

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.I. ROUTE 72 (I-72)
SECTION (10-71HB)BDR,BJR

BRIDGE DECK REPAIRS
CHAMPAIGN COUNTY
OVER I-72 AT THE NORTH EDGE OF BONDVILLE
C-95-036-10

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(10-71HB)BDR,BJR	CHAMPAIGN	14	1
		ILLINOIS	CONTRACT NO. 70865	

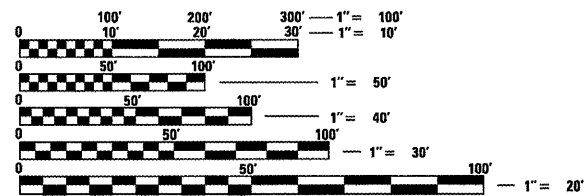
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

**CURRENT
TRAFFIC DATA**

CH-19 / (FAI-72)

2010 ADT = 650 / (13,400)
2030 ADT = 900 / (18,200)
PU + PC % = 94.0 / (81.5)
SU % = 5.0 / (3.9)
MU% = 1.0 / (14.6)

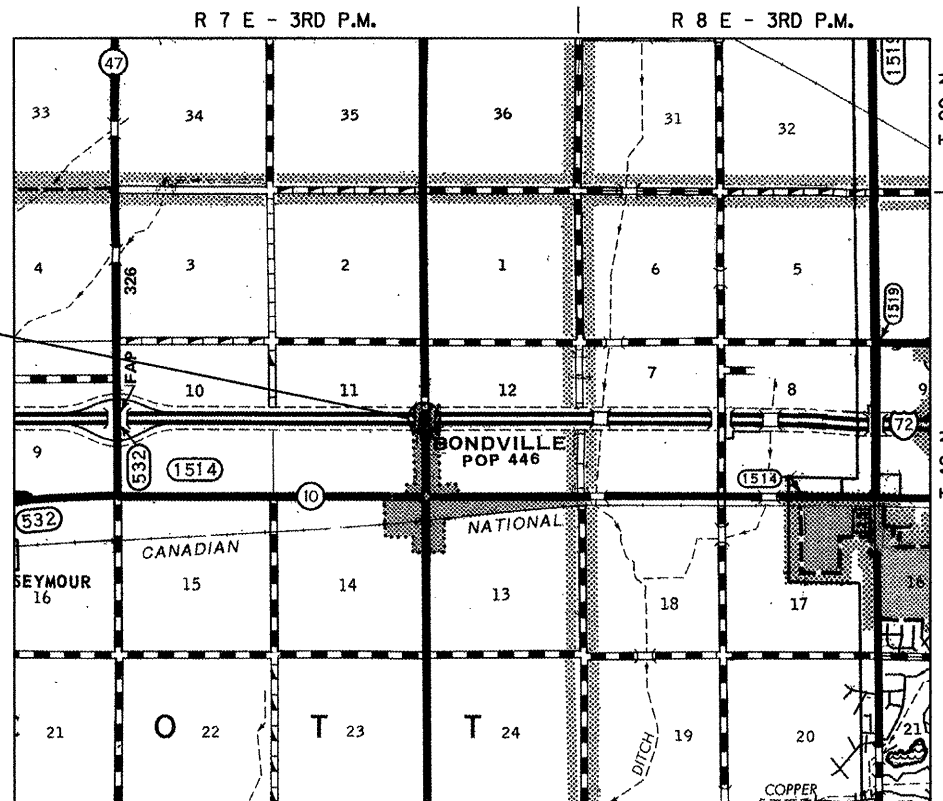
DESIGN DESIGNATION
LOCAL STREET / (INTERSTATE)



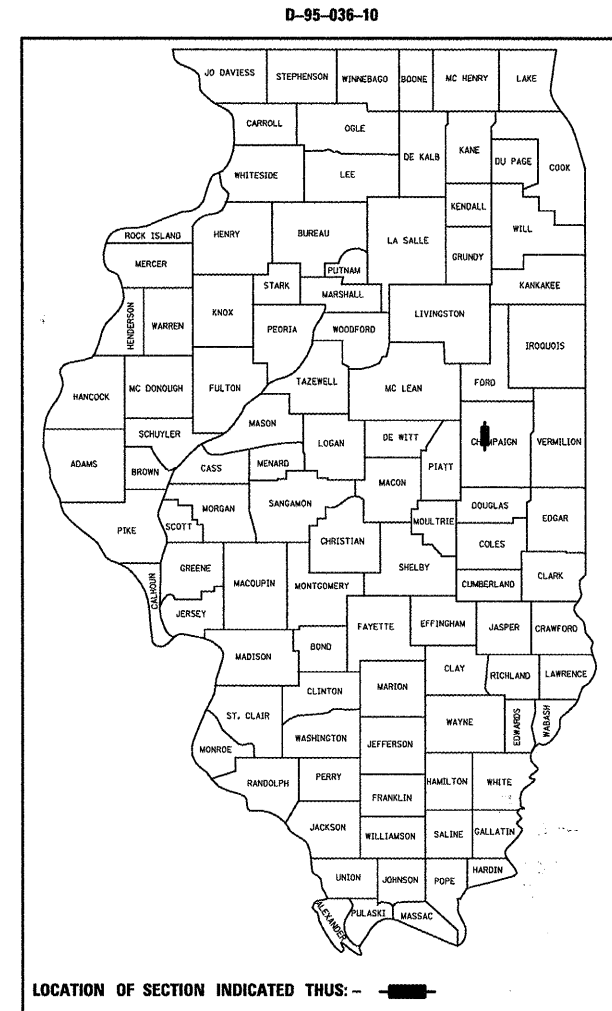
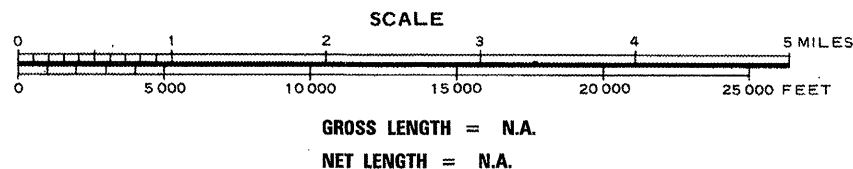
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811 SCOTT TOWNSHIP

PROJECT ENGINEER: TIM BRANDENBURG
PROJECT MANAGER: GARY SIMS
217-465-4181
CONTRACT NO. 70865



EXISTING S.N. 010-0146
CH-19 (MARKET STREET) OVER
F.A.I. 72 STATION 1780+09.74
PROPOSED STRUCTURE REPAIRS



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 03/03 20 10
David E. Lewis
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 7 20 10
Scott E. Stitt, P.E., I.C.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

May 7 20 10
Christine M. Reed, I.C.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS
2	LIST OF STANDARDS
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3	SUMMARY OF QUANTITIES
4	GENERAL PLAN
5	AS-BUILT PATCHING PLAN
6	JOINT AND DRAIN REPAIR DETAILS
7	PLAN AND ELEVATION FOR STRUCTURAL STEEL REPAIR
8	BEAM STRAIGHTENING DETAILS
9	BEARING REPLACEMENT DETAILS
10-13	AS-BUILT STRUCTURE PLANS - FOR INFORMATION ONLY
14	TRAFFIC CONTROL & PROTECTION DEVICES (ROAD & SIDEROAD/STREET CLOSURES)

GENERAL NOTES

GENERAL NOTES

G.N.-100

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-501A

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD FOLLOW THE GUIDE BRIDGE SPECIAL PROVISIONS FOR CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

LIST OF HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-02	OFF-ROAD OPERATIONS, MULTILANE, 4.5m (15') TO 600mm (24") FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 4.5m (15') AWAY
701400-04	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-05	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701901-01	TRAFFIC CONTROL DEVICES

FILE NAME =	USER NAME = smsgm	DESIGNED - GMS	REVISED -
c:\pwork\pwork\DOT\SIMSGM\0184265\0570865-Bridge Repair Plans.dgn		DRAWN - GMS	REVISED -
	PLOT SCALE = 40.0001' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/26/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS,
LIST OF STANDARDS & GENERAL NOTES**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(10-71H)BDR,BJR	CHAMPAIGN	14	2
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 70865	

SUMMARY OF QUANTITIES

FAI-72
 CHAMPAIGN CO.
 RURAL
 INTERSTATE
 100% STATE
 MINOR
 STRUCTURE
 REPAIR

 SFTY-2A
 S.N. 010-0146

CODE NO	ITEM	UNIT	TOTAL QUANTITY
50157300	PROTECTIVE SHIELD	SQ YD	250.0
50500405	FURNISH AND ERECT STRUCTURAL STEEL	POUND	1090.0
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	10.0
50501130	STRUCTURAL STEEL REPAIR	POUND	430.0
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10.0
52100520	ANCHOR BOLTS, 1"	EACH	20.0
67100100	MOBILIZATION	L SUM	1.0
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1.0
X0321468	PLUG EXISTING DECK DRAINS	EACH	16.0
X0322932	SILICONE JOINT SEALER, 1.5"	FOOT	60.0
X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	28.0
Z0003600	BEAM STRAIGHTENING	L SUM	1.0
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	5.0
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	30.0
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	23.0
NO SPECIALTY ITEMS			

FILE NAME =	USER NAME = simagn	DESIGNED - GMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\PWIDOT\SIH5GM\08184265\0570855-Bridge Repair Plans.dgn	DRAWN - GMS	REVISED -	72			(10-71HB)BDR,BJR	CHAMPAIGN	14	3	
PLOT SCALE = 40.0001' / IN.	CHECKED -	REVISED -	CONTRACT NO. 70865							
PLOT DATE = 2/26/2010	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

DECK SURVEY PERFORMED ON APRIL 8, 2009. IF MORE THAN ONE WINTER FREEZE-THAW CYCLE OCCURS BETWEEN THE INITIAL INSPECTION AND THE COMMENCEMENT OF WORK, THE FINAL PLAN QUANTITIES FOR DECK REPAIRS MUST BE BASED ON A NEW INSPECTION OF THE DECK.

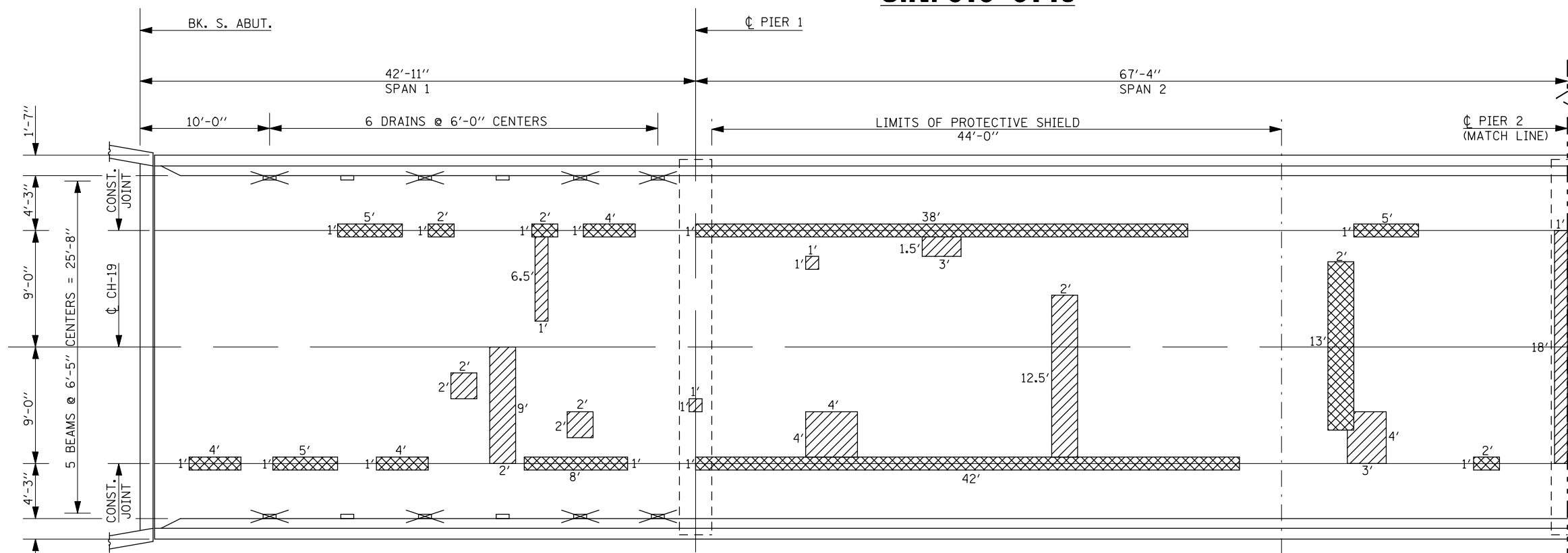
GENERAL PLAN S.N. 010-0146

THE EXISTING OVERHEAD STRUCTURE WAS BUILT IN 1969 AS FA ROUTE 11, SECTION 10-71HB AT STATION 1780+09.74 IN CHAMPAIGN COUNTY.

THE SUPERSTRUCTURE CONSISTS OF A 7" R.C. SLAB AND FIVE WF-30 STEEL I-BEAMS SUPPORTED BY THREE HAMMERHEAD PIERS AND STUB ABUTMENTS. THE STRUCTURE MEASURES 220'-6" FROM BACK TO BACK OF ABUTMENT. THE DECK HAS A CLEAR WIDTH OF 26'-6" AND AN OUT-TO-OUT WIDTH OF 29'-8".

METHOD OF CONSTRUCTION: ROAD CLOSURE (UTILIZING BLR STD. 21-8)

SEE PROPOSED IMPROVEMENTS ON THIS SHEET.



TOTAL BILL OF MATERIALS

ITEM	UNIT	TOTAL
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	5.0
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	30.0
DECK SLAB REPAIR (PARTIAL)	SQ YD	23.0
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10.0
JACK AND REMOVE EXISTING BEARINGS	EACH	10.0
FURNISH AND ERECT STRUCTURAL STEEL	POUND	1090.0
PLUG EXISTING DECK DRAINS	EACH	16.0
SILICONE JOINT SEALER, 1.5"	FOOT	60.0
ANCHOR BOLTS, 1" Ø	EACH	20.0
PROTECTIVE SHIELD	SQ YD	250.0
STRUCTURAL STEEL REPAIR	POUND	430.0
BEAM STRAIGHTENING	L SUM	1.0

PROPOSED WORK

- PARTIAL AND FULL-DEPTH DECK SLAB REPAIR.
- PLUG EXISTING FLOOR DRAINS.
- REMOVE EXISTING STEEL ROCKER BEARINGS AND REPLACE WITH ELASTOMERIC BEARINGS.
- MECHANICALLY STRAIGHTEN WEST FASCIA BEAM OVER WESTBOUND LANES.
- INSTALL SILICONE JOINT SEALER AT EXPANSION JOINTS.

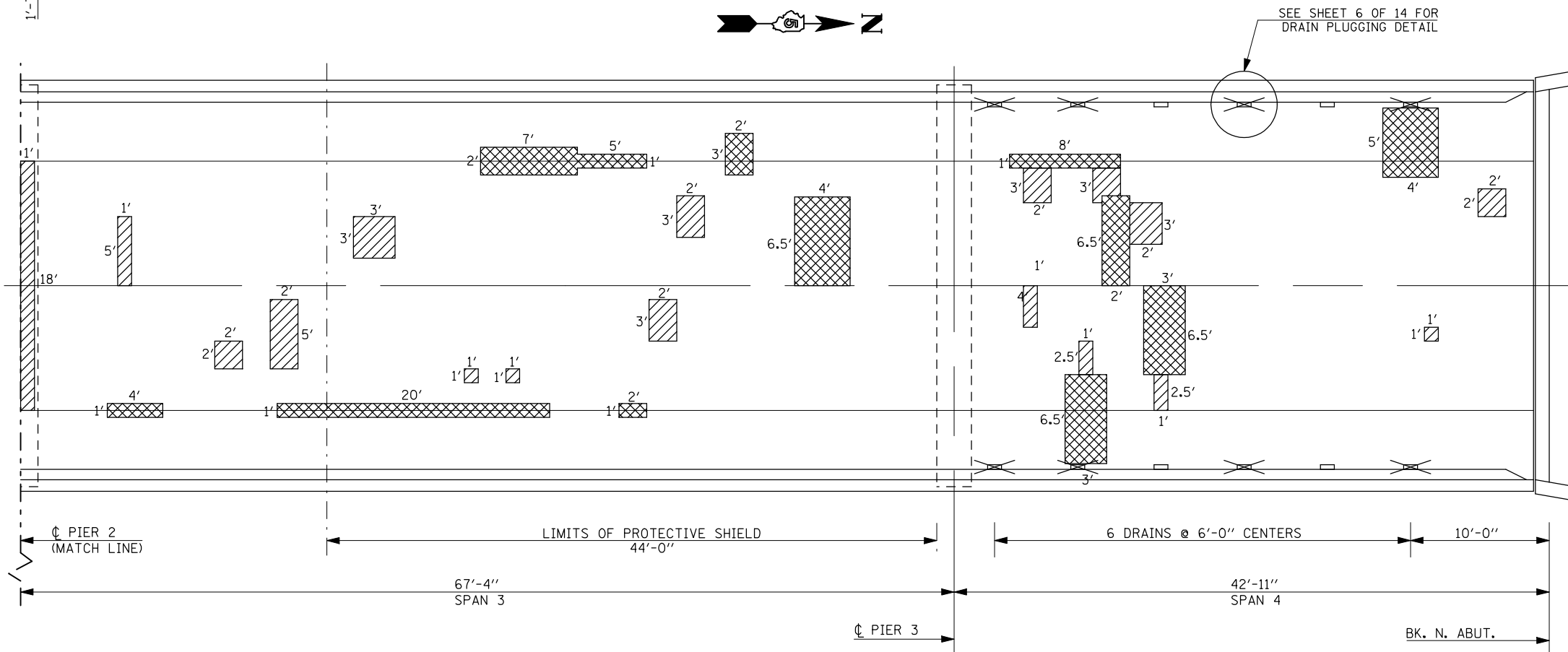
LEGEND

- DECK SLAB REPAIR, FULL-DEPTH
- DECK SLAB REPAIR (PARTIAL)
- PLUG EXISTING DECK DRAINS

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.



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PLOT DATE = 2/26/2010		DATE -	REVISED -

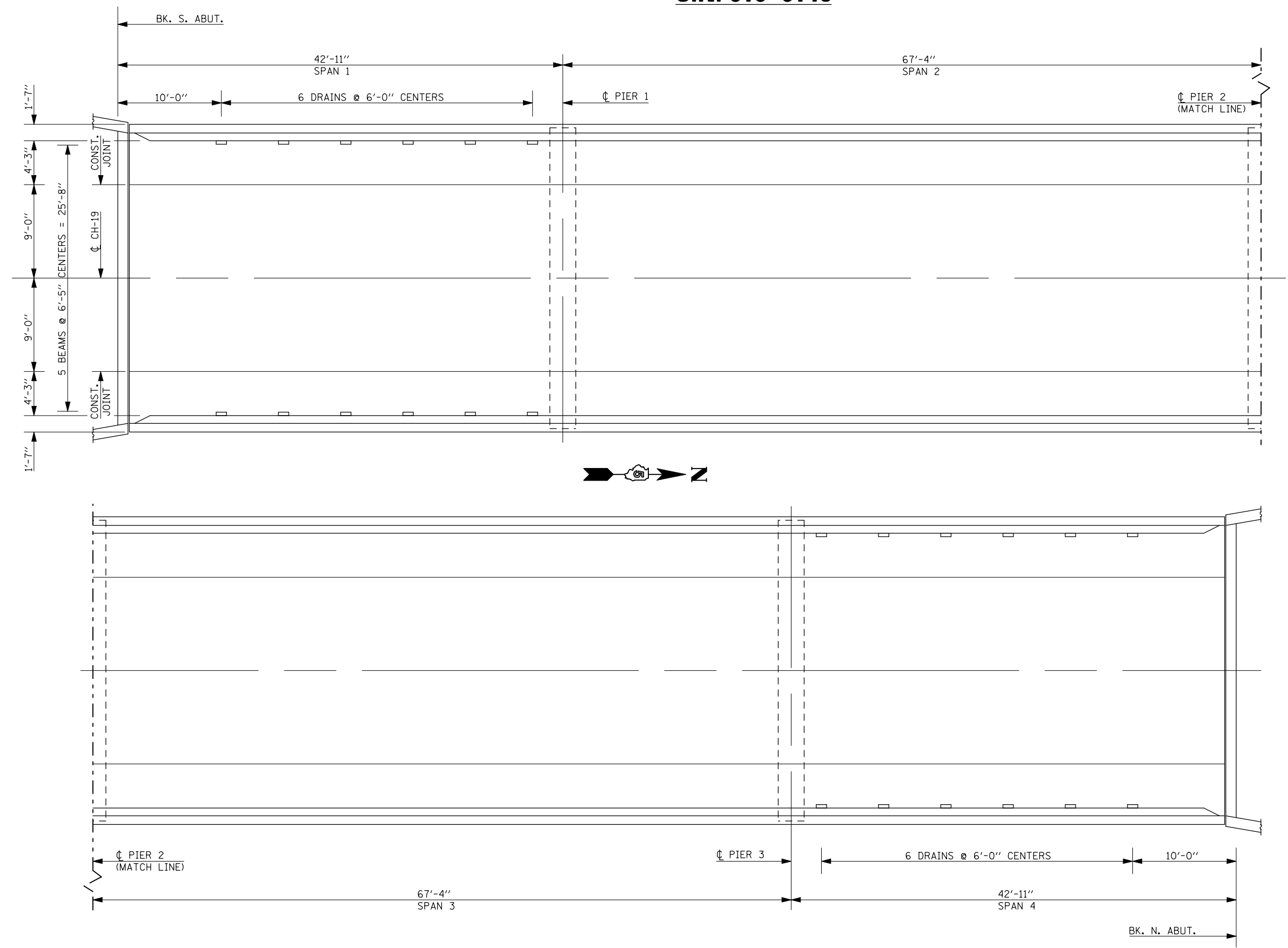
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
S.N. 010-0146

SCALE: SHEET NO. 1 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(10-71HB)BDR,BJR	CHAMPAIGN	14	4
CONTRACT NO. 70865			ILLINOIS FED. AID PROJECT	

AS-BUILT PATCHING PLAN S.N. 010-0146

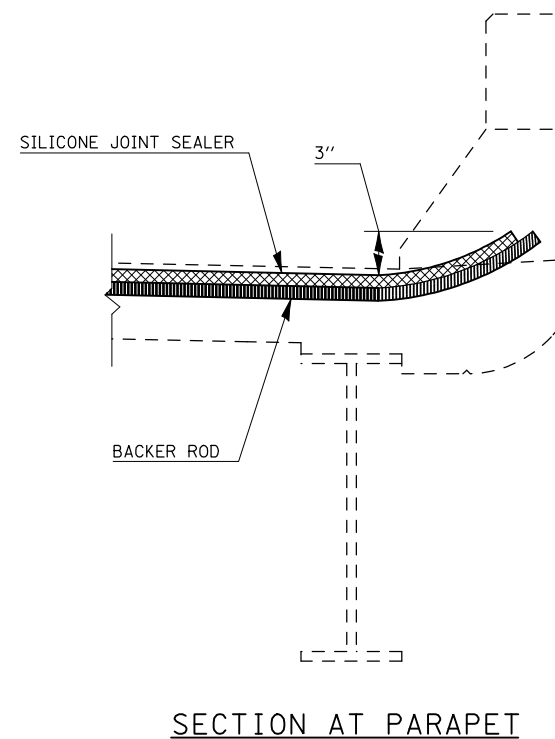
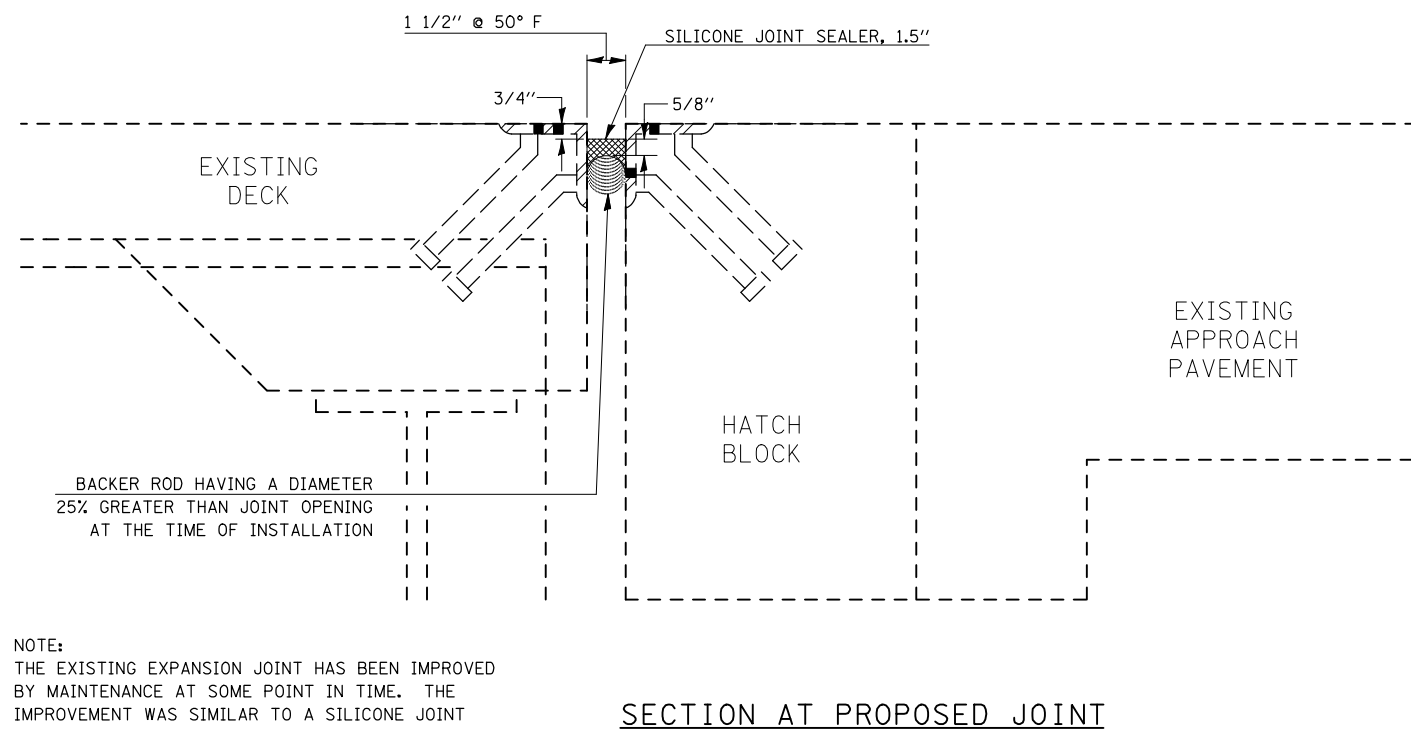
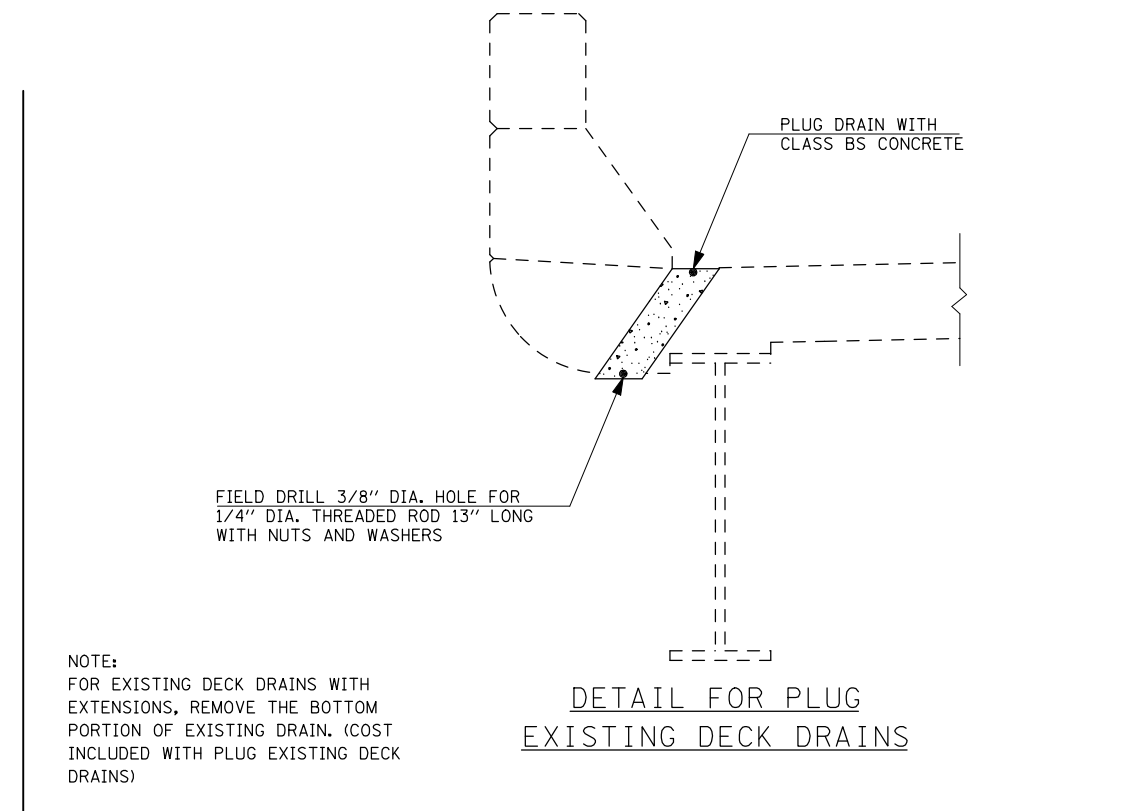
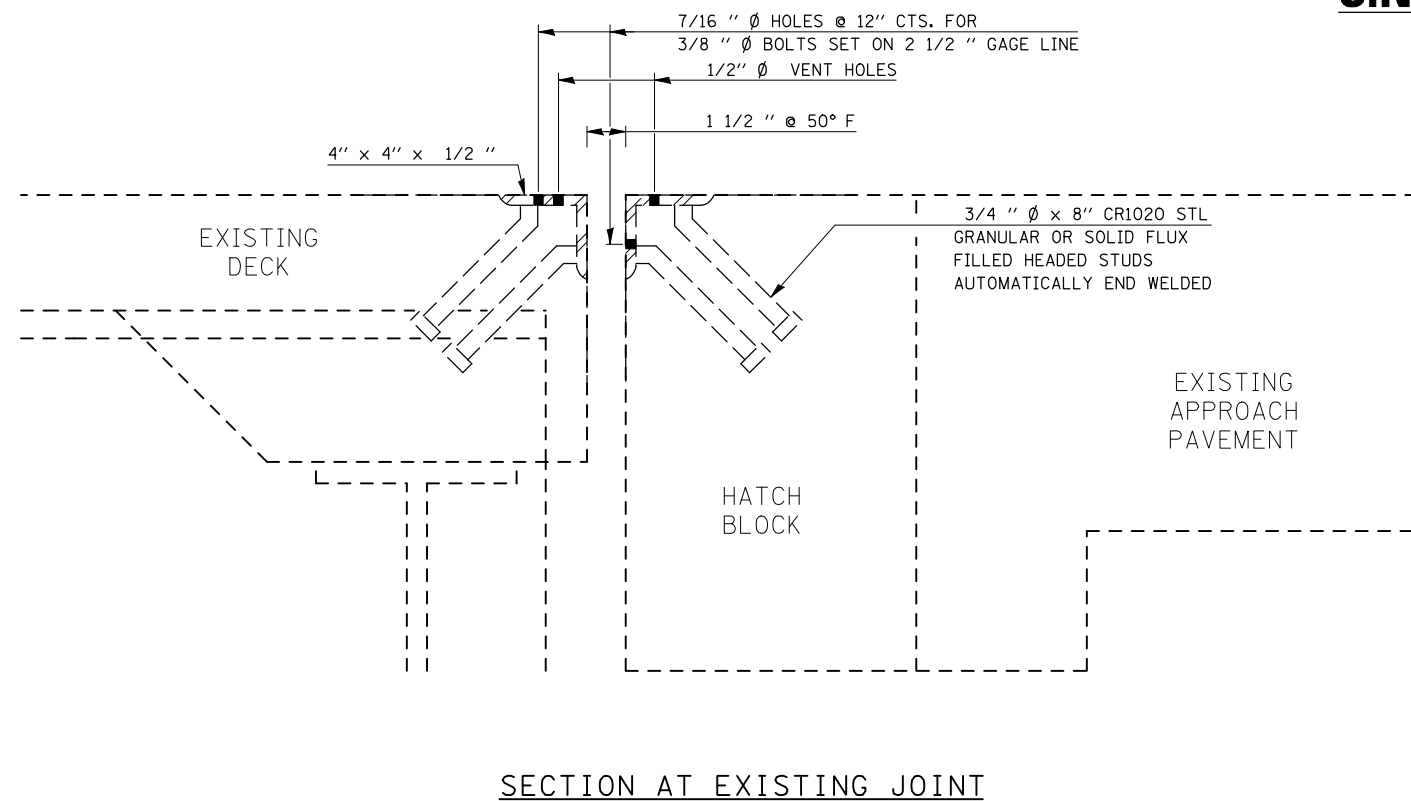


NOTE:
A PATCHING SURVEY WAS CONDUCTED AND THE PATCH SIZES AND LOCATIONS WERE PROVIDED ON THE PREVIOUS SHEET. ACTUAL SIZES AND LOCATIONS FOR THE FULL AND PARTIAL DEPTH PATCHING SHALL BE DETERMINED BY THE ENGINEER AND SHOWN ON THIS SHEET.

FILE NAME =	USER NAME = s1msgm	DESIGNED - GMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AS-BUILT PATCHING PLAN S.N. 010-0146			F.A.I. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\PWIDOT\SIMSGM\d0184265\0570865-Bridge Repair Plans.dgn		DRAWN - GMS	REVISED -		72	(10-71HB)BDR,BJR	CHAMPAIGN	14	5			
PLOT SCALE = 40.0001' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. 2 OF 10 SHEETS STA. TO STA.			CONTRACT NO. 70865				
PLOT DATE = 2/26/2010		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

JOINT AND DRAIN REPAIR DETAILS

S.N. 010-0146



NOTE:
THE EXISTING EXPANSION JOINT HAS BEEN IMPROVED BY MAINTENANCE AT SOME POINT IN TIME. THE IMPROVEMENT WAS SIMILAR TO A SILICONE JOINT SEALER SYSTEM, BUT HAS SINCE FAILED.

EXISTING JOINT MATERIAL SHALL BE REMOVED AND STEEL ARMORING SHALL BE CLEANED PRIOR TO INSTALLING THE SILICONE JOINT SEALER. COST INCLUDED WITH SILICONE JOINT SEALER, 1.5".

BILL OF MATERIALS

ITEM	UNIT	TOTAL
PLUG EXISTING DECK DRAINS	EACH	16.0
SILICONE JOINT SEALER, 1.5"	FOOT	60.0

FILE NAME =	USER NAME = s1msgm	DESIGNED - GMS	REVISED -
ct:\pwork\pwid01\S1MSGM\0184265\0570865-Bridge Repair Plans.dgn		DRAWN - GMS	REVISED -
	PLOT SCALE = 40.0001' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/26/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT & DRAIN REPAIR DETAILS
S.N. 010-0146**

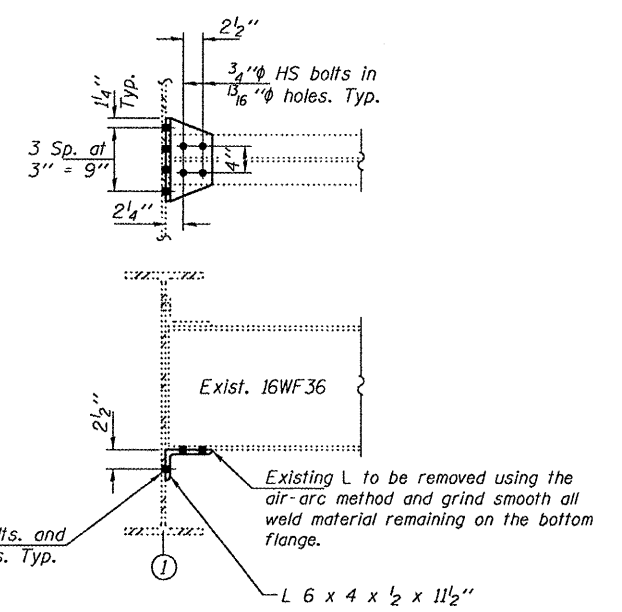
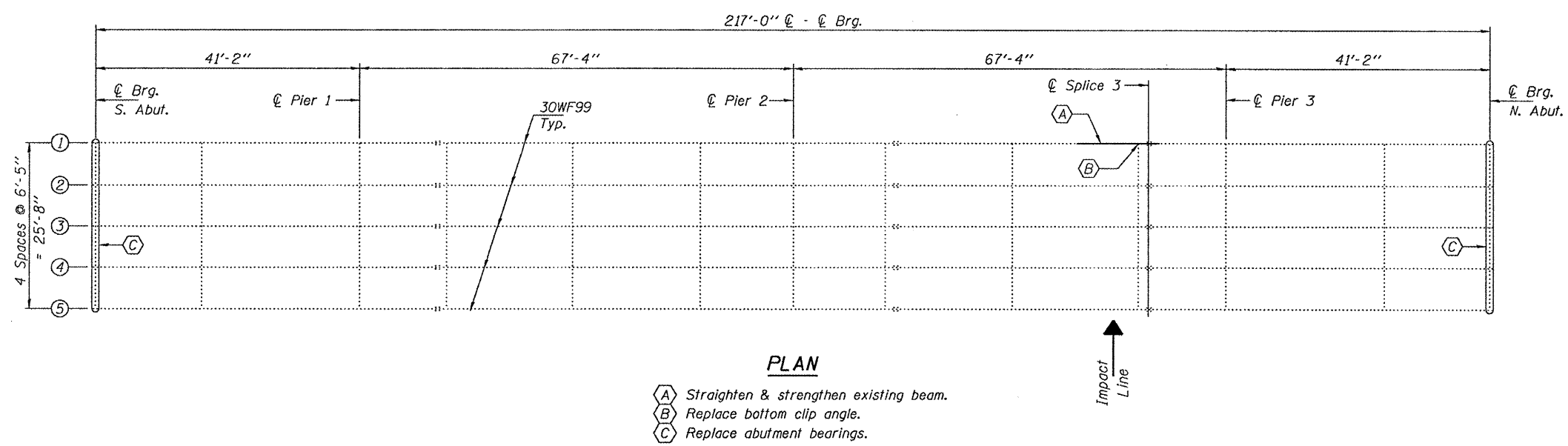
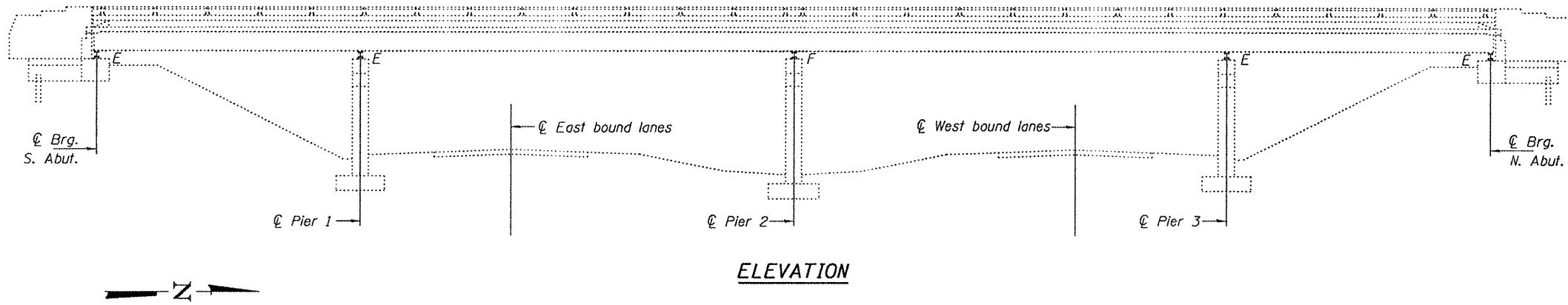
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(10-71HB)BDR,BJR	CHAMPAIGN	14	6
CONTRACT NO. 70865			ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES

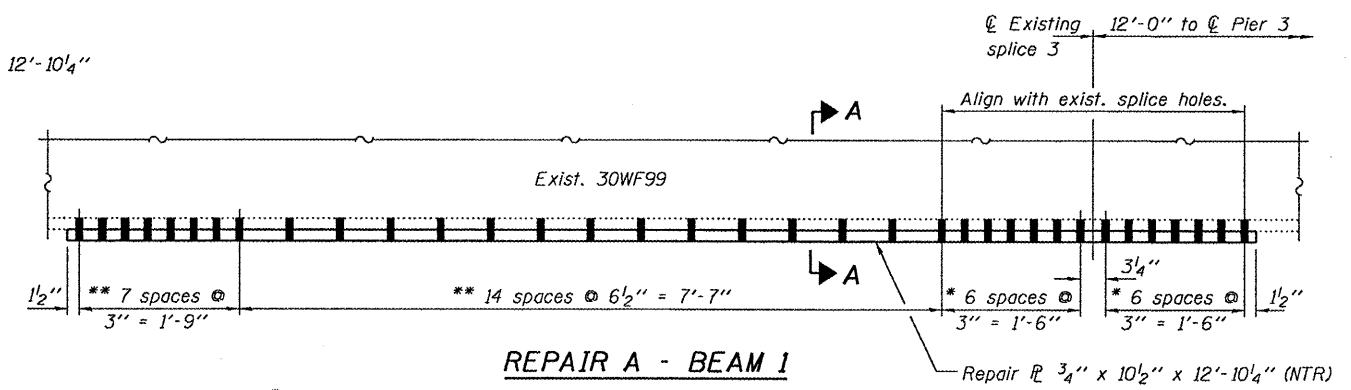
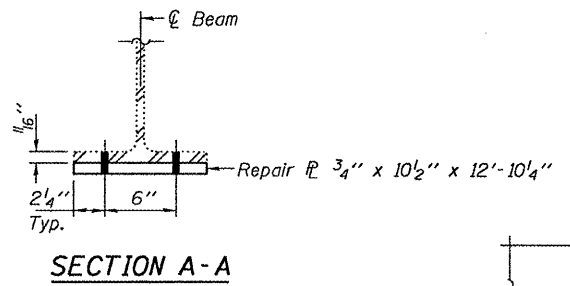
All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	430
Beam Straightening	L.S.	1

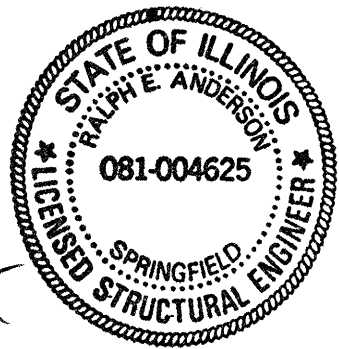
Notes:
Fasteners shall be high strength bolts.
Holes for Repair A shall be 1/16" for 7/8" bolts. Holes for Repair B shall be 1/16" for 3/4" bolts.
Existing bolts shall not be re-used.
The cost of field drilling required for installation of the steel members is included with Structural Steel Repair.
Traffic on CH 19 shall be shifted away from beam 1 for the duration of Repair A.



* Use existing holes in bottom flange as template to field drill holes in new plate.
** Use holes in new plate as template to field drill holes in bottom flange plate.

PLAN AND ELEVATION
CH 19 OVER I-72
SN 010-0146

SHEET NO. 1 3 SHEETS	F.A.I. RTE. 72	SECTION (10-71HB)BDR,BJR	COUNTY CHAMPAIGN	TOTAL SHEETS 14	SHEET NO. 7
	CONTRACT NO. 70865			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

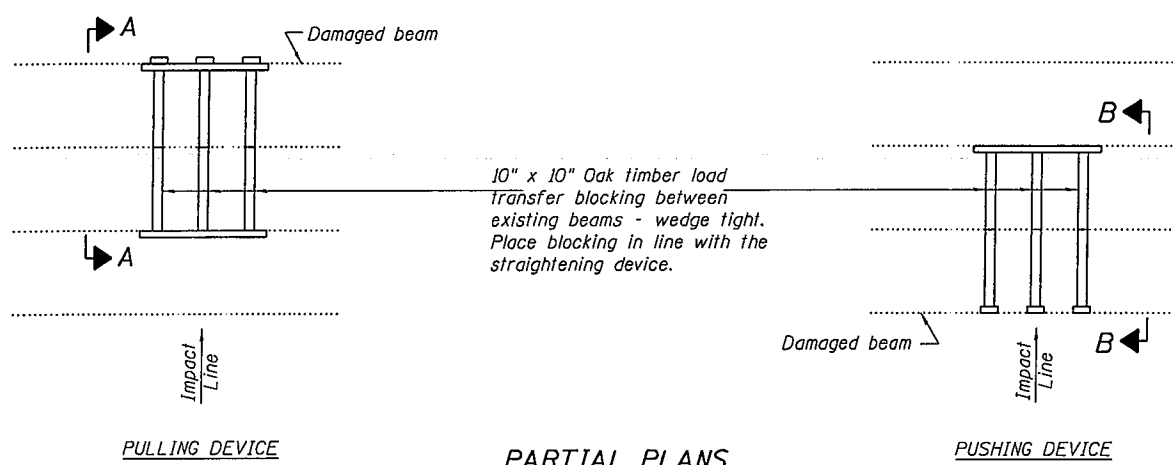


DESIGNED: Victor H. Valiga
CHECKED: Adrian T. Halliday
DRAWN: balva
CHECKED: VHV ATH

APRIL 13, 2010
EXAMINED: [Signature]
PASSED: [Signature]

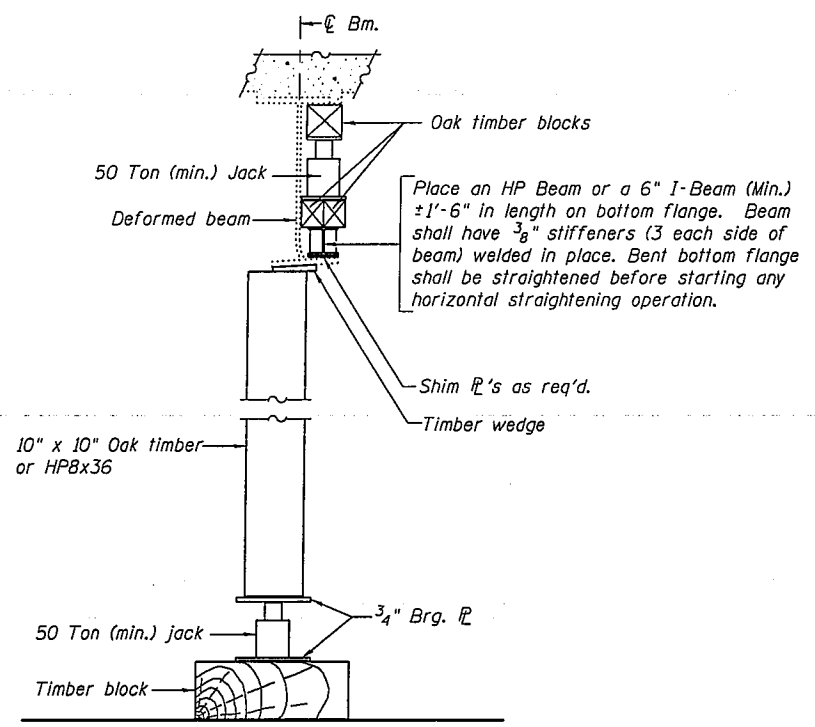
EXPIRES 11-30-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

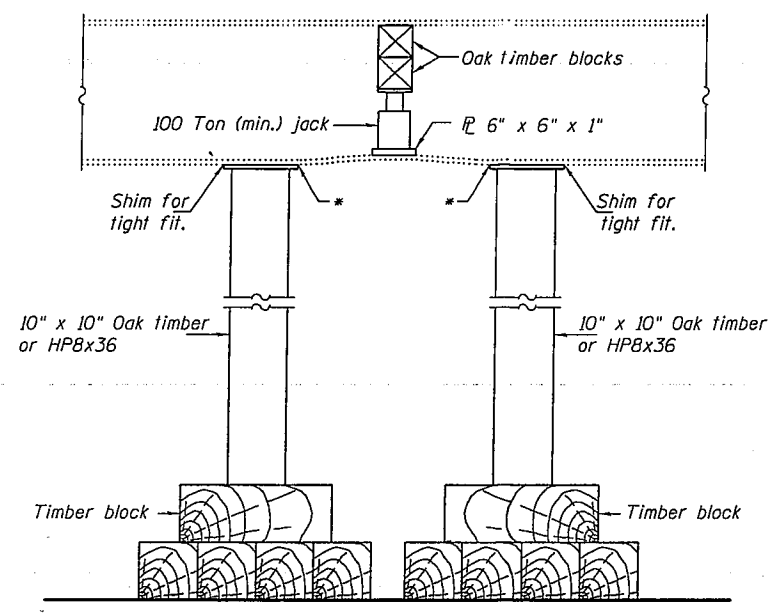


SUGGESTED BEAM STRAIGHTENING METHODS

Straightening force shall be maintained on all load transfer blocking during beam straightening.



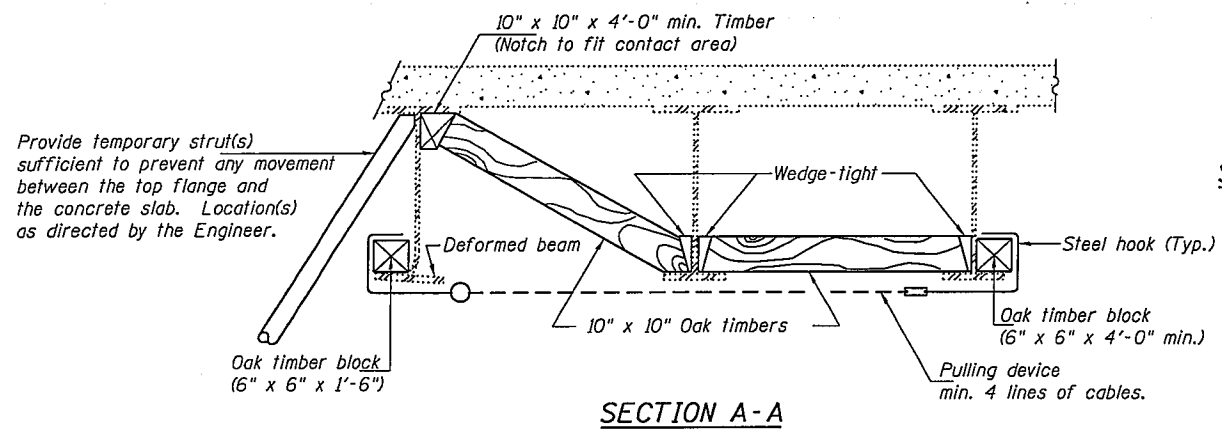
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)



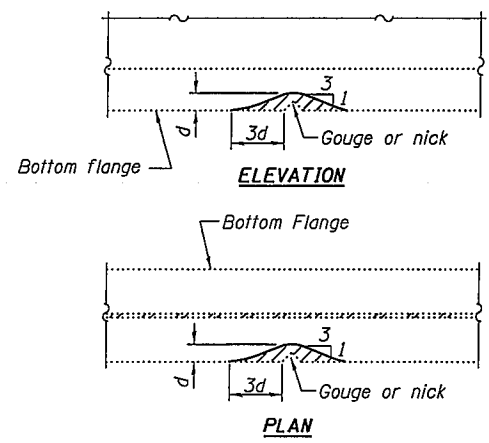
SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

* Edge of plate shall line up with edge of deformation.

Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.

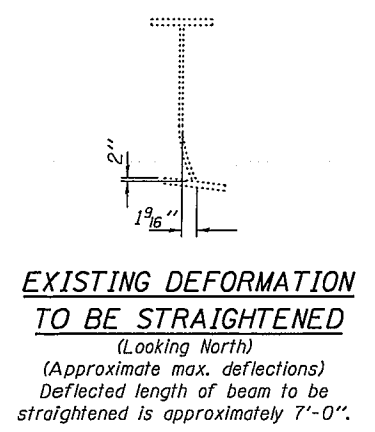


SECTION A-A



GRINDING DETAIL

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.



REPAIR DETAILS
CH 19 OVER I-72
SN 010-0146

DESIGNED	VHV
CHECKED	ATH
DRAWN	ballva
CHECKED	VHV ATH

APRIL 13, 2010

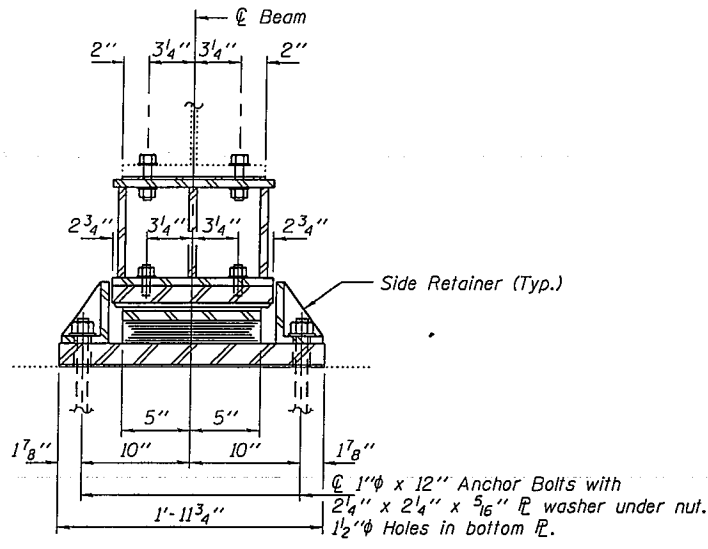
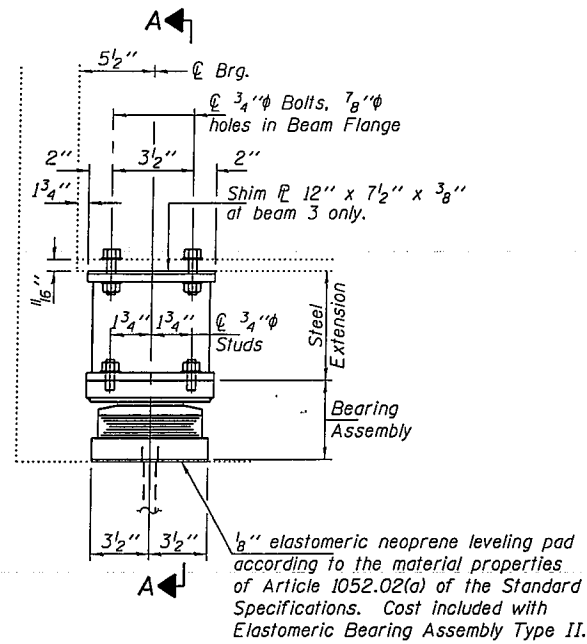
EXAMINED *Carl Proyer*
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

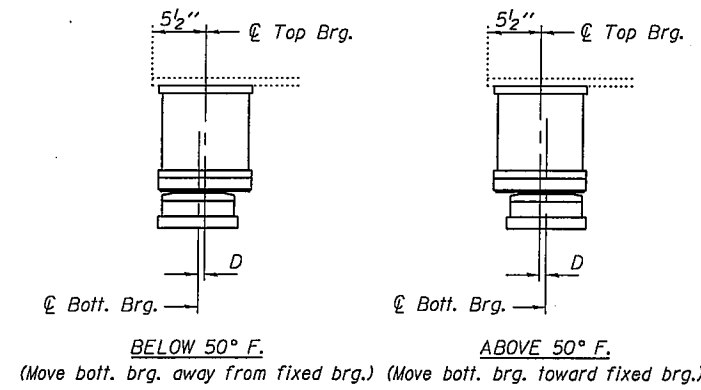
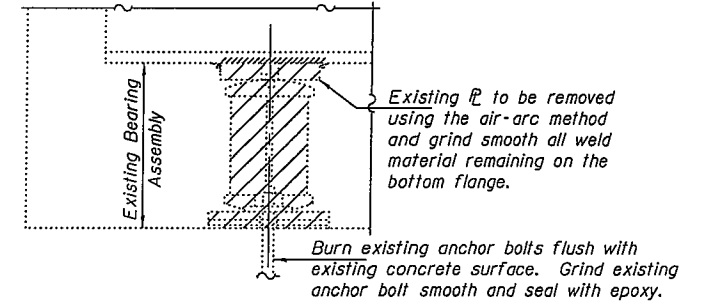
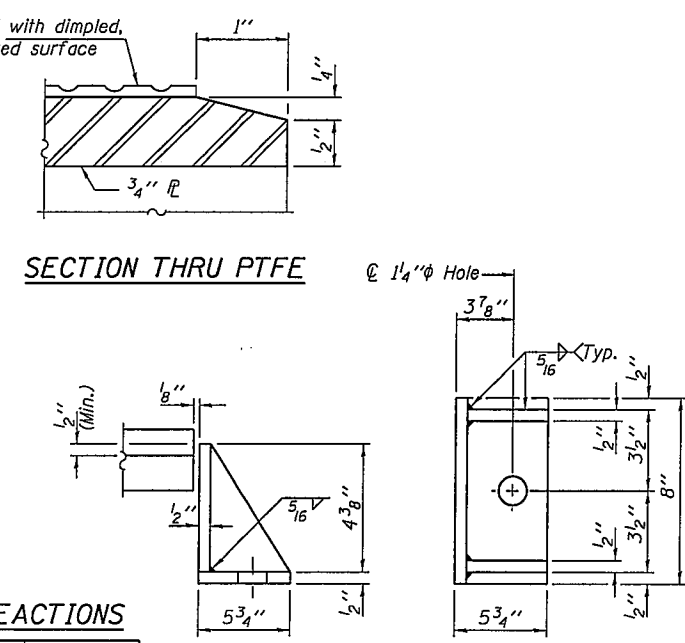
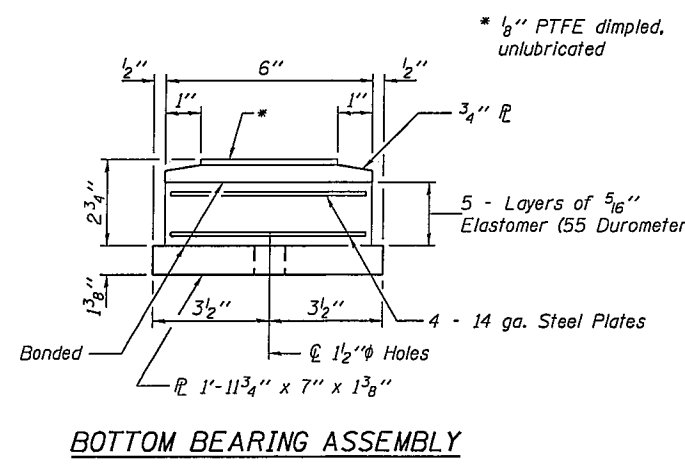
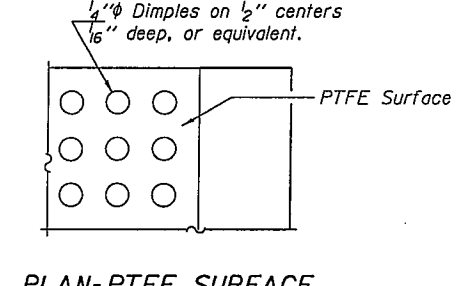
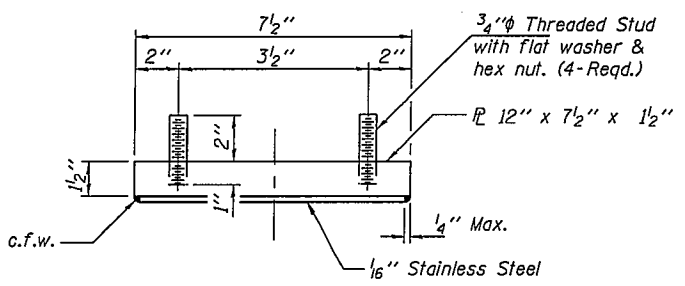
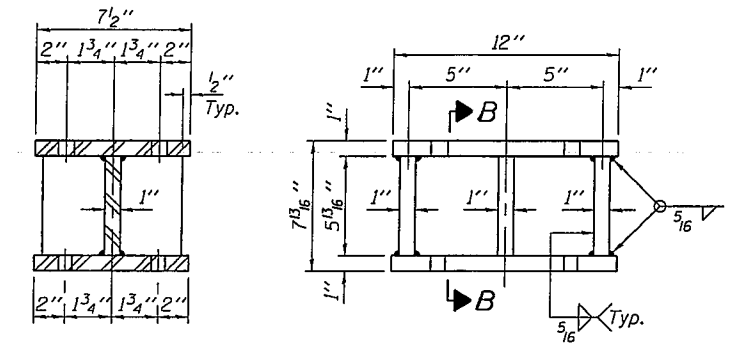
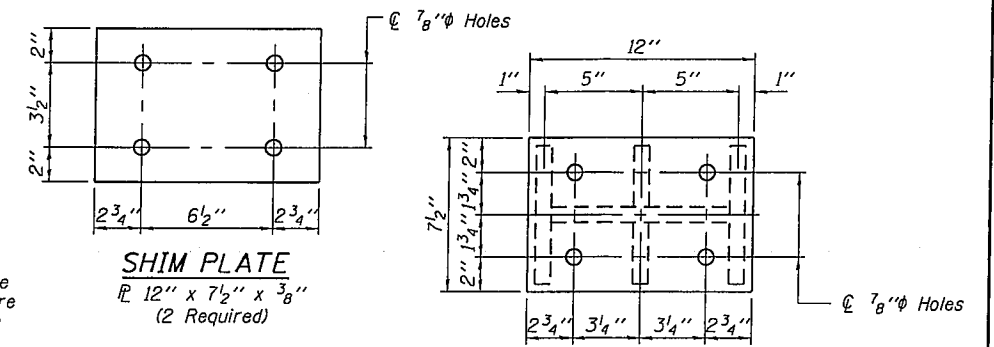
REP-1 1-14-2005

SHEET NO. 2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(10-71HB)BDR,BJR	CHAMPAIGN	14	8
3 SHEETS	CONTRACT NO. 70865				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:
 Diaphragm removal and installation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 25 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
 Fasteners shall be high strength bolts.



BEAM REACTIONS

RP	(K)	11.6
Rt	(K)	31.0
Imp.	(K)	9.3
R (Total)	(K)	51.9

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	1090
Anchor Bolts 1"φ	Each	20

DESIGNED	GGE
CHECKED	ATH
DRAWN	balliva
CHECKED	GGE ATH

TYII/REPS 12-03-2008

APRIL 13, 2010
 EXAMINED *Carl Perry*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
 CH 19 OVER I-72
 SN 010-0146

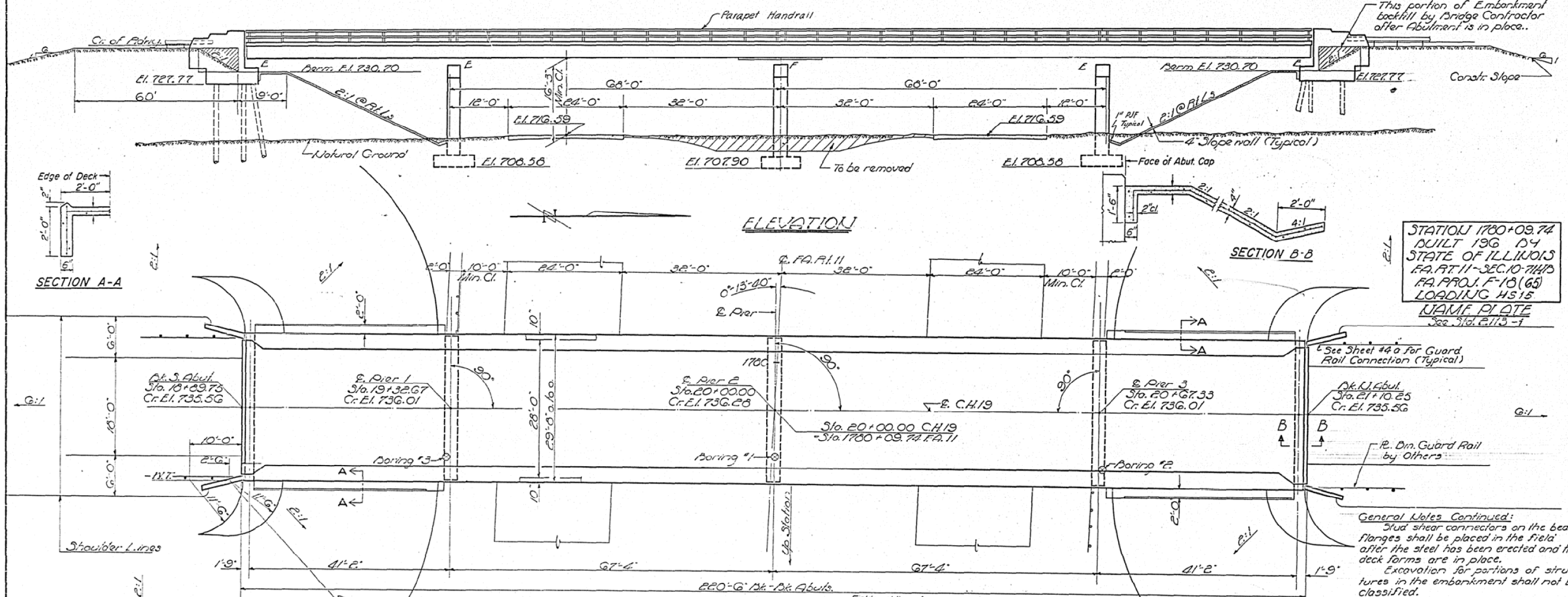
SHEET NO. 13 3 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(10-71)HBIBDR,BJR	CHAMPAIGN	14	9
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	

AS-BUILT PLANS FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
10-7145	Champaign	37	9	10 SHEETS	

A.M. - Concrete Monument, marked "V-4", 4'x4' Ft. of Sta. 1779+05 Elev. 713.60



SECTION A-A

ELEVATION

SECTION B-B

PLAN

STATION 1780+09.74
BUILT 196 1/4
STATE OF ILLINOIS
FA. RT. 11 - SEC. 10-7145
FA. PROJ. F-18 (65)
LOADING HS 15
NAME PLATE
See Sta. E. 113-1

General Notes Continued:
Stud shear connectors on the beam flanges shall be placed in the field after the steel has been erected and the deck forms are in place.
Excavation for portions of structures in the embankment shall not be classified.

GENERAL NOTES

Class X Concrete shall be used throughout. Coarse aggregate which is to be used in and posts must be free of chert, flint, limonite, lignite and soft sandstone.
The concrete floor slab shall be finished in accordance with Article 51.19 of the Std. Specs.
The use of permanent forms will not be permitted in forming the concrete floor.
Slope walls shall be reinforced with welded wire fabric G₁ G₂ mesh, 14 wires, weighing 55 lbs per 100 sq. ft.
Pivots 2" O.D. unless noted.
All bolsters, rockers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel, Est'd. Mt. - 6,355.
Anchor bolts shall be set before riveting diaphragms over supports.
All Structural Steel shall comply with the Specifications for Structural Steel, A.S.T.M. Designation A-36.
Expansion guards shall be fabricated and erected in accordance with Article 51.13 (d) of the Standard Specifications and are included in quantity of Structural Steel. Estimated Weight = 1550 lbs.

Field welding of construction accessories to the bottom flanges or for a distance of 1/4 of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for field paint.

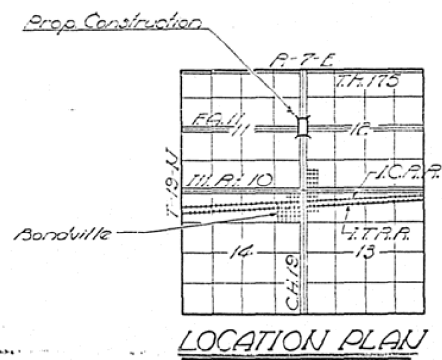
The Contractor shall drive one concrete test pile in permanent location of South Abut. as directed by the Engineer before ordering or casting remainder of piles.
Piles in the Abutments shall be driven in holes pre-cored through the embankment to the natural ground line in accordance with Article 60.8 (c) of the Standard Specifications.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
* Class A Excavation for Structures	Cu. Yd.		190	190
Class X Concrete	Cu. Yd.	168.6	176.5	345.1
Structural Steel	Lb.	139,490		139,490
Alum. Horizontal Reinforcement Bars	Lin. Ft.	437		437
Concrete Piles	Lb.	42,220	13,700	55,920
Test Piles (Concrete)	Ea.		1	1
Name Plates	Ea.		2	2
Slope Wall	Sq. Yds.			360
** Protective Coat	Sq. Yds.			637
(1) Bridge Seat Sealant	Lump Sum			1

* Includes excavation for slopenall.
** Includes use on inside vertical face, top and exposed ends of the abutment wings.
DESIGN STRESSES
F_c = 1400 p.s.i. Super G-Sub.
F_s = 20000 p.s.i. Rein. n = 10
F_s = 20000 p.s.i. Struct. (A-36)
Allowable L.L. Defl. non comp. = L/1000
vc = 75 p.s.i. F_{os} & comp. = L/1200
LOADING HS 15-312-4.4

(1) Use on abutment seats.
C.H. 19 OVER FA. RT. 11
PROJECT F-18 (65)
GENERAL PLAN & ELEVATION
FA. RT. 11 SEC. 10-7145
CHAMPAIGN COUNTY
STA. 1780+09.74
Rev. By Br. Office 4/1/11



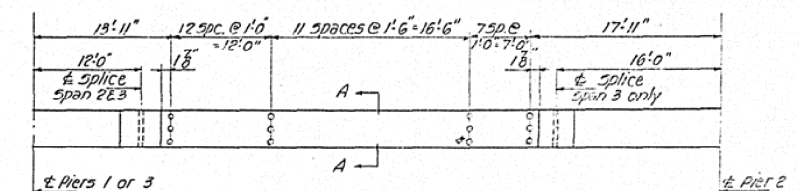
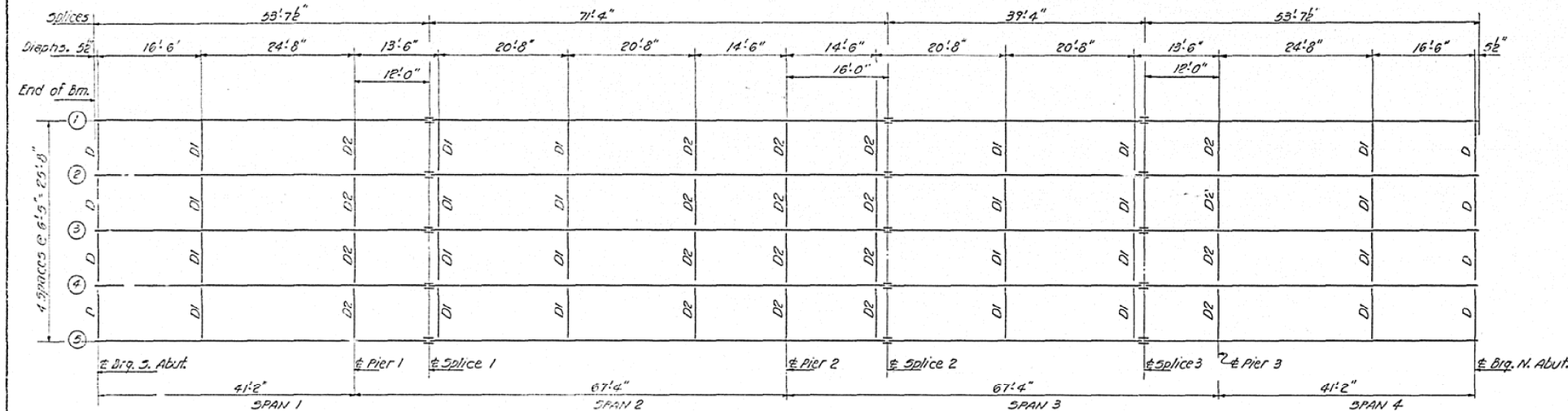
DESIGNED	O. H. Hogerem	EXAMINED	[Signature]
CHECKED	[Signature]	PASSED	[Signature]
DRAWN	P.H.H. ril 10/06/05	APPROVED	[Signature]
CHECKED	[Signature]		

Rev. 10/16/04 H.P.G. Rev. Quan. for Parapet Handrail: Alum. to Metal; C. X Concrete from 181.4 to 194.1 (300.7 to 373.4); Reinf. lbs 34,730 to 40,080 & 48,520 to 53,870; Crse. Piles length rev., Total Lin. Ft. from 150 to 170; Added Protect. Coat & Bridge Seat Sealant

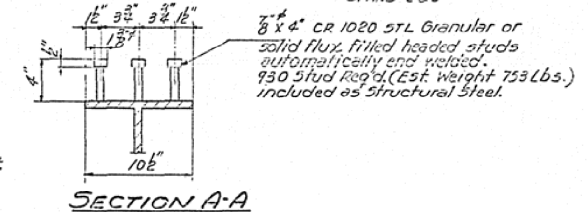
AS-BUILT PLANS FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
11	10-718B	Champaign	37	11	10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



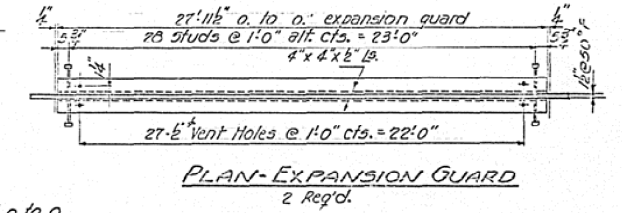
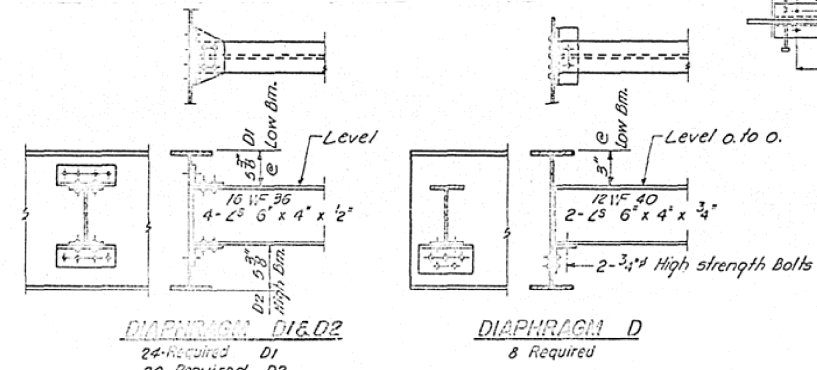
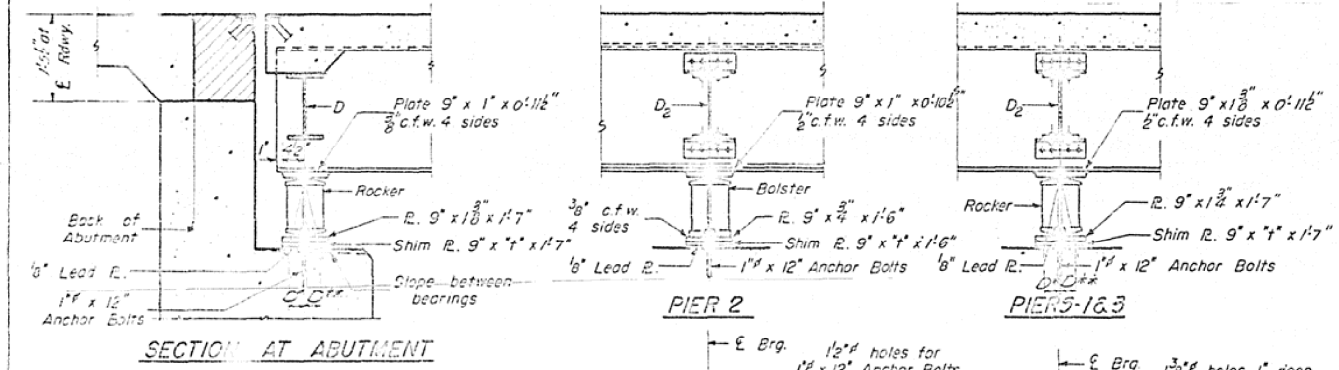
PLAN - SHEAR CONNECTORS
SPANS 2 & 3



NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.
a) 1/2" (Side of brg. away from fixed brg.)
Of 1/8" per 100' of expansion for every
15' fall below the normal temp. of 50°F.
b) (Side of brg. toward fixed brg.)
Of 1/8" per 100' of expansion for every
15' rise above the normal temp. of 50°F.

FRAMING PLAN
(All beams 30 W 99)

Notes continued:
h) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



*** ELEVATION TOP OF BEAMS**

	Beams 215	Beams 264	Beam 3
So. Abut. (Brp.)	734.92	735.04	735.06
Pier 1	735.29	735.41	735.44
Splice 1	735.40	735.52	735.54
Pier 2	735.53	735.65	735.68
Splice 2	735.57	735.69	735.71
Splice 3	735.40	735.52	735.54
Pier 3	735.29	735.41	735.44
No. Abut. (Brp.)	732.72	732.84	732.86

* For correct elevations subtract .04' from values shown.

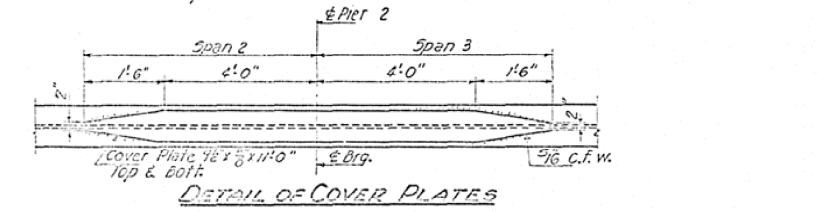
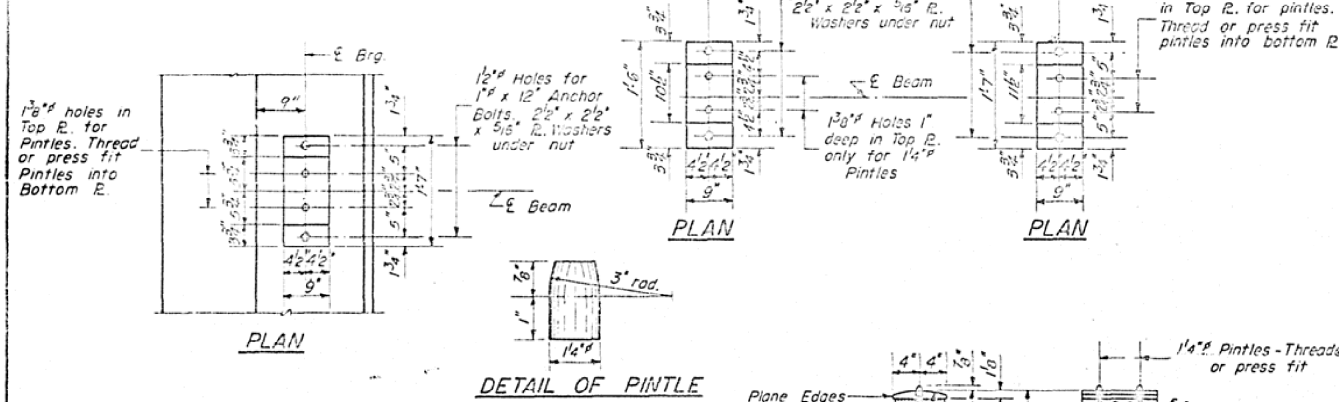
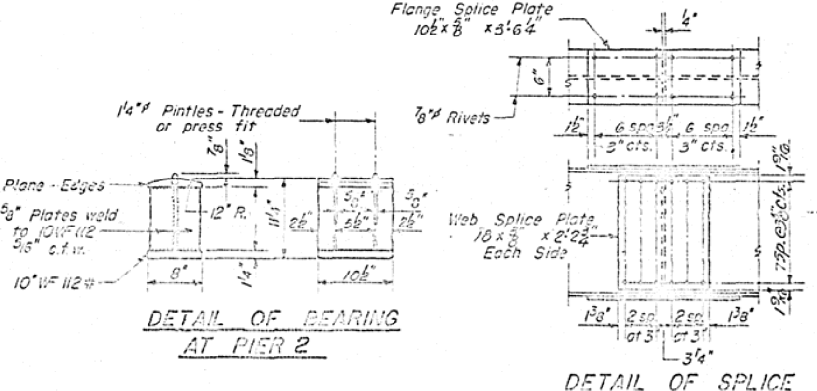
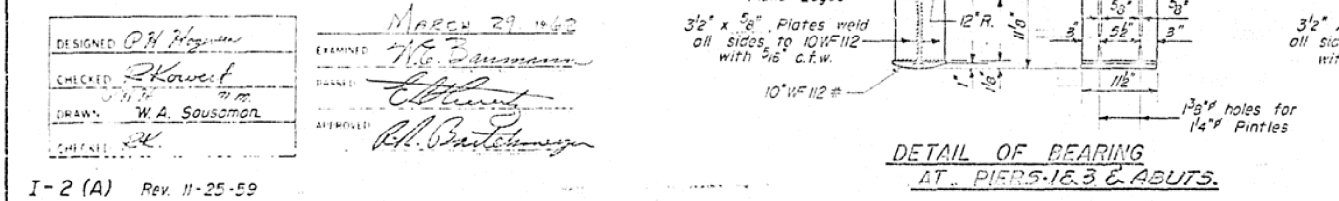


TABLE OF "G" DIMENSIONS

Beam	All Bearings
1 E. 5	0"
2 E. 4	0"
3	2"



DESIGNED: P.H. Hoeggen
CHECKED: R. H. H. H.
DRAWN: W.A. Sausamon
APPROVED: R.H. H. H.
DATE: MARCH 29 1962

STRUCTURAL STEEL
COMMERCIAL STEEL CO. OF ILL. II
EAST - SECOND FLOOR
CHAMPAIGN COUNTY
STATION 1780 FOS. 34

I-2 (A) Rev. 11-25-59

DETAIL OF BEARING AT PIERS 5-16.3 & ABUTS.

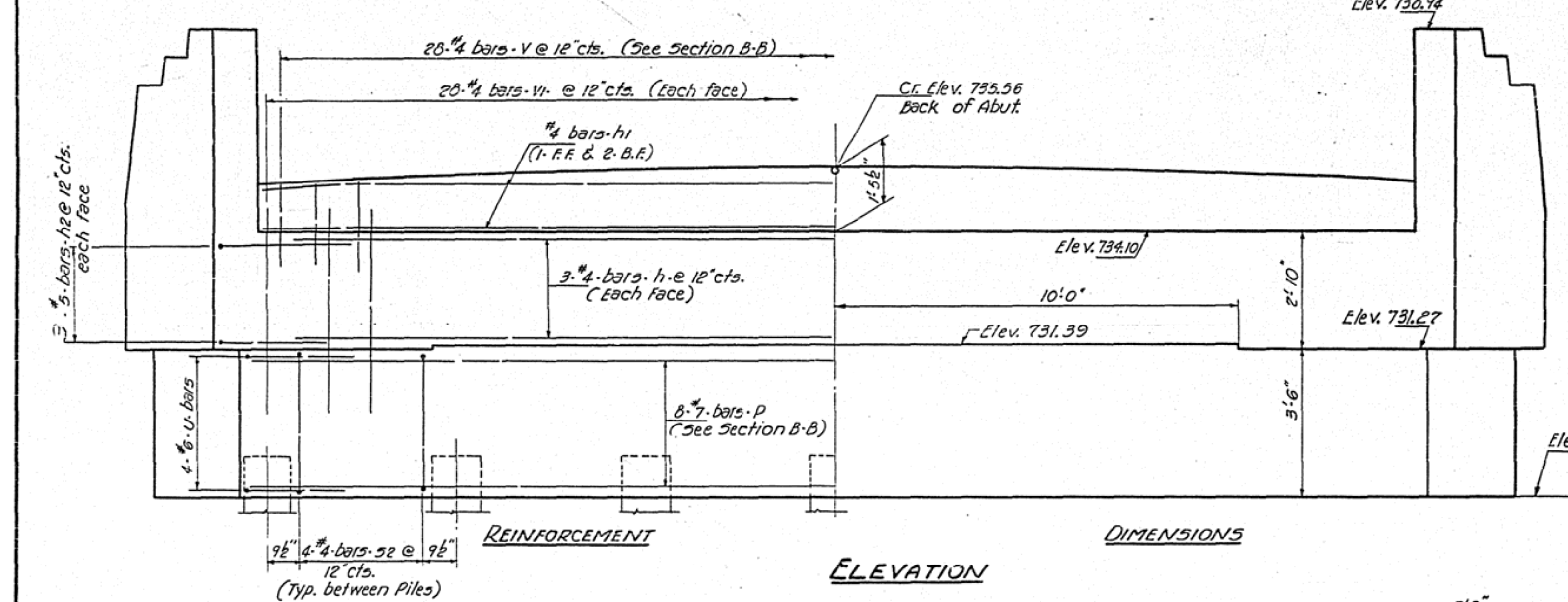
DETAIL OF BEARING AT PIER 2

DETAIL OF SPLICE

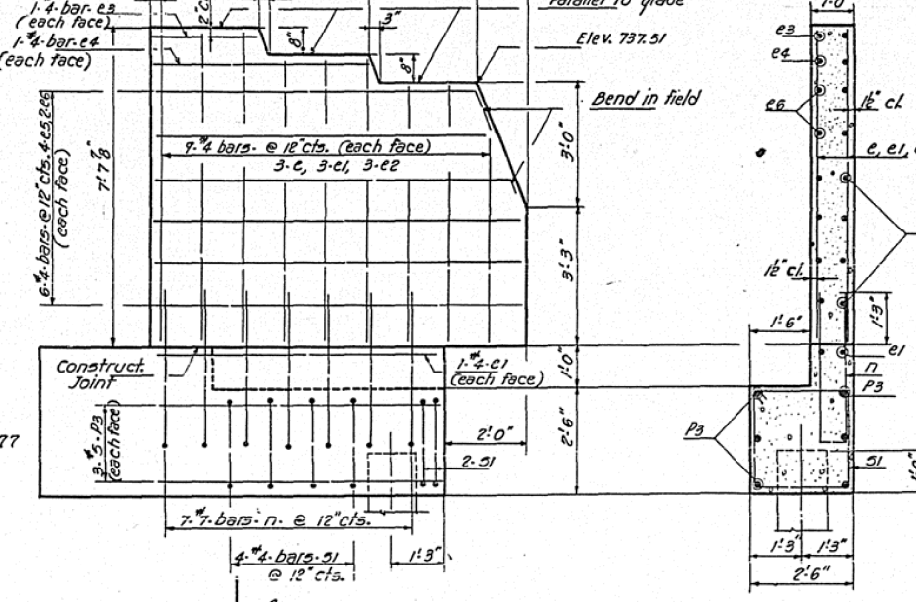
AS-BUILT PLANS FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-711HB	Champaign	37	13	10 SHEETS

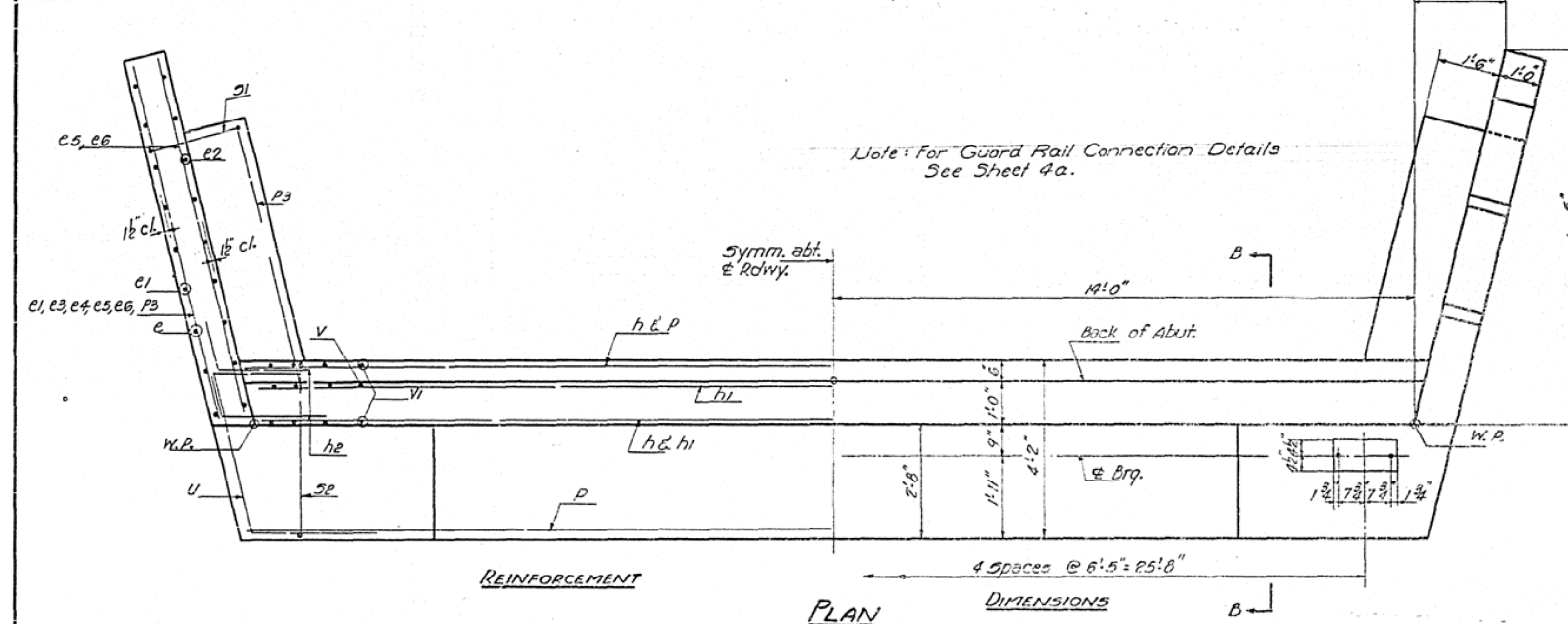


ELEVATION

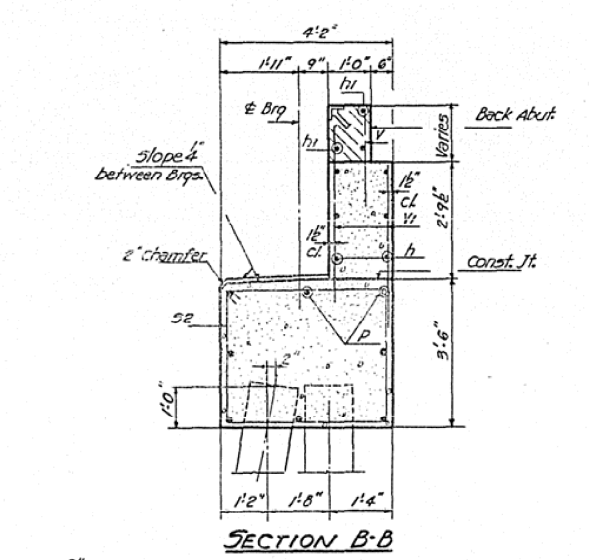


ELEVATION OF WING WALL
* Along inside face of Wing

SECTION A-A



PLAN



SECTION B-B

BILL OF MATERIAL
Two Abutments

BAR NO.	SIZE	LENGTH	SHAPE
c	#4	7'9"	—
c1	#4	6'6"	—
c2	#4	5'10"	—
c3	#4	2'3"	—
c4	#4	4'11"	—
c5	#4	6'9"	—
c6	#4	7'6"	—
h	#4	26'6"	—
h1	#4	27'0"	—
h2	#5	4'8"	—
n	#5	7'9"	U
p	#7	28'4"	—
p3	#7	7'6"	—
sp	#8	14'9"	□
51	#4	9'9"	□
u	#6	11'11"	—
v	#4	2'4"	—
vi	#4	4'9"	—

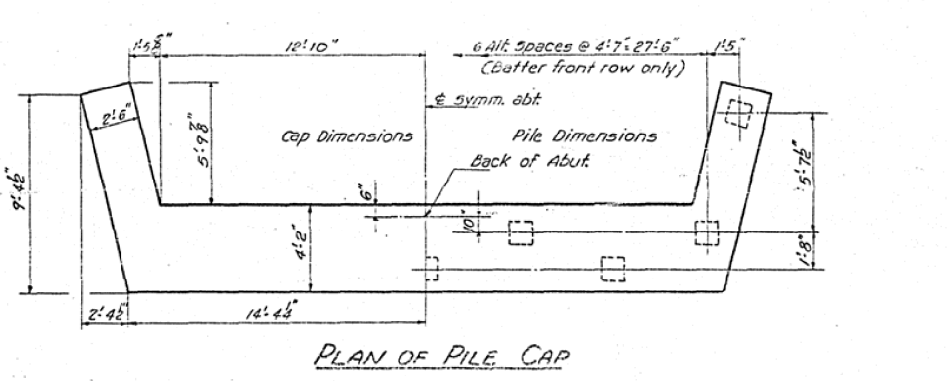
Class-X Concrete Cu. Yds. 55.0
Reinforcement Bars Lbs. 3980
Concrete Piles Lin. Ft. 595
Test Piles (Concrete) Each 1

PILE DATA

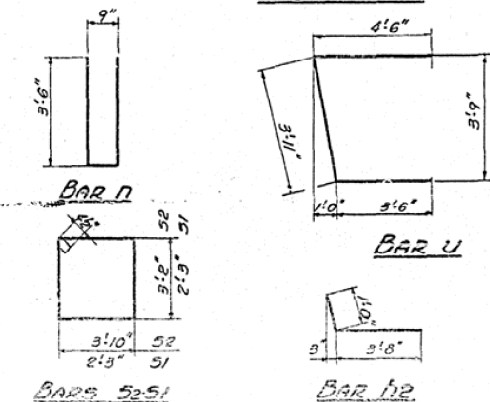
Type	Concrete
Capacity	30 Tons Min.
Est. Length	35 Ft.
No. Req'd.	18 (includes 1 Test Pile)

DESIGNED <i>PH Ferguson</i>	EXAMINED <i>M.G. Brumman</i>
CHECKED <i>R. Howard</i>	PASSED <i>Chabert</i>
DRAWN <i>PHH M. Miller</i>	APPROVED <i>R.L. Baston</i>
CHECKED <i>RL</i>	

MARCH 29 1962



PLAN OF PILE CAP

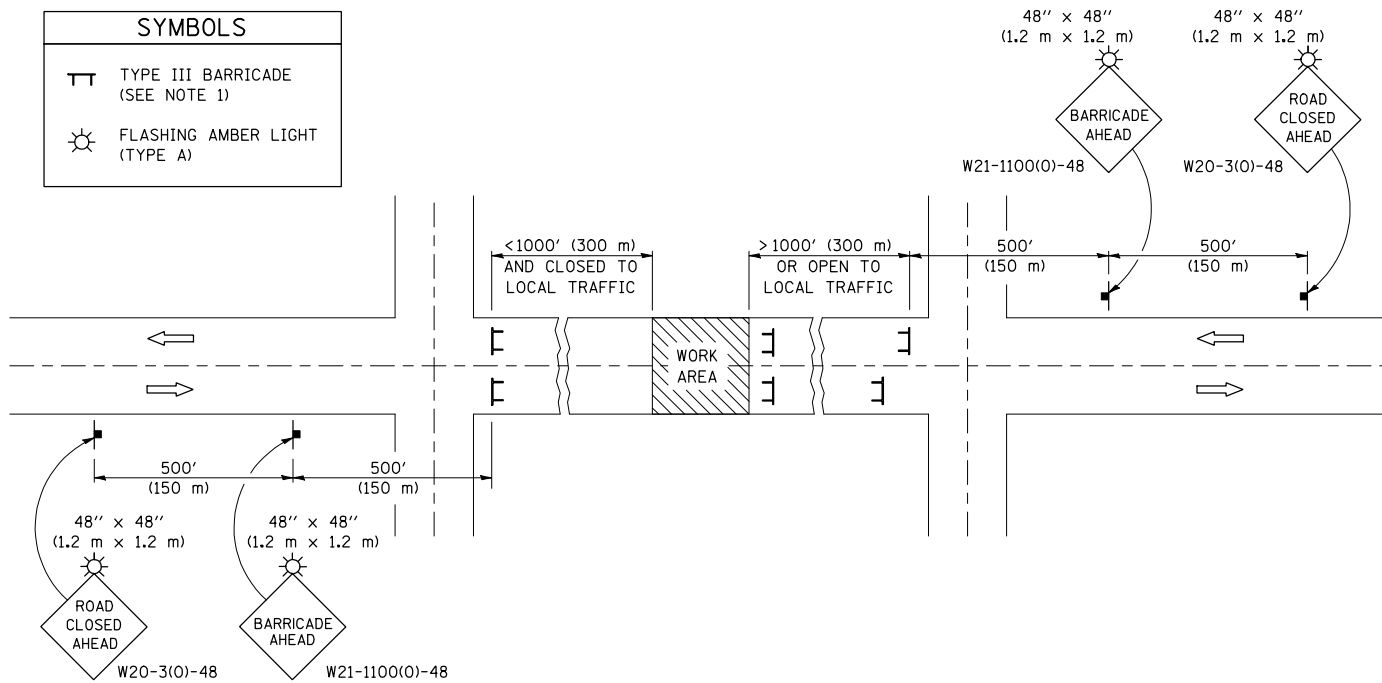


ABUTMENTS
COUNTY HIGHWAY 19 OVER F.A. RT. 11
F.A. RT. 11 - SEC. 10-711HB
CHAMPAIGN COUNTY
STATION 1780+09.74

ROAD CLOSURE

SIDEROAD / STREET CLOSURE

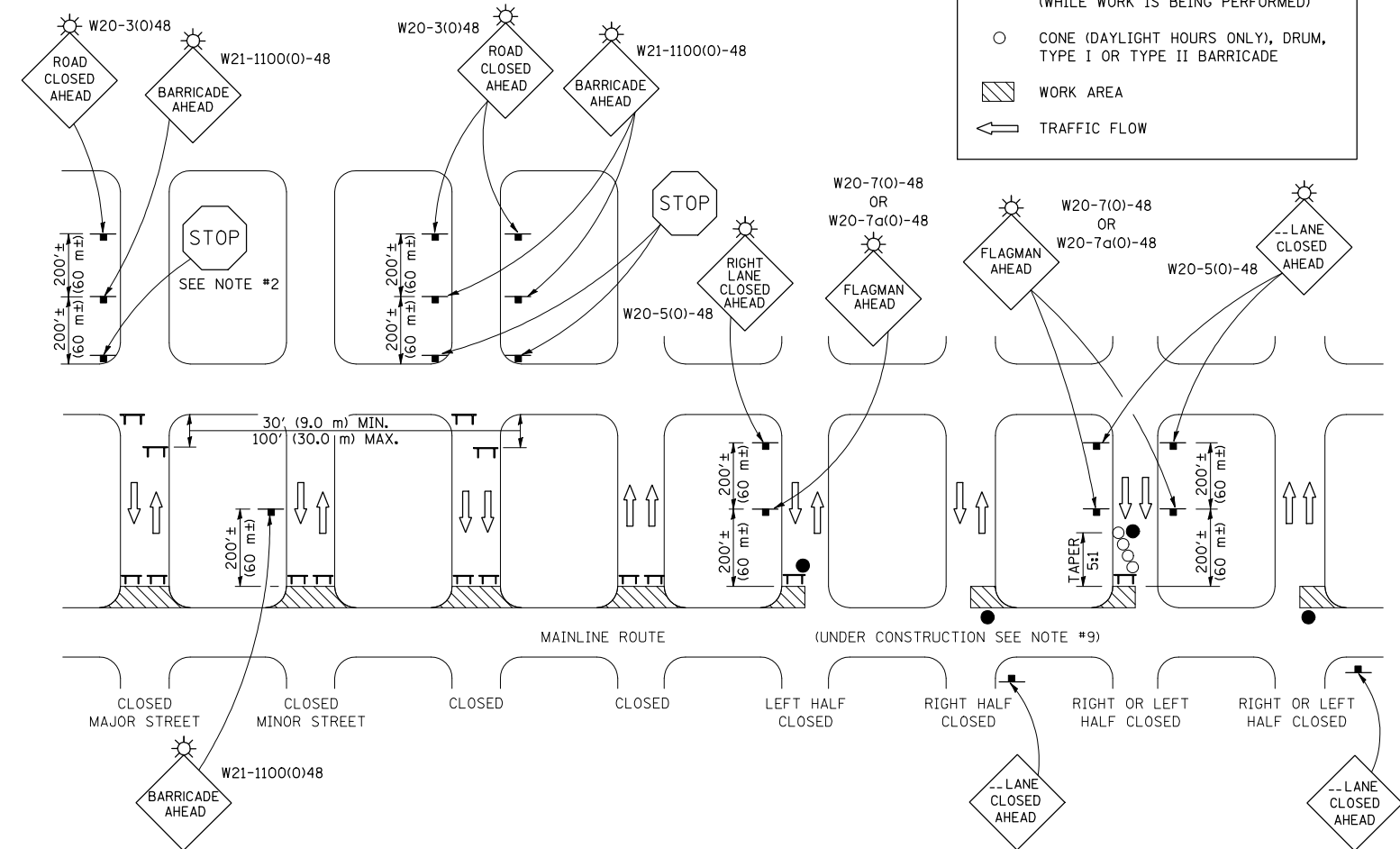
SYMBOLS	
	TYPE III BARRICADE (SEE NOTE 1)
	FLASHING AMBER LIGHT (TYPE A)



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 701901 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
- WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
- REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TYPE III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT. 725 AND BT. 726 ARE REQUIRED.
- WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
- AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

SYMBOLS	
	TYPE III BARRICADE (SEE NOTE)
	FLASHING LIGHT
	FLAGGER WITH TRAFFIC CONTROL SIGN (WHILE WORK IS BEING PERFORMED)
	CONE (DAYLIGHT HOURS ONLY), DRUM, TYPE I OR TYPE II BARRICADE
	WORK AREA
	TRAFFIC FLOW



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT 725 AND BT 726 ARE REQUIRED.
- THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
- ALL FLAGGERS REQUIRED AT SIDE ROADS AND ENTRANCES REMAINING OPEN TO TRAFFIC AND/OR ADDITIONAL BARRICADES REQUIRED BY THE ENGINEER TO CLOSE SIDE ROADS AND ENTRANCES WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = s1msgm	DESIGNED -	REVISED - 11/06
ct:\pw\work\PWID01\S1MSGM\0184265\0570865-Bridge Repair Plans.dgn		DRAWN -	REVISED - 12/07
	PLOT SCALE = 40.0001' / IN.	CHECKED -	REVISED - 09/09 - KJT
	PLOT DATE = 2/26/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION DEVICES
(ROAD & SIDEROAD/STREET CLOSURES)

SCALE: SHEET NO. OF SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7020000

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(10-71HB)BDR,BJR	CHAMPAIGN	14	14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70865	