

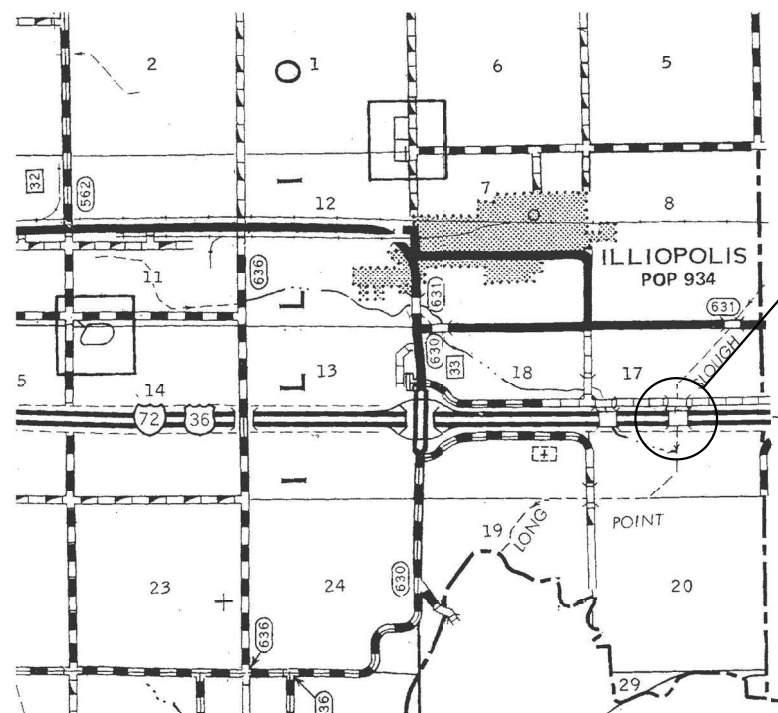
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|----------------|----------|--------------------|-----------|
| 72A | (84-10-3B-2)BP | SANGAMON | 7 | 1 |
| | | ILLINOIS | CONTRACT NO. 72650 | |

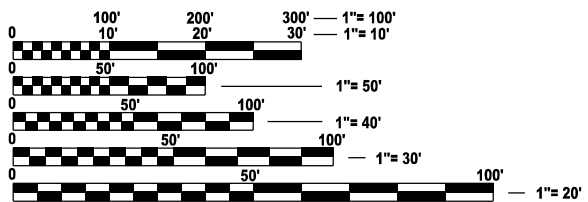
FOR INDEX OF SHEETS, SEE SHEET NO.

**PROPOSED
HIGHWAY PLANS**

**FAI ROUTE 72A (I-72)
SECTION (84-10-3B-2)BP
PROJECT NHPP-147Q(105)
BRIDGE PAINTING
SANGAMON COUNTY
C-96-023-25**



PROJECT LOCATION:
SN 084-0163 & 0164
I-72 EB & WB OVER
LONG POINT SLOUGH
1.5 MI E ILLIOPOLIS INT.



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

PROJECT ENGINEER: BRANDON DUDLEY - (217-785-9290)
PROJECT MANAGER

CONTRACT NO. 72650

GROSS LENGTH = 158 FT. = 0.03 MILE
NET LENGTH = 158 FT. = 0.03 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 17, 2024

John P. Meyer
REGIONAL ENGINEER

December 6, 2024
Scott A. Clark
ENGINEER OF DESIGN AND ENVIRONMENT

December 6, 2024
James J. Quinn
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

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

HIGHWAY STANDARDS


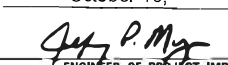
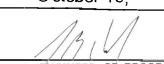
INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
- 3 SUMMARY OF QUANTITIES
- 4-7 EXISTING BRIDGE PLANS, SN 084-0163 & 0164

- 000001-08
- 001006
- 701101-05
- 701106-02
- 701400-12
- 701402-12
- 701901-10
- 704001-08
- 782006-01

GENERAL NOTES:

1. WORK SHALL CONSIST OF BLASTING AND PAINTING STRUCTURAL STEEL AT LOCATIONS DESCRIBED IN THE SPECIAL PROVISIONS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/EJU. THE COLOR OF THE FINAL FINISH COATS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
2. THE USE OF AIR MONITORS WILL BE REQUIRED AT LOCATIONS AS CALLED OUT IN THE SPECIAL PROVISIONS.
3. THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED.
4. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. RUBBER COMPONENTS SHALL NOT BE PAINTED.
5. UPON COMPLETION OF PAINTING OPERATIONS, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE INCLUDED IN THE COST OF THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

| | |
|---|-------------------|
| STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6 | |
| EXAMINED | October 15, 20 24 |
|  ENGINEER OF OPERATIONS | |
| EXAMINED | October 15, 20 24 |
|  ENGINEER OF PROJECT IMPLEMENTATION | |
| EXAMINED | October 16, 20 24 |
|  ENGINEER OF PROGRAM DEVELOPMENT | |

REV - MS

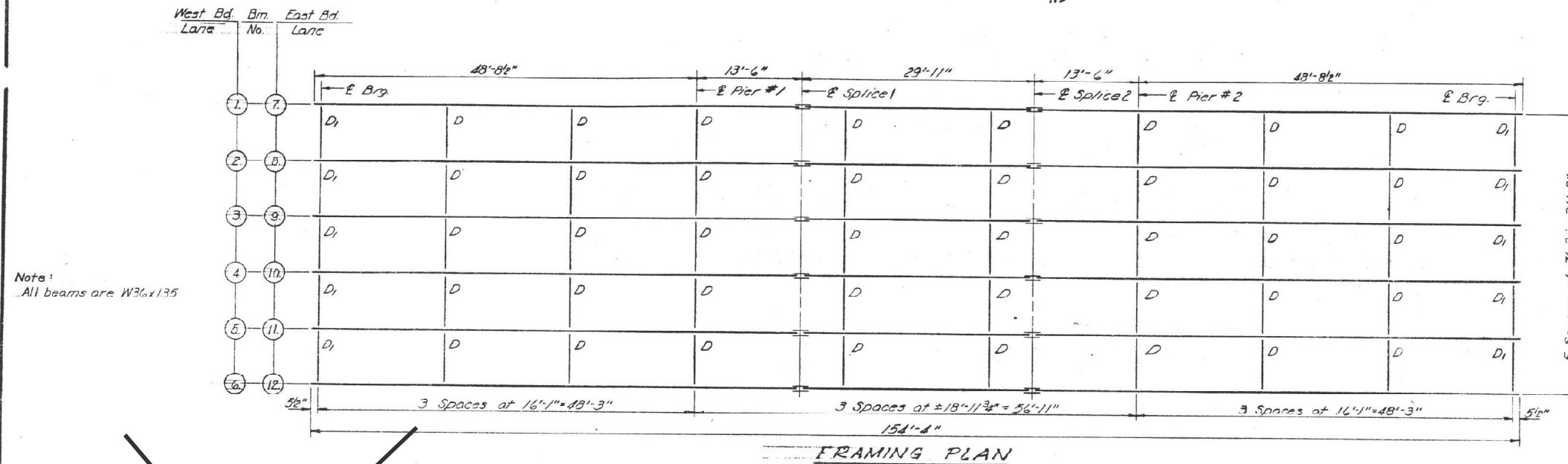
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| | | | | | | | | | | |
|--|----------------------------|------------|-----------|---|--|----------------------|---------------------------|-----------------------------|----------------------|-------------------|
| | USER NAME = brandon.dudley | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & SIGNATURES | F.A.I RTE. 72A | SECTION (84-10-3B-2)BP | COUNTY SANGAMON | TOTAL SHEETS 7 | SHEET NO. 2 |
| | | DRAWN - | REVISED - | | | CONTRACT NO. 72650 | | ILLINOIS FED. AID PROJECT | | |
| | PLOT DATE = 10/17/2024 | CHECKED - | REVISED - | | SCALE: | SHEET | OF 1 SHEETS | STA. | TO STA. | |
| | | DATE - | REVISED - | | | | | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-------------|---------|----------|--------------|-----------|
| PROJECT NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 84-10-3B-2 | | Sangamon | 357 | 119 |

21 SHEETS



| | | |
|--------------------|-------|---------|
| | Abut. | Pier #2 |
| R ₂ (k) | 22.04 | 79.51 |
| R ₄ (k) | 36.39 | 44.94 |
| Imp. (k) | 10.55 | 12.13 |
| R Total | 71.98 | 136.58 |

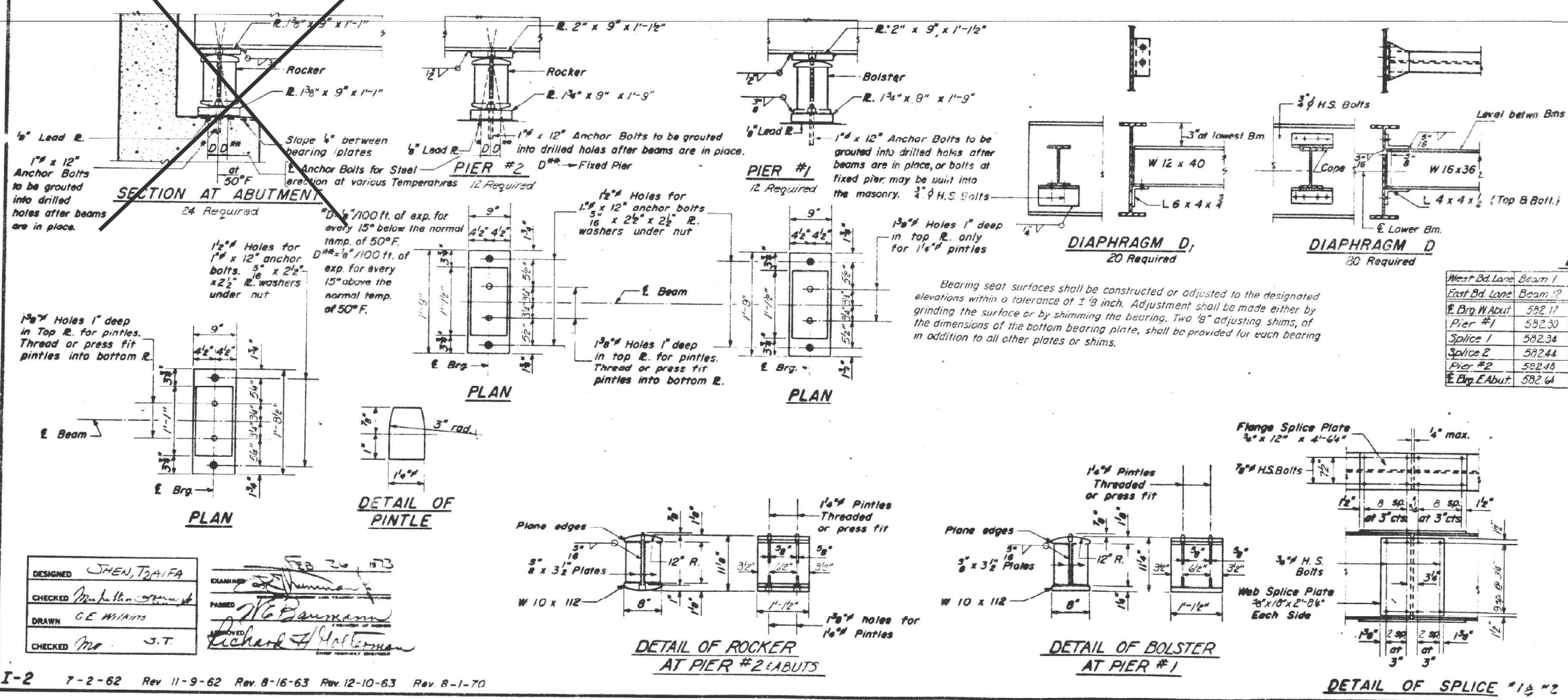
INTERIOR BEAM REACTION TABLE

| | | | |
|--------------------|--------------|---------|-----------|
| | 04 Sp. 1 & 3 | Pier #2 | 05 Span 2 |
| I (k) | 7920 | 7920 | 7920 |
| Q (k) | 1.363 | 1.363 | 1.363 |
| M _Q (k) | 229.45 | -379.31 | 179.66 |
| M ₂ (k) | 313.92 | -2479.4 | 306.30 |
| Imp. (k) | 91.04 | -26.55 | 32.70 |
| M Total (k) | 634.41 | -633.21 | 562.32 |
| F _s | 1730 | 1890 | 1534 |

INTERIOR BEAM MOMENT TABLE

Note:
All beams are W36x135

FRAMING PLAN



ELEVATION TOP OF W

| | | | | | | |
|------------------|---------|---------|---------|--------|--------|--------|
| West Bd. Lane | Beam 1 | Beam 2 | Beam 3 | Beam 4 | Beam 5 | Beam 6 |
| East Bd. Lane | Beam 12 | Beam 11 | Beam 10 | Beam 9 | Beam 8 | Beam 7 |
| E. Brg. W. Abut. | 582.17 | 582.32 | 582.44 | 582.50 | 582.59 | 582.59 |
| Pier #1 | 582.30 | 582.46 | 582.57 | 582.64 | 582.92 | 582.59 |
| Splice 1 | 582.34 | 582.50 | 582.41 | 582.48 | 582.56 | 582.43 |
| Splice 2 | 582.44 | 582.59 | 582.71 | 582.77 | 582.66 | 582.51 |
| Pier #2 | 582.48 | 582.63 | 582.75 | 582.91 | 582.70 | 582.56 |
| E. Brg. E. Abut. | 582.64 | 582.79 | 582.91 | 582.97 | 582.96 | 582.73 |

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

DESIGNED: JHEN, TDA/FA
CHECKED: [Signature]
DRAWN: G.E. WILKINS
CHECKED: [Signature]

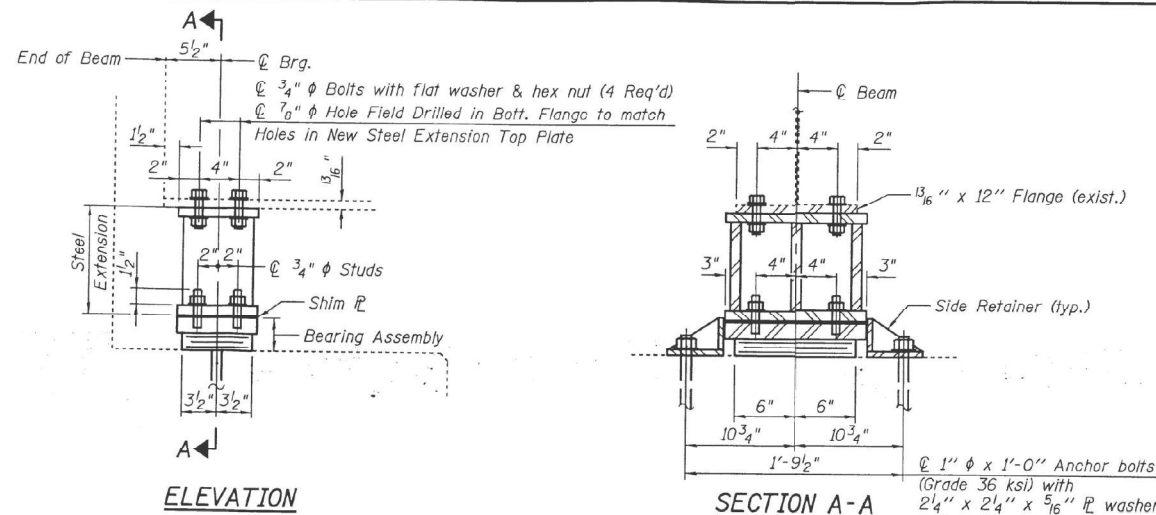
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PASSED: [Signature]
APPROVED: [Signature]

I-2 7-2-62 Rev 11-9-62 Rev 8-16-63 Rev 12-10-63 Rev 8-1-70

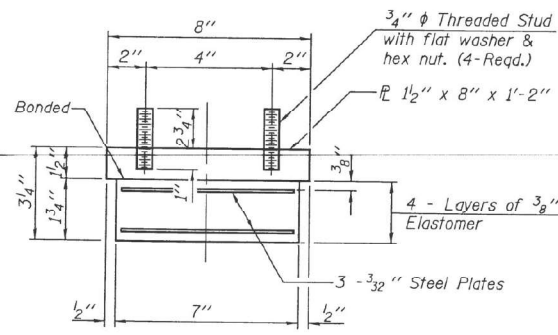
STRUCTURAL STEEL
FAI RT 72 SEC. 84-10-3B-2
SANGAMON COUNTY
STA. 799+1800

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| | | | | | | | | | |
|---------------------------|-------------|------------|---|---|--------------------|-------------------------|------------------|-----------------|--------------|
| USER NAME: brandon.dudley | DESIGNED: - | REVISED: - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | EXISTING BRIDGE PLANS, SN 084-0163 & 0164 (FOR INFORMATION ONLY) | F.A.I. RTE.: 72A | SECTION: (84-10-3B-2)BP | COUNTY: SANGAMON | TOTAL SHEETS: 7 | SHEET NO.: 5 |
| PLOT DATE: 10/17/2024 | DRAWN: - | REVISED: - | SCALE: | SHEET OF 4 SHEETS | CONTRACT NO. 72650 | ILLINOIS | FED. AID PROJECT | | |

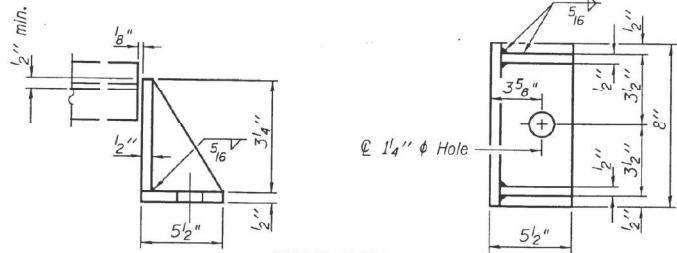


TYPE I ELASTOMERIC EXP. BRG.

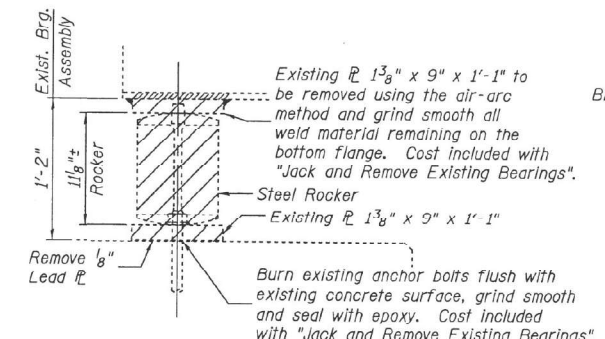


BEARING ASSEMBLY

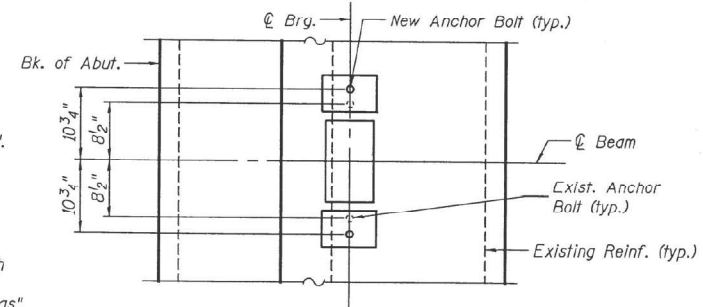
Note:
Shim plates shall not be placed under Bearing Assembly.



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

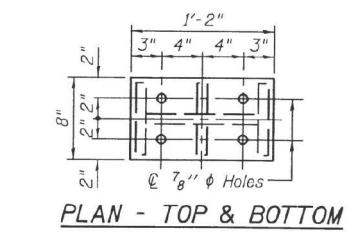


EXISTING BEARING REMOVAL

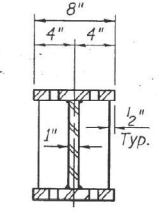


ANCHOR BOLT LAYOUT

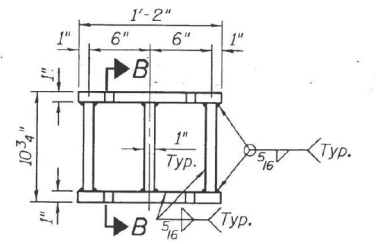
| BEAM REACTION TABLE | | |
|-----------------------|--------|----------|
| | | W. Abut. |
| R (DL) | (K) | 25.0 |
| R (LL) | (K) | 36.4 |
| R (Imp) | (K) | 10.5 |
| R (Total) | (K) | 71.9 |
| Minimum Jack Capacity | (Tons) | 40 |



PLAN - TOP & BOTTOM



SECTION B-B



ELEVATION

STEEL EXTENSION

Notes:
Existing expansion bearings shall be removed and replaced according to the plans. Jacking shall be according to the Special Provisions for "JACK AND REMOVE EXISTING BEARINGS".
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.
The abutment bearings shall be in place and the jacks lowered before the new concrete deck is poured at the abutments.
Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be 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. Existing bearing dimensions shown are copied from the original plans.
Two 5/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
New steel extensions and connection bolts are included with Furnishing and Erecting Structural Steel.
The structural steel bearing plates for the expansion bearings shall conform to the requirements of AASHTO M 270 Grade 36 (min.).

BILL OF MATERIAL

| Item | Unit | EB | WB |
|--|-------|-----|-----|
| Jack and Remove Existing Bearings | Each | 6 | 6 |
| Elastomeric Bearing Assembly Type I | Each | 6 | 6 |
| Furnishing and Erecting Structural Steel | Pound | 876 | 876 |
| Anchor Bolts, 1" | Each | 12 | 12 |

I-2E-1
7-1-10 (Modified)
JOHNSON, DEPP & GILBERTSON
CONSULTING ENGINEERS
Springfield, Illinois

| USER NAME | DESIGNED | CHECKED | DRAWN | DATE |
|-----------|----------|---------|--------|---------------------|
| DCD | CMV | DCD | P. Roy | 04/02/2013 15:18:57 |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - WEST ABUTMENT
STRUCTURE NO. 084-0163(EB) & 084-0164(WB)

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------------|----------|--------------|-----------|
| T2 | (84-10-3)RS-5 | SANGAMON | 95 | 85 |

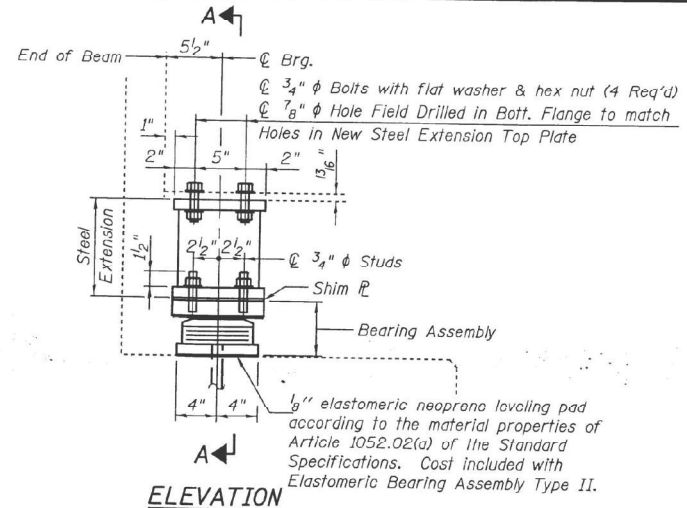
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| USER NAME | DESIGNED | CHECKED | DRAWN | DATE |
|----------------|----------|---------|--------|------------|
| brandon.dudley | CMV | DCD | P. Roy | 10/17/2024 |

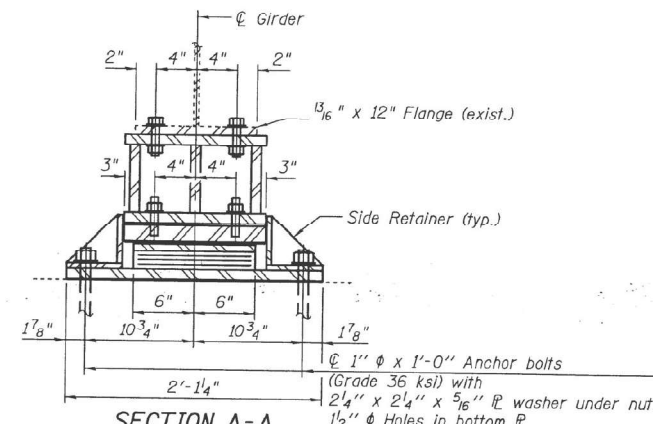
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 084-0163 & 0164
(FOR INFORMATION ONLY)

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|----------------|----------|--------------|-----------|
| 72A | (84-10-3B-2)BP | SANGAMON | 7 | 6 |

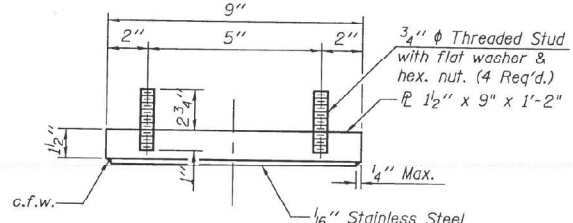


ELEVATION

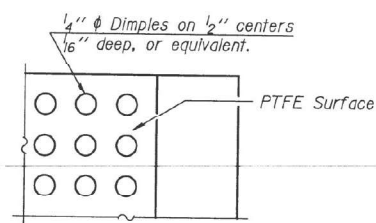


SECTION A-A

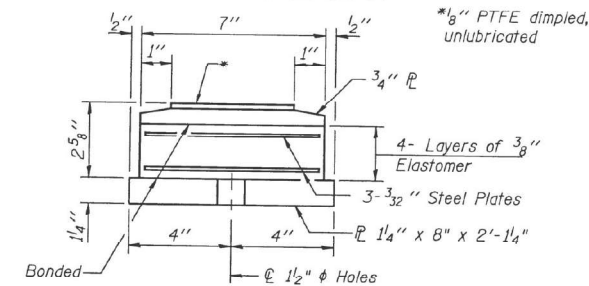
TYPE II ELASTOMERIC EXP. BRG.



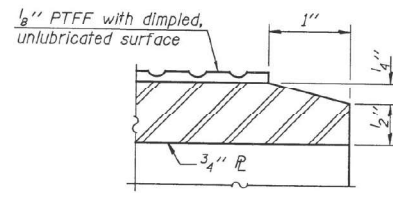
TOP BEARING ASSEMBLY



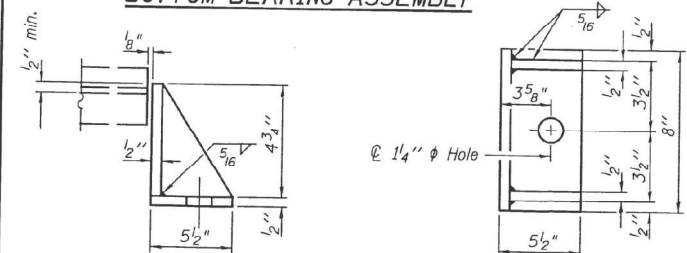
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY

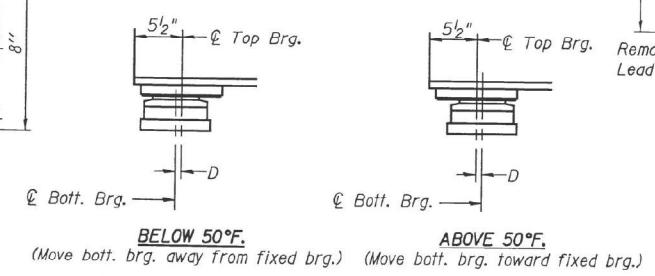


SECTION THRU PTFE



SIDE RETAINER

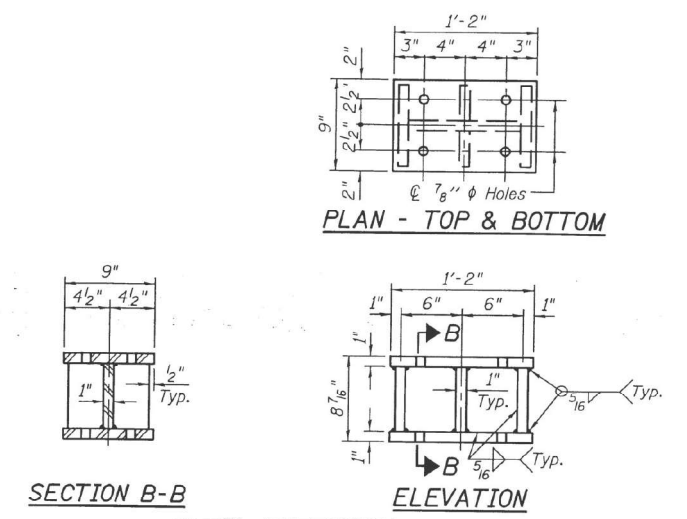
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG.

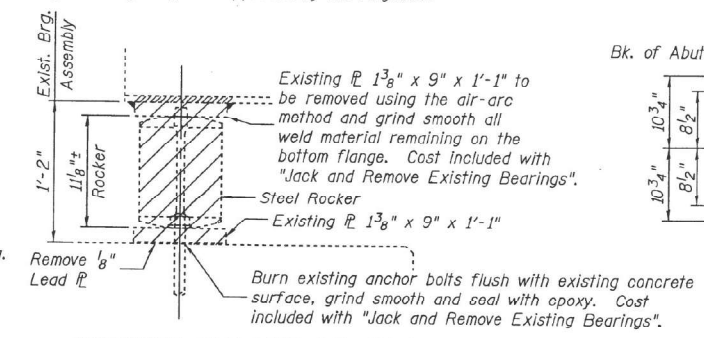
D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

Notes:
 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 in the concrete through holes in 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 and other steel members required for the elastomeric bearing assembly 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.

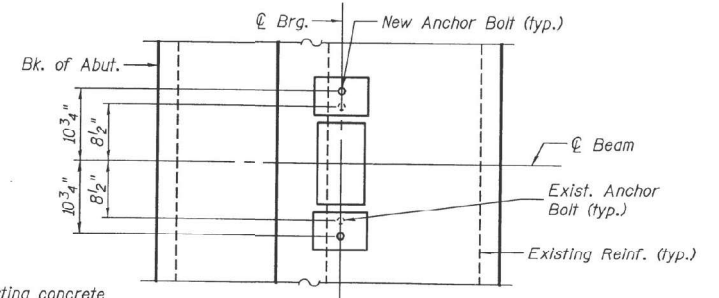


SECTION B-B STEEL EXTENSION

Notes:
 See additional notes on sheet B of 10.



EXISTING BEARING REMOVAL



ANCHOR BOLT LAYOUT

BEAM REACTION TABLE

| | | E. Abut. |
|-----------------------|--------|----------|
| R (DL) | (K) | 25.0 |
| R (LL) | (K) | 36.4 |
| R (Imp) | (K) | 10.5 |
| R (Total) | (K) | 71.9 |
| Minimum Jack Capacity | (Tons) | 40 |

BILL OF MATERIAL

| Item | Unit | EB | WB |
|--|-------|-----|-----|
| Jack and Remove Existing Bearings | Each | 6 | 6 |
| Elastomeric Bearing Assembly Type II | Each | 6 | 6 |
| Furnishing and Erecting Structural Steel | Pound | 837 | 837 |
| Anchor Bolts, 1" | Each | 12 | 12 |

I-2E-2 7-1-10 (Modified)

| | | | |
|--|----------------|------------------|------------|
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| DATE: 04/02/2013 15:49:01 | PLOT SCALE: | CHECKED: DCD | REVISIONS: |
| | | DRAWN: P. Ray | REVISIONS: |
| | | CHECKED: CMW/DCD | REVISIONS: |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - EAST ABUTMENT
 STRUCTURE NO. 084-0163(EB) & 084-0164(WB)
 SHEET NO. 9 OF 10 SHEETS

PART B - SHEET 58 OF 67

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|----------|--------------------|-----------|
| 72 | (84-10-3B-2)BP | SANGAMON | 95 | 86 |
| STA. 799+18.00 | | | CONTRACT NO. 72C88 | |
| ILLINOIS FED. AID PROJECT | | | | |

| | | |
|---------------------------|-------------|--------------|
| USER NAME: brandon.dudley | DESIGNED: - | REVISIONS: - |
| | DRAWN: - | REVISIONS: - |
| | CHECKED: - | REVISIONS: - |
| PLOT DATE: 10/17/2024 | DATE: - | REVISIONS: - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 084-0163 & 0164 (FOR INFORMATION ONLY)
 SCALE: SHEET OF 4 SHEETS STA. TO STA.

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|----------------|----------|---------------------------|-----------|
| 72A | (84-10-3B-2)BP | SANGAMON | 7 | 7 |
| CONTRACT NO. 72650 | | | ILLINOIS FED. AID PROJECT | |

MODEL: bridge-4 (Sheet)
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