

033

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZEVELL	45 1
RUNOFF			CONTRACT NO 68E27

D-94-040-18



S.N. 090-0127: REPLACE BRIDGE DECK JOINTS, REPLACE BEARINGS AT ABUTMENTS, STRUCTURAL STEEL REPLACEMENT, AND BEAM STRAIGHTENING AT BEAM ENDS.

S.N. 090-0131: REPLACE BRIDGE DECK JOINTS, CLEAN AND PAINT INSIDE OF STEEL BOX GIRDERS, SEAL PARAPETS, SEAL BRIDGE DECK, AND SEAL APPROACHES.

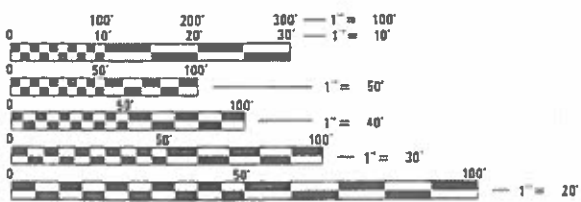
INDEX OF SHEETS	
1.	COVER SHEET
2.	GENERAL AND PROJECT SPECIFIC NOTES
3-5	SUMMARY OF QUANTITIES
6.	TYPICALS
7.	SCHEDULE OF QUANTITIES
8	LINE DIAGRAM
9.	TRAFFIC CONTROL TYPICALS
10-11	TRAFFIC CONTROL
12.	DETOUR DETAILS
13-14	PROPOSED PATCHING AND SEALING DETAILS
15-26	STRUCTURAL DETAILS
27-33	ORIGINAL STRUCTURE PLANS S.N. 090-0127
34-43	ORIGINAL STRUCTURE PLANS S.N. 090-0131
44-45	DISTRICT 4 STANDARDS

LIST OF STANDARDS

- 442201 03
- 643001 02
- 701101 05
- 701106 02
- 701400-09
- 701402-12
- 701411-09
- 701901-08
- 704001-08
- 780001-05
- 782006
- 701426-09
- 701428 01

S.N. 090-0127 S.N. 090-0131

- | | |
|----------|----------|
| ADT 3450 | ADT 2850 |
| SU 275 | SU 80 |
| MU 175 | MU 50 |

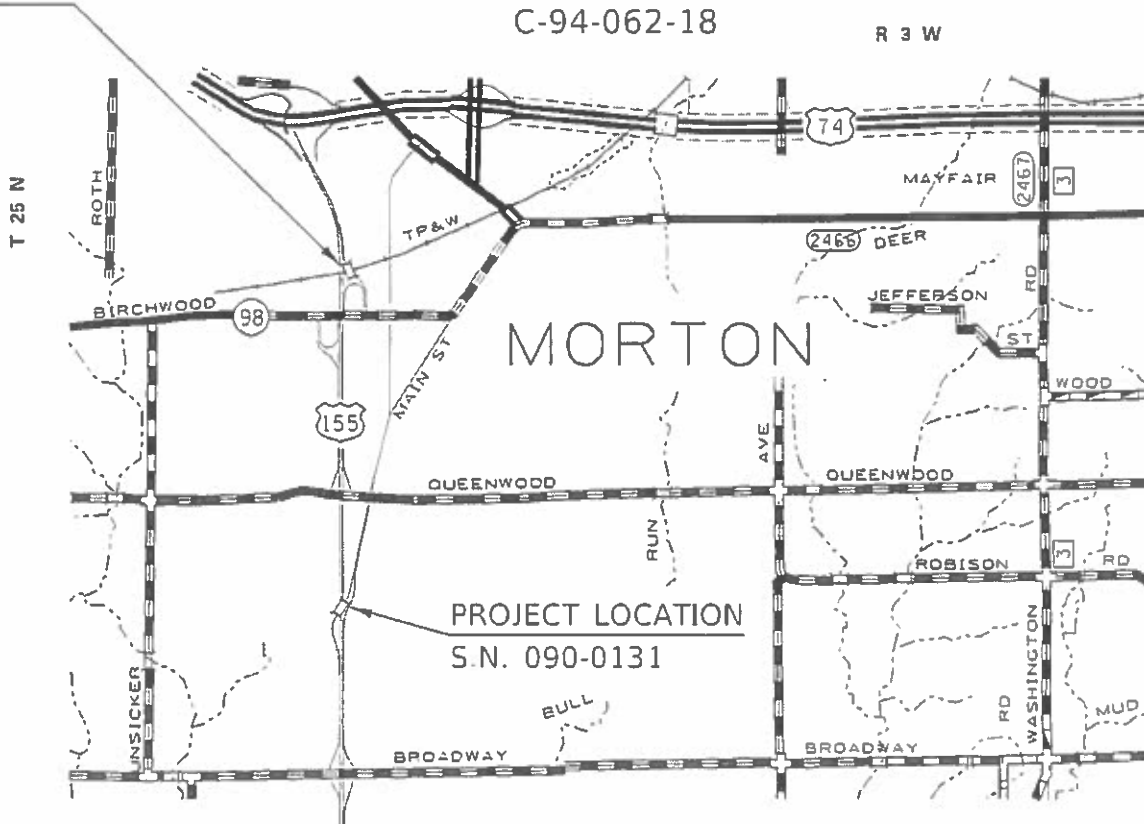


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: NICHOLAS JACK
PROJECT MANAGER: JOSH JOCHUMS
CATALOG NO. 035614-00D
CONTRACT NO. 68E27

PROJECT LOCATION
S.N. 090-0127



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 24 2019
Paul A. James
REGIONAL ENGINEER

Aug 16 2019
Paul A. James
ENGINEER OF DESIGN AND ENVIRONMENT

Aug 16 2019
Paul A. James
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES:

CRITICAL PATH WORK SCHEDULE REQUIREMENT

The Contractor will submit to the Engineer a satisfactory progress schedule and critical path schedule which shall show the proposed sequence of work at the time of the pre-construction conference.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Cultural and Natural Resources Review of Borrow Areas)
- * BDE Form 2290 (Waste/Use Area Review)
- * A location map showing the size limits and location of the use area
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form – D4 PI0101

Prior to any waste materials being removed from the construction site the required environmental resource surveys shall be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

Please note that a minimum of four weeks shall be allowed for the District to obtain the required environmental clearances and six weeks for the required borrow site environmental clearances.

POLYMERIZED BITUMINOUS MATERIALS (TACK COAT) RATES

Surface Type	Residual Rate
Milled (HMA or PCC)	0.08 lb /sq ft
Existing Pavement	0.08 lb /sq ft
Fog Coat (between lifts)	0.08 lb /sq ft

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use(s):	Class D Patches, TY III, 13"
AC/PC:	PG 64-22
Design Air Voids:	4.0% AT N= 50
Mixture Composition: (Gradation Mixture):	IL 9.5
Friction Aggregate:	Mix "C"
Quality Management:	QC/QA

Notes:

- 1) Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal maximum.
- 2) For design purposes, mixture weight for all mixes is determined to be 112.0 lb/s.y/in., unless otherwise noted.
- 3) Sublot sizes for PFP and QCP mixes will be 1,000 tons, unless otherwise agreed to by the Engineer and the paving Contractor.

ADDITIONAL SUPPLEMENTAL TRAFFIC CONTROL

The Department reserves the right at any time to add additional Traffic Control Systems or devices within the active contract limits, by means of an additional contract. All terms of Article 105.08 of the Standard Specifications shall be followed by each Contractor.

SIGNING

Sign locations may vary from the stations shown on the plans in accordance with directions from the Engineer at the time of construction. Sign locations may be adjusted in the field to avoid any found utilities.

All wood post locations shall be verified with the Bureau of Operations, Traffic Section, before installation.

PROJECT SPECIFIC NOTES:

S.N. 090-0127:

1. All new Concrete Superstructure shall be treated with Protective Coat.
2. If any railroad flaggers are needed they shall be paid for per Article 109.05 of the Standard Specifications

S.N. 090-0131:

1. All new Concrete Superstructure shall be treated with Protective Coat only. The remaining existing concrete parapet shall be treated with Surface Filler (Special) and Protective Coat (Special). The remaining existing concrete bridge deck and approaches shall be treated with Concrete Healer Sealer.
2. The joint replacement shall be completed before the interior blasting, cleaning, and painting begins on the tub girders.
3. The existing interior lighting shall be removed prior to abrasive blast cleaning and reinstalled after the final field coat. "Cleaning and Painting Structural Steel, Location 1" shall be used for all work associated with the interior of the tub girders.
4. Traffic control signage and maintenace of signage for the I-155 southbound shoulder closure will be included in the cost of the work being performed on this contract.

	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						155	90-106X[VB-1,HB-2]]2JR,BRR	TAZEWELL	45	2
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -						CONTRACT NO. 68E27				
	PLOT DATE = 6/24/2019	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS	FED. AID PROJECT

MODEL Default
FILE NAME: P:\Jplanneroom\dot\illinois.gor\PI\DOT\Documents\DDT Office\District 4\Projects\04-68E27\CA00Data\CA00drawings\Jash.dgn

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	
				CONST. CODE	CONST. CODE
				90/ 10	90/ 10
				FED/STATE	FED/STATE
				BRIDGE PRES.	BRIDGE PRES.
				0013	0013
				S.N. 090-0127	S.N. 090-0131
42001300	PROTECTIVE COAT	SQ YD	48	25	23
44201807	CLASS D PATCHES, TYPE III, 13 INCH	SQ YD	40	40	
50102400	CONCRETE REMOVAL	CU YD	17.1	8	9.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	17.3	8.1	9.2
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4100	4100	
* 50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1		1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2380	1340	1040
52000110	PREFORMED JOINT STRIP SEAL	FOOT	115	59	56
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	8	8	
52100520	ANCHOR BOLTS, 1"	EACH	32	32	
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	4	2	2
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1		1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1		1

*= SPECIALTY ITEM

	USER NAME = jochums.jg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			155	90-106X(VB-1,HB-2)BJR,BRR	TAZEWELL	45	3
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 68E27				
	PLOT DATE = 6/21/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

MODEL Default
FILE \\net1-pa\planroom\detail\inosgwp\IDOT\Documents\IDOT Office\District 4\Projects\ID4-68E27\CA0Data\CA0Drawings\Jashdgn

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN	
				CONST. CODE	CONST. CODE
				90/10	90/10
				FED/STATE	FED/STATE
				BRIDGE PRES.	BRIDGE PRES.
				0013	0013
				S. N. 090-0127	S. N. 090-0131
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	1	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1808		1808
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	603		603
70400100	TEMPORARY CONCRETE BARRIER	FOOT	590		590
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2		2
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	976	24	952
* 78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	88		88
* 78200011	BARRIER WALL RELFLECTORS, TYPE C	EACH	48		48
X0324966	CONCRETE HEALER SEALER	SQ YD	1336		1336
X0326444	SURFACE FILLER (SPECIAL)	GALLON	10		10
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	369		369
X5030550	PROTECTIVE COAT (SPECIAL)	SQ YD	653		653
* X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO.1	L SUM	1		1
X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	0.5	0.5

*= SPECIALTY ITEM

	USER NAME = jochums.jg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			155	90-106X(VB-1,HB-2)BJR,BRR	TAZEWELL	45	4
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -			CONTRACT NO. 68E27				
	PLOT DATE = 6/21/2019	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

MODEL: Default

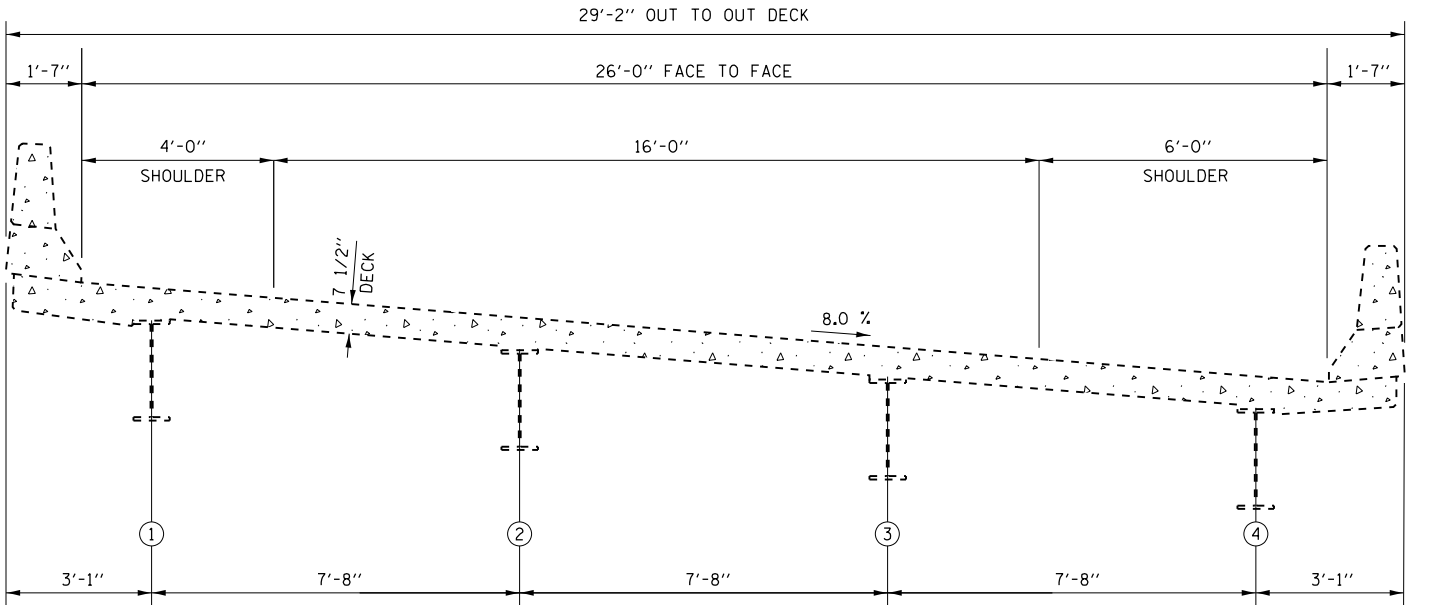
[illegible]

USER NAME = jochums.jg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

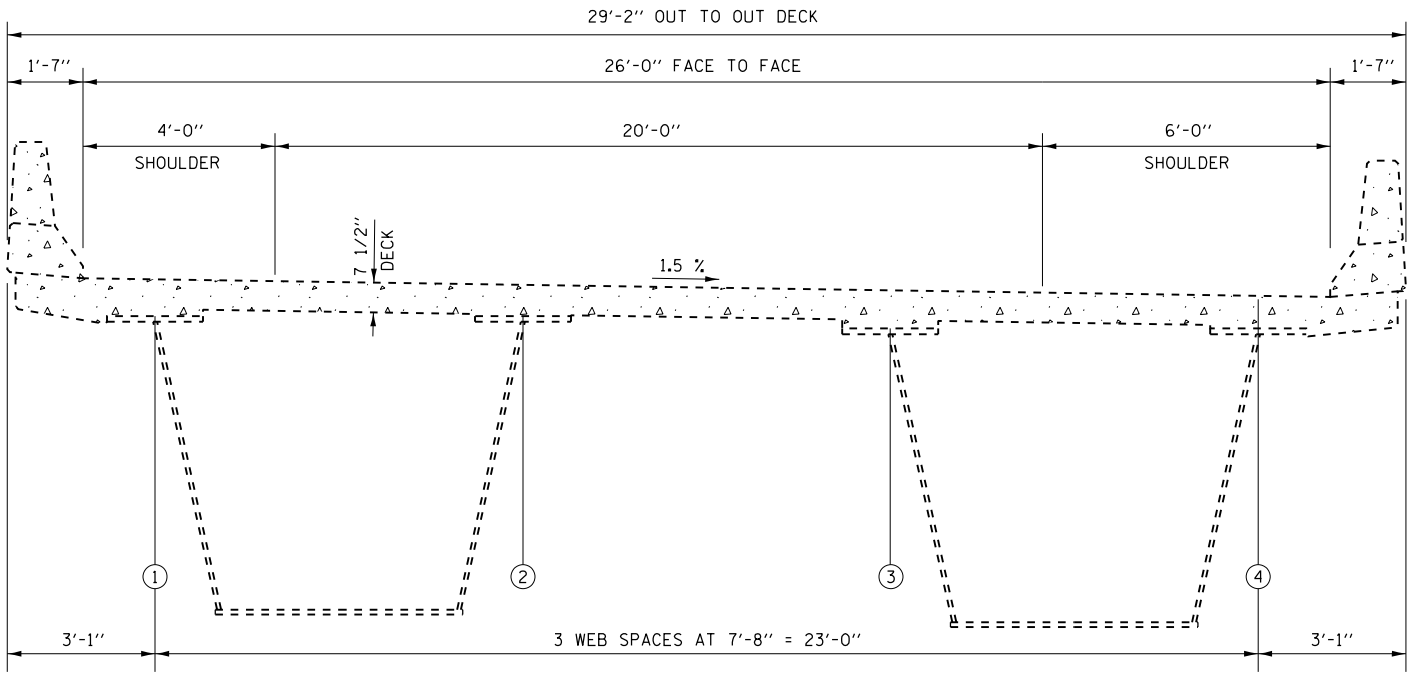
SUMMARY OF QUANTITIES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106XVB-1,HB-2BJR,BRR	TAZEWELL	45	5
		CONTRACT NO. 68E27		
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION NO. 1

S.N. 090-0127
(LOOKING NORTH)



EXSITING TYPICAL SECTION NO. 2

S.N. 090-0131
(LOOKING SOUTHWEST)

MODEL: Default
FILE: \\nwrp-pxw\planroom\dat\illinois\gov\p\w\DOT\Documents\DOT - Offices\District 4\Projects\DU_68E27\CADDData\CADDrawing\Josh.dgn

	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICALS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				155	90-106X[VB-1,HB-2]]2JR,BRR	TAZEWELL	45	6
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -				CONTRACT NO. 68E27				
	PLOT DATE = 6/21/2019	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				
SCALE:		SHEET OF SHEETS		STA.		TO STA.					

MODEL Default
FILE Name: pavplanroom.dwg\\links.sou\\PWIDOT\\Documents\\DOT Office\\Dlartct -\\Projects\\DL_68E27\\CADData\\CADrawings\\losh.dgn

TABULATION OF PATCHING QUANTITIES					
S.N.	STATION	TO	STATION	SIZE	44201803
					CLASS D PATCHES, TY III, 13"
					SY
090-0127	14+56	TO	14+62	6X30	20
090-0127	18+53	TO	18+59	6X30	20
TOTAL					40

CLEANING & PAINTING STRUCTURAL STEEL, LOCATION 1		
STRUCTURE	LOCATION	50606701
		L SUM
090-0131	INSIDE OF ALL EXISTING TUB GIRDERS	1
TOTAL		1

MOBILIZATION	
STRUCTURE	67100100
	L SUM
090-0127	0.5
090-0131	0.5
TOTAL	1

ENGINEER'S FIELD OFFICE, TYPE B	
STRUCTURE	67000500
	CAL MO
090-0127	2
090-0131	2
TOTAL	4

TRAFFIC CONTROL AND PROTECTION, STANDARD 701402		
STRUCTURE	LOCATION	70100207
		EACH
090-0131	LANE CLOSURE IN THE NBL OF I-155	1
TOTAL		1

TRAFFIC CONTROL AND PROTECTION, STANDARD 701411		
STRUCTURE	LOCATION	70100420
		EACH
090-0131	EXIT RAMP IN THE NBL OF I-155	1
TOTAL		1

CHANGEABLE MESSAGE SIGN	
STRUCTURE	70106800
	CAL MO
090-0127	1
090-0131	1
TOTAL	2

TRAFFIC CONTROL ITEMS				
STRUCTURE	LOCATION	70400100	78200011	70600250
		TEMPORARY CONCRETE BARRIER	BARRIER WALL REFLECTORS, TYPE C	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
		FOOT	EACH	EACH
090-0131	STA. 144+01 TO STA. 147+28	327	26	1
090-0131	STA. 145+83 TO STA. 148+46	263	21	1
TOTAL		590	48	2

RAILROAD PROTECTIVE LIABILITY INSURANCE	
STRUCTURE	X7010216
	L SUM
090-0127	1
TOTAL	1

TEMPORARY PAVEMENT MARKINGS					
STRUCTURE	LOCATION			70300100	70300150
	STA	TO	STA	SHORT-TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL
				FOOT	SF
090-0131	144+01	TO	156+25	1224	408
	154+69	TO	156+25	156	52
	157+49	TO	158+44	95	32
	158+44	TO	161+77	333	111
TOTALS				1808	603

CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1		
STRUCTURE	LOCATION	X5060601
		L SUM
090-0131	INSIDE ALL EXISTING TUB GIRDERS	1
TOTAL		1

PERMANENT PAVEMENT MARKINGS								
STRUCUTRE	LOCATION					X0327980	78009004	78009008
	STA	TO	STA	NOTES	LT/RT	PAVEMENT MARKING REMOVAL - WATER BLASTING	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"
						SF		FOOT
090-0127	15+84	TO	15+90		LT		6	
	15+84	TO	15+90		RT		6	
	17+25	TO	17+31		LT		6	
	17+25	TO	17+31		RT		6	
090-0131	18+00	TO	18+06		LT		6	
	18+00	TO	18+06		RT		6	
	22+39	TO	22+45		LT		6	
	22+39	TO	22+45		RT		6	
	144+01	TO	162+00	I-155 STATIONING	LT	167	500	
	157+49	TO	161+77	I-155 STATIONING	LT	143	428	
	154+69	TO	157+49	I-155 STATIONING	LT	60		88
	TOTALS					369	976	88

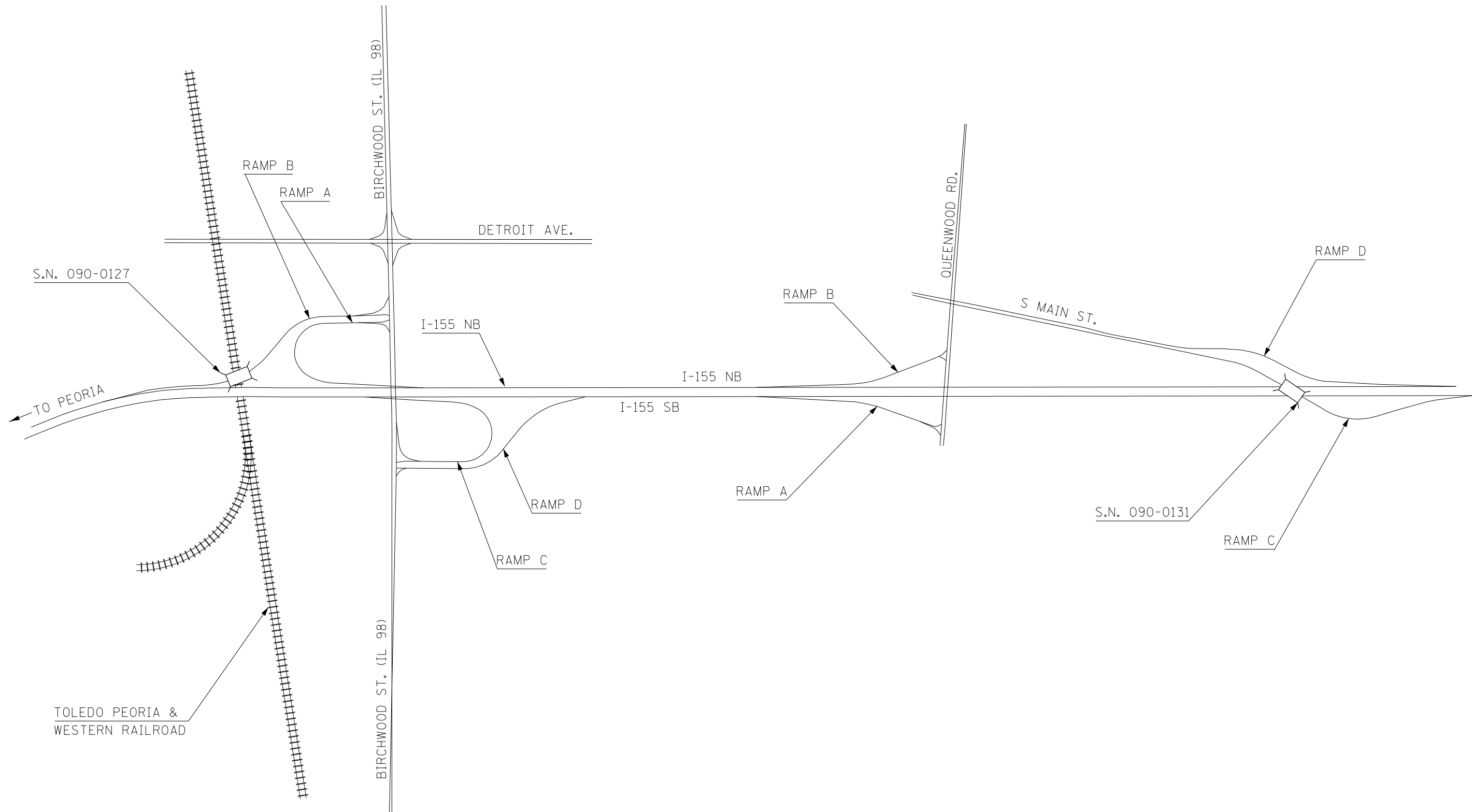
TRAFFIC CONTROL AND PROTECTION, SPECIAL		
STRUCTURE	LOCATION	X7010216
		L SUM
090-0127	DETOUR	0.5
090-0131	DETOUR	0.5
TOTAL		1

CONCRETE HEALER SEALER		
STRUCTURE	LOCATION	X0324966
		SY
090-0131	BRIDGE DECK AND APPROACHES	1336
TOTAL		1336

SURFACE FILLER (SPECIAL)		
STRUCTURE	LOCATION	X0326444
		GALLON
090-0131	EXISTING PARAPET	10
TOTAL		10

PROTECTIVE COAT (SPECIAL)		
STRUCTURE	LOCATION	X5030550
		SY
090-0131	EXISTING PARAPET	653
TOTAL		653

MODEL: Definitive
FILE NAME: 000



MODEL: Default
FILE: \\nrt12\proj\planroom\dat\illinois\gov\p\w\dot\Documents\DOT_Offices\District_4\Projects\DU_68E27\CADDData\CADDrawings\lsh.dgn

USER NAME	= jochumsjg	DESIGNED	-	REVISED	-
		DRAWN	-	REVISED	-
PLOT SCALE	= 100,0000 ' / in.	CHECKED	-	REVISED	-
PLOT DATE	= 6/24/2019	DATE	-	REVISED	-

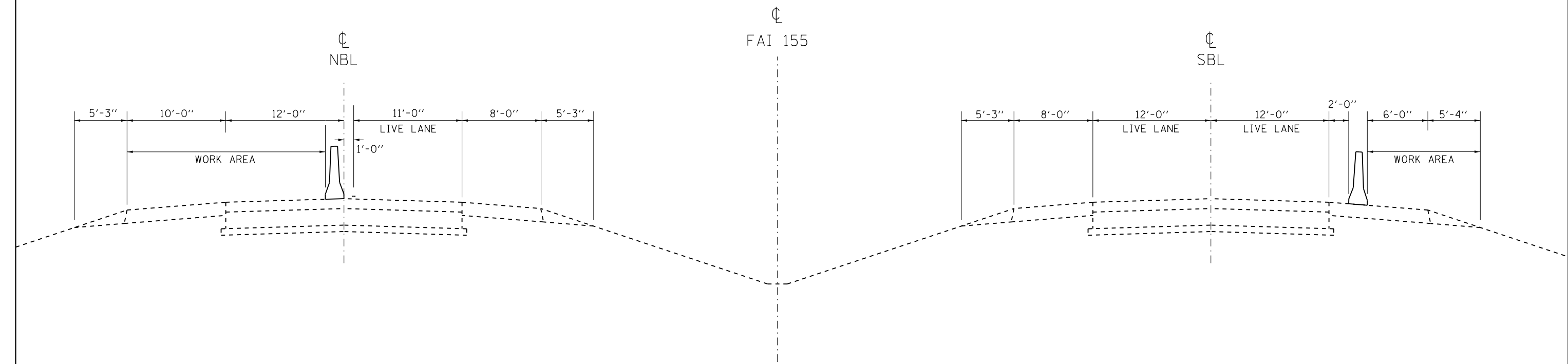
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LINE DIAGRAM

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-016X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	8
CONTRACT NO. 68E27				
ILLINOIS FED. AID PROJECT				

MODEL Default
FILE Name: p:\pub\anr\anr\dot\illinois\gov\p\w\dot\Documents\DOT Office\District 4\Projects\DU_68E27\CADDData\CADDrawings\osh.dgn




TRAFFIC CONTROL TYPICAL SECTION (NBL)
STA. 144+01 TO STA. 145+77

TRAFFIC CONTROL TYPICAL SECTION (SBL)
STA. 146+71 TO STA. 148+46

MODEL: Detail FILE NAME: pwt	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL TYPICALS					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -							155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	9
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -							CONTRACT NO. 68E27				
	PLOT DATE = 6/21/2019	DATE -	REVISED -		ILLINOIS FED. AID PROJECT									
						SCALE: 50	SHEET	OF	SHEETS	STA.	TO STA.			


MODEL Default
FILE Name: p:\publanroom.dat\illinois\p\WIDOT\Documents\DOT Office\blatct.ctb\Projects\DU_68E27\CADDData\CADDrawing\lsh.dgn

LEGEND




=

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TL-3




=

WORK AREA



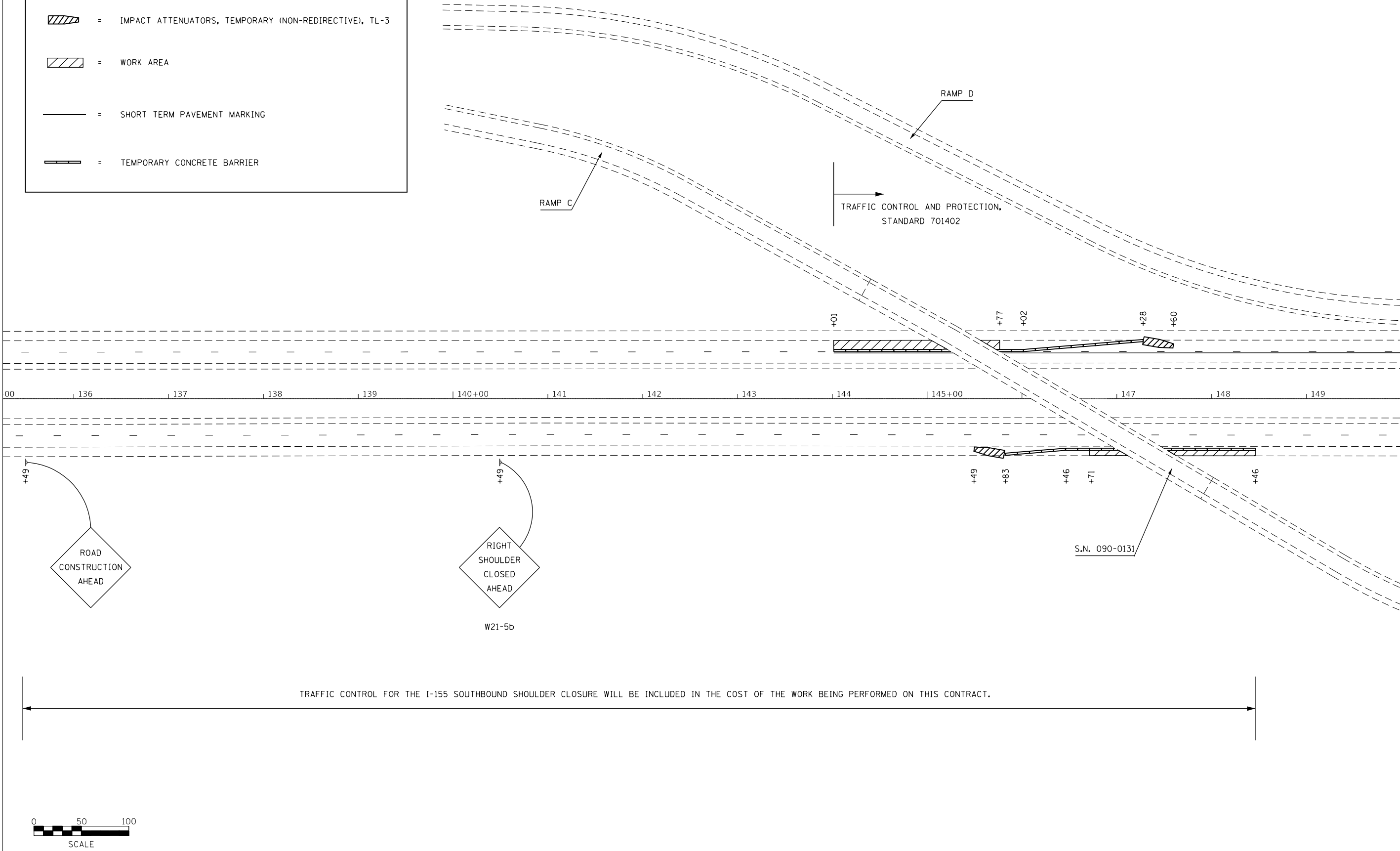
=

SHORT TERM PAVEMENT MARKING



=

TEMPORARY CONCRETE BARRIER



MATCHLINE STA 150+00

USER NAME	= jochumsjg	DESIGNED	-
DRAWN	-	REVISED	-
PLOT SCALE	= 100.0000 ' / in.	CHECKED	-
PLOT DATE	= 6/24/2019	DATE	-

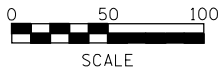
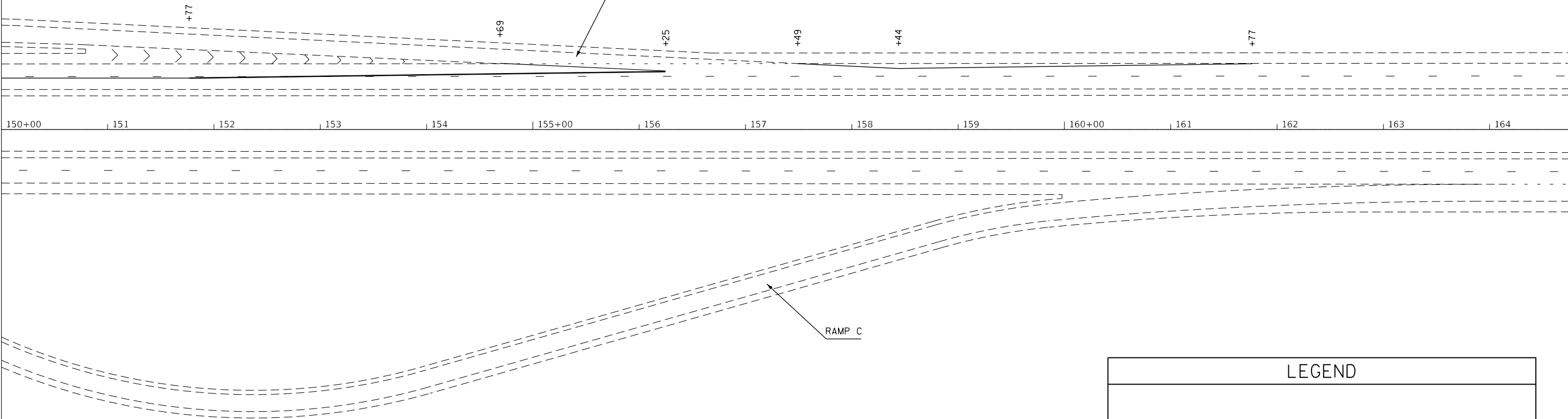
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL			
SCALE: 50	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	10
				CONTRACT NO. 68E27
		ILLINOIS	FED. AID PROJECT	





MODEL: Default
FILE: \\net12-pw\pub\lanroom\dot\illinois\gov\PW\DOT\Documents\DOT_Offices\District 4\Projects\ID4_68E27\CADD\data\CADD\Drawings\Iosh.dgn

MATCHLINE STA 150+00



SCALE

LEGEND

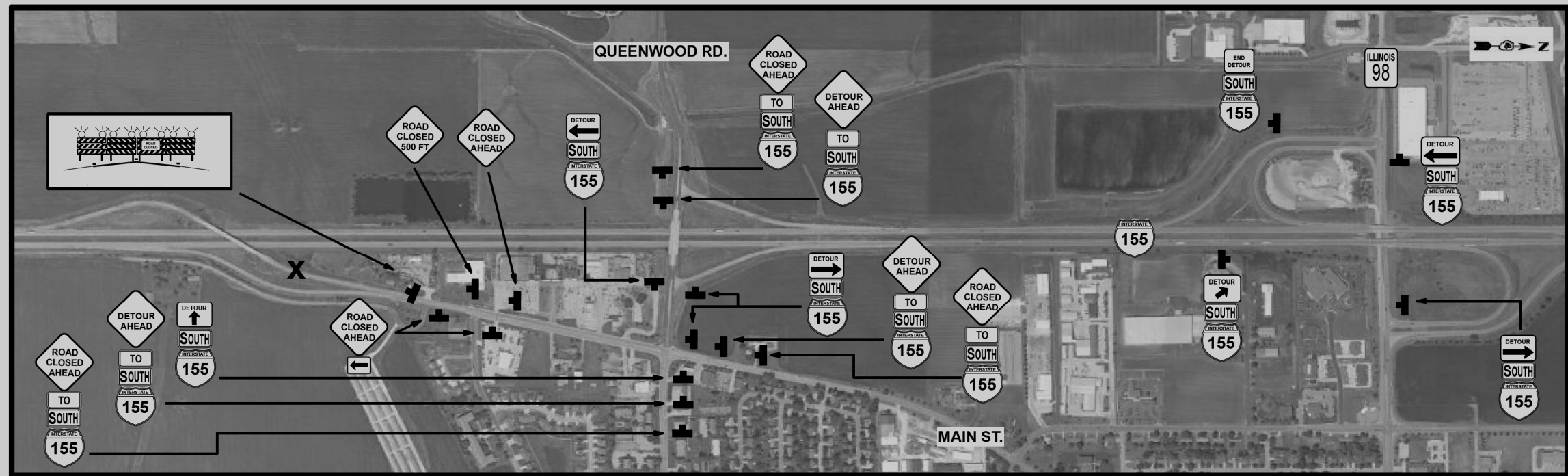
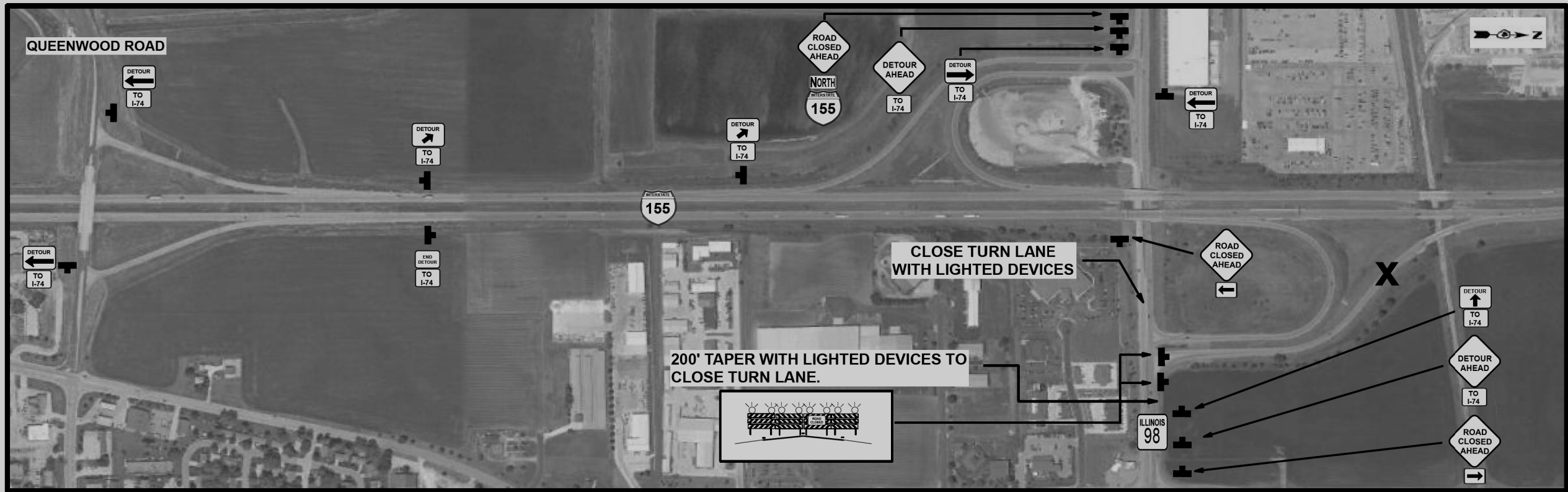
-  = IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TL-3
-  = WORK AREA
-  = SHORT TERM PAVEMENT MARKING
-  = TEMPORARY CONCRETE BARRIER

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

SCALE: 50 SHEET OF SHEETS STA. TO STA.

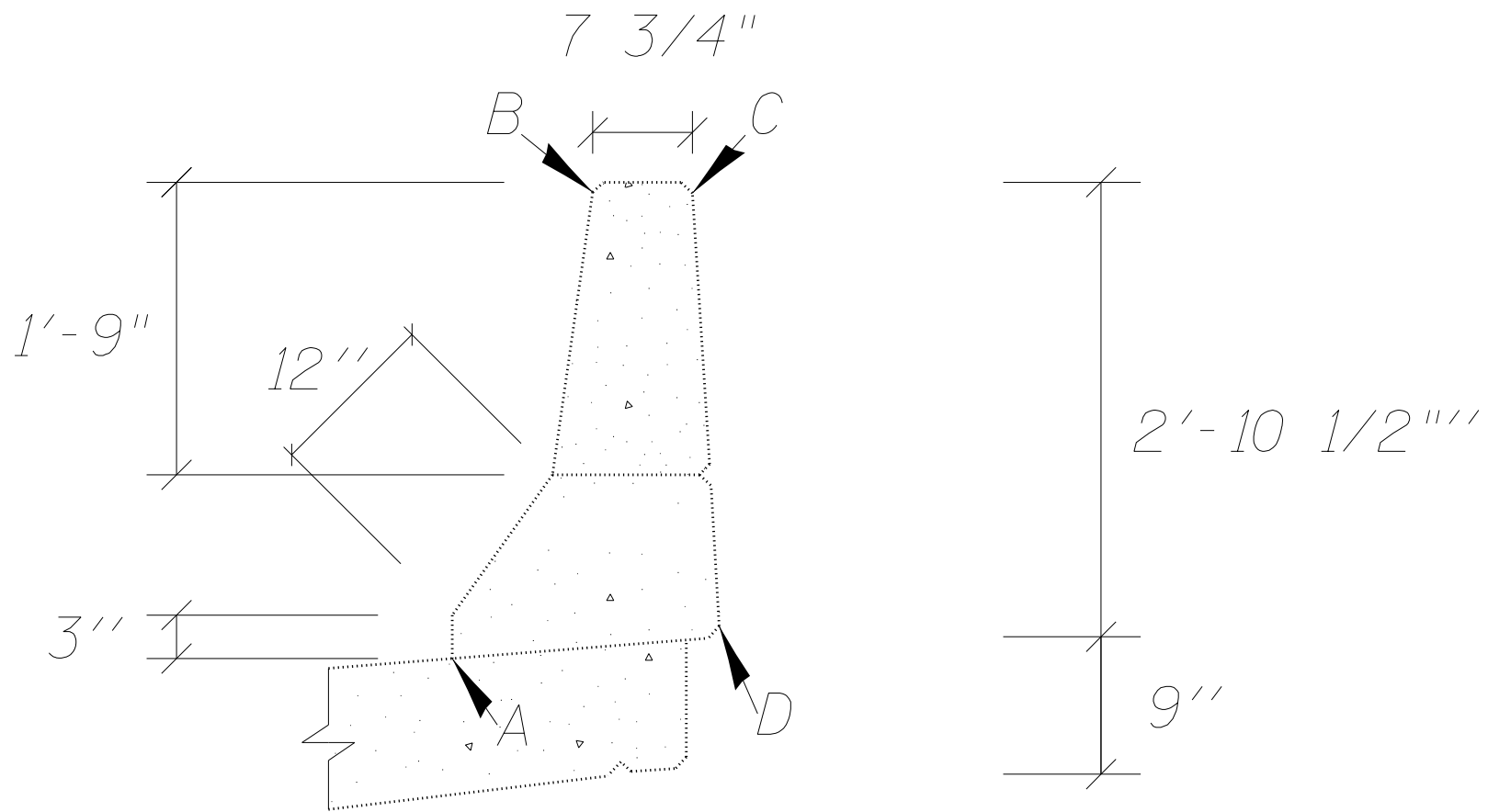
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	11
CONTRACT NO. 68E27				
ILLINOIS		FED. AID PROJECT		



- TYPICAL WHITE ON BLUE
- TYPICAL WHITE ON BLUE
- TYPICAL WHITE ON BLUE
- TYPICAL INTERSTATE COLORS
- ALL OTHER SIGNS-BLACK ON ORANGE
- ALL SIGNS AND LETTER HEIGHTS PER MUTCD.

MODEL: Default
FILE: \\net12-pw\pub\anr\room\dot\illinois\gov\p\w\dot\Documents\DOT-Office\District-4\Projects\ID4_68E27\CADD\Drawings\Iosh.dgn

	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR DETAILS				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	DRAWN -	REVISED -	155						90-106X[VB-1,HB-2]B[R,BRR	TAZEWELL	45	12		
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -						CONTRACT NO. 68E27					
	PLOT DATE = 6/21/2019	DATE -	REVISED -		SCALE: 50	SHEET	OF	SHEETS	STA.	TO STA.			ILLINOIS	FED. AID PROJECT



BRIDGE PARAPET

NOTE:

1. PROTECTIVE COAT (SPECIAL) TO COVER FROM POINT A THROUGH POINTS B, C, AND D OF THE EXISTING PARAPET.

MODEL: Default
FILE: \\net12\proj\planroom\dot\illinois\dot\p\w\dot\Documents\DOT Office\District 4\Projects\DU_68E27\CADDData\CADDrawing\osh.dgn

	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PARAPET SEALING DETAIL S.N. 090-0131		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	14
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -				CONTRACT NO. 68E27				
	PLOT DATE = 6/21/2019	DATE -	REVISED -		SCALE: 50	SHEET OF SHEETS	STA.	TO STA.	ILLINOIS	FED. AID PROJECT	

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Diaphragm connection holes shall be 1 5/16"Ø for 3/4"Ø bolts. Two hardened washers shall be required at diaphragm connections.

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.

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.

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.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Reinforcement bars designated (E) shall be epoxy coated.

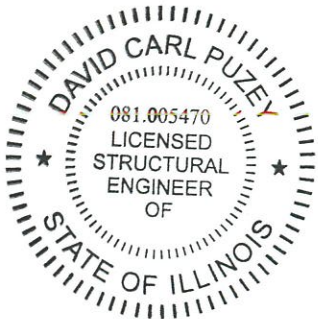
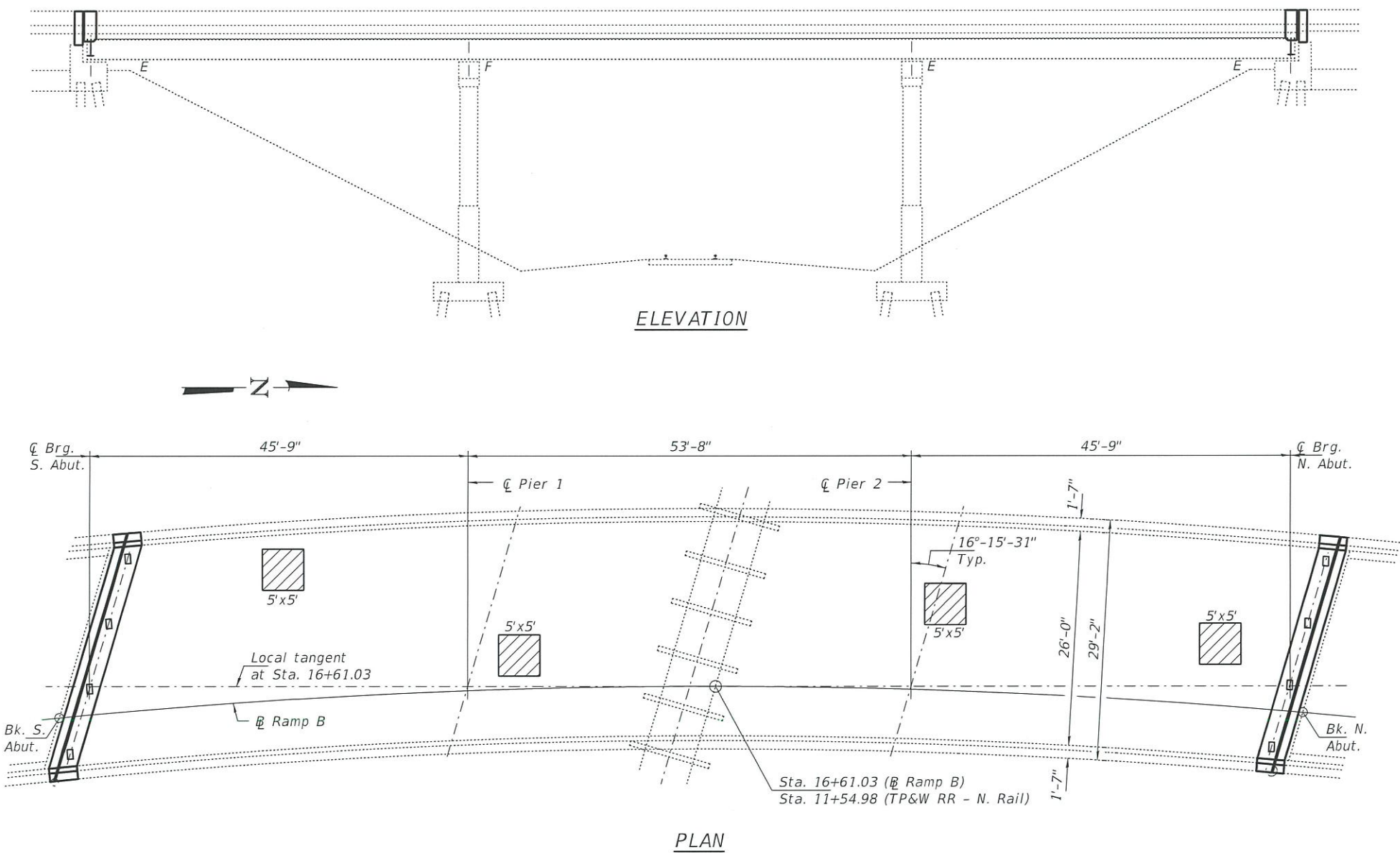
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall 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.

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.

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".

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".

Work to be completed under road closure.



Notes:
Horizontal dimensions are along local tangent.
Replace expansion joints, bearings and diaphragms at each abutment.
Deformed beam ends at each abutment to be straightened.
All beam straightening operations to be completed prior to removal of existing diaphragms and concrete deck.

LEGEND

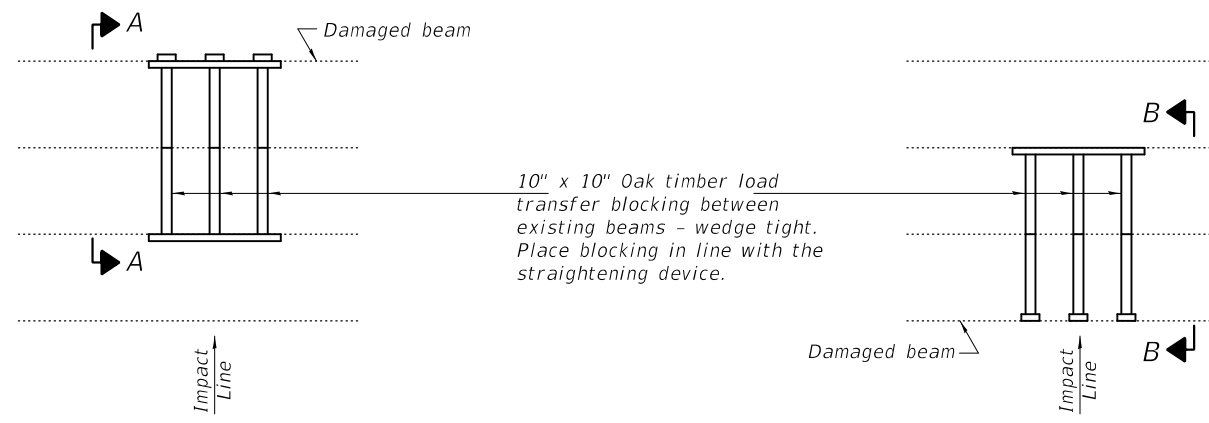
Indicates Deck Slab Repair (Partial)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	8.0
Concrete Superstructure	Cu. Yd.	8.1
Preformed Joint Strip Seal	Foot	59
Reinforcement Bars, Epoxy Coated	Pound	1340
Protective Coat	Sq. Yd.	25
Structural Steel Removal	Pound	1920
Furnishing and Erecting Structural Steel	Pound	4100
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Anchor Bolts, 1"	Each	32
Beam Straightening	L. Sum	1
Deck Slab Repair (Partial)	Sq. Yd.	12

* Apply to new concrete only.

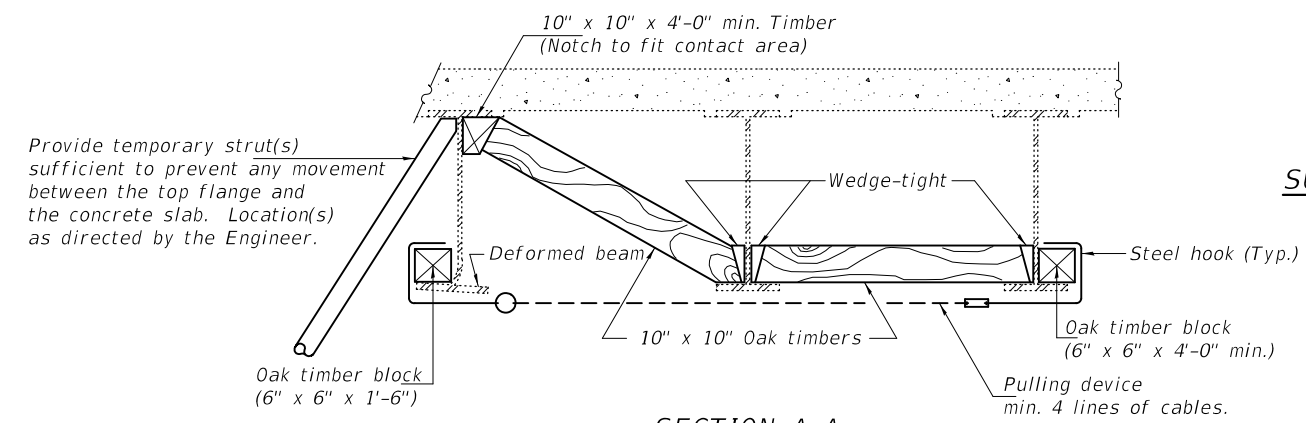
DESIGNED - <i>James J. J. J.</i>	EXAMINED - <i>Ty A. J. J.</i>	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION FAP 406 RAMP B OVER BSNF RR SN 090-0127	SHEET NO. 1 OF 8 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - <i>Stephen M. J.</i>	PASSED - <i>David C. J.</i>	REVISD -				155	90-106X[V-B-1,HB-2]BJR,BRR	TAZEWELL	45	15
DRAWN - <i>daburdell</i>		REVISD -				CONTRACT NO. 68E27				
CHECKED - <i>DAIR</i>						ILLINOIS FED. AID PROJECT				



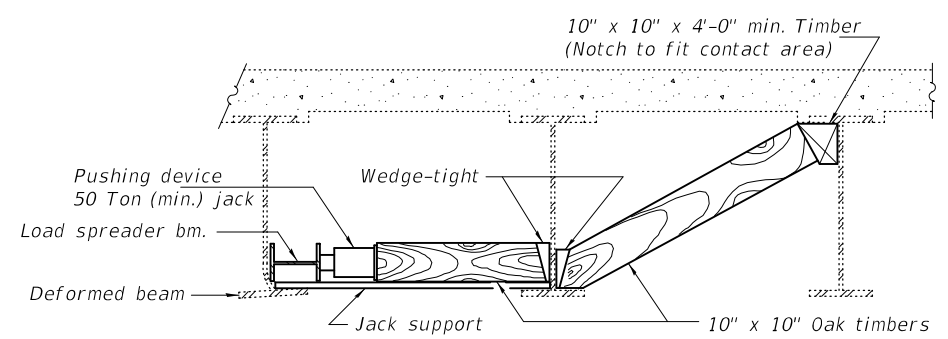
PULLING DEVICE

PUSHING DEVICE

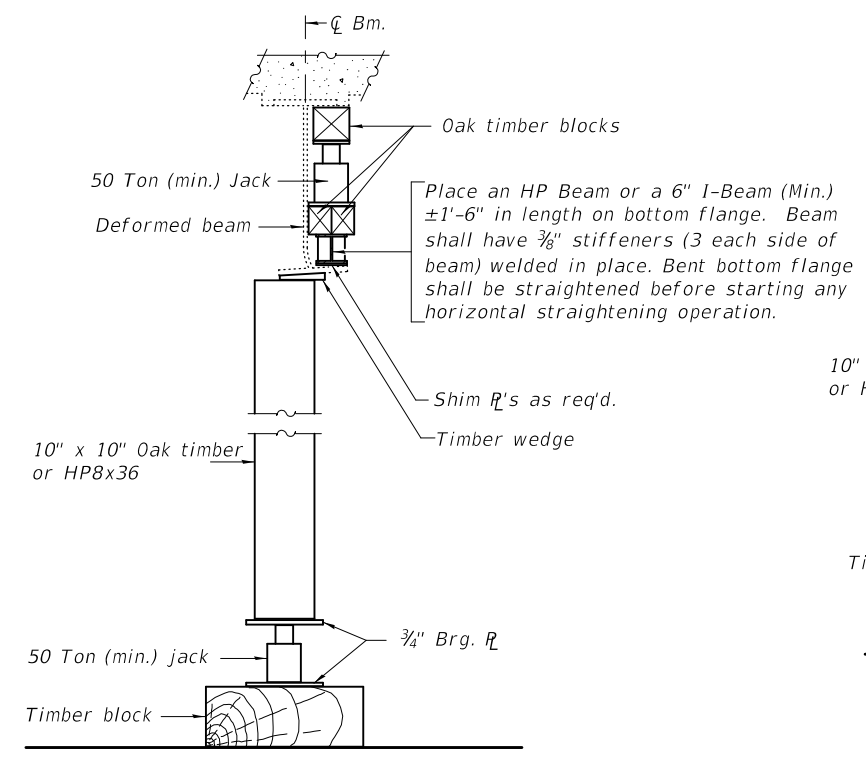
PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS
Straightening force shall be maintained on all load transfer blocking during beam straightening.



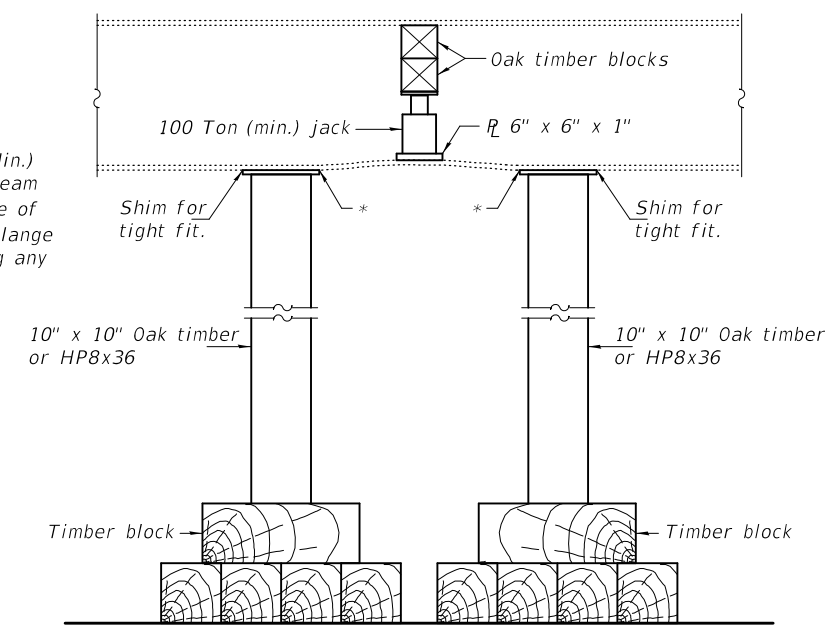
SECTION A-A



SECTION B-B

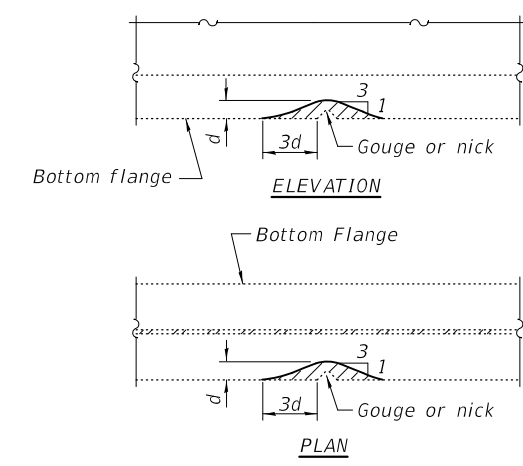


SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)



SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)

* Edge of plate shall line up with edge of deformation.
Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.

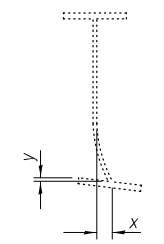


GRINDING DETAIL

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.

TABLE OF DIMENSIONS x AND y

Span	Beam	x	y
1	1	±3/8"	±1/4"
1	2	±1/2"	±1/4"
1	3	±1/2"	±1/4"
1	4	±1/4"	±1/4"
3	1	±1 7/8"	±1/4"
3	2	±1 7/8"	±1/4"
3	3	±1 1/4"	±1/4"
3	4	±1 7/8"	±1/4"

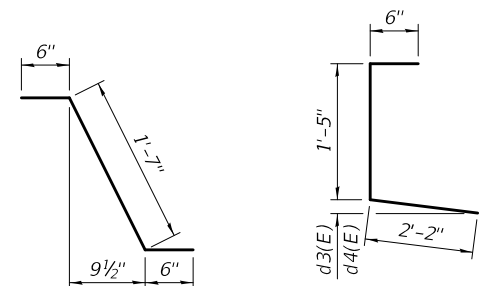
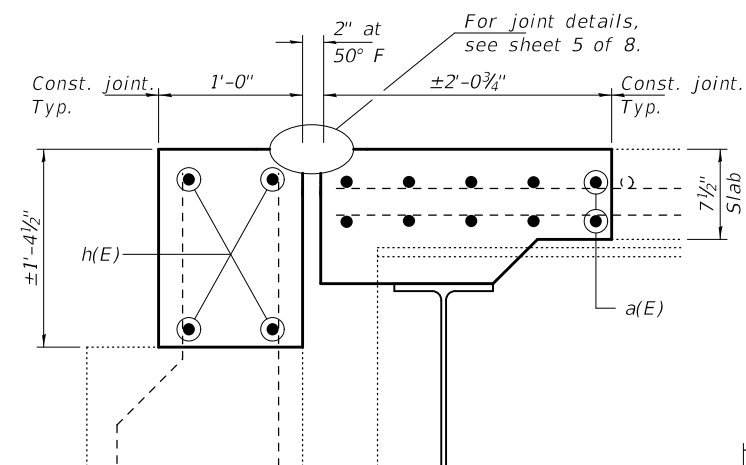
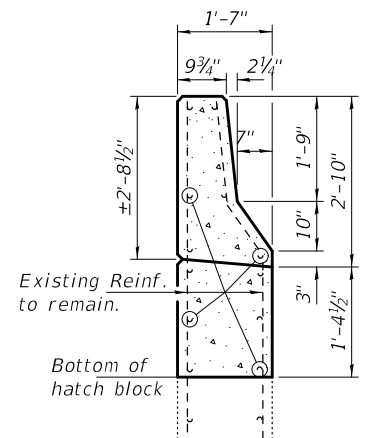
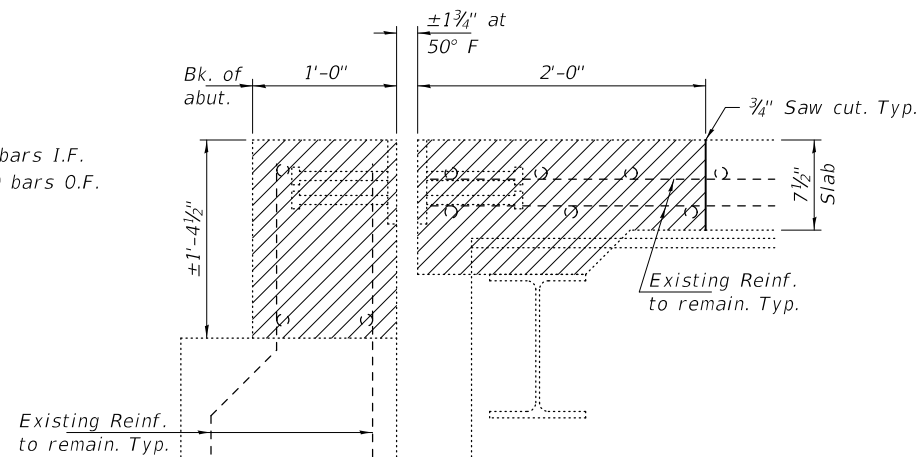
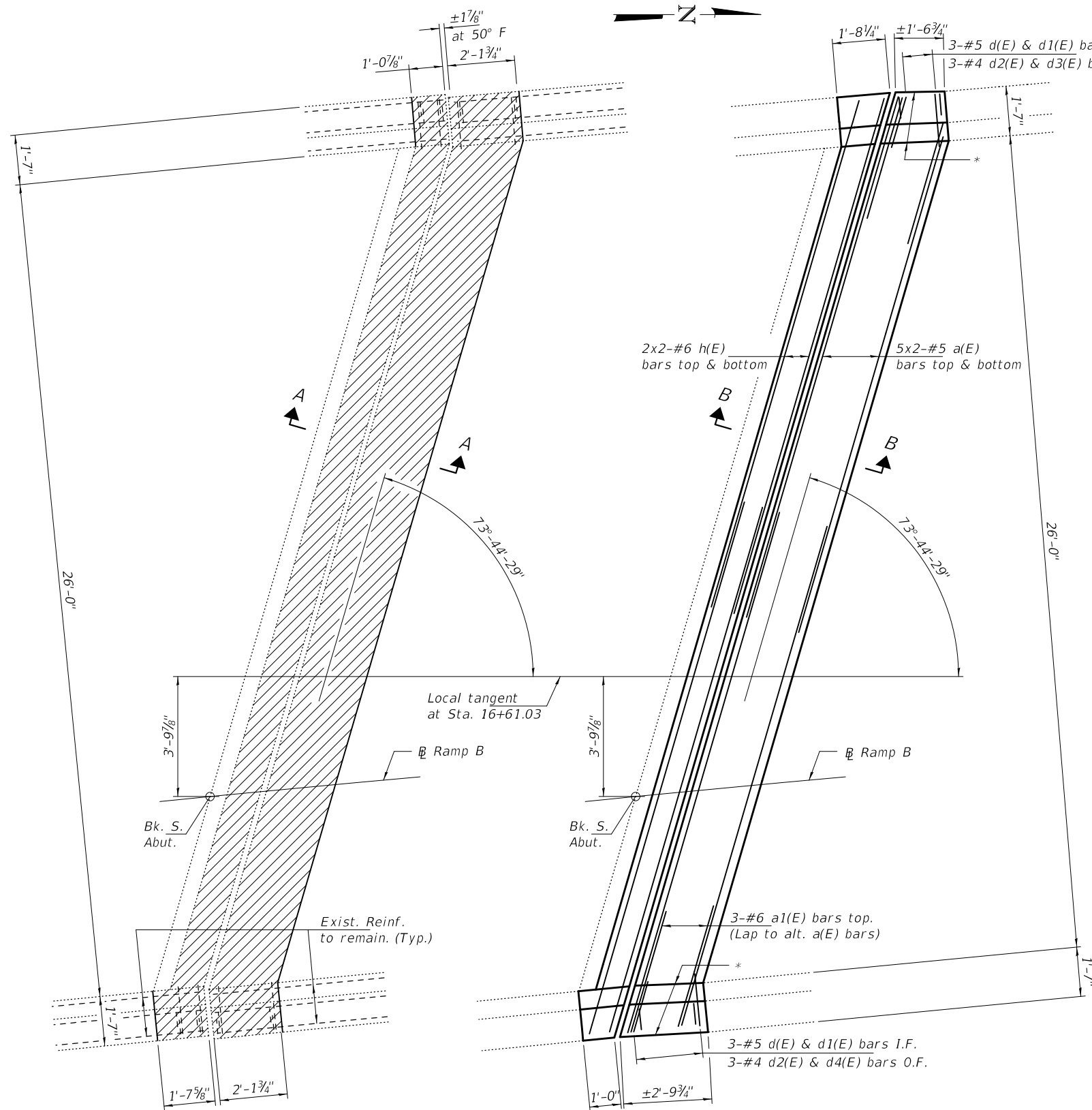


EXISTING DEFORMATION TO BE STRAIGHTENED
(Looking North at North Abut. and looking South at South Abut.)

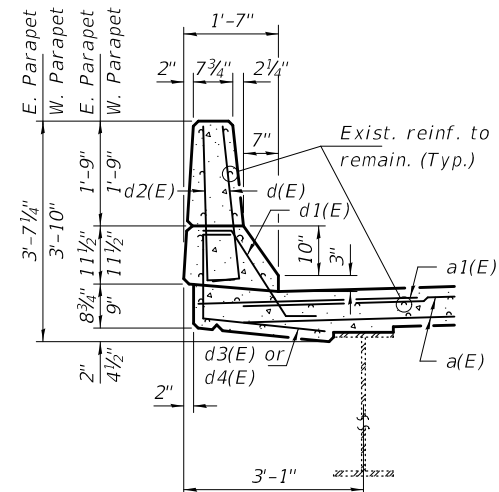
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 45'-9".

REP-1 8-16-2018

DESIGNED - JOV	EXAMINED <div>Timothy A. Daulton</div> <div>ENGINEER OF STRUCTURAL SERVICES</div>	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEAM STRAIGHTENING DETAILS SN 090-0127	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR		PASSED <div>Carl Kreyer</div> <div>ENGINEER OF BRIDGES AND STRUCTURES</div>			REVISED -	155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45
DRAWN - daburdell	REVISED -				CONTRACT NO. 68E27				
CHECKED - JOV SMR	SHEET NO. 2 OF 8 SHEETS					ILLINOIS	FED. AID PROJECT		



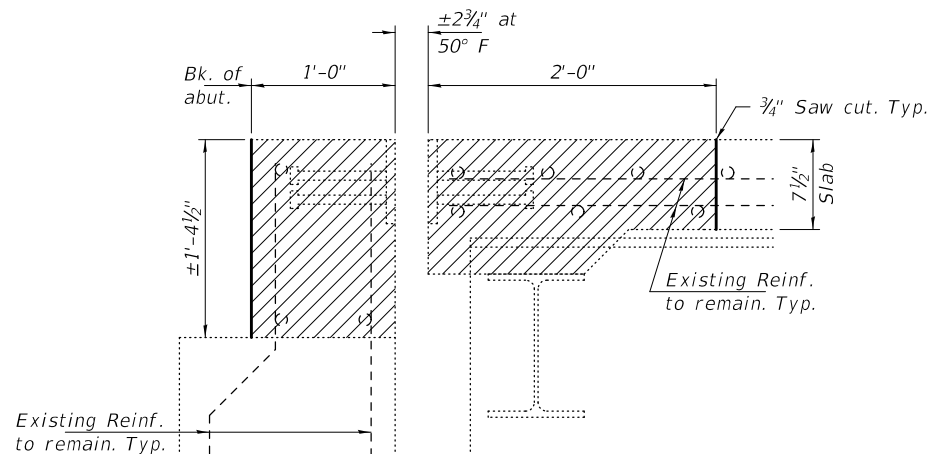
BARS d3(E) & d4(E)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	20	#5	17'-3"	—
a1(E)	6	#6	4'-0"	—
d(E)	6	#5	3'-0"	└
d1(E)	6	#5	2'-7"	└
d2(E)	6	#4	3'-0"	└
d3(E)	3	#4	4'-1"	└
d4(E)	3	#4	4'-1"	└
h(E)	8	#6	17'-6"	—
Concrete Removal			Cu. Yd.	4.0
Concrete Superstructure			Cu. Yd.	4.0
Reinforcement Bars, Epoxy Coated			Pound	670

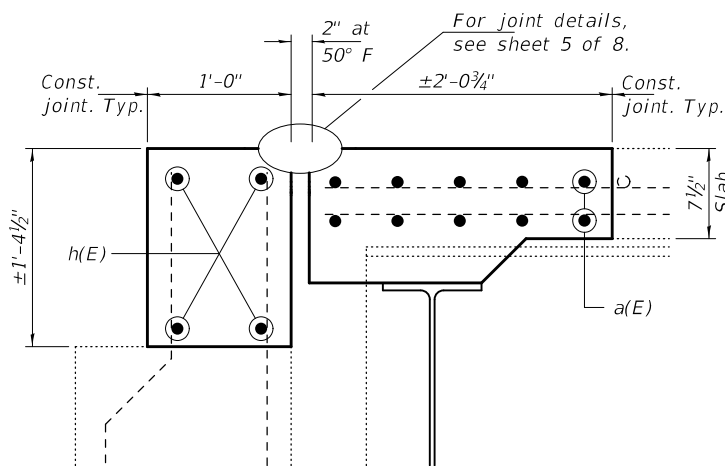
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.



SECTION A-A

(Near C Roadway)

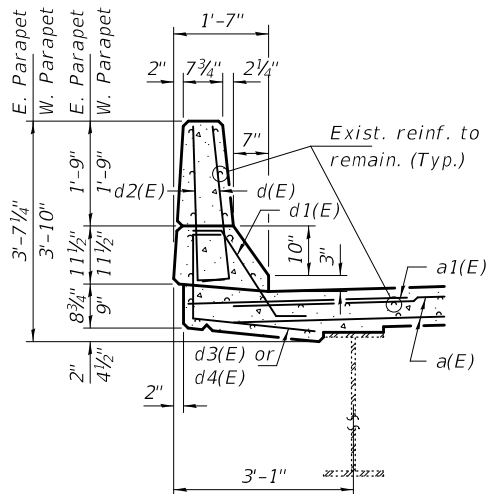
(Dimensions are at RT L's to end of deck)



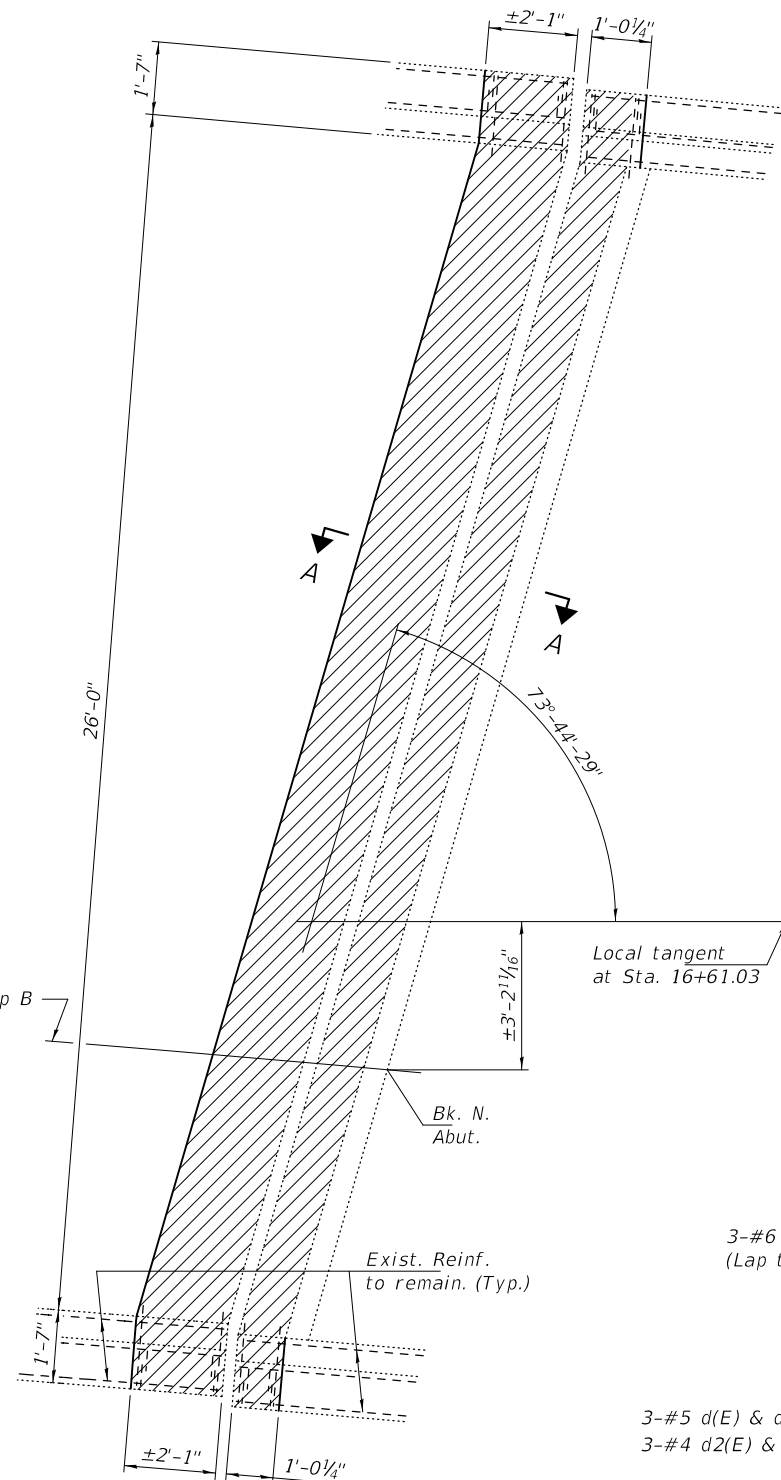
SECTION B-B

(Near C Roadway)

(Dimensions are at RT L's to end of deck)



TYPICAL PARAPET SECTION



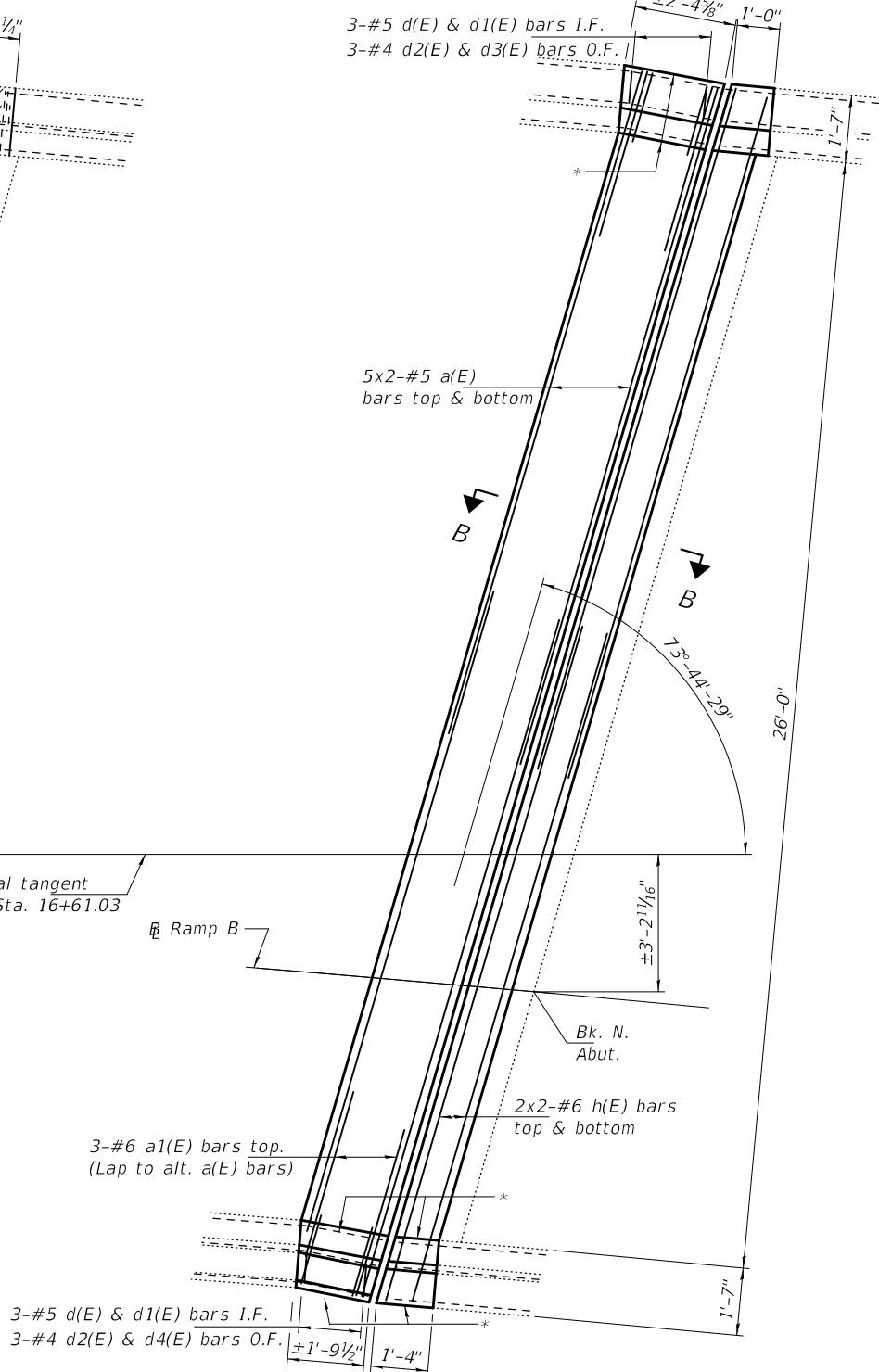
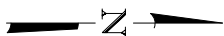
REMOVAL PLAN

North Abutment

(Hatched areas indicate removal.)
(Joint closure & deck offsets not shown)

MINIMUM BAR LAP

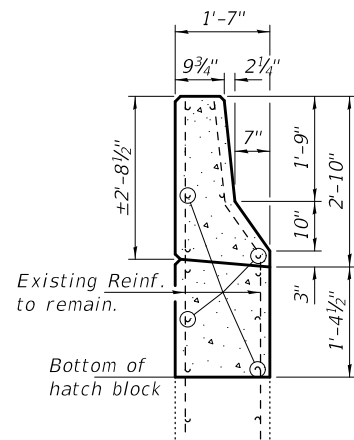
#5 bar = 3'-6"
#6 bar = 4'-0"



REPLACEMENT PLAN

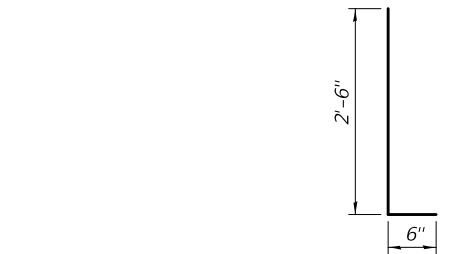
North Abutment

* Pour parapet edges flush
to correct existing offset.

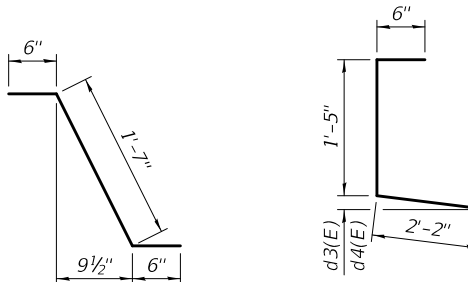


TYPICAL SECTION AT

APPROACH PARAPET



BARS d(E) & d2(E)



BAR d1(E)

BARS d3(E) & d4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	20	#5	17'-3"	
a1(E)	6	#6	4'-0"	
d(E)	6	#5	3'-0"	
d1(E)	6	#5	2'-7"	
d2(E)	6	#4	3'-0"	
d3(E)	3	#4	4'-1"	
d4(E)	3	#4	4'-1"	
h(E)	8	#6	17'-6"	
Concrete Removal			Cu. Yd.	4.0
Concrete Superstructure			Cu. Yd.	4.1
Reinforcement Bars, Epoxy Coated			Pound	670

Bars indicated thus 5x2-#5 etc. indicates
5 lines of bars with 2 lengths per line.

DESIGNED - JOV
CHECKED - SMR
DRAWN - daburdell
CHECKED - JOV SMR

EXAMINED	Timothy A. Daburdell
PASSED	Carl R. Ruyter
ENGINEER OF STRUCTURAL SERVICES	
ENGINEER OF BRIDGES AND STRUCTURES	

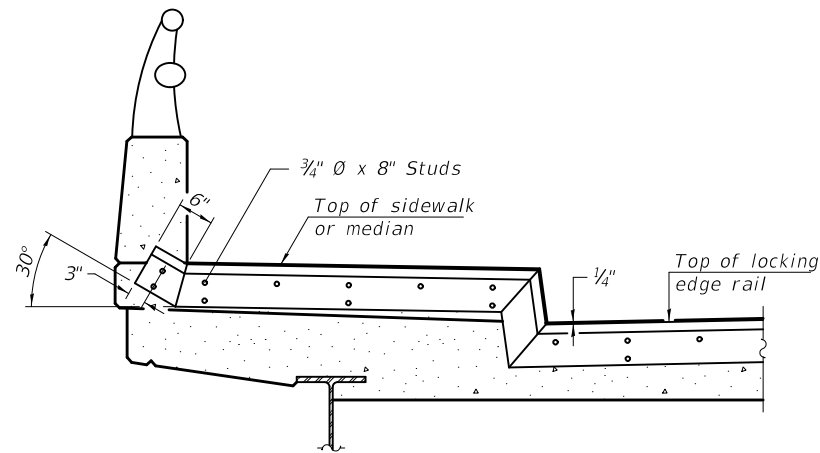
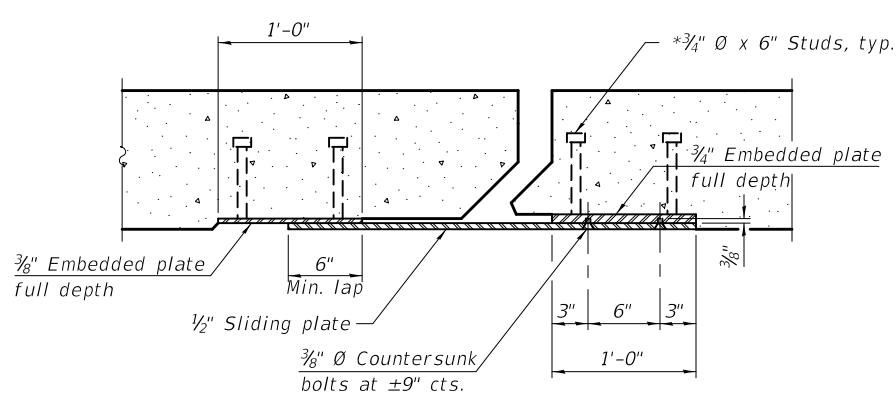
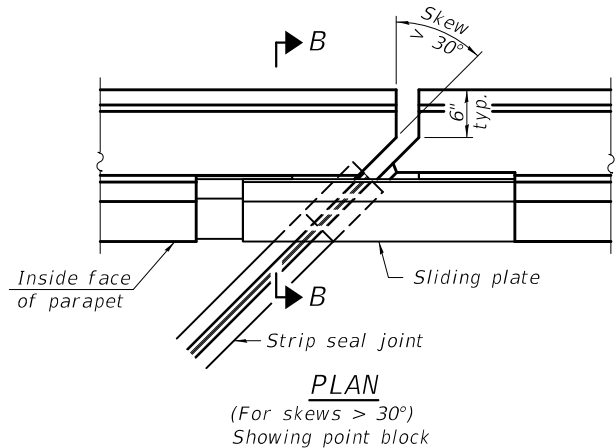
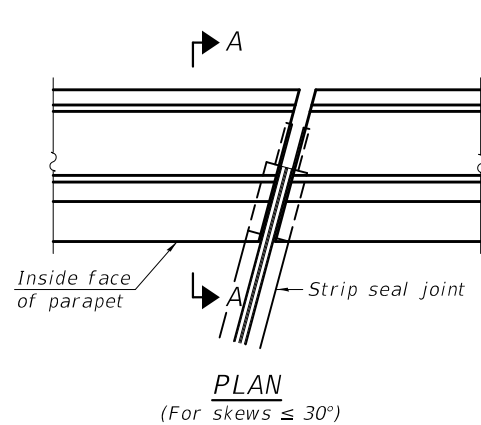
DATE -	AUGUST 9, 2019
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT REPAIR DETAILS
SN 090-0127

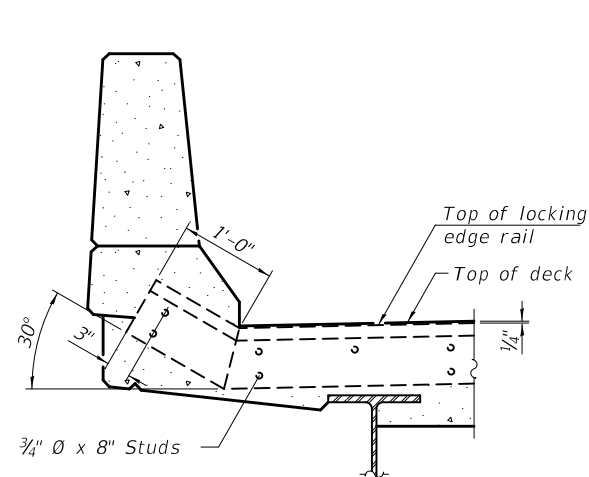
SHEET NO. 4 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	18
CONTRACT NO. 68E27				
ILLINOIS FED. AID PROJECT				

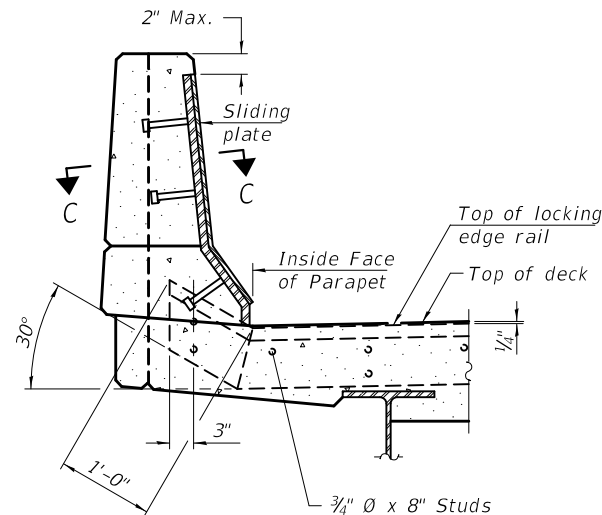


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

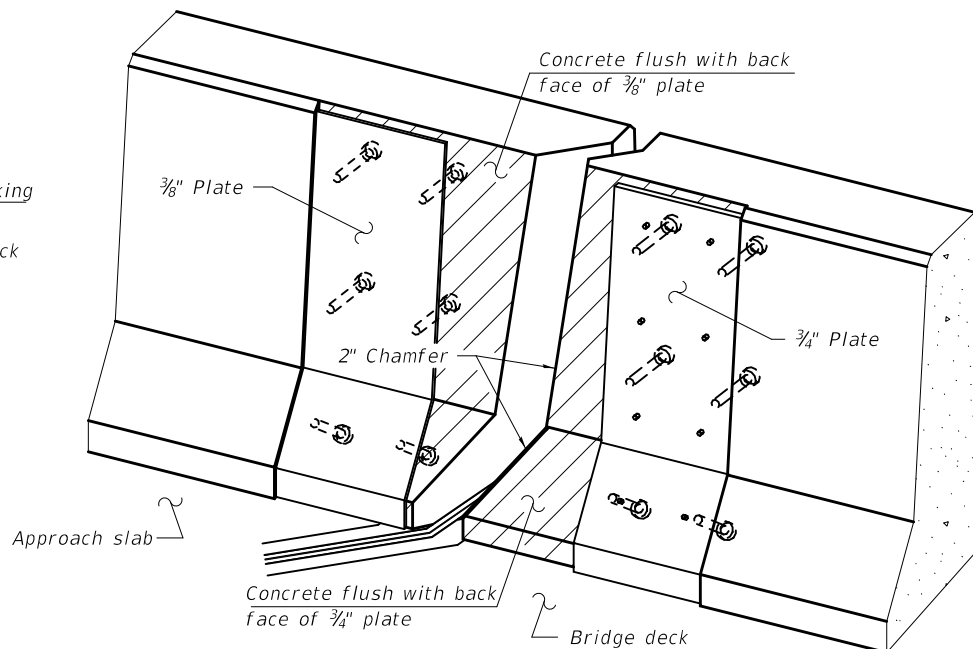
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



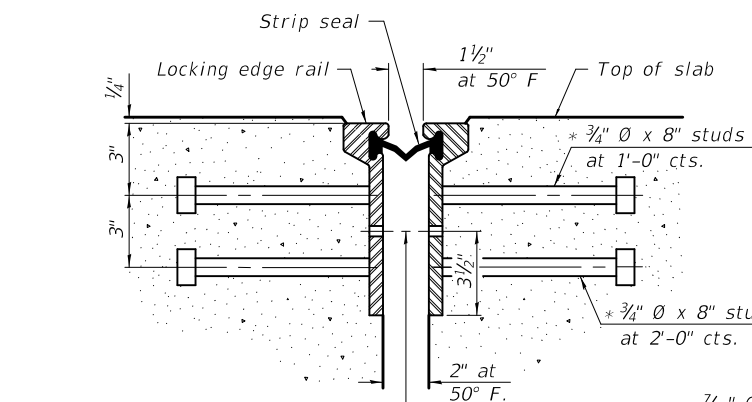
SECTION A-A



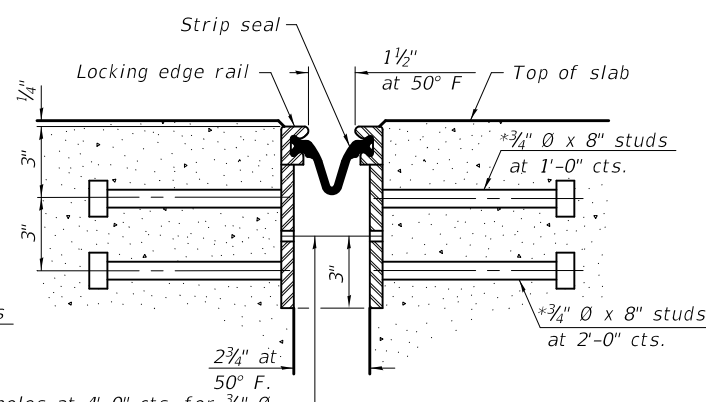
SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)



SECTION THRU
ROLLED RAIL JOINT



SECTION THRU
WELDED RAIL JOINT

7/16" Ø holes at 4'-0" cts. for 3/8" Ø bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" Ø holes at 4'-0" cts. for 3/8" Ø bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

ROLLED EXTRUDED RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

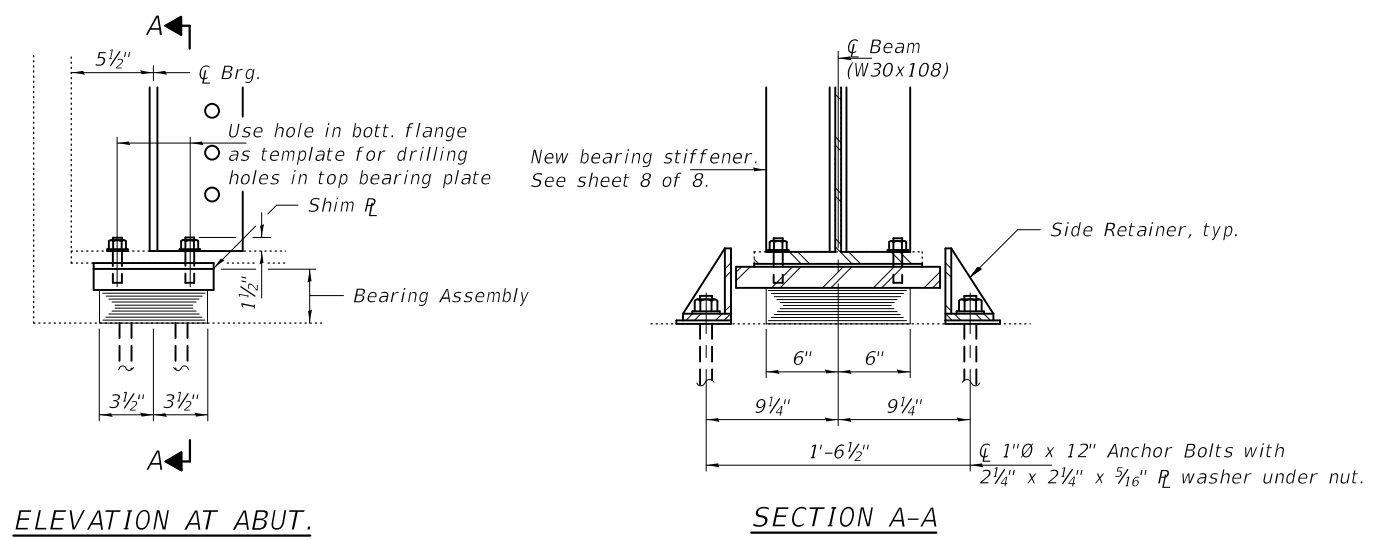
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	59

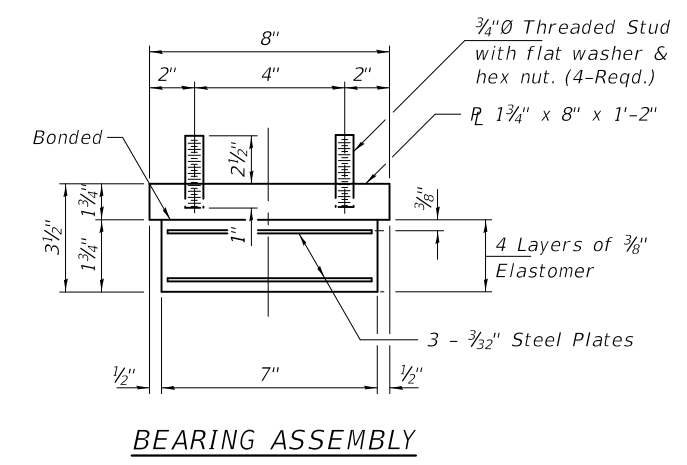
EJ-SSJ

2-17-2017

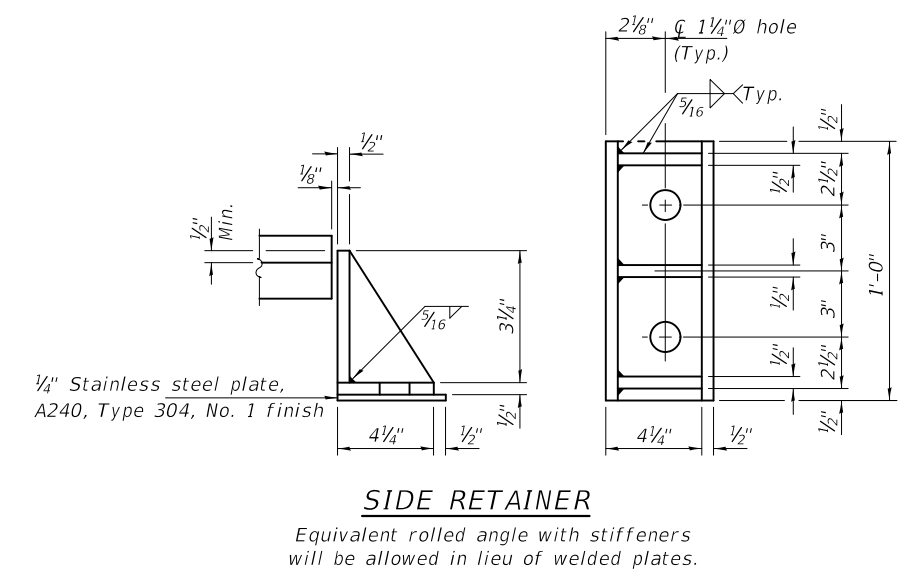
DESIGNED - JOV	EXAMINED	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL SN 090-0127	SHEET NO. 5 OF 8 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED	REVISED -				155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	19
DRAWN - daburdell		REVISED -				CONTRACT NO. 68E27				
CHECKED - JOV SMR						ILLINOIS FED. AID PROJECT				



TYPE I ELASTOMERIC EXP. BRG.



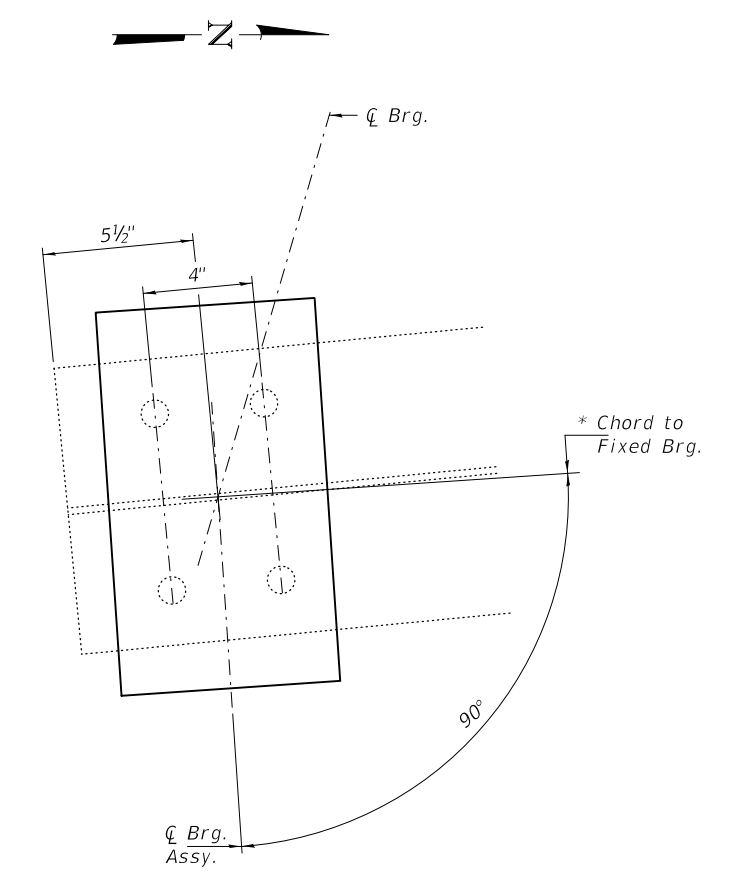
Note:
Shim plates shall not be placed under Bearing Assembly.



BEAM REACTIONS

R \bar{L}	(K)	22.2
R \bar{L}	(K)	42.6
Imp.	(K)	11.3
R (Total)	(K)	76.1

Notes:
Shim plates 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. Min. jack capacity = 17 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.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.

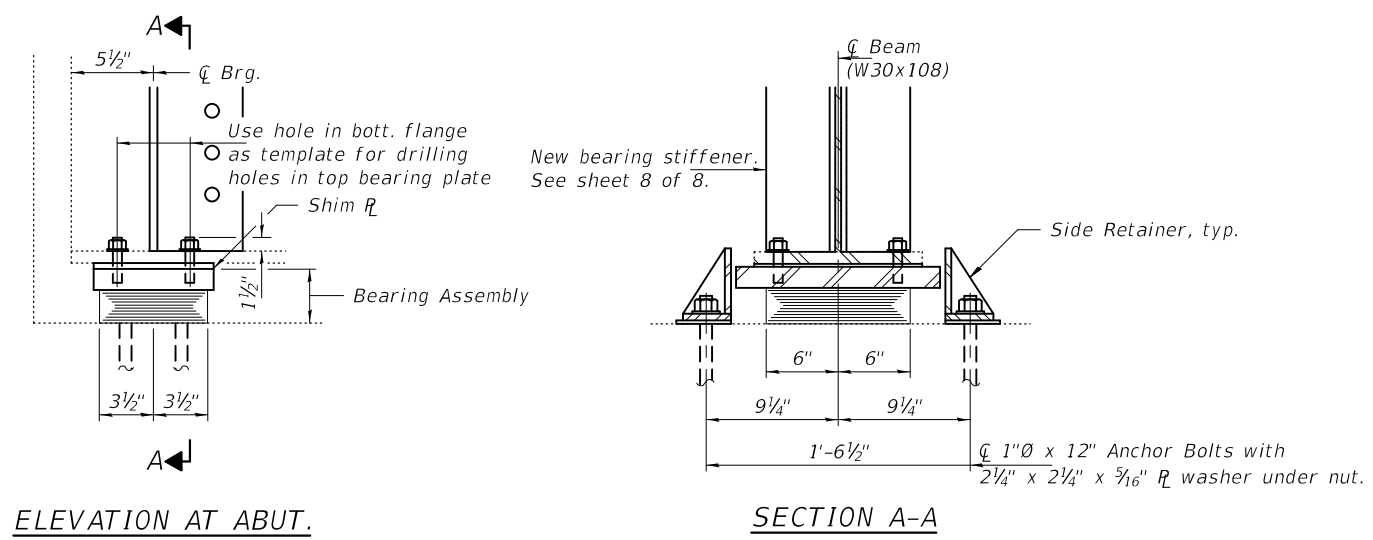


SOUTH ABUTMENT BEARING ORIENTATION

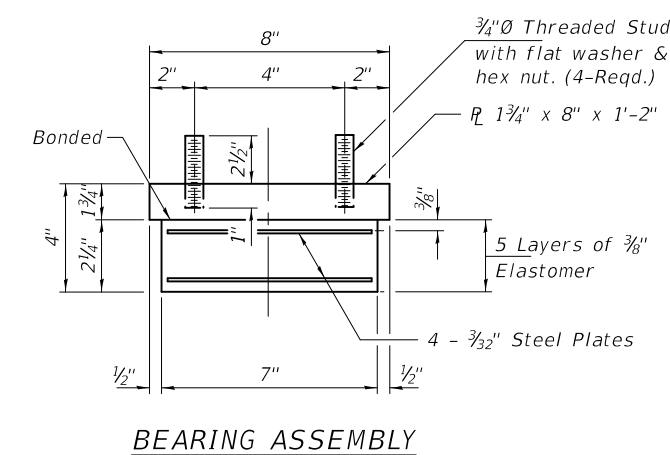
* The Contractor shall field verify each bearing orientation data shown herein and adjust as necessary to match existing chord to fixed bearing.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	4
Jack and Remove Existing Bearings	Each	4
Anchor Bolts, 1"	Each	16

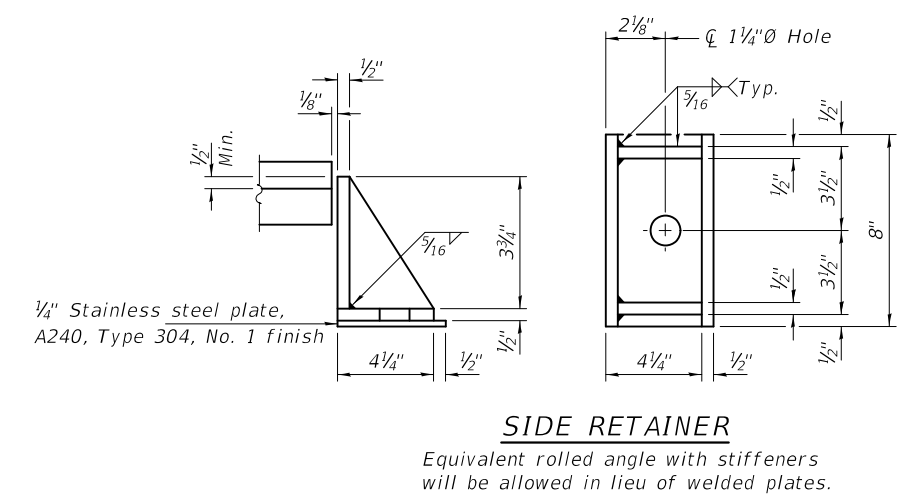


TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

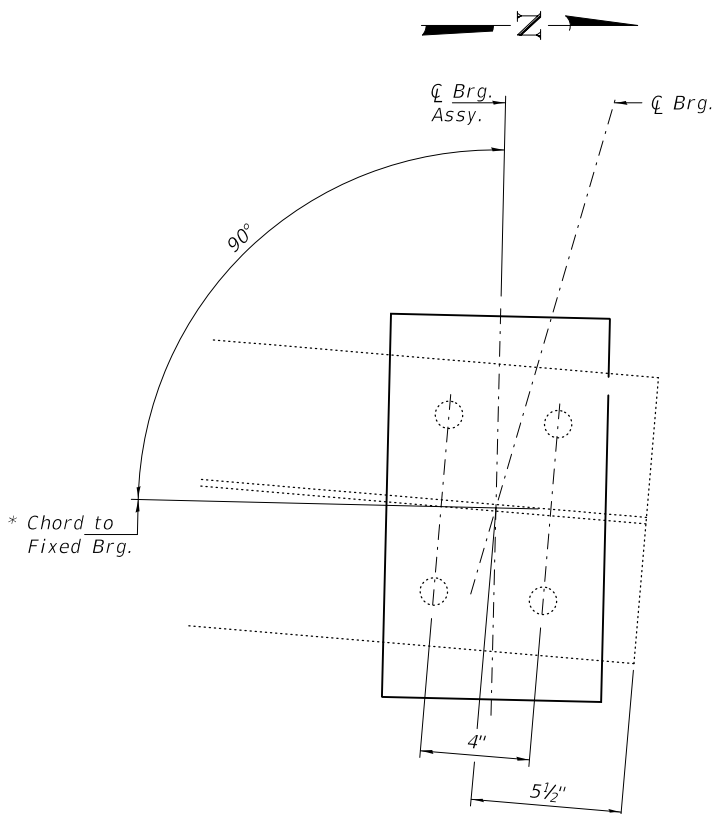
Note:
Shim plates shall not be placed under Bearing Assembly.



BEAM REACTIONS

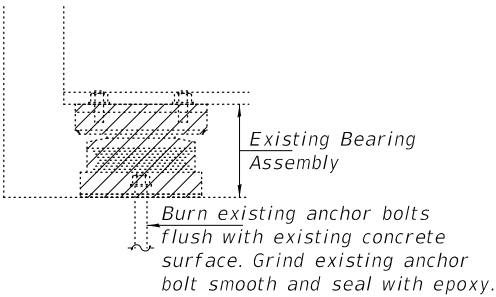
$R \bar{L}$	(K)	22.2
$R \bar{L}$	(K)	42.6
Imp.	(K)	11.3
R (Total)	(K)	76.1

Notes:
Shim plates 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. Min. jack capacity = 17 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.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



NORTH ABUTMENT BEARING ORIENTATION

* The Contractor shall field verify each bearing orientation data shown herin and adjust as necessary to match existing chord to fixed bearing.

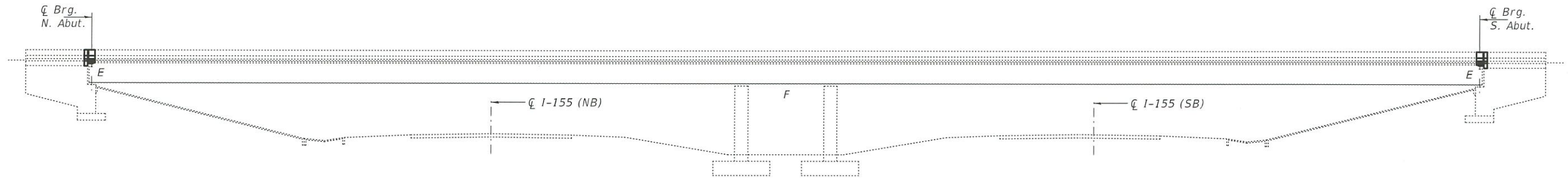


EXISTING BEARING REMOVAL DETAIL

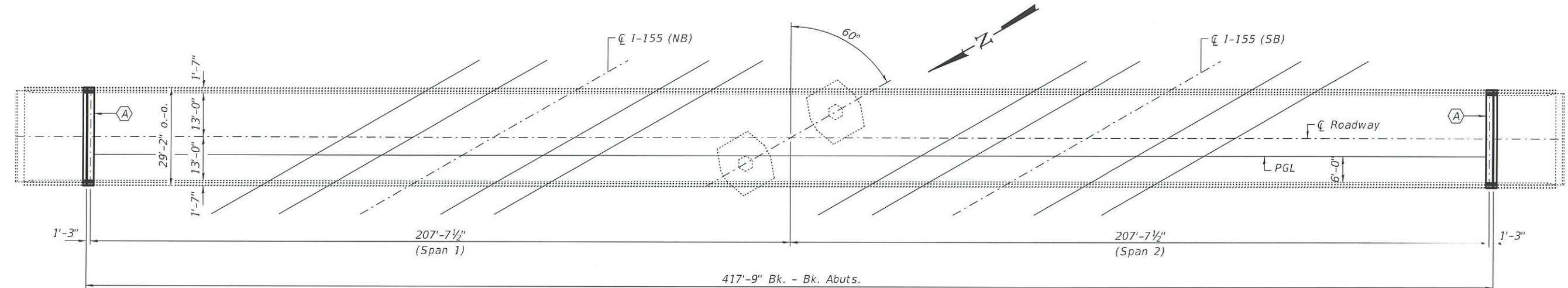
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	4
Jack and Remove Existing Bearings	Each	4
Anchor Bolts, 1"	Each	16



ELEVATION



PLAN

(A) - Remove existing Expansion Joint and install new Preformed Joint Strip Seal.

GENERAL NOTES

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.

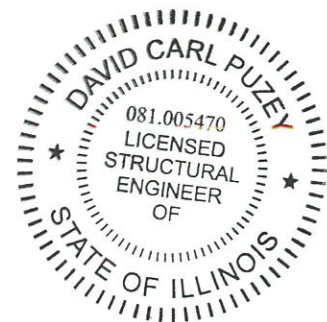
Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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.

TOTAL BILL OF MATERIAL

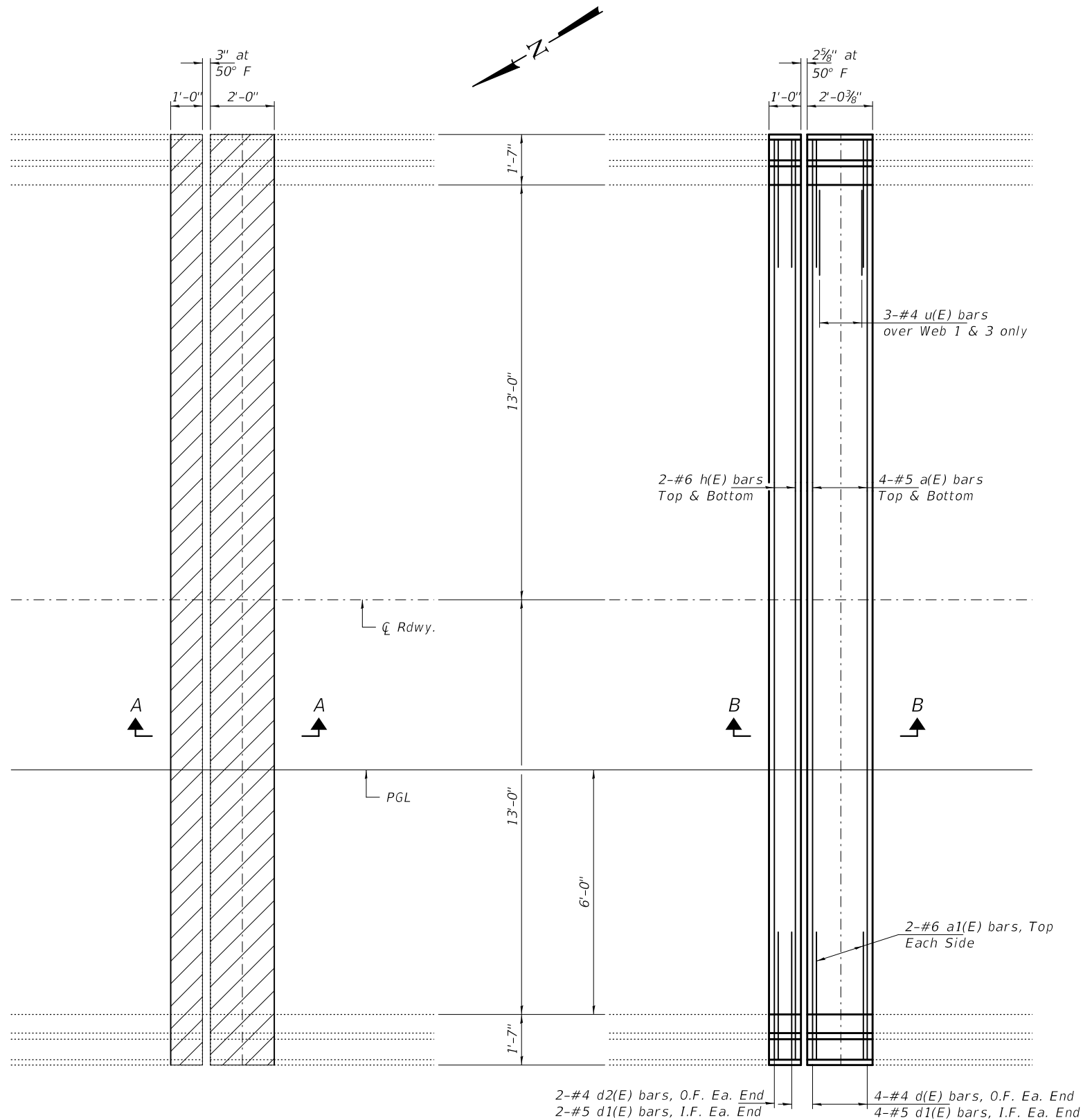
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	9.1
Concrete Superstructure	Cu. Yd.	9.2
Preformed Joint Strip Seal	Foot	56
Reinforcement Bars, Epoxy Coated	Pound	1040
* Protective Coat	Sq. Yd.	23

* Apply to new concrete only.



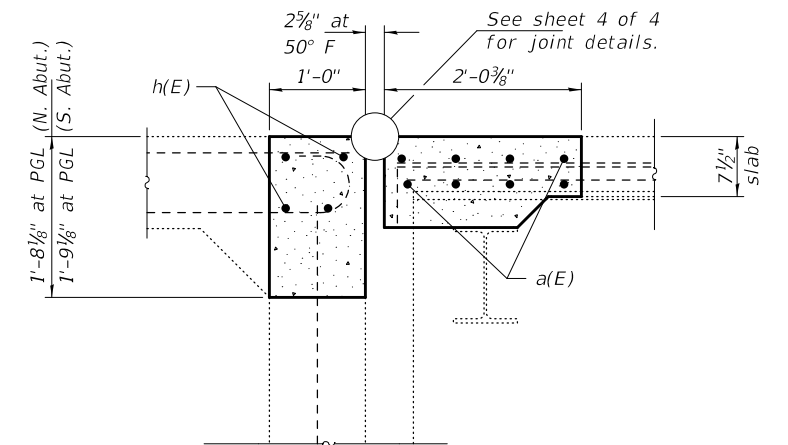
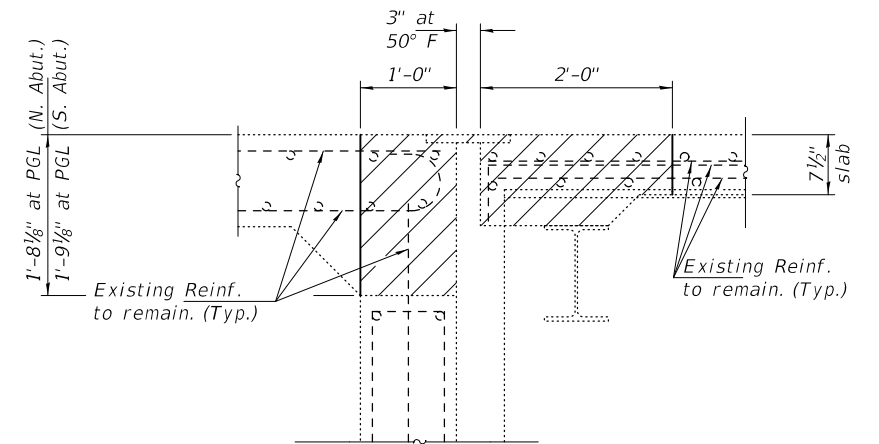
EXPIRES 11-30-2020

DESIGNED - <i>James J. J. J.</i>	EXAMINED - <i>T. A. J.</i>	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION FAP 406 OVER I-155 SN 090-0131 SHEET NO. 1 OF 4 SHEETS	F.A.I. RTE. 155	SECTION 90-106X(VB-1, HB-2)BJR,BRR	COUNTY TAZEWELL	TOTAL SHEETS 45	SHEET NO. 23
CHECKED - <i>daburdell</i>	PASSED - <i>SMB</i>	REVISED -			CONTRACT NO. 68E27				
DRAWN - <i>daburdell</i>		REVISED -			ILLINOIS FED. AID PROJECT				
CHECKED - <i>SMB</i>									



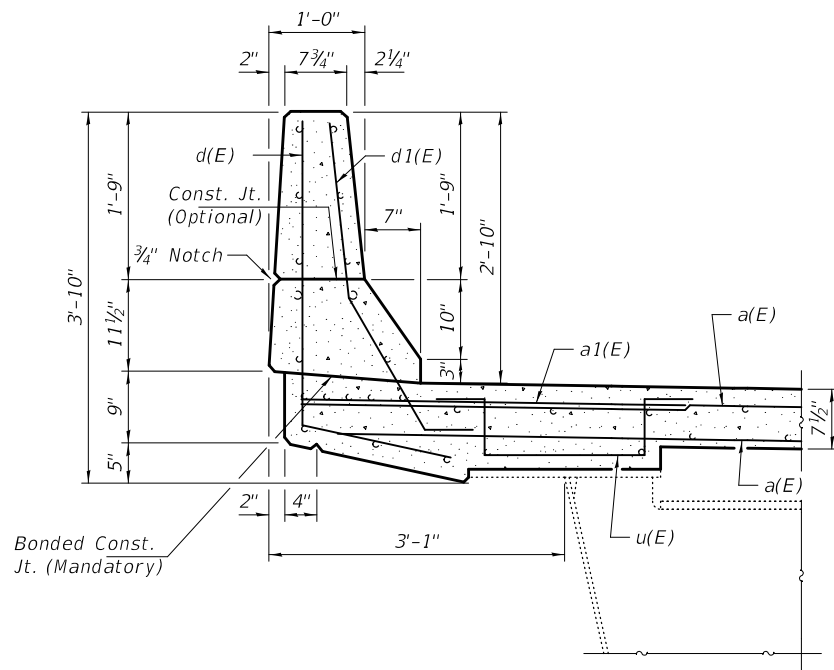
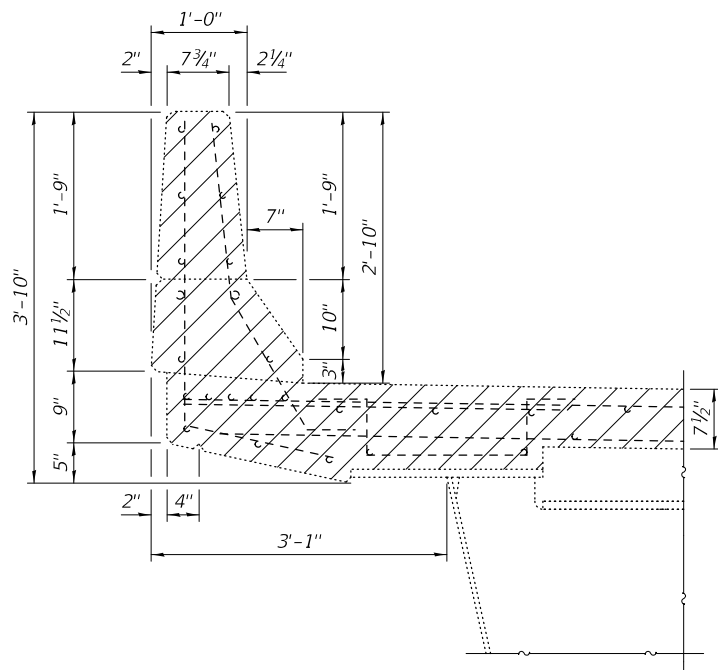
REMOVAL PLAN
North Abutment shown; South
Abutment similar by mirroring.

REPLACEMENT PLAN
North Abutment shown; South
Abutment similar by mirroring.

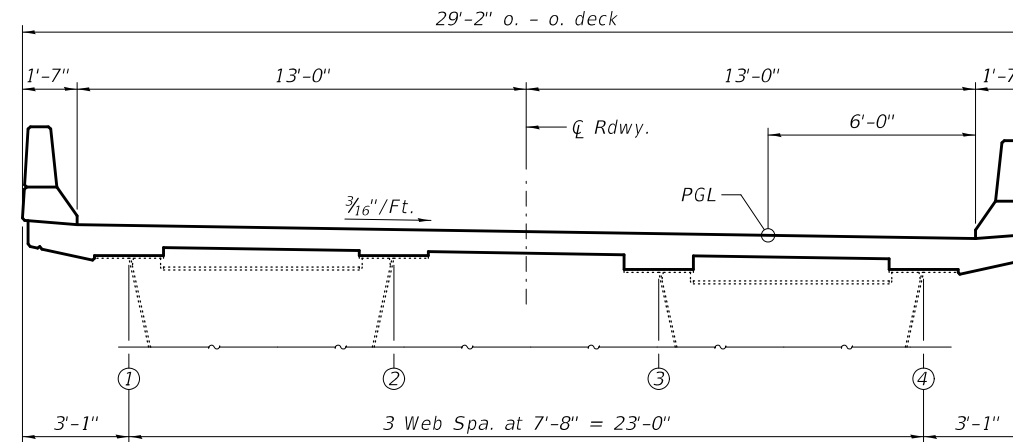


Notes:
See sheet 3 of 4 for Section Thru Bridge
Parapet, Section Thru Approach Parapet,
Cross Section, Bill of Material and reinforcement
bending diagrams.
Hatched areas indicate Concrete Removal.

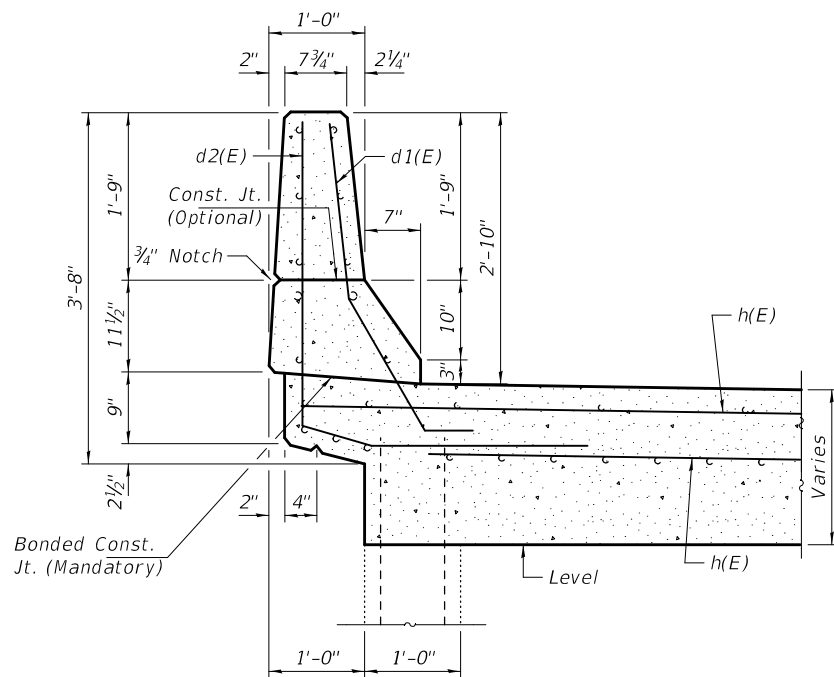
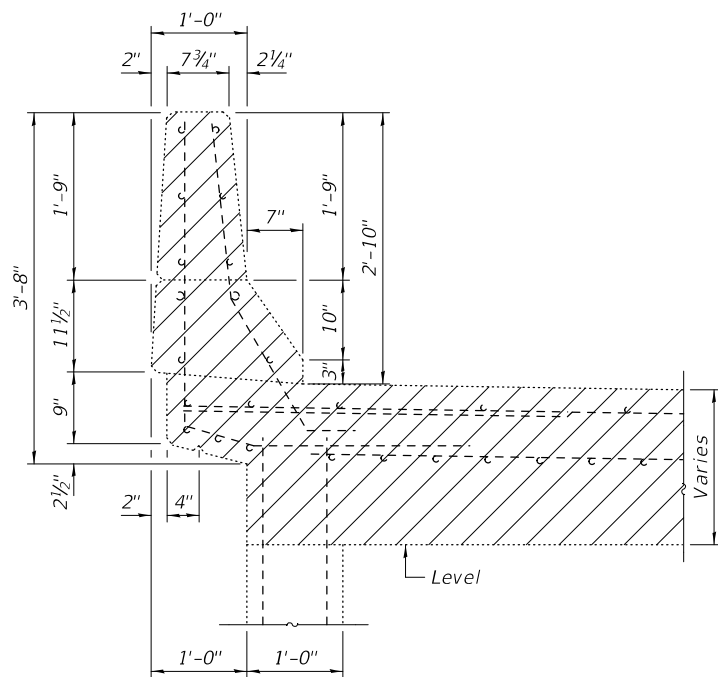
DESIGNED - JOV	EXAMINED	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		JOINT REPLACEMENT DETAILS - ABUTMENTS SN 090-0131		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED	REVISED -					155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	24
DRAWN - daburdell	ENGINEER OF BRIDGES AND STRUCTURES		SHEET NO. 2 OF 4 SHEETS		ILLINOIS FED. AID PROJECT		CONTRACT NO. 68E27				
CHECKED - JOV SMR											



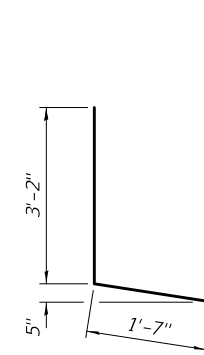
SECTIONS THRU BRIDGE PARAPET
(Looking South)



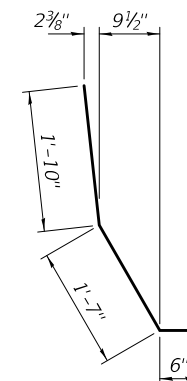
CROSS SECTION AT ABUTMENT
(Looking South)



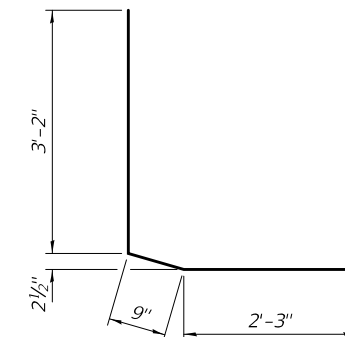
SECTIONS THRU APPROACH PARAPET
(Looking South)



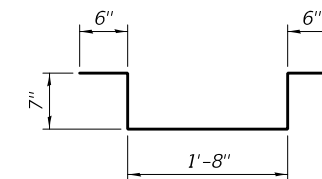
BAR d(E)



BAR d1(E)



BAR d2(E)



BAR u(E)

**BILL OF MATERIAL
(BOTH ABUTS)**

Bar	No.	Size	Length	Shape
a(E)	16	#5	27'-2"	—
a1(E)	8	#6	4'-0"	—
d(E)	16	#4	4'-9"	└
d1(E)	24	#5	3'-11"	└
d2(E)	8	#4	6'-2"	└
h(E)	8	#6	27'-2"	—
u(E)	12	#4	3'-10"	U
Concrete Removal			Cu. Yd.	9.1
Concrete Superstructure			Cu. Yd.	9.2
Reinforcement Bars, Epoxy Coated			Pound	1040

DESIGNED - JOV
CHECKED - SMR
DRAWN - daburdell
CHECKED - JOV SMR

EXAMINED
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

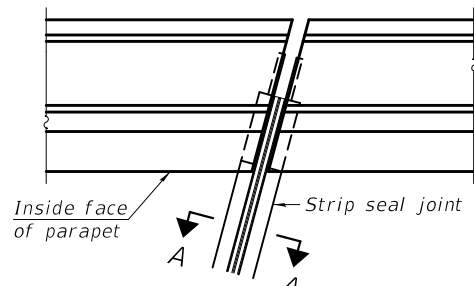
DATE - AUGUST 9, 2019
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

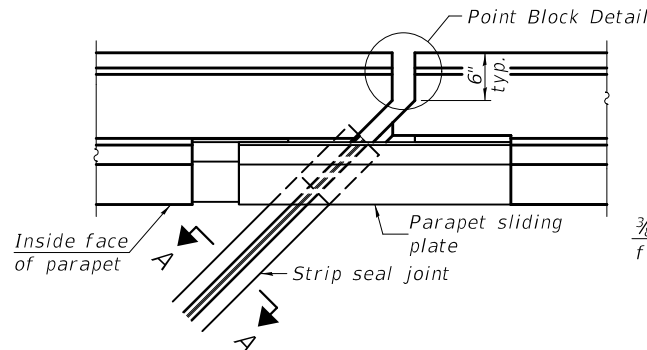
JOINT REPLACEMENT DETAILS
SN 090-0131

SHEET NO. 3 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	25
ILLINOIS			FED. AID PROJECT	

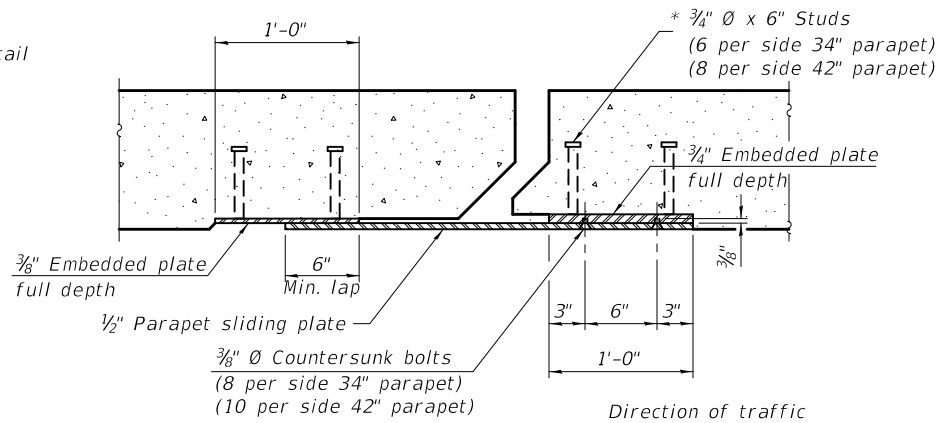


FOR SKEWS $\leq 30^\circ$

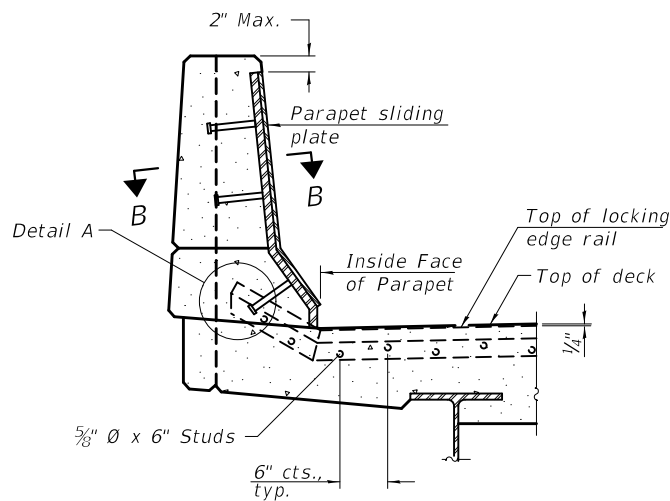


FOR SKEWS $> 30^\circ$

PLAN AT PARAPET

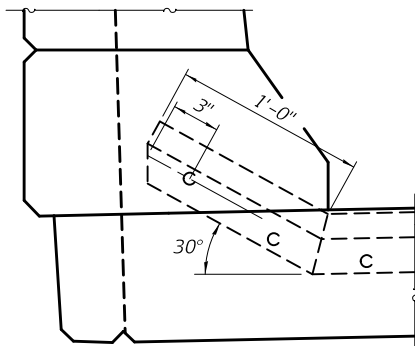


SECTION B-B

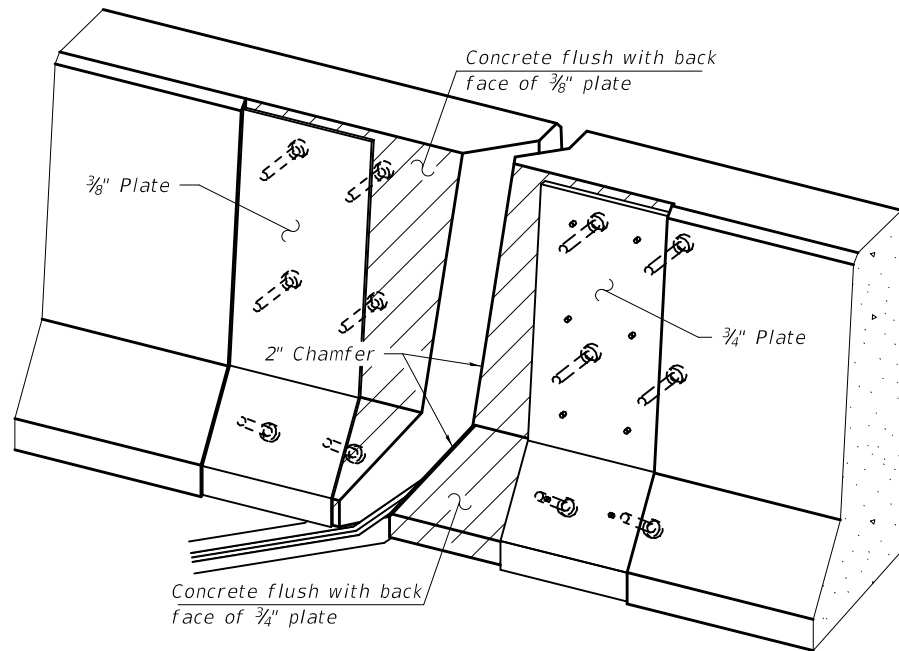


ELEVATION AT PARAPET

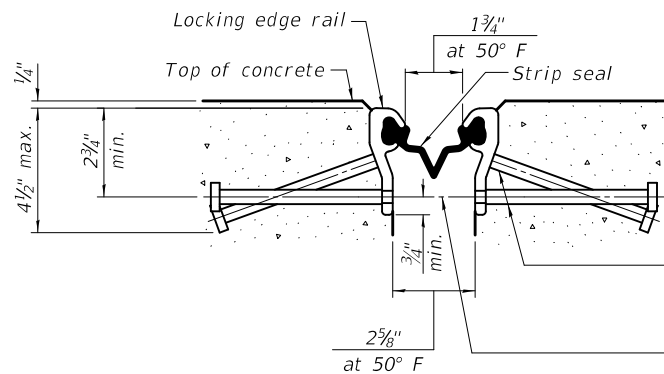
(Skews $> 30^\circ$ shown. Skews $\leq 30^\circ$ similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW
(Showing embedded plates only)



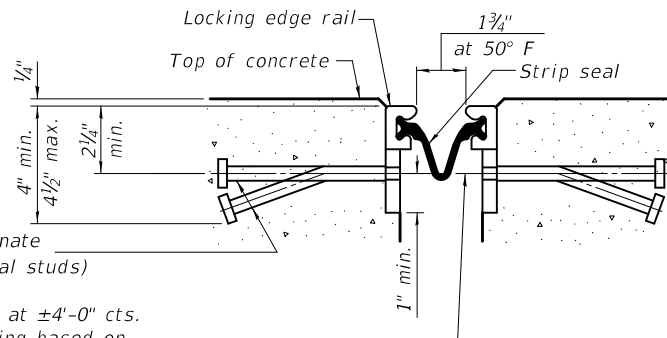
SHOWING ROLLED RAIL JOINT

* $\frac{5}{8}$ " \varnothing x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

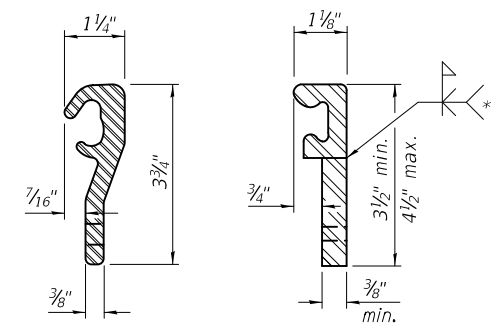
$\frac{3}{8}$ " \varnothing threaded rods in $\frac{7}{16}$ " \varnothing holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



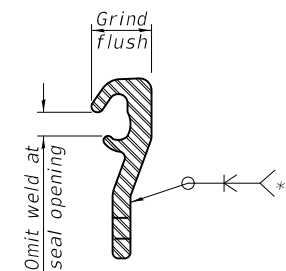
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL WELDED RAIL

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	56

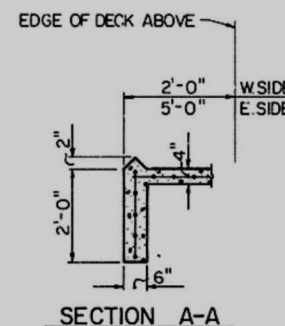
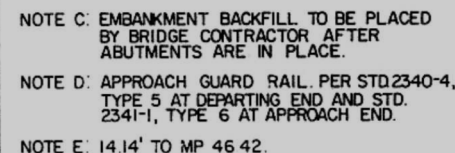
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum 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 $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
The manufacturer's recommended installation methods shall be followed.
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 $\frac{3}{16}$ " 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.

EJ-SS

8-11-17

DESIGNED - JOV	EXAMINED	DATE - AUGUST 9, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PREFORMED JOINT STRIP SEAL SN 090-0131	SHEET NO. 4 OF 4 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED	REVIS				155	90-106X[VB-1,HB-2]BJR,BRR	TAZEWELL	45	26
DRAWN - daburdell		REVIS				CONTRACT NO. 68E27				
CHECKED - JOV SMR						ILLINOIS FED. AID PROJECT				

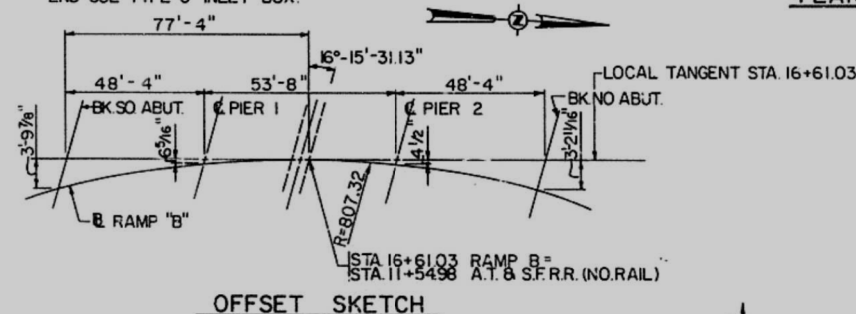
GENERAL NOTES



NOTE A: 16'-0" WIDE APPROACH PAVEMENT PER
STANDARD 2353-5.

NOTE B: APPROACH SHOULDER PAVEMENT PER
STANDARD 2324-6. AT EAST SHOULDER, SOUTH
END USE TYPE C INLET BOX.

PLAN



BORING LOCATIONS

B-1: 23.5' LT. STA. 17+44, R RAMP B
100.3' LT. STA. 46+35, S F.A.RTE. 406
B-2: 15.2' LT. STA. 15+86, R RAMP B
174.6' LT. STA. 47+78, S F.A.RTE. 406

CURVE DATA B RAMP B-2

P.I. STA. 16+57.44
 P.C. STA. 13+02.59
 P.T. STA. 19+71.26
 $\Delta = 47^{\circ}-27'-20.44''$
 $D = 7^{\circ}-05'-49.30''$
 $L = 668.67'$
 $R = 807.32'$
 $T = 354.86'$
 $E = 74.55'$
 $S.E. = 0.08\%$
 $SA = 11+74.59 - 13+66.59$
 $SR = 19+07.26 - 20+99.26$

A.T. & S.F. R.R.
BUILT 19 BY
STATE OF ILLINOIS
F.A. RTE. 406 SEC. 90-106X1 VB-
PROJECT DE-67(801)
STA. 16+61.03 LOADING HS20
STR. NO. 090-0127

LETTERING FOR NAME PLATE

(SEE STD. 2113)

DESIGN STRESSES

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (REINF.)
n = 9
ly = 50,000 p.s.i. (STR. ST)
ly = 36,000 p.s.i. (STR. ST)
LOADING HS 20-44 (+25 PSF
FUTURE WEARING SURFACE)

DESIGN SPECIFICATIONS: A.A.S.H.T.O.
1983 & 1984 AND 1985 & 1986 INTER
AND GUIDE SPECIFICATIONS FOR
HORIZONTALLY CURVED HIGHWAY
BRIDGES 1980 & INTERIMS

STATION	TOP OF RAIL ELEVATIONS	
	NO. RAIL	SO. RAIL
10+50	720.76	720.77
11+00	720.55	720.57
11+50	720.39	720.40
12+00	720.41	720.47
12+50	720.45	720.47


A.T. & S.F. R.R. PROFILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

3	BRIDGE OFFICE REVIEW	JCC	0-30-87
2	BRIDGE OFFICE REVIEW	JCC	10-9-87
1	BRIDGE OFFICE REVIEW	JCC	2-28-87
BY	DESCRIPTION	BY	DATE APPROVED

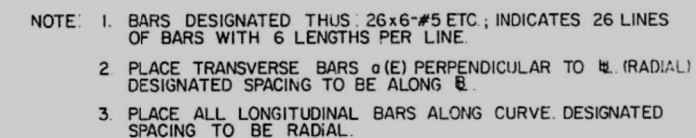
GENERAL PLAN AND ELEVATION

Design KWB	F.A. RTE. 406 RAMP B OVER A.T. & S.F. R.R.	SCALE NONE
Date 3-27-87		
Drawn JCC	F.A. RTE. 406 SEC. 90 (106X)VB-1	SWC PROJECT NO 034 - 8601-02
Date 3-27-87		
Checked JCC	TAZEWELL COUNTY STA. 16+61.03 (RAMP B)	CLIENT PROJECT NO P-94-145-85
Date 3-27-87		
Approved	STRUCTURE NO. 090-0127	DRAWING NO.
State	 BLANK, WESTLINK, COOK & ASSOCIATES, INC.	
Blank		
Appr.	ENGINEERS & CONSULTANTS	

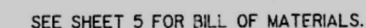
USER NAME = jochemsjg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/21/2019	DATE -	REVISED -

SCALE: NONE	SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A
-------------	---------	------	--------	----------	-------------

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]JR,BRR	TAZWELL	45	27
		CONTRACT NO. 68E27		
		ILLINOIS	FED. AID PROJECT	



MIN. BAR LAPS
#5 BAR-1'-8"



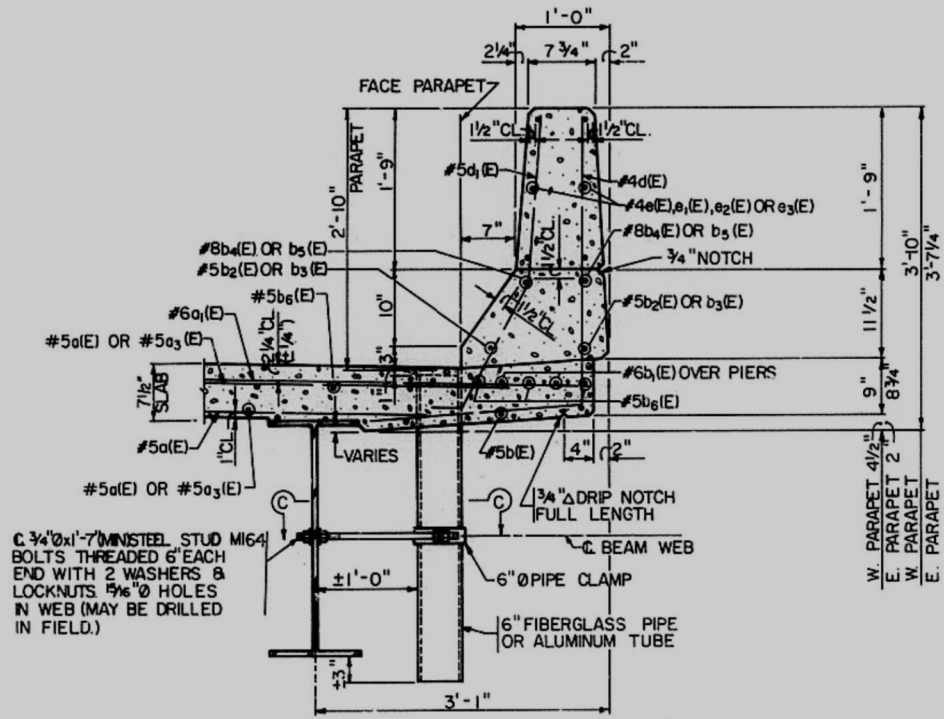
	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	155	90-106X[VB-1,HB-2]BJR,BRR	TAZWELL	45	28
1/A			CONTRACT NO. 68E27		
		ILLINOIS	FEED AID PROJECT		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

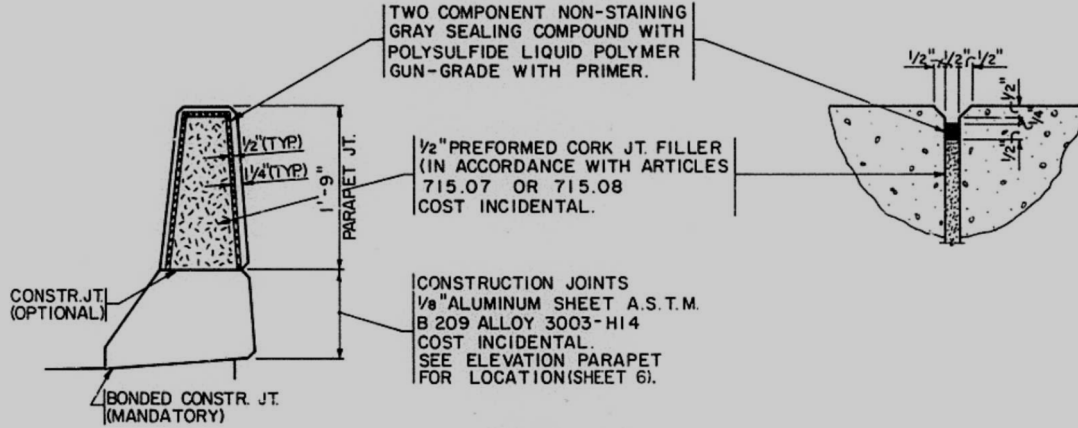
FOR INFORMATION ONLY

SCALE: NONE	SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A
-------------	---------	------	--------	----------	-------------

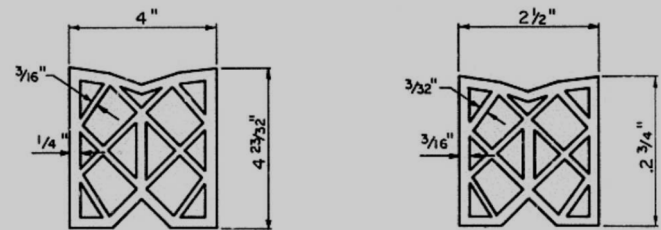
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZWELL	45	28
		CONTRACT NO. 68E27		
		ILLINOIS FED. AID PROJECT		



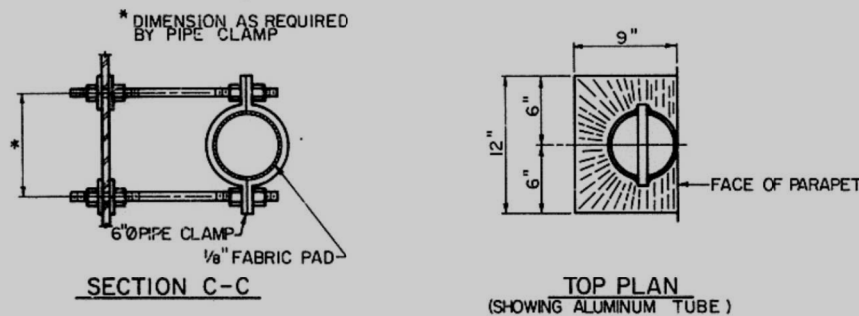
SECTION THRU PARAPET AND DRAIN



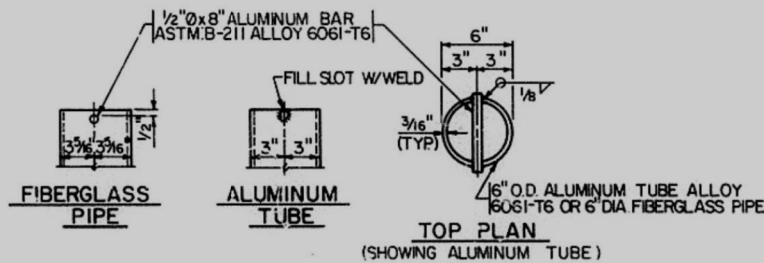
PARAPET JOINT DETAILS



PREFORMED JOINT SEAL (4") PREFORMED JOINT SEAL (2 1/2")



TOP PLAN (SHOWING ALUMINUM TUBE)

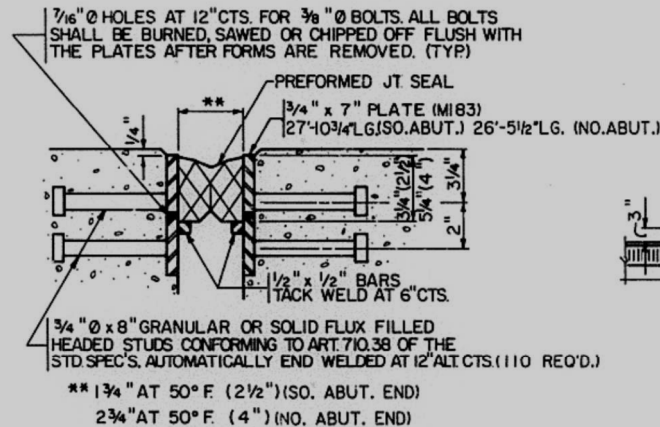


TOP PLAN (SHOWING ALUMINUM TUBE)

NOTES: THE EXTERIOR SURFACES OF THE FLOOR DRAIN SHALL BE PAINTED WITH THE VINYL ENAMEL COAT PAINTING SPECIFIED FOR STRUCTURAL STEEL. THE EXTERIOR SURFACES OF THE ALUMINUM TUBE SHALL BE CLEANED AND GIVEN A WASH COAT PRETREATMENT IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S SPEC. SSPC-SPI & SSPC-PAINT 27 PRIOR TO PAINTING.

FIBERGLASS PIPE SHALL CONFORM TO ASTM D2996, WITH SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MINIMUM. THE SURFACE OF THE FIBERGLASS PIPE SHALL BE FREE OF BOND INHIBITING AGENTS.

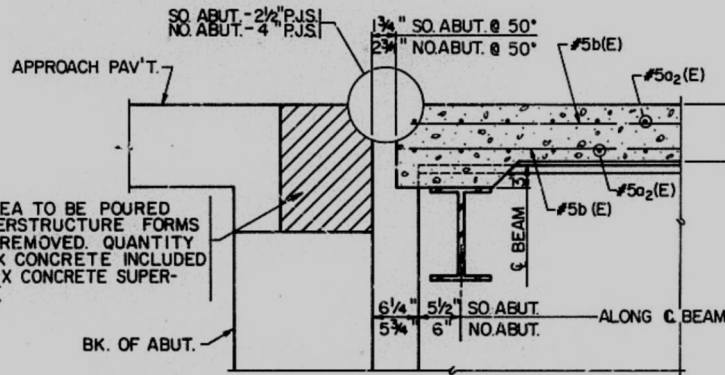
FLOOR DRAINS (6 REQ'D.)



SECTION

END OF SEAL TREATMENT

NOTE: AFTER FABRICATION ALL SURFACES OF THE STEEL PLATES SHALL BE GIVEN ONE SHOP COAT OF PAINT SPECIFIED FOR STRUCTURAL STEEL.



SECTION B-B

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	488	#5	27'-0"	
a1 (E)	292	#6	4'-0"	
a2 (E)	8	#5	15'-9"	
a3 (E)	24	#5	27'-0"	
b (E)	162	#5	25'-8"	
b1 (E)	58	#6	32'-6"	
b2 (E)	16	#5	6'-9"	
b3 (E)	24	#5	21'-0"	
b4 (E)	16	#8	6'-9"	
b5 (E)	24	#8	21'-11"	
b6 (E)	160	#5	31'-1"	
d (E)	294	#4	5'-4"	
d1 (E)	320	#5	3'-11"	
e (E)	48	#4	6'-9"	
e1 (E)	24	#4	20'-1"	
e2 (E)	24	#4	19'-8"	
e3 (E)	24	#4	19'-3"	

CLASS X CONCRETE SUPERSTRUCTURES CU. YD.	138.6
REINFORCEMENT BARS (EPOXY COATED) LB.	34,520
FLOOR DRAINS EACH	6
PREFORMED JOINT SEAL (2 1/2") LIN. FT.	31
PREFORMED JOINT SEAL (4") LIN. FT.	30

3	BRIDGE OFFICE REVIEW	JCC 10-30-87
2	BRIDGE OFFICE REVIEW	JCC 10-9-87
1	BRIDGE OFFICE REVIEW	JCC 8-28-87
REV. NO.	DESCRIPTION	BY DATE APPROVAL
SUPERSTRUCTURE		
Design KWB	F.A. RTE. 406 RAMP B OVER A.T. & S.F. R.R.	SCALE NONE
Date 3-27-87		
Drawn JCC	F.A. RTE. 406 SEC. 90-106X/VB-1	BWC PL. JECT NO. 034-8601-02
Date 3-27-87		
Checked JCC	TAZEWELL COUNTY	CLIENT PROJECT NO. P-94-145-85
Date 3-27-87		
Approved	STA 16+61.03 (RAMP B) STRUCTURE NO. 090-0127	DRAWING NO.
Date		
Blank	BLANK, WESSELINK, COOK & ASSOCIATES, INC.	
Appr.		
Date		
ENGINEERS & CONSULTANTS		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[Vb-1,HB-2]B[R,BRR]	TAZEWELL	45	29
CONTRACT NO. 68E27				
ILLINOIS FED. AID PROJECT				

NOTE A: 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).

VR IS THE MAXIMUM $L + IMPACT$ SHEAR RANGE IN SPAN.

F_b MAXIMUM ALLOWABLE STRESS F_{bu} OR F_{by} COMPUTED ACCORDING TO AASHTO [GUIDE SPECIFICATIONS FOR HORIZONTALLY CURVED HIGHWAY BRIDGES SECTION 2.12(B) & 2.16]

f_w IS THE CALCULATED NORMAL STRESS AT THE EDGE OF FLANGE DUE TO LATERAL FLANGE BENDING (FACTORED)

M_L AND R_L HAVE BEEN INCREASED DUE TO THE EFFECT OF CENTRIFUGAL FORCE AND SUPERELEVATION.

M_o (APPLIED MOMENT) = $1.3 [M + P + M_o + \frac{1}{2} (M_L + I)]$

f_s (TOTAL) IS THE SUM OF THE STRESSES DUE TO $1.3 [M + P + M_o + \frac{1}{2} (M_L + I)]$.

ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY I (AISC) OF THE QUALITY CERTIFICATION PROGRAM.

INTERIOR BEAM MOMENT TABLE			
	0.4 SPAN 1	PIER	0.5 SPAN 2
I_s (in ⁴)	4470	4470	4470
I_c (in ⁴)	13,006		13,006
S_s (in ³)	299	299	299
S_c (in ³)	458		458
Q (K/I)	0.868	1.241	0.868
M_o (K)	132	283	97
S_o (K/I)	0.373		0.373
M_L (K)	67		66
M_{IMP} (K)	367	105	383
M_{IMP} (K)	98	47	97
$\frac{1}{2} (M_L + I)$ (K)	775	353	800
M_o (K)	1266	827	1252
f_s (NON-COMP) (ksi)	53	11.4	3.9
f_s (COMP) (ksi)	18		1.7
$f_s \frac{1}{2} (L + I)$ (ksi)	20.3	14.2	21.0
f_w (ksi)	3.48	2.27	3.44
f_s (TOTAL) (ksi)	35.6	33.3	34.6
VR (K)	54.4		57.0
F_b (ksi)	50	36.25	50

FOR NOMENCLATURE, SEE NOTE A

INTERIOR BEAM REACTION TABLE		
	ABUT	PIER
R_o (K)	22.2	67.9
R_L (K)	42.6	50.2
IMP (K)	11.3	13.0
R TOTAL (K)	76.1	131.1

BEAM LAYOUT DIMENSIONS (MEASURED IN FEET)

BEAM	C. BRG. SO. ABUT.		C. BRG. PIER NO. 1		C. SPLICE 1		C. BRG. PIER NO. 2		C. SPLICE 2		C. BRG. NO. ABUT.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	.873	2.992	.099	.340	.030	.104	.158	.542	.275	.944	.991	3.397
2	.939	3.221	.120	.412	.042	.144	.137	.469	.248	.850	.942	3.231
3	1.010	3.462	.144	.494	.056	.191	.118	.403	.222	.761	.894	3.067
4	1.083	3.715	.169	.579	.071	.243	.098	.337	.198	.677	.848	2.907

BEAM	RADIUS IN FEET	LOCATION	
		M	N
1	825.820	13'-1 1/2"	29'-10 7/8"
2	818.153	15'-4 1/4"	27'-8 1/4"
3	810.487	17'-7 1/8"	25'-5 3/4"
4	802.820	19'-9 1/4"	23'-3 7/8"

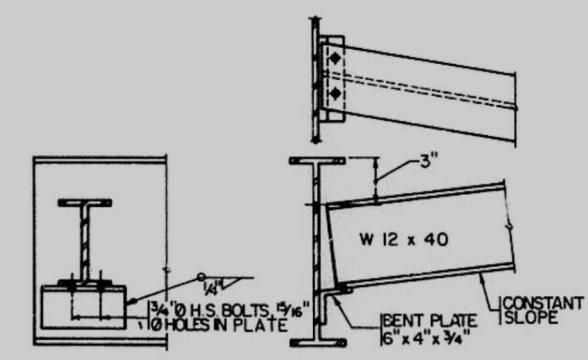
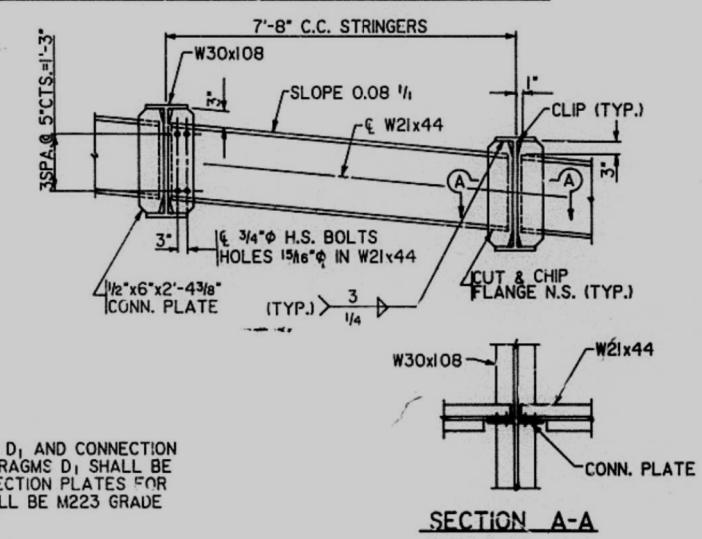
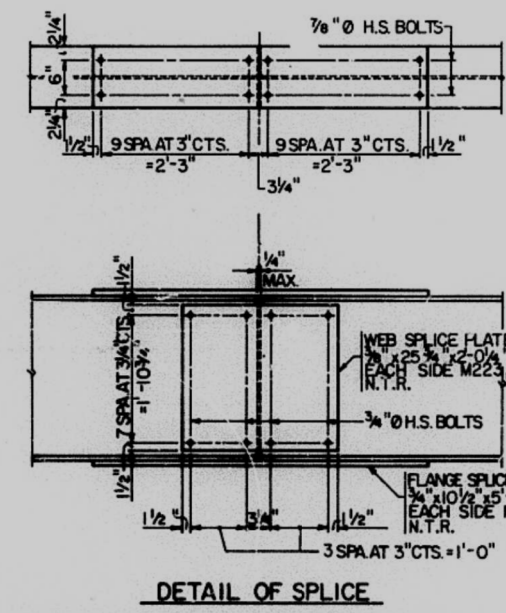
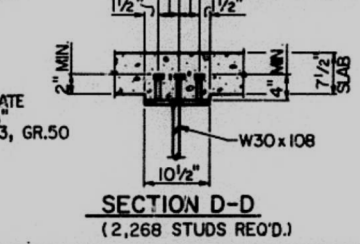
BEAM	BEAM DIMENSIONS & TOTAL LENGTH					
	A	B	C	D	E	TOTAL
1	47'-0 3/4"	10'-7 1/8"	43'-0 3/8"	9'-7"	35'-10 5/8"	146'-17 1/8"
2	47'-4 3/8"	10'-7 3/8"	43'-0 1/2"	9'-7 3/8"	35'-10 1/2"	146'-3 3/8"
3	47'-2 1/8"	10'-7 1/8"	43'-0 7/8"	9'-7 1/8"	35'-10 1/2"	146'-4 3/4"
4	47'-2 7/8"	10'-7 7/8"	43'-1 1/8"	9'-7 7/8"	35'-10 1/2"	146'-6 1/4"

TOP OF BEAM ELEVATIONS

LOC.	BM	1	2	3	4
C. BRG. SO. ABUT.		748.50	747.87	747.24	747.60
C. BRG. PIER NO. 1		748.62	748.00	747.38	746.76
C. SPLICE 1		748.63	748.01	747.39	746.77
C. BRG. PIER NO. 2		748.70	748.09	747.47	746.86
C. SPLICE 2		748.70	748.09	747.47	746.86
C. BRG. NO. ABUT.		748.72	748.11	747.50	746.89

*FOR FABRICATION ONLY

3/4" GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED



DIAPHRAGMS D AND D₁ AND CONNECTION PLATES FOR DIAPHRAGMS D₁ SHALL BE M183 STEEL. CONNECTION PLATES FOR DIAPHRAGMS D SHALL BE M223 GRADE 50 STEEL.

NOTE: HARDENED WASHERS SHALL BE REQ'D. OVER 1 1/16" ϕ HOLES IN ANGLES AND PLATES. 2 WASHERS PER BOLT.

DIAPHRAGM D (24 REQUIRED)

INTERIOR DIAPHRAGM LAYOUT DIMENSIONS

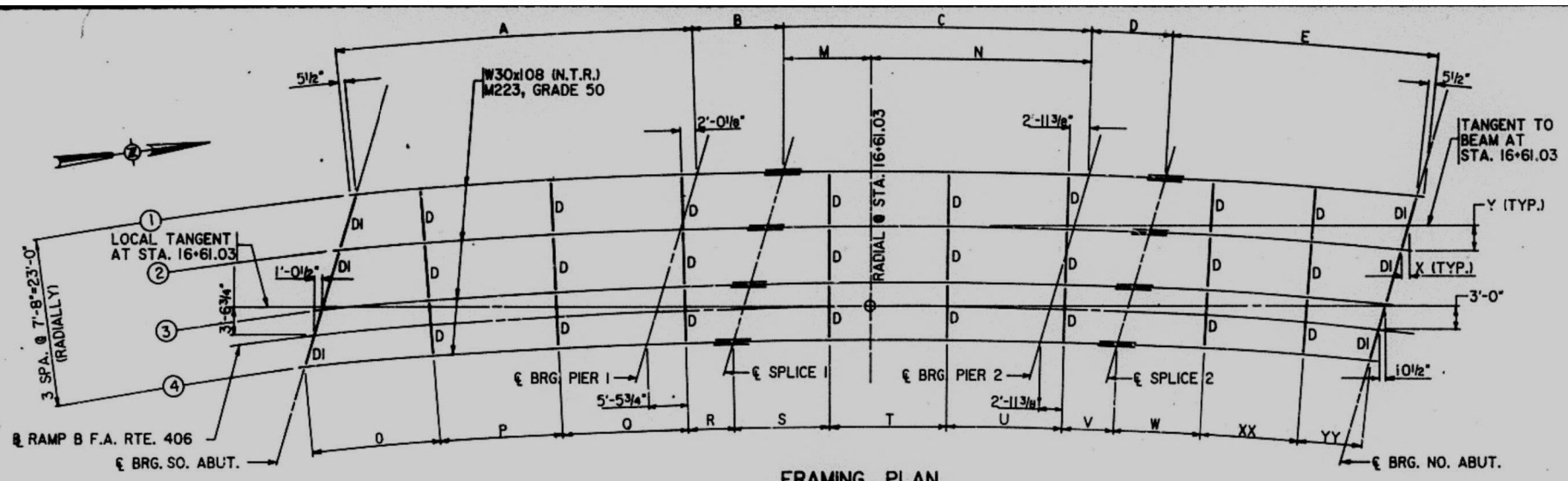
BEAM	O	P	Q	R	S	T	U	V	W	XX	YY
1	8'-9"	17'-11"	17'-11"	12'-7 1/4"	7'-4 7/8"	16'-4 1/8"	16'-4 1/8"	12'-6 1/2"	7'-5 1/2"	13'-11 3/4"	13'-11 3/4"
2	11'-7 1/8"	17'-9"	17'-9"	10'-1 5/8"	9'-8 1/8"	16'-2 1/4"	16'-2 1/4"	10'-7 1/8"	9'-2 5/8"	13'-10 1/4"	12'-4 1/4"
3	14'-6 3/8"	17'-7"	17'-7"	7'-7 3/4"	11'-11 3/4"	16'-0 1/2"	16'-0 1/2"	8'-8"	10'-11 5/8"	13'-8 3/8"	10'-8 3/8"
4	17'-5"	17'-5"	17'-5"	5'-2"	14'-3 3/4"	15'-0 5/8"	15'-10 5/8"	6'-8 1/2"	12'-8 7/8"	13'-7 1/8"	9'-1 1/8"

BEAM ELEVATION (SHOWING SHEAR STUD SPACING)

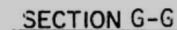
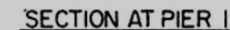
BEAM	F	G	H	J	K	L
1	3"	12'-8 3/8"	13'-3 1/4"	8"	12'-3 1/8"	10"
2	4"	12'-7 7/8"	13'-3 7/8"	8"	12'-3 1/2"	10"
3	5"	12'-7 3/8"	13'-3 1/8"	8"	12'-3 3/4"	10"
4	5"	12'-8 3/8"	13'-4"	8"	12'-4"	10"

FRAMING PLAN

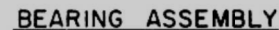
N.T.R. DENOTES NOTCH TOUGHNESS REQUIREMENT



MODEL: Default
FILE: \\wms\p\planroom\dot\illinois\dot\Documents\DOT Offices\District 4\Projects\CD4_68E27\CD4Data\CD4Drawings\Job.dgn
6/21/2019 10:44:11 AM



(4 REG'D AT PIER #1)

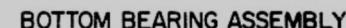


NOTE: SHIM PLATES SHALL NOT BE PLACED
UNDER BEARING ASSEMBLY.



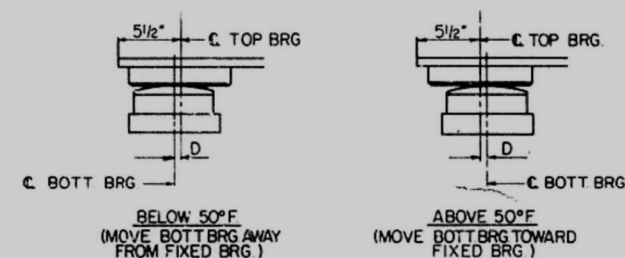
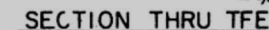
NOTE ② THE 1/8" TFE SHEET SHALL BE BONDED DIRECTLY TO THE TOP STEEL PLATE WITH A TWO-COMPONENT, MEDIUM VISCOSITY EPOXY RESIN, CONFORMING TO THE REQUIREMENTS OF THE FEDERAL SPEC. MMM-A-134, TYPE I. THE BOND AGENT SHALL BE APPLIED ON THE FULL AREA OF THE CONTACT SURFACES.

BONDING OF 1/8" TFE SHEET DURING VULCANIZING PROCESS
WILL BE PERMITTED PROVIDED THE PROCESS AND METHOD
OF ADJUSTING ASSEMBLY HEIGHT IS APPROVED BY THE
ENGINEER.



(4 REQ'D. AT NO. ABUTMENT)


****SIDE RETAINERS TO BE USED AT INSIDE FACE OF EXTERIOR STRINGERS ONLY (TYPE II) AND AT EACH FACE OF EACH STRINGER (TYPE I). EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.**



D = 1/8" PER EACH 100' OF EXPANSION FOR EVERY 15° F
TEMP CHANGE FROM THE NORMAL TEMP OF 50° F.

NOTE: ① AFTER BEAMS HAVE BEEN ERECTED HOLES AT EXPANSION BEARINGS SHALL BE DRILLED AND ANCHOR BOLTS GROUTED IN PLACE. FOR ANCHOR BOLT INSTALLATION SEE SH.14

STRUCTURAL STEEL

Design JCC	F.A.RTE.406 RAMP B OVER A.T. & S.F. R.R.	Scale NONE
Date		
Drawn JCC	F.A.RTE.406 SEC. 09-(106X)VB-1	ENC. REFERENCE 034-8601-02
Date	TAZEWELL COUNTY	
Checked TRC	STA.16+61.03 (RAMP B)	ENC. REFERENCE P-94-144-85
Date	STRUCTURE NO. 090-0127	
Approved	 BLAIR, WESBELLINK & ASSOCIATES, INC.	ISSUING FIRM
Engineer		
Scale	ENGINEERS • CONSULTANTS	

USER NAME = jochumsjg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

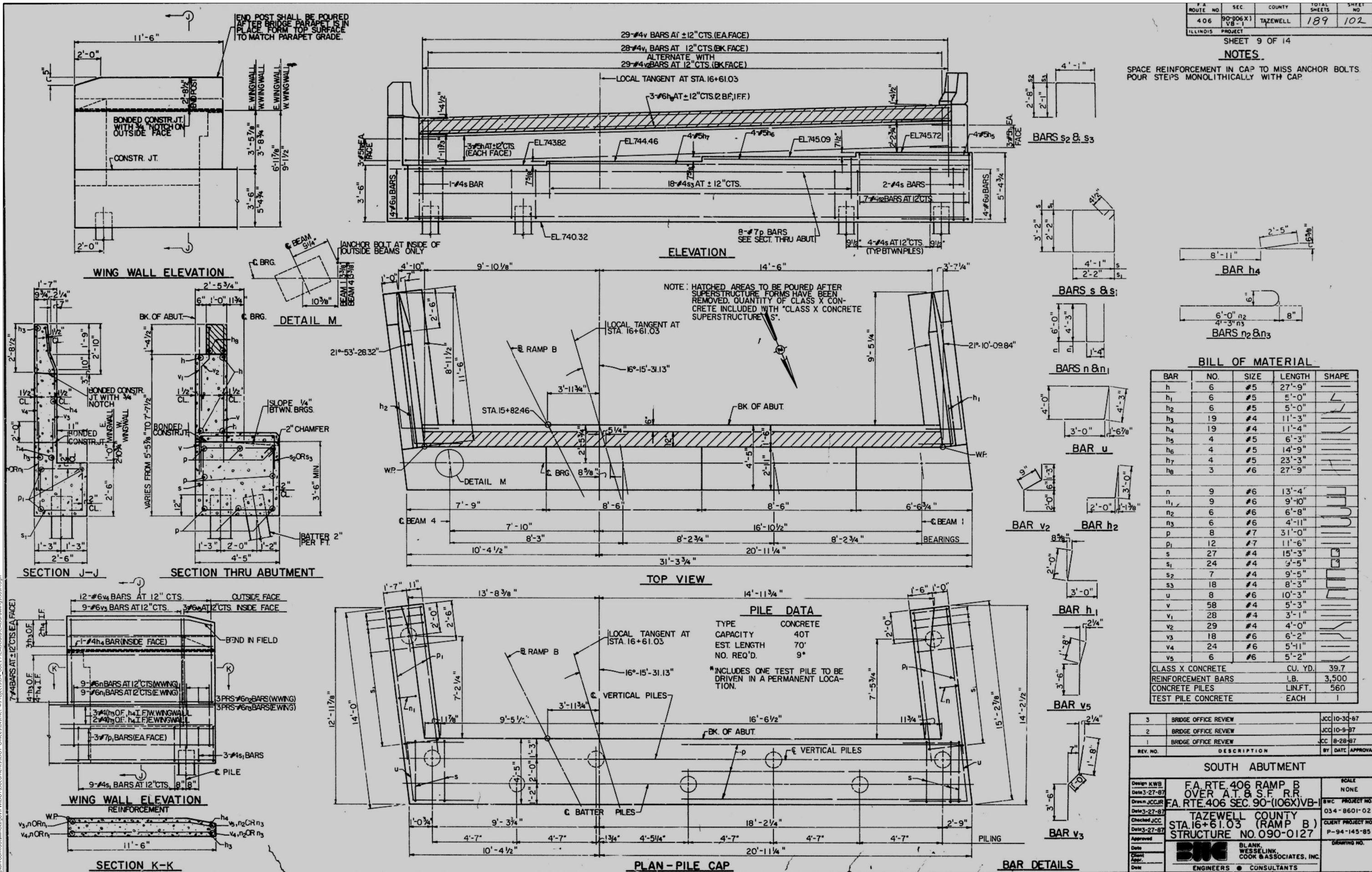
FOR INFORMATION ONLY

SCALE: NONE	SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A
-------------	---------	------	--------	----------	-------------

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X{VB-1,HB-2}BJR,BRR	TAZWELL	45	31
		CONTRACT NO. 68E27		
		ILLINOIS FED. AID PROJECT		

NOTES

SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
POUR STEPS MONOLITHICALLY WITH CAP.



USER NAME = jochumsjg

DESIGNED -

REVISED -

DRAWN -

REVISED -

REVISED -

PLOT SCALE = 100,000' / in.

CHECKED -

REVISED -

PLOT DATE = 6/21/2019

DATE -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

SCALE: NONE

SHEET 1

OF 4

SHEETS

STA. N/A

TO STA. N/A

F.A.I.

RTE.

SECTION

COUNTY

TOTAL SHEETS

SHEET NO.

155

90-106X[VB-1,HB-2]B[R,BRR]

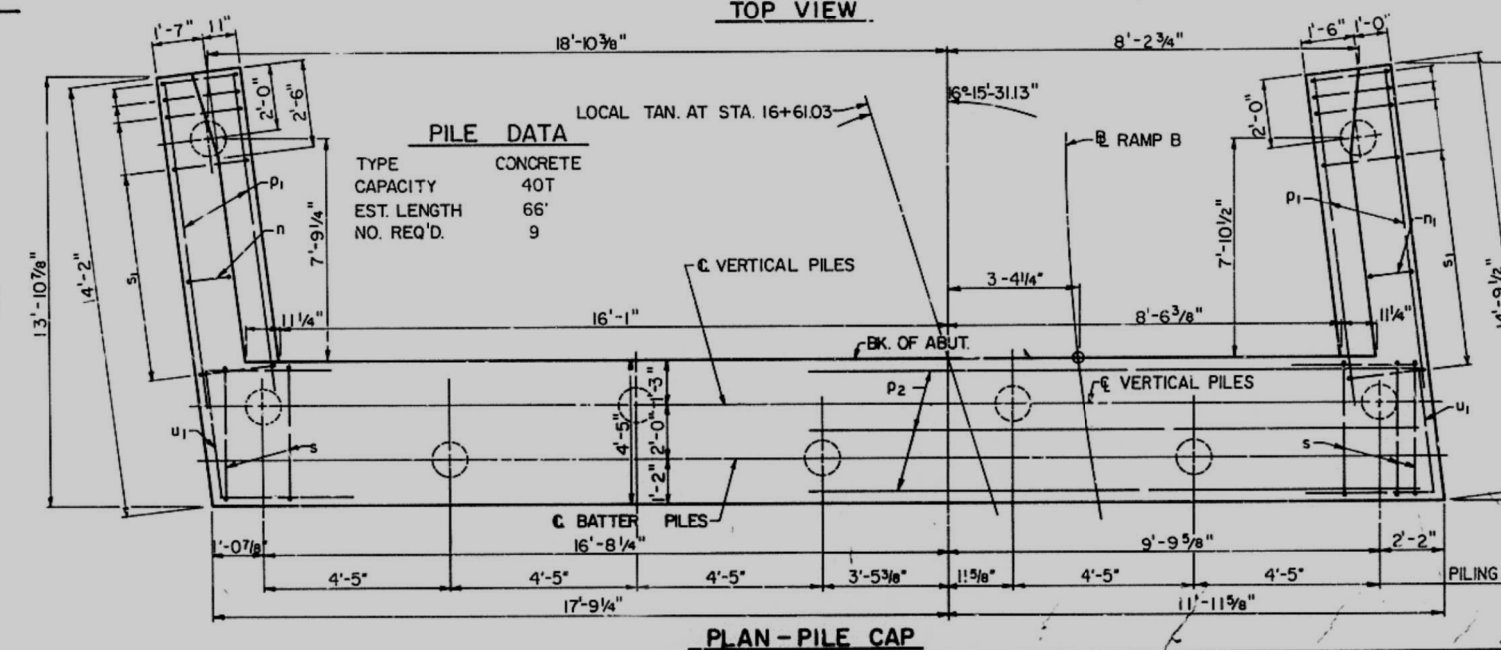
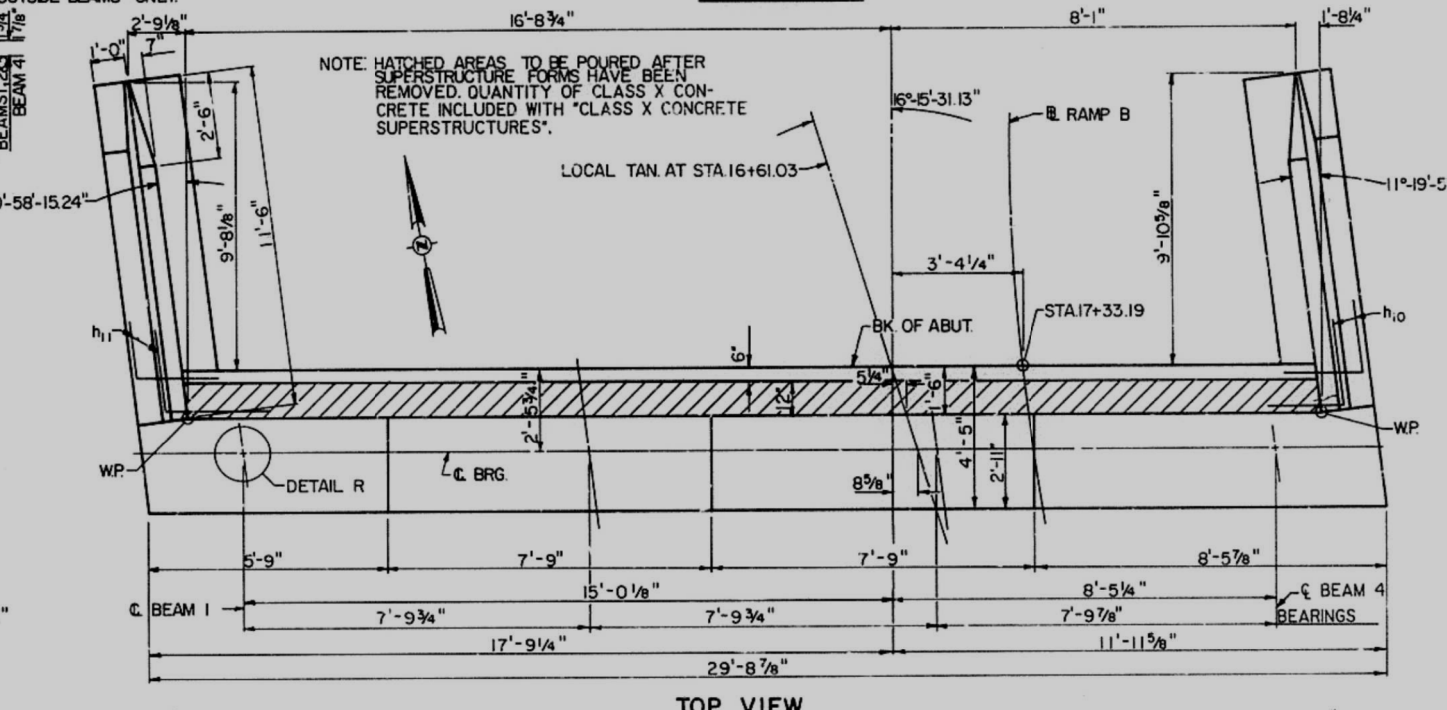
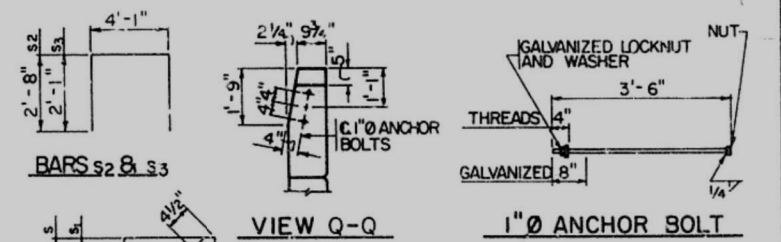
TAZEWELL

45

CONTRACT NO.

68E27

ILLINOIS FED. AID PROJECT



3	BRIDGE OFFICE REVIEW	JCC	10-30-87
2	BRIDGE OFFICE REVIEW	JCC	8-9-87
1	BRIDGE OFFICE REVIEW	JCC	8-28-87
REV. NO.	DESCRIPTION	BY	DATE
NORTH ABUTMENT			
Design K/VB	F.A. RTE. 406 RAMP B	SCALE	NONE
Date 3-27-87	OVER A.T. & S.F. R.R.	SWC	PROJECT NO.
Drawn JCCJR	F.A. RTE. 406 SEC. 90-(106X)VB-1	034-U601-02	
Date 3-27-87	TAZEWELL COUNTY	CURRENT PROJECT NO.	
Checked JCC	STA. 16+61.03 (RAMP B)	P-94-145-8	
Date 3-27-87	STRUCTURE NO. 090-0127	DRG. TO NO.	
Approved	BWC	BLANK, WESSELINK, COOK & ASSOCIATES, INC.	
Date			
Client			
Asst.			
Date			
	ENGINEERS	CONSULTANTS	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]BJR,BRR	TAZWELL	45	33
		CONTRACT NO. 68E27		
		ILLINOIS	FED. AID PROJECT	

TBM 110: FAP 406 STA 138+45, 483' LEFT
MAIN STREET STA 9+13, 83' LEFT
RR SPIKE IN POWER POLE,
ELEV 694.12

NO EXISTING STRUCTURE.

STATION 146+18.00
BUILT 199 BY
STATE OF ILLINOIS
F.A.P. RT. 406 SEC. 90-(106X)HB-2
F.A. PROJ. ACB-ACF-0067(803)
LOADING HS 20
STR. NO. 090-0131

NAME PLATE

(SEE STD 2113)
FOR LOCATION SEE PLAN

GENERAL NOTES:

- SEE PROPOSAL FOR BORING DATA.
- FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" Ø, OPEN HOLES 15/16" Ø, UNLESS OTHERWISE NOTED.
- CALCULATED WEIGHT OF STRUCTURAL STEEL (M183) = 278,857 LBS.
CALCULATED WEIGHT OF STRUCTURAL STEEL (M223) = 491,797 LBS.
- THE ZINC-SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
- ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER SUPPORTS.
- THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
- SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.
- BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
- CONCRETE PILES AT ABUTMENTS SHALL BE DRIVEN IN HOLES PRECURED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.09(c) OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT PIER AND EA. ABUT. AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
- THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF THE ABUTMENTS. PILE DRIVING AT THE ABUTMENTS SHALL BE DELAYED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY III (AISC) OF THE QUALITY CERTIFICATION PROGRAM.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

John W. Clark
Registered Structural Engineer

BILL OF MATERIAL

ITEM	UNIT	QUANTITIES		
		SUB-STRUCT	SUPER-STRUCT	TOTAL
SAND BACKFILL	CU. YD.	184	----	184
* PROTECTIVE COAT	SQ. YD.	---	1721	1721
** FLOATING BEARING ASSEMBLY, FIXED	EACH	---	2	2
** FLOATING BEARING ASSEMBLY, GUIDED EXPANSION	EACH	---	8	8
CLASS X CONCRETE	CU. YD.	269.5	----	269.5
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	---	466.2	466.2
FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	---	7	7
STUD SHEAR CONNECTORS	EACH	160	2448	2608
REINFORCEMENT BARS	POUND	41,910	6990	48,890
REINFORCEMENT BARS (EPOXY COATED)	POUND	---	100,640	100,640
CONCRETE PILES	LIN. FT.	4718	----	4718
TEST PILE CONCRETE	EACH	3	----	3
NAME PLATES	EACH	---	1	1
SLOPEWALL 4 INCH	SQ. YD.	617	----	617
NEOPRENE EXPANSION JOINT, 4 INCH	LIN. FT.	---	56	56
PERMANENT SURVEY MARKER, TYPE 1	EACH	---	1	1
DRAINAGE SCUPPERS	EACH	---	3	3
STRUCTURE EXCAVATION	CU. YD.	521	----	521
BRIDGE SEAT SEALER	LUMP SUM	1	----	1

** SEE SPECIAL PROVISIONS
* INCLUDES BRIDGE DECK SURFACE

"I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT, AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES."

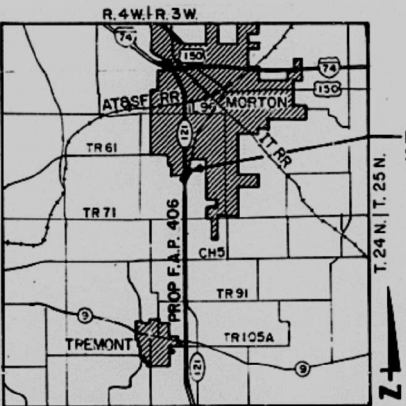
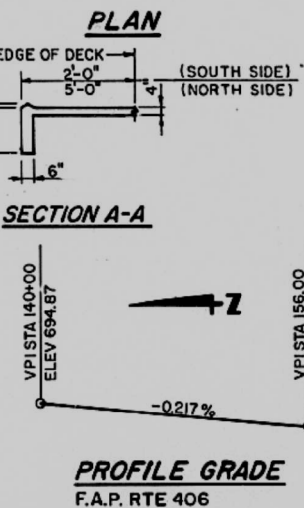
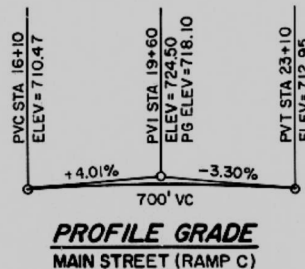
Woodrow C. Chenault, Jr.
WOODROW C. CHENAULT, JR.
ILLINOIS REGISTERED STRUCTURAL
ENGINEER NO. 3567
DATE 2-23-08



GENERAL PLAN AND ELEVATION

MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131

DESIGNED	JF-J
CHECKED	WCC
DRAWN	DEH
CHECKED	WCC



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

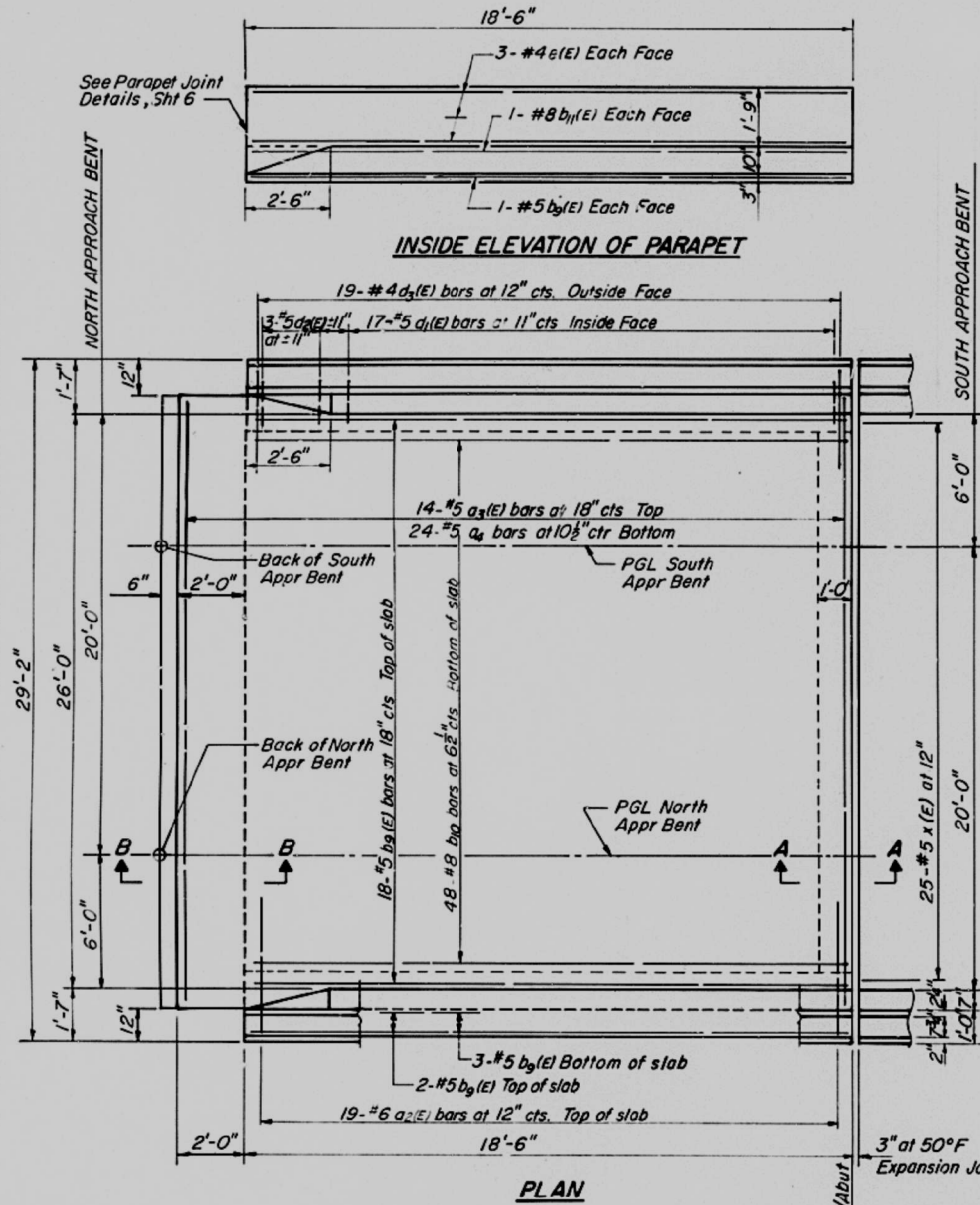
FOR INFORMATION ONLY

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

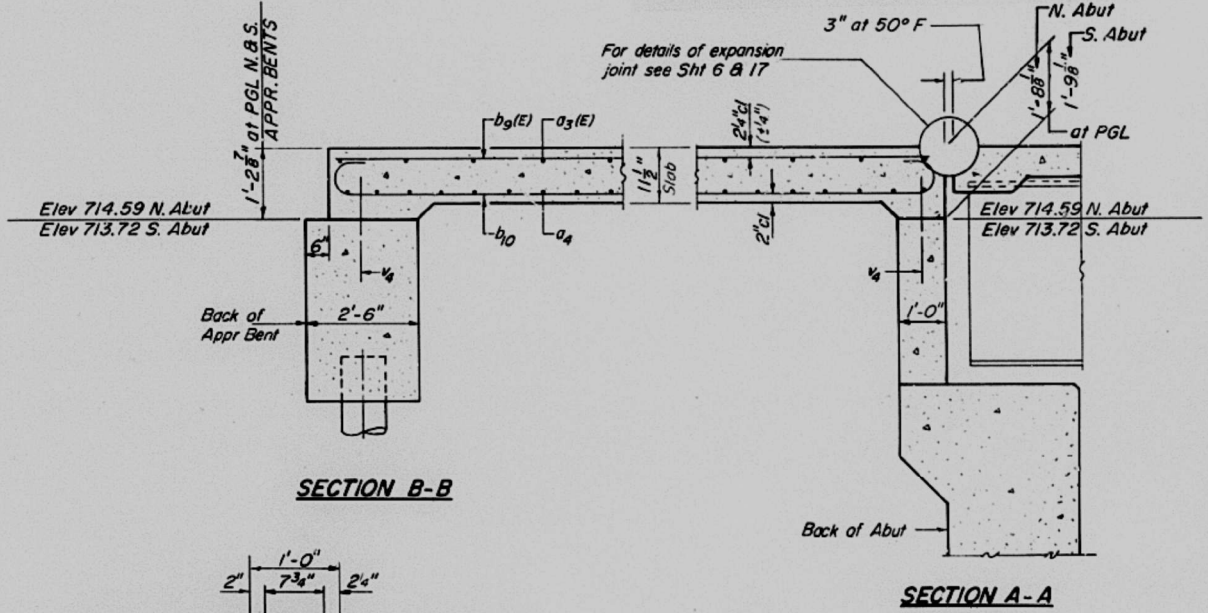
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]B,R,BR	TAZEWELL	45	34
CONTRACT NO. 68E27				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

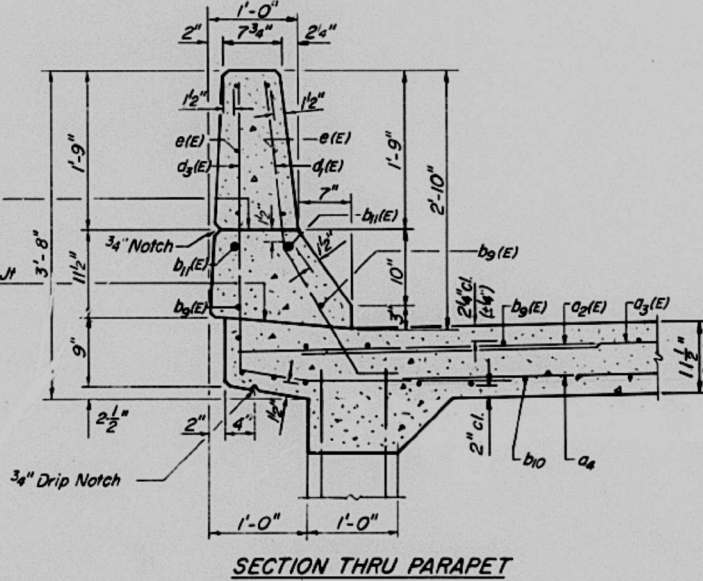
ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO.
F.A.P. 406	90-(106X)HB-2	TAZEWELL	237	81	4
F.H.W.A. REG. 4	ILLINOIS PROJECT *				20
					*F406 ()



NORTH APPROACH BENT
SOUTH APPROACH BENT



BAR x (E)



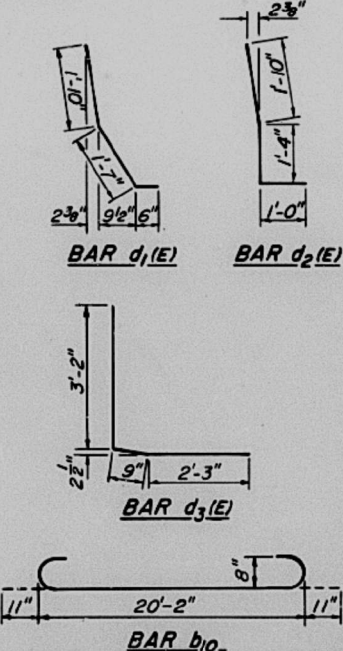
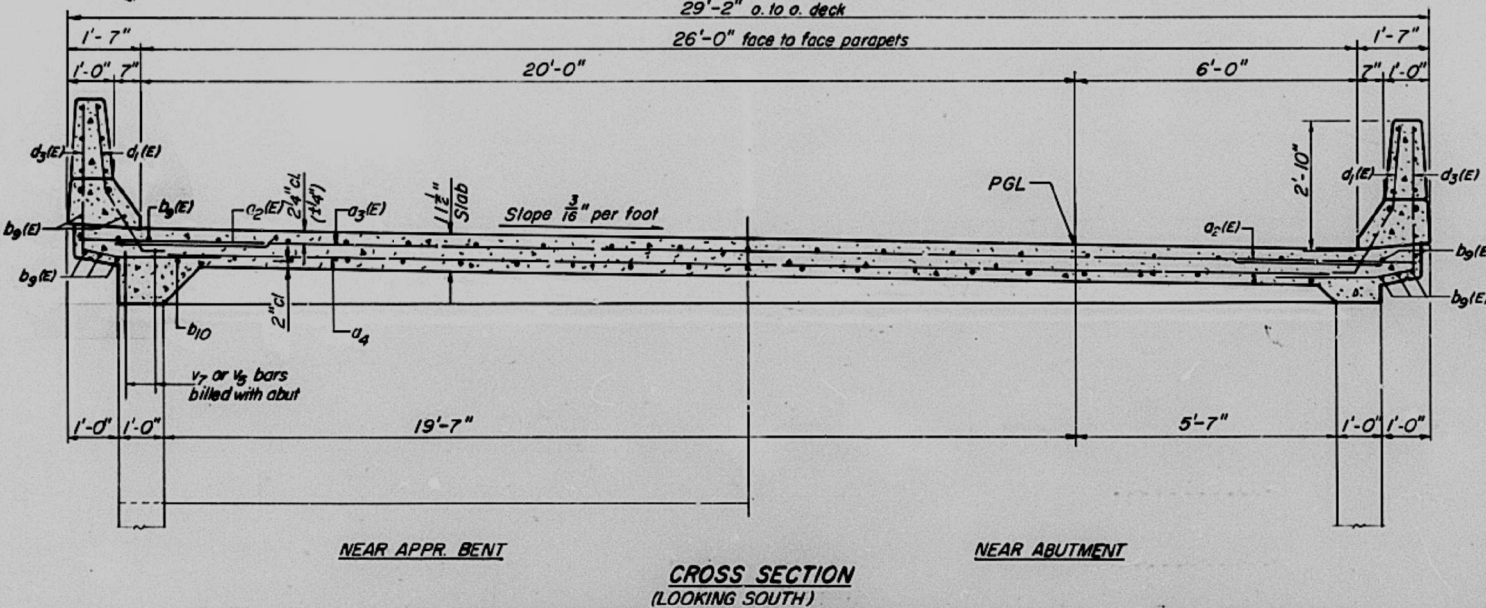
TWO APPR. SLABS BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a ₂ (E)	76	#6	4'-0"	—
a ₃ (E)	28	#5	26'-10"	—
a ₄	48	#5	26'-10"	—
b ₉ (E)	64	#5	20'-2"	—
b ₁₀	96	#8	22'-0"	—
b ₁₁ (E)	8	#8	18'-2"	—
d ₁ (E)	68	#5	3'-11"	—
d ₂ (E)	12	#5	4'-2"	—
d ₃ (E)	76	#4	6'-2"	—
e(E)	24	#4	18'-2"	—
x(E)	50	#5	4'-1"	—
Reinforcement Bars			Lbs.	6980
Reinforcement Bars (Epoxy Coated)			Lbs.	4120
Class X Concrete Superstructure			Cu Yds	62.2

Reinforcement bars designated (E) shall be epoxy coated.

APPROACH SLAB DETAILS
MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131

DESIGNED	JFJ
CHECKED	LMG
DRAWN	DEH
CHECKED	WCC

SA-2-0 12-1-83



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

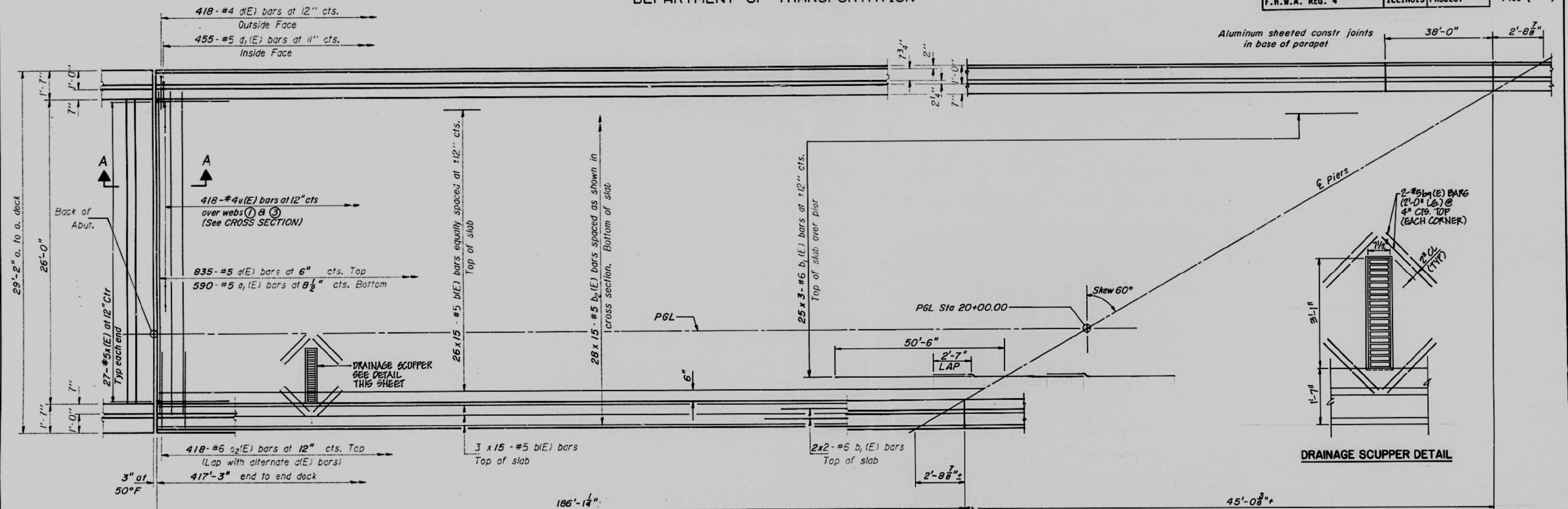
USER NAME	= jochumsjg	DESIGNED	-	REVISED	-
PLOT SCALE	= 100,000' / in.	DRAWN	-	REVISED	-
PLOT DATE	= 6/21/2019	CHECKED	-	REVISED	-
		DATE	-	REVISED	-

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

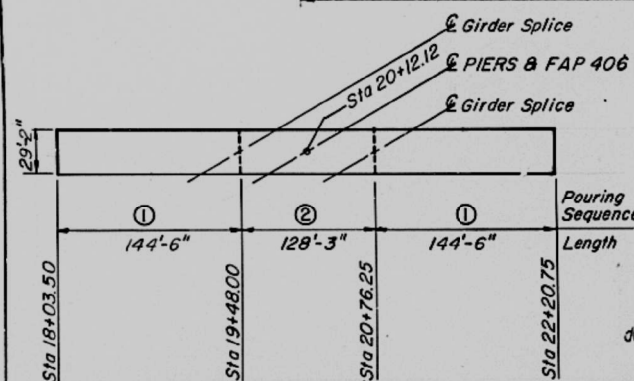
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]B,R,BRR	TAZEWELL	45	35
				CONTRACT NO. 68E27
				ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO.
F.A.P. 406	90-(106X)HB-2	TAZEWELL	237	82	5
F.H.W.A. REG. 4	ILLINOIS	PROJECT *			SHEETS 20
					*F406 ()



HALF PLAN



SLAB PLAN SHOWING SEQUENCE
OF CONCRETE PLACEMENT

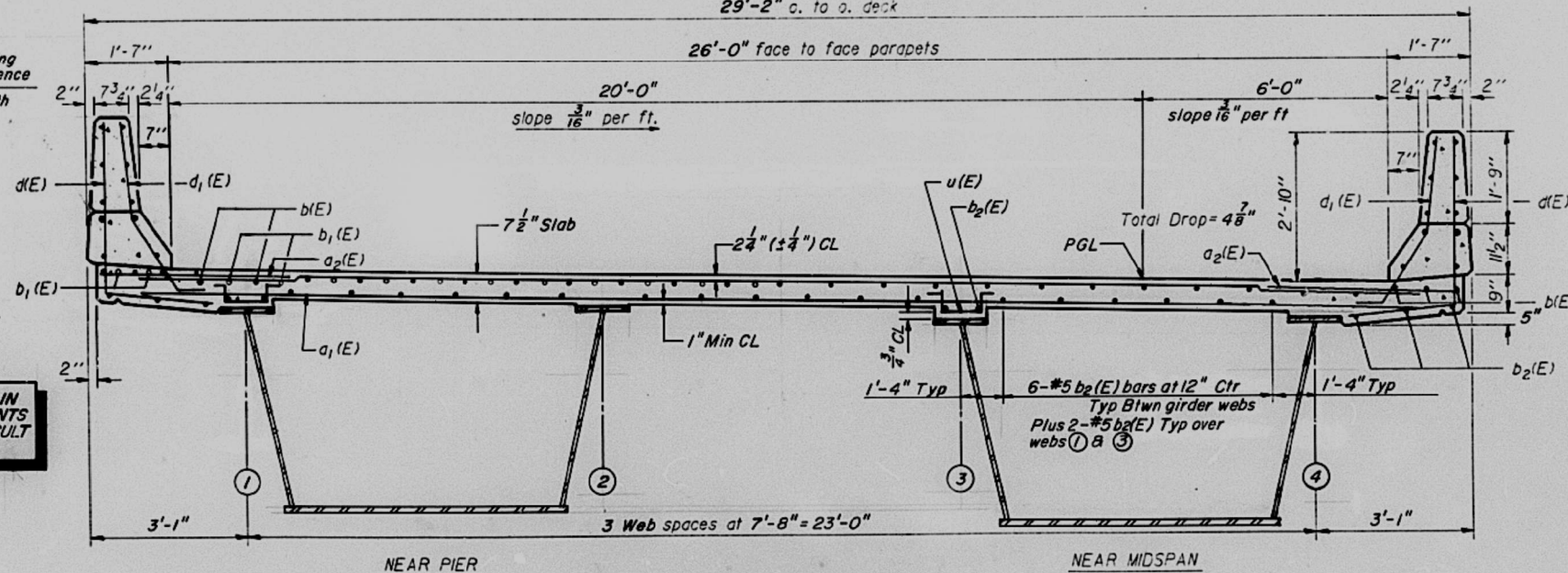
(Allow Concrete to Reach Design Strength Prior to Pouring
Next Sequence if Single Pour Construction Not Used.)

*Optional Bonded Construction Joint

NOTE: CONCRETE MUST BE PLACED SIMULTANEOUSLY IN
NORTH & SOUTH SPANS. PROCEED FROM THE ABUTMENTS
TOWARD THE PIER. UNBALANCED PLACEMENT WILL RESULT
IN EXCESSIVE DEFLECTIONS.

DESIGNED	JFJ
CHECKED	LMG
DRAWN	DEH
CHECKED	LMG

S-2-0 12-1-83



CROSS SECTION

(Looking Southwest)

Notes: See sheet #6 for superstructure details
and Bill of Material.
Reinforcement bars designated (E) shall be
epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates
20 lines of bars with 3 lengths per line.

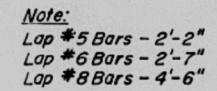
SUPERSTRUCTURE SLAB
MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

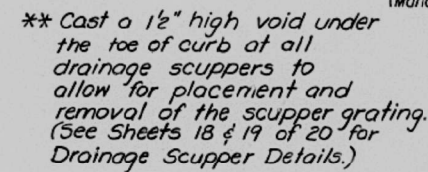
FOR INFORMATION ONLY

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

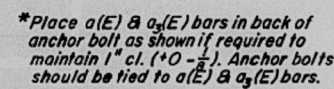
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]B,R,BRR	TAZEWELL	45	36
				CONTRACT NO. 68E27
		ILLINOIS		FED. AID PROJECT



Bar	No.	Size	Length	Shape
a(E)	835	#5	27'-2"	_____
a ₁ (E)	590	#5	27'-2"	_____
a ₂ (E)	836	#6	4'-0"	_____
b(E)	480	#5	29'-8"	_____
b ₁ (E)	87	#6	35'-5"	_____
b ₂ (E)	420	#5	29'-8"	_____
b ₃ (E)	28	#5	29'-5"	_____
b ₄ (E)	24	#5	26'-1"	_____
b ₅ (E)	8	#5	20'-0"	_____
b ₆ (E)	24	#8	35'-11"	_____
b ₇ (E)	8	#8	37'-9"	_____
b ₈ (E)	20	#8	33'-2"	_____
b ₉ (E)	24	#6	28'-0"	_____



BAR x (E)



BAR u (E)

$d(E)$	836	#4	4'-9"	L
$d_1(E)$	910	#5	3'-11"	L
$e(E)$	12	#4	21'-10"	—
$e_1(E)$	240	#4	18'-9"	—
$e_2(E)$	12	#4	14'-10"	—
$u(E)$	836	#4	3'-10"	—
$x(E)$	54	#5	4'-1"	—

Reinforcement Bars: (Epoxy Coated)	Lbs	96,520
Glass X Concrete Superstructure	Cu Yd	404.0
Permanent Survey Marker, Type 1	Each	1

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	JPT
CHECKED	LMG
DRAWN	DEH
CHECKED	LMG

S-I-D 12-1-83

USER NAME = jochemsjg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/21/2019	DATE -	REVISED -

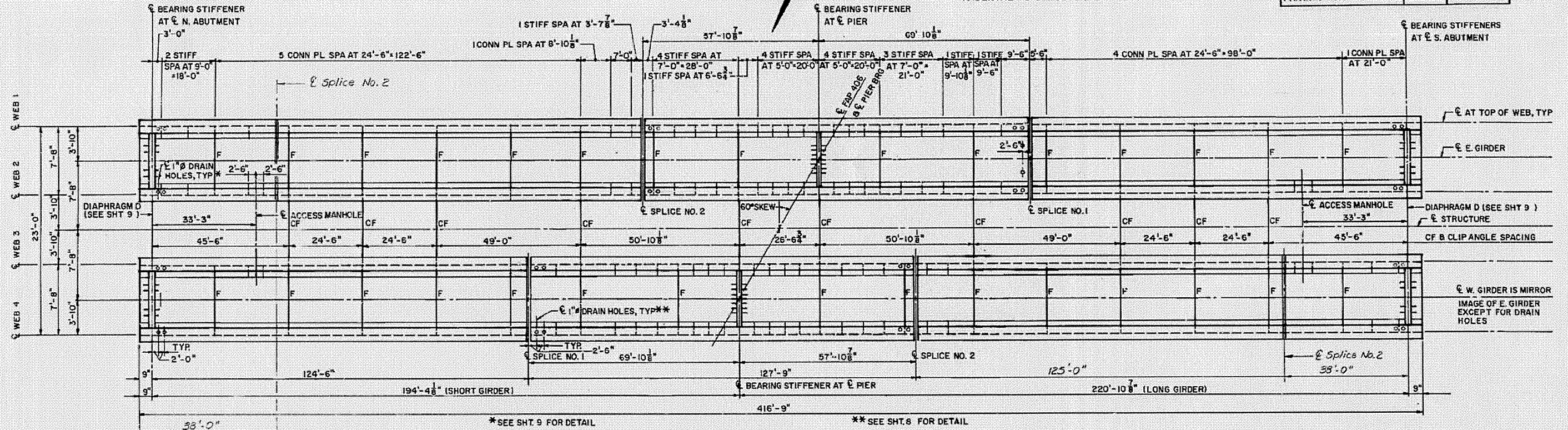
FOR INFORMATION ONLY

SCALE: NONE	SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A
-------------	---------	------	--------	----------	-------------

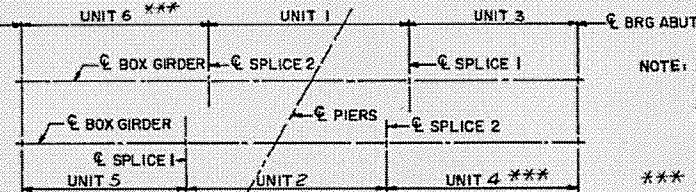
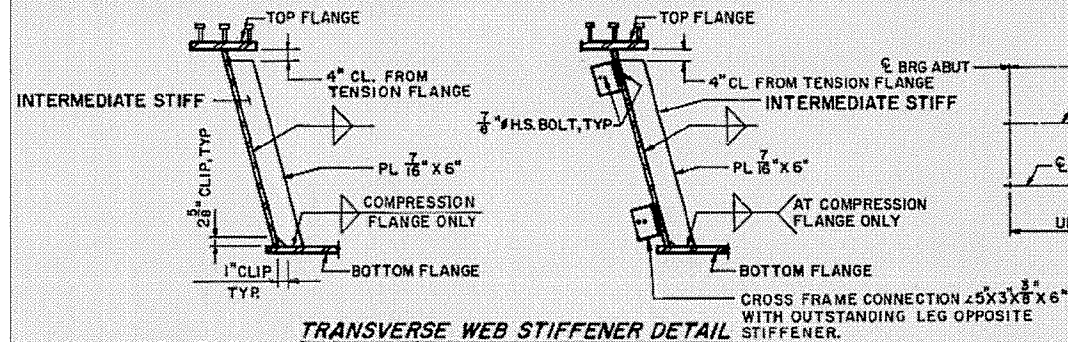
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X VB-1,HB-2 BJR,BRR	TAZWELL	45	37
		CONTRACT NO. 68E27		
		ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO.
F.A.P. 406	90-106X)HB-2	TAZEWELL	237	84	7
F.H.W.A. REG. 4	ILLINOIS	PROJECT	*	F406 ()	20

NOTE: ALL DRAIN HOLES SHALL HAVE STAINLESS STEEL MESH ($\frac{1}{4}$ " MAX OPENING) PRESS FIT INTO HOLES (COST INCIDENTAL TO STRUCTURAL STEEL)



PLAN



FIELD ERECTION SEQUENCE

THE SEQUENCE OF FIELD ERECTION OF THE BOX GIRDERS SHALL BE UNIT 1 THRU UNIT 6 IN NUMERICAL ORDER.

NOTE: FOR UNITS 1 & 2, COMPRESSION FLANGES ARE BOTTOM FLANGES. FOR UNITS 3, 4, 5 & 6 COMPRESSION FLANGES ARE TOP FLANGES.

*** Splice Units 6 & 4 in field prior to erection, $L = 163'-9"$.

BOX GIRDER MOMENT TABLE (LOAD FACTOR DESIGN)

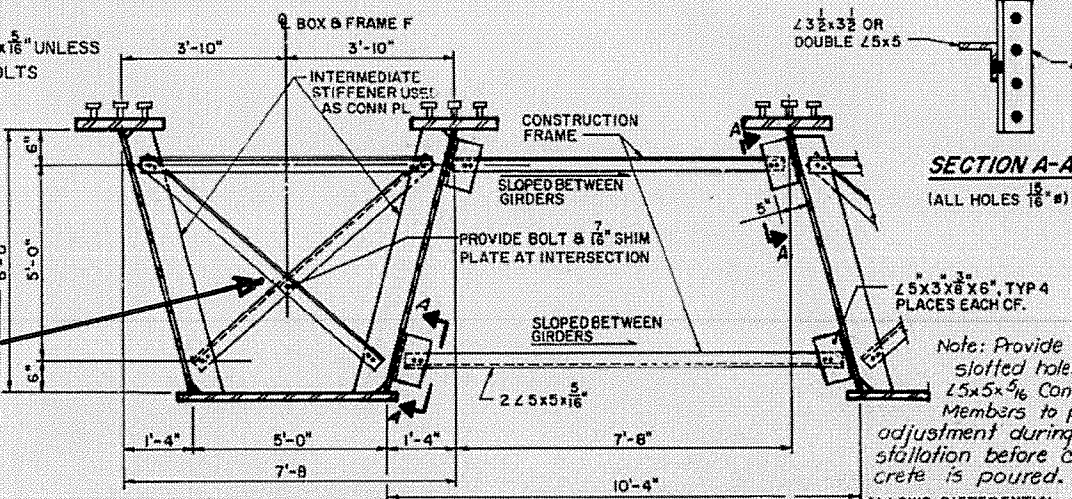
GENERAL	0.4 SHORT SPAN	0.6 PIER	0.6 LONG SPAN
	BRACED-COMPOSITE	NON-COMPACT	
I_x (in. ⁴)	161,296	393,266	236,898
I_c (in. ⁴) (n=9)	295,757	422,583	401,380
S_x (in. ³)	4349	10,870	6508
S_c (in. ³) (N=9)	5347	11,091	7601
S_c (in. ³) (N=27)	4919	11,098	7089
Z (in. ³)	N/A		
DL (K/ft.)	2081	2699	2287
MDL (ft.K)	3849	15,374	7561
sDL (K/ft.)	0.735	0.735	0.735
MSDL (ft.K)	1493	4592	2464
MLL (ft.K)	3283	4928	4179
MIMP (ft.K)	514	744	604
5/3 (MLL+I) (ft.K)	6328	9453	7972
Ma (ft.K)	15,171	38,245	23,397
Mu (ft.K)	N/A		
f_s DL (non-comp)(k.s.i.)	10.6	17.0	13.9
f_s DL (comp)(k.s.i.) (n=27)	3.6	5.0	4.2
f_s 5/3(LL+I)(k.s.i.)	142	102	12.6
f_s (Overload)(k.s.i.)	28.4	32.2	30.7
f_s (Total)(k.s.i.)	36.9	41.9	39.9
Allowable f_s (Total)(k.s.i.)	48.4	49.4	49.1
Allowable f_s (Overload)(k.s.i.)	47.5	47.5	47.5
VR (K)	137.7		

* f_s (Total)=1.3x[f_s DL(non-comp)+ f_s DL(comp)+ f_s 5/3(LL+I)]
 ** Allowable f_s varies from $F_y=50$ k.s.i. by the reduction required for Composite Hybrid Girders
 See Sht 10 for Girder Reactions at Bearings.

NOTE: ALL ANGLES ARE $3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{5}{16}"$ UNLESS NOTED. ALL BOLTS ARE $\frac{7}{8}"$ H.S. BOLTS IN $\frac{1}{8}"$ HOLES & WITH HARDENED WASHERS UNLESS NOTED.

CROSSFRAMES USED FOR ERECTION ONLY. NO LONGER PRESENT

DESIGNED	JFJ
CHECKED	WCC
DRAWN	DEH
CHECKED	WCC



TYPICAL BOX GIRDER CROSS SECTION

NOTE: FRAMES F SHALL BE INSTALLED IN THE SHOP & SHALL REMAIN IN PLACE TO STIFFEN THE GIRDERS DURING ERECTION, PLACEMENT & CURING OF THE CONCRETE DECK. AFTER WHICH THESE FRAMES SHALL BE REMOVED & DISPOSED OF.

CONSTRUCTION FRAME (CF)

NOTE: CONSTRUCTION FRAMES SHALL BE PLACED IN THE FIELD & SHALL REMAIN IN PLACE TO STIFFEN THE GIRDERS DURING ERECTION, PLACEMENT & CURING OF THE CONCRETE DECK AFTER WHICH THESE FRAMES ALONG WITH ANGLES & THE DECK FORM SHALL BE REMOVED. PLACE $\frac{1}{2}"$ BOLT IN HOLES IN WEB PL.

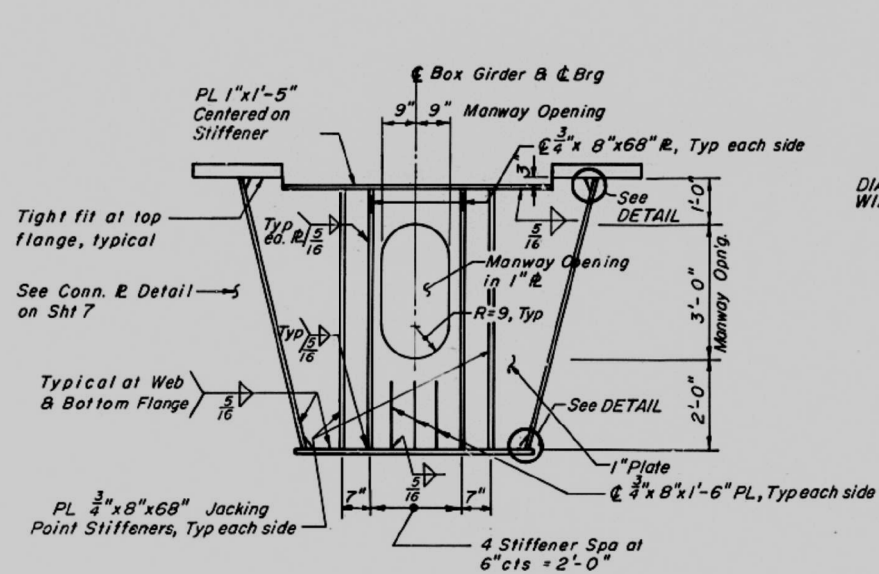
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INFORMATION ONLY

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

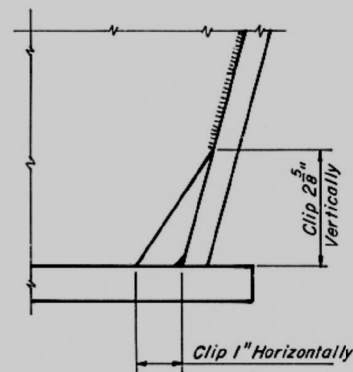
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X)VB-1,HB-2)B)R,BRR	TAZEWELL	45	38
CONTRACT NO. 68E27				ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO.
F.A.P. 406	90-(106X)HB-2	TAZEWELL	237	86	9
F.H.W.A. REG. 4	ILLINOIS PROJECT *				20
					*F406 ()

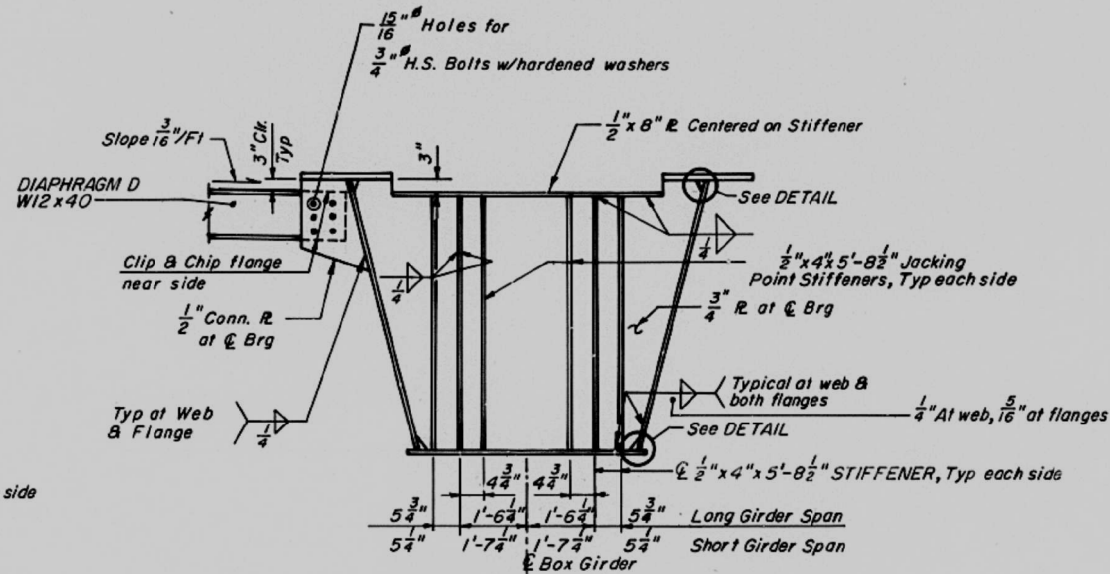


PIER BEARING STIFFENER

MILL ALL STIFFENERS TO BEAR ON BOTTOM FLANGE.

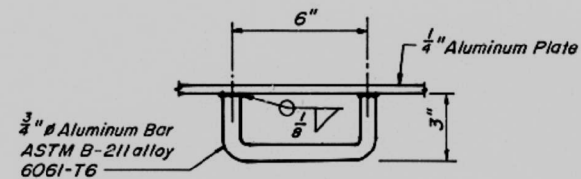


STIFFENER DETAIL AT FLANGE TO WEB WELD

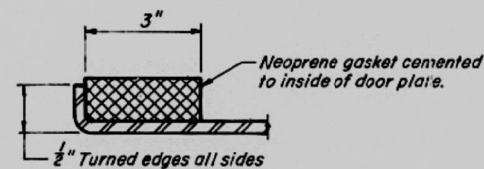


ABUTMENT BEARING STIFFENER & DIAPHRAGM

MILL ALL STIFFENERS TO BEAR ON BOTTOM FLANGE.



HANDLE DETAIL

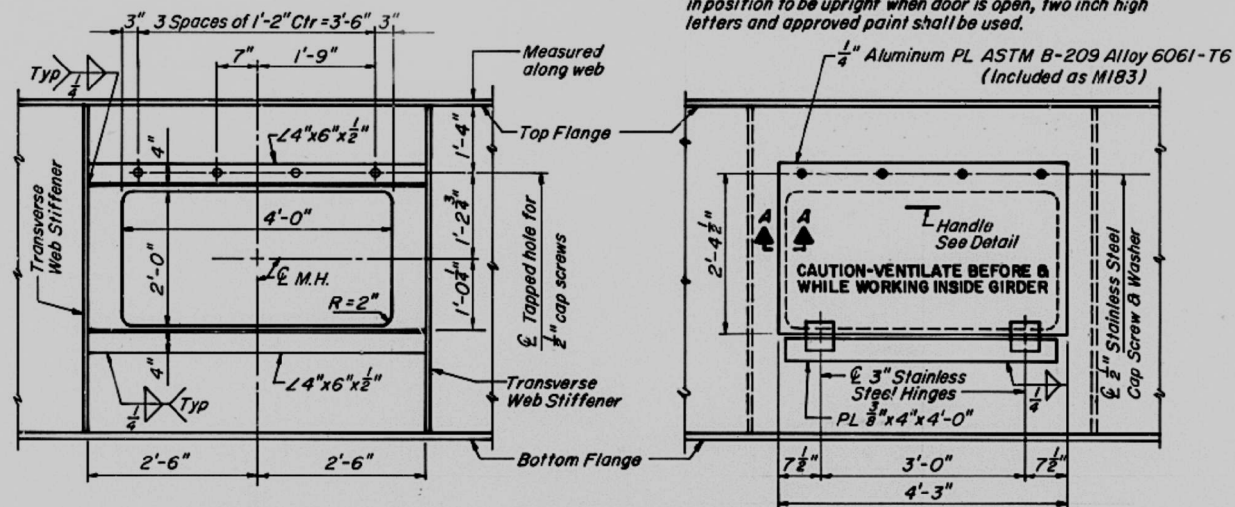


SECTION A-A

NOTES:

The exterior surface of the aluminum access doors shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Councils Specifications SSPC-SP1 and SSPC-PT3 followed by the painting specified for structural steel.

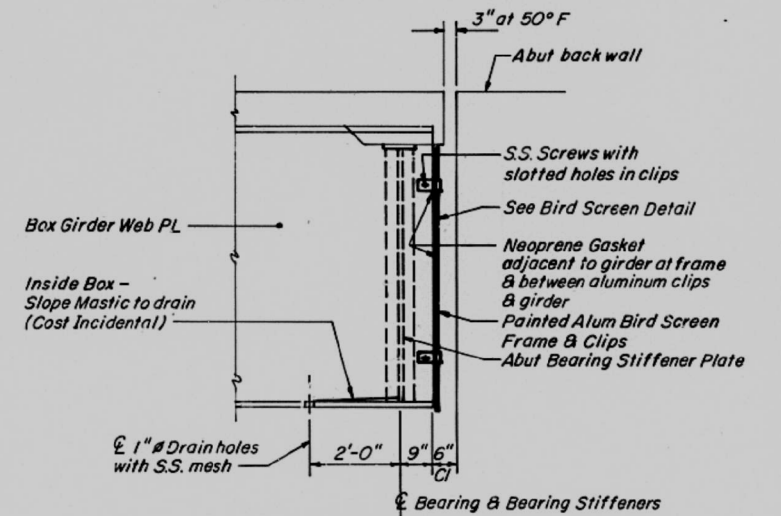
Warning Note shall be stenciled on inside surface of door in position to be upright when door is open, two inch high letters and approved paint shall be used.



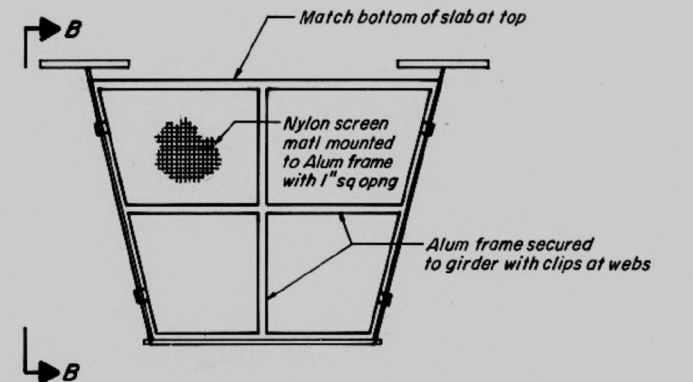
INSIDE VIEW

OUTSIDE VIEW

DETAIL OF MANHOLE



SECTION B-B



END OF GIRDER BIRD SCREEN

(Cost of Bird Screen, Frame & Mounting is included as M183)

DESIGNED	JFJ
CHECKED	WCC
DRAWN	DEH
CHECKED	WCC

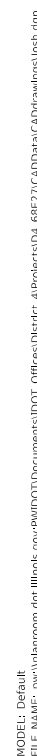
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

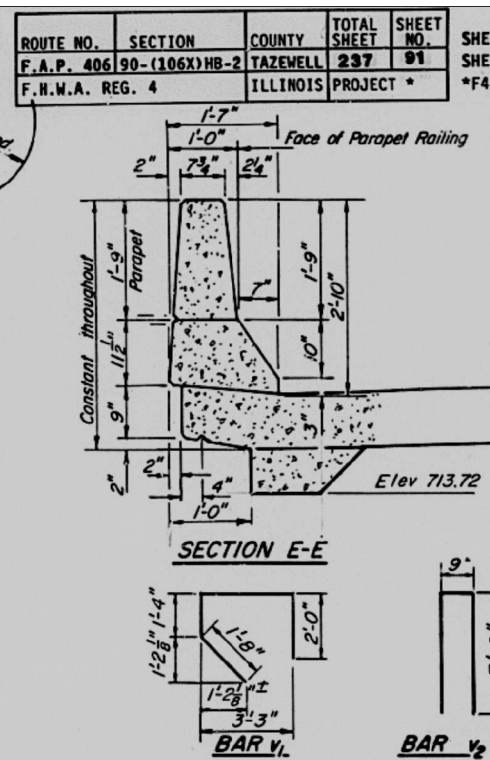
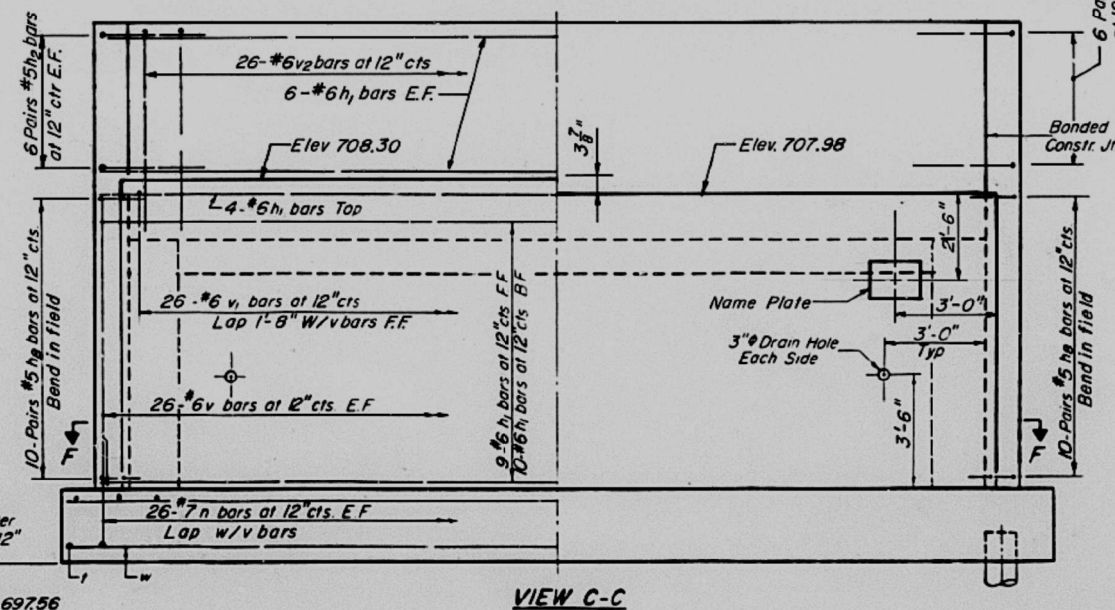
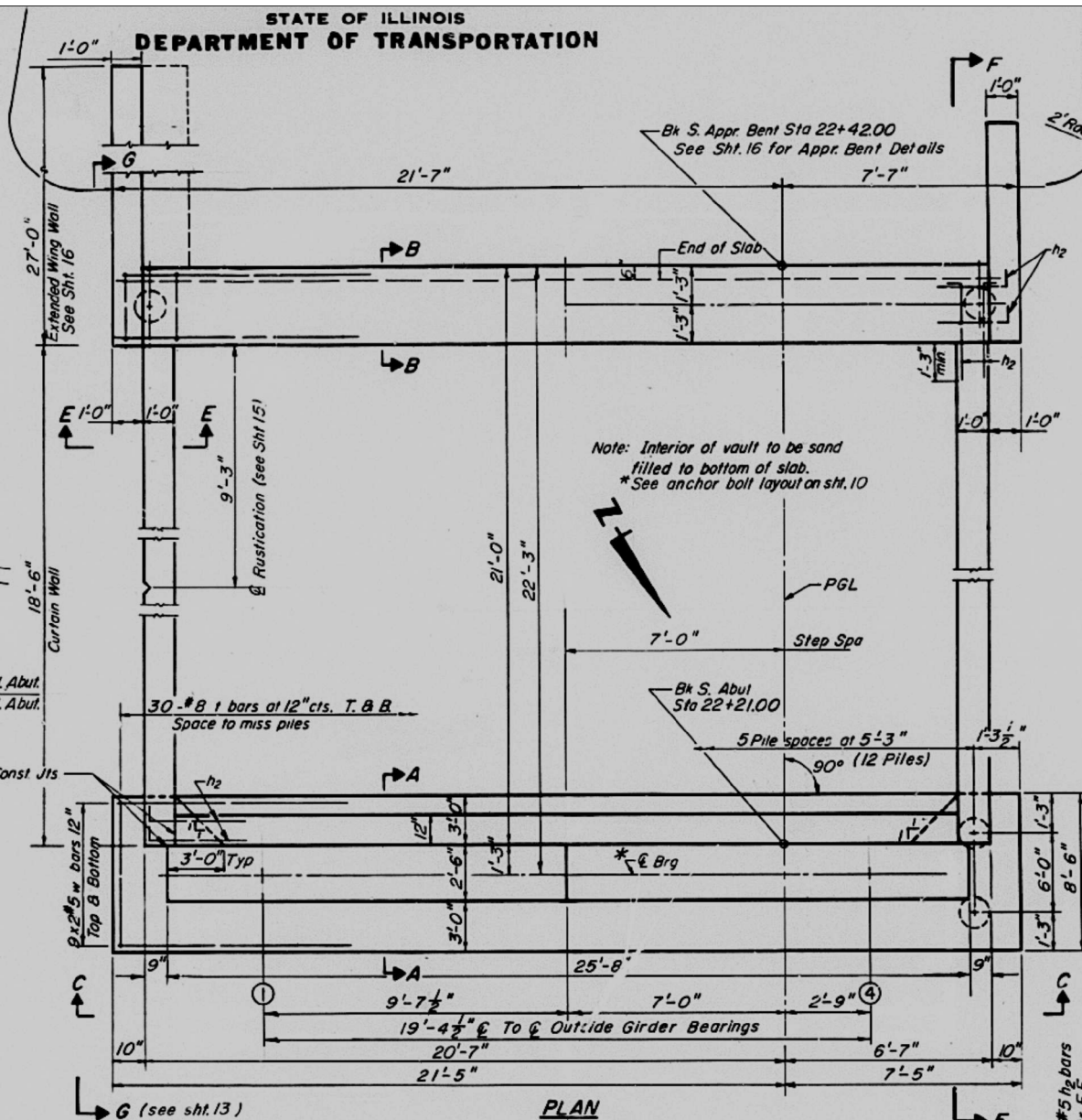
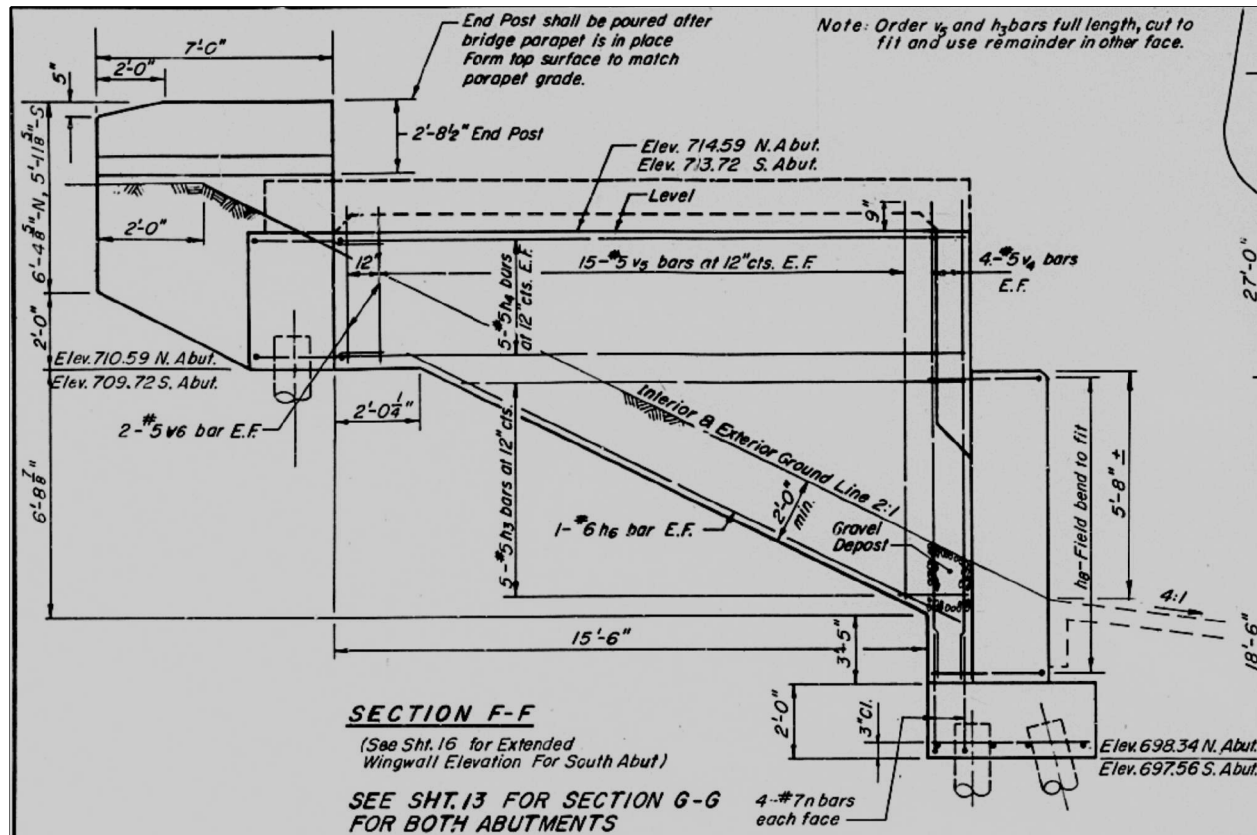
SN 090-0131 OLD STUCTURE PLANS
INTERIOR STRUCTURE

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]B,R,BR	TAZEWELL	45	40
				CONTRACT NO. 68E27
		ILLINOIS	FED. AID PROJECT	

BOX GIRDER DETAILS
MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131





Min. Lap 5 Bars = 2'-2"
Min. Lap 6 Bars = 2'-7"
Min. Lap 7 Bars = 3'-5"

Bar	No	Size	Length	Shape
n ₁	35	#6	25'-5"	—
n ₂	24	#5	3'-6"	J
n ₃	5	#5	19'-6"	—
n ₄	36	#5	18'-0"	—
n ₅	2	#6	18'-10"	—
n ₆	40	#5	9'-4"	—
n	68	#7	6'-5"	—
i	60	#8	8'-2"	—
v	52	#6	8'-4"	—
v ₁	26	#6	8'-3"	□
v ₂	26	#6	14'-9"	Π
v ₃	26	#5	3'-0"	—
v ₄	8	#5	14'-7"	—
v ₅	15	#5	15'-6"	—
v ₆	2	#5	4'-7"	—
v ₇	16	#6	21'-8"	—

Structure Excavation	Cu Yd	107
Reinforcement Bars	Lbs	7950
Class X Concrete	Cu Yds.	58
Concrete Piles	Lin Ft	59

SOUTH ABUTMENT DETAILS
MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131

DESIGNED	L.M.G.
CHECKED	J.F.J.
DRAWN	DEH/J.W.N.
CHECKED	J.F.J.

<u>ABUTMENT-PILE DATA</u>	
Type	Concrete
Capacity	45 Tons
Est. Length	54 LF
No. Req'd.	11 + 1 Test Pile

USER NAME = jochumsjg	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 6/21/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

<p align="center">SN 090-0131 OLD STUCTURE PLANS</p> <p align="center">INTERIOR STRUCTURE</p>					
SCALE: NONE	SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]JR,BRR	TAZWELL	45	42
		CONTRACT NO. 68E27		
		ILLINOIS	FED. AID PROJECT	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. 17
F.A.P. 406	90-(106X)HB-2	TAZEWELL	237	04	20
F.H.W.A. REG. 4	ILLINOIS	PROJECT *			*F406 ()

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

INSTALLATION NOTES

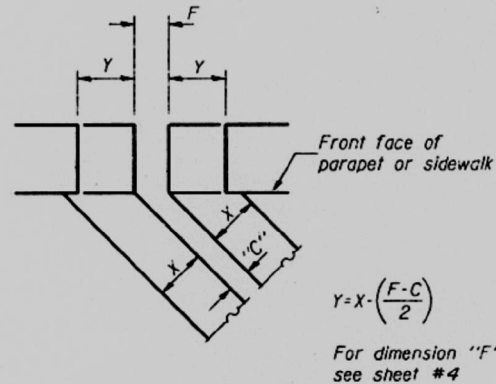
- Install sponge mandrels into positions shown to form flap convolution.
- Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- Install continuous seal in roadway.
- Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

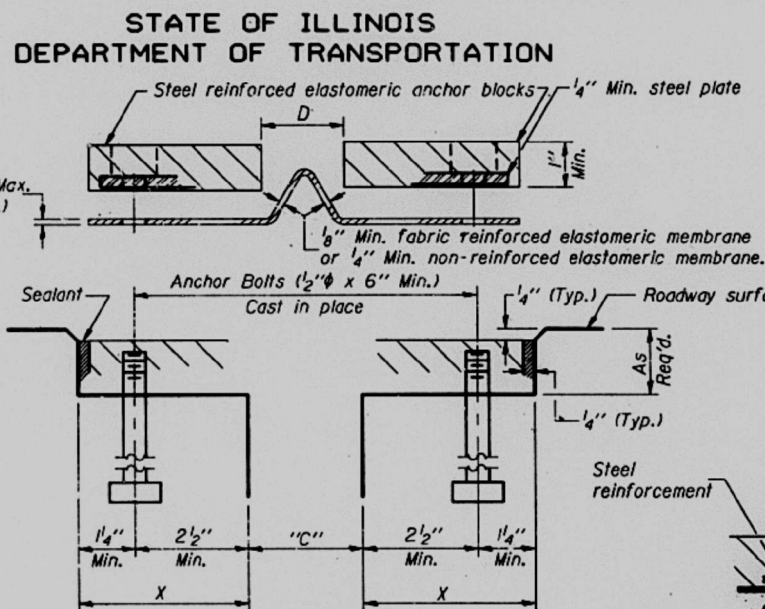
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" cts.

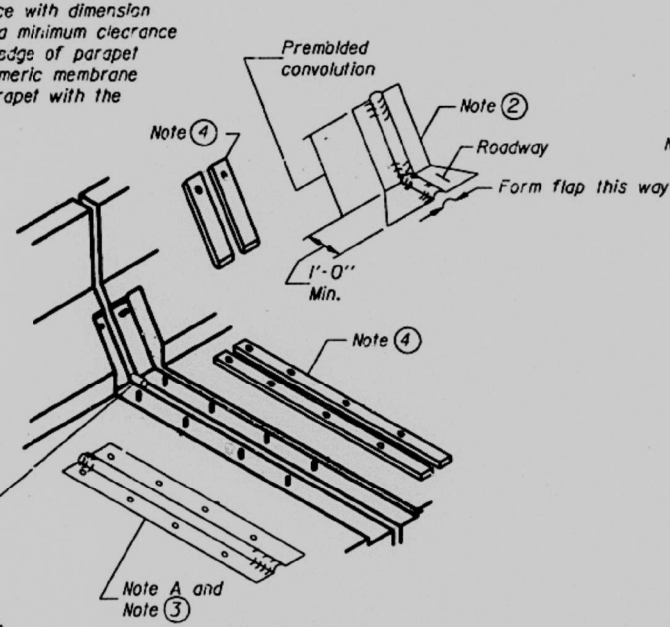


FORMING BLOCKOUT SKETCH

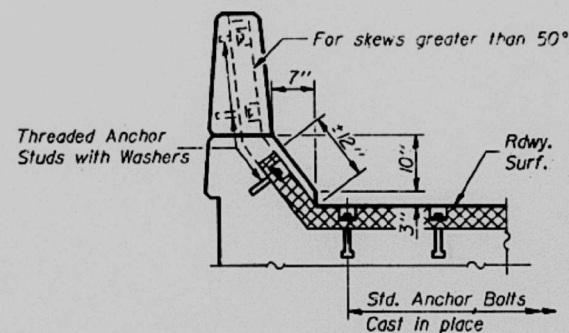


CROSS SECTION

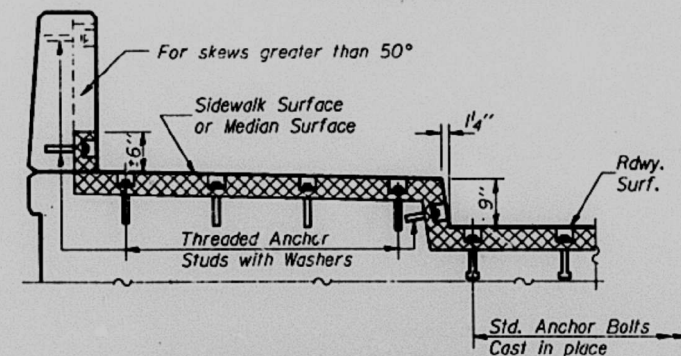
ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE



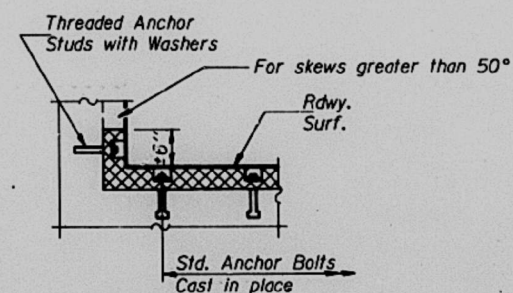
AT CURB



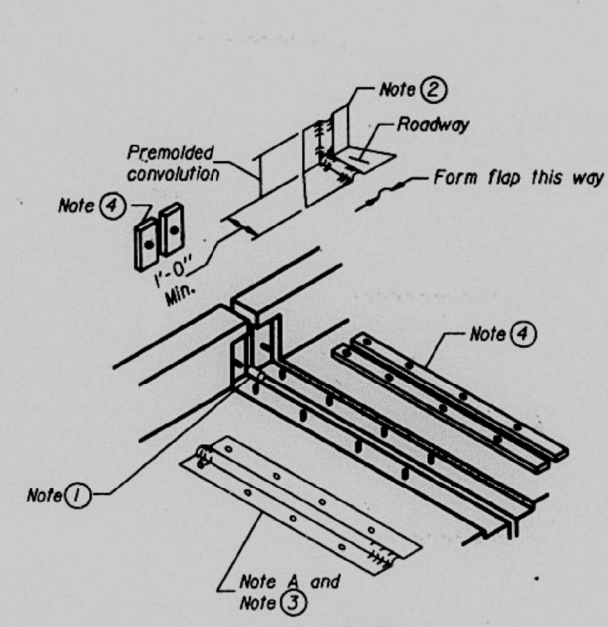
AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL



AT WALL

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS For 2", 2 1/2" and 4" Movement

MAIN STREET (RAMP C)
OVER FAP RTE 406
SECTION 90-(106X) HB-2
STATION 146+18.00 FAP 406
TAZEWELL COUNTY
STRUCTURE NO. 090 0131

DESIGNED	JFJ
CHECKED	
DRAWN	DEH
CHECKED	JFJ
EJ-CS	12-1-83

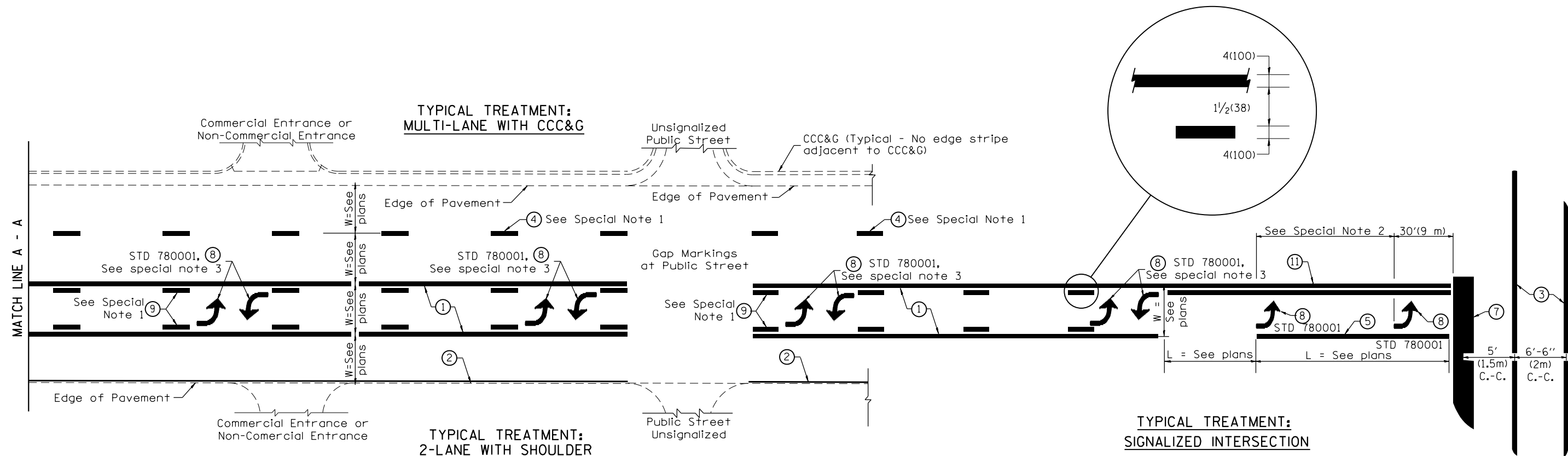
USER NAME = jochumsjg	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 6/21/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 090-0131 OLD STRUCTURE PLANS
INTERIOR STRUCTURE

SCALE: NONE SHEET 1 OF 4 SHEETS STA. N/A TO STA. N/A

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
155	90-106X[VB-1,HB-2]JR,BRR	TAZEWELL	45	43
				CONTRACT NO. 68E27
		ILLINOIS	FED. AID PROJECT	



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A) 11(280) C.-C. See Table A
- ⑪ 4(100) Double Solid (Yellow)

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.
3. Refer to Article 780.13 for letter, number and symbol areas (sq. ft.)
4. Areas are grooved 1" beyond each edge for the following symbols:
 - Through Arrow= 14.8 sq. ft.
 - Large Left or Right Arrow= 21.9 sq. ft.
 - 2 Arrow Combination Left (or Right) and Through= 34.9 sq. ft.
 - Wrong Way Arrow= 29.5 sq. ft.
 - Railroad Crossing Symbol= 69.8 sq. ft.
 (For further information, refer to BDE Special Provision: Grooving for Recessed Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL PAVEMENT MARKINGS	SHT. 1 OF 2 CADD STD. 780001-D4	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.	2/29/16	ADDED GROOVING AREAS	R.D.				155	90-106X[VB-1,HB-2]B[R,BRR]	TAZEWELL	45	44
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.							CONTRACT NO. 68E27				
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

NOT TO SCALE

