| PROJECT | DESIGNATION |
|---|---|
| 20-00332 | - |
| CONTRACT | BRIDGE FILE |
| - | 20-00332 |

| STRUCTURE INFORMATION | | | | |
|---|---|---|---|---|
| STRUCTURE | TYPE | SPAN AND SKEW | OVER | STATION |
| 20-00332 | CONTINUOUS COMPOSITE PRESTRESSED CONCRETE BOX BEAM | TWO SPANS<br>49'-0 1/2", 49'-0 1/2"<br>SKEW = 0° | ELKHART RIVER | 25+09.00 Line "A" |

# ELKHART COUNTY
# HIGHWAY DEPARTMENT

# BRIDGE PLANS

## FOR SPANS OVER 20 FEET
## CR 142
## OVER
## ELKHART RIVER

| TRAFFIC DATA | CR 142 |
|---|---|
| A.D.T. (2025) | 2920 V.P.D. |
| A.D.T. (2045) | 4730 V.P.D. |
| D.H.V. (2045) | 197 V.P.H. |
| DIRECTIONAL DISTRIBUTION | 50% |
| TRUCKS | 12% D.H.V. |
| | |
| | |

| DESIGN DATA | |
|---|---|
| DESIGN SPEED | 35 M.P.H. |
| PROJECT DESIGN CRITERIA | 3R (NON-FREEWAY) |
| FUNCTIONAL CLASSIFICATION | LOCAL |
| RURAL/URBAN | URBAN |
| TERRAIN | LEVEL |
| ACCESS CONTROL | NONE |

ELKHART COUNTY
BOARD OF COMMISSIONERS

BRADLEY D. ROGERS, PRESIDENT

SUZANNE M. WEIRICK, VICE PRESIDENT

BOB BARNES, MEMBER

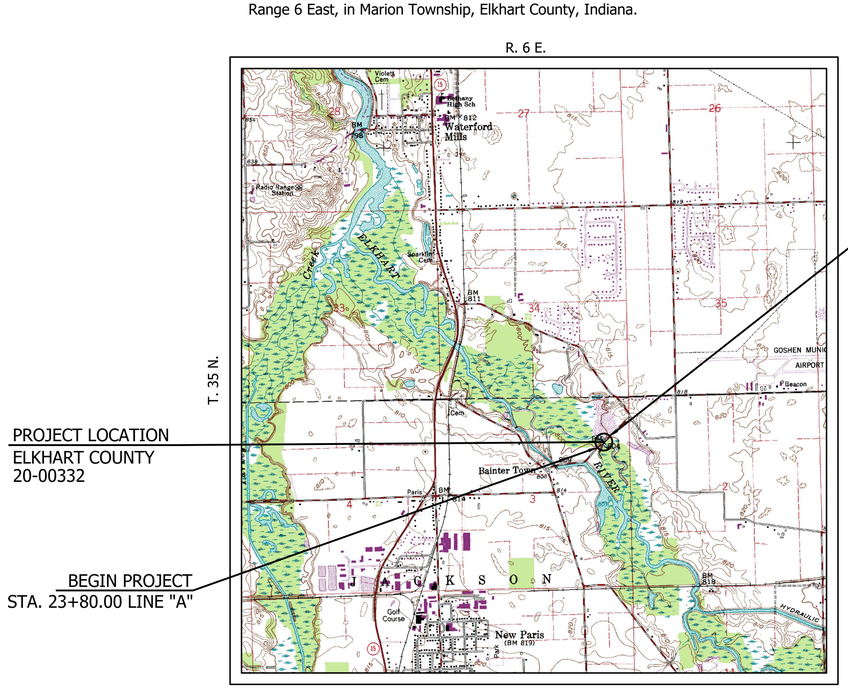
ATTEST: DATE:

PATRICIA A. PICKENS, COUNTY AUDITOR

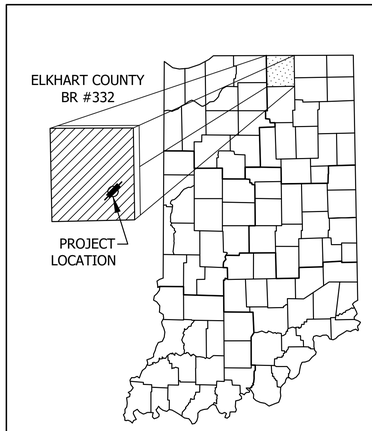
APPROVED:

TIMOTHY JACKSON, P.E., ELKHART COUNTY PROJECT ENGINEER

Replacement of Elkhart County Bridge No. 332 carrying CR 142 over Elkhart River, Approximately 0.37 miles northeast of SR29, Located in Section 3, Township 35 North, Range 6 East, in Marion Township, Elkhart County, Indiana.




LOCATION MAP




LATITUDE: 39°47'21.44"N LONGITUDE: 86°35'42.94"W

| | |
|---|---|
| BRIDGE LENGTH : | 0.019 MI. |
| ROADWAY LENGTH : | 0.030 MI. |
| TOTAL LENGTH : | 0.049 MI. |
| MAX GRADE : | 0.35% |

HUC: 051202030103

[INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2024 TO BE USED WITH THESE PLANS]


UNITED Consulting
8440 Allison Pointe Boulevard, Suite 200
Indianapolis, IN 46250
Phone 317-895-2585
www.ucindy.com


PLANS PREPARED BY: UNITED CONSULTING (317) 895-2585 PHONE NUMBER

CERTIFIED BY: June 2, 2025 DATE

JON E. CLODFELTER REGISTERED No. 19800071 STATE OF INDIANA PROFESSIONAL ENGINEER

| BRIDGE FILE | |
|---|---|
| 20-00332 | |
| DESIGNATION | |
| - | |
| SURVEY BOOK | SHEETS |
| - | 1 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Title.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

## UTILITIES

ELECTRIC: NIPSCO Electric (GOSHEN)
300 E. Kercher Road
Goshen, IN 46526
Attn: Matthew Boyle
Ph: (219) 380-4136
mboyle@nisource.com

COMMUNICATIONS: New Paris Telephone, Inc.
Community Fiber/Quality Cablevision
19066 Market Street
New Paris, IN 46553
Attn: Robert Smith
Ph: (574) 831-7170
rob.smith@nptel.com

NOTE: The project limits may include private laterals to the utilities. The contractor shall verify the location of private laterals.

## REVISIONS

| SHEET NO. | DATE | REVISION |
|---|---|---|
| | | |
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## INDEX



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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

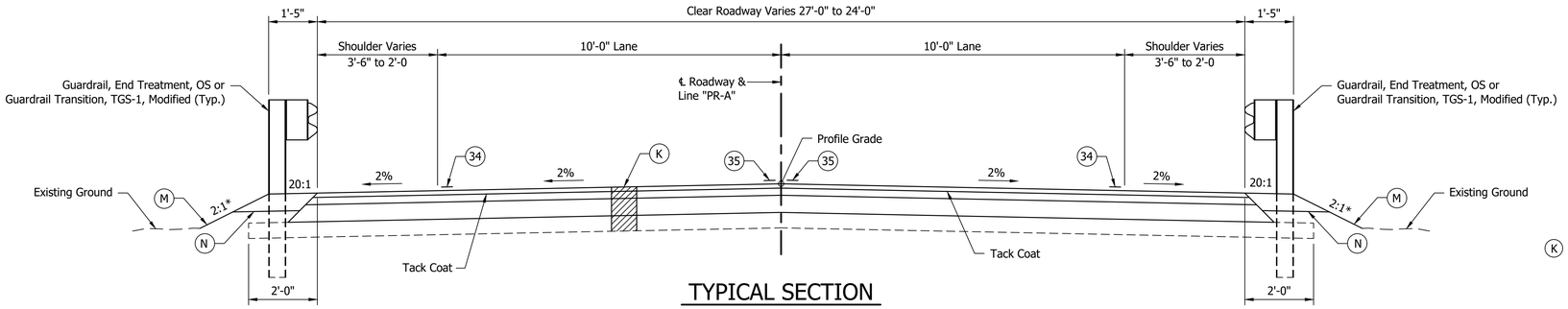
ELKHART COUNTY
HIGHWAY DEPARTMENT

INDEX
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |

| SURVEY BOOK | SHEETS |
|---|---|
| - | 2 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Index.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski




## TYPICAL SECTION

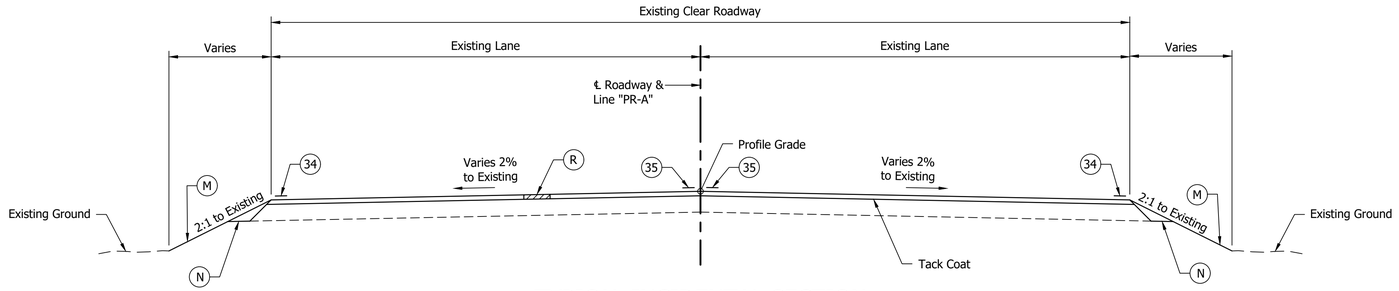
Scale: 1/2" = 1'-0"

STA. 23+80.00 "A" TO 24+38.46 "A"
STA. 25+79.54 "A" TO 26+40.00 "A"

* Except as shown on cross sections

## LEGEND

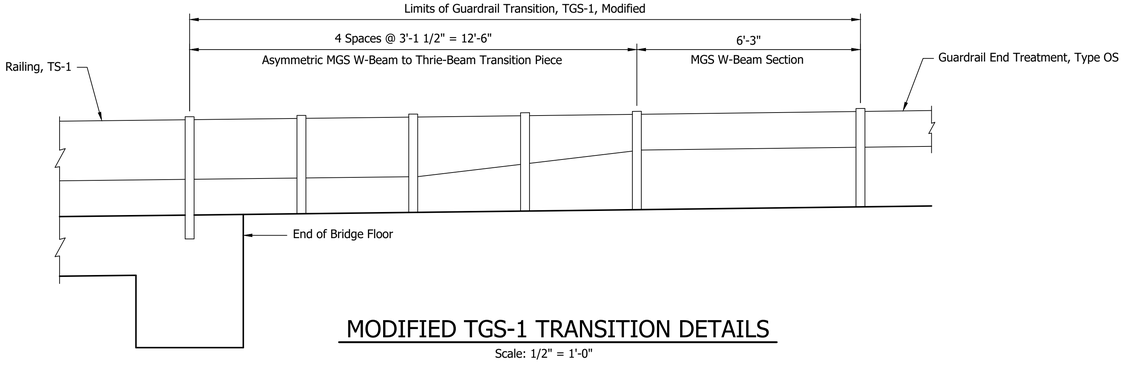
- (K) HMA Full Depth
  165 lb/sys QC/QA-HMA 3, 58S, Surface, 9.5 mm on
  275 lb/sys QC/QA-HMA 3, 58S, Intermediate, 19.0 mm on
  660 lb/sys QC/QA-HMA 3, 58S, Base, 25.0 mm on
  Subgrade Treatment, Type IC on
  Geotextile for Pavement Type 2B
- (M) Seed Mixture, Floodplain
- (N) 6" Compacted Aggregate, No. 53
- (R) 165 lb/sys QC/QA-HMA, 3, 58S, Surface, 9.5 mm on
  Milling Transition
- (34) Line, Paint, Solid, White, 4 Inch
- (35) Line, Paint, Solid, Yellow, 4 Inch




## TYPICAL INCIDENTAL SECTION

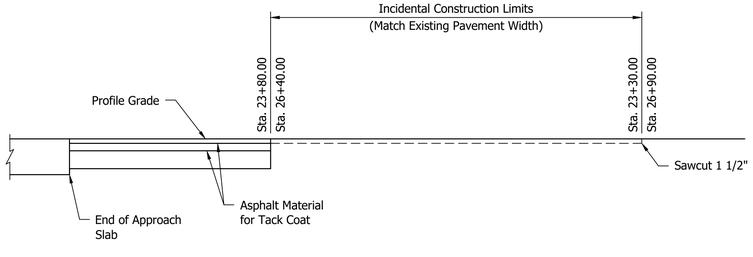
Scale: 1/2" = 1'-0"

STA. 23+30.00 "A" TO 23+80.00 "A"
STA. 26+40.00 "A" TO 26+90.00 "A"




## MODIFIED TGS-1 TRANSITION DETAILS

Scale: 1/2" = 1'-0"




## TRANSITION MILLING DETAIL

No Scale

NOTES:
For Additional TGS-1 details, see RSP 706-B-104d.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8440 Allison Pointe Boulevard, Suite 200
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Phone 317-895-2585
www.ucindy.com


CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

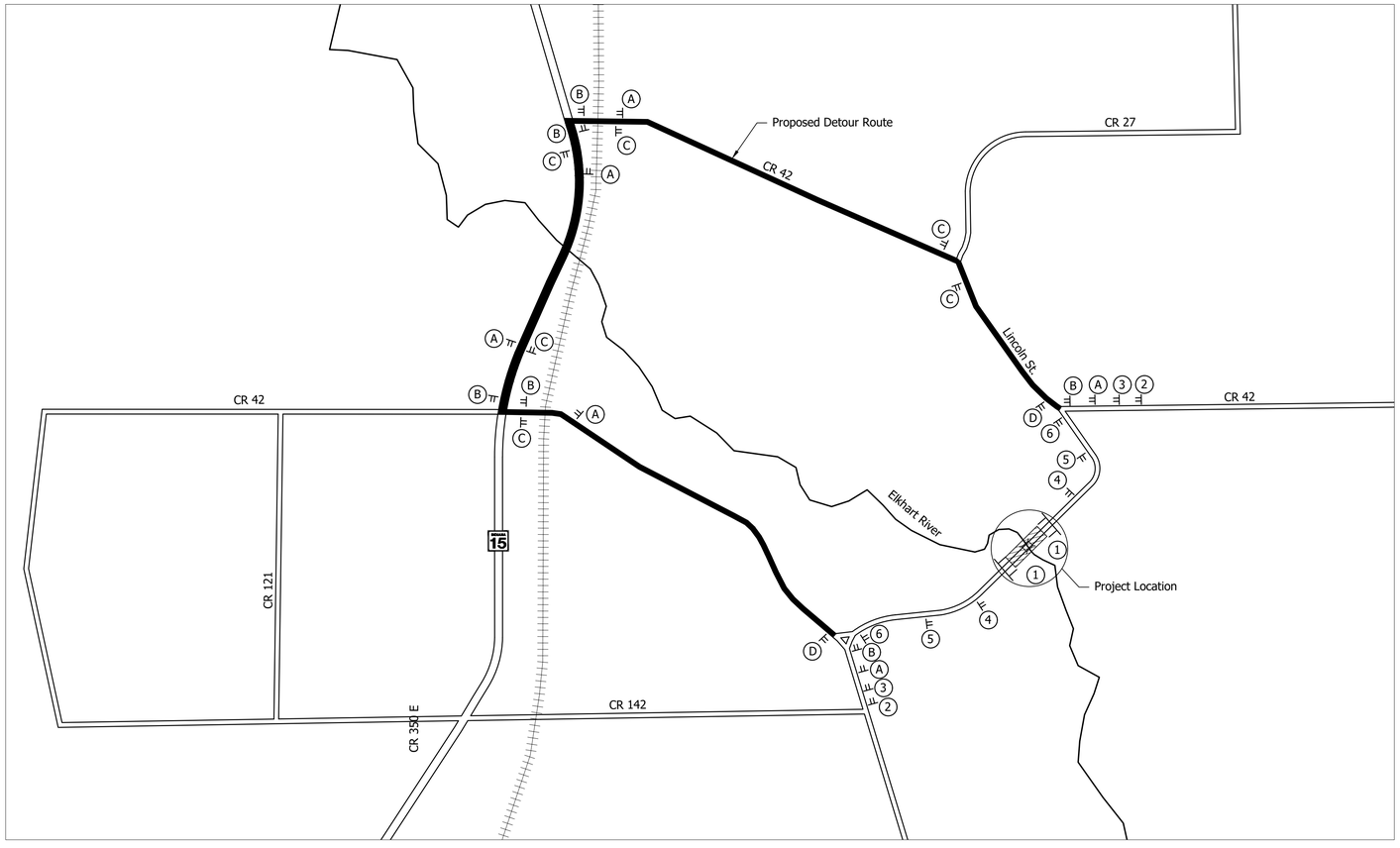
RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

TYPICAL SECTIONS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 3 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |




1. 

(R11-2) on Road Closure Sign Assembly with Type III-A Barricades

2. 

(XW20-3)

3. 

(XW20-2)

4. 

(XW20-3)

5. 

(XW20-3)

6. 

(R11-3) on Road Closure Sign Assembly with Type III-B Barricades

(XM4-10) (L or R)

## CONSTRUCTION SIGN SUMMARY

| TYPE | QUANTITY |
|---|---|
| Construction Sign, A | 8 Ea. |
| | |
| Barricade, III-A | 48 Lft. |
| | |
| Barricade, III-B | 48 Lft. |
| | |
| Road Closure Sign Assembly | 4 Ea. |
| | |
| Detour Route Marker Assembly | 20 Ea. |
| | |
| | |
| | |

Construction Area

Detour Route

NOTES:
1. Road Closure Notice Sign (XG20-5) to be placed as directed by the engineer prior to construction.
2. For Detour Route Marker Assemblies, see Std. Dwg. 801-TCDT-04.

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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

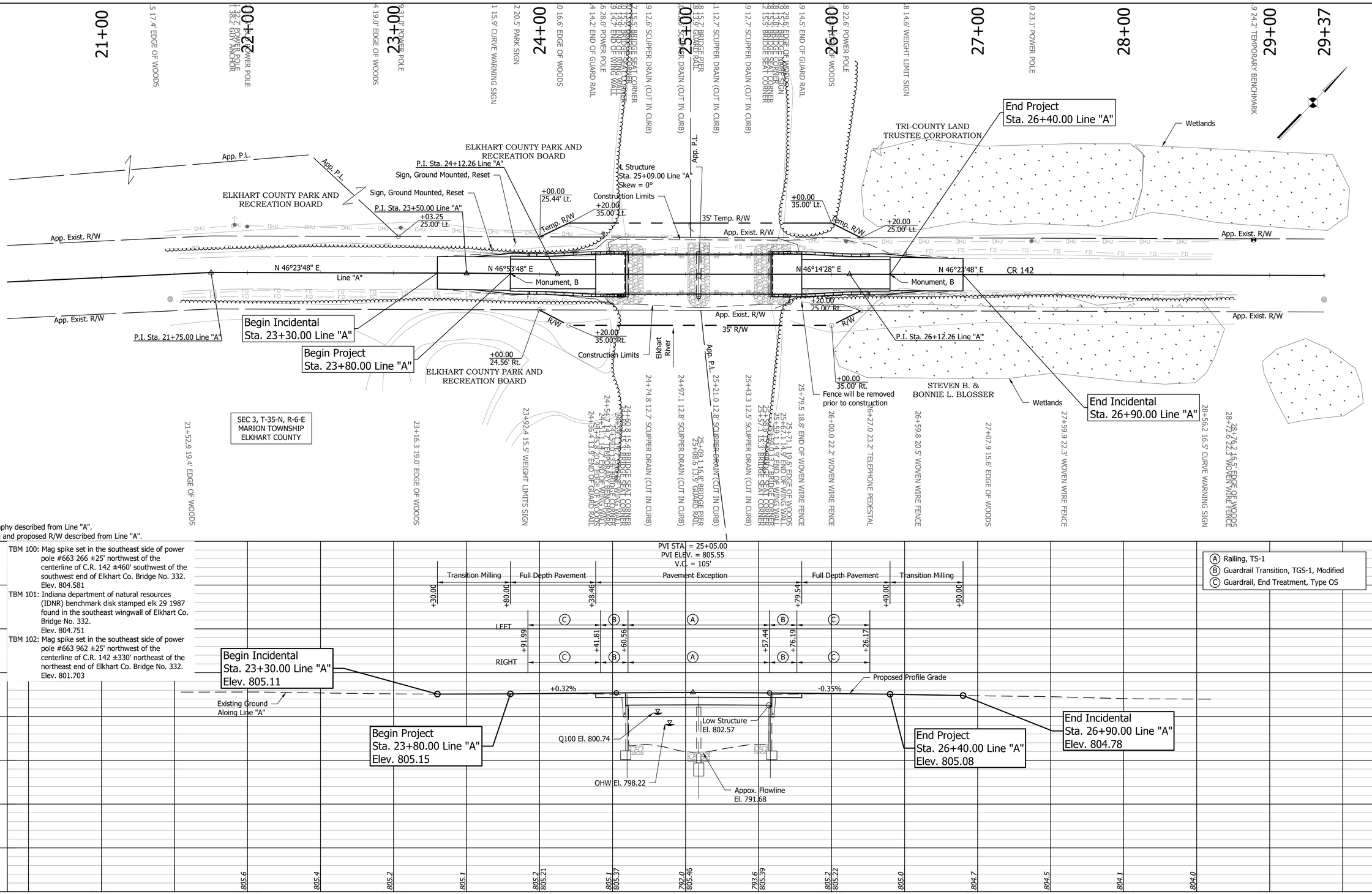
RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

MAINTENANCE OF TRAFFIC
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| | 4 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |




All topography described from Line "A".
All existing and proposed R/W described from Line "A".

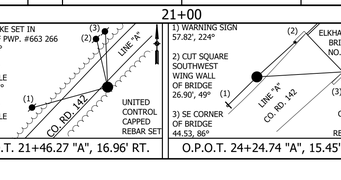
TBM 100: Mag spike set in the southeast side of power pole #663 266 ±25' northwest of the centerline of C.R. 142 ±460' southwest of the southwest end of Elkhart Co. Bridge No. 332. Elev. 804.581

TBM 101: Indiana department of natural resources (IDNR) benchmark disk stamped elk 29 1987 found in the southeast wingwall of Elkhart Co. Bridge No. 332. Elev. 804.751

TBM 102: Mag spike set in the southeast side of power pole #663 962 ±25' northwest of the centerline of C.R. 142 ±330' northeast of the northeast end of Elkhart Co. Bridge No. 332. Elev. 801.703



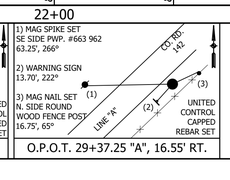

Railing, TS-1
Guardrail Transition, TGS-1, Modified
Guardrail, End Treatment, Type OS



O.P.O.T. 21+46.27 "A", 16.96' RT.



O.P.O.T. 24+24.74 "A", 15.45' LT.



O.P.O.T. 29+37.25 "A", 16.55' RT.

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Phone 317-895-2585
www.ucindy.com

CHRISTOPHER J. ANDRZEJEWSKI
REGISTERED
No. PE11600681
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

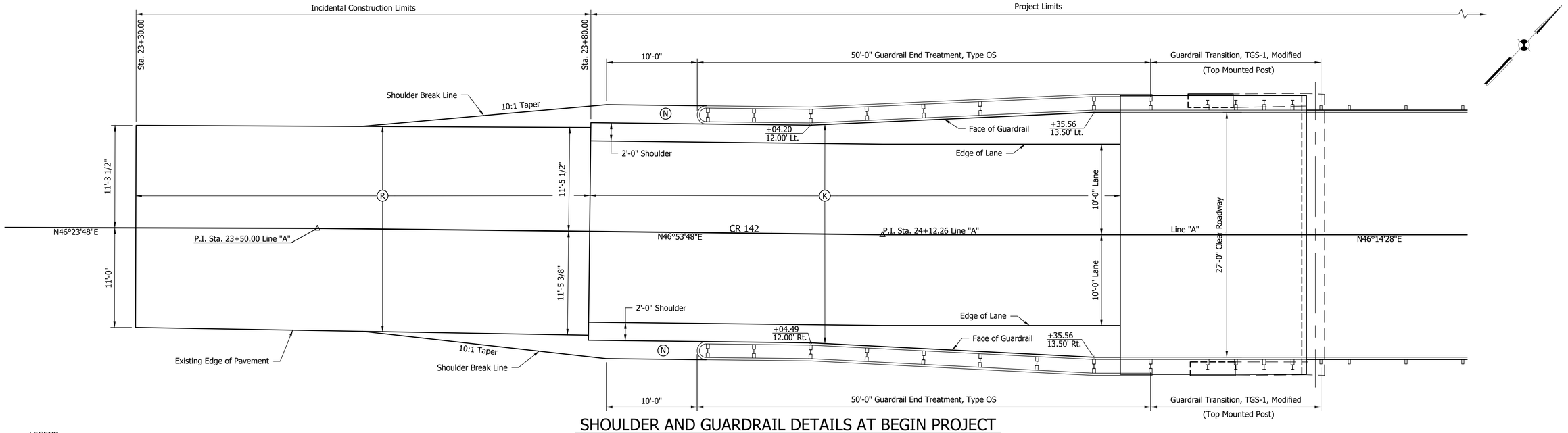
DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

PLAN AND PROFILE
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 30' | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| 1" = 10' | - |
| SURVEY BOOK | SHEETS |
| - | 5 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR(C3D)\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Plan and Profile.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

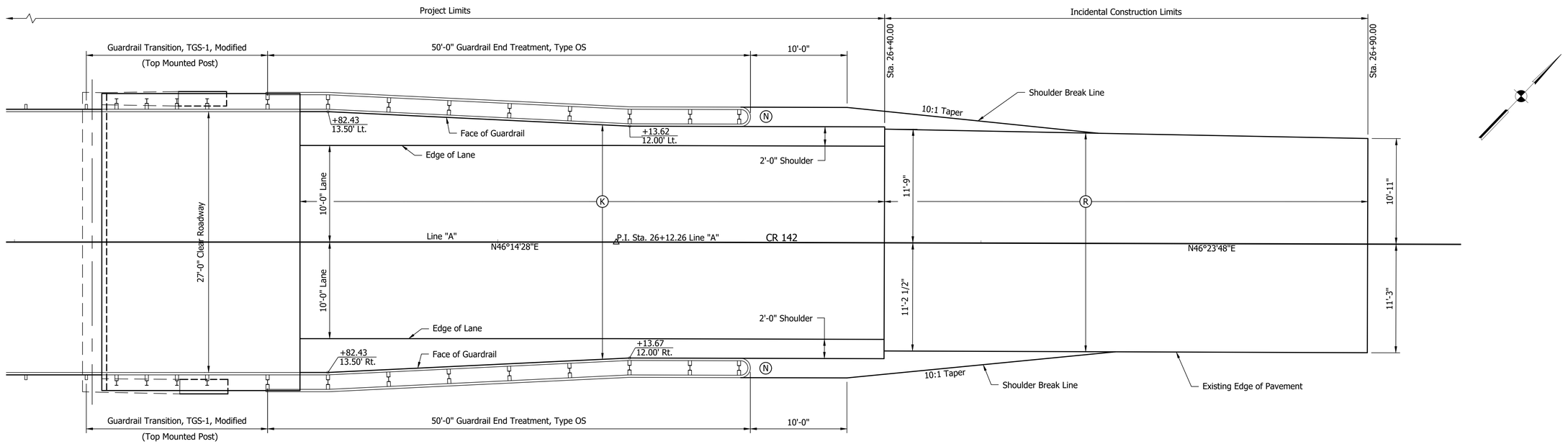



## SHOULDER AND GUARDRAIL DETAILS AT BEGIN PROJECT

Scale: 3/16" = 1'-0"

LEGEND

(N) 6" Compacted Aggregate, No. 53
(K) HMA Full Depth
(R) Transition Milling




## SHOULDER AND GUARDRAIL DETAILS AT END PROJECT

Scale: 1/8" = 1'-0"

NOTE:
For Additional Top Mounted Post Details,
See Std. Dwg. E601-MGSA-10.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8440 Allison Pointe Boulevard, Suite 200
Indianapolis, IN 46250
Phone 317-895-2585
www.ucindy.com


CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Christopher J. Andrzejewski 06/02/2025
DESIGN ENGINEER DATE

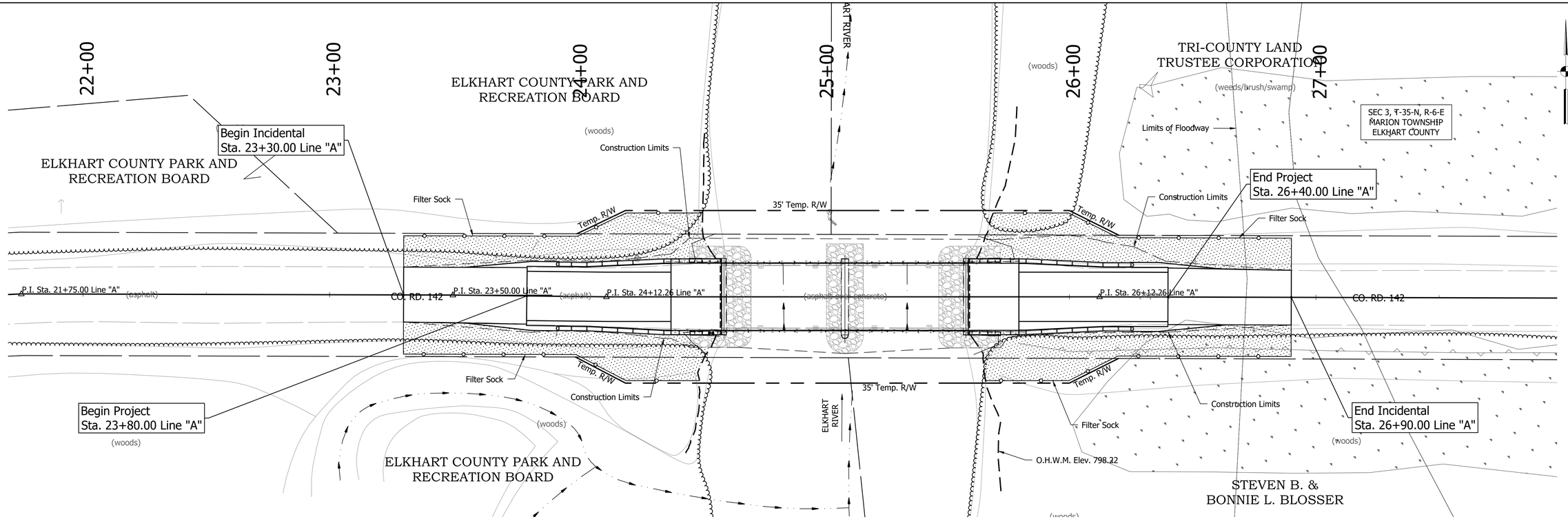
DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

CONSTRUCTION DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 6 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Construction Details.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski




PLAN
Scale: 1" = 20'-0"

## LEGEND

- Wetlands
- Temporary Seeding and Mulch
- Class I Riprap
- Filter Sock
- O.H.W.M. Ordinary High Water Mark
- Manufactured Surface Stabilization Product

| TEMPORARY EROSION CONTROL | | |
|---|---|---|
| DESCRIPTION | QUANTITY | UNITS |
| *No. 2 Stone | 100 | Tons |
| *Filter Sock | 525 | Lft. |
| *Temporary Seed Mixture | 24 | Lbs. |
| *Temporary Mulch | 1 | Tons |
| *Sediment Remove | 8 | Cys. |
| Cofferdam | 1 | LS |
| *Manufactured Surface Protection | 753 | Sys. |
| *Fertilizer | 0.1 | Tons |
| *Temporary Geotextile | 251 | Sys. |
| | | |

*Quantities included in Stormwater Management Budget.

## GENERAL EROSION CONTROL NOTES

A. This erosion control plan shall be considered a minimum application. The contractor shall be responsible for promptly and properly addressing unforeseen erosion in accordance with the Indiana Storm Water Quality Manual. The contractor shall keep an up-to-date record onsite of any alterations to the storm water pollution prevention plan.
B. The contractor has full responsibility of inspecting and maintaining the erosion control measures on a daily basis. At a minimum, practices need to be inspected weekly, within 24 hours after each storm event over 1/2 inch, and daily during prolonged storm events. Failing practices shall be repaired or replaced immediately.
C. Any sediment tracked out of project area onto public streets must be cleaned up the same day it occurs.
D. Erosion control measures shall be implemented during all phases of construction.
E. The contractor shall control dust on site using methods which comply with the Indiana Storm Water Quality Manual.
F. Temporary seeding shall be installed on any cleared area that will be undisturbed for 7 days or more.
G. Filter sock shall be terminated upslope at all locations.
H. If any loose material stockpiles are required on site, silt fence shall be provided on all downslope sides 10' from the toe of slope to prevent sediment movement.
I. Concrete washout locations shall be determined by the contractor in the storm water quality control plan. Placement shall be 50 feet from any drainage conveyance including ditches and inlets.
J. Temporary erosion control measures shall be removed as permanent erosion control measures are installed.
K. Permanent erosion control measure are not shown in these details. Refer to plan & profile sheets for permanent erosion control measures.
L. Ditch slopes of 3:1 or greater shall be immediately seeded and protected with manufactured surface protection products upon completion of grading.
M. The Contractor is responsible for having an appropriate number of spill kits on site throughout construction. All fuel storage must be in secondary containment. Report all reportable environment spills emergency spills to IDEM spill hotline (888) 233-7745.
N. Cofferdams and dewatering will be required to dry working areas so pier foundations and scour protection can be installed in dry conditions. Cofferdams shown are part of documentation included for permit approval. See special provisions.
O. Temporary dewatering measures are expected to be in place less than 3 months.
P. Contractor shall verify existing flowline elevation to set the appropriate pump depth prior to construction.
Q. Dewatering hose positioned so intake does not rest on stream bed.
R. Disturbed areas above the O.H.W.M. will be regraded and restored with Seed Mixture Floodplain.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Phone 317-895-2585
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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

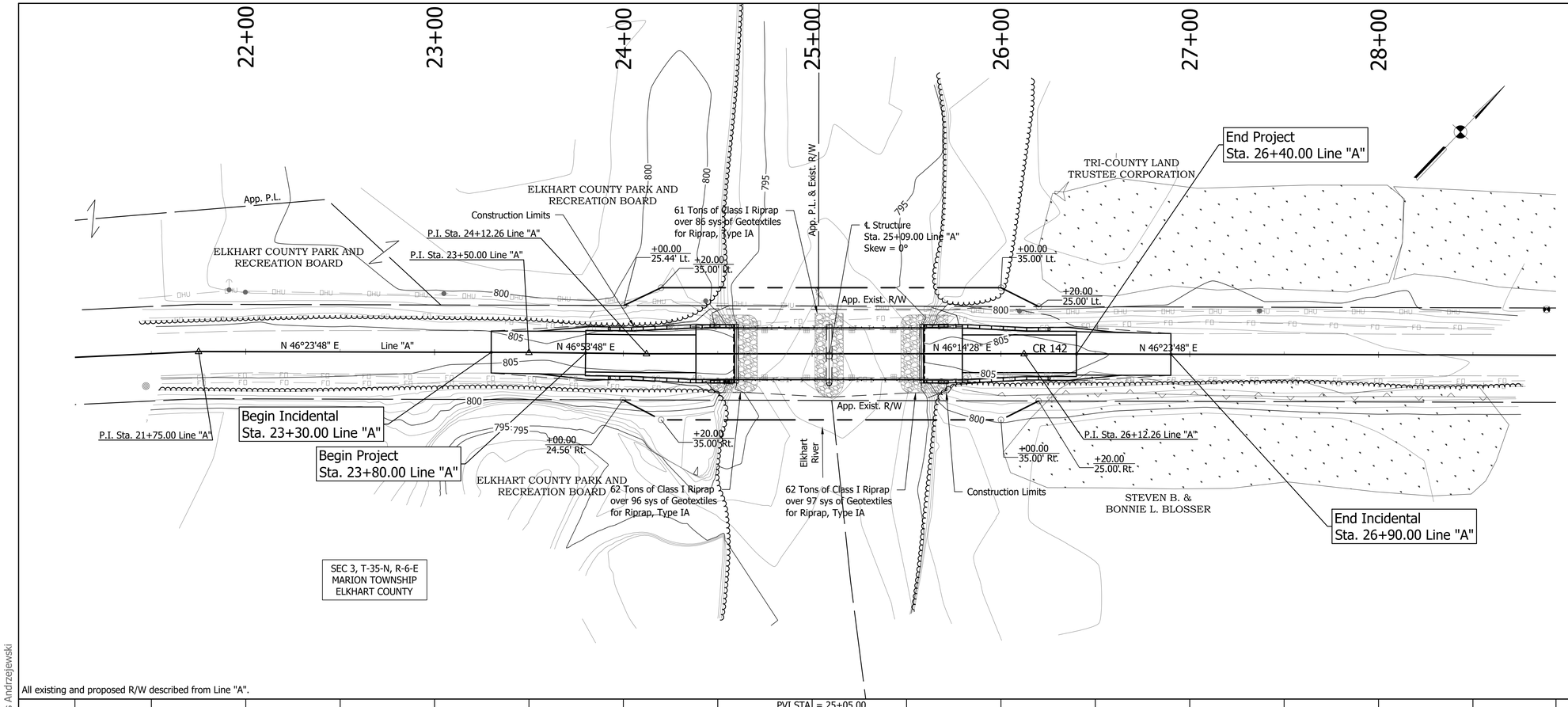
RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

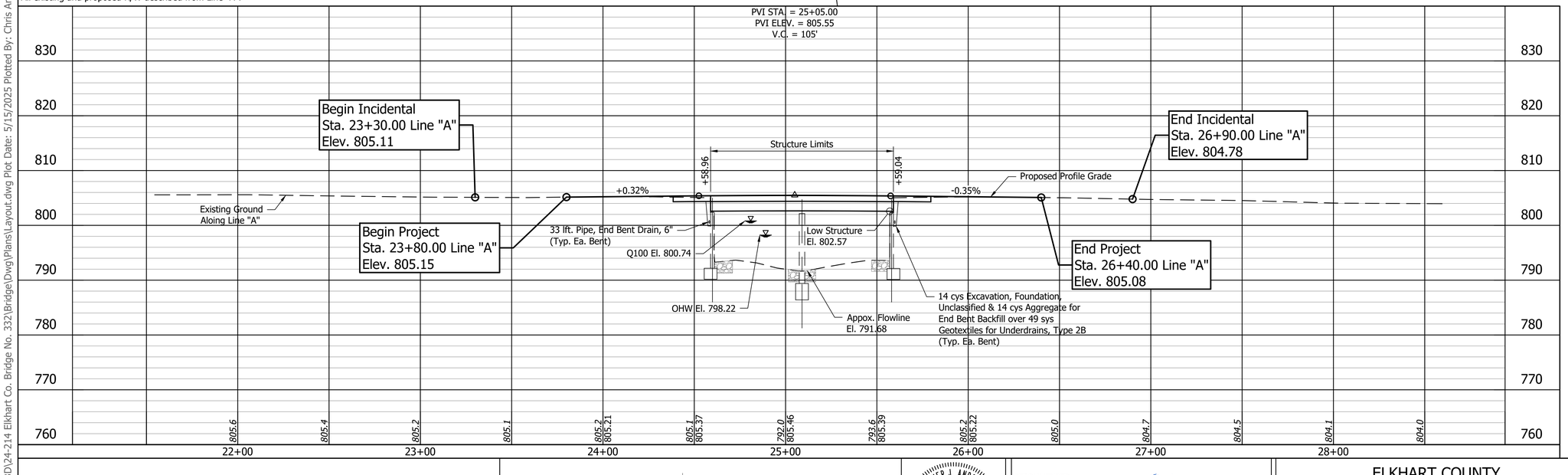
ELKHART COUNTY
HIGHWAY DEPARTMENT

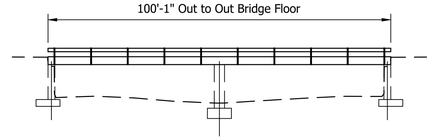
EROSION AND SEDIMENT CONTROL
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 7 of 26 |
| CONTRACT | PROJECT |
| B-44289 | 20-00332 |




All existing and proposed R/W described from Line "A".




The existing structure (20-00332) consists of a two-span prestressed adjacent box beam bridge. It was constructed in 1962 and has two spans of 49'-0 1/2", no skew, and a clear roadway width of 25.3'. The structure is to be rehabilitated.

## EXISTING STRUCTURE
No Scale

## LEGEND
Class I Riprap

Wetlands

## HYDRAULIC DATA

| | |
|---|---|
| Drainage Area: | 200 sq. mi. |
| Q100 Discharge: | 1,800 cfs |
| Q100 Elevation: | 800.74 (NAVD) |
| Flow Line Elevation: | 794.00 (NAVD) |

EXISTING STRUCTURE HYDRAULIC SUMMARY

| | |
|---|---|
| Minimum Low Structure Elevation: | 802.33 (NAVD) |
| Skew: | No Skew |
| Q100 Headwater Elevation: | 801.42 (NAVD) |
| Gross Waterway Area Opening Below Q100: | 601.25 sft |
| Q100 Road Overflow Area: | N/A |
| Q100 Average Velocity: | 2.90 fps |
| Q100 Maximum Velocity: | 3.39 fps |
| Q100 Backwater: | 0.41 ft |
| Q100 Structure Freeboard: | 1.59 ft |

PROPOSED STRUCTURE HYDRAULIC SUMMARY

| | |
|---|---|
| Minimum Low Structure Elevation: | 802.57 (NAVD) |
| Skew: | No Skew |
| Q100 Headwater Elevation: | 801.41 (NAVD) |
| Gross Waterway Area Opening Below | Q100: 601.13 sft |
| Q100 Road Overflow Area: | N/A |
| Q100 Average Velocity: | 2.90 fps |
| Q100 Maximum Velocity: | 3.42 fps |
| Q100 Backwater: | 0.40 ft |
| Q100 Structure Freeboard: | 1.83 ft |
| Q100 Contraction Scour: | 1.86 ft |
| Q100 Total Scour: | 5.89 ft |
| Q100 Low Scour Depth: | 788.11 (NAVD) |

EARTHWORK TABULATION

| | |
|---|---|
| Fill +25% | 15 cys |
| Common Excavation | 320 cys |
| Usable Waterway Excavation | 0 cys |
| Surplus Foundation Excavation | 0 cys |
| Borrow | 0 cys |
| Total Waterway Excavation | 0 cys |
| Benching - Estimated* | 0 cys |

*No Direct Payment

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CHRISTOPHER J. ANDREJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 06/02/2025

DESIGNED: MAT | DRAWN: AJM | CHECKED: CJA | CHECKED: MAT

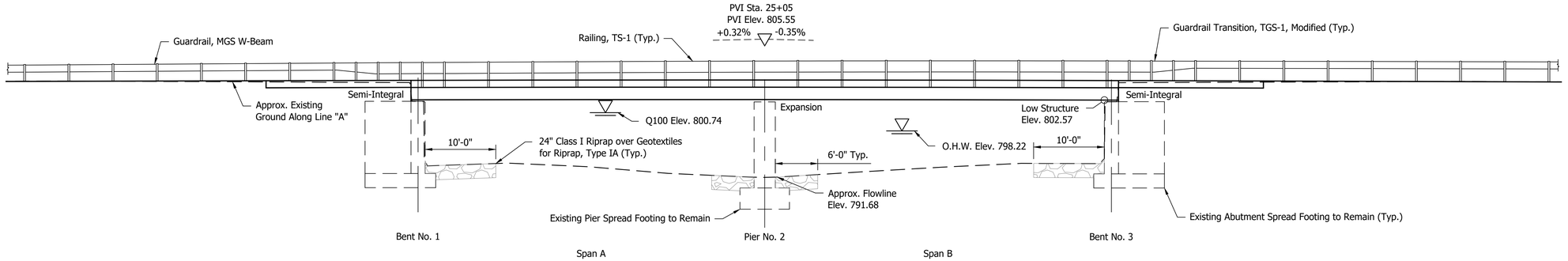
ELKHART COUNTY HIGHWAY DEPARTMENT

LAYOUT
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 30' | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| 1" = 10' | - |
| SURVEY BOOK | SHEETS |
| - | 8 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

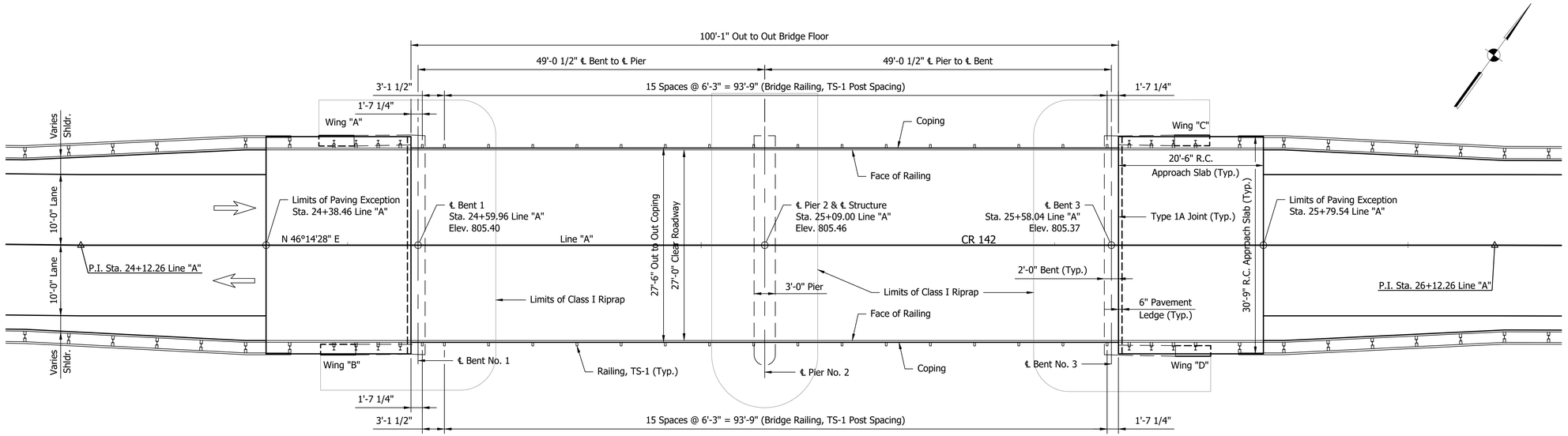
File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Layout.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

## STRUCTURE BUILT TO A 105' VERTICAL CURVE




## ELEVATION

Scale: 1/8" = 1'-0"




## PLAN

Scale: 1/8" = 1'-0"

CONTINUOUS COMPOSITE PRESTRESSED
CONCRETE SPREAD BOX BEAM BRIDGE
2 SPANS: 49'-0 1/2" & 49'-0 1/2"
NO SKEW
CLEAR ROADWAY: 27'-0"
CR 142 OVER ELKHART RIVER
ELKHART COUNTY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CHRISTOPHER J. ANDRZEJEWSKI — REGISTERED — No. PE11600681 — STATE OF INDIANA — PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: DESIGN ENGINEER — DATE 06/02/2025

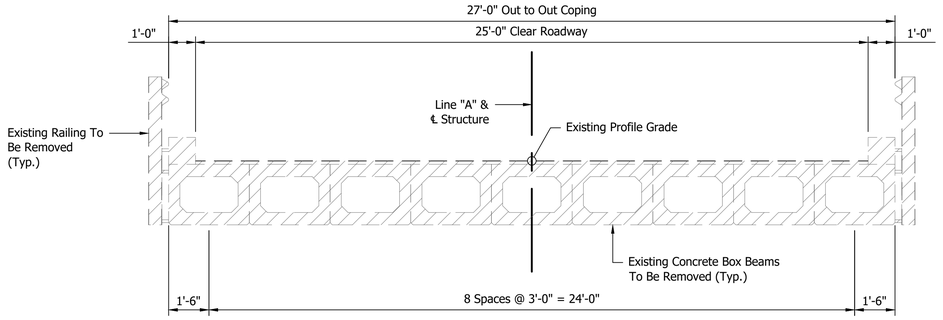
DESIGNED: MAT | DRAWN: AJM | CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

GENERAL PLAN
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 9 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\General Plan.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

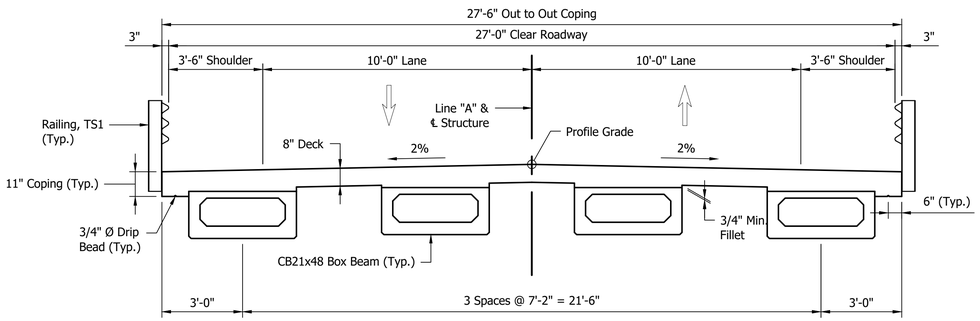



## EXISTING SECTION

Scale: 3/8" = 1'-0"

## LEGEND

Denotes present structure remove portions




## TYPICAL SECTION

Scale: 3/8" = 1'-0"

## GENERAL NOTES

Reinforcing steel covering to be 2 1/2" in the top and 2" minimum in the bottom of floor slabs, 3" in footings except bottom steel which shall be 4", and 2" in all other parts, unless noted.

Surface seal all exposed surfaces of end bents and wingwalls. (Estimated Qty. = 580 sft.)

## DESIGN DATA

Live Load:
Originally designed for H20-S16-44 in accordance with AASHO Specifications.

Proposed superstructure designed for HL-93 Loading, in accordance with the AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020, and its Subsequent Interims.

Dead Load:
Actual loads plus 35 psf allowance for future wearing surfaces and an additional 15 psf for permanent metal forms.

Proposed Concrete Deck designed with a 7 1/2" inch structural depth and a 1/2" inch sacrificial wearing surface.

## ULTIMATE DESIGN STRESSES

| | |
|---|---|
| Class "A" Concrete | f'c = 3,500 psi |
| Class "B" Concrete | f'c = 3,000 psi |
| Class "C" Concrete | f'c = 4,000 psi |
| Reinforcing Steel (Grade 60) | fy = 60,000 psi |

## CONSTRUCTION LOADING

The Exterior Beam has been Checked for Strength, Deflection and Overturning Using the Constructions Loads Shown Below. Cantilever Overhang Brackets were Assumed for Support of the Deck Overhang Past the Edge of the Exterior Beam. The Finishing Machine was Assumed to be Supported 6in. Outside the Vertical Coping Form.
The Top Overhang Brackets were Assumed to be Located 6in. Past the Edge of the Vertical Coping Form. The Bottom Overhang Brackets were Assumed to be Braced Against the edge of the Beam.

| | |
|---|---|
| Deck Falsework Loads: | Designed for 15 lbs/ft$^2$ for Permanent Metal Stay-in-Place Deck Forms, Removable Deck Forms and 2ft. Exterior Walkway. |
| Construction Live Load: | Designed for 20 lbs/ft$^2$ Extending 2ft. Past the Edge of Coping and 75 lbs/ft Vertical Force Applied at a Distance of 6in. Outside the Face of Coping Over a 30ft. Length of the Deck Centered with the Finishing Machine. |
| Finishing-Machine Load: | 4500 lbs. Distributed Over 10 ft. Along the Coping. |
| | Structure designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1. |

# CONTINUOUS COMPOSITE PRESTRESSED CONCRETE SPREAD BOX BEAM BRIDGE
# 2 SPANS: 49'-0 1/2" & 49'-0 1/2"
# NO SKEW
# CLEAR ROADWAY: 27'-0"
# CR 142 OVER ELKHART RIVER
# ELKHART COUNTY

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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

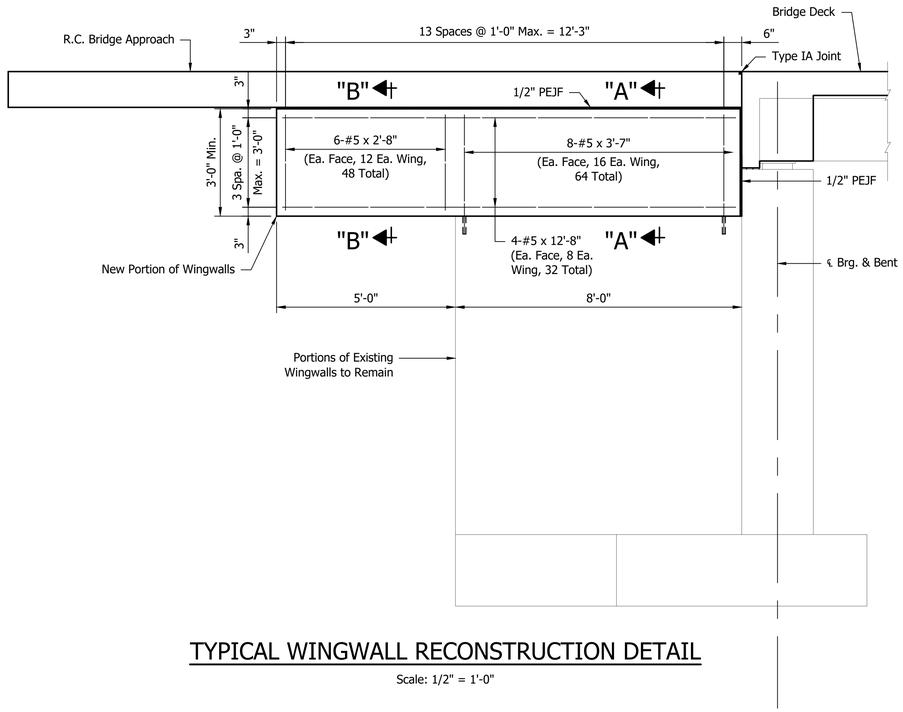
RECOMMENDED FOR APPROVAL Christopher J. Andrzejewski 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

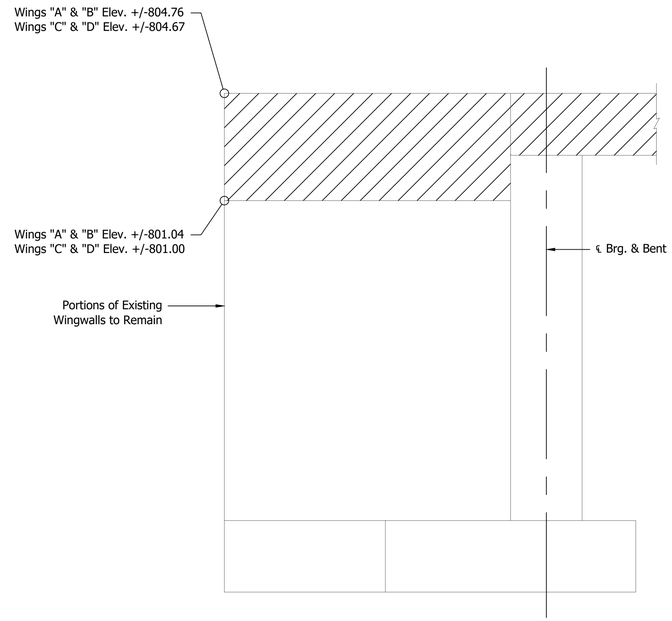
GENERAL PLAN
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 10 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |




## TYPICAL WINGWALL RECONSTRUCTION DETAIL

Scale: 1/2" = 1'-0"




## EXISTING WINGWALL REMOVAL DETAIL

Scale: 1/2" = 1'-0"

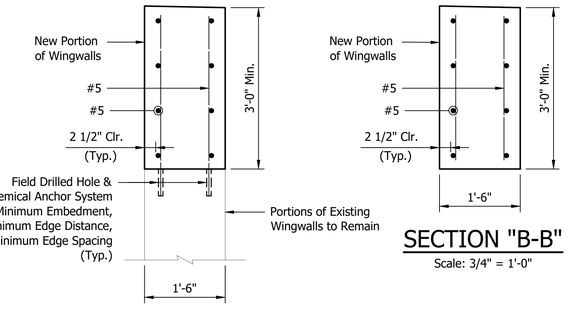
Denotes present structure remove portions

## BILL OF MATERIALS

WINGWALLS

| EPOXY COATED REINFORCING STEEL | | | |
|---|---|---|---|
| Size or Mark | No. of Bars | Length | Weight (lbs) |
| #5 | 32 | 12'-8" | |
| #5 | 64 | 3'-7" | |
| #5 | 48 | 2'-8" | |
| | | | |
| | | Total #5 | 796 |
| | | | |
| Total E.C. Reinforcing Steel | | | 796 |
| | | | |
| CONCRETE | | | |
| Concrete, C, Superstructure | | | 8.8 Cys. |
| | | | |
| MISCELLANEOUS | | | |
| Field Drilled Hole in Concrete | | | 72 Ea. |
| | | | |

| UNDISTRIBUTED QUANTITIES FOR SUBSTRUCTURE REPAIR | |
|---|---|
| Pay Item | Qty. |
| Epoxy Injection, Crack Preparation | 40 Lft. |
| Epoxy Injection, Epoxy Materials | 5 Gal. |
| Epoxy Injection, Furnishing Equipment | 1 LS |
| Patching Concrete Structures | 10 Sft. |



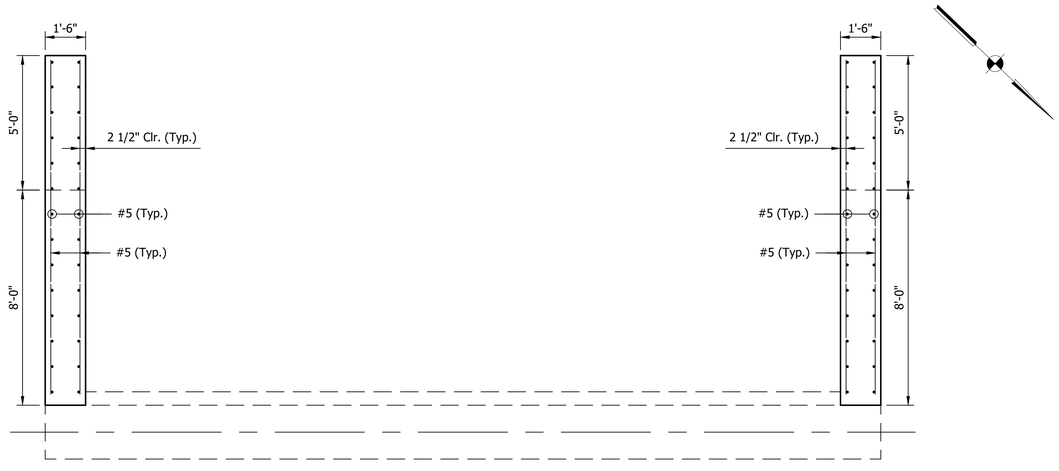

## SECTION "A-A"

Scale: 3/4" = 1'-0"




## SECTION "B-B"

Scale: 3/4" = 1'-0"




## TYPICAL WINGWALL PLAN

Scale: 3/8" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For General Notes, see Sheet 10.
For Additional Information on the Undistributed Quantities, see the Special Provisions.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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

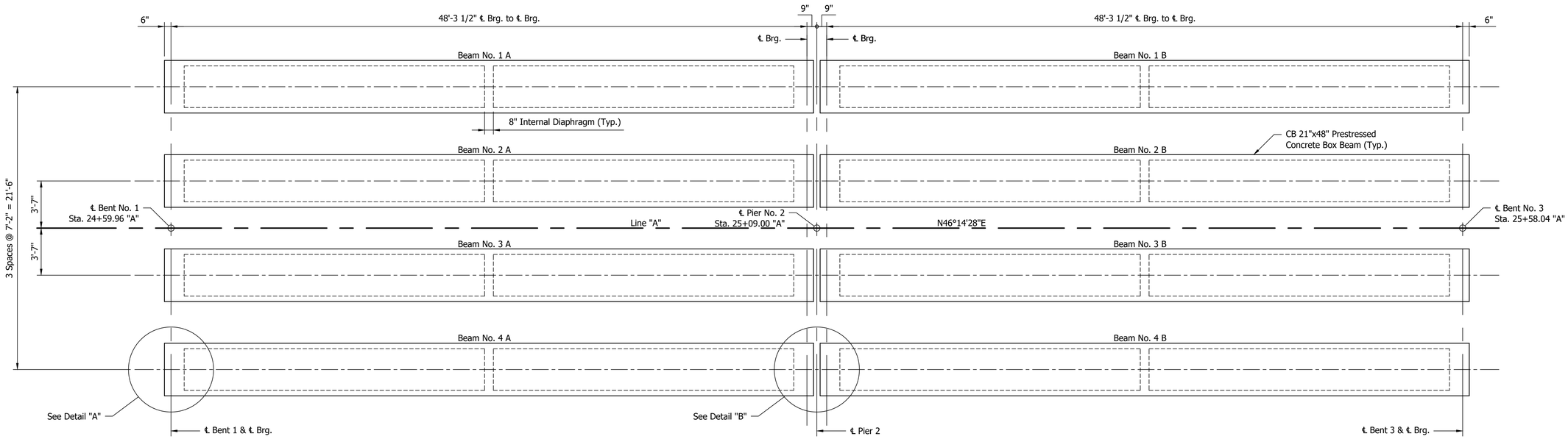
RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

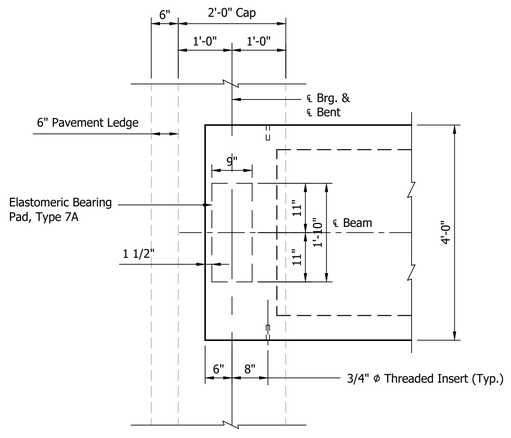
WINGWALL DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 11 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |



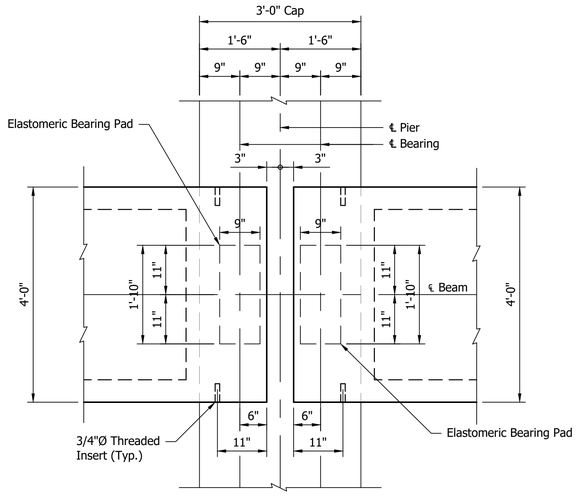

## FRAMING PLAN

Scale: 1/4" = 1'-0"




## DETAIL "A"

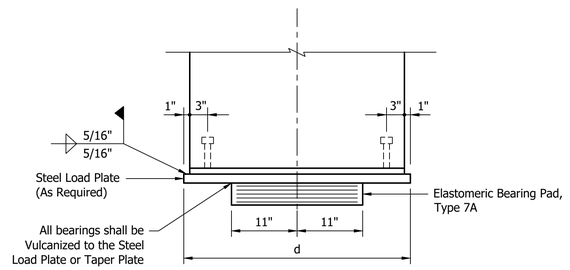
Scale: 3/4" = 1'-0"



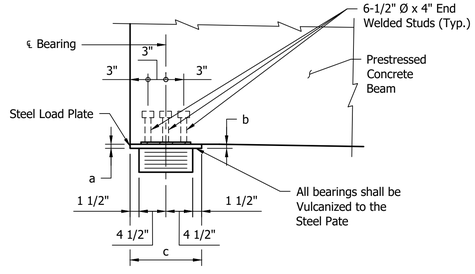

## DETAIL "B"

Scale: 3/4" = 1'-0"

| EXTERIOR BEAMS (ALL BENTS) | INTERIOR BEAMS (ALL BENTS) |
|---|---|
| a = 3/4" | a = 2 1/2" |
| b = 3/4" | b = 2 1/2" |
| c = 1'-0" | c = 1'-0" |
| d = 4'-2" | d = 4'-2" |




ELEVATION




TYPICAL SIDE VIEW @ BENT

## BEARING ASSEMBLY

Scale: 1" = 1'-0

NOTES:
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For General Notes, see Sheet 10.
For Additional Beam Details, see Sheets 13.

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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 06/02/2025 DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

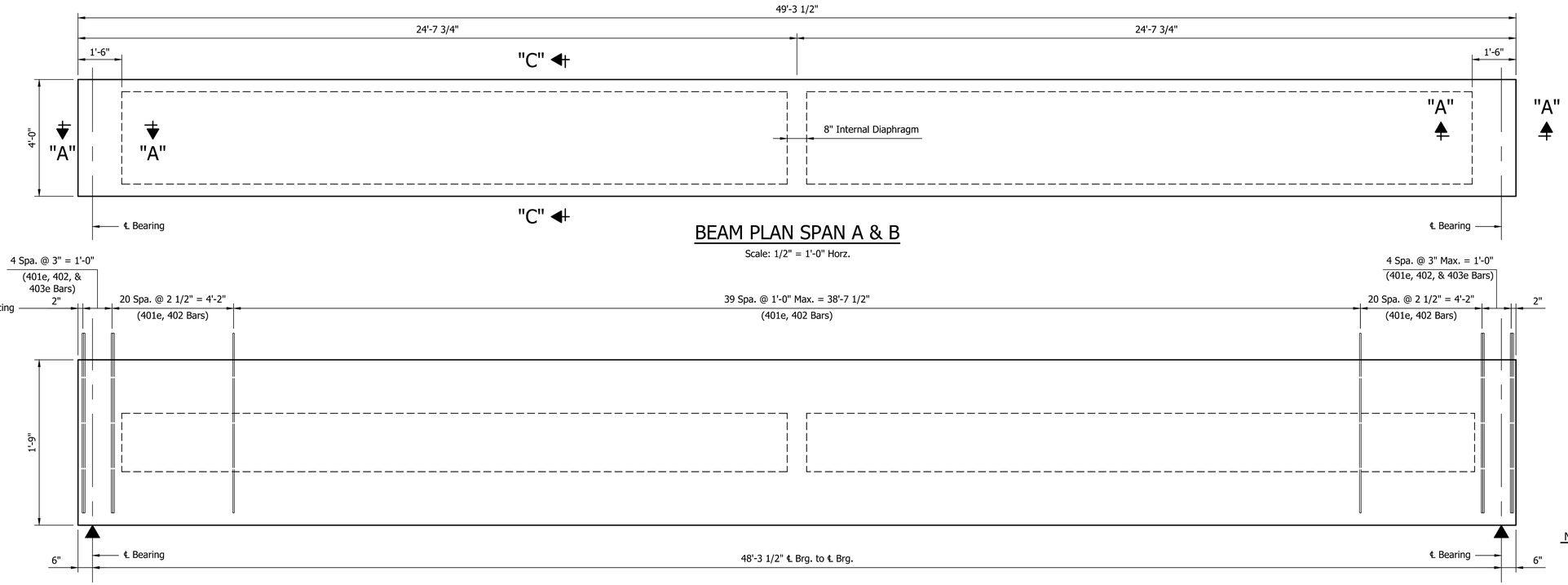
ELKHART COUNTY
HIGHWAY DEPARTMENT

FRAMING PLAN
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |

| SURVEY BOOK | SHEETS |
|---|---|
| - | 12 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Framing Plan.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

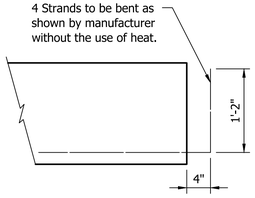



## BEAM PLAN SPAN A & B

Scale: 1/2" = 1'-0" Horz.

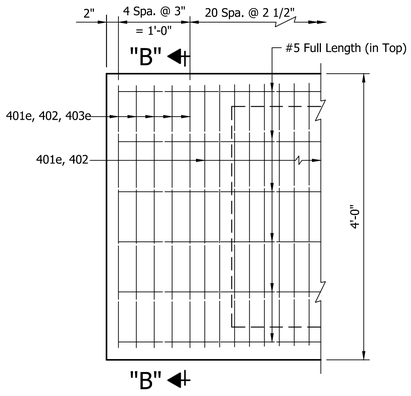
## BEAM ELEVATION SPAN A & B

Scale: 1/2" = 1'-0" Horz.
Scale: 1/4" = 1'-0" Vert.



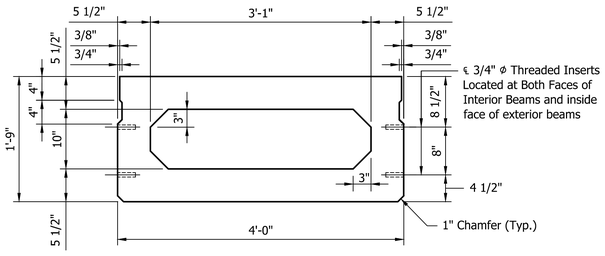

## SECTION "A-A"

Scale: 1" = 1'-0"



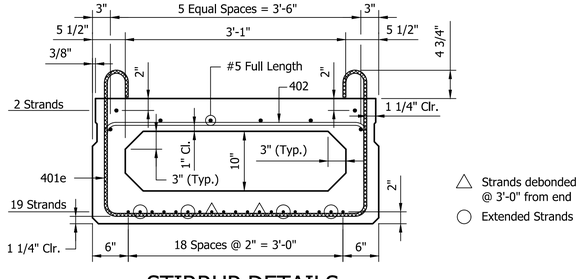

## END REINFORCING DETAIL

Scale: 1" = 1'-0"



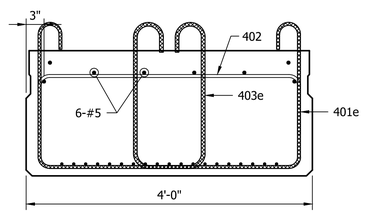

## TYPICAL BEAM SECTION

Scale: 1" = 1'-0"



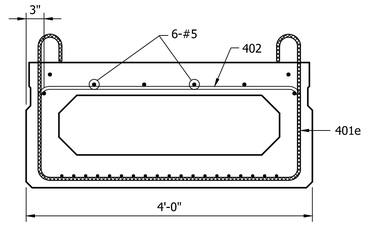

## STIRRUP DETAILS

Scale: 1" = 1'-0"



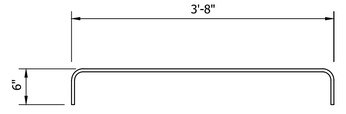

## SECTION "B-B"

Scale: 1" = 1'-0"

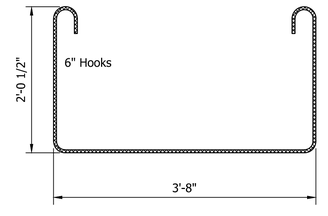



## SECTION "C-C"

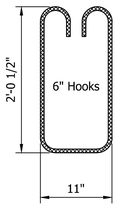
Scale: 1" = 1'-0"




402 x 4'-8"




401e x 8'-9"




403e x 6'-0"

## BENT BAR DETAILS

No Scale

NOTES:
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For General Notes, see Sheet 10.
For Additional Beam Details, see Sheet 12.

## BEAM GENERAL NOTES

Top of beams to be scored transversely at about 3" on center with a pointed tool. (Maximum depth of scoring is 1/4").

The beam manufacturer shall furnish the engineer, through the contractor, shop drawings for approval prior to the casting of the beams.

Beams shall be maintained vertically at all times. Suitable restraint shall be provided to prevent the rotation of the outside beams from construction loads such as finishing machine, forms, etc.

Adequate bracing must be provided at all times during storage, transporting, and lifting to resist lateral loads.

Several lifting devices are satisfactory. Type used must be guaranteed by the beam manufacturer and shown on the shop drawings.

Surface seal on outside face of exterior beam shall be applied by fabricator in the shop.

An allowance shall be made in beam length for elastic shortening and grade by the fabricator.

All reinforcing steel extended in to the deck shall be Epoxy Coated.

Bridge seat elevations were calculated using design camber and dead load deflection of the slab (residual camber) with the top of the beam a minimum of 3/4" below the bottom of slab elevation.

## BEAM CAMBER @ MIDSPAN

| | |
|---|---|
| Anticipated Beam Camber | 1.539" |
| Dead Load Deflection | -0.640" |
| Residual Camber | 0.899" |

NOTES:
The camber values as shown in the above table are expected values. If the actual camber as erected is different by 1" or more, the Contractor shall notify the Engineer immediately so that adjustments can be made. Anticipated beam camber is the upward deflection from pre-stressing forces at the time of erection minus the downward deflection from the dead load of the beam.

## BEAM DESIGN DATA

| | |
|---|---|
| Prestressed Strands: | 1/2" ϕ uncoated special low-relaxation seven-wire strand (Area - 0.167 sq. in.) with an ultimate tensile strength of 270 ksi. |
| Reinforcing Steel | fy = 60 ksi. |
| Concrete Strength: | f'ci = 4.0 ksi (at release)<br>f'c = 7.0 ksi (28 day strength) |
| Steel Plate: | A36 |
| Initial Pull Per Strand: | 33,820 lbs./ strand |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RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 06/02/2025 DATE

DESIGNED: MAT | DRAWN: AJM
CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY HIGHWAY DEPARTMENT

BEAM DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
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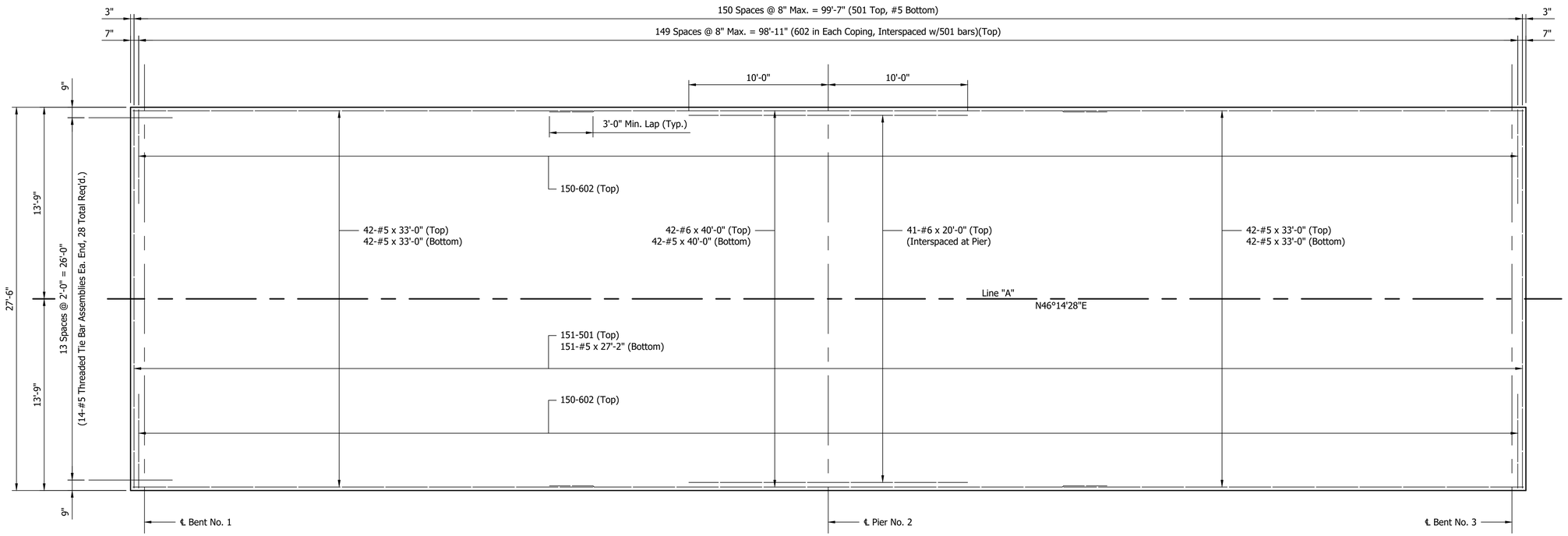
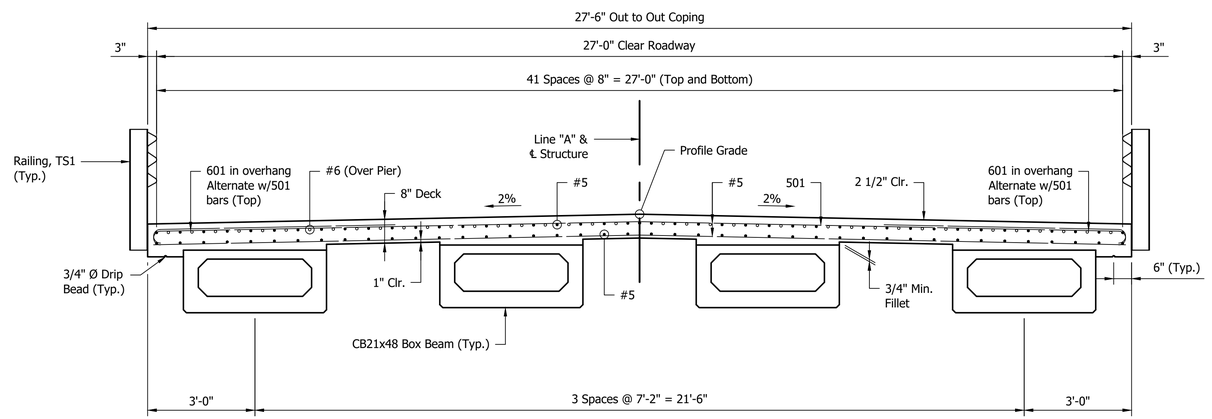
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Beams.dwg Plot Date: 6/2/2025 Plotted By: Chris Andrzejewski




## DECK - PLAN

Scale: 1/4" = 1'-0"




## TYPICAL SECTION

Scale: 1/2" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Additional Superstructure Details, see Sheets 16-19.
For General Notes, see Sheet 10.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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Christopher J. Andrzejewski 06/02/2025
DESIGN ENGINEER — DATE

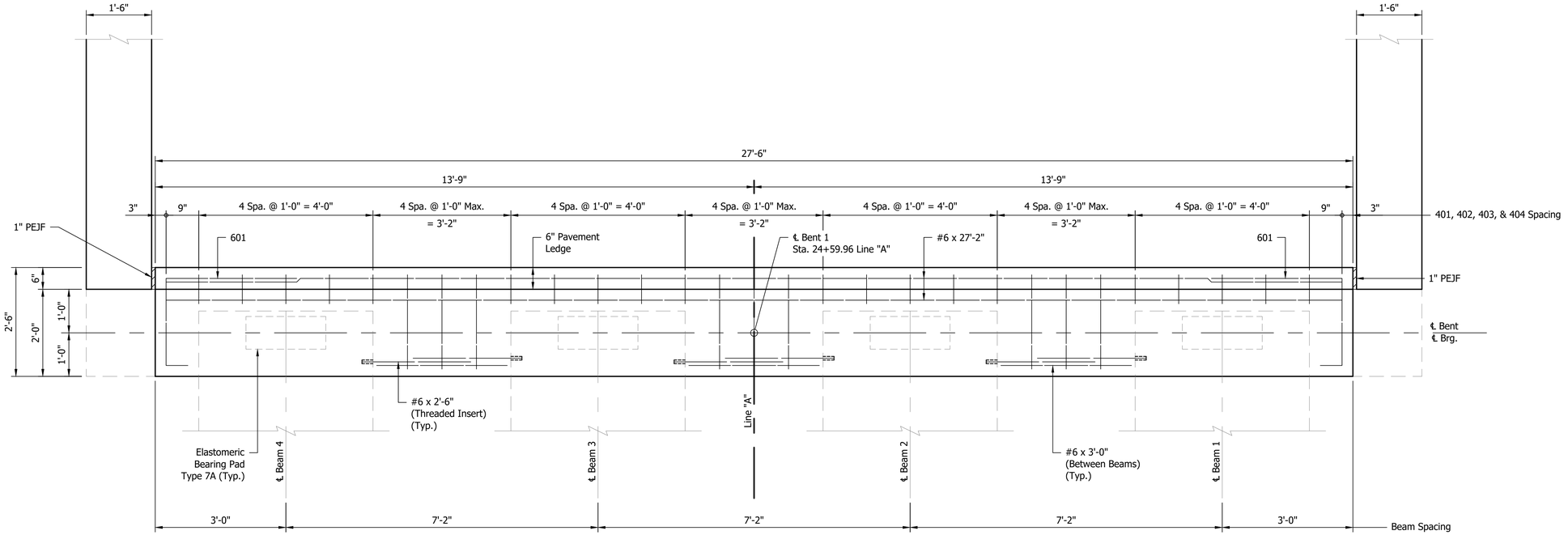
DESIGNED: MAT | DRAWN: AJM
CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
CR 142 OVER ELKHART RIVER

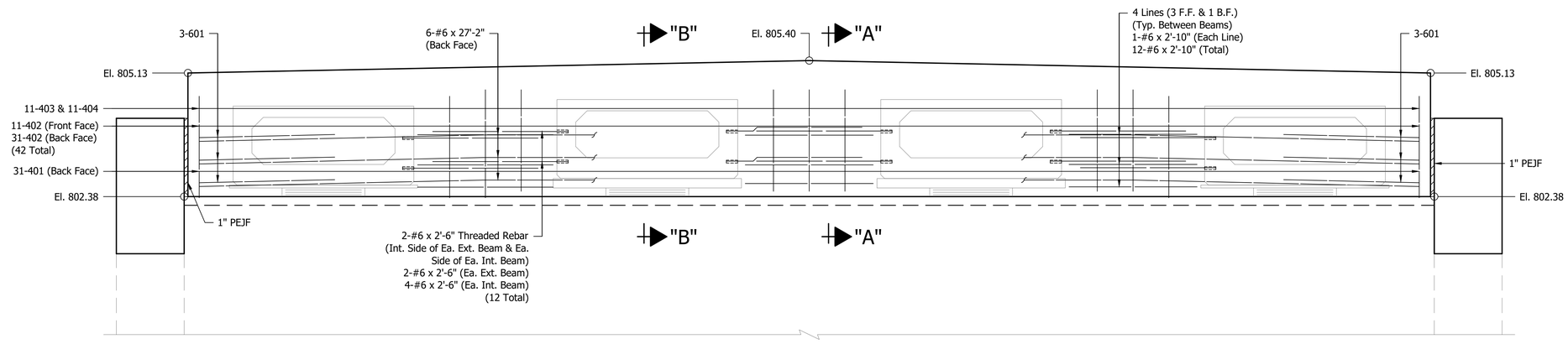
| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |

| SURVEY BOOK | SHEETS |
|---|---|
| - | 14 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |




## BENT 1 - PLAN

Scale: 3/4" = 1'-0"




## BENT 1 - ELEVATION

Scale: 3/4" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Additional Superstructure Details, see Sheets 15, 17-19.
For General Notes, see Sheet 10.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SUPERSTRUCTURE DETAILS
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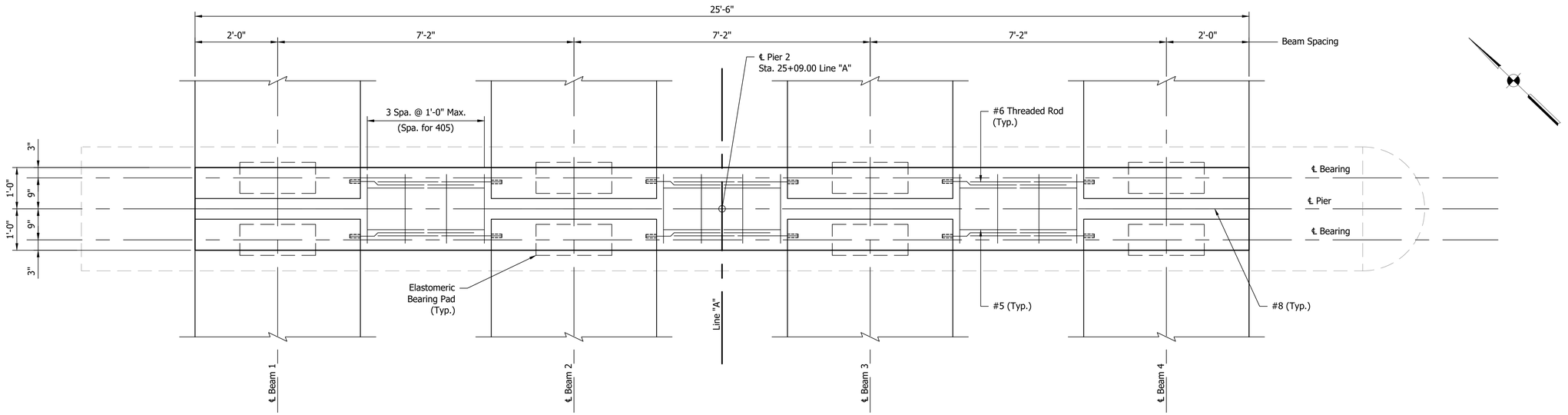
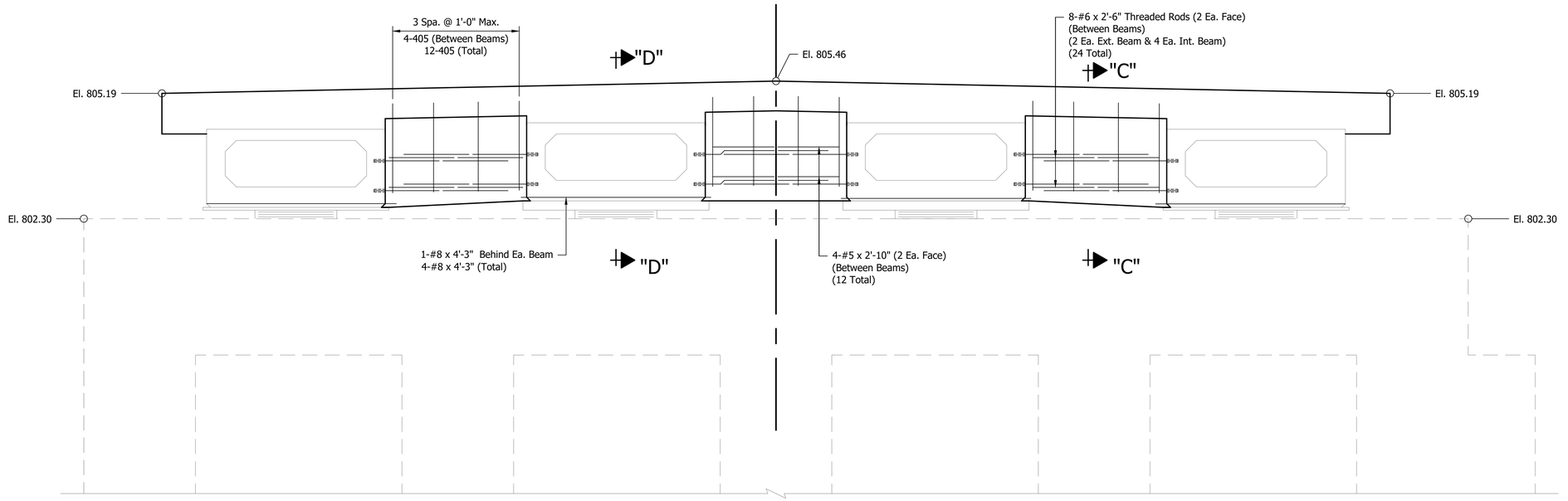
| CONTRACT | PROJECT |
| - | 20-00332 |




## PIER 2 - PLAN

Scale: 3/4" = 1'-0"




## PIER 2 - ELEVATION

Scale: 3/4" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Additional Superstructure Details, see Sheets 15-16, 18-19.
For General Notes, see Sheet 10.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CHRISTOPHER J. ANDRZEJEWSKI REGISTERED No. PE11600681 STATE OF INDIANA PROFESSIONAL ENGINEER

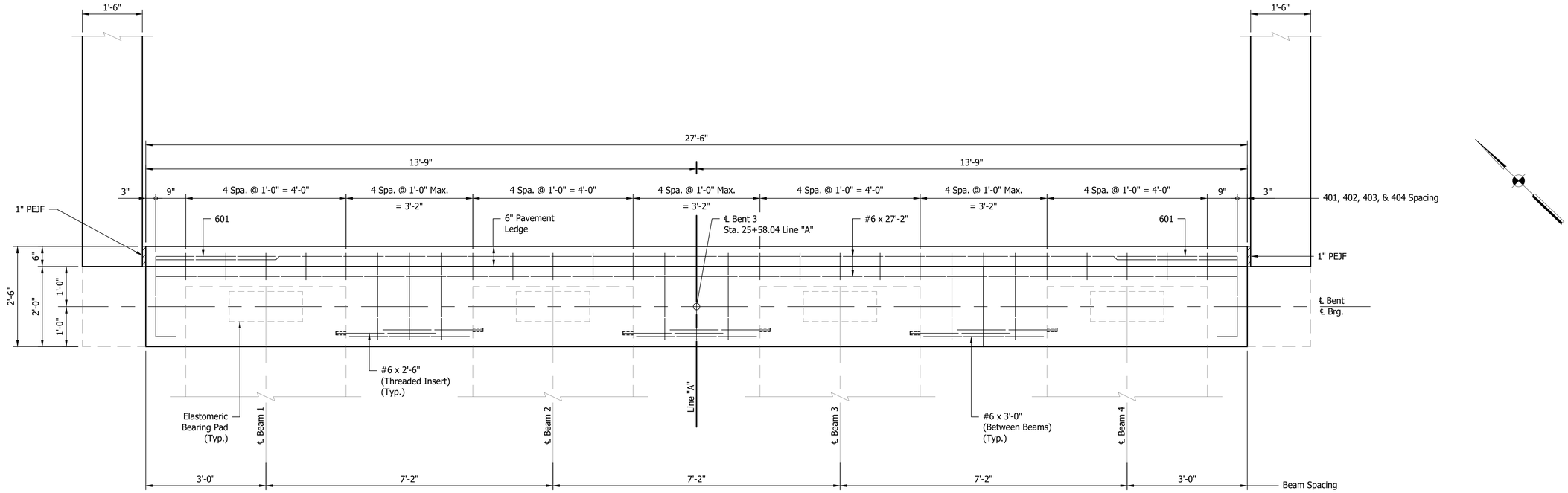
RECOMMENDED FOR APPROVAL: Christopher J. Andrzejewski 06/02/2025
DESIGN ENGINEER — DATE

DESIGNED: MAT | DRAWN: AJM
CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

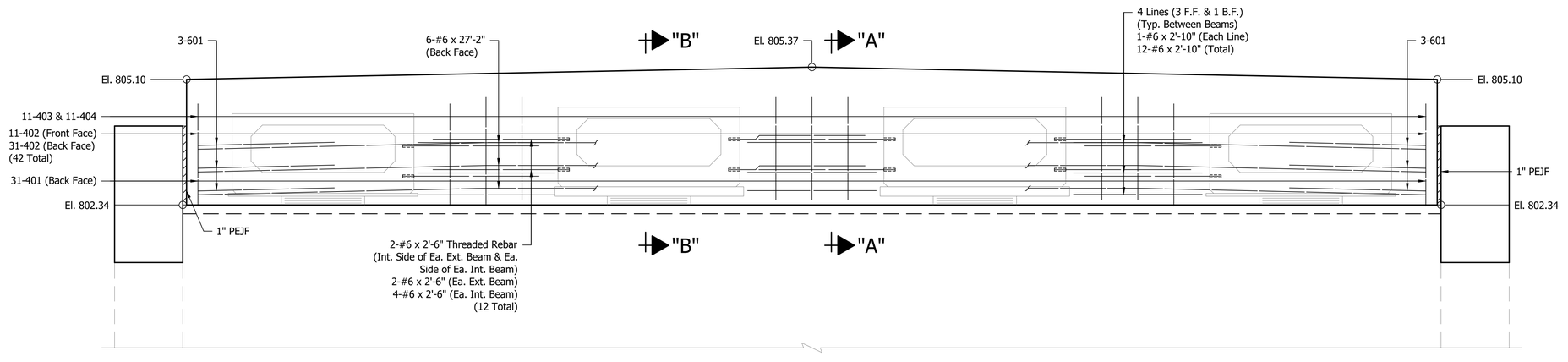
SUPERSTRUCTURE DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 16 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |




## BENT 3 - PLAN

Scale: 3/4" = 1'-0"




## BENT 3 - ELEVATION

Scale: 3/4" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Additional Superstructure Details, see Sheets 15-17, 19.
For General Notes, see Sheet 10.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CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

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CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
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| AS NOTED | 20-00332 |
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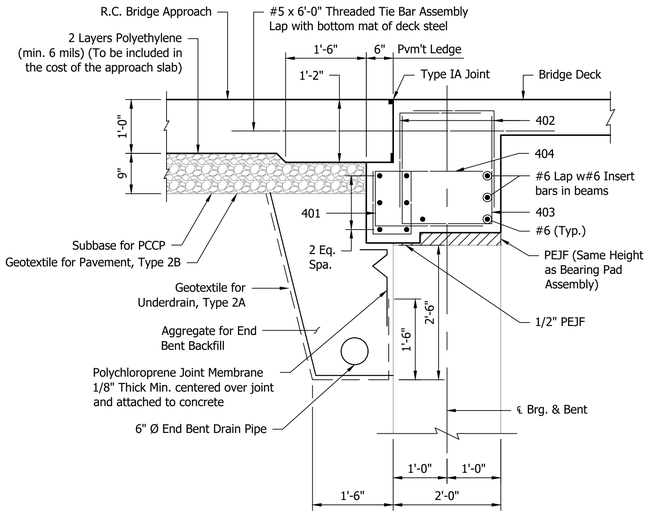
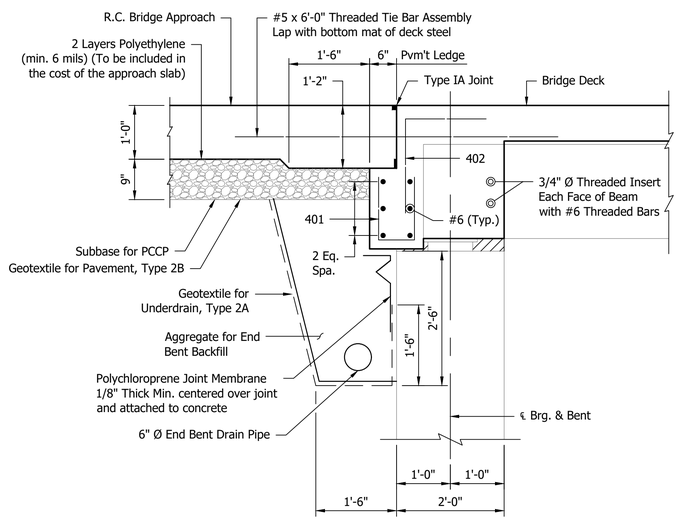
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 17 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |



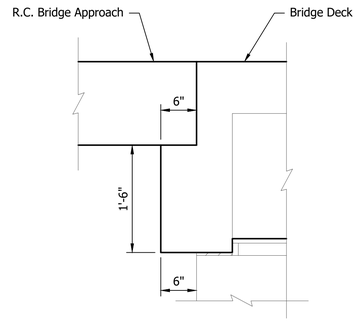

## SECTION "A-A" BETWEEN BEAMS

Scale: 3/4" = 1'-0"
(SECTION @ BEAMS)



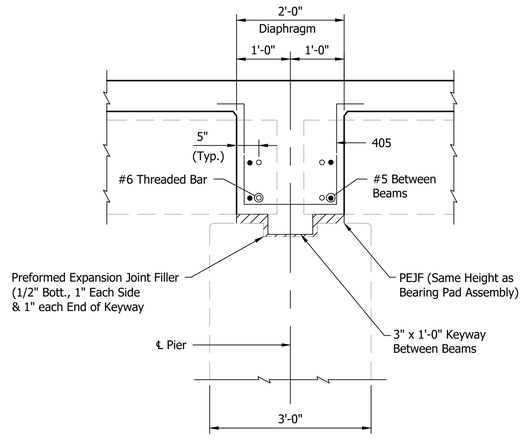

## SECTION "B-B" @ BEAMS

Scale: 3/4" = 1'-0"
(SECTION @ BEAMS)



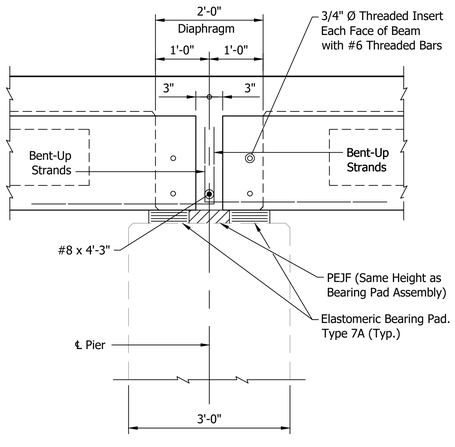

## PAVEMENT LEDGE DETAIL

Scale: 1" = 1'-0"




## SECTION "C-C" BETWEEN BEAMS

Scale: 3/4" = 1'-0"



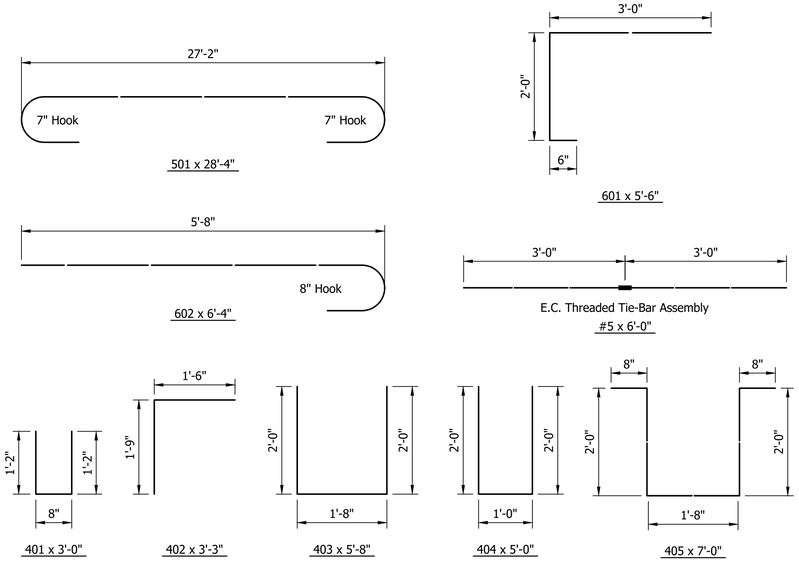

## SECTION "D-D" @ BEAMS

Scale: 3/4" = 1'-0"

# BILL OF MATERIALS

## SUPERSTRUCTURE

| EPOXY COATED REINFORCING STEEL | | | |
|---|---|---|---|
| Size or Mark | No. of Bars | Length | Weight (lbs) |
| #8 | 4 | 4'-3" | |
| | | | |
| | | Total #8 | 46 |
| 601 | 12 | 5'-6" | |
| 602 | 300 | 6'-4" | |
| #6 | 42 | 40'-0" | |
| #6 | 12 | 27'-2" | |
| #6 | 41 | 20'-0" | |
| #6 | 24 | 2'-10" | |
| #6 | 48 | 2'-6" | |
| | | | |
| | | Total #6 | 7480 |
| 501 | 151 | 28'-4" | |
| #5 | 42 | 40'-0" | |
| #5 | 168 | 33'-0" | |
| #5 | 151 | 27'-2" | |
| #5 | 12 | 2'-10" | |
| | | | |
| | | Total #5 | 16311 |
| 401 | 62 | 3'-0" | |
| 402 | 84 | 3'-3" | |
| 403 | 22 | 5'-8" | |
| 404 | 22 | 5'-0" | |
| 405 | 12 | 7'-0" | |
| | | | |
| | | Total #4 | 520 |
| | | | |
| Total E.C. Reinforcing Steel | | | 24357 |
| | | | |
| CONCRETE | | | |
| Concrete, C, Superstructure | | | 87.7 Cys. |
| | | | |
| MISCELLANEOUS | | | |
| Threaded Tie Bar Assembly, Epoxy Coated | | | 28 Ea. |
| Bearing Assembly, Elastomeric | | | 16 Ea. |
| Structural Member, Concrete, Box Beam, 21" x 48" | | | 395 Lft. |
| Railing, Steel TS-1 | | | 194 Lft. |




## BAR BENDING DETAILS

No Scale

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Additional Superstructure Details, see Sheets 15-18.
For General Notes, see Sheet 10.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RECOMMENDED FOR APPROVAL _____ 06/02/2025
DESIGN ENGINEER DATE

DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

SUPERSTRUCTURE DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
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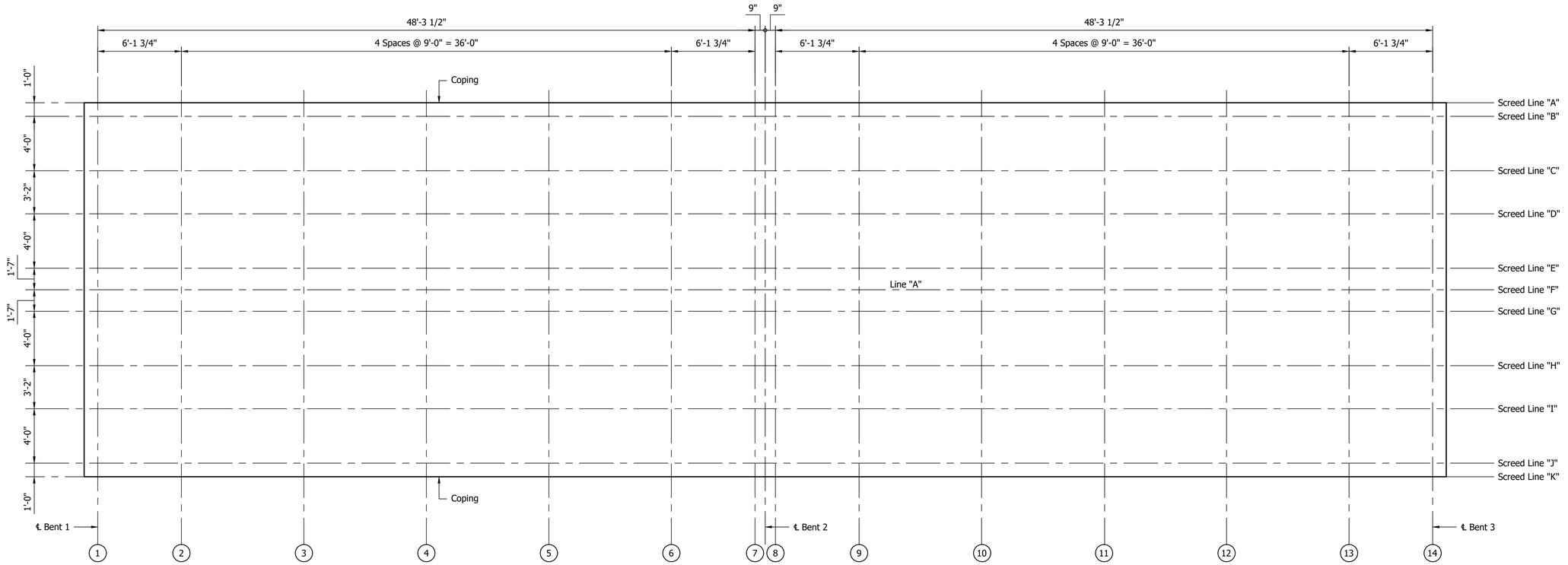
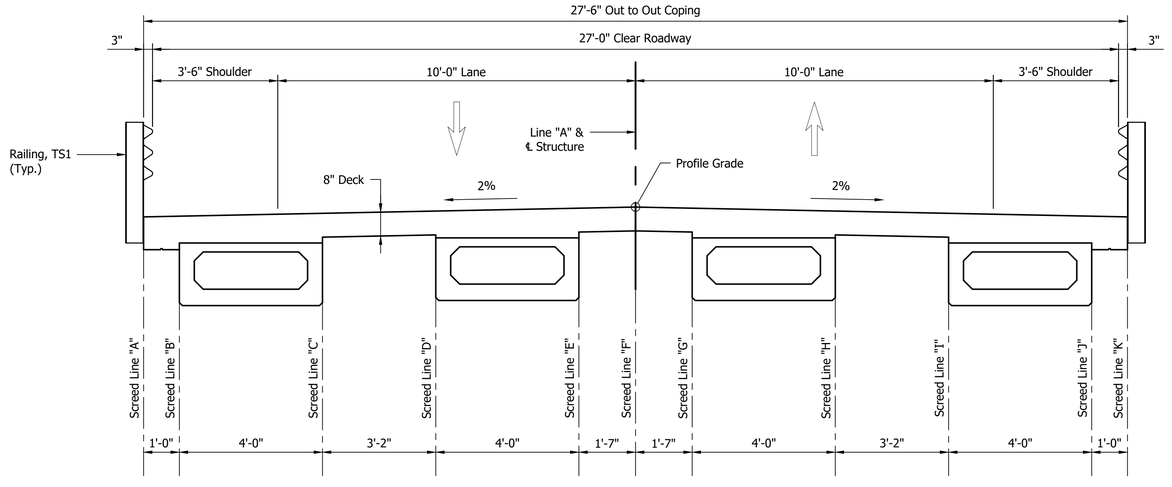



## SCREED PLAN

Scale: 1/4" = 1'-0"




## TYPICAL SECTION

Scale: 1/2" = 1'-0"

## PROCEDURE AND NOTES:

After the beams are set and prior to setting the deck forms, take elevations at all screed points on top of the beams. Enter these elevations in the table. Subtract these elevations from the tabulated elevations and use the resulting dimensions as the height for setting screed forms above these points. These dimensions remain constant regardless of how much or in what order the concrete is poured.

DO NOT SET SCREED FORMS BY LEVELING.

Stay-in-place froms shall not be set until the above operations are completed and are to be approved by the ENGINEER.

Screed elevations as shown in the table include an allowance for concrete dead load deflections.

All Dead Load Deflections are in inches.
All other dimensions are in feet unless otherwise noted.

NOTES:
For Additional Screed Details, see sheet 21.
For General Notes, see Sheet 10.

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RECOMMENDED FOR APPROVAL _____ 06/02/2025
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ELKHART COUNTY
HIGHWAY DEPARTMENT

SCREED DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |

| SURVEY BOOK | SHEETS |
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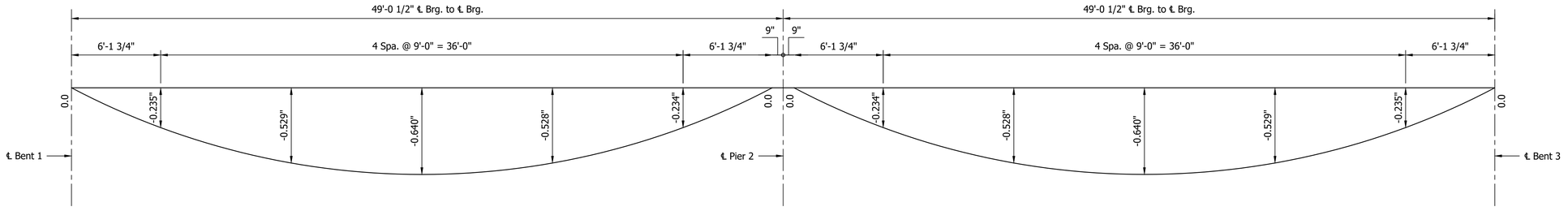
| CONTRACT | PROJECT |
| - | 20-00332 |

| POINT | LOCATION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Elevation - Top of Coping | 805.130 | 805.165 | 805.205 | 805.230 | 805.230 | 805.205 | 805.185 | 805.185 | 805.200 | 805.215 | 805.210 | 805.180 | 805.130 | 805.090 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Coping | | | | | | | | | | | | | | |
| B | Elevation - Top of Screed | 805.150 | 805.185 | 805.225 | 805.250 | 805.250 | 805.225 | 805.205 | 805.205 | 805.220 | 805.235 | 805.230 | 805.200 | 805.150 | 805.110 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| C | Elevation - Top of Screed | 805.230 | 805.265 | 805.305 | 805.330 | 805.330 | 805.305 | 805.285 | 805.285 | 805.300 | 805.315 | 805.310 | 805.280 | 805.230 | 805.190 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| D | Elevation - Top of Screed | 805.290 | 805.330 | 805.370 | 805.395 | 805.390 | 805.370 | 805.350 | 805.350 | 805.365 | 805.380 | 805.375 | 805.345 | 805.295 | 805.255 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| E | Elevation - Top of Screed | 805.370 | 805.410 | 805.450 | 805.475 | 805.470 | 805.450 | 805.430 | 805.430 | 805.445 | 805.460 | 805.455 | 805.425 | 805.375 | 805.335 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| F | Elevation - Top of Screed | 805.405 | 805.440 | 805.480 | 805.505 | 805.505 | 805.480 | 805.460 | 805.460 | 805.475 | 805.490 | 805.485 | 805.455 | 805.405 | 805.365 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| G | Elevation - Top of Screed | 805.370 | 805.410 | 805.450 | 805.475 | 805.470 | 805.450 | 805.430 | 805.430 | 805.445 | 805.460 | 805.455 | 805.425 | 805.375 | 805.335 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| H | Elevation - Top of Screed | 805.290 | 805.330 | 805.370 | 805.395 | 805.390 | 805.370 | 805.350 | 805.350 | 805.365 | 805.380 | 805.375 | 805.345 | 805.295 | 805.255 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| I | Elevation - Top of Screed | 805.230 | 805.265 | 805.305 | 805.330 | 805.330 | 805.305 | 805.285 | 805.285 | 805.300 | 805.315 | 805.310 | 805.280 | 805.230 | 805.190 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| J | Elevation - Top of Screed | 805.150 | 805.185 | 805.225 | 805.250 | 805.250 | 805.225 | 805.205 | 805.205 | 805.220 | 805.235 | 805.230 | 805.200 | 805.150 | 805.110 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Screed | | | | | | | | | | | | | | |
| K | Elevation - Top of Coping | 805.130 | 805.165 | 805.205 | 805.230 | 805.230 | 805.205 | 805.185 | 805.185 | 805.200 | 805.215 | 805.210 | 805.180 | 805.130 | 805.090 |
| | Elevation - Top of Beam | | | | | | | | | | | | | | |
| | Distance - Top of Beam to Top of Coping | | | | | | | | | | | | | | |




## CONCRETE DEAD LOAD DEFLECTIONS

No Scale

NOTES:
For Additional Screed Details, see sheet 20.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DESIGNED: MAT DRAWN: AJM
CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

SCREED DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
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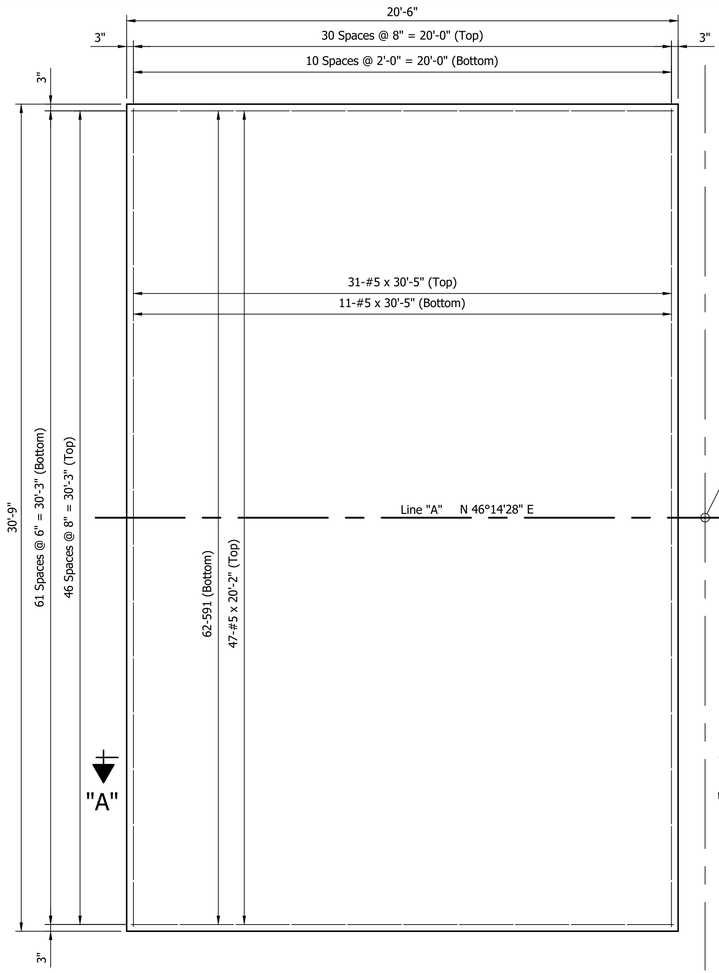
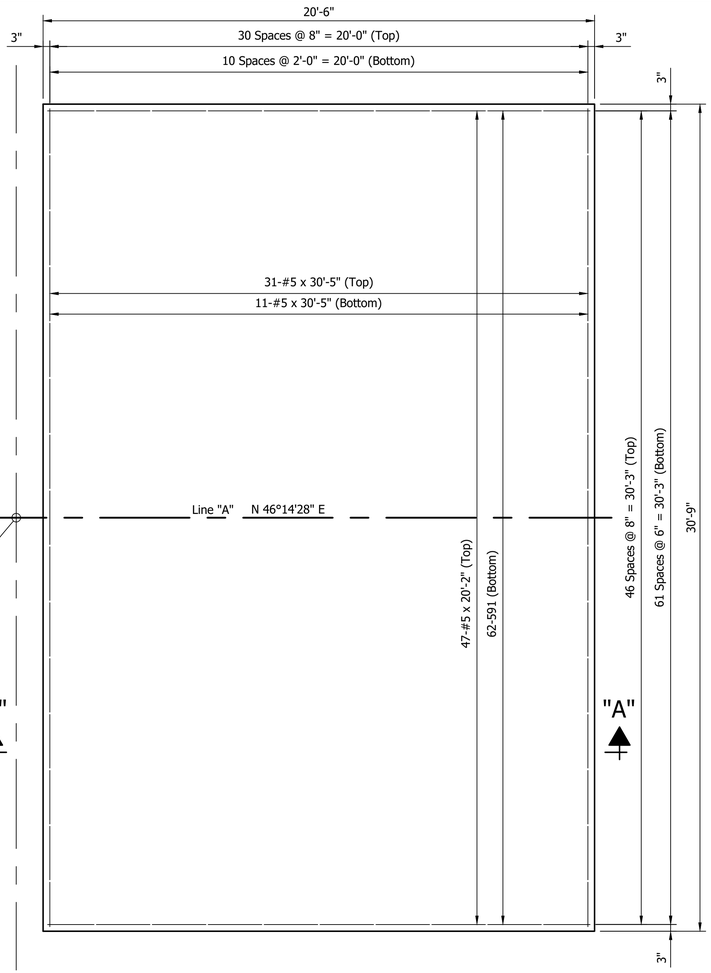


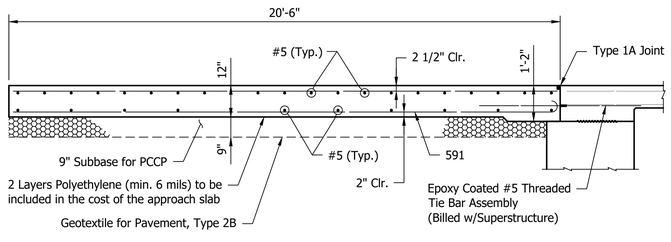

## WEST APPROACH

Scale: 3/8" = 1'-0"



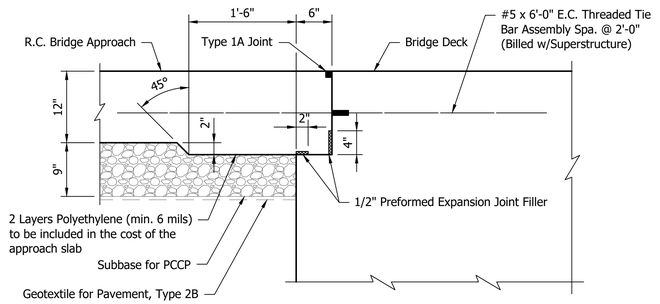

## EAST APPROACH

Scale: 3/8" = 1'-0"




## SECTION "A-A"

Scale: 3/8" = 1'-0"




## TYPICAL PAVEMENT LEDGE DETAIL

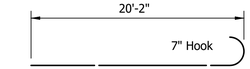
Scale: 1" = 1'-0

## BILL OF MATERIALS
### WEST APPROACH

| E.C. REINFORCING BARS | | | |
|---|---|---|---|
| Size or Mark | No. of Bars | Length | Weight (lbs) |
| 591 | 62 | 20'-9" | |
| #5 | 42 | 30'-5" | |
| #5 | 47 | 20'-2" | |
| | | | |
| | | Total #5 | 3,663 |
| | | | |
| Total E.C. Reinforcing Bars | | | 3,663 |
| | | | |
| CONCRETE | | | |
| Reinforced Concrete Bridge Approach, 12" | | | 71 Sys. |
| MISCELLANEOUS | | | |
| Subbase for PCCP | | | 17 Cys. |
| Geotextiles for Pavement Type 2B | | | 67 Sys. |

## BILL OF MATERIALS
### EAST APPROACH

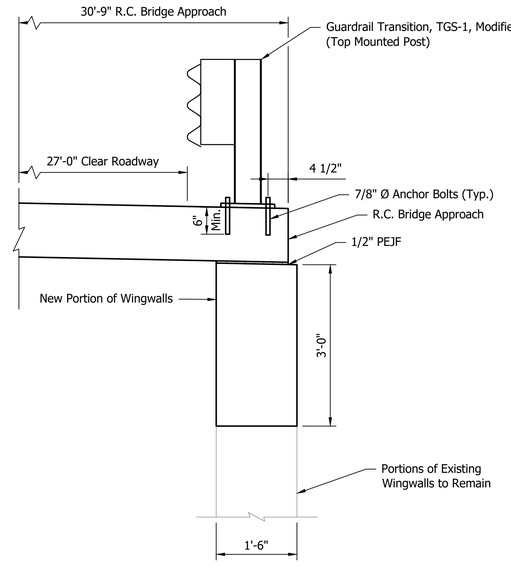
| E.C. REINFORCING BARS | | | |
|---|---|---|---|
| Size or Mark | No. of Bars | Length | Weight (lbs) |
| 591 | 62 | 20'-9" | |
| #5 | 42 | 30'-5" | |
| #5 | 47 | 20'-2" | |
| | | | |
| | | Total #5 | 3,663 |
| | | | |
| Total E.C. Reinforcing Bars | | | 3,663 |
| | | | |
| CONCRETE | | | |
| Reinforced Concrete Bridge Approach, 12" | | | 71 Sys. |
| MISCELLANEOUS | | | |
| Subbase for PCCP | | | 17 Cys. |
| Geotextiles for Pavement Type 2B | | | 67 Sys. |




591 x 20'-9"

## BAR BENDING DETAILS

No Scale




## TYPICAL APPROACH SLAB AND WINGWALL DETAIL

Scale: 3/4" = 1'-0"

NOTES:
All Reinforcing to be Epoxy Coated.
For Reinforcing Bar Notes, see Std. Drawing 703-BRST-01.
For Reinforced Concrete Approach Slab, see Std. Drawing 609-RCBA-02 & 04.
For General Notes, see Sheet No. 10.
For Additional Details, see Std. Drawing 601-MGSA-10.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CHECKED: CJA CHECKED: MAT

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HIGHWAY DEPARTMENT

APPROACH DETAILS
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
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| CONTRACT | PROJECT |
| - | 20-00332 |

# SUMMARY OF BRIDGE QUANTITIES

| ITEM | CONCRETE | | | CONCRETE RAILING CLASS C | | REINF. BARS | EPOXY COATED REINF. BARS | STRUCT. STEEL | FIELD DRILLED HOLE IN CONC. | ANCHOR PLATES MK-AP | PILES | | | | | | | CONICAL PILE TIP, 14" | GEOTEXTILES FOR UNDERDRAIN, TYPE 2B | AGGREGATE FOR END BENT BACKFILL | EPOXY INJ, CRACK PREP | EPOXY INJ, EPOXY MATERIAL | EPOXY INJ, FURNISHING EQUIPMENT | PATCHING CONC. STRUCTURES | PIPE, END BENT DRAIN, 6" | BEARING ASSEMBLY, ELASTOMERIC | CONC. STR. MEMBERS BOX BEAM 21" x 48" | RAILING, STEEL TS-1 | SURFACE SEAL ** | EPOXY COATED THREADED BAR ASSEMBLIES | GEOTEXTILE FOR PAVEMENT TYPE 2B | R.C. BRIDGE APPROACH 12 Inch | SUBBASE FOR PCCP 9 Inch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CLASS C | CLASS A | CLASS B | | | | | | | | TEST PILE INDICATOR, PRODUCTION | | TEST PILE INDICATOR, RESTRIKE | PILE, STEEL PILE, EPOXY COATED, 0.312", 14" | | PILE, STEEL PIPE, 0.312", 14" | | | | | | | | | | | | | | | | | |
| | SUPERSTR | SUBSTRUCTURE | IN FTG. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | cys. | cys. | cys. | lft. | cys. | lbs. | lbs. | lbs. | each | each | no. | lft. | each | no. | lft. | no. | lft. | each | sys. | cys. | lft. | gal. | LS | sft. | lft. | ea. | lft. | lft. | sys. | each | cys. | sys. | cys. |
| BENT NO. 1 | 4.4 | | | | | | 398 | | 36 | | | | | | | | | | 49 | 14 | | | | | 33 | | | | 33 | | | | |
| PIER NO. 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BENT NO. 3 | 4.4 | | | | | | 398 | | 36 | | | | | | | | | | 49 | 14 | | | | | 33 | | | | 32 | | | | |
| SUPERSTRUCTURE | 87.7 | | | | | | 24357 | | | | | | | | | | | | | | | | | | | 16 | 395 | 194 | | 28 | | | |
| APPROACH SLAB (WEST) | | | | | | | 3663 | | | | | | | | | | | | | | | | | | | | | | | | 67 | 71 | 17 |
| APPROACH SLAB (EAST) | | | | | | | 3663 | | | | | | | | | | | | | | | | | | | | | | | | 67 | 71 | 17 |
| UNDISTRIBUTED QUANTITIES (SUBSTR.) | | | | | | | | | | | | | | | | | | | | | 40 | 5 | 1 | 10 | | | | | | | | | |
| Totals | 96.5 | | | | | | 32479 | | 72 | | | | | | | | | | 98 | 28 | 40 | 5 | 1 | 10 | 66 | 16 | 395 | 194 | 65 | 28 | 134 | 142 | 34 |

** ESTIMATED QUANTITY

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Bridge_Summary.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski


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CHRISTOPHER J. ANDRZEJEWSKI — REGISTERED — No. PE11600681 — STATE OF INDIANA — PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 06/02/2025 DATE

DESIGNED: MAT | DRAWN: AJM

CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

BRIDGE SUMMARY
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |

| SURVEY BOOK | SHEETS |
|---|---|
| - | 22 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

# PAVEMENT QUANTITIES AND APPROACH TABLE

| LOCATION | DESCRIPTION (APPROACH TYPE OR CLASS) | WIDTH | LENGTH | RADII | DISTANCE BEYOND R/W LINE | HOT MIX ASPHALT & CONCRETE FOR APPROACHES | | | | | | EXCAVATION | | MILLING, TRANSITION | JOINT AHHESIVE, INTERMEDIATE | JOINT AHHESIVE, SURFACE | ASPHALT MATERIAL FOR ROADS | | | GEOTEXTILE FOR PAVEMENT, TYPE 2B | SUBGRADE TREATMENT, TYPE 1C | COMPACTED AGGREGATE NO. 53 | ASPHALT FOR TACK COAT | COMPACTED AGGREGATE FOR BASE NO. 53 DEPTH 3 | | COMPACTED AGGREGATE FOR BASE NO. 2 DEPTH 4 | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | BEYOND R/W LINE | | | WITHIN R/W LINE | | | | | | | | | | | | | | | | | | | |
| | | | | | | COMP. AGGR. BASE | HMA FOR APPROACHES | CONCRETE 6 Inch | COMP. AGGR. BASE | HMA FOR APPROACHES | CONCRETE 6 Inch | CUT | FILL | | | | QC/QA-HMA 3, 58S, SURFACE, 9.5mm | QC/QA-HMA 3, 58S, INTERMEDIATE, 19.0 mm | QC/QA-HMA 3, 58S, BASE, 25.0 mm | | | | | Inch | cys. | Inch | cys. | |
| | | lft. | lft. | lft. | lft. | Tons | Tons | sys. | lbs. | Tons | sys. | cys. | cys. | LFT. | LFT. | LFT. | Tons | Tons | Tons | sys. | sys. | Tons | sys. | | | | | |
| MAINLINE | | | | | | | | | | | | | | 251 | 119 | 219 | 49 | 46 | 109 | 384 | 384 | 28 | 910 | | | | | |
| TOTALS | | | | | | | | | | | | | | 251 | 119 | 219 | 49 | 46 | 109 | 384 | 384 | 28 | 910 | | | | | |

# GUARDRAIL SUMMARY TABLE

| LOCATION FROM STATION | LOCATION TO STATION | LEFT | RIGHT | W-BEAM GUARDRAIL LENGTH: GUARDRAIL MGS W-BEAM @ 6'-3 SPA. | STANDARD POST @ ___ SPA. | DOUBLE FACED @ 6'-3 SPA. | LONG POST @ ___ SPA. | GUARDRAIL REMOVE | NESTED GUARDRAIL | GUARDRAIL TRANSITION, TGS-1, MODIFIED | GUARDRAIL TRANSITION "TFC" | GUARDRAIL END TREATMENT "TYPE OS" | CURVED W-BEAM GUARDRAIL SYSTEM: TERMINAL SYSTEM | | CONNECTOR SYSTEM | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | lft. | lft. | lft. | lft. | lft. | lft. | lft. | EACH | EACH | TYPE | EACH | TYPE | EACH | |
| 23+91.99 "A" | 24+60.56 "A" | X | | | | | | 15 | | 1 | | 1 | | | | | |
| 25+57.44 "A" | 26+26.17 "A" | X | | | | | | 15 | | 1 | | 1 | | | | | |
| 23+91.99 "A" | 24+60.56 "A" | | X | | | | | 15 | | 1 | | 1 | | | | | |
| 25+57.44 "A" | 26+26.17 "A" | | X | | | | | 13 | | 1 | | 1 | | | | | |
| | TOTALS | | | | | | | 58 | | 4 | | 4 | | | | | |

# R/W MARKERS

| LT/RT | STATION | OFFSET | EACH |
|---|---|---|---|
| Lt. | 24+00.00 "A" | 25.44' | 1 |
| Lt. | 24+20.00 "A" | 35.00' | 1 |
| Lt. | 26+00.00 "A" | 35.00' | 1 |
| Lt. | 26+20.00 "A" | 25.00' | 1 |
| Rt. | 24+00.00 "A" | 24.56' | 1 |
| Rt. | 24+20.00 "A" | 35.00' | 1 |
| Rt. | 26+00.00 "A" | 35.00' | 1 |
| Rt. | 26+20.00 "A" | 25.00' | 1 |

# MONUMENTS

| ALIGNMENTS STATION | ALIGNMENTS DESIGNATION | TYPE A | TYPE B | TYPE C | TYPE D | TYPE SEC. COR. |
|---|---|---|---|---|---|---|
| 23+80.00 "A" | | | 1 | | | |
| 26+40.00 "A" | | | 1 | | | |
| TOTALS | | | 2 | | | |

# PERMANENT SEEDING

| LOCATION | SEED MIXTURE, FLOODPLAIN | SODDING | EROSION CONTROL BLANKET | MULCHING MATERIAL | MOBILIZATION & DEMOBILIZATION FOR SEEDING |
|---|---|---|---|---|---|
| | lbs. | sys. | sys. | Tons | Each |
| MAINLINE | 11 | | | | 1 |
| TOTALS | 11 | | | | 1 |

# PAVEMENT MARKINGS SUMMARY TABLE

| LOCATION | LINE PAINT: SOLID WHITE 4 IN. | LINE PAINT: SOLID YELLOW 4 IN. |
|---|---|---|
| | lft. | lft. |
| MAINLINE | 720 | 720 |
| TOTALS | 720 | 720 |


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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 06/02/2025 DATE

DESIGNED: MAT | DRAWN: AJM

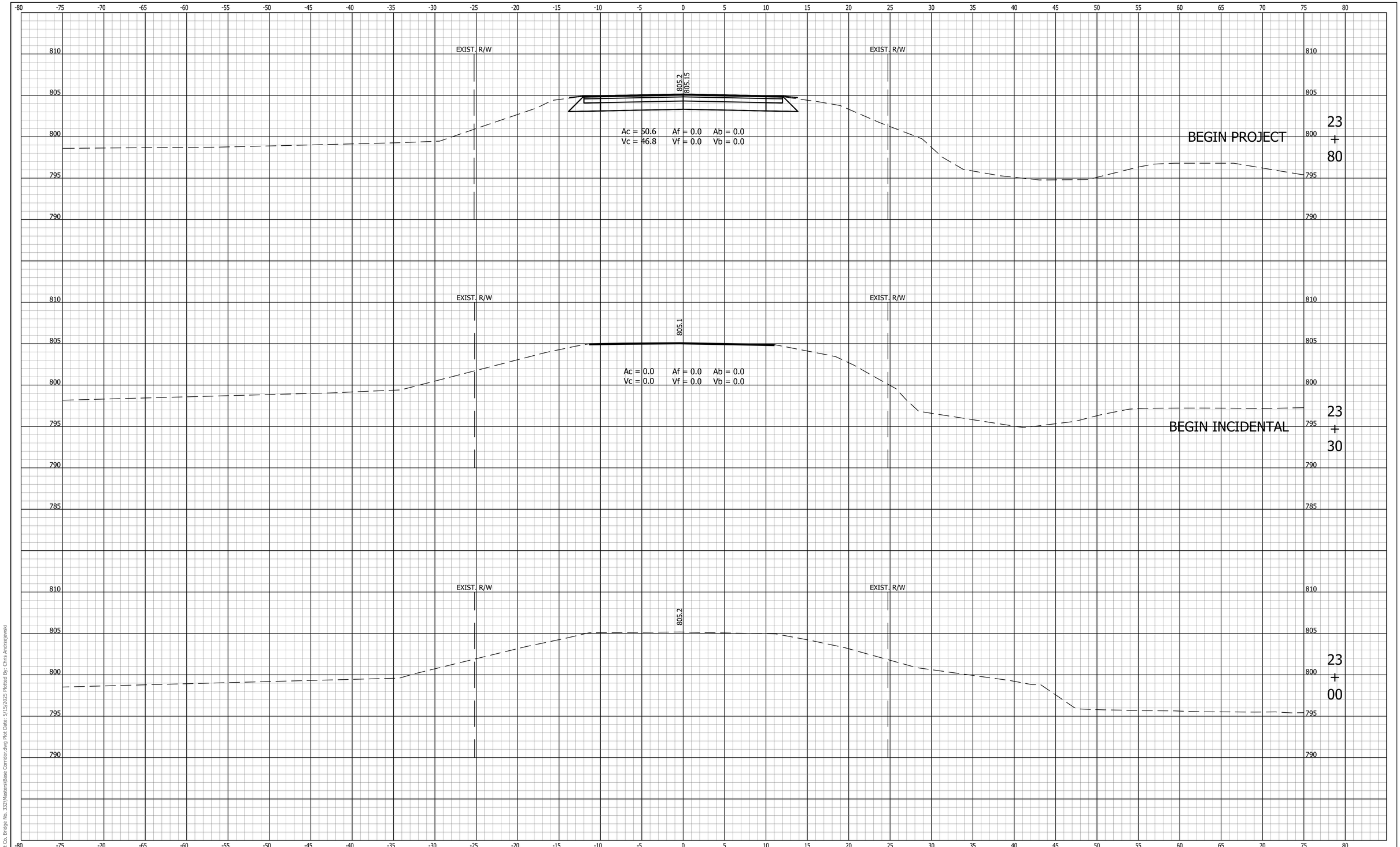
CHECKED: CJA | CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

ROAD SUMMARY
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | - |
| SURVEY BOOK | SHEETS |
| - | 23 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

File Name: P:\BR\(C3D)24-214 Elkhart Co. Bridge No. 332\Bridge\Dwg\Plans\Road Summary.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski




File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Masters\Base Corridor.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

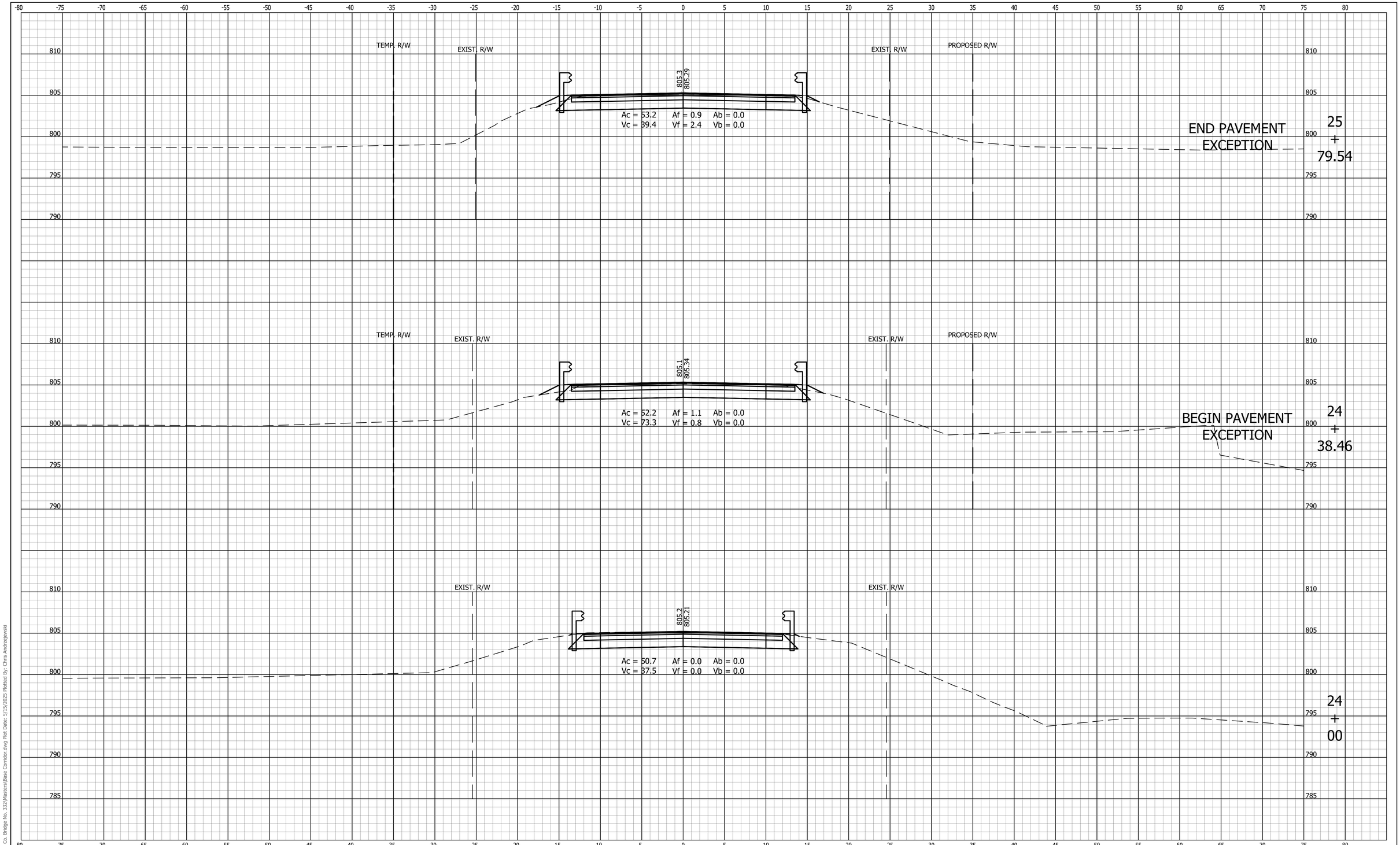
DESIGNED: MAT DRAWN: AJM

CHECKED: CJA CHECKED: MAT

ELKHART COUNTY
HIGHWAY DEPARTMENT

CROSS SECTIONS - LINE "A"
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 5' | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| 1" = 5' | - |
| SURVEY BOOK | SHEETS |
| - | 24 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |

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ELKHART COUNTY
HIGHWAY DEPARTMENT

CROSS SECTIONS - LINE "A"
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 5' | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| 1" = 5' | - |

| SURVEY BOOK | SHEETS | | |
|---|---|---|---|
| - | 25 | of | 26 |
| CONTRACT | PROJECT | | |
| - | 20-00332 | | |

File Name: P:\BR\C3D\24-214 Elkhart Co. Bridge No. 332\Masters\Base Corridor.dwg Plot Date: 5/15/2025 Plotted By: Chris Andrzejewski

27 + 00

Ac = 0.0 Af = 0.0 Ab = 0.0
Vc = 0.0 Vf = 0.0 Vb = 0.0

804.7

EXIST. R/W

EXIST. R/W

END INCIDENTAL

26 + 90

804.8

Ac = 0.0 Af = 0.0 Ab = 0.0
Vc = 0.0 Vf = 0.0 Vb = 0.0

END PROJECT

EXIST. R/W

EXIST. R/W

805.1
805.08

Ac = 51.0 Af = 0.0 Ab = 0.0
Vc = 47.2 Vf = 0.0 Vb = 0.0

26 + 40

TEMP. R/W

EXIST. R/W

EXIST. R/W

PROPOSED R/W

805.2
805.22

Ac = 50.9 Af = 5.5 Ab = 0.0
Vc = 75.4 Vf = 4.1 Vb = 0.0

26 + 00

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CROSS SECTIONS - LINE "A"
CR 142 OVER ELKHART RIVER

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 5' | 20-00332 |
| VERTICAL SCALE | DESIGNATION |
| 1" = 5' | - |

| SURVEY BOOK | SHEETS |
|---|---|
| - | 26 of 26 |
| CONTRACT | PROJECT |
| - | 20-00332 |