

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 517 (US 20 BUS)
SECTION (1-2HB)BJR
PROJECT NHPP-GQFF(032)
BRIDGE REPAIR OF STRUCTURE
CARRYING POPLAR GROVE ROAD
OVER US 20 BUSINESS
BOONE COUNTY

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	1-2HB)BJR	BOONE	37	1
		ILLINOIS	CONTRACT NO. 64N33	

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
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- 30 TRAFFIC CONTROL FOR ROAD CLOSURE (40.1)
- 31-33 TYPICAL PAVEMENT MARKINGS (41.1)
- 34-37 REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL (53.1)

HIGHWAY STANDARDS

- 000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 482011-03 HMA SHLD, STRIPS/SHLDS, WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
- 610001-08 SHOULDER INLET WITH CURB
- 630001-12 STEEL PLATE BEAM GUARDRAIL
- 631031-16 TRAFFIC BARRIER TERMINAL, TYPE 6
- 701101-05 OFF-ROAD OPERATIONS, MULTILANE MORE THAN 15' TO 24' FROM PAVEMENT EDGE
- 701106-02 OFF-ROAD OPERATIONS, MULTILANE MORE THAN 15' AWAY
- 701901-08 TRAFFIC CONTROL DEVICES
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS



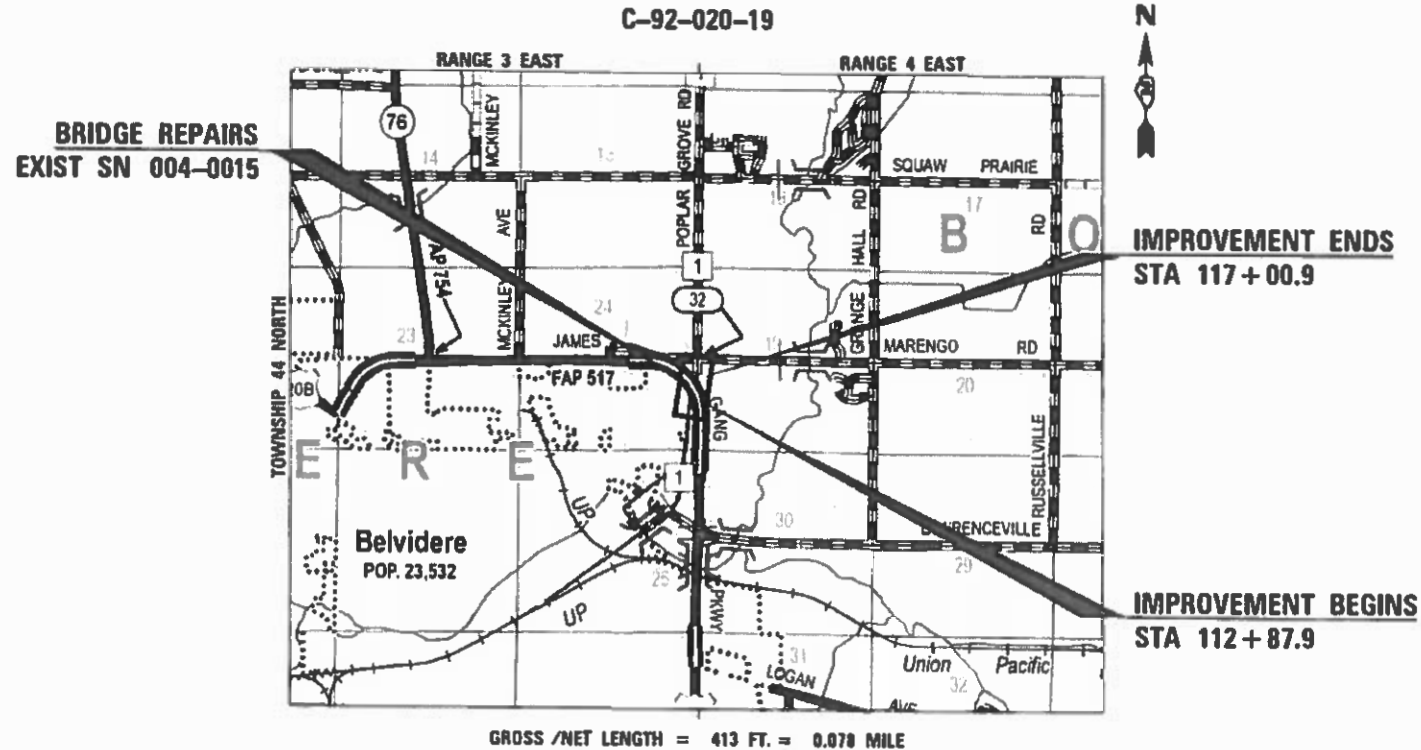
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

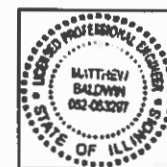
PROJECT ENGINEER GEOFFREY F SMITH, P.E.
PROJECT MANAGER MAHMOUD ETEMADI, P.E.

CONTRACT NO. 64N33

C-92-020-19



Kaskaskia
Engineering Group, L.L.C.
Professional Engineering Group



SEPTEMBER 20 20 19
MATTHEW H. BALDWIN
ILLINOIS REG. PROFESSIONAL ENGINEER NO. 062-003297
EXPIRATION DATE 11-30-2019
SHEETS 1-8, 21-37

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUBMITTED October 2, 20 19
REGIONAL ENGINEER
ENGINEER OF DESIGN AND ENVIRONMENT
DIRECTOR OF DIVISION'S PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

1. ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTH MOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.
2. THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (ZERO TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
3. THE AREA TO BE TACKED OR PRIMED SHALL BE LIMITED TO THAT WHICH CAN BE COVERED WITH HMA ON THE NEXT DAY'S PRODUCTION, BUT NO MORE THAN FIVE DAYS IN ADVANCE OF THE PLACEMENT OF THE HMA, UNLESS APPROVED BY THE ENGINEER.
4. TO HELP AVOID EXCESS DROP OFFS AT THE EDGE OF PAVEMENT, AGGREGATE SHOULDER MATERIAL OF THE TYPE SPECIFIED IN HE PLANS SHALL BE PLACED PRIOR TO ANY BITUMINOUS MATERIAL. THE AGGREGATE MATERIAL SHALL BE PLACED FLUSH WITH THE EXISTING PAVEMENT OR AT THE ELEVATION OF ANY PROPOSED MILLING. AT NO TIME SHALL THE EDGE OF THE AGGREGATE MATERIAL BE HIGHER THAN THE EXISTING EDGE OF PAVEMENT. THIS WORK SHALL BE PAID FOR BY THE TON FOR AGGREGATE SHOULDERS OF THE TYPE SPECIFIED.
5. THE STRUCTURE WILL RETAIN THE SAME NUMBER SN 004-0015.
6. PAVEMENT MARKING SHALL BE DONE ACCORDING TO STANDARD 780001, EXCEPT AS FOLLOWS:
 - 1) ALL WORDS, SUCH AS ONLY, SHALL BE 8 FEET HIGH.
 - 2) ALL NON-FREEWAY ARROWS SHALL BE THE LARGE SIZE.
 - 3) THE DISTANCE BETWEEN YELLOW NO-PASSING LINES SHALL BE 8 INCHES, NOT 7 INCHES, AS SHOWN IN THE DETAIL OF TYPICAL LANE AND EDGE LINES.
 - 4) CENTERLINE SKIP DASH PAVEMENT MARKING ON MULTI-LANE DIVIDED, MULTI-LANE UNDIVIDED, AND ONE-WAY ROADWAY SHALL BE ACCORDING TO DISTRICT STANDARD 41.1.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.

 IDOT IS NOT A MEMBER OF JULIE. IF YOU ARE NEAR ANY OVERHEAD LIGHTING, INTERSECTION LIGHTING OR TRAFFIC SIGNALS, CONTACT THE IDOT TRAFFIC OFFICE AT 815/284-5469 AT LEAST 48 HOURS PRIOR TO WORK.
8. CADD DATA WILL BE AVAILABLE TO CONTRACTORS AND CONSULTANTS WORKING ON THIS PROJECT. THIS INFORMATION WILL BE PROVIDED UPON REQUEST AS MICROSTATION CADD FILES AND GEOPAK COORDINATE GEOMETRY FILES ONLY. IF DATA IS REQUIRED IN OTHER FORMATS IT WILL BE YOUR RESPONSIBILITY TO MAKE THESE CONVERSIONS. IF ANY DISCREPANCY OR INCONSISTENCY ARISES BETWEEN THE ELECTRONIC DATA AND THE INFORMATION ON THE HARD COPY, THE INFORMATION ON THE HARD COPY SHOULD BE USED. CONTACT THE DISTRICT'S PROJECT ENGINEER TO REQUEST THESE FILES.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

LOCATION(S):	ROADWAY
MIXTURE USE(S):	SURFACE
PG:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N50
MIXTURE COMPOSITION	IL 9.5
(MIXTURE GRADATION):	D
FRICTION AGGREGATE:	
MIXTURE WEIGHT:	QC/QA

- 1) THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LB/SQ YD/IN.

MODEL: D:\cadd\19-1089-03_PoplarGroveRd\CADD\0_IDOT\CAD_Sheets\0264N33-ht-GenNotes.dgn
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	DRAWN - NDP	REVISED -
PLOT SCALE = 2,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 9/20/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
POPLAR GROVE RD OVER US 20 BUSINESS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	2
CONTRACT NO. 64N33				
		ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE							
				80% FED 20% STATE							
				BRIDGE	0047	URBAN					
28000510	INLET FILTERS	EACH	4	4							
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	36	36							
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160	160							
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	13.4	13.4							
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	8.5	8.5							
50102400	CONCRETE REMOVAL	CU YD	8.9	8.9							
50300255	CONCRETE SUPERSTRUCTURE	CU YD	10.6	10.6							
50300260	BRIDGE DECK GROOVING	SQ YD	1,002	1,002							
50300300	PROTECTIVE COAT	SQ YD	1,072	1,072							
20010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1							
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,890	1,890							
52000110	PREFORMED JOINT STRIP SEAL	FOOT	89	89							
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	100	100							
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4							
63200310	GUARDRAIL REMOVAL	FOOT	248	248							
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	2	2							

* SPECIAL PROVISION

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477 South Third Street Naperville, Illinois 60563 630.333.3477 phone www.kaskaskia.com	USER NAME = ndp	DESIGNED -	REVISED -
PROFESSIONAL ENGINEER Illinois Professional Design Firm 34-06713 28-108936	PLOT SCALE = 20.0000" / in.	DRAWN -	REVISED -
	PLOT DATE = 9/20/2019	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
POPLAR GROVE RD OVER US 20 BUSINESS			
SCALE:	SHEET	OF	SHEETS
		STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	3
			CONTRACT NO. 64N33	
ILLINOIS FED. AID PROJECT				

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						
				80% FED 20% STATE						
				BRIDGE						
				0047						
				URBAN						
67100100	MOBILIZATION	L SUM	1	1						
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	503	503						
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	15	15						
* 78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	7	7						
X0931400	INLET BOXES TO BE ADJUSTED (SPECIAL)	EACH	4	4						
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1						
X7010237	CHANGEABLE MESSAGE SIGN, SPECIAL	CAL DA	42	42						
Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ YD	1,044	1,044						
* X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1						
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1,044	1,044						
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	10	10						
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	SQ YD	10	10						
Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	2	2						
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	43	43						

* SPECIAL PROVISION



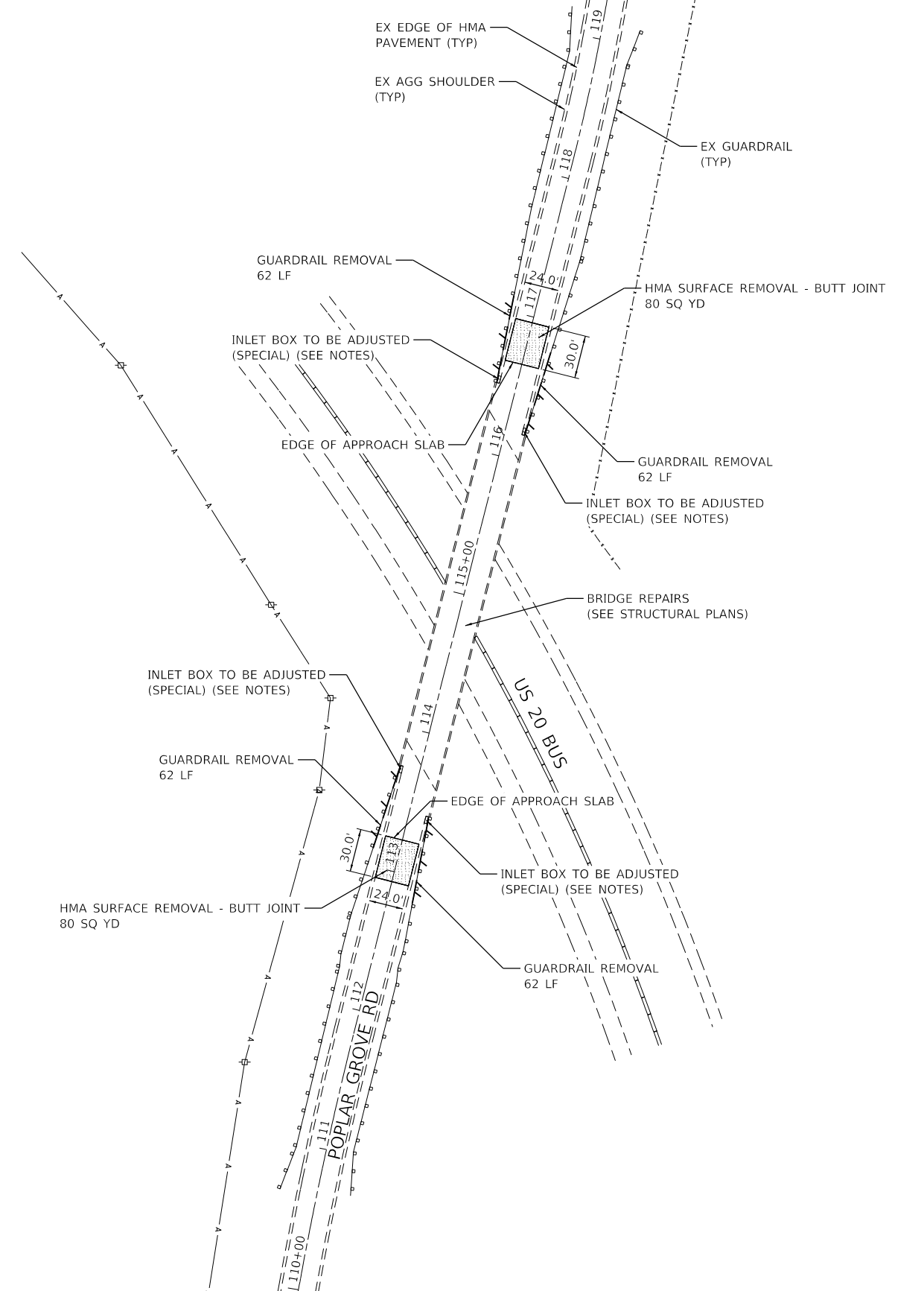
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	PLOT DATE = 9/20/2019	CHECKED -	REVISED +
		DATE -	REVISED +

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
POPLAR GROVE RD OVER US 20 BUSINESS			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	4
			CONTRACT NO. 64N33	
ILLINOIS FED. AID PROJECT				

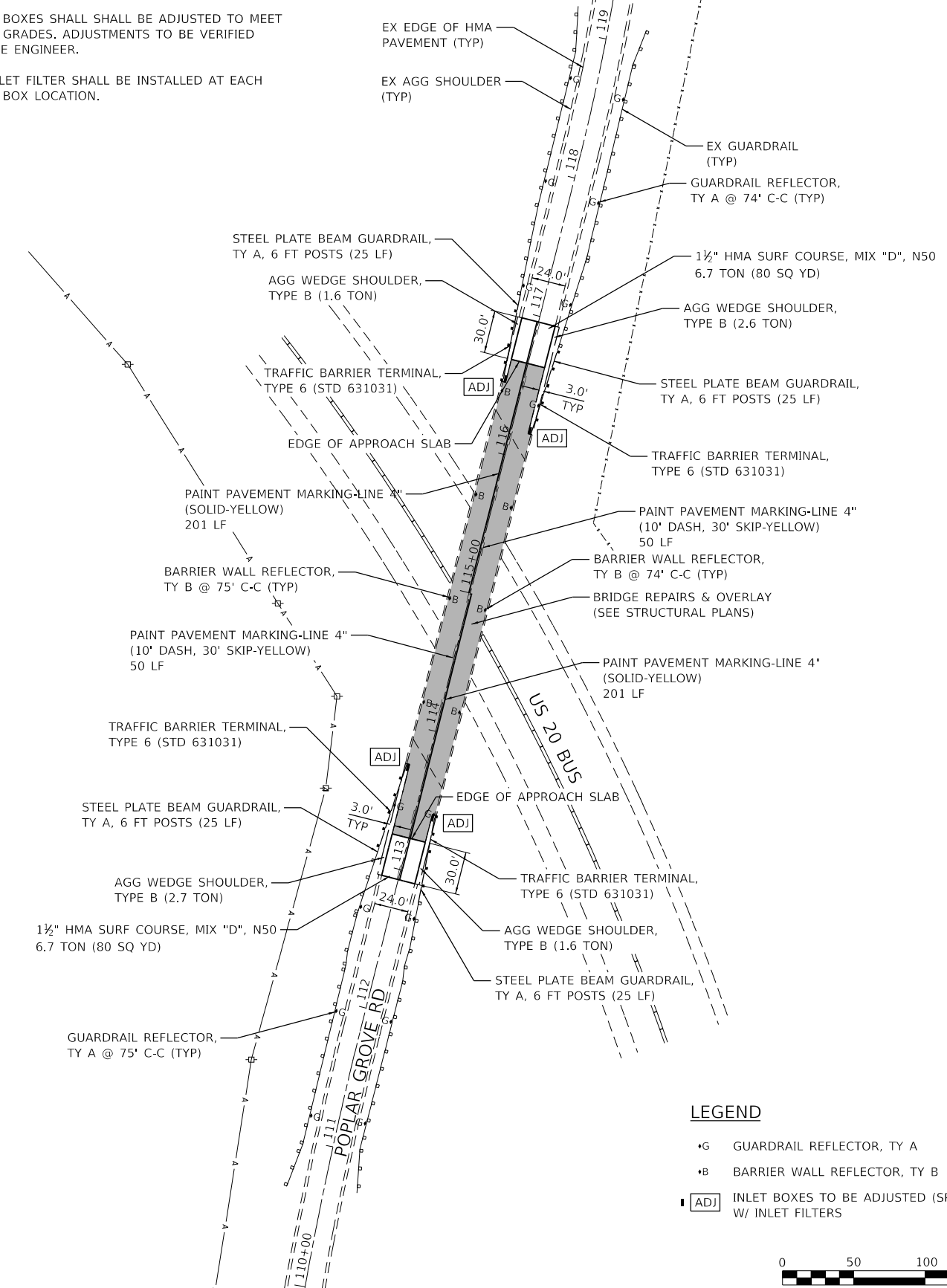
REMOVAL PLAN



IMPROVEMENTS PLAN

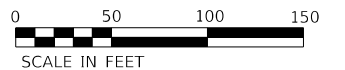
INLET BOX ADJUSTMENT NOTES

1. INLET BOXES SHALL BE ADJUSTED TO MEET FINAL GRADES. ADJUSTMENTS TO BE VERIFIED BY THE ENGINEER.
2. AN INLET FILTER SHALL BE INSTALLED AT EACH INLET BOX LOCATION.



LEGEND

- G GUARDRAIL REFLECTOR, TY A
- B BARRIER WALL REFLECTOR, TY B
- [ADJ] INLET BOXES TO BE ADJUSTED (SPECIAL) W/ INLET FILTERS



MODEL: D:\dgn\11 PoplarGroveRd\CAD\03_11DOT\CAD_Sheets\0264N33-rfc-Design.dgn

Kaskaskia
Engineering Group, LLC
477 South Third Street
Suite 270
Geneseo, Illinois 60134
630.333.8187 phone
www.kaskaskiaeng.com
ILLINOIS PROFESSIONAL ENGINEERING GROUP
Professional Engineering Group

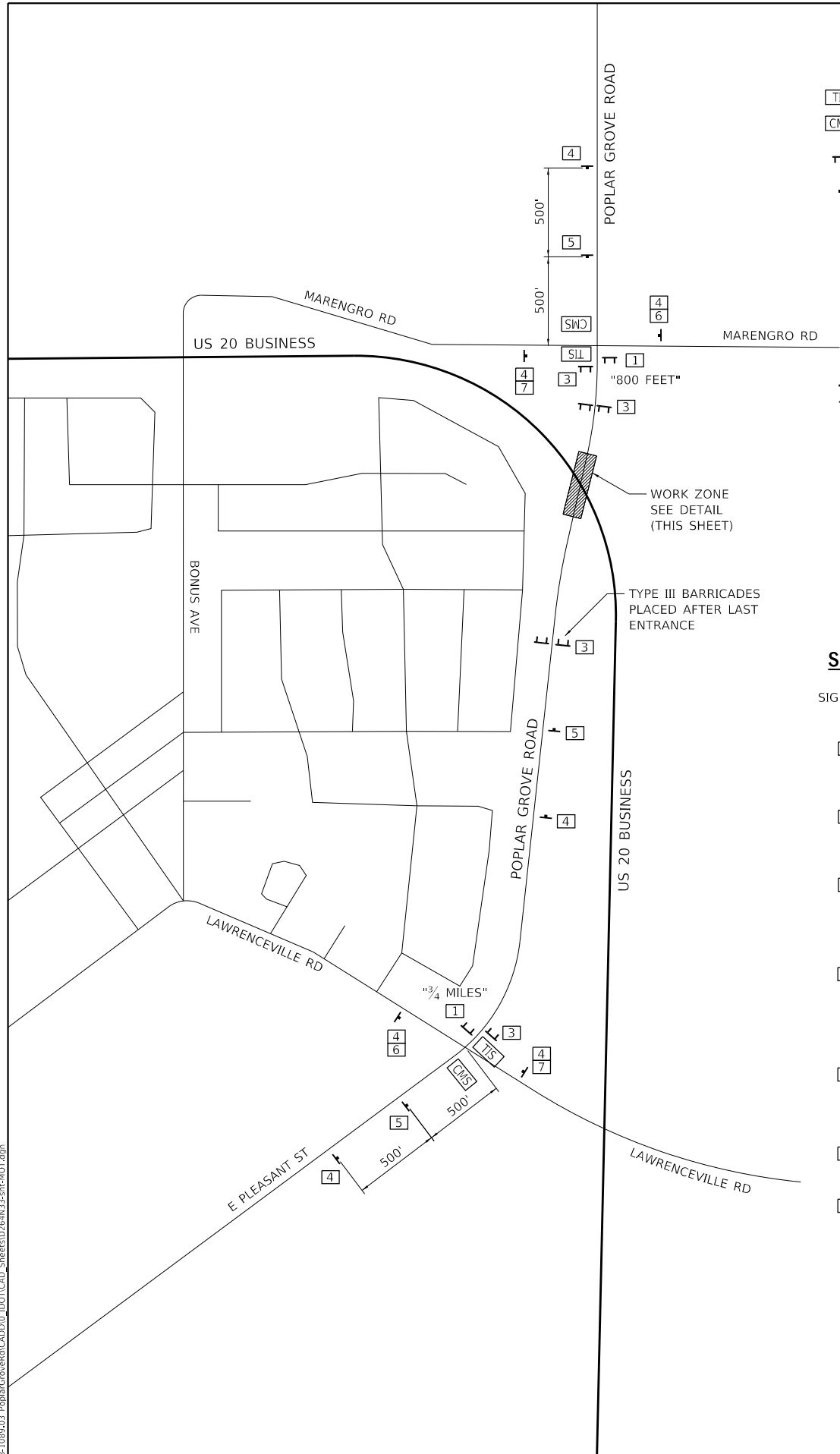
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PLOT SCALE = 100.0000' / in.	DRAWN - NDP	REVISED -
PLOT DATE = 9/20/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL & IMPROVEMENTS PLAN
POPLAR GROVE RD OVER US 20 BUSINESS**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

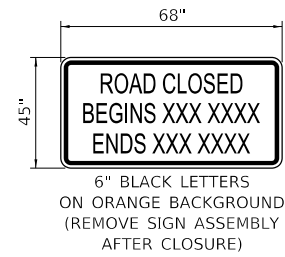
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517	(1-2HB)BJR	BOONE	37	5
CONTRACT NO. 64N33			ILLINOIS FED. AID PROJECT	



LEGEND

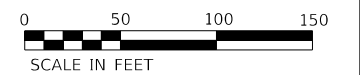
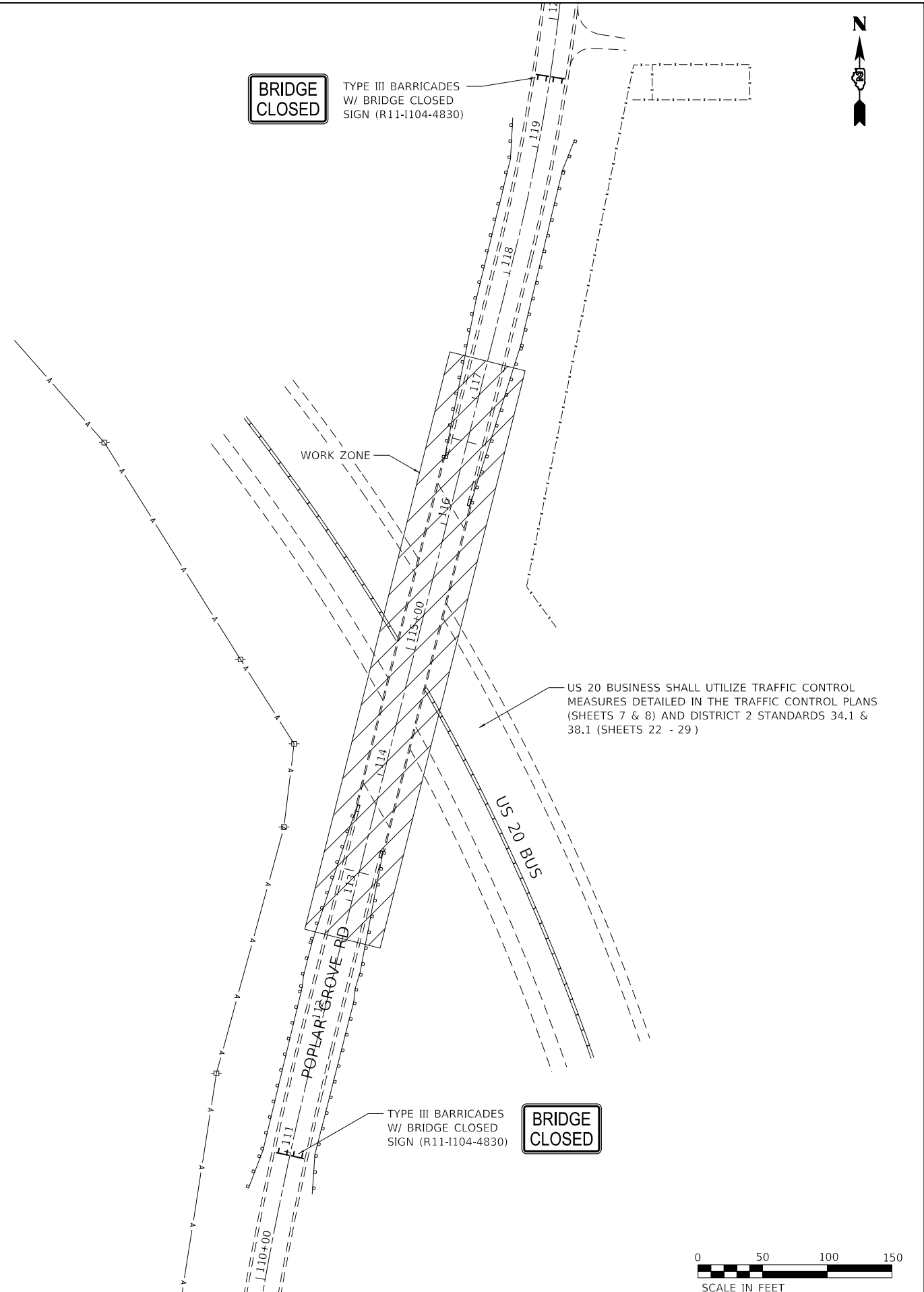
- TIS TEMPORARY INFORMATION SIGN
- CMS CHANGEABLE MESSAGE SIGN
- TYPE III BARRICADE W/ FLASHERS
- CONSTRUCTION SIGN

TEMP. INFORMATION SIGN



SCHEDULE OF CLOSURE SIGNS

SIGN NO.	SIGN	MUTCD CODE-SIZE
1		R11-3B-6030
2		R11-1104-4830
3		R11-2-4830
4		W20-3-4848
5		W20-3-4848
6		M6-1L-2115
7		M6-1R-2115



MODEL: D:\d\p\11\110892_03_PoplarGroveRd\CADD\0_IDOT\CAD_Sheets\110892_03_PoplarGroveRd.dwg

Kaskaskia
Engineering Group, LLC

477 South Third Street
Suite 270
Geneva, Illinois 60134
630.333.8107 phone
www.kaskaskiaeng.com

Illinois Professional Design Firm
Professional Engineering Group

USER NAME = ndp	DESIGNED - MNB	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN - NDP	REVISED -
PLOT DATE = 9/20/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ROADWAY CLOSURE PLAN
POPLAR GROVE RD OVER US 20 BUSINESS**

SCALE: AS SHOWN SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	6
				CONTRACT NO. 64N33
		ILLINOIS	FED. AID PROJECT	

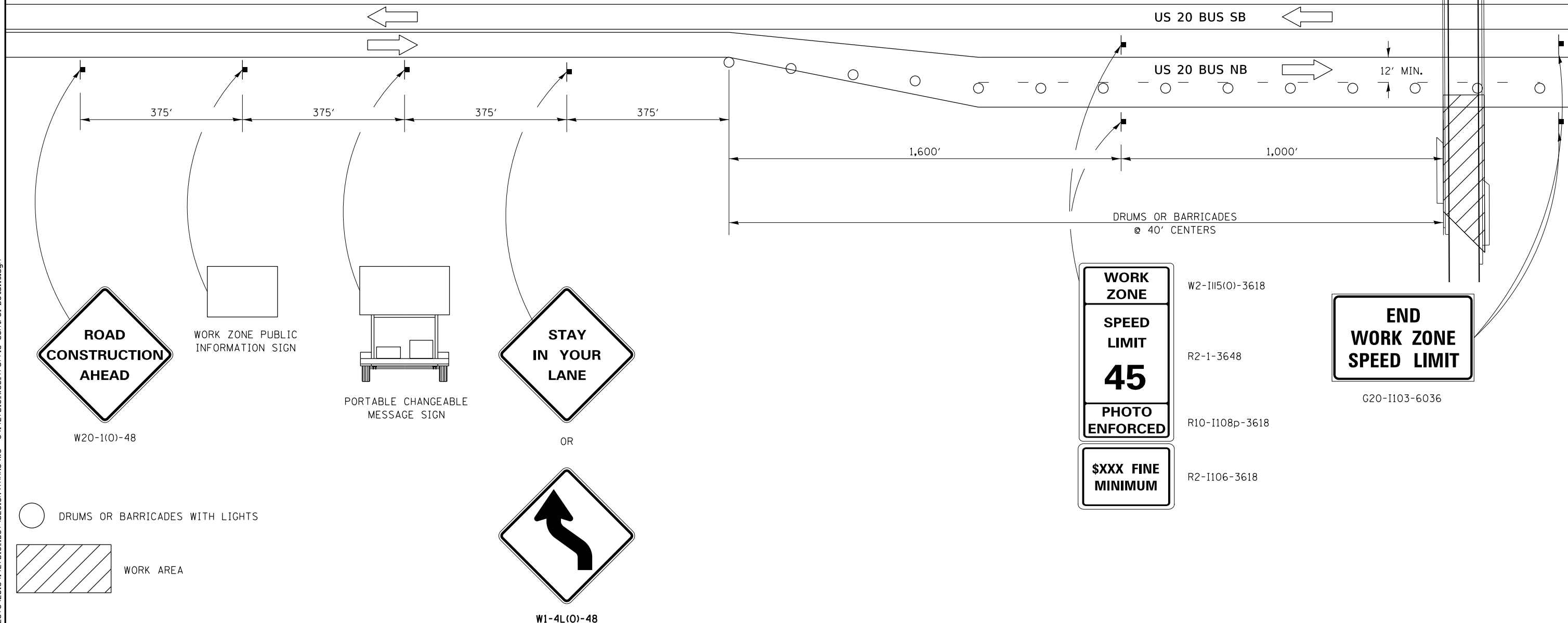
TRAFFIC CONTROL FOR US 20 BUS NORTHBOUND APPROACH TO WORK ZONE

GENERAL NOTES

LANE CLOSURE SHALL BE SWITCH BETWEEN LEFT AND RIGHT AS NEEDED SO THAT NO WORK OPERATIONS ARE PERFORMED OVER TRAFFIC.

THIS DETAIL WILL BE ALLOWED TO REMIAN IN PLACE OVERNIGHT, BUT WILL ONLY BE ALLOWED TO REMAIN IN PLACE FOR A TOTAL OF 6 WORKING DAYS (3 FOR LEFT LANE AND 3 FOR RIGHT LANE).

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).



FILE = S:\PROJECTS\2018\1427D18.D00\DESIGN\TRANS\WG #3\1427D18.W03.Traffic Control Details.dgn

○ DRUMS OR BARRICADES WITH LIGHTS

▨ WORK AREA



USER NAME = luku	DESIGNED - LGN	REVISED -
DRAWN - LGN	REVISED -	
PLOT SCALE = 40.0000' / in.	CHECKED - GFS	REVISED -
PLOT DATE = 9/12/2019	DATE - 9/10/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN FOR US 20
POPLAR GROVE RD OVER US 20 BUSINESS

SCALE: _____ SHEET NO. 1 OF 2 SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	7
CONTRACT NO. 64N33				
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				

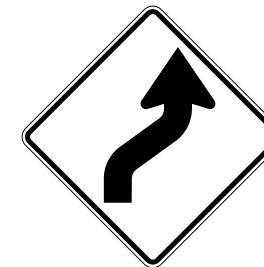
TRAFFIC CONTROL FOR US 20 BUS SOUTHBOUND APPROACH TO WORK ZONE

GENERAL NOTES

LANE SHIFT SHALL BE SWITCH BETWEEN LEFT AND RIGHT AS NEEDED SO THAT NO WORK OPERATIONS ARE PERFORMED OVER TRAFFIC.

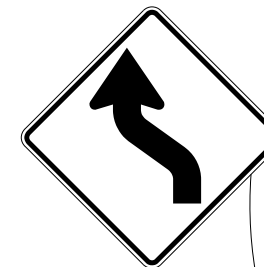
THIS DETAIL WILL BE ALLOWED TO REMIAN IN PLACE ONLY DURING DAY TIME HOURS. THIS DETAIL SHALL BE REMOVED AT THE END OF EACH WORKING DAY.

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).

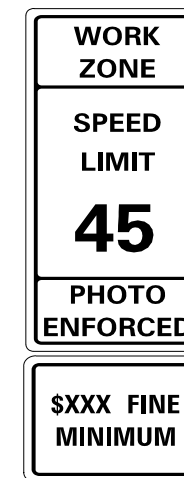


W1-4R(0)-48

OR



W1-4L(0)-48



W2-1115(0)-3618

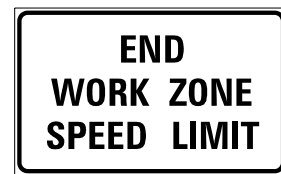
R2-1-3648

R10-1108p-3618

R2-1106-3618



W20-1(0)-48



G20-1103-6036

POPLAR GROVE ROAD

200' TANGENT SECTION

1:30 TAPER (MIN. 300')

500'

500'

500'

10' MIN.

US 20 BUS SB

US 20 BUS NB

○ DRUMS OR BARRICADES WITH LIGHTS

▨ WORK AREA

FILE = S:\PROJECTS\2018\1427D18.IDOT\DESIGN\TRANS\WO #3\1427D18.W03.Traffic Control.Details.dgn



USER NAME = luku	DESIGNED - LGN	REVISED -
	DRAWN - LGN	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - GFS	REVISED -
PLOT DATE = 9/12/2019	DATE - 9/10/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN FOR US 20
POPLAR GROVE RD OVER US 20 BUSINESS

SCALE: _____ SHEET NO. 2 OF 2 SHEETS STA. _____ TO STA. _____

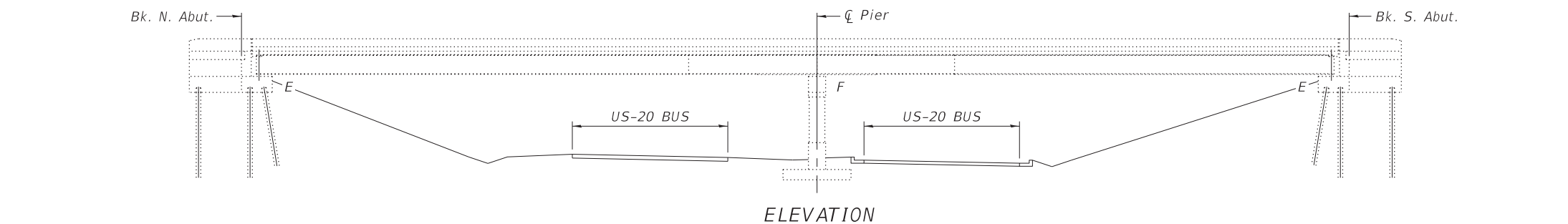
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	8
				CONTRACT NO. 64N33
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 004-0015, originally built in 1986 as a two-span welded plate girder superstructure with open abutments and multi-column pier. The back to back length = 241'-8 1/4" and the out to out width = 33'-2". Structure is to be repaired as detailed in these plans. The structure will be closed during construction and traffic will be detoured.

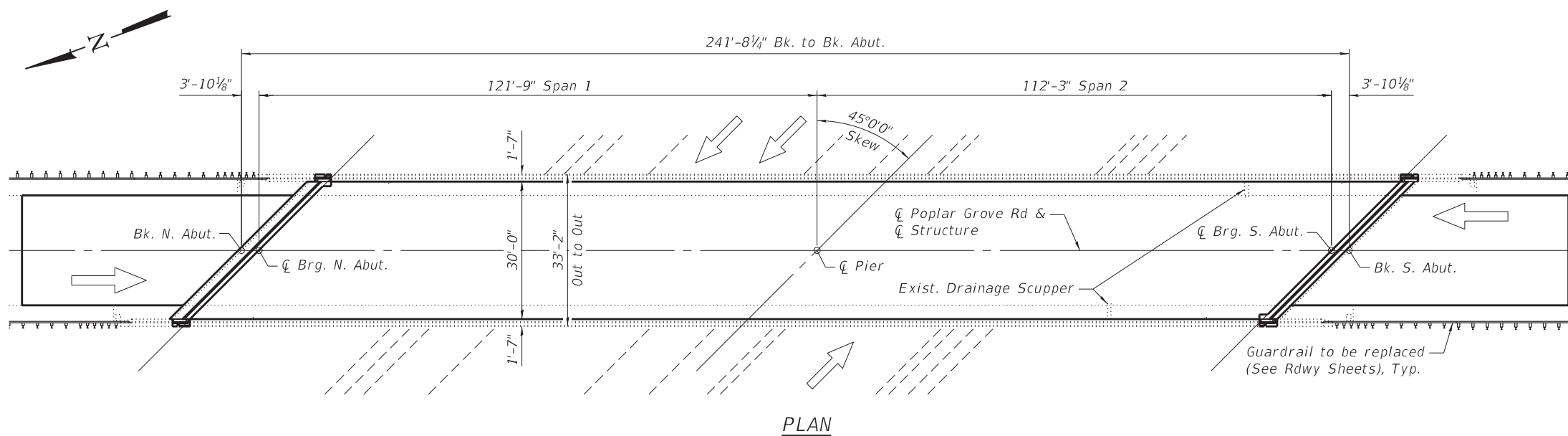
No Salvage

INDEX OF SHEETS

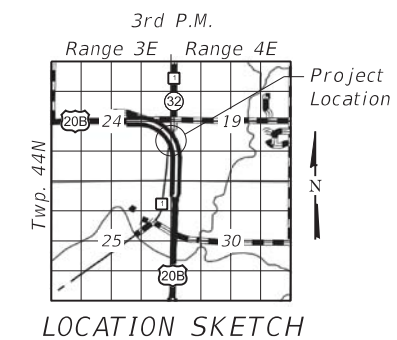
1. General Plan and Elevation
2. General Details
3. Deck Overlay Plan
- 4-5. North Abutment Expansion Joint Details
- 6-7. South Abutment Expansion Joint Details
8. Preformed Joint Strip Seal
9. Abutment Repair Details
- 10-12. Existing Plans Reference Sheets



LOADING HS20-44
Existing and Proposed



DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications
for Highway Bridges - LFD



DESIGN STRESSES

FIELD UNITS (EXIST. CONST.)

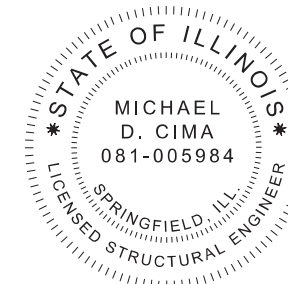
- $f'_c = 3,500$ psi
- $f_y = 60,000$ psi (Reinforcement)
- $f_y = 50,000$ psi (M-223 Grade 50, Structural Steel)
- $f_y = 36,000$ psi (M-183, Structural Steel - Web and Diaphragms)

FIELD UNITS (NEW CONST.)

- $f'_c = 4,000$ psi
- $f_y = 60,000$ psi (Reinforcement)

SCOPE OF WORK

1. Replace the transverse expansion joints located at the ends of the bridge deck using the shallow replacement detail.
2. Deck scarification and latex concrete overlay.
3. Paint beam ends and bottom flange.
4. Repair abutments.



Michael D. Cima 9/19/19
Michael D. Cima, Illinois S.E. 081-005984 Date
Expires 11/30/2020

GENERAL PLAN & ELEVATION
POPLAR GROVE RD OVER US-20 BUS
SECTION (1-2HB)BJR
BOONE COUNTY
STRUCTURE NO. 004-0015

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 004-0015

SHEET 1 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	9
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

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.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Cleaning and painting of the existing structural steel shall be specified in the special provision for "Cleaning and Painting Existing Steel Structures". Areas to be painted shall consist of all structural steel within 10 ft. (measured along beam) of the beam ends, including all bearings at the abutments. Steel shall be cleaned per Near White Blast Cleaning SSPC-SP10. The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of Paint System 1-0Z/E/U. The color of the final finish coat for all exterior steel surfaces shall be Interstate Green, Munsell No. 7.5G 4/8.

Existing guardrail shall be removed and replaced. See guardrail sheets for details.

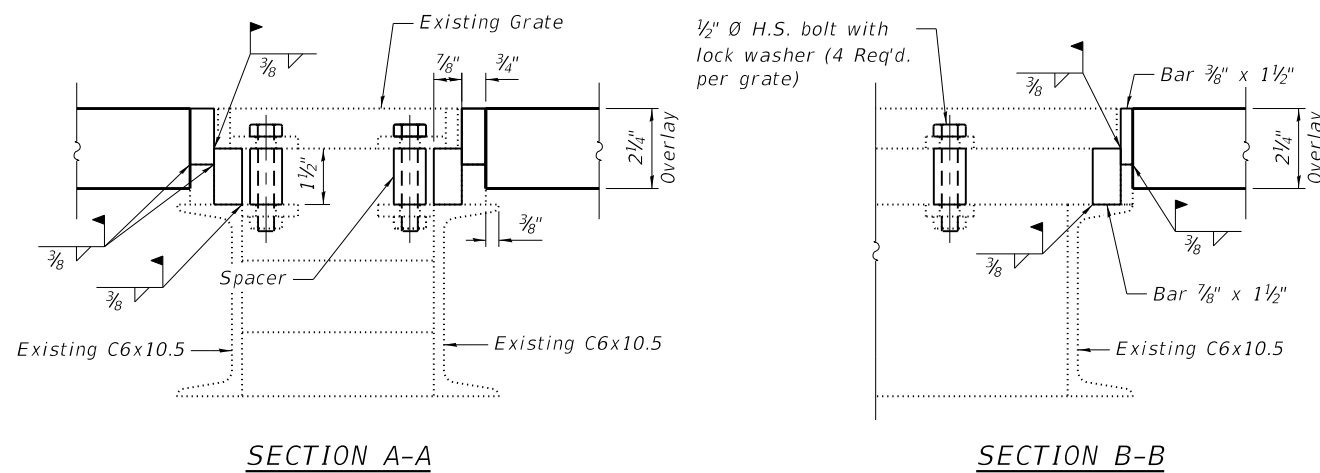
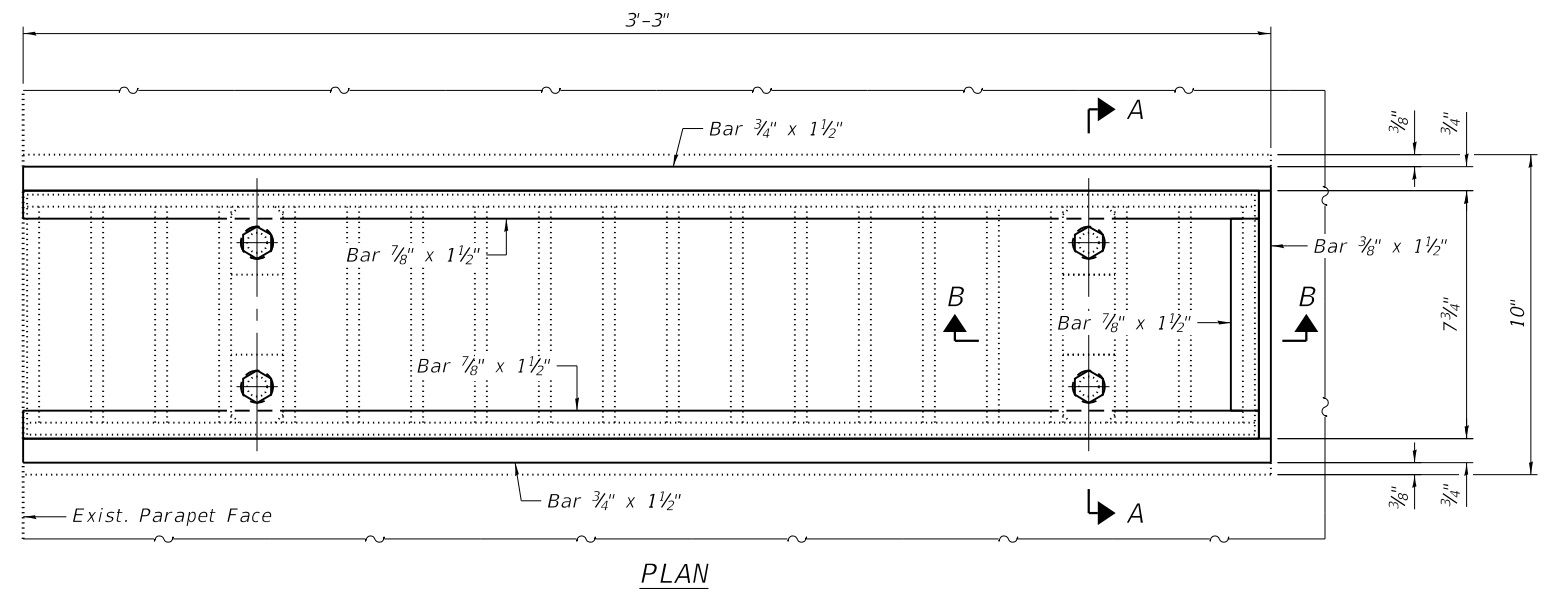
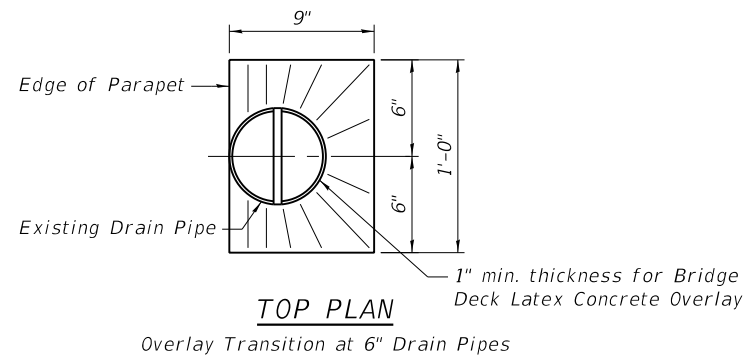
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

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.

Containment of cleaning and painting residue is required to control nuisance dust. See special provisions.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Concrete Removal	Cu. Yd.	8.9	-	8.9
Concrete Superstructures	Cu. Yd.	10.6	-	10.6
Bridge Deck Grooving	Sq. Yd.	1,002	-	1,002
Protective Coat	Sq. Yd.	1,072	-	1,072
Reinforcement Bars, Epoxy Coated	Pound	1,890	-	1,890
Preformed Joint Strip Seal	Foot	89	-	89
Bridge Deck Latex Concrete Overlay, 2 1/4 inches	Sq. Yd.	1,044	-	1,044
Cleaning and Painting Steel Bridge No. 1	L Sum	1	-	1
Bridge Deck Scarification 3/4"	Sq. Yd.	1,044	-	1,044
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	10	-	10
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10	-	10
Drainage Scuppers to be Adjusted	Each	2	-	2
Containment and Disposal of Non-Lead Paint Cleaning Residues No. 1	L Sum	1	-	1



DRAINAGE SCUPPER ADJUSTMENT DETAILS

Notes:
 All structural steel shall conform to AASHTO Classification M-270 Gr. 36. The adjusting scupper ring shall be galvanized.
 Bolts shall be 1/2" Ø, AASHTO M164 Type 1, mechanically galvanized.
 The Contractor shall ensure that no damage is done to the existing grates to be reused.
 Shop plans for the proposed adjusting scupper ring shall be submitted for approval prior to fabrication.
 Cost of all labor and materials necessary to remove existing grates, clean existing scuppers, install adjusting scupper rings and reinstall grates is included in the cost per unit each for Drainage Scuppers to be Adjusted.

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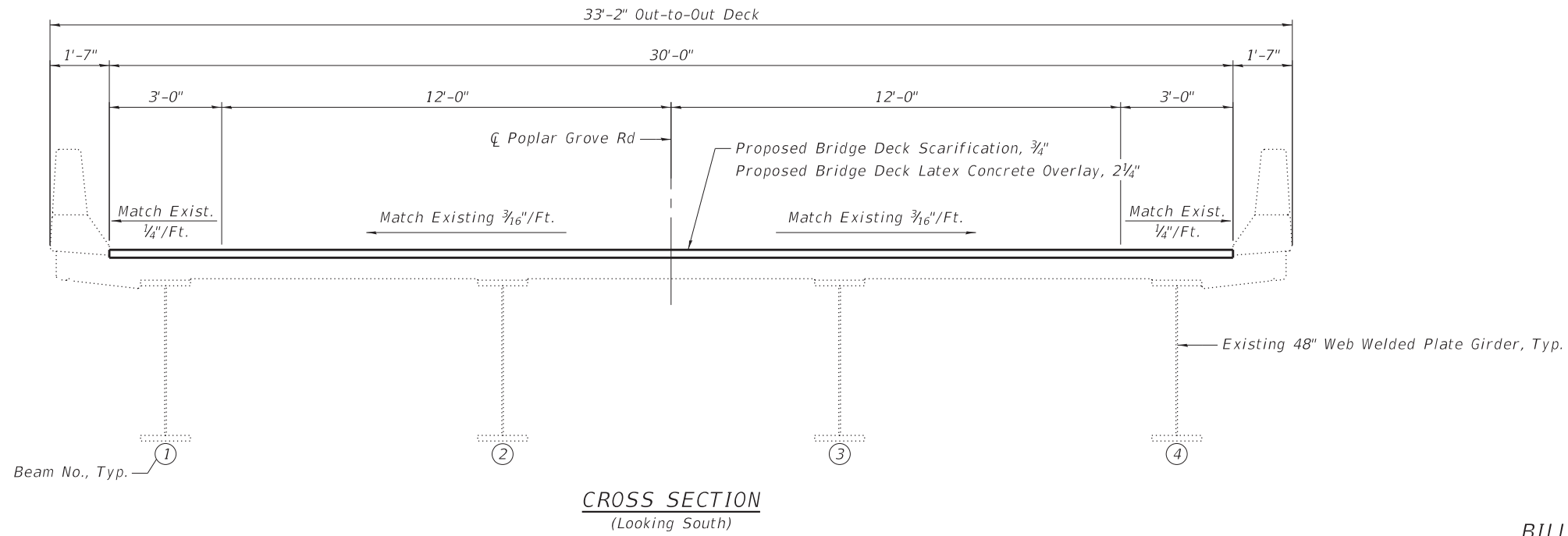
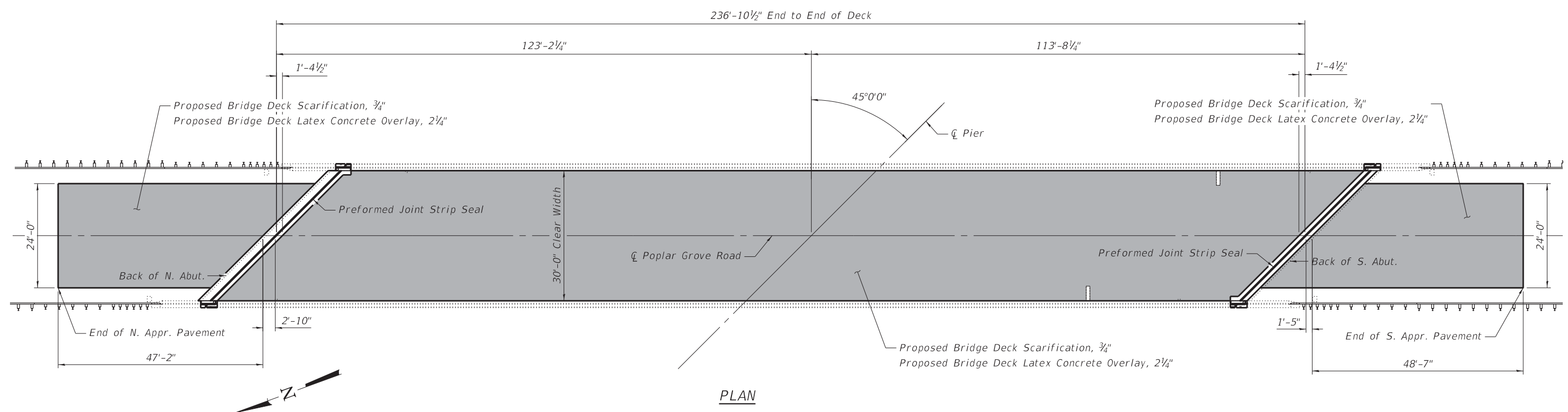
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS
 STRUCTURE NO. 004-0015**

SHEET 2 OF 12 SHEETS

F.A.P. RTE. 517	SECTION (1-2HB)BJR	COUNTY BOONE	TOTAL SHEETS 37	SHEET NO. 10
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

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Note:
 For overlay details at drainage scupper and drain pipes see Sheet 2 of 12.

BILL OF MATERIAL

Item	Unit	Total
Bridge Deck Grooving	Sq. Yd.	1,002
Protective Coat	Sq. Yd.	1,072
Bridge Deck Latex Concrete Overlay, 2 1/4"	Sq. Yd.	1,044
Bridge Deck Scarification 3/4"	Sq. Yd.	1,044
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

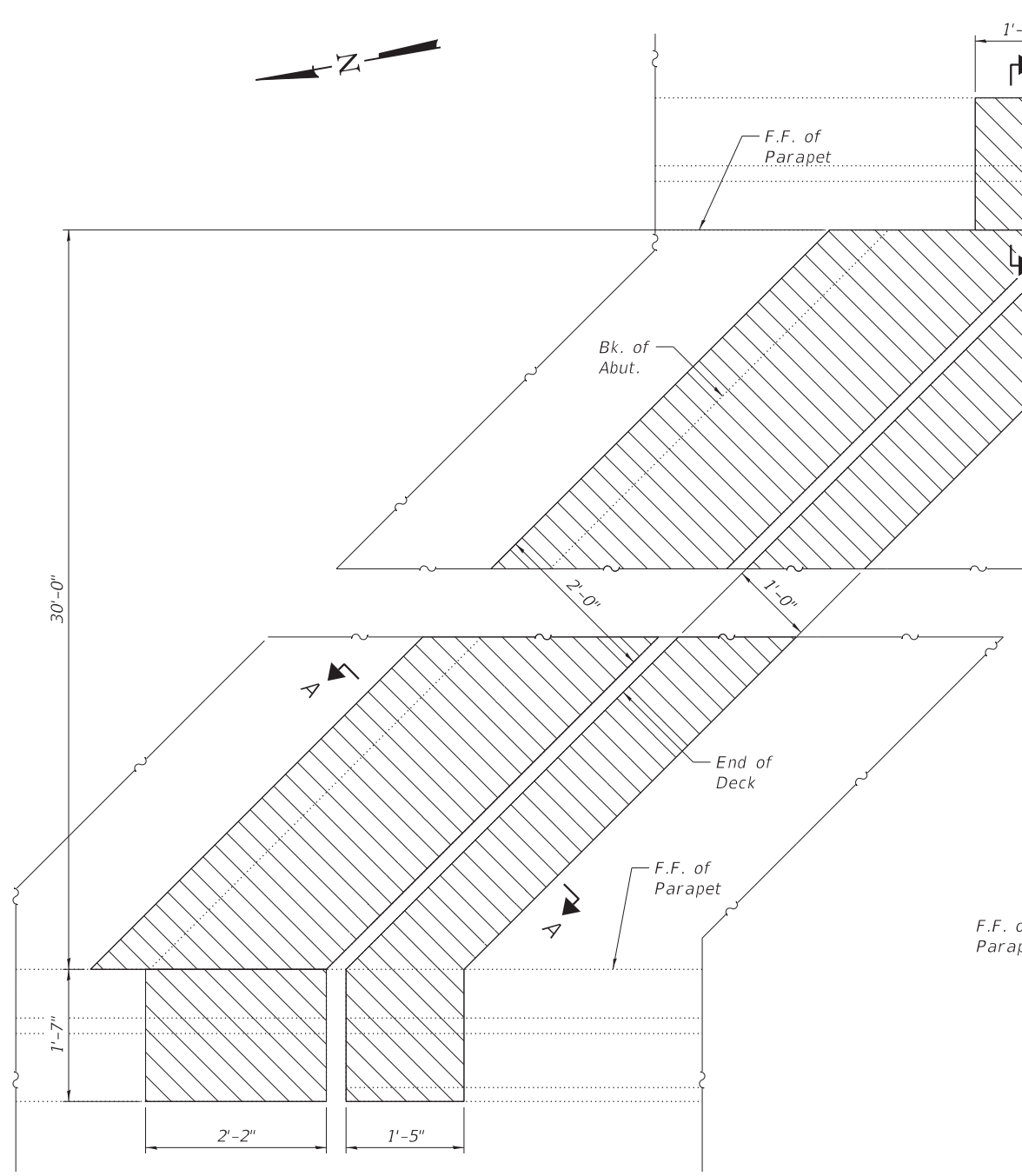
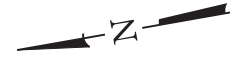
DECK OVERLAY PLAN
 STRUCTURE NO. 004-0015

SHEET 3 OF 12 SHEETS

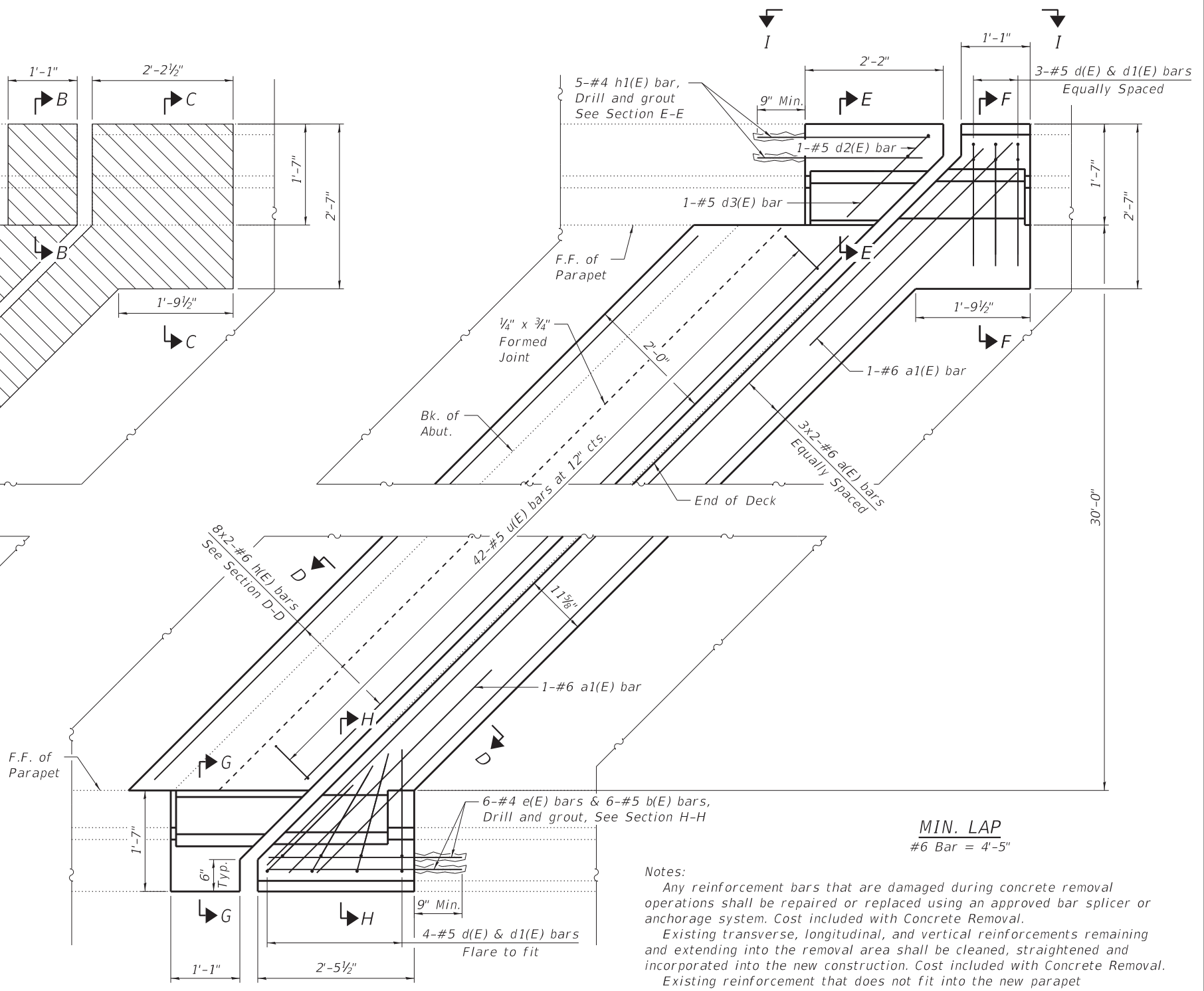
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	11
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

LEGEND

 Concrete Removal



CONCRETE REMOVAL PLAN



CONCRETE REPLACEMENT PLAN

Notes:
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 Existing transverse, longitudinal, and vertical reinforcements remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
 Existing reinforcement that does not fit into the new parapet configuration shall be trimmed to allow for min. concrete cover in new layout or cut, ground flush with the concrete and coated with epoxy paint if it does not fit within the new parapets.
 See Sheet 5 of 12 for Bill of Material, bar details and sections.
 For Overlay details see cross section on sheet 3 of 12.
 Cut b(E), e(E) and h1(E) bars to fit.
 Bars indicated thus 8x2-#6 etc. indicates 8 lines of bars with 2 lengths per line.
 See Sheet 8 of 12 for joint seal details.
 Cost of drilling and grouting bars included in Concrete Superstructure.

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 DEPARTMENT OF TRANSPORTATION**

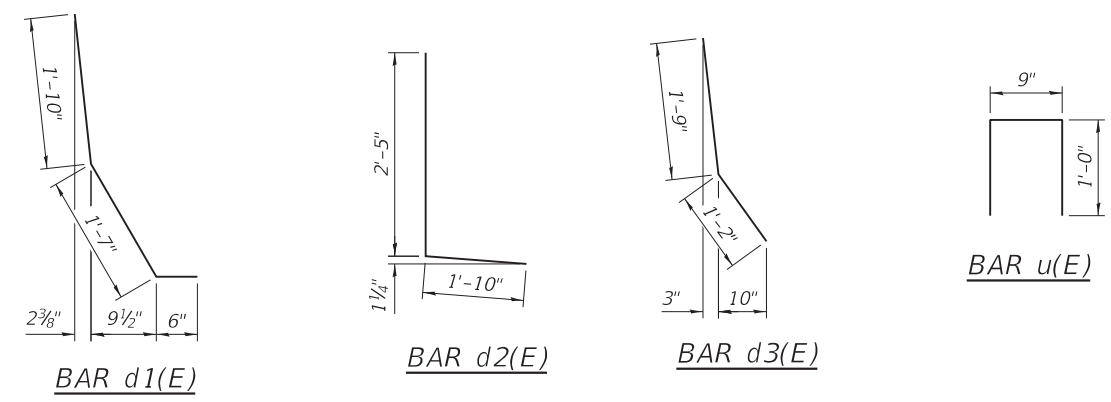
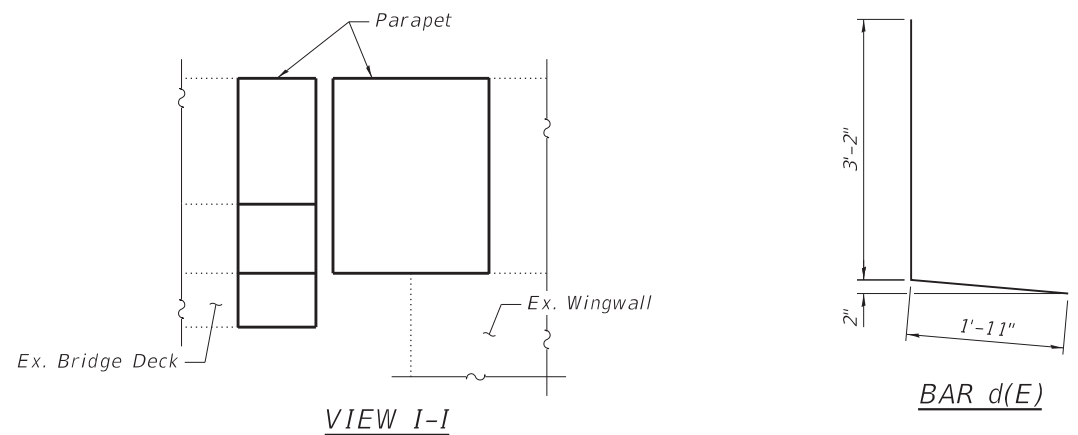
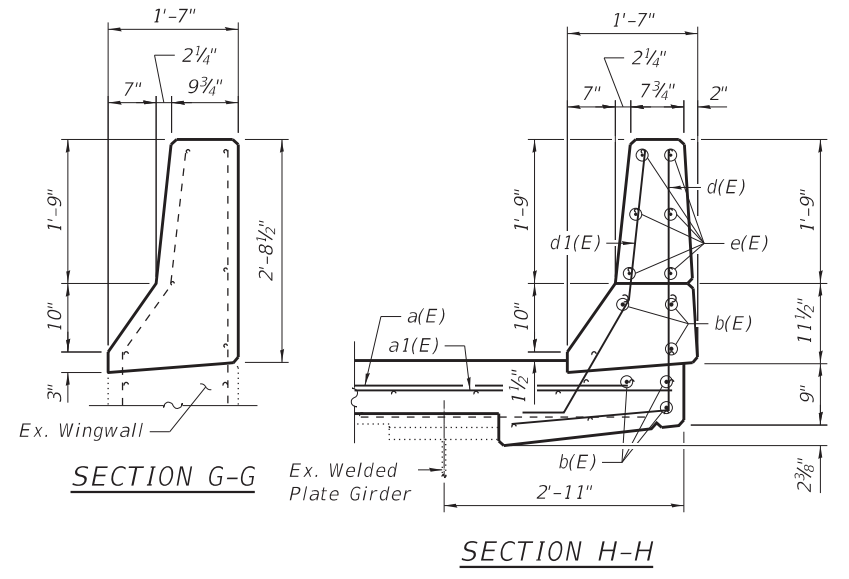
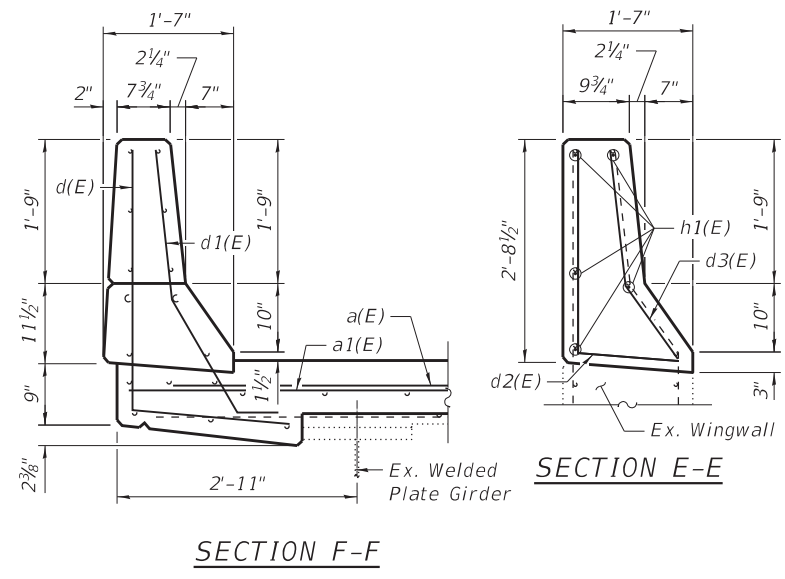
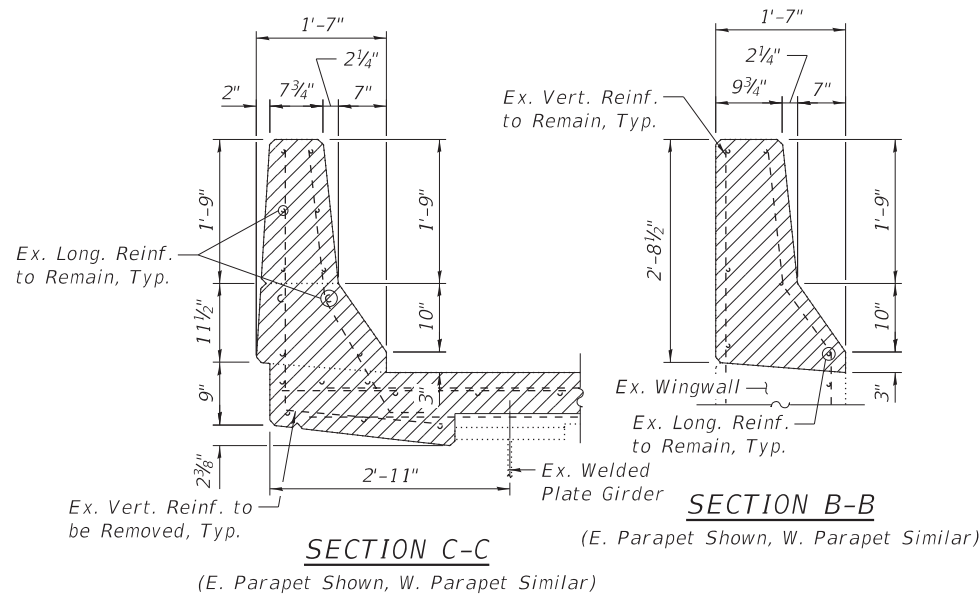
**NORTH ABUTMENT EXPANSION JOINT DETAILS
 STRUCTURE NO. 004-0015**

SHEET 4 OF 12 SHEETS

F.A.P. RTE. 517	SECTION (1-2HB)BJR	COUNTY BOONE	TOTAL SHEETS 37	SHEET NO. 12
CONTRACT NO. 64N33				

ILLINOIS FED. AID PROJECT

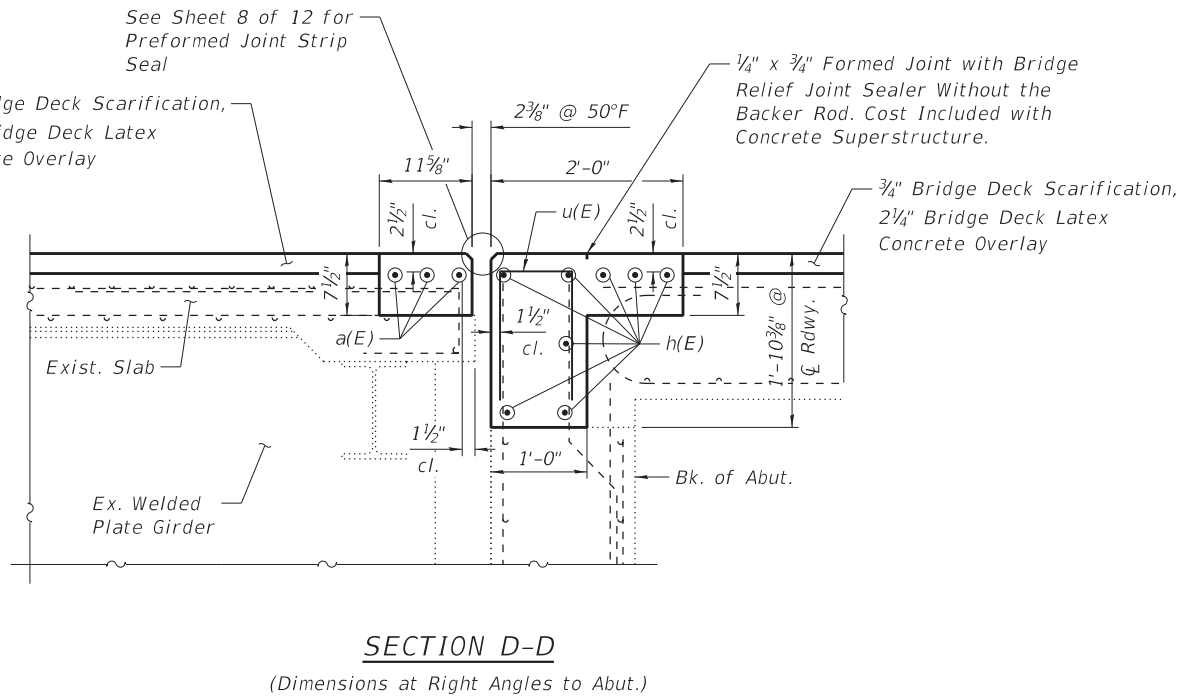
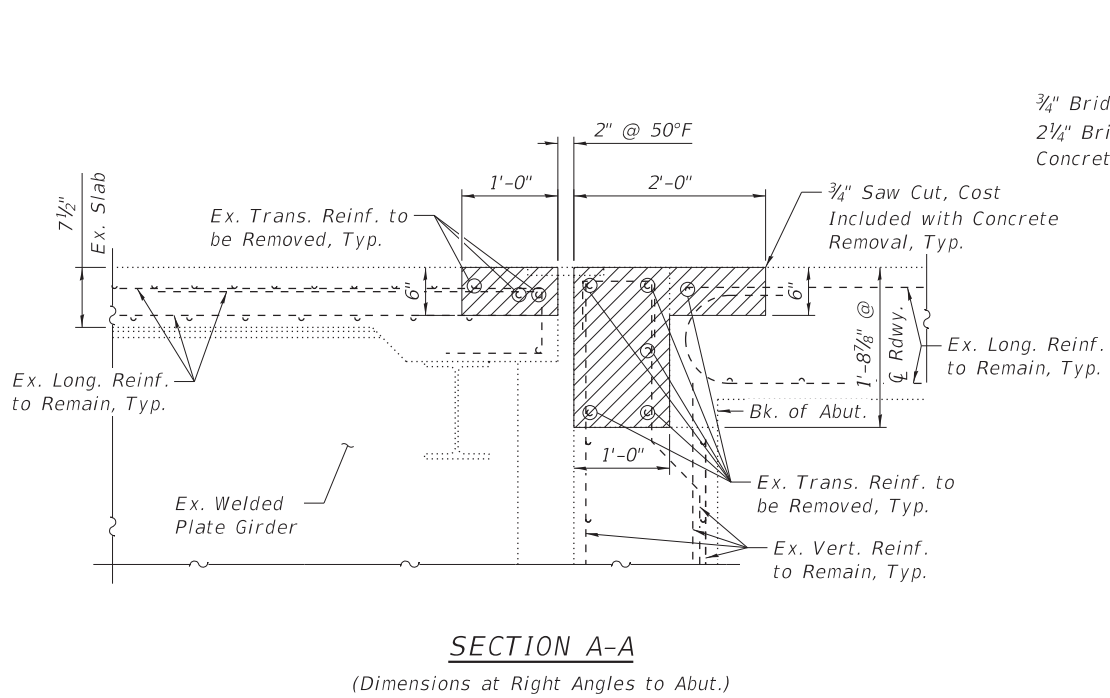
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LEGEND

Concrete Removal

Notes:
 See Sheet 4 of 12 for section cuts.
 See Sheet 8 of 12 for joint seal details.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	6	#6	25'-2"	—	
a1(E)	2	#6	6'-6"	—	
b(E)	6	#5	3'-1"	—	
d(E)	7	#5	5'-1"	L	
d1(E)	7	#5	3'-11"	L	
d2(E)	1	#5	4'-3"	L	
d3(E)	1	#5	2'-11"	L	
e(E)	6	#4	3'-1"	—	
h(E)	16	#6	23'-5"	—	
h1(E)	5	#4	2'-9"	—	
u(E)	42	#5	2'-9"	□	
Item				Unit	Total
Concrete Removal				Cu. Yd.	5
Concrete Superstructure				Cu. Yd.	5.7
Reinforcement Bars, Epoxy Coated				Pound	1,050



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

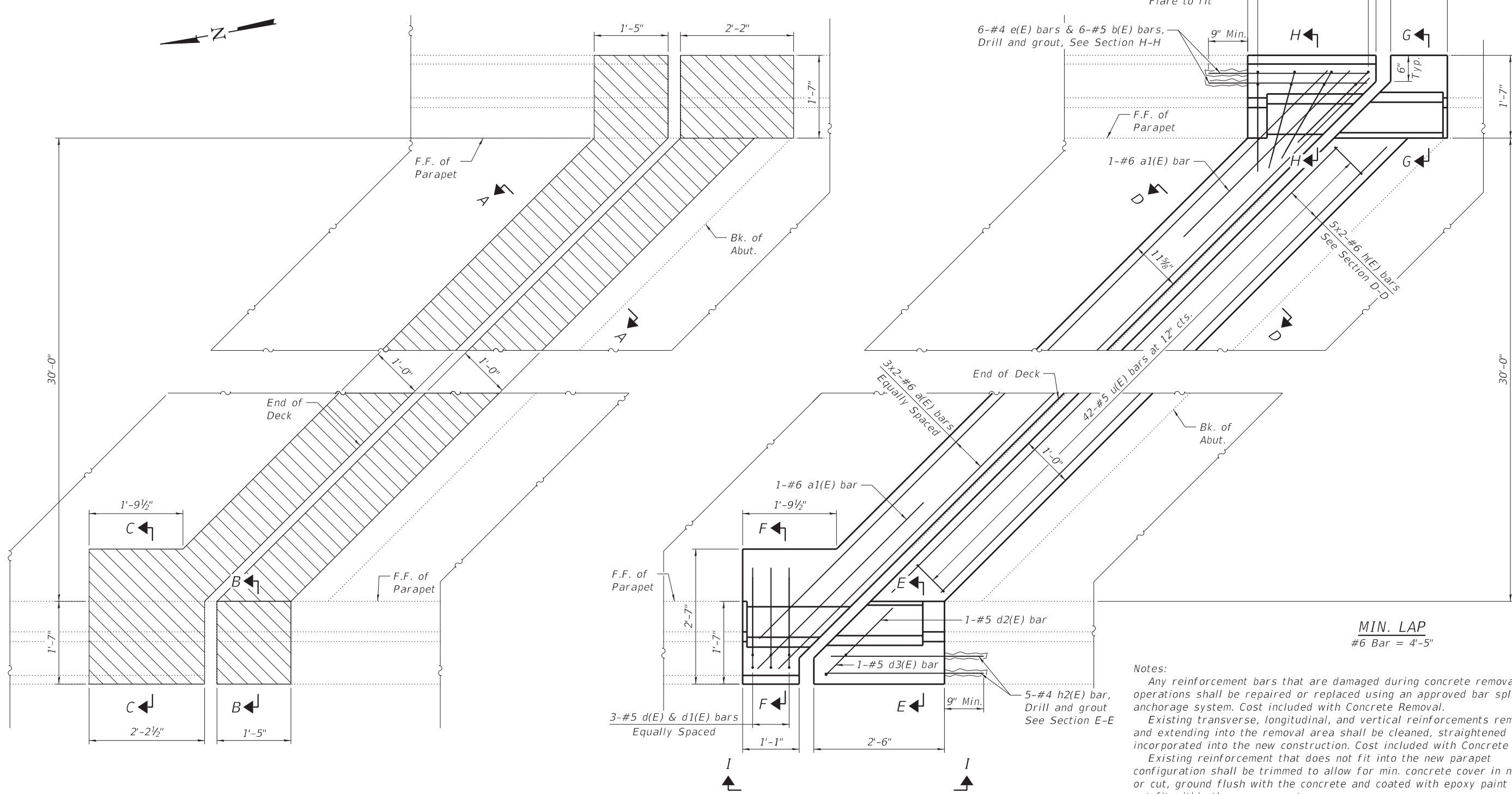
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STRUCTURE NO. 004-0015

SHEET 5 OF 12 SHEETS

F.A.P. RTE. 517	SECTION (1-2HB)BJR	COUNTY BOONE	TOTAL SHEETS 37	SHEET NO. 13
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

LEGEND

 Concrete Removal



CONCRETE REMOVAL PLAN

CONCRETE REPLACEMENT PLAN

MIN. LAP
#6 Bar = 4'-5"

Notes:
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 Existing transverse, longitudinal, and vertical reinforcements remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
 Existing reinforcement that does not fit into the new parapet configuration shall be trimmed to allow for min. concrete cover in new layout or cut, ground flush with the concrete and coated with epoxy paint if it does not fit within the new parapets.
 See Sheet 7 of 12 for Bill of Material, bar details and sections.
 For Overlay details see cross section on sheet 3 of 12.
 Cut b(E), e(E) and h1(E) bars to fit.
 Bars indicated thus 5x2-#6 etc. indicates 5 lines of bars with 2 lengths per line.
 See Sheet 8 of 12 for joint seal details.
 Cost of drilling and grouting bars included in Concrete Superstructure.

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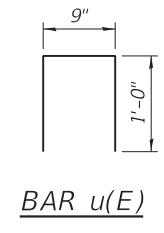
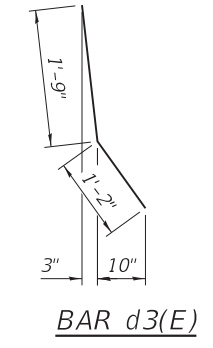
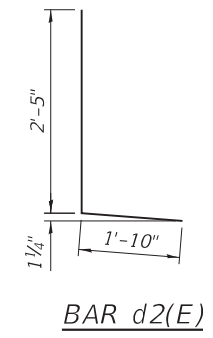
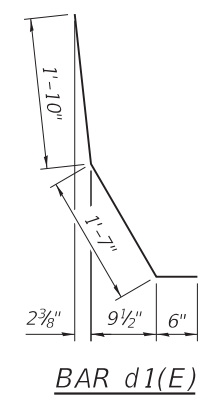
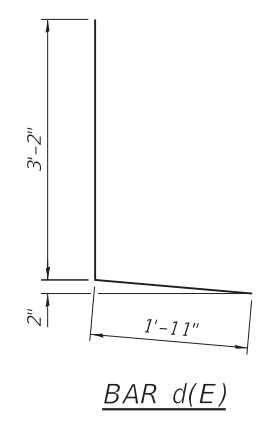
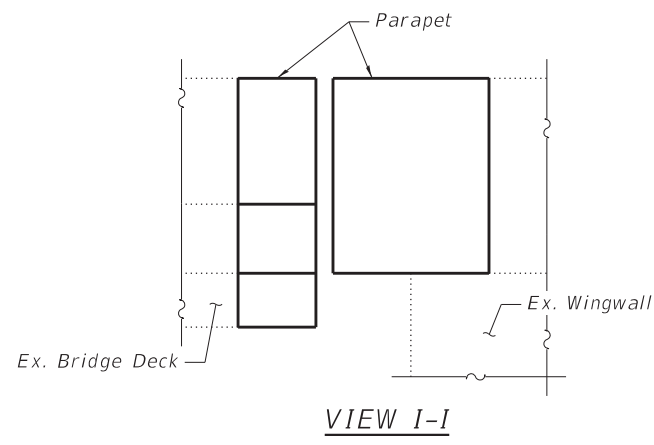
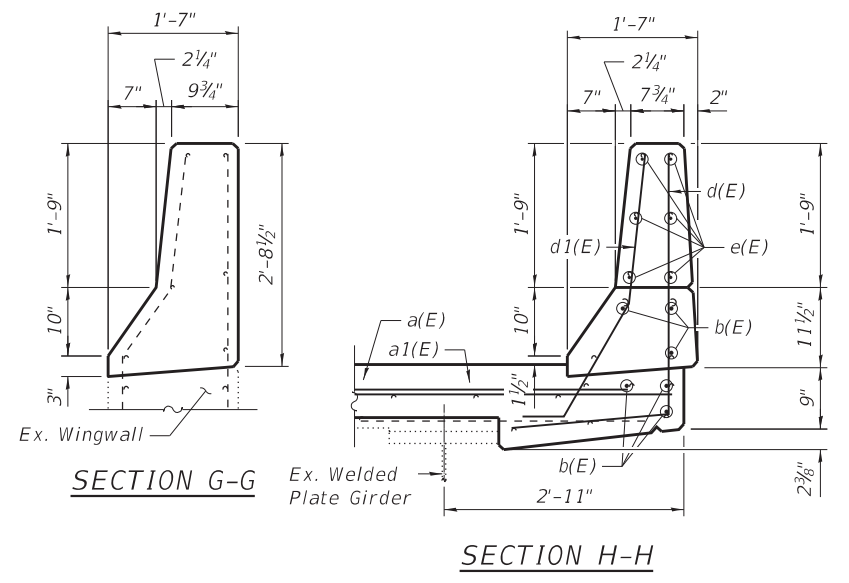
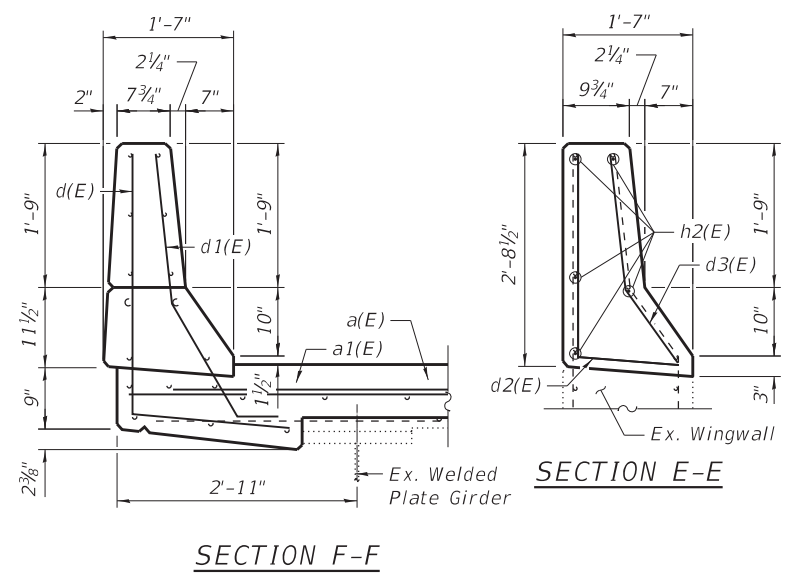
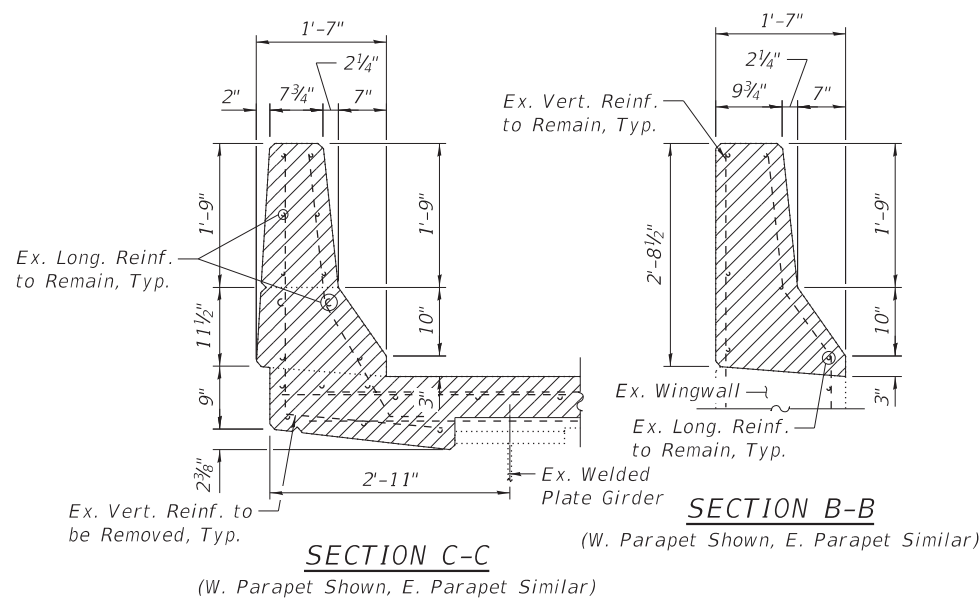
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT EXPANSION JOINT DETAILS
STRUCTURE NO. 004-0015

SHEET 6 OF 12 SHEETS

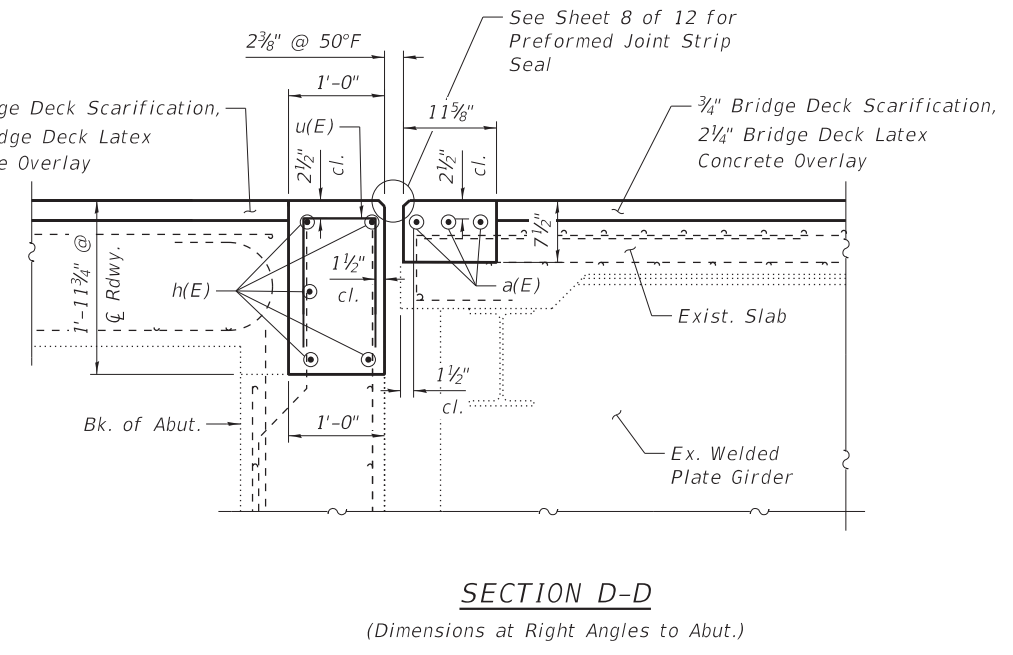
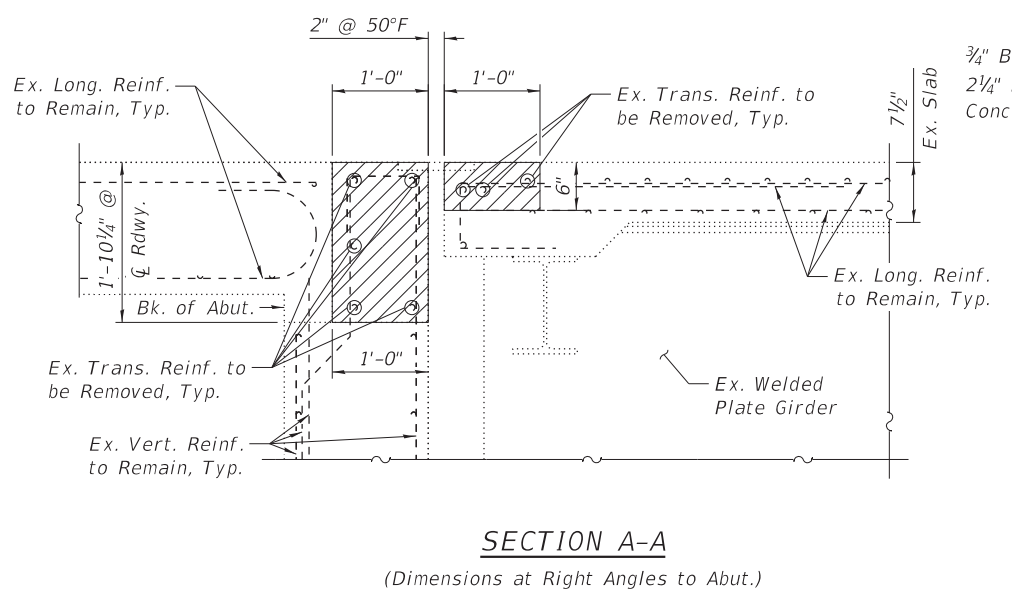
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CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

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LEGEND
 Concrete Removal

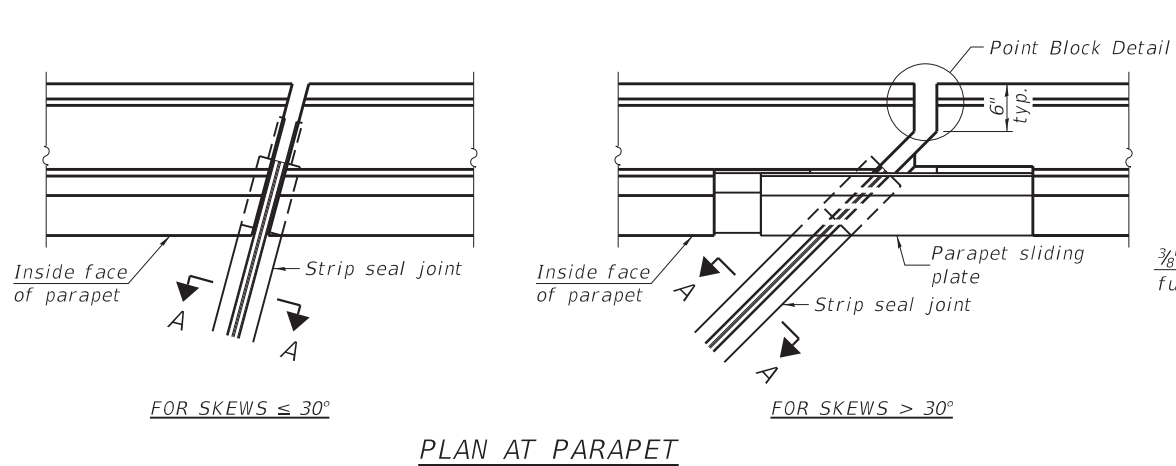
Notes:
 See Sheet 6 of 12 for section cuts.
 See Sheet 8 of 12 for joint seal details.



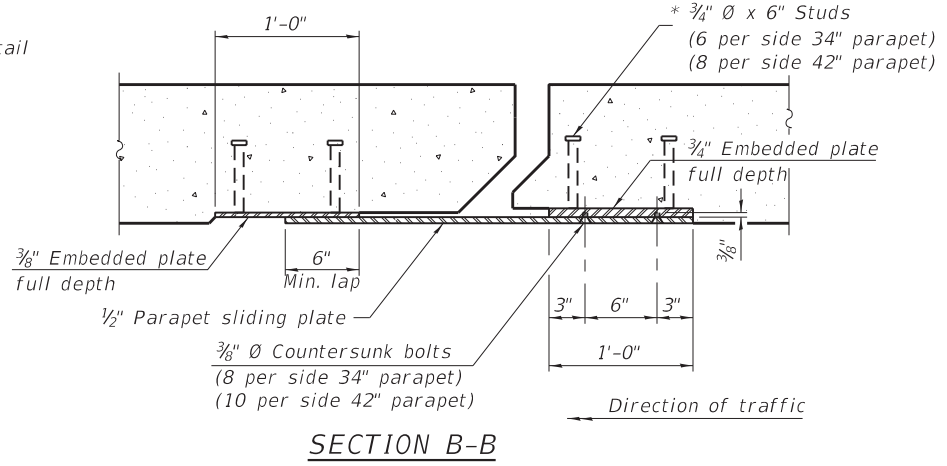
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	6	#6	25'-2"	—	
a1(E)	2	#6	6'-6"	—	
b(E)	6	#5	3'-1"	—	
d(E)	7	#5	5'-1"	L	
d1(E)	7	#5	3'-11"	L	
d2(E)	1	#5	4'-3"	L	
d3(E)	1	#5	2'-11"	L	
e(E)	6	#4	3'-1"	—	
h(E)	10	#6	23'-5"	—	
h2(E)	5	#4	3'-1"	—	
u(E)	42	#5	2'-9"	□	
Item				Unit	Total
Concrete Removal				Cu. Yd.	3.9
Concrete Superstructure				Cu. Yd.	4.9
Reinforcement Bars, Epoxy Coated				Pound	840

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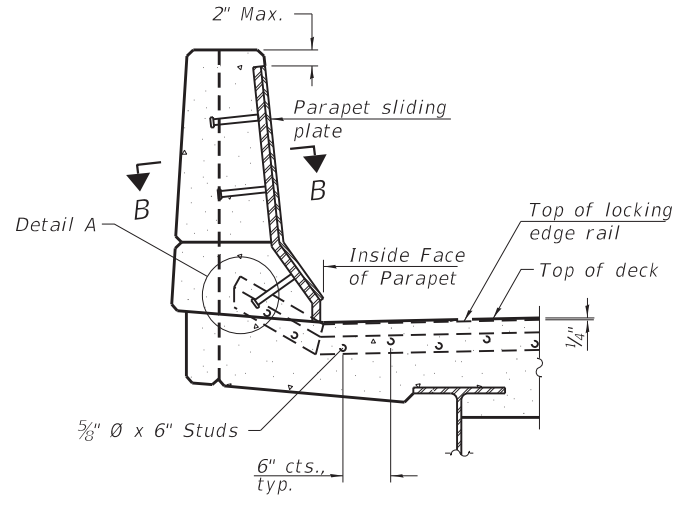


PLAN AT PARAPET



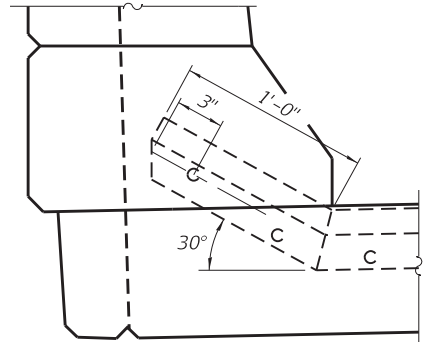
SECTION B-B

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
 The manufacturer's recommended installation methods shall be followed.

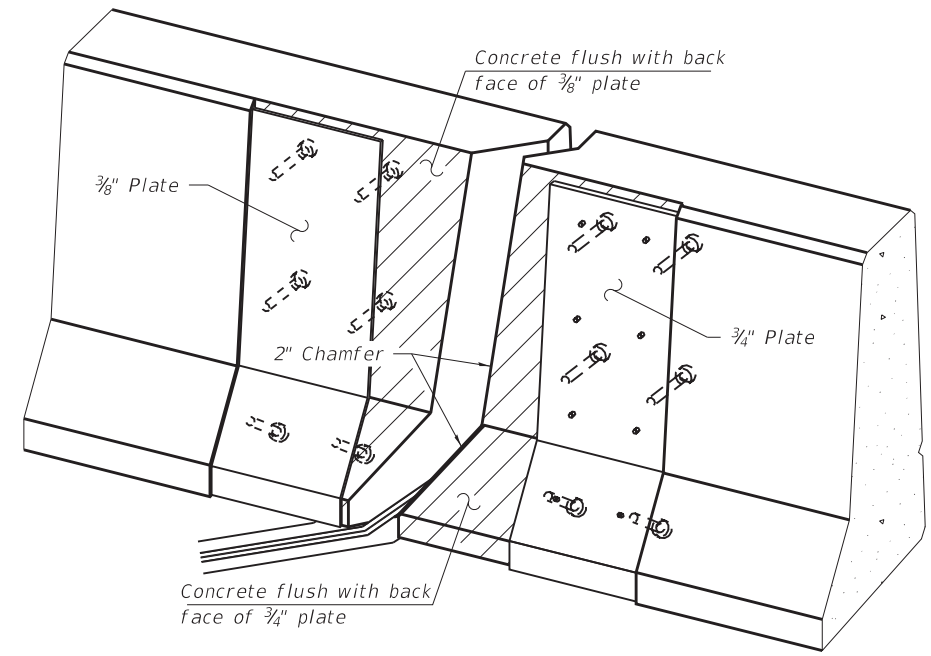


ELEVATION AT PARAPET

(Skews > 30° shown. Skews <= 30° similar except as shown in plan view.)

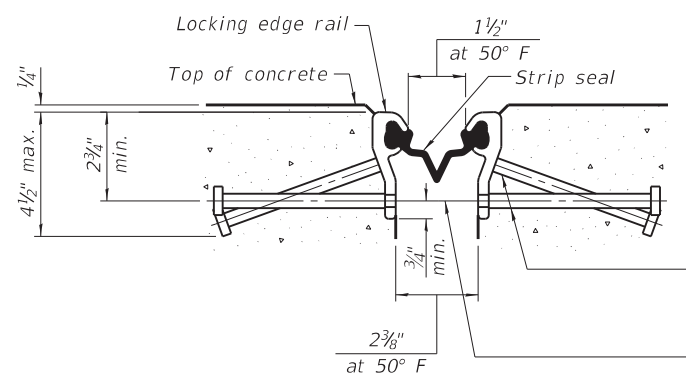


DETAIL A



TRIMETRIC VIEW
 (Showing embedded plates only)

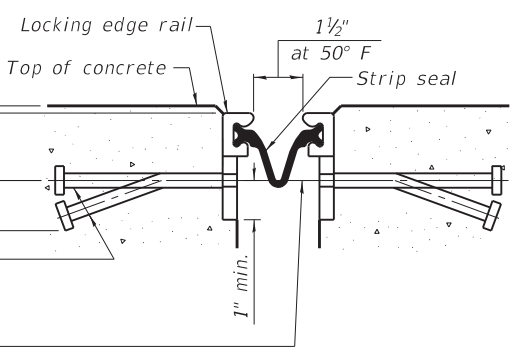
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.
 Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.
 34" F-shape barrier shown, 42" F-shape similar as noted.
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



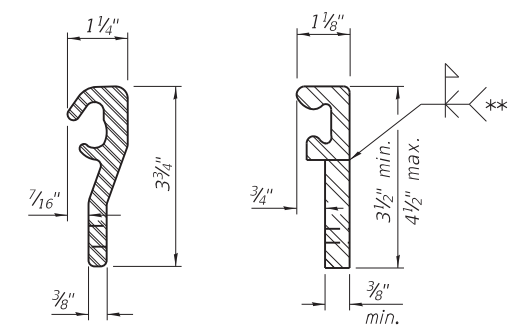
SHOWING ROLLED RAIL JOINT

* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 3/8" Ø threaded rods in 7/16" Ø holes at ±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.

SECTION A-A

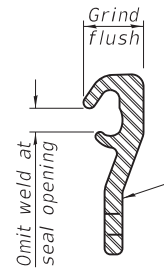


SHOWING WELDED RAIL JOINT



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	89

EJ-SS

8-11-17



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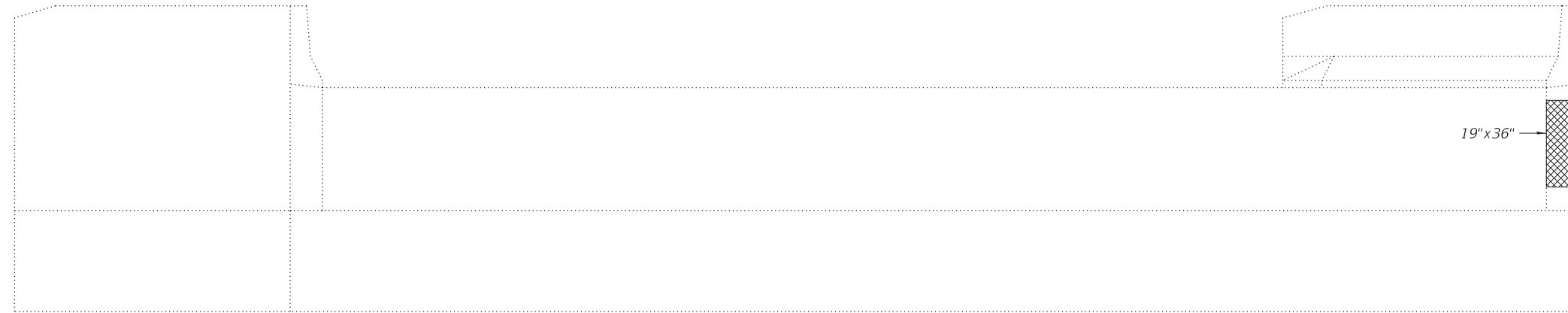
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 004-0015

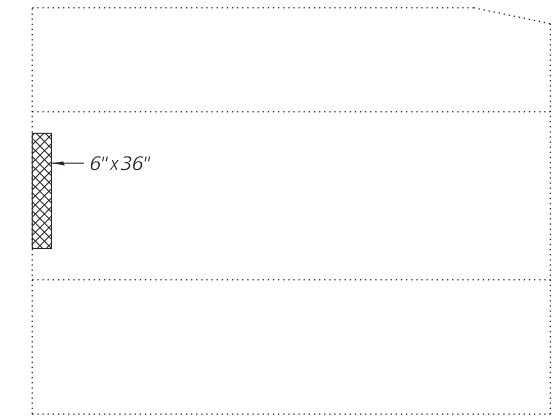
SHEET 8 OF 12 SHEETS

F.A.P. RTE. 517	SECTION (1-2HB)BJR	COUNTY BOONE	TOTAL SHEETS 37	SHEET NO. 16
ILLINOIS FED. AID PROJECT			CONTRACT NO. 64N33	

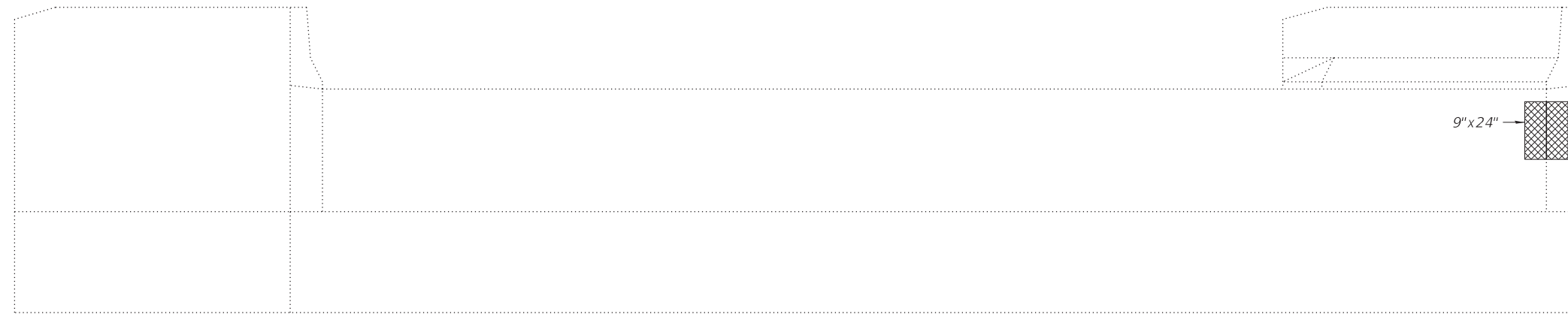
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NORTH ABUTMENT ELEVATION
 (Looking North)



NORTHEAST WINGWALL
 (Looking West)



SOUTH ABUTMENT ELEVATION
 (Looking South)



SOUTHWEST WINGWALL
 (Looking East)

Note:
 Dimensions given for repair areas are width by height.

LEGEND

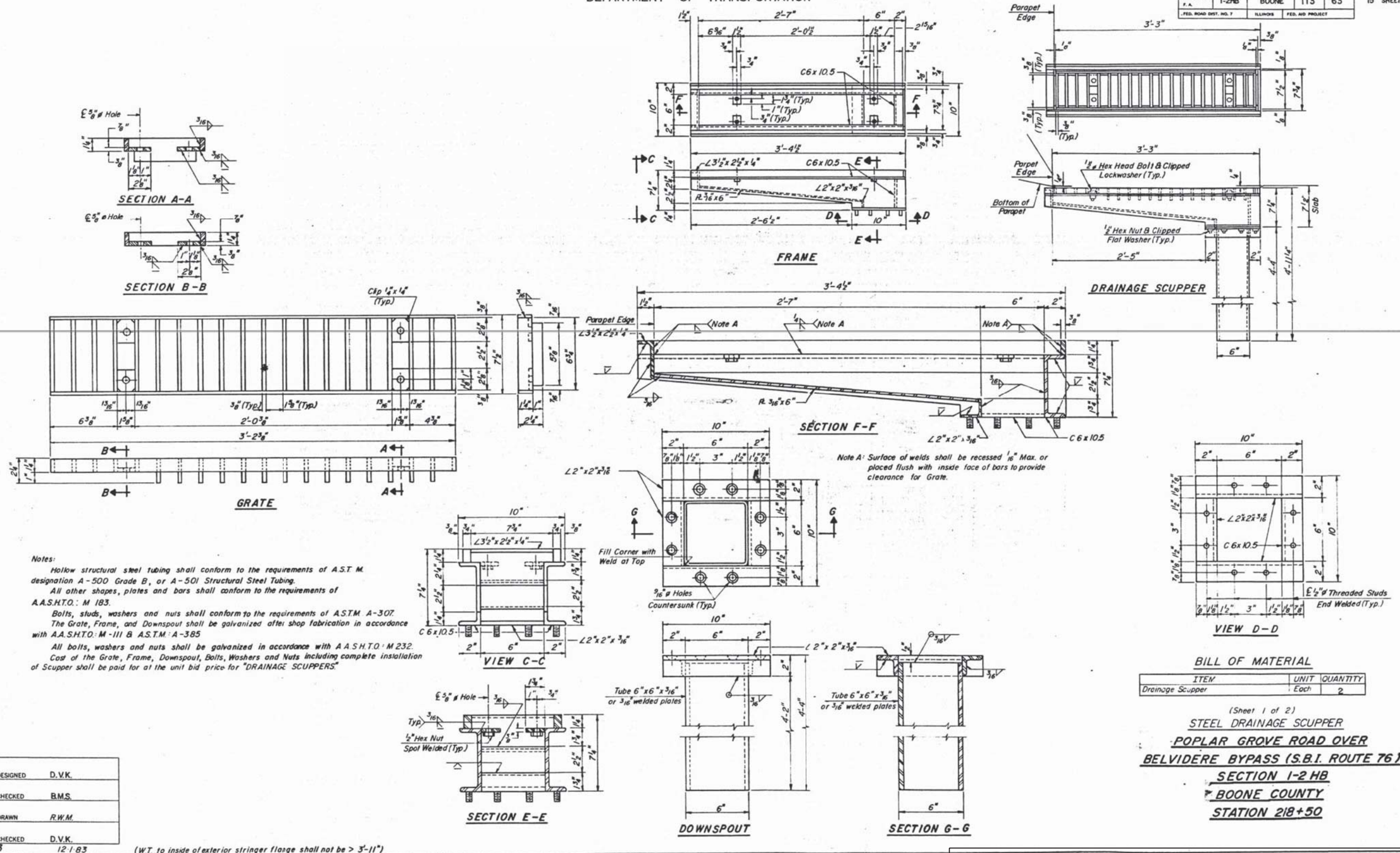
 Repair Area

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. I-76	SECTION I-2HB	COUNTY BOONE	TOTAL SHEETS 113	SHEET NO. 63	SHEET NO. 7 of 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



Notes:
Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B, or A-501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O.: M 183.
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A-307.
The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O.: M-111 B and ASTM A-385
All bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232.
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS"

DESIGNED	D.V.K.
CHECKED	B.M.S.
DRAWN	R.W.M.
CHECKED	D.V.K.

DS-3 12-1-83 (WT. to inside of exterior stringer flange shall not be > 3'-11")

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	2

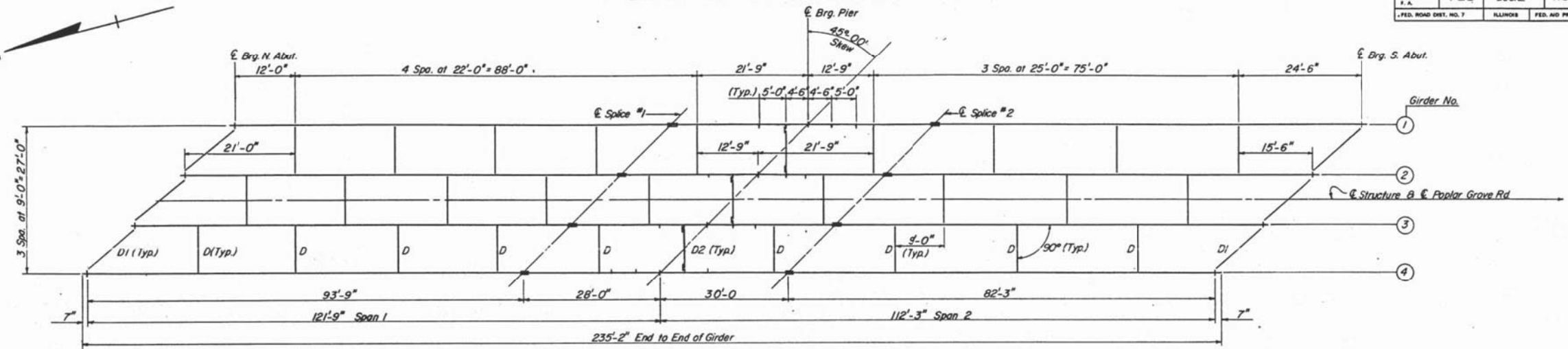
(Sheet 1 of 2)
STEEL DRAINAGE SCUPPER
POPLAR GROVE ROAD OVER
BELVIDERE BYPASS (S.B.I. ROUTE 76)
SECTION I-2 HB
BOONE COUNTY
STATION 218+50

FOR INFORMATION ONLY

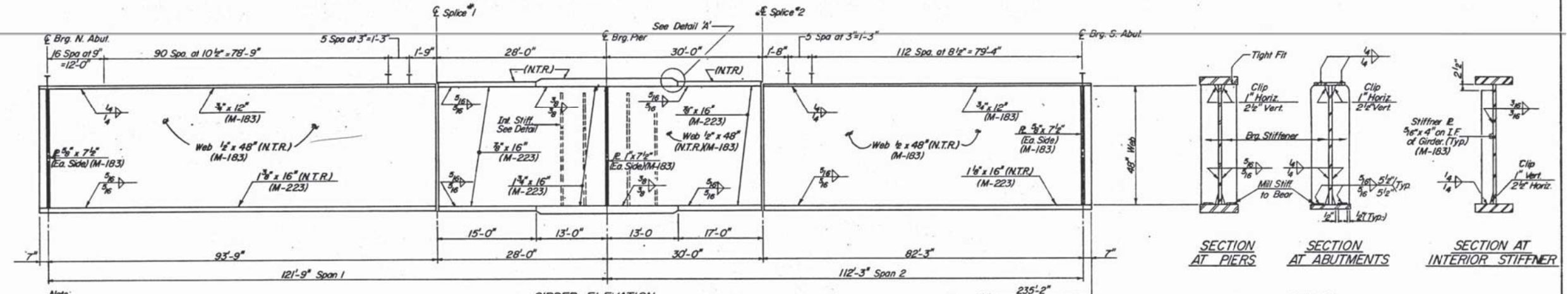
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. OF 15 SHEETS
A.A. 176 I.A.	1-2HB	BOONE	113	65	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

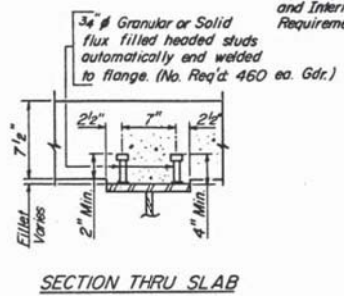


FRAMING PLAN



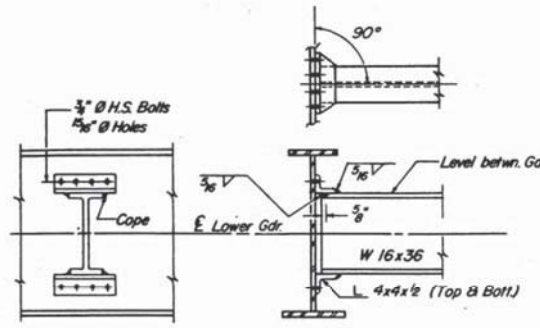
GIRDER ELEVATION

Note:
Top Flanges between splices, Bolt Flanges, and Splices to be M-223 Grade 50 Steel.
Top Flange from Abutments to Splices, Web, Diaphragms and Connections, Bearing Stiffeners and Interior Stiffeners to be M-183 Steel. N.T.R. denotes plates to which Notch Toughness Requirements are applicable.

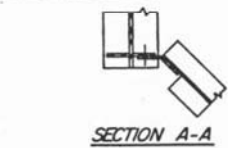


SECTION THRU SLAB

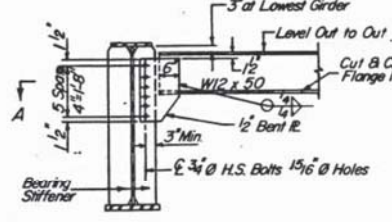
DESIGNED	D.V.K.
CHECKED	B.M.S.
DRAWN	T.A.H.
CHECKED	D.V.K.



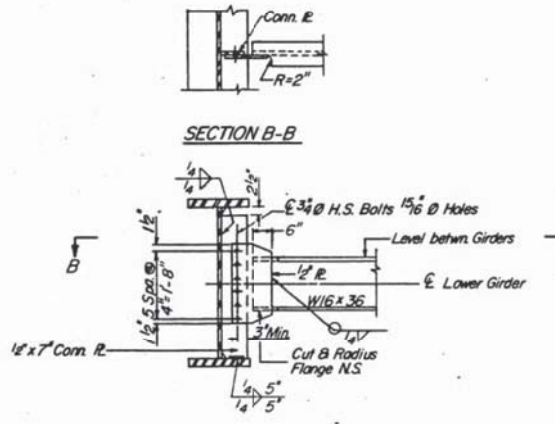
INTERIOR DIAPHRAGM D
(27 Required)



SECTION A-A

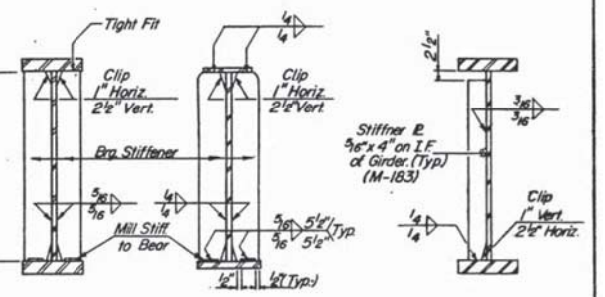


END DIAPHRAGM-D1
(6 Required)

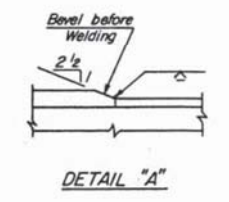


SECTION B-B

INTERIOR DIAPHRAGM AT PIER-D2
(3 Required)



SECTION AT PIERS
SECTION AT ABUTMENTS
SECTION AT INTERIOR STIFFENER



DETAIL "A"

STRUCTURAL STEEL DETAILS
POPLAR GROVE ROAD OVER
BELVIDERE BYPASS (S.B.I. ROUTE 76)
SECTION 1-2HB
BOONE COUNTY
STATION 218 +50

FOR INFORMATION ONLY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

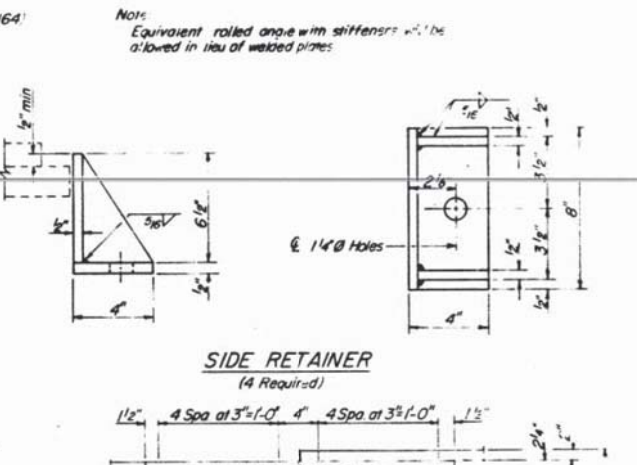
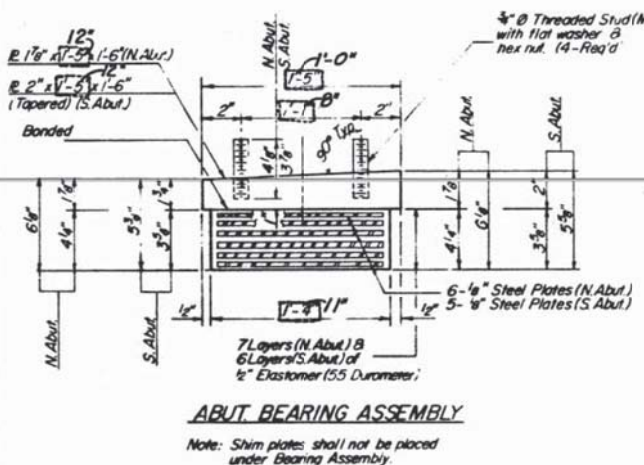
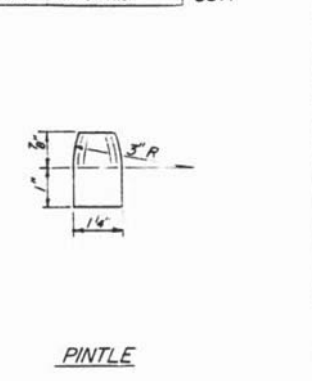
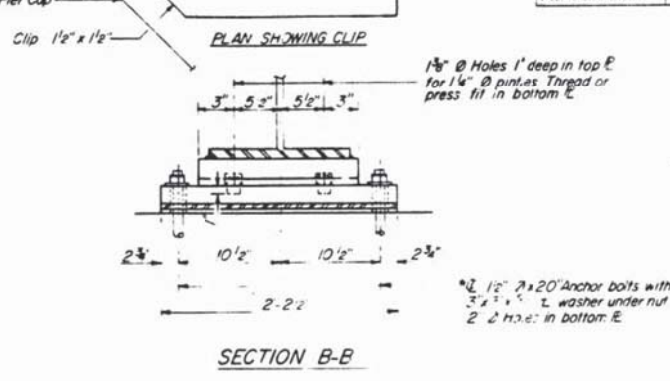
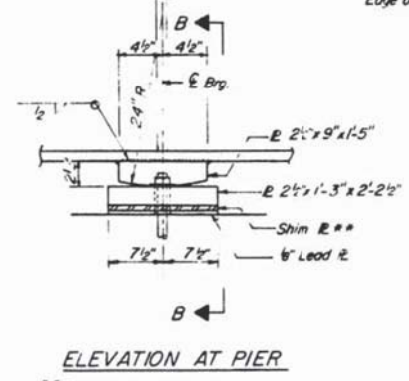
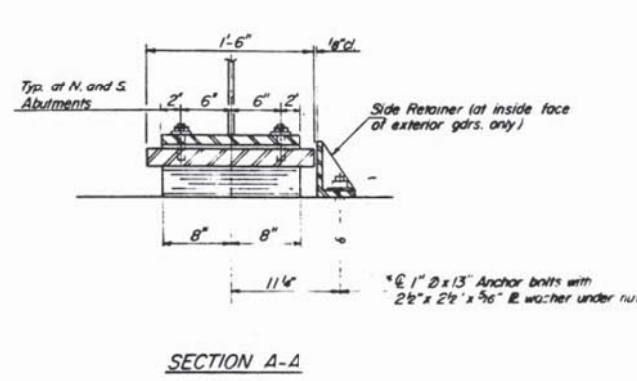
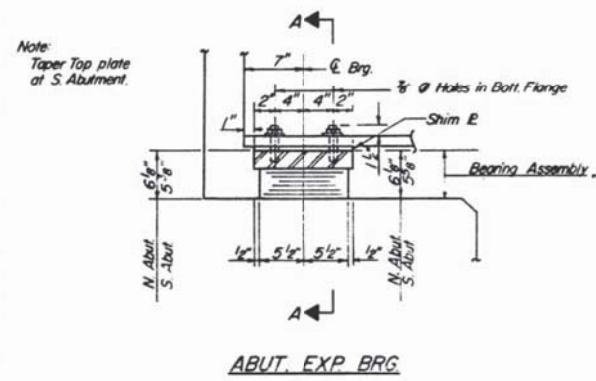
EXISTING PLAN REFERENCE SHEET
STRUCTURE NO. 004-0015

SHEET 11 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	19
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 OF
1-2HB	1-2HB	BOONE	113	66	15 SHEETS
FED. ROAD DIST. NO. 7					ILLINOIS
FED. AID PROJECT					66A



Notes:
See sheet 14 for Anchor Bolt Installation.
All structural steel for bearing assemblies shall be A36.
Calculated weight of structural steel bearings: 2,960 lbs (13,200 lbs).

TOP OF WEB ELEVATIONS*

Location	GIRDER #1	GIRDER #2	GIRDER #3	GIRDER #4
E Brg. 1. Abut	801.75	801.84	801.76	801.53
E Splice #1	801.94	802.12	802.14	802.01
E Brg. Pier	801.64	801.84	801.89	801.79
E Splice #2	801.47	801.71	801.79	801.71
E Brg. S. Abut	800.21	800.53	802.70	800.70

*For Fabrication Only

INTERIOR GIRDER MOMENT TABLE

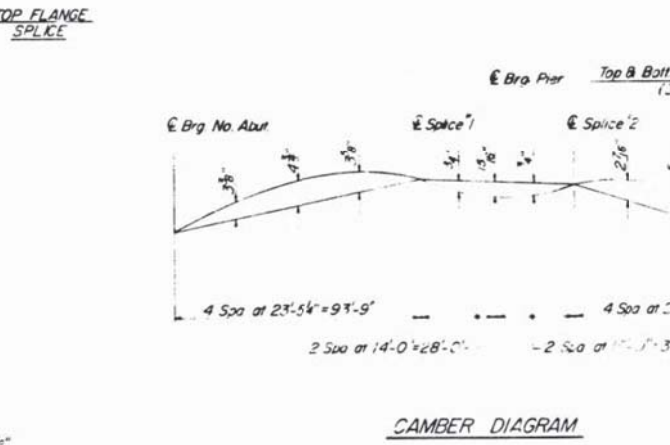
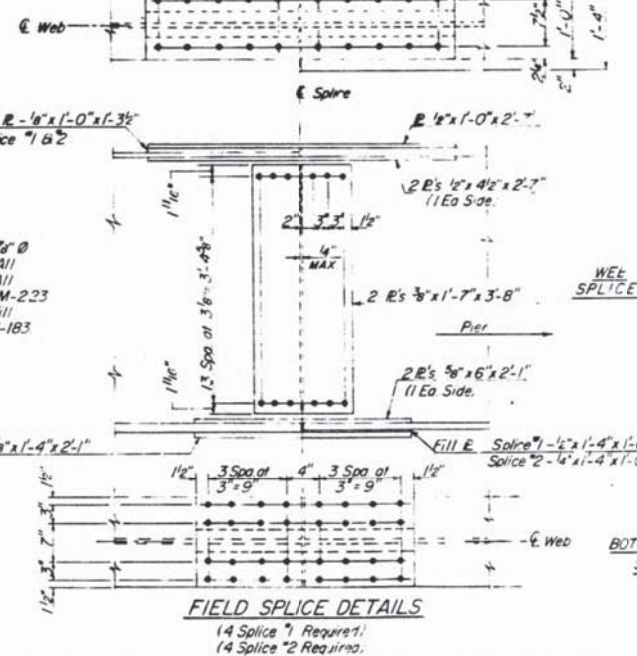
	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s (in ⁴)	21,461.8	39,273.2	19,444.4
I_c (in ⁴)	59,332.6	—	52,990.2
S_s (in ³)	1,101.2	1,525.2	955.9
S_c (in ³)	1,508.6	—	1,314.2
M_E (K)	1,266	1,555	1,05
M_P (K)	1,079.1	2,627.0	776.6
M_S (K)	0.393	—	0.397
M_{E+P} (K)	466.1	—	361.7
M_{E+S} (K)	1,322.1	1,064.4	1,195.3
M_{P+S} (K)	267.8	2,19.9	251.8
M_a (K)	2,649.8	2,140.5	2,411.8
M_o (K)	5,453.5	6,197.2	4,614.6
f_s (non-compl.) (ksi)	1.76	20.67	5.75
f_s (comp.) (ksi)	4.04	—	3.59
f_s (k+1) (ksi)	21.08	16.84	22.02
f_s (Overload) (ksi)	36.88	37.51	35.36
f_s (Total) (ksi)	47.94	48.76	45.97
V_R (K)	69.6	—	70.8

SHIM PLATE TABLE

Grder	3
Location	5g
Pier	5g

Note: Provide shims of the same dimensions as the bottom bearing plate at locations shown in the Shim Plate Table above.

Note: All bolts in splices are 7/8" High Strength All. Holes shall be 5/8" Ø. All Splice Plates shall be M-223 Gr. 50 (N.T.R.) except Fill Plates which shall be M-183.



INTERIOR GIRDER REACTION TABLE

	N. Abut.	Pier	S. Abut.
R_E (K)	67.3	27.0	57.8
R_P (K)	57.6	99.1	57.0
$Imp.$ (K)	11.7	20.5	12.2
R Total (K)	136.6	336.6	126.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total & Overload).
 V_R is the maximum $1/4$ Impact shear range in span.
 M_a (Applied Moment) = $1.3 [M_E + M_S + 5/3(M_{E+S})]$
 f_s (Overload) is the sum of the stresses due to $M_E + M_S + 5/3(M_{E+S})$
 f_s (Total) is the sum of the stresses due to $1.3 [M_E + M_S + 5/3(M_{E+S})]$

FIELD SPLICE & BEARING ASSEMBLY DETAILS
POPLAR GROVE ROAD OVER
BELVIDERE BYPASS (S.B.I. ROUTE 76)
SECTION 1-2HB, BOONE COUNTY
STATION 218+50

AS REVISED 2-14-06 E.V.T.

FOR INFORMATION ONLY

DESIGNED	D.V.K.
CHECKED	B.M.S.
DRAWN	T.A.H.
CHECKED	D.V.K.

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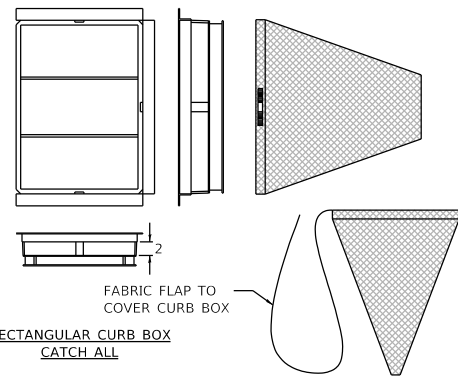
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN REFERENCE SHEET
STRUCTURE NO. 004-0015

SHEET 12 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	20
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

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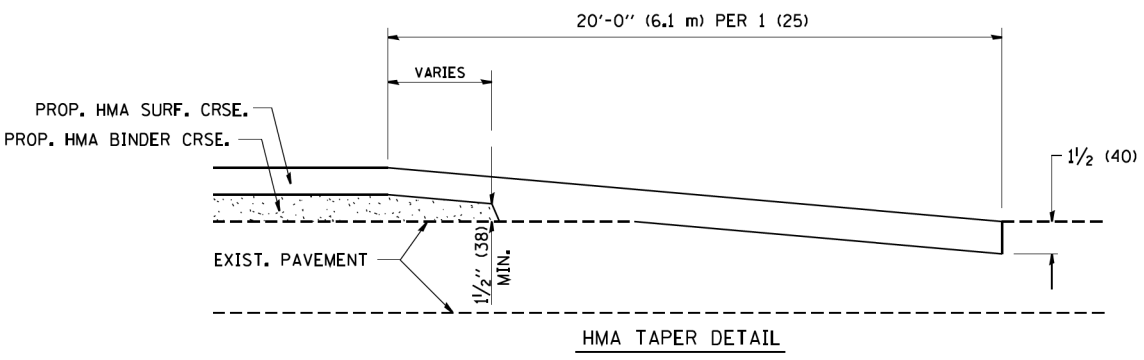
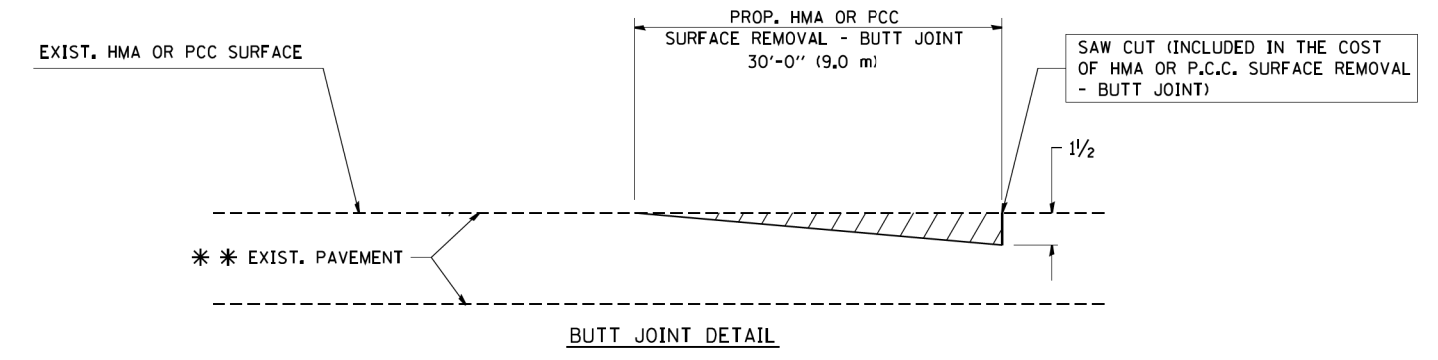


INLET FILTER NOTES:

FRAME: TOP FLANGE FABRICATED FROM 1 1/4"x1 1/2"x1/8" ANGLE. BASE RIM FABRICATED FROM 1 1/2"x1/2"x1/8" CHANNEL. HANDLES AND SUSPENSION BRACKETS FABRICATED FROM 1 1/2"x1/4" FLAT STOCK. ALL STEEL CONFORMING TO ASTM-A36.

SEDIMENT BAG: BAG FABRICATED FROM 4 OZ./SQ.YD. NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH. BAG SECURED TO BASE RIM WITH A STAINLESS STEEL BAND AND LOCK.

INLET FILTER DETAIL
N.T.S.



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

NOTES

THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

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	DATE -	REVISED -

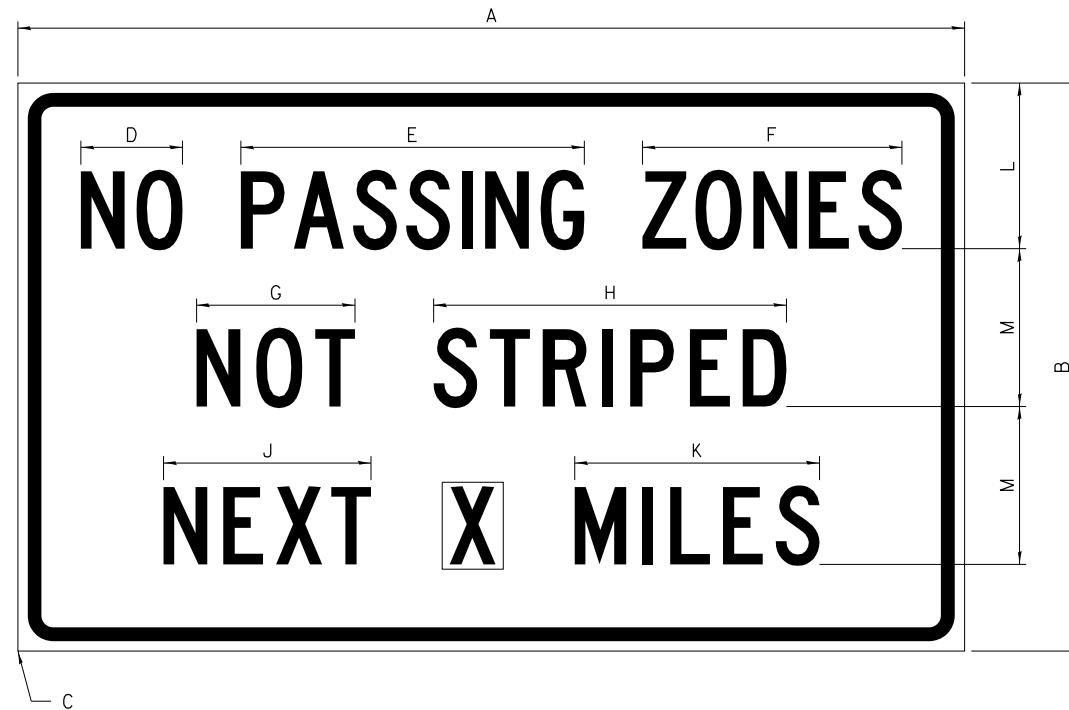
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS				
SCALE:	SHEET	OF SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	21
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

WORK ZONE SIGN DETAILS

ILLINOIS STANDARD G20-I100



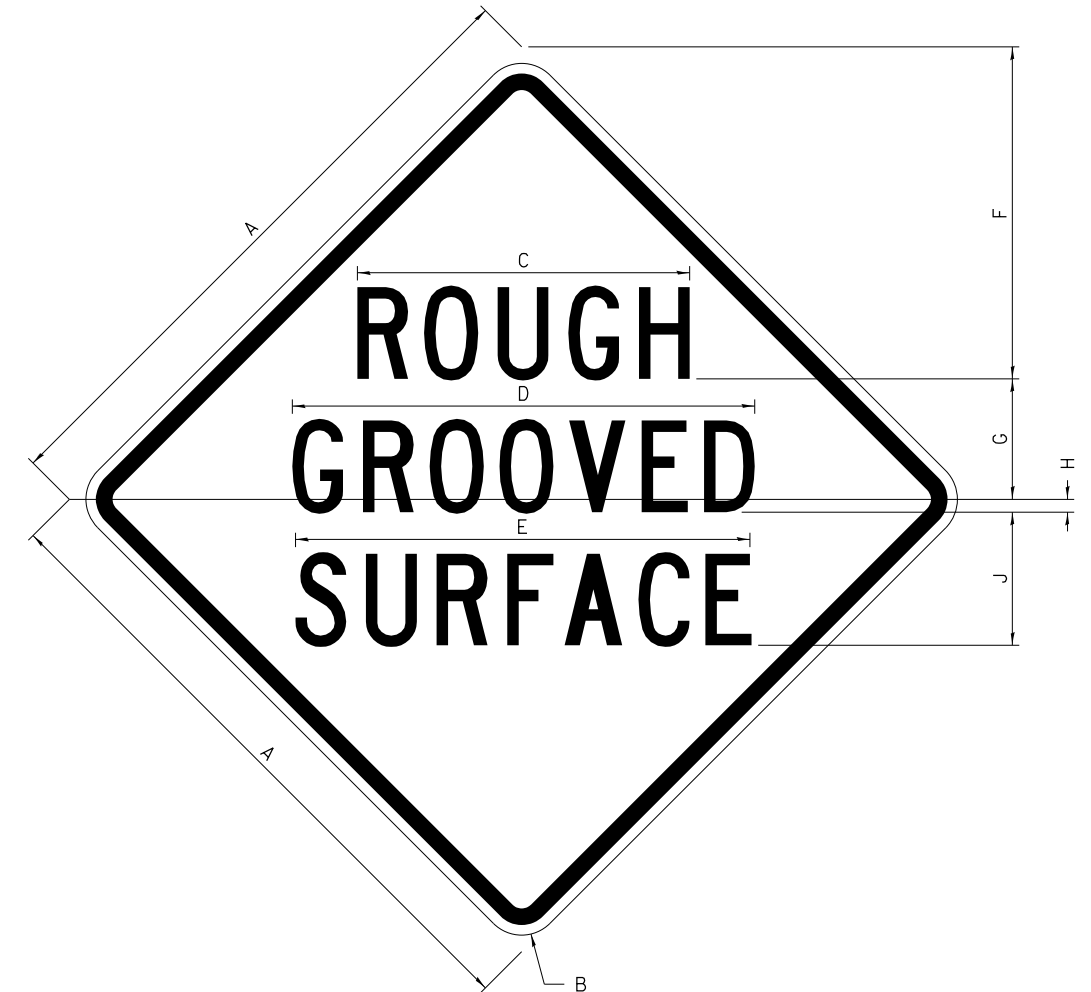
COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
60 x 36	60.00	36.00	2.25	6.4	21.80	16.40	10.00	22.40	13.20	15.50	10.50	10.00

SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
60 x 36	5C	5C	5C	0.625	0.875

Sign not to scale

ILLINOIS STANDARD W8-I107



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
48 x 48	48.00	3.00	25.00	34.80	34.20	24.94	9.00	1.00	10.00

SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
48 x 48	7C	7C	7C	1.250	0.750

Sign not to scale

GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REGION 2 /DISTRICT 2 STANDARD

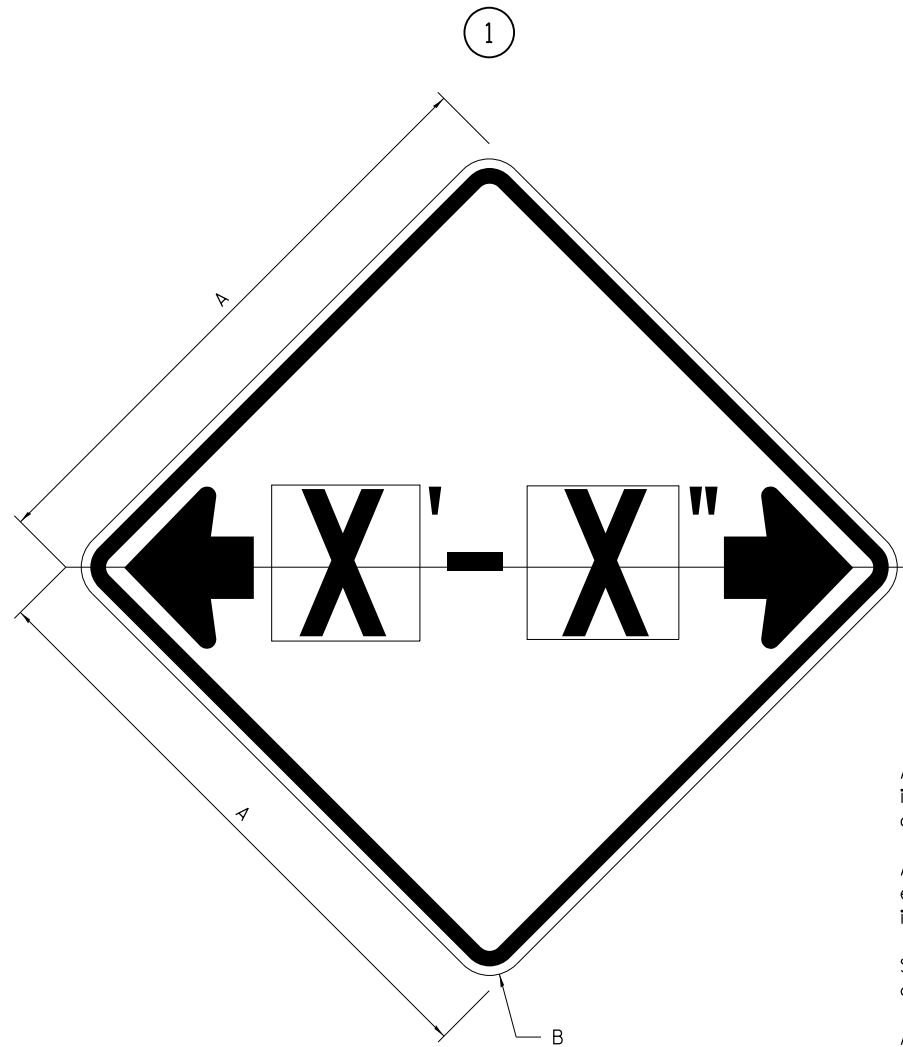
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517	(1-2HB)BJR	BOONE	37	22
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.

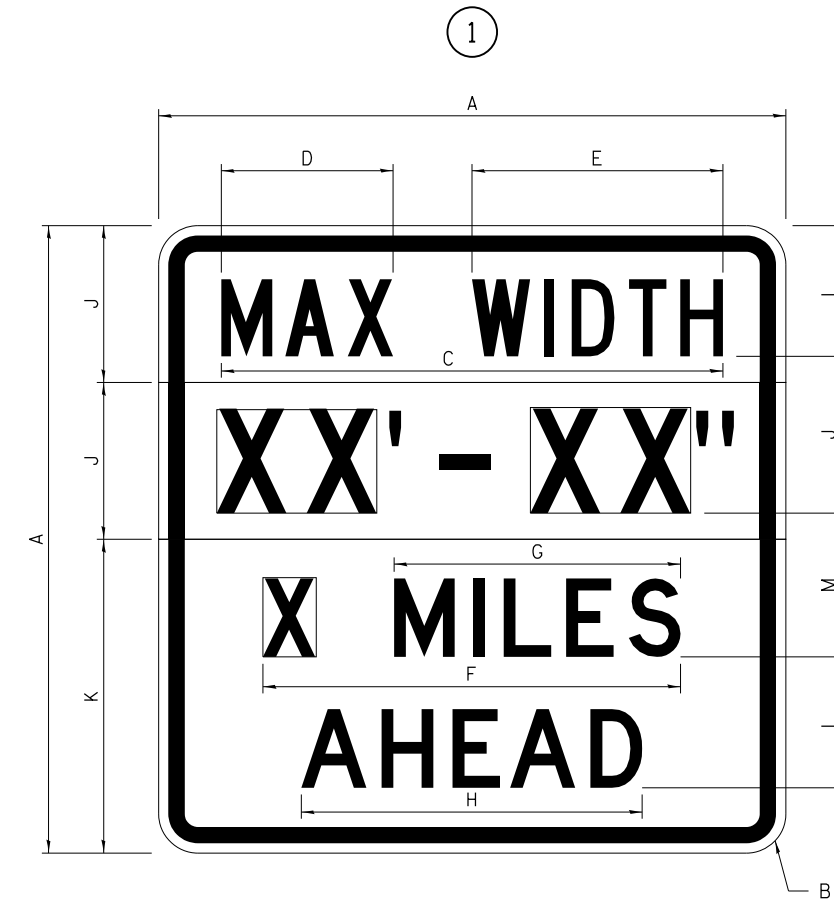
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WORK ZONE SIGN DETAILS

ILLINOIS STANDARD W12-I102



ILLINOIS STANDARD W12-I103



GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

COLOR LEGEND AND BORDER BACKGROUND BLACK FL ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS	
	A	B
48 x 48	48.00	3.00

① Illinois Standard signs W12-I102 and W12-I103 shall be used as described in the special provisions.

SIGN SIZE	SERIES BY LINE	MARGIN	BORDER
	1		
48 x 48	12C	0.750	1.250

Sign not to scale

COLOR LEGEND AND BORDER BACKGROUND (WIDTH) BLACK WHITE FL ORANGE NON-REFLECTORIZED REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
48 x 48	48.00	3.00	38.40	13.20	19.20	32.00	22.00	26.20	12.00	24.00	10.00	11.00

SIGN SIZE	SERIES BY LINE				MARGIN	BORDER
	1	2	3	4		
48 x 48	6C	8D	6D	6D	0.750	1.250

Sign not to scale

XX'-XX" WIDTH AND X MILES ARE VARIABLE TOP AND BOTTOM OF BACKGROUND WHITE

MODEL: D:\m\h\... FILE NAME: P:\18-1089-03_Paper\Governa\CAD\0_IDOT\CAD_Sheets\0264N33-PL-02Detail_01-2.dgn

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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 /DISTRICT 2 STANDARD

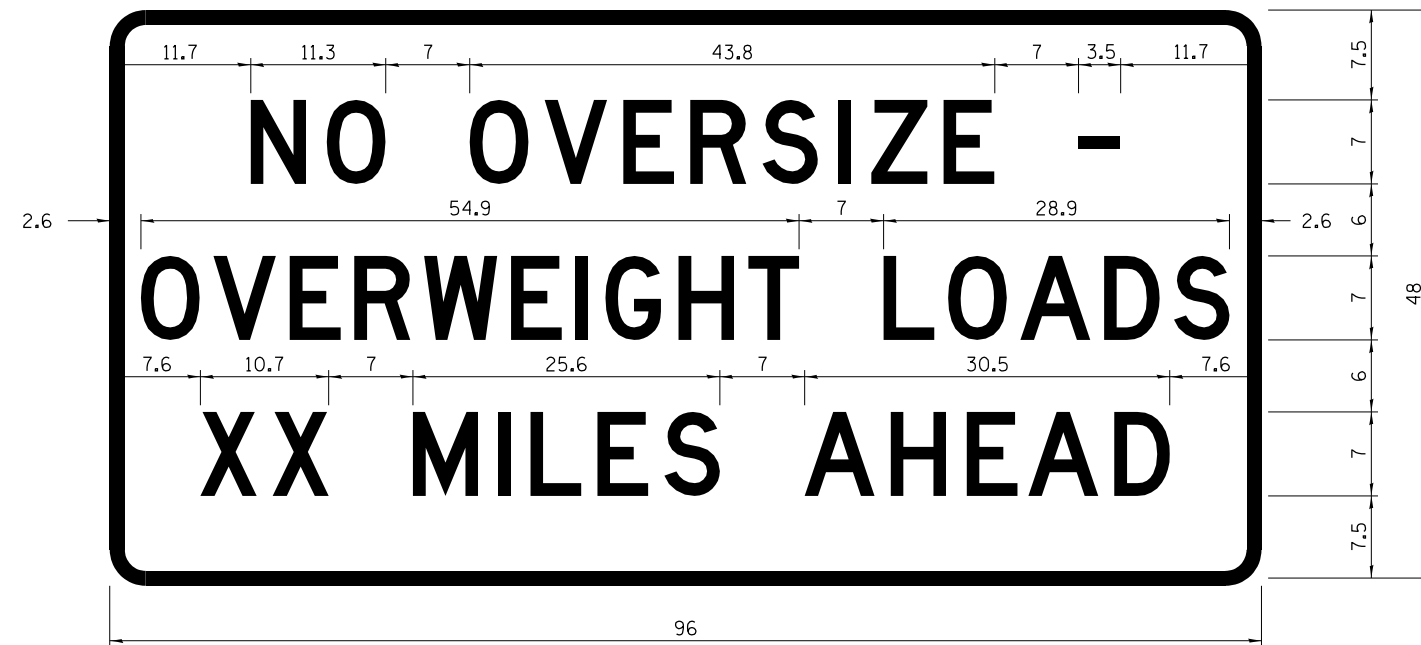
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	23
CONTRACT NO. 64N33				

WORK ZONE SIGN DETAILS

ROAD CLOSED TO OVERSIZED LOADS

STOP LINE SIGN FOR TEMPORARY SIGNALS



COLOR	LEGEND AND BORDER BACKGROUND	BLACK ORANGE	NON-REFLECTORIZED REFLECTORIZED
-------	------------------------------	--------------	---------------------------------

COLOR	LEGEND AND BORDER BACKGROUND	BLACK WHITE	NON-REFLECTORIZED REFLECTORIZED
-------	------------------------------	-------------	---------------------------------

Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border;
 [NO OVERSIZE -] D; [OVERWEIGHT LOADS] D 85% spacing; [XX MILES AHEAD] D;
 Table of letter and object lefts.

SIGN SIZE	SERIES BY LINE		
	1	2	3
24 x 24	4C	4C	4C

N	O	O	V	E	R	S	I	Z	E	-
11.7	18.1	30.0	36.2	42.8	48.4	54.4	60.7	63.5	69.5	80.8

O	V	E	R	W	E	I	G	H	T	L	O	A	D	S
2.6	8.6	15.0	20.4	26.2	33.4	38.8	41.3	47.4	53.2	64.5	69.9	75.9	82.9	88.7

X	X	M	I	L	E	S	A	H	E	A	D
7.6	13.6	25.3	32.3	35.1	40.6	46.2	57.9	65.1	71.4	76.6	83.7

Sign not to scale

Sign not to scale

GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

MODEL: D:\m\h\1 FILE NAME: P:\18-1089-03_Poplar Grove\cadd\0_IDOT\CAD_Sheets\0264N33-plc-02Detail-01-3.dgn

USER NAME = ndp	DESIGNED -	REVISED - 3-02-16
	DRAWN -	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 9/20/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

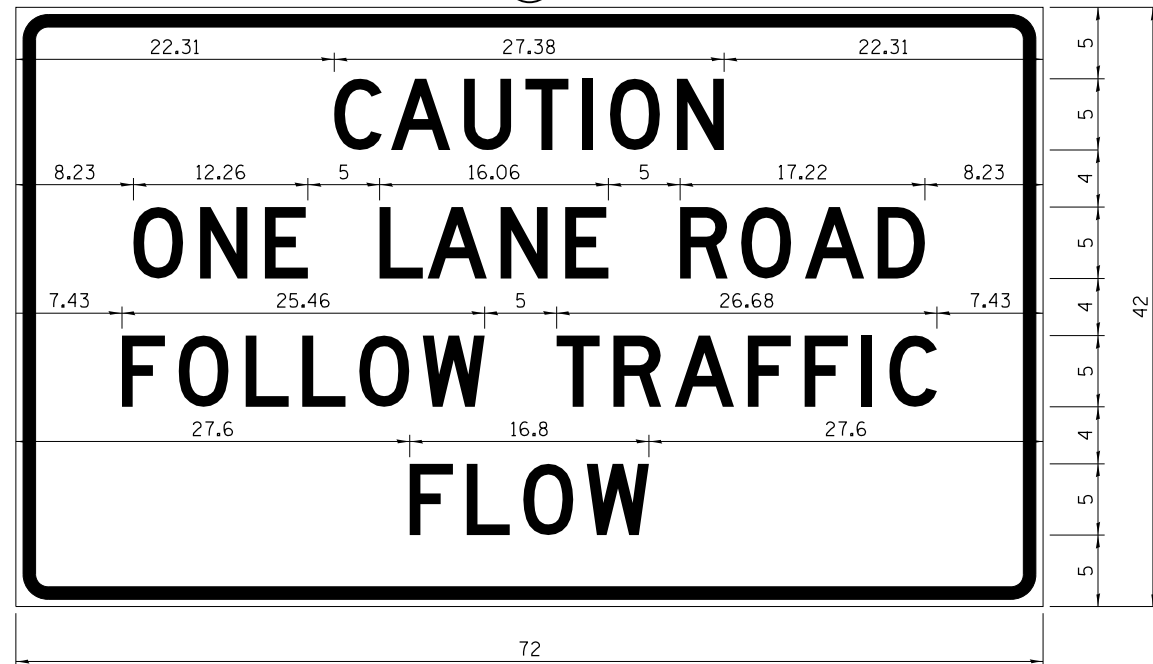
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	24
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

**ENTRANCE SIGN FOR USE
WITH TEMPORARY SIGNALS**

WORK ZONE SIGN DETAILS

②



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

2.25" Radius, 0.88" Border, 0.50" Indent;
[CAUTION] D; [ONE LANE ROAD] D;
[FOLLOW TRAFFIC] D; [FLOW] D

② This sign shall be installed at entrances located between the temporary signals as shown in the staging plans.

Table Of Widths And Spaces

22.31	C	3.36	0.62	A	4.18	0.94	U	3.36	0.94	T	3.04	0.94	I	0.78	1.17	O	3.52	1.17	N	3.36	22.31
-------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	-------

8.23	O	3.51	1.17	N	3.36	1.18	E	3.04
------	---	------	------	---	------	------	---	------

5.00	L	3.05	0.31	A	4.18	0.94	N	3.36	1.17	E	3.05
------	---	------	------	---	------	------	---	------	------	---	------

5.00	R	3.36	0.93	O	3.52	0.94	A	4.18	0.93	D	3.36	8.23
------	---	------	------	---	------	------	---	------	------	---	------	------

7.43	F	3.04	0.94	O	3.52	1.17	L	3.04	0.94	L	3.05	0.94	O	3.51	0.94	W	4.37
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------

5.00	T	3.05	0.94	R	3.36	0.94	A	4.18	0.93	F	3.05	0.94	F	3.04	0.94	I	0.78	1.18	C	3.35	7.43
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------

27.60	F	3.05	0.94	L	3.04	0.94	O	3.52	0.93	W	4.38	27.60
-------	---	------	------	---	------	------	---	------	------	---	------	-------

Sign not to scale

GENERAL NOTES

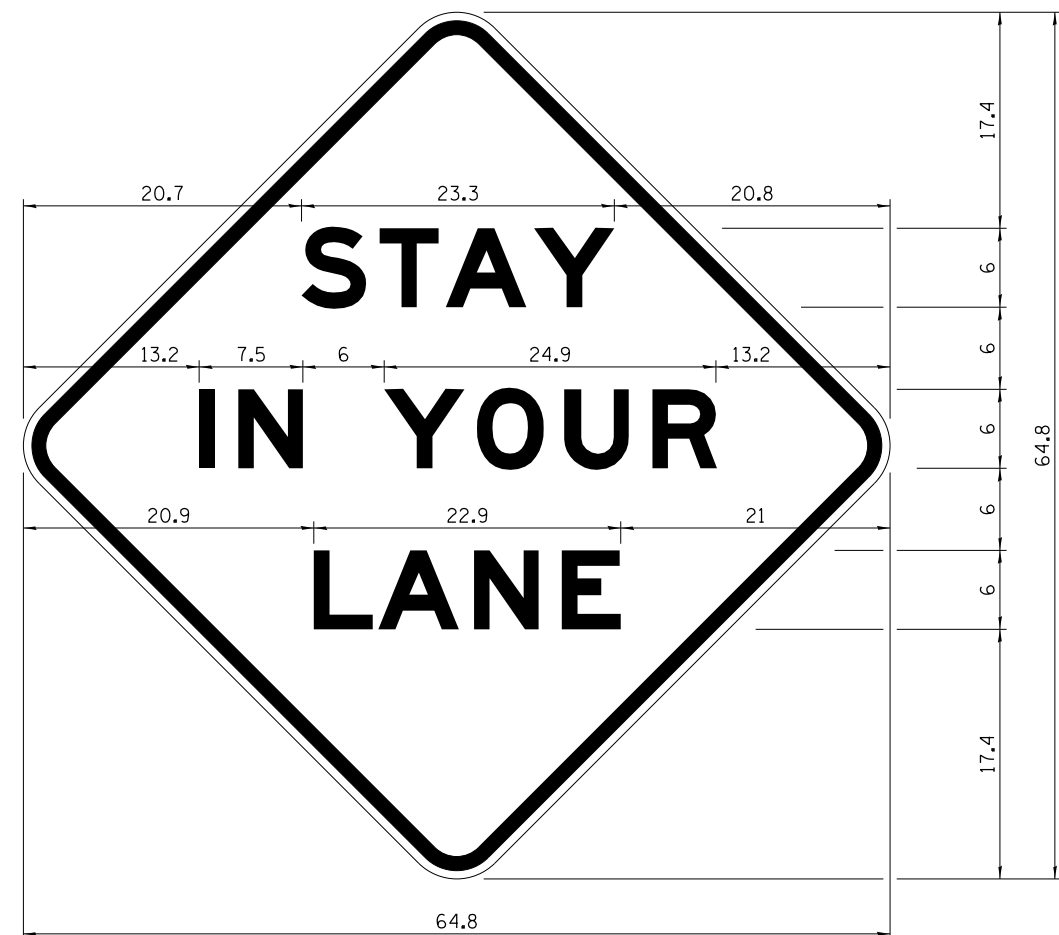
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

STAY IN YOUR LANE



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

48.0" across sides 3.8" Radius, 1.0" Border, 0.6" Indent;
"STAY" E Mod; "IN YOUR" E Mod; "LANE" E Mod;

Table of Letter and Object Lefts

S	T	A	Y
20.7	26.8	31.6	38.0

I	N	Y	O	U	R
13.2	15.9	26.7	33.9	40.5	46.8

L	A	N	E
20.9	25.8	33.1	39.4

Sign not to scale

MODEL: D:\dgn\181089_03_PopularGovernor\CAD\00_IDOT\CAD_Sheets\0264N33-01-4.dgn

USER NAME = ndp	DESIGNED -	REVISED - 3-02-16
	DRAWN -	REVISED -
PLOT SCALE = 2,000' / in.	CHECKED -	REVISED -
PLOT DATE = 9/20/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

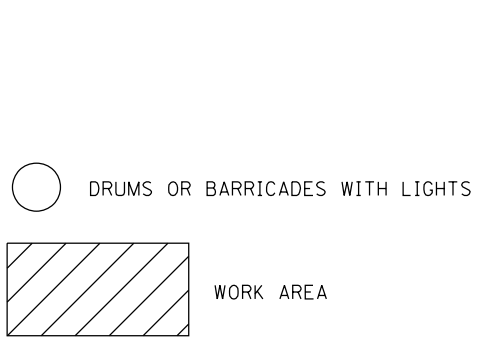
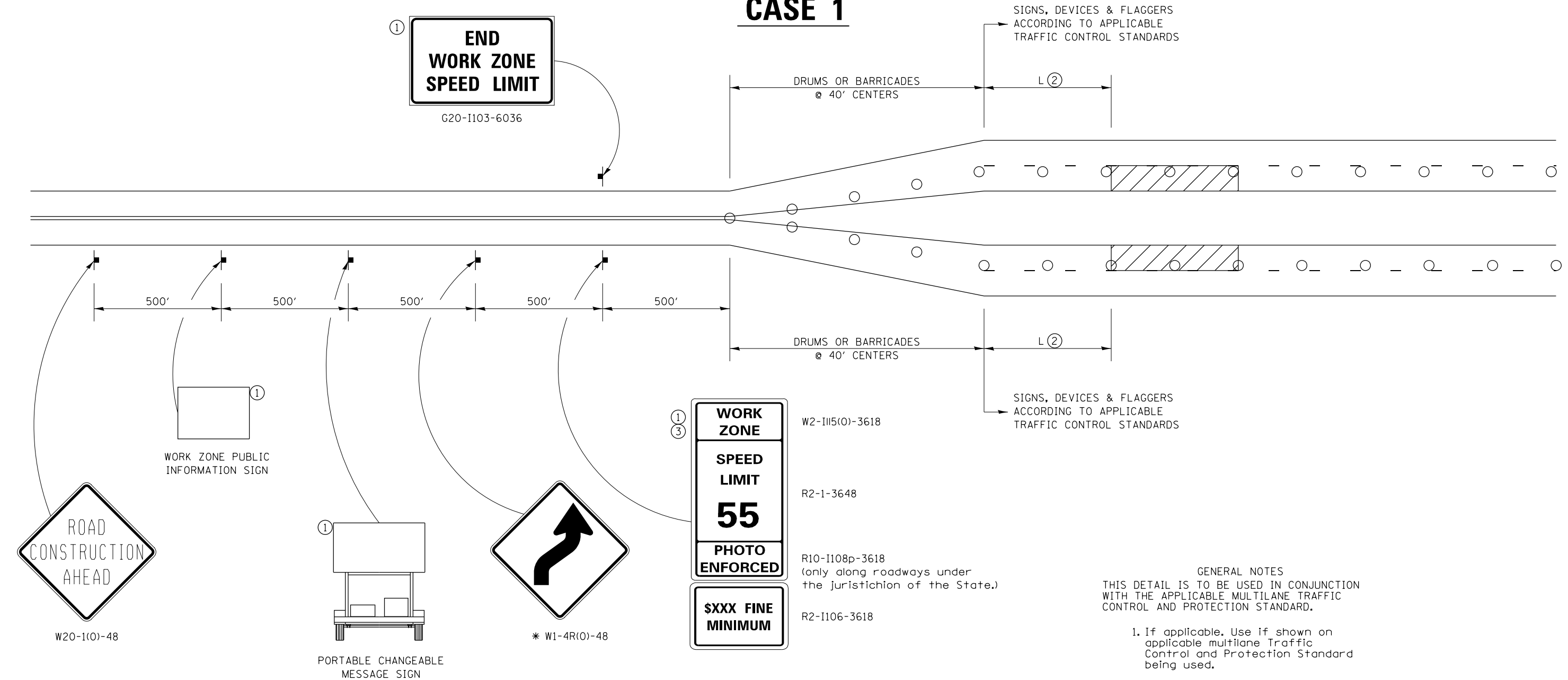
REGION 2 /DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	25
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL FOR TRANSITION AREAS

CASE 1



NOTE: STANDARDS 701301 AND 701306 SHALL NOT BE USED WITHIN 500 FEET OF THE TRANSITION.

* DEPENDS ON GEOMETRICS OF THE TRANSITION. MAY SWITCH THE "STAY IN YOUR LANE" AND "WEAVE SIGNS"

- GENERAL NOTES**
- THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE APPLICABLE MULTILANE TRAFFIC CONTROL AND PROTECTION STANDARD.
1. If applicable, Use if shown on applicable multilane Traffic Control and Protection Standard being used.
 2. If the work is within 2500 feet of the transition when the speed is > 40 mph, or 1500 feet for all other speeds, the detail shall be used.
 3. WORK ZONE SPEED LIMIT 55 SIGN ASSEMBLY shall be replaced with WORK ZONE SPEED LIMIT 45 SIGN ASSEMBLY where the workers are within 500 feet of the transition.

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

MODEL: D:\m\it... FILE NAME: P:\18-1089\03... 02-1.dgn

USER NAME = ndp	DESIGNED -	REVISED - 4-20-17
PLOT SCALE = 2,000' / in.	DRAWN -	REVISED - 1-05-16
PLOT DATE = 9/20/2019	CHECKED -	REVISED - 8-27-13
	DATE -	REVISED - 1-16-13

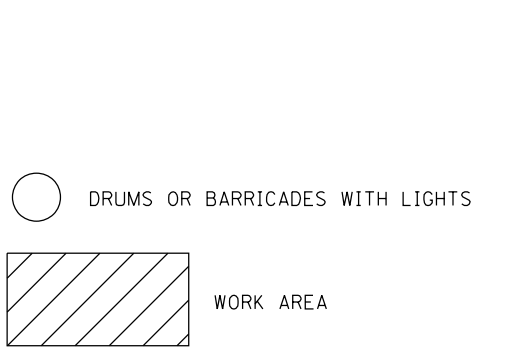
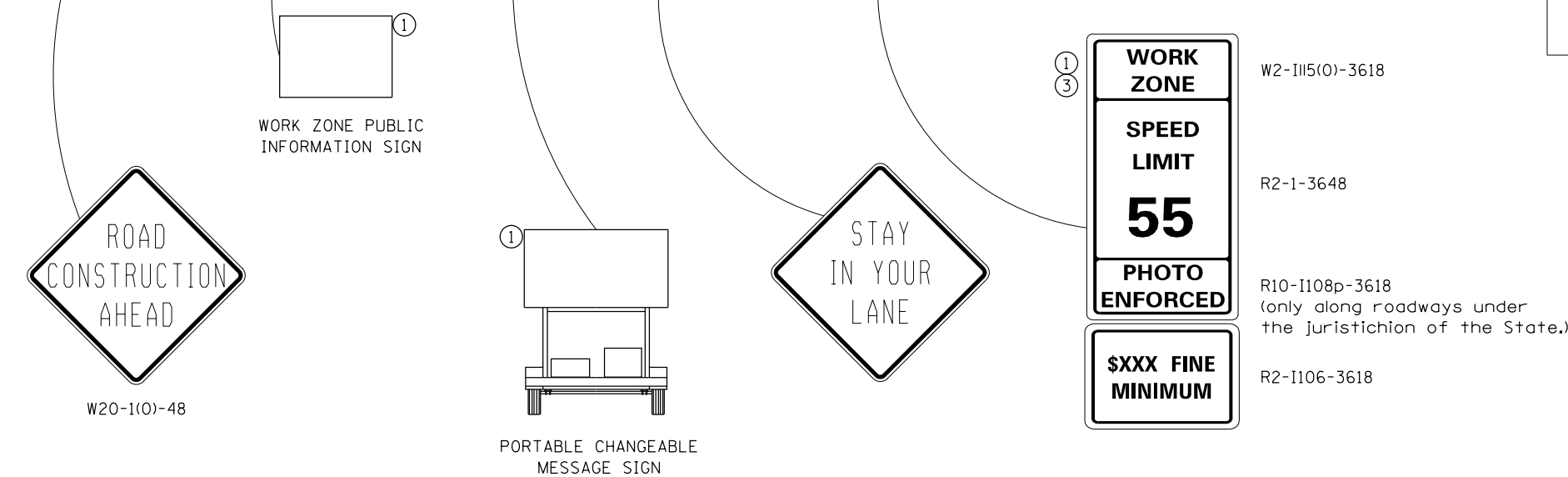
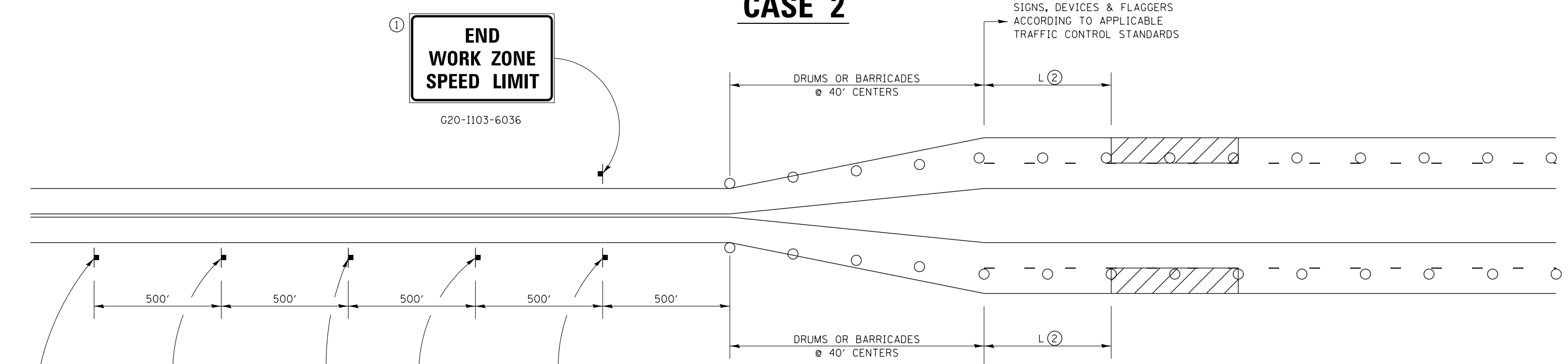
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REGION 2 /DISTRICT 2 STANDARD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	26
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL FOR TRANSITION AREAS

CASE 2



NOTE: STANDARDS 701301 AND 701306 SHALL NOT BE USED WITHIN 500 FEET OF THE TRANSITION.

SIGNS, DEVICES & FLAGGERS ACCORDING TO APPLICABLE TRAFFIC CONTROL STANDARDS

SIGNS, DEVICES & FLAGGERS ACCORDING TO APPLICABLE TRAFFIC CONTROL STANDARDS

GENERAL NOTES
 THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE APPLICABLE MULTILANE TRAFFIC CONTROL AND PROTECTION STANDARD.

1. If applicable, use if shown on applicable multilane Traffic Control and Protection Standard being used.
2. If the work is within 2500 feet of the transition when the speed is > 40 mph, or 1500 feet for all other speeds, the detail shall be used.
3. WORK ZONE SPEED LIMIT 55 SIGN ASSEMBLY shall be replaced with WORK ZONE SPEED LIMIT 45 SIGN ASSEMBLY where the workers are within 500 feet of the transition.

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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PLOT DATE = 9/20/2019	DATE -	REVISED - 1-16-13

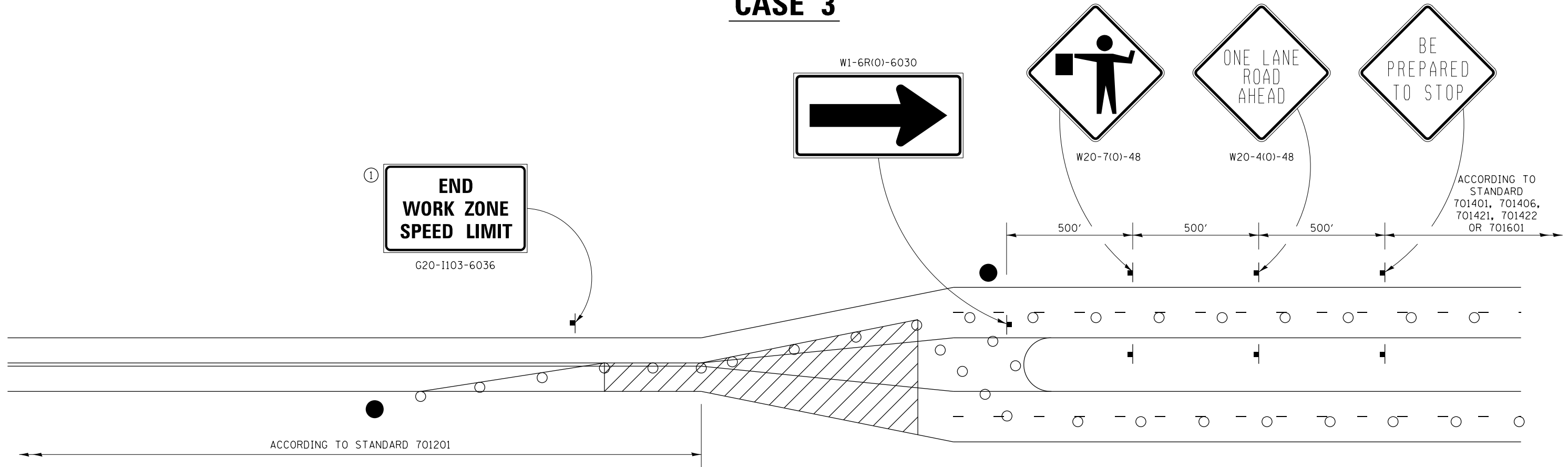
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REGION 2 /DISTRICT 2 STANDARD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	27
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL FOR TRANSITION AREAS

CASE 3



GENERAL NOTES
 THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE APPLICABLE MULTILANE TRAFFIC CONTROL AND PROTECTION STANDARD.

1. If applicable, Use if shown on applicable multilane Traffic Control and Protection Standard being used.
2. If the work is within 2500 feet of the transition when the speed is > 40 mph, or 1500 feet for all other speeds, the detail shall be used.
3. WORK ZONE SPEED LIMIT 55 SIGN ASSEMBLY shall be replaced with WORK ZONE SPEED LIMIT 45 SIGN ASSEMBLY where the workers are within 500 feet of the transition.

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

● FLAGGER WITH TRAFFIC CONTROL SIGN

○ DRUMS OR BARRICADES WITH LIGHTS

▨ WORK AREA

NOTE: STANDARDS 701301 AND 701306 SHALL NOT BE USED WITHIN 500 FEET OF THE TRANSITION.

MODEL: D:\m\h\11 FILE NAME: P:\18-1089\03_PoplarGroveRd\CADD\DOT\CAD_Sheets\0264N33-plc-02Drafile_02-3.dgn

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	DRAWN -	REVISED - 1-05-16
PLOT SCALE = 2,0000' / in.	CHECKED -	REVISED - 8-27-13
PLOT DATE = 9/20/2019	DATE -	REVISED - 3-05-12

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

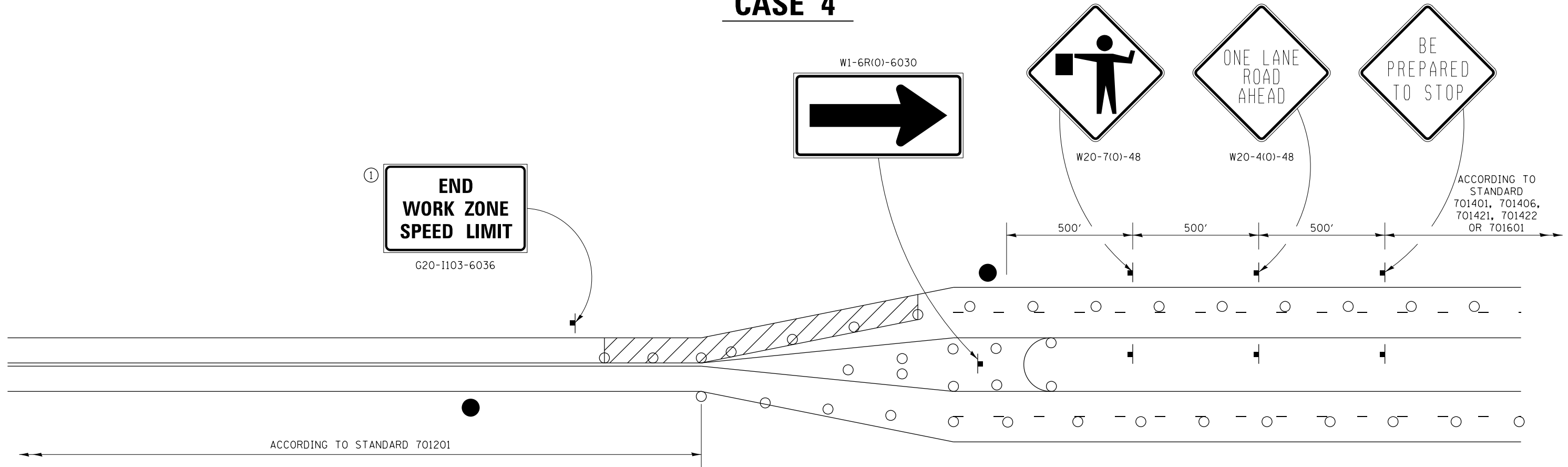
REGION 2 /DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	28
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL FOR TRANSITION AREAS

CASE 4



① **END WORK ZONE SPEED LIMIT**
G20-1103-6036

GENERAL NOTES

THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE APPLICABLE MULTILANE TRAFFIC CONTROL AND PROTECTION STANDARD.

1. If applicable, Use if shown on applicable multilane Traffic Control and Protection Standard being used.
2. If the work is within 2500 feet of the transition when the speed is > 40 mph, or 1500 feet for all other speeds, the detail shall be used.
3. WORK ZONE SPEED LIMIT 55 SIGN ASSEMBLY shall be replaced with WORK ZONE SPEED LIMIT 45 SIGN ASSEMBLY where the workers are within 500 feet of the transition.

THIS TRAFFIC CONTROL DETAIL SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

- FLAGGER WITH TRAFFIC CONTROL SIGN
- DRUMS OR BARRICADES WITH LIGHTS
- WORK AREA

NOTE: STANDARDS 701301 AND 701306 SHALL NOT BE USED WITHIN 500 FEET OF THE TRANSITION.

MODEL: D:\m\h\11 FILE NAME: P:\18-1089\03_PoplarGroveRd\CADD\DOT\CAD_Sheets\0264N33-PL-02Drafile_02-4.dgn

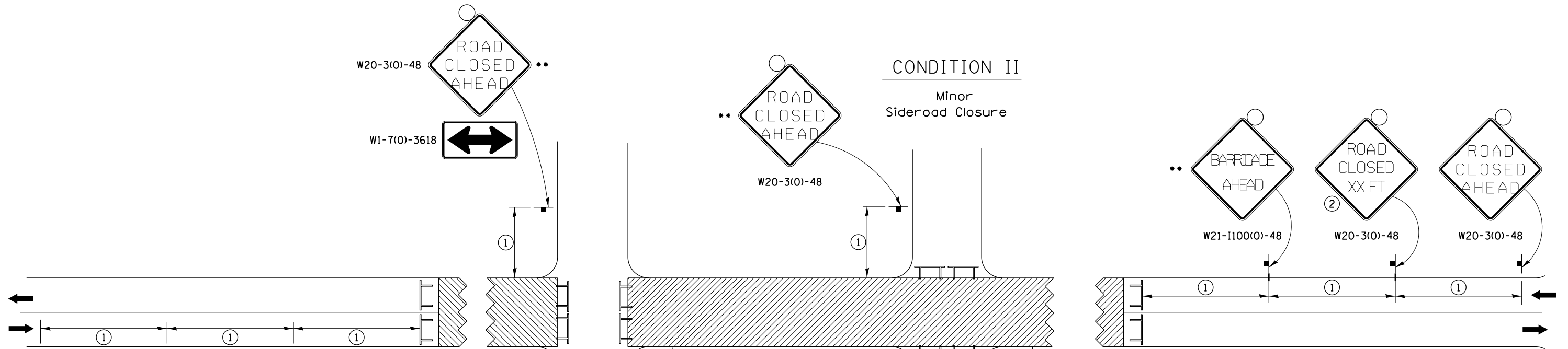
USER NAME = ndp	DESIGNED -	REVISED - 4-20-17
	DRAWN -	REVISED - 1-05-16
PLOT SCALE = 2,0000' / in.	CHECKED -	REVISED - 8-27-13
PLOT DATE = 9/20/2019	DATE -	REVISED - 3-05-12

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**




REGION 2 /DISTRICT 2 STANDARD			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	29
CONTRACT NO. 64N33				
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.

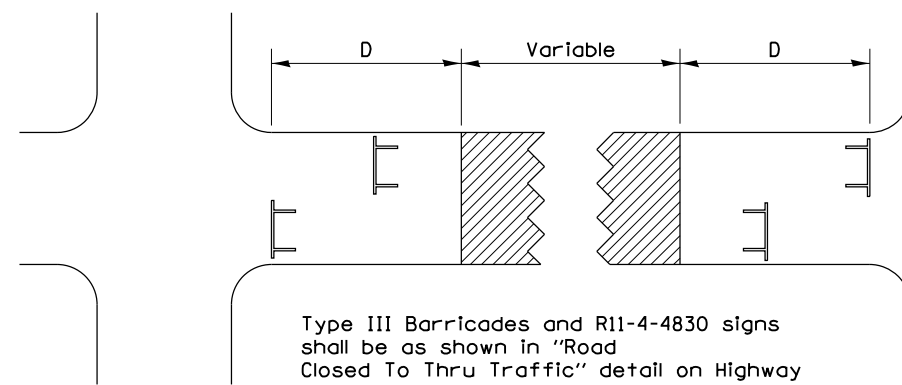
①

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.

MODEL: D:\m\11...
FILE NAME: P:\13-1089-03...
DATE: 9/20/2019

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PLOT SCALE = 2,000' / in.	DRAWN -	REVISED -
PLOT DATE = 9/20/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

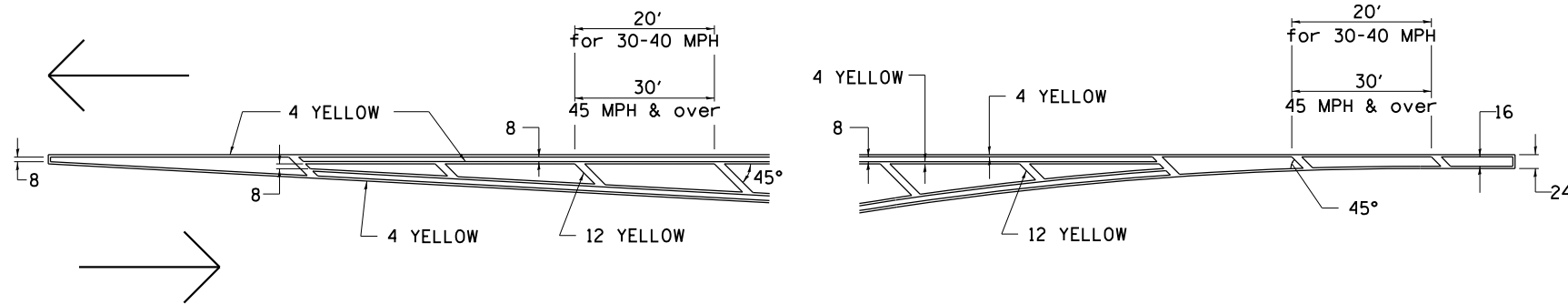
REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

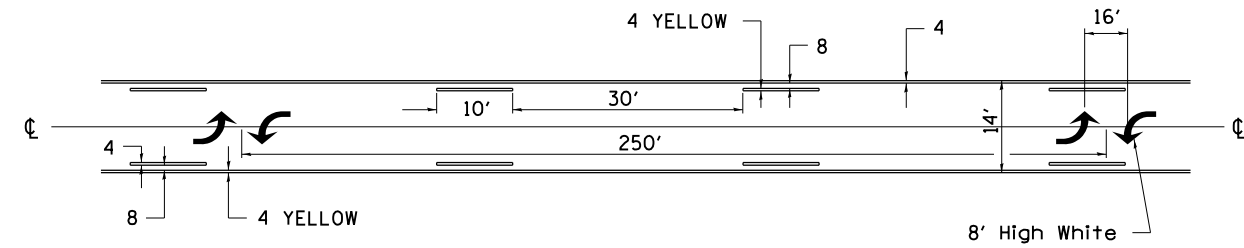
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	30
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TYPICAL PAVEMENT MARKINGS

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE

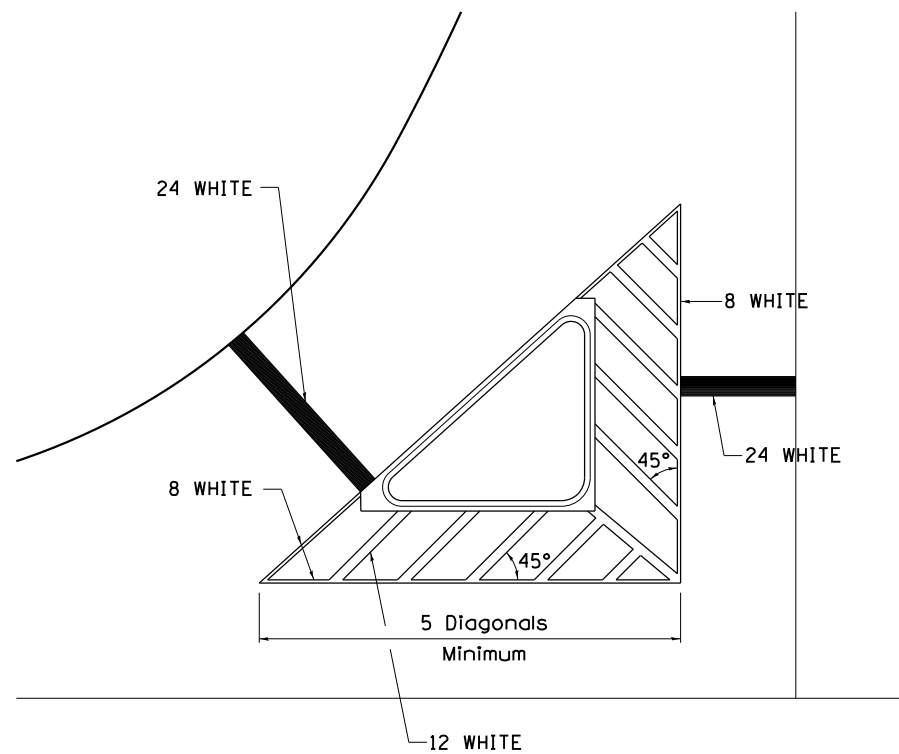


MEDIAN PAVEMENT MARKING



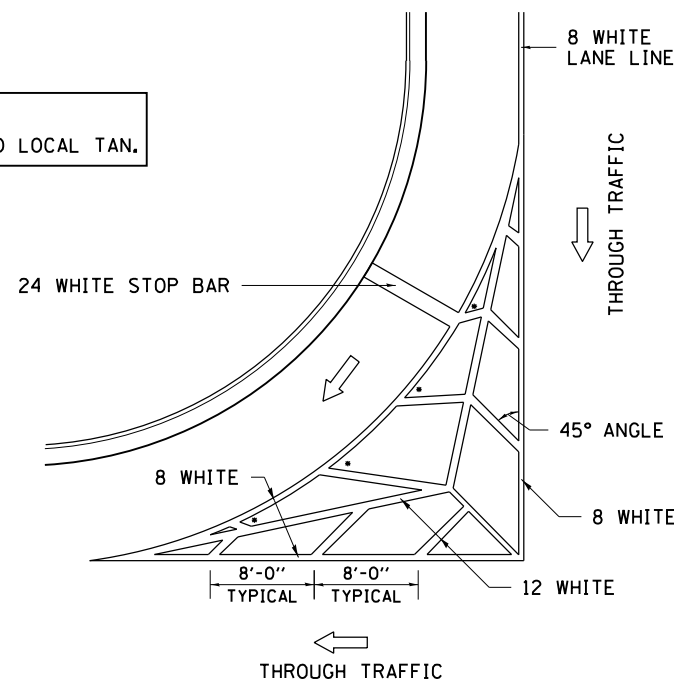
•• ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TYPICAL ISLAND OFFSET SHOULDER WIDTH



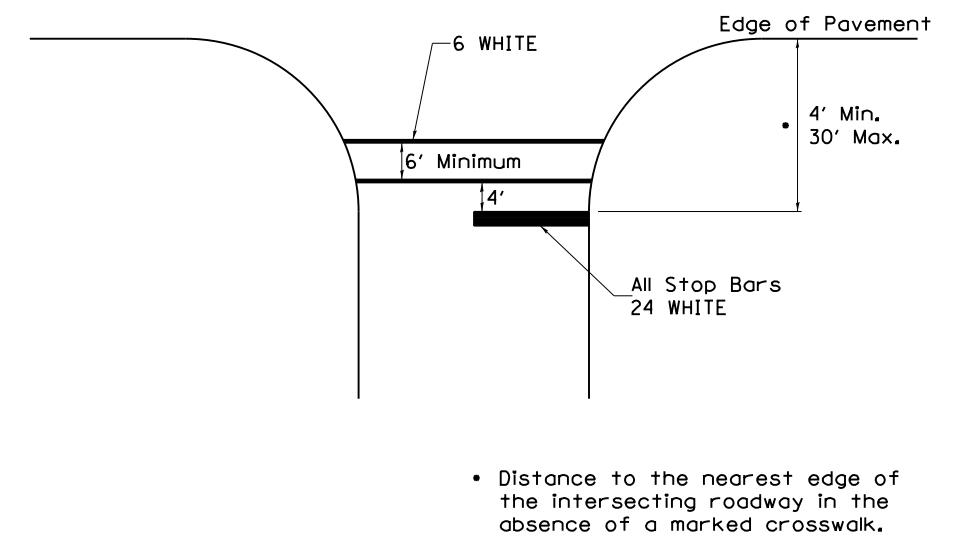
TYPICAL MARKING FOR PAINTED ISLANDS

NOTE:
* 45° TO LOCAL TAN.



STANDARD CROSSWALK MARKING

See Schedules for Locations



• Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

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FILE NAME: P:\11089.03_Paper\Gover\CA\000_IDOT\CAD_Sheets\0264N33-rl-02Dreall-04-1.dgn

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PLOT SCALE = 2,000' / in.	DRAWN -	REVISED -
PLOT DATE = 9/20/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

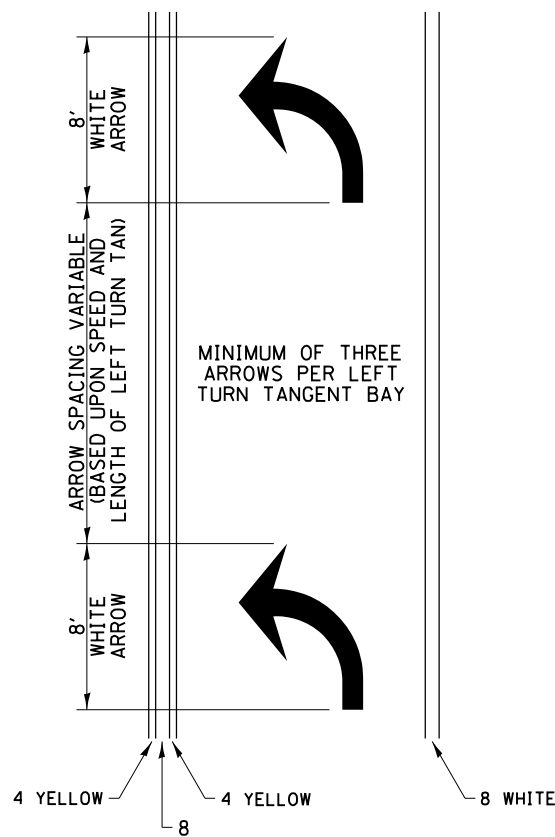
REGION 2 /DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	31
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TYPICAL PAVEMENT MARKINGS

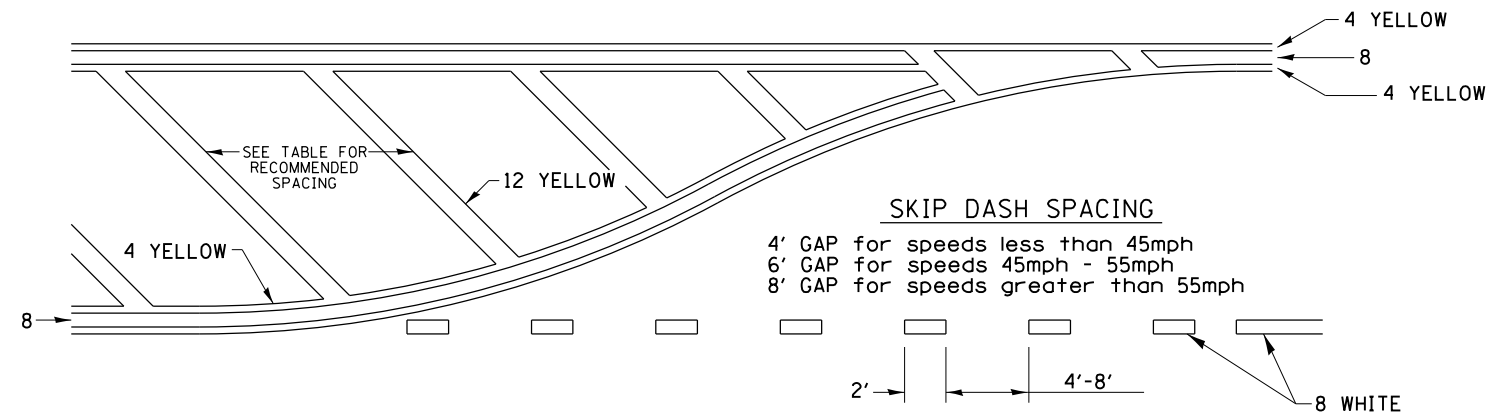
ARROW LAYOUT



- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER
- ◆ TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

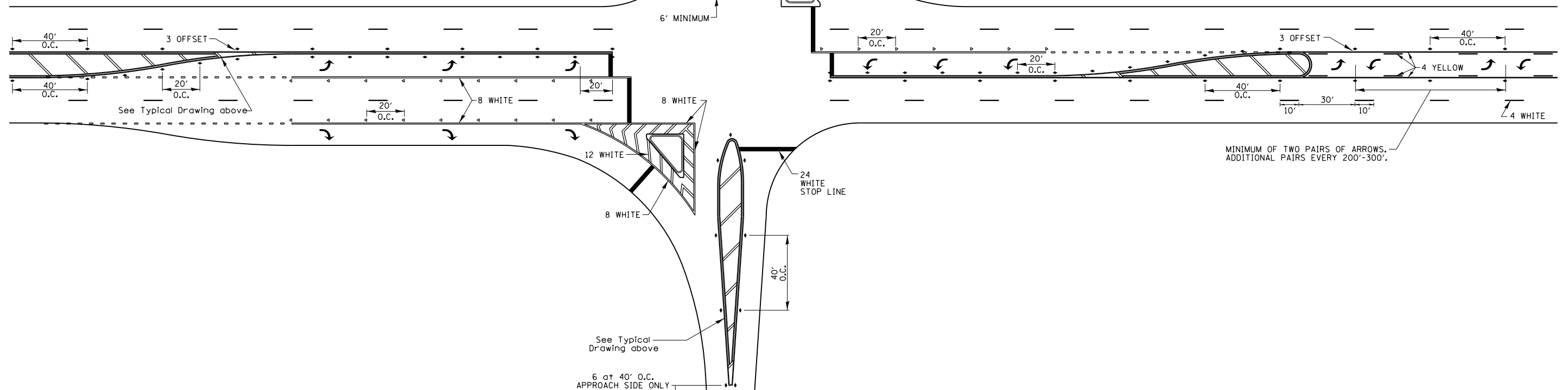
TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN



RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 30MPH	50'	15'	10'
30-40MPH	75'	20'	15'
45MPH & over	75'	30'	20'

NOTE: if the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.



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	DRAWN -	REVISED -
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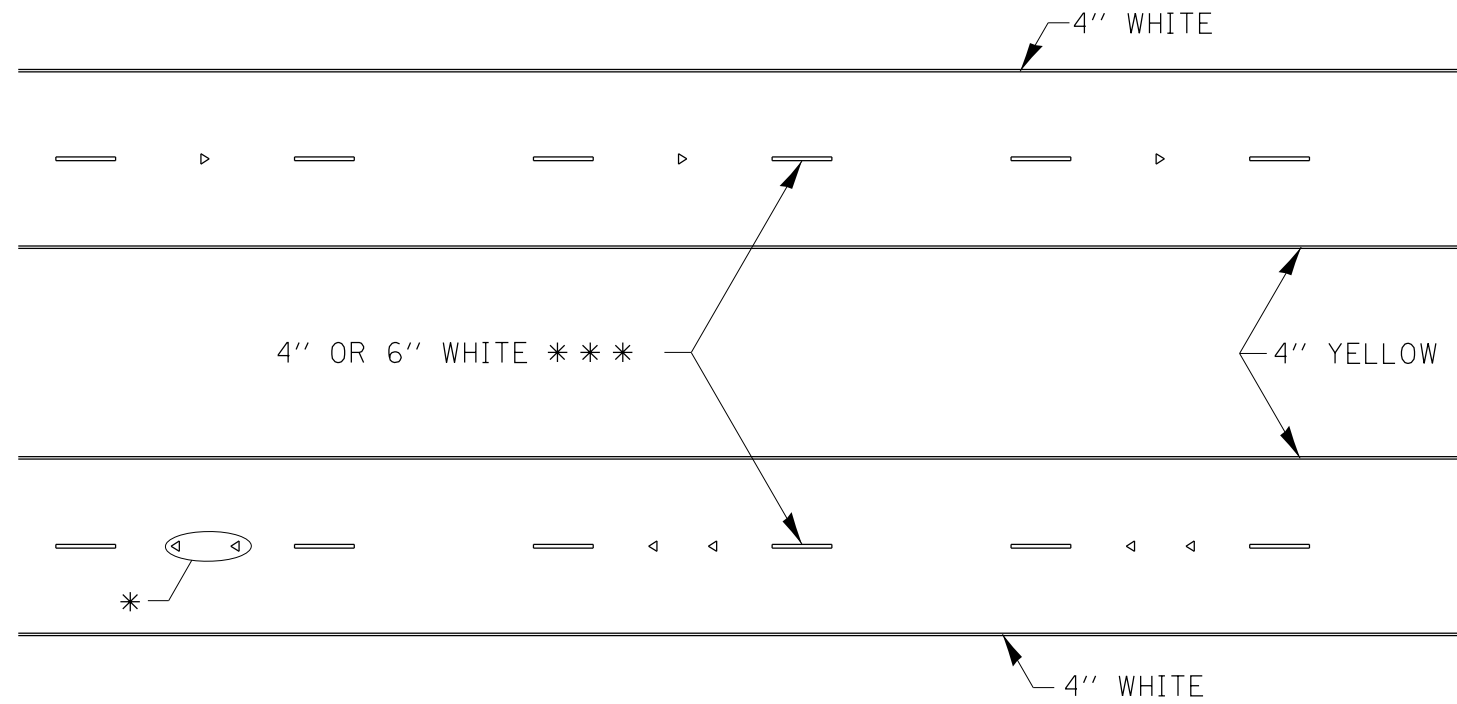
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

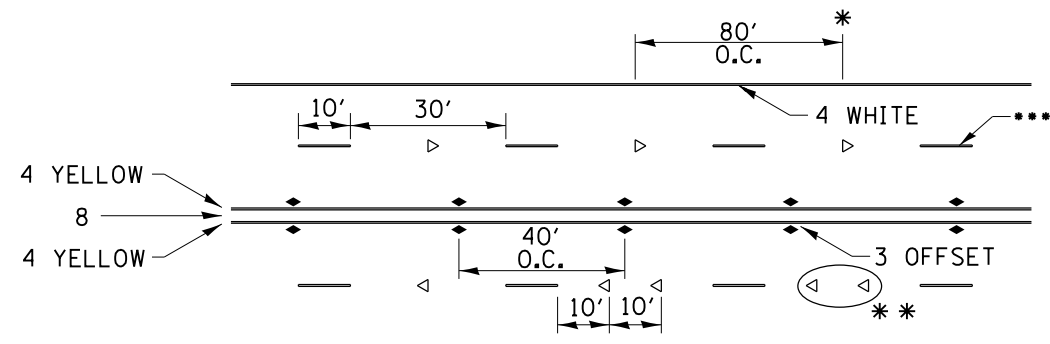
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	32
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

TYPICAL PAVEMENT MARKINGS



* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS.
USE DOUBLE MARKERS WHEN ADT > 20,000.

MULTI-LANE / DIVIDED



SYMBOLS

* REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH LOWER THAN POSTED SPEEDS.

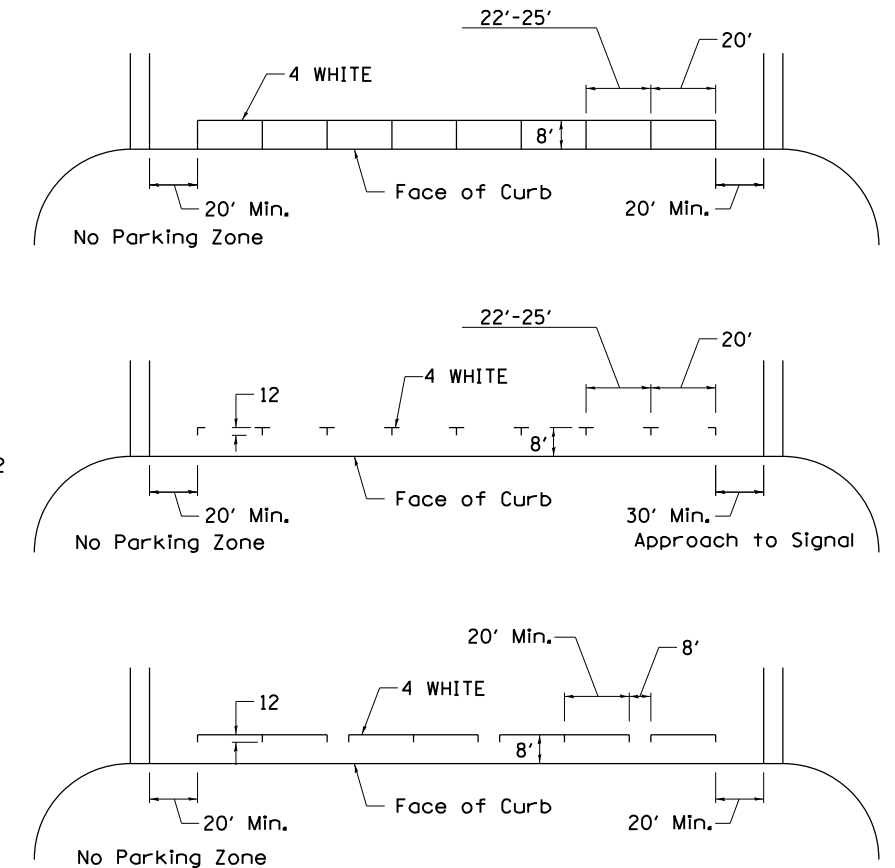
** USE DOUBLE MARKERS WHEN ADT ≥ 20,000

*** CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND OVER USE 6" LINE.

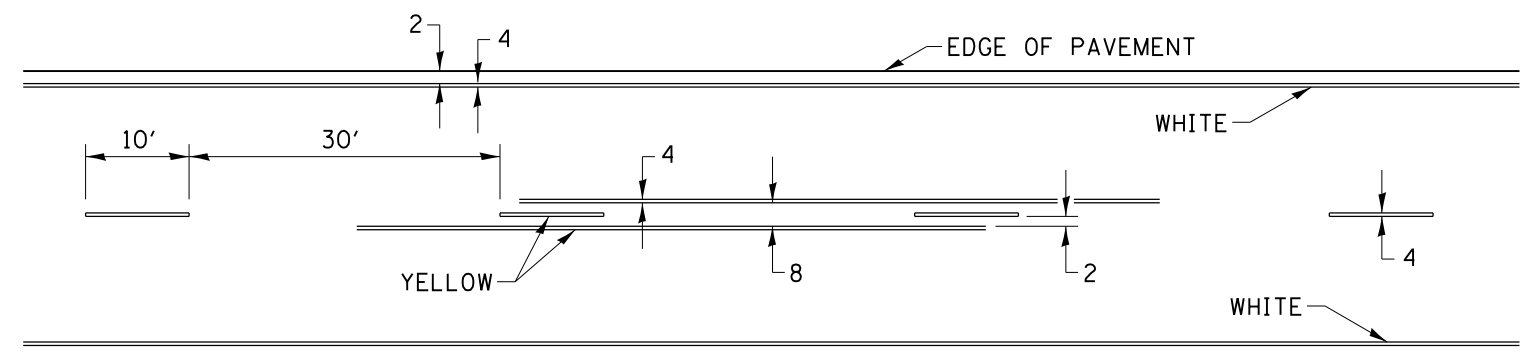
MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS
DETAIL NOT HIGHWAY STANDARD 781001)

TYPICAL PARKING SPACING



TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION – NO PASSING ZONES



MODEL: D:\m\it... FILE NAME: P:\18-1089-03... 04-3.dgn

USER NAME = ndp	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 9/20/2019	DATE -	REVISED -

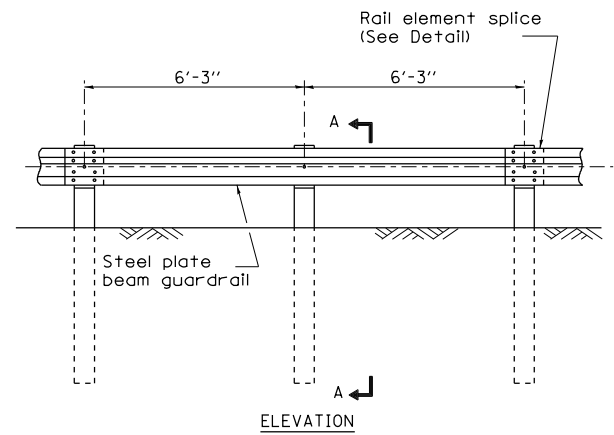
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

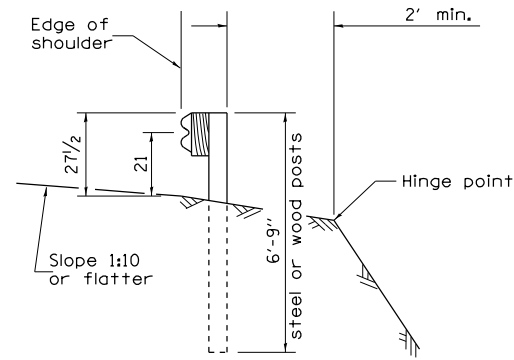
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
517	(1-2HB)BJR	BOONE	37	33
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

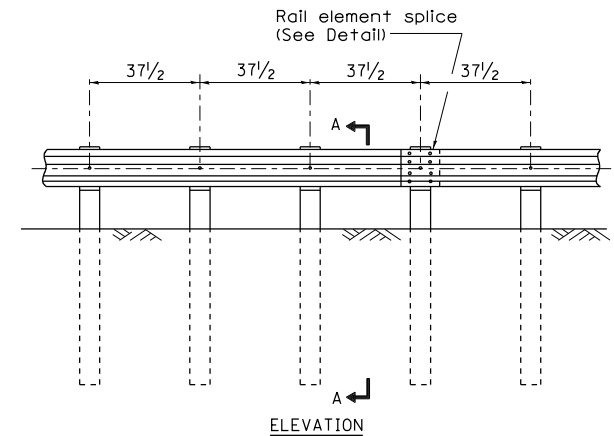
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL



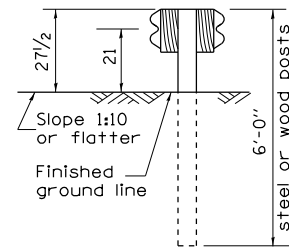
TYPE A
6'-3" Typical post spacing



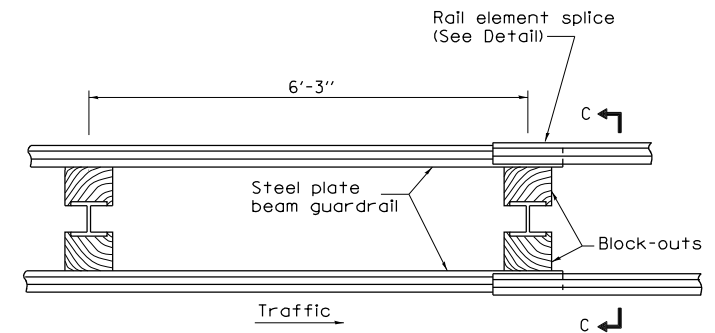
SECTION A-A



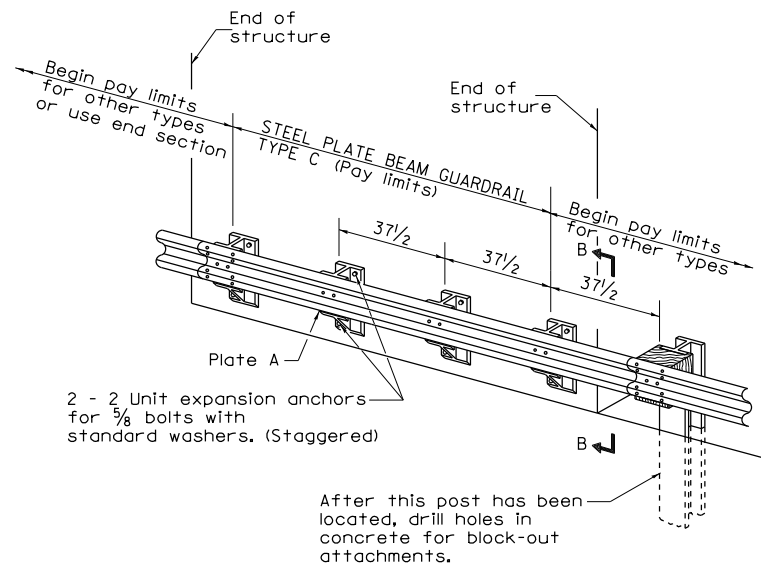
TYPE B
37/2 Closed post spacing



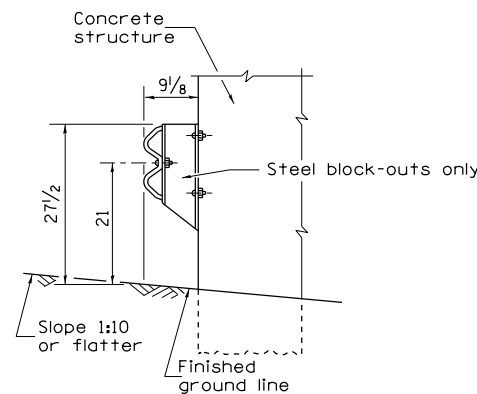
SECTION C-C



TYPE D
Double steel plate beam guardrail
6'-3" typical post spacing



TYPE C
37/2 Block-out spacing



SECTION B-B

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

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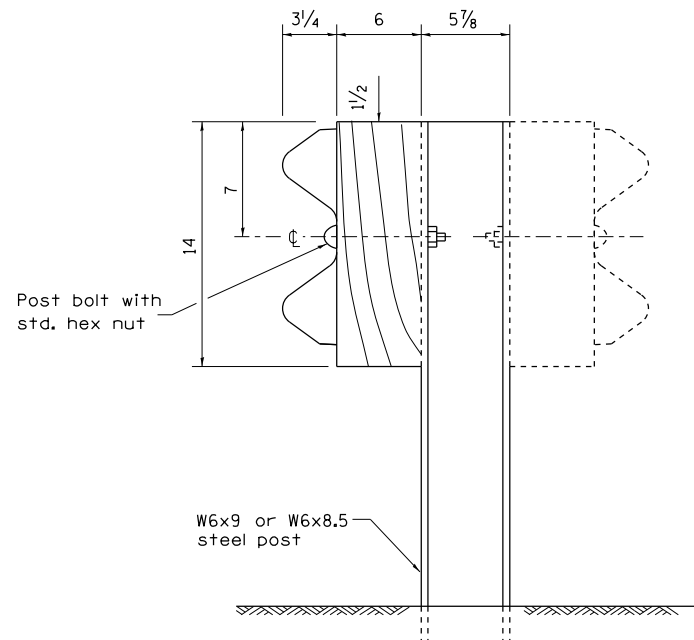
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

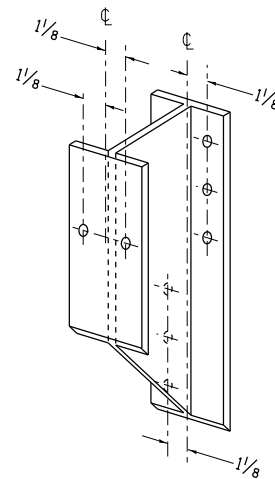
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

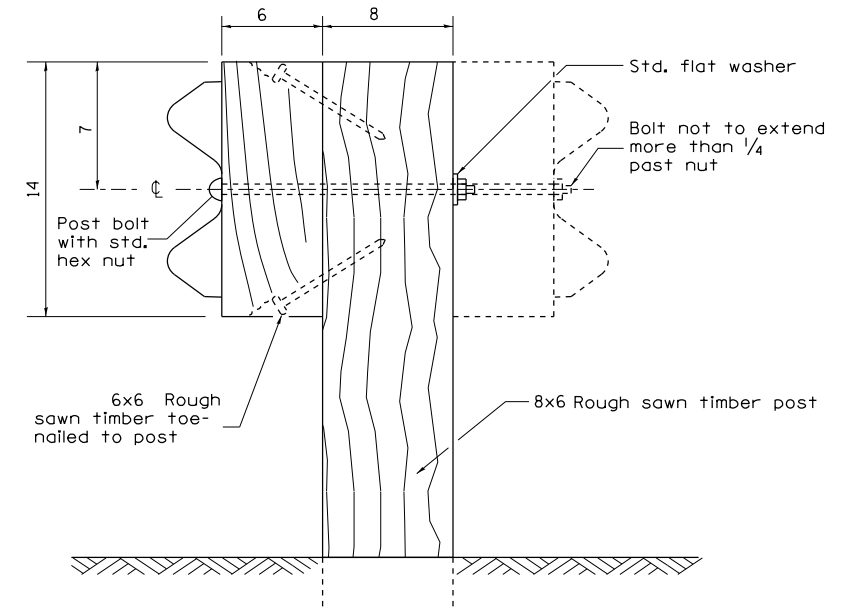
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL



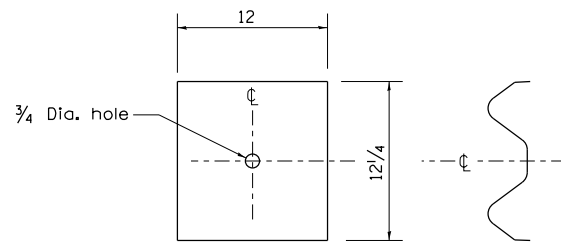
STEEL POST CONSTRUCTION



STEEL BLOCK-OUT DETAIL



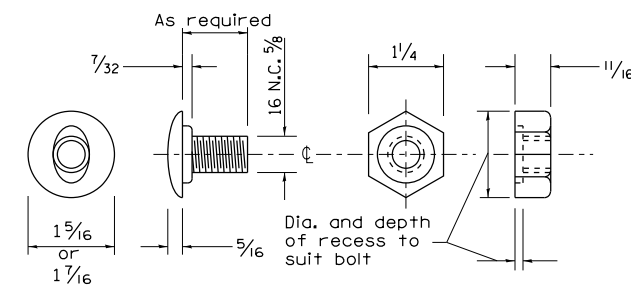
WOOD POST CONSTRUCTION



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



POST OR SPLICE BOLT & NUT

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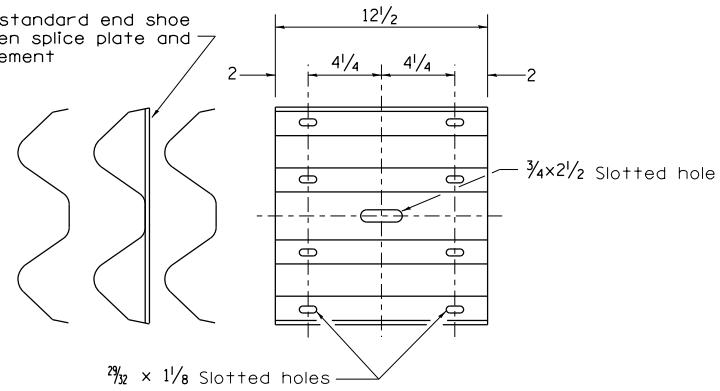
REGION 2 /DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

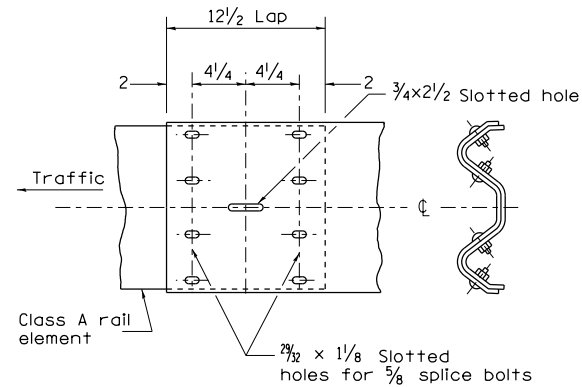
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517	(1-2HB)BJR	BOONE	37	35
CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

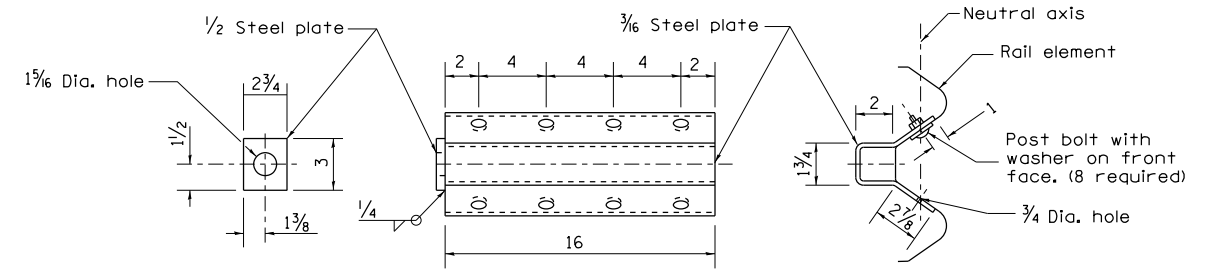
Place standard end shoe between splice plate and rail element



SPLICE PLATE



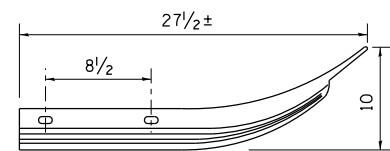
RAIL ELEMENT SPLICE



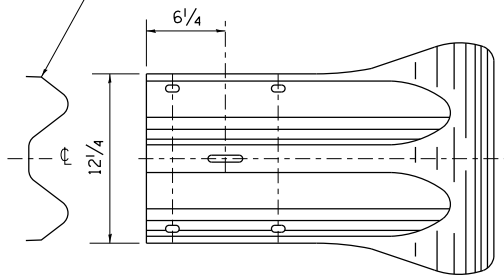
NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

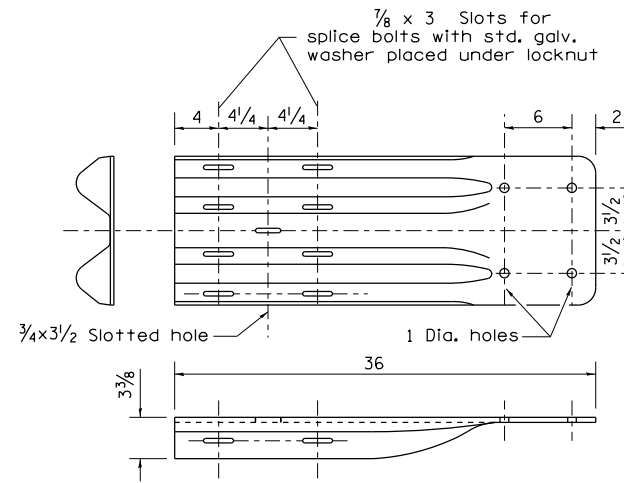
ANCHOR PLATE T DETAILS



Class A rail element



END SECTION



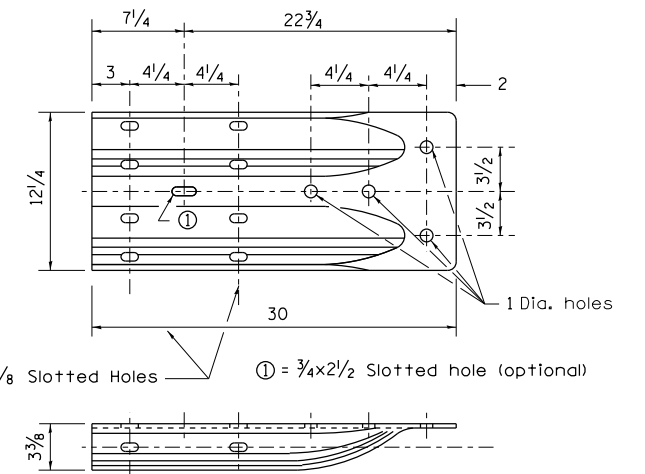
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE



ALTERNATE END SHOE

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	DATE -	REVISED -

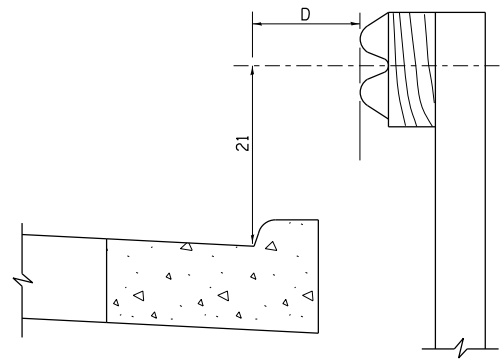
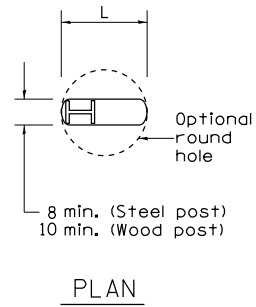
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REGION 2 /DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

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CONTRACT NO. 64N33				
ILLINOIS FED. AID PROJECT				

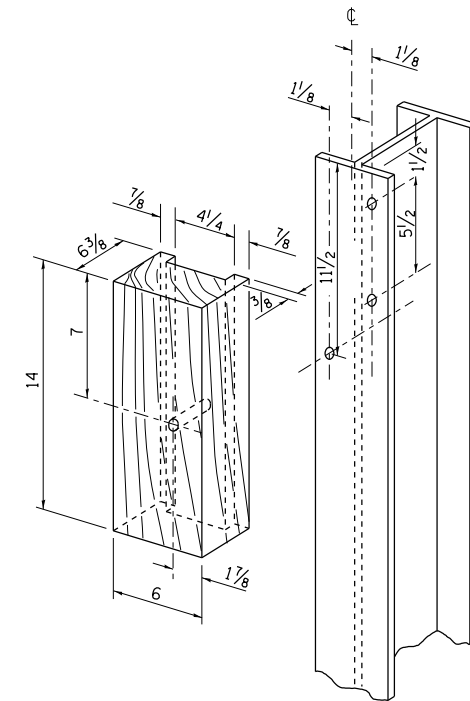
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL



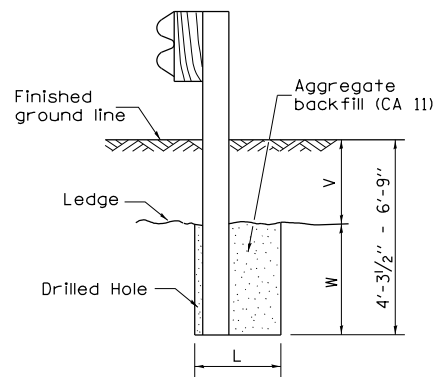
Note:
If it is necessary for D to be more than 12 and less than 10'-0" type M-2 curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 12 maximum)



WOOD BLOCK-OUT AND STEEL POST DETAILS

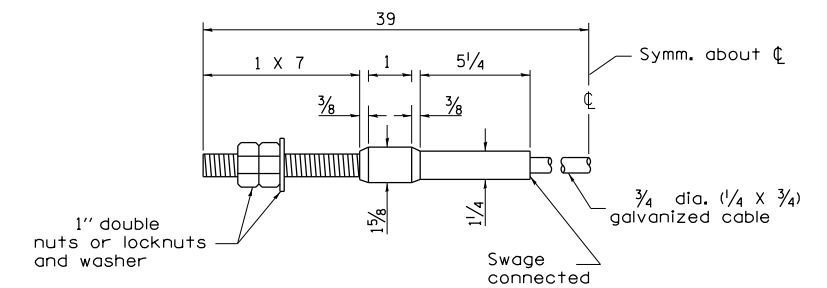


Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	
		Steel Post	Wood Post
0 - 18	24	21	23
>18 - 41.5	12	8	10
>41.5 - 53.5	12 - 0	8	10



CABLE ASSEMBLY
(40,000 lbs. min. breaking strength)
Tighten to fault tension.

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REGION 2 /DISTRICT 2 STANDARD

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