

ORIGINAL 101-0136
PLANS

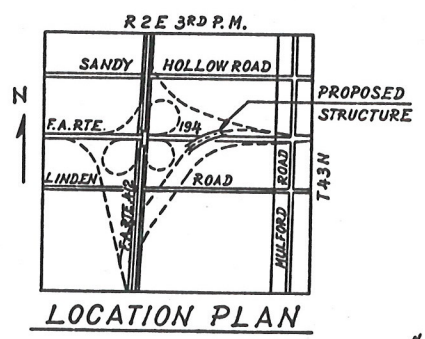
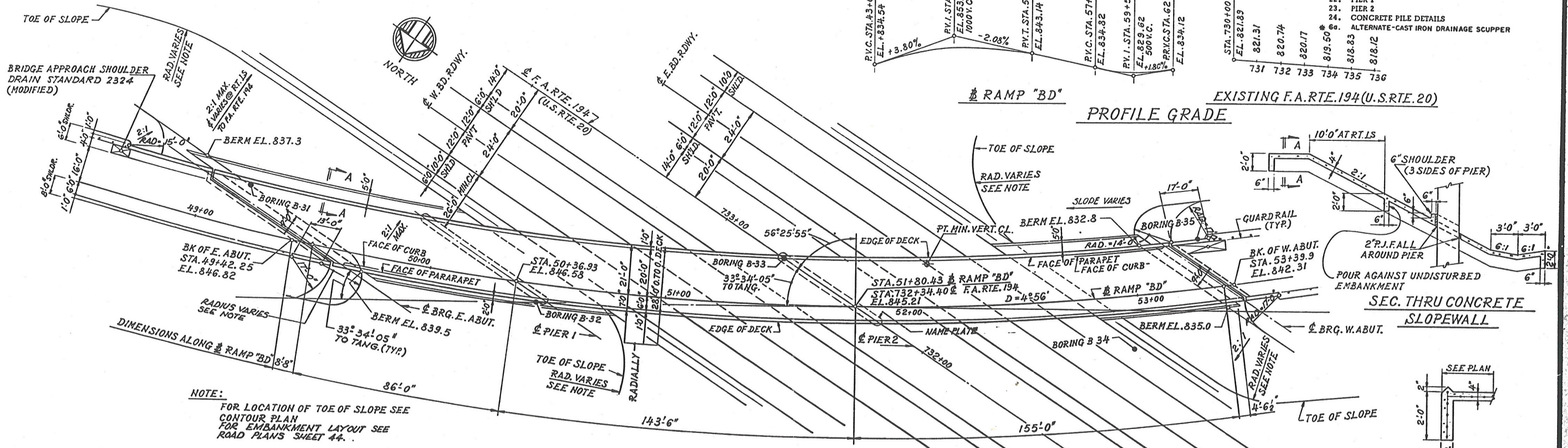
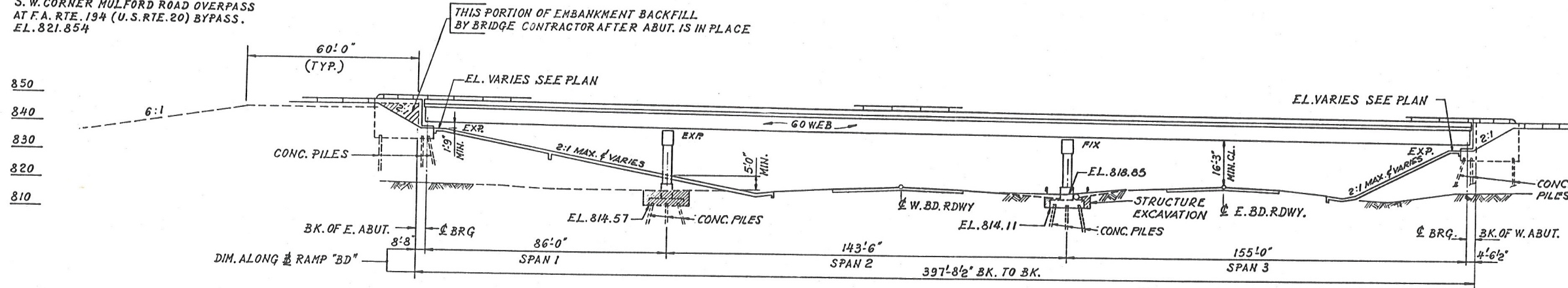
NO EXISTING STRUCTURE
BENCHMARK #3, BRASS TABLET
"D.M.-3" IN CONC. (FLUSH)
S.W. CORNER MULFORD ROAD OVERPASS
AT F.A. RTE. 194 (U.S. RTE. 20) BYPASS.
EL. 821.854

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	76
STA.	TO STA.			
F. H. & REG. NO. 4	ILLINOIS	PROJECT		

SHEET 1 OF 24

INDEX OF SHEETS

1. GENERAL PLAN AND ELEVATION
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4. DECK REINFORCEMENT PLAN - SPAN 3
5. DECK DETAILS
6. DRAINAGE SCUPPERS
7. ALUMINUM HANDRAIL PLAN
8. ALUMINUM HANDRAIL DETAILS
9. NEOPRENE EXPANSION JOINTS (2-1/2")
10. NEOPRENE EXPANSION JOINTS (4")
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13. FRAMING PLAN AND ELEVATIONS
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17. BEARING DETAILS
18. E. ABUTMENT
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21. ABUTMENT DETAILS
22. PIER 1
23. PIER 2
24. CONCRETE PILE DETAILS
60. ALTERNATE-CAST IRON DRAINAGE SCUPPER



DESIGN LOAD
L.L. = HS 20-44
FUTURE D.L. = 25 P.S.F.

DESIGN STRESSES
 $f_c = 3,500$ P.S.I.
 $f_c = 1,400$ P.S.I. (SUBSTRUCTURE, CURB & PARAPET)
 $f_c = 1,000$ P.S.I. (WITH EARTH PRESSURE)
 $v = 0.95 \sqrt{f_c}$ (FOOTINGS)
 $n = 10$

REINFORCING STEEL
 $f_s = 20,000$ P.S.I. (Substructure)

STRUCTURAL STEEL
 $f_s = 20,000$ P.S.I. (M183)
 $f_s = 27,000$ P.S.I. (M223) UP TO 1-1/2" INCL.
 $f_s = 27,000$ P.S.I. (M222) OVER 1-1/2" TO 4" INCL.

MAX. L.L. DEFLECTION
L/1200 (COMPOSITE)

DESIGN SPECIFICATIONS
AASHTO: 1973 AND INTERIM AS APPLICABLE

Deck Slab Design Stresses
 $f_c = 3,500$ psi.
 $f_y = 60,000$ psi. (Reinf.)
 $n = 8.5$

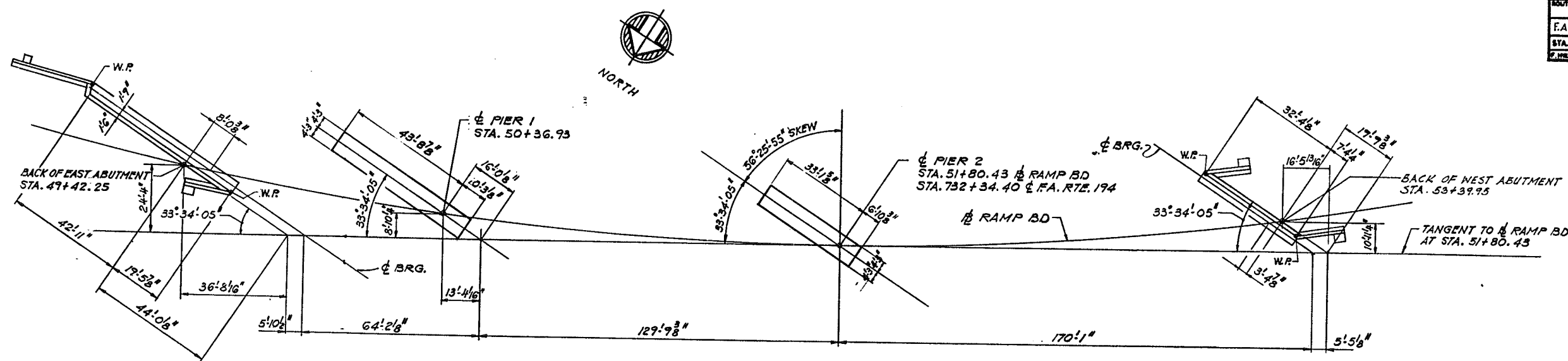
NOTE: FOR HORIZONTAL CURVE DATA SEE SHEET 2

APPROVED
FOR STRUCTURAL ADEQUACY (M.M.)
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

101-0136
GENERAL PLAN AND ELEVATION
RAMP BD
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	77
STA.	TO STA.		PROJECT	
7, 10E & RES. NO. 4	ILLINOIS			

SHEET 2 OF 24



FOOTING LAYOUT PLAN

CURVE DATA
 PI STA. 51+23.80
 $\Delta = 62^\circ - 50' - 33''$
 $D = 4^\circ - 56' - 00''$
 $T = 704.88$
 $R = 1161.40$
 $L = 1267.08$
 $E = 197.17$

GENERAL NOTES

- ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.
- PASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4" DIAMETER, OPEN HOLES 13/16" DIAMETER, UNLESS OTHERWISE NOTED.
- CALCULATED WEIGHT OF STRUCTURAL STEEL = 669,420 LBS.
- THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. 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.
- SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" MESH, WEIGHING 58 LBS. PER 100 SQ. FT.
- THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.
- THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT THE PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.
- THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.
- THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.
- BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF $\pm 1/8$ 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.
- 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 of wide flange beams.*
- For boring data see Special Provisions.*
- Reinforcement bars in the deck slab shall conform to the requirements of AASHTO M31 Gr. 60 or M53 Gr. 60.*

ITEM	UNIT	EVB	SUPER	TOTAL
* BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D CLASS I	TON	-	90	90
STRUCTURE EXCAVATION	CU. YD.	122	-	122
* PROTECTIVE COAT	SQ. YD.	-	325	325
CLASS X CONCRETE	CU. YD.	424.3	379.4	803.70
STUD SHEAR CONNECTORS	EACH	-	2,349	2,349
STRUCTURAL STEEL	L.SUM	-	0.66	0.66
ALUMINUM RAILING	LIN. FT.	-	868	868
REINFORCEMENT BARS	LBS.	65,380	99,380	164,760
CONCRETE PILES	LIN. FT.	3,496	-	3,496
TEST PILE CONCRETE	EACH	4	-	4
NAME PLATES	EACH	1	-	1
SLOPE WALL, 4 INCH	SQ. YD.	930	-	930
* WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	-	1,085	1,085
NEOPRENE EXPANSION JOINT, 4 INCH	LIN. FT.	-	70	70
NEOPRENE EXPANSION JOINT, 2-1/2 INCH	LIN. FT.	-	40	40
DRAINAGE SCUPPERS	EACH	-	2	2

* Not in this contract. To be constructed on Paving Section.

STATION 51+80.43
 BUILT 197 BY
 STATE OF ILLINOIS
 F.A. RT. 194 SEC. 201-3HB-2
 F.A. PROJ. EBE-405-5 (7)
 LOADING HS 20

1 REQ'D.
 (SEE STATE OF ILLINOIS STD. 2115)
 LETTERING FOR NAME PLATE

GENERAL NOTES, QUANTITIES AND FOOTING LAYOUT

RAMP BRIDGE
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

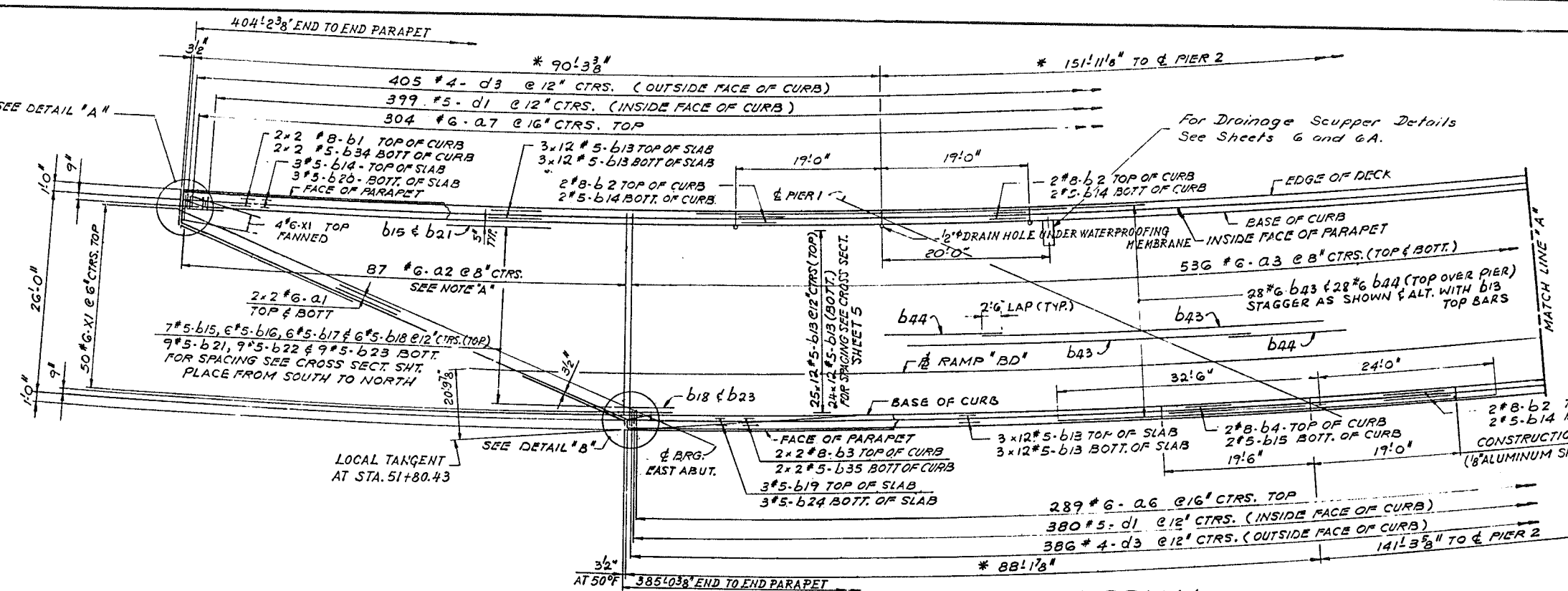
Rev. Drainage Scupper from 1 Each to 2 Each. 6-29-77 D.D.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.194	201-3HB-2	WINNEBAGO	163	78
STA.		TO STA.		
F.M.E. & RES. NO. 4		ILLINOIS		PROJECT

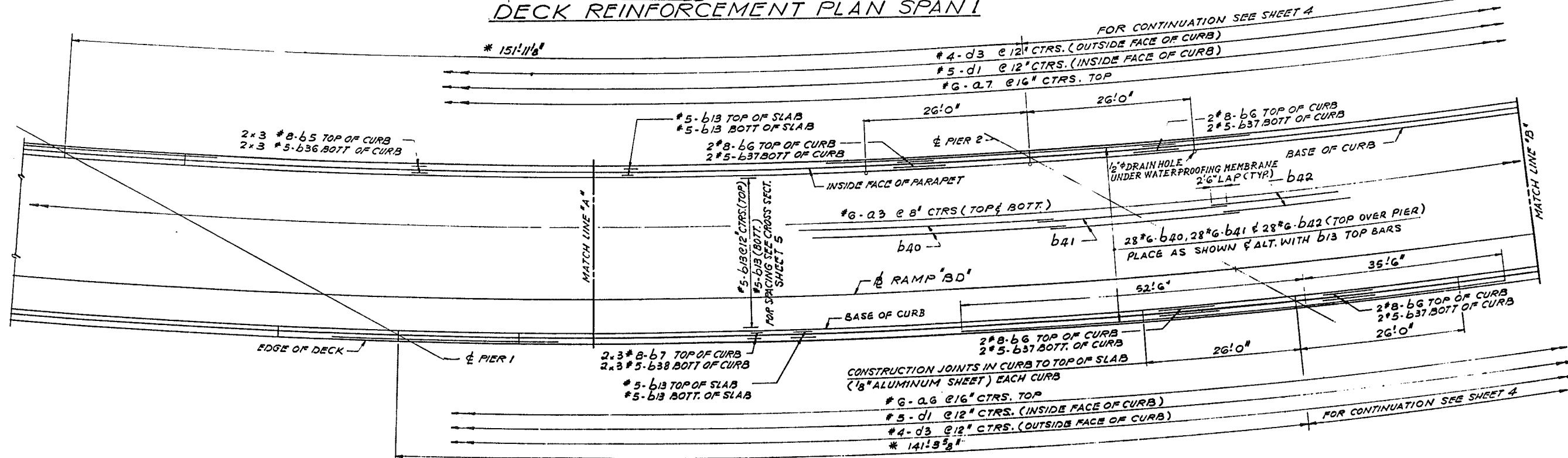
SHEET 3 OF 24

NOTE: A
ORDER BARS FULL LENGTH CUT IN FIELD TO FIT SKEW FOR BOT. BARS USE THE REMAINDER FOR TOP BARS.

NOTE:
DIMENSIONS INDICATED THUS (*) ARE GIVEN ALONG INSIDE FACE OF PARAPET
BARS INDICATED THUS 25-12-5.6 ETC. INDICATES 25 LINES OF BARS WITH 12 LENGTHS PER LINE.



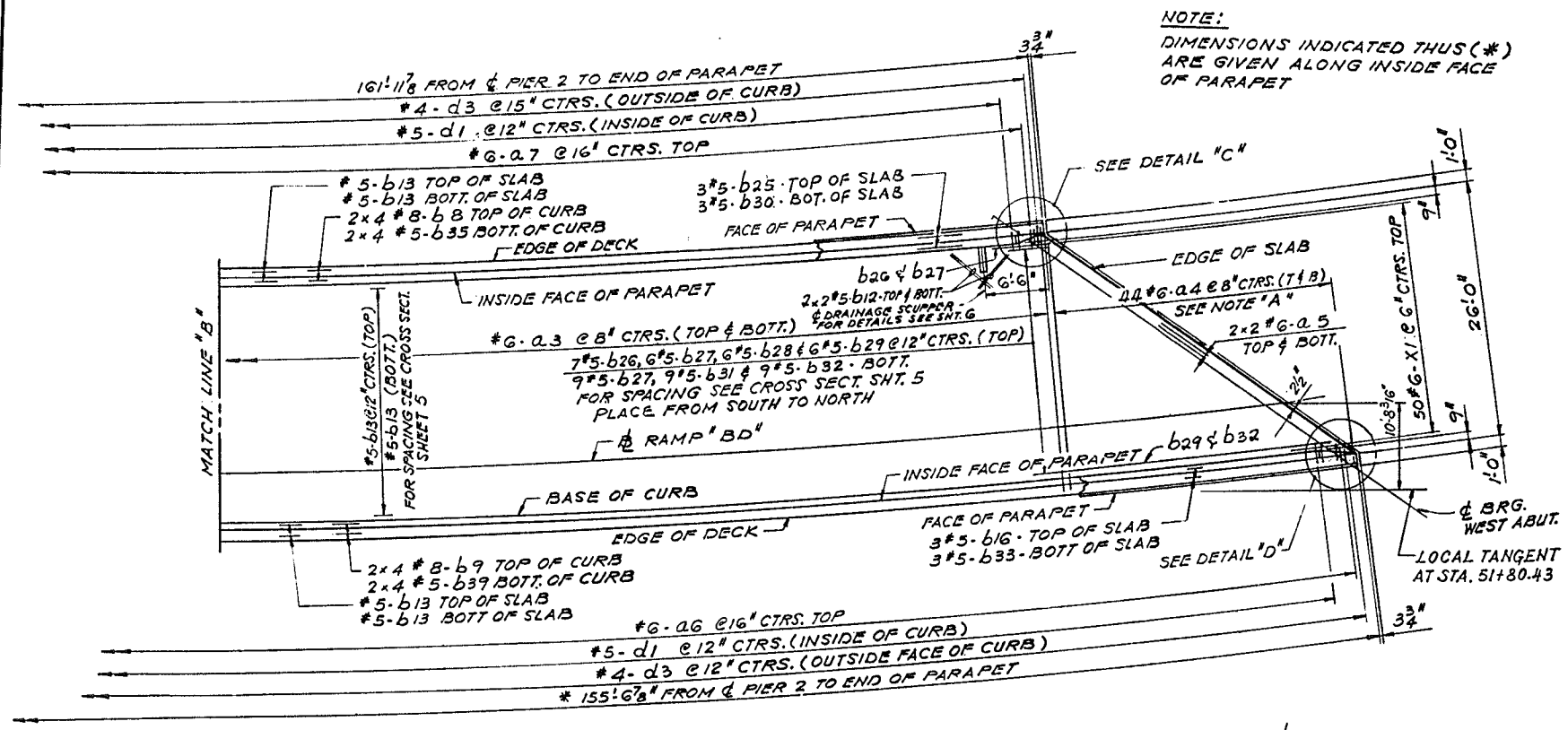
DECK REINFORCEMENT PLAN SPAN 1



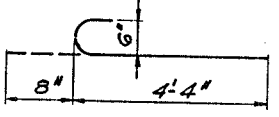
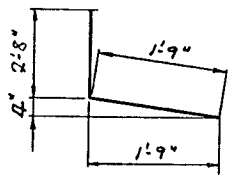
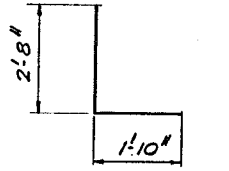
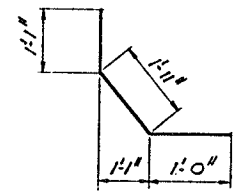
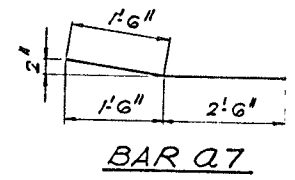
DECK REINFORCEMENT PLAN SPAN 2

DECK REINFORCEMENT PLAN - SPAN 1 & 2
RAMP BD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233N. MICHIGAN AVE., CHICAGO, ILLINOIS



NOTE:
DIMENSIONS INDICATED THUS (*) ARE GIVEN ALONG INSIDE FACE OF PARAPET

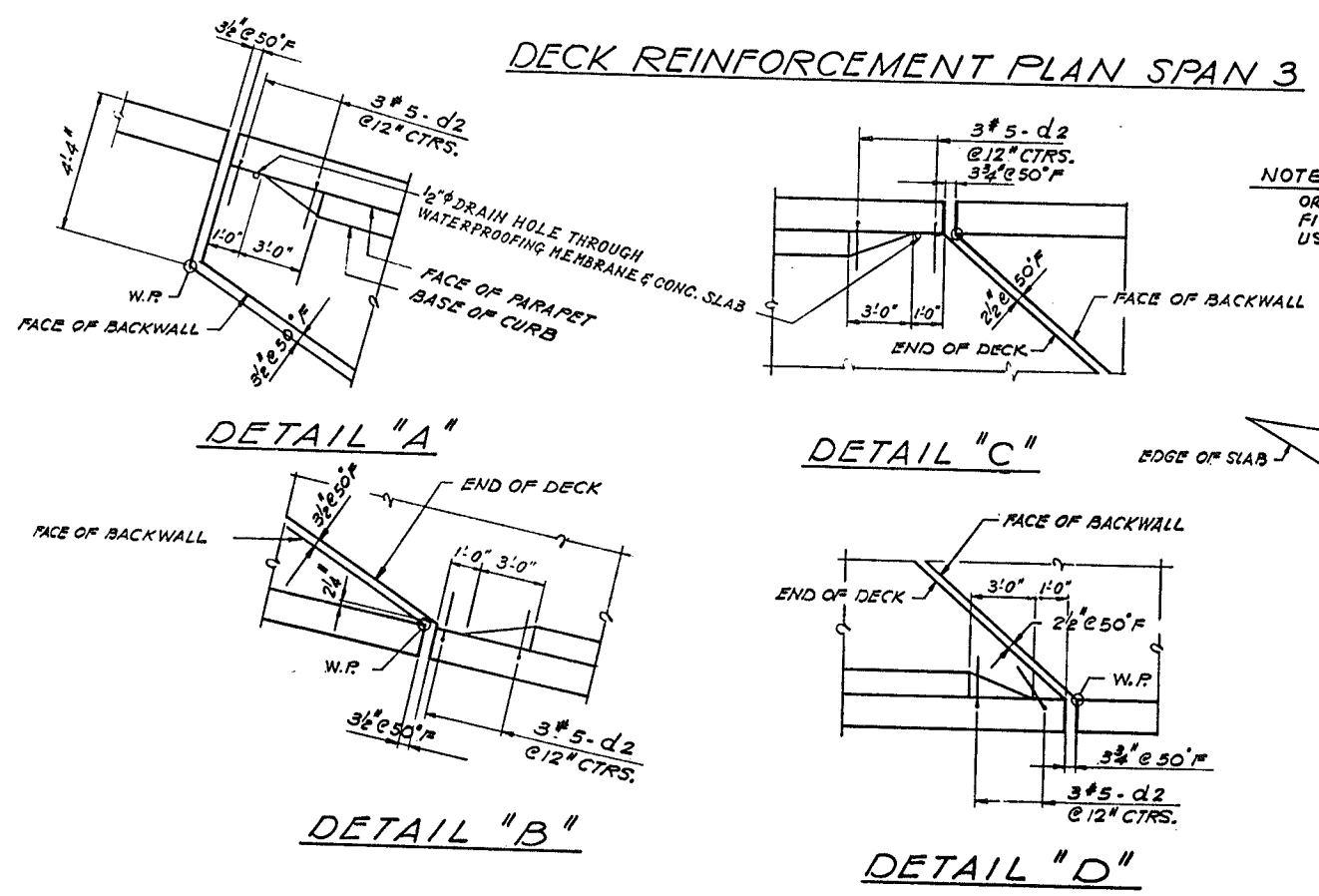


BILL OF MATERIAL

BAR No.	SIZE	LENGTH	SHAPE	BAR No.	SIZE	LENGTH	SHAPE
Q1	8	#6	32'-0"	b25	3	#5	42'-0"
Q2	87	#6	30'-0"	b26	7	#5	38'-6"
Q3	1072	#6	26'-0"	b27	15	#5	33'-6"
Q4	44	#6	28'-0"	b28	6	#5	28'-6"
Q5	8	#6	20'-0"	b29	6	#5	23'-6"
Q6	289	#6	4'-0"	b30	3	#5	35'-6"
Q7	304	#6	4'-0"	b31	9	#5	31'-6"
				b32	9	#5	29'-6"
				b33	3	#5	27'-6"
b1	4	#8	36'-6"	b34	4	#5	36'-3"
b2	6	#8	18'-9"	b35	12	#5	35'-0"
b3	4	#8	35'-3"	b36	6	#5	36'-6"
b4	2	#8	19'-3"	b37	8	#5	25'-9"
b5	6	#8	37'-0"	b38	6	#5	33'-0"
b6	8	#8	25'-9"	b39	8	#5	33'-3"
b7	6	#8	33'-6"				
b8	8	#8	35'-6"				
b9	8	#8	34'-0"				
b40	28	#6	40'-0"	d1	779	#5	4'-0" C
b41	28	#6	30'-0"	d2	12	#5	4'-6" L
b42	28	#6	23'-0"				
b43	28	#6	22'-0"	d3	791	#4	4'-5" L
b44	28	#6	15'-0"				
b12	8	#5	2'-0"				
b13	732	#5	30'-0"				
b14	9	#5	18'-9"	X1	104	#6	5'-0" C
b15	9	#5	19'-3"				
b16	9	#5	20'-0"				
b17	6	#5	20'-9"				
b18	6	#5	21'-6"				
b19	3	#5	22'-0"				
b20	3	#5	25'-0"				
b21	9	#5	23'-0"				
b22	9	#5	21'-0"				
b23	9	#5	19'-0"				
b24	3	#5	17'-0"				
				CLASS X CONCRETE	CU.YDS	354	
				REINFORCEMENT BARS	LBS.	97,060	

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.
PARAPET REINFORCEMENT & CLASS X CONCRETE ARE BILLED ON SHEET 3

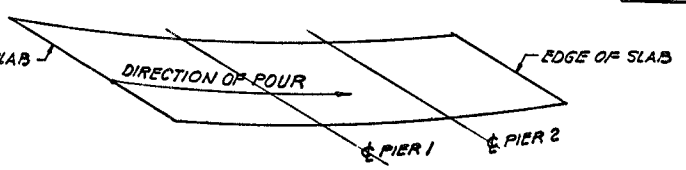
DECK REINFORCEMENT PLAN SPAN 3



NOTE "A"
ORDER BARS FULL LENGTH. CUT IN FIELD TO FIT SKEW FOR BOT. BARS. USE CUT-OFFS FOR TOP BARS.

POUR SEQUENCE OF DECK

NOTE:
IT IS MANDATORY THAT THE POUR BE MADE AS SHOWN

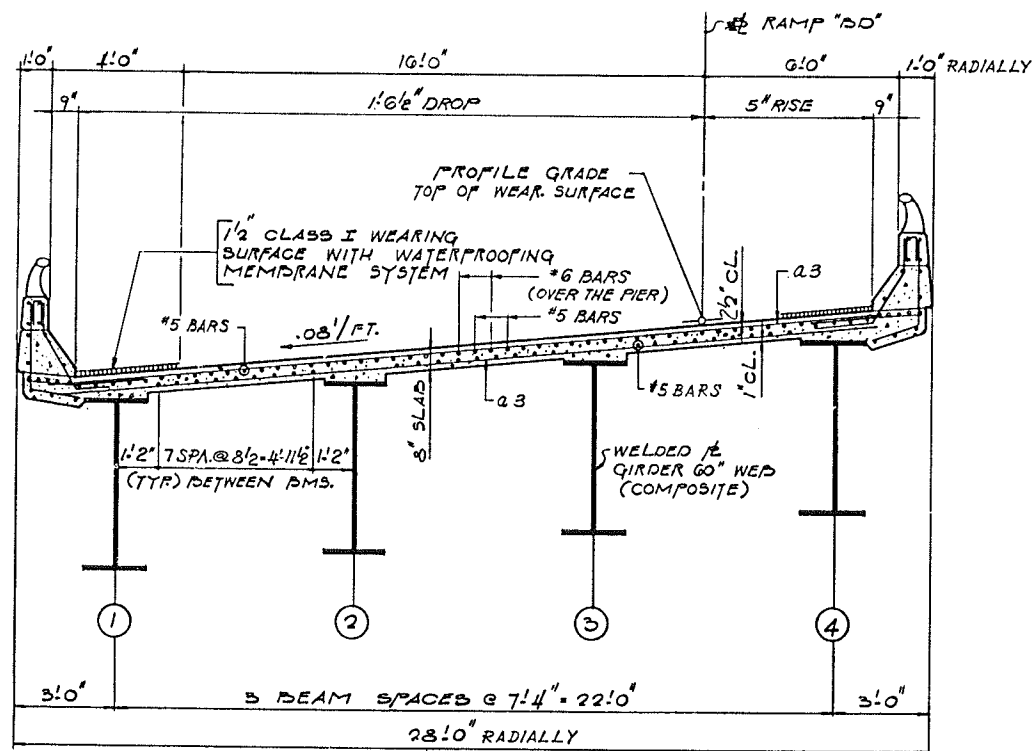


DECK REINFORCEMENT PLAN-SPAN 3
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

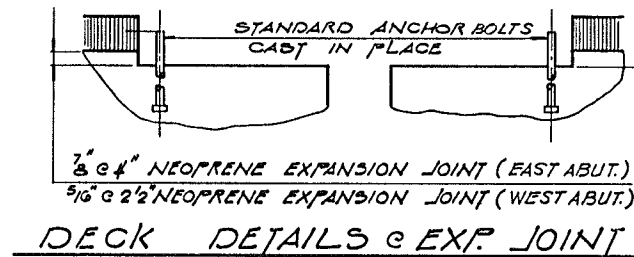
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 194	201-3HB-2	WINNEBAGO	163	80
STA.		TO STA.		
P. ME. & RES. NO. 4		ILLINOIS		PROJECT

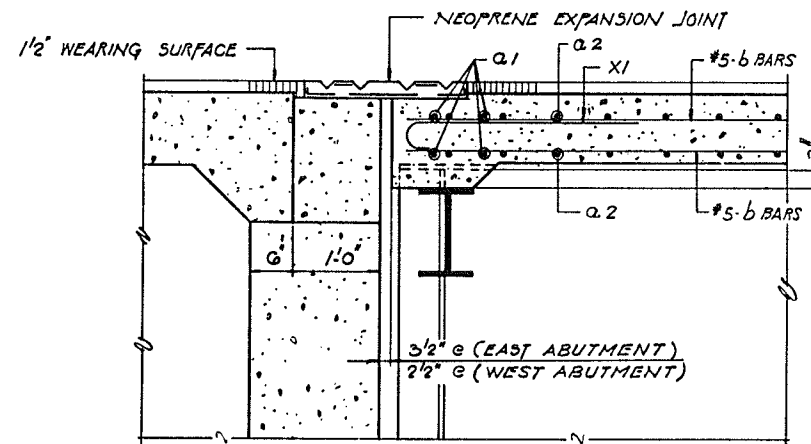
SHEET 5 OF 24



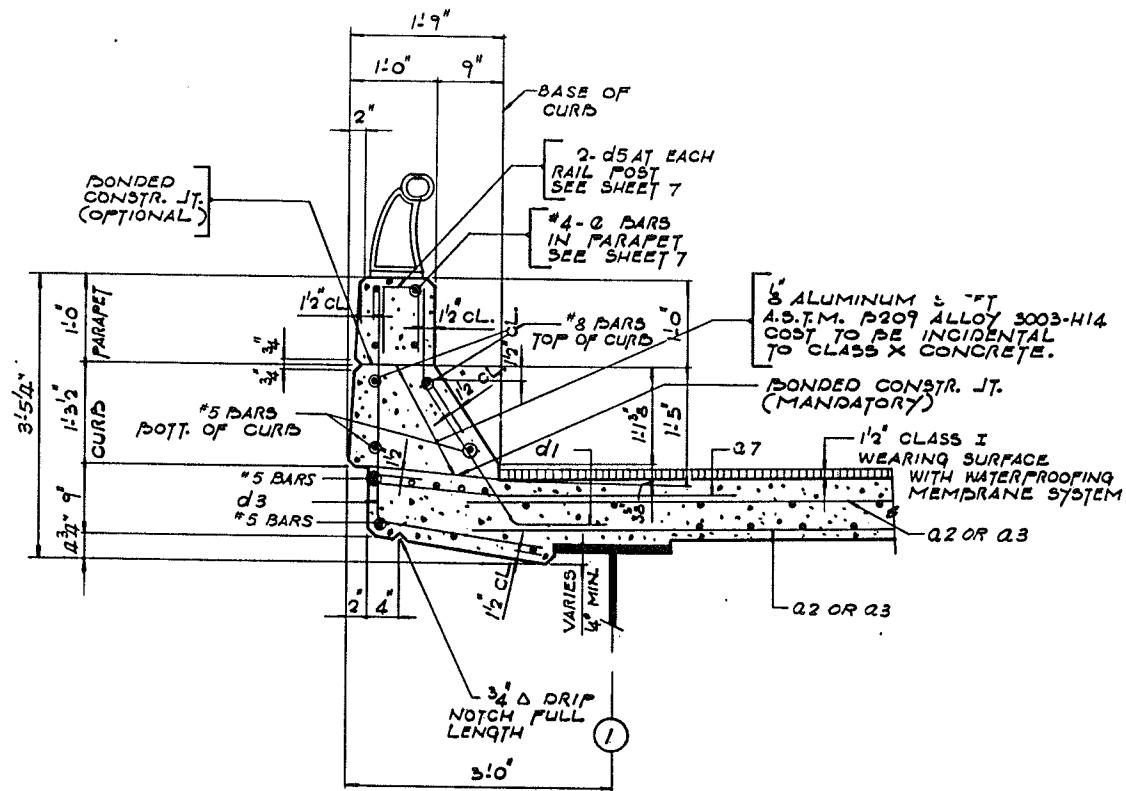
DECK CROSS SECTION



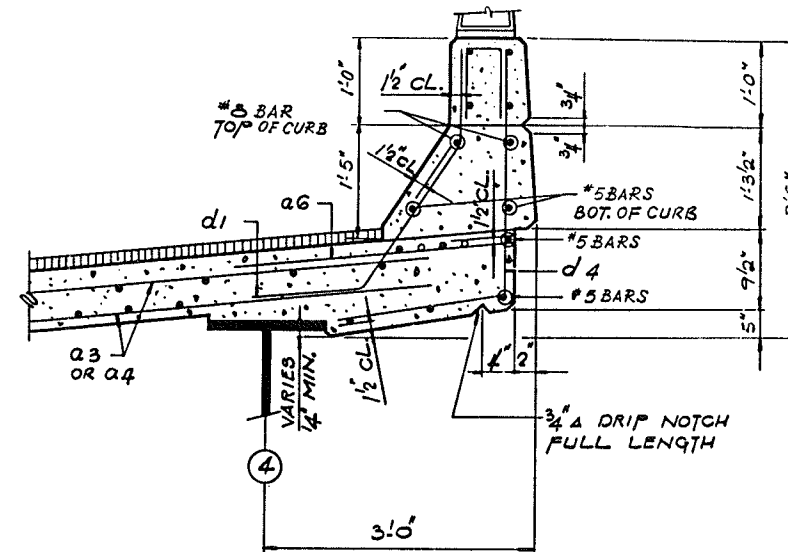
DECK DETAILS & EXP. JOINT



SECTION AT EAST ABUTMENT
SECTION AT WEST ABUTMENT SIMILAR

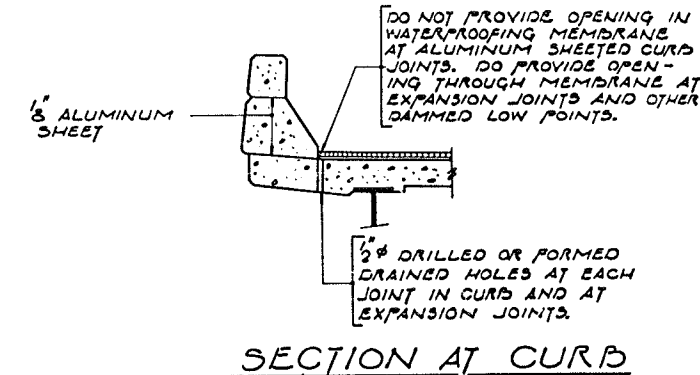


SOUTH FASCIA CURB DETAIL



NORTH FASCIA CURB DETAIL

NOTE!
FOR DIMENSIONS NOT SHOWN SEE SOUTH FASCIA CURB DETAIL



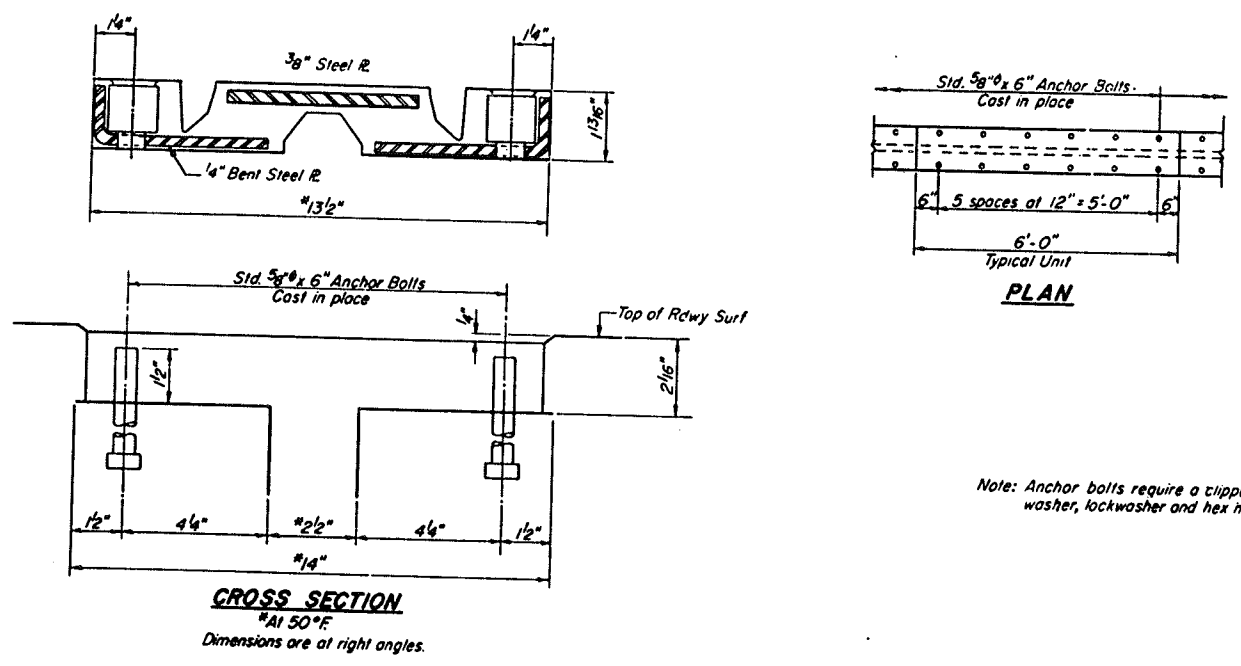
SECTION AT CURB

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1005-1C
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

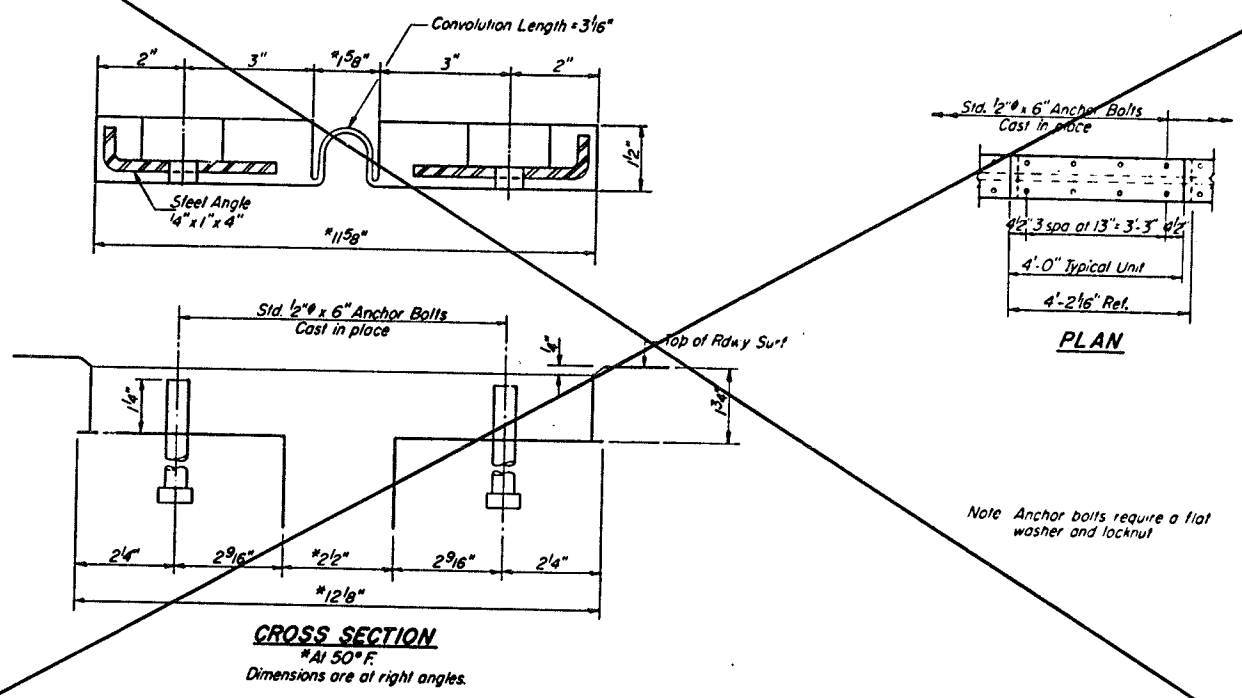
DECK DETAILS
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

10. 0136

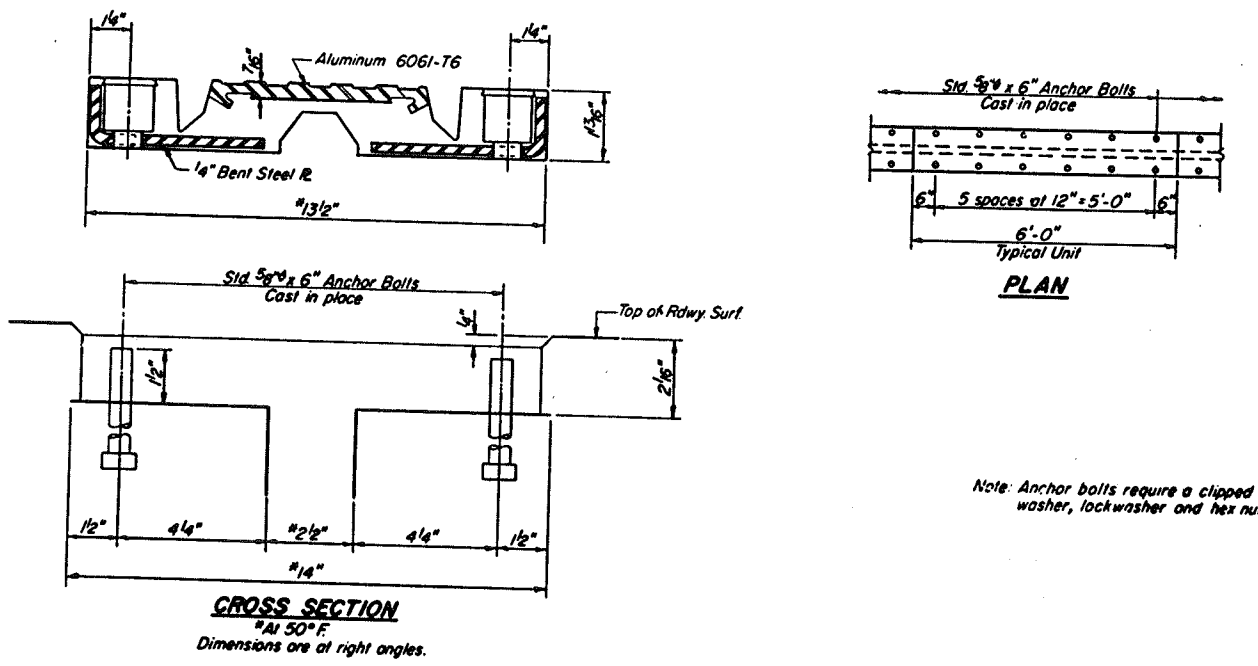
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F.A. 194	201-3HB-2	WINNEBAGO	143	84
STA.		TO STA.		
F.M.E. & RES. NO. 4		ILLINOIS PROJECT		



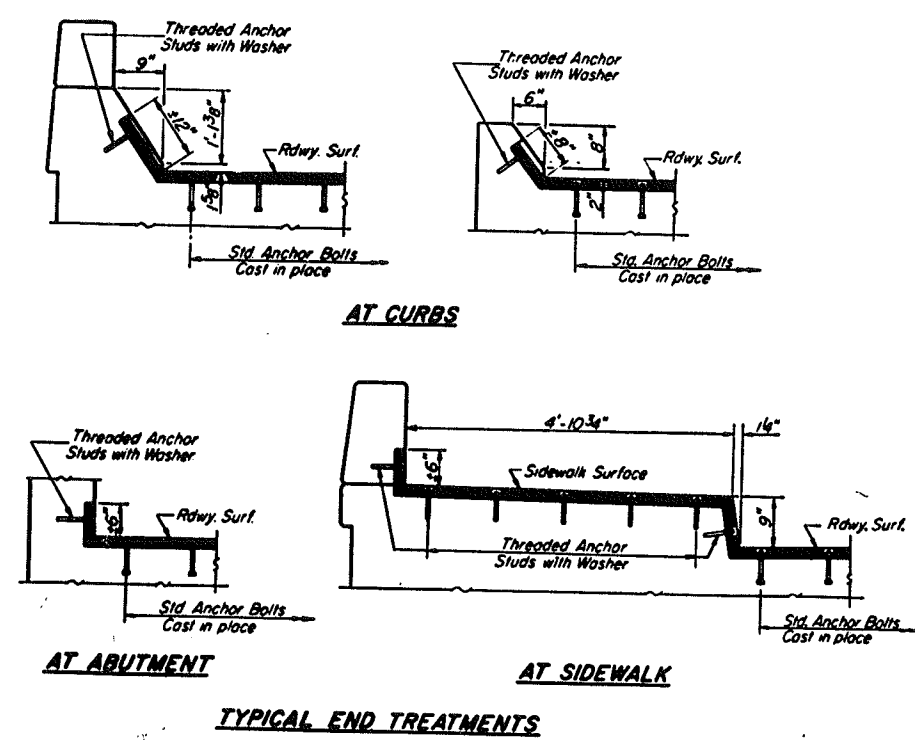
TRANSFLEX MODEL 250
(Structural Rubber Products Co.)



FEL-SPAN MODEL T-30
(Fel-Pro Building Products Inc.)



WABOFLEX MODEL SR 2.5
(Watson-Bowman Associates Inc.)



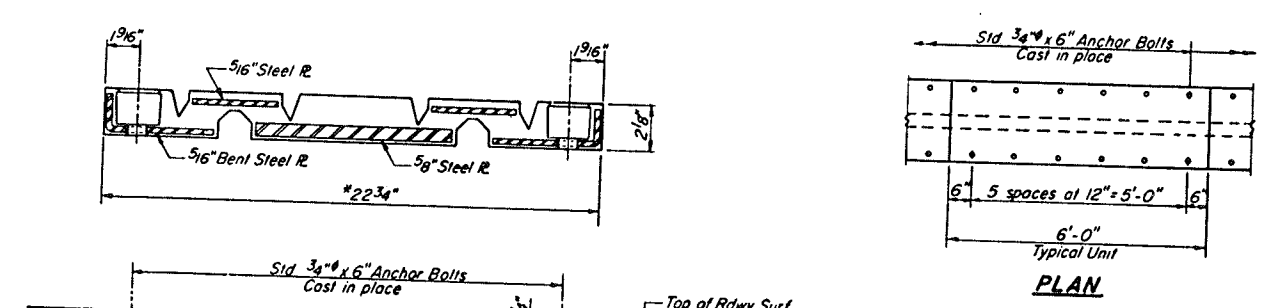
NOTE:
Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Spec's. when the deck is poured at an ambient temperature other than 50°F.

NEOPRENE EXPANSION JOINTS (2'-2")
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1805-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

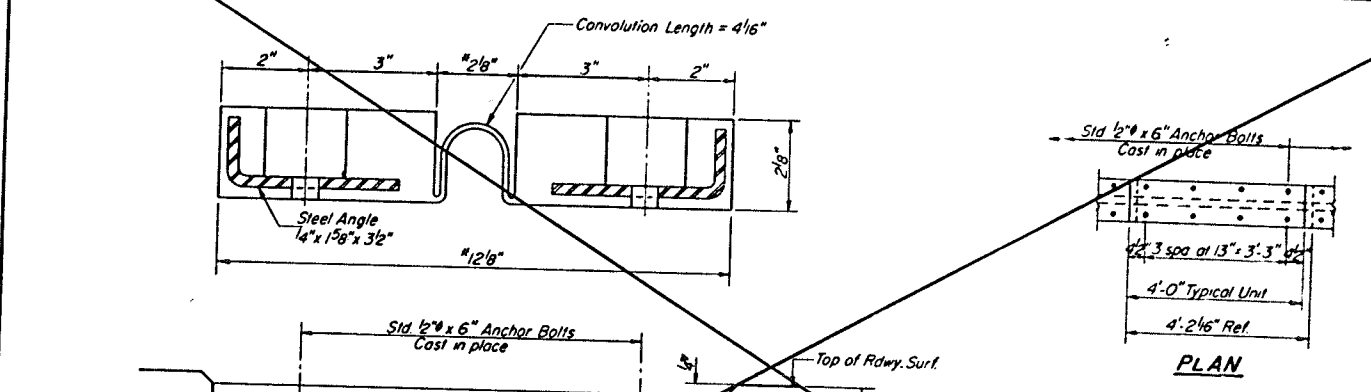
101-0136

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
F.A. 194	2013HB2	WINNEBAGO	163
STA.	TO STA.		PROJECT
1+78 & 2+88	ILLINOIS		



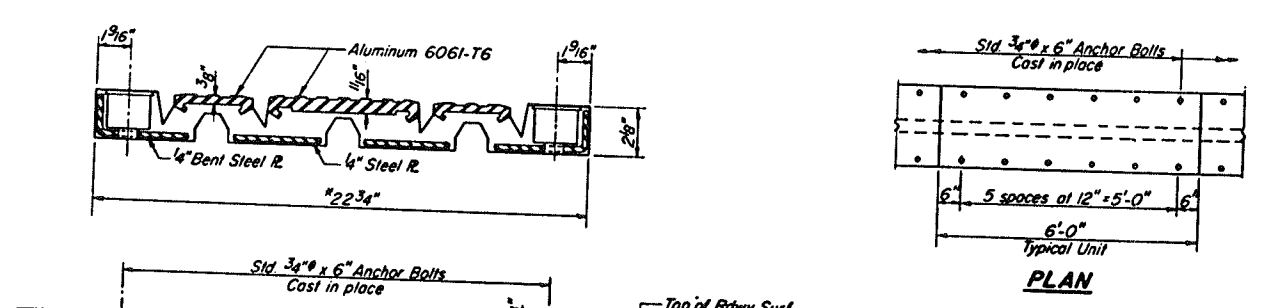
Note: Anchor bolts require a clipped washer, lockwasher and hex nut.

TRANSFLEX MODEL 400A
(Structural Rubber Products Co.)



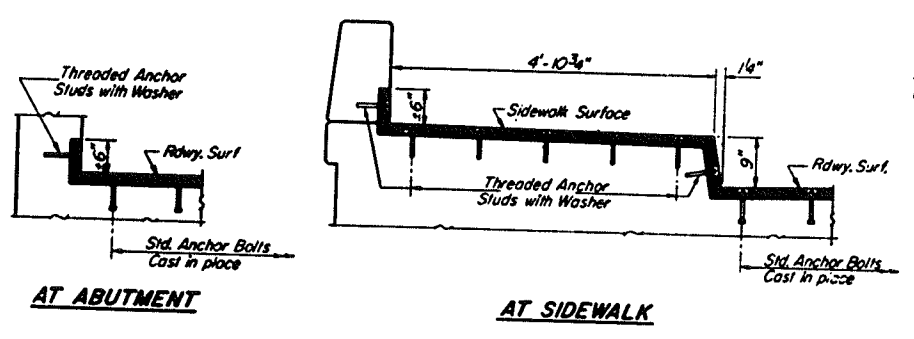
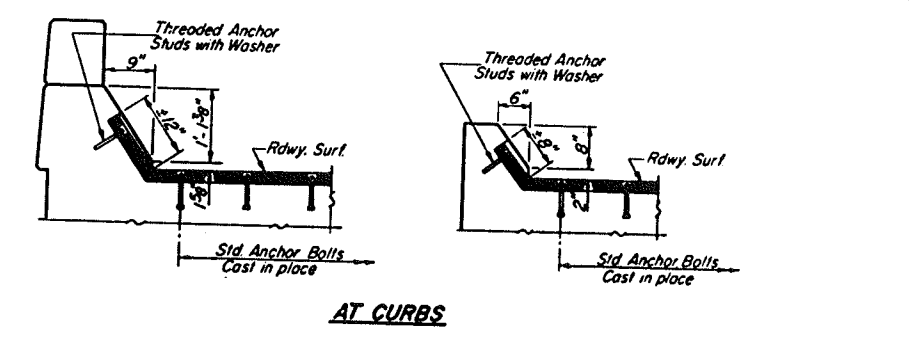
Note: Anchor bolts require a flat washer and locknut.

FEL-SPAN MODEL T-40
(Fel-Pro Building Products Inc.)



Note: Anchor bolts require a clipped washer, lockwasher and hex nut.

WABOFLEX MODEL SR 4
(Watson-Bowman Associates Inc.)



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

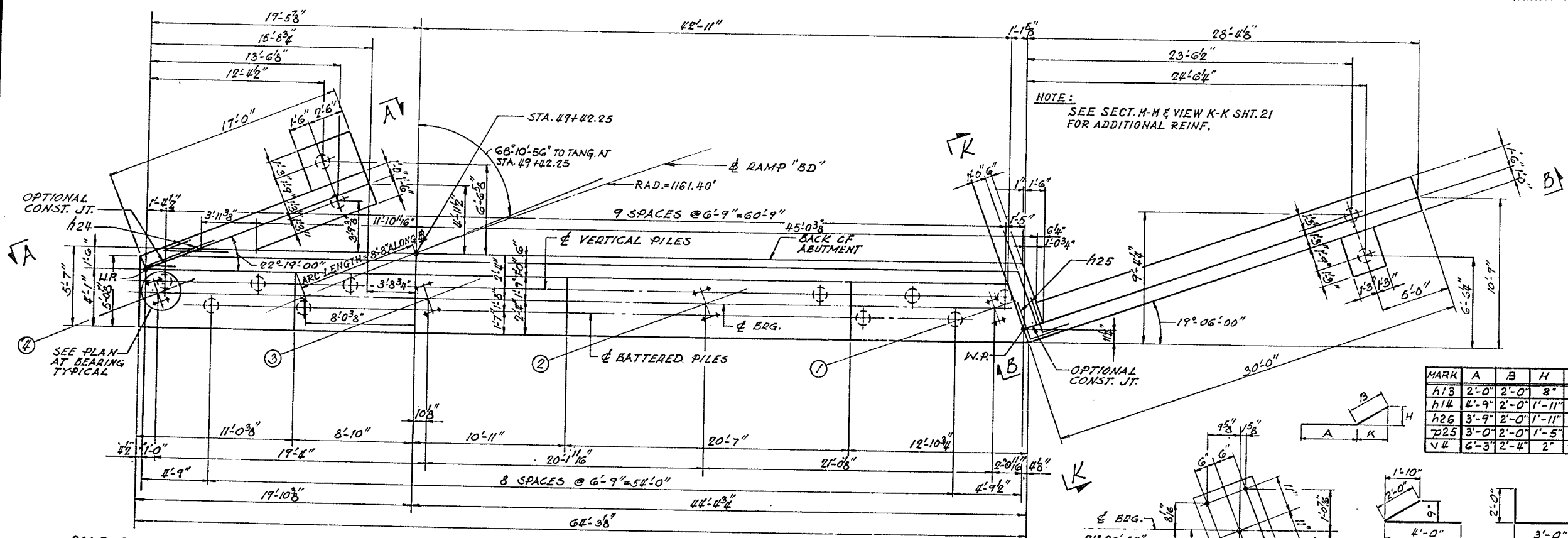
TYPICAL END TREATMENTS

NEOPRENE EXPANSION JOINTS(4")
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
400 NO. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

NOTE:
FOR WINGWALL FTG. REINF. SEE SECT. G-G SHT. 21

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	123	93
STA.	TO STA.			
FILE & RES NO.	ALLOWS	PROJECT		

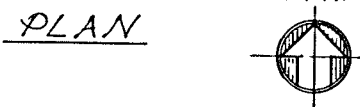


NOTE:
SEE SECT. M-M & VIEW K-K SHT. 21 FOR ADDITIONAL REINF.

BILL OF MATERIAL

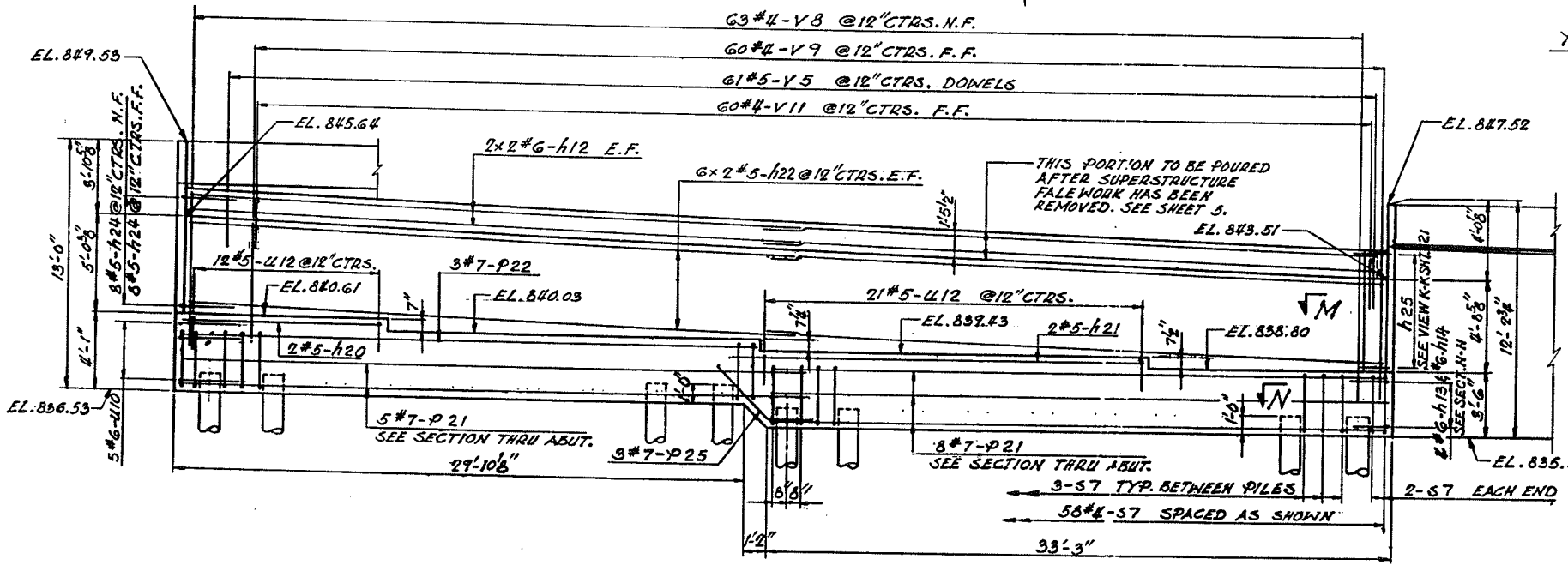
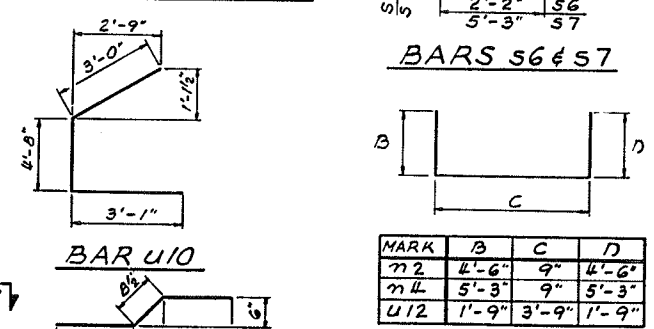
BAR NO.	NO.	SIZE	LENGTH	SHAPE
h12	8	#6	32'-9"	—
h13	4	#6	4'-0"	—
h14	4	#6	6'-9"	—
h20	2	#5	10'-9"	—
h21	2	#5	21'-9"	—
h22	24	#5	32'-6"	—
h23	7	#5	4'-3"	—
h24	16	#5	6'-0"	—
h25	14	#5	5'-0"	—
h26	7	#5	5'-9"	—
h27	20	#4	16'-9"	—
h28	20	#4	29'-9"	—
m2	31	#6	9'-9"	U
m4	22	#6	11'-3"	U
p8	1	#9	29'-9"	—
p9	3	#9	32'-6"	—
p10	2	#9	26'-6"	—
p11	5	#8	16'-6"	—
p15	4	#8	13'-0"	—
p21	13	#7	33'-0"	—
p22	3	#7	30'-3"	—
p23	2	#7	29'-9"	—
p24	3	#7	32'-0"	—
p25	3	#7	5'-0"	—
s6	48	#4	9'-5"	□
s7	58	#4	17'-7"	□
t2	9	#7	6'-10"	C
u10	5	#6	10'-9"	U
u12	33	#6	7'-3"	U
v3	53	#6	8'-7"	—
v4	53	#6	8'-7"	—
v5	65	#5	2'-6"	—
v8	66	#4	7'-6"	—
v9	60	#4	6'-0"	—
v10	4	#4	8'-0"	—
v11	60	#4	3'-9"	—
w3	5	#5	3'-8"	—
w4	6	#5	2'-2"	—
CLASS X CONCRETE CUVDS				997
REINFORCEMENT BARS LBS.				9,280
CONCRETE PILES L/N.F.T.				990
TEST PILES, CONCRETE EACH				1

PILE DATA
TYPE: CONCRETE
CAPACITY: 35 TONS
EST. LENGTH: 45 FT.
NO. REQ'D.: 23 *
* INCLUDES ONE TEST PILE



PLAN

PLAN AT BEARING

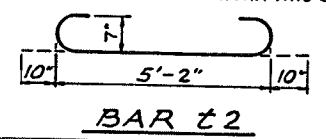


ELEVATION

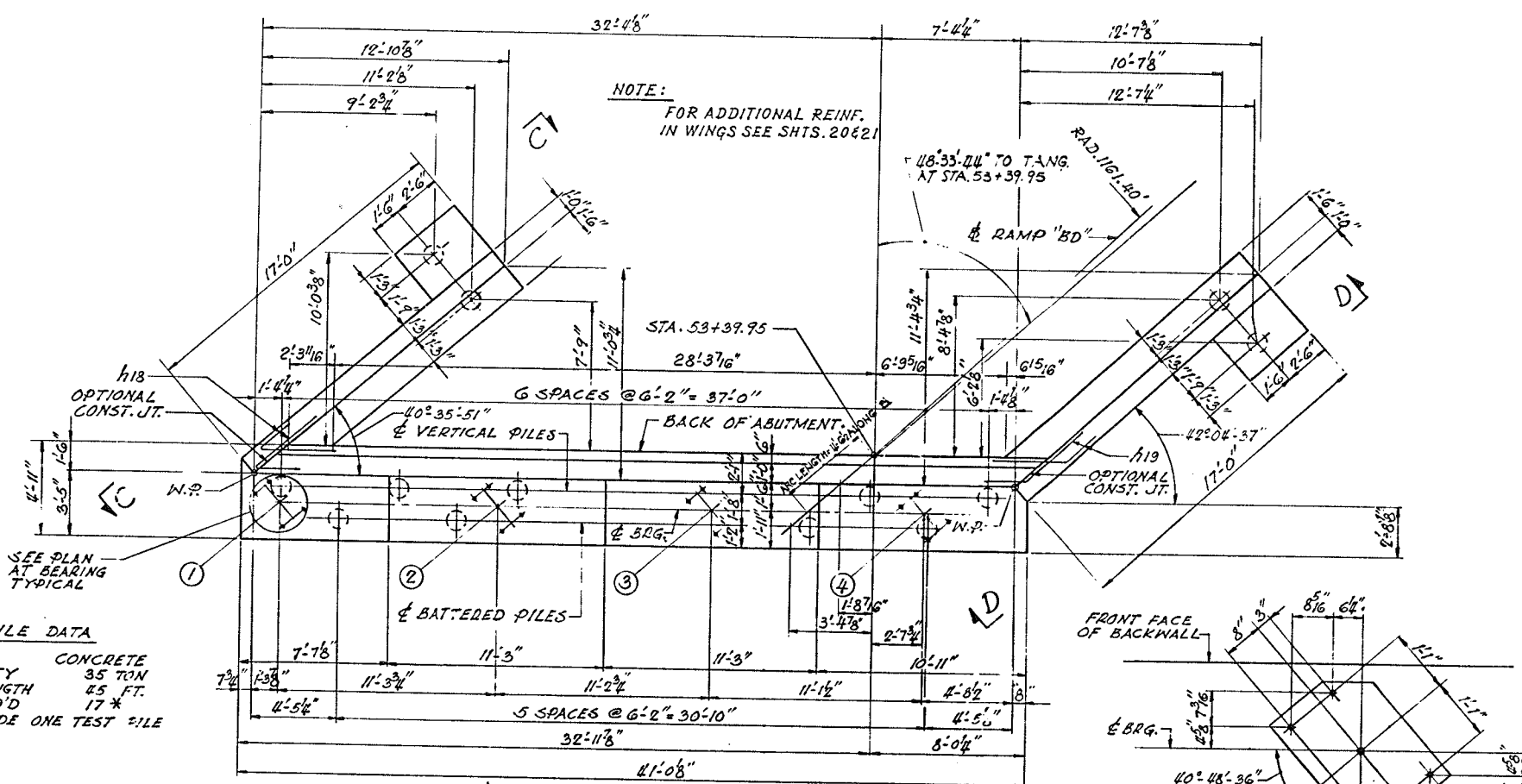
NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
POUR STEPS MONOLITHICALLY WITH CAP.
FOR ELEV. A-A, B-B SEE SHEET 20.
BARS INDICATED THIS: Gx2#5H, ETC.
INDICATE G LINES OF BARS WITH 2 BAR LENGTH PER LINE.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
WORK THIS SHEET WITH SHEETS #20 & 21

EAST ABUTMENT
RAMP BD
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

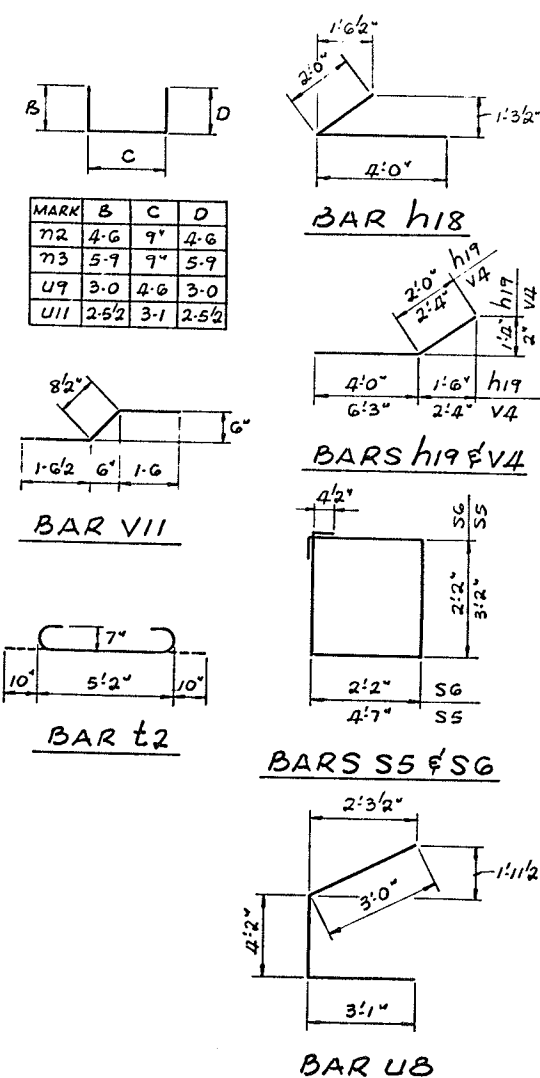
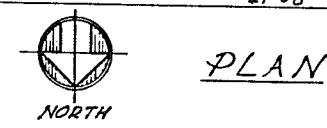


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.194	2013HB-2	WINNEBAGO	123	94
STA.	TO STA.			
7 HW A RES NO 4	ILLINOIS	PROJECT		



PILE DATA

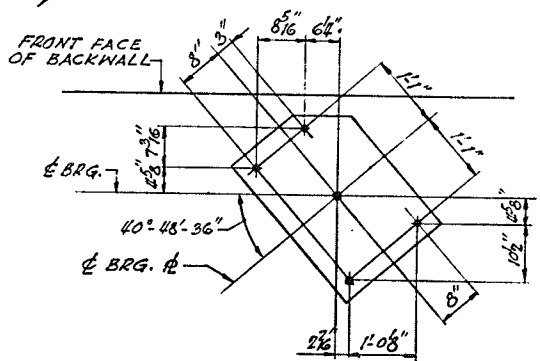
TYPE CONCRETE
CAPACITY 35 TON
EST. LENGTH 85 FT.
NO. REQ'D 17 *
* INCLUDE ONE TEST PILE



BILL OF MATERIAL

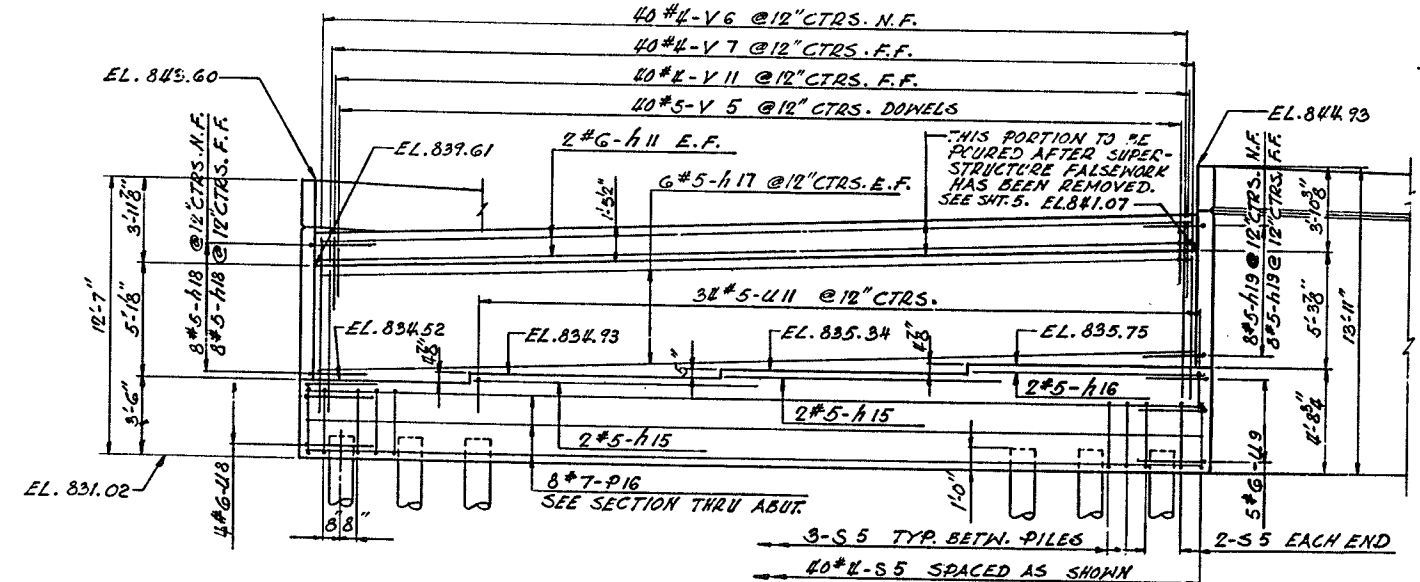
BAR	NO.	SIZE	LENGTH	SHAPE
h11	4	#6	39.3	—
h15	4	#5	12.6	—
h16	2	#5	10.6	—
h17	12	#5	39.3	—
h18	16	#5	6.0	—
h19	16	#5	6.0	—
h27	42	#4	16.9	—
n2	22	#6	9.9	—
n3	22	#6	12.3	—
p11	5	#8	16.6	—
p12	4	#8	15.0	—
p13	5	#8	19.0	—
p14	4	#8	18.0	—
p16	8	#7	39.6	—
s5	40	#4	16.3	—
s6	36	#4	9.5	—
t2	10	#7	6.10	—
u8	4	#6	10.3	—
u9	5	#6	10.6	—
u11	34	#5	8.0	—
v3	44	#6	8.7	—
v4	44	#6	8.7	—
v5	40	#5	2.6	—
v6	40	#4	7.9	—
v7	40	#4	6.3	—
v11	40	#4	3.9	—
w3	10	#5	3.8	—
CLASS X CONCRETE			CUNDS.	66.7
REINFORCEMENT BARS			LBS.	6650
CONCRETE PILES			LIN. FT.	720
TEST PILES, CONCRETE			EACH	1

PLAN AT BEARING



NOTE!
ALL BAR DIMENSIONS ARE OUT TO OUT.

NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
FOUR STEPS MONOLITHICALLY WITH CAP.
FOR ELEV. C-C, D-D SEE SHEET 20.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
WORK THIS SHEET WITH SHEETS *20&21

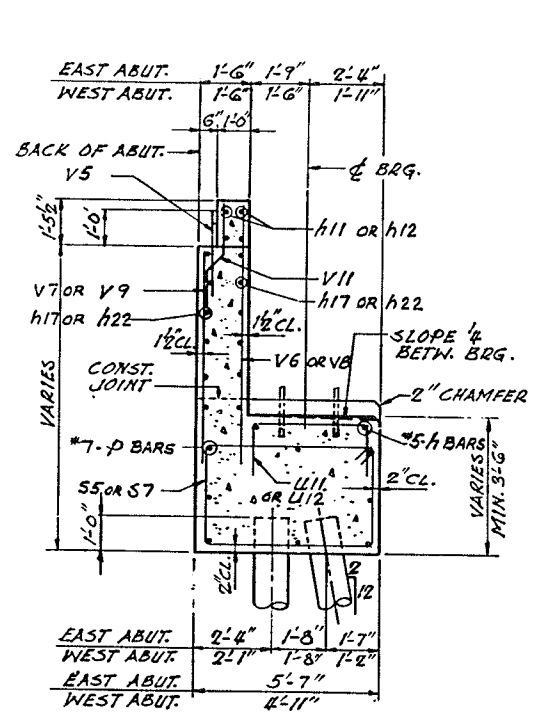


ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

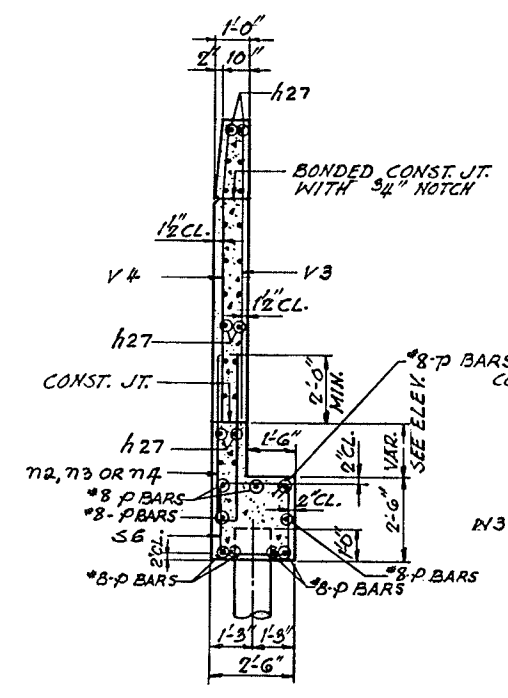
WEST ABUTMENT
RAMP "BD"
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	2013HB2	WINNEBAGO	163	96
STA.	TO STA.			
FILE & RES. NO. & PLANS	PROJECT			

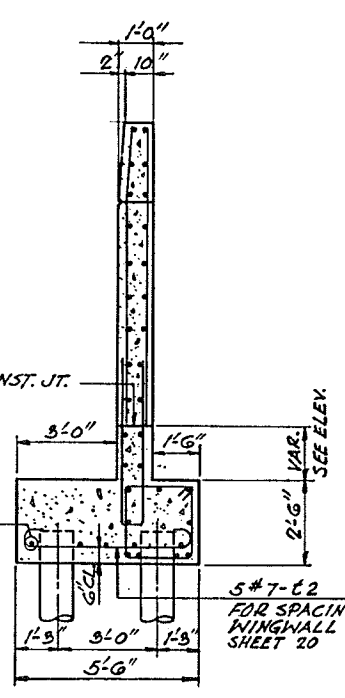
SHEET 21 OF 24



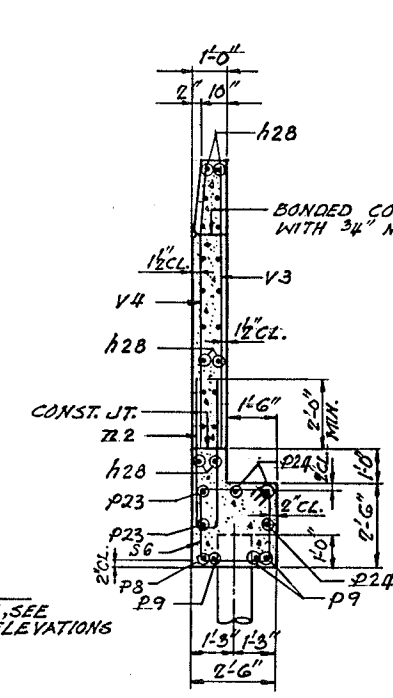
SECT THRU ABUT.



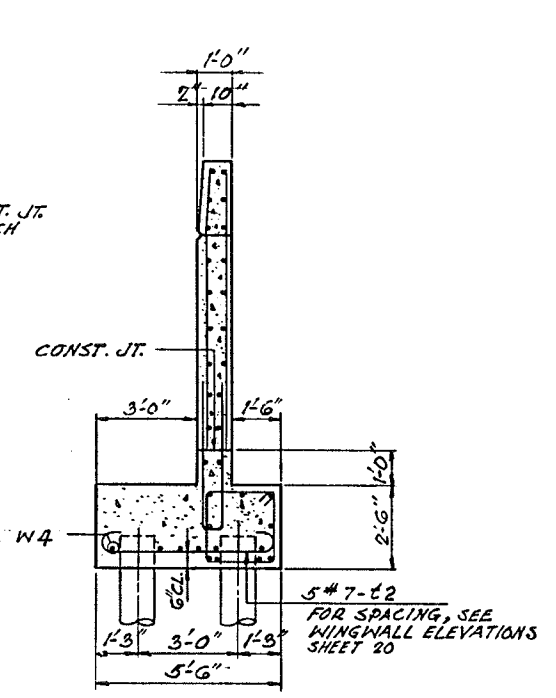
SECTION E-E



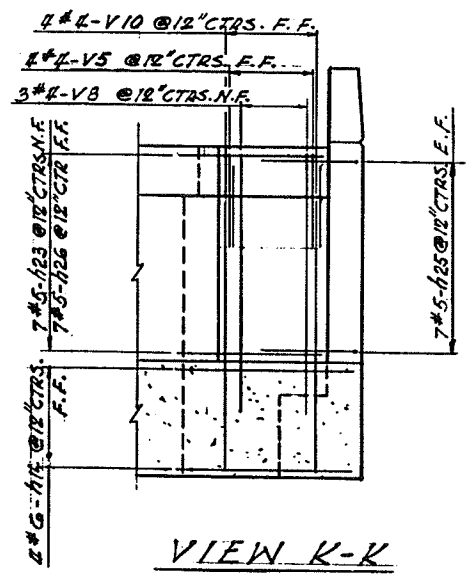
SECTION G-G



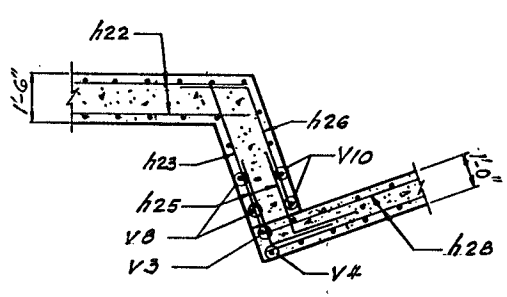
SECTION H-H



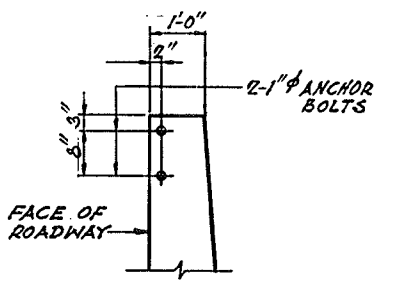
SECTION J-J



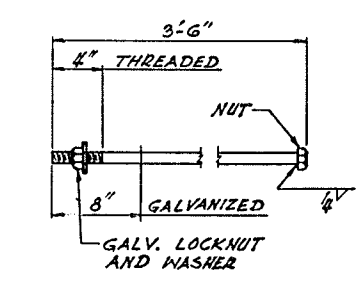
VIEW K-K



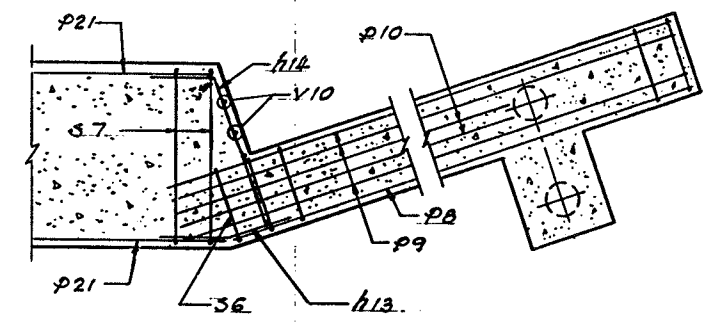
SECTION M-M



VIEW F-F
VIEW F1-F1 SIMILAR



1" ANCHOR BOLT



SECTION N-N

ABUTMENT DETAILS
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80 43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO.
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

101-0136
2001 Rehab

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
BRIDGE WORK

F.A.I. ROUTE 39 (I-39)
SECTION 201-BR-DECK REPAIRS
PROJECT WHI-39-1(7)1
WINNEBAGO COUNTY
C-92-033-01

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- 3. TOTAL SUMMARY OF QUANTITIES
- 4. ROADWAY APPROACH QUANTITIES
- 5. TRAFFIC CONTROL PLAN, S.N. 101-0135
- 6-8. TRAFFIC CONTROL PLAN (2), S.N. 101-0136
- 9-10. TRAFFIC CONTROL PLAN (2), S.N. 101-0137
- 11-12. TRAFFIC CONTROL PLAN (2), S.N. 101-0138
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- 14-15. TRAFFIC CONTROL PLAN (2), S.N. 101-0140
- 16. TRAFFIC CONTROL PLAN, S.N. 101-0142
- 17. TRAFFIC CONTROL PLAN, S.N. 101-0143
- 18. TRAFFIC CONTROL PLAN, S.N. 101-0144
- 19-20. TRAFFIC CONTROL PLAN (2), S.N. 101-0145

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S.N. 101-0142/S.N. 101-0143

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- 91. DECK REPAIR PLAN, S.N. 101-0143
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- 96. BAR SPLICER ASSEMBLY DETAILS
- 97. TEMPORARY CONCRETE BARRIER

S.N. 101-0144

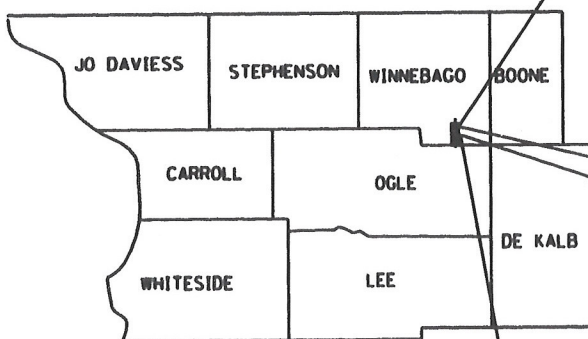
- 98. GENERAL PLAN & ELEVATION
- 99. DECK PLAN
- 100. DECK CROSS SECTIONS
- 101. DECK REPAIR PLAN
- 102. JOINT REPLACEMENT DETAILS
- 103. PARAPET DETAILS
- 104. BAR SPLICER ASSEMBLY DETAILS
- 105. TEMPORARY CONCRETE BARRIER

S.N. 101-0145

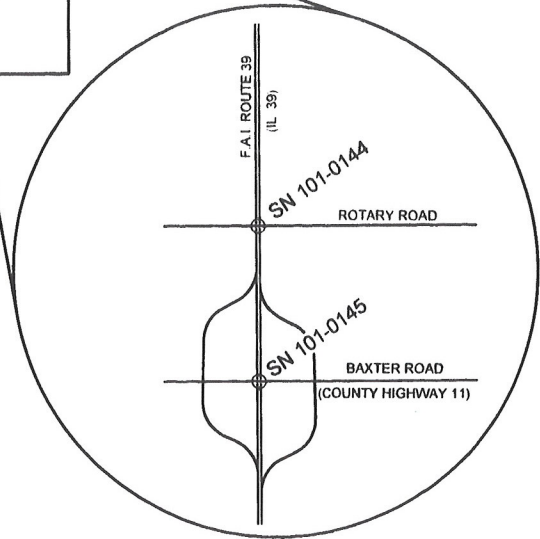
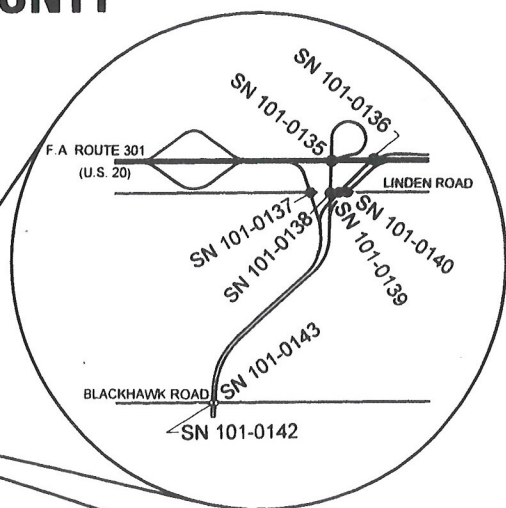
- 106. GENERAL PLAN & ELEVATION
- 107. DECK PLAN
- 108. DECK CROSS SECTIONS
- 109. DECK REPAIR PLAN
- 110. JOINT REPLACEMENT DETAILS
- 111. JOINT REPLACEMENT DETAILS
- 112. PARAPET DETAILS
- 113. BAR SPLICER ASSEMBLY DETAILS
- 114. TEMPORARY CONCRETE BARRIER

HIGHWAY STANDARDS

606001-01	CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER
606301-01	PC CONCRETE ISLANDS AND MEDIANS
606301-02	PC CONCRETE ISLANDS AND MEDIANS
609001-01	BRIDGE APPROACH SHOULDER PAVEMENT AND DRAIN
630001-02	STEEL PLATE BEAM GUARD RAIL
701201-01	LANE CLOSURE, 2L 2W, DAY ONLY ON ROAD, FOR SPEEDS ≥ 45MPH
701321-04	LANE CLOSURE, 2L 2W, BRIDGE REPAIR WITH BARRIER
701401	LANE CLOSURE, MULTILANE, FOR SPEEDS > 45 MPH
701402-01	LANE CLOSURE, MULTILANE, WITH BARRIER
701416-02	LANE CLOSURE, MULTILANE, DIVIDED, WITH CROSSOVER, FOR SPEEDS > 45 MPH
701601-03	URBAN LANE CLOSURE MULTILANE, IN OR 2W WITH NONTRAVERSABLE MEDIAN
702001-02	TRAFFIC CONTROL DEVICES
704001	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS



LOCATION MAP



PLANS PREPARED BY:

WENDLER ENGINEERING & SURVEYING
DIXON, ILLINOIS
DEKALB, ILLINOIS
PRINCETON, ILLINOIS
CLINTON, IOWA



LOCATION OF SECTION INDICATED THIS: -



Scott A. Brown 02/23/01
DATE
SCOTT A. BROWN
DIXON, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 062-053649
EXPIRES 11-30-2001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8 February 2001

Scott A. Brown
DISTRICT ENGINEER

March 23, 2001

Michael Rhine
ENGINEER OF DESIGN AND ENVIRONMENT

March 23, 2001

James P. Slifka
DIRECTOR, DIVISION OF HIGHWAYS

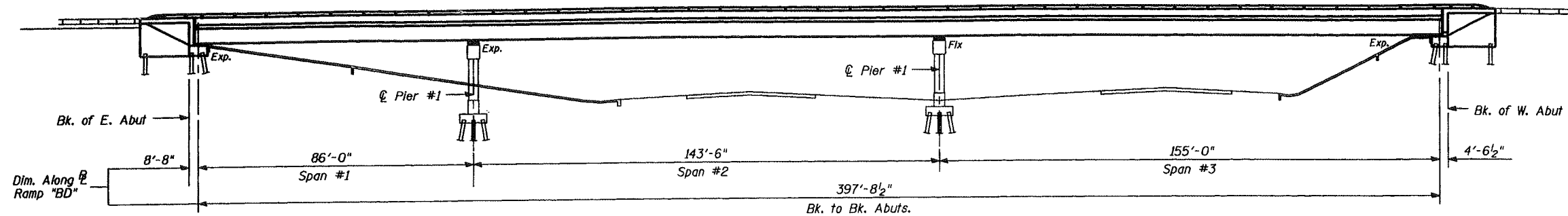
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I.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-882-9123

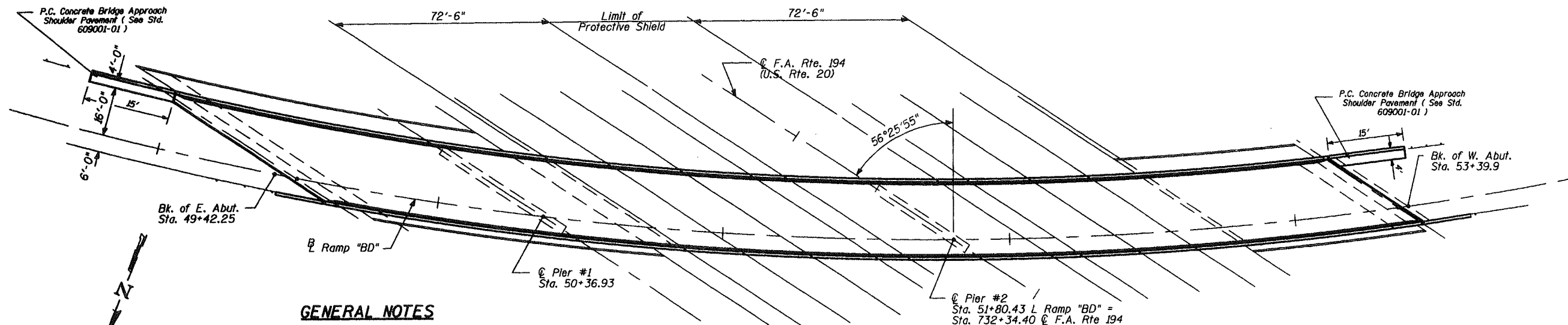
CONTRACT NO. 64676

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DISTRICT	COUNTY	JOB NO.	SHEET NO.
201-39	3HB-1	Winnebago	114	31
SHEET NO. 1				
9 SHEETS				



ELEVATION



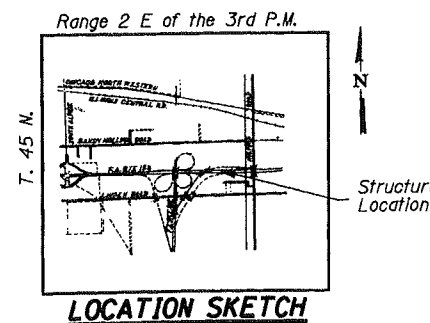
PLAN

GENERAL NOTES

- This structure will retain the same number 101-0136.
- All new structural steel shall conform to AASHTO Classification # 270, unless otherwise noted.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The contractor should take appropriate precautions to deal with the presence of lead on this project.
- Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in the cost of "Concrete Removal".
- Existing longitudinal reinforcement extending into the removed area shall be cleaned, straightened and incorporated into the new construction. Existing transverse reinforcement may be cut as shown and removed.
- During construction operations, the Contractor shall provide temporary shielding from shoulder to shoulder of the roadway crossed. See Special Provisions.
- Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	11.5		11.5
Bituminous Concrete Removal (Deck)	Sq Yd	1074		1074
Concrete Superstructure	Cu Yd	11.5		11.5
Reinforcement Bars (Epoxy Coated)	Pound	1760		1760
Deck Slab Repair (Full Depth - Type 1)	Sq Yd	10		10
Deck Slab Repair (Full Depth - Type 2)	Sq Yd	22		22
Deck Slab Repair (Partial Depth)	Sq Yd	278		278
Protective Shield	Sq Yd	354		354
Bar Splicers	Each	20		20
Polymerized Bituminous Concrete Surface Course, Superpave, Mix "D", N70	Ton	96		96
Sheet Waterproofing Membrane System	Sq Yd	1062		1062
Neoprene Expansion Joint 2 1/2"	Foot	42		42
Neoprene Expansion Joint 4"	Foot	65		65

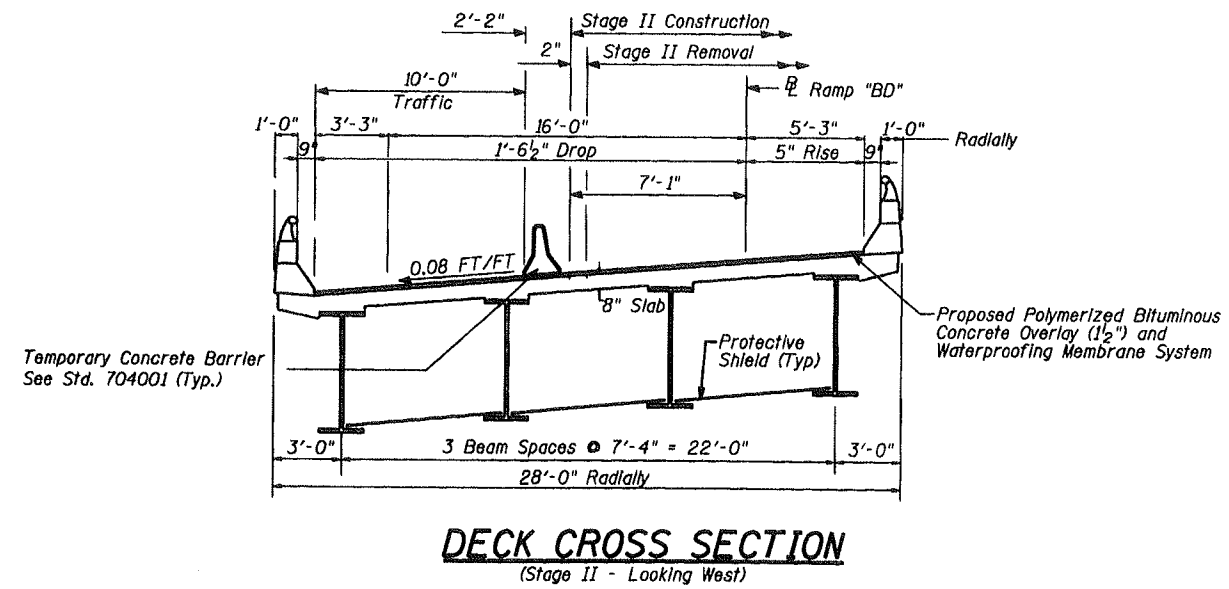
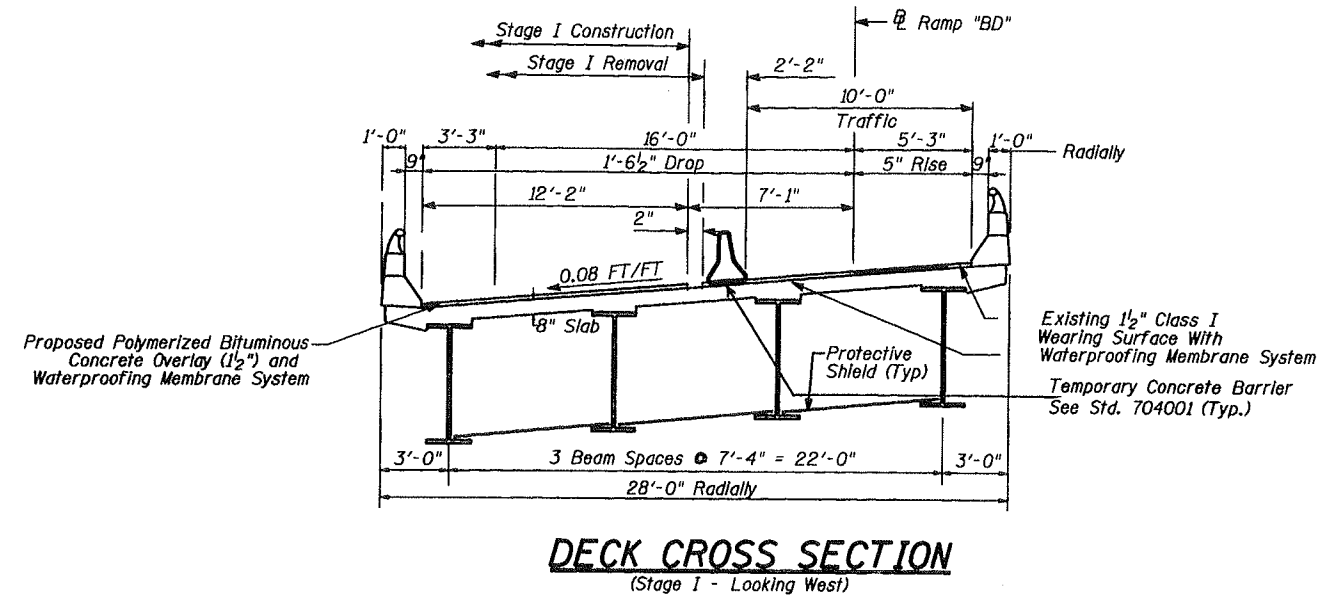


LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. RTE. 39 (I-39 & US51 S.B.)
RAMP "BD" OVER F.A. ROUTE 301
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

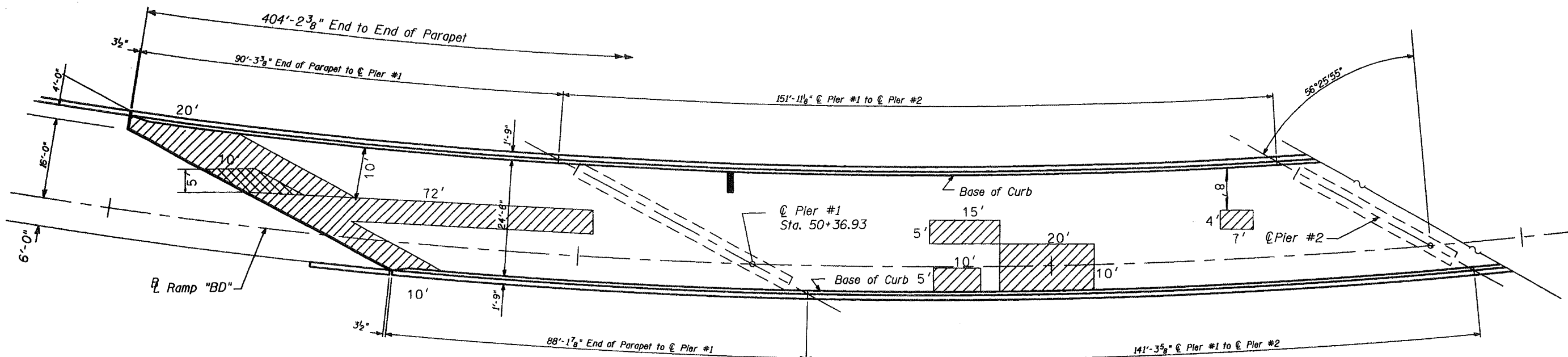
PROJECT NO.	SECTION	COUNTY	DATE	DATE	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	1/85	32	9 SHEETS
P.O. ROAD DIST. NO. 7	ALLIANCE	P.O. JOB PROJECT			



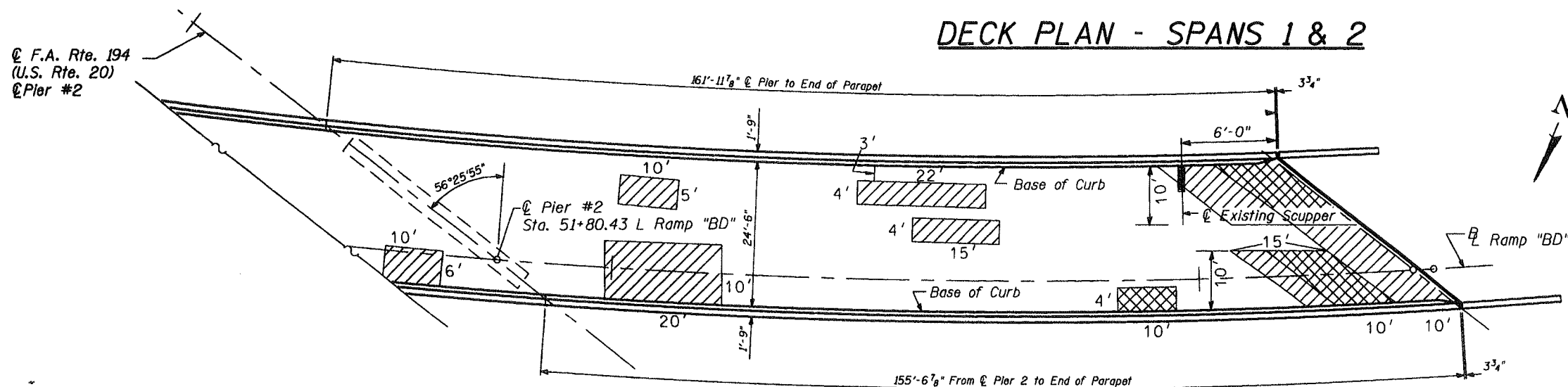
DECK CROSS SECTIONS
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0135

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	APPX	DATE	SHEET NO.
P.A.L. 39	201-3HB-1	Winnebago	114	34
9 SHEETS				



DECK PLAN - SPANS 1 & 2



DECK PLAN - SPANS 3

Legend

- Deck Slab Repair (Partial)
- Deck Slab Repair (Full Depth)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Deck Slab Repair (Partial)	Sq. Yd.	278
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	10
Deck Slab Repair (Full Depth, Type 2)	Sq. Yd.	22

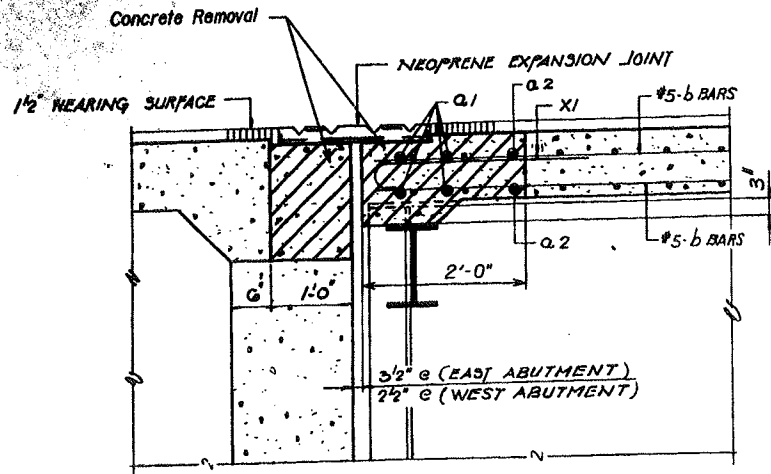
The plan quantities shown for Deck Slab Repair (Partial and Full Depth) are estimated quantities. The actual locations and quantity of Deck Slab Repair shall be determined by the resident engineer in the field after removal of the existing wearing surface. Actual repair locations shall be shown on the as-built plans.

Deck Survey : 01/10/00

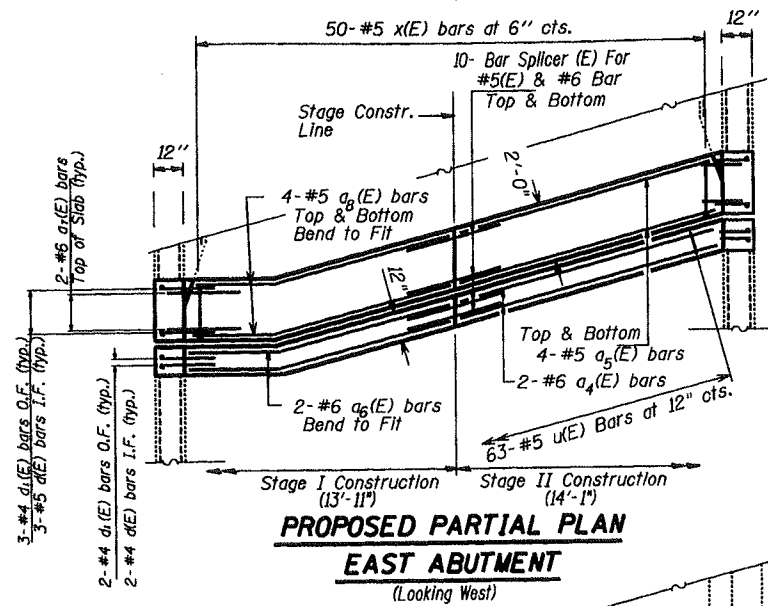
DECK REPAIR PLAN
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

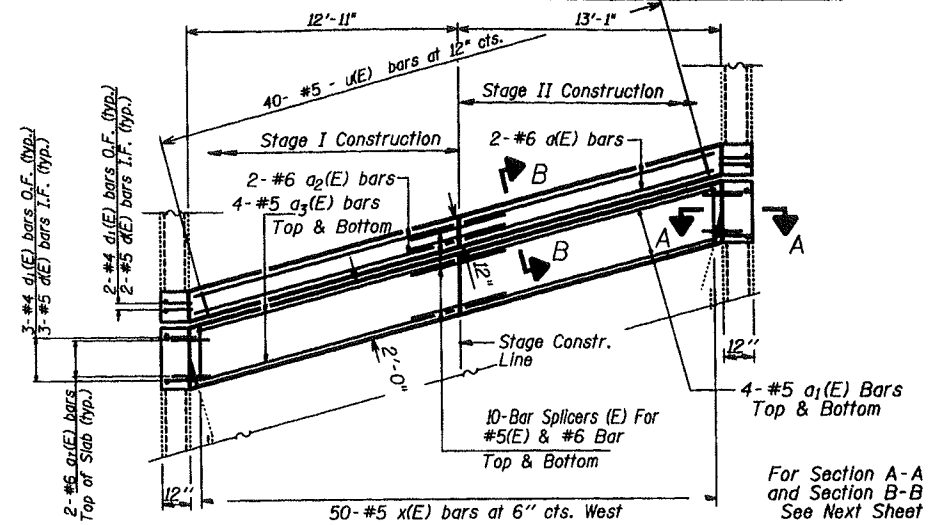
PROJECT NO.	201-3HB-1	COUNTY	Winnebago	DATE	114	SHEET NO.	5
P.L.S. NO.	39				35	TOTAL SHEETS	9



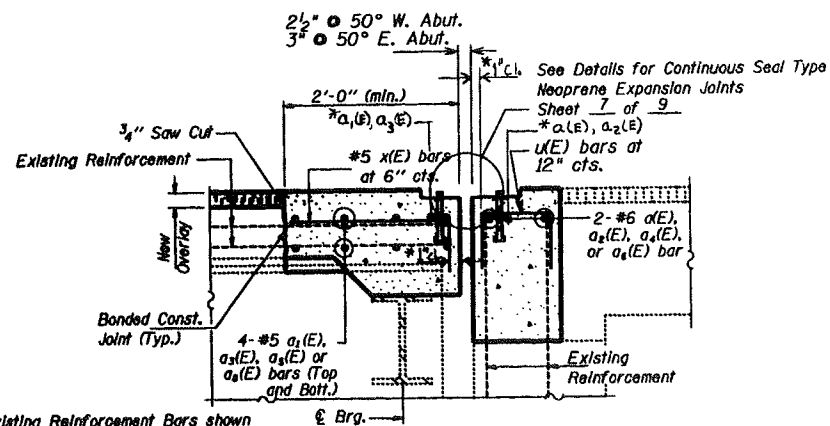
SECTION THRU EXISTING ABUT.



PROPOSED PARTIAL PLAN EAST ABUTMENT
(Looking West)



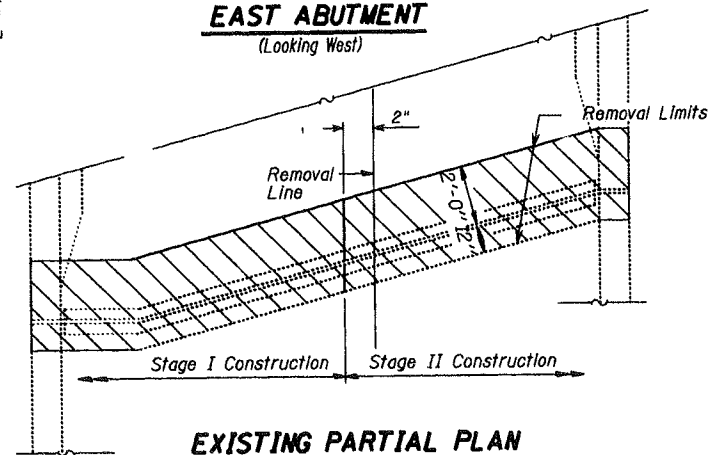
PROPOSED PARTIAL PLAN WEST ABUTMENT
(Looking West)



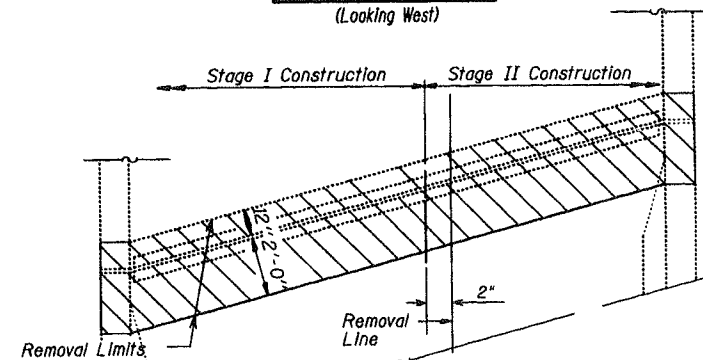
JOINT RECONSTRUCTION

Note: Existing Reinforcement Bars shown are to be cleaned and incorporated into new construction.

* Reinforcement bars a₁(E), a₂(E), a₃(E) and a₄(E) bars in back of existing joint as shown if required to maintain 1" cl. Anchor bars a₁(E), a₂(E), a₃(E) and a₄(E).



EXISTING PARTIAL PLAN EAST ABUTMENT

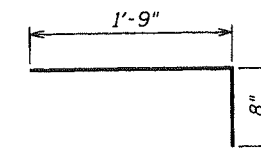


EXISTING PARTIAL PLAN WEST ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	2	#6	20'-0"		
a ₁ (E)	8	#5	20'-0"		
a ₂ (E)	2	#6	19'-6"		
a ₃ (E)	8	#5	19'-6"		
a ₄ (E)	2	#6	33'-6"		
a ₅ (E)	8	#5	33'-6"		
a ₆ (E)	2	#6	31'-11"		
a ₇ (E)	8	#6	4'-0"		
a ₈ (E)	8	#5	31'-11"		
d(E)	12	#5	4'-3"		
d ₁ (E)	28	#4	4'-6"		
d ₂ (E)	8	#4	2'-1"		
u(E)	103	#4	1'-7"		
x(E)	100	#5	2'-5"		
Item				Unit	Quantity
Reinforcement Bars, Epoxy Coated				Pound	1760
Concrete Superstructure				Cu. Yd.	11.5
Concrete Removal				Cu. Yd.	11.5
Bar Splicers				Each	20
Neoprene Expansion Joint 2 1/2"				Foot	42
Neoprene Expansion Joint 4"				Foot	65

Reinforcement bars designated (E) shall be epoxy coated.

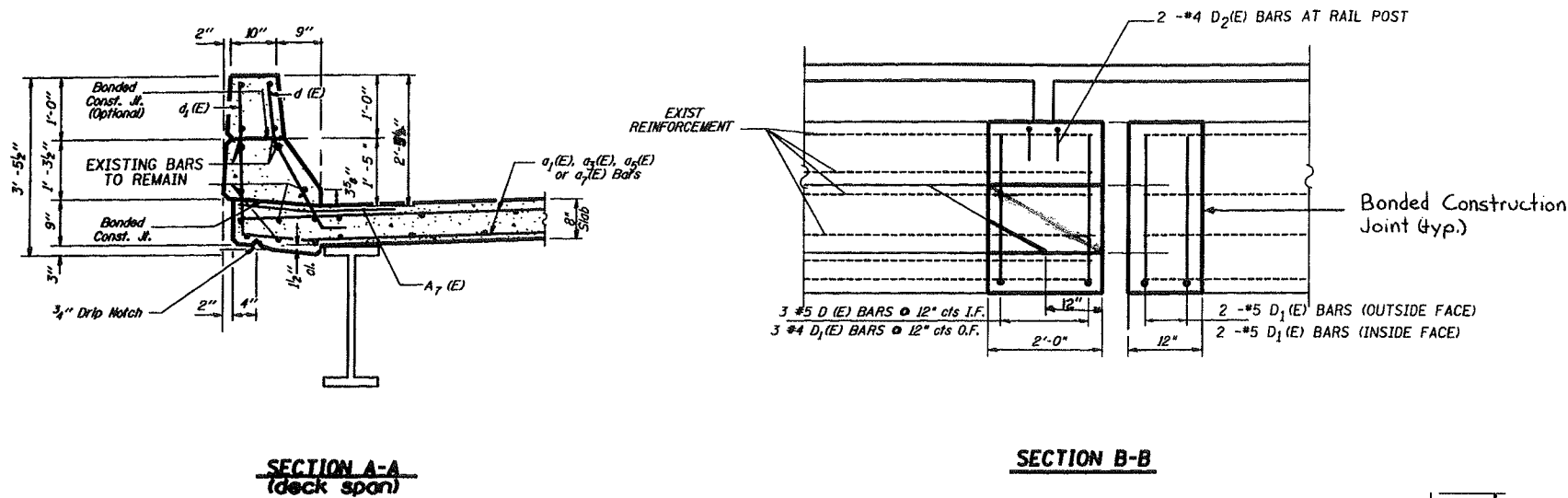


BAR x(E)

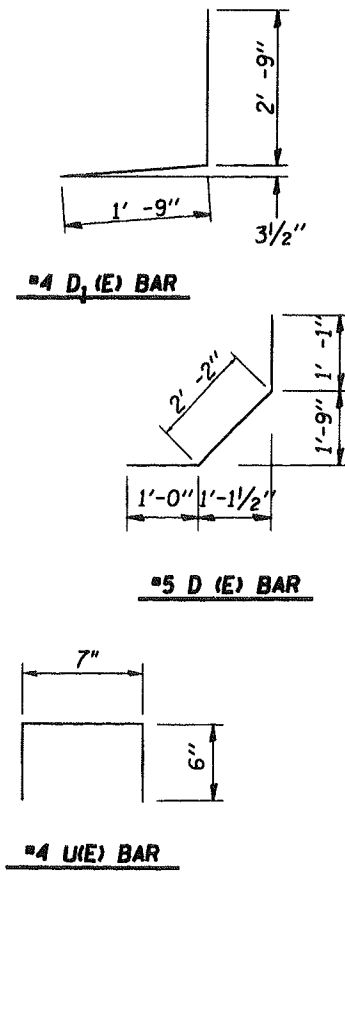
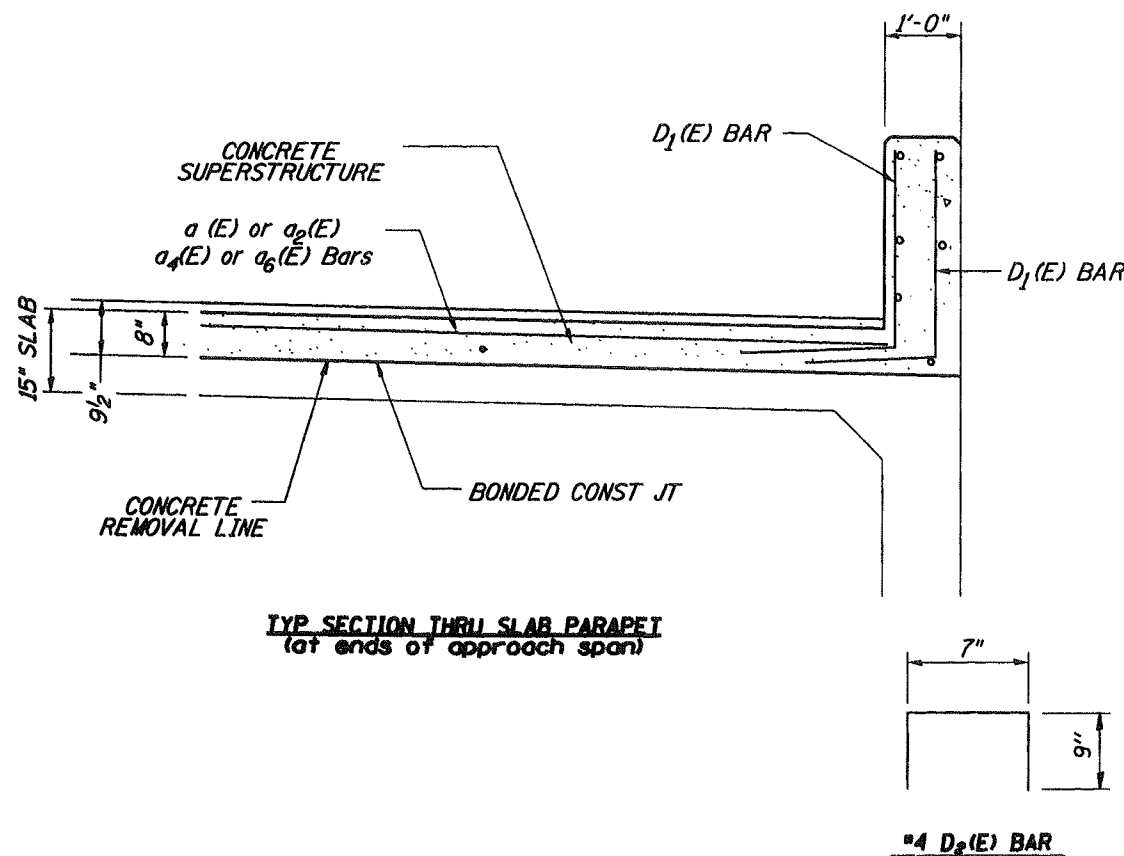
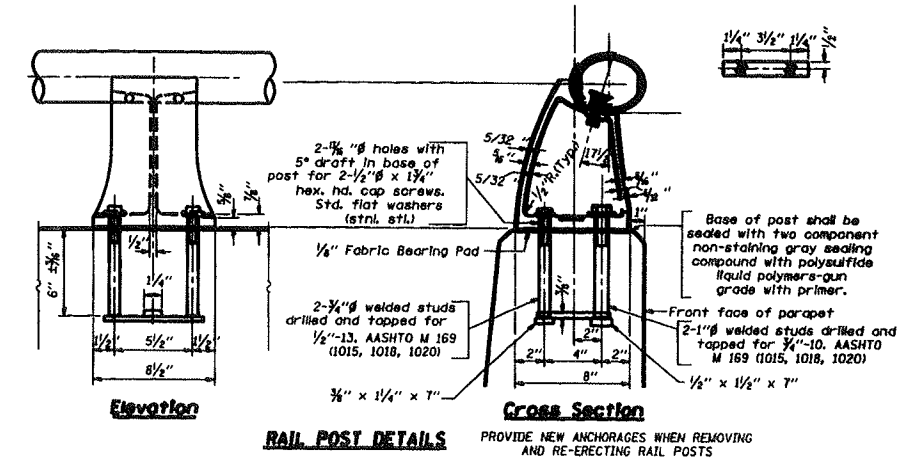
JOINT REPLACEMENT DETAILS
F.A.I. RTE. 39 (I-39 & US51)
RAMP "BD"
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNT	DATE	SCALE	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	36	9 SHEETS
FILE NO. DESK. NO. 7	ILLINOIS	FOR USE PROPERTY			



NOTE: ALL COST FOR REMOVAL OF EXISTING ALUMINUM RAILING AND RAIL ELEMENTS, IF REQUIRED, AND RE-INSTALLATION SHALL BE CONSIDERED INCLUDED IN CONCRETE REMOVAL



PARAPET DETAILS
F.A.I. RTE. 39 (I-39 & US51 S.B.)
RAMP "BD" OVER F.A. ROUTE 301
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

DESIGNED	
CHECKED	
DATE	
BY	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

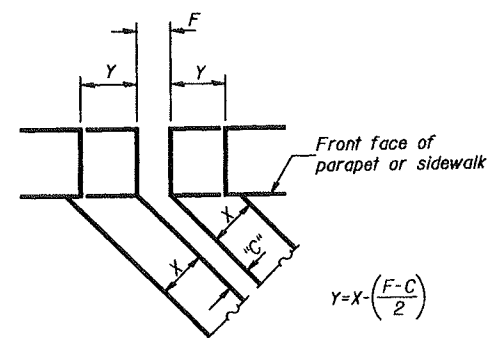
ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	TOTAL SHEETS
P.A.L. 39	201-3HB-1	Winnebago	114	37
FED. ROAD DIST. NO. 7		ILLINOIS	FED. ROAD PRODUCT	

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 continuous seal in roadway, parapet, curb, and sidewalk.
- Install anchor blocks as indicated.

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



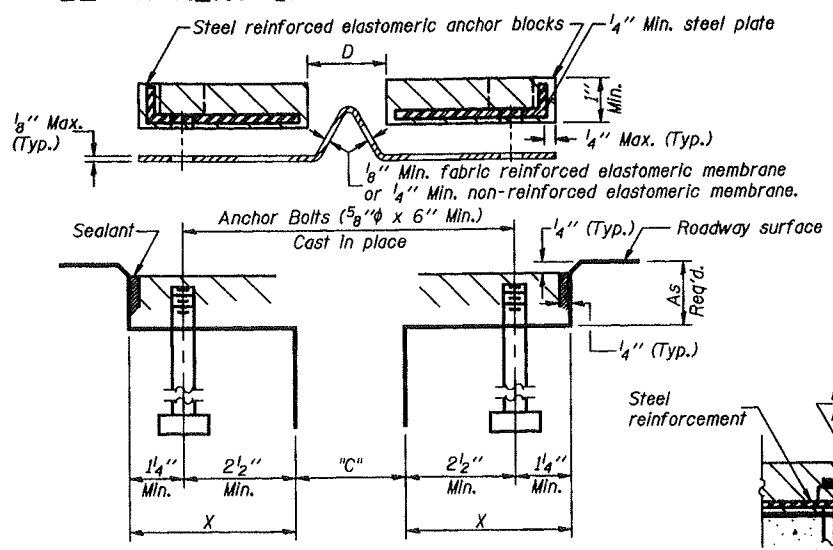
FORMING BLOCKOUT SKETCH

$$Y = X \left(\frac{F - C}{2} \right)$$

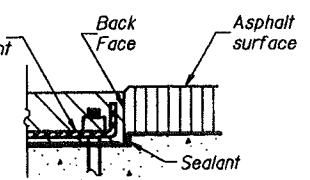
For dimension "F" see sheet #

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 according to 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.



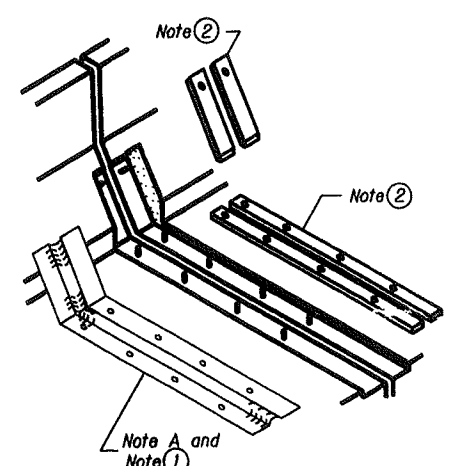
CROSS SECTION



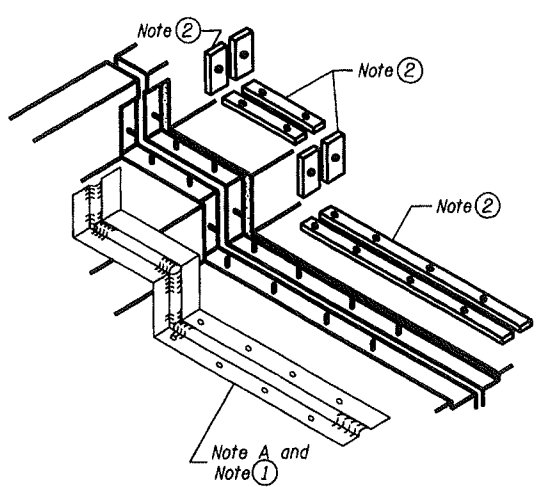
ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

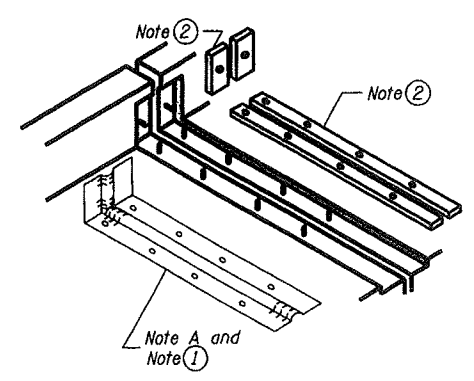
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure. The 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 according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F. The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



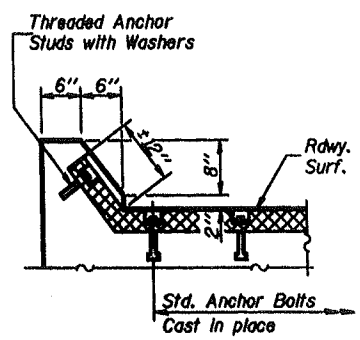
AT PARAPET



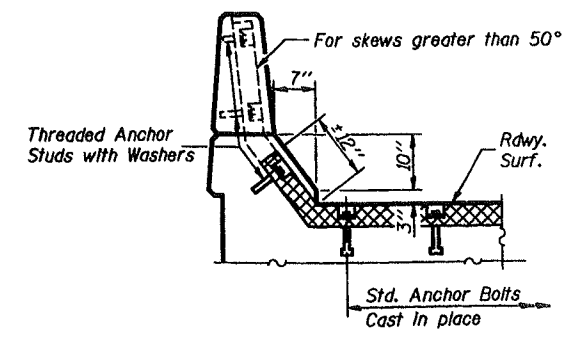
AT SIDEWALK OR MEDIAN



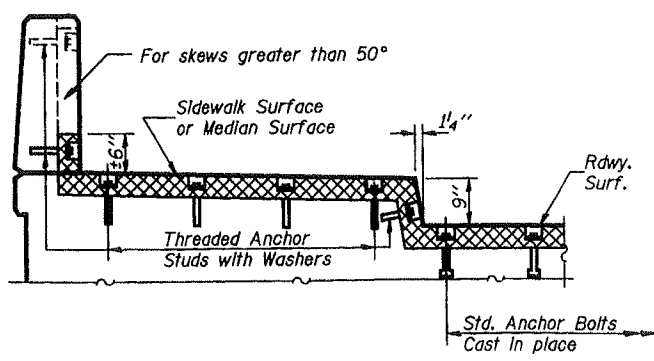
AT WALL



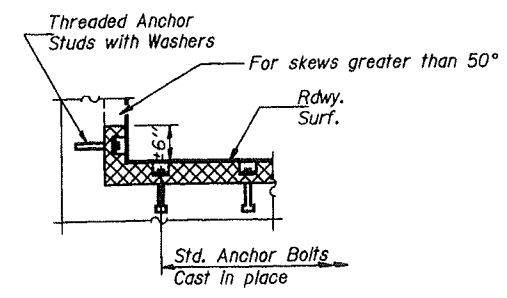
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS

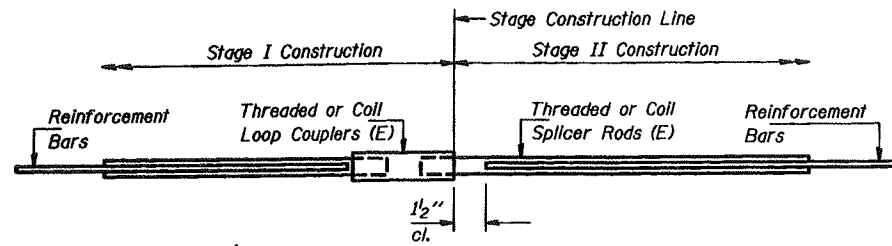


AT WALL

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

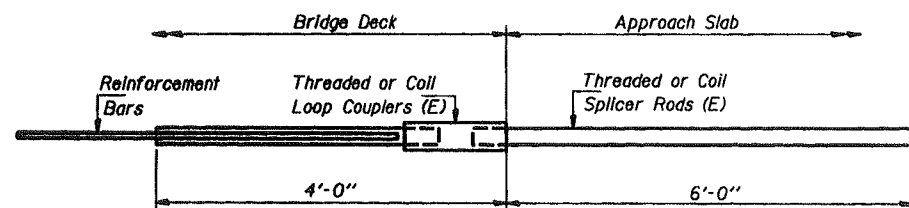
ROUTE NO.	DISTRICT	COUNTY	SECTION	"E"	SHEET NO. 8
P.A.S. 39	201-3HB-1	Winnebago	114	38	9 SHEETS
PUB. ROAD DIST. NO. 7		ILLINOIS		PUB. ROAD DIST. NO. 7	



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#6	2	EAST. ABUT.
#5	8	EAST. ABUT.
#6	2	WEST ABUT.
#5	8	WEST ABUT.

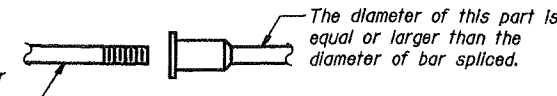
(E) : Indicates epoxy coating.



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

The diameter of this part is equal or larger than the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

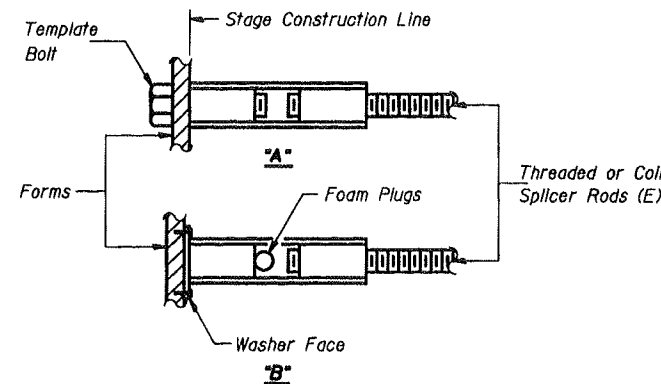
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars. Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

$f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

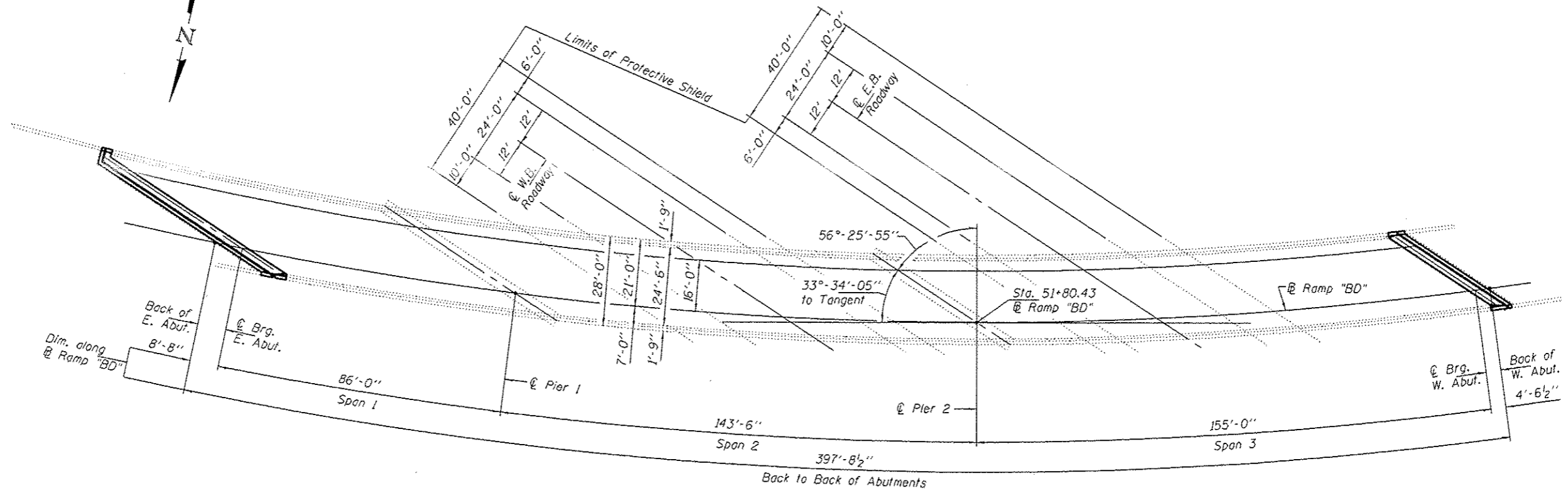
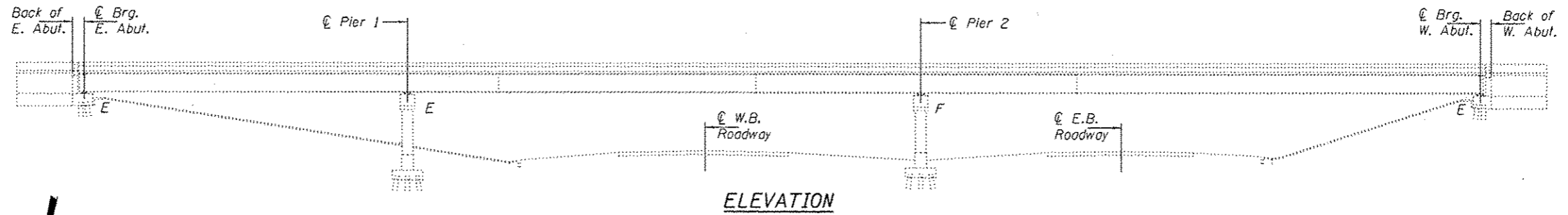
A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

BAR SPLICER ASSEMBLY DETAILS
F.A.I. RTE. 39 (I-39 & US51 S.B.)
RAMP "BD" OVER F.A. ROUTE 301
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136



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. 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.

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.

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

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

PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	17.9
Concrete Superstructure	Cu. Yd.	17.9
Reinforcement Bars, Epoxy Coated	Pound	2490
Preformed Joint Strip Seal	Foot	41
Polymerized Hot-Mix Asphalt Surface Course, Mix "D", N90	Tons	91
* Deck Slab Repair (Partial)	Sq. Yd.	162
* Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	54
* Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	54
HMA Surface Removal (Deck)	Sq. Yd.	1080
Waterproofing Membrane System, Special	Sq. Yd.	1080
Expansion Joint (Special)	Foot	68
Polymer Concrete	Cu. Ft.	5
Protective Shield	Sq. Yd.	235

* Quantities are estimated. Actual locations and sizes to be determined in the field, by the Engineer.



Expires: November 30, 2016

DESIGNED - *Victor H. Doris*
 CHECKED - *Stephan M. Ryan*
 DRAWN - Kyle M. Stoffan
 CHECKED - *VHV* *SMR*

PASSED

David Carl Puzey
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - JANUARY 26, 2016

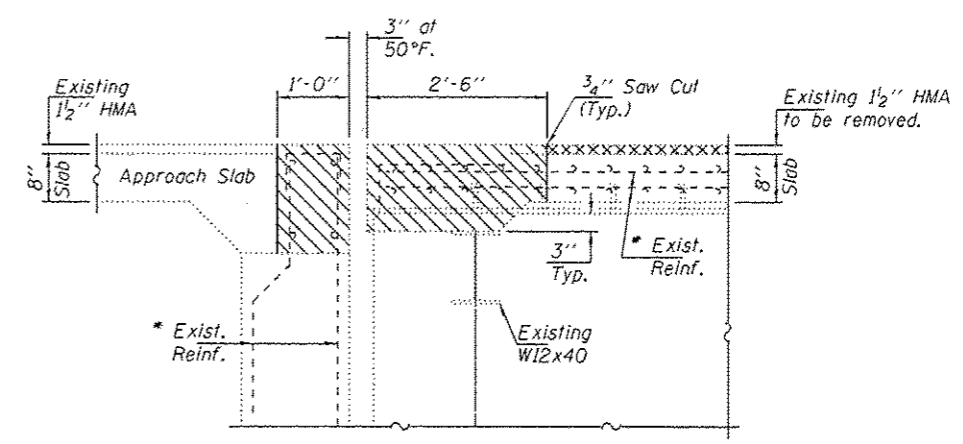
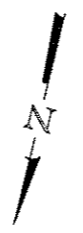
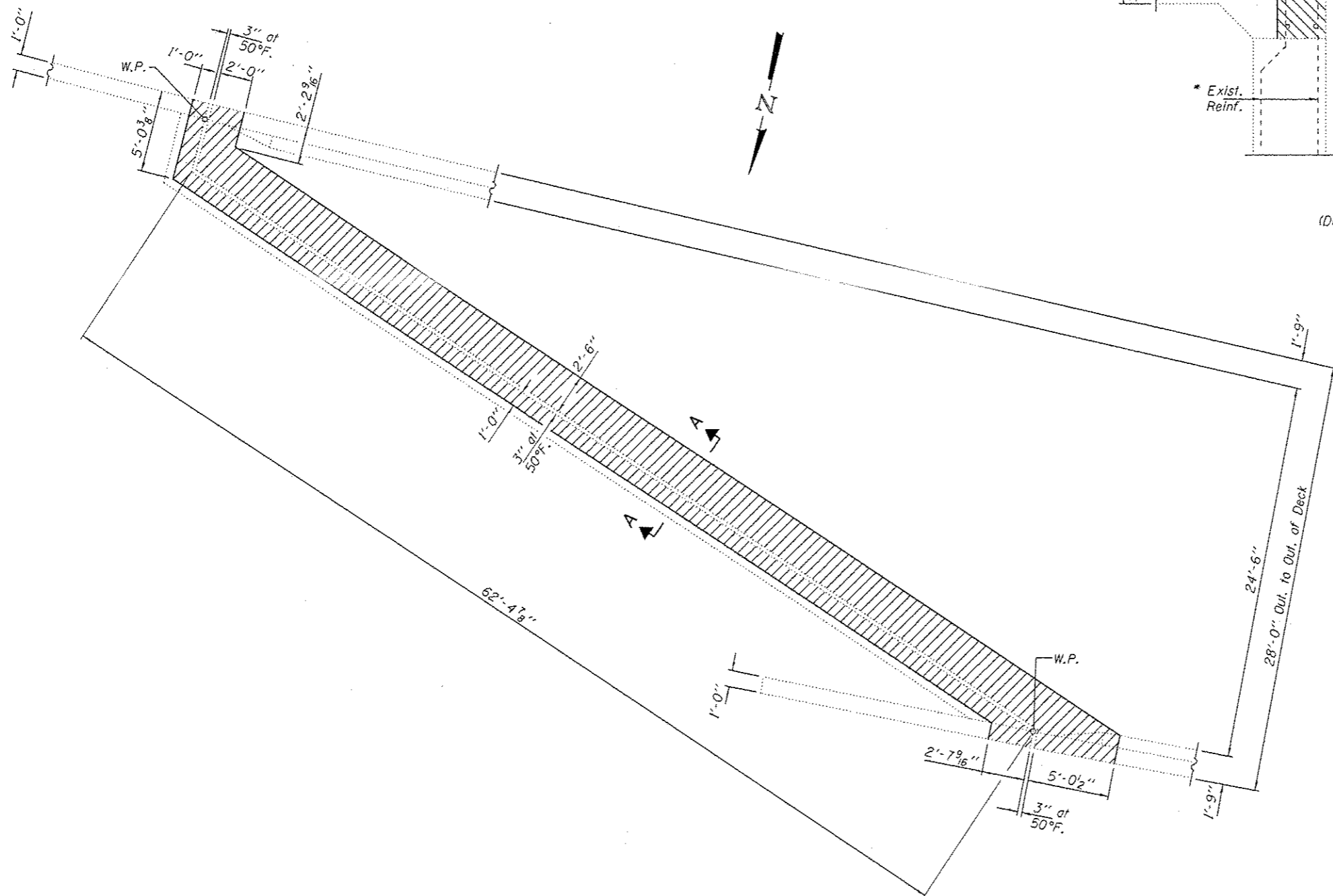
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 RAMP "BD" OVER F.A.P. ROUTE 301 (U.S. ROUTE 20 BYPASS)
 SN 101-0136

SHEET NO. 1 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	26	15

CONTRACT NO. **69206**
 ILLINOIS FED. AID PROJECT



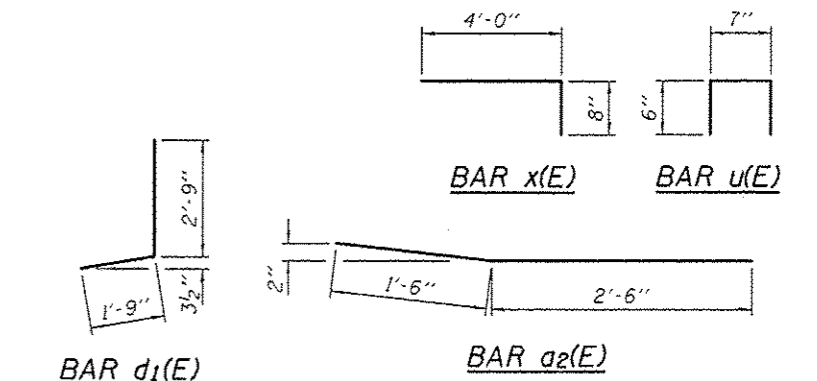
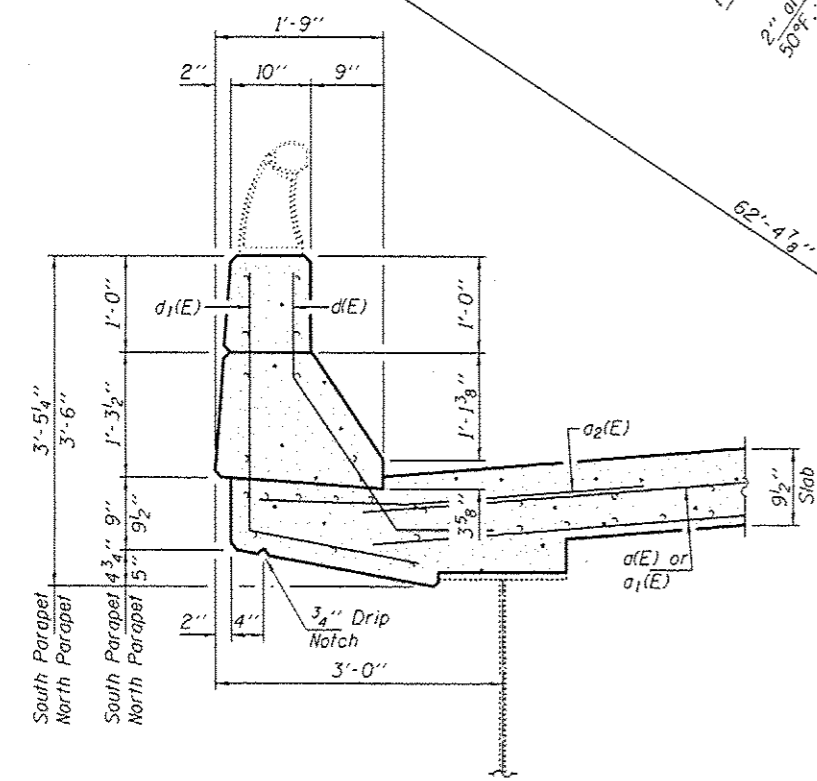
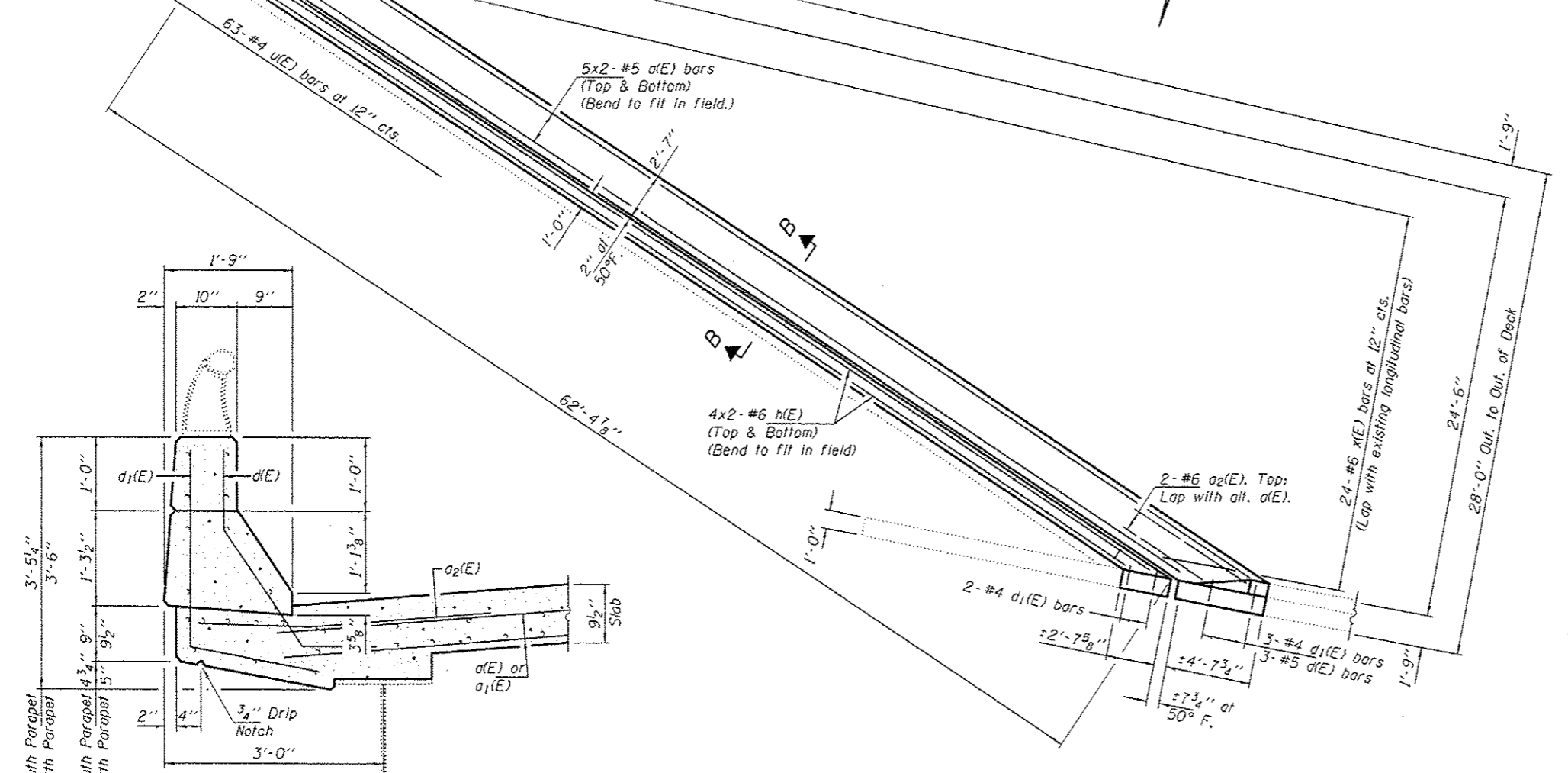
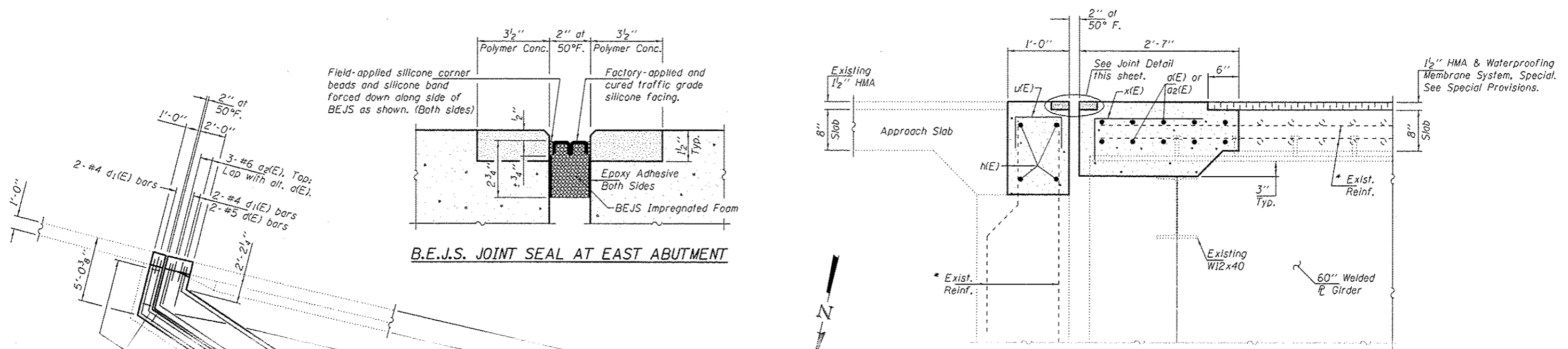
SECTION A-A
(Near E Roadway)
(Dims. at RT L's to end of deck)

* For existing reinforcement treatment see General Notes on sheet 1 of 6.

Note:
Hatched areas indicate concrete removal.
Cross-hatched areas indicate HMA removal.

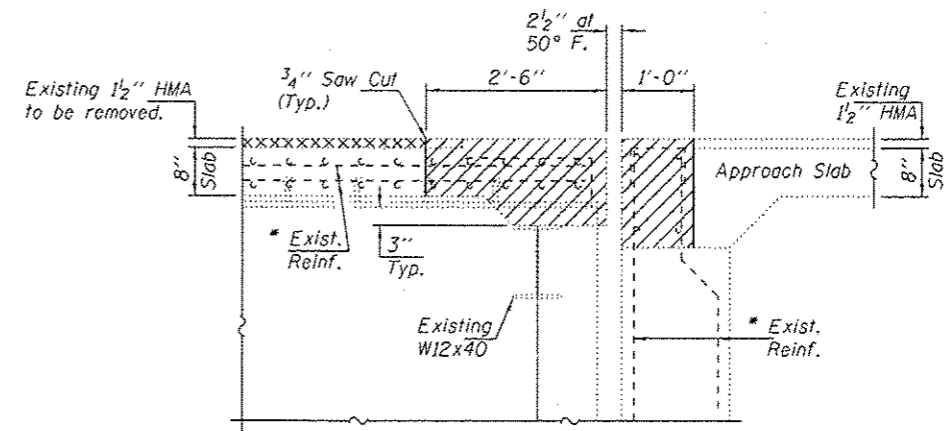
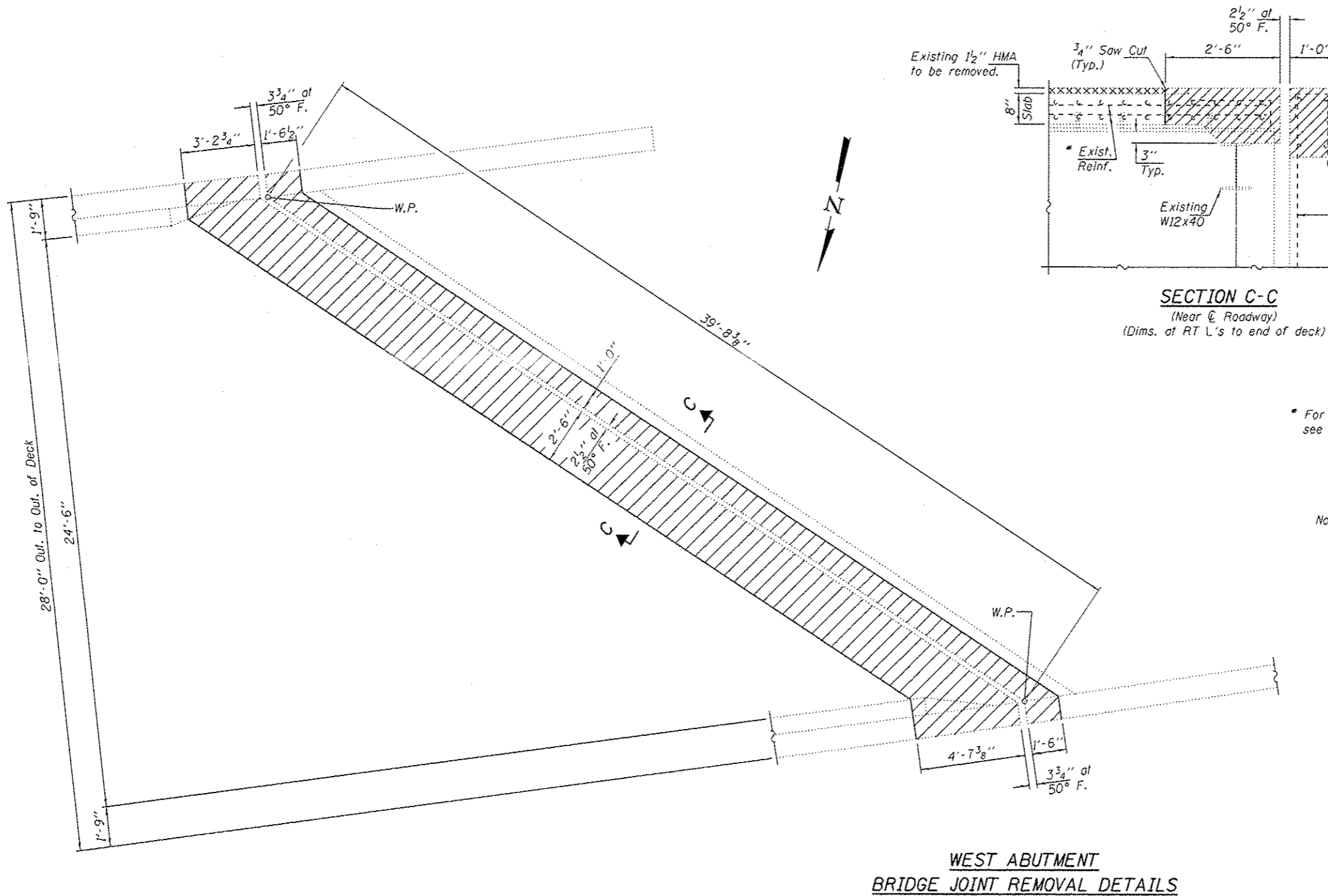
**EAST ABUTMENT
BRIDGE JOINT REMOVAL DETAILS**

DESIGNED - VHV	DATE - JANUARY 26, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT JOINT REMOVAL DETAILS SN 101-0136	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR				39	D2 DECK REPAIR 2016-2	WINNEBAGO	26	16
DRAWN - Kyle M. Steffen	PASSED <i>[Signature]</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES			CONTRACT NO. 64104		ILLINOIS FED. AID PROJECT		
CHECKED - VHV SMR			SHEET NO. 2 OF 6 SHEETS					



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	20	#5	34'-9"	—
a2(E)	6	#6	4'-0"	—
d(E)	5	#5	4'-3"	J
d1(E)	9	#4	4'-6"	J
h(E)	8	#6	36'-0"	—
u(E)	63	#4	1'-7"	□
x(E)	24	#6	4'-8"	—
Concrete Removal			Cu. Yd.	11
Concrete Superstructure			Cu. Yd.	11
Reinforcement Bars, Epoxy Coated			Pound	1480
Polymer Concrete			Cu. Ft.	5
Expansion Joint (Special)			Foot	68



* For existing reinforcement treatment see General Notes on sheet 1 of 6.

Note:
Hatched areas indicate concrete removal.
Cross-hatched areas indicate HMA removal.

DESIGNED - VHV
CHECKED - SMR
DRAWN - Kyle M. Steffen
CHECKED - VHV SMR

DATE - JANUARY 26, 2016

PASSED *[Signature]*
ACTING ENGINEER OF BRIDGES AND STRUCTURES

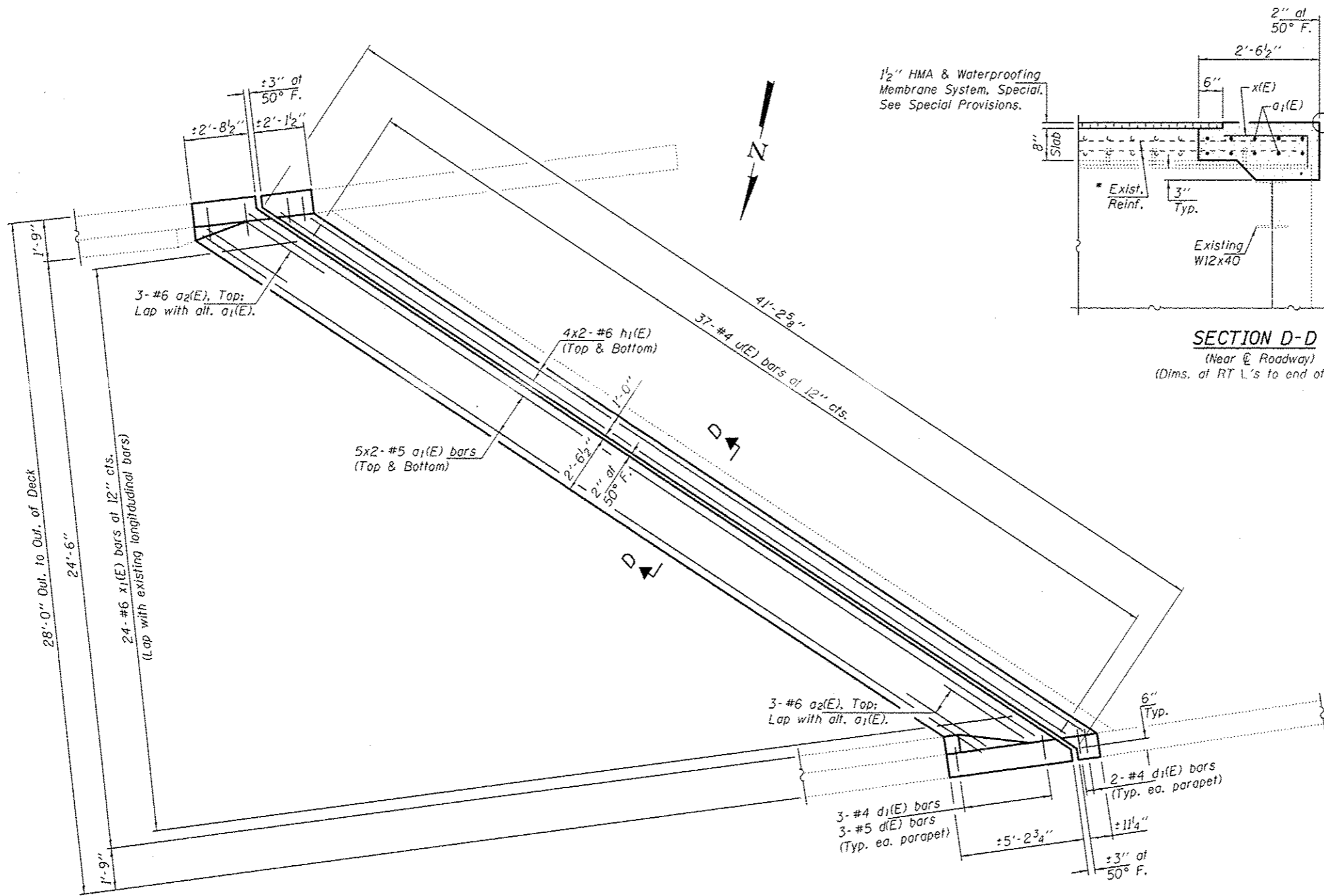
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WEST ABUTMENT JOINT REMOVAL DETAILS
SN 101-0136

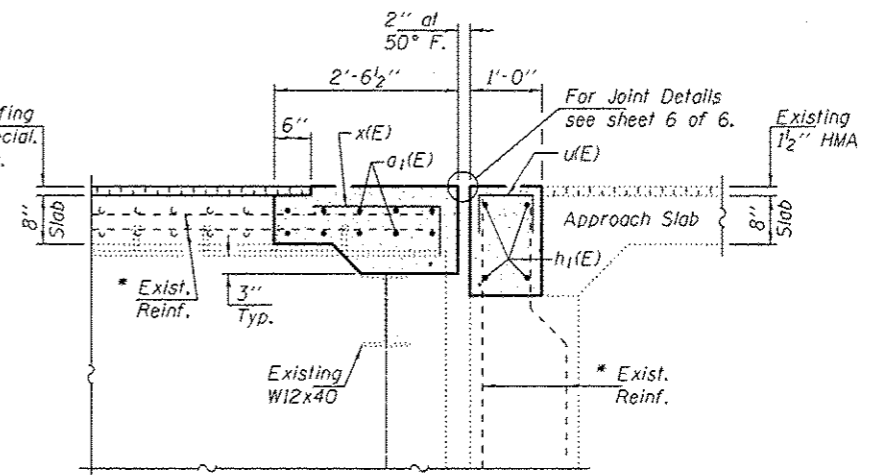
SHEET NO. 4 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	20	18
CONTRACT NO. 64206				

ILLINOIS FED. AID PROJECT



1/2" HMA & Waterproofing Membrane System, Special. See Special Provisions.

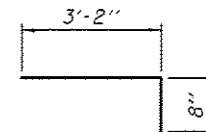


SECTION D-D

(Near E Roadway)
(Dims. at RT L's to end of deck)

* For existing reinforcement treatment see General Notes on sheet 1 of 6.

Note:
For parapet and reinforcement details see sheet 3 of 6.



BAR x1(E)

**WEST ABUTMENT
BRIDGE JOINT REPLACEMENT DETAILS**

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	20	#5	22'-6"	—
a2(E)	6	#6	4'-0"	—
d(E)	6	#5	4'-3"	J
d1(E)	10	#4	4'-6"	J
h1(E)	8	#6	22'-6"	—
u(E)	37	#4	1'-7"	□
x1(E)	24	#6	3'-10"	┌
Concrete Removal		Cu. Yd.	6.9	
Concrete Superstructure		Cu. Yd.	6.9	
Reinforcement Bars, Epoxy Coated		Pound	1010	
Preformed Joint Strip Seal		Foot	41	

BAR LAPS

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

DESIGNED - VHV
CHECKED - SMR
DRAWN - Kyle M. Staffon
CHECKED - VHV SMR

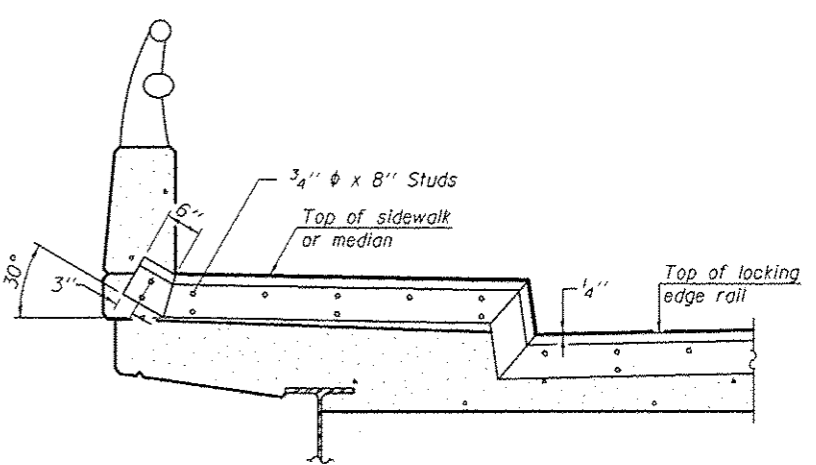
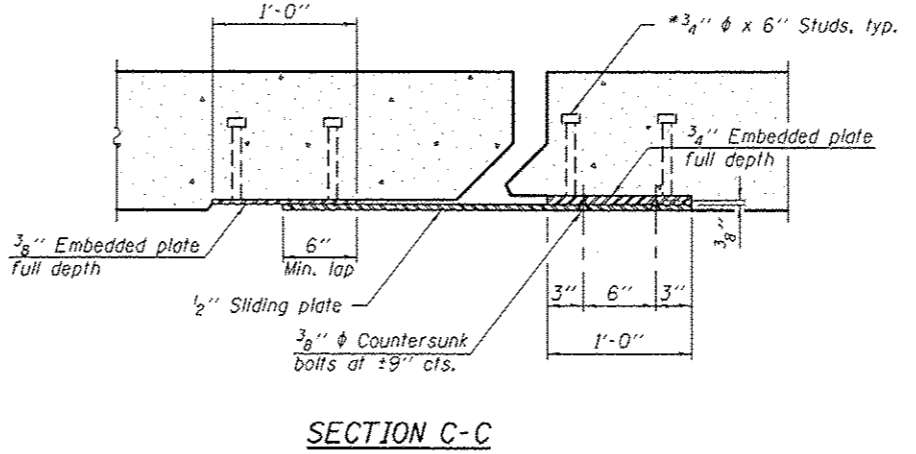
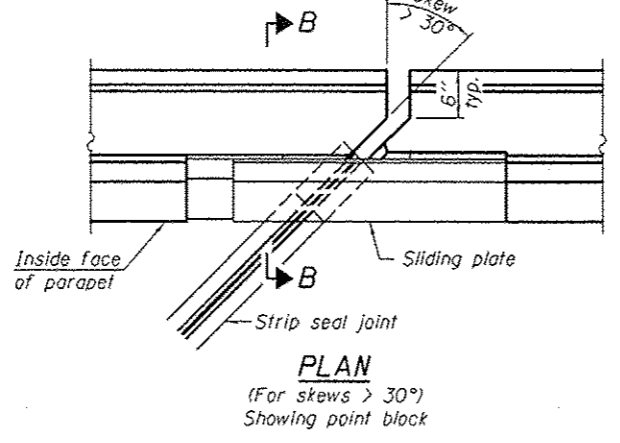
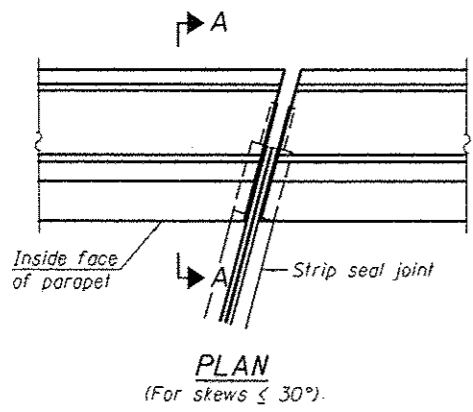
DATE - JANUARY 26, 2016
PASSED
[Signature]
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT JOINT REPLACEMENT DETAILS
SN 101-0136

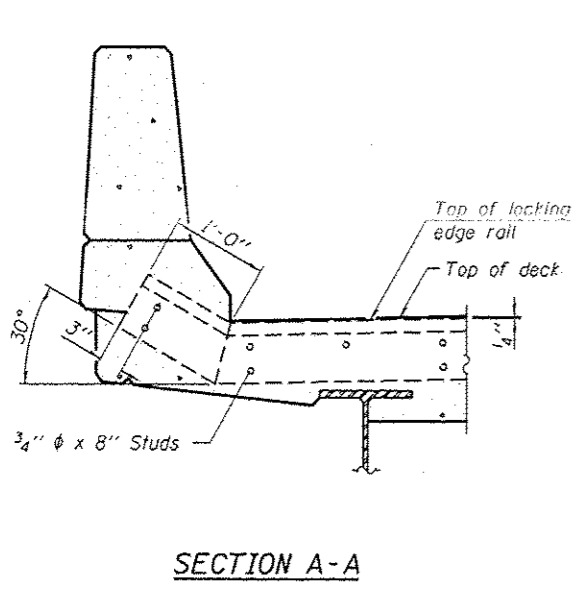
SHEET NO. 5 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	210	19
CONTRACT NO. 641.06			ILLINOIS FED. AID PROJECT	

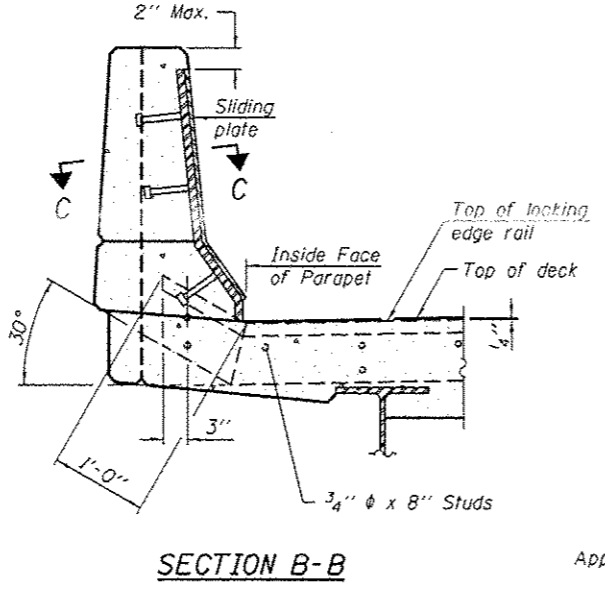


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

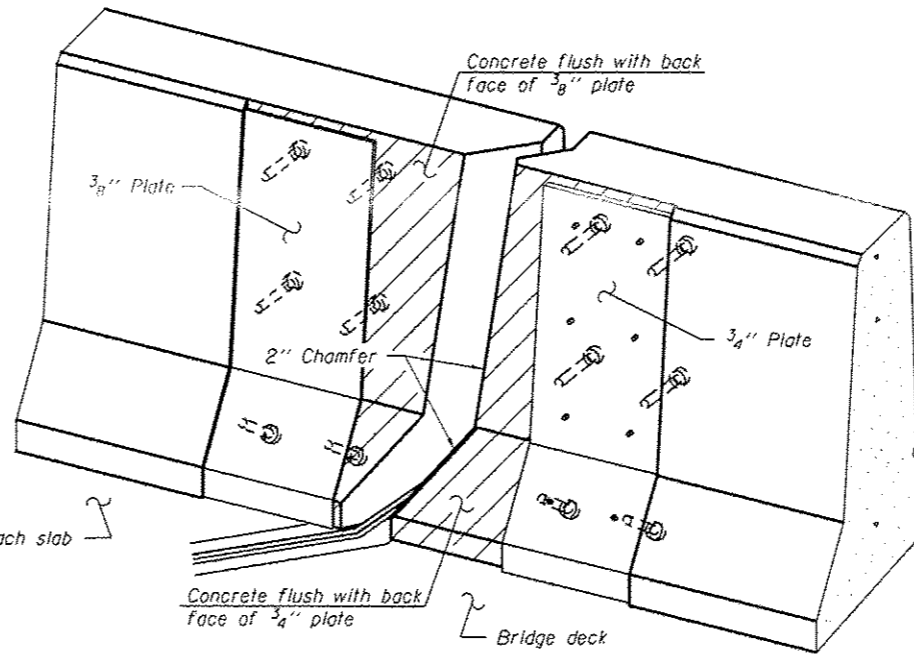
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A

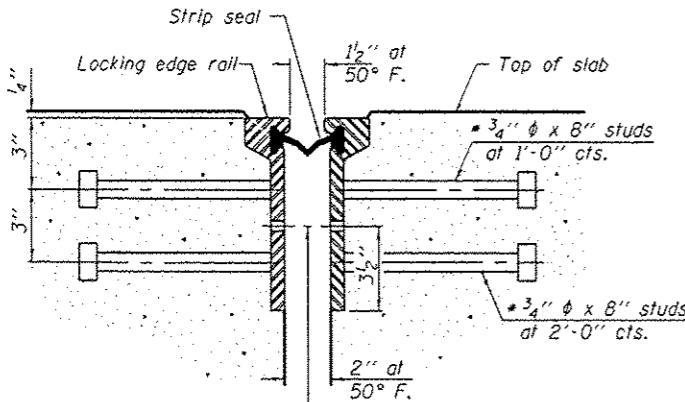


SECTION B-B

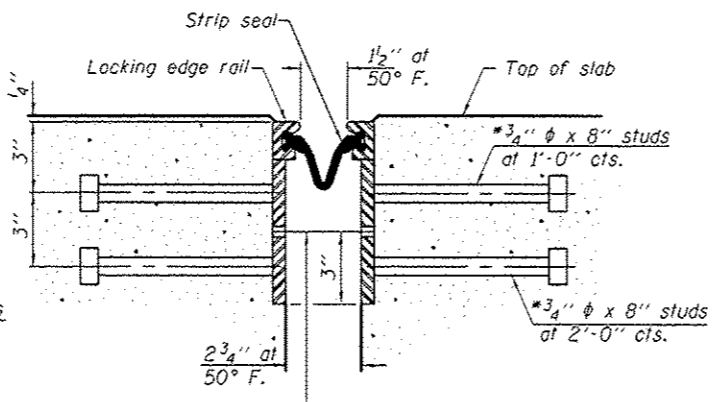


TRIMETRIC VIEW (Showing back plates only)

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT

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

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

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	41

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

EJ-SSJ

1-27-12

DESIGNED - VHV	CHECKED - SMR	DRAWN - Kyle M. Staffan	CHECKED - VHV SMR
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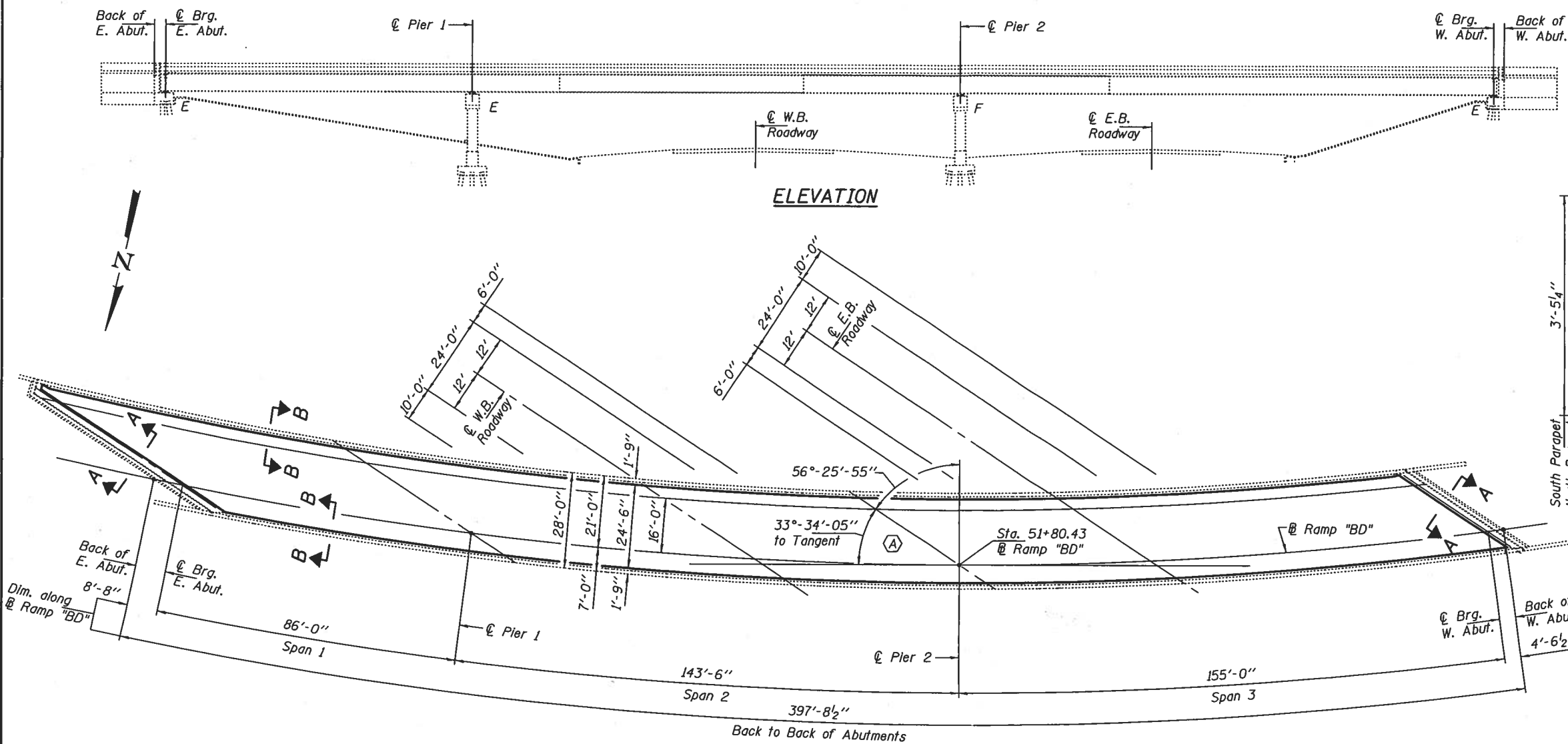
DATE - JANUARY 26, 2016
PASSED *J. Carl Perry*
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

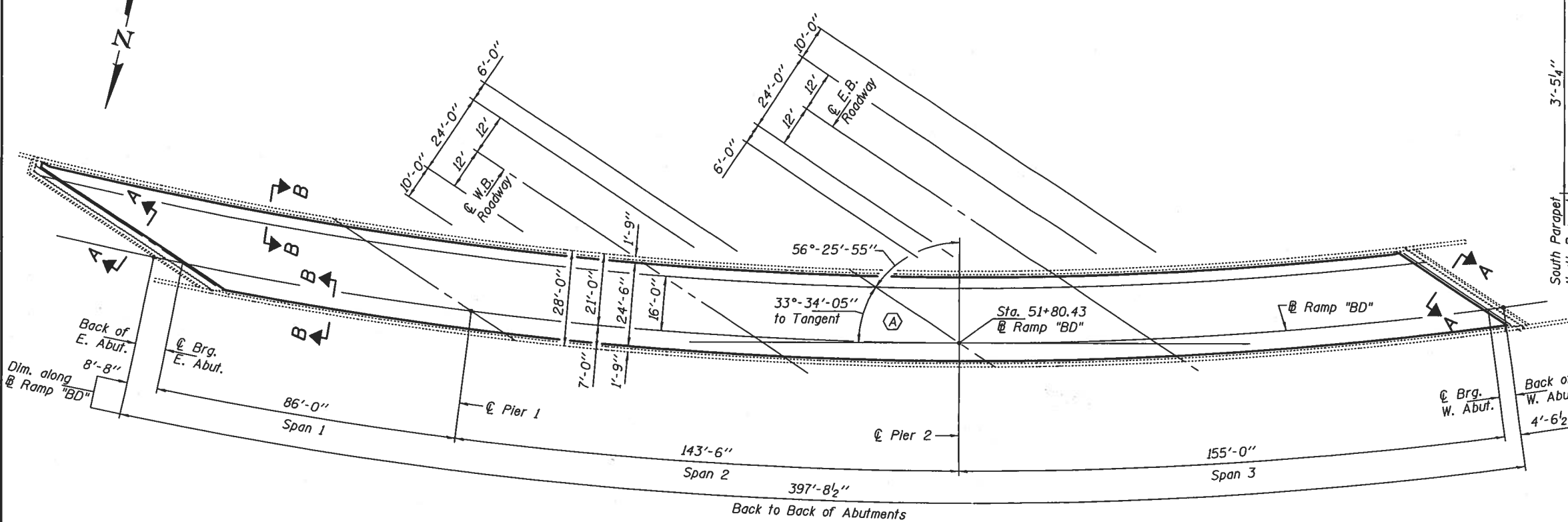
PREFORMED JOINT STRIP SEAL DETAILS
SN 101-0136

SHEET NO. 6 OF 6 SHEETS

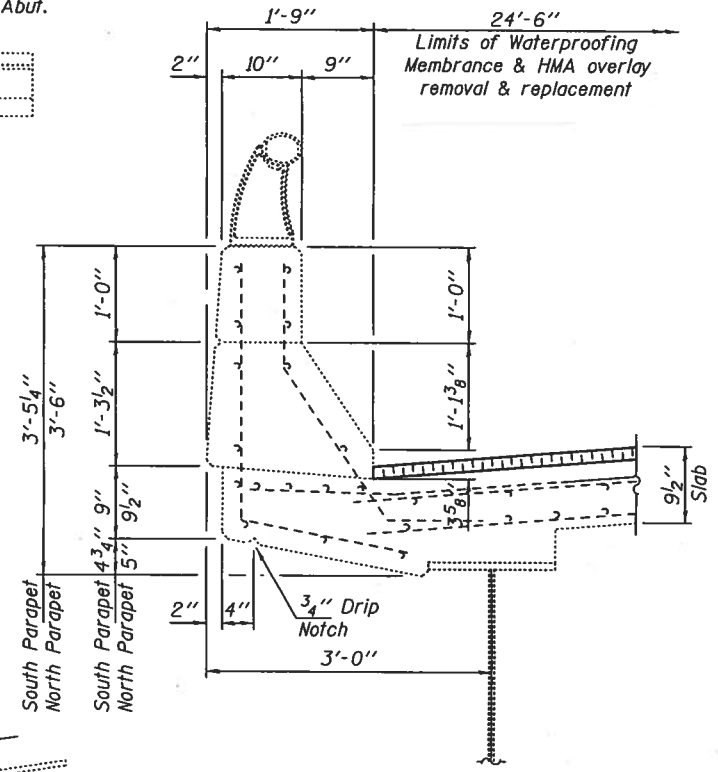
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	210	20
CONTRACT NO. 47106				
ILLINOIS FED. AID PROJECT				



ELEVATION

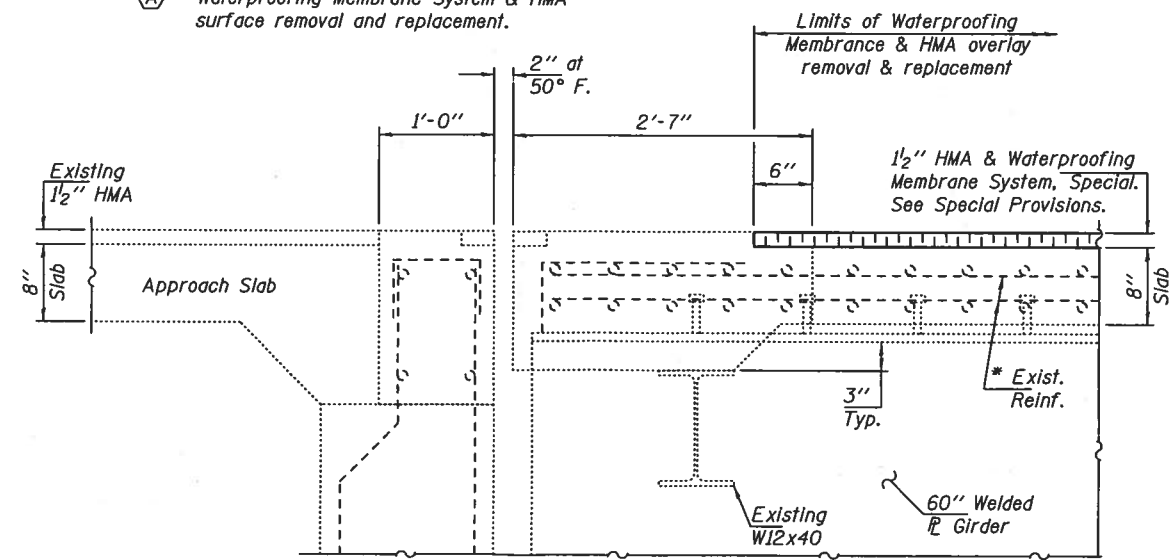


PLAN



SECTION B-B

(A) - Waterproofing Membrane System & HMA surface removal and replacement.



SECTION A-A

(Near \O Roadway)
(Dims. at RT L's to end of deck)

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. Work to be completed under road closure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Polymerized Hot-Mix Asphalt Surface Course, Mix "D", N90	Tons	90
HMA Surface Removal	Sq. Yd.	1060
Waterproofing Membrane System, Special	Sq. Yd.	1060

PRE-FINAL
DATE: 9/3/2019
EXPIRES 11-30-2020

DESIGNED -	EXAMINED -	DATE - SEPTEMBER 3, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION RAMP "BD" OVER F.A.P. ROUTE 301 (U.S. ROUTE 20 BYPASS) SN 101-0136	F.A.I. RTE. 39	SECTION	COUNTY WINNEBAGO	TOTAL SHEETS	SHEET NO.
CHECKED -	ENGINEER OF STRUCTURAL SERVICES	REVISED -			39				
DRAWN - daburdell	PASSED -	REVISED -							
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -							