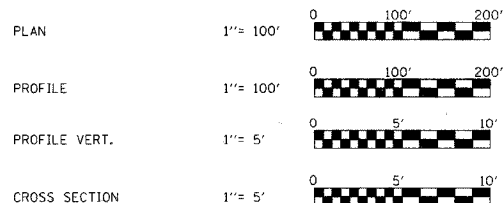


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET & SUMMARY OF QUANTITIES
2	PLAN & PROFILE, TYPICAL SECTIONS & GENERAL NOTES
3	EROSION CONTROL PLAN
4-8	EARTHWORK SCHEDULE, ROADWAY CROSS SECTIONS & STONE RIPRAP DITCH DESIGN
9-22	BRIDGE DESIGN

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	196.00
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	48.00
20100500	TREE REMOVAL, ACRES	ACRE	1.20
20200100	EARTH EXCAVATION	CU YD	8879.00
20300100	CHANNEL EXCAVATION	CU YD	5677.00
20400800	FURNISHED EXCAVATION	CU YD	718.00
20700110	POROUS GRANULAR EMBANKMENT	TON	210.00
*25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.90
*28000255	TEMPORARY EROSION CONTROL SEEDING	ACRE	1.90
28000300	TEMPORARY DITCH CHECKS	EACH	10.00
28000400	PERIMETER EROSION BARRIER	FOOT	3492.00
28001000	AGGREGATE (EROSION CONTROL)	TON	75.00
28100207	STONE RIPRAP, CLASS A4	TON	700.00
*28102600	STONE RIPRAP DITCH	TON	30.00
28200200	FILTER FABRIC	SO YD	1096.00
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	981.00
42001165	BRIDGE APPROACH PAVEMENT	SO YD	160.00
42001300	PROTECTIVE COAT	SO YD	1114.00
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.00
50200100	STRUCTURE EXCAVATION	CU YD	256.00
50300225	CONCRETE STRUCTURES	CU YD	244.00
50300255	CONCRETE SUPERSTRUCTURE	CU YD	225.00
50300260	BRIDGE DECK GROOVING	SO YD	1058.00
50300280	CONCRETE ENCASMENT	CU YD	3.10
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1.00
50500505	STUD SHEAR CONNECTORS	EACH	2552.00
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	85830.00
50800515	BAR SPLICERS	EACH	48.00
*50901305	STEEL RAILING, TYPE S1 (SPECIAL)	FOOT	615.00
51201400	FURNISHING STEEL PILES HP10X42	FOOT	1000.00
51201610	FURNISHING STEEL PILES HP 12X63	FOOT	2890.00
51202305	DRIVING PILES	FOOT	3890.00
51203400	TEST PILE STEEL HP10X42	EACH	2.00
51203610	TEST PILE STEEL HP 12X63	EACH	2.00
51500100	NAME PLATES	EACH	1.00
54201060	PIPE CULVERTS, CLASS D, TYPE 2 15"	FOOT	138.00
54201063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	96.00
*54215550	METAL END SECTIONS 15"	EACH	6.00
*54215553	METAL END SECTIONS 18"	EACH	4.00
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	59.00
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4.00
*60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	128.00
63000005	STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	100.00
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2.00
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	21.00
*67100100	MOBILIZATION	L SUM	1.00
*78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	4.00
*L1631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2.00
*X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1.00
*X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1.00



DESIGN DESIGNATION:
 DESIGN SPEED: 40 MPH
 HIGHWAY CLASS - COLLECTOR
 EXISTING STRUCTURE NO.: 097-3030
 PROPOSED STRUCTURE NO.: 097-3186
 CURRENT A.D.T. = 150
 CONTRACT NO. 99268

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

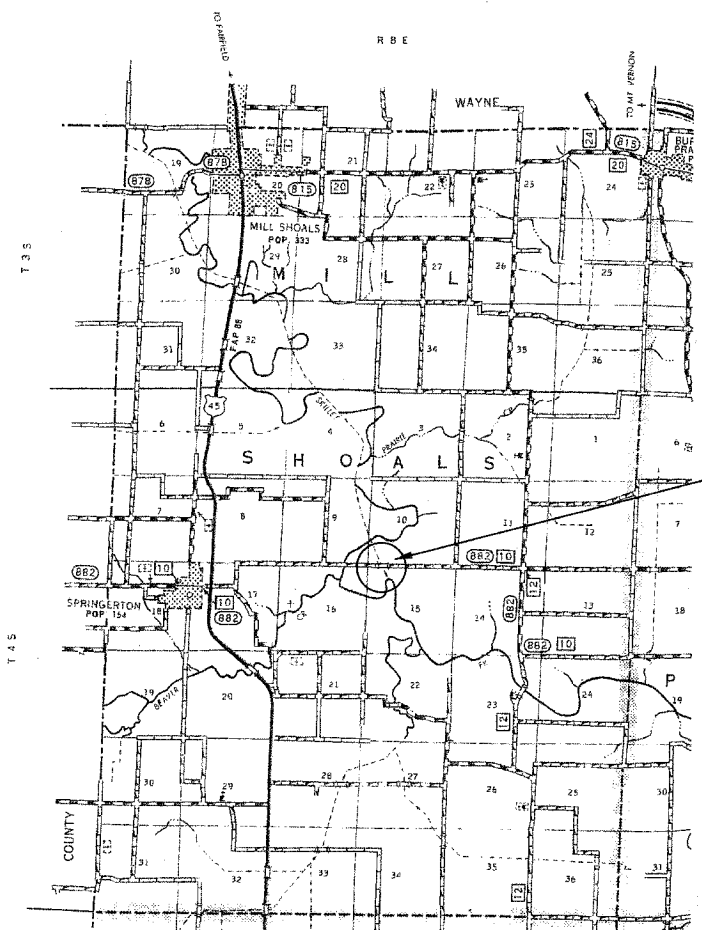
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

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

FAS 882 (C.H. 10) WHITE COUNTY SECTION 84-00059-00-BR

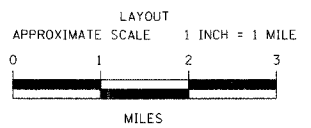
PROJECT NO. BRS-882(108) JOB NO. C-99-593-06



SECTION 84-00059-00-BR
 BEGINS STATION 2+00

STATION 9+40, STRUCTURE NO. 097-3186
 A 302' TRIPLE SPAN (92'-0", 118'-0", 92'-0")
 CONTINUOUS WELDED PLATE GIRDER BRIDGE,
 24' ROADWAY, 0.00% GRADE, 27° RT FORWARD
 SKEW.

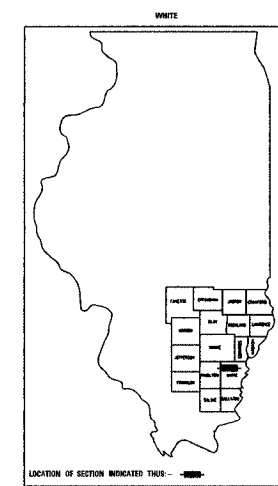
SECTION 84-00059-00-BR
 ENDS STATION 19+00



	FEET	MILES
GROSS LENGTH	1700.000 FT	0.322 MILES
OMISSIONS	0.000 FT	0.000 MILES
NET LENGTH	1700.000 FT	0.322 MILES

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
882	84-00059-00-BR	WHITE	22	1

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



AARON M. MEFFORD
 NAME
 SIGNATURE
 DATE
 2-12-07
 11-30-07
 EXPIRES

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 22

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
- 280001-03 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-02 NAME PLATE FOR BRIDGES
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 666001 RIGHT OF WAY MARKERS
- 702001-06 TRAFFIC CONTROL DEVICES
- B.L.R. 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- B.L.R. 22-4 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO-WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

APPROVED: 2/12/07
Jack Bosaw
 COUNTY ENGINEER

PASSED: 2/15/07
Dennis W. Hillebrunn
 ENGINEER OF LOCAL ROADS AND STREETS

APPROVED: 2-16-07
Mary C. Lamie
 MARY C. LAMIE, P.E.
 DEPUTY DIRECTOR OF HIGHWAY
 REGION FIVE ENGINEER

F.A.S. ROUTE 882 (CH 10)
 SKILLET FORK
 WHITE COUNTY, ILLINOIS

SHEET TITLE:
 TITLE SHEET

SCALE: Varies
 BY: AMM
 DATE: 2/07
 REV:

1 OF 22
 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.

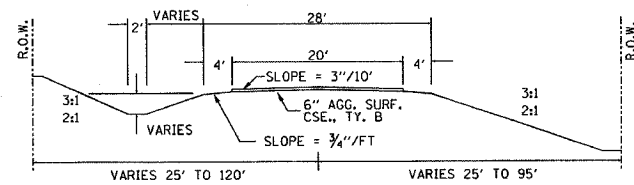
THE WORK INVOLVED ON THIS SECTION CONSISTS OF EARTHWORK, TREE REMOVAL, THE REMOVAL OF THE EXISTING STRUCTURE, THE CONSTRUCTION OF A 302' FOOT LONG TRIPLE SPAN CONTINUOUS WELDED PLATE GIRDER BRIDGE, AGGREGATE SURFACE COURSE AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THIS SECTION.

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

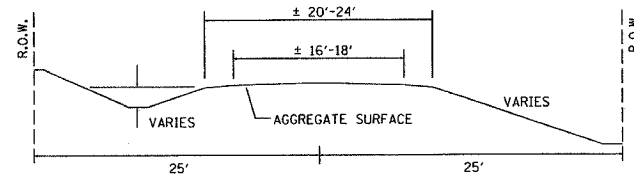
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL THE UTILITIES, AFFECTING THE PROJECT, PRIOR TO CONSTRUCTION.

TWO (2) EACH CURLED END SECTIONS REQUIRED ON THE NW AND SE CORNERS. ITEM TO BE INCIDENTAL TO THE STEEL RAILING.

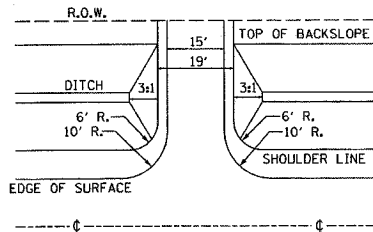
TYPICAL CROSS SECTION PROPOSED



TYPICAL CROSS SECTION EXISTING



FIELD ENTRANCE DETAIL



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

VERIZON
225 E. CHESTNUT
OLNEY, IL 62450
618-395-6181

WAYNE-WHITE ELECTRIC CO-OP
ROUTE 45 WEST
FAIRFIELD, IL 62837
618-842-1296

NOTE: CONSTRUCT SPECIAL DITCH

STA 1+50 TO STA 7+50 LT
STA 1+50 TO STA 7+75 RT
STA 10+74 TO STA 18+35 LT
STA 10+71 TO STA 18+35 RT

NOTE: CONSTRUCT STONE RIPRAP DITCH

STA 10+70 TO STA 11+00 LT & RT (0.48 TON/LIN FT)
30 TON STONE RIPRAP DITCH ALLOWED IN PROPOSAL.

SEE SHEET NO. 7 FOR STONE RIPRAP DITCH DETAIL.

NOTE: TRAFFIC BARRIER TERMINAL 5A

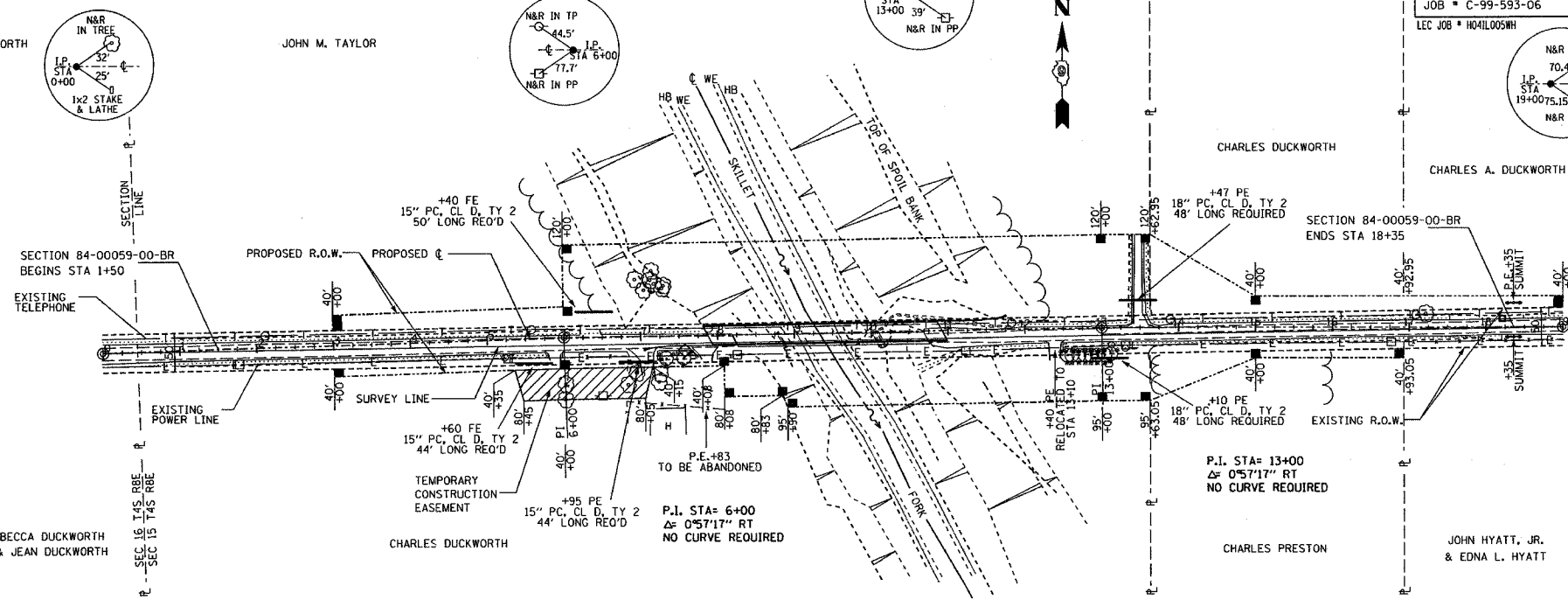
STA 7+81.32 TO STA 7+94.57 RT
STA 10+85.66 TO STA 10+98.91 LT

NOTE: STEEL PLATE BEAM GUARDRAIL TYPE B

STA 7+31.32 TO STA 7+81.32 RT
STA 10+98.91 TO STA 11+48.91 LT

NOTE: TRAFFIC BARRIER TERMINAL TYPE 1

STA 7+06.32 TO STA 7+31.32 RT
STA 11+48.91 TO STA 11+73.91 LT

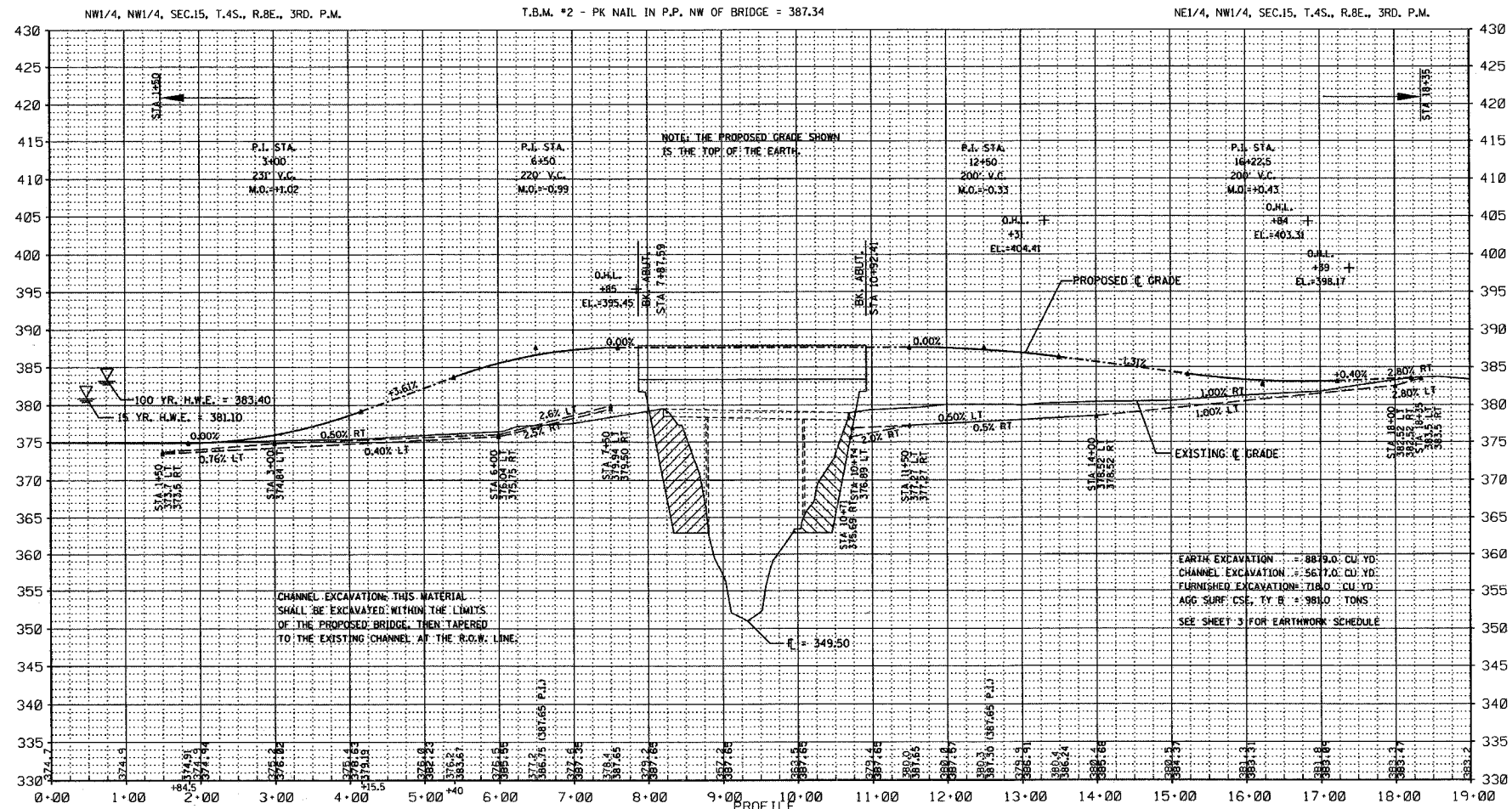


NOTE: CONSTRUCT TRANSITIONS:
STA 1+50 TO STA 2+00
STA 18+00 TO STA 18+35
ALL QUANTITIES ARE INCLUDED IN THE PROPOSAL.

EXISTING STRUCTURE-STA 9+50; STRUCTURE NUMBER: 097-3030
A SINGLE SPAN THRU TRUSS BRIDGE WITH TWO PONY TRUSS APPROACH SPANS. CONCRETE DECK ON CONCRETE PIERS AND CLOSED CONCRETE ABUTMENTS. ±248' BK-BK ABUTMENTS. ±16' WIDE.

PROPOSED STRUCTURE: STA 9+40
STRUCTURE NO. 097-3186.
A CONTINUOUS WELDED PLATE GIRDER BRIDGE. TRIPLE SPAN- 92'-0", 118'-0", 92'-0". 24' ROADWAY, 27° SKEW RT. FORWARD.
SEE SHEETS 9-22 FOR THE DESIGN AND BILL OF MATERIALS.

21.0 EACH FURNISHING & ERECTING ROW MARKERS
1.2 ACRES TREE REMOVAL
196 UNITS-TREE REMOVAL (6 TO 15 UNITS DIAMETER)
48 UNITS-TREE REMOVAL (OVER 15 UNITS DIAMETER)
1.90 ACRES SEEDING, CLASS 2 SPECIAL REQUIRED



EARTH EXCAVATION = 8819.0 CU YD
CHANNEL EXCAVATION = 5617.0 CU YD
FURNISHED EXCAVATION = 718.0 CU YD
AGG SURF. CSE., TY B = 981.0 TONS
SEE SHEET 3 FOR EARTHWORK SCHEDULE

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
882	84-00059-00-BR	WHITE	22	2
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		923 W. 3RD ST. P.O. BOX 160 MT. CARMEL, IL 62863
PROJECT# BR5-882(108)		CONTRACT# 99268		PHONE: (618)-262-8651 FAX: (618)-263-3327
JOB # C-99-593-06		SKILLET FORK		405 W. STATE ST SUITE 1 PRINCETON, IN 47670
LEC JOB # H041005WH				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
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
56284

NAME: Aaron M. Mefford
SIGNATURE: [Signature]
DATE: 2-12-07
11-30-07 EXPIRES

F.A.S. ROUTE 882
SKILLET FORK
WHITE COUNTY, ILLINOIS

SHEET TITLE:
PLAN & PROFILE

SCALE: VARIES
BY: AMM
DATE: 12/07
REV:

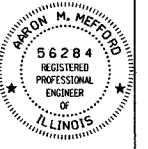
2 OF 22 SHEETS
SHEET NO. 2

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
882	84-00059-00-BR	WHITE	22	4	323 W. 3RD ST. P.O. BOX 180 MT. CARMEL, IL 62863
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT			PHONE: (618)-262-8651
PROJECT * BRS-882(108)		CONTRACT * 99268			FAX: (618)-263-3327
JOB * C-99-593-06		SKILLET FORK			LEC JOB * H041005WH

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

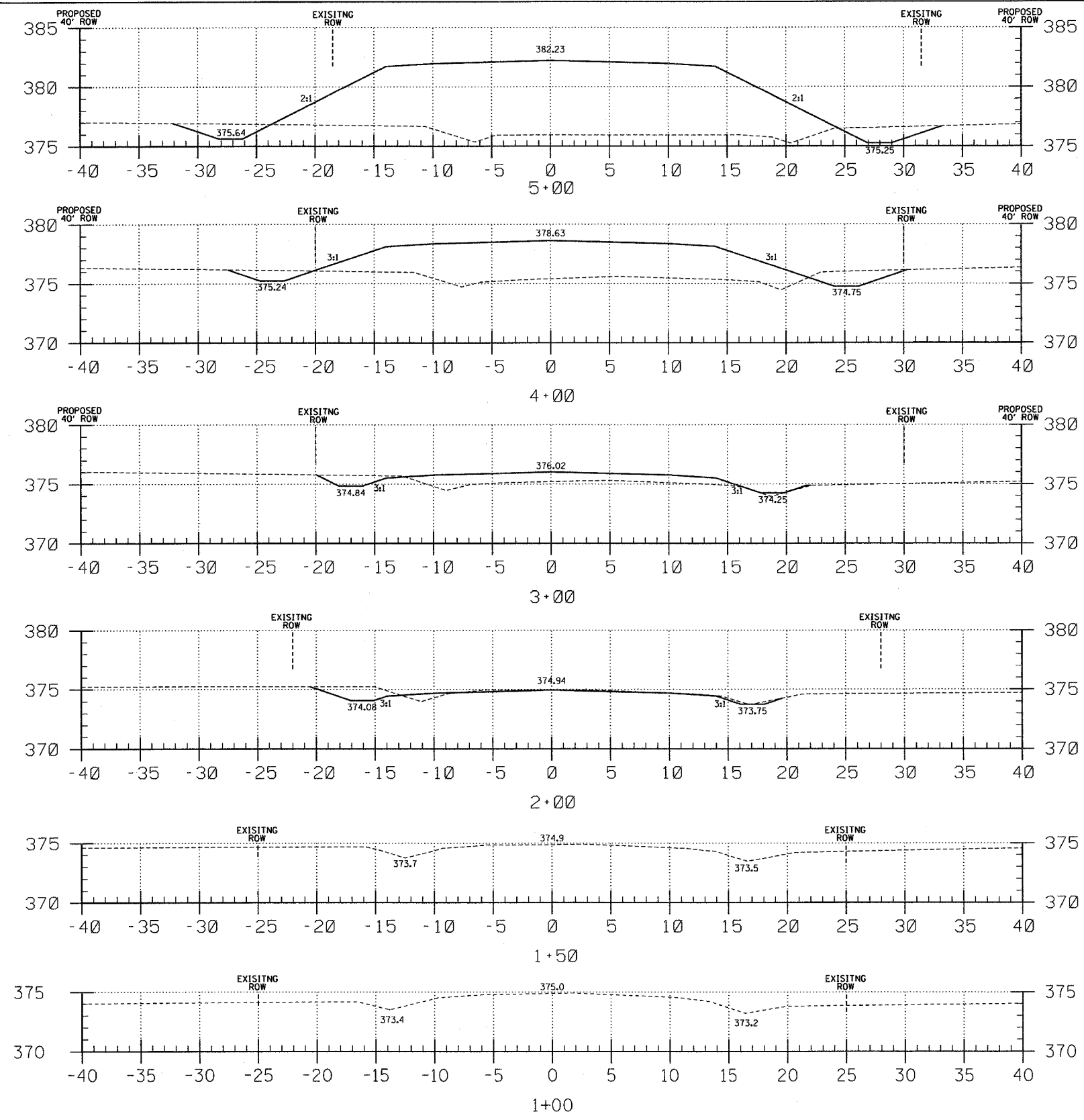


PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-00087
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
[Signature]
SIGNATURE
2-12-07
DATE
11-30-07
EXPIRES

F.A.S. ROUTE 882
SKILLET FORK
WHITE COUNTY, ILLINOIS



C = 13.7
F = 226.4

C = 10.9
F = 104.4

C = 4.0
F = 20.3

C = 7.1
F = 1.4

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION CUBIC YARD	CHANNEL EXCAVATION CUBIC YARD	ESTIMATED UNSUITABLE MATERIAL CUBIC YARD	SUITABLE MATERIAL ADJUSTED FOR SHRINKAGE CUBIC YARD	EMBANKMENT CUBIC YARD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CUBIC YARD
STA 0+00 TO 7+58	5234.0	0.0	0.0	3925.5	4230.2	-304.7
STA 7+58 TO 10+92	0.0	5677.1	2838.6	2129.0	0.0	2129.0
STA 10+92 TO 19+00	3645.2	0.0	0.0	2733.9	4451.0	-1717.1
ENTRANCES					825.2	-825.2
TOTAL	8879.2	5677.1	2838.6	8788.4	9506.4	-718.0

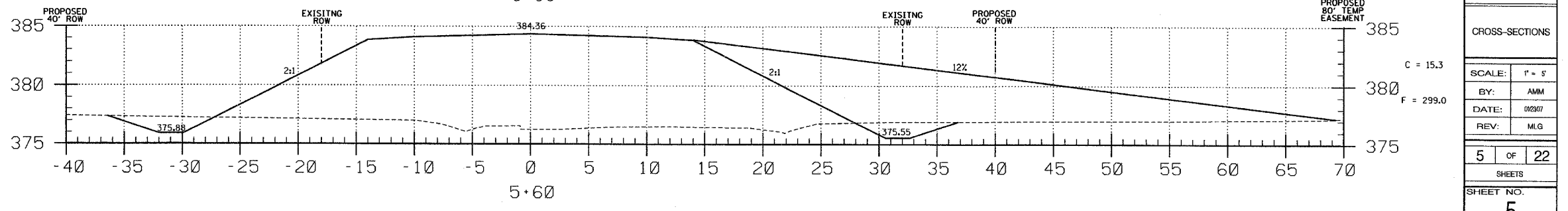
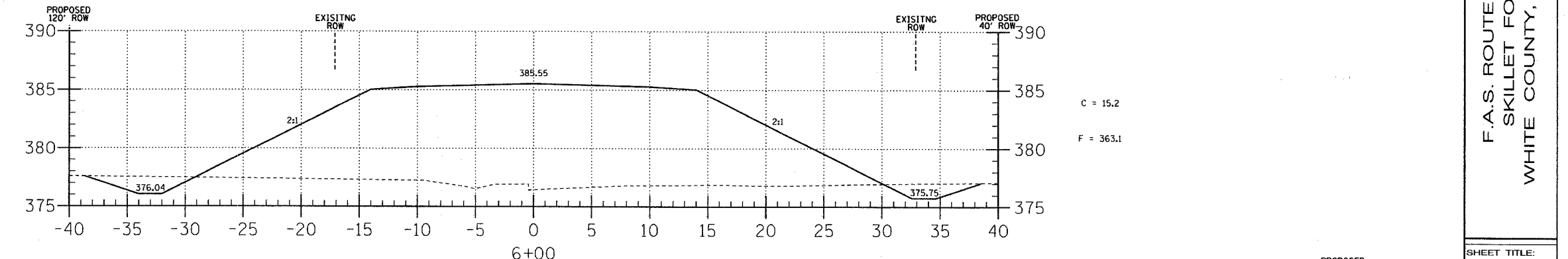
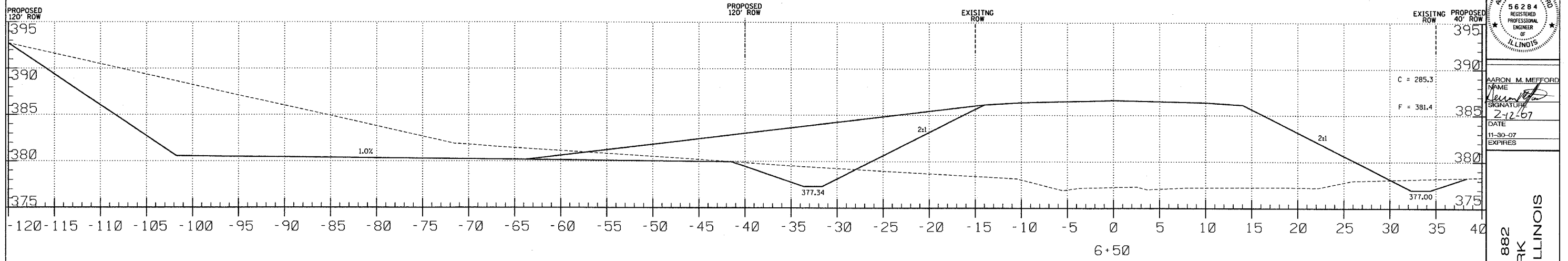
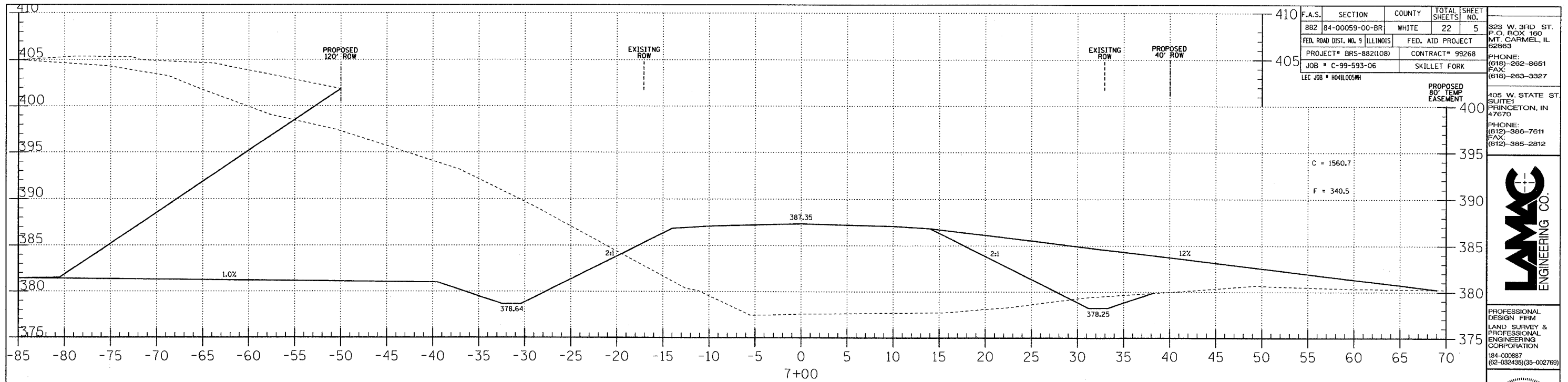
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BY: AMM
DATE: 082907
REV: MLG

4 OF 22
SHEETS

SHEET NO.
4

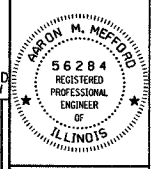


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FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT # BRS-882(108)		CONTRACT # 99268		
JOB # C-99-593-06		SKILLET FORK		
LEC JOB # H041005HH				

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

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

PROFESSIONAL
DESIGN FIRM
LAND SURVEY &
PROFESSIONAL
ENGINEERING
CORPORATION
184-00087
(62-032435)(38-002769)



AARON M. MEFFORD
NAME
SIGNATURE
DATE
11-30-07
EXPIRES

F.A.S. ROUTE 882
SKILLET FORK
WHITE COUNTY, ILLINOIS

SHEET TITLE:	
CROSS-SECTIONS	
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BY:	AMM
DATE:	02/20/07
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5	OF 22
SHEETS	
SHEET NO.	
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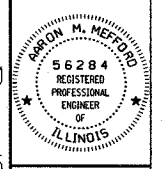
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PROJECT # BRS-882(10B)		CONTRACT # 9926B		
JOB # C-99-593-06		SKILLET FORK		

323 W. 3RD ST.
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PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-00087
(62-032435)(35-002769)



AARON M. MEFFORD
NAME
Aaron Mefford
SIGNATURE
2-12-07
DATE
11-30-07
EXPIRES

F.A.S. ROUTE 882
SKILLET FORK
WHITE COUNTY, ILLINOIS

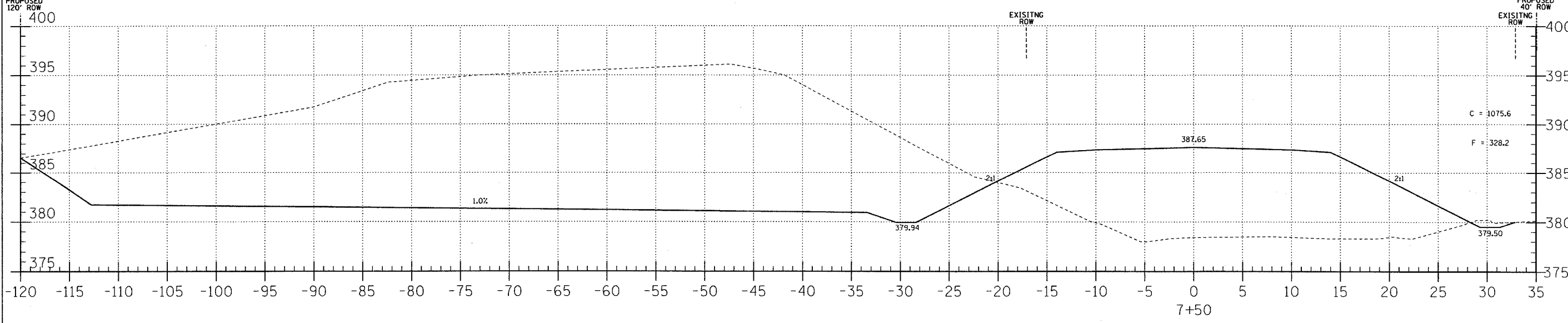
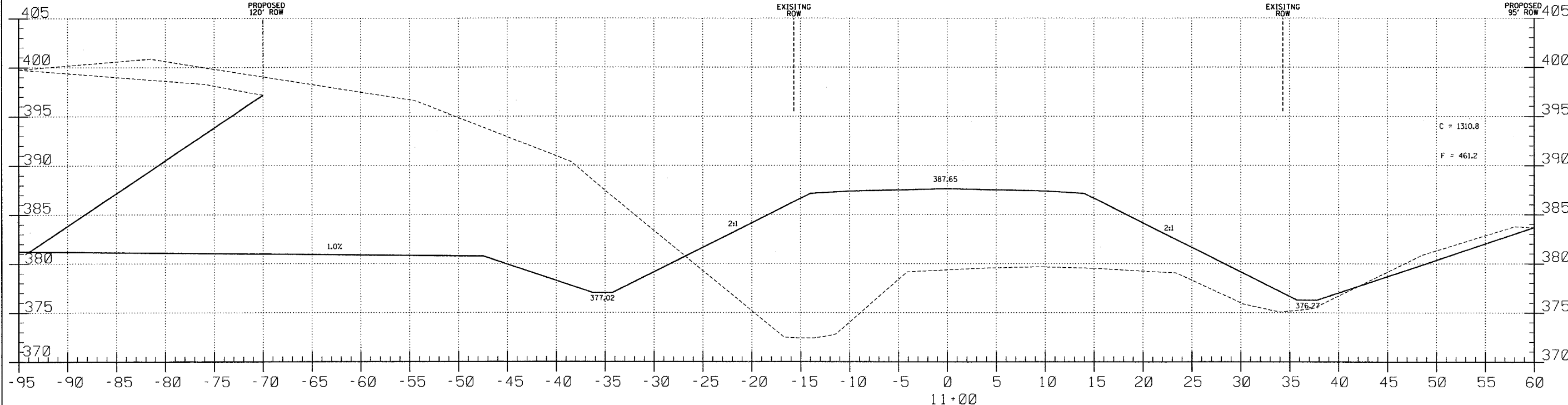
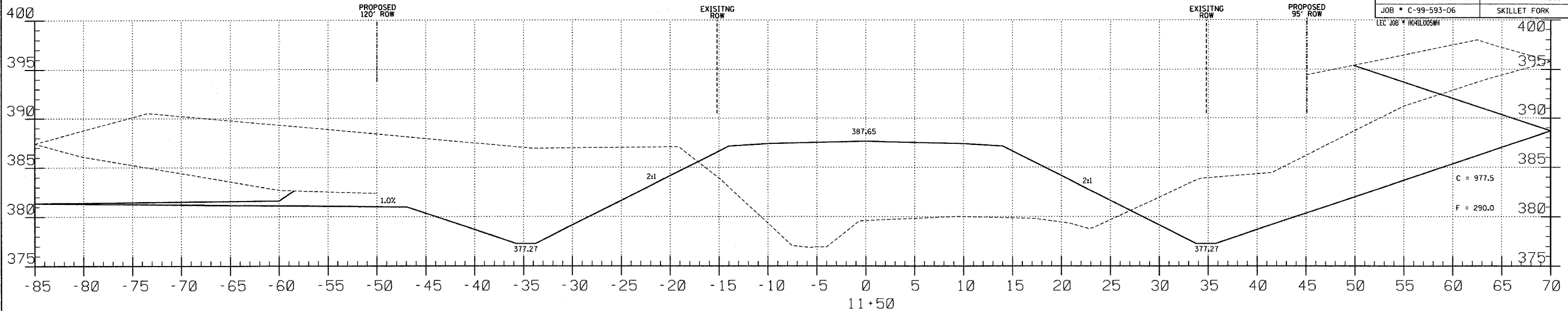
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CROSS-SECTIONS

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BY: AMM
DATE: 02/20/07
REV: MLG

6 OF 22 SHEETS

SHEET NO. 6



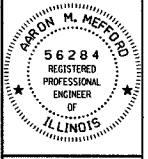
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882	84-00059-00-BR	WHITE	22	7
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT # BRS-882(108)		CONTRACT # 99268		
JOB # C-99-593-06		SKILLET FORK		
LEC JOB # H04L005WH				

323 W. 3RD ST.
P.O. BOX 160
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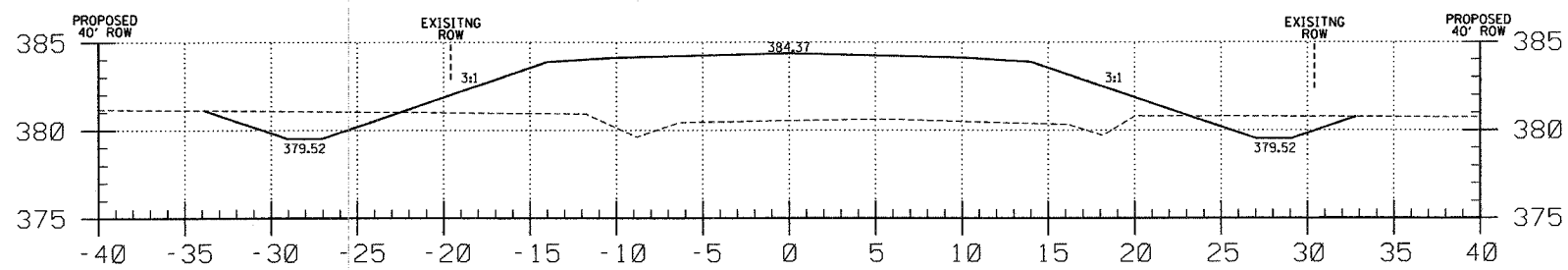


PROFESSIONAL DESIGN FIRM
LAND SURVEY & PROFESSIONAL ENGINEERING CORPORATION
184-000887
(62-032435)(35-002769)



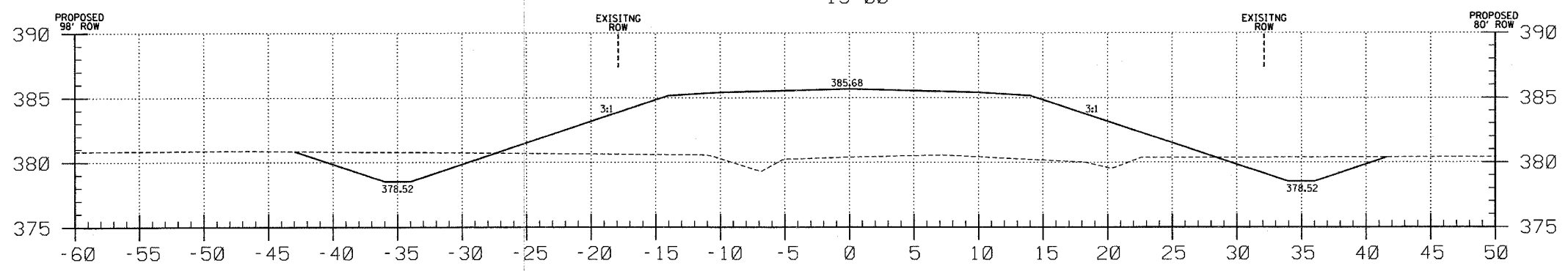
AARON M. MEFFORD
NAME
SIGNATURE
DATE
11-30-07
EXPIRES

F.A.S. ROUTE 882
SKILLET FORK
WHITE COUNTY, ILLINOIS



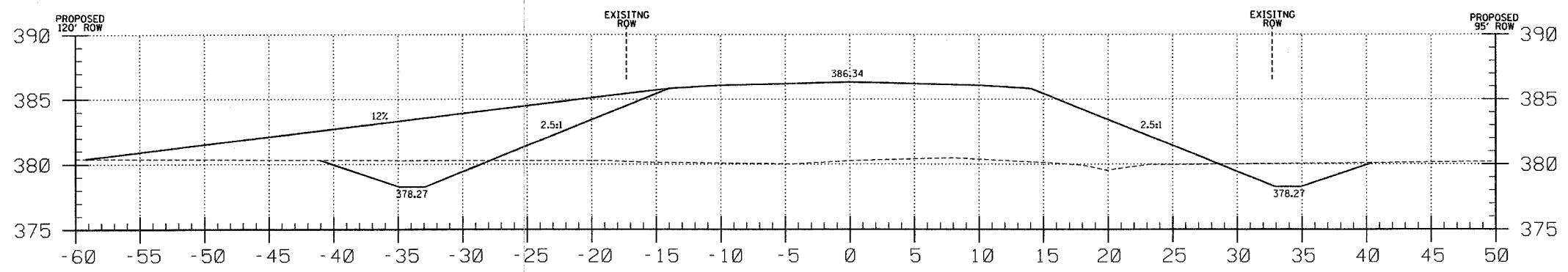
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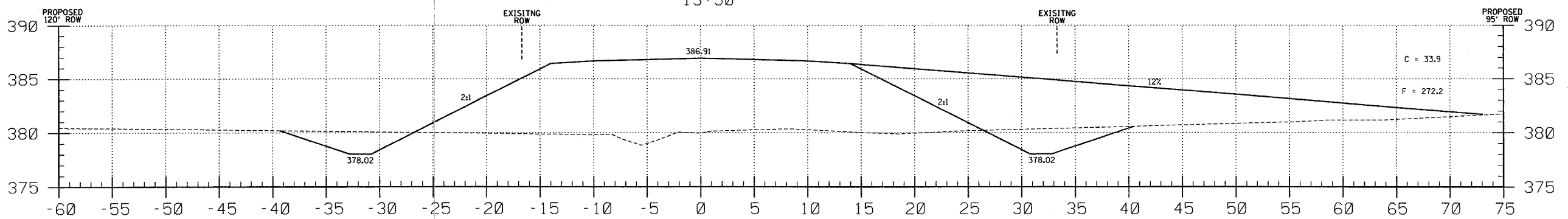
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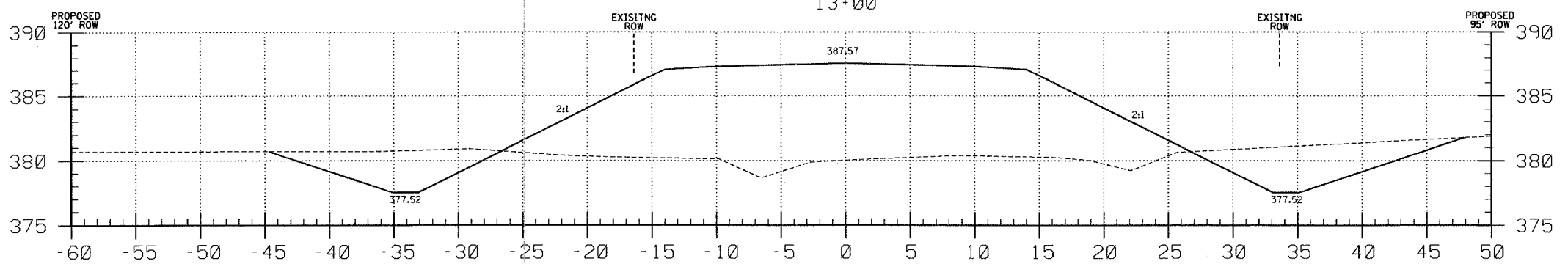
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CROSS-SECTIONS

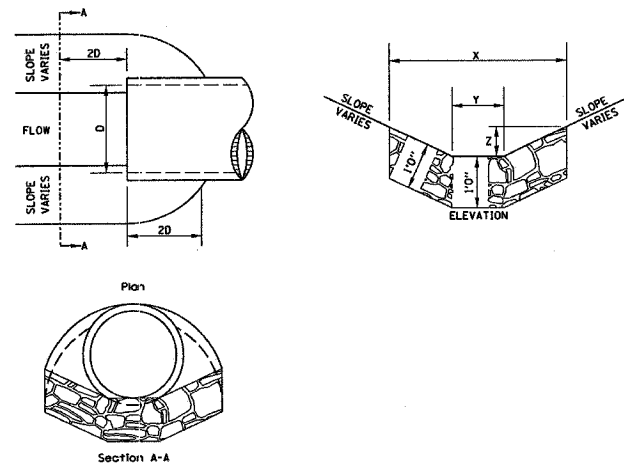
SCALE:	1" = 5'
BY:	AMM
DATE:	06/20/07
REV:	MLG

7 OF 22

SHEETS

SHEET NO.
7

STONE RIPRAP DITCH DESIGN



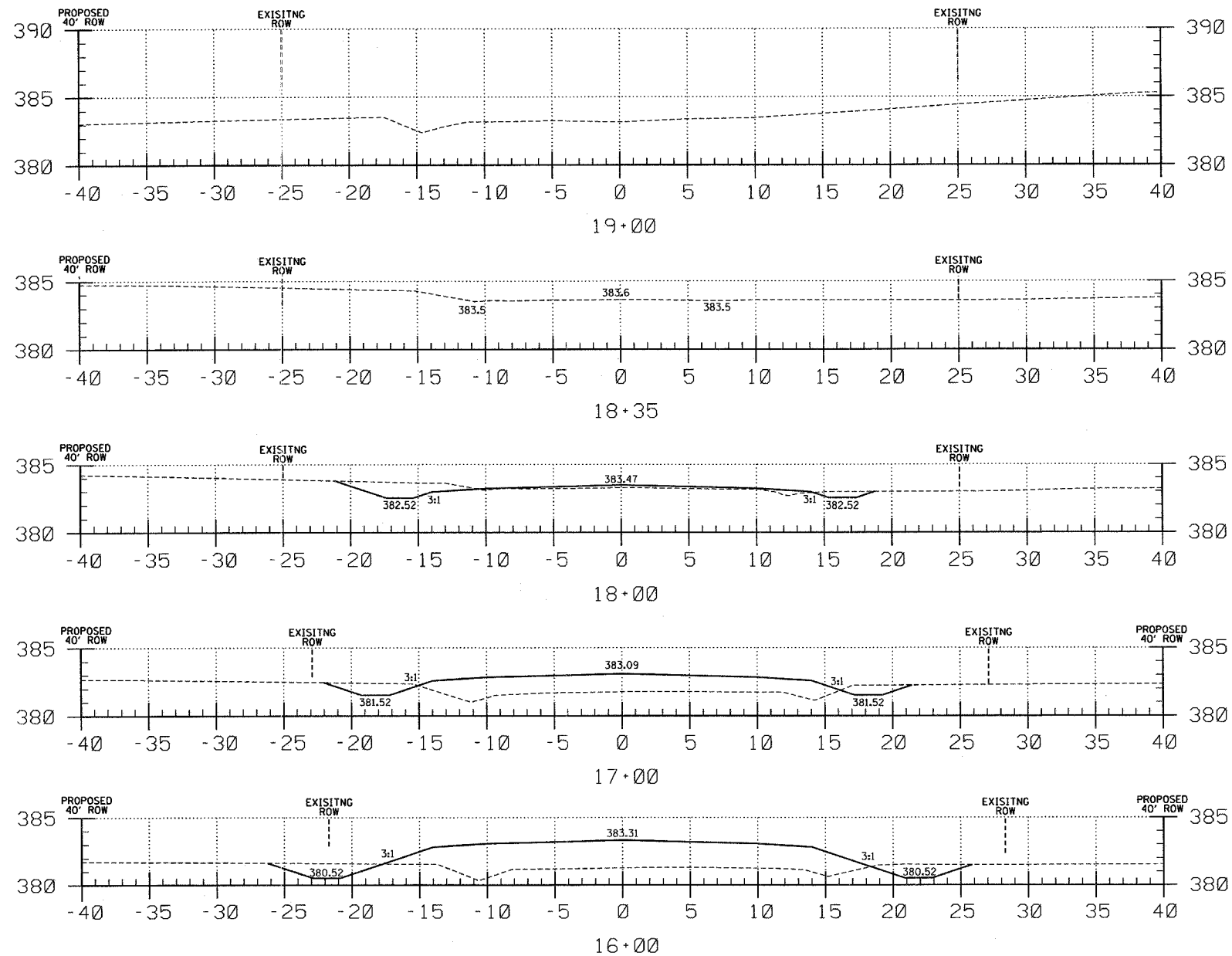
NOTE: FOR PLACEMENT, QUALITY GRADATION AND OTHER MISCELLANEOUS REQUIREMENTS FOR STONE RIPRAP DITCH-SEE SPECIAL PROVISIONS.

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		



C = 8.5
 F = 3.7
 C = 6.8
 F = 36.8
 C = 10.7
 F = 61.6

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
882	84-00059-00-BR	WHITE	22	8
FED. ROAD DIST. NO. 9 ILLINOIS		FED. AID PROJECT		
PROJECT# BRS-882(108)		CONTRACT# 99268		
JOB # C-99-593-06		SKILLET FORK		

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)-386-2812



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



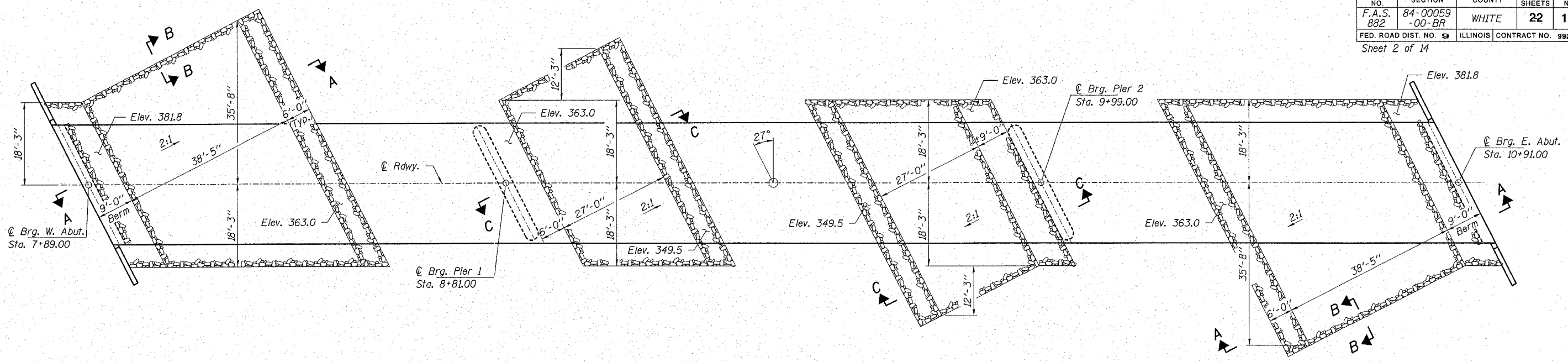
AARON M. MEFFORD
 NAME
 SIGNATURE
 DATE
 2-12-07
 11-30-07
 EXPIRES

F.A.S. ROUTE 882
 SKILLET FORK
 WHITE COUNTY, ILLINOIS

SHEET TITLE:	
CROSS-SECTIONS	
SCALE:	1" = 8'
BY:	AMM
DATE:	02/20/07
REV:	MLG
8	of 22
SHEETS	
SHEET NO.	
8	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 882	84-00059-00-BR	WHITE	22	10
FED. ROAD DIST. NO. 9		ILLINOIS CONTRACT NO. 99268		

Sheet 2 of 14



PLAN

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts (in painted areas and M164 Type 3 in unpainted areas). Bolts $\frac{1}{8}$ " ϕ , open holes $\frac{15}{16}$ " ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 220,405 Pounds.

All structural steel shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 in. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."

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

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements of Notch Toughness, Zone 2.

All proposed construction activity 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.

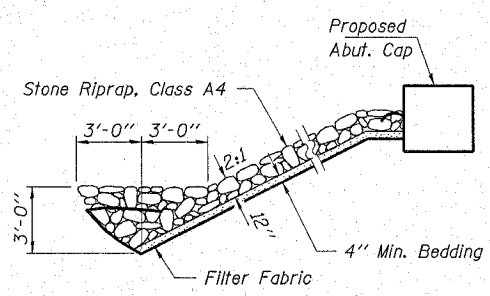
See Sheets 13 & 14 of 14 for Borings.

All construction joints shall be bonded.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

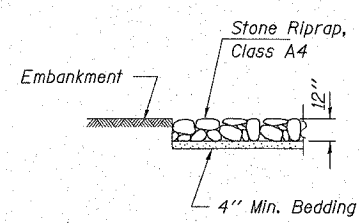
The Bridge Approach Pavement shall be constructed without the curb detail.

Quantities for Protective Coat and Bridge Deck Grooving include that for Bridge Approach Pavement.

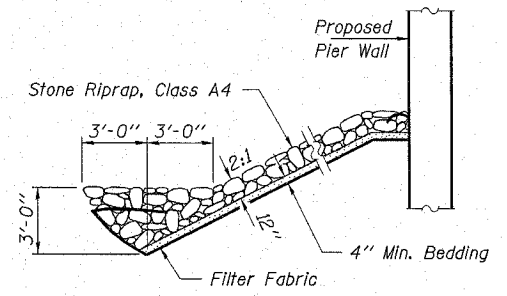


SECTION A-A

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



SECTION B-B



SECTION C-C

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

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

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

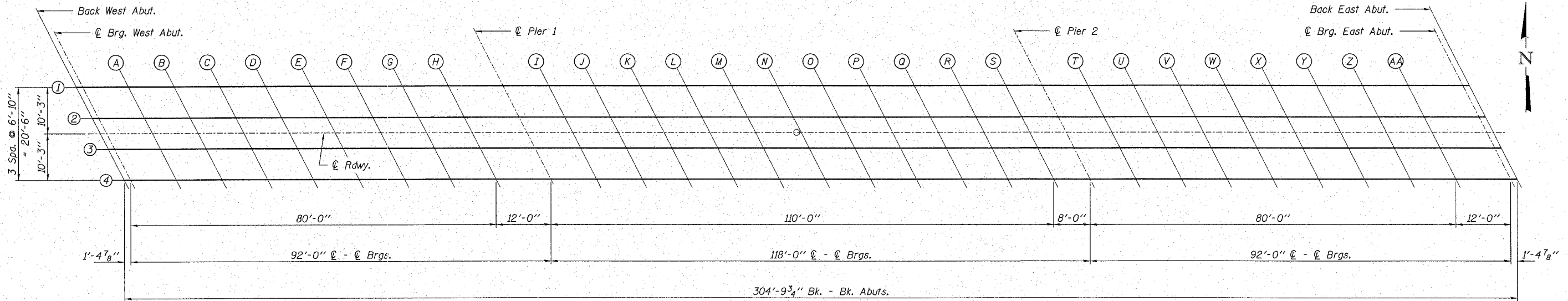
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
 DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

RIPRAP DETAIL

F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY

STRUCTURE NO. 097-3186 / STATION 9+40

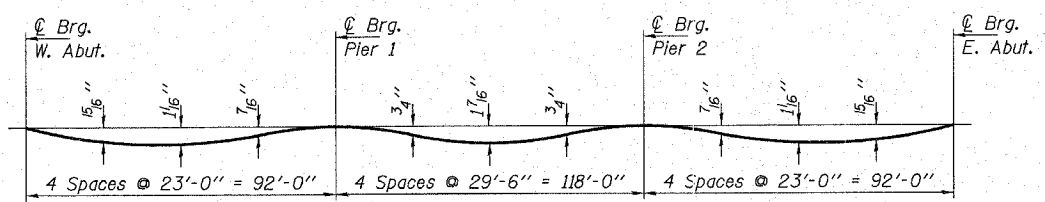


PLAN

BEAM 1

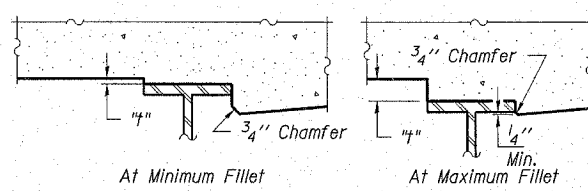
	Bk. of W. Abut.	C. of W. Abut.	Span 1								C. of PIER 1	Span 2								C. of PIER 2			
			A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S
Theoretical Grade Elevation	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740
Theoretical Grade Elevation Adjusted for D.L. Deflection	387.740	387.740	387.780	387.810	387.830	387.830	387.820	387.800	387.770	387.750	387.740	387.750	387.775	387.805	387.835	387.855	387.860	387.850	387.830	387.800	387.770	387.745	387.740
Bottom of Slab Elevation		387.115	387.155	387.185	387.205	387.205	387.195	387.175	387.145	387.125	387.115	387.125	387.150	387.180	387.210	387.230	387.235	387.225	387.205	387.175	387.145	387.120	387.115
Top of Steel																							
Fillet Height "t"																							

Span 3								C. of E. Abut.	Bk. of E. Abut.
T	U	V	W	X	Y	Z	AA		
387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740
387.745	387.770	387.790	387.815	387.830	387.830	387.815	387.785	387.740	387.740
387.120	387.145	387.165	387.190	387.205	387.205	387.190	387.160	387.115	



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets 3 & 4 of 14.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations, subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 3 & 4 of 14, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

	HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS		SLAB ELEVATIONS F.A.S. ROUTE 882 SECTION 84-00059-00-BR WHITE COUNTY STRUCTURE NO. 097-3186 / STATION 9+40
	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	ELGIN • SPRINGFIELD	

BEAM 2

	Bk. of W. Abut.	C. of W. Abut.	Span 1								C. PIER 1	Span 2								C. PIER 2			
			A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S
Theoretical Grade Elevation	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	
Theoretical Grade Elevation Adjusted for D.L. Deflection	387.845	387.845	387.885	387.915	387.935	387.935	387.925	387.905	387.875	387.855	387.845	387.855	387.880	387.910	387.940	387.960	387.965	387.955	387.935	387.905	387.875	387.850	387.845
Bottom of Slab Elevation		387.220	387.260	387.290	387.310	387.310	387.300	387.280	387.250	387.230	387.220	387.230	387.255	387.285	387.315	387.335	387.340	387.330	387.310	387.280	387.250	387.225	387.220
Top of Steel																							
Fillet Height "4"																							

Span 3									C. of E. Abut.	Bk. of E. Abut.
T	U	V	W	X	Y	Z	AA			
387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847
387.850	387.875	387.895	387.920	387.935	387.935	387.920	387.890	387.845	387.845	387.845
387.225	387.250	387.270	387.295	387.310	387.310	387.295	387.265	387.220		

C. ROADWAY

	Bk. of W. Abut.	C. of W. Abut.	Span 1								C. PIER 1	Span 2								C. PIER 2			
			A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S
Theoretical Grade Elevation	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900
Theoretical Grade Elevation Adjusted for D.L. Deflection	387.900	387.900	387.940	387.970	387.990	387.990	387.980	387.960	387.930	387.910	387.900	387.910	387.935	387.965	387.995	388.015	388.020	388.010	387.990	387.960	387.930	387.905	387.900
Bottom of Slab Elevation		387.275	387.315	387.345	387.365	387.365	387.355	387.335	387.305	387.285	387.275	387.285	387.310	387.340	387.370	387.390	387.395	387.385	387.365	387.335	387.305	387.280	387.275
Top of Steel																							
Fillet Height "4"																							

Span 3									C. of E. Abut.	Bk. of E. Abut.
T	U	V	W	X	Y	Z	AA			
387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900	387.900
387.905	387.930	387.950	387.975	387.990	387.990	387.975	387.945	387.900	387.900	387.900
387.280	387.305	387.325	387.350	387.365	387.365	387.350	387.320	387.275		

BEAM 3


	Bk. of W. Abut.	C. of W. Abut.	Span 1								C. PIER 1	Span 2								C. PIER 2			
			A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S
Theoretical Grade Elevation	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847
Theoretical Grade Elevation Adjusted for D.L. Deflection	387.845	387.845	387.885	387.915	387.935	387.935	387.925	387.905	387.875	387.855	387.845	387.855	387.880	387.910	387.940	387.960	387.965	387.955	387.935	387.905	387.875	387.850	387.845
Bottom of Slab Elevation		387.220	387.260	387.290	387.310	387.310	387.300	387.280	387.250	387.230	387.220	387.230	387.255	387.285	387.315	387.335	387.340	387.330	387.310	387.280	387.250	387.225	387.220
Top of Steel																							
Fillet Height "4"																							

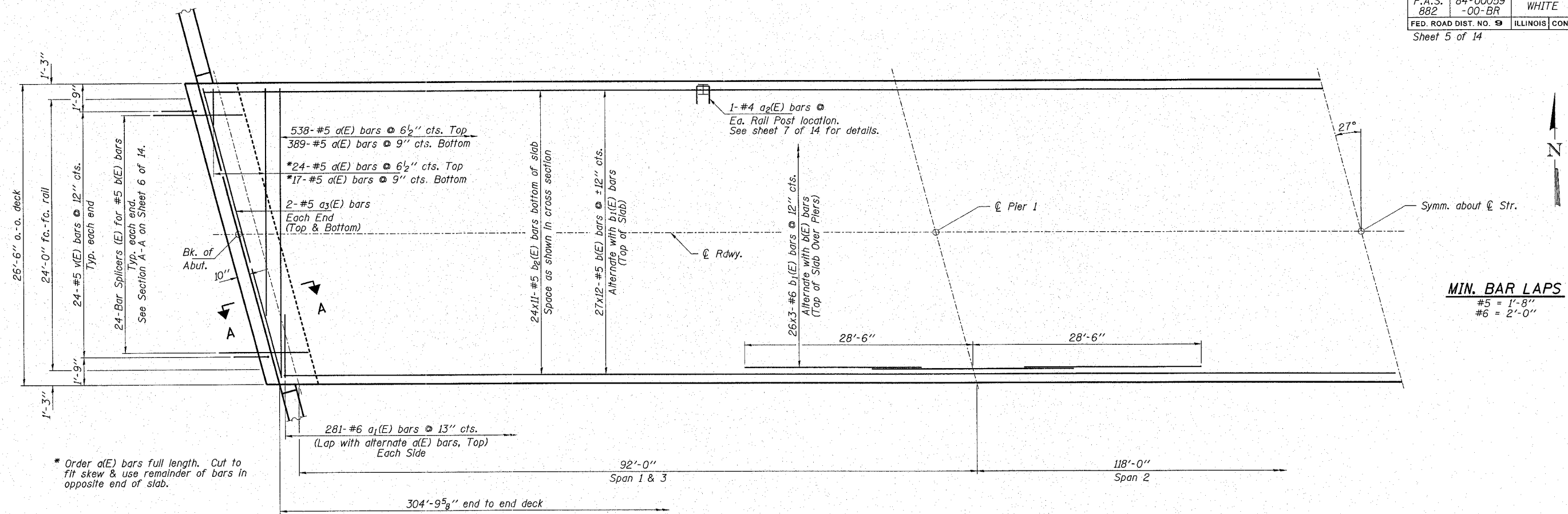
Span 3									C. of E. Abut.	Bk. of E. Abut.
T	U	V	W	X	Y	Z	AA			
387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847	387.847
387.850	387.875	387.895	387.920	387.935	387.935	387.920	387.890	387.845	387.845	387.845
387.225	387.250	387.270	387.295	387.310	387.310	387.295	387.265	387.220		

BEAM 4

	Bk. of W. Abut.	C. of W. Abut.	Span 1								C. PIER 1	Span 2								C. PIER 2			
			A	B	C	D	E	F	G	H		I	J	K	L	M	N	O	P		Q	R	S
Theoretical Grade Elevation	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740
Theoretical Grade Elevation Adjusted for D.L. Deflection	387.740	387.740	387.780	387.810	387.830	387.830	387.820	387.800	387.770	387.750	387.740	387.750	387.775	387.805	387.835	387.855	387.860	387.850	387.830	387.800	387.770	387.745	387.740
Bottom of Slab Elevation		387.115	387.155	387.185	387.205	387.205	387.195	387.175	387.145	387.125	387.115	387.125	387.150	387.180	387.210	387.230	387.235	387.225	387.205	387.175	387.145	387.120	387.115
Top of Steel																							
Fillet Height "4"																							

Span 3									C. of E. Abut.	Bk. of E. Abut.
T	U	V	W	X	Y	Z	AA			
387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740	387.740
387.745	387.770	387.790	387.815	387.830	387.830	387.815	387.785	387.740	387.740	387.740
387.120	387.145	387.165	387.190	387.205	387.205	387.190	387.160	387.115		

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 		SLAB ELEVATIONS F.A.S. ROUTE 882 SECTION 84-00059-00-BR WHITE COUNTY STRUCTURE NO. 097-3186 / STATION 9+40
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400		
PROJECT NUMBER: 12-98-0013-1 DESIGNED: M.G.B.	DATE: 01/18/07 CHECKED: S.W.M.	DRAWN: D.B.



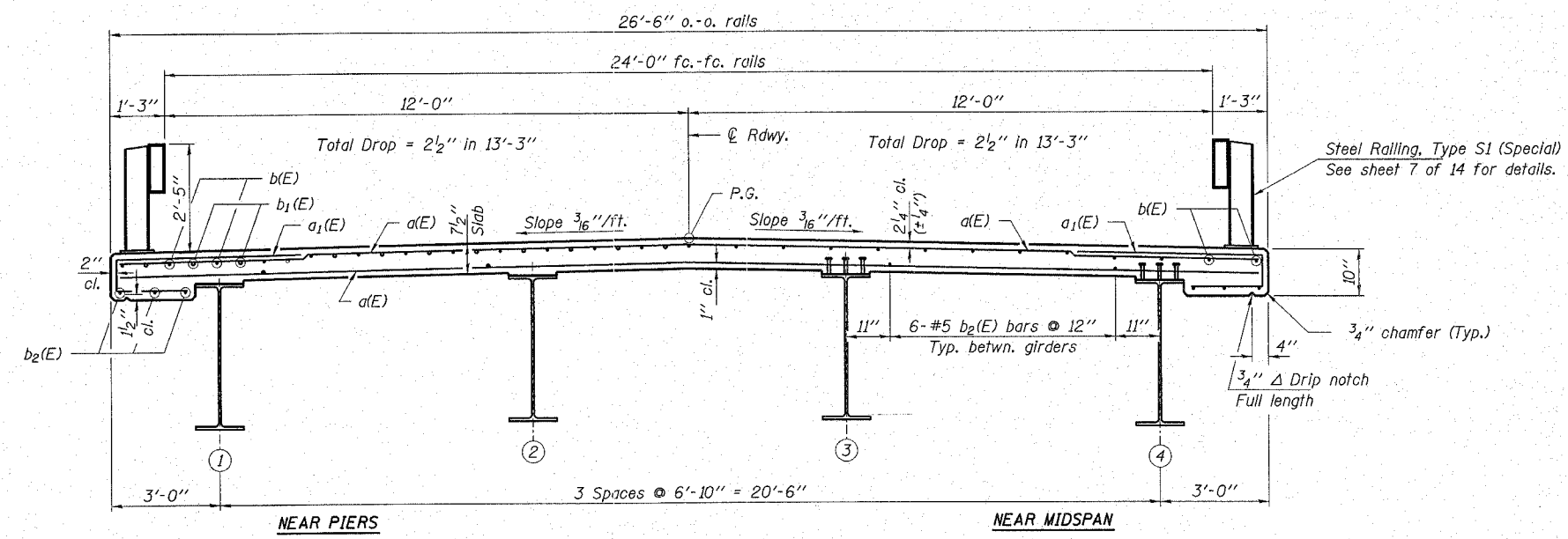
* Order a(E) bars full length. Cut to fit skew & use remainder of bars in opposite end of slab.

MIN. BAR LAPS
 #5 = 1'-8"
 #6 = 2'-0"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	968	#5	26'-2"	—
a1(E)	562	#6	7'-9"	—
a2(E)	76	#4	7'-0"	—
a3(E)	4	#5	29'-4"	—
b(E)	324	#5	26'-11"	—
b1(E)	156	#6	20'-4"	—
b2(E)	264	#5	29'-3"	—
m(E)	10	#6	29'-6"	—
m1(E)	16	#6	8'-11"	—
m2(E)	6	#6	7'-3"	—
m3(E)	4	#6	3'-1"	—
s(E)	54	#5	6'-7"	U
s1(E)	48	#4	10'-2"	U
v(E)	48	#5	3'-0"	┌
Concrete Superstructure			Cu. Yd.	225.0
Reinforcement Bars, Epoxy Coated			Pound	56,950
Protective Coat			Sq. Yd.	954
Bridge Deck Grooving			Sq. Yd.	898
Bar Splicers			Each	48

Reinforcement bars designated (E) shall be epoxy coated. For Section A-A see Sheet 6 of 14. Bars indicated thus 26x3-#6 etc. indicates 26 lines of bars with 3 lengths per line.



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 LAND SURVEYORS

HLR

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 SPRINGFIELD, ILLINOIS 62703
 (217) 548-3400

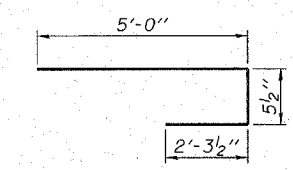
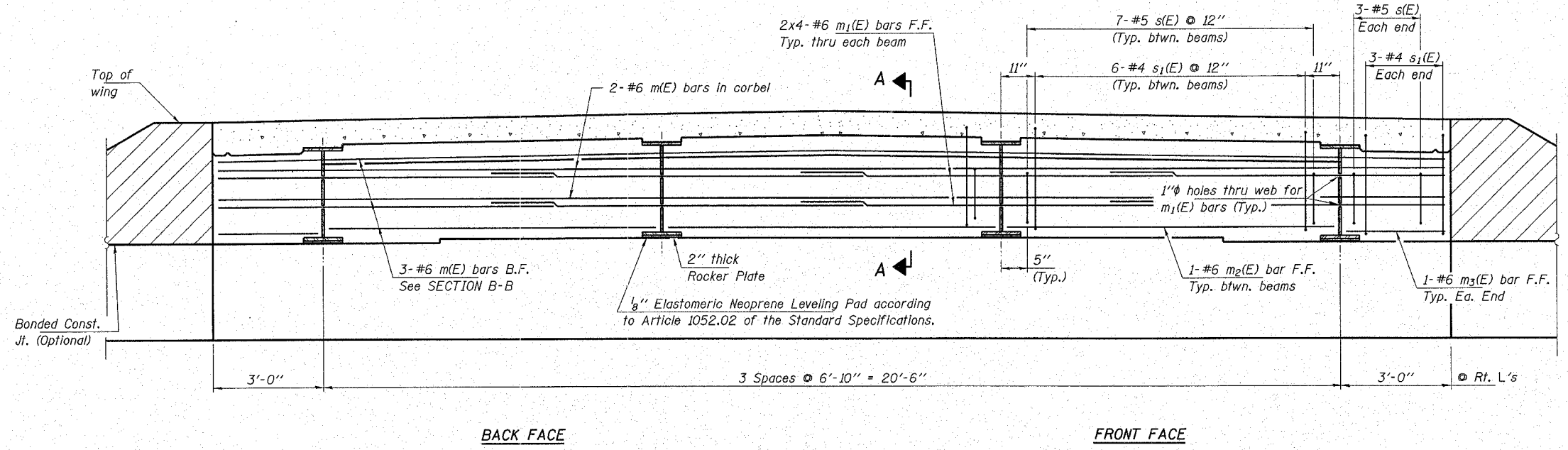
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
 DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

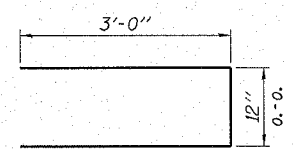
SUPERSTRUCTURE

F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY

STRUCTURE NO. 097-3186 / STATION 9+40



BAR a₁(E)



BAR a₂(E)

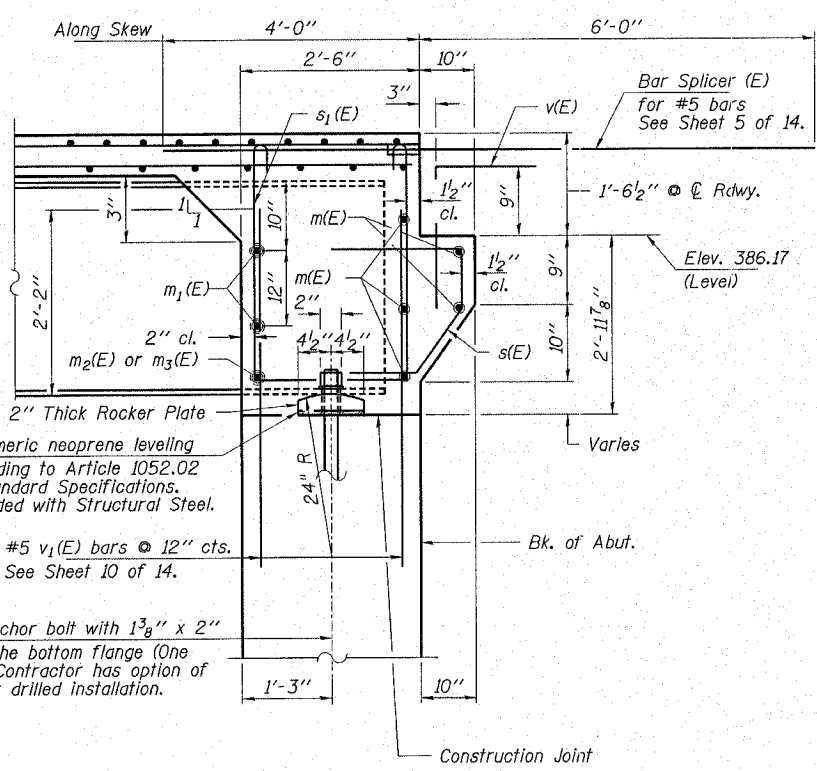
DIAPHRAGM AT ABUTMENTS

East Abut. (Looking East)
F.F. - Front Face
B.F. - Back Face

Notes: Reinforcement bars in diaphragms are billed with superstructure on sheet 5 of 14. Concrete in diaphragms is included with "Concrete Superstructure" on sheet 5 of 14. Reinforcement bars designated (E) shall be epoxy coated.

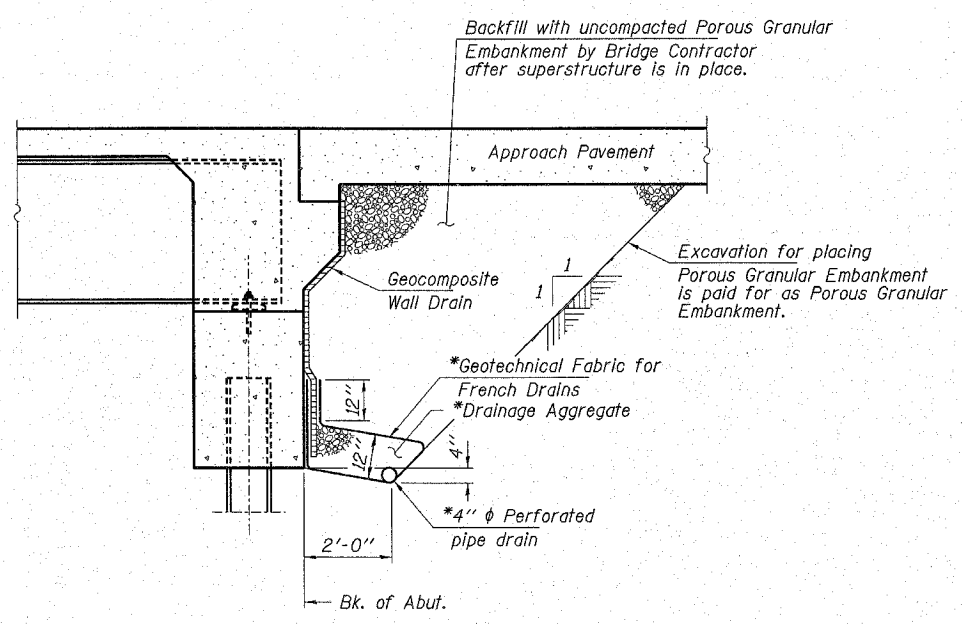
MIN. BAR LAPS

#6 bars = 2'-7"



SECTION A-A

At Rt. L's, except as noted
** Cost Included with "Concrete Structures".

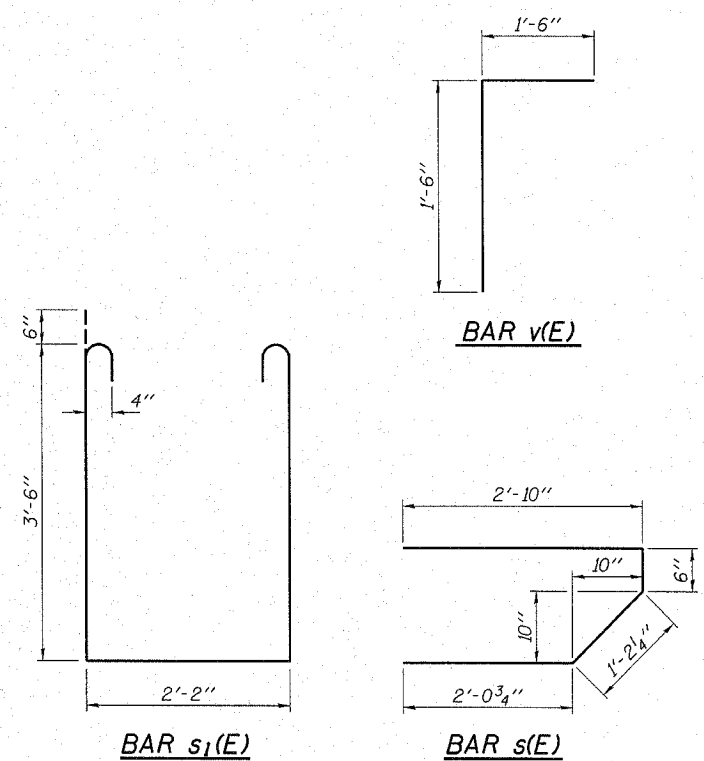


SECTION THRU INTEGRAL ABUTMENT

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

* Included in the cost of Pipe Underdrains for Structures.

Note: All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



BAR v(E)

BAR s₁(E)

BAR s(E)

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CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

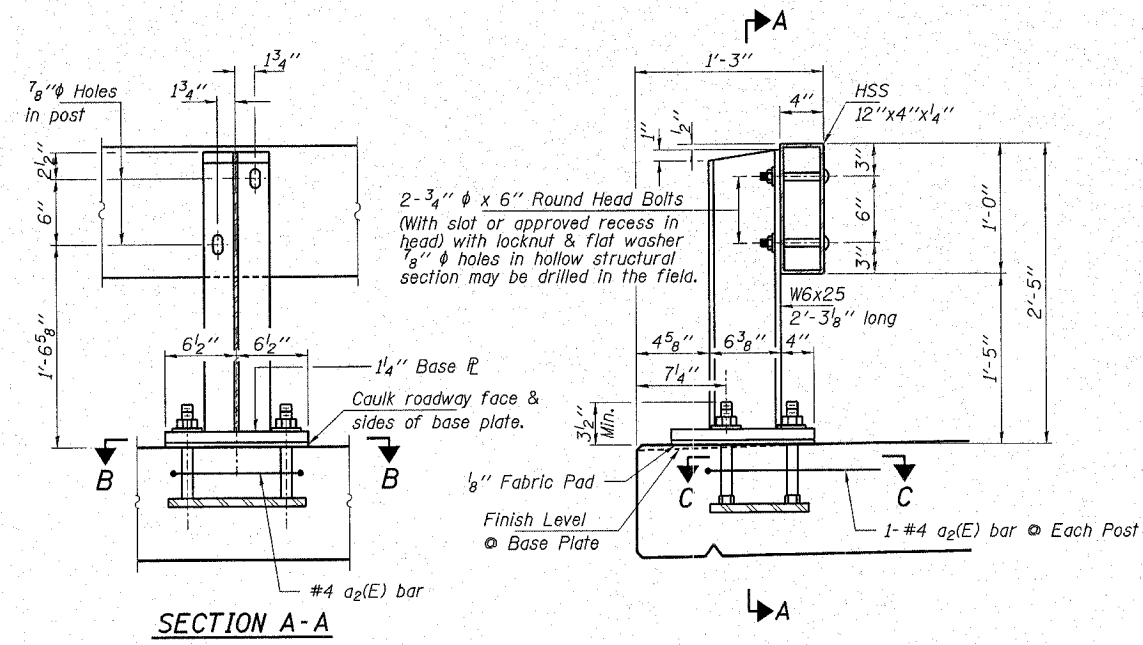
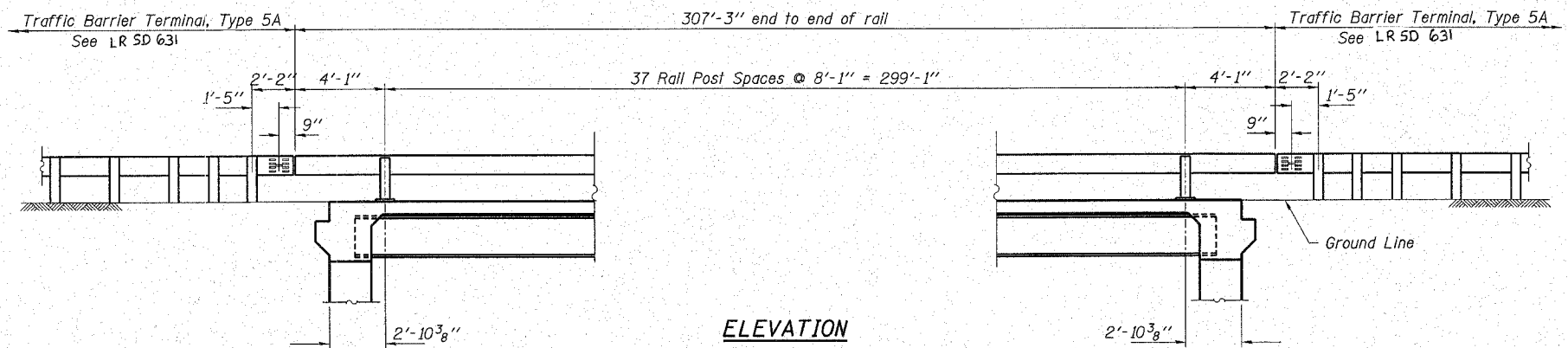
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

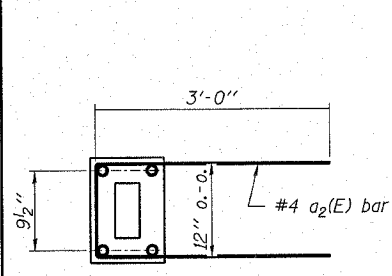
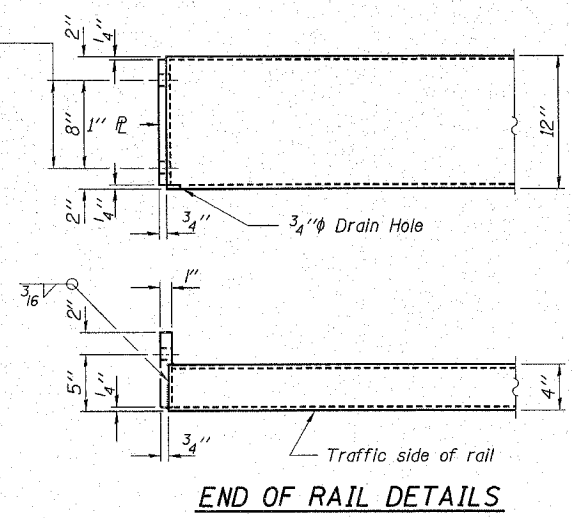
SUPERSTRUCTURE DETAILS

F.A.S. ROUTE 882
SECTION 84-00059-00-BR
WHITE COUNTY
STRUCTURE NO. 097-3186 / STATION 9+40

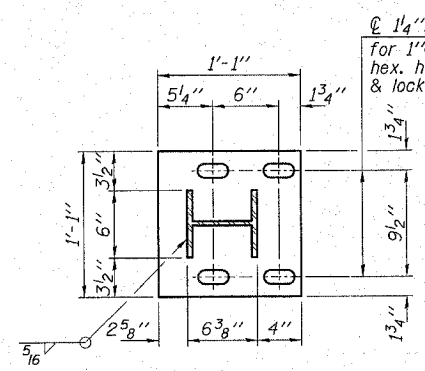


SECTION AT RAIL POST

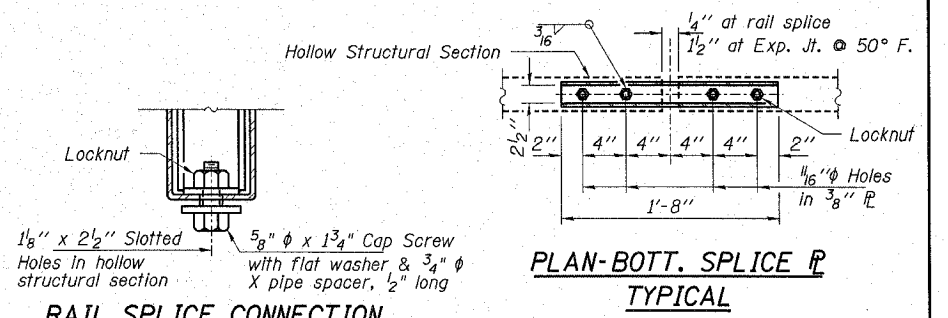
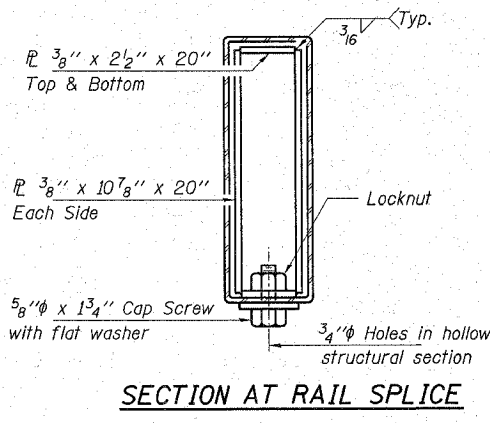
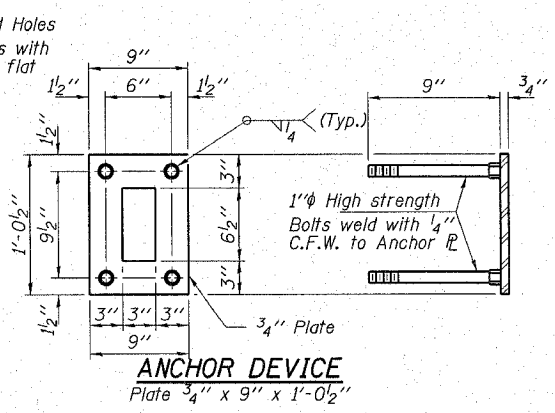
1/8" φ Holes for 1" φ x 4" Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Std. 631026.



76-#4 a2(E) bars billed in superstructure reinforcement sheet. Rest a2(E) bar on top of longitudinal reinforcement.



ANCHOR DEVICE
Plate 1/4" x 9" x 1'-0 1/2"



RAIL SPLICE CONNECTION AT EXPANSION JT.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1 (Special)	Foot	615

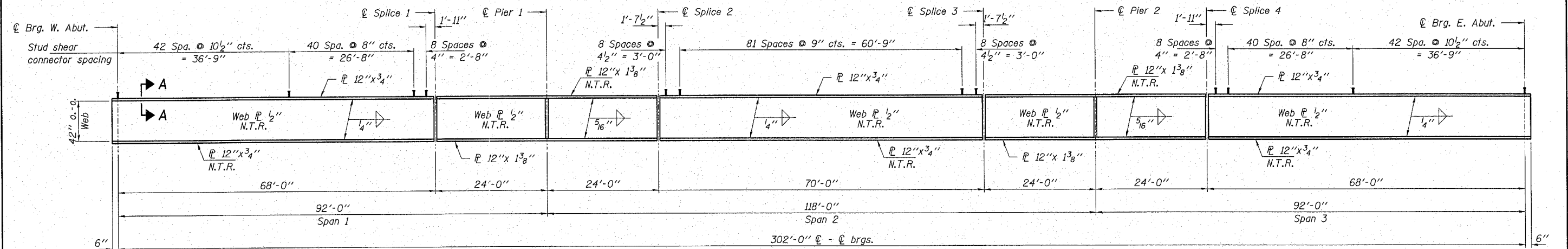
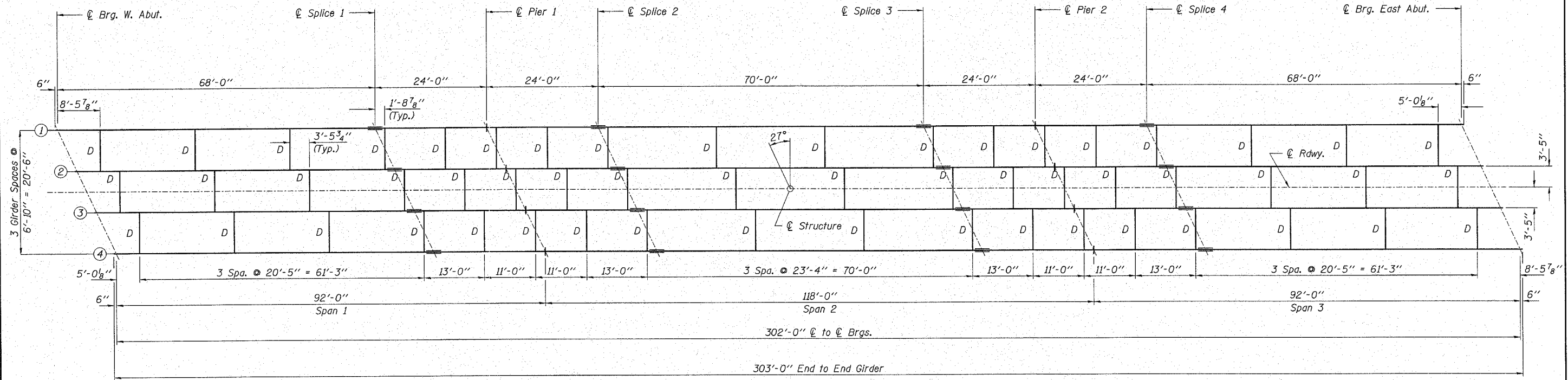
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(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

RAILING DETAILS
F.A.S. ROUTE 882
SECTION 84-00059-00-BR
WHITE COUNTY
STRUCTURE NO. 097-3186 / STATION 9+40



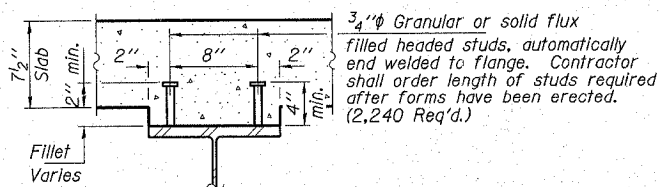
Notes:

N.T.R. Indicates Notch Toughness Requirements, Zone 2.

All structural steel shall be M270 Grade 50 W.

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.

Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



Location	End Brg. W. Abut.	Splice #1	Pier #1	Splice #2	Splice #3	Pier #2	Splice #4	End Brg. E. Abut.
BEAM 1	386.91	386.96	386.91	386.97	386.97	386.91	386.96	386.91
BEAM 2	387.02	387.07	387.02	387.08	387.08	387.02	387.07	387.02
BEAM 3	387.02	387.07	387.02	387.08	387.08	387.02	387.07	387.02
BEAM 4	386.91	386.96	386.91	386.97	386.97	386.91	386.96	386.91

TOP OF WEB ELEVATIONS
 (For fabrication only)

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ILR

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/17/07
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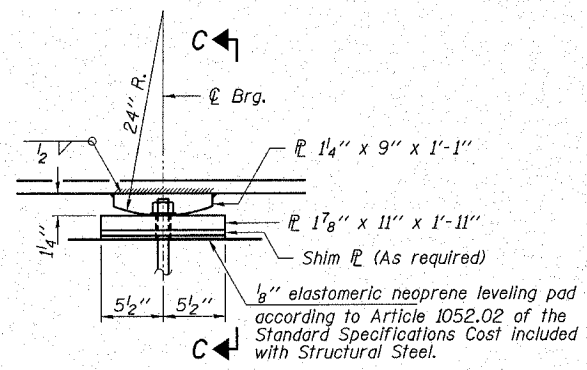
STRUCTURAL STEEL

F.A.S. ROUTE 882

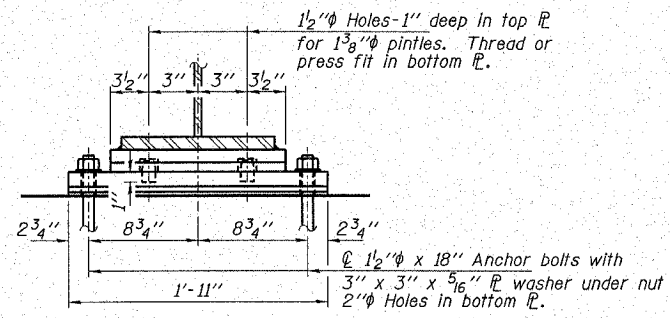
SECTION 84-00059-00-BR

WHITE COUNTY

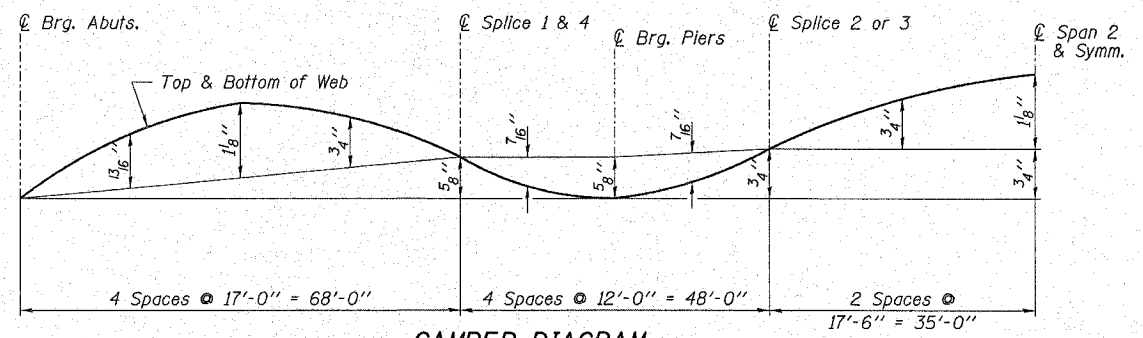
STRUCTURE NO. 097-3186 / STATION 9+40



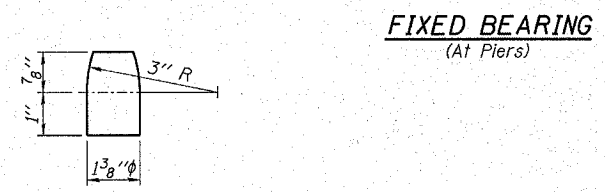
ELEVATION AT PIER



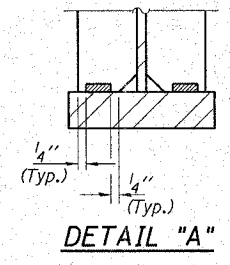
SECTION C-C



CAMBER DIAGRAM



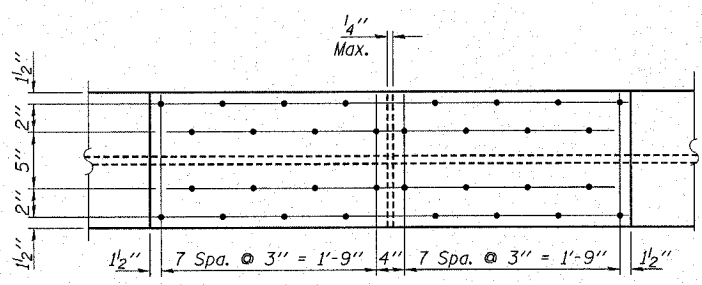
PINTLE
(50 ksi)



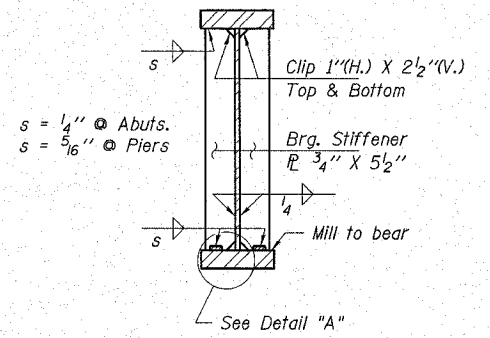
DETAIL "A"

INTERIOR BEAM MOMENT TABLE			
	0.4 Sp. 1 & 3	Pier 1 & 2	0.5 Sp. 2
I_s	(in ⁴) 11,312	18,613	11,312
I_c (n)	(in ⁴) 28,740		28,740
I_c (3n)	(in ⁴) 21,333		21,333
S_s	(in ³) 520	832	520
S_c (n)	(in ³) 747		747
S_c (3n)	(in ³) 679		679
Z	(in ³)		
\bar{y}	(k/ft.) 0.844	1.014	0.844
M_D	(k/ft.) 442	1,220	432
s_D	(k/ft.) 0.170		0.170
$M_s \bar{y}$	(k) 100	619	113
M_L	(k) 725	619	783
M (Imp)	(k) 167	136	164
$3[M_L + M(\text{Imp})]$	(k) 1,486	1,259	1,579
M_a	(k) 2,637	3,222	2,761
M_u	(k) 3,956		3,956
$f_s \bar{y}$ non-comp (k.s.l.)	10.2	17.6	10.0
$f_s \bar{y}$ (comp) (k.s.l.)	1.8		2.0
$f_s \bar{y}$ (k+Imp) (k.s.l.)	23.9	18.2	25.4
f_s (Overload) (k.s.l.)	35.9	35.8	37.4
f_s (Total) (k.s.l.)		46.5	
VR	(k) 51.2		50.7

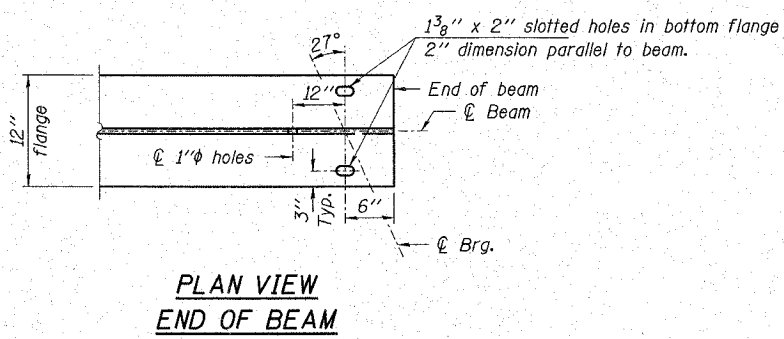
INTERIOR BEAM REACTION TABLE		
	N. Abutment	Pier 1
R_D	(K) 33.3	119.7
R_L	(K) 39.4	64.4
R Imp.	(K) 9.1	14.0
R (Total)	(K) 81.8	198.1



SECTION B-B

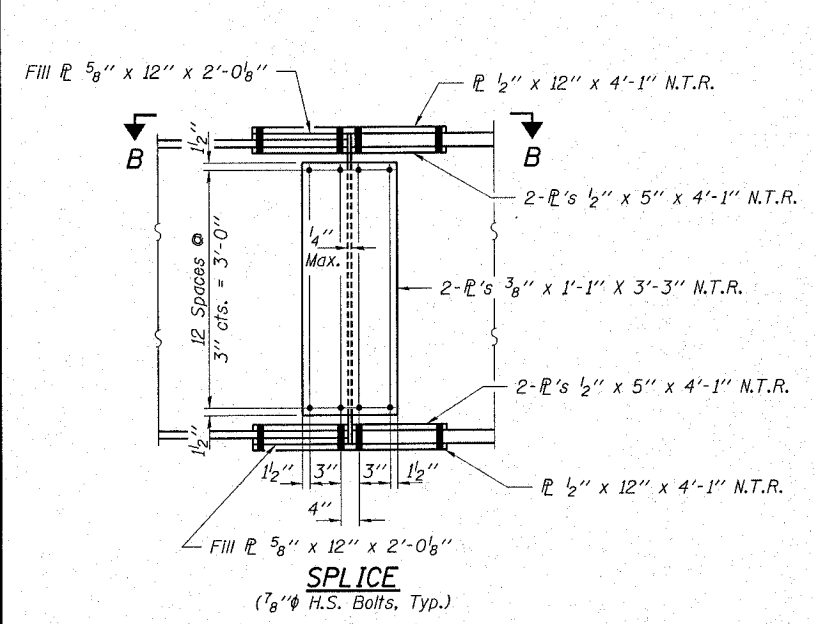


SECTION AT PIERS

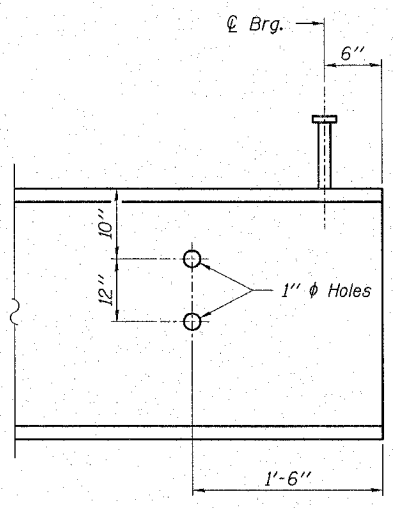


**PLAN VIEW
END OF BEAM**

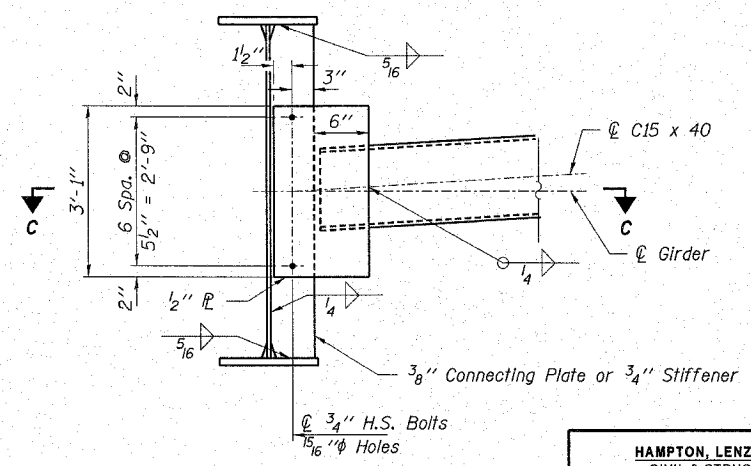
Note:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



SPLICE
(7/8 inch H.S. Bolts, Typ.)



**ELEVATION VIEW
END OF BEAM**



DIAPHRAGM D
54 Required

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See ASSHTO 10.38).
 VR is the maximum Live Load + Impact shear range within the composite portion of the span.
 Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite area.
The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 & 10.50.1.1.
 f_s (Total) is the sum of the stresses due to $1.3[M_D + M_s \bar{y} + 5_3(M_L + M(\text{Imp}))]$.
 f_s (Overload) is the sum of the stresses due to $M_D + M_s \bar{y} + 5_3(M_L + M(\text{Imp}))$.
 M_D - Moment due to dead loads on non-composite section.
 $M_s \bar{y}$ - Moment due to dead loads on composite section.
 M_L - Moment due to live load on non-composite or composite section.
 $M(\text{Imp})$ - Moment due to live load impact on non-composite or composite section.
 M_a (Applied Moment) = $1.3[M_D + M_s \bar{y} + 5_3(M_L + M(\text{Imp}))]$.

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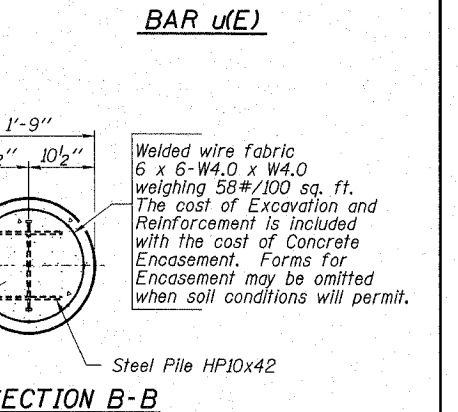
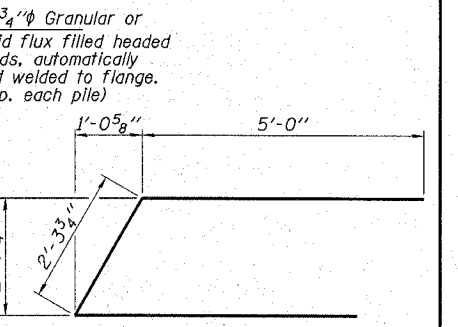
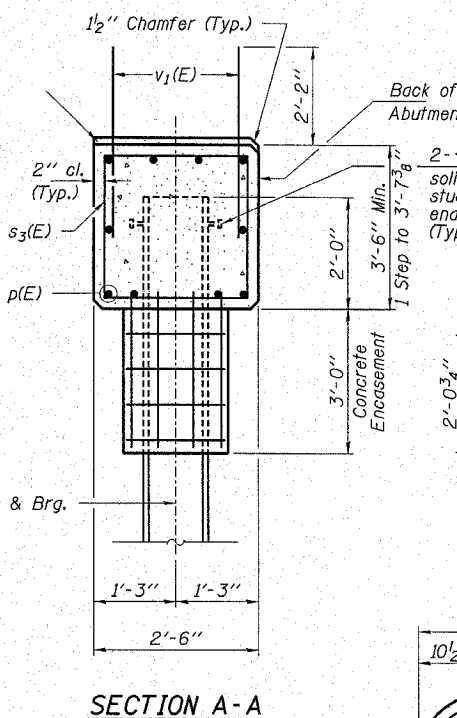
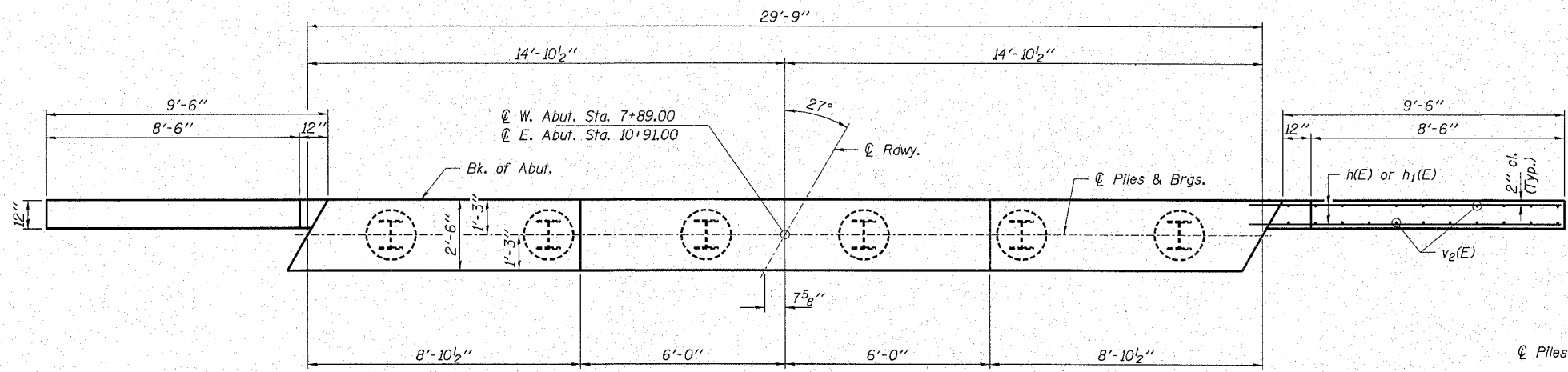
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
 DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

STRUCTURAL STEEL

F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY

STRUCTURE NO. 097-3186 / STATION 9+40

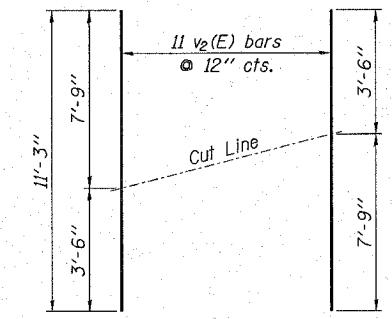
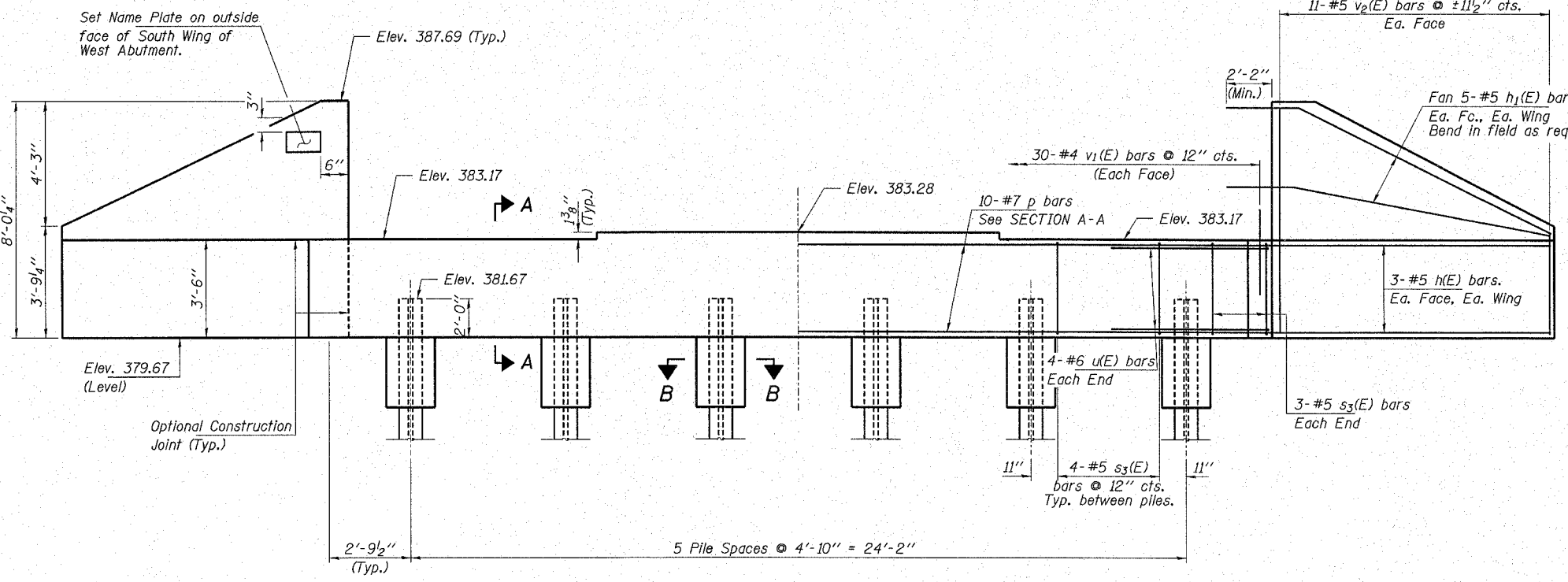


PILE ENCASEMENT DETAIL

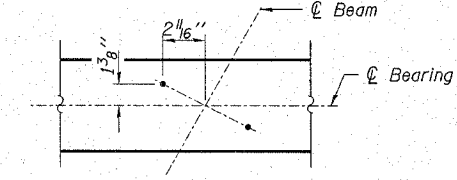
BILL OF MATERIAL - BOTH ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	24	#5	11'-9"	—
h1(E)	40	#5	12'-9"	—
p(E)	20	#7	29'-5"	—
s3(E)	52	#5	11'-7"	□
u(E)	16	#6	12'-4"	—
v1(E)	120	#5	4'-4"	—
v2(E)	44	#5	11'-3"	—
Concrete Structures			Cu. Yd.	28.1
Reinforcement Bars, Epoxy Coated			Pound	4,010
Steel Piles HP 10x42			Foot	1000
Test Pile Steel HP 10x42			Each	2
Concrete Encasement			Cu. Yd.	3.1
Stud Shear Connectors			Each	24

Reinforcement Bars designated (E) shall be epoxy coated.



FIELD CUTTING DIAGRAM
 Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



TYP. ANCHOR BOLT LOCATIONS

PILE DATA

Type Steel HP10x42
 No. Req'd. (2 Abut.) *12
 Nominal Required Bearing 240 kips/pile
 Allowable Resistance Available 80 kips/pile
 Estimated Lengths 110 Ft/pile (W. Abut.)
 90 Ft/pile (E. Abut.)

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.
 * Includes one steel test pile to be driven in a permanent location at each abutment.

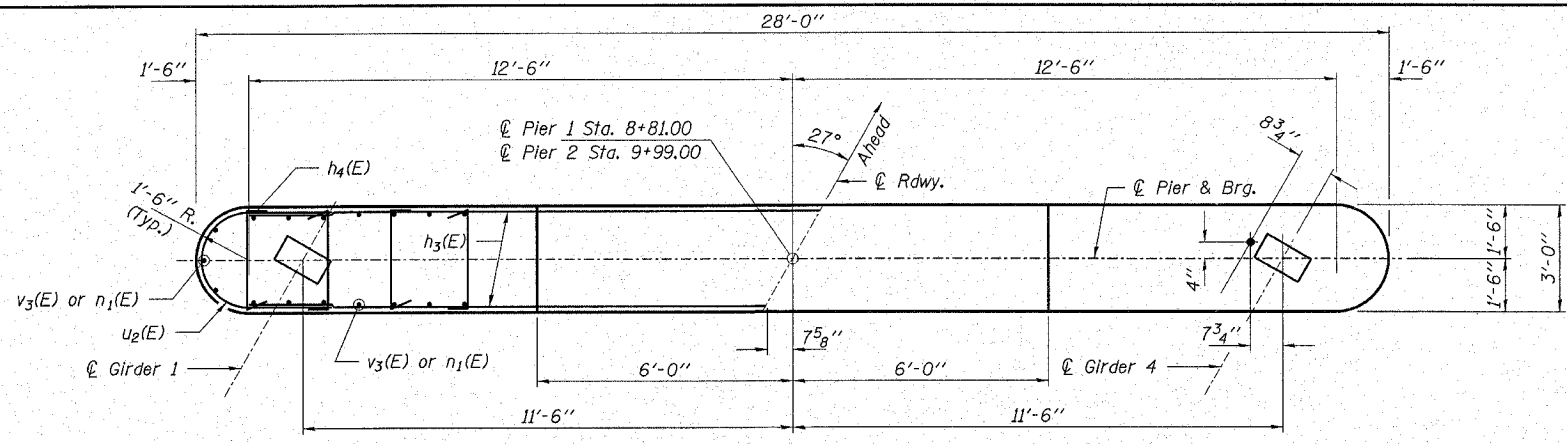
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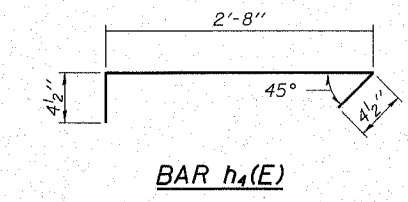
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0013-1 DATE: 01/18/07
 DESIGNED: M.G.B. CHECKED: S.W.M. DRAWN: D.B.

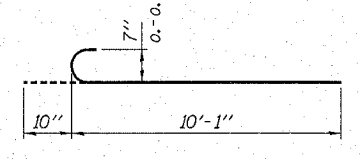
ABUTMENTS
 F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY
 STRUCTURE NO. 097-3186 / STATION 9+40



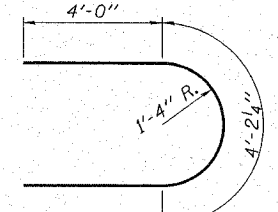
PLAN



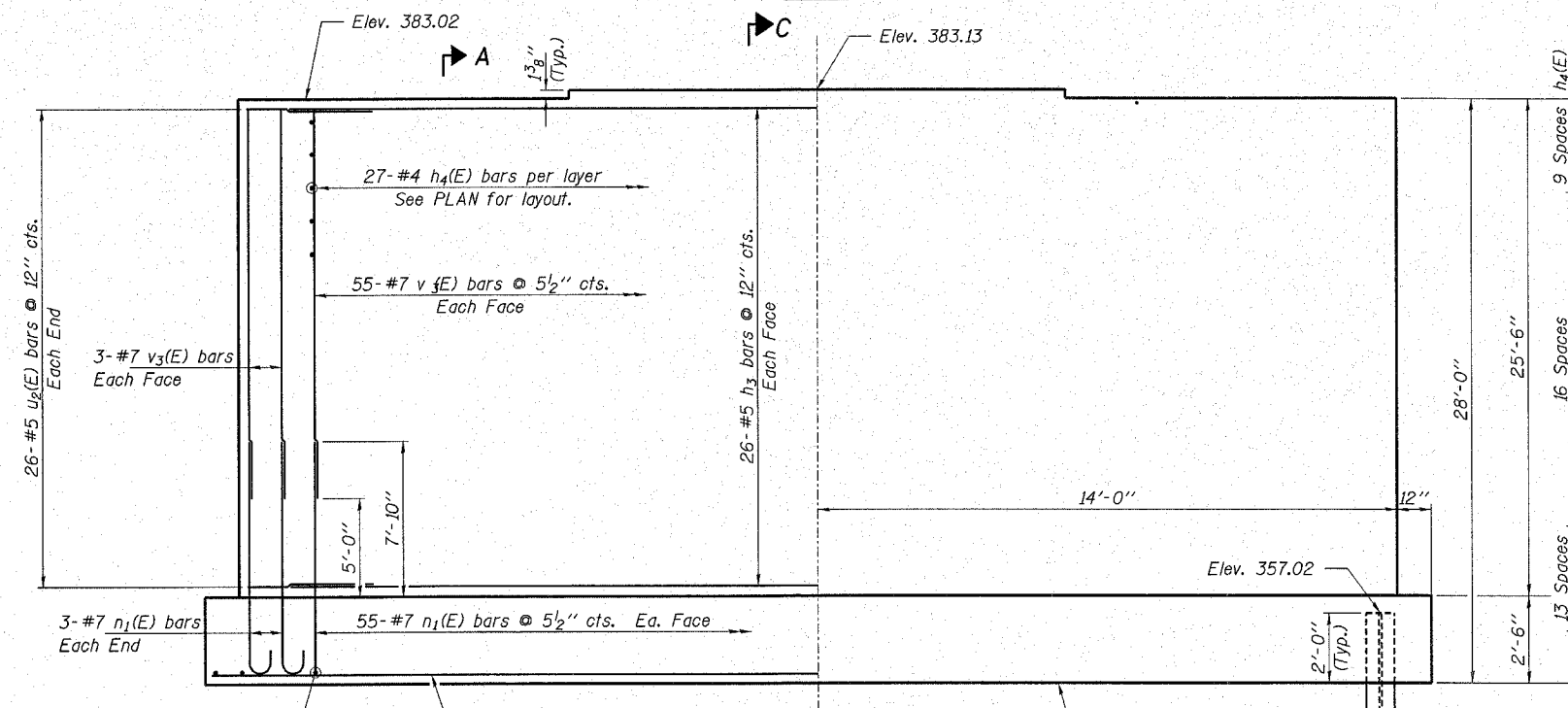
BAR h₄(E)



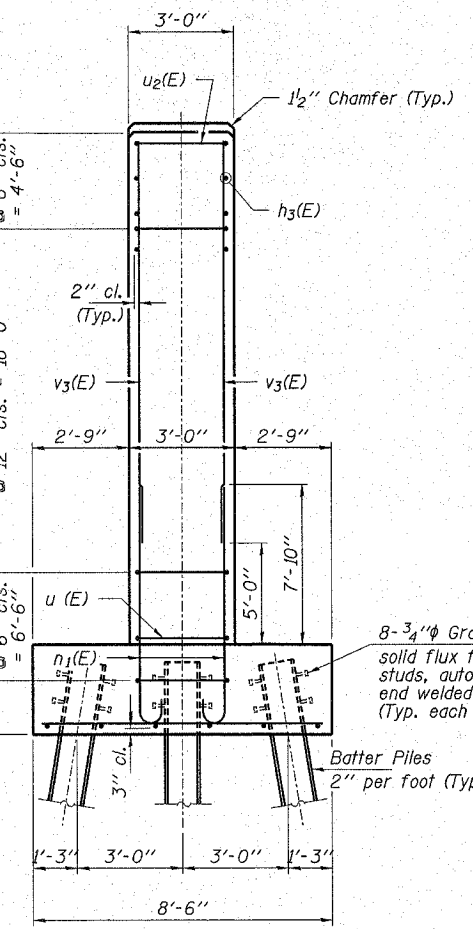
BAR n₁(E)



BAR u₂(E)



ELEVATION
(Looking East)



END VIEW

PILE DATA

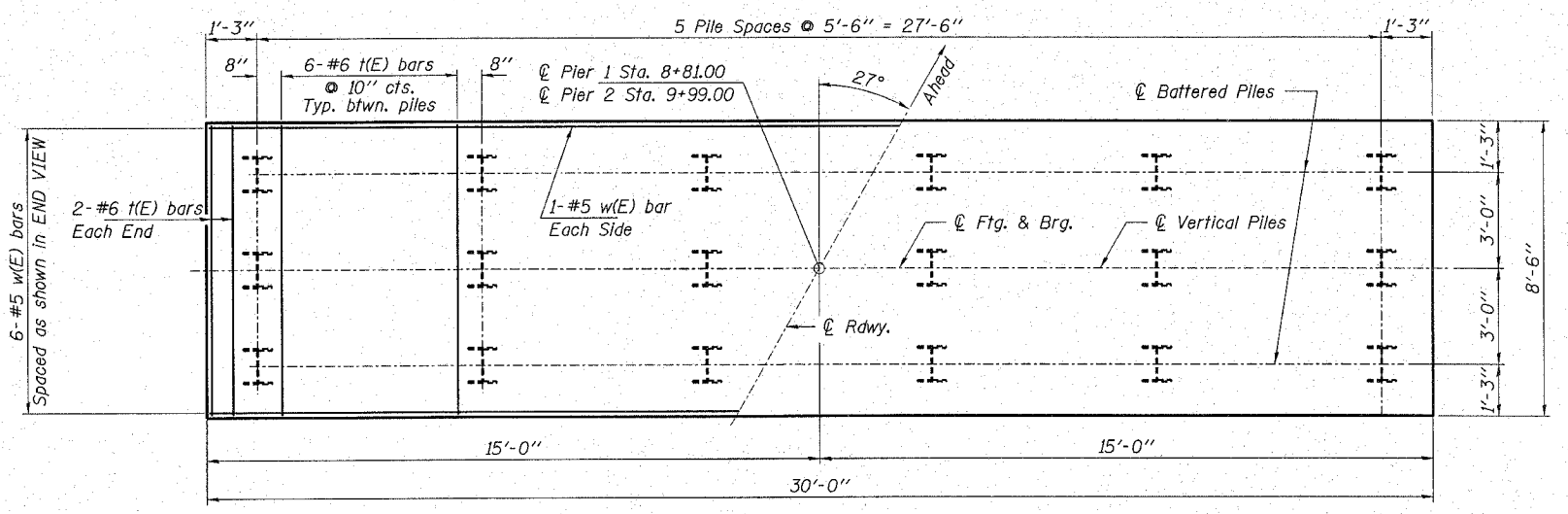
Type _____ Steel HP12x63
 No. Req'd. (2 Piers.) _____ *36
 Nominal Required Bearing _____ 462 kips/pile
 Allowable Resistance Available _____ 154 kips/pile
 Estimated Lengths _____ 85 Ft/Pile

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.
 * Includes one steel test pile to be driven in a permanent location at each Pier.

BILL OF MATERIAL - BOTH PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h ₃ (E)	104	#5	25'-0"	—
h ₄ (E)	2,106	#4	3'-5"	┌
n ₁ (E)	232	#7	10'-11"	—
t(E)	68	#6	8'-2"	—
u ₂ (E)	104	#5	12'-2"	—
v ₃ (E)	232	#7	20'-4"	—
w(E)	12	#5	29'-8"	—
Concrete Structures			Cu. Yd.	215.9
Reinforcement Bars, Epoxy Coated			Pound	24,870
Steel Piles HP 12x63			Foot	2,890
Test Pile Steel HP 12x63			Each	2
Structure Excavation			Cu. Yd.	256
Stud Shear Connectors			Each	288

Reinforcement Bars designated (E) shall be epoxy coated.



FOOTING PLAN

MIN. BAR LAP
#7 = 2'-8"

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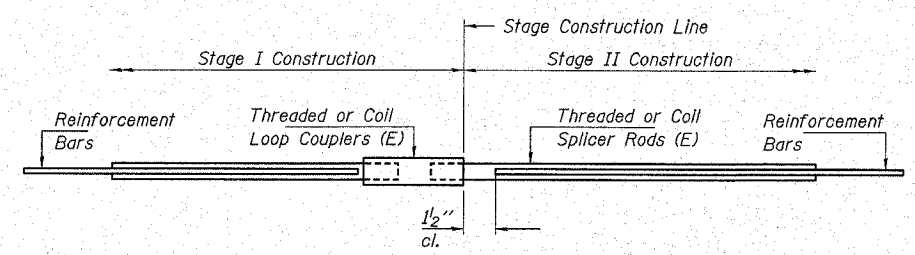
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PIERS

F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY

STRUCTURE NO. 097-3186 / STATION 9+40



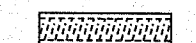
SPLICER DETAIL

Bar Size	No. Assemblies Required	Location

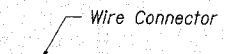
The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



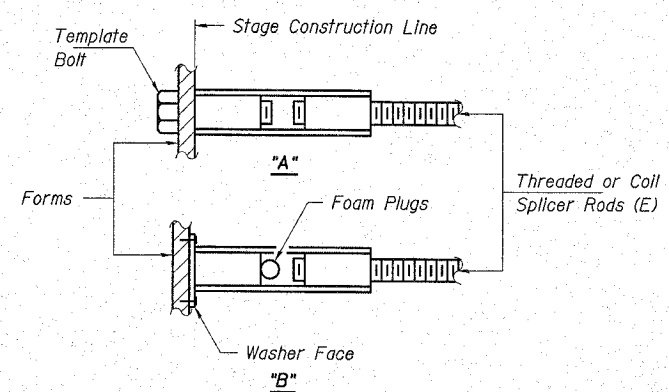
•• ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

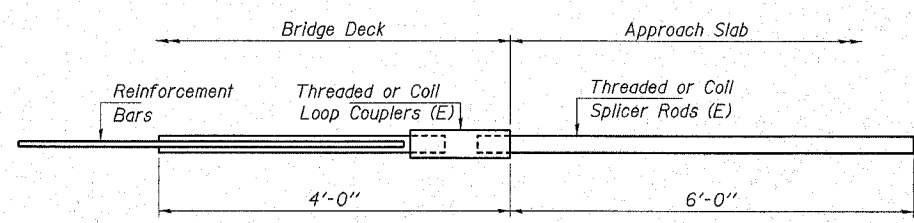
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



**INTEGRAL ABUTMENT
 BAR SPLICER ASSEMBLY DETAIL
 FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 48

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BAR SPLICERS

F.A.S. ROUTE 882
 SECTION 84-00059-00-BR
 WHITE COUNTY
 STRUCTURE NO. 097-3186 / STATION 9+40

BRIDGE FOUNDATION BORING LOG

PROJECT: BRIDGE SKILLET FORK Date: JUNE 12, 1985
 ROUTE: FAS 882 (C.H.10) EXIST. STR. NO. 097-3030 Bored By: R. D. METHENEY
 SEC: 84-00059-00-BR STA: _____ Checked By: J. J. KLAY
 COUNTY: WHITE

Boring No. 2, E. ABUT.
 Station: SEE REMARKS
 Offset: ON SHEET NO. 6

Elevation	N	Qu t/sf	w (%)	Remarks
0				Ground Surface <u>379.1</u>
198.7				EXISTING GRAVEL SURFACE ROAD AND BASE (1'±) <u>378.1</u>
197.7	25	2.0	10	STIFF, VERY MOIST, SANDY CLAY LOAM <u>377.1</u>
194.7	9	1.0	22	MEDIUM, DAMP TO VERY DAMP, CLAY <u>373.6</u>
192.7	23	1.8	20	STIFF, DAMP, CLAY <u>370.6</u>
190.2	23	2.2	20	VERY STIFF, DAMP, CLAY <u>369.6</u>
184.2	18	1.8	27	STIFF, DAMP, HIGH PLASTICITY, CLAY <u>363.6</u>
181.7	25	2.3	20	VERY STIFF, DAMP, HIGH PLASTICITY, CLAY <u>343.1</u>
180.2	23	2.1	24	STIFF, DAMP, HIGH PLASTICITY, CLAY <u>359.6</u>
156.7				SOFT, WET, CLAY WITH 2"± THICK LENSES OF SANDY LOAM TO SAND <u>336.1</u>
176.7				STIFF, DAMP, HIGH PLASTICITY, CLAY <u>356.1</u>
172.7	23	2.1	25	VERY STIFF, DAMP, HIGH PLASTICITY, CLAY <u>352.1</u>
170.2	15	1.3	26	STIFF, DAMP TO VERY DAMP, HIGH PLASTICITY, CLAY <u>349.6</u>

Surface Water El. 174.8
 Groundwater El. at Completion 175.7
 After _____ Hours _____

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 1470g hammer falling 30"
 Qu - Unconfined Compressive Strength - t/sf
 w - Water Content - percentage
 Type failure: B - Bulge Failure, S - Shear Failure, E - Estimated Value

BORING NO. 2 CONTINUED FROM SHEET NO. 4


Elevation	N	Qu t/sf	w (%)	Remarks
154.2				SOFT, WET, CLAY WITH 2"± THICK SAND LENSES <u>333.6</u>
149.2	15	1.5	20	STIFF, VERY DAMP, CLAY TO CLAY TILL (CONSIDERABLE SAND CONTENT) <u>328.6</u>
144.2	19	1.5	14	DENSE, DAMP, CEMENTED, LOAM TO SANDY LOAM <u>323.6</u>
142.7	32			DENSE, VERY MOIST, CEMENTED, LOAM <u>322.1</u>
136.7	13			MEDIUM, DAMP, CEMENTED, LOAM TO SILTY LOAM <u>316.1</u>
129.2	16			MEDIUM, DAMP TO VERY DAMP, CEMENTED, LOAM TO SANDY LOAM <u>308.6</u>
129.2				MEDIUM LOAM TO SL <u>308.6</u>
123.2	22			MEDIUM, DAMP, CEMENTED, FINE GRAIN, SANDY LOAM <u>302.6</u>
119.2	18			MEDIUM, VERY DAMP, CLAY TILL WITH 1"± THICK SAND LENSES <u>298.6</u>
114.2	22			MEDIUM, WET, FINE GRAIN, SAND <u>293.6</u>
112.7	24			DENSE, VERY DAMP, CEMENTED, LOAM TO SANDY LOAM <u>292.1</u>
103.2	24			MEDIUM, DAMP TO VERY DAMP, CEMENTED, LOAM TO SANDY LOAM <u>282.6</u>

BORING NO. 2 CONTINUED FROM SHEET NO. 5

Elevation	N	Qu t/sf	w (%)	Remarks
97.7	12	4.3	12	VERY DENSE, VERY MOIST, WEATHERED, CLAY SHALE <u>277.1</u>
93.7	85			HARD, DAMP, CLAY TILL (CONSIDERABLE SAND CONTENT) <u>273.1</u>
110				EXTENT OF EXPLORATION

REMARKS:
 BORING LOCATION OF BORING NO. 2 IS 11.0' EAST OF EAST END OF THE EXISTING CONCRETE BRIDGE DECK AND 1.0' NORTH OF THE EXISTING CENTERLINE.
 BENCH MARK - SEE SHEET NO. 3

BORING 2

HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 		BORING 2 F.A.S. ROUTE 882 SECTION 84-00059-00-BR WHITE COUNTY STRUCTURE NO. 097-3186 / STATION 9+40	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400		ELGIN • SPRINGFIELD	
PROJECT NUMBER: 12-98-0013-1	DESIGNED: M.G.B.	DATE: 01/18/07	CHECKED: S.W.M.
			DRAWN: D.B.