| PROJECT | DESIGNATION |
|---|---|
| 1383332 | 1383623 |
| CONTRACT | BRIDGE FILE |
| R-37053 | I69-215-05323A |

| INDEX | | | | |
|---|---|---|---|---|
| STRUCTURE | TYPE | SPAN AND SKEW | OVER | STATION |
| I69-215-05323A | CONTINUOUS COMPOSITE STEEL BEAM | TWO SPANS: 100'-3", 100'-3" SKEW 00°00'00" | I-69 | 920+78.21 "A" |

| KIN DESIGNATION NUMBERS | | |
|---|---|---|
| DESIGNATION | DESCRIPTION | TYPE |
| 1383332 | I-69 ADDED TRAVEL LANES FROM 116TH ST. TO 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY | ROADWAY |
| 1383486 & 1383487 | I-69 OVER SAND CREEK | BRIDGE |
| 1383488 | BROOKS SCHOOL RD OVER I-69 | BRIDGE |
| 1383489 & 1383490 | CAMPUS PARKWAY INTERCHANGE I-69 ADDED TRAVEL LANES FROM 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY TO 0.42 MILE | ROADWAY/BRIDGE |
| 1383336 | EAST OF S.R. 13 | ROADWAY |
| 1383509 & 1383510 | I-69 OVER MUD CREEK | BRIDGE |
| 1383512 & 1383513 | I-69 OVER THORPE CREEK | BRIDGE |
| 1383514 & 1383515 | I-69 OVER S.R. 13 | BRIDGE |
| 1383337 | I-69 ADDED TRAVEL LANES FROM 0.42 MILE EAST OF S.R. 13 TO LAPEL ROAD | ROADWAY |
| 1383624 & 1383625 | I-69 OVER FOSTERS BRANCH | BRIDGE |
| | | |

R-37053
SET 11 OF 12

INDIANA DEPARTMENT
OF TRANSPORTATION

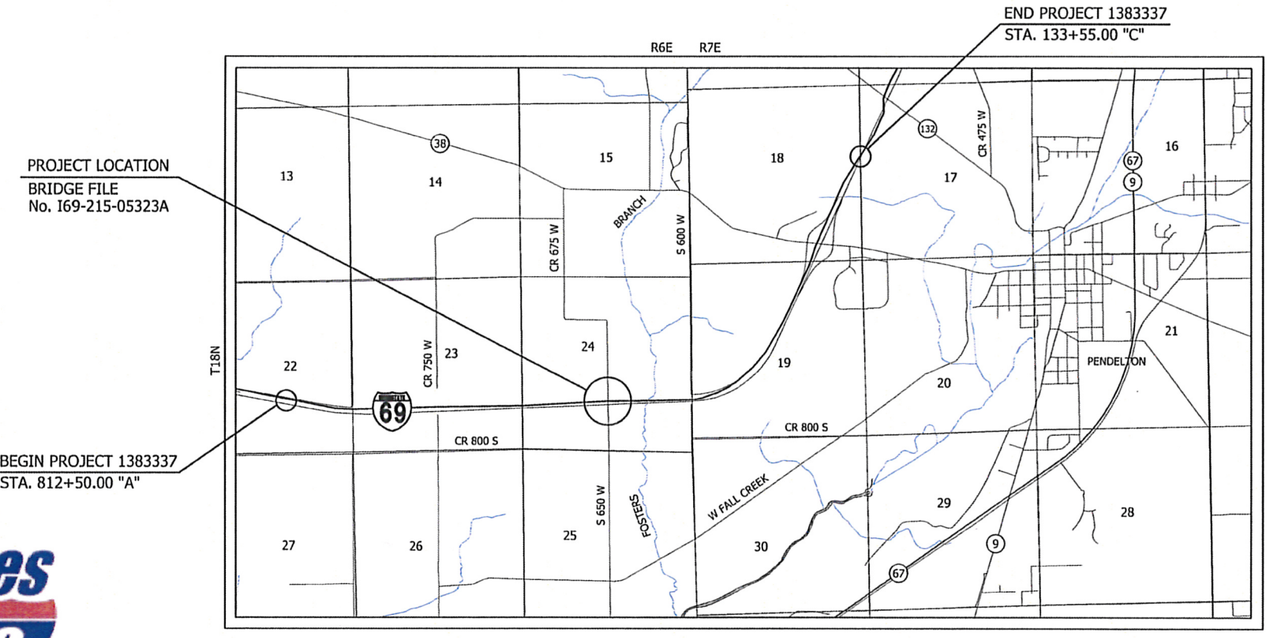
# BRIDGE REHABILITATION PLANS

FOR SPANS OVER 20 FEET
C.R. 650 WEST
OVER
I-69

## PROJECT NO. 1383332 P.E.

RP 216+95

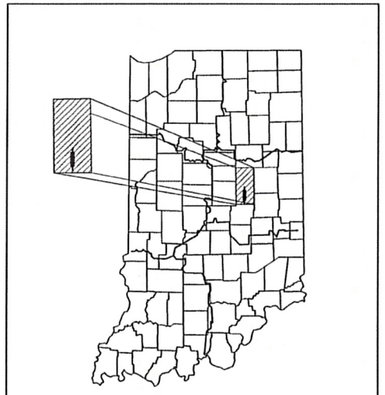
Bridge Rehabilitation on Structure I69-215-05323 over I-69 Located in Section 24, of Township 18 North, Range 6 East, in Green Township, Madison County Indiana.




LOCATION MAP
MADISON COUNTY

Scale 1" = 2000'

| TRAFFIC DATA | C.R. 650 WEST |
|---|---|
| A.D.T. (2015) | 240 V.P.D. |
| A.D.T. (2035) | 300 V.P.D. |
| D.H.V. (2035) | N/A |
| DIRECTIONAL DISTRIBUTION | 50% |
| TRUCKS | 10% A.A.D.T. |
| | |
| | |
| DESIGN DATA | C.R. 650 WEST |
| DESIGN SPEED | 50 M.P.H. |
| PROJECT DESIGN CRITERIA | PARTIAL 3R (NON-FREEWAY) |
| FUNCTIONAL CLASSIFICATION | MINOR COLLECTOR |
| RURAL/URBAN | RURAL |
| TERRAIN | LEVEL |
| ACCESS CONTROL | NONE |




LATITUDE: 39°59'30.36"N LONGITUDE: 85°47'46.16"W

| | |
|---|---|
| BRIDGE LENGTH : | 0.039 MI. |
| ROADWAY LENGTH : | 0.045 MI. |
| TOTAL LENGTH : | 0.084 MI. |
| MAX GRADE : | 4.00% |

MajorMoves 2020

**CERTIFIED TRUE COPY**
**SET 6 of 6**

[INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2016 TO BE USED WITH THESE PLANS]


UNITED Consulting
1625 N. Post Road
Indianapolis, Indiana 46219
Phone: 317-895-2585
Fax: 317-895-2596 Web: www.ucindy.com


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

CERTIFIED BY: Michael A. Rowe 9-17-15 DATE

APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

MICHAEL A. ROWE REGISTERED No. 10001062 STATE OF INDIANA PROFESSIONAL ENGINEER

| | BRIDGE FILE |
|---|---|
| | I69-215-05323A |
| | DESIGNATION |
| | 1383623 |
| SURVEY BOOK | SHEETS |
| | 1 of 6 |
| CONTRACT | PROJECT |
| R-37053 | 1383332 |

## UTILITIES

**Sanitary Sewer**

Hamilton Southeastern Utilities
11901 Lakeside Dr.
Fishers, IN 46038
Tom Kallio 317-690-1573
tkallio@samcoinc.us

**Gas**

Vectren Energy
16000 Allisonville Road - PO Box 1700
Noblesville, IN 46204
Brian Harger 317-776-5534
bharger@vectren.com

**Petroleum**

Marathon Pipe Line, LLC
539 South Main Street, RM 7642
Findlay, OH 45840
Dave Wisner 419-421-2211
dswisner@marathonpetroleum.com

**Lighting**

INDOT Lighting
Prakash Patel 317-233-3702
prpatel@indot.in.gov

**Water**

Citizens Energy Group
1220 Waterway Boulevard
Indianapolis, IN 46206
Scott Ritter
sritter@citizensenergygroup.com

**Electric**

Duke Energy Indiana, Inc.
1619 W. Deffenbaugh St.
Kokomo, IN 46902
Connie Maus 765-454-6180
connie.maus@duke-energy.com

**Telephone**

AT&T - LNS
300 North Point Pkwy
Alpharetta, GA 30005
Joel McKinney 770-335-9816
jcmckinney@att.com

**Miscellaneous**

ITS Technology Deployment Division
Konstantin Veygman 317-899-8606
kveygman@indot.in.gov

**Traffic Structures**

HERE
425 West Randolph
Chicago, IL 60606
Alexandra Archer 773-747-4247
Alexandra.Archer@HERE.com

## REVISIONS

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


| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | TITLE |
| 2 | INDEX |
| 3 | DETOUR PLAN |
| 4 | LAYOUT |
| 5 | GENERAL PLAN |
| 6 | BENT DETAILS |



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Fax 317-895-2596
www.ucindy.com


JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

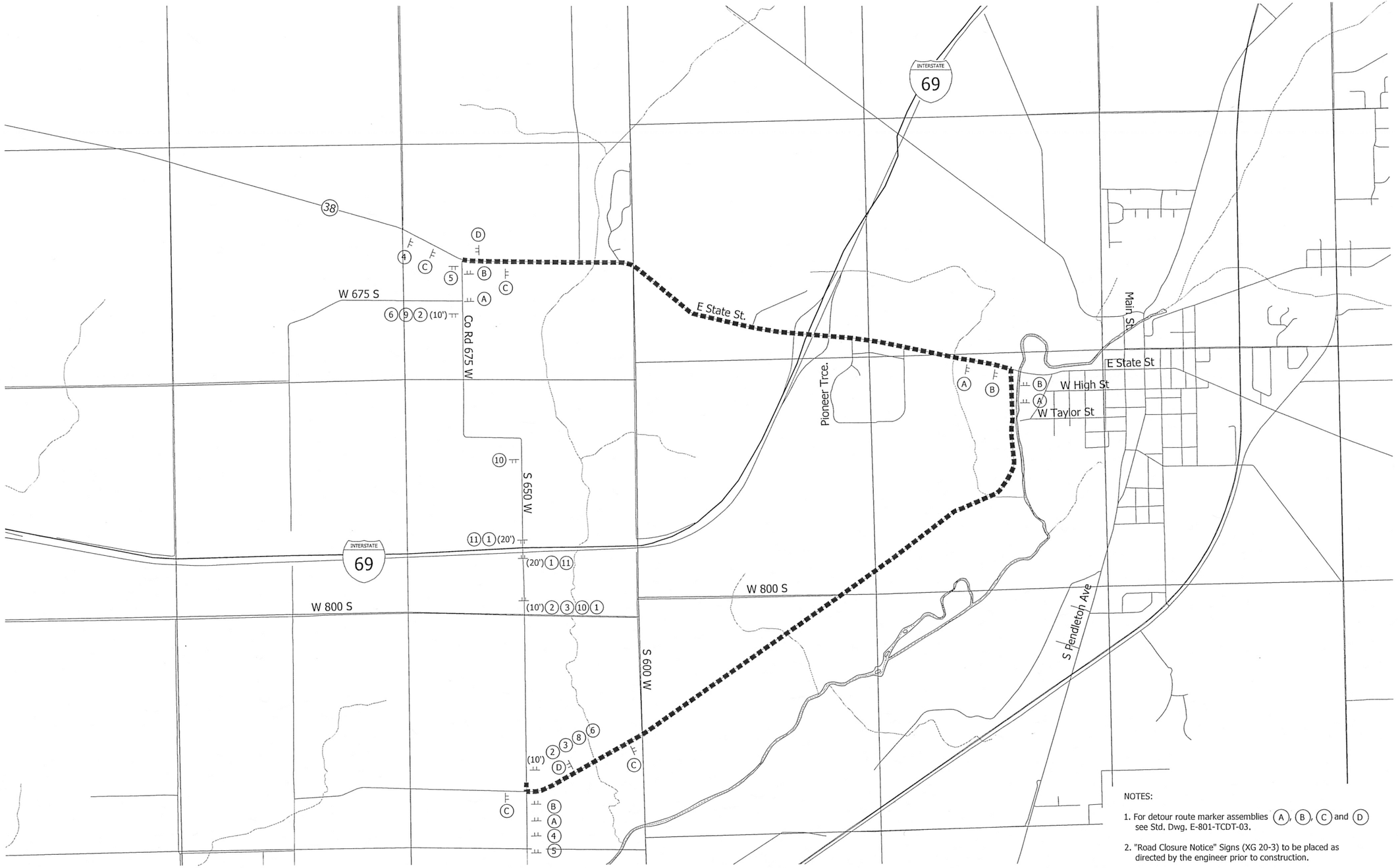
DESIGNED: NJK DRAWN: AJM
CHECKED: JNR CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX
CR650 W OVER I-65

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | I69-215-05323A |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | 1383623 |
| SURVEY BOOK | SHEETS |
| - | 2 of 6 |
| CONTRACT | PROJECT |
| R-37053 | 1383332 |


File Name: P:\C3D\MK15-469\Bridge\CR650W over I-69\Dwg\Plans\Index.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.




NOTES:

1. For detour route marker assemblies (A), (B), (C) and (D) see Std. Dwg. E-801-TCDT-03.
2. "Road Closure Notice" Signs (XG 20-3) to be placed as directed by the engineer prior to construction.

LEGEND

- Construction Area
- (1) Type III-A Barricade W/ Road Closure SIgn Assembly Req'd
- (2) Type III-B Barricade W/ Road Closure SIgn Assembly Req'd
- (3) XM4-10 (L/R)
- (4) Detour Ahead (XW 20-2)
- (5) Road Closed Ahead (XW 20-3)
- (6) Road Closed Sign Assembly (RII-3)
- (7) "ROAD CLOSED TO THRU TRAFFIC" (RII-4)
- (8) "ROAD CLOSED 0.2 MILES AHEAD LOCAL TRAFFIC ONLY"
- (9) "ROAD CLOSED 0.1 MILES AHEAD LOCAL TRAFFIC ONLY"
- (10) "ROAD CLOSED 500 FT" (XW20-3)
- (11) "ROAD CLOSED" (RII-2)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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

DESIGNED: NJK DRAWN: DJZ

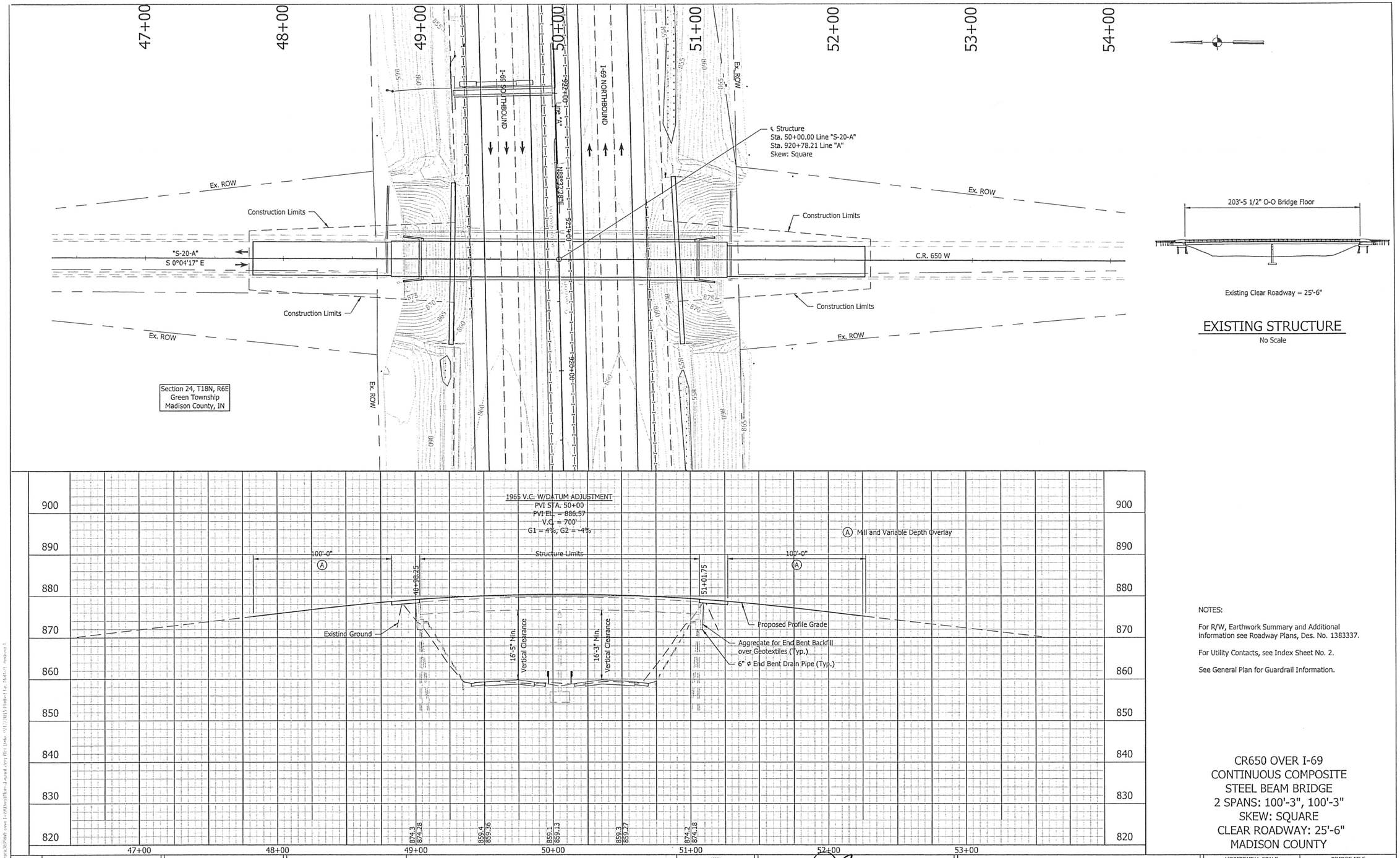
CHECKED: JNR CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN
CR650 OVER I-65

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | I69-215-05323A |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | 1383623 |
| SURVEY BOOK | SHEETS |
| - | 3 of 6 |
| CONTRACT | PROJECT |
| R-37053 | 1383332 |

File Name: P:\C3D\MK15-469\Bridge\CR650W over I-69\Dwg\Plans\Detour.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.







Existing Clear Roadway = 25'-6"

## EXISTING STRUCTURE

No Scale

NOTES:

For R/W, Earthwork Summary and Additional information see Roadway Plans, Des. No. 1383337.

For Utility Contacts, see Index Sheet No. 2.

See General Plan for Guardrail Information.

CR650 OVER I-69
CONTINUOUS COMPOSITE
STEEL BEAM BRIDGE
2 SPANS: 100'-3", 100'-3"
SKEW: SQUARE
CLEAR ROADWAY: 25'-6"
MADISON COUNTY

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1625 N. Post Road
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RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

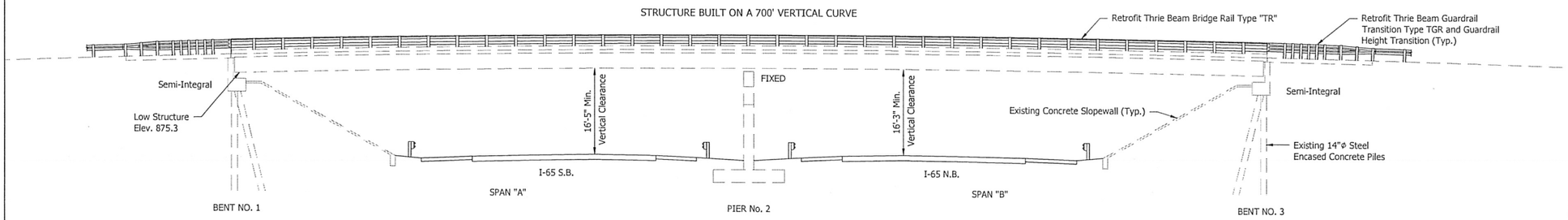
DESIGNED: NJK | DRAWN: AJM | CHECKED: JNR | CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

LAYOUT
C.R. 650 OVER I-65

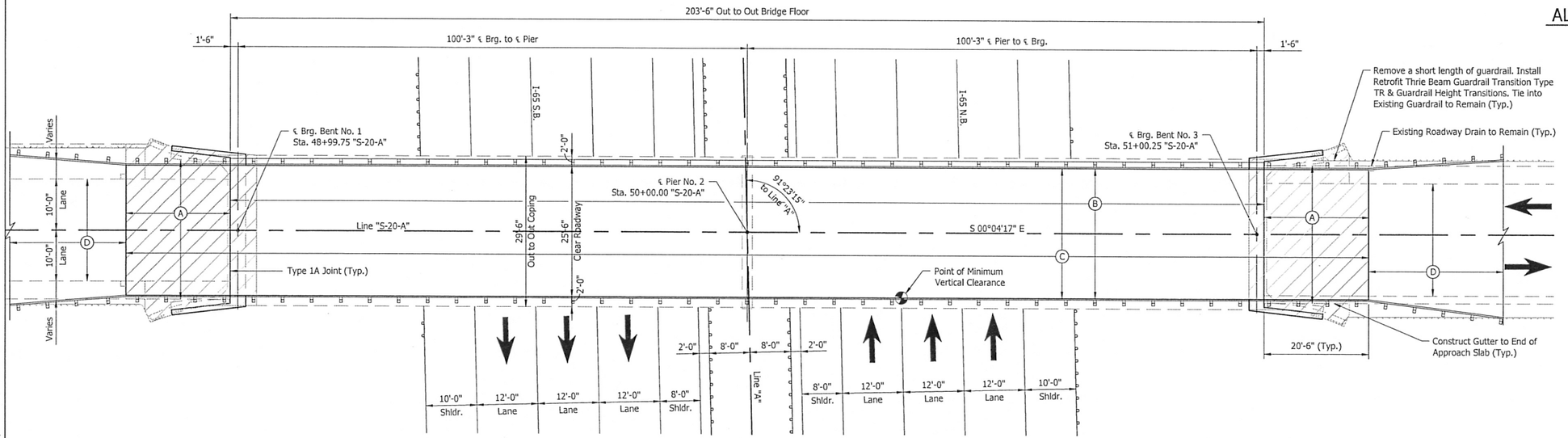
| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| 1" = 30' | I69-215-05323A |
| VERTICAL SCALE | DESIGNATION |
| 1" = 10' | 1383623 |
| SURVEY BOOK | SHEETS |
| - | 4 of 6 |
| CONTRACT | PROJECT |
| R-37053 | 1383332 |

File Name: I:\...\1383332_650OVER_I69_Layout.dgn PW Date: 9/17/2015 10:08:47 AM Plotted by: Jay N. Ridens



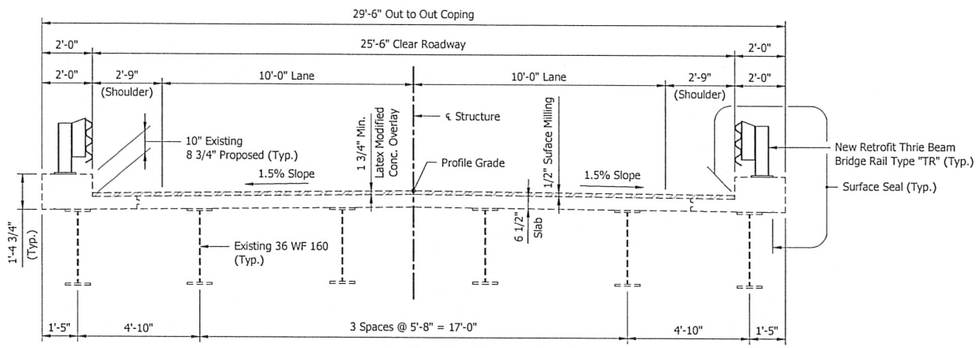

## ELEVATION

Scale: 3/32" = 1'-0"




## PLAN

Scale: 3/32" = 1'-0"




## TYPICAL SECTION

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

## GENERAL NOTES

Plans for existing structure are on file as bridge file I69-15-05323 and are available upon request.

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

Surface seal all exposed new concrete surfaces of bents, wingwall, face of deck coping and underside of deck to the face of exterior beam. (Estimated Quantity = XX)

## DESIGN DATA

Superstructure & Substructure Designed for HS-20 Loading in accordance with AASHTO Standard Specifications Seventeenth Edition, 2002, and subsequent interims. Designed for actual dead load plus 35 psf. of future wearing surface.

## ALLOWABLE DESIGN STRESSES

Concrete Class C, f'c = 4,000 psi
Reinforcing Steel, Fy = 60,000 psi

## SEISMIC DESIGN DATA

Seismic Performance Zone = Zone 1
Acceleration Coefficient ($S_{D1}$) = 0.114
Seismic Soil Profile Type = Site Class D

## DESIGN STRENGTHS

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

## LEGEND

(A) Remove Existing Bridge Approach Railings, Approach Slabs, Approach Slab Transition, and Joint Material.

(B) Remove End Bent Mudwalls, Rocker Bearings, and Wingwalls to Existing Bridge Seats, Remove Existing Bridge Rail, Remove 5' Width of Existing Deck Slab over End Bents, Surface Mill Bridge Deck, Perform Hydrodemolition & Partial Depth Patching as Needed.

(C) Construct Semi-Integral End Bents, Wingwalls, and Bridge Deck Overlay, Retrofit Type TR Bridge Railings, Reinforced Concrete Bridge Approaches, and Retrofit Type TGR Guardrail Transitions.

(D) Limits of 100' Length Roadway Approach mill and overlay.

Indicates limits of removal

CONTINUOUS COMPOSITE
STEEL BEAM BRIDGE
2 SPANS: 100'-3", 100'-3"
SKEW: SQUARE
25'-6" CLEAR ROADWAY
C.R. 650 E OVER I-69
MADISON COUNTY

| DATE | REVISION |
|---|---|
| | |
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RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

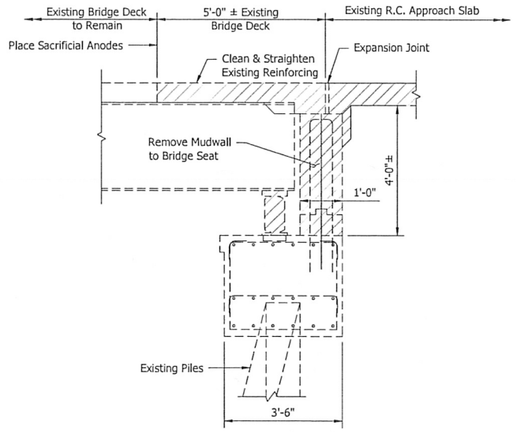
INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
C.R. 650 OVER I-69

| | |
|---|---|
| DESIGNED: NJK | DRAWN: AJM |
| CHECKED: JNR | CHECKED: JNR |

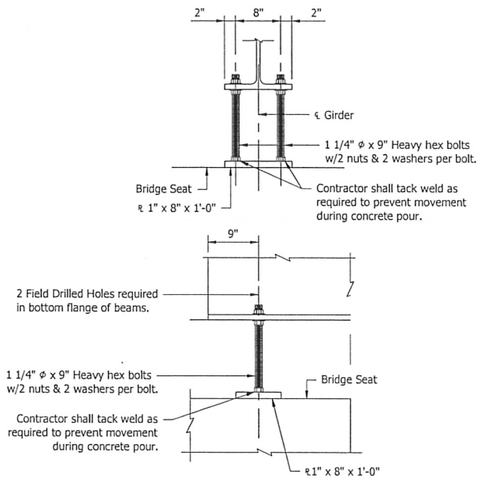
| | |
|---|---|
| HORIZONTAL SCALE | BRIDGE FILE |
| AS NOTED | I69-215-05323A |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | 1383623 |
| SURVEY BOOK | SHEETS |
| - | 5 of 6 |
| CONTRACT | PROJECT |
| R-37053 | 1383332 |

File Name: P:\CD\HK15-469\Bridge\CR650W over I-69\Dwg\Plans\GP.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.



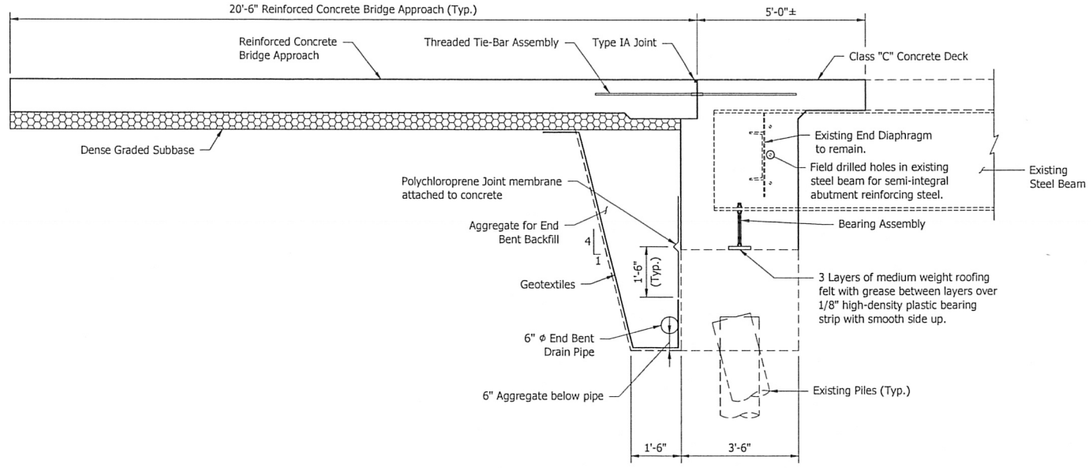

## TYPICAL SECTION EXISTING END BENT REMOVAL

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



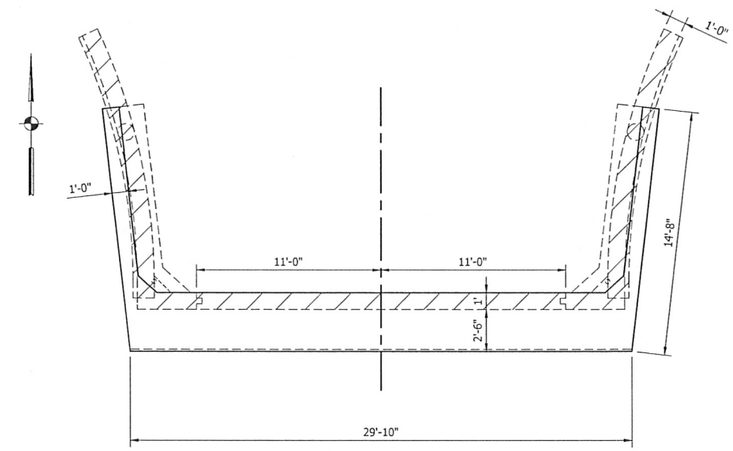

## BEARING ASSEMBLY @ END BENTS

Scale: 1" = 1'-0"



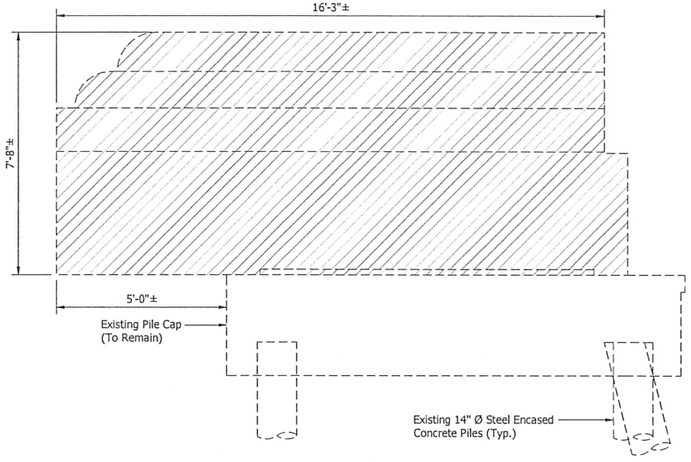

## TYPICAL SECTION - PROPOSED SEMI INTEGRAL END BENT

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



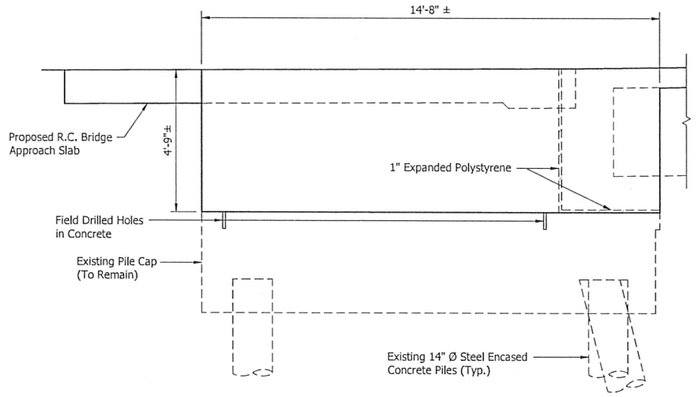

## PLAN - TYPICAL END BENT

(END BENT NO. 1 SHOWN)
Scale: 1/4" = 1'-0"




## TYPICAL EXISTING WING ELEVATION - REMOVAL

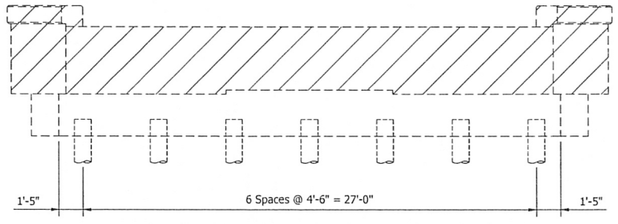
Scale: 1/2" = 1'-0"




## TYPICAL PROPOSED WING ELEVATION

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

- Indicates Limits of Removal




## ELEVATION - TYPICAL END BENT

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

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

DESIGNED: NJK DRAWN: DJZ CHECKED: JNR CHECKED: JNR

INDIANA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE DETAILS
C.R. 650 OVER I-69

| HORIZONTAL SCALE | BRIDGE FILE |
|---|---|
| AS NOTED | 169-215-05323A |
| VERTICAL SCALE | DESIGNATION |
| AS NOTED | 1383623 |
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| CONTRACT | PROJECT |
| R-37053 | 1383332 |

File Name: P:\C3D\Mk15-469\Bridge\CR650W over I-69\Dwg\Plans\Substructure.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.