**Highway Division**

**PLANS OF PROPOSED IMPROVEMENT ON THE PRIMARY ROAD SYSTEM**

**ALLAMAKEE COUNTY**

**BRIDGE REPLACEMENT**

---

**PRELIMINARY PLANS**

Subject to change by final design.

---

**DESIGN DATA URBAN**

(East of IA 26 Intersection)

**TRUCKS**

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<th>Year</th>
<th>Design ESALs</th>
<th>Total</th>
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<td>1,400</td>
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<td>1,400</td>
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<tr>
<td>2045</td>
<td>1,000</td>
<td>2,000</td>
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</table>

Total Design ESALs: 1,400

---

**PRELIMINARY EARTHWORK QUANTITY SUMMARY**

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<tbody>
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<tr>
<td>Embankment</td>
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</table>

---

**DESIGN DATA URBAN**

(AKA Second St., Lansing)

**TOTAL**: 1,400

---

**PRELIMINARY PLANS**

Subject to change by final design.
PROFILE GRADE 2% 12" MODIFIED SUBBASE

BEGIN STATION 103+09.58

END STATION 104+10.17

Longitudinal joint: CD at 17' spacing
Transverse joints: 1.5' at 17' spacing

Mainline jointing:
Earth Shoulder Finishing:
Refer to V Sheets for MSE Wall Details

9" PCC PAVEMENT

Sta.104+10.17 - Sta. 121+32.26
Bridge Construction,
Refer to V Sheets for Limits of
Details.

Bridge Approach Pavement
Refer to S.R.P. BR-203 for

Soldier Pile Wall Details
Refer to V Sheets for

MSE Wall Details
Paved Shoulder at Guardrail

<table>
<thead>
<tr>
<th>Station to Station</th>
<th>Longitudinal Joint</th>
<th>Transverse Joints</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>C at normal spacing</td>
</tr>
</tbody>
</table>

HMA Shoulder Jointing:

- Longitudinal joint: BT-1 or BT-5

PCC Shoulder Jointing:

- Longitudinal joint: B

Notes:

1. Normal Section shown may be modified appropriately in areas of uneven, irregular or changing ground surface.
2. Refer to B.R.P. BR-203 for Bridge Approach Paving standards.

IA 9/WIS 82
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

- Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

1. PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
2. Continue paved shoulder 20 feet beyond the center of the first post.
3. Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
4. "KT-1 joint for PCC shoulder. 18" joint for HMA shoulder.
5. Match shoulder slope.
6. The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
7. Refer to other details in the plan.

**NEW CONSTRUCTION**

**EXISTING SHOULDER**

**PAVED SHOULDER AT GUARDRAIL**

(ADJACENT TO PARTIAL WIDTH PAVED SHOULDER)
TYPICAL DETAILS OF PCC PAVEMENT HEADER

Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement.
Full header is included for payment.

Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

End of Taper
Bevel Area
Approximate 1" Drop
Full Thickness
End of Taper
Design Taper Paint Line
End of Taper

Roadway Pavement
Length

Pavement Taper

DETAIL 'A'
FOR GRANULAR SHOULDERS

DETAIL 'A'
FOR PAVED SHOULDERS

See Detail 'A'
See Detail 'A'

10-19-10
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<td>BA-200</td>
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<td>04-16-19</td>
<td>Steel Beam Guardrail Barrier Transition Section (MASH TL-3)</td>
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<td>Steel Beam Guardrail Rolled End Anchor</td>
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<td>10-17-17</td>
<td>Double Reinforced 12&quot; Approach</td>
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<td>Concrete Aprons</td>
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<td>SW-104</td>
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<td>Fire Hydrant Assembly</td>
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The Restricted Areas shall be marked off with orange snow fence and no ground disturbance is permissible within these areas. If the contractor has questions they can contact the construction engineer or Iowa DOT Location and Environment staffer Brennan Dolan at (515) 239-1795.

For Side Road Details Refer to Sheets No. E.1 - E.4

Do Not Disturb Existing Sidewalk

Do Not Disturb Existing Retaining Wall

Do Not Disturb Existing Deck/Porch

Restricted Area

Existing Bridge
BEGIN CONSTRUCTION

ELEV. 671.40

Profile Grade

Existing Grade

VPI +45.000
Elev. 672.50
Len. 90.00 ft
K = 40
0.5% ± 10 mph

VPI +00.000
Elev. 674.11
Len. 50.00 ft
K = 15
0.5% ± 15 mph

VPI +00.000
Elev. 685.50
Len. 90.00 ft
K = 29
3.0% ± 30 mph

VPI +00.000
Elev. 685.50
Len. 650.00 ft
K = 108
-3.0% ± 90 mph

VPI +00.000
Elev. 697.50
Len. 90.00 ft
K = 30
-3.0% ± 30 mph

BEGIN CONSTRUCTION
Elev. 671.40

D.S. = 15 mph
Elev. 671.72

D.S. = 30 mph
Elev. 672.50

D.S. = 50 mph
Elev. 673.69

D.S. = 30 mph
Elev. 675.00

D.S. = 30 mph
Elev. 676.31

D.S. = 30 mph
Elev. 677.62

D.S. = 30 mph
Elev. 678.94

D.S. = 30 mph
Elev. 680.25

D.S. = 30 mph
Elev. 681.56

D.S. = 30 mph
Elev. 682.87

D.S. = 30 mph
Elev. 684.14

D.S. = 30 mph
Elev. 685.25

D.S. = 30 mph
Elev. 686.20

D.S. = 30 mph
Elev. 687.00

D.S. = 30 mph
Elev. 687.75

D.S. = 30 mph
Elev. 688.14

D.S. = 30 mph
Elev. 689.75

D.S. = 30 mph
Elev. 690.29

D.S. = 30 mph
Elev. 690.78

D.S. = 30 mph
Elev. 691.21

D.S. = 30 mph
Elev. 691.59

D.S. = 30 mph
Elev. 691.90

D.S. = 30 mph
Elev. 692.16

D.S. = 30 mph
Elev. 692.37

D.S. = 30 mph
Elev. 692.51

D.S. = 30 mph
Elev. 692.60

D.S. = 30 mph
Elev. 692.63

D.S. = 30 mph
Elev. 692.51

D.S. = 30 mph
Elev. 692.37

D.S. = 30 mph
Elev. 692.16

D.S. = 30 mph
Elev. 691.90

D.S. = 30 mph
Elev. 691.59

D.S. = 30 mph
Elev. 691.21

D.S. = 30 mph
Elev. 690.78

D.S. = 30 mph
Elev. 690.29

D.S. = 30 mph
Elev. 689.75

D.S. = 30 mph
Elev. 688.47

D.S. = 30 mph
Elev. 687.75

D.S. = 30 mph
Elev. 687.00

D.S. = 30 mph
Elev. 686.18

D.S. = 30 mph
Elev. 685.15

D.S. = 30 mph
Elev. 683.90

D.S. = 30 mph
Elev. 682.43

D.S. = 30 mph
Elev. 680.90

D.S. = 30 mph
Elev. 679.37

D.S. = 30 mph
Elev. 677.83

D.S. = 30 mph
Elev. 676.30
Note 1:
Transition superelevation of both lanes at constant rate between stations as follows:
Sta. 126+52.00, e = 3.4%
Sta. 126+79.00, e = 3.0%

Note 2:
Roadway is W3S 60 on east side of Mississippi River.
Refer to Sheet No. E.5
For Concrete Steps Detail

Refer to Sheets No. M.3 - M.6
For Storm Sewer Details

Refer to Sheets No. HAM.2 - HAM.5
For Water Main Details

Note 1: Refer to Sheet

Note 2: For Concrete Steps Detail

Do Not Disturb
Existing Stairs

Sta. 1098+29.31
Begin Construction

POT Sta 1098+83.70 (Second St.)
\*POT Sta 2098+83.70 (Hale St.)

Do Not Disturb
Existing Deck/Parapet

Do Not Disturb
Existing Retaining Wall

All Storm Sewer

Remove/Replace Modular Block Retaining Wall
During Driveway Construction

Roadway Lighting to be coordinated during Final Design

Reconstruct Sanitary Manhole

Note 1

Normal Crown
D.S. = 30 mph

Reconstruct Sanitary Manhole

Note 1

Concrete Steps Detail.

U.2 for Concrete Steps Detail.

Note 1: Refer to Sheet

Restrict Area

Wall During Driveway Construction

Restricted Area
Prop. Type "C" Ent.

Sta. 1098+29.31
Begsn Construction
Elev. 658.16

Justification:
- B.F. +53.140
- Elv. 659.25
- Len. 110,000 ft
- H. x 38 ft
- G.S. = 30 mph

Design:
- Elev. 658.17
- 1108
- 660
- 662
- 664
- 666
Note 1:

Transition superelevation of NB lane as follows:
- Sta. 1104+25.00, e = +2.0%
- Sta. 1103+50.00, e = +2.0%

Maintain +2.0% x-slope in NB lane from Sta. 1102+25.00

Sta. 1102+25.00, e = +2.0%
Sta. 1101+75.00, e = -2.0%

Transition superelevation of NB lane as follows:
- Sta. 1105+77.02, e = +2.0%
- Sta. 1104+25.00, e = +2.0%

The superelevation of the NB lane should be maintained at +2.0% from Sta. 1102+25.00 to Sta. 1101+75.00. After Sta. 1101+75.00, the superelevation should transition to +2.0% from Sta. 1105+77.02 to Sta. 1104+25.00.

End Construction

Sta. 1105+77.02

D.S. = 40 mph

Sta. 1104+25.00, e = -2.0%
Sta. 1103+50.00, e = +2.0%

Transition superelevation of NB lane as follows:

- Sta. 1105+77.02, e = +2.0%
- Sta. 1104+25.00, e = +2.0%

End construction
Begin Construction Sta. 2098+95.70
Elev. 658.44
Len 18.00 ft
K = 2
D.S. < 15 mph
V.P. = 40.00
E = 550.08
\[ \text{Refer to Sheets No. E.1 - E.4 For Side Road Details} \]
Survey Information

ALLAMAKEE COUNTY
BRF-009-9(73)--38-03
MISSISSIPPI RIVER BRIDGE
LANSING, IOWA
PIN 16-03-009-010
SAP #414.6

Contact Information

Fieldwork performed by: Martin & Whitacre, Surveyors & Engineers, Inc.
1508 Bidwell Road
Muskatine, IA 52761
POC: Matt Krause, P.L.S. 563-263-7691
EMAIL: MKRAUSE@MARTIN-WHITACRE.COM

Survey Data Submitted to: Burns & McDonnell
9400 Ward Parkway
Kansas City, Mo 64114
POC: Jonathon Tronson, P.E. 815-448-7491
EMAIL: JSTRONSON@BURNSMCD.COM

Party Personnel

Project Manager - Matt Krause, PLS
Field Supervisor - Seth Whitacre, PLS
Party Chiefs - Mike Sandsness, Joel Proffitt
Rodmen - Eric Allison

Date(s) of Survey

SAP#414.6 – Begin Date April 2019
End Date October 2019

General Information

This survey was completed to provide topographic survey information for the design of a new bridge over the Mississippi River at Lansing, Iowa.

Horizontal Control

The coordinate system used is NAD83(2011) (Epoch 2010.00) Iowa Regional Coordinate System Zone 3 – Elkader, U. S. Survey Feet.

Three Allamakee County GPS Monuments (#235, #236 & #228) were checked for this project using the Iowa RTN and IASPC North Zone NAD83(1996). Their published coordinate values were established in 2002 as part of the Allamakee County wide GPS Control Network. The average horizontal error of the published versus observed northings was 0.11'. The average horizontal error of the published versus observed eastings was .01'. Each of these monuments were observed with GPS for a 5 minute window using the Iowa RTN. Sixteen on-site control points were set on the Iowa side of the river and four on-site control points were set on the Wisconsin side of the river. The twenty on-site control points were observed with GPS for 3 minute windows on 4 separate occasions, with appropriate time spans in-between, using the Iowa RTN. All new Control Points were held at the observed Horizontal Positions.

Vertical Control

The vertical datum used is NAVD88 computed from GPS Observations and Geoid 12A.

Benchmarks checked this project consisted of 1 NGS Benchmark (H123) and 3 Allamakee County GPS Monuments (#235, #236 & #228). The vertical error on the NGS Benchmark was -07', and the average vertical error on the 3 County Monuments was -0.15'. Eleven Benchmarks were established on the Iowa side and 2 Benchmarks were established on the Wisconsin side of the river. The observed GPS elevations were "held" at 4 on-site control points, 2 on the Iowa Side and 2 on the Wisconsin side of the river. The elevations of these 4 Control Points were "held" based on the average differences between the Observed GPS elevations and the leveled elevations. Elevations were then transferred to the other 16 on-site Control Points and the 13 new established Benchmarks with 3 dependent differential level loops. The maximum error of closure of these 3 loops was .005'.

Alignment Information

No horizontal alignments for the existing roadways were computed for this survey.
CONTROL POINT VICINITY MAPS

This map is a guide to the vicinity of the primary project control points.
Primary control is for use with RTK base stations and for RTN validation.
Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 3
Coordinate listing from next sheet will be used with laRTN for monument recovery. No other reference ties are given.
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<th>Easting</th>
<th>Elevation</th>
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### Spiral or Circular Curve Data

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**SUPERELEVATION DATA**

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<th>Section B-B</th>
<th>Section C-C</th>
<th>Section D-D</th>
<th>Section E-E</th>
<th>Section F-F</th>
<th>Case A</th>
<th>Case B</th>
<th>Case C</th>
<th>Case S</th>
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</table>
TRAFFIC CONTROL PLAN

Second Street
- Maintain traffic during Stage 1.
- Close from Hale Street to north of Henry Street using TC-212 during Stage 2.

Front Street
- Close during construction of spans 2-6 in Stage 1
- Maintain traffic during Stage 2
- Close during demolition of existing bridge span 1 in Stage 3

WI-82
- Place temporary barrier rail (precast concrete) on north shoulder using Standard Road Plan TC-202 and BA-401 during Stage 1.
- Close using Standard Road Plan TC-212 during Stage 2.

Existing bridge, IA 9
- Maintain traffic during Stage 1.
- Close to traffic during Stage 2.
- Demo in Stage 3

Private entrances
- Maintain access via local road network for the duration of the project.

STAGING NOTES

Stage 1:
- Existing bridge and all roadways remain open to traffic during construction of spans 2-6.
- Front street closed during construction of span 1 (west end of bridge).
- Place temporary barrier rail (precast concrete) on north side of WI-82 using Standard Road Plan TC-202 and BA-401.
- Detour Pedestrian Traffic as shown in Standard Road Plan TC-601.
- Construct new bridge adjacent to existing bridge, including both abutments and a portion of the new retaining wall on the Iowa approach to the new bridge, as shown on sheet J.4.

Stage 2:
- Place temporary barrier rail (precast concrete) on north side of WI-82 using Standard Road Plan TC-202 and BA-401.
- Closures of Front Street between Henry Street and Hale Street shall not be allowed concurrent with closure of Second Street.
- Detour traffic using detours identified in sheets J.7 through J.8.
- Detour Pedestrian Traffic as shown in Standard Road Plan TC-601.
- Construct Second Street improvements, Iowa bridge approach, Wisconsin bridge approach, roadway tie-in to WI-82, and Big Slough Landing improvements as shown on sheet J.5.
- Remove traffic control and open all lanes and new bridge to traffic.

Stage 3:
- Front street closed during demolition of existing bridge span 1.
- Detour Pedestrian Traffic as shown in Standard Road Plan TC-601.
- Demo existing bridge as shown on sheet J.6.
- Remove traffic control and open all lanes to traffic.

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

<table>
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<th>Type of Work</th>
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<tbody>
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PEDESTRIAN PATH CLOSURES

Refer to TC-601.

* Assumes 6 foot wide barricade.
Closures may need to be removed and re-established.

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<th>Type III Barricades*</th>
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<tr>
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<td>1 Stage 1, detour to west side of Second Street</td>
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</tr>
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</tr>
<tr>
<td>Front Street, southbound</td>
<td>East</td>
<td>1 Stage 1, detour to west side of Second Street</td>
<td></td>
</tr>
<tr>
<td>Second Street, northbound</td>
<td>West</td>
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</tr>
<tr>
<td>Second Street, southbound</td>
<td>West</td>
<td>1 Stage 2, detour to Front Street</td>
<td></td>
</tr>
<tr>
<td>Front Street, northbound</td>
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<td></td>
</tr>
<tr>
<td>Front Street, southbound</td>
<td>West</td>
<td>1 Stage 2, detour to Front Street</td>
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</tr>
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<tr>
<td>Front Street, southbound</td>
<td>West</td>
<td>1 Stage 3, detour to west side of Second Street</td>
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### PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- **Green (2)**: Existing Topographic Features and Labels
- **Magenta (5)**: Pavement Marking Call Outs
- **Blue (11)**: Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
- **Yellow (4)**: Pavement Markings, Yellow
- **Off White (254)**: Pavement Markings, White
- **Violet (3)**: Temporary barrier rail, Unpinned
- **Plum Orange (228)**: Temporary barrier rail, Pinned
- **Brown, Med (9)**: Proposed Paving Shading
- **Blue, Light (230)**: Proposed Granular Surface Shading
- **Lavender (237)**: Existing Pavement Shading
- **Tan (13)**: Proposed Granular Subbase
- **Light Blue (216)**: Proposed Special Backfill
- **Pink, Dark (3)**: Proposed Grading Limits Shading
- **Gray, Med (48)**: Proposed Granular Shoulder
- **Gray, Light (4)**: Proposed Special Backfill
- **Green, Light (225)**: Proposed Bridge Shading and Sign Trusses
- **Pink, Light (4)**: Proposed Bridge Shading and Sign Trusses
- **Gray, Light (48)**: Proposed Bridge Shading and Sign Trusses
- **Red (3)**: Proposed Bridge Shading and Sign Trusses
- **Black w/Gray, Light Fill (0,48)**: Proposed Bridge Shading and Sign Trusses
- **Brown, Light (9)**: Proposed Bridge Shading and Sign Trusses

### CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND

- **Pavement Removal**
- **Proposed Granular Shoulder**
- **Proposed Granite Subbase**
- **Temporary Shoulder**
- **Proposed Special Backfill**
- **Existing Shoulder Strengthening**
- **Temporary Barrier Rail**
- **Permanent Barrier Rail**
- **Channelizing Device**
- **Drainage Device**
- **Traffic Barriers**
- **Temporary Lane Separator**
- **Flagger**
- **Temporary Floodlighting**
- **Traffic Signal**
- **Type I Barricade**
- **Type II Barricade**
- **Type III Barricade**
- **Type IV Barricade**
- **Temporary Warning Light**
- **Direction of Traffic**
- **Safety Closure**
- **Lane Identification**

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

---

**Traffic Control and Staging Legend and Symbol Information Sheet**

(Covers Sheet Series J)
SECTION A-A
STAGE 1 - STA 121+29.24

SECTION A-A
STAGE 2 - STA 121+29.24

SECTION A-A
STAGE 3 - STA 121+29.24
NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

Refer to Standard Road Plan SW-514 for additional joint details around intake structures.
Refer to appropriate Standard Road Plans for additional information. Refer to G sheets for horizontal alignment information. Dimensions shown are to the edge of pavement. Note:

If a joint length is 2', a C joint shall be used instead of a CD joint. All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise. All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise. If a joint length is 2', a C joint shall be used instead of a CD joint. Refer to Standard Road Plan SW-514 for joint details around intake structures. Refer to Standard Road Plan PV-101 for joint details. Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to appropriate Standard Road Plans for additional information.

Refer to G sheets for horizontal alignment information.

Dimensions shown are to the edge of pavement.

Note:
Dimensions shown are to the edge of pavement.
Refer to 6 sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.
Jointing Details
Intersection of
IA 9 and Second St,
Second St and Henry St

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan NV-54 for joint details.
Refer to Standard Road Plan SW-54 for additional joint details around intake structures.

Refer to Standard Road Plan SW-514 for additional joint details around intake structures.
###设计长度，斜坡，和流线是计算自内壁到内壁的管路中心。额外的2英尺长度被加到每个侧的计算长度来考虑结构的中心长度。
Design Note:
Storm sewer was designed based on a 10 year design event.
Design Note: Storm Sewer was designed based on a 10 year design event.
Connect to Existing 8" Water Main with 8"x6" Reducer at Sta. 1098+73.21, 13.07 Rt.

Install 8" - 45° Bend at Sta. 1098+92.28, 6.00Lt.

Install 8" - 45° Bend at Sta. 1098+73.21, 13.07 Rt.
Proposed 15° Storm Sewer
IE 664.38
Storm Sewer
Proposed 15°

45° Bend
8" Gate Valve

IE 659.39
Storm Sewer
Proposed 15"

45° Bend
8" x 8" Tee (Rotated 22 1/2° Down)

8" DIP Water Main
Air Release Valve & Vault

22 1/2° Bend
8" x 8" Tee (Rotated 22 1/2° Down)
Adjustment Rings

Square Edge

Class 1 Bedding Material

Air Release Valve

Tapping Sleeve

Pipe Supports

Casting

Precast Top

Precast Riser Sections

Precast Opening

SW-601 Type C casting with the word "WATER" on the cover.

Prevent riser from bearing on pipe by providing a precast opening with a diameter up to 6 inches larger than pipe diameter.
## PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

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## STORMWATER DRAINAGE BASIN AND STORAGE

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POLLI 10-20-20

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (IDNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 on Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual water permits. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection and Monitoring, Certification, and Additional Information. This plan references such things as fieldbook entries but does not repeat the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. This responsibility shall be shared with subcontractors whose work is a potential source of pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITIES

A. Project Engineer:
1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Clean Water Act and the Iowa Administrative Code.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2002 of the Standard Specifications. The ECIP includes appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
4. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
5. Equalize soil and water control practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2002 of the Standard Specifications.
8. Submits amended PPP site maps according to Section 2002 of the Standard Specifications.

C. Subcontractors:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of pollution as defined by the PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:
1. Project Storm Water Manager.
2. In KinderPID 2, is Contracting Authority, is current with erosion control training or certification.
3. Takes necessary actions to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, issuing instructions, or delegating work to subcontractors with appropriate training and experience.
4. Drafts any change orders, and directs corrective actions to ensure compliance with storm water requirements.
5. Supervises all necessary work to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order other actions as necessary to meet storm water requirements.
7. In KinderPID 2, is Contracting Authority, is responsible for periodically monitoring inspection reports to check for complete inspections and timely addressed, and is not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
8. Maintains contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
9. Is signature authority on fieldbook entries and storm water site inspection reports if there is a change in design, construction, or operations that has a significant effect on the discharge of pollutants from the project.
10. Makes information to determine permit compliance available to the DNR on their request.

E. Inspector:
1. Performs inspections of the site with the contractor/subcontractor.
2. Completes an inspection report after each inspection.

F. WPCM:
1. In KinderPID 2, is Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Clean Water Act and the Iowa Administrative Code.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of a bridge over the Mississippi River and associated roadway pavements. The bridge is approximately 4.2 acres with an estimated 3.87 acres of right-of-way. The portion of the PPP covered by this contract is 3.87 acres disturbed. This project is located within the area of 1 soil association (Dunes - Rosedale - Hardness). The estimated weighted average runoff coefficient number for this PPP after completion will be 0.5.

B. Storm Soil Site Map is located in the R sheets. Supplementation is located in the Tabulations in the C or CR sheets.

C. The base storm water site map as amended by contract modifications and programs is located in the Tabulations in the C or CR sheets. The base storm water site map will not be installed until the ditch has been installed. Installed, installed locations may be found in the Tabulation blocks located by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

D. Runoff from this work will flow into storm sewers and the Mississippi River.

III. CONTROLS

A. The Contractor's ECIP specified in Article 2002.05 of the Standard Specifications for accomplishment of storm water controls should be submitted to Iowa DNR as required by the NPDES permit.

B. The PPP will be completed in accordance with the construction process that the PPP controls. The PPP is required to document and perform these actions.

C. Sections 2002 and 2002 of the Standard Specifications define requirements to implement erosion and sediment control measures. Erosion and sediment control on this project may vary from the Base PPP if the project is in a waterbody or from the stormwater site map of the project. Fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not identified in the PPP, the work will be paid for according to Article 2003.08 paragraph B of the Standard Specifications.

I. EROSION AND SEDIMENT CONTROLS

a. Designation of Storm Water Control Plans

1. Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
2. Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities.
   a) Permanently cease on any portion of the site,
   b) Or temporarily cease on any portion of the site that is covered by a stormwater site map or are referenced in the Standard Road Plans Tabulation (110-4) located in the C or CR sheets.
3. Prevent rapid discharges of flow from stormwater control practices to be used on this project that are located within right-of-way
4. Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantity (110-4, 110-1A, 110-1C), and Estimate Reference Information (110-6) located in the C or CR sheets. Additional information may be found in the Tabulations in the C or CR sheets or in referenced in Section 2102 of the Standard Specifications.

b. Structural Practices

1. Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: soil basins that detain and treat runoff; sedimentation basins that detain and treat sedimentary or erosive water; and sediment or erosion controls; outlets that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
2. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to check for complete inspections and timely addressed, and is not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
3. Is familiar with the Project PPP and storm water site map.
4. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order other actions as necessary to meet storm water requirements.
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Deploys erosion and water control practices according to Paragraph III, C, 2.
7. Is familiar with the Project PPP and storm water site map.
8. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
9. Prepares Base PPP included in the project plan.
10. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
12. Makes information to determine permit compliance available to the DNR on their request.
13. In KinderPID 2, is Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Clean Water Act and the Iowa Administrative Code.

C. Subcontractors:

1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of pollution as defined by the PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:

1. Project Storm Water Manager.
2. In KinderPID 2, is Contracting Authority, is current with erosion control training or certification.
3. Takes necessary actions to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, issuing instructions, or delegating work to subcontractors with appropriate training and experience.
4. Drafts any change orders, and directs corrective actions to ensure compliance with storm water requirements.
5. Supervises all necessary work to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order other actions as necessary to meet storm water requirements.
7. In KinderPID 2, is Contracting Authority, is responsible for periodically monitoring inspection reports to check for complete inspections and timely addressed, and is not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
8. Maintains contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
9. Is signature authority on fieldbook entries and storm water site inspection reports if there is a change in design, construction, or operations that has a significant effect on the discharge of pollutants from the project.
10. Makes information to determine permit compliance available to the DNR on their request.

E. Inspector:

1. Performs inspections of the site with the contractor/subcontractor.
2. Completes an inspection report after each inspection.

F. WPCM:

1. In KinderPID 2, is Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Clean Water Act and the Iowa Administrative Code.
IV. MAINTENANCE PROCEDURES
The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS
A. Inspections shall be made jointly by the Contractor and the Contracting Authority’s inspector at least once every seven calendar days. Storm water site inspections will include:
   1. Date of the inspection.
   2. Summary of the scope of the inspection.
   3. Name and qualifications of the personnel making the inspection.
   5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
   6. Major observations related to the implementation of the PPP.
B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES
This includes subsurface drains (i.e., longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class B stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION
Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS
A. Base PPP - Initial Pollution Prevention Plan.
B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
C. Fieldbook Entries – This contains the inspector’s daily diary and bid item postings.
D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature
Printed or Typed Name
Signature
Refer to Sheets No. E.1 - E.4 For Side Road Details
Roadway is WIS 82 on east side of Mississippi River.

Note 2:
## SIDEWALK COMPLIANCE

### Iowa DOT\Burns & McDonnell

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### SIDEWALK COMPLIANCE

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* Does not include curb
* Shading required by Contracting Authority per Article 2511.03 of the Standard Specifications.
* Refer to calculation 113-05 for bid quantities.

FOR INFORMATION ONLY:
VALUES USED TO DETERMINE DESIGNED SLOPES

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SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb

FOR INFORMATION ONLY:
VALUES USED TO DETERMINE DESIGNED SLOPES

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Provide a minimum of 2 inches of cover for all reinforcing.

Ensure all risers are an equal height and all treads are an equal depth within a flight of stairs.

1. Minimum riser height is 4 inches. Maximum riser height is 7 inches.
2. Minimum tread depth is 11 inches.
3. Match existing sidewalk width.
4. Construct cross slope of landing to match adjacent sidewalk.
5. Slope tread 1% minimum to 2% maximum in any direction.
6. Weld post to anchor plate with 1/4 inch weld. Grind weld to provide smooth surface, free of burns.
GENERAL NOTES:
This design is for a new 305'-10" x 40'-0" steel through-truss bridge on 16'-0" lane superstructure. The design is based on the National Bridge Design Standard and provides for a 100-year, 25% chance of recurrence flood event. The site lies on a 50-foot-high hillside, and the Superstructure is supported on 48 steel columns. The Structural Design includes construction of Piers 1 to 3, West Abutment, and South Approach Bridge. The Minimum clearance for the bridge is 75 feet.

PROJECT NUMBER
SHEET NUMBER
DESIGN NO.
pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\0300901016\BRPrelim\STR_03009073_BMCD_Z03.dgn   TSL_03_0124_01   11x17_pdf.pltcfg

BURNS & MCDONNELL ENGINEERING CO., INC.
9400 WARD PARKWAY
KANSAS CITY, MISSOURI 64114

DESIGN TEAM: BURNS & MCDONNELL

V. CONSTRUCTION LOADS

FOR AN IMPACT LOAD OF A VEHICLE ROLLING OVER THE BARRIER, OR SHALL BE REDUNDANT. THE FACE OF THE TRAFFIC BARRIER TO A HEIGHT OF 13'-6" SHALL EITHER BE DESIGNED AS A DC LOADING OR AS A LC LOADING. THE FACE OF THE TRAFFIC BARRIER TO A HEIGHT OF 13'-6" SHALL EITHER BE DESIGNED AS A DC LOADING OR AS A LC LOADING.

VI. WIND LOADS

IN ACCORDANCE WITH AASHTO LRFD, WITH THE EXCEPTIONS FOR THE MINIMUM ANGLE OF ATTACK AND THE MINIMUM GAP BETWEEN MEMBERS.

VII. CONSTRUCTION LOADS

IN ACCORDANCE WITH AASHTO LRFD, WITH THE EXCEPTIONS FOR THE MINIMUM ANGLE OF ATTACK AND THE MINIMUM GAP BETWEEN MEMBERS.

VIII. THERMAL LOADS

THE CONSTRUCTION OF THE ENTRANCEWAY OF THE BRIDGE IS DESIGNATED TO A 100-YEAR FLOOD WITH A MAXIMUM FLOOD Height OF 10 FEET. THE CONSTRUCTION LOADS FOR THE ENTRANCEWAY OF THE BRIDGE SHALL BE DESIGNATED TO A 100-YEAR FLOOD WITH A MAXIMUM FLOOD Height OF 10 FEET.

IX. LOAD AND RESISTANCE FACTORS

LOAD MODIFIERS

FACTOR LOAD MODIFIERS - USE FOR ALL ELEMENTS. RESIDUENCY - 1.0 FOR ALL ELEMENTS. OPERATIONAL IMPORTANCE - 1.0 FOR ALL ELEMENTS.

LOAD FACTORS

FACTOR LOAD MODIFIERS - USE FOR ALL ELEMENTS. RESIDUENCY - 1.0 FOR ALL ELEMENTS. OPERATIONAL IMPORTANCE - 1.0 FOR ALL ELEMENTS.

LOAD FACTORS

FACTOR LOAD MODIFIERS - USE FOR ALL ELEMENTS. RESIDUENCY - 1.0 FOR ALL ELEMENTS. OPERATIONAL IMPORTANCE - 1.0 FOR ALL ELEMENTS.
BRIDGE DESIGN ASSUMPTIONS:

1. The bridge will be designed to withstand the applicable effects of ice and the horizontal force associated with the floodwood.
2. The bridge will be designed to withstand the stream loads associated with the floodwood.
3. The bridge will be designed to withstand the applicable effects of seismic forces.
4. The bridge will be designed to withstand the applicable effects of wind forces.

HYDRAULIC DATA:

1. The bridge will be designed to withstand the applicable effects of ice and the horizontal force associated with the floodwood.
2. The bridge will be designed to withstand the stream loads associated with the floodwood.
3. The bridge will be designed to withstand the applicable effects of seismic forces.
4. The bridge will be designed to withstand the applicable effects of wind forces.

GENERAL PLAN:

1. The bridge will be designed to withstand the applicable effects of ice and the horizontal force associated with the floodwood.
2. The bridge will be designed to withstand the stream loads associated with the floodwood.
3. The bridge will be designed to withstand the applicable effects of seismic forces.
4. The bridge will be designed to withstand the applicable effects of wind forces.
GENERAL NOTES:
1. THE DESIGN IS FOR A NEW 65'-0 SOLDIER PILE RETAINING WALL. THIS DESIGN INCLUDES TYPICAL DETAILS TO ADJACENT MSE WALLS AND TIE-IN DETAILS TO ADJACENT RETAINING WALL.
2. THE RESTRICTED AREAS SHALL BE MARKED OFF WITH CONSTRUCTION FENCE AND NO GROUND DISTURBANCE IS PERMISSIBLE WITHIN THESE AREAS. IF THE CONTRACTOR HAS QUESTIONS THEY CAN CONTACT THE CONSTRUCTION ENGINEER OR IOWA DOT LOCATION AND ENVIRONMENT STAFFER BRENNAN DOLAN AT (515)-239-1795.
3. SEE SHEET V.1 FOR HORIZONTAL AND VERTICAL GEOMETRY.
4. SEE SHEETS E.1 AND E.2 FOR SECOND ST. GEOMETRY.

DESIGN NOTES:
1. H-PILE SPACING AND NEED FOR 8' PILE SPACING TO BE CONFIRMED DURING FINAL DESIGN.
2. CONCRETE FACING AND RETAINING WALL FOR EXISTING RETAINING WALL. NEEDS FOR ADJUSTMENT TO BE DETERMINED DURING FINAL DESIGN.
3. SOLDIER PILES WILL LIKELY CONFLICT WITH EXISTING RETAINING WALL. THIS DESIGN INCLUDES TIE-IN DETAILS TO ADJACENT RETAINING WALL. THIS DESIGN INCLUDES TIE-IN DETAILS TO ADJACENT MSE WALLS AND TIE-IN DETAILS TO ADJACENT RETAINING WALL.
4. LIMITS OF RESTRICTED AREA AS SHOWN HAVE BEEN ADJUSTED. WALL TYPE SHALL BE RE-EVALUATED DURING FINAL DESIGN.

PLAN NOTES:
1. SEE SHEET V.1 FOR MSE WALL LAYOUT AND ELEVATION.
2. SEE SHEETS V.14 AND V.15 FOR DETAILS AT WALL CORNERS.

TRAFFIC ESTIMATE

LOCATION

65'-0 X VARIABLE HEIGHT SOLDIER PILE RETAINING WALL

ELEVATION ALONG FRONT OF WALL
Refer to Sheet No. E.5
For Side Road Details
Refer to Sheet No. E.6
For Main Line Details
Refer to Standard Road Plan MI-221
For Combined Retaining Wall/Sidewalk Details

For Section A-A and B-B, see Sheet V.13.
For Section A-A and B-B, see Sheet V.13.

Refer to Sheet No. E.6
For Side Road Details
Refer to Sheet No. E.6
For Combined Retaining Wall/Sidewalk Details

Refer to Sheet No. E.5
For Side Road Details
Refer to Sheet No. E.5
For Combined Retaining Wall/Sidewalk Details

For Section A-A and B-B, see Sheet V.13.
For Section A-A and B-B, see Sheet V.13.

Refer to Sheet No. E.6
For Side Road Details
Refer to Sheet No. E.6
For Combined Retaining Wall/Sidewalk Details

For Section A-A and B-B, see Sheet V.13.
For Section A-A and B-B, see Sheet V.13.

Refer to Sheet No. E.5
For Side Road Details
Refer to Sheet No. E.5
For Combined Retaining Wall/Sidewalk Details

For Section A-A and B-B, see Sheet V.13.
For Section A-A and B-B, see Sheet V.13.
**VIEW A-A**

- **BL Soldier Pile Wall**
- **Concrete Facing on Soldier Pile Wall**
- **MSE Wall (Front Face)**
- **Top of Abutment Footing**
- **Concrete Facing on Soldier Pile Wall**
- **MSE Wall (Behind)**

**VIEW B-B**

- **Soldier Pile Wall (Typ.)**
- **Concrete Facing on Soldier Pile Wall**
- **MSE Wall (Front Face)**
- **Top of Abutment Footing (Behind)**
- **MSE Wall (Behind)**

**GENERAL NOTE:**
Include Coping along horizontal and vertical edge of Soldier pile wall, as shown to match look of MSE Wall.

**NOT INCLUDED FOR FINAL DESIGN**
- **Retaining Wall Corner Details**
- **9'-1 Wall Vertical Step (To Be Reviewed as Design Progresses)**

**FILE NO.:** BRF-009-9(73)–38-03

**DATE:** 11/27/2020

**DESIGN TEAM:** Iowa DOT, Burns & McDonnell
**DESIGN TEAM**

**PROJECT NUMBER**

**SHEET NUMBER**

**COUNTY**

**FILE NO.**

**ENGLISH**

**SYSTEMDATE**

**FILE NO.**

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**V.13**

**DESIGN TEAM**

**PROJECT NUMBER**

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**ENGLISH**

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**FILE NO.**

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**V.13**

**RETAINING WALL SECTION VIEWS**

**NOT INCLUDED FOR FINAL DESIGN**
CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET
(COVERS SHEET SERIES W, X, Y, & Z)
Preliminary
Preliminary
Second St
Preliminary