

64L06

WINNEBAGO

F.A.I. RTE.	SECTION	TOWNSHIP	RANGE	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	21	1
		ILLINOIS	CONTRACT NO. 64L06	

01-1-2016 LETTING ITEM 027

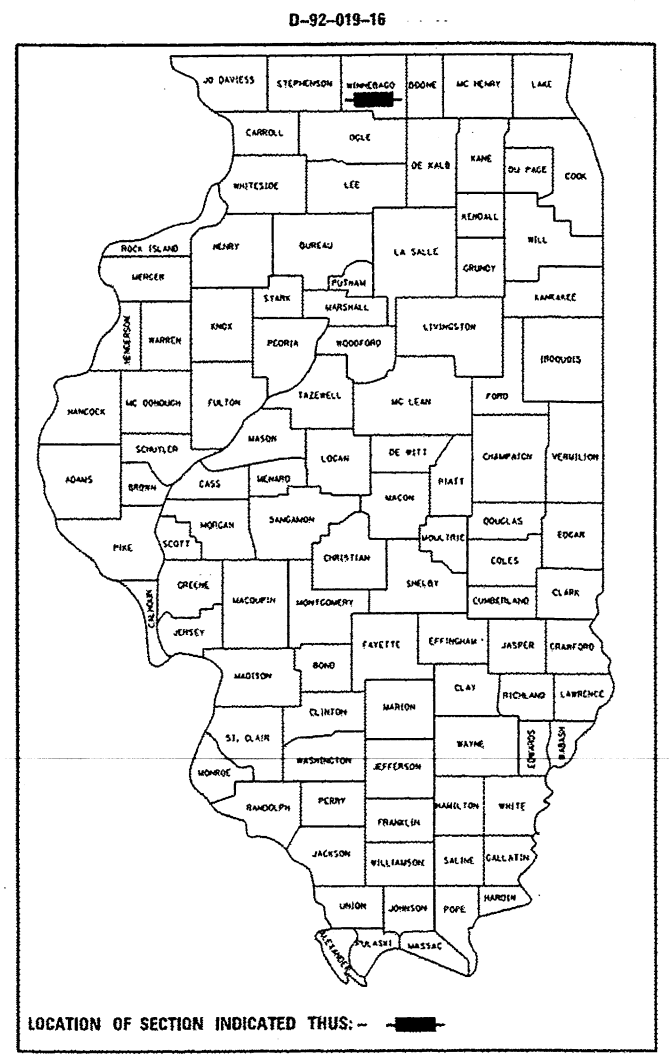
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

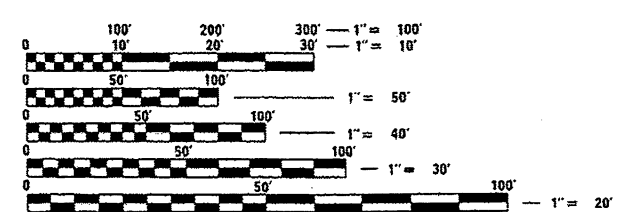
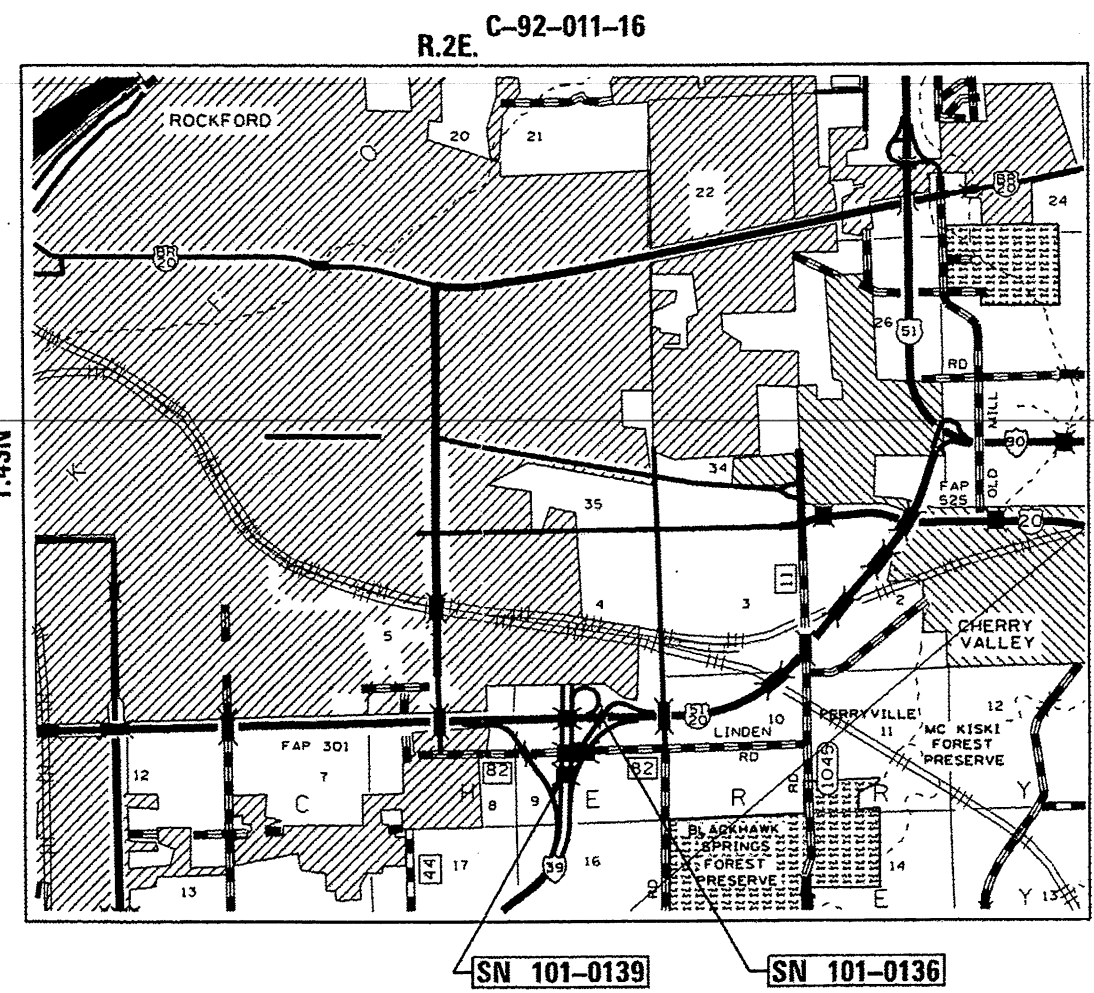
FAI 39 ROUTE (I-39)
 SECTION D2 DECK REPAIR 2016-2
 TYPE of IMPROVEMENT: DECK REPAIR
 WINNEBAGO

FOR INDEX OF SHEETS, SEE SHEET NO. 2
 FOR STATE STANDARDS, SEE SHEET NO. 2

100%
 9-1-2016



CHERRY VALLEY TOWNSHIP, SECTION 9



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

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

PROJECT ENGINEER: DAVID DOSS (815) 284-5416
 PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393
 CONTRACT NO. 64L06 **101-0136**

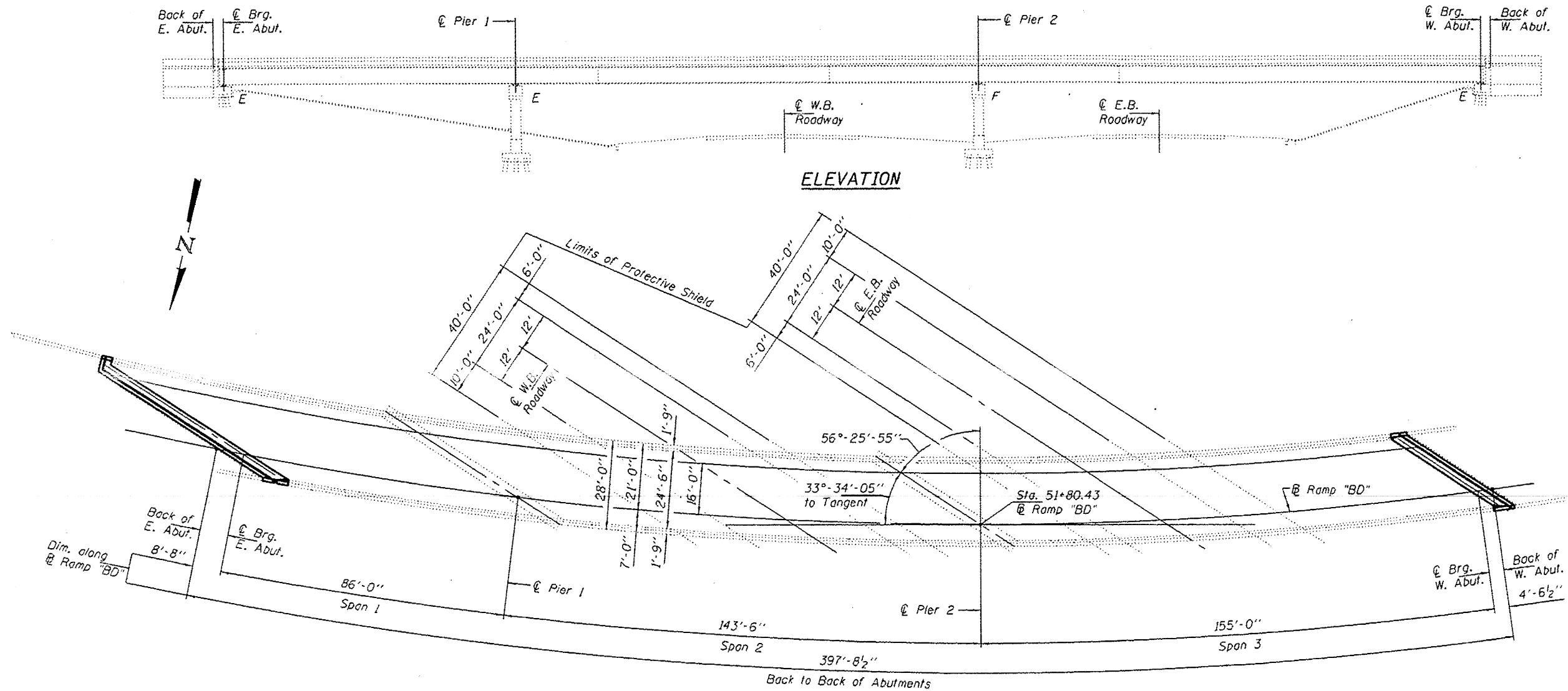
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED *Dec 11th* 20 *15*
Paul C. [Signature]
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Jan 29 20 *16*
Maureen M. Addis PE
 ENGINEER OF DESIGN AND ENVIRONMENT

Jan 29 20 *16*
Cherasmam PE
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS



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 splitter or anchorage system. Cost included with Concrete Removal.

The new deck surface area shall have its final finish lined 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
Prefarmed 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. Uozis
 CHECKED - Stephen M. Ryan
 DRAWN - Kyle M. Steffen
 CHECKED - VHU SMR

PASSED
 David Carl Puzey
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

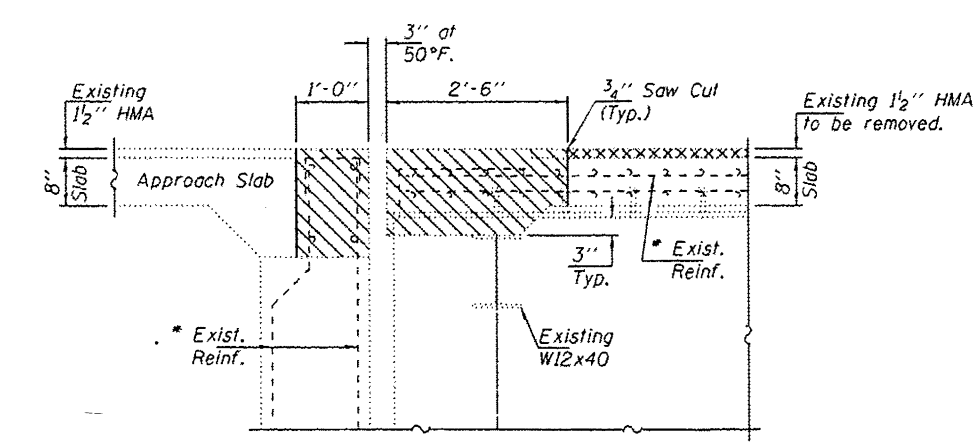
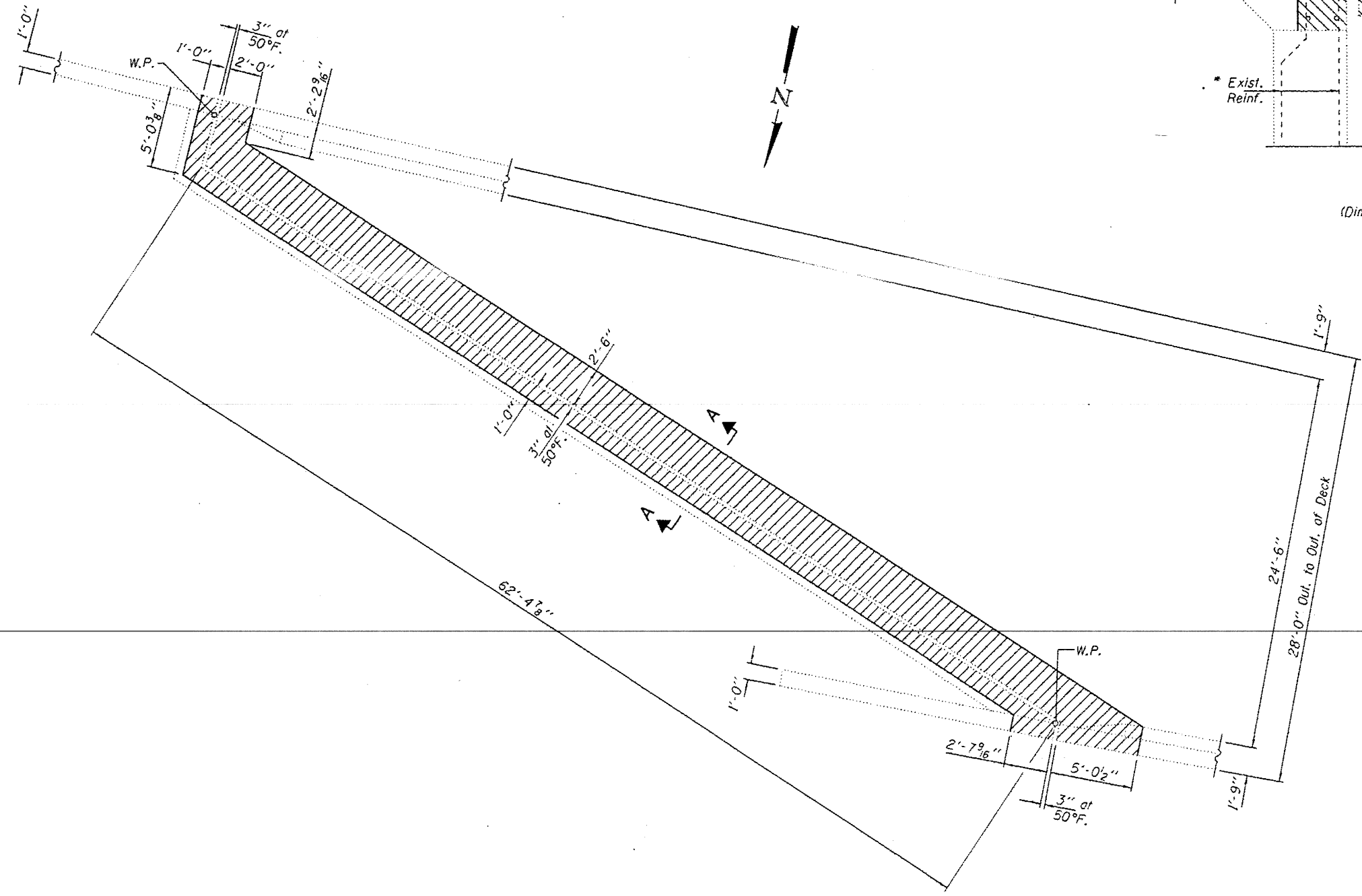
DATE - JANUARY 26, 2016

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.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	26	15
CONTRACT NO. 69106				
ILLINOIS FED. AID PROJECT				



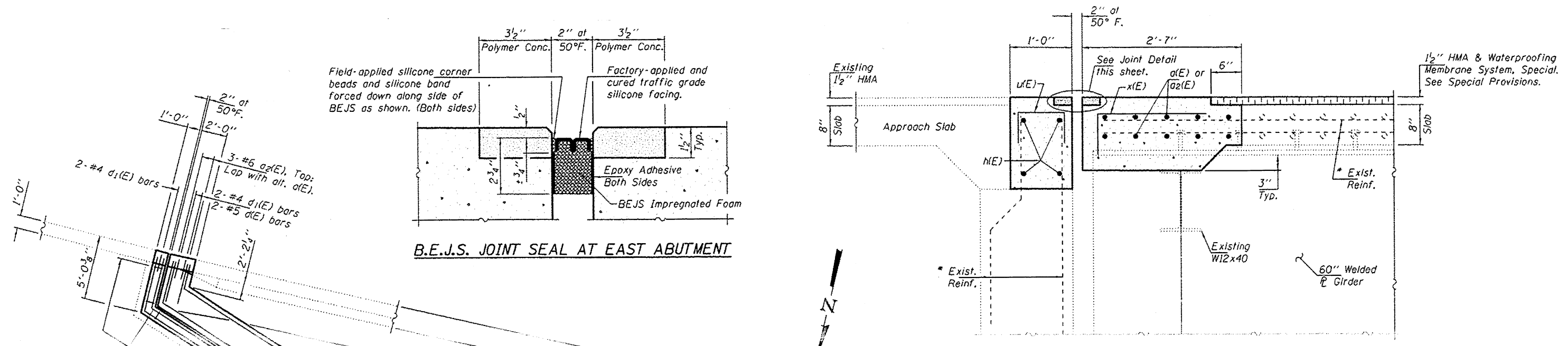
SECTION A-A
(Near E Roadway)
(Dims. at RT L's to end of deck)

* 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	PASSED <i>Carl Perry</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES			39	D2 DECK REPAIR 2016-2	WINNEBAGO	20	16
DRAWN - Kyle M. Steffen			SHEET NO. 2 OF 6 SHEETS	CONTRACT NO. 64104				
CHECKED - VHV SMR				ILLINOIS FED. AID PROJECT				

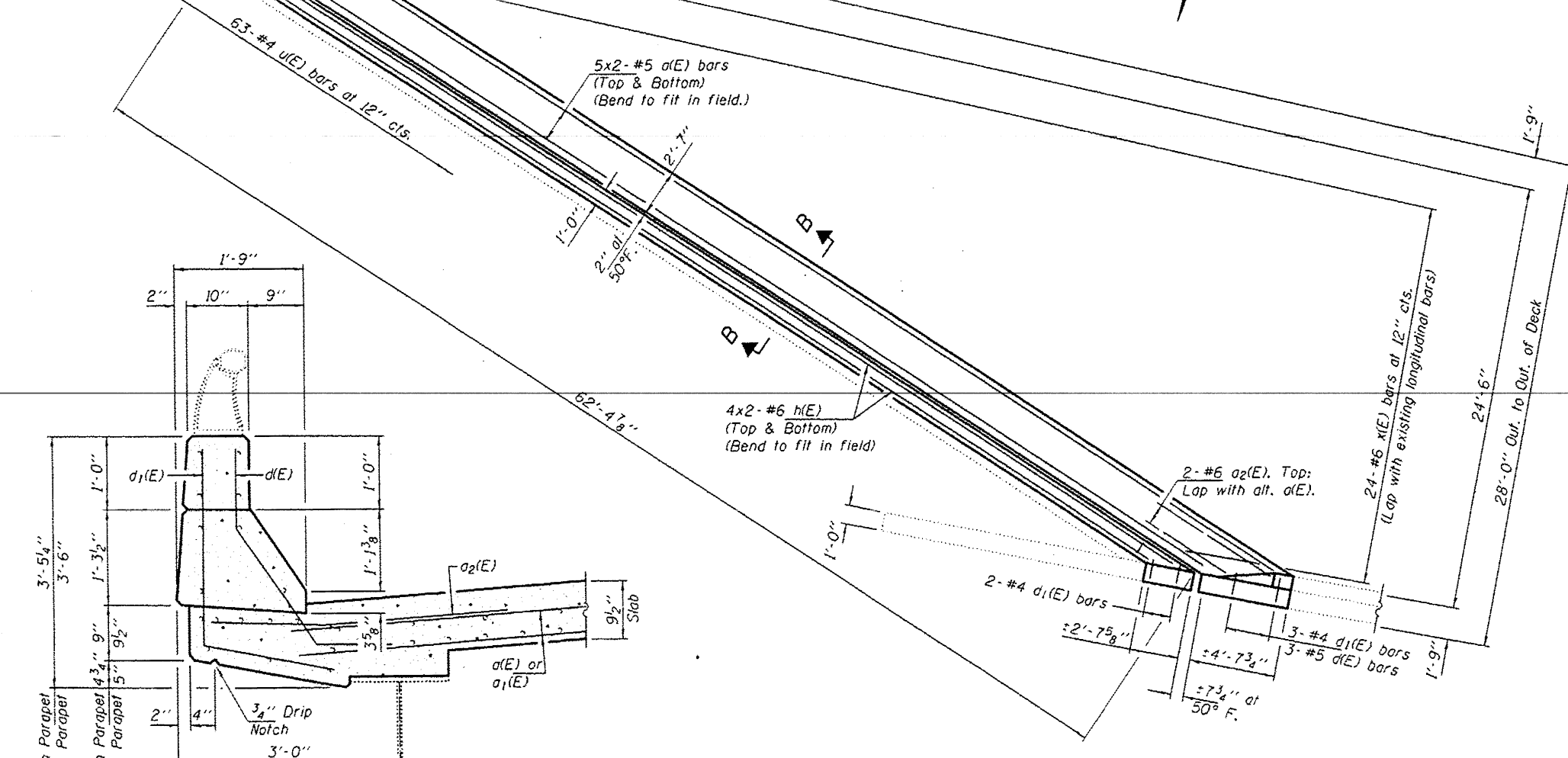


B.E.J.S. JOINT SEAL AT EAST ABUTMENT

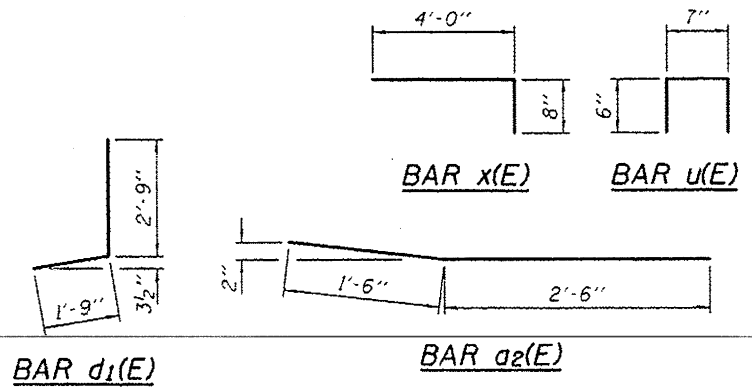
SECTION B-B

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

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



**EAST ABUTMENT
BRIDGE JOINT REPLACEMENT DETAILS**



BAR d1(E)

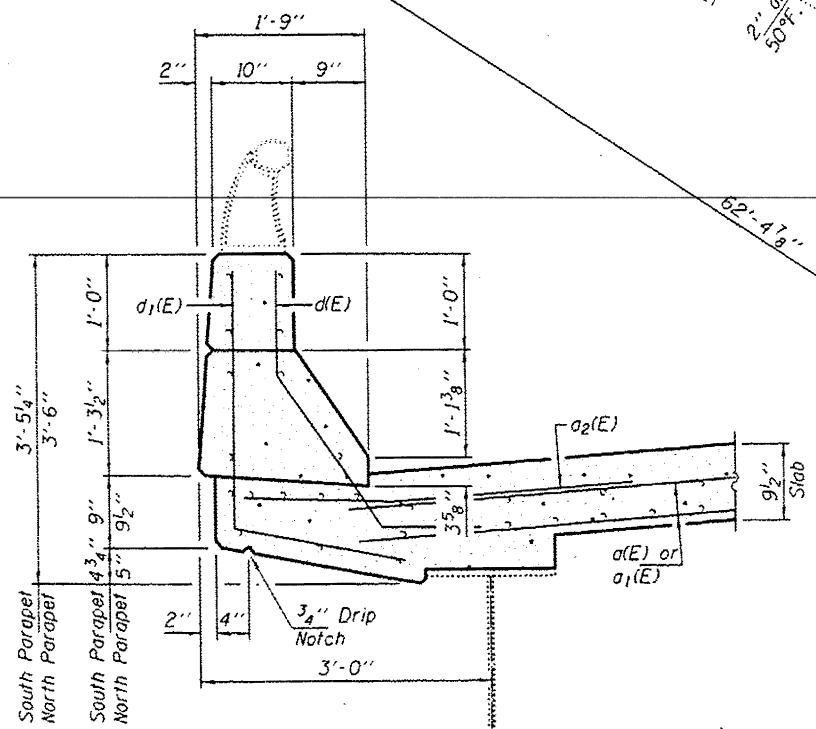
BAR a2(E)

BAR d(E)

BAR LAPS

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

SECTION THRU PARAPET



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
n(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

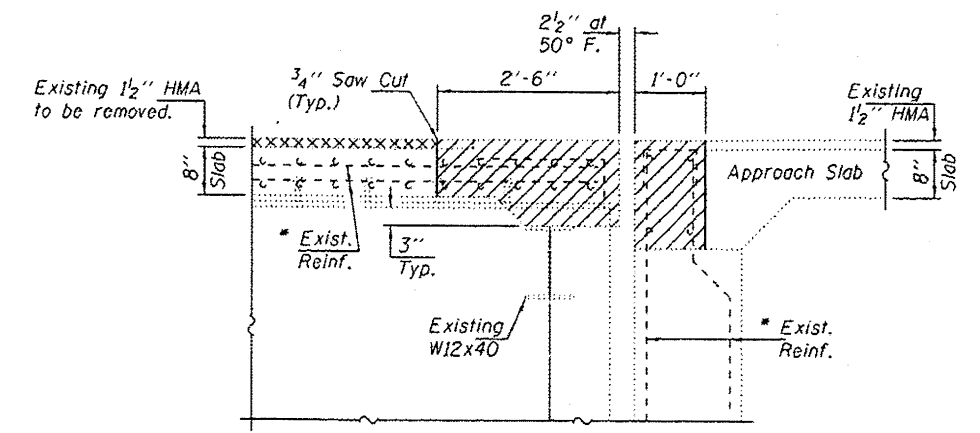
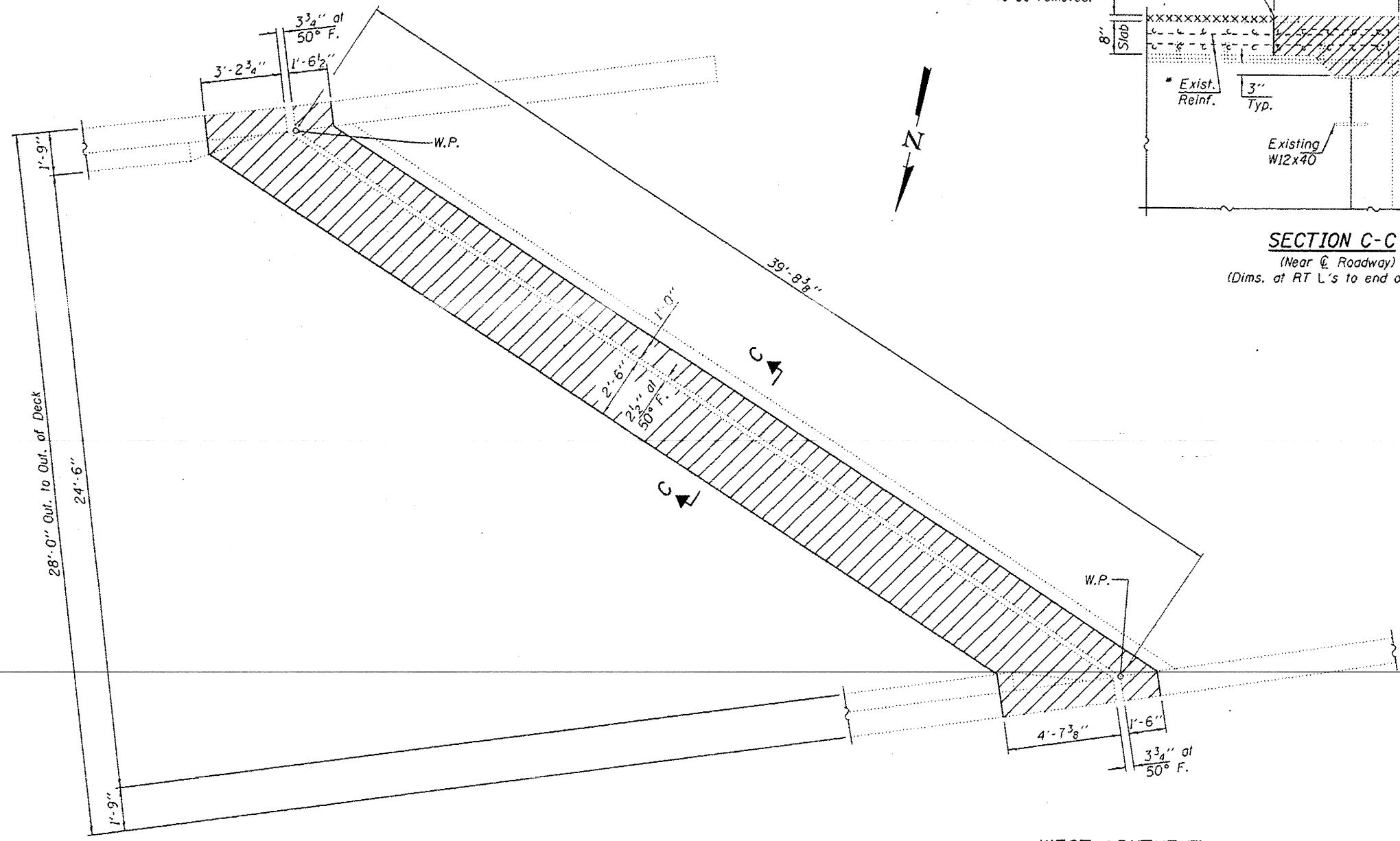
DESIGNED - VHV
CHECKED - SMR
DRAWN - Kyle M. Steffan
CHECKED - VHV SMR

DATE - JANUARY 26, 2016
PASSED
Carl Perry
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT JOINT REPLACEMENT DETAILS
SN 101-0136
SHEET NO. 3 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	02 DECK REPAIR 2016-2	WINNEBAGO	20	17
CONTRACT NO. 64206			ILLINOIS FED. AID PROJECT	



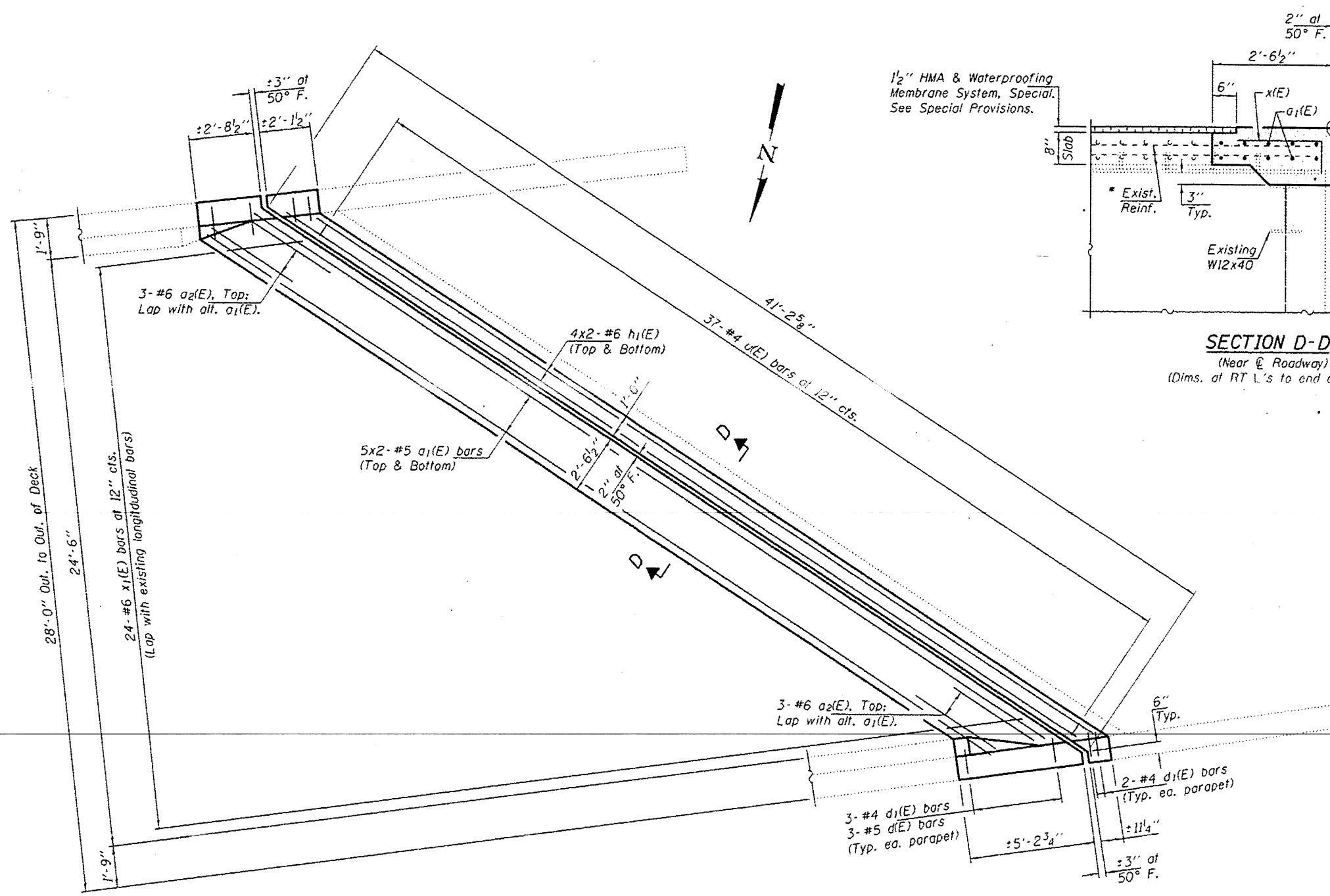
SECTION C-C
(Near Roadway)
(Dims. at RT L's to end of deck)

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

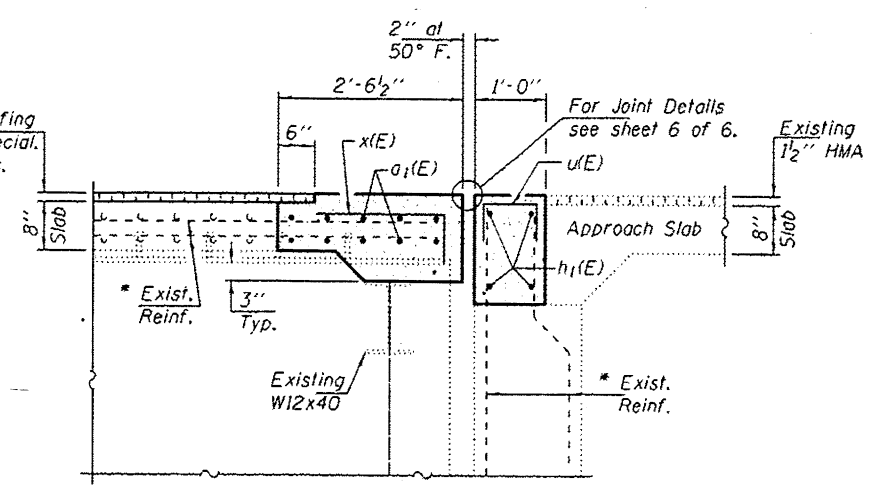
Note:
Hatched areas indicate concrete removal.
Cross-hatched areas indicate HMA removal.

**WEST ABUTMENT
BRIDGE JOINT REMOVAL DETAILS**

DESIGNED - VHV	DATE - JANUARY 26, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST ABUTMENT JOINT REMOVAL DETAILS SN 101-0136		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	PASSED <i>[Signature]</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES		SHEET NO. 4 OF 6 SHEETS		39	D2 DECK REPAIR 2016-2	WINNEBAGO	20	18
DRAWN - Kyle M. Steffen					CONTRACT NO. 6466				
CHECKED - VHV SMR					ILLINOIS FED. AID PROJECT				



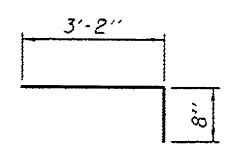
1/2" HMA & Waterproofing Membrane System, Special. See Special Provisions.



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**

BAR LAPS

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

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

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

PASSED
DATE - JANUARY 26, 2016
Carl Papp
ACTING ENGINEER OF BRIDGES AND STRUCTURES

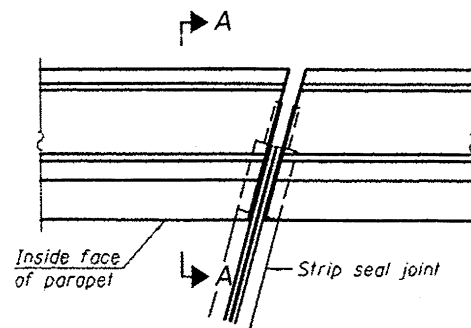
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT JOINT REPLACEMENT DETAILS
SN 101-0136

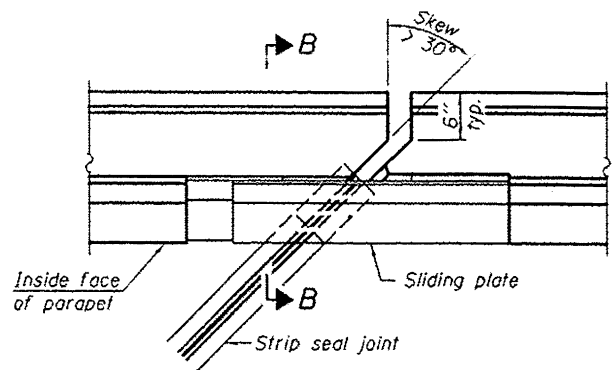
SHEET NO. 5 OF 6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 DECK REPAIR 2016-2	WINNEBAGO	210	19
CONTRACT NO. 6416				

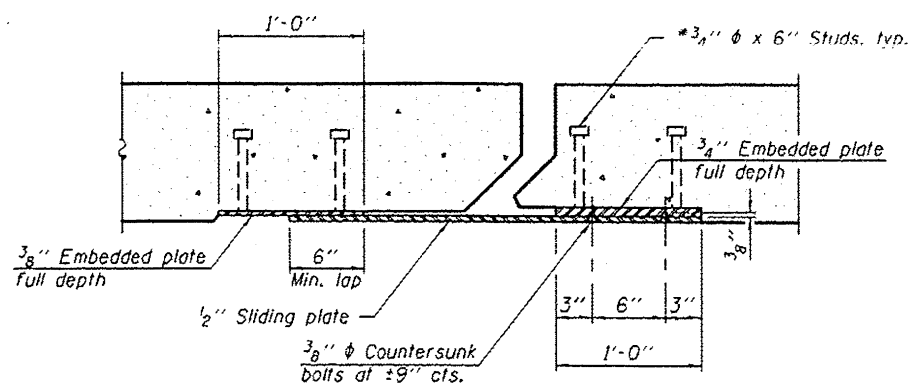
ILLINOIS FED. AID PROJECT



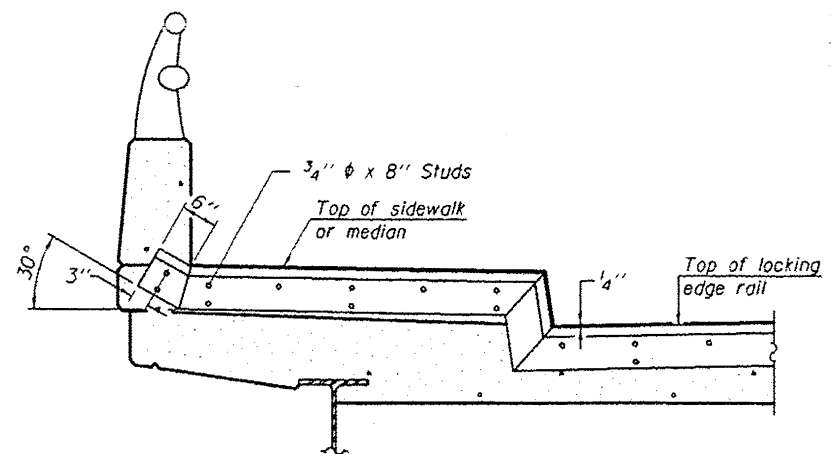
PLAN
(For skews $\leq 30^\circ$)



PLAN
(For skews $> 30^\circ$)
Showing point block

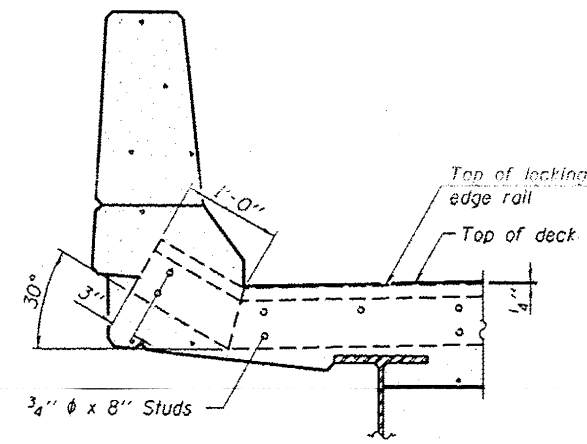


SECTION C-C

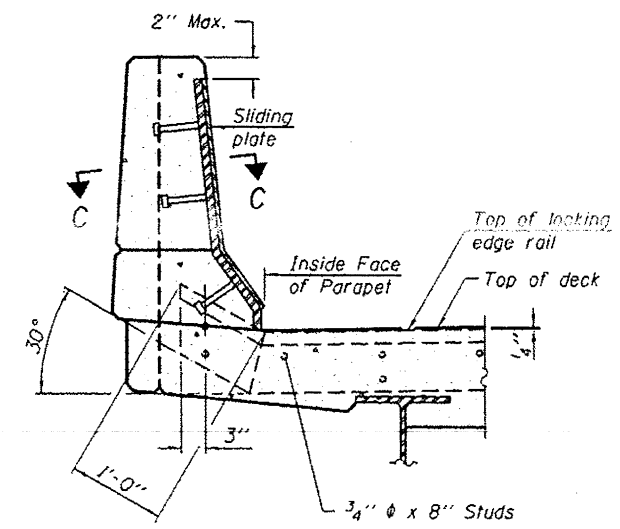


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

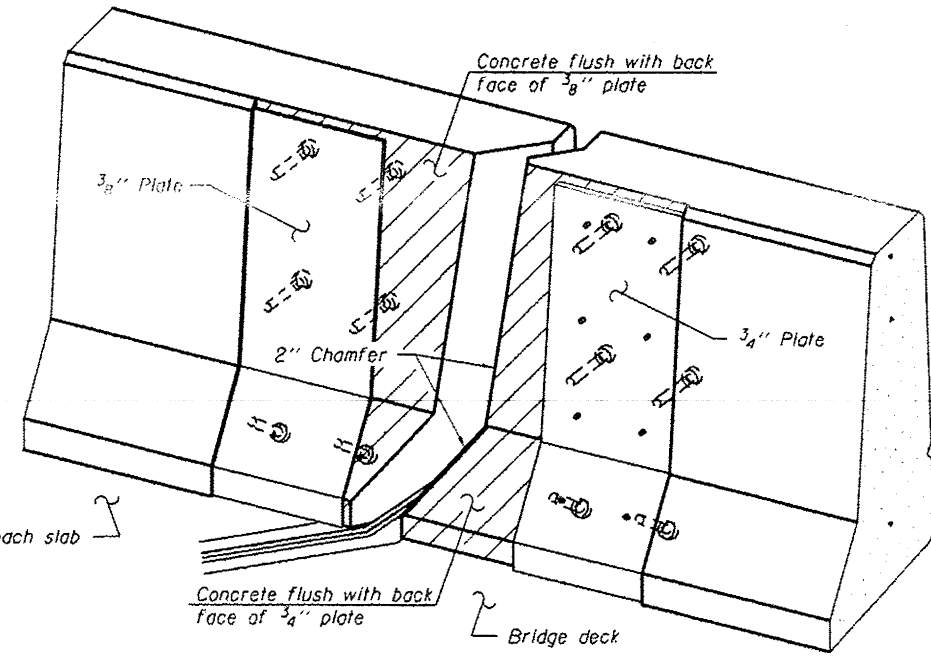
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



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.

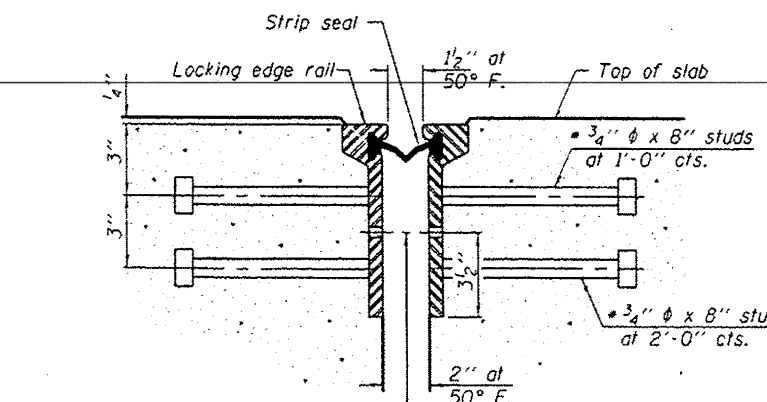
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

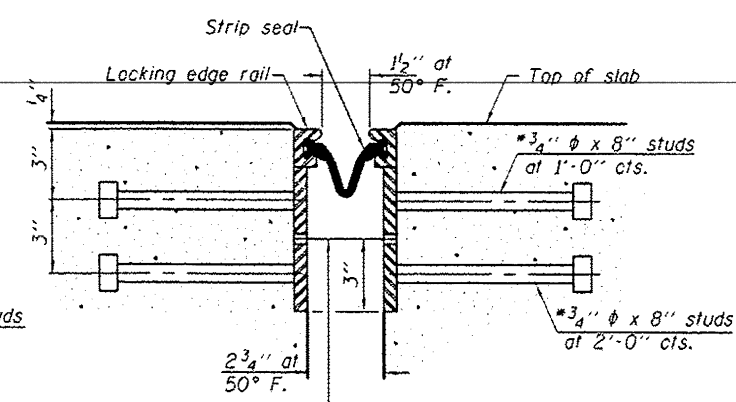
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications 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.

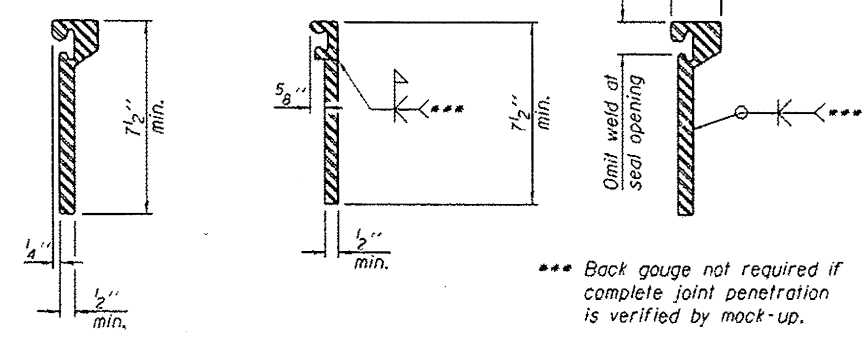
Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL WELDED RAIL

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

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	41

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


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

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

EJ-SSJ

1-27-12

DESIGNED - VHV	PASSED
CHECKED - SMR	
DRAWN - Kyle M. Staffen	
CHECKED - VHV SMR	

DATE - JANUARY 26, 2016	 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. 39	SECTION 02 DECK REPAIR 2016-2	COUNTY WINNEBAGO	TOTAL SHEETS 20	SHEET NO. 20
CONTRACT NO. 64106			ILLINOIS FED. AID PROJECT	

54 99.9%
10-28-2001

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S.N. 101-0135

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- 111. JOINT REPLACEMENT DETAILS
- 112. PARAPET DETAILS
- 113. BAR SPLICER ASSEMBLY DETAILS
- 114. TEMPORARY CONCRETE BARRIER

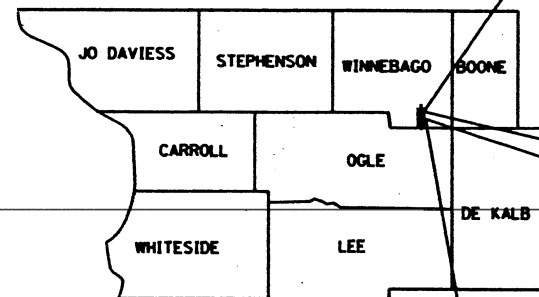
HIGHWAY STANDARDS

- 606001-01 CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER
- 606501-01 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
- 702001-01 LANE CLOSURE, 2L 2W, DAY ONLY ON ROAD, FOR SPEEDS ≥ 45MPH
- 70321-04 LANE CLOSURE, 2L 2W, BRIDGE REPAIR WITH BARRIER
- 70401 LANE CLOSURE, MULTILANE, FOR SPEEDS > 45 MPH
- 70402-01 LANE CLOSURE, MULTILANE, WITH BARRIER
- 70416-02 LANE CLOSURE, MULTILANE, DIVIDED, WITH CROSSOVER, FOR SPEEDS > 45 MPH
- 70801-03 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

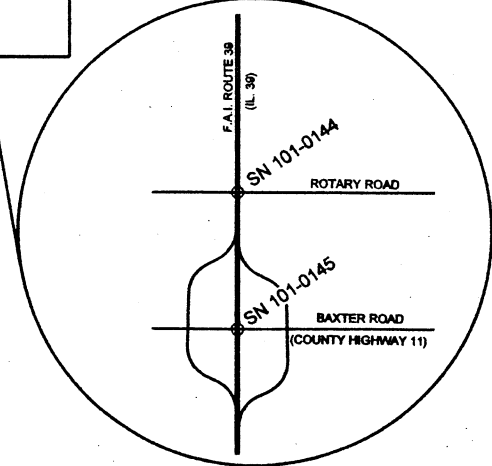
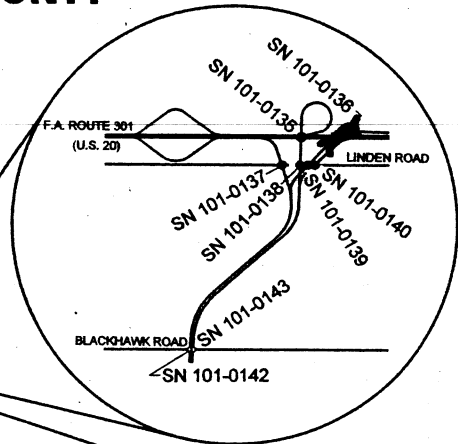
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
BRIDGE WORK**

F.A.I. ROUTE 39 (I-39) (I-37)
SECTION 201-BR-DECK REPAIRS
PROJECT NHI-39-1(7)1
WINNEBAGO COUNTY
C-92-033-01



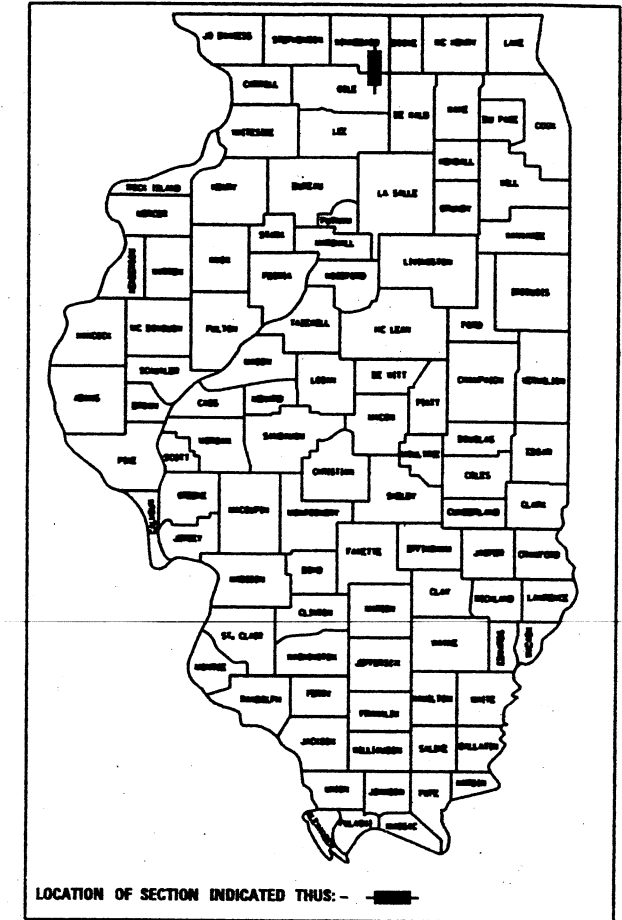
LOCATION MAP



PLANS PREPARED BY:
WENDLER ENGINEERING & SURVEYING
DIXON, ILLINOIS
DEKALB, ILLINOIS
PRINCETON, ILLINOIS
CLINTON, IOWA

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	201-34B-1	WINNEBAGO	114	1

D-92-024-01



LOCATION OF SECTION INDICATED THUS: -



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

2-242

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8 February 2001

District Engineer

March 23, 2001

Michael R. Rine
ENGINEER OF DESIGN AND ENVIRONMENT

March 23, 2001

James P. Stiles
DIRECTOR, DIVISION OF HIGHWAYS

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

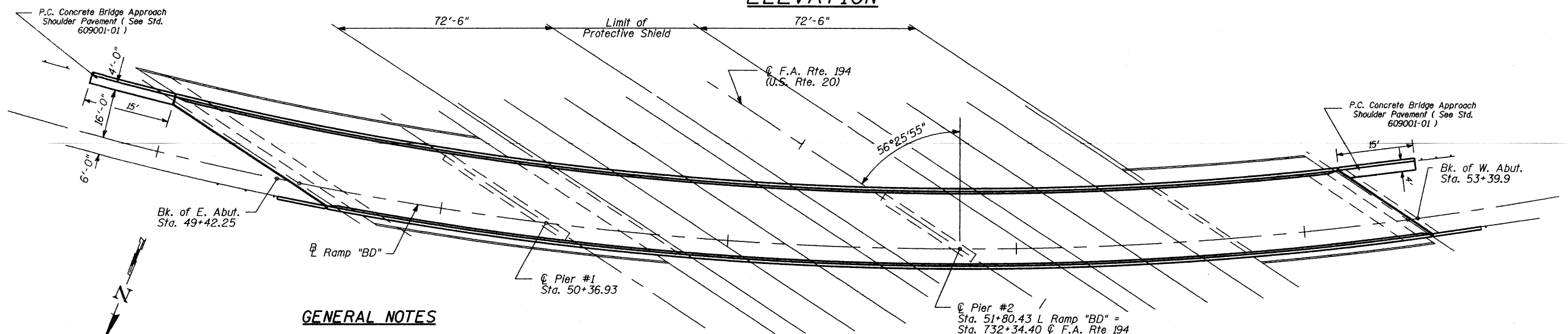
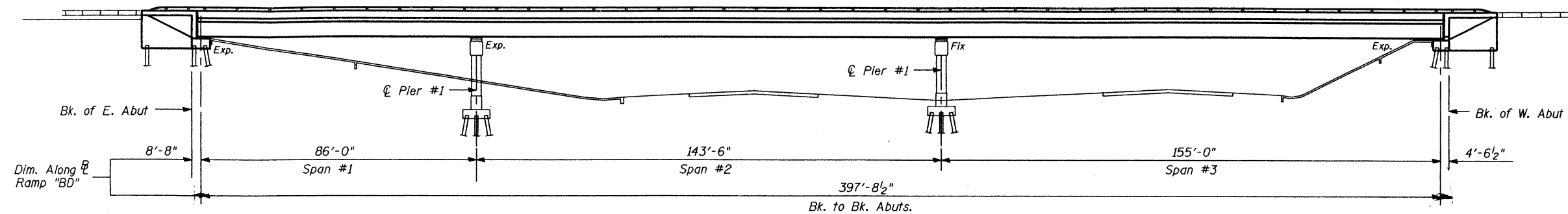
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 64676 /01-0136

-0139
-0139
-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
P.A.L. 39	201-3HB-1	Winnebago	114	31	9 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



PLAN

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

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.

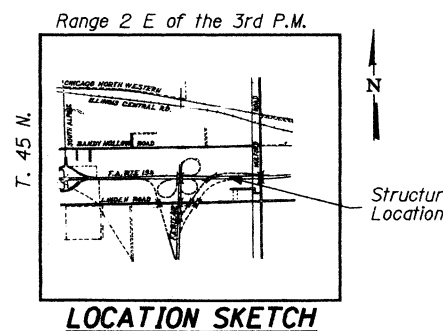
Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in the cost of "Concrete Removal".

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.

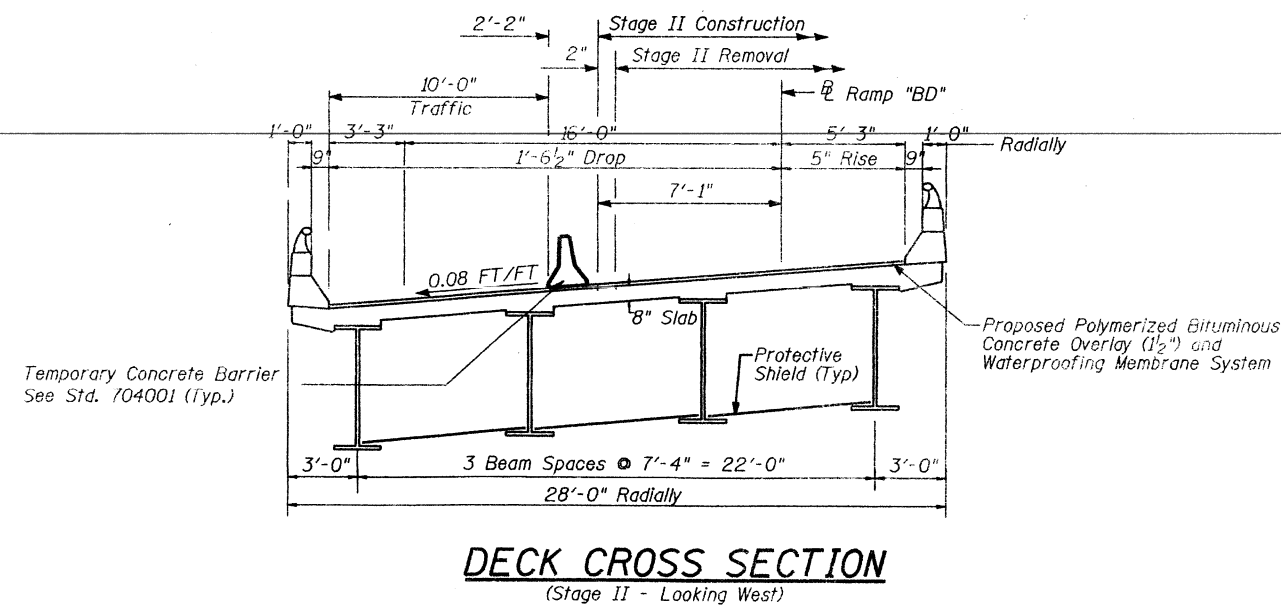
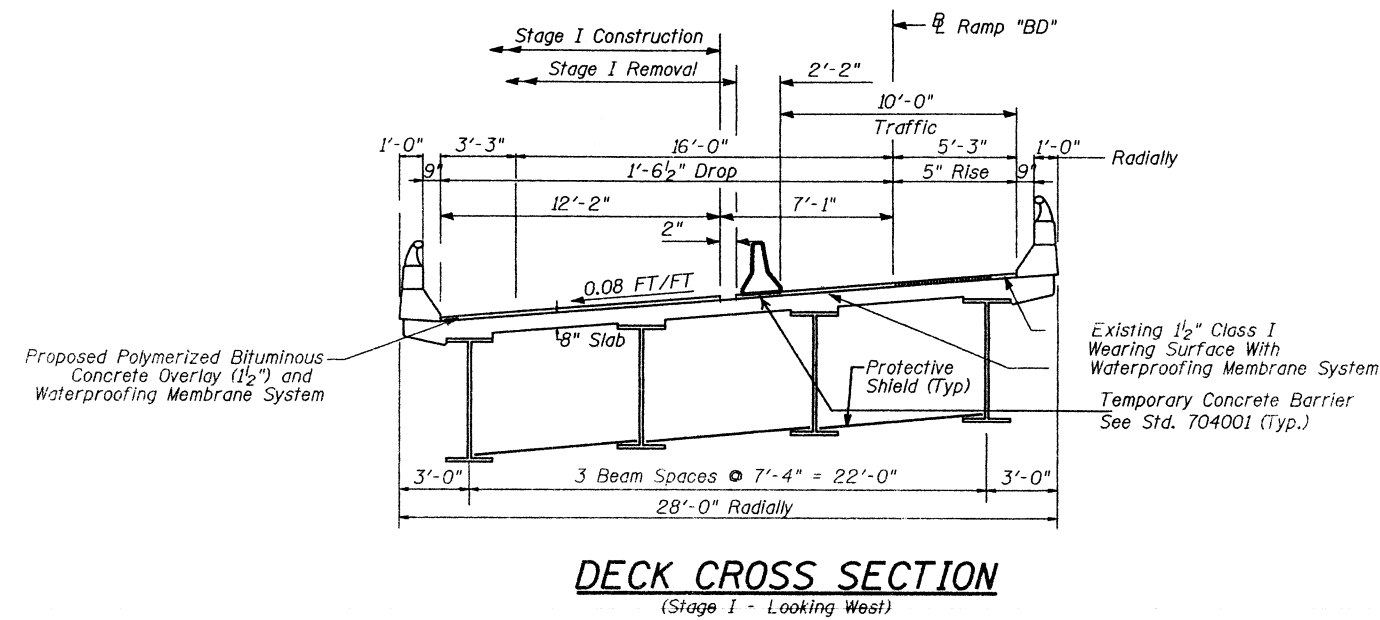
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GENERAL PLAN AND ELEVATION
F.A.I. RTE. 39 (I-39 & US51 S.B.)
RAMP "BD" OVER F.A. ROUTE 301
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE	PROJECT	SHEET NO. 3
F.A.I. 39	201-3HB-1	Winnebago	11	32	9 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

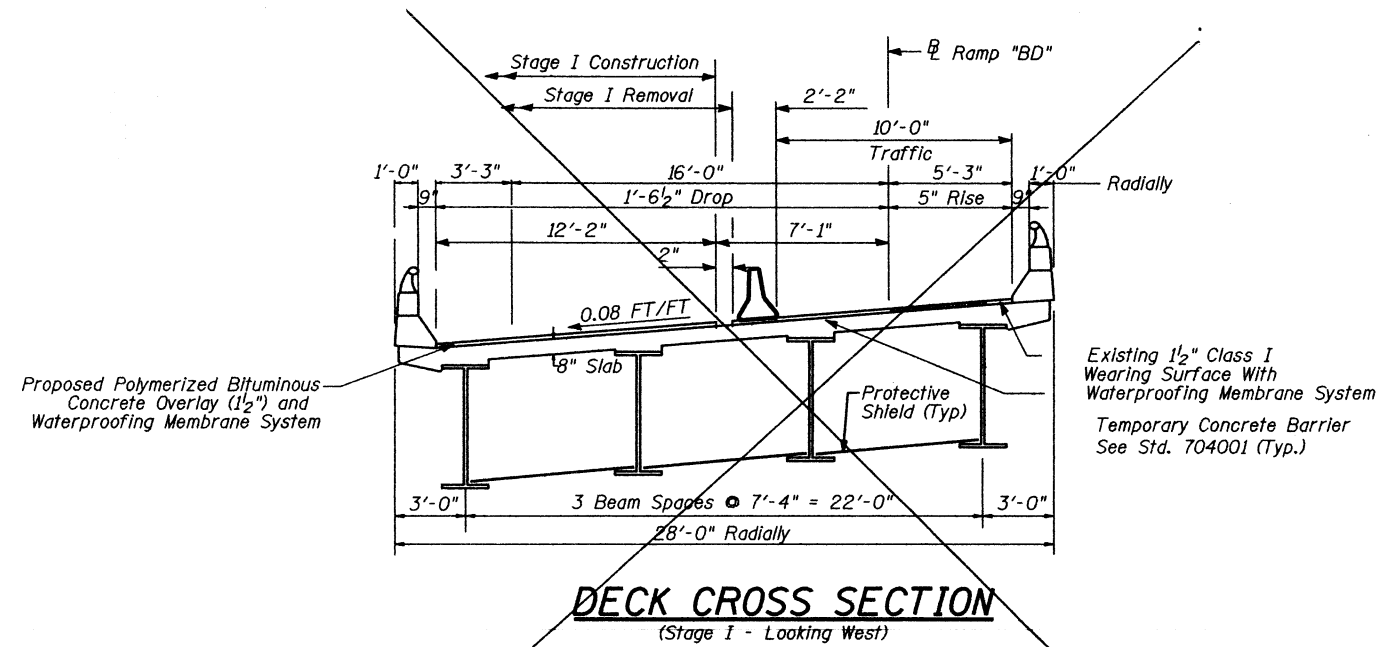


DESIGNED
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DECK CROSS SECTIONS
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

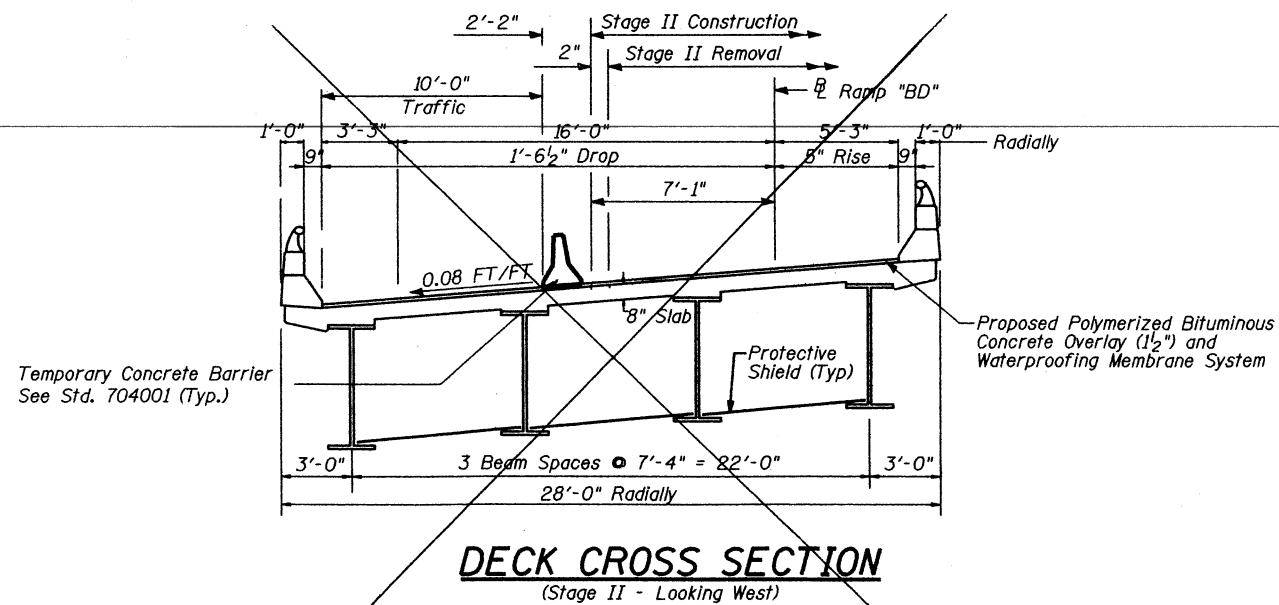
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A.I. 39	201-3HB-1	Winnebago	114	33	9 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			



VOID SHEET

Same as Sheet 32 of 114

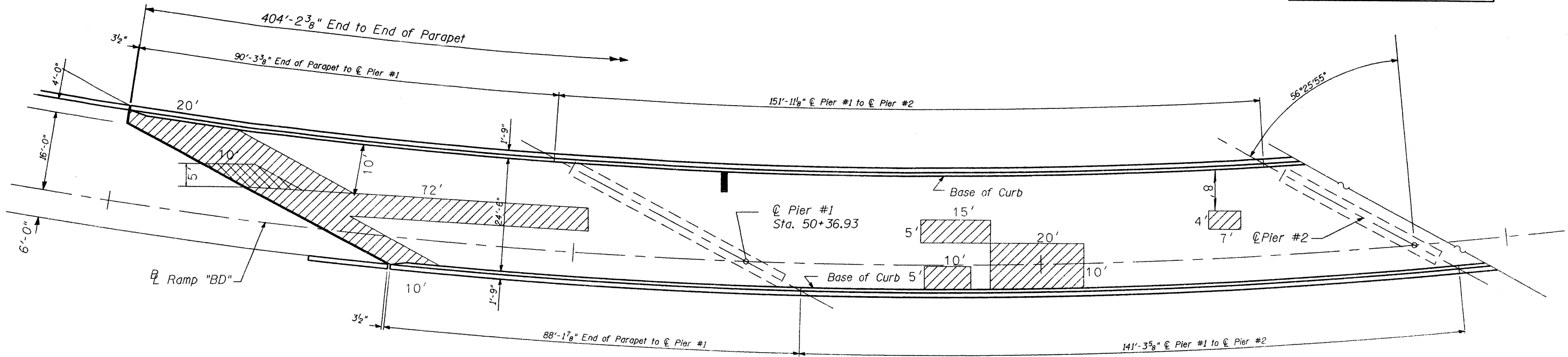


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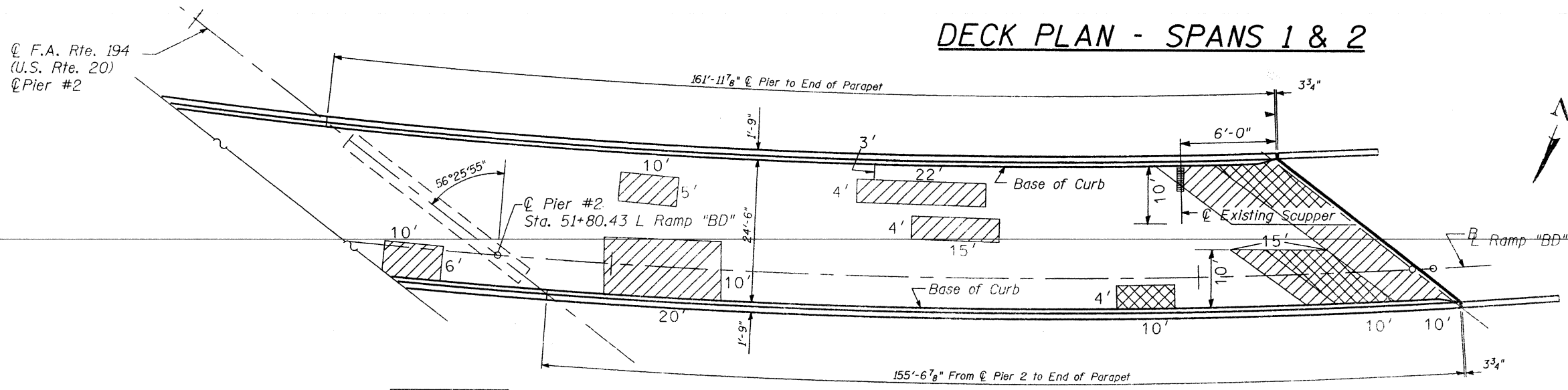
DECK CROSS SECTIONS
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

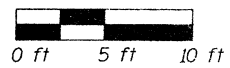
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
201-39	3HB-1	Winnebago	114	34
SHEETS				
FED. ROAD DIST. NO. 7				
BILLINGS				
FED. AID PROJECT				



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

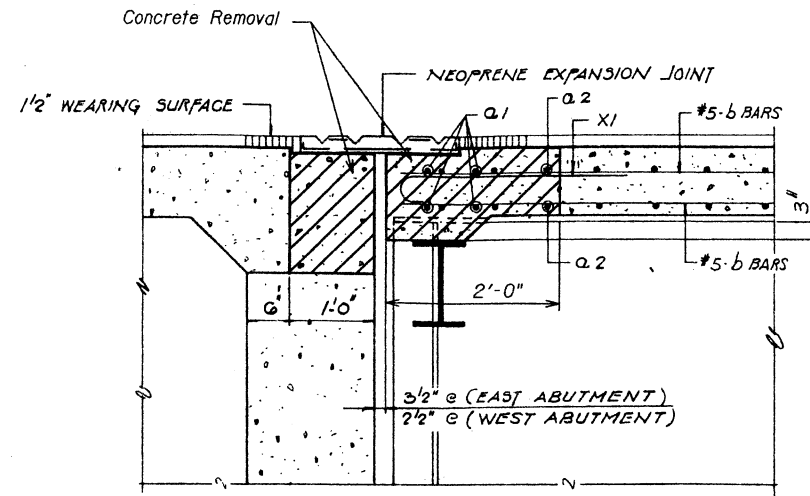
DECK REPAIR PLAN
F.A.I. RTE. 39 (I-39 & US51 SB)
RAMP BD
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0136

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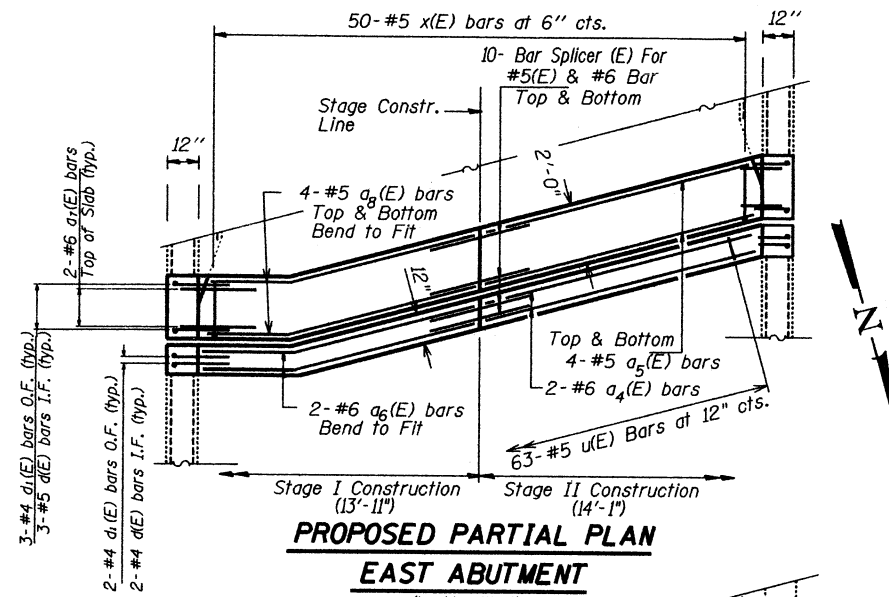
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	35
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

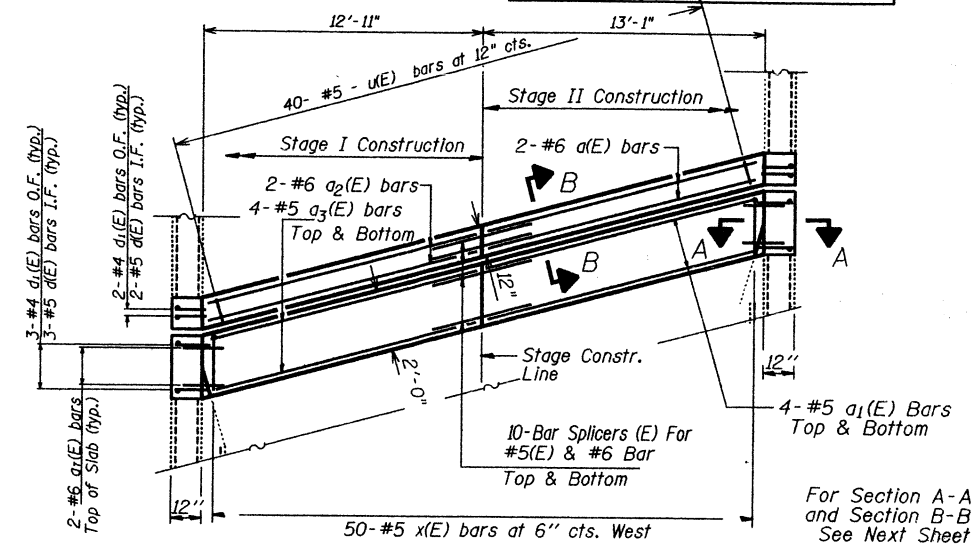
SHEET NO. 5
9 SHEETS



**SECTION THRU
EXISTING ABUT.**

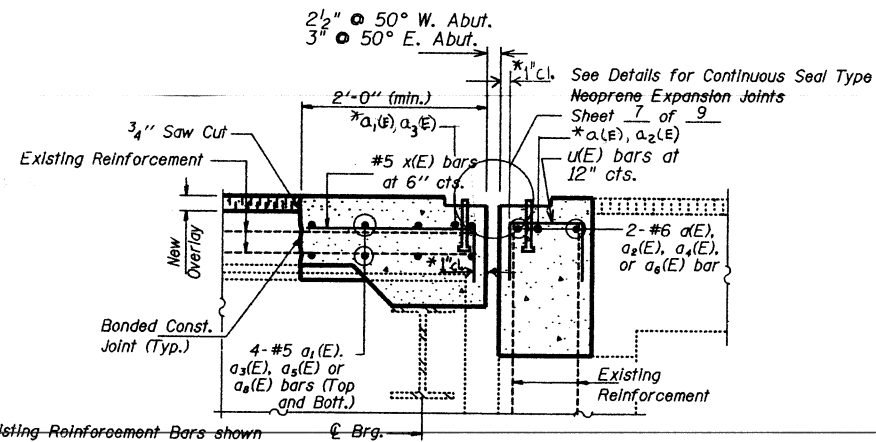


**PROPOSED PARTIAL PLAN
EAST ABUTMENT
(Looking West)**



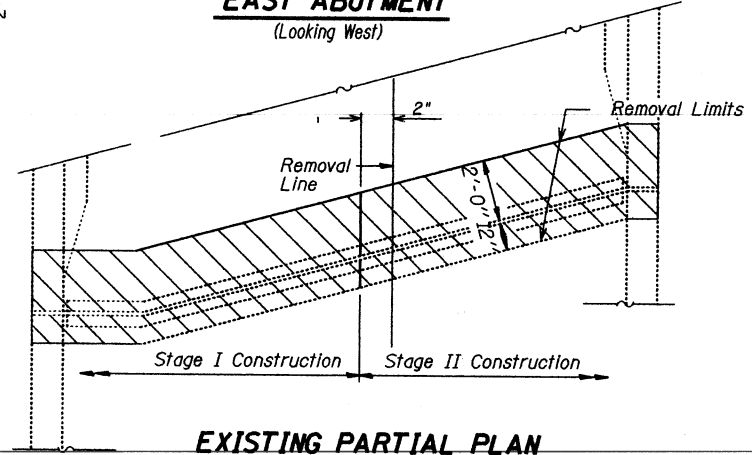
**PROPOSED PARTIAL PLAN
WEST ABUTMENT
(Looking West)**

For Section A-A and Section B-B See Next Sheet

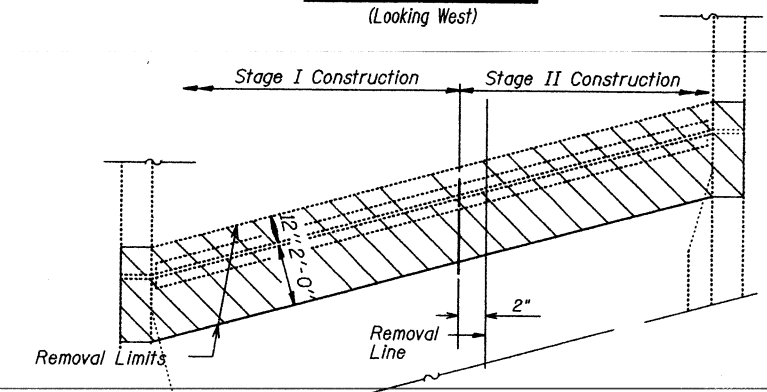


JOINT RECONSTRUCTION

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



**EXISTING PARTIAL PLAN
EAST ABUTMENT
(Looking West)**

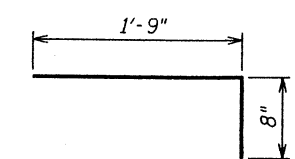


**EXISTING PARTIAL PLAN
WEST ABUTMENT
(Looking West)**

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.



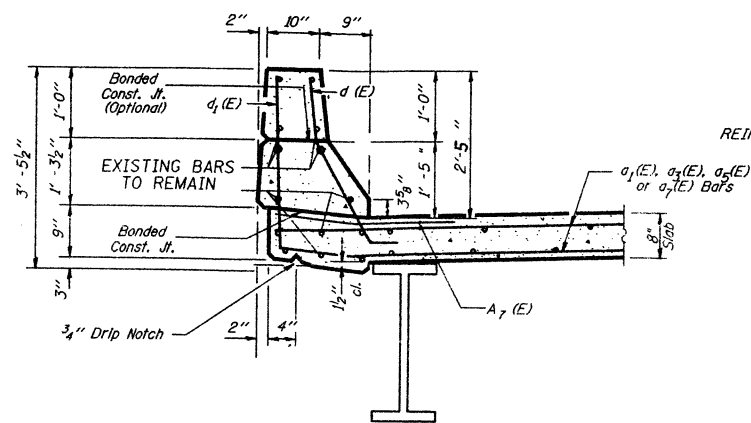
BAR x(E)

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

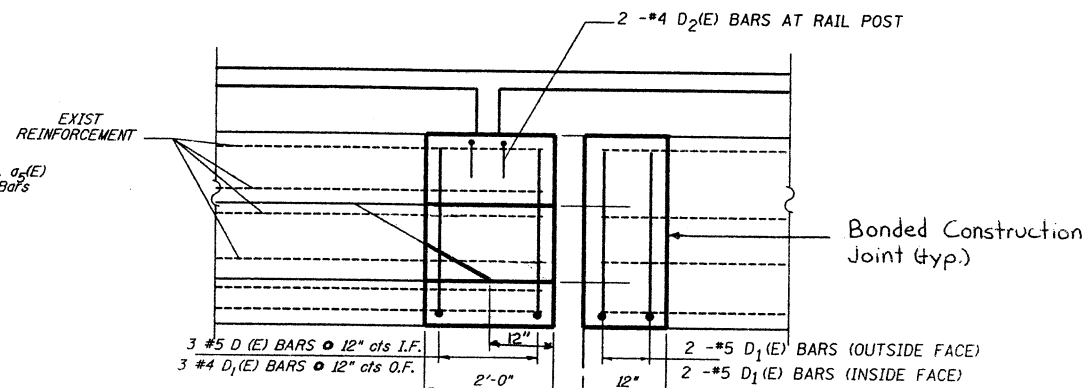
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO.
P.A. 39	201-3HB-1	Winnebago	114	36	9
FED. ROAD DIST. NO. 7	ILL. PROJ.	FED. AID PROJECT			

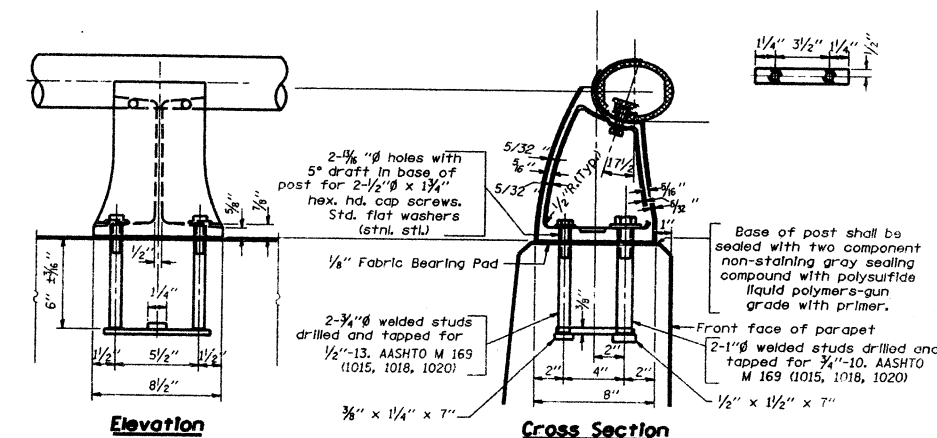


SECTION A-A
(deck span)

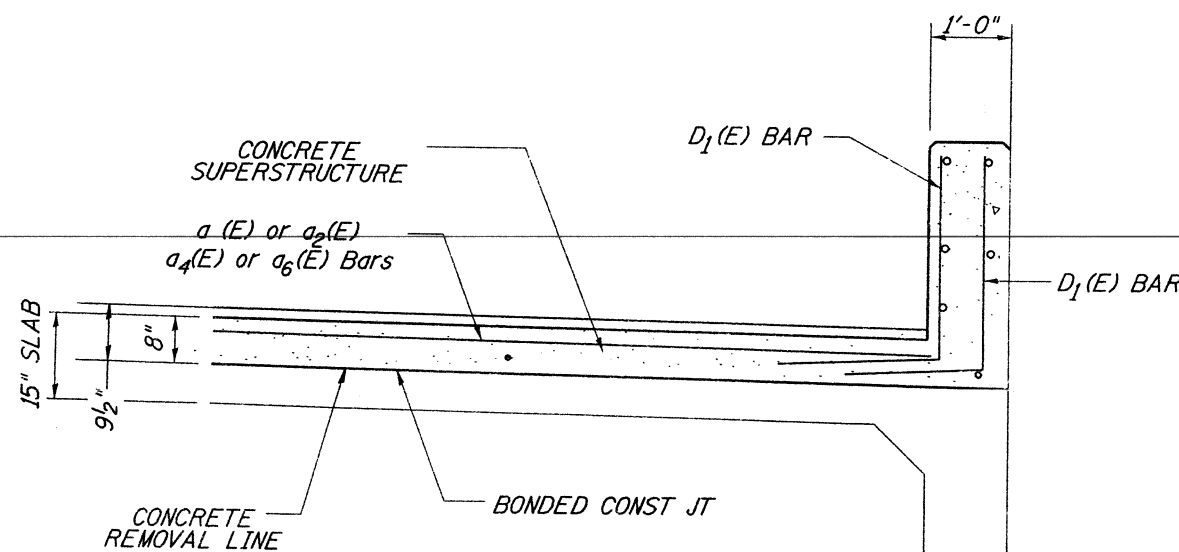


SECTION B-B

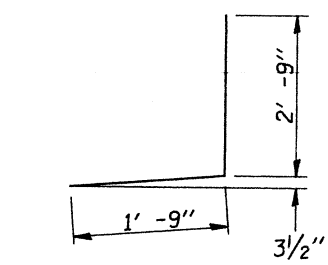
NOTE: ALL COST FOR REMOVAL OF EXISTING ALUMINUM RAILING AND RAIL ELEMENTS, IF REQUIRED, AND RE-INSTALLATION SHALL BE CONSIDERED INCLUDED IN CONCRETE REMOVAL



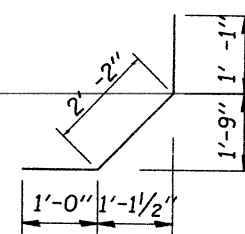
RAIL POST DETAILS
PROVIDE NEW ANCHORAGES WHEN REMOVING AND RE-ERECTING RAIL POSTS



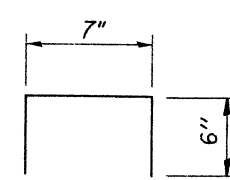
TYP SECTION THRU SLAB PARAPET
(at ends of approach span)



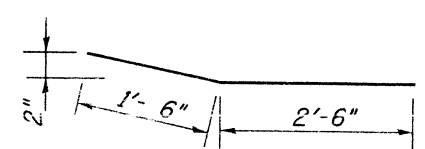
#4 D₁(E) BAR



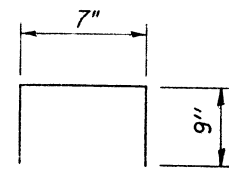
#5 D (E) BAR



#4 U(E) BAR



#4 A₈(E) BAR



#4 D₂(E) BAR

DESIGNED
CHECKED
DRAWN
CHECKED

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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.

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.

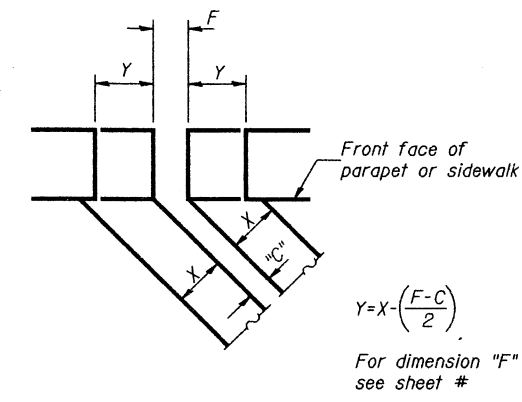
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

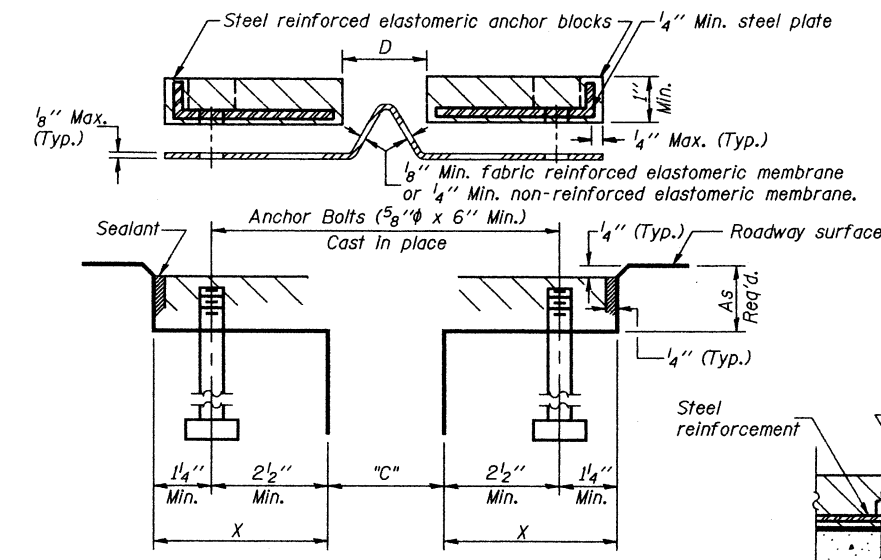
INSTALLATION NOTES

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

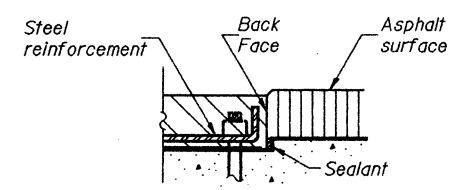
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.



FORMING BLOCKOUT SKETCH



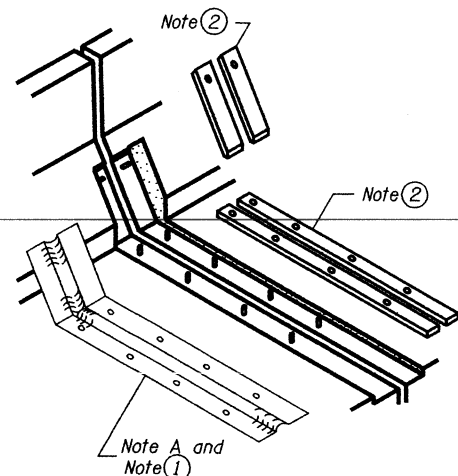
CROSS SECTION



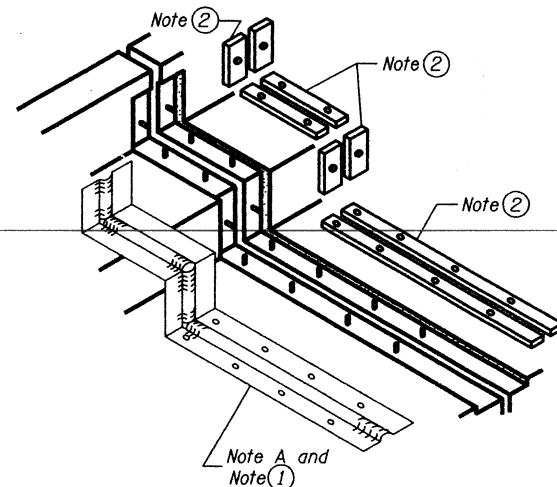
ANCHOR BLOCK WITH ASPHALT SURFACE

SKREW LIMITATIONS

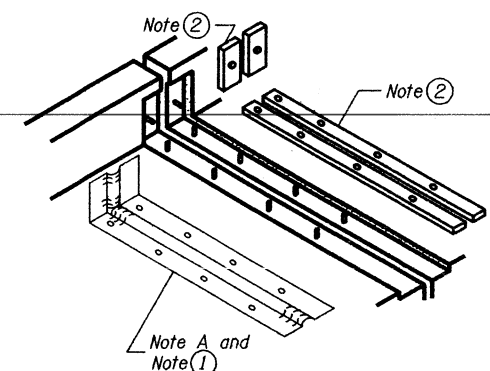
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1 1/2" from centerline 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.



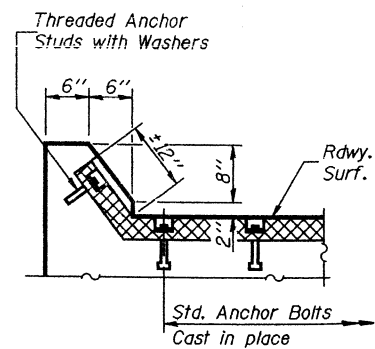
AT PARAPET



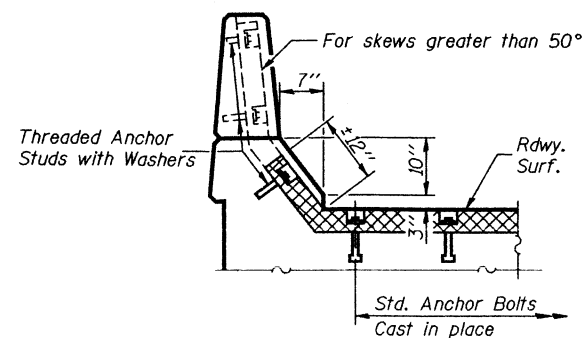
AT SIDEWALK OR MEDIAN



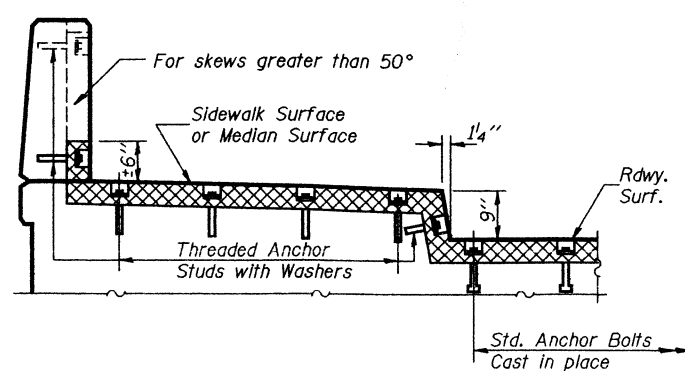
AT WALL



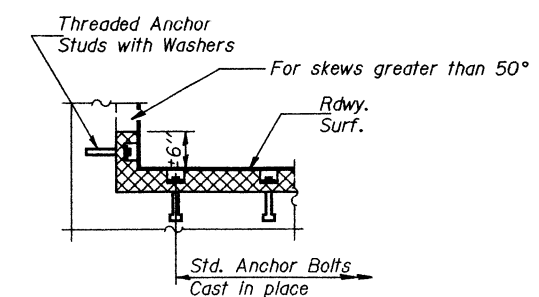
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

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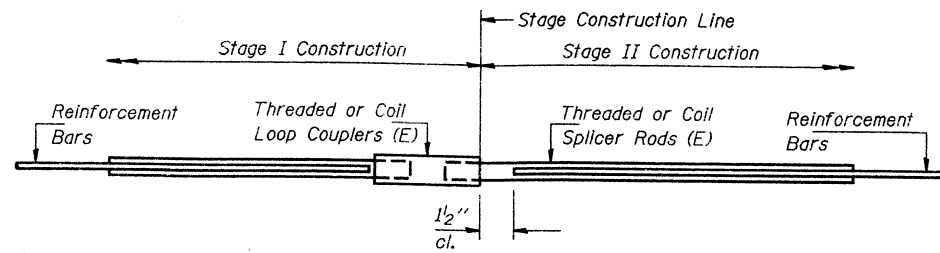
EJ-CS 4-30-97

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.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	38
F.A.I. 39		201-3HB-1	114	38
F.A.I. 39		201-3HB-1	114	38

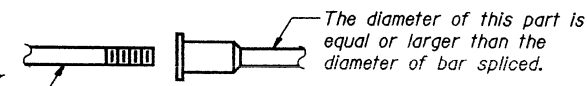


SPLICER DETAIL

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.

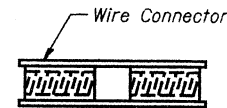
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

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.

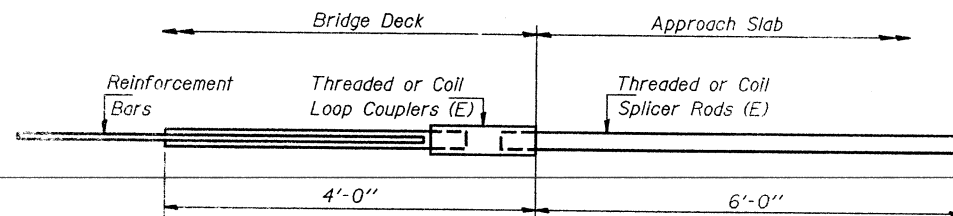
$f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

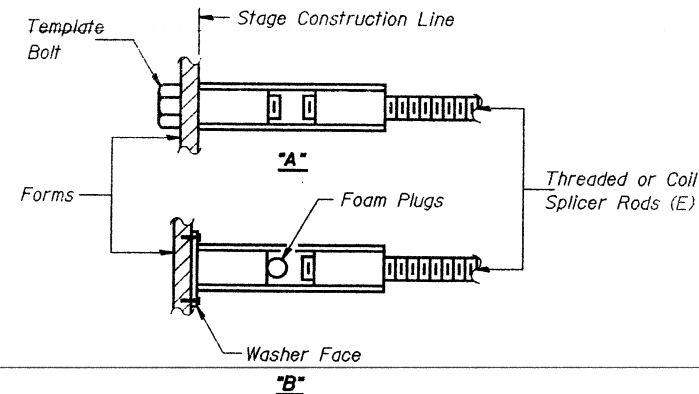
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

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."



**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 =



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.

DESIGNED
CHECKED
DRAWN
CHECKED

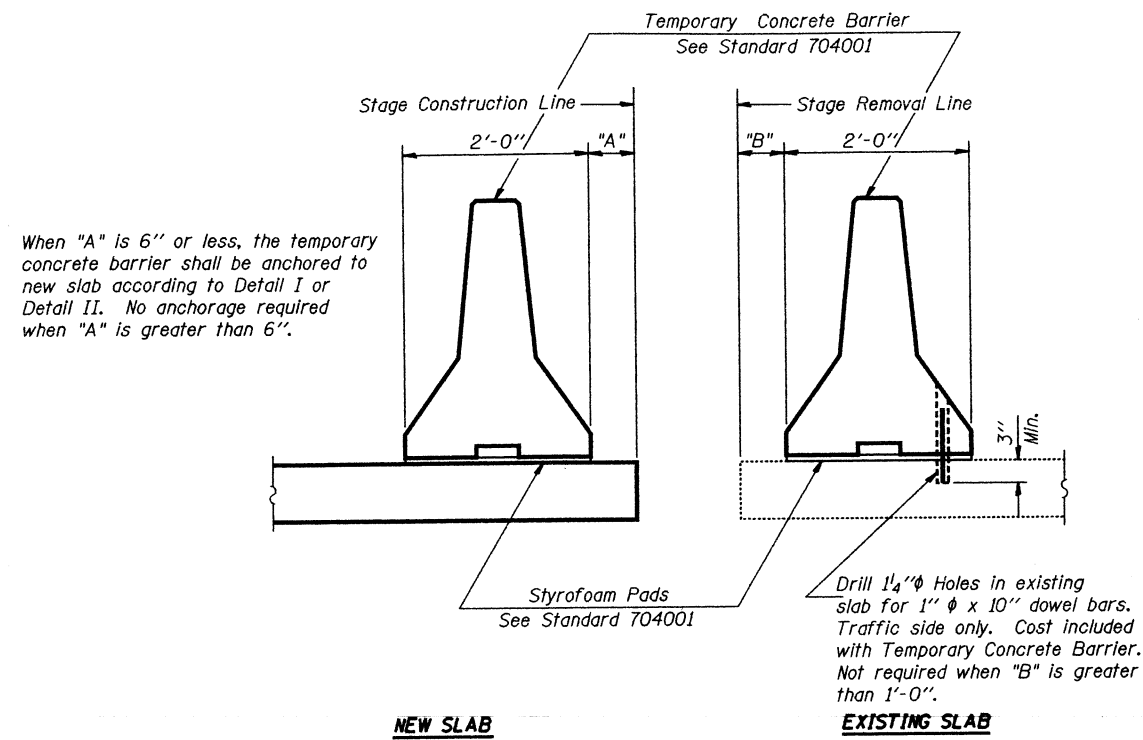
BSD-1 4-30-99

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 9
9 SHEETS



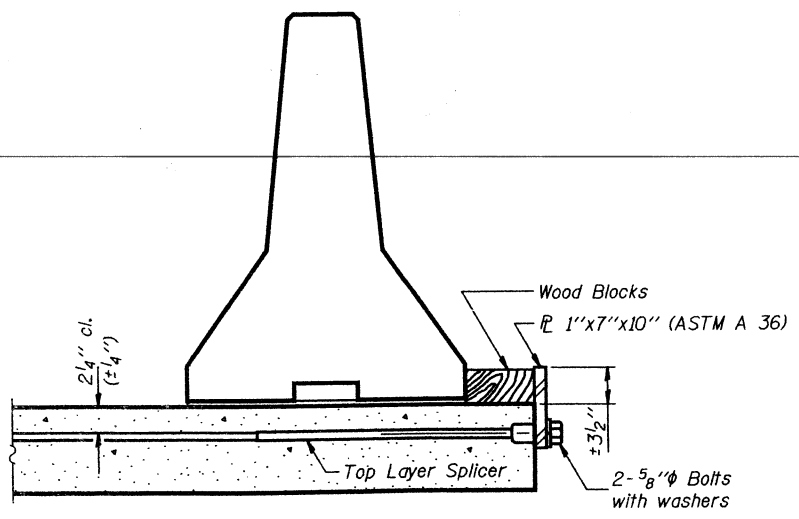
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each 10'-0" barrier panel.

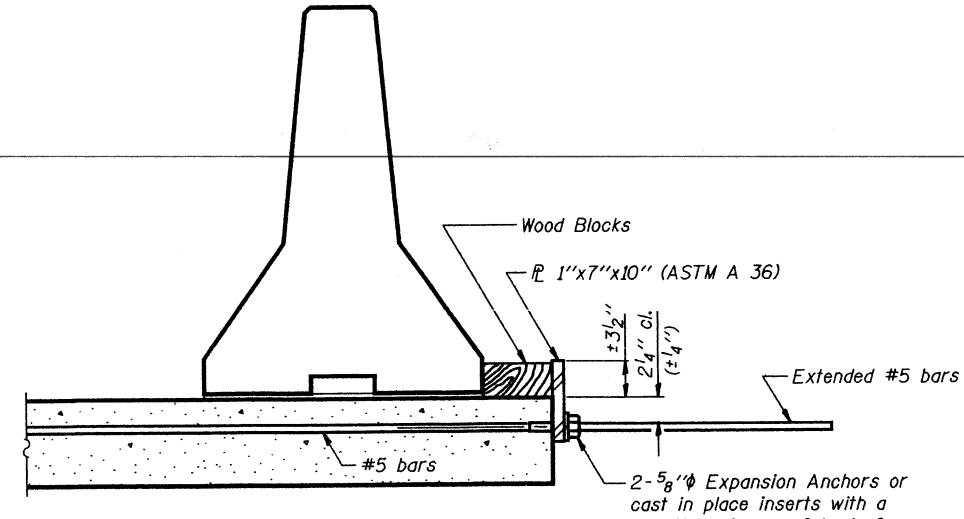
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each 10'-0" barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



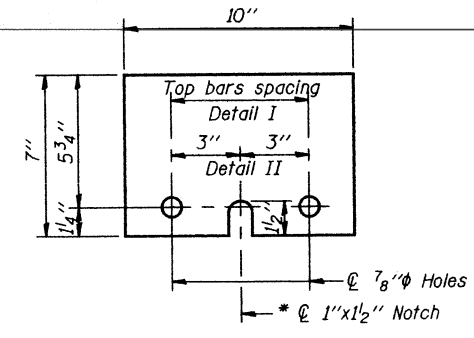
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1"x7"x10"

* Required only with Detail II

DESIGNED
CHECKED
DRAWN
CHECKED

R-27 4-30-99

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION**
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

* 201-1-2,2,3 & 201-1-2,2,3)S G		TOTAL SHEETS	
FEDERAL AID ROUTE NO.	SEC. 201	COUNTY	SHEET NO.
412	*	WINNEBAGO	1
P. H. W. A. REC.		ILL. ROAD DIST. REC.	

P-92-026-74

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

F. A. ROUTE 412
SECTION 201-(1-2,2,3)
SECTION 201-(1-2,2,3)S G
PROJECT EBF-412-5-(17)
WINNEBAGO COUNTY

C-92-141-80

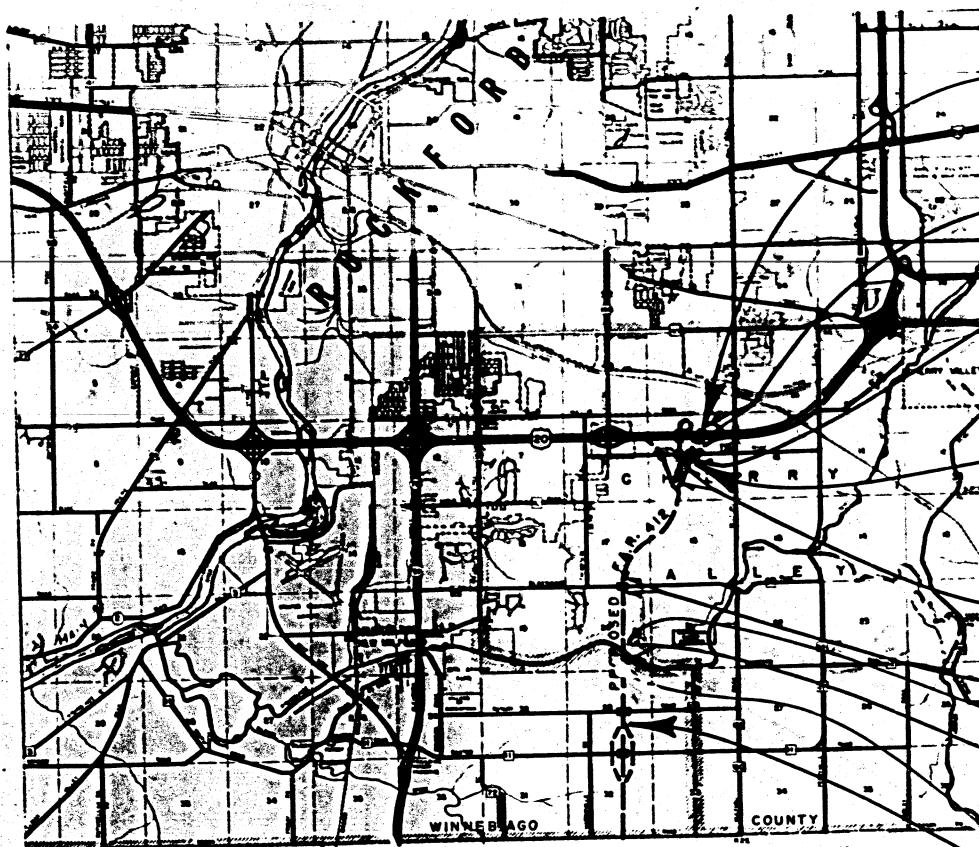


LOCATION OF SECTION INDICATED THUS

LENGTH OF IMPROVEMENT

SECTION 201-1-2
LENGTH OF SECTION = 32710 FEET = 0.620 MILES
SECTION 201-1B (SURFACING ONLY)
LENGTH OF SECTION = 1165.5 FEET = 0.220 MILES
SECTION 201-2
LENGTH OF SECTION = 12798.89 FEET = 2.424 MILES *
SECTION 201-3
LENGTH OF SECTION = 1505.27 FEET = 0.285 MILES **
TOTAL LENGTH OF IMPROVEMENT = 18,740.66 FEET = 3.549 MILES

*INCLUDES SURFACING OF VIADUCT SECTIONS 201-2HB & 201-2HB-1
**INCLUDES SURFACING OF VIADUCT SECTIONS 201-3HB, 3HB-1, 3HB-2, 3HB-4, 3HB-5, 3HB-6



PROJECT EBF-412-5-(17)
SECTION 201-3 ENDS
F.A. ROUTE 412
STA. 2573+90.66 (N.B.)

SECTION 201-3HB-1
STA. 2570+44.66 TO 2572+90.66 (N.B.)

SECTION 201-3 HB
STA. 2558+85.39 TO 2560+34.39 (N.B.)

SECTION 201-3 BEGINS
STATION 2558+85.39 (N.B.)
F.A. ROUTE 412

SECTION 201-2 ENDS
STATION 2558+85.39 (N.B.)

SECTION 201-2 HB-1
STA. 2551+56.42 TO 2554+19.08 (N.B.)

SECTION 201-2 HB
STA. 2487+44.48 TO 2488+91.67 (N.B.)

SECTION 201-2 BEGINS
STATION 2430+43.50 (N.B.)

SECTION 201-1B
STA. 2419+16.50 TO 2430+87.00 (N.B.)

SECTION 201-1-2 ENDS
STATION 2419+16.50

PROJECT EBF-412-5-(17)
SECTION 201-1-2 BEGINS
STATION 2386+50.00

DESIGN DESIGNATION
F. A. ROUTE 412 - 3015 (95) TRUNK 17.06 (CRPC-20)

CALL I.U.L.I.E. BEFORE
YOU DIG 800-892-0123
ROCKFORD & CHERRY VALLEY
TOWNSHIPS

CONTRACT NO. 34863

101-0136



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Sept 19 1980
C. R. Paris DISTRICT ENGINEER

EXAMINED Dec 26 1980
N. Wilson ENGINEER OF PLANS AND CONTRACTS

PASSED Dec 26 1980
Thomas E. Bryant ENGINEER OF DESIGN

APPROVED Dec 26 1980
G. L. Thompson DIRECTOR OF HIGHWAYS

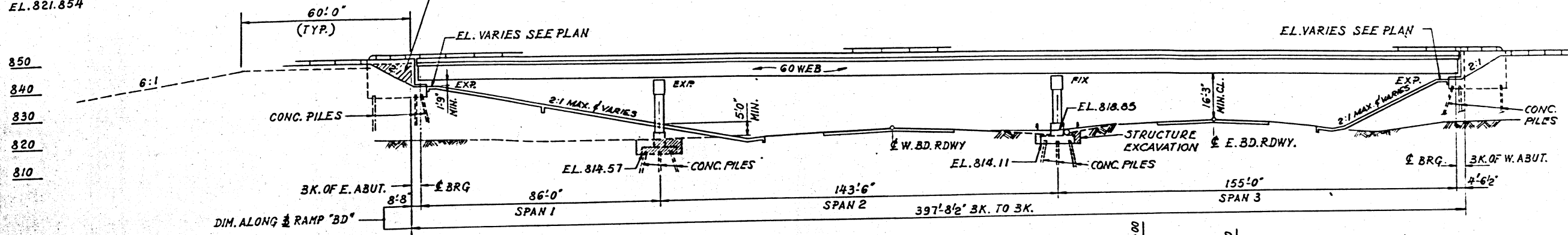
2-128
51+80.43

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	*	WINNEBAGO	155	75
STA.		TO STA.		
# 201-(1-2, 3)		# 201-(1-2, 3)		55

REFERENCE ONLY FOR BITUMINOUS SURFACE

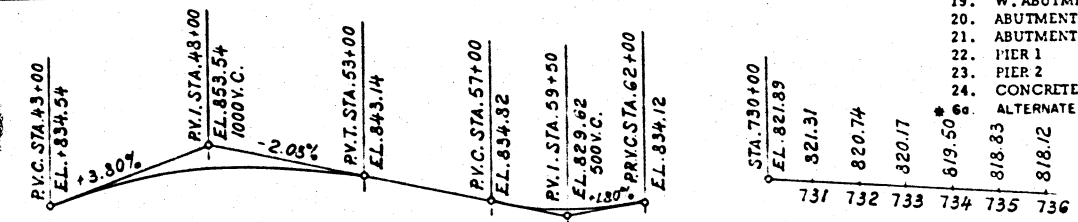
NO EXISTING STRUCTURE
BENCHMARK #3, BRASS TABLET
"D.M.-3" IN CONC. (FLUSH)
S. W. CORNER MULFORD ROAD OVERPASS
AT F.A. RTE. 194 (U.S. RTE. 20) BYPASS.
EL. 821.854

THIS PORTION OF EMBANKMENT BACKFILL
BY BRIDGE CONTRACTOR AFTER ABUT. IS IN PLACE

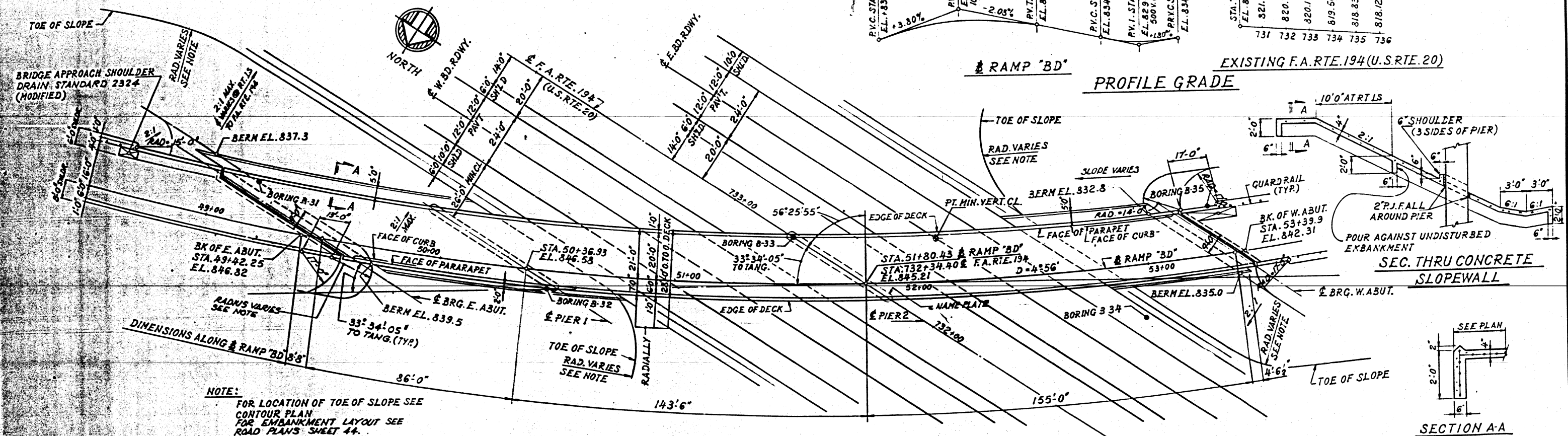


ELEVATION

- INDEX OF SHEETS
- GENERAL PLAN AND ELEVATION
 - GENERAL NOTES, QUANTITIES AND FOOTING LAYOUT
 - DECK REINFORCEMENT PLAN - SPANS 1 & 2
 - DECK REINFORCEMENT PLAN - SPAN 3
 - DECK DETAILS
 - DRAINAGE SCUPPERS
 - ALUMINUM HANDRAIL PLAN
 - ALUMINUM HANDRAIL DETAILS
 - NEOPRENE EXPANSION JOINTS (2-1/2")
 - NEOPRENE EXPANSION JOINTS (4")
 - TOP OF SLAB ELEVATIONS
 - TOP OF SLAB ELEVATIONS
 - FRAMING PLAN AND ELEVATIONS
 - FRAMING PLAN AND ELEVATIONS
 - STEEL DETAILS
 - STEEL DETAILS
 - BEARING DETAILS
 - E. ABUTMENT
 - W. ABUTMENT
 - ABUTMENT DETAILS
 - ABUTMENT DETAILS
 - PIER 1
 - PIER 2
 - CONCRETE PILE DETAILS
 - ALTERNATE-CAST IRON DRAINAGE SCUPPER



PROFILE GRADE

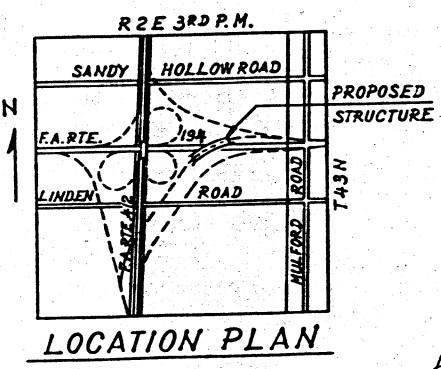


PLAN

NOTE:
FOR LOCATION OF TOE OF SLOPE SEE
CONTOUR PLAN
FOR EMBANKMENT LAYOUT SEE
ROAD PLANS SHEET 44.

- 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. I. I. 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)
 $n = 8.5$



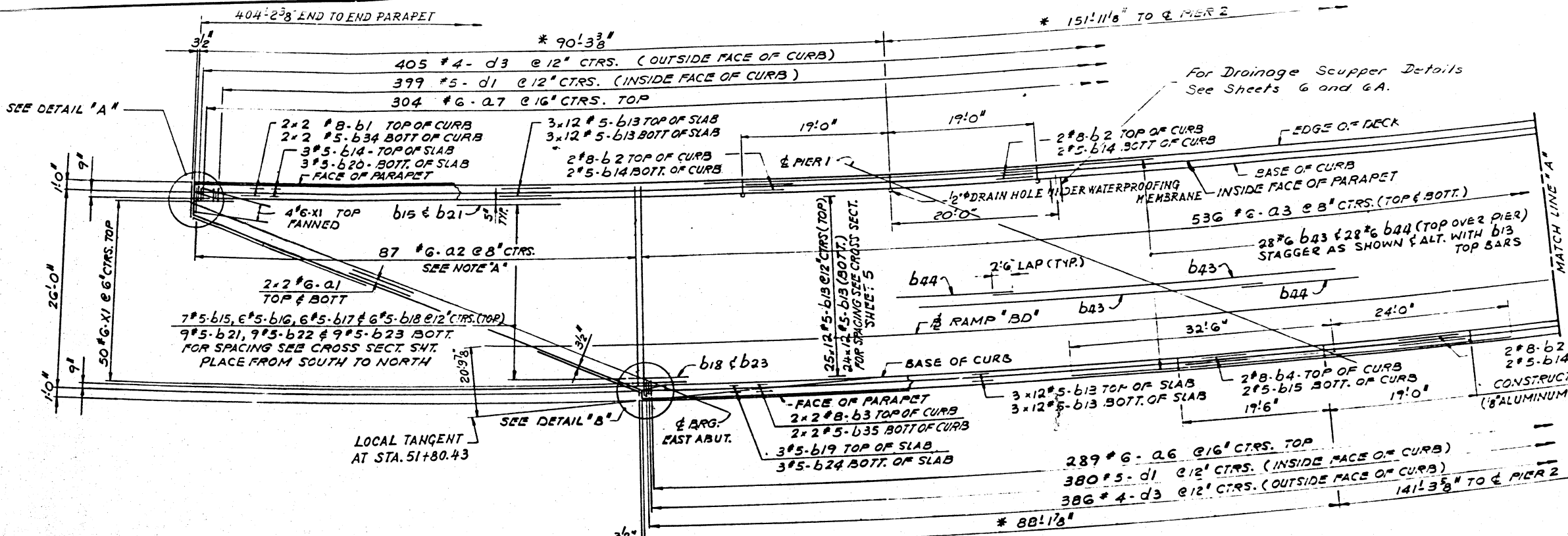
LOCATION PLAN

NOTE:
FOR HORIZONTAL CURVE DATA SEE SHEET 2

APPROVED
FOR STRUCTURAL APPROVAL ON
PROJECT
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

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

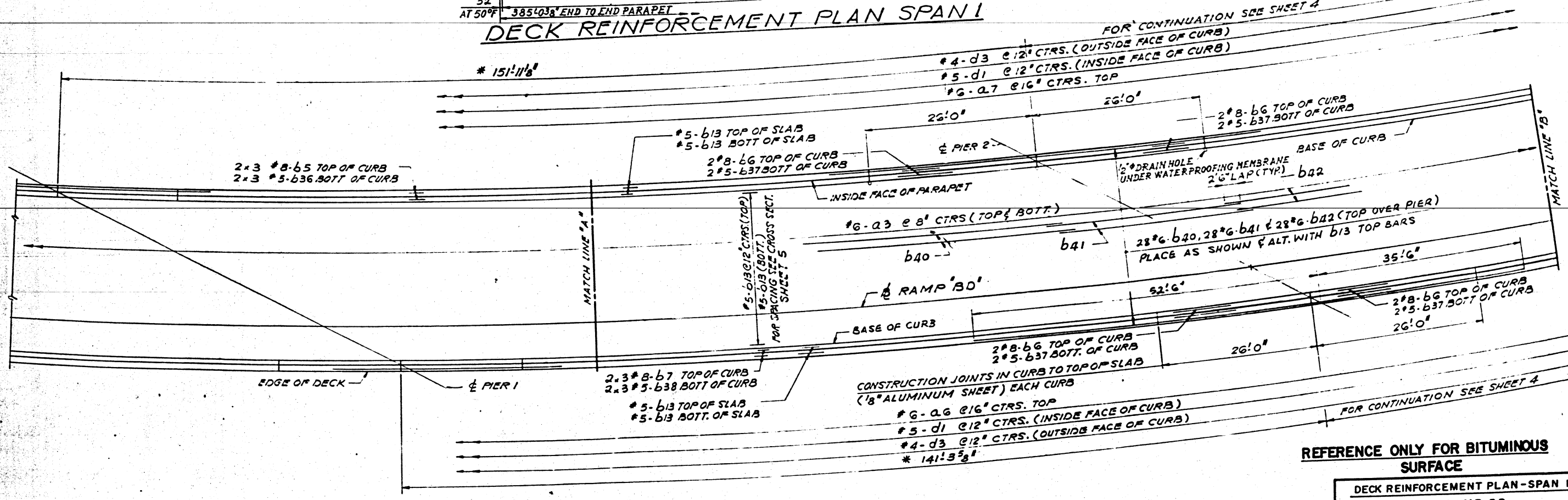
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A. 194	*	WINNEBAGO	155	26
STA.	TO STA.			
* 201-(1-2,2,3) + 201-(1-2,2,3) SG		PROJECT		



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 25x12#5 ETC. INDICATES 25 LINES OF BARS WITH 12 LENGTHS PER LINE

DECK REINFORCEMENT PLAN SPAN 1



DECK REINFORCEMENT PLAN SPAN 2

REFERENCE ONLY FOR BITUMINOUS SURFACE

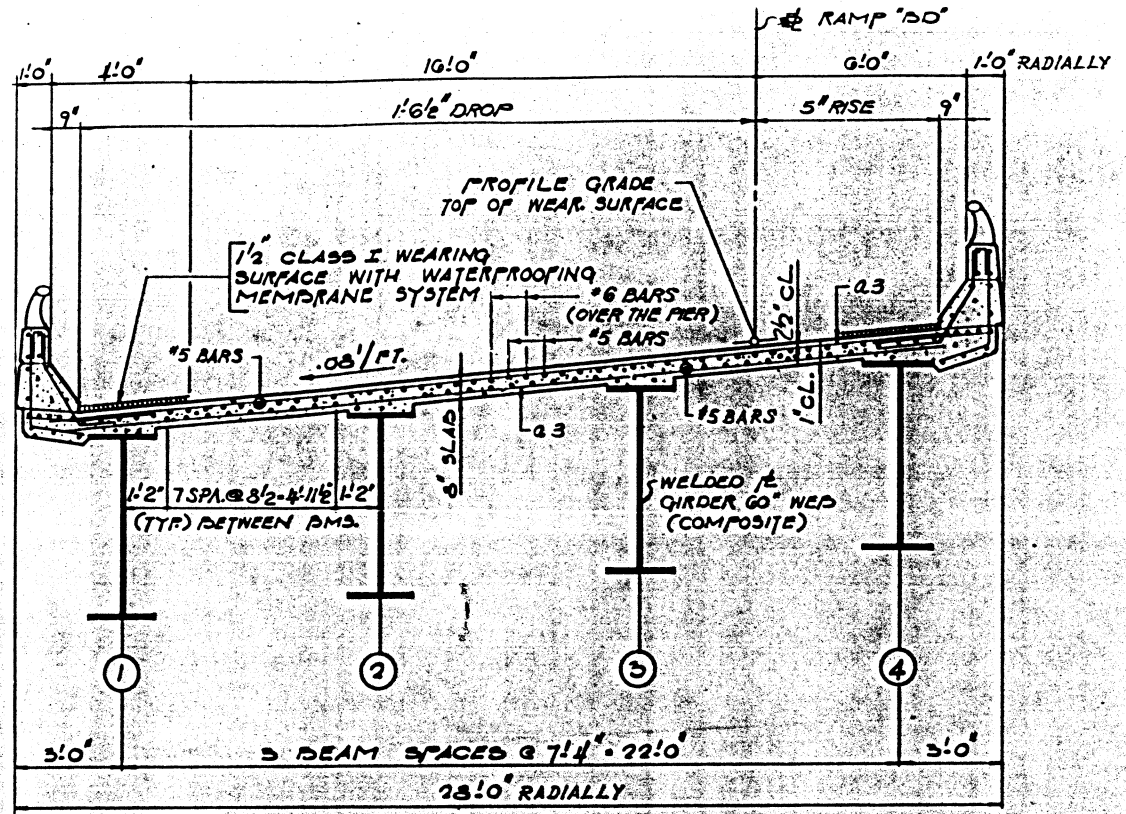
DECK REINFORCEMENT PLAN - SPAN 1 & 2
RAMP BD
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

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

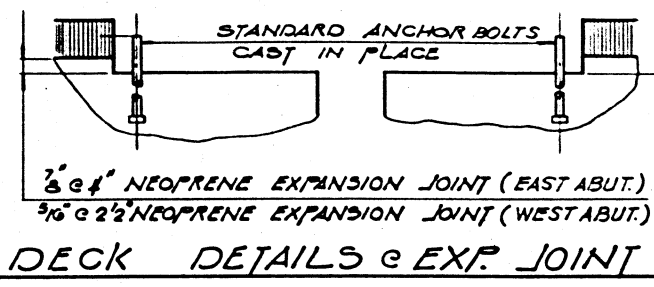


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PA. 194	*	WINNEBAGO	155	70
STA.	TO STA.			
F. ME. & REG. NO. 4	ILLINOIS	PROJECT		
# 201-(1-2,2,3) + 201-(1-2,2,3) SG				

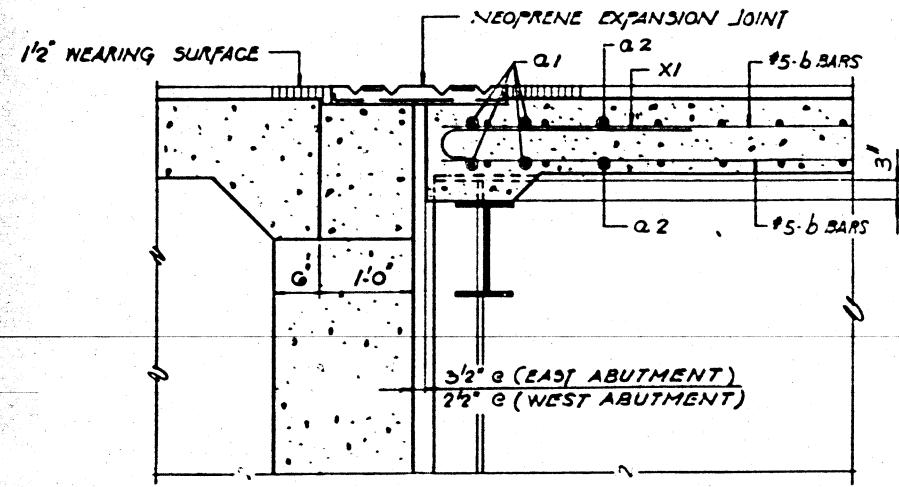
REFERENCE ONLY FOR BITUMINOUS SURFACE



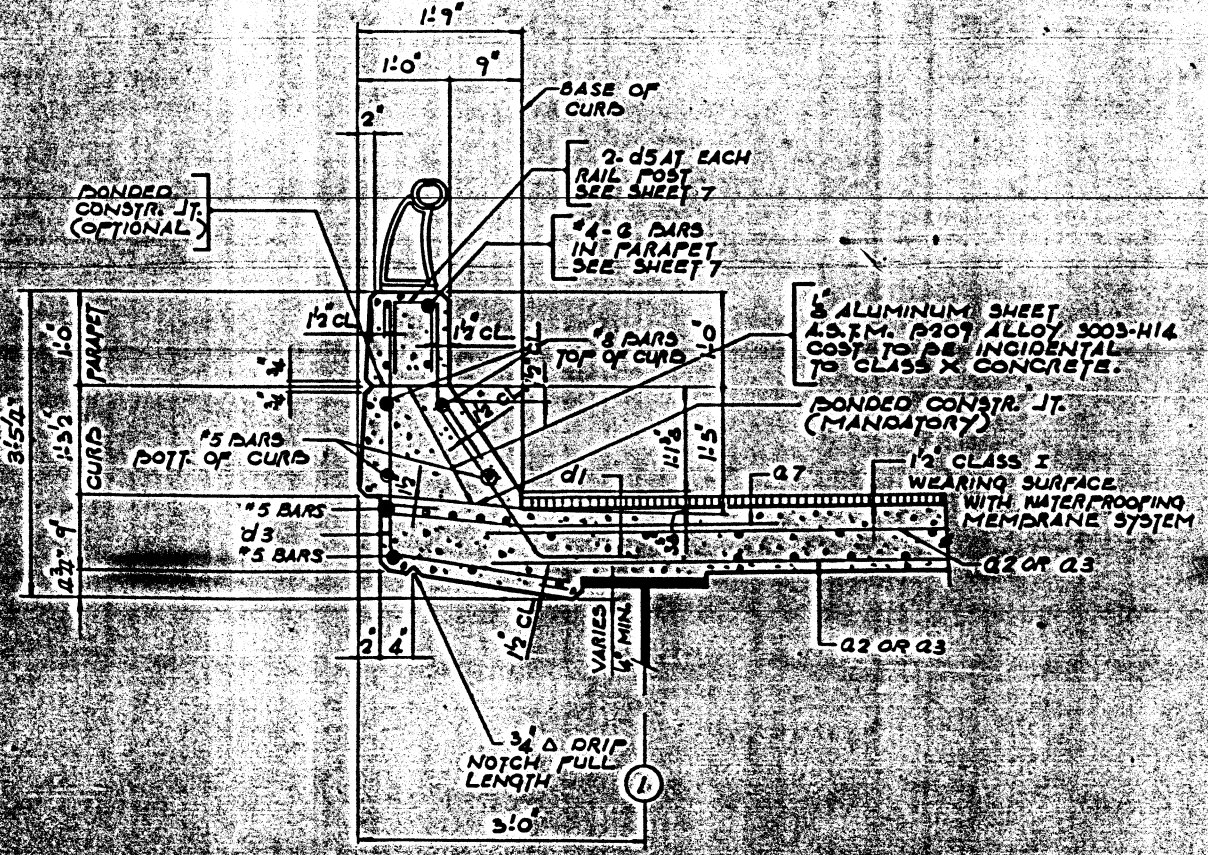
DECK CROSS SECTION



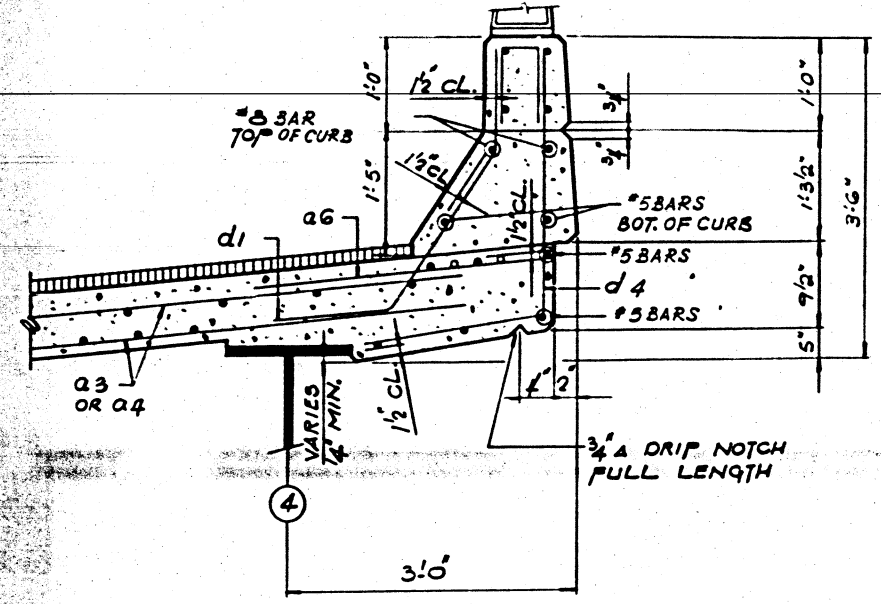
DECK DETAILS @ EXP. JOINT



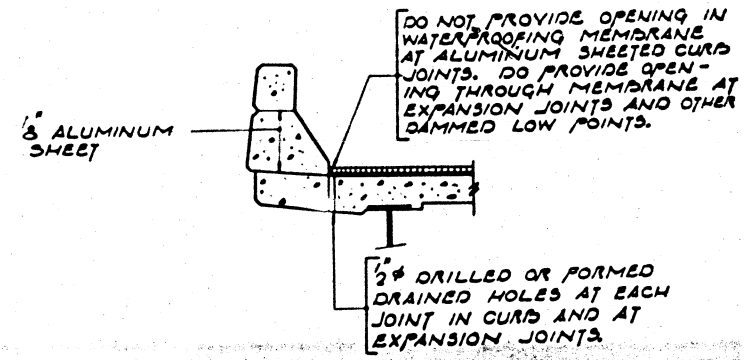
SECTION AT EAST ABUTMENT
SECTION AT WEST ABUTMENT SIMILAR



SOUTH FASCIA CURB DETAIL



NORTH FASCIA CURB DETAIL



SECTION AT CURB

NOTE!
FOR DIMENSIONS NOT SHOWN SEE SOUTH FASCIA CURB DETAIL

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1005-K
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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
412	201-3-1A	WINNEBAGO	163	1

P-92-026-74

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

F.A. ROUTE 412
SECTION 201-3-1A
SECTION 201-3HB-1
SECTION 201-3HB-2
F.A. PROJECT EBF-412-5(7)
WINNEBAGO COUNTY

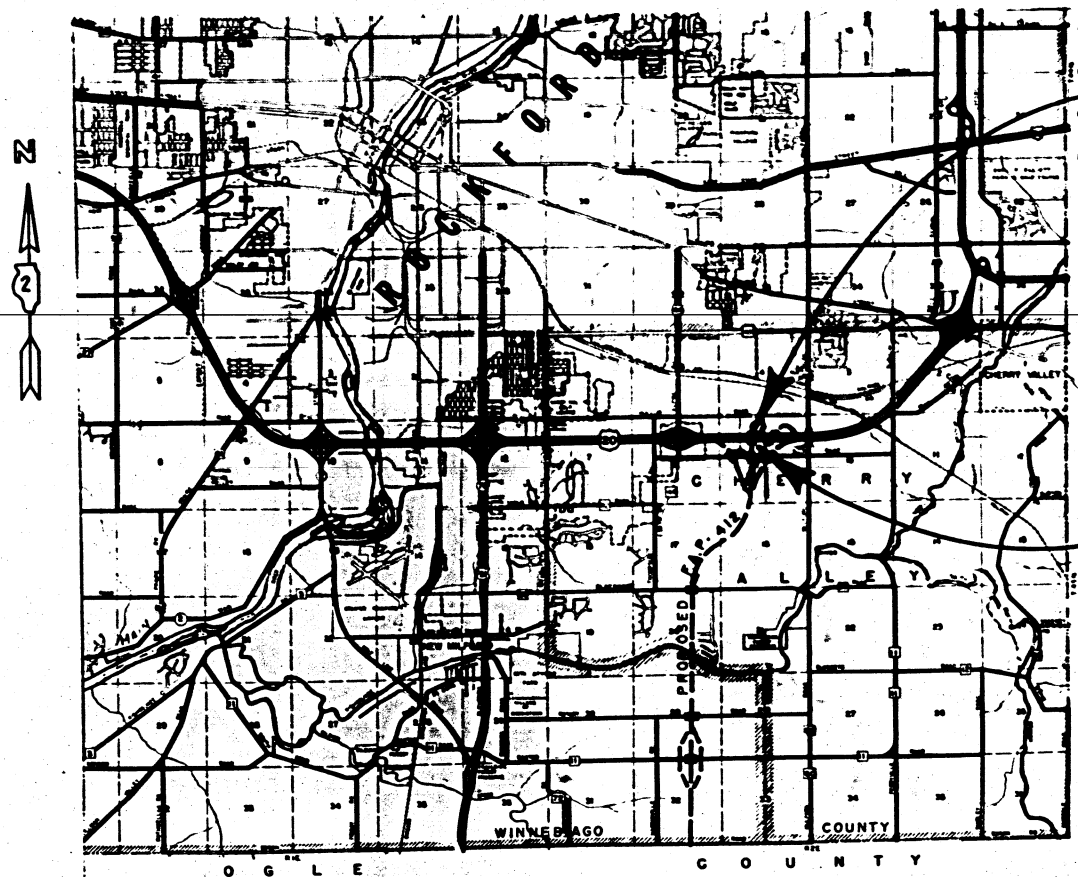
C-92-115-76



LOCATION OF SECTION INDICATED THUS:

SECTION 201-3HB-1
INCLUDES COMPLETE CONSTRUCTION OF A TWO SPAN (2 AT 99'-0") WELDED PLATE GIRDER STRUCTURE CARRYING NORTHBOUND F.A. ROUTE 412 OVER F.A. ROUTE (U.S. ROUTE 20) AT STATION 2571+66.20 ALONG CENTER-LINE F.A. ROUTE 412.

SECTION 201-3HB-2
INCLUDES COMPLETE CONSTRUCTION OF A THREE SPAN (1 AT 86'-0", 1 AT 143'-6" & 1 AT 155'-0") WELDED PLATE GIRDER STRUCTURE CARRYING RAMP BD OVER F.A. ROUTE (U.S. ROUTE 20) AT STATION 51+80.43 ALONG BASE-LINE RAMP BD.



FA PROJECT EBF-412-5(?)
SECTION 201-3-1A
ENDS
STATION 2573 + 90.66

FA PROJECT EBF-412-5(?)
SECTION 201-3-1A
BEGINS
STATION 2569 + 84.00

DESIGN DESIGNATION
F.A. ROUTE 412-3015 (95) TRUNK 17.06 (CRPC-20)

LAYOUT
SCALE 1"=1 MILE

GROSS LENGTH OF IMPROVEMENT = 406.66 FEET = 0.077 MILES = 0.124 KILOMETERS
NET LENGTH OF PROJECT = 246.00 FEET = 0.047 MILES = 0.076 KILOMETERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan. 18, 1977

EXAMINED March 17, 1977

PASSED March 17, 1977

APPROVED March 17, 1977

DISTRICT ENGINEER
ENGINEER OF PLANS AND CONTRACTS
ENGINEER OF DESIGN
DIRECTOR OF HIGHWAYS

2-116

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

CONTRACT NO. 32588

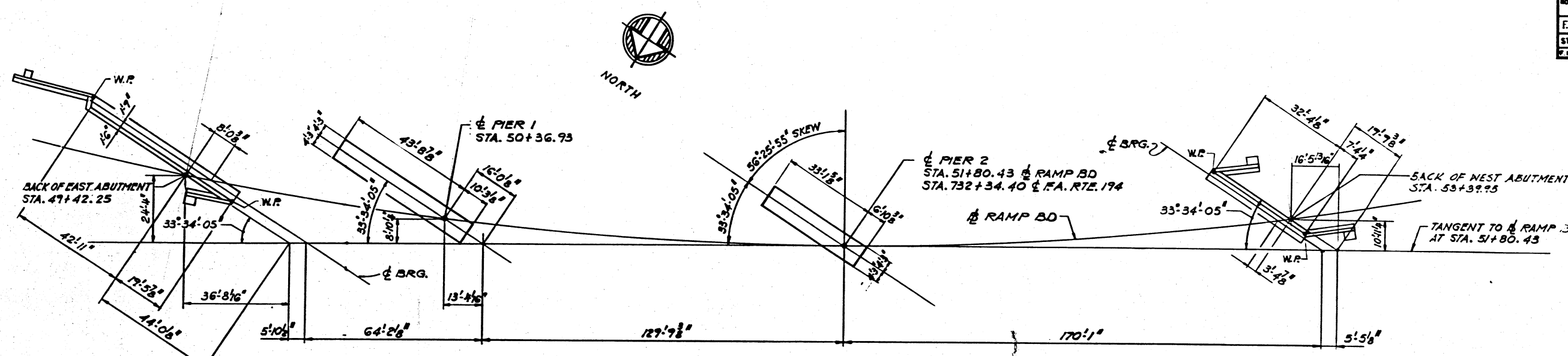
101-0136

Handwritten signature and date: 4/19/77

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	77
STA.	TO STA.		PROJECT	

SHEET 2 OF 24

CURVE DATA
 P.I. STA. 51+23.80
 $\Delta = 62^{\circ}-30'-33''$
 $D = 4^{\circ}-56'-00''$
 $T = 704.88$
 $R = 1161.40$
 $L = 1267.08$
 $E = 197.17$



FOOTING LAYOUT PLAN

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.
 FASTENERS 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	SUB	SUPER	TOTAL
1 BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D CLASS I	TON	-	90	90
STRUCTURE EXCAVATION	CU. YD.	122	-	122
4 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	-	0.06	0.06
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. 2113)
 LETTERING FOR NAME PLATE

GENERAL NOTES, QUANTITIES AND FOOTING LAYOUT
RAMP BD
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

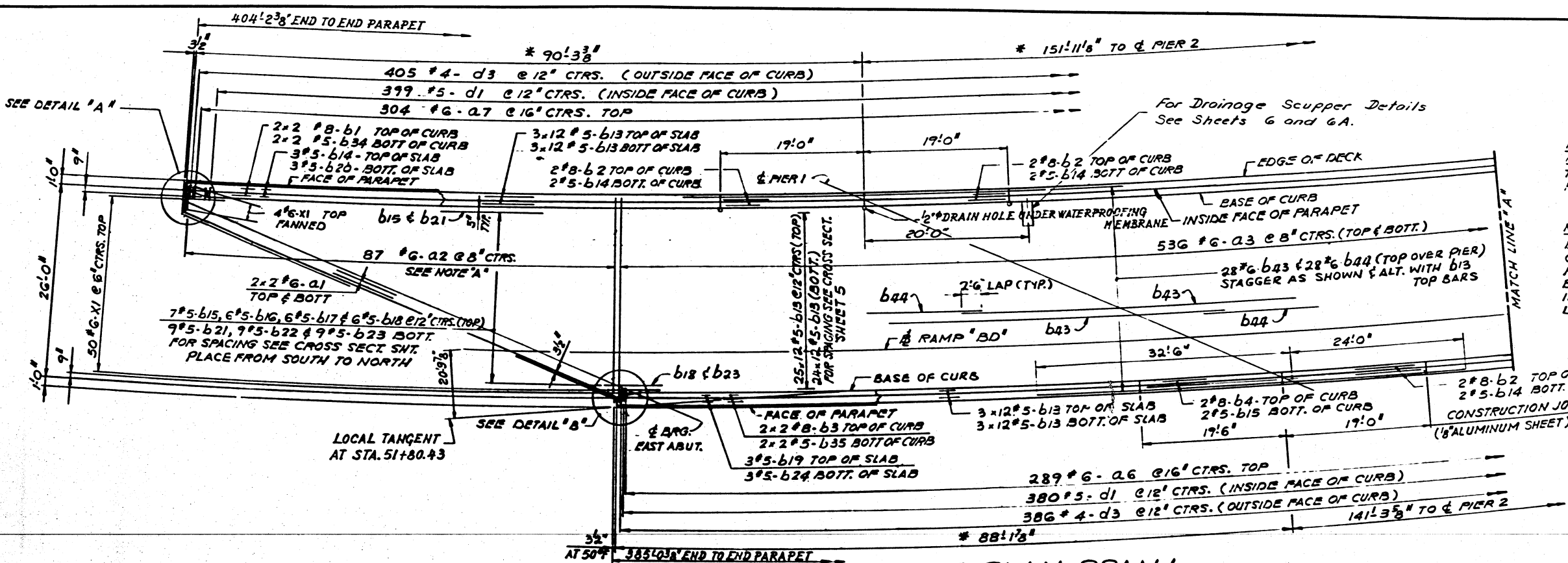
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.194	2013HB 2	WINNEBAGO	163	78
STA.	TO STA.			
P. M. & REG. NO. 4	ILLINOIS	PROJECT		

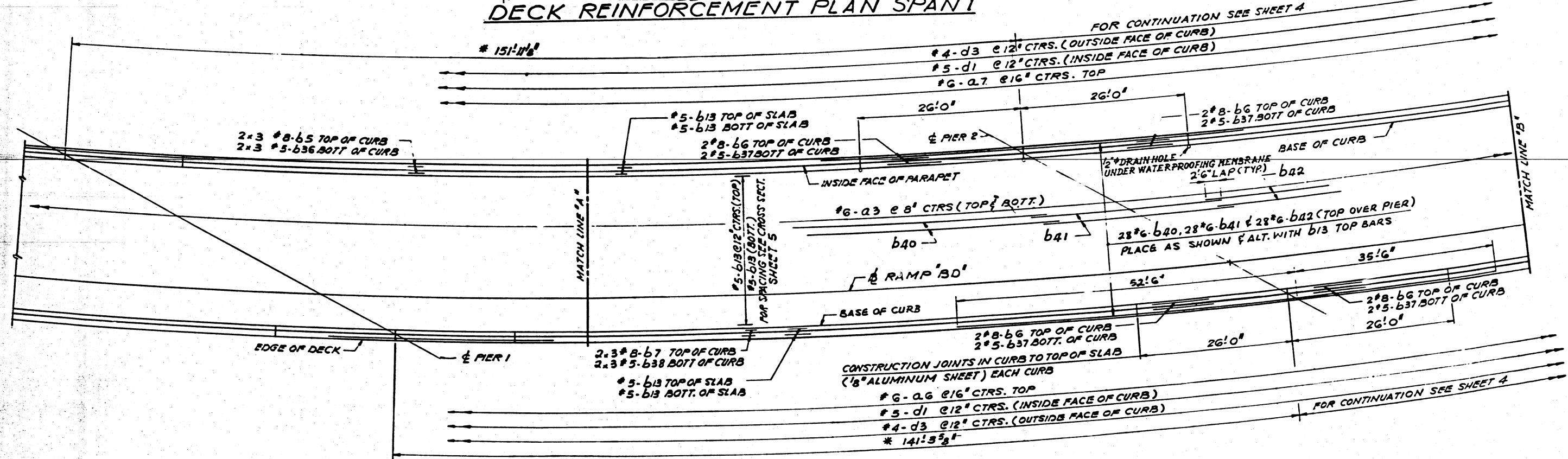
SHEET 3 OF 24

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 25x12#5-B ETC. INDICATES 25 LINES OF BARS WITH 12 LENGTHS PER LINE.



DECK REINFORCEMENT PLAN SPAN 1



DECK REINFORCEMENT PLAN SPAN 2

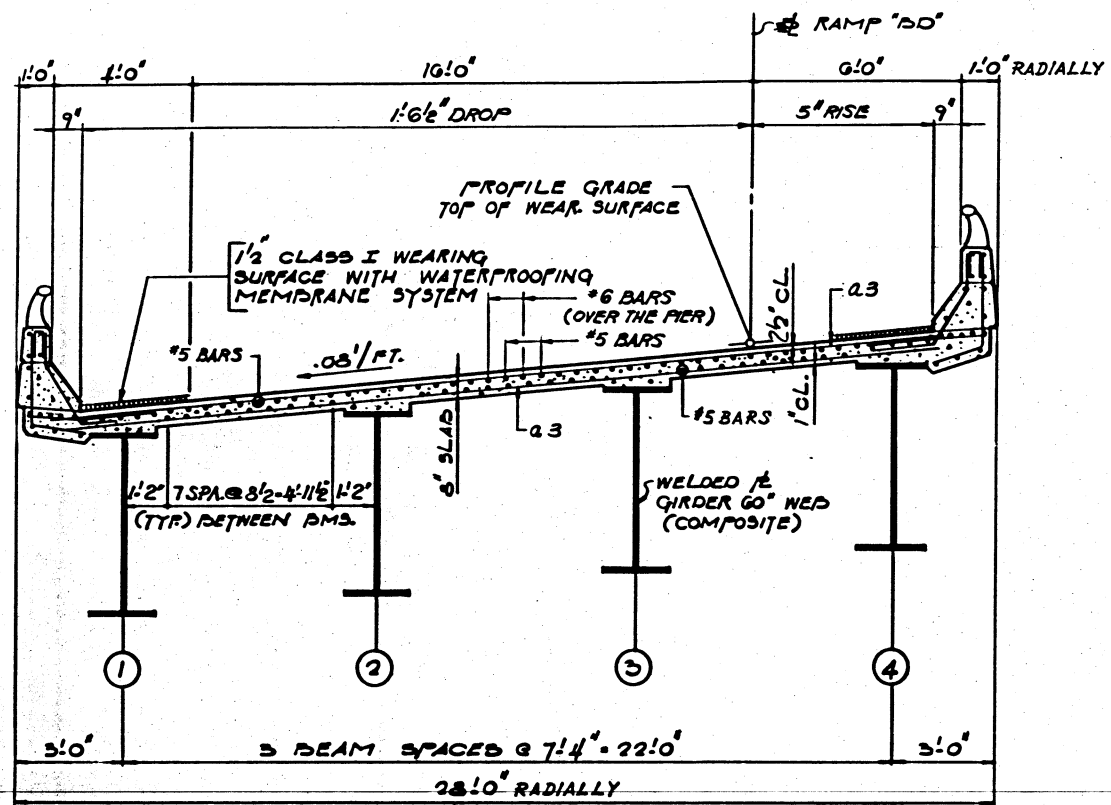


DECK REINFORCEMENT PLAN - SPAN 1 & 2
RAMP RD
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

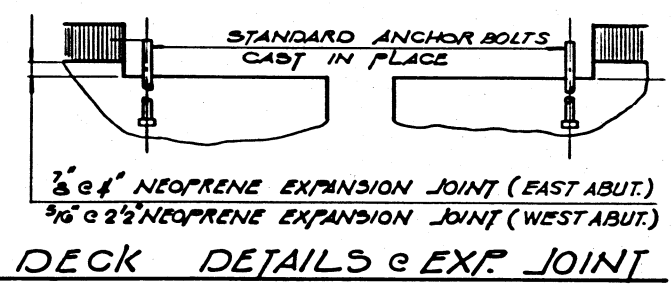
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

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

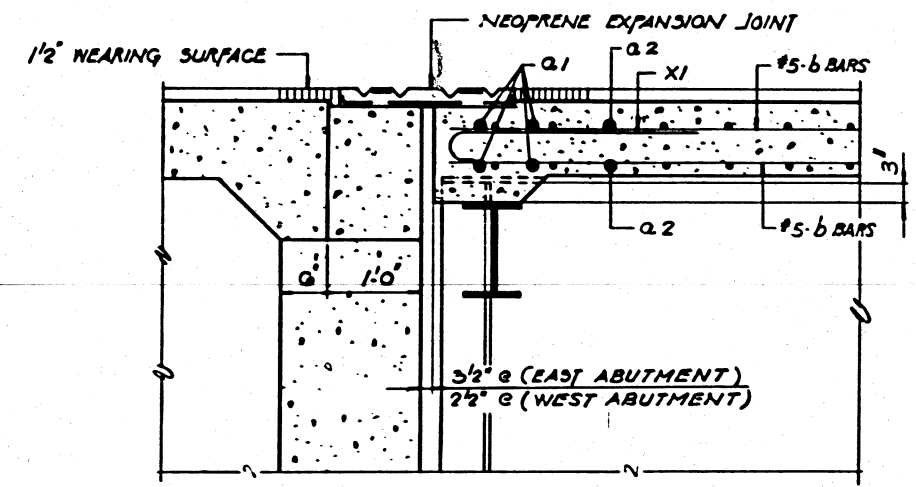
SHEET 5 OF 24



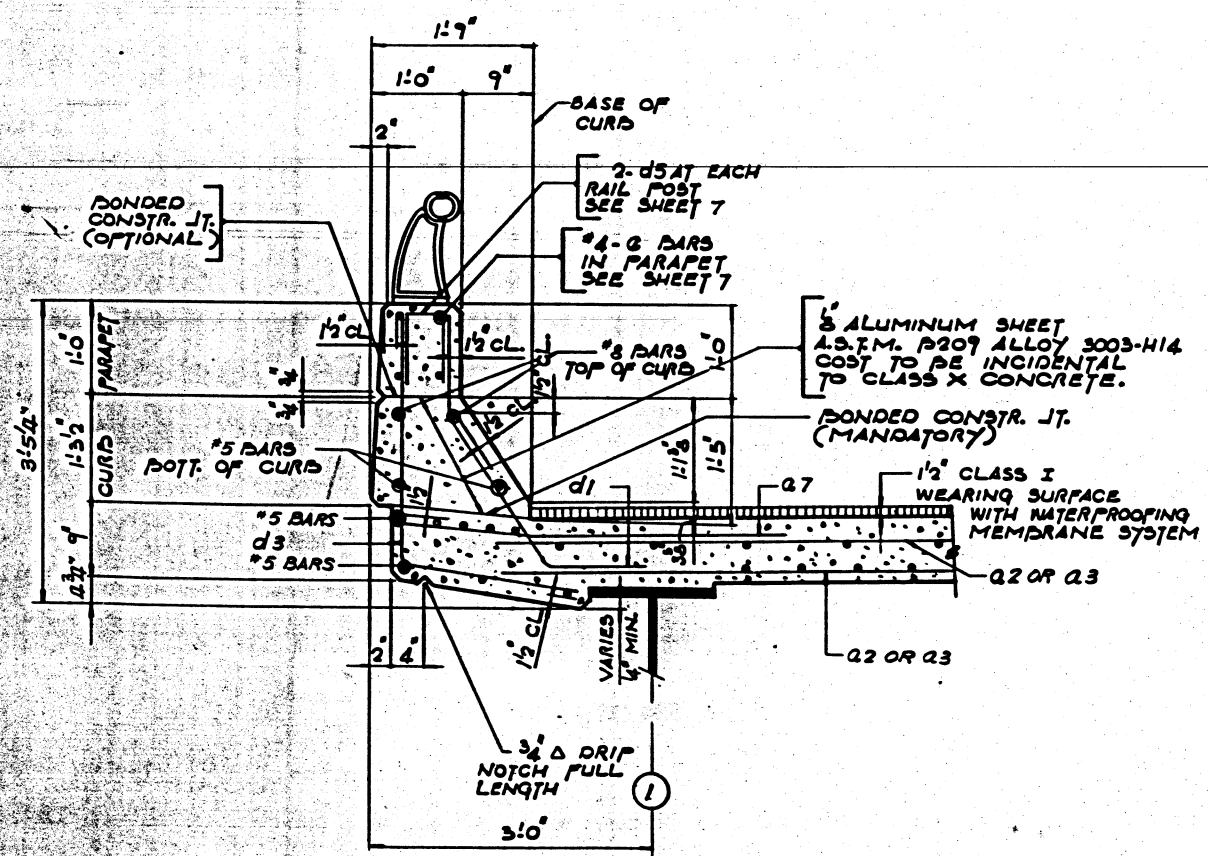
DECK CROSS SECTION



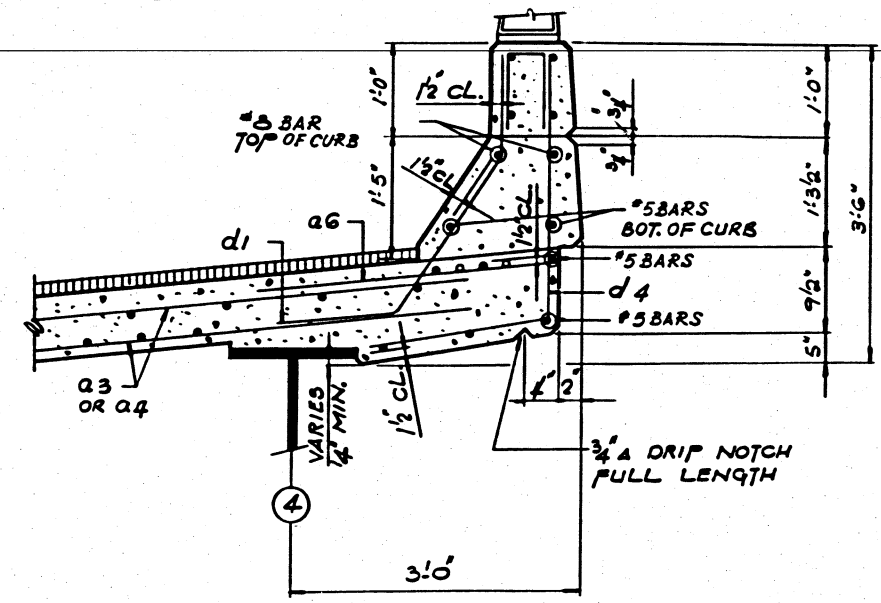
DECK DETAILS @ EXP. JOINT



SECTION AT EAST ABUTMENT
SECTION AT WEST ABUTMENT SIMILAR

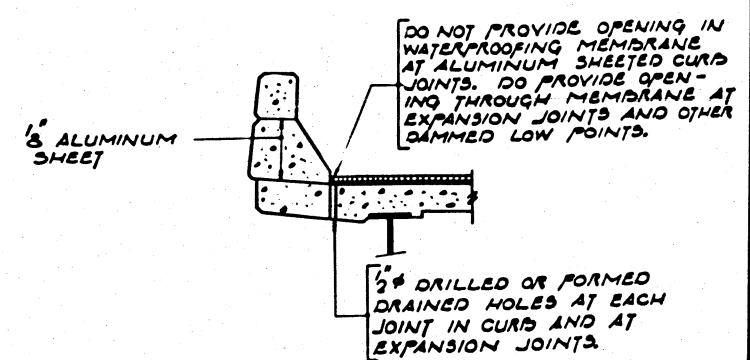


SOUTH FASCIA CURB DETAIL



NORTH FASCIA CURB DETAIL

NOTE!
FOR DIMENSIONS NOT SHOWN SEE SOUTH FASCIA CURB DETAIL



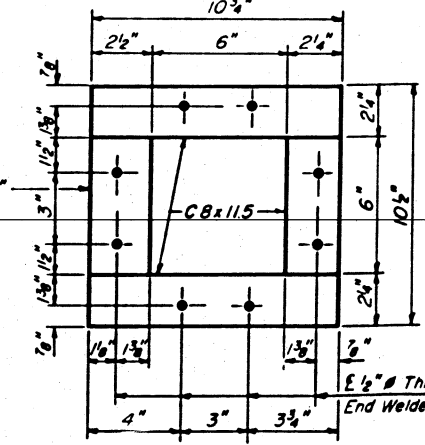
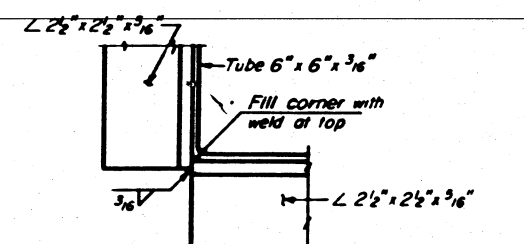
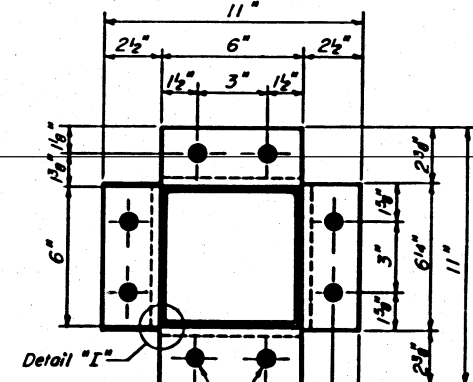
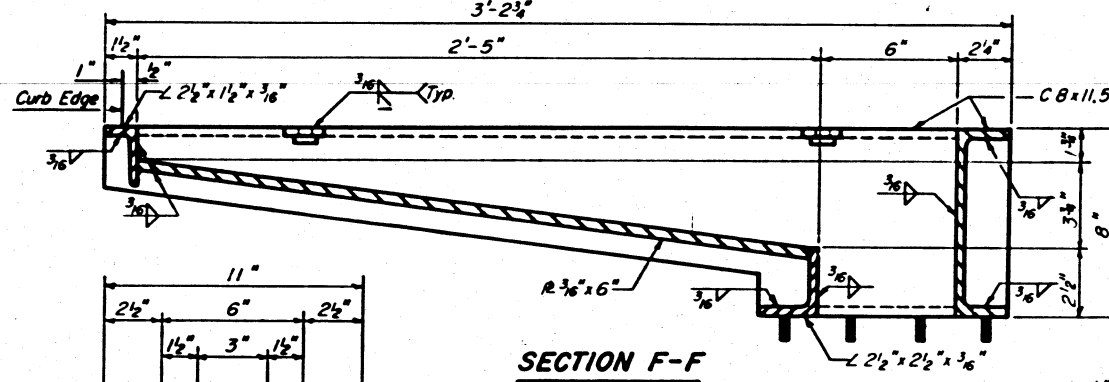
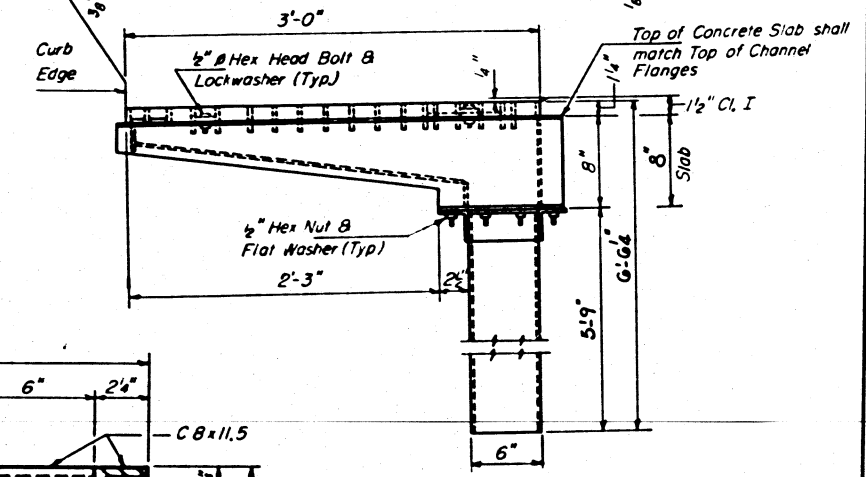
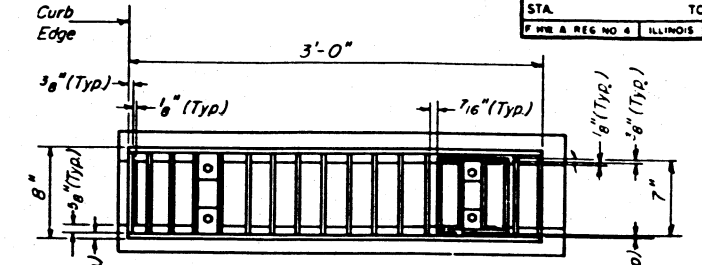
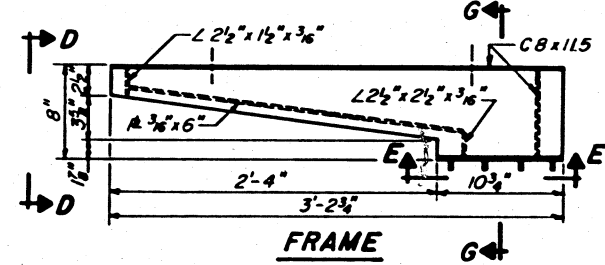
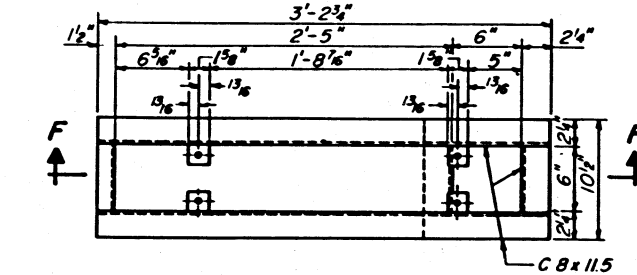
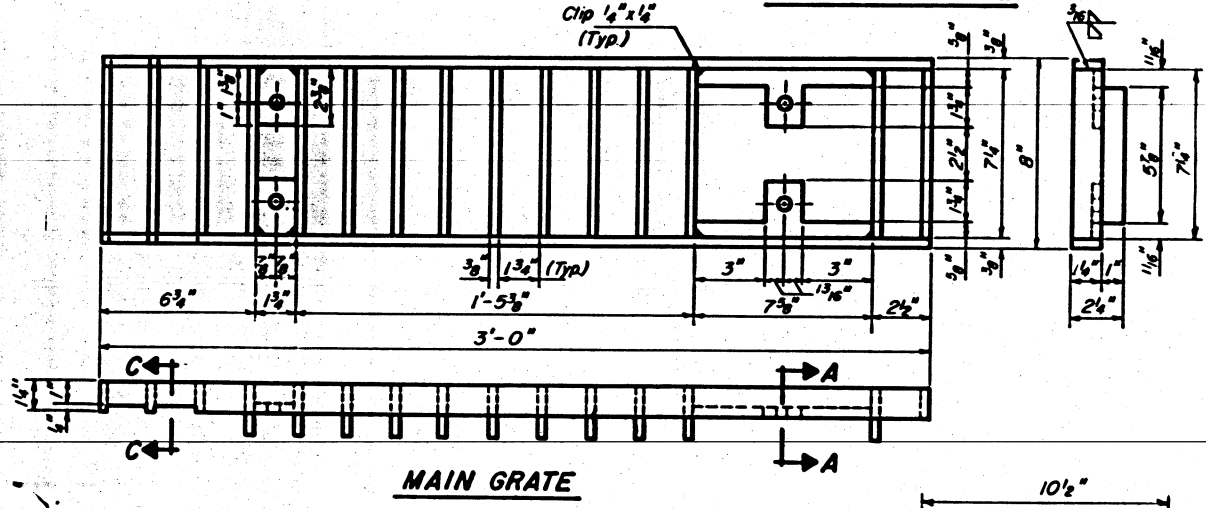
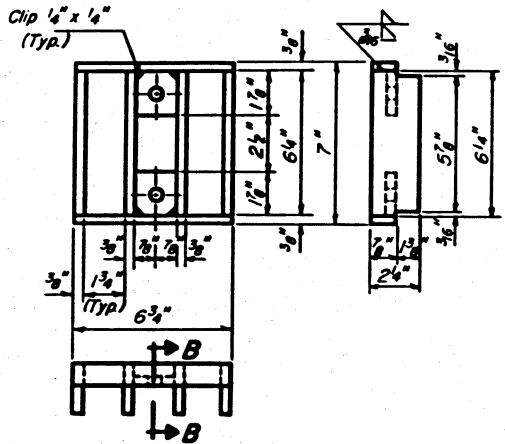
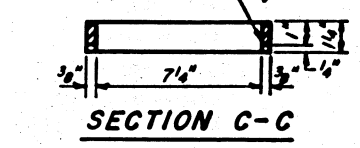
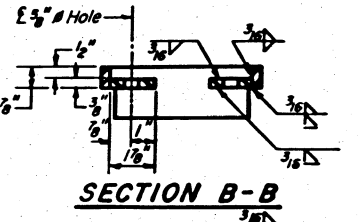
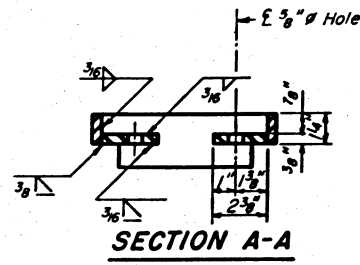
SECTION AT CURB

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

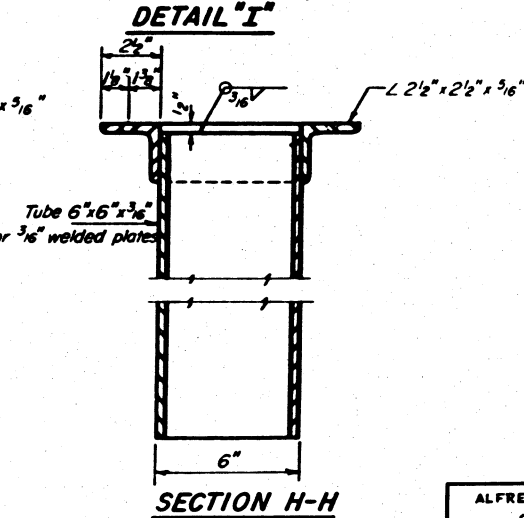
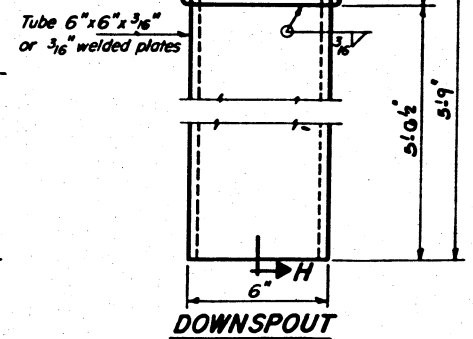
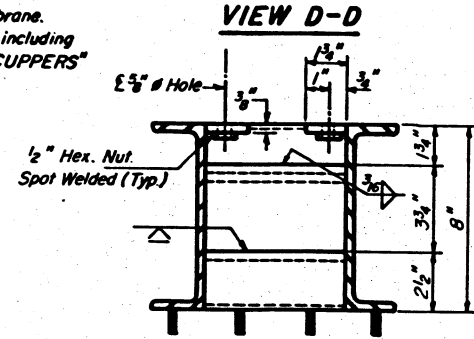
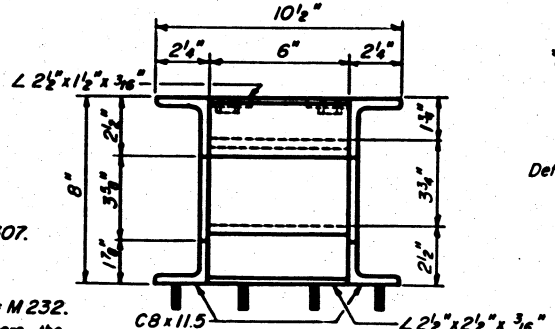
DECK DETAILS
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

Rev. 6-29-77
Rev. 7-15-77

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.194	2013HB2	WINNEBAGO	13	81
STA.	TO STA.			
7 W.B. & REG. NO. 4	ILLINOIS		PROJECT	



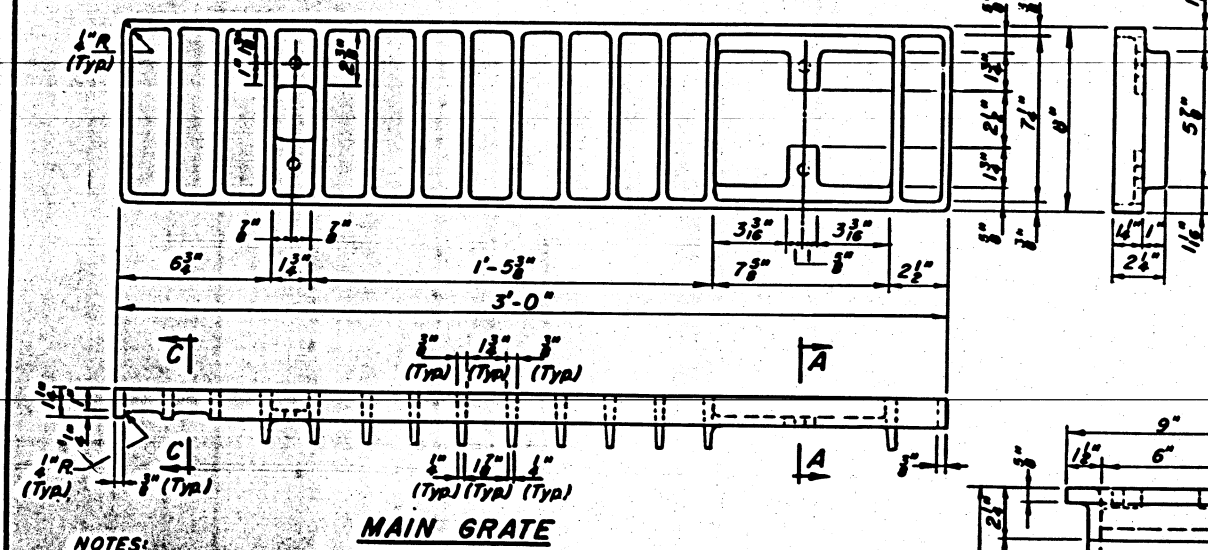
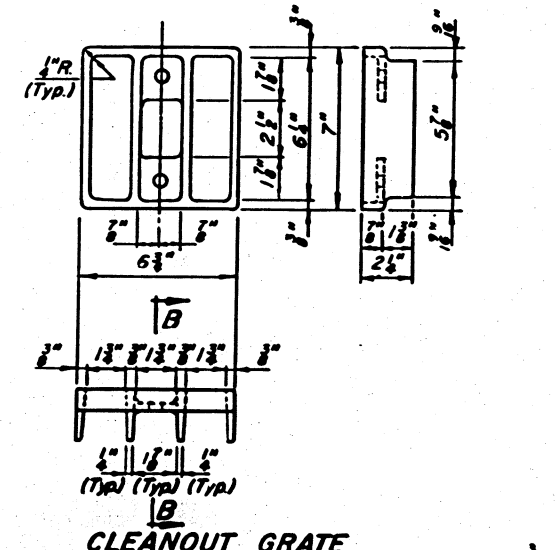
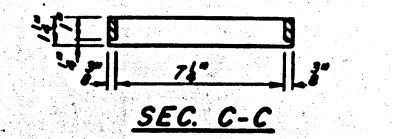
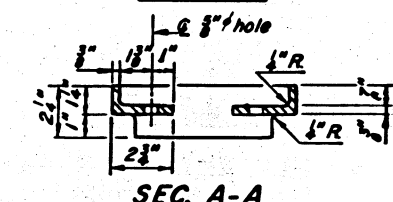
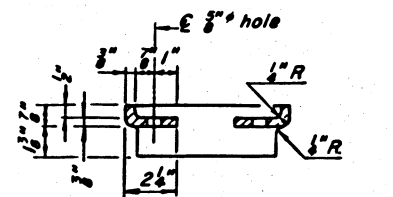
Notes:
 Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing.
 All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. M 183.
 Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M. A-307.
 The Main Grate, Cleanout Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M III B A.S.T.M. A-385.
 All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O. M 232.
 The Waterproofing Membrane System shall be installed such that the membrane covers the frame flanges and extends down into the frame with the grates placed on top of the membrane.
 Cost of the Main Grate, Cleanout Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS"



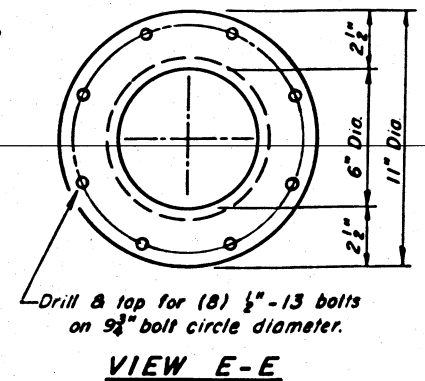
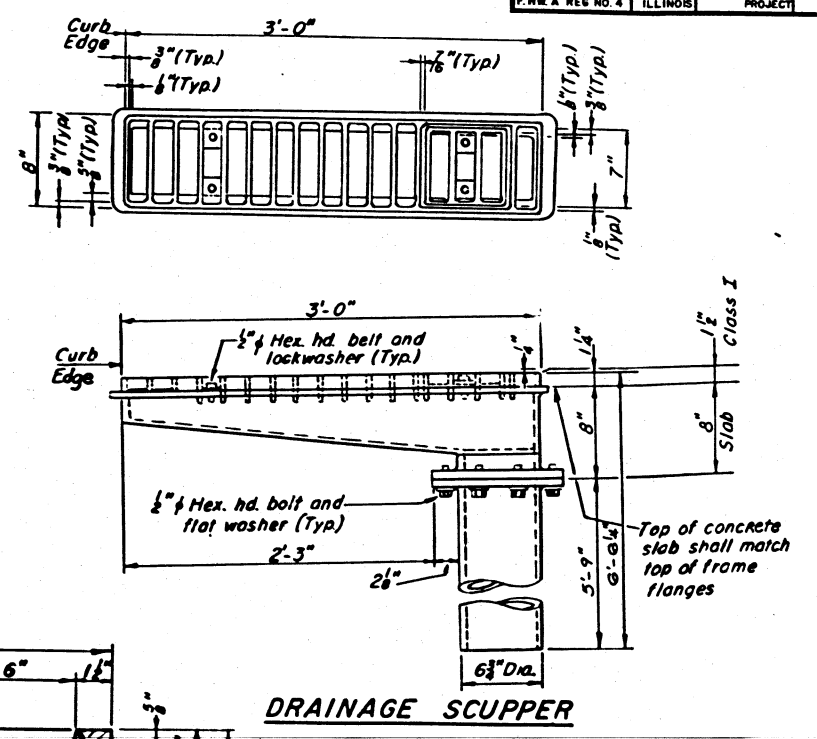
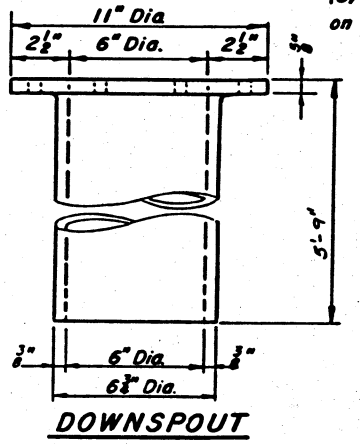
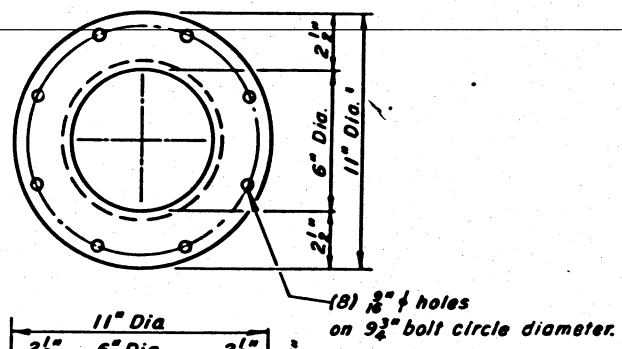
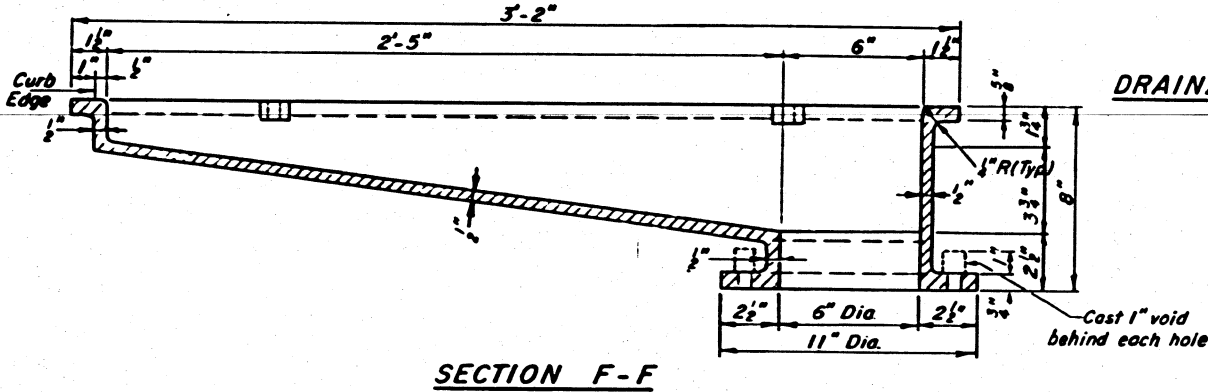
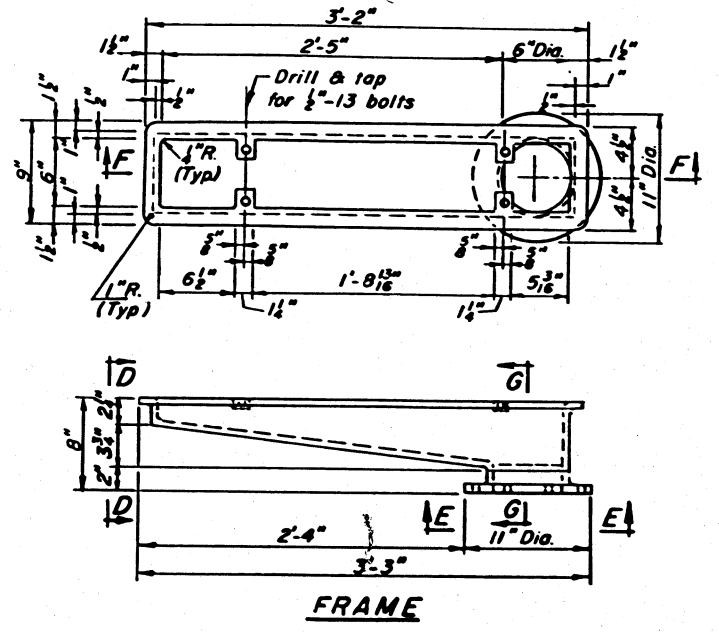
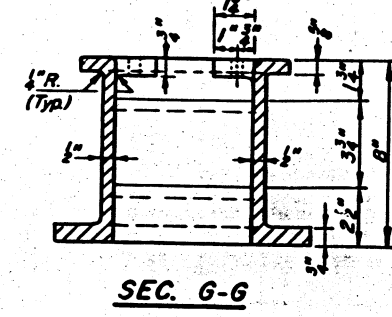
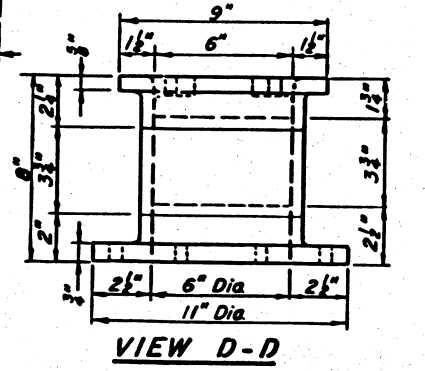
DRAINAGE SCUPPERS
 RAMP BD.
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 194	201-3HB-2	WINNEBAGO	1/3	61A
STA.	TO STA.			
F.H.W.A. REG. NO. 4	ILLINOIS	PROJECT		



NOTES:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M103, Class 30.
 Bolts, washers and nuts shall conform to the requirements of ASTM A-307.
 All bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232.
 The waterproofing membrane system shall be installed such that the membrane covers the frame flanges and extends down into the frame with the grates placed on top of the membrane.
 Cost of the Main Grate, Cleanout Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".
 The Contractor may use at his option steel frames and steel grates or cast frames and cast grates, but will not be allowed to use steel grates with cast frames nor cast grates with steel frames.

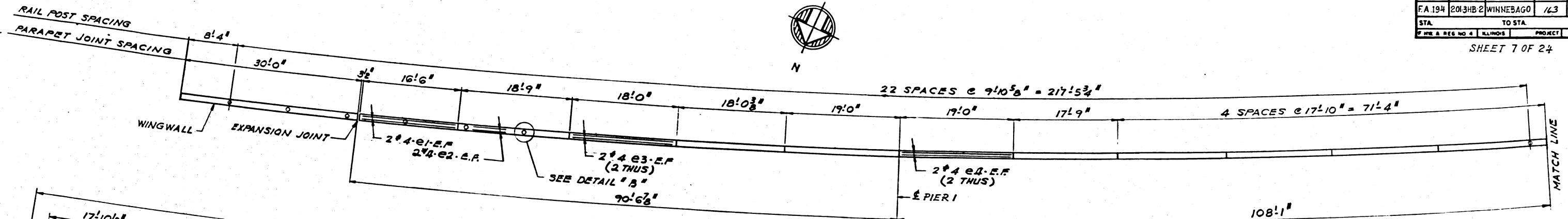


ALTERNATE-CAST IRON DRAINAGE SCUPPER
 RAMP BD.
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

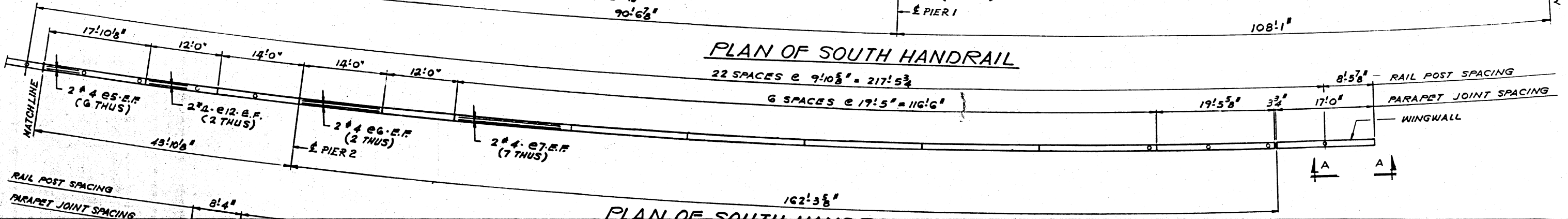
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 408 N. MICHIGAN AVE.
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	2013HB-2	WINNEBAGO	123	82
STA.		TO STA.		PROJECT
7 ME & REG NO. 4		ILLINOIS		

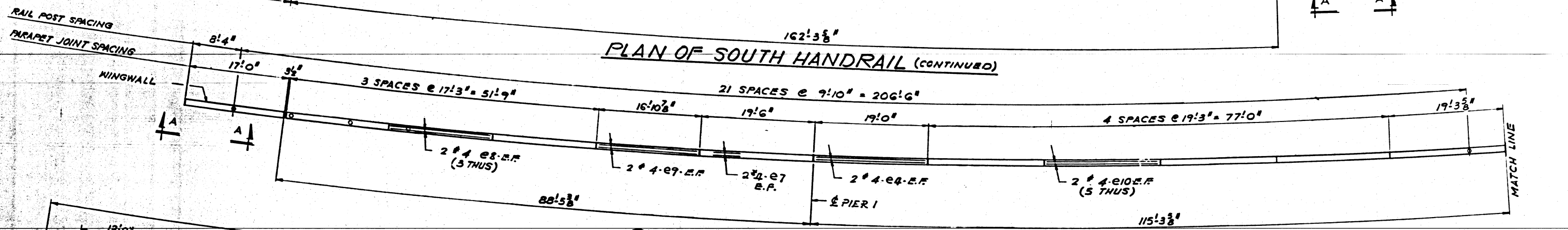
SHEET 7 OF 24



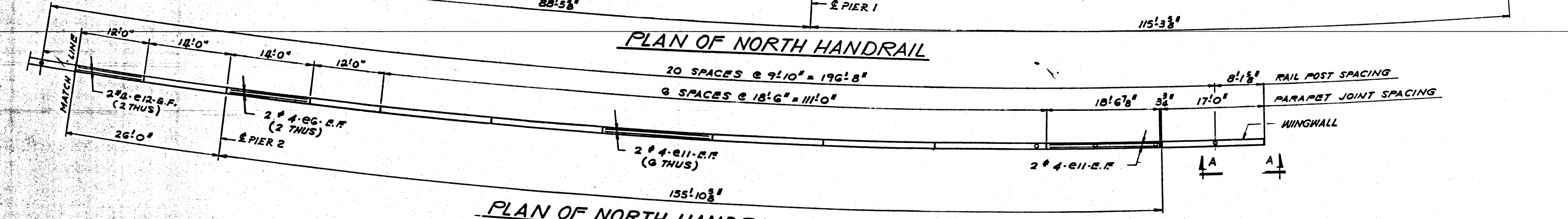
PLAN OF SOUTH HANDRAIL



PLAN OF SOUTH HANDRAIL (CONTINUED)



PLAN OF NORTH HANDRAIL

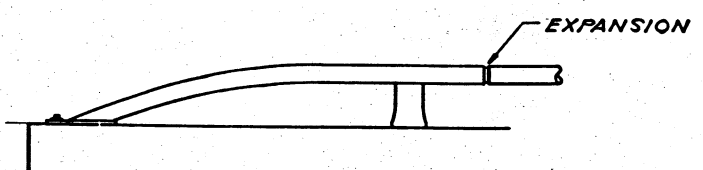


PLAN OF NORTH HANDRAIL (CONTINUED)

NOTE:
ALL DIMENSIONS SHOWN ARE
ALONG INSIDE FACE OF PARAPET.



DETAIL "B"



ELEVATION A-A

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

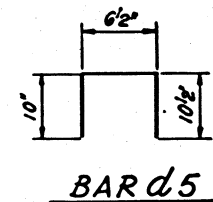
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	83
STA.	TO STA.			
F.W.M.A. REG. NO. 4	ILLINOIS	PROJECT		

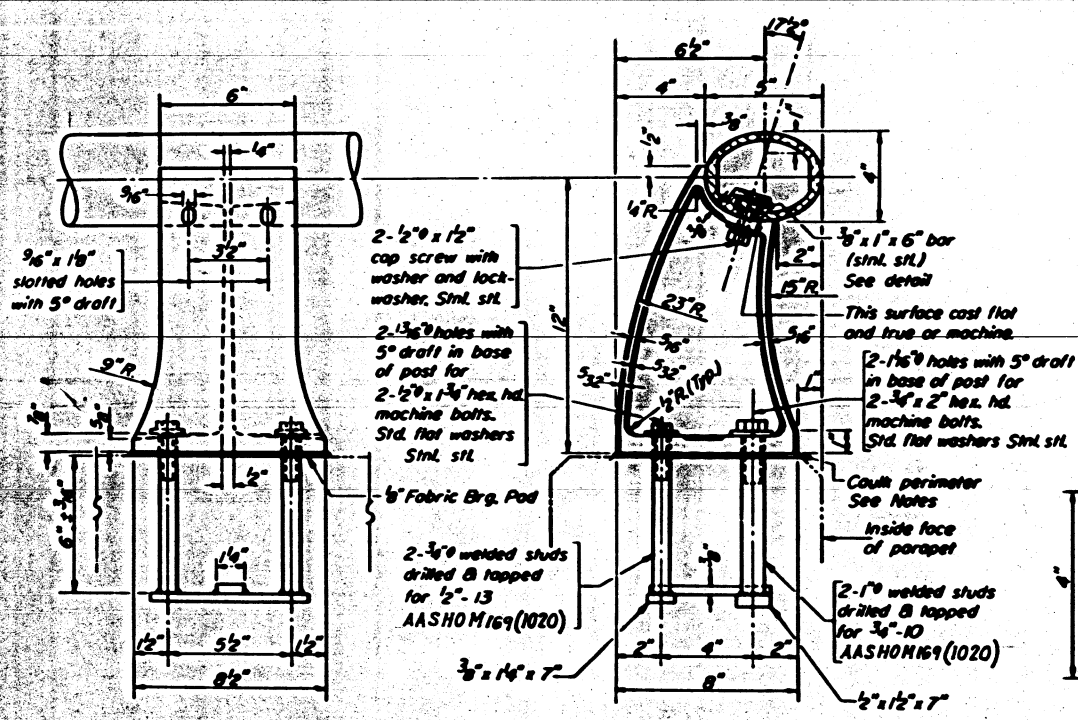
SHEET 8 OF 24

BILL OF MATERIAL

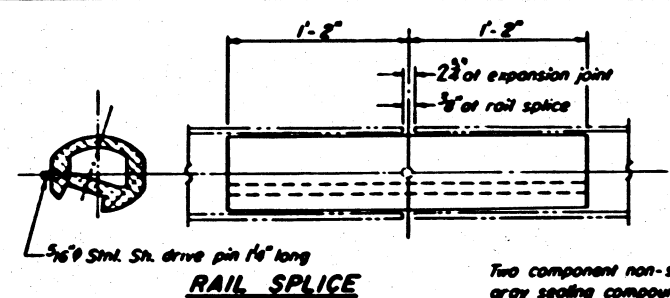
BAR	NO. REQ'D		SIZE	LENGTH	SHAPE
	SOUTH	NORTH			
E1	4	—	#4	16'-3"	—
E2	4	—	#4	18'-6"	—
E3	8	—	#4	17'-9"	—
E4	8	4	#4	18'-9"	—
E5	24	—	#4	17'-6"	—
E6	8	8	#4	13'-9"	—
E7	28	4	#4	19'-2"	—
E8	—	12	#4	17'-0"	—
E9	—	4	#4	16'-6"	—
E10	—	20	#4	19'-0"	—
E11	—	28	#4	18'-3"	—
E12	8	8	#4	11'-9"	—
d5	82	80	#4	2'-3"	□
CLASS CONCRETE					CYCLS 23.4
REINFORCEMENT BARS					LBS 2,320
ALUMINUM RAILING					LN.FT. 869



NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT.

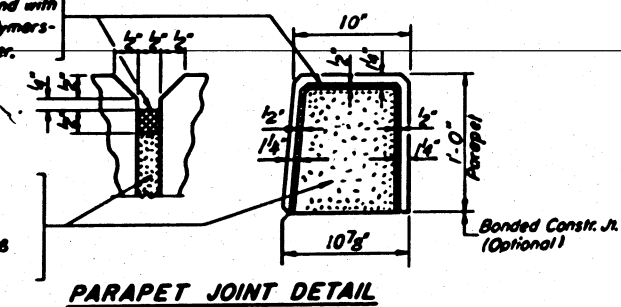


RAIL POST DETAILS



RAIL SPLICE

Two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.



PARAPET JOINT DETAIL

NOTES:

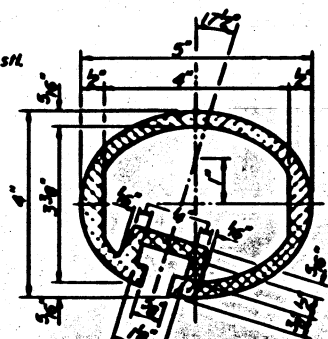
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail. Provide 1-1/8 inch and 2-1/8 inch Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

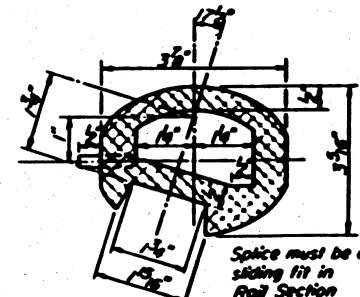
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T3 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

Stainless Steel Machine Bolts or Cap Screws shall be in accordance with Article 710.37(a) of the Std. Spec's except Grade B8 or B8M May be furnished.



SEC. THRU ELLIPTICAL RAIL SECTION

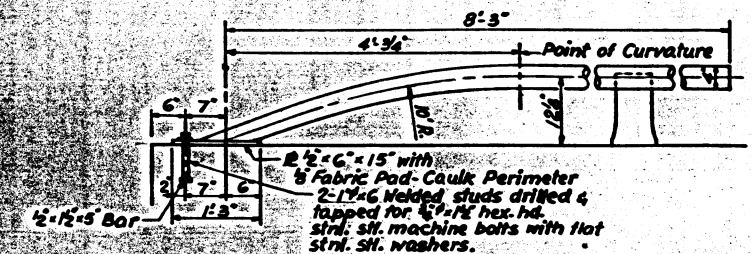


SEC. THRU SPLICE

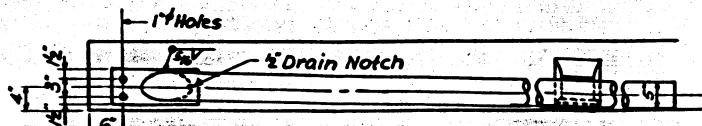


CLAMP BAR

NOTE: The end rail post shall be set back as required for the terminal rail section.



BRIDGE RAIL TERMINAL SECTION

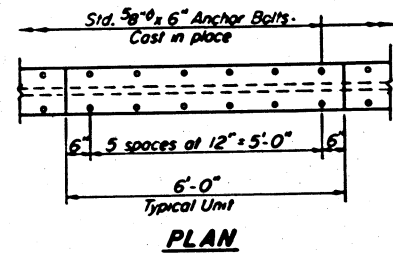
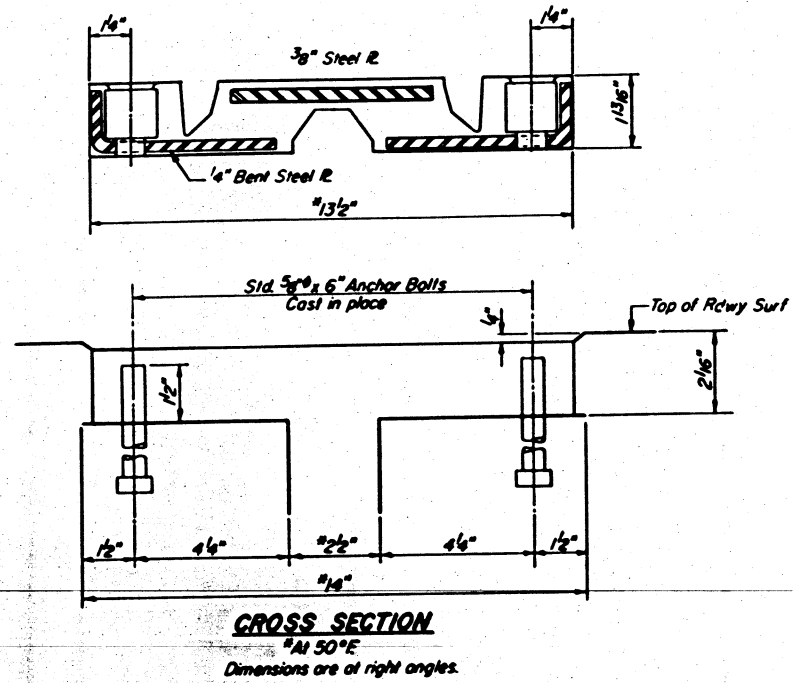


ALUMINUM HANDRAIL DETAILS

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

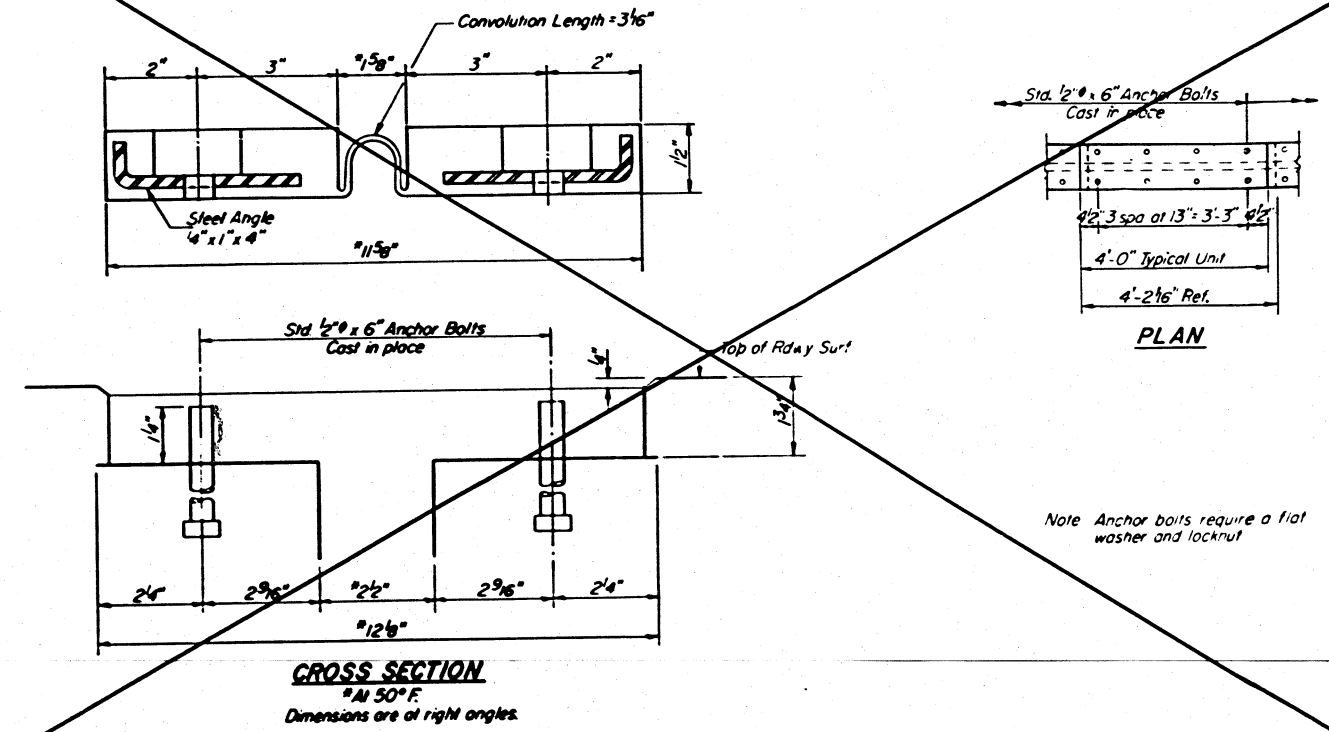
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1005-K
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.194	201-3HB-2	WINNEBAGO	163	84
STA.	TO STA.			
7. W.E. & RES. NO. 4	ILLINOIS	PROJECT		



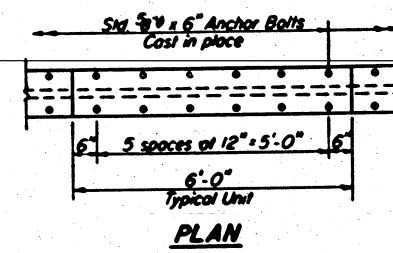
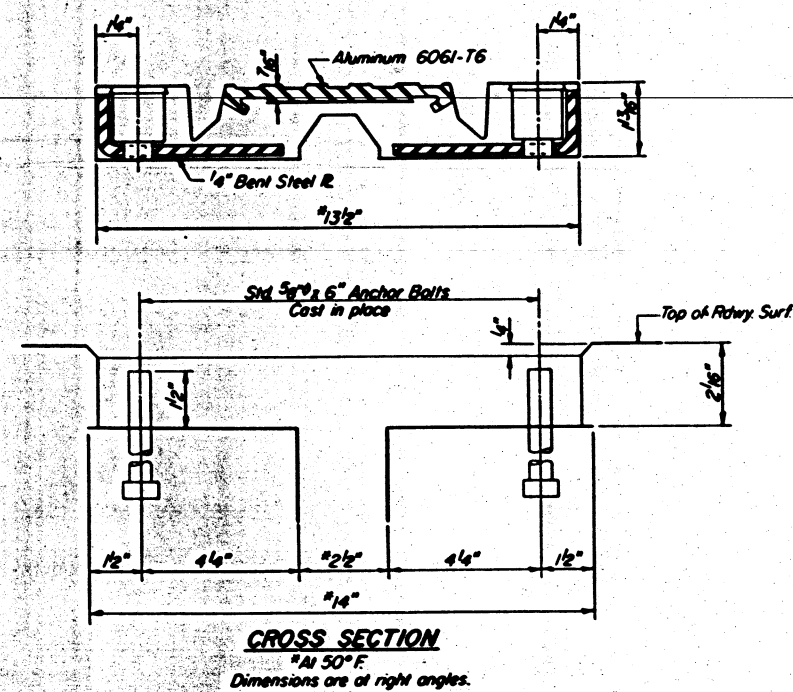
Note: Anchor bolts require a clipped washer, lockwasher and hex nut.

TRANSFLEX MODEL 250
(Structural Rubber Products Co.)



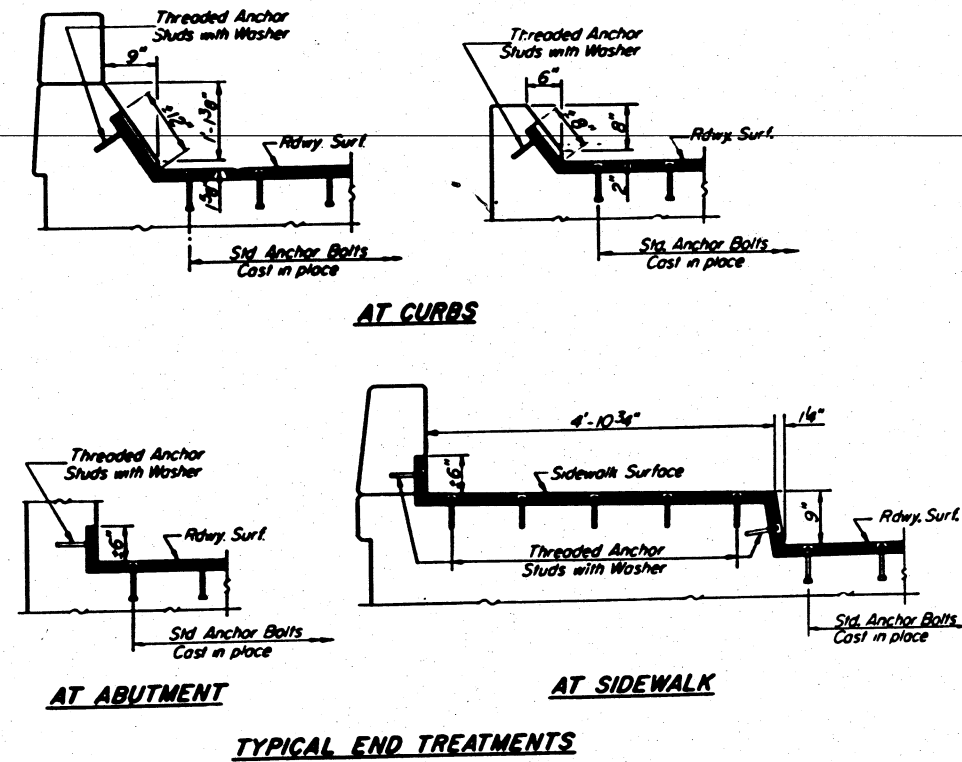
Note: Anchor bolts require a flat washer and locknut.

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



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

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

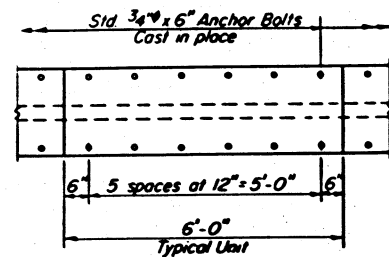
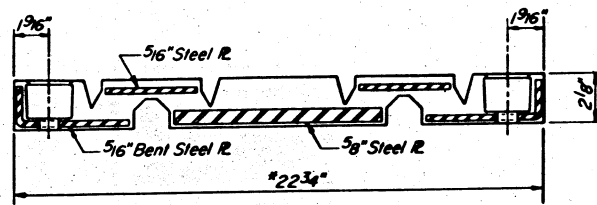


NOTE: Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.

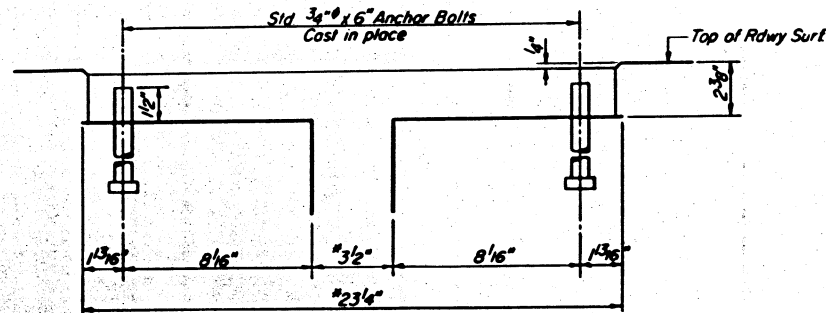
NEOPRENE EXPANSION JOINTS (2'2")
RAMP BD
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
408 W. 1605-N
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	43	85
STA.		TO STA.		
WE & REG. NO. 4	ILLINOIS	PROJECT		



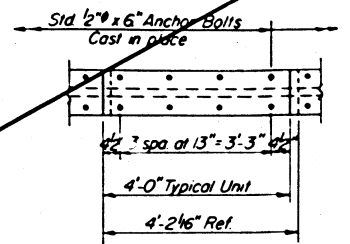
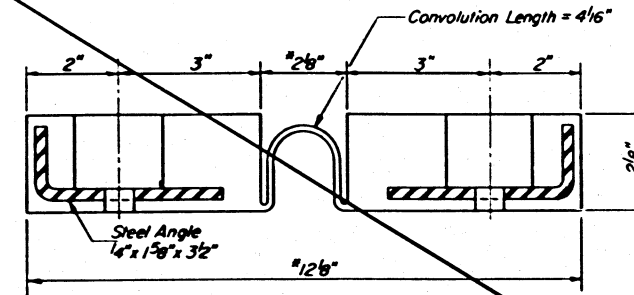
PLAN



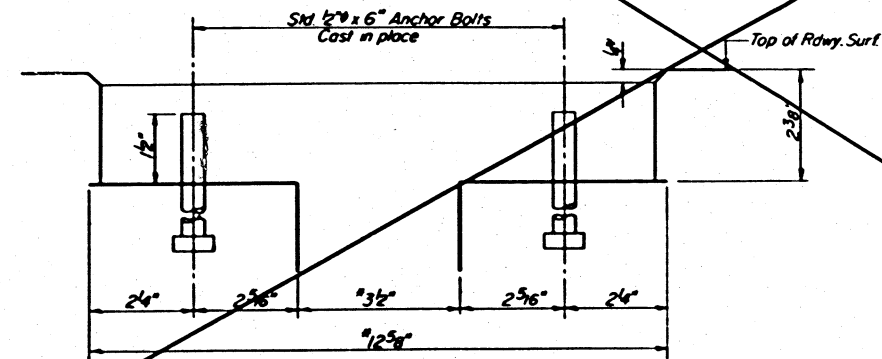
CROSS SECTION

At 50°F
Dimensions are at right angles.

TRANSFLEX MODEL 400A
(Structural Rubber Products Co.)



PLAN

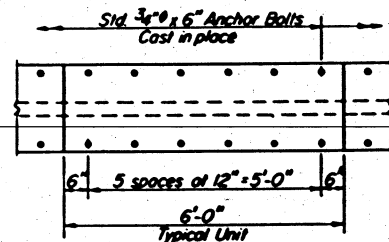
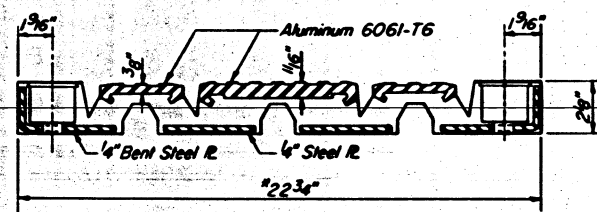


CROSS SECTION

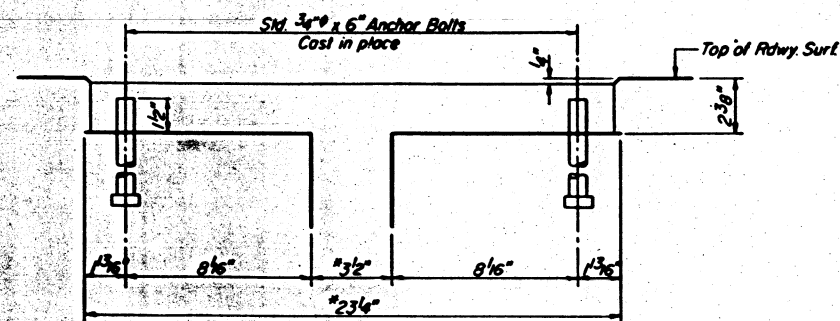
At 50°F
Dimensions are at right angles

Note: Anchor bolts require a flat washer and locknut

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



PLAN

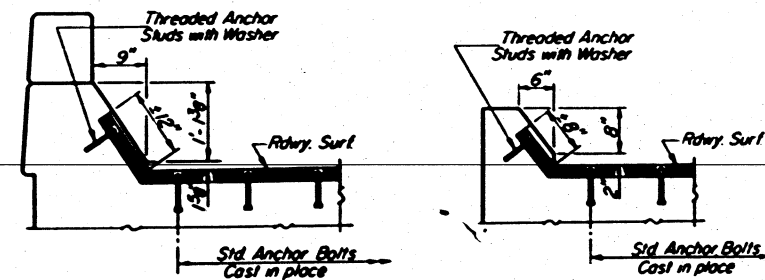


CROSS SECTION

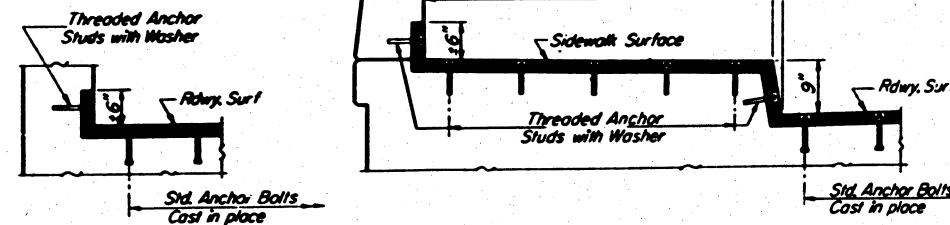
At 50°F
Dimensions are at right angles.

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

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



AT CURBS



AT ABUTMENT

AT SIDEWALK

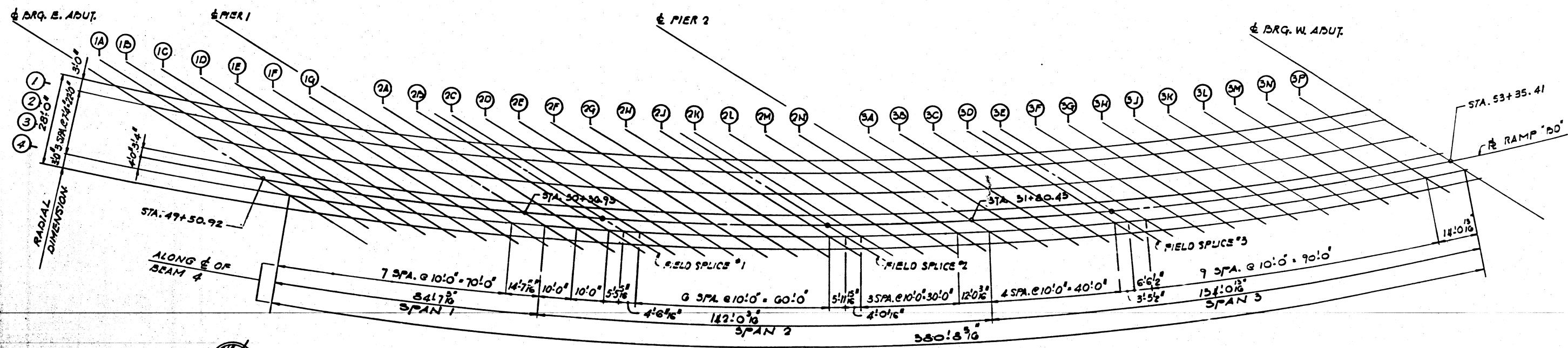
TYPICAL END TREATMENTS

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.

NEOPRENE EXPANSION JOINTS(4")

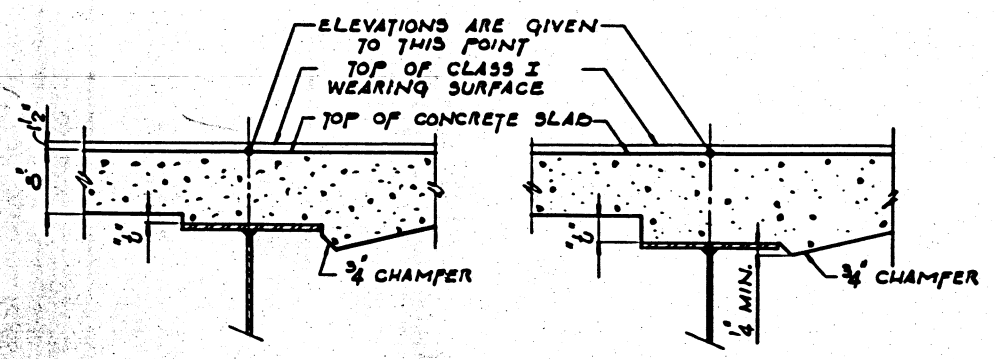
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
408 N. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

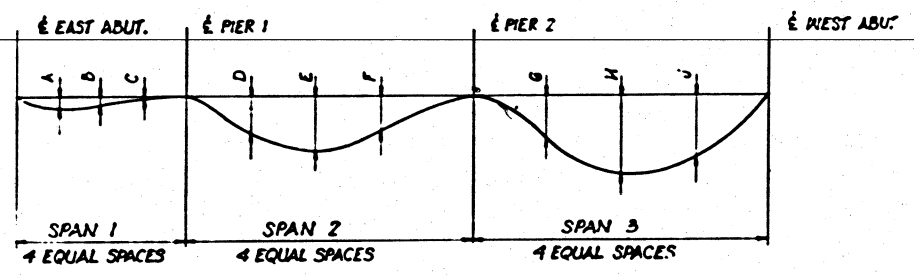


PLAN

NOTE!
 DIMENSIONS ARE GIVEN ALONG
 G IRDER 4.
 ALL OFFSETS ARE REFERENCED
 TO THE R RAMP "DD".



AT MINIMUM FILLET AT MAXIMUM FILLET
FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM
 INCLUDES WEIGHT OF CONCRETE AND INITIAL SDL.

GIRDER	SPAN 1			SPAN 2			SPAN 3		
	A	B	C	D	E	F	G	H	J
1	5/16"	5/16"	0"	1/8"	1/16"	5/8"	1/4"	2 1/2"	2"
2	5/16"	5/16"	0"	15/16"	15/16"	3/8"	13/8"	2 1/2"	2 1/8"
3	5/16"	1/8"	1/16"	3/8"	1/16"	1/8"	1 1/2"	2 3/8"	2 3/16"
4	5/16"	1/2"	1/16"	5/8"	13/16"	1/8"	1 1/2"	2 13/16"	2 1/4"

NOTE:
 THE ABOVE DEFLECTIONS ARE NOT TO BE USED
 IN THE FIELD IF THE ENGINEER IS WORKING FROM
 THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD
 DEFLECTIONS.

FILLET THICKNESS

TO DETERMINE "b" AFTER ALL STRUCTURAL STEEL HAS BEEN
 ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS
 SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS
 SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED
 FOR DEAD LOAD DEFLECTION" SHOWN ON SHEET 12
 MINUS SLAB THICKNESS, EQUALS THE
 FILLET HEIGHT "b" ABOVE TOP FLANGE OF THE GIRDERS.

TOP OF SLAB ELEVATIONS
RAMP DD
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

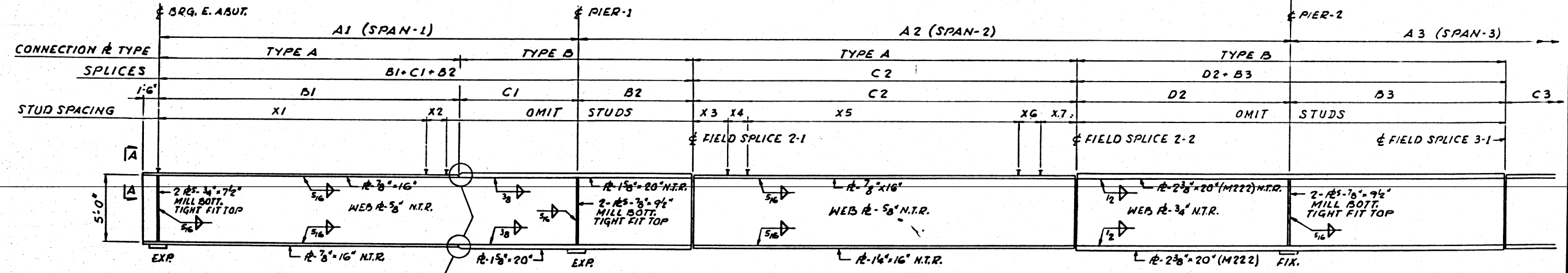
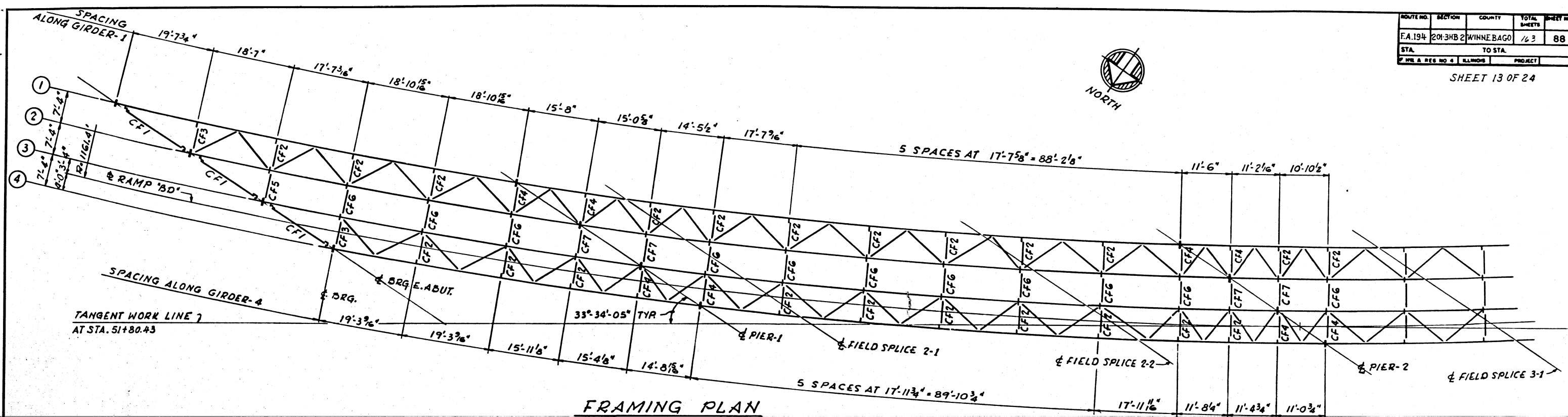
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

SPAN 1

SPAN 2

SPAN 3

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BRG E. ABUT	GIR 1	4903.876	-18.000	845.201	845.201	PIER 1	GIR 1	4999.002	-18.000	845.172	845.172	PIER 2	GIR 1	5152.364	-18.000	844.005	844.005
	GIR 2	4923.814	-10.670	845.826	845.826		GIR 2	5014.911	-10.670	845.702	845.702		GIR 2	5164.027	-10.670	844.444	844.444
	GIR 3	4942.637	-3.340	846.426	846.426		GIR 3	5030.180	-3.340	846.220	846.220		GIR 3	5175.366	-3.340	844.884	844.884
	GIR 4	4960.566	4.000	847.008	847.008		GIR 4	5044.885	4.000	846.728	846.728		GIR 4	5186.414	4.000	845.318	845.318
1A	GIR 1	4915.350	-18.000	845.226	845.241	2A	GIR 1	5010.007	-18.000	845.134	845.156	3A	GIR 1	5162.981	-18.000	843.873	843.892
	GIR 2	4934.716	-10.670	845.836	845.851		GIR 2	5025.336	-10.670	845.658	845.675		GIR 2	5174.414	-10.670	844.310	844.332
	GIR 3	4953.061	-3.340	846.423	846.439		GIR 3	5040.461	-3.340	846.168	846.180		GIR 3	5185.536	-3.340	844.743	844.768
	GIR 4	4970.532	4.000	846.997	847.009		GIR 4	5054.851	4.000	846.667	846.679		GIR 4	5196.380	4.000	845.175	845.201
1B	GIR 1	4926.732	-18.000	845.243	845.268	2B	GIR 1	5020.973	-18.000	845.090	845.139	3B	GIR 1	5173.581	-18.000	843.735	843.780
	GIR 2	4946.375	-10.670	845.840	845.865		GIR 2	5036.138	-10.670	845.603	845.643		GIR 2	5184.791	-10.670	844.168	844.219
	GIR 3	4963.447	-3.340	846.418	846.441		GIR 3	5050.731	-3.340	846.106	846.139		GIR 3	5195.702	-3.340	844.597	844.653
	GIR 4	4980.498	4.000	846.979	847.001		GIR 4	5064.816	4.000	846.601	846.627		GIR 4	5206.345	4.000	845.025	845.083
1C	GIR 1	4938.086	-18.000	845.252	845.281	F.S.1	GIR 1	5026.924	-18.000	845.063	845.129	3C	GIR 1	5184.163	-18.000	843.590	843.668
	GIR 2	4958.396	-10.670	845.837	845.865		GIR 2	5041.898	-10.670	845.571	845.626		GIR 2	5195.154	-10.670	844.019	844.106
	GIR 3	4973.815	-3.340	846.404	846.431		GIR 3	5056.319	-3.340	846.071	846.115		GIR 3	5205.863	-3.340	844.443	844.537
	GIR 4	4990.443	4.000	846.956	846.982		GIR 4	5070.239	4.000	846.562	846.598		GIR 4	5216.311	4.000	844.870	844.965
1D	GIR 1	4949.359	-18.000	845.254	845.278	2C	GIR 1	5031.901	-18.000	845.038	845.119	3D	GIR 1	5194.729	-18.000	843.439	843.553
	GIR 2	4967.181	-10.670	845.827	845.852		GIR 2	5046.718	-10.670	845.544	845.610		GIR 2	5205.312	-10.670	843.864	843.989
	GIR 3	4984.168	-3.340	846.384	846.409		GIR 3	5060.991	-3.340	846.040	846.094		GIR 3	5216.018	-3.340	844.287	844.417
	GIR 4	5000.429	4.000	846.928	846.951		GIR 4	5074.782	4.000	846.528	846.572		GIR 4	5226.277	4.000	844.709	844.843
1E	GIR 1	4960.575	-18.000	845.248	845.263	2D	GIR 1	5042.795	-18.000	844.980	845.090	F.S.3	GIR 1	5198.379	-18.000	843.385	843.512
	GIR 2	4977.932	-10.670	845.811	845.827		GIR 2	5057.276	-10.670	845.478	845.568		GIR 2	5209.090	-10.670	843.809	843.947
	GIR 3	4994.505	-3.340	846.358	846.375		GIR 3	5071.241	-3.340	845.967	846.041		GIR 3	5219.528	-3.340	844.231	844.375
	GIR 4	5010.395	4.000	846.893	846.910		GIR 4	5084.748	4.000	846.450	846.510		GIR 4	5229.722	4.000	844.652	844.799
1F	GIR 1	4971.737	-18.000	845.235	845.239	2E	GIR 1	5053.657	-18.000	844.915	845.044	3E	GIR 1	5205.280	-18.000	843.281	843.429
	GIR 2	4988.652	-10.670	845.787	845.792		GIR 2	5067.815	-10.670	845.406	845.512		GIR 2	5215.858	-10.670	843.703	843.863
	GIR 3	5004.829	-3.340	846.326	846.332		GIR 3	5082.483	-3.340	845.889	845.975		GIR 3	5226.170	-3.340	844.123	844.289
	GIR 4	5020.361	4.000	846.852	846.860		GIR 4	5096.713	4.000	846.366	846.433		GIR 4	5236.242	4.000	844.542	844.712
1G	GIR 1	4982.850	-18.000	845.215	845.211	2F	GIR 1	5064.489	-18.000	844.843	844.982	3F	GIR 1	5215.816	-18.000	843.118	843.296
	GIR 2	4999.342	-10.670	845.737	845.737		GIR 2	5078.335	-10.670	845.327	845.441		GIR 2	5226.154	-10.670	843.536	843.727
	GIR 3	5015.139	-3.340	846.287	846.287		GIR 3	5091.715	-3.340	845.805	845.896		GIR 3	5236.316	-3.340	843.953	844.151
	GIR 4	5030.326	4.000	846.806	846.807		GIR 4	5104.679	4.000	846.276	846.348		GIR 4	5246.208	4.000	844.369	844.571
2G	GIR 1	5075.291	-18.000	844.764	844.902	2G	GIR 1	5075.291	-18.000	844.764	844.902	3G	GIR 1	5226.339	-18.000	842.948	843.145
	GIR 2	5088.838	-10.670	845.243	845.354		GIR 2	5088.838	-10.670	845.243	845.354		GIR 2	5236.522	-10.670	843.363	843.574
	GIR 3	5101.940	-3.340	845.714	845.801		GIR 3	5101.940	-3.340	845.714	845.801		GIR 3	5246.459	-3.340	843.777	843.996
	GIR 4	5114.649	4.000	846.180	846.257		GIR 4	5114.649	4.000	846.180	846.257		GIR 4	5256.174	4.000	844.190	844.413
2H	GIR 1	5086.066	-18.000	844.679	844.800	2H	GIR 1	5086.066	-18.000	844.679	844.800	3H	GIR 1	5236.847	-18.000	842.771	842.982
	GIR 2	5099.324	-10.670	845.132	845.246		GIR 2	5099.324	-10.670	845.132	845.246		GIR 2	5246.841	-10.670	843.184	843.408
	GIR 3	5112.157	-3.340	845.618	845.690		GIR 3	5112.157	-3.340	845.618	845.690		GIR 3	5256.597	-3.340	843.595	843.828
	GIR 4	5124.610	4.000	846.079	846.132		GIR 4	5124.610	4.000	846.079	846.132		GIR 4	5266.139	4.000	844.006	844.242
2J	GIR 1	5096.815	-18.000	844.587	844.684	2J	GIR 1	5096.815	-18.000	844.587	844.684	3J	GIR 1	5247.343	-18.000	842.589	842.802
	GIR 2	5109.796	-10.670	845.054	845.128		GIR 2	5109.796	-10.670	845.054	845.128		GIR 2	5257.152	-10.670	842.999	843.225
	GIR 3	5122.366	-3.340	845.519	845.568		GIR 3	5122.366	-3.340	845.519	845.568		GIR 3	5266.732	-3.340	843.407	843.642
	GIR 4	5134.576	4.000	845.971	846.007		GIR 4	5134.576	4.000	845.971	846.007		GIR 4	5276.105	4.000	843.815	844.053
F.S.2	GIR 1	5103.250	-18.000	844.529	844.609	F.S.2	GIR 1	5103.250	-18.000	844.529	844.609	3K	GIR 1	5257.827	-18.000	842.400	842.602
	GIR 2	5116.063	-10.670	844.993	845.051		GIR 2	5116.063	-10.670	844.993	845.051		GIR 2	5267.456	-10.670	842.807	843.021
	GIR 3	5128.483	-3.340	845.430	845.491		GIR 3	5128.483	-3.340	845.430	845.491		GIR 3	5276.863	-3.340	843.213	843.436
	GIR 4	5140.552	4.000	845.904	845.929		GIR 4	5140.552	4.000	845.904	845.929		GIR 4	5286.071	4.000	843.619	843.843
2K	GIR 1	5107.541	-18.000	844.489	844.558	2K	GIR 1	5107.541	-18.000	844.489	844.558	3L	GIR 1	5268.299	-18.000	842.205	842.388
	GIR 2	5120.248	-10.670	844.950	844.999		GIR 2	5120.248	-10.670	844.950	844.999		GIR 2	5277.752	-10.670	842.610	842.804
	GIR 3	5132.589	-3.340	845.406	845.438		GIR 3	5132.589	-3.340	845.406	845.438		GIR 3	5286.990	-3.340	843.013	843.216
	GIR 4	5144.542	4.000	845.858	845.875		GIR 4	5144.542	4.000	845.858	845.875		GIR 4	5296.036	4.000	843.417	843.622
2L	GIR 1	5118.243	-18.000	844.384	844.425	2L	GIR 1	5118.243	-18.000	844.384	844.425	3M	GIR 1	5278.759	-18.000	842.004	842.157
	GIR 2	5130.689	-10.670	844.840	844.866		GIR 2	5130.689	-10.670	844.840	844.866		GIR 2	5288.040	-10.670	842.406	842.568
	GIR 3	5142.764	-3.340	845.291	845.304		GIR 3	5142.764	-3.340	845.291	845.304		GIR 3	5297.114	-3.340	842.808	842.977
	GIR 4	5154.507	4.000	845.739	845.740		GIR 4	5154.507	4.000	845.739	845.740		GIR 4	5306.002	4.000	843.210	843.381
2M	GIR 1	5128.923	-18.000	844.273	844.291	2M	GIR 1	5128.923	-18.000	844.273	844.291	3N	GIR 1	5289.209	-18.000	841.796	841.910
	GIR 2	5141.116	-10.670	844.724	844.732		GIR 2	5141.116	-10.670	844.724	844.732		GIR 2	5298.322	-10.670	842.196	842.316
	GIR 3	5152.954	-3.340	845.171	845.170		GIR 3	5152.954	-3.340	845.171	845.170		GIR 3	5307.235	-3.340	842.597	842.724
	GIR 4	5164.473	4.000	845.614	845.605		GIR 4	5164.473	4.000								



GIRDERS DIMENSIONS (SEE ELEVATION)

GIRDER	A1	B1	C1	A2	B2	C2	D2	A3	B3	C3	RADIUS (FT.)
1	93'-7 1/2"	66'-1 1/8"	27'-5 3/8"	150'-11 1/8"	27'-5 3/8"	75'-1 1/8"	48'-4 1/4"	159'-5 5/8"	45'-3 3/8"	114'-1 1/8"	1143.40
2	90'-3 3/8"	63'-6 1/4"	26'-8 3/8"	147'-8 1/8"	26'-8 3/8"	73'-5 1/8"	47'-6 1/4"	157'-6 5/8"	44'-7 3/8"	112'-10 3/4"	1150.73
3	87'-3 3/8"	61'-2 3/8"	26'-0 1/8"	144'-9 3/8"	26'-0 1/8"	71'-11 1/2"	46'-9"	155'-9 3/8"	44'-0 1/8"	111'-8 3/4"	1158.06
4	84'-7 3/8"	59'-2"	25'-5 5/8"	142'-0 3/8"	25'-5 5/8"	70'-6"	46'-0 3/8"	154'-0 1/8"	43'-5 1/2"	110'-7 5/8"	1165.40

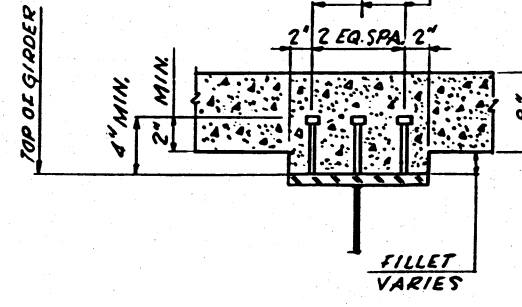
NOTE: GIRDER DIMENSIONS ARE ALONG CENTERLINE OF GIRDER AND ARE HORIZONTAL.

STUD SPACING AND LOCATION

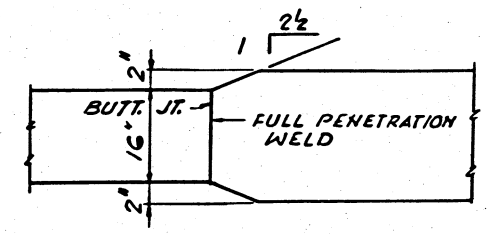
GIRDER	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
1	67@11 1/2" = 64'-2 1/2"	3@6'-1 1/8" = 3'-0 3/8"	3@5'-1 1/8" = 3'-0 3/8"	53@1'-3 1/8" = 66'-3"	3@5'-1 1/8" = 3'-3 3/8"	3@10'-1/8" = 30'-3 1/8"	3@4'-1 1/8" = 12'-3 1/8"	3@6'-2 1/8" = 18'-6 1/8"	57@1'-1 1/8" = 109'-3"	
2	64@11 1/2" = 61'-4"	3@7'-1 1/8" = 3'-1 1/8"	3@5'-1 1/8" = 3'-0 3/8"	52@1'-3 1/8" = 65'-0"	3@5'-1 1/8" = 3'-3 3/8"	2@10'-1/8" = 20'-1 1/8"	3@11 1/4" = 33'-3 1/4"	3@6'-2 1/8" = 18'-6 1/8"	56@1'-1 1/8" = 107'-4"	
3	62@11 1/2" = 59'-5"	3@6'-1 1/8" = 3'-0 3/8"	2@4'-0" = 2'-0"	52@1'-3 1/8" = 65'-0"	3@5'-1 1/8" = 3'-3 3/8"	2@10'-1/8" = 20'-1 1/8"	4@0'-3 1/8" = 4'-0 3/8"	3@9'-2 1/8" = 27'-6 1/8"	55@1'-1 1/8" = 105'-5"	
4	59@11 1/2" = 56'-6 1/2"	3@8'-2 1/8" = 3'-6 1/8"	2@6'-3/8" = 2'-6 3/8"	50@1'-3 1/8" = 62'-6"	3@5'-1 1/8" = 3'-3 3/8"	3@5'-1 1/8" = 3'-3 3/8"	3@9'-3/8" = 27'-1 1/8"	3@5'-2 1/8" = 15'-6 1/8"	55@1'-1 1/8" = 105'-5"	

ELEVATION

3/4" GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED TO FLANGE (NO. REQ'D = 2349)



SECTION A-A



DETAIL B

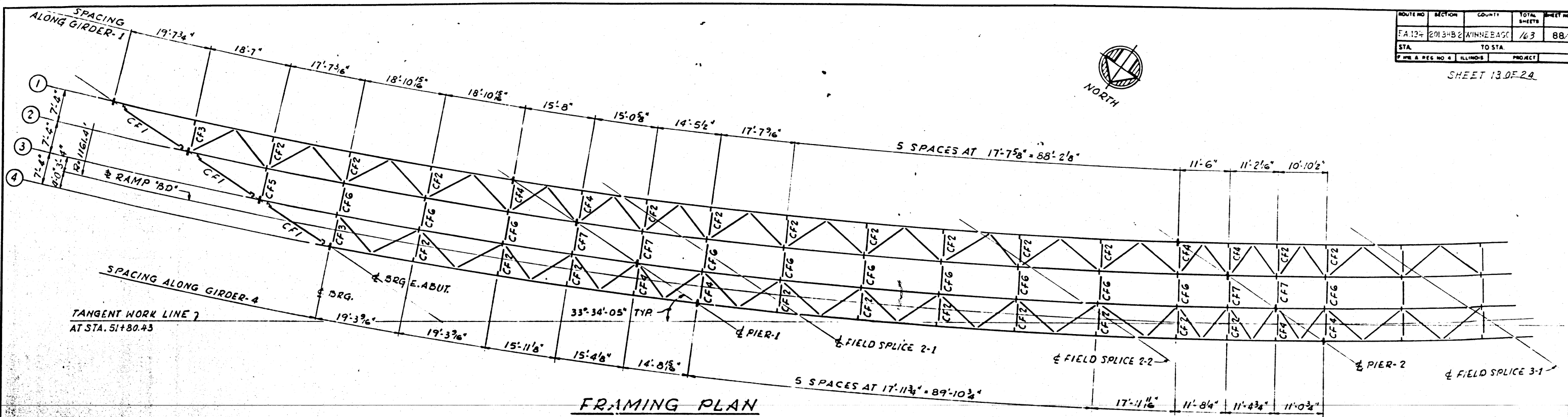
NOTE: N.T.R. DESIGNATES MEMBERS SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS. ALL STRUCTURAL STEEL SHALL BE AASHTO DESIGNATION M183 EXCEPT AS NOTED.

FRAMING PLAN AND ELEVATIONS
RAMP RD.
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 51+80.43

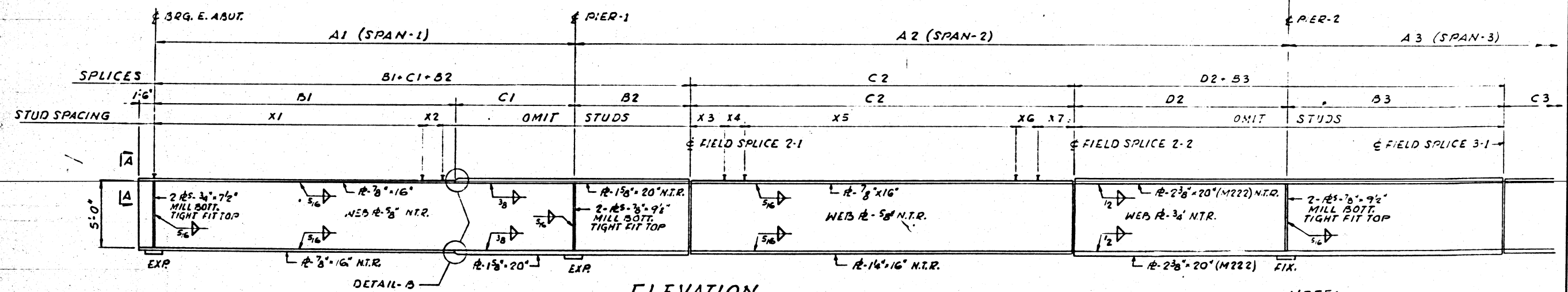
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233N. MICHIGAN AVE., CHICAGO, ILLINOIS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 134	2013-B-2	WINNEBAGO	163	88/1
STA.	TO STA.			
P.W.E. & REG. NO. 4	ILLINOIS	PROJECT		

SHEET 13 OF 24



FRAMING PLAN



ELEVATION

GIRDERS DIMENSIONS (SEE ELEVATION)

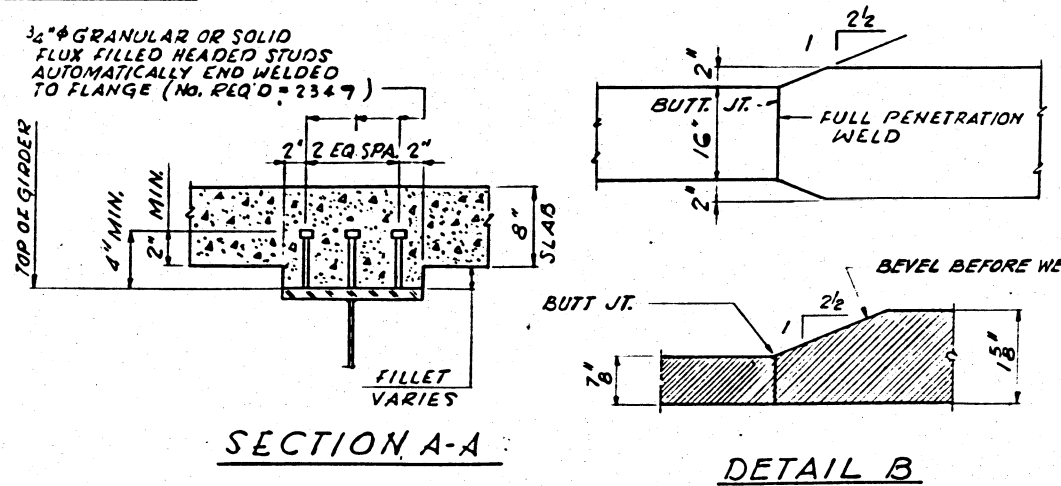
GIRDER	A1	B1	C1	A2	B2	C2	D2	A3	B3	C3	RADIUS (FT.)
1	93'-7 1/8"	66'-11 1/8"	27'-5 3/8"	150'-11 1/8"	27'-5 3/8"	75'-11 1/8"	48'-4 1/4"	159'-5 5/8"	45'-3 3/8"	114'-1 1/8"	1143.40
2	90'-3 3/8"	63'-6 1/4"	26'-8 3/8"	147'-8 1/8"	26'-8 3/8"	73'-5 1/8"	47'-6 1/4"	157'-6 5/8"	44'-7 3/8"	112'-10 3/8"	1150.73
3	87'-3 3/4"	61'-2 3/8"	26'-0 1/8"	144'-9 3/8"	26'-0 1/8"	71'-11 1/2"	46'-9"	155'-9 3/8"	44'-0 7/8"	111'-8 3/4"	1158.06
4	84'-7 5/8"	59'-2"	25'-5 5/8"	142'-0 3/8"	25'-5 5/8"	70'-6 1/8"	46'-0 3/8"	154'-0 1/8"	43'-5 1/2"	110'-7 5/8"	1165.40

NOTE: GIRDER DIMENSIONS ARE ALONG CENTERLINE OF GIRDER AND ARE HORIZONTAL.

STUD SPACING AND LOCATION

GIRDER	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
1	67@11'-2"-64'-2 1/2"	3@6'-1 1/2"	3'-0 3/8"	3@5'-1 1/2"	53@1'-3"-66'-3"	3@5'-1 1/2"	3'-3 1/8"	3'-10 1/16"	3@4'-1 0"	57@1'-11"-109'-3"
2	64@11'-2"-61'-4"	3@7'-1 1/4"	3'-1 3/8"	3@5'-1 1/2"	52@1'-3"-65'-0"	3@5'-1 1/2"	2'-10 1/16"	3'-11 1/2"	3@6'-2"-1-7 1/2"	56@1'-11"-107'-4"
3	62@11'-2"-59'-5"	3@6'-1 1/2"	2'-4 1/4"	3@5'-1 1/2"	52@1'-3"-65'-0"	3@5'-1 1/2"	2'-11 1/4"	4'-0 3/4"	3@9'-2'-3"	55@1'-11"-105'-5"
4	59@11'-2"-56'-6 1/2"	3@8'-2'-0"	2'-6 3/8"	3@5'-1 1/2"	50@1'-3"-62'-6"	3@5'-1 1/2"	3'-9 1/16"	3'-9 1/16"	3@5'-2"-1-4 1/2"	55@1'-11"-105'-5"

AS REVISED



SECTION A-A

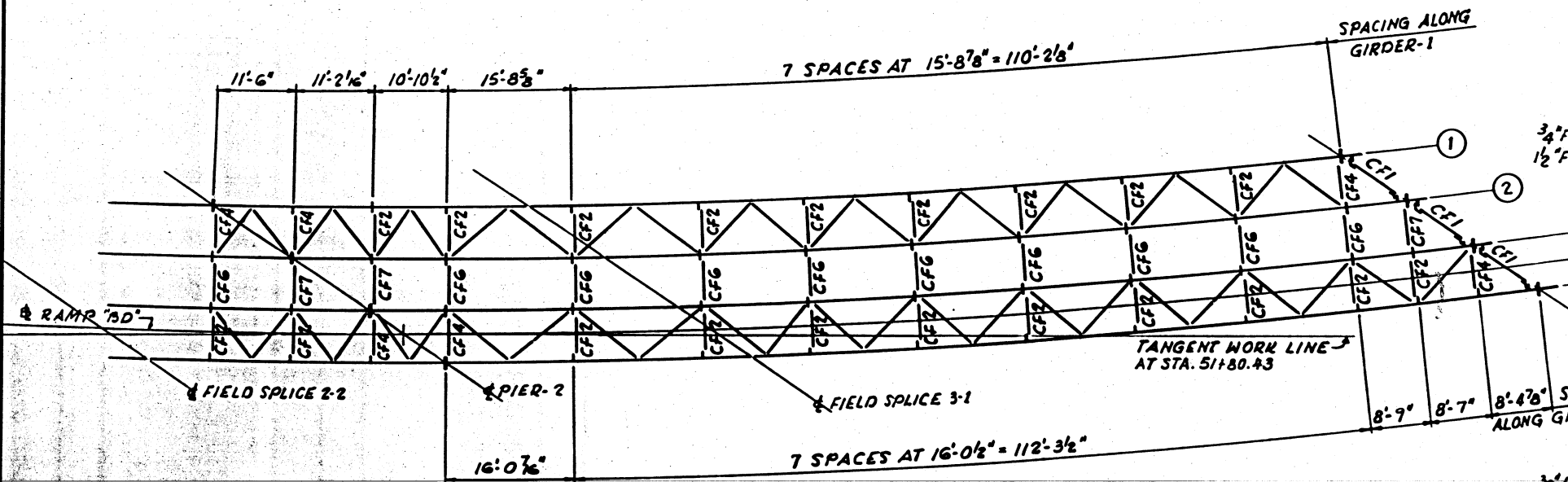
DETAIL B

NOTE:
N.T.R. DESIGNATES MEMBERS SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS. ALL STRUCTURAL STEEL SHALL BE AASHTO DESIGNATION M183 EXCEPT AS NOTED.

FRAMING PLAN AND ELEVATIONS
RAMP BD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

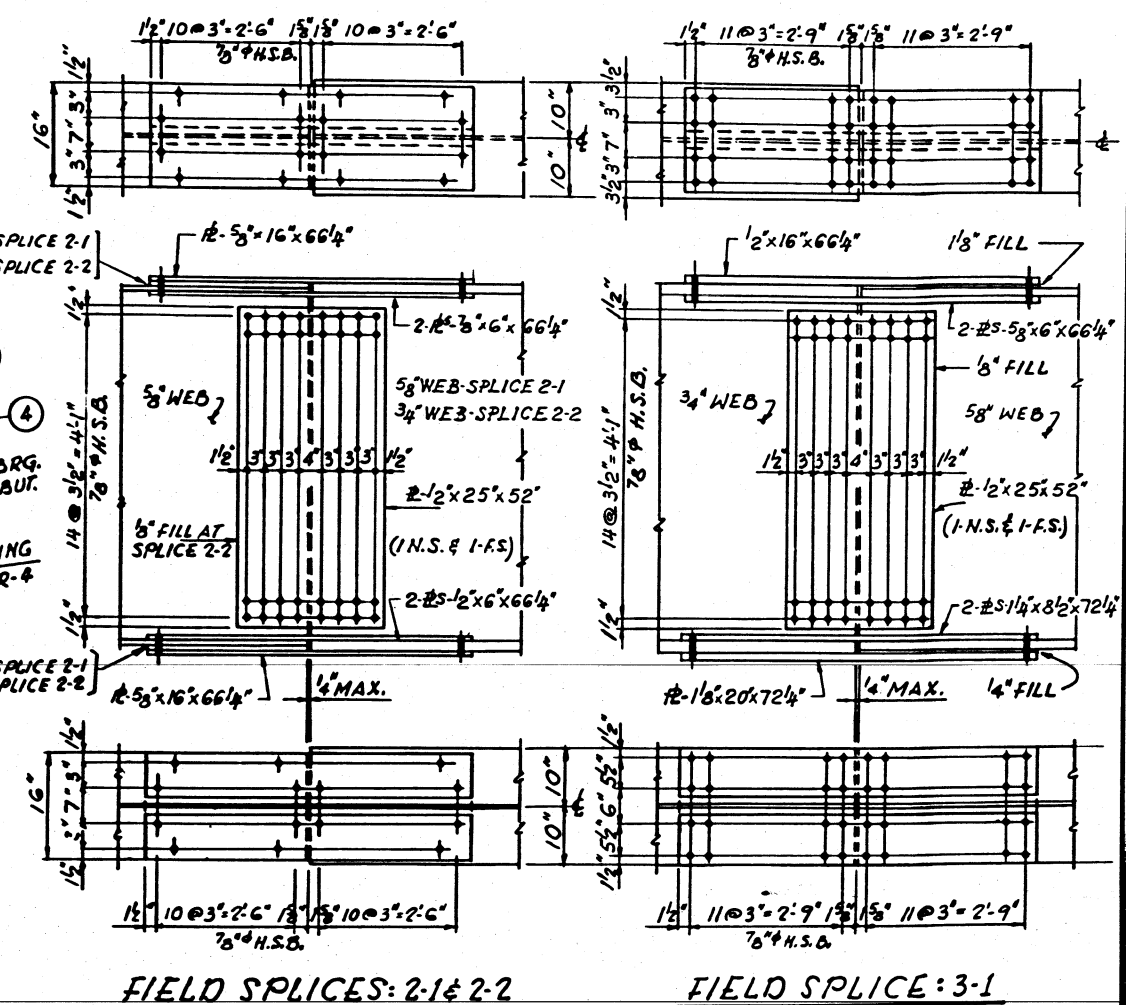
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1605-K
233 N. MICHIGAN AVE. CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A. 194	2013HB 2	WINNEBAGO	43	89
STA.	TO STA.			
718 & RES NO 4	ILLINOIS	PROJECT		



CONNECTION # TYPE		TYPE B		TYPE A	
SPLICES	D2 + B3			C3	
STUD SPACING	D2	B3		C3	
FIELD SPLICE 2-2					
FIELD SPLICE 3-1					

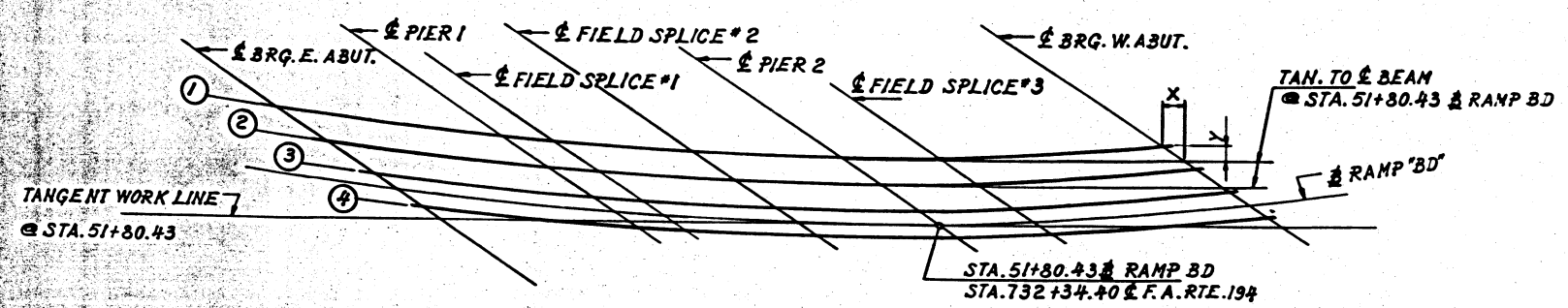
BRG. E. ABUT.	PIER 1	SP1	SP2	PIER 2	SP3	BRG. W. ABUT.
1	2	3	4	5	6	7



ELEVATION

LAYOUT DIMENSIONS (IN FEET)

BEAM	BRG. E. ABUT.		PIER 1		SP1		SP2		PIER 2		SP3		BRG. W. ABUT.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	48.6193	32.2635	20.9809	13.9228	15.0286	9.9729	3.8032	2.5238	0.5030	0.3338	0.2070	0.1365	11.4363	7.5891
2	42.1576	27.9756	17.5808	11.6665	12.3215	8.1765	2.6625	1.7668	0.1730	0.1148	0.5279	.3503	13.0565	8.6642
3	36.4380	24.1801	14.5797	9.6750	9.9526	6.6045	1.7441	1.1574	0.0164	0.0109	0.9895	0.6566	14.7605	9.795
4	31.3753	20.8205	11.9467	7.9278	7.8985	5.2414	1.0351	0.6869	0.0234	0.0155	1.5814	1.0494	16.5399	10.9758
BRG. W. ABUT.	34.0628	22.6039	13.3405	8.8527	8.9824	5.9607	1.3971	0.9277	0.0	0.0	1.2425	0.8246	15.5593	10.3258

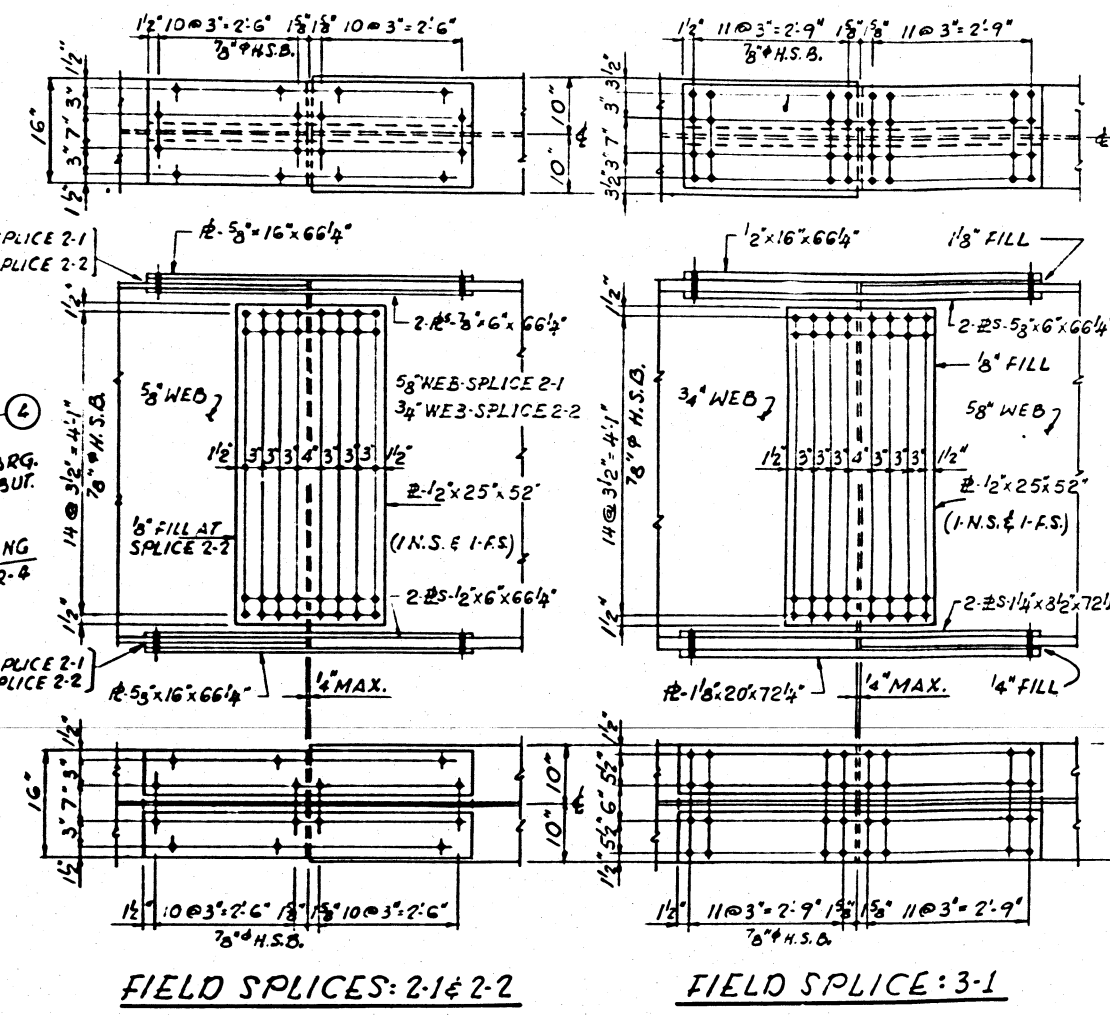
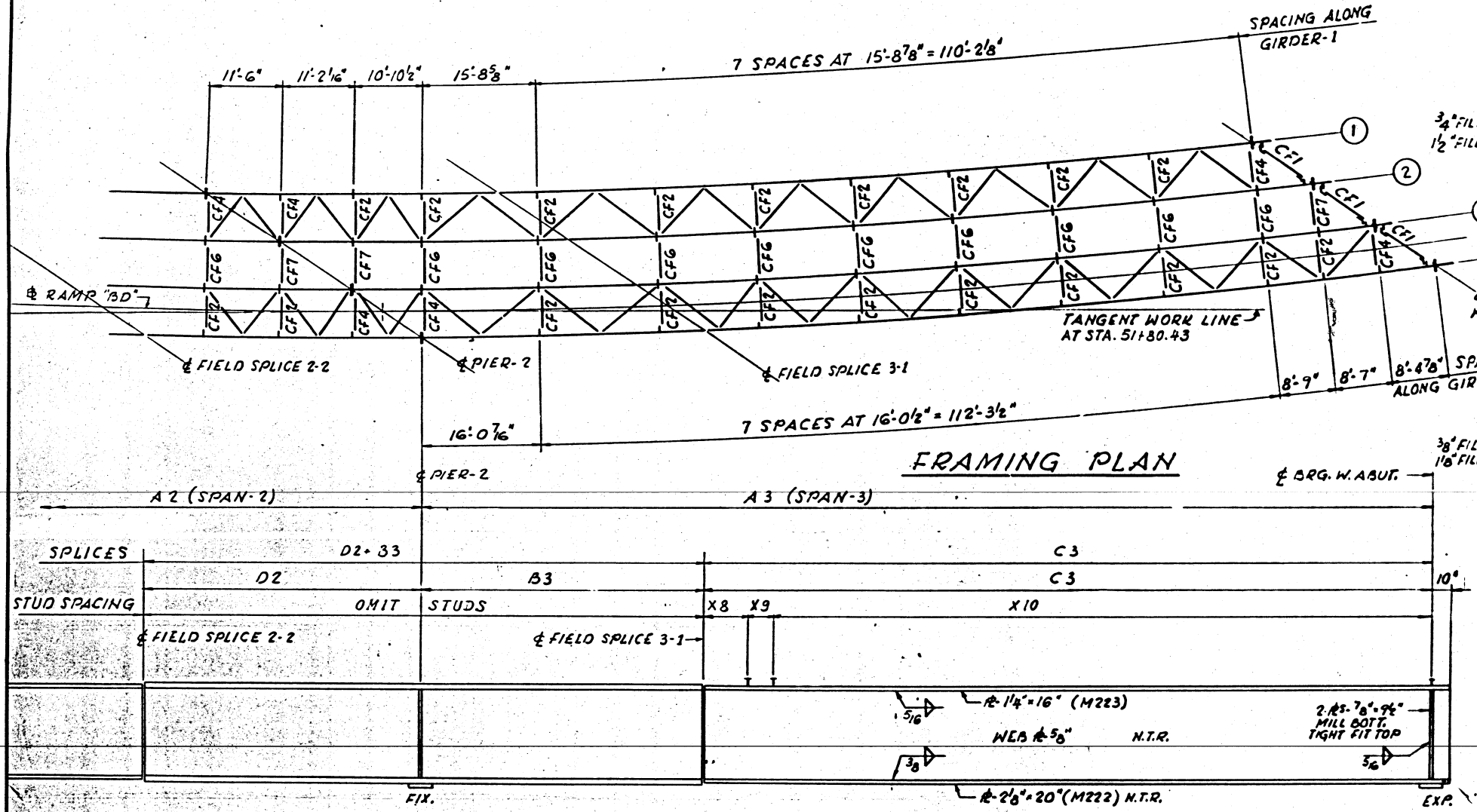


GIRDER LAYOUT PLAN

FRAMING PLAN AND ELEVATIONS
 RAMP BD.
 OVER F.A. ROUTE 194
 PROJECT
 SECTION 201-3HB-2
 WINNEBAGO COUNTY
 STATION 81+80.43

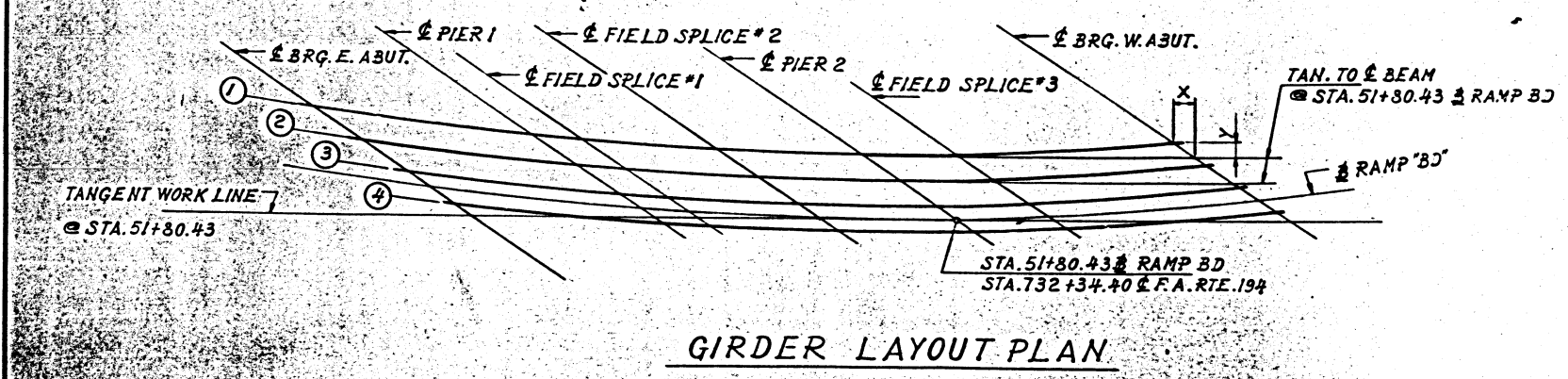
ALFRED BENESCH & COMPANY
 CONSULTING ENGINEERS
 JOB NO. 1605-K
 233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	2013HB 2	WINNEBAGO	43	69A
STA.	TO STA.	PROJECT		
172 & RES NO 4	ILLINOIS			



LAYOUT DIMENSIONS (IN FEET)

BEAM	BRG. E. ABUT.		PIER 1		SP1		SP2		PIER 2		SP3		BRG. W. ABUT.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	48.6193	32.2635	20.9809	13.9228	15.0286	9.9729	3.8032	2.5238	0.5030	0.3338	0.2070	0.1365	11.4363	7.5891
2	42.1576	27.9756	17.5808	11.6665	12.3215	8.1765	2.6625	1.7668	0.1730	0.1148	0.5279	.3503	13.0565	8.6642
3	36.4380	24.1801	14.5797	9.6750	9.9526	6.6045	1.7441	1.1574	0.0164	0.0109	0.9395	0.6566	14.7605	9.795
4	31.3753	20.8205	11.9467	7.9278	7.8985	5.2414	1.0351	0.6869	0.0234	0.0155	1.5814	1.0494	16.5399	10.9758
BRG. W. ABUT.	34.0628	22.6039	13.3405	8.8527	8.9824	5.9607	1.3971	0.9277	0.0	0.0	1.2425	0.8246	15.5593	10.3258



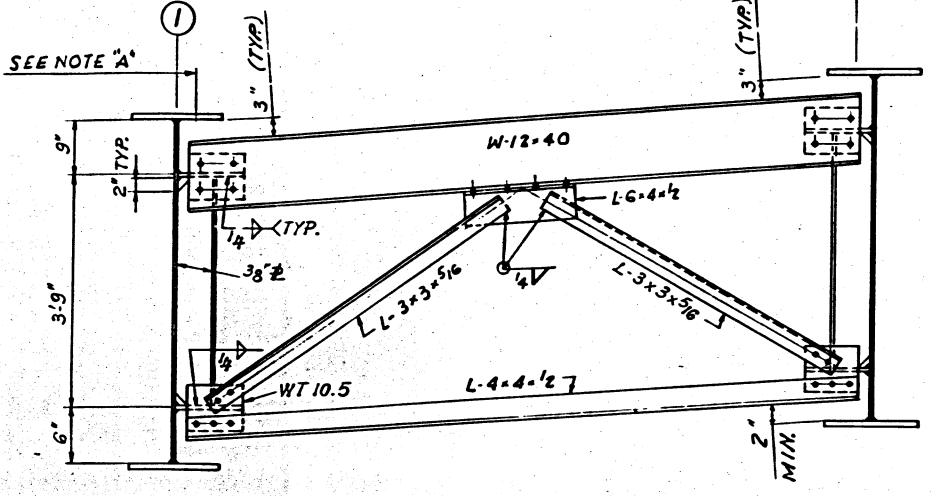
AS REVISED

FRAMING PLAN AND ELEVATIONS
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
2334 MICHIGAN AVE., CHICAGO, ILLINOIS

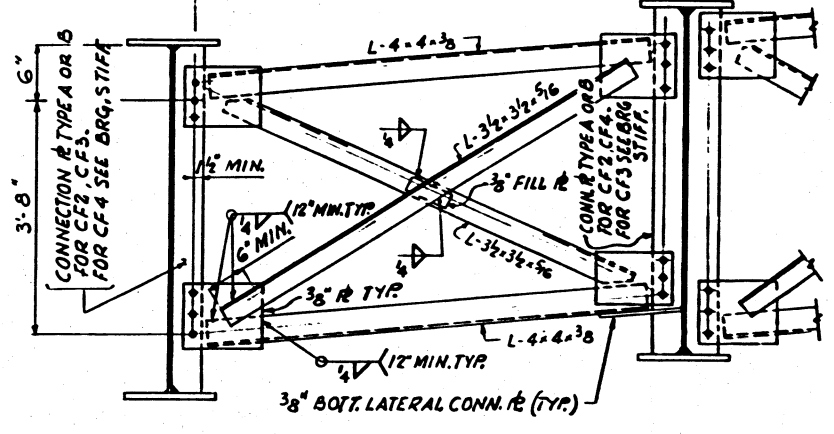
NOTE 'A': 1/2" HLS IN R² FOR 3/4" H.S. BOLTS
HARDENED WASHER REQ'D OVER HLS IN 3/8" R²

SEE NOTE 'A'



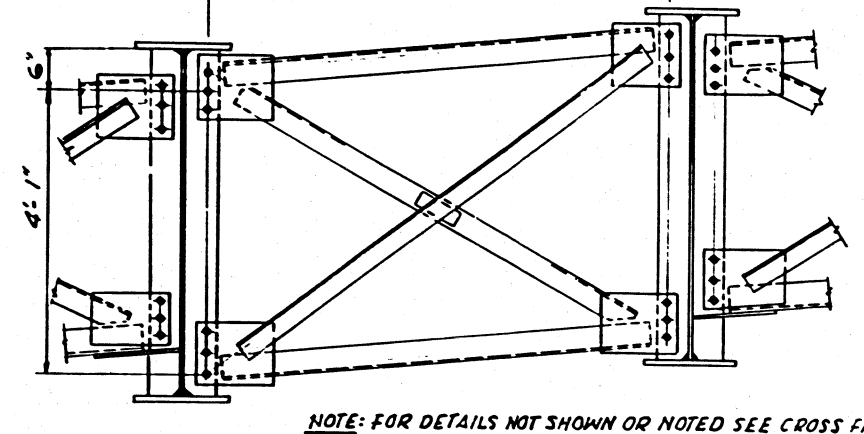
CROSS FRAME-CF1

CF2	6'-6 1/2"
CF3	6'-5"
CF4	6'-3"



CROSS FRAME-CF2
CROSS FRAME CF3 & CF4 SIMILAR
EXCEPT AS SHOWN OR NOTED

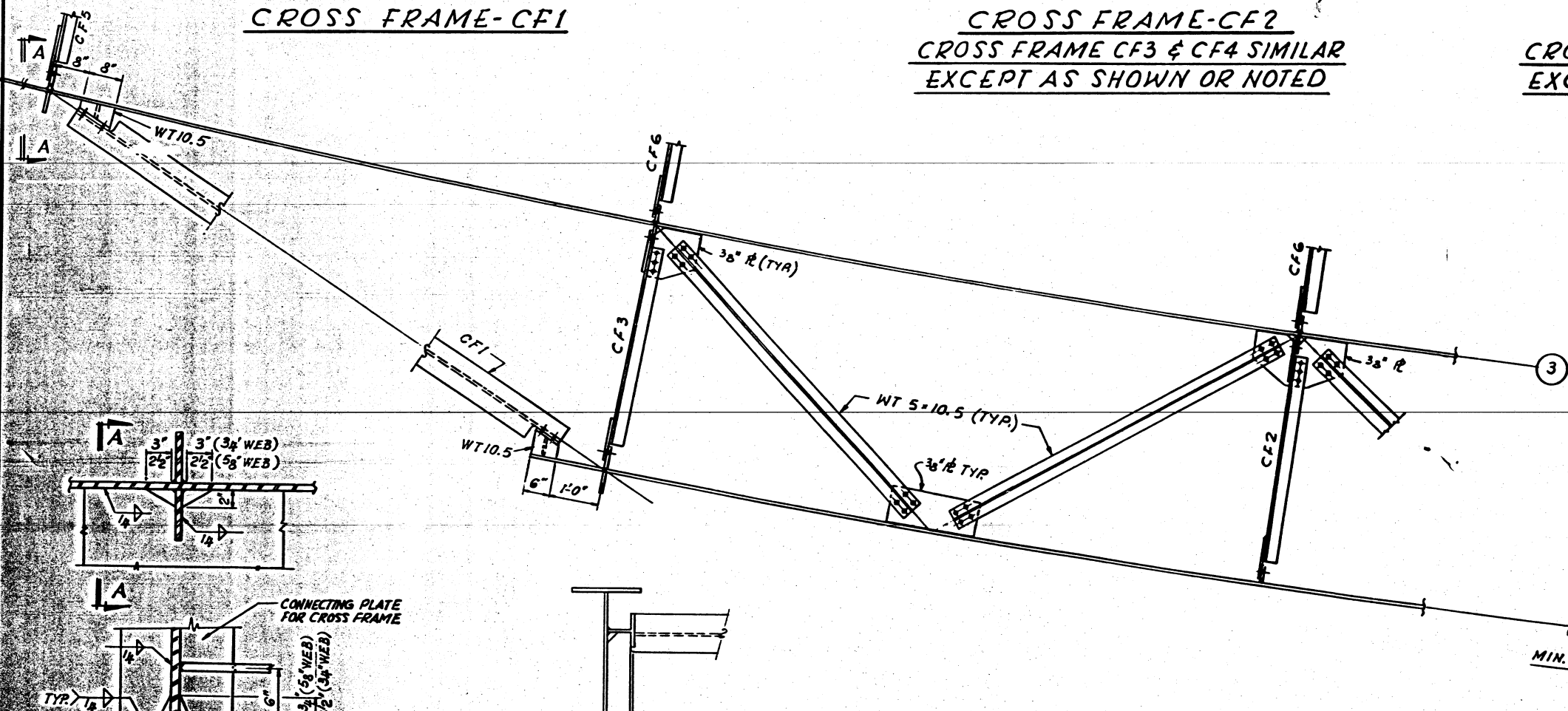
CF5	6'-5"
CF6	6'-6 1/2"
CF7	6'-3"



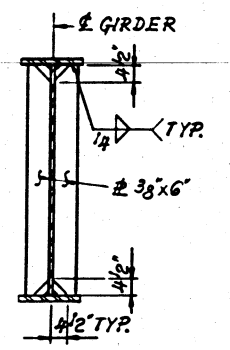
CROSS FRAME-CF6
CROSS FRAME CF5 & CF7 SIMILAR
EXCEPT AS SHOWN OR NOTED

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	90
STA.		TO STA.		
7 INCH & 1/2 INCH		PROJECT		

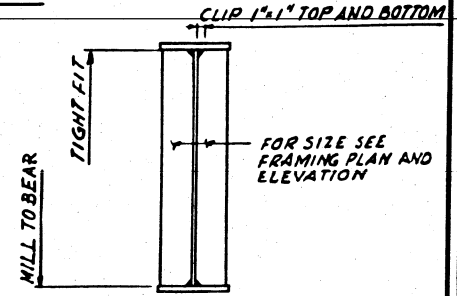
SHEET 15 OF 24



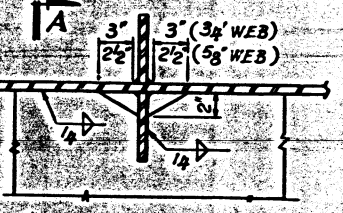
TYPICAL BOTTOM LATERAL BRACING CONNECTIONS



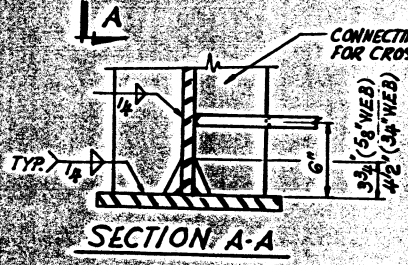
CONNECTION #5



BEARING STIFFENER #5

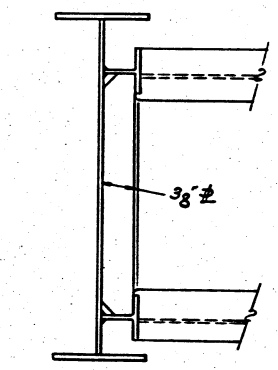


CONNECTING PLATE FOR CROSS FRAME



SECTION A-A

DETAIL FOR BOTTOM LATERAL CONNECTIONS.



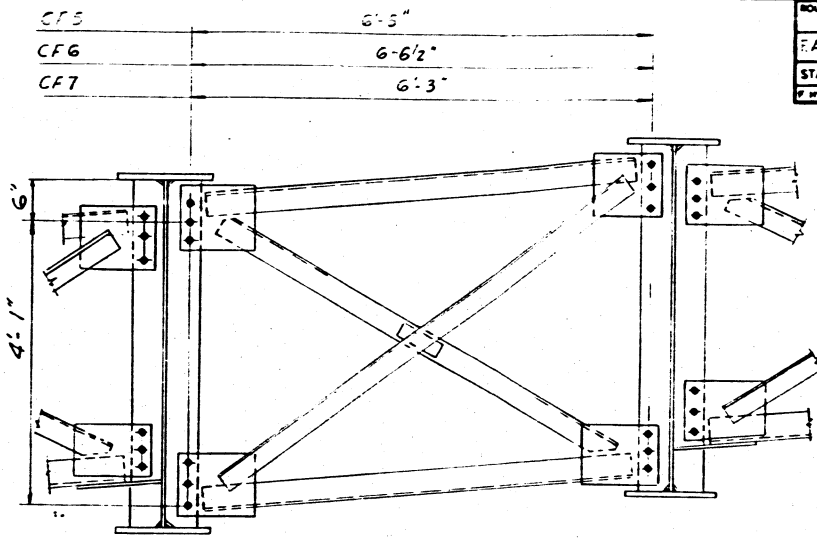
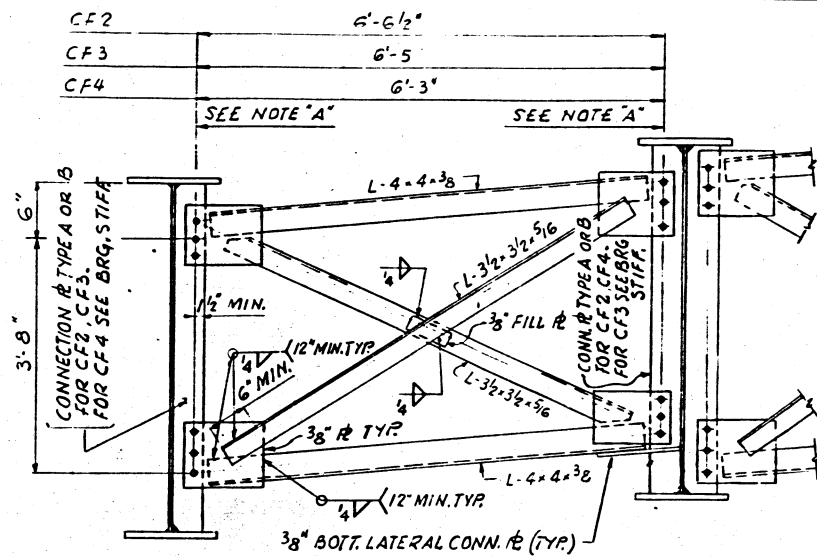
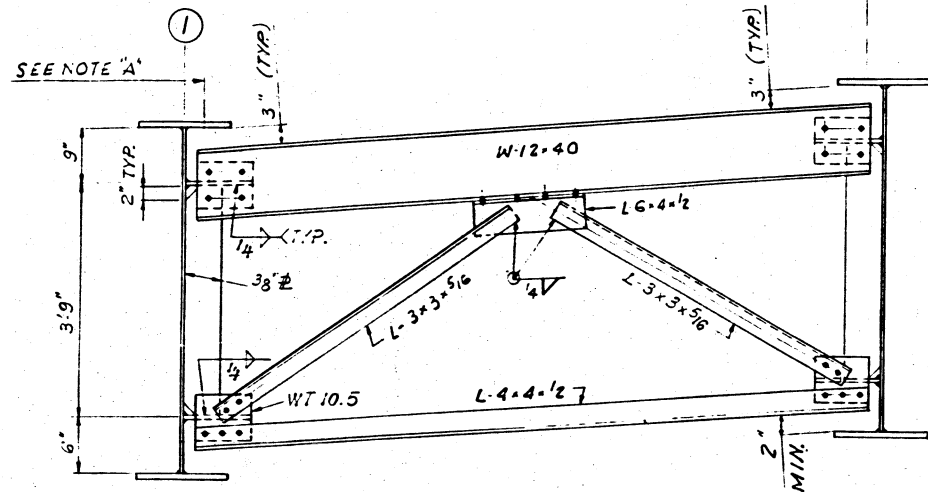
SECTION A-A

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

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

NOTE A: 1/2" HLS IN 4'S FOR 3/4" H.S. BOLTS
HARDENED WASHER REQD OVER HLS IN 3/8" 4'S

SEE NOTE A



ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	90	90
STA.		TO STA.		
F.W.E. & REG. NO. 4		ILLINOIS		PROJECT

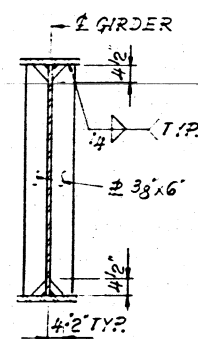
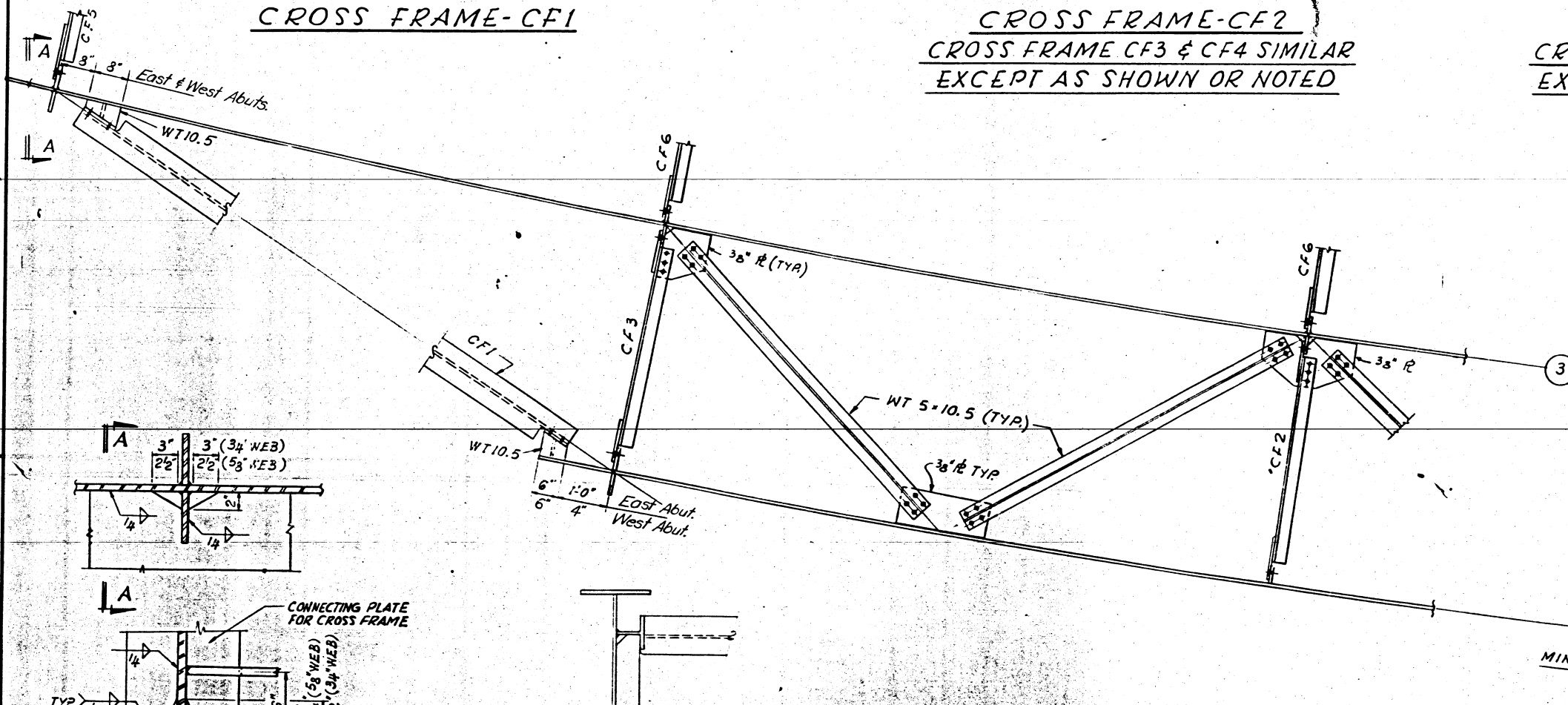
SHEET 15 OF 24

NOTE: FOR DETAILS NOT SHOWN OR NOTED SEE CROSS FRAME CF2

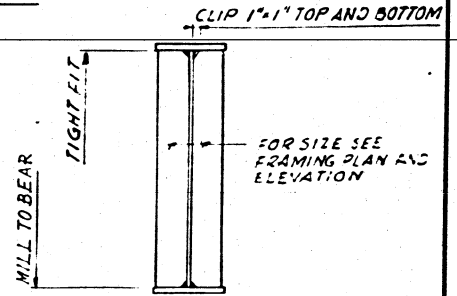
CROSS FRAME-CF1

CROSS FRAME-CF2
CROSS FRAME CF3 & CF4 SIMILAR
EXCEPT AS SHOWN OR NOTED

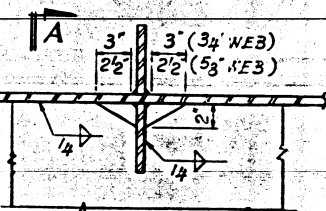
CROSS FRAME-CF6
CROSS FRAME-CF5 & CF7 SIMILAR
EXCEPT AS SHOWN OR NOTED



CONNECTION #2



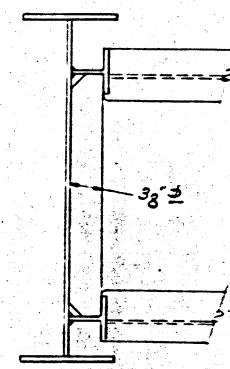
BEARING STIFFENER #2



SECTION A-A

DETAIL FOR BOTTOM LATERAL CONNECTIONS.

CONNECTING PLATE FOR CROSS FRAME



SECTION A-A

TYPICAL BOTTOM LATERAL BRACING CONNECTIONS

AS REVISED

MIN. CL. 1" TO WEB SPLICE #2 AT FIELD SPLICES

As Revised 1-6-78 L.W.

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

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

MOMENT TABLE

(COMPOSITE IN POSITIVE MOMENT AREAS ONLY)

MAXIMUM MOMENT TABLE					
	0.4 L ₁	PIER 1	0.4 L ₂	PIER 2	0.6 L ₃
I _s (in ⁴)	57192	72980	42495	105953	66026
I _c (in ⁴)	80825	—	96775	—	143598
S _s (in ³)	1204	2307	1484	3273	2636
S _c (in ³)	1635	—	2017	—	3340
S _{TOP FL.} (in ³)	37	108	33	158	142
S _{BOFF FL.} (in ³)	37	108	33	158	142
Q (K/I)	0.944	0.944	0.985	0.985	1.007
M _Q (K)	354	-1562	707	-3024	2259
f _s (OL) (K/S)	3.53	8.13	5.43	11.09	10.28
SDL (K/I)	0.536	0.536	0.536	0.536	0.536
M _{SDL} (FT-K)	225	-787	454	-1488	1252
M _Q (FT-K)	738	-945	804	-1494	1759
M _{imp} (FT-K)	176	-198	161	-273	311
M _{SDL+Q} (FT-K)	1139	1930	1479	-3255	3302
f _{SDL+Q} (K/S)	8.36	10.03	8.95	11.93	11.87
M _{LATERAL} (FT-K)	9	13	13	37	24
f _s LATERAL (K/S)	2.86	1.44	2.97	2.81	2.00
f _s TOTAL (K/S)	14.75	19.60	17.26	25.83	24.15
VR (K)	48.7		52.6		51.3

NOTES!

I_s AND S_s ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF STEEL SECTION.

I_c AND S_c ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s.

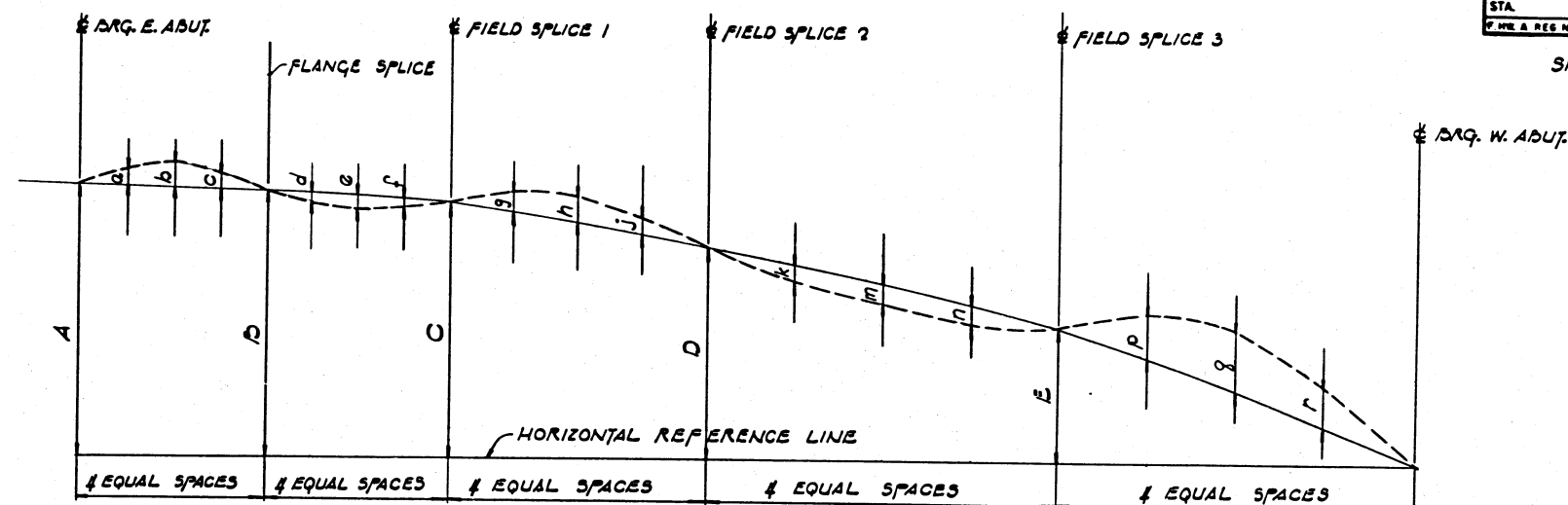
VR IS THE MAXIMUM L.L. + IMPACT SHEAR RANGE IN SPAN.

REACTION TABLE

MAXIMUM REACTION TABLE				
LOCATION	EAST ABUT.	PIER 1	PIER 2	WEST ABUT.
R _Q (K)	42.9	202.4	293.6	110.8
R _L (K)	41.9	77.6	97.3	52.4
IMP (K)	10.1	16.3	17.6	9.4
R _{TOTAL} (K)	94.9	296.3	408.5	172.6

T/WEB ELEVATIONS FOR FABRICATION ONLY

LOCATION	GIRDER	0.4 DRG. E. ABUT.	PIER 1	P.S. 1.	P.S. 2	PIER 2	P.S. 3	0.6 DRG. W. ABUT.
1		844.340	844.241	844.160	843.582	843.011	842.454	841.304
2		844.771	844.771	844.665	844.019	843.452	842.872	842.709
3		845.371	845.289	845.143	844.435	843.870	843.321	842.118
4		846.133	845.777	845.375	844.889	844.342	843.740	842.531



GIRDER	A	a	b	C	D	d	e	f	G	g	h	j	D	k	m	n	E	p	q	r
1	4'-0 1/2"	3 1/2"	1/2"	3/8"	4'-0"	-3/16"	-1/4"	-3/16"	3'-10 3/8"	1"	1 3/8"	1 1/16"	3'-3 3/8"	-9/16"	-3/4"	-9/16"	2'-1 1/2"	2 1/8"	3 3/8"	2 7/16"
2	4'-3 3/8"	3 3/8"	1/8"	1/16"	4'-1 3/4"	-3/16"	-1/4"	-3/16"	3'-11 1/2"	1"	1 3/8"	1 1/16"	3'-3 3/8"	-9/16"	-3/4"	-9/16"	2'-2 3/16"	2 1/8"	3 3/8"	2 7/16"
3	4'-5 7/16"	1 1/16"	1"	1/16"	4'-3 3/8"	-3/16"	-1/4"	-3/16"	4'-0 1/4"	1"	1 3/8"	1 1/16"	3'-4"	-9/16"	-3/4"	-9/16"	2'-2 1/16"	2 1/8"	3 3/8"	2 7/16"
4	4'-7 1/2"	3 1/4"	1 3/8"	1/16"	4'-4 7/16"	-3/16"	-1/4"	-3/16"	4'-0 3/4"	1"	1 3/8"	1 1/16"	3'-4 1/4"	-9/16"	-3/4"	-9/16"	2'-2 1/16"	2 1/8"	3 3/8"	2 7/16"

CAMBER DIAGRAM

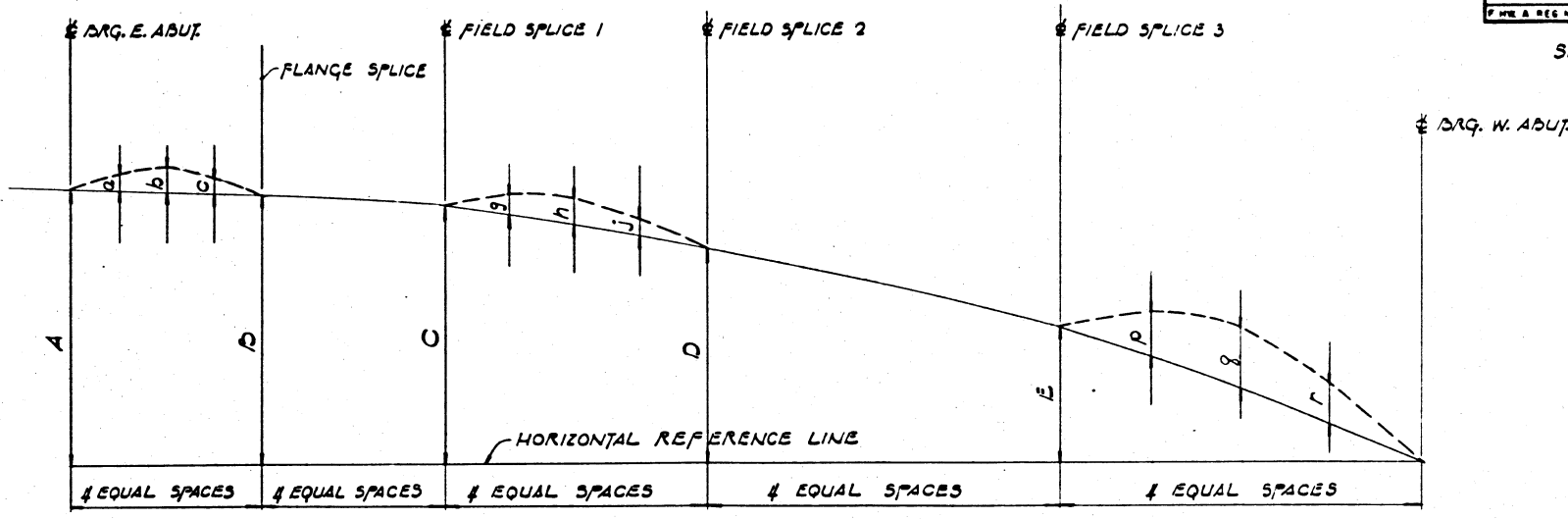
NOTE:

FOR HORIZONTAL DIMENSIONS SEE STEEL FRAMING PLAN SHEETS 13 & 14.

MOMENT TABLE

(COMPOSITE IN POSITIVE MOMENT AREAS ONLY)

MAXIMUM MOMENT TABLE					
	O.4 L ₁	PIER 1	O.4 L ₂	PIER 2	O.6 L ₃
I _s (in ⁴)	37192	72980	42495	105953	66026
I _c (in ⁴)	80825	—	96775	—	143598
S _s (in ³)	1204	2307	1484	3273	2636
S _c (in ³)	1635	—	2017	—	3340
S _{TOP FL.} (in ³)	37	108	53	158	142
S _{ROOT FL.} (in ³)	37	108	53	158	142
Q	0.944	0.944	0.985	0.985	1.007
M _g (K)	354	-1562	707	-3024	2259
f ₃ (OL) (KSI)	3.53	8.13	5.43	11.09	10.23
SDL (K/ft)	0.536	0.536	0.536	0.536	0.536
M _{SDL} (FT-K)	225	-787	454	-1488	1252
M _g (FT-K)	738	-945	864	-1494	1739
M _{IMP} (FT-K)	176	-198	161	-273	311
M _{SDL+IMP} (FT-K)	1139	1930	1479	-3255	3302
f ₃ (OL+IMP) (KSI)	8.30	10.03	8.95	11.93	11.87
M _{LATERAL} (FT-K)	9	13	13	37	24
f ₃ LATERAL (KSI)	2.86	1.44	2.97	2.81	2.00
f ₃ TOTAL (KSI)	11.16	11.47	11.92	14.74	13.87
VR (K)	48.7	—	52.6	—	51.3



GIRDER	A	a	b	C	D			C	g	h	j	D			E	p	q	r
1	4-0 1/2	5 1/8	1/2	5/8	4-0			3-10 3/8	1"	1 3/8	1 1/8	3-3 3/8			2-1 1/8	2 3/8	3 3/8	2 1/8
2	4-3 3/8	3 3/8	3/8	1 1/8	4-1 3/4			3-11 1/2	1"	1 3/8	1 1/8	3-3 3/4			2-2 3/8	2 3/8	3 3/8	2 1/8
3	4-3 7/8	1 1/8	1"	1 1/8	4-3 3/8			4-0 1/2	1"	1 3/8	1 1/8	3-4"			2-2 1/8	2 3/8	3 3/8	2 1/8
4	4-7 1/2	3 1/4	1 3/8	1 3/8	4-4 7/8			4-1 1/2	1"	1 3/8	1 1/8	3-4 7/8			2-3 3/8	2 3/8	3 3/8	2 1/8

CAMBER DIAGRAM

NOTE:
FOR HORIZONTAL DIMENSIONS
SEE STEEL FRAMING PLAN
SHEETS 13 & 14.

NOTES!

I_s AND S_s ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF STEEL SECTION.

I_c AND S_c ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f₃.

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

REACTION TABLE

MAXIMUM REACTION TABLE				
LOCATION	EAST ABUT.	PIER 1	PIER 2	WEST ABUT.
R _g (K)	42.9	202.4	293.6	110.8
R ₄ (K)	41.9	77.6	97.3	52.4
IMP (K)	101	16.5	17.6	9.4
R _{TOTAL} (K)	94.9	296.5	408.5	172.6

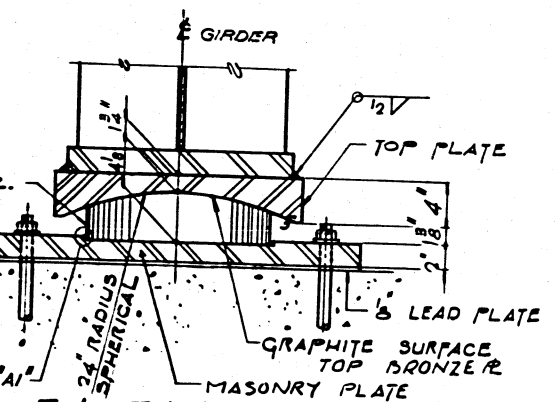
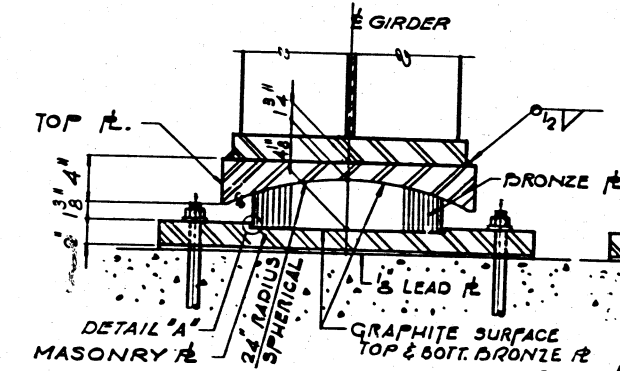
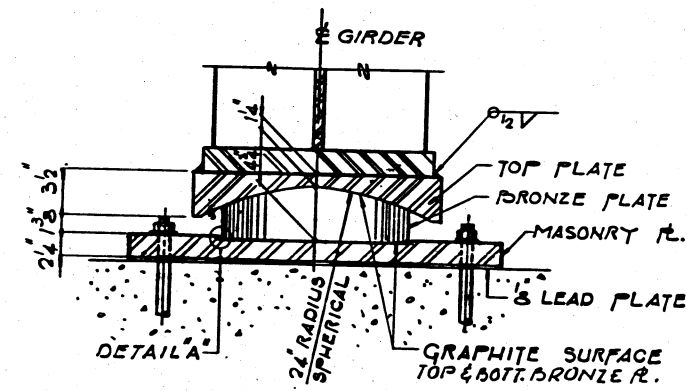
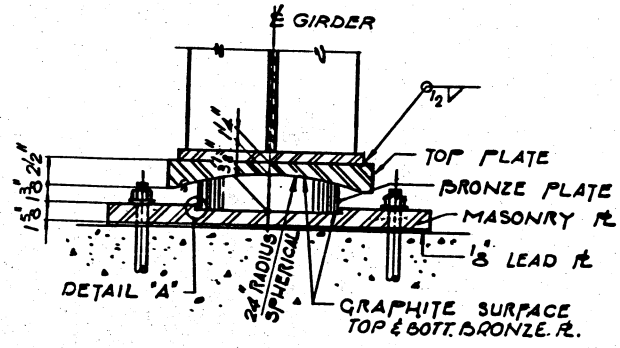
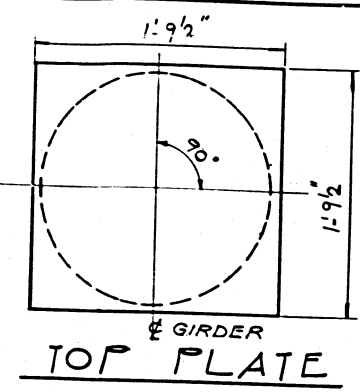
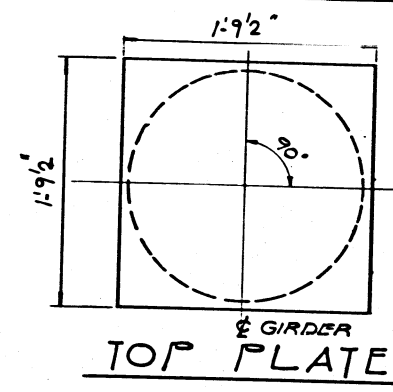
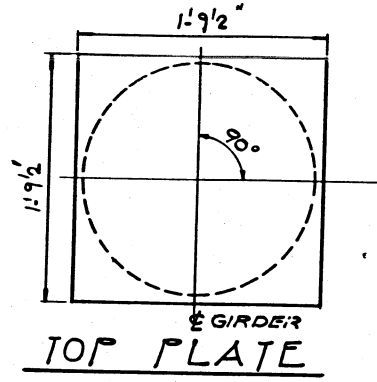
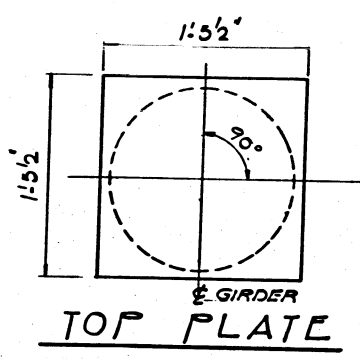
T/WEB ELEVATIONS FOR FABRICATION ONLY

LOCATION	GIRDER	DRG. E. ABUT.	PIER 1	P.S. 1	P.S. 2	PIER 2	P.S. 3	DRG. W. ABUT.
1	1	844.546	844.281	844.60	843.582	843.011	842.454	840.304
2	2	844.771	844.771	844.665	843.019	843.452	842.892	842.709
3	3	843.571	843.289	843.445	844.455	843.890	843.321	841.118
4	4	846.153	843.797	843.656	844.937	844.342	843.791	841.531

AS REVISED

STEEL 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. 1605-K
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

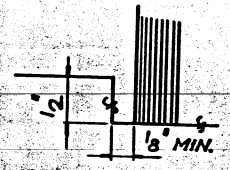


ELEVATION

ELEVATION

ELEVATION

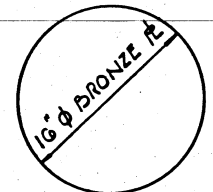
ELEVATION



DETAIL 'A'



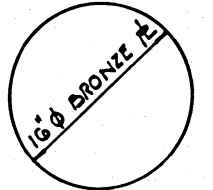
BRONZE PLATE



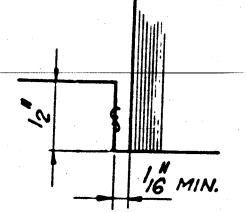
BRONZE PLATE



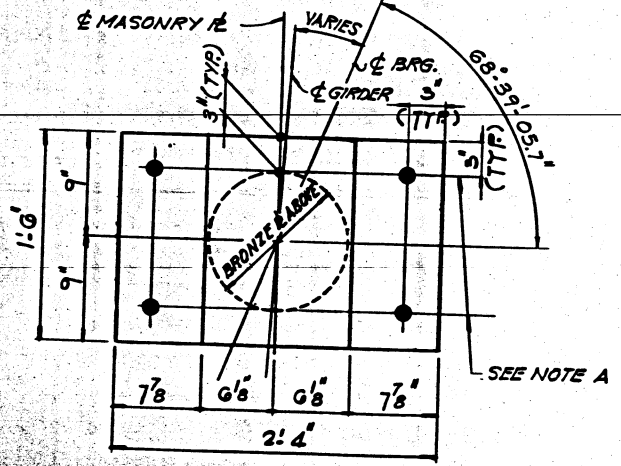
BRONZE PLATE



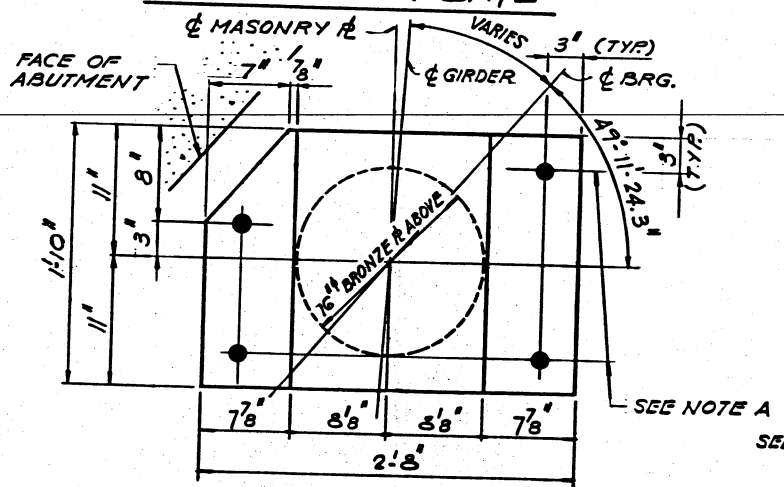
BRONZE PLATE



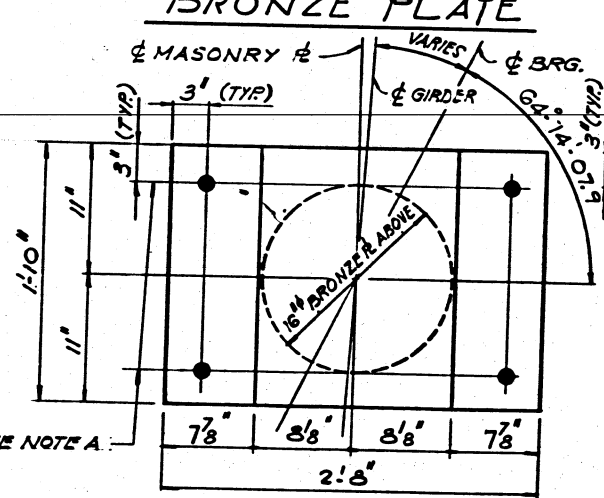
DETAIL 'A1'



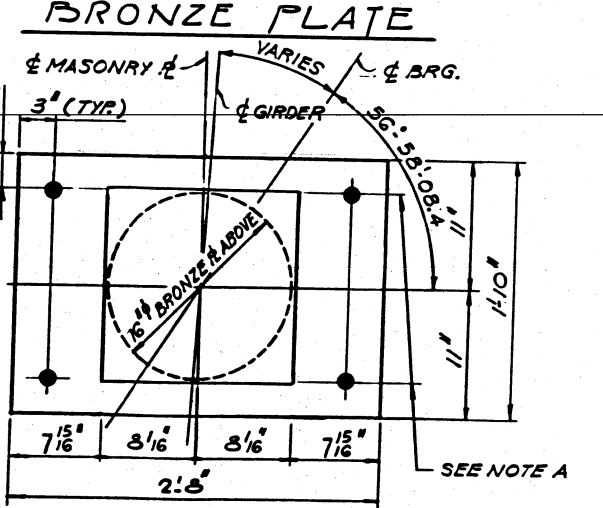
MASONRY PLATE
E. ABUT. (EXPANSION) BRG. DETAILS



MASONRY PLATE
W. ABUT. (EXPANSION) BRG. DETAILS



MASONRY PLATE
PIER 1 (EXP.) BRG. DETAILS



MASONRY PLATE
PIER 2 (FIXED) BRG. DETAILS

NOTES:
BRONZE BEARING PLATES SHALL CONFORM TO A.S.T.M. E22-70, ALLOY B. ALL OTHER MATERIALS SHALL CONFORM TO A.A.S.H.T.O M183, EXCEPT AS OTHERWISE NOTED.
BEARING PLATES, BRONZE PLATES, ANCHOR BOLTS AND MISCELLANEOUS ITEMS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL.
WEIGHT OF THE BEARINGS IS 17830 LBS. WHICH INCLUDES 37 1/2 LBS. OF BRONZE PLATES.

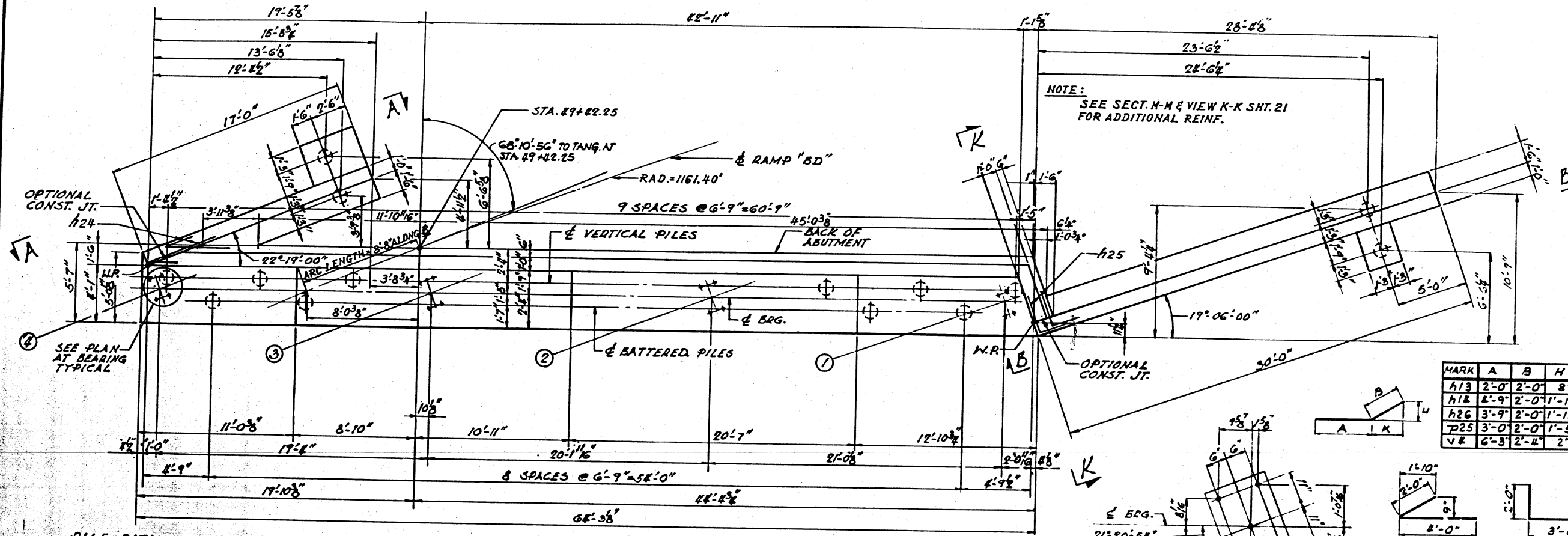
NOTE A
PROVIDE 1 1/2" DIAMETER HOLES FOR 1" DIAMETER x 12" ANCHOR BOLTS AND 2 1/2" x 2 1/2" x 5/16" PLATE WASHERS UNDER NUT.
AFTER BEAMS HAVE BEEN ERECTED, HOLES SHALL BE DRILLED AND ANCHOR BOLTS SHALL BE GROUTED IN PLACE.

BEARING 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. 1005-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	25	93
STA.	TO STA.			
FILE & REF. NO. 4	ILLINOIS	PROJECT		

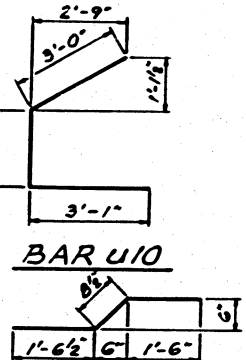
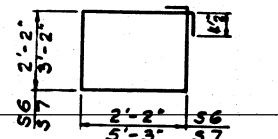
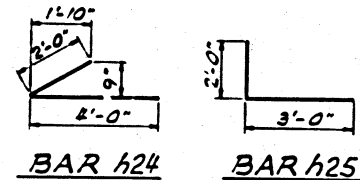


NOTE:
SEE SECT. M-M & VIEW K-K SHT. 21
FOR ADDITIONAL REINF.

BILL OF MATERIAL

BAR NO.	NO.	SIZE	LENGTH	SHAPE
h12	8	#6	32'-9"	—
h13	4	#6	4'-0"	—
h14	2	#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"	—
m4	22	#6	11'-3"	—
p8	1	#9	29'-9"	—
p9	3	#9	32'-5"	—
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"	—
sg	48	#4	9'-5"	—
s7	58	#4	17'-7"	—
t2	9	#7	6'-10"	—
u10	5	#6	10'-9"	—
u12	33	#6	7'-3"	—
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	#2	3'-9"	—
w3	5	#5	3'-8"	—
w4	6	#5	2'-2"	—
CLASS X CONCRETE	CU YDS	997		
REINFORCEMENT BARS	LBS.	9,280		
CONCRETE PILES	LIN. FT.	990		
TEST PILES, CONCRETE	EACH	1		

MARK	A	B	H	K
h13	2'-0"	2'-0"	8"	1'-11"
h14	4'-9"	2'-0"	1'-11"	8"
h26	3'-9"	2'-0"	1'-11"	8"
p25	3'-0"	2'-0"	1'-5"	1'-5"
v4	6'-3"	2'-4"	2"	2'-8"



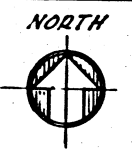
MARK	B	C	D
m2	4'-6"	9"	4'-6"
m4	5'-3"	9"	5'-3"
u12	1'-9"	3'-9"	1'-9"

NOTE:
ALL BAR DIMENSIONS
ARE OUT TO OUT.

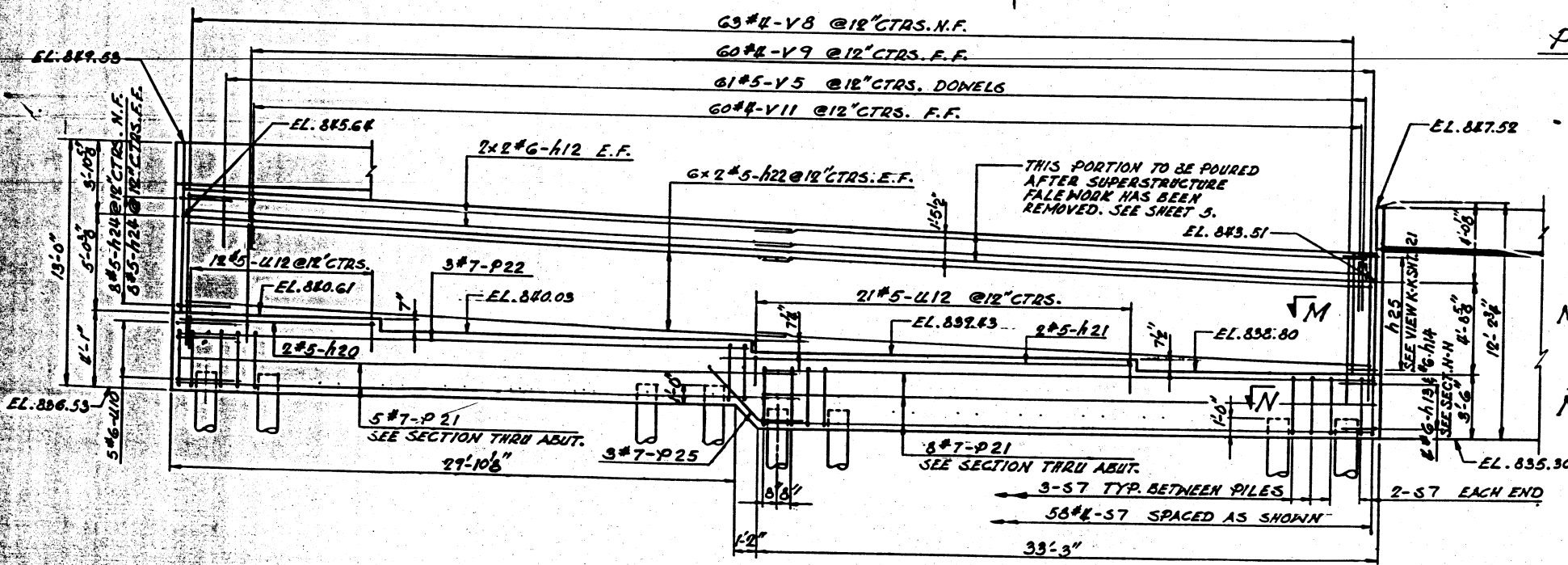
NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
POUR STEPS MONOLITHICALLY WITH CAP. FOR ELEV. A-A, B-B SEE SHEET 20.
BARS INDICATED THIS: 6x2 #5h, ETC. INDICATE G LINES OF BARS WITH 2 BAR LENGTH PER LINE.
ALL EDGES SHALL HAVE STANDARD 3/8" CHAMFERS EXCEPT AS NOTED.
WORK THIS SHEET WITH SHEETS #20 & 21

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

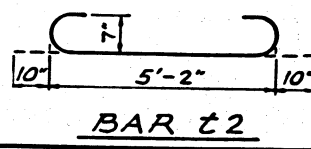
PLAN



PLAN AT BEARING



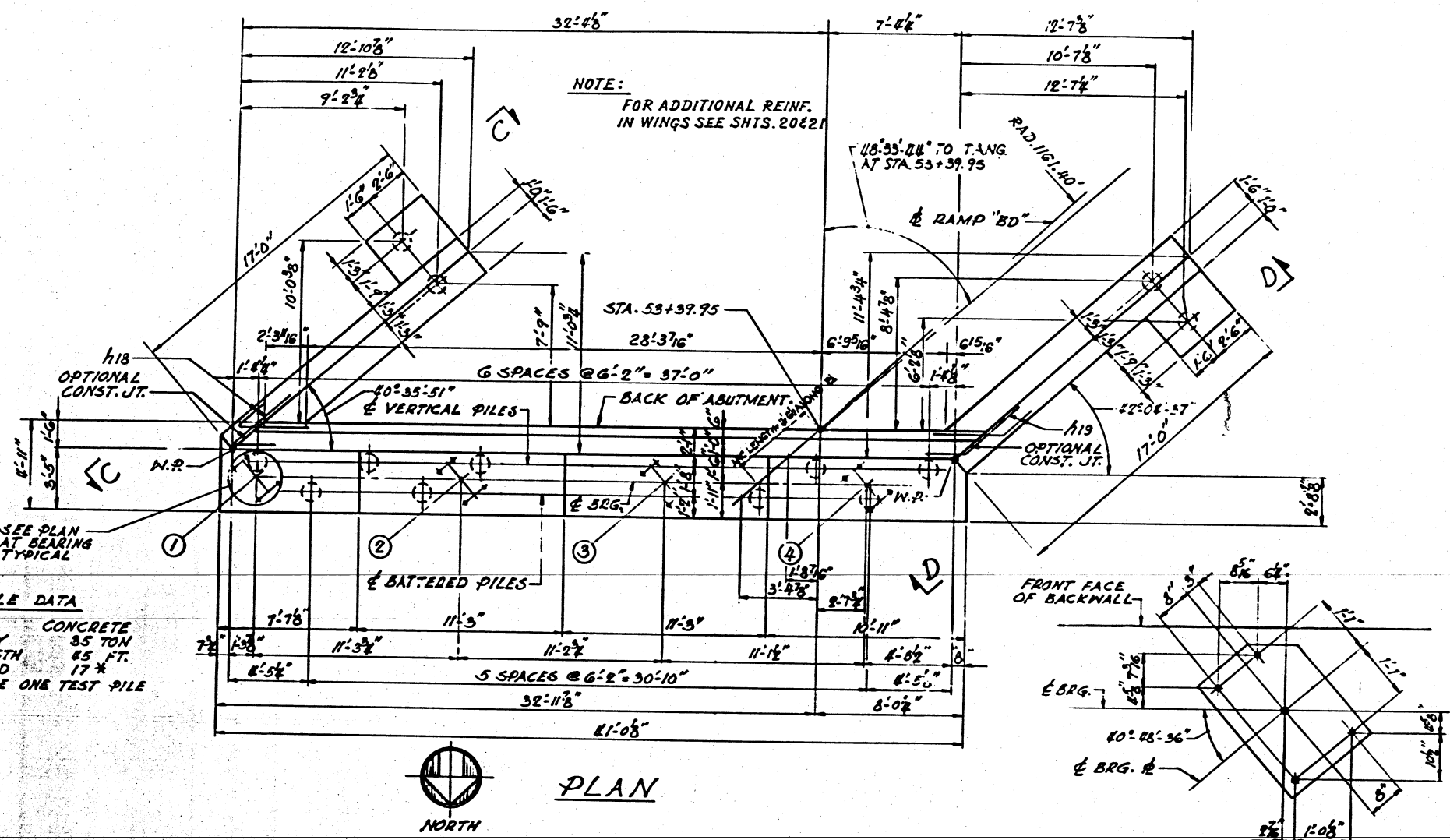
ELEVATION



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

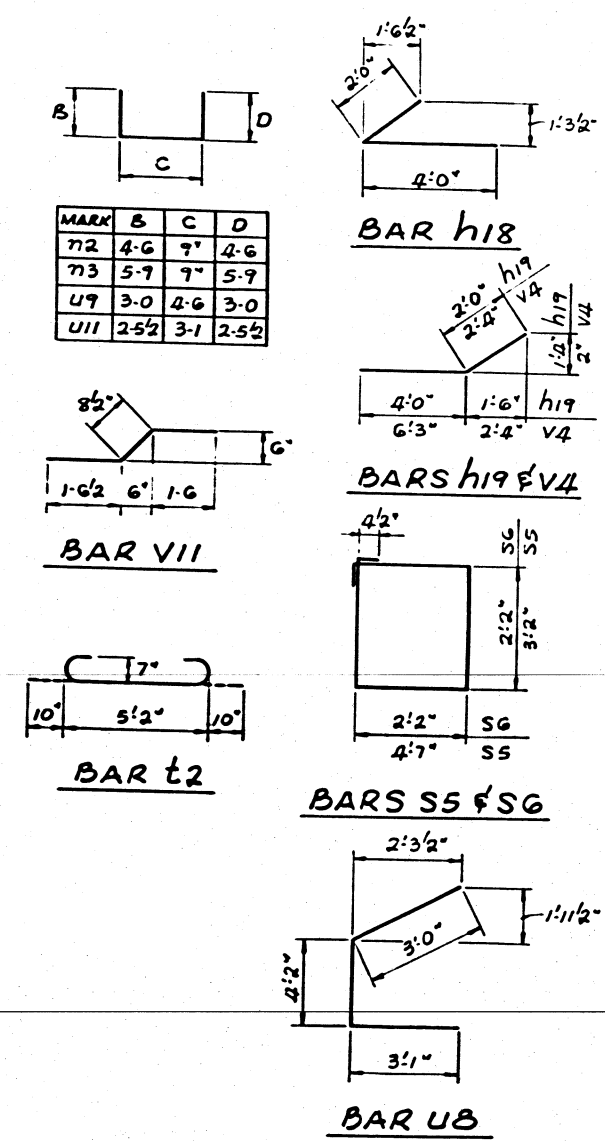
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
408 N. 1605TH ST.
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	163	94
STA.	TO STA.			
F.H.E. & RES. NO. 4	ALLIANCE	PROJECT		



PILE DATA

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



MARK	B	C	D
72	4-6	7	4-6
73	5-7	7	5-9
U9	3-0	4-6	3-0
U11	2-5 1/2	3-1	2-5 1/2

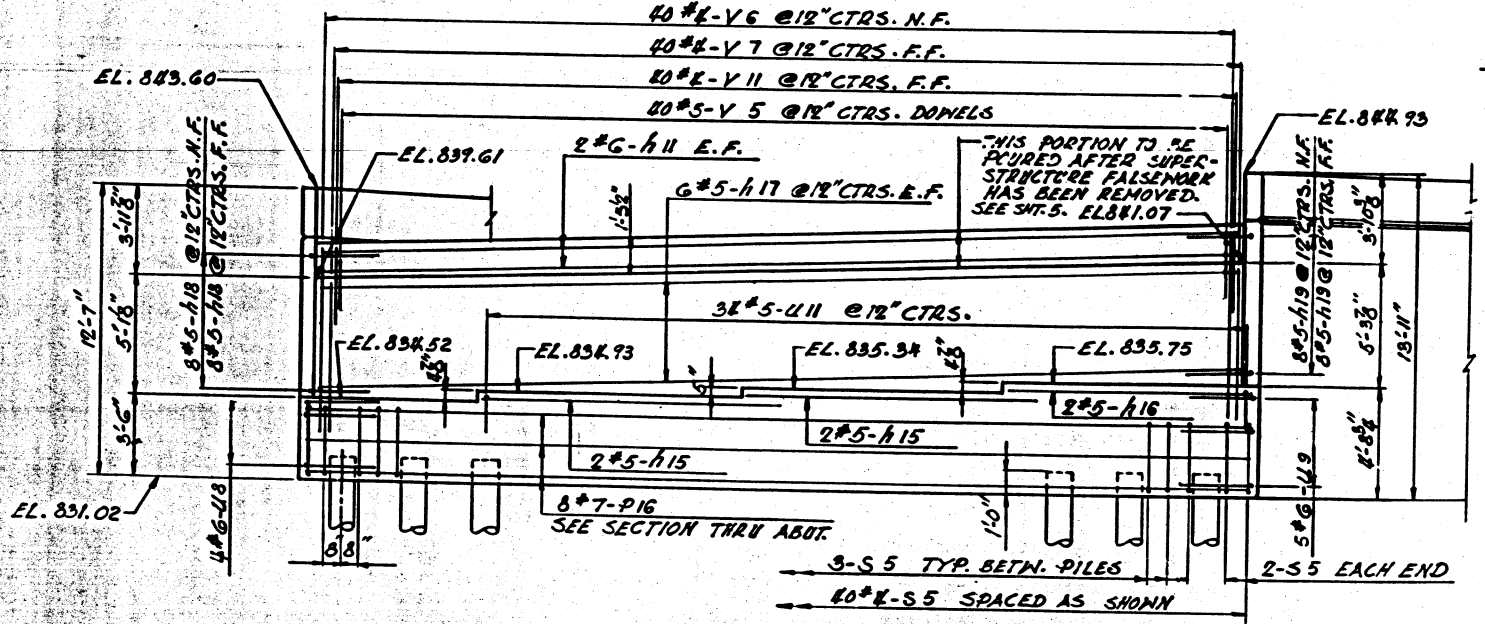
BILL OF MATERIAL

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	—
h22	22	#6	9.9	—
h23	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	CU. YDS.	66.7		
REINFORCEMENT BARS	LBS.	6650		
CONCRETE PILES	LIN. FT.	720		
TEST PILES, CONCRETE	EACH	1		

PLAN AT BEARING

NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
POUR 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

NOTE!
ALL BAR DIMENSIONS ARE OUT TO OUT.



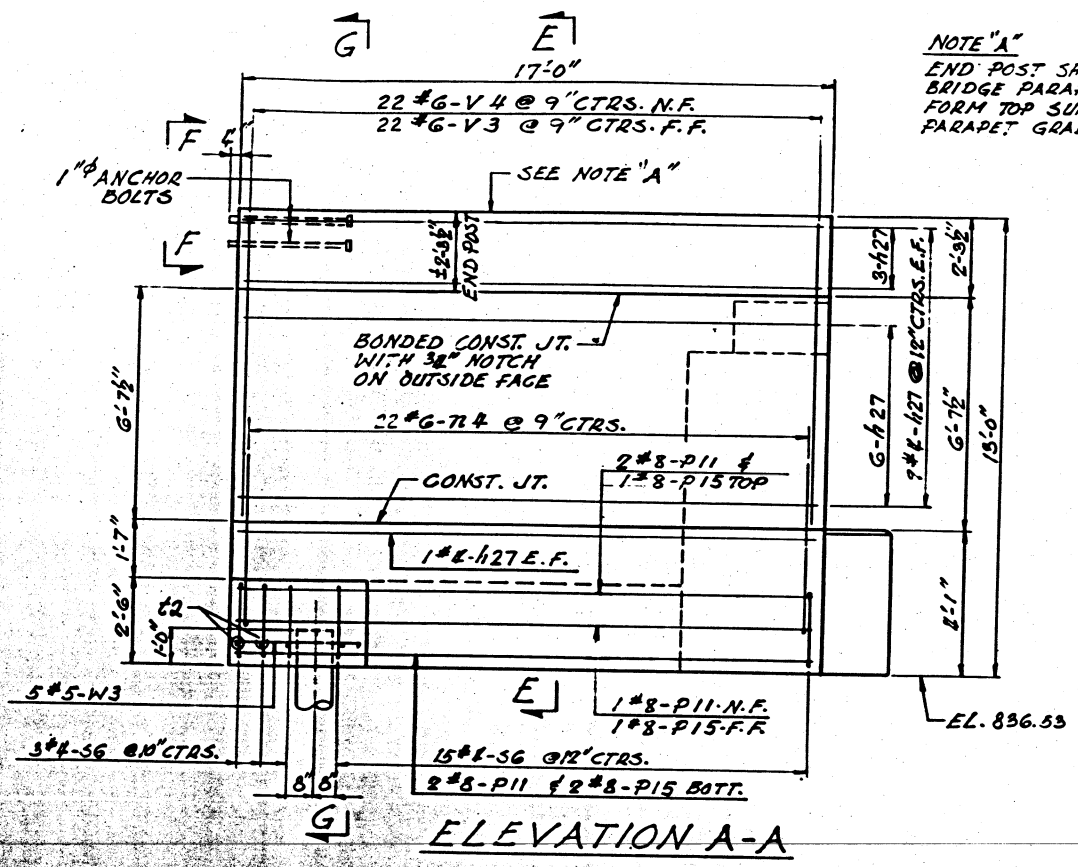
WEST ABUTMENT
RAMP "BD"
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

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

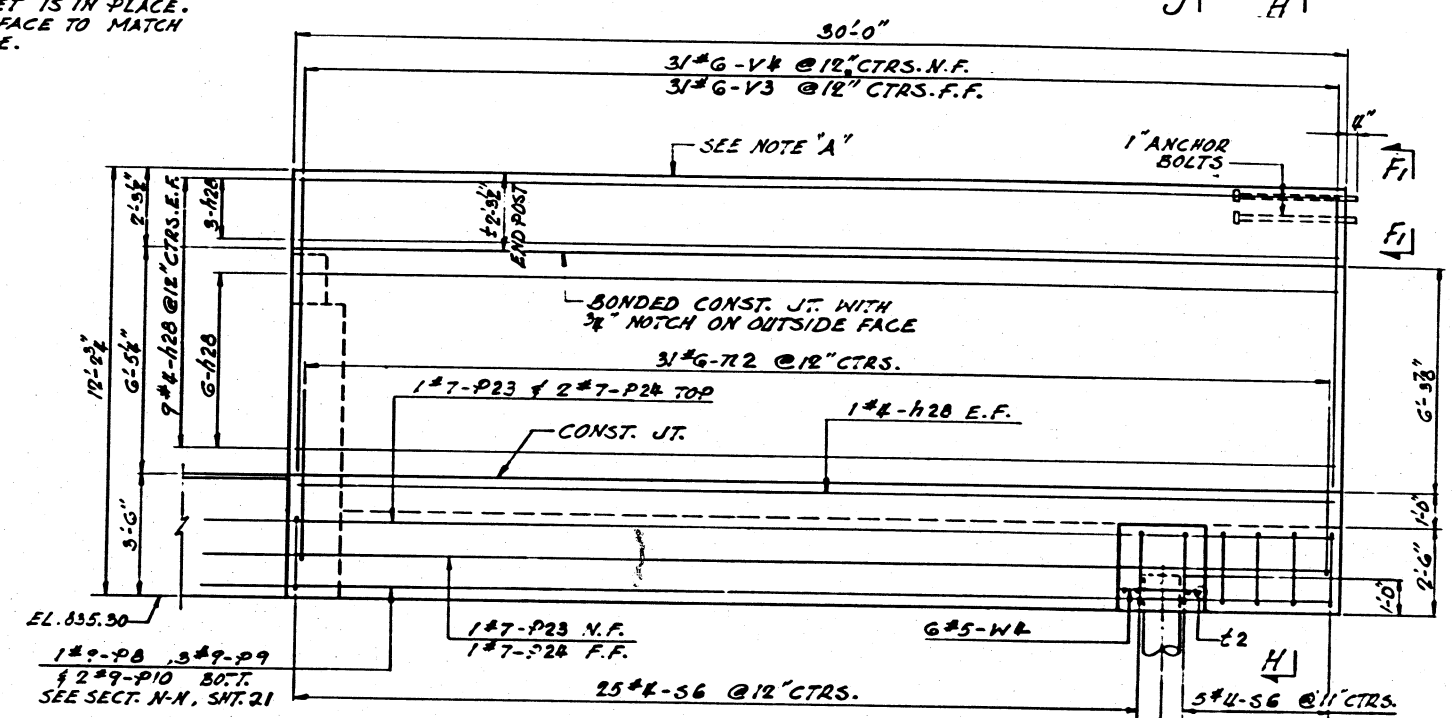
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	201-3HB-2	WINNEBAGO	143	95
STA.	TO STA.		PROJECT	
CH. & RES. NO. 4	ILLINOIS			

SHEET 20 OF 24

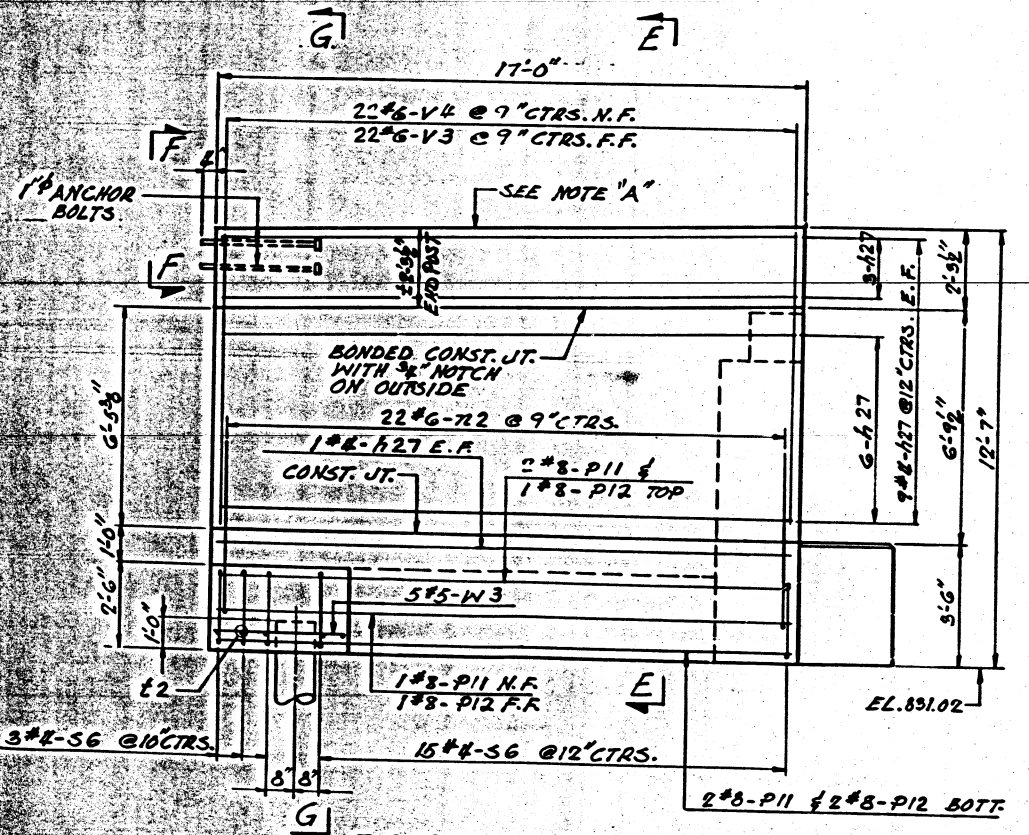
NOTE "A"
 END POST SHALL BE POURED AFTER
 BRIDGE PARAPET IS IN PLACE.
 FORM TOP SURFACE TO MATCH
 PARAPET GRADE.



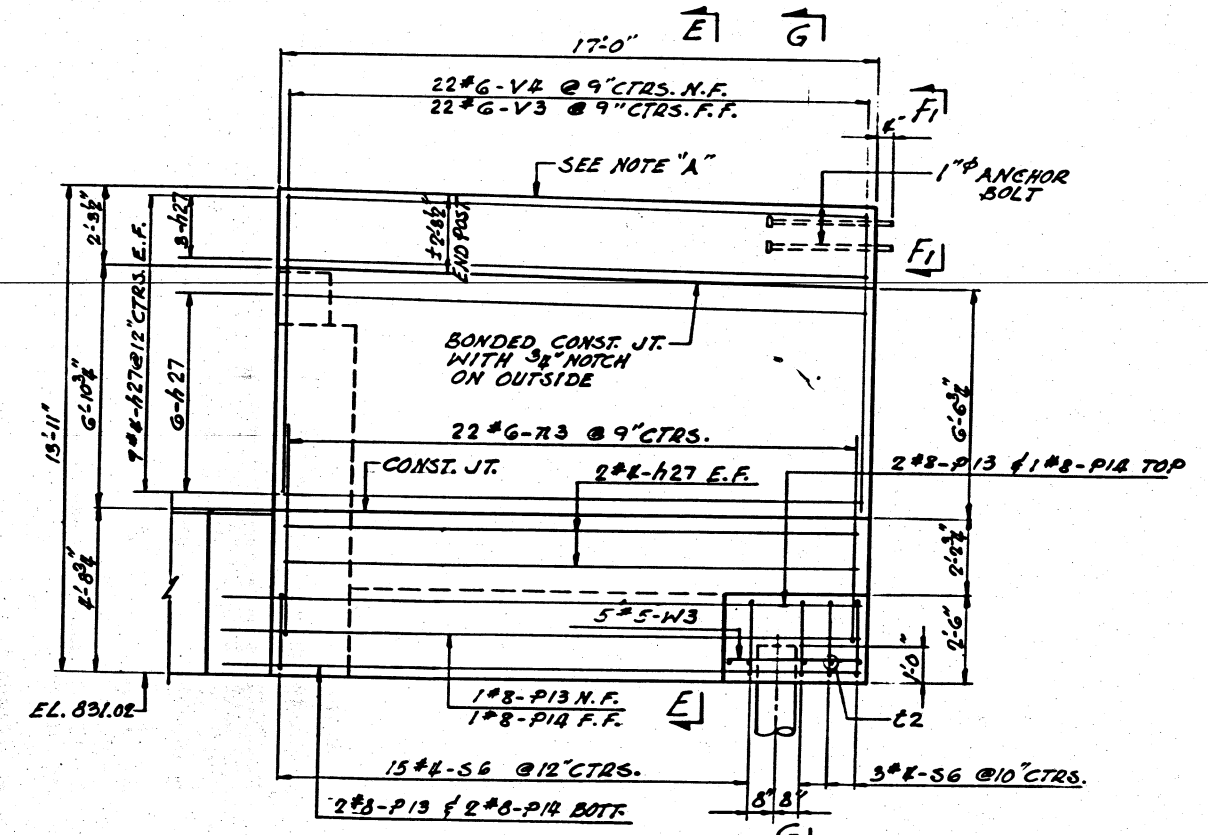
ELEVATION A-A



ELEVATION B-B



ELEVATION C-C

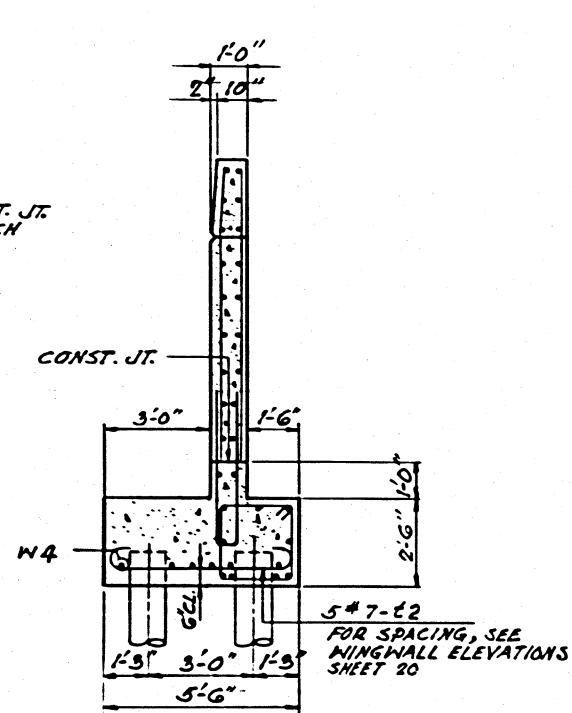
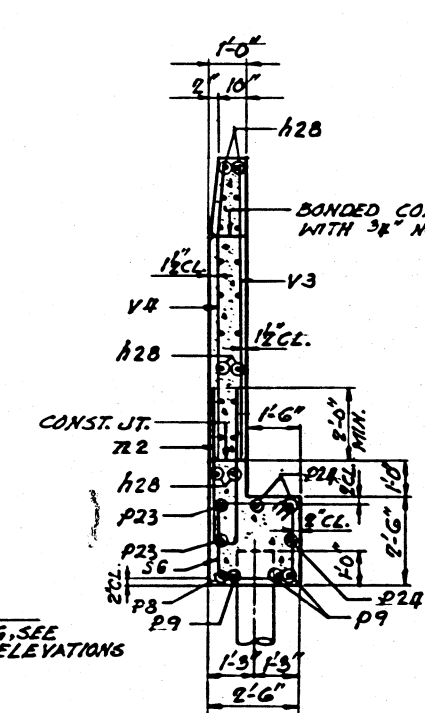
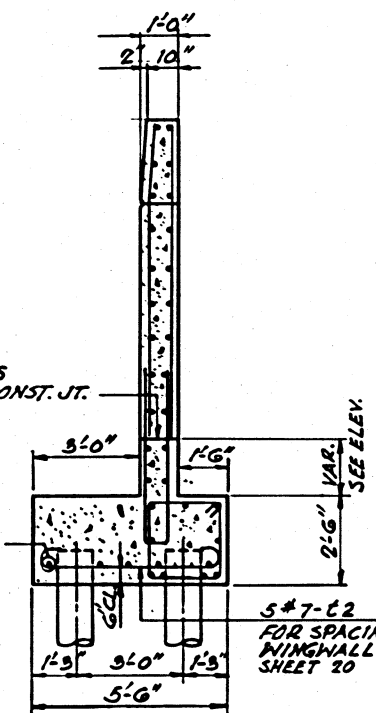
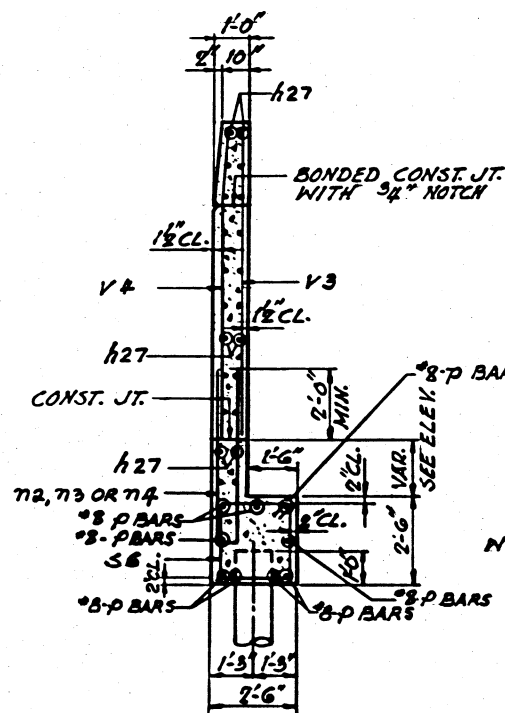
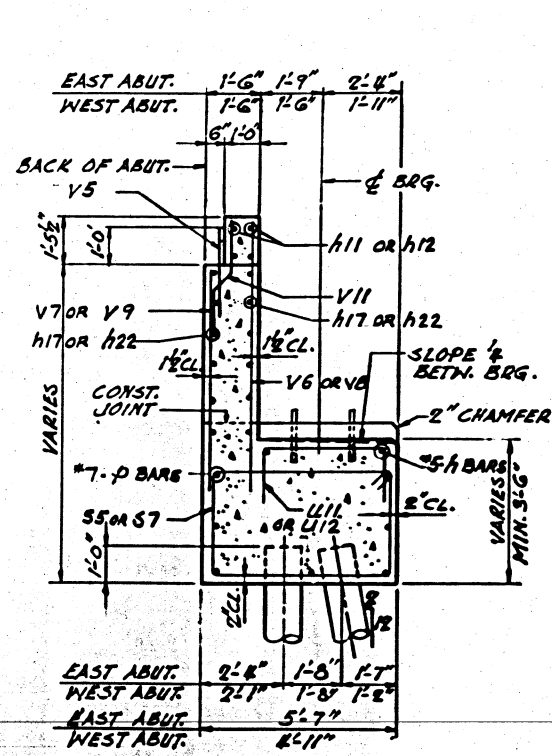


ELEVATION D-D

ABUTMENT DETAILS
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	201-3HB-2	WINNEBAGO	163	96
STA.	TO STA.			
PROJECT				



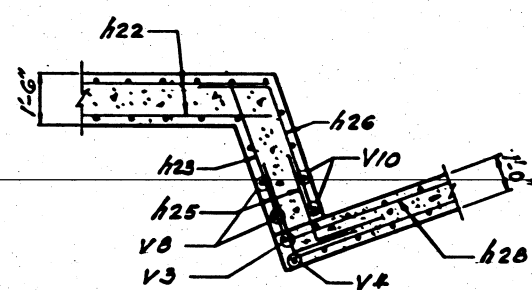
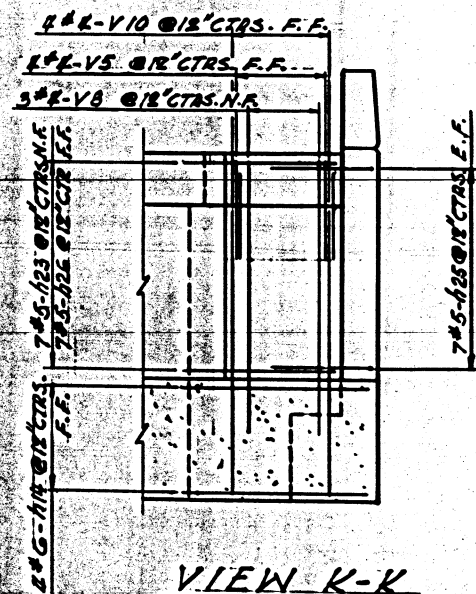
SECT THRU ABUT.

SECTION E-E

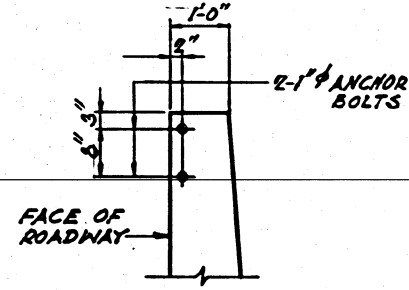
SECTION G-G

SECTION H-H

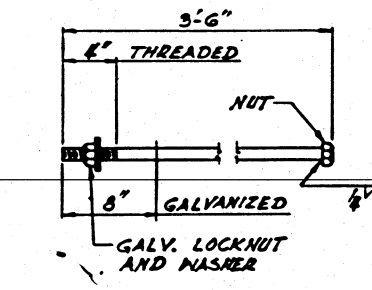
SECTION J-J



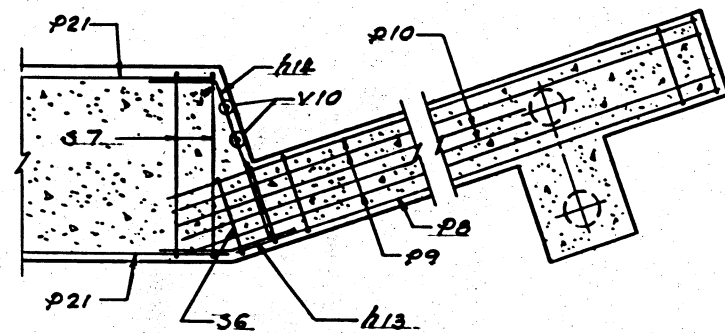
SECTION M-M



VIEW F-F
VIEW F1-F1 SIMILAR



1" ANCHOR BOLT

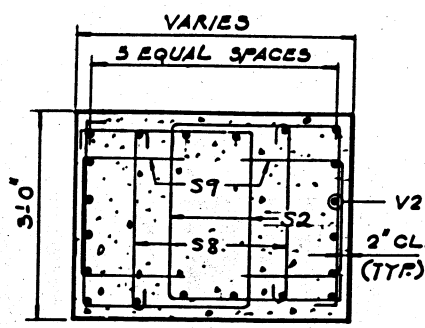


SECTION N-N

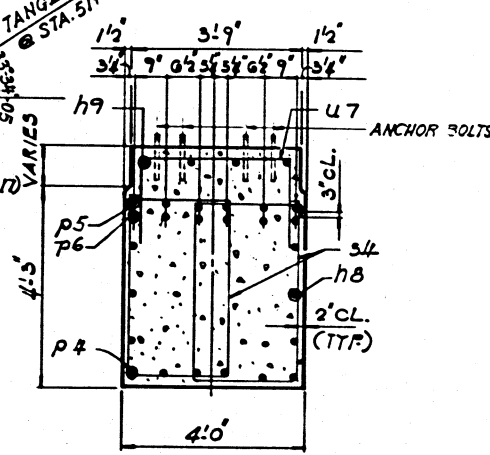
ABUTMENT DETAILS
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43

BILL OF MATERIAL

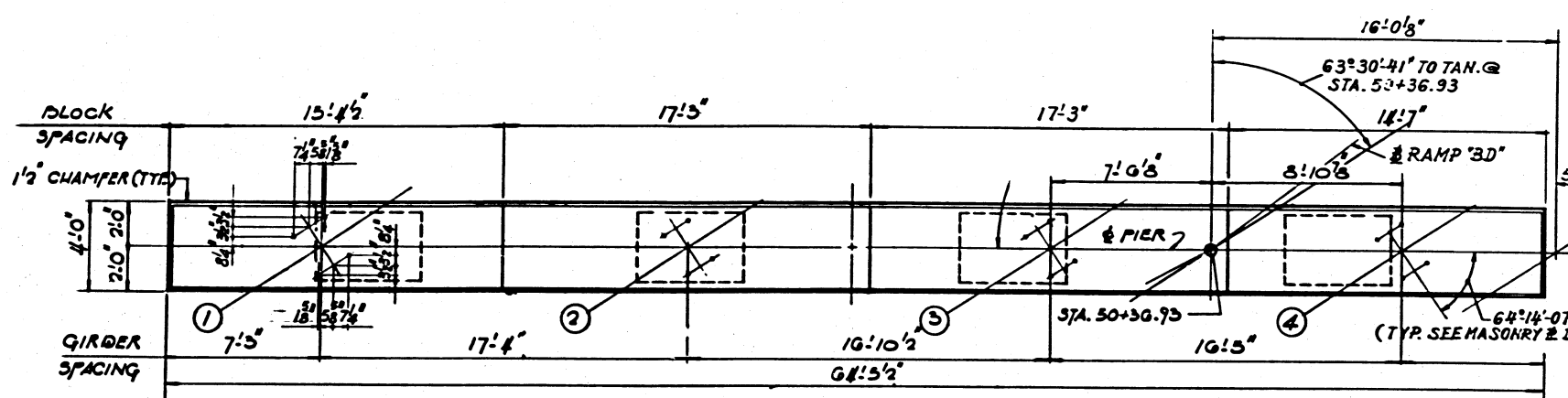
BAR NO.	SIZE	LENGTH	SHAPE
h6	12 #10	27'-0"	—
h7	16 #5	26'-0"	—
h8	12 #5	32'-9"	—
h9	8 #5	18'-6"	—
h10	4 #5	14'-3"	—
m1	80 #11	11'-9"	—
p4	6 #11	45'-6"	—
p5	12 #9	36'-0"	—
p6	12 #9	18'-9"	—
p7	12 #7	11'-3"	—
s1	20 #5	12'-7"	□
s2	104 #5	11'-11"	□
s4	66 #5	13'-9"	□
s8	104 #5	3'-10"	□
s9	104 #5	4'-9"	□
t1	70 #7	9'-8"	□
u1	12 #6	8'-6"	□
u2	38 #5	10'-6"	□
u3	38 #5	11'-2"	□
u4	10 #5	6'-6"	□
u6	56 #5	7'-6"	□
u7	50 #4	8'-6"	□
v2	80 #11	16'-0"	—
w2	16 #8	27'-9"	—



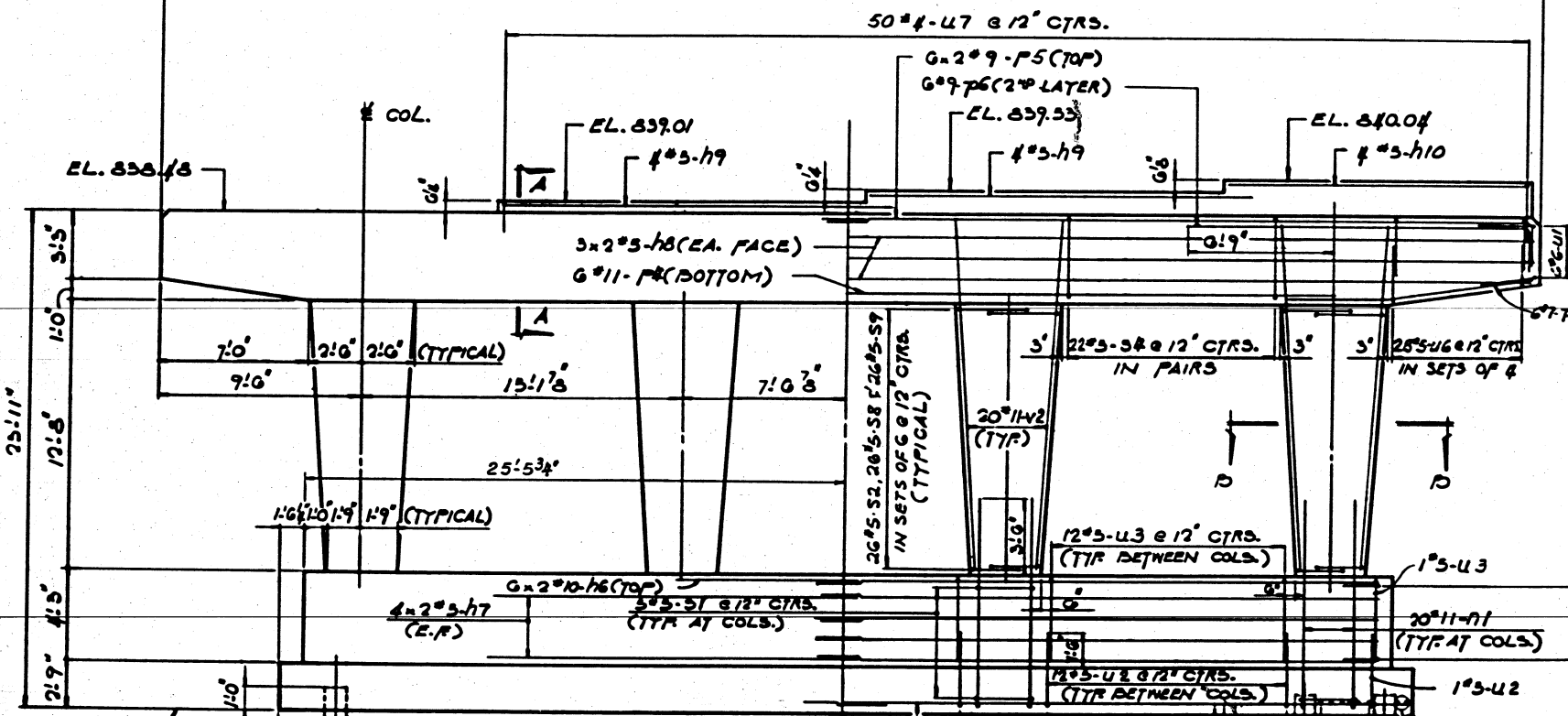
SECTION B-B



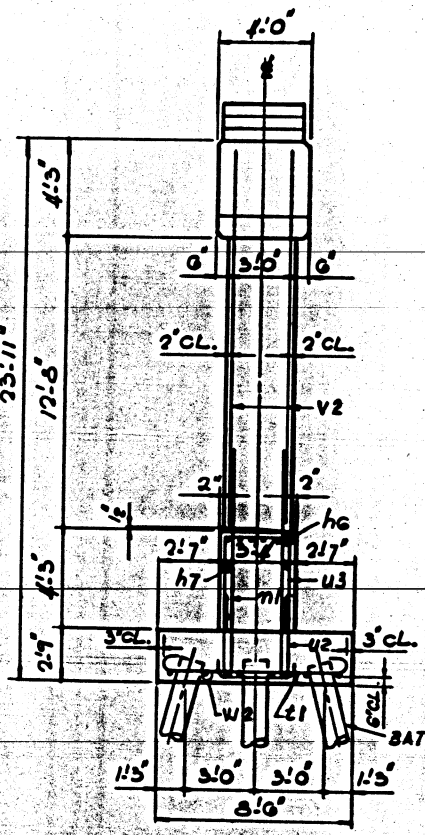
SECTION A-A



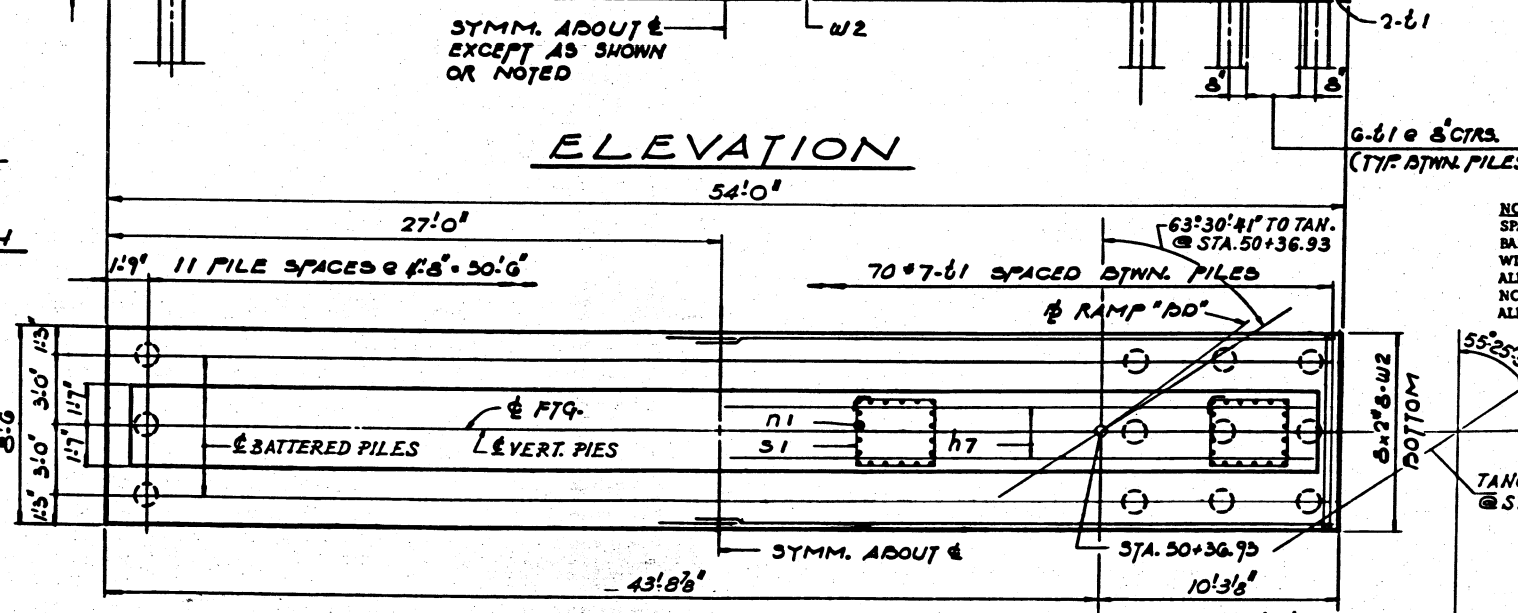
TOP PLAN



ELEVATION



END VIEW



FOOTING PLAN

MARK	A	B	C	D
U1	2'-6"	8'-6"	8'-5"	
U2	3'-9"	8'-0"	8'-9"	
U3	4'-1"	3'-0"	8'-1"	
U4	1'-10"	2'-0"	7'-9"	
U6	2'-6"	2'-6"	2'-6"	
U7	2'-7"	3'-4"	2'-7"	
S9	1'-6"	1'-9"	1'-6"	

NOTE:
ALL BAR DIMENSIONS ARE OUT TO OUT.

NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
BARS INDICATED THUS: 3 X 2 #5, ETC. INDICATES 3 LINES OF BARS WITH 2 BAR LENGTHS PER LINE.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS OTHERWISE NOTED.
ALL BAR DIMENSIONS ARE OUT TO OUT.

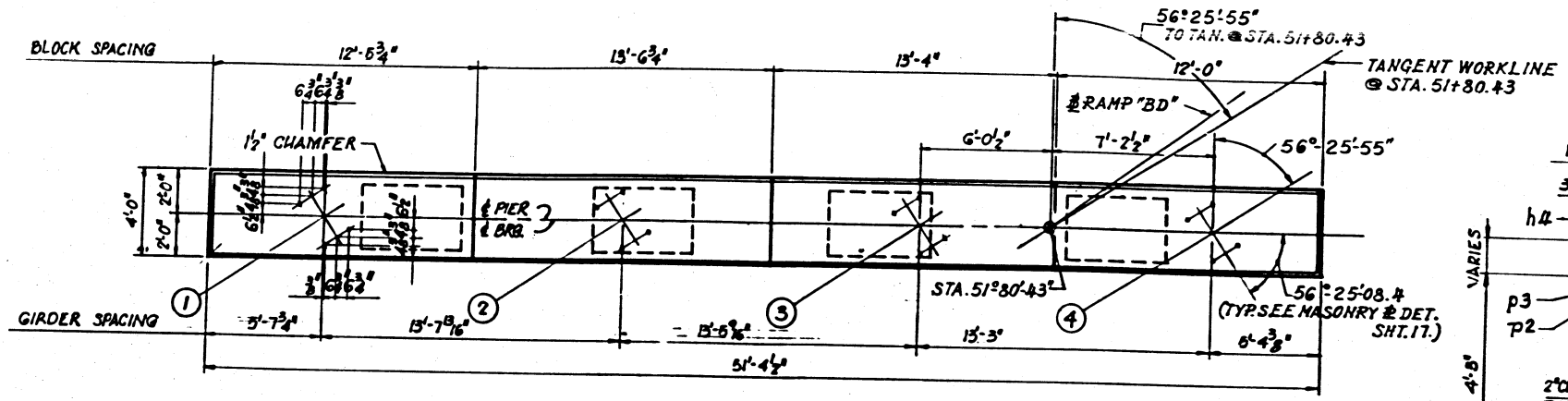
MARK	A	B	C
S1	2'-8"	3'-2"	5'-2"
S2	2'-8"	2'-10"	5'-2"
S4	2'-6"	3'-11"	5'-2"

PILE DATA

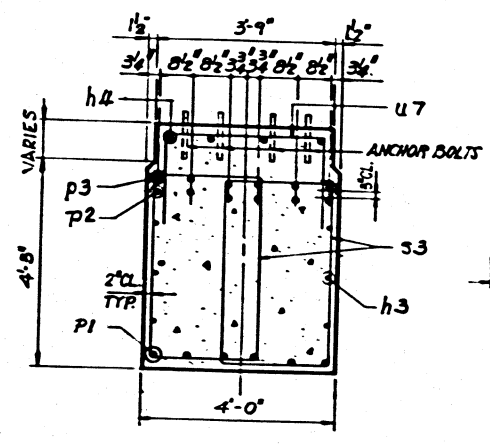
TYPE: CONCRETE
CAPACITY: 35 TON
EST. LENGTH: 30'
NO. REQ'D: 36*
* INCLUDES ONE TEST PILE

**PIER 1
RAMP RD.
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+80.43**

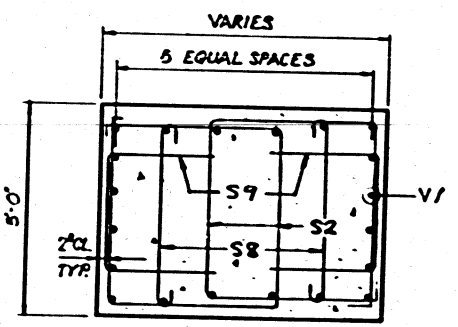
ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB NO. 1005-K
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS



TOP PLAN



SECTION A-A

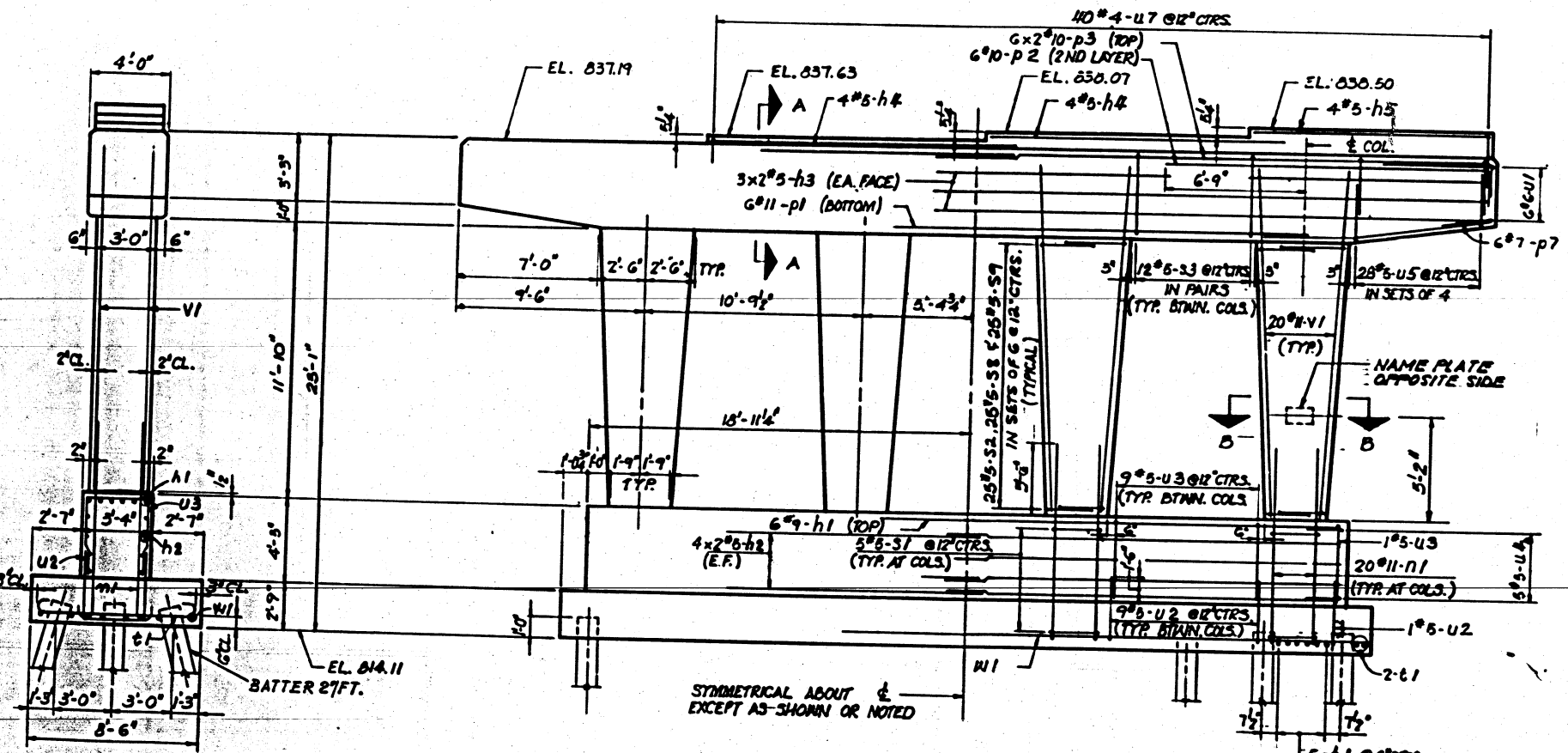


SECTION B-B

BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE
h1	#9	37'-6"	
h2	#5	19'-6"	
h3	#5	26'-3"	
h4	#5	18'-9"	
h5	#5	11'-6"	
u7	#11	11'-9"	
p1	#6	33'-0"	
p2	#12	#10	18'-9"
p3	#12	#10	29'-6"
p7	#12	#7	11'-3"
S1	#20	#5	12'-7"
S2	#100	#5	11'-11"
S3	#36	#5	13'-5"
S8	#100	#5	3'-10"
S9	#100	#5	4'-9"
U1	#12	#6	8'-6"
U2	#29	#5	10'-6"
U3	#29	#5	11'-2"
U4	#10	#5	6'-6"
U5	#56	#5	7'-6"
U7	#40	#4	8'-6"
V1	#80	#11	15'-3"
W1	#8	#8	39'-6"

NOTE:
ALL BAR DIMENSIONS
ARE OUT TO OUT.



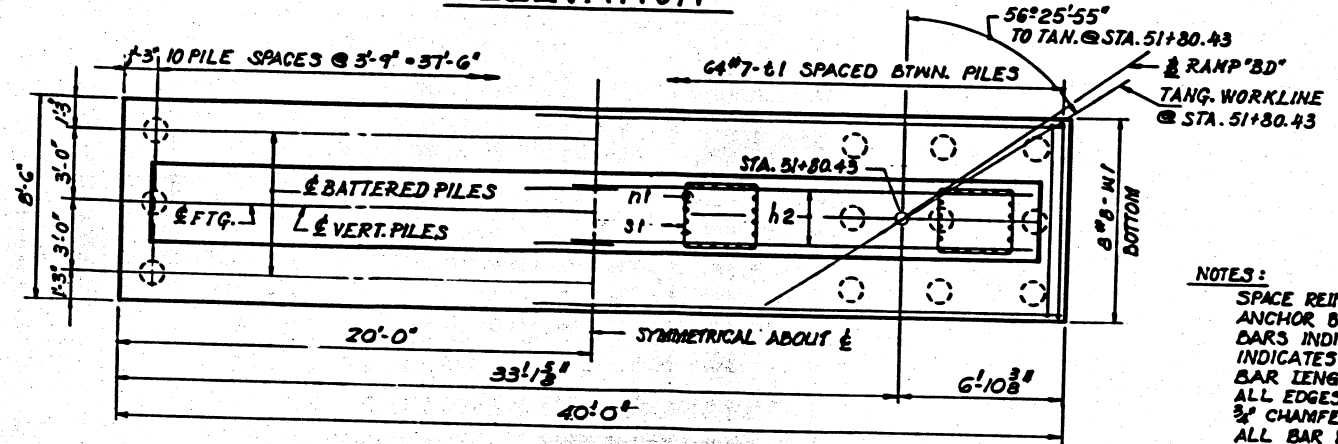
ELEVATION

END VIEW

PILE DATA

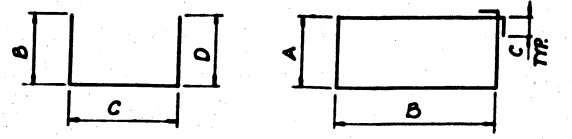
TYPE	CONCRETE
CAPACITY	36 TON
EST. LENGTH	23'
NO. REQUIRED	33*

*INCLUDES ONE TEST PILE



FOOTING PLAN

NOTES:
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
BARS INDICATED THIS: 3x2#5 ETC. INDICATES 3 LINES OF BARS WITH 2 BAR LENGTHS PER LINE.
ALL EDGES SHALL HAVE STANDARD 3/8" CHAMFERS EXCEPT AS OTHERWISE NOTED.
ALL BAR DIMENSIONS ARE OUT TO OUT.



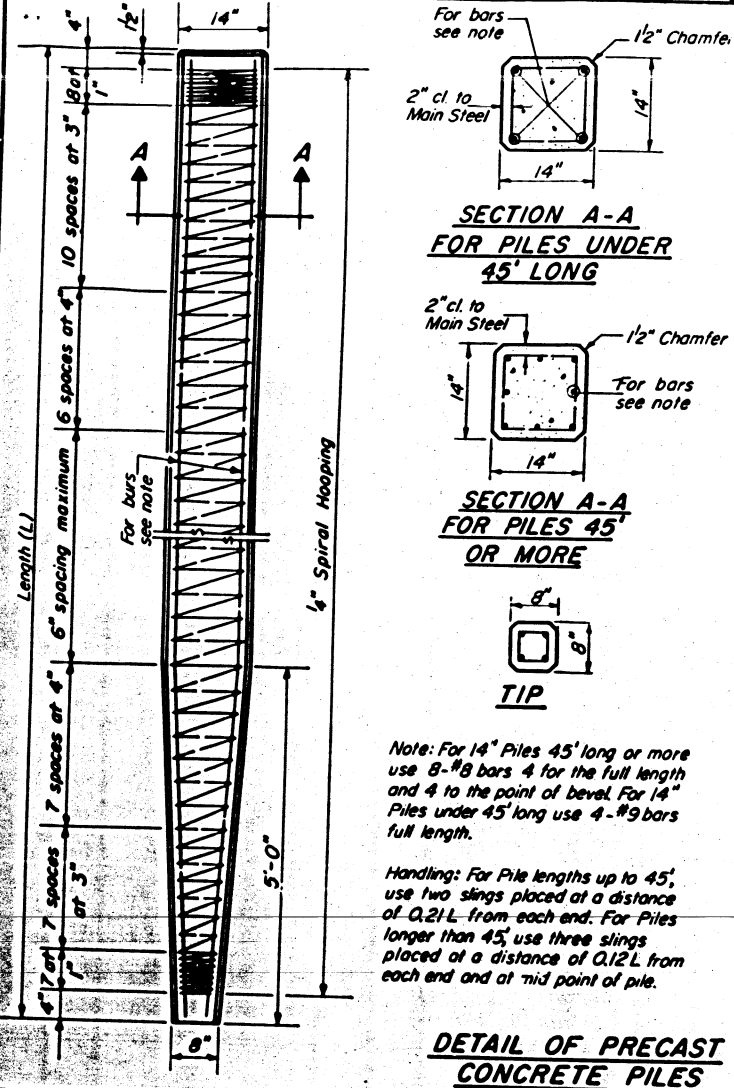
MARK	B	C	D
U1	2'-6"	3'-6 1/2"	2'-5 1/2"
U2	3'-9"	3'-0"	3'-9"
U3	2'-1"	3'-0"	2'-1"
U4	1'-10"	2'-10 1/2"	1'-9 1/2"
U5	2'-7"	2'-8"	2'-7"
U7	2'-7"	3'-2"	2'-7"
S9	1'-6"	1'-9"	1'-6"

MARK	A	B	C
S1	2'-5"	3'-2"	5'-2"
S2	2'-8"	2'-10"	5'-2"
S3	2'-2"	3'-11"	5'-2"

PIER 2
RAMP 'BD'
OVER F.A. ROUTE 194
PROJECT
SECTION 201-3HB-2
WINNEBAGO COUNTY
STATION 51+00 43

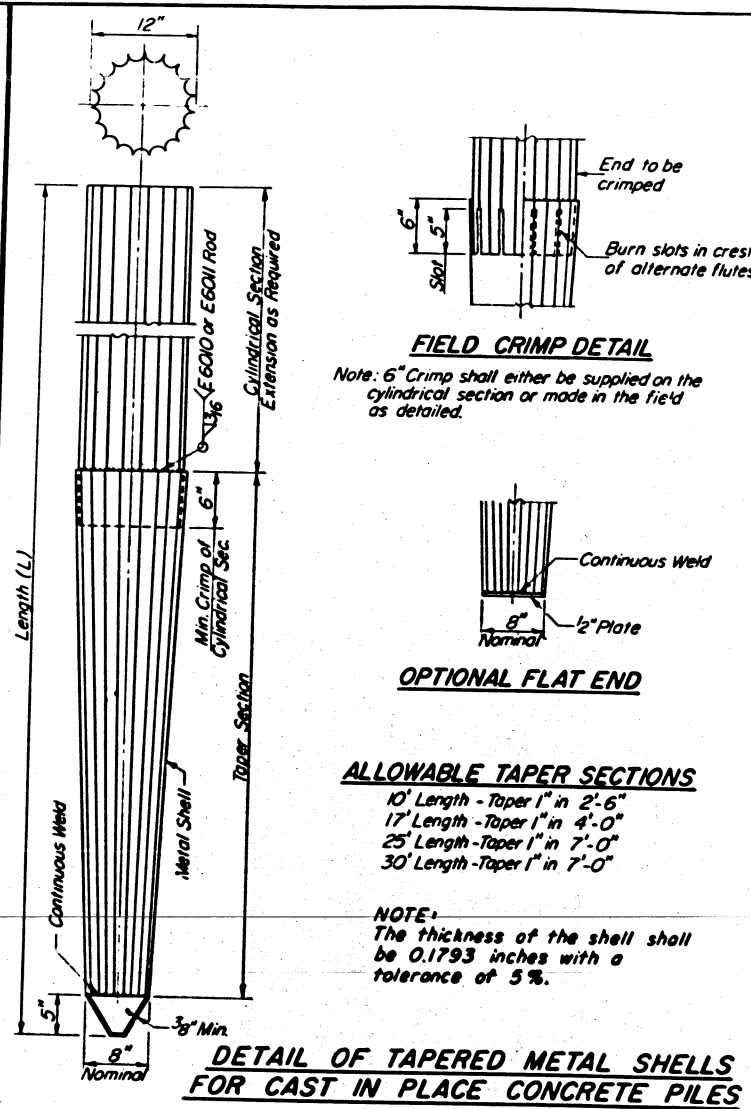
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.194	201-3HR-2	WINNEBAGO	163	99
F.H.W.A. REG. NO. A.	ILLINOIS	PROJECT		

SHEET 24 OF 24

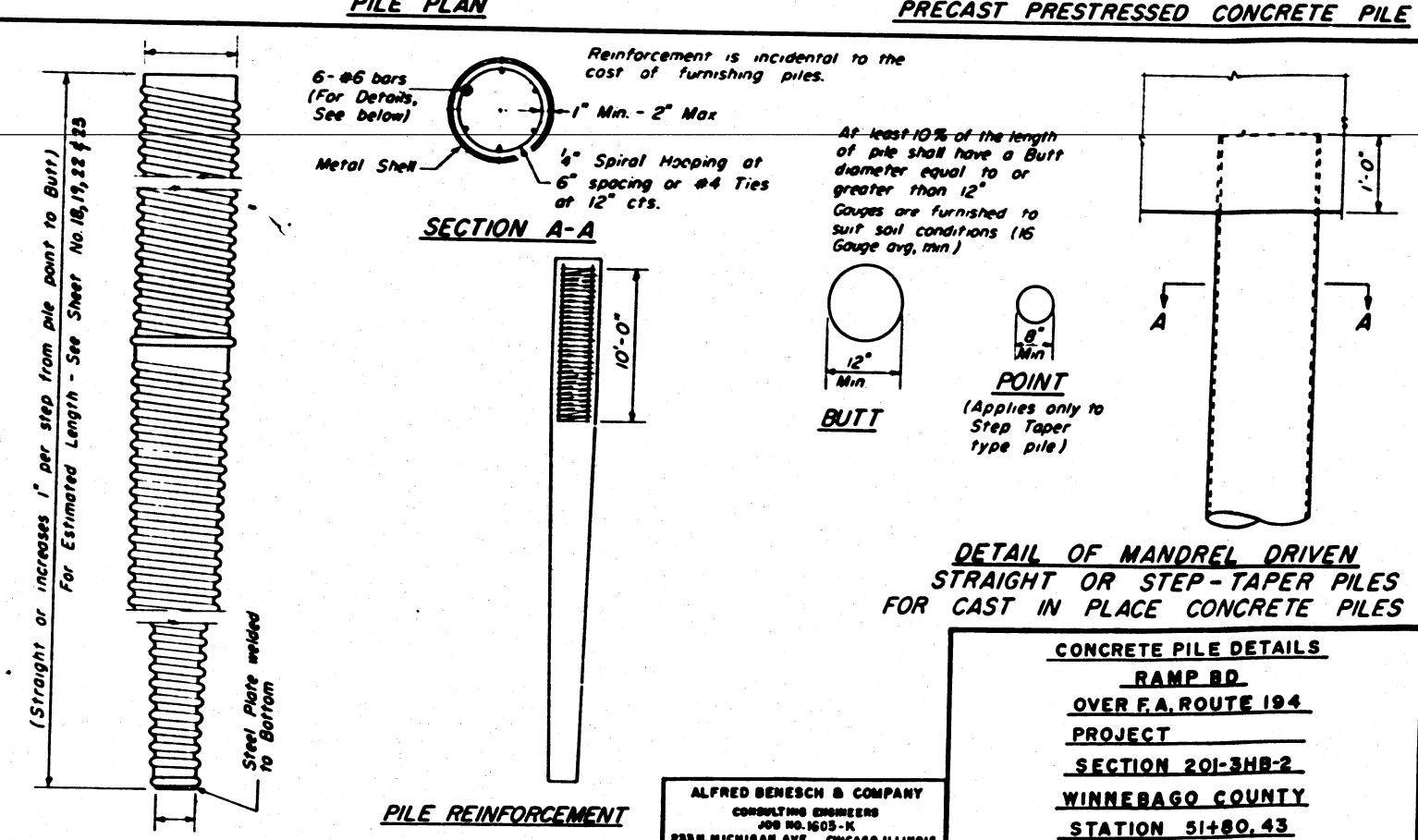
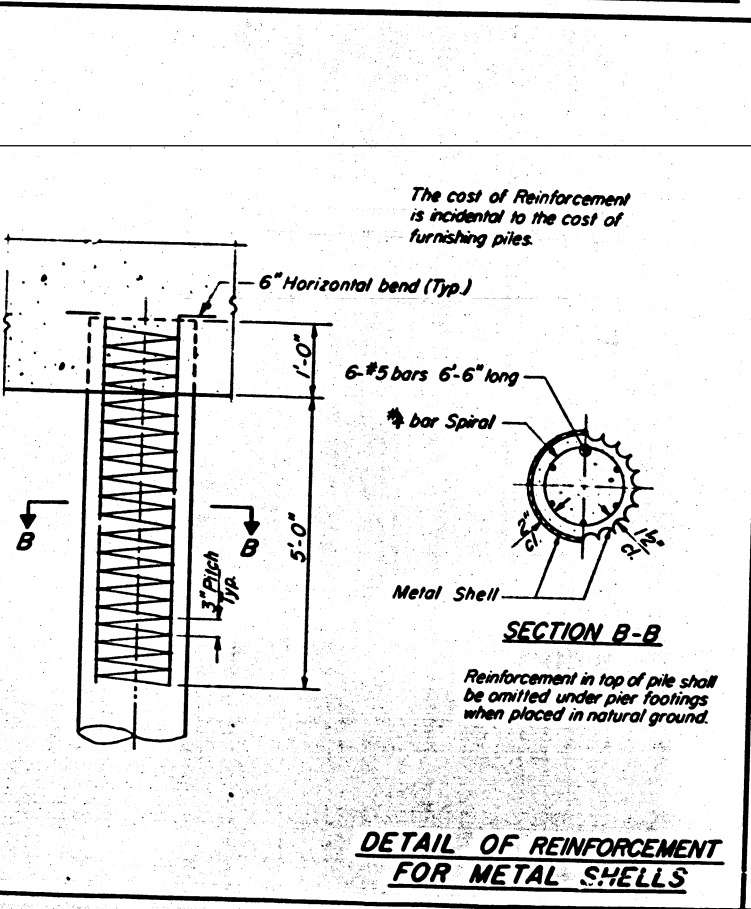
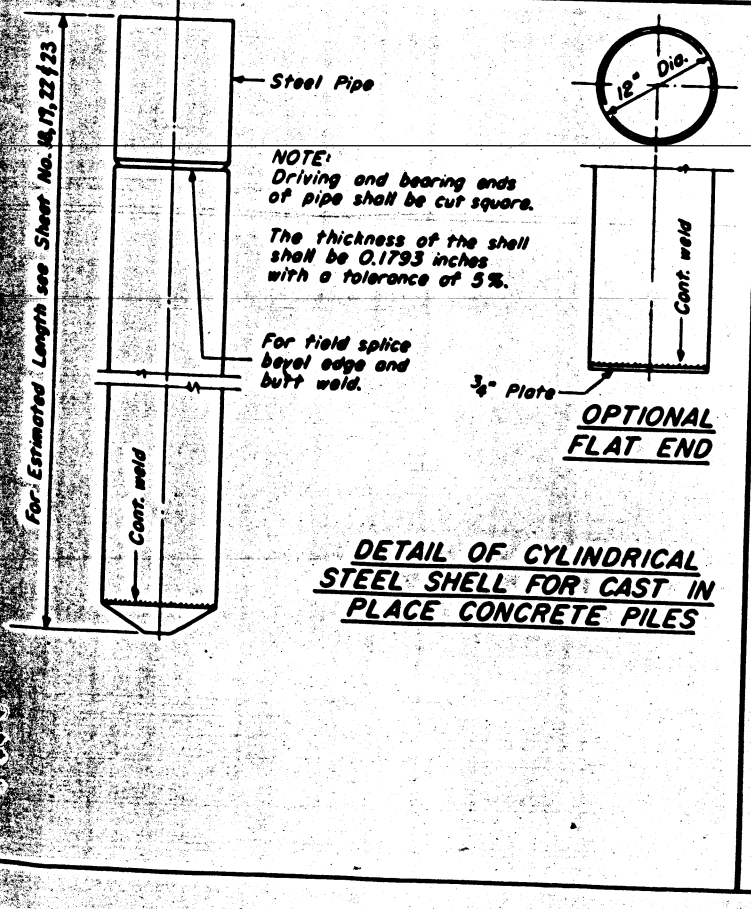
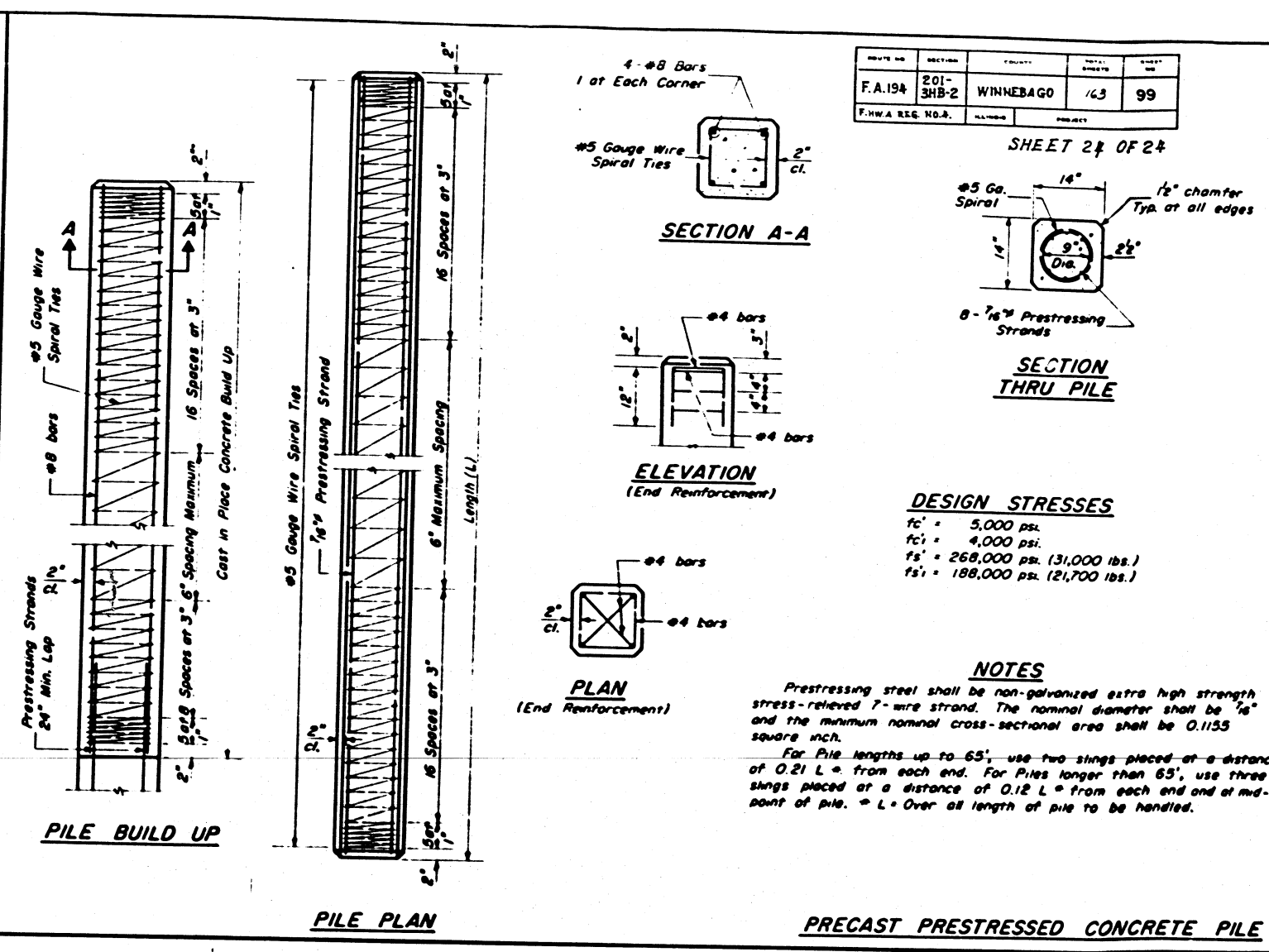


Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid point of pile.



NOTE: The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.



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

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