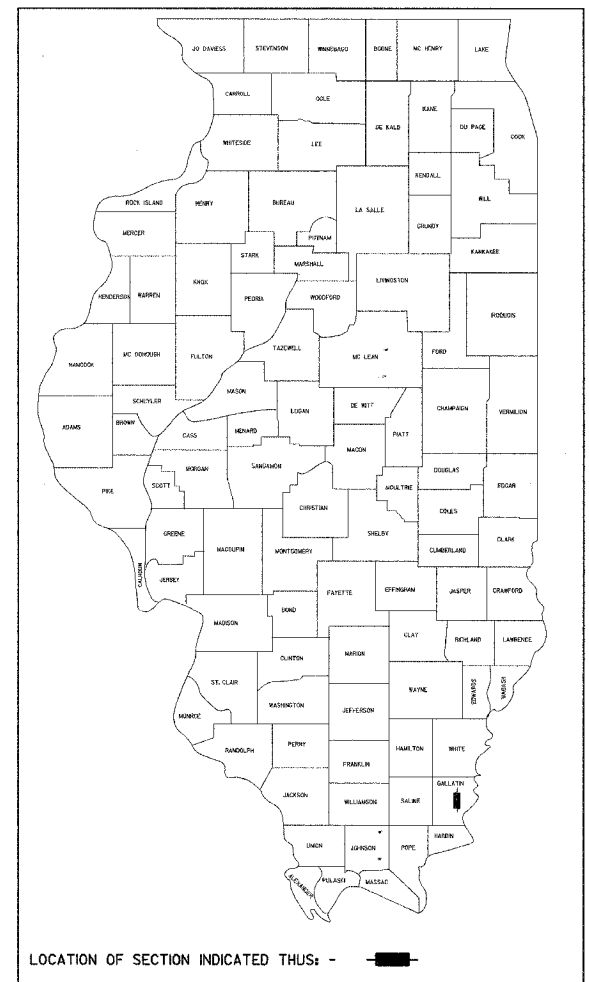


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED MAJOR BRIDGE PROGRAM

ROUTE NO. F.A.S. 888	SECTION 00-00065 -00-BR	COUNTY GALLATIN	TOTAL SHEETS 22	SHEET NO. 1
FED. ROAD DIST. NO.		ILL. HIGHWAY PROJECT		

CONTRACT NO. 99232



- INDEX OF SHEETS**
1. COVER SHEET
 2. SUMMARY OF QUANTITIES AND GENERAL NOTES
 3. TYPICAL CROSS SECTIONS
 4. PLAN AND PROFILE
 - 5.-9. STATION CROSS SECTIONS
 - 10.-18. BRIDGE PLANS
 - 19.-22. BORINGS

SCALES

PLAN	0" = 50'
PROFILE HORIZ.	0" = 50'
PROFILE VERT.	0" = 5'
CROSS SECTIONS	0" = 5'

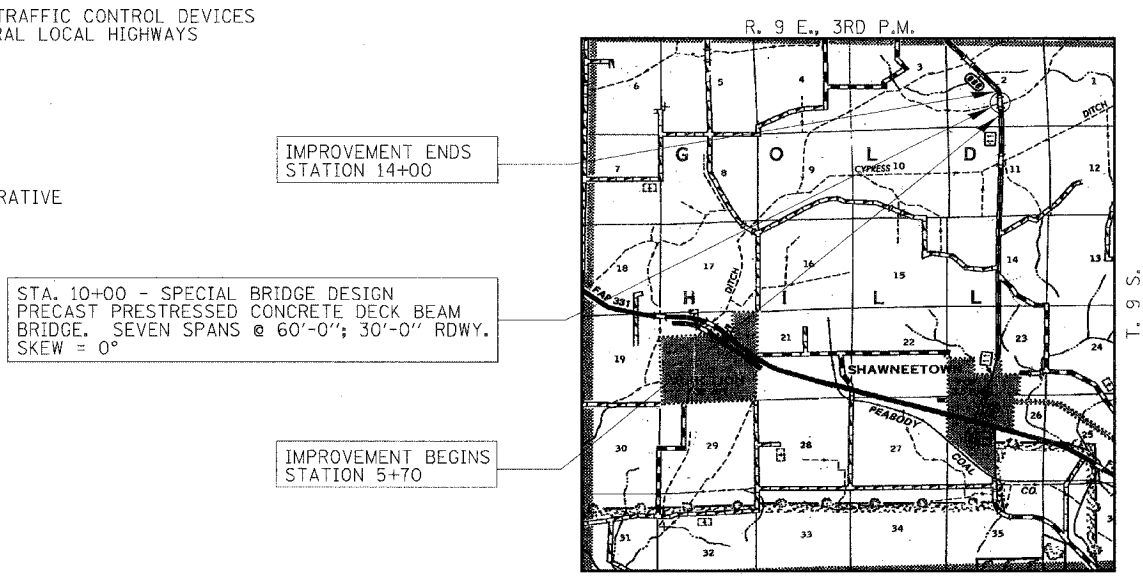
PROJECT BRS-888(119) SECTION 00-00065-00-BR F.A.S. 888 / C.H. 11 GALLATIN COUNTY C-99-075-00 STRUCTURE NO. 030-3116

- HIGHWAY STANDARDS**
- 420401-05 BRIDGE APPROACH PAVEMENT
 - 515001-02 NAME PLATE FOR BRIDGES
 - 630001-05 STEEL PLATE BEAM GUARDRAIL
 - 630301-03 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
 - 631026-02 TRAFFIC BARRIER TERMINAL TYPE 5 & 5A
 - 702001-05 TRAFFIC CONTROL DEVICES
 - BLR 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

SOUTHEASTERN ILLINOIS ELECTRIC COOPERATIVE
PO BOX 251
585 HIGHWAY 12 SOUTH
ELDORADO, ILLINOIS 62930
618-273-2611

VERIZON COMMUNICATIONS
608 WEST UNION STREET
MARION, ILLINOIS 629559



LAYOUT
APPROXIMATE SCALE: 0" = 1 MILE
NET LENGTH OF SECTION = 830 FEET = 0.157 MILES



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED JUNE 9 2005
Jim W. Brown
COUNTY ENGINEER

PASSED JULY 25 2005
Dani W. Hill
ENGINEER OF LOCAL ROADS & STREETS

APPROVED 7-25 2005
Mary C. Lame
MARY C. LAME, P.E.
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

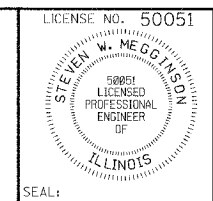
DESIGN FUNCTIONAL CLASSIFICATION
MAJOR COLLECTOR (RURAL)
CURRENT ADT 1,250
DESIGN SPEED: 50 MPH

CONTRACT 99232

DATE: June 7 2005

BY: *Stuart Aggins*

LICENSE EXPIRES: NOVEMBER 30, 2005



HLR
Rice, Berry and Associates
A Division of Hampton,
Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-730-4637

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 888	00-00065-00-BR	GALLATIN	22	2
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 99232

SUMMARY OF QUANTITIES

CODE NO	ITEM	CONSTRUCTION CODE	
		UNIT	QUANTITY
20100110	TREE REMOVAL (6-15 UNITS DIAMETER)	UNIT	36
20200100	EARTH EXCAVATION	CU YD	130
20300100	CHANNEL EXCAVATION	CU YD	680
20700110	POROUS GRANULAR EMBANKMENT	TON	110
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	2.2
28000400	PERIMETER EROSION BARRIER	FOOT	1,000
28101700	RIPRAP, SPECIAL	TON	880
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	70
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	240
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	235
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	200
44000100	PAVEMENT REMOVAL	SQ YD	262
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	700
48101200	AGGREGATE SHOULDERS, TYPE B	TON	200
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300160	NEOPRENE EXPANSION JOINT 4"	FOOT	60
50300225	CONCRETE STRUCTURES	CU YD	83.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.6
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAM (27" DEPTH)	SQ FT	12,600
50500505	STUD SHEAR CONNECTORS	EACH	176
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11,185
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	846
51201800	FURNISHING STEEL PILES HP14X73	FOOT	7,240
51202700	DRIVING STEEL PILES	FOOT	7,240
51203800	TEST PILE STEEL HP14X73	EACH	2
51204315	CONCRETE ENCASEMENT	CU YD	67.2
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1,400
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	945
58700200	BRIDGE SEAT SEALER	SQ FT	280
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	350
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	108
78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	2,075
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X4066416	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N70	TON	290
Z0000900	AGGREGATE BASE COURSE WIDENING	TON	155
67100100	MOBILIZATION	LSUM	1

> SEE SPECIAL PROVISIONS
* SPECIALTY ITEM

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE CONSIDERED INCLUDED IN THE CONTRACT.
- THE LOCATIONS OF EXISTING ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS UNTIL THE OWNER, HIS AGENT, OR A PROFESSIONAL LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE SURFACE CSE., TY. B	2.05 TON/CU YD
RIPRAP, SPECIAL	1.75 TON/CU YD
POROUS GRANULAR EMBANKMENT	2.00 TON/CU YD
BITUMINOUS CONCRETE	112 LB/IN/SQ YD
AGGREGATE SHOULDERS	2.00 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY = 2.2 ACRES
- TREES WITHIN THE RIGHT OF WAY AND EASEMENTS WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
- ALL PROPOSED CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH GENERAL CONDITION NUMBER 14 OF THE DEPARTMENT OF THE ARMY NATIONWIDE PERMIT AUTHORIZED UNDER SECTION 404 OF THE CLEAN WATER ACT. THE IEPA HAS ISSUED SECTION 401 WATER QUALITY CERTIFICATION FOR THIS ACTIVITY. SEE SPECIAL PROVISIONS.
- THE CONCRETE CURB SHALL BE EXCLUDED FROM THE BRIDGE APPROACH PAVEMENT.

LOCATION	FOOT
LT. STA. 11+97.04 TO STA. 12+22.95	26.0
RT. STA. 11+96.50 TO STA. 12+21.40	25.0
LT. STA. 7+76.32 TO STA. 8+04.74	28.4
RT. STA. 7+76.47 TO STA. 8+05.03	28.6
TOTAL	108

LOCATION	EACH
RT. STA. 6+26.05 TO STA. 6+76.05	1
LT. STA. 6+51.05 TO STA. 7+01.05	1
RT. STA. 13+00.21 TO STA. 13+50.21	1
LT. STA. 13+25.21 TO STA. 13+75.21	1
TOTAL	4

LOCATION	FOOT
LT. & RT. STA. 6+10 TO 8+40	500
LT. & RT. STA. 11+75 TO 14+00	500
TOTAL	1000

LOCATION	EACH
RT. STA. 7+76.05 TO STA. 7+89.30	1
LT. STA. 7+76.05 TO STA. 7+89.30	1
RT. STA. 12+11.96 TO STA. 12+25.21	1
LT. STA. 12+11.96 TO STA. 12+25.21	1
TOTAL	4

LOCATION	FOOT
WHITE EDGE LINE	
LT. & RT. STA. 5+70 TO STA. 14+00	1,660
DASHED YELLOW CENTERLINE	
STA. 5+70 TO STA. 14+00	415
TOTAL	2,075

LOCATION	FOOT
RT. STA. 6+76.05 TO STA. 7+76.05	100
LT. STA. 7+01.05 TO STA. 7+76.05	75
RT. STA. 12+25.21 TO STA. 13+00.21	75
LT. STA. 12+25.21 TO STA. 13+25.21	100
TOTAL	350

ROADWAY QUANTITIES SCHEDULE

LOCATION (STATION TO STATION)	AGG. BASE CSE. WID. 12" (SQ YD)	BC SURF. CS SP. C N70 (TON)	AGG. SHLD. TB. (6") (TON)	PAVEMENT REMOVAL (SQ YD)	BIT. MAT. PR. CT. (GALLON)	STRIP REF. CRACK CNTL. TREATMENT (FOOT)	BRIDGE APPROACH PAVEMENT (SQ YD)
5+70.00 TO 6+20.00	22.2	11.2	25.9	5.6	13.0	100	
6+20.00 TO 7+58.83	61.7	40.1	72.0	15.4	37.0	278	
7+58.83 TO 7+88.83			8.9	111.4			100
7+88.83 TO 12+11.17		160.0			141.0		
12+11.17 TO 12+41.17			8.9	111.4			100
12+41.17 TO 13+50.00	48.4	64.4	56.4	12.1	29.0	218	
13+50.00 TO 14+00.00	22.2	11.2	25.9	5.6	13.0	100	
TOTAL	154.5	286.9	198.0	261.5	233	696	200
USE:	155	290	200	262	240	700	200

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 5+70 TO STA. 7+88.33	73	25%	100%	54	176	-122
STA. 7+88.33 TO STA. 12+11.76		25%	100%			
STA. 12+11.76 TO STA. 14+00	56	25%	100%	42	186	-144
CHANNEL EXCAVATION ENTRANCES	680	25%	70%	357		357
TOTAL	129			453	362	91
USE:	130					90

* AVAILABLE EXCAVATION = EXC. x (1-SHRINKAGE FACTOR) x % USED (WASTE)

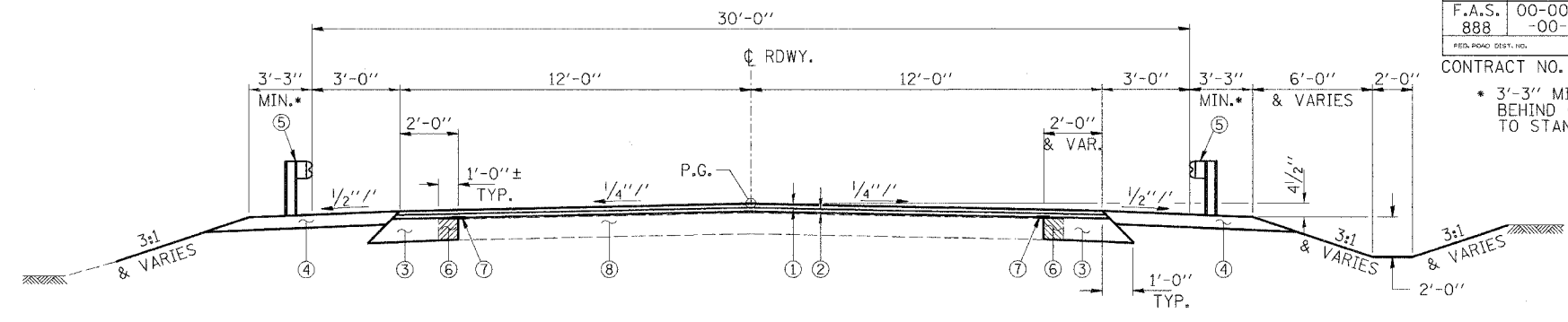
HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 Account Number: 12-38-0003-1
 Date: 05/26/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

SUMMARY OF QUANTITIES AND GENERAL NOTES
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. 11
 GALLATIN COUNTY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
F.A.S. 888	00-00065 -00-BR	GALLATIN	22	3
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

CONTRACT NO. 99232
 * 3'-3" MINIMUM & VARIES 4'-0"
 BEHIND GUARDRAIL ACCORDING
 TO STANDARD 630301 & 630001.

- LEGEND**
- ① BITUMINOUS CONCRETE, SURFACE COURSE, SUPERPAVE, (1 1/2" MIN.)
 - ② BITUMINOUS CONCRETE, SURFACE COURSE, SUPERPAVE, (VARIABLE DEPTH)
 - ③ AGGREGATE BASE COURSE WIDENING, 12"
 - ④ AGGREGATE SHOULDERS, TYPE B, 6"
 - ⑤ STEEL PLATE BEAM GUARD RAIL
 - ⑥ PAVEMENT REMOVAL
 - ⑦ STRIP REFLECTIVE CRACK CONTROL TREATMENT
 - ⑧ EXISTING BITUMINOUS PAVEMENT ON AGGREGATE BASE
 - ⑨ BITUMINOUS SURFACE REMOVAL - BUTT JOINT
 - ⑩ TEMPORARY RAMP AT 1:40 (SEE ARTICLE 406.18)
 - ⑪ BRIDGE APPROACH PAVEMENT
 - ⑫ SEE STANDARD 420401 FOR SUB-BASE GRANULAR MATERIAL INCLUDED IN COST OF BRIDGE APPROACH PAVEMENT



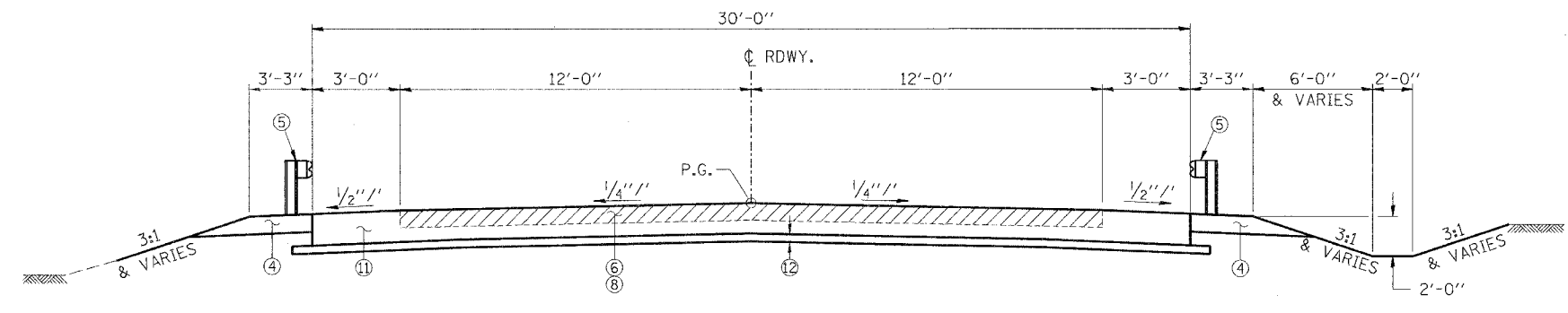
TYPICAL CROSS SECTION
 SUGGESTED FILL SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS
 STA. 6+20 TO STA. 7+58.83 & STA. 12+41.17 TO STA. 13+50
 SUGGESTED CUT SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS

TRANSITION FROM PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 5+70 TO STA. 6+20 AND FROM STA. 13+50 TO STA. 14+00.

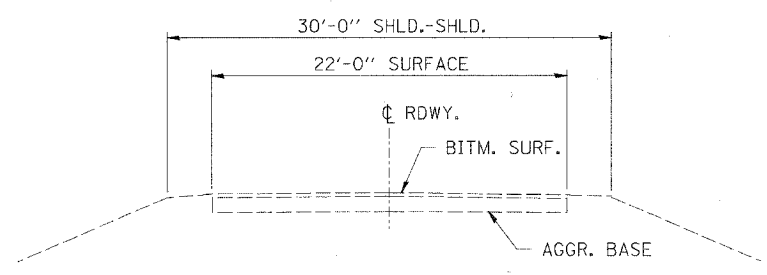
NOTES

THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT PRIOR TO PAVEMENT REMOVAL FOR THE BASE COURSE WIDENING. THE COST OF SAWCUTTING SHALL BE INCLUDED IN PAVEMENT REMOVAL.

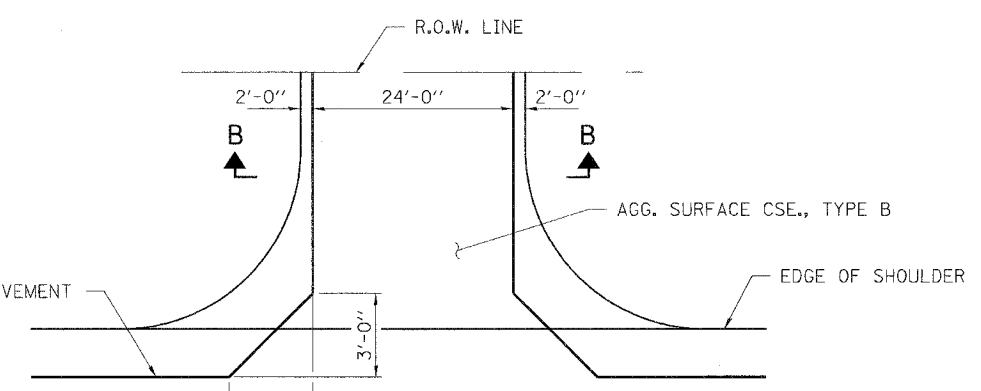
THE CONTRACTOR SHALL SAW CUT THE EXISTING SURFACE PRIOR TO BITUMINOUS SURFACE REMOVAL FOR PAVEMENT TRANSITION CONSTRUCTION. THE COST OF SAWCUTTING SHALL BE INCLUDED IN BITUMINOUS SURFACE REMOVAL - BUTT JOINT.



TYPICAL CROSS SECTION
 SUGGESTED FILL SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS
 STA. 7+58.83 TO STA. 7+88.83 & STA. 12+11.17 TO STA. 12+41.17
 SUGGESTED CUT SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS

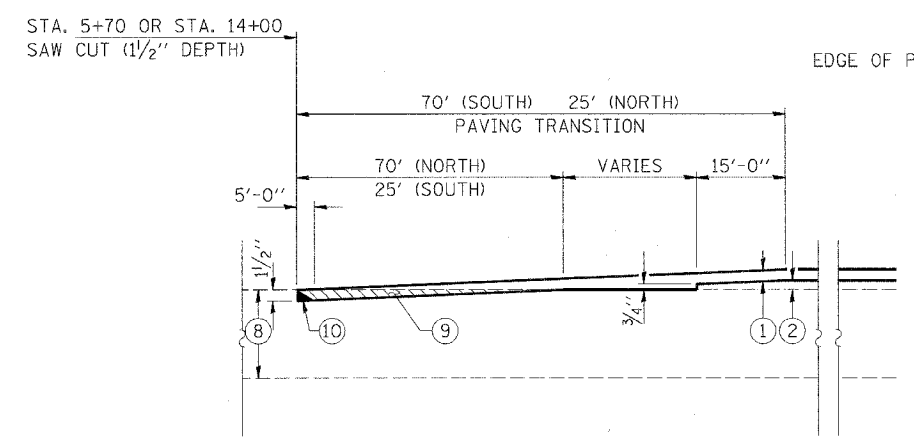


EXISTING CROSS SECTION

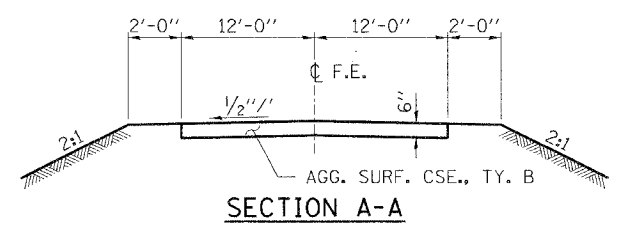


FIELD ENTRANCE DETAIL

MIXTURE REQUIREMENTS	
LOCATION(S):	SURFACE COURSE
MIXTURE USE(S):	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N70
AC/PG:	PG 64-22
RAP % (MAX):	10
DESIGN AIR VOIDS:	4.0%, 70 GYRATION SUPERPAVE DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE):	IL-9.5 mm OR IL-12.5 mm
FRICITION AGGREGATE:	C SURFACE



PAVEMENT TRANSITION DETAIL



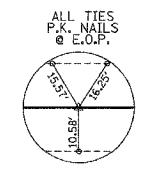
SECTION A-A

HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
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 618-790-4637
 Account Number 12-38-0003-1
 Date: 05/26/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

TYPICAL CROSS SECTIONS
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. 11
 GALLATIN COUNTY

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888 00-00065-00-BF		GALLATIN	22	4
STA. 5+00		TO STA. 15+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 99232				

ENTRANCES TO BE BUILT
 LT. STA. 6+02 F.E. -1.75% AGG. 24' SURF.
 LT. STA. 5+97 F.E. -4.52% AGG. 24' SURF.
 QUANTITIES INCLUDED IN EARTHWORK TABLE.



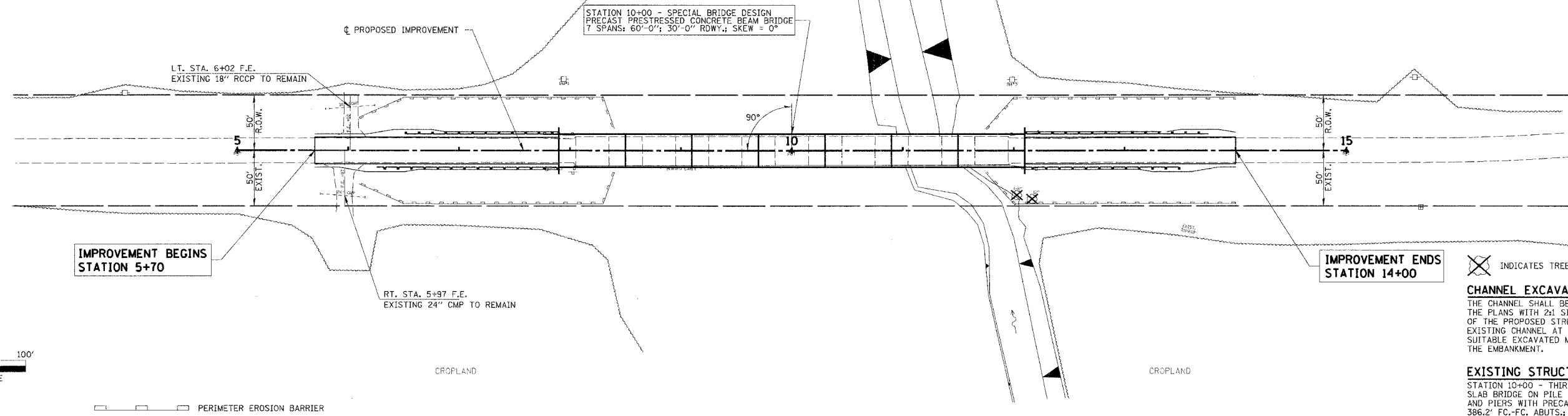
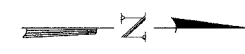
P.O.T. STA. 5+00.07
MAG NAIL SET



P.O.T. STA. 10+00.00
MAG NAIL SET



P.O.T. STA. 14+99.84
MAG NAIL SET



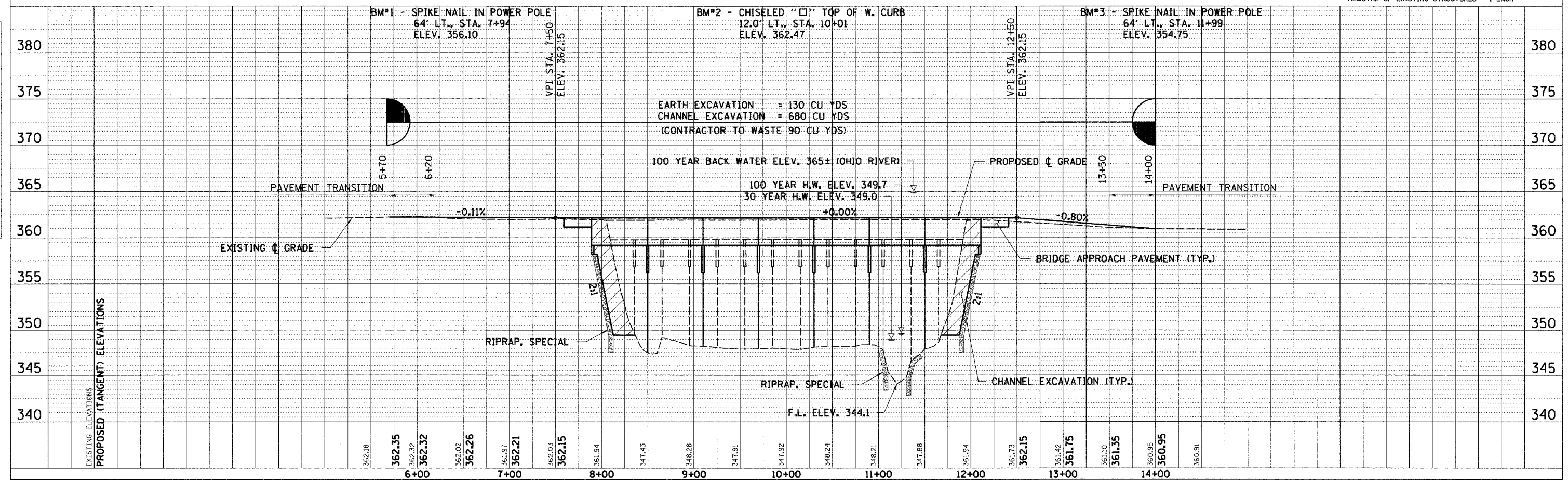
✕ INDICATES TREE TO BE REMOVED

CHANNEL EXCAVATION
 THE CHANNEL SHALL BE EXCAVATED AS SHOWN IN THE PLANS WITH 2:1 SIDE SLOPES WITHIN THE LIMITS OF THE PROPOSED STRUCTURE, THEN TAPER TO THE EXISTING CHANNEL AT THE R.O.W. LINES. ONLY SUITABLE EXCAVATED MATERIAL SHALL BE USED IN THE EMBANKMENT.

EXISTING STRUCTURE NO. 030-3001
 STATION 10+00 - THIRTEEN SPAN PRECAST CONCRETE SLAB BRIDGE ON PILE BENT CONCRETE ABUTMENTS AND PIERS WITH PRECAST CONCRETE PILES.
 386.2' FC-FC ABUTTS.; 26.2' O.-O. DECK
 REMOVAL OF EXISTING STRUCTURES = 1 EACH

PLAN	SURVEYED	DATE
NOTE BOOK	BY	06-20-02
NO. SHEETS	CHECKED	06-20-02
	DATE	06-20-02

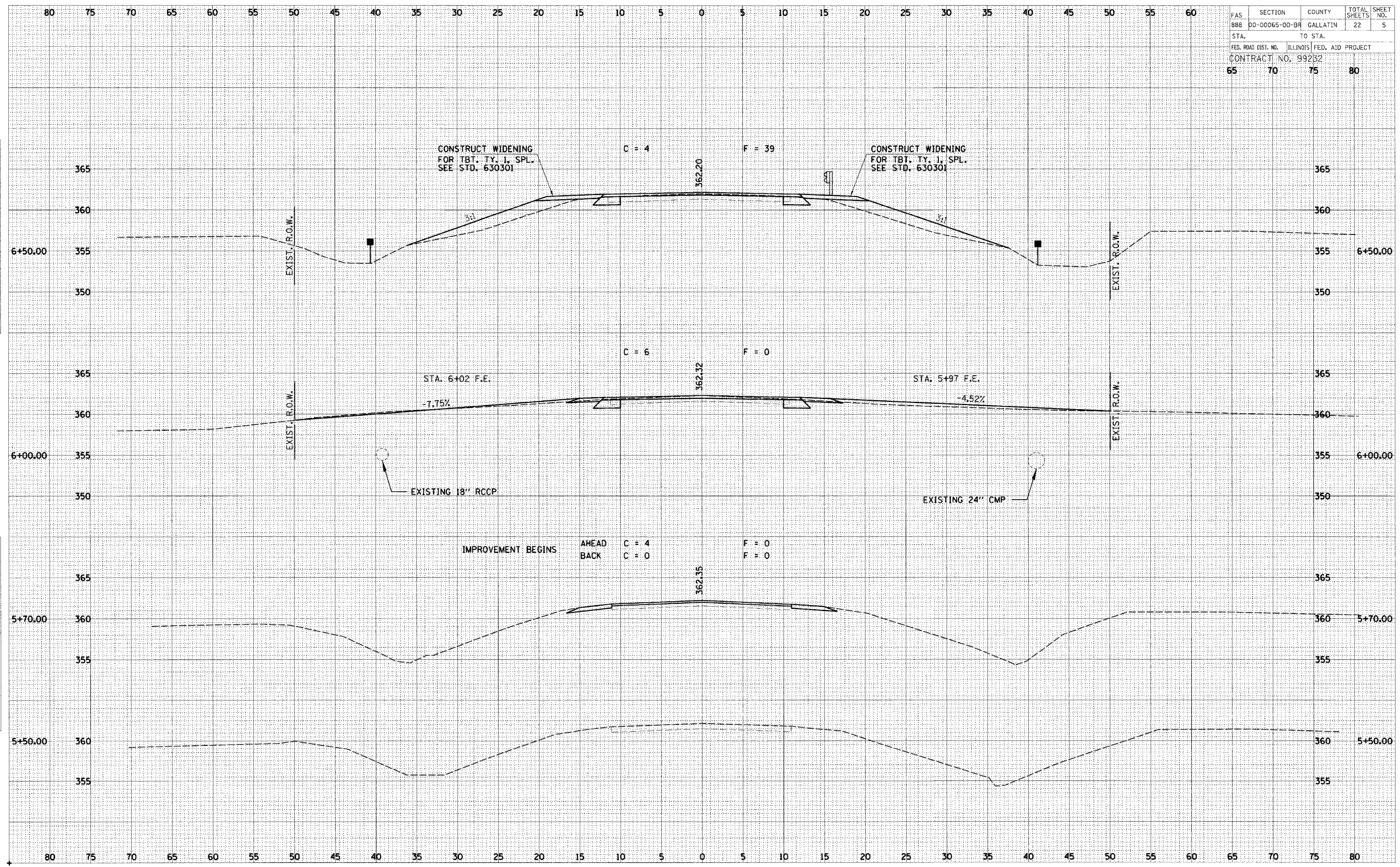
PROFILE	SURVEYED	DATE
NOTE BOOK	BY	06-20-02
NO. SHEETS	CHECKED	06-20-02
	DATE	06-20-02



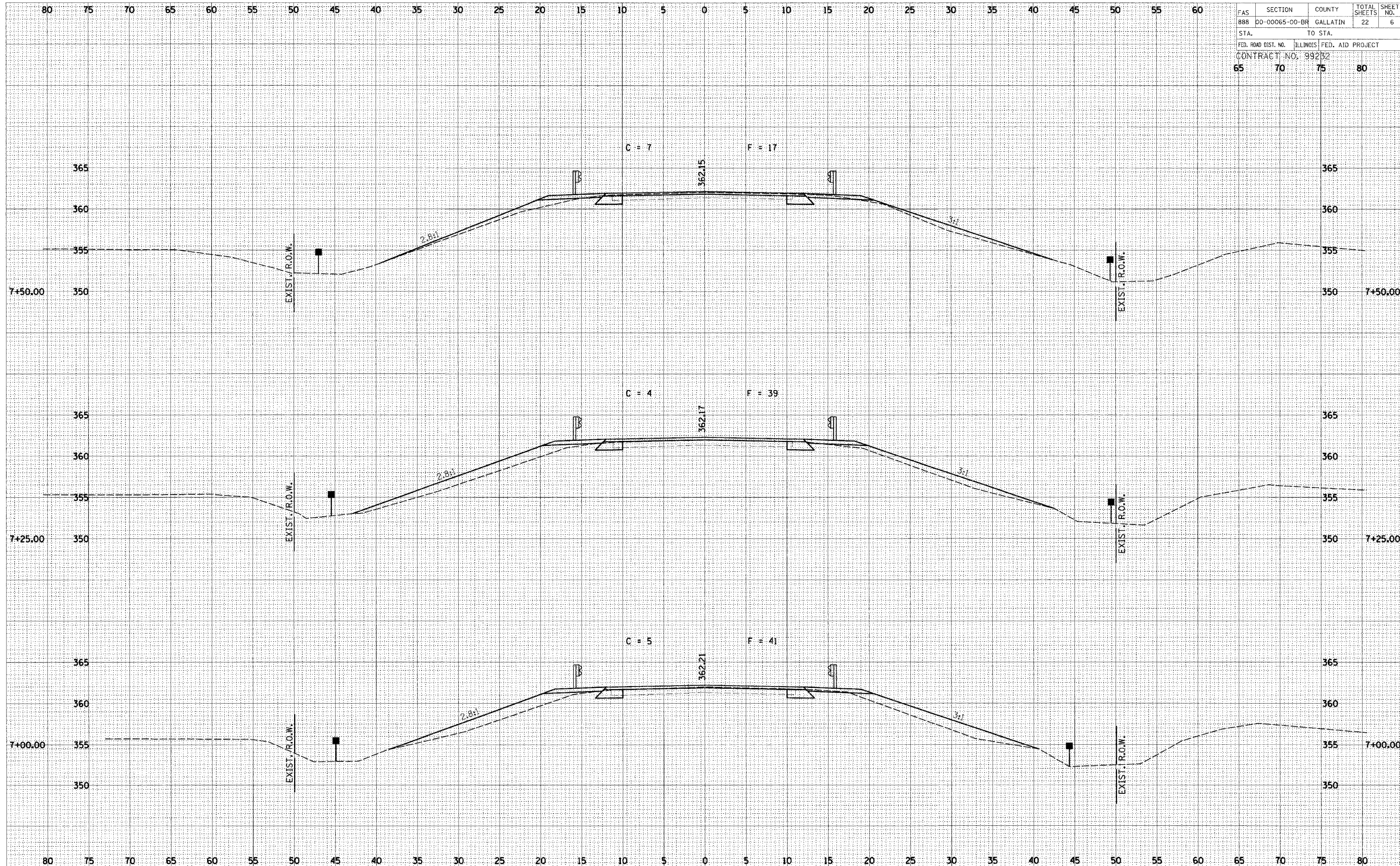
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	00-00065-00-BR	GALLATIN	22	5
STA.		TO STA.		
65		70		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT
CONTRACT NO. 99232				

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____



FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	00-00065-00-BR	GALLATIN	22	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 99232				
65	70	75	80	



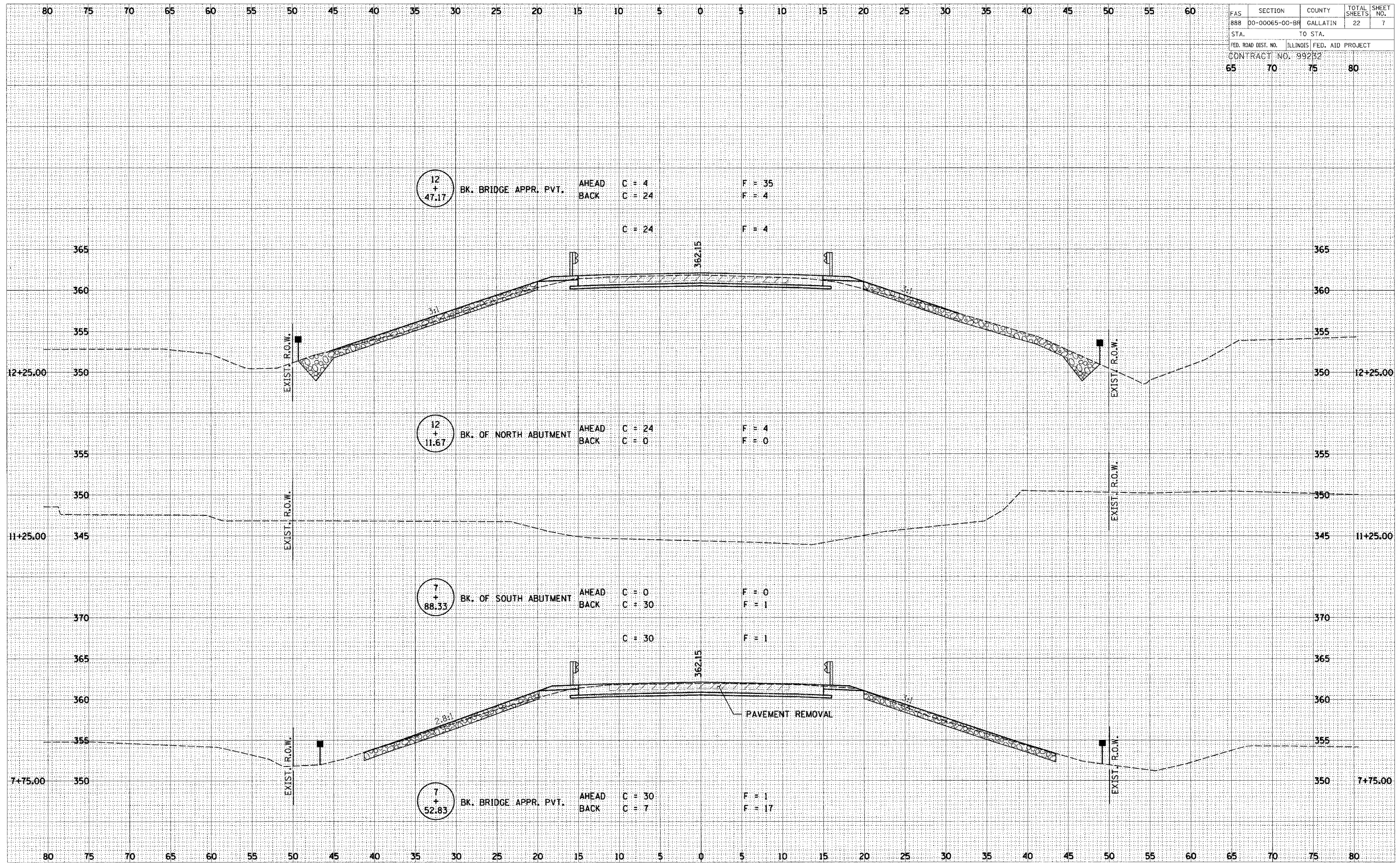
BY: _____ DATE: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

BY: _____ DATE: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

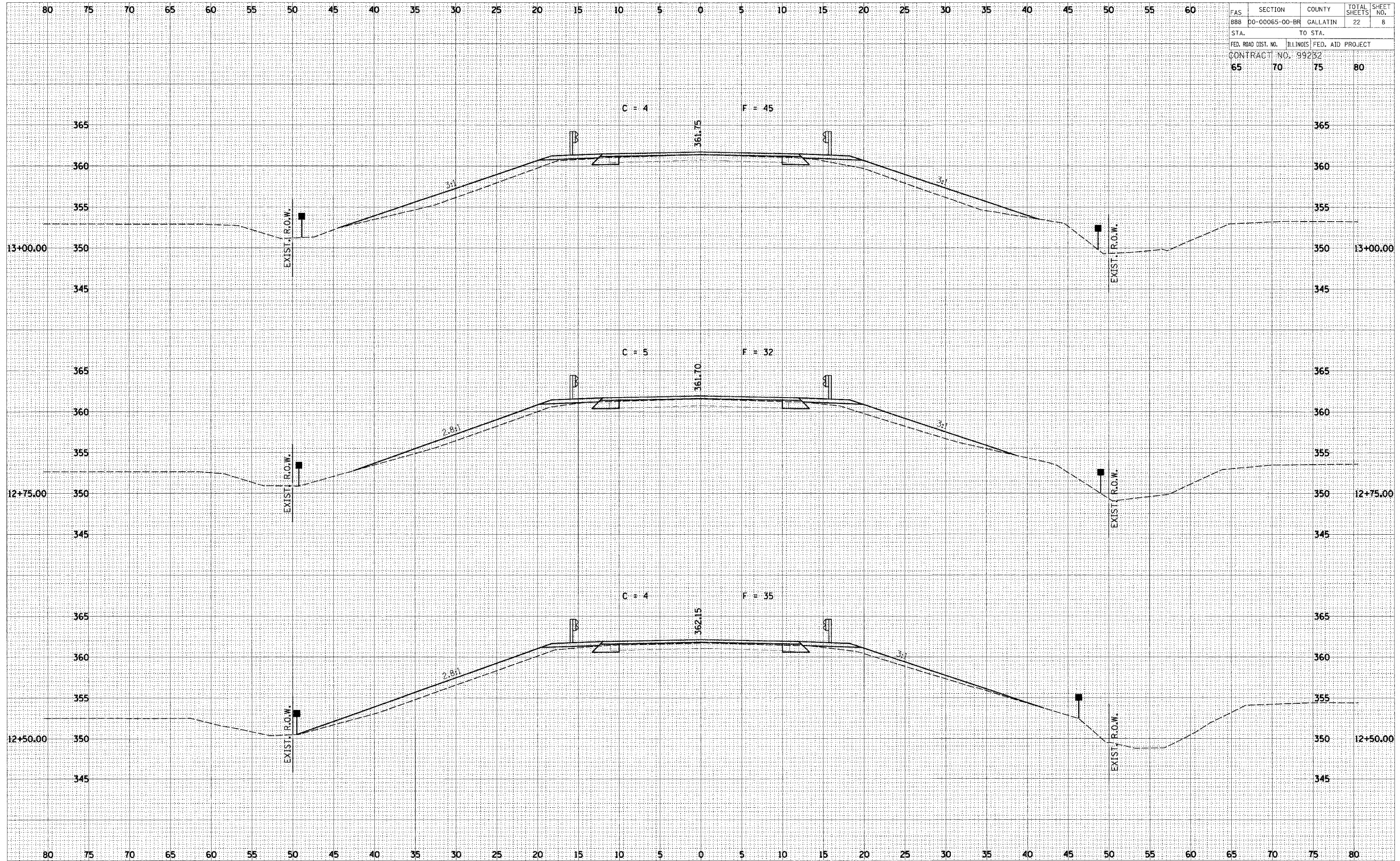
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	00-00065-00-BR	GALLATIN	22	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 99232				
65	70	75	80	

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED



FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BBB	00-00065-00-BR	GALLATIN	22	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 99232				
65	70	75	80	



BY: _____ DATE: _____

FINAL SURVEY SURVEYED _____ PLOTTED _____

NOTE BOOK NO. _____ DATE _____

AREAS CHECKED _____

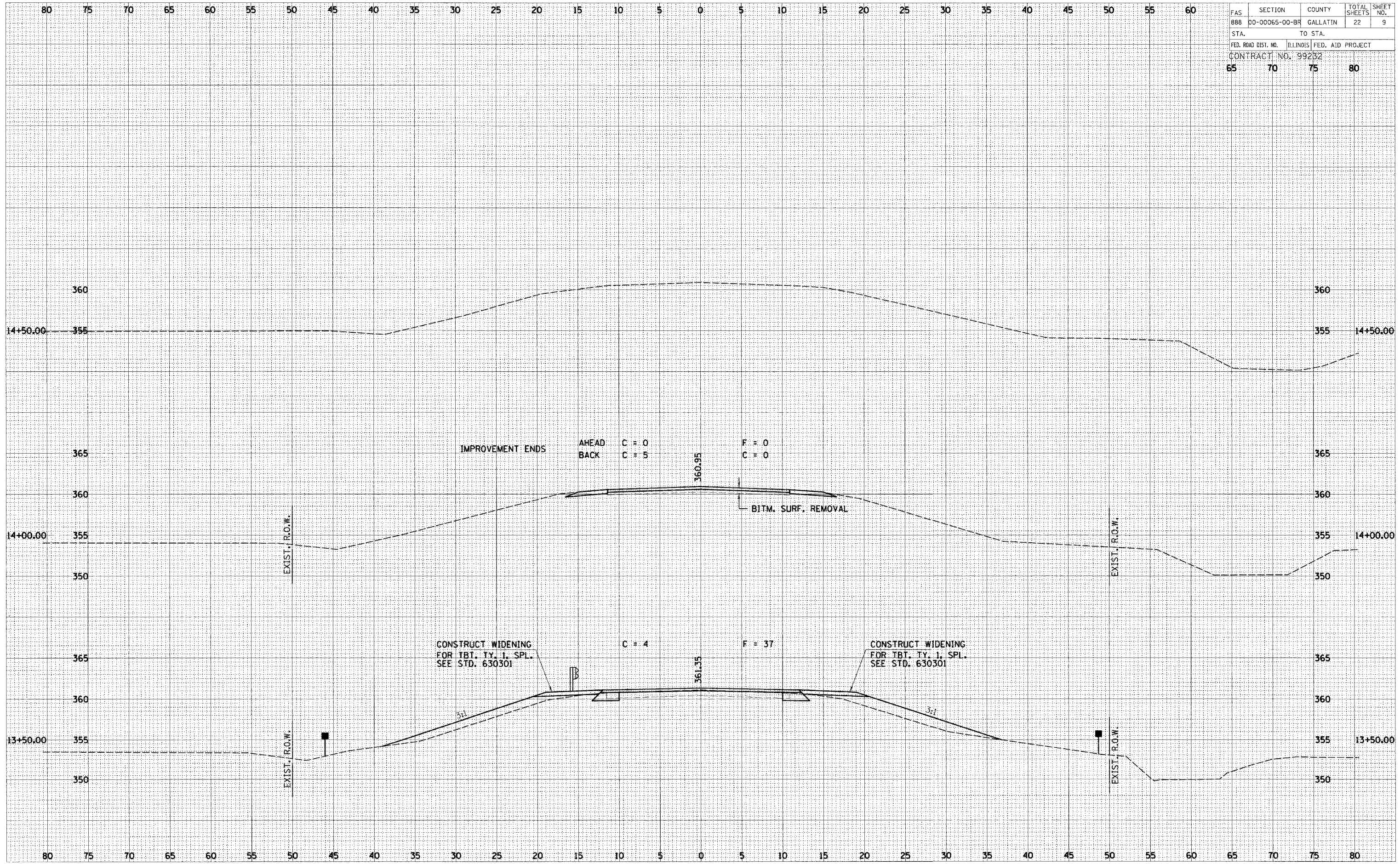
BY: _____ DATE: _____

ORIGINAL SURVEY SURVEYED _____ PLOTTED _____

NOTE BOOK NO. _____ DATE _____

AREAS CHECKED _____

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
888	00-00065-00-BR	GALLATIN	22	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 99232				
65	70	75	80	



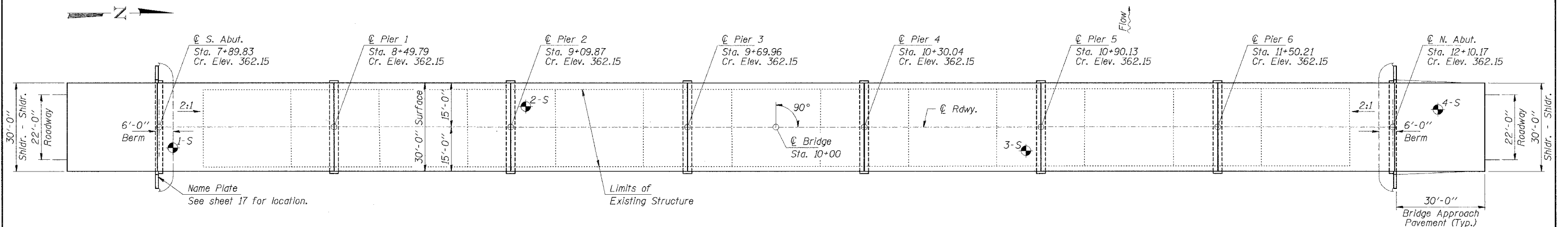
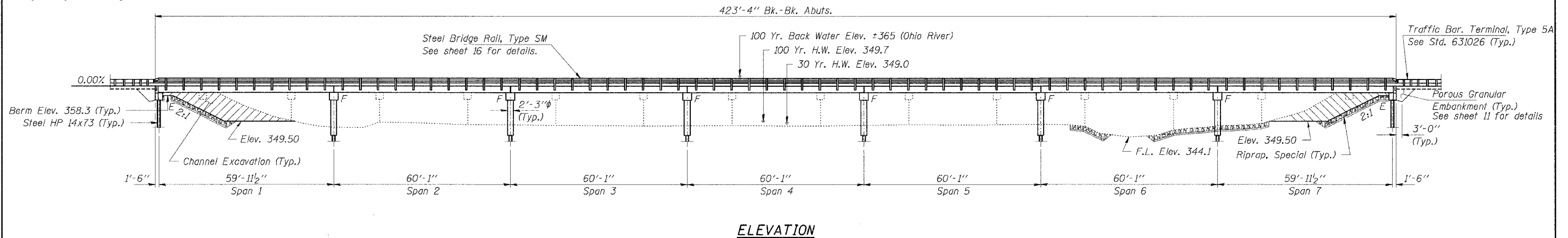
BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS CHECKED

Existing Structure No. 030-3001, Sta. 10+00.
 Thirteen span Precast Concrete Slab Bridge on
 concrete abutments and piers with Precast
 Concrete piles, 386'-3" fc. - fc. abutments;
 26'-3" o. - o. Deck.
 Bridge will be closed to traffic during construction.
 Salvage bridge rail and good beams.

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
F.A.S. 888	00-00065 -00-BR	GALLATIN	22	10
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 99232



GENERAL NOTES

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer. See Sheet 11 for layout.
 The Contractor shall drive two steel test piles in permanent locations; one at Pier 1, one at Pier 6, as directed by the Engineer before ordering the remainder of the piles.
 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.
 Excavation required for Porous Granular Embankment, construction of abutments and Concrete Encasement shall not be paid for separately, but shall be considered included in the cost of that item.
 Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
 In addition to all other requirements of section 512 of the Standard specifications, splices for HP14x73 piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

WATERWAY INFORMATION

Drainage Area = 2.2 Sq. Mi.		Low Grade Elev. 360.90 @ Sta. 14+00						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Natural H.W.E. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	210	385	390	349.0	0.0	0.0	349.0
Base	100	260	575	590	349.7	0.0	0.0	349.7
Overtopping								
Max. Calc.	500	310	675	690	350.0	0.0	0.0	350.0

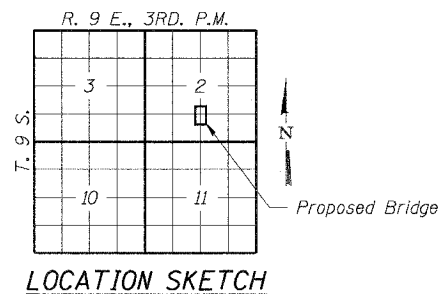
DESIGN STRESSES

f'c = 5,000 psi (Prestressed Beams)
 f'ci = 4,800 psi (Prestressed Beams)
 f'c = 3,500 psi (Class SI Concrete)
 f's = 270,000 psi (Prestressed Strands)
 fsi = 189,000 psi (Prestressed Strands)
 fy = 60,000 psi (Reinf. Bars - Field Units)
 fy = 36,000 psi (Steel H-Piles)
 n = 9 (Class SI Concrete)
 Loading HS 20-44

SEISMIC DATA

Seismic Performance Category (SPC) = B
 Bedrock Acceleration Coefficient (A) = 0.10g
 Site Coefficient (S) = 1.5

PLAN



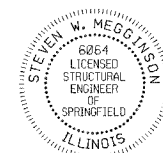
LOCATION SKETCH

MIDDLE FORK CYPRESS CREEK
 BUILT 200 BY
 GALLATIN COUNTY
 SEC. 00-00065-00-BR
 F.A.S. 888
 F.A. PROJ. BRS-888(119)
 STR. NO. 030-3116 LOADING HS20

NAME PLATE
 See Std. 515001

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

Steven W. Megginson 5-26-05
 ILLINOIS STRUCTURAL NO. 6064



TOTAL BILL OF MATERIAL

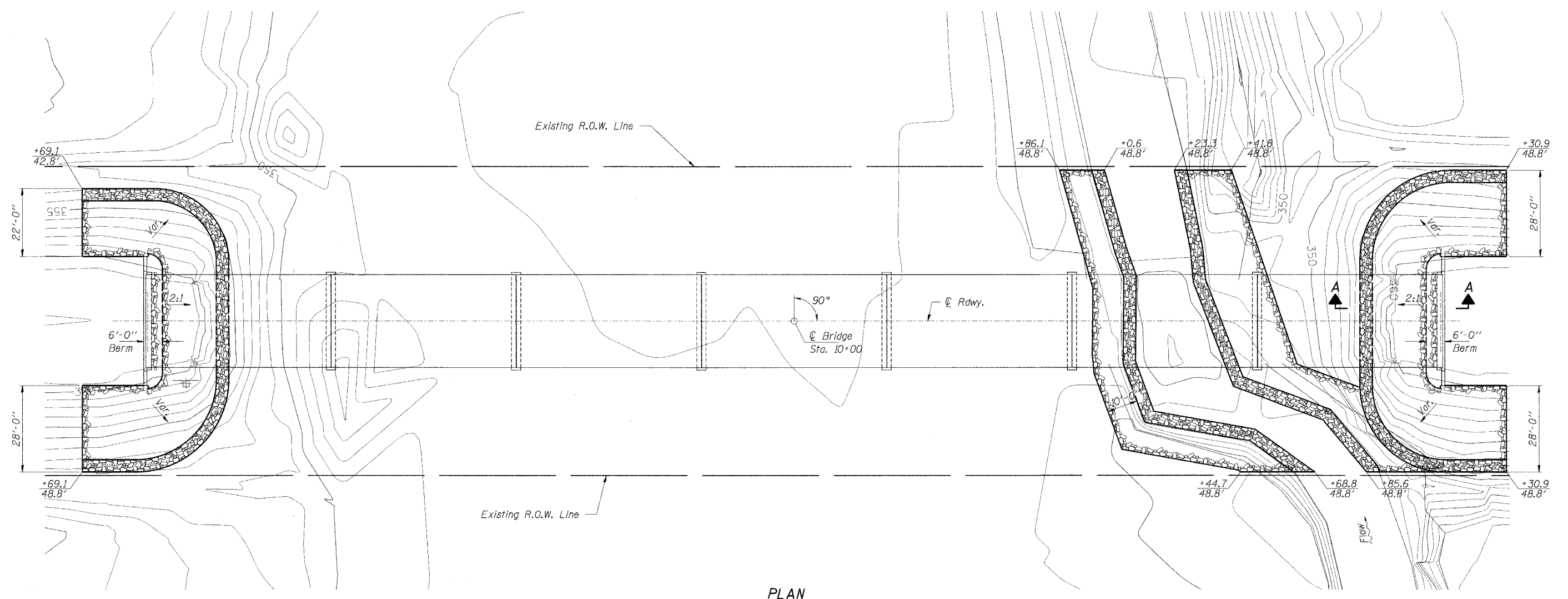
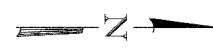
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Ton			110
Riprap, Special	Ton			880
Neoprene Expansion Joint 4"	Foot	60		60
Concrete Structures	Cu. Yd.		83.0	83.0
Concrete Superstructure	Cu. Yd.	1.6		1.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	12,600		12,600
Stud Shear Connectors	Each		176	176
Reinforcement Bars, Epoxy Coated	Pound	185	11,000	11,185
Steel Bridge Rail, Type SM	Foot	846		846
Steel Piles HP14x73	Foot		7,240	7,240
Test Pile Steel HP14x73	Each		2	2
Concrete Encasement	Cu. Yd.		67.2	67.2
Name Plates	Each		1	1
Waterproofing Membrane System	Sq. Yd.	1,400		1,400
Bridge Seat Sealer	Sq. Ft.		280	280
Bituminous Concrete Surface Course, Superpave, Mix "C", N70	Ton	160		160
P.C. Mortar Fairing Course	Foot	945		945

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 80 S. Durkin Drive
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 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4631
 Account Number 12-38-0003-1
 Date: 05/26/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

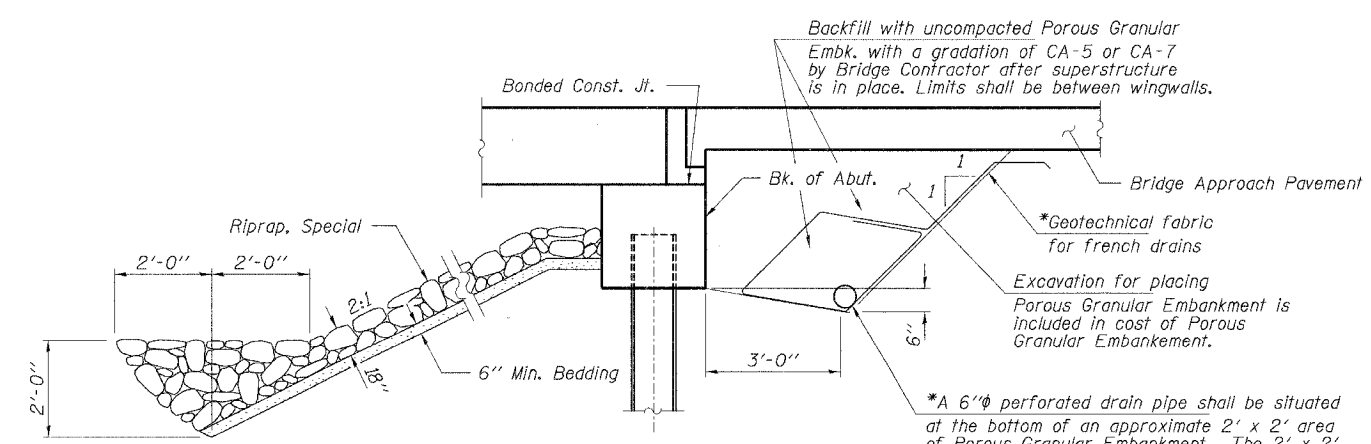
GENERAL PLAN AND ELEVATION
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. II
 GALLATIN COUNTY
 STR. NO. 030-3116 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 888	00-00065-00-BR	GALLATIN	22	11

CONTRACT NO. 99232



PLAN



SECTION A-A

Note: See Special Provisions for Riprap, Special.

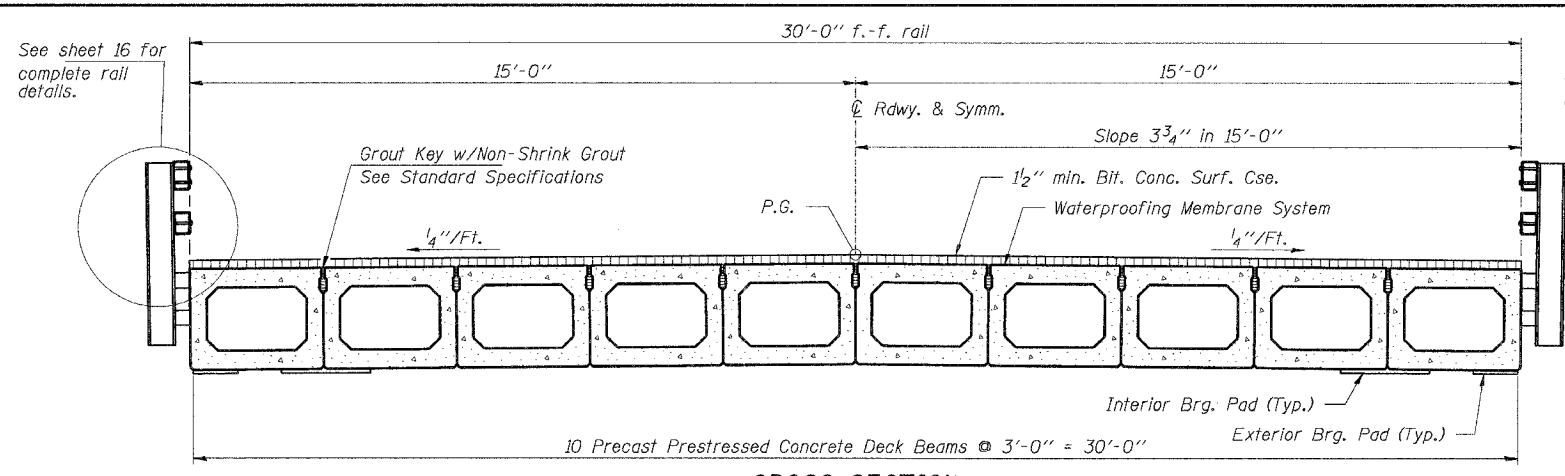
*A 6" perforated drain pipe shall be situated at the bottom of an approximate 2' x 2' area of Porous Granular Embankment. The 2' x 2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with side slope. Cost included with Porous Granular Embankment.

* Cost included with Porous Granular Embankment.

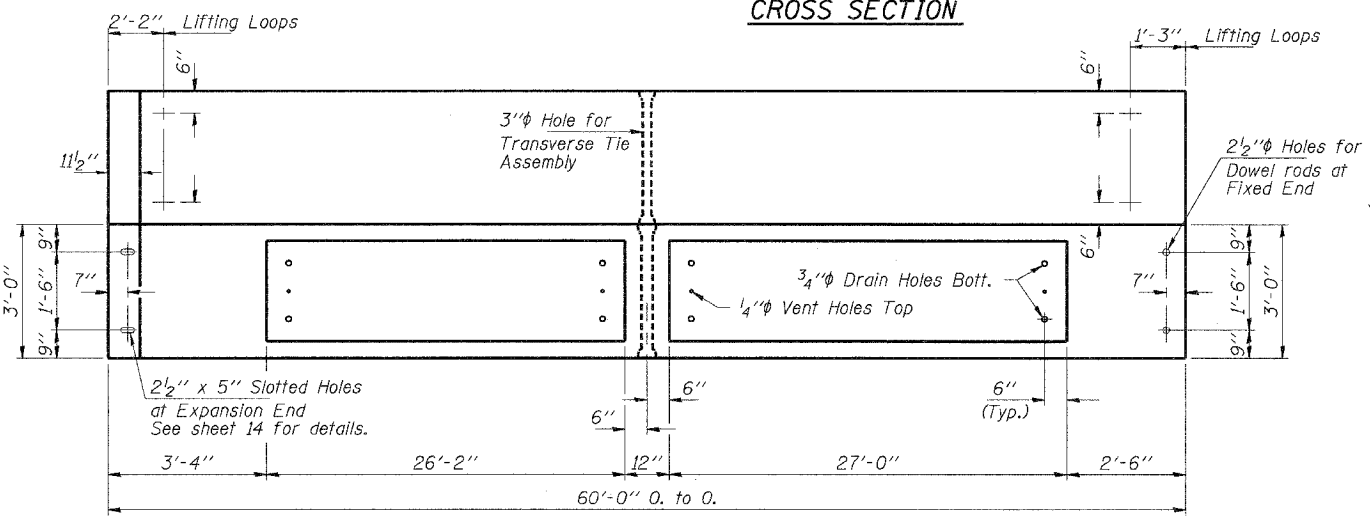
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 217-546-3400
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 618-790-4637
 Account Number 12-38-0003-1
 Date: 05/26/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

RIPRAP DETAILS
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. II
 GALLATIN COUNTY
 STR. NO. 030-3116 / STATION 10+00

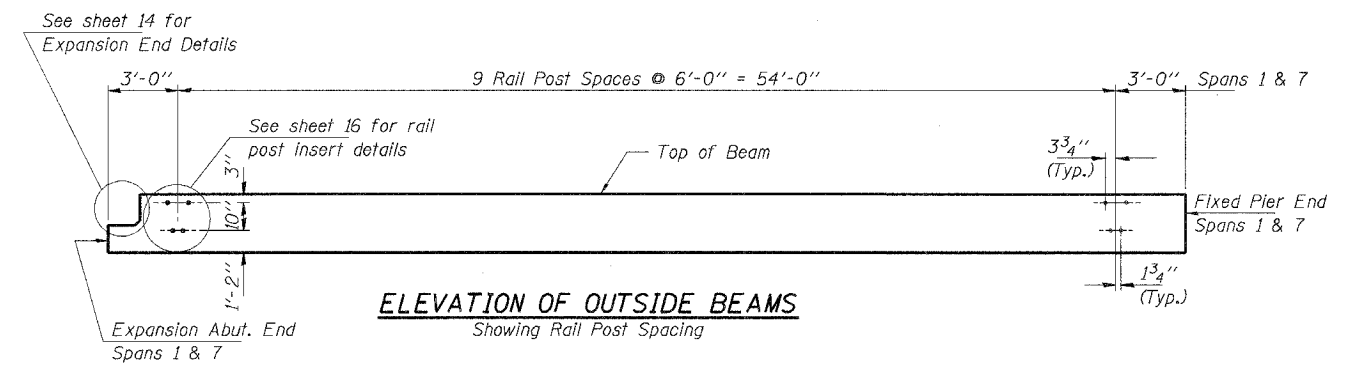
ROUTE NO.	SECTION	EQUITY	DATE	SHEET
F.A.S. 888	00-00065-00-BR	GALLATIN	22	12



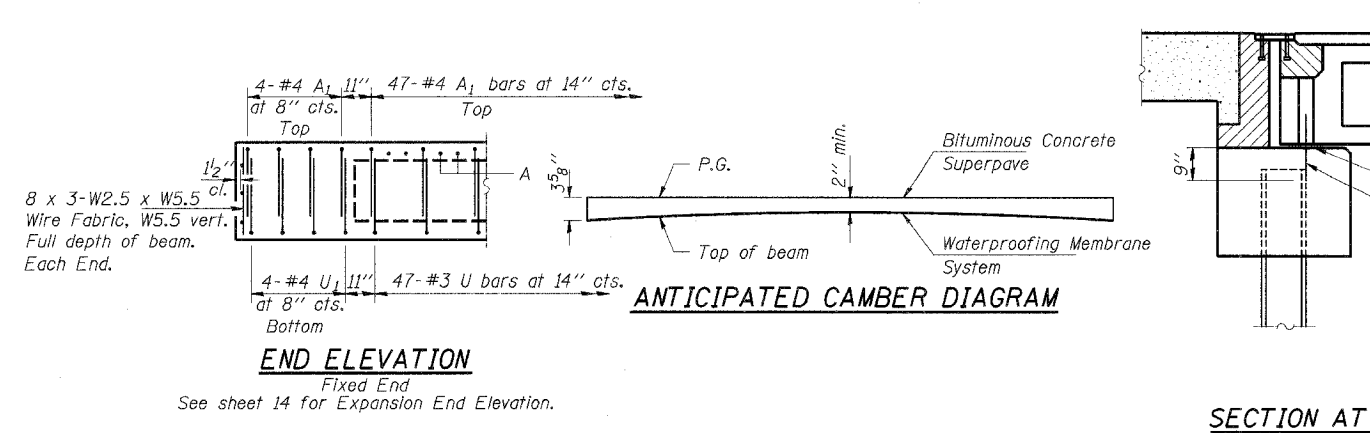
CROSS SECTION



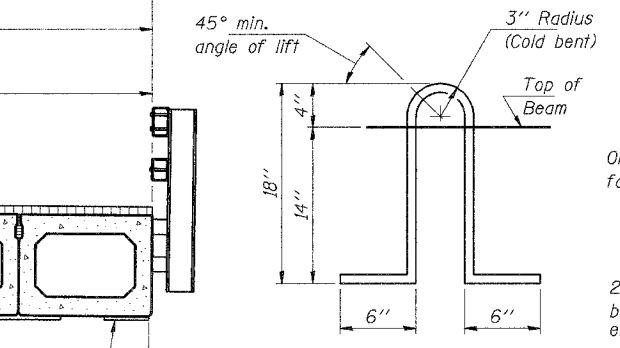
PLAN



ELEVATION OF OUTSIDE BEAMS
Showing Rail Post Spacing

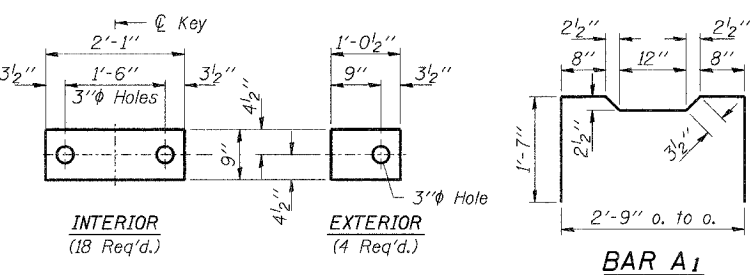


END ELEVATION

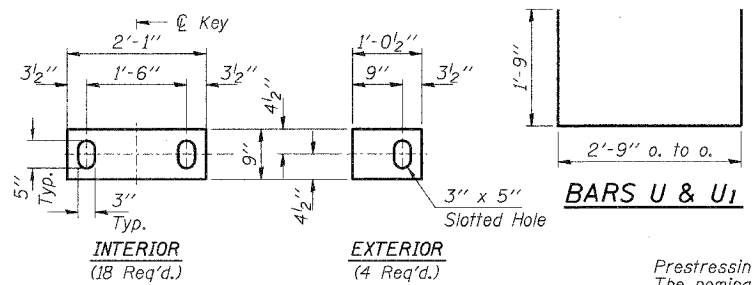


LIFTING LOOP DETAIL

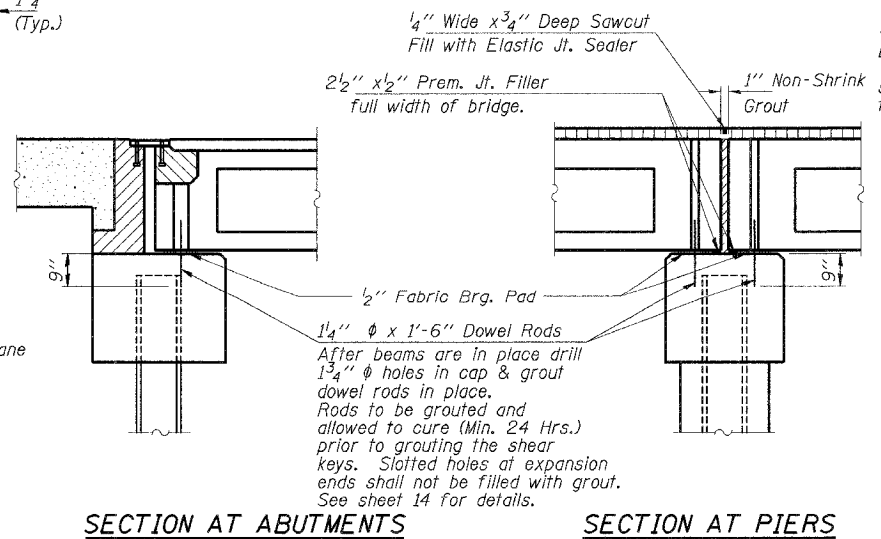
Note: The loop shall be formed in a manner such that all strands are engaged during lifting. Loops shall be cut off after the beams have been erected.



FABRIC BEARING PAD DETAILS (Piers)

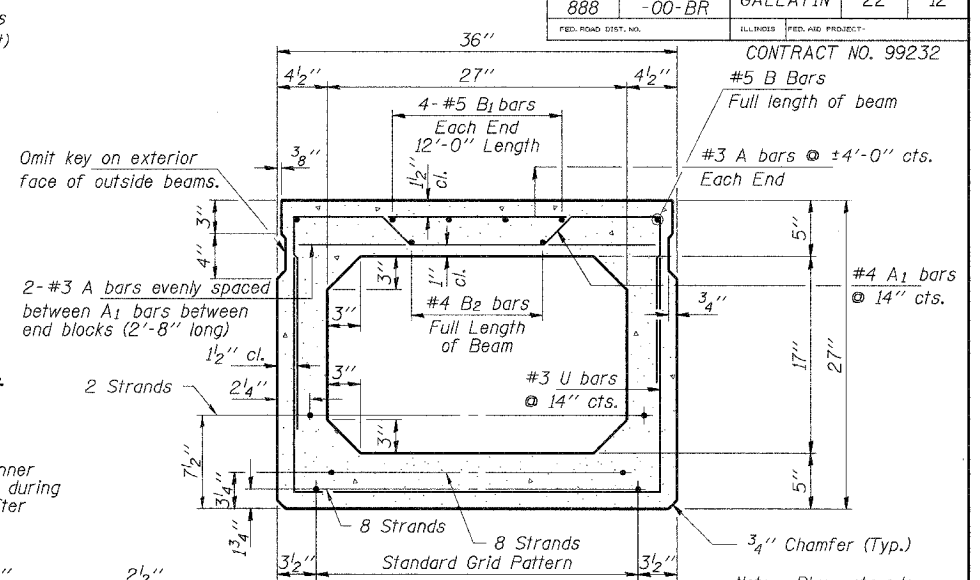


FABRIC BEARING PAD DETAILS (Abutments)



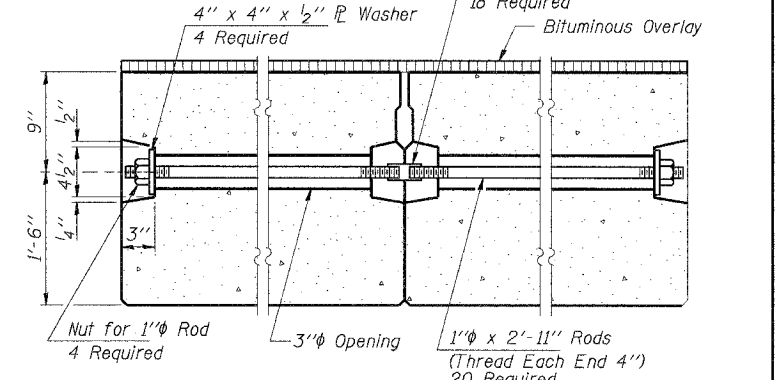
SECTION AT ABUTMENTS

SECTION AT PIERS



TYPICAL SECTION

18-1/2" Strands Each Strand Stressed to 30,900 Lbs.
8-Strands 3/4" up, 8-Strands 3/4" up, 2-Strands 7/2" up
Expected Camber = 1 5/8"



TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES
 Prestressing steel shall be uncoated high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 7-wire stress-relieved 2-1/2"-270 ksi strands, as shown.
 The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
 Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
 Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
 Required Release Strength, f'ci, shall be 4,800 p.s.i.
 An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted. Weight of one Beam approximately 34,000 lbs.

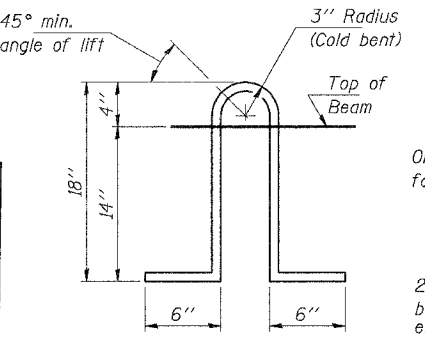
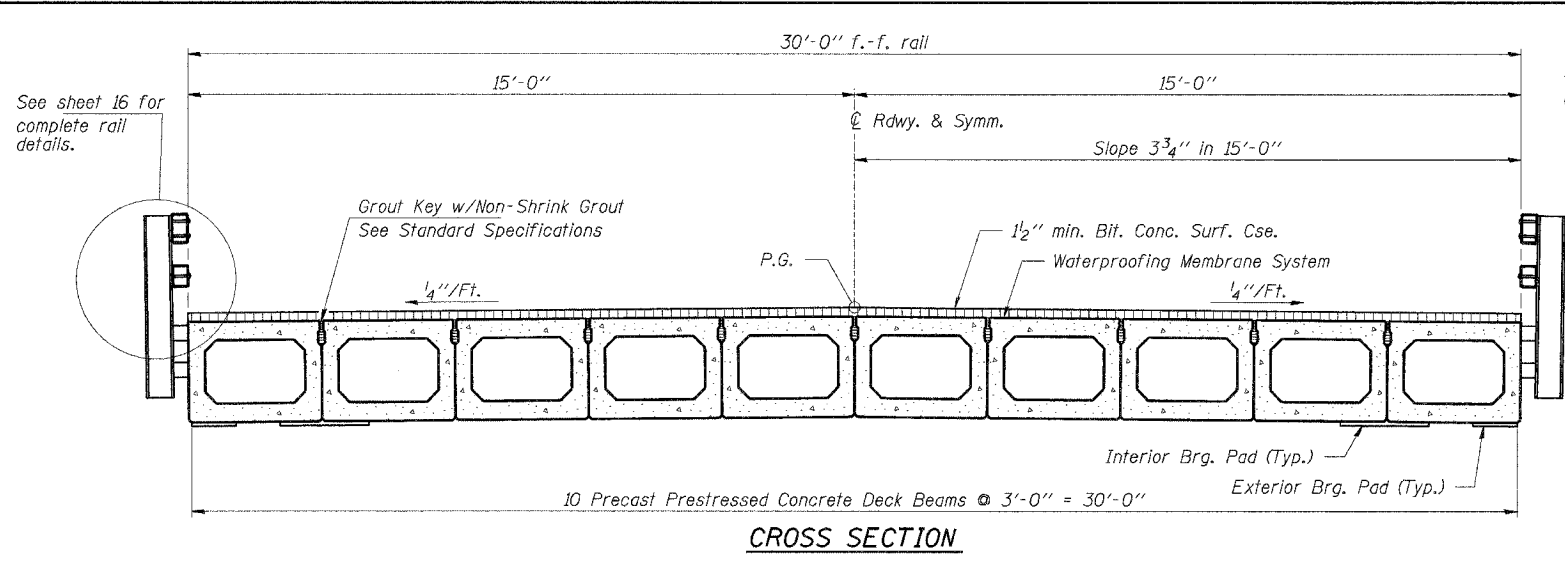
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	3,600
Bit. Conc. Surf. Cse., Superpave, Mix C, N70	Ton	45
Waterproofing Membrane System	Sq. Yd.	399
P.C. Mortar Fairing Course	Foot	270

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 618-790-4637
 Date: 05/26/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

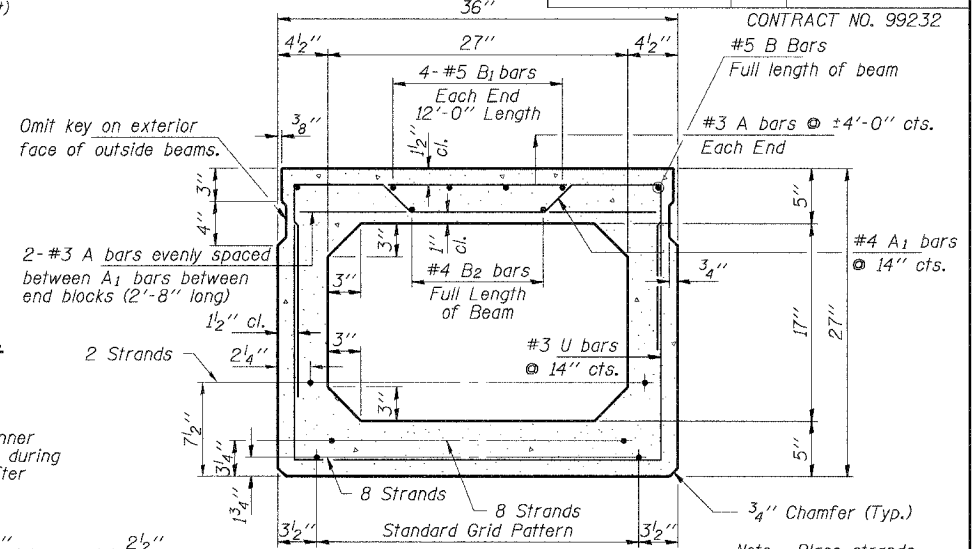
SUPERSTRUCTURE - SPANS 1 & 7
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. II
 GALLATIN COUNTY
 STR. NO. 030-3116 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
F.A.S. 888	00-00065-00-BR	GALLATIN	22	13
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



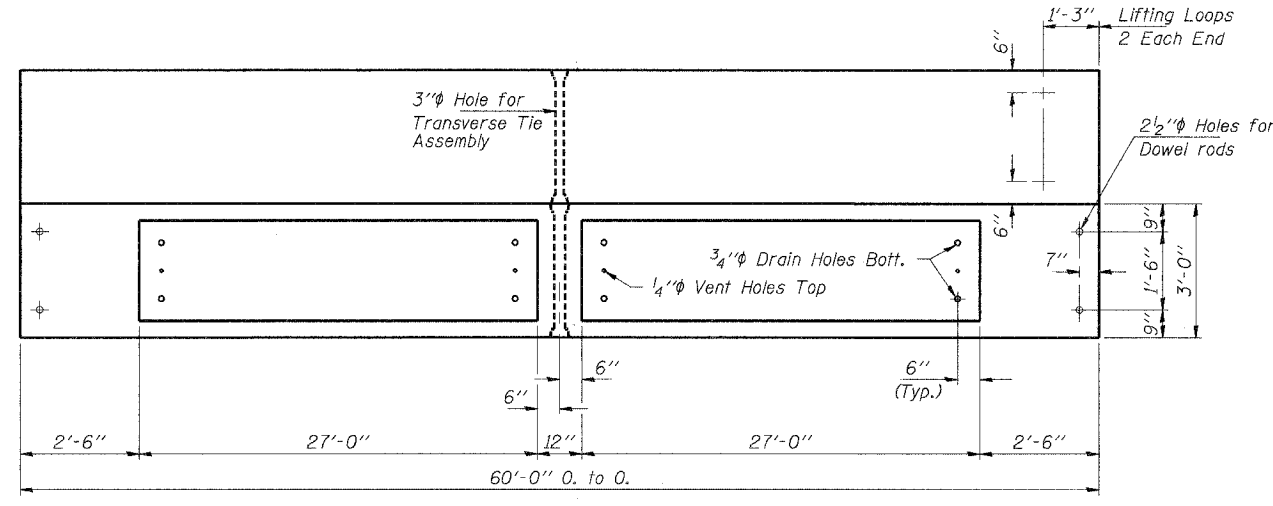
LIFTING LOOP DETAIL
Approved alternate may be substituted for the above detail.

Note: The loop shall be formed in a manner such that all strands are engaged during lifting. Loops shall be cut off after the beams have been erected.

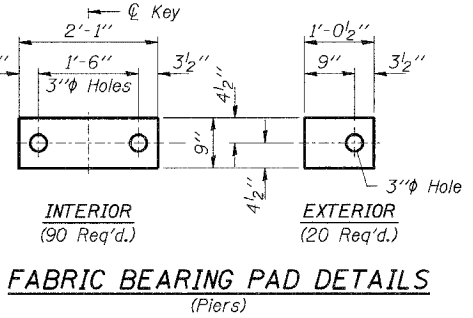


TYPICAL SECTION

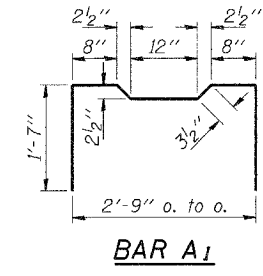
18-1/2" Strands Each Strand Stressed to 30,900 Lbs.
8-Strands 1 3/4" up, 8-Strands 3/4" up, 2 Strands 7/2" up
Expected Camber = 1 3/8"



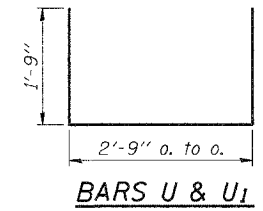
PLAN



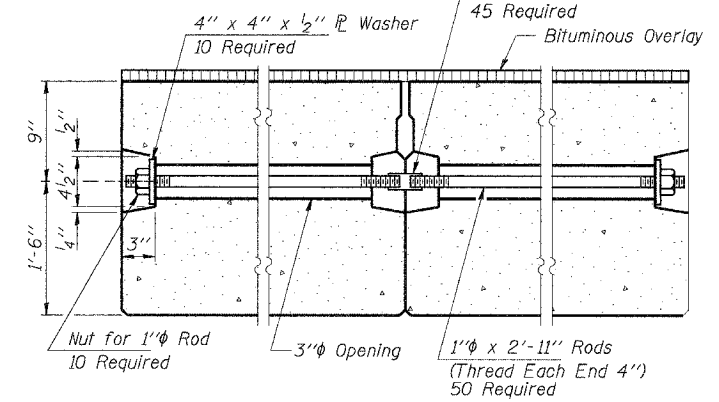
FABRIC BEARING PAD DETAILS (Piers)



BAR A1



BARS U & U1



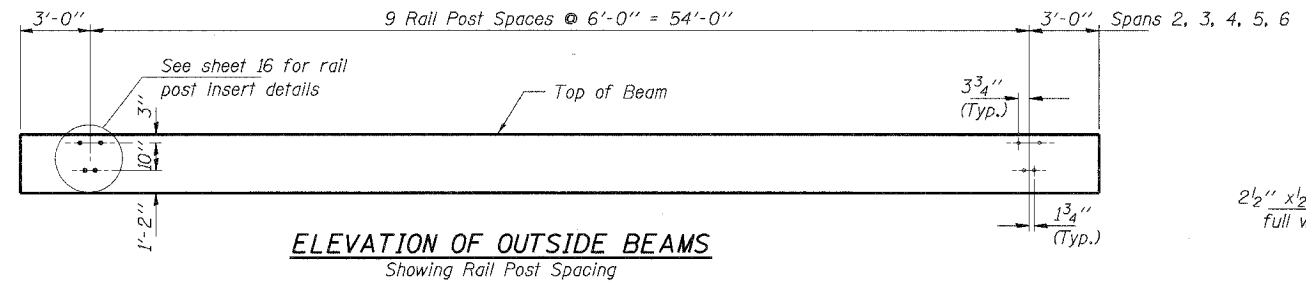
TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

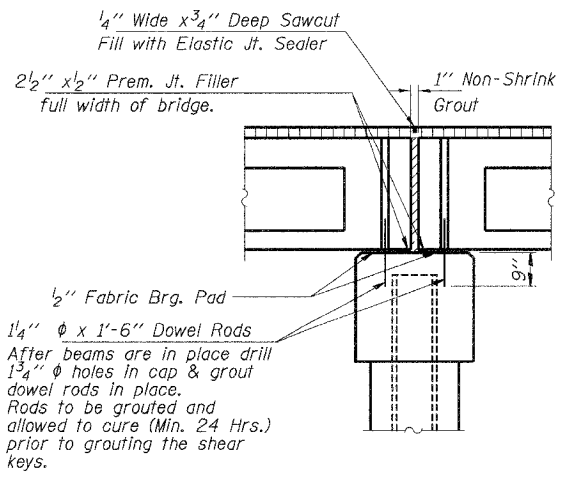
Prestressing steel shall be uncoated high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 7-wire stress-relieved 2-1/2" phi-270 ksi strands, as shown. The 1" phi rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Required Release Strength, f'ci, shall be 4,800 p.s.i. An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted. Weight of one Beam approximately 34,000 lbs.

BILL OF MATERIAL

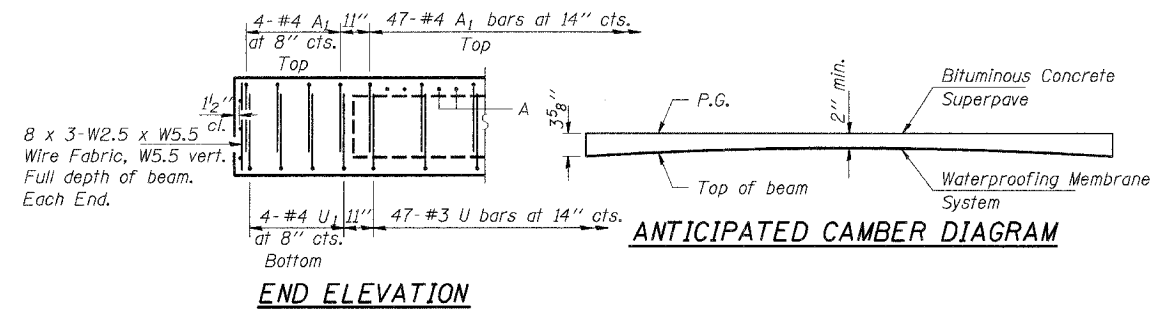
ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	9,000
Bit. Conc. Surf. Cse., Superpave. Mix C, N70	Ton	115
Waterproofing Membrane System	Sq. Yd.	1,001
P.C. Mortar Fairing Course	Foot	675



ELEVATION OF OUTSIDE BEAMS
Showing Rail Post Spacing



SECTION AT PIERS



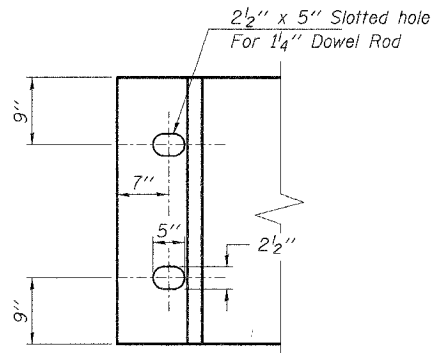
END ELEVATION

ANTICIPATED CAMBER DIAGRAM

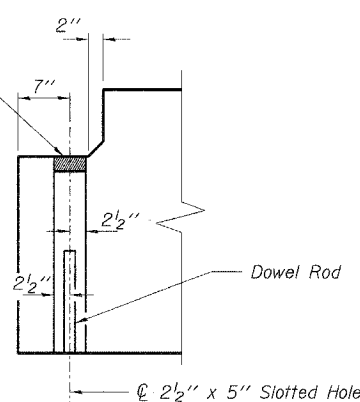
HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

SUPERSTRUCTURE - SPANS 2-6
SECTION 00-00065-00-BR
F.A.S. 888 / C.H. II
GALLATIN COUNTY
STR. NO. 030-3116 / STATION 10+00

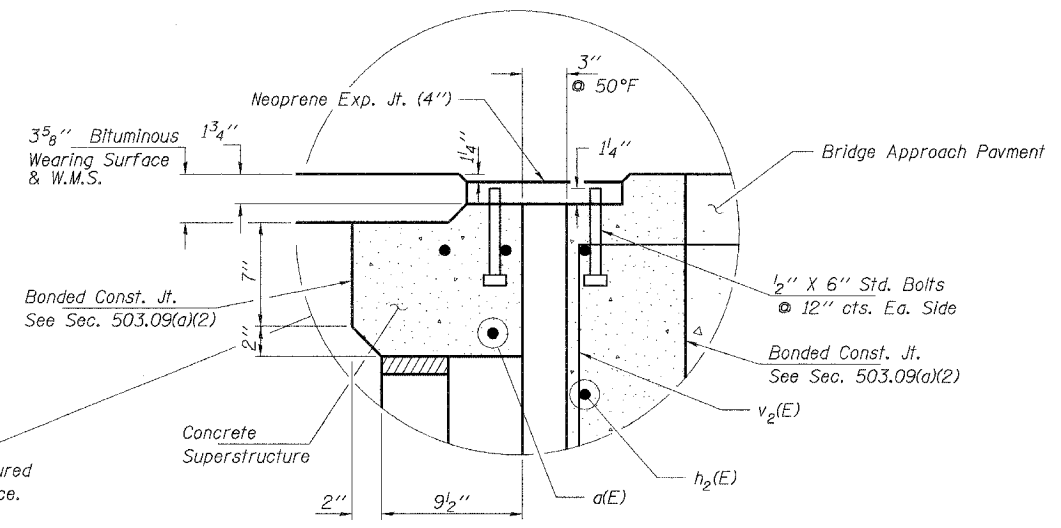
CONTRACT NO. 99232



Slotted hole shall be covered with a cap or plugged before placement of the Expansion Joint concrete.

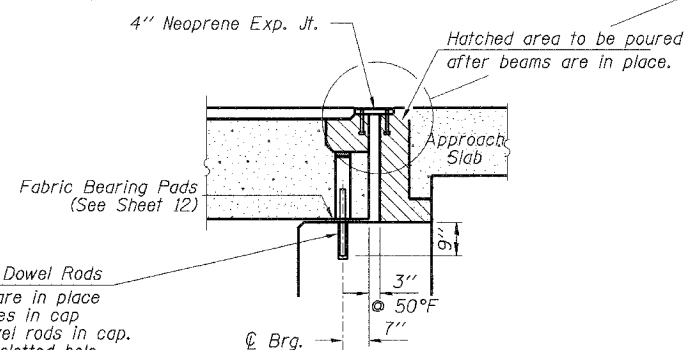


NOTCH BEAM DETAIL AT EXPANSION END



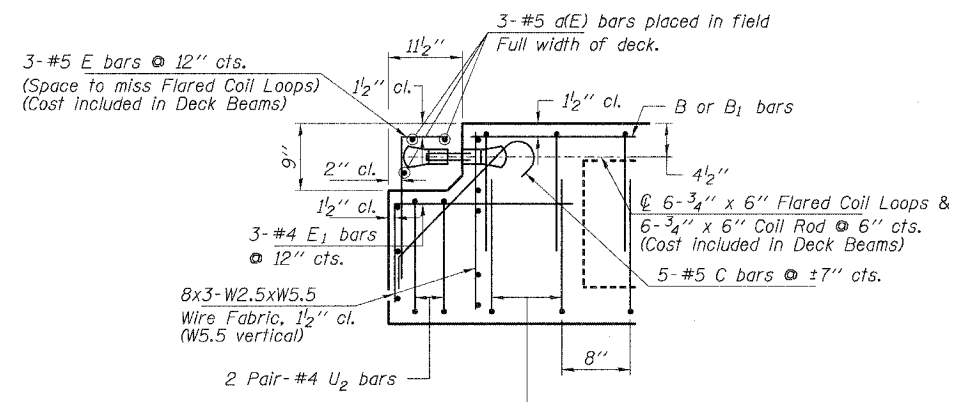
NEOPRENE EXPANSION JOINT
See Sheet 15 for Neoprene Expansion Joint details.

Notes:
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
Concrete Superstructures shall be poured after shear keys are grouted and cured.

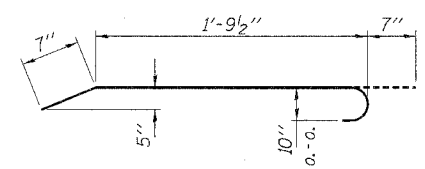


EXPANSION ABUTMENT DETAIL

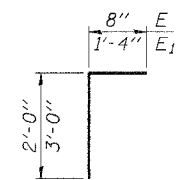
1 1/4" ϕ x 1'-6" Dowel Rods
After beams are in place drill 1 3/4" ϕ holes in cap and grout dowel rods in cap. Do not grout slotted hole at expansion end of beams. Slotted hole shall be covered before concrete for expansion joint is placed.



EXPANSION END ELEVATION
(At Abutments)



BAR C



BARS E & E1

Note: Space reinforcement bars to miss dowel rod holes.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	6	#5	29'-8"	—
Reinf. Bars, Epoxy Coated			Pound	185
Neoprene Expansion Joint 4"			Foot	60
Concrete Superstructure			Cu. Yd.	1.6

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DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

SUPERSTRUCTURE DETAILS
SECTION 00-00065-00-BR
F.A.S. 888 / C.H. II
GALLATIN COUNTY
STR. NO. 030-3116 / STATION 10+00

CONTRACT NO. 99232

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

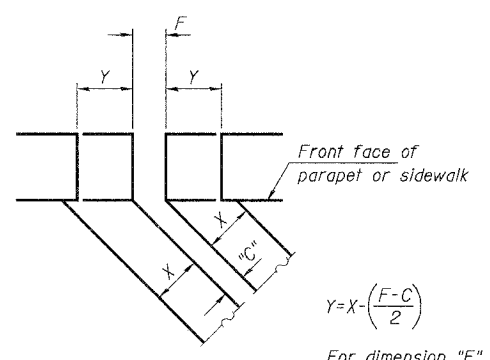
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

INSTALLATION NOTES

- Install continuous seal in roadway, parapet, curb, and sidewalk.
- Install anchor blocks as indicated.

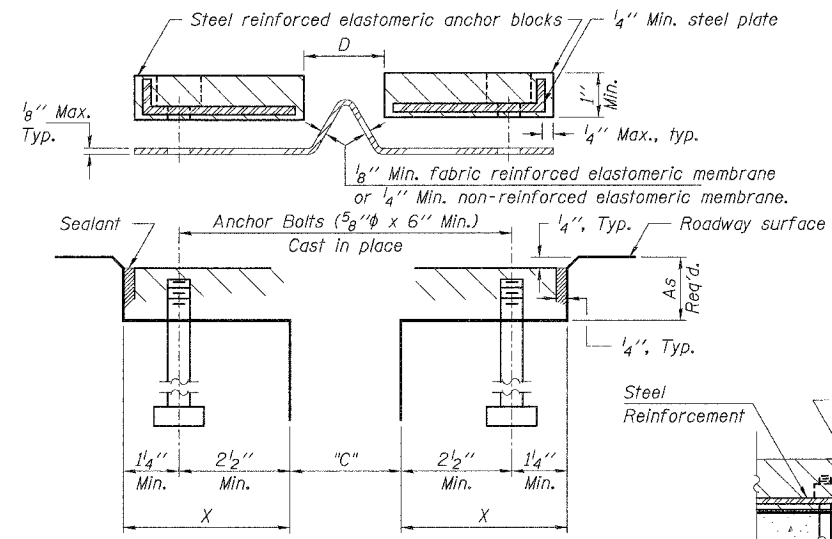
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.



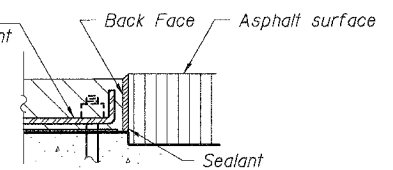
$$Y = X \cdot \left(\frac{F - C}{2} \right)$$

For dimension "F" See Sheet 14.

FORMING BLOCKOUT SKETCH



CROSS SECTION

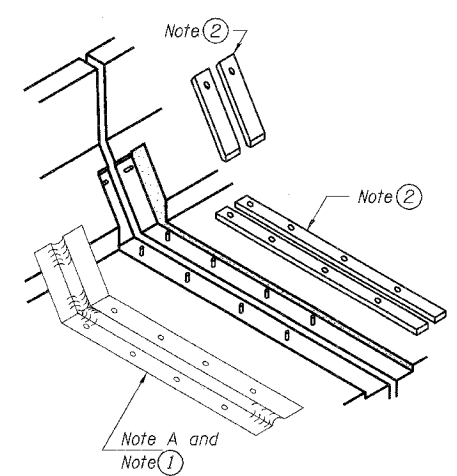


ANCHOR BLOCK WITH ASPHALT SURFACE

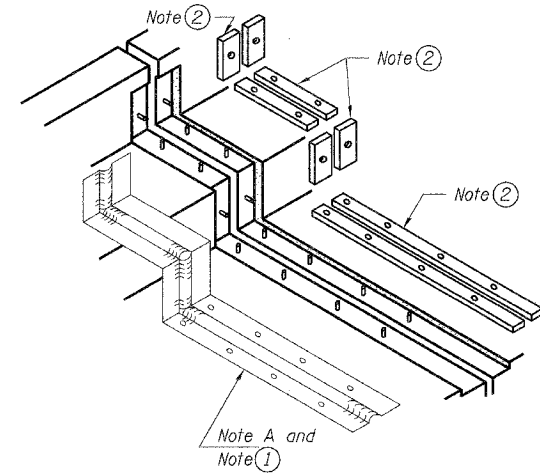
SKREW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

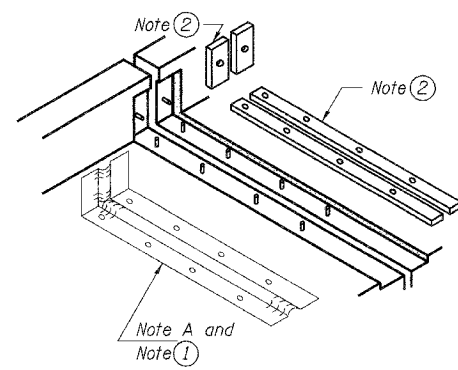
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



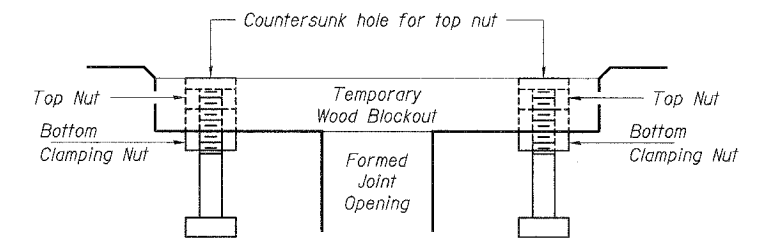
AT PARAPET



AT SIDEWALK OR MEDIAN



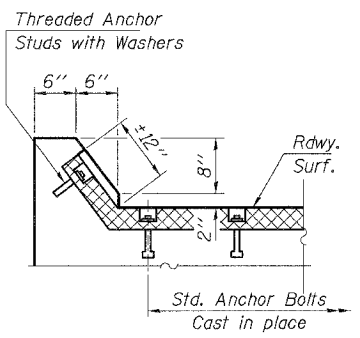
AT WALL



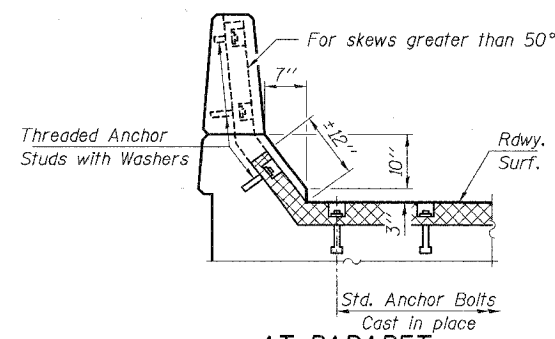
RECOMMENDED BLOCKOUT DETAIL

Anchor studs should be stainless

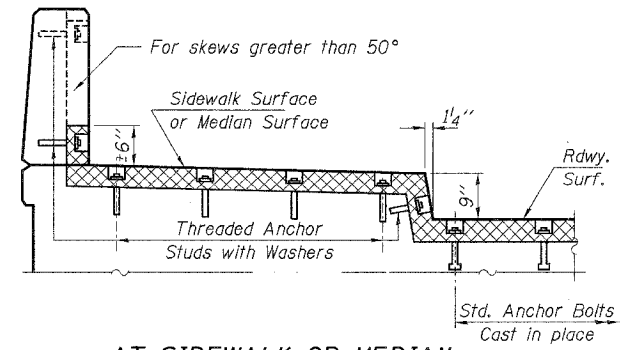
Note: Stud needs to be threaded lower to allow for use of clamping nut.



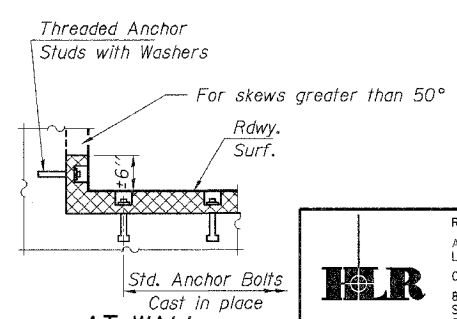
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

HLR

Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400

Account Number 12-38-0003-1
Date: 05/26/05

P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637

DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

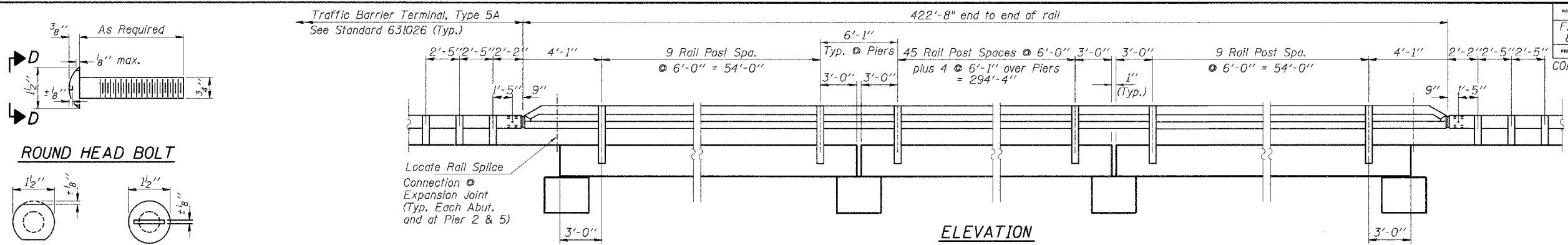
CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS

SECTION 00-00065-00-BR

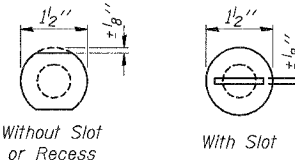
F.A.S. 888 / C.H. 11

GALLATIN COUNTY

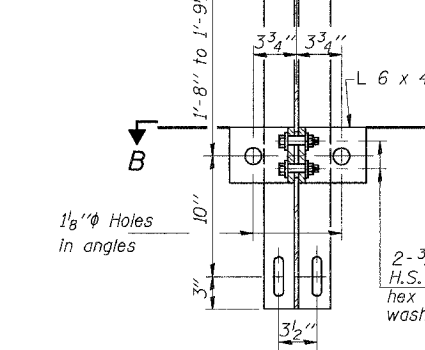
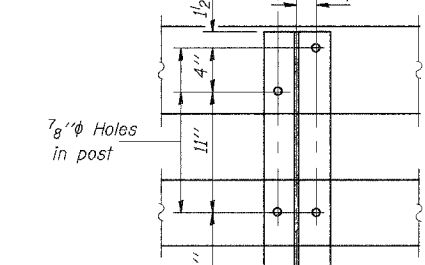
STR. NO. 030-3116 / STATION 10+00



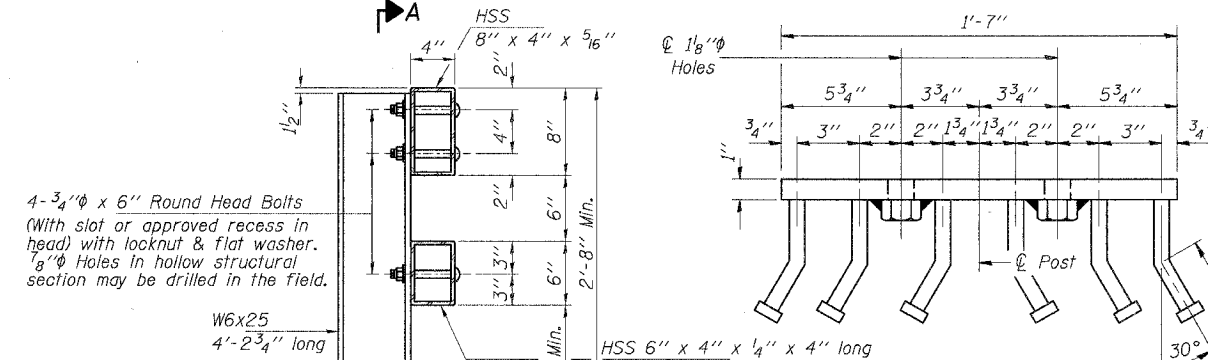
ROUND HEAD BOLT



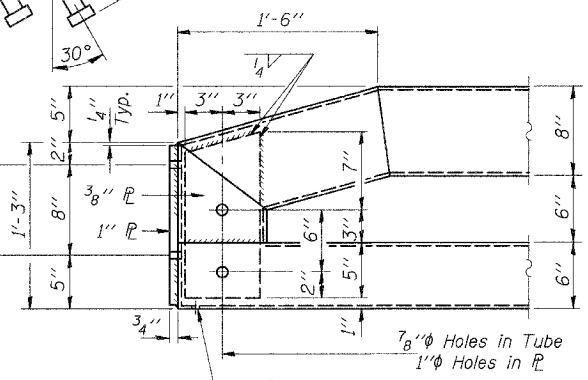
VIEW D-D



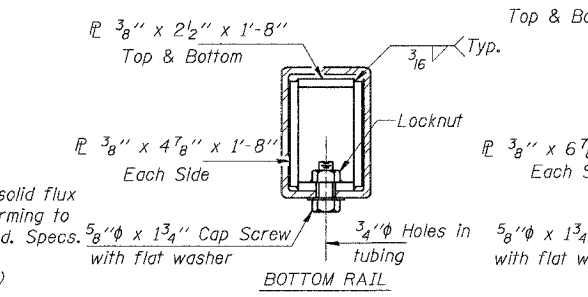
SECTION A-A



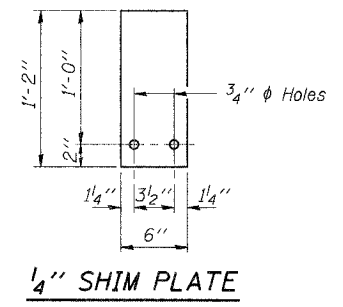
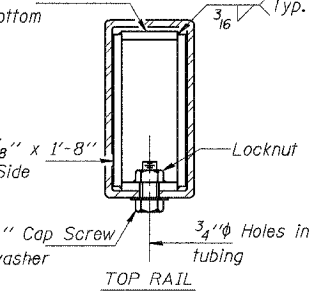
RAIL SPLICE CONNECTION AT EXPANSION JT.



END OF RAIL DETAILS



SECTION AT RAIL SPLICE



1/4" SHIM PLATE

NOTES

Hollow structural sections shall conform to the requirements of A.S.T.M. designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. M-164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized according to A.A.S.H.T.O. M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-111 and A.A.S.H.T.O. M-385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per foot for STEEL BRIDGE RAIL, TYPE SM.

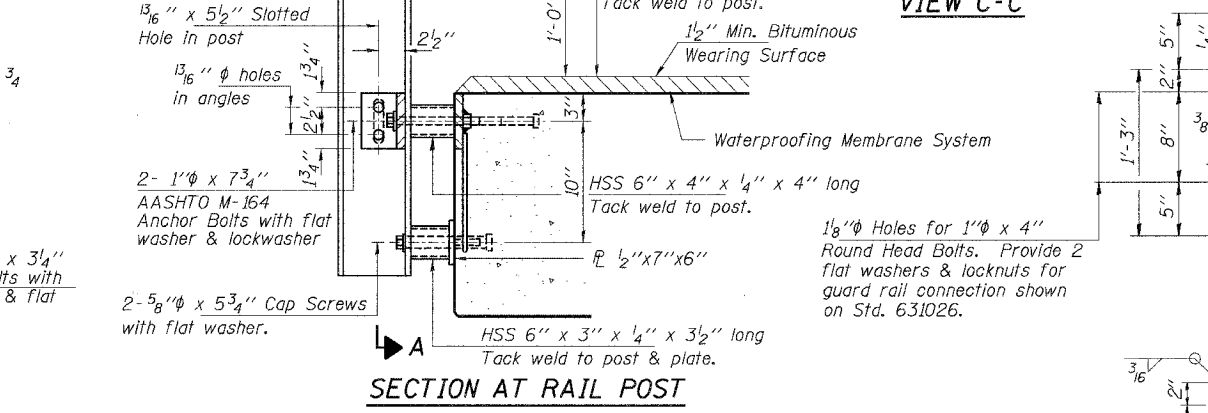
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 6" fabric bearing pads between the plates and concrete.

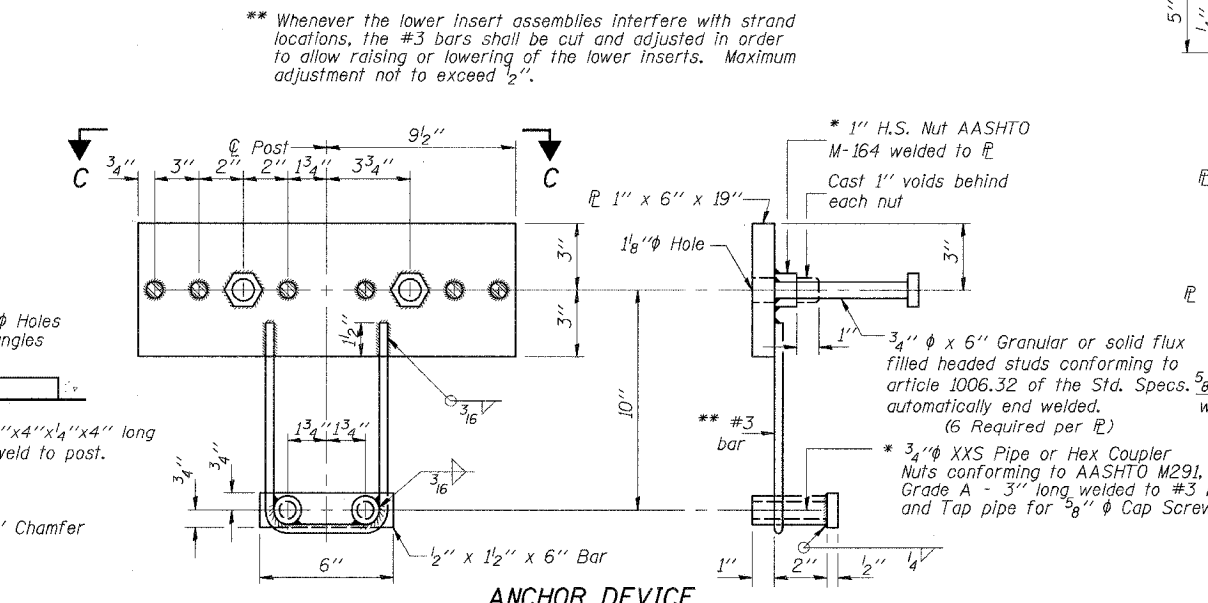
The 3/4" diameter high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Art. 505.04(f)(3) of the Standard Specifications. The 1" diameter high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" diameter cap screws in bottom of posts shall be tightened to a snug fit only.

Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement. 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.

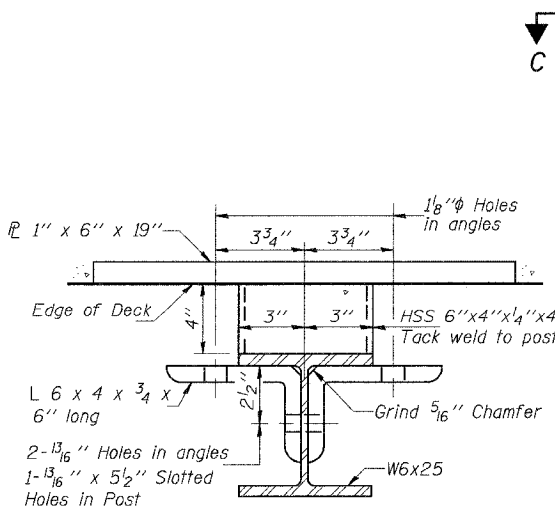
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing.



SECTION AT RAIL POST

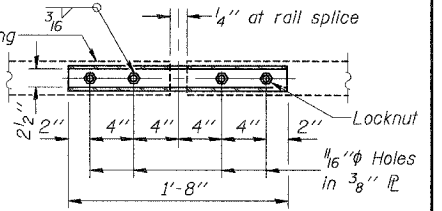


ANCHOR DEVICE



SECTION B-B

PLAN-BOTT. SPLICE R TYPICAL



BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	846

RAILING DETAILS SECTION 00-00065-00-BR

F.A.S. 888 / C.H. II
GALLATIN COUNTY
STR. NO. 030-3116 / STATION 10-00

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-190-4631
Account Number 12-38-0003-1
Date: 05/26/05
DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

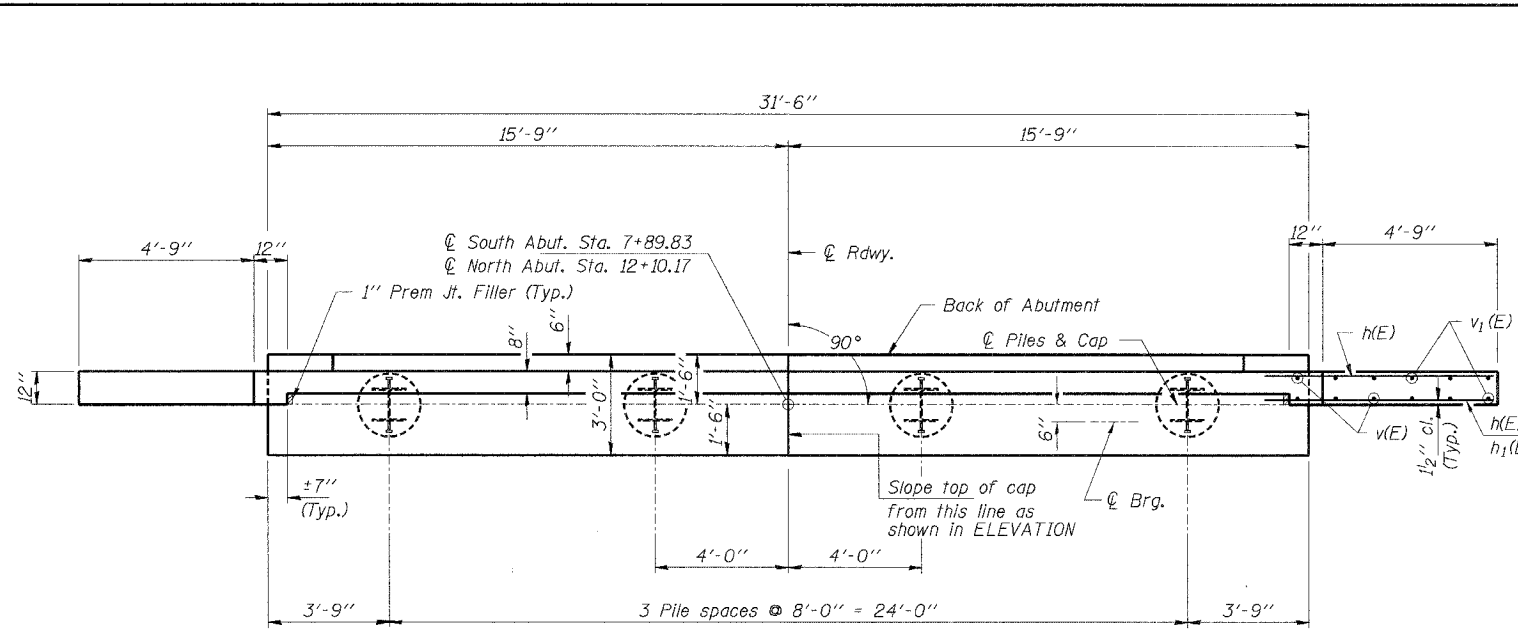
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

* 1" H.S. Nut AASHTO M-164 welded to P
Cast 1" voids behind each nut

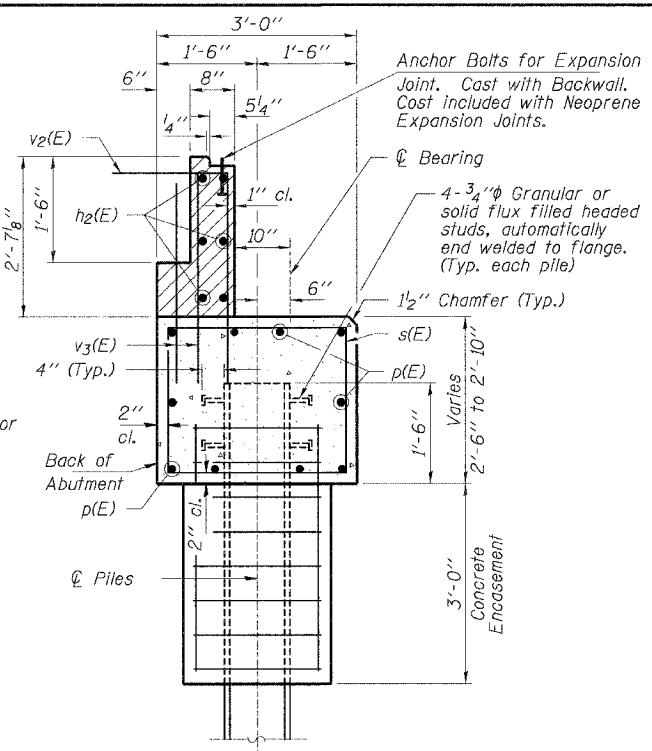
* 3/4" diameter XXS Pipe or Hex Coupler Nuts conforming to AASHTO M291, Grade A - 3" long welded to #3 bar and Tap pipe for 5/8" diameter Cap Screw.

* 3/4" diameter XXS Pipe or Hex Coupler Nuts conforming to AASHTO M291, Grade A - 3" long welded to #3 bar and Tap pipe for 5/8" diameter Cap Screw.

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

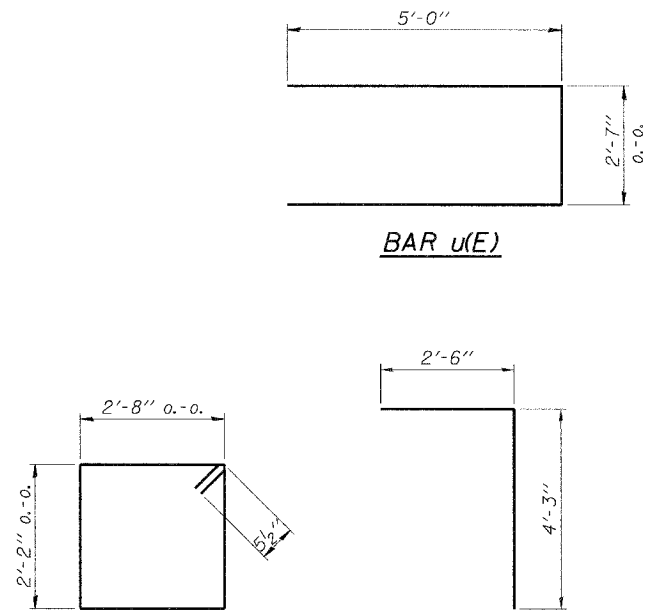


PLAN



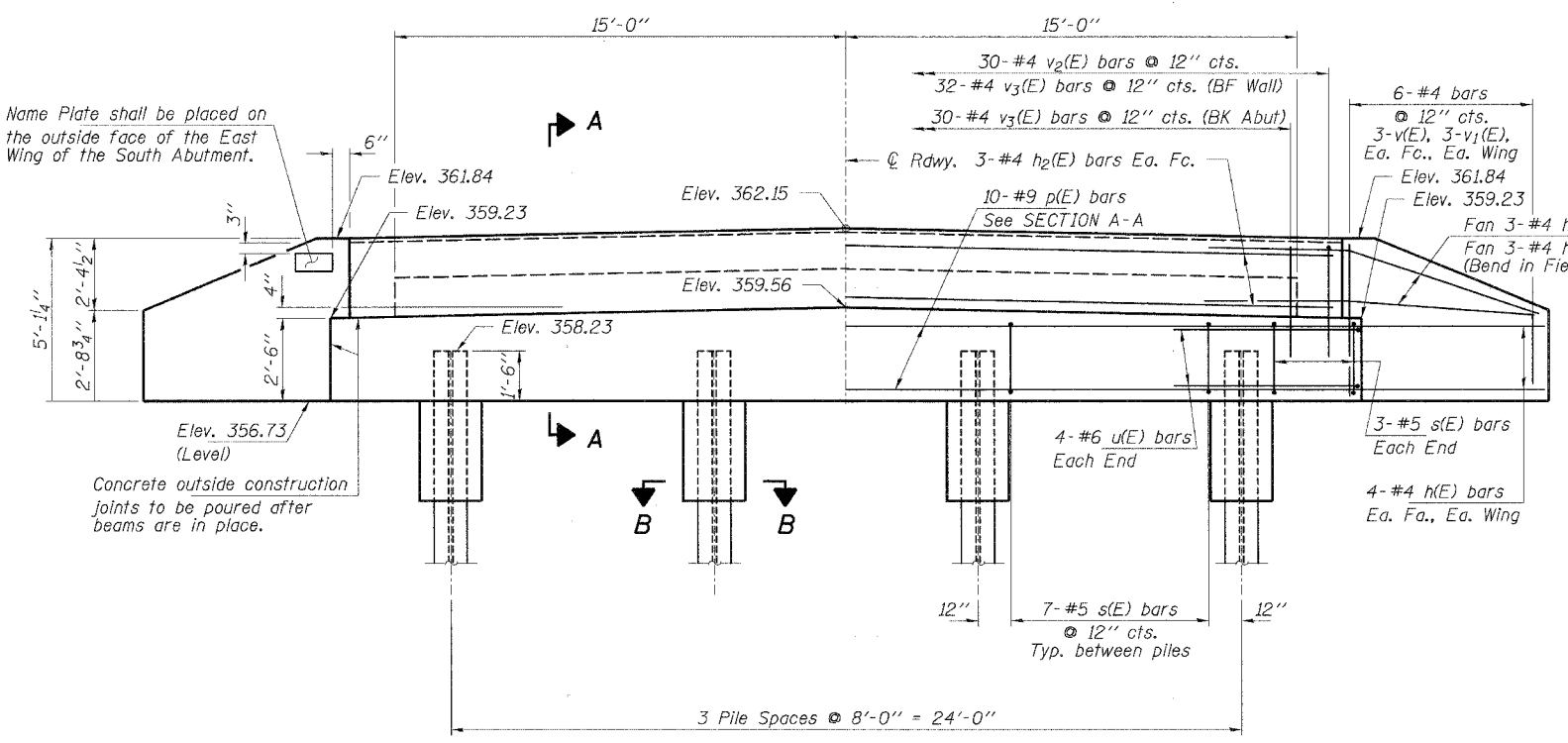
SECTION A-A

Hatched area to be poured after beams are in place and dowel rods grouted into cap. May be poured with Bridge Appr. Pvt.



BAR s(E)

BAR v2(E)

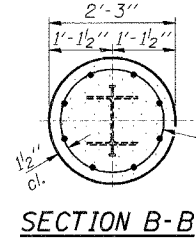


ELEVATION

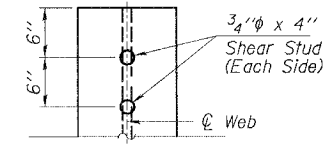
PILE DATA

Type _____ Steel HP14x73
 No. Req'd. _____ 8
 Req'd Bearing Capacity... Drive To Refusal
 Design Loading _____ 66 Ton/Pile
 Est. Length** _____ 140 Feet/Pile

** All piles shall be driven below a minimum pile Elevation = 260.0
 5 Tons of design loading is due to seismic liquefaction.



SECTION B-B



PILE SHEAR STUD CONNECTION DETAIL

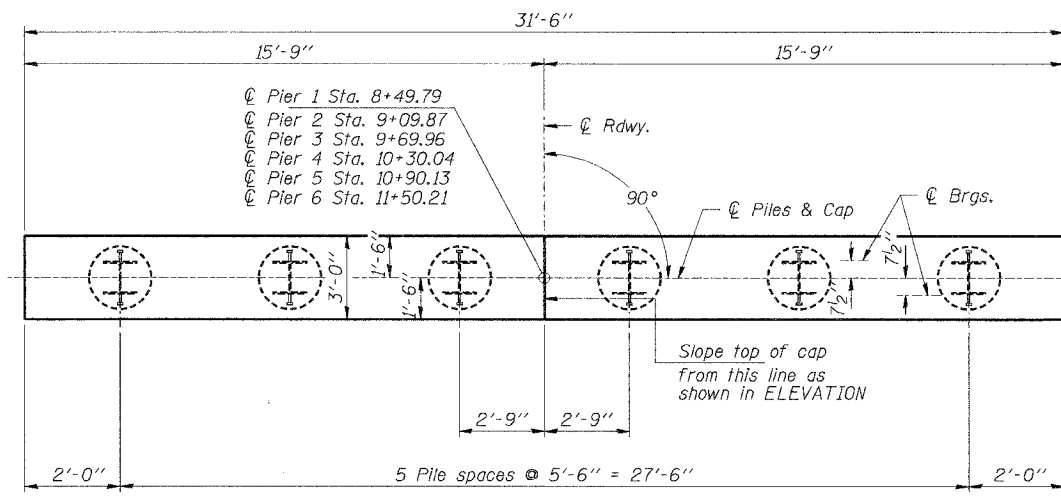
BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	44	#4	6'-6"	—
h1(E)	12	#4	5'-6"	—
h2(E)	12	#4	30'-0"	—
p(E)	20	#9	31'-2"	—
s(E)	54	#5	10'-7"	□
u(E)	16	#6	12'-7"	—
v(E)	24	#4	4'-1"	—
v1(E)	24	#4	2'-5"	—
v2(E)	60	#4	6'-9"	—
v3(E)	124	#4	4'-3"	—
Concrete Structures			Cu. Yd.	27.0
Reinforcement Bars, Epoxy Coated			Pound	4,220
Name Plates			Each	1
Steel Pile HP14x73			Foot	1,120
Concrete Encasement			Cu. Yd.	3.6
Stud Shear Connectors			Each	32
Bridge Seat Sealer			Sq. Ft.	280

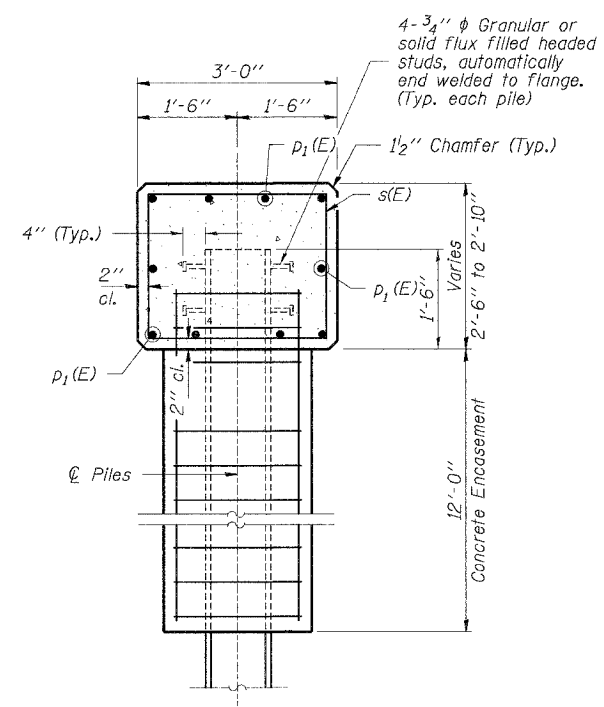
HLR
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 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4631
 Dates: 05/26/05
 DESIGNED: T.P.L. | CHECKED: S.W.M. | DRAWN: D.B.

ABUTMENTS
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. II
 GALLATIN COUNTY
 STR. NO. 030-3116 / STATION 10+00

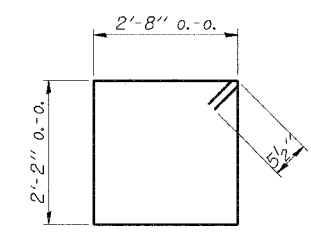
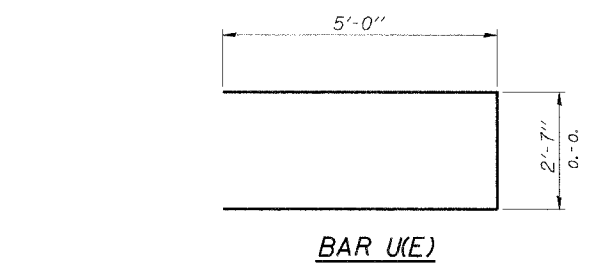
CONTRACT NO. 99232



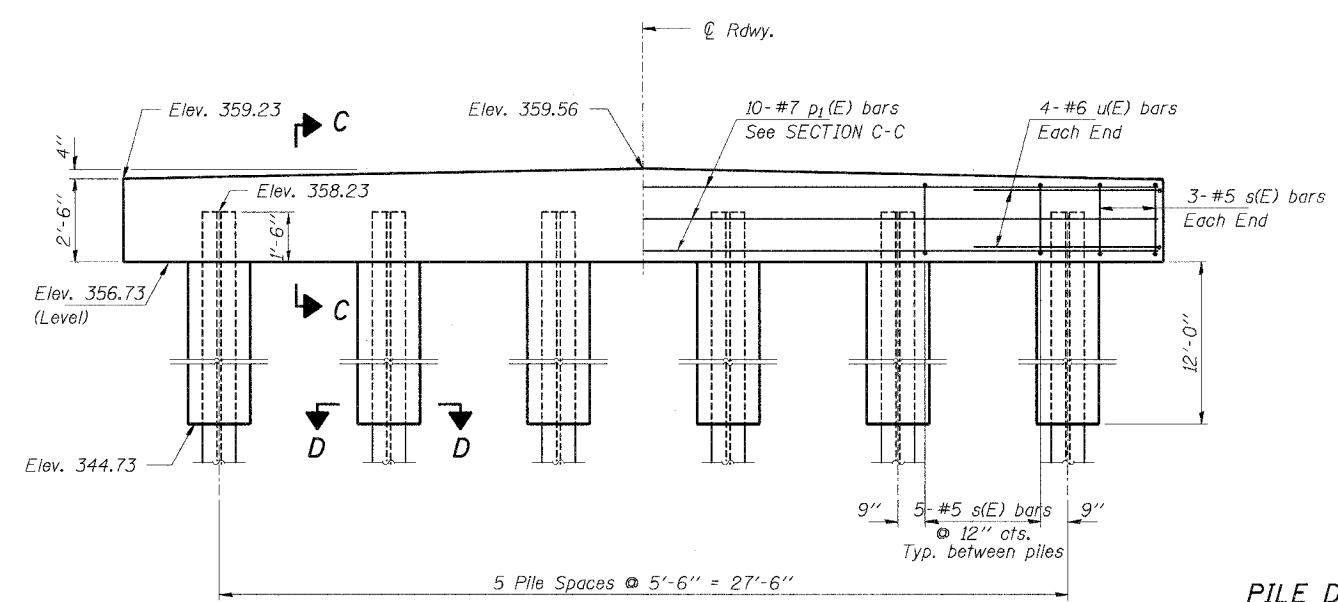
PLAN



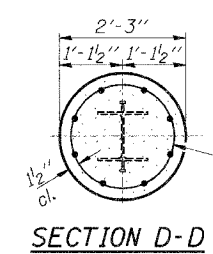
SECTION C-C



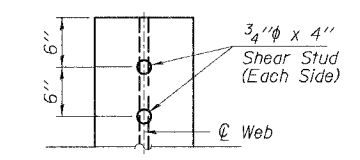
BAR S(E)



ELEVATION



SECTION D-D



PILE SHEAR STUD CONNECTION DETAIL

PILE DATA

Type Steel HP14x73
 No. Req'd. *36
 Req'd Bearing Capacity Drive To Refusal
 Design Loading 97 Ton/Pile
 Est. Length** 180 Feet/Pile

* Includes two steel test piles to be driven in permanent locations, one at Pier 1 and Pier 6.
 ** All piles shall be driven below a minimum tip Elevation = 240.0
 27 Tons of design loading is due to seismic liquefaction.

BILL OF MATERIAL - 6 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
p ₁ (E)	60	#7	31'-2"	—
s(E)	186	#5	10'-7"	□
u(E)	48	#6	12'-7"	—
Concrete Structures			Cu. Yd.	56.0
Reinforcement Bars, Epoxy Coated			Pound	6,780
Steel Pile HP14x73			Foot	6,120
Test Pile Steel HP14x73			Each	2
Concrete Encasement			Cu. Yd.	63.6
Stud Shear Connectors			Each	144

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 Date: 05/26/05
 618-790-4637

PIERS
 SECTION 00-00065-00-BR
 F.A.S. 888 / C.H. 11
 GALLATIN COUNTY
 STR. NO. 030-3116 / STATION 10+00

DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.B.

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials
Bridge Foundation Boring Log
Sheet 1 of 3

Route: FAS 888 (New Haven Road) Over N. Fork Cypress Creek
Station: 7+95
Section: 00-00065-00-BR
Location: 3.65 MI N ILL 13
Date: _____
Checked By: Rob Graeff

Boring No: 1-3				Station: 7+95				Offset: 7' RT CL				Ground Surface: 362.3 Ft					
D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p
Bluminous Pavement 361.8																	
Crushed Aggregate 309.3																	
Very stiff, moist, gray Clay to Silty Clay A7-6 357.5																	
Stiff, moist, gray speckled brown, Clay to Silty Clay A7-6 355.3																	
Very stiff, moist, gray, Silty Clay A-8 352.5																	
Stiff, very moist, gray, Clay A7-6 350.3																	
Medium, very moist, gray, Clay A7-6 347.8																	
Very loose, wet, gray, very fine Silty Sand 94% Sand 4% Sil 2% Clay 342.8																	
Medium, wet, gray, very fine Silty Sand 337.8																	
337.8 25.0 WH																	

Surf. Wat Elev: 347.0
Ground Water Elevation when Drilling: 347.5
At Completion: _____
Hrs: _____

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)

Sheet 2 of 3

Route: FAS 888
Station: 7+95
Section: 00-00065-00-BR
Location: 3.65 MI N ILL 13
Date: _____
Checked By: Rob Graeff

Boring No: 1-3				Station: 7+95				Offset: 7' RT CL				Ground Surface: 362.3 Ft					
D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p
Soft, very moist, gray, Silty Clay Loam A-6 307.8																	
Medium, very moist, gray, Silty Clay Loam A-6 307.8																	
No Recovery 307.8																	
Soft to medium, very moist, gray, Clay A7-6 with fine Sand Layers 297.8																	
Medium, wet, gray, very fine Silty Sand 91% Sand 6% Sil 3% Clay 292.8																	
297.8 75.0 7																	

Medium, wet, gray, Sand with some Gravel 71% Sand 4% Sil 2% Clay 23% Gravel 10 8 19

Medium, wet, gray, very fine Silty Sand with some Gravel 94% Sand 4% Sil 2% Clay 11 25

Elevation referenced to BM located on adjacent square on top of W. Curb 12' LT Station 10+01 Elev = 362.47 ft.

To convert "N" values to "N60" values multiply by 1.25.

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)


Sheet 3 of 3

Route: FAS 888
Station: 7+95
Section: 00-00065-00-BR
Location: 3.65 MI N ILL 13
Date: _____
Checked By: Rob Graeff

Boring No: 1-3				Station: 7+95				Offset: 7' RT CL				Ground Surface: 362.3 Ft					
D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p	D	B	L	W	Q _u	W _p
Medium, wet, gray, very fine Silty Sand with some Gravel 94% Sand 4% Sil 2% Clay 11 25																	
105.0 120.0																	
110.0 8 135.0																	
115.0 140.0																	
120.0 9 145.0																	
241.3 11																	
ESF = 71 Tons																	
Bottom of hole = 121.0 ft.																	
125.0 150.0																	

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 1

 Account Number 12-38-0003-1 Date: 05/26/05 DESIGNED: T.P.L.	Rice, Berry and Associates A Division of Hampton, Lenzini and Renwick, Inc. Civil & Structural Engineers 801 S. Durkin Drive Springfield, Illinois 62704 217-546-3400 P.O. Box 1036 DuQuoin, Illinois 62832 618-790-4637 CHECKED: S.W.M. DRAWN: D.B.	BORING 1 SECTION 00-00065-00-BR F.A.S. 888 / C.H. 11 GALLATIN COUNTY STR. NO. 030-3116 / STATION 10+00
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