

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

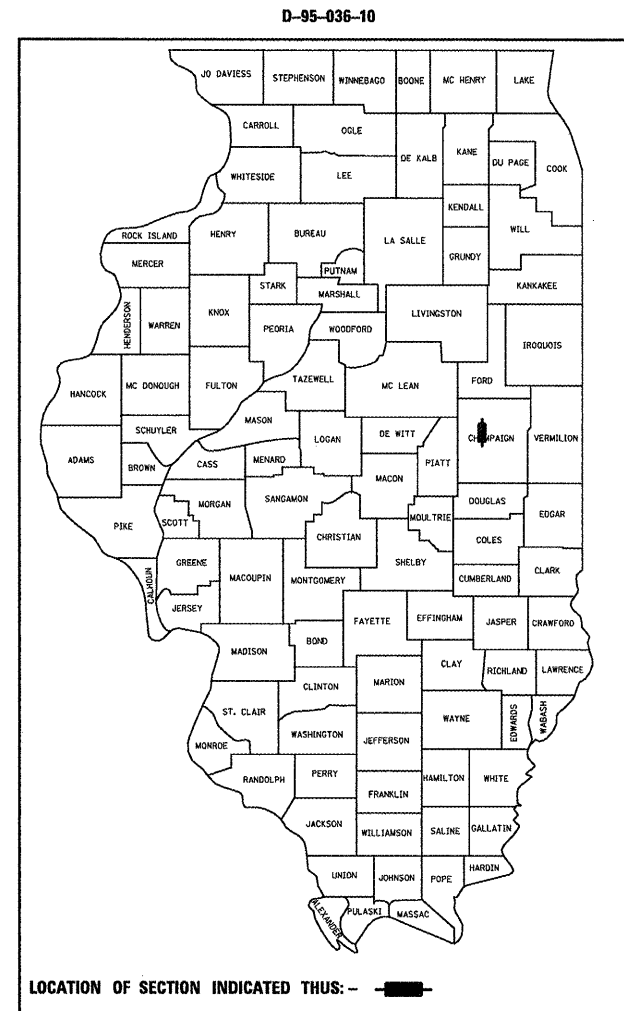
**PROPOSED
HIGHWAY PLANS**

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

BRIDGE DECK REPAIRS
CHAMPAIGN COUNTY

MARKET ST. AT THE N. 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 | |



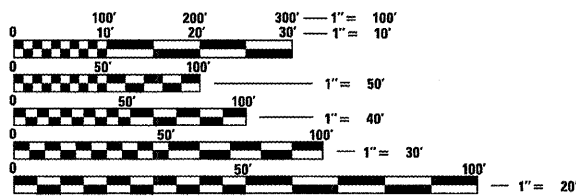
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

**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)

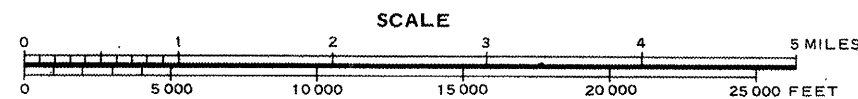
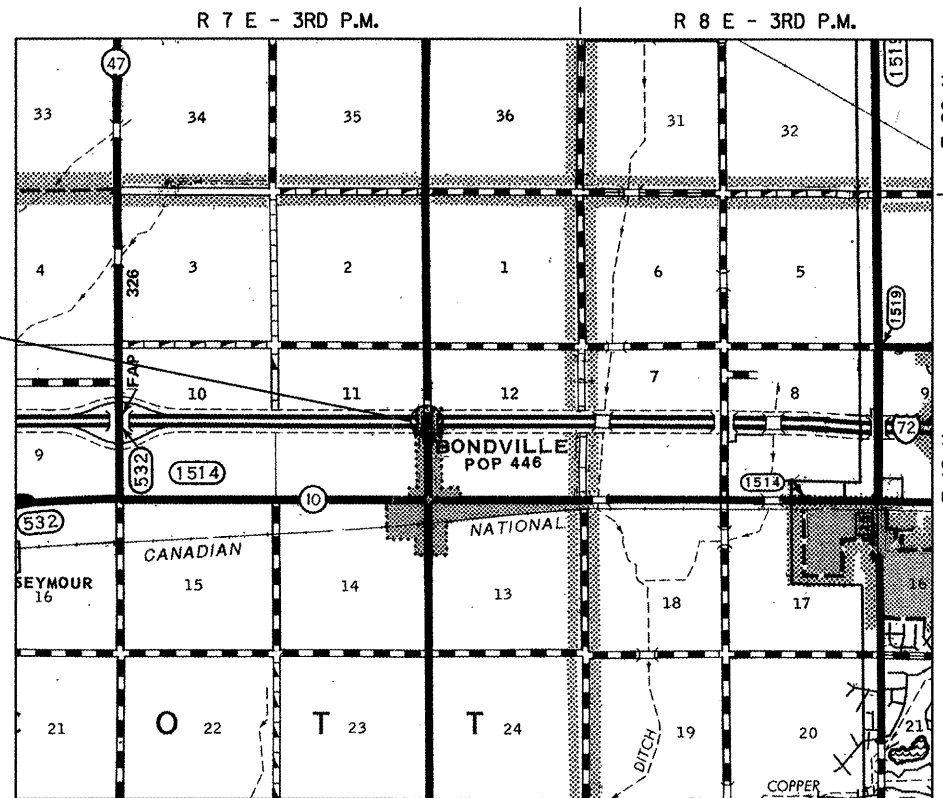


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



GROSS LENGTH = 220.5 FT. (0.04 MI.)
NET LENGTH = 220.5 FT. (0.04 MI.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 1/21 20 11
Janette Cowman
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 20 11
Scott E. Stitt
ENGINEER OF DESIGN AND ENVIRONMENT

March 25 20 11
Christine M. Reed
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 |
| 2 | GENERAL NOTES |
| 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.

IT IS THE INTENT, WHEN REPLACING BRIDGE BEARINGS, TO NOT ONLY PROVIDE NEW AND PROPER SUPPORT FOR THE SUPERSTRUCTURE, BUT ALSO TO RE-ESTABLISH THE ORIGINAL DECK ELEVATIONS. SUPERSTRUCTURES THAT ARE HEAVED WITH PACK RUST SHALL BE ACCOUNTED FOR WHEN VERIFYING THE NECESSARY DIMENSIONS OF THE STEEL EXTENSIONS. THE AMOUNT OF HEAVE MEASURED AT EACH BEAM LINE SHALL BE SUBTRACTED FROM THE EXISTING BEAM-TO-BEARING SEAT CLEARANCE MEASURED BELOW THUS ENSURING THAT THE FINAL DECK ELEVATIONS WILL PROVIDE A FLUSH JOINT.

LIST OF HIGHWAY STANDARDS

| STANDARD NO. | DESCRIPTION |
|--------------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 701101-02 | OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE |
| 701106-02 | OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY |
| 701400-05 | APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701406-06 | LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY |
| 701901-01 | TRAFFIC CONTROL DEVICES |

| | | | | | | | | | | |
|--|-----------------------------|----------------|-----------|---|---|---|------------------|-----------|-----------------|--------------|
| FILE NAME = | USER NAME = simsgm | DESIGNED - GMS | 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. |
| c:\pwwork\pwwork\simsgm\d0184265\057085- 95-Bridge Repair Plans.dgn | PLOT SCALE = 40,0001' / IN. | DRAWN - GMS | REVISED - | | | 72 | (10-71HB)BDR,BJR | CHAMPAIGN | 14 | 2 |
| PLOT DATE = 1/21/2011 | DATE = 01-20-2011 | CHECKED - | REVISED - | | | CONTRACT NO. 70865 | | | | |
| | | | | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

SUMMARY OF QUANTITIES

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

S.N. 010-0146

0014

| CODE NO | ITEM | UNIT | TOTAL QUANTITY |
|---------------------|---|-----------------|-----------------|
| 50157300 | PROTECTIVE SHIELD | SQ YD | 250.0 |
| 50500405 | FURNISH AND ERECT STRUCTURAL STEEL | POUND | 1090.0 |
| 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 |
| Z0001899 | JACK AND REMOVE EXISTING BEARINGS | EACH | 10.0 |
| X7015005 | CHANGEABLE MESSAGE SIGN | CAL DA | 28.0 |
| Z0001905 | STRUCTURAL STEEL REPAIR | POUND | 430.0 |
| Z0003600 | BEAM STRAIGHTENING | L SUM | 1.0 |
| Z0015802 | PLUG EXISTING DECK DRAINS | EACH | 16.0 |
| 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 |
| Z0021906 | SILICONE JOINT SEALER, 1.5" | FOOT | 60.0 |
| NO SPECIALTY ITEMS | | | |

| | | | | | | | | | | | |
|---|--------------------|----------------|-----------|---|------------------------------|---|-------------------|-----------|-----------------|--------------|--|
| FILE NAME = | USER NAME = simsgm | DESIGNED - GMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| cr:\pwork\pwork\simsgm\0184265\057085-Bridge Repair Plans.dgn | DRAWN - GMS | REVISIONS | | | | 72 | 110-71HB(BDR,BJR) | CHAMPAIGN | 14 | 3 | |
| PLOT SCALE = 40.0000' / IN. | CHECKED - | REVISIONS | | | | CONTRACT NO. 70865 | | | | | |
| PLOT DATE = 1/21/2011 | DATE - 01-20-2011 | REVISIONS | | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

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".


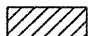
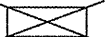
METHOD OF CONSTRUCTION: ROAD CLOSURE (UTILIZING BLR STD. 21-8)

SEE PROPOSED IMPROVEMENTS ON THIS SHEET.

PROPOSED WORK

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

LEGEND

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

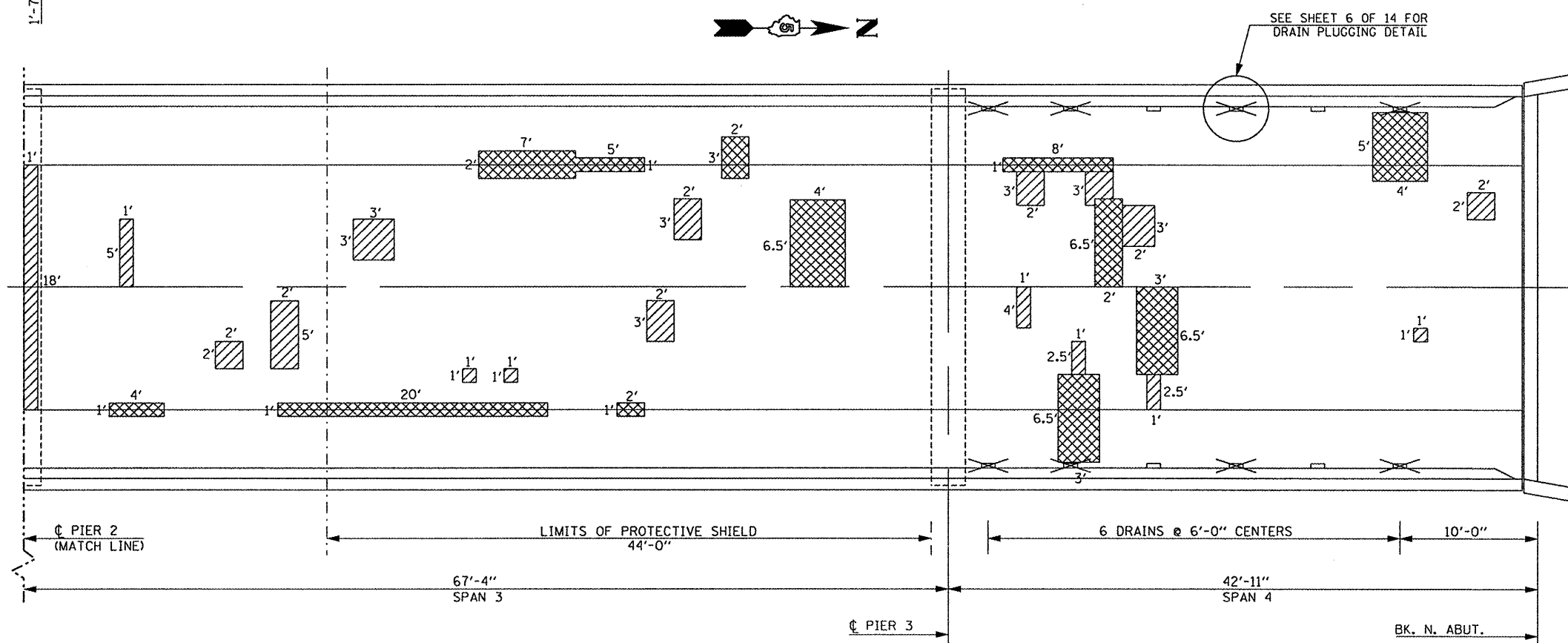
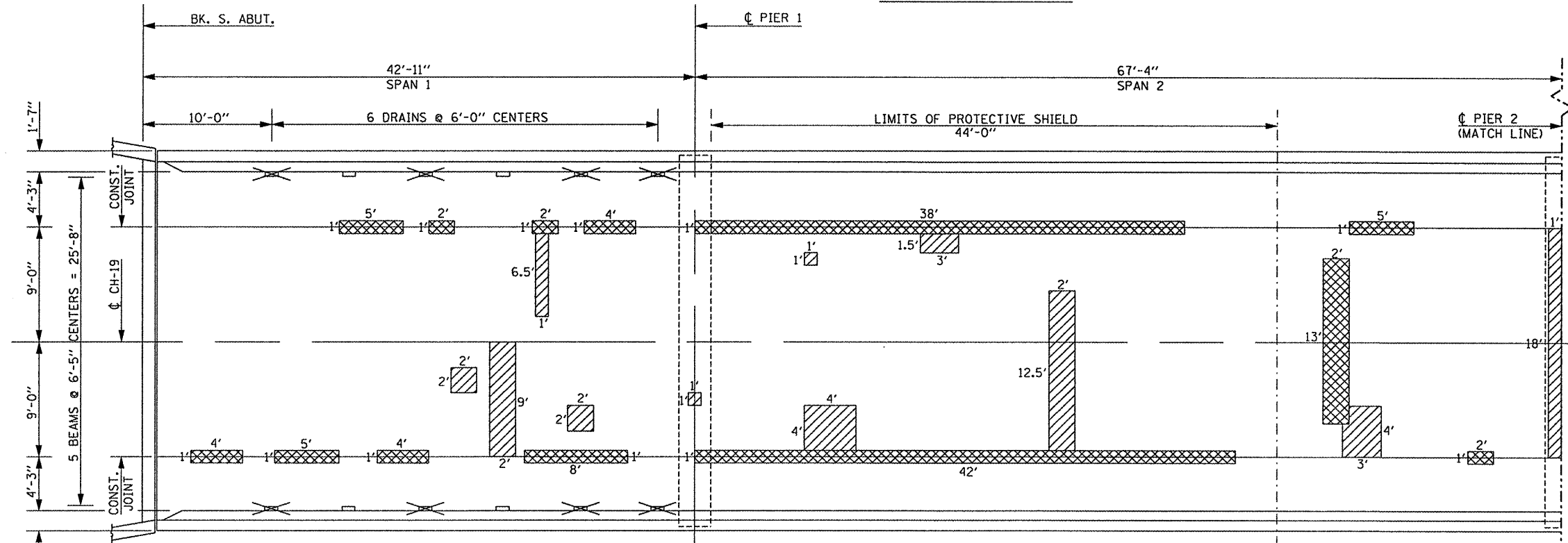
GENERAL NOTES

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. AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

SEE SHEET 2 OF 10 FOR TOTAL BILL OF MATERIAL



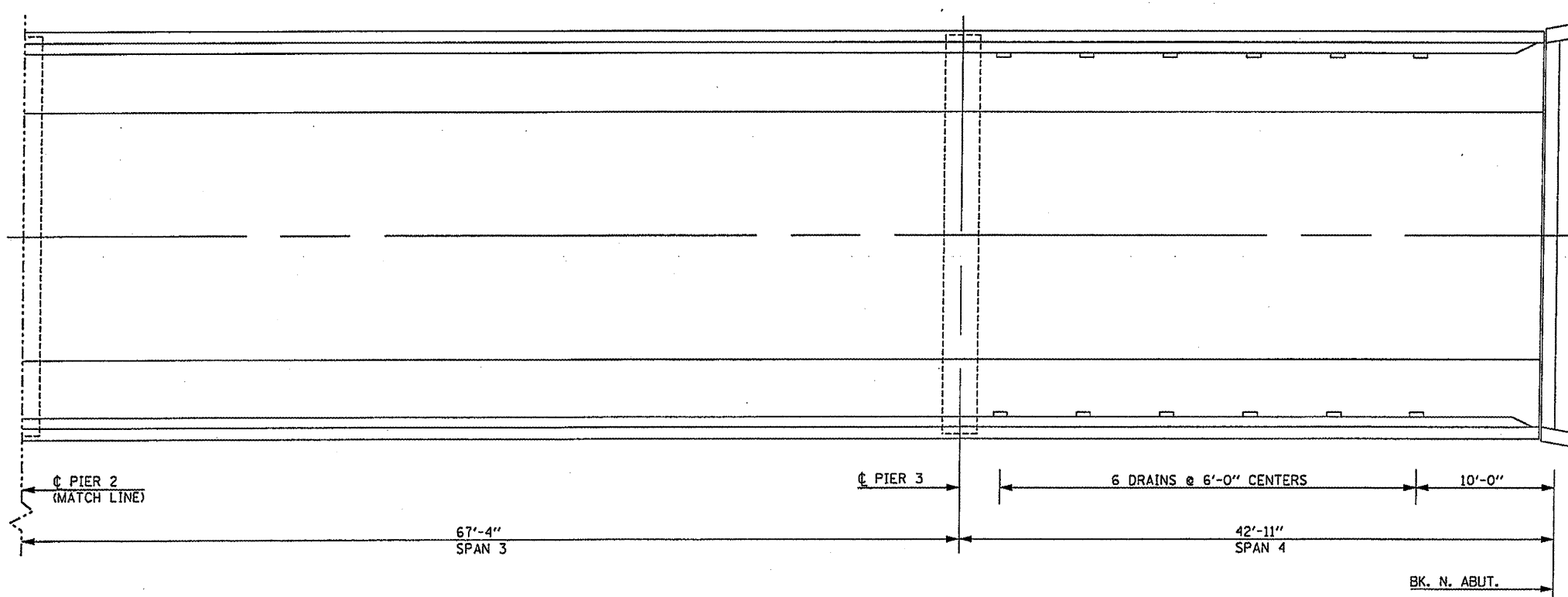
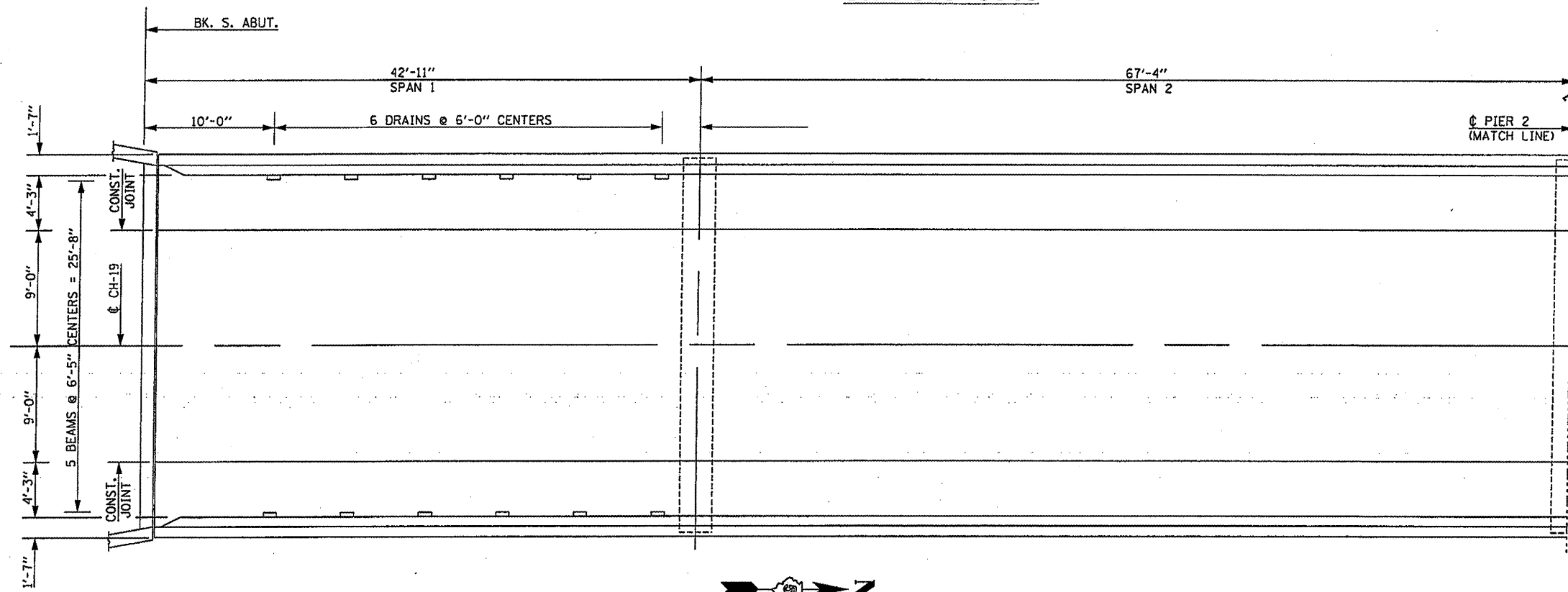
David Carl Puzey 3/17/11
Expires 11/30/2012



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| #FILE# | | DRAWN - GMS | REVISED - | | | 72 | (10-71HB)BDR,BJR | CHAMPAIGN | 14 | 4 | |
| PLOT SCALE = #SCALE# | | CHECKED - IJL | REVISED - | | | CONTRACT NO. 70865 | | | | | |
| PLOT DATE = #DATE# | | DATE - 01-20-2011 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | |
| | | | | | | SCALE: | SHEET NO. 1 OF 10 SHEETS | STA. | TO STA. | | |

AS-BUILT PATCHING PLAN

S.N. 010-0146



TOTAL BILL OF MATERIALS

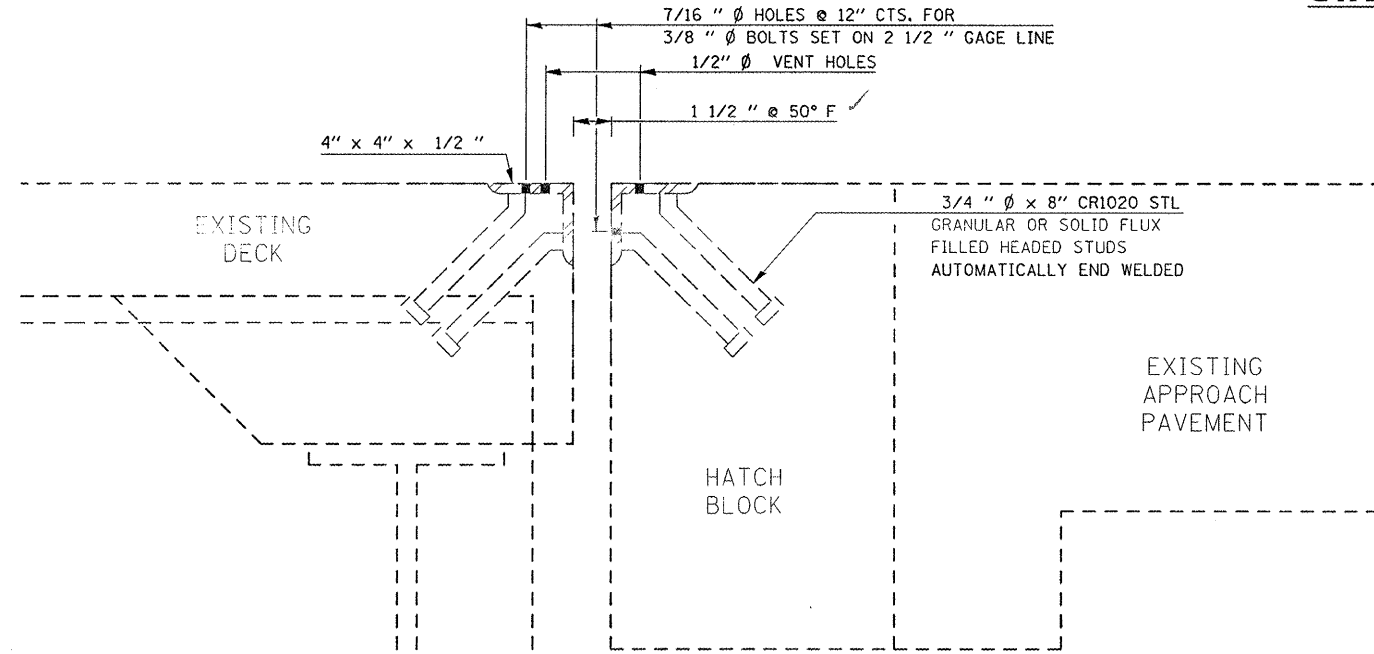
| ITEM | UNIT | TOTAL |
|--|-------|--------|
| DECK SLAB REPAIR (FULL DEPTH, TYPE I) | SQ YD | 5.0 |
| DECK SLAB REPAIR (FULL DEPTH, TYPE II) | SQ YD | 30.0 |
| DECK SLAB REPAIR (PARTIAL) | SQ YD | 23.0 |
| ELASTOMERIC BEARING ASSEMBLY, TYPE II | EACH | 10.0 |
| JACK AND REMOVE EXISTING BEARINGS | EACH | 10 |
| 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 |

NOTE:
 A PATCHING SURVEY WAS CONDUCTED IN APRIL OF 2009. THE PATCH SIZES AND LOCATIONS WERE PROVIDED ON THE PREVIOUS SHEET. ADDITIONAL QUANTITY FOR PARTIAL DEPTH PATCHING HAS BEEN PROVIDED TO ACCOUNT FOR CONTINUED DETERIORATION SINCE THE PATCHING SURVEY WAS CONDUCTED. ACTUAL SIZES AND LOCATIONS FOR THE FULL AND PARTIAL DEPTH PATCHING SHALL BE DETERMINED BY THE ENGINEER AND SHOWN ON THIS SHEET.

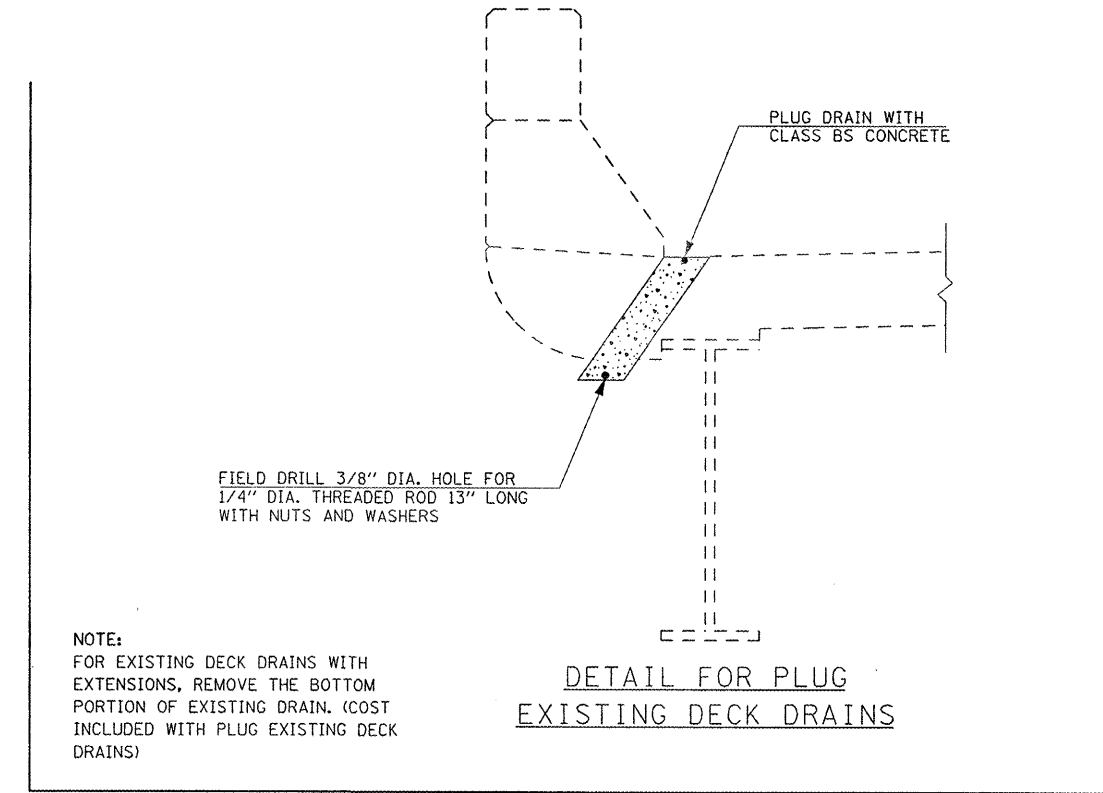
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| | | CHECKED - IJL | REVISED - | | | | | | | |
| | | DATE - 01-20-2011 | REVISED - | | | | | | | |
| | | | | | | SCALE: | SHEET NO. 2 OF 10 SHEETS | STA. | TO STA. | |
| | | | | | | [ILLINOIS] FED. AID PROJECT | | | | |

JOINT AND DRAIN REPAIR DETAILS

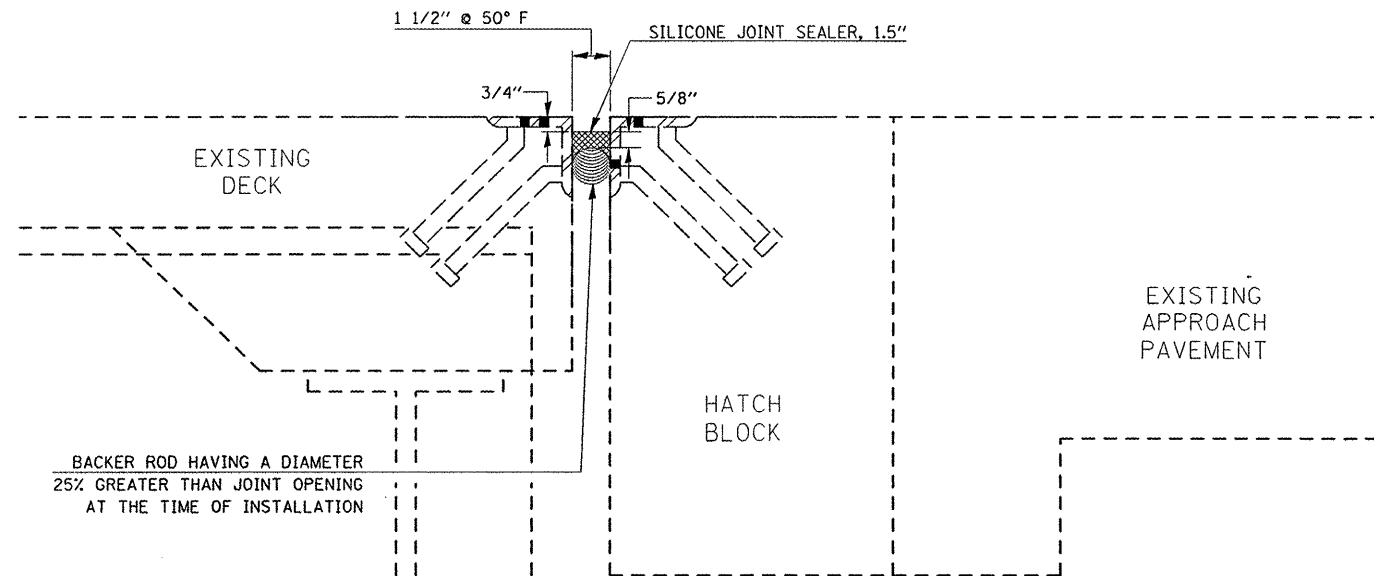
S.N. 010-0146



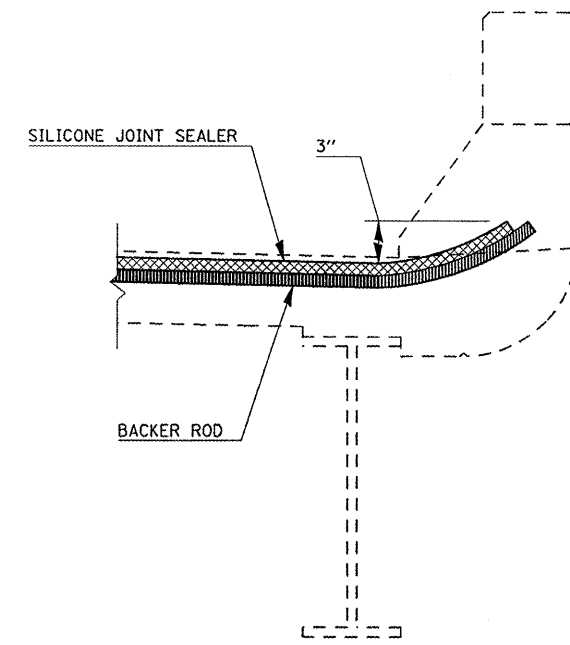
SECTION AT EXISTING JOINT



NOTE:
FOR EXISTING DECK DRAINS WITH EXTENSIONS, REMOVE THE BOTTOM PORTION OF EXISTING DRAIN. (COST INCLUDED WITH PLUG EXISTING DECK DRAINS)



SECTION AT PROPOSED JOINT



SECTION AT PARAPET

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\"/>

SEE SPECIAL PROVISIONS

BILL OF MATERIALS

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

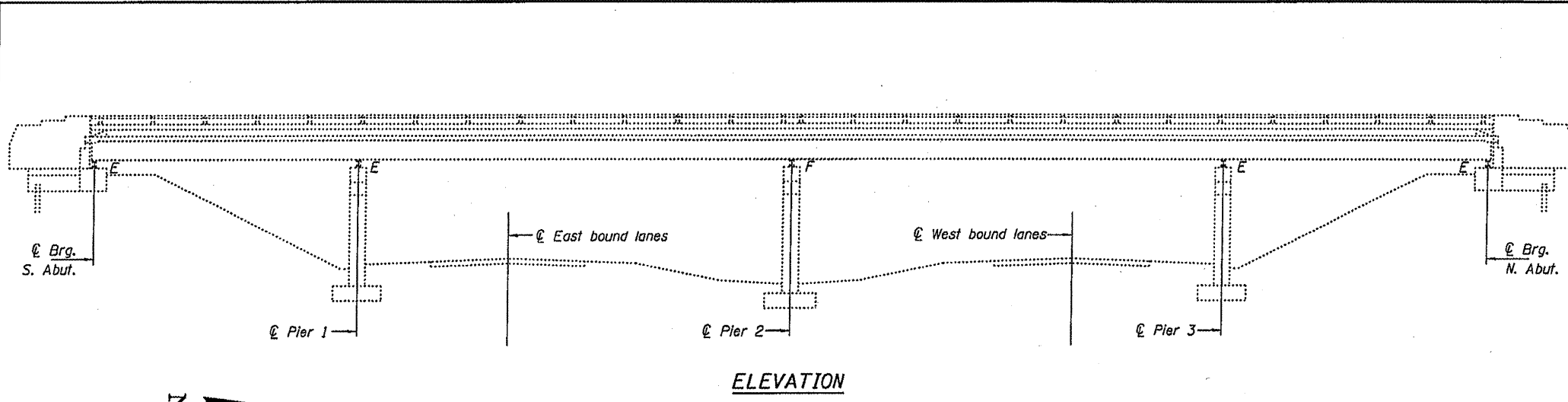
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| | PLOT SCALE = 40,0001' / IN. | CHECKED - JTL | REVISED - |
| | PLOT DATE = 1/20/2011 | DATE - 01-20-2011 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

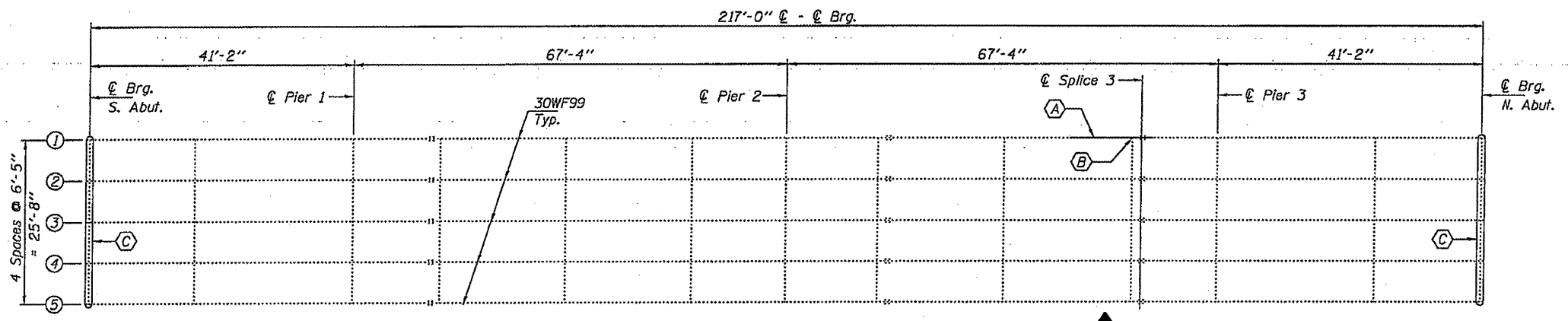
JOINT & DRAIN REPAIR DETAILS
S.N. 010-0146

SCALE: SHEET NO. 3 OF 10 SHEETS STA. TO STA.

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



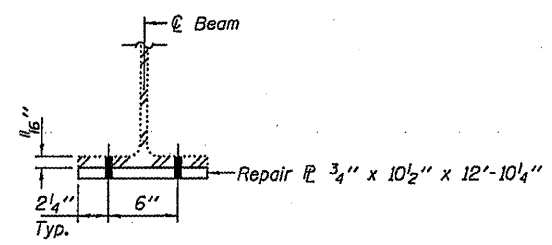
ELEVATION



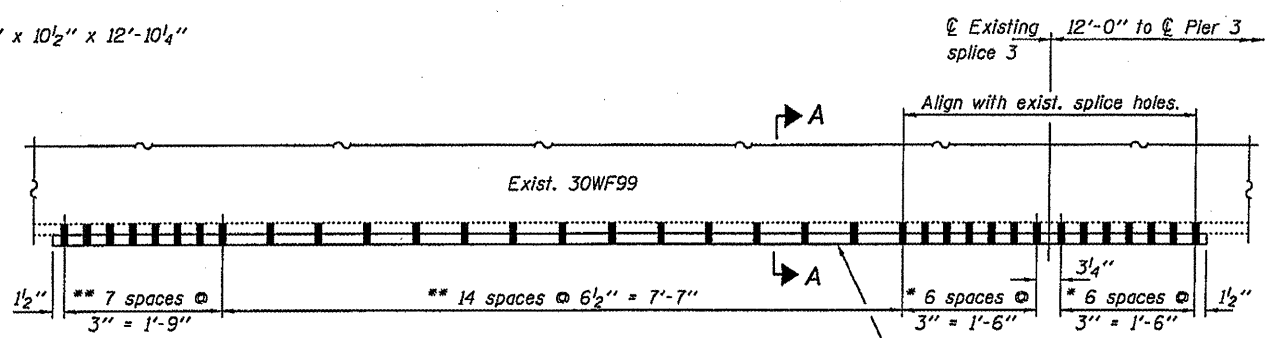
PLAN

- (A) Straighten & strengthen existing beam.
- (B) Replace bottom clip angle.
- (C) Replace abutment bearings.

Notes:
Fasteners shall be high strength bolts. Holes for Repair A shall be $\frac{15}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Holes for Repair B shall be $\frac{13}{16}$ " ϕ for $\frac{3}{4}$ " ϕ 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. Work to be done under road closure.



SECTION A-A

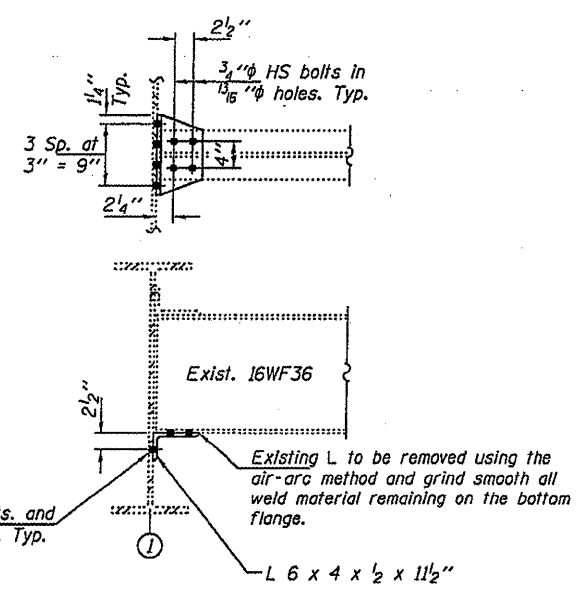


REPAIR A - BEAM 1

* 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.

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.
After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".



REPAIR B CLIP ANGLE REPLACEMENT

BILL OF MATERIAL

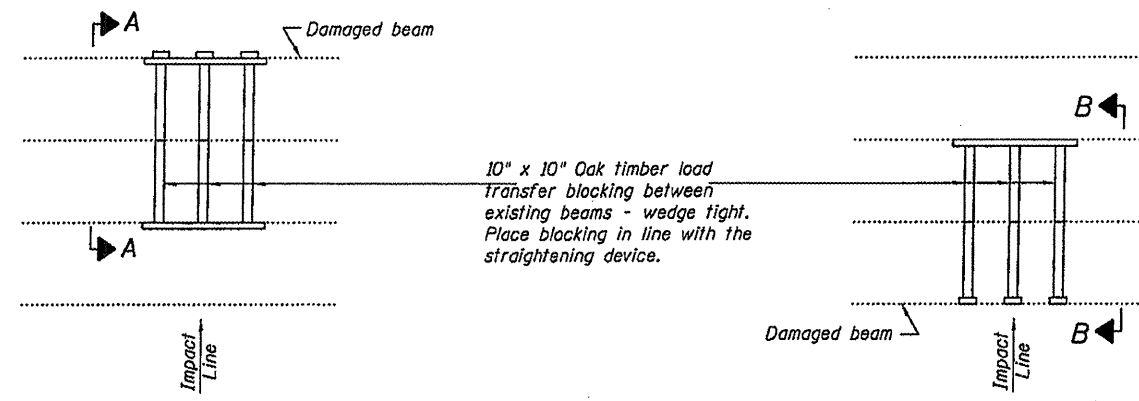
| ITEM | UNIT | QUANTITY |
|--|-------|----------|
| Structural Steel Repair | Pound | 430 |
| Beam Straightening | L.S. | 1 |
| Elastomeric Bearing Assembly, Type II | Each | 10 |
| Jack and Remove Existing Bearings | Each | 10 |
| Furnishing and Erecting Structural Steel | Pound | 1090 |
| Anchor Bolts 1" ϕ | Each | 20 |

| | | |
|-----------------|----------|---------------------|
| DESIGNED VHV | EXAMINED | DATE MARCH 11, 2011 |
| CHECKED ATH | PASSED | |
| DRAWN baliva | | |
| CHECKED VHV ATH | | |

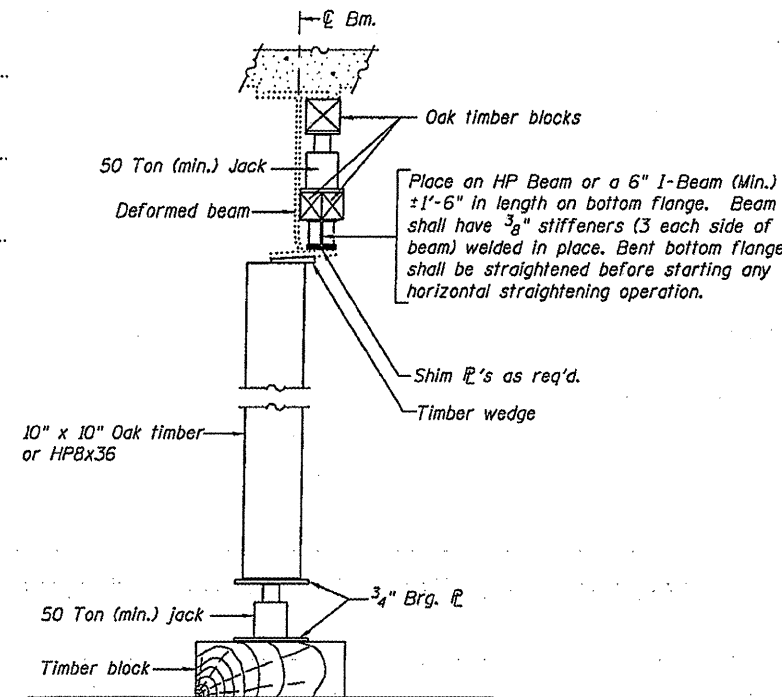
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
CH 19 OVER I-72
SN 010-0146
SHEET 1 OF 3 SHEETS

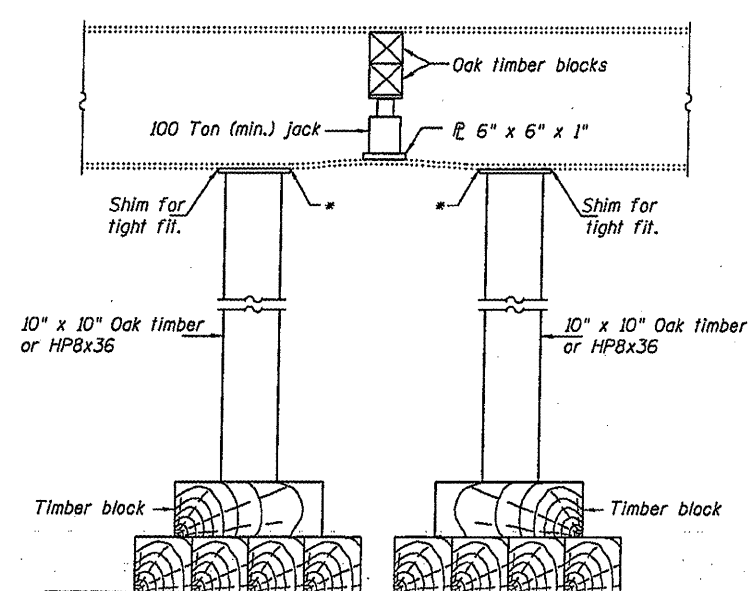
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|--------------------|----------------|-----------|---------------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 72 | 110-71HBDR,B,R | CHAMPAIGN | 14 | 7 |
| CONTRACT NO. 70865 | | | ILLINOIS FED. AID PROJECT | |



PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS
 Straightening force shall be maintained on all load transfer blocking during beam straightening.

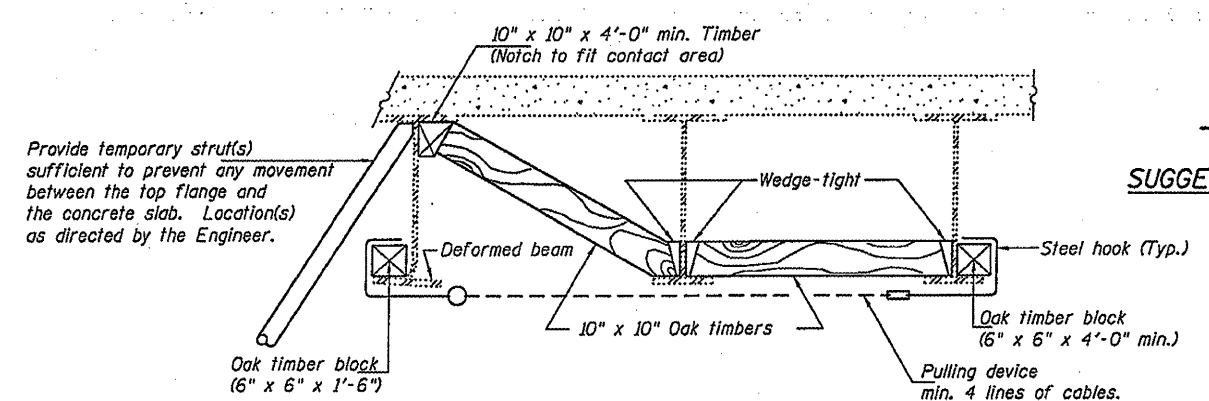


SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct flange rotation.)

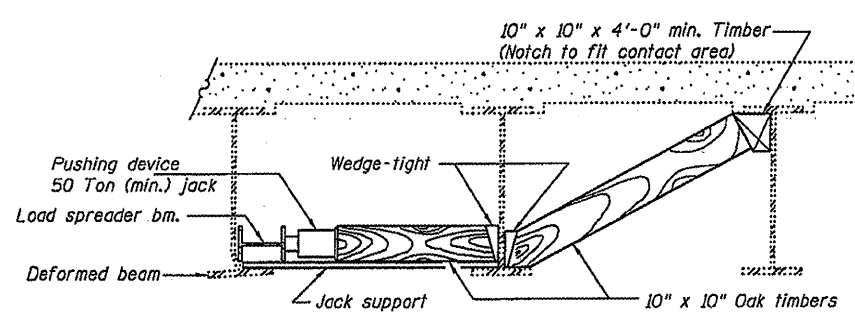


SUGGESTED VERTICAL STRAIGHTENING DETAIL
 (To correct localized vertical flange deformations.)

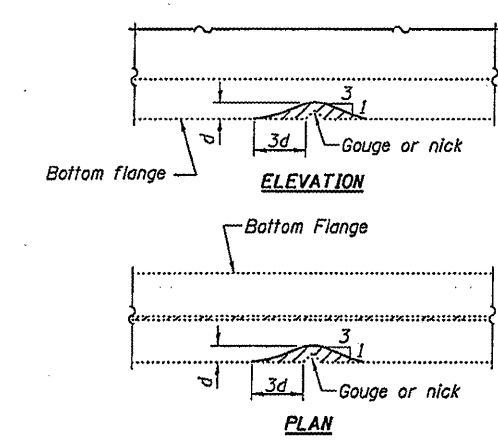
* Edge of plate shall line up with edge of deformation.
 Note:
 Braces and jack assembly shall be placed on same side of web.
 Bent bottom flange shall be straightened before starting any horizontal straightening operations.



SECTION A-A

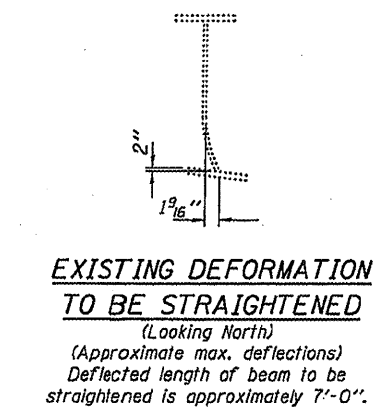


SECTION B-B



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.



EXISTING DEFORMATION TO BE STRAIGHTENED
 (Looking North)
 (Approximate max. deflections)
 Deflected length of beam to be straightened is approximately 7'-0".

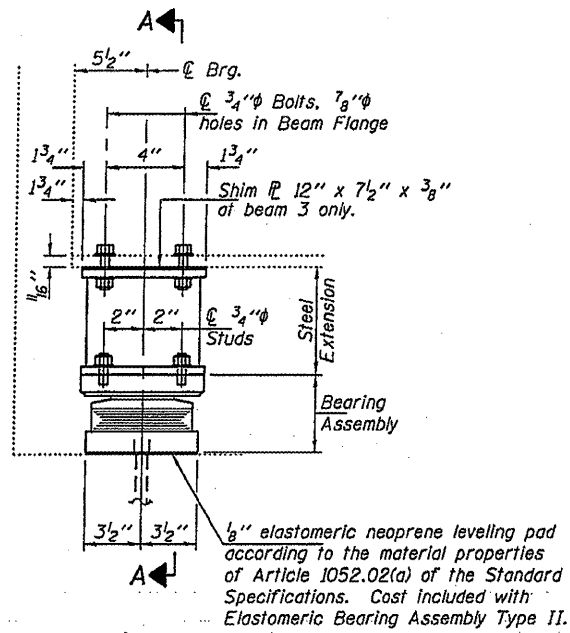
REP-11-14-2005

| | | |
|-----------------|----------|---------------------|
| DESIGNED VHV | EXAMINED | DATE MARCH 11, 2011 |
| CHECKED ATH | PASSED | |
| DRAWN Baliva | | |
| CHECKED VHV ATH | | |

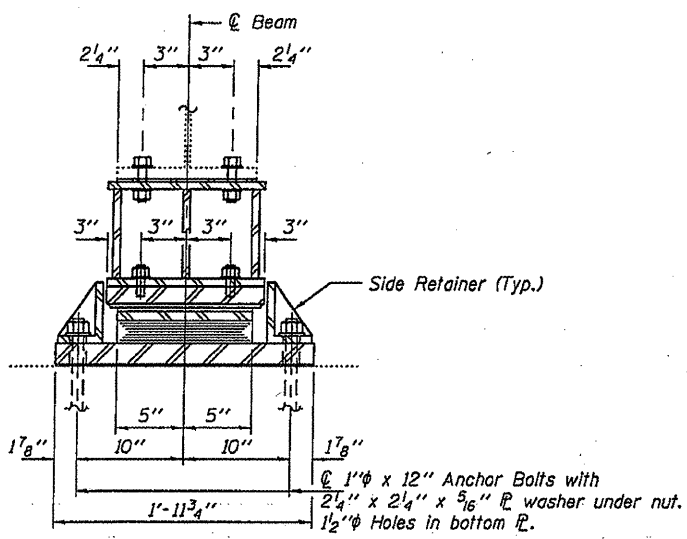
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
 SN 010-0146
 SHEET 2 OF 3 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|------------------|-----------|--------------------|-----------|
| 72 | 410-TIMBIBOR,BJR | CHAMPAIGN | 14 | 8 |
| | | | CONTRACT NO. 70865 | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION AT ABUTMENT
TYPE II TFE ELASTOMERIC EXP. BRG.

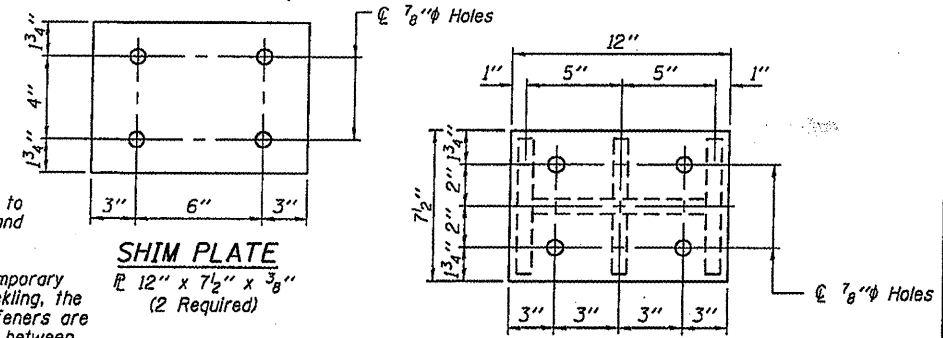


SECTION A-A

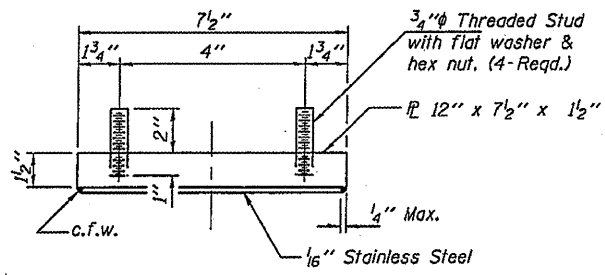
BEAM REACTIONS

| | | |
|----------------|-----|------|
| R _P | (K) | 11.6 |
| R _L | (K) | 31.0 |
| Imp. | (K) | 9.3 |
| R (Total) | (K) | 51.9 |

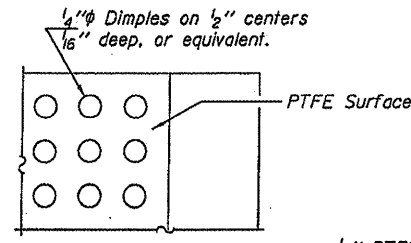
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web 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 (F_y=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.



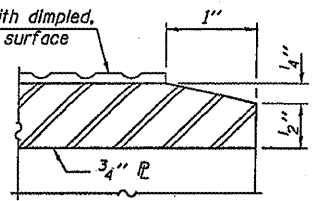
SHIM PLATE
PLAN TOP AND BOTTOM PLATE



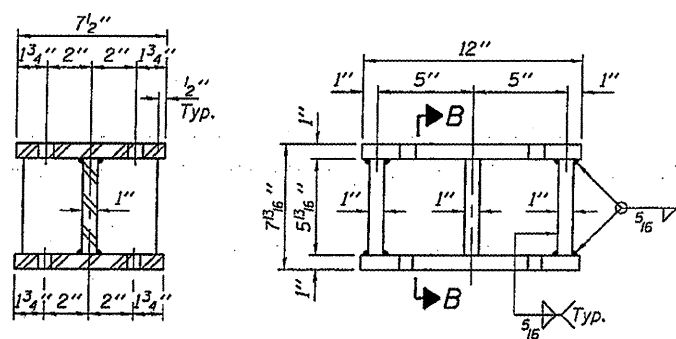
TOP BEARING ASSEMBLY



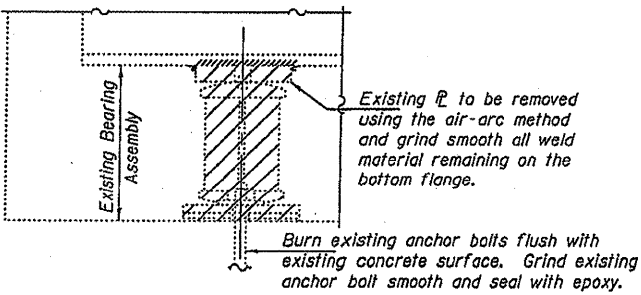
PLAN-PTFE SURFACE



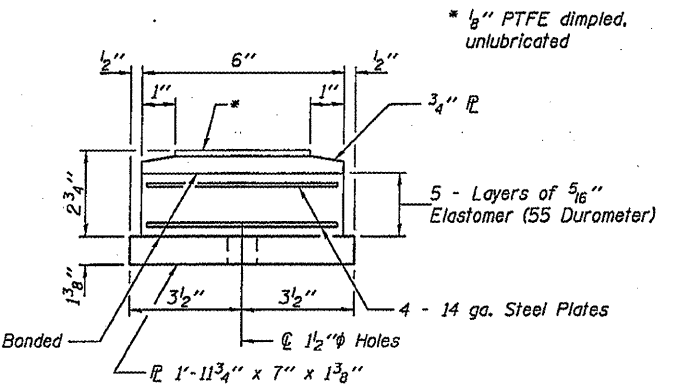
SECTION THRU PTFE



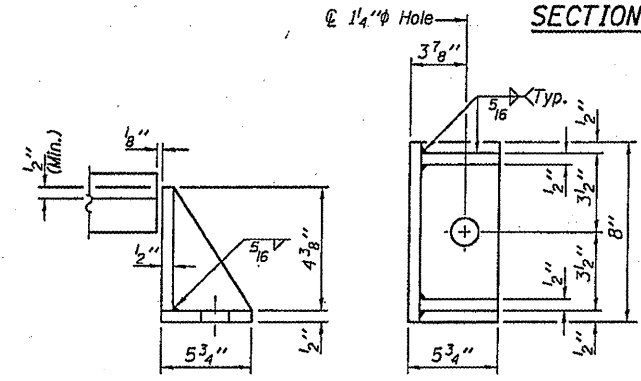
SECTION B-B
STEEL EXTENSION DETAIL



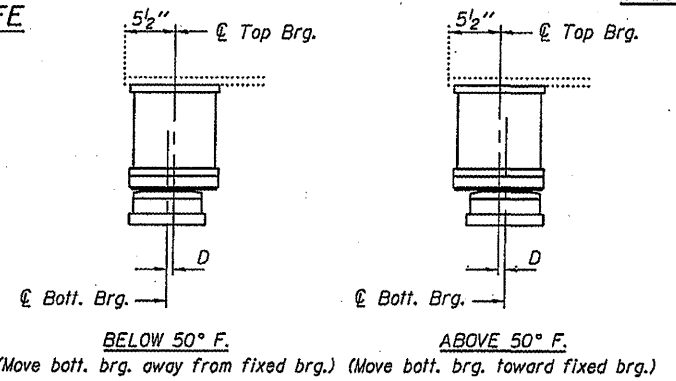
EXISTING BEARING REMOVAL DETAIL



BOTTOM BEARING ASSEMBLY



SIDE RETAINER
 Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG.
 D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Cost included with Jack and Remove Existing Bearings.

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" @ | Each | 20 |

TYII/REPS 12-03-2008

| | | |
|-----------------|----------|---------------------|
| DESIGNED GGE | EXAMINED | DATE MARCH 11, 2011 |
| CHECKED ATH | PASSED | |
| DRAWN boliva | | |
| CHECKED GGE ATH | | |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

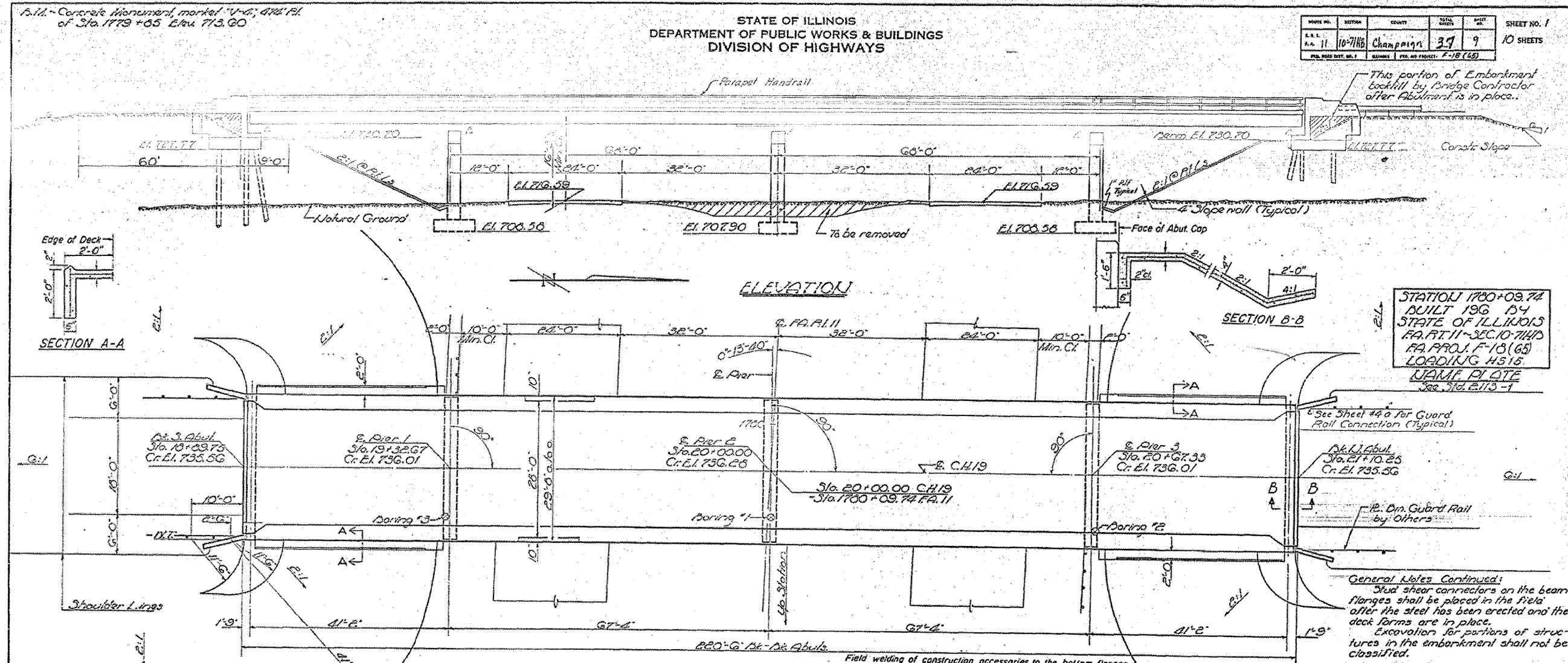
REPAIR DETAILS
 SN 010-0146
 SHEET 3 OF 3 SHEETS

| | | | | |
|--------------------|-------------------------|------------------|---------------------------|-------------|
| F.A.I. R.T.E. 72 | SECTION 110-THBIBDR.B.R | COUNTY CHAMPAIGN | TOTAL SHEETS 14 | SHEET NO. 9 |
| CONTRACT NO. 70865 | | | ILLINOIS FED. AID PROJECT | |

AS-BUILT PLANS FOR INFORMATION ONLY

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

| | | | | |
|--------------------------|-----------|--------|--------------|-----------|
| PROJECT NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 10-7166 | Champaign | 39 | 9 | 10 |
| SHEET NO. 1 10 SHEETS | | | | |

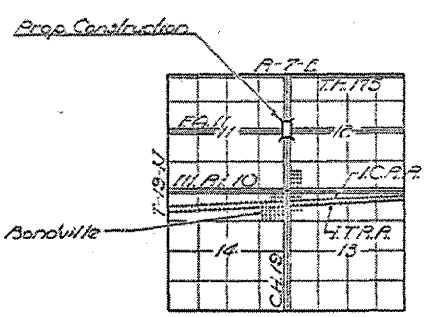


STATION 1780+09.74
BUILT 1964
STATE OF ILLINOIS
FA.R.T. II - SEC. 10-7166
LOADING H/S 15
NAME PLATE
See Sta. E.113-1

SECTION A-A

ELEVATION

SECTION B-B



LOCATION PLAN

| | | |
|-----------------------------------|--------------------------------------|-----------------------|
| DESIGNED <i>Q. H. Hagerman</i> | EXAMINED <i>W. C. Baumann</i> | DATE MARCH 29 1962 |
| CHECKED <i>R. Howard</i> | PASSED <i>R. Howard</i> | |
| DRAWN <i>R.H.H. n/j, jcc/b</i> | APPROVED <i>R.H.H. n/j, jcc/b</i> | |
| CHECKED <i>RK</i> | | |

GENERAL NOTES

Class A 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 wall shall be reinforced with welded wire fabric @ 6" mesh, #4 wires weighing 50# per 100 sq. ft. Panels 2' x 4' Open holes 1/2" unless noted.

All bolsters, rockers, bearing plates, foot 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. - G. 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. Est'd material 2' x 2' x 1/2" = 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 prepared through the embankment to the natural ground line in accordance with Article 60.9(c) of the Standard Specifications.

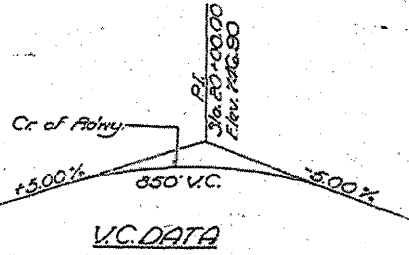
TOTAL BILL OF MATERIAL

| Item | Unit | Super | Sub | Total |
|-------------------------------------|----------|---------|--------|---------|
| * Class A Excavation for Structures | Cu. Yd. | | 190 | 190 |
| Class A Concrete | Cu. Yd. | 166.6 | 176.5 | 343.1 |
| Structural Steel | Lb. | 139,490 | | 139,490 |
| Alum. Horizontal | Lin. Ft. | 437 | | 437 |
| Reinforcement Bars | Lb. | 42,220 | 13,700 | 55,920 |
| Concrete Piles | Lin. Ft. | | 595 | 595 |
| Test Piles (Concrete) | Eq. | | 1 | 1 |
| Name Plates | Eq. | | 2 | 2 |
| Slope Wall | Sq. Yds. | | | 360 |
| ** Protective Coat | Sq. Yds. | | | 637 |
| (1) Bridge Seat Segment | Lump Sum | | | 1 |

* Includes excavation for slope wall. (1) Use an abutment seats.
** Includes use on inside vertical face top and exposed ends of the abutment wings.

DESIGN STRESSES
F_y = 1400 p.s.i. Super & Sub.
F_t = 20000 p.s.i. Paint
F_t = 20000 p.s.i. Struc. (A-36)
vc = 75 p.s.i. Fls. & comp. - L/1200
LOADING H/S-312-44

GENERAL PLAN & ELEVATION
FA.R.T. II SEC. 10-7166
CHAMPAIGN COUNTY
STA. 1780+09.74



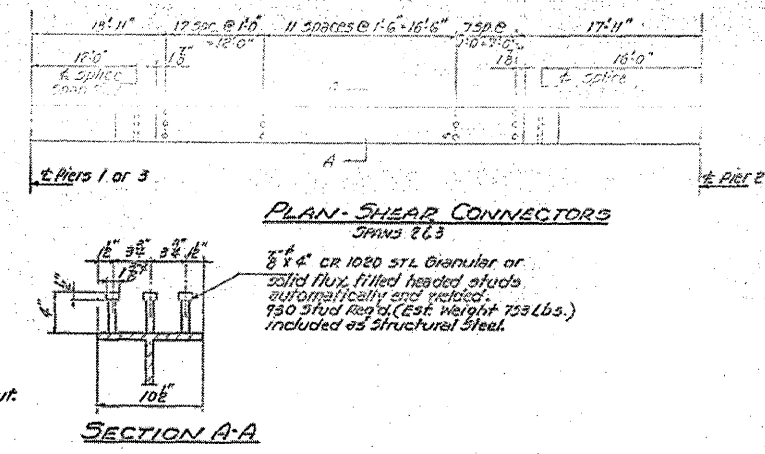
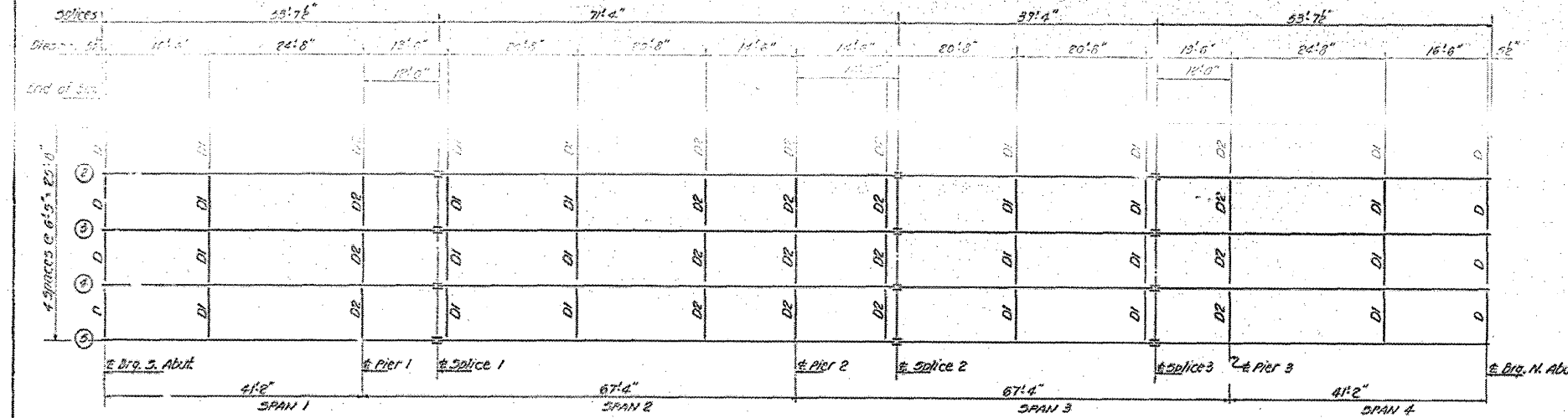
V.C. DATA

Rev. 10/16/64 H.A.G. Rev. Quan. for Parapet Handrail: Alum. to Metal; C. X Concrete from 181.4 to 194.1 (360.7 to 575.4); Paint. lbs 34,730 to 40,060 (148,320 to 55,570) C.S.P. Piles Length per 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

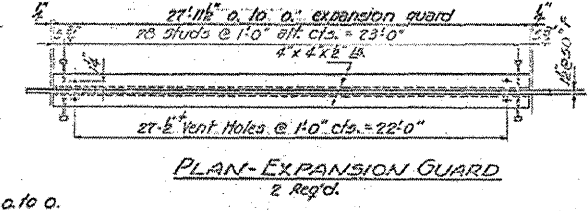
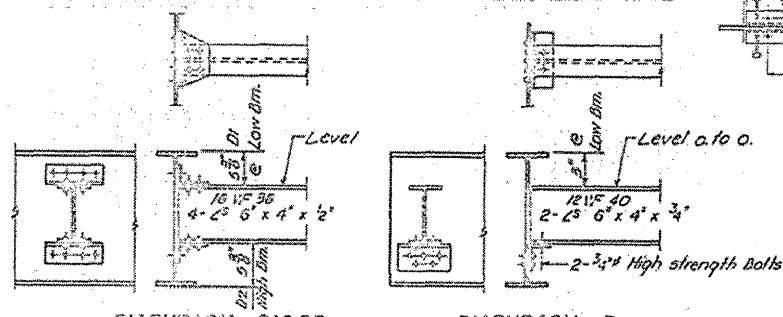
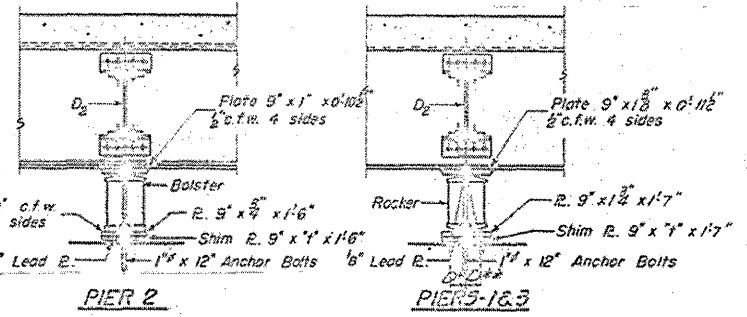
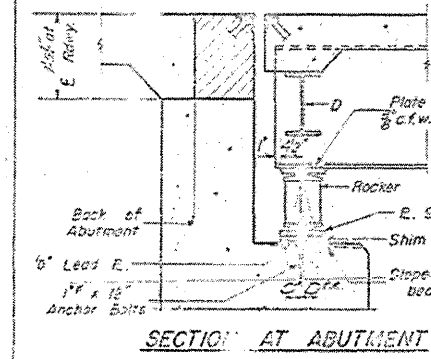
| | | | | |
|--------------------------|---------|-----------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 11 | 10-788 | CHAMPAIGN | 37 | 11 |
| SHEET NO. 3 10 SHEETS | | | | |



NOTES ON SETTING OF ANCHOR BOLTS AT EXP. DECS.
a) 1/2" (Side of brg. away from fixed brg.)
b) 1/2" (Side of brg. toward fixed brg.)
c) 1/2" (Side of brg. toward fixed brg.)
d) 1/2" (Side of brg. toward fixed brg.)

FRAMING PLAN
(All beams 30 W 99)

Notes continued:
After beams have been erected and dimensions D₁ or D₂ 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 1&2 | Beam 3 | Beam 4 |
|------------------|-----------|--------|--------|
| So. Abut. (Brg.) | 734.92 | 735.04 | 735.06 |
| Pier 1 | 735.69 | 735.41 | 735.44 |
| Splice 1 | 735.20 | 735.32 | 735.34 |
| Pier 2 | 735.53 | 735.63 | 735.68 |
| Splice 2 | 735.57 | 735.67 | 735.71 |
| Splice 3 | 735.20 | 735.52 | 735.34 |
| Pier 3 | 735.29 | 735.41 | 735.44 |
| No. Abut. (Brg.) | 734.92 | 735.04 | 735.06 |

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

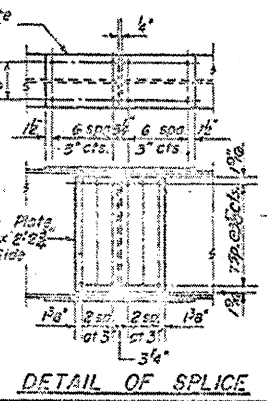
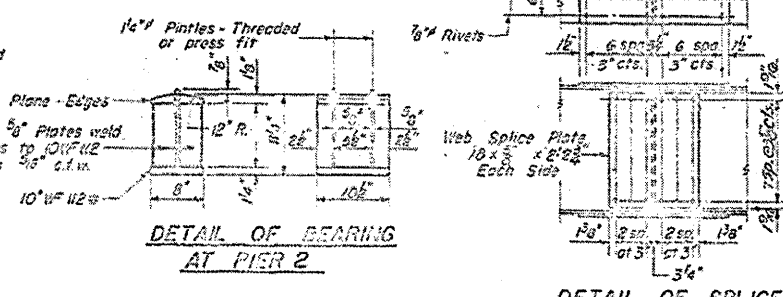
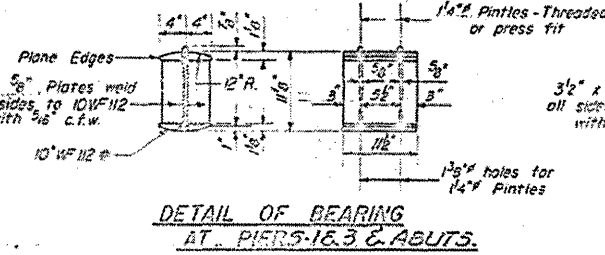
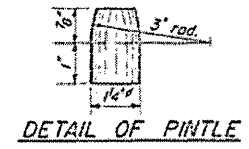
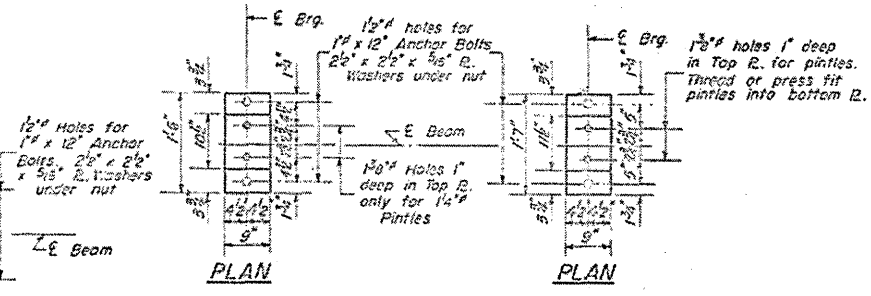
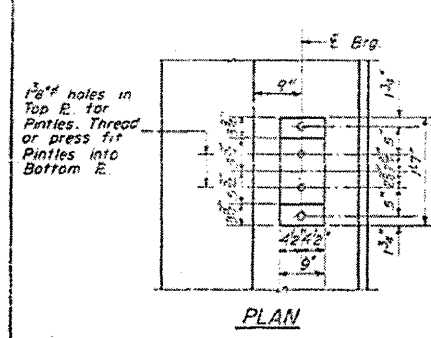


TABLE OF 1/2" DIMENSIONS

| Beam | All Bearings |
|-------|--------------|
| 1 & 2 | 0" |
| 3 & 4 | 0" |
| 3 | 0" |

DESIGNED: O.H. Higgins
CHECKED: R. H. ...
DRAWN: W.A. Sausonson

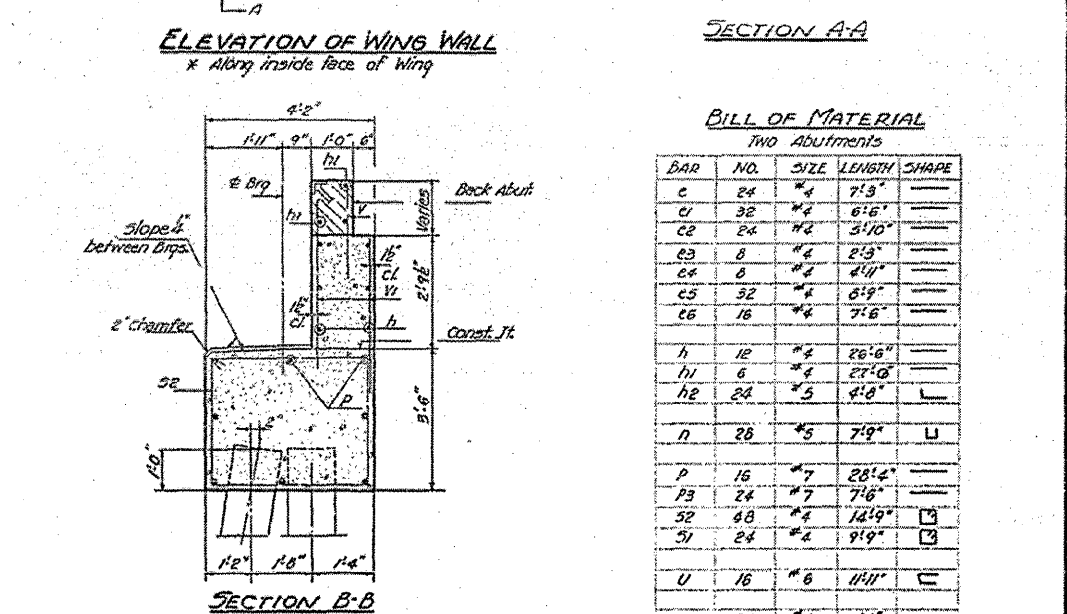
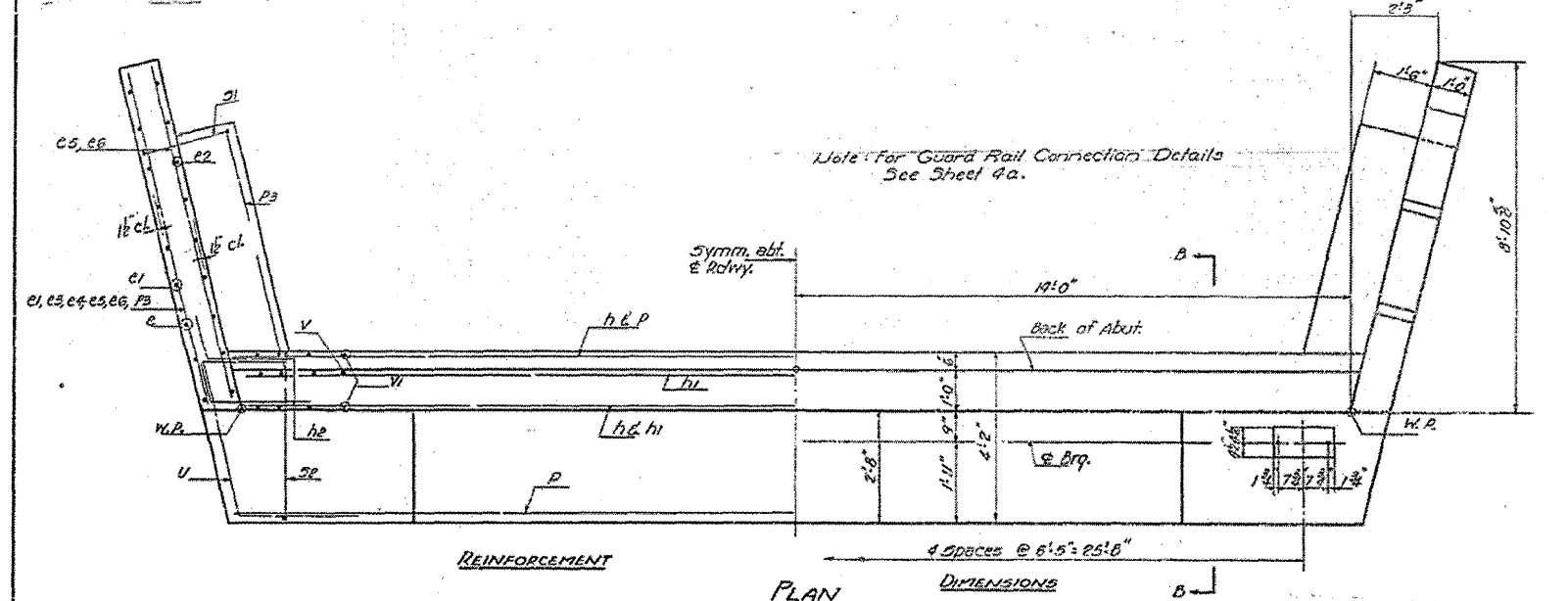
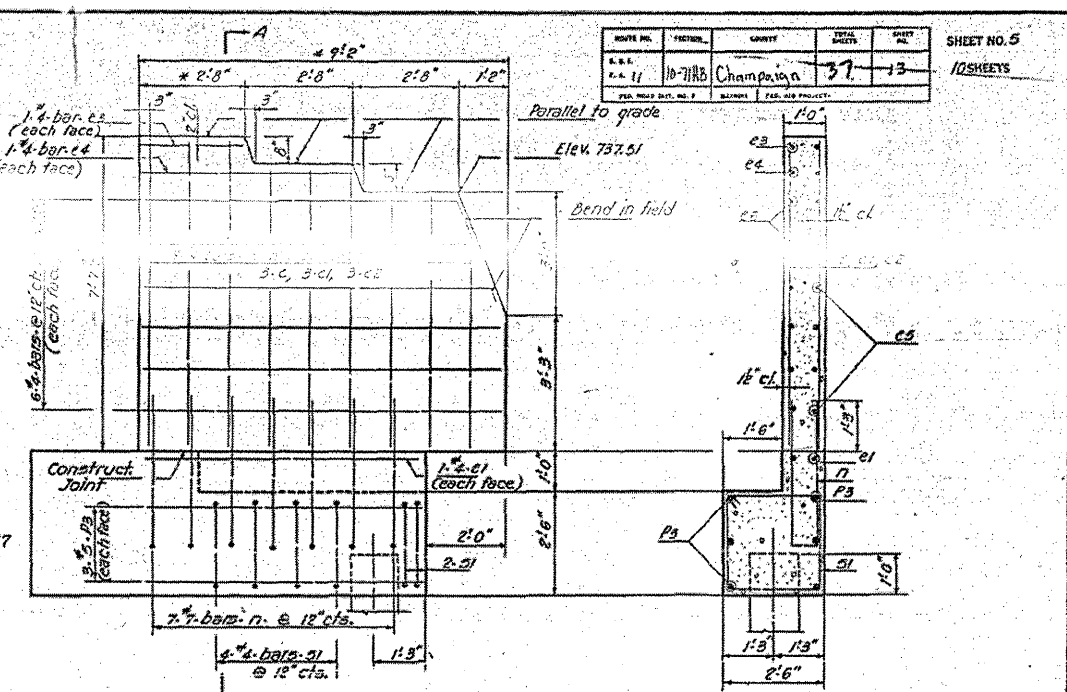
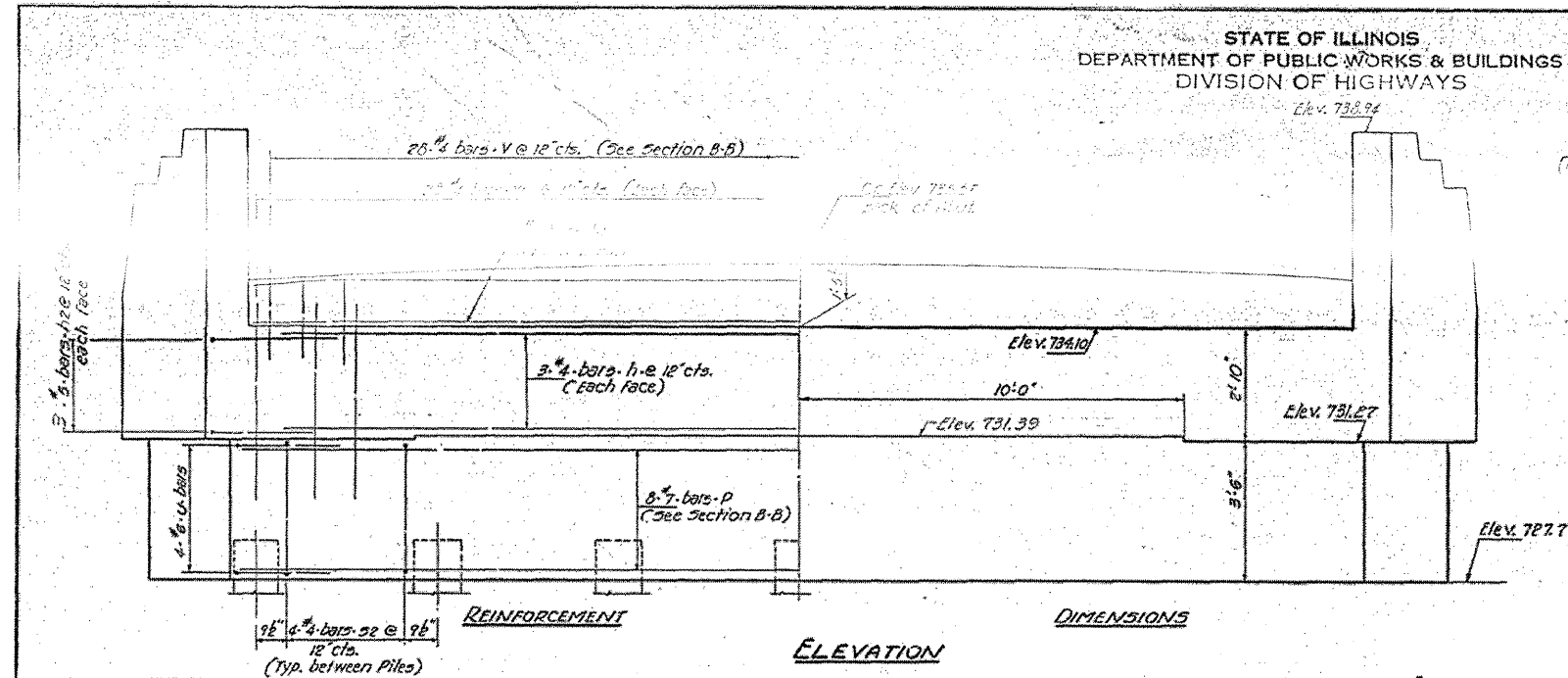
MARCH 29 1962
EXAMINED: W.E. ...
APPROVED: R.L. ...

STRUCTURAL STEEL
COUNTY ENGINEER'S OFFICE II
F.A.H. - Sec. 1071112
CHAMPAIGN COUNTY
DIVISION 1780109.24

AS-BUILT PLANS FOR INFORMATION ONLY

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

| | | | | |
|-------------|---------|-----------|-----------|--------------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | TOTAL SHEETS |
| S.A. 11 | 10-71HB | Champaign | 57-13 | 10 SHEETS |
| SHEET NO. 5 | | | | |



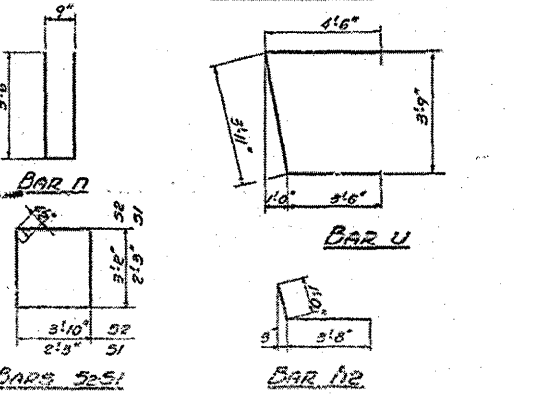
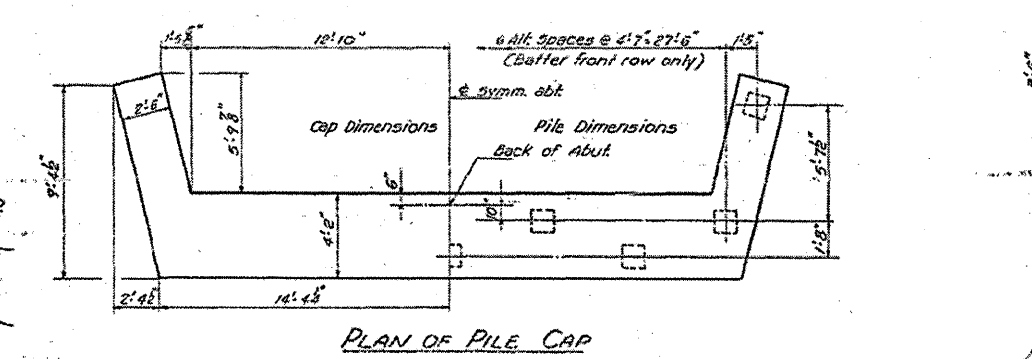
BILL OF MATERIAL TWO Abutments

| BAR NO. | SIZE | LENGTH | SHAPE |
|---------|------|--------|-------|
| C | #4 | 7'9" | — |
| CI | #4 | 6'6" | — |
| CE | #4 | 3'10" | — |
| CB | #4 | 2'9" | — |
| CF | #4 | 4'11" | — |
| CG | #4 | 6'9" | — |
| CH | #4 | 7'6" | — |
| H | #4 | 26'6" | — |
| HI | #4 | 27'0" | — |
| HI2 | #5 | 4'8" | L |
| N | #5 | 7'9" | U |
| P | #7 | 28'4" | — |
| P3 | #7 | 7'6" | — |
| S2 | #4 | 14'9" | □ |
| S1 | #4 | 9'9" | □ |
| U | #6 | 11'11" | — |
| V | #4 | 2'4" | — |
| W | #4 | 4'9" | — |

Class-X Concrete Cu Ids. 53.0
Reinforcement Bars Lbs. 3900
Concrete Piles Lin Ft. 595
Ret. 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: P.H. Hagen
CHECKED: P.H. Hagen
DRAWN: P.H. Hagen
CHECKED: R.L.
DATE: MARCH 29 1962
EXAMINED: H.C. Beermann
PASSED: [Signature]
APPROVED: R.L. [Signature]

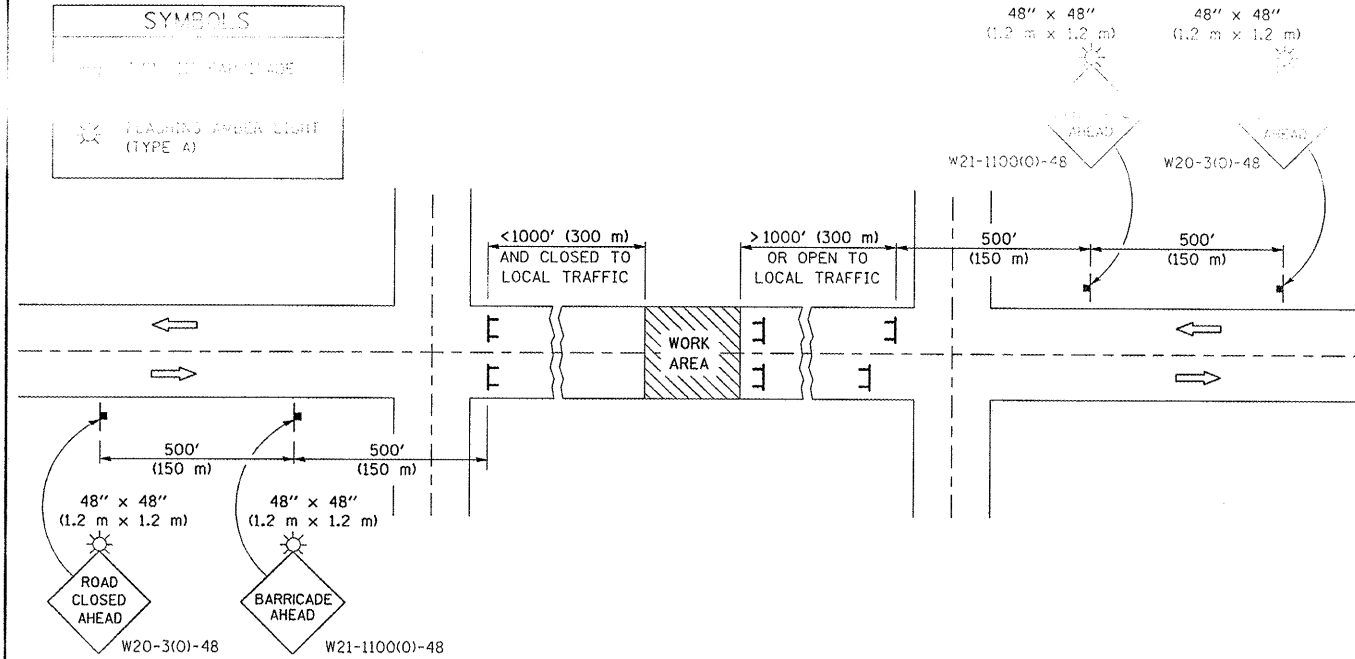


ABUTMENTS
COUNTY HIGHWAY 19 OVER E.A. RT. 11
E.A. RT. 11 - SEC. 10-71HB
CHAMPAIGN COUNTY
STATION 1780+09.74

ROAD CLOSURE

SIDEROAD / STREET CLOSURE

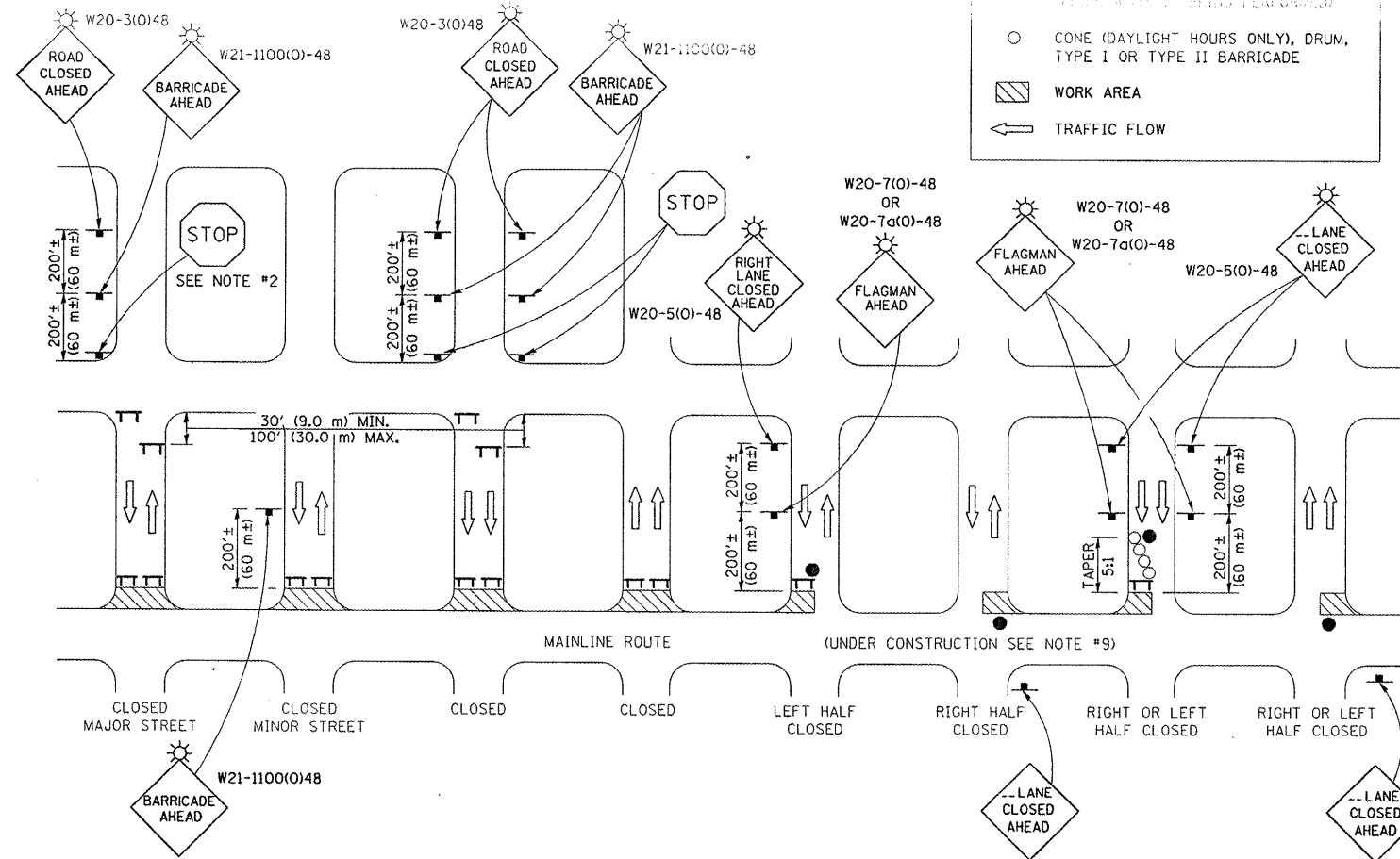
| SYMBOLS | |
|---------|-------------------------------|
| | TYPE III BARRICADE (SEE NOTE) |
| | FLASHING AMBER LIGHT (TYPE A) |



| SYMBOLS | |
|---------|---|
| | TYPE III BARRICADE (SEE NOTE) |
| | FLASHING AMBER LIGHT (TYPE A) |
| | 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 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.



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 |
| o:\pw\work\p1dot\s1msgm\d0184265\057885-Bridge Repair Plans.dgn | | DRAWN - | REVISED - 12/07 |
| | | CHECKED - | REVISED - 09/09 - KJT |
| | | DATE - | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|------------------|-----------|--------------|-----------|
| 72 | (10-7)HB/BDR,BJR | CHAMPAIGN | 14 | 14 |

CONTRACT NO. 70B65

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

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT