

062

01-17-2020 LETTING ITEM 062

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121 BR 1	RANDOLPH	18	1
		ILLINOIS	CONTRACT NO. 76K65	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

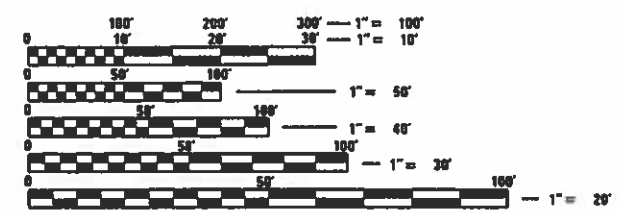
FAP ROUTE 312 (IL 3)
SECTION 121-BR-1
PROJECT NHPP-ZWPL(369)
BRIDGE JOINT REPAIR & HMA OVERLAY
WITH BRIDGE REPAIRS
RANDOLPH COUNTY

C-98-312-18

R 6 W

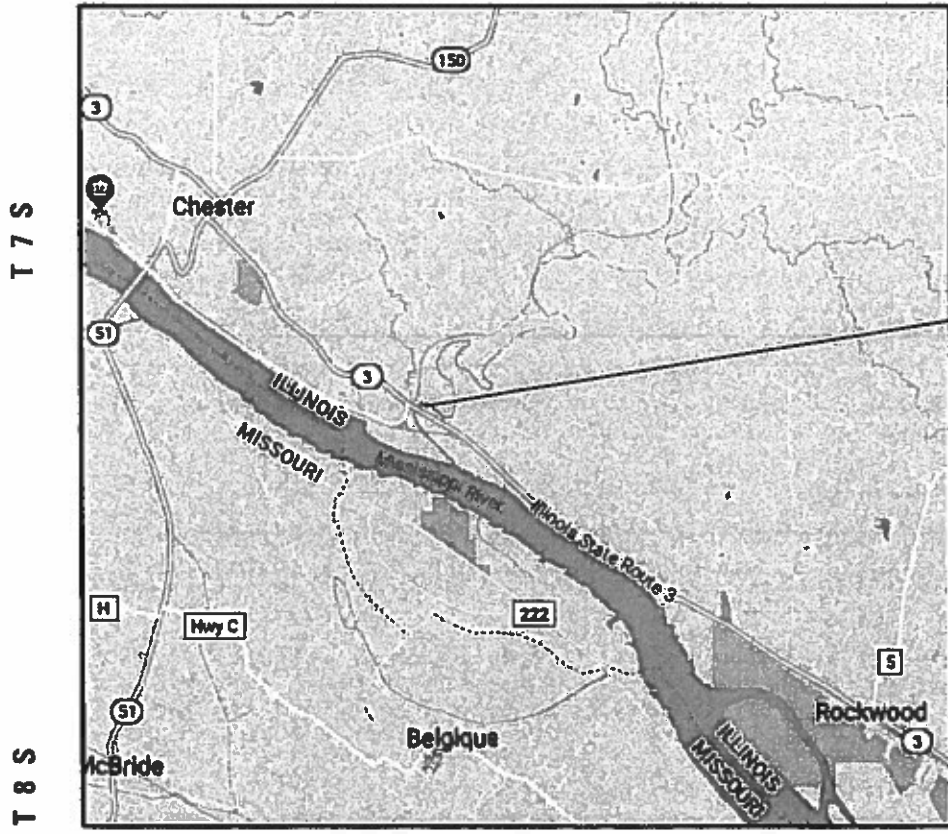


TRAFFIC DATA
2019 ADT: 2300 (ACTUAL)
2040 ADT: 2800 (ESTIMATED)
MU%: 18.5
SU%: 5.2



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



SN 079-0011
STA. 1017+00
366'-4"
4 SPAN; CONCRETE DECK ON
STEEL PLATE GIRDER
LAT.: 37.88382
LONG.: 89.78341

PROJECT ENGINEER: BILLIE OWEN (618) 346-3209
PROJECT MANAGER: HERVE GELIN (618) 346-3179

CONTRACT NO. 76K65

NOT TO SCALE
GROSS / NET LENGTH = 366.33 FT. = 0.069 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Oct 12 2019
Kath Roberts REGIONAL ENGINEER

Dec 16 2019
Paul P. [Signature] ENGINEER OF DESIGN AND ENVIRONMENT

Dec 16 2019
[Signature] DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

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INDEX OF SHEETS

- 1 COVER
- 2 INDEX OF SHEETS, HIGHWAY STANDARDS, MIXTURE REQUIREMENTS, GENERAL NOTES, & COMMITMENTS
- 3-5 SUMMARY OF QUANTITIES
- 6 SCHEDULE OF QUANTITIES
- 7-8 DETOUR SIGNING
- 9-17 STRUCTURE SHEETS
- 18 MISCELLANEOUS DETAILS

HIGHWAY STANDARDS

- 000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 442201-03 CLASS C AND D PATCHES
- 701901-08 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
- B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

MIXTURE REQUIREMENTS

MIXTURE USE	POLY SURFACE	SHOULDERS ≥ 2.25"	SHOULDERS < 2.25"
AC/PG	SBS PG 76-22	PG 64-22	PG 64-22
RAP % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0% @ Ndes=90	4.0% @ Ndes=30	4.0% @ Ndes=30
MIX COMPOSITION (GRADATION)	1L 9.5	1L 19.0L	1L 9.5L
FRICTION AGG	MIXTURE "D"		
QUALITY MGMT PROGRAM	QC/QA	QC/QA	QC/QA

PLAN QUANTITIES FOR HOT-MIX ASPHALT SURFACE COURSE ITEMS ARE CALCULATED USING A WEIGHT OF 112 LB/SQ YD/IN.

GENERAL NOTES

1. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

* AMEREN ILLINOIS (GAS & ELECTRIC)
* CITY OF CHESTER (WATER & SANITARY SEWER)
* CITY OF CHESTER (GAS)
* CLEARWAVE COMMUNICATIONS (COMMUNICATIONS)
* FRONTIER COMMUNICATIONS (COMMUNICATIONS)

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

2. THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT, THE STATIONING, TOPOGRAPHY AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

3. THE THICKNESS OF THE HOT-MIX ASPHALT SURFACE MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
4. THE INTENT OF THE MILLING IS TO REMOVE THE HOT-MIX ASPHALT RESURFACING, ANY UNDERLYING CONCRETE THAT IS EXPOSED, SHALL BE SCARIFIED ONLY.

5. AN ESTIMATED QUANTITY OF 165 TONS OF CUTTINGS FROM THE HOT-MIX ASPHALT SURFACE REMOVAL OPERATION IS ANTICIPATED.

6. DURING THE MILLING AND RESURFACING OF THE SHOULDERS, ANY RAIL FROM THE GUARDRAIL THAT NEEDS TO BE REMOVED AND RE-ERECTED SHALL BE INCLUDED IN THE COST OF THE HMA SHOULDER RESURFACING PAY ITEMS.

7. THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF EXISTING PAVEMENT MARKINGS, AS DIRECTED BY THE ENGINEER.

8. TWO CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED TWO WEEKS PRIOR AND REMAIN FOR THE DURATION OF THE PROJECT. THE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED ALONG ROUTE IL 3 AS DIRECTED BY THE ENGINEER.

COMMITMENTS

THE RESIDENT ENGINEER SHALL NOTIFY THE FOLLOWING ENTITIES AT LEAST TWO WEEKS PRIOR TO THE CLOSURE OF IL 3 OVER MARY'S RIVER.
* NIGHT HAWK COAL; JEANNIE COLEMAN AT (618) 521-8338
* CITY OF CHESTER; MAYOR TOM PAGE AT (618) 826-5114

	USER NAME = harbaughrd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, MIXTURE REQUIREMENTS, GENERAL NOTES, & COMMITMENTS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			312	121-BR-1	RANDOLPH	18	2
	PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 76K65				
	PLOT DATE = 10/18/2019	DATE -	REVISED -			SCALE: NA	SHEET 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS	FED. AID PROJECT

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FEDERAL / 20% STATE
				RURAL
				BRIDGE
				0013
				S.N. 079-0011
28100105	STONE RIPRAP, CLASS A3	SQ YD	63	63
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	589	589
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	133.5	133.5
40604164	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	TON	230	230
44000152	HOT-MIX ASPHALT SURFACE REMOVAL, 3/4"	SQ YD	267	267
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	272	272
48203100	HOT-MIX ASPHALT SHOULDERS	TON	27	27
50102400	CONCRETE REMOVAL	CU YD	12.3	12.3
50300100	FLOOR DRAINS	EACH	28	28
50300255	CONCRETE SUPERSTRUCTURE	CU YD	13.1	13.1
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5720	5720
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1760	1760
52000110	PREFORMED JOINT STRIP SEAL	FOOT	82	82
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	12

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		DRAWN -	REVISED -					312	121-BR-1	RANDOLPH	18	3
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	PLOT DATE = 10/18/2019	DATE -	REVISED -		SCALE: NA	SHEET 1	OF 3 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

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				CONSTR. CODE	
				80% FEDERAL / 20% STATE	
				RURAL	
				BRIDGE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0013	
				S.N. 079-0011	
52100520	ANCHOR BOLTS ,1"	EACH	24	24	
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1540	1540	
67100100	MOBILIZATION	L SUM	1	1	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	90	90	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	88	88	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	29	29	
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	62	62
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE4"	FOOT	1601	1601
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	24	24
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6
*	78200006	GUARDRAIL REFLECTORS, TYPE B	EACH	3	3
*	78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	7	7
*	78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	7	7
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NA SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	4
CONTRACT NO. 76K65				
		ILLINOIS	FED. AID PROJECT	

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FEDERAL / 20% STATE
				RURAL
				BRIDGE
				0013
				S.N. 079-0011
* X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUESNO. 1	L SUM	1	1
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	2804	2804
X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	12	12
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	3400	3400
Z0001905	STRUCTURAL STEEL REPAIR	POUND	650	650
Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	1540	1540
* Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO.1	L SUM	1	1
Z0010615	CLEANING EXISTING INLETS	EACH	2	2
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10	10
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	10	10
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	100	100
Z0016702	DETOUR SIGNING	L SUM	1	1
Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	481	481

* SPECIALTY ITEM

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PLOT DATE = 10/18/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NA SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	5
CONTRACT NO. 76K65				
		ILLINOIS	FED. AID PROJECT	

RESURFACING SCHEDULE

LOCATION			RURAL OR URBAN	COMMENTS	LENGTH	AVG. PVMT WIDTH	SHOULDER WIDTH		HOT-MIX ASPHALT SURFACE	HOT-MIX ASPHALT SURFACE	PORTLAND CEMENT CONCRETE SURFACE REMOVAL	POLYMERIZED BITUMINOUS MATERIALS	LONGITUDINAL JOINT SEALANT	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N90	HOT-MIX ASPHALT SHOULDERS
							OUTSIDE	INSIDE	REMOVAL, 1 1/2"	REMOVAL, 3/4"	- BUTT JOINT	(TACK COAT)			
STA.	TO	STA.			FOOT	FOOT	FOOT	FOOT	SQ YD	SQ YD	TON	POUNDS	FOOT	TON	TON
1019+04.24	TO	1018+83.16	RURAL		21.08	24	8	8	93.7			42.2	21.1	7.1	4.7
1018+83.16	TO	1015+16.83	RURAL	SN 079-0011	366.33	24	7.25	7.25							
1015+16.83	TO	1014+66.83	RURAL		50	24	8	8	88.9	133.4		100	50	14	11.1
1014+66.83	TO	1014+16.83	RURAL		50	24	8	8	88.9	133.4	133.3	100	50	14	11.1
TOTAL									271.5	266.8	133.3	242.2	121.1	35.1	26.9
ROUNDED TOTAL									272	267	133.5	242	121	36	27

* NOT TOTAL QUANTITY - SEE BRIDGE PLANS

*

*

*

PAVEMENT MARKING SCHEDULE

LOCATION			RURAL OR URBAN		THERMOPLASTIC PAVEMENT MARKING						RAISED REFLECTIVE PAVEMENT MARKER		SHORT TERM PAVEMENT				GUARDRAIL REFLECTORS, TYPE B		BARRIER WALL REFLECTORS, TYPE B		BARRIER WALL REFLECTORS, TYPE C		
					- LINE 4"				- LINE 24"	LETTERS			MARKING		REMOVAL								
					WHITE EDGE LINE		YELLOW CENTERLINE		(RR CROSSING	AND			WHITE			YELLOW							
					SOLID		SKIP-DASH	SOLID	SYMBOL)	SYMBOLS			EDGE LINE			CENTERLINE							
					WB / NB	EB / SB		WB / NB	EB / SB	WB / NB	WB / NB	REMOVAL	2-WAY AMBER	WB / NB		EB / SB		WB / NB	EB / SB				
STA.	TO	STA.		LENGTH	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	EACH	EACH	FOOT	FOOT	FOOT	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH
1019+04.24	TO	1018+83.16	RURAL	21.08	21.08	21.08		21.08	21.08					4	4	4	4						
1018+83.16	TO	1018+75.24	RURAL	7.92	7.92	7.92		7.92	7.92														
1018+75.24	TO	1018+72.83	RURAL	2.41	2.41	2.41		2.41															
1018+72.83	TO	1015+16.83	RURAL	356	356	356	90	356		24	61.2	5	5	12	12	32	18.6	2	1	3	4	3	4
1015+16.83	TO	1014+16.83	RURAL	100	100	100	20	100				1	1	4	4	12	6.6						
SUBTOTAL					487.41	487.41	110	487.41	29					20	20	48		2	1	3	4	3	4
TOTAL					1601.23				24	61.2	6	6	88				29.2	3		7		7	
ROUNDED TOTAL					1601				24	62	6	6	88				29	3		7		7	

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PLOT DATE	= 10/18/2019	DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

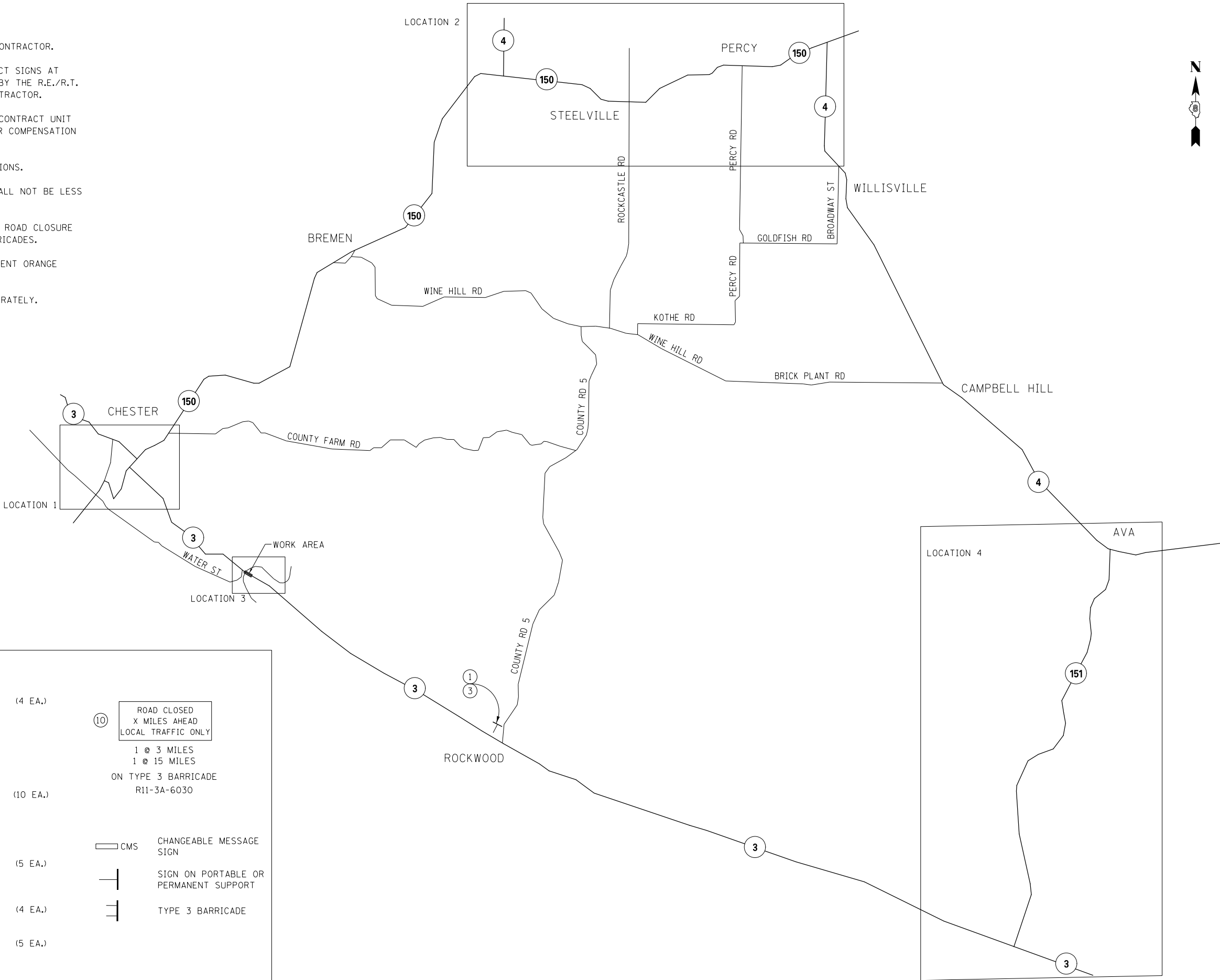
SCHEDULE OF QUANTITIES

SCALE: NA SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	6
CONTRACT NO. 76K65				
		ILLINOIS	FED. AID PROJECT	


NOTES:

- DETOUR SIGNS REQUIRED WILL BE SUPPLIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE R.E./R.T. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
- THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR DETOUR SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
- SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
- THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.
- CONTRACTOR SHALL FURNISH ADVANCE WARNING SIGNS, ROAD CLOSURE SIGNS, CHANGEABLE MESSAGE SIGNS, AND TYPE 3 BARRICADES.
- ALL ADVANCE WARNING SIGNS SHALL BE 48" FLUORESCENT ORANGE WITH FLASHING LIGHTS.
- CHANGEABLE MESSAGE SIGNS SHALL BE PAID FOR SEPARATELY.




SIGNS REQUIRED
TO BE PROVIDED BY CONTRACTOR


- ①


ROAD CLOSED
AHEAD
W20-3(O)-48


(4 EA.)
- ②


DETOUR
AHEAD
W20-2(O)-48

(4 EA.)
- ③


MS-1R(O)

(2 EA.)
- ④


MS-1L(O)


(1 EA.)
- ⑤

DETOUR	M4-8(O)-2412
NORTH	M3-1-2412
ILLINOIS	M1-I100-24
3	


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SOUTH	M3-3-2412
ILLINOIS	M1-I100-24
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
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M6-3-2115

(5 EA.)
- ⑧


M6-1-2115




(4 EA.)
- ⑨


M6-1-2115

(5 EA.)

- ⑩
- ROAD CLOSED
X MILES AHEAD
LOCAL TRAFFIC ONLY

1 @ 3 MILES
1 @ 15 MILES
ON TYPE 3 BARRICADE
R11-3A-6030

-  CMS CHANGEABLE MESSAGE SIGN
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TYPE 3 BARRICADE

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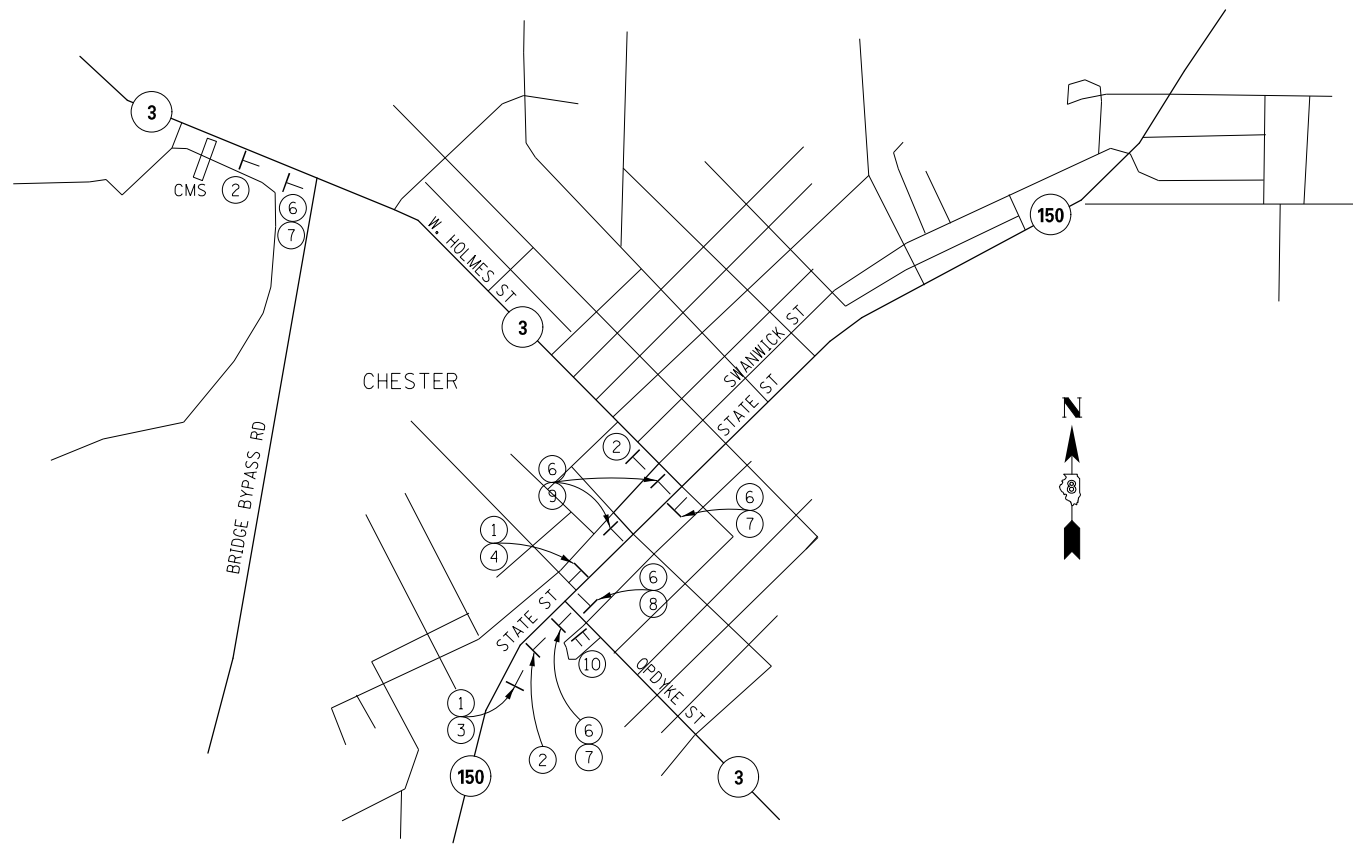
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING

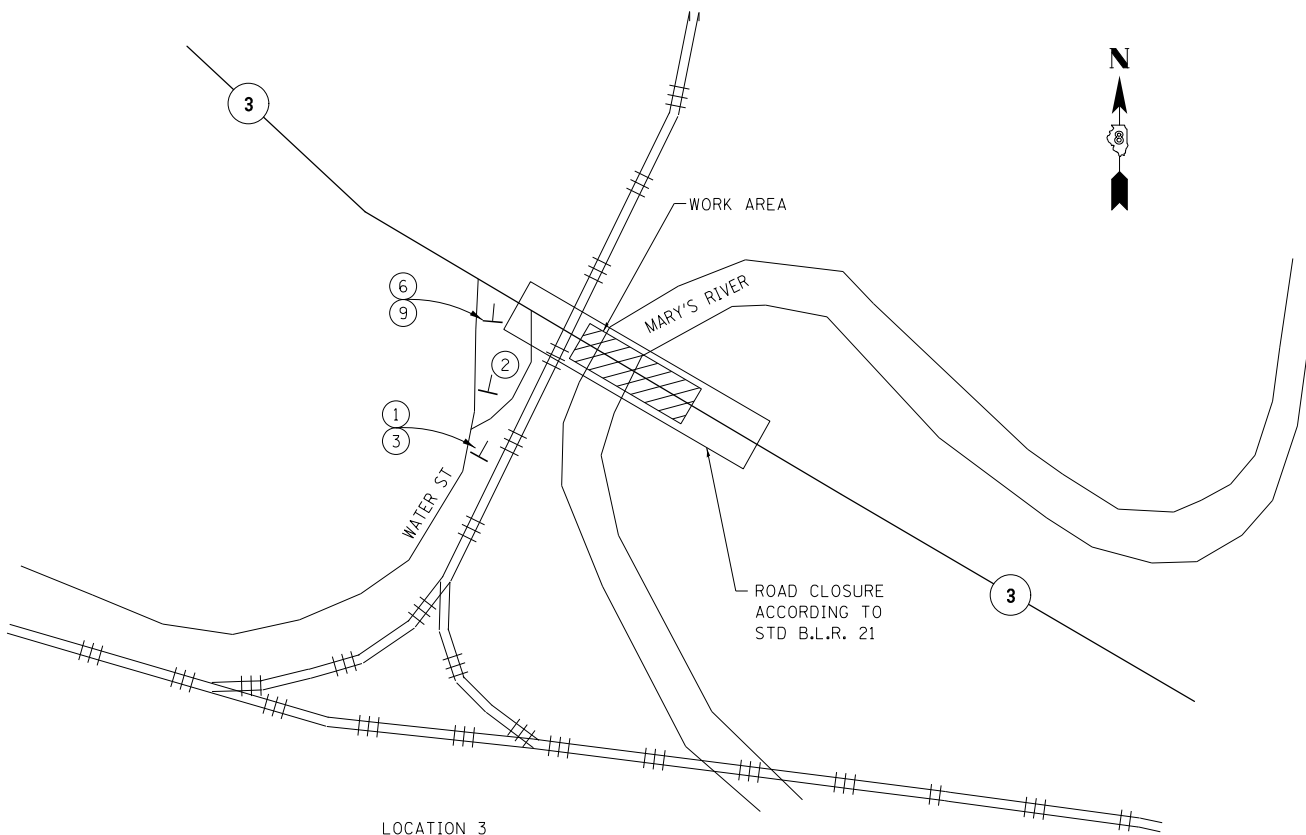
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	7
CONTRACT NO. 76K65				
		ILLINOIS	FED. AID PROJECT	

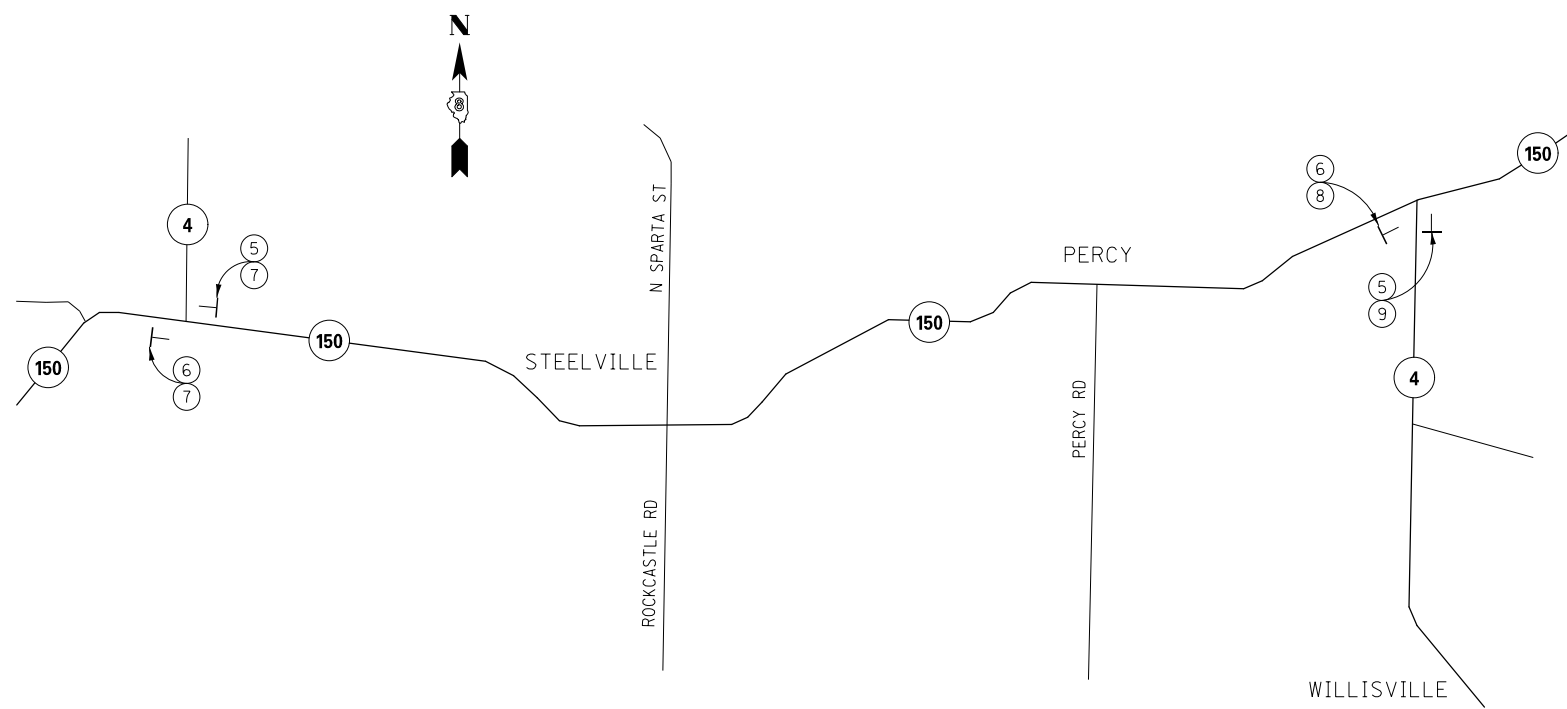
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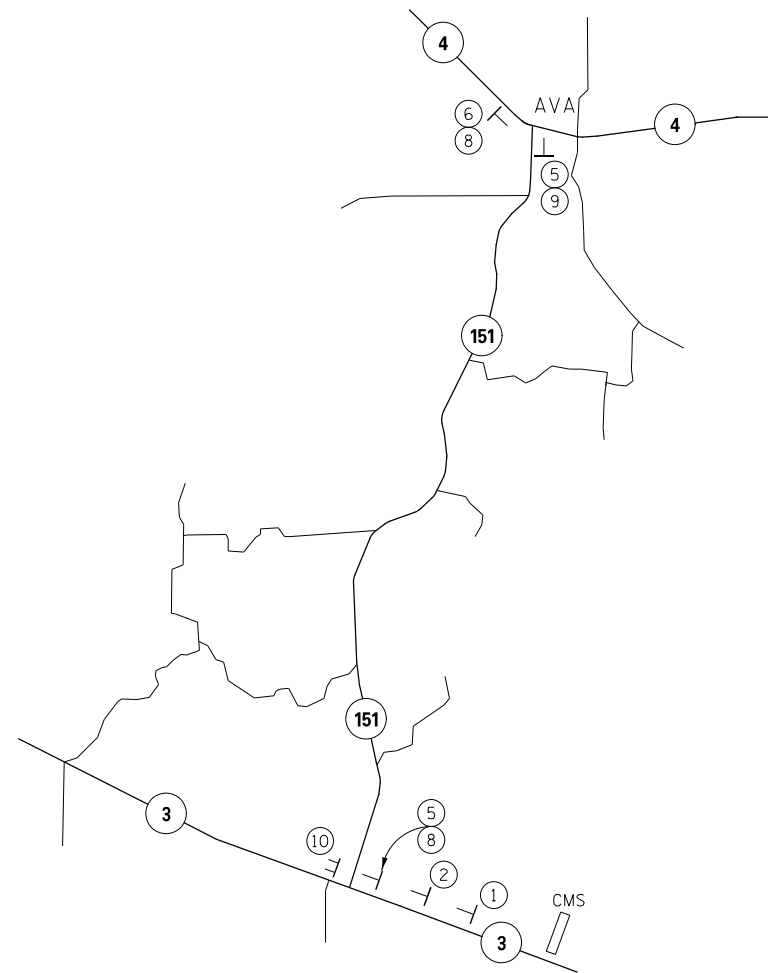
LOCATION 1



LOCATION 3



LOCATION 2



LOCATION 4

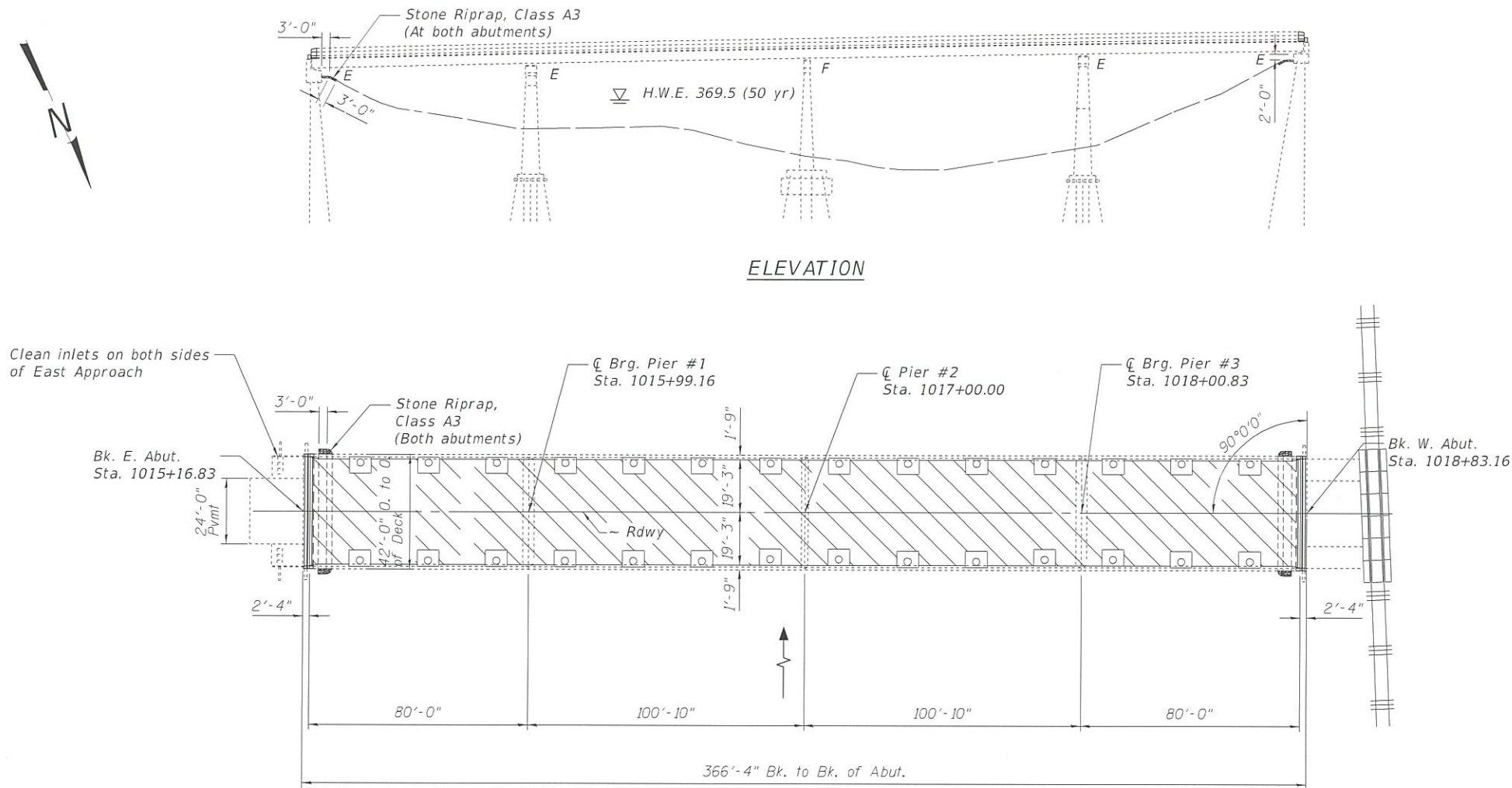
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING

USER NAME	= harbaughrd	DESIGNED	-	REVISED	-
		DRAWN	-	REVISED	-
PLOT SCALE	= 100,0000' / in.	CHECKED	-	REVISED	-
PLOT DATE	= 10/18/2019	DATE	-	REVISED	-

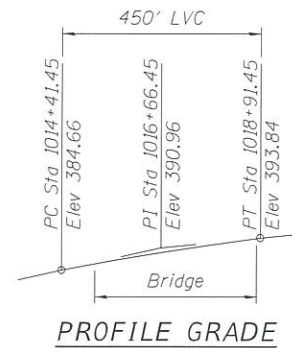
SCALE: NA SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	8
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				



ELEVATION

PLAN



PROFILE GRADE

INDEX OF SHEETS

1. General Plan & Elevation
2. Deck Cross Section
3. Joint Replacement
4. Joint Details
5. End Diaphragms
6. Beam End L plates
7. Bearings
8. Drain Details
9. Strip Seal Details

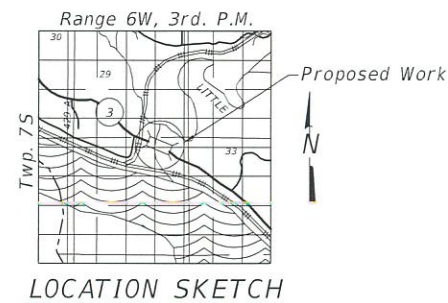
SCOPE OF WORK

- Replace deck ends at abutments, hatchblocks and install strip seals
- Replace all end diaphragms and bearings at both abutments.
- Plate 3 beam ends
- Replace existing HMA & WMS
- Replace existing square drains with round floor drains.

FLOOR DRAIN REPLACEMENT

Existing drains & adjacent concrete to be removed and replaced with 6" circular drains and full depth patch. (See sheet 8 of 9 for details)

(28 Req'd)



LOCATION SKETCH

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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.

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.

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

All structural steel shall conform to AASHTO Classification M 270 Grade 50, unless otherwise noted.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The new deck surface adjacent to the joints shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructures.

Bridge deck concrete sealer shall be placed on top/inside faces of parapet (full length) and wingwalls and on top of new concrete at joints.

Fasteners shall be high strength bolts. Bolts 3/4"Ø, open holes 1 1/16"Ø, unless otherwise noted.

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

Cleaning and Painting of the existing structural steel and bearings shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams within 5 feet (measured along the beam) of either side of the deck joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10). Existing diaphragms and bearings at the abutments will be replaced and are excluded from the cleaning requirements.

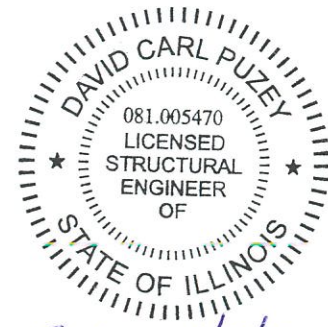
The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) and the new galvanized diaphragms, repair plates, steel extensions, and bearings shall be painted according to the requirements of Paint System 1 - 0Z/E/U. The color of the final finish coat for all steel surfaces shall be Reddish Brown (Munsell No 2.5YR 3/4).

Areas of deck repairs are estimated. The Engineer shall show actual locations of deck repairs on As-Built Plans.

TOTAL BILL OF MATERIAL

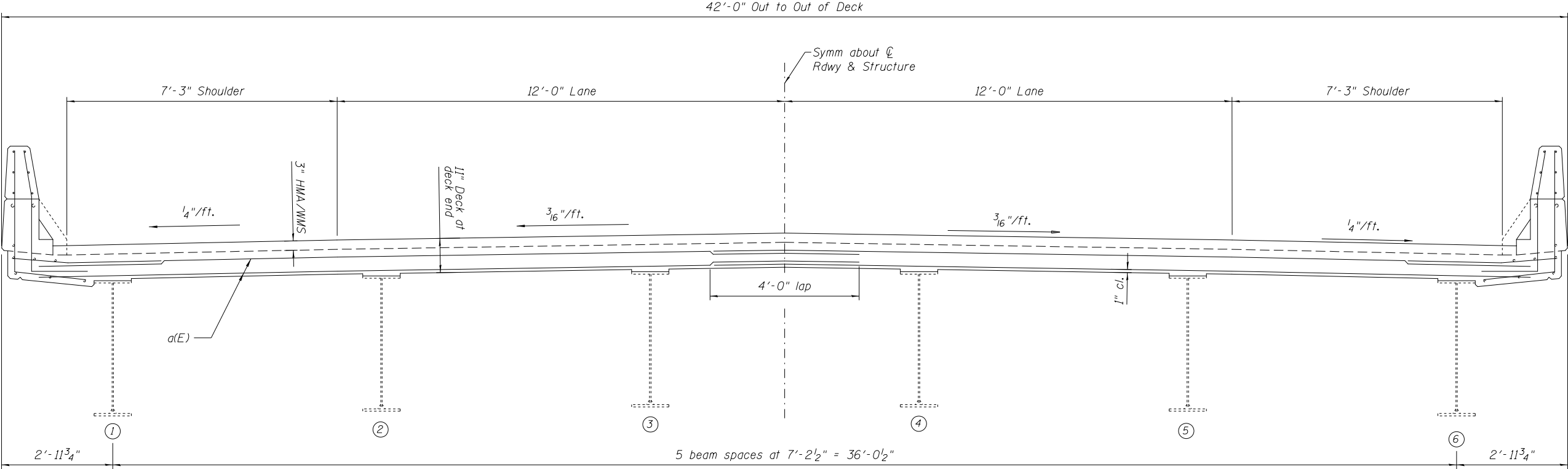
ITEM	UNIT	TOTAL
Stone Riprap, Class A3	Sq. Yd.	63
Polymerized Bituminous Materials (Tack Coat)	Pound	347
Polymerized HMA Surface Course, IL-9.5, Mix "D", N90	Ton	194
Concrete Removal	Cu. Yd.	12.3
Floor Drains	Each	28
Concrete Superstructure	Cu. Yd.	13.1
Furnishing and Erecting Structural Steel	Pound	5720
Reinforcement Bars, Epoxy Coated	Pound	1760
Preformed Joint Strip Seal	Foot	82
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1"Ø	Each	24
Waterproofing Membrane System	Sq. Yd.	1540
Bridge Deck Concrete Sealer	Sq. Ft.	2804
Jack and Remove Existing Bearings	Each	12
Structural Steel Removal	Pound	3400
Structural Steel Repair	Pound	650
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1540
* Containment and Disposal of Non-Lead Paint	L Sum	1
Cleaning Residues No. 1	L Sum	1
Cleaning and Painting Steel Bridge No. 1	L Sum	1
Cleaning Existing Inlets	Each	2
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	10
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	10
Deck Slab Repair (Partial)	Sq. Yd.	100
Longitudinal Joint Sealant	Foot	360

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



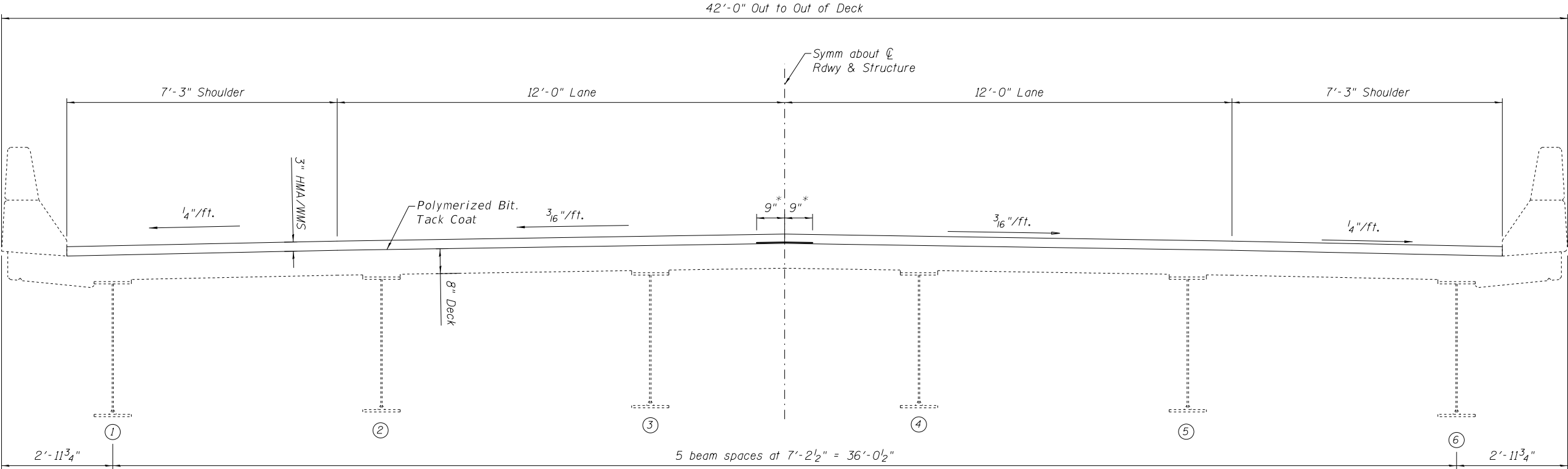
Expires 11/30/20
11/18/19

DESIGNED - Anthony Y. Vinson	EXAMINED - <i>Tung A. Dang</i>	DATE - OCTOBER 15, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		GENERAL PLAN & ELEVATION SN 079-0011		F.A.P. RTE. 312	SECTION 121-BR-1	COUNTY RANDOLPH	TOTAL SHEETS 18	SHEET NO. 9
CHECKED - John Uehle	PASSED - <i>John Uehle</i>	REVIS -					CONTRACT NO. 76K65				
DRAWN - Anthony Y. Vinson	ENGINEER OF BRIDGES AND STRUCTURES	REVIS -					ILLINOIS FED. AID PROJECT				
CHECKED - John Uehle											



CROSS SECTION

(Looking West @ Joint Location)



CROSS SECTION

(Looking West between joints)

Note:
A tack coat, per Section 406, with a residual asphalt rate of 0.025 lb/ sq ft should be placed on top of the 1/2" thick Asphalt Sand Seal Protection Layer of the Waterproofing Membrane System, before the HMA surfacing is placed.

* Longitudinal Joint Sealant

MODEL: 0790011-76K65-002
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DESIGNED - Anthony Y. Vinson	EXAMINED	DATE - JANUARY 17, 2020
CHECKED - John Uehle	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Anthony Y. Vinson	PASSED	REVISED -
CHECKED - John Uehle	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

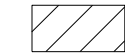
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SECTION
SN 079-0011

SHEET 2 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	10
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				

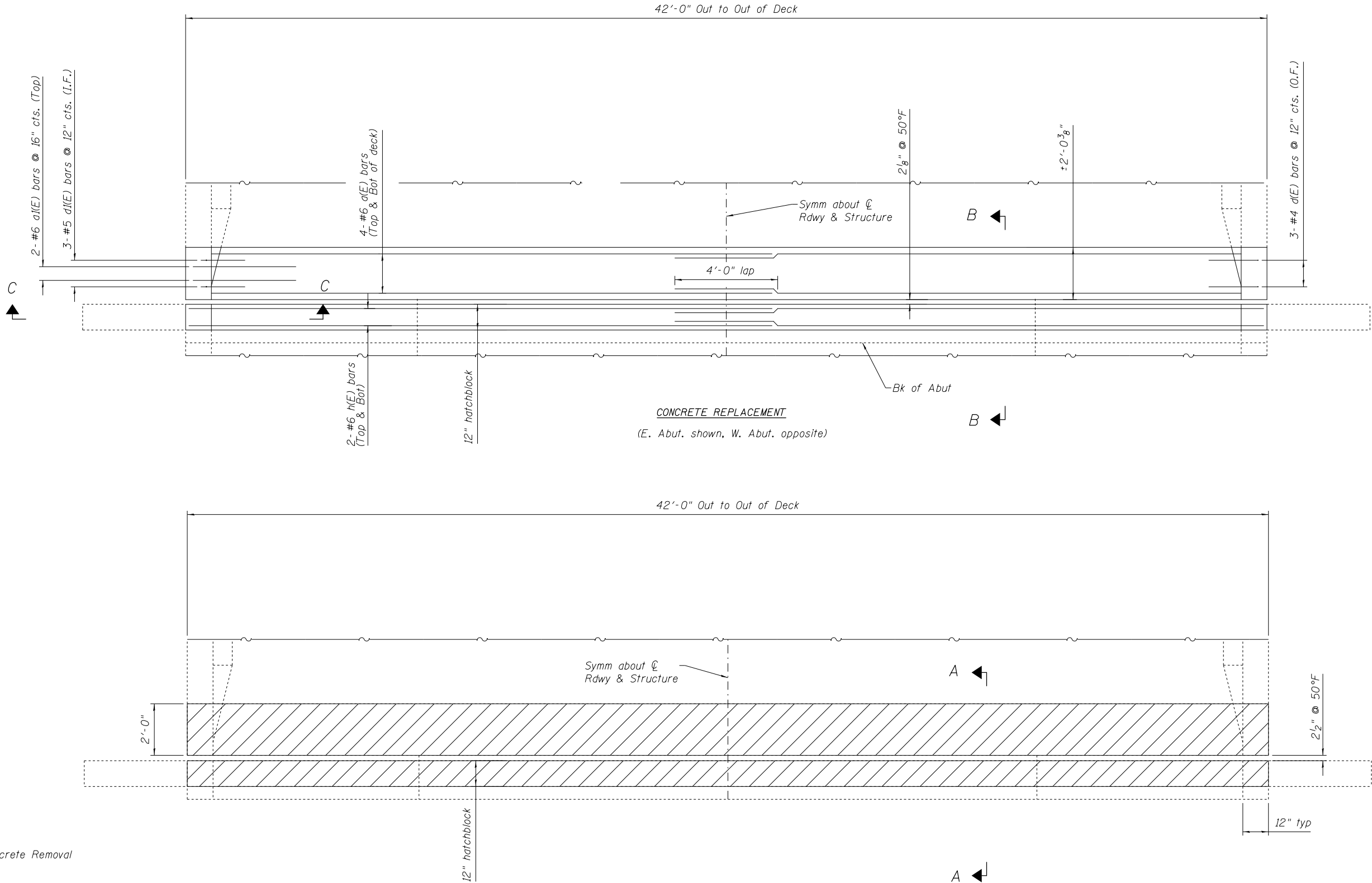
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Concrete Removal

Note:
See sheet 4 of 9 for Bill of Material & Section A-A, B-B & C-C.

Existing reinforcement bars extending into 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.



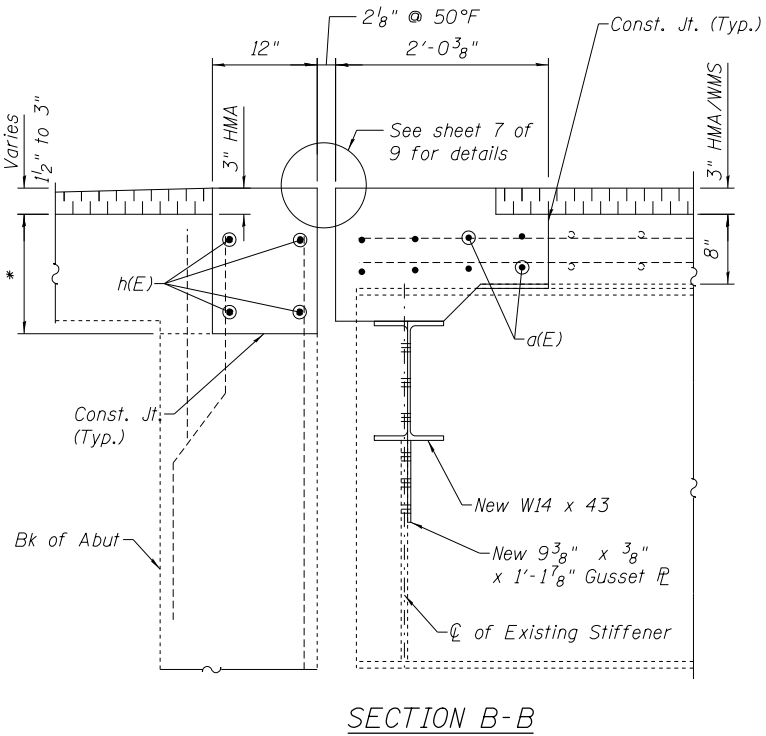
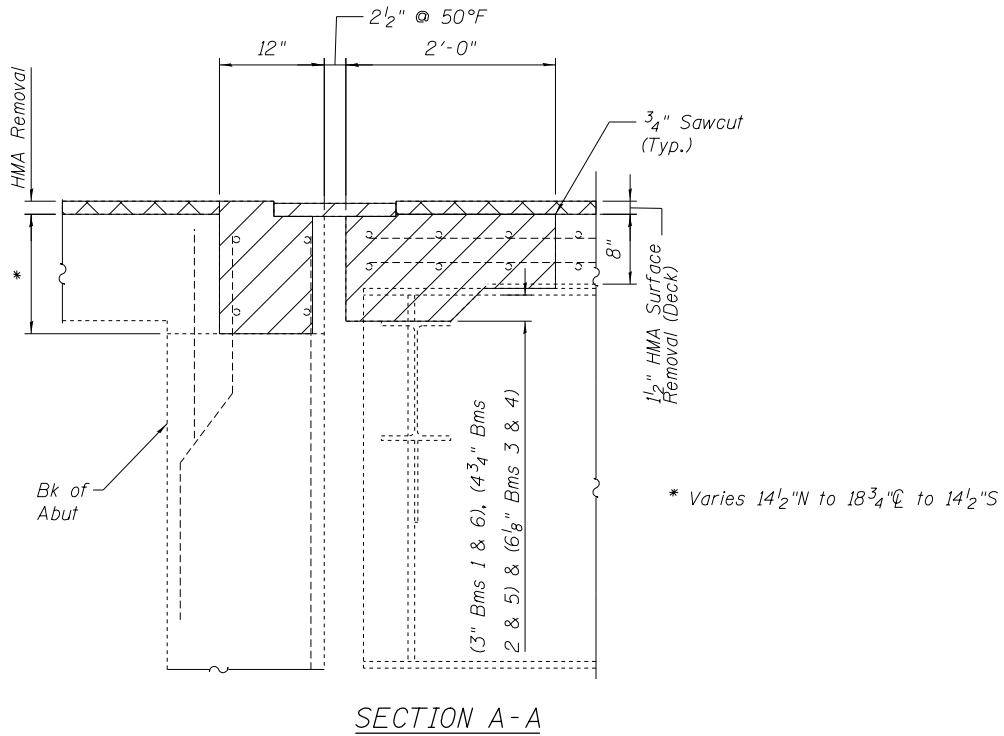
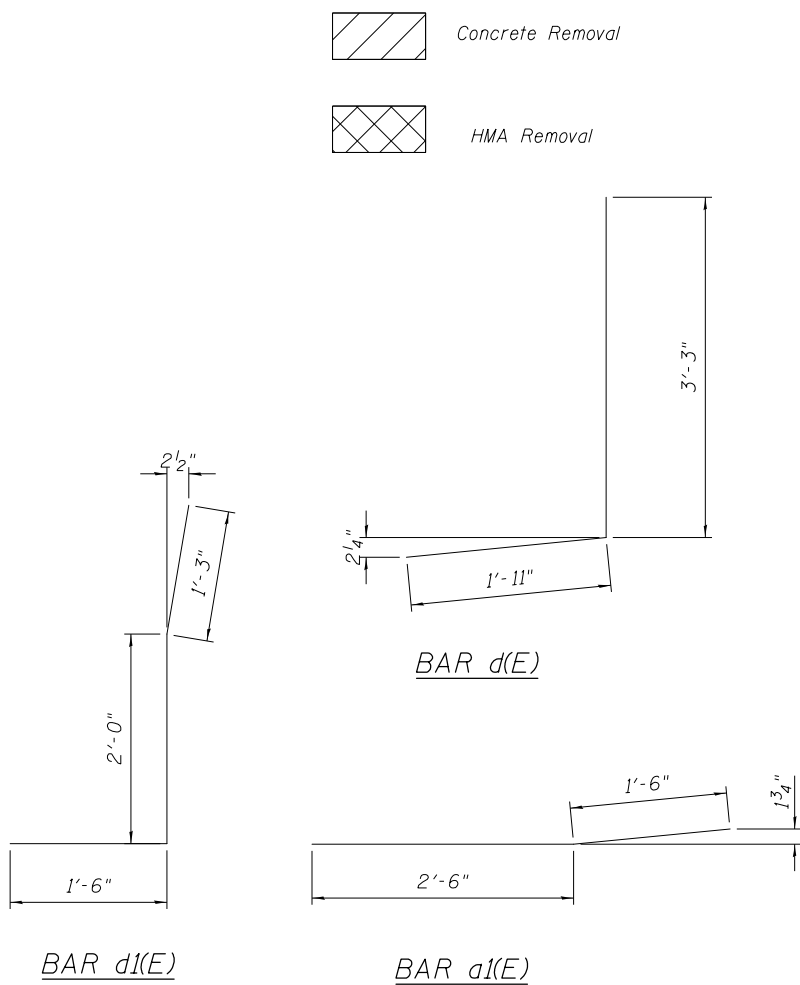
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT
SN 079-0011

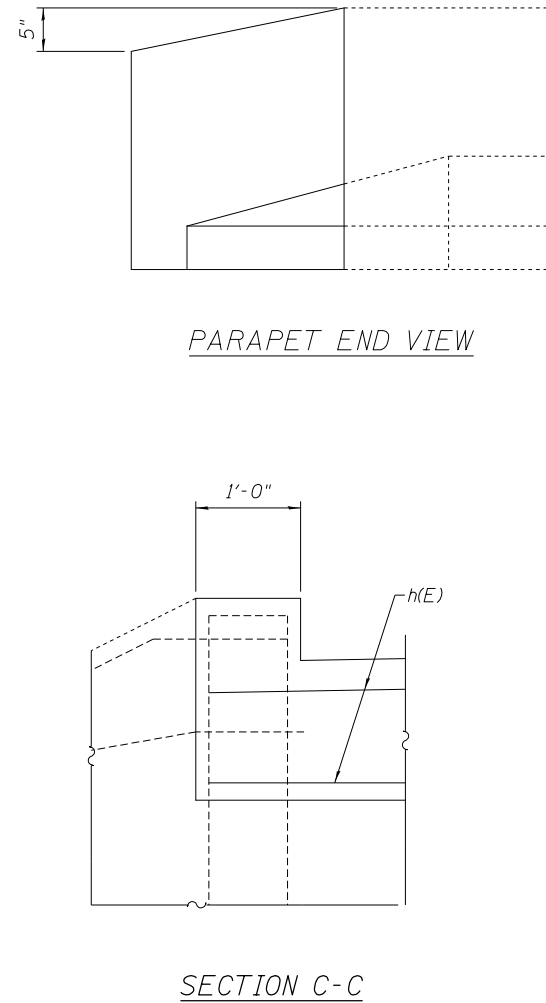
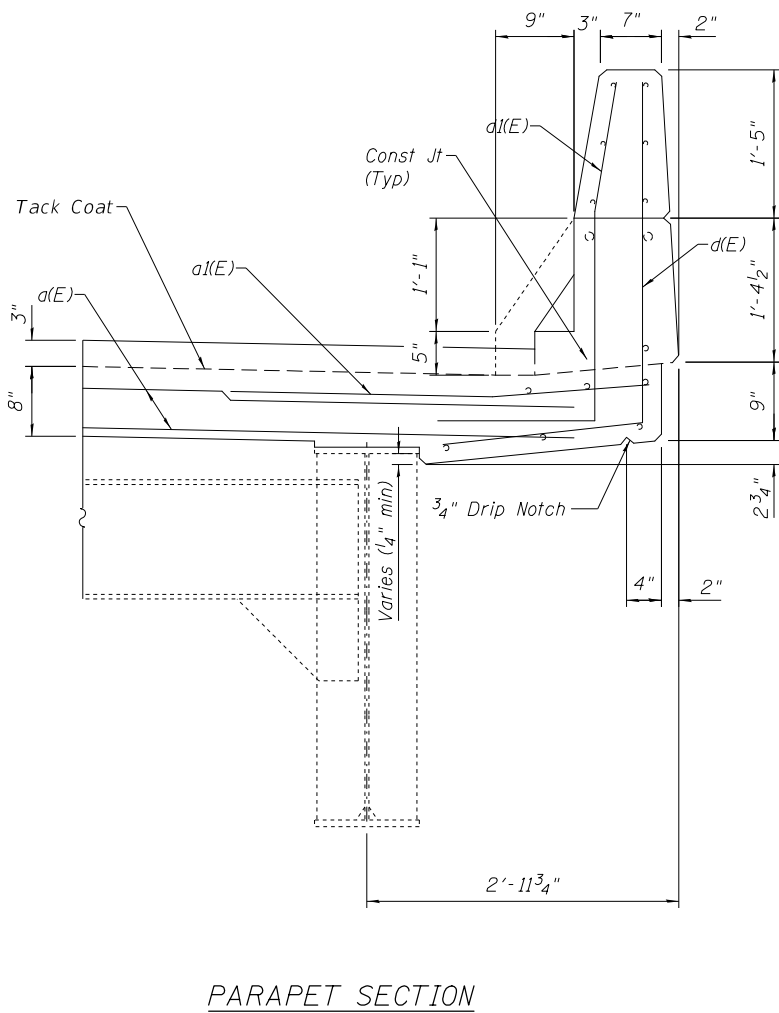
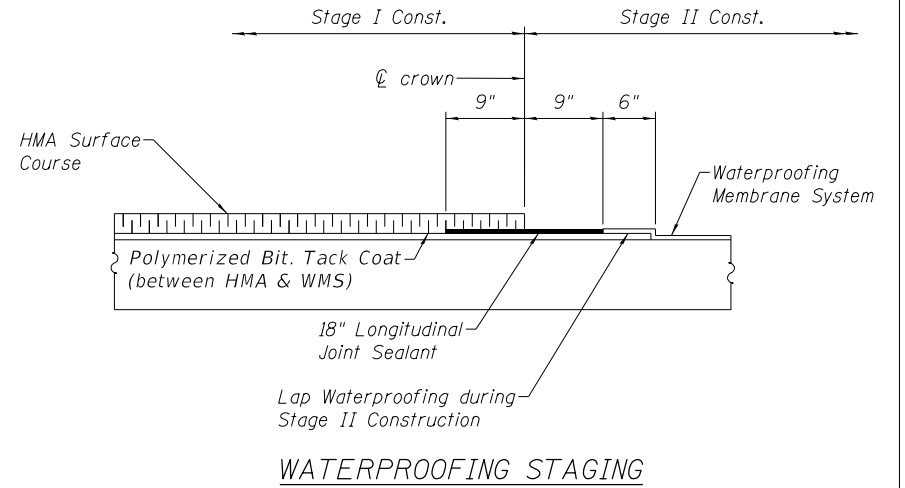
SHEET 3 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	11
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				

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Note:
Existing reinforcement bars extending into 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.



BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a(E)	32	#6	22'-0"	—
a(I(E))	8	#6	4'-0"	—
d(E)	12	#4	5'-2"	L
d(I(E))	12	#5	4'-9"	L
h(E)	16	#6	22'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	1760
Concrete Superstructure			Cu. Yd.	13.1
Concrete Removal			Cu. Yd.	12.3

DESIGNED	-	Anthony Y. Vinson
CHECKED	-	John Uehle
DRAWN	-	Anthony Y. Vinson
CHECKED	-	John Uehle

EXAMINED		ACTING ENGINEER OF STRUCTURAL SERVICES
PASSED		ENGINEER OF BRIDGES AND STRUCTURES

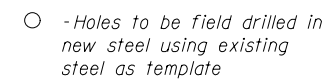
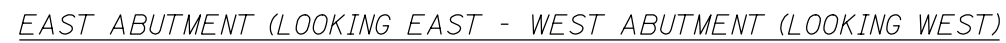
DATE	-	JANUARY 17, 2020
REVISED	-	
REVISED	-	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

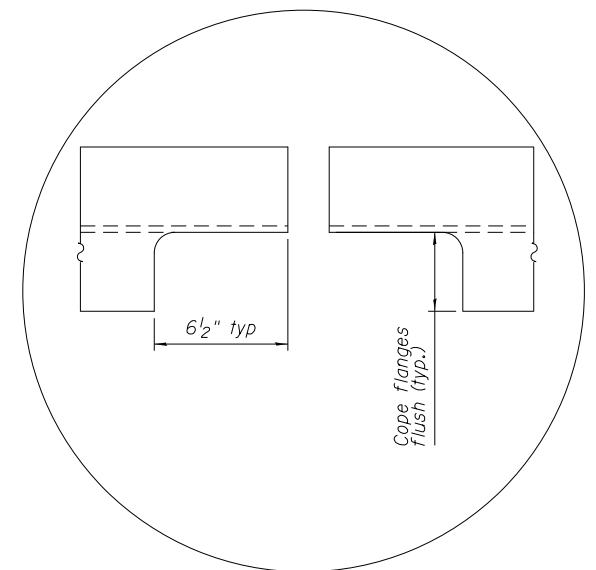
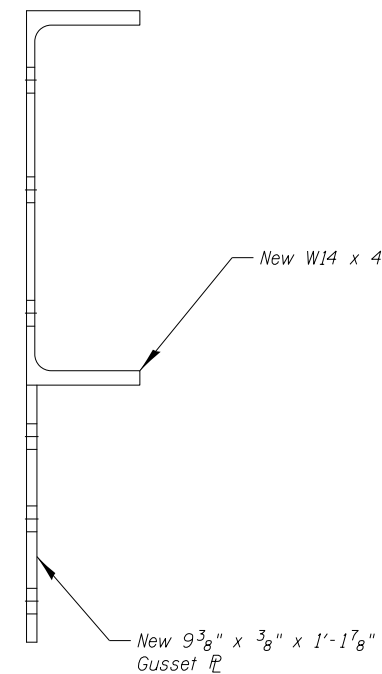
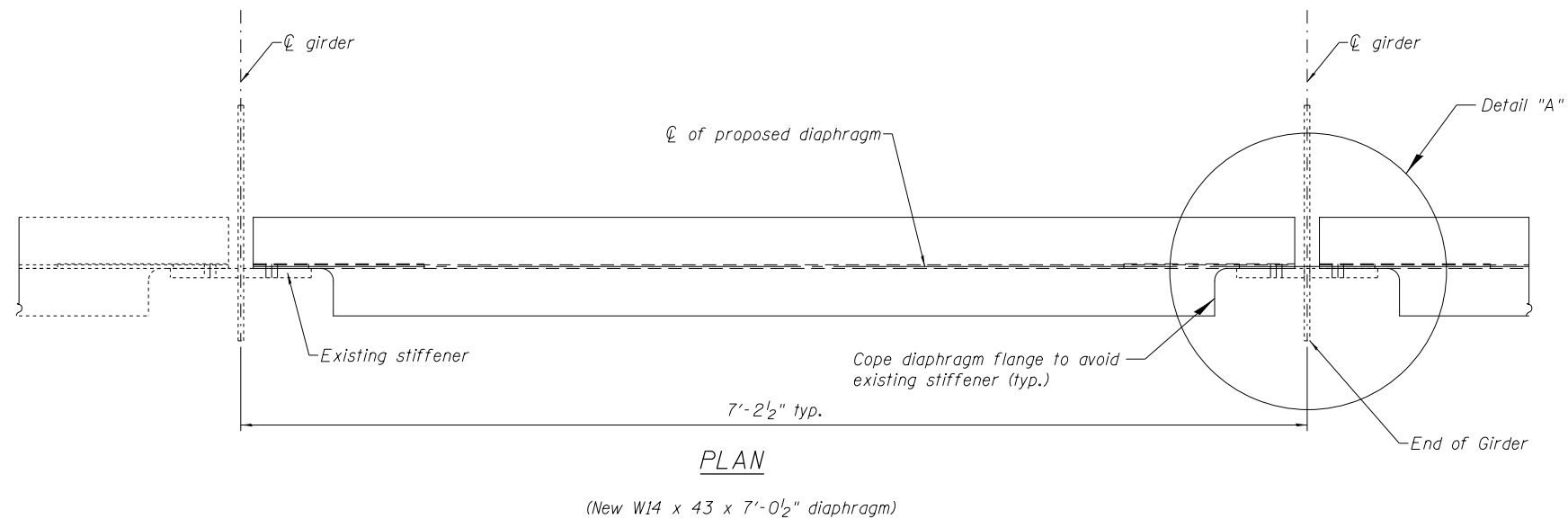
JOINT DETAILS
SN 079-0011

SHEET 4 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	12
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				



Note: Two hardened washers shall be required at diaphragm connections.



DETAIL "A"

(Only showing diaphragms for clarity)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	Pound	3400
F & E Structural Steel	Pound	3400

DESIGNED - Anthony Y. Vinson	EXAMINED	DATE - JANUARY 17, 2020
CHECKED - John Uehle		ACTING ENGINEER OF STRUCTURAL SERVICES
DRAWN - Anthony Y. Vinson	PASSED	REVISED -
CHECKED - John Uehle		ENGINEER OF BRIDGES AND STRUCTURES

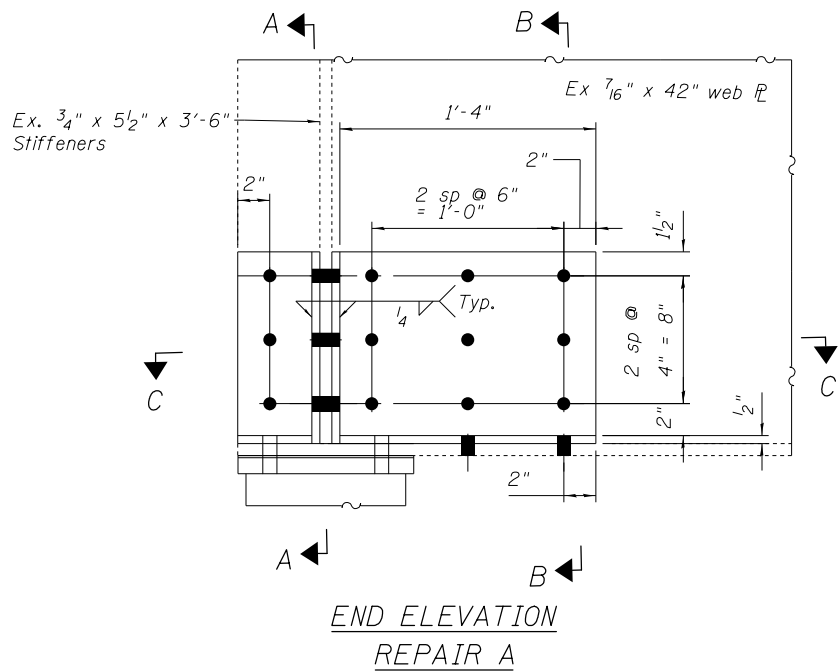
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

END DIAPHRAGM DETAILS
SN 079-0011

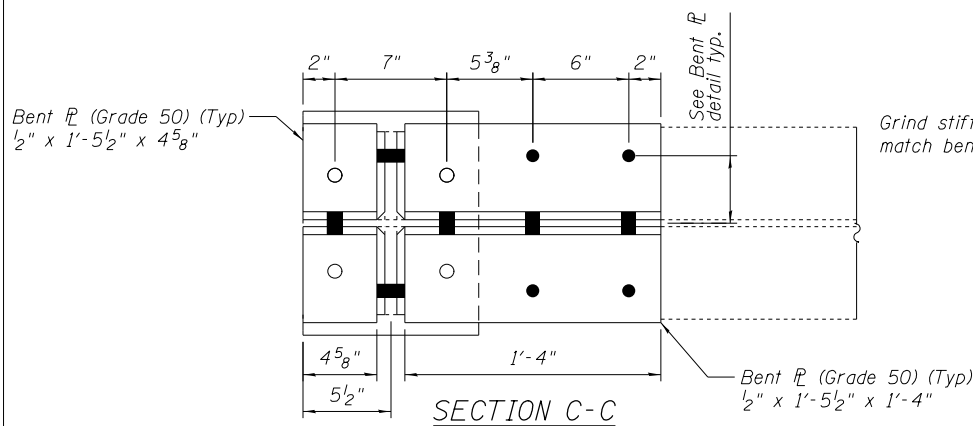
SHEET 5 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 76K65		
		ILLINOIS FED. AID PROJECT		

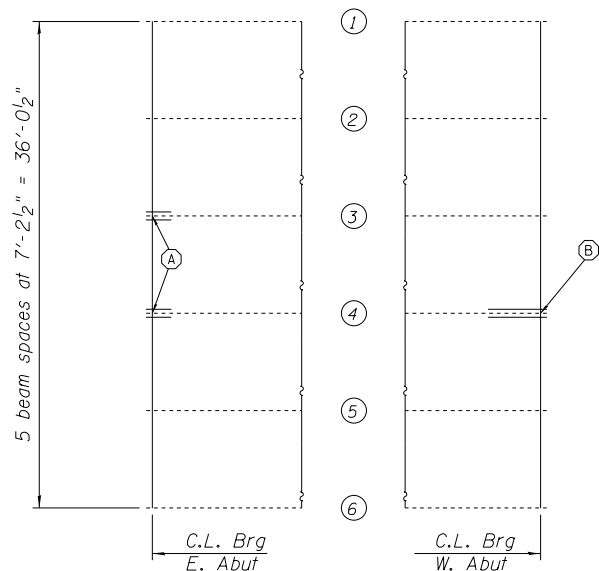
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END ELEVATION
REPAIR A



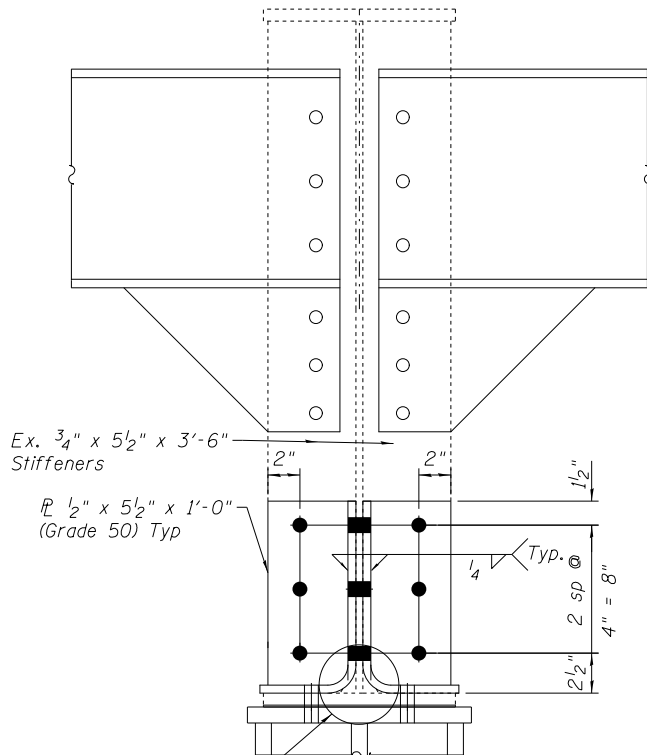
SECTION C-C



PARTIAL LOCATION PLAN

Ⓐ - Beam End Repair, E. Abut, Beams 3 & 4

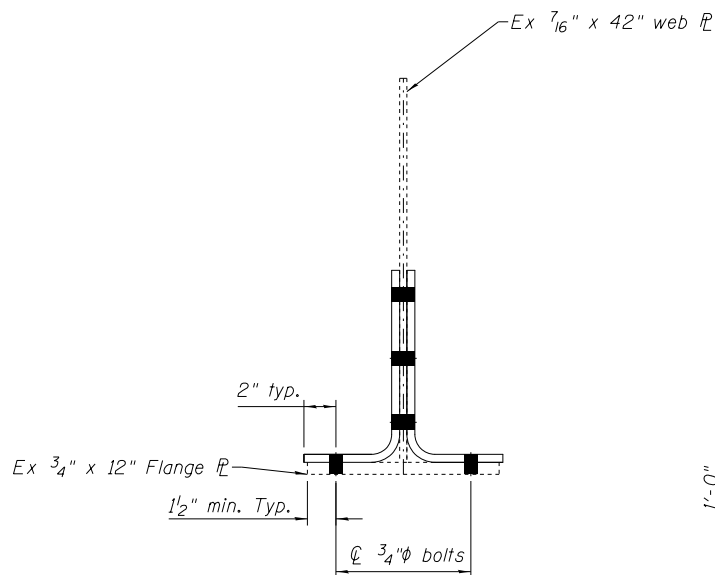
Ⓑ - Beam End Repair, W. Abut, Beam 4



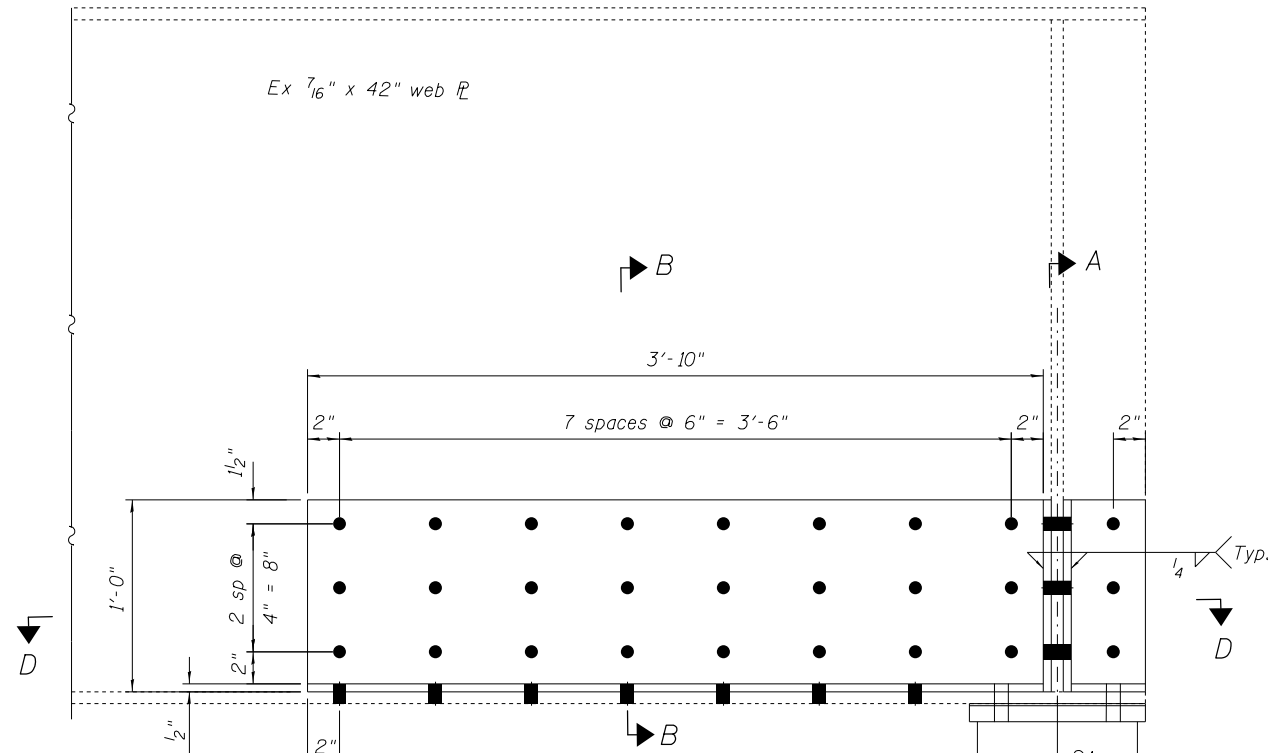
SECTION A-A

Grind stiffener repair plate to match bent plate. Don't clip

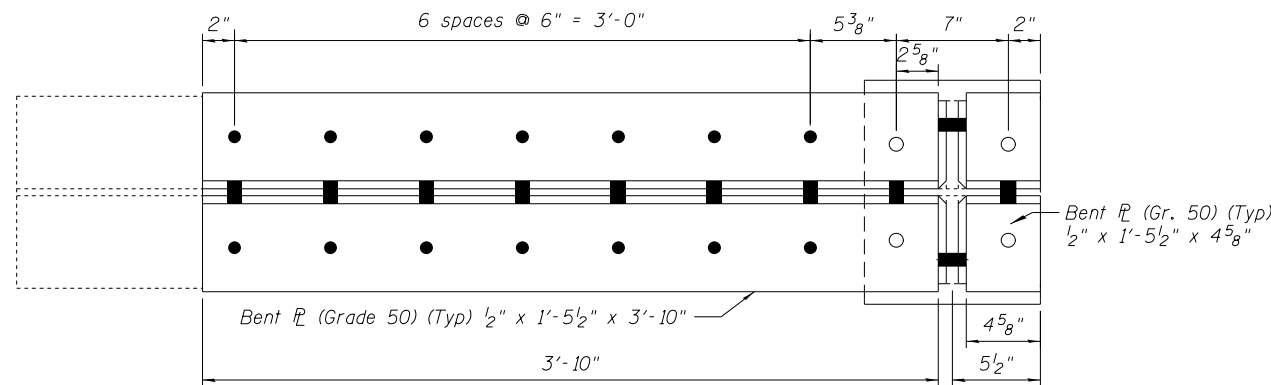
- - Holes to be field drilled in existing \overline{R} using new \overline{R} as template
- - Holes to be field drilled using steel extension as template



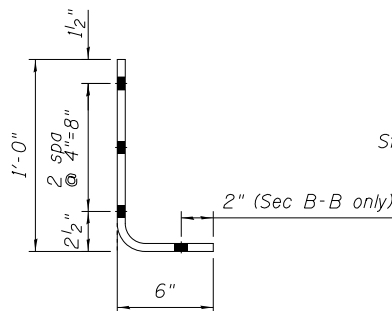
SECTION B-B



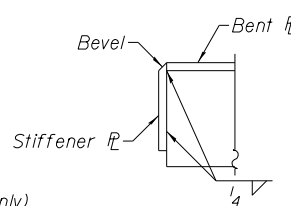
END ELEVATION
REPAIR B



SECTION D-D



BENT \overline{R}



BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	650

DESIGNED -	Anthony Y. Vinson
CHECKED -	John Uehle
DRAWN -	Anthony Y. Vinson
CHECKED -	John Uehle

EXAMINED	ACTING ENGINEER OF STRUCTURAL SERVICES
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

DATE -	JANUARY 17, 2020
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM END REPAIRS
SN 079-0011

SHEET 6 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	14
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				

ELEVATION AT ABUTMENT

SECTION A-A

BEAM REACTIONS

$R\varnothing$	(K)	39.3
$R\frac{1}{2}$	(K)	40.7
Imp.	(K)	9.9
R (Total)	(K)	89.9

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

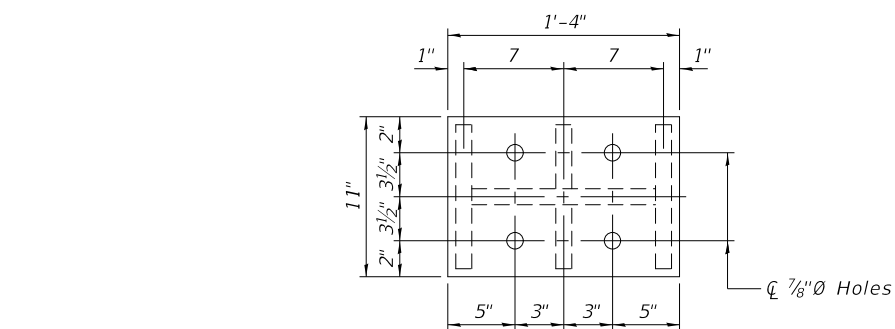
Min. jack capacity = 50 Tons.

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 ($F_y=36\text{ksi}$). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

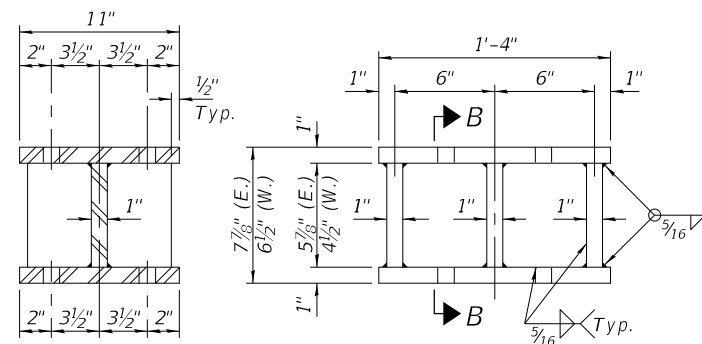
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Steel extensions are based on field measured heights of the existing rocker bearings (which do not match the existing plans). Provide shims as shown below.

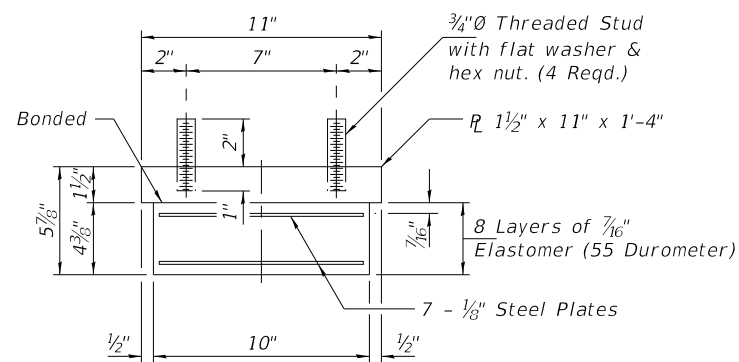


PLAN TOP AND BOTTOM PLATE



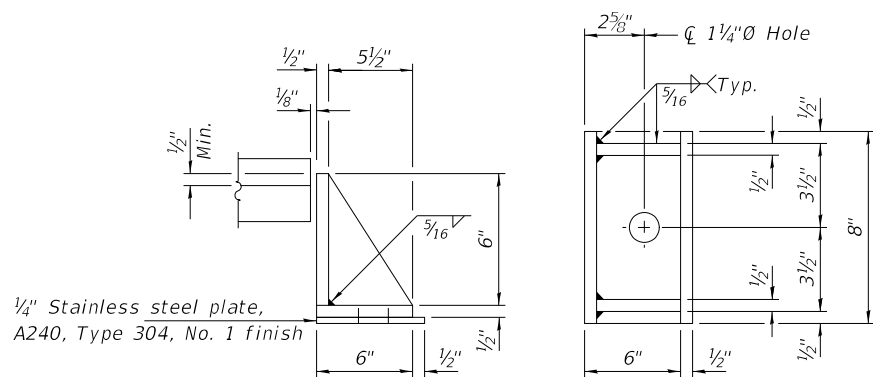
SECTION B-B

STEEL EXTENSION DETAIL



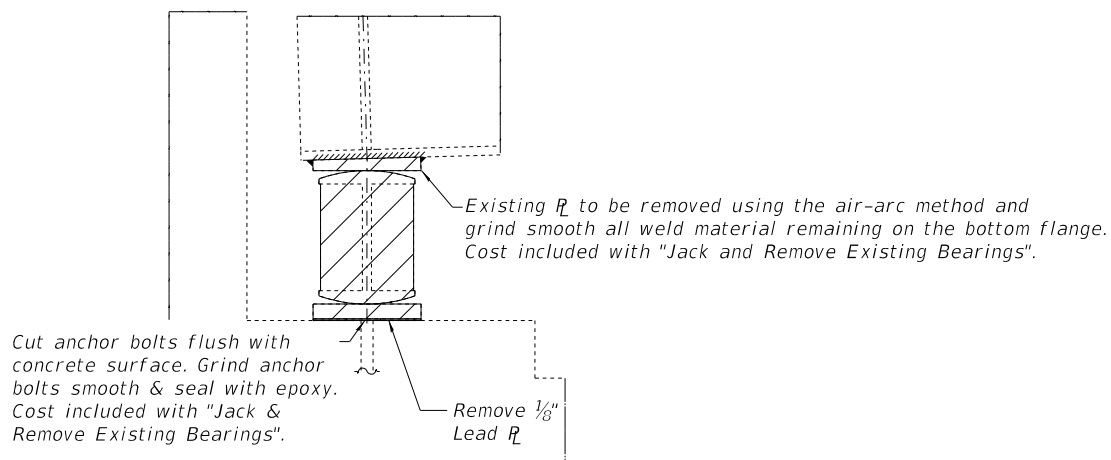
BEARING ASSEMBLY

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



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

East Abutment Shims

Based on $5\frac{7}{8}"$ bearing + $\frac{1}{8}"$ normal shim + $7\frac{7}{8}"$ Extension = $13\frac{7}{8}"$

Beam #	1	2	3	4	5	6
Existing bearing height	13 ⁷ / ₈ "	14 ¹ / ₈ "	13 ⁷ / ₈ "	14 ¹ / ₈ "	14 ¹ / ₄ "	14 ¹ / ₂ "
Shim Thickness	0"	1/4"	0"	1/4"	3/8"	5/8"

West Abutment Shims

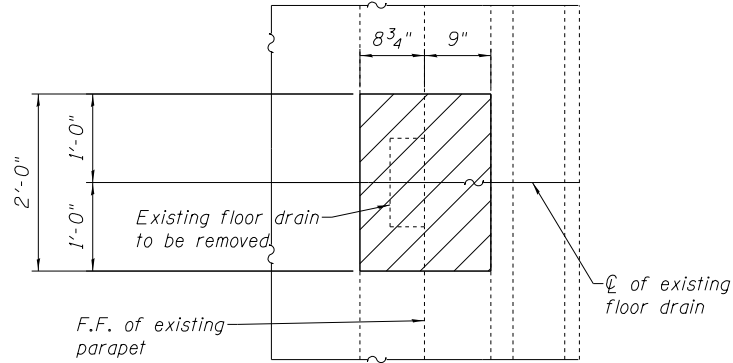
Based on $5\frac{7}{8}$ " bearing + $\frac{1}{8}$ " normal shim + $6\frac{1}{2}$ " Extension = $12\frac{1}{2}$ "

Beam #	1	2	3	4	5	6
Existing bearing height	12 $\frac{5}{8}$ "	12 $\frac{1}{2}$ "	12 $\frac{1}{2}$ "	12 $\frac{1}{2}$ "	12 $\frac{3}{4}$ "	13 $\frac{1}{4}$ "
Shim Thickness	$\frac{3}{8}$ "	0"	0"	0"	$\frac{1}{4}$ "	$\frac{3}{4}$ "

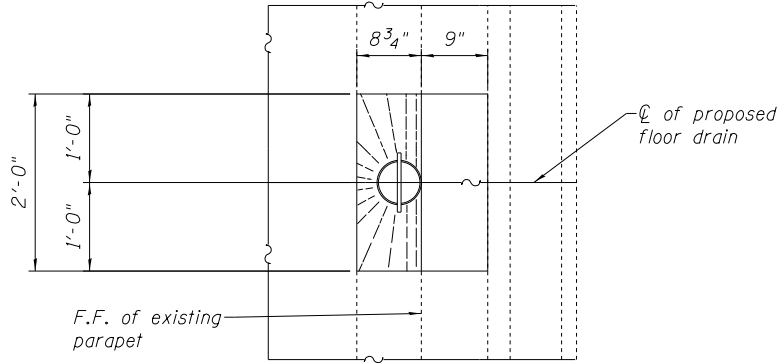
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	2320
Anchor Bolts, 1"Ø	Each	24

MODEL: 0790011-76K65-008
FILE NAME: pw:\planroom-dot.illinois.gov\PWIDOT\Documents\DOT Offices\District 8\Projects\ID876K65\CADDData\Structures\0790011-76K65.dgn



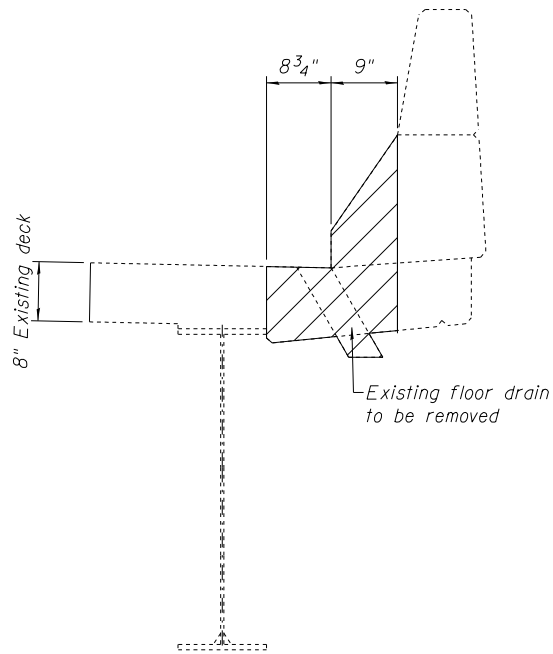
PLAN-REMOVAL OF EXISTING FLOOR
DRAIN AND ADJACENT CONCRETE



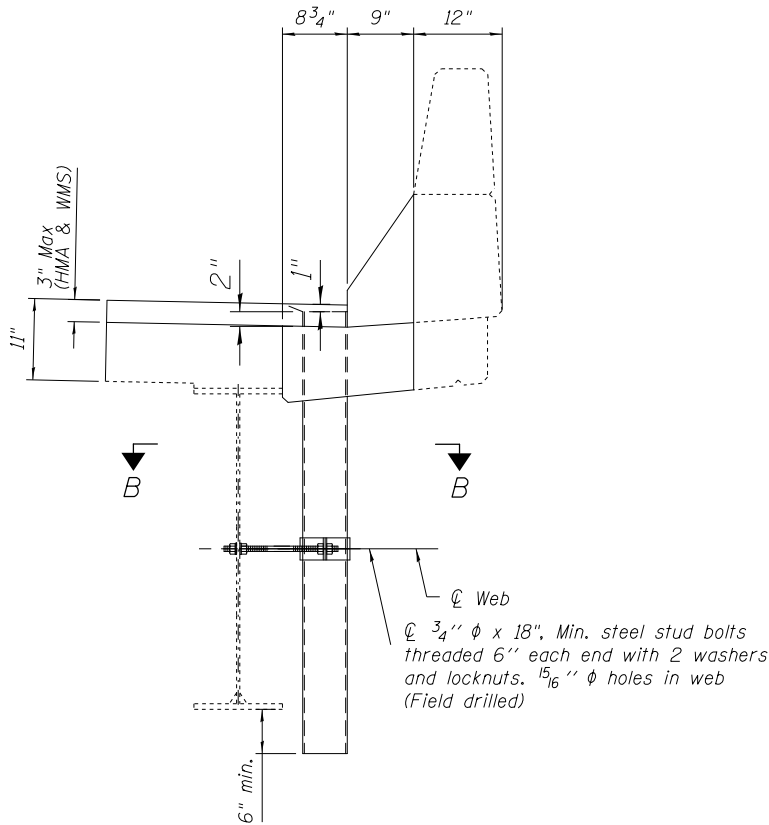
PLAN-PROPOSED FLOOR DRAIN, FULL DEPTH PATCH
& HMA @ DRAINS

(See sheet 1 of 10 for locations to replace rectangular drain with proposed drain) (28 Req'd)

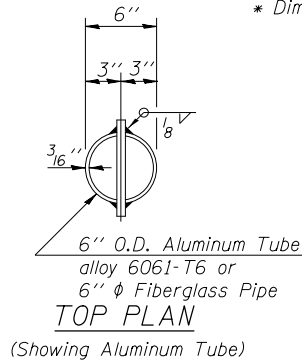
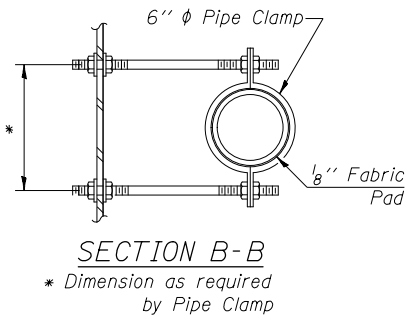
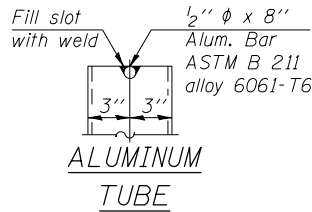
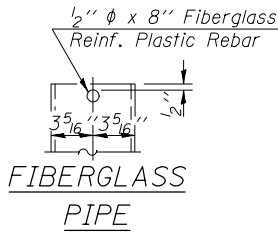
Slope to drain with 1" minimum HMA at drains edge



SECTION-REMOVAL OF EXISTING FLOOR
DRAIN AND ADJACENT CONCRETE



SECTION-PROPOSED FLOOR DRAIN &
FULL DEPTH PATCH



Notes:
The floor drains shall be painted to match the outside of the fascia beams.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232.
Cost of clamping device and inserts is included with Floor Drains.
Cost of Concrete Removal and replacement and removal of existing drains is included in cost of Deck Slab Repair (Full Depth, Type I)

DESIGNED	-	Anthony Y. Vinson
CHECKED	-	John Uehle
DRAWN	-	Anthony Y. Vinson
CHECKED	-	John Uehle

EXAMINED	ACTING ENGINEER OF STRUCTURAL SERVICES
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

DATE	-	JANUARY 17, 2020
REVISED	-	
REVISED	-	

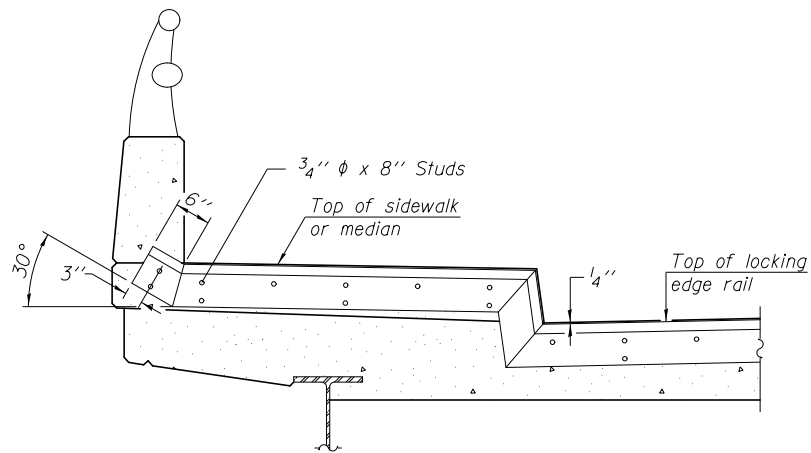
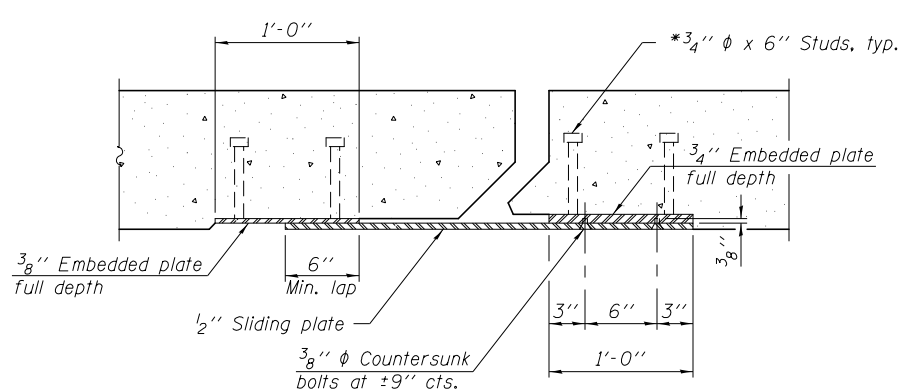
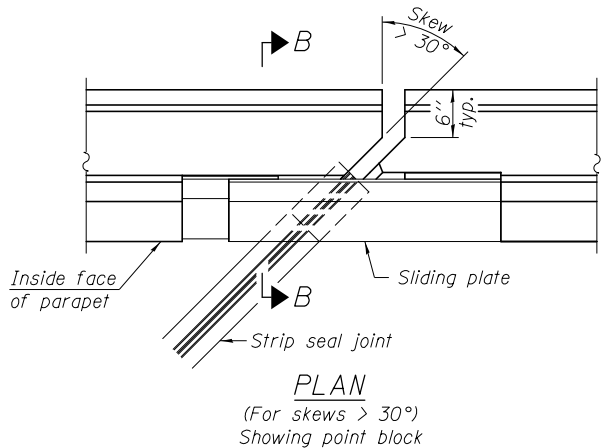
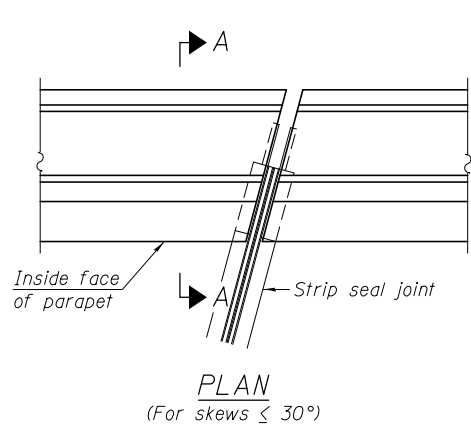
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAIN DETAILS
SN 079-0011

SHEET 8 OF 9 SHEETS

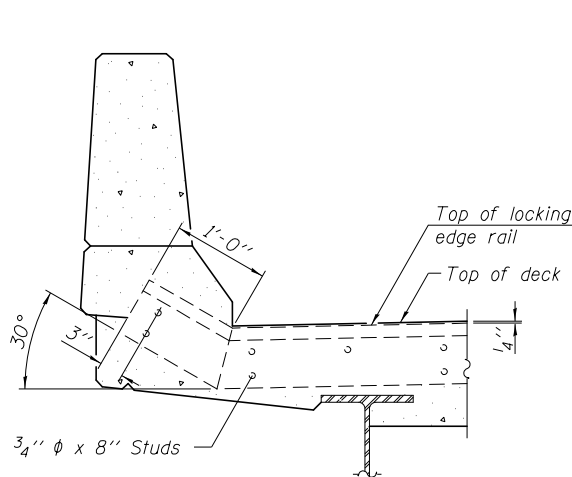
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312	121-BR-1	RANDOLPH	18	16
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				

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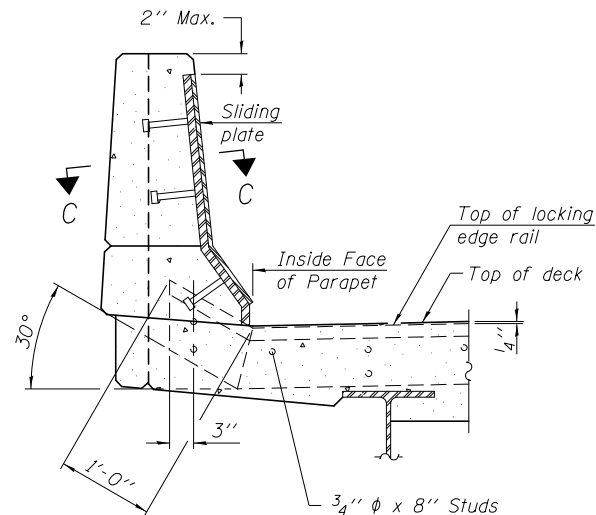


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

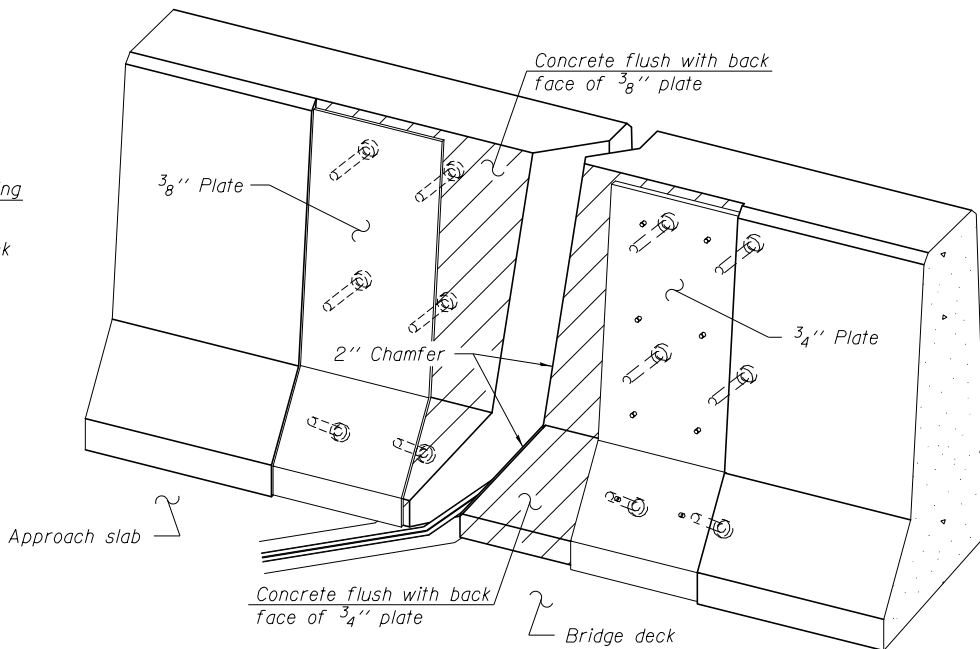
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



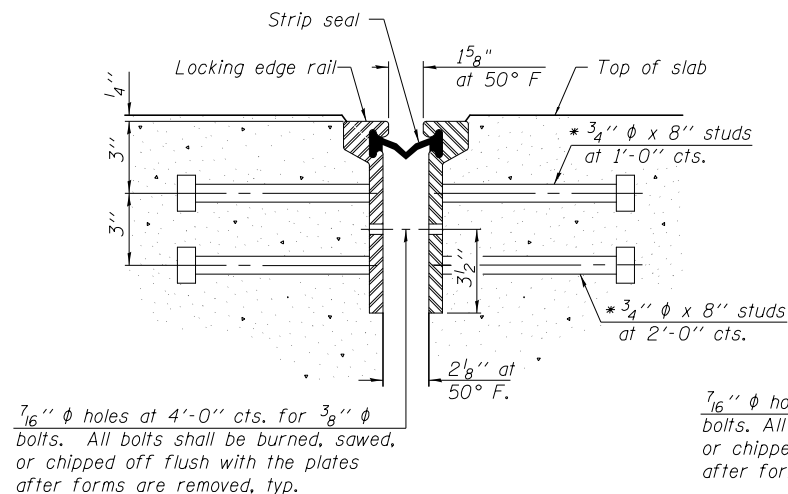
SECTION A-A



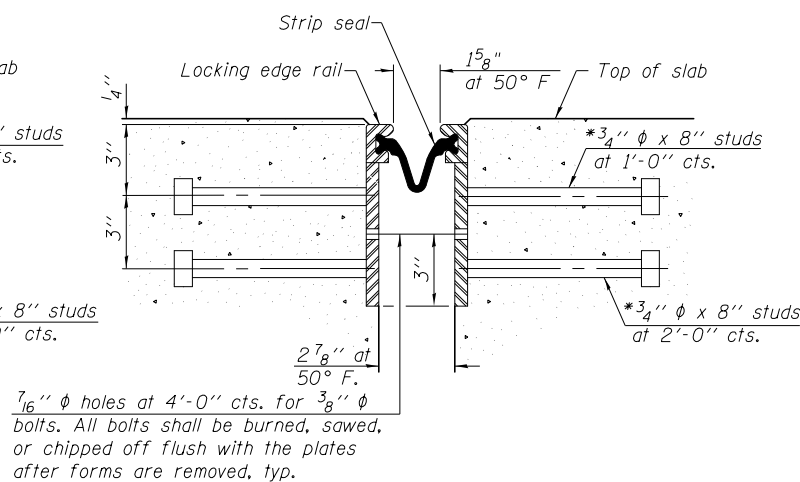
SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)



SECTION THRU
ROLLED RAIL JOINT



SECTION THRU
WELDED RAIL JOINT

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	82

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

EJ-SSJ

11-22-2016

DESIGNED -	Anthony Y. Vinson
CHECKED -	John Uehle
DRAWN -	Anthony Y. Vinson
CHECKED -	John Uehle

EXAMINED	ACTING ENGINEER OF STRUCTURAL SERVICES
PASSED	ENGINEER OF BRIDGES AND STRUCTURES

DATE -	JANUARY 17, 2020
REVISED -	
REVISED -	

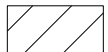
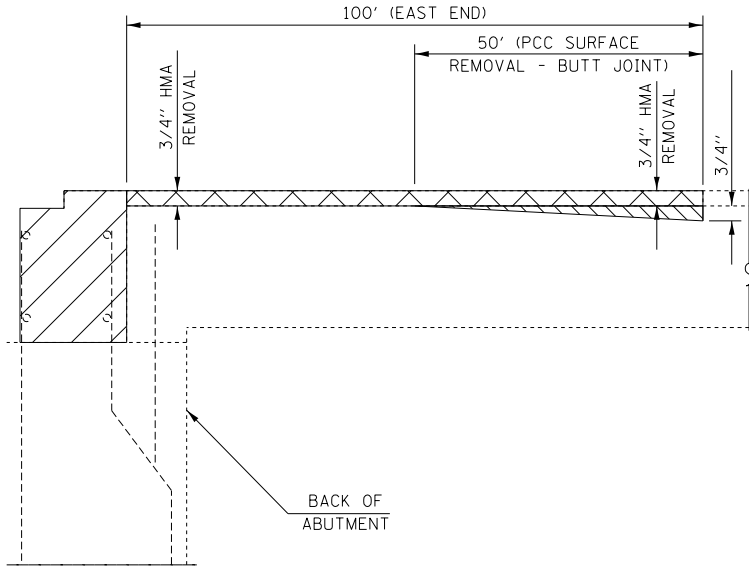
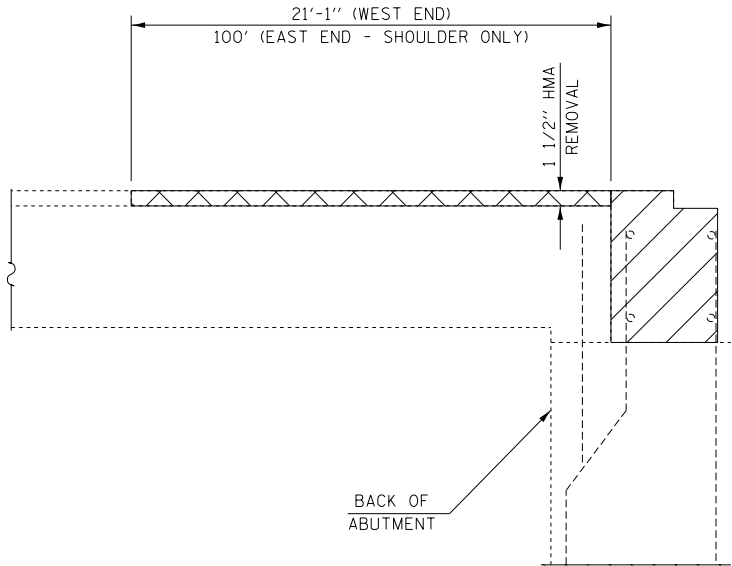
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 079-0011

SHEET 9 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	17
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				

10/15/2019 2:21:30 PM



CONCRETE REMOVAL



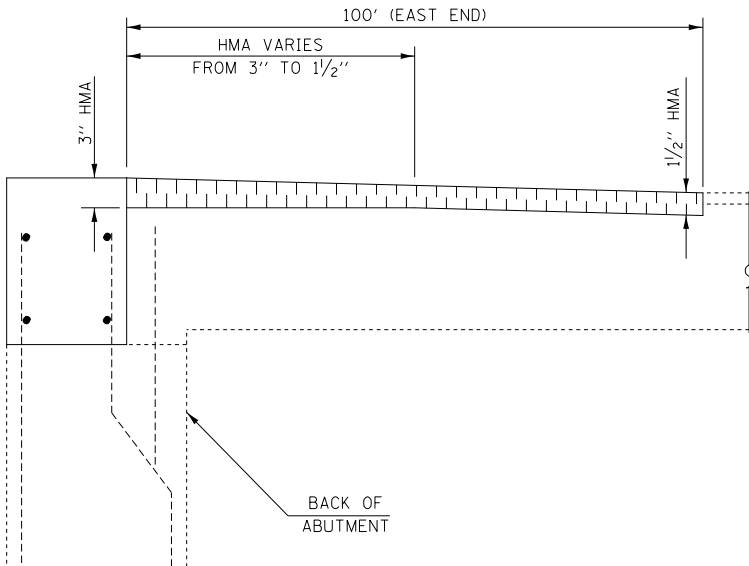
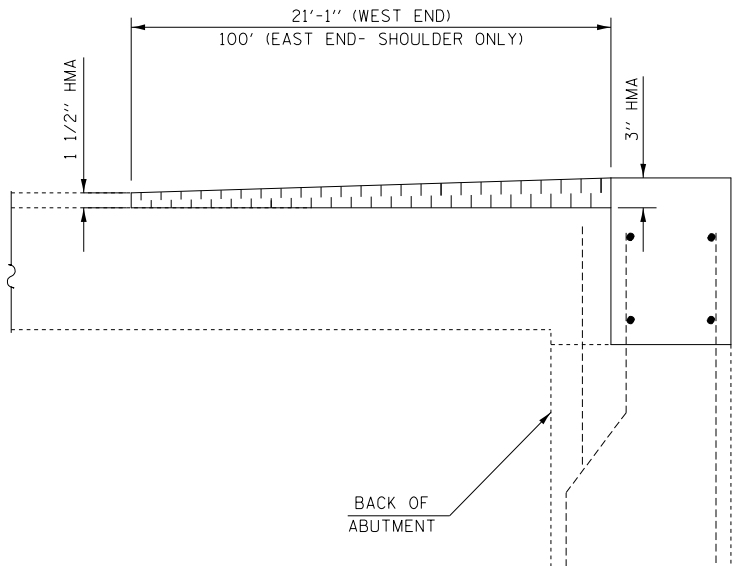
HMA REMOVAL



PCC SURFACE REMOVAL
- BUTT JOINT



HMA SURFACE



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USER NAME	= harbaughrd	DESIGNED	-	REVISED	-
		DRAWN	-	REVISED	-
PLOT SCALE	= 40,0000 ' / in.	CHECKED	-	REVISED	-
PLOT DATE	= 10/18/2019	DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

SCALE: NA SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312	121-BR-1	RANDOLPH	18	18
CONTRACT NO. 76K65				
ILLINOIS FED. AID PROJECT				