

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
723	08-00129-00-BR	MONTGOMERY	18	1
FED. ROAD DIST. NO. 6		ILLINOIS	FED. AID PROJECT	
CONTRACT NO.				

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

INDEX OF SHEETS

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- 2 GENERAL NOTES, SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
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- 6 PPC DECK BEAM SUPERSTRUCTURE
- 7 33" X 36" PPC DECK BEAM
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- 10 STEEL RAILING, TYPE SM
- 11 HP PILE DETAILS
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LIST OF STANDARDS

- 000001-05 635006-03
- 280001-05 701301-03
- 515001-03 701901-01
- 630001-08 BLR 21-8
- 630301-05
- 631011-06
- 631032-05

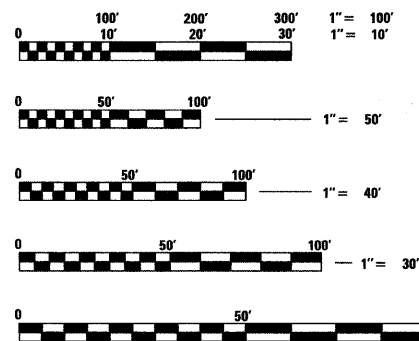
PROJECT DESCRIPTION

THE WORK IN THIS SECTION INCLUDES THE CONSTRUCTION OF A SINGLE SPAN REPLACEMENT BRIDGE 30' WIDE, 69'-0" CTRCTR END BENTS, USING PRECAST PRESTRESSED CONCRETE DECK BEAMS AND PILE BENT ABUTMENTS. INCLUDED IS CONSTRUCTION OF ROADWAY APPROACHES AND OTHER INCIDENTAL CONSTRUCTION WORK NECESSARY TO COMPLETE THIS SECTION.

EXISTING S.N. 068-3012
PROPOSED S.N. 068-3359

UTILITY CONTACTS

AMEREN IP	ELECTRICAL	STEVE RALSTON	618.236.6207
CONSOLIDATED COMMUNICATIONS	TELEPHONE/OTHER	BARB WILLIAMS	217.235.3326
FRONTIER COMMUNICATIONS	TELEPHONE/OTHER	R. MARK BURKS	217.854.2222
MONTGOMERY COUNTY WATER CO.	WATER	BILL BROWN	618.252.8111



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

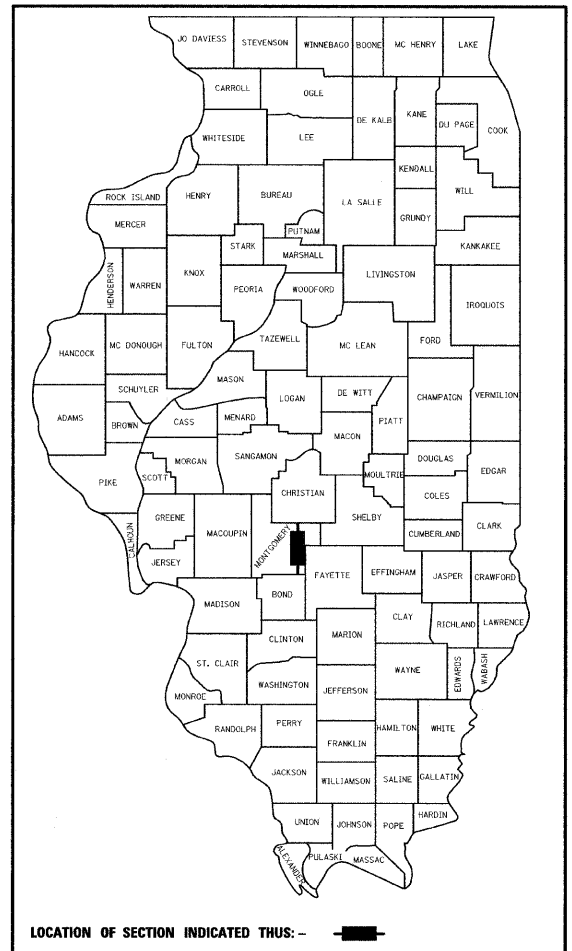
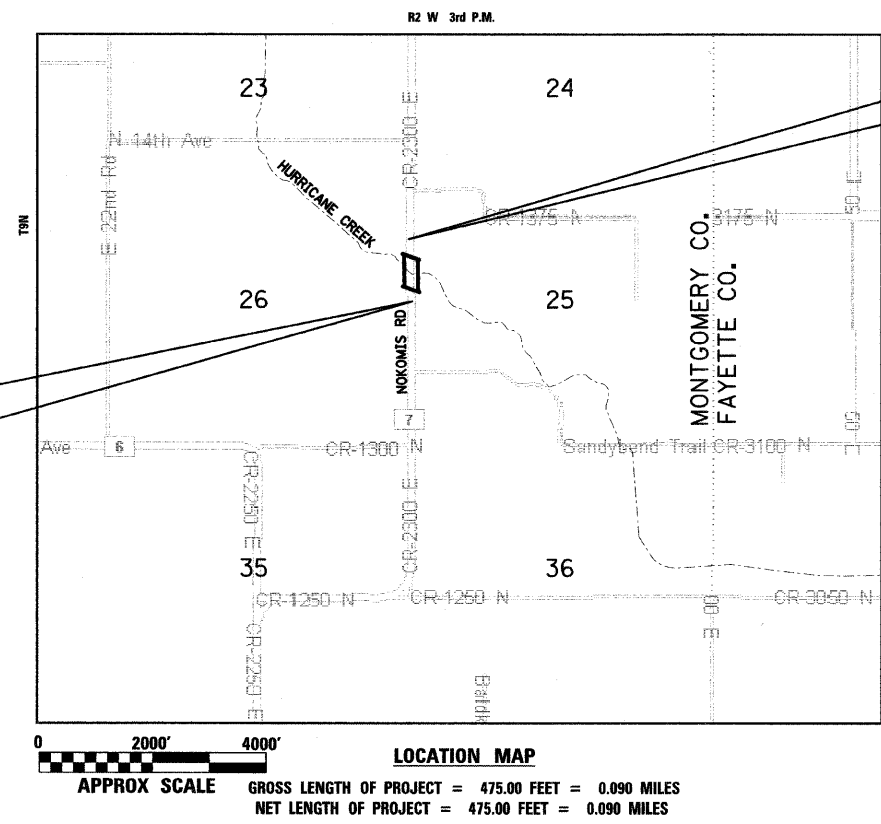
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
WITT TOWNSHIP

CONTRACT NO. 93498

ROUTE FAS 723 (CH #7)
SECTION 08-00129-00-BR
PROJECT NO. BRS-0723 (111)
MONTGOMERY COUNTY
JOB NO. C-96-203-10

**END CONSTRUCTION
STATION 444 + 00.00**

**BEGIN CONSTRUCTION
STATION 439 + 25.00**



APPROVED Sep. 15 ,2009
DATE
[Signature]
COUNTY ENGINEER

Passed October 14 ,2009
DATE
Terence H. Fontana KSE
DISTRICT 6 ENGINEER OF LOCAL ROADS AND STREETS

Passed October 9 ,2009
DATE
Ron Ashambeau
DISTRICT 6 ENGINEER OF CONSTRUCTION

RELEASING FOR BID
BASED ON LIMITED
REVIEW October 14 ,2009
DATE
Roger J. Driskell KSE
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



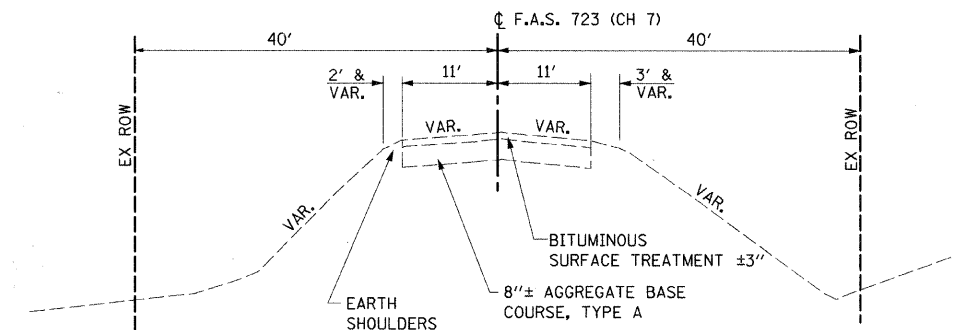
[Signature] 9-15-09
MARK A. REITZ P.E. #062-047531 DATE
LICENSE EXPIRES: NOVEMBER 30, 2009
HURST-ROSCHKE ENGINEERS, INC.

PROJECT ENGINEER:
SOUJAD LEADER

DESIGN DESIGNATION
FAS 723 - CH#7 NOKOMIS ROAD
MAJOR COLLECTOR (NON-URBAN)
CURRENT ADT = 1156
3R DESIGN/APPROACHES

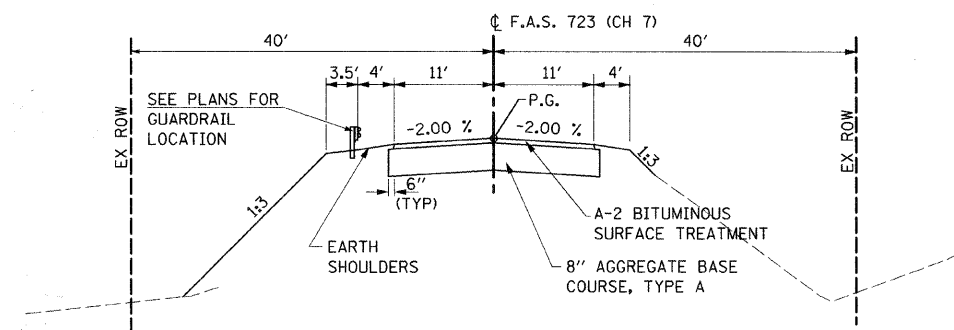
SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE	
CODE NO.	ITEM	UNIT	TOTAL	F000	X081-2A
20200100	EARTH EXCAVATION	CU YD	365	365	0
20300100	CHANNEL EXCAVATION	CU YD	59	0	59
20400800	FURNISHED EXCAVATION	CU YD	309	309	0
25000200	SEEDING, CLASS 2	ACRE	0.5	0.5	0
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	0
25100115	MULCH, METHOD 2	ACRE	0.5	0.5	0
25100630	EROSION CONTROL BLANKET	SQ YD	2420	2420	0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	200	200	0
28000400	PERIMETER EROSION BARRIER	FOOT	800	800	0
28100707	STONE DUMPED RIPRAP, CLASS A4	SQ YD	340	0	340
28200200	FILTER FABRIC	SQ YD	340	0	340
35100700	AGGREGATE BASE COURSE, TYPE A 8"	SQ YD	1031	1031	0
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	538	538	0
40300300	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	GALLON	1076	1076	0.0
40300500	COVER COAT AGGREGATE	TON	13	13	0
40300600	SEAL COAT AGGREGATE	TON	13	13	0
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	0	1
50200100	STRUCTURE EXCAVATION	CU YD	82	0	82
50300225	CONCRETE STRUCTURES	CU YD	27.2	0	27.2
50300280	CONCRETE ENCASEMENT	CU YD	4.2	0	4.2
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2100	0	2100
50800105	REINFORCEMENT BARS	POUND	3530	0	3530
50901050	* STEEL RAILING, TYPE SM	FOOT	140	0	140
51201400	FURNISHING STEEL PILES HP10x42	FOOT	415	0	415
51202305	DRIVING PILES	FOOT	415	0	415
51203400	TEST PILE STEEL HP10x42	EACH	1	0	1
51500100	NAME PLATES	EACH	1	0	1
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	630	0	630
63000001	* STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	150.0	150.0	0
63100045	* TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2	0
63100087	* TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	0
63100167	* TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	0
67100100	MOBILIZATION	L SUM	1	1	0
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1	0	1
78201000	* TERMINAL MARKER - DIRECT APPLIED	EACH	2	0	2

* INDICATES SPECIALTY ITEM



EXISTING TYPICAL SECTION

STA 439+25.00 TO STA 441+28.17
STA 441+99.83 TO STA 444+00.00



PROPOSED TYPICAL SECTION

STA 439+25.00 TO STA 441+28.17
STA 441+99.83 TO STA 444+00.00

GENERAL NOTES

1. THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007, AND THE SPECIAL PROVISIONS.
2. ALL STATIONING REFERS TO THE CENTERLINE OF NEW CONSTRUCTION
3. THE EXISTING ROAD SHALL REMAIN CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION; SEE SPECIAL PROVISIONS.
4. THE HIGHWAY STANDARD NUMBERS LISTED SHALL NOT BE SUPERCEDED BY LATER REVISIONS OF THE STANDARDS LISTED IN THE PLANS.
5. THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM AVAILABLE RECORD INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE. FIELD MARKING OF FACILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 48 HOURS ADVANCE NOTICE TO J.U.L.I.E. ☎ (800) 892-0123.
6. THE FOLLOWING CONSTANTS WERE USED IN THE CALCULATIONS OF QUANTITIES FOR THIS PROJECT.

BITUMINOUS MATERIALS (PRIME COAT) - 0.50 GAL. / SQ. YD.
BITUMINOUS COVER COAT MATERIAL - 0.50 GAL. / SQ. YD.
COVER COAT AGGREGATE - 25 LBS. / SQ. YD.
BITUMINOUS SEAL COAT MATERIAL - 0.50 GAL. / SQ. YD.
SEAL COAT AGGREGATE - 25 LBS. / SQ. YD.

FILE NAME =	USER NAME = HURST-ROSCH	DESIGNED JJC	REVISED -
ts\132-3928_nokoms_rd_bridg\ dgn\gen notes & typ.dgn		DRAWN UJ	REVISED -
		CHECKED MAR	REVISED -
		DATE 9-14-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, SUMMARY OF QUANTITIES AND TYPICAL SECTIONS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE. 723	SECTION 08-00129-00-BR	COUNTY MONTGOMERY	TOTAL SHEETS 18	SHEET NO. 2
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				CONTRACT NO. 93498

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EARTH EXCAVATION					
Location		Earth Excavation	Excavation to be used in Embankment	Embankment	Earthwork Balance**
From	To	Cubic Yard	Cubic Yard	Cubic Yard	Cubic Yard
439+25	444+00	365	274	583	-309
Total		365	274	583	-309

* Adjusted for Shrinkage (25% Shrinkage Assumed)
 ** Waste (+) or Shortage (-)

SEEDING, CLASS 2			
Nokomis Road			ACRE
439+25	to	444+00	0.50
Total			0.5

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS				
Nokomis Road				FOOT
440+18.50	to	440+81.00	Rt	62.5
440+80.00	to	440+92.50	Lt	12.5
442+35.50	to	442+48.00	Rt	12.5
442+47.00	to	443+09.50	Lt	62.5
Total				150.0

BITUMINOUS MATERIALS (PRIME COAT)			
Nokomis Road			GALLON
439+25.00	to	441+28.17	270.89
441+99.83	to	444+00.00	266.92
Total			538

MULCH, METHOD 2			
Nokomis Road			ACRE
439+25	to	444+00	0.50
Total			0.5

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT				
Nokomis Road				EACH
439+68.50	to	440+18.50	Rt	1
443+09.50	to	443+59.50	Lt	1
Total				2

BITUMINOUS MATERIALS (COVER AND SEAL COATS)			
Nokomis Road			GALLON
439+25.00	to	441+28.17	541.79
441+99.83	to	444+00.00	533.84
Total			1076

NITROGEN FERTILIZER NUTRIENT			
0			POUND
439+25	0	444+00	45.00
Total			45

TRAFFIC BARRIER TERMINAL, TYPE 2				
Nokomis Road				EACH
440+67.50	to	440+80.00	Lt	1
442+48.00	to	442+60.50	Rt	1
Total				2

PHOSPHORUS FERTILIZER NUTRIENT			
Nokomis Road			POUND
439+25	to	444+00	45.00
TOTAL			45

TRAFFIC BARRIER TERMINAL, TYPE 6A				
Nokomis Road				EACH
440+81.00	to	441+24.00	Rt	1
440+92.50	to	441+35.50	Lt	1
441+92.50	to	442+35.50	Rt	1
442+04.00	to	442+47.00	Lt	1
Total				4

POTASSIUM FERTILIZER NUTRIENT			
Nokomis Road			POUND
439+25	to	444+00	45.00
TOTAL			45

COVER COAT AGGREGATE			
Nokomis Road			TON
439+25.00	to	441+28.17	6.77
441+99.83	to	444+00.00	6.67
Total			13.4

AGGREGATE BASE COURSE, TYPE A 8"			
Nokomis Road			SQ YD
439+25.00	to	441+28.17	519.2
441+99.83	to	444+00.00	511.5
Total			1031

SEAL COAT AGGREGATE			
Nokomis Road			TON
439+25.00	to	441+28.17	6.77
441+99.83	to	444+00.00	6.67
Total			13.4

FILE NAME =	USER NAME = HURST-ROSCHE	DESIGNED JJC	REVISED -
\\132-3928.nokomis_rd_bridges\dgn\QUANTITIES.dgn		DRAWN UJ	REVISED -
	PLOT SCALE = 15,0000 ' / IN.	CHECKED MAR	REVISED -
	PLOT DATE = 9/15/2009	DATE 9-14-2009	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

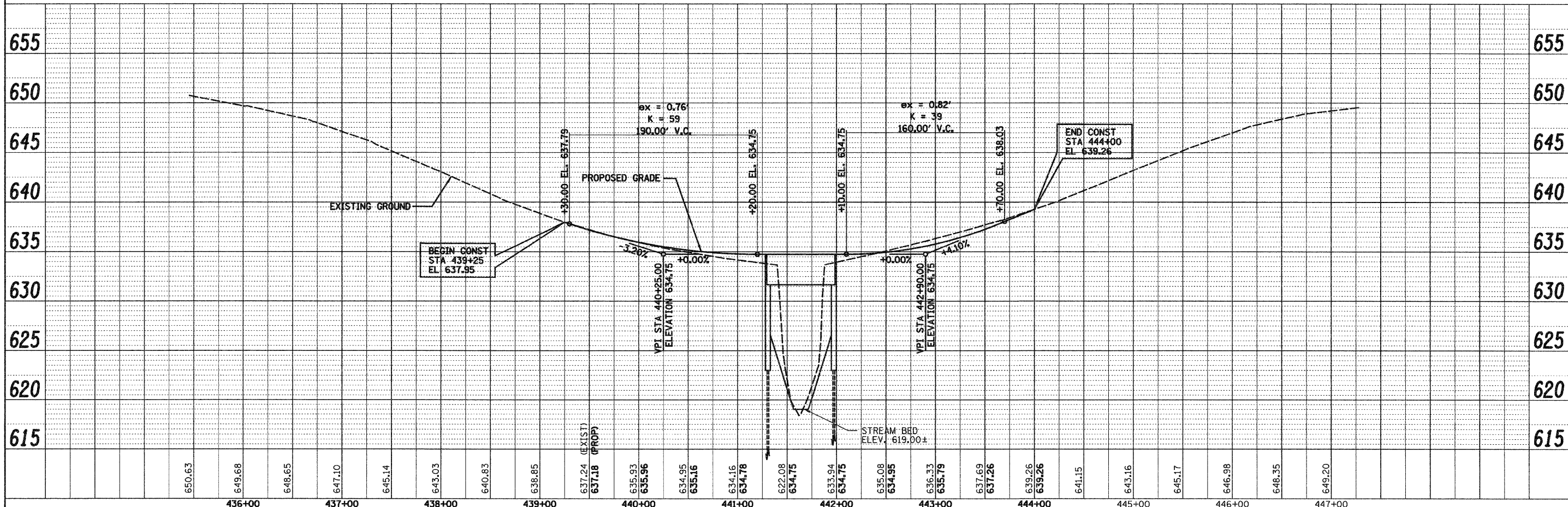
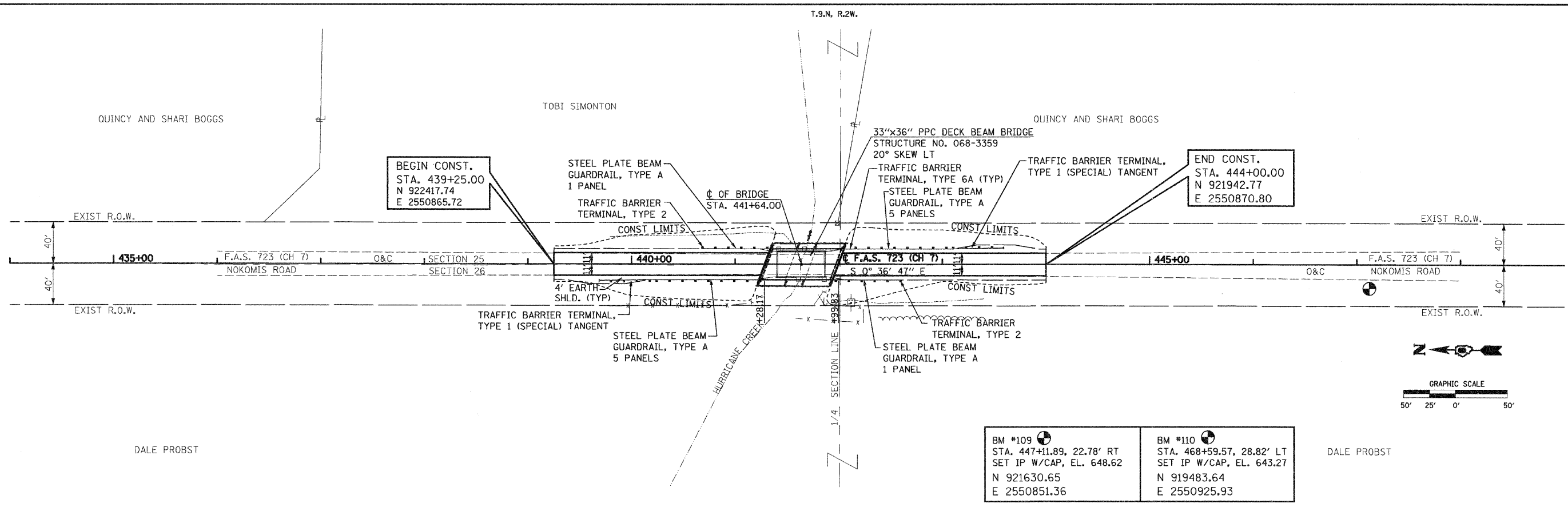
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
723	08-00129-00-BR	MONTGOMERY	18	3
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT			CONTRACT NO. 3498	

QUANTITIES.dgn 9/15/2009 3:07:36 PM

DATE	
BY	
PLAN	
SURVEYED	
ALIGNED	
CHECKED	
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DATE	
BY	
PROFILE	
SURVEYED	
GRADES CHECKED	
B.M. NOTED	
STRUCTURE NOTATIONS CIRD	
NO.	



FILE NAME =	USER NAME = HURST-ROSCHE	DESIGNED JJC	REVISED -	F.A.S. RTE. 723	SECTION 08-00129-00-BR	COUNTY MONTGOMERY	TOTAL SHEETS 18	SHEET NO. 4
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				PLAN AND PROFILE SHEET				
SCALE: 1"=50'				SHEET NO. 1 OF 1 SHEETS STA. 439+25 TO STA. 444+00				
CONTRACT NO. 93498				FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

Bench Mark: BM #109 is an iron pin with cap at Station 447+11.89, 22.78' RT.
Elevation = 648.62

Existing Structure: S.N. 068-3012 was built in 1936 as Section 11BWPS0 at Station 441+62.50 by the Illinois Department of Transportation as a reinforced concrete slab (30±cy) bridge on steel stringers (11±kips) and reinforced concrete closed abutments. There have been no known major reconstruction activities on this structure since its installation. The back to back of abutments dimension is 47'-0", the out to out width is 25'-0" and the bridge roadway clear width is 24'-0". The structure has 3" to 4" of oil and chip surfacing built up as the wearing surface. The roadway will remain closed to through traffic during construction, and local detours will be in place.

No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
with 2008 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

HIGHWAY CLASSIFICATION

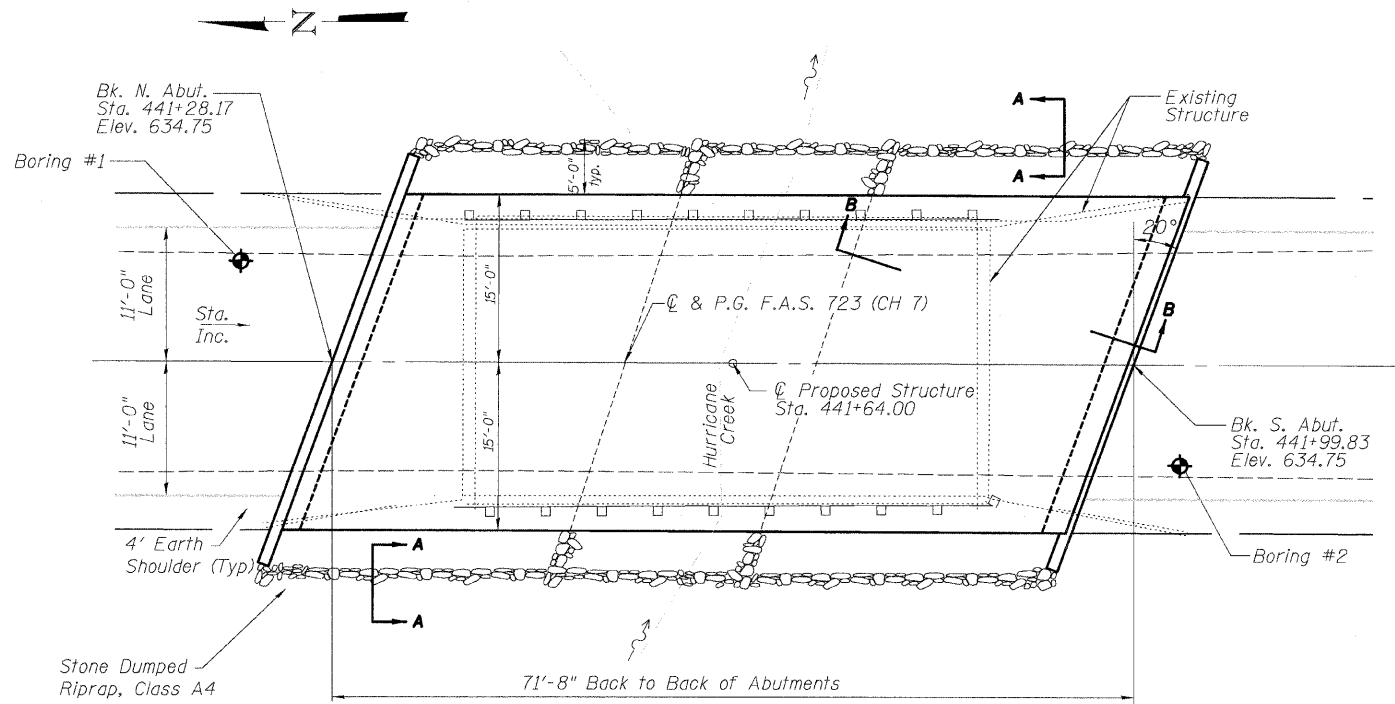
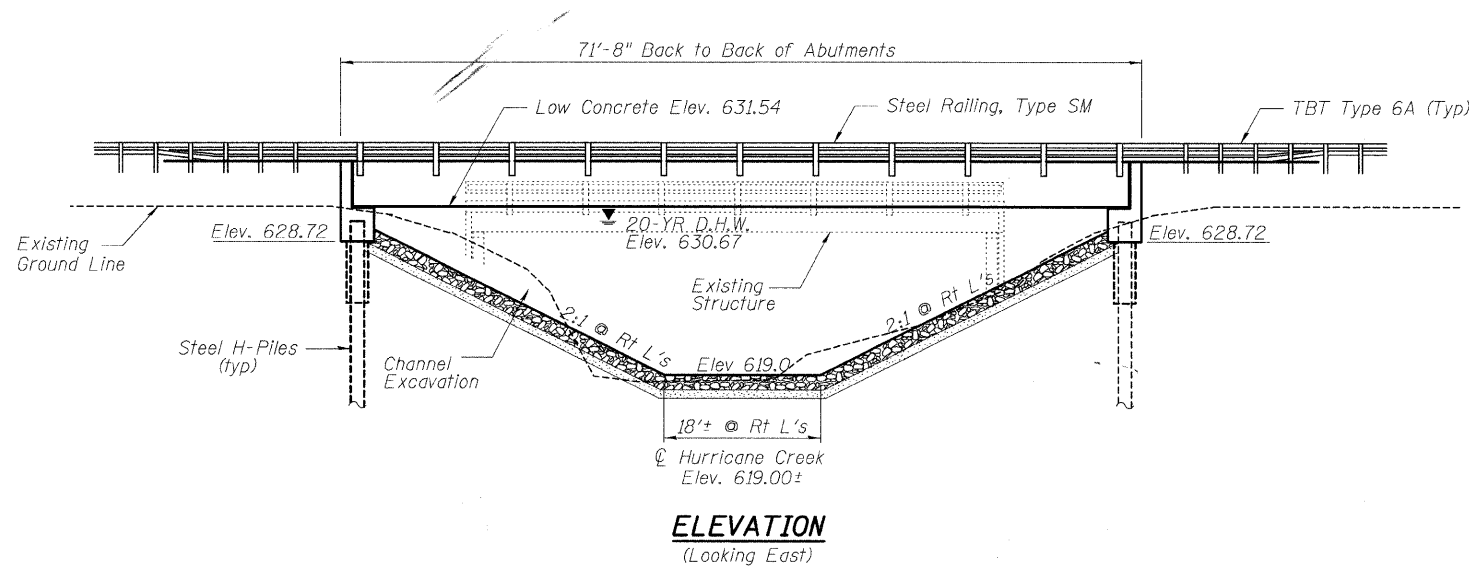
F.A.S. 723 - Ch #7 Nokomis Road
Functional Class: Major Collector (Non-Urban)
Current ADT: 1156
ADTT: 3%

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. ($S_{0.1}$) = 0.20
Design Spectral Acceleration at 0.2 sec. ($S_{0.2}$) = 0.44
Soil Site Class = D

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. 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.



PLAN

DESIGN SCOUR ELEVATION TABLE

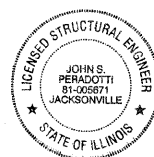
Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	N/A	N/A

I certify that to the best of my knowledge, information and belief, this Bridge Design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the "A.A.S.H.T.O. Standard Specification for Highway Bridges."

DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC

HR
HURST-ROSCHÉ
ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER 184-00078

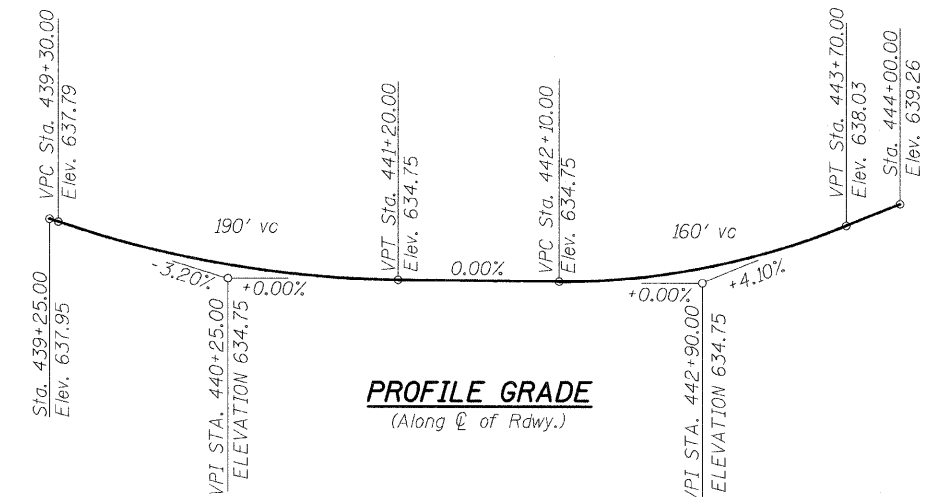
John S. Peradotti 7-10-09
JOHN S. PERADOTTI, S.E.
ILLINOIS STRUCTURAL NO. 5671
EXPIRES: NOVEMBER 30, 2010



WATERWAY INFORMATION

Drainage Area = 6.51 sq. mi. Low Grade Elev. 633.65 ft @ Sta. 441+64

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	2031	326	405	630.02	0.54	0.35	630.56	630.37
Overtopping	20	2520	356	445	630.67	0.91	0.58	631.58	631.25
Max. Calc.	100	3937	366	511	632.02	2.39	1.43	634.41	633.45



PROFILE GRADE
(Along \hat{C} of Rdwy.)

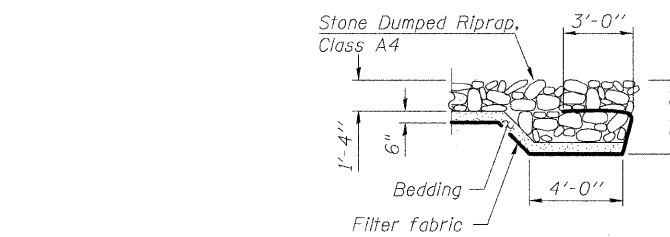
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Filter Fabric	Sq. Yd.		340	340
Stone Dumped Riprap, Class A4	Sq. Yd.		340	340
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		82	82
Concrete Structures	Cu. Yd.		27.2	27.2
* Concrete Encasement	Cu. Yd.		4.2	4.2
* Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,100		2,100
Reinforcement Bars	Pound		3,530	3,530
Steel Railing, Type SM	Foot	140		140
* Furnishing Steel Piles HP 10x42	Foot		415	415
Driving Piles	Foot		415	415
Test Pile Steel HP 10x42	Each		1	1
Name Plates	Each	1		1
Portland Cement Mortar Fairing Course	Foot	630		630

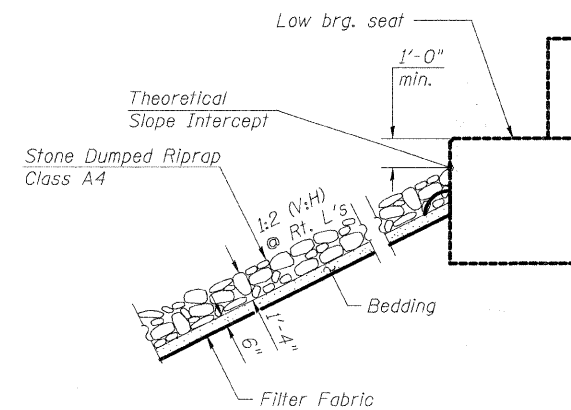
* See Special Provisions

HURRICANE CREEK
BUILT 2010 BY
MONTGOMERY COUNTY
SEC. 08-00129-00-BR
STATION 441+64.00
STRUCTURE NO. 068-3359
LOADING HL-93

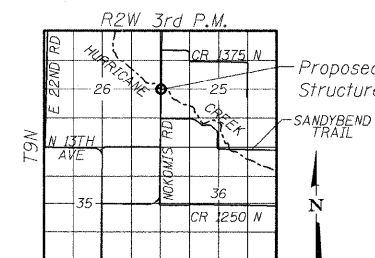
NAME PLATE
See Std. 515001



SECTION A-A



SECTION B-B



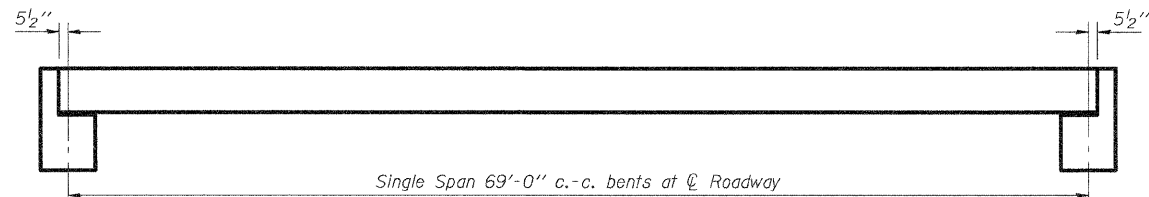
LOCATION SKETCH

GENERAL PLAN & ELEVATION

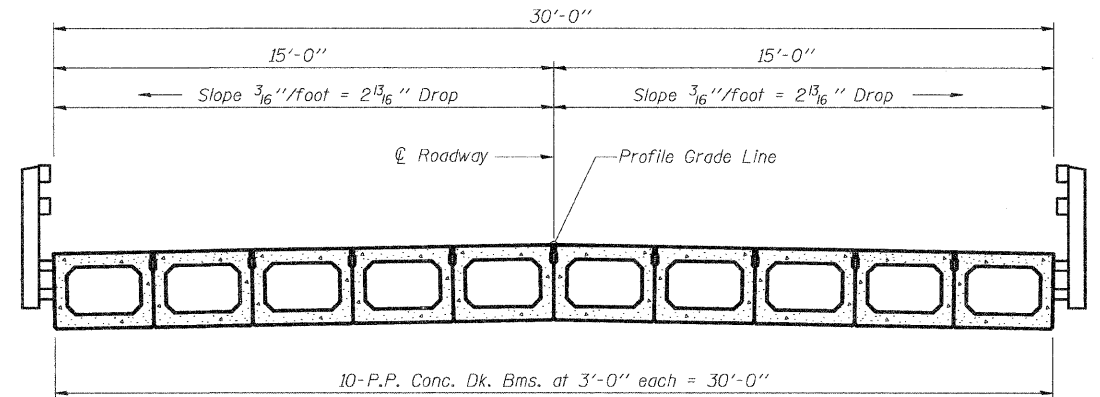
NOKOMIS ROAD OVER
HURRICANE CREEK
F.A.S. 723 - SEC. 08-00129-00-BR
MONTGOMERY COUNTY
STATION 441+64.00
STRUCTURE NO. 068-3359

SHEET NO. 1	F.A.S. RTE. 723	SECTION 08-00129-00-BR	COUNTY MONTGOMERY	TOTAL SHEETS 18	SHEET NO. 5
9 SHEETS					
CONTRACT NO. 93498					
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

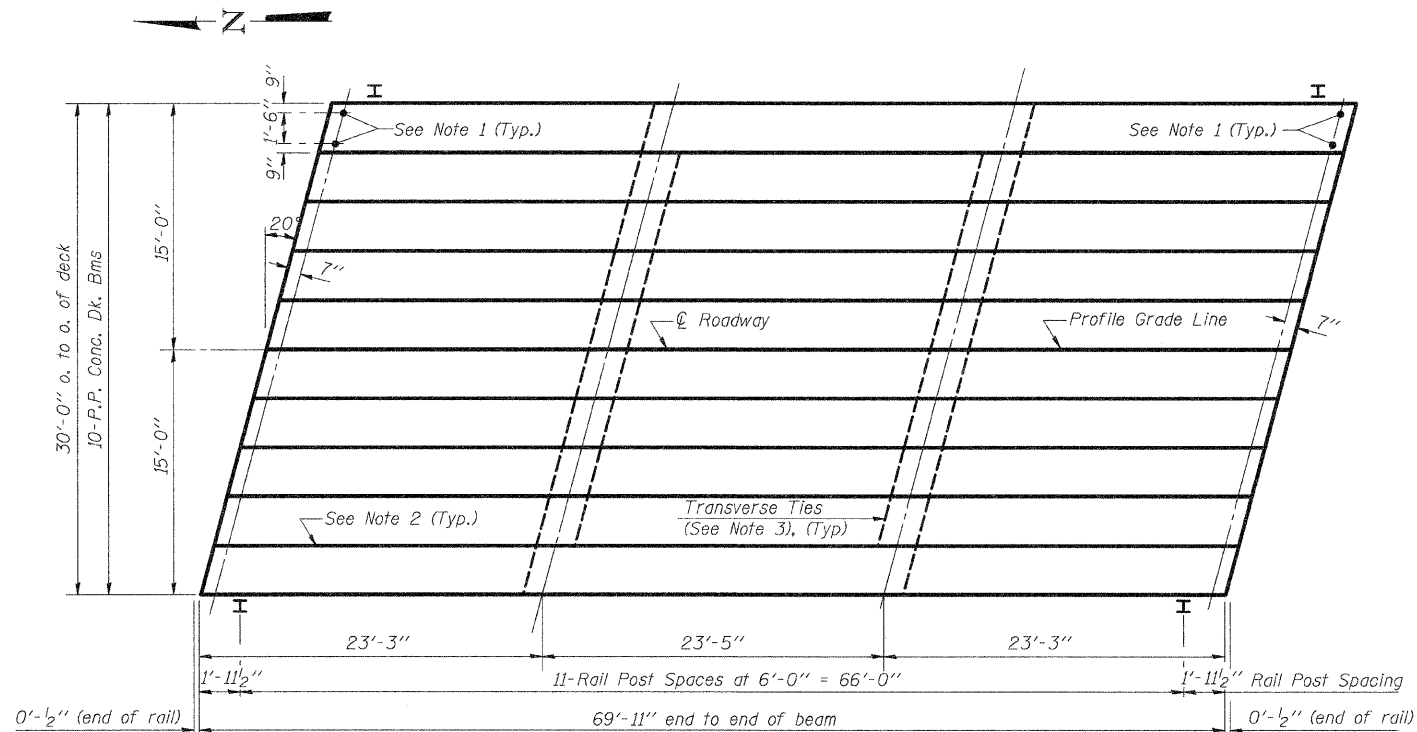
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



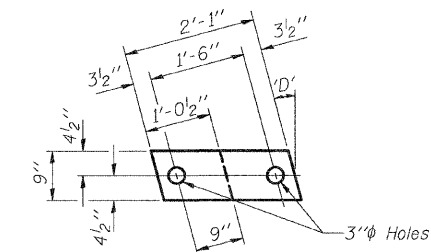
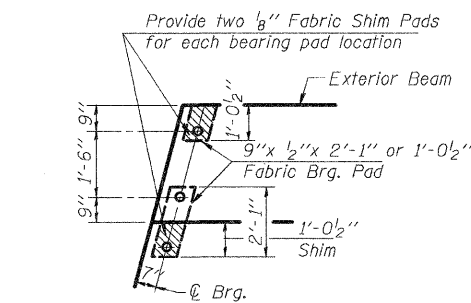
TYPICAL ELEVATIONS



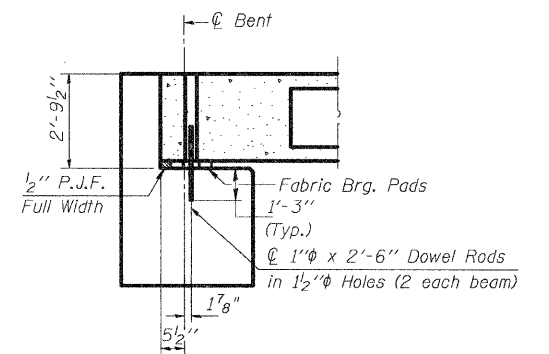
CROSS SECTION



PLAN



1/2" FABRIC BRG. PAD DETAILS



SECTION AT ABUTS.
(Along $\text{\textcircled{C}}$ Beams)

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" ϕ 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.

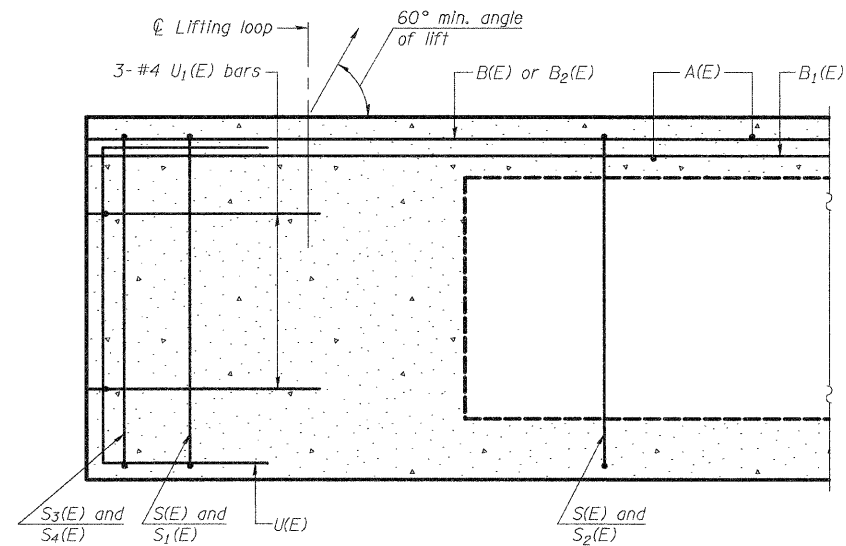
DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC

HR
HURST-ROSCHÉ
ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER: 184-000298

P.P.C. DECK BEAM SUPERSTRUCTURE
STRUCTURE NO. 068-3359

SHEET NO. 2 9 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	723	08-00129-00-BR	MONTGOMERY	18	6
			CONTRACT NO. 93498		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

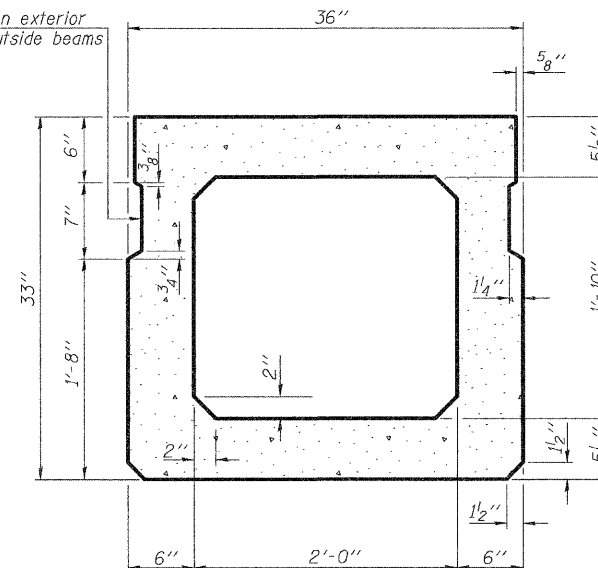
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



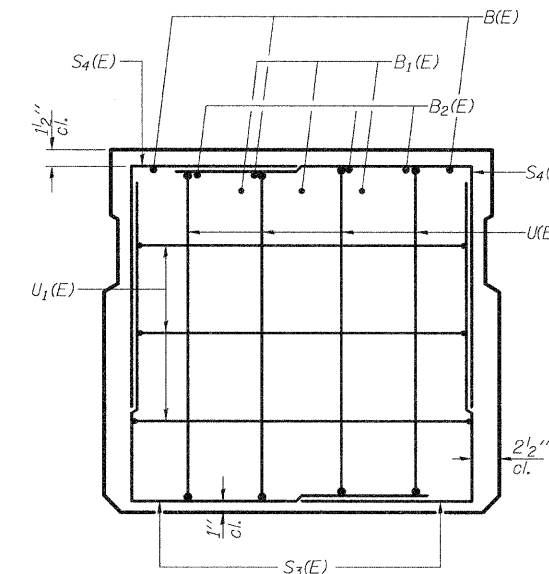
SECTION C-C

* Omit key on exterior face of outside beams

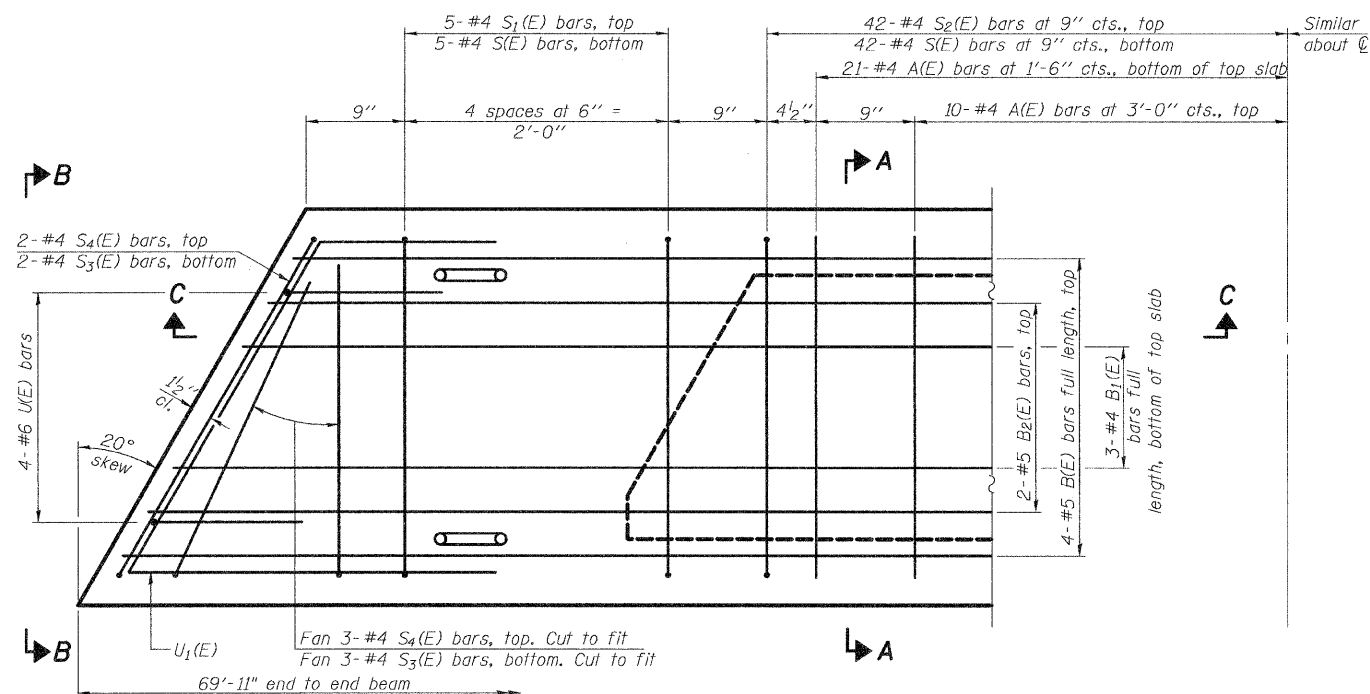
* Rail post anchor devices (Sht 6 of 9) shall be cast into exterior face of outside beams.



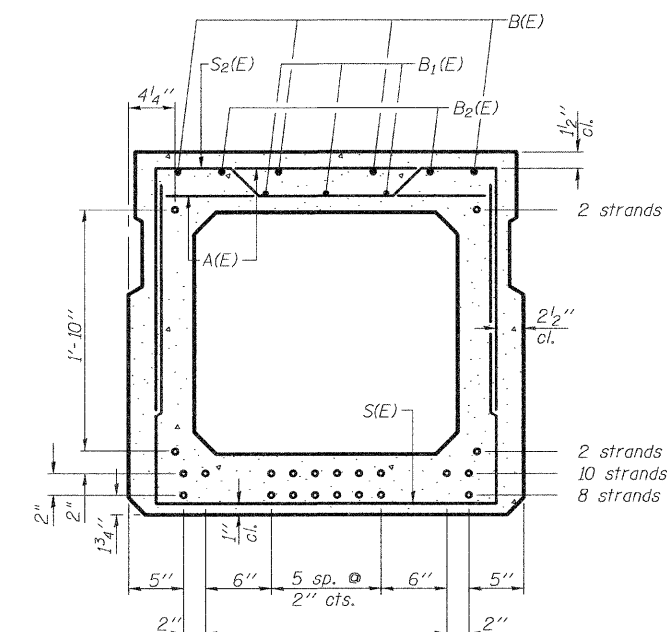
SECTION A-A
(Showing dimensions)



VIEW B-B



PLAN VIEW



SECTION A-A

(Showing reinforcement and permissible strand locations)

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	62	#4	2'-7"	—
B(E)	4	#5	69'-7"	—
B1(E)	3	#4	69'-7"	—
B2(E)	4	#5	14'-0"	—
S(E)	94	#4	7'-5"	U
S1(E)	10	#4	6'-3"	U
S2(E)	84	#4	6'-6"	U
S3(E)	5	#4	4'-5"	U
S4(E)	5	#4	3'-10"	U
U(E)	8	#6	5'-0"	U
U1(E)	6	#4	6'-2"	U

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

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4 inches in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC

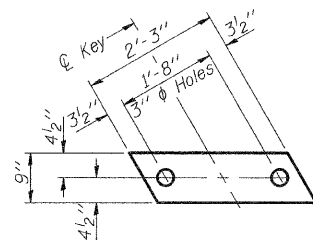
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HURST-ROSCHKE
ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER: 184-00078

33" x 36" PPC DECK BEAM
STRUCTURE NO. 068-3359

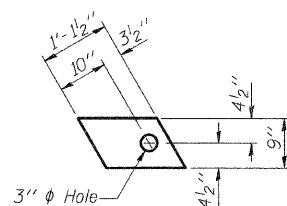
SHEET NO. 3 9 SHEETS	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	723	08-00129-00-BR	MONTGOMERY	18	7
CONTRACT NO. 93498					
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

© 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



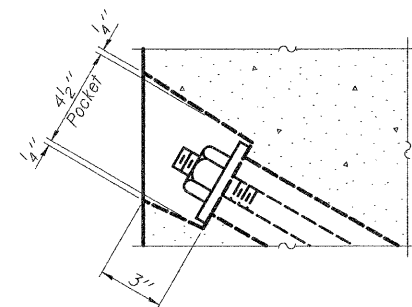
FABRIC BEARING PAD
(Interior)



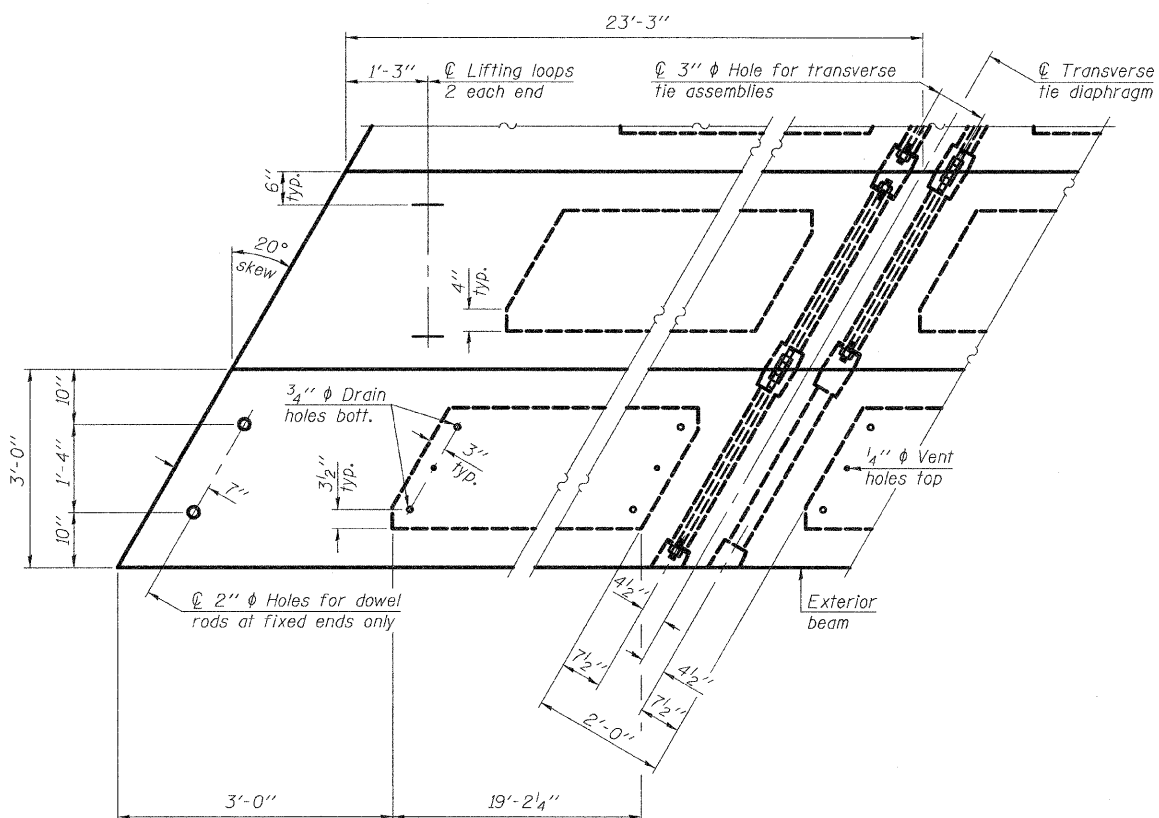
FABRIC BEARING PAD
(Exterior)

FIXED

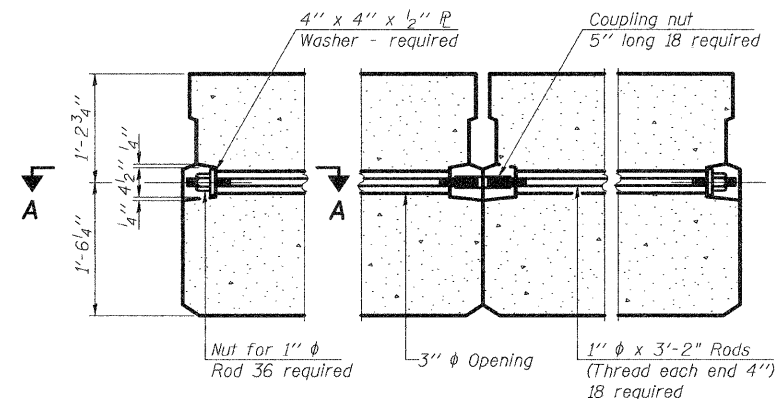
Note: Omit holes when using expansion bearings.



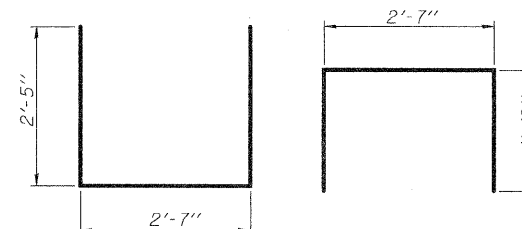
SECTION A-A



PLAN VIEW

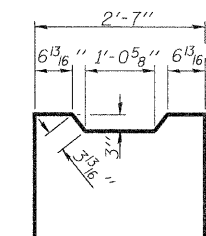


TYPICAL TRANSVERSE TIE ASSEMBLY

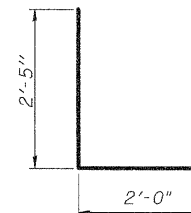


BAR S₁(E)

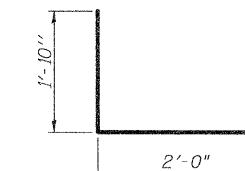
BAR S(E)



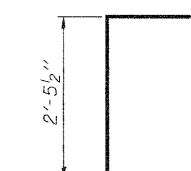
BAR S₂(E)



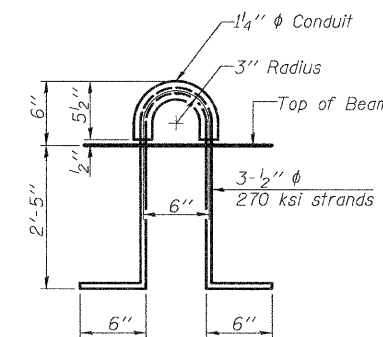
BAR S₃(E)



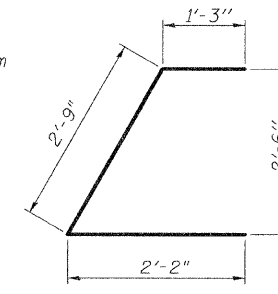
BAR S₄(E)



BAR U(E)



LIFTING LOOP DETAIL



BAR U₁(E)

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	2100
---	---------	------

**33" X 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 068-3359**

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

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" 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, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

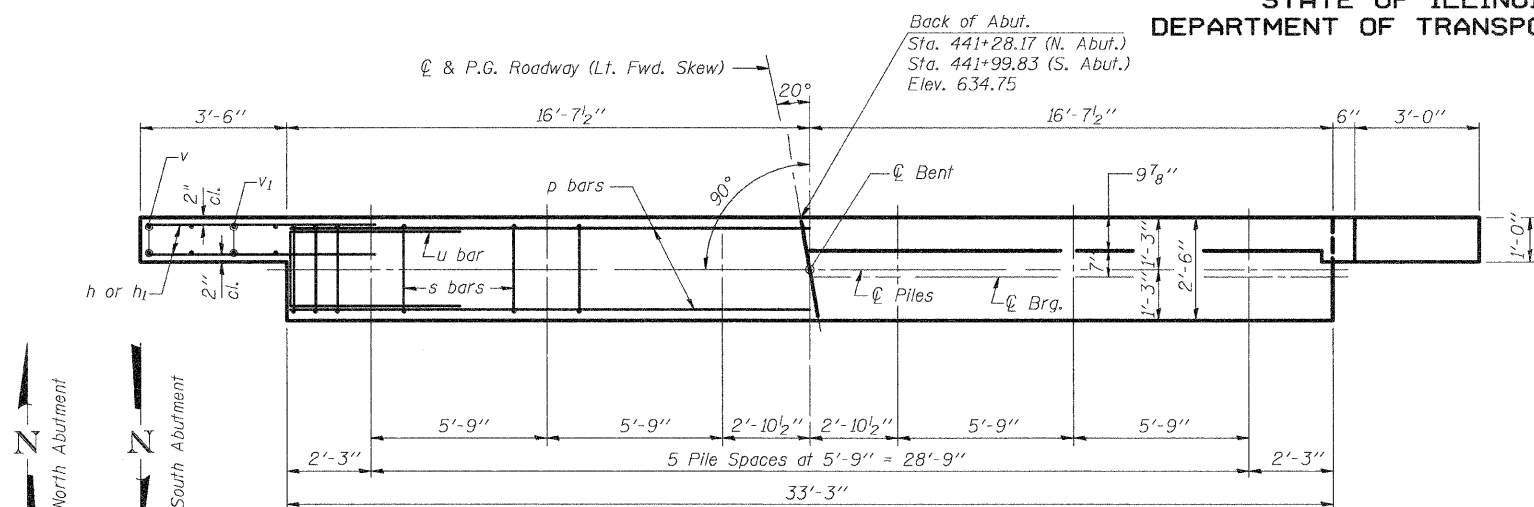
DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC



SHEET NO. 4 9 SHEETS	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	723	08-00129-00-BR	MONTGOMERY	18	8
			CONTRACT NO. 98498		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

3:07:16 PM 3/17/2005 3:07:16 PM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

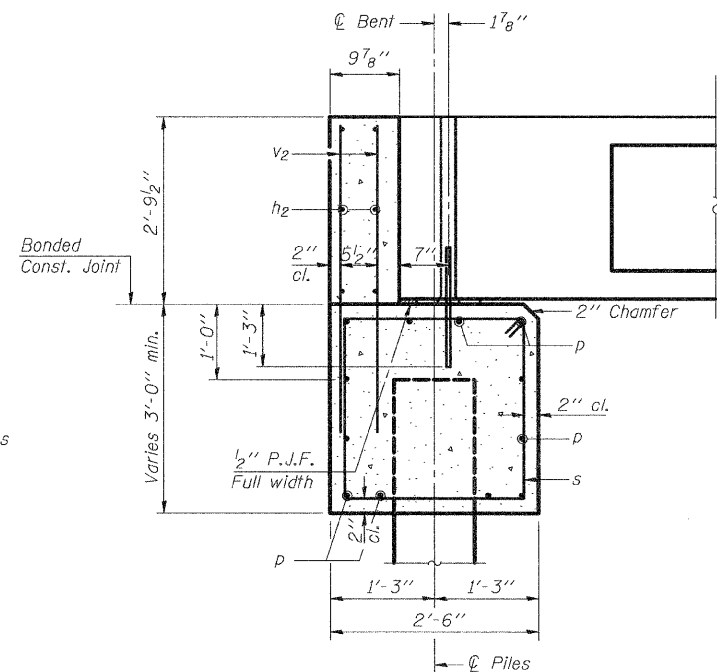


PLAN

(North Abutment shown)
(South Abutment similar, except as noted)

PILE DATA (2-ABUTS.)

Type: HP 10x42
Nominal Required Bearing: 160 Kips
Factored Resistance Available: 80 Kips
Est. Length: 35 Feet (North Abut)
40 Feet (South Abut)
No. Production Piles: 11
No. Test Piles: 1 (North Abut)

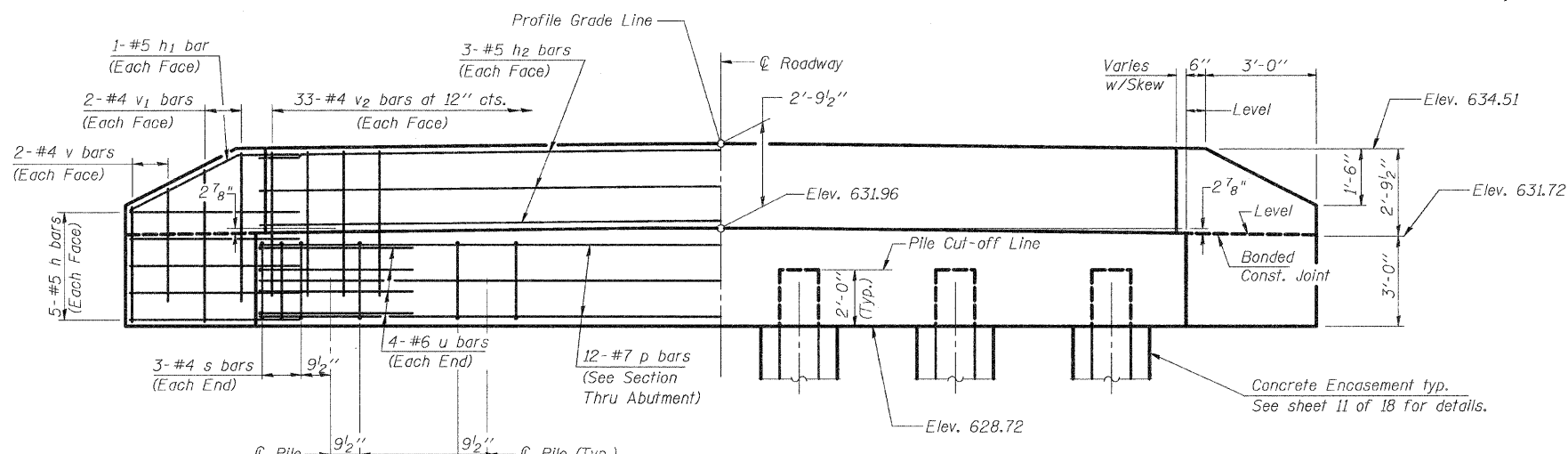


SECTION THRU ABUTMENT

(At Right Angles)

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi



ELEVATION AT NORTH ABUTMENT

(Looking North)
(South Abutment similar, except as noted)

BILL OF MATERIAL FOR THE NORTH ABUTMENT

Bar	No.	Size	Length	Shape
h	20	#5	5'-0"	—
h1	4	#5	5'-3"	—
h2	6	#5	32'-11"	—
p	12	#7	32'-11"	—
s	36	#4	10'-5"	□
u	8	#6	11'-1"	□
v	8	#4	3'-8"	—
v1	8	#4	4'-8"	—
v2	66	#4	4'-5"	—
Structure Excavation				Cu. Yd. 41
Concrete Structures				Cu. Yd. 13.6
Reinforcement Bars				Lb. 1765
Furnishing Steel Piles HP 10x42				Ft. 175
Driving Piles				Ft. 175
Test Pile Steel HP 10x42				Each 1
Concrete Encasement				Cu. Yd. 2.1

BILL OF MATERIAL FOR THE SOUTH ABUTMENT

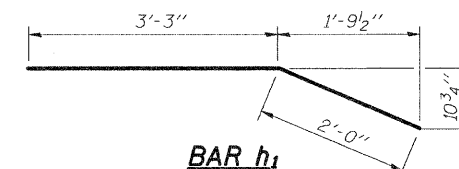
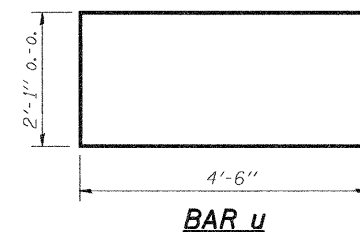
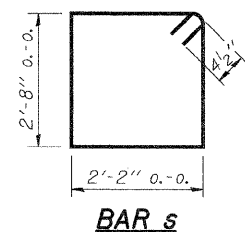
Bar	No.	Size	Length	Shape
h	20	#5	5'-0"	—
h1	4	#5	5'-3"	—
h2	6	#5	32'-11"	—
p	12	#7	32'-11"	—
s	36	#4	10'-5"	□
u	8	#6	11'-1"	□
v	8	#4	3'-8"	—
v1	8	#4	4'-8"	—
v2	66	#4	4'-5"	—
Structure Excavation				Cu. Yd. 41
Concrete Structures				Cu. Yd. 13.6
Reinforcement Bars				Lb. 1765
Furnishing Steel Piles HP 10x42				Ft. 240
Driving Piles				Ft. 240
Concrete Encasement				Cu. Yd. 2.1

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.
- Space reinforcement in cap to miss anchor bolts.

DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC

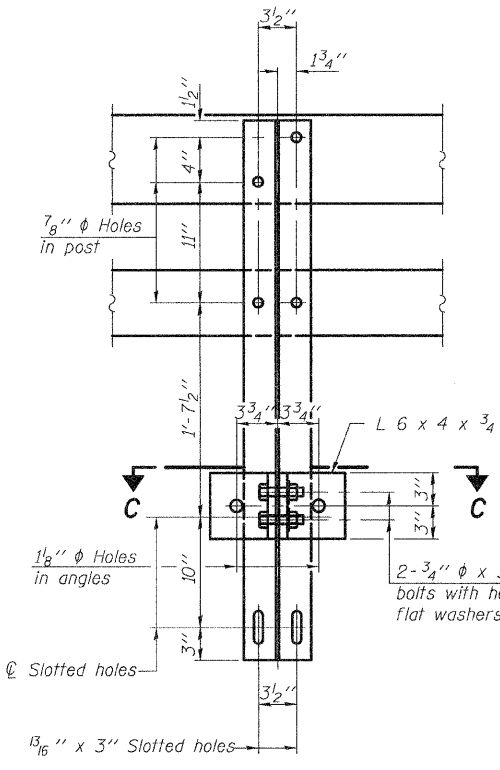
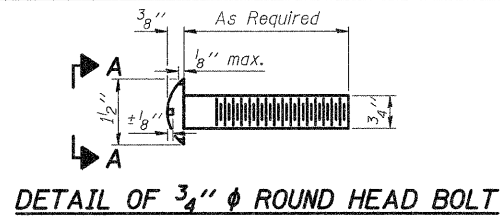
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PROFESSIONAL DESIGN NUMBER: 184-00078



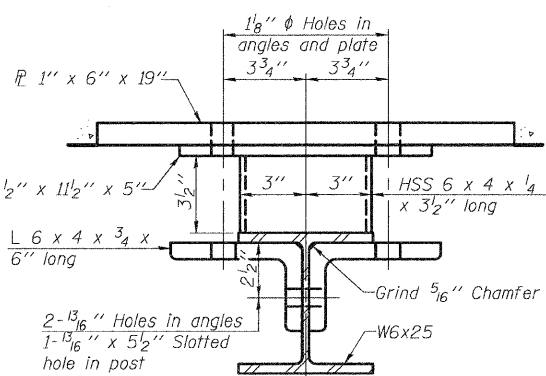
**PPC DECK BEAM PILE BENT ABUTMENT
STRUCTURE NO. 068-3359**

SHEET NO. 5 9 SHEETS	F.A.S. RTE. 723	SECTION 08-00129-00-BR	COUNTY MONTGOMERY	TOTAL SHEETS 18	SHEET NO. 9
	CONTRACT NO. 93498				
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

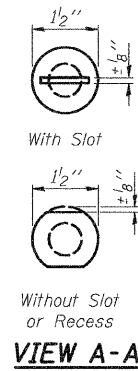
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



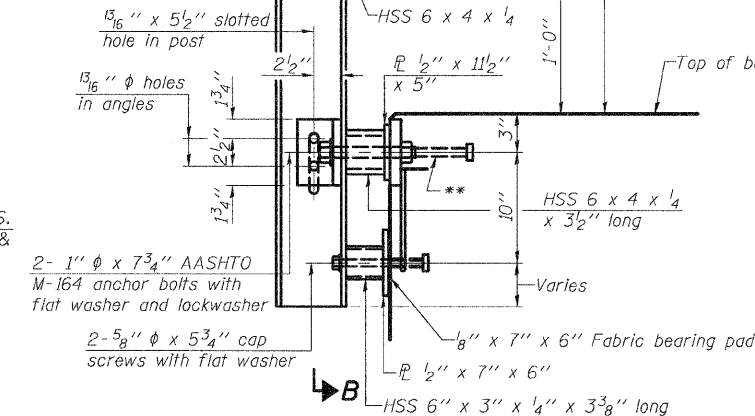
SECTION B-B



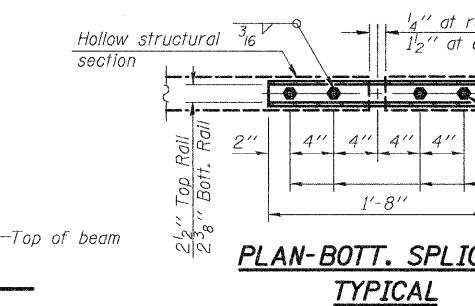
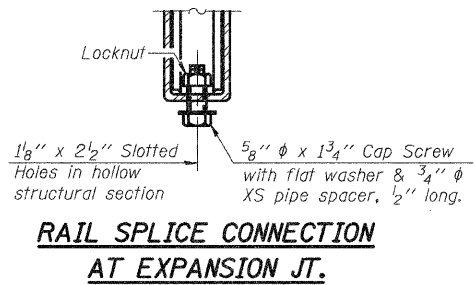
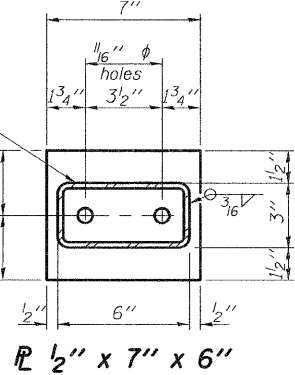
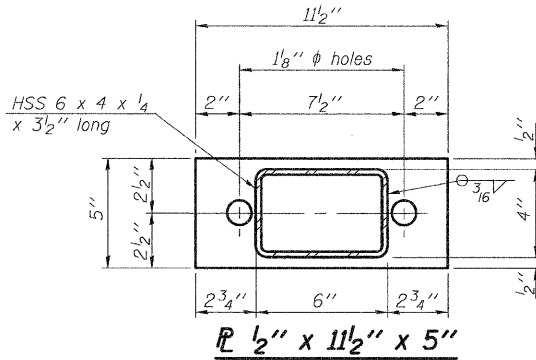
SECTION C-C



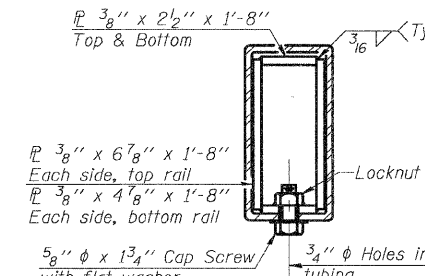
4-3/4" ϕ x 6" Round Head Bolts
(With slot or approved recess in head) with locknut & flat washer.
7/8" ϕ holes in hollow structural section may be drilled in the field.



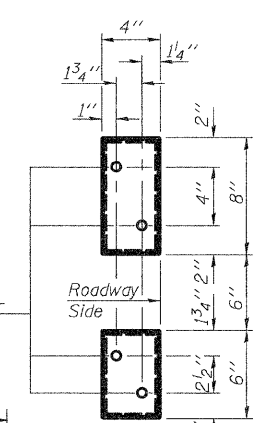
SECTION AT RAIL POST



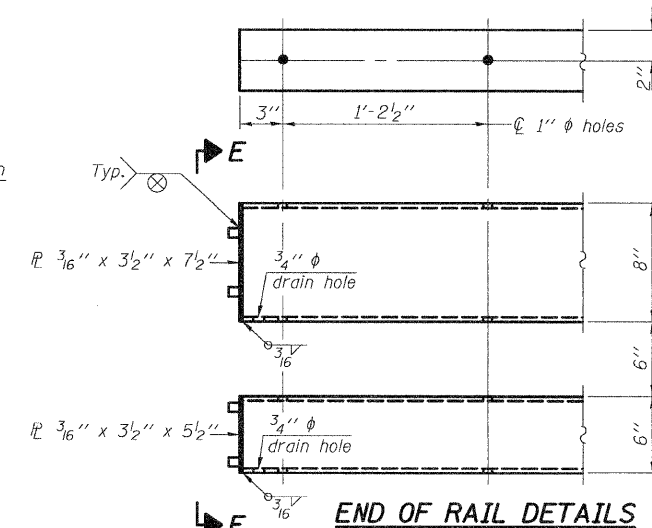
5/8" ϕ x 13/4" Cap Screw with flat washer & 3/4" ϕ XS pipe spacer, 1/2" long.



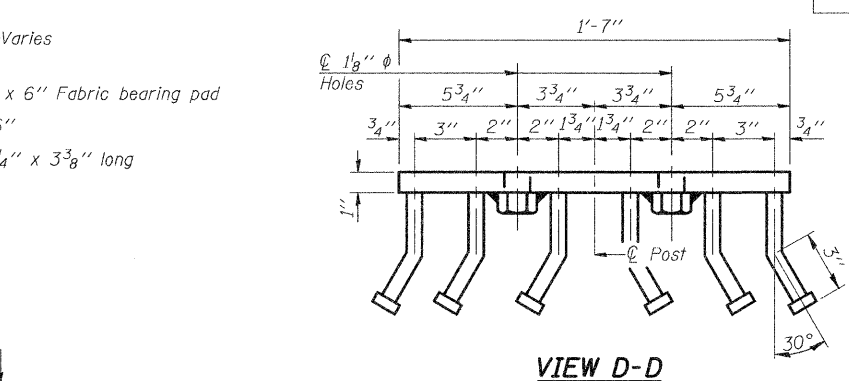
SECTION AT RAIL SPLICE



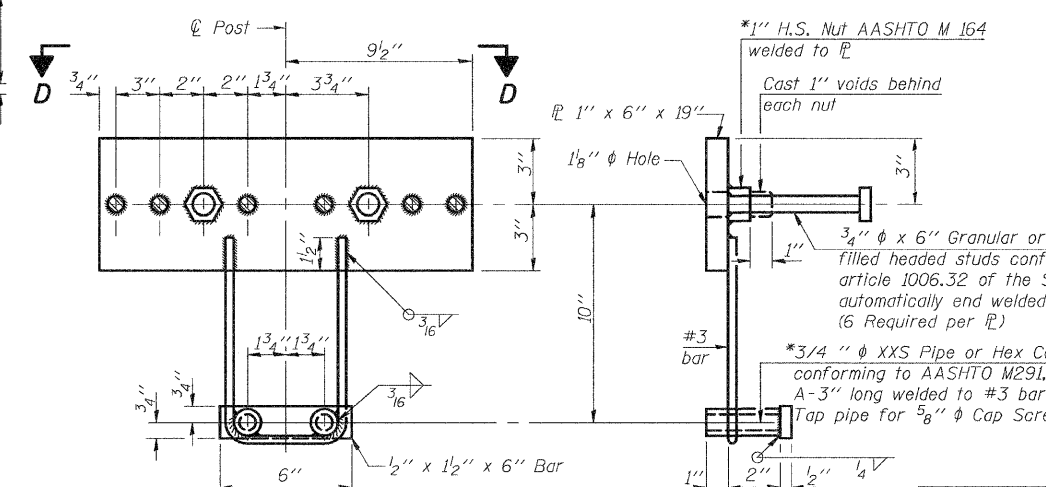
VIEW E-E



END OF RAIL DETAILS



VIEW D-D



ANCHOR DEVICE

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	140

STEEL RAILING, TYPE SM
STRUCTURE NO. 068-3359

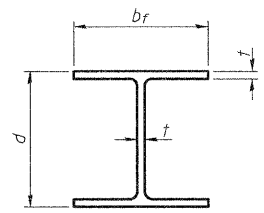
DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC



SHEET NO. 6	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	723	08-00129-00-BR	MONTGOMERY	18	10
CONTRACT NO. 93498					
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

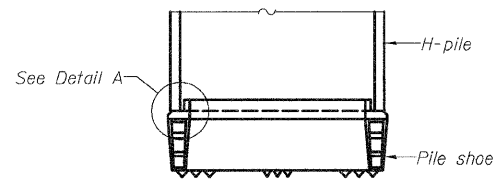
*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

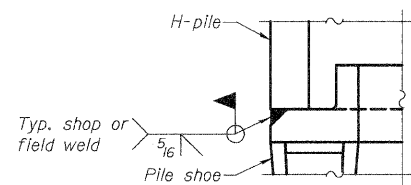


STEEL PILE TABLE

Designation	Depth <i>d</i>	Flange width <i>b_f</i>	Web and Flange thickness <i>t</i>	Encasement diameter <i>A</i>
HP 10x42	9 ³ / ₄ "	10 ⁵ / ₈ "	⁷ / ₁₆ "	24"

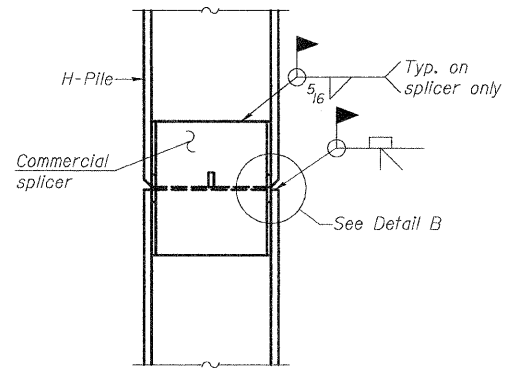


ELEVATION

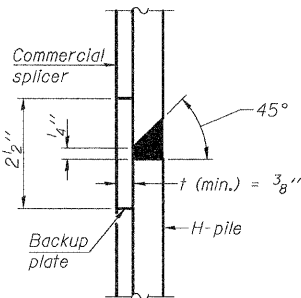


DETAIL A

H-PILE SHOE ATTACHMENT

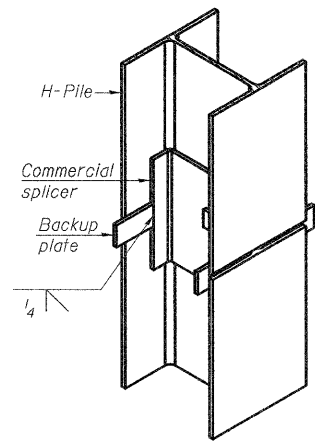


ELEVATION

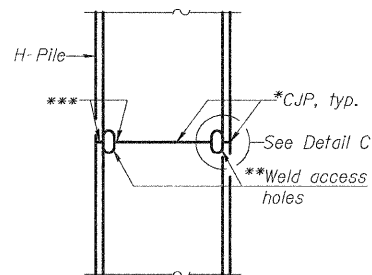


DETAIL "B"

WELDED COMMERCIAL SPLICE

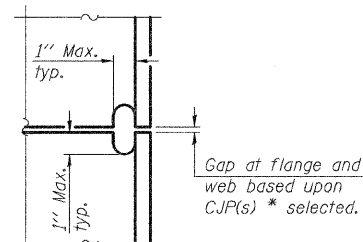


ISOMETRIC VIEW

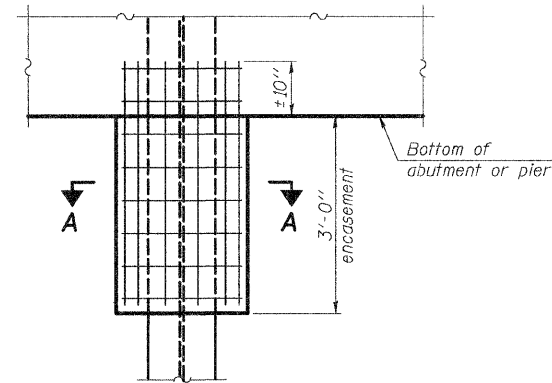


ELEVATION

COMPLETE PENETRATION WELD SPLICE

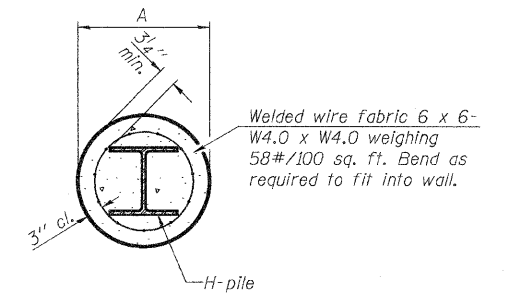


DETAIL C



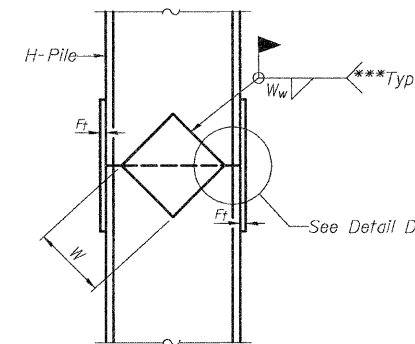
ELEVATION

PILE ENCASEMENT

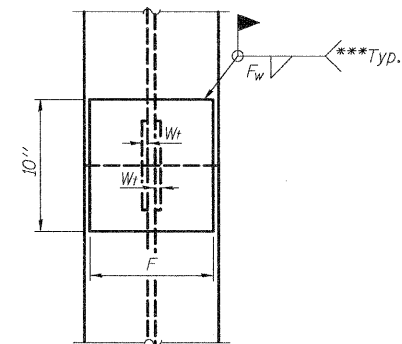


SECTION A-A

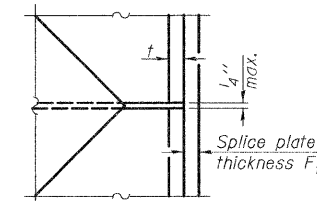
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

Designation	F	F _t	F _w	W	W _t	W _w
HP 10x42	8"	5 ⁵ / ₈ "	9 ⁵ / ₁₆ "	5 ¹ / ₄ "	1 ¹ / ₂ "	3 ³ / ₈ "

WELDED PLATE FIELD SPLICE

DESIGNED	JLG
CHECKED	JSP
DRAWN	UJ
CHECKED	CJC

HR
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ENGINEERS, INC.
PROFESSIONAL DESIGN NUMBER: 144-000296

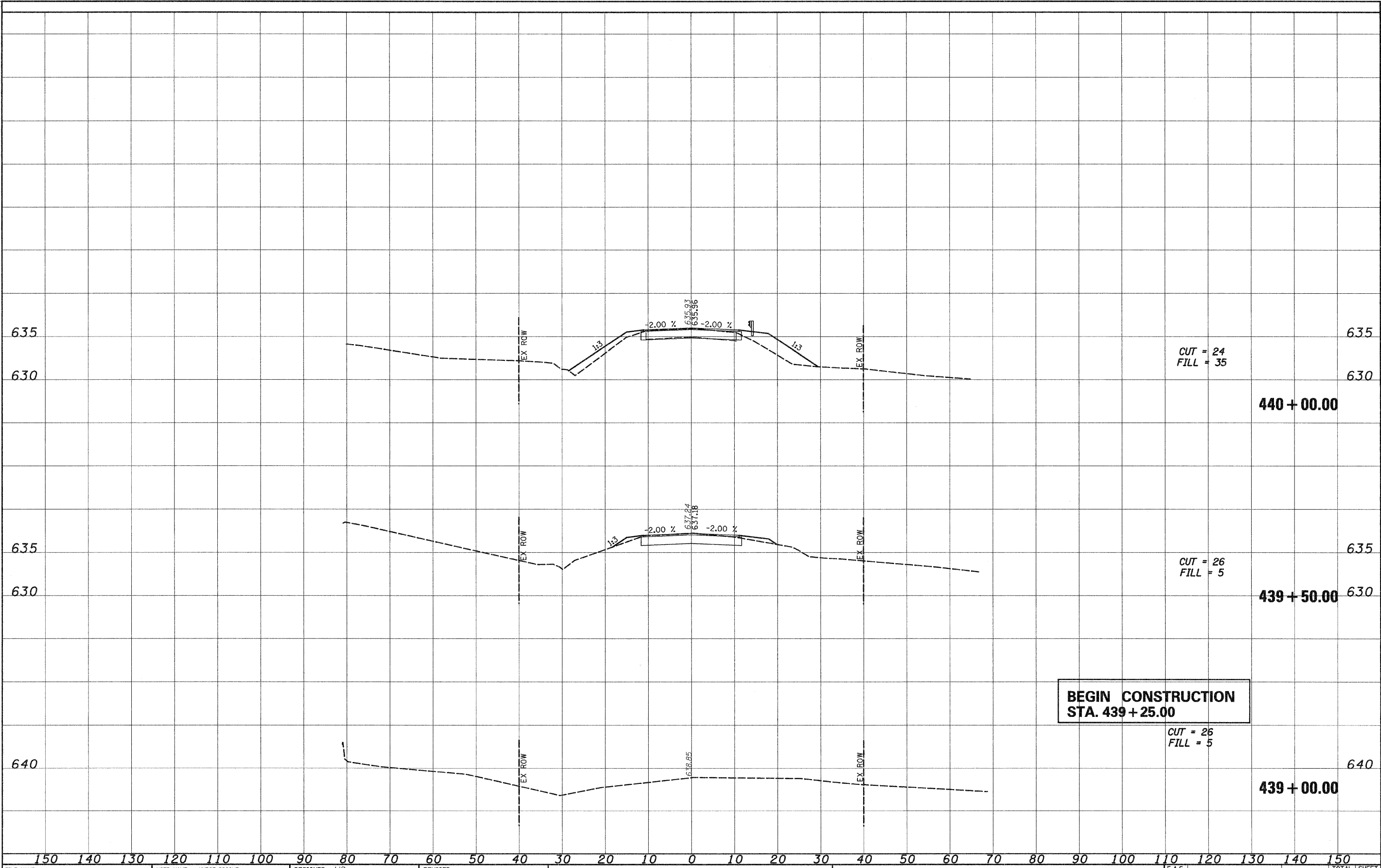
* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
*** Interrupt welds 1/4" from end of each pile.

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

SHEET NO. 7 9 SHEETS	F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	723	08-00129-00-BR	MONTGOMERY	18	11
CONTRACT NO. 93498					
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	



CUT = 24
FILL = 35

440 + 00.00

CUT = 26
FILL = 5

439 + 50.00

**BEGIN CONSTRUCTION
STA. 439 + 25.00**

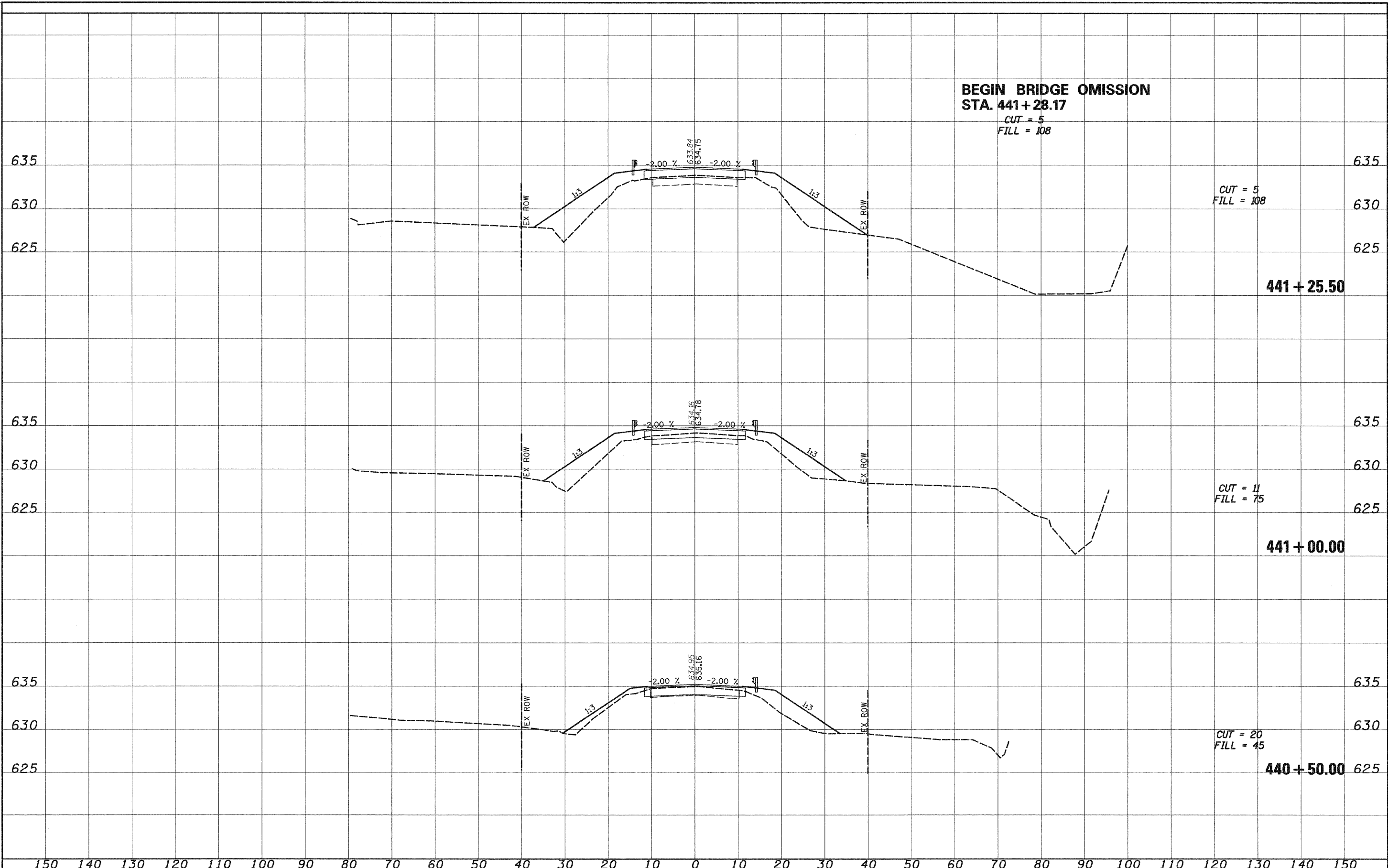
CUT = 26
FILL = 5

439 + 00.00

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PLOT SCALE = 10.0000' / IN.	CHECKED MAR	REVISOR -	SCALE:			SHEET NO. OF SHEETS	STA. 439+00.00 TO STA. 440+00.00	ILLINOIS FED. AID PROJECT		CONTRACT NO. 93498	
PLOT DATE = 9/15/2009	DATE 9-14-09	REVISOR -									

DATE	
BY	
SURVEYED	
TEMPLE	
NOTE BOOK	
AREAS CHECKED	
NO.	

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TEMPLE	
NOTE BOOK	
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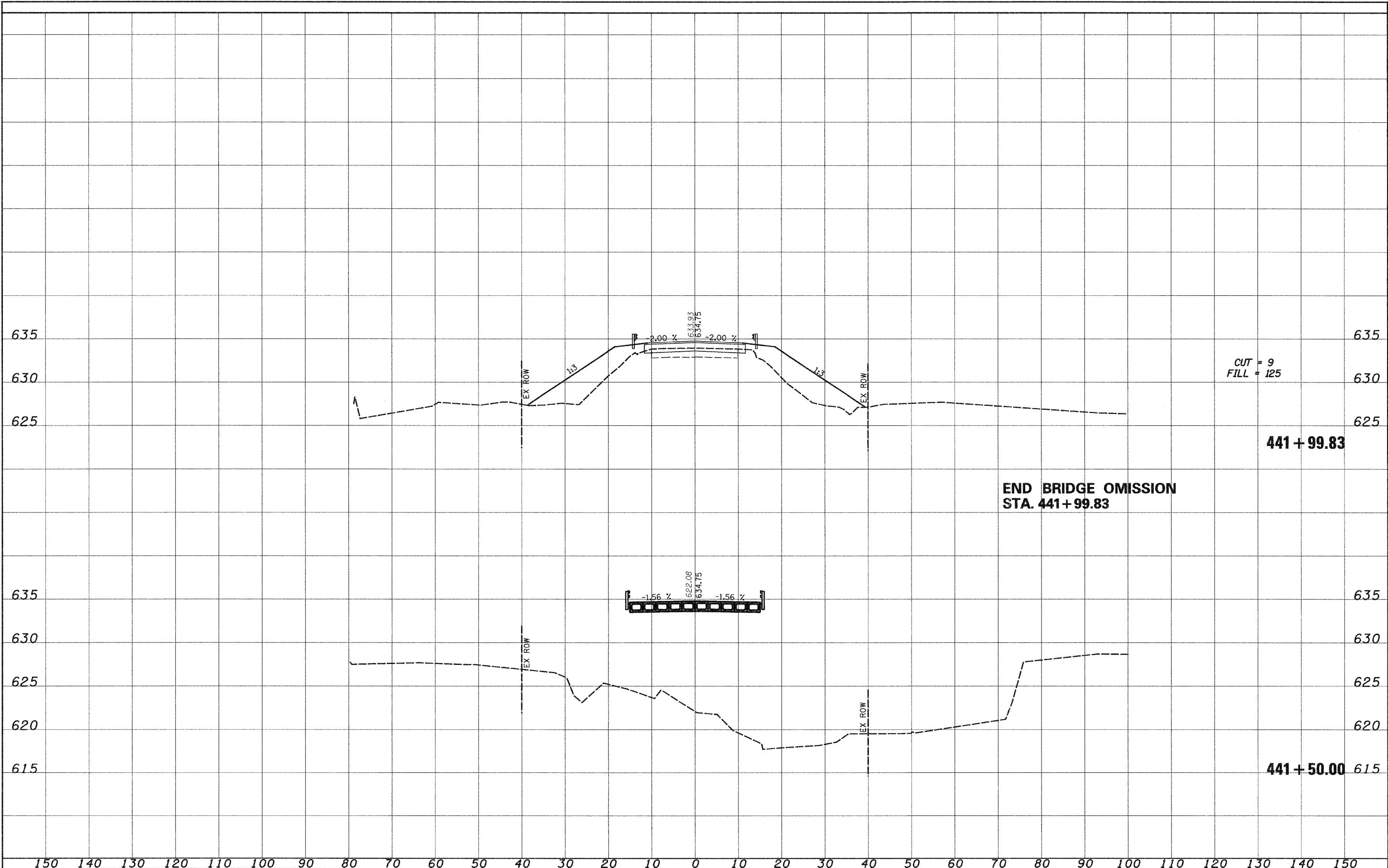


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PLOT SCALE = 10.0000' / IN.	CHECKED MAR	REVISOR -	SCALE:			SHEET NO. OF SHEETS	STA. 440+50.00 TO STA. 441+25.50	CONTRACT NO. 93498		ILLINOIS FED. AID PROJECT
PLOT DATE = 9/15/2009	DATE 9-14-09	REVISOR -								

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BY	
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AREA	
TEMPLATE	
AREAS	
CHECKED	
NO.	



CUT = 9
FILL = 125

441 + 99.83

END BRIDGE OMISSION
STA. 441 + 99.83

441 + 50.00

FILE NAME = T:\132-3928_Hokomis_Rd_Bridge\0gn\XSEC.dgn

USER NAME = HURST-ROSCHÉ

DESIGNED JJC

REVISÉ -

DRAWN UJ

REVISÉ -

CHECKED MAR

REVISÉ -

DATE 9-14-09

REVISÉ -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

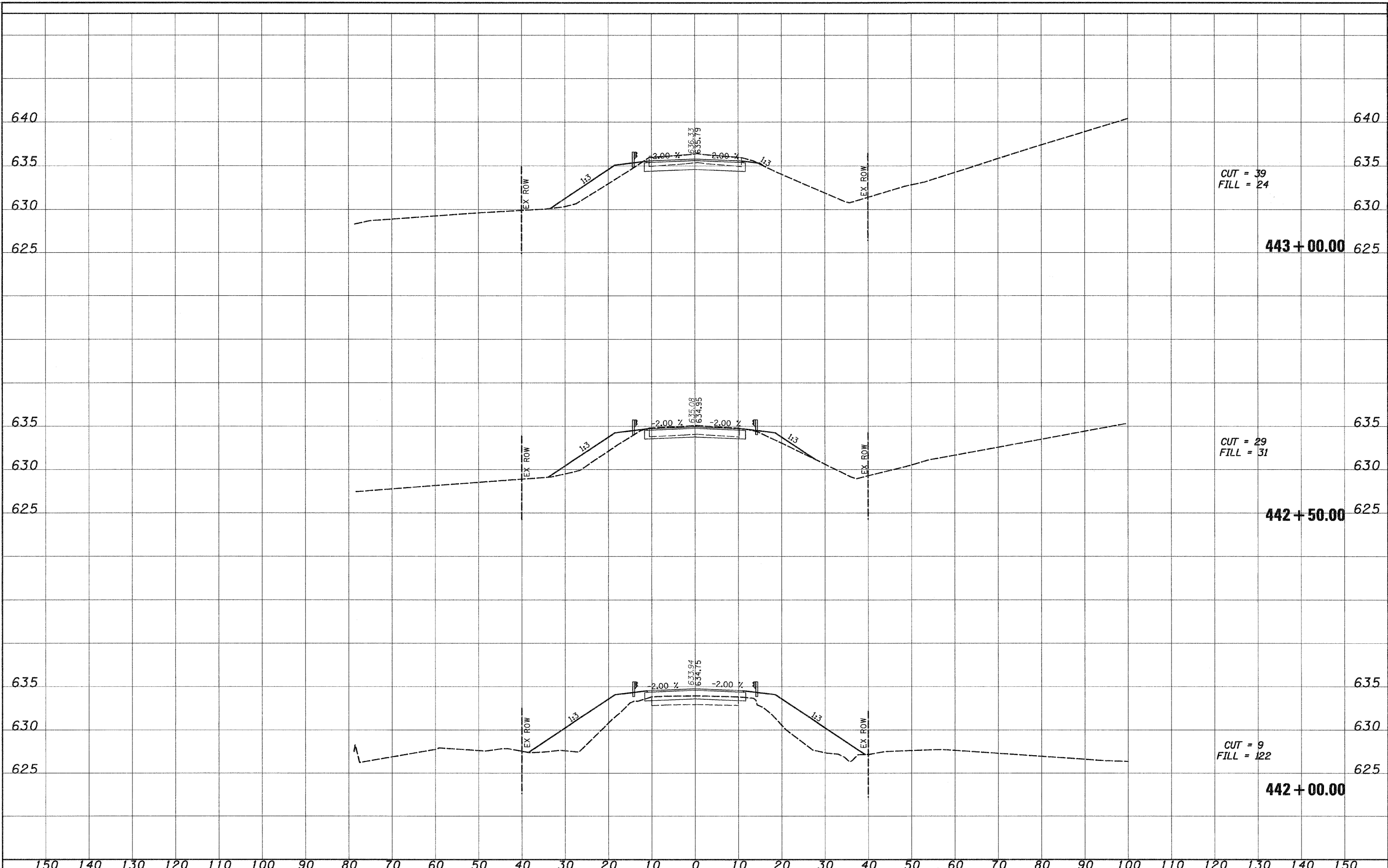
CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 441+50.00 TO STA. 441+99.50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
723	08-00129-00-BR	MONTGOMERY	18	16
CONTRACT NO. 93498				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
ORIGINAL SURVEY	
SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

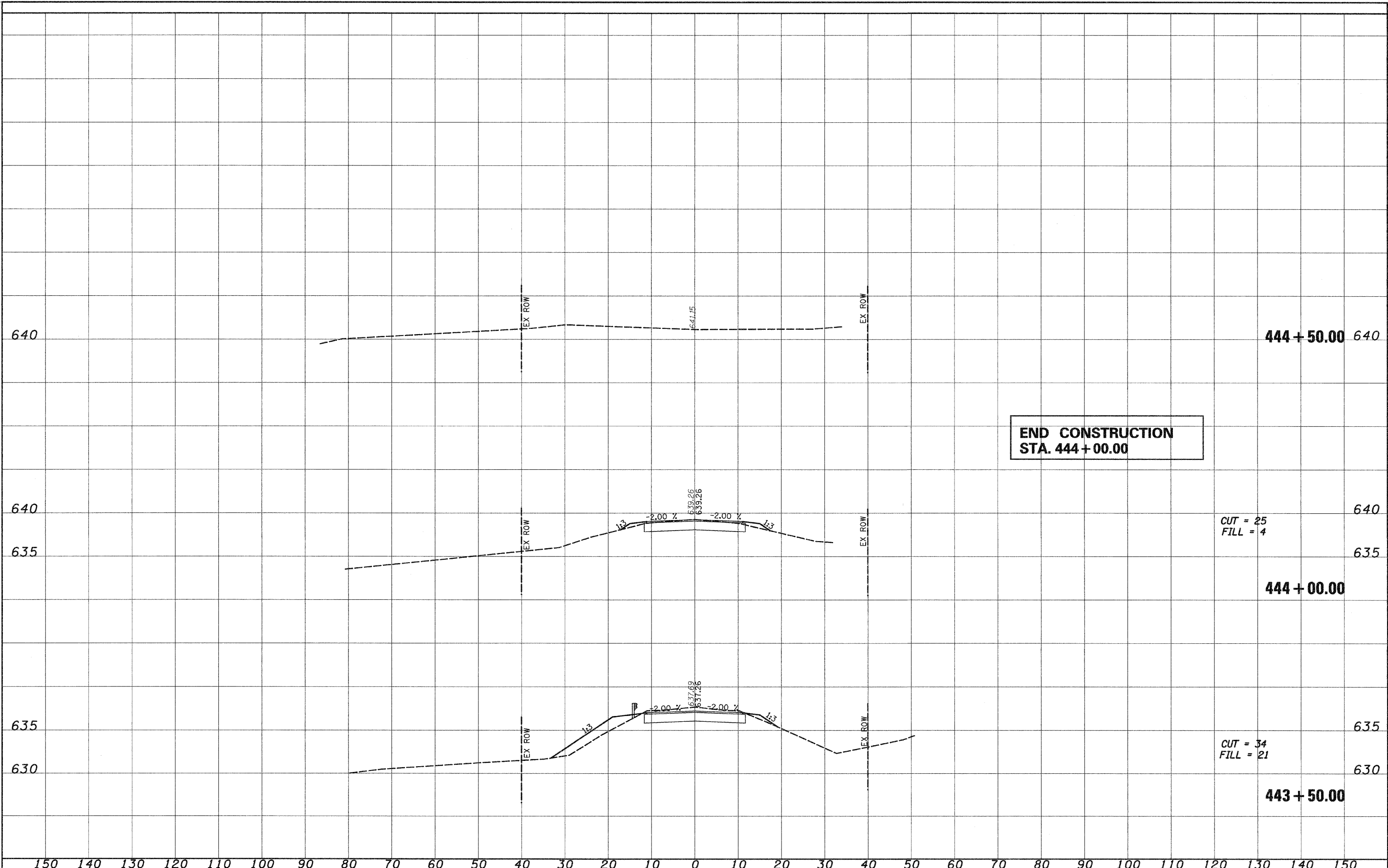
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BY	
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NOTE BOOK	
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	PLOT SCALE = 10,0000' / IN.	DRAWN UJ	REVISOR -		SCALE:	SHEET NO.	OF	SHEETS	STA. 442+00.00	TO STA. 443+00.00	CONTRACT NO. 93498		
	PLOT DATE = 9/15/2009	CHECKED MAR	REVISOR -		ILLINOIS FED. AID PROJECT								
		DATE 9-14-09	REVISOR -										

DATE	
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NOTE BOOK	
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PLOT SCALE = 10,0000 ' / IN.	CHECKED MAR	REVISOR -	SCALE: SHEET NO. OF SHEETS STA. 443+50.00 TO STA. 444+50.00			CONTRACT NO. 99498				
PLOT DATE = 9/15/2009	DATE 9-14-09	REVISOR -	ILLINOIS FED. AID PROJECT							

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