

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19	D2 BJR 2019-1	WINNEBAGO	12	1
			CONTRACT NO.	64N30

INDEX OF SHEETS

- 1 COVER SHEET, INDEX OF SHEETS & STATE STANDARDS
- 2 SUMMARY OF QUANTITIES
- 3 SHOULDER CLOSURE DETAIL
- 4 SHOULDER CLOSURE TYPICAL
- 5-6 ROAD CLOSURE DETAIL
- 7 TRAFFIC CONTROL ROAD CLOSURE STANDARD
- 8 GENERAL PLAN & ELEVATION
- 9 CROSS SECTION & FRAMING PLAN
- 10 JOINT REMOVAL & REPLACEMENT DETAILS AT ABUTMENTS
- 11 PERFORMED JOINT STRIP SEAL DETAILS
- 12 BEARING REPLACEMENT DETAILS AT ABUTMENT

STATE STANDARDS

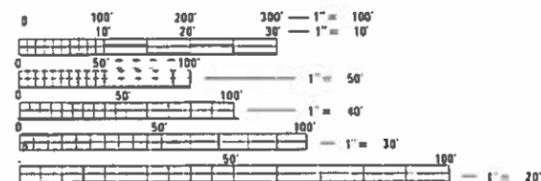
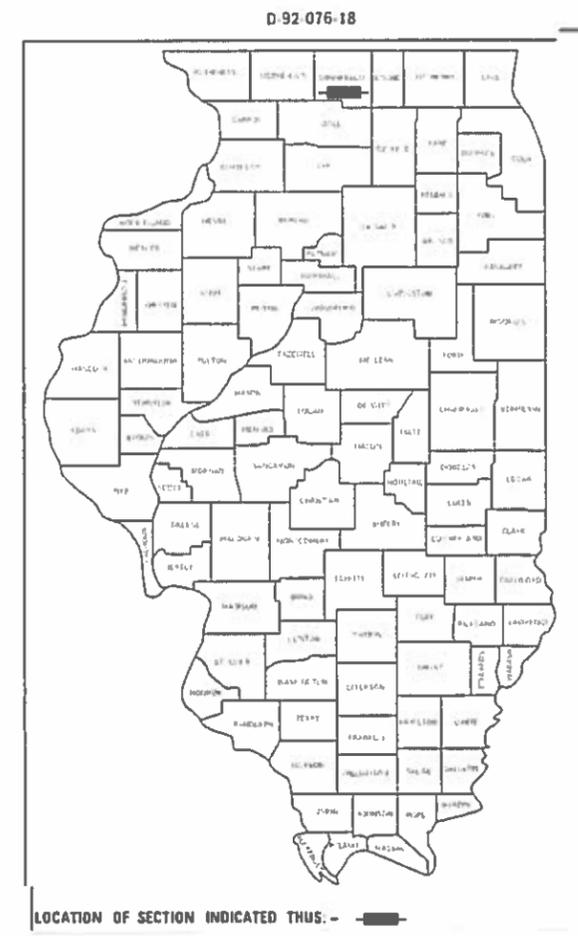
- 701006-05 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' TO 24" FROM PAVEMENT EDGE
- 701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
- 701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701406-12 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 701428-01 TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY

# PROPOSED HIGHWAY PLANS

FAI ROUTE 39 (I-39)  
SECTION D2 BJR 2019-2  
PROJECT  
TYPE OF IMPROVEMENT  
WINNEBAGO COUNTY

C-92-001-19  
R.2E.

SN 101-0144

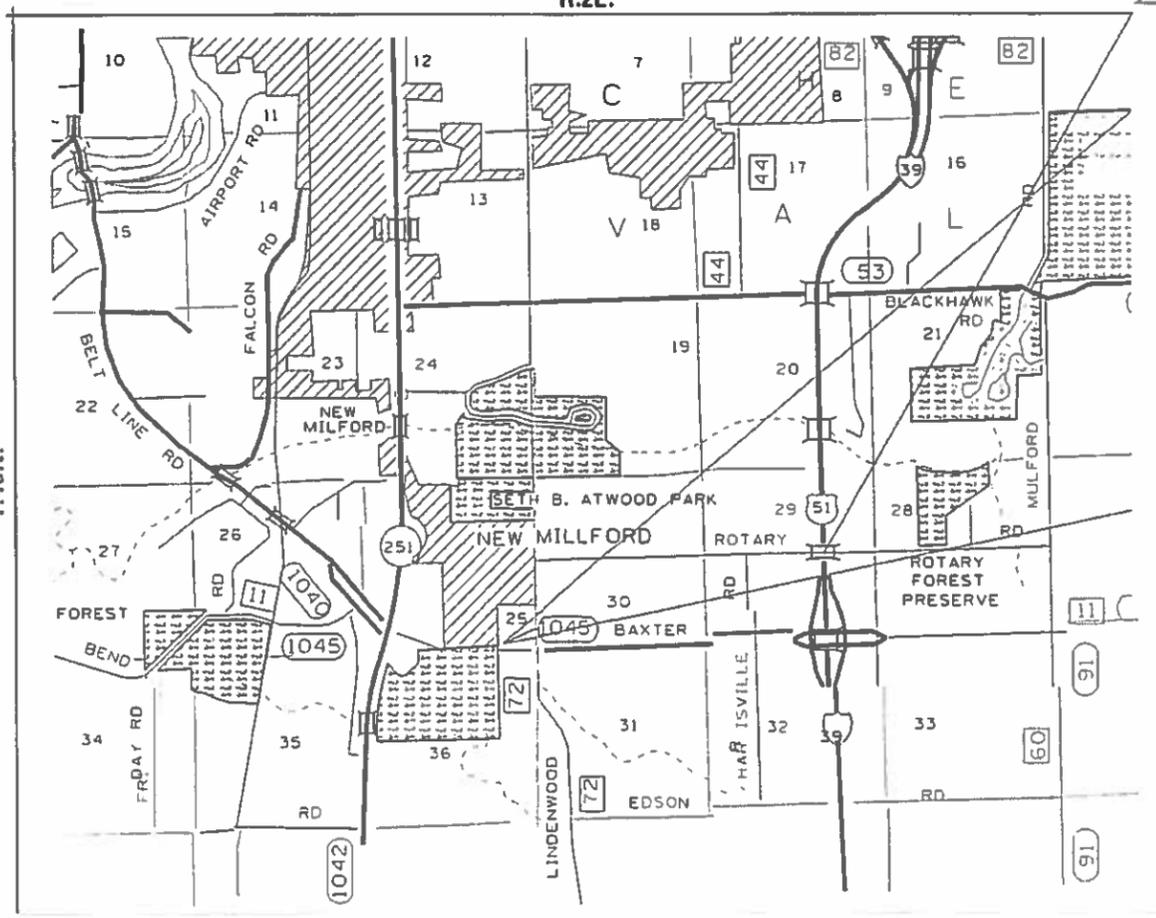


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: KYLE ROLLINS (815) 284-5417  
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

CONTRACT NO. 64N30



WINNEBAGO COUNTY  
CHERRY VALLEY TOWNSHIP - SECTIONS 28 & 29

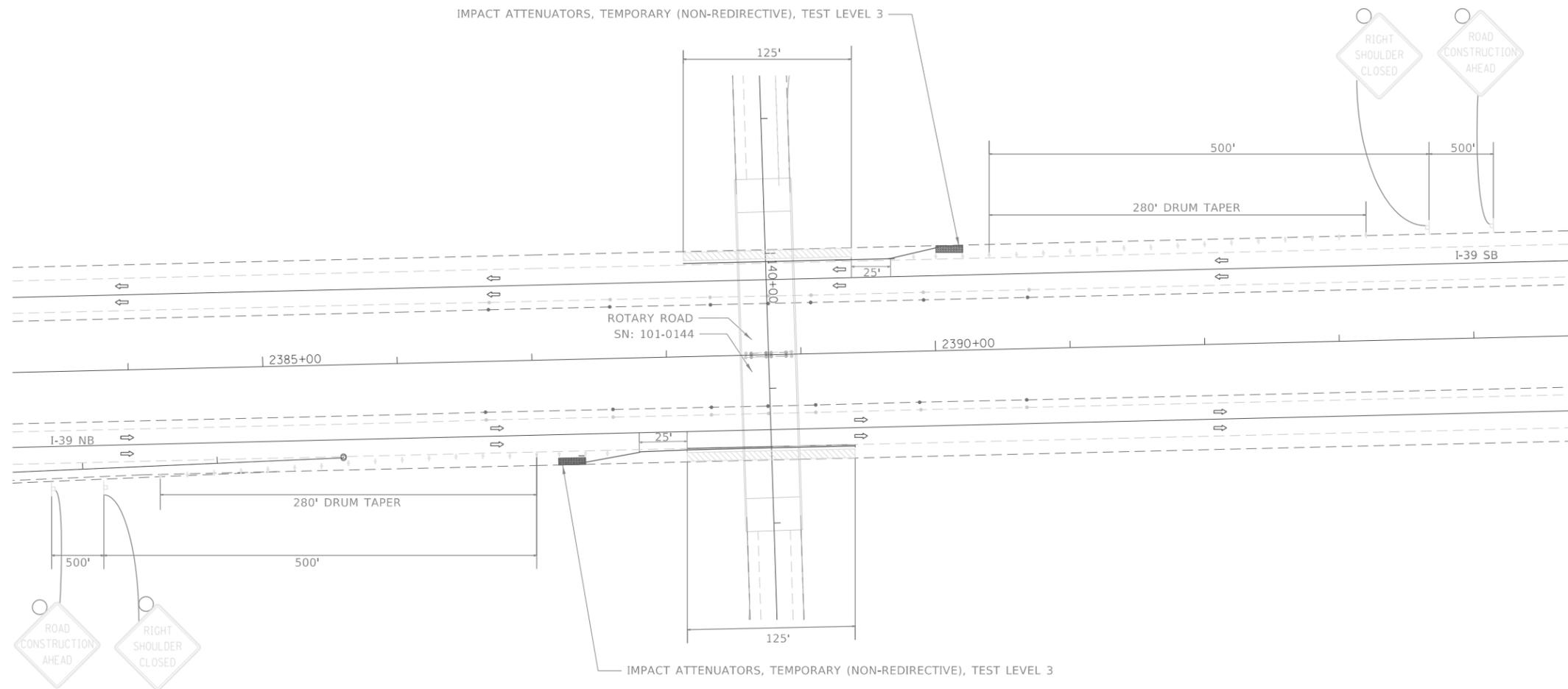
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED 10-10-2018  
K. Mauchel  
Dec 7 2018  
E.A. Etk  
ENGINEER OF DESIGN AND ENVIRONMENT  
Dec 7 2018  
Paul P. Ch...  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



# SHOULDER CLOSURE DETAIL



## NOTES:

"ROAD CONSTRUCTION AHEAD" AND "RIGHT SHOULDER CLOSED" SIGNS SHALL BE PLACED ON I-39 NORTH BOUND ALONG WITH THE ON RAMP FROM BAXTER ROAD TO I-39 NORTH BOUND.

SIGNS AND DEVICES SHALL BE ACCORDING TO STANDARD 701101

## SYMBOLS

-  WORK AREA
-  SIGN
-  TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE, WITH STEADY BURN MONODIRECTIONAL LIGHT
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR

MODEL: Default  
FILE: \\nwrpc-pvs\ulb\B&E\BID\ITC\Illinois\pvs\PIV\DOT\Documents\1\DOT\_Offices\District 2\Projects\Operations\Bldg\_Section\Winnebago\101-0144\64N30\CAD\DD\2-shc-cover.dgn

USER NAME = Rollins	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
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PLOT DATE = Oct-17-2018 08:59:25 AM	DATE - _____	REVISED - _____

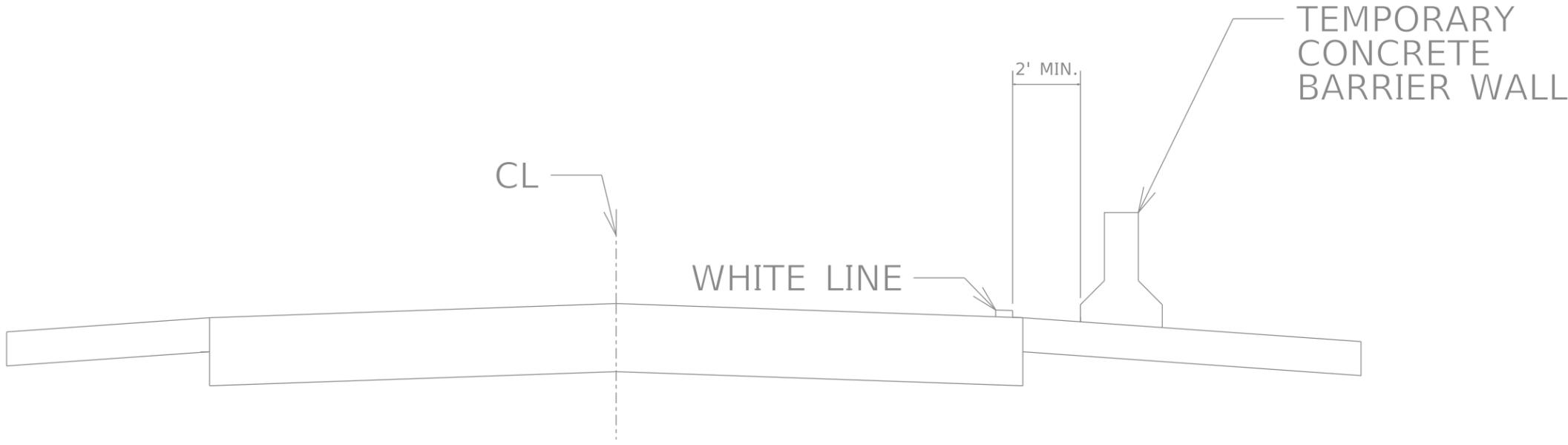
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHOULDER CLOSURE DETAIL

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 BJR 2019-1	WINNEBAGO	12	3
CONTRACT NO. 64N30				
ILLINOIS FED. AID PROJECT				

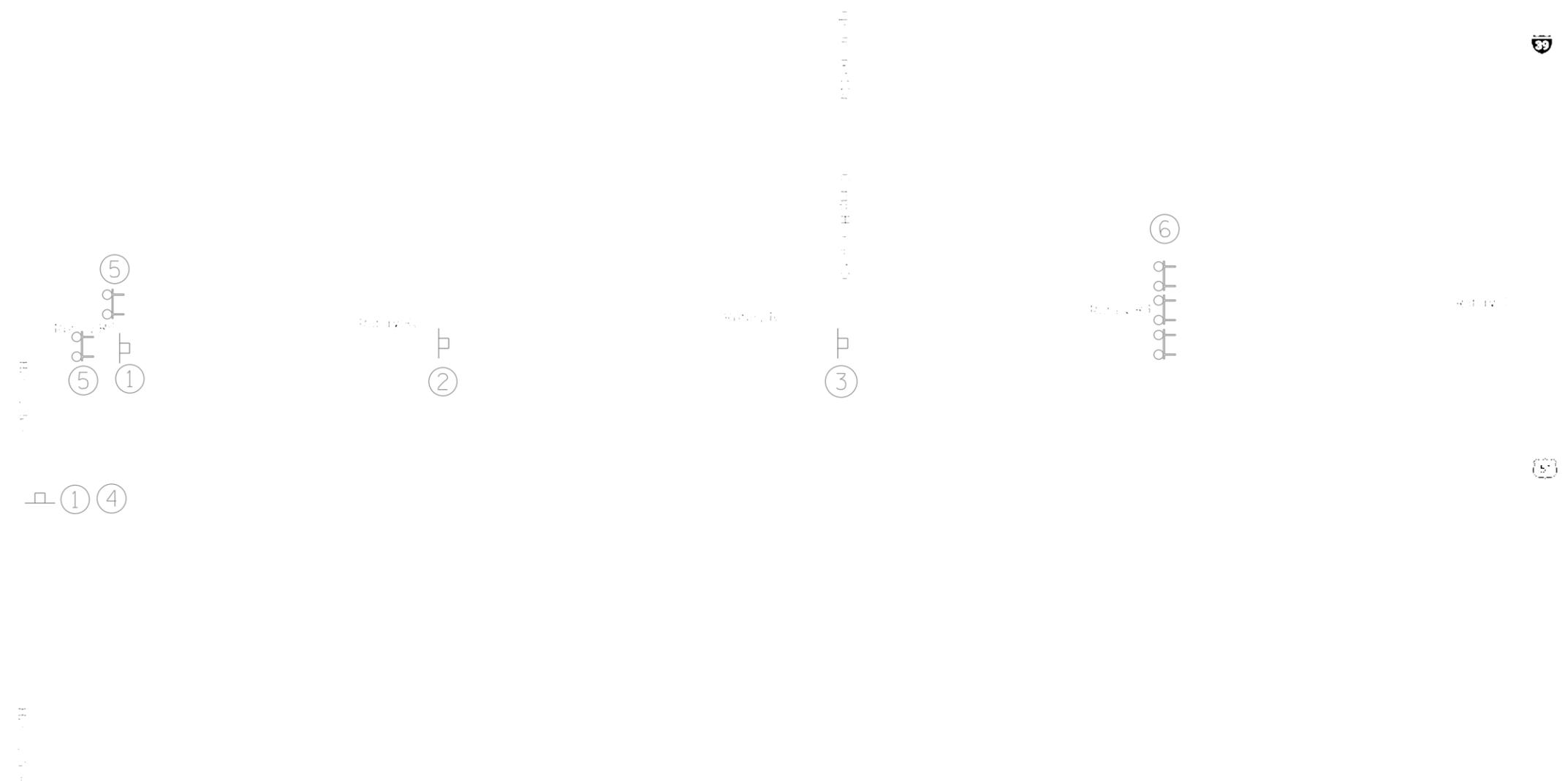
# I-39 SHOULDER CLOSURE DETAIL

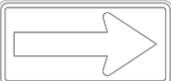
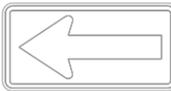


MODEL: Default  
 FILE: \\nrcs-pkgs\illinois\BID\NTEC\Illinois\gov\PIV\DOT\Documents\DOT\_Offices\District\_2\Projects\Operations\Bldg\_Section\Winnebago\101-011464\2018\CADD\02-shc-cover.dgn

USER NAME = Rollins	DESIGNED - _____	REVISED - _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-39 SHOULDER CLOSURE DETAIL</b>		F.A.I. RTE. = 39	SECTION = D2 BJR 2019-1	COUNTY = WINNEBAGO	TOTAL SHEETS = 12	SHEET NO. = 4	
PLOT SCALE = 100.0000' / in.	CHECKED - _____	REVISED - _____				SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 64N30			
PLOT DATE = Oct-17-2018 08:59:53 AM	DATE - _____	REVISED - _____		ILLINOIS FED. AID PROJECT							

# ROTARY ROAD OVER I-39 CLOSURE



- ①  W20-3(0)-48
- ②  W20-3(0)-48
- ③  W21-1100(0)-48
- ④  W1-6(F0) 3618
- ⑤  R11-4 4830  
MOUNTED ON TYPE III  
STAGGERED BARRICADE
- ⑥  R11-2  
MOUNTED ON TYPE III  
BARRICADE
- ⑦  W1-6(F0) 3618
-  Type III barricade  
with flashing lights

NOTE: ROAD CLOSURE WILL BE PAID FOR AS TRAFFIC CONTROL AND PROTECTION, SPECIAL

MODEL: Default  
FILE: \\nrc\p\110108\B&E\BID\ITC\Illinois\gov\PIV\DOT\Documents\1011\11\64\10\CA00\02-51c-cover.dgn

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PLOT DATE = Oct-17-2018 09:00:32 AM	CHECKED - _____	REVISIONS - _____
	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROTARY ROAD OVER I-39 CLOSURE**

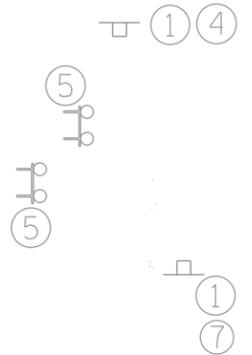
SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 BJR 2019-1	WINNEBAGO	12	5
				CONTRACT NO. 64N30
		ILLINOIS	FED. AID PROJECT	

# ROTARY ROAD OVER I-39 CLOSURE



5



Cherry Valley  
Equestrian Center

XPO Logistics



W20-3(0)-48



W21-I100(0)-48



R11-4 4830  
MOUNTED ON TYPE III  
STAGGERED BARRICADE



R11-2  
MOUNTED ON TYPE III  
BARRICADE



W1-6(F0) 3618



W20-3(0)-48



W1-6(F0) 3618

 Type III barricade  
with flashing lights

MODEL: Default  
FILE: \\nrcs-pvs\ILLINOIS\BID\NTEC\Illinois.gov\PIV\DOT\Documents\DOT\_Offices\Director\Projects\Operations\Bldg\_Section\Winnebago\10-14\64N30\CADD\02-shc-cover.dgn

USER NAME = Rollins	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
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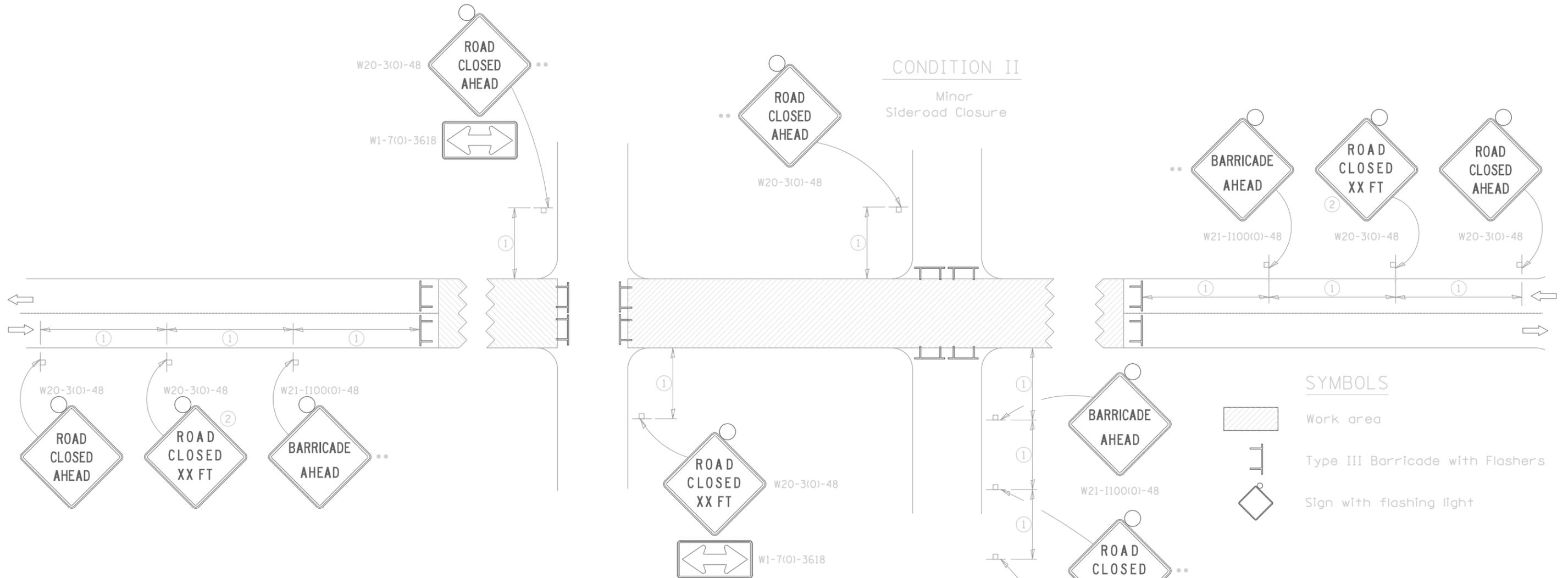
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROTARY ROAD OVER I-39 CLOSURE

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 BJR 2019-1	WINNEBAGO	12	6
CONTRACT NO. 64N30				
ILLINOIS FED. AID PROJECT				

# TRAFFIC CONTROL FOR ROAD CLOSURE



## SYMBOLS

-  Work area
-  Type III Barricade with Flashers
-  Sign with flashing light

## GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

\*\* Where local access is to be maintained, barricades are to be set up as shown in "Road Closed to Thru Traffic". Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed to All Traffic" detail on Highway Standard 701901.

All dimensions are in inches unless otherwise shown.

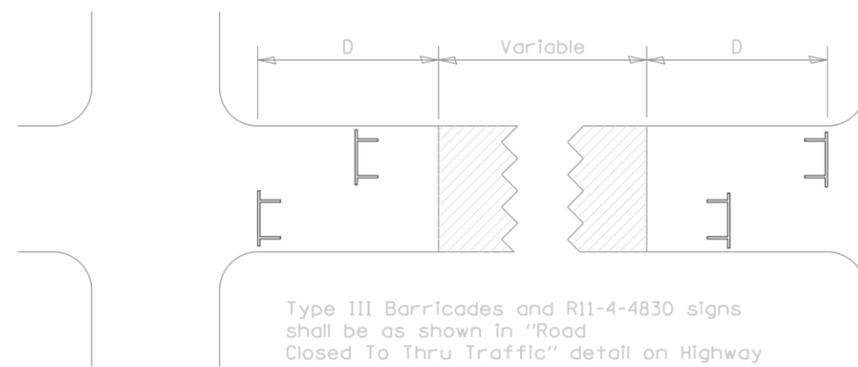
①

SIGN SPACING TABLE	
Posted Speed	Sign Spacing
45 MPH and above	500'
Below 45 MPH	250'

②

SIGN LEGEND	
Posted Speed Limit	Distance
45 MPH and above	1000'
Below 45 MPH	500'

## ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



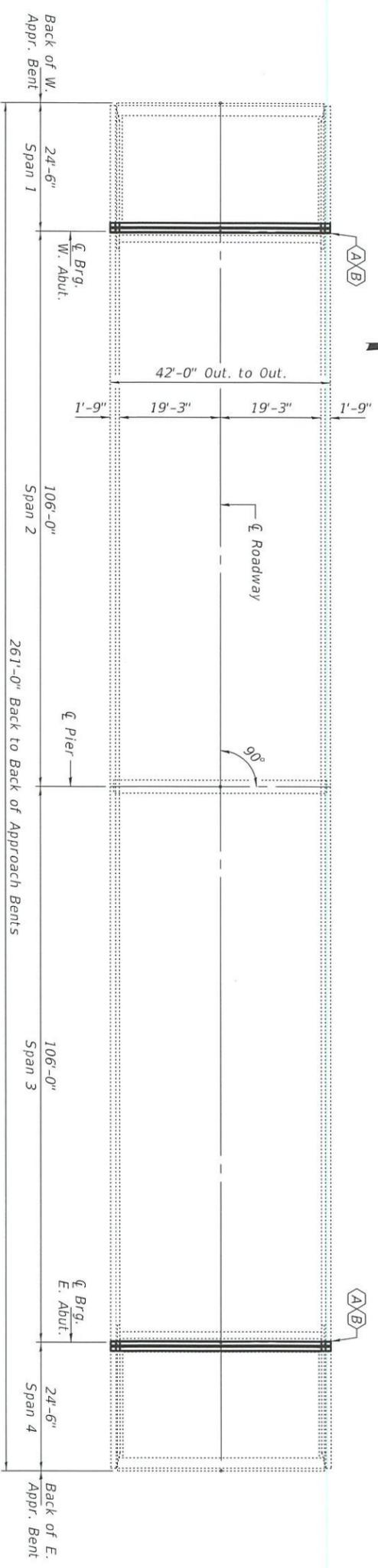
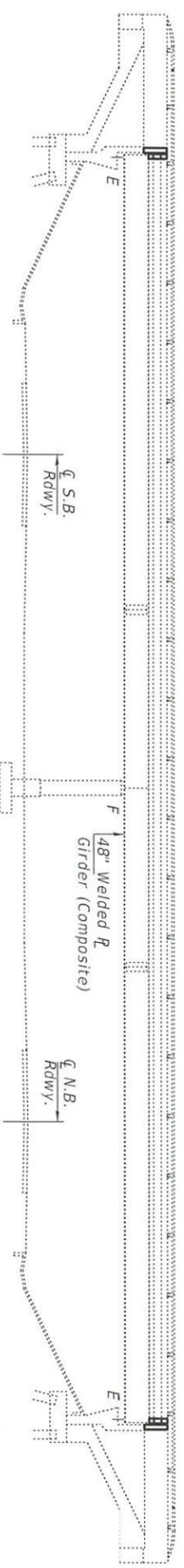
Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed to Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 2000' an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

## TYPICAL APPLICATION FOR ROAD CLOSURE

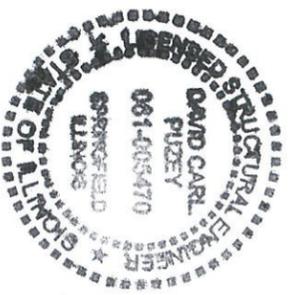
FILE NAME =	USER NAME = Rollinsks	DESIGNED -	REVISED - 8-03-17	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REGION 2 / DISTRICT 2 STANDARD</b>		F.A.I. RTE. 39	SECTION D2 BJR 2019-1	COUNTY WINNEBAGO	TOTAL SHEETS 12	SHEET NO. 7		
pw:\11\084EBIDINTEG\illinois.gov\PIDOT\Documents\IDOT Offices\District 2\Projects\Open Road\Bridges\Section\Winnebago\101-0144\6R\02-02-shr-10-17.dgn	DRAWN	CHECKED -	REVISED - 8-27-13				SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 64N30		FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT		
PLOT SCALE = 100.0000' / in.	DATE -	REVISED - 10-17-11											

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.  
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.  
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
 The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.  
 Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.  
 Work to be completed under road closure.



- (A) - Remove & Replace Existing Expansion Joint
- (B) - Remove & Replace Existing Expansion Bearings (12 locations)



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.8
Concrete Superstructure	Cu. Yd.	3.8
Reinforcement Bars, Epoxy Coated	Pound	710
Performed Joint Strip Seal	Foot	81
Jack and Remove Existing Bearings	Each	12
Elastomeric Bearing Assembly, Type I	Each	12
Furnishing & Erecting Structural Steel	Pound	2310
Anchor Bolts, 1"Ø	Each	48

Expires: November 30, 2020

DESIGNED - <i>Theresa Sells</i>	EXAMINED - <i>Trinity A. Amundson</i>	DATE - NOVEMBER 19, 2018
CHECKED - <i>Stephen Ryan</i>	PASSED - <i>Carl Ludwig</i>	REVISED -
DRAWN - STEFFEN	ENGINEER OF STRUCTURAL SERVICES	REVISIONS
CHECKED - <i>HSS</i>	ENGINEER OF BRIDGES AND STRUCTURES	

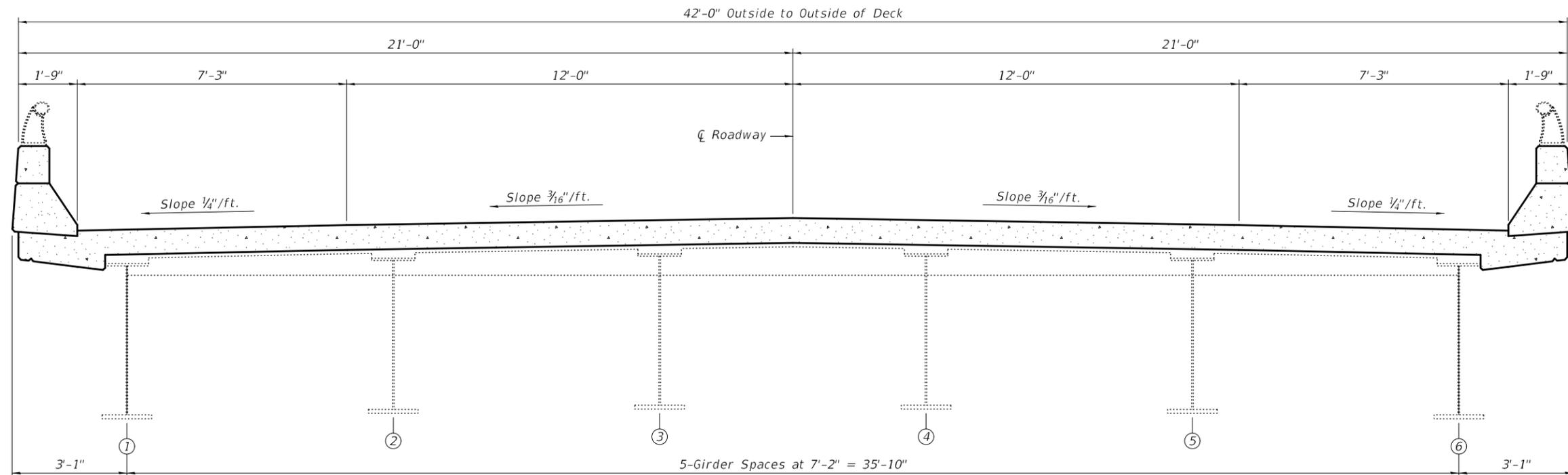
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
 ROTARY ROAD OVER F.A. ROUTE 412  
 SN 101-0144

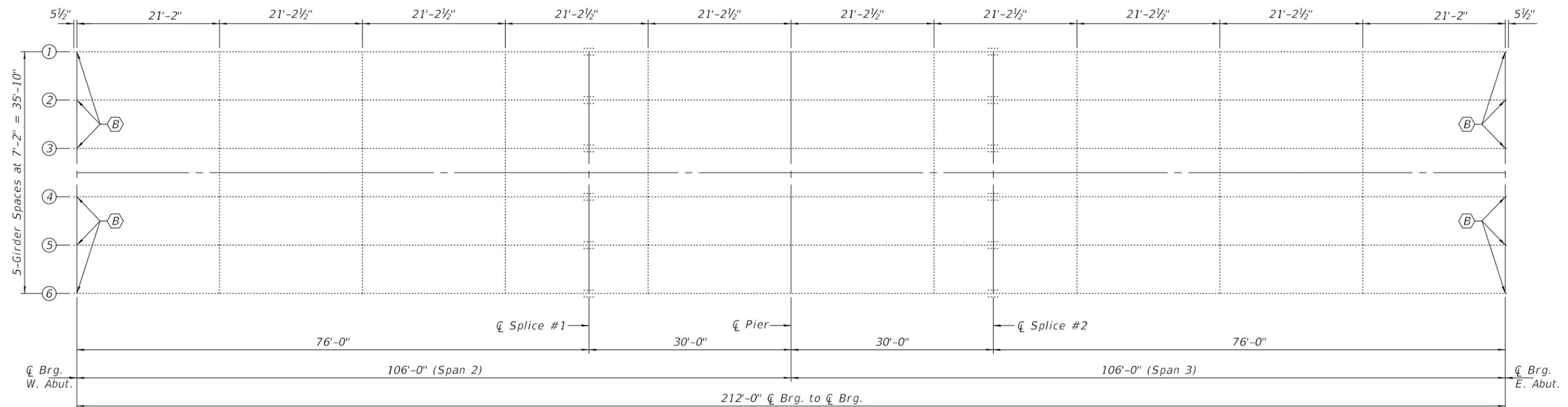
SHEET 1 OF 5 SHEETS

FA RTE. 412	SECTION D2 BR 2019-1	COUNTY WINNEBAGO	TOTAL SHEETS 12
		CONTRACT NO. 64N30	8

ILLINOIS FED. AID PROJECT



**CROSS SECTION**  
(Looking East)



**FRAMING PLAN**

ⓑ - Remove & Replace Expansion Bearings



DESIGNED - HSS  
CHECKED - SMR  
DRAWN - STEFFEN  
CHECKED - HSS SMR

EXAMINED  
PASSED

*Timothy A. Daulton*  
ENGINEER OF STRUCTURAL SERVICES  
*Carl R. Meyer*  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - NOVEMBER 19, 2018

REVISED -  
REVISED -

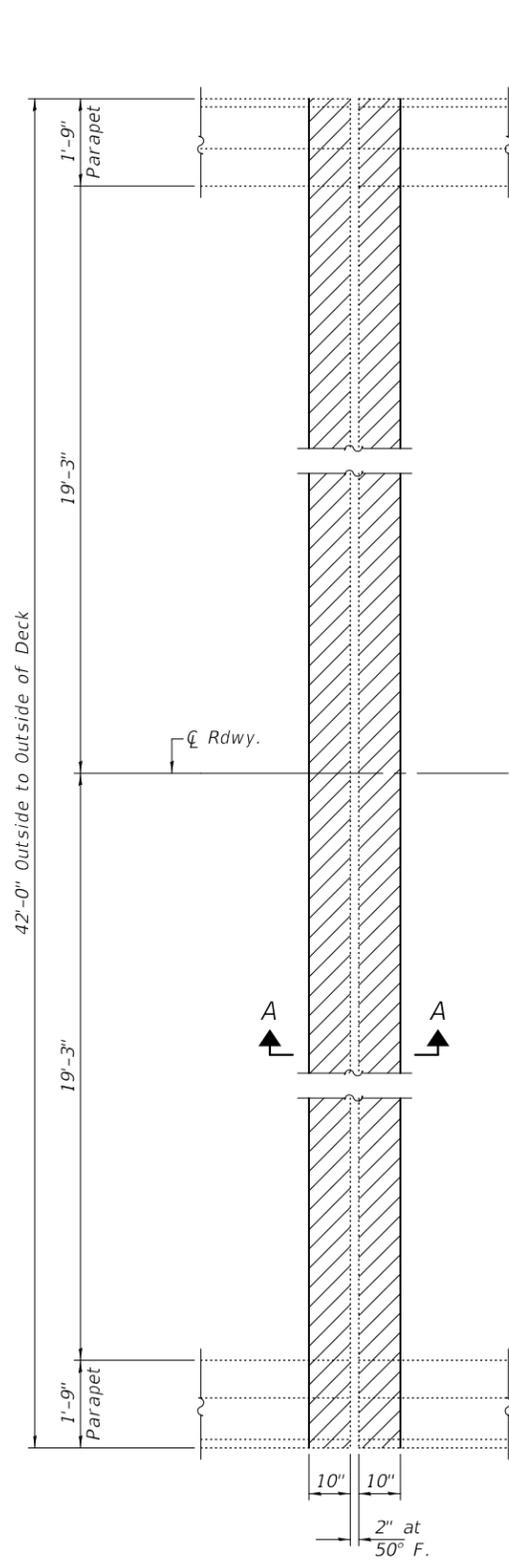
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION & FRAMING PLAN**  
**SN 101-0144**

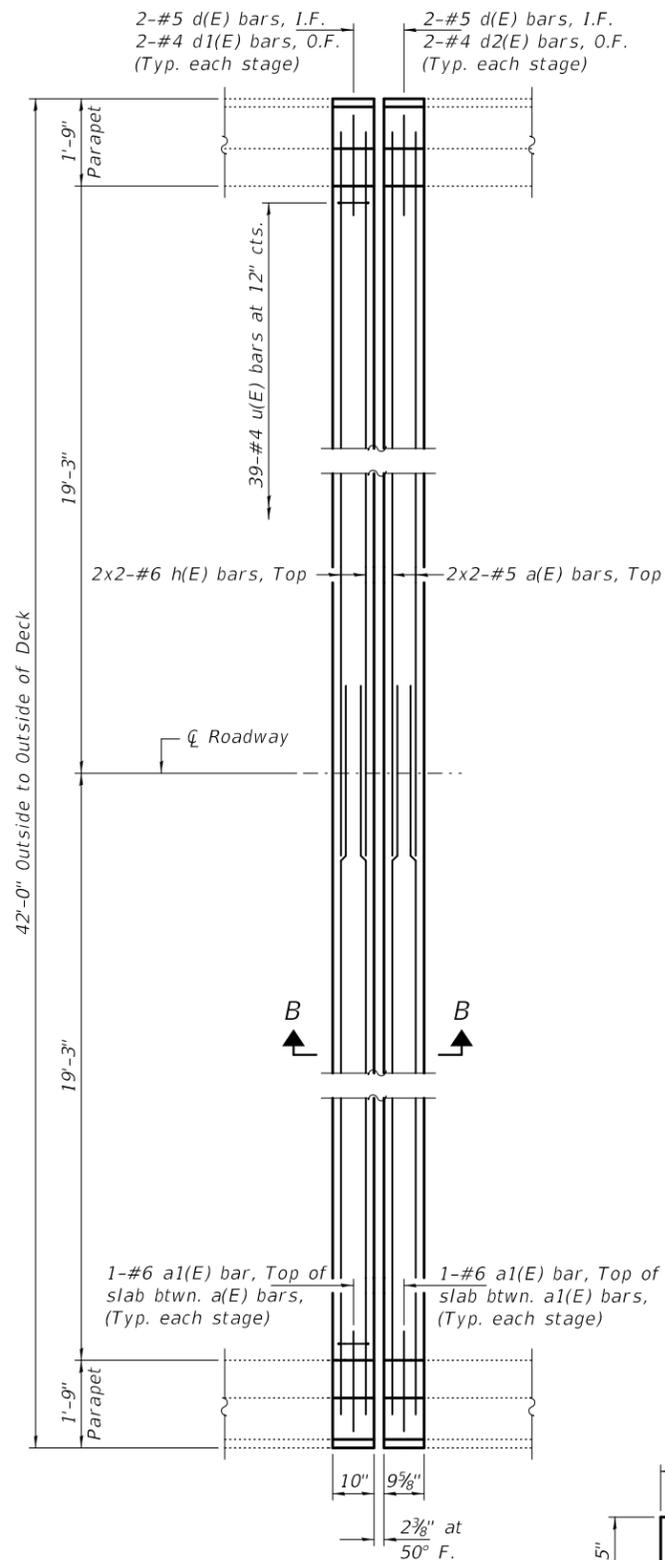
SHEET 2 OF 5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	D2 BJR 2019-1	WINNEBAGO	12	9
CONTRACT NO. 64N30				

ILLINOIS FED. AID PROJECT

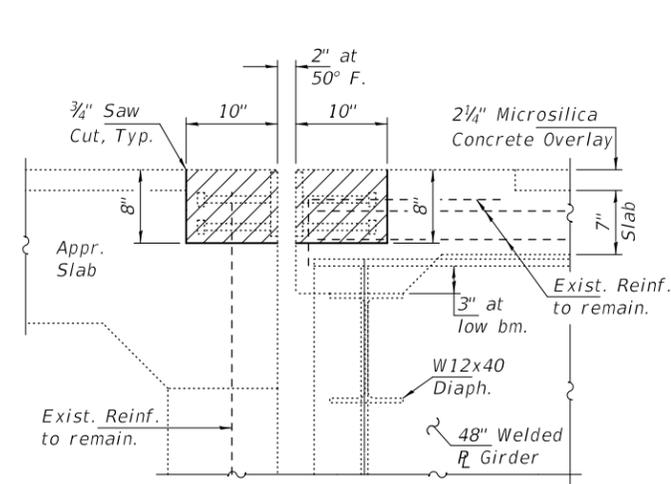


**CONCRETE REMOVAL PLAN**  
(W. Abut. shown, E. Abut. similar.)

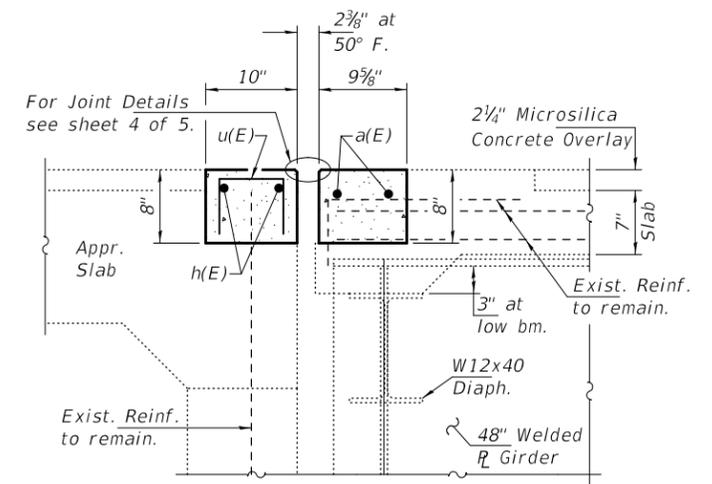


**CONCRETE REPLACEMENT PLAN**  
(W. Abut. shown, E. Abut. similar.)

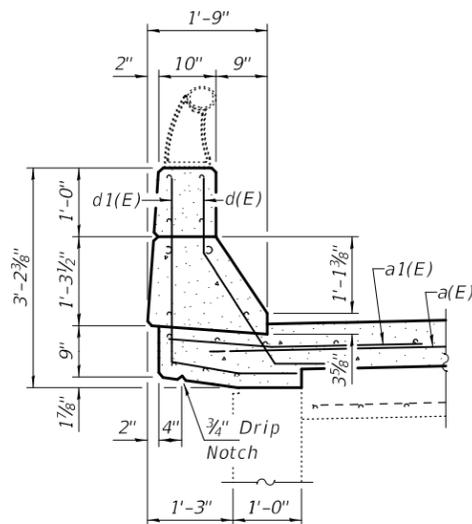
Note:  
Hatched areas indicate  
Concrete Removal.



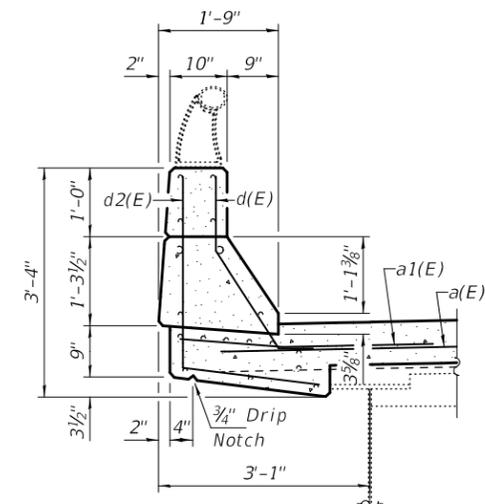
**SECTION A-A**



**SECTION B-B**



**TYPICAL PARAPET SECTION FOR SPANS 1 & 4**

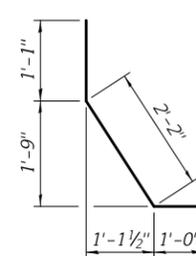


**TYPICAL PARAPET SECTION FOR SPANS 2 & 3**

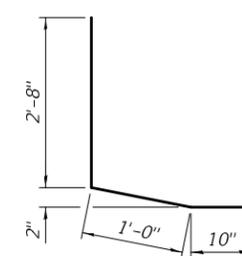
**MIN. BAR LAPS**  
#5 = 3'-6"  
#6 = 5'-0"



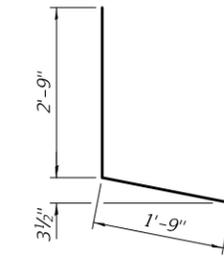
**BAR a1(E)**



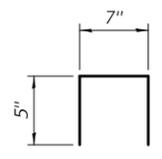
**BAR d(E)**



**BAR d1(E)**



**BAR d2(E)**



**BAR u(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	8	#5	22'-0"	—
a1(E)	8	#6	4'-0"	—
h(E)	8	#6	22'-9"	—
d(E)	16	#5	4'-3"	┌
d1(E)	8	#4	4'-8"	┌
d2(E)	8	#4	4'-6"	┌
u(E)	78	#4	1'-7"	□
Concrete Removal			Cu. Yd.	3.8
Concrete Superstructure			Cu. Yd.	3.8
Bar Splicers			Each	8
Reinforcement Bars, Epoxy Coated			Pound	710

DESIGNED - HSS  
CHECKED - SMR  
DRAWN - STEFFEN  
CHECKED - HSS SMR

EXAMINED  
PASSED  
Timothy A. Daulton  
ENGINEER OF STRUCTURAL SERVICES  
Carl R. Meyer  
ENGINEER OF BRIDGES AND STRUCTURES

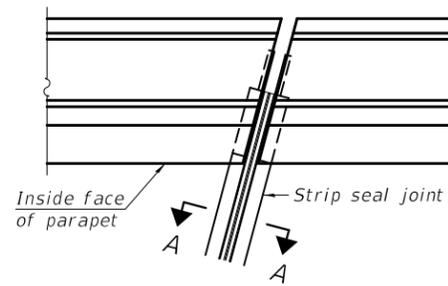
DATE - NOVEMBER 19, 2018  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL & REPLACEMENT DETAILS AT ABUTMENTS  
SN 101-0144**

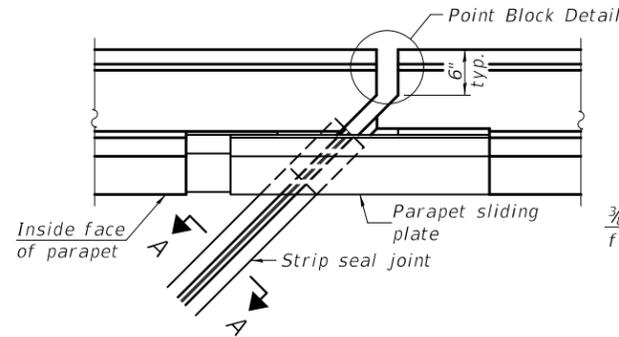
SHEET 3 OF 5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	D2 BJR 2019-1	WINNEBAGO	12	10
CONTRACT NO. 64N30				
ILLINOIS FED. AID PROJECT				

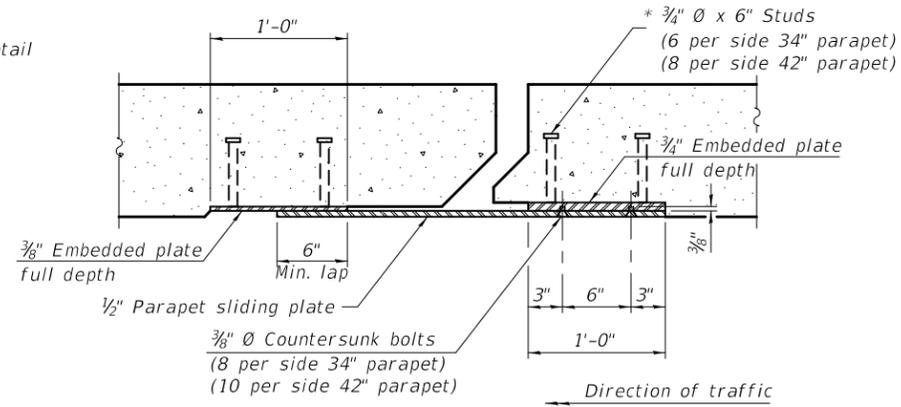


FOR SKEWS  $\leq 30^\circ$

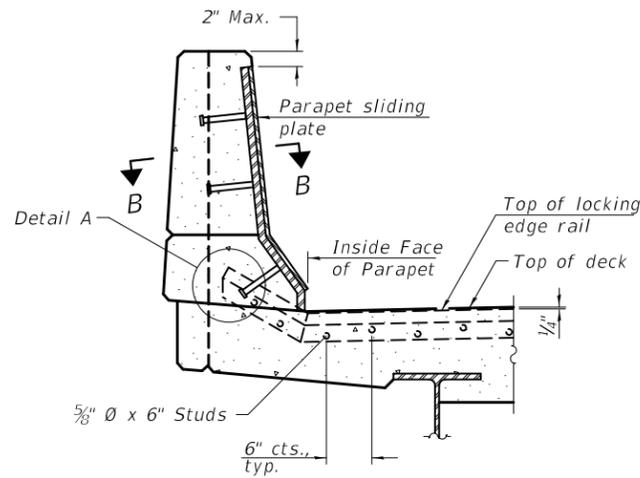
PLAN AT PARAPET



FOR SKEWS  $> 30^\circ$

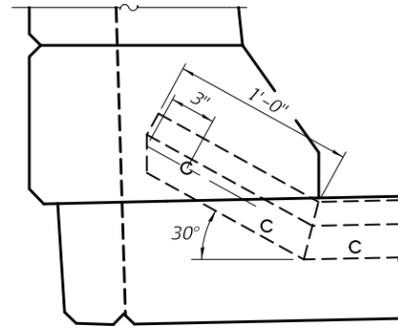


SECTION B-B

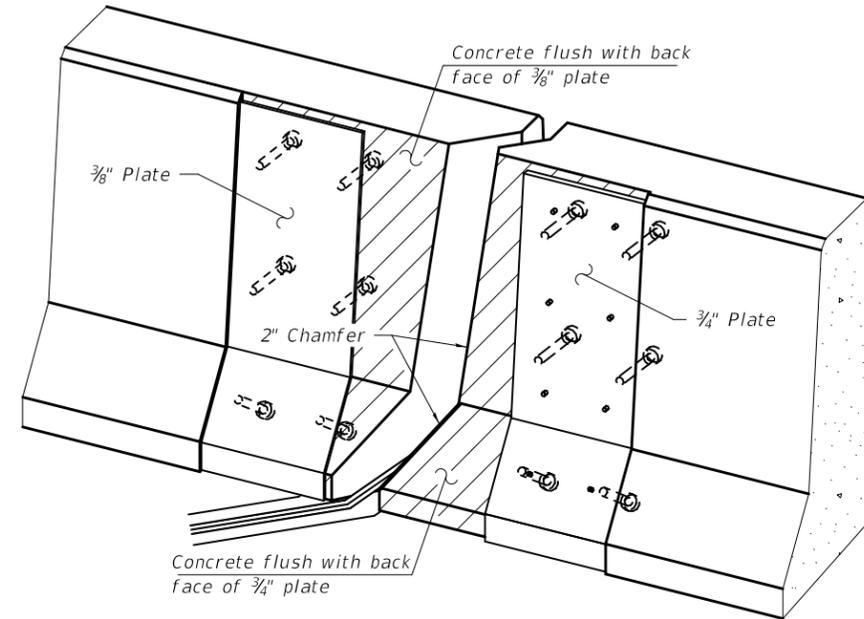


ELEVATION AT PARAPET

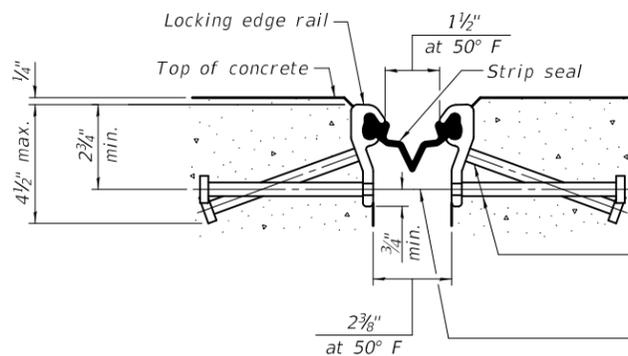
(Skews  $> 30^\circ$  shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)



DETAIL A

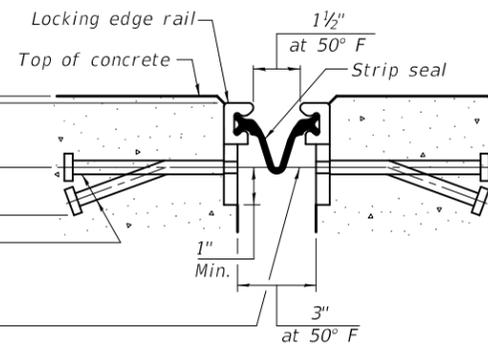


TRIMETRIC VIEW  
(Showing embedded plates only)

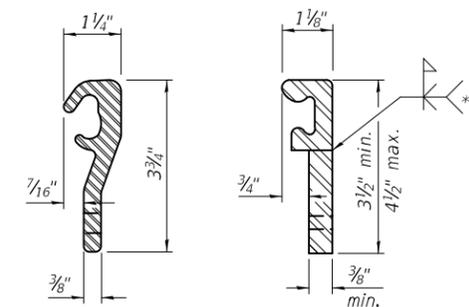


SHOWING ROLLED RAIL JOINT

\*  $5/8"$   $\phi$  x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)  
 $3/8"$   $\phi$  threaded rods in  $7/16"$   $\phi$  holes at  $\pm 4'-0"$  cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

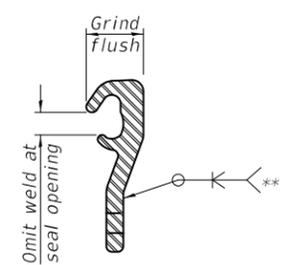


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

\*\* Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	81

EJ-SS

8-11-17

DESIGNED - HSS	EXAMINED
CHECKED - SMR	PASSED
DRAWN - STEFFEN	
CHECKED - HSS SMR	

Timothy A. Daulton  
 ENGINEER OF STRUCTURAL SERVICES  
 Carl Rieger  
 ENGINEER OF BRIDGES AND STRUCTURES

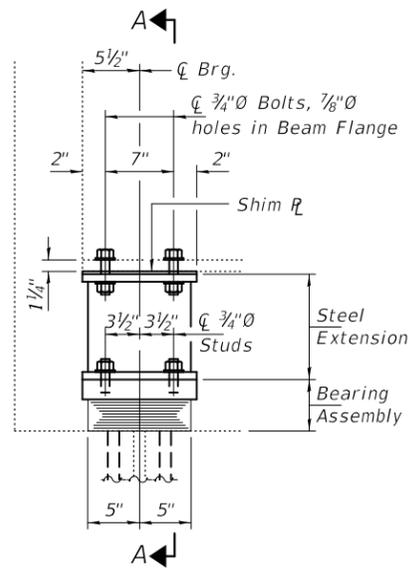
DATE - NOVEMBER 19, 2018
REVISED -
REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

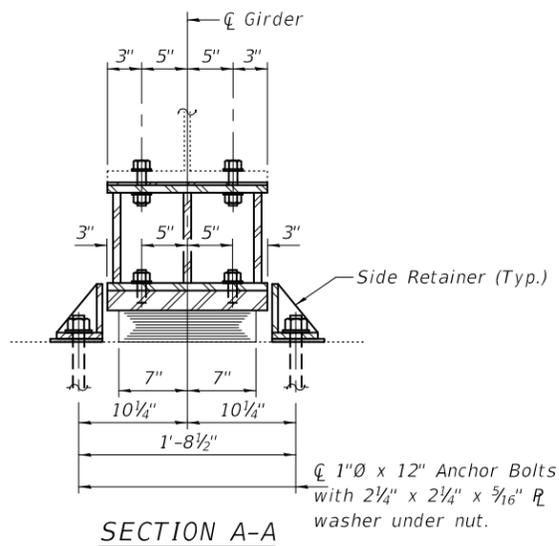
PREFORMED JOINT STRIP SEAL DETAILS  
 SN 101-0144

SHEET 4 OF 5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	D2 BJR 2019-1	WINNEBAGO	12	11
CONTRACT NO. 64N30				
ILLINOIS FED. AID PROJECT				

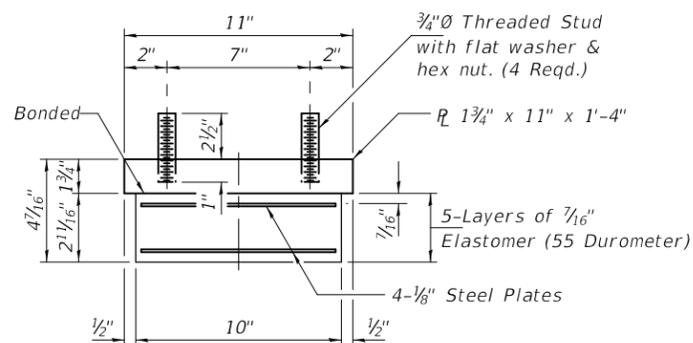


**ELEVATION AT ABUTMENT**



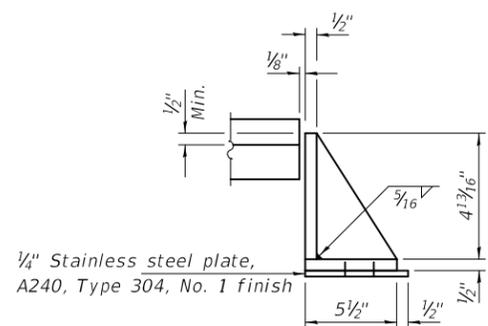
**SECTION A-A**

**TYPE I ELASTOMERIC EXP. BRG.**



**BEARING ASSEMBLY**

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



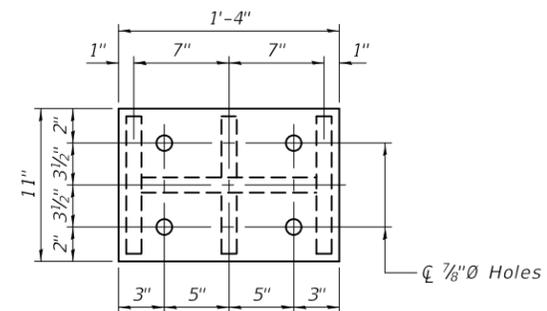
**SIDE RETAINER**

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

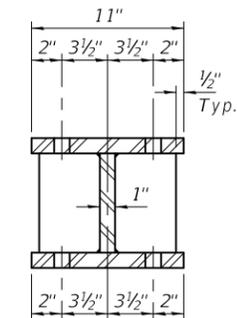
**BEAM REACTIONS**

R <sub>∅</sub>	(K)	50.4
R <sub>⊥</sub>	(K)	46.7
Imp.	(K)	10.1
R (Total)	(K)	107.2

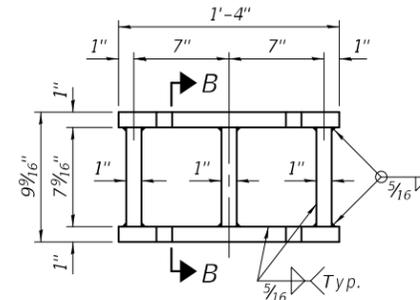
Notes:  
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
Min. jack capacity = 60 Tons.  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



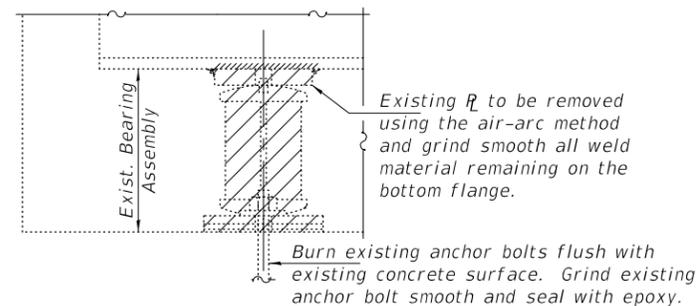
**PLAN TOP AND BOTTOM PLATE**



**SECTION B-B**



**STEEL EXTENSION DETAIL**



**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	2310
Anchor Bolts, 1"∅	Each	48

DESIGNED - HSS  
CHECKED - SMR  
DRAWN - STEFFEN  
CHECKED - HSS SMR

EXAMINED  
PASSED  
Timothy A. [Signature]  
ENGINEER OF STRUCTURAL SERVICES  
[Signature]  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - NOVEMBER 19, 2018  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT ABUTMENTS  
SN 101-0144

SHEET 5 OF 5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
412	D2 BJR 2019-1	WINNEBAGO	12	12
CONTRACT NO. 64N30				
ILLINOIS FED. AID PROJECT				