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SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NO.
0.10	ACRE	TREE REMOVAL, ACRES	20100500
270.00	CU YD	EARTH EXCAVATION	20200100
313.00	CU YD	CHANNEL EXCAVATION	20300100
1142.00	CU YD	FURNISHED EXCAVATION	20400800
305.00	TON	POROUS GRANULAR BACKFILL	20900310
0.40	ACRE	SEEDING, CLASS 2 (SPECIAL)	25001000
1.00	EACH	TEMPORARY DITCH CHECKS	28000300
27.00	TON	AGGREGATE (EROSION CONTROL)	28001000
320.00	TON	STONE DUMPED RIPRAP, CLASS A4	28100807
61.00	TON	STONE RIPRAP DITCH	28102600
370.00	TON	AGGREGATE SURFACE COURSE, TYPE B	40200800
1.00	EACH	REMOVAL OF EXISTING STRUCTURES	50100100
1.00	EACH	REMOVE EXISTING CULVERTS	50105200
110.00	CU YD	STRUCTURE EXCAVATION	50200100
28.60	CU YD	CONCRETE STRUCTURES	50300225
3.40	CU YD	CONCRETE ENCASUREMENT	50300280
1680.00	SQ FT	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	50400505
3210.00	POUND	REINFORCEMENT BARS	50800105
136.00	FOOT	STEEL RAILING, TYPE S1	50900205 *
513.00	FOOT	FURNISHING STEEL PILES HP10X42	51201400
513.00	FOOT	DRIVING PILES	51202305
1.00	EACH	TEST PILE STEEL HP10X42	51203400
1.00	EACH	NAME PLATES	51500100
1.00	L SUM	MOBILIZATION	67100100
34.00	FOOT	ALUMINUM STRUCTURAL PLATE BOX CULVERT (SPECIAL) 97 SQ. FT.	XX009116

* SPECIALTY ITEMS

DESIGN DESIGNATION:
 DESIGN SPEED: 30 MPH
 HIGHWAY CLASS - LOCAL ROAD
 EXISTING STRUCTURE NO.: 093-3028
 PROPOSED STRUCTURE NO.: 093-3133
 CURRENT A.D.T. = 50
 CONTRACT NO. 95584



STATE OF ILLINOIS

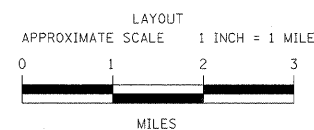
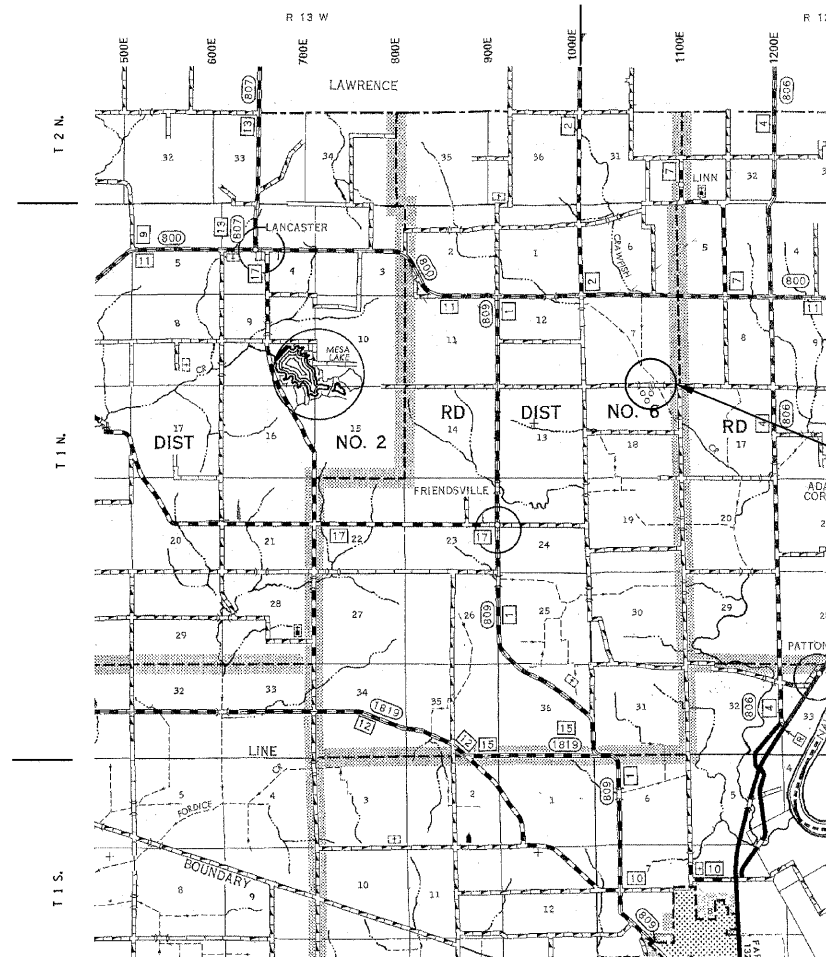
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED FEDERAL AID - H.B.P. PROJECT

T.R. 37 WABASH COUNTY SECTION 06-06109-00-BR

PROJECT NO. BROS-185(030) JOB NO. C-97-091-09

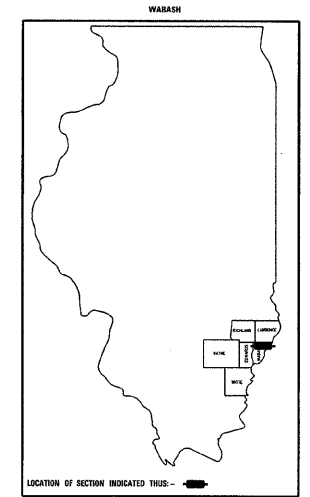
CONTRACT #95584 CRAWFISH CREEK



GROSS LENGTH	600.00 FT	0.114 MILES
OMISSIONS	0.00 FT	0.000 MILES
NET LENGTH	600.00 FT	0.114 MILES

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	1

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT
 PROJECT # BROS-185(030) CONTRACT # 95584
 LEC JOB # H081005WB CRAWFISH CREEK



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



AARON M. MEFFORD
 NAME
 SIGNATURE
 DATE
 11-30-09
 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 06-06109-00-BR BEGINS STATION 2+00

STATION 5+00, STRUCTURE NO. 093-3133
 A 70' LONG SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE (27" DEPTH), 24' ROADWAY, 0.00% GRADE, 35° RT FORWARD SKEW.

SECTION 06-06109-00-BR ENDS STATION 8+00

APPROVED APRIL 1 20 09
 COUNTY ENGINEER

PASSED 4-21 20 09
 DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
4-21 20 09
 DEPUTY DIRECTOR OF HIGHWAYS
 REGION FOUR ENGINEER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CRAWFISH CREEK
 TOWNSHIP ROUTE 37
 WABASH COUNTY, ILLINOIS

SHEET TITLE:
 TITLE SHEET

SCALE: VARIES
 BY: AMM
 DATE: 4/09
 REV:

1 OF 14
 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 JANUARY 1, 2007.

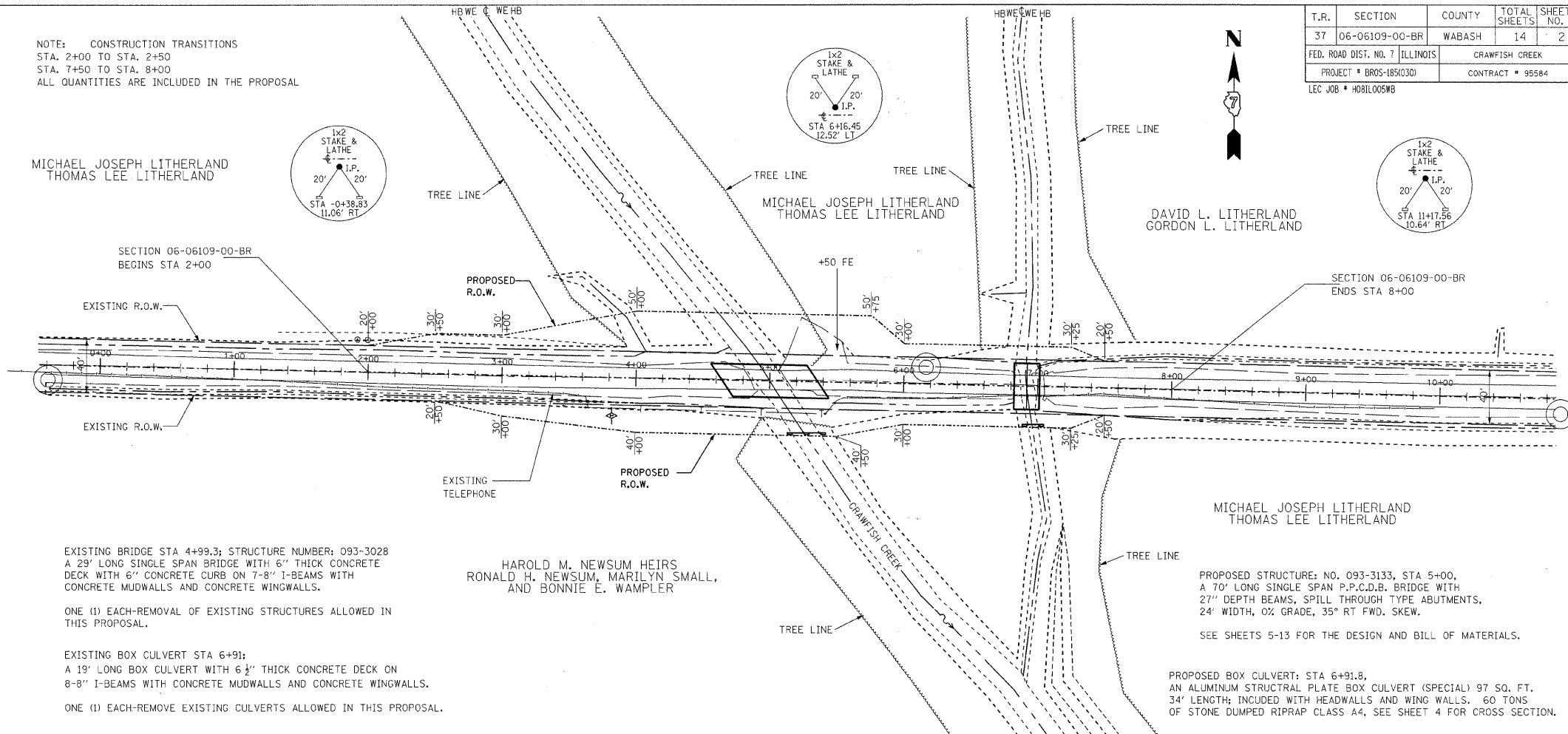
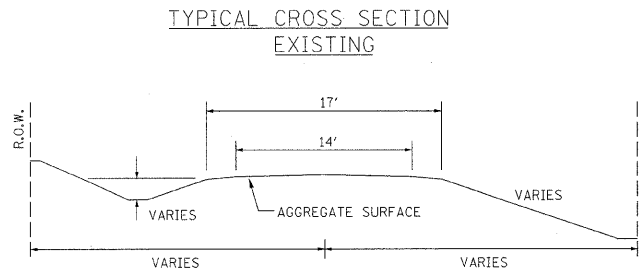
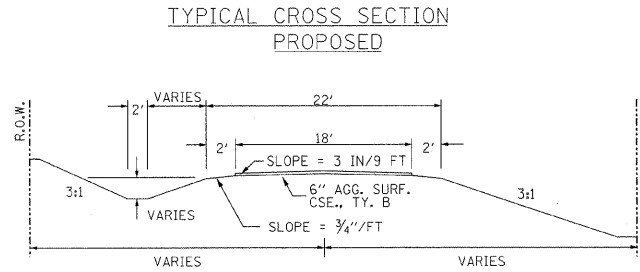
THE WORK INVOLVED ON THIS SECTION CONSISTS OF THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 70 FOOT LONG SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE, ALUMINUM BOX CULVERT, EARTH APPROACHES, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS 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.

NOTE: CONSTRUCTION TRANSITIONS
 STA. 2+00 TO STA. 2+50
 STA. 7+50 TO STA. 8+00
 ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL

MICHAEL JOSEPH LITHELAND
 THOMAS LEE LITHELAND



EXISTING BRIDGE STA 4+99.3; STRUCTURE NUMBER: 093-3028
 A 29' LONG SINGLE SPAN BRIDGE WITH 6" THICK CONCRETE DECK WITH 6" CONCRETE CURB ON 7-8" I-BEAMS WITH CONCRETE MUDWALLS AND CONCRETE WINGWALLS.

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

EXISTING BOX CULVERT STA 6+91;
 A 19' LONG BOX CULVERT WITH 6 1/2" THICK CONCRETE DECK ON 8-8" I-BEAMS WITH CONCRETE MUDWALLS AND CONCRETE WINGWALLS.

ONE (1) EACH-REMOVE EXISTING CULVERTS ALLOWED IN THIS PROPOSAL.

NOTE: FILL NEXT TO BRIDGE TO BE AGGREGATE SURFACE COURSE

TEMPORARY DITCH CHECKS -> AGGREGATE (EROSION CONTROL)

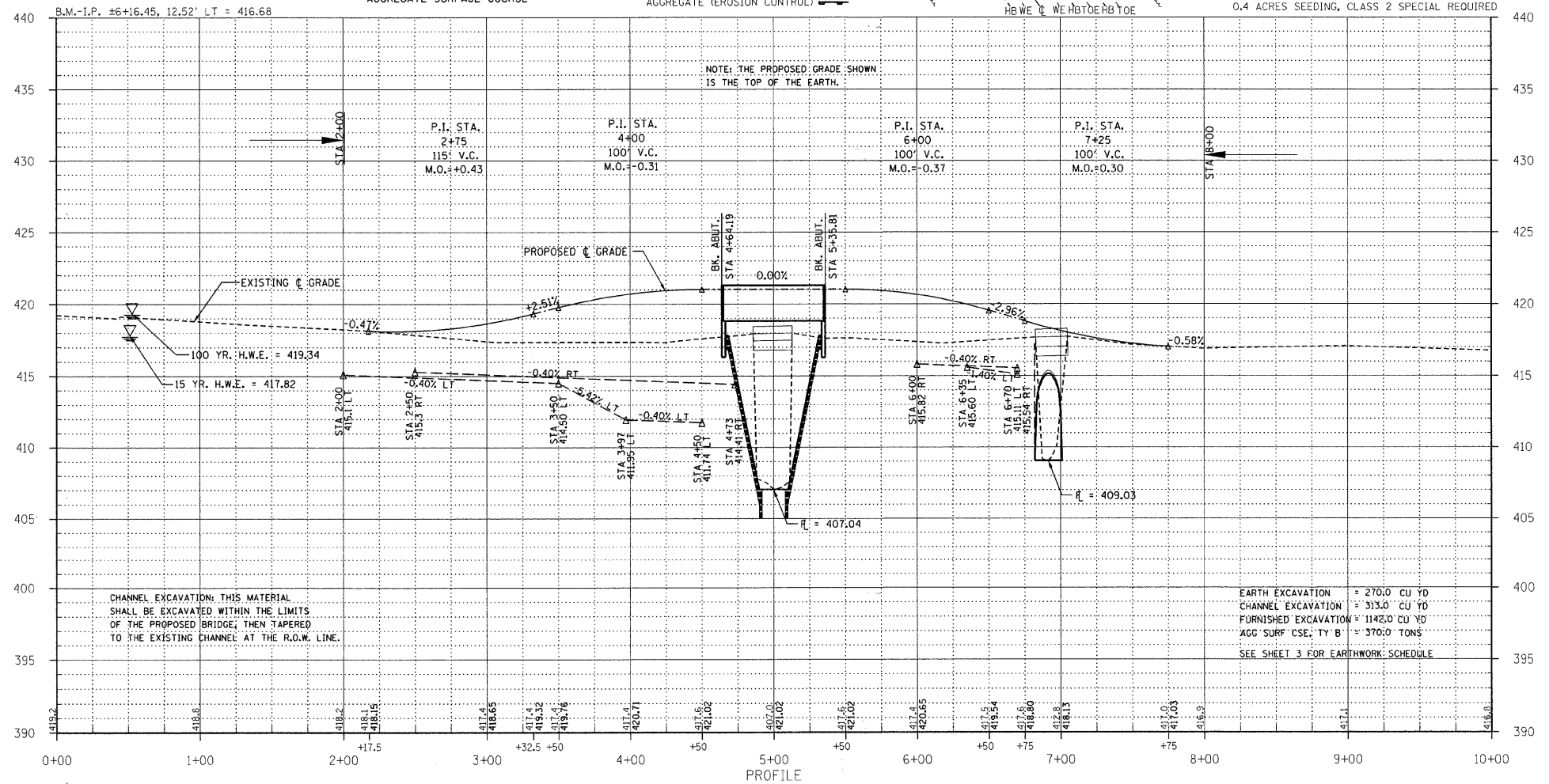
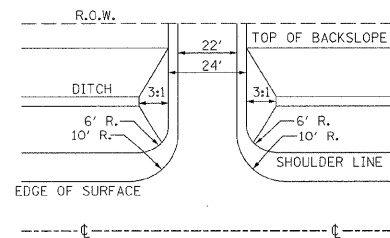
0.1 ACRES TREE REMOVAL, ACRES
 0.4 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED

UTILITIES:
 J.U.L.T.E. 1-800-892-0123
 VERIZON
 1-618-395-6191

NOTE: CONSTRUCT SPECIAL DITCH
 STA 2+50 TO STA 4+73 RT
 STA 2+00 TO STA 4+50 LT
 STA 6+00 TO STA 6+70 RT
 STA 6+35 TO STA 6+70 LT
 STA 7+01 TO STA 7+25 RT
 STA 7+01 TO STA 7+25 LT

NOTE: CONSTRUCT STONE RIPRAP DITCH
 STA 3+50 RT TO 4+00 LT (0.62 TON/LIN FT)
 STA 7+01 RT TO 7+25 RT (0.62 TON/LIN FT)
 STA 7+01 LT TO 7+25 LT (0.62 TON/LIN FT)
 61 TON STONE RIPRAP DITCH ALLOWED IN PROPOSAL.

FIELD ENTRANCE DETAIL



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 = 270.0 CU YD
 CHANNEL EXCAVATION = 313.0 CU YD
 FURNISHED EXCAVATION = 1142.0 CU YD
 AGG SURF CSE, TY B = 370.0 TONS
 SEE SHEET 3 FOR EARTHWORK SCHEDULE

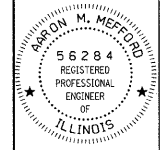
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	2
FED. ROAD DIST. NO. 7		ILLINOIS	CRAWFISH CREEK	
PROJECT # BROS-185030		CONTRACT # 95584		
LEC JOB # H0810058B				

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

405 W. STATE ST.
 SUITE 1
 PRINCETON, IN 47670
 PHONE: (812)-386-7611
 FAX: (812)-385-2812



PROFESSIONAL DESIGN FIRM
 LAND SURVEY &
 PROFESSIONAL ENGINEERING CORPORATION
 184-000887
 (62-032435)(35-002789)



AARON M. MEFFORD
 NAME
 Signature
 DATE
 11-30-09
 EXPIRES

CRAWFISH CREEK
 TOWNSHIP ROUTE 37
 WABASH COUNTY, ILLINOIS

SHEET TITLE:

PLAN & PROFILE

SCALE: VARIES
 BY: AMM
 DATE: 4/09
 REV:

2 OF 14 SHEETS

SHEET NO. 2

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	3
FED. ROAD DIST. NO. 7		ILLINOIS	CRAWFISH CREEK	
PROJECT # BR05-185(030)		CONTRACT # 95584		

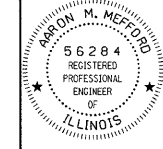
LEC JOB # H081L05W6

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

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PRINCETON, IN
47670
PHONE:
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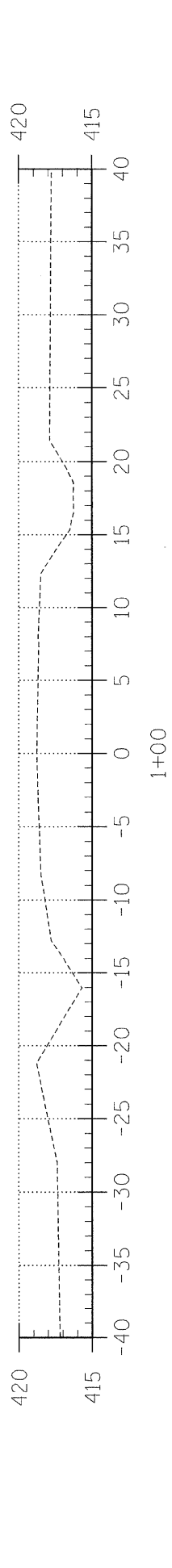
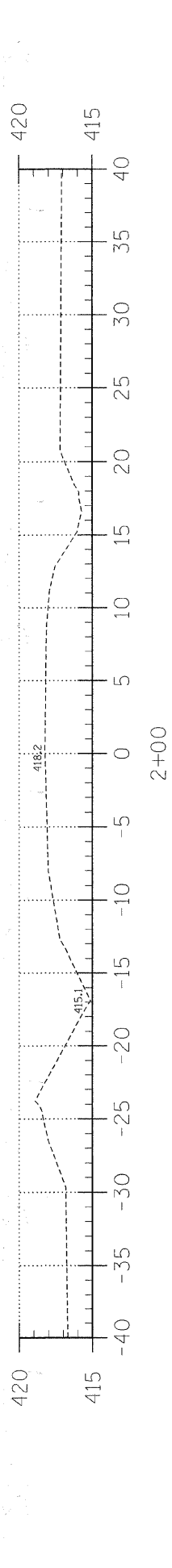
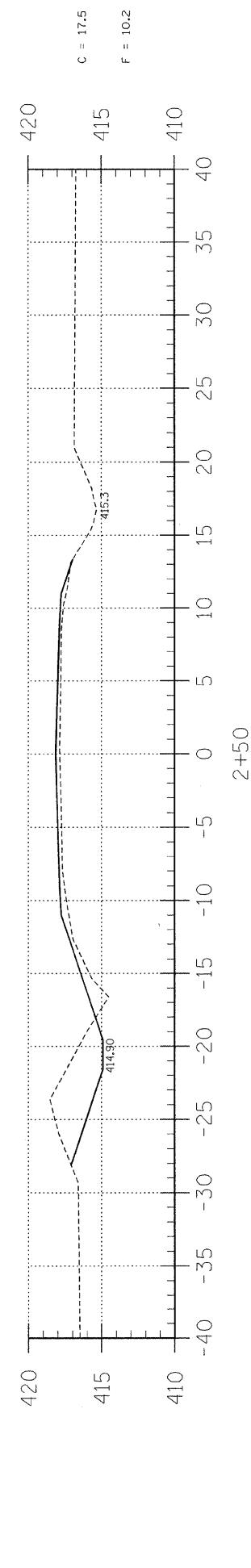
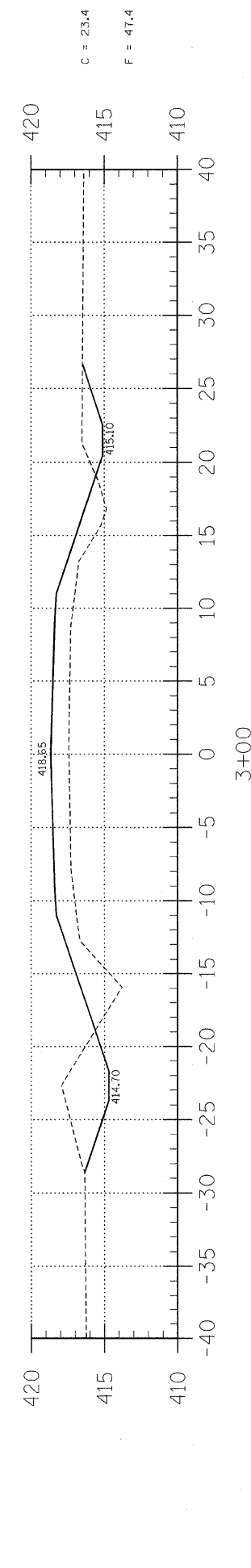
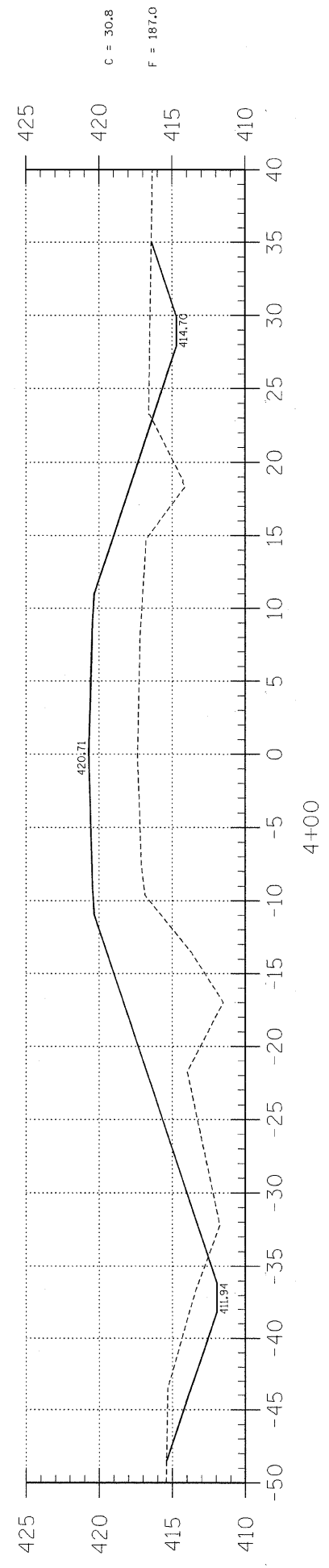
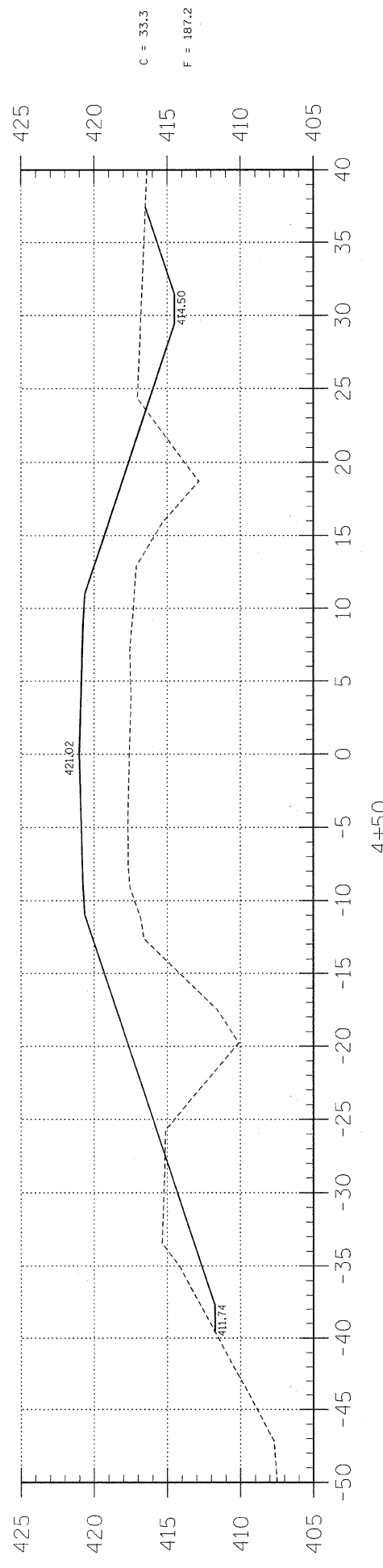
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PROFESSIONAL
ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
Aaron M. Mefford
SIGNATURE
DATE
4-1-09
11-30-09
EXPIRES

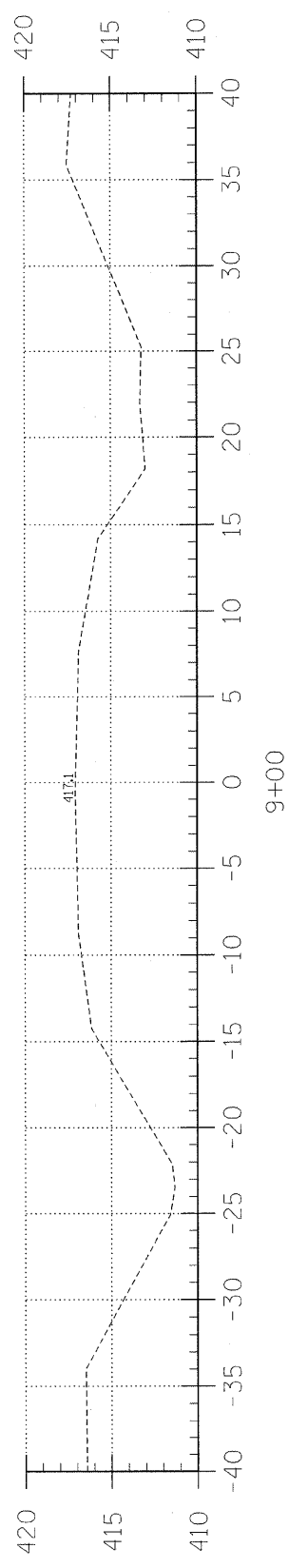
CRAWFISH CREEK
TOWNSHIP ROUTE 37
WABASH COUNTY, ILLINOIS

SHEET TITLE:
CROSS-SECTIONS
SCALE: 1" = 5'
BY: AMM
DATE: 4/09
REV:
3 OF 14
SHEETS
SHEET NO.
3

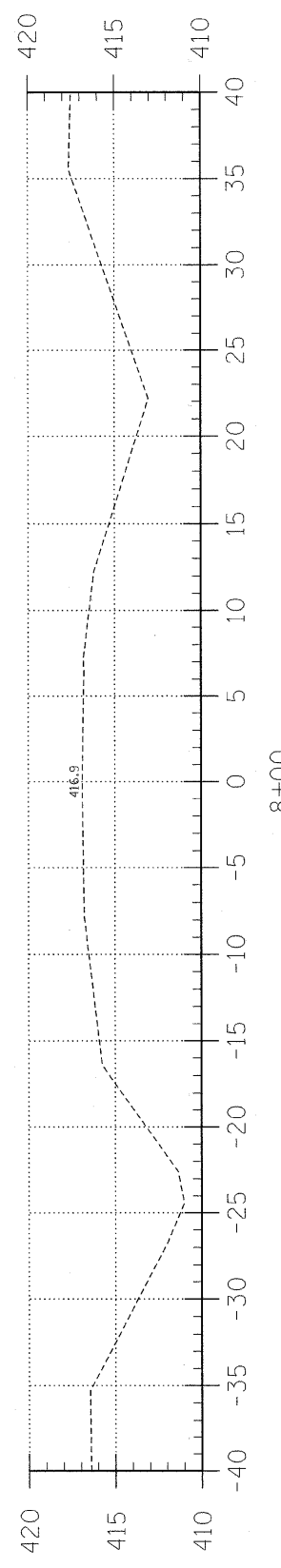


EARTHWORK SCHEDULE

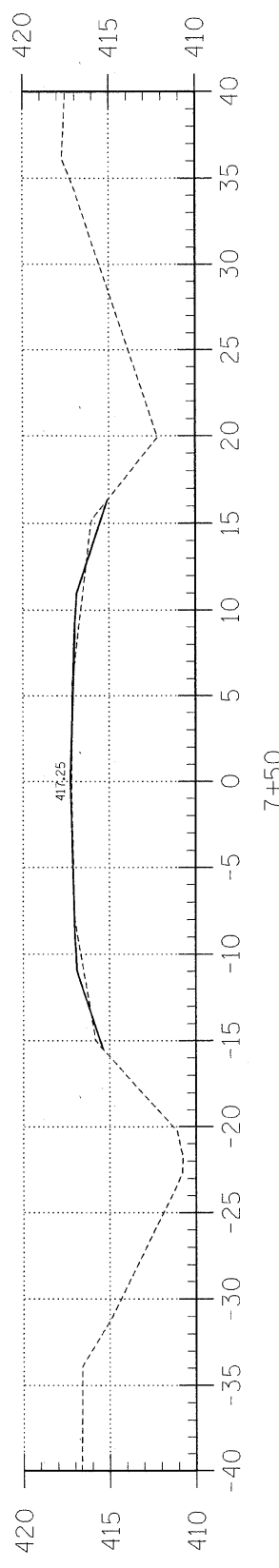
LOCATION	EARTH EXCAVATION		CHANNEL EXCAVATION		ESTIMATED UNSUITABLE MATERIAL		SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE		EMBANKMENT		EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA 0+00 TO 4+64.1	247.5	0.0	0.0	185.6	0.0	810.2	-624.6					
STA 4+64.1 TO 5+35.8	0.0	313.0	0.0	117.8	156.0	0.0	117.8					
STA 5+35.8 TO 10+00	22.5	0.0	0.0	16.9	0.0	590.1	-573.2					
I FIELD ENTRANCE	0.0	0.0	0.0	0.0	0.0	62.1	-62.1					
TOTAL	270.0	313.0	0.0	320.3	156.0	1462.4	-1142.1					



9+00

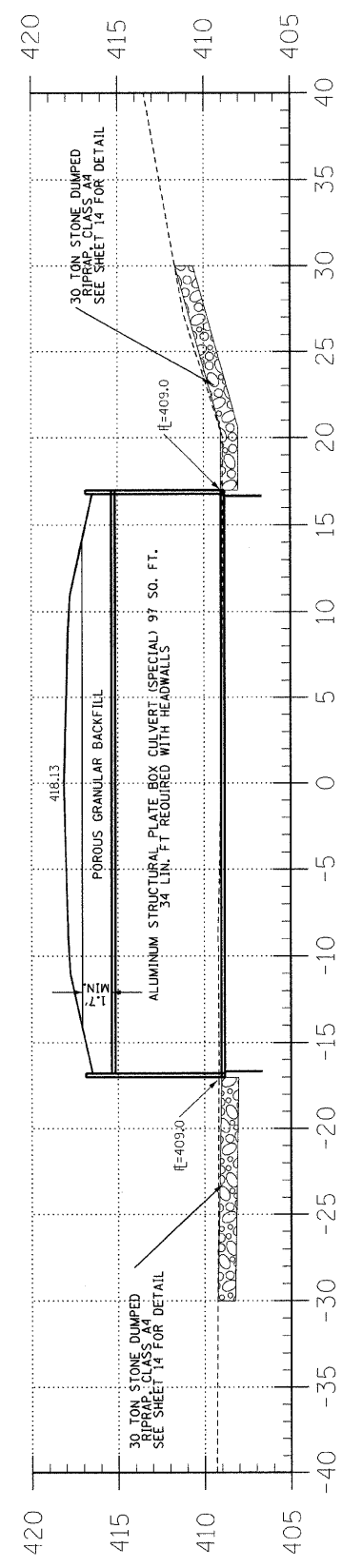


8+00

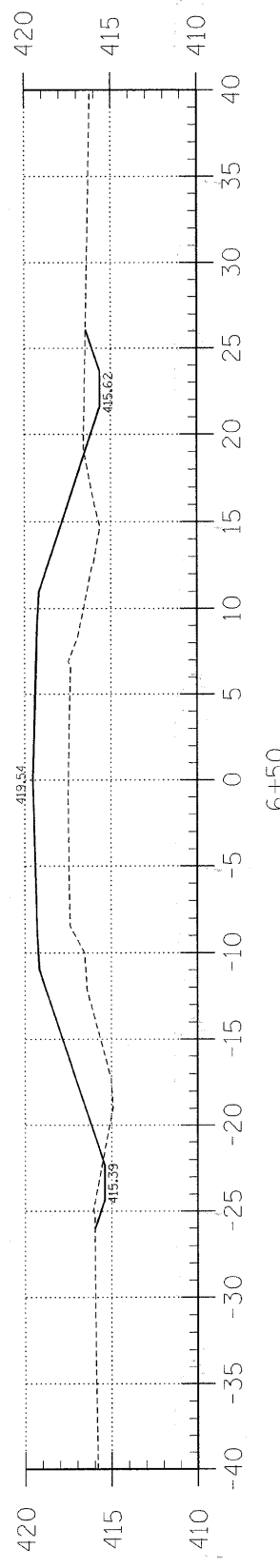


7+50

C = 1.3
F = 2.9

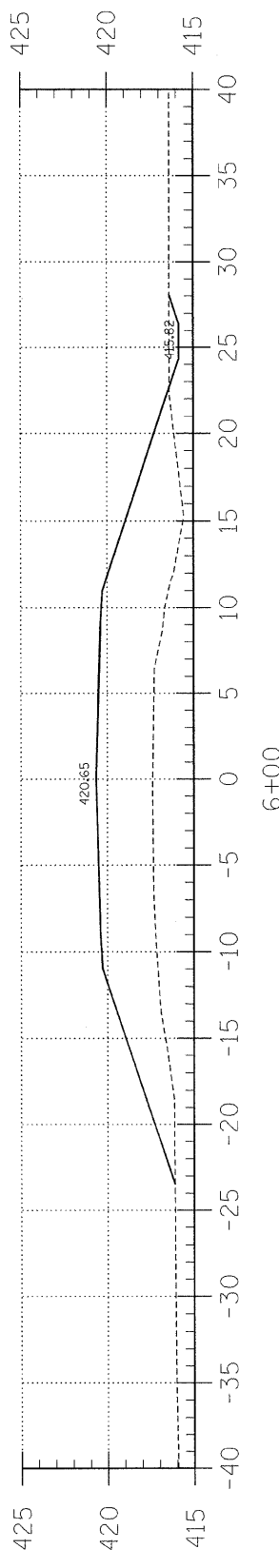


7+00



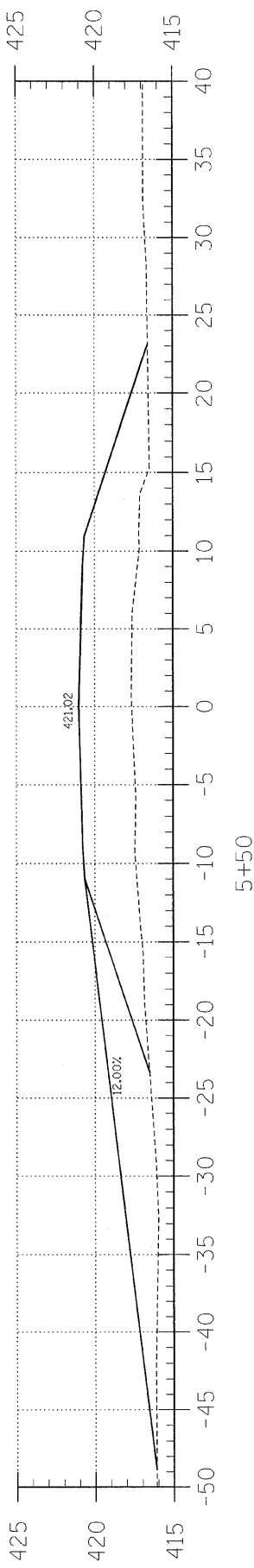
6+50

C = 5.4
F = 81.0



6+00

C = 2.1
F = 121.6



5+50

C = 0.0
F = 118.6

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	4
FED. ROAD DIST. NO. 7 ILLINOIS		CRAWFISH CREEK		
PROJECT # BR05-1850300		CONTRACT # 95584		
LEC JOB # H081005WB				

323 W 3RD ST.
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PROFESSIONAL
ENGINEERING
CORPORATION
184-000887
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
Aaron Mefford
SIGNATURE
4-1-09
DATE
11-30-09
EXPIRES

CRAWFISH CREEK
TOWNSHIP ROUTE 37
WABASH COUNTY, ILLINOIS

SHEET TITLE:

CROSS-SECTIONS

SCALE:	1" = 5'
BY:	AMM
DATE:	4/09
REV:	

4 OF 14
SHEETS

SHEET NO.
4

BENCHMARK:

EXISTING STRUCTURE: 29' long single span bridge with 6" thick concrete deck with 6" concrete curbs on 7-8" I-beams with concrete mudwalls and concrete wingwalls. Structure closed to traffic.

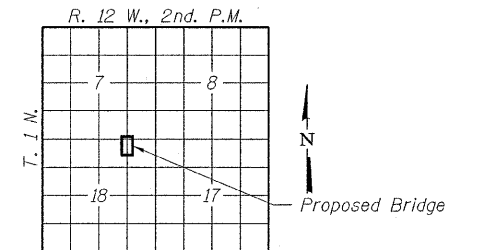
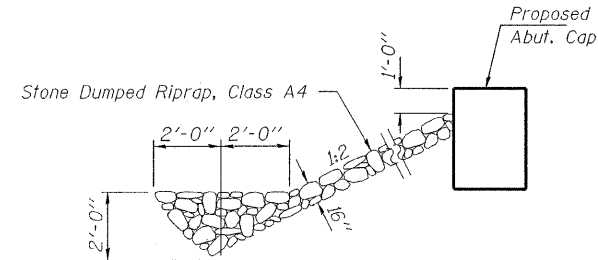
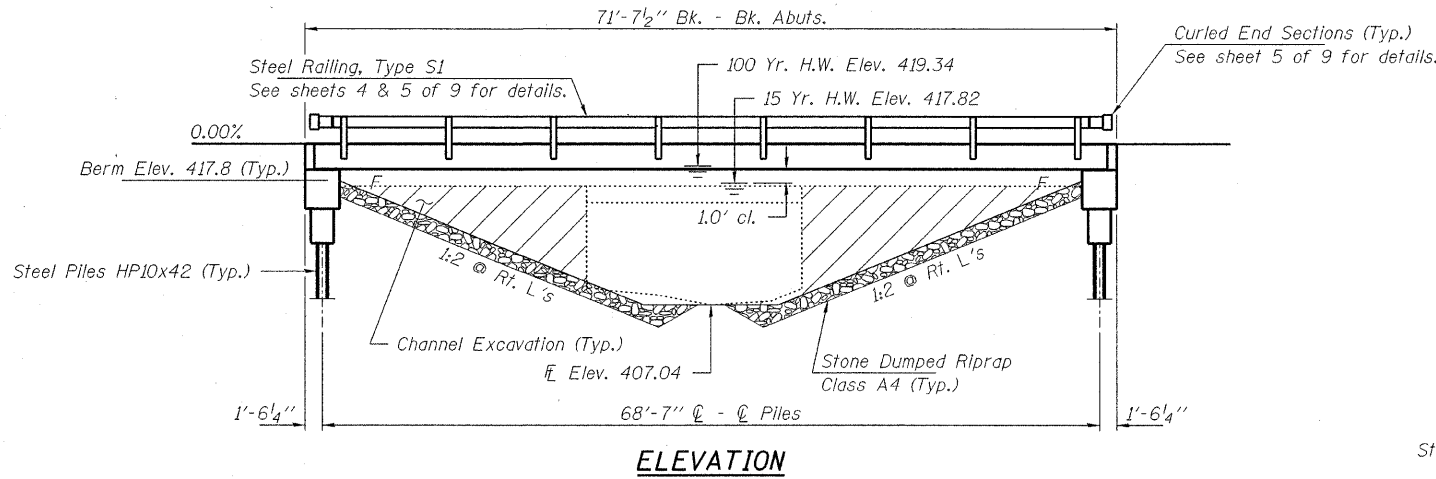
No Salvage

GENERAL NOTES

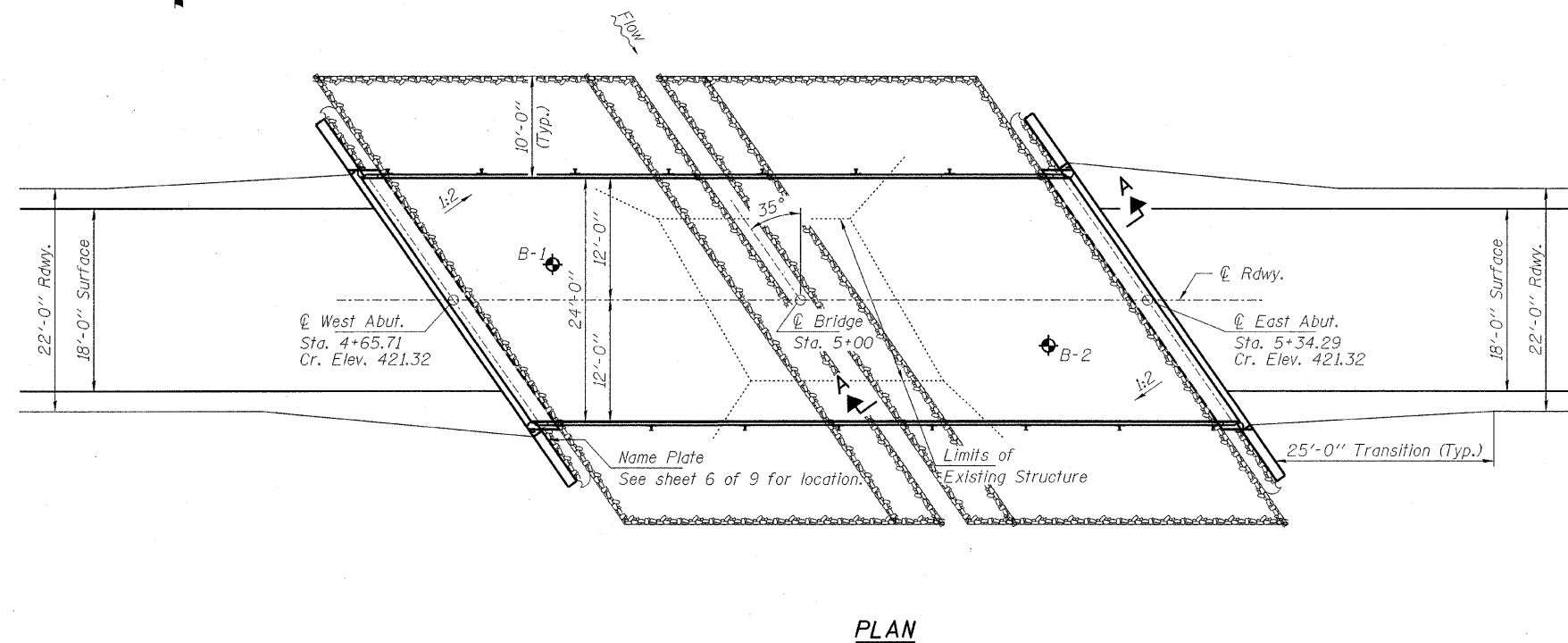
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles.
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
 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. See Sheets 8 & 9 of 9 for Borings.

CRAWFISH CREEK
 BUILT 200_ BY
 WABASH COUNTY
 SEC. 06-06109-00-BR
 ROAD DISTRICT #6
 STR. NO. 093-3133
 LOADING HL-93

NAME PLATE
 See Std. 515001



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



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			-
Stone Dumped Riprap, Class A4	Ton			260
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		28.6	28.6
Concrete Encasement	Cu. Yd.		3.4	3.4
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars	Pound		3,210	3,210
Steel Railing, Type S1	Foot	136		136
Furnishing Steel Piles HP10x42	Foot		513	513
Driving Piles	Foot		513	513
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1

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.)

LOADING HL-93

Design Specifications: 2007 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. (SD1) = 0.247g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.577g
 Soil Site Class = D

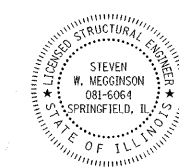
WATERWAY DATA

Drainage Area..... 8.6 Sq. Mi.
 Existing Opening (15 yr)..... 233 Sq. Ft.
 Req'd Opening (15 yr)..... 447 Sq. Ft.
 Proposed Opening (15 yr)..... 447 Sq. Ft.
 Design Discharge (15 yr)..... 2,460 C.F.S.
 Created Head (15 yr)..... 0.0 Ft.
 100 Yr. Discharge..... 4,317 C.F.S.
 100 Yr. Created Head..... 0.0 Ft.

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

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."

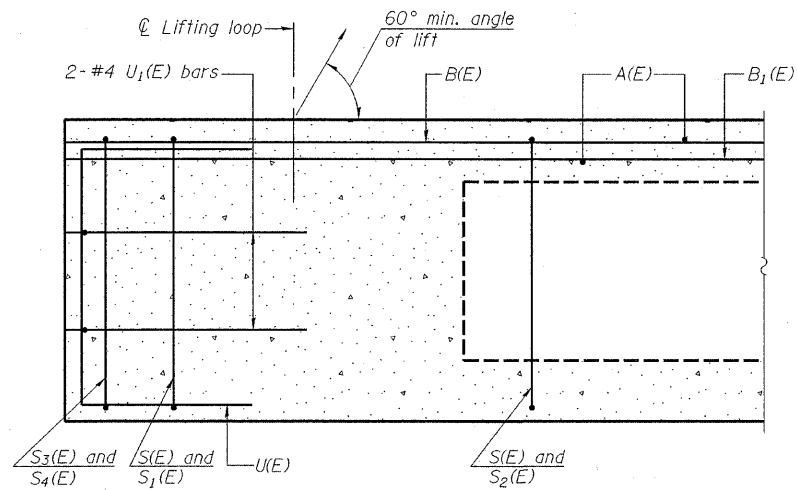
Steven W. Megginson 3/31/2009
 ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2010

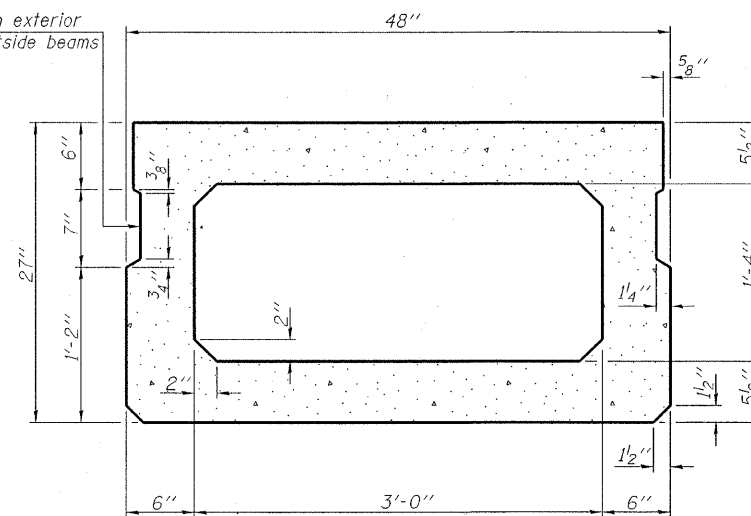
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 093-3133

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0207.130 DATE: 03/31/09	SHEET NO. 1	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		37	06-06109-00-BR	WABASH	14	5
		9 SHEETS		CONTRACT NO. 95584		
		FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

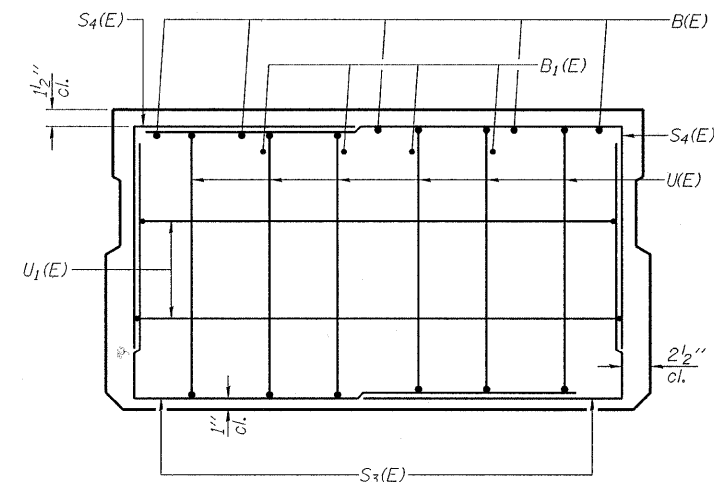


SECTION C-C

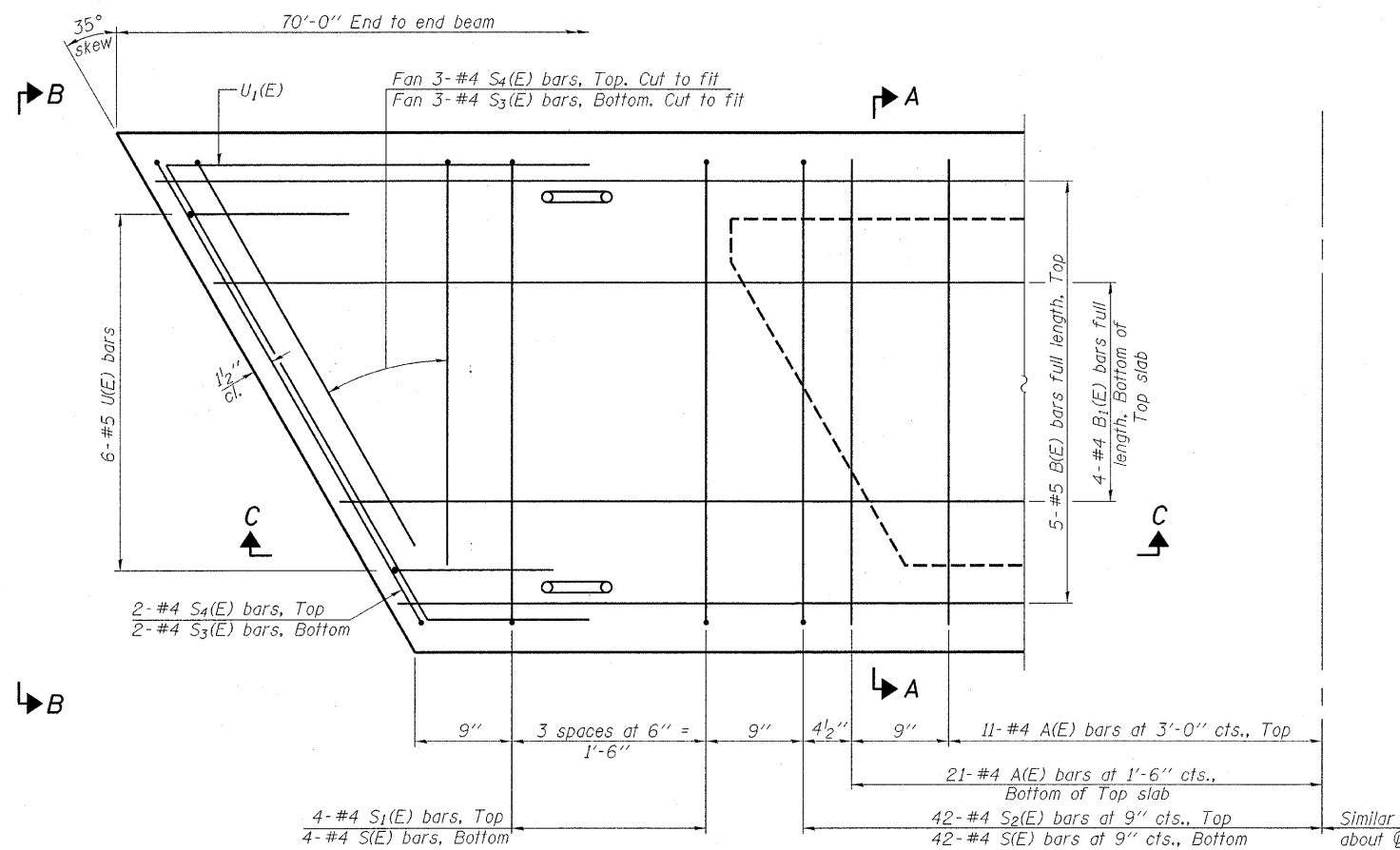
Omit key on exterior face of outside beams



SECTION A-A
(Showing dimensions)

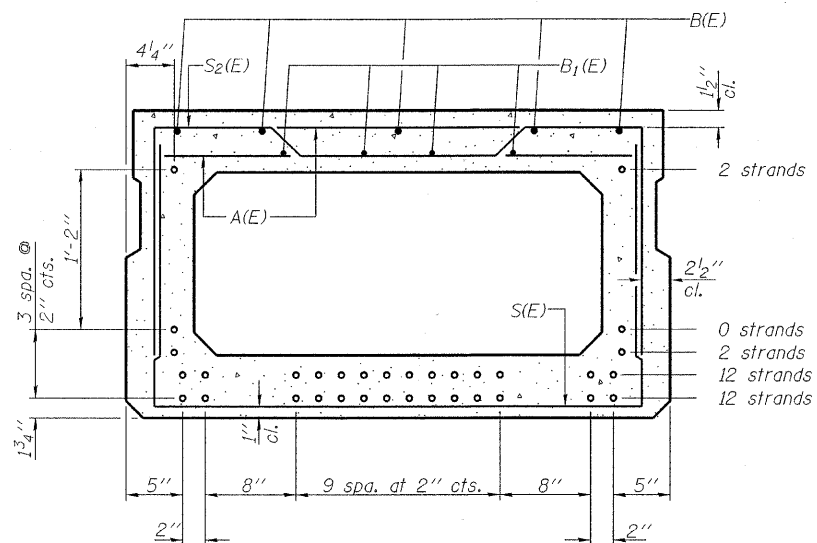


VIEW B-B



PLAN VIEW

Note: 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.



SECTION A-A

(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)	64	#4	3'-7"	—
B(E)	10	#5	36'-0"	—
B1(E)	12	#4	23'-10"	—
S(E)	92	#4	7'-5"	┌
S1(E)	8	#4	6'-11"	┌
S2(E)	84	#4	7'-2"	┌
S3(E)	10	#4	5'-2"	┌
S4(E)	10	#4	5'-1"	┌
U(E)	12	#5	4'-6"	┌
U1(E)	4	#4	9'-3"	┌

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

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

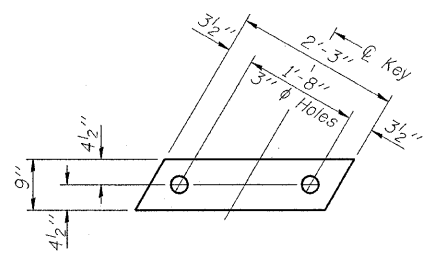
PD-2748-R 5-16-08

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
HLR
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400
PROJECT NUMBER: 08.0207.130 DATE: 03/31/09

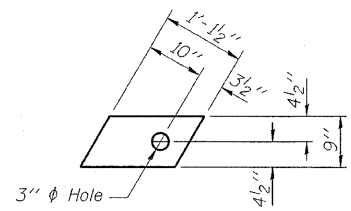
SHEET NO. 2
9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	6
CONTRACT NO. 95584				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SUPERSTRUCTURE
27" X 48" PPC DECK BEAM
STRUCTURE NO. 093-3133



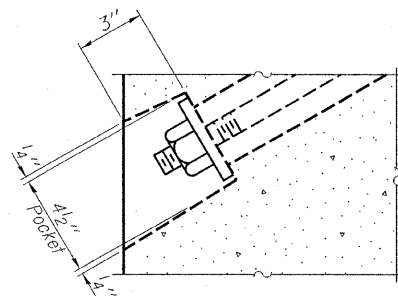
FABRIC BEARING PAD
Interior (10 Required)



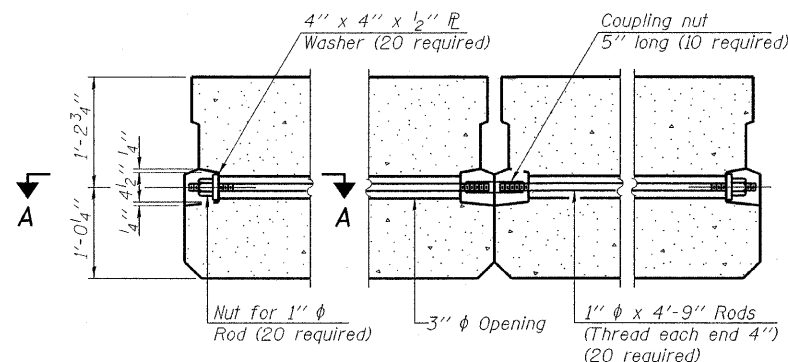
FABRIC BEARING PAD
Exterior (4 Required)

FIXED

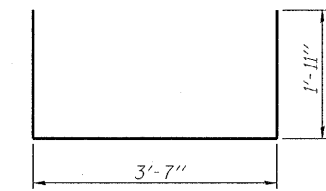
Note: Omit holes when using expansion bearings.



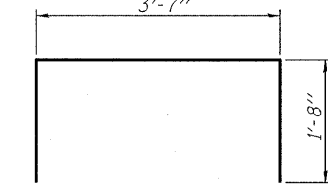
SECTION A-A



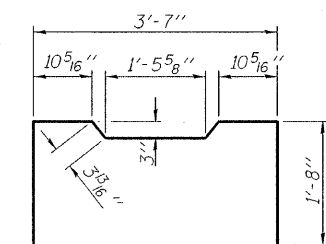
TYPICAL TRANSVERSE TIE ASSEMBLY



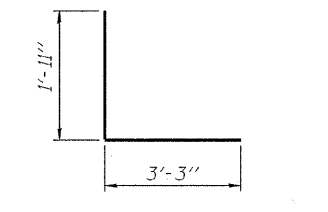
BAR S(E)



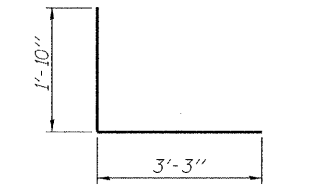
BAR S1(E)



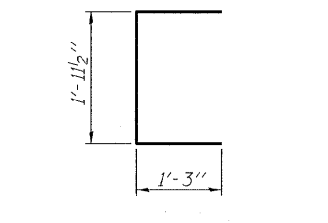
BAR S2(E)



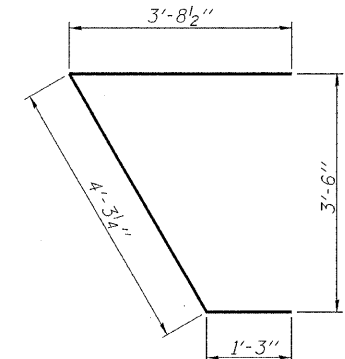
BAR S3(E)



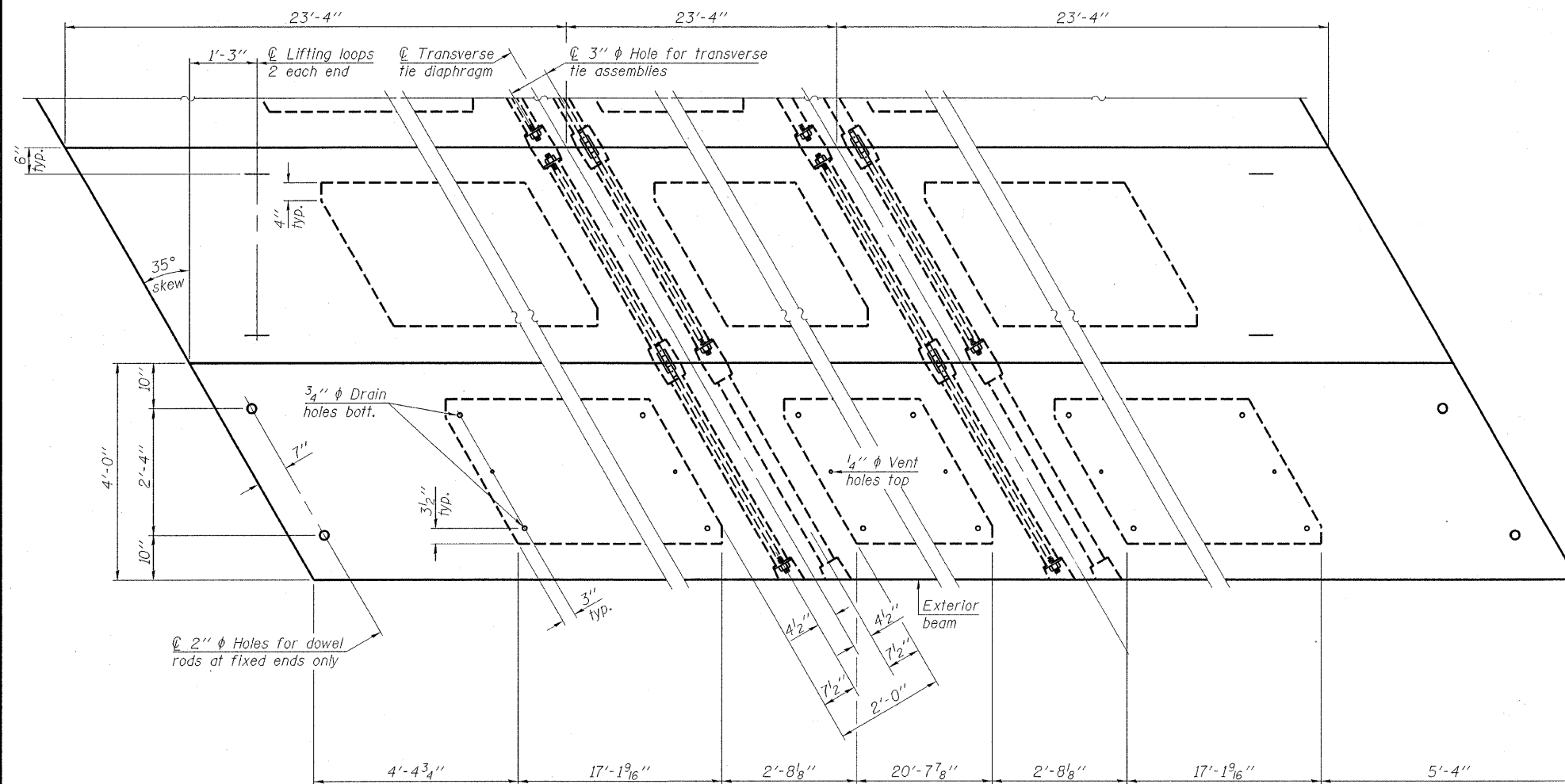
BAR S4(E)



BAR U(E)



BAR U1(E)

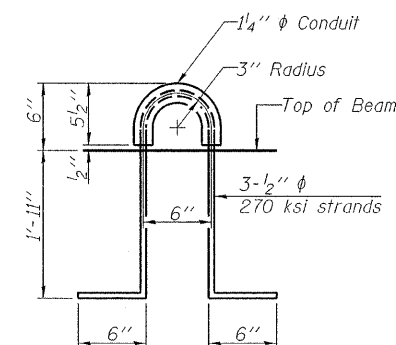


PLAN VIEW

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 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 inch 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 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 inch 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.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,680
---	---------	-------

SUPERSTRUCTURE DETAILS
27" X 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 093-3133

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

PD-2748-RD 5-16-08

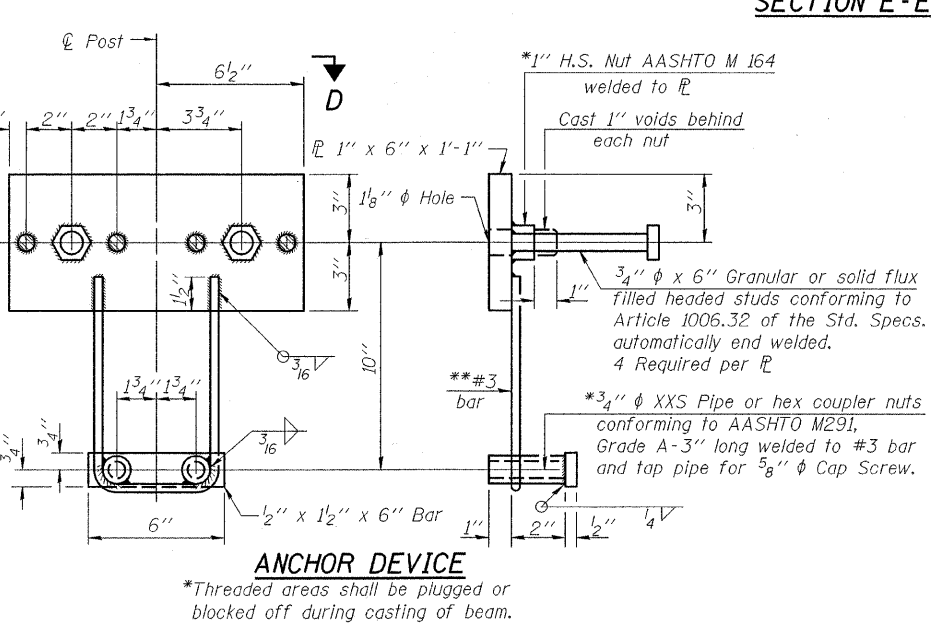
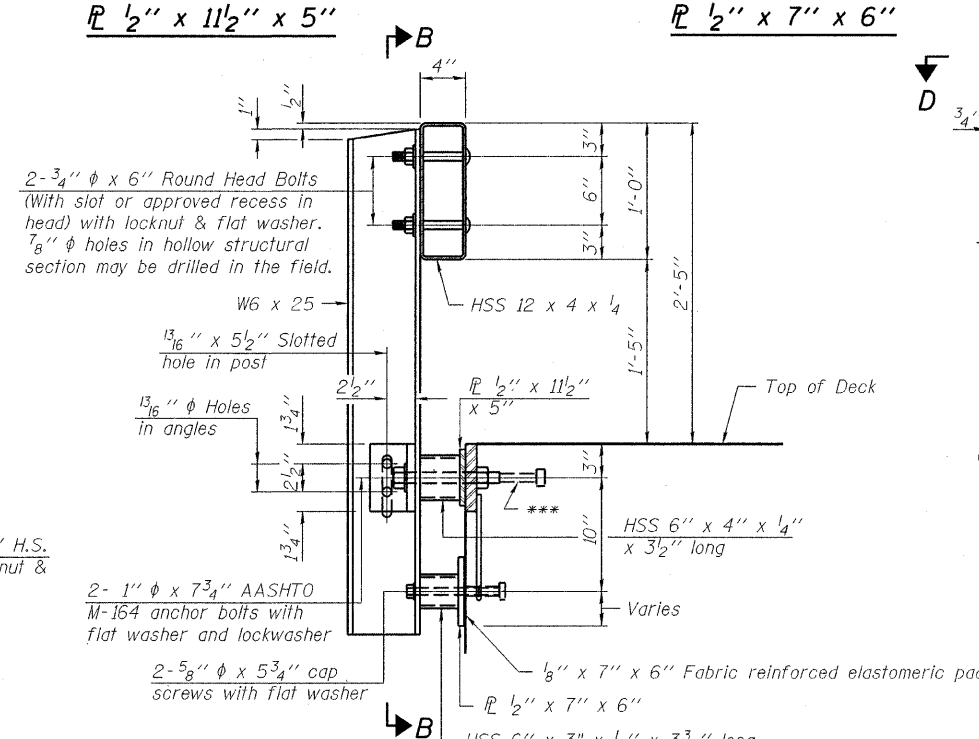
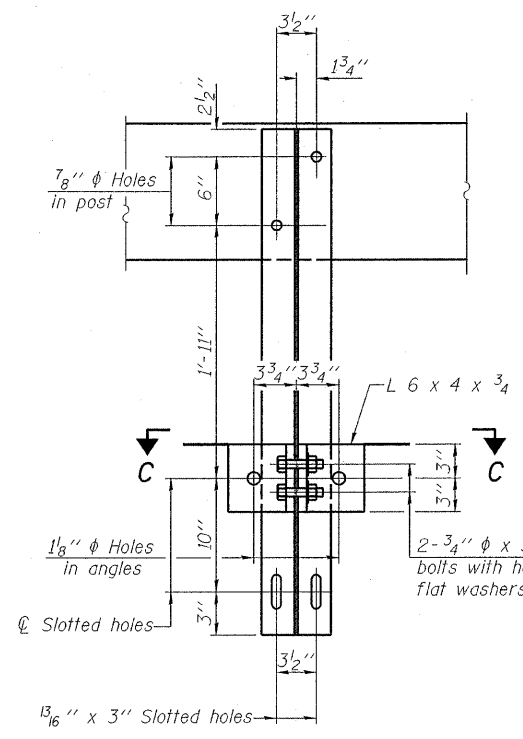
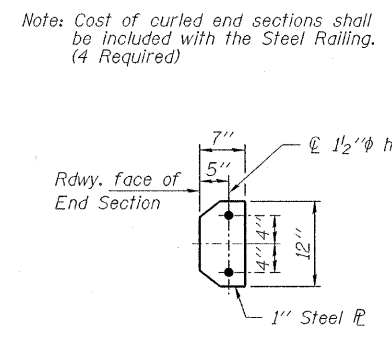
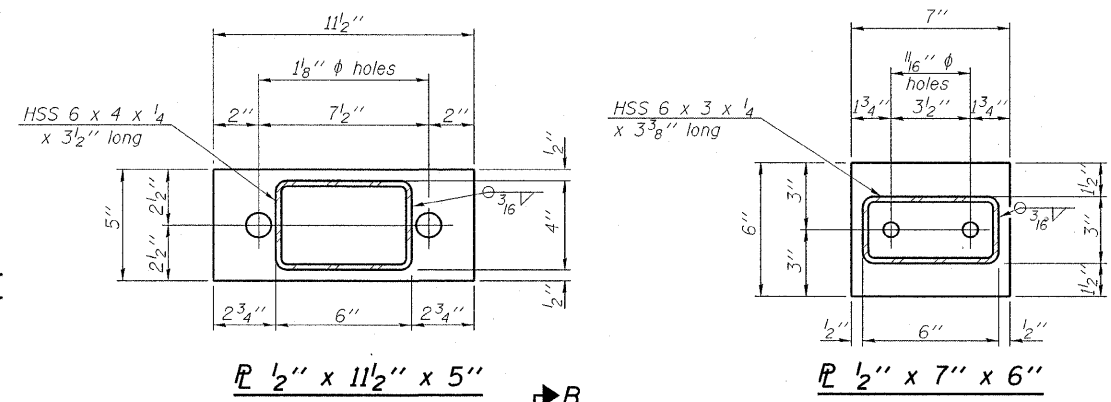
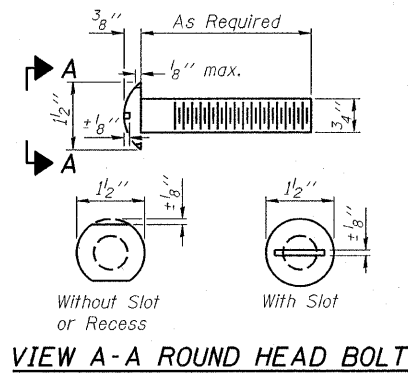
HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR 3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

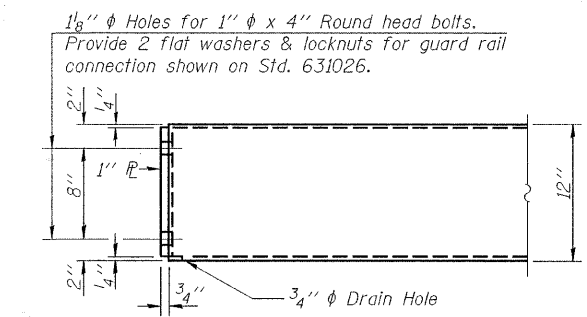
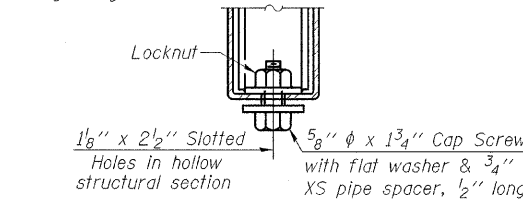
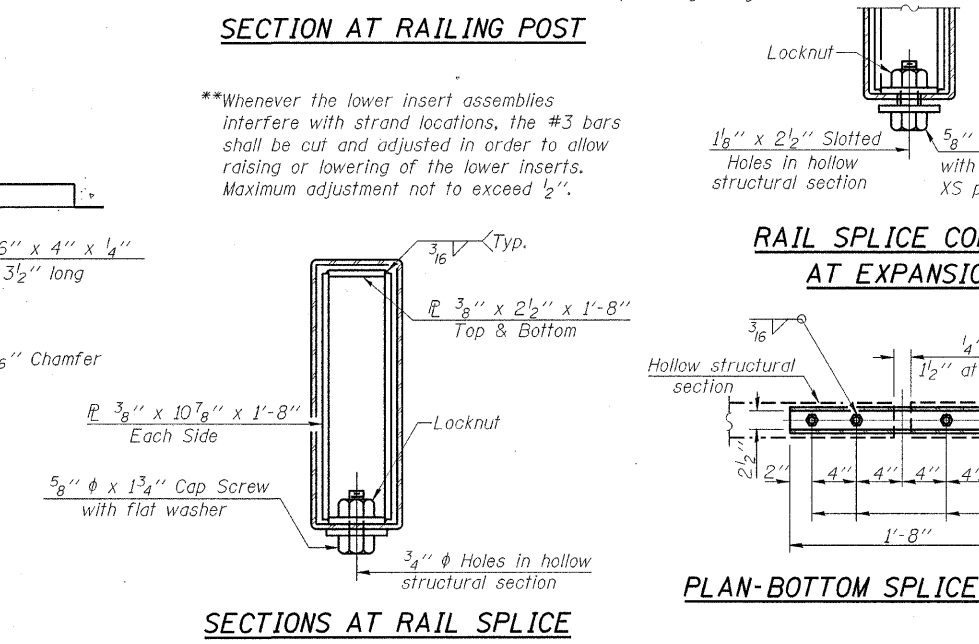
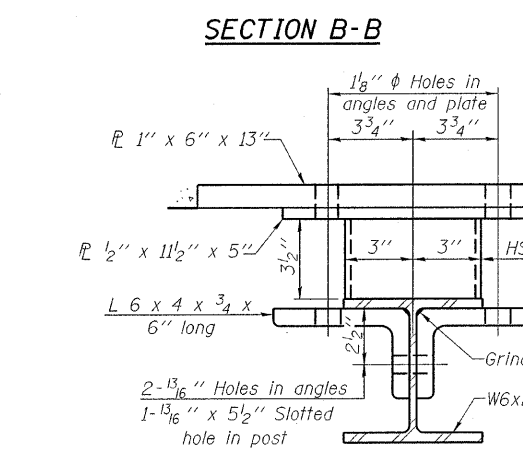
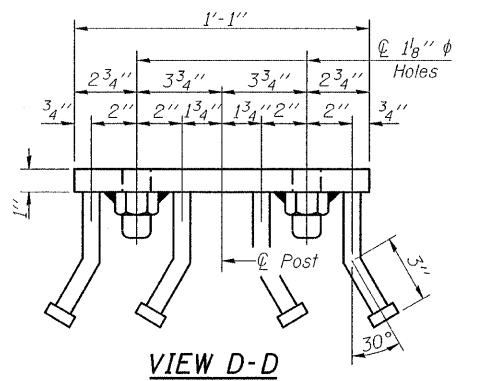
PROJECT NUMBER: 08.0207.130 DATE: 03/31/09

SHEET NO. 3
9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
37	06-06109-00-BR	WABASH	14	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
CONTRACT NO. 95584				



Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch 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.



BILL OF MATERIAL

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

**STEEL RAILING, TYPE S-1
 STRUCTURE NO. 093-3133**

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

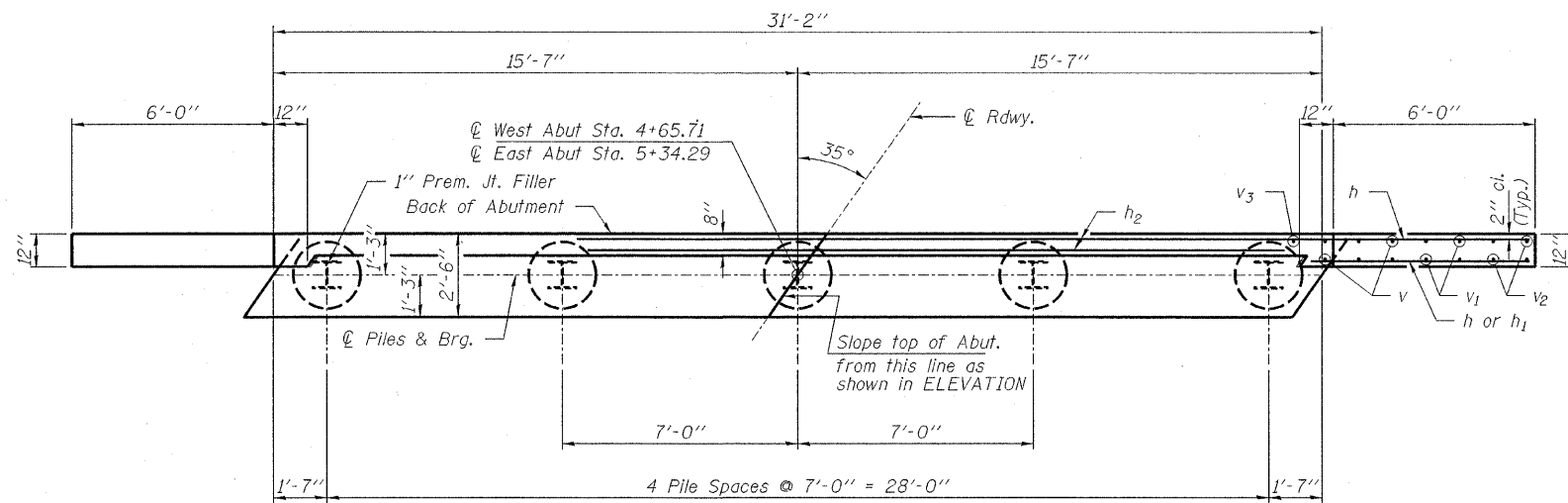
R-23A 5-16-08 (10'-9" Maximum Post Spacing)

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

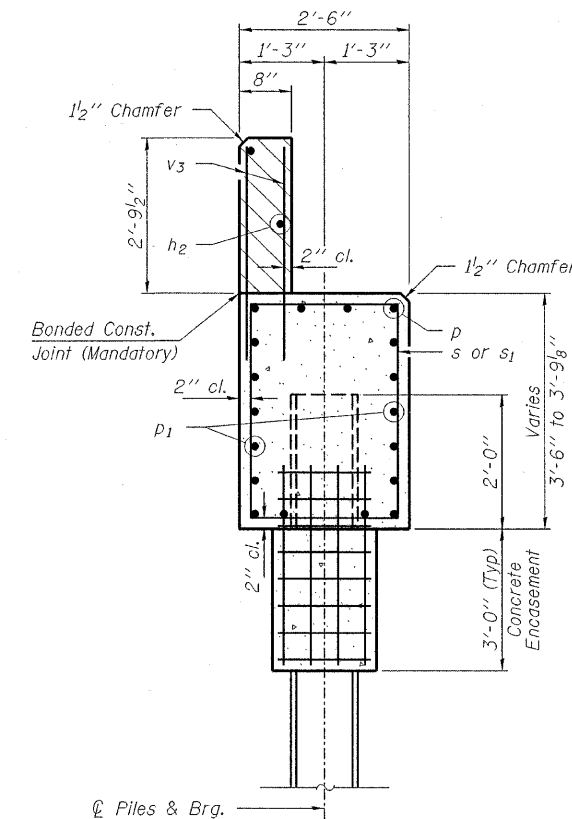
HLR 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

PROJECT NUMBER: 08.0207.130 DATE: 03/31/09

SHEET NO. 5	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	37	06-06109-00-BR	WABASH	14	9
			CONTRACT NO. 95584		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

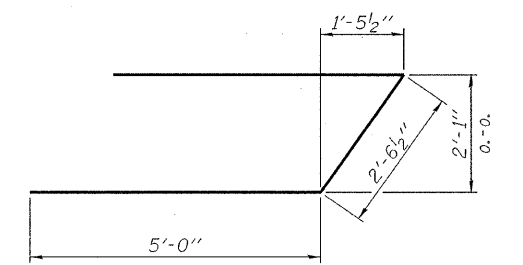


PLAN

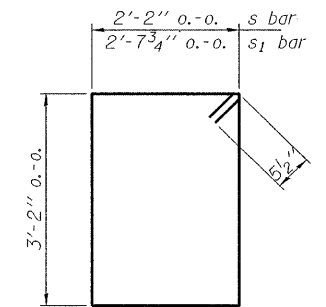


SECTION A-A

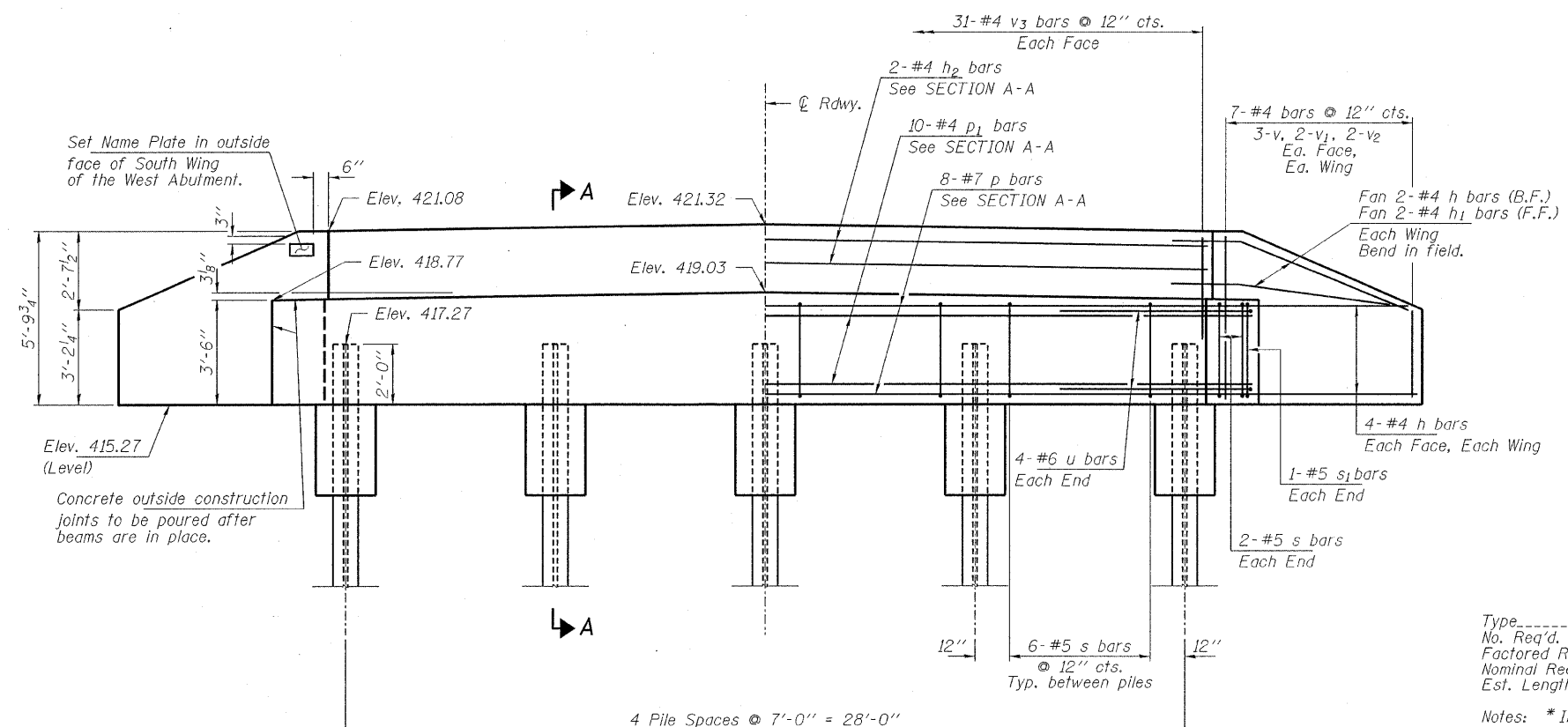
Hatched area to be poured after beams are in place.



BAR u



BAR s & s1



ELEVATION

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	8'-3"	—
h1	8	#4	6'-9"	—
h2	4	#4	30'-10"	—
p	16	#7	30'-10"	—
p1	20	#4	30'-10"	—
s	56	#5	11'-7"	□
s1	4	#5	12'-7"	□
u	16	#6	12'-7"	—
v	24	#4	4'-8"	—
v1	16	#4	3'-10"	—
v2	16	#4	2'-11"	—
v3	124	#4	3'-4"	—
Concrete Structures			Cu. Yd.	28.6
Concrete Encasement			Cu. Yd.	3.4
Reinforcement Bars			Pound	3,210
Steel Piles HP10x42			Foot	513
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1

PILE DATA

Type.....Steel HP10x42
 No. Req'd. (2 Abuts.).....*10
 Factored Resistance Available.....167 Kips/Pile
 Nominal Req'd Bearing.....335 Kips/Pile
 Est. Length.....57 Ft/Pile

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

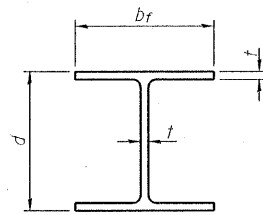
The Steel H-Piles shall be according to AASHTO M270 Grade 50.

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

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

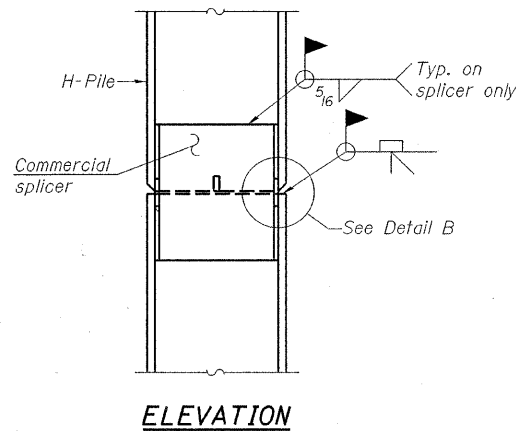
**ABUTMENTS
STRUCTURE NO. 093-3133**

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS HLR 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 08.0207.130 DATE: 03/31/09	SHEET NO. 6 9 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		37	06-06109-00-BR	WABASH	14	10
		CONTRACT NO. 95584				
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

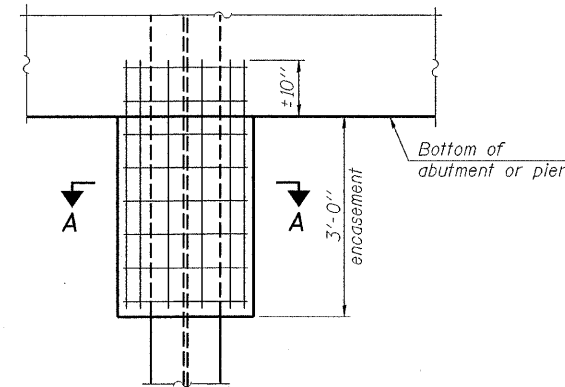


STEEL PILE TABLE

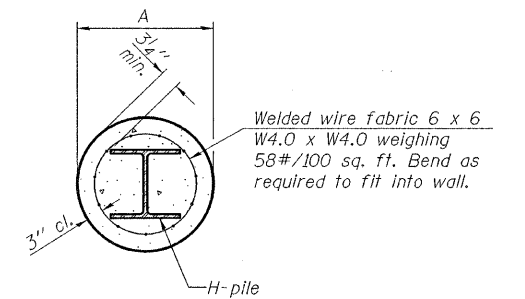
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



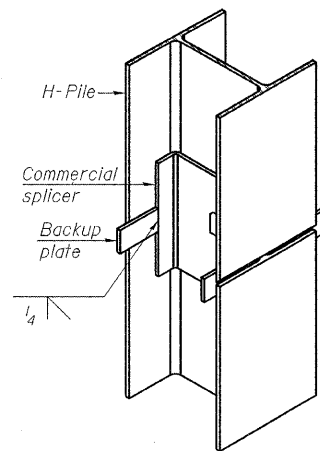
ELEVATION



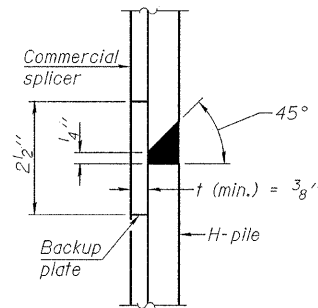
SECTION A-A

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

PILE ENCASEMENT

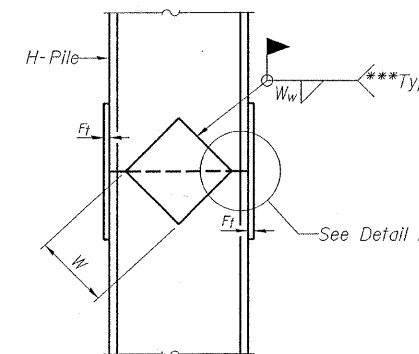


ISOMETRIC VIEW

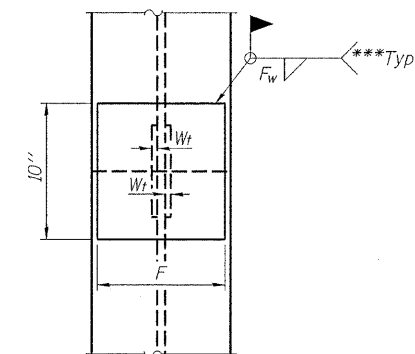


DETAIL "B"

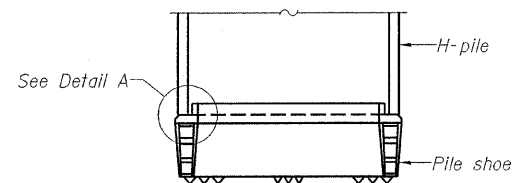
WELDED COMMERCIAL SPLICE



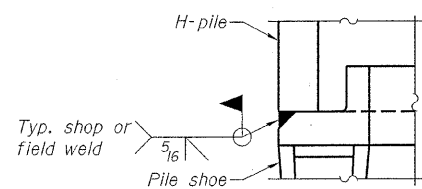
ELEVATION



END VIEW

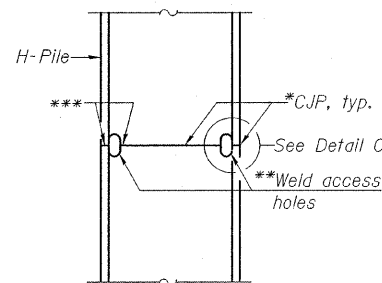


ELEVATION

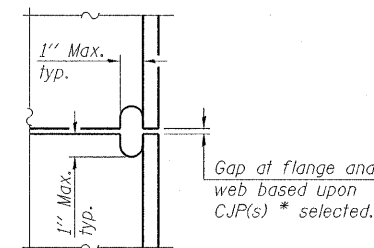


DETAIL A

H-PILE SHOE ATTACHMENT

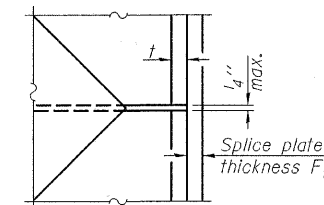


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

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

**STEEL H PILE DETAILS
STRUCTURE NO. 093-3133**

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

*Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code-Steel.

**Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code-Steel.

***Interrupt welds 1/4" from end of each pile.

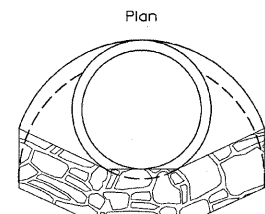
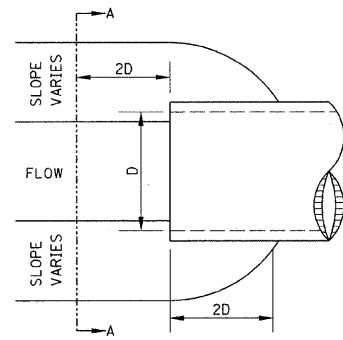
DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - D.A.B.

F-HP

5-16-08

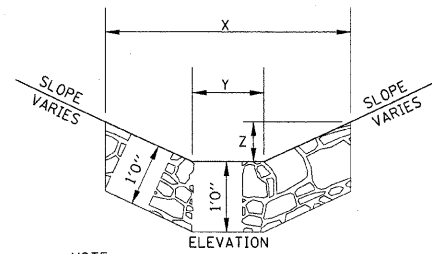
HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 7	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		37	06-06109-00-BR	WABASH	14	11
9 SHEETS		CONTRACT NO. 95584				
PROJECT NUMBER: 08.0207.130		DATE: 03/31/09				
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STONE RIPRAP DITCH DESIGN



Section A-A

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



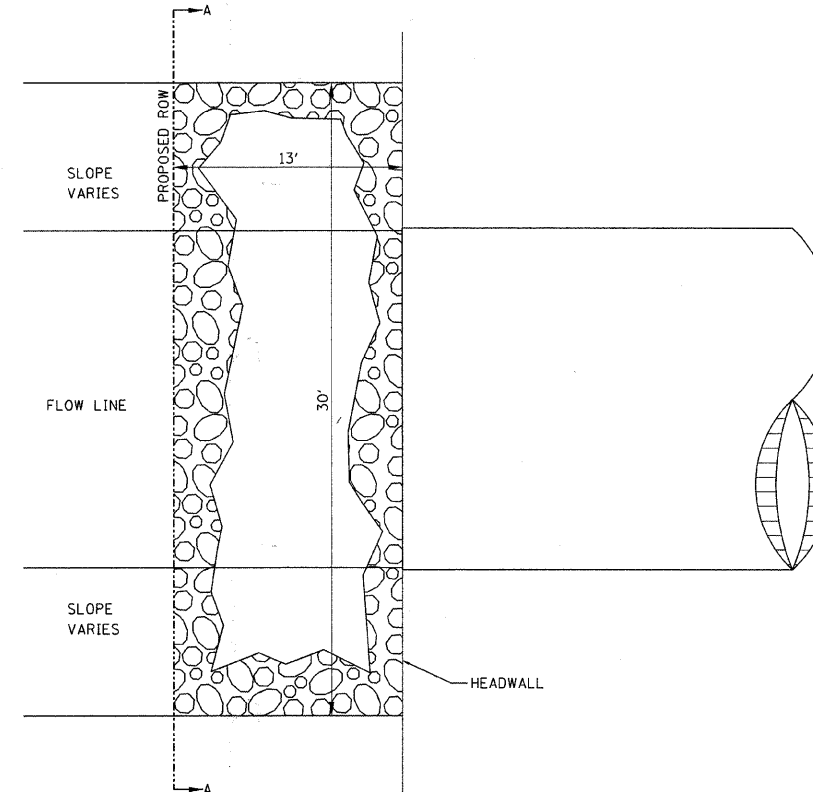
NOTE:

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

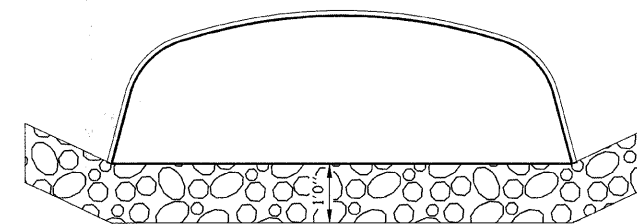
BOTTOM OF DITCH	SLOPE			
	1 1/2:1	2:1	3:1	
3 FT	X= 6 FT	7 FT	9 FT	
	Y= 3 FT	3 FT	3 FT	
	Z= 1 FT	1 FT	1 FT	
	0.48	0.56	0.70	TON/LIN. FT

BOTTOM OF DITCH	SLOPE			
	1 1/2:1	2:1	3:1	
4 FT	X= 7 FT	8 FT	10 FT	
	Y= 4 FT	4 FT	4 FT	
	Z= 1 FT	1 FT	1 FT	
	0.56	0.64	0.78	TON/LIN. FT

STONE DUMPED RIPRAP, CLASS A4 AT ALUMINUM BOX CULVERT



Plan



Section A-A

NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE DUMPED RIPRAP, CLASS A4-SEE SPECIAL PROVISIONS.