

**JOHNSON CO.**  
**BRIDGE - UNSPECIFIED**  
**BRF-001-5(106)--38-52**

LETTING DATE  
 10/16/2018



**Highway Division**

PLANS OF PROPOSED IMPROVEMENT ON THE

**PRIMARY ROAD SYSTEM**  
**JOHNSON COUNTY**  
**BRIDGE - UNSPECIFIED**

**RALSTON CREEK 2.3 MILES S. OF I-80 (NB)**

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

14-52-001-010

PROJECT NUMBER

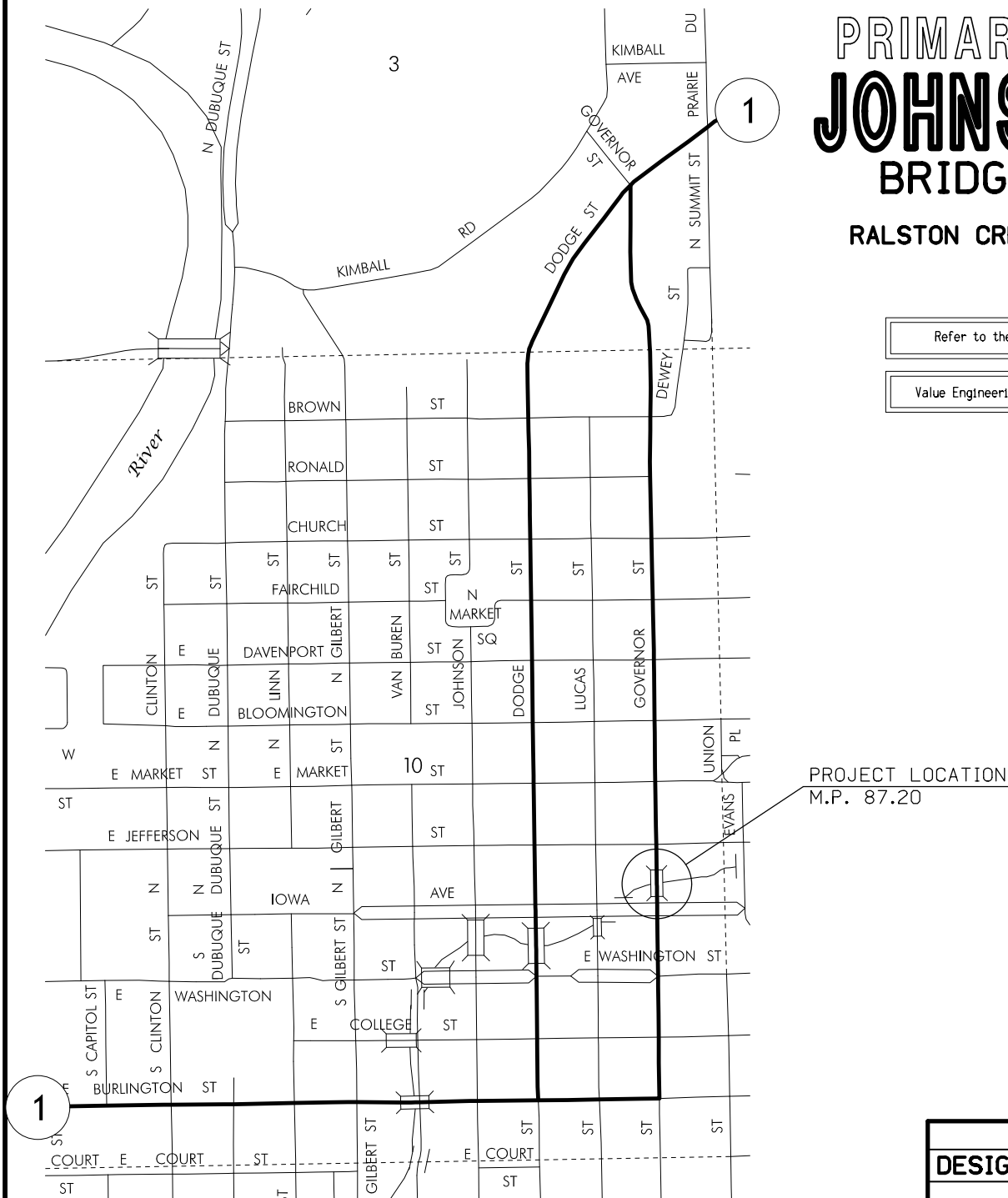
BRF-001-5(106)--38-52

R.O.W. PROJECT NUMBER

NHSN-001-5(107)--2R-52

**INDEX OF SHEETS**

| No.                 | DESCRIPTION                                      |
|---------------------|--|
| <b>A Sheets</b>     | <b>Title Sheets</b>                              |
| A.1                 | Title Sheet                                      |
| <b>B Sheets</b>     | <b>Typical Cross Sections and Details</b>        |
| B.1                 | Typical Cross Sections and Details               |
| <b>D Sheets</b>     | <b>Mainline Plan and Profile Sheets</b>          |
| * D.1               | Plan & Profile Legend & Symbol Information Sheet |
| * D.2               | IA 1 Plan & Profile                              |
| <b>G Sheets</b>     | <b>Survey Sheets</b>                             |
| G.1                 | Reference Ties and Bench Marks                   |
| <b>J Sheets</b>     | <b>Traffic Control and Staging Sheets</b>        |
| J.1                 | Traffic Control Plan                             |
| <b>V Sheets</b>     | <b>Bridge and Culvert Situation Plans</b>        |
| V.1 - 4             | Bridge and Culvert Situation Plan                |
| <b>W Sheets</b>     | <b>Mainline Cross Sections</b>                   |
| W.1 - 4             | Cross Sections Legend & Symbol Information Sheet |
| * Color Plan Sheets |  |



PROJECT LOCATION  
M.P. 87.20

**DESIGN DATA URBAN**

|                    |      |        |
|--------------------|------|--------|
| 2019 AADT          | 7200 | V.P.D. |
| 2039 AADT          | 9100 | V.P.D. |
| 2039 DHV           | 940  | V.P.H. |
| TRUCKS             | 4    | %      |
| Total Design ESALs | --   |        |

**INDEX OF SEALS**

| SHEET NO. | NAME | TYPE                    |
|-----------|------|-------------------------|
| A.1       | X    | Primary Signature Block |
| X         | X    | X                       |

D4 PLAN - Date: 6-19-2018  
 B3 PLAN - Date: 8-7-2018

**PRELIMINARY PLANS**

Subject to change by final design.

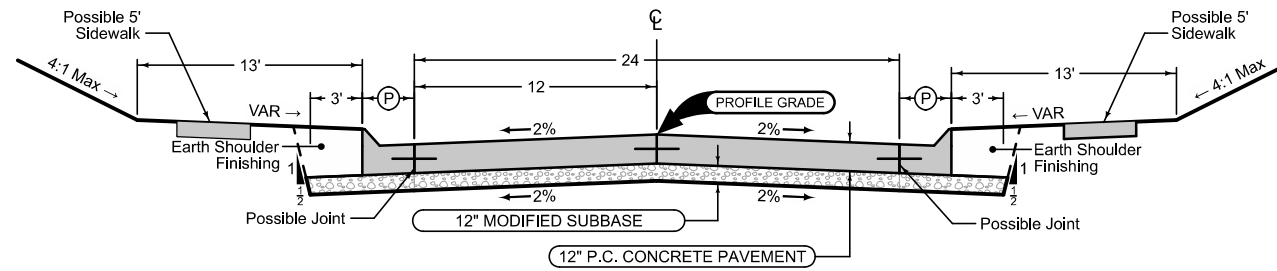
D5 PLAN - Date: 12-29-2016

**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of  
 curb to nearest joint is less than 15':

Single pour: L-2  
 Staged : KT-2  
 Transverse:C at 20' spacing

| STATION TO STATION |         | (P)<br>Feet | Curb Type<br>See PV-102 |
|--------------------|---------|-------------|-------------------------|
| 1+88.75            | 2+79.00 | 3.5         | 6" STD                  |
| 3+21.00            | 4+31.25 | 3.5         | 6" STD                  |



**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of  
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Single pour: L-2  
 Staged : KT-2  
 Transverse:C at 20' spacing

| STATION TO STATION |         | (P)<br>Feet | Curb Type<br>See PV-102 |
|--------------------|---------|-------------|-------------------------|
| 1+88.75            | 2+79.00 | 3.5         | 6" STD.                 |
| 3+21.00            | 4+31.25 | 3.5         | 6" STD.                 |

Mainline Jointing:  
 Transverse joints: CD at 20' spacing  
 Longitudinal joint: L-2

| STATION TO STATION |         |
|--------------------|---------|
| 1+88.75            | 2+79.00 |
| 3+21.00            | 4+31.25 |

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**IA 1**

**SURVEY SYMBOLS**

**UTILITY LEGEND**

CenturyLink  
Local Fiber Optic  
Steven Parker  
2103 E. University Ave. 1st Floor  
Des Moines, IA 50317  
515-265-0698

City of Iowa City  
Sanitary Sewer; Water  
410 E. Washington Street  
Iowa City, IA 52240  
319-356-5438

Mediacom  
Cable TV  
Kevin Fountain  
546 Southgate Avenue  
Iowa City, IA 52240  
319-351-0408

MidAmerican Energy Company  
Electric Distribution  
Adam Streeter  
260 Fairview Avenue  
Waterloo, IA 50703  
319-291-4742

MidAmerican Energy Company  
Gas Distribution  
Jennifer Kinney  
602 D Avenue NW  
Cedar Rapids, IA 52405-3822  
319-298-5156

**PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS**

| LINEWORK         | Design Color No. |  |
|------------------|------------------|--|
| Green            | (2)              | Existing Topographic Features and Labels                               |
| Blue             | (1)              | Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation    |
| Magenta          | (5)              | Existing Utilities   |
| SHADING          |                  |  |
| Design Color No. |                  |  |
| Yellow           | (4)              | Highlight for Critical Notes or Features                               |
| Red              | (3)              | Delineates Restricted Areas  |
| Lavender         | (9)              | Temporary Pavement Shading   |
| Gray, Light      | (48)             | Proposed Pavement Shading  |
| Gray, Med        | (80)             | Proposed Granular Shading  |
| Gray, Dark       | (112)            | Proposed Grade and Pave Shading "In conjunction with a paving project" |
| Brown, Light     | (236)            | Grading Shading  |
| Tan              | (8)              | Proposed Sidewalk Shading  |
| Blue, Light      | (230)            | Proposed Sidewalk Landing Shading                                      |
| Pink             | (11)             | Proposed Sidewalk Ramp Shading   |

**PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS**

| LINEWORK    | Design Color No. |                                 |
|-------------|------------------|---------------------------------|
| Green       | (2)              | Existing Ground Line Profile    |
| Blue        | (1)              | Proposed Profile and Annotation |
| Magenta     | (5)              | Existing Utilities              |
| Blue, Light | (230)            | Proposed Ditch Grades, Left     |
| Black       | (0)              | Proposed Ditch Grades, Median   |
| Rust        | (14)             | Proposed Ditch Grades, Right    |

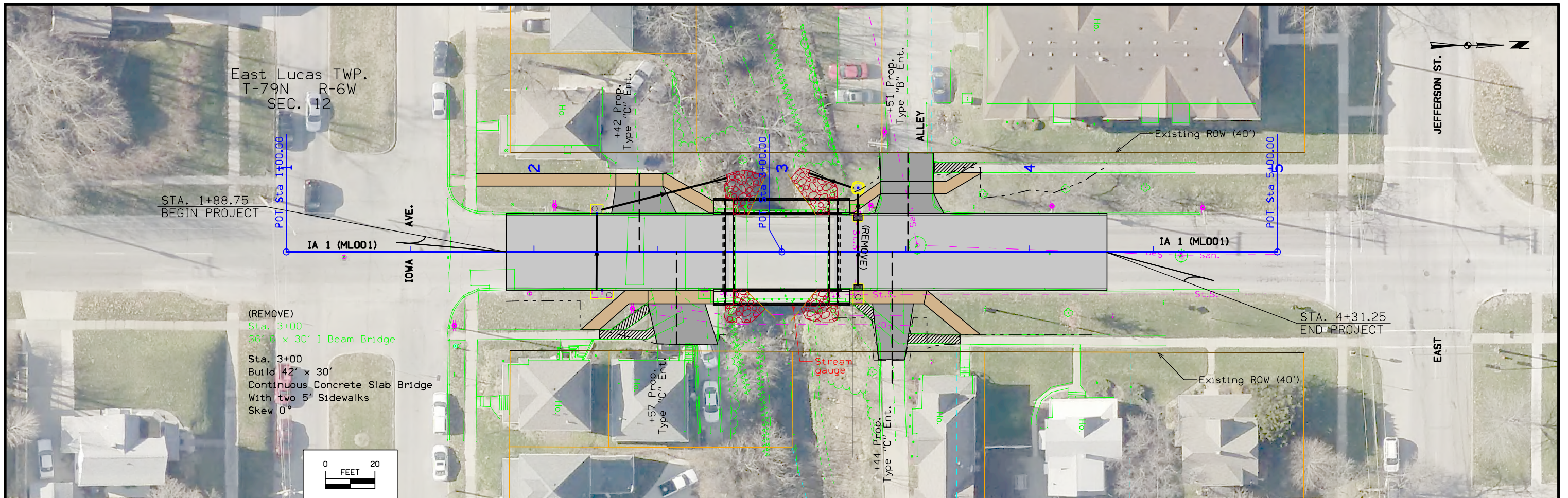
|  |                             |
|--|-----------------------------|
|  | Reference Point             |
|  | Station                     |
|  | Survey Line                 |
|  | Section Corner              |
|  | Ground Line Intercept       |
|  | Saw Cut                     |
|  | Guardrail                   |
|  | Trench Drain                |
|  | HighTension Cable Guardrail |
|  | Sheet Pile                  |
|  | Pavement Removal            |
|  | Clearing & Grubbing Area    |

| RIGHT-OF-WAY LEGEND |                                    |
|---------------------|------------------------------------|
|                     | Proposed Right-of-Way              |
|                     | Existing Right of Way              |
|                     | Existing and Proposed Right-of-Way |
|                     | Easement and Existing Right-of-Way |
|                     | Easement (Temporary)               |
|                     | Easement                           |
|                     | Access Control                     |
|                     | Property Line                      |

**PLAN AND PROFILE  
LEGEND AND SYMBOL  
INFORMATION SHEET**

(COVERS SHEET SERIES D, E, F, & K)

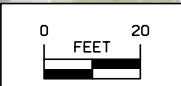




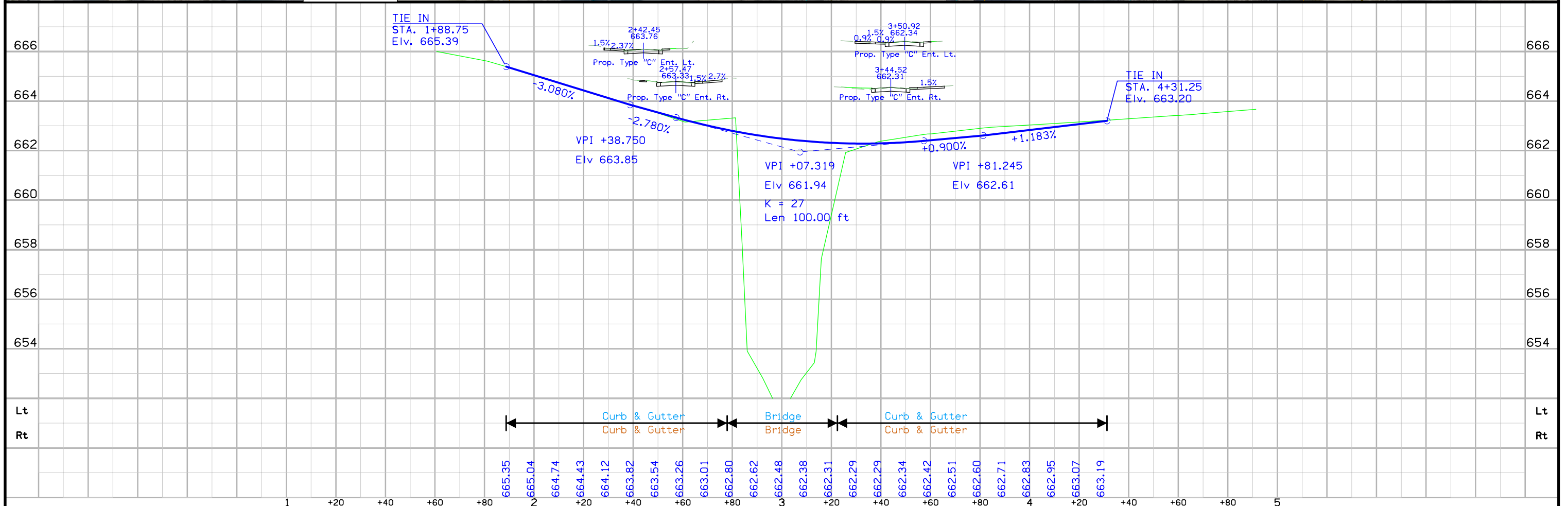
East Lucas TWP.  
T-79N R-6W  
SEC. 12

STA. 1+88.75  
BEGIN PROJECT

(REMOVE)  
Sta. 3+00  
36'-6" x 30' I Beam Bridge  
Sta. 3+00  
Build 42' x 30'  
Continuous Concrete Slab Bridge  
With two 5' Sidewalks  
Skew 0°



STA. 4+31.25  
END PROJECT





## Survey Information

### General Information

Measurement units for this survey are US survey feet. This survey is for the replacement of the Iowa Highway 1 northbound bridge (Maintenance No. 5287.2R001) over Ralston Creek, 2.3 miles south of I-80 in Iowa City.

### Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid 12a). The Ellipsoidal Height was computed at on one benchmark by averaging multiple observations with appropriate time span between from nearby Iowa RTN reference Stations. Addition benchmark and elevations on control points were then established using differential leveling.

### Horizontal Control

The project coordinate system for this survey is the Iowa Regional Coordinate System (IaRCS) Zone 10 (U.S. Survey Feet). The survey control is relative to IaRTN reference stations.

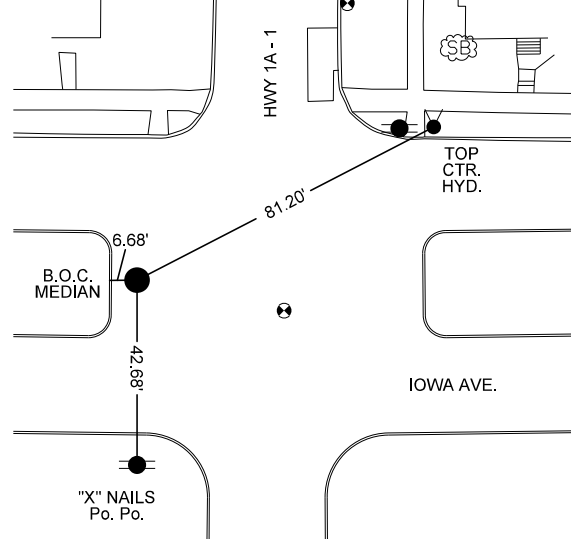
### Alignment Information

The horizontal alignment for this survey is a retrace of As-built plans City of Iowa city Proposed Improvement on Governor Street 36'-6" x 30'-0" Steel Beam Bridge (Shiver-Hattery and Associates) June 1978.

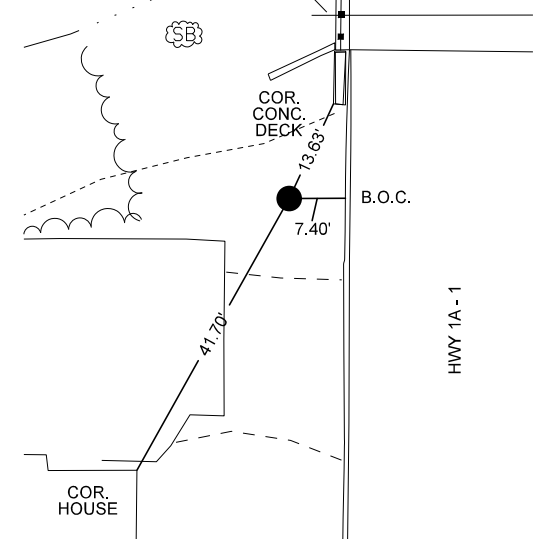
## VERTICAL CONTROL

| Point | North       | East         | Elevation | Station   | Offset    | Feature | Description  |
|-------|-------------|--------------|-----------|-----------|-----------|---------|--|
| BM1   | 7937343.480 | 20539343.303 | 669.730   | 1+68.21   | 38.064    | BM      | TOP CENTER BOLT OF HYD AT NE COR OF HWY 1 AND IOWA AVE     |
| BM2   | 7937767.000 | 20539348.000 | 667.990   | Off Chain | Off Chain | BM      | TOP CENTER BOLT OF HYD AT NE COR OF HWY 1 AND JEFFERSON ST |

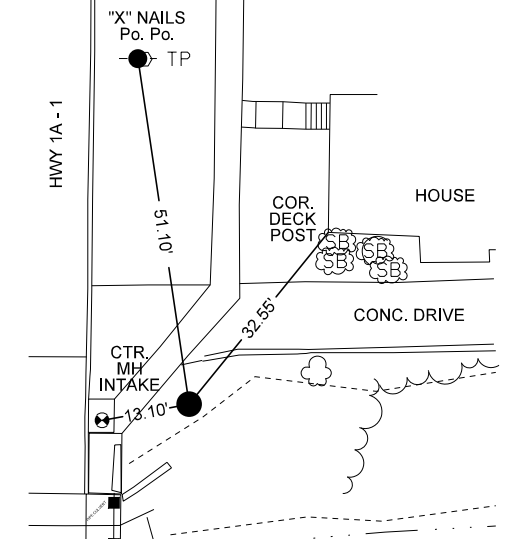
C.P. STA. 1+30.53, Lt. 33.78  
C.P. G1, SET 1/2 IN X24 IN REBAR  
N=7937306.299, E=20539271.200



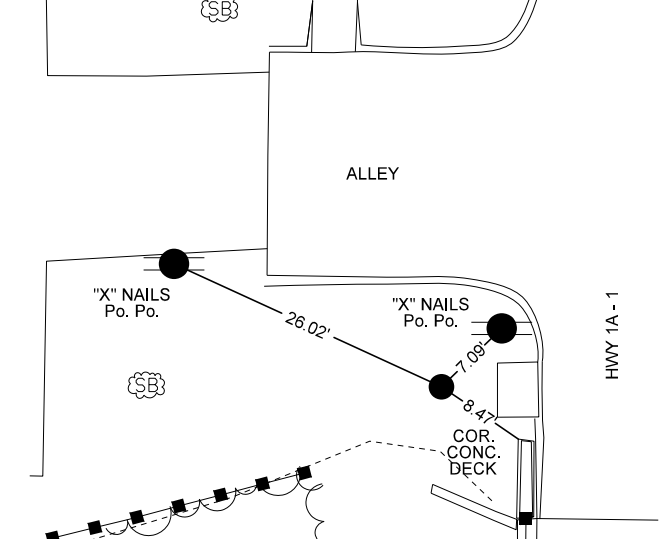
C.P. STA. 2+61.67, Lt. 23.13  
C.P. G2, SET 1/2 IN X24 IN REBAR  
N=7937437.368, E=20539282.770



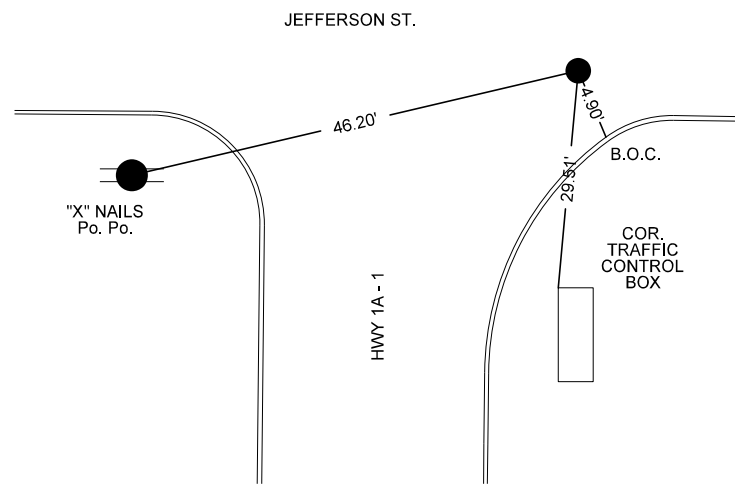
C.P. STA. 3+31.70, Rt. 29.93  
C.P. G3, SET 1/2 IN X24 IN REBAR  
N=7937507.021, E=20539336.320



C.P. STA. 3+30.54, Lt. 24.12  
C.P. G4, SET 1/2 IN X24 IN REBAR  
N=7937506.246, E=20539282.260

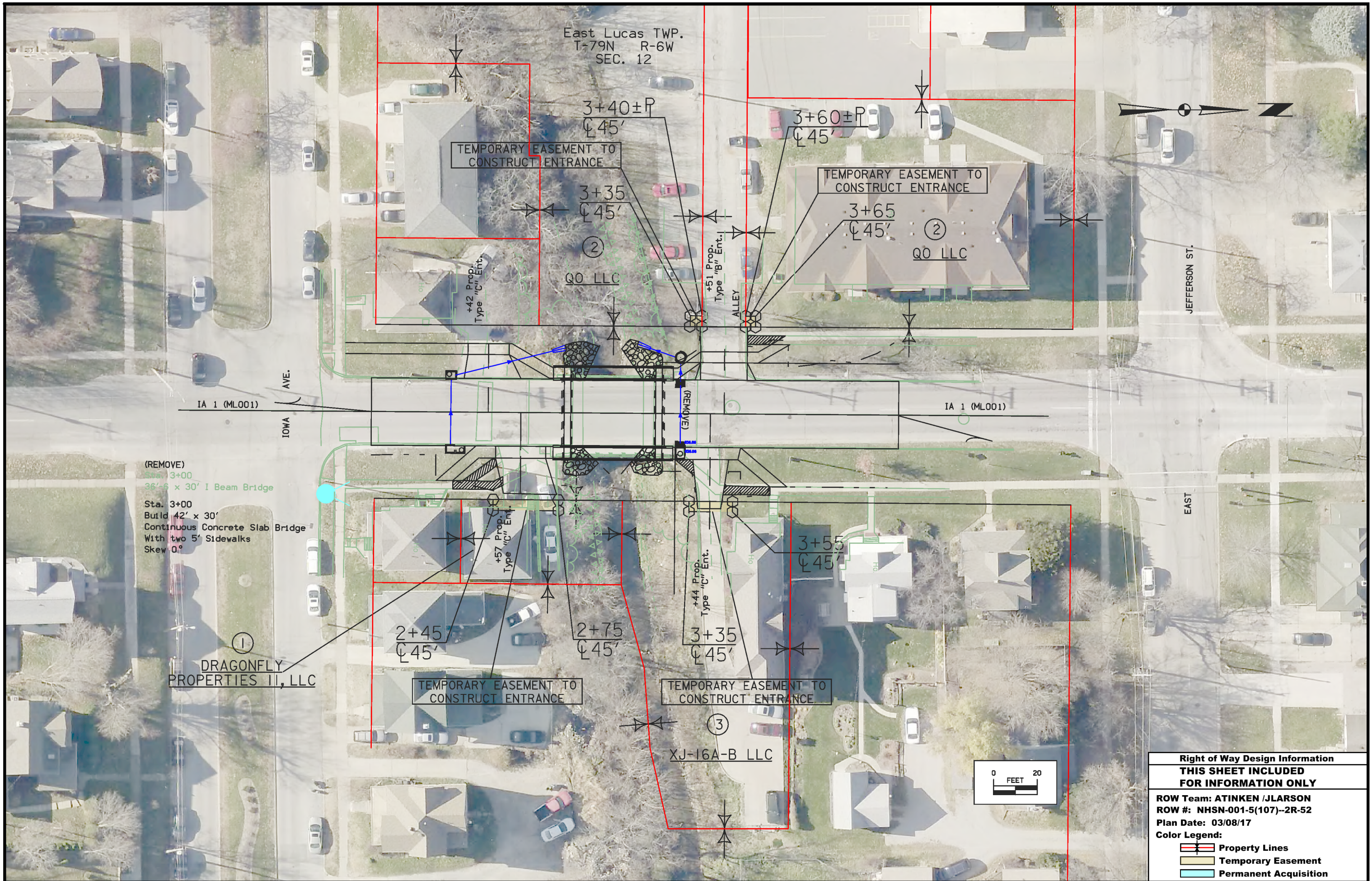


C.P. STA. OffChain, Rt.  
C.P. G5, SET 1/2 IN X24 IN REBAR  
N=7937710.974, E=20539335.770



|           |                                     |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
|-----------|-------------------------------------|-------|------|--------|---------------|------|------|--------|------|------|------------|-------|-------|-------------|----------|------------|--|--|
| Johnson   | ROW: NHSN-001-5(107)--2R-52         |       |      | PIN    | 14-52-001-010 |      |      |        |      |      |            |       |       |             |          |            |  |  |
|           | Ralston Creek 2.3 mi S of I-80 (NB) |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
|           |                                     |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
|           |                                     | STATE |      | COUNTY |               | CITY |      | BORROW |      |      |            |       |       |             |          |            |  |  |
| PARCEL N  | OWNER NAM                           | FEE   | EASE | FEE    | EASE          | FEE  | EASE | EXCESS | FEE  | T.E. | MITIGATION | OTHER | HOUSE | BUILDING(S) | A/C ONLY | TOTAL ACQ. |  |  |
| 1         | DRAGONFLY PROPERTIES II, LLC - Fee  |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
| 2         | QO LLC - Fee                        |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
| 3         | XJ-16A-B LLC - Fee                  |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
|           |                                     |       |      |        |               |      |      |        |      |      |            |       |       |             |          |            |  |  |
| 3 Parcels | "TOTALS                             | 0 AC  | 0 AC | 0 AC   | 0 AC          | 0 AC | 0 AC | 0 AC   | 0 AC | 0 AC | 0 AC       | 0 AC  |       |             |          |            |  |  |
|           |                                     | 0 SF  | 0 SF | 0 SF   | 0 SF          | 0 SF | 0 SF | 0 SF   | 0 SF | 0 SF | 0 SF       | 0 SF  |       |             |          |            |  |  |





(REMOVE)  
 Sta. 3+00  
 36'-6" x 30' I Beam Bridge  
 Sta. 3+00  
 Build 42' x 30'  
 Continuous Concrete Slab Bridge  
 With two 5' Sidewalks  
 Skew 0°

①  
 DRAGONFLY  
 PROPERTIES II, LLC

TEMPORARY EASEMENT TO  
 CONSTRUCT ENTRANCE

TEMPORARY EASEMENT TO  
 CONSTRUCT ENTRANCE

|   |                       |
|---|-----------------------|
| <b>Right of Way Design Information</b>          |                       |
| <b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b> |                       |
| ROW Team: ATINKEN /JLARSON                      |                       |
| ROW #: NHSN-001-5(107)--2R-52                   |                       |
| Plan Date: 03/08/17                             |                       |
| Color Legend:                                   |                       |
|   | Property Lines        |
|   | Temporary Easement    |
|   | Permanent Acquisition |



108-23A  
08-01-08

**TRAFFIC CONTROL PLAN**

Access to all properties shall be maintained at all times.

Traffic on IA 1 shall be maintained via off-site detour.

Installation, maintenance, and removal of the detour signs are the responsibility of the contractor. Refer to sheet J.x. The detour route signs will be provided by the DOT.

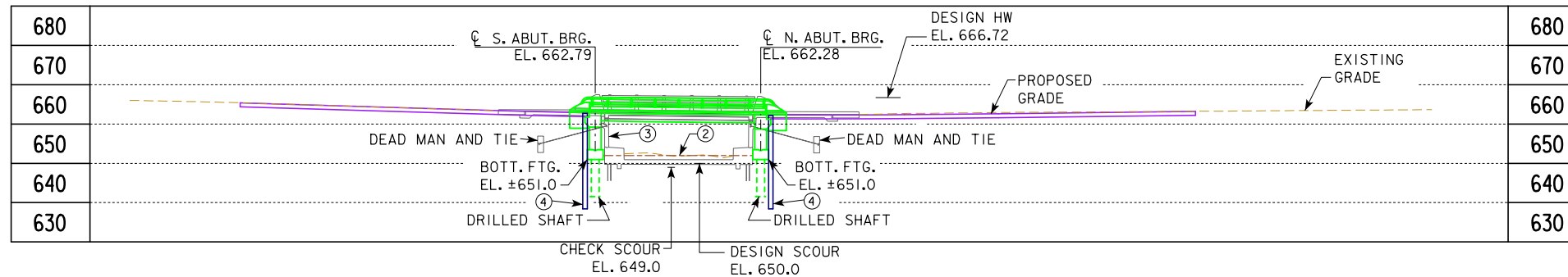
108-25  
10-21-14

**511 TRAVEL RESTRICTIONS**

| Route | Direction | County  | Location Description | Feature Crossed | Object Type | Maint. Bridge No.,<br>Structure ID,<br>or FHWA No. | Type of<br>Restriction | Existing<br>Measurement | Construction<br>Measurement | Construction<br>Measurement<br>as Signed | Projected<br>As Built<br>Measurement | Remarks |
|-------|-----------|---------|----------------------|-----------------|-------------|--|------------------------|-------------------------|-----------------------------|--|--------------------------------------|---------|
| IA 1  | NB        | Johnson | M.P. 87.20           | Road Closure    |             |  |                        |                         |                             |  |                                      |         |
|       |           |         |                      |                 |             |  |                        |                         |                             |  |                                      |         |
|       |           |         |                      |                 |             |  |                        |                         |                             |  |                                      |         |
|       |           |         |                      |                 |             |  |                        |                         |                             |  |                                      |         |

TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 0.03'  
BELOW THE PROFILE GRADE TO ACCOUNT FOR DECK  
CROSS SLOPE AND PARABOLIC CROWN.

BENCH MARK I TOP CENTER BOLT OF HYDRANT AT NE CORNER OF IA I AND IOWA AVE, STA 1+68.21, 38.06' RT EL. 669.730



LONGITUDINAL SECTION ALONG  $\phi$  APPROACH ROADWAY

- ① STREAM BANK PROTECTION CLASS E REVET. (2' THICK. MIN.) UNDERLAIN W/ ENGR. FABRIC
- ② PROPOSED STREAMBED EL. 652.00
- ③ EXISTING BRIDGE 36'-6" X 30' I BEAM TO BE REMOVED
- ④ STEEL SHEET PILE. PLACE SHEET PILE SUCH THAT OUTER EDGE OF FOOTING BUTTS UP AGAINST SHEET PILE. CUT DEAD MAN TIES AS NECESSARY TO INSTALL SHEET PILE. REMOVE EXISTING PAVEMENT, SIDEWALK OR EXISTING BRIDGE WING WALLS PRIOR TO INSTALLING SHEET PILE. REMOVE TOP OF SHEET PILE AS NECESSARY TO CONSTRUCT ABUTMENTS, STORM SEWER, END WALLS, SIDEWALK APPROACH SLABS, REVETMENT AND NEW PAVEMENT; REMAINDER OF SHEET PILE TO BE LEFT IN PLACE. SEE DETAIL SHEET V.3.

**HYDRAULIC DATA**

DRAINAGE AREA = 7.3 SQ. MI.  
STREAM SLOPE = 19.6 FT./MI.  
AVG. LOW WATER STAGE = 652.5

$Q_{50} = 4,000$  CFS  
STAGE = 665.73  
REGULATORY LOW BEAM = 660.18  
BACKWATER = 0.00 FT.  
AVG. BRIDGE VELOCITY = 3.3 FPS

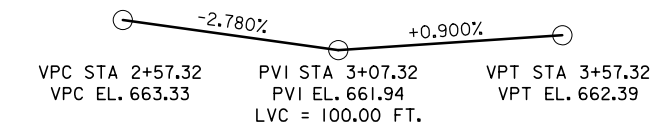
$Q_{100} = 5,000$  CFS  
STAGE = 666.72  
OPERATIONAL LOW BEAM = 659.98  
BACKWATER = 0.03 FT.  
AVG. BRIDGE VELOCITY = 2.9 FPS

$Q_{200} = 6,300$  CFS  
STAGE = 667.70  
CALCULATED DESIGN SCOUR = 650.0

$Q_{OVERTOP} = 1,600$  CFS  
AVG. BRIDGE VELOCITY = 4.7 FPS  
CALCULATED CHECK SCOUR = 649.0  
ROADWAY OVERTOP 662.28  
STA. 3+32.86

$Q_{500} = 8,000$  CFS

EXTREME HW STAGE = UNKNOWN  
DATE = UNKNOWN



PROPOSED PROFILE GRADE IA I

NOTES TO FINAL DESIGNER

1. HIGH ABUTMENTS SHOWN DUE TO SPACE LIMITATIONS AT SITE.
2. DRILLED SHAFT FOUNDATIONS SHOWN DUE TO CLOSE PROXIMITY OF HOUSES AND APARTMENT BUILDINGS; VIBRATION MONITORING SHALL BE PERFORMED DURING CONSTRUCTION.
3. SEPARATION BARRIER RAIL AND OUTER SIDEWALK FENCE TO MATCH DESIGN OF IA I (E. BURLINGTON ST.) BRIDGE OVER RALSTON CREEK IN IOWA CITY; MAINT. NO. 5286.5S001, FHWA NO. 31740, PROJECT BRF-001-5(54)--38-52, (IGNORE PHOTO ON PAGE 7 OF FINAL CONCEPT).
4. MAXIMUM LENGTH OF SEPARATION RAIL END SECTION IS 5 FEET (THIS SUPERSEDES FINAL CONCEPT STATEMENT).
5. ASSUMED DECK THICKNESS OF 24 INCHES.

UTILITIES LEGEND:

- - ELEC. - MIDAMERICAN ENERGY
- - ST. S. - CITY OF IOWA CITY
- - SAN. - CITY OF IOWA CITY
- - FO - FIBER OPTIC - CENTURY LINK
- - FO2 - FIBER OPTIC - CENTURY LINK
- - W - WATER - CITY OF IOWA CITY

50, 100 & 500 YR. STAGES AND DISCHARGES FROM JOHNSON COUNTY F.I.S., DATED FEBRUARY 16, 2007. F.I.S. DATUM 0.0 FT. ABOVE/BELOW PROJECT DATUM.

LOCATION

IA I (GOVERNOR ST.) OVER RALSTON CREEK  
T-79N R-6W  
SECTION 10  
EAST LUCAS TOWNSHIP  
CITY OF IOWA CITY  
JOHNSON COUNTY  
BRIDGE MAINT. NO. 5287.2R001  
FHWA NO. 31762  
LATITUDE 41.661663°  
LONGITUDE -91.522826°

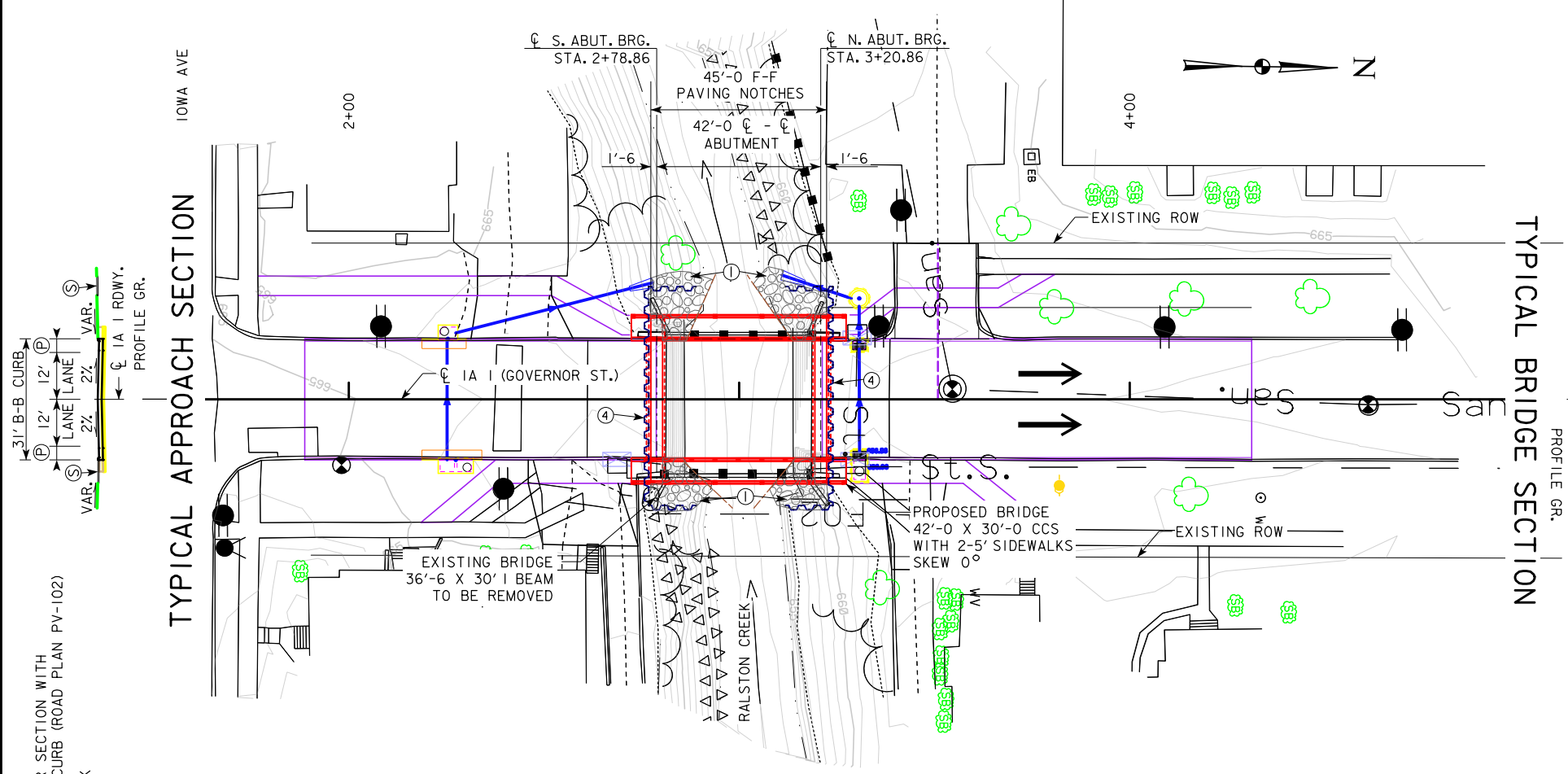
TRAFFIC ESTIMATE

|                    |       |        |
|--------------------|-------|--------|
| 2019 AADT          | 7,200 | V.P.D. |
| 2039 AADT          | 9,100 | V.P.D. |
| 2039 DHV           | 940   | V.P.H. |
| TRUCKS             | 4     | %      |
| TOTAL DESIGN ESALs |       |        |



PRELIMINARY

DESIGN FOR 0° SKEW  
**42'-0" X 30'-0"**  
**CONTINUOUS CONCRETE SLAB BRIDGE**  
**WITH 2-5' SIDEWALKS**  
42'-0" SINGLE SPAN  
**SITUATION PLAN** DECEMBER 2016  
JOHNSON COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. 1 OF 4 FILE NO. 31410 DESIGN NO. 1018



SITUATION PLAN

31' B-B CURB  
12' LANE  
2% VAR.  
6" IN. STD. CURB (ROAD PLAN PV-102)  
5' SIDEWALK  
3.5' GUTTER SECTION WITH 2% VAR.  
3.5' GUTTER SECTION WITH 2% VAR.  
3.5' GUTTER SECTION WITH 2% VAR.



### ESTIMATED ARMORING QUANTITIES

| LOCATION                              | REVTMENT CL. E (TON) | ENGINEERING FABRIC (SY) | EXCAVATION (CY) |
|---------------------------------------|----------------------|-------------------------|-----------------|
| BANK PROTECTION - SW CORNER OF BRIDGE | 38                   | 43                      | 23              |
| BANK PROTECTION - SE CORNER OF BRIDGE | 28                   | 34                      | 17              |
| BANK PROTECTION - NW CORNER OF BRIDGE | 37                   | 44                      | 23              |
| BANK PROTECTION - NE CORNER OF BRIDGE | 27                   | 31                      | 16              |
| TOTALS                                | 130                  | 152                     | 79              |

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.

### REVTMENT LOCATION TABLE

| SOUTH ABUTMENT |        |           | NORTH ABUTMENT |        |        |           |        |
|----------------|--------|-----------|----------------|--------|--------|-----------|--------|
| STATION        | OFFSET | ELEV      | STATION        | OFFSET | ELEV   |           |        |
| A              | 2+77.5 | 31.05' LT | 659.00         | MI     | 3+03.6 | 29.57' LT | 652.30 |
| B              | 2+93.3 | 30.52' LT | 652.30         | N      | 3+07.6 | 33.94' LT | 654.00 |
| C              | 2+86.5 | 15.00' LT | 652.00         | O      | 3+21.7 | 27.29' LT | 660.00 |
| D              | 2+80.4 | 15.00' LT | 652.00         | P      | 3+22.4 | 21.67' LT | 662.00 |
| E              | 2+80.4 | 21.67' LT | 658.00         | Q      | 3+19.4 | 21.67' LT | 659.50 |
| F              | 2+77.4 | 21.67' LT | 661.00         | R      | 3+13.8 | 15.00' LT | 652.00 |
| G              | 2+80.4 | 15.00' RT | 652.00         | S      | 3+19.4 | 15.00' LT | 652.00 |
| H              | 2+85.5 | 15.00' RT | 652.00         | T      | 3+14.4 | 15.00' RT | 652.00 |
| J              | 2+77.4 | 21.67' RT | 662.00         | U      | 3+19.4 | 15.00' RT | 652.00 |
| K              | 2+80.4 | 21.67' RT | 660.00         | V      | 3+19.4 | 21.67' RT | 659.50 |
| L              | 2+76.9 | 26.53' RT | 662.50         | W      | 3+07.7 | 23.03' RT | 652.50 |
| M              | 2+93.2 | 23.05' RT | 652.50         | X      | 3+22.4 | 27.27' RT | 660.00 |
|                |        |           |                | Y      | 3+22.4 | 21.67' RT | 662.00 |

REVTMENT ELEVATIONS REFLECT GRADING SURFACE

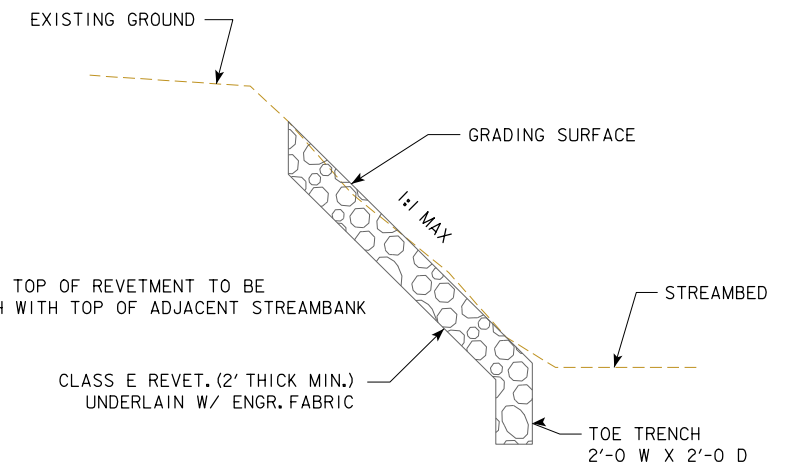
STEEL SHEET PILE (TYP.)

SOUTH ABUTMENT

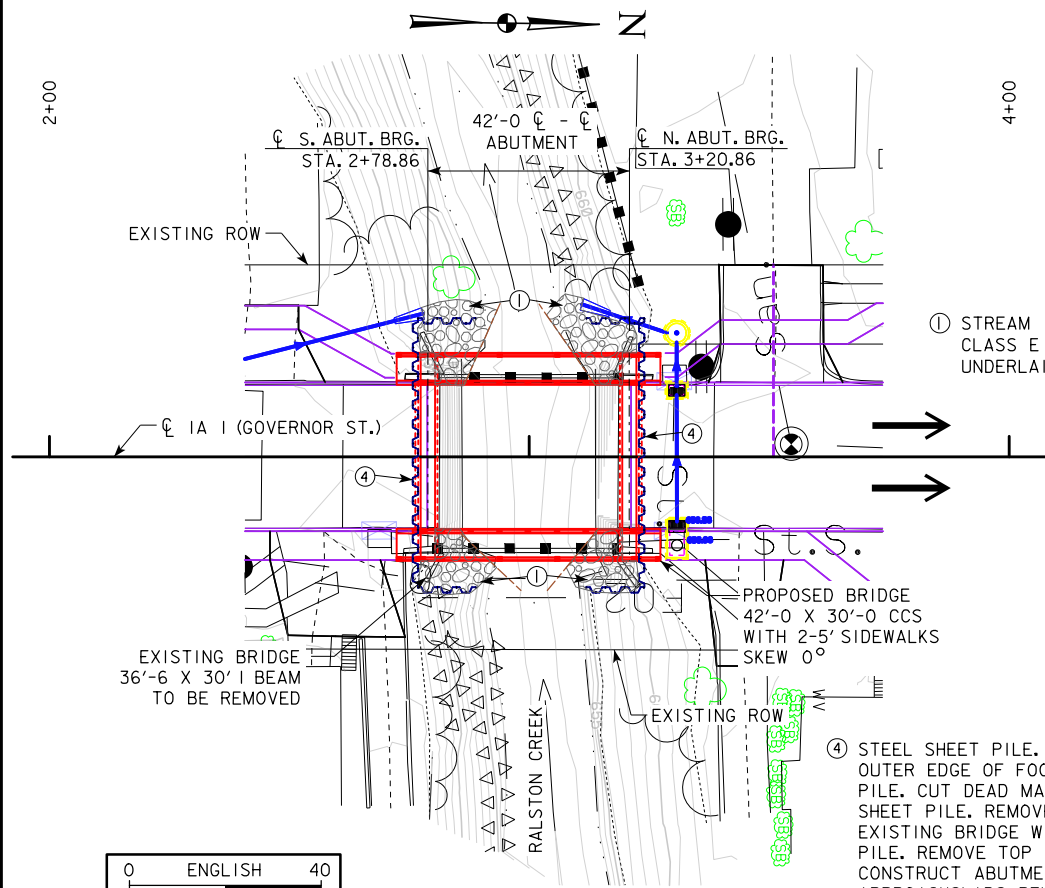
NORTH ABUTMENT

BRIDGE REVTMENT PLAN NOT TO SCALE

(Z) STREAM BANK PROTECTION CLASS E REVT. (2' THICK. MIN.) UNDERLAIN W/ ENGR. FABRIC



TYP. SECTION AT BANK PROTECTION NOT TO SCALE



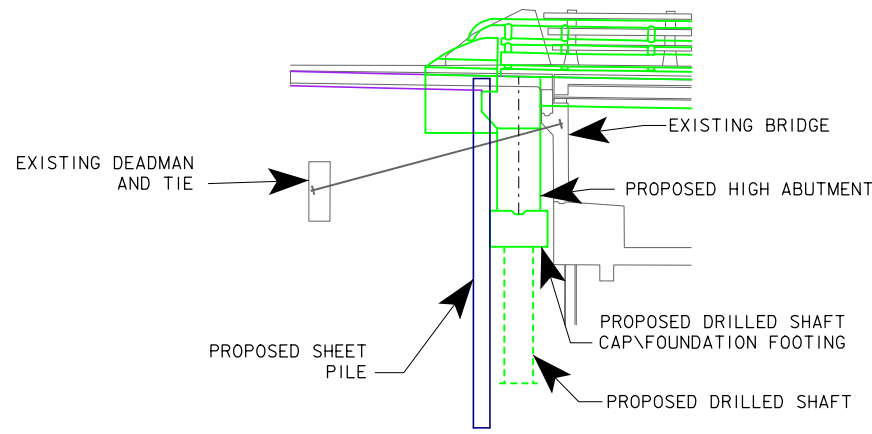
SITE PLAN

(4) STEEL SHEET PILE. PLACE SHEET PILE SUCH THAT OUTER EDGE OF FOOTING BUTTS UP AGAINST SHEET PILE. CUT DEAD MAN TIES AS NECESSARY TO INSTALL SHEET PILE. REMOVE EXISTING PAVEMENT, SIDEWALK OR EXISTING BRIDGE WING WALLS PRIOR TO INSTALLING SHEET PILE. REMOVE TOP OF SHEET PILE AS NECESSARY TO CONSTRUCT ABUTMENTS, STORM SEWER, END WALLS, SIDEWALK APPROACHSLABS, REVTMENT AND NEW PAVEMENT, REMAINDER OF SHEET PILE TO BE LEFT IN PLACE. SEE DETAIL SHEET V.3.



PRELIMINARY

DESIGN FOR 0° SKEW  
**42'-0 X 30'-0**  
**CONTINUOUS CONCRETE SLAB BRIDGE**  
**WITH 2'-5' SIDEWALKS**  
 42'-0 SINGLE SPAN  
**SITUATION PLAN-SITE**  
 STATION 2+99.86 DECEMBER 2016  
**JOHNSON COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. 2 OF 4 FILE NO. 31410 DESIGN NO. 1018



NOTE: PROPOSED DRILLED SHAFT CAP FOUNDATION FOOTING TO BUTT AGAINST PROPOSED SHEET PILE. DEPTH OF SHEET PILE TO BE DETERMINED BY FINAL DESIGN.

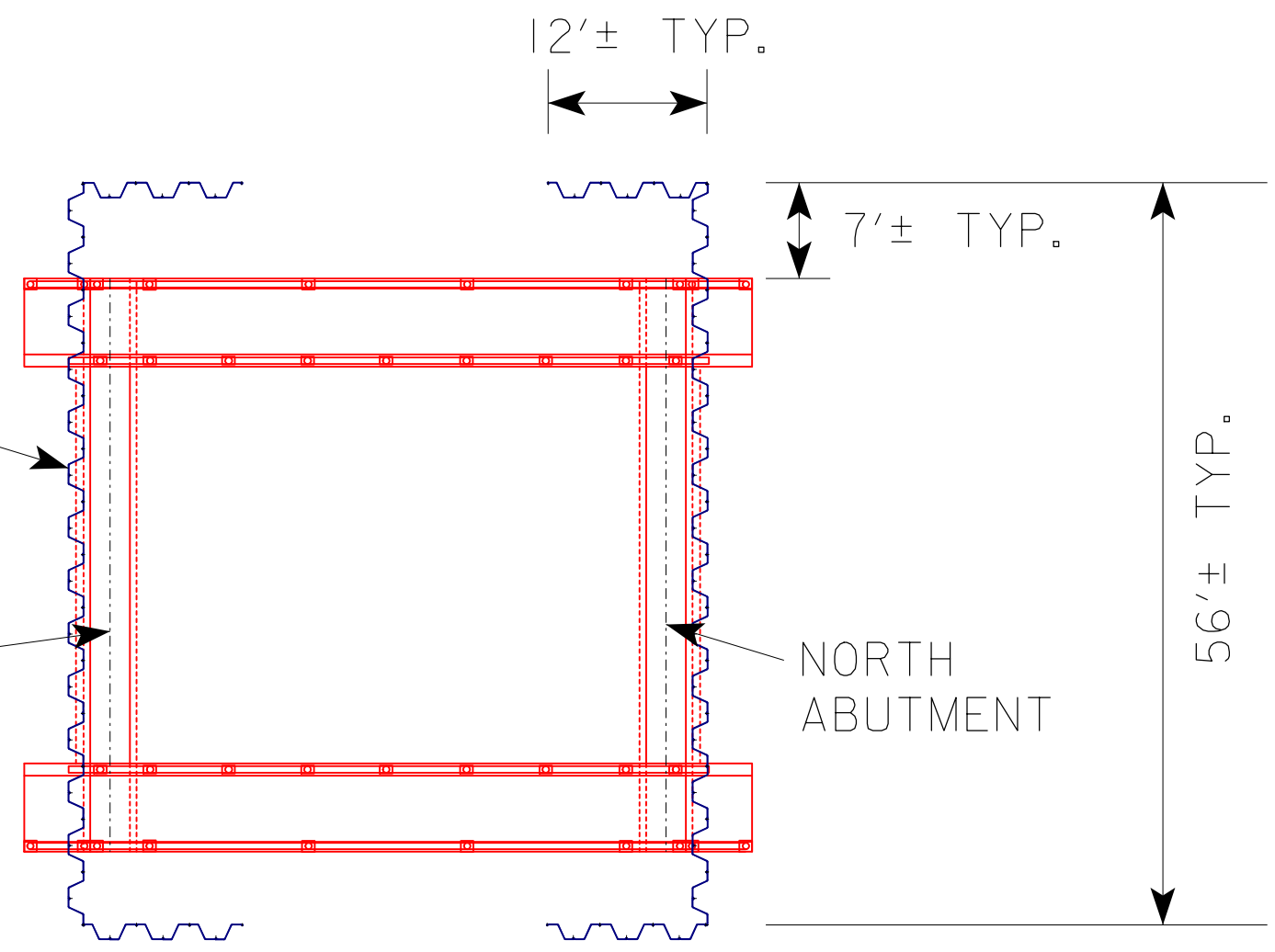
BACKFILL WITH FLOWABLE MORTAR BETWEEN ABUTMENT AND SHEET PILE.

TYP. SHEET PILE SECTION  
NOT TO SCALE

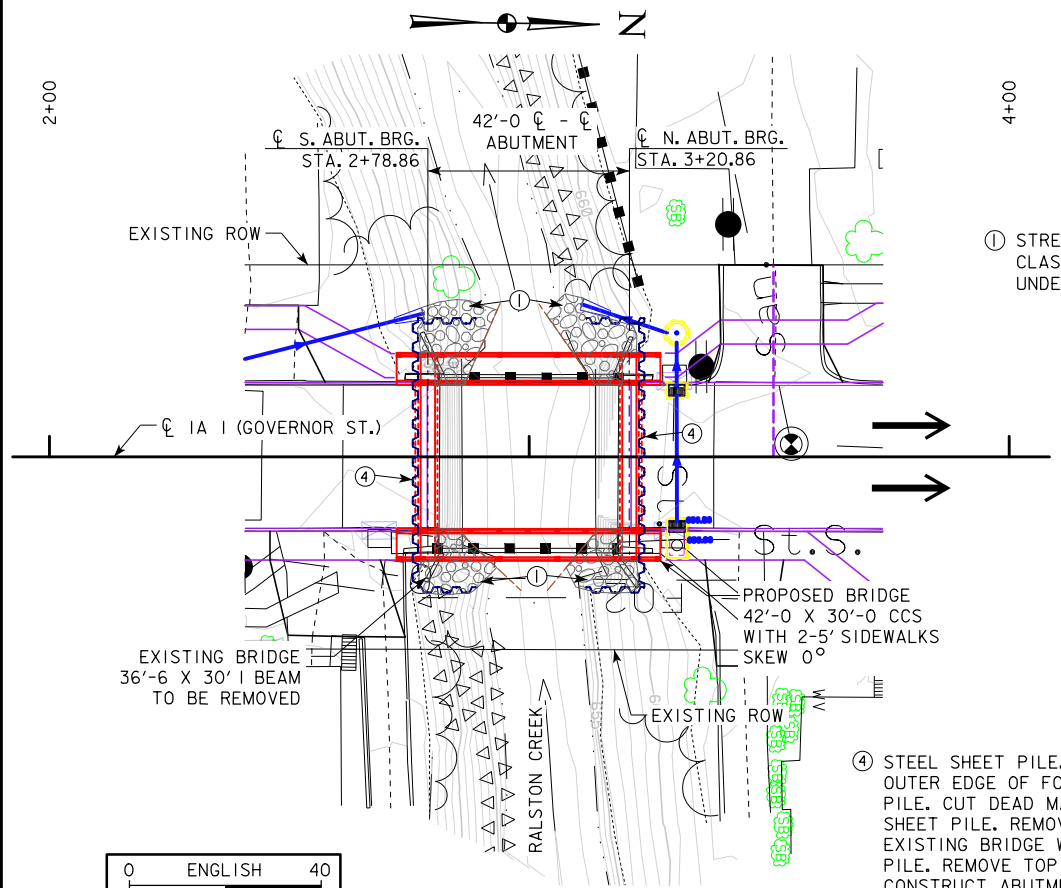
STEEL SHEET PILE (TYP.)

SOUTH ABUTMENT

NORTH ABUTMENT



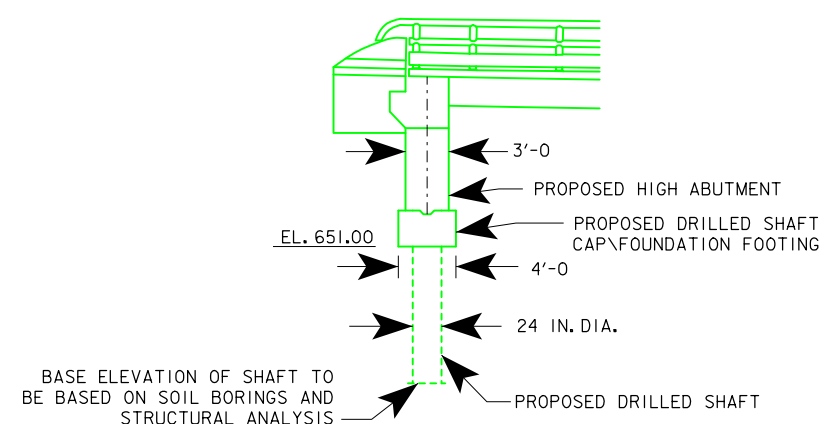
SHEET PILE PLAN  
NOT TO SCALE



SITE PLAN

① STREAM BANK PROTECTION CLASS E REVET. (2' THICK. MIN.) UNDERLAIN W/ ENGR. FABRIC

④ STEEL SHEET PILE. PLACE SHEET PILE SUCH THAT OUTER EDGE OF FOOTING BUTTS UP AGAINST SHEET PILE. CUT DEAD MAN TIES AS NECESSARY TO INSTALL SHEET PILE. REMOVE EXISTING PAVEMENT, SIDEWALK OR EXISTING BRIDGE WING WALLS PRIOR TO INSTALLING SHEET PILE. REMOVE TOP OF SHEET PILE AS NECESSARY TO CONSTRUCT ABUTMENTS, STORM SEWER, END WALLS, SIDEWALK APPROACH SLABS, REVETMENT AND NEW PAVEMENT, REMAINDER OF SHEET PILE TO BE LEFT IN PLACE. SEE DETAIL SHEET V.3.



NOTE: DIMENSIONS APPROXIMATE; FINAL DIMENSIONS TO BE DETERMINED BY FINAL DESIGN.

TYP. ABUTMENT FOUNDATION SECTION  
NOT TO SCALE

PRELIMINARY

DESIGN FOR 0° SKEW

**42'-0" X 30'-0"**

**CONTINUOUS CONCRETE SLAB BRIDGE WITH 2'-5" SIDEWALKS**

42'-0" SINGLE SPAN

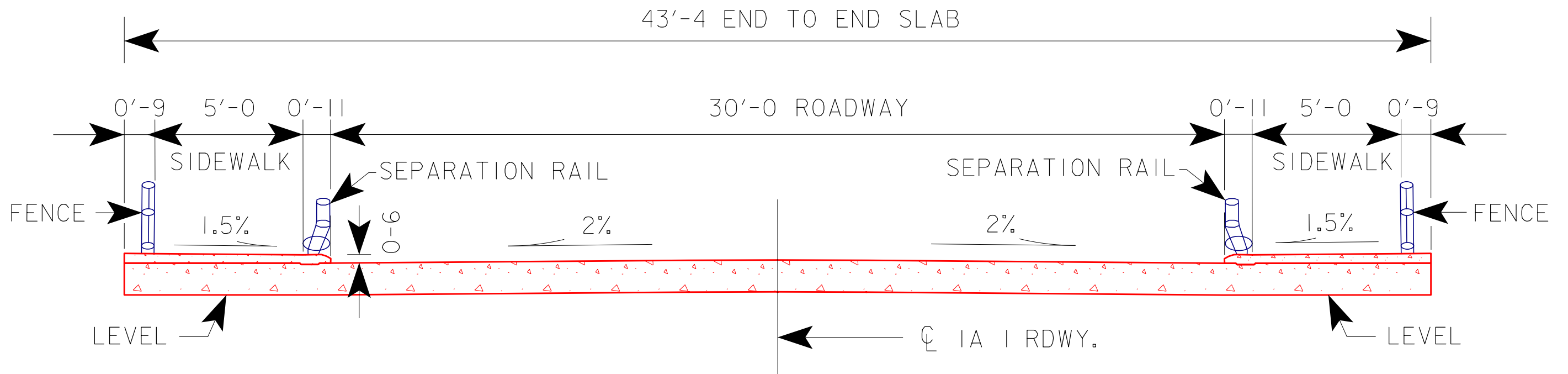
**SHEET PILE DETAILS**

STATION 2+99.86 DECEMBER 2016

**JOHNSON COUNTY**

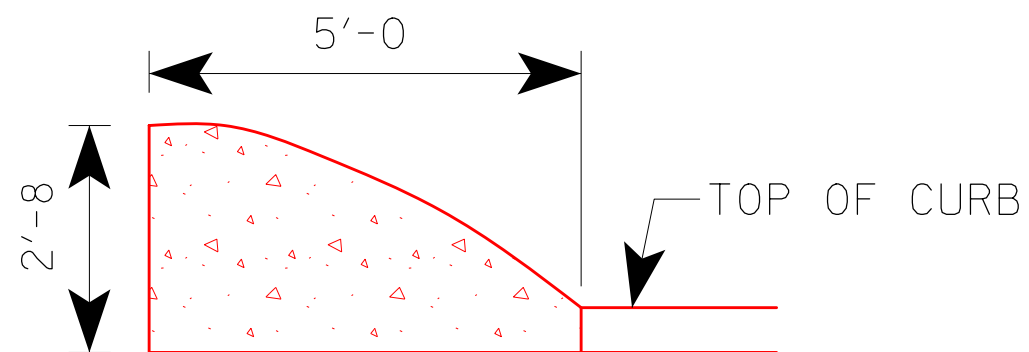
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 3 OF 4 FILE NO. 31410 DESIGN NO. 1018



NOTE TO FINAL DESIGNER  
 1. SEPARATION BARRIER RAIL AND OUTER SIDEWALK FENCE TO MATCH DESIGN OF IA 1 (E. BURLINGTON ST.) BRIDGE OVER RALSTON CREEK IN IOWA CITY; MAINT. NO. 5286.5S001, FHWA NO. 31740, PROJECT BRF-001-5(54)--38-52 (IGNORE PHOTO ON PAGE 7 OF FINAL CONCEPT).

## TYPICAL BRIDGE DECK CROSS SECTION

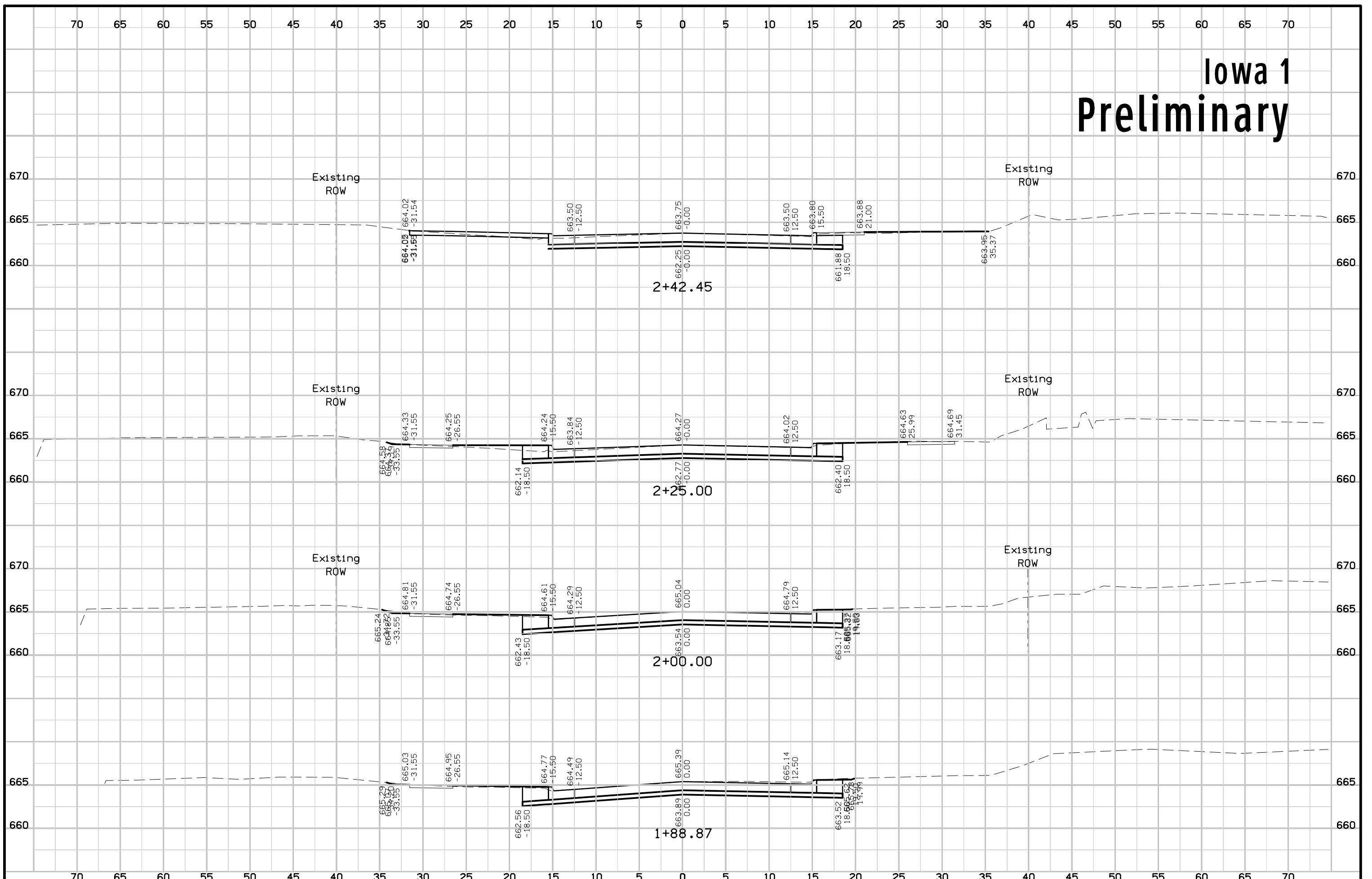


## SEPARATION RAIL END SECTION

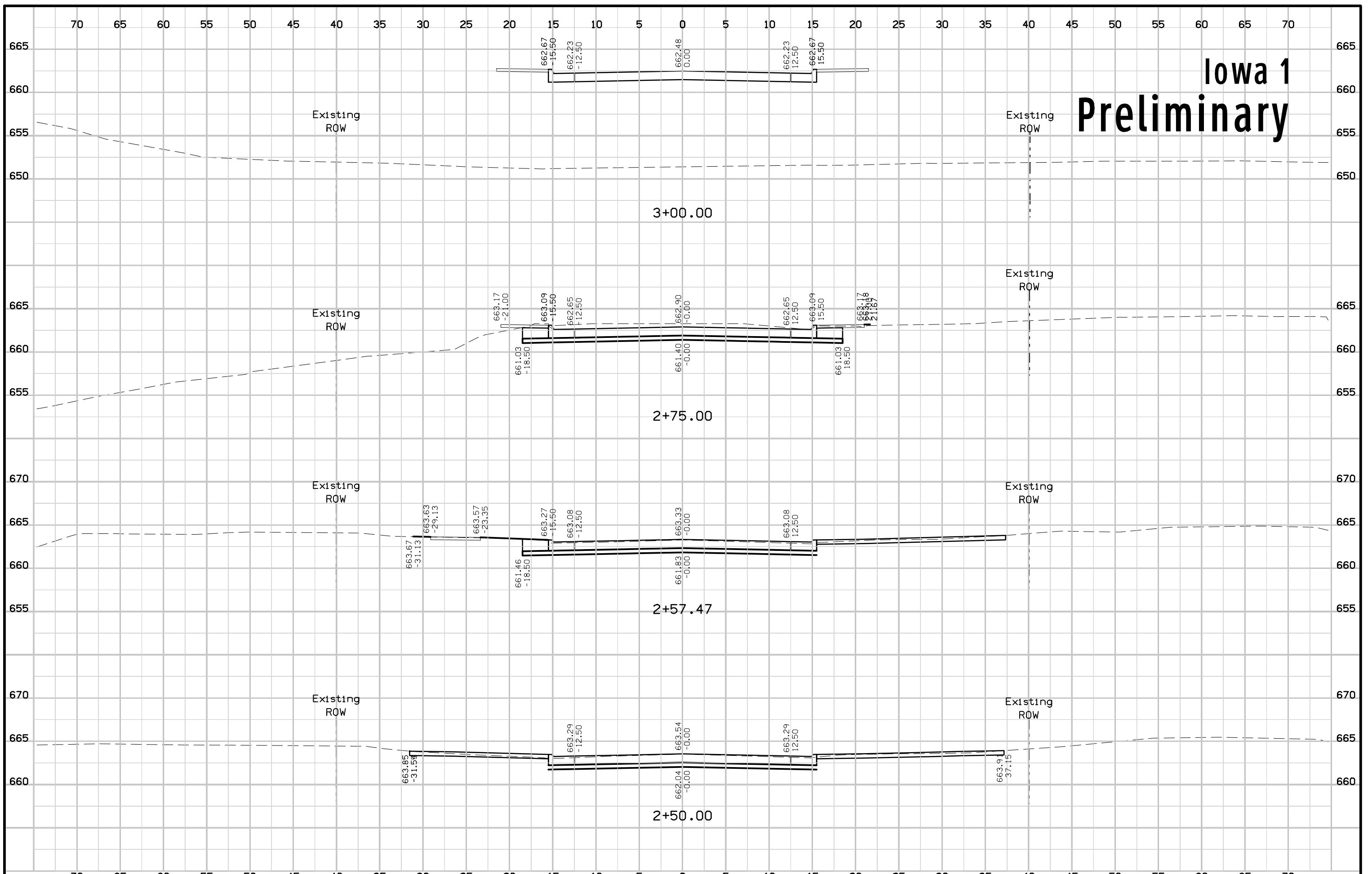
PRELIMINARY  
 DESIGN FOR 0° SKEW  
 42'-0 X 30'-0  
 CONTINUOUS CONCRETE STAB BRIDGE  
 WITH 2-5' SIDEWALKS  
 BRIDGE DECK AND SEP. RAIL  
 STATION 2+99.86 DECEMBER 2016  
 JOHNSON COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
 DESIGN SHEET NO. 4 OF 4 FILE NO. 31410 DESIGN NO. 1018



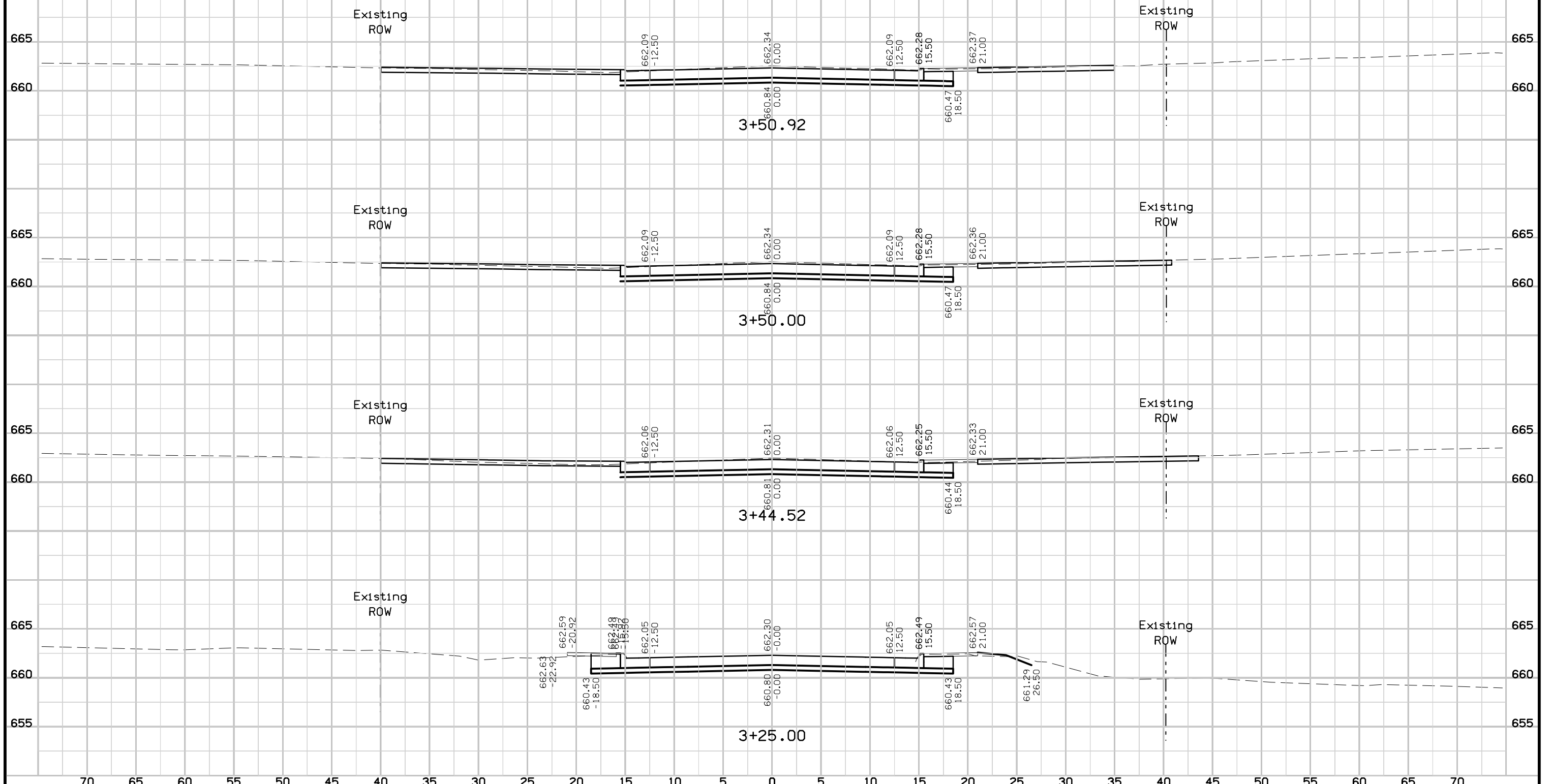
# Iowa 1 Preliminary



# Iowa 1 Preliminary



# Iowa 1 Preliminary





# Iowa 1 Preliminary

