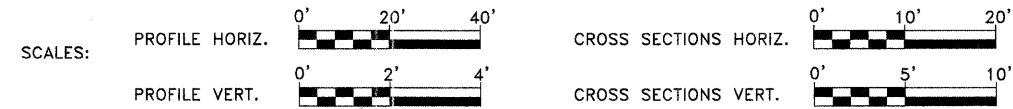
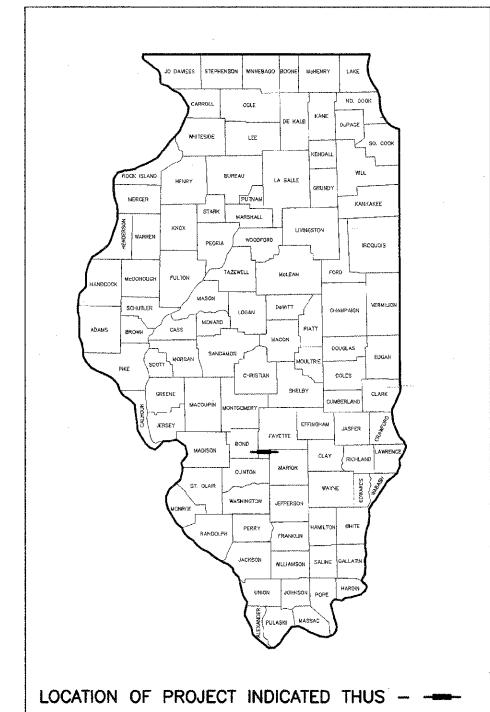


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED HIGHWAY BRIDGE PROGRAM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	1
FEDERAL AID PROJECT		ILLINOIS	PROJECT	
CONTRACT NO. 95662				



SECTION 08-00118-00-BR PROJECT NO. BRS-0720(107) FAYETTE COUNTY JOB NO. C-97-130-10 F.A.S. 720 (C.H. 10)

INDEX OF SHEETS

- 1 COVER SHEET
- 2 TYPICAL CROSS SECTION, GENERAL NOTES, AND SUMMARY OF QUANTITIES
- 3 PLAN AND PROFILE
- 4-9 BRIDGE PLANS
- 10 METAL SHELL PILE DETAILS
- 11-12 CROSS SECTIONS

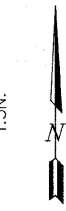
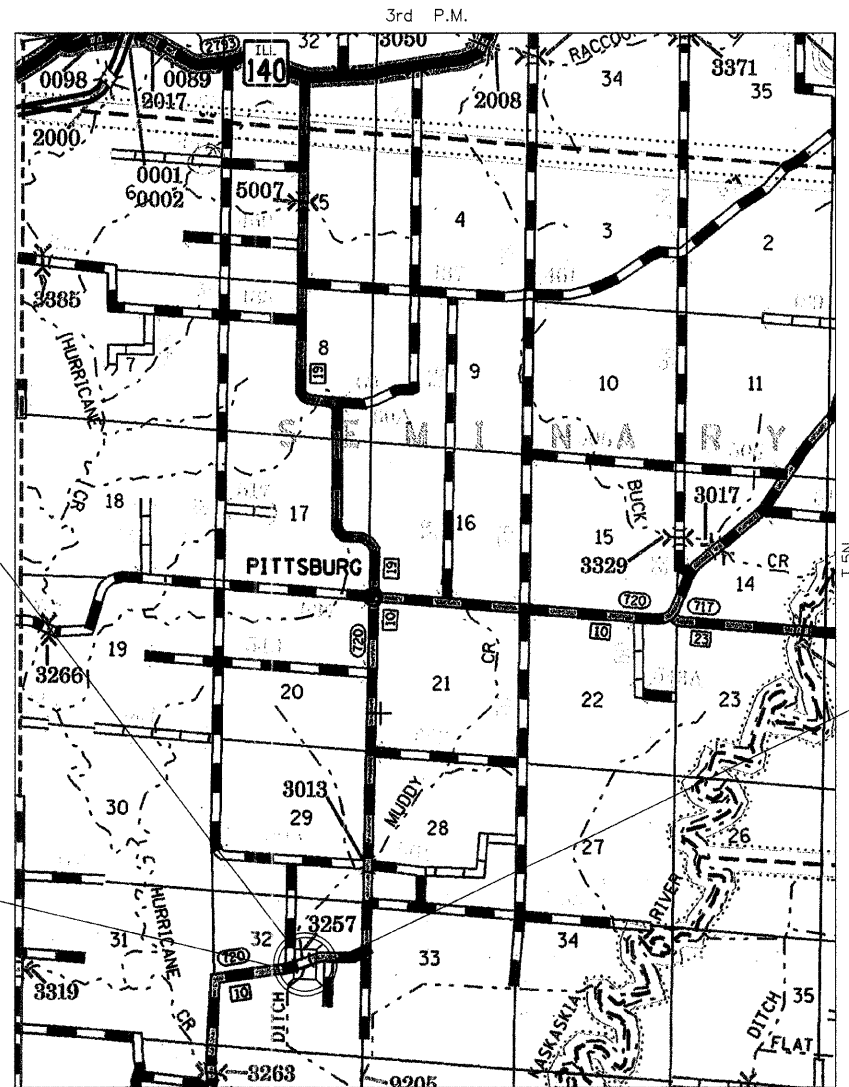
STANDARDS

- STANDARD 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- STANDARD 515001-03 NAME PLATE FOR BRIDGES
- STANDARD 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- STANDARD 631026-05 TRAFFIC BARRIER TERMINAL, TYPE 5
- STANDARD 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- STANDARD 701901-01 TRAFFIC CONTROL DEVICES
- STANDARD B.L.R. 21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- STANDARD B.L.R. 27-1 TRAFFIC BARRIER TERMINAL TYPE 5A

UTILITIES:

- FRONTIER COMMUNICATIONS (402)250-1095
- SOUTHWESTERN ELECTRIC CO-OP ATTN: ANNETTE BROWN (618)664-1025 EXT. 5933

STA. 50+00 - CONSTRUCT SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE (71.89' BK. TO BK. ABUTMENTS) WITH SPILL-THRU ABUTMENTS ON CONCRETE METAL SHELL PILES, 30' SKEW, 30' ROADWAY EXISTING STRUCTURE NO. 026-3257 PROPOSED STRUCTURE NO. 026-3451



END SECTION 08-00118-00-BR
STA. 50+45.94

BEGIN SECTION 08-00118-00-BR
STA. 49+54.05

R.1.W.
LOCATION MAP
APPROXIMATE SCALE - 1" = 0.58 MILE
LENGTH OF IMPROVEMENTS - 91.89 FEET = 0.017 MILE

FAYETTE COUNTY
HIGHWAY DEPARTMENT

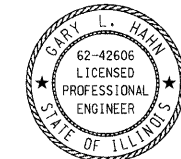
APPROVED 5-19, 2011.
David A. Hahn
COUNTY ENGINEER

PASSED 6-3, 2011.
Maureen East
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review 6-3, 2011.
Roger L. Quishe
DEPUTY DIRECTOR OF HIGHWAYS,
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS



Gary L. Hahn 05-18-2011
GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 62-42606
EXPIRES NOV. 30, 2011



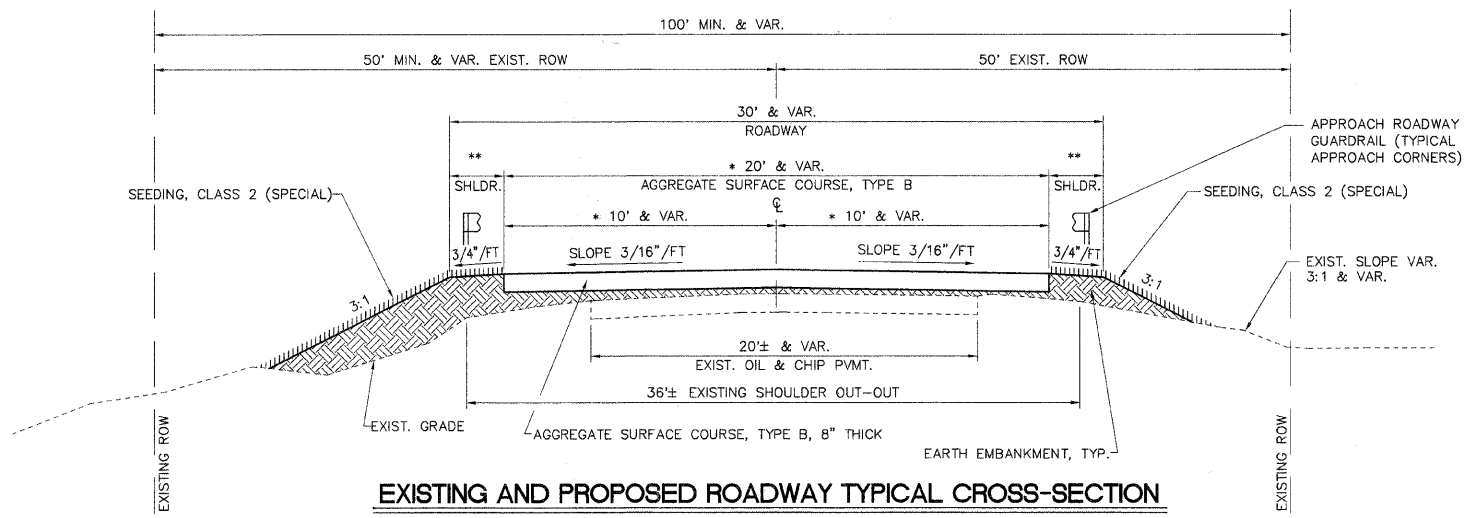
48 HOURS PRIOR TO EXCAVATION CALL J.U.L.I.E.:
811 OR 1-800-892-0123

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS



CLASS ROAD: RURAL MAJOR COLLECTOR
A.D.T. = 150
40 M.P.H.

PREPARED FOR:
AECOM
DATE: MAY 18, 2011
RHUTASEL JOB NO. 51410



EXISTING AND PROPOSED ROADWAY TYPICAL CROSS-SECTION

- * TRANSITION FROM ±20' EXISTING TO 20' PROPOSED PAVEMENT STA. 49+04.05 TO STA. 49+54.05
- * 20' PROPOSED PAVEMENT STA. 49+54.05 TO THE BRIDGE AND FROM THE BRIDGE TO STA. 50+45.94.
- * TRANSITION FROM 20' PROPOSED TO ±20' EXISTING PAVEMENT STA. 50+45.94 TO STA. 50+95.94
- ** DEPARTURE CORNERS - 5' EARTH SHOULDER.
- ** APPROACH CORNERS - VARIABLE WIDTH EARTH SHOULDER WIDENING FOR TRAFFIC BARRIER TERMINALS PER IDOT STANDARDS LISTED ON COVER SHEET, EXCEPT THAT THE SHOULDER WIDTH SHALL BE 9'-0" MIN. IN LIEU OF 8'-9 1/2" ADJACENT TO TBT TY 5A TO MATCH THE SHOULDER WIDTH OF 9'-0" MIN. ADJACENT TO TBT TY 1. SPECIAL SHOULDER WIDENING FOR TBT TY 1 SPECIAL SHALL TERMINATE WHERE 6:1 HORIZONTAL TAPER BLENDS INTO EXISTING SHOULDER. SEE CROSS SECTIONS FOR SHOULDER SLOPE BREAK POINTS ON APPROACH CORNERS.

NOTE:
SEE PLAN AND PROFILE FOR EXTENTS OF SHOULDER WORK.

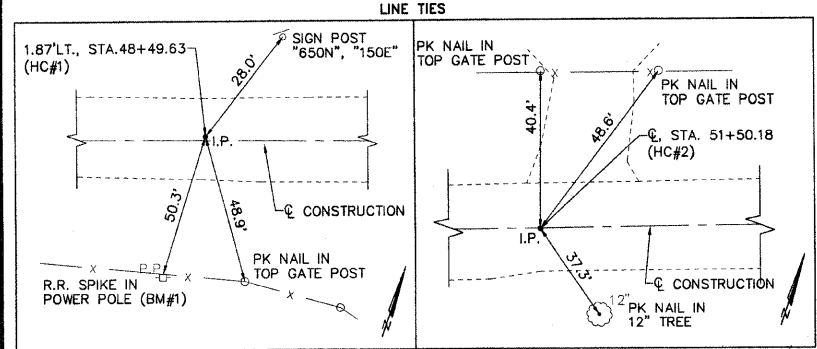
SUMMARY OF QUANTITIES

CODE NO.	ITEM	QUANTITY	UNIT
20200100	EARTH EXCAVATION	42	CU. YD.
20300100	CHANNEL EXCAVATION	123	CU. YD.
20400800	FURNISHED EXCAVATION	30	CU. YD.
28100807	STONE DUMPED RIPRAP, CLASS A4	120	TON
40200800	AGGREGATE SURFACE COURSE, TYPE B	115	TON
50100100	REMOVAL OF EXISTING STRUCTURES	1	EACH
50300225	CONCRETE STRUCTURES	25.8	CU. YD.
50300280	CONCRETE ENCASEMENT	6.6	CU. YD.
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	2100	SQ. FT.
50800105	REINFORCEMENT BARS	3140	POUND
* 50900205	STEEL RAILING, TYPE S1	140	FOOT
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	631	FOOT
51202305	DRIVING PILES	631	FOOT
51203200	TEST PILE METAL SHELLS	1	EACH
51500100	NAME PLATES	1	EACH
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	2	EACH
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	2	EACH
63200310	GUARDRAIL REMOVAL	151	FOOT
67100100	MOBILIZATION	1	L. SUM
* 78201000	TERMINAL MARKER - DIRECT APPLIED	4	EACH
X2501000	SEEDING, CLASS 2 (SPECIAL)	0.1	ACRE

* SPECIALTY ITEMS

GENERAL NOTES

1. THE SHRINKAGE FACTOR FOR EMBANKMENT IS 25%.
2. ALL CLEARING AND GRUBBING IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EARTH EXCAVATION.
3. BITUMINOUS SURFACE TREATMENT (A-2) WILL BE COMPLETED BY THE OWNER.

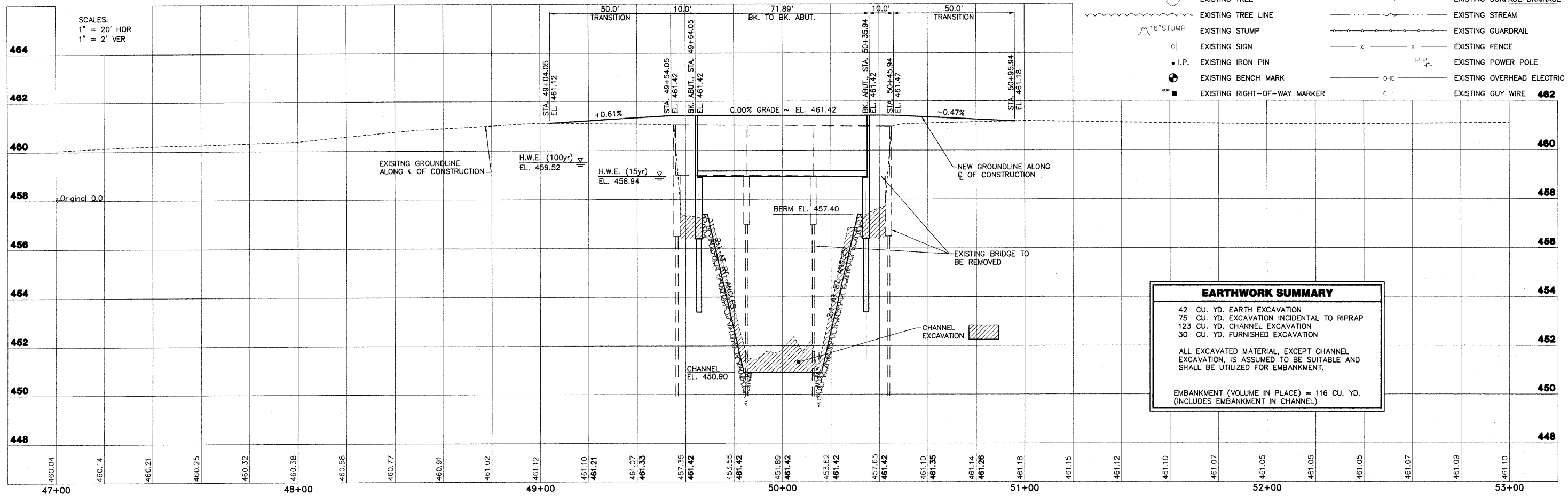
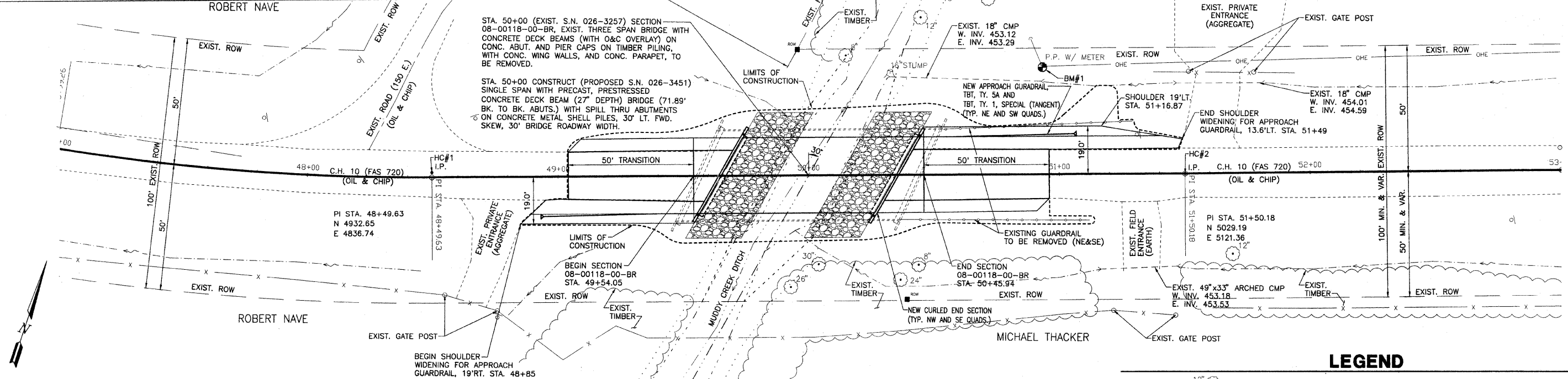


HORIZONTAL CONTROL COORDINATES

POINT	LOCATION	N. COOR.	E. COOR.
HC#1 (IRON PIN)	1.87' LT., STA. 48+49.63	4934.42	4836.14
HC#2 (IRON PIN)	CL, STA. 51+50.18	5029.19	5121.36

BENCH MARK COORDINATES

POINT	LOCATION	ELEV.
BM#1 (R.R. SPIKE IN POWER POLE)	42.33' LT., STA. 50+93.42	457.80



EARTHWORK SUMMARY

42 CU. YD. EARTH EXCAVATION	
75 CU. YD. EXCAVATION INCIDENTAL TO RIPRAP	
123 CU. YD. CHANNEL EXCAVATION	
30 CU. YD. FURNISHED EXCAVATION	
ALL EXCAVATED MATERIAL, EXCEPT CHANNEL EXCAVATION, IS ASSUMED TO BE SUITABLE AND SHALL BE UTILIZED FOR EMBANKMENT.	
EMBANKMENT (VOLUME IN PLACE) = 116 CU. YD. (INCLUDES EMBANKMENT IN CHANNEL)	

LEGEND

12" (Symbol)	EXISTING TREE	--- (Symbol)	EXISTING SURFACE DRAINAGE
--- (Symbol)	EXISTING TREE LINE	--- (Symbol)	EXISTING STREAM
16" STUMP (Symbol)	EXISTING STUMP	--- (Symbol)	EXISTING GUARDRAIL
o (Symbol)	EXISTING SIGN	--- (Symbol)	EXISTING FENCE
• I.P. (Symbol)	EXISTING IRON PIN	P.P. (Symbol)	EXISTING POWER POLE
• (Symbol)	EXISTING BENCH MARK	OHE (Symbol)	EXISTING OVERHEAD ELECTRIC LINE
■ (Symbol)	EXISTING RIGHT-OF-WAY MARKER	--- (Symbol)	EXISTING GUY WIRE

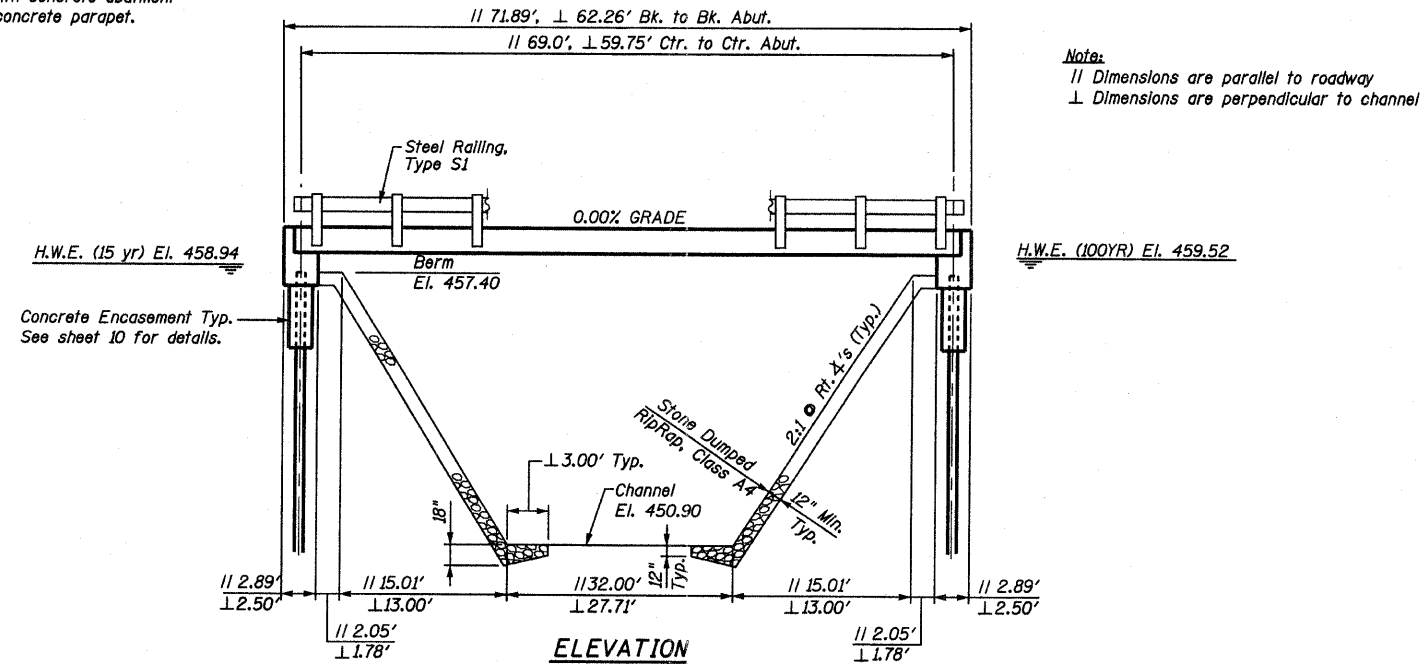
B.M. - B.M. #1, R.R. Spike In Power Pole, 46.78' RT., STA. 48+37.12, EL. 456.92
 B.M. #2, R.R. Spike In Power Pole, 42.33' LT., STA. 50+93.42, EL. 457.80

Existing Structure - Three span precast concrete deck beams (with o/c overlay), with concrete abutment and pier caps, on timber piling, with concrete wingwalls and concrete parapet.

Salvage - None

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	4
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

CONTRACT NO. 95662



Note:
 || Dimensions are parallel to roadway
 ⊥ Dimensions are perpendicular to channel

BILL OF MATERIAL (BRIDGE ONLY)

Item	Unit	Total
Removal of Existing Structures	Each	1
Concrete Structures	Cu. Yd.	25.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2100
Steel Railing, Type S1	Foot	140
Reinforcement Bars	Pound	3140
Furnishing Metal Shell Piles, 12"x0.250"	Foot	631
Driving Piles	Foot	631
Test Pile Metal Shells	Each	1
Name Plates	Each	1
Concrete Encasement	Cu. Yd.	6.6

GENERAL NOTES

The Contractor shall drive test pile to 110% of the Nominal Required Bearing specified in a production location at the substructure location specified or approved by the Engineer before ordering the remainder of piles.

See Special Provisions for boring logs.

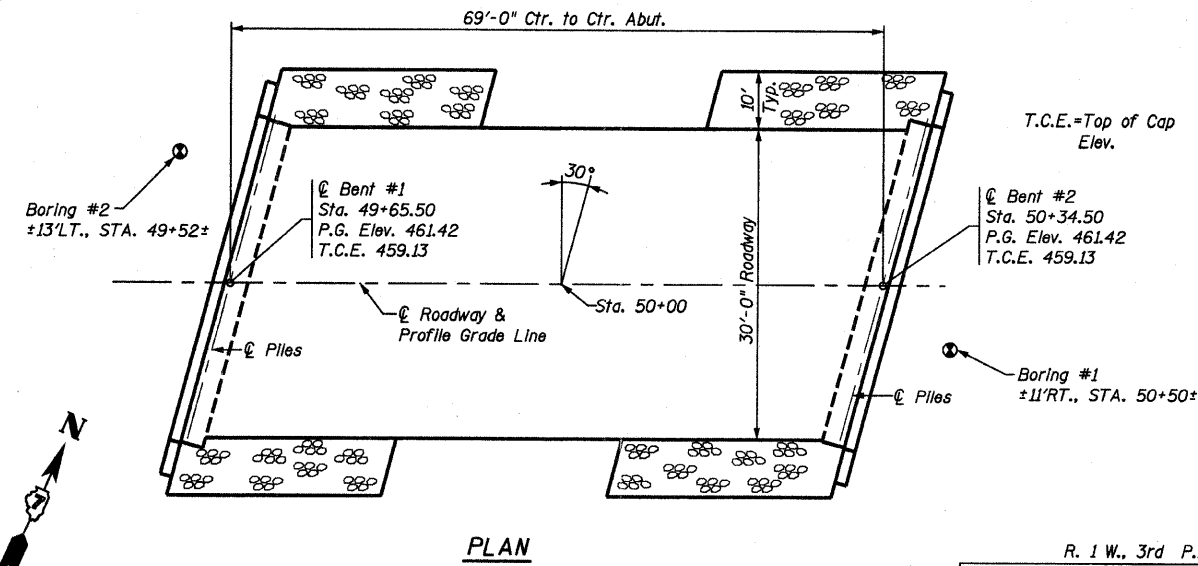
A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

Do not scale these drawings.

The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.



DESIGN SPECIFICATIONS
 2007 (4th Edition) AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

LOADING HL-93

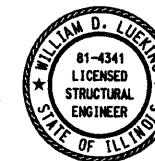
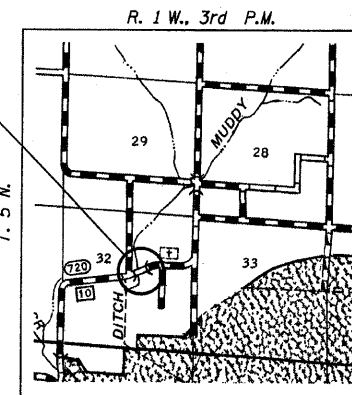
Allow 50# / Sq. Ft. for Future Wearing Surface.

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (SD1) = 24.3
 Design Spectral Acceleration at 0.2 sec. (SDS) = 54.9
 Soil Site Class = D

STATION 50+00
 MUDDY CREEK DITCH
 SEC. 08-00118-00-BR BUILT 20L
 PROJECT NO. BROS-0720(107)
 FAYETTE COUNTY
 LOADING HL93
 STR. NO. 026-3451

LETTERING FOR NAME PLATE

Locate Name Plate at Southeast Corner of Bridge (See Std. 515001)



William D. Lueking
 William D. Lueking
 05-18-2011
 Date of Signing
 11-30-2012
 Date of License Expiration

PILE DATA (2-ABUTS.)

Pile Type and Size: Concrete Metal Shell Piles, 12", with 0.25" Wall Thickness
 Nominal Required Bearing: 255 kips
 Allowable Resistance Available: 85 kips
 Estimated Pile Length: 56 Feet Bent #1, 59 Feet Bent #2
 Number of Production Piles: 11
 Number of Test Piles: 1 (located in Bent #2)

WATERWAY INFORMATION

Drainage Area = 5.1 Sq. Mi.		Low Grade Elev. 459.59 @ Sta. 46+00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E. Ft.	Head - Ft.		Headwater Elev. - Ft.	
			Exlst.	Prop.		Exlst.	Prop.	Exlst.	Prop.
Design	15	1392	317	353	458.94	1.20		460.14	
Base	100	2269	317	353	459.52	1.36		460.88	
Overlapping									
Max. Calc.									

GENERAL PLAN AND ELEVATION

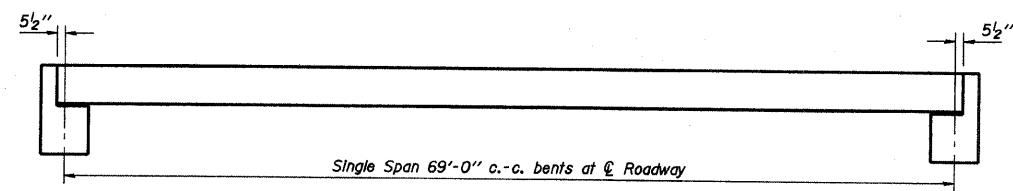
FAS 720 (C.H. 10)
 OVER MUDDY CREEK DITCH

SECTION 08-00118-00-BR
 FAYETTE COUNTY
 STRUCTURE NO. 026-3451

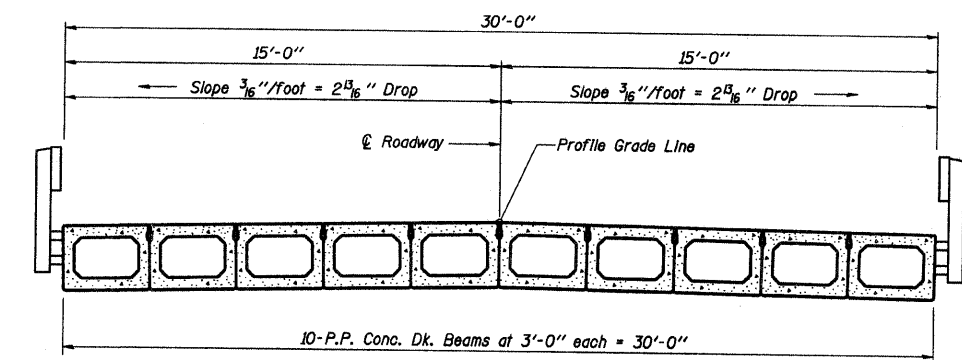
RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS & LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS

PREPARED FOR:
 AECOM
 60097894

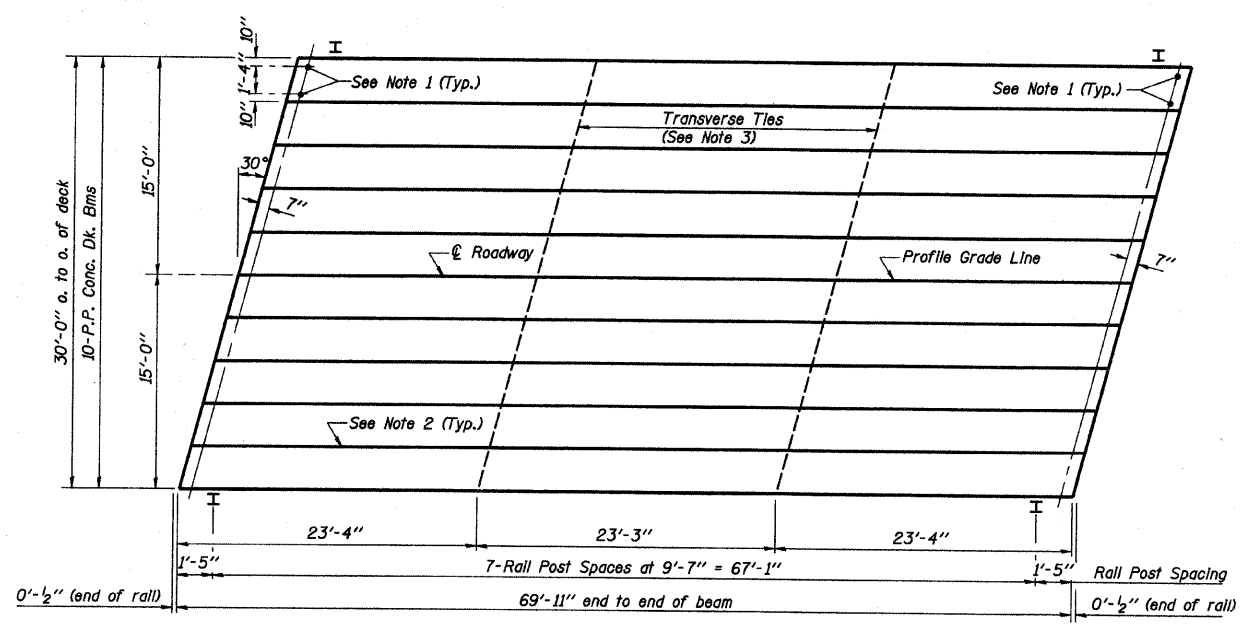
Date: 04/07/2011
 Design: MRQ, WDL
 Drawn: JSD
 Job No.: 51410



TYPICAL ELEVATION

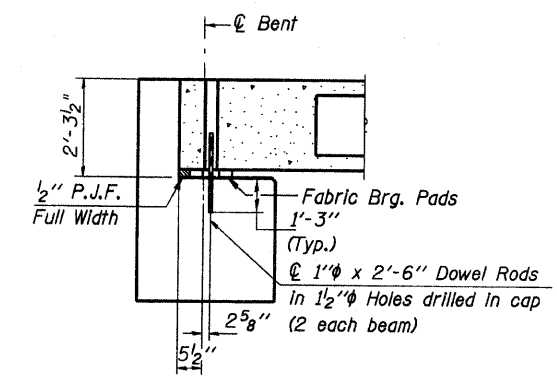


CROSS SECTION



PLAN

Provide Curled End Sections at the departure ends of the Structure (NW & SE) See Notes.

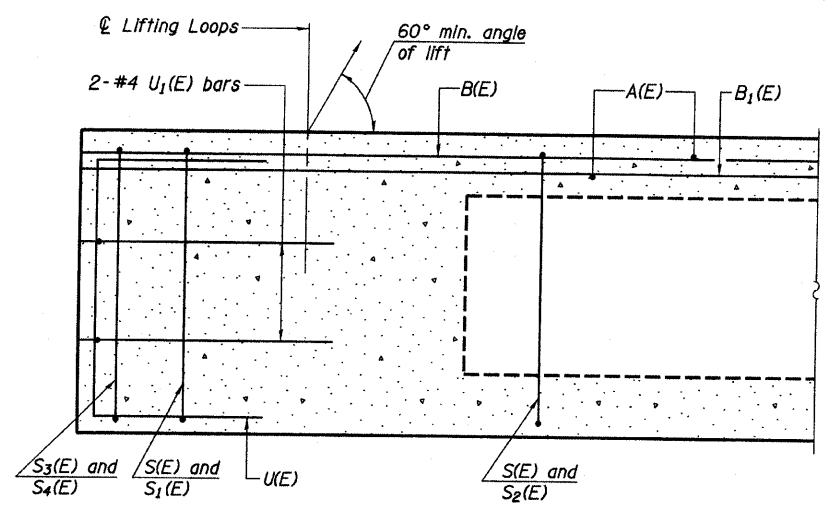


QUANTITIES FOR ONE SPAN

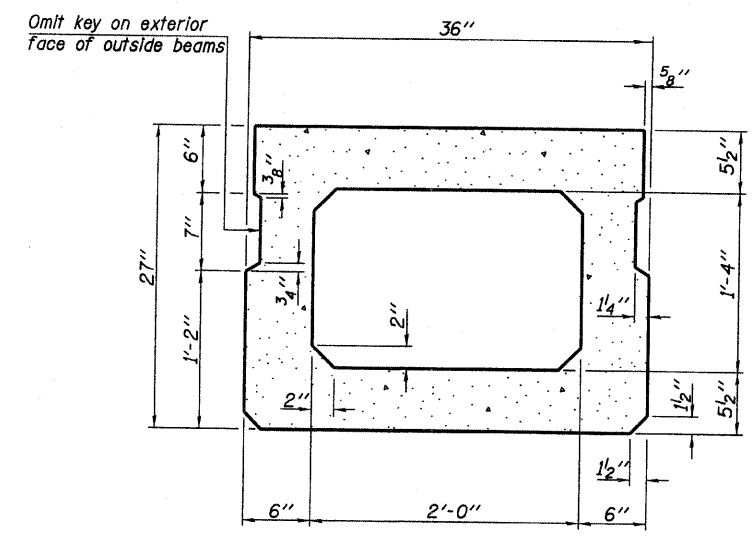
P.P. Conc. Dk. Bm. 27" Dp.	2100 Sq. Ft.
Steel Railing, Type S1	140 Ft.

NOTES

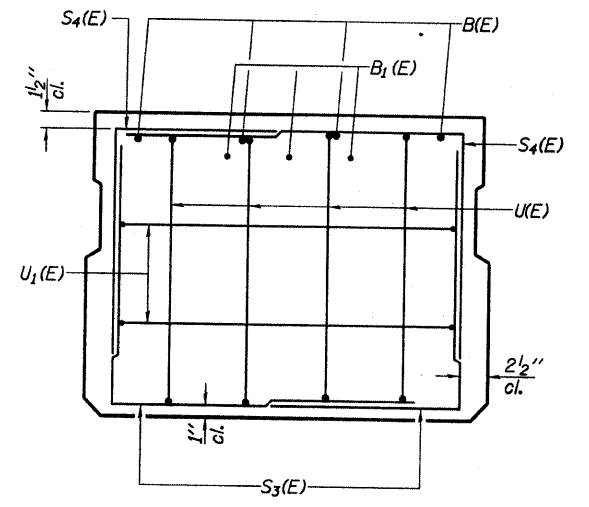
- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
- Longitudinal keys shall be grouted.
- The 1" \varnothing rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar outside shall be filled with grout after transverse tie assembly is in place.
- The cost of the Curled End Sections shall be included in the contract unit price per foot for "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.



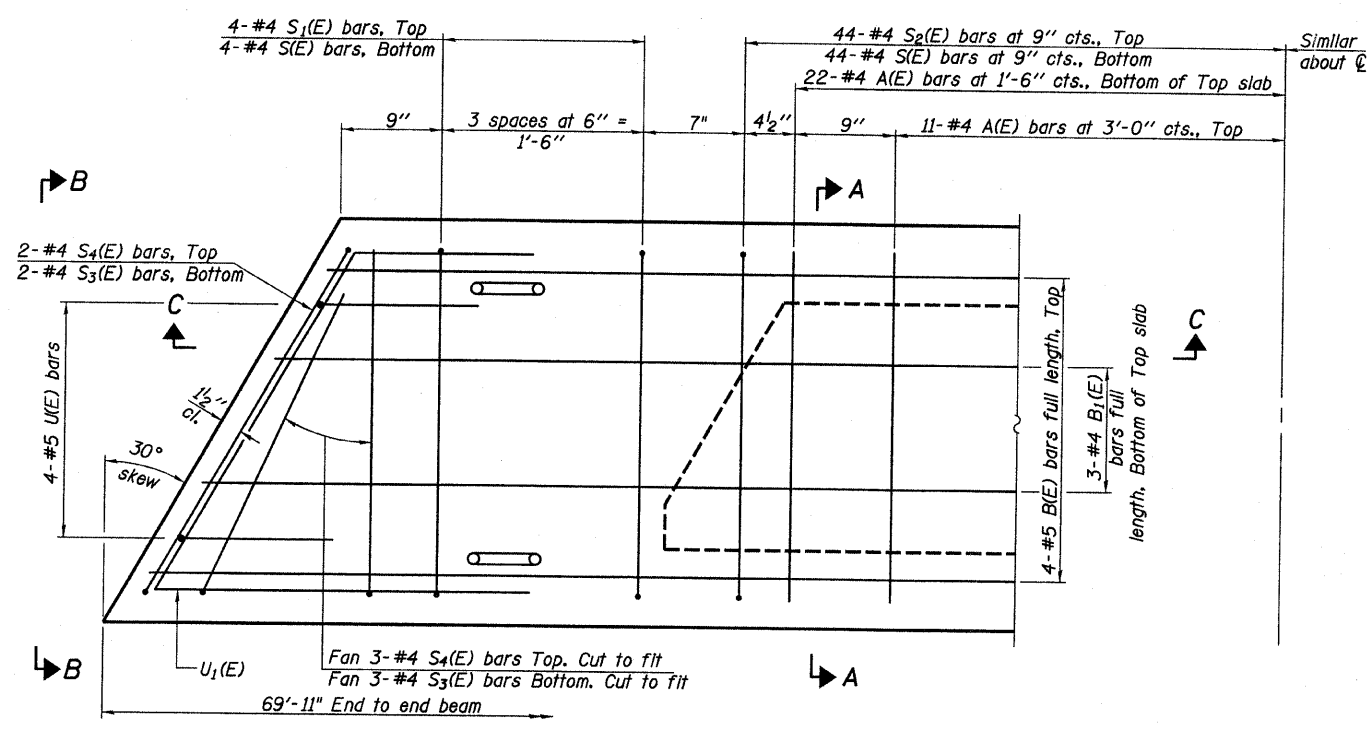
SECTION C-C



SECTION A-A
(Showing dimensions)

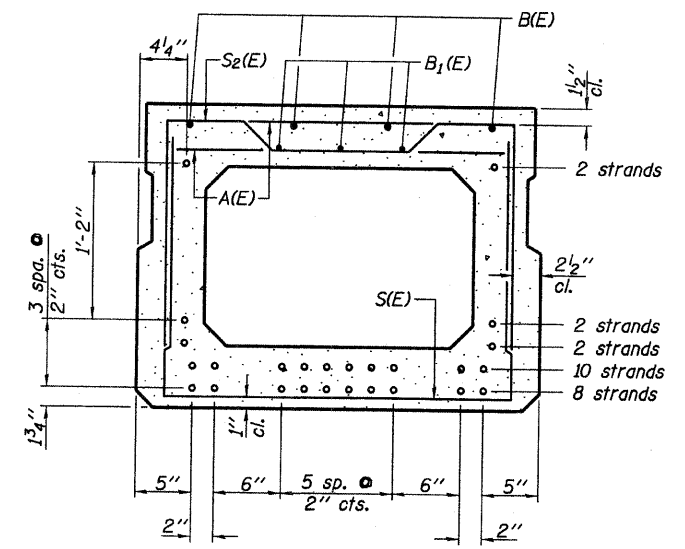


VIEW B-B



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)

24 - 1/2" Strands

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

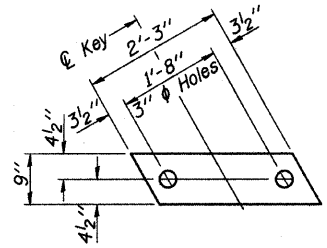
BAR LIST
ONE BEAM ONLY
(For Information only)

Bar	No.	Size	Length	Shape
A(E)	66	#4	2'-7"	—
B(E)	4	#5	69'-8"	—
B1(E)	3	#4	69'-8"	—
S(E)	96	#4	6'-5"	—
S1(E)	8	#4	5'-11"	┌
S2(E)	88	#4	6'-2"	┌
S3(E)	10	#4	4'-6"	┌
S4(E)	10	#4	4'-3"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	5'-9"	┌

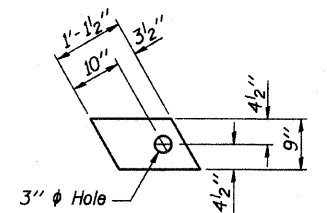
Note: See sheet 5 of 12 for Bill of Material. See sheet 7 of 12 for additional details.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. ID	08-0018-00-BR	FAYETTE	12	7
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

CONTRACT NO. 95662



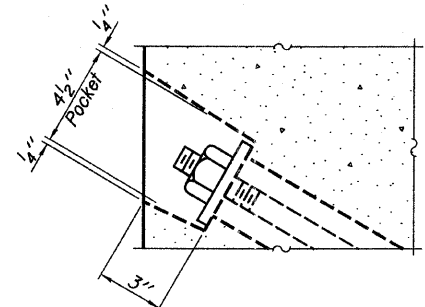
FABRIC BEARING PAD
(Interior)



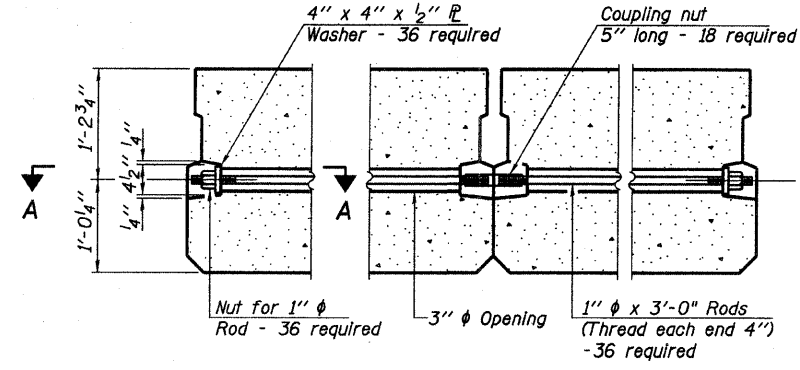
FABRIC BEARING PAD
(Exterior)

FIXED

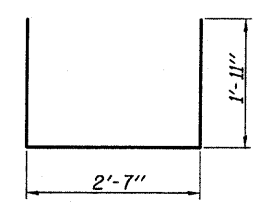
Note: All bearing pads shall be 1/2" thick.



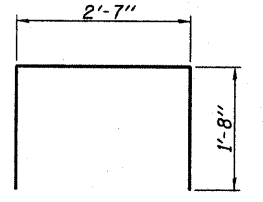
SECTION A-A



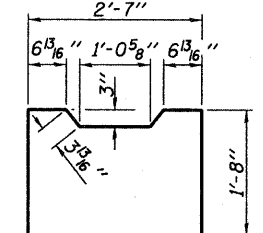
TYPICAL TRANSVERSE TIE ASSEMBLY



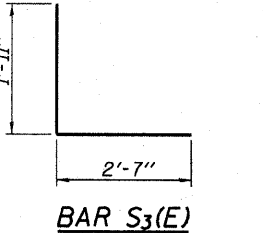
BAR S(E)



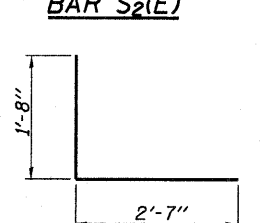
BAR S1(E)



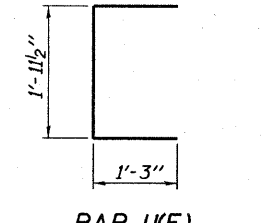
BAR S2(E)



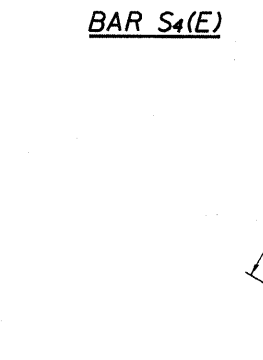
BAR S3(E)



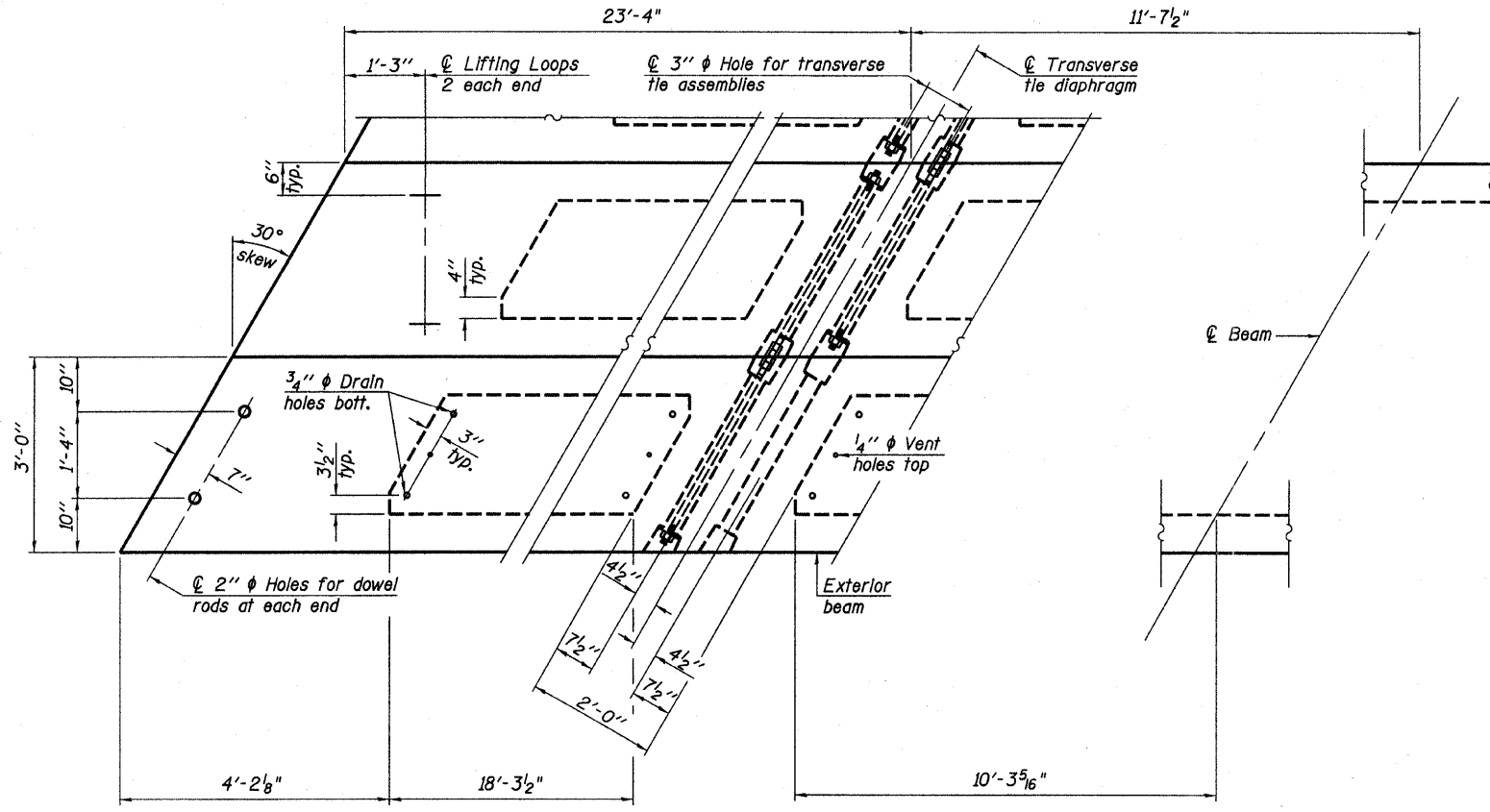
BAR S4(E)



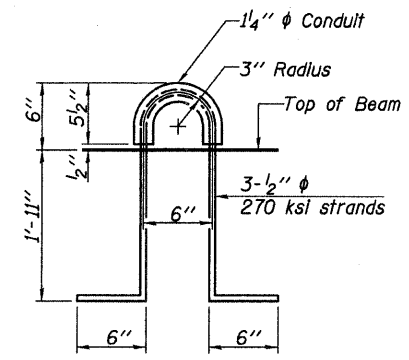
BAR U(E)



BAR U1(E)



PLAN VIEW



LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" 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 (IL Modified), Grade 60.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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'cl, shall be 5000 psi.
- Rail post anchor devices shall be cast into outside beam as elsewhere specified.
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between the top of the beam and the bottom edge of the key.

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

DESIGN STRESSES

- f_s = 270,000 p.s.i. (1/2" φ Low relax Strand)
- f_{sl} = 201,960 p.s.i. (1/2" φ Low relax Strand)
- F_i = 30,900 lbs per strand
- f_y = 60,000 p.s.i. Reinf. bars
- f_c = 6,000 p.s.i.
- f_{cl} = 5,000 p.s.i.

Note: See sheet 5 of 12 for Bill of Material.

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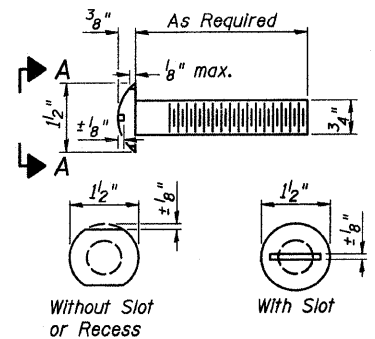
PREPARED FOR:
AECOM
6007894

Date: 04/07/2011
Design: WDL
Drawn: JSD
Job No.: 51410

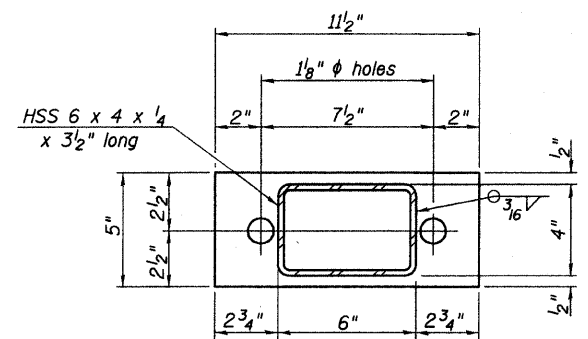
**P.P.C. DECK BEAM
DETAILS AND SECTIONS**
SECTION 08-0018-00-BR
FAYETTE COUNTY
STRUCTURE NO. 026-3451

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	8
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

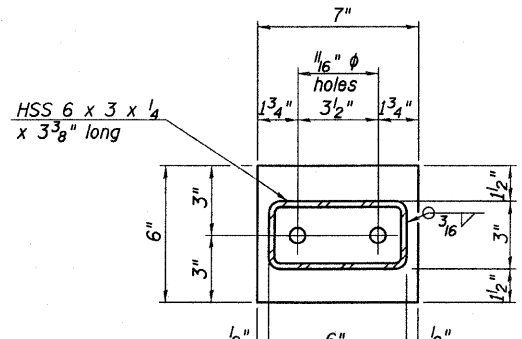
CONTRACT NO. 95662



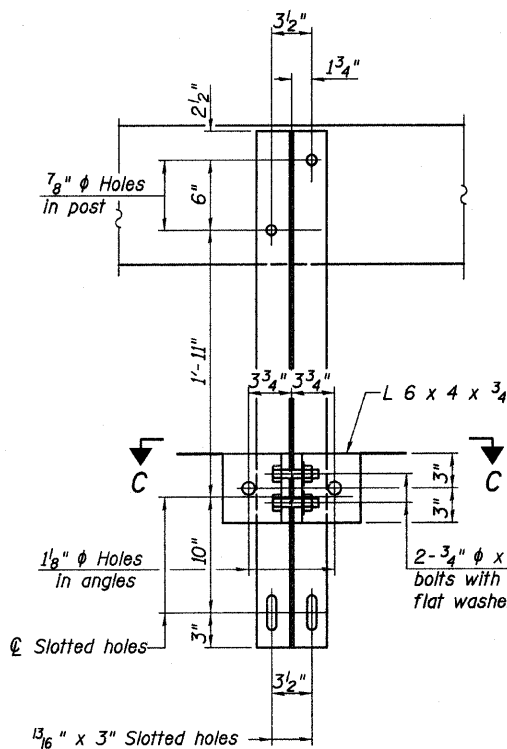
VIEW A-A ROUND HEAD BOLT



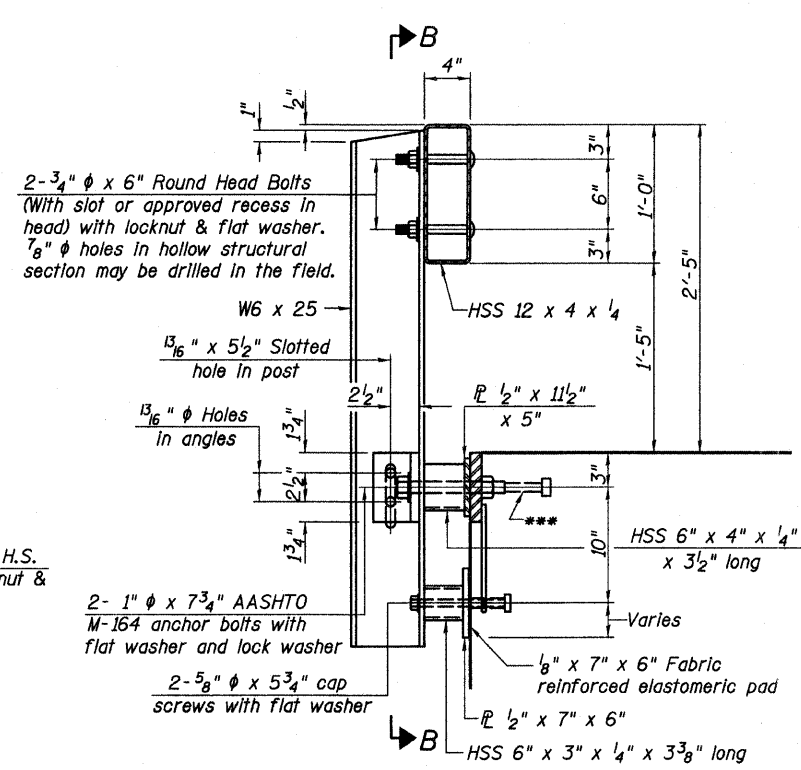
SECTION B-B
P 1/2" x 11 1/2" x 5"



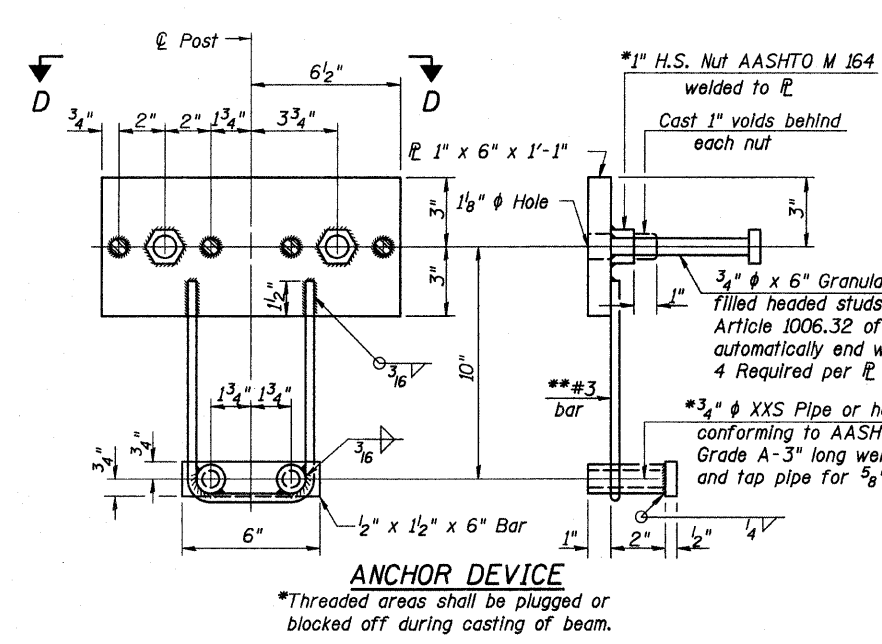
SECTION AT RAILING POST
P 1/2" x 7" x 6"



SECTION C-C

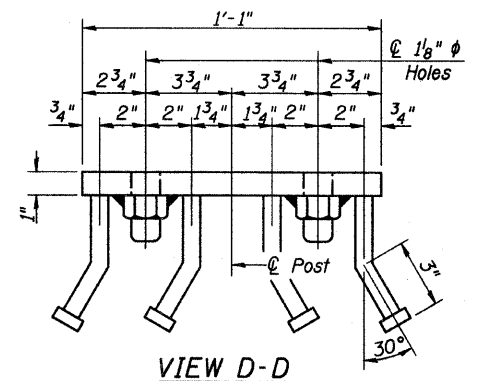


SECTION AT RAILING POST

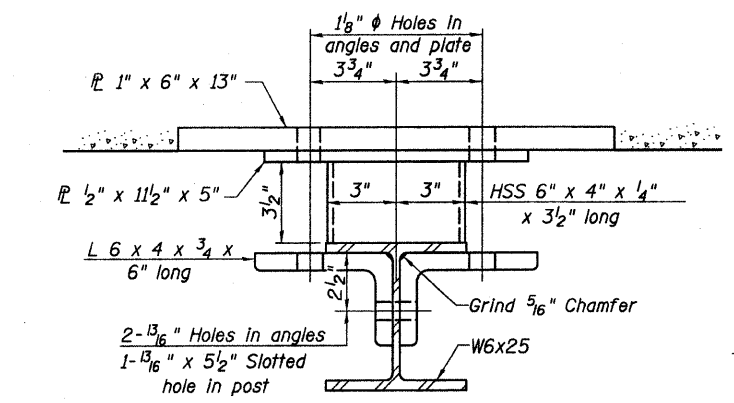


ANCHOR DEVICE

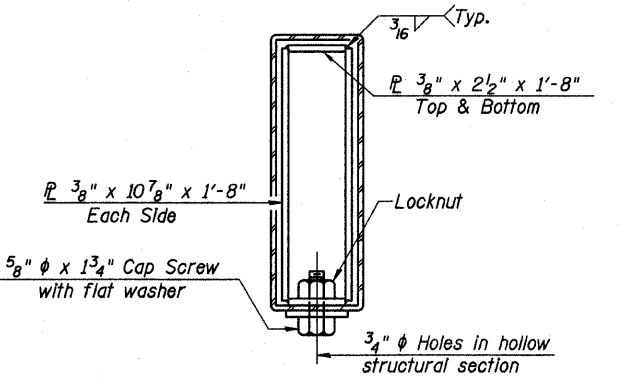
***Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



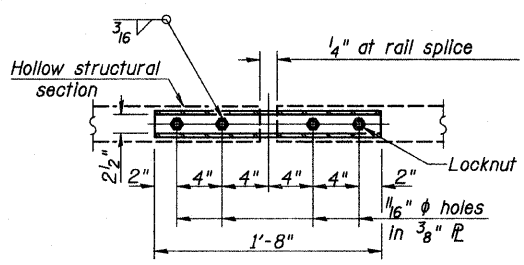
VIEW D-D



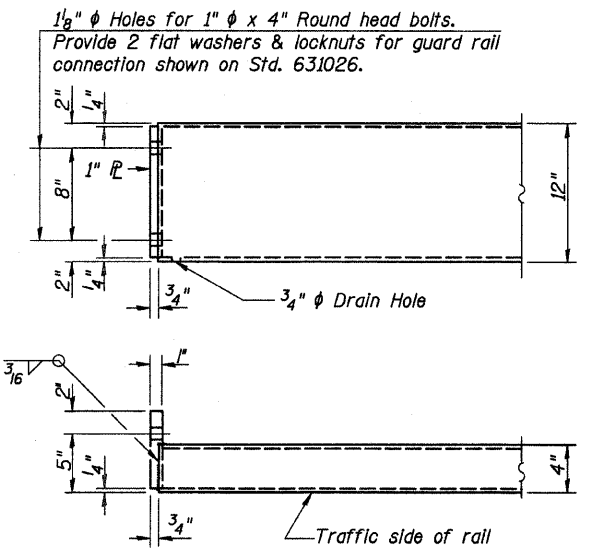
SECTION C-C



SECTIONS AT RAIL SPLICE



PLAN-BOTTOM SPLICE P TYPICAL



END OF RAIL DETAILS

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.

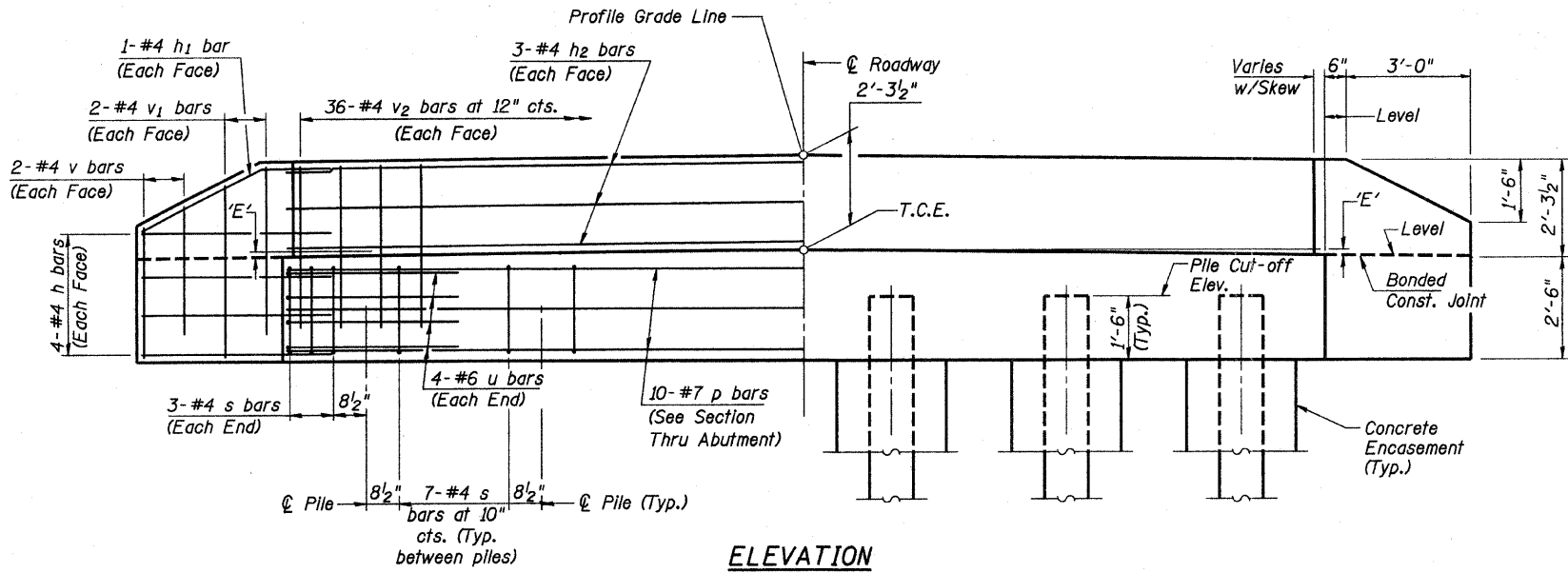
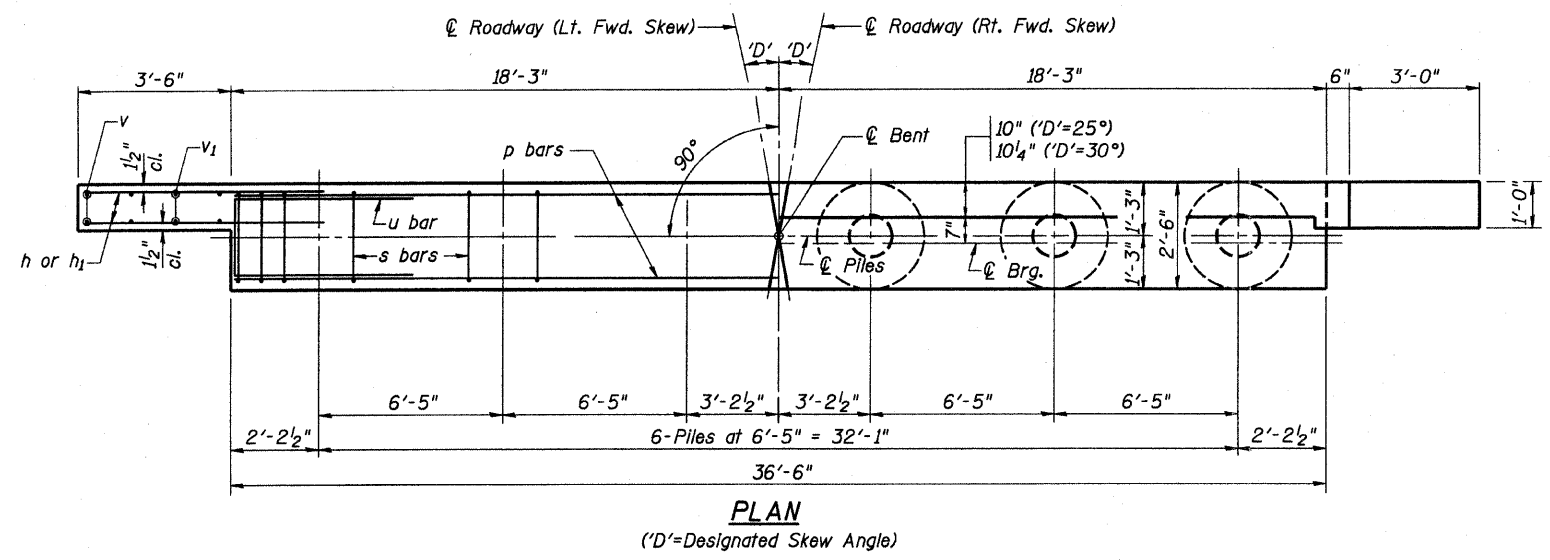
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

***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.

The maximum allowable rail post spacing shall be 10'-9". The rail post spacing shown elsewhere in the plans is based on the allowable spacing for another type of rail. When this type of rail is used, the number of posts may be decreased and the post spacing increased to provide equal post spaces of 10'-9" or less.

See Special Provisions for curled end section. The cost of the Curled End Sections shall be included in the contract unit price per foot for "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.

See sheet 5 of 12 for Steel Railing Quantities.



DIMENSION 'E'

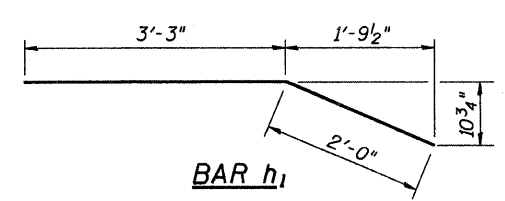
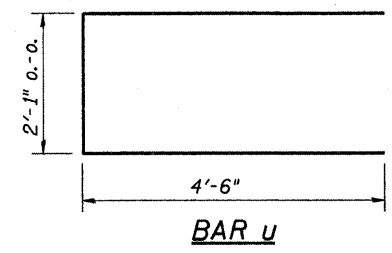
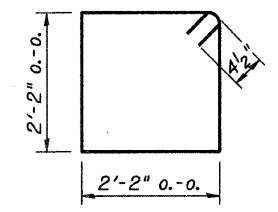
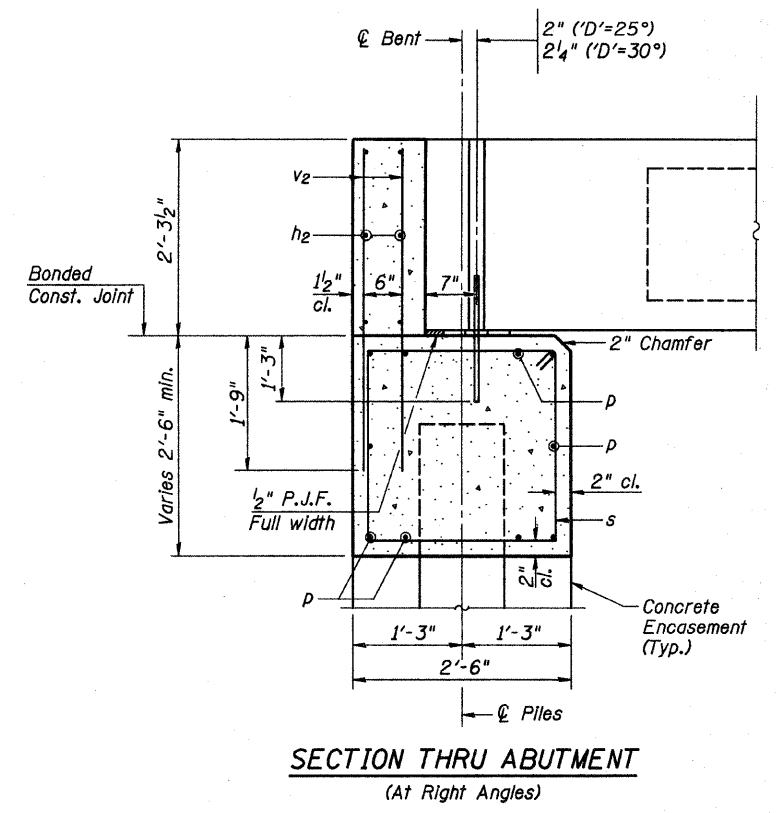
GRADE	'D'=25°		'D'=30°	
	UPGRADE END	DOWNGRADE END	UPGRADE END	DOWNGRADE END
0%	3 1/8"	3 1/8"	3"	3"
Over 0% to 1%	2 5/8"	3 1/2"	2 3/8"	3 1/2"
Over 1% to 2%	1 3/4"	4 1/2"	1 3/8"	4 5/8"
Over 2% to 3%	3/4"	5 3/8"	1/4"	5 5/8"
Over 3% to 4%	0"	6 1/4"	—	—

NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60 (IL Modified).
- Space reinforcement in cap to miss anchor bolts.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi

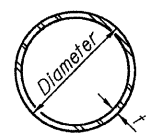


BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h	16	#4	5'-0"	—
h1	4	#4	5'-3"	—
h2	6	#4	36'-2"	—
p	10	#7	36'-2"	—
s	41	#4	9'-5"	□
u	8	#6	11'-1"	□
v	8	#4	3'-8"	—
v1	8	#4	4'-2"	—
v2	72	#4	3'-11"	—
Concrete Structures			12.9 Cu. Yds.	
Reinforcement Bars			1570 Pound	
Concrete Encasement			3.3 Cu. Yds.	

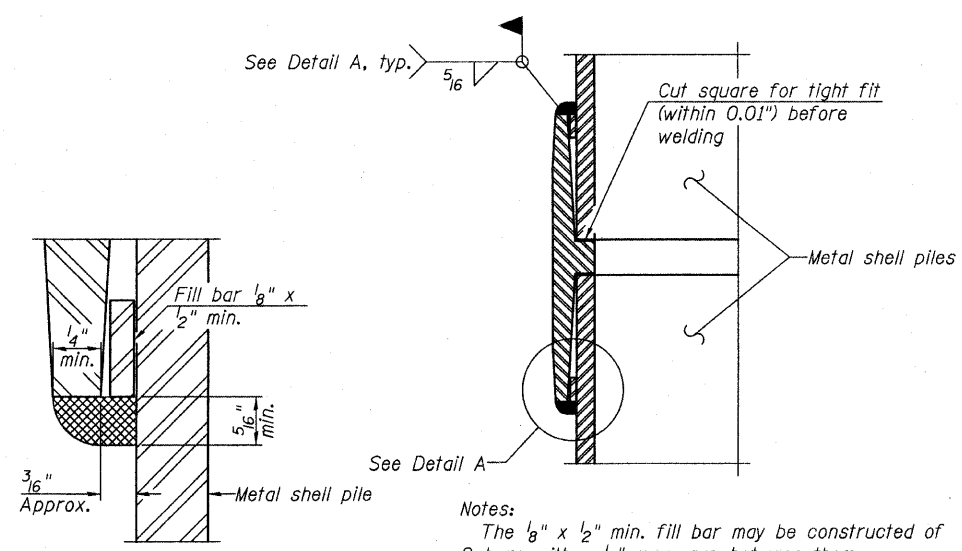
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. NO.	08-0018-00-BR	FAYETTE	12	10
FEDERAL AID PROJECT		ILLINOIS	PROJECT	

CONTRACT NO. 95662



METAL SHELL PILE TABLE

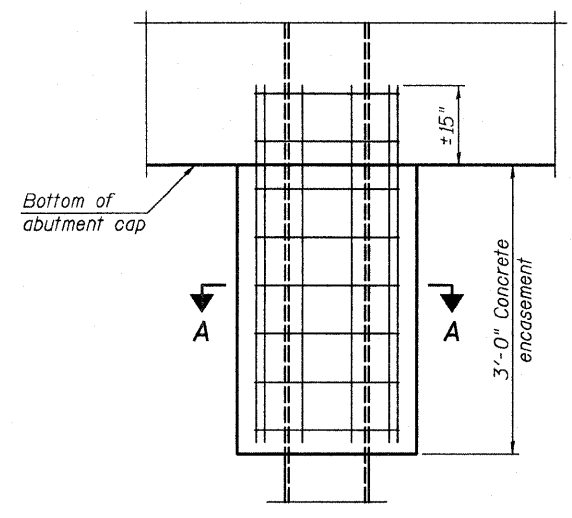
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



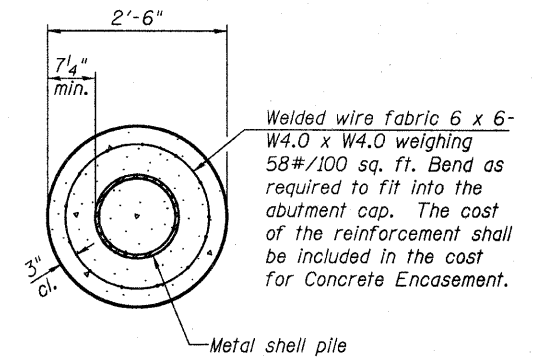
DETAIL A

Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



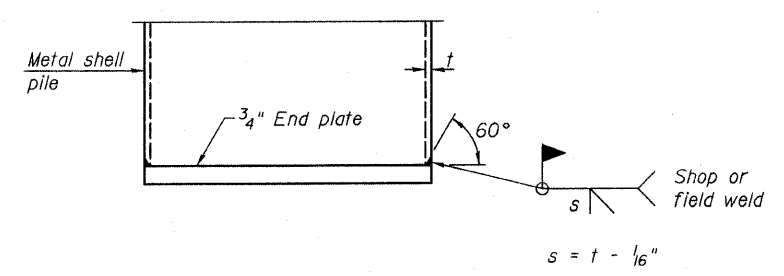
ELEVATION



SECTION A-A

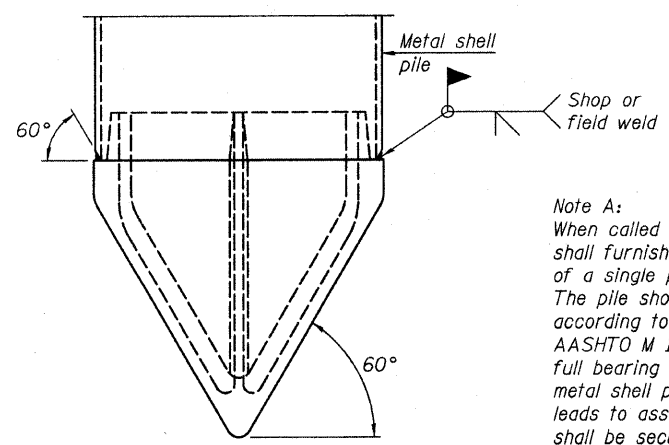
Note:
 Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT DETAIL



END PLATE ATTACHMENT

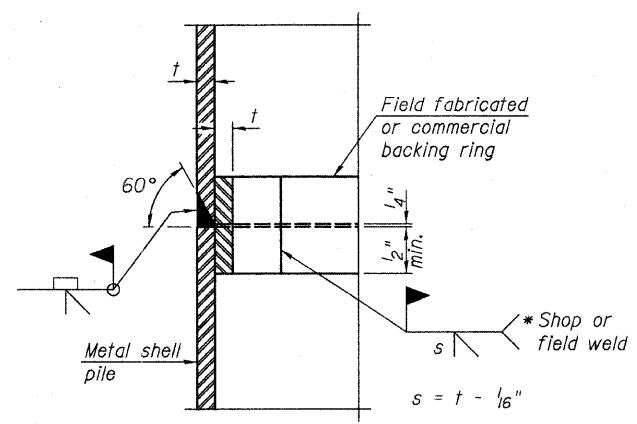
$s = t - 1/16"$



METAL SHELL PILE SHOE ATTACHMENT

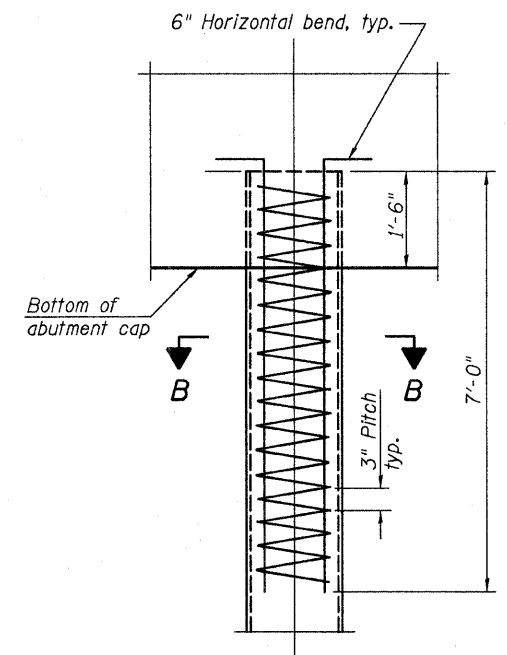
(See Note A)

Note A:
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



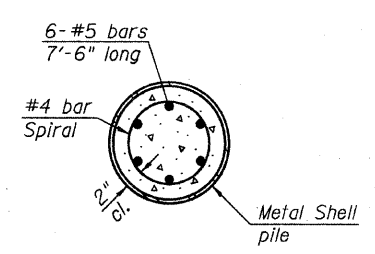
COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

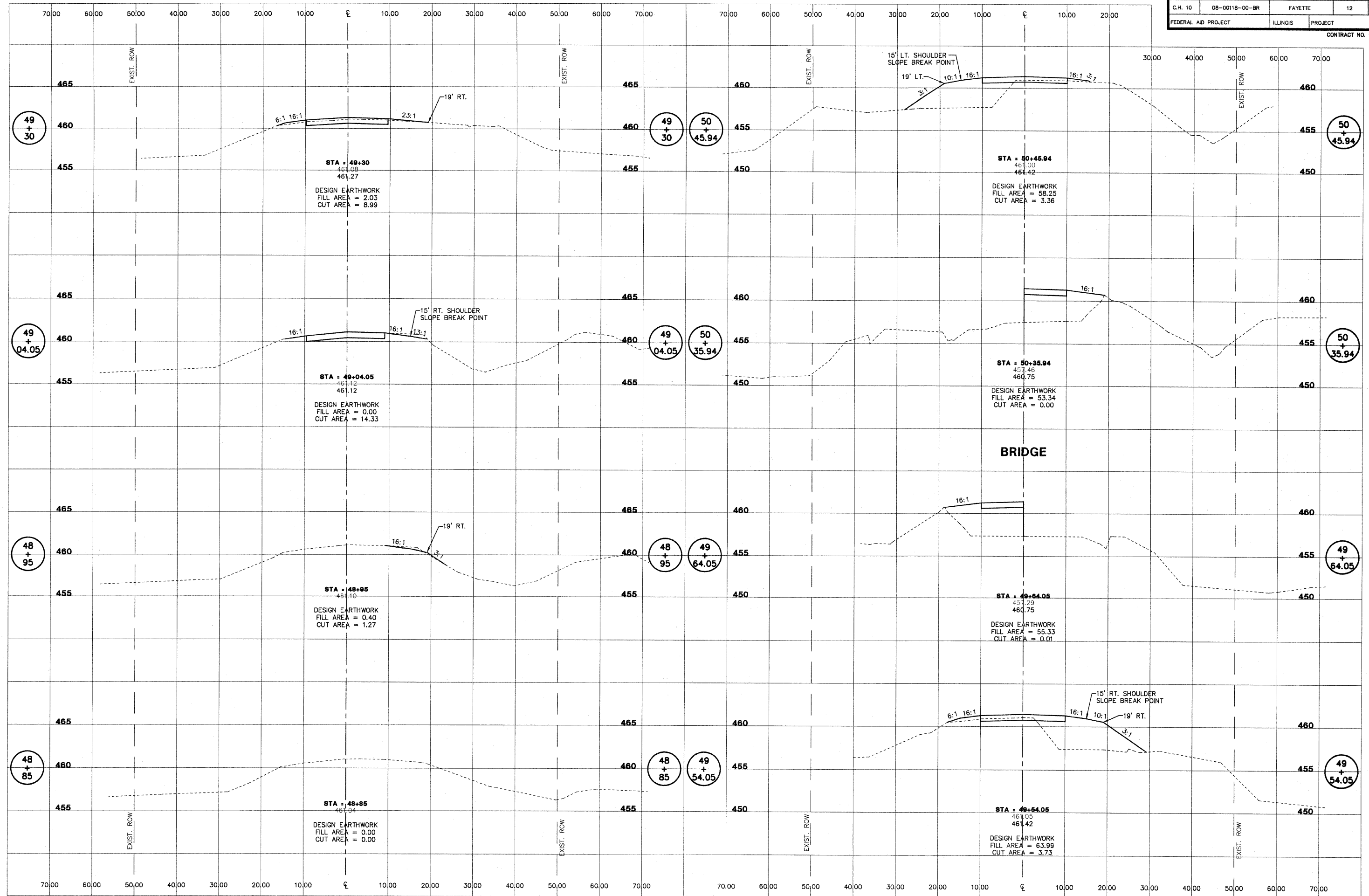
METAL SHELL REINFORCEMENT



SECTION B-B

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	11
FEDERAL AID PROJECT		ILLINOIS	PROJECT	
CONTRACT NO. 95682				



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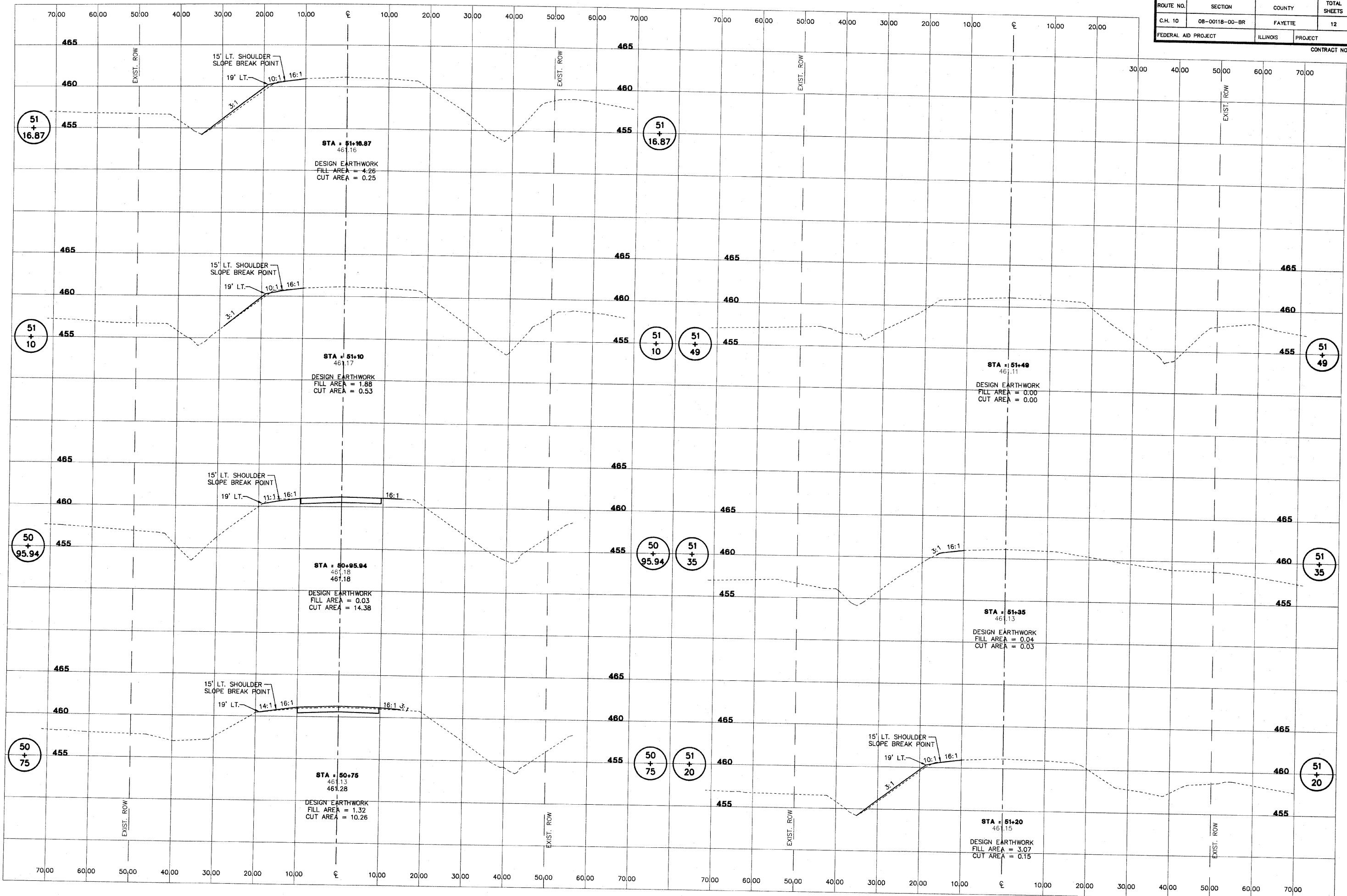
PREPARED FOR:
AECOM
 60097894

F.A.S. 720 (C.H. 10)
SECTION 08-00118-00-BR
FAYETTE COUNTY, ILLINOIS

CROSS SECTIONS
STA. 48+85 TO STA. 50+45.94

SURVEY	JAS	CHECKED	DATE
DESIGN	MRQ	APPROVED	05/18/11
DRAWN	JMW		REVISED
			JOB NO.
			51410

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 10	08-00118-00-BR	FAYETTE	12	12
FEDERAL AID PROJECT		ILLINOIS	PROJECT	
CONTRACT NO. 95662				



RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS • LAND SURVEYORS
 CENTRALIA, ILLINOIS FREEBURG, ILLINOIS

PREPARED FOR:
AECOM
 60097804

F.A.S. 720 (C.H. 10)
 SECTION 08-00118-00-BR
 FAYETTE COUNTY, ILLINOIS

CROSS SECTIONS
 STA. 50+75 TO STA. 51+49

SURVEY	JAS	CHECKED	DATE
DESIGN	MRQ	APPROVED	05/18/11
DRAWN		REVISION	
		JOB NO.	