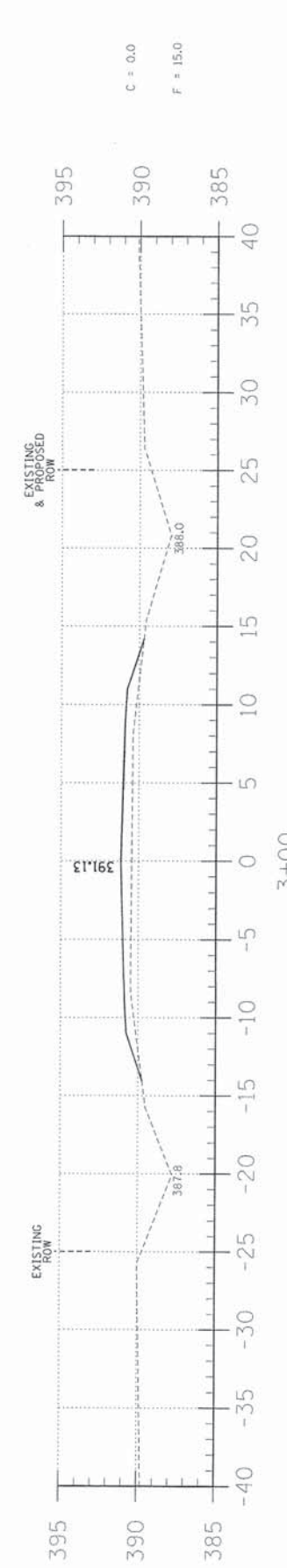
4+55



4+00



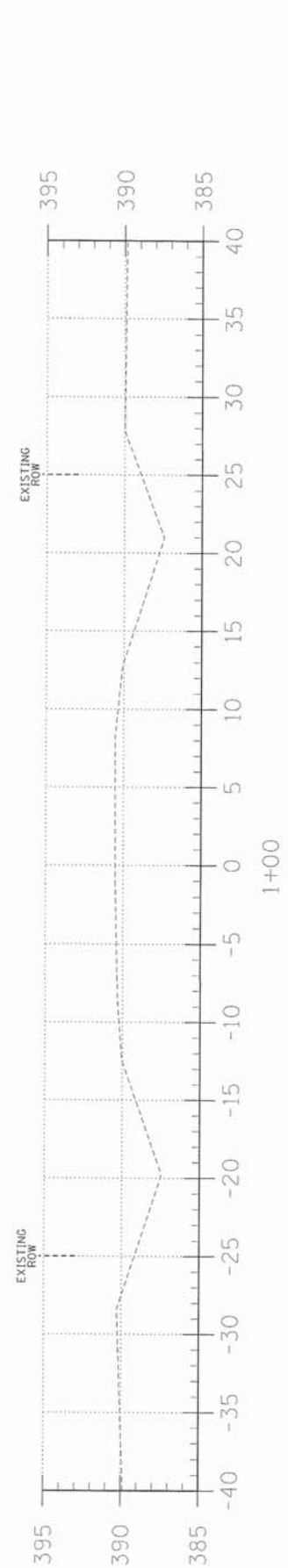
3+50



3+00



2+25



1+00

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+64.3	76.9	0.0	0.0	57.7	408.3	-350.6
STA 4+64.3 TO 5+35.7	0.0	350.0	175.0	131.3	0.0	131.3
STA 5+35.7 TO 10+00	138.9	0.0	0.0	104.2	511.1	-406.9
2 FIELD ENTRANCE	0.0	0.0	0.0	0.0	90.1	-90.1
TOTAL	215.8	350.0	175.0	293.2	1009.5	-716.3

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	3
PROJECT* BROS-06510551		CONTRACT* 99515		
JOB NO. C-99-525-13		RILEY CREEK		

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LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-00087
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
SIGNATURE
DATE
8-29-13
EXPIRES

TOWNSHIP ROUTE 388
OVER RILEY CREEK
HAMILTON COUNTY, ILLINOIS

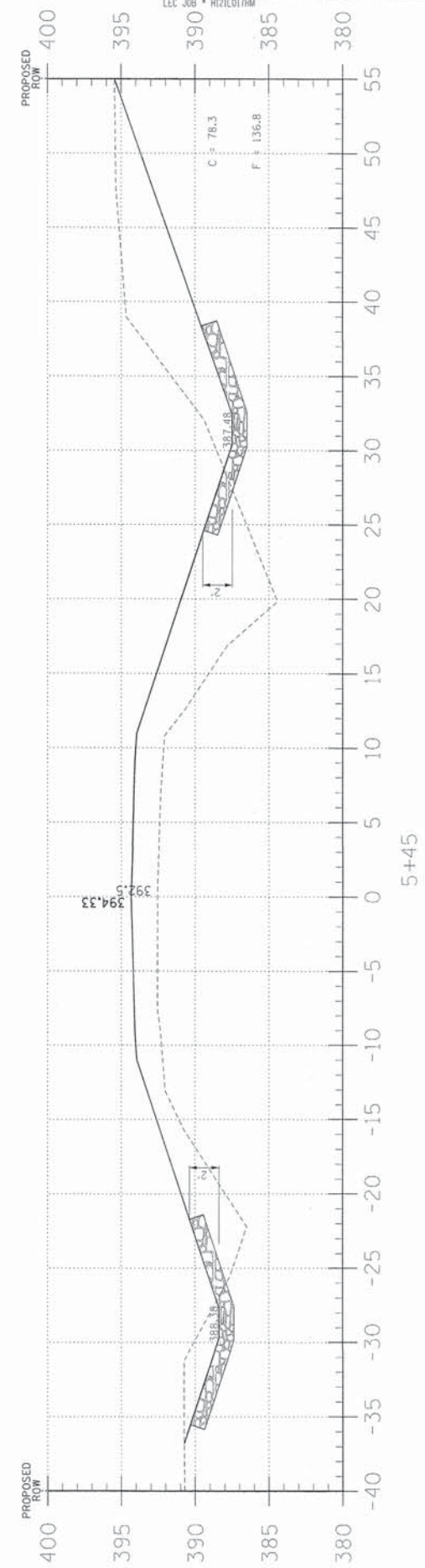
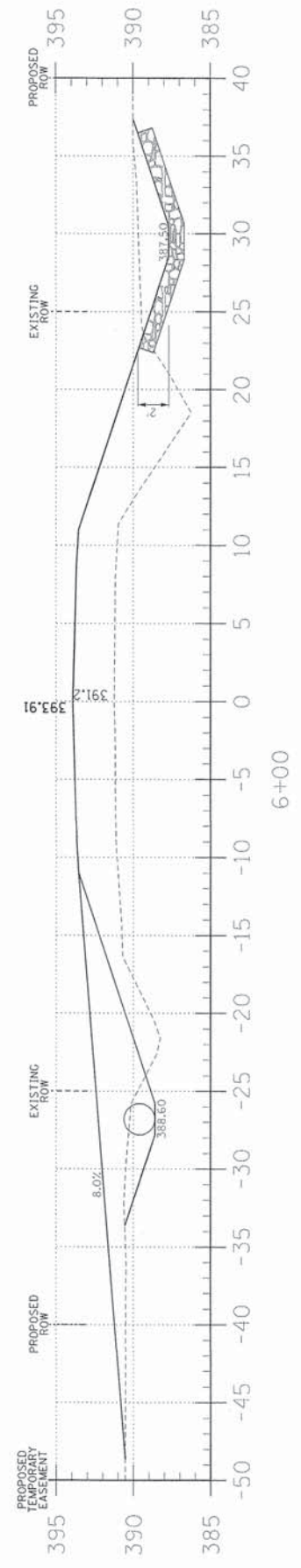
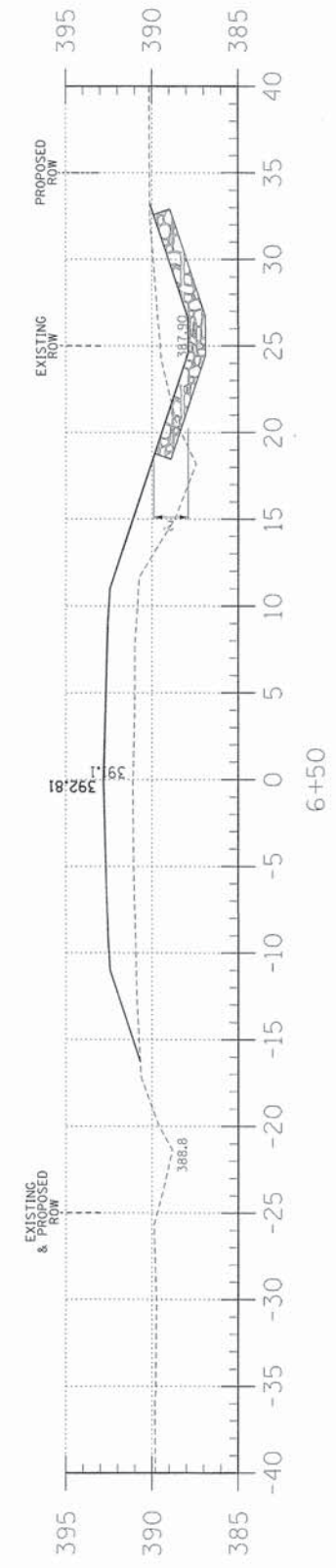
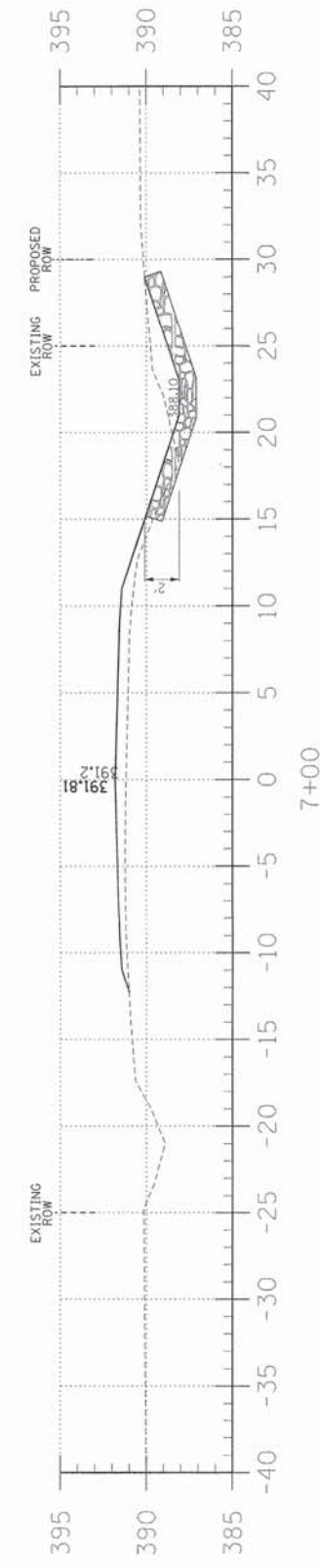
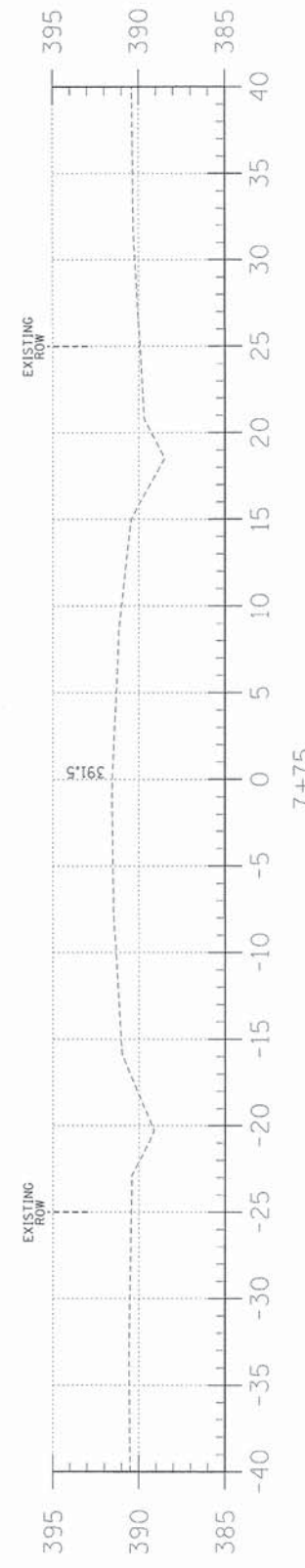
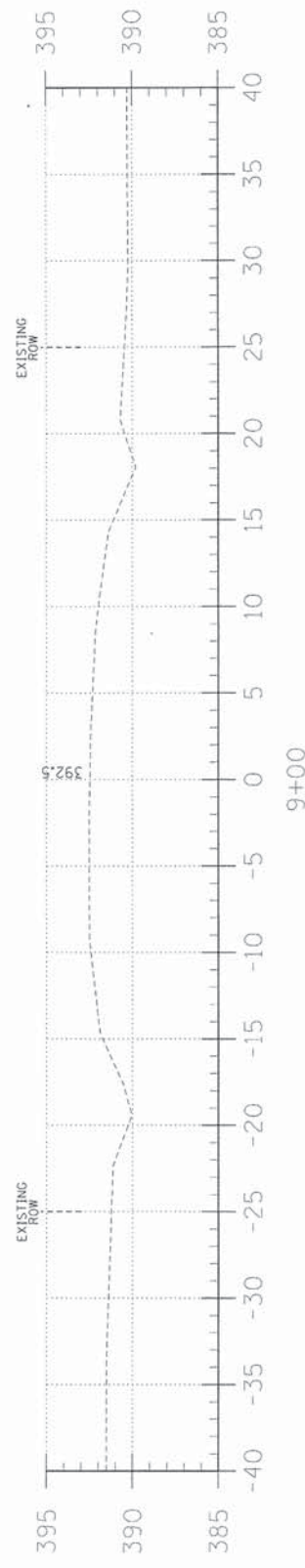
SHEET TITLE:

CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 8/29/13
REV:

3 OF 13 SHEETS

SHEET NO. 3



C = 66.6
F = 16.7

C = 111.7
F = 59.4

C = 25.6
F = 116.0

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	4
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BROS-065/055		CONTRACT# 99515		
JOB NO. C-99-525-13		RILEY CREEK		
LEC JOB # HIZILOITHM				

323 W. 3RD ST.
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62863
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(618)-262-8651
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PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-000867
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
Aaron M. Mefford
SIGNATURE
8-29-13
DATE
11-30-13
EXPIRES

TOWNSHIP ROUTE 388
OVER RILEY CREEK
HAMILTON COUNTY, ILLINOIS

SHEET TITLE:

CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 8/29/13
REV:

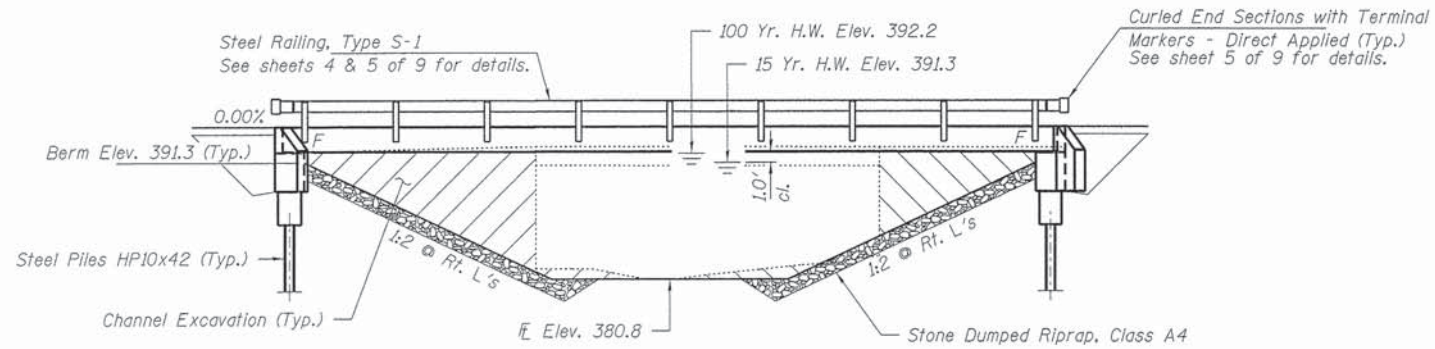
4 OF 13
SHEETS

SHEET NO.
4

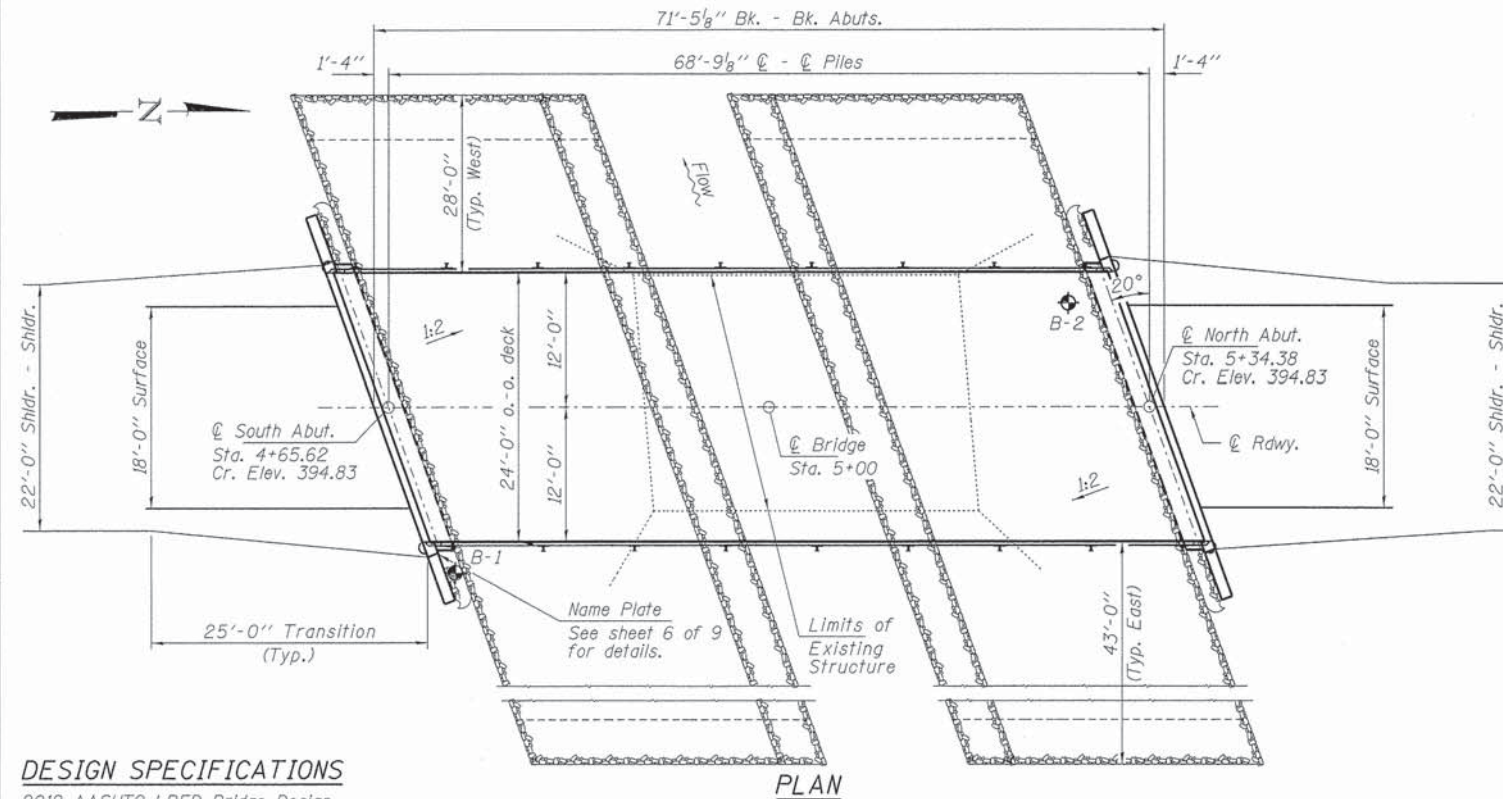
EXISTING STRUCTURE NO. 033-3182: Sta. 5+03 - A single span bridge with concrete deck beams on timber caps, piling, mudwalls and wingwalls. 27.5' fc.-fc. abuts.

Structure closed to traffic during construction.

No Salvage



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with all applicable 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" low lax. strands)
fpbt = 201,960 psi (1/2" low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.311g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.742g
Soil Site Class = D

Design Scour Elevations (ft.)		
	S. Abut.	N. Abut.
0.100	388.7	388.7

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	2040	277	448	391.33			
Base	100	3520	277	500	392.17	1.39	0.37	393.56 392.54

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."

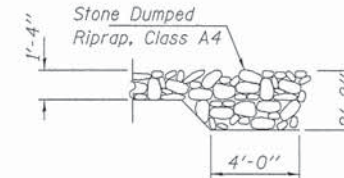
Steven W. Megginson 08/21/2013
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



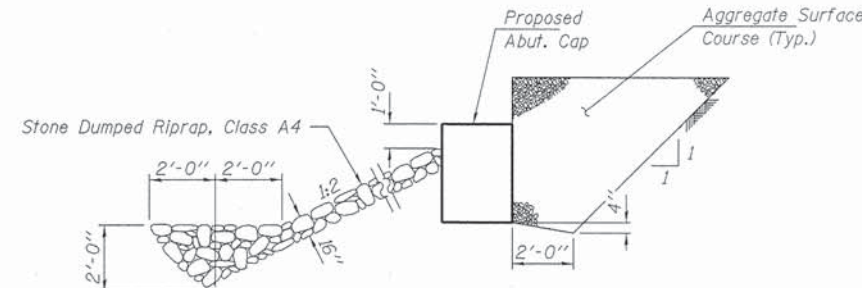
Expires 11-30-2014

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 or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Excavation required to construct the Abutments 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.



SECTION B-B

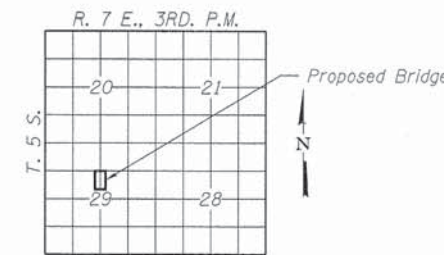


SECTION A-A

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

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 27"x48" PPC Deck Beam
3. 27"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. HP Pile Details
- 8-9. Borings



LOCATION SKETCH

RILEY CREEK
BUILT 2011 BY
HAMILTON COUNTY
SEC. 07-02128-00-BR
CROOK ROAD DISTRICT
STR. NO. 033-3319
LOADING HL-93

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			350
Stone Dumped Riprap, Class A4	Ton			470
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		25.0	25.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars	Pound		2,680	2,680
Steel Railing, Type S-1	Foot	136		136
Furnishing Steel Piles HP10x42	Foot		350	350
Driving Piles	Foot		350	350
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Terminal Marker - Direct Applied	Each	4		4

FILE NAME = 120308-shr-bridge.dgn	USER NAME =
HAMPTON, LENZINI AND RENWICK, INC.	
308 STEVENSON DRIVE, SUITE 301	
SPRINGFIELD, ILLINOIS 62703	
ILLINOIS PROFESSIONAL DESIGN FIRM	
LS/P/E/SE CORP. 184200009	

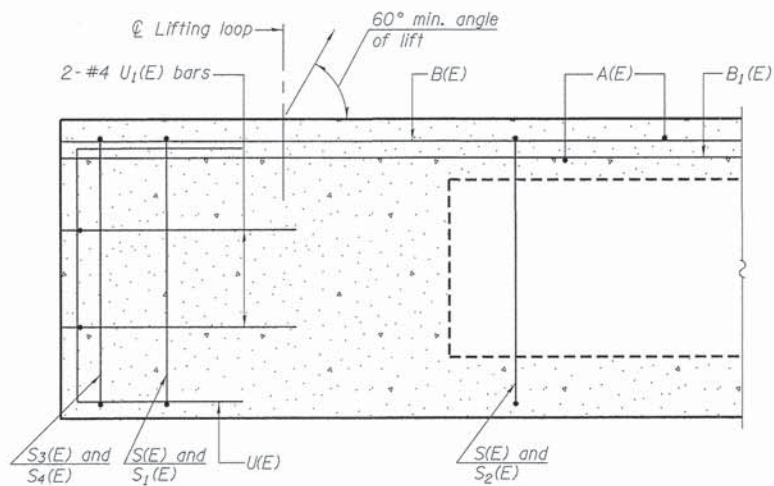
DESIGNED - L.A.P.	REVISD -
CHECKED - S.W.M.	REVISD -
DRAWN - D.A.B.	REVISD -
CHECKED - S.W.M.	REVISD -

STATE OF ILLINOIS
HAMILTON COUNTY HIGHWAY DEPARTMENT

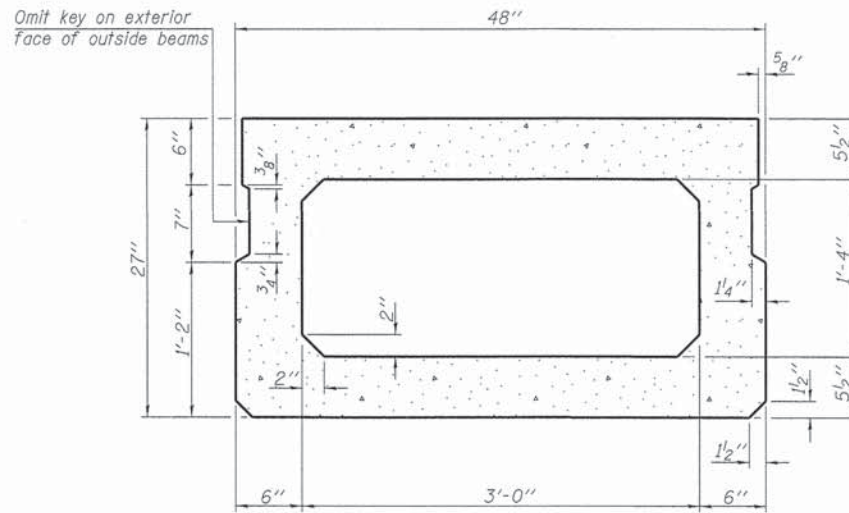
GENERAL PLAN & ELEVATION
STRUCTURE NO. 033-3319

SHEET NO. 1 OF 9 SHEETS

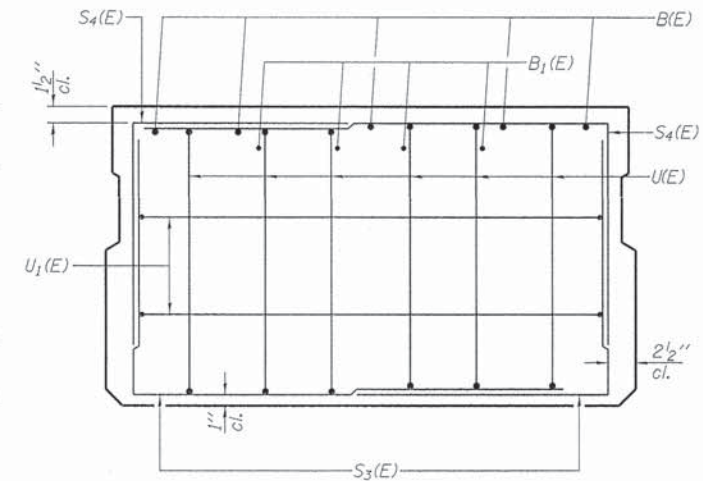
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	5
CROOK ROAD DISTRICT			CONTRACT NO. 99515	
ILLINOIS FED. AID PROJECT BR05-19310581				



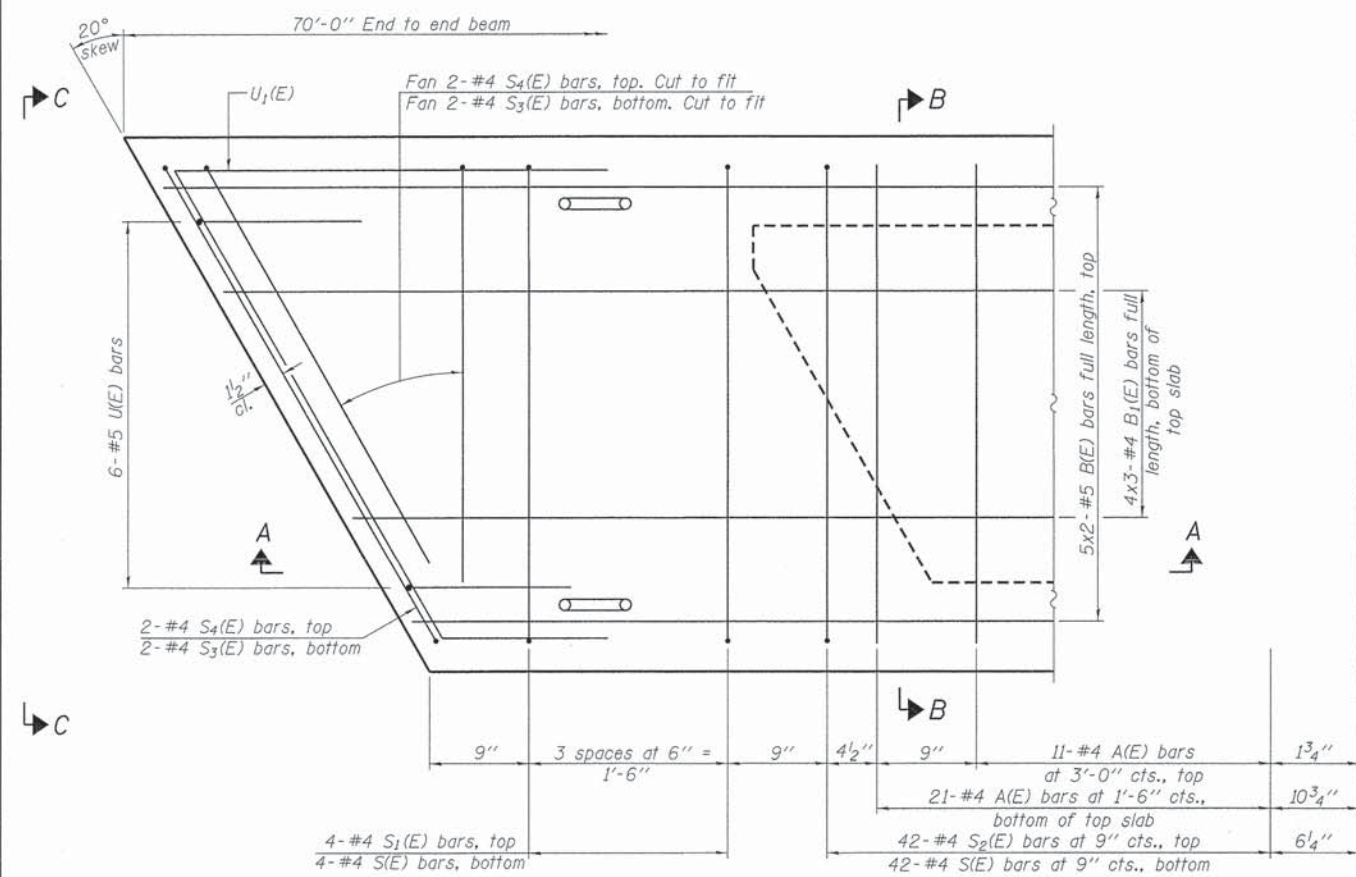
SECTION A-A



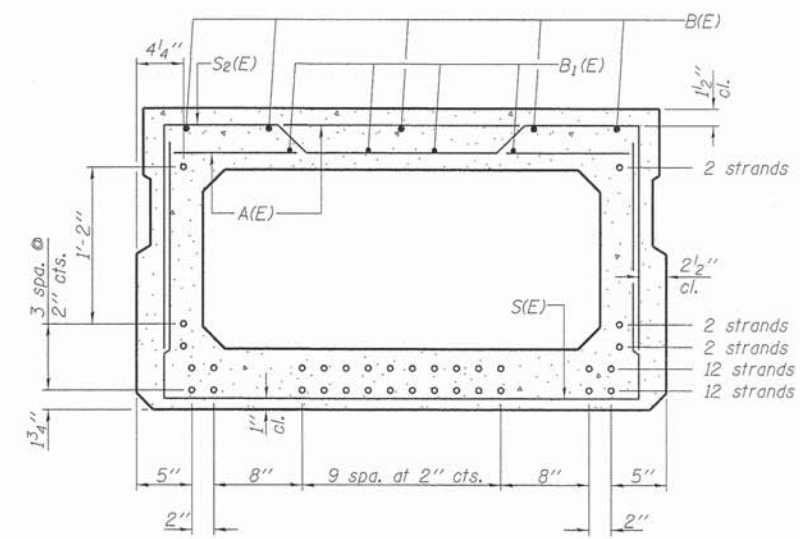
SECTION B-B
(Showing dimensions)



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)	65	#4	3'-7"	—
B(E)	10	#5	36'-2"	—
B1(E)	12	#4	24'-7"	—
S(E)	93	#4	7'-5"	—
S1(E)	8	#4	6'-11"	┌
S2(E)	85	#4	7'-2"	┌
S3(E)	8	#4	4'-9"	┌
S4(E)	8	#4	4'-6"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	7'-6"	┌

Note: See sheets 3 & 4 of 9 for additional details and Bill of Material.

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.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2748-R 7-1-10

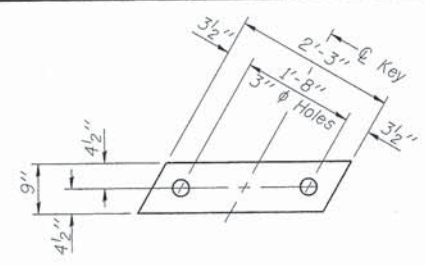
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HAMPTON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =
ILLINOIS PROFESSIONAL DESIGN FIRM LA / PR / SE CORP. 184 00999	PLOT DATE = 8/21/2013

DESIGNED - L.A.P.	REVISED -
CHECKED - S.W.M.	REVISED -
DRAWN - D.A.B.	REVISED -
CHECKED - S.W.M.	REVISED -

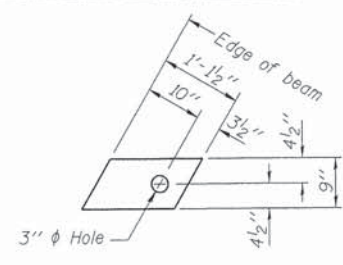
STATE OF ILLINOIS
HAMILTON COUNTY HIGHWAY DEPARTMENT

27" x 48" PPC DECK BEAM
STRUCTURE NO. 033-3319
SHEET NO. 2 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	6
CROOK ROAD DISTRICT			CONTRACT NO. 99515	
[ILLINOIS] FED. AID PROJECT BR05-19310581				

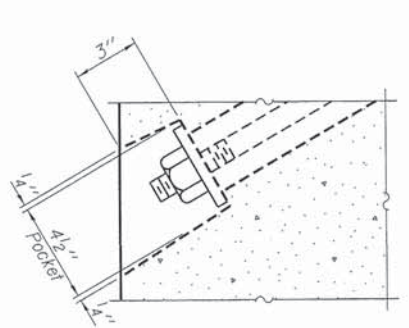


FABRIC BEARING PAD
(Interior - 10 Required)

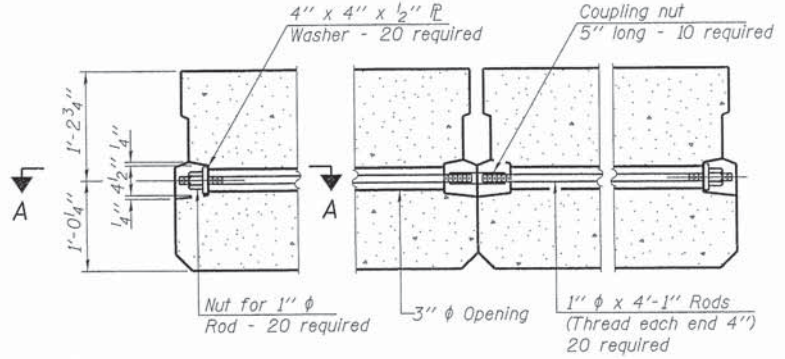


FABRIC BEARING PAD
(Exterior - 4 Required)

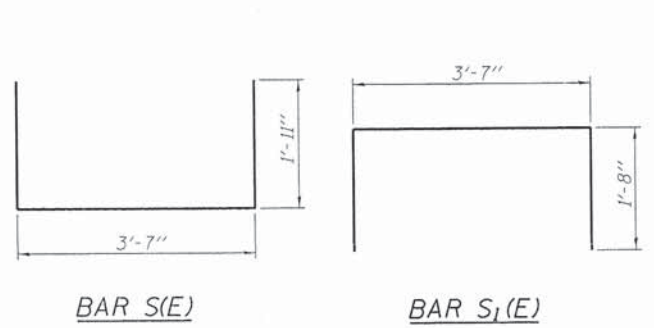
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

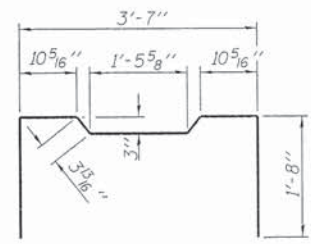


TYPICAL TRANSVERSE TIE ASSEMBLY

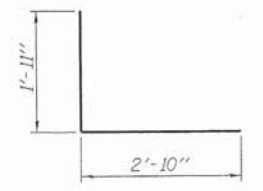


BAR S1(E)

BAR S2(E)



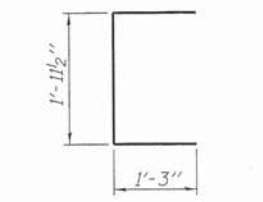
BAR S3(E)



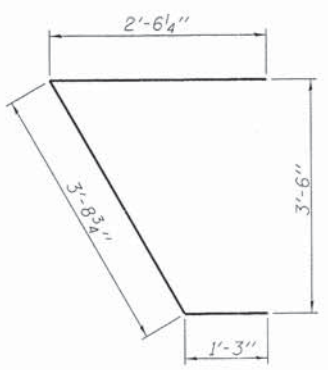
BAR S4(E)



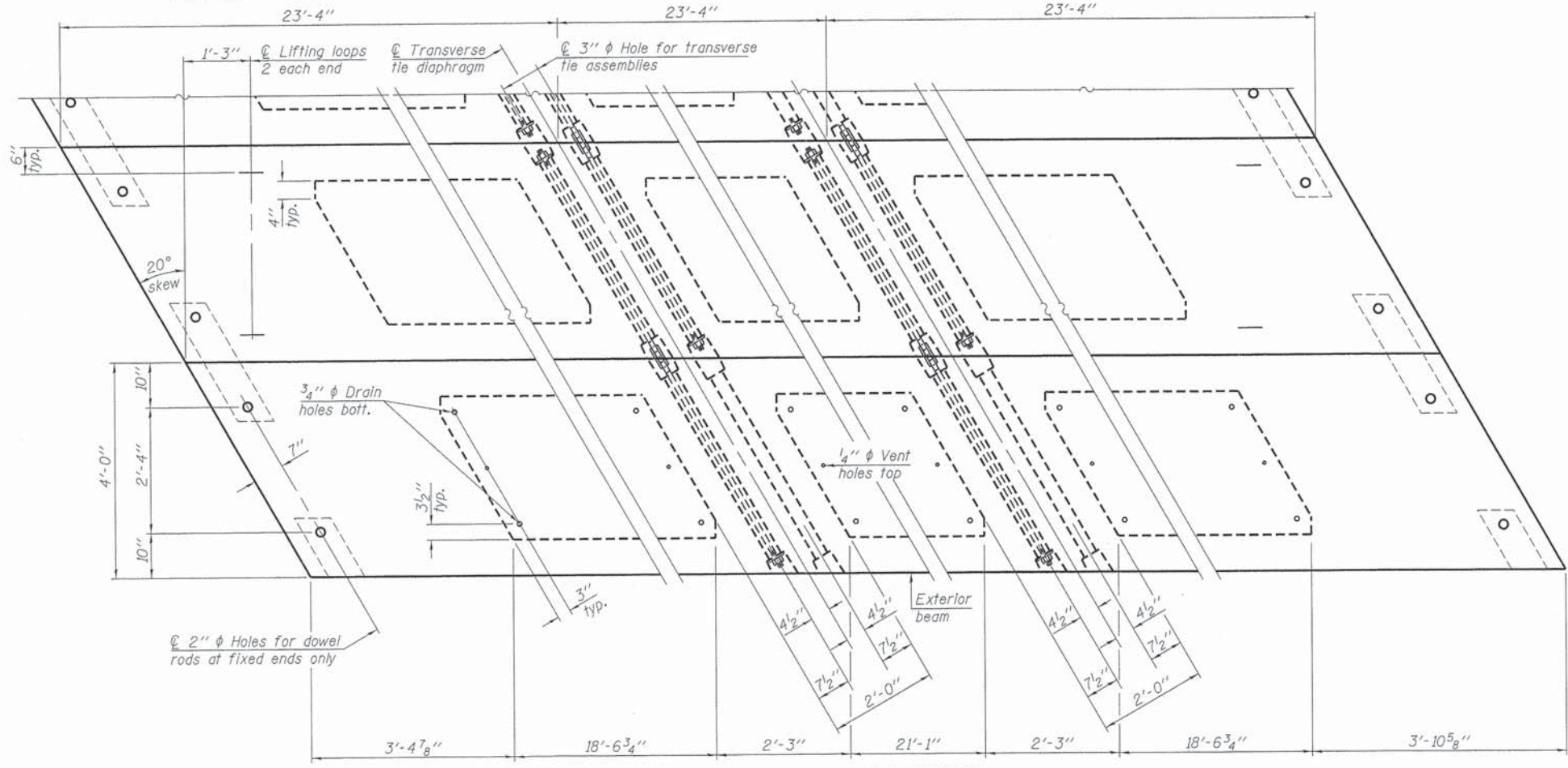
BAR U1(E)



BAR U2(E)



BAR U3(E)

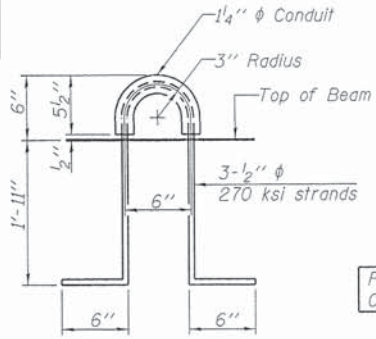


PLAN VIEW

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" diameter 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 3/8" 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)(12) 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'cl, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.

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



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,680
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PD-2748-RD 7-1-10

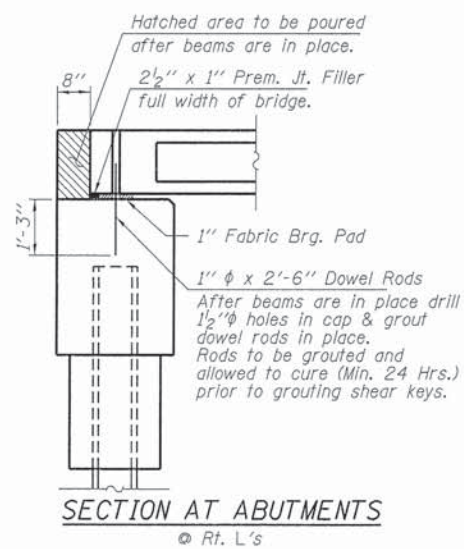
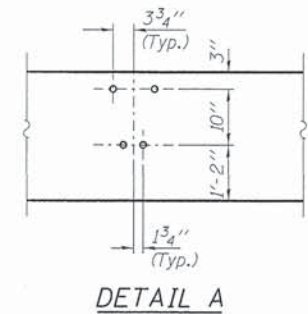
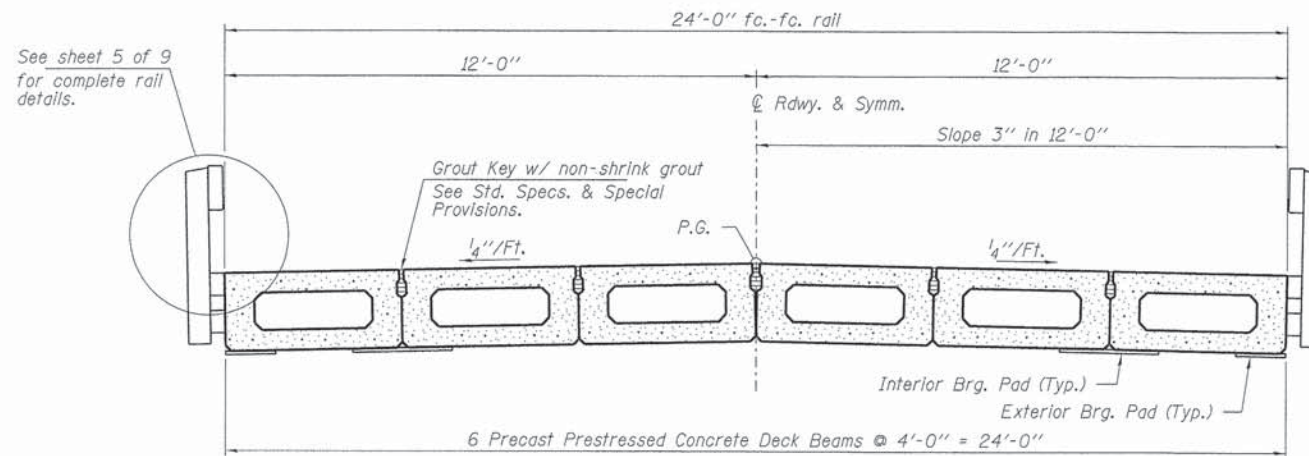
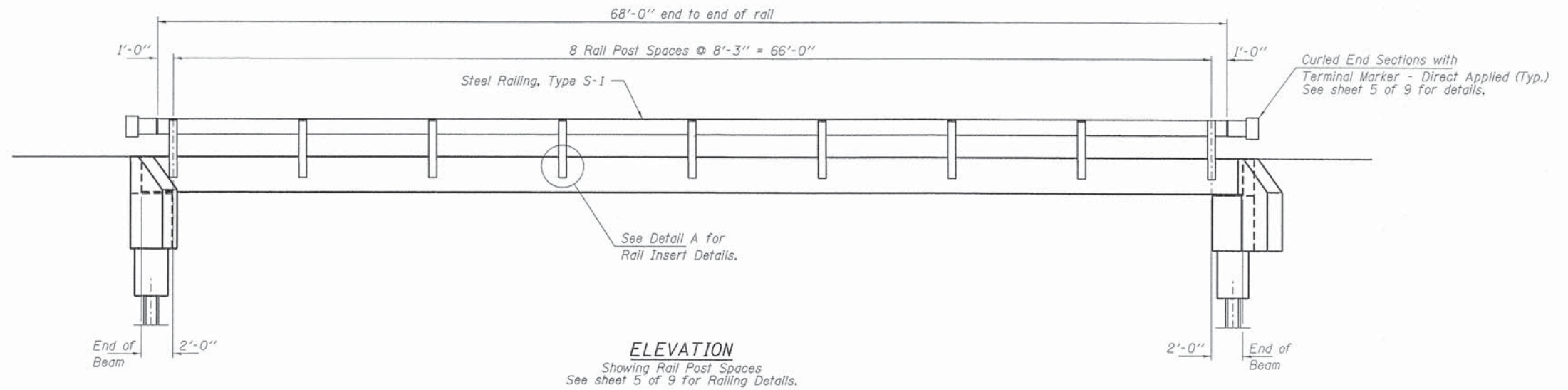
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HAMPTON, LENZINI AND RENWICK, INC.	388 STEVENSON DRIVE, SUITE 201	CHECKED - S.W.M.	REVISED -
SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT DATE = 8/21/2013	CHECKED - S.W.M.	REVISED -
LSI / PE / SE CORP. 184.00099			

STATE OF ILLINOIS
HAMILTON COUNTY HIGHWAY DEPARTMENT

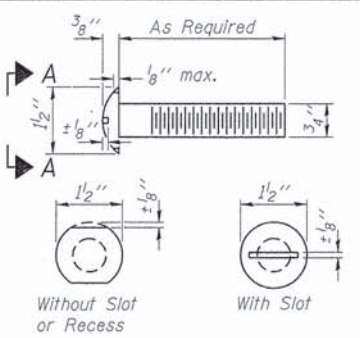
27" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 033-3319

SHEET NO. 3 OF 9 SHEETS

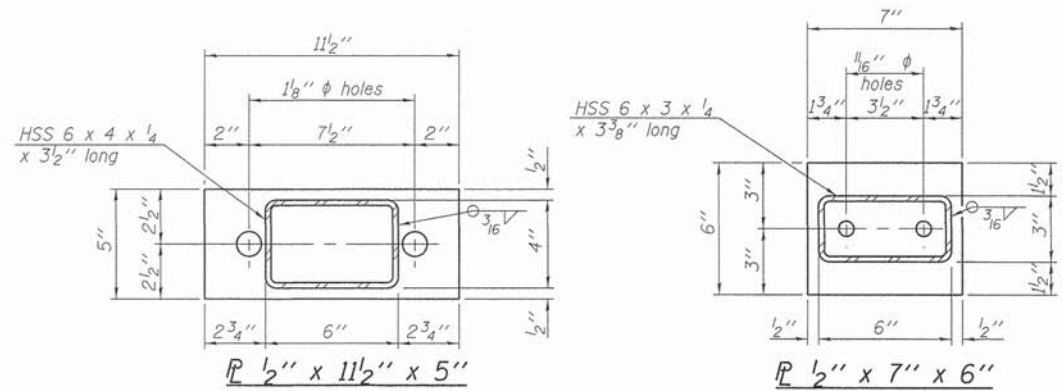
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	7
CROOK ROAD DISTRICT			CONTRACT NO. 99515	
[ILLINOIS] FED. AID PROJECT BROS-19310581				



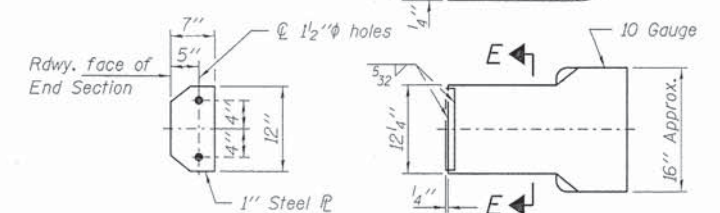
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HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			388	07-02128-00-BR	HAMILTON	13	8
IL	PLOT DATE = 8/21/2013	DRAWN - D.A.B.	REVISED -			CROOK ROAD DISTRICT		CONTRACT NO. 99515		
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-000000		CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 9 SHEETS		ILLINOIS FED. AID PROJECT BR05-19310581		



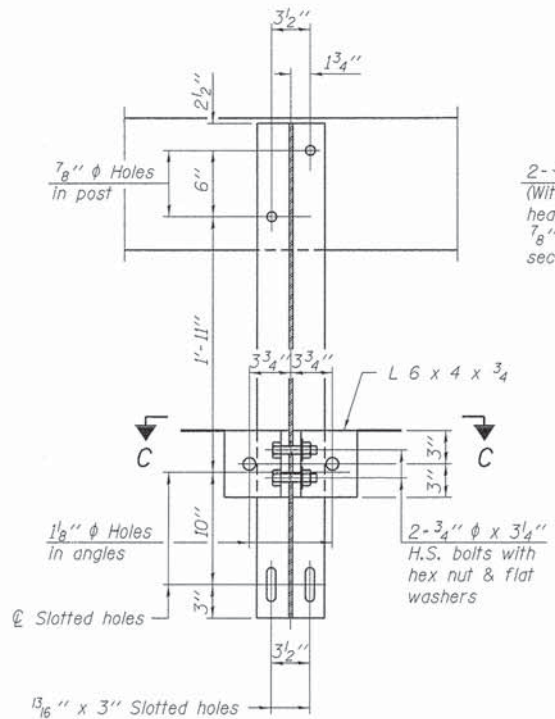
**VIEW A-A
ROUND HEAD BOLT**



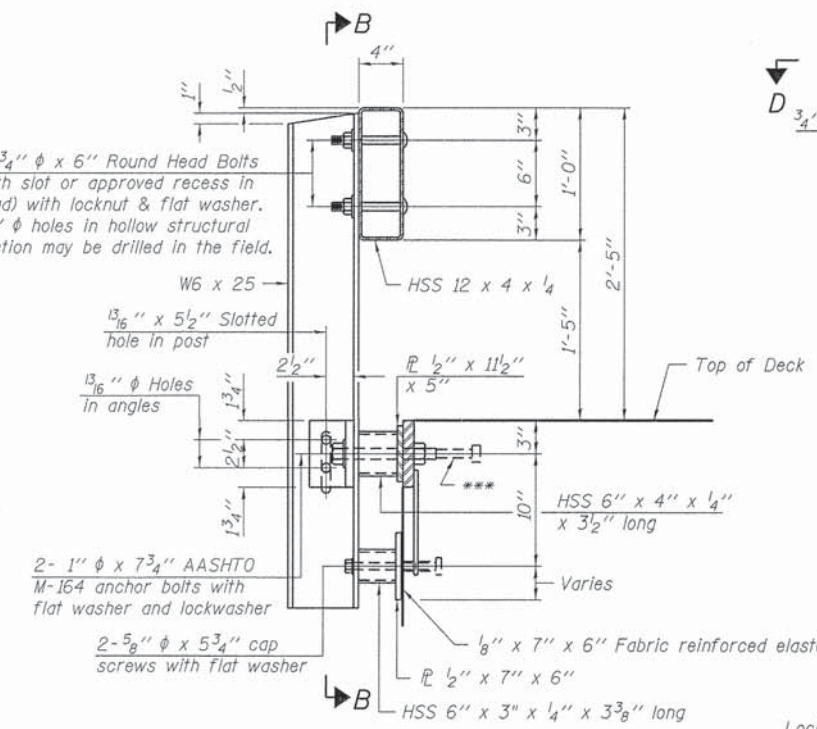
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



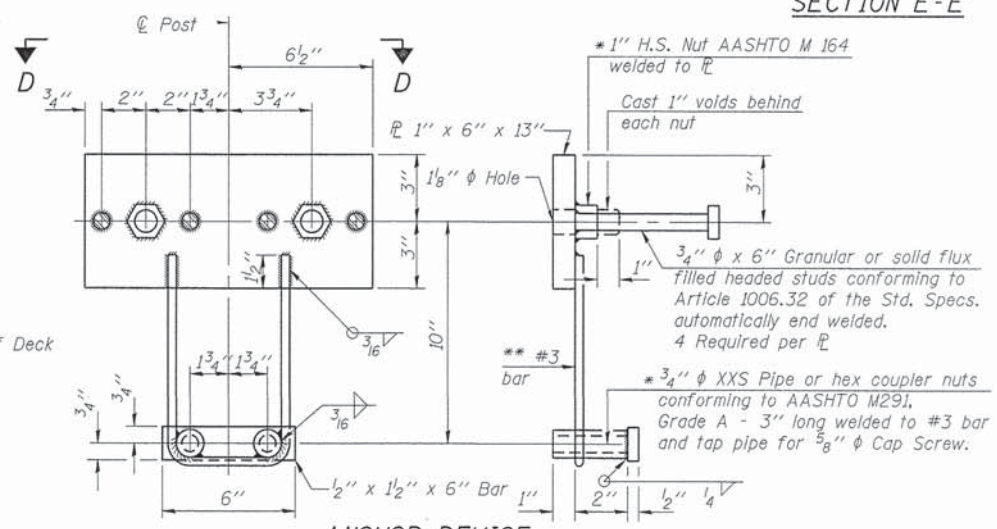
**SECTION E-E
CURLLED END SECTION DETAILS**



SECTION B-B

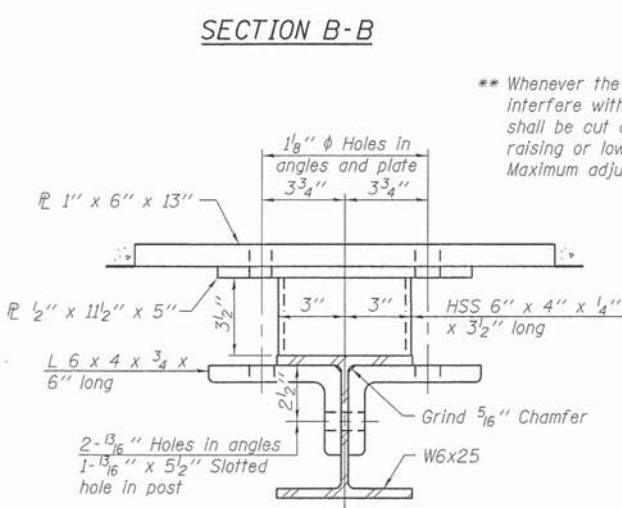


SECTION AT RAILING POST

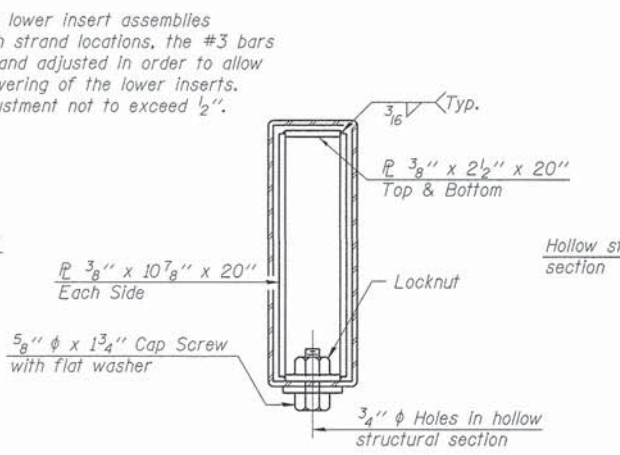


ANCHOR DEVICE

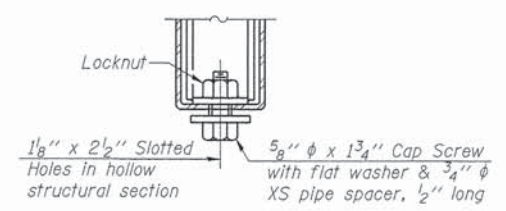
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** 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.



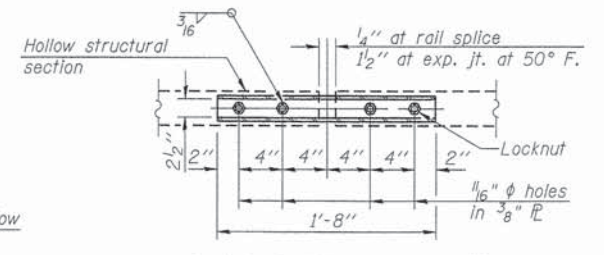
SECTION C-C



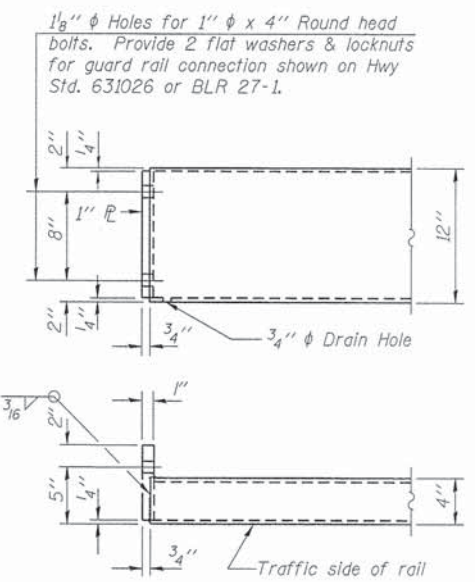
SECTIONS AT RAIL SPLICE



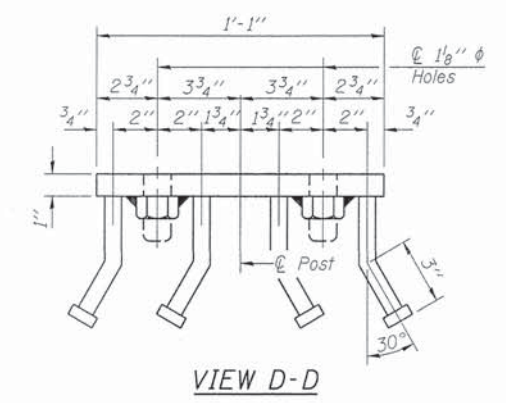
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE R
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	136

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

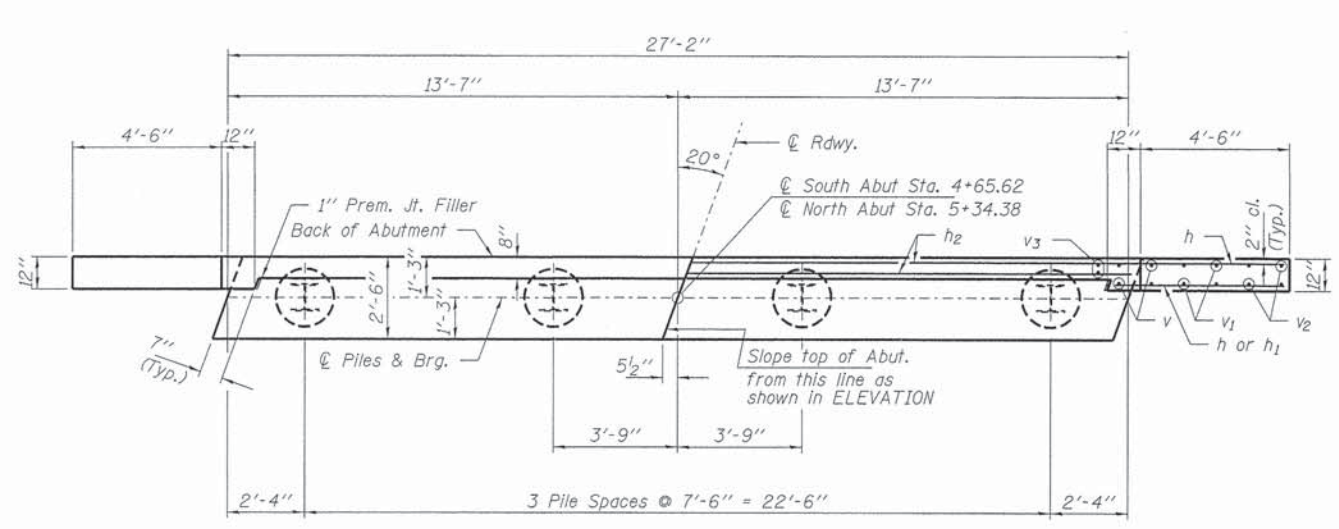
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 USER NAME =
 DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 HAMPTON, LENZINI AND RENWICK, INC.
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62733
 ILLINOIS PROFESSIONAL DESIGN FIRM
 L3 / PE / SE CORP. 184-000009

DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - D.A.B.
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 REVISED -
 REVISED -
 REVISED -

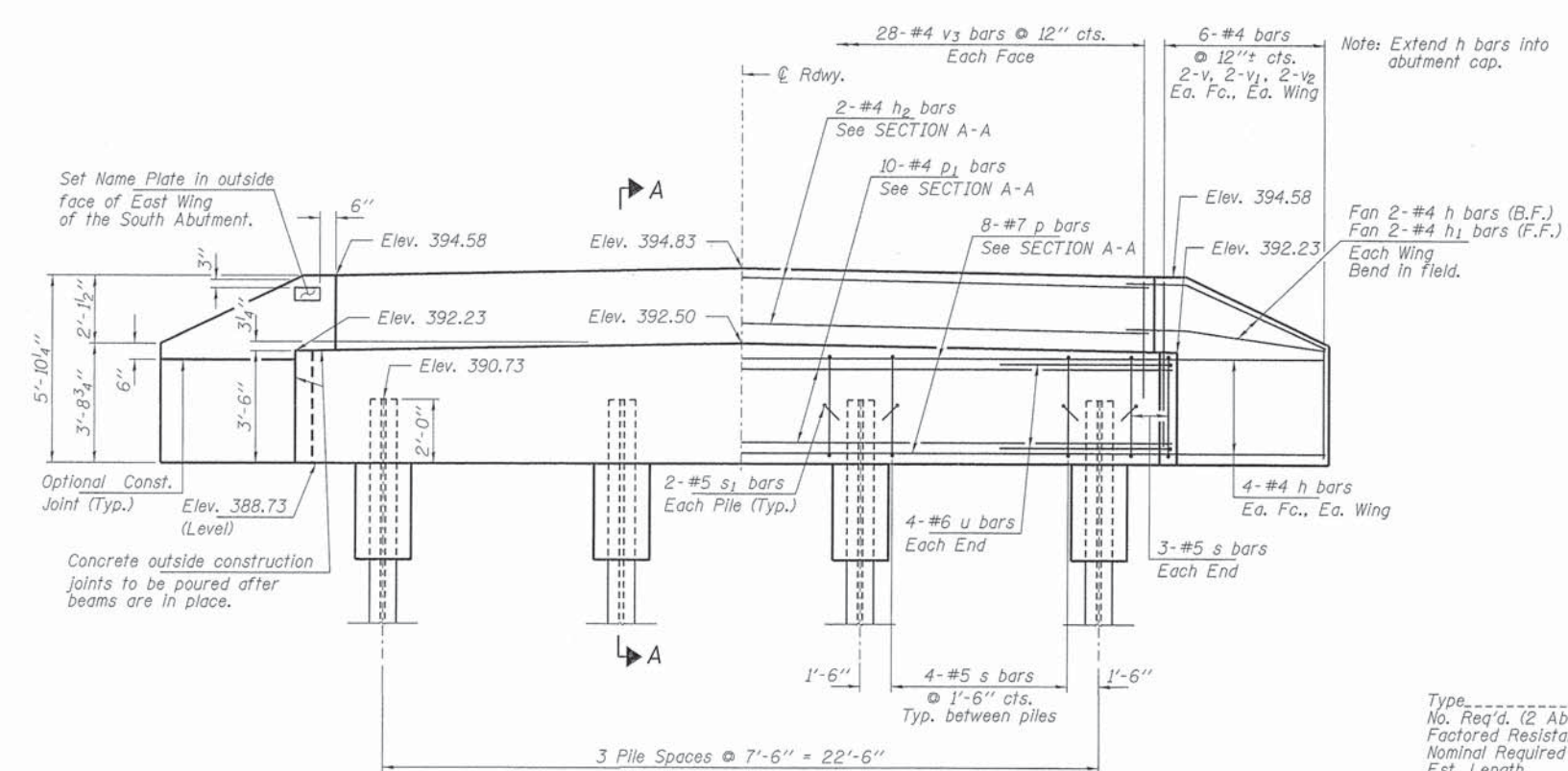
STATE OF ILLINOIS
 HAMILTON COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
 STRUCTURE NO. 033-3319
 SHEET NO. 5 OF 9 SHEETS

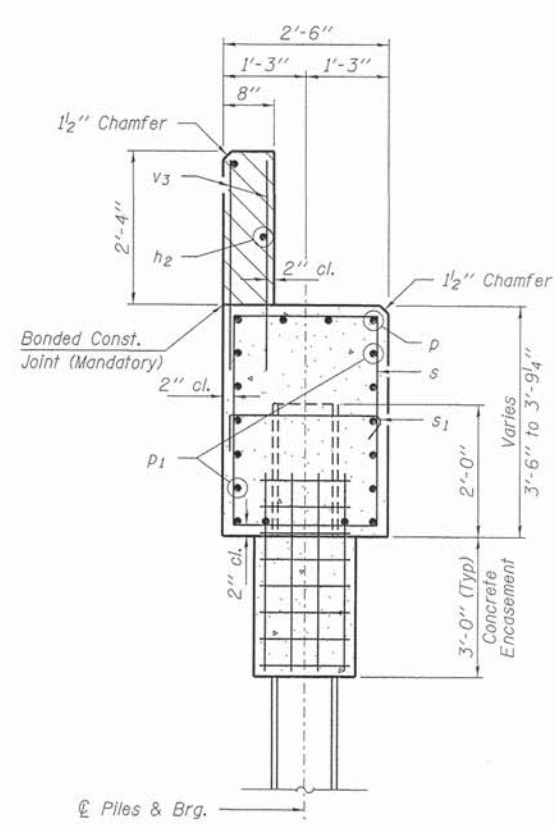
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	9
CROOK ROAD DISTRICT			CONTRACT NO. 99515	
(ILLINOIS FED. AID PROJECT BR05-1931058)				



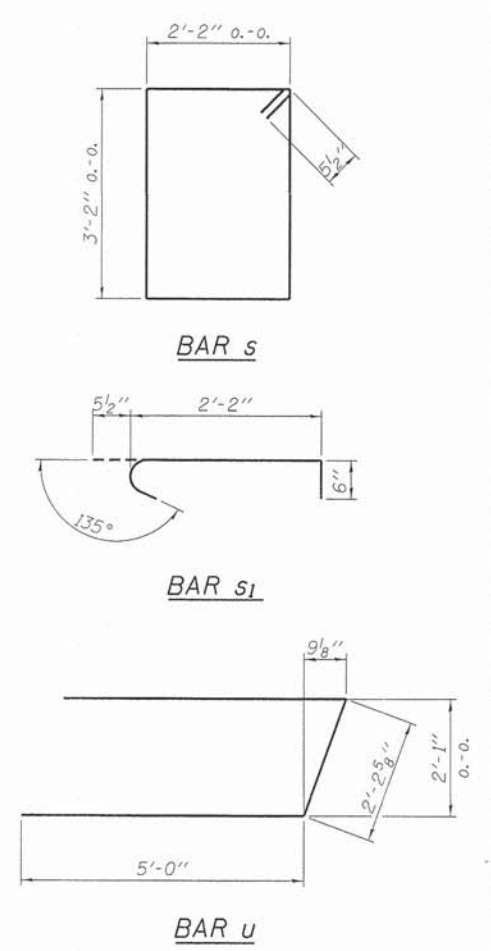
PLAN



ELEVATION



SECTION A-A



PILE DATA

Type: Steel Piles HP10x42
 No. Req'd. (2 Abutments): 8
 Factored Resistance Available (Rf): 184 Kips/Pile
 Nominal Required Bearing (Rn): 335 Kips/Pile
 Est. Length: 50 Ft/Pile

Notes: * Includes one test pile to be driven in a permanent location at the North Abutment.
 The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	6'-9"	—
h ₁	8	#4	5'-3"	—
h ₂	4	#4	26'-10"	—
p	16	#7	26'-10"	—
p ₁	20	#4	26'-10"	—
s	36	#5	11'-7"	□
s ₁	16	#5	3'-2"	┌
u	16	#6	12'-3"	┌
v	16	#4	5'-5"	—
v ₁	16	#4	4'-4"	—
v ₂	16	#4	3'-4"	—
v ₃	112	#4	3'-2"	—
Concrete Structures			Cu. Yd.	25.0
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,680
Furnishing Steel Piles HP10x42			Foot	350
Driving Piles			Foot	350
Test Pile HP 10x42			Each	1
Name Plates			Each	1

FILE NAME = 120305-ah-bridge.dgn
 USER NAME =
 DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - D.A.B.
 PLOT DATE = 8/21/2013

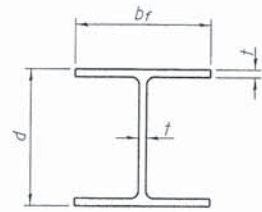
DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - D.A.B.
 PLOT DATE = 8/21/2013

STATE OF ILLINOIS
 HAMILTON COUNTY HIGHWAY DEPARTMENT

ABUTMENTS
 STRUCTURE NO. 033-3319
 SHEET NO. 6 OF 9 SHEETS

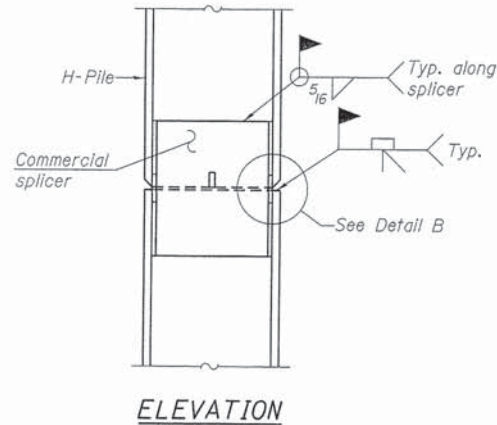
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
388	07-02128-00-BR	HAMILTON	13	10

CONTRACT NO. 99515
 [ILLINOIS] FED. AID PROJECT BROS-19310591

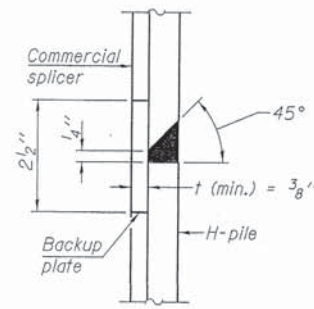


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	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"	11/16"	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"	1/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

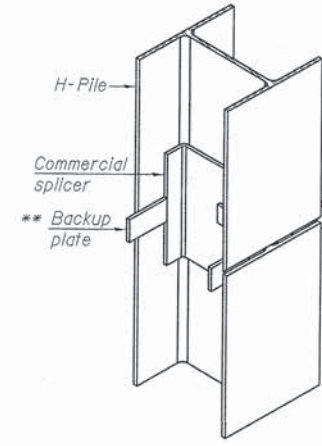


ELEVATION

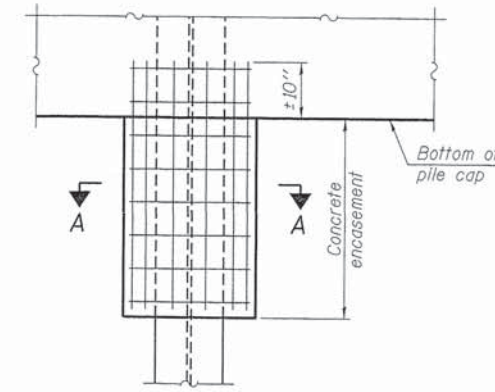


DETAIL "B"

WELDED COMMERCIAL SPLICE

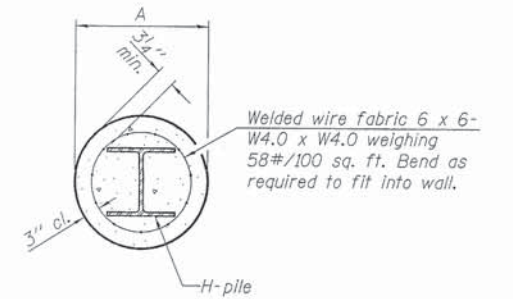


ISOMETRIC VIEW



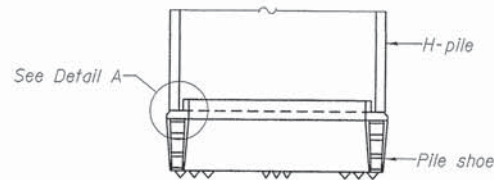
ELEVATION

PILE ENCASEMENT

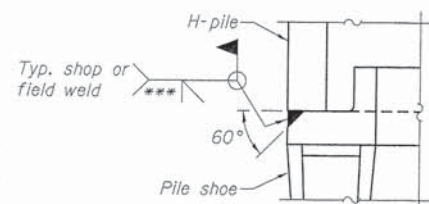


SECTION A-A

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

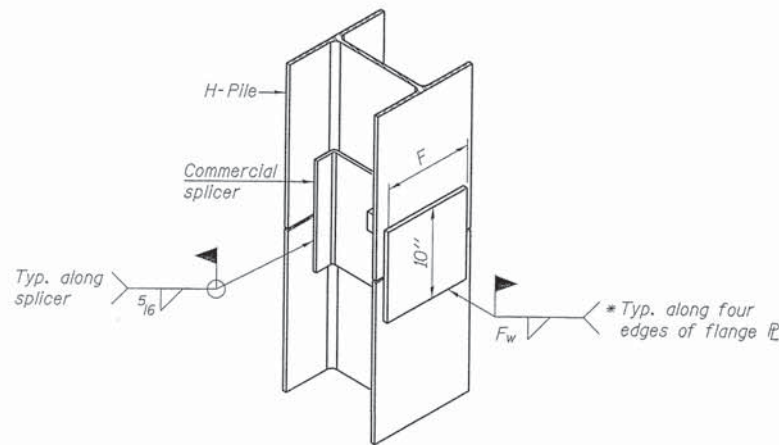


ELEVATION

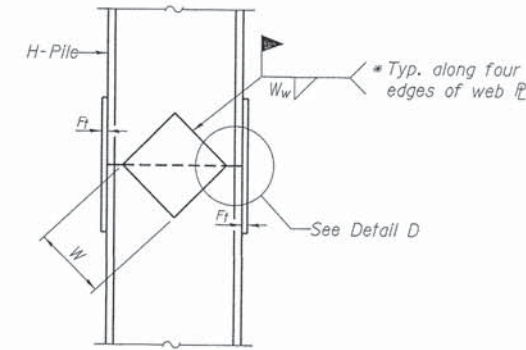


DETAIL A

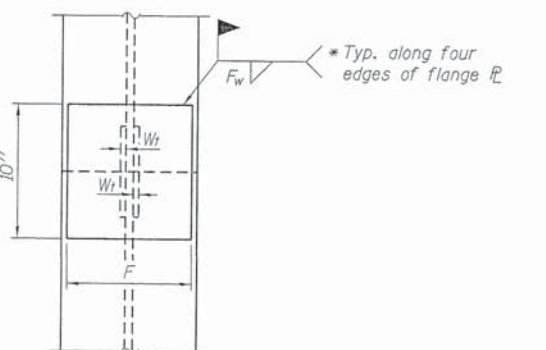
H-PILE SHOE ATTACHMENT



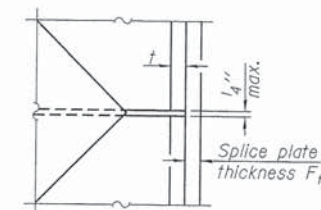
ISOMETRIC VIEW



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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"

WELDED COMMERCIAL SPLICE ALTERNATE

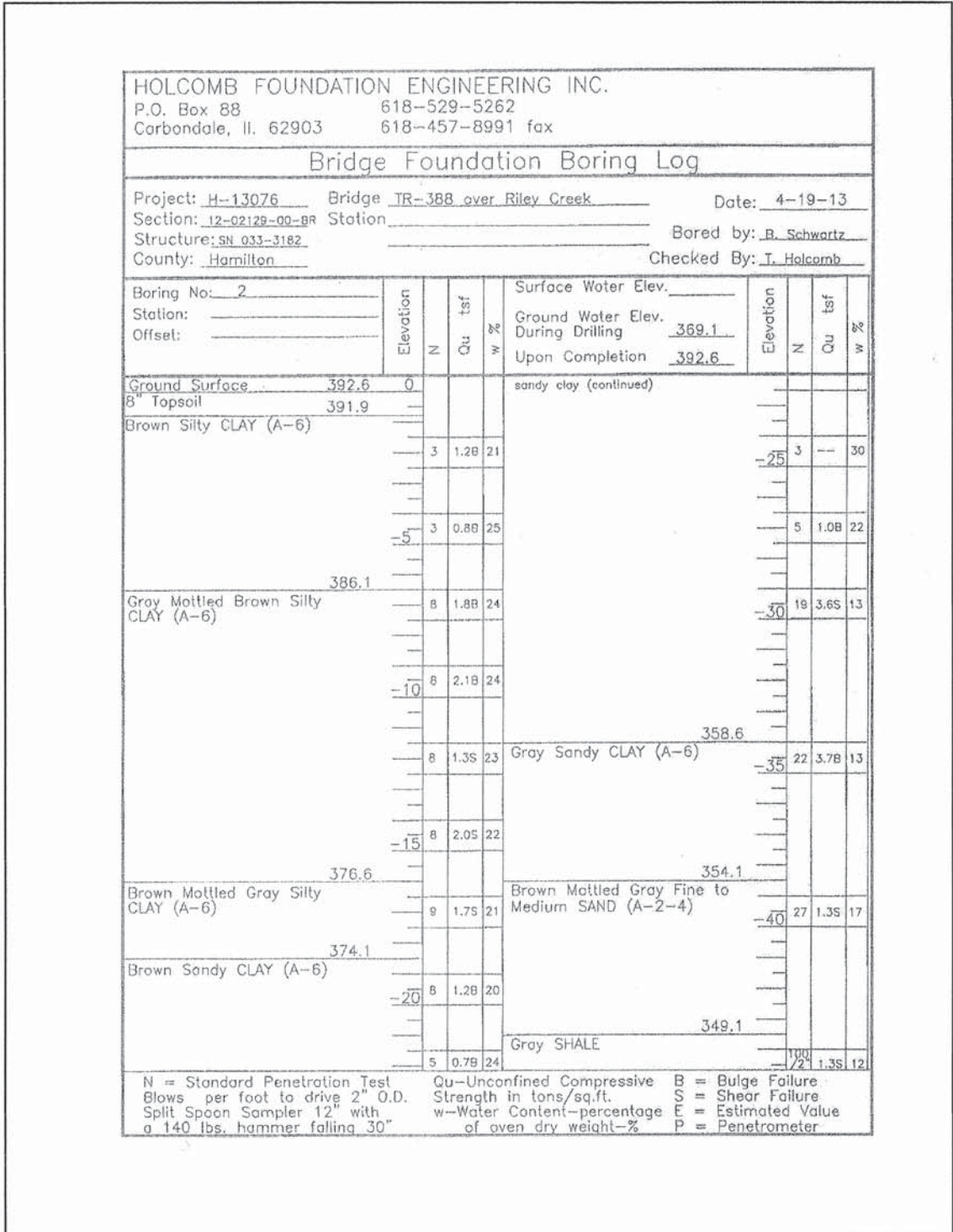
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

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

F-HP

1-27-12

FILE NAME * 120306-sh1-brIDGE.dgn	USER NAME *	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS HAMILTON COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 033-3319	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3080 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -			388	07-02128-00-BR	HAMILTON	13	11
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PS / SE CORP. 184.000009		DRAWN - D.A.B.	REVISED -			CROOK ROAD DISTRICT				CONTRACT NO. 99515
		CHECKED - S.W.M.	REVISED -			ILLINOIS FED. AID PROJECT BR05-19310581				



BORING 2

