06-17-11 LETTING ITEM 261

INDEX OF SHEETS

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS (6 SHEETS)
280001-05	TEMPORARY EROSION CONTROL SYSTEMS (2 SHEETS)
515001-03	NAME PLATE FOR BRIDGES
701901-01	TRAFFIC CONTROL DEVICES
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 22-6	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

QUANTITY	UNIT	ITEM	CODE NO.
2081.00	CU YD	EARTH EXCAVATION	20200100
147.00	CU YD	CHANNEL EXCAVATION	20300100
28.00	CU YD	FURNISHED EXCAVATION	20400800
14.00	FOOT	TEMPORARY DITCH CHECKS	28000305
10.00	TON	AGGREGATE (EROSION CONTROL)	28001000
680.00	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
315.00	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.00	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
22.00	CU YD	CONCRETE STRUCTURES	50300225
2.80	CU YD	CONCRETE ENCASEMENT	50300280
1320.00	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	50400405
2420.00	POUND	REINFORCEMENT BARS	50800105
109.00	FOOT	STEEL RAILING, TYPE S1	50900205 *
385.00	FOOT	FURNISHING STEEL PILES HP10X42	51201400
385.00	FOOT	DRIVING PILES	51202305
1.00	EACH	TEST PILE STEEL HP10X42	51203400
1.00	EACH	NAME PLATES	51500100
1.00	L SUM	MOBILIZATION	67100100
0.80	ACRE	SEEDING, CLASS 2 (SPECIAL)	X2501000
5.00	FOOT	PIPE CULVERT REMOVAL (SPECIAL)	X5015225
2.00	E. CH	FIELD TILE ADJUSTMENT	XX004633
87.00	TON	STONE LINED DITCH	Z0068900

*SPECIALTY ITEMS

DESIGN DESIGNATION:
DESIGN SPEED: 30 MPH
HIGHWAY CLASS - LOCAL ROAD
EXISTING STRUCTURE NO.: 093-3031
PROPOSED STRUCTURE NO.: 093-3134
CURRENT A.D.T. = 50
CONTRACT NO. 95653

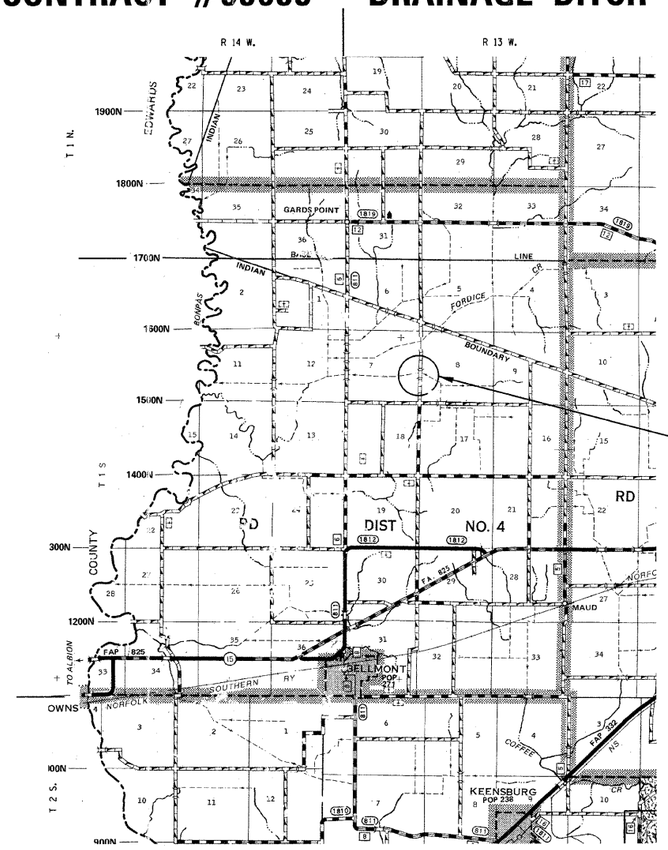
WARNING

CALL JULIE TOLL FREE 1-800-892-0123

CALL 811 BEFORE YOU DIG

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
FEDERAL AID – H.B.P. PROJECT

T.R. 52 WABASH COUNTY SECTION 06–04114–00–BR
PROJECT NO. BROS–0185(032) JOB NO. C–97–059–11
CONTRACT #95653 DRAINAGE DITCH



N

LAYOUT
APPROXIMATE SCALE 1 INCH = 1 MILE
0 1 2 3
MILES

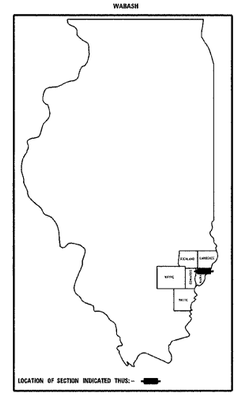
GROSS LENGTH	500.00 FT	0.095 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	500.00 FT	0.095 MILES

SECTION 06-04114-00-BR
BEGINS STATION 2+50

STATION 5+00, STRUCTURE NO. 093-3134
A 55' LONG SINGLE SPAN PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE (21" DEPTH),
24' ROADWAY, 0.00% GRADE, 0° SKEW.

SECTION 06-04114-00-BR
ENDS STATION 7+50

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
PROJECT # BROS-185(032)		CONTRACT # 95653		
LEC JOB # H10IL004WB		DRAINAGE DITCH		



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'

APPROVED April 13TH 20 11
COUNTY ENGINEER

PASSED 4-18 20 11
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 4/18 20 11
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

405 W. STATE ST.
SUITE1
PRINCETON, IN
47670
PHONE:
(812)-386-7611
FAX:
(812)-385-2812

LAMAC ENGINEERING CO.

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

AARON M. MEFFORD
56284
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-13-11
DATE
11-30-11
EXPIRES

DRAINAGE DITCH
TOWNSHIP ROUTE 52
WABASH COUNTY, ILLINOIS

SHEET TITLE.
TITLE SHEET

SCALE:	VARIES
BY:	AMM
DATE:	4/11
REV:	

1 OF 13 SHEETS

SHEET NO. 1

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	2
FED. ROAD DIST. NO. 7	ILLINOIS	DRAINAGE DITCH		
PROJECT * BROS-1851032)		CONTRACT * 95653		

LEC JOB * H101L004WB

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AARON M. MEFFORD
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PROFESSIONAL
ENGINEER
OF
ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-13-11
DATE
11-30-11
EXPIRES

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, 2007.

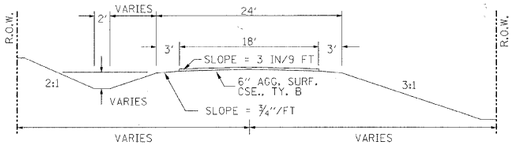
THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 55 FOOT LONG SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

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

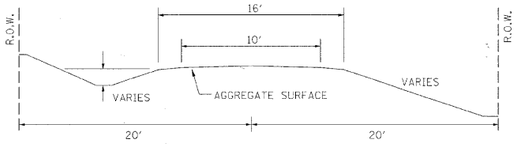
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

THE QUANTITY SHOWN IN THE SUMMARY OF QUANTITIES FOR STONE DUMPED RIPRAP, CLASS A4 ALLOWS 300 TONS FOR THE NORTHEAST ROADSIDE DITCH AND 380 TON FOR THE BRIDE.

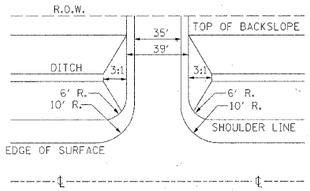
TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



FIELD ENTRANCE DETAIL



NOTE: CONSTRUCT SPECIAL DITCH

STA 2+50 TO STA 4+70 LT
STA 2+50 TO STA 4+70 RT
STA 5+30 TO STA 7+30 RT

NOTE: CONSTRUCT STONE LINED DITCH

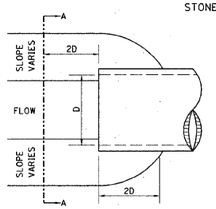
STA 4+00 TO STA 4+70 LT (0.62 TON/LIN FT)
STA 4+00 TO STA 4+70 RT (0.62 TON/LIN FT)
87 TON STONE LINED DITCH ALLOWED IN PROPOSAL.

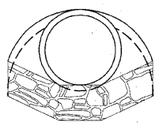
SEE STONE LINED DITCH DETAIL.

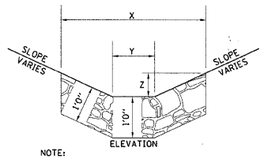
NOTE: FIELD TILE ADJUSTMENT
STA 3+64.8 LT AND STA 6+94.2 LT
2 EACH FIELD TILE ADJUSTMENT

NOTE: PIPE CULVERT REMOVAL (SPECIAL)
STA. 7+15 LT WEST 5 FOOT

STONE LINED DITCH DESIGN




Section A-A

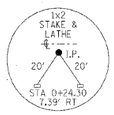


NOTE:

BOTTOM OF DITCH		SLOPE		
	1 1/2:1	2:1	3:1	
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

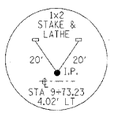
NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE LINED DITCH-SEE SPECIAL PROVISIONS.

NOTE: CONSTRUCTION TRANSITIONS
STA. 2+50 TO STA. 3+00
STA. 7+00 TO STA. 7+50
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL



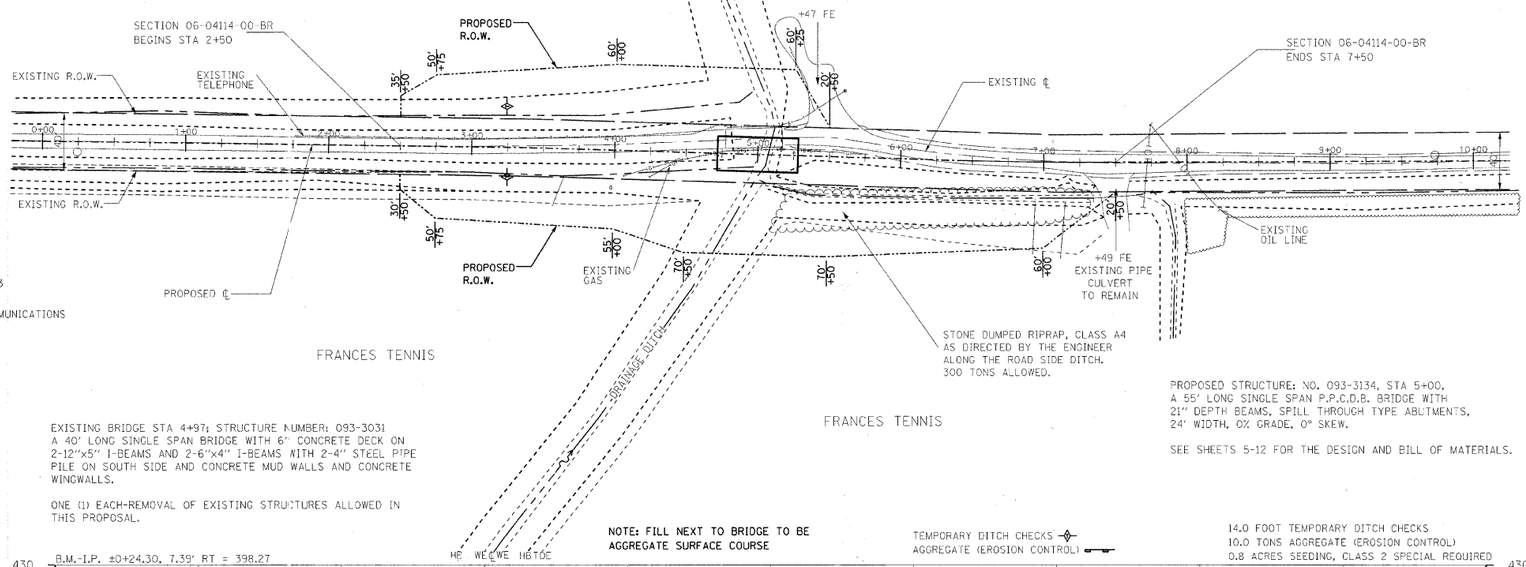
P.I. STA= 3+40.18
Δ= 00°55'30" RT

CURVE #1
P.I. STA= 6+94.66
Δ= LT. 2°01'46"
D= 1°54'38"
R= 3000'
T= 53.14'
L= 106.26'
E= 0.47'
e= NONE
T.R.= NONE
S.E. RUN= NONE
P.C. STA= 6+41.53
P.T. STA= 7+47.79



LEWIS M. TENNIS

LEWIS M. TENNIS



UTILITIES:
J.U.L.I.E.
1-800-892-0123

FRONTIER COMMUNICATIONS
618-395-6195

COUNTRYMARK
812-838-8501

FRANCES TENNIS

FRANCES TENNIS

EXISTING BRIDGE STA 4+97; STRUCTURE NUMBER: 093-3031
A 40' LONG SINGLE SPAN BRIDGE WITH 6' CONCRETE DECK ON 2-12"x5" I-BEAMS AND 2-6"x4" I-BEAMS WITH 2-4" STEEL PIPE PILE ON SOUTH SIDE AND CONCRETE MUD WALLS AND CONCRETE WINGWALLS.

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

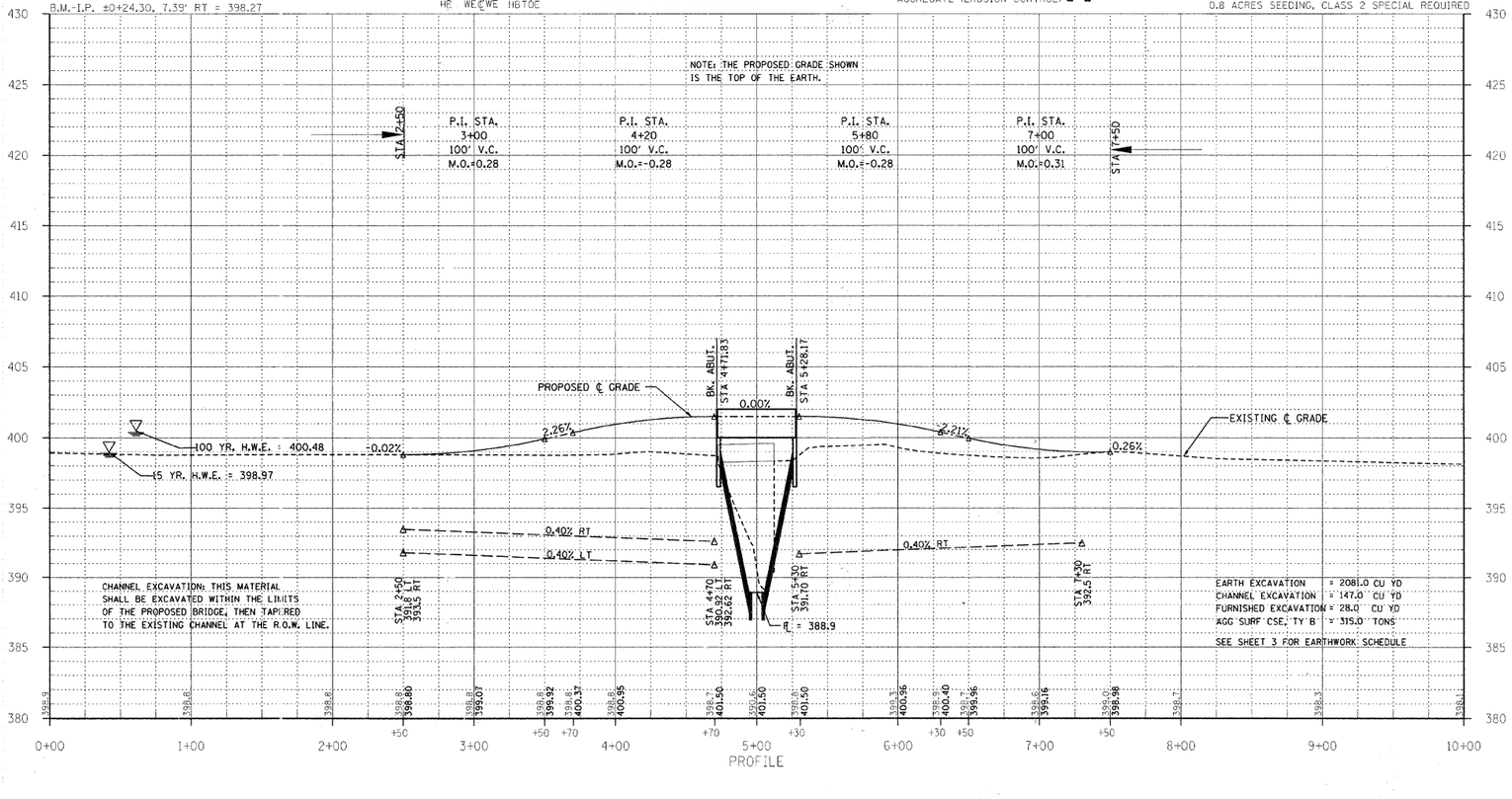
PROPOSED STRUCTURE: NO. 093-3134, STA 5+00,
A 55' LONG SINGLE SPAN P.P.C.D.B. BRIDGE WITH
21" DEPTH BEAMS, SPILL THROUGH TYPE ABUTMENTS,
24' WIDTH, 0% GRADE, 0° SKEW.

SEE SHEETS 5-12 FOR THE DESIGN AND BILL OF MATERIALS.

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE

TEMPORARY DITCH CHECKS ⟡ AGGREGATE (EROSION CONTROL)

14.0 FOOT TEMPORARY DITCH CHECKS
10.0 TONS AGGREGATE (EROSION CONTROL)
0.8 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



DRAINAGE DITCH
TOWNSHIP ROUTE 52
WABASH COUNTY, ILLINOIS

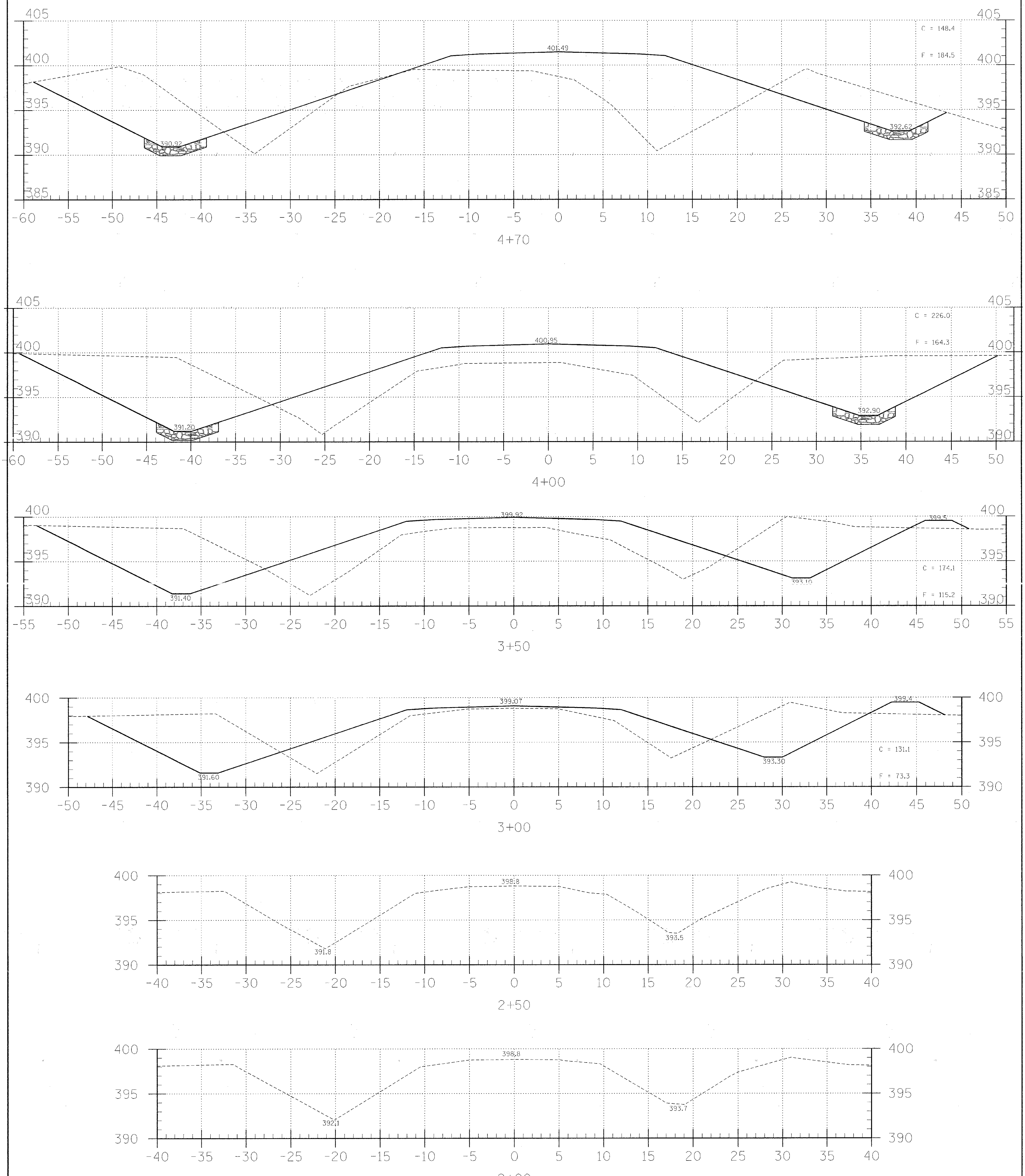
SHEET TITLE:

PLAN & PROFILE

SCALE:	VARIES
BY:	AMM
DATE:	4/13/11
REV:	

2 OF 13 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+71.8	1517.8	0.0	0.0	1138.4	986.4	152.0
STA 4+71.8 TO 5+28.2	0.0	146.7	73.4	55.0	0.0	55.0
STA 5+28.2 TO 10+00	563.6	0.0	0.0	422.7	651.0	-228.3
1 FIELD ENTRANCE	0.0	0.0	0.0	0.0	6.4	-6.4
TOTAL	2081.4	146.7	73.3	1616.1	1643.8	-27.7

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	3
FED. ROAD DIST. NO. 7	ILLINOIS	DRAINAGE DITCH		
PROJECT # BROS-1850(032)		CONTRACT # 35653		

LEC JOB # H10IL004WB

323 W. 3RD ST.
P.O. BOX 160
MT. CARMEL, IL 62863
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PRINCETON, IN 47670
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LAMAC ENGINEERING CO.

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

AARON M. MEFFORD 56284 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

AARON M. MEFFORD
NAME
SIGNATURE
4-13-11
DATE
11-30-11
EXPIRES

DRAINAGE DITCH
TOWNSHIP ROUTE 52
WABASH COUNTY, ILLINOIS

SHEET TITLE: CROSS-SECTIONS

SCALE: 1" = 5'
BY: AMM
DATE: 4/13/11
REV:

3 OF 13 SHEETS

SHEET NO. 3

323 W. 3RD. ST.
P.O. BOX 68
MT. CARMEL, IL
62863
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SUITE 1
PRINCETON, IN
47670
PHONE:
(812)-386-7611
FAX:
(812)-485-2812

LAWC ENGINEERING CO.

PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-000987
(62-032435)(35-002769)

AARON M. MEFFORD
NAME
SIGNATURE
7/13/11
DATE
11-30-11
EXPIRES

DRAINAGE DITCH
TOWNSHIP ROUTE 52
WABASH COUNTY, ILLINOIS

SHEET TITLE: CROSS-SECTIONS

SCALE: 1" = 5
BY: AMM
DATE: 4/5/11
REV:

4 OF 13 SHEETS

SHEET NO. 4

F.A.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	4
FED. ROAD DIST. NO. 7	ILLINOIS	DRAINAGE DITCH		
PROJECT # BRDG-1(8302)		CONTRACT # 35A53		
LEC JOB # H01L004MB				

5+30

F = 154.5
C = 123.2
400.5
391.70
401.49

6+00

F = 116.8
C = 88.3
400.0
391.36
400.36

6+50

F = 73.9
C = 69.0
399.9
392.18
399.36

7+00

F = 42.2
C = 56.8
400.1
392.38
399.16

7+30

F = 5.4
C = 0.9
392.5
396.89

7+50

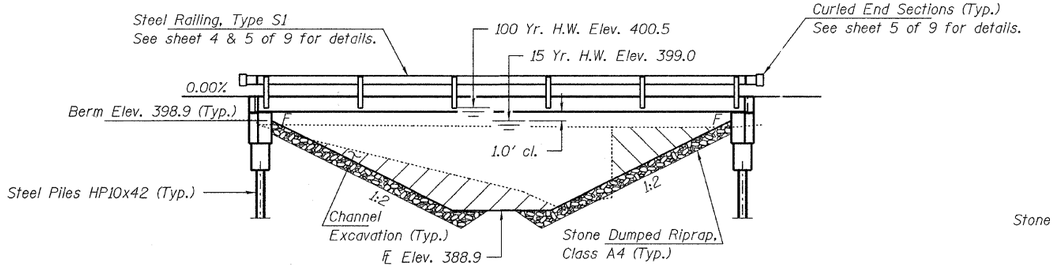
399.0

8+00

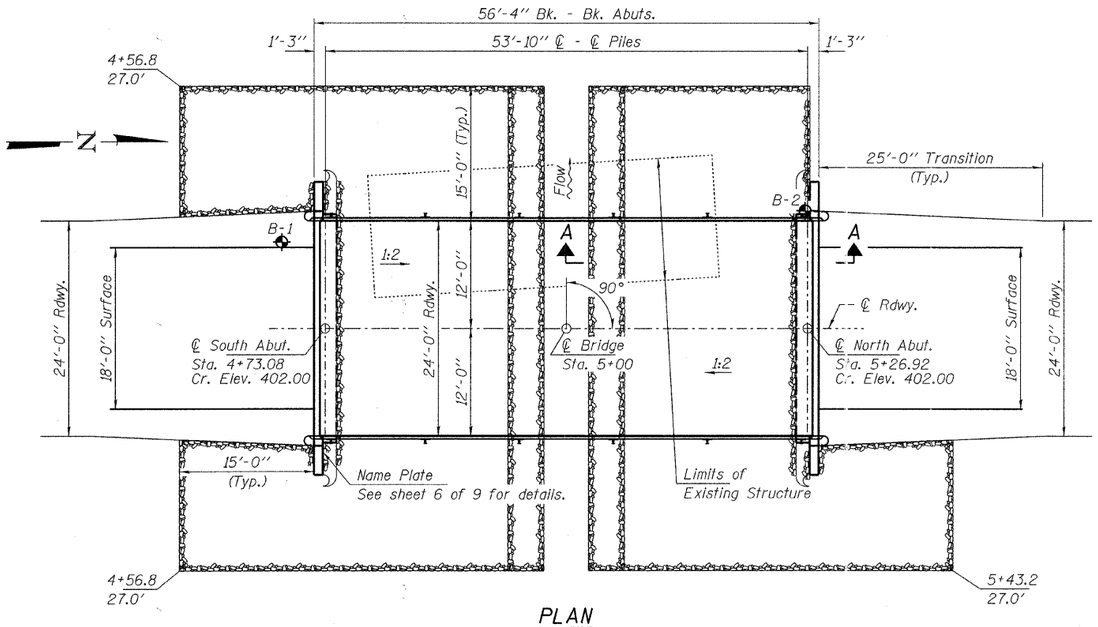
398.7

BENCHMARK: Iron Pin, Sta. 0+24.30, 7.39' Rt., Elev. 398.27

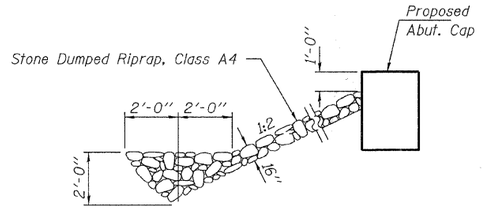
EXISTING STRUCTURE NO. 093-3031: 40' long single span I-beam bridge on steel pipe pile and concrete wingwalls and mud walls. Structure closed to traffic.



ELEVATION



PLAN



SECTION A-A

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

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 South 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.

INDEX OF STRUCTURE SHEETS

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 (½"ϕ low lax. strands)
fpbt = 201,960 psi (½"ϕ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD with all applicable interims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.257g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.613g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 3.7 Sq. Mi. — Existing Low Grade Elev. 398.7 @ Sta. 8+00 — Proposed Low Grade Elev. 398.8 @ Sta. 2+50

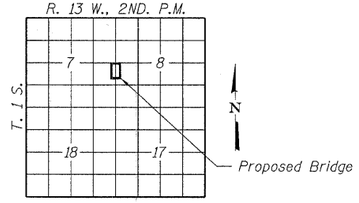
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	1257	195	313	399.0	0.61	0	399.6	399.0
Base	100	2180	195	366①	400.5	1.03	0.38	401.5	400.9

① Approach opening = 535 sq. ft. to remain in place.

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 081-6064 SPRINGFIELD, IL — LICENSED STRUCTURAL ENGINEER — STATE OF ILLINOIS

Steven W. Meggenson 4/18/2011
ILLINOIS STRUCTURAL NO. 081-6064 Expires 11-30-2012



LOCATION SKETCH

BUILT 201_ BY
WABASH COUNTY
SEC. 06-04114-00-BR
ROAD DISTRICT #4
STR. NO. 093-3134
LOADING HL-93

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

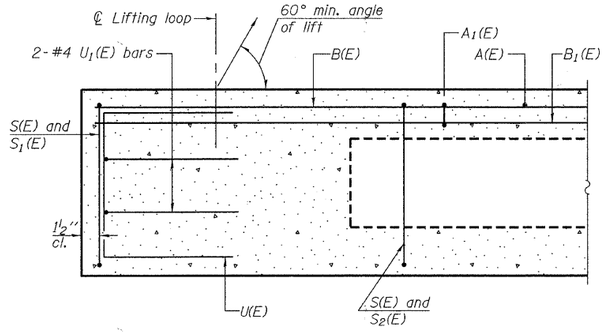
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			147
Stone Dumped Riprap, Class A4	Ton			380
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		22.0	22.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,320		1,320
Reinforcement Bars	Pound		2,420	2,420
Steel Railing, Type S1	Foot	109		109
Furnishing Steel Piles HP10x42	Foot		385	385
Driving Piles	Foot		385	385
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1

FILE NAME = 100258-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3565 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.005859		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

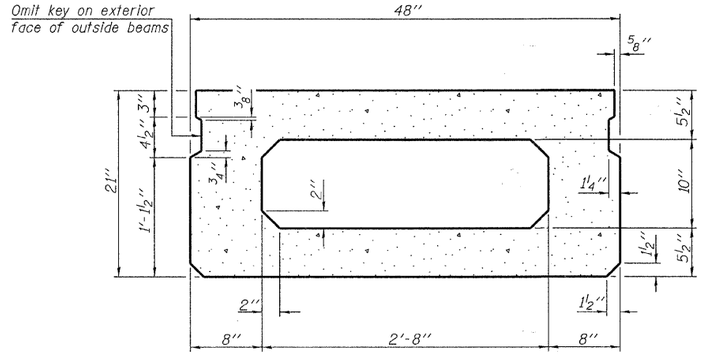
STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 093-3134
SHEET NO. 1 OF 9 SHEETS

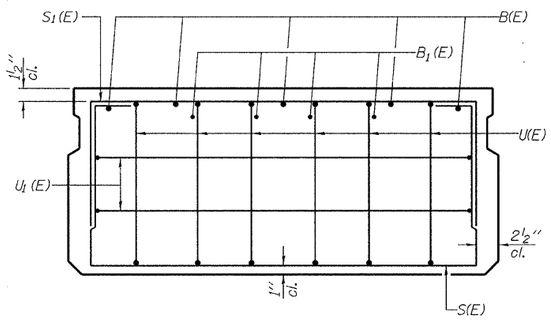
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	5
ROAD DISTRICT #4		CONTRACT NO. 95653		
ILLINOIS	FED. AID PROJECT			



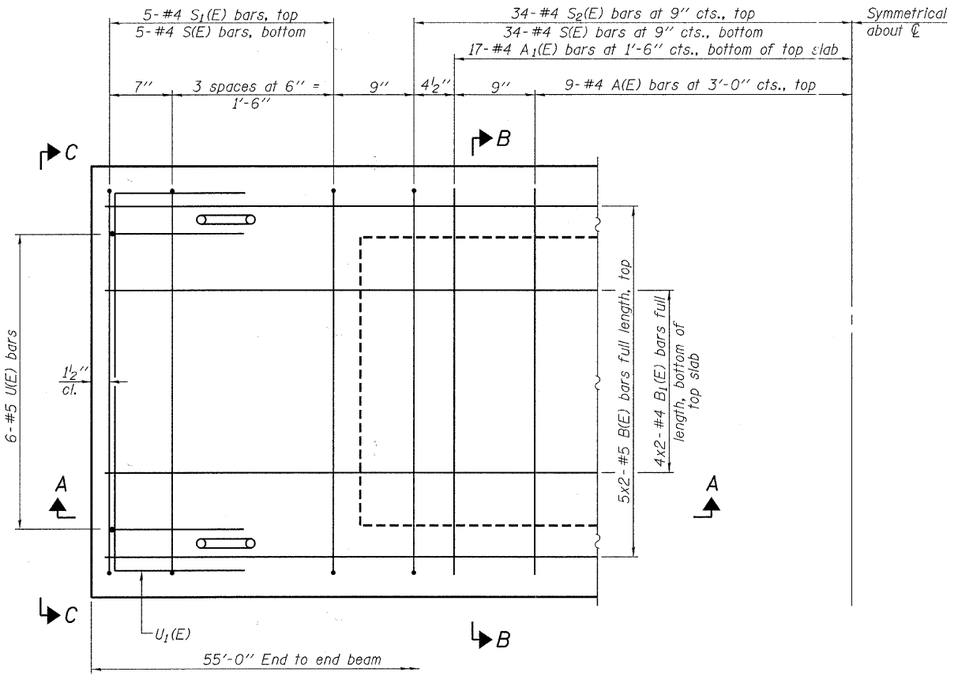
SECTION A-A



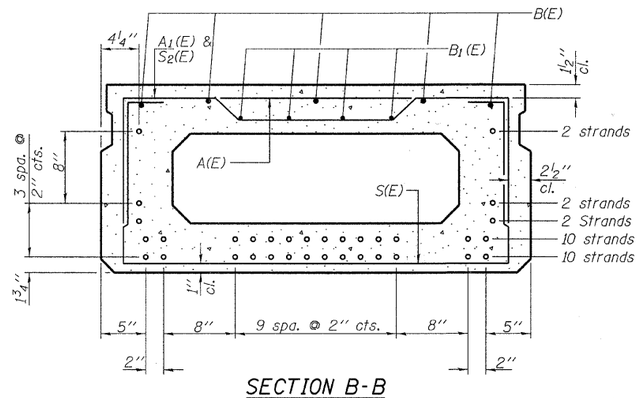
SECTION B-B
(Showing dimensions)



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)	18	#4	3'-7"	—
$A_1(E)$	34	#4	3'-10"	~
B(E)	10	#5	28'-8"	—
$B_1(E)$	8	#4	28'-5"	—
S(E)	78	#4	7'-5"	⌴
$S_1(E)$	10	#4	5'-11"	⌐¬
$S_2(E)$	68	#4	6'-2"	⌐¬
U(E)	12	#5	4'-0"	⊏
$U_1(E)$	4	#4	6'-0"	⌐¬

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

Note:
Spacing of S(E) and $S_2(E)$ 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"

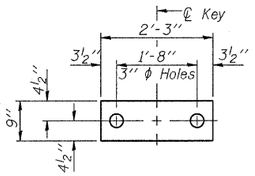
PD-2148-0 7-1-10

FILE NAME = 100058-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.002959		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

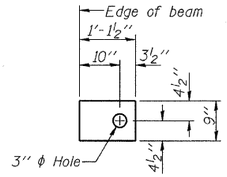
STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

21" x 48" PPC DECK BEAM
STRUCTURE NO. 093-3134
SHEET NO. 2 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	6
ROAD DISTRICT #4		CONTRACT NO. 95653		
ILLINOIS	FED. AID PROJECT			



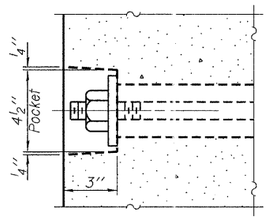
FABRIC BEARING PAD
(Interior - 10 Req'd.)



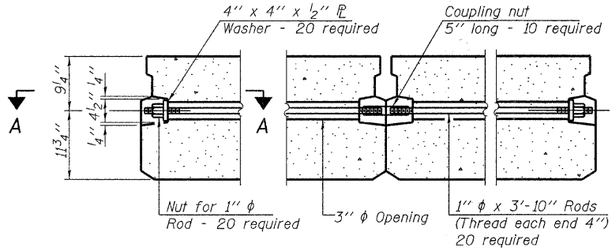
FABRIC BEARING PAD
(Exterior - 4 Req'd.)

FIXED

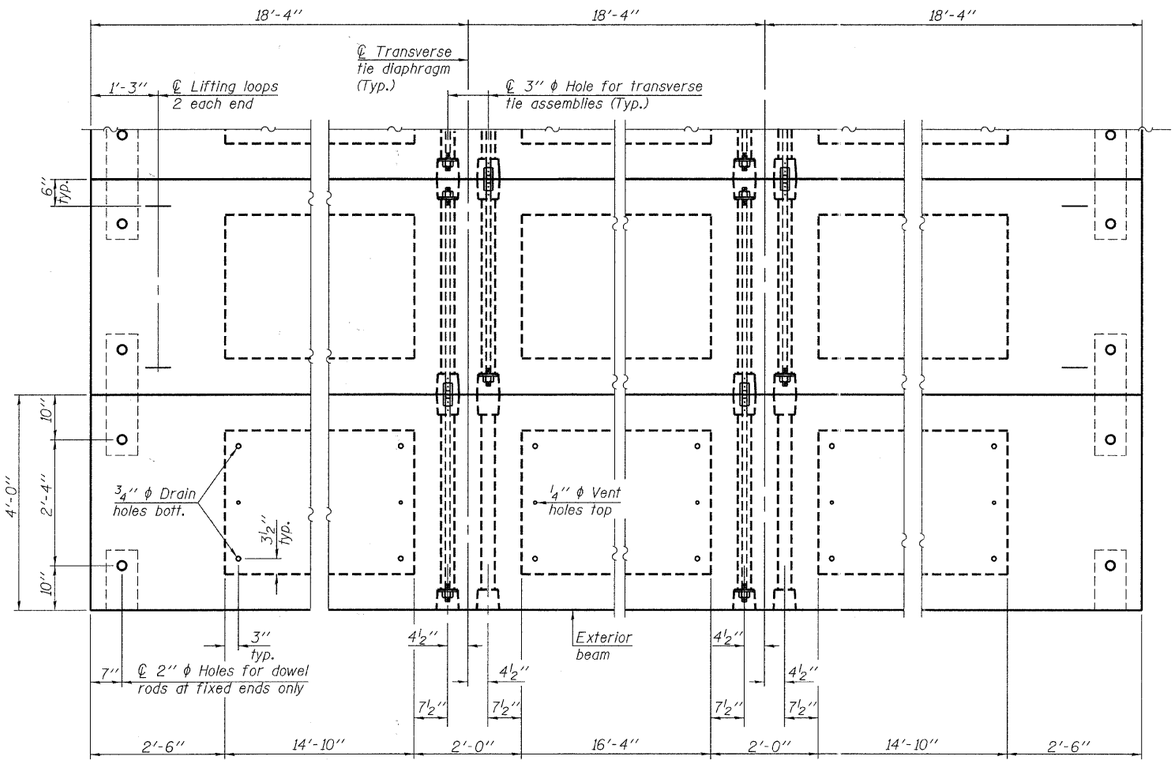
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

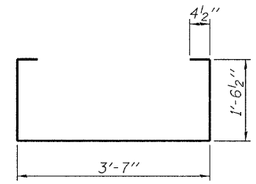


TYPICAL TRANSVERSE TIE ASSEMBLY

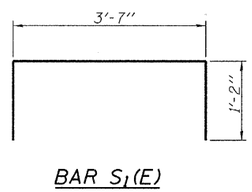


PLAN VIEW

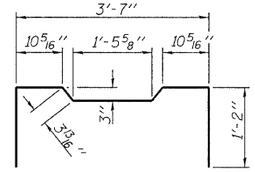
Note: Connect beams in pairs with the transverse tie configuration shown.



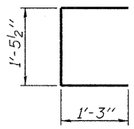
BAR S(E)



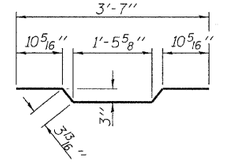
BAR S1(E)



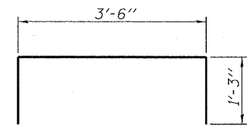
BAR S2(E)



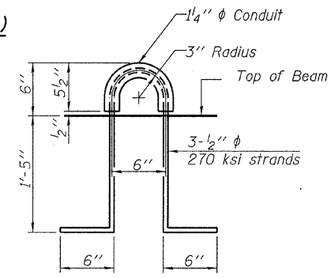
BAR U(E)



BAR A1(E)



BAR U1(E)



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" 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 ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 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.

All reinforcement shall be epoxy coated.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,320.

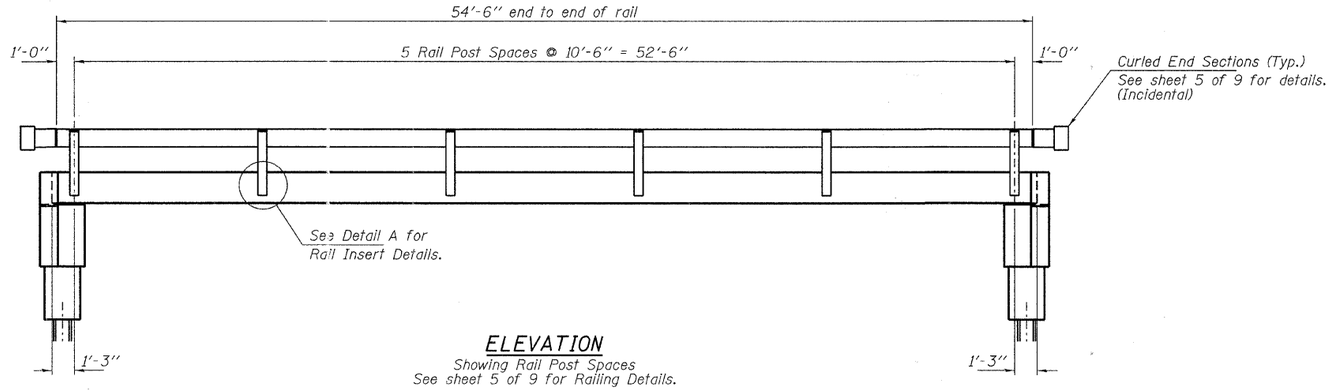
PD-2148-0D 7-1-10

FILE NAME = 100858-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002859	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

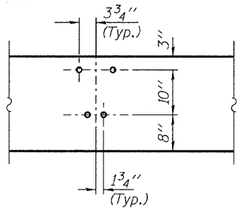
21" x 48" PPC DECK BEAM
STRUCTURE NO. 093-3134
SHEET NO. 3 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	7
ROAD DISTRICT #4		CONTRACT NO. 95653		
		ILLINOIS FED. AID PROJECT		

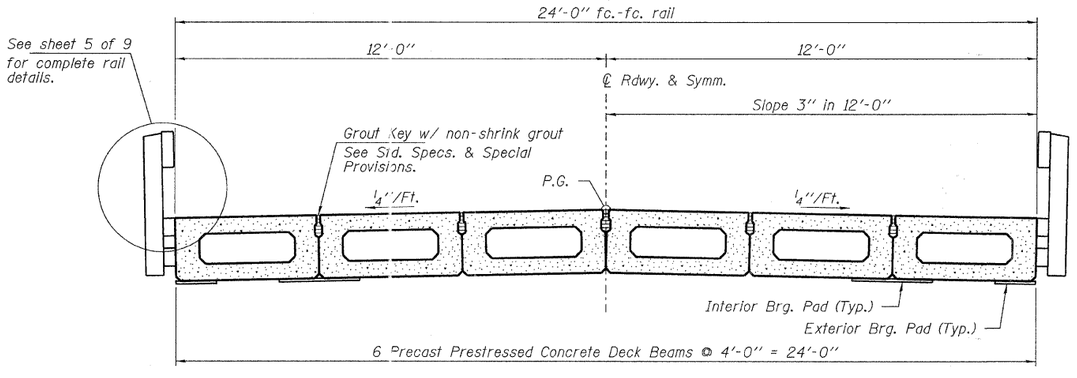


ELEVATION

Showing Rail Post Spaces
See sheet 5 of 9 for Railing Details.

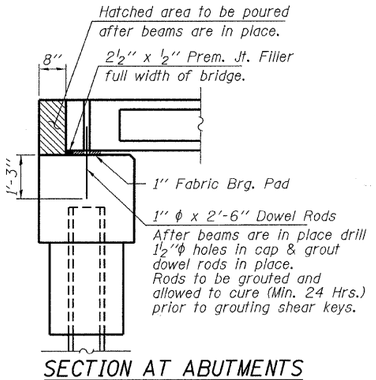


DETAIL A



CROSS SECTION

See sheets 2 & 3 of 9 for Superstructure.



SECTION AT ABUTMENTS

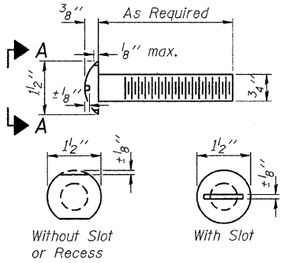
@ Rt. L's

FILE NAME = 100358-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. - 184.000959	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

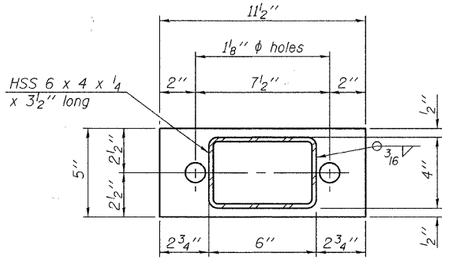
STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 093-3134
SHEET NO. 4 OF 9 SHEETS

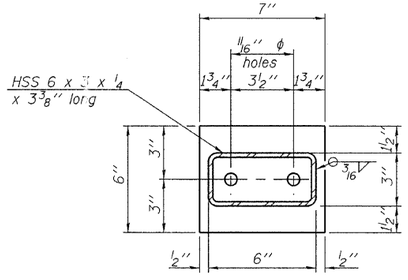
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	8
ROAD DISTRICT #4		CONTRACT NO. 95653		
	ILLINOIS	FED. AID PROJECT		



VIEW A-A
ROUND HEAD BOLT

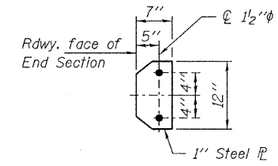


℄ 1/2" x 11 1/2" x 5"

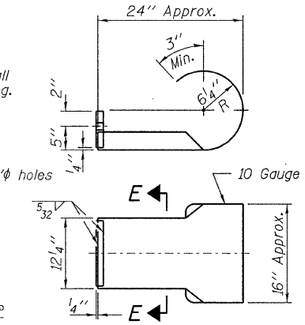


℄ 1/2" x 7" x 6"

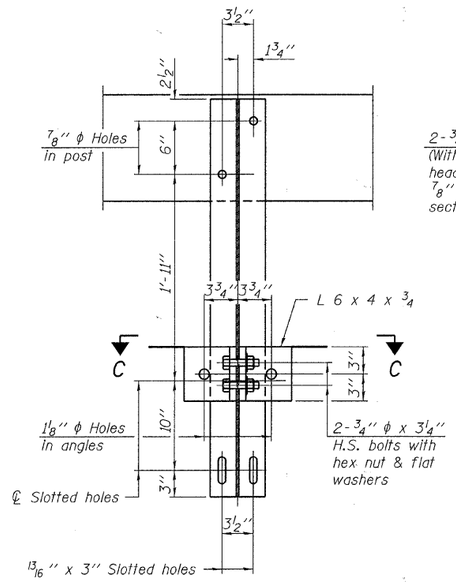
Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)



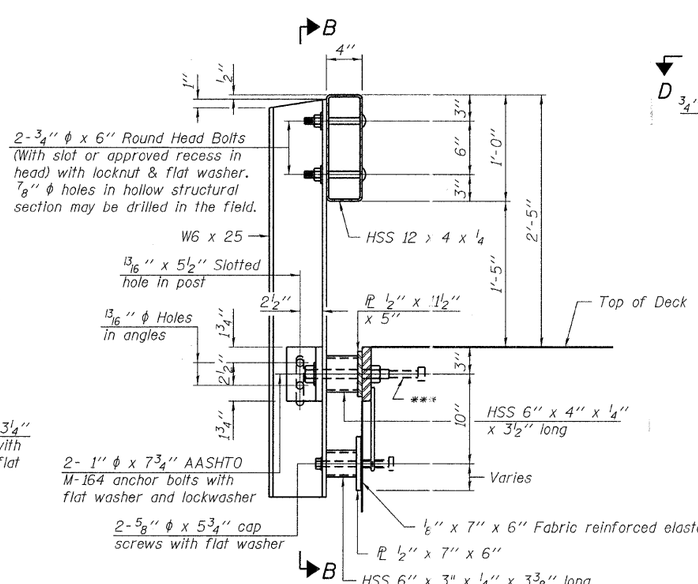
SECTION E-E



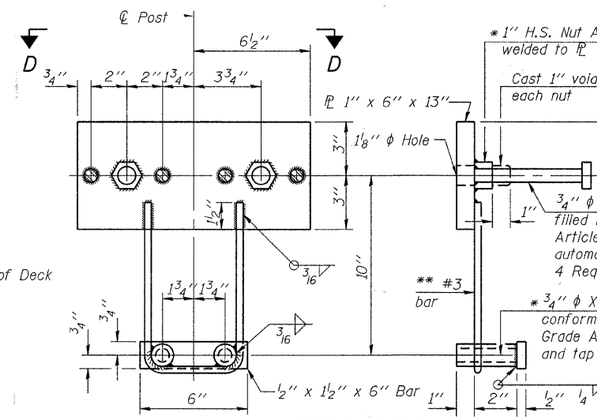
CURLED END SECTION DETAILS



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

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

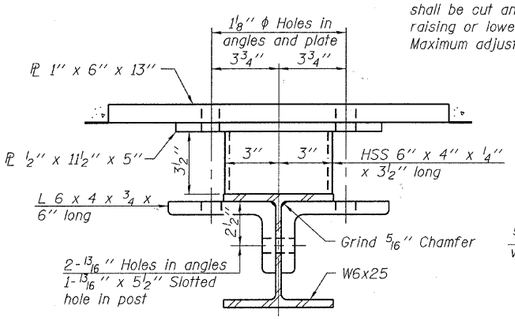
Notes:

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.

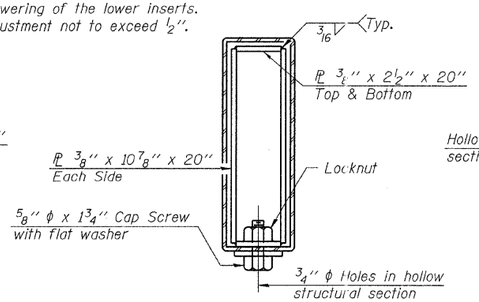
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

*** 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.

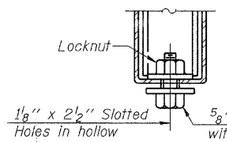


SECTION C-C

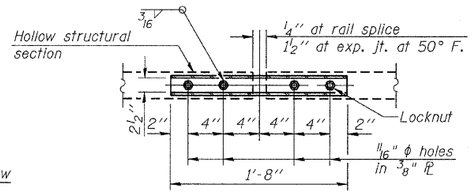
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



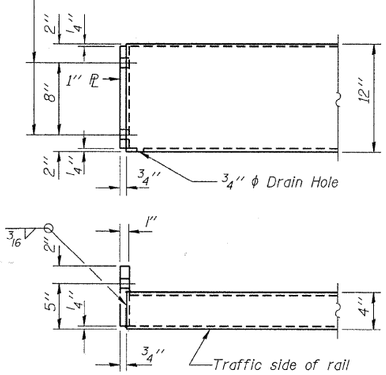
SECTIONS AT RAIL SPLICE



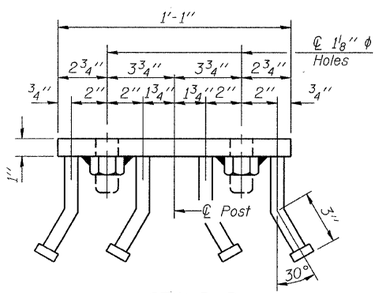
RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE ℄
TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	109

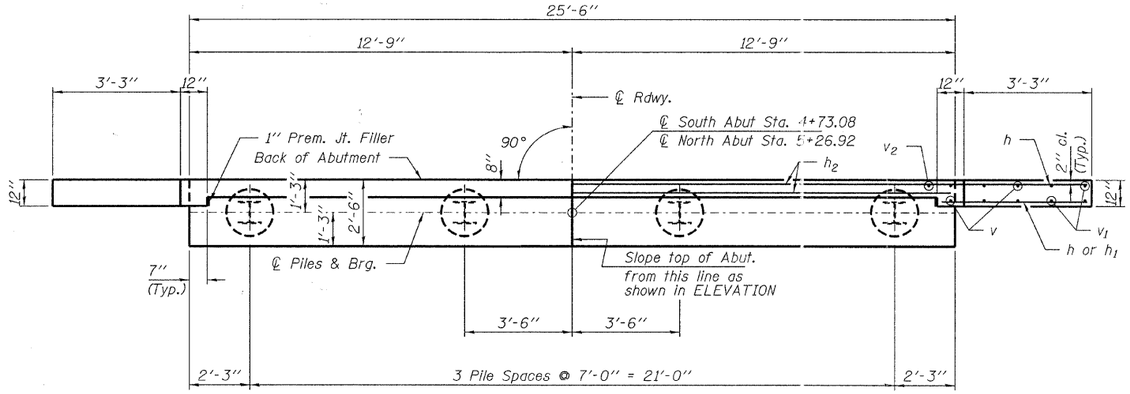
R-23A 7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = 100058-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L0 / PE / SE CORP. 184.000969		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

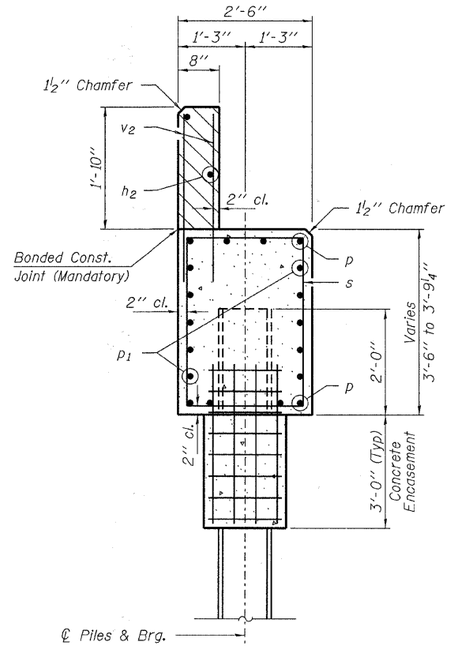
STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 093-3134
SHEET NO. 5 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	9
ROAD DISTRICT #4		CONTRACT NO. 95653		
		ILLINOIS FED. AID PROJECT		

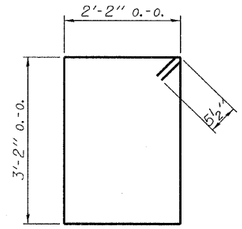


PLAN

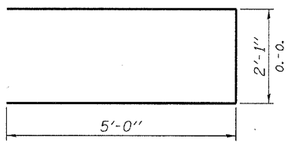


SECTION A-A

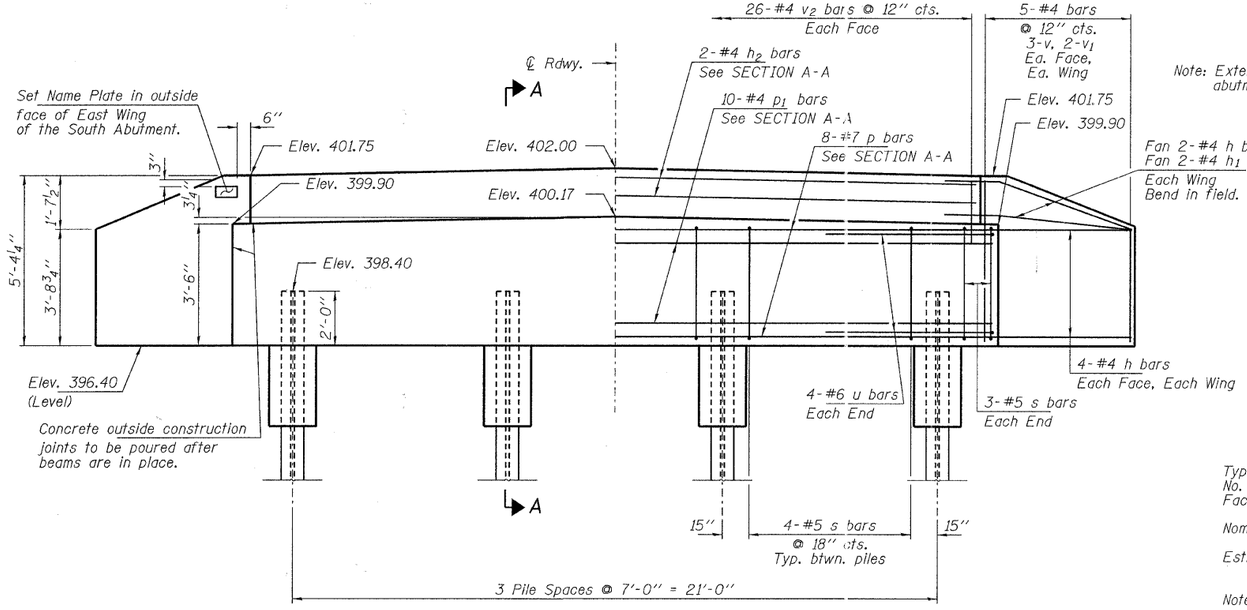
Hatched area to be poured after beams are in place.



BAR s



BAR u



ELEVATION

PILE DATA

Type _____ Steel HP10x42
No. Req'd. (2 Abuts.) _____ *8
Factored Resistance Available (Rf) _____ 157 Kips/Pile (S. Abut.)
184 Kips/Pile (N. Abut.)
Nominal Required Bearing (Rn) _____ 285 Kips/Pile (S. Abut.)
335 Kips/Pile (N. Abut.)
Est. Length _____ 55 Ft/Pile

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

The Steel H-Piles shall be according to AASHTO M270 Grade 50.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - 2 ABUTS.

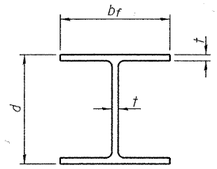
BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	5'-6"	——
h_1	8	#4	4'-0"	——
h_2	4	#4	25'-2"	——
p	16	#7	25'-2"	——
p_1	20	#4	25'-2"	——
s	36	#5	11'-7"	□
u	16	#6	12'-1"	▭
v	24	#4	4'-6"	——
v_1	16	#4	3'-6"	——
v_2	104	#4	2'-8"	——
Concrete Structures			Cu. Yd.	22.0
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,420
Steel Piles HP10x42			Foot	385
Test Pile HP10x42			Each	1
Name Plates			Each	1

FILE NAME = 100258-sht-bridge.dgn | USER NAME = | DESIGNED - V.J.H. | REVISED -
HAMPTON, LENZINI AND RENWICK, INC. | | CHECKED - S.W.M. | REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE = | DRAWN - D.A.B. | REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | PLOT DATE = 4/12/2011 | CHECKED - S.W.M. | REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

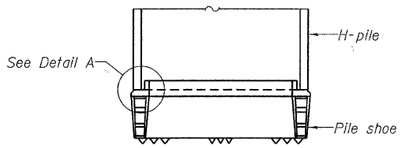
ABUTMENTS
STRUCTURE NO. 093-3134
SHEET NO. 6 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	10
ROAD DISTRICT #4		CONTRACT NO. 95653		
ILLINOIS	FED. AID PROJECT			

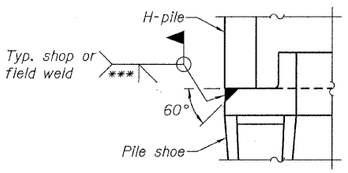


STEEL PILE TABLE

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"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

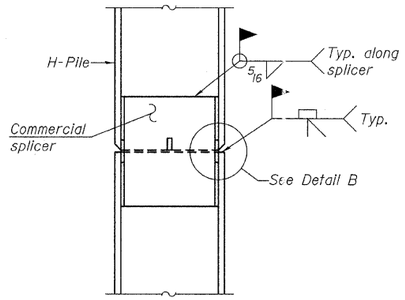


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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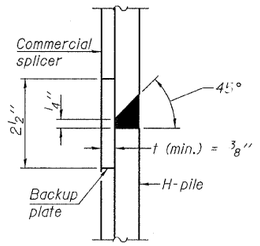
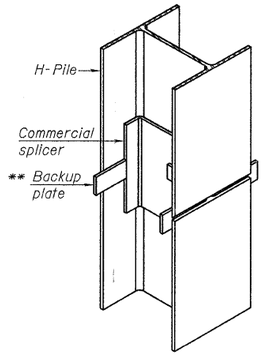
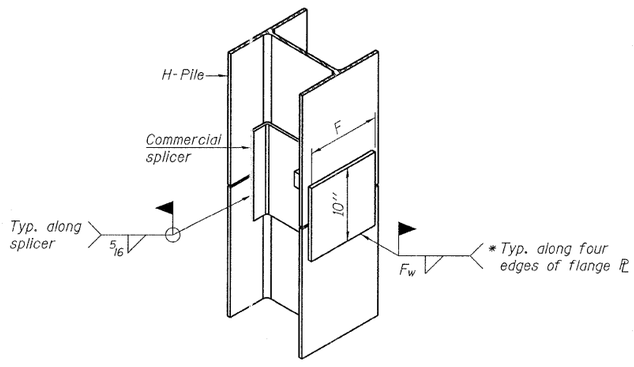


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



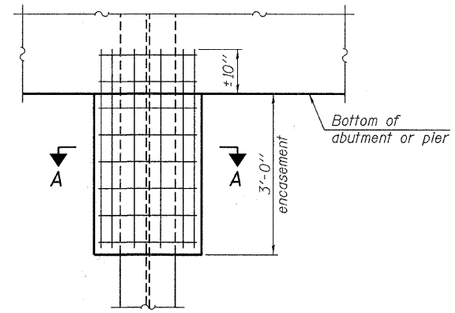
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

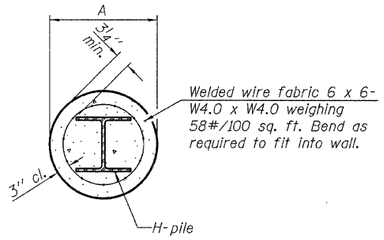
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



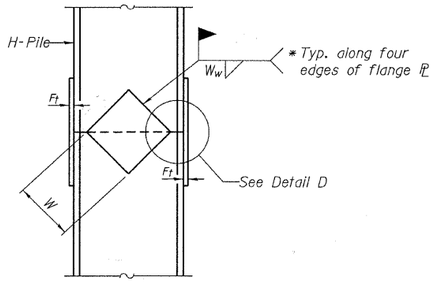
ELEVATION



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

SECTION A-A

PILE ENCASEMENT



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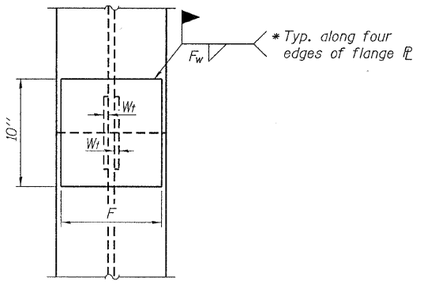
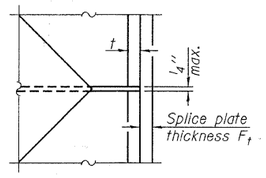


END VIEW



DETAIL D

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 PLATE FIELD SPLICE

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

F-HP 7-1-10

FILE NAME = 100058-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -	STATE OF ILLINOIS WABASH COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 093-3134	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -			52	06-04114-00-BR	WABASH	13	11
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			ROAD DISTRICT #4		CONTRACT NO. 95653		
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -		SHEET NO. 7 OF 9 SHEETS	ILLINOIS	FED. AID PROJECT			

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Bridge Foundation Boring Log

Project: H10062
Section: 06-04114-00-BR
Route: 500E
County: Wabash

Bridge Trib. to Fordice Creek
Station

Date: 4/5/10
Bored by: J. Carter
Checked By: T. Holcomb

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 381.3
Upon Completion 394.3

Material	Elevation	N	Qu tsf	w %
Ground Surface 399.8 / 2" A-3/ 8" C. Stone 399.3	0			
Gray Mottled Brown Silty CLAY (A-6)		7	2.1B	18
	-5	7	1.5S	32
		7	1.7S	29
	-10	6	1.7B	29
386.3 Brown Mottled Gray Sandy CLAY (A-6) with gravel		5	1.6B	24
	-15	7	1.4B	23
383.8 Gray Silty CLAY (A-6)		4	0.6B	28
	-20	3	0.9B	27
		5	1.5B	28
silty clay (continued) 376.3				
Gray to Brown Silty CLAY (A-6)	-25	5	1.7S	34
373.8 Gray Mottled Brown Silty CLAY (A-6) with sand and gravel		6	0.7S	49
	-30	9	2.8B	36
	-35	7	1.7B	24
361.3 Gray Sandy SILT (A-4)		14	0.8B	22
	-40			
356.3 Gray Silty CLAY (A-6)			0.9B	23

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

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Bridge Foundation Boring Log

Project: H10062
Section: 06-04114-00-BR
Route: 500E
County: Wabash

Bridge Trib. to Fordice Creek
Station

Date: 4/5/10
Bored by: J. Carter
Checked By: T. Holcomb

Boring No: 1
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 381.3
Upon Completion 394.3

Material	Elevation	N	Qu tsf	w %
silty clay (continued)	-45			
350.3 Gray CLAY (A-6) with sand seams	-50	28	4.6B	12
	-55	42	0.5B	17
	-60	135	1.0S	11
334.8 End of Boring @ -65.0'	-65	97	1.0S	13
	-70			
	-75			
	-80			
	-85			

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 1

FILE NAME = 100258-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

BORINGS
STRUCTURE NO. 093-3134
SHEET NO. 8 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	12
ROAD DISTRICT #4		CONTRACT NO. 95653		
ILLINOIS	FED. AID PROJECT			

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Page 1 of 2

Bridge Foundation Boring Log

Project: H10062
Section: 06-04114-00-BR
Route: 500E
County: Wabash

Bridge Trib. to Fordice Creek
Station

Date: 4/5/10
Bored by: J. Carter
Checked By: T. Holcomb

Boring No: 2
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 379.0
Upon Completion 394.0

Elevation		N	Qu tsf	w %
Ground Surface	400.0			
12" Crushed Stone	399.0			
Gray Mottled Brown Silty CLAY (A-6)		6	--	22
	-5	5	1.1S	33
		8	1.6S	29
	-10	7	1.3S	29
		7	1.4S	24
	-15	10	3.7B	25
	384.0			
Gray Silty CLAY (A-6) with sand		3	0.3B	29
	-20	3	0.7B	27
	379.0			
Gray Mottled Brown Silty CLAY (A-6) with gravel		5	1.0S	30
silty clay (continued)	-25	5	1.5S	34
	374.0			
Brown Mottled Gray Silty CLAY (A-6)		3	0.6S	45
	-30	5	2.4S	34
	366.0			
Gray Sand and Gravel (A-2-4)	-35	20	--	13
	361.5			
Gray Silty CLAY (A-6)	-40	12	0.9B	25
		10	1.2B	29

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

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax

Page 2 of 2

Bridge Foundation Boring Log

Project: H10062
Section: 06-04114-00-BR
Route: 500E
County: Wabash

Bridge Trib. to Fordice Creek
Station

Date: 4/5/10
Bored by: J. Carter
Checked By: T. Holcomb

Boring No: 2
Station:
Offset:

Surface Water Elev.
Ground Water Elev. During Drilling 379.0
Upon Completion 394.0

Elevation		N	Qu tsf	w %
silty clay (continued)	45			
	-50	24	3.3B	13
	347.5			
Gray LIMESTONE	347.0	100/1"-		6
End of Boring @ -53.0'				
	-55			
	-60			
	-65			
	-70			
	-75			
	-80			
	-85			

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 2

FILE NAME = 180058-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000059		CHECKED - S.W.M.	REVISED -	
	PLOT SCALE =	DRAWN - D.A.B.	REVISED -	
	PLOT DATE = 4/12/2011	CHECKED - S.W.M.	REVISED -	

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

BORINGS
STRUCTURE NO. 093-3134
SHEET NO. 9 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	13
ROAD DISTRICT #4		CONTRACT NO. 95653		
ILLINOIS	FED. AID PROJECT			