

INDEX OF SHEETS

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STANDARDS

280001-05	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542301-02	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-01	METAL END SECTION FOR PIPE CULVERT
601001-03	SUB-SURFACE DRAINS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
606101-04	TYPE A GUTTER (INLET, OUTLET & ENTRANCE)
606106-04	OUTLET TYPE 1 FOR TYPE A GUTTER
609006-05	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
630001-08	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
665001-02	WOVEN WIRE FENCE
701006-03	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701901-01	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS, & DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL (FOR SIGNS & MARKERS)
780001-02	TYPICAL PAVEMENT MARKINGS
B.L.R. 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION OF RURAL LOCAL HIGHWAYS
B.L.R. 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

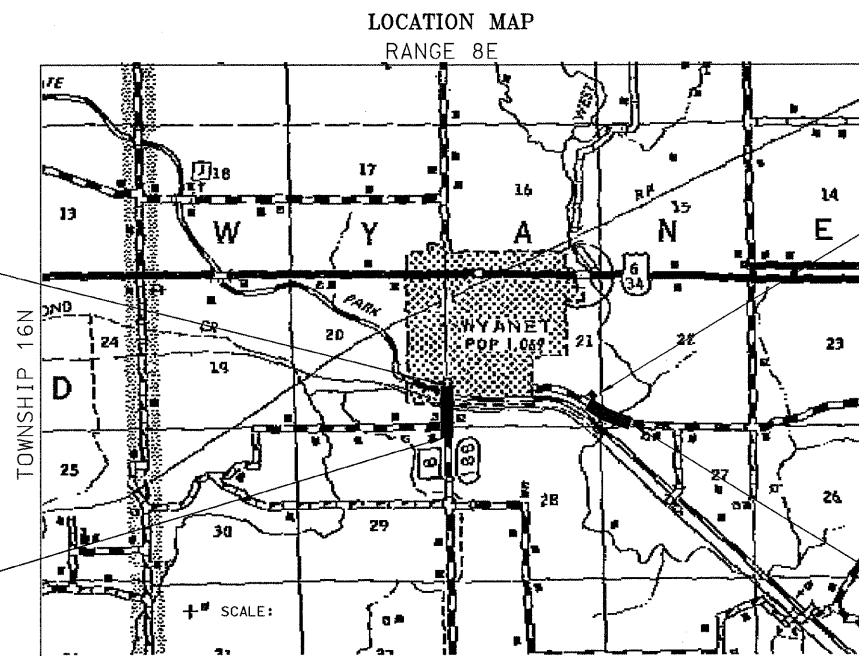
STATE OF ILLINOIS  
BUREAU COUNTY  
PLANS FOR PROPOSED  
LOCAL AGENCY IMPROVEMENTS  
MAJOR BRIDGE PROGRAM  
SECTION 05-00195-00-BR  
FAS 188 (C.H. 8) & TR 271A  
PROJECT BRS-0188(118)  
JOB NO. C-93-031-09  
CONTRACT NO. 87380

NAME AND ADDRESS OF UTILITIES	TYPE
COMCAST ATTN: DONNA ZIES 4450 KISHWAUKEE ST. ROCKFORD, IL 61109 (815) 509-7876	CABLE TV
VERIZON NORTH ATTN: TERRY SPURGEON 111 S. MAIN ST. KEWANEE, IL 61443 309-853-6293	TELEPHONE
MCI - VERIZON BUSINESS ATTN: INVESTIGATIONS 2400 N. GLENVILLE DRIVE RICHARDSON, TX 75082 972-729-6322	TELEPHONE
AMEREN IP CONTACT KATHY CROMWELL 1450 RED ADAMS ROAD KEWANEE, IL 61443 309-852-2963	ELECTRIC
VILLAGE OF WYANET McCLURE ENGINEERING ATTN: JOHN KUSEK 1138 COLUMBUS ST. OTTAWA, IL 61350 815-433-2080	SEWER/WATER

COUNTY HIGHWAY 8  
PROJECT ENDS  
STA 41+00

PROPOSED STRUCTURE  
S.N. 006-3247 INCL.  
BRIDGE APPROACH PVT.  
STA. 33+87.78 TO  
38+12.22 (424.44')

COUNTY HIGHWAY 8  
PROJECT BEGINS  
STA 25+00

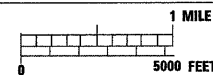


TR 271A  
PROJECT BEGINS  
STA. 54+90

PROPOSED STRUCTURE  
S.N. 006-4376 INCL.  
BRIDGE APPROACH PVT.  
STA. 59+11.25 TO  
60+88.75 (177.5')

TR 271A  
PROJECT ENDS  
STA 65+30

LOCATION MAP SCALE



SCALES:

PLAN AND PROFILE



\* CROSS SECTIONS



\* FOR SHEETS 23-26 1"=20'

PROJECT LENGTH

CH 8 =	1,600' = 0.30 MILES
TR 271A =	1,040' = 0.20 MILES
1400 N =	80' = 0.02 MILES
TOW PATH ROAD =	574' = 0.11 MILES
SHARED USE PATH =	420' = 0.08 MILES
BIKE PATH =	142' = 0.03 MILES
CANAL ST. =	114' = 0.02 MILES

TOTAL PROJECT NET LENGTH=  
3,970' = 0.752 MILES

BUREAU COUNTY

APPROVED 03/26/10 DATE  
*John E. Fran* COUNTY ENGINEER

PASSED 04/02/10 DATE  
*Gregory J. ...* DISTRICT 3 IMPLEMENTATION ENGINEER

RELEASING FOR BID  
BASED ON LIMITED  
REVIEW 04/02/10 DATE  
*Gregory J. ...* DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER



DESIGN CRITERIA				
FUNCTIONAL CLASSIFICATION	HIGHWAY	ADT (2030)	% TRUCKS	DESIGN SPEED
MAJOR COLLECTOR	COUNTY HIGHWAY 8	1420	7%	55 MPH
MINOR COLLECTOR	T.R. 271A	650	3%	50 MPH
LOCAL ROAD	CANAL STREET	650	3%	30 MPH



809 East Second Street Dixon, Illinois 61021  
Phone 815.284.3381 Fax 815.284.3385  
Design Firm #184-000918  
www.willetthofmann.com

CONSTRUCTION TYPE CODE: X071-2A

DATE	BY
DESIGNED	CHECKED
PLANNED	NOTED
PROFILE	NOTED
GRADES	CHECKED
STRUCTURE	NOTATIONS

DATE	BY
DESIGNED	CHECKED
PLANNED	NOTED
PROFILE	NOTED
GRADES	CHECKED
STRUCTURE	NOTATIONS

ITEM NO.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CH 8 QUANTITY	TR 271A QUANTITY
1	20100500	TREE REMOVAL, ACRES	ACRE	0.88	0.30	0.58
2	20101000	TEMPORARY FENCE	FOOT	200	200	0
3	20200410	EARTH EXCAVATION (SPECIAL)	CU YD	2,438	2,271	167
4	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	283	266	17
5	20300100	CHANNEL EXCAVATION	CU YD	1,592	77	1515
6	20400800	FURNISHED EXCAVATION	CU YD	54,909	46,031	8,878
7	20700110	POROUS GRANULAR EMBANKMENT	TON	1,242	566	676
8	20800150	TRENCH BACKFILL	CU YD	23	23	0
9	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	5,589	3509	2080
10	25001100	SEEDING, CLASS 3 (SPECIAL)	ACRE	4.90	3.54	1.36
11	25100630	EROSION CONTROL BLANKET	SQ YD	23,716	17,134	6,582
12	28000255	TEMPORARY EROSION CONTROL SEEDING	ACRE	4.90	3.54	1.36
13	28000305	TEMPORARY DITCH CHECKS	FOOT	50	50	0
14	28000400	PERIMETER EROSION BARRIER	FOOT	4,892	2,085	2,807
15	28000500	INLET AND PIPE PROTECTION	EACH	10	10	0
16	28100208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	137	137	0
17	28100210	STONE RIPRAP, CLASS A5 (SPECIAL)	TON	360	0	360
18	28100705	STONE DUMPED RIPRAP, CLASS A3	SQ YD	336	336	0
19	31101000	SUB-BASE GRANULAR MATERIAL, TYPE B	TON	3,398	2,606	792
20	35100100	AGGREGATE BASE COURSE, TYPE A	TON	1,581	1,185	396
21	35101400	AGGREGATE BASE COURSE, TYPE B	TON	577	465	112
22	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	3,770	2,737	1,033
23	40600300	AGGREGATE (PRIME COAT)	TON	10	7	3
24	40603100	HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30	TON	996	853	143
25	40603305	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N30	TON	541	407	134
26	40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	39	39	0
27	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	976	488	488
28	48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	997	728	269
29	48203015	HOT-MIX ASPHALT SHOULDERS, 4 1/2"	SQ YD	1,259	851	408
30	50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1	0
31	50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1	0	1
32	50104800	REMOVAL OF EXISTING CONCRETE DECK	L SUM	1	1	0
33	50157300	PROTECTIVE SHIELD	SQ YD	593	593	0
34	50200100	STRUCTURE EXCAVATION	CU YD	1,980	287	1,693
35	50300100	FLOOR DRAINS	EACH	28	28	0
36	50300225	CONCRETE STRUCTURES	CU YD	693.0	315.7	377.3
37	50300255	CONCRETE SUPERSTRUCTURE	CU YD	652.8	531.6	121.2
38	50300260	BRIDGE DECK GROOVING	SQ YD	1,740	1,322	418
39	50300300	PROTECTIVE COAT	SQ YD	2,221	1,728	493
40	50300540	FLOOR DRAINS (SPECIAL)	EACH	12	0	12
41	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1	0
42	50500505	STUD SHEAR CONNECTORS	EACH	8,504	3,830	4,674
43	50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1	0	1
44	50606400	CONTAINMENT AND DISPOSAL OF LEAD BASED CLEANING RESIDUES	L SUM	1	0	1
45	50800105	REINFORCEMENT BARS	POUND	102,690	90,100	12,590
46	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	242,120	164,070	78,050
47	50800515	BAR SPLICERS	EACH	62	62	0
48	51200957	FURNISHING METAL SHELL PILES 12" X 0.25"	FOOT	1,734	1,734	0
49	51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	1,236	1,236	0
50	51201900	FURNISHING STEEL PILES HP 14 X 89	FOOT	4,428	0	4,428
51	51202305	DRIVING PILES	FOOT	7,398	2,970	4,428
52	51203200	TEST PILE METAL SHELLS	EACH	4	4	0
53	51203900	TEST PILE STEEL HP 14 X 89	EACH	2	0	2
54	51205200	TEMPORARY SHEET PILING	SQ FT	2,505	2,505	0
55	51500100	NAME PLATES	EACH	3	2	1
56	52000110	PREFORMED JOINT STRIP SEAL	FOOT	58	34	24
57	52100010	ELASTOMERIC BEARING ASSEMBLY, Type I	EACH	5	5	0
58	52100020	ELASTOMERIC BEARING ASSEMBLY, Type II	EACH	5	5	0
59	52100400	STEEL BEARING ASSEMBLY	EACH	4	0	4
60	52100505	ANCHOR BOLTS, 5/8"	EACH	10	10	0
61	52100520	ANCHOR BOLTS, 1"	EACH	20	20	0
62	52100530	ANCHOR BOLTS, 1 1/4"	EACH	32	20	12
63	54002020	EXPANSION BOLTS 3/4 INCH	EACH	94	94	0
64	54003000	CONCRETE BOX CULVERTS	CU YD	494.4	494.4	0
65	542A0220	PIPE CULVERTS, CLASS A, TYPE 1 15"	FOOT	135	135	0

ITEM NO.	CODE NO.	ITEM	UNIT	QUANTITY	CH 8 QUANTITY	TR 271A QUANTITY
66	542A0229	PIPE CULVERTS, CLASS A, TYPE 1 24"	FOOT	45	45	0
67	542A0235	PIPE CULVERTS, CLASS A, TYPE 1 30"	FOOT	50	50	0
68	542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	82	82	0
69	542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	60	60	0
70	54213447	END SECTIONS 12"	EACH	2	2	0
71	54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1	1	0
72	54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	6	6	0
73	54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	2	2	0
74	54213675	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"	EACH	2	2	0
75	54213870	STEEL END SECTIONS 15"	EACH	6	6	0
76	54213879	STEEL END SECTIONS 24"	EACH	2	2	0
77	550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	26	26	0
78	58700300	CONCRETE SEALER	SQ FT	215	215	0
79	59000200	EPOXY CRACK INJECTION	FOOT	87	87	0
80	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	361	112	249
81	60100945	PIPE DRAINS 12"	FOOT	16	16	0
82	60107700	PIPE UNDERDRAINS 6"	FOOT	6,046	4,364	1,682
83	60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	138	108	30
84	60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	209	209	0
85	60600095	CLASS SI CONCRETE (OUTLET)	CU YD	4.6	4.6	0.0
86	60602500	CONCRETE GUTTER, TYPE A	FOOT	264	264	0
87	60603400	GUTTER OUTLET (SPECIAL)	EACH	1	1	0
88	60900140	TYPE B INLET BOX, STANDARD 609006	EACH	2	2	0
89	60900515	CONCRETE THRUST BLOCKS	EACH	2	2	0
90	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	350	350	0
91	63004011	WEATHERING STEEL TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT	EACH	4	0	4
92	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4	0	4
93	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	0
94	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT	EACH	4	4	0
95	63200310	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	2,065	855	1210
96	63300315	REMOVAL AND REINSTALLATION OF EXISTING TERMINAL SECTION, SINGLE RAIL	EACH	4	4	0
97	63300575	REMOVE AND RE-ERECT RAIL ELEMENT OF EXISTING GUARD RAIL	FOOT	667	667	0
98	63302700	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	0
99	66407000	CHAIN LINK GATES, 5' X 18' DOUBLE	EACH	1	1	0
100	66502000	WOVEN WIRE GATES, 4' X 24' DOUBLE	EACH	2	2	0
101	66500105	WOVEN WIRE FENCE, 4'	FOOT	408	408	0
102	66503200	BARBED WIRE FENCE, FIVE STRAND	FOOT	646	646	0
103	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	16	16	0
104	67100100	MOBILIZATION	L SUM	1.0	0.8	0.2
105	70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1.0	0.8	0.2
106	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	480	0	0
107	72000100	SIGN PANEL - TYPE 1	SQ FT	67	67	0
108	72900100	METAL POST - TYPE A	FOOT	124	124	0
109	78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	61	61	0
110	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	6,138	6,138	0
111	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	52	52	0
112	78200410	GUARDRAIL MARKERS, TYPE A	EACH	15	9	6
113	78200420	GUARDRAIL MARKERS, TYPE B	EACH	14	10	4
114	78300100	PAVEMENT MARKING REMOVAL	SQ FT	160	0	0
115	C2002560	SHRUB, EUONYMUS ALATA (WINGED EUONYMUS), 5' HEIGHT, BALLED AND BURLAPPED	EACH	13	13	0
116	X0325305	STRUCTURE REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	123	123	0
117	X0325644	HIGH LOAD MULTI-ROTATION BEARINGS, GUIDED EXPANSION, 400K	EACH	5	5	0
118	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	0	1
119	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	0	1
120	XX005699	BITUMINOUS SURFACE TREATMENT, A-3 SPECIAL	SQ YD	628	628	0
121	XX006493	WEATHERING STEEL PLATE BEAM GUARD RAIL, SPECIAL	FOOT	200	0	200
122	Z0005400	BREAKER-RUN CRUSHED STONE	TON	989	954	35
123	Z0013798	CONSTRUCTION LAYOUT	L SUM	1.0	0.8	0.2
124	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	0
125	Z0076600	TRAINNEES	HOUR	1,000	800	200
126	XX008384	RELOCATE EXISTING BRIDGE	L SUM	1	1	0
127	28100206	STONE RIPRAP, CLASS A3 (SPECIAL)	TON	900	900	0
128	28100214	STONE RIPRAP, CLASS A7 (SPECIAL)	TON	344	344	0
129	XX006489	FIXED HINGE PIN ASSEMBLY	EACH	4	0	4

+Y080  
 Δ SPECIALTY ITEMS

\*INDICATES SPECIAL PROVISION, GENERAL NOTE, OR DETAIL

FILE NAME = S:\STRUCT\1066005BureauCounty\Design\COVER C.dgn

**WILLET, HOFMANN & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS  
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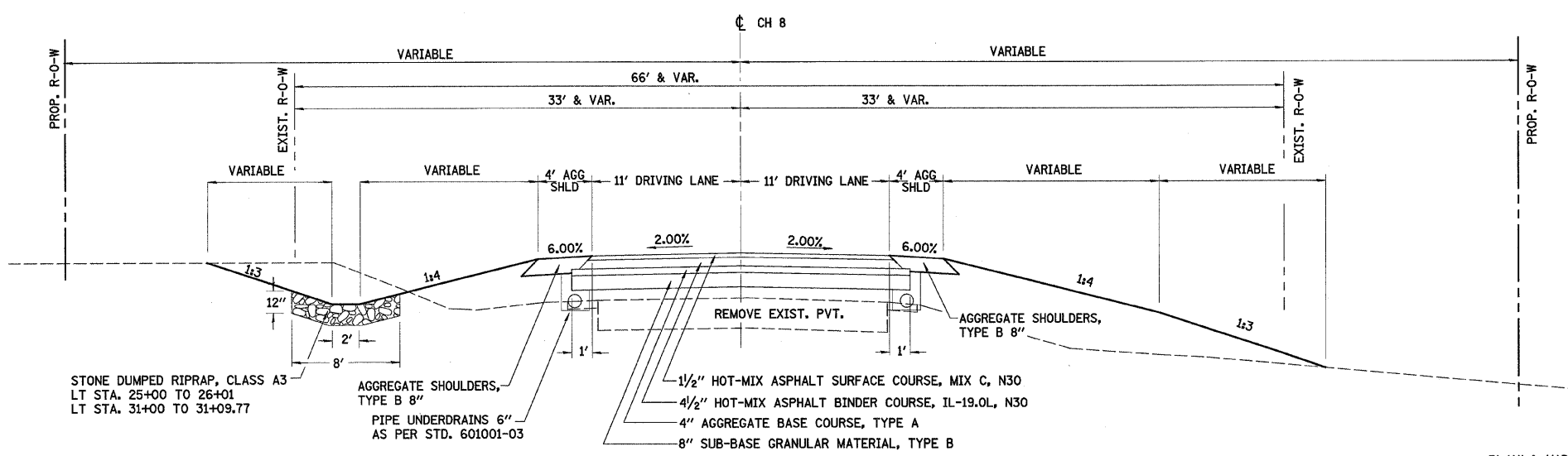
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**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**SUMMARY OF QUANTITIES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	2
STA.	TO STA.	CONTRACT NO.	87380	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	BRS-0188(118)	





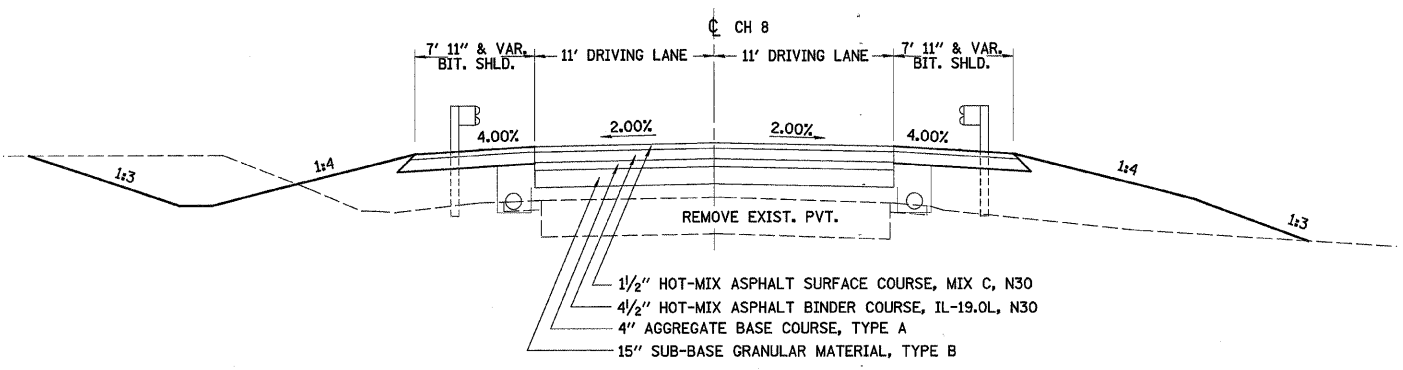
STONE DUMPED RIPRAP, CLASS A3  
 LT STA. 25+00 TO 26+01  
 LT STA. 31+00 TO 31+09.77

AGGREGATE SHOULDERS,  
 TYPE B 8"

PIPE UNDERDRAINS 6"  
 AS PER STD. 601001-03

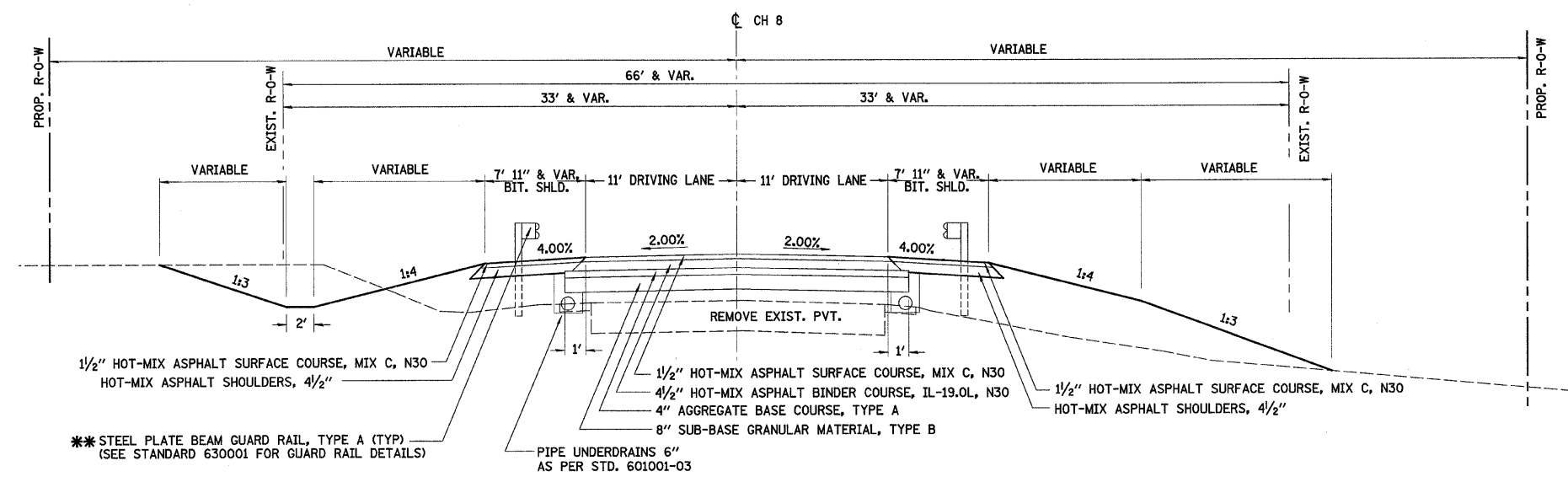
1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 4 1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30  
 4" AGGREGATE BASE COURSE, TYPE A  
 8" SUB-BASE GRANULAR MATERIAL, TYPE B

**COUNTY HIGHWAY 8**  
**STA. 25+00.00 TO STA. 31+09.77**  
**AND**  
**STA. 39+67.35 TO STA. 41+00.00**



**COUNTY HIGHWAY 8**  
**BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)**  
**STA. 32+87.78 TO 33+87.78**  
**AND**  
**STA. 38+12.22 TO 39+12.22**

- NOTE:**
- SEE STANDARD 420401-08 FOR TRANSITION INTO BRIDGE APPROACH PAVEMENT.
  - ALL PAVEMENT ITEMS INCLUDED IN THE PAY ITEM, BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE), SHALL BE INCIDENTAL TO SAID ITEM.



1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 HOT-MIX ASPHALT SHOULDERS, 4 1/2"

1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 4 1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30  
 4" AGGREGATE BASE COURSE, TYPE A  
 8" SUB-BASE GRANULAR MATERIAL, TYPE B

1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 HOT-MIX ASPHALT SHOULDERS, 4 1/2"

PIPE UNDERDRAINS 6"  
 AS PER STD. 601001-03

**\*\* STEEL PLATE BEAM GUARD RAIL, TYPE A (TYP)**  
 (SEE STANDARD 630001 FOR GUARD RAIL DETAILS)

**\*\* GAIRD RAIL FROM STATION:**  
 LT 32+55.80 TO 33+80.80  
 LT 38+32.53 TO 38+82.53  
 RT 31+94.57 TO 33+69.57

**COUNTY HIGHWAY 8**  
**STA. 31+70.99 TO STA. 32+87.78 \***

**\* BRIDGE OMISSION STA 33+67.78 TO 38+12.22**

**PAVEMENT MIXTURE REQUIREMENTS**

	CONSTRUCTION		
	HMA BINDER	HMA SURFACE	HMA SHOULDERS
PG GRADE**	PG58-22	PG58-22	PG58-22
DESIGN AIR VOIDS	4.0% @ N30	4.0% @ N30	2.0% @ N30
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 19.0L	IL 9.5L	IL 19.0
FRICTION AGGREGATE		MIXTURE C	
DENSITY TEST METHOD	CORES	CORES	CORES

\*\* WHEN MORE THAN 20% RAP IS USED, A SOFTER ASPHALT BINDER (PG58-22) MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.

**PAVEMENT STRUCTURAL DESIGN**  
**COUNTY HIGHWAY 8**

STRUCTURAL DESIGN TRAFFIC (S.D.T.) = YEAR 2020

CLASS III STREET  
 80,000\* TRUCK DESIGN

E<sub>RI</sub> : (ASSUMED) 2 ksi  
 TF = 0.24  
 HMA MIX TEMP. 79°F  
 HMA E<sub>AC</sub> = 575 ksi  
 HMA DESIGN STRAIN 225 microstrain

P.V. 1,135  
 S.U. 40  
 M.U. 50 ] 1,225 ADT

USE  
 1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 4 1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30  
 12" AGGREGATE BASE

PLAN

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	

PROFILE

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	

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**CONSULTING ENGINEERS**  
 809 East Second Street, Dixon, IL 61021  
 Phone 815.294.3381 Fax 815.294.3385  
 Design Firm # 184-00918  
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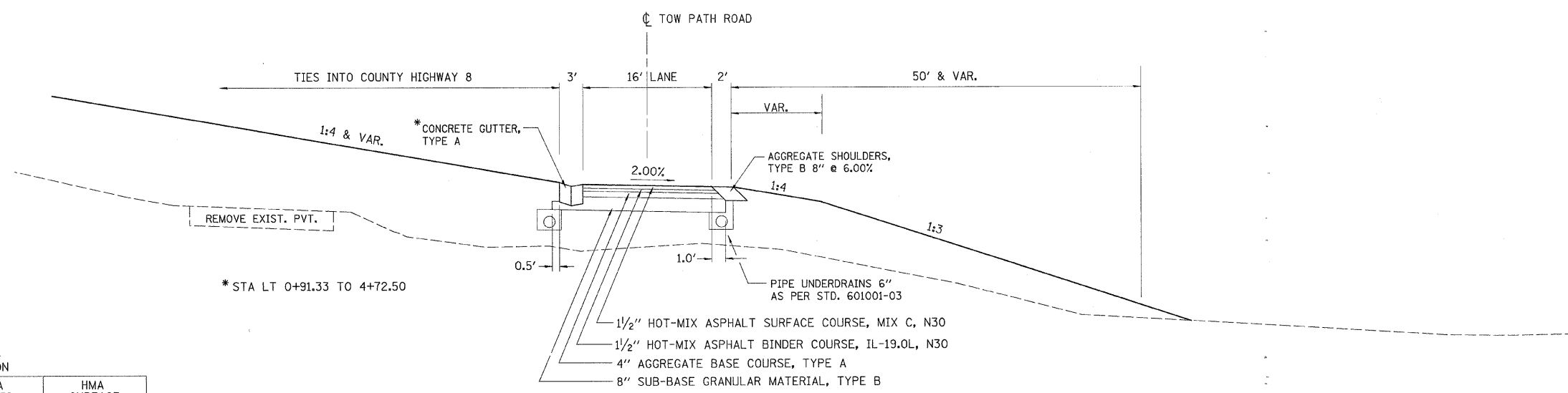
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL**

**TYPICAL SECTIONS & CONTROL POINTS**

F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 3
STA. TO STA.	CONTRACT NO. 87380		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)	

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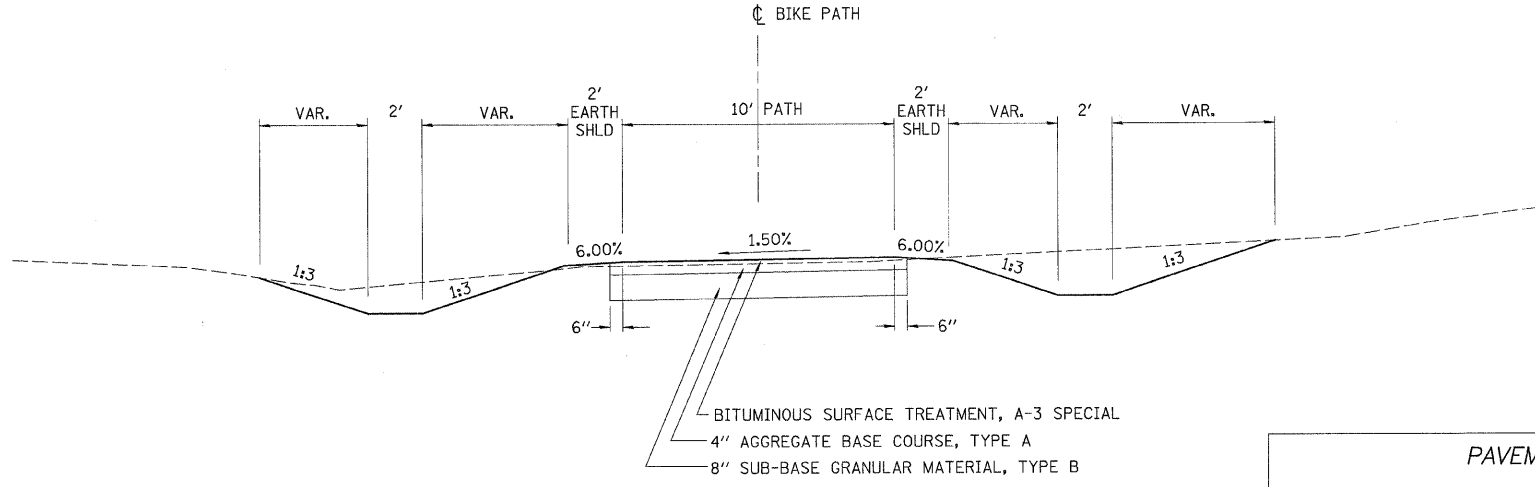
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PAVEMENT MIXTURE REQUIREMENTS  
CONSTRUCTION

	HMA BINDER	HMA SURFACE
PG GRADE**	PG58-22	PG58-22
DESIGN AIR VOIDS	4.0% @ N30	4.0% @ N30
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 12.5L	IL 9.5L
FRICTION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	CORES	CORES

\*\* WHEN MORE THAN 20% RAP IS USED, A SOFTER ASPHALT BINDER (PG58-22) MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.



**PAVEMENT STRUCTURAL DESIGN**  
**TOW PATH ROAD**  
 STRUCTURAL DESIGN TRAFFIC (S.D.T.) = YEAR 2020  
 CLASS IV STREET  
 USE  
 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
 1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30  
 12" AGGREGATE BASE

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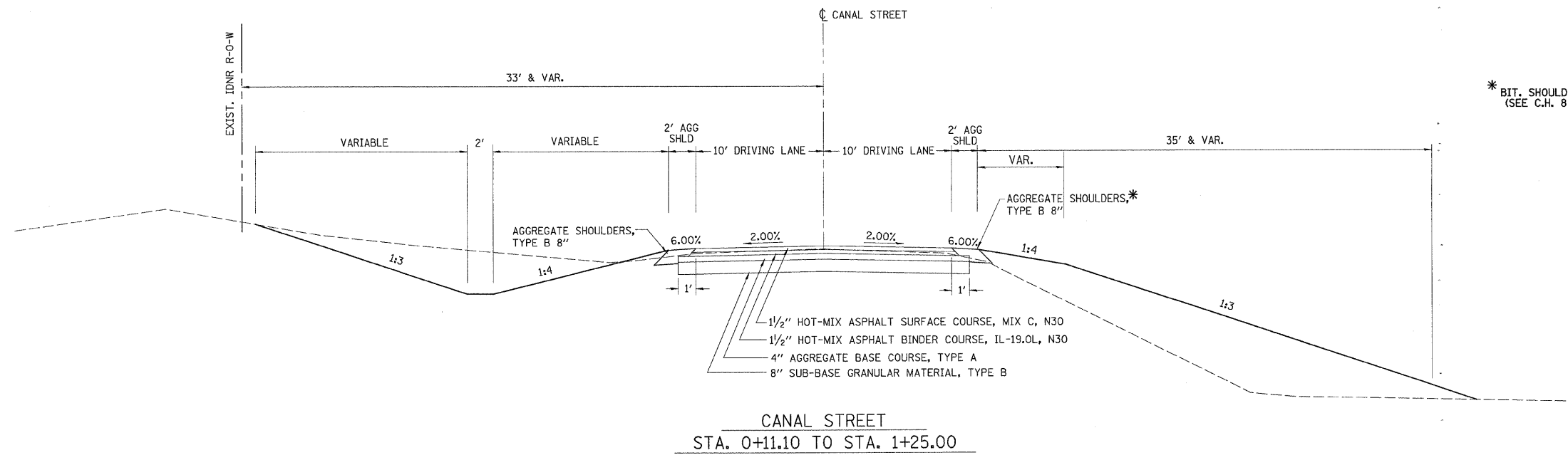
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**TYPICAL SECTIONS & CONTROL POINTS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	4
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

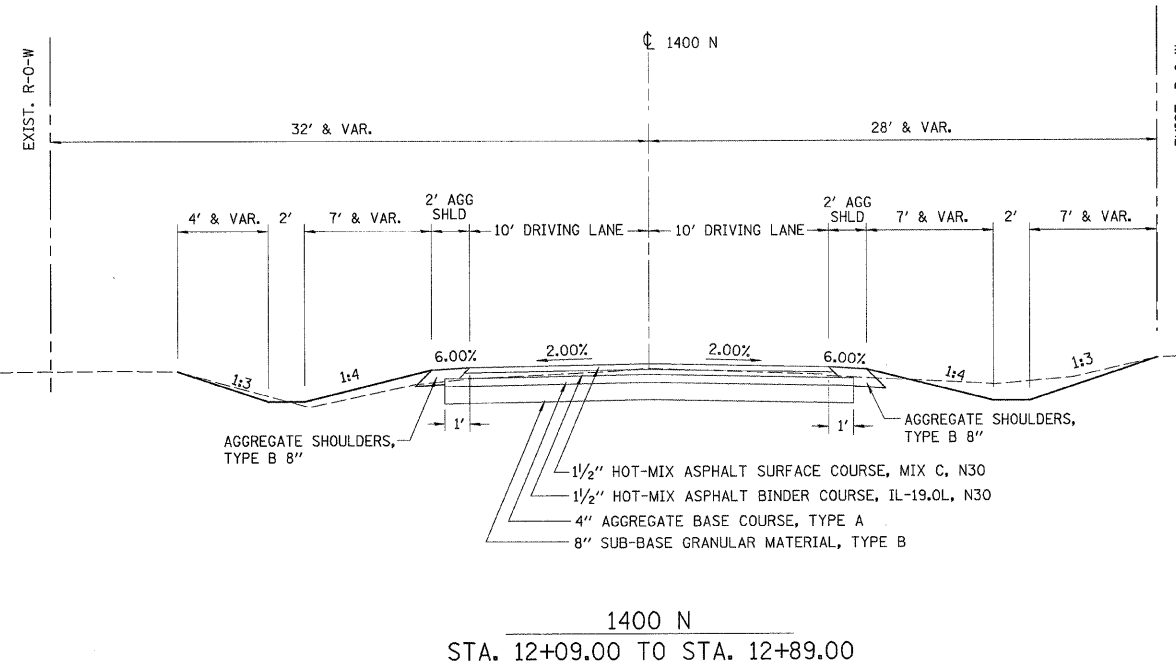
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REVISIONS	
NO.	



\* BIT. SHOULDER FROM RT 0+11.10 TO 0+74.00 (SEE C.H. 8 PLAN & PROFILE FOR DETAILS)

CANAL STREET  
STA. 0+11.10 TO STA. 1+25.00



1400 N  
STA. 12+09.00 TO STA. 12+89.00

PAVEMENT MIXTURE REQUIREMENTS

	CONSTRUCTION	
	HMA BINDER	HMA SURFACE
PG GRADE**	PG58-22	PG58-22
DESIGN AIR VOIDS	4.0% @ N30	4.0% @ N30
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 12.5L	IL 9.5L
FRICION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	CORES	CORES

\*\* WHEN MORE THAN 20% RAP IS USED, A SOFTER ASPHALT BINDER (PG58-22) MAY BE REQUIRED AS DETERMINED BY THE ENGINEER.

**PAVEMENT STRUCTURAL DESIGN  
CANAL STREET**

STRUCTURAL DESIGN TRAFFIC (S.D.T.) = YEAR 2020

CLASS III STREET  
80,000\* TRUCK DESIGN

$E_{R1}$  : (ASSUMED) 2 ksi  
TF = 0.03  
HMA MIX TEMP. 74°F  
HMA  $E_{AC}$  = 700 ksi  
HMA DESIGN STRAIN 395 microstrain

USE  
1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX C, N30  
1/2" HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30  
12" AGGREGATE BASE

P.V. 517  
S.U. 13  
M.U. 3 } 533 ADT

1400 N CLASS IV STREET

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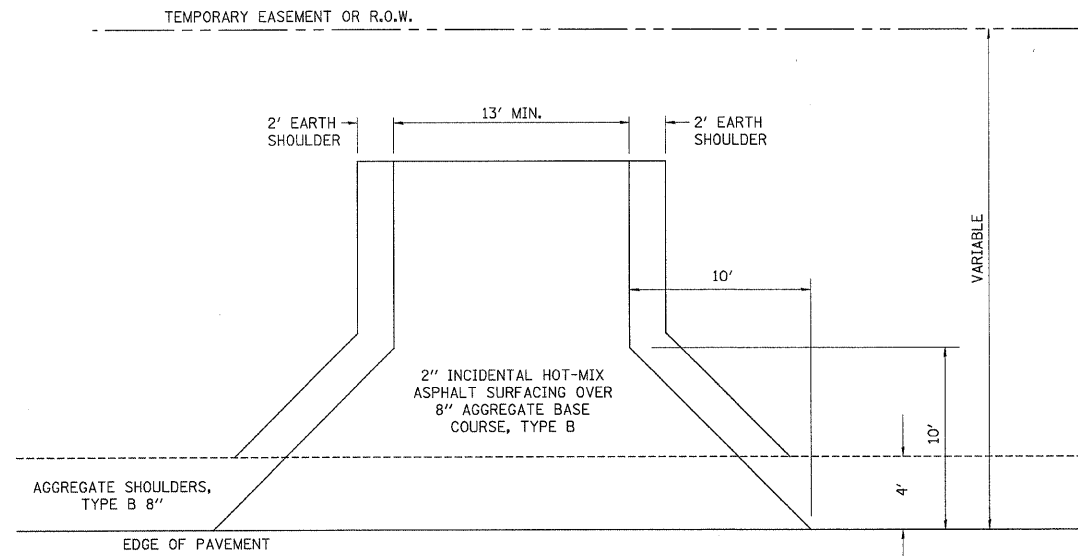
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**TYPICAL SECTIONS & CONTROL POINTS**

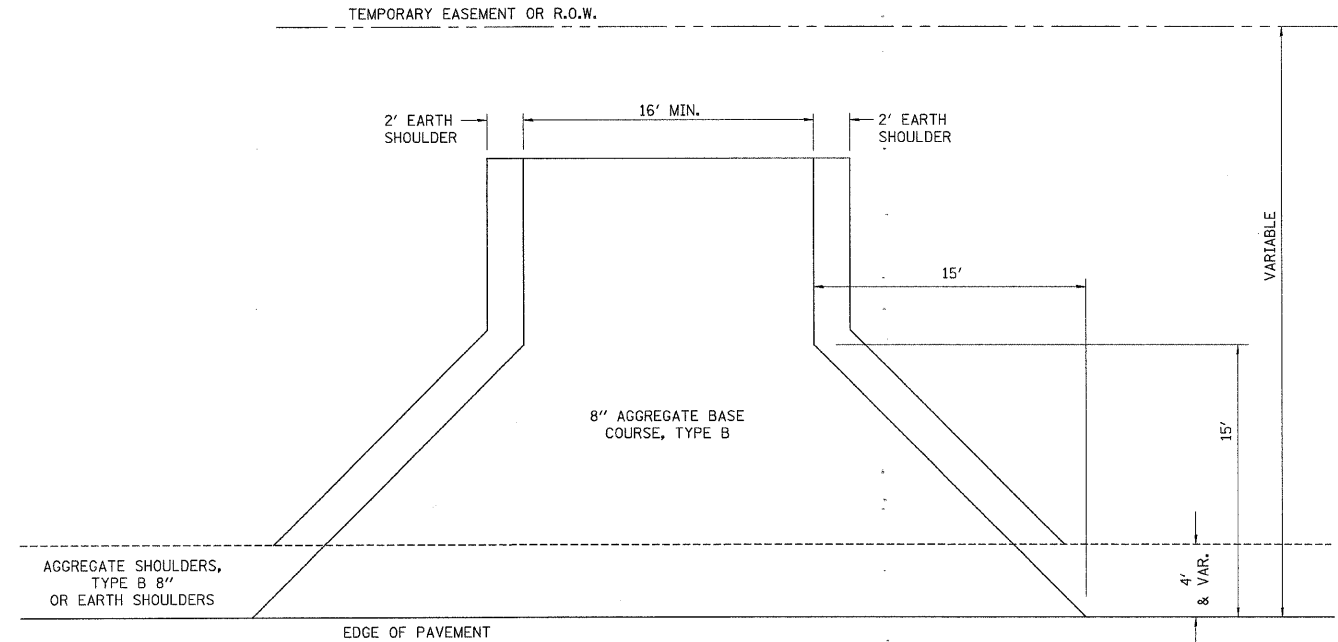
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	5
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

PLAN SURVEYED BY DATE  
 NOTE BOOK NO. CHECKED BY  
 ALIGNED CHECKED BY  
 RT. OF WAY CHECKED BY  
 PLOT FILE NAME

PROFILE SURVEYED BY DATE  
 NOTE BOOK NO. CHECKED BY  
 ELEV. NOTED  
 STRUCTURE NOTATIONS CHECKED



COUNTY HIGHWAY 8  
 TYP. PRIVATE ENTRANCE



TR 271A AND TOW PATH ROAD  
 TYP. FIELD ENTRANCE

NOTE:  
 MAILBOX TURNOUTS ON COUNTY HIGHWAY 8  
 TO BE CONSTRUCTED SIMILAR TO BITUMINOUS  
 SHOULDER = 1 1/2" HMA SURF CRS, MIX "C", N30  
 OVER HMA SHOULDERS, 6 1/2"

VERTICAL BENCH MARKS - CH 8	
ELEV.	DESCRIPTION
632.05	CHISLED "C" ON NW WING WALL OF APPROACH STRUCTURE
635.90	"M" IN MUELLER ON FH @ NE CORNER OF CH 8 & CANAL ST.
632.26	CHISLED "C" ON NW HUB GUARD ON BRIDGE OVER RR TRACKS
617.16	RR SPIKE IN 2ND PP SOUTH OF RR BRIDGE WEST OF CH 8
VERTICAL BENCH MARKS - TR271A	
580.41	CHISLED "C" SW WING WALL OF EXIST. BRIDGE
579.81	TOP OF EAST I-BEAM @ GATE TO IL DEPT. OF NAT. RES.

HORIZONTAL CONTROL POINTS - CH 8						
POINT #	ROAD	STATION	O/S	-NORTH	EAST	DESCRIPTION
100	CH 8	38+46.79	RT 18.11	1707754.96	2455653.40	IRON PIN
101	CH 8	44+10.64	LT 16.91	1708317.96	2455606.67	IRON PIN
102	CH 8	38+43.21	LT 87.03	1707749.19	2455548.36	IRON PIN
200	CH 8	26+56.45	LT 0.11	1706564.49	2455659.91	RR SPIKE

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**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**TYPICAL SECTIONS & CONTROL POINTS**

F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 6
STA. TO STA.		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0186(118)				



C.H. 8 & TR271 RECONSTRUCTION EARTHWORK TOTALS

LOCATION	EARTH EXCAVATION (SPECIAL) 20200410*	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25%	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) FURNISHED EXCAVATION 20400800
	CU YD	CU YD	CU YD	CU YD
COUNTY HIGHWAY 8	2,013.44	1,510.08	46,184.69	-44,674.61
TOW PATH ROAD	0.22	0.17	153.22	-153.05
SHARED USE PATH	167.45	125.59	435.01	-309.43
BIKE PATH	38.55	28.91	193.44	-164.53
TR271	167.27	125.45	9,003.77	-8,878.32
STAGE 1	49.30	37.00	232.20	-195.30
STAGE 2	1.85	1.39	535.58	-534.19
<b>TOTAL</b>	<b>2,438.08</b>	<b>1,828.59</b>	<b>56,737.92</b>	<b>-54,909.34</b>

TREE REMOVAL, ACRES

STATION	ACRE	REMARKS
CH 8		
R 31+65 TO 31+78	0.006	
R 32+88 TO 34+41	0.169	
R 36+27 TO 36+43	0.004	
L & R 37+05 TO 38+14	0.120	
R 39+01 TO 39+21	0.004	
<b>SUBTOTAL</b>	<b>0.30</b>	
TR 271A		
R 54+90 TO 59+93	0.255	
R 60+61 TO 63+92	0.267	
R 64+20 TO 65+30	0.056	
<b>SUBTOTAL</b>	<b>0.58</b>	
<b>PROJECT TOTAL</b>	<b>0.88</b>	

TEMPORARY FENCE

STATION	FOOT	REMARKS
CH 8		
L 39+75 TO 40+75	100	TO PROTECT CONCRETE FENCE POSTS
CONTINGENCY ITEM	100	AS DIRECTED BY THE ENGINEER
<b>PROJECT TOTAL</b>	<b>200</b>	

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

STATION	CU YD	REMARKS
CH 8		
CH 8	201	
TOW PATH ROAD	0	
SHARED USE PATH	17	
BIKE PATH	4	
STAGE 1A	34	
STAGE 1B	6	
STAGE 2	4	
<b>SUBTOTAL</b>	<b>266</b>	
TR 271A		
<b>SUBTOTAL</b>	<b>17</b>	
<b>PROJECT TOTAL</b>	<b>283</b>	

TRENCH BACKFILL

STATION	CU YD	REMARKS
CH 8		
25+92	3.2	30" P CUL
<b>SUBTOTAL</b>	<b>3.2</b>	
TOW PATH ROAD		
3+85.55	3.0	12" SS
4+85	5.6	15" P CUL
5+72.69	3.9	15" P CUL
<b>SUBTOTAL</b>	<b>12.5</b>	
SHARED USE PATH		
0+26.75	3.7	15" P CUL (BIKE PATH)
<b>SUBTOTAL</b>	<b>3.7</b>	
CANAL STREET		
0+50	3.7	24" P CUL
<b>SUBTOTAL</b>	<b>3.7</b>	
<b>PROJECT TOTAL</b>	<b>23</b>	

GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

STATION	SQ YD	REMARKS
CH 8		
25+00 TO 41+00	3,509.00	CONTINGENCY ITEM
<b>SUBTOTAL</b>	<b>3,509.00</b>	
TR 271A		
54+90 TO 65+30	2,080.00	CONTINGENCY ITEM
<b>SUBTOTAL</b>	<b>2,080.00</b>	
<b>PROJECT TOTAL</b>	<b>5,589.00</b>	

SEEDING, CLASS 3 (SPECIAL)

STATION	ACRE	REMARKS
CH 8		
CH 8	3.24	
TOW PATH ROAD	0.03	
SHARED USE PATH	0.17	
BIKE PATH	0.10	
<b>SUBTOTAL</b>	<b>3.54</b>	
TR 271A		
<b>SUBTOTAL</b>	<b>1.36</b>	
<b>PROJECT TOTAL</b>	<b>4.90</b>	

EROSION CONTROL BLANKET

STATION	SQ YD	REMARKS
CH 8		
CH 8	15,682	
TOW PATH ROAD	145	
SHARED USE PATH	823	
BIKE PATH	484	
<b>SUBTOTAL</b>	<b>17,134</b>	
TR 271A		
<b>SUBTOTAL</b>	<b>6,582</b>	
<b>PROJECT TOTAL</b>	<b>23,716</b>	

TEMPORARY EROSION CONTROL SEEDING

STATION	ACRE	REMARKS
CH 8		
CH 8	3.24	
TOW PATH ROAD	0.03	
SHARED USE PATH	0.17	
BIKE PATH	0.10	
<b>SUBTOTAL</b>	<b>3.54</b>	
TR 271A		
<b>SUBTOTAL</b>	<b>1.36</b>	
<b>PROJECT TOTAL</b>	<b>4.90</b>	

TEMPORARY DITCH CHECKS

STATION	FOOT	REMARKS
CH 8		
L 27+00	5	
L 28+00	5	
L 29+00	5	
L 30+00	5	
L 31+00	5	
L 32+00	5	
L 37+77	5	
L 38+66	5	
<b>SUBTOTAL</b>	<b>40</b>	
SHARED USE PATH		
L & R 8+60	10	
<b>SUBTOTAL</b>	<b>10</b>	
<b>PROJECT TOTAL</b>	<b>50</b>	

PERIMETER EROSION BARRIER

STATION	FOOT	REMARKS
CH 8		
R 24+56 TO 26+60	272	
R 26+77 TO 30+67	473	
L 33+03 TO 35+49	254	
R 36+98 TO L 37+31	166	ALONG NORTH EDGE OF CANAL
R 36+98 TO 38+46	189	
L 37+31 TO 37+97	65	
<b>SUBTOTAL</b>	<b>1,418</b>	
TR 271A		
L 54+90 TO 58+25	360	
R 54+90 TO 59+66	531	
R 59+66 TO L 60+16	395	ALONG WEST EDGE OF W. BUREAU CREEK
L 60+35 TO R 60+41	324	ALONG EAST EDGE OF W. BUREAU CREEK
L 60+35 TO 65+30	540	
R 60+41 TO 65+30	657	
<b>SUBTOTAL</b>	<b>2,807</b>	
TOW PATH ROAD		
L 0+91 TO 4+73	384	
R 2+09 TO 3+02	138	
R 3+50 TO 5+05	145	
<b>SUBTOTAL</b>	<b>667</b>	
<b>PROJECT TOTAL</b>	<b>4,892</b>	

INLET AND PIPE PROTECTION

STATION	EACH	REMARKS
CH 8		
L 25+92	1	
R 39+51	1	
L 39+70	1	
R 40+72	1	
<b>SUBTOTAL</b>	<b>4</b>	
TOW PATH ROAD		
R 1+31	1	
L 3+86	1	
L 4+85	1	
L 5+73	1	
<b>SUBTOTAL</b>	<b>4</b>	
SHARED USE PATH		
R 7+70	1	
<b>SUBTOTAL</b>	<b>1</b>	
CANAL STREET		
L 0+49	1	
<b>SUBTOTAL</b>	<b>1</b>	
<b>PROJECT TOTAL</b>	<b>10</b>	

STONE DUMPED RIPRAP, CLASS A3

STATION	SQ YD	REMARKS
CH 8		
L 25+00 TO 26+01	91	8' WIDE
L 31+00 TO 32+50	159	8' WIDE
L 37+36 TO 37+97	59	8' WIDE
<b>SUBTOTAL</b>	<b>309</b>	
TOW PATH ROAD		
R 3+93	5	6' X 8'
<b>SUBTOTAL</b>	<b>5</b>	
CANAL STREET		
R 0+49	22	8' WIDE
<b>SUBTOTAL</b>	<b>22</b>	
<b>PROJECT TOTAL</b>	<b>336</b>	

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**CONTROL POINTS & SCHEDULES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	7
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

DATE	BY	SUBMITTED	PLANNED	REVISIONS	REVISIONS	REVISIONS	REVISIONS
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.

DATE	BY	SUBMITTED	PLANNED	REVISIONS	REVISIONS	REVISIONS	REVISIONS
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.

SUB-BASE GRANULAR MATERIAL, TYPE B		
STATION	TON	REMARKS
CH 8		
25+00 TO 26+08.52	131	8"
26+08.52 TO 27+18.44	263	8"
27+18.44 TO 32+87.78	691	8"
39+12.22 TO 41+00	228	8"
Stage 1	170	9" - STAGE 1 TEMPORARY ROAD
Stage 2	61	9" - STAGE 2 TEMPORARY ROAD
SUBTOTAL	1,544	
TR 271A		
54+90 TO 55+63.89	84	8"
55+63.89 TO 58+11.25	300	8"
61+88.75 TO 64+43.25	309	8"
64+43.25 TO 65+30	99	8"
SUBTOTAL	792	
TOW PATH ROAD		
0+11 TO 0+91.80	113	8"
0+91.80 TO 5+53.29	420	8"
5+53.29 TO 5+85.10	47	8"
SUBTOTAL	580	
SHARED USE PATH		
5+60 TO 5+73	7	8"
5+73 TO 9+47.45	208	8"
9+47.45 TO 9+80	19	8"
0+00 TO 1+50	81	8" (BIKE PATH)
SUBTOTAL	315	
CANAL STREET		
0+11.1 TO 0+58.35	93	8"
0+58.35 TO 1+25	74	8"
SUBTOTAL	167	
PROJECT TOTAL	3,388	

AGGREGATE BASE COURSE, TYPE A		
STATION	TON	REMARKS
CH 8		
25+00 TO 26+08.52	65	4"
26+08.52 TO 27+18.44	132	4"
27+18.44 TO 32+87.78	345	4"
39+12.22 TO 41+00	114	4"
SUBTOTAL	656	
TR 271A		
54+90 TO 55+63.89	42	4"
55+63.89 TO 58+11.25	150	4"
61+88.75 TO 64+43.25	154	4"
64+43.25 TO 65+30	50	4"
SUBTOTAL	396	
TOW PATH ROAD		
0+11 TO 0+91.80	57	4"
0+91.80 TO 5+53.29	210	4"
5+53.29 TO 5+85.10	23	4"
SUBTOTAL	290	
SHARED USE PATH		
5+60 TO 5+73	3	4"
5+73 TO 9+47.45	104	4"
9+47.45 TO 9+80	9	4"
0+00 TO 1+50	40	4" (BIKE PATH)
SUBTOTAL	156	
CANAL STREET		
0+11.1 TO 0+58.35	46	4"
0+58.35 TO 1+25	37	4"
SUBTOTAL	83	
PROJECT TOTAL	1,581	

AGGREGATE BASE COURSE, TYPE B		
STATION	TON	REMARKS
CH 8		
PER 26+67.5	66	8"
PER 39+37	19	8"
PER 39+52	37	8"
PER 40+55	25	8"
Stage 1	57	3" - STAGE 1 TEMPORARY ROAD
Stage 2	20	3" - STAGE 2 TEMPORARY ROAD
CONTINGENCY ITEM	100	TEMP ROADWAY TAPERS
SUBTOTAL	324	
TR 271A		
FER 64+10	72	8"
CONTINGENCY ITEM	40	TEMP ROADWAY TAPERS
SUBTOTAL	112	
TOW PATH ROAD		
FER 1+24	141	8"
SUBTOTAL	141	
PROJECT TOTAL	577	

BITUMINOUS MATERIALS (PRIME COAT)		
STATION	GALLON	REMARKS
CH 8		
25+00 TO 26+08.52	26	.1 GAL / SY (OVER BIT)
26+08.52 TO 27+18.44	54	.1 GAL / SY (OVER BIT)
27+18.44 TO 32+87.78	139	.1 GAL / SY (OVER BIT)
39+12.22 TO 41+00	46	.1 GAL / SY (OVER BIT)
L 29+80.00 TO 30+25.00	1	.1 GAL / SY (OVER BIT) - MAILBOX TURNOUT
L 30+10.00 TO 34+23.82	31	.1 GAL / SY (OVER BIT) - SHOULDER
L 37+88.26 TO 39+41.86	12	.1 GAL / SY (OVER BIT) - SHOULDER
R 26+63.50 TO 27+08.50	1	.1 GAL / SY (OVER BIT) - MAILBOX TURNOUT
R 30+21.58 TO 34+11.74	30	.1 GAL / SY (OVER BIT) - SHOULDER
R 37+76.18 TO 38+21.55	2	.1 GAL / SY (OVER BIT) - SHOULDER
25+00 TO 26+08.52	105	.4 GAL / SY (OVER AGG)
26+08.52 TO 27+18.44	217	.4 GAL / SY (OVER AGG)
27+18.44 TO 33+87.78	654	.4 GAL / SY (OVER AGG)
38+12.22 TO 41+00	281	.4 GAL / SY (OVER AGG)
PER 26+67.5	58	.4 GAL / SY (OVER AGG)
PER 39+37	17	.4 GAL / SY (OVER AGG)
PER 39+52	32	.4 GAL / SY (OVER AGG)
PER 40+55	22	.4 GAL / SY (OVER AGG)
SUBTOTAL	1,728	
TR 271A		
54+90 TO 55+63.89	17	.1 GAL / SY (OVER BIT)
55+63.89 TO 58+11.25	60	.1 GAL / SY (OVER BIT)
61+88.75 TO 64+43.25	62	.1 GAL / SY (OVER BIT)
64+43.25 TO 65+30	20	.1 GAL / SY (OVER BIT)
L 58+19.61 TO 59+40.75	8	.1 GAL / SY (OVER BIT) - SHOULDER
L 60+59.25 TO 62+30.67	12	.1 GAL / SY (OVER BIT) - SHOULDER
R 57+70.18 TO 59+40.75	12	.1 GAL / SY (OVER BIT) - SHOULDER
R 60+59.25 TO 61+80.32	8	.1 GAL / SY (OVER BIT) - SHOULDER
54+90 TO 55+63.89	67	.4 GAL / SY (OVER AGG)
55+63.89 TO 59+11.25	340	.4 GAL / SY (OVER AGG)
60+88.75 TO 64+43.25	347	.4 GAL / SY (OVER AGG)
64+43.25 TO 65+30	80	.4 GAL / SY (OVER AGG)
SUBTOTAL	1,033	
TOW PATH ROAD		
0+11 TO 0+91.80	24	.1 GAL / SY (OVER BIT)
0+91.80 TO 5+53.29	82	.1 GAL / SY (OVER BIT)
5+53.29 TO 5+85.10	10	.1 GAL / SY (OVER BIT)
0+11 TO 0+91.80	95	.4 GAL / SY (OVER AGG)
0+91.80 TO 5+53.29	328	.4 GAL / SY (OVER AGG)
5+53.29 TO 5+85.10	40	.4 GAL / SY (OVER AGG)
SUBTOTAL	579	
SHARED USE PATH		
5+60 TO 5+73	5	.4 GAL / SY (OVER AGG)
5+73 TO 9+47.45	166	.4 GAL / SY (OVER AGG)
9+47.45 TO 9+80	15	.4 GAL / SY (OVER AGG)
0+00 TO 1+50	64	.4 GAL / SY (OVER AGG) - BIKE PATH
SUBTOTAL	250	
CANAL STREET		
0+11.1 TO 0+58.35	20	.1 GAL / SY (OVER BIT)
0+58.35 TO 1+25	15	.1 GAL / SY (OVER BIT)
R 0+18.72 TO 0+74.00	6	.1 GAL / SY (OVER BIT) - SHOULDER
0+11.1 TO 0+58.35	80	.4 GAL / SY (OVER AGG)
0+58.35 TO 1+25	59	.4 GAL / SY (OVER AGG)
SUBTOTAL	180	
PROJECT TOTAL	3,770	

AGGREGATE (PRIME COAT)		
STATION	TON	REMARKS
CH 8		
25+00 TO 26+08.52	0.39	3 LBS / SY
26+08.52 TO 27+18.44	0.81	3 LBS / SY
27+18.44 TO 32+87.78	2.09	3 LBS / SY
39+12.22 TO 41+00	0.69	3 LBS / SY
L 29+80.00 TO 30+25.00	0.02	3 LBS / SY - MAILBOX TURNOUT
L 30+10.00 TO 34+23.82	0.46	3 LBS / SY - SHOULDER
L 37+88.26 TO 39+41.86	0.17	3 LBS / SY - SHOULDER
R 26+63.50 TO 27+08.50	0.02	3 LBS / SY - MAILBOX TURNOUT
R 30+21.58 TO 34+11.74	0.45	3 LBS / SY - SHOULDER
R 37+76.18 TO 38+21.55	0.03	3 LBS / SY - SHOULDER
SUBTOTAL	5.13	
TR 271A		
54+90 TO 55+63.89	0.25	3 LBS / SY
55+63.89 TO 58+11.25	0.91	3 LBS / SY
61+88.75 TO 64+43.25	0.93	3 LBS / SY
64+43.25 TO 65+30	0.30	3 LBS / SY
L 58+19.61 TO 59+40.75	0.12	3 LBS / SY - SHOULDER
L 60+59.25 TO 62+30.67	0.19	3 LBS / SY - SHOULDER
R 57+70.18 TO 59+40.75	0.18	3 LBS / SY - SHOULDER
R 60+59.25 TO 61+80.32	0.12	3 LBS / SY - SHOULDER
SUBTOTAL	3.00	
TOW PATH ROAD		
0+11 TO 0+91.80	0.36	3 LBS / SY
0+91.80 TO 5+53.29	1.23	3 LBS / SY
5+53.29 TO 5+85.10	0.15	3 LBS / SY
SUBTOTAL	1.74	
CANAL STREET		
0+11.1 TO 0+58.35	0.30	3 LBS / SY
0+58.35 TO 1+25	0.22	3 LBS / SY
R 0+18.72 TO 0+74.00	0.09	3 LBS / SY - SHOULDER
SUBTOTAL	0.61	
PROJECT TOTAL	10	

HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30		
STATION	TON	REMARKS
CH 8		
25+00 TO 26+08.52	71	4 1/2" (2 LIFTS)
26+08.52 TO 27+18.44	147	4 1/2" (2 LIFTS)
27+18.44 TO 32+87.78	376	4 1/2" (2 LIFTS)
39+12.22 TO 41+00	124	4 1/2" (2 LIFTS)
SUBTOTAL	718	
TR 271A		
54+90 TO 55+63.89	15	1 1/2"
55+63.89 TO 58+11.25	54	1 1/2"
61+88.75 TO 64+43.25	56	1 1/2"
64+43.25 TO 65+30	18	1 1/2"
SUBTOTAL	143	
TOW PATH ROAD		
0+11 TO 0+91.80	21	1 1/2"
0+91.80 TO 5+53.29	74	1 1/2"
5+53.29 TO 5+85.10	9	1 1/2"
SUBTOTAL	104	
CANAL STREET		
0+11.1 TO 0+58.35	18	1 1/2"
0+58.35 TO 1+25	13	1 1/2"
SUBTOTAL	31	
PROJECT TOTAL	996	

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**SCHEDULES OF QUANTITIES & GENERAL NOTES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	8
STA.	TO STA.	CONTRACT NO.	87380	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	BRS-0188(118)	

DATE \_\_\_\_\_ BY \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 (GRADES CHECKED) \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_ STRUCTURE NOTATIONS CHK'D \_\_\_\_\_  
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DATE \_\_\_\_\_ BY \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 (GRADES CHECKED) \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_ STRUCTURE NOTATIONS CHK'D \_\_\_\_\_

HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N30			
STATION	TON	REMARKS	
<b>CH 8</b>			
25+00 TO 26+08.52	22	1 1/2"	
26+08.52 TO 27+18.44	46	1 1/2"	
27+18.44 TO 32+87.78	117	1 1/2"	
39+12.22 TO 41+00	39	1 1/2"	
L 29+80.00 TO 30+25.00	1	1 1/2" (MAILBOX TURNOUT)	
L 31+70.99 TO 34+23.82	17	1 1/2" (SHOULDER)	
L 37+88.26 TO 39+41.86	10	1 1/2" (SHOULDER)	
R 26+63.50 TO 27+08.50	1	1 1/2" (MAILBOX TURNOUT)	
R 31+09.77 TO 34+11.74	21	1 1/2" (SHOULDER)	
R 37+76.18 TO 38+21.55	2	1 1/2" (SHOULDER)	
<b>SUBTOTAL</b>	<b>276</b>		
<b>TR 271A</b>			
54+90 TO 55+63.89	14	1 1/2"	
55+63.89 TO 58+11.25	51	1 1/2"	
61+88.75 TO 64+43.25	52	1 1/2"	
64+43.25 TO 65+30	17	1 1/2"	
<b>SUBTOTAL</b>	<b>134</b>		
<b>TOW PATH ROAD</b>			
0+11 TO 0+91.80	20	1 1/2"	
0+91.80 TO 5+53.29	69	1 1/2"	
5+53.29 TO 5+85.10	8	1 1/2"	
<b>SUBTOTAL</b>	<b>97</b>		
<b>CANAL STREET</b>			
0+11.1 TO 0+58.35	17	1 1/2"	
0+58.35 TO 1+25	12	1 1/2"	
R 0+18.72 TO 0+74.00	5	1 1/2" (SHOULDER)	
<b>SUBTOTAL</b>	<b>34</b>		
CALCULATIONS BASED ON 112* / SY / INCH			
<b>PROJECT TOTAL</b>	<b>541</b>		

INCIDENTAL HOT-MIX ASPHALT SURFACING			
STATION	TON	REMARKS	
<b>CH 8</b>			
PER 26+67.5	17	2"	
PER 39+37	5	2"	
PER 39+52	10	2"	
PER 40+55	7	2"	
CALCULATIONS BASED ON 120* / SY / INCH			
<b>PROJECT TOTAL</b>	<b>39</b>		

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)			
STATION	SQ YD	REMARKS	
<b>CH 8</b>			
32+87.78 TO 33+87.78	244		
38+12.22 TO 39+12.22	244		
<b>SUBTOTAL</b>	<b>488</b>		
<b>TR 271A</b>			
58+11.25 TO 59+11.25	244		
60+88.75 TO 61+88.75	244		
<b>SUBTOTAL</b>	<b>488</b>		
<b>PROJECT TOTAL</b>	<b>976</b>		

AGGREGATE SHOULDERS, TYPE B 8"			
STATION	SQ YD	REMARKS	
<b>CH 8</b>			
L 25+00 TO 26+48.85	77		
L 26+67.49 TO 30+10.00	151		
L 39+65.40 TO 41+00	57		
R 25+00 TO 26+54.50	63		
R 26+78.50 TO 29+74.63	122		
R 39+07.62 TO 39+23.90	4		
R 39+49.21 TO 40+40.50	39		
R 40+70.42 TO 41+00	13		
<b>SUBTOTAL</b>	<b>526</b>		
<b>TR 271A</b>			
L 54+90.00 TO 58+19.61	75		
L 62+30.67 TO 65+30.00	68		
R 54+90.00 TO 57+70.18	59		
R 61+80.32 TO 63+87.47	45		
R 64+29.39 TO 65+30.00	22		
<b>SUBTOTAL</b>	<b>269</b>		
<b>TOW PATH ROAD</b>			
L 0+15.00 TO 0+91.33	15		
L 44+72.50 TO 5+85.77	29		
R 0+15.00 TO 1+04.94	24		
R 1+48.42 TO 5+85.45	99		
<b>SUBTOTAL</b>	<b>167</b>		
<b>CANAL STREET</b>			
L 0+09.63 TO 1+25.00	28		
R 0+96.33 TO 1+25.00	7		
<b>SUBTOTAL</b>	<b>35</b>		
<b>PROJECT TOTAL</b>	<b>997</b>		

HOT-MIX ASPHALT SHOULDERS, 4 1/2"			
STATION	SQ YD	REMARKS	
<b>CH 8</b>			
L 29+80.00 TO 30+25.00	14	(MAILBOX TURNOUT)	
L 30+10.00 TO 34+23.82	306		
L 37+88.26 TO 39+41.86	116		
R 26+63.50 TO 27+08.50	14	(MAILBOX TURNOUT)	
R 30+21.68 TO 34+11.74	302		
R 37+76.18 TO 38+21.55	23		
<b>SUBTOTAL</b>	<b>775</b>		
<b>TR 271A</b>			
L 58+19.61 TO 59+40.75	81		
L 60+59.25 TO 62+30.67	124		
R 57+70.18 TO 59+40.75	122		
R 60+59.25 TO 61+80.32	81		
<b>SUBTOTAL</b>	<b>408</b>		
<b>CANAL STREET</b>			
R 0+18.72 TO 0+96.33	76		
<b>SUBTOTAL</b>	<b>76</b>		
<b>PROJECT TOTAL</b>	<b>1,259</b>		

PIPE CULVERTS, CLASS A, TYPE 1 15"			
STATION	FOOT	REMARKS	
<b>TOW PATH ROAD</b>			
4+85	30	ACROSS ROAD	
5+65	45	ACROSS ROAD	
<b>SUBTOTAL</b>	<b>75</b>		
<b>SHARED USE PATH</b>			
0+26.75	60	ACROSS ROAD (BIKE PATH)	
<b>SUBTOTAL</b>	<b>60</b>		
<b>PROJECT TOTAL</b>	<b>135</b>		

PIPE CULVERTS, CLASS A, TYPE 1 24"			
STATION	FOOT	REMARKS	
<b>CANAL STREET</b>			
0+50	45	ACROSS ROAD	
<b>PROJECT TOTAL</b>	<b>45</b>		

PIPE CULVERTS, CLASS A, TYPE 1 30"			
STATION	FOOT	REMARKS	
<b>CH 8</b>			
25+92	50	ACROSS ROAD	
<b>PROJECT TOTAL</b>	<b>50</b>		

PIPE CULVERTS, CLASS D, TYPE 1 15"			
STATION	FOOT	REMARKS	
<b>CH 8</b>			
PER 39+37	24	ACROSS ENTRANCE	
PER 39+52	30	ACROSS ENTRANCE	
PER 40+55	28	ACROSS ENTRANCE	
<b>PROJECT TOTAL</b>	<b>82</b>		

PIPE CULVERTS, CLASS D, TYPE 1 24"			
STATION	FOOT	REMARKS	
<b>TOW PATH ROAD</b>			
FER 1+24	60	ACROSS ENTRANCE	
<b>PROJECT TOTAL</b>	<b>60</b>		

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"			
STATION	EACH	REMARKS	
<b>TOW PATH ROAD</b>			
3+93.00 R 21.00'	1		
<b>PROJECT TOTAL</b>	<b>1</b>		

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"			
STATION	EACH	REMARKS	
<b>TOW PATH ROAD</b>			
4+85	2		
5+72.69	2		
<b>SUBTOTAL</b>	<b>4</b>		
<b>SHARED USE PATH</b>			
0+26.75	2		
<b>SUBTOTAL</b>	<b>2</b>		
<b>PROJECT TOTAL</b>	<b>6</b>		

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**SCHEDULES OF QUANTITIES & GENERAL NOTES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	9
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 (ILLINOIS) FED. AID PROJECT BRS-0188(118)				

DATE	BY	REVIEWED	DATE

DATE	BY	REVIEWED	DATE

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"		
STATION	EACH	REMARKS
CANAL STREET		
0+50	2	
PROJECT TOTAL	2	

54213669

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 30"		
STATION	EACH	REMARKS
CH 8		
25+92	2	
PROJECT TOTAL	2	

54213675

STEEL END SECTIONS 15"		
STATION	EACH	REMARKS
CH 8		
PER 39+37	2	
PER 39+52	2	
PER 40+55	2	
PROJECT TOTAL	6	

54213870

STEEL END SECTIONS 24"		
STATION	EACH	REMARKS
TOW PATH ROAD		
FER 1+24	2	ACROSS ENTRANCE
PROJECT TOTAL	2	

54213879

STORM SEWERS, CLASS A, TYPE 1 12"		
STATION	FOOT	REMARKS
TOW PATH ROAD		
3+49.01 TO 3+85.55	26	ACROSS ROAD
PROJECT TOTAL	26	

550A0050

PIPE UNDERDRAINS 6"		
STATION	FOOT	REMARKS
CH 8		
L 25+00 TO 25+84	84	
L 27+15 TO 30+75	360	
L 30+75 TO 33+90	315	
L 38+20 TO 41+00	280	
R 25+00 TO 25+84	84	
R 25+96 TO 27+50	154	
27+50 TO 29+00	1,200	CONTINGENCY ITEM FOR EX. EMBANKMENTS
R 27+54 TO 29+65	211	
R 30+35 TO 30+75	40	
R 30+75 TO 33+81	306	
R 38+82 TO 41+00	232	INCL RAD @ CANAL STREET
SUBTOTAL:	3,266	
TR 271A		
L 55+00 TO 59+11	411	
L 61+00 TO 65+30	430	
R 55+00 TO 59+11	411	
R 61+00 TO 65+30	430	
SUBTOTAL:	1,682	
TOW PATH ROAD		
L 0+13 TO 3+93	372	DRAINS INTO GUTTER OUTLET BOX
L 3+95 TO 4+85	90	DRAINS INTO 15" P.CUL
L 4+89 TO 5+65	76	DRAINS INTO 15" P.CUL
R 0+13 TO 3+87	401	
R 3+90 TO 4+79	90	
R 4+89 TO 5+58	69	
SUBTOTAL:	1,098	
PROJECT TOTAL	6,046	

60107700

PIPE UNDERDRAINS 6" (SPECIAL)		
STATION	FOOT	REMARKS
CH 8		
L 25+84	8	
L 30+75	16	2 PIPES @ 8'
L 38+20	11	
R 25+84	8	
R 27+50	8	
R 29+65	8	
R 30+75	20	2 PIPES @ 10'
R 39+20	6	
SUBTOTAL:	85	
TR 271A		
L 55+00	8	
L 61+00	7	
R 55+00	8	
R 61+00	7	
SUBTOTAL:	30	
TOW PATH ROAD		
R 3+87	8	
R 4+79	7	
R 5+58	8	
SUBTOTAL:	23	
PROJECT TOTAL	138	HEADWALLS INCIDENTAL TO PAY ITEM

60108200

CLASS SI CONCRETE (OUTLET)		
STATION	CU YD	REMARKS
TOW PATH ROAD		
L 4+30.21 TO 4+80.00	4.6	
PROJECT TOTAL	4.6	

60600095

CONCRETE GUTTER, TYPE A		
STATION	FOOT	REMARKS
TOW PATH ROAD		
L 0+91.33 TO 3+55.25	264	
PROJECT TOTAL	264	

60602500

GUTTER OUTLET (SPECIAL)		
STATION	EACH	REMARKS
TOW PATH ROAD		
L 3+55.25 TO 4+30.21	1	
PROJECT TOTAL	1	

60603400

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS		
STATION	FOOT	REMARKS
CH 8		
L 32+54.36 TO 33+79.36	125	
L 38+31.86 TO 38+81.86	50	
R 31+93.14 TO 33+68.14	175	
PROJECT TOTAL	350	

63000001

WEATHERING STEEL TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT		
STATION	EACH	REMARKS
TR 271A		
L 58+53.57 TO 59+03.57	1	
L 61+46.28 TO 61+96.28	1	
R 58+03.78 TO 58+53.78	1	
R 60+96.43 TO 61+46.28	1	
PROJECT TOTAL	4	

63004011

TRAFFIC BARRIER TERMINAL, TYPE 6		
STATION	EACH	REMARKS
CH 8		
L 33+79.36 TO 34+25.00	1	
L 37+86.22 TO 38+31.86	1	
R 33+68.14 TO 34+13.78	1	
R 37+75.00 TO 38+20.64	1	
PROJECT TOTAL	4	

63100085

TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT		
STATION	EACH	REMARKS
CH 8		
L 32+04.36 TO 32+54.36	1	
L 38+81.86 TO 39+31.86	1	
R 31+43.14 TO 31+93.14	1	
R 38+20.64 TO 38+53.71	1	RADIUS
PROJECT TOTAL	4	

63100167

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**SCHEDULES OF QUANTITIES & GENERAL NOTES**

F.A.S. RTE.	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 10
STA.	TO STA.		CONTRACT NO. 87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				



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TRAFFIC BARRIER TERMINAL, TYPE 5A		
STATION	EACH	REMARKS
TR 271A		
L & R 59+28.55 TO 59+41.78	2	
L & R 60+58.22 TO 60+71.45	2	
PROJECT TOTAL	4	

63100205\*

STEEL PLATE BEAM GUARD RAIL REMOVAL		
STATION	FOOT	REMARKS
CH 8		
L 30+54 TO 33+94	340	
L 37+95 TO 39+33	138	
R 30+55 TO 33+94	339	
R 37+95 TO 38+33	38	
SUBTOTAL	855	
TR 271A		
L 55+92 TO 59+47	355	
L 60+53 TO 63+06	253	
R 55+96 TO 59+47	351	
R 60+53 TO 63+04	251	
SUBTOTAL	1,210	
PROJECT TOTAL	2,065	

63200305

REMOVAL AND REINSTALLATION OF EXISTING TERMINAL SECTION, SINGLE RAIL		
STATION	EACH	REMARKS
CH 8		
L 30+39.36 TO 30+89.36	1	
L 40+19.86 TO 40+69.86	1	
R 30+29.14 TO 30+79.14	1	
R 38+20.64 TO R 38+50	1	
PROJECT TOTAL	4	

63300315

REMOVE AND RE-ERECT RAIL ELEMENT OF EXISTING GUARDRAIL		
STATION	FOOT	REMARKS
CH 8		
L 30+89.36 TO 33+79.36	290	
L 38+31.86 TO 40+19.86	88	
R 30+79.14 TO 33+68.14	289	
PROJECT TOTAL	667	

63300575

REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 6		
STATION	EACH	REMARKS
CH 8		
L 33+79.36 TO 34+25.00	1	
L 37+86.22 TO 38+31.86	1	
R 33+68.14 TO 34+13.78	1	
R 37+75.00 TO 38+20.64	1	
PROJECT TOTAL	4	

63302700

CHAIN LINK GATES, 5' X 18' DOUBLE		
STATION	EACH	REMARKS
TOW PATH ROAD		
R 1+54	1	ACROSS FER 1+24
PROJECT TOTAL	1	

66407000

WOVEN WIRE GATES, 4' X 24' DOUBLE		
STATION	EACH	REMARKS
CH 8		
32+99 L 132'	1	
34+85 L 160'	1	
PROJECT TOTAL	2	

66502000

WOVEN WIRE FENCE, 4'		
STATION	FOOT	REMARKS
CH 8		
L 31+09.06 TO 32+34.00	178	
L 32+89.00 TO 35+27.24	230	DEDUCTIONS FOR GATE WIDTHS INCL.
PROJECT TOTAL	408	

66500105

BARBED WIRE FENCE, FIVE STRAND		
STATION	FOOT	REMARKS
CH 8		
R 27+04.82 TO 30+76.34	429	ALONG PROP. R.O.W.
R 30+94.51 TO 32+39.00	144	ALONG PROP. R.O.W.
R 32+87 TO 33+60.18	73	ALONG PROP. R.O.W.
PROJECT TOTAL	646	

66503200\*

SHORT-TERM PAVEMENT MARKING		
STATION	FOOT	REMARKS
CH 8		
25+00 TO 41+00	291	4' - 40' SP (YELLOW) - 2 APPLICATIONS
SUBTOTAL	291	
TR 271A		
54+90.00 TO 65+30.00	189	4' - 40' SP (YELLOW) - 2 APPLICATIONS
SUBTOTAL	189	
PROJECT TOTAL	480	

70300100

SIGN PANEL - TYPE 1		
STATION	SQ FT	REMARKS
CH 8		
L 26+39	6.25	RI-1 TYPE 1 (STOP SIGN) @ 1400 N
SUBTOTAL	6.25	
TOW PATH ROAD		
L 0+25	6.25	RI-1 TYPE 1 (STOP SIGN) @ CH 8
R 3+46	7.07	W10-1 (RR X SIGN)
R 4+95	6.00	2- RI5-1 (RR X SIGNS)
R 4+95	2.25	RI5-2 (2 TRACKS SIGN) - 2 PCS
L 5+50	6.00	2- RI5-1 (RR X SIGNS)
L 5+50	2.25	RI5-2 (2 TRACKS SIGN) - 2 PCS
R 5+58	6.25	RI-2 TYPE 1 (YIELD SIGN) @ BIKE PATH
SUBTOTAL	36.07	
SHARED USE PATH		
R 6+50	6.25	W10-3 (RR X AHEAD LT)
R 7+61	6.25	RI-2 TYPE 1 (YIELD SIGN) @ BIKE PATH
L 8+44	6.25	W10-3 (RR X AHEAD RT)
SUBTOTAL	18.75	
CANAL STREET		
L 0+54	6.25	RI-1 TYPE 1 (STOP SIGN) @ CH 8
SUBTOTAL	6.25	
PROJECT TOTAL	67	

72000100

METAL POST - TYPE A		
STATION	FOOT	REMARKS
CH 8		
L 26+39	12	(STOP SIGN) @ 1400 N
SUBTOTAL	12	
TOW PATH ROAD		
L 0+25	12	(STOP SIGN) @ CH 8
R 3+46	12	(RR X SIGN)
R 4+95	14	(RR X SIGNS)
L 5+50	14	(RR X SIGNS)
R 5+58	12	(YIELD SIGN) @ BIKE PATH
SUBTOTAL	64	
SHARED USE PATH		
R 6+50	12	(RR X AHEAD LT)
R 7+61	12	(YIELD SIGN) @ BIKE PATH
L 8+44	12	(RR X AHEAD RT)
SUBTOTAL	36	
CANAL STREET		
L 0+54	12	(STOP SIGN) @ CH 8
SUBTOTAL	12	
PROJECT TOTAL	124	

72900100

PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS		
STATION	SQ FT	REMARKS
TOW PATH ROAD		
R 3+56	54	20' RR "X" (WHITE)
R 3+56	7.2	2 - 6' "R" (WHITE) @ 3.6 SF EA.
PROJECT TOTAL	61	

78001100

PAINT PAVEMENT MARKING - LINE 4"		
STATION	FOOT	REMARKS
CH 8		
25+00 TO 41+00	400	10' - 30' SP (YELLOW)
L 25+00 TO 26+48.85	212	EDGE LINE (WHITE)
L 26+67.47 TO 27+18.44	109	EDGE LINE (WHITE)
L 27+18.44 TO 41+00	1,382	EDGE LINE (WHITE)
R 25+00 TO 29+61.78	462	EDGE LINE (WHITE)
R 30+38.30 TO 38+48.61	916	EDGE LINE (WHITE)
R 38+67.67 TO 41+00	317	EDGE LINE (WHITE)
SUBTOTAL	3,798	
TR 271A		
54+90.00 TO 65+30.00	260	10' - 30' SP (YELLOW)
L 54+90.00 TO 65+30.00	1,040	EDGE LINE (WHITE)
R 54+90.00 TO 65+30.00	1,040	EDGE LINE (WHITE)
SUBTOTAL	2,340	
PROJECT TOTAL	6,138	

78001110

PAINT PAVEMENT MARKING - LINE 24"		
STATION	FOOT	REMARKS
CH 8		
L 26+53	10	STOP BAR @ 1400 N (WHITE)
SUBTOTAL	10	
TOW PATH ROAD		
R 3+31	8	STOP BAR BEFORE RR X PVT MKG (WHITE)
R 3+81	8	STOP BAR AFTER RR X PVT MKG (WHITE)
R 4+96	8	STOP BAR @ RR X SIGN (WHITE)
L 5+50	8	STOP BAR @ RR X SIGN (WHITE)
SUBTOTAL	32	
CANAL STREET		
L 0+54	10	STOP BAR @ CH 8 (WHITE)
SUBTOTAL	10	
PROJECT TOTAL	52	

78001180

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**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL

**SCHEDULES OF QUANTITIES & GENERAL NOTES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	11
STA.	TO STA.	CONTRACT NO.	87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

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GUARDRAIL MARKERS, TYPE A		
STATION	EACH	REMARKS
CH 8		
L 32+05.80 TO 34+26.45	3	BIDIRECTIONAL SILVER / SILVER
L 37+86.88 TO 39+32.53	2	BIDIRECTIONAL SILVER / SILVER
R 31+44.57 TO 34+15.22	3	BIDIRECTIONAL SILVER / SILVER
R 37+75.66 TO 38+53.69	1	BIDIRECTIONAL SILVER / SILVER
SUBTOTAL	9	
TR 271A		
L 56+53.57 TO 59+41.78	1	BIDIRECTIONAL SILVER / SILVER
L 60+58.22 TO 61+46.28	2	BIDIRECTIONAL SILVER / SILVER
R 56+03.78 TO 59+41.78	2	BIDIRECTIONAL SILVER / SILVER
R 60+58.22 TO 61+46.28	1	BIDIRECTIONAL SILVER / SILVER
SUBTOTAL	6	
PROJECT TOTAL	15	

GUARDRAIL MARKERS, TYPE B		
STATION	EACH	REMARKS
CH 8		
L 34+26.45 TO 37+86.88	5	BIDIRECTIONAL SILVER / SILVER
R 34+15.22 TO 37+75.66	5	BIDIRECTIONAL SILVER / SILVER
SUBTOTAL	10	
TR 271A		
L 59+41.78 TO 60+58.22	2	BIDIRECTIONAL SILVER / SILVER
R 59+41.78 TO 60+58.22	2	BIDIRECTIONAL SILVER / SILVER
SUBTOTAL	4	
PROJECT TOTAL	14	

PAVEMENT MARKING REMOVAL		
STATION	SQ FT	REMARKS
CH 8		
25+00 TO 41+00	97	2 APPLICATIONS
SUBTOTAL	97	
TR 271A		
54+90.00 TO 65+30.00	63	2 APPLICATIONS
SUBTOTAL	63	
PROJECT TOTAL	160	

SHRUB, EUONYMUS ALATA (WINGED EUONYMUS), 5' HEIGHT, BALLED AND BURLAPPED		
STATION	EACH	REMARKS
CH 8		
LT 28+15 TO 28+75	13	
SUBTOTAL	13	
PROJECT TOTAL	13	

BITUMINOUS SURFACE TREATMENT, A-3 SPECIAL		
STATION	SQ YD	REMARKS
SHARED USE PATH		
5+60 TO 5+73	13	
5+73 TO 9+47.45	416	
9+47.45 TO 9+60	38	
0+00 TO 1+50	161	(BIKE PATH)
PROJECT TOTAL	628	

WEATHERING STEEL PLATE BEAM GUARD RAIL, SPECIAL		
STATION	FOOT	REMARKS
TR 271A		
L 59+03.57 TO 59+428.55	25	
L 60+71.45 TO 61+46.28	75	
R 58+53.78 TO 59+428.55	75	
R 60+71.45 TO 60+96.43	25	
PROJECT TOTAL	200	

BREAKER-RUN CRUSHED STONE		
STATION	TON	REMARKS
CH 8		
CH 8	412	
TOW PATH ROAD	0	
SHARED USE PATH	35	
BIKE PATH	8	
STAGE 1A	70	
STAGE 1B	12	
STAGE 2	8	
SUBTOTAL	545	
TR 271A		
	35	
SUBTOTAL	35	
PROJECT TOTAL	580	

GENERAL NOTES

THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS, SECTION OR SUBSECTION MONUMENTS ENCOUNTERED, UNTIL AN OWNER OR AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. ANY PROPERTY MARKS, SECTION OR SUBSECTION MONUMENTS UNLESS REFERENCED, DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

THE CONTRACTOR SHALL REMOVE ALL STRUCTURES WITHIN THE EXISTING RIGHT OF WAY AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION (SPECIAL)

ALL TELEPHONE AND ELECTRIC POLES, GAS PIPES, ETC. IN THE WAY OF THE IMPROVEMENT SHALL BE MOVED BY THE UTILITIES PRIOR TO CONSTRUCTION AND SHALL NOT BE INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITIES TO MAKE THE NECESSARY ADJUSTMENTS PRIOR TO THIS CONSTRUCTION.

THE LOCATION AND ELEVATION OF THE VARIOUS UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT TO BE TAKEN AS EXACT. THE CONTRACTOR SHALL USE SPECIAL CARE WHEN CONDUCTING CONSTRUCTION OPERATIONS NEAR THEM TO PREVENT DAMAGE.

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL NOT BE UTILIZED UNTIL THE SUBGRADE HAS BEEN TREATED IN ACCORDANCE WITH SECTION 301 OF THE STANDARD SPECIFICATIONS AND THE RESULTING STABILITY DETERMINED INADEQUATE.

THE FINAL TOP 4" OF SOIL IN ANY AREA DISTURBED BY THE CONTRACTOR MUST BE ABLE TO SUPPORT VEGETATION.

EXISTING STREET SIGNS AND TRAFFIC SIGNS THAT ARE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AND RESET BY THE CONTRACTOR. COST OF REMOVING AND RESETTING SHALL BE INCIDENTAL TO EARTH EXCAVATION (SPECIAL).

WHERE THE PROPOSED CONSTRUCTION MEETS AN EXISTING BITUMINOUS SURFACE, OR WHERE SAWING IS STATED ON THE PLANS, THE EXISTING SURFACE SHALL BE SAWED IN A NEAT, STRAIGHT LINE. COST OF SAWING TO BE INCLUDED IN THE CONTRACT UNIT PRICE PER UNIT OF EARTH EXCAVATION (SPECIAL).

GENERAL NOTES CONTINUED

REMOVAL OF TEMPORARY PAVEMENT MARKING WILL BE INCIDENTAL TO SHORT TERM PAVEMENT MARKING.

REMOVAL OF TEMPORARY AGGREGATE SURFACES DURING STAGE CONSTRUCTION SHALL BE INCIDENTAL TO THE PAY ITEM.

REMOVAL OF TEMPORARY CULVERTS SHALL BE INCIDENTAL TO THE PRICE OF THE PAY ITEM. CULVERTS SHALL BECOME PROPERTY OF THE CONTRACTOR AFTER REMOVAL.

DURING CONSTRUCTION, NO STAGING OF EQUIPMENT SHALL BE ON IDNR PROPERTY.

PIPE UNDERDRAIN CONNECTIONS INTO INLET AND/OR PIPES SHALL BE INCIDENTAL TO PIPE UNDERDRAINS 6".

TEMPORARY FENCE (SNOW FENCE) SHALL BE PLACED AS PROTECTION OF CONCRETE POSTS AND AROUND OTHER SENSITIVE AREAS TO AVOID DISTURBANCE.

CONTRACTOR MAY CONTACT MR. RICHARD A. CAMBRON. HE HAS FURNISHED EXCAVATION AVAILABLE. IF THE CONTRACTOR CHOOSES TO USE THIS FURNISHED EXCAVATION ON THIS PROJECT, HE IS RESPONSIBLE TO MAKE SURE THAT THE MATERIAL HAS BEEN TESTED AND APPROVED FOR USE ON THIS PROJECT. HIS ADDRESS IS 14000 WYANET-WALNUT ROAD WYANET, IL 61379.

AGGREGATE SHOULDERS, TYPE B 8" SHALL BE PLACED AT THE LOCATIONS AS SHOWN IN THE PLANS. THE USE OF A SPREADER BOX IS REQUIRED.

SOFT MAPLE TREES LOCATED ON SHIPP'S PROPERTY SHALL BE PRESERVED UNLESS DIRECTED BY THE ENGINEER.

A TEMPORARY FENCE THAT IS ABLE TO CONTROL HORSES SHALL BE INSTALLED ON THE SHIPP PROPERTY CONNECTING THE EXISTING FENCE THAT WILL REMAIN IN PLACE FROM +/- STA. 31+00 TO +/- STA. 35+30. THE FENCE SHALL CROSS POND CREEK AND BE MAINTAINED DURING CONSTRUCTION. THE PROPOSED FENCE SHALL BE INSTALLED AS SHOWN IN THE PLANS. COST OF THE TEMPORARY FENCE SHALL BE INCIDENTAL TO THE COST OF THE WOVEN WIRE FENCE.

CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND PROSPECTIVE PROPERTY OWNERS ON THE PLACEMENT OF THE HISTORIC TRUSS ON TR 271A FOR STORAGE UNTIL CONSTRUCTION BEGINS.

A CONTINGENCY ITEM FOR AGGREGATE SURFACE COURSE TYPE B IS TO BE USED FOR TEMPORARY ROADWAY TAPERS. THIS ITEM SHALL BE PLACED AND REMOVED BY THE CONTRACTOR. AT THE DISCRETION OF THE ENGINEER, THE AGGREGATE CAN BE USED IN THE ROADWAY BASE, OR THE CONTRACTOR MUST HAUL AWAY THE AGGREGATE TO AN APPROVED DUMP SITE.

REMOVAL AND REINSTALLATION OF EXISTING POSTS ON THE SHARED USE PATH SHALL BE INCIDENTAL TO EARTH EXCAVATION.

ALL PIPE UNDERDRAINS 6" AND PIPE UNDERDRAINS 6" SPECIAL SHALL BE BACKFILLED WITH CLEAN COARSE AGGREGATE ACCEPTABLE TO THE ENGINEER AND CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

WINGED EUONYMUS, 5' HEIGHT, BALLED AND BURLAPPED SHALL BE PLANTED AT THE LOCATIONS AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

FILL SLOPE STATION 27+00 TO 30+00 SHALL BE CONSTRUCTED TO ACCOMMODATE DRAINAGE BETWEEN STAGE 1 AND STAGE 2 TEMPORARY ROAD UNTIL ITS REMOVAL. THE COST SHALL BE INCIDENTAL TO THE PROJECT.

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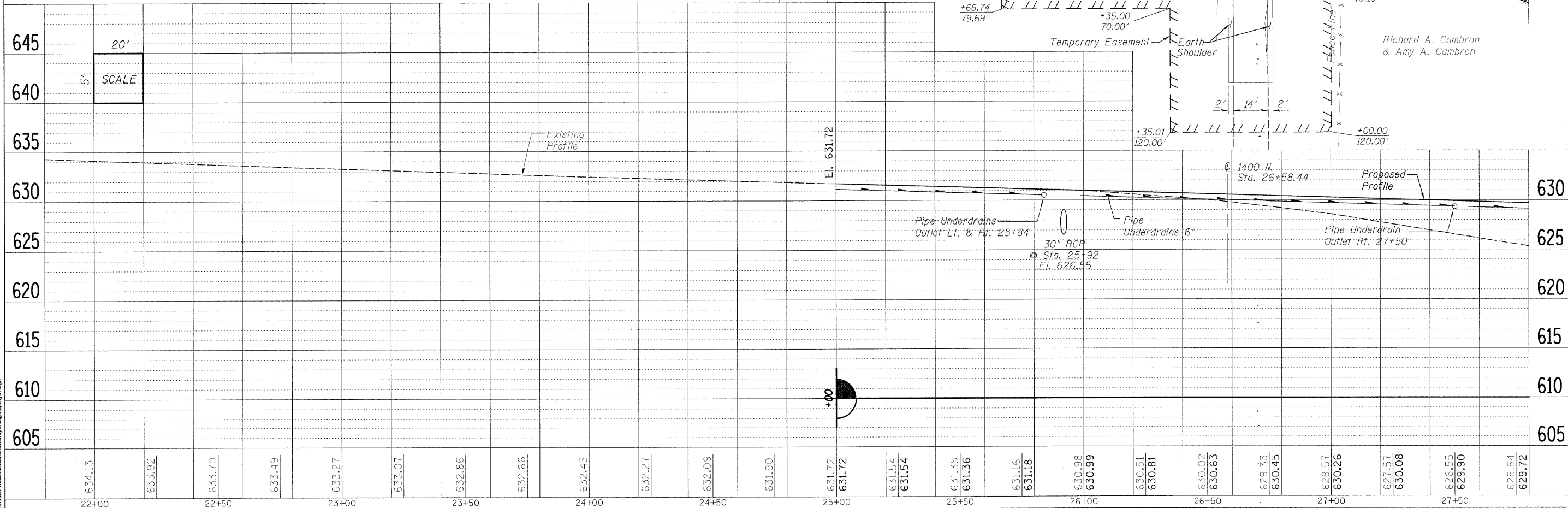
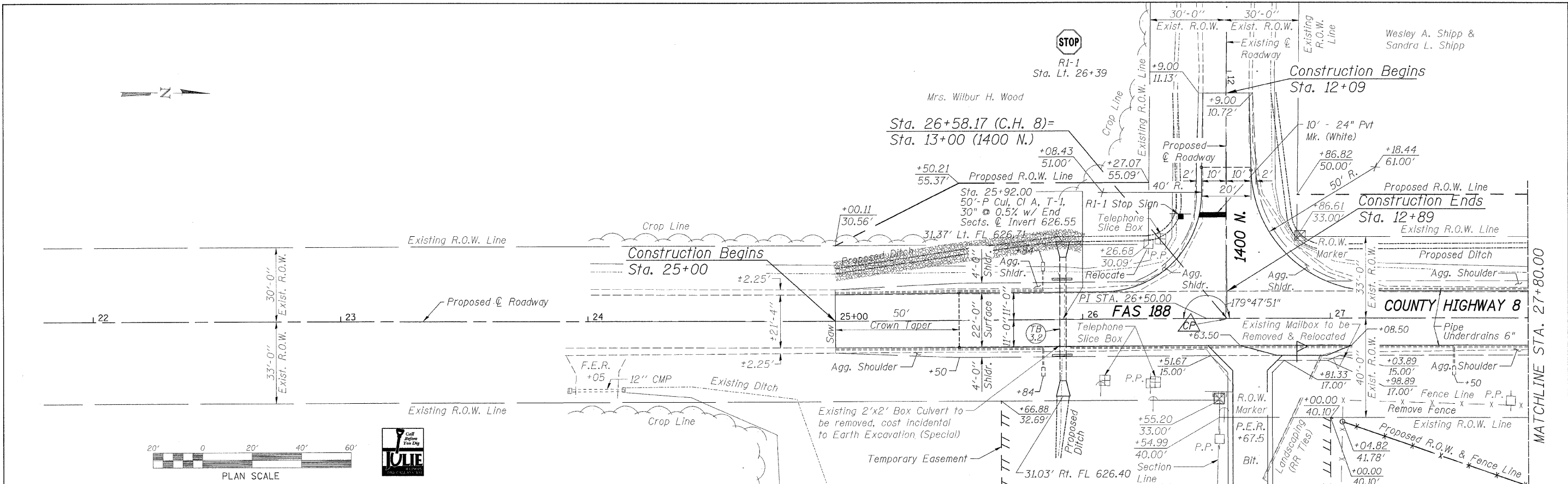
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**SCHEDULES OF QUANTITIES & GENERAL NOTES**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	12
STA.	TO STA.	CONTRACT NO. B7380		
FED. ROAD DIST. NO. 7 (ILLINOIS) FED. AID PROJECT BRS-0188(118)				

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22+00	22+50	23+00	23+50	24+00	24+50	25+00	25+50	26+00	26+50	27+00	27+50																								

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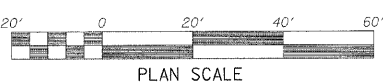
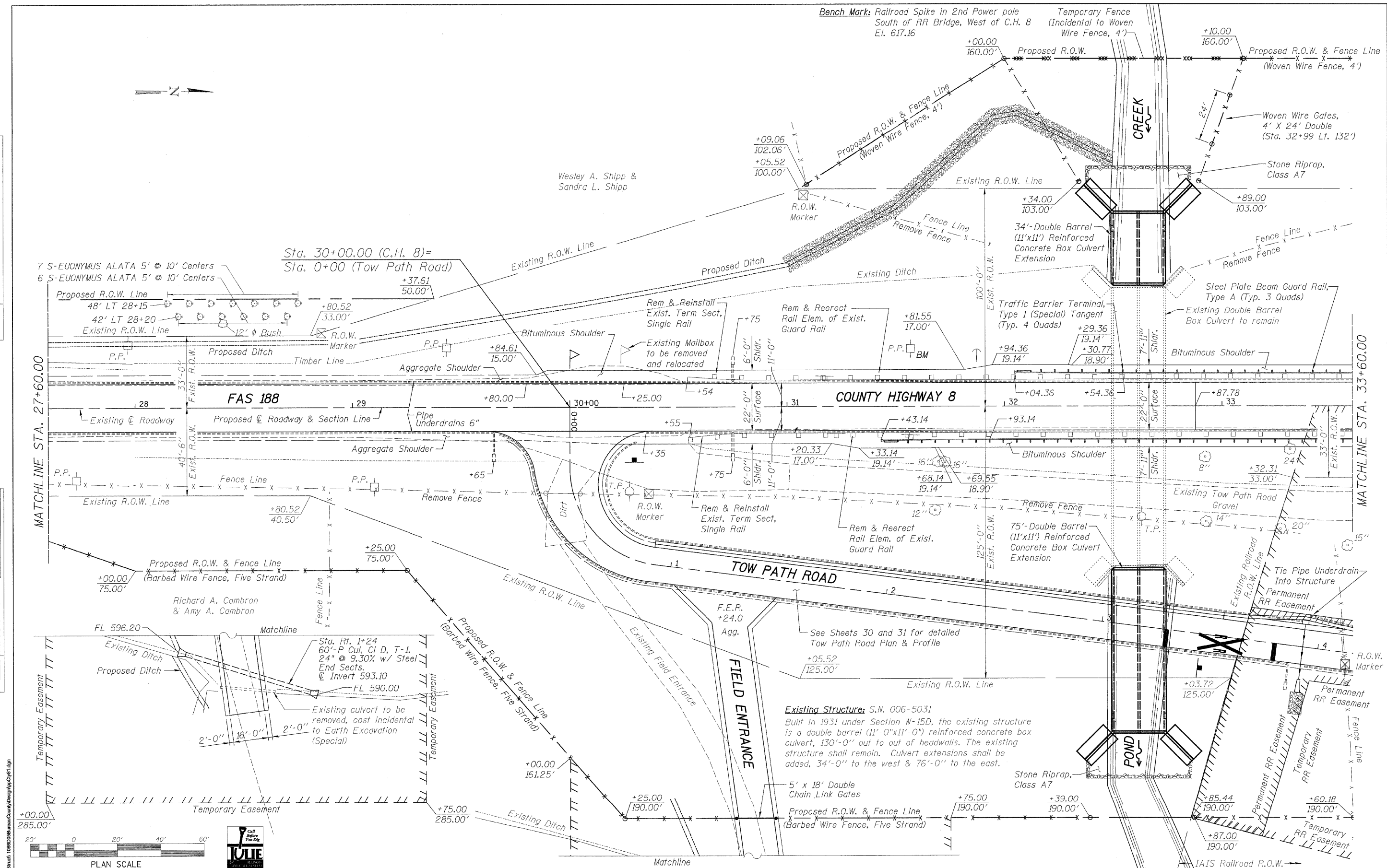
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - PLAN & PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	13
STA. 21+80 TO STA. 27+80		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BRS-018R118				

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL**

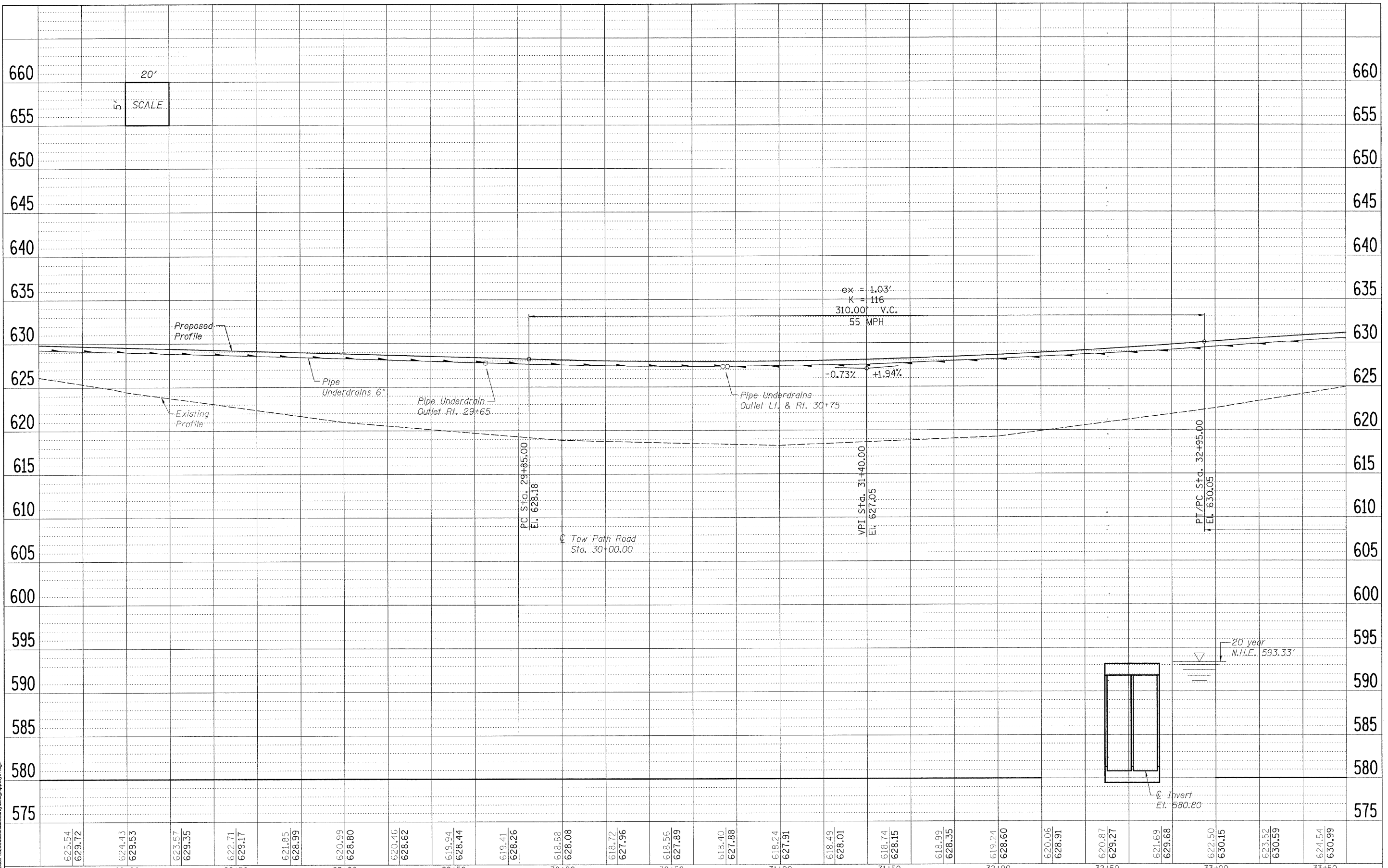
**C.H. 8 - PLAN**

F.A.S.	SECTION	COUNTY	TOTAL SHEET NO.
188	05-00195-00-BR	BUREAU	127 14
STA. 27+60 TO STA. 33+60			CONTRACT NO. 87380
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)			



PLAN	SURVEYED	DATE
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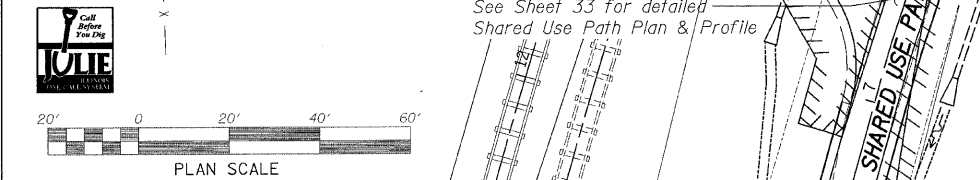
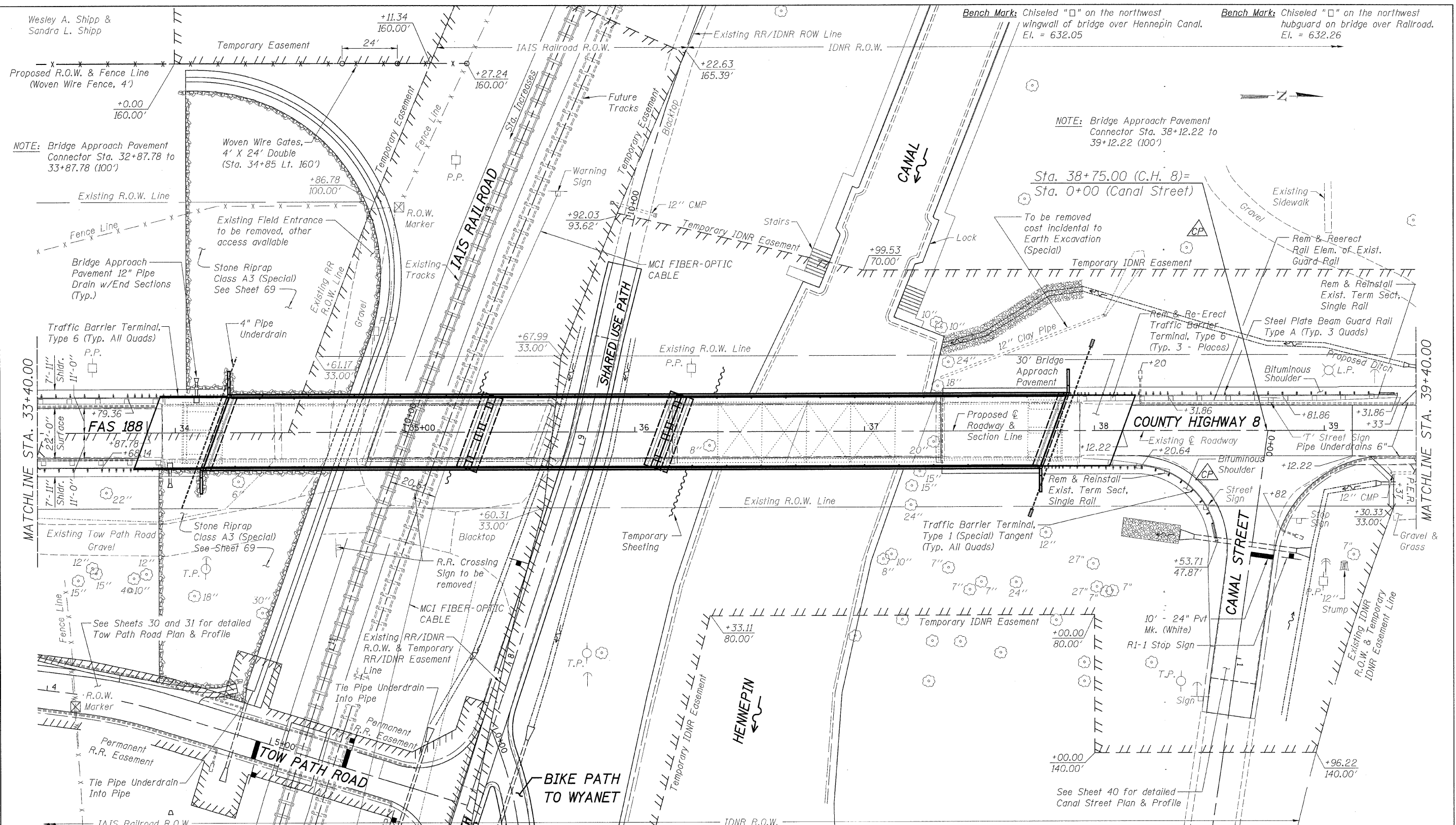
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEET NO.
188	05-00195-00-BR	BUREAU	127 15
STA. 27+60 TO STA. 33+60		CONTRACT NO.	81380
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188(118)			



**Existing Structure:** S.N. 006-3244 & 006-3245  
 Originally built in 1931 as S.A. Rt. 8 under Section W-15D and rehabilitated in 1981 under Section 79-00122-00-BR. Existing structure number 006-3244 consists of a single span (1 @ 115'-0") steel Pratt Thru Truss and two single spans (1 @ 59'-10 1/2" & 56'-7 3/8") precast, prestressed deck beam approach spans, while structure number 006-3245 consists of a single span (1 @ 67'-8") steel thru girder with two single span (1 @ 43'-4 3/8" & 49'-5 1/2") precast, prestressed concrete deck beam approach spans, 400'-8 7/8" back to back of abutments and 22'-9" clear roadway width. Structure to be removed and replaced. Road shall be closed to traffic.

The existing steel Pratt Thru Truss shall be salvaged and relocated to TR 271A over West Bureau Creek.

**Proposed Structure:** S.N. 006-3247  
 A three span (113'-0":81'-0" & 164'-6") plate girder structure on open semi-integral abutments and pile supported piers, 366'-2 1/2" back to back of abutments and 33'-2" out to out of deck.

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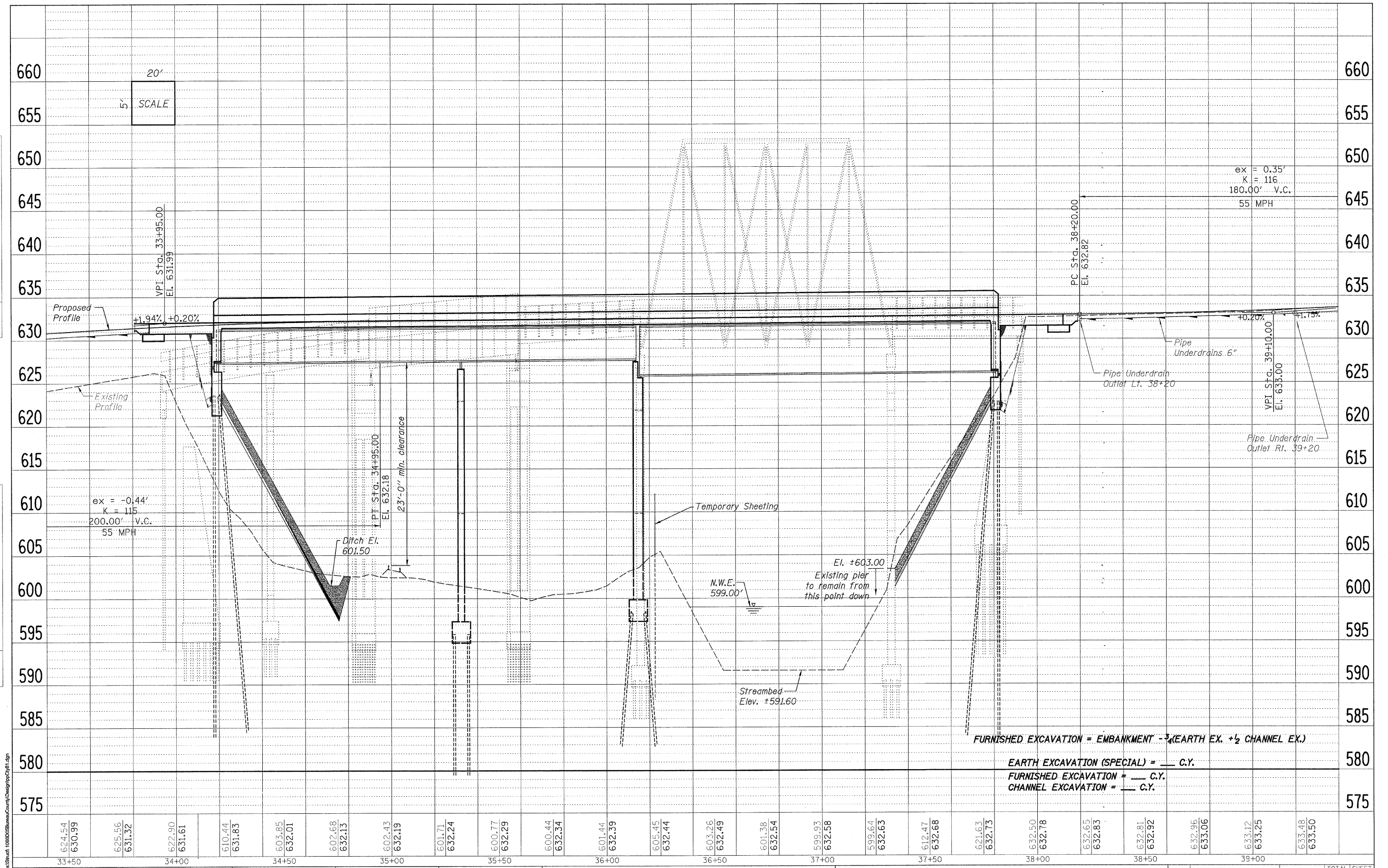
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**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - PLAN**

F.A.S.	SECTION	COUNTY	TOTAL SHEET NO.
188	05-00195-00-BR	BUREAU	127 16
STA. 33+40 TO STA. 39+40		CONTRACT NO. 87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)			

PLAN	SURVEYED	BY	DATE
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PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	UPDATES		
	CHECKED		
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	DATE		



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**WILLET, HOFMANN & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS  
 809 East Second Street Dixon, IL 61021  
 Phone: 815.284.3381 Fax: 815.294.3385  
 Design Firm # 184-00918  
 www.willettthofmann.com

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
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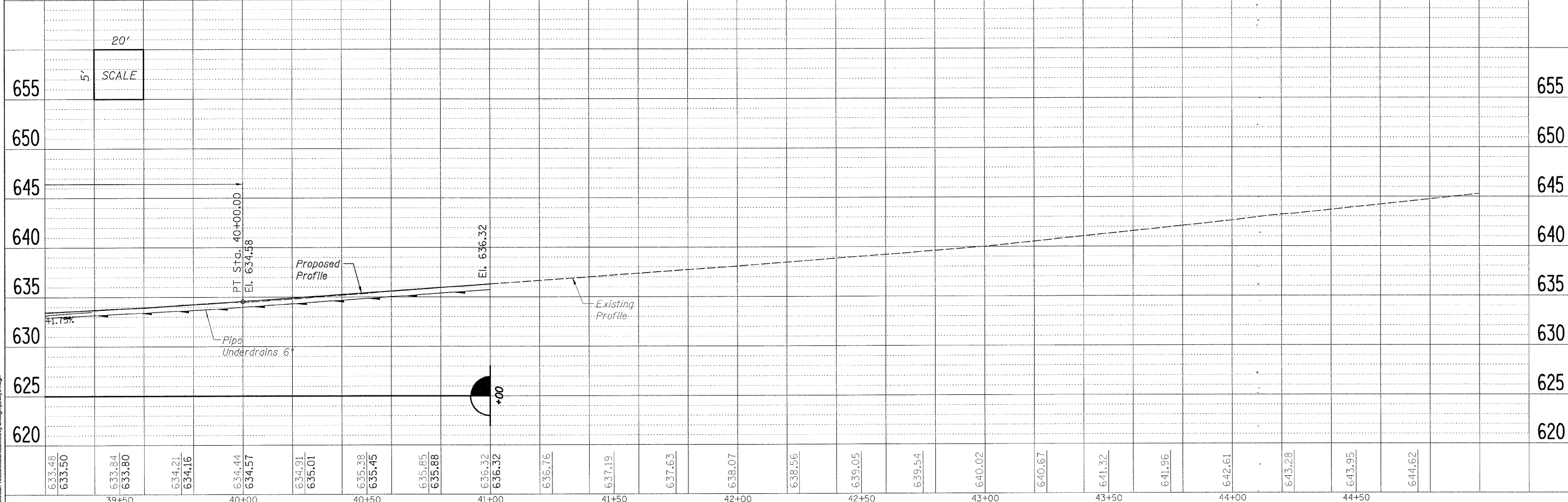
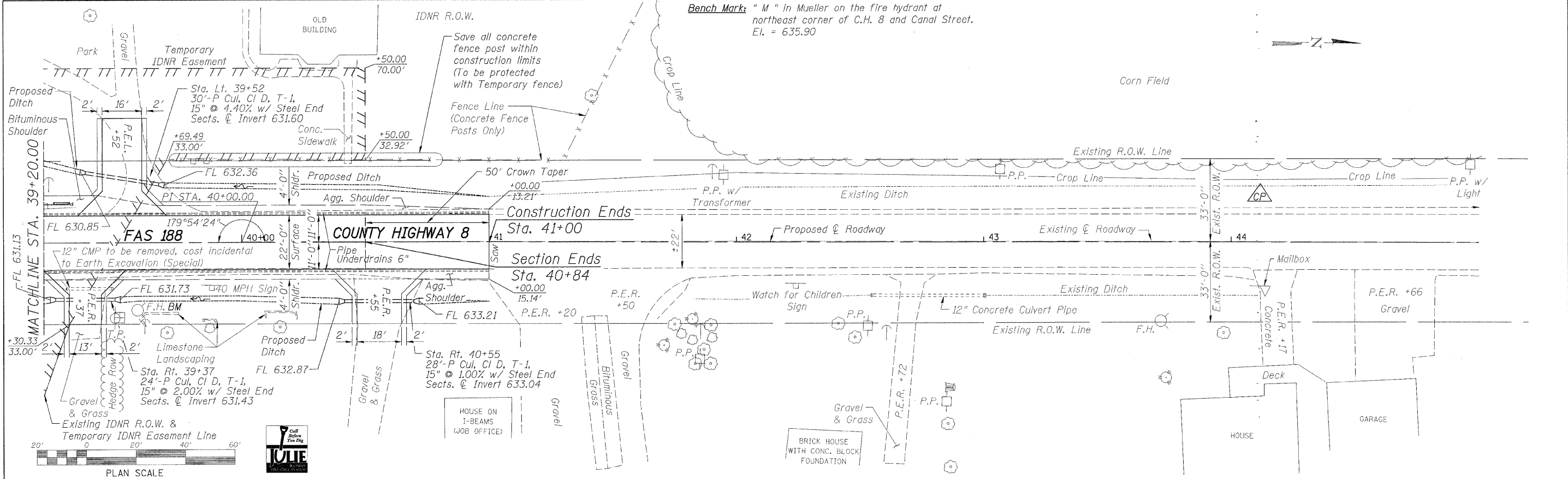
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	17
STA. 33+40 TO STA. 39+40		CONTRACT NO. 01380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188118				

DATE	
BY	
PLAN	SURVEYED
	ALIGNED
	CHECKED
	BY
	DATE
	NO.

DATE	
BY	
PROFILE	SURVEYED
	ALIGNED
	CHECKED
	BY
	DATE
	NO.



633.48	633.50	633.84	633.80	634.21	634.16	634.44	634.57	634.91	635.01	635.38	635.45	635.85	635.88	636.32	636.32	636.76	637.19	637.63	638.07	638.56	639.05	639.54	640.02	640.67	641.32	641.96	642.61	643.28	643.95	644.62
39+50		40+00		40+50		41+00		41+50		42+00		42+50		43+00		43+50		44+00		44+50										

**WILLET, HOFMANN & ASSOCIATES, INC.**  
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 Design Firm # 184-00918  
 www.willettthofmann.com

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PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

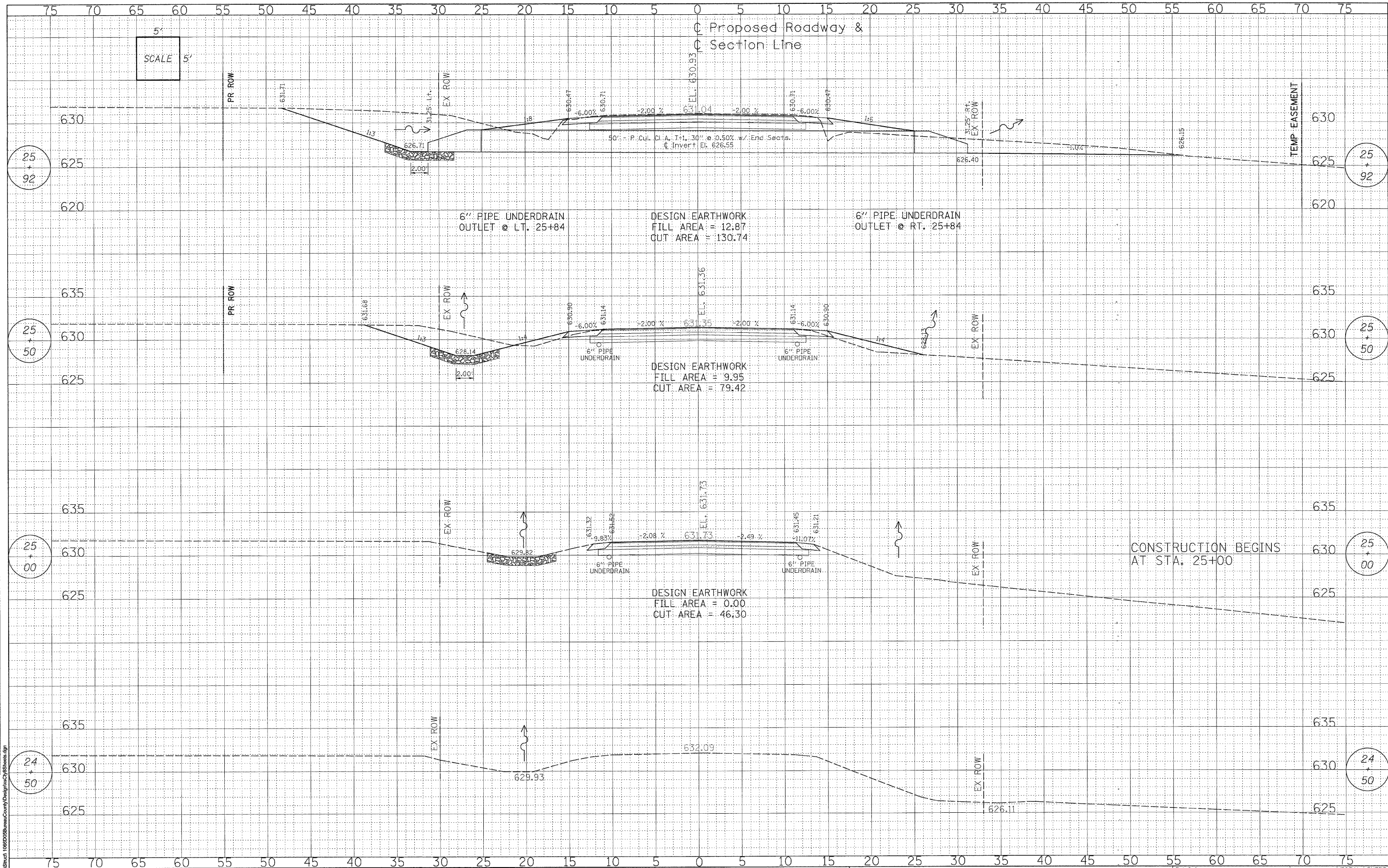
**C.H. 8 - PLAN & PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	18
STA. 39+20 TO STA. 45+00		CONTRACT NO. 81380		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188018				



DATE	
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FINAL SURVEY	
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NOTE BOOK	
AREAS CHECKED	
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BY	
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NOTE BOOK	
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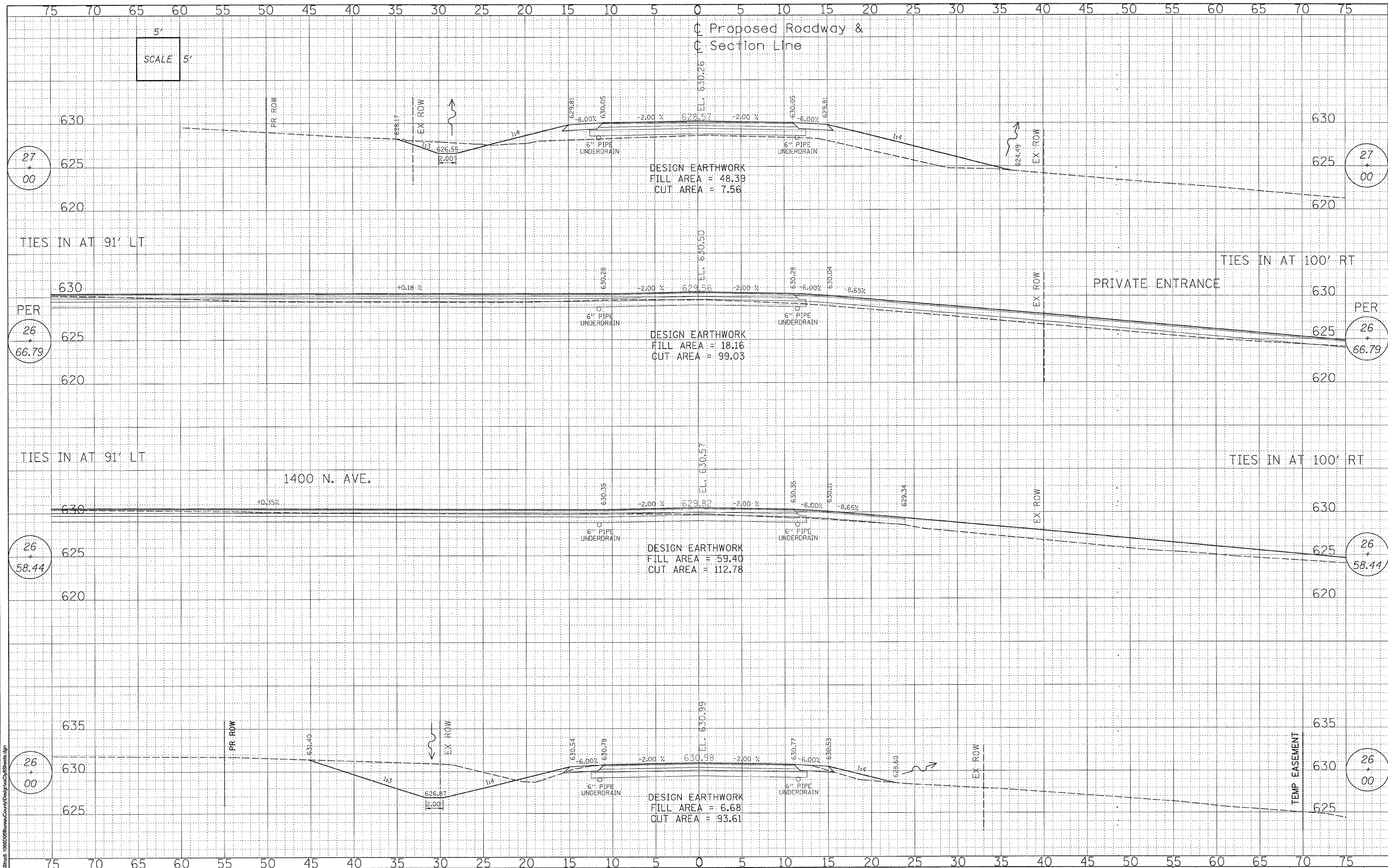
**WILLET, HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
609 East Second Street, Dixon, IL 61021  
Phone 815.284.3381 Fax 815.284.3385  
Design Firm 184-00918  
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PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	19
STA. 24+50.00 TO STA. 25+92.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BRS-0188(118)				



DATE	
BY	
FINAL SURVEY	
NOTED	
PLOTTED	
DATE	
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DATE	
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ORIGINAL SURVEY	
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DATE	
AREAS	
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
809 East Second Street, Dixon, IL 61021  
Phone 815.284.3381 Fax 815.284.3385  
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PLOT DATE =	CHECKED -	REVISED -
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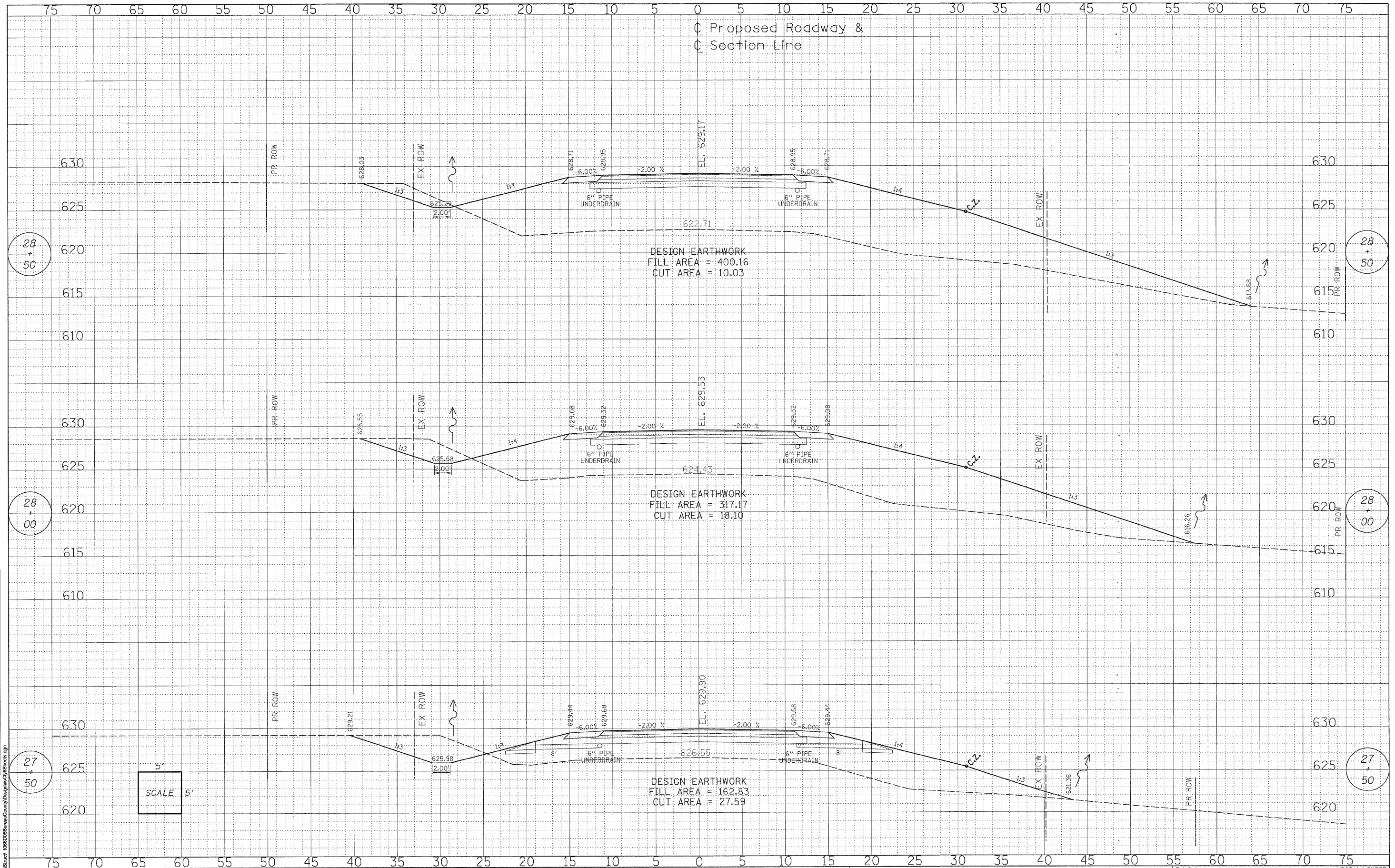
**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	20
STA. 26+00.00 TO STA. 27+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(118)				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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DATE	
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ORIGINAL SURVEY	
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NOTE BOOK	
AREAS CHECKED	
NO.	



5'  
SCALE 5'

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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Savoy Street, Dixon, IL 61021  
 Phone 815.284.3391 Fax 815.284.3385  
 Design Firm 815.284.3388  
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PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

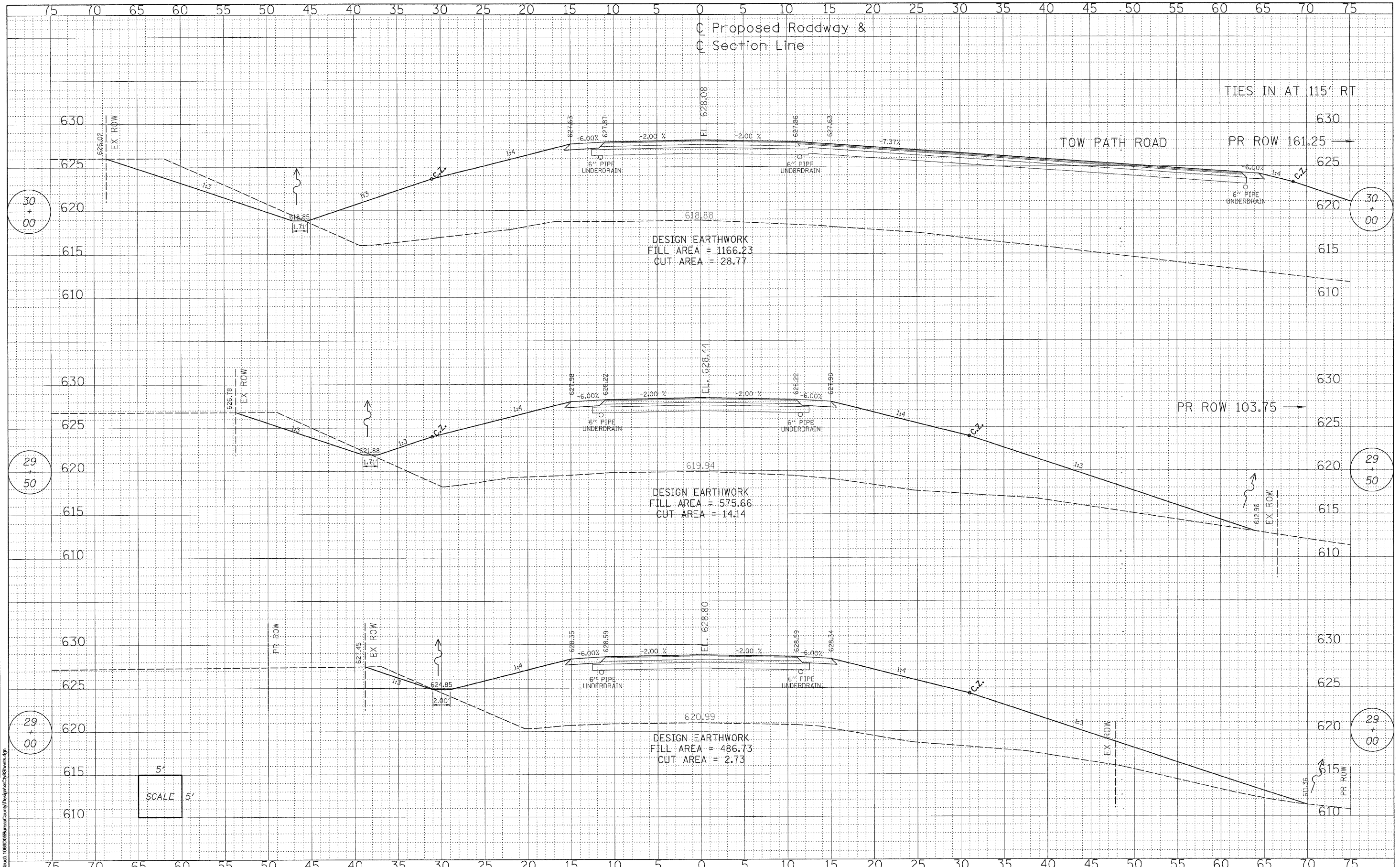
**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	21
STA. 27+50.00 TO STA. 28+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(181)				



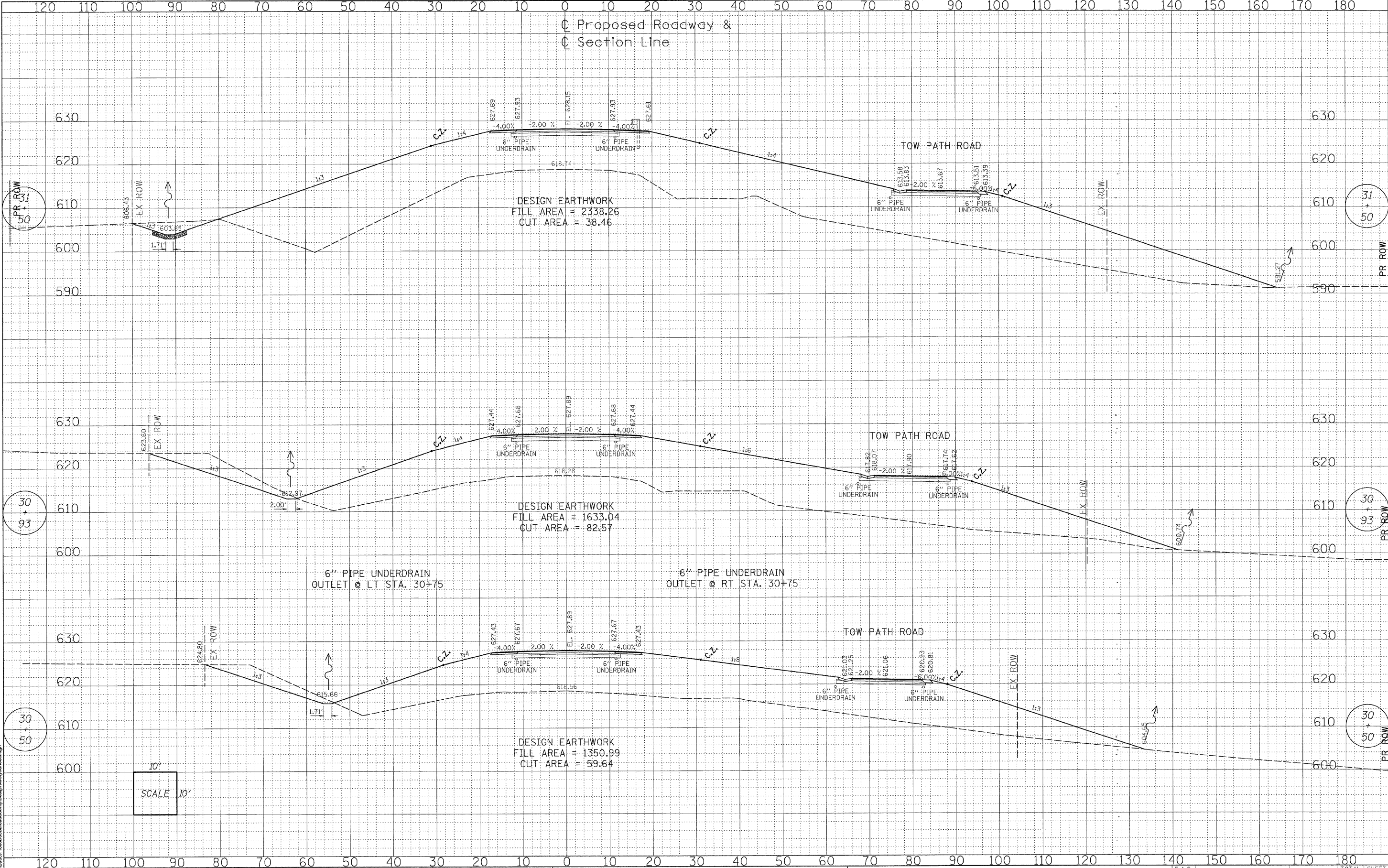
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FINAL SURVEY	
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NOTE BOOK	
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ORIGINAL SURVEY	
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NOTE BOOK	
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 BY \_\_\_\_\_  
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DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
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 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_



SCALE 10'

**WILLET, HOFMANN & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS  
 808 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.294.3385  
 Design Firm # 184-00818  
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USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

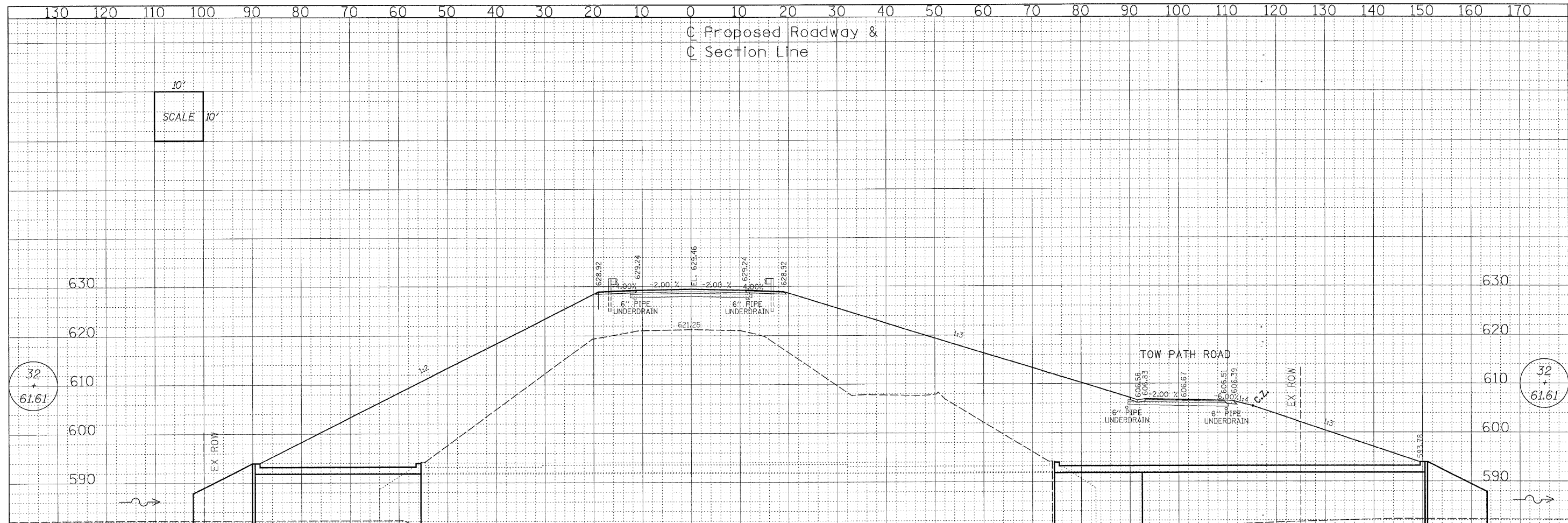
**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	23
STA. 30+50.00 TO STA. 31+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

FINAL SURVEY	DATE
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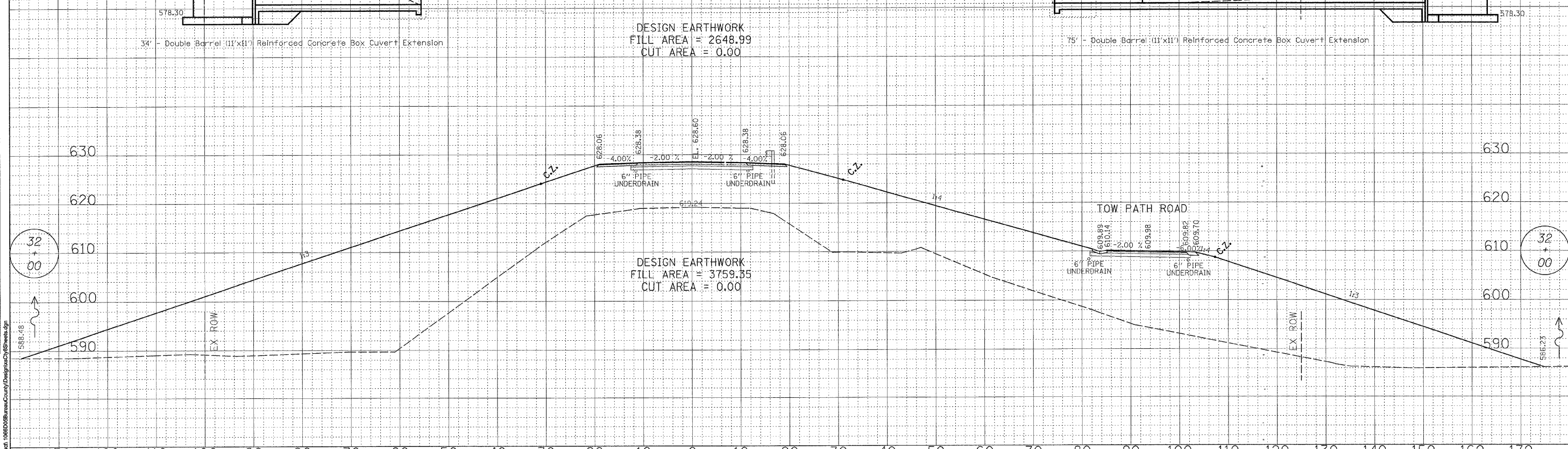
ORIGINAL SURVEY	DATE
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AREAS	
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34' - Double Barrel (11'x11') Reinforced Concrete Box Culvert Extension

DESIGN EARTHWORK  
FILL AREA = 2648.99  
CUT AREA = 0.00

75' - Double Barrel (11'x11') Reinforced Concrete Box Culvert Extension



34' - Double Barrel (11'x11') Reinforced Concrete Box Culvert Extension

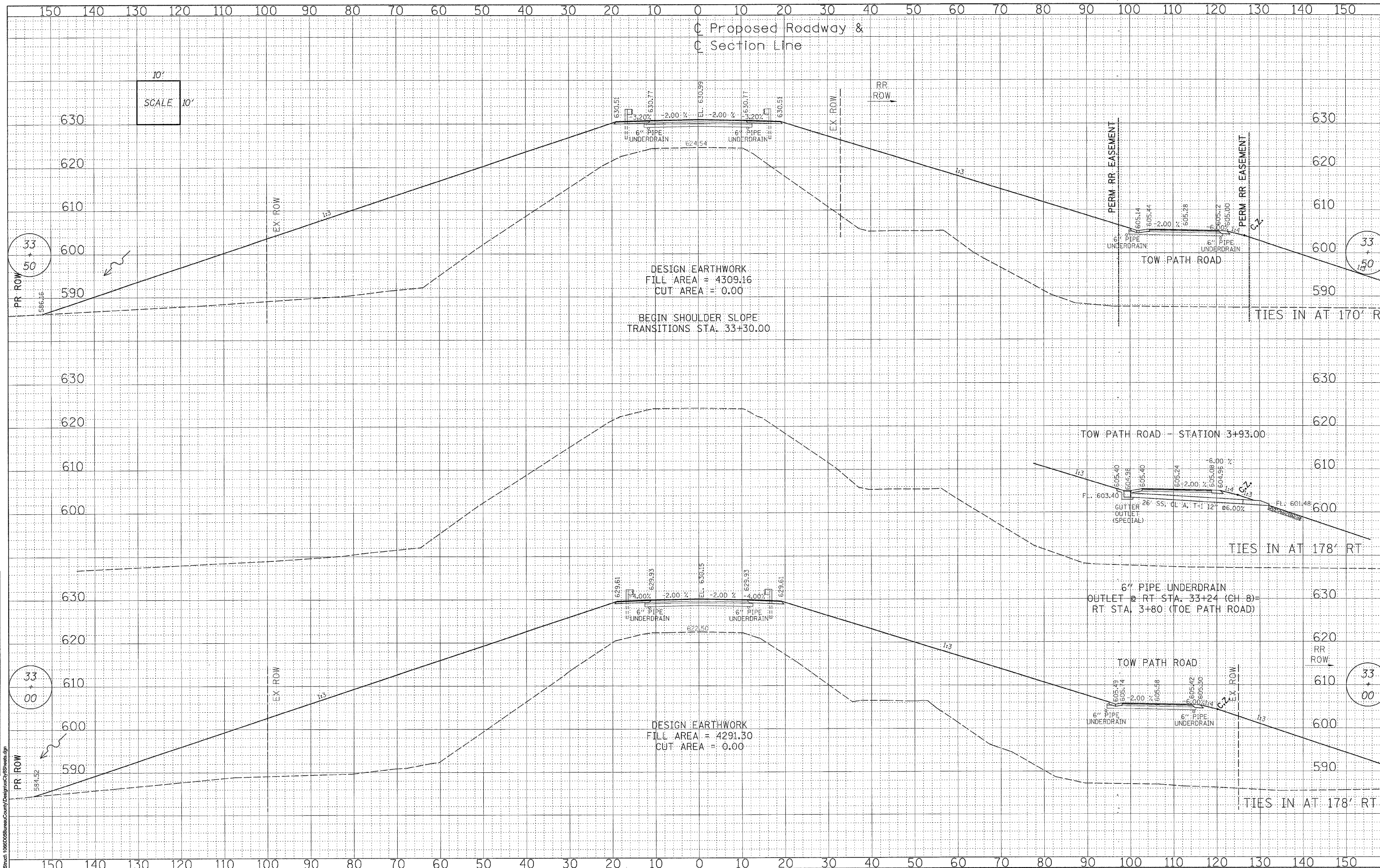
DESIGN EARTHWORK  
FILL AREA = 3759.35  
CUT AREA = 0.00

75' - Double Barrel (11'x11') Reinforced Concrete Box Culvert Extension

<p><b>WILLETT, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS 809 East Second Street Dixon, IL 61021 Phone 815.284.3381 Fax 815.284.3385 Design Firm # 184-00918 www.willett-hofmann.com</p>	USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	<p align="center"><b>BUREAU COUNTY</b> BRIDGE REPLACEMENT FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</p>	<p align="center"><b>C.H. 8 / TOW PATH RD - CROSS SECTIONS</b></p>	<table border="1"> <tr> <th>F.A. FILE</th> <th>SECTION</th> <th>COUNTY</th> <th>TOTAL SHEETS</th> <th>SHEET NO.</th> </tr> <tr> <td>188</td> <td>05-00195-00-BR</td> <td>BUREAU</td> <td>127</td> <td>24</td> </tr> </table>	F.A. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	188	05-00195-00-BR	BUREAU	127	24
F.A. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.												
188	05-00195-00-BR	BUREAU	127	24												

STA. 32+00.00	TO STA. 32+61.61	CONTRACT NO. 87380
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)		





DATE	
BY	
FINAL SURVEY	
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AREAS CHECKED	
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ORIGINAL SURVEY	
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AREAS CHECKED	
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00918  
 www.willett-hofmann.com

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PLOT SCALE =	DRAWN -	REVISED -
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	DATE -	REVISED -

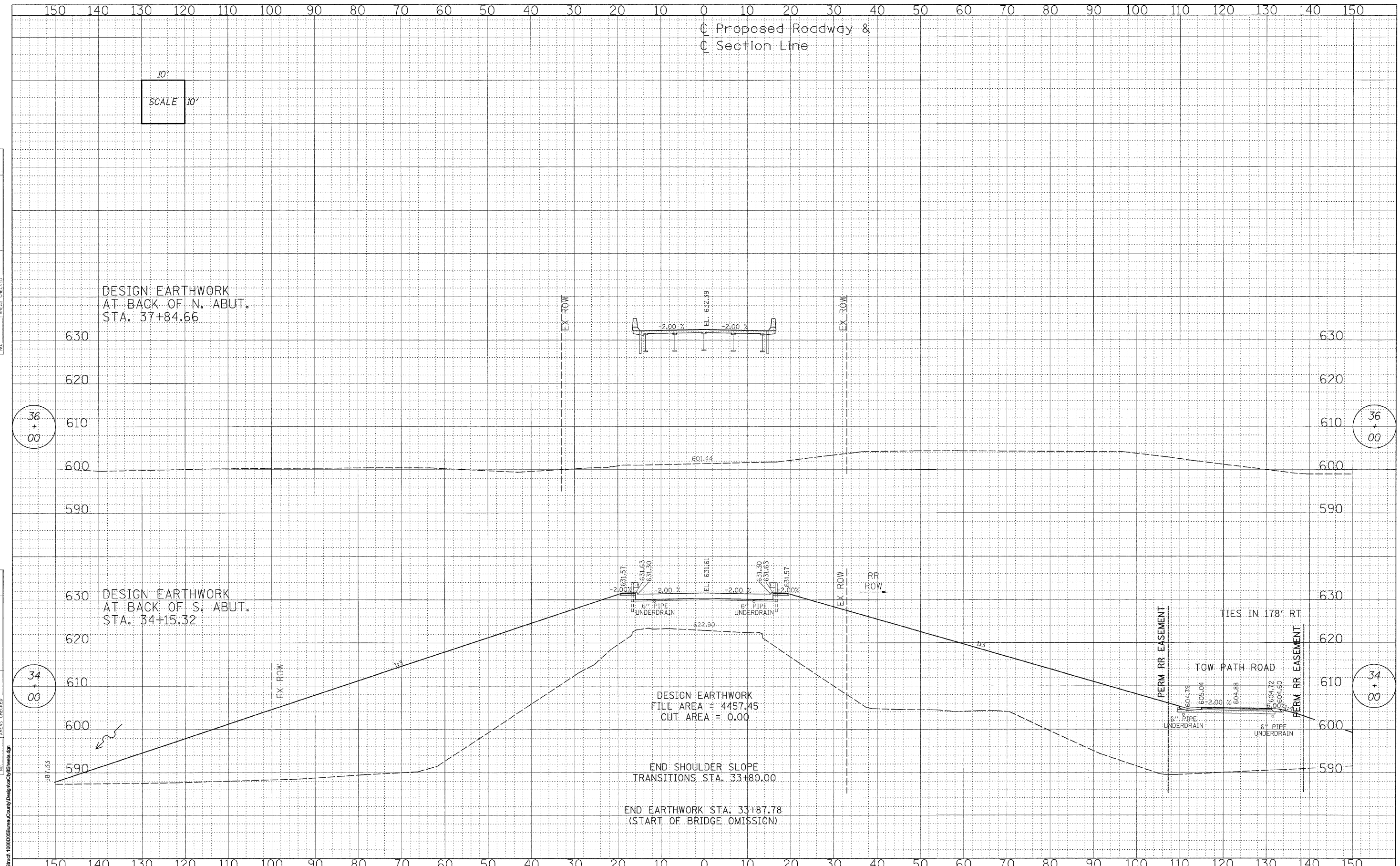
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	25
STA. 33+00.00 TO STA. 33+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BRS-0186(118)				

DATE	
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DRAWN	
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DATE	
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DATE	
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DESIGNED	
DRAWN	
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DATE	
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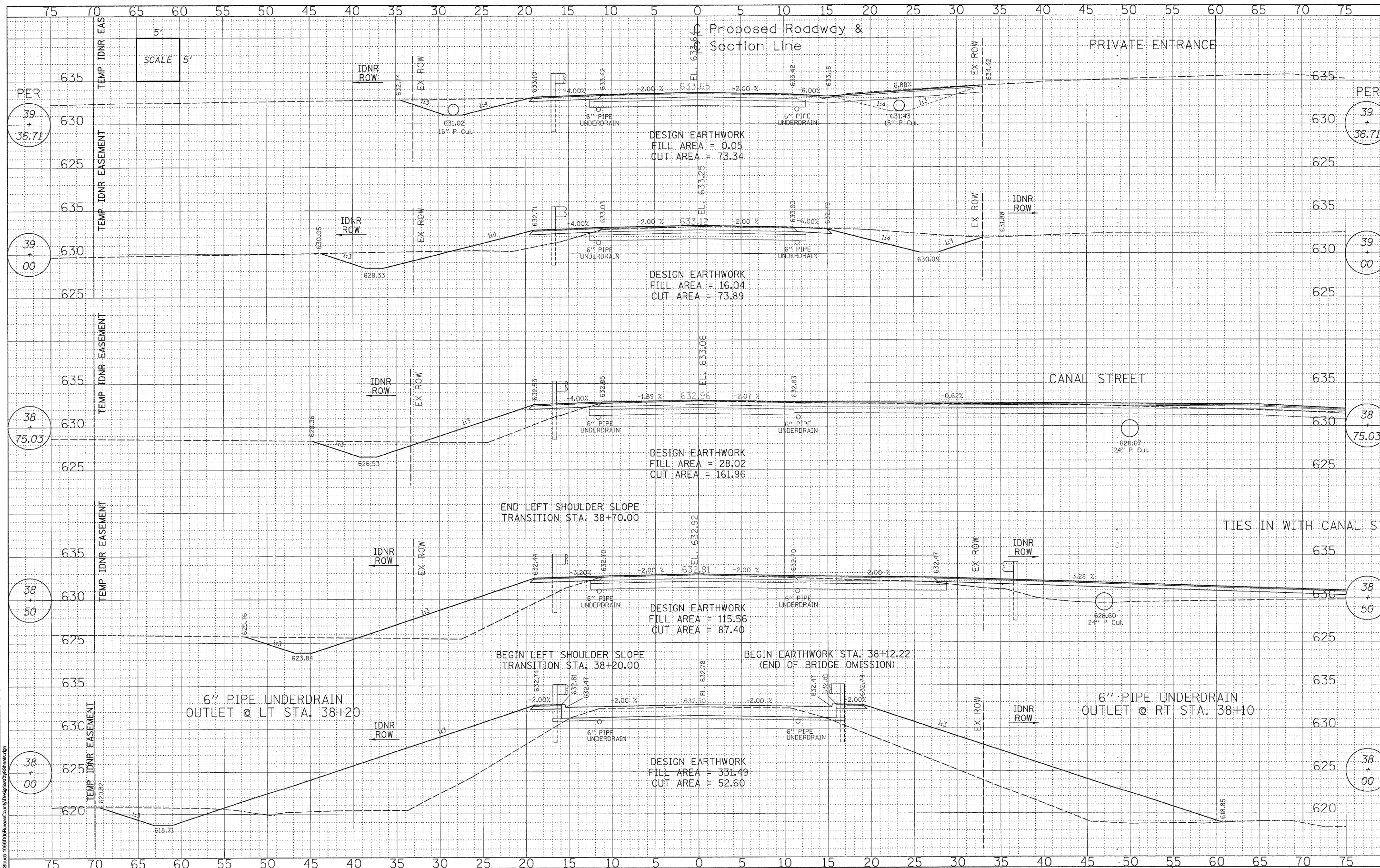
**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-0018  
 www.willettthofmann.com

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PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	26
STA. 34+00.00 TO STA. 36+00.00 CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BRS-0189(118)				



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 Design Firm # 184-00918  
 www.willett-hofmann.com

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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

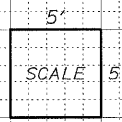
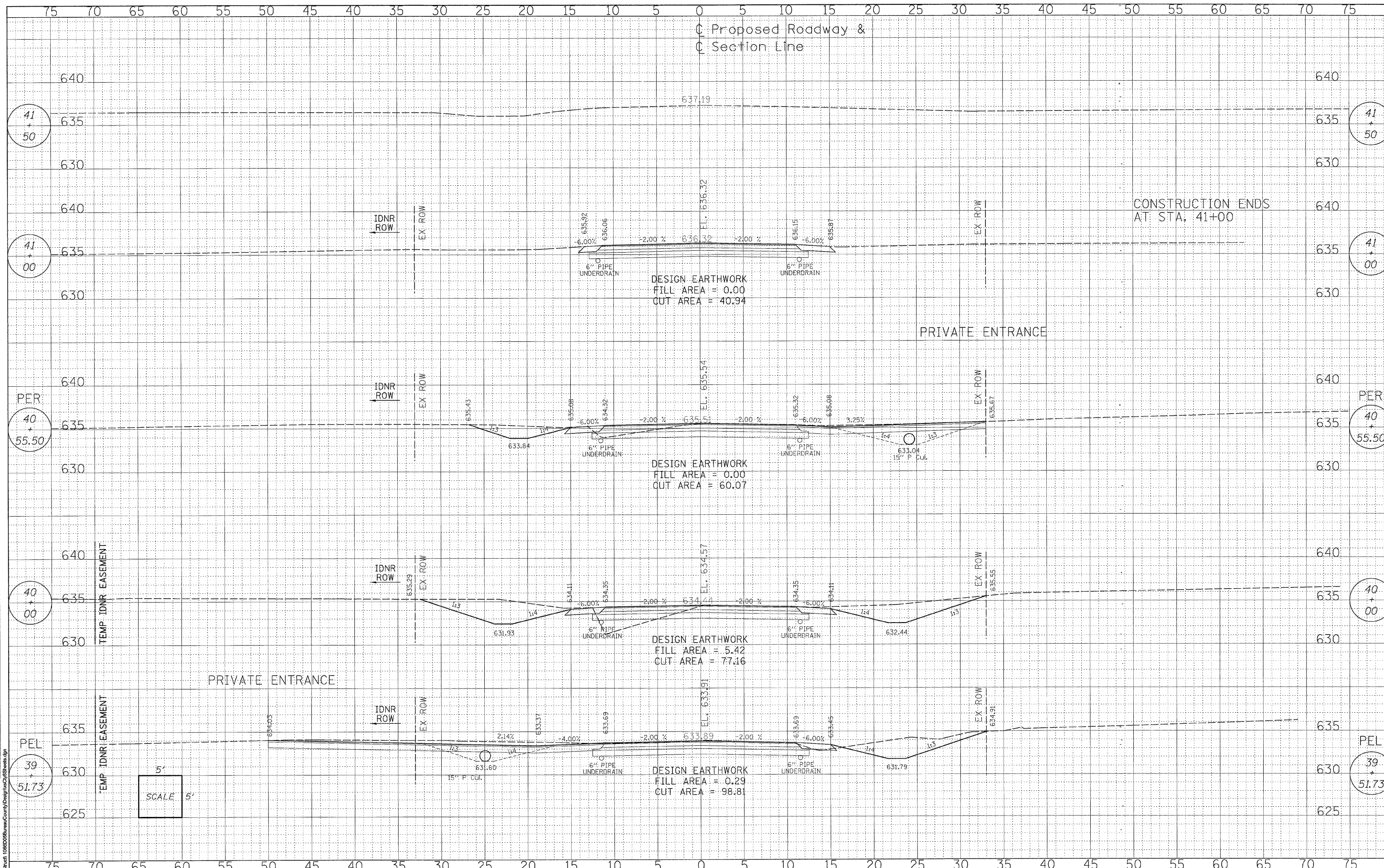
**C.H. 8 / TOW PATH RD - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	27
STA. 38+00.00 TO STA. 39+36.71		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7   ILLINOIS FED. AID PROJECT BHS-0188(118)				



BY	DATE

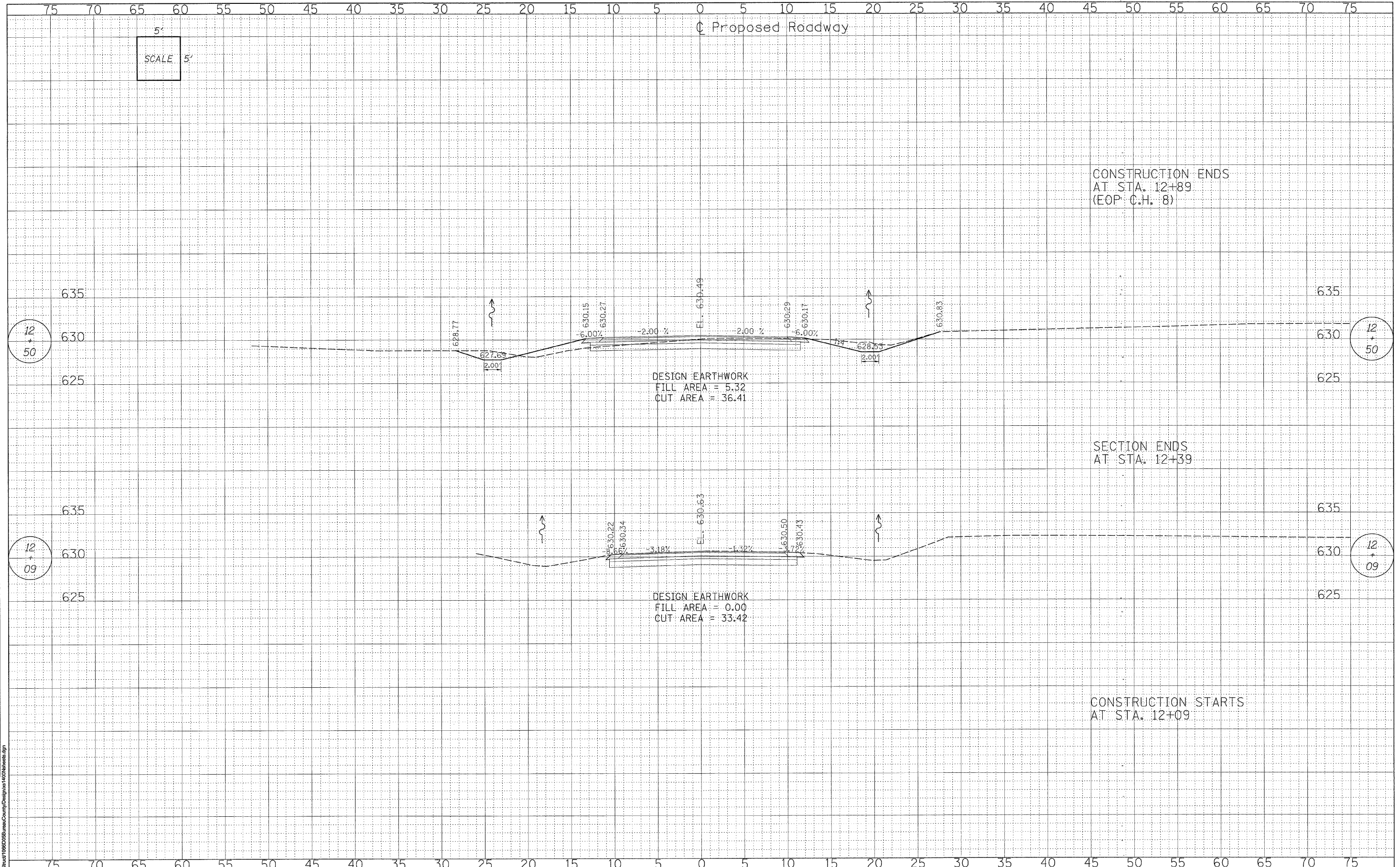
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<b>WILLETTHOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS 809 East Second Street Dixon, IL 61021 Phone 815.284.3381 Fax 815.284.3385 Design Firm # 184-00918 www.willetthofmann.com	USER NAME =	DESIGNED -	REVISED -	<b>BUREAU COUNTY</b> <b>BRIDGE REPLACEMENT</b> <b>FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</b>	<b>C.H. 8 / TOW PATH RD - CROSS SECTIONS</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE =	DRAWN -	REVISED -			188	05-00195-00-BR	BUREAU	127	28	
	PLOT DATE =	CHECKED -	REVISED -			STA. 39+58.00	TO STA. 41+50.00	CONTRACT NO. 87380			
		DATE -	REVISED -					FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		BRS-0188(118)	

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	CHECKED

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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS
	CHECKED



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**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00918  
 www.willetthofmann.com

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	DRAWN -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD AND THE HENNEPIN CANAL**

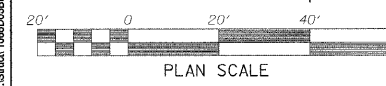
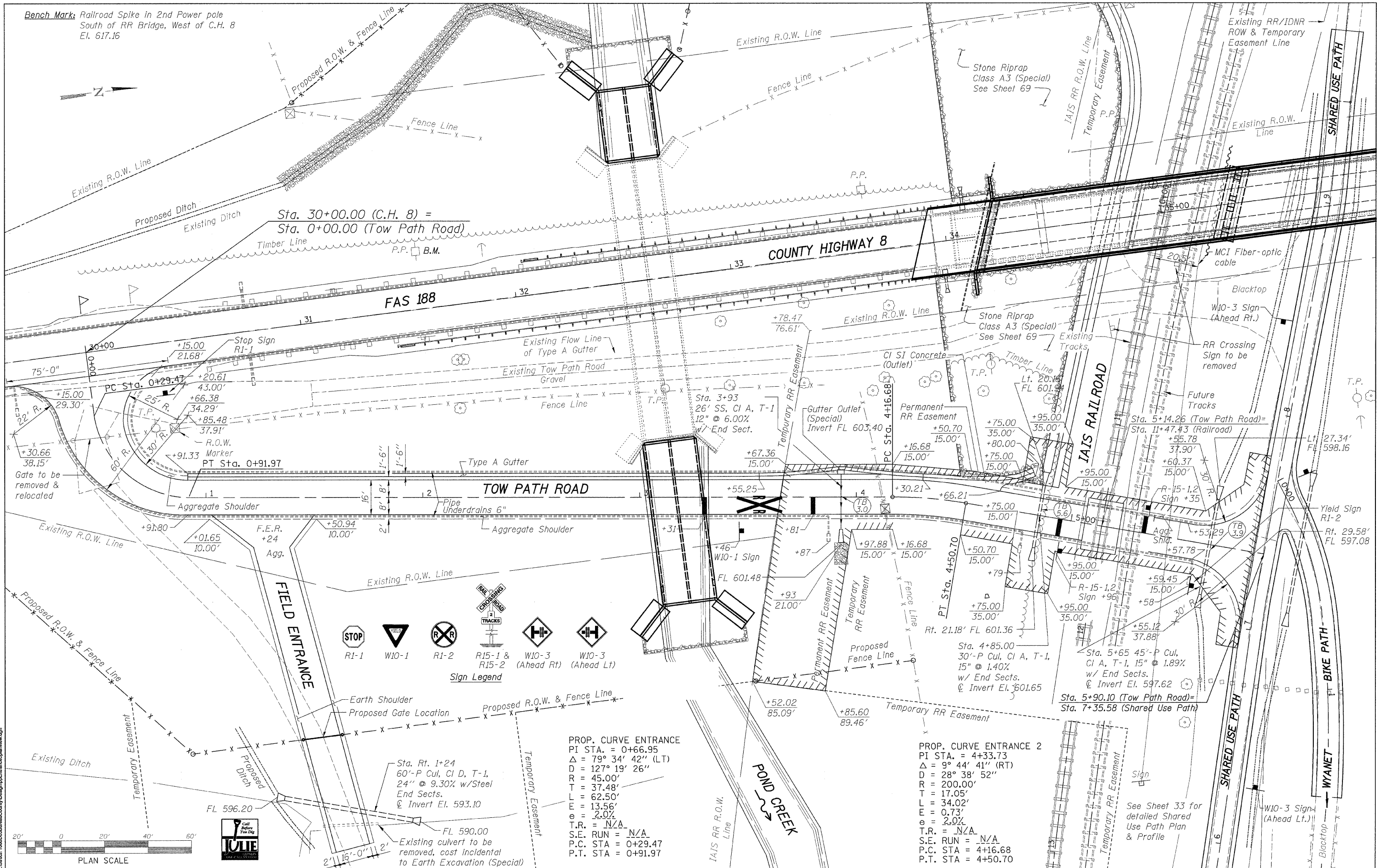
**1400 N. AVENUE - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	29
STA. 12+00.00 TO STA. 12+50.00			CONTRACT NO. 87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(18)				

Bench Mark: Railroad Spike in 2nd Power pole  
South of RR Bridge, West of C.H. 8  
El. 617.16

DATE	
BY	
REVISIONS	
NO.	
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REVISIONS	
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DATE	
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
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809 East Second Street Dixon, IL 61021  
Phone 815.294.3381 Fax 815.294.3388  
Design Firm # 184-0918  
www.willetthofmann.com

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	DRAWN -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE -	REVISED -

**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

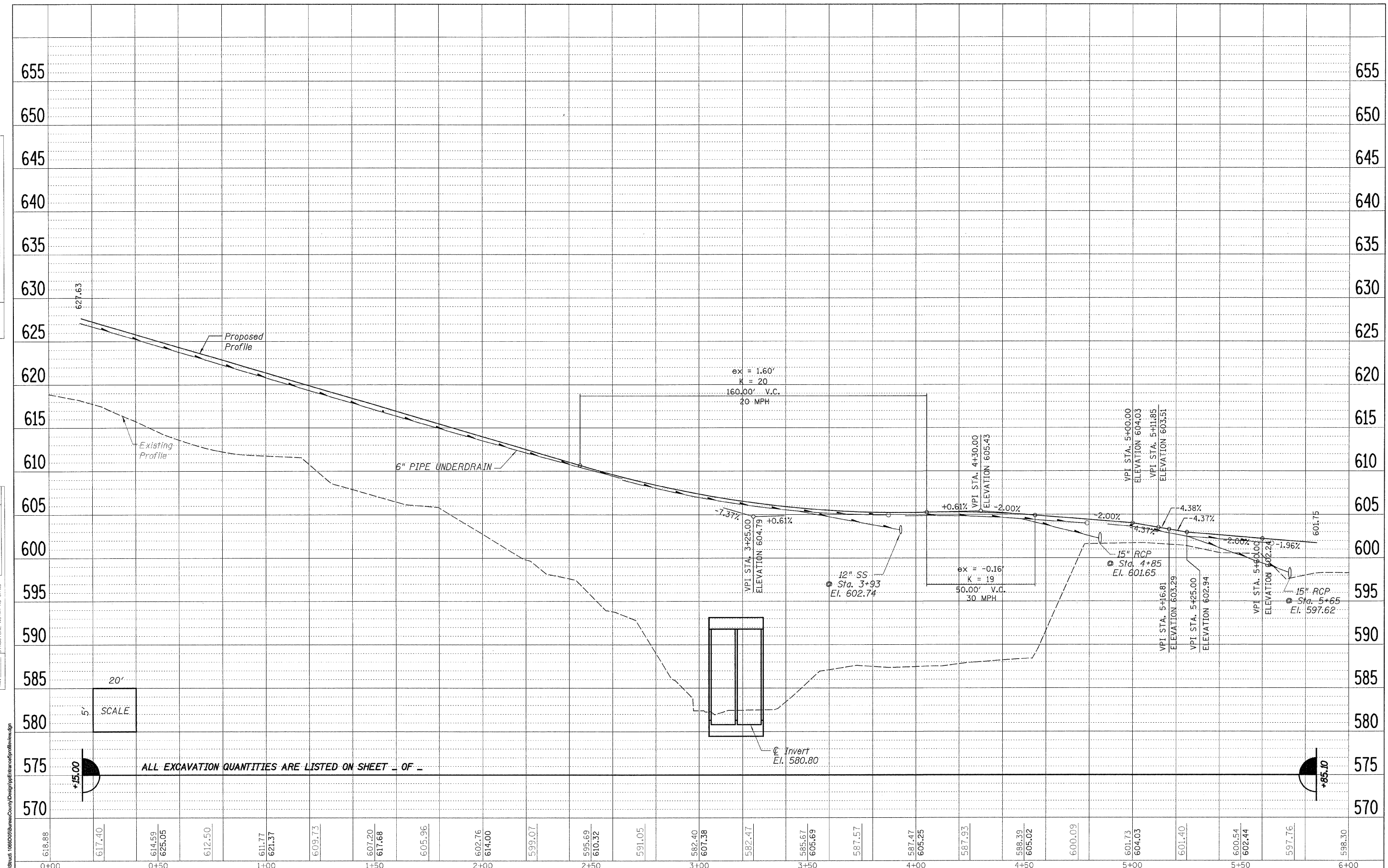
**TOW PATH ROAD - PLAN**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS
188	05-00195-00-BR	BUREAU	127 30
STA. 0+00 TO STA. 5+75		CONTRACT NO.	97380
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0189118			



PLAN	SERVED	DATE
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PROFILE	SERVED	DATE
	PLOTTED	
	NOTED	
	BY	
	NO.	



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20'  
5' SCALE

ALL EXCAVATION QUANTITIES ARE LISTED ON SHEET - OF -

618.88	617.40	614.59	612.50	611.77	609.73	607.20	605.96	602.76	599.07	595.69	591.05	582.40	582.47	585.67	587.57	587.47	587.93	588.39	600.09	601.73	601.40	600.54	597.76	598.30	
0+00	0+50	1+00	1+50	2+00	2+50	3+00	3+50	4+00	4+50	5+00	5+50	6+00													

**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone: 815.284.3381 Fax: 815.284.3385  
 Design Firm # 184-00818  
 www.willett-hofmann.com

USER NAME =	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE	REVISED -

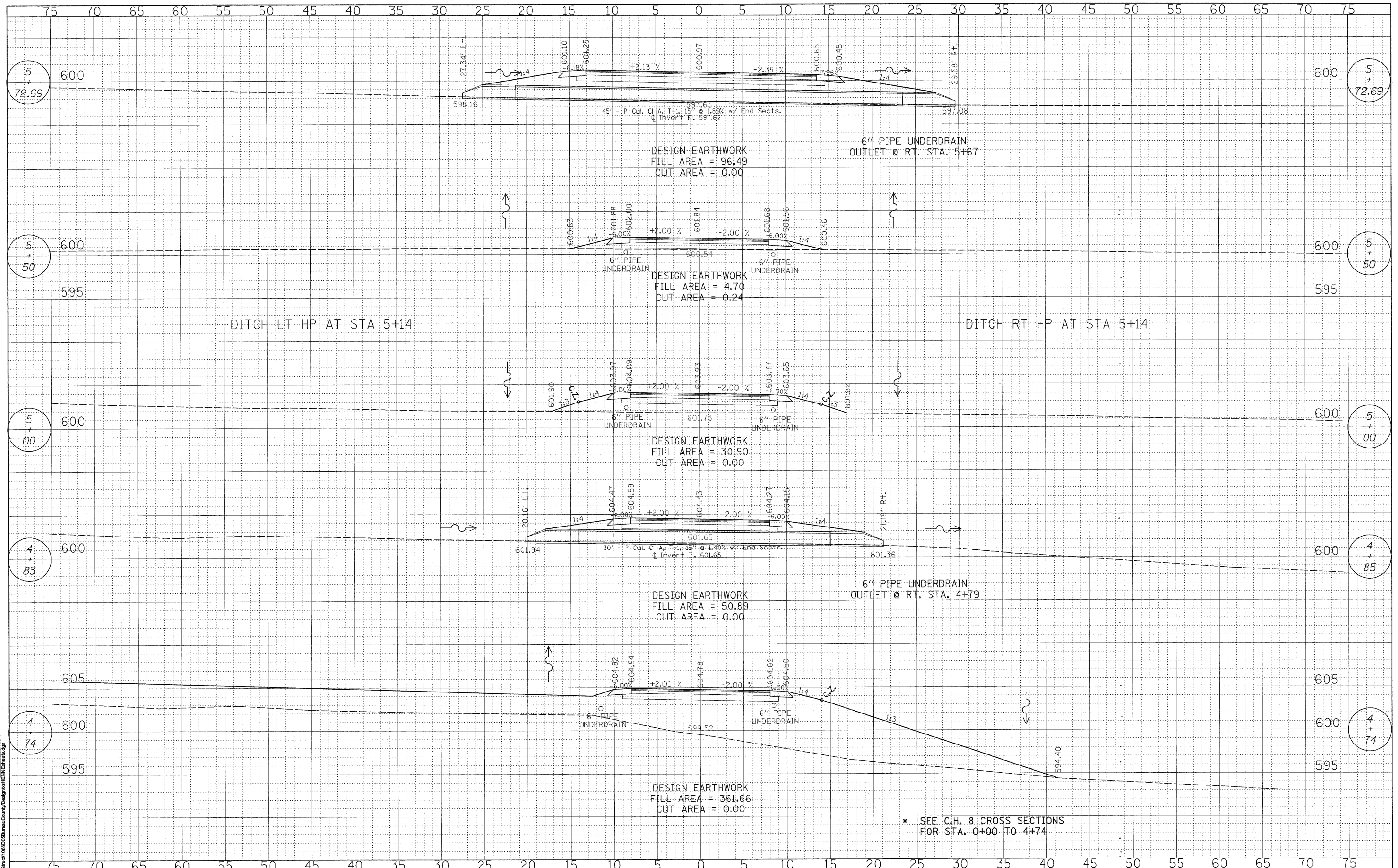
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8 OVER IAS RAILROAD & THE HENNEPIN CANAL)**

**TOW PATH ROAD - PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	31
STA. 0+00 TO STA. 6+00		CONTRACT NO. 07380		
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT BR5-0188(118)				

DATE	
BY	
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ORIGINAL SURVEY	
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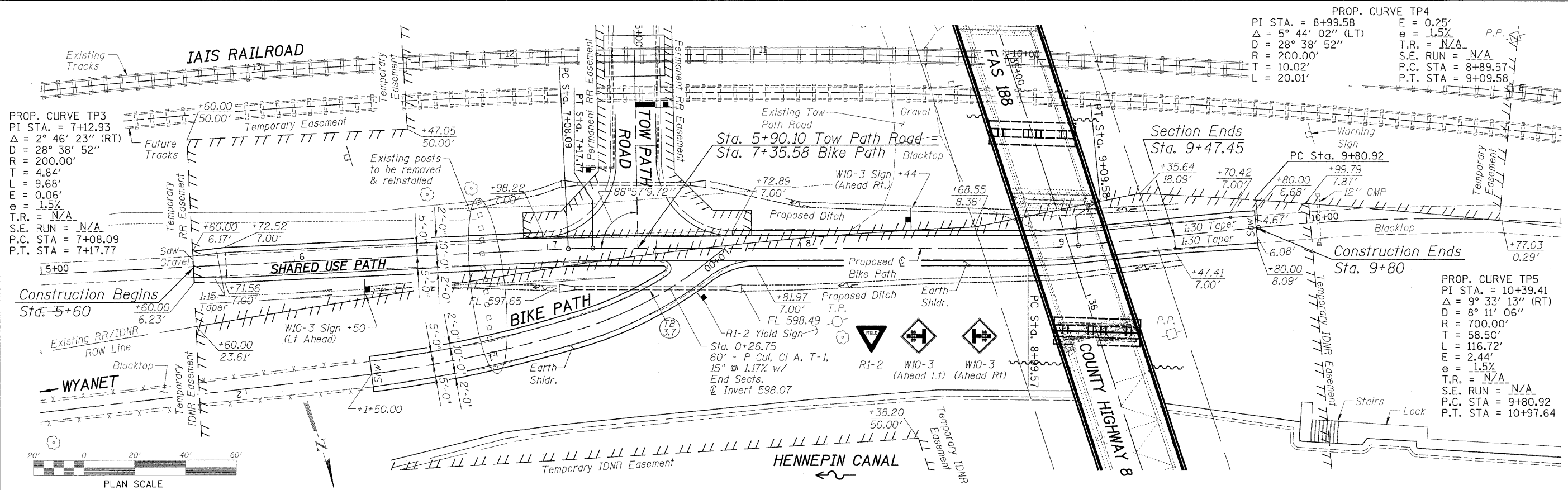
**WILLET, HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
808 East Second Street Dixon, IL 61021  
Phone 815.284.3381 Fax 815.284.3385  
Design Firm # 184-01918  
www.willetthofmann.com

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

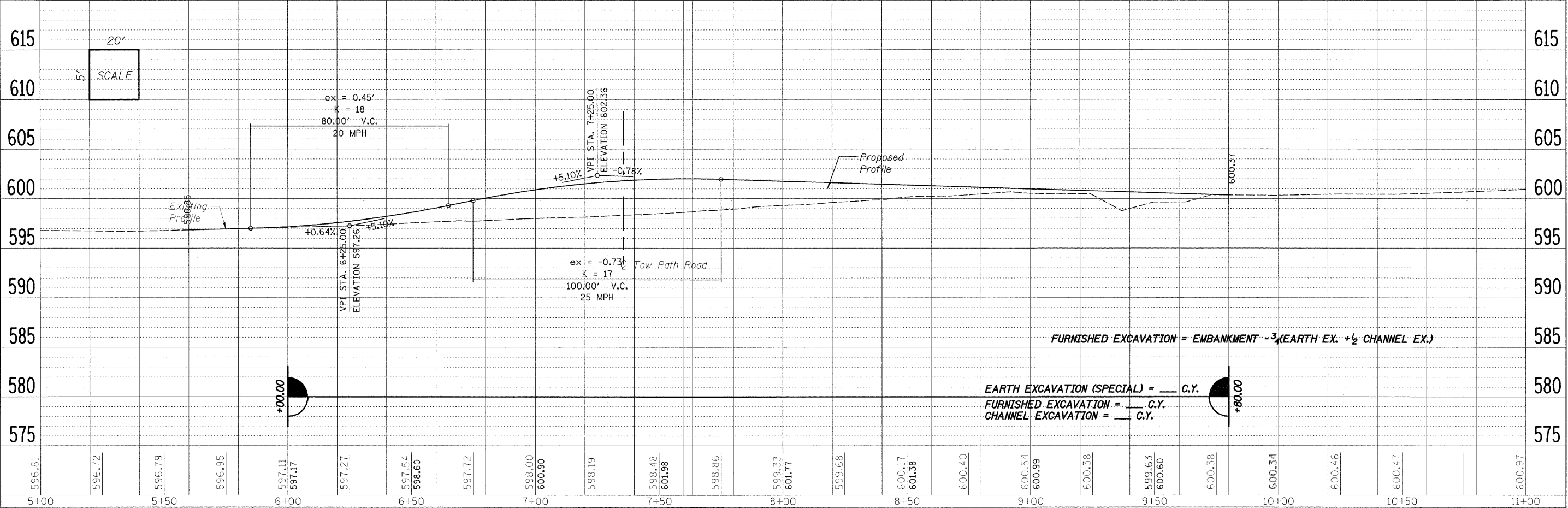
**TOW PATH ROAD - CROSS SECTIONS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	32
STA. 4+74.00 TO STA. 5+72.73		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(18)				



DATE	
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	GRADES CHECKED
	NOTE BOOK
	STRUCTURE
	NOTATIONS
	CHKD

DATE	
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PROFILE	SUBMITTED
	PLOTTED
	GRADES CHECKED
	NOTE BOOK
	STRUCTURE
	NOTATIONS
	CHKD



5+00	5+50	6+00	6+50	7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00																			
596.81	596.72	596.79	596.95	597.11	597.17	597.27	597.54	598.60	597.72	598.00	600.90	598.19	598.48	601.98	598.86	599.33	601.77	599.68	600.17	601.38	600.40	600.54	600.99	600.38	599.63	600.60	600.38	600.34	600.46	600.47	600.97

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PLOT DATE =	CHECKED =	REVISED =
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**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

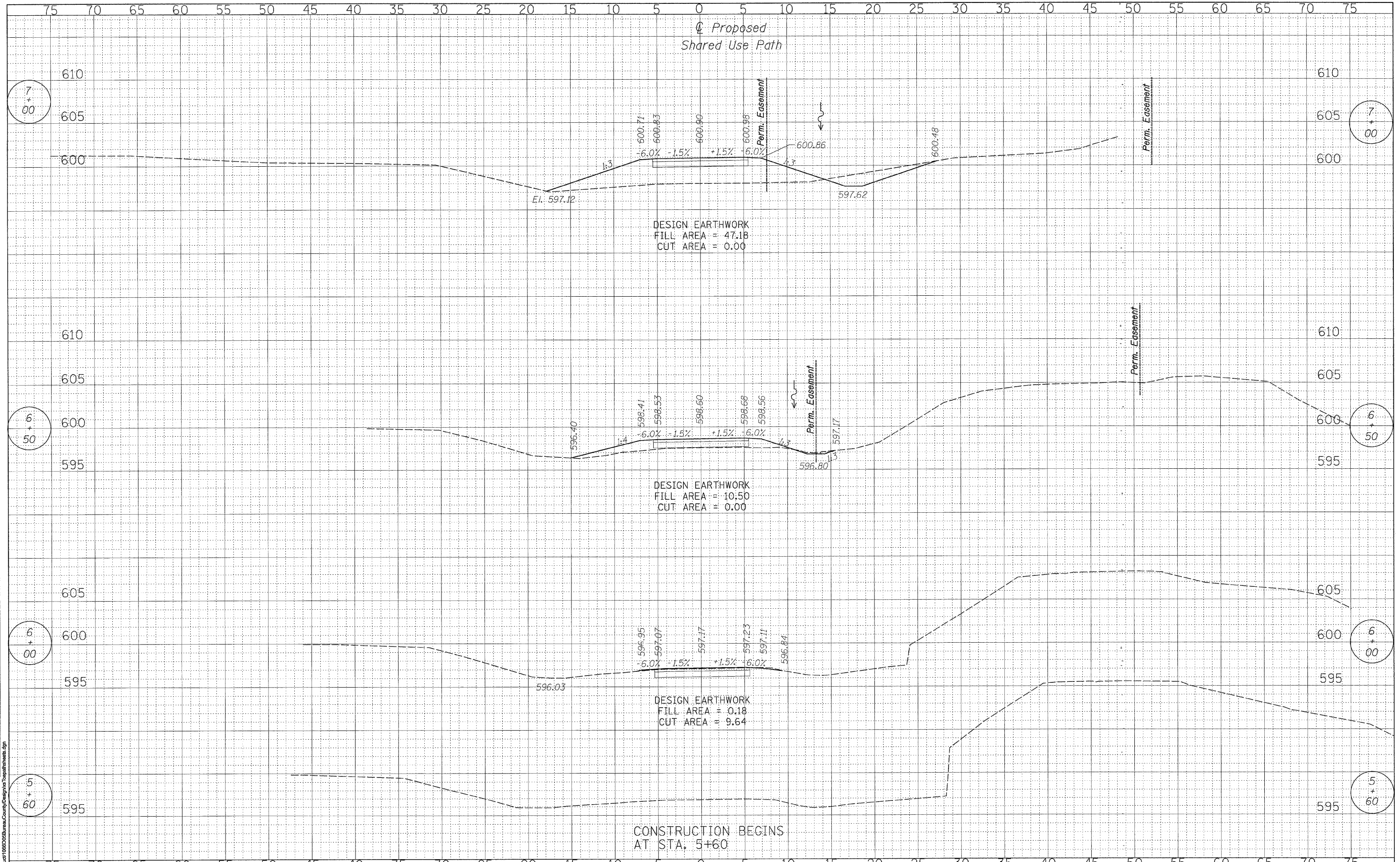
**SHARED USE PATH - PLAN & PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	33
STA. 5+00 TO STA. 11+00			CONTRACT NO. 87380	
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT BRS-0188111				



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FINAL SURVEY	
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NOTE BOOK	
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ORIGINAL SURVEY	
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NOTE BOOK	
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
809 East Second Street Dixon, IL 61021  
Phone 815.284.3391 Fax 815.284.3385  
Design Firm # 184-00918  
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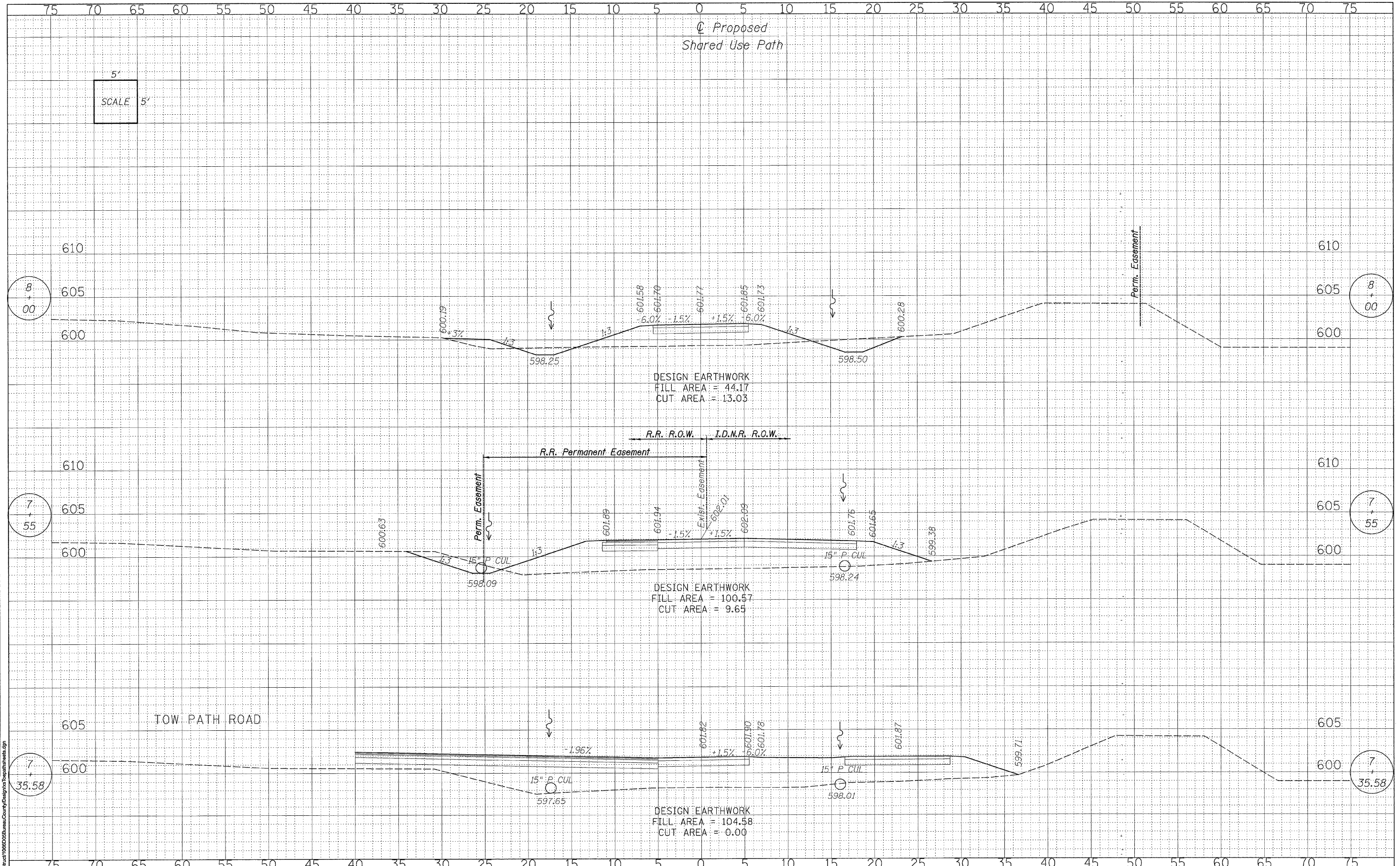
**BUREAU COUNTY**  
BRIDGE REPLACEMENT  
FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**SHARED USE PATH - CROSS SECTIONS**

F.A.S. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	34
STA. 6+00.00 TO STA. 7+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

FINAL SURVEY	BY	DATE
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ORIGINAL SURVEY	BY	DATE
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 808 East Second Street Dixon, IL 61021  
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PLOT SCALE =	DRAWN -	REVISED -
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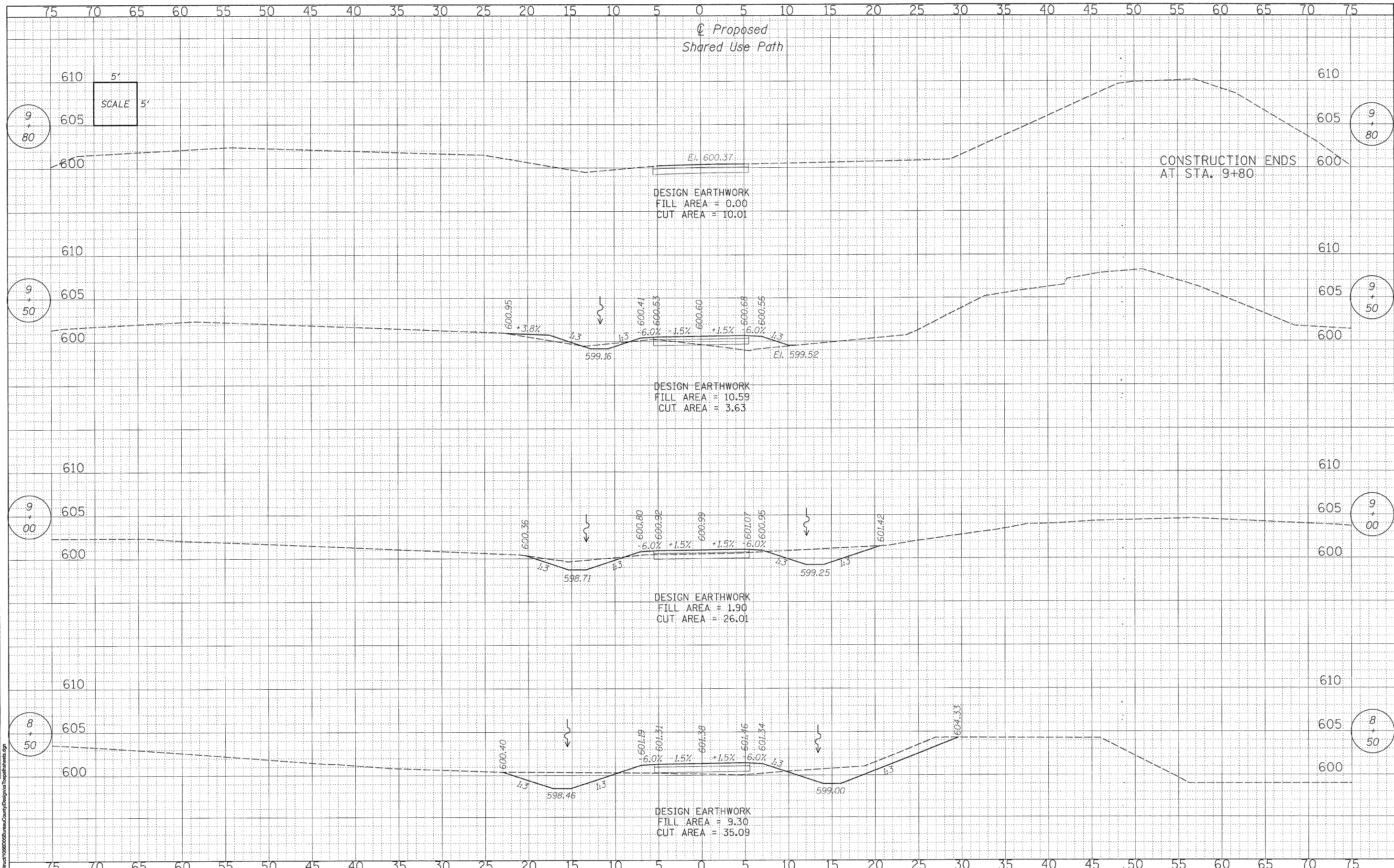
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SHARED USE PATH - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	35
STA. 7+35.58 TO STA. 8+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

DATE	
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FINAL SURVEY	
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ORIGINAL SURVEY	
SURVEYED	
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NOTE BOOK	
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AREAS CHECKED	
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 609 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.294.3385  
 Design Firm # 184-03918  
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PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

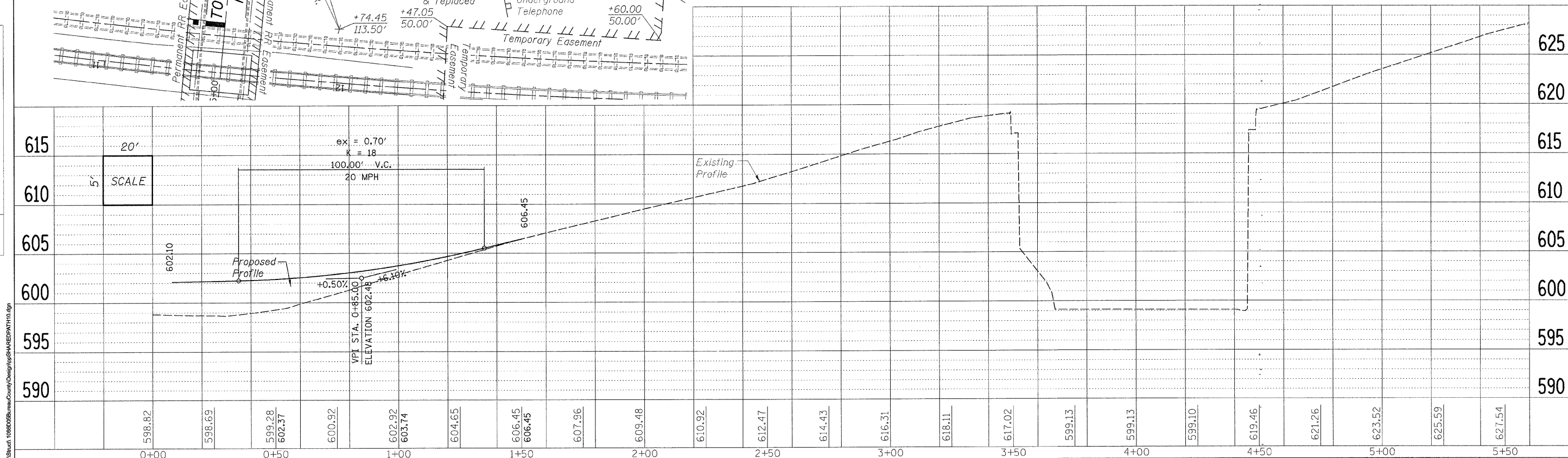
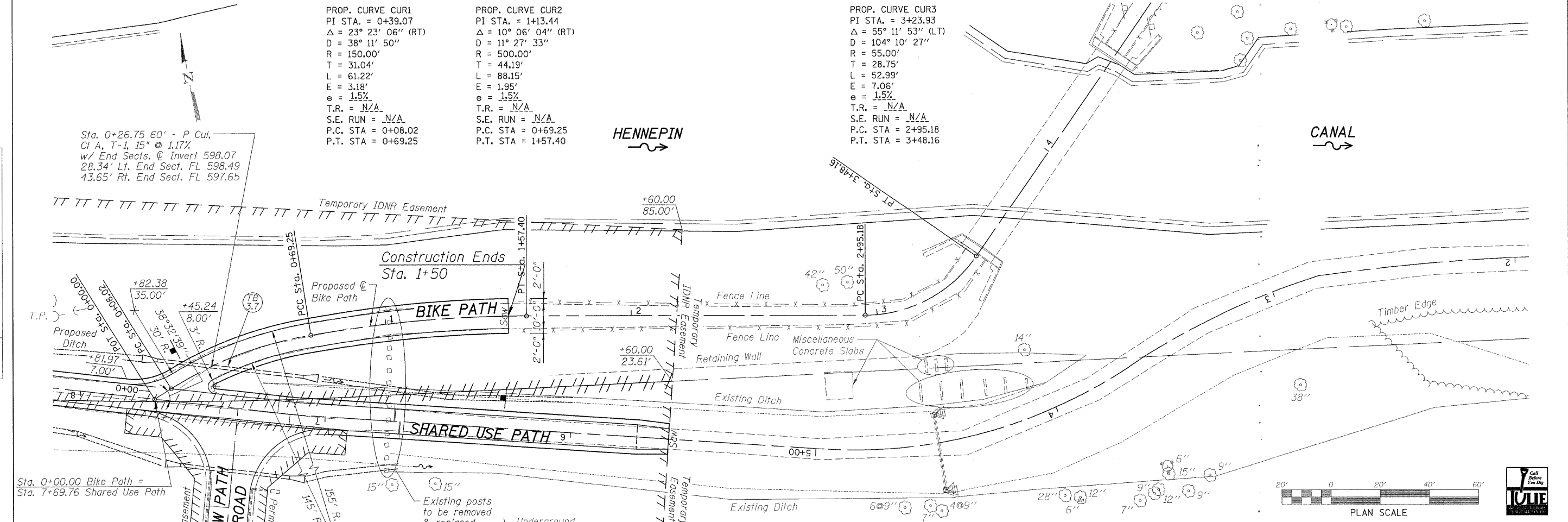
**SHARED USE PATH - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	36
STA. 8+50.00 TO STA. 9+80.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188(118)				



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	STRUCTURE
	NOTATIONS
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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
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 www.willetthofmann.com

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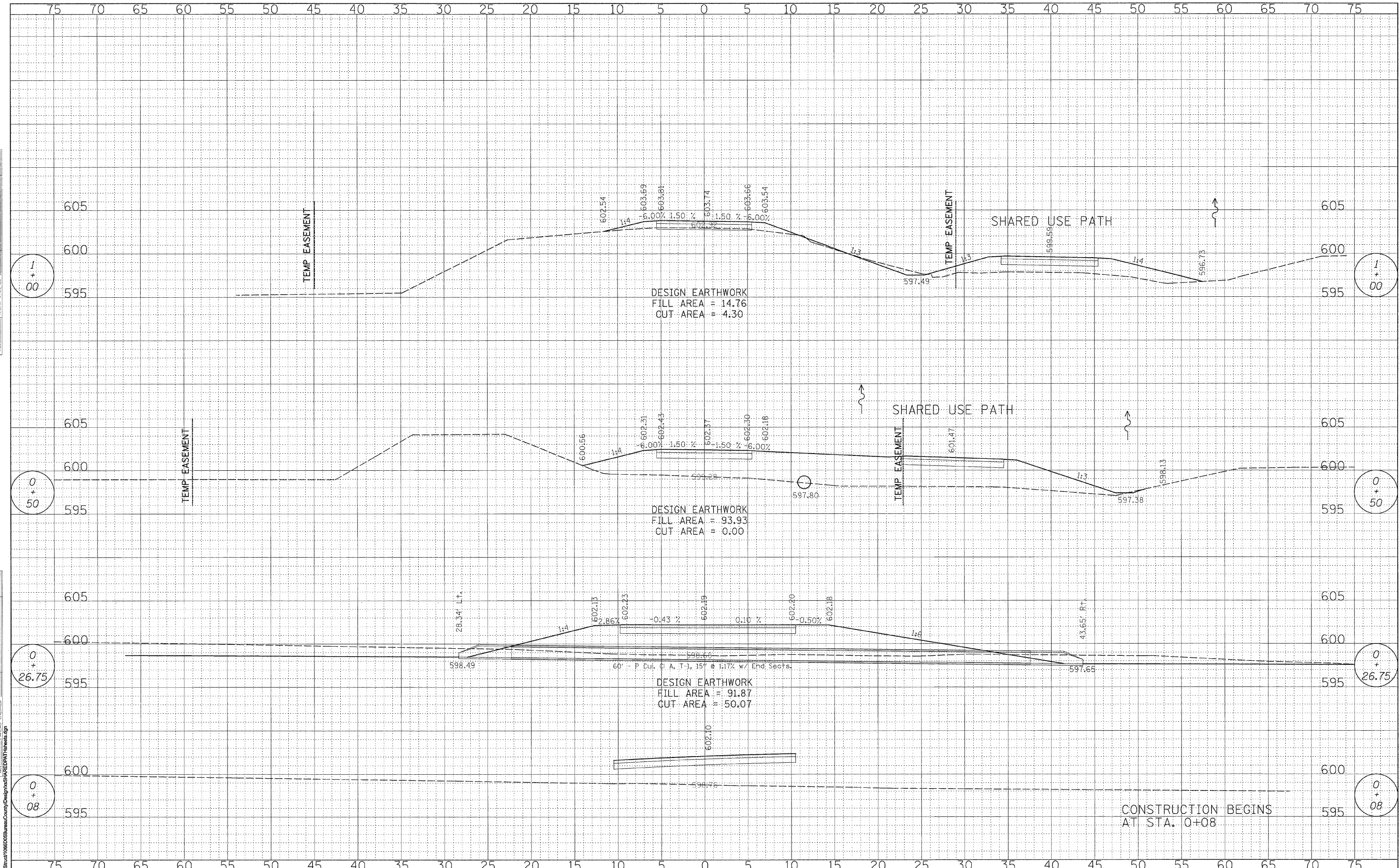
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL**

**BIKE PATH**  
**PLAN AND PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	37
STA. 0+00 TO STA. 5+75		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

DATE	
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TEMPLATE	
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TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



CONSTRUCTION BEGINS  
AT STA. 0+08

**WILLETT, HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
809 East Second Street Dixon, IL 61021  
Phone: 815.284.3381 Fax: 815.284.3386  
Design Firm # 194-00918  
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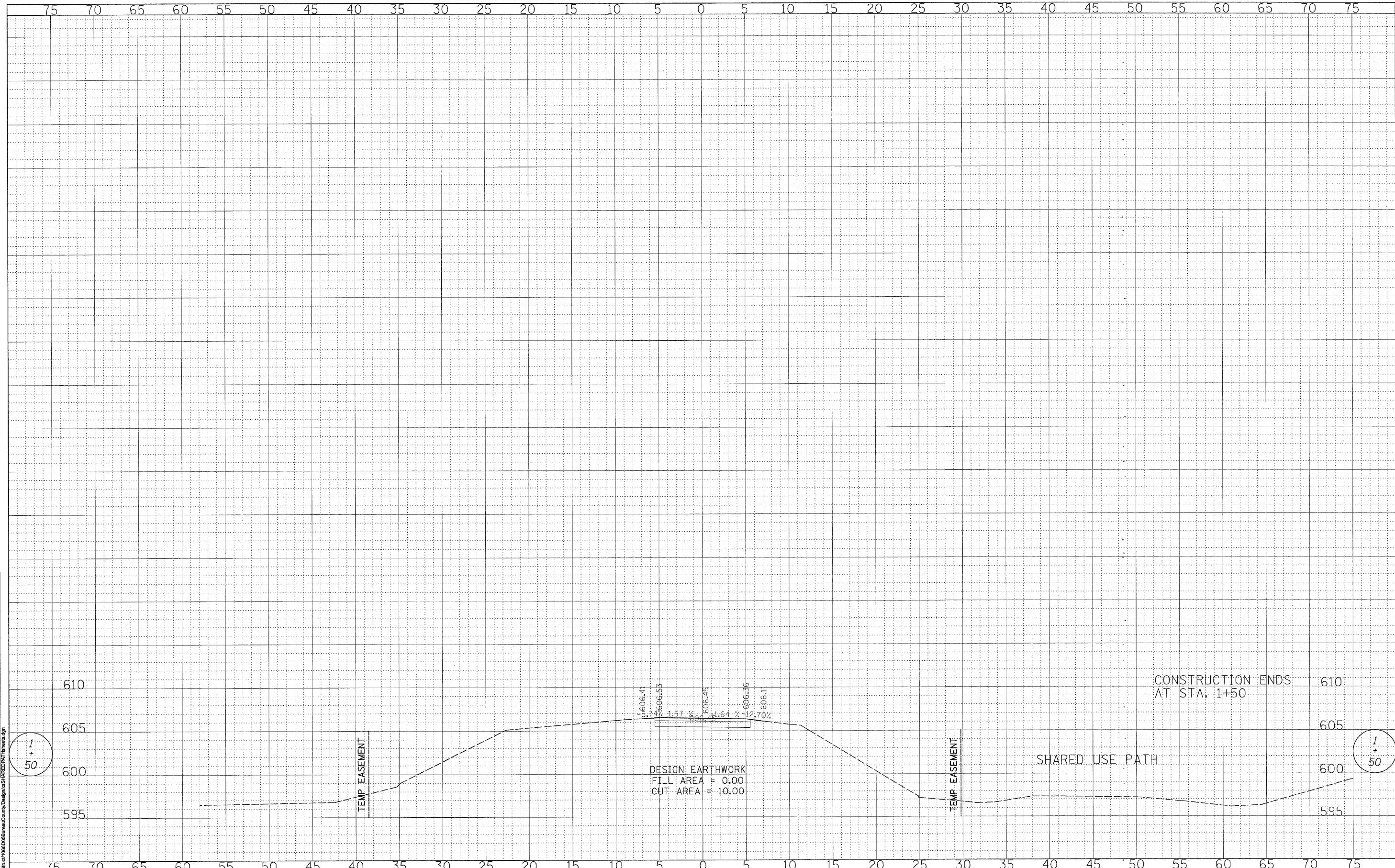
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**BIKE PATH**  
**CROSS SECTIONS**

F.A.S. R/L	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	07-00210-00-WR	BUREAU	127	36
STA. +08.00 TO STA. 1+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	BY
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ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK NO.	PLOTTED	BY
AREAS CHECKED	DATE	



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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3301 Fax 815.284.3385  
 Design Firm # 184-00918  
 www.willett-hofmann.com

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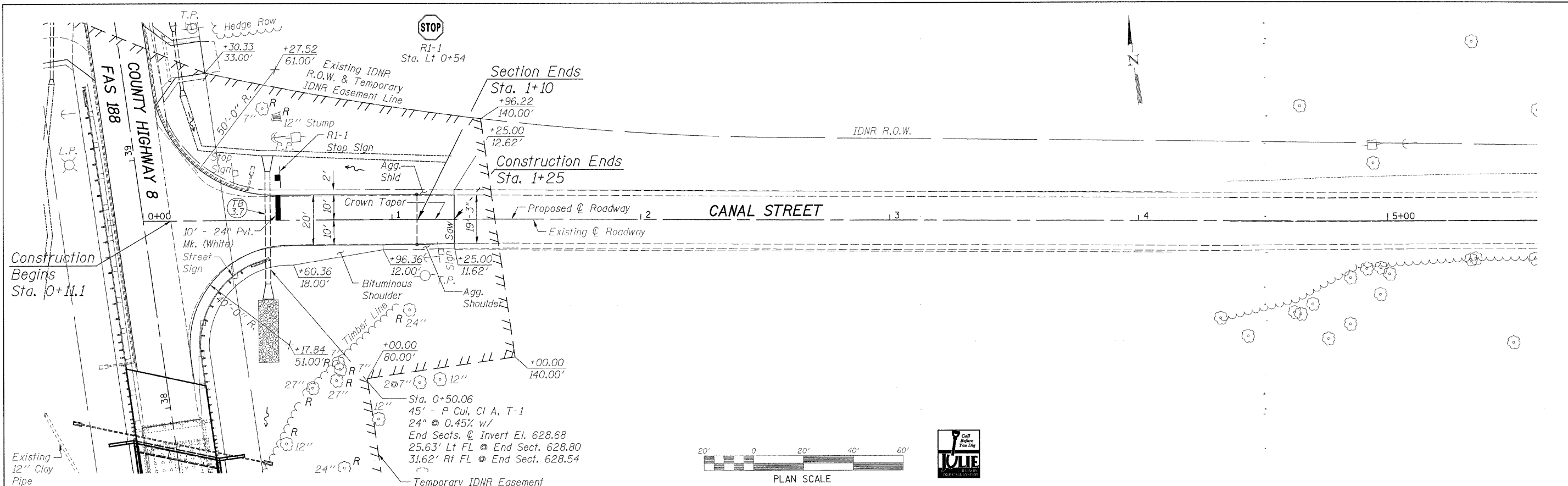
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**BIKE PATH**  
**CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	07-00210-00-WR	BUREAU	127	39
STA. 1+50.00 TO STA. 1+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(1B)				

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**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 808 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00918  
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	CHECKED -	REVISED -
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

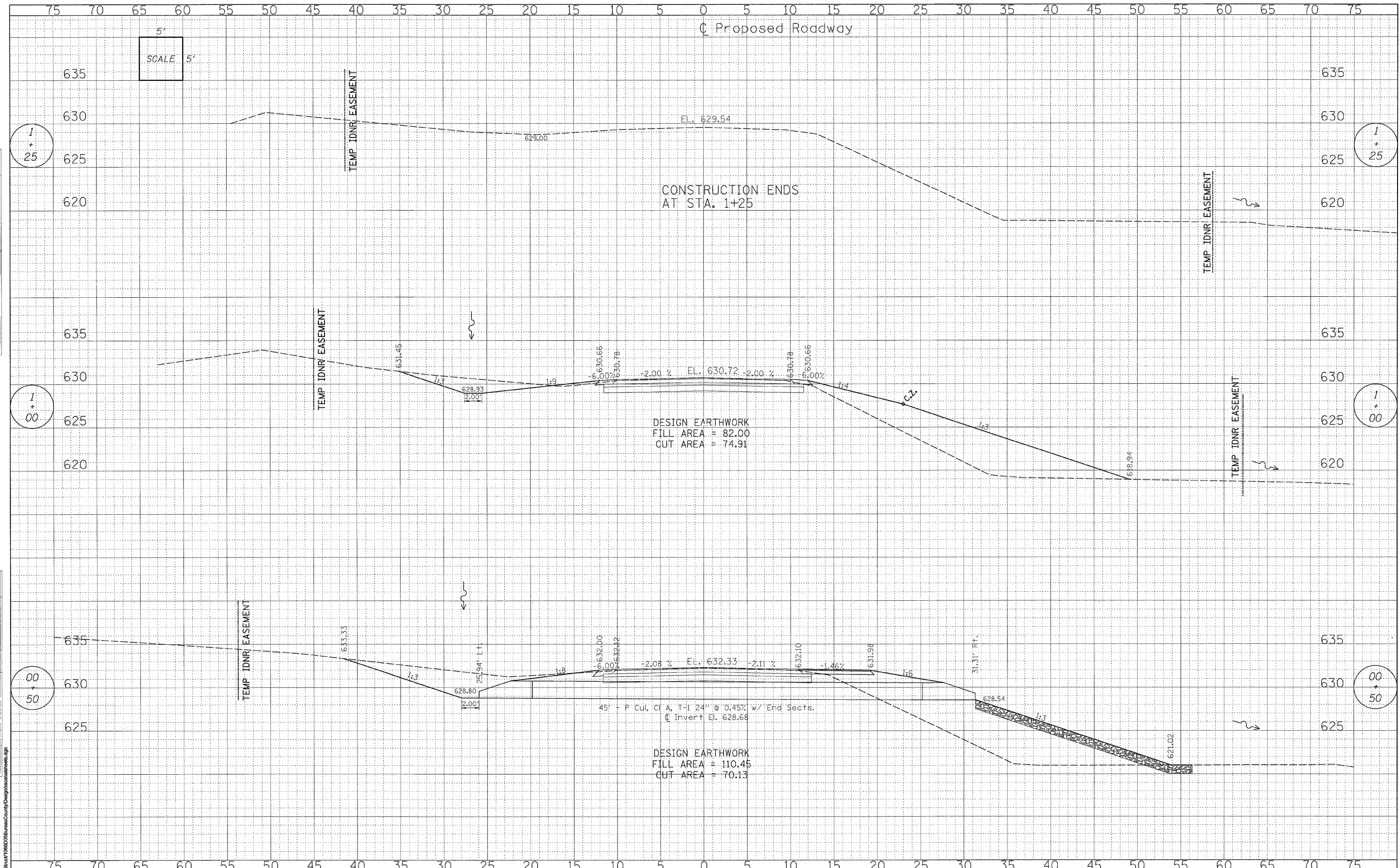
**CANAL STREET - PLAN & PROFILE**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	40
STA. 0+00 TO STA. 5+75		CONTRACT NO.	81380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				



DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



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**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone: 815.284.3381 Fax: 815.284.3385  
 Design Firm # 134-0018  
 www.willett-hofmann.com

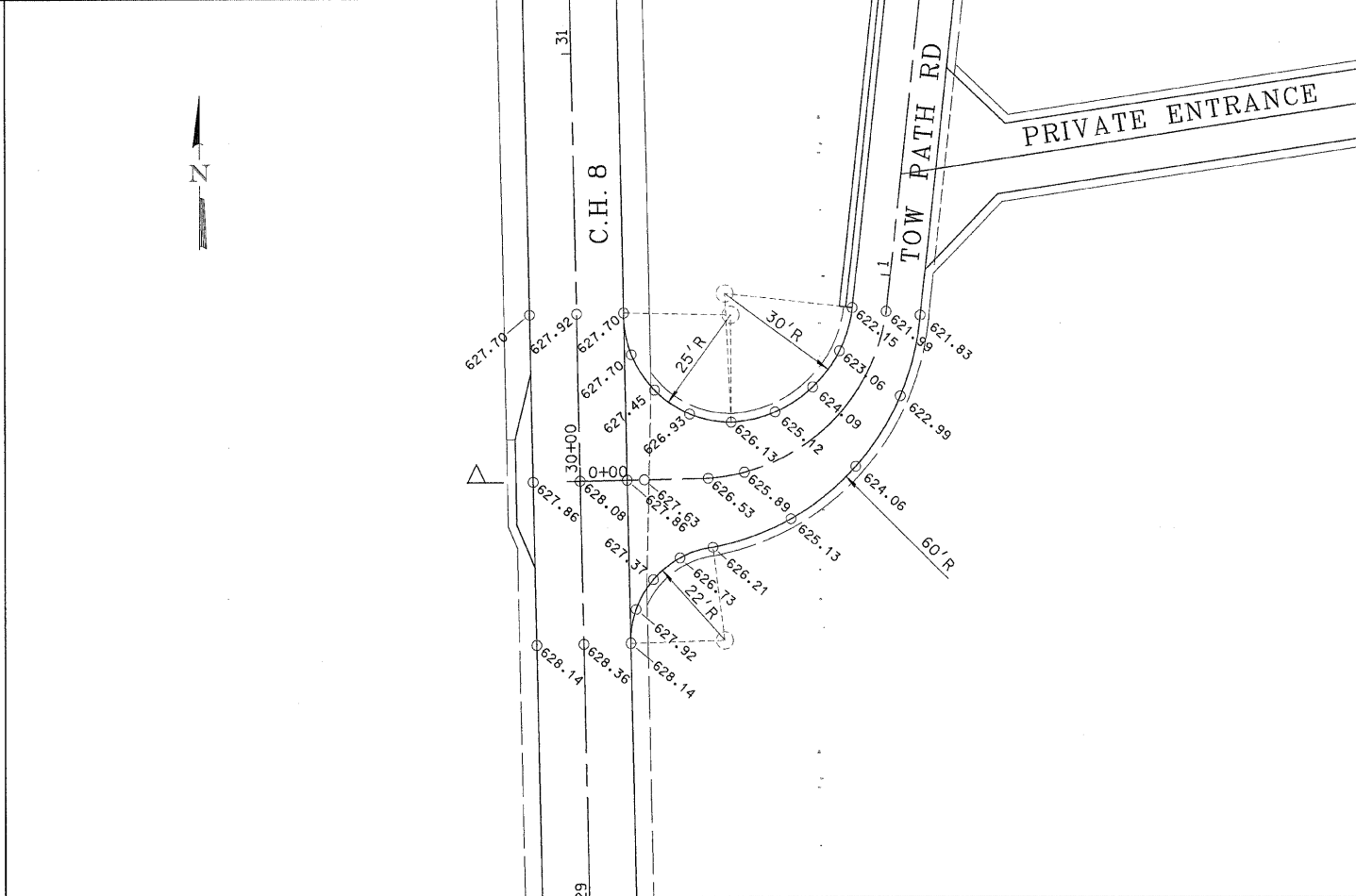
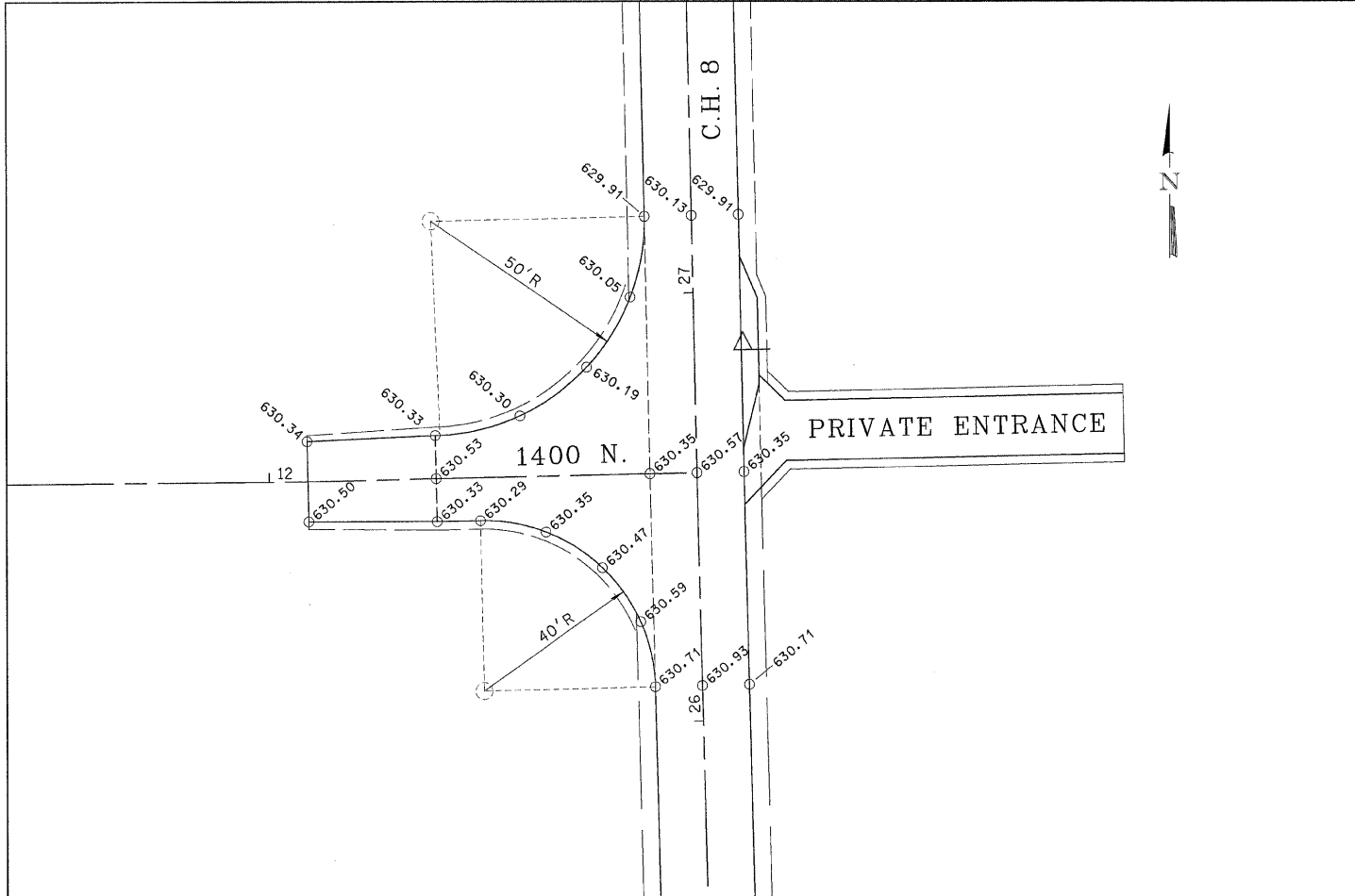
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

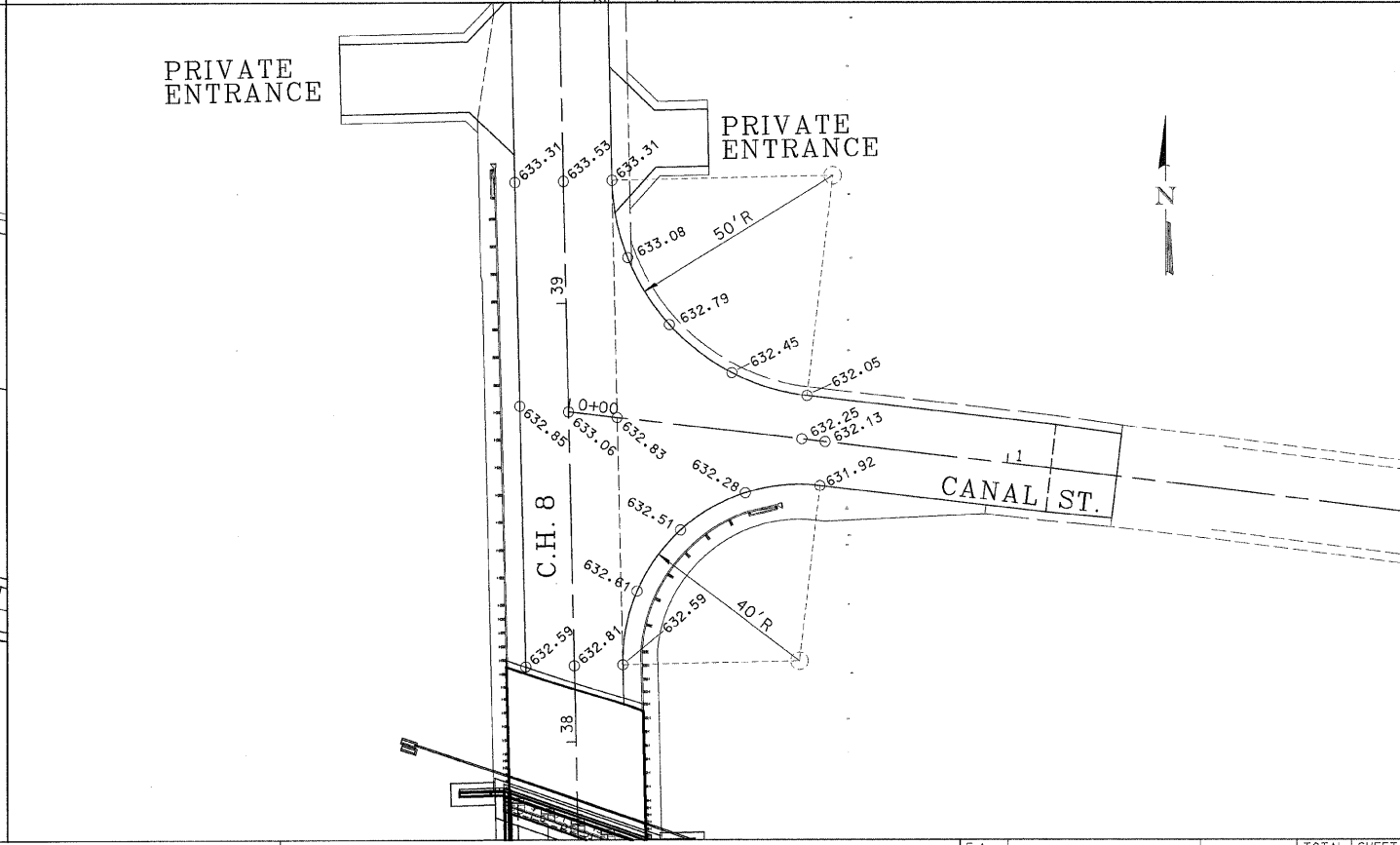
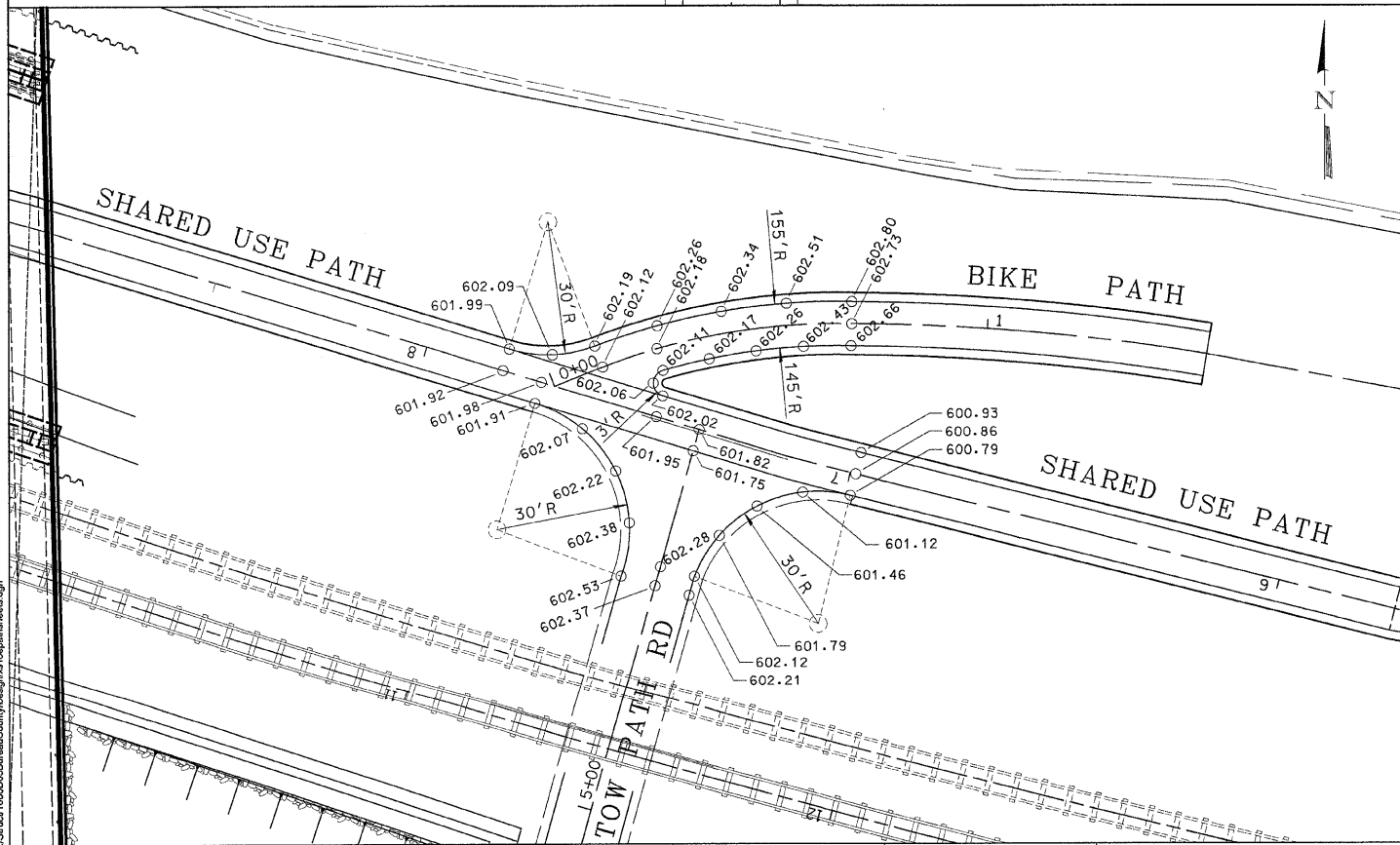
**CANAL STREET - CROSS SECTIONS**

F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 41
STA. 00+50.00 TO STA. 1+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0186(18)				

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PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**INTERSECTION DETAILS**

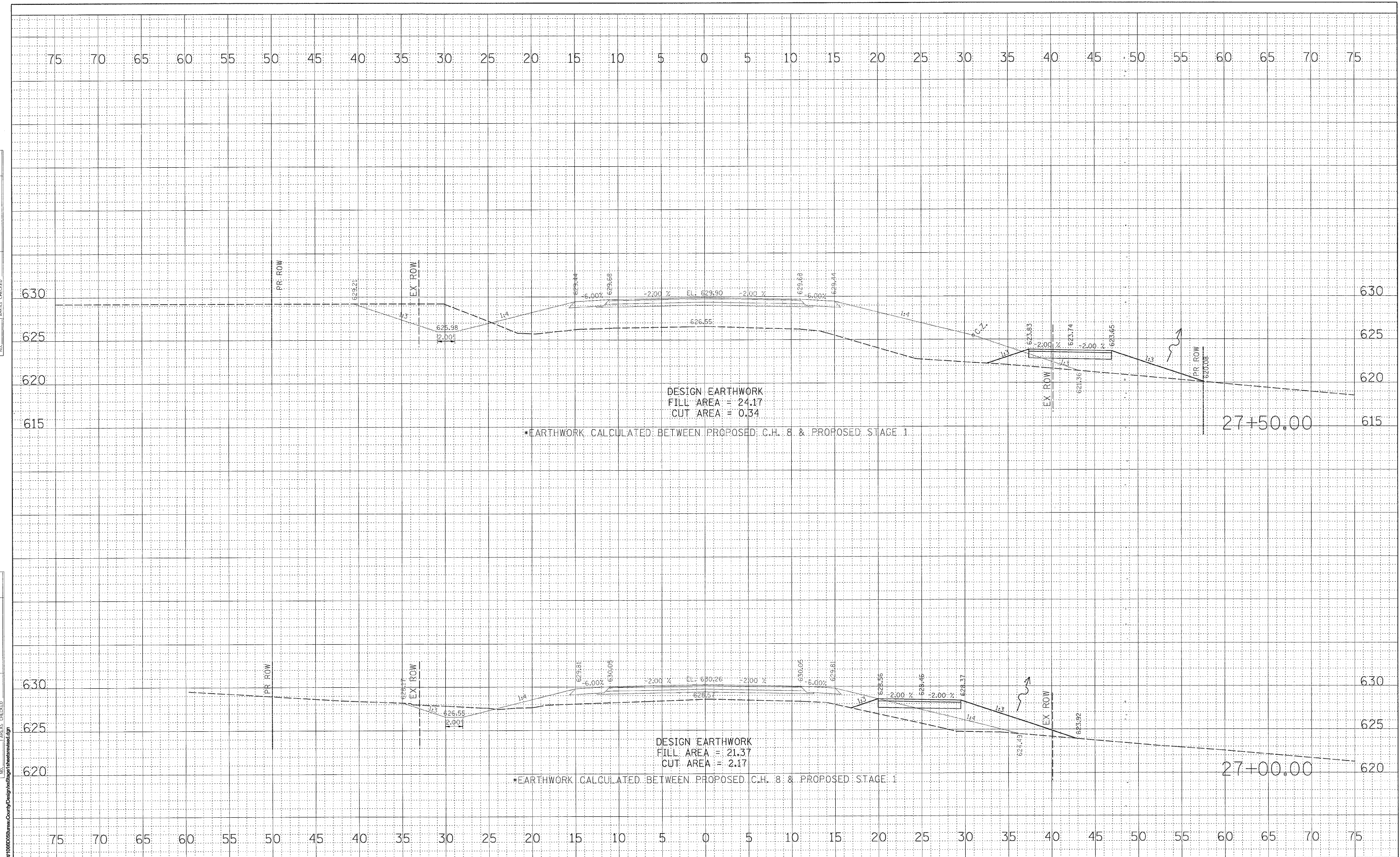
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188	05-00195-00-BR	BUREAU	127	42
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT BRS-0188(118)				





FINAL SURVEY NO.	SURVEY PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEY PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		



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 Design Firm # 184-0018  
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PLOT DATE =	CHECKED -	REVISED -
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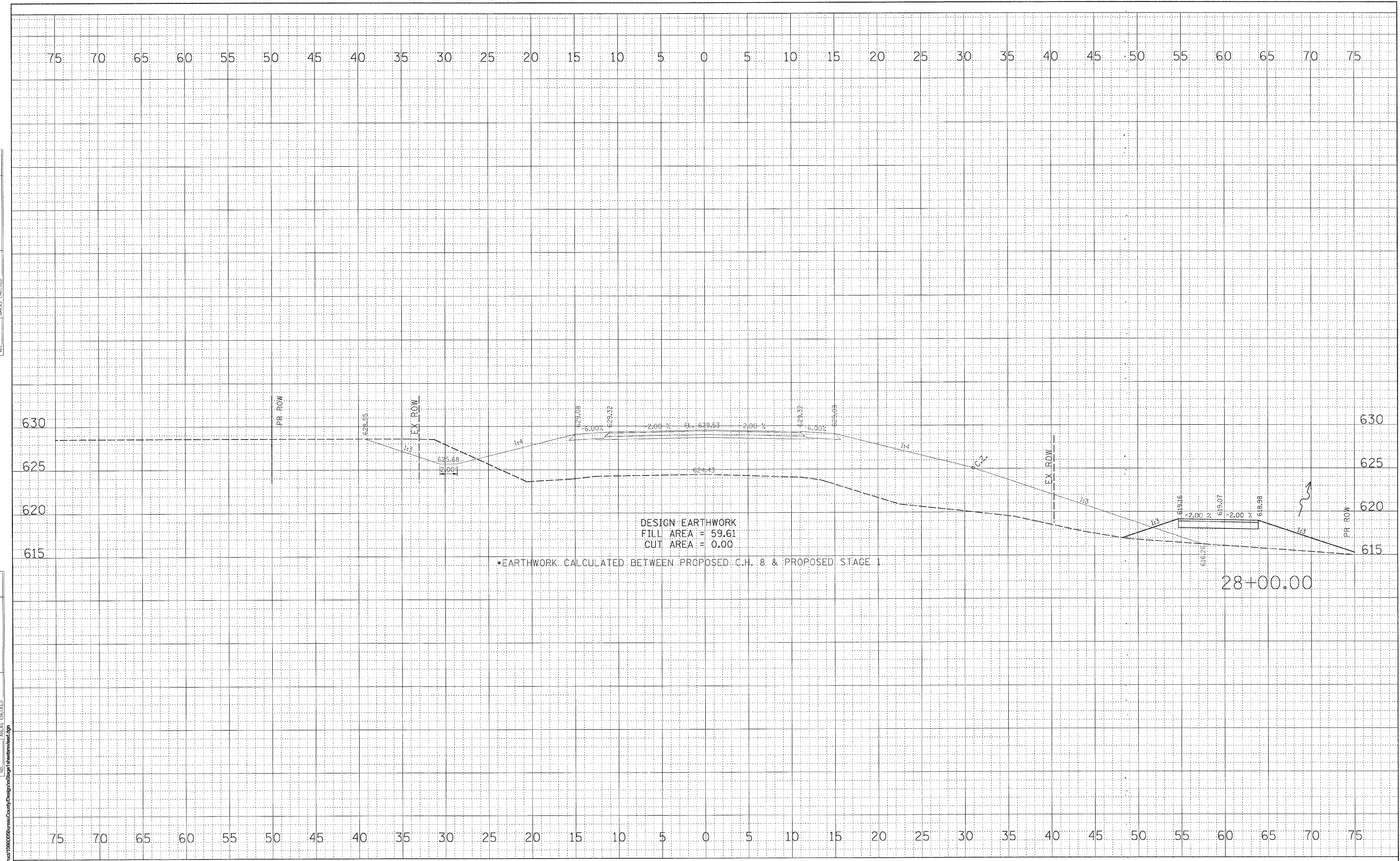
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - STAGE 1 CROSS SECTIONS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	44
STA. 27+00.00 TO STA. 27+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT BRS-0188(118)				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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	CHECKED		



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 Phone 815.284.3381 Fax 815.284.3388  
 Design Firm # 184-0018  
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USER NAME =	DESIGNED -	REVISED -
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PLOT DATE =	CHECKED -	REVISED -
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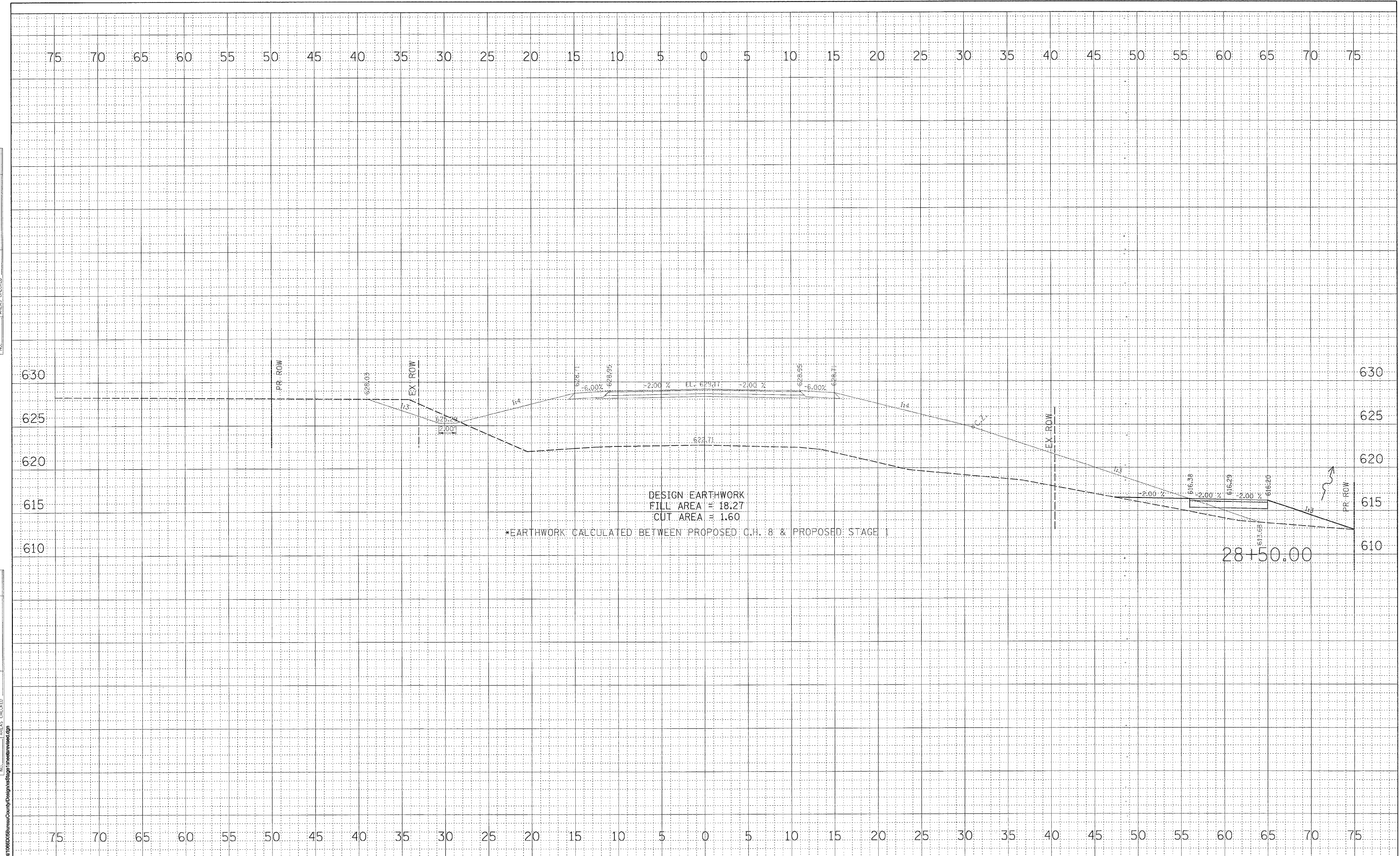
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - STAGE 1 CROSS SECTIONS**

F.A. -	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	45
STA. 28+00.00 TO STA. 28+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. -		ILLINOIS FED. AID PROJECT 6RS-0188(18)		

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
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ORIGINAL SURVEY NO.	DESIGNED	DATE
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	TEMPLATE	
	AREAS	
	CHECKED	



**WILLETT, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.294.3381 Fax 815.294.3386  
 Design Firm # 184-0018  
 www.willett-hofmann.com

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PLLOT DATE =	CHECKED -	REVISED -
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

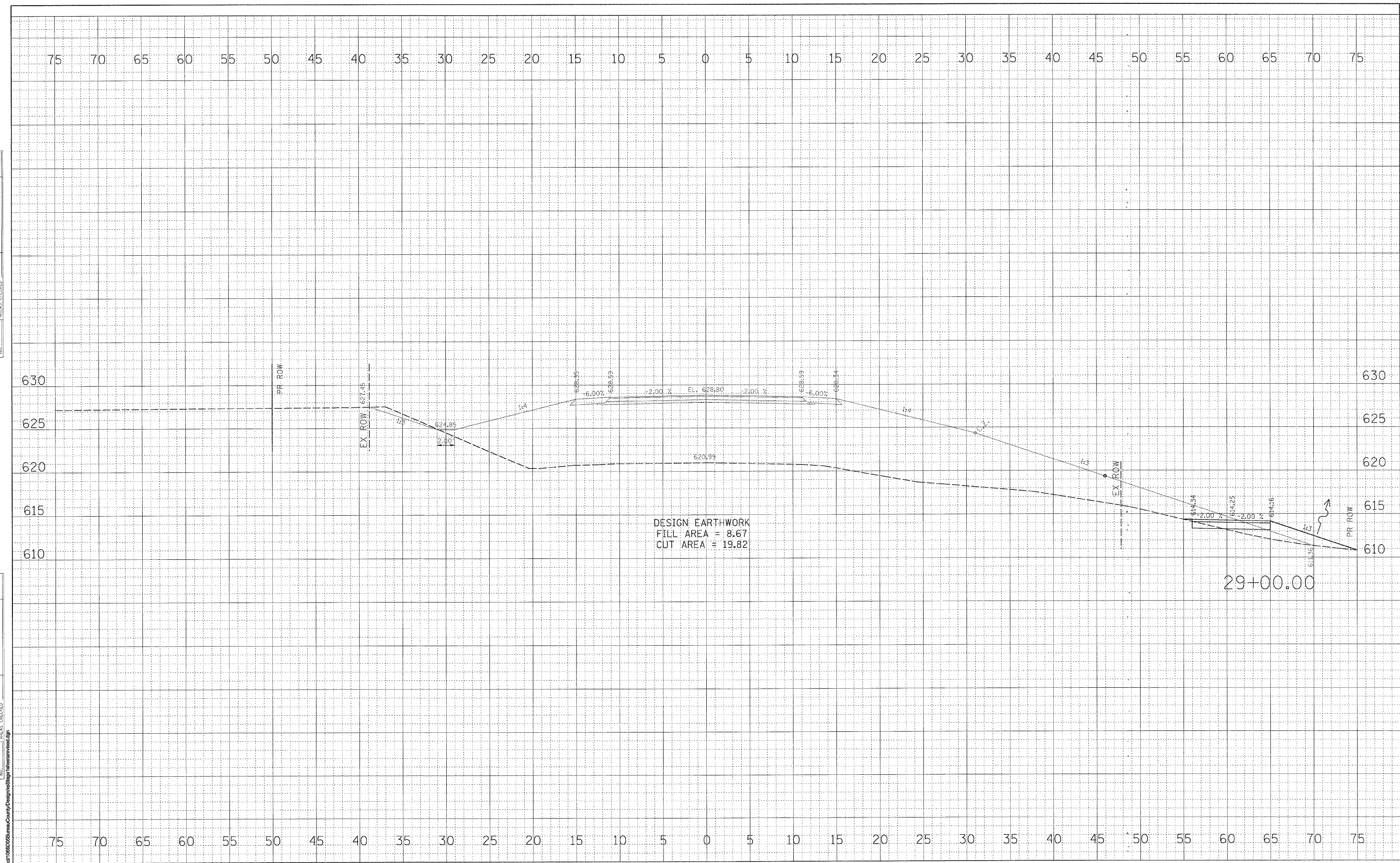
**C.H. 8 - STAGE 1 CROSS SECTIONS**

F.A. REC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	46
STA. 28+50.00 TO STA. 28+50.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188(118)				



FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS	TEMPLATE		
AREAS	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS	TEMPLATE		
AREAS	CHECKED		



DESIGN EARTHWORK  
 FILL AREA = 8.67  
 CUT AREA = 19.82

**WILLET HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 809 East Second Street, Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00918  
 www.willett-hofmann.com

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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
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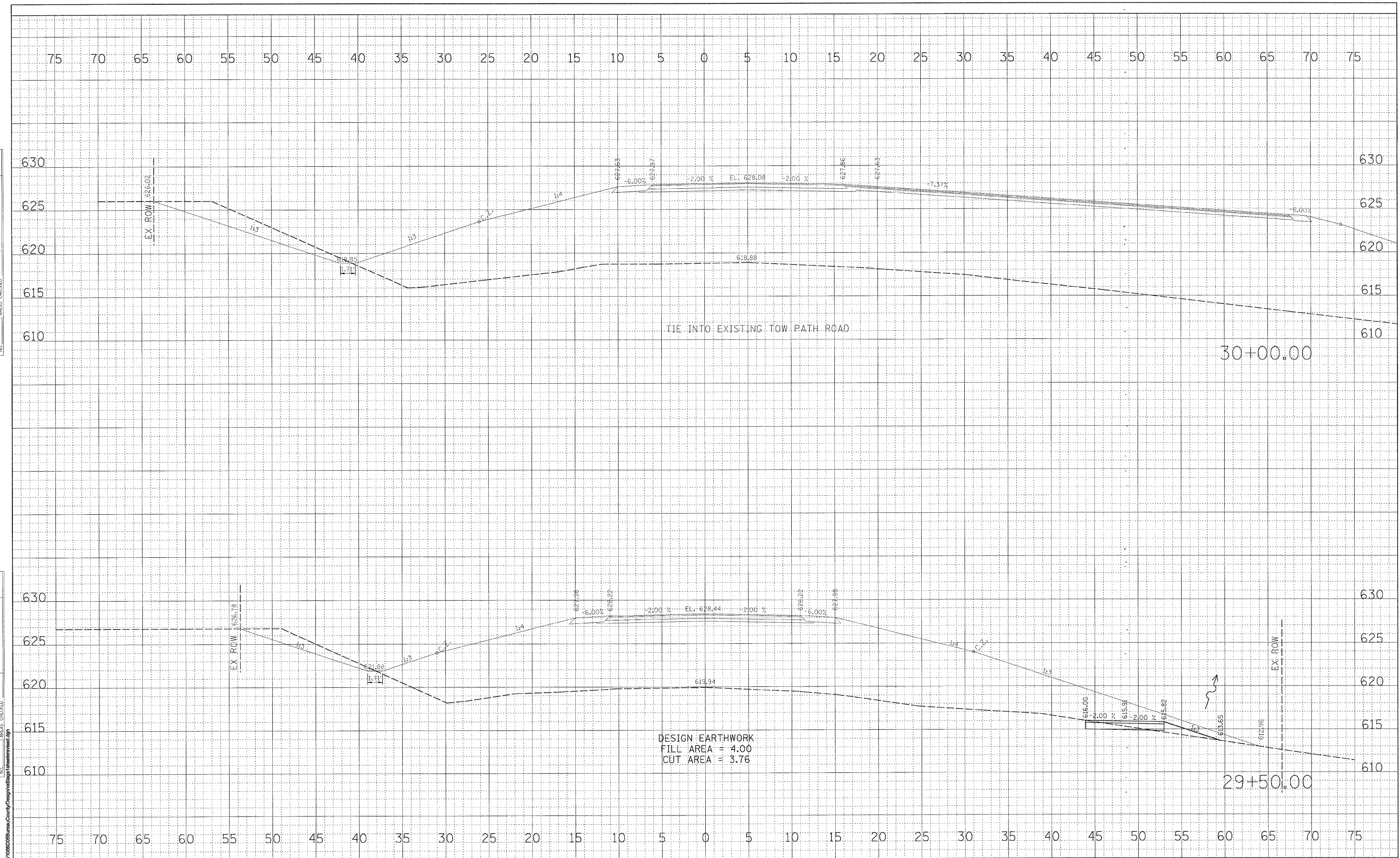
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - STAGE 1 CROSS SECTIONS**

F.A. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 47
STA. 29+00.00 TO STA. 29+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BRS-0186(118)				

FINAL SURVEY NO.	DATE
SURVEY PLOTTED	BY
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	

ORIGINAL SURVEY NO.	DATE
SURVEY PLOTTED	BY
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	



DESIGN EARTHWORK  
 FILL AREA = 4.00  
 CUT AREA = 3.76

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**CONSULTING ENGINEERS**  
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 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm 815.284.0018  
 www.willett-hofmann.com

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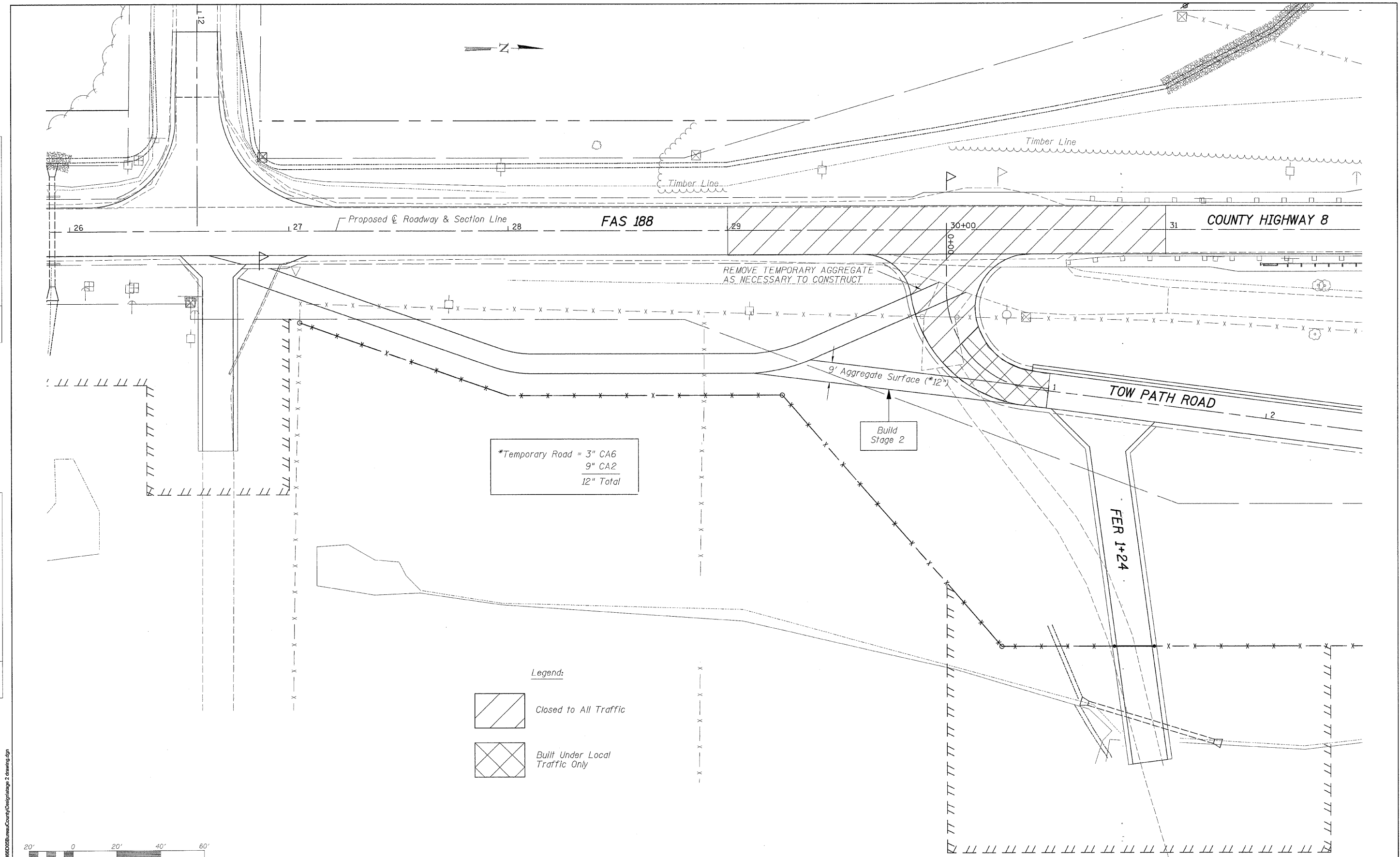
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**C.H. 8 - STAGE 1 CROSS SECTIONS**

F.A. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 48
STA. 29+50.00 TO STA. 30+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

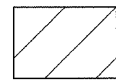

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NOTE BOOK	
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BY	
APPROVED	
PLANNED	
NOTE BOOK	
NO.	
STRUCTURE NOTATIONS CHECKED	



\*Temporary Road = 3" CA6  
 9" CA2  
 12" Total

Legend:

-  Closed to All Traffic
-  Built Under Local Traffic Only



FILE NAME: F:\Struct\10650\BureauCounty\Design\stage 2.dwg

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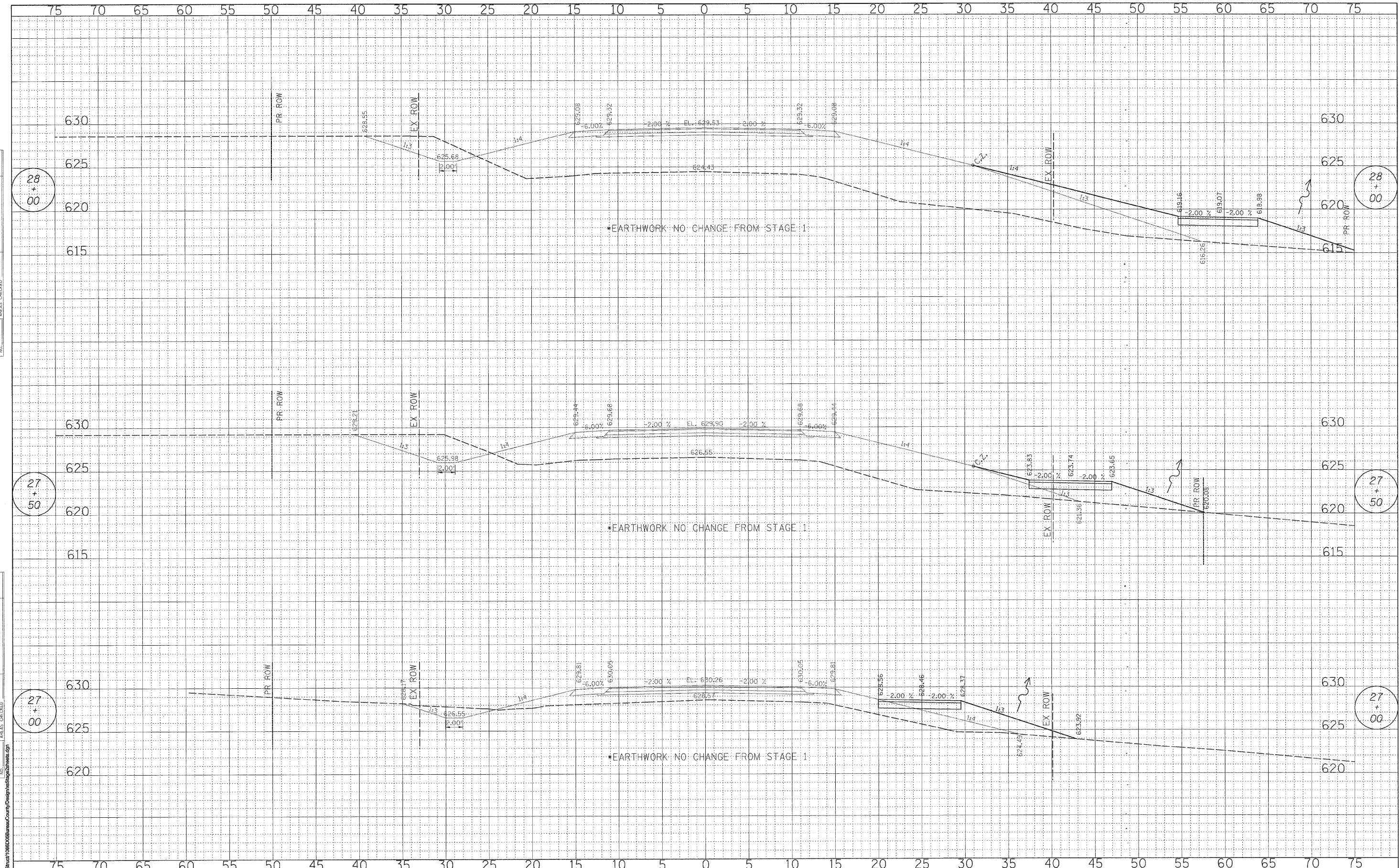
**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL

**C.H. 8 - STAGE 2 PLAN**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	49
STA. 27+60 TO STA. 33+60			CONTRACT NO. 81380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

FINAL SURVEY	DATE
SURVEY NO.	
PLOTTED	
TEMPLATE	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEY NO.	
PLOTTED	
TEMPLATE	
AREAS CHECKED	



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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

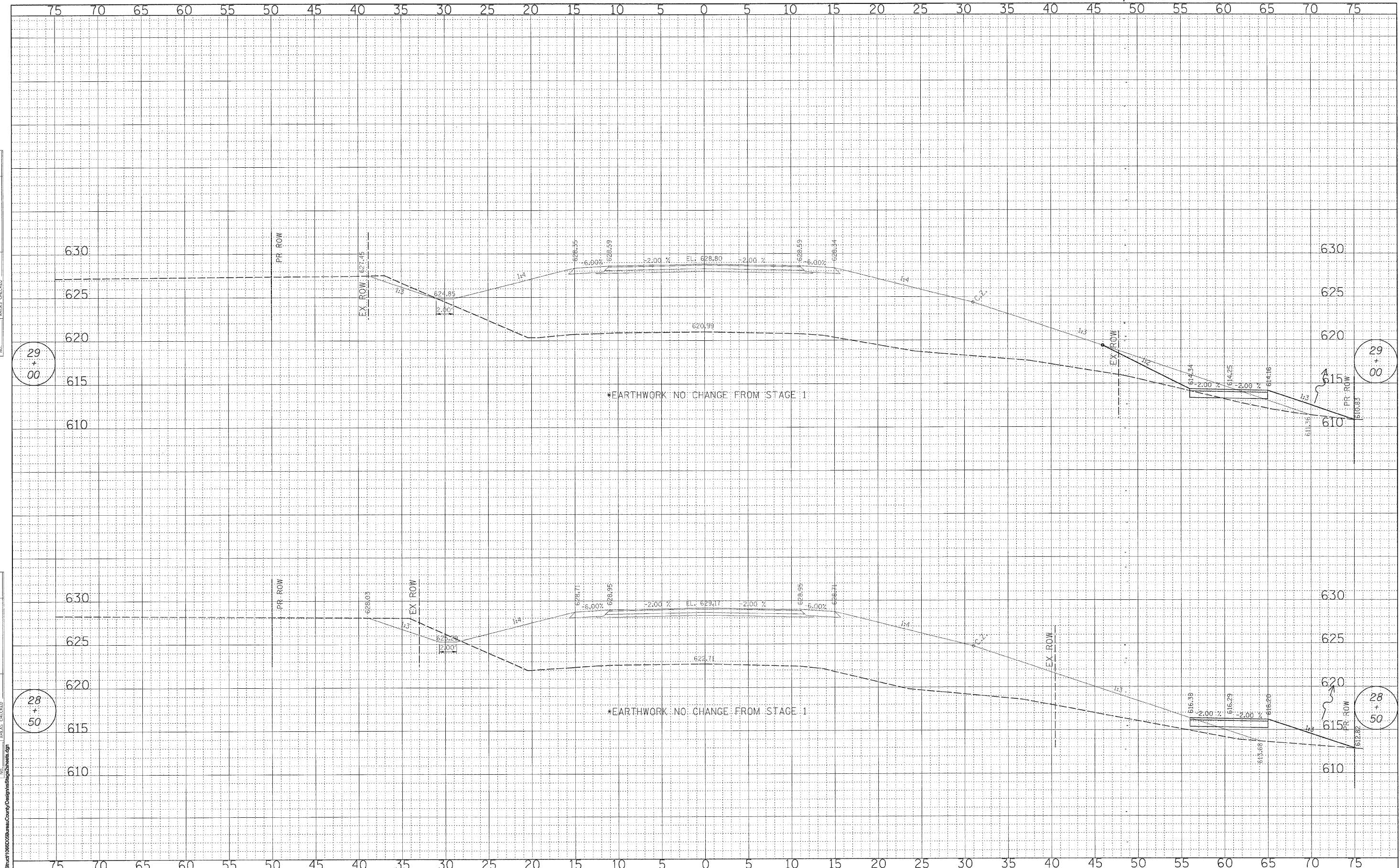
**C.H. 8 - STAGE 2 CROSS SECTIONS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	50
STA. 27+00.00 TO STA. 28+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		BRS-0188(118)		



FINAL SURVEY	DATE
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NOTE BOOK	
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ORIGINAL SURVEY	DATE
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NOTE BOOK	
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

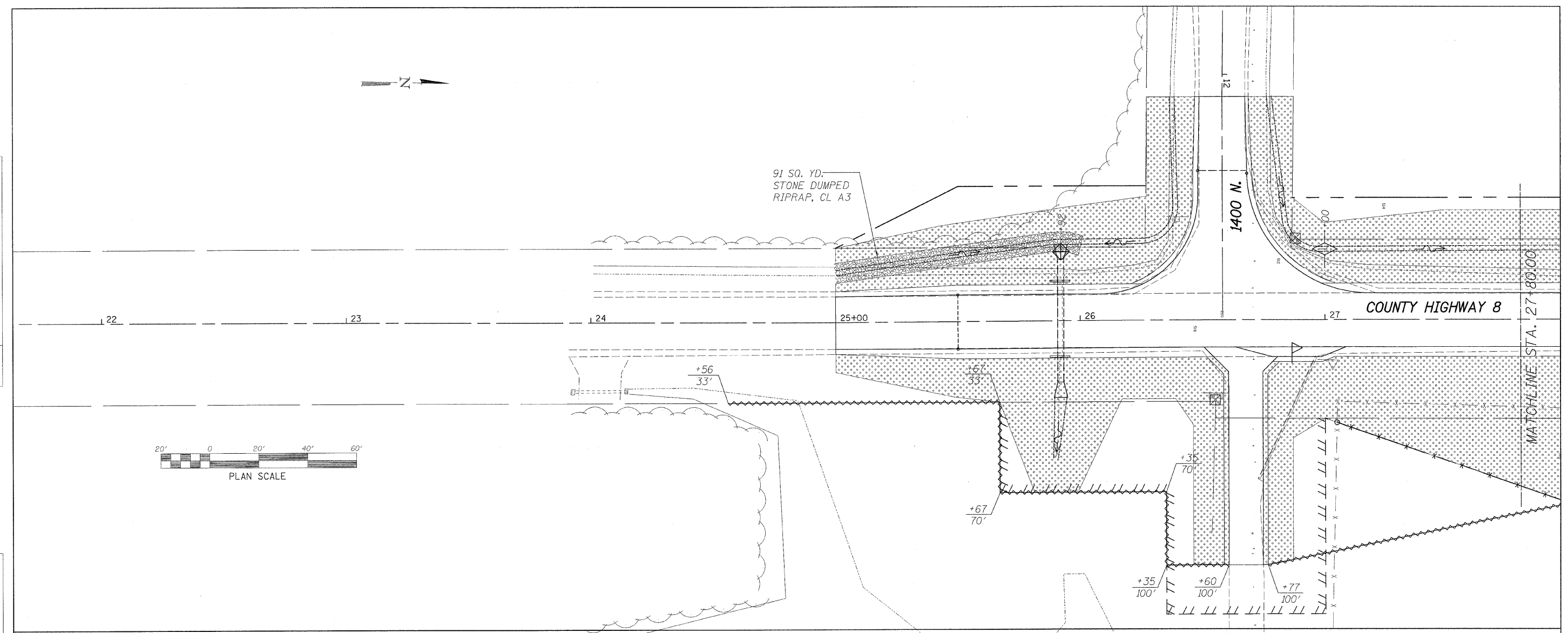
**C.H. 8 - STAGE 2 CROSS SECTIONS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	51
STA. 28+50.00 TO STA. 29+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT 695-0188(118)				



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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	TREE REMOVAL, ACRES
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

FILE NAME = s:\bureau\1008000\Bureau\County\Design\swppp\c8\g1.dgn

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - C.H. 8**

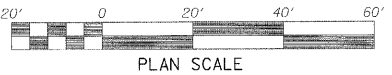
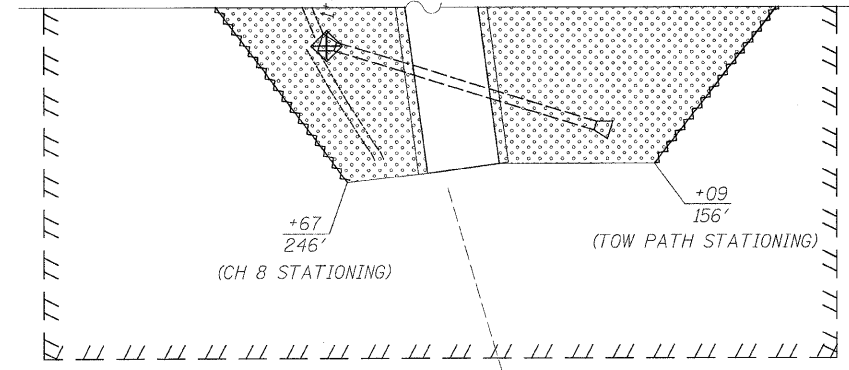
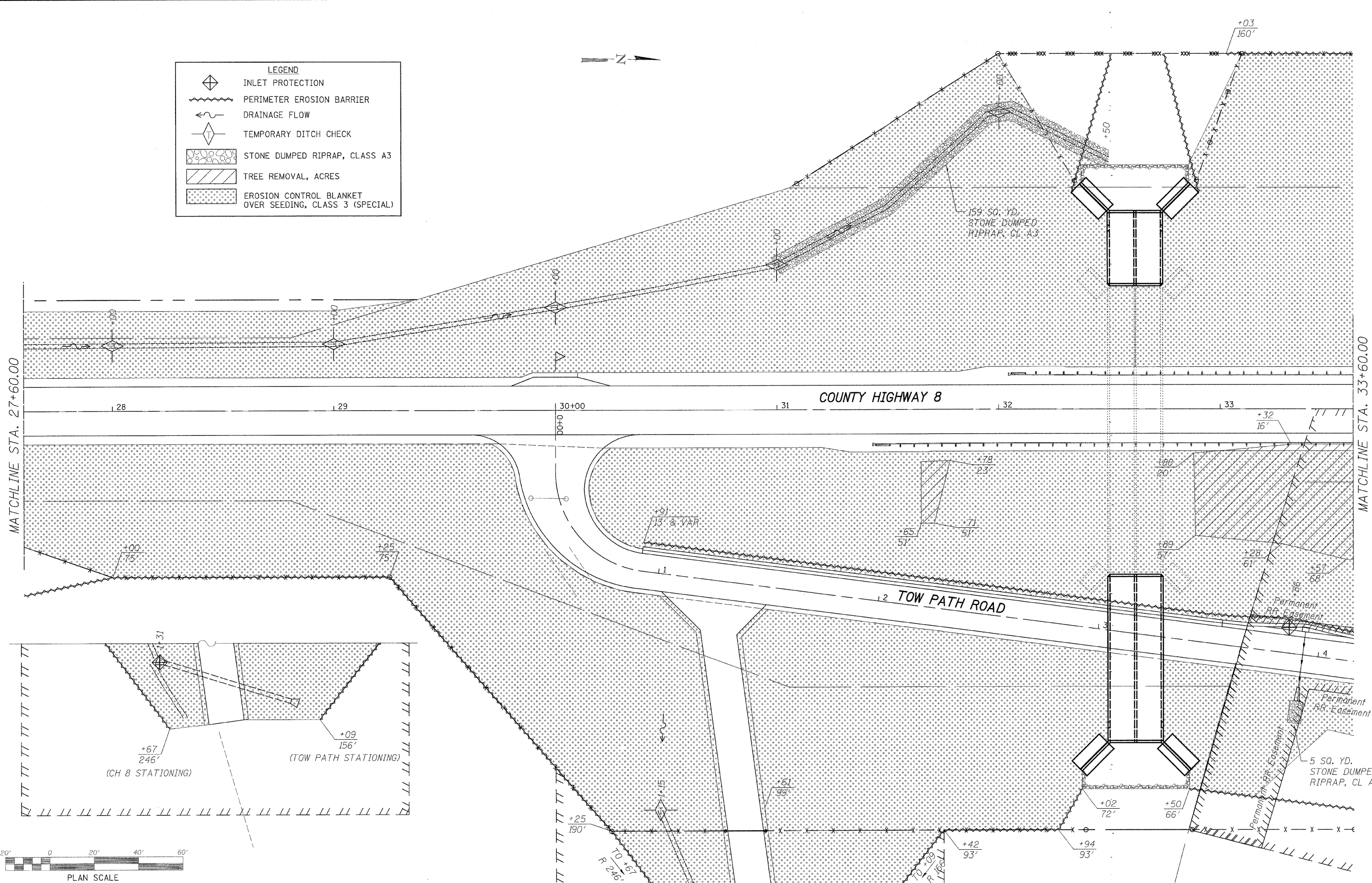
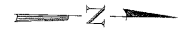
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188	05-00195-00-BR	BUREAU	127	53
STA. 21+80 TO STA. 27+80		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188(118)				



PLAN	SURVEYED	DATE
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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	TREE REMOVAL, ACRES
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)



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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - C.H. 8**

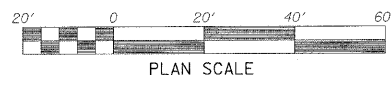
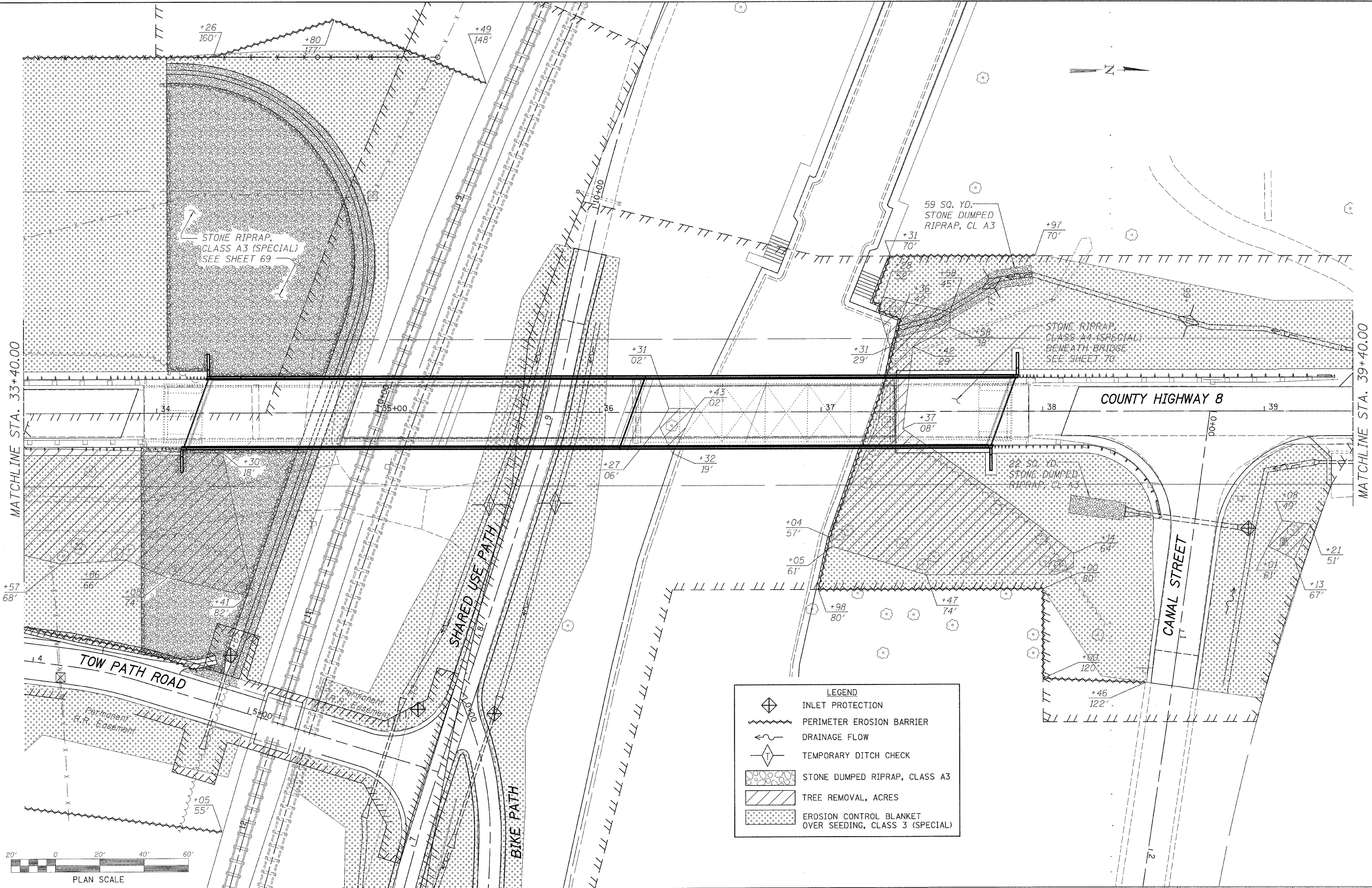
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188	05-00195-00-BR	BUREAU	127	54
STA. 27+60 TO STA. 33+60			CONTRACT NO. 81390	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(18)				

MATCHLINE STA. 33+60.00



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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	TREE REMOVAL, ACRES
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

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 Design Firm # 184-00918  
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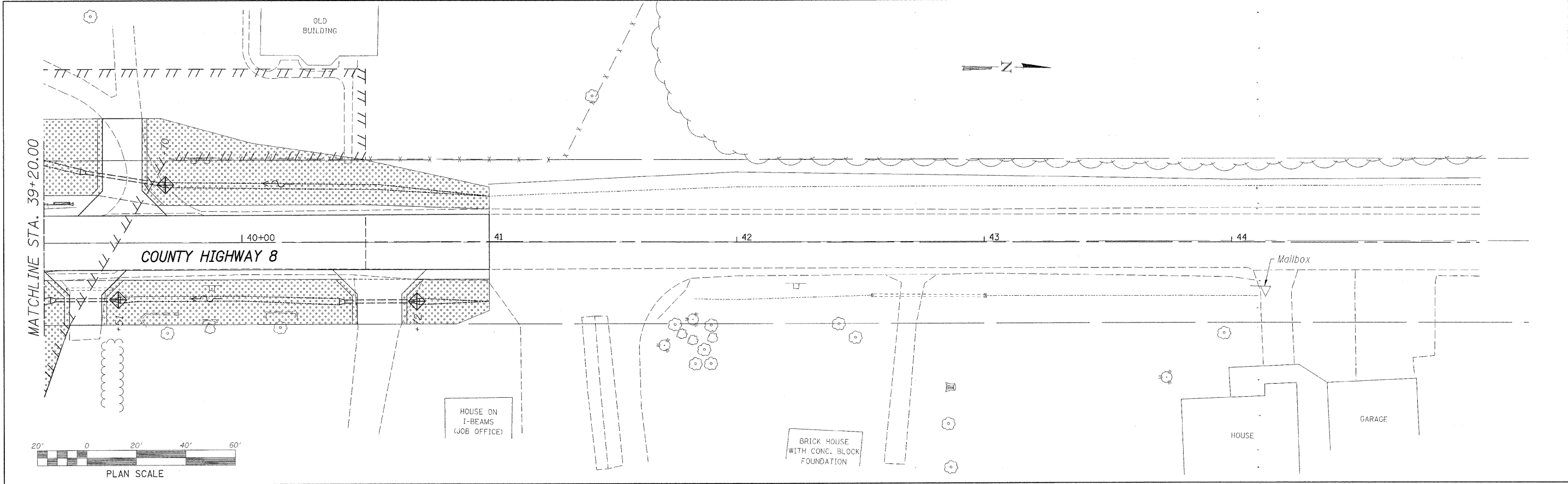
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - C.H. 8**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	55
STA. 33+40 TO STA. 39+40		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(18)				

PLAN	SURVEYED	DATE
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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	TREE REMOVAL, ACRES
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

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**WILLET, HOFMANN & ASSOCIATES, INC.**  
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

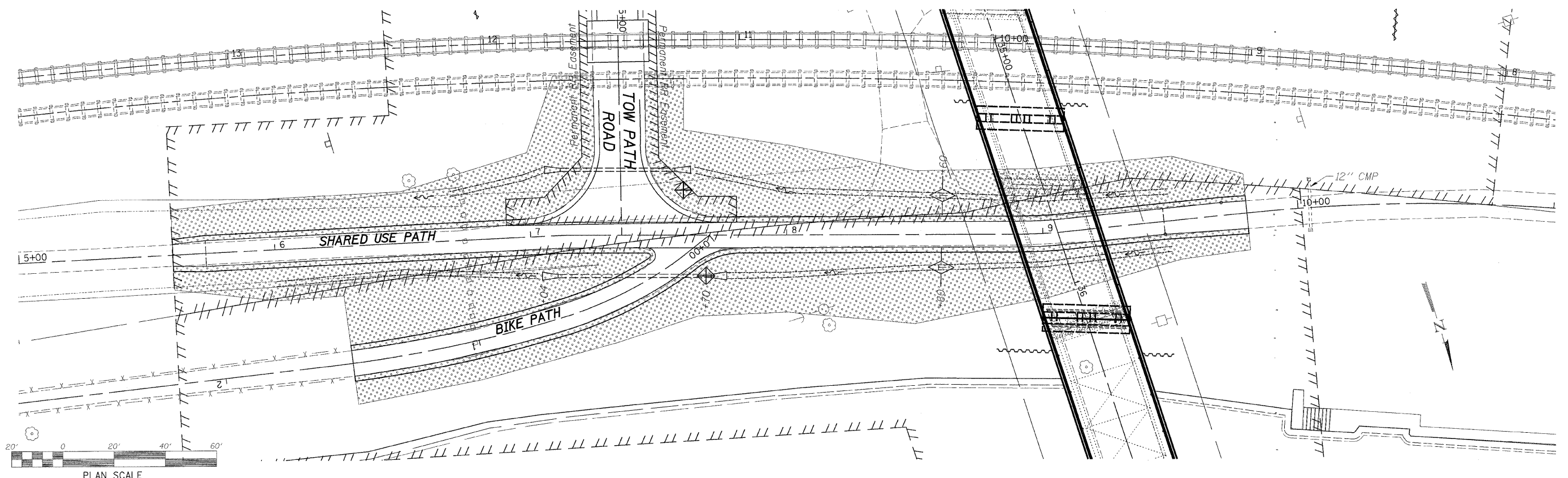
**SWPPP - C.H. 8**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	56
STA. 39+20 TO STA. 45+00		CONTRACT NO. 01380		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0188(118)				

PLAN	SURVEYED	DATE
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PROFILE	SURVEYED	DATE
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	RT. OF WAY CHECKED	
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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

**WILLETT, HOFMANN & ASSOCIATES, INC.**  
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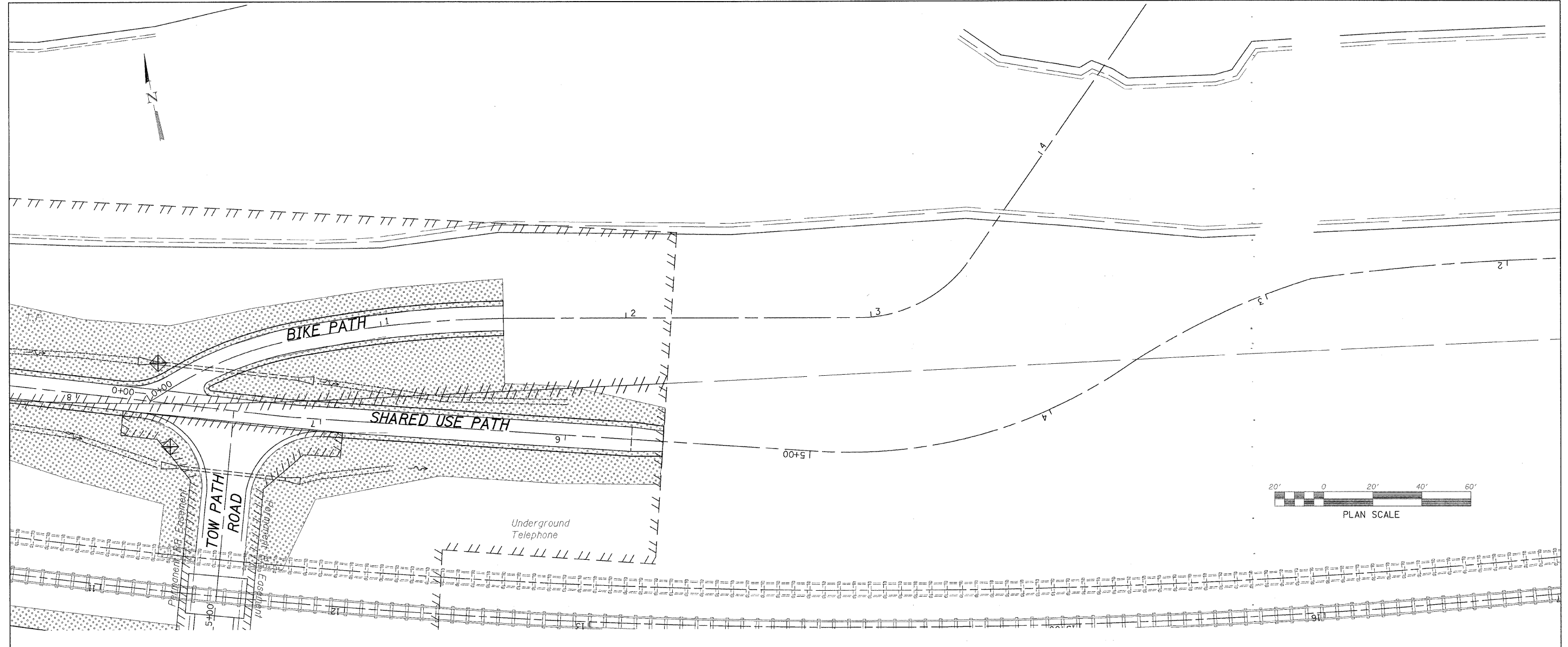
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - SHARED USE PATH**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	57
STA. 5+00 TO STA. 11+00			CONTRACT NO. 87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR3-0188(118)				

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 STRUCTURE NOTATIONS CH'D  
 NO.



LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

FILE NAME: s:\Sharon 1086058\Bureau\County\Design\swppp\SHARED\BPP1110.dgn

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PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - BIKE PATH**

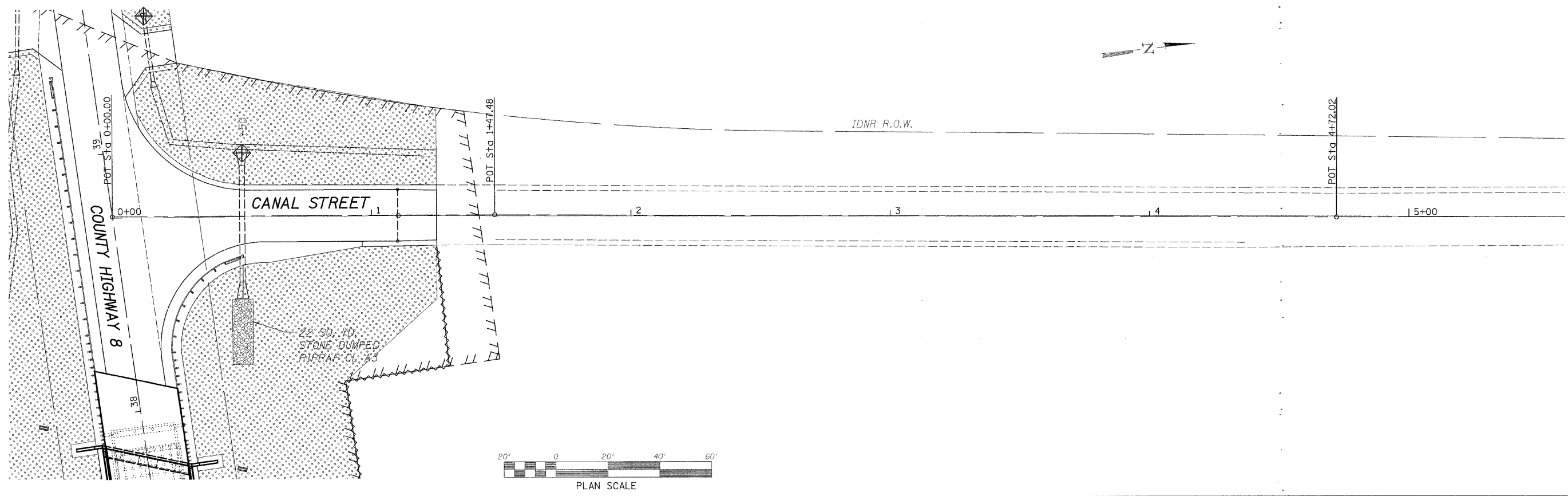
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	58
STA. 0+00 TO STA. 5+75			CONTRACT NO. 01380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0186(118)				



PLAN	SURVEYED	BY	DATE
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LEGEND	
	INLET PROTECTION
	PERIMETER EROSION BARRIER
	DRAINAGE FLOW
	TEMPORARY DITCH CHECK
	STONE DUMPED RIPRAP, CLASS A3
	EROSION CONTROL BLANKET OVER SEEDING, CLASS 3 (SPECIAL)

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PLOT DATE =	CHECKED -	REVISED -
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP - CANAL STREET**

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	59
STA. 0+00 TO STA. 5+75		CONTRACT NO. 07380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				

# STORM WATER POLLUTION PREVENTION PLAN EROSION CONTROL PLAN

THE FOLLOWING PLAN WAS ESTABLISHED AND INCLUDED IN THESE PLANS TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE SILTATION WITHIN THE CONSTRUCTION ZONE AND TO ELIMINATE SEDIMENTS FROM ENTERING AND LEAVING THE CONSTRUCTION ZONE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN ITEMS, AS SHOWN IN THIS PLAN AND REFERENCED BY THE LEGEND, SHALL BE PLACED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION RESULTING FROM THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL PLACE PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A REASONABLE AMOUNT OF TIME; THEREFORE, REDUCING THE AMOUNT OF AREA BEING OPEN TO THE POSSIBILITY OF EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE RESIDENT ENGINEER WILL DETERMINE IF TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED, THE PROPER METHOD OF INSTALLATION, AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS SHALL BE ADDED WHICH ARE NOT INCLUDED IN THE PLANS. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

#### SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY: TOTAL RECONSTRUCTION OF COUNTY HIGHWAY 8 FROM APPROXIMATELY 160' SOUTH OF 1400 N. TO 225' NORTH OF CANAL ROAD.

THIS PROJECT CONSISTS OF PAVEMENT REMOVAL, EARTH EXCAVATION, CONCRETE DRIVEWAYS, BRIDGE SECTIONS, CULVERTS, NEW STORM SEWER AND INLETS, VARIOUS PAVEMENT ITEMS, AND OTHER MISCELLANEOUS ITEMS OF CONSTRUCTION

#### DESCRIPTION OF INTENDED SEQUENCE OF ACTIVITIES:

THE SEQUENCE OF EVENTS ARE AS FOLLOW: PAVEMENT REMOVAL, EARTH EXCAVATION, STORM SEWER INSTALLATION, INSTALLATION OF INLET & PIPE PROTECTION, BRIDGE & CULVERT CONSTRUCTION, AGGREGATE BASE, BITUMINOUS SURFACE AND RELATED APPURTENANCES, PLACEMENT OF PERMANENT EROSION CONTROL INCLUDING SEEDING

TOTAL CONSTRUCTION SITE (CONSTRUCTION LIMIT TO CONSTRUCTION LIMIT) 8.95 ACRES  
DISTURBED SOIL BY EXCAVATION (SEED AREA) 3.54 ACRES

#### SUPPORTING REPORTS AND PLANS

THE FOLLOWING ASSISTED IN DEVELOPING THE EROSION CONTROL PLAN AS REFERENCED DOCUMENTS:

USGS DRAINAGE MAPS, PROJECT PLAN DOCUMENTS

DRAINAGE TRIBUTARIES RECEIVING WATER FROM CONSTRUCTION SITE:  
HENNEPIN CANAL

EROSION CONTROLS AND SEDIMENT CONTROL PROCEDURES  
STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:  
SILT FENCE INSTALLATION

#### STABILIZATION PRACTICES DURING CONSTRUCTION:

- (a) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
- (b) EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
- (c) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:
  - I. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
  - II. TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
- (d) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.
- (e) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
- (f) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING THE WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE CONSTRUCTION FIELD ENGINEER ON A BI-WEEKLY BASIS TO DETERMINE THAT EROSION CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.
- (g) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EARTH EXCAVATION (SPECIAL).
- (h) THE TEMPORARY EROSION CONTROL SYSTEM SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

#### MAINTENANCE AFTER FINAL GRADING

TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED WITH THE PROPER STAND. SEED SHALL BE WATERED ACCORDING TO THE SPECIFICATIONS AND ADDITIONAL WATERINGS SHALL BE USED AS DIRECTED BY THE ENGINEER.

PLAN	DATE
BY	
REVISIONS	
NO.	
DATE	
BY	
DESCRIPTION	

PROFILE	DATE
BY	
REVISIONS	
NO.	
DATE	
BY	
DESCRIPTION	

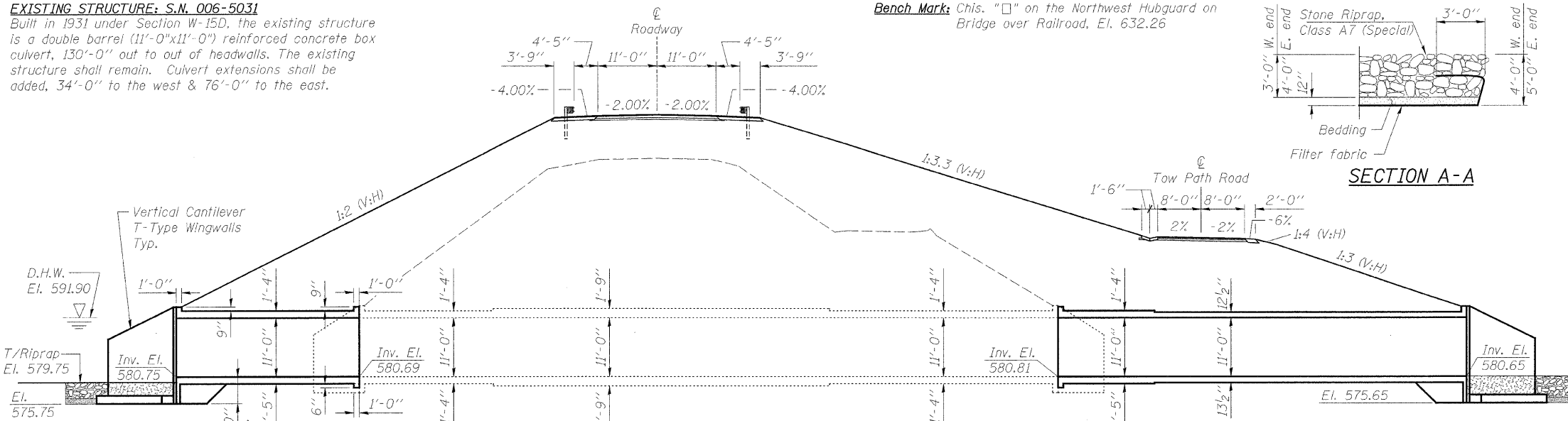
FILE NAME: s:\Shuch106\Bureau\Bureau\County\Design\swppp\cyl81.dgn

 <b>WILLET, HOFMANN &amp; ASSOCIATES, INC.</b> <b>CONSULTING ENGINEERS</b> 809 East Second Street, Dixon, IL 61021 Phone 815.284.3391 Fax 815.294.3385 Design Firm # 164-00918 www.willett-hofmann.com	USER NAME =	DESIGNED -	REVISED -	<b>BUREAU COUNTY</b> <b>BRIDGE REPLACEMENT</b> <b>FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</b>	<b>SWPPP NOTES - C.H. 8</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN -	REVISED -			188	05-00195-00-BR	BUREAU	127	60
	PLOT DATE =	CHECKED -	REVISED -			STA.	TO STA.	CONTRACT NO. 87380		
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(118)				

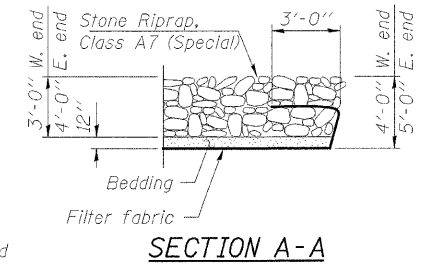
**EXISTING STRUCTURE: S.N. 006-5031**

Built in 1931 under Section W-15D, the existing structure is a double barrel (11'-0"x11'-0") reinforced concrete box culvert, 130'-0" out to out of headwalls. The existing structure shall remain. Culvert extensions shall be added, 34'-0" to the west & 76'-0" to the east.

Bench Mark: Chis. "□" on the Northwest Hubguard on Bridge over Railroad, El. 632.26



**ELEVATION VIEW**



**SECTION A-A**

**BILL OF MATERIAL - CULVERT**

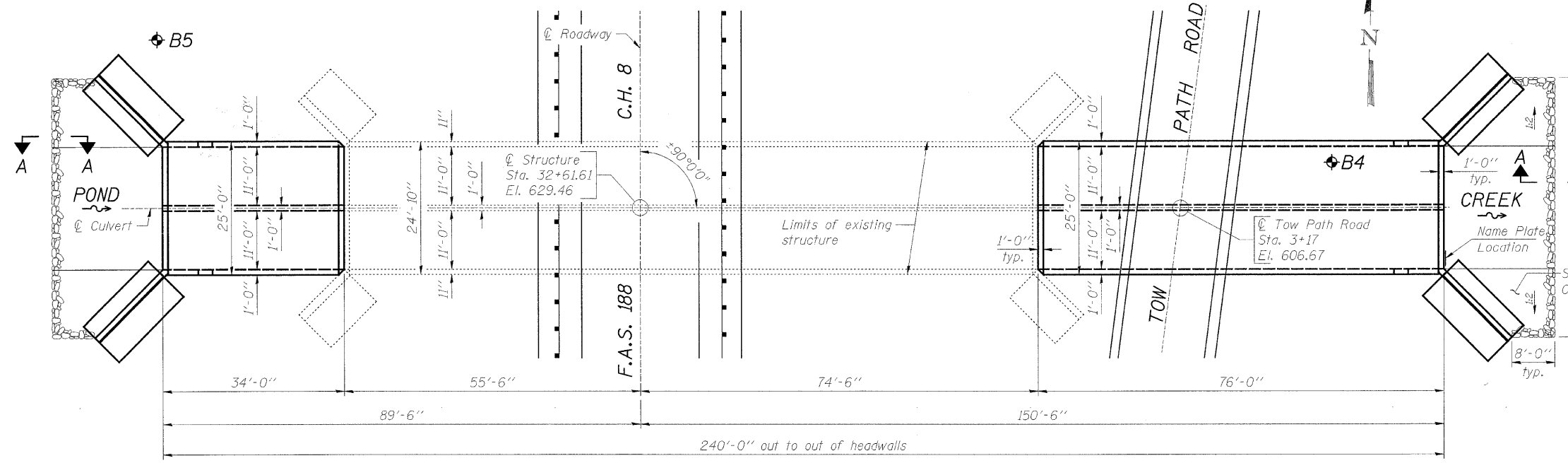
ITEM	UNIT	SUB	SUPER	TOTAL
Porous Granular Embankment	Ton	100		100
Reinforcement Bars	Pound	90,100		90,100
Name Plates	Each	1		1
Expansion Bolts 3/4 Inch	Each	94		94
Concrete Box Culverts	Cu. Yd.	494.4		494.4
Epoxy Crack Injection	Foot	87		87
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	123		123
Stone Riprap, Class A7 (Special)	Ton	344		344
Breaker-Run Crushed Stone	Ton	409		409

\*See Special Provisions

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
 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.  
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
 Certified proof load of expansion bolts shall be 3,500 pounds.  
 Epoxy Crack Injection and Structural Repair of Concrete shall be performed at various locations in the existing culvert barrels as marked out by Field Engineer.  
 The quantities for Epoxy Crack Injection and Structural Repair of Concrete were determined from the following approximations made on a field visit:

- Epoxy Crack Injection:
- South Barrel: South Wall = 20 ft. North Wall = 21 ft. Top Slab = 6 ft.
  - North Barrel: South Wall = 19 ft. North Wall = 14 ft. Top Slab = 7 ft.
- Structural Repair of Concrete:
- South Barrel: South Wall = 0 North Wall = 11 sq. ft. Top Slab = 51 sq. ft.
  - North Barrel: South Wall = 29 sq. ft. North Wall = 1 sq. ft. Top Slab = 31 sq. ft.



**PLAN VIEW**

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	575.75	575.65

**DESIGN STRESSES**

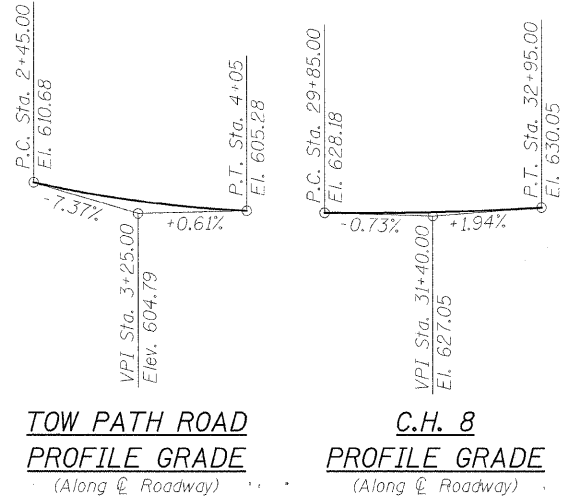
**FIELD UNITS**  
 f'c = 3,500 psi (Exist. & Prop.)  
 fy = 60,000 psi (Proposed Reinforcement)  
 fy = 33,000 psi (Existing Reinforcement)  
 Net Allowable Bearing Pressure = 6,000 psf

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition  
**LOADING HS20**  
 Allow 50#/sq. ft. for future wearing surface.

**WATERWAY INFORMATION**

Flood	Freq. Yr.	Q	Opening Sq. Ft.		*Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	5,300	242	242	593.33	10.24	10.24	603.57	603.57
Base	100	8,120	242	242	595.43	11.07	11.07	606.50	606.50
Overtopping									



**TOW PATH ROAD PROFILE GRADE**  
 (Along & Roadway)

**C.H. 8 PROFILE GRADE**  
 (Along & Roadway)

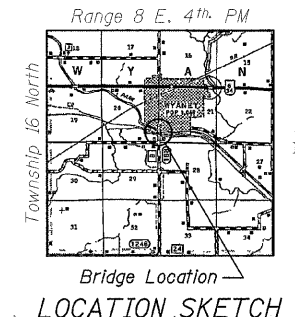
**INDEX OF SHEETS**

- 1A General Plan and Elevation
- 2A West Culvert Extension Details
- 3A East Culvert Extension Details
- 4A-5A Boring Logs
- 6A Existing Culvert Plans



Brian K. Converse  
 DATE: March 26, 2010  
 EXPIRES 11/30/10

"I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans. The Design Is An Economical One Complies With Requirements Of The Current 'AASHTO Standard Specifications For Highway Bridges.'"



**BRIDGE LOCATION LOCATION SKETCH**

POND CREEK  
 EXTENSION BUILT 2010 BY  
 BUREAU COUNTY  
 SECTION 05-00195-00-BR  
 F.A.S. RT. 188 STA. 32+61.61  
 STR. NO. 006-5031 LOADING HS20

**NAME PLATE LETTERING**  
 Refer To Std. 515001-03

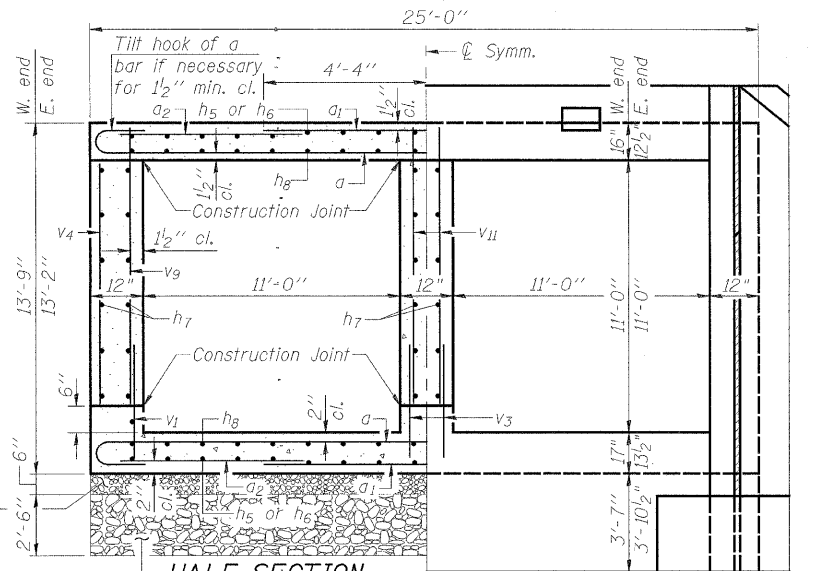
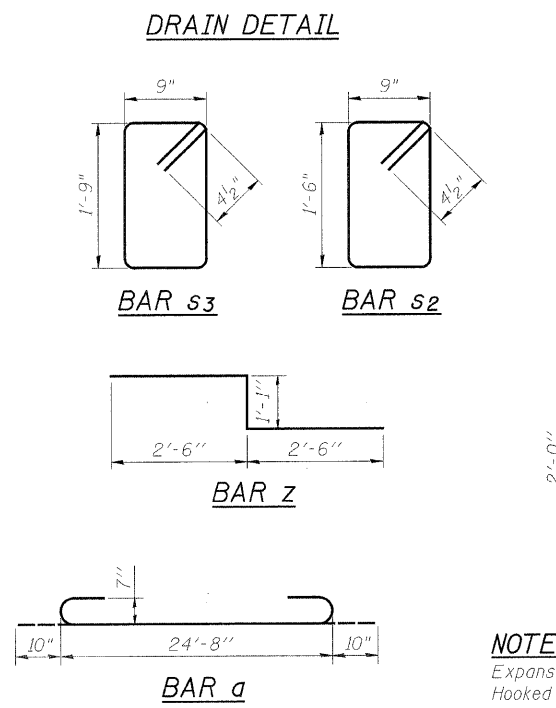
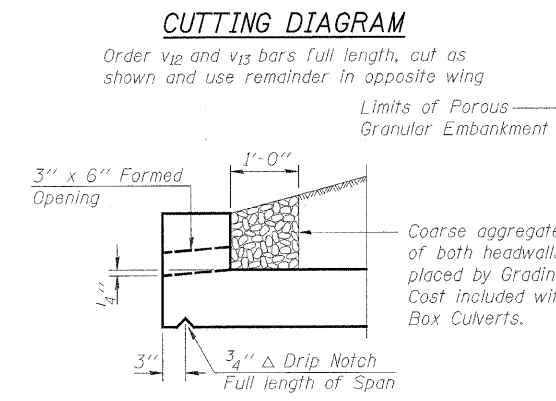
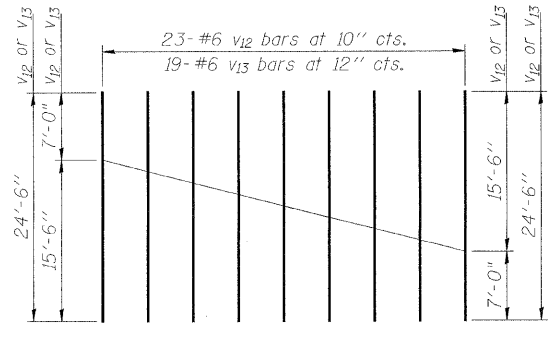
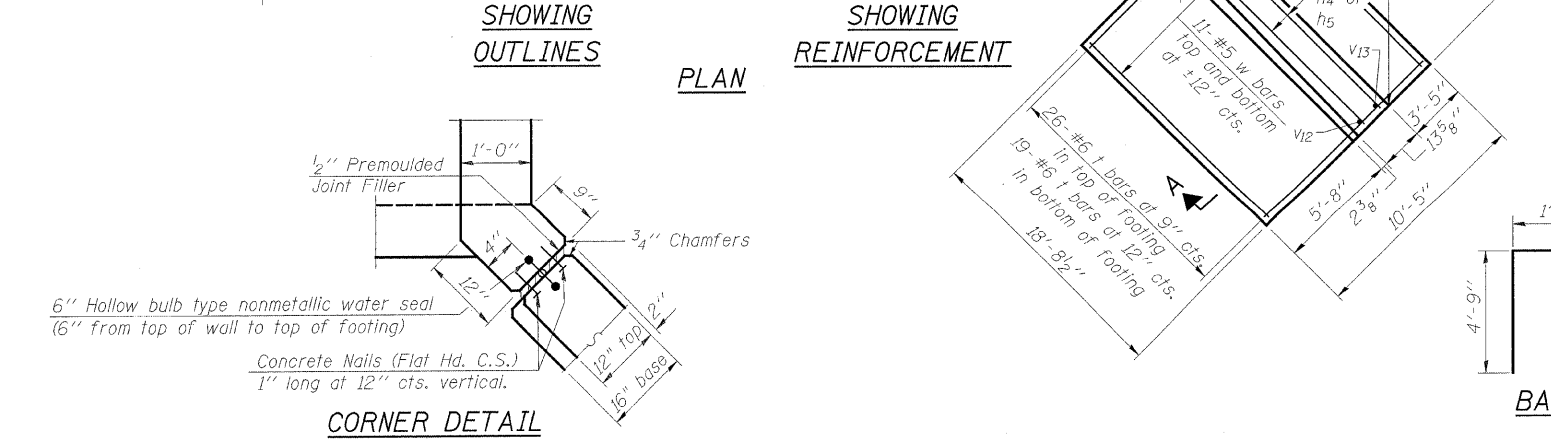
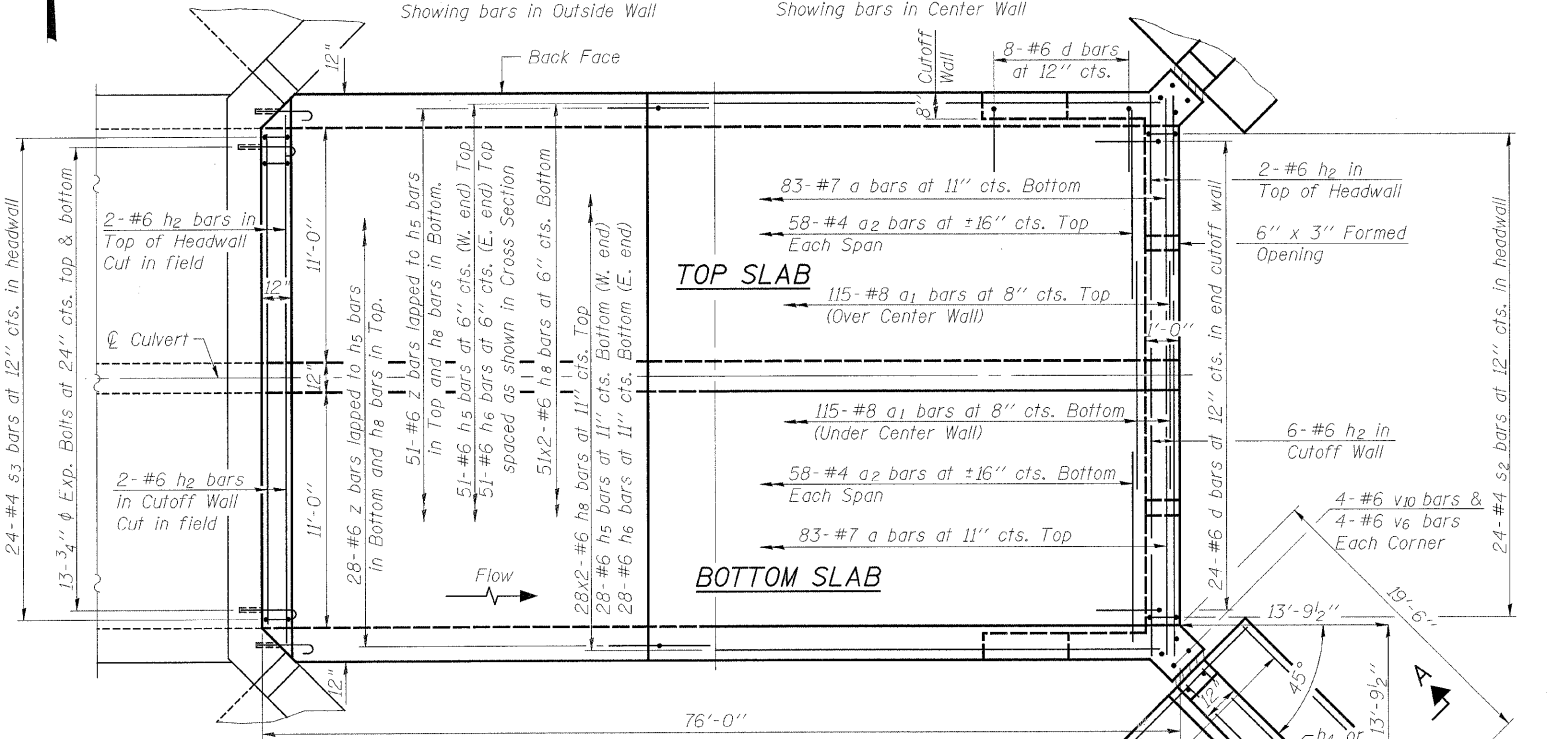
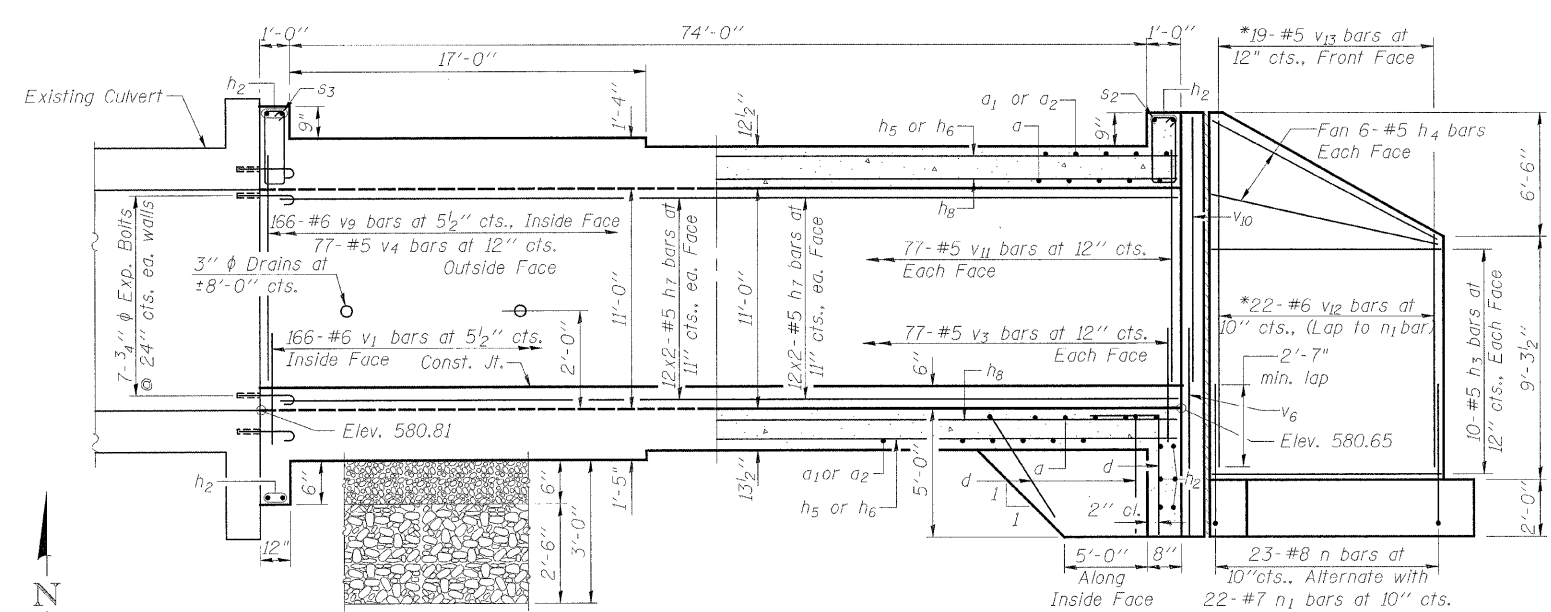
**GENERAL PLAN AND ELEVATION**  
**C.H. 8 OVER POND CREEK**  
**F.A.S. RTE. 188 - SEC. 05-00195-00-BR**  
**BUREAU COUNTY**  
**STATION 32+62**  
**S.N. 006-5031**

WHA JOB NUMBER 1066D05	 809 East Second Street Dixon, Illinois 61021 Phone 815-284-3351 Fax 815-284-3355 Design Firm #154-000916 www.willett-hofmann.com	Designed By: M. A. Small Date: 4/09
STRUCTURAL SHEET NO. 1A OF 6A SHEETS.		Checked By: B. K. Converse Date: 4/09
		Drawn By: F. D. Lachat Date: 1/10
F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU
		TOTAL SHEETS 127
		SHEET NO. 61
CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)		





\*See Field Cutting Diagram



Bar	No.	Size	Length	Shape
a	166	#7	26'-4"	U
a <sub>1</sub>	230	#8	8'-8"	U
a <sub>2</sub>	232	#4	9'-4"	U
d	40	#6	6'-6"	U
h <sub>2</sub>	12	#6	24'-8"	U
h <sub>3</sub>	40	#5	18'-5"	U
h <sub>4</sub>	24	#5	18'-6"	U
h <sub>5</sub>	79	#6	17'-8"	U
h <sub>6</sub>	79	#6	57'-8"	U
h <sub>7</sub>	144	#5	39'-0"	U
h <sub>8</sub>	158	#6	39'-2"	U
n	46	#8	8'-8"	U
n <sub>1</sub>	44	#7	5'-4"	U
s <sub>2</sub>	24	#4	5'-9"	U
s <sub>3</sub>	24	#4	5'-7"	U
t	90	#6	10'-1"	U
v <sub>1</sub>	332	#6	3'-9"	U
v <sub>3</sub>	154	#5	3'-9"	U
v <sub>4</sub>	154	#5	10'-3"	U
v <sub>6</sub>	8	#6	7'-7"	U
v <sub>9</sub>	332	#6	11'-3"	U
v <sub>10</sub>	8	#6	12'-0"	U
v <sub>11</sub>	154	#5	11'-3"	U
v <sub>12</sub>	22	#6	24'-6"	U
v <sub>13</sub>	19	#5	24'-6"	U
w	44	#5	18'-5"	U
z	79	#6	6'-1"	U
Porous Granular Embankment			Ton	70
Reinforcement Bars			Pound	59,590
Expansion Bolts 3/4"			Each	47
Concrete Box Culverts			Cu. Yd.	310.6
Breaker-Run Crushed Stone			Ton	349

**NOTES:**  
Expansion bolts shall be 3/4" φ hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete.  
Cost of Preformed Joint Filler, Hollow Bulb Type Nonmetallic Water Seal & Concrete Nails included with Concrete Box Culverts.  
No Precast Option Allowed.

MIN. LAP	SIZE	LAP
	#4	1'-8"
	#5	2'-2"
	#6	2'-7"
	#7	3'-5"
	#8	4'-6"
	#9	5'-9"

STRUCTURAL SHEET NO. 3A OF 6A SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	63
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

**EAST CULVERT EXTENSION DETAILS**  
C.H. OVER POND CREEK  
STATION 32+61.61  
S.N. 006-5031  
WHA #1066D05

FILE NAME: s:\51-1-10-10\1066D05\Bureau\Drawings\Double Barrel\1066D05\1066D05.dwg

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**



BORING **4** DATE STARTED **4-29-09** DATE COMPLETED **4-29-09** JOB **L-73,147**

ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **582.6** WHILE DRILLING **0.5'**  
 END OF BORING **537.6** AT END OF BORING **N/A Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	SS	4				3.5	579.1	Loose dark brown silty SAND, some gravel, trace clay, occasional clay seams, wet (SM)
	2	SS	1				6.0	576.0	Very loose dark gray silty medium to fine SAND, trace gravel, wet (SM)
	3	SS	25	10.7	4.5*		11.0	571.8	Hard pinkish-gray very silty CLAY, little to some sand, trace gravel, moist (CL)
	4	SS	23	10.8	4.5*		13.5	569.1	Dense light gray medium to fine SAND, occasional silt seams (SP)
	5	SS	34				18.0	564.6	Firm to dense light gray medium to fine SAND, trace gravel and silt (SP)
	6	SS	28				21.0	561.6	Very tough to hard pinkish-gray very silty CLAY, trace to little sand, trace gravel, occasional sand seams, moist (CL)
	7	SS	35				22.0	560.6	Firm light gray medium to fine SAND, trace gravel (SP)
	8	SS	34	12.9	3.0-4.0*		25.0	554.6	Very tough to hard pinkish-gray and gray silty CLAY and very silty CLAY layers, little to some sand, trace gravel, moist (CL/CL-ML)
	9	SS	19	11.4	3.5-4.25*		28.0	544.6	Tough pinkish-gray very silty CLAY, trace to little sand, trace gravel, very moist (CL-ML)
	10	SS	20	12.7	3.50 2.25-3.1*				
	11	SS	14	11.9	2.0*				
	12	SS	12	13.3	1.12 1.0-1.25*				
	13	SS	13	13.0	1.25*				

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 45.0' Page 1 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**



BORING **4** DATE STARTED **4-29-09** DATE COMPLETED **4-29-09** JOB **L-73,147**

ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **582.6** WHILE DRILLING **0.5'**  
 END OF BORING **537.6** AT END OF BORING **N/A Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
	14	SS	23	15.0	0.75*		38.0	544.6	Tough pinkish-gray very silty CLAY, trace to little sand, trace gravel, very moist (CL-ML)
	15	SS	17	18.2	0.75*				Stiff light gray and pinkish-gray very silty CLAY, trace to little sand, trace gravel, occasional Cobbles, very moist (CL) Samples 14 and 15: Poor recovery presumably due to Cobbles.
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 45.0' Page 2 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**



BORING **5** DATE STARTED **4-28-09** DATE COMPLETED **4-28-09** JOB **L-73,147**

ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **587.7** WHILE DRILLING **5.5'**  
 END OF BORING **542.7** AT END OF BORING **Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	SS	3	17.0	2.0*		3.5	584.2	FILL - Brown very silty CLAY, trace to little sand, moist (CL)
	2	SS	4	25.4			6.0	581.7	Loose light gray and gray silty fine SAND, moist to wet (SM)
	3	SS	7				8.5	579.2	Loose black silty fine SAND, wet (SM)
	4	SS	16	11.8	3.11 3.6*		15.0	573.2	Very tough to hard pinkish-gray silty CLAY and very silty CLAY layers, little to some sand, trace gravel, occasional sand seams, moist (CL-ML)
	5	SS	15	11.9	3.5*		20.5	567.2	Tough gray very silty CLAY, trace sand and gravel, occasional Cobbles and Boulders, moist (CL)
	6	SS	18	10.6	4.5-*		25.5	562.2	Sample 10: Poor recovery presumably due to a Cobble or Boulder.
	7	SS	20	12.1	2.5*				
	8	SS	19	10.7	2.48 3.25*				
	9	SS	17	12.5	1.75*				
	10	SS	17	15.5					
	11	SS	19	12.4	2.25*				
	12	SS	13	12.1	2.0*				
	13	SS	12	12.9	2.0*				

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 45.0' Page 1 of 2

**BORING LOGS**  
**C.H. 8 OVER POND CREEK**  
**STATION 32+61.61**  
**S.N. 006-5031**  
 WHA #1066D05

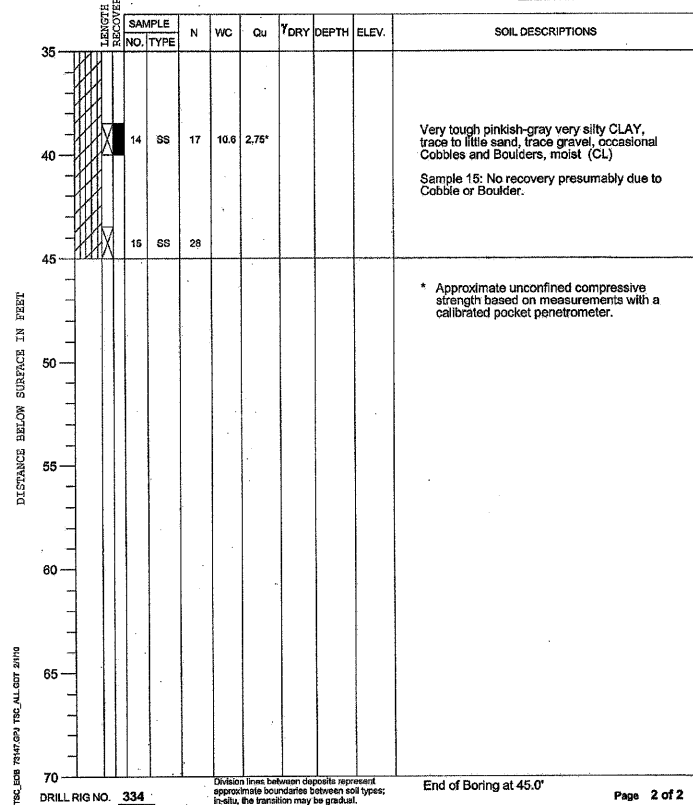
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	188	05-00195-00-BR	BUREAU	127	64
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **5** DATE STARTED **4-28-09** DATE COMPLETED **4-28-09** JOB **L-73,147**



ELEVATIONS  
 GROUND SURFACE **587.7**  
 END OF BORING **542.7**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **5.5'**  
 AT END OF BORING **Wash Boring**  
 24 HOURS

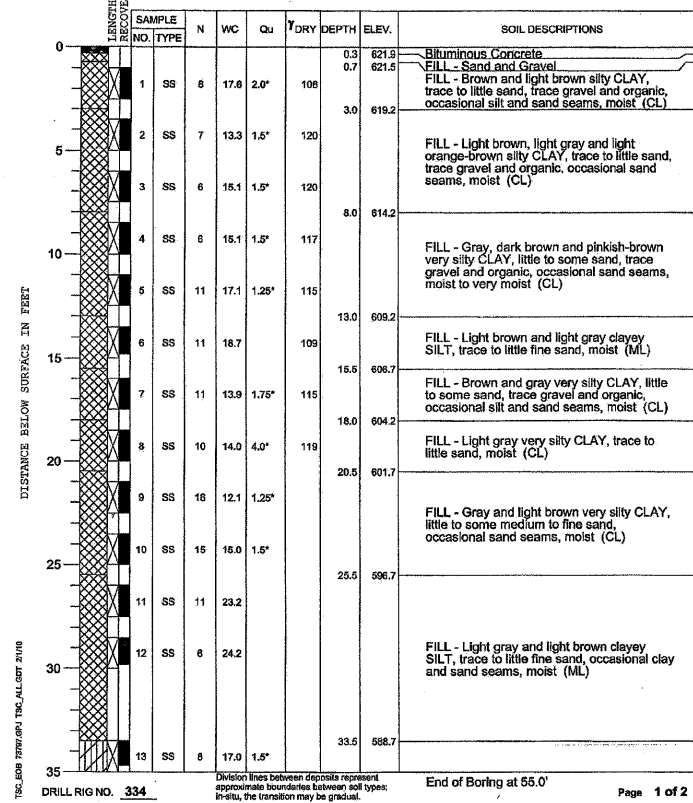


PROJECT **Slope Stability & Settlement Analysis, Co. Hwy. 8 over RR/Canal Bridge, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Dixon, Illinois**  
 BORING **6** DATE STARTED **9-3-09** DATE COMPLETED **9-3-09** JOB **L-73,797**



ELEVATIONS  
 GROUND SURFACE **622.2**  
 END OF BORING **567.2**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **Dry to 10'**  
 AT END OF BORING **N/A - Wash Boring**  
 24 HOURS

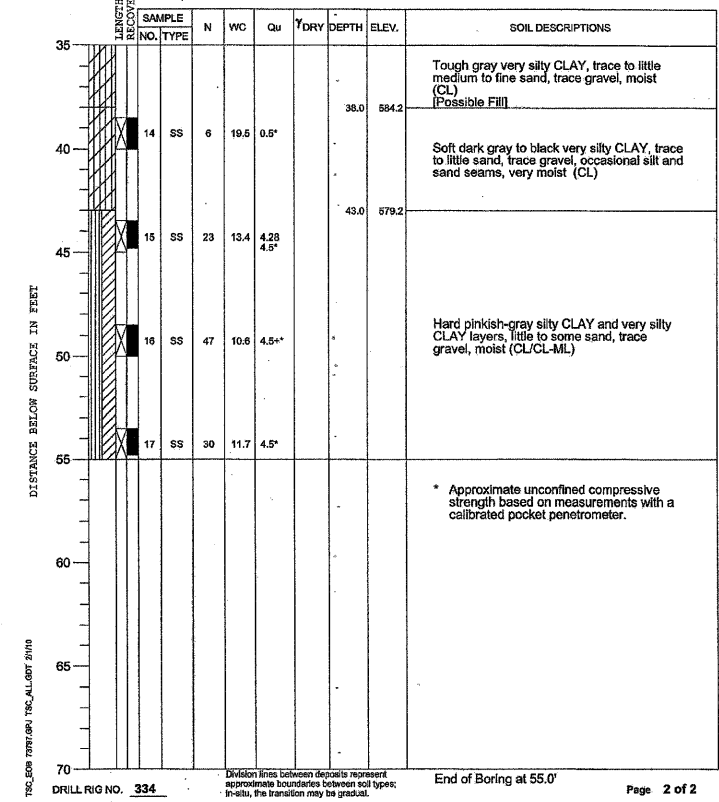


PROJECT **Slope Stability & Settlement Analysis, Co. Hwy. 8 over RR/Canal Bridge, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Dixon, Illinois**  
 BORING **6** DATE STARTED **9-3-09** DATE COMPLETED **9-3-09** JOB **L-73,797**



ELEVATIONS  
 GROUND SURFACE **622.2**  
 END OF BORING **567.2**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **Dry to 10'**  
 AT END OF BORING **N/A - Wash Boring**  
 24 HOURS



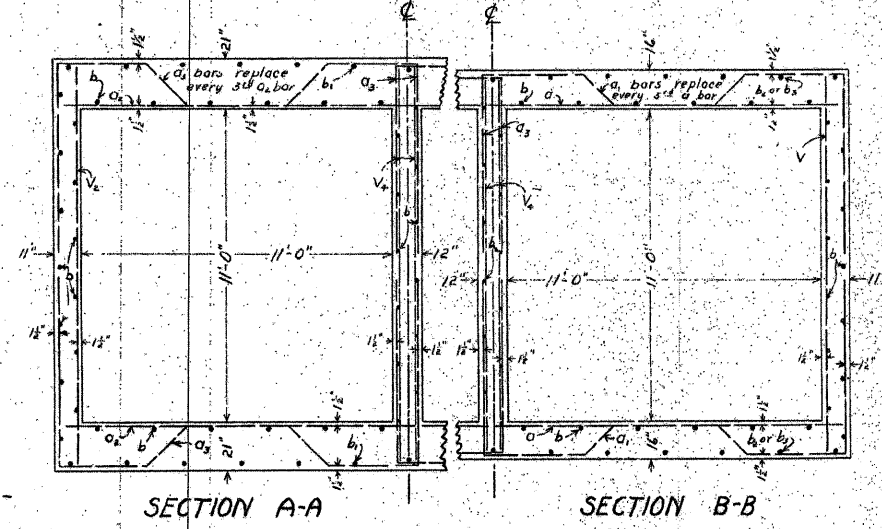
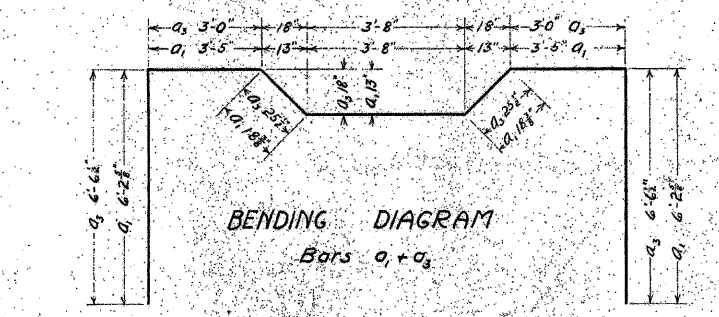
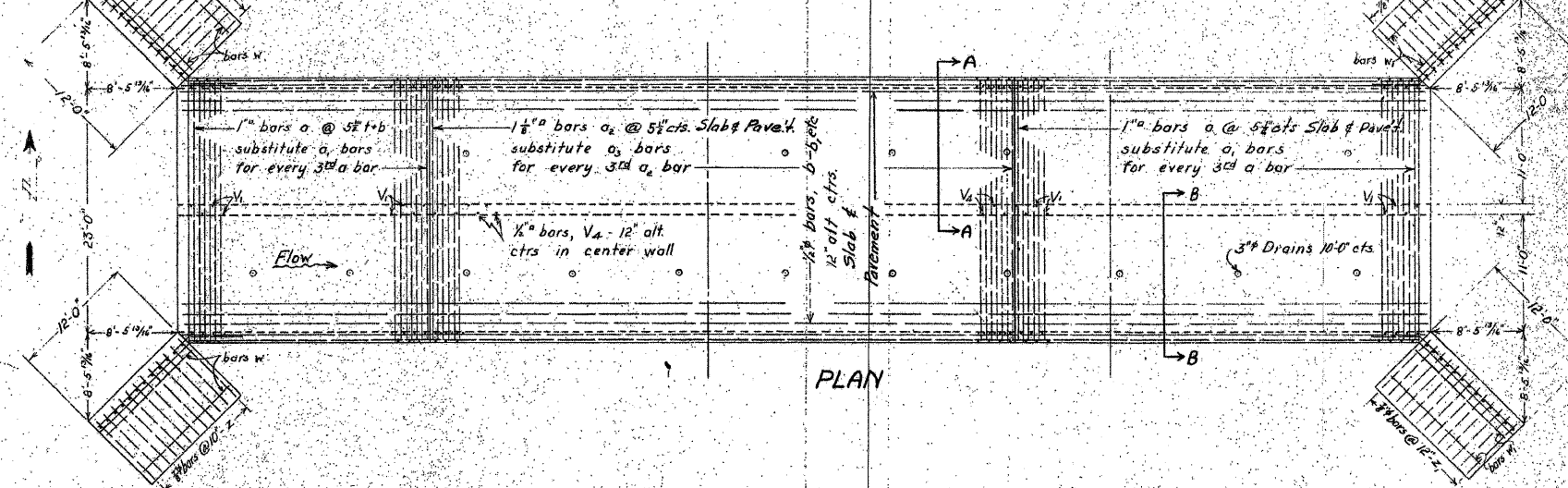
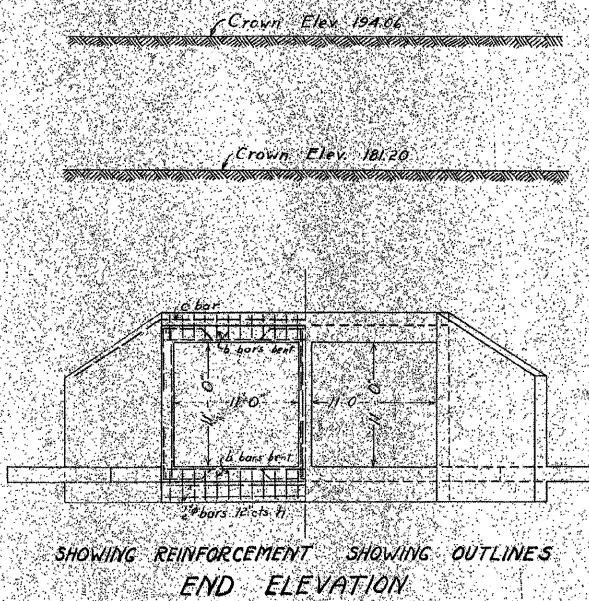
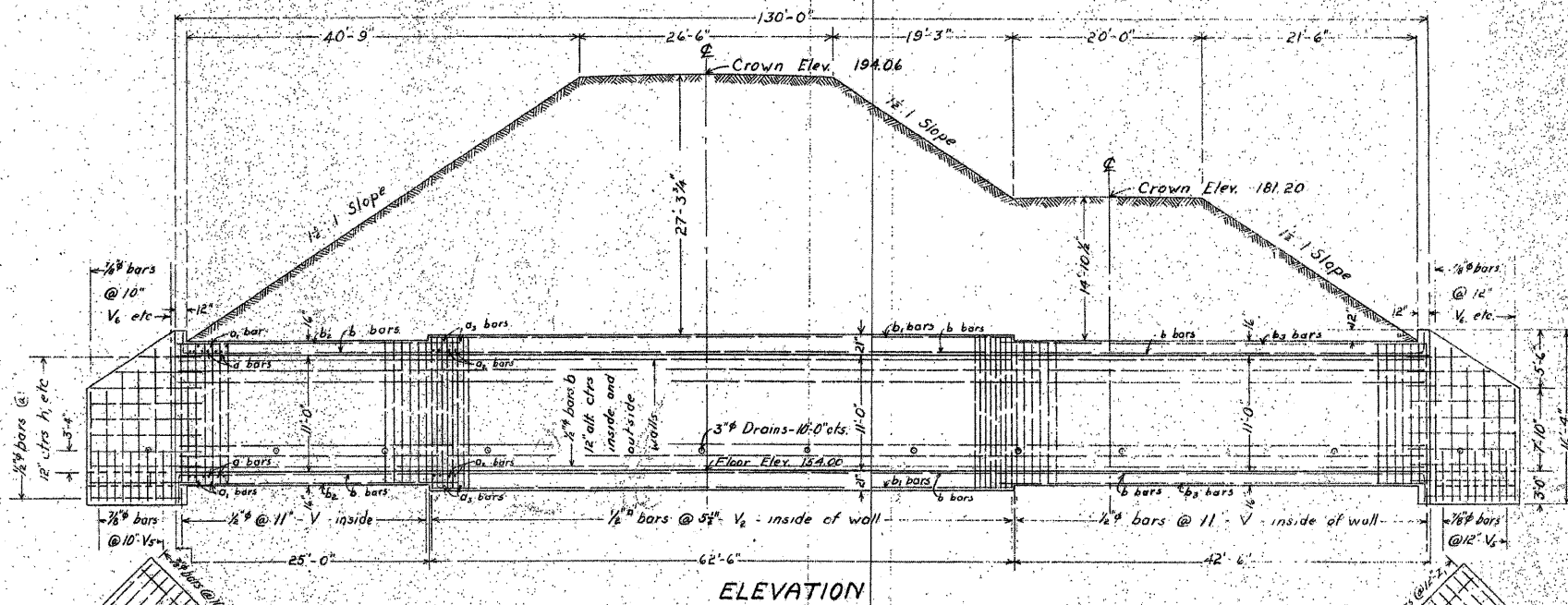
**BORING LOGS**  
**C.H. 8 OVER POND CREEK**  
**STATION 32+61.61**  
**S.N. 006-5031**  
 WHA #1066D05

STRUCTURAL SHEET NO. 5A OF 6A SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	65
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

B.M. - Brass Plug in top of Lock No. 19, I.M. Canal, Elev 184.00  
 Existing Structure - Concrete Floor on I-beams - Concrete Abuts.  
 Abuts. may be left in place, Contractor to remove floor

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

SHEET NO. /  
 SHEETS



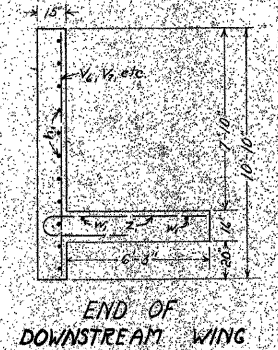
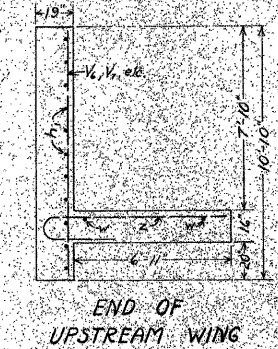
Class X Concrete to be used throughout.  
 All reinforcing steel to be wired securely  
 in place before concrete is poured.

FOR  
 INFORMATION  
 ONLY

**BILL OF MATERIAL**

Bars	Number	Size	Length
a	196	1"Ø	24'-6"
a <sub>1</sub>	186	1"Ø	26'-0"
a <sub>2</sub>	182	1 1/8"Ø	24'-6"
a <sub>3</sub>	182	1 1/8"Ø	27'-0"
b	300	1/2"Ø	27'-6"
c	4	1/2"Ø	28'-0"
h	4	1/2"Ø	24'-0"
h <sub>1</sub>	44	1/2"Ø	13'-6"
h <sub>2</sub>	8	1/2"Ø	9'-9"
h <sub>3</sub>	8	1/2"Ø	5'-6"
v	148	1/2"Ø	13'-3"
v <sub>1</sub>	68	1/2"Ø	15'-3"
v <sub>2</sub>	272	1/2"Ø	14'-0"
v <sub>3</sub>	65	1/2"Ø	14'-0"
v <sub>4</sub>	52	3/8"Ø	6'-0"
v <sub>5</sub>	14	3/8"Ø	14'-6"
v <sub>6</sub>	12	3/8"Ø	13'-6"
v <sub>7</sub>	14	3/8"Ø	12'-0"
v <sub>8</sub>	12	3/8"Ø	10'-6"
w	4	1/2"Ø	11'-6"
w <sub>1</sub>	4	1/2"Ø	11'-6"
z	28	3/8"Ø	11'-6"
z <sub>1</sub>	24	3/8"Ø	10'-6"
Reinforcing Steel - Lbs 91400			
Class X Concrete - Cu Yds - 570.4			
b <sub>1</sub>	72	1/2"Ø	22'-3"
b <sub>2</sub>	24	1/2"Ø	29'-6"
b <sub>3</sub>	48	1/2"Ø	24'-9"

One Name Plate



POND CREEK  
 S.A. RTE 8 SEC WB-15D  
 BUREAU COUNTY

EXISTING CULVERT PLANS  
 C.H. 8 OVER POND CREEK  
 STATION 32+61.61  
 S.N. 006-5031  
 WHA #1066D05

STANDARD	COMPUTED - M. Thompson
	CHECKED - H. J. E. [Signature]
	DRAWN - M. Thompson
	CHECKED - H. J. E. [Signature]
SPECIAL	ASSEMBLED - [Signature]
	CHECKED - [Signature]

EXAMINED: J. M. [Signature] 10/21  
 BRIDGE ENGINEER  
 PASSED: H. E. Surman  
 ENGINEER OF DESIGN  
 APPROVED: Frank J. Sheehy  
 CHIEF HIGHWAY ENGINEER

STRUCTURAL SHEET NO. 6A OF 6A SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	66
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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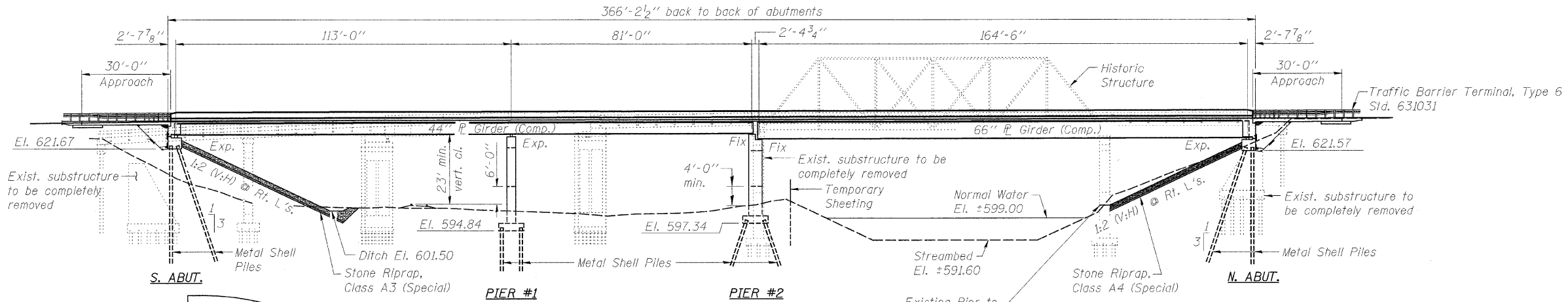
**EXISTING STRUCTURES: S.N. 006-3244 & 006-3245**

Originally built in 1931 as S.A. Rt. 8 under Sections W, W-B, W-B-2, W-C & W-V, 15D and rehabilitated in 1981 under Section 79-00122-00-BR. Existing structure number 006-3244 consists of a single span (1 @ 115'-0") steel Pratt Thru Truss and two single span (1 @ 59'-10 1/2" & 56'-7 3/8") precast, prestressed deck beam approach spans, while structure number 006-3245 consists of a single span (1 @ 67'-8") steel thru girder with two single span (1 @ 43'-4 3/8" & 49'-5 1/2") precast, prestressed concrete deck beam approach spans. 400'-8 7/8" back to back of abutments and 22'-9" clear roadway width. Structure to be removed and replaced. Road shall be closed to traffic.

**Bench Mark:** Chis. "□" on the Northwest Hubguard on Bridge over Railroad, El. 632.26

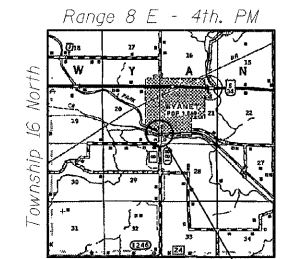
**Bench Mark:** Chis. "□" on the Northwest Wingwall of Approach Structure, North of Bridge over Hennepin Canal, El. 632.05

The existing steel Pratt Thru Truss shall be salvaged and relocated to TR 271A over West Bureau Creek.



IAIS RR & HENNEPIN CANAL  
BUILT 2010 BY  
BUREAU COUNTY  
SECTION 05-00195-00-BR  
F.A.S. RT. 188 STATION 36+00  
STR. NO. 006-3247 LOADING HL93

**NAME PLATE LETTERING**  
Refer To Std. 515001-03

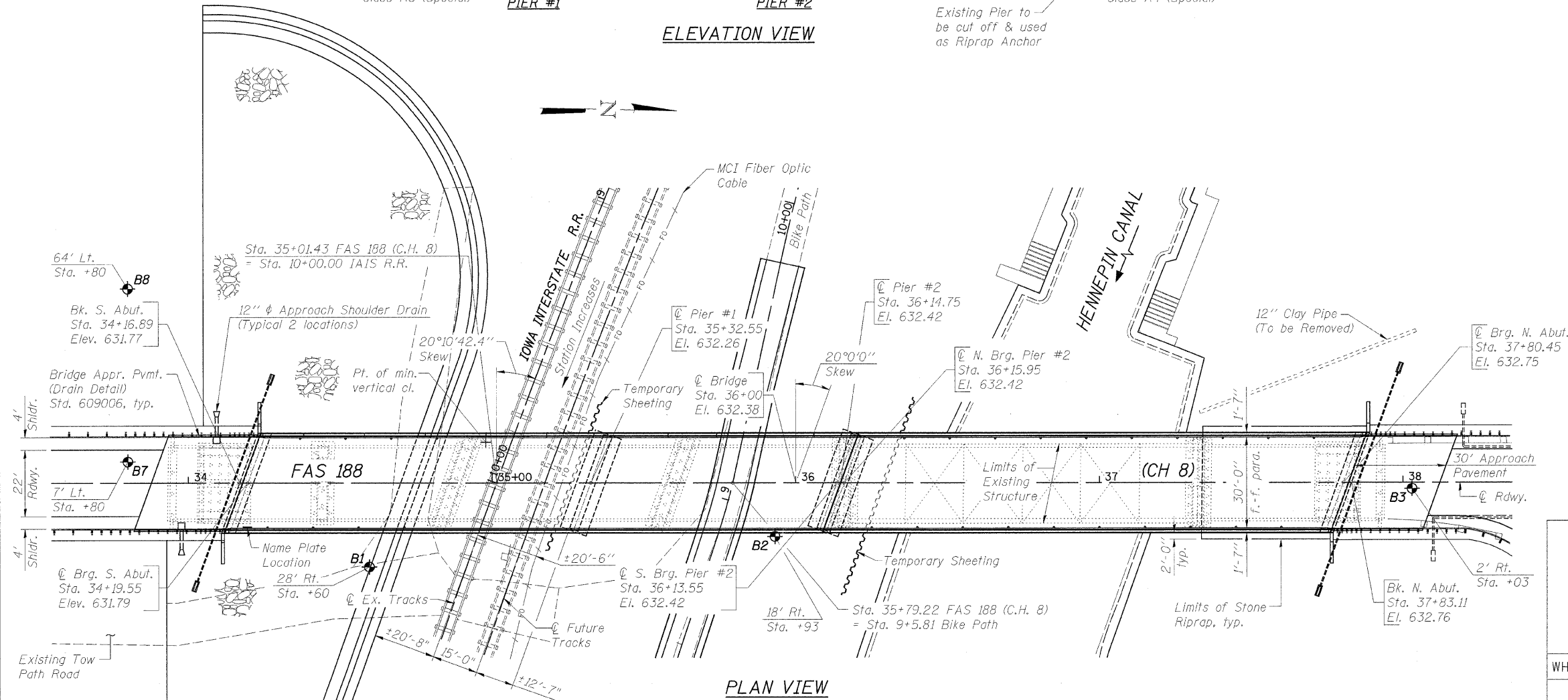


Bridge Location  
**LOCATION SKETCH**



*Brian K. Converse*  
DATE: MARCH 25, 2010  
EXPIRES 11/30/10

"I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans, The Design Is An Economical One Complies With Requirements Of The Current 'AASHTO Standard Specifications For Highway Bridges'."



**GENERAL PLAN & ELEVATION  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247**

WHA JOB NUMBER 1066D05	<b>WILLET, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS Land Surveying - Transportation - Structural Environmental - Architecture 809 East Second Street Dixon, Illinois 61021 Phone 815.284.3381 Fax 815.284.3385 Design Firm #194-002919 www.willettthofmann.com	Designed By: B. K. Converse Date: 1/10			
		Checked By: M. A. Cackley Date: 1/10			
STRUCTURAL SHEET NO. 1B OF 33B SHEETS	F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 67
	CONTRACT NO. 87380			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(118)	

**GENERAL NOTES:**

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8" φ, holes 1" φ, unless otherwise noted.

Calculated weight of Structural Steel = 530,834 lbs.

All structural steel shall be AASHTO M 270 Grade 50, unless otherwise noted.

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

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shiming the bearings.

Concrete Sealer shall be applied to the designated areas of Pier #2.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Reddish Brown, Munsell No. 2.5YR 3/4. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

The deck pour of Spans 1 & 2 shall begin at Pier #2 and end at the South Abutment in order to prevent uplift of the two-span steel girders at Pier #2.

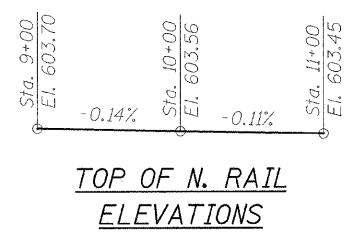
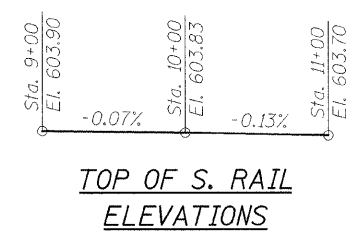
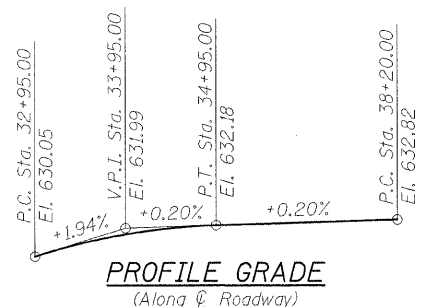
**INDEX OF SHEETS**

1B General Plan & Elevation	17B Framing Plan - Spans 1 & 2
2B General Data	18B Framing Plan - Span 3
3B Riprap and Pile Layout - South Abutment and Pier #1	19B Framing Details
4B Riprap and Pile Layout - Pier #2 and North Abutment	20B Elastomeric Bearing Details
5B Temporary Sheet Piling Details	21B HLMR Guided Expansion Bearing Details
6B Top of Slab Elevations	22B Fixed Bearing Details
7B Top of Approach Slab Elevations - South	23B South Abutment Details
8B Top of Approach Slab Elevations - North	24B North Abutment Details
9B Superstructure - Spans 1 & 2	25B Pier #1 Details
10B Superstructure - Span 3	26B Pier #2 Details
11B Superstructure Details - Spans 1 & 2	27B Preformed Joint Strip Seal
12B Superstructure Details - Span 3	28B Metal Shell Pile Details
13B Diaphragm Details - South Abutment	29B Bar Splicer Assembly and Mechanical Splicer Details
14B Diaphragm Details - North Abutment	30B-32B Boring Logs
15B South Bridge Approach Slab Details	33B Existing Truss Plans
16B North Bridge Approach Slab Details	

**BILL OF MATERIAL - BRIDGE**

ITEM	UNIT	SUB	SUPER	TOTAL
Channel Excavation	Cu. Yd.	77	---	77
* Porous Granular Embankment	Ton	466	---	466
* Stone Riprap, Class A4 (Special)	Ton	137	---	137
* Removal of Existing Structures No. 1	Each	---	---	1
* Removal of Existing Concrete Deck	L. Sum	---	1	1
*** Protective Shield	Sq. Yd.	---	593	593
Structure Excavation	Cu. Yd.	287	---	287
Floor Drains	Each	---	28	28
Concrete Structures	Cu. Yd.	295.1	20.6	315.7
Concrete Superstructure	Cu. Yd.	---	531.6	531.6
Bridge Deck Grooving	Sq. Yd.	---	1322	1322
** Protective Coat	Sq. Yd.	---	1728	1728
Furnishing and Erecting Structural Steel	L. Sum	---	1	1
Stud Shear Connectors	Each	---	3,830	3,830
Reinforcement Bars, Epoxy Coated	Pound	35,980	128,090	164,070
Bar Splicers	Each	---	62	62
Furnishing Metal Shell Piles 12" x 0.25"	Foot	1,734	---	1,734
Furnishing Metal Shell Piles 14" x 0.312"	Foot	1,236	---	1,236
Driving Piles	Foot	2,970	---	2,970
Test Pile Metal Shells	Each	4	---	4
* Temporary Sheet Piling	Sq. Ft.	2,505	---	2,505
Name Plates	Each	---	1	1
Preformed Joint Strip Seal	Foot	---	34	34
Elastomeric Bearing Assembly, Type I	Each	---	5	5
Elastomeric Bearing Assembly, Type II	Each	---	5	5
Anchor Bolts, 5/8"	Each	---	10	10
Anchor Bolts, 1"	Each	---	20	20
Anchor Bolts, 1 1/4"	Each	---	20	20
End Sections 12"	Each	---	2	2
Concrete Sealer	Sq. Ft.	215	---	215
Geocomposite Wall Drain	Sq. Yd.	112	---	112
Pipe Drains 12"	Foot	---	16	16
* Pipe Underdrains for Structures 4"	Foot	209	---	209
Type B Inlet Box, Standard 609006	Each	---	2	2
Concrete Thrust Blocks	Each	---	2	2
* High Load Multi-Rotation Bearings, Guided Expansion, 400k	Each	---	5	5
* Stone Riprap, Class A3 (Special)	Ton	900	---	900
* Relocate Existing Bridge	L. Sum	---	1	1

\* See Special Provisions.  
 \*\* Includes Deck, Approach Pavement, and Top & Inside Face of Parapet only.  
 \*\*\* Protective Shield shall be placed in historic truss span and bridge span over the railroad tracks.



**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 50,000 psi (M270 Grade 50)

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**SEISMIC DATA**

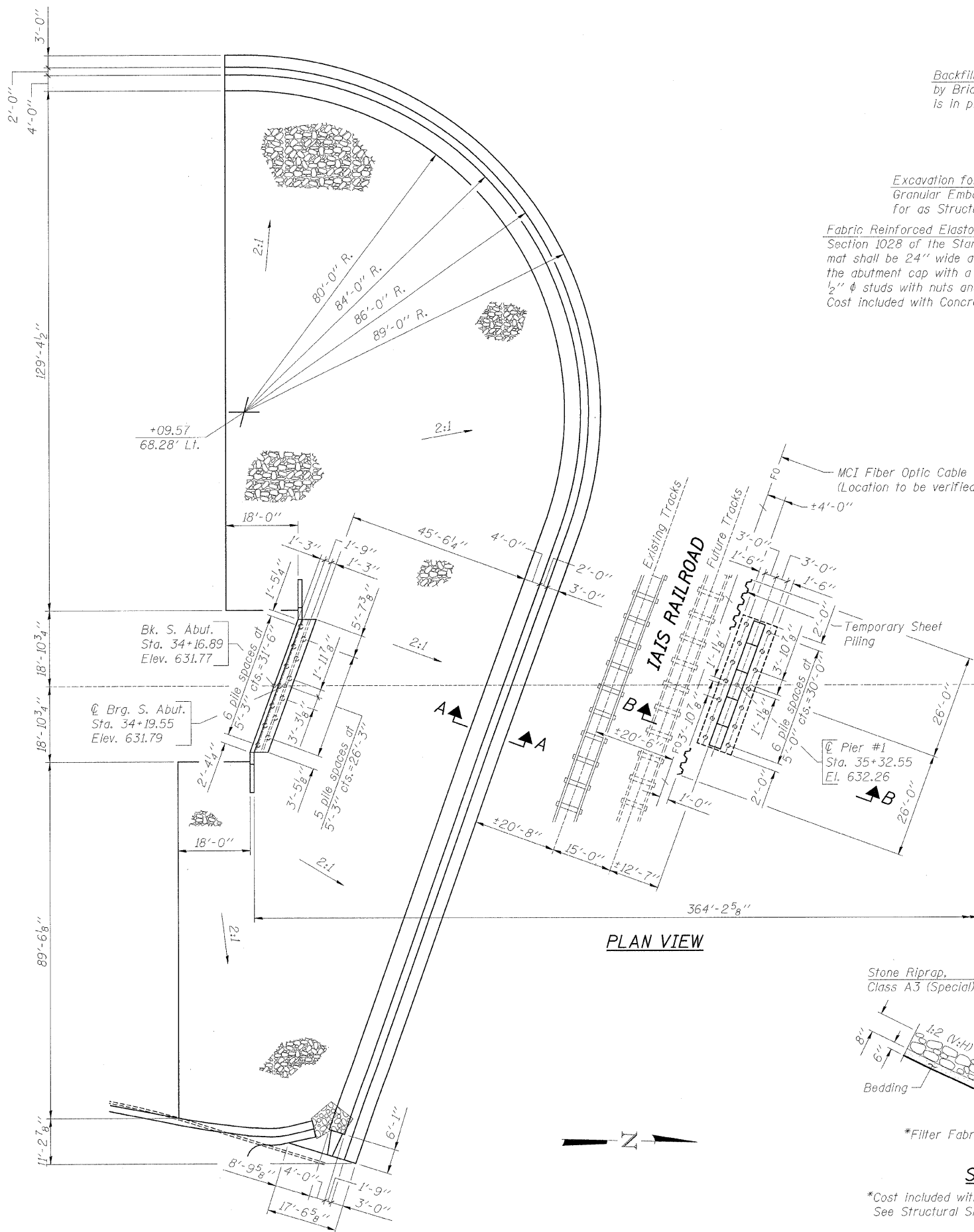
Seismic Performance Zone (SPZ) = I  
 Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.015g  
 Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.11g  
 Soil Site Class = B

**GENERAL DATA**  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247

WHA JOB NUMBER	1066D05	<b>WILLETT, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS Land Surveying - Transportation - Structural Environmental - Architecture 809 East Second Street Dixon, Illinois 61021 Phone 815.284.3351 Fax 815.284.3385 Design Firm #184-000918 www.willett-hofmann.com	Designed By: B. K. Converse Date: 1/10
			Checked By: M. A. Cackley Date: 1/10 Drawn By: F. D. Lachat Date: 1/10
STRUCTURAL SHEET NO. 2B OF 33B SHEETS	F.A.S. RTE. 188 SECTION 05-00195-00-BR COUNTY BUREAU 127	TOTAL SHEETS 127 SHEET NO. 68	CONTRACT NO. 87380
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)			

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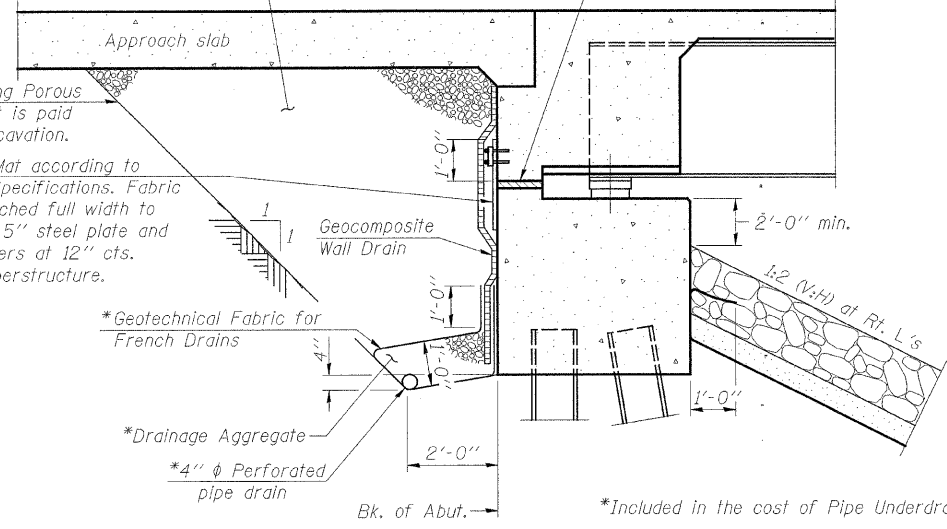
**PLAN VIEW**

Backfill with Porous Granular Embankment, by Bridge Contractor after superstructure is in place.

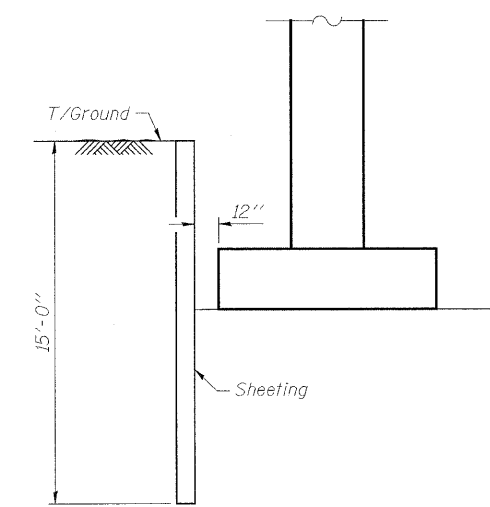
Excavation for placing Porous Granular Embankment is paid for as Structure Excavation.

Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width to the abutment cap with a 3/8" x 5" steel plate and 1/2" φ studs with nuts and washers at 12" cts. Cost included with Concrete Superstructure.

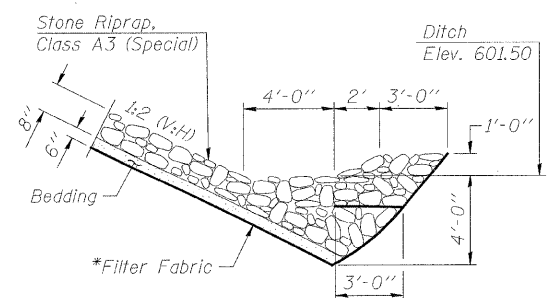
2" PJF (per Article 1051.08 of the Standard Specifications) full width and vertically at edges bonded to abutment cap with suitable adhesive as recommended by supplier.



**SECTION THRU SEMI-INTEGRAL ABUTMENT**  
(Horiz. dim. at Rt. L's)



**SECTION B-B**



**SECTION A-A**

\*Cost included with Stone Riprap, Class A3 (Special)  
See Structural Sheet 4B of 33B for Bill of Material.

**BILL OF MATERIAL**

Item	Unit	Quantity
Temporary Sheet Piling	Sq. Ft.	780

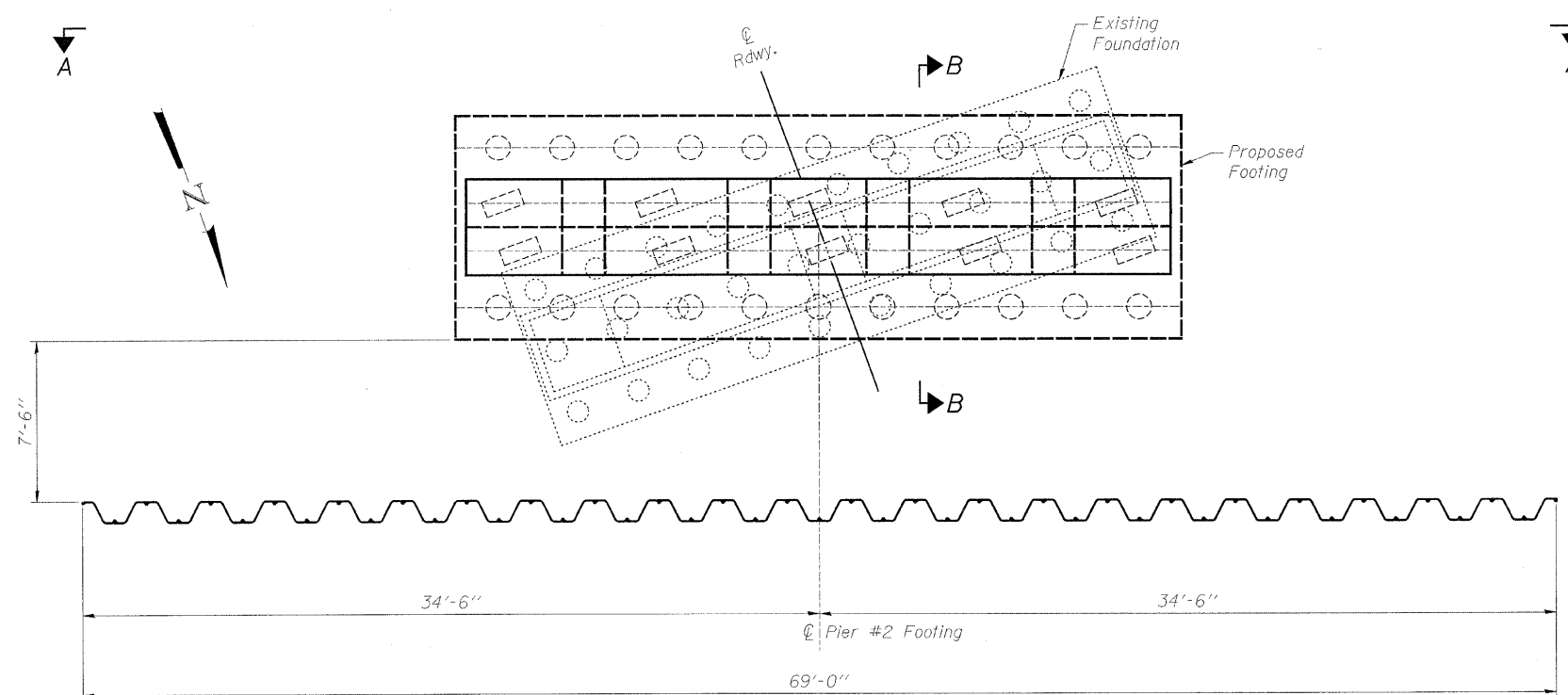
**NOTE:**  
Sheeting shall have a minimum section modulus of 18.1 in.<sup>3</sup>/ft. of wall & shall be A328 Grade Steel or better.

**RIPRAP AND PILE LAYOUT  
SOUTH ABUTMENT AND PIER #1  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05**

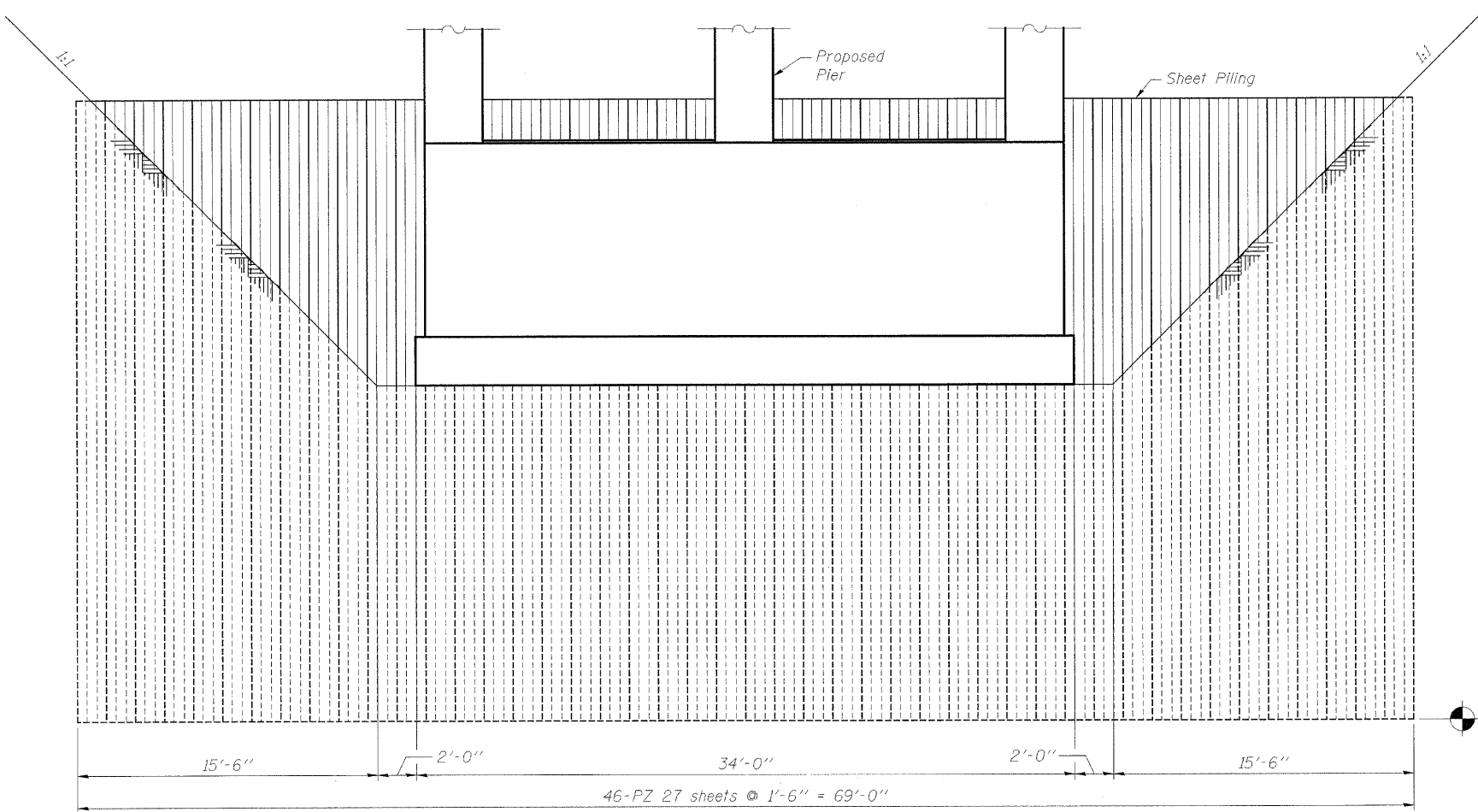
STRUCTURAL SHEET NO. 3B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	69
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



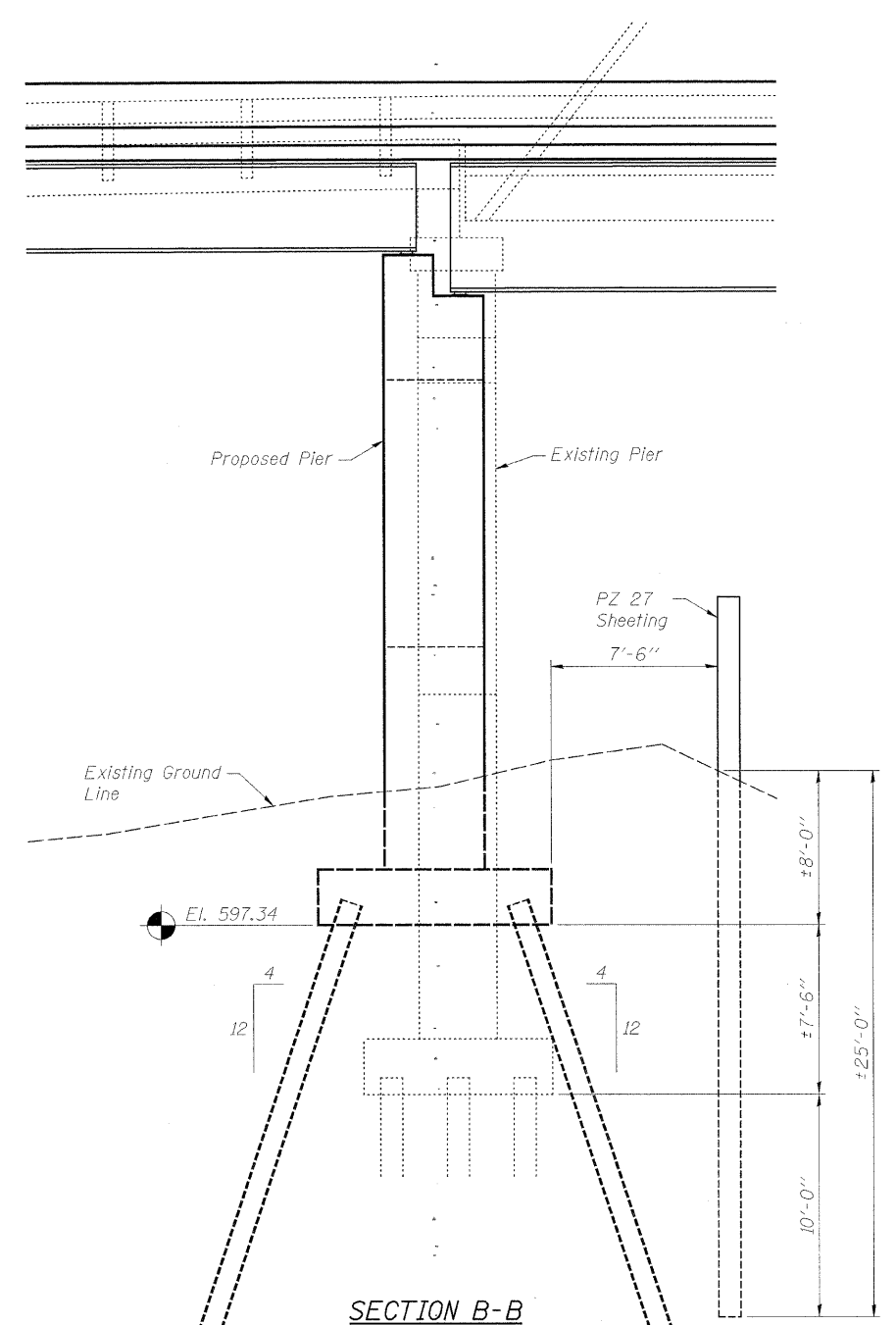




PLAN VIEW



SECTION A-A



SECTION B-B

**NOTES:**  
 After existing pier is removed, region between the bottom of the existing footing & bottom of the proposed footing shall be backfilled & compacted.  
 Sheet piling shall have a minimum section modulus of 18.1 in.<sup>3</sup>/ft. of wall & shall be A328 Grade Steel or better.

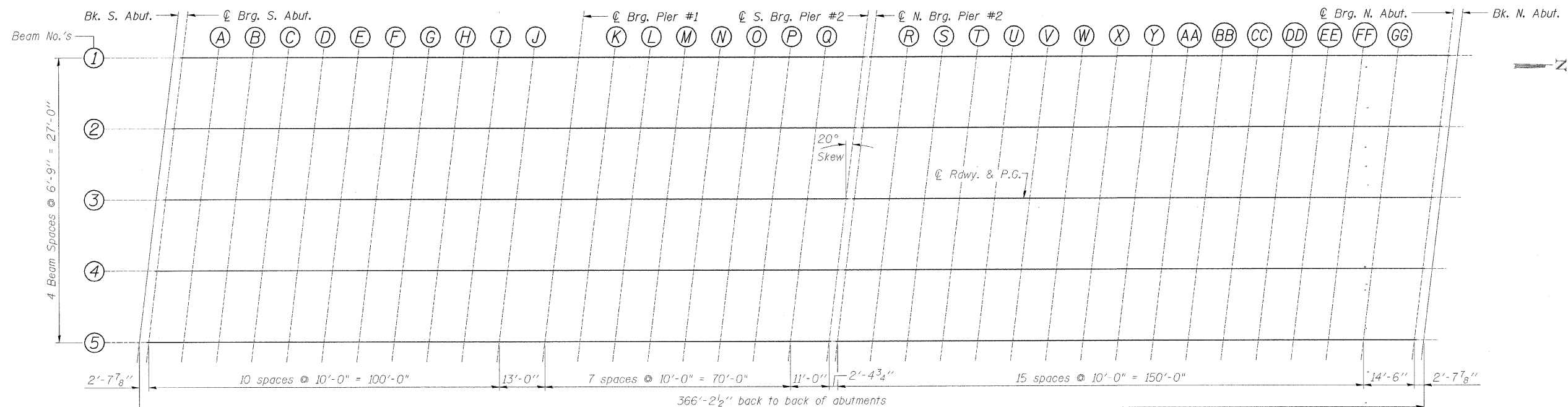
**BILL OF MATERIAL**

Item	Unit	Quantity
Temporary Sheet Piling	Sq. Ft.	1,725

**TEMPORARY SHEET PILING DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 5B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	71
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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PLAN

**BEAM 1**

Location	Station	Offset Lt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	34+21.804	13.500	631.54	631.54
⊗ Brg. S. Abut.	34+24.464	13.500	631.56	631.56
A	34+34.464	13.500	631.64	631.71
B	34+44.464	13.500	631.71	631.84
C	34+54.464	13.500	631.77	631.94
D	34+64.464	13.500	631.82	632.02
E	34+74.464	13.500	631.86	632.07
F	34+84.464	13.500	631.89	632.10
G	34+94.464	13.500	631.92	632.09
H	35+04.464	13.500	631.93	632.07
I	35+14.464	13.500	631.95	632.04
J	35+24.464	13.500	631.97	632.02
⊗ Brg. Pier 1	35+37.464	13.500	632.00	632.00
K	35+47.464	13.500	632.02	632.01
L	35+57.464	13.500	632.04	632.03
M	35+67.464	13.500	632.06	632.05
N	35+77.464	13.500	632.08	632.09
O	35+87.464	13.500	632.10	632.12
P	35+97.464	13.500	632.12	632.14
Q	36+07.464	13.500	632.14	632.16
⊗ S. Brg. Pier 2	36+18.467	13.500	632.16	632.15
⊗ N. Brg. Pier 2	36+20.861	13.500	632.16	632.15
R	36+30.861	13.500	632.18	632.17
S	36+40.861	13.500	632.20	632.18
T	36+50.861	13.500	632.22	632.19
U	36+60.861	13.500	632.24	632.20
V	36+70.861	13.500	632.26	632.21
W	36+80.861	13.500	632.28	632.22
X	36+90.861	13.500	632.30	632.23
Y	37+00.861	13.500	632.32	632.24
AA	37+10.861	13.500	632.34	632.25
BB	37+20.861	13.500	632.36	632.26
CC	37+30.861	13.500	632.38	632.27
DD	37+40.861	13.500	632.40	632.28
EE	37+50.861	13.500	632.42	632.29
FF	37+60.861	13.500	632.44	632.30
GG	37+70.861	13.500	632.46	632.31
⊗ Brg. N. Abut.	37+85.364	13.500	632.49	632.49
Bk. of N. Abut.	37+88.024	13.500	632.50	632.50

**BEAM 2**

Location	Station	Offset Lt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	34+19.347	6.750	631.65	631.65
⊗ Brg. S. Abut.	34+22.007	6.750	631.68	631.68
A	34+32.007	6.750	631.76	631.82
B	34+42.007	6.750	631.83	631.95
C	34+52.007	6.750	631.89	632.06
D	34+62.007	6.750	631.94	632.14
E	34+72.007	6.750	631.99	632.20
F	34+82.007	6.750	632.02	632.22
G	34+92.007	6.750	632.05	632.22
H	35+02.007	6.750	632.06	632.20
I	35+12.007	6.750	632.08	632.17
J	35+22.007	6.750	632.10	632.15
⊗ Brg. Pier 1	35+35.007	6.750	632.13	632.13
K	35+45.007	6.750	632.15	632.14
L	35+55.007	6.750	632.17	632.16
M	35+65.007	6.750	632.19	632.19
N	35+75.007	6.750	632.21	632.22
O	35+85.007	6.750	632.23	632.25
P	35+95.007	6.750	632.25	632.27
Q	36+05.007	6.750	632.27	632.29
⊗ S. Brg. Pier 2	36+15.010	6.750	632.29	632.29
⊗ N. Brg. Pier 2	36+18.404	6.750	632.29	632.29
R	36+28.404	6.750	632.31	632.31
S	36+38.404	6.750	632.33	632.31
T	36+48.404	6.750	632.35	632.33
U	36+58.404	6.750	632.37	632.37
V	36+68.404	6.750	632.39	632.39
W	36+78.404	6.750	632.41	632.41
X	36+88.404	6.750	632.43	632.43
Y	36+98.404	6.750	632.45	632.45
AA	37+08.404	6.750	632.47	632.47
BB	37+18.404	6.750	632.49	632.49
CC	37+28.404	6.750	632.51	632.51
DD	37+38.404	6.750	632.53	632.53
EE	37+48.404	6.750	632.55	632.55
FF	37+58.404	6.750	632.57	632.57
GG	37+68.404	6.750	632.59	632.59
⊗ Brg. N. Abut.	37+82.907	6.750	632.62	632.62
Bk. of N. Abut.	37+85.567	6.750	632.63	632.63

**BEAM 3**

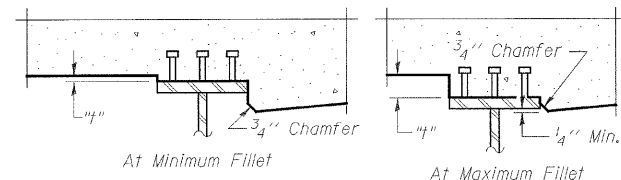
Location	Station	Offset Rt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	34+16.890	0.000	631.77	631.77
⊗ Brg. S. Abut.	34+19.550	0.000	631.79	631.79
A	34+29.550	0.000	631.87	631.94
B	34+39.550	0.000	631.95	632.07
C	34+49.550	0.000	632.01	632.18
D	34+59.550	0.000	632.06	632.27
E	34+69.550	0.000	632.11	632.32
F	34+79.550	0.000	632.15	632.35
G	34+89.550	0.000	632.18	632.35
H	34+99.550	0.000	632.19	632.33
I	35+09.550	0.000	632.21	632.30
J	35+19.550	0.000	632.23	632.28
⊗ Brg. Pier 1	35+32.550	0.000	632.26	632.26
K	35+42.550	0.000	632.28	632.27
L	35+52.550	0.000	632.30	632.29
M	35+62.550	0.000	632.32	632.32
N	35+72.550	0.000	632.34	632.35
O	35+82.550	0.000	632.36	632.38
P	35+92.550	0.000	632.38	632.40
Q	36+02.550	0.000	632.40	632.42
⊗ S. Brg. Pier 2	36+13.553	0.000	632.42	632.42
⊗ N. Brg. Pier 2	36+15.947	0.000	632.42	632.42
R	36+25.947	0.000	632.44	632.44
S	36+35.947	0.000	632.46	632.46
T	36+45.947	0.000	632.48	632.48
U	36+55.947	0.000	632.50	632.50
V	36+65.947	0.000	632.52	632.52
W	36+75.947	0.000	632.54	632.54
X	36+85.947	0.000	632.56	632.56
Y	36+95.947	0.000	632.58	632.58
AA	37+05.947	0.000	632.60	633.04
BB	37+15.947	0.000	632.62	633.04
CC	37+25.947	0.000	632.64	633.03
DD	37+35.947	0.000	632.66	633.00
EE	37+45.947	0.000	632.68	632.96
FF	37+55.947	0.000	632.70	632.91
GG	37+65.947	0.000	632.72	632.85
⊗ Brg. N. Abut.	37+80.450	0.000	632.75	632.75
Bk. of N. Abut.	37+83.110	0.000	632.76	632.76

**BEAM 4**

Location	Station	Offset Rt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	34+14.433	6.750	631.61	631.61
⊗ Brg. S. Abut.	34+17.093	6.750	631.64	631.64
A	34+27.093	6.750	631.72	631.79
B	34+37.093	6.750	631.79	631.92
C	34+47.093	6.750	631.86	632.03
D	34+57.093	6.750	631.92	632.12
E	34+67.093	6.750	631.97	632.18
F	34+77.093	6.750	632.01	632.21
G	34+87.093	6.750	632.04	632.21
H	34+97.093	6.750	632.05	632.19
I	35+07.093	6.750	632.07	632.16
J	35+17.093	6.750	632.09	632.14
⊗ Brg. Pier 1	35+30.093	6.750	632.12	632.12
K	35+40.093	6.750	632.14	632.13
L	35+50.093	6.750	632.16	632.15
M	35+60.093	6.750	632.18	632.18
N	35+70.093	6.750	632.20	632.21
O	35+80.093	6.750	632.22	632.24
P	35+90.093	6.750	632.24	632.26
Q	36+00.093	6.750	632.26	632.28
⊗ S. Brg. Pier 2	36+11.096	6.750	632.28	632.28
⊗ N. Brg. Pier 2	36+13.490	6.750	632.28	632.28
R	36+23.490	6.750	632.30	632.30
S	36+33.490	6.750	632.32	632.32
T	36+43.490	6.750	632.34	632.35
U	36+53.490	6.750	632.36	632.36
V	36+63.490	6.750	632.38	632.38
W	36+73.490	6.750	632.40	632.40
X	36+83.490	6.750	632.42	632.42
Y	36+93.490	6.750	632.44	632.44
AA	37+03.490	6.750	632.46	632.90
BB	37+13.490	6.750	632.48	632.90
CC	37+23.490	6.750	632.50	632.89
DD	37+33.490	6.750	632.52	632.86
EE	37+43.490	6.750	632.54	632.82
FF	37+53.490	6.750	632.56	632.77
GG	37+63.490	6.750	632.58	632.71
⊗ Brg. N. Abut.	37+77.993	6.750	632.61	632.61
Bk. of N. Abut.	37+80.653	6.750	632.62	632.62

**BEAM 5**

Location	Station	Offset Rt.	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut.	34+11.916	13.500	631.45	631.45
⊗ Brg. S. Abut.	34+14.636	13.500	631.48	631.48
A	34+24.636	13.500	631.56	631.63
B	34+34.636	13.500	631.64	631.77
C	34+44.636	13.500	631.71	631.88
D	34+54.636	13.500	631.77	631.97
E	34+64.636	13.500	631.82	632.03
F	34+74.636	13.500	631.86	632.06
G	34+84.636	13.500	631.89	632.07
H	34+94.636	13.500	631.92	632.06
I	35+04.636	13.500	631.93	632.02
J	35+14.636	13.500	631.95	632.00
K	35+24.636	13.500	631.97	632.00
⊗ Brg. Pier 1	35+37.636	13.500	632.00	632.00
L	35+47.636	13.500	632.02	632.02
M	35+57.636	13.500	632.04	632.04
N	35+67.636	13.500	632.06	632.07
O	35+77.636	13.500	632.08	632.10
P	35+87.636	13.500	632.10	632.12
Q	35+97.636	13.500	632.12	632.14
⊗ S. Brg. Pier 2	36+08.639	13.500	632.14	632.14
⊗ N. Brg. Pier 2	36+11.033	13.500	632.14	632.14
R	36+21.033	13.500	632.16	632.16
S	36+31.033	13.500	632.18	632.18
T	36+41.033	13.500	632.20	632.20
U	36+51.033	13.500	632.22	632.22
V	36+61.033	13.500	632.24	632.24
W	36+71.033	13.500	632.26	632.26
X	36+81.033	13.500	632.28	632.28
Y	36+91.033	13.500	632.30	632.30
AA	37+01.033	13.500	632.32	632.32
BB	37+11.033	13.500	632.34	632.34
CC	37+21.033	13.500	632.36	632.36
DD	37+31.033	13.500	632.38	632.38
EE	37+41.033	13.500	632.40	632.40
FF	37+51.033	13.500	632.42	632.42
GG	37+61.033	13.500	632.44	632.44
⊗ Brg. N. Abut.	37+75.536	13.500	632.47	632.47
Bk. of N. Abut.	37+78.196	13.500	632.48	632.48



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams

LEFT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	33+93.39	-15.4167	631.23
B	34+03.39	-15.4167	631.33
C	34+13.39	-15.4167	631.43
D	34+23.27	-15.0833	631.52

LEFT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	33+91.78	-11	631.30
B	34+01.78	-11	631.40
C	34+11.78	-11	631.50
D	34+21.78	-11	631.59

CENTERLINE

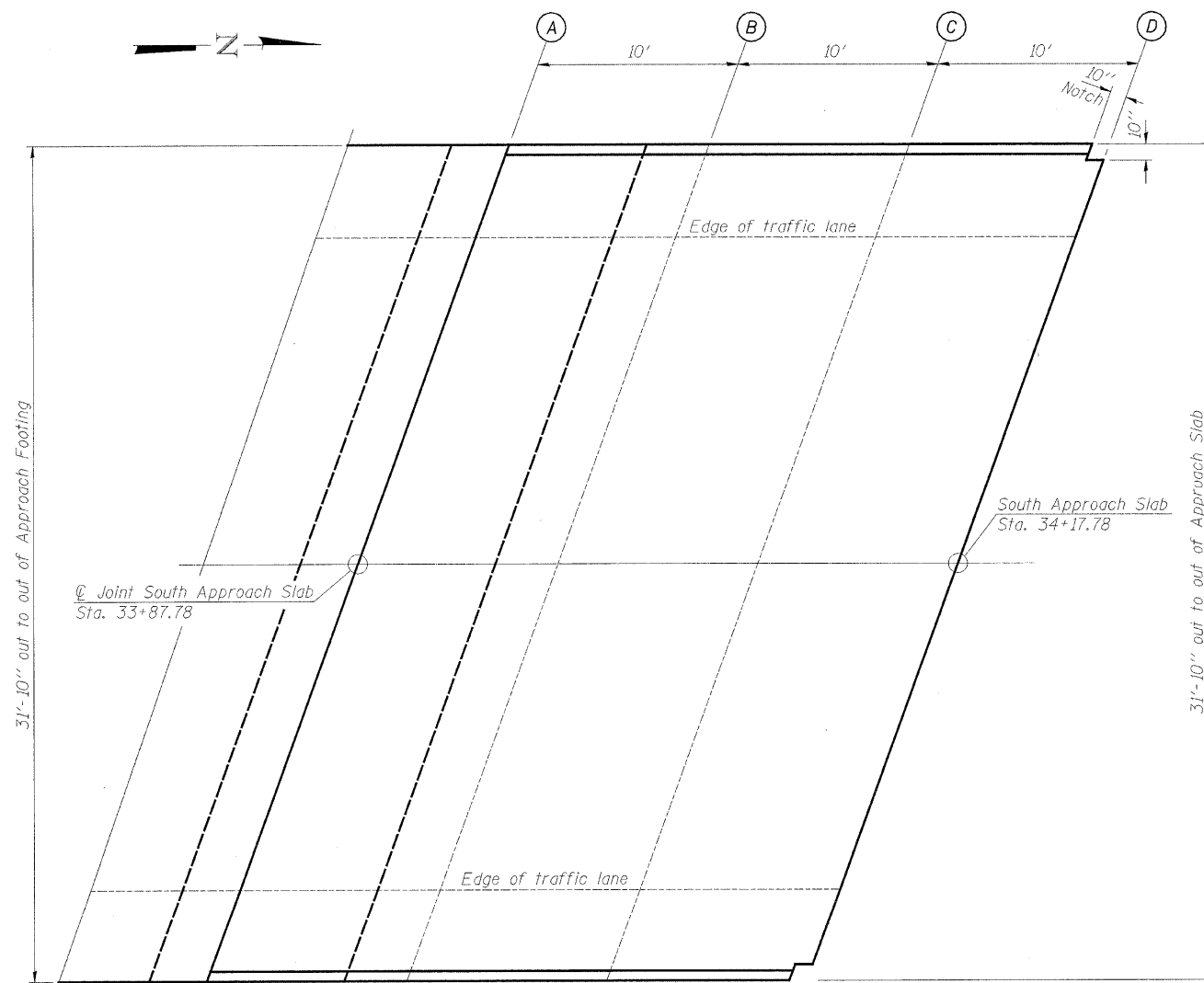
Location	Station	Offset	Theoretical Grade Elevations
A	33+87.78	0	631.47
B	33+97.78	0	631.58
C	34+07.78	0	631.68
D	34+17.78	0	631.77

RIGHT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	33+83.78	11	631.21
B	33+93.78	11	631.32
C	34+03.78	11	631.42
D	34+13.78	11	631.52

RIGHT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	33+82.17	15.4167	631.10
B	33+92.17	15.4167	631.22
C	34+02.17	15.4167	631.32
D	34+12.29	15.0833	631.42



PLAN

TOP OF APPROACH SLAB ELEVATIONS - SOUTH  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247  
 WHA #1066D05

STRUCTURAL SHEET NO. 7B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	73
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

LEFT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	37+87.71	-15.0833	632.45
B	37+97.83	-15.4167	632.47
C	38+07.83	-15.4167	632.49
D	38+17.83	-15.4167	632.51

LEFT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	37+86.22	-11	632.53
B	37+96.22	-11	632.55
C	38+06.22	-11	632.57
D	38+16.22	-11	632.59

CENTERLINE

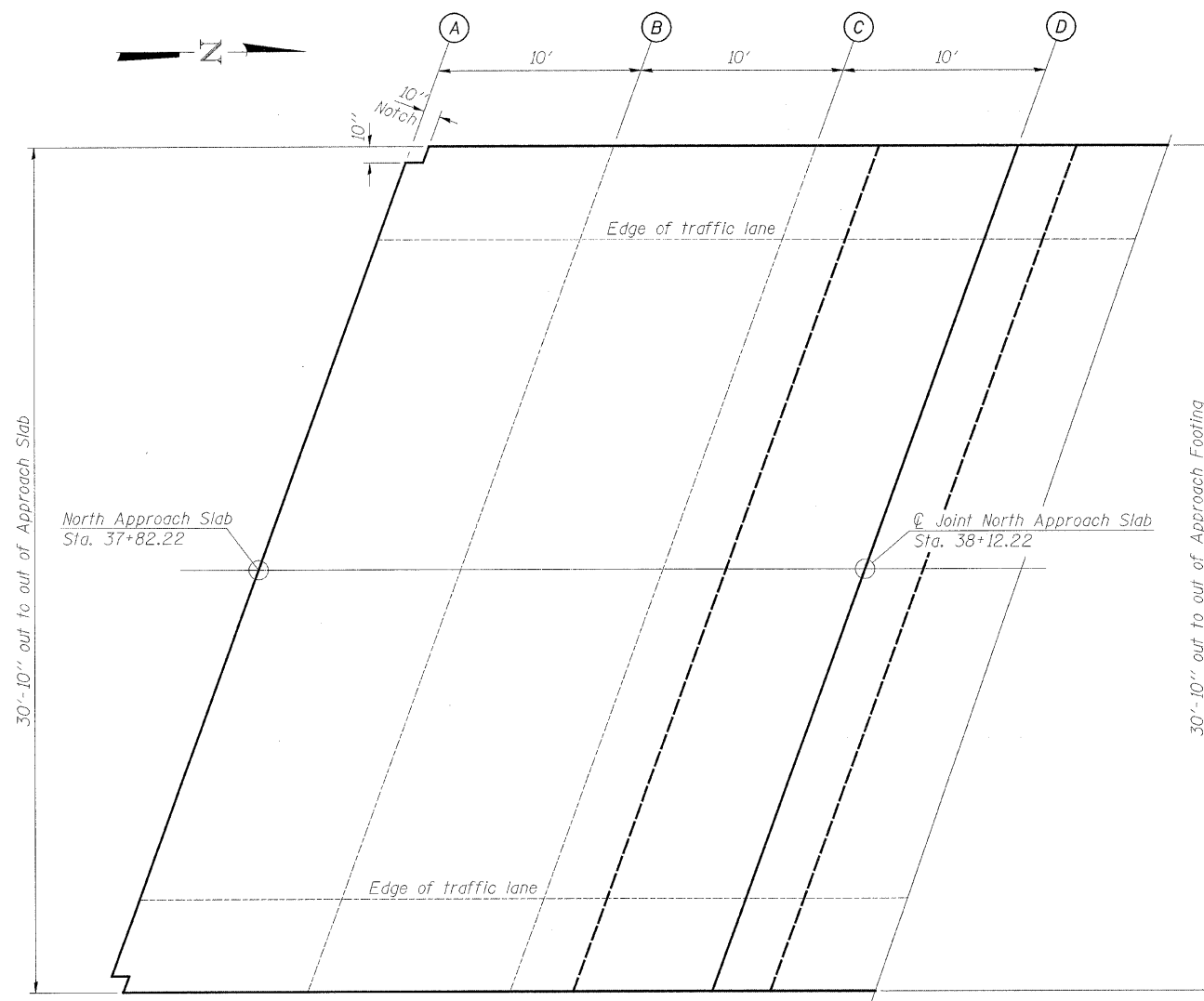
Location	Station	Offset	Theoretical Grade Elevations
A	37+82.22	0	632.75
B	37+92.22	0	632.77
C	38+02.22	0	632.78
D	38+12.22	0	632.80

RIGHT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	37+78.22	11	632.52
B	37+88.22	11	632.54
C	37+98.22	11	632.56
D	38+08.22	11	632.58

RIGHT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	37+76.73	15.0833	632.43
B	37+86.61	15.4167	632.45
C	37+96.61	15.4167	632.47
D	38+06.61	15.4167	632.48

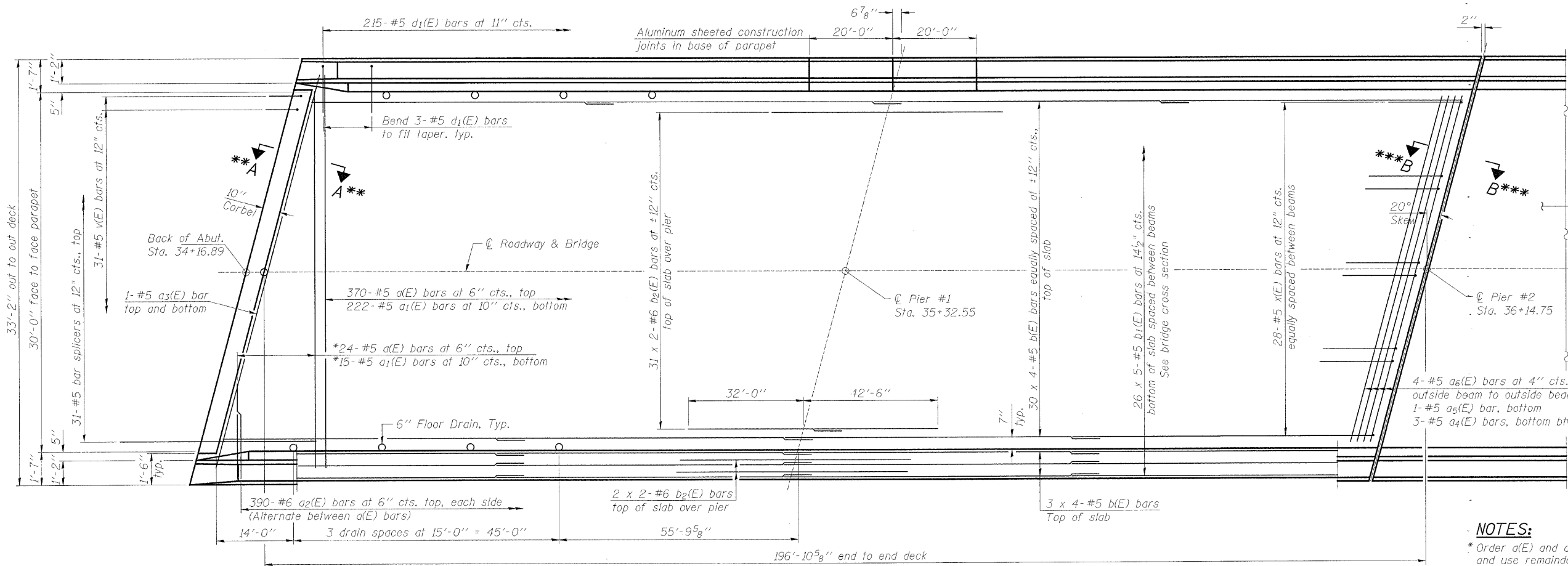


PLAN

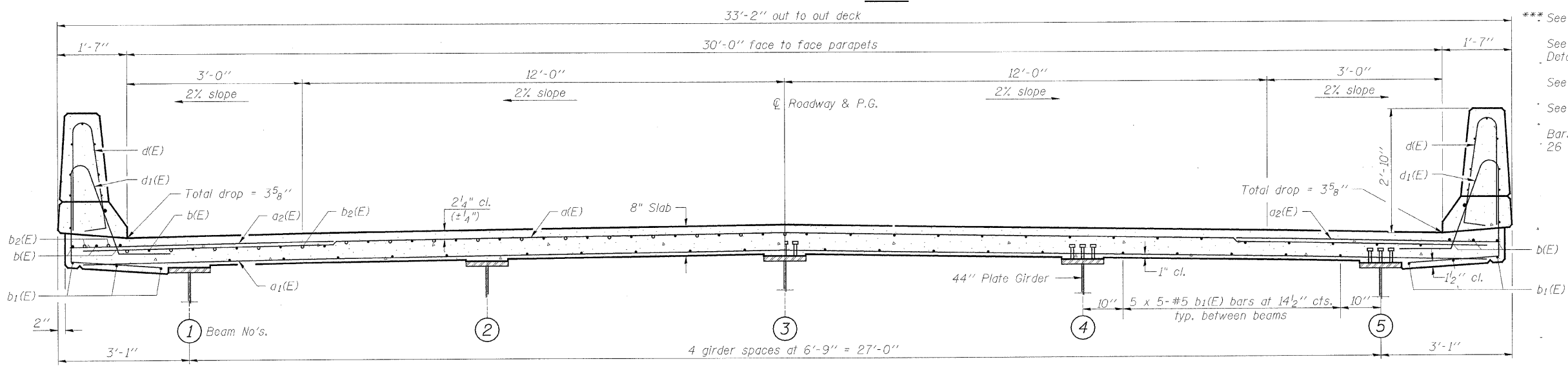
TOP OF APPROACH SLAB ELEVATIONS - NORTH  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247  
 WHA #1066D05

STRUCTURAL SHEET NO. 8B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	74
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					





**PLAN**



**CROSS SECTION**  
(Looking North)

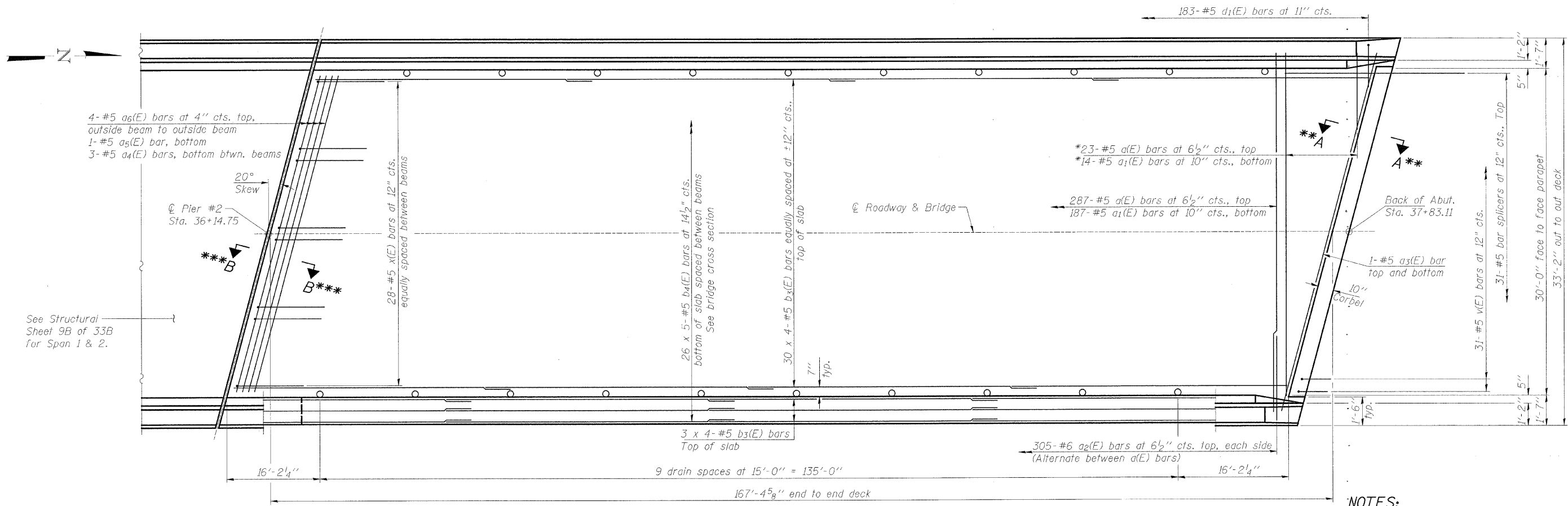
- NOTES:**
- \* Order d(E) and a<sub>1</sub>(E) bars full length, cut to fit skew and use remainder of bars in opposite end.
  - \*\* See Structural Sheet 13B of 33B for Sections A-A.
  - \*\*\* See Structural Sheet 11B of 33B for Sections B-B.
  - See Structural Sheet 11B of 33B for Superstructure Details - Spans 1 & 2.
  - See Structural Sheet 12B of 33B for Bill of Material.
  - See Structural Sheet 11B of 33B for parapet reinforcement.
  - Bars indicated thus 26 x 5-#5 etc. indicates 26 lines of bars with 5 lengths per line.

**SUPERSTRUCTURE - SPANS 1 & 2**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

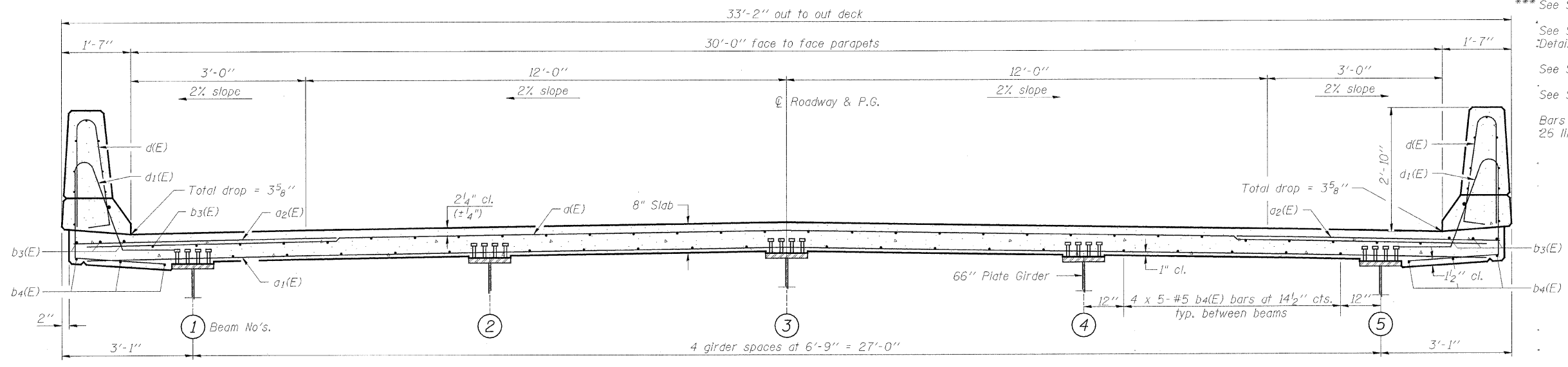
MIN. LAP SIZE	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

STRUCTURAL SHEET NO. 9B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	75
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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**PLAN**



**CROSS SECTION**  
(Looking North)

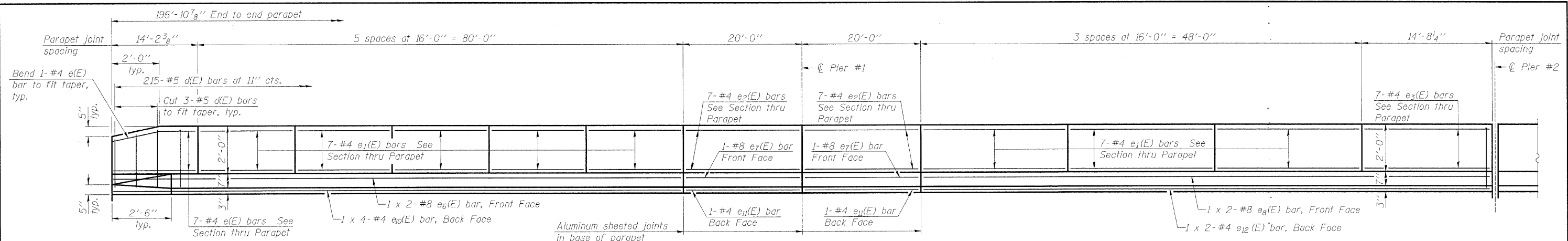
- NOTES:**
- \* Order a(E) and a<sub>1</sub>(E) bars full length, Cut to fit skew and use remainder of bars in opposite end.
  - \*\* See Structural Sheet 14B of 33B for Sections A-A.
  - \*\*\* See Structural Sheet 11B of 33B for Sections B-B.
  - See Structural Sheet 12B of 33B for Superstructure Details - Spans 3.
  - See Structural Sheet 12B of 33B for Bill of Material.
  - See Structural Sheet 12B of 33B for parapet reinforcement.
  - Bars indicated thus 26 x 5-#5 etc. indicates 26 lines of bars with 5 lengths per line.

**SUPERSTRUCTURE - SPAN 3**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

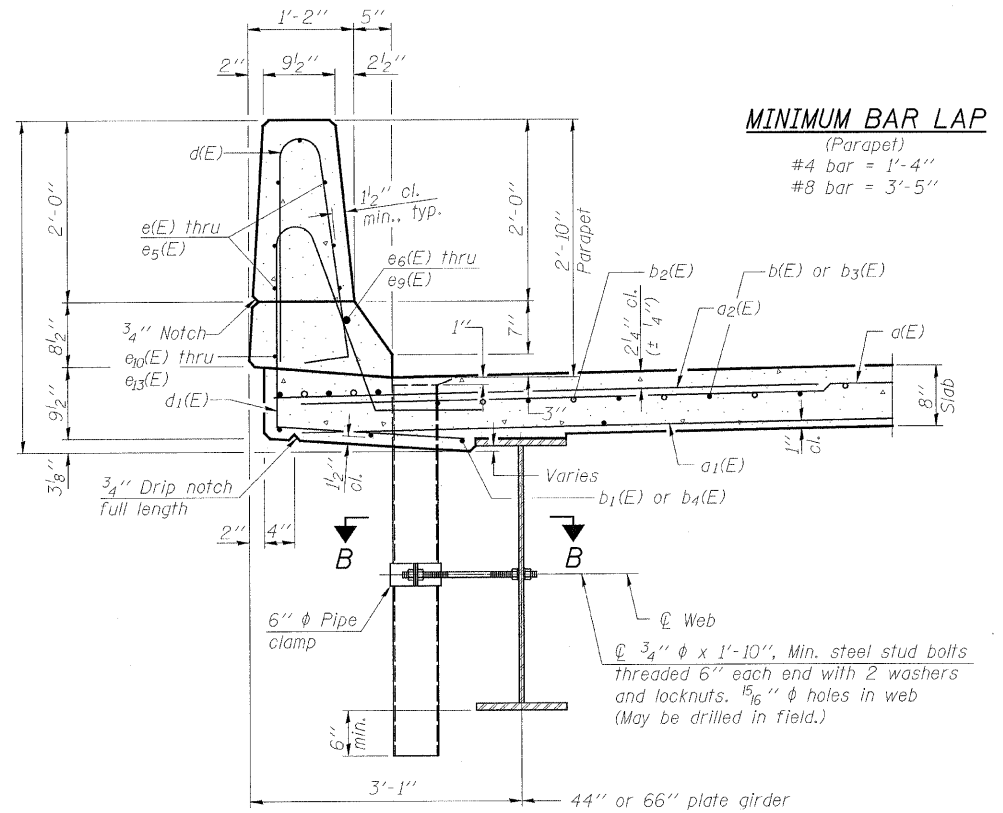
MIN. LAP SIZE	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

STRUCTURAL SHEET NO. 10B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	76
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

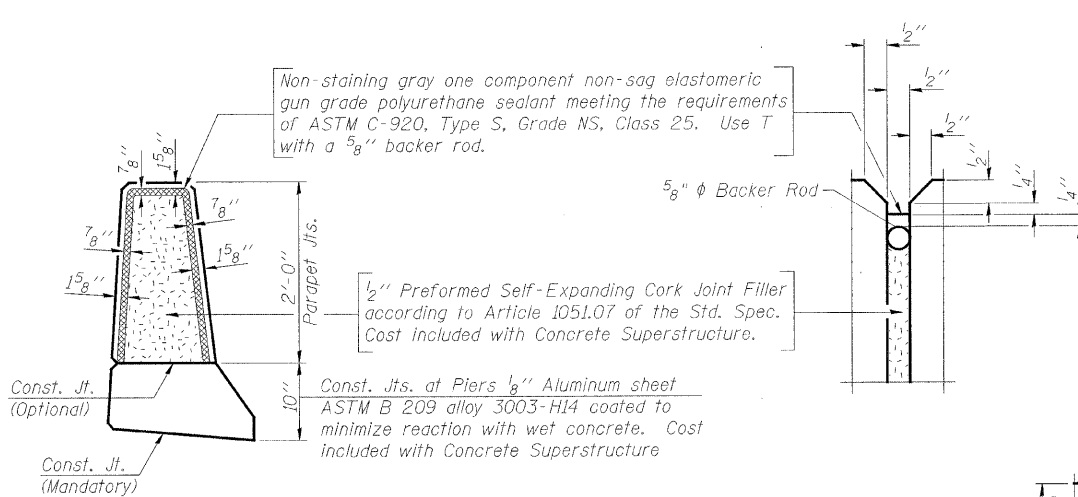
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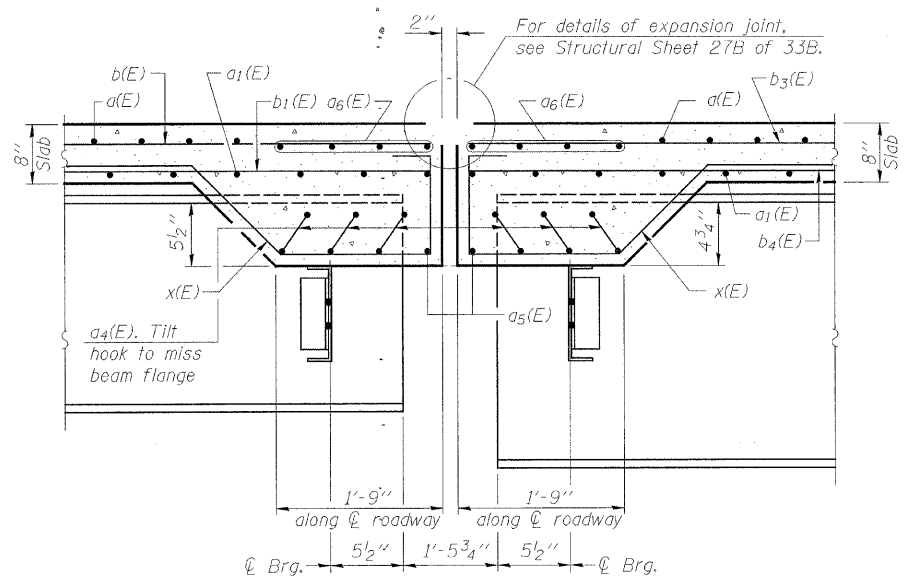
**INSIDE ELEVATION OF PARAPET**



**SECTION THRU PARAPET**

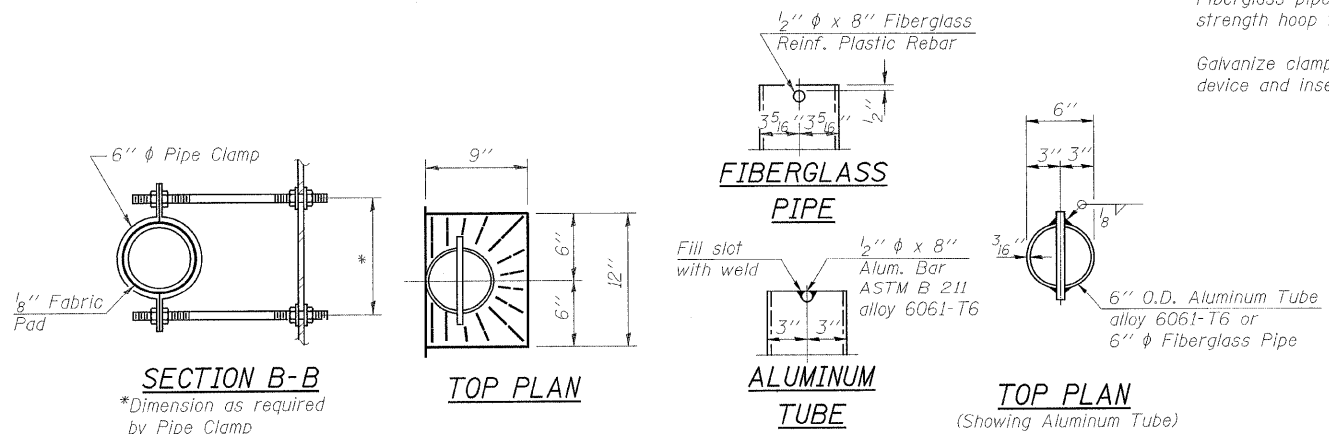


**PARAPET JOINT DETAILS**



**SECTION B-B**

**NOTES:**  
 Drains shall be located clear of all diaphragms.  
 The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.



**SECTION B-B**  
 \*Dimension as required by Pipe Clamp

**TOP PLAN**

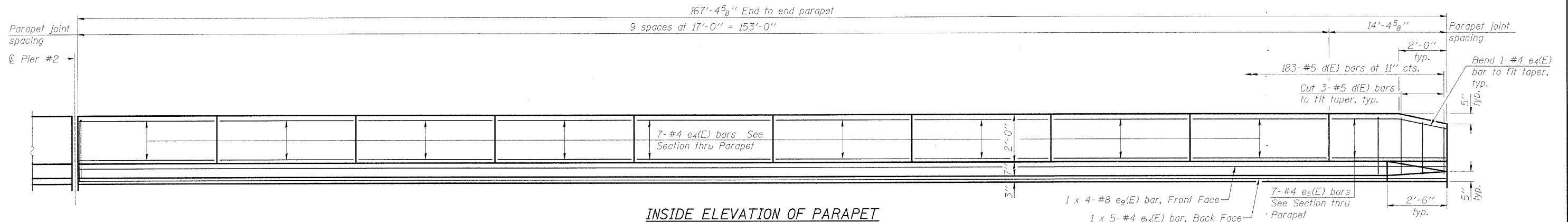
**ALUMINUM TUBE**

**TOP PLAN**  
 (Showing Aluminum Tube)

**SUPERSTRUCTURE DETAILS - SPANS 1 & 2  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247  
 WHA #1066D05**

STRUCTURAL SHEET NO. 11B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	77
			CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BRS-0188(118)		

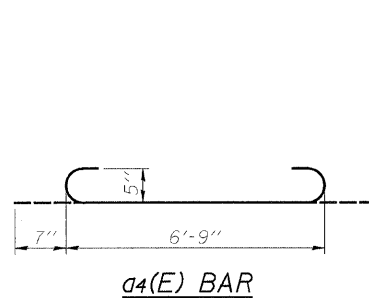
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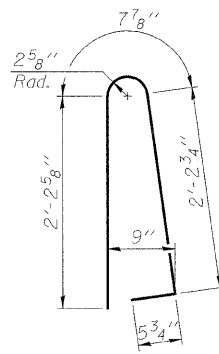
INSIDE ELEVATION OF PARAPET

**SUPERSTRUCTURE  
BILL OF MATERIAL**

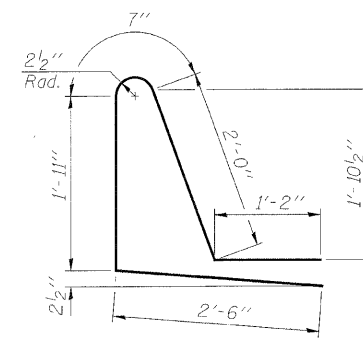
Bar	No.	Size	Length	Shape
a(E)	704	#5	32'-6"	—
a <sub>1</sub> (E)	438	#5	32'-6"	—
a <sub>2</sub> (E)	1,390	#6	6'-6"	—
a <sub>3</sub> (E)	4	#5	34'-11"	—
a <sub>4</sub> (E)	24	#5	7'-11"	—
a <sub>5</sub> (E)	2	#5	28'-4"	—
a <sub>6</sub> (E)	8	#5	34'-11"	—
b(E)	144	#5	51'-7"	—
b <sub>1</sub> (E)	130	#5	41'-11"	—
b <sub>2</sub> (E)	70	#6	39'-2"	—
b <sub>3</sub> (E)	144	#5	44'-2"	—
b <sub>4</sub> (E)	130	#5	36'-0"	—
d(E)	796	#5	5'-7"	⌒
d <sub>1</sub> (E)	796	#5	8'-2"	⌒
e(E)	14	#4	13'-10"	—
e <sub>1</sub> (E)	112	#4	15'-8"	—
e <sub>2</sub> (E)	28	#4	19'-8"	—
e <sub>3</sub> (E)	14	#4	14'-4"	—
e <sub>4</sub> (E)	126	#4	16'-8"	—
e <sub>5</sub> (E)	14	#4	14'-0"	—
e <sub>6</sub> (E)	4	#8	50'-4"	—
e <sub>7</sub> (E)	4	#8	19'-8"	—
e <sub>8</sub> (E)	4	#8	34'-7"	—
e <sub>9</sub> (E)	8	#8	46'-10"	—
e <sub>10</sub> (E)	8	#4	25'-5"	—
e <sub>11</sub> (E)	4	#4	19'-8"	—
e <sub>12</sub> (E)	4	#4	32'-6"	—
e <sub>13</sub> (E)	10	#4	35'-6"	—
m(E)	30	#6	11'-1"	—
m <sub>1</sub> (E)	20	#6	10'-9"	—
m <sub>2</sub> (E)	12	#6	6'-10"	—
m <sub>3</sub> (E)	6	#6	2'-11"	—
m <sub>4</sub> (E)	22	#6	34'-11"	—
s(E)	30	#5	9'-8"	⌒
s <sub>1</sub> (E)	30	#4	11'-4"	⌒
s <sub>2</sub> (E)	26	#5	11'-8"	⌒
s <sub>3</sub> (E)	26	#4	14'-6"	⌒
u(E)	72	#4	3'-8"	⌒
u <sub>1</sub> (E)	20	#6	8'-2"	⌒
v(E)	62	#5	3'-8"	⌒
x(E)	56	#5	6'-5"	⌒
Floor Drains	Each		28	
Concrete Superstructure	Cu. Yd.		441.5	
Bridge Deck Grooving	Sq. Yd.		1,133	
Protective Coat	Sq. Yd.		1,519	
Reinforcement Bars, Epoxy Coated	Pound		103,680	



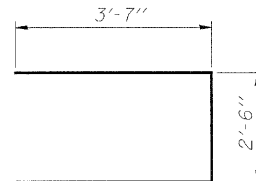
a<sub>4</sub>(E) BAR



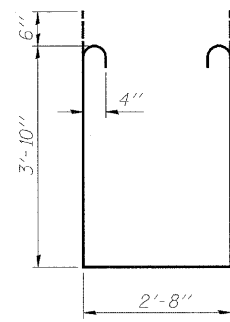
BAR d(E)



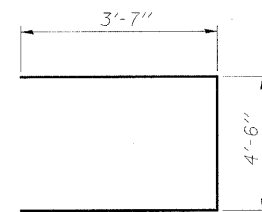
BAR d<sub>1</sub>(E)



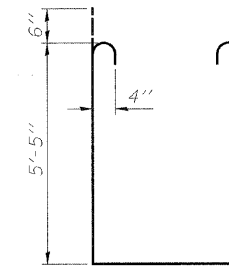
BAR s(E)



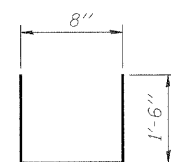
BAR s<sub>1</sub>(E)



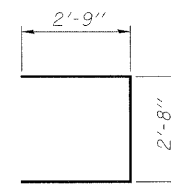
BAR s<sub>2</sub>(E)



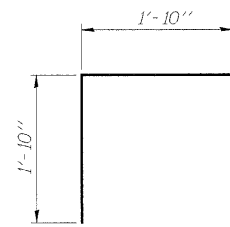
BAR s<sub>3</sub>(E)



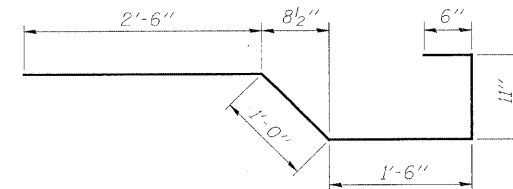
BAR u(E)



BAR u<sub>1</sub>(E)



BAR v(E)



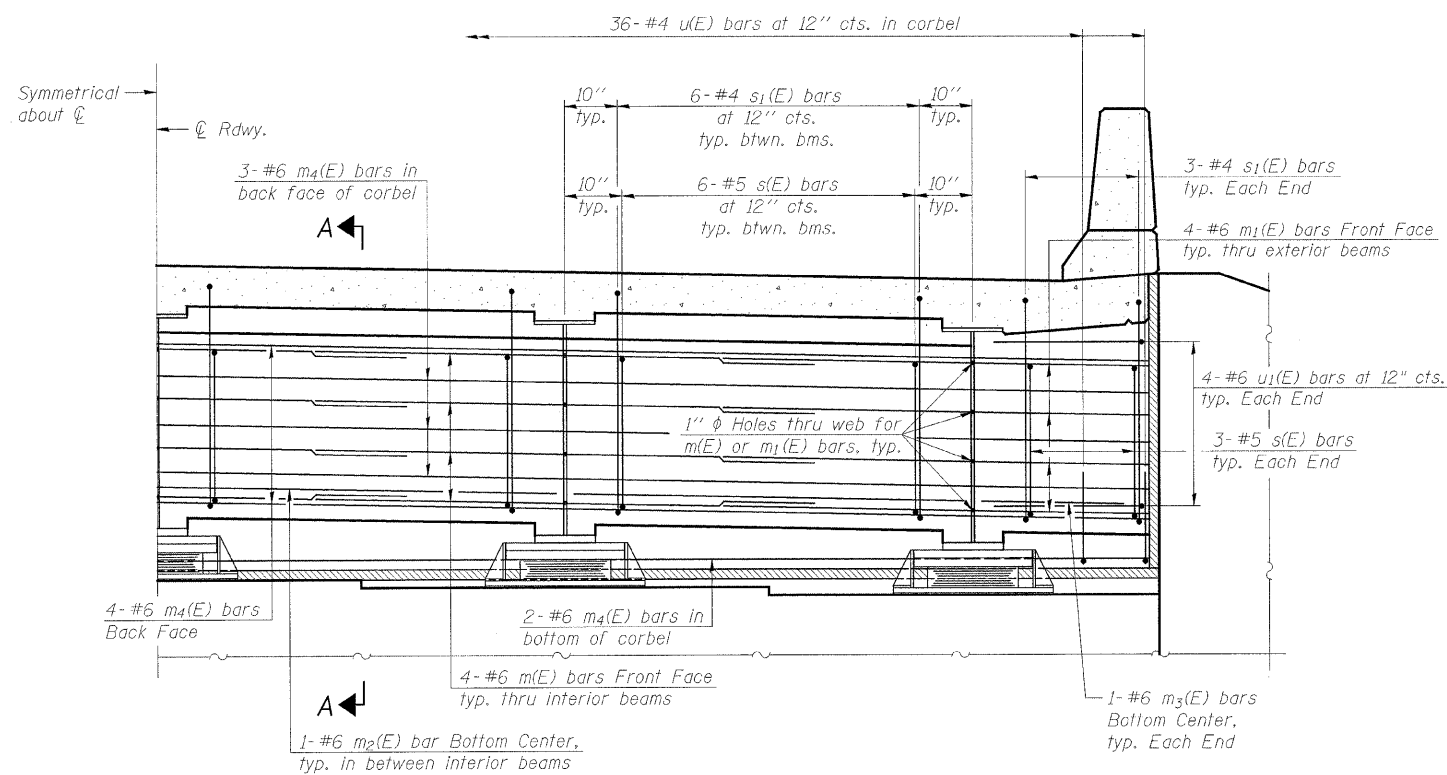
BAR x(E)

**SUPERSTRUCTURE DETAILS - SPAN 3  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05**

STRUCTURAL SHEET NO. 12B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	78
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

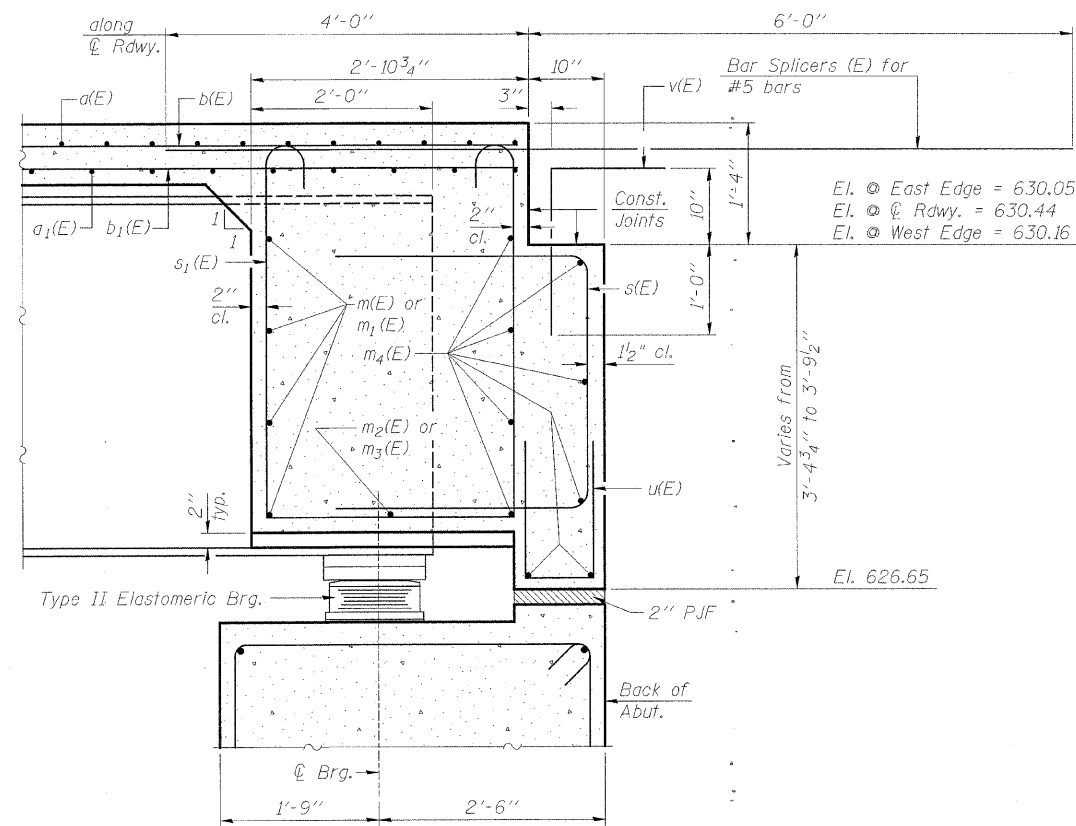
Bars indicated thus 1 x 4 - #8 etc. indicates 1 line of bars with 4 lengths per line.





**DIAPHRAGM ELEVATION AT ABUTMENT**

Concrete Side Retainer not shown for clarity, see Structural Sheet 23B of 33B.



**SECTION A-A**

Dimensions at right angles to abutment, except as shown.

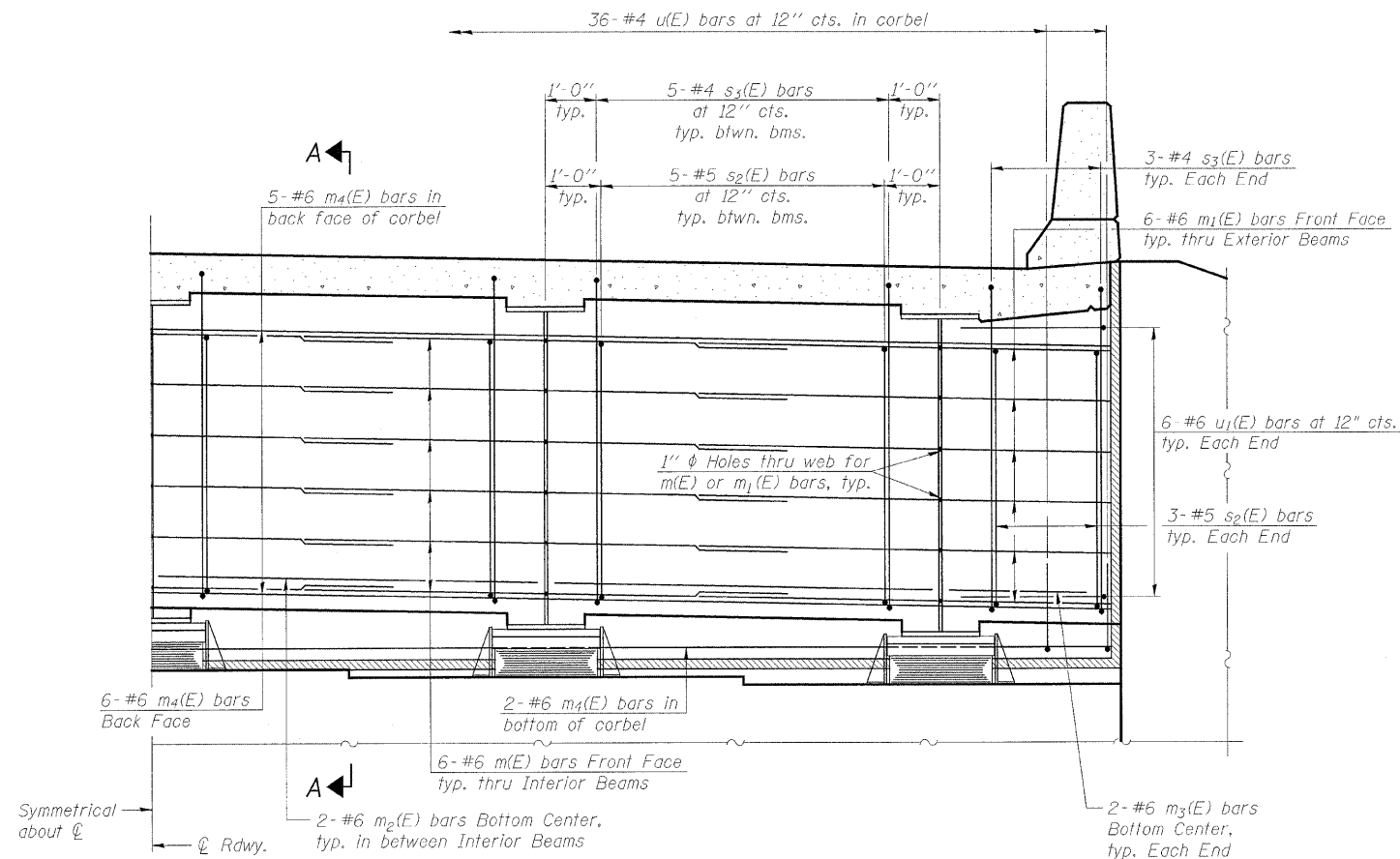
**NOTES:**

Reinforcement bars in diaphragm are billed with Superstructure on Structural Sheet 12B of 33B. For bar details, see Structural Sheet 12B of 33B. Concrete in diaphragm is included with Concrete Superstructure on Structural Sheet 12B of 33B.

MIN. BAR LAPS	
BAR	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

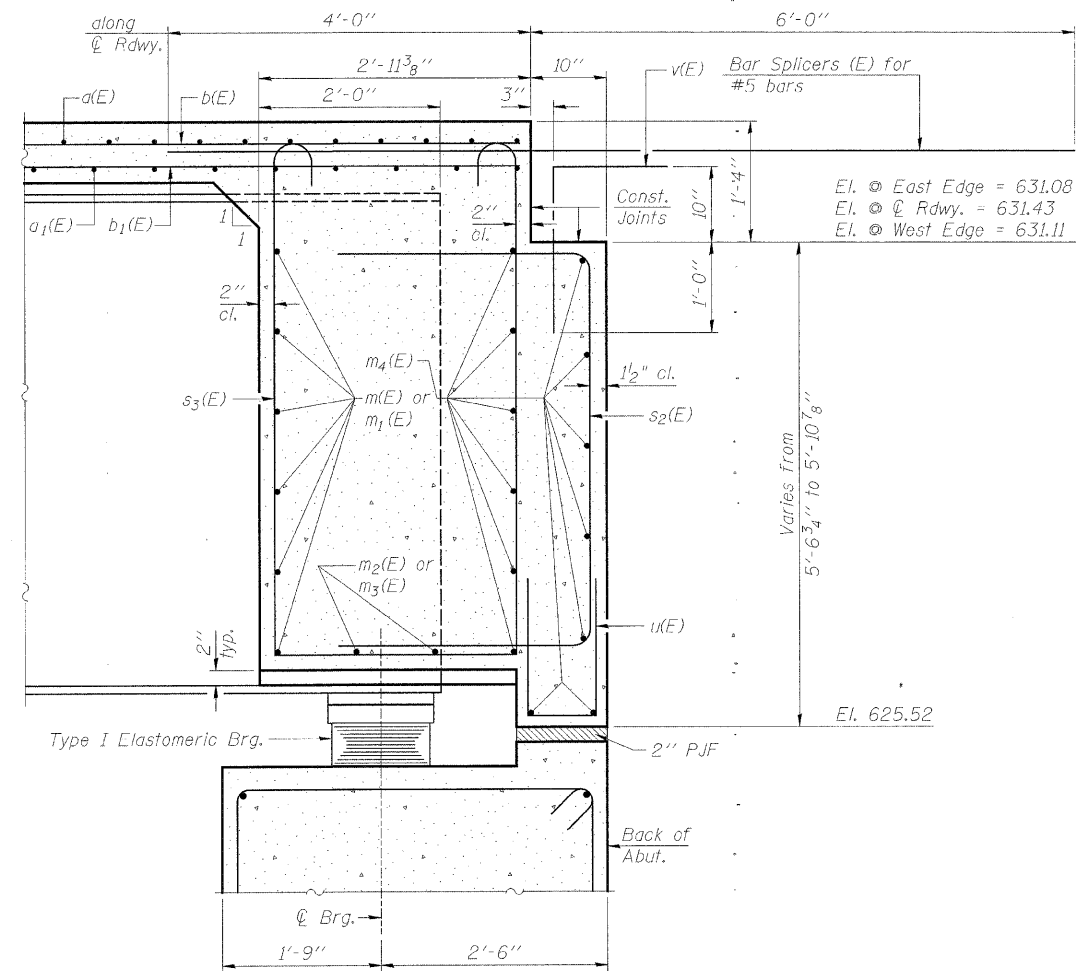
**DIAPHRAGM DETAILS - SOUTH ABUTMENT**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 13B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	79
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



**DIAPHRAGM ELEVATION AT ABUTMENT**

Concrete Side Retainer not shown for clarity, see Structural Sheet 24B of 33B.



**SECTION A-A**

Dimensions at right angles to abutment, except as shown.

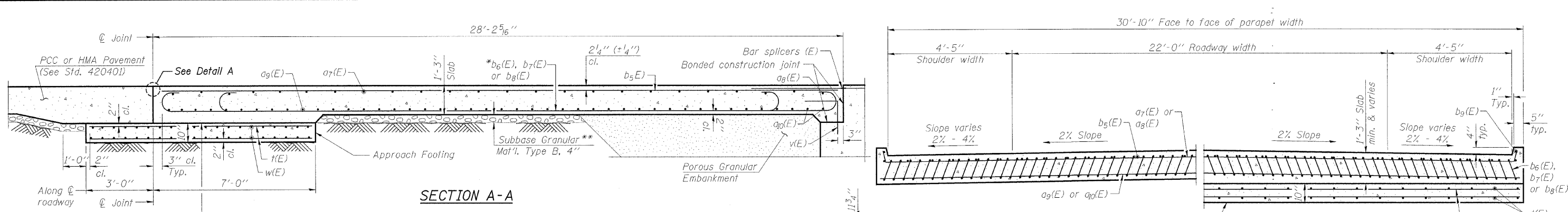
**NOTES:**

Reinforcement bars in diaphragm are billed with Superstructure on Structural Sheet 12B of 33B. For bar details, see Structural Sheet 12B of 33B. Concrete in diaphragm is included with Concrete Superstructure on Structural Sheet 12B of 33B.

MIN. BAR LAPS	
BAR	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

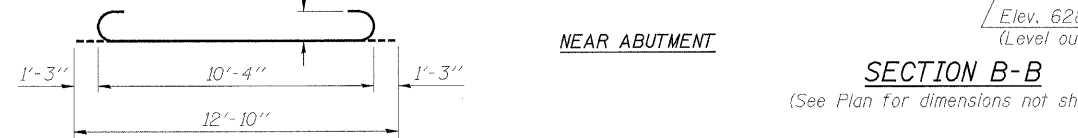
**DIAPHRAGM DETAILS - NORTH ABUTMENT**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 14B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	80
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



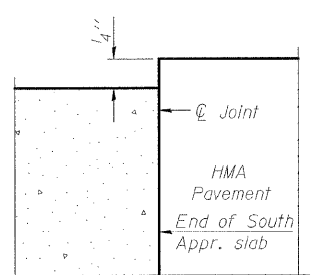
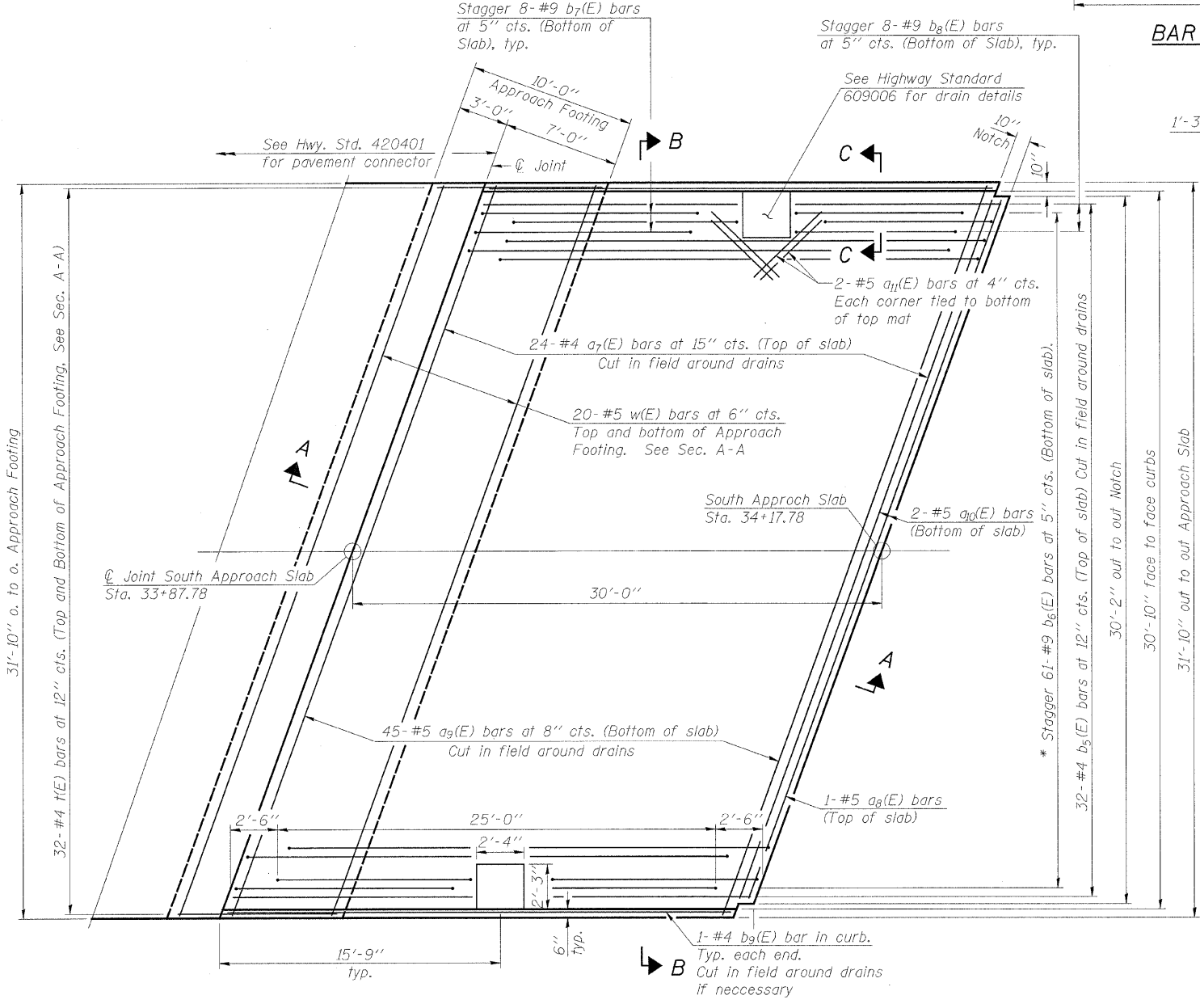
\*\* 10 mil. Polyethylene bond breaker on steel trowel finish

\* Tilt #9 b<sub>6,7</sub>, or b<sub>8</sub> (E) bars as required to maintain clearance.  
 \*\* Cost included with Concrete Superstructure.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>7</sub> (E)	24	#4	34'-1"	
a <sub>9</sub> (E)	1	#5	31'-9"	
a <sub>9</sub> (E)	45	#5	33'-6"	
a <sub>11</sub> (E)	2	#5	31'-9"	
a <sub>11</sub> (E)	8	#5	3'-0"	
b <sub>5</sub> (E)	32	#4	29'-8"	
b <sub>6</sub> (E)	61	#9	29'-9"	
b <sub>7</sub> (E)	16	#9	15'-0"	
b <sub>8</sub> (E)	16	#9	12'-10"	
b <sub>9</sub> (E)	4	#4	28'-9"	
t(E)	64	#4	9'-8"	
w(E)	40	#5	32'-6"	
Concrete Structures		Cu. Yd.	10.5	
Concrete Superstructure		Cu. Yd.	45.3	
Bridge Deck Grooving		Sq. Yd.	93	
Protective Coat		Sq. Yd.	106	
Reinforcement Bars, Epoxy Coated		Pound	12,410	
End Sections 12"		Each	2	
Pipe Drains 12"		Foot	16	
Type B Inlet Box, Standard 609006		Each	2	



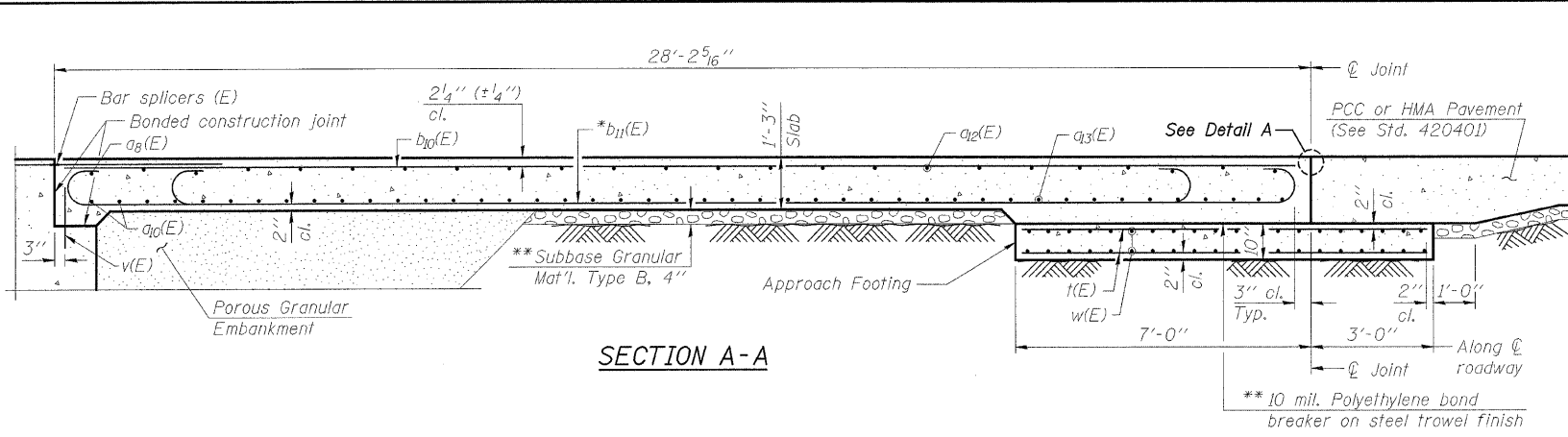
**NOTES:**

a<sub>7</sub>(E), a<sub>9</sub>(E), and w(E) bar spacings measured along  $\phi$  Rdwy.  
 Approach slab concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 Cost of excavation for approach footing included with Concrete Structures.  
 The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.  
 For v(E) bar details, see Structural Sheet 12B of 33B.  
 For bar splicer details, see Structural Sheet 29B of 33B.  
 For Porous Granular Embankment and drainage treatment details, see Structural Sheet 3B of 33B.

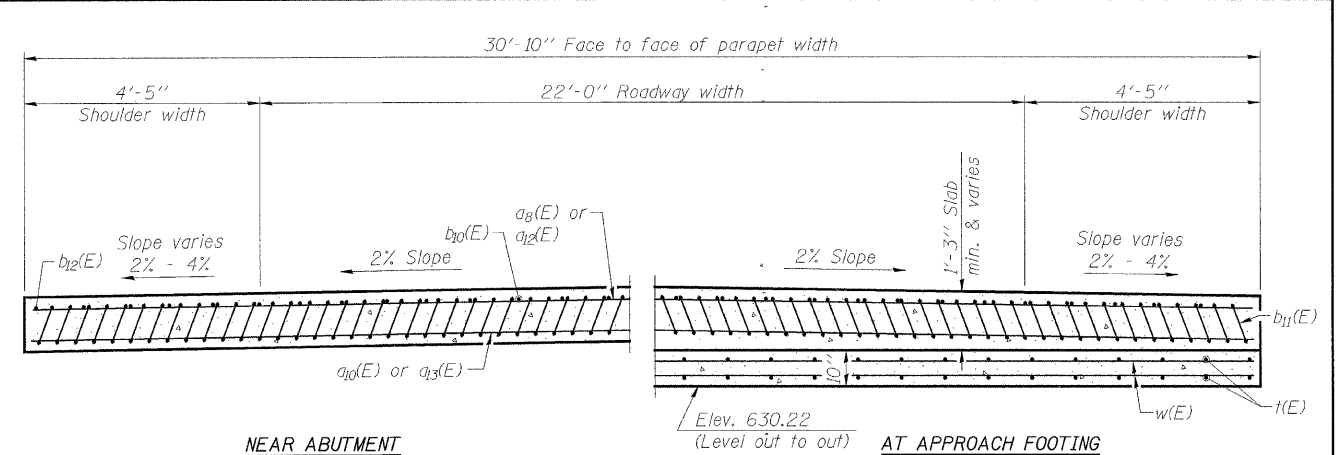
**SOUTH BRIDGE APPROACH SLAB DETAILS  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247  
 WHA #1066D05**

STRUCTURAL SHEET NO. 15B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	81
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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SECTION A-A

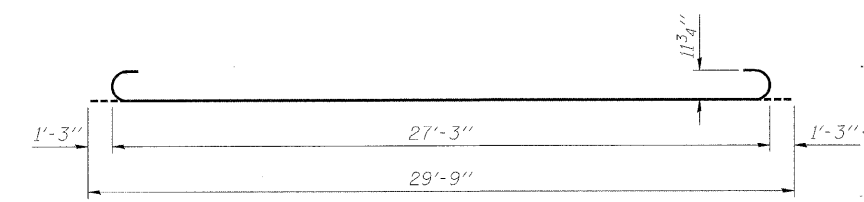


NEAR ABUTMENT

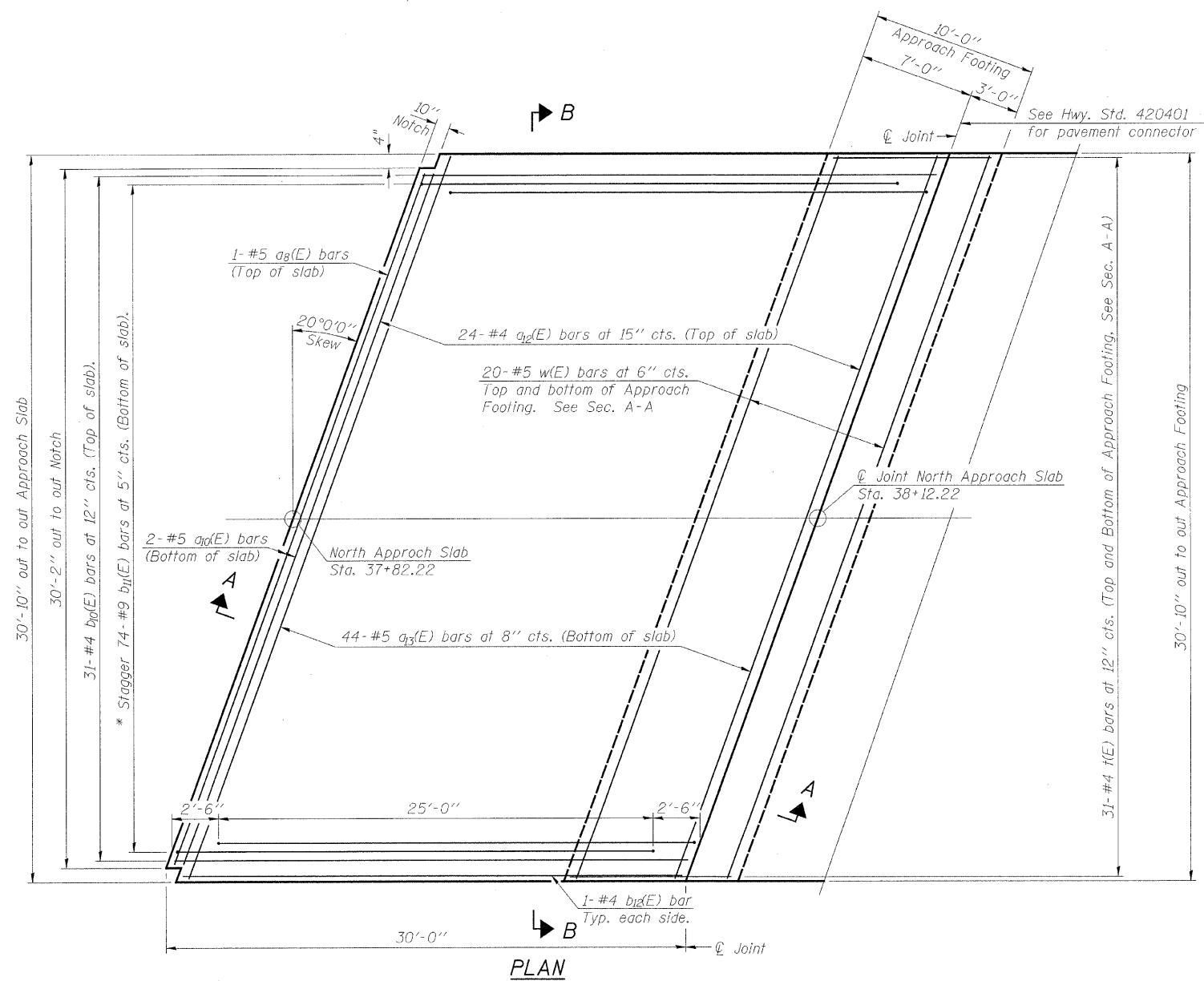
SECTION B-B

(See Plan for dimensions not shown)

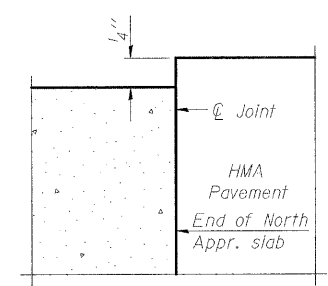
- \* Tilt #9 b11(E) bars as required to maintain clearance.
- \*\* Cost included with Concrete Superstructure.



BAR b11(E)



PLAN



FLEXIBLE PAVEMENT  
DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a8(E)	1	#5	31'-9"	—
a10(E)	2	#5	31'-9"	—
a12(E)	24	#4	32'-5"	—
a13(E)	44	#5	32'-5"	—
b10(E)	31	#4	29'-8"	—
b11(E)	74	#9	29'-9"	U
b12(E)	2	#4	28'-10"	—
t(E)	62	#4	9'-8"	—
w(E)	40	#5	32'-5"	—
Concrete Structures			Cu. Yd.	10.1
Concrete Superstructure			Cu. Yd.	44.8
Bridge Deck Grooving			Sq. Yd.	96
Protective Coat			Sq. Yd.	103
Reinforcement Bars, Epoxy Coated			Pound	12,000

NOTES:

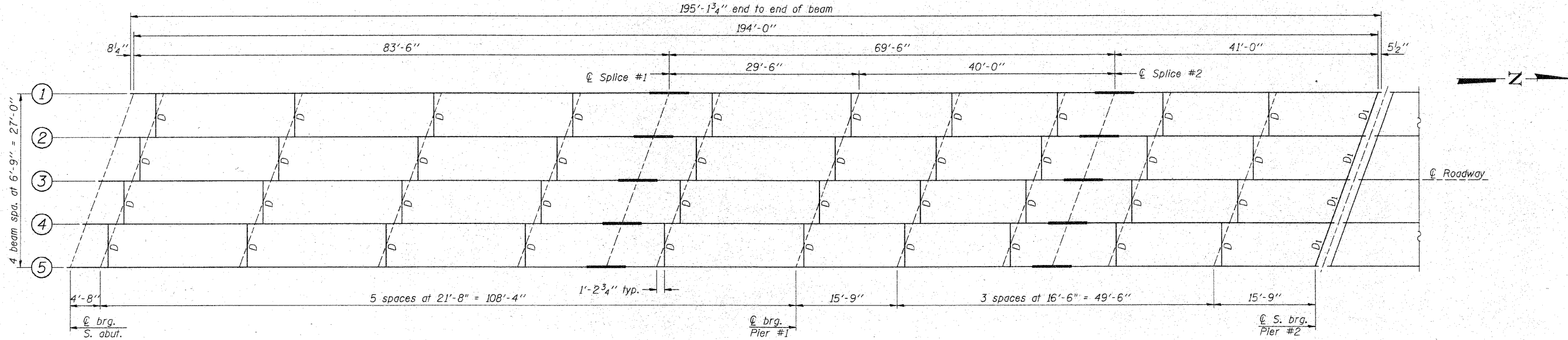
- a12(E), a13(E), and w(E) bar spacings measured along  $\phi$  Rdwy.
- Approach slab concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- Cost of excavation for approach footing included with Concrete Structures.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For v(E) bar details, see Structural Sheet 12B of 33B.
- For bar splicer details, see Structural Sheet 29B of 33B.
- For Porous Granular Embankment and drainage treatment details, see Structural Sheet 4B of 33B.

NORTH BRIDGE APPROACH SLAB DETAILS  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

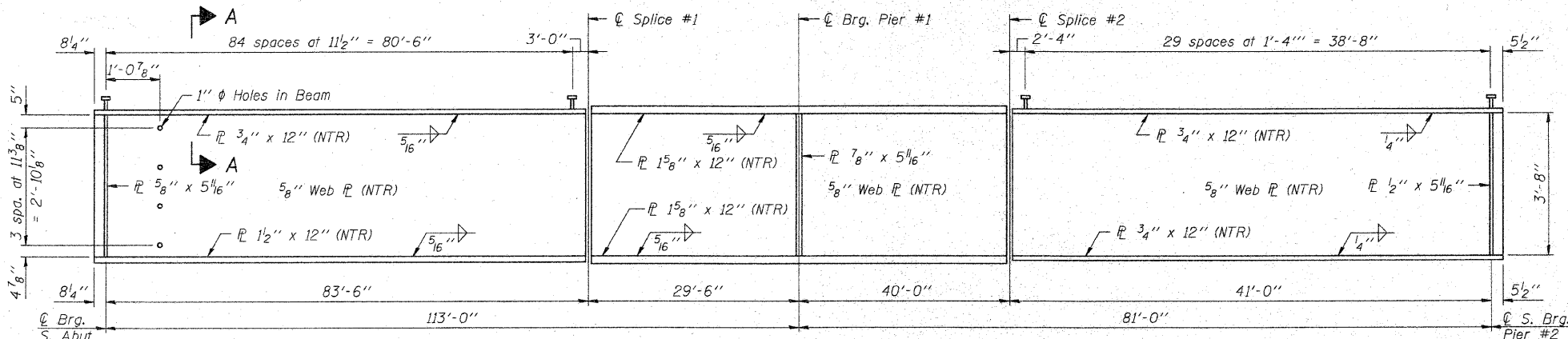
STRUCTURAL SHEET NO. 16B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	82
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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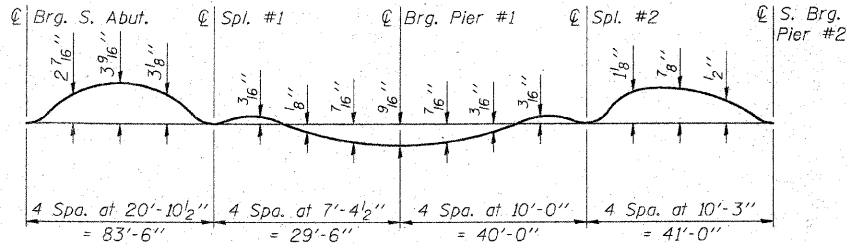




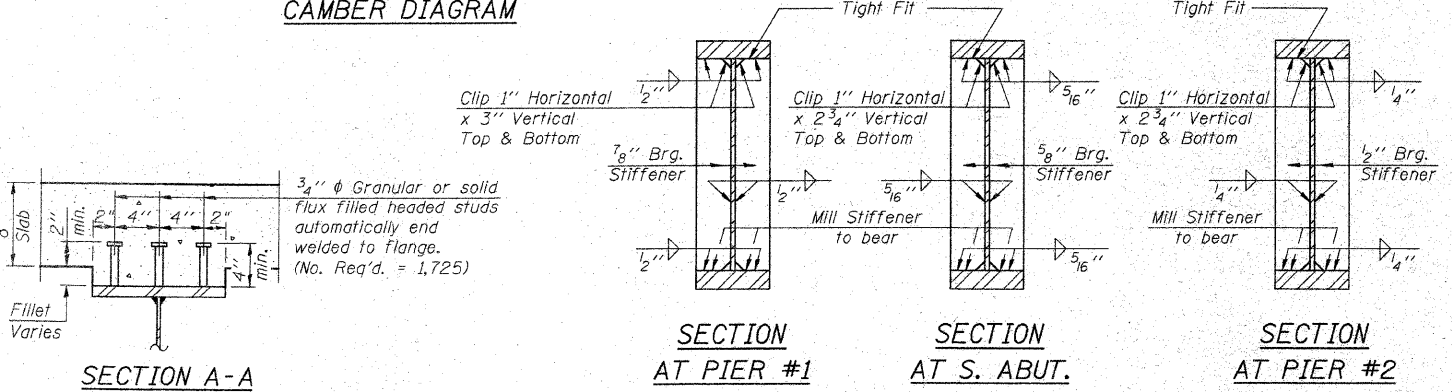
**FRAMING PLAN - SPAN 1 & SPAN 2**



**GIRDER ELEVATION**  
 "NTR" denotes plates to which notch toughness requirements are applicable.



**CAMBER DIAGRAM**



**INTERIOR GIRDER MOMENT TABLE**

		0.4 Span 1	Pier #1	0.6 Pier #2
$I_s$	(in <sup>4</sup> )	17,468	24,741	13,449
$I_c(n)$	(in <sup>4</sup> )	46,838	-	33,784
$I_c(3n)$	(in <sup>4</sup> )	33,166	-	24,820
$S_s$	(in <sup>3</sup> )	888	1,047	591
$S_c(n)$	(in <sup>3</sup> )	1,263	-	863
$S_c(3n)$	(in <sup>3</sup> )	1,143	-	776
DC1	(k/')	0.931	0.980	0.894
MDC1	(k)	895.5	-1,335.4	232.2
DC2	(k/')	0.180	0.180	0.180
MDC2	(k)	199.8	-188.0	67.6
DW	(k/')	0.338	0.338	0.338
MDW	(k)	375.2	-353.0	-127.0
M <sub>L</sub> - IM	(k)	1,420.0	-989.8	816.3
M <sub>u</sub> (Strength I)	(k)	4,417	4,166	1,994
Φ <sub>r</sub> M <sub>n</sub> , Φ <sub>r</sub> M <sub>nc</sub>	(k)	6,163	4,799	5,305
f <sub>s</sub> DC1	(ksi)	12.1	15.3	4.7
f <sub>s</sub> DC2	(ksi)	2.1	2.2	1.0
f <sub>s</sub> DW	(ksi)	3.9	4.0	2.0
f <sub>s</sub> 1.3(I+IM)	(ksi)	17.6	14.7	14.8
f <sub>s</sub> (Service II)	(ksi)	35.7	36.2	22.5
f <sub>s</sub> (Total)(Strength I)	(ksi)	47.3	47.7	30.0
V <sub>f</sub>	(k)	68.3	-	26.4

**TOP OF WEB ELEVATIONS (FOR FABRICATORS USE ONLY)**

Beam Number	South Abutment	Splice #1	Pier #1	Splice #2	S. of Brg. Pier #2
1	630.770	631.175	631.134	631.191	631.369
2	630.885	631.306	631.265	631.321	631.500
3	630.999	631.436	631.395	631.451	631.630
4	630.843	631.297	631.255	631.311	631.491
5	630.686	631.158	631.116	631.170	631.351

\* Compact sections  
 \*\* Non-Compact and slender sections

**INTERIOR GIRDER REACTION TABLE (SERVICE LOADS)**

	S. Abut.	Pier #1	S. of Pier #2
R <sub>DC1</sub>	(k)	76.2	121.3
R <sub>DC2</sub>	(k)	8.5	21.5
R <sub>DW</sub>	(k)	15.9	40.4
R <sub>L</sub> - IM	(k)	91.0	187.7
R <sub>Total</sub>	(k)	156.2	370.9

**BILL OF MATERIAL**

Item	Unit	Total
Stud Shear Connectors	Each	1,830
Furnishing and Erecting Structural Steel	L. Sum	1

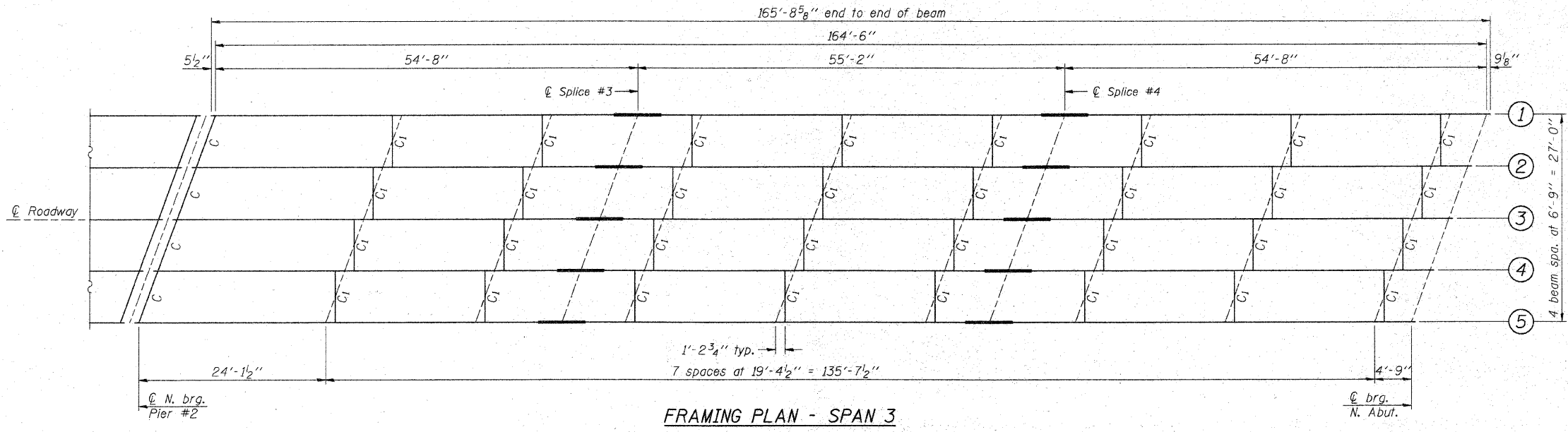
\*Includes Span 3 steel

**NOTES:**  
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

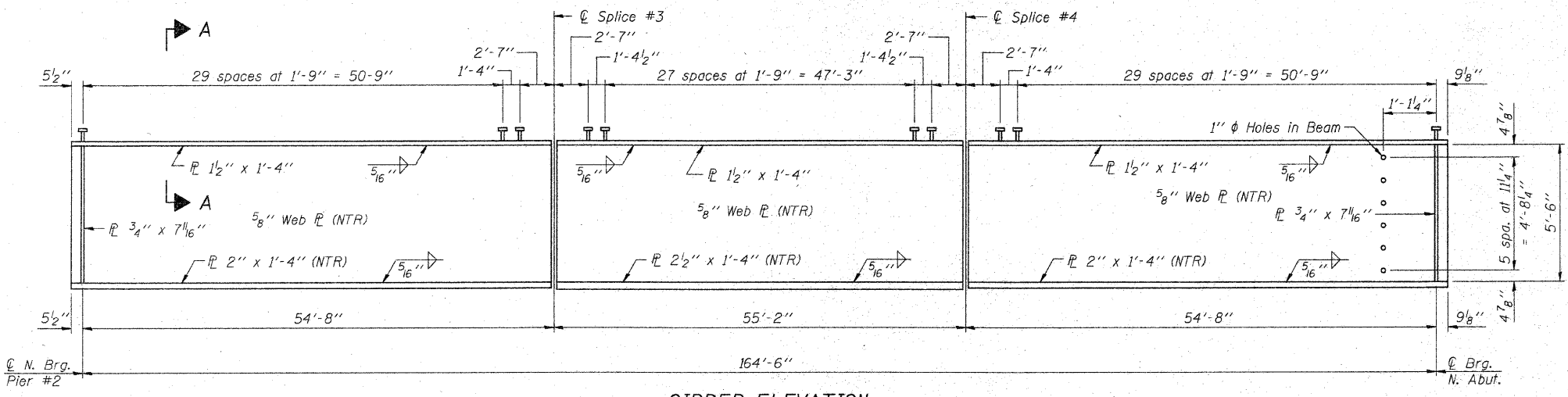
**FRAMING PLAN - SPANS 1 & 2**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD & THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 17B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	83
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BR5-0188(118)		
					CONTRACT NO. 87380

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FRAMING PLAN - SPAN 3



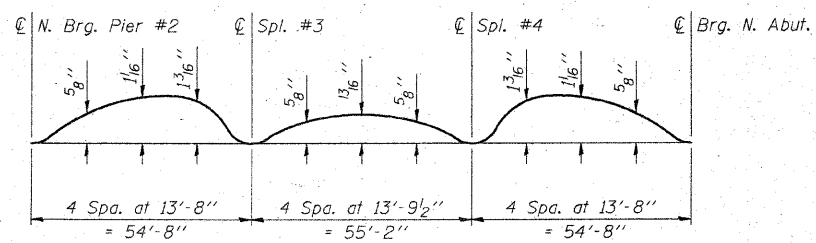
GIRDER ELEVATION  
"NTR" denotes plates to which notch toughness requirements are applicable.

INTERIOR GIRDER MOMENT TABLE		0.5 Span #3
$I_s$	(in <sup>4</sup> )	86,280
$I_c(n)$	(in <sup>4</sup> )	168,760
$I_c(3n)$	(in <sup>4</sup> )	123,936
$S_s$	(in <sup>3</sup> )	2,859
$S_c(n)$	(in <sup>3</sup> )	3,517
$S_c(3n)$	(in <sup>3</sup> )	3,235
DC1	(k/')	1.138
MDC1	(k)	3,800
DC2	(k/')	0.180
MDC2	(k)	608.8
DW	(k/')	0.338
MOW	(k)	1,143.3
M <sub>L</sub> + IM	(k)	2,946.7
M <sub>u</sub> (Strength I)	(k)	12,383
* $\phi_r M_n$ , $\phi_r M_{nc}$	(k)	16,336
$f_s$ DC1	(ksi)	15.9
$f_s$ DC2	(ksi)	2.3
$f_s$ DW	(ksi)	4.2
$f_s$ 1.3(4+IM)	(ksi)	13.1
$f_s$ (Service II)	(ksi)	35.5
$f_s$ (Total)(Strength I)	(ksi)	46.7
** V <sub>r</sub>	(k)	71.9

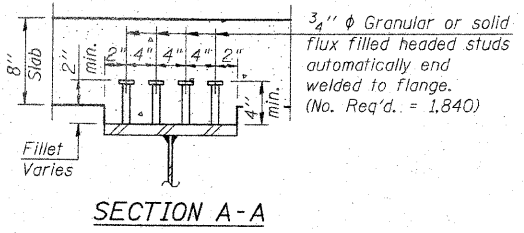
\* Compact sections  
\*\* Non-Compact and slender sections

TOP OF WEB ELEVATIONS (FOR FABRICATORS USE ONLY)				
Beam Number	☐ N. Brg Pier #2	Splice #3	Splice #4	☐ Brg. N. Abut.
1	631.307	631.811	631.921	631.636
2	631.437	631.941	632.051	631.766
3	631.567	632.071	632.181	631.896
4	631.427	631.931	632.041	631.756
5	631.287	631.791	631.901	631.616

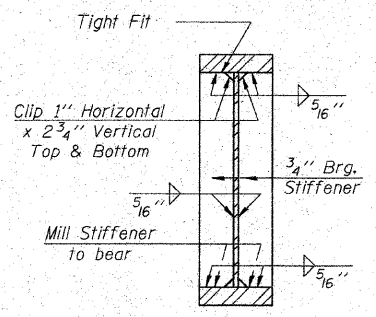
INTERIOR GIRDER REACTION TABLE (SERVICE LOADS)			
		S. ☐ Pier #2	N. Abut.
R <sub>DC1</sub>	(k)	91.8	135.3
R <sub>DC2</sub>	(k)	14.8	14.8
R <sub>DW</sub>	(k)	27.8	27.8
R <sub>L</sub> + IM	(k)	110.4	110.4
R <sub>Total</sub>	(k)	244.8	293.4



CAMBER DIAGRAM



SECTION A-A



SECTION  
AT N. ABUT. & ☐ N. BRG. PIER #2

BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	2,000

NOTES:

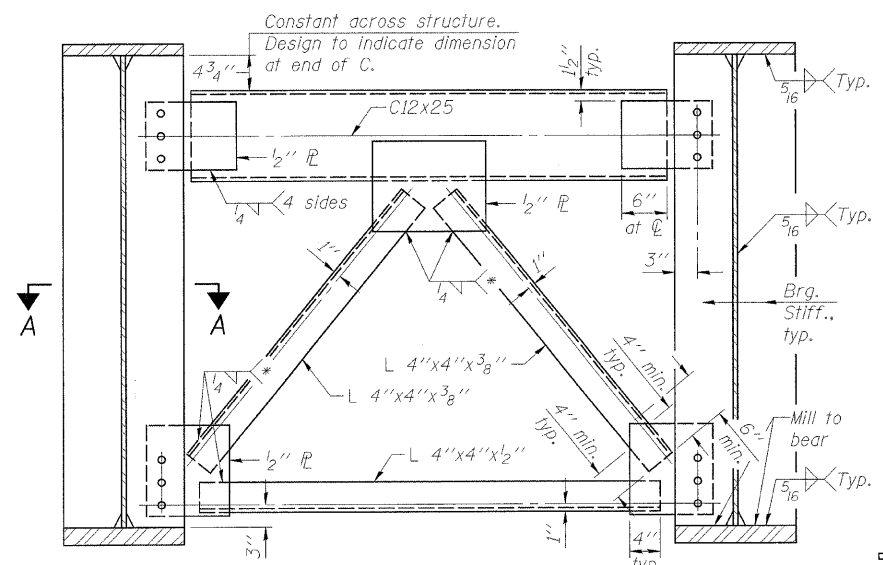
See Structural Sheet 19B of 33B for shear stud connector spacing on splice plates.

All cross frames shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.

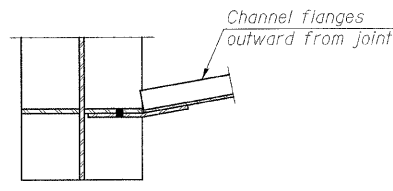
FRAMING PLAN - SPAN 3  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

STRUCTURAL SHEET NO. 18B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	84
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BR5-0188(118)					

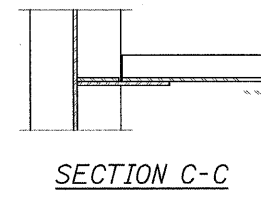
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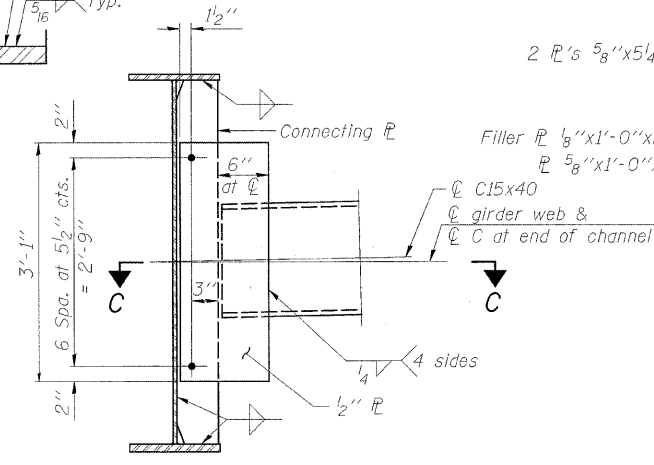
**END CROSS FRAME (C) - N. Q BRG. PIER #2**  
\*Weld on near side of 1/2" P.



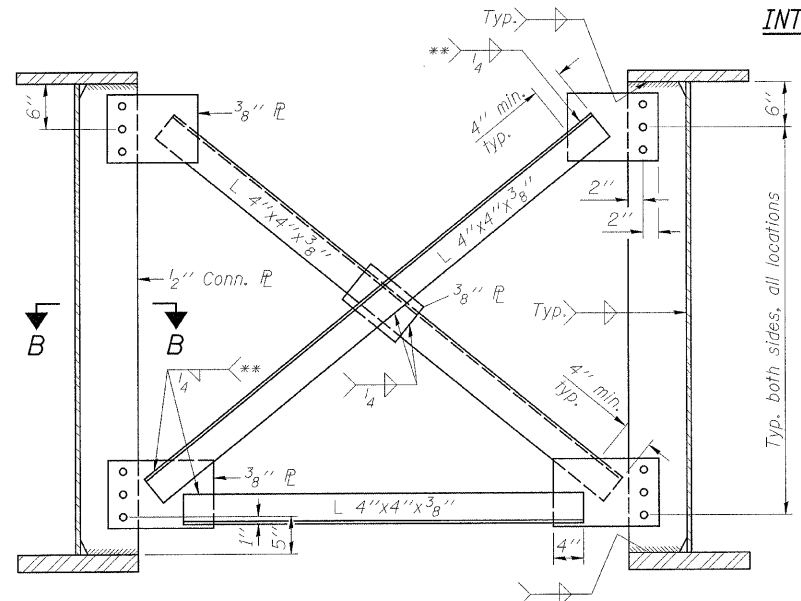
**SECTION A-A**



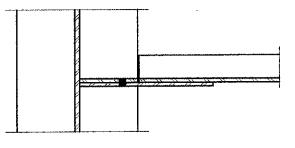
**SECTION C-C**



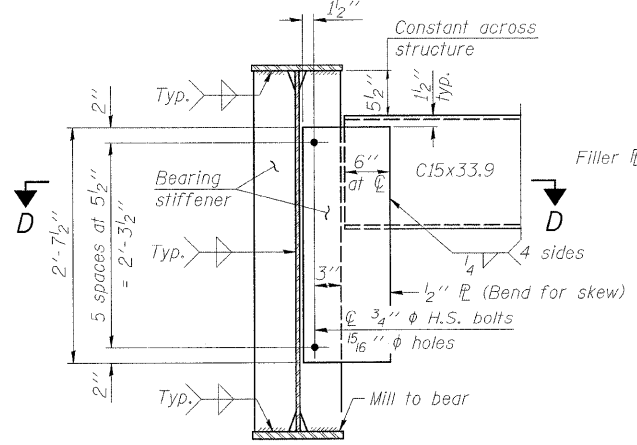
**INTERIOR DIAPHRAGM (D) - SPAN 1 & SPAN 2**



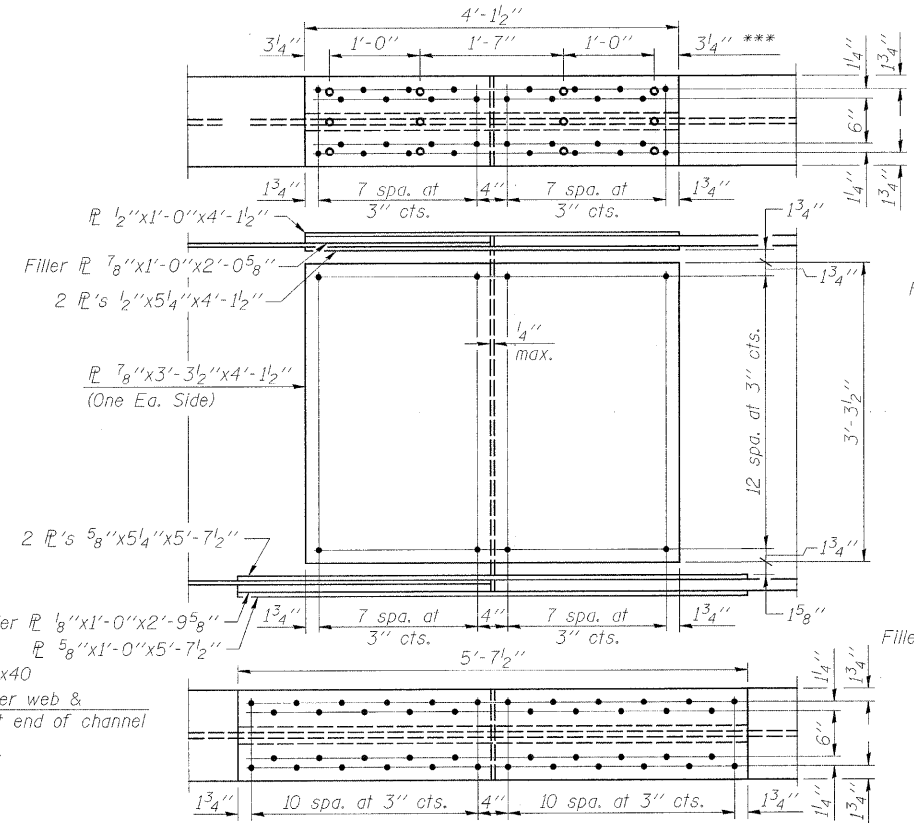
**INTERIOR CROSS FRAME (C1) - SPAN 3**  
\*\*Fillet weld angles along 3 sides on one face of gusset plate.



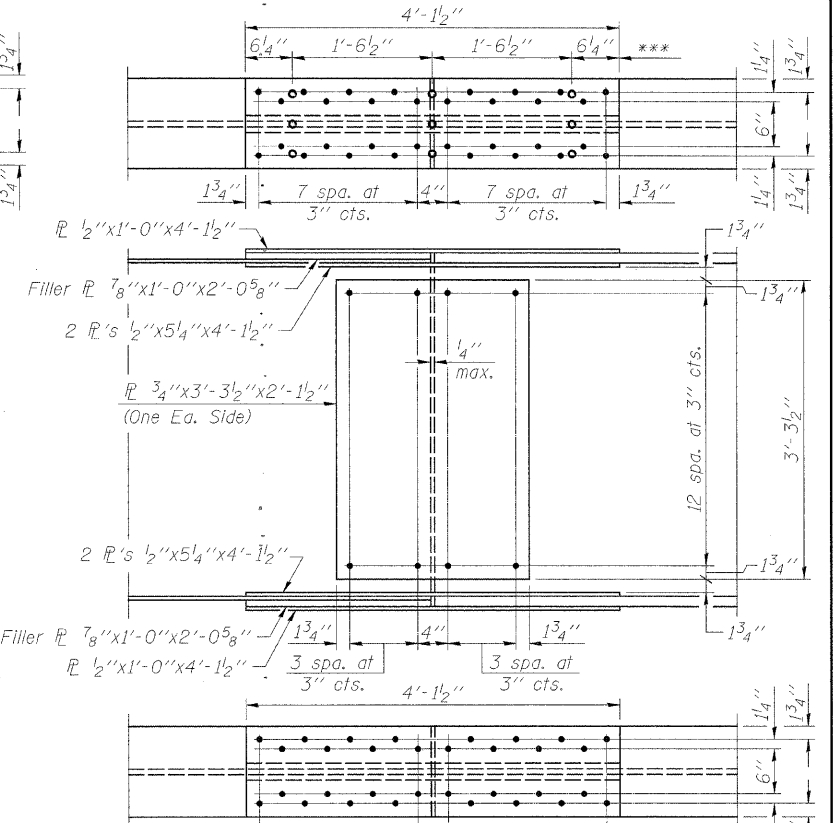
**SECTION B-B**



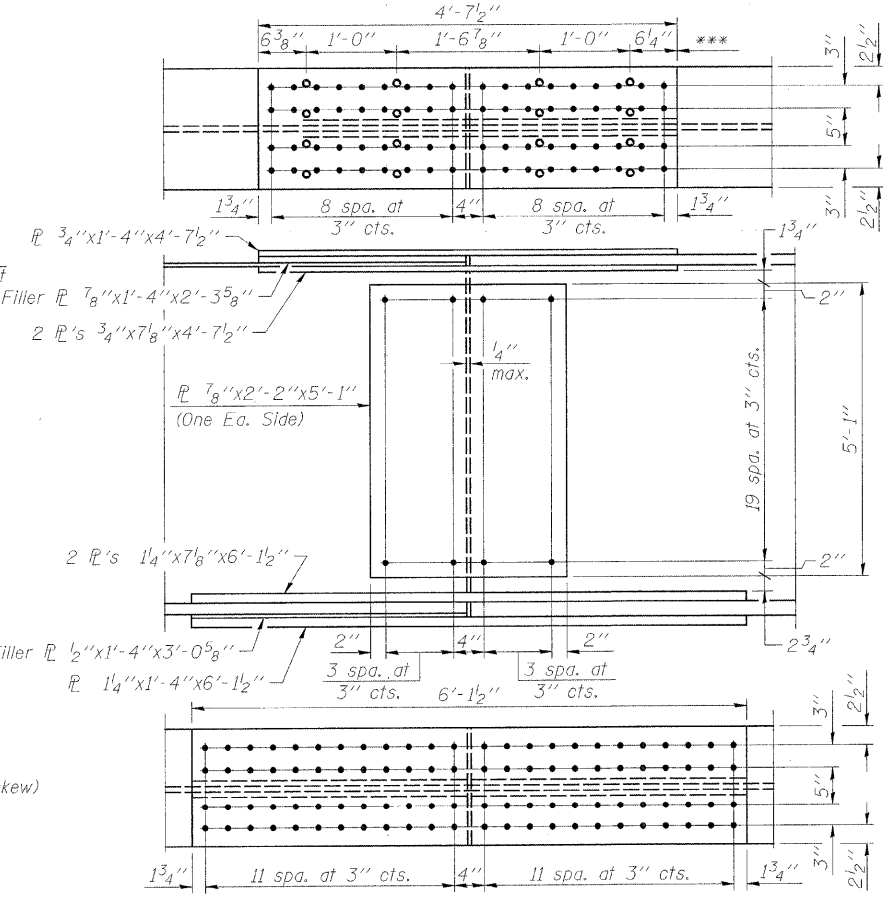
**END DIAPHRAGM (D1) - S. Q BRG. PIER #2**



**FIELD SPLICE #1 DETAIL**



**FIELD SPLICE #2 DETAIL**



**FIELD SPLICE #3 & #4**  
Field Splice #4 mirrored.

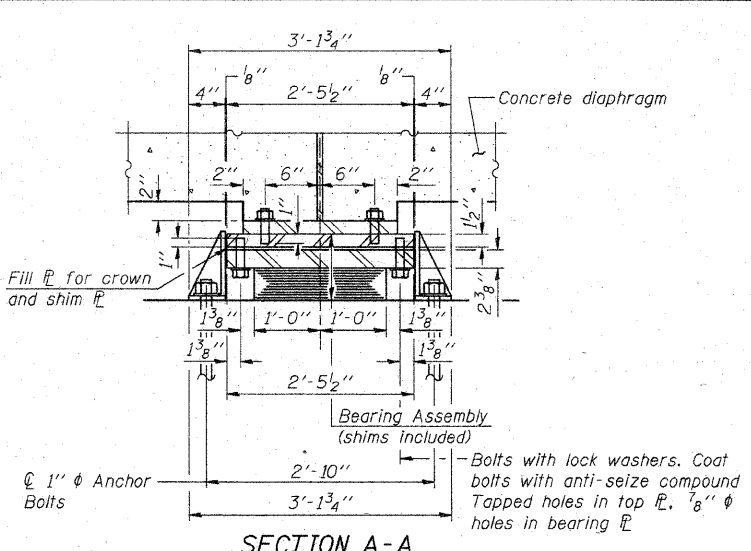
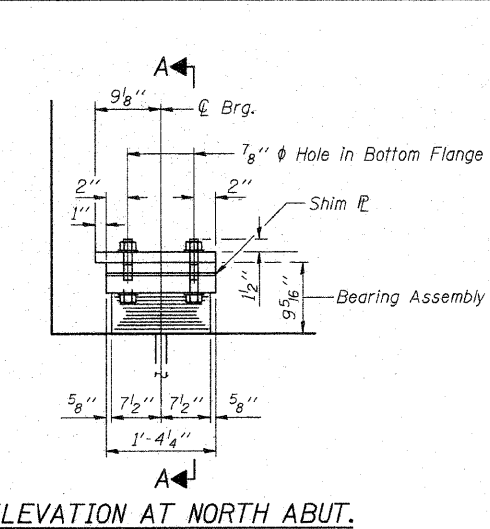
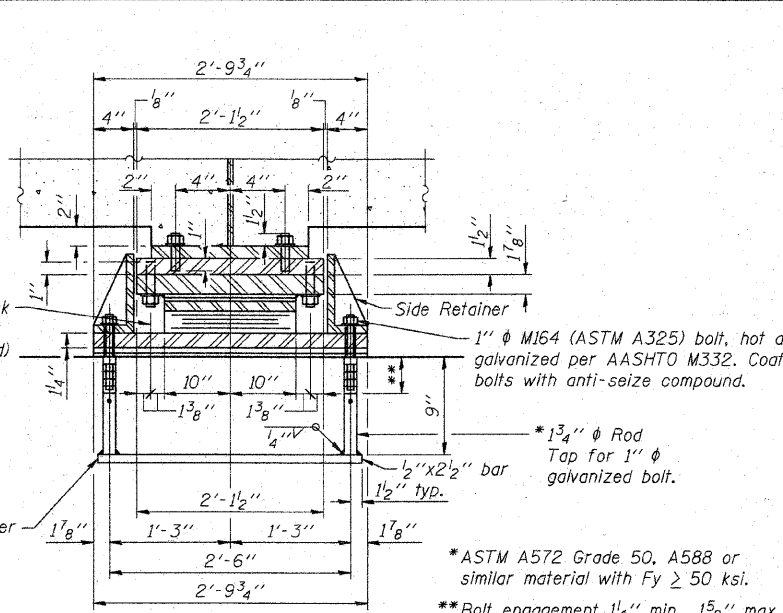
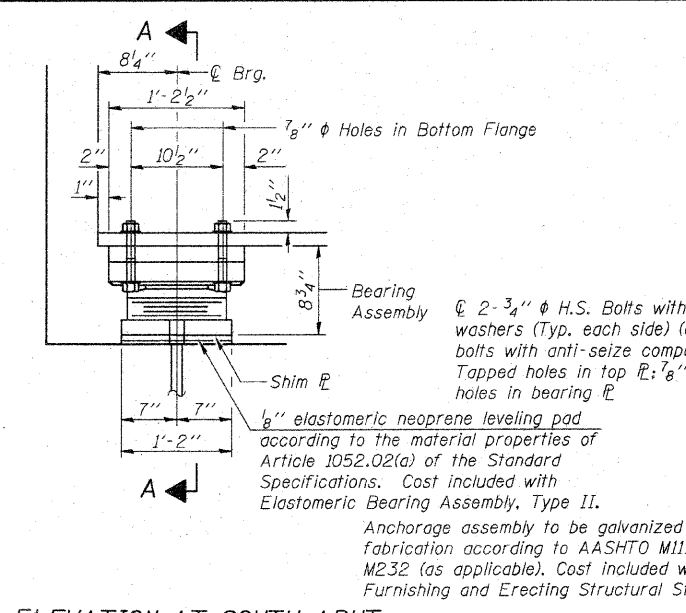
\*\*\*Additional Shear Stud Connectors.

**NOTES:**  
**CROSS FRAMES & DIAPHRAGMS:**  
Bolts shall be 3/4" φ HS bolts, 15/16" φ holes  
Two hardened washers required for each set of oversized holes.

**FRAMING DETAILS**  
**DIAPHRAGM DETAILS - SOUTH ABUTMENT**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
**WHA #1066D05**

STRUCTURAL SHEET NO. 198 OF 338 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	85
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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\*ASTM A572 Grade 50, A588 or similar material with  $F_y \geq 50$  ksi.  
\*\*Bolt engagement 1 1/4" min., 1 5/8" max., allowing up to 3/8" adjustment shims. Top full threads in rod 1 3/4" deep. Provide 1/4" φ galvanizing vent hole below full thread.

**NOTES:**

**ELASTOMERIC BEARING ASSEMBLY, TYPE I:**  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 ( $F_y=36$ ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

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

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates required and placed as shown on bearing details.

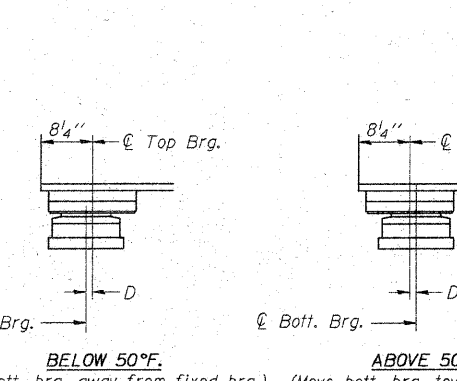
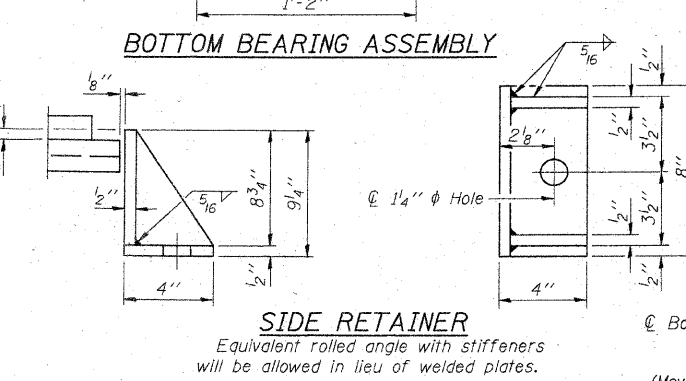
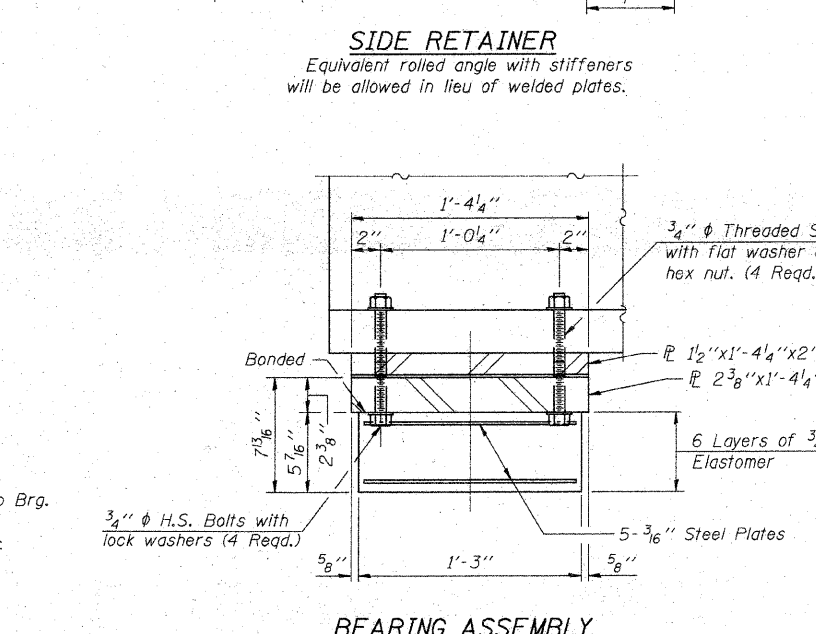
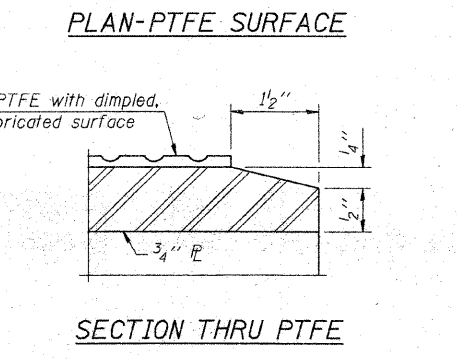
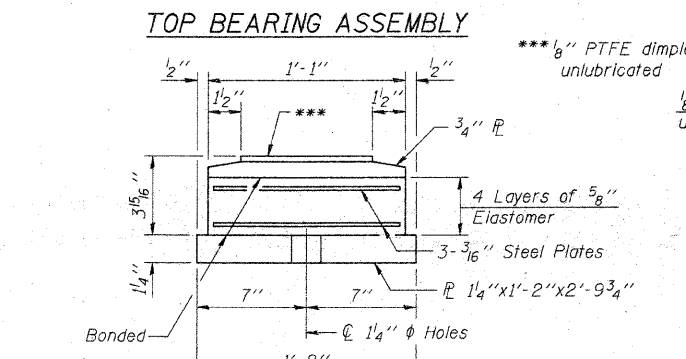
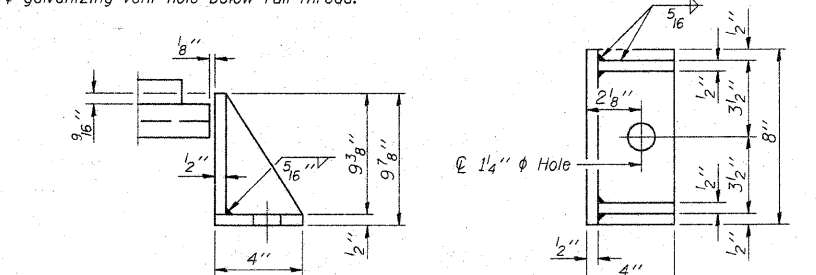
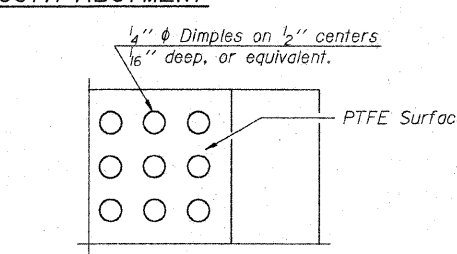
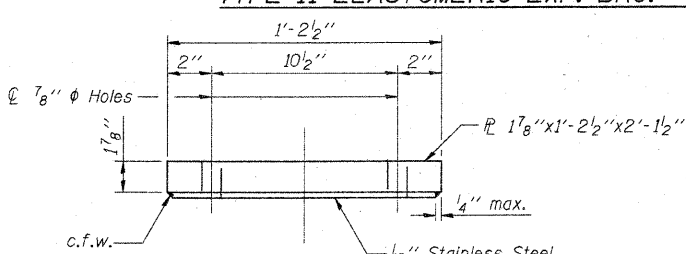
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

**ELASTOMERIC BEARING ASSEMBLY, TYPE II:**  
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates required and placed as shown on bearing details.



**SETTING ANCHOR BOLTS AT EXP. BRG.**  
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**BILL OF MATERIAL**

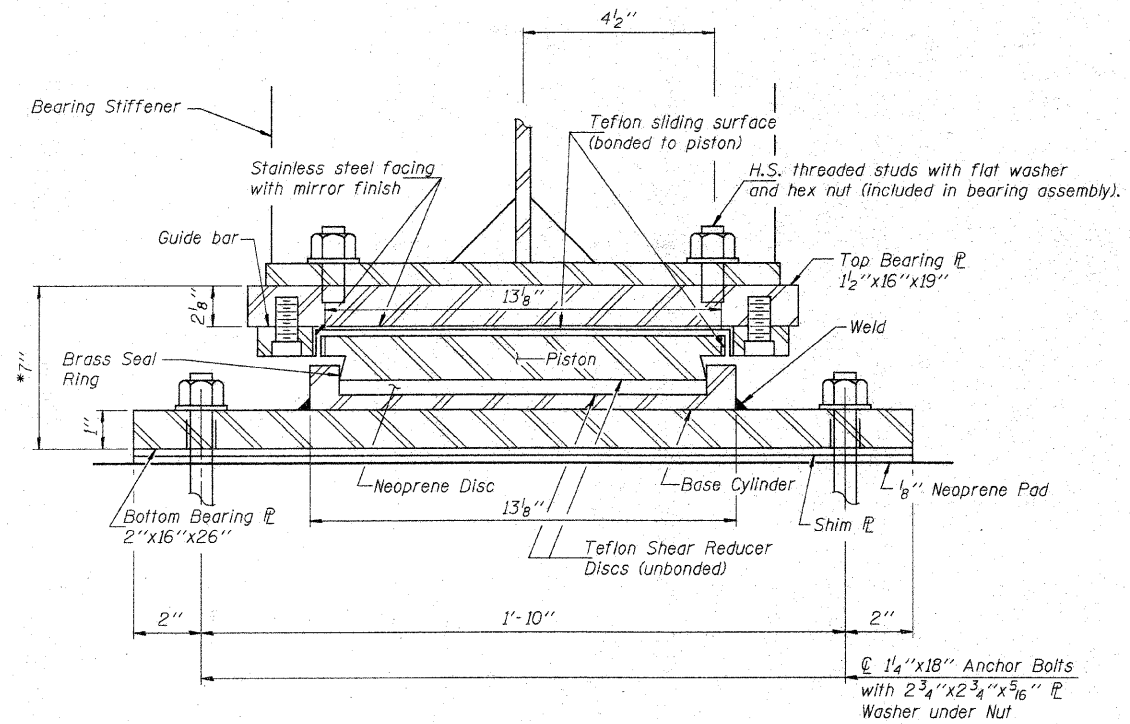
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	5
Elastomeric Bearing Assembly, Type II	Each	5
Anchor Bolts, 1"	Each	10

**ELASTOMERIC BEARING DETAILS**  
C.H. 8 OVER IOWA INTERSTATE RAILROAD & THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

STRUCTURAL SHEET NO. 20B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	86
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

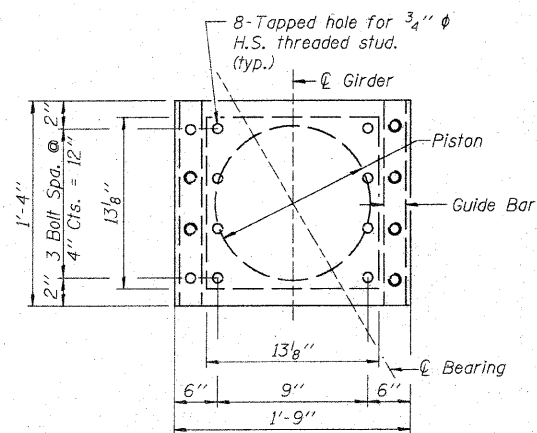
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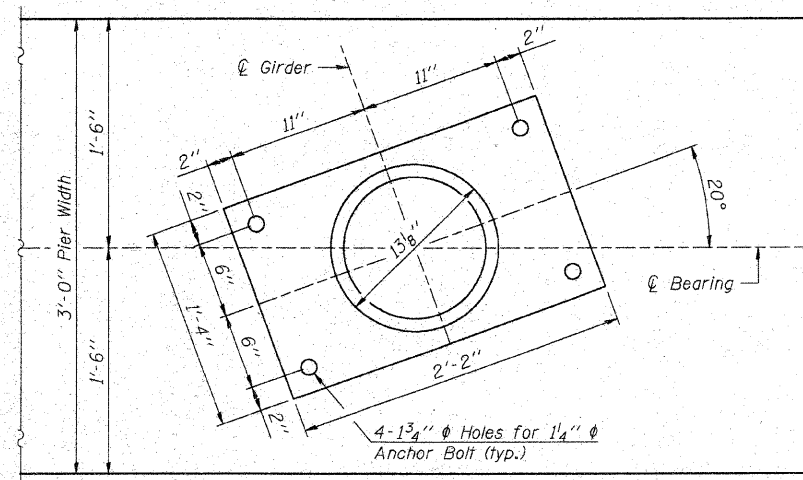


**GUIDED EXPANSION  
FLOATING BEARING - 250K**  
(Pier #1)

\*Pier #1 height is based on 7" deep pot bearing, if different by supplier column height shall be adjusted accordingly.



**TOP BEARING PLATE AND  
PISTON PLAN**



**BOTTOM BEARING PLATE AND  
BASE CYLINDER PLAN**

POT Bearing DATA	
Service Loads	Pier #1 (Exp.)
Dead Load	183.2 <sup>k</sup>
Live Load	153.8 <sup>k</sup>
Vert. Design Load	337 <sup>k</sup>
Impact	34.3 <sup>k</sup>
Total	371.3 <sup>k</sup>
Long Load	0
Trans. Loads	
Wind	37.6 <sup>k</sup>
Earthquake	35.1 <sup>k</sup>
Hu=Factored Ultimate (Strength) Design Lateral Load	52.6 <sup>k</sup>
Expansion Length	81'-0"
Total Expansion	1/2"

**NOTES:**

All P's of the Bearing Assembly shall be AASHTO M 270M Grade 50.

Base P. Thickness was determined by using a Pot  $\phi$  of 13 3/8".

Cost of field drilling is included with "Furnishing & Erecting Structural Steel".

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates required and placed as shown on bearing details.

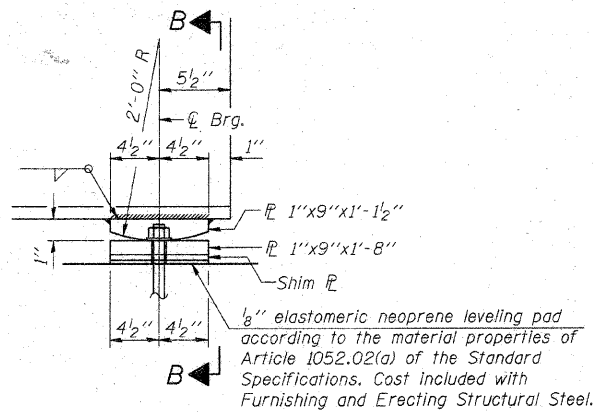
**BILL OF MATERIAL**

Item	Unit	Total
Anchor Bolts, 1 1/4"	Each	20
High Load Multi-Rotation Bearings, Guided Expansion, 400k	Each	5

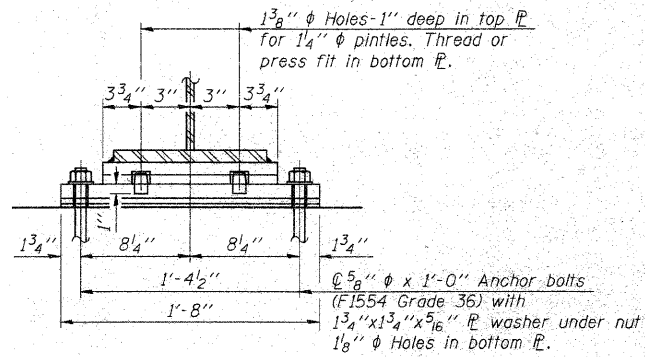
HLMR GUIDED EXPANSION BEARING DETAILS  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

STRUCTURAL SHEET NO. 21B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	87
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BRS-0188(118)		
CONTRACT NO. 87380					

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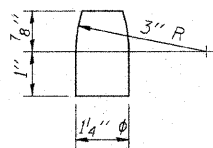


ELEVATION AT PIER

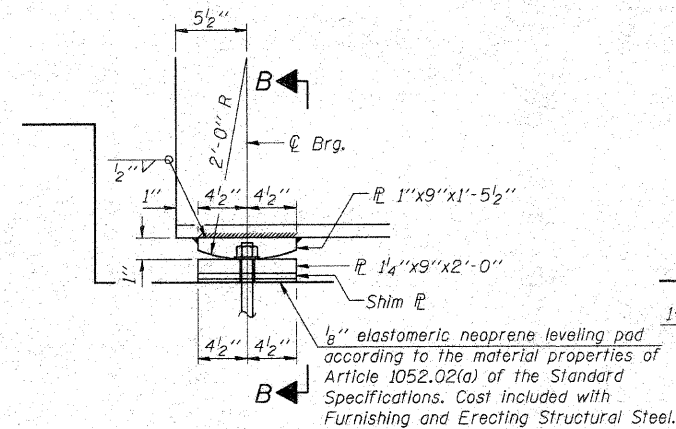


SECTION B-B

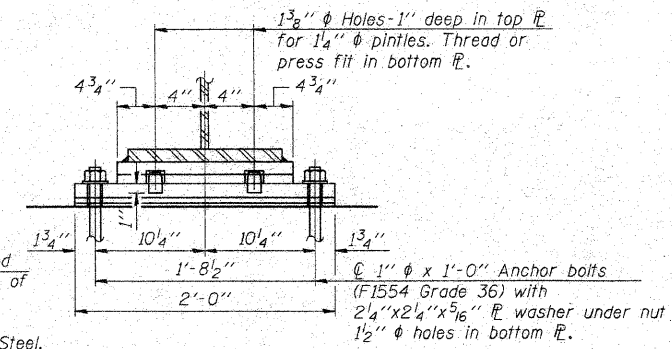
FIXED BEARING - SOUTH BEARING PIER #2



PINTLE

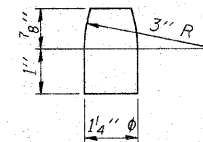


ELEVATION AT PIER



SECTION B-B

FIXED BEARING - NORTH BEARING PIER #2



PINTLE

NOTES:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

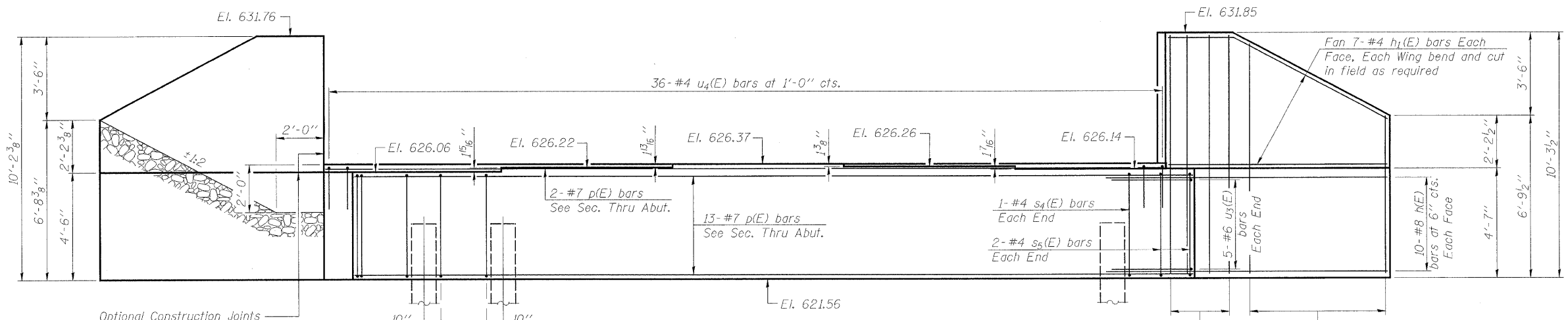
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates required and placed as shown on bearing details.

BILL OF MATERIAL

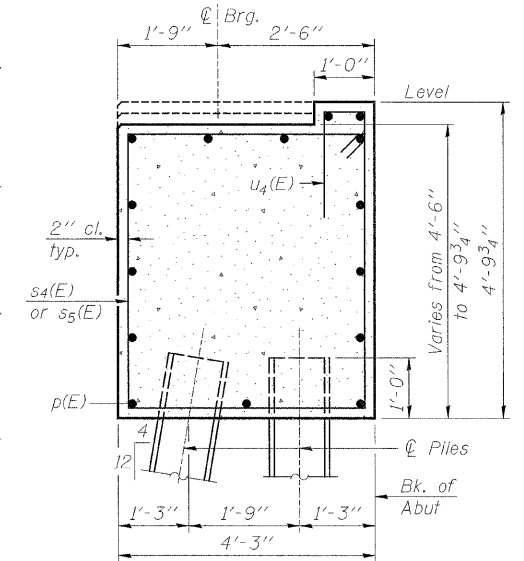
Item	Unit	Total
Anchor Bolts, 5/8"	Each	10
Anchor Bolts, 1"	Each	10

FIXED BEARING DETAILS  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

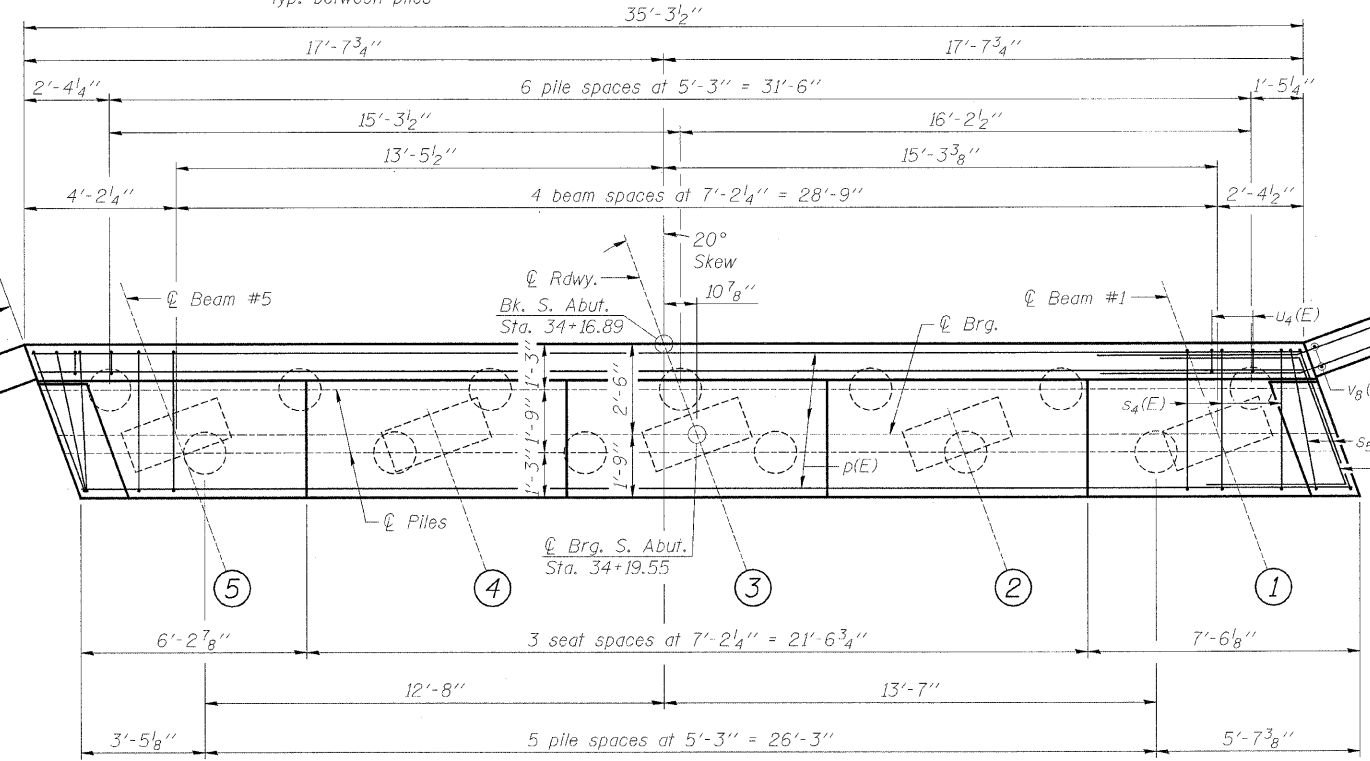
STRUCTURAL SHEET NO. 22B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	88
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



**ELEVATION**  
(Looking South)

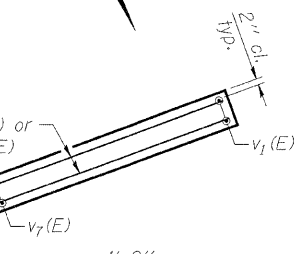


**SEC. THRU ABUT.**

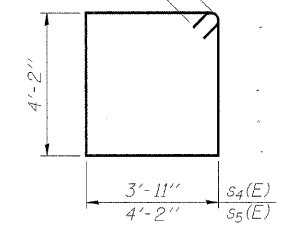


**PLAN**

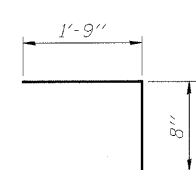
\*Cut bars to fit in Opposite Wing.



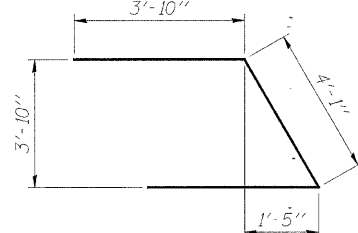
**BAR u2(E)**



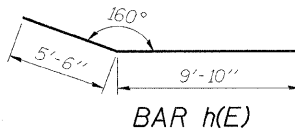
**BARS s4(E) & s5(E)**



**BAR u4(E)**



**BAR u3(E)**



**BAR h(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	40	#8	15'-4"	
h1(E)	28	#4	10'-6"	
h2(E)	4	#5	3'-0"	
p(E)	15	#7	34'-11"	
s4(E)	26	#4	16'-11"	
s5(E)	4	#4	17'-5"	
u2(E)	8	#5	5'-6"	
u3(E)	10	#6	11'-9"	
u4(E)	36	#4	4'-2"	
v1(E)	4	#4	6'-7"	
v2(E)	4	#4	7'-1"	
v3(E)	4	#4	7'-7"	
v4(E)	4	#4	8'-1"	
v5(E)	4	#4	8'-7"	
v6(E)	4	#4	9'-1"	
v7(E)	4	#4	9'-7"	
v8(E)	16	#4	10'-0"	
Porous Granular Embankment		Ton	209	
Concrete Structures		Cu. Yd.	32.2	
Reinforcement Bars, Epoxy Coated		Pound	3,840	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	756	
Driving Piles		Foot	756	
Test Pile Metal Shells		Each	1	
Geocomposite Wall Drain		Sq. Yd.	53	
Pipe Underdrains for Structures 4"		Foot	101	

**NOTES:**

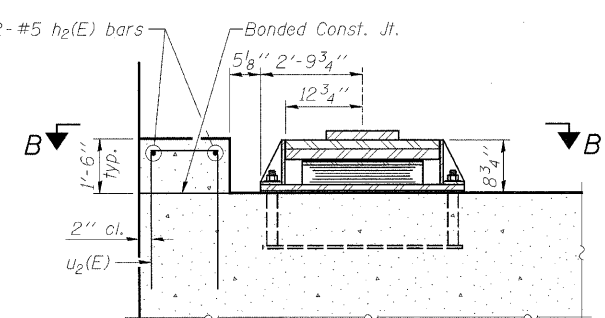
For pile details, see Structural sheet 28B of 33B.  
Pour steps monolithically with cap.

**SOUTH ABUTMENT DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
**WHA #1066D05**

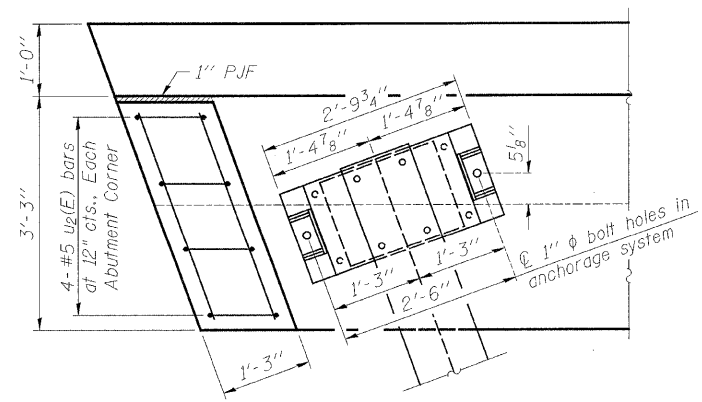
STRUCTURAL SHEET NO. 23B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	89
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

**PILE DATA**

Type: Metal Shell - 14 in. dia. x 0.312 in. walls  
Nominal Required Bearing: 455 k  
Factored Resistance Available: 250 k  
Est. Length: 63'  
No. Production Piles: 12  
No. Test Piles: 1



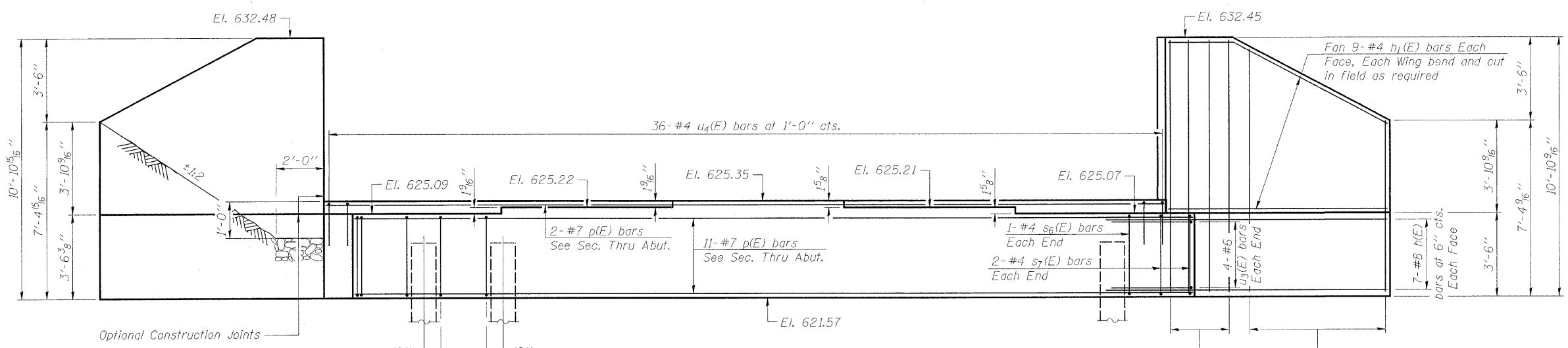
**ELEVATION**



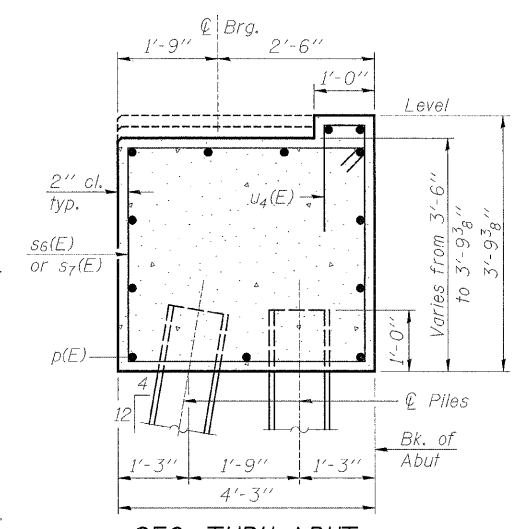
**SECTION B-B**

**CONCRETE SIDE RETAINER DETAILS**

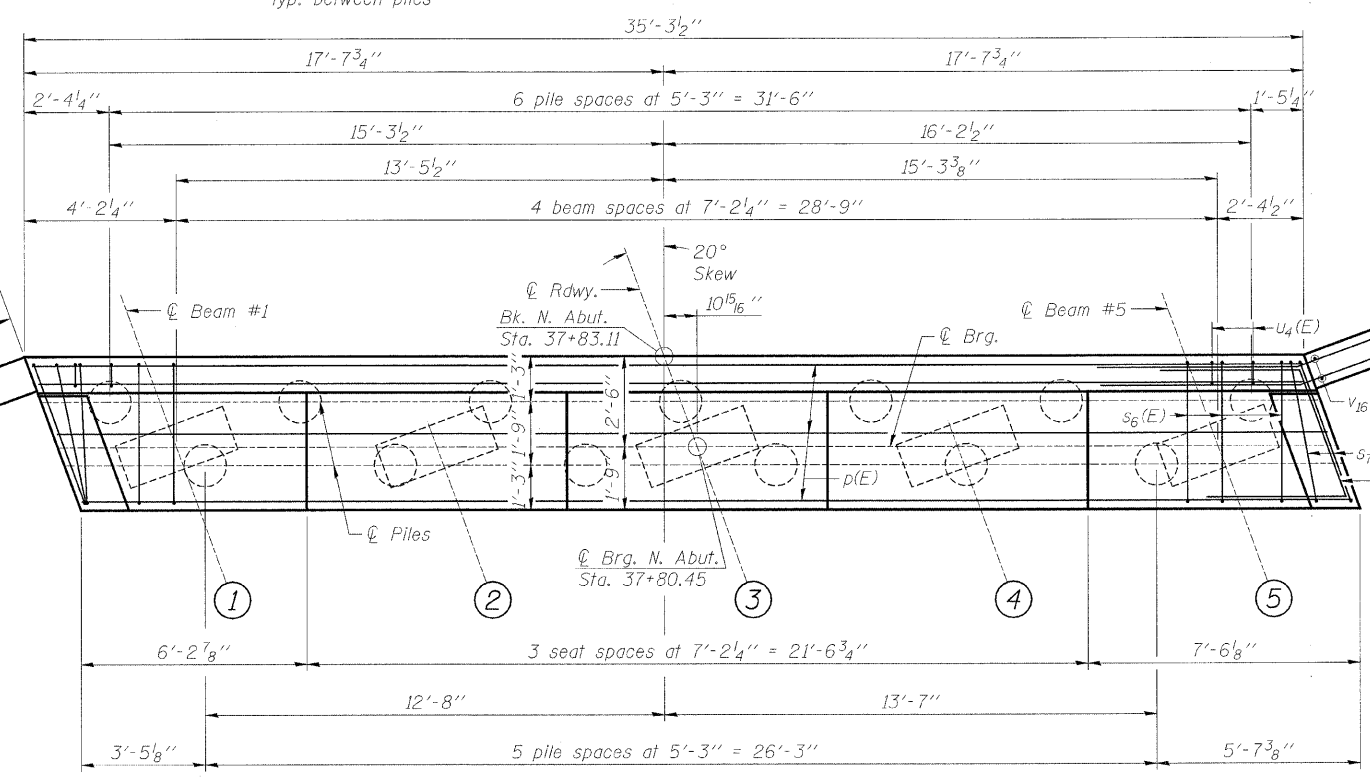
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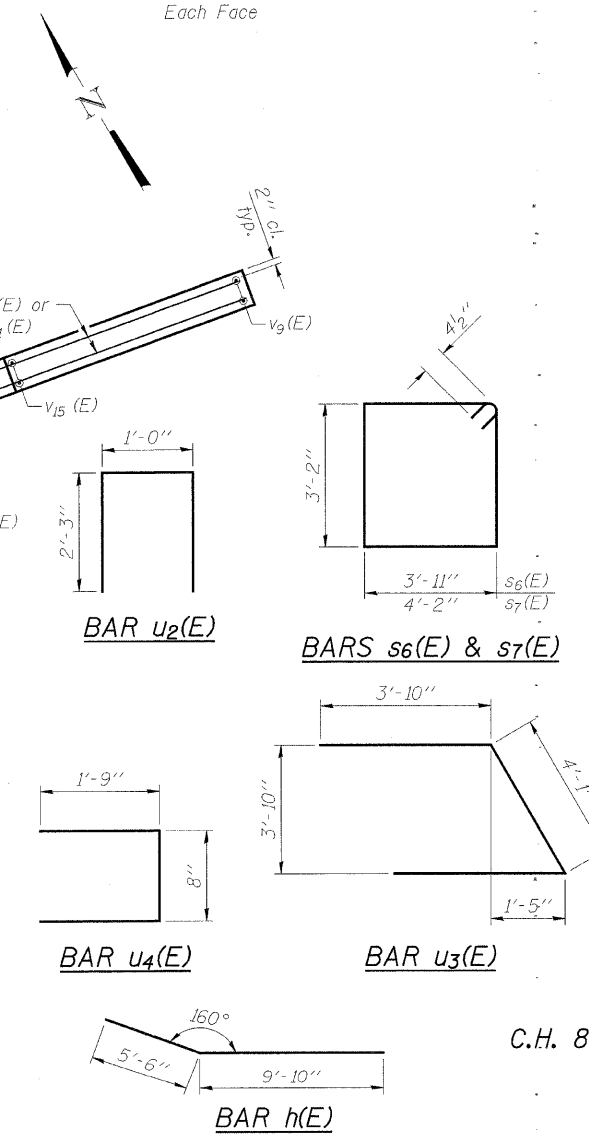
**ELEVATION**  
(Looking North)



**SEC. THRU ABUT.**



**PLAN**



**BAR u<sub>2</sub>(E)**

**BARS s<sub>6</sub>(E) & s<sub>7</sub>(E)**

**BAR u<sub>4</sub>(E)**

**BAR u<sub>3</sub>(E)**

**BAR h(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	28	#8	15'-4"	—
h <sub>1</sub> (E)	36	#4	10'-6"	—
h <sub>2</sub> (E)	4	#5	3'-0"	—
p(E)	13	#7	34'-11"	—
s <sub>6</sub> (E)	26	#4	14'-11"	□
s <sub>7</sub> (E)	4	#4	15'-5"	□
u <sub>2</sub> (E)	8	#5	5'-6"	U
u <sub>3</sub> (E)	8	#6	11'-9"	U
u <sub>4</sub> (E)	36	#4	4'-2"	U
v <sub>9</sub> (E)	4	#4	7'-2"	—
v <sub>10</sub> (E)	4	#4	7'-8"	—
v <sub>11</sub> (E)	4	#4	8'-2"	—
v <sub>12</sub> (E)	4	#4	8'-8"	—
v <sub>13</sub> (E)	4	#4	9'-2"	—
v <sub>14</sub> (E)	4	#4	9'-8"	—
v <sub>15</sub> (E)	4	#4	10'-2"	—
v <sub>16</sub> (E)	16	#4	10'-7"	—
Porous Granular Embankment		Ton	257	
Structure Excavation		Cu. Yd.	32	
Concrete Structures		Cu. Yd.	27.3	
Reinforcement Bars, Epoxy Coated		Pound	3,200	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	480	
Driving Piles		Foot	480	
Test Pile Metal Shells		Each	1	
Geocomposite Wall Drain		Sq. Yd.	59	
Pipe Underdrains for Structures 4"		Foot	108	

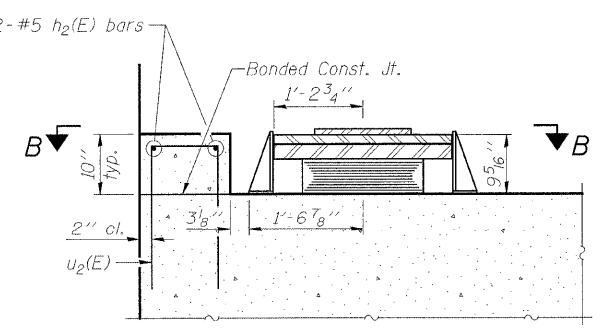
**NOTES:**

For pile details, see Structural sheet 28B of 33B.  
Pour steps monolithically with cap.

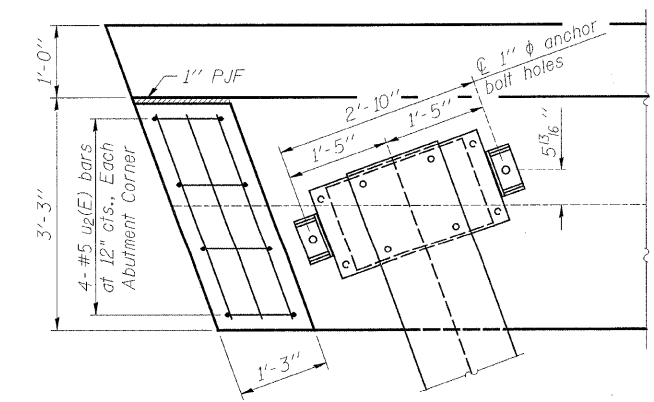
**NORTH ABUTMENT DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
**WHA #1066D05**

**PILE DATA**

Type: Metal Shell - 14 in. dia. x 0.312 in. walls  
Nominal Required Bearing: 507 k  
Factored Resistance Available: 279 k  
Est. Length: 40'  
No. Production Piles: 12  
No. Test Piles: 1



**ELEVATION**



**SECTION B-B**

**CONCRETE SIDE RETAINER DETAILS**

STRUCTURAL SHEET NO. 24B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	90
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

FILE NAME = s:\stewar\1066D05\Bureau\Drawings\1066D05\NorthAbutment.dgn



**NOTES:**

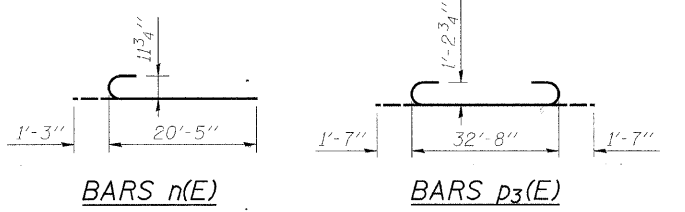
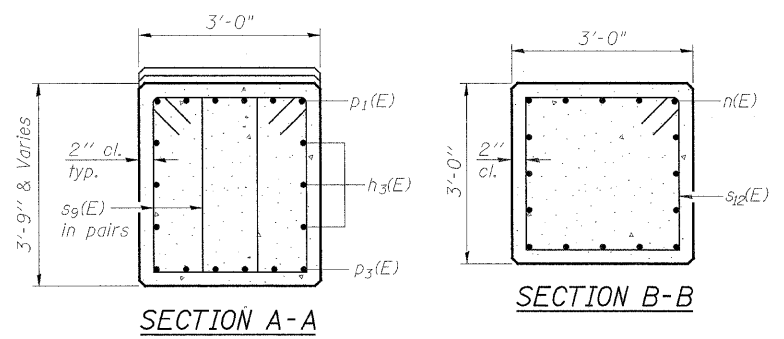
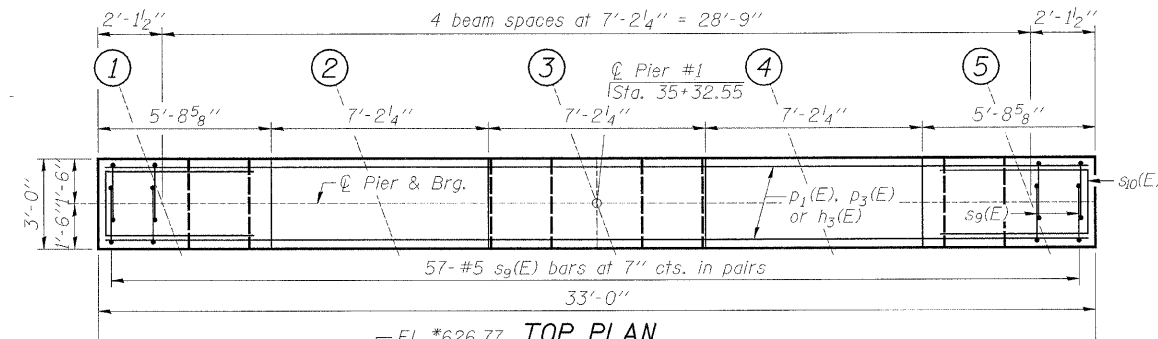
All exposed edges shall have 3/4" chamfer unless otherwise noted.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

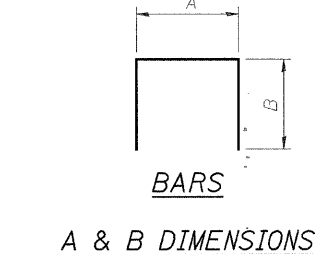
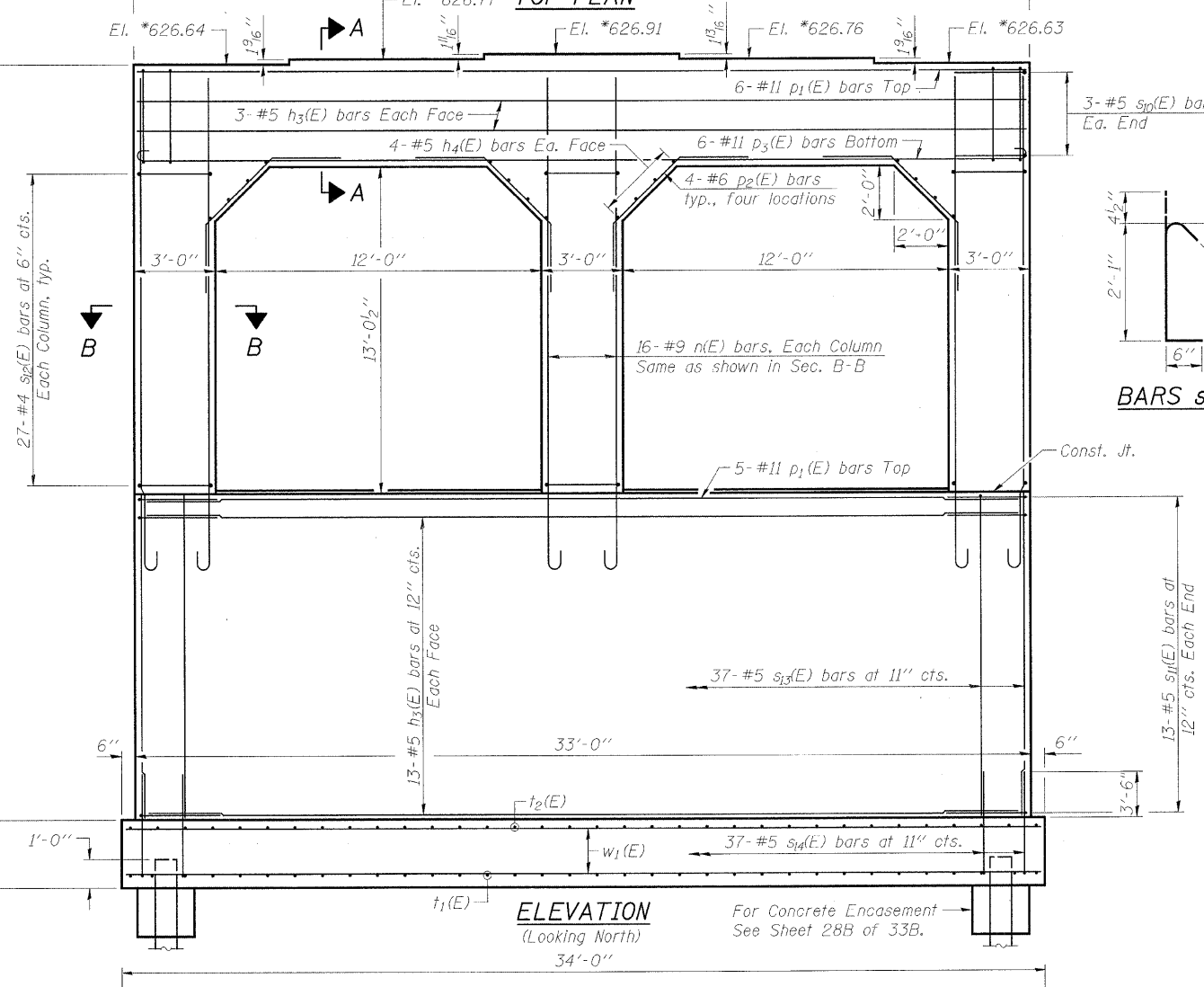
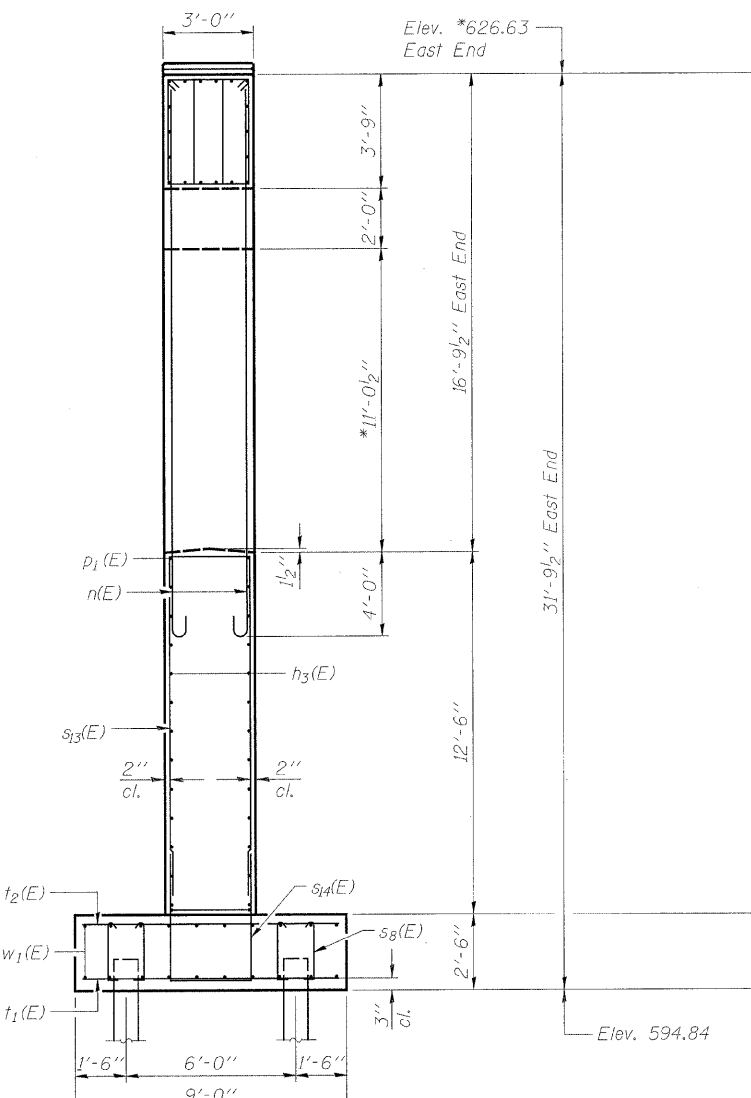
For details of piles, see Structural Sheet 28B of 33B.

\*Pier height is based on 7" deep pot bearing. If different by supplier, then column height shall be adjusted accordingly.



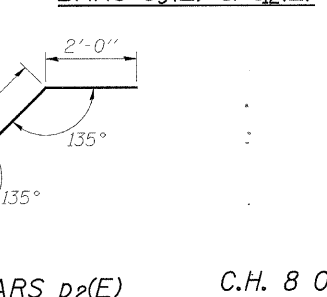
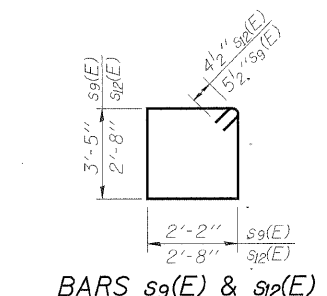
**BILL OF MATERIAL - PIER #1**

Bar	No.	Size	Length	Shape
h3(E)	32	#5	32'-8"	—
h4(E)	16	#5	2'-8"	—
n(E)	48	#9	21'-8"	U
p1(E)	11	#11	32'-8"	—
p2(E)	16	#6	7'-4"	U
p3(E)	6	#11	35'-10"	U
s8(E)	236	#4	2'-11 1/2"	L
s9(E)	114	#5	11'-11"	□
s10(E)	6	#5	8'-7"	□
s11(E)	26	#5	8'-6"	□
s12(E)	81	#4	11'-5"	□
s13(E)	37	#5	27'-0"	□
s14(E)	37	#5	14'-2"	□
t1(E)	38	#7	8'-8"	—
t2(E)	35	#5	8'-8"	—
w1(E)	20	#5	33'-8"	—
Structure Excavation	Cu. Yd.	121		
Concrete Structures	Cu. Yd.	102.1		
Reinforcement Bars, Epoxy Coated	Pound	13,970		
Furnishing Metal Shell Piles 12" x 0.25"	Foot	663		
Driving Piles	Foot	663		
Test Pile Metal Shells	Each	1		



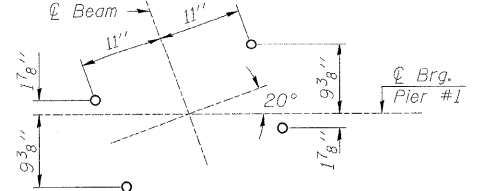
**A & B DIMENSIONS**

Bar	A	B
s10(E)	2'-7"	3'-0"
s11(E)	2'-6"	3'-0"
s13(E)	2'-8"	12'-2"
s14(E)	2'-8"	5'-9"

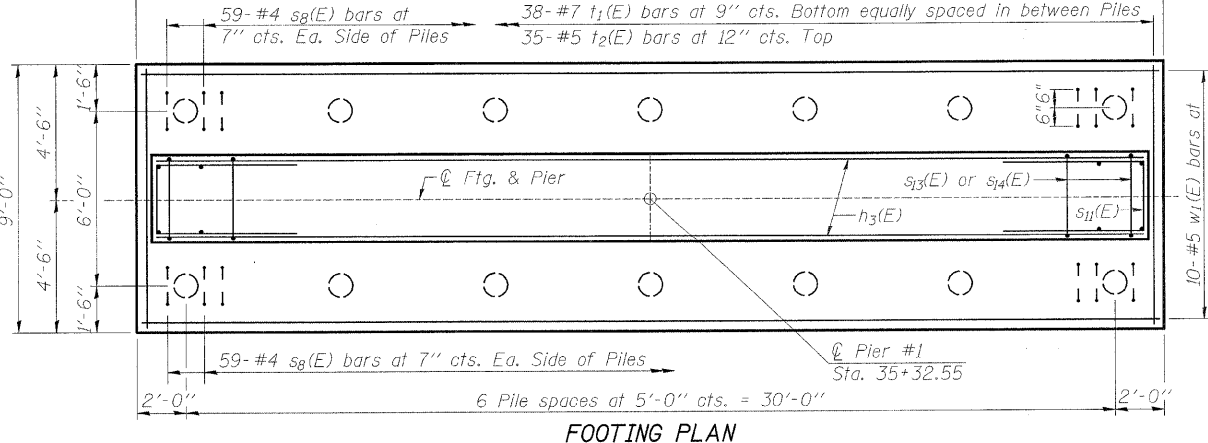


**PILE DATA**

Type: Metal Shell - 12 in. dia. x 0.25 in. walls  
 Nominal Required Bearing: 355 k  
 Factored Resistance Available: 150 k  
 Est. Length: 51'  
 No. Production Piles: 13  
 No. Test Piles: 1



**ANCHOR BOLT LAYOUT**



**FOOTING PLAN**

**PIER #1 DETAILS**  
 C.H. 8 OVER IOWA INTERSTATE RAILROAD  
 & THE HENNEPIN CANAL  
 STATION 36+00  
 S.N. 006-3247  
 WHA #1066D05

STRUCTURAL SHEET NO. 258 OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	91	
CONTRACT NO. 87380			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)		

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**NOTES:**

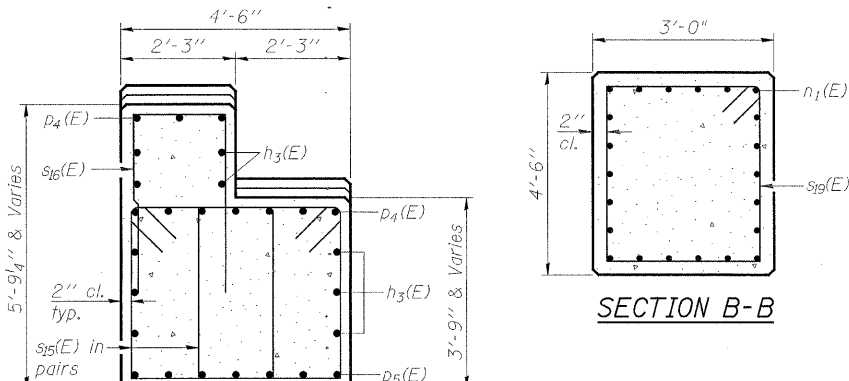
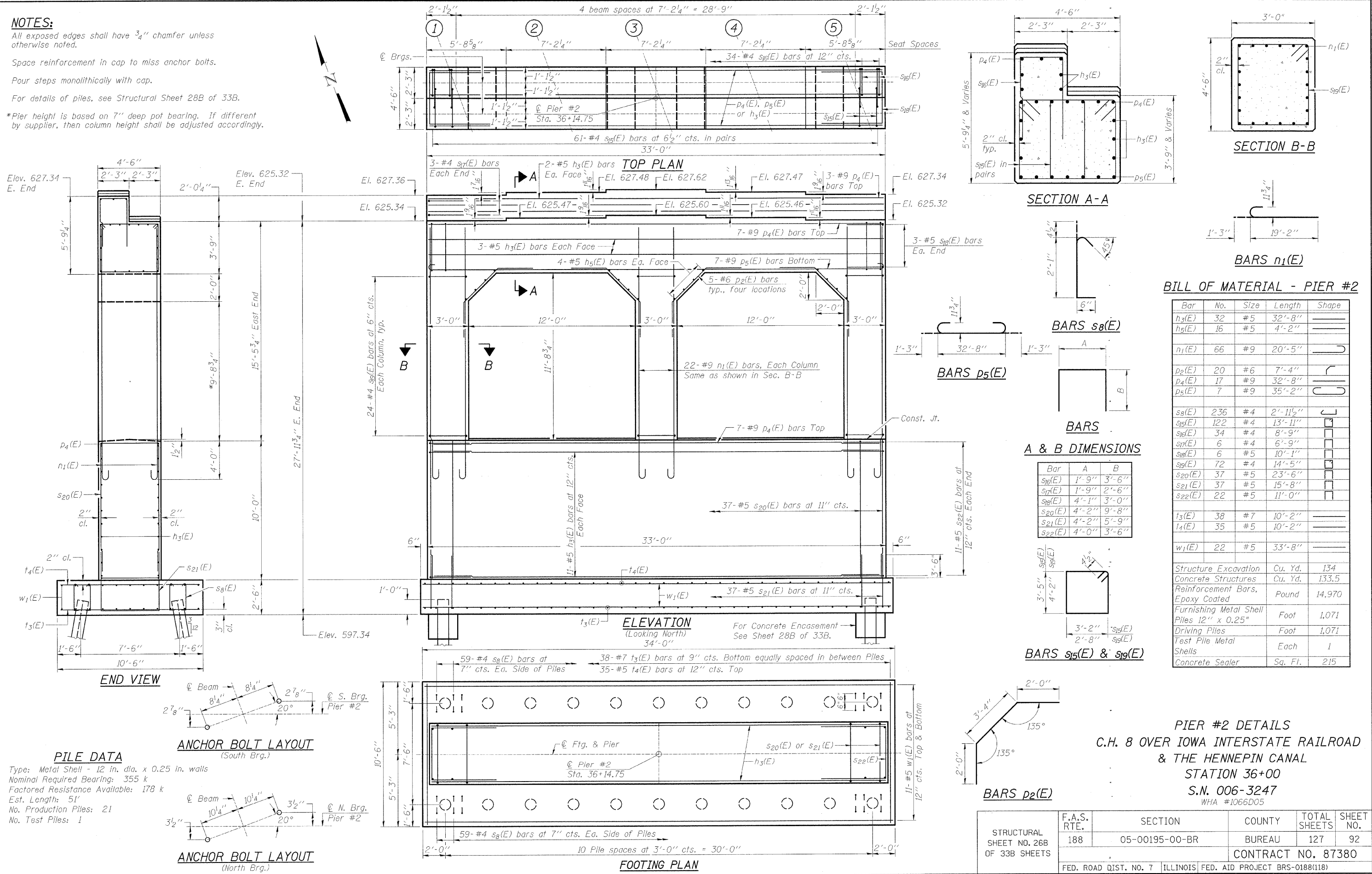
All exposed edges shall have 3/4" chamfer unless otherwise noted.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

For details of piles, see Structural Sheet 28B of 33B.

\*Pier height is based on 7" deep pot bearing. If different by supplier, then column height shall be adjusted accordingly.



**BILL OF MATERIAL - PIER #2**

Bar	No.	Size	Length	Shape
h3(E)	32	#5	32'-8"	—
h5(E)	16	#5	4'-2"	—
n1(E)	66	#9	20'-5"	U
p2(E)	20	#6	7'-4"	—
p4(E)	17	#9	32'-8"	—
p5(E)	7	#9	35'-2"	—
s8(E)	236	#4	2'-11 1/2"	U
s15(E)	122	#4	13'-11"	U
s16(E)	34	#4	8'-9"	U
s17(E)	6	#4	6'-9"	U
s18(E)	6	#5	10'-1"	U
s19(E)	72	#4	14'-5"	U
s20(E)	37	#5	23'-6"	U
s21(E)	37	#5	15'-8"	U
s22(E)	22	#5	11'-0"	U
t3(E)	38	#7	10'-2"	—
t4(E)	35	#5	10'-2"	—
w1(E)	22	#5	33'-8"	—
Structure Excavation		Cu. Yd.	134	
Concrete Structures		Cu. Yd.	133.5	
Reinforcement Bars, Epoxy Coated		Pound	14,970	
Furnishing Metal Shell Piles 12" x 0.25"		Foot	1,071	
Driving Piles		Foot	1,071	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	215	

**SECTION A-A**

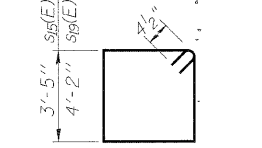


**BARS p5(E)**

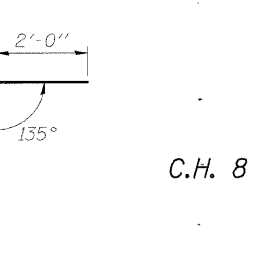


**A & B DIMENSIONS**

Bar	A	B
s16(E)	1'-9"	3'-6"
s17(E)	1'-9"	2'-6"
s18(E)	4'-1"	3'-0"
s20(E)	4'-2"	9'-8"
s21(E)	4'-2"	5'-9"
s22(E)	4'-0"	3'-6"



**BARS p2(E)**

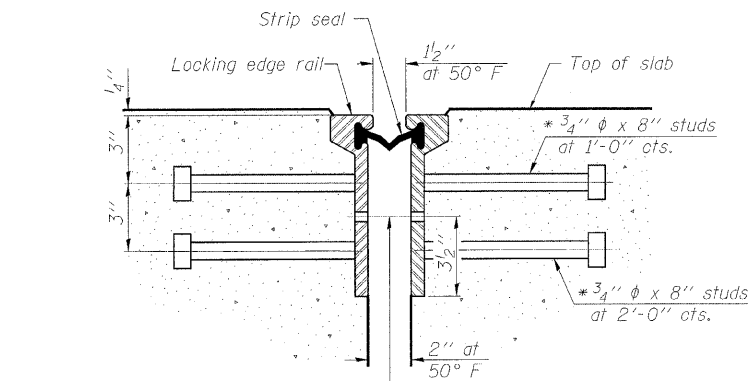


**PIER #2 DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
**WHA #1066D05**

STRUCTURAL SHEET NO. 26B OF 33B SHEETS	F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 92
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT BRS-0188(118)		
CONTRACT NO. 87380					

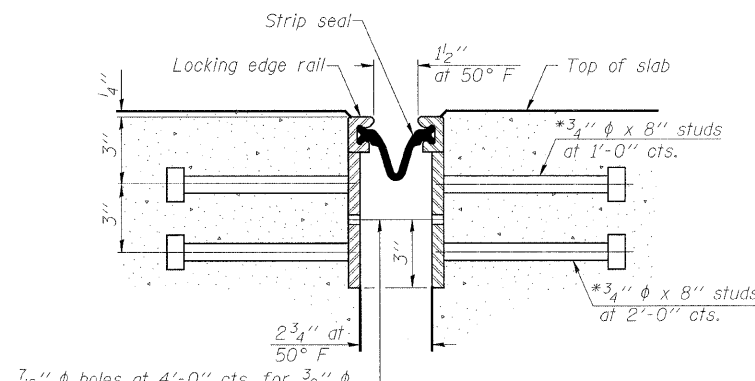
FILE NAME: s:\Structures\18660285\Bureau\Drawings\1866Pier#2.dwg

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



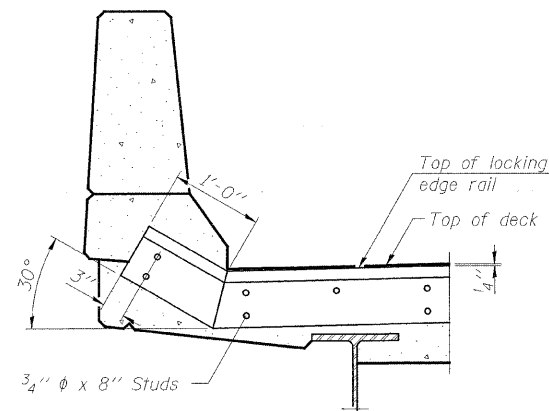
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU ROLLED RAIL JOINT**

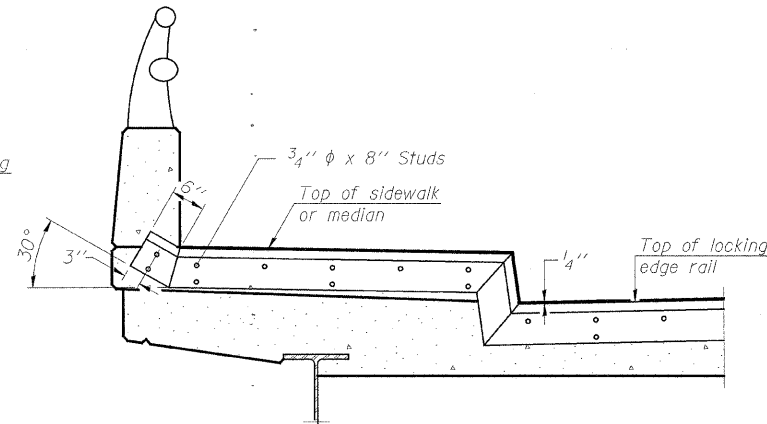


7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU WELDED RAIL JOINT**



**AT PARAPET**  
See Section A-A for end treatment of skews > 30°.



**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.

**TYPICAL END TREATMENTS**

**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".

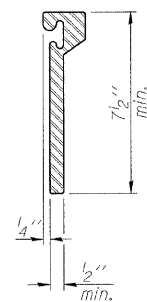
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

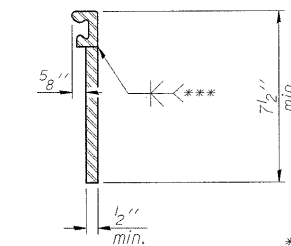
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications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

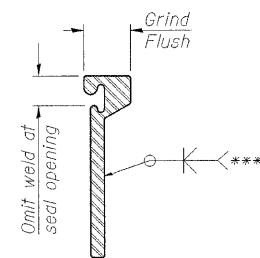
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**

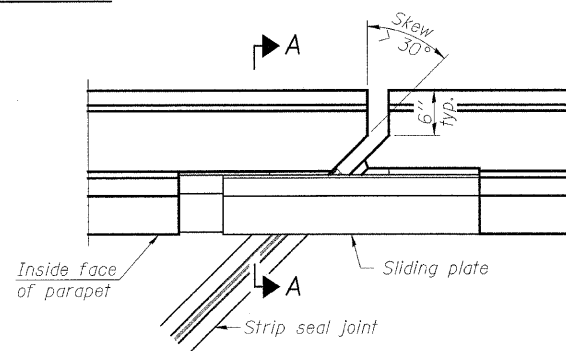


\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.

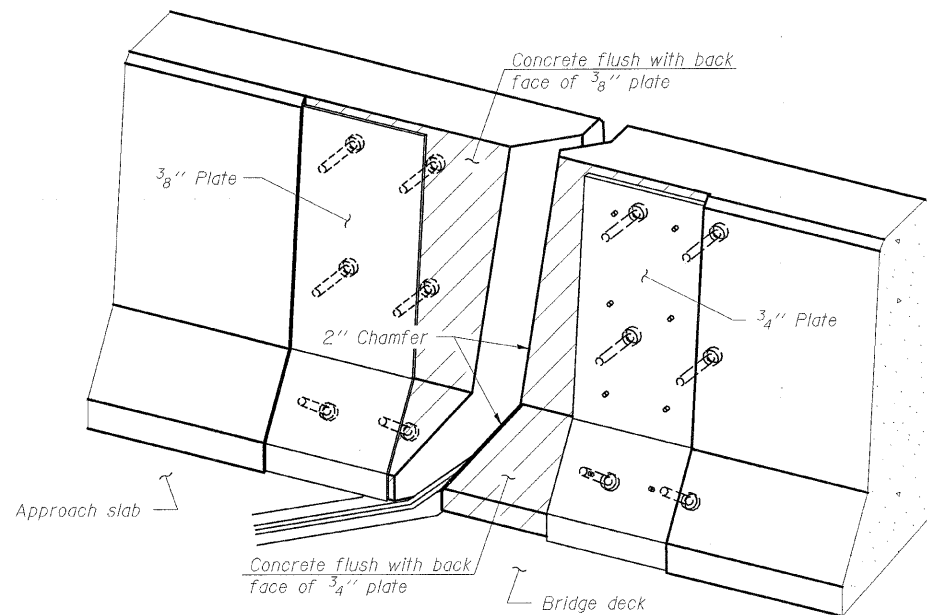
**LOCKING EDGE RAIL SPLICE**

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

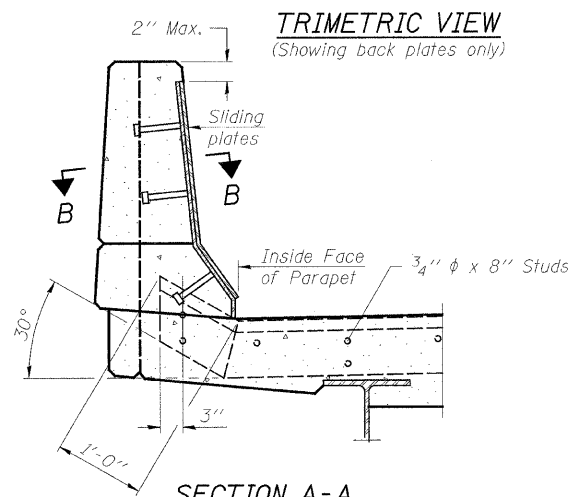
**LOCKING EDGE RAILS**



**PLAN**

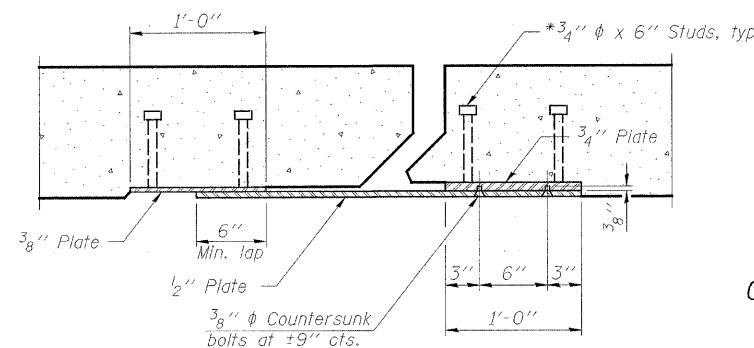


**TRIMETRIC VIEW**  
(Showing back plates only)



**SECTION A-A**

**POINT BLOCK DETAILS**  
(for skews > 30°)



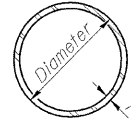
**SECTION B-B**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	34

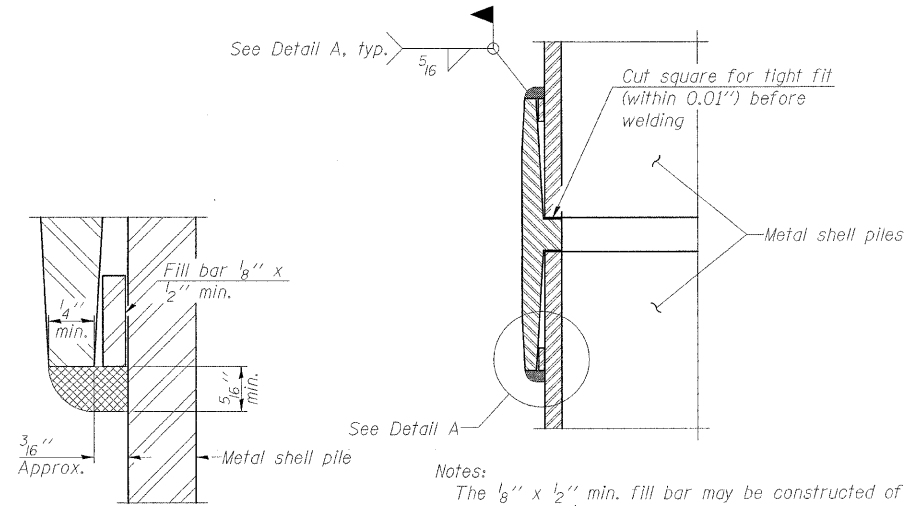
**PREFORMED JOINT STRIP SEAL  
C.H. 8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05**

STRUCTURAL SHEET NO. 27B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	93
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				CONTRACT NO. 87380	



**METAL SHELL PILE TABLE**

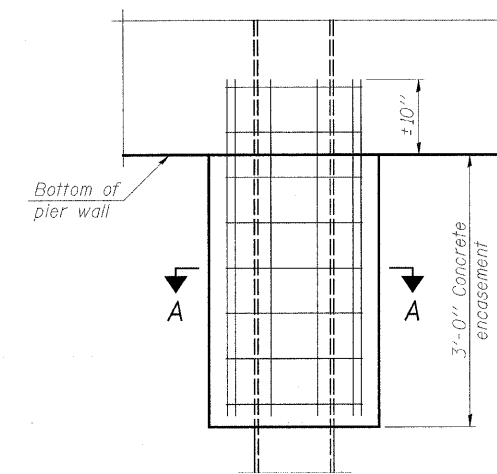
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



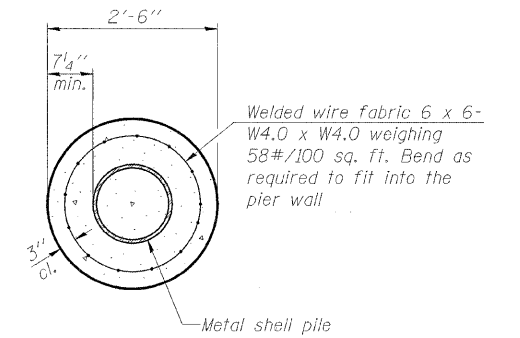
**DETAIL A**

**Notes:**  
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
 Pile segments shall be driven to solid contact with splicer before welding.

**WELDED COMMERCIAL SPLICE**



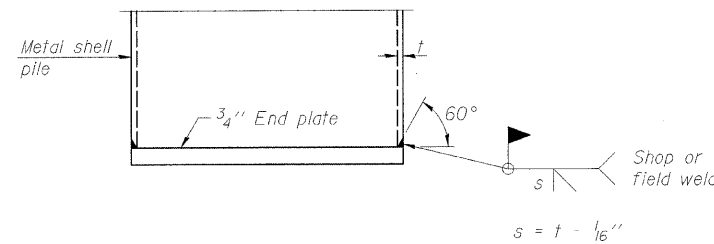
**ELEVATION**



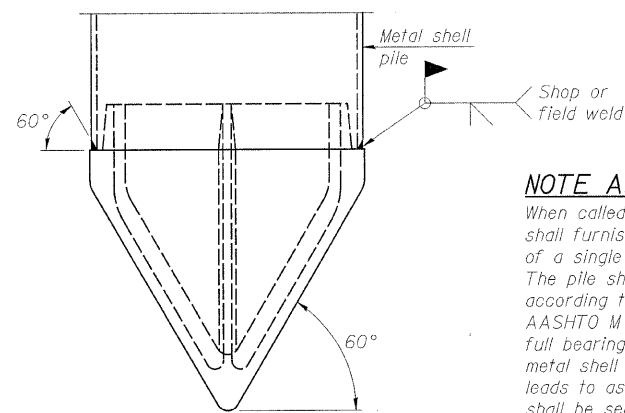
**SECTION A-A**

**Note:**  
 Forms for encasement may be omitted when soil conditions permit.

**CONCRETE ENCASMENT AT PIERS**

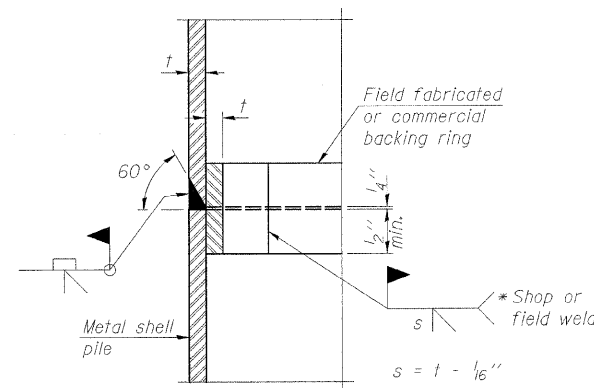


**END PLATE ATTACHMENT**



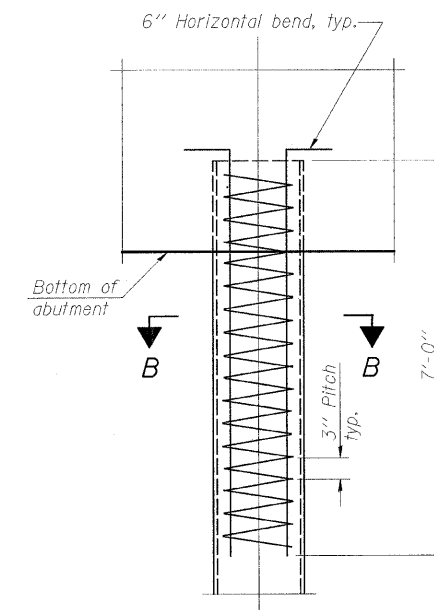
**METAL SHELL PILE SHOE ATTACHMENT**  
 (See Note A)

**NOTE A:**  
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



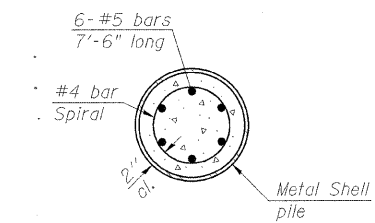
**COMPLETE PENETRATION WELD SPLICE**

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**



**SECTION B-B**

**METAL SHELL PILE DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

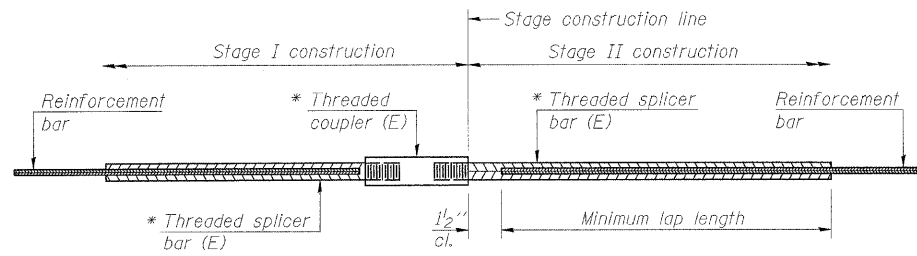
**NOTE:**

The metal shell piles shall be according to ASTM A 252 Grade 3.

Concrete Encasement, Welded Wire Fabric, and Reinforcement Bars for Piers & Abutments and all associated work shall be included in the contract unit price per foot for Driving Piles.

STRUCTURAL SHEET NO. 28B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	94
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					





**STANDARD BAR SPLICER ASSEMBLY**

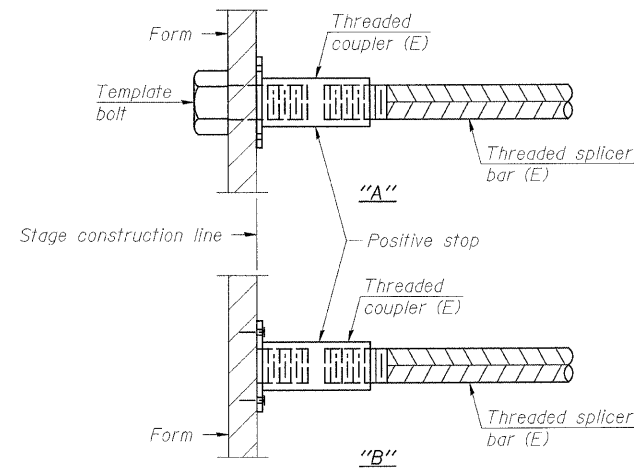
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C  
 Table 2: Black bar, Top bar lap, 0.8 Class C  
 Table 3: Epoxy bar, 0.8 Class C  
 Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

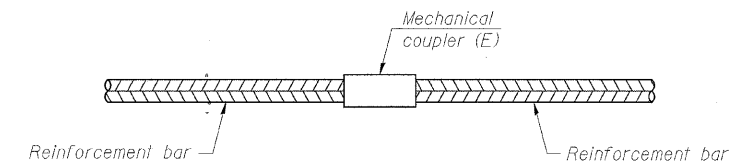
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



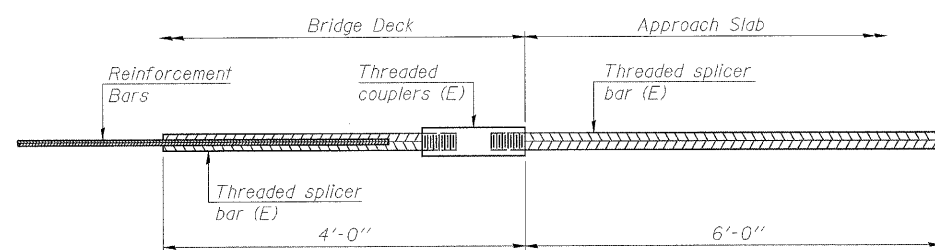
**INSTALLATION AND SETTING METHODS**

"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.



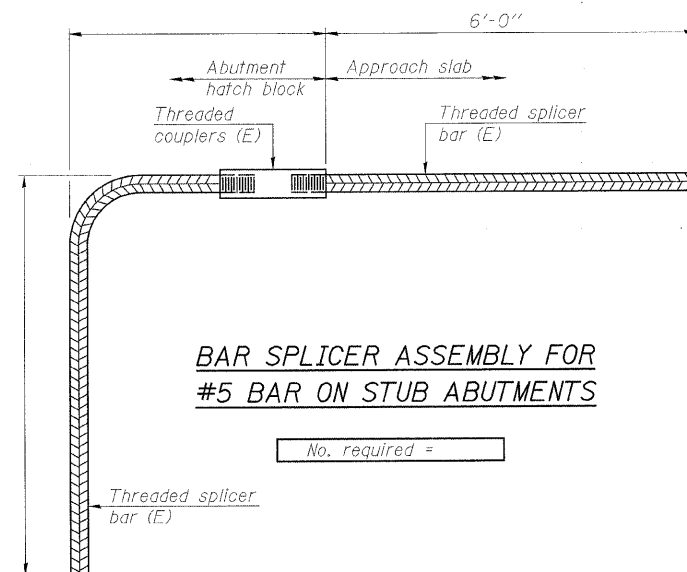
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required = 62



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES:**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD & THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 29B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	95
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

FILE NAME = s:\5\proj\1066D05\1066D05\Drawings\1066D05\Splicer.dgn

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **1** DATE STARTED **4-28-09** DATE COMPLETED **4-28-09** JOB **L-73,147**



ELEVATIONS  
 GROUND SURFACE **604.2**  
 END OF BORING **544.2**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **15.5'**  
 AT END OF BORING **Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	QU	Y DRY DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	SS	14	8.1		1.3	602.9	FILL - SAND and GRAVEL
	2	SS	9	17.0	2.0"	3.5	600.7	FILL - Gray, black and dark brown silty SAND, trace gravel, little cinders, moist (SM)
	3	SS	5	18.1		6.0	598.2	FILL - Light brown and black silty CLAY, little sand and cinders, trace organic, trace clay, moist (CL)
	4	SS	3	16.1				FILL - Black silty SAND and CINDERS, trace clay, moist
	A 5 B	SS	6	8.1 13.9	2.26"	11.0 12.0	593.2 592.2	FILL - Orange-brown fine SAND, trace silt, moist (SP)
	6	SS	5	13.1	2.0"	12.5		FILL - Pinkish-gray very silty CLAY, little sand, occasional sand seams, moist (CL)
	7	SS	4	28.5	1.25"	16.0	588.2	Tough light gray and gray very silty CLAY, trace to little sand, very moist (CL) [Possible Fill]
	8	SS	6	38.9	0.5"	16.5	585.7	Soft black and dark gray silty CLAY, trace sand, trace to little organic, occasional sand seams, very moist (CL)
	A 9 B	SS	7	32.5	0.5"	21.5	582.7	Loose to firm light gray silty medium to fine SAND, trace gravel, wet (SM)
	10	SS	11					
	11	SS	16	12.5	3.0"	26.0	578.2	
	12	SS	23	11.4	4.60 3.75"			Very tough to hard pinkish-gray silty CLAY and very silty CLAY layers, little to some sand, trace gravel, occasional silt and sand seams, moist (CL/CL-ML)
	13	SS	22	10.3	4.5"			

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **334** End of Boring at 60.0' Page 1 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **1** DATE STARTED **4-28-09** DATE COMPLETED **4-28-09** JOB **L-73,147**



ELEVATIONS  
 GROUND SURFACE **604.2**  
 END OF BORING **544.2**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **15.5'**  
 AT END OF BORING **Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	QU	Y DRY DEPTH	ELEV.	SOIL DESCRIPTIONS
	14	SS	25	11.1	3.0"			Very tough to hard pinkish-gray silty CLAY and very silty CLAY layers, little to some sand, trace gravel, occasional silt and sand seams, moist (CL/CL-ML)
	15	SS	62	19.8		43.5	566.7	Very dense light gray clayey SILT, trace to little fine sand, very moist to wet (ML)
	16	SS	25	12.1	4.5"	48.5	555.7	
	17	SS	22	12.5	4.0"			Hard gray very silty CLAY, trace to little sand, trace gravel, occasional sand seams, moist (CL)
	18	SS	25	12.1	4.5"			* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **334** End of Boring at 60.0' Page 2 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **2** DATE STARTED **4-24-09** DATE COMPLETED **4-27-09** JOB **L-73,147**



ELEVATIONS  
 GROUND SURFACE **600.6**  
 END OF BORING **540.6**

WATER LEVEL OBSERVATIONS  
 WHILE DRILLING **10.5'**  
 AT END OF BORING **Wash Boring**  
 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	QU	Y DRY DEPTH	ELEV.	SOIL DESCRIPTIONS
	A 1 B	SS	17	6.8 7.2		2.0	598.6	FILL - Dark brown silty medium to fine SAND, trace gravel, damp (SM)
	2	SS	11	7.0		3.5	597.1	Firm light brown and brown silty medium to fine SAND, trace gravel, moist (SM) [Possible Fill]
	3	SS	21	12.5				Firm brown and light brown silty medium to fine SAND, trace gravel, occasional Cobbles, moist (SM) [Possible Fill]
	4	SS	13	8.7		6.5	592.1	FILL - Brown and black silty fine SAND, trace organic, occasional silt seams, moist to wet (SM)
	5	SS	4	34.1	0.5"	10.5	590.1	Soft dark brown to black silty CLAY, trace sand, little organic, occasional sand seams, very moist (CL/OL)
	6	SS	8	24.8	2.0"	13.5	587.1	Tough to very tough dark gray to black silty CLAY, trace sand, trace organic, moist to very moist (CL/CH)
	7	SS	8	25.8	1.00 1.0"	16.5	582.1	
	8	SS	14					Firm brown silty SAND, little to some gravel, occasional Cobbles (SM)
	A 9 B	SS	14	11.4	3.0"	24.0	578.6	Very tough to hard pinkish-gray and light gray very silty CLAY, little sand, trace gravel, moist (CL)
	10	SS	23	11.3	4.50 4.5"	28.5	572.1	
	11	SS	27	22.1		33.5	567.1	Firm light gray medium to fine SAND, trace silt, wet (SP)
	12	SS	27	22.1				
	A 13 B	SS	21	11.4	3.22 4.5"			

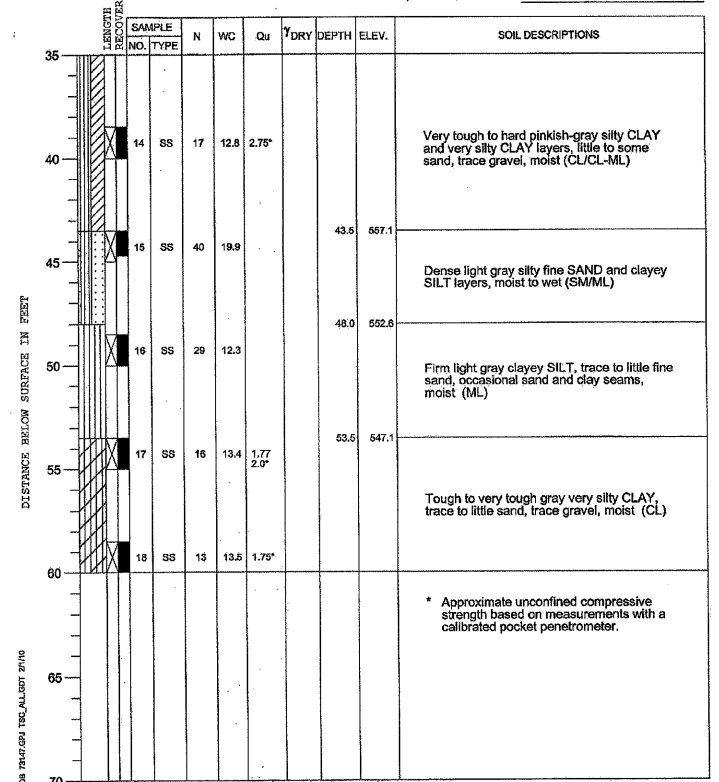
Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **334** End of Boring at 60.0' Page 1 of 2

**BORING LOGS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

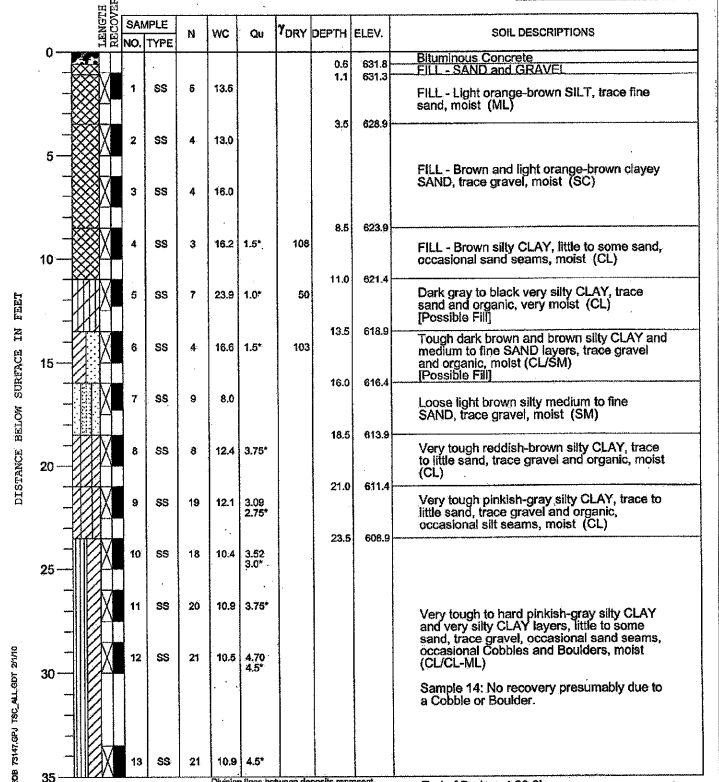
STRUCTURAL SHEET NO. 30B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	96
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanot, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **2** DATE STARTED **4-24-09** DATE COMPLETED **4-27-09** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **600.6** WHILE DRILLING **10.5'**  
 END OF BORING **540.6** AT END OF BORING **Wash Boring**  
 24 HOURS



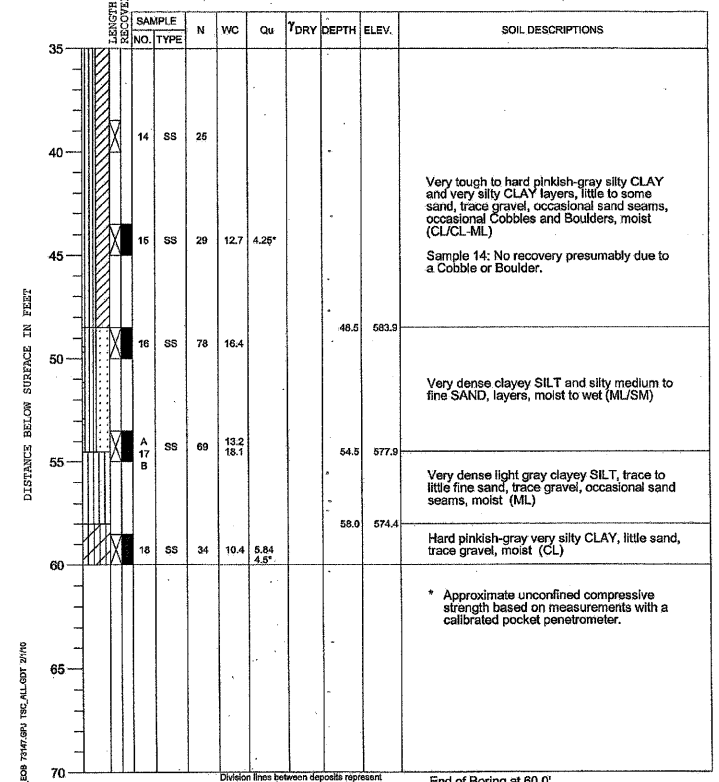
DRILL RIG NO. **334** End of Boring at 60.0' Page 2 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanot, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **3** DATE STARTED **4-27-09** DATE COMPLETED **4-27-09** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **632.4** WHILE DRILLING **Dry**  
 END OF BORING **572.4** AT END OF BORING **Dry**  
 24 HOURS



DRILL RIG NO. **334** End of Boring at 60.0' Page 1 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanot, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **3** DATE STARTED **4-27-09** DATE COMPLETED **4-27-09** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **632.4** WHILE DRILLING **Dry**  
 END OF BORING **572.4** AT END OF BORING **Dry**  
 24 HOURS

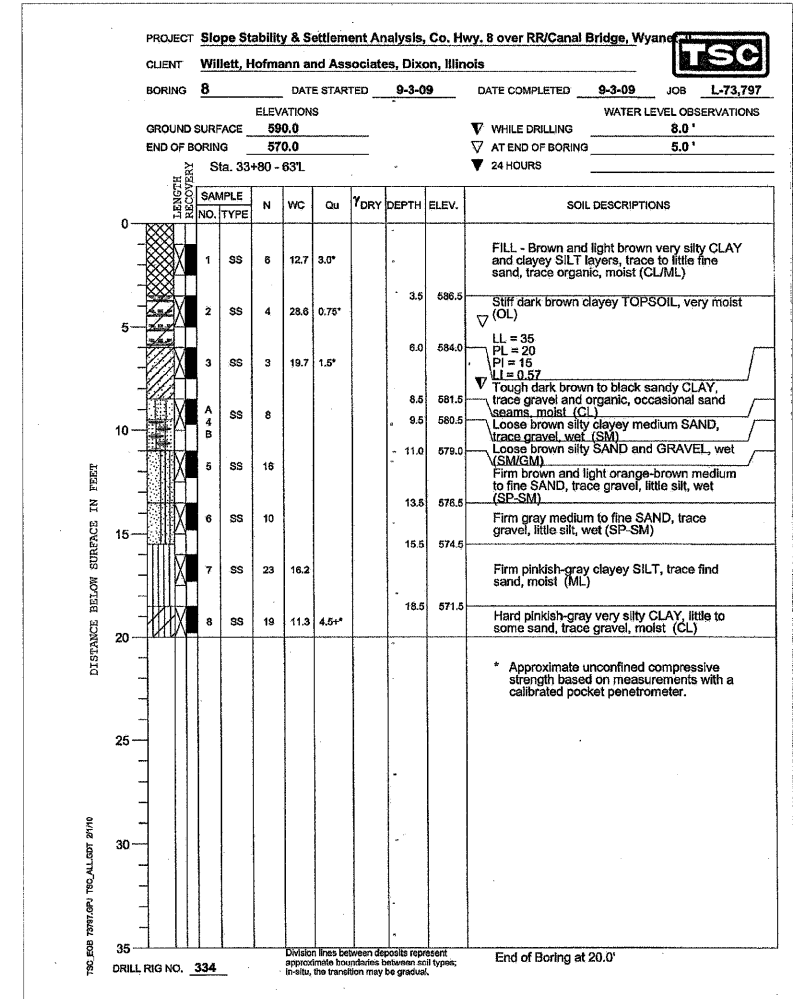
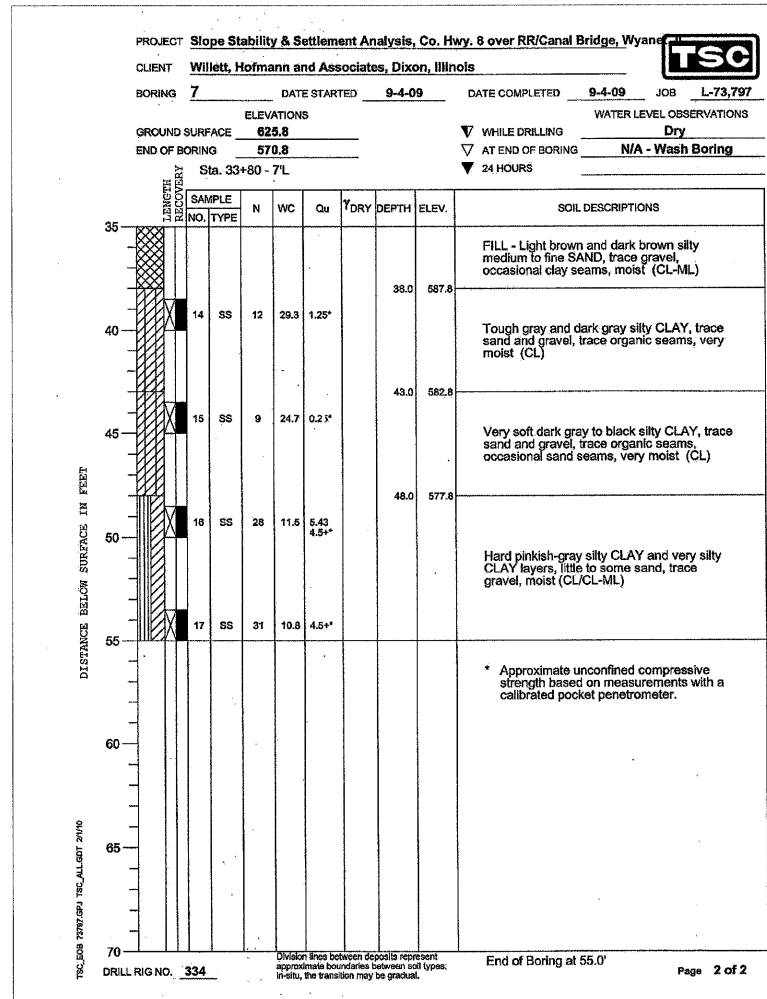
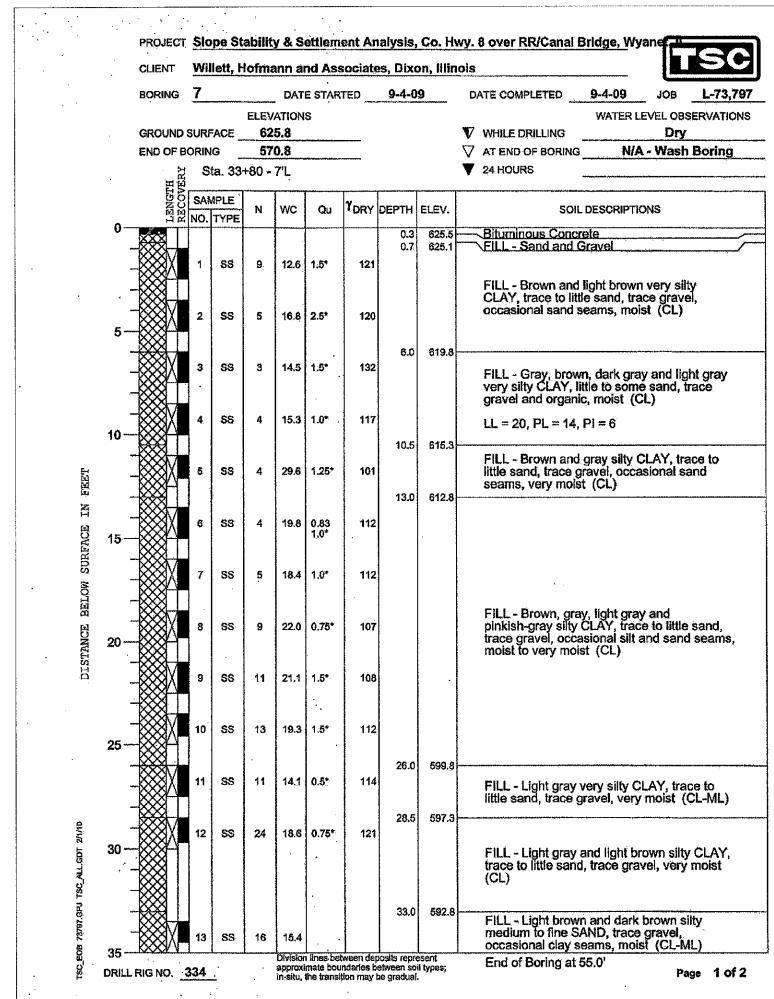


DRILL RIG NO. **334** End of Boring at 60.0' Page 2 of 2

**BORING LOGS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

STRUCTURAL SHEET NO. 31B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	97
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

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**BORING LOGS**  
**C.H. 8 OVER IOWA INTERSTATE RAILROAD**  
**& THE HENNEPIN CANAL**  
**STATION 36+00**  
**S.N. 006-3247**  
 WHA #1066D05

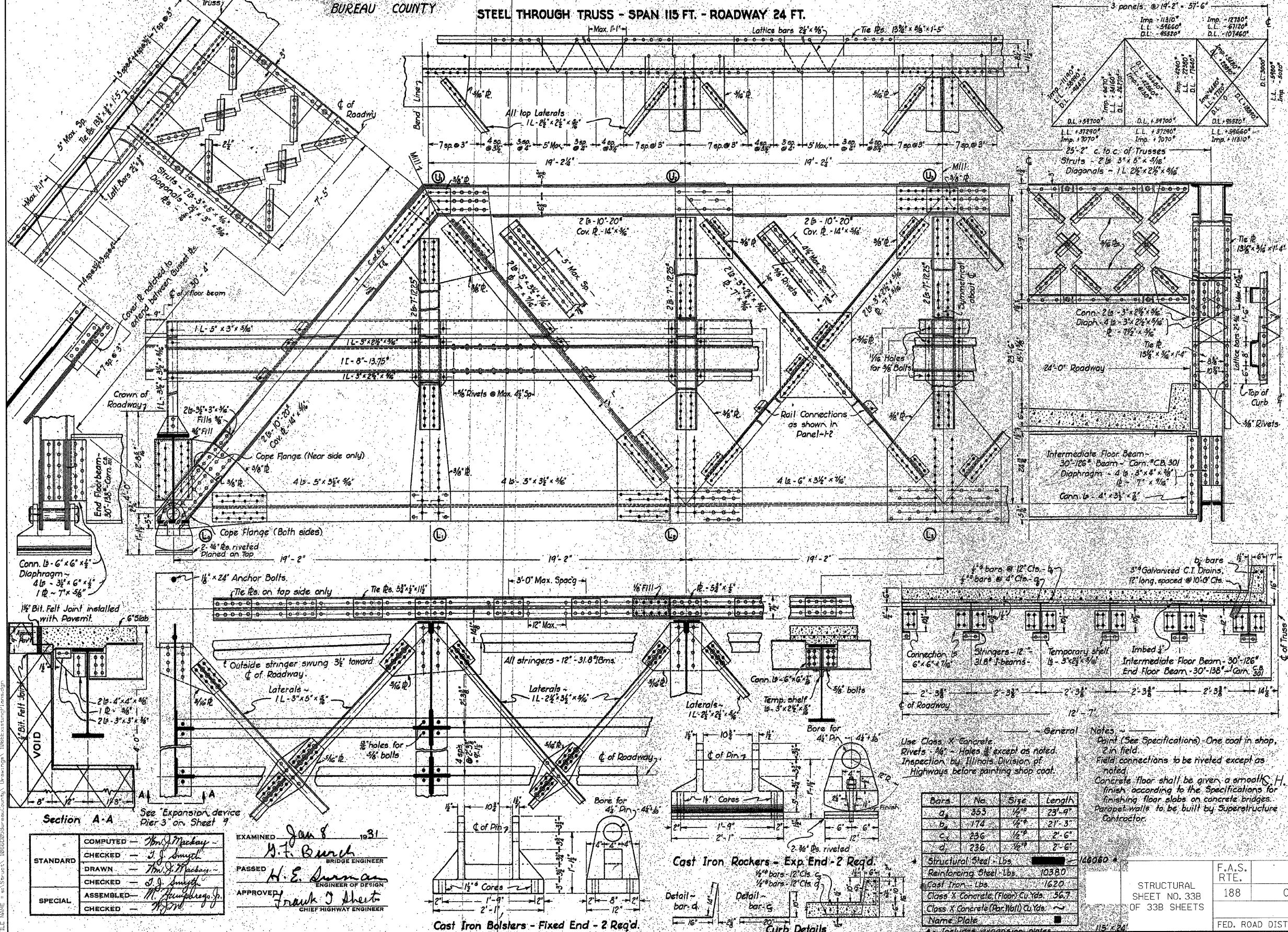
STRUCTURAL SHEET NO. 32B OF 33B SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	98
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

SPAN 5  
OVERHEAD CROSSING AT WYANET  
S.A. RTE 8 SEC. W6-15d  
BUREAU COUNTY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

SHEET NO. 2  
13 SHEETS

STEEL THROUGH TRUSS - SPAN 115 FT. - ROADWAY 24 FT.



FOR  
INFORMATION  
ONLY

**General Notes**  
Use Class X Concrete.  
Rivets 3/4" - Holes 1/2" except as noted.  
Inspection by Illinois Division of Highways before painting shop coat.

Bars	No.	Size	Length
a	353	1/2"	23'-9"
b	174	1/2"	21'-3"
c	236	1/2"	2'-6"
d	236	1/2"	2'-6"

Structural Steel - Lbs.	146080
Reinforcing Steel - Lbs.	10380
Cast Iron - Lbs.	1620
Class X Concrete (Floor) Cu Yds.	36.7
Class X Concrete (Par. Wall) Cu Yds.	
Name Plate	

Section A-A  
See Expansion device Pier 3 on Sheet 9

COMPUTED	— <i>Wm. J. Mackay</i> —	EXAMINED	— <i>Jan 8 1931</i> —
CHECKED	— <i>J. J. Smyth</i> —	PASSED	— <i>H. E. Swanson</i> —
DRAWN	— <i>Wm. J. Mackay</i> —	APPROVED	— <i>Frank J. Sheehy</i> —
CHECKED	— <i>J. J. Smyth</i> —		
ASSEMBLED	— <i>Wm. J. Mackay, Jr.</i> —		
CHECKED	— <i>H. J. P.</i> —		

EXISTING TRUSS PLANS  
8 OVER IOWA INTERSTATE RAILROAD  
& THE HENNEPIN CANAL  
STATION 36+00  
S.N. 006-3247  
WHA #1066D05

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	99

CONTRACT NO. 87380  
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)



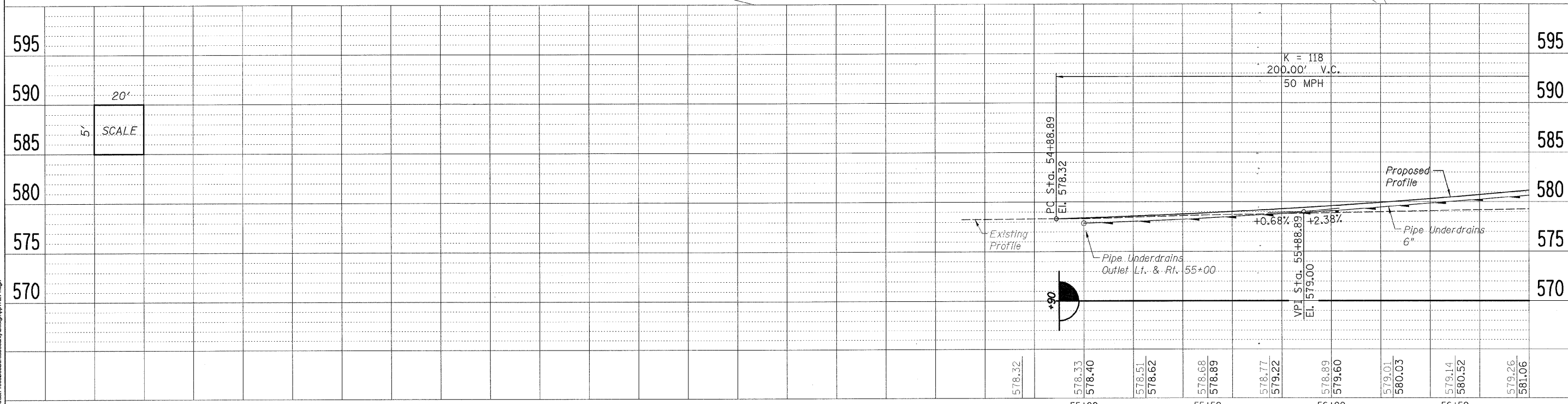


PROP. CURVE PR-TR271-1  
 PI STA. = 57+11.26  
 $\Delta$  = 8° 46' 42" (LT)  
 D = 2° 59' 03"  
 R = 1,920.00'  
 T = 147.37'  
 L = 294.17'  
 E = 5.65'  
 e = 3.5%  
 T.R. = 33 ft  
 S.E. RUN = 239.17'  
 P.C. STA = 55+63.89  
 P.T. STA = 58+58.06

Larson Property

DATE	
BY	
PLANNED	
DESIGNED	
DRAWN	
CHECKED	
NOTED	
NO.	

DATE	
BY	
PROFILING	
DESIGNED	
DRAWN	
CHECKED	
NOTED	
NO.	



<b>WILLET, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS 809 East Second Street Dixon, IL 61021 Phone 815.294.3381 Fax 815.294.3385 Design Firm # 184-0018 www.willettthofmann.com	USER NAME =	DESIGNED -	REVISED -	<b>BUREAU COUNTY</b> <b>BRIDGE REPLACEMENT</b> <b>FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</b>	<b>TR 271A - PLAN &amp; PROFILE</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEET NO.	
	PLOT SCALE =	DRAWN -	REVISED -			188	05-00195-00-BR	BUREAU	127	101
	PLOT DATE =	CHECKED -	REVISED -			STA. 54+00 TO STA. 56+80		CONTRACT NO. 87380		
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-01880181				

FILE NAME = s:\bureau\108500\BureauCounty\Design\tr271.dgn

Larson Property

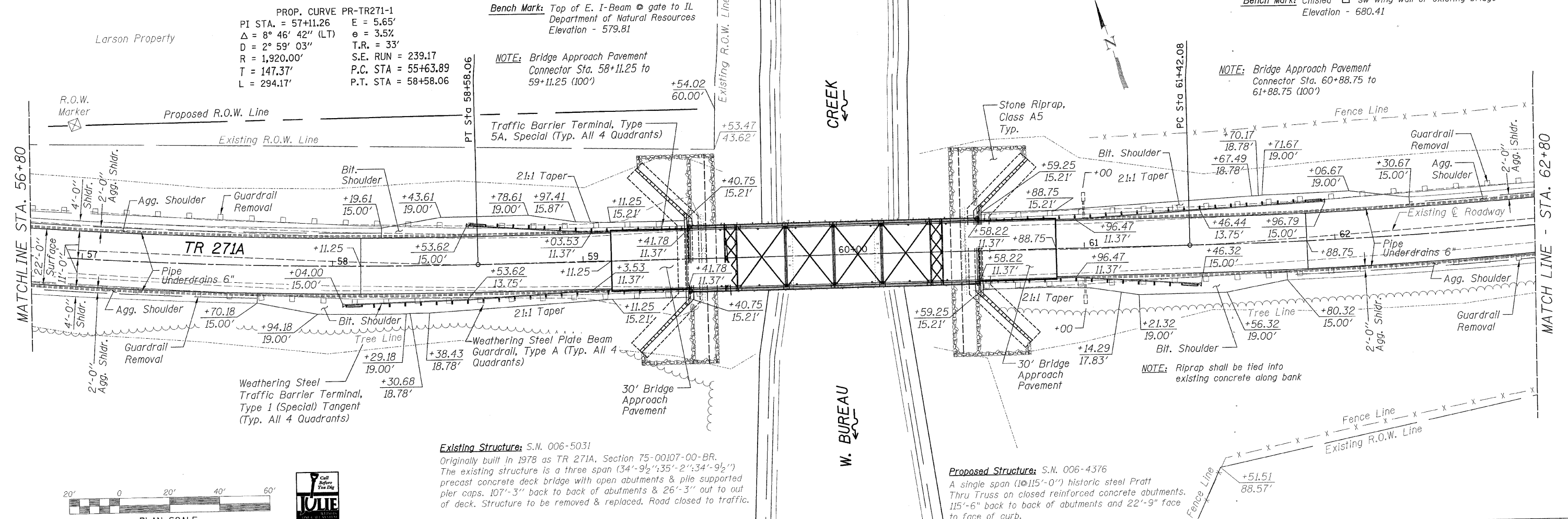
PROP. CURVE PR-TR271-1  
 PI STA. = 57+11.26 E = 5.65'  
 $\Delta = 8^\circ 46' 42''$  (LT)  $e = 3.5\%$   
 $D = 2^\circ 59' 03''$  T.R. = 33'  
 $R = 1,920.00'$  S.E. RUN = 239.17  
 $T = 147.37'$  P.C. STA = 55+63.89  
 $L = 294.17'$  P.T. STA = 58+58.06

Bench Mark: Top of E. I-Beam @ gate to IL  
 Department of Natural Resources  
 Elevation - 579.81

NOTE: Bridge Approach Pavement  
 Connector Sta. 58+11.25 to  
 59+11.25 (100')

Bench Mark: Chisled "□" sw wing wall of existing bridge  
 Elevation - 680.41

NOTE: Bridge Approach Pavement  
 Connector Sta. 60+88.75 to  
 61+88.75 (100')

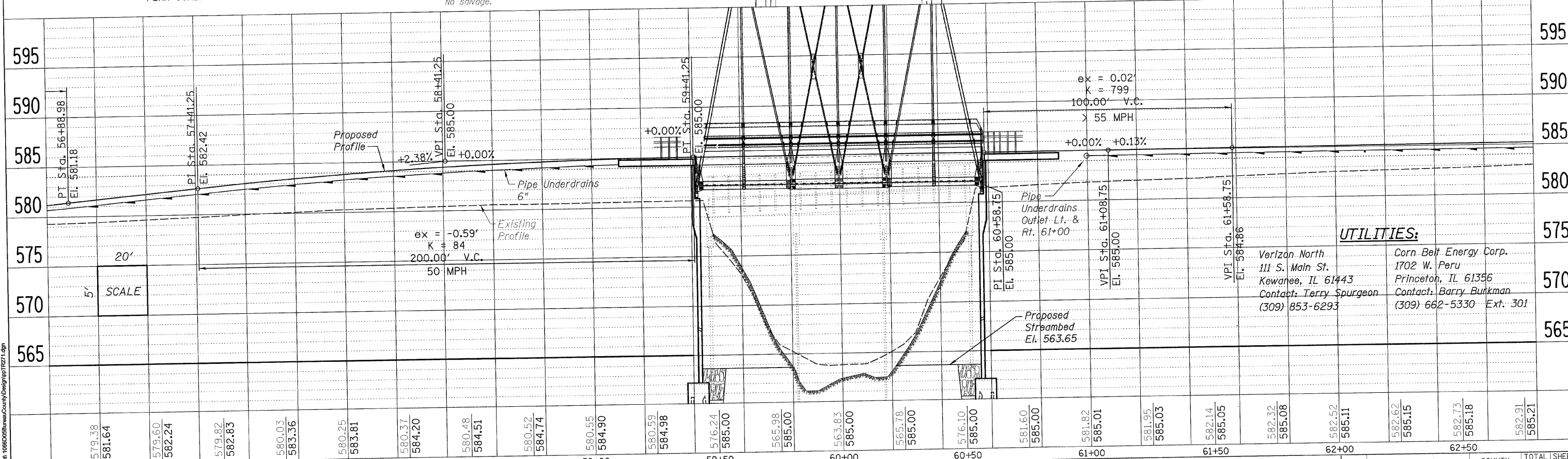


**Existing Structure:** S.N. 006-5031  
 Originally built in 1978 as TR 271A, Section 75-00107-00-BR.  
 The existing structure is a three span (34'-9 1/2"; 35'-2"; 34'-9 1/2")  
 precast concrete deck bridge with open abutments & pile supported  
 pier caps. 107'-3" back to back of abutments & 26'-3" out to out  
 of deck. Structure to be removed & replaced. Road closed to traffic.  
 No salvage.

**Proposed Structure:** S.N. 006-4376  
 A single span (101'5'-0") historic steel Pratt  
 Thru Truss on closed reinforced concrete abutments.  
 115'-6" back to back of abutments and 22'-9" face  
 to face of curb.

PLAN	SURVEYED	DATE
	BY	
	DATE	
	BY	
	DATE	
	BY	
	DATE	
	BY	
	DATE	
	BY	
	DATE	

PROFILE	SURVEYED	DATE
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	DATE	



**UTILITIES:**

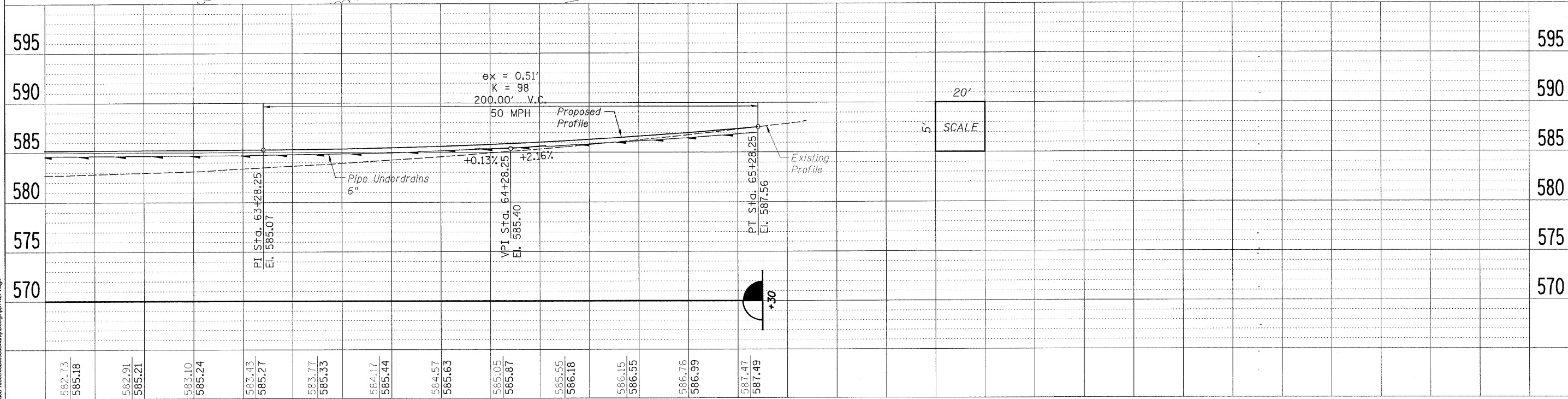
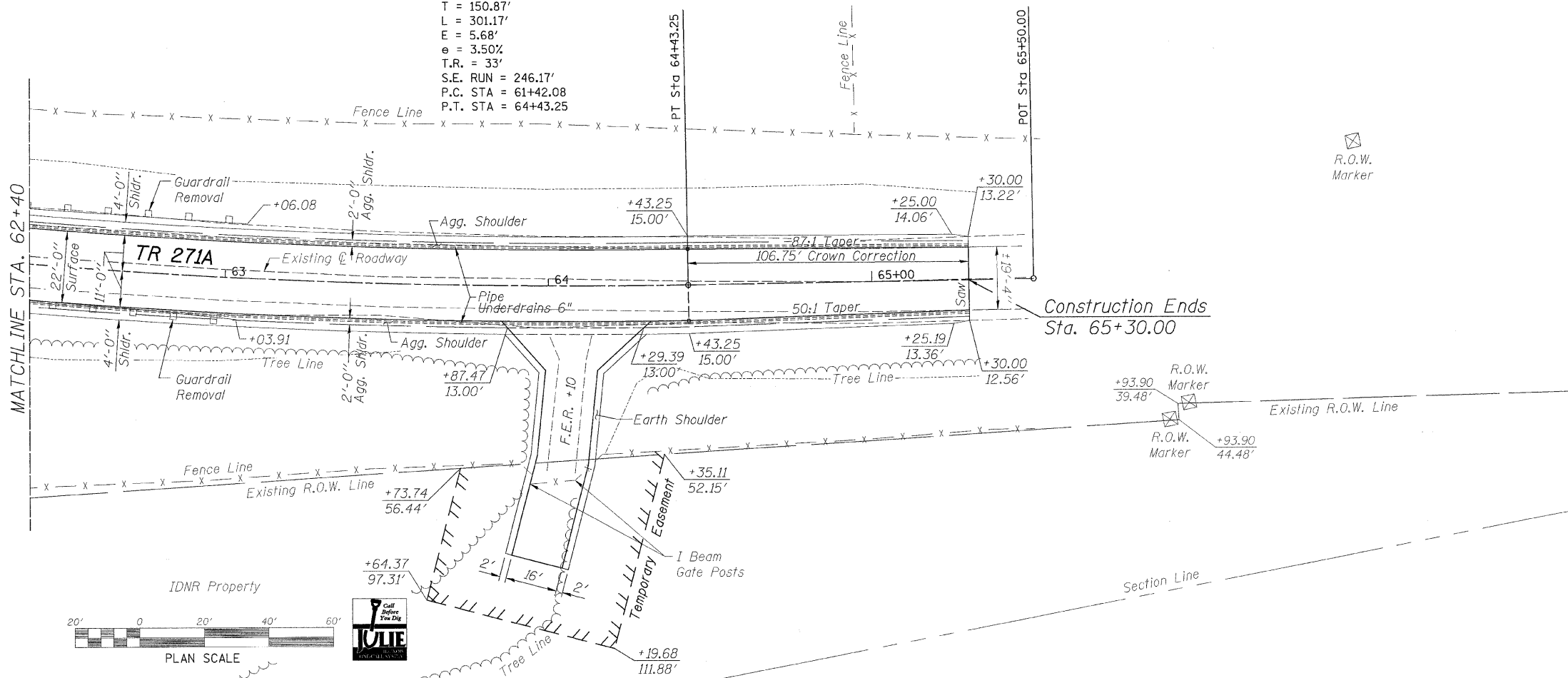
Verizon North 111 S. Main St. Kewanee, IL 61443 Contact: Terry Spurgeon (309) 853-6293	Corn Belt Energy Corp. 1702 W. Peru Princeton, IL 61356 Contact: Barry Burkman (309) 662-5330 Ext. 301
--	--

	USER NAME =	DESIGNED -	REVISED -	<b>BUREAU COUNTY</b> <b>BRIDGE REPLACEMENT</b> <b>TR 271A - PLAN &amp; PROFILE</b> <b>FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE =	DRAWN -	REVISED -		188	05-00195-00-BR	BUREAU	127	102	
	PLOT DATE =	CHECKED -	REVISED -		STA. 56+80 TO STA. 62+80		CONTRACT NO. 87380		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)	
		DATE -	REVISED -							

PROP. CURVE PR-TR271-2  
 PI STA. = 62+92.95  
 $\Delta = 8^\circ 37' 40''$  (LT)  
 $D = 2^\circ 51' 53''$   
 $R = 2,000.00'$   
 $T = 150.87'$   
 $L = 301.17'$   
 $E = 5.68'$   
 $e = 3.50\%$   
 $T.R. = 33'$   
 $S.E. RUN = 246.17'$   
 $P.C. STA = 61+42.08$   
 $P.T. STA = 64+43.25$

DATE	
BY	
NO.	
DATE	
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DATE	
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DATE	
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NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	



582.73	585.18	582.91	585.21	583.10	585.24	583.43	585.27	583.77	585.33	584.17	585.44	584.57	585.63	585.05	585.87	585.55	586.18	586.15	586.55	586.76	586.99	587.47	587.49
62+50	63+00	63+50	64+00	64+50	65+00																		

**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 808 East Second Street, Dixon, IL 61021  
 Phone 815.284.3391 Fax 815.294.3385  
 Design Firm # 184-00918  
 www.willettthofmann.com

USER NAME =	DESIGNED =	REVISED =
PLOT SCALE =	DRAWN =	REVISED =
PLOT DATE =	CHECKED =	REVISED =
	DATE =	REVISED =

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**TR 271A - PLAN & PROFILE**

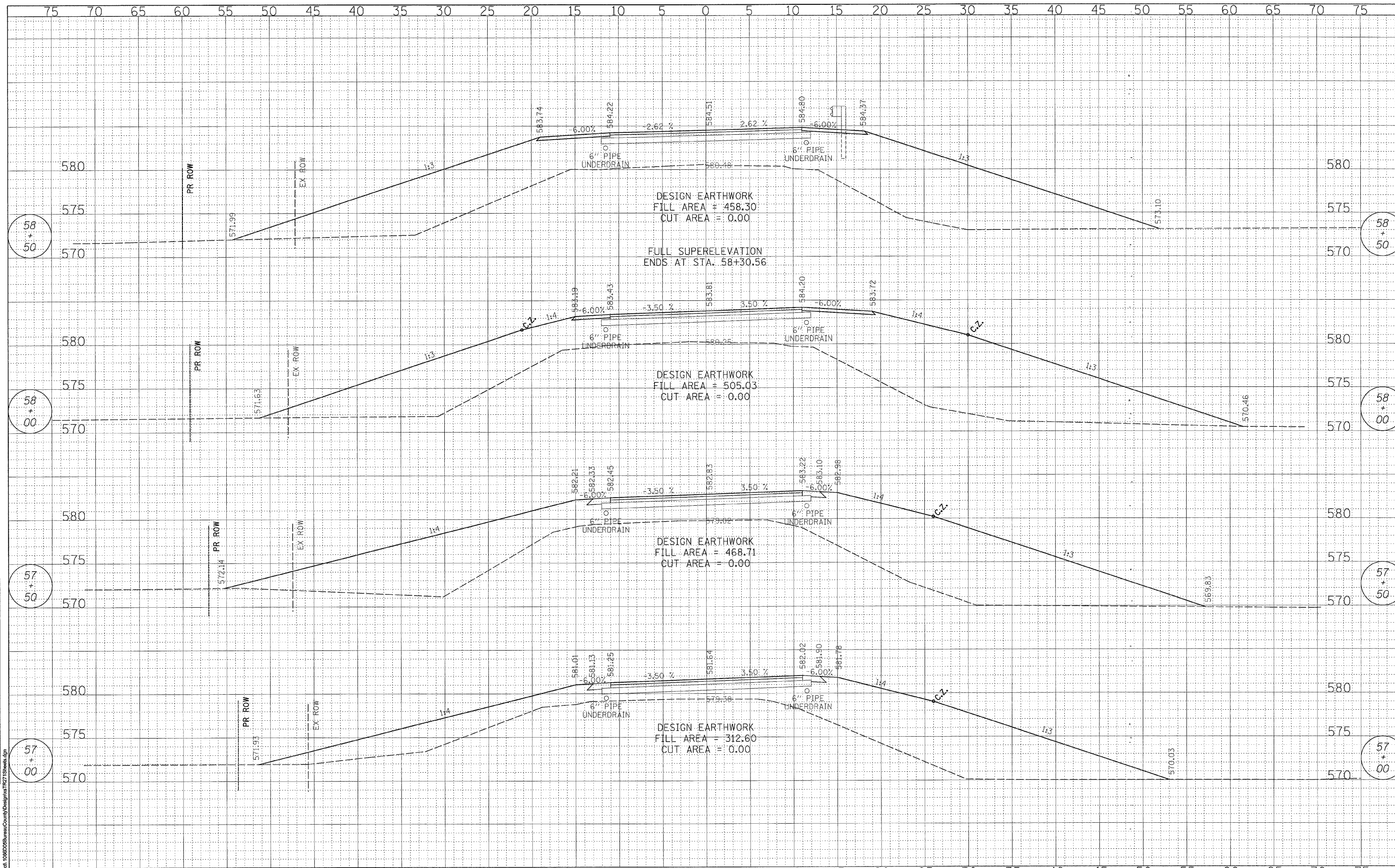
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188	05-00195-00-BR	BUREAU	127	103
STA. 62+40 TO STA. 65+50			CONTRACT NO. 07380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT			BRS-0188(119)	





DATE	
BY	
FINAL SURVEY	
SURVEYED	
NOTED	
PLOTTED	
DATE	
NO.	
AREAS CHECKED	

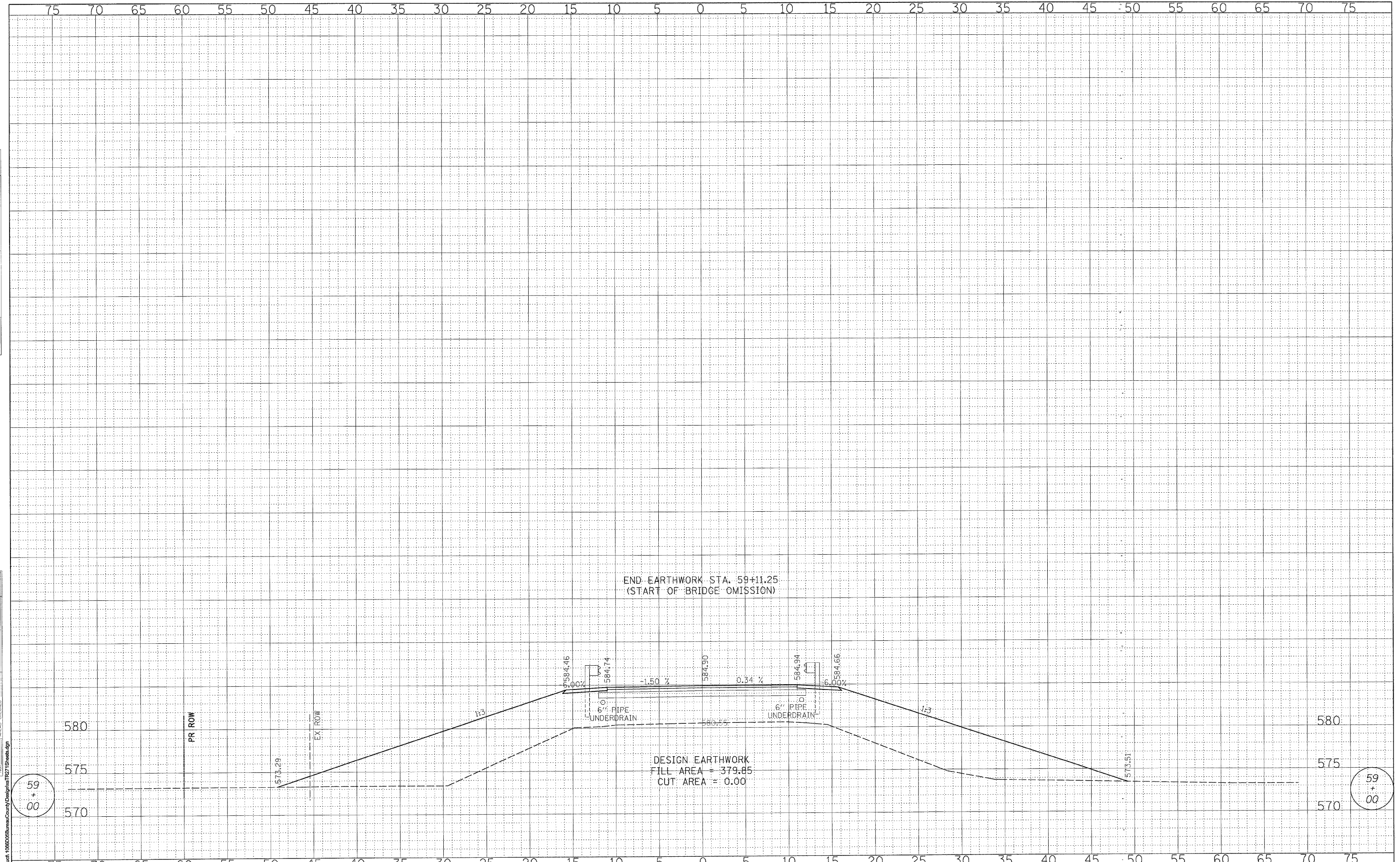
DATE	
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ORIGINAL SURVEY	
SURVEYED	
NOTED	
PLOTTED	
DATE	
NO.	
AREAS CHECKED	



<b>WILLETT, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS 809 East Second Street, Dixon, IL 61021 Phone 815.284.3391 Fax 815.294.3385 Design Firm 184-0018 www.willett-hofmann.com	USER NAME =	DESIGNED -	REVISED -	<b>BUREAU COUNTY</b> <b>BRIDGE REPLACEMENT</b> <b>FAS 188 (C.H. 8) OVER IAIS RAILROAD &amp; THE HENNEPIN CANAL</b>	<b>TR 271A - CROSS SECTIONS</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN -	REVISED -			188	05-00195-00-BR	BUREAU	127	105
PLOT DATE =	CHECKED -	REVISED -	STA. 57+00.00 TO STA. 58+50.00			CONTRACT NO. 87380		FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT BRS-0188(118)		
	DATE -	REVISED -								

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
DATE	
BY	
AREA'S CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
DATE	
BY	
AREA'S CHECKED	



WILLET, HOFMANN & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
809 East Second Street Dixon, IL 61021  
Phone 815.294.3391 Fax 815.294.3395  
Design Firm # 184-00978  
www.willettthofmann.com

USER NAME =	DESIGNED -	REVISIONS -
PLOT SCALE =	DRAWN -	REVISIONS -
PLOT DATE =	CHECKED -	REVISIONS -
	DATE -	REVISIONS -

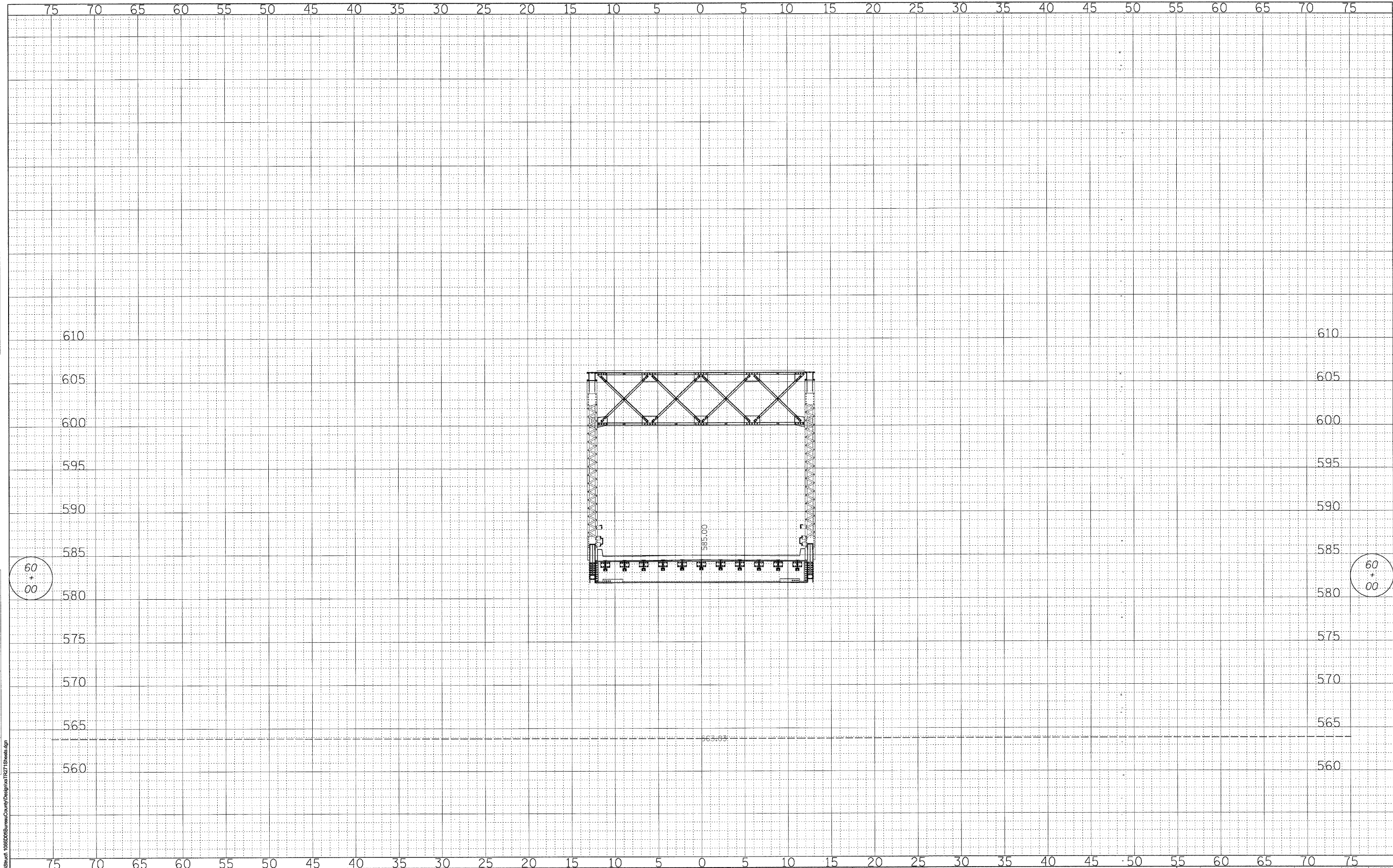
**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**TR 271A - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	106
STA. 59+00.00 TO STA. 59+00.00			CONTRACT NO. 87380	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-018B(118)				

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
NO.	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
NO.	
AREAS CHECKED	



**WILLET, HOFMANN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**  
 839 East Second Street, Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00818  
 www.willett-hofmann.com

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

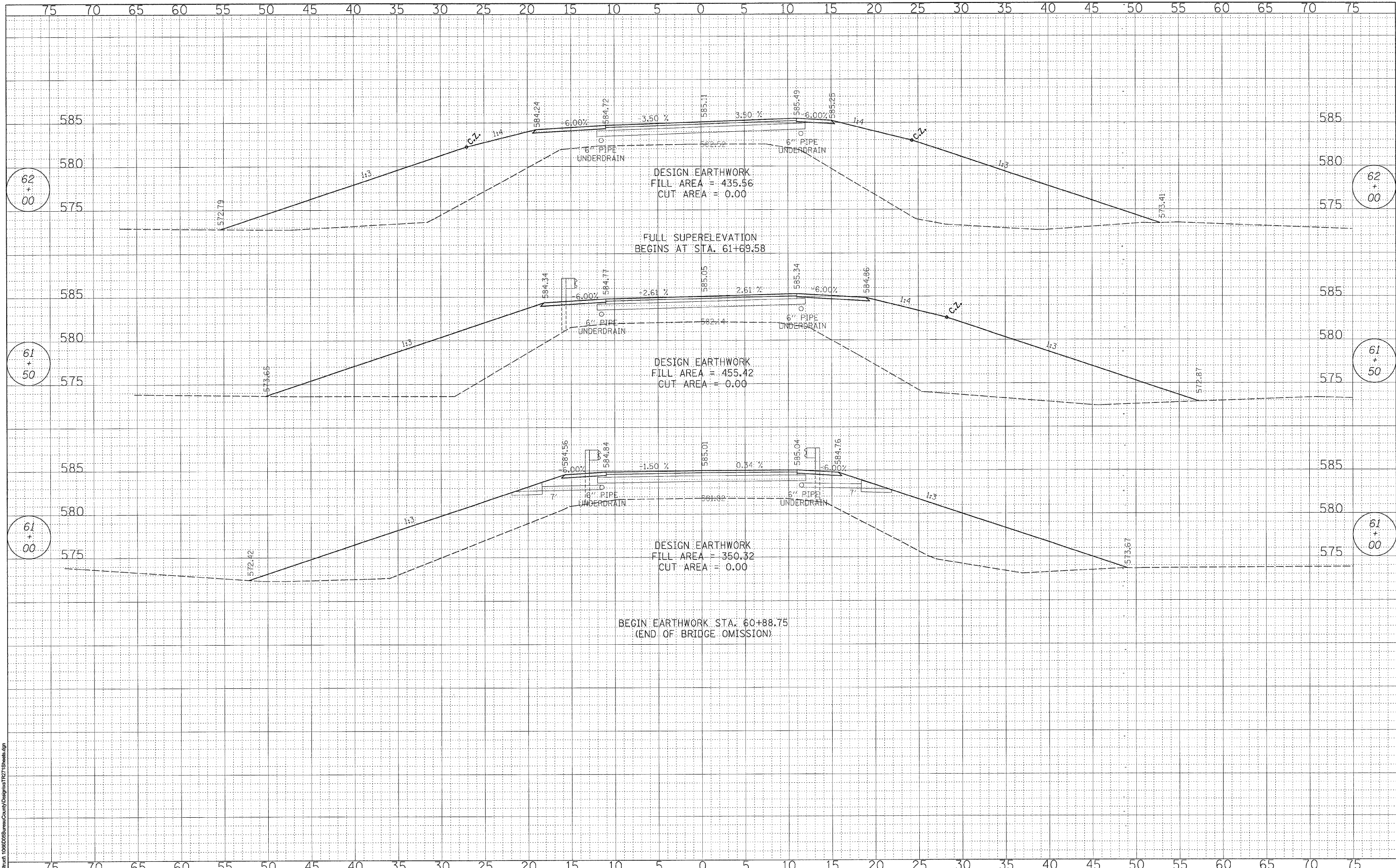
**TR 271A - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	107
STA. 60+00.00 TO STA. 60+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT BRS-0188(118)				



BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 FINAL SURVEY \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
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 NOTE BOOK \_\_\_\_\_  
 NO. \_\_\_\_\_



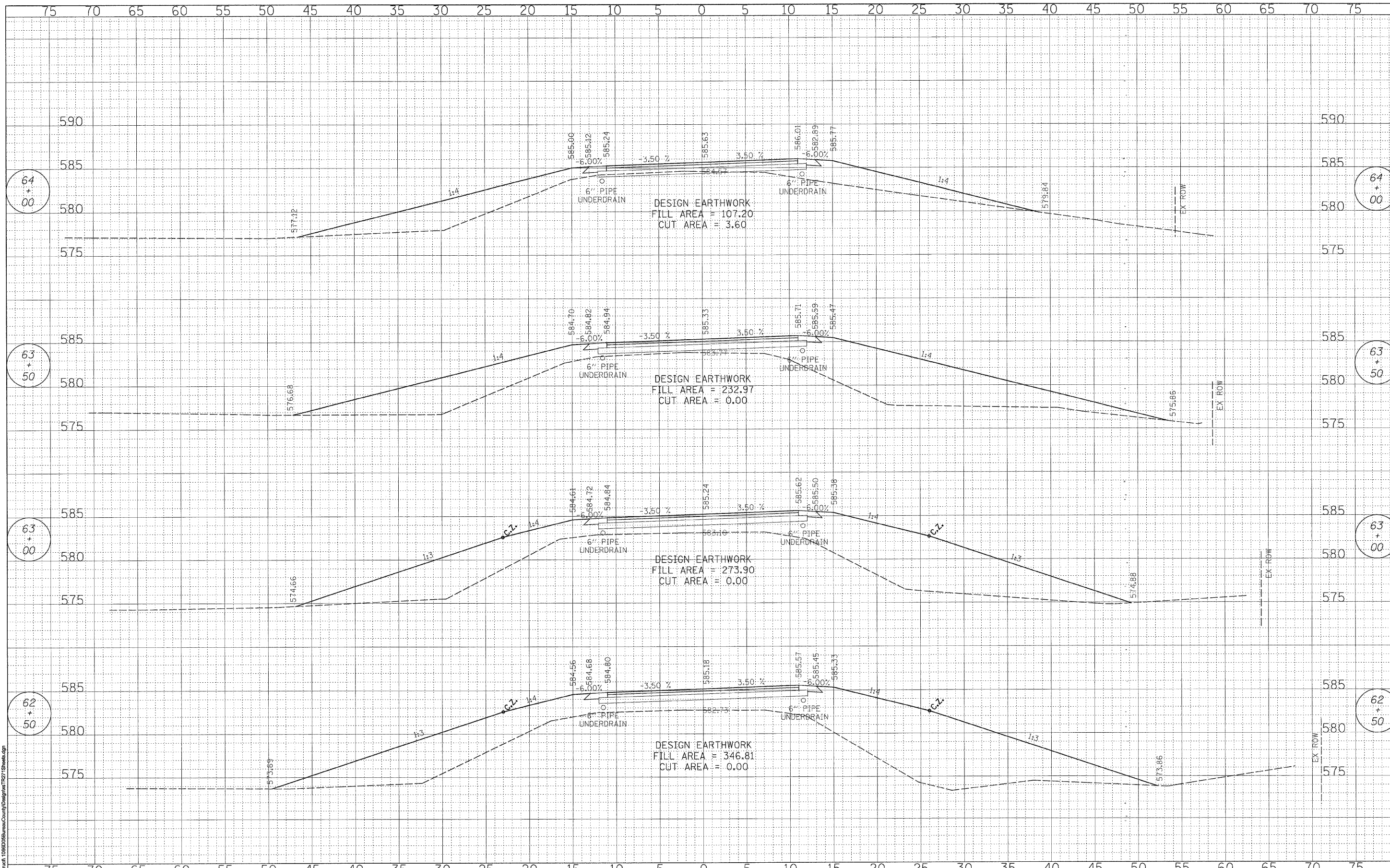
**WILLET, HOFMANN & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-02818  
 www.willett-hofmann.com

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	DATE -	REVISED -

**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**TR 271A - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	108
STA. 61+00.00 TO STA. 62+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-01880181				



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AREAS CHECKED	

BY	DATE
ORIGINAL SURVEY	
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TEMPLATE	
AREAS CHECKED	

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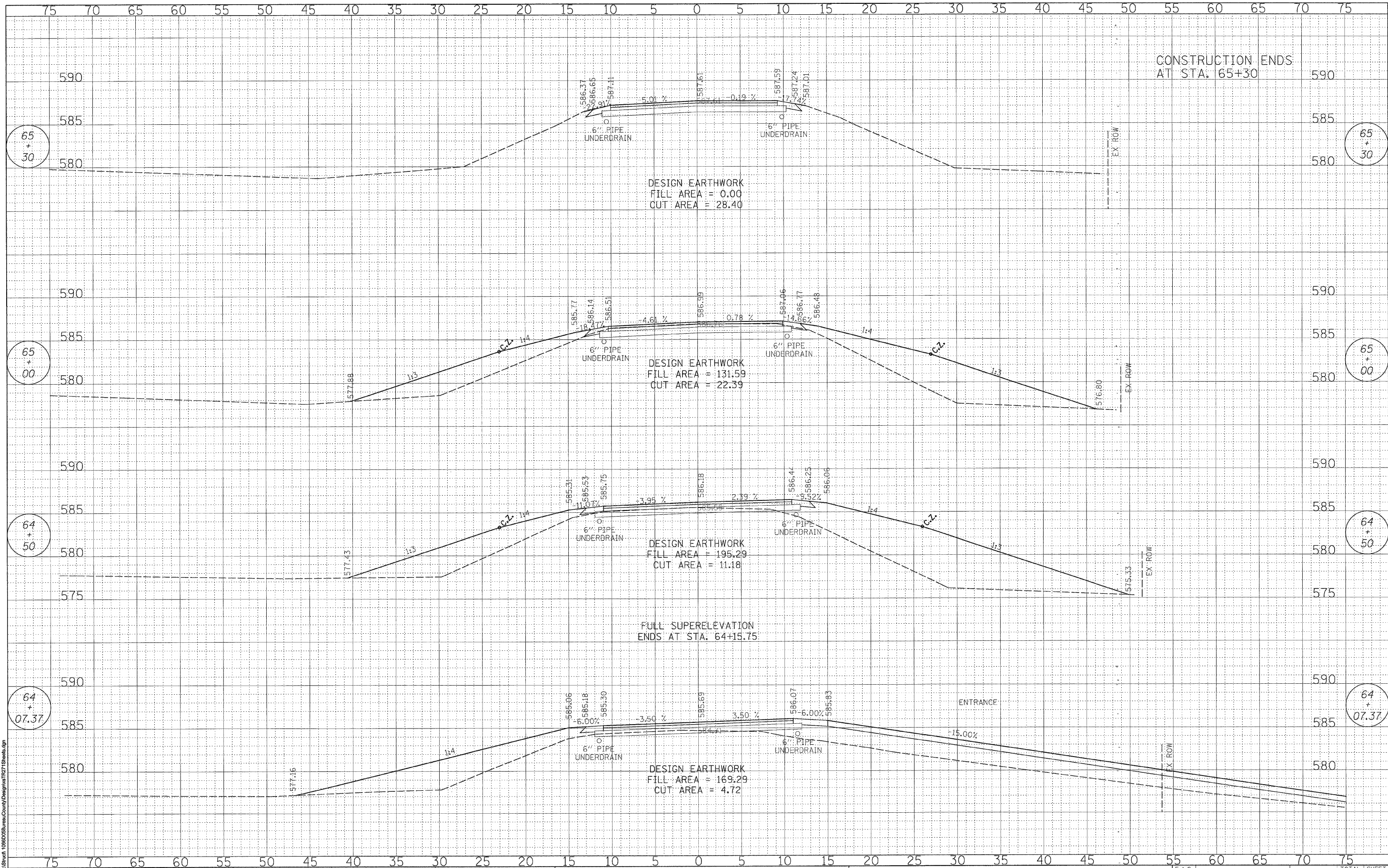
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PLLOT DATE =	CHECKED -	REVISED -
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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**TR 271A - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	109
STA. 62+50.00 TO STA. 64+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				





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**BUREAU COUNTY**  
 BRIDGE REPLACEMENT  
 FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL

**TR 271A - CROSS SECTIONS**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	110
STA. 64+07.37 TO STA. 65+00.00		CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0189(110)				





# STORM WATER POLLUTION PREVENTION PLAN

## EROSION CONTROL PLAN

THE FOLLOWING PLAN WAS ESTABLISHED AND INCLUDED IN THESE PLANS TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE SILTATION WITHIN THE CONSTRUCTION ZONE AND TO ELIMINATE SEDIMENTS FROM ENTERING AND LEAVING THE CONSTRUCTION ZONE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN ITEMS, AS SHOWN IN THIS PLAN AND REFERENCED BY THE LEGEND, SHALL BE PLACED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION RESULTING FROM THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL PLACE PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A REASONABLE AMOUNT OF TIME; THEREFORE, REDUCING THE AMOUNT OF AREA BEING OPEN TO THE POSSIBILITY OF EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE RESIDENT ENGINEER WILL DETERMINE IF TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED, THE PROPER METHOD OF INSTALLATION, AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS SHALL BE ADDED WHICH ARE NOT INCLUDED IN THE PLANS. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

#### SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY: TOTAL RECONSTRUCTION OF 1,040 L.F. OF TR 271A FROM APPROXIMATELY 420' SOUTHWEST OF STRUCTURE TO 440' NORTHEAST OF STRUCTURE.

THIS PROJECT CONSISTS OF PAVEMENT REMOVAL, EARTH EXCAVATION, CONCRETE DRIVEWAYS, BRIDGE SECTIONS, VARIOUS PAVEMENT ITEMS, AND OTHER MISCELLANEOUS ITEMS OF CONSTRUCTION

#### DESCRIPTION OF INTENDED SEQUENCE OF ACTIVITIES:

THE SEQUENCE OF EVENTS ARE AS FOLLOW: PAVEMENT REMOVAL, EARTH EXCAVATION, BRIDGE & CULVERT CONSTRUCTION, AGGREGATE BASE, BITUMINOUS SURFACE AND RELATED APPURTENANCES, PLACEMENT OF PERMANENT EROSION CONTROL INCLUDING SEEDING

TOTAL CONSTRUCTION SITE (CONSTRUCTION LIMIT TO CONSTRUCTION LIMIT) 3.05 ACRES  
DISTURBED SOIL BY EXCAVATION (SEED AREA) 1.36 ACRES

#### SUPPORTING REPORTS AND PLANS

THE FOLLOWING ASSISTED IN DEVELOPING THE EROSION CONTROL PLAN AS REFERENCED DOCUMENTS:

USGS DRAINAGE MAPS, PROJECT PLAN DOCUMENTS

DRAINAGE TRIBUTARIES RECEIVING WATER FROM CONSTRUCTION SITE:  
W. BUREAU CREEK

EROSION CONTROLS AND SEDIMENT CONTROL PROCEDURES  
STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:  
SILT FENCE INSTALLATION

#### STABILIZATION PRACTICES DURING CONSTRUCTION:

- (a) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
- (b) EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
- (c) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:
  - I. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
  - II. TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
- (d) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.
- (e) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
- (f) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING THE WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE CONSTRUCTION FIELD ENGINEER ON A BI-WEEKLY BASIS TO DETERMINE THAT EROSION CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.
- (g) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EARTH EXCAVATION (SPECIAL).
- (h) THE TEMPORARY EROSION CONTROL SYSTEM SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

#### MAINTENANCE AFTER FINAL GRADING

TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED WITH THE PROPER STAND. SEED SHALL BE WATERED ACCORDING TO THE SPECIFICATIONS AND ADDITIONAL WATERINGS SHALL BE USED AS DIRECTED BY THE ENGINEER.

PLAN	DATE
SURVEYED	BY
ALIGNMENT CHECKED	
GRADE CHECKED	
NOTE BOOK NO.	
FIELD FILE NAME	

PROFILE	DATE
SURVEYED	BY
GRADES CHECKED	
NOTE BOOK NO.	
FIELD FILE NAME	

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www.willett-hofmann.com

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**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNEPIN CANAL**

**SWPPP NOTES - TR 271A**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
188	05-00195-00-BR	BUREAU	127	113
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7   ILLINOIS FED. AID PROJECT BRS-0188(118)				



**EXISTING STRUCTURE:** S.N. 006-3243

Originally built in 1978 as TR 271A, Section 75-00107-00-BR. The existing structure is a three span (34'-9 1/2':35'-2':34'-9 1/2') precast concrete deck bridge with open abutments & pile supported pier caps. 107'-3" back to back of abutments & 26'-3" out to out of deck. Structure to be removed & replaced. Road closed to traffic.

No salvage.

**BENCH MARK:** Chiseled "□" on the southwest wingwall of existing structure, El. = 580.41

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut. 559.65	E. Abut. 559.65
------------------------------	-----------------	-----------------

WEST BUREAU CREEK  
BUILT 2010 BY  
BUREAU COUNTY  
SECTION 05-00195-00-BR  
T.R. 271A STATION 60+00  
STR. NO. 006-4376 LOADING HS20

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUB	SUPER	TOTAL
Channel Excavation	Cu. Yd.	1,515	---	1,515
* Porous Granular Embankment	Ton	676	---	676
* Stone Riprap, Class A5 (Special)	Ton	360	---	360
* Removal of Existing Structures No. 2	Each	---	---	1
Structure Excavation	Cu. Yd.	1,693	---	1,693
Concrete Structures	Cu. Yd.	362.5	14.8	377.3
Concrete Superstructure	Cu. Yd.	---	121.2	121.2
Bridge Deck Grooving	Sq. Yd.	---	418	418
Protective Coat	Sq. Yd.	---	493	493
* Floor Drains (Special)	Each	---	12	12
Stud Shear Connectors	Each	960	---	4,674
* Cleaning and Painting Steel Bridge	L. Sum	---	1	1
* Containment and Disposal of Lead Based Cleaning Residues	L. Sum	---	1	1
Reinforcement Bars	Pound	12,590	---	12,590
Reinforcement Bars, Epoxy Coated	Pound	39,980	38,070	78,050
Furnishing Steel Piles HP 14x89	Foot	4,428	---	4,428
Driving Piles	Foot	4,428	---	4,428
Test Pile Steel HP 14x89	Each	2	---	2
Name Plates	Each	---	1	1
Preformed Joint Strip Seal	Foot	---	24	24
Anchor Bolts, 1/4"	Each	---	12	12
Geocomposite Wall Drain	Sq. Yd.	249	---	249
* Steel Bearing Assembly	Each	---	4	4
* Underwater Structure Excavation Protection - Location 1	Each	1	---	1
* Underwater Structure Excavation Protection - Location 2	Each	1	---	1
* Fixed Hinge Pin Assembly	Each	---	4	4

\* See Special Provisions.  
\*\* Includes Deck, Approach Pavement, and Top & Inside Face of Curb only.

**NAME PLATE LETTERING**

Refer To Std. 515001-02

**INDEX OF SHEETS**

- 1C General Plan and Elevation
- 2C Superstructure Details
- 3C Top of Approach Slab Elevations - West
- 4C Top of Approach Slab Elevations - East
- 5C Shear Stud Layout & Force Diagram
- 6C Bolsters & Floor Drains
- 7C Strip Seal Details
- 8C Bridge Approach Slab Details
- 9C East & West Abutment Details
- 10C East & West Abutment Details
- 11C Pile Details
- 12C-13C Boring Logs

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.045 g  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.11 g  
Soil Site Class = B

**GENERAL NOTES:**

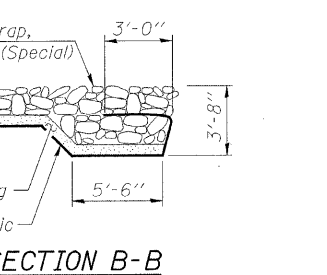
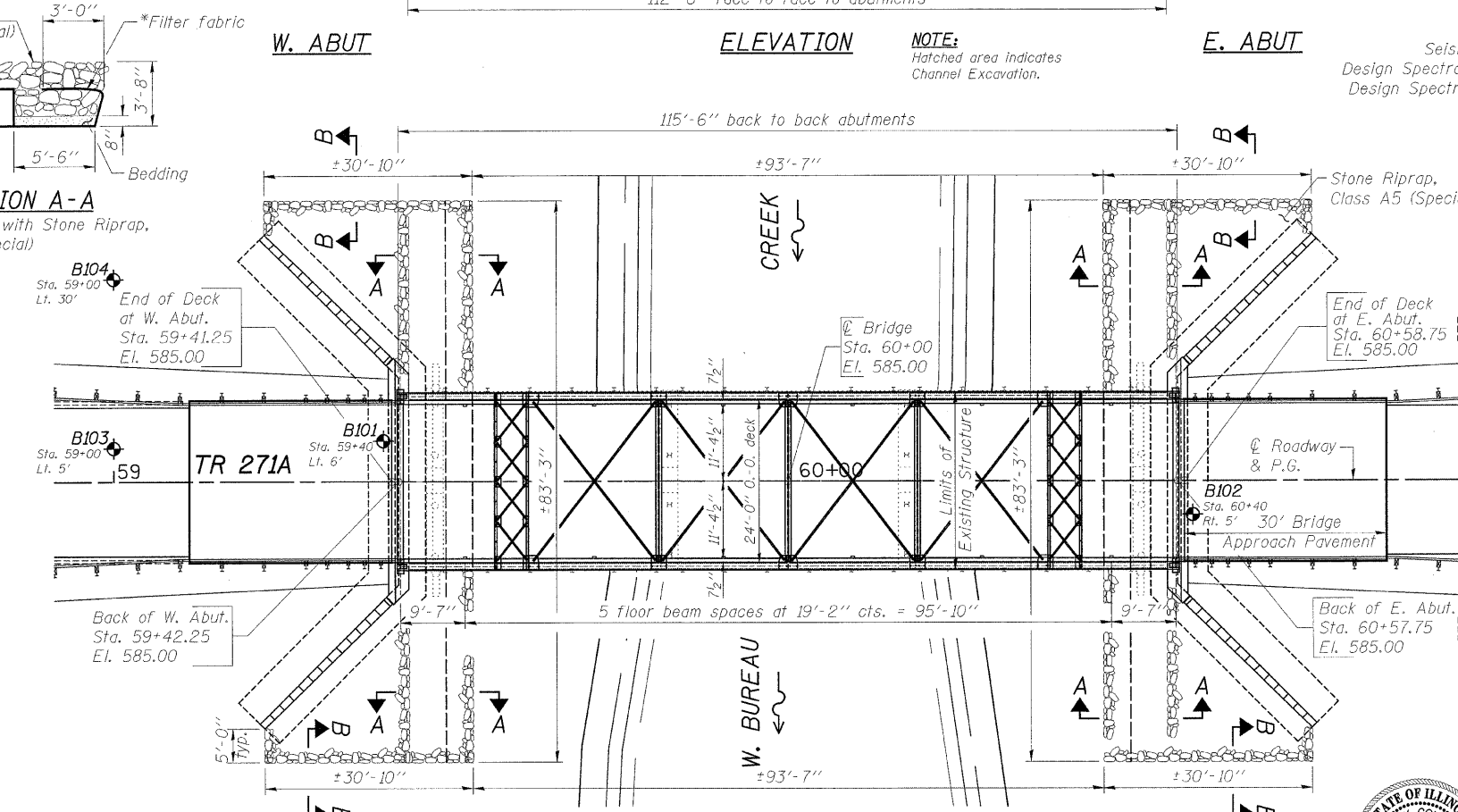
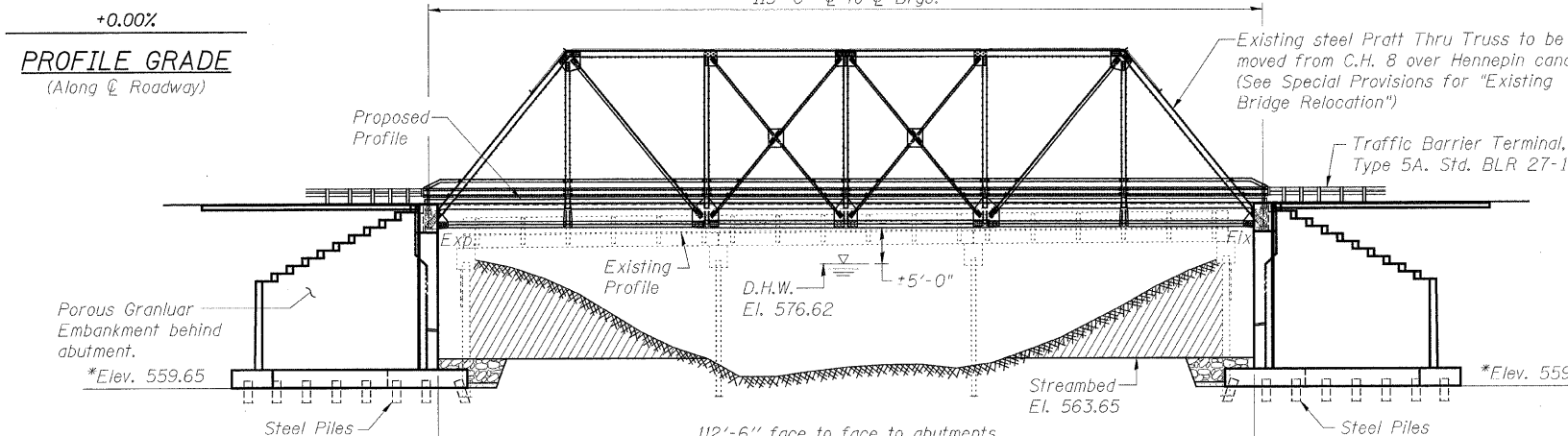
Total weight of Steel Bearing Assemblies - 1,990 lbs.  
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.  
The structural steel plates of the bearing assembly shall conform to the requirements of ASTM A 706 Gr 50. See Special Provisions.  
Reinforcement bars designated (E) shall 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. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/8 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final coat for all steel surfaces shall be Reddish Brown, Munsell No. 2.5YR 3/4.

Contractor shall field weld end plate at four corners of historic truss railing of same size & thickness as plate located on Traffic Barrier Terminal Type 5A. Cost incidental to "Traffic Barrier Terminal Type 5A".



**SECTION A-A**  
\*Cost included with Stone Riprap, Class A5 (Special)

**DESIGN SPECIFICATIONS**  
2002 Standard Specifications for Highway Bridges - 17th Edition

**LOADING HS20-44**  
No future wearing surface allowed.

**DESIGN STRESSES**  
**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (M270 Grade 50W)

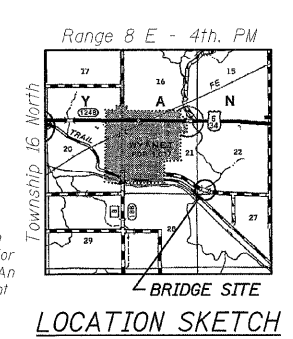
**WATERWAY INFORMATION**

Drainage Area = 87.2 sq. mi.	Low Grade El. 578.32 @ Sta. 54+75								
Flood Freq. Yr.	0	Opening Sq. Ft.	Nat.	Head - Ft.	Headwater El.				
Design	20	8,200	957	1,437	576.62	2.56	1.87	579.18	578.49
Base	100	12,575	1,145	1,644	578.46	4.45	3.56	582.91	582.02
Overtopping									

"I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans. The Design Is An Economical One Complies With Requirements Of The Current "AASHTO Standard Specifications For Highway Bridges"."



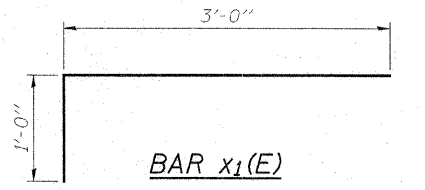
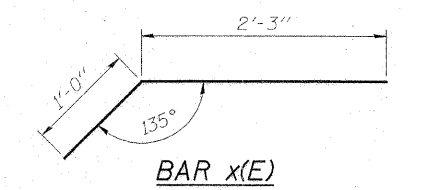
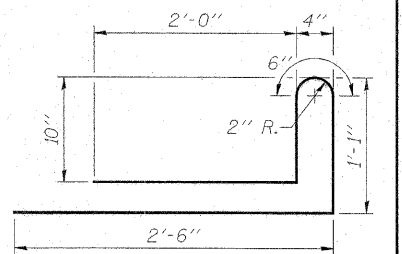
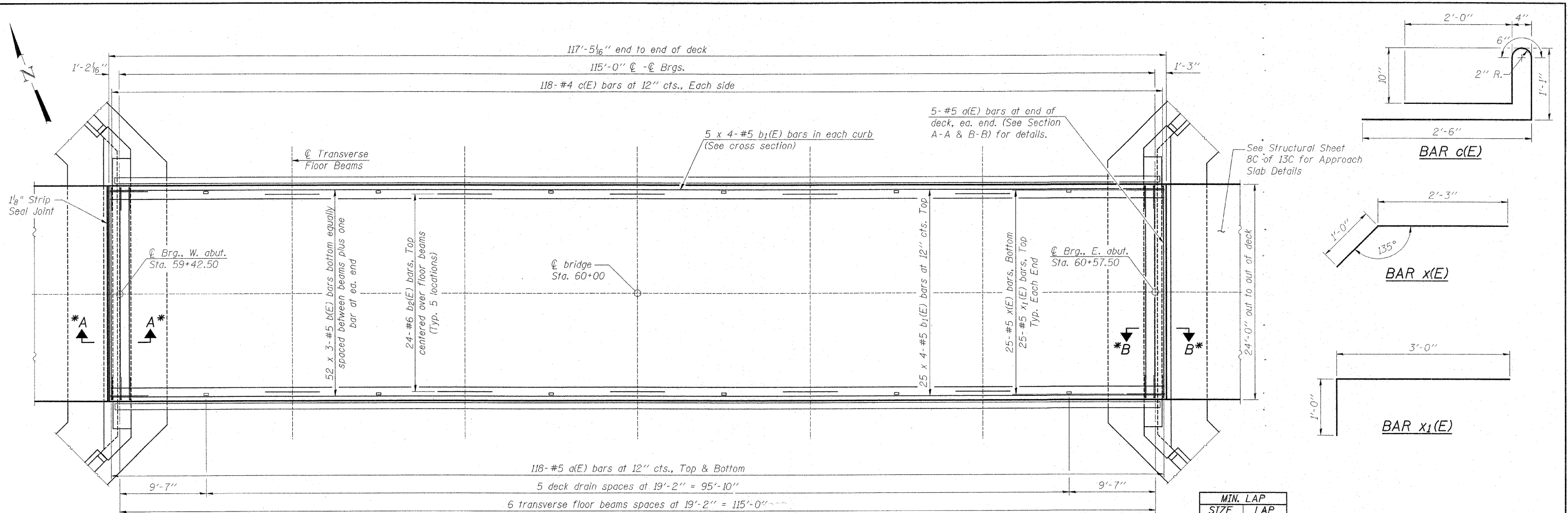
Brian K. Converse  
DATE: 4/30/2010  
EXPIRES 11/30/10



**GENERAL PLAN AND ELEVATION**  
**T.R. 271A OVER WEST BUREAU CREEK**  
**SECTION 05-00195-00-BR**  
**BUREAU COUNTY**  
**STA. 60+00**  
**S.N. 006-4376**

WHA JOB NUMBER	1066D05	<b>WILLET, HOFMANN &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS Land Surveying - Transportation - Structural Environmental - Architecture 809 East Second Street Dixon, Illinois 61021 Phone 815-294-3391 Fax 815-294-3395 Design Firm #184-000918 www.willett-hofmann.com	Designed By: M. A. Small Date: 2/10		
			Checked By: B. K. Converse Date: 2/10		
STRUCTURAL SHEET NO. 1C OF 13C SHEETS	F.A.S. RTE. 188	SECTION 05-00195-00-BR	COUNTY BUREAU	TOTAL SHEETS 127	SHEET NO. 114
		CONTRACT NO. 87380		FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BRS-0188(18)	

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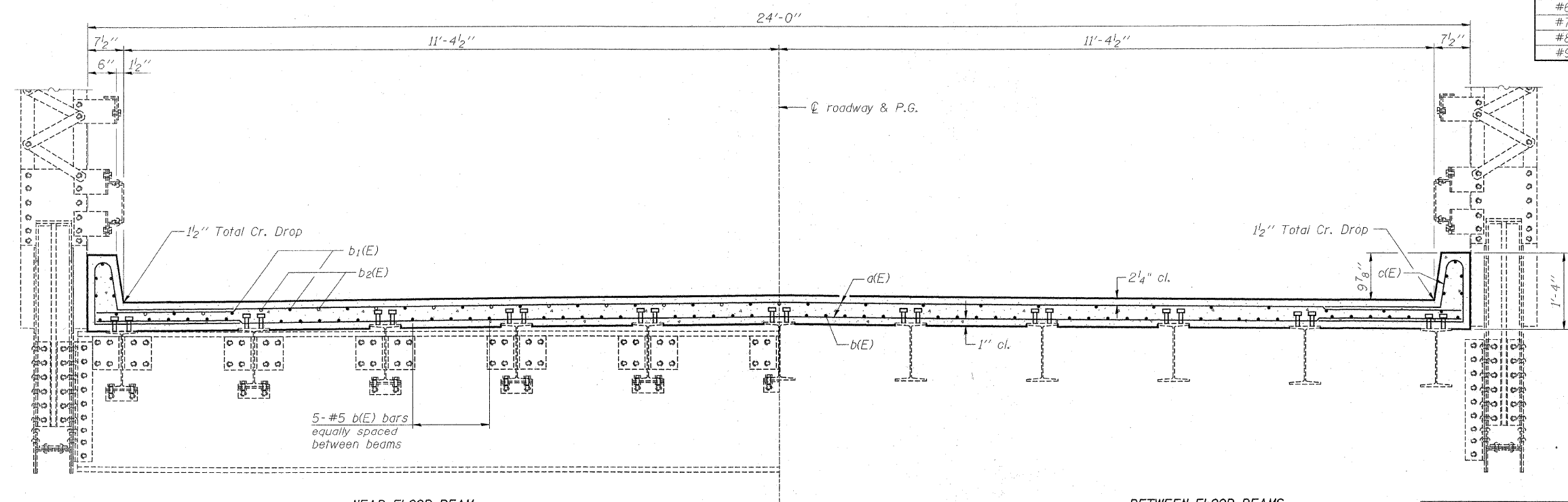
SIZE	MIN. LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	246	#5	23'-8"	—
b(E)	156	#5	41'-3"	—
b <sub>1</sub> (E)	140	#5	31'-9"	—
b <sub>2</sub> (E)	120	#6	6'-0"	—
c(E)	236	#4	6'-1"	U
x(E)	50	#5	3'-3"	⌋
x <sub>1</sub> (E)	50	#5	4'-0"	⌋
Concrete Superstructure			Cu. Yd.	51.5
Bridge Deck Grooving			Sq. Yd.	271
Protective Coat			Sq. Yd.	332
Reinforcement Bars, Epoxy Coated			Pound	19,840

**NOTES:**  
 Bars indicated thus 32 x 3-#5 etc. indicates 32 lines of bars with 3 lengths per line.  
 \*See Structural Sheet 7C of 13C for details.

**SUPERSTRUCTURE DETAILS**  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05



**CROSS SECTION**  
 (Looking East)

STRUCTURAL SHEET NO. 2C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	115
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

FILE NAME = s:\Struct\188009BureauCreek\Drawings\Historical\Structure\Superstructure.dgn

LEFT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	59+11.25	Lt. 12.00'	584.77
B	59+21.25	Lt. 12.00'	584.81
C	59+31.25	Lt. 12.00'	584.85
D	59+41.25	Lt. 12.00'	584.87

LEFT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	59+11.25	Lt. 11'-0"	584.78
B	59+21.25	Lt. 11'-0"	584.83
C	59+31.25	Lt. 11'-0"	584.86
D	59+41.25	Lt. 11'-0"	584.88

CENTERLINE ROADWAY

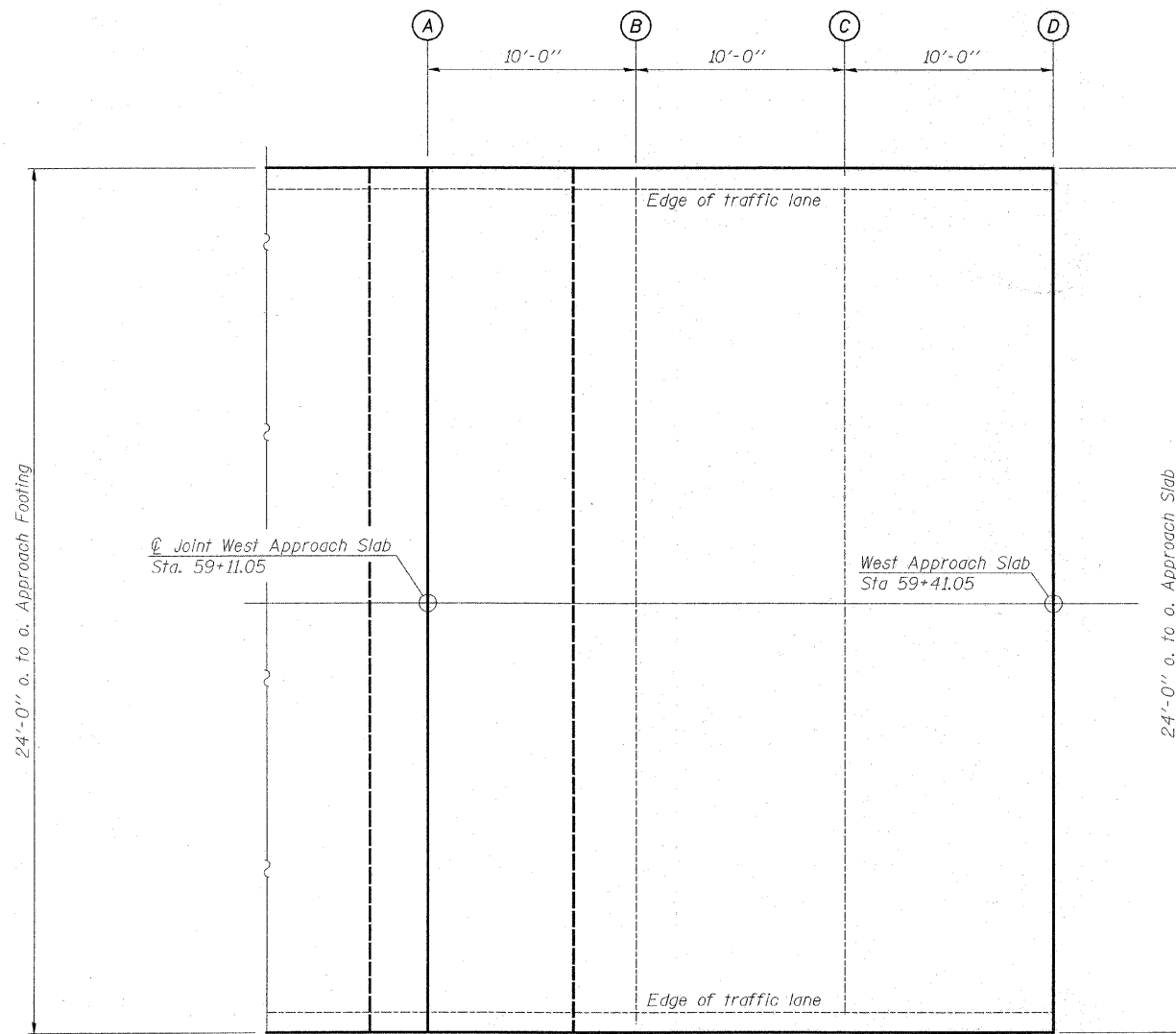
Location	Station	Offset	Theoretical Grade Elevations
A	59+11.25	0	584.95
B	59+21.25	0	584.98
C	59+31.25	0	584.99
D	59+41.25	0	585.00

RIGHT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	59+11.25	Rt. 11'-0"	584.93
B	59+21.25	Rt. 11'-0"	584.92
C	59+31.25	Rt. 11'-0"	584.91
D	59+41.25	Rt. 11'-0"	584.88

RIGHT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	59+11.25	Rt. 12.00'	584.92
B	59+21.25	Rt. 12.00'	584.91
C	59+31.25	Rt. 12.00'	584.90
D	59+41.25	Rt. 12.00'	584.87



PLAN

TOP OF APPROACH SLAB ELEVATIONS - WEST  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05

STRUCTURAL SHEET NO. 3C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	116
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

LEFT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	60+58.75	Lt. 12.00'	584.87
B	60+68.75	Lt. 12.00'	584.86
C	60+78.75	Lt. 12.00'	584.84
D	60+88.75	Lt. 12.00'	584.82

LEFT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	60+58.75	Lt. 11'-0"	584.88
B	60+68.75	Lt. 11'-0"	584.87
C	60+78.75	Lt. 11'-0"	584.85
D	60+88.75	Lt. 11'-0"	584.84

CENTERLINE ROADWAY

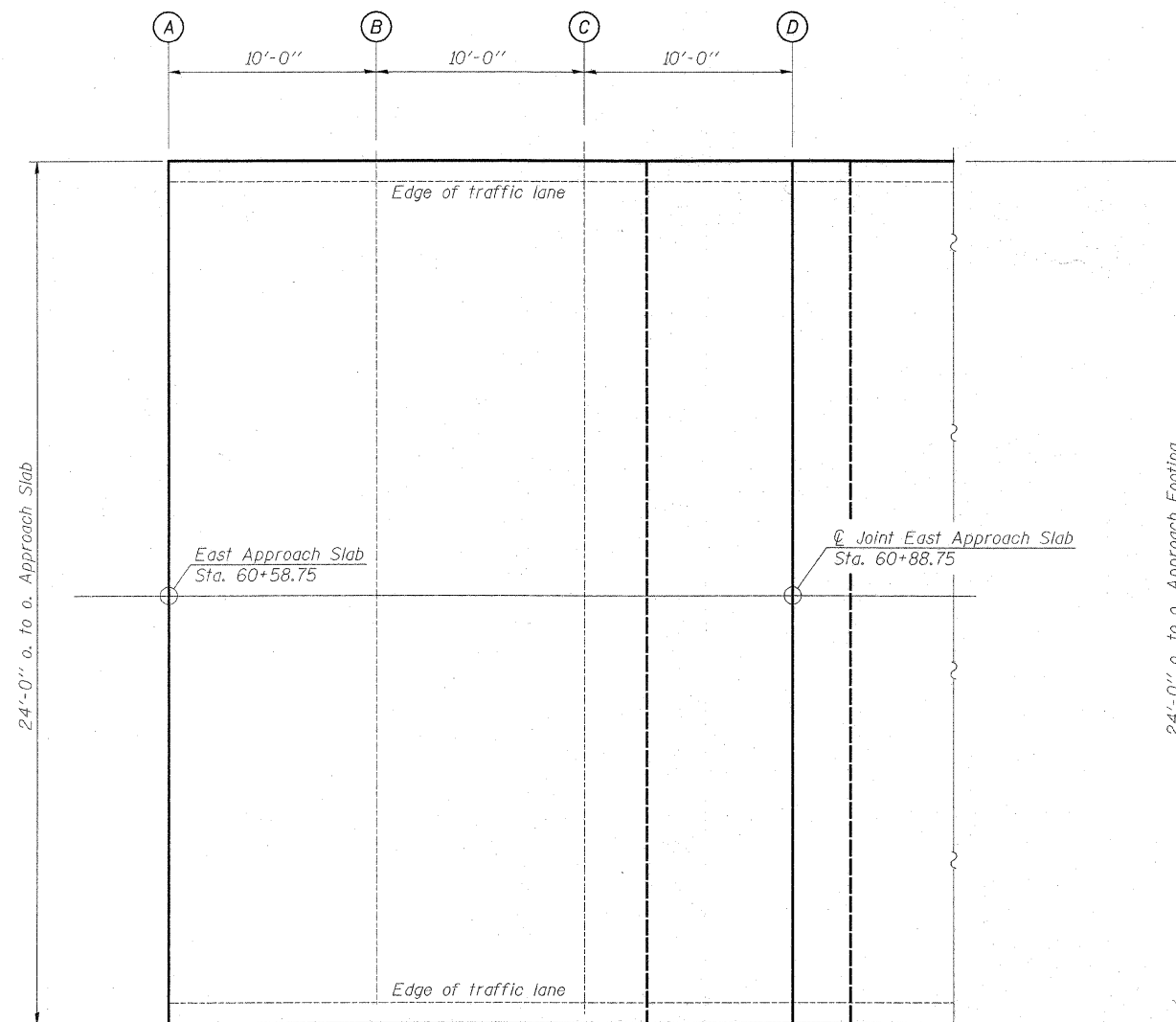
Location	Station	Offset	Theoretical Grade Elevations
A	60+58.75	0	585.00
B	60+68.75	0	585.00
C	60+78.75	0	585.00
D	60+88.75	0	585.01

RIGHT EDGE OF TRAFFIC LANE

Location	Station	Offset	Theoretical Grade Elevations
A	60+58.75	Rt. 11'-0"	584.88
B	60+68.75	Rt. 11'-0"	584.91
C	60+78.75	Rt. 11'-0"	584.95
D	60+88.75	Rt. 11'-0"	584.99

RIGHT EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
A	60+58.75	Rt. 12.00'	584.87
B	60+68.75	Rt. 12.00'	584.90
C	60+78.75	Rt. 12.00'	584.94
D	60+88.75	Rt. 12.00'	584.98

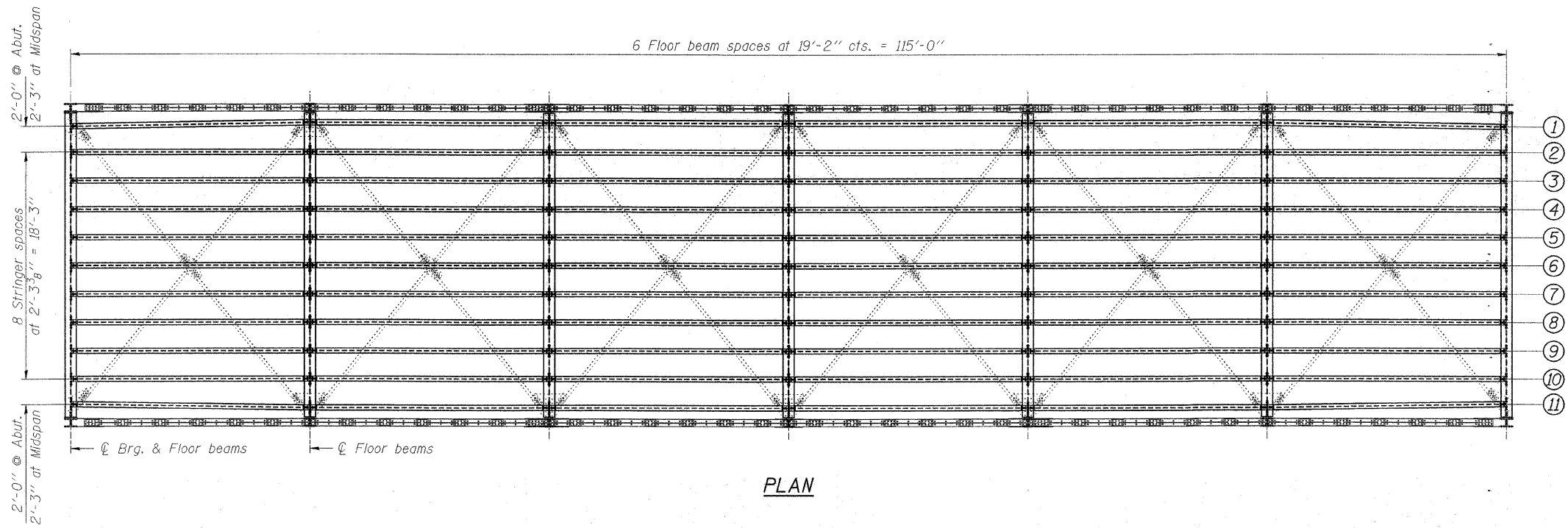


PLAN

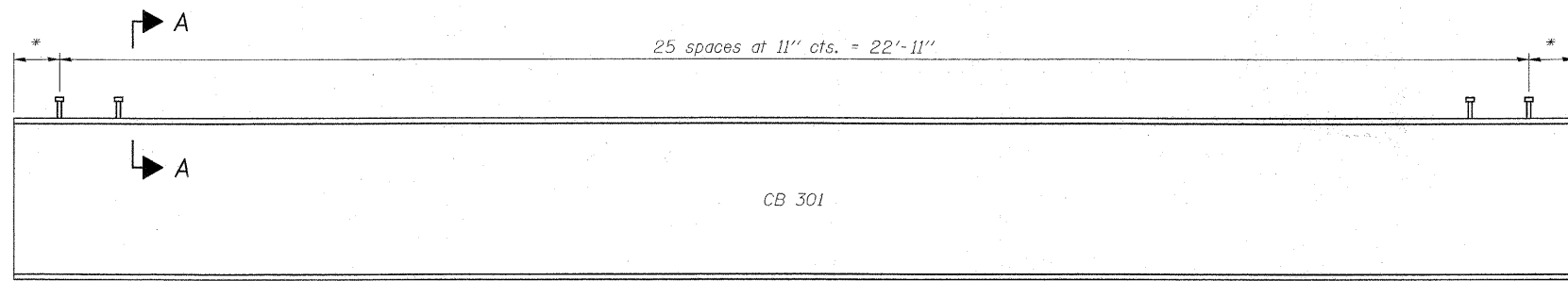
TOP OF APPROACH SLAB ELEVATIONS - EAST  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05

STRUCTURAL SHEET NO. 4C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	117
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



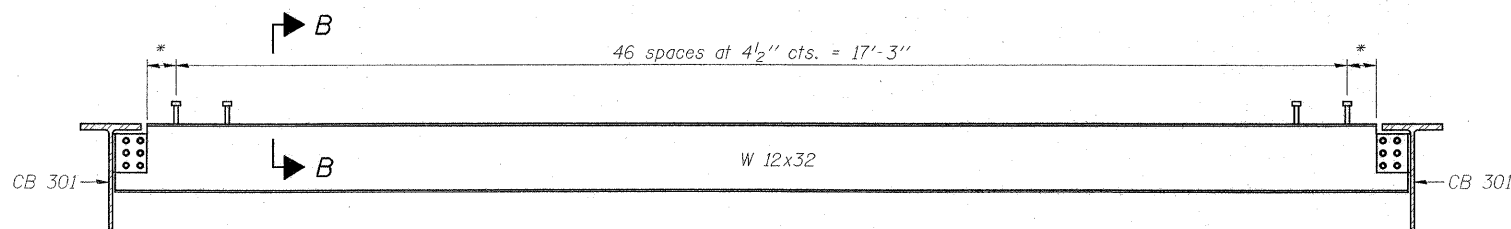


PLAN

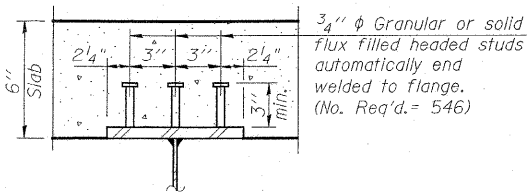


FLOOR BEAM ELEVATION  
(Seven Locations)

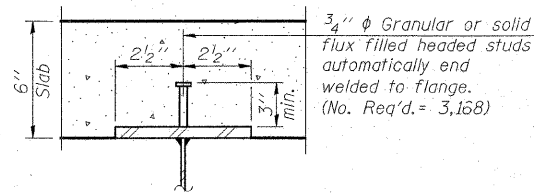
\*Field verify end dimension of Floor Beam and Stringer



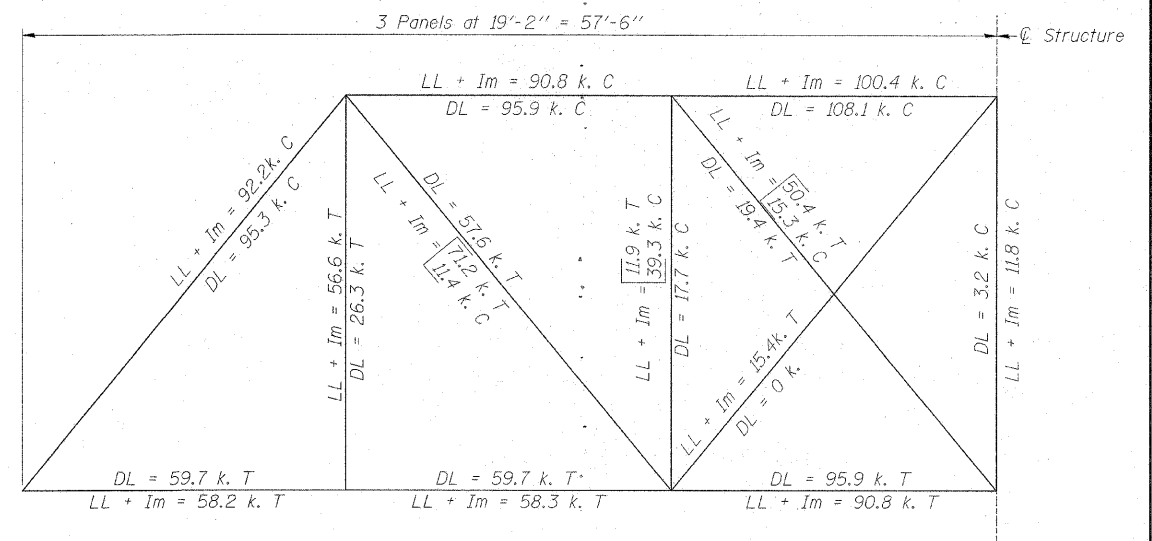
STRINGER ELEVATION  
(66 Locations)



SECTION A-A



SECTION B-B



HS 20 TRUSS FORCE DIAGRAM

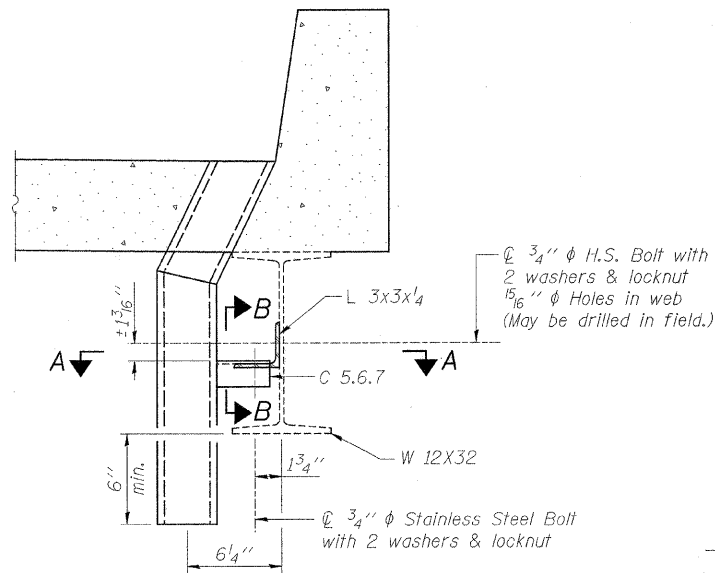
T = Tension  
C = Compression

BILL OF MATERIAL

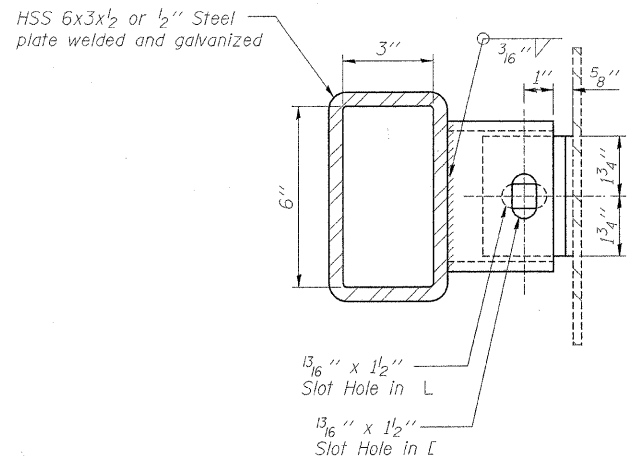
Item	Unit	Total
Stud Shear Connectors	Each	3,714
Cleaning and Painting Steel Bridge	L. Sum	1
Containment and Disposal of Lead Based Cleaning Residues	L. Sum	1

SHEAR STUD LAYOUT & FORCE DIAGRAM  
T.R. 271A OVER WEST BUREAU CREEK  
STATION 60+00  
S.N. 006-4376  
WHA #1066D05

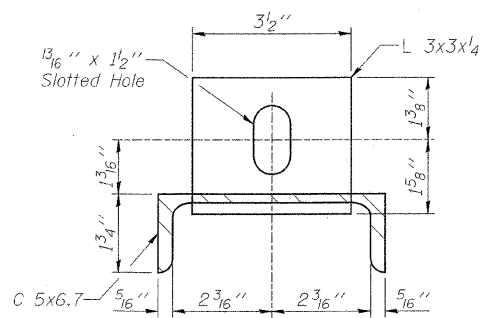
STRUCTURAL SHEET NO. 5C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	118
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



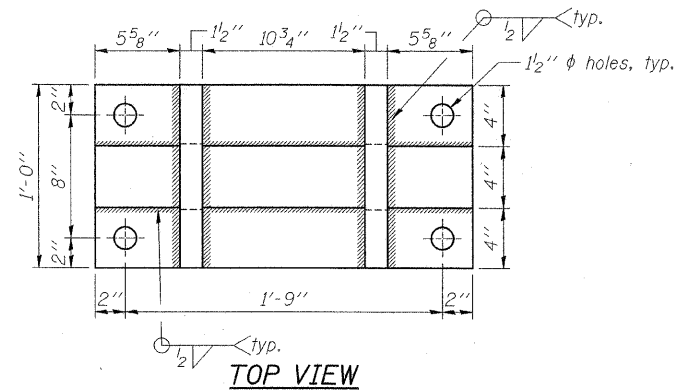
**SECTION AT DRAIN**



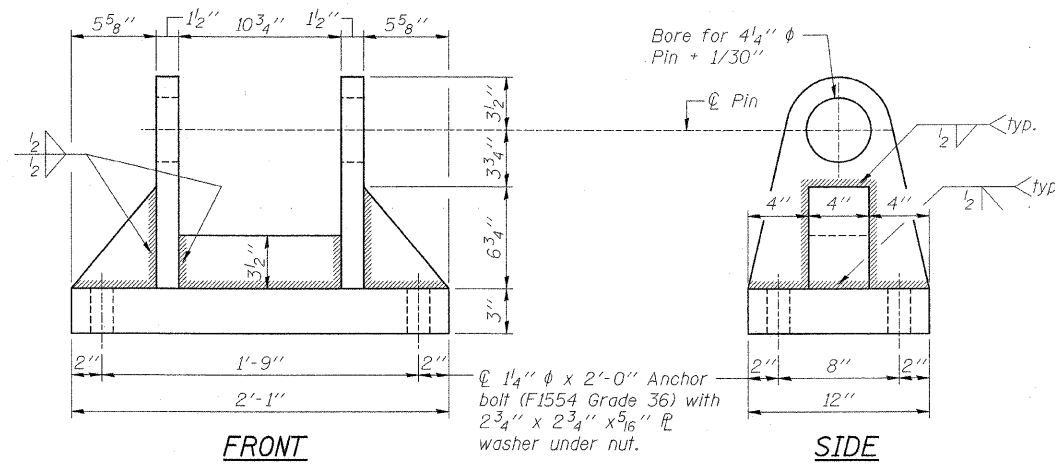
**SECTION A-A**



**SECTION B-B**



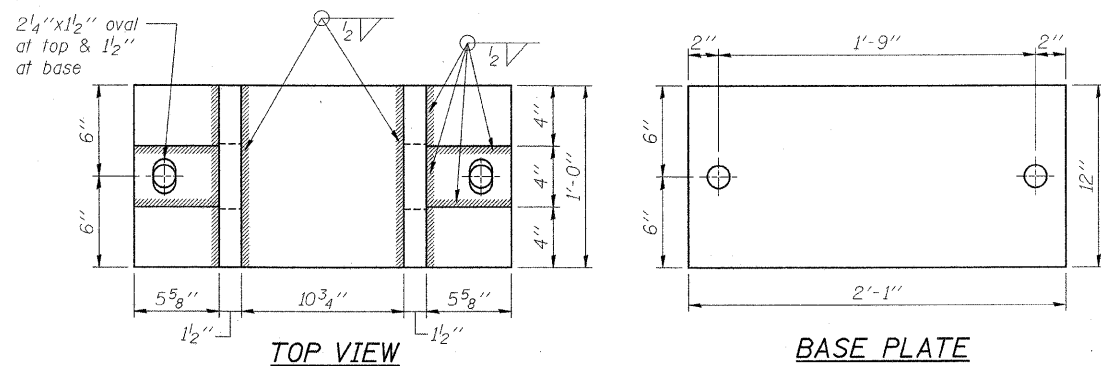
**TOP VIEW**



**FRONT**

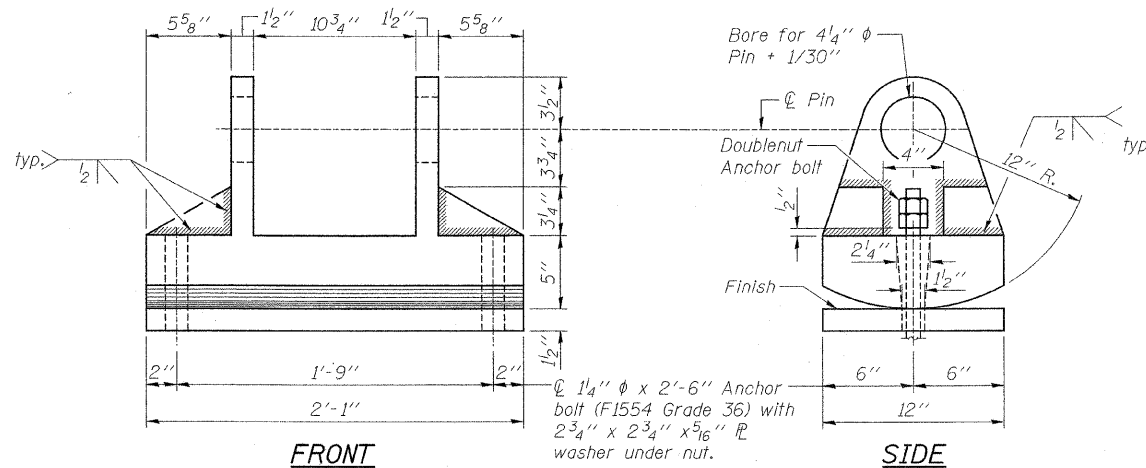
**SIDE**

**FIXED BOLSTER**  
(Two required)



**TOP VIEW**

**BASE PLATE**



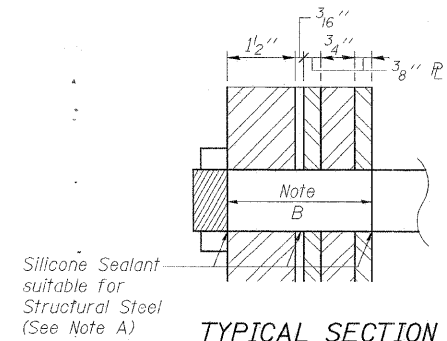
**FRONT**

**SIDE**

**ROCKER BOLSTER**  
(Two required)

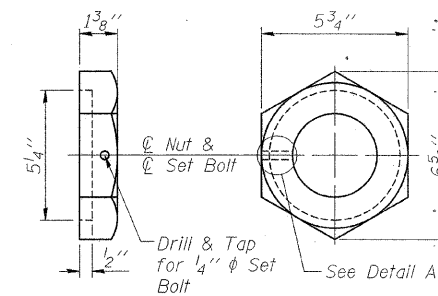
**BILL OF MATERIAL**

Item	Unit	Total
Floor Drains (Special)	Each	12
Steel Bearing Assembly	Each	4
Anchor Bolts, 1 1/4"	Each	12
Fixed Hinge Pin Assembly	Each	4

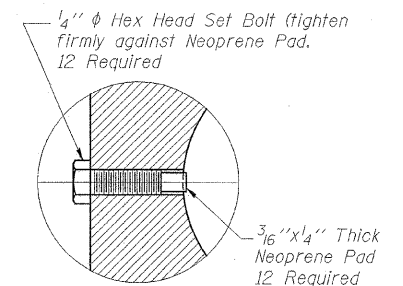


**TYPICAL SECTION THRU HINGE PIN ASSEMBLY**

- NOTE A:** Apply 3/8" bead to face of pin plates immediately before completion of the remaining arch installation. Place sealant around nuts after installation. Sealant shall be suitable for prolonged exterior exposure without losing flexibility or adhesion to painted steel surfaces. Proposed products shall be subject to department's acceptance based on documented testing or other evidence.
- NOTE B:** Nominal pin diameter shall be as shown on the drawings. pin material shall be sae 8620 in accordance with Article 1006.04 of the Standard Specifications. Threads shall be 6 un class 2a/2b.

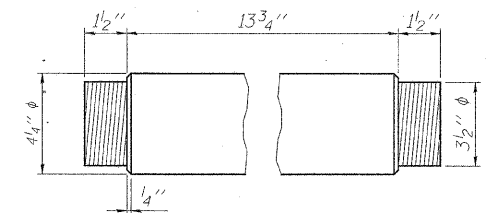


**NUT DETAIL**  
(Recess One Nut Only)



**DETAIL A**

Set Bolt shall conform to the requirements of ASTM A307 and shall be galvanized according to AASHTO M232.



**PIN DETAIL**

**NOTES:**

All steel deck drains, attachments & Bolsters shall be painted in accordance with & included in the cost of "Cleaning & Painting Steel Bridge".

Steel tube (HSS 6 x 3 x 1/2) shall be Hot dipped Galvanized in accordance with AASHTO M 232.

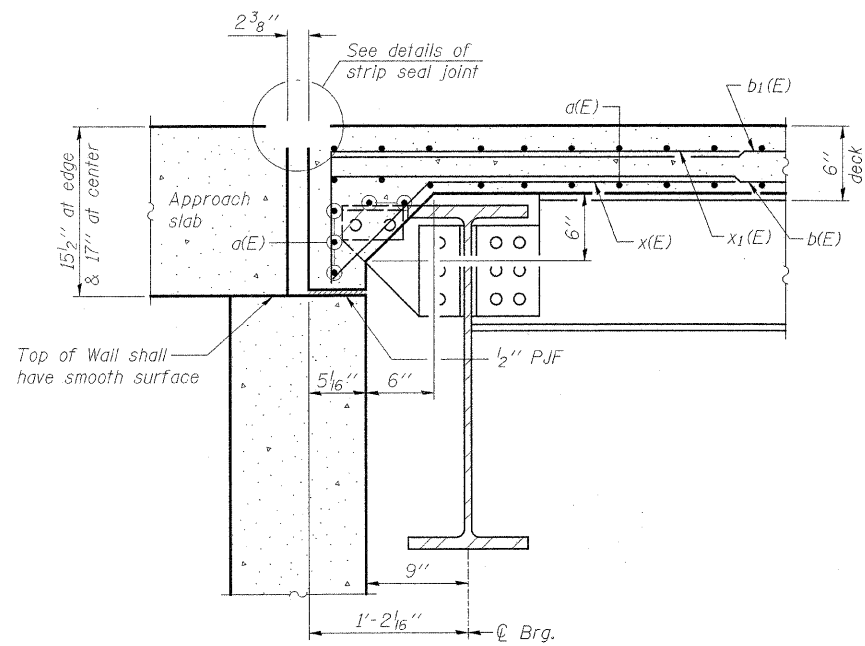
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.

Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place.

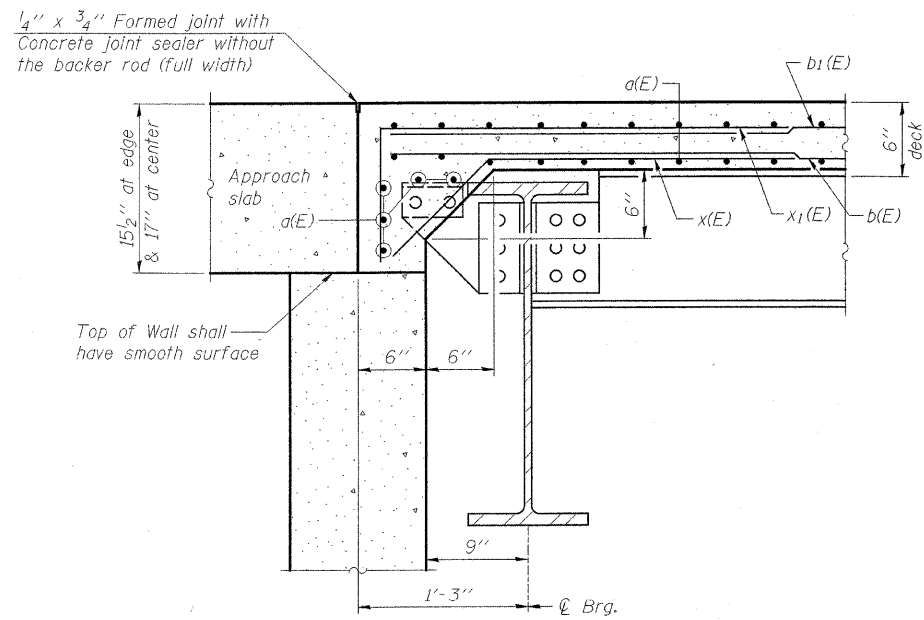
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

**BOLSTERS & FLOOR DRAINS**  
**T.R. 271A OVER WEST BUREAU CREEK**  
**STATION 60+00**  
**S.N. 006-4376**  
WHA #1066D05

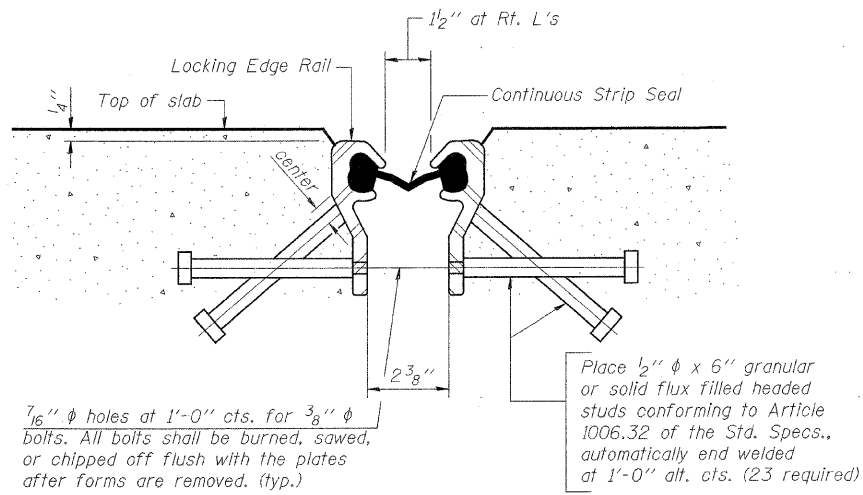
STRUCTURAL SHEET NO. 6C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	119
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT BRS-0188(118)		
			CONTRACT NO. 87380		



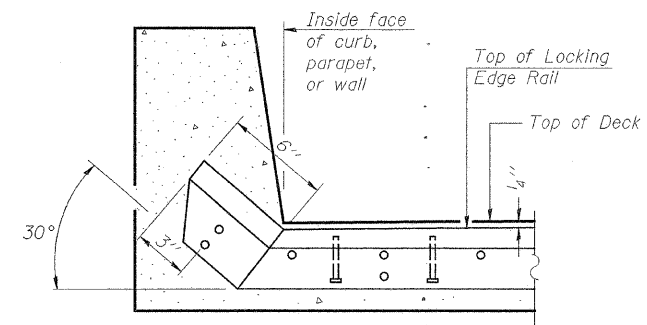
SECTION A-A



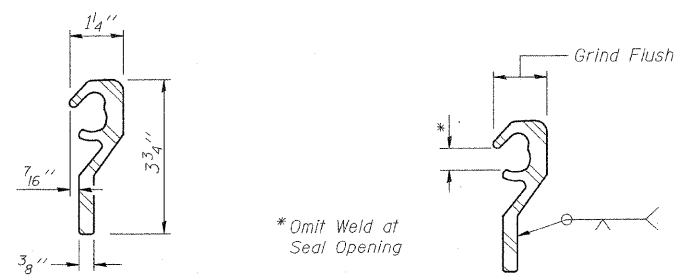
SECTION B-B



SECTION THRU STRIP SEAL JOINT



AT CURB  
TYPICAL END TREATMENTS FOR STRIP SEAL



LOCKING EDGE RAIL LOCKING EDGE RAIL SPLICE

The inside of the Locking Edge Rail groove shall be free of weld residue.

GENERAL NOTES

Furnish PJS steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.

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.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. 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 and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

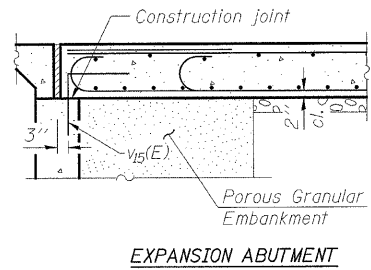
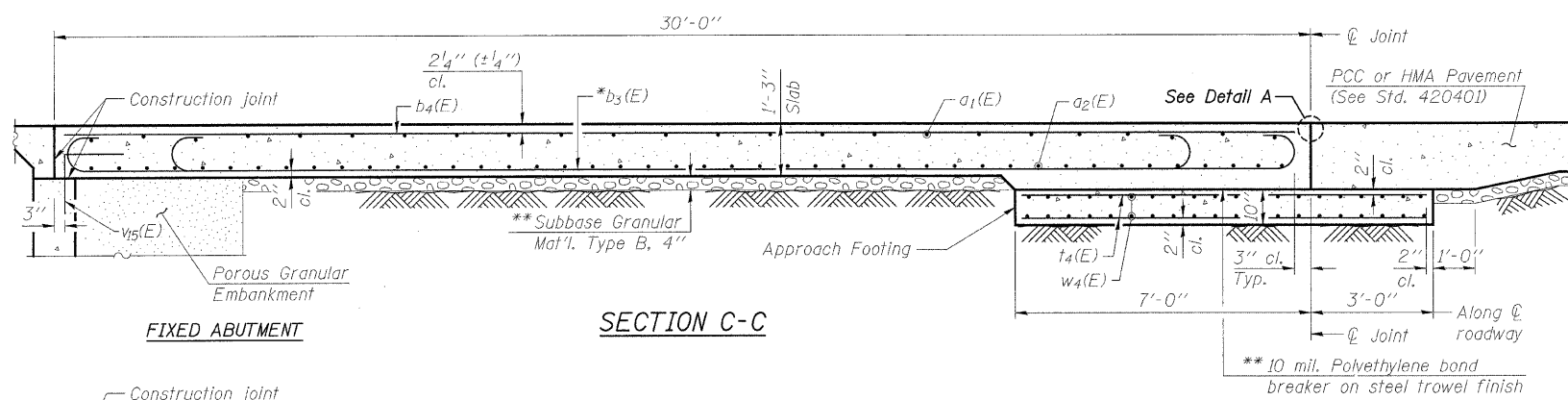
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	24

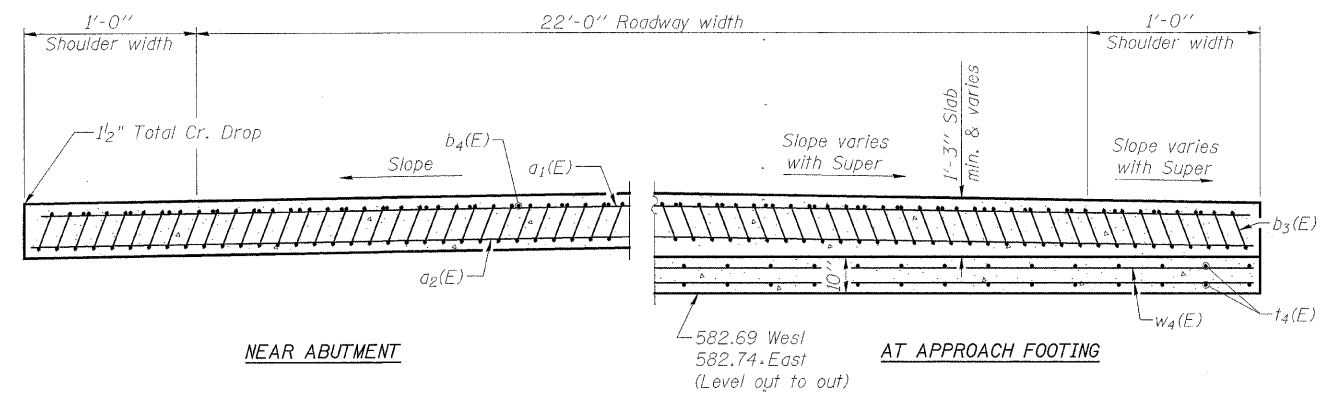
STRIP SEAL DETAILS  
T.R. 271A OVER WEST BUREAU CREEK  
STATION 60+00  
S.N. 006-4376  
WHA #1066D05

STRUCTURAL SHEET NO. 7C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	120
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					



SECTION C-C

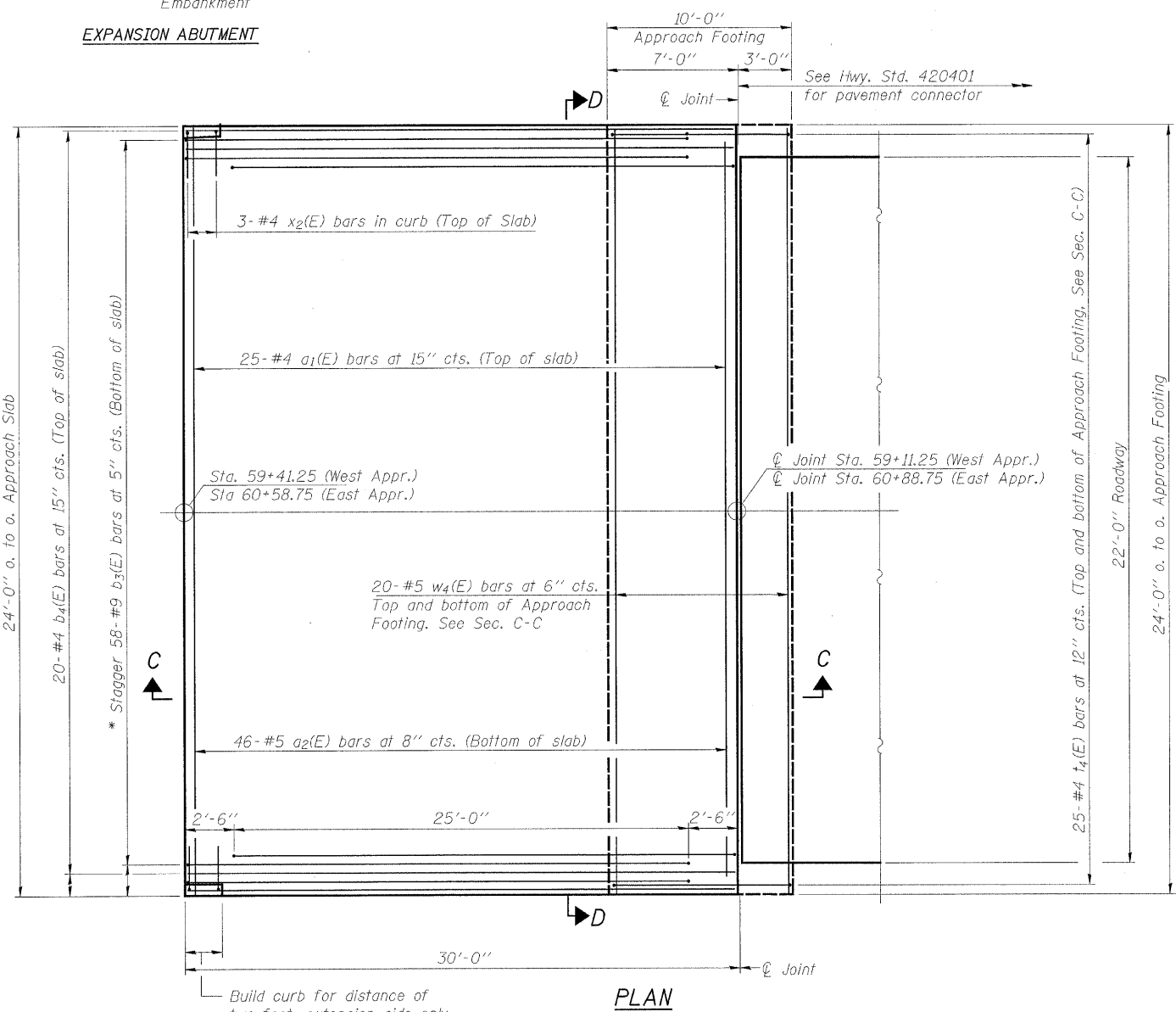
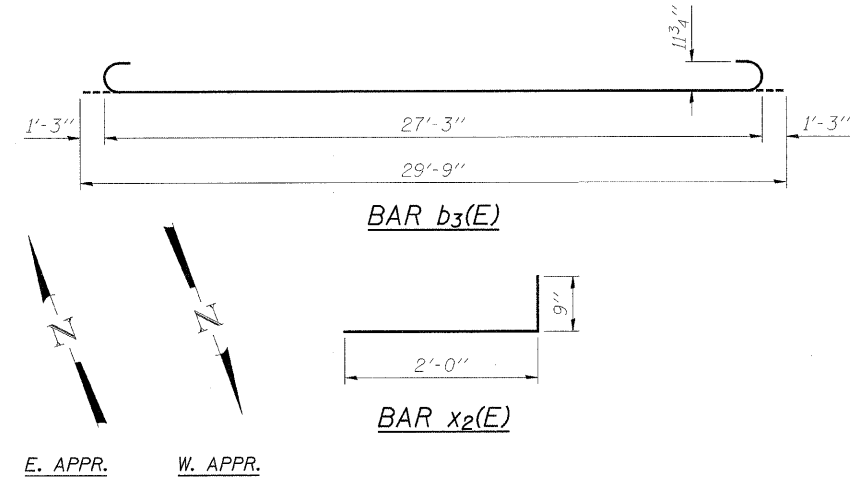
\* Tilt #9 b<sub>3</sub>(E) bars as required to maintain clearance.  
 \*\* Cost included with Concrete Superstructure.



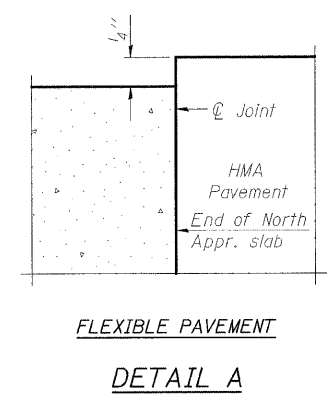
SECTION D-D  
 (See Plan for dimensions not shown)

TWO APPROACHES  
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>1</sub> (E)	50	#4	23'-8"	—
a <sub>2</sub> (E)	92	#5	23'-8"	—
b <sub>3</sub> (E)	116	#9	29'-9"	⌋
b <sub>4</sub> (E)	40	#4	29'-8"	—
t <sub>4</sub> (E)	100	#4	9'-8"	—
w <sub>4</sub> (E)	80	#5	23'-8"	—
x <sub>2</sub> (E)	12	#4	2'-9"	└
Concrete Structures			Cu. Yd.	14.8
Concrete Superstructure			Cu. Yd.	69.7
Bridge Deck Grooving			Sq. Yd.	147
Protective Coat			Sq. Yd.	161
Reinforcement Bars, Epoxy Coated			Pound	18,230



PLAN



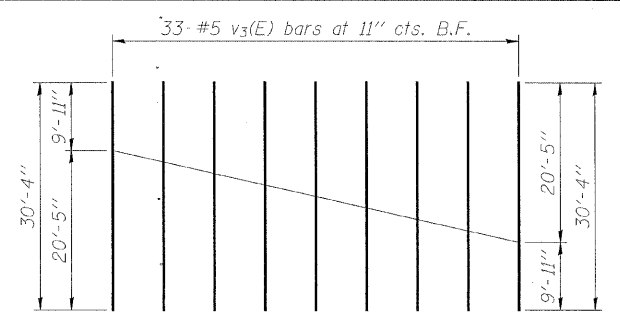
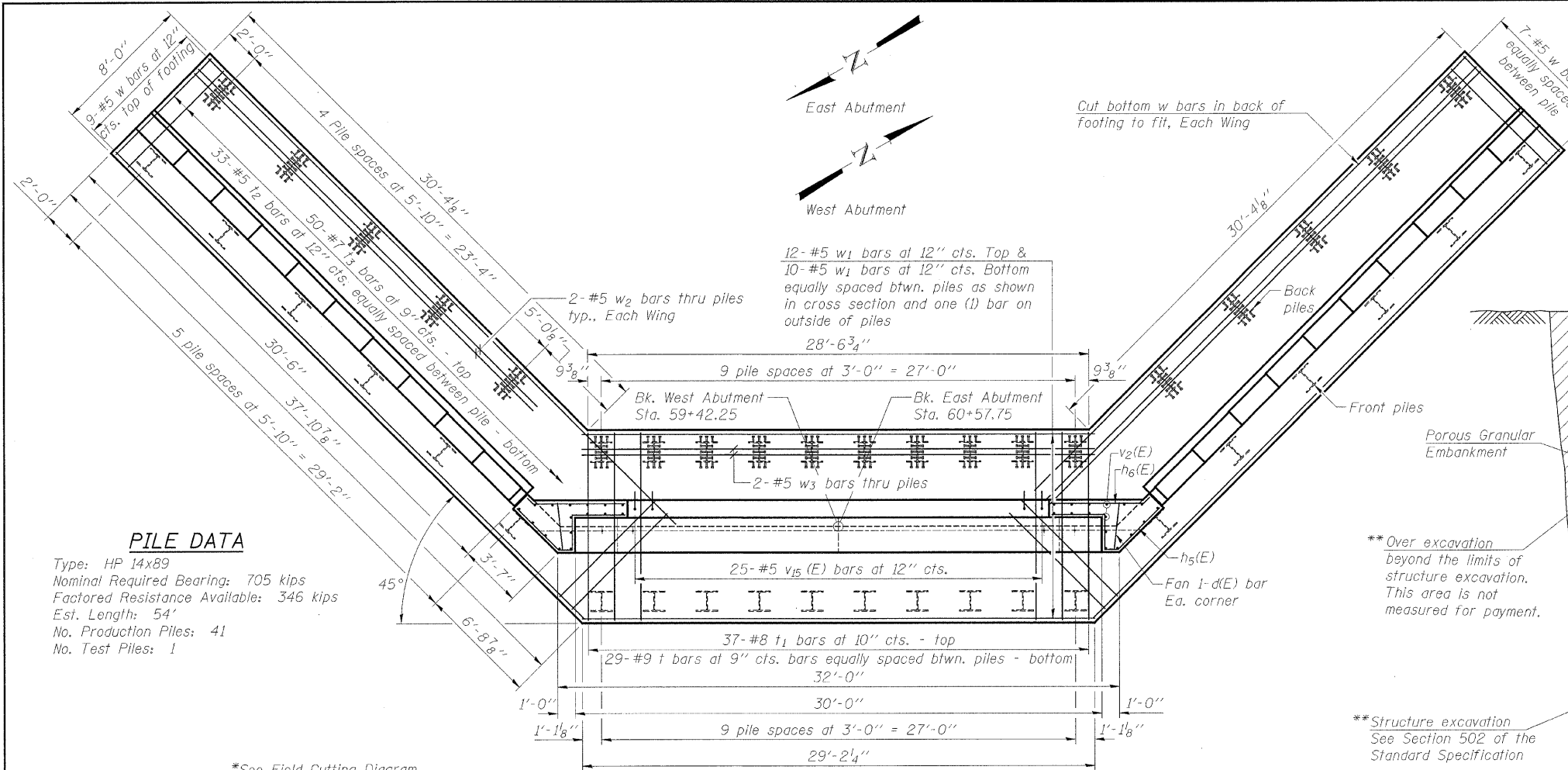
FLEXIBLE PAVEMENT  
 DETAIL A

**NOTES:**  
 a<sub>1</sub>(E), a<sub>2</sub>(E), and w<sub>4</sub>(E) bar spacings measured along  $\phi$  Rdwy.  
 Approach slab shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v (E) bar details, see sheet 10C of 13C.  
 The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Porous Granular Embankment and drainage treatment details, see sheet 9C of 13C.

BRIDGE APPROACH SLAB DETAILS  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05

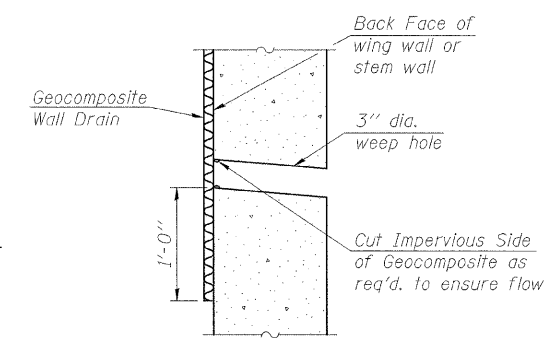
STRUCTURAL SHEET NO. 8C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	121
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

FILE NAME = p:\Sernect\1066D05\Bureau\Drawings\Historical\Structure\Approach\Slab\dgn



**CUTTING DIAGRAM**

Order v<sub>3</sub>(E) bars full length, cut as shown and use remainder in opposite wing

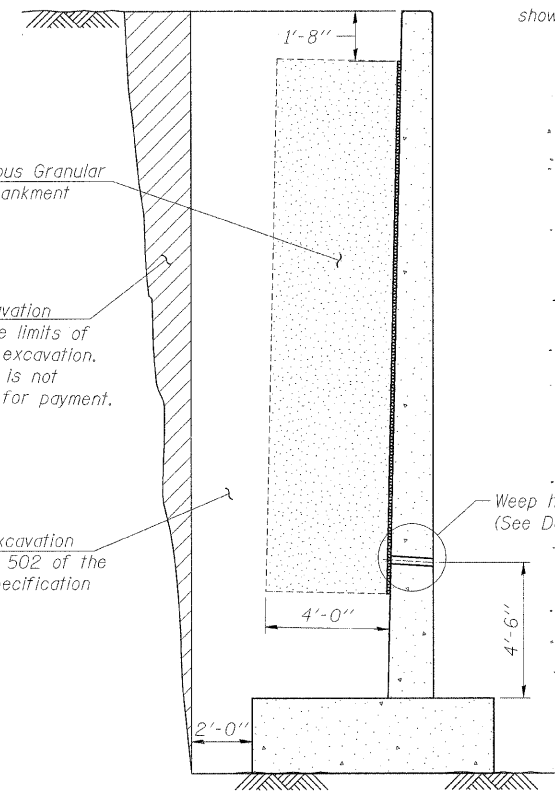


**WEEP HOLE DRAIN DETAIL**

\*\*Backfill remainder of structure excavation and over excavation with same material specified for roadway embankment

\*\*Over excavation beyond the limits of structure excavation. This area is not measured for payment.

\*\*Structure excavation See Section 502 of the Standard Specification



**SECTION THRU T-TYPE WALL OR CLOSED ABUTMENT**

**NOTES:**

- Hatched area to be poured after bridge is set in place.
- Footings for abutment and wingwalls shall be poured monolithically.
- All corners shall have a 3/4" chamfer unless otherwise noted.
- Front pile shall be battered 4:12. See Section Thru Abutment.
- Slope seat between bearings to drain.
- Space d(E) bars to miss Anchor bolts.

**NOTATIONS**

F.F.	- Front Face
B.F.	- Back Face
E.F.	- Each Face

**MIN. LAP**

SIZE	LAP
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

**EAST & WEST ABUTMENT DETAILS**  
T.R. 271A OVER WEST BUREAU CREEK  
STATION 60+00  
S.N. 006-4376  
WHA #1066D05

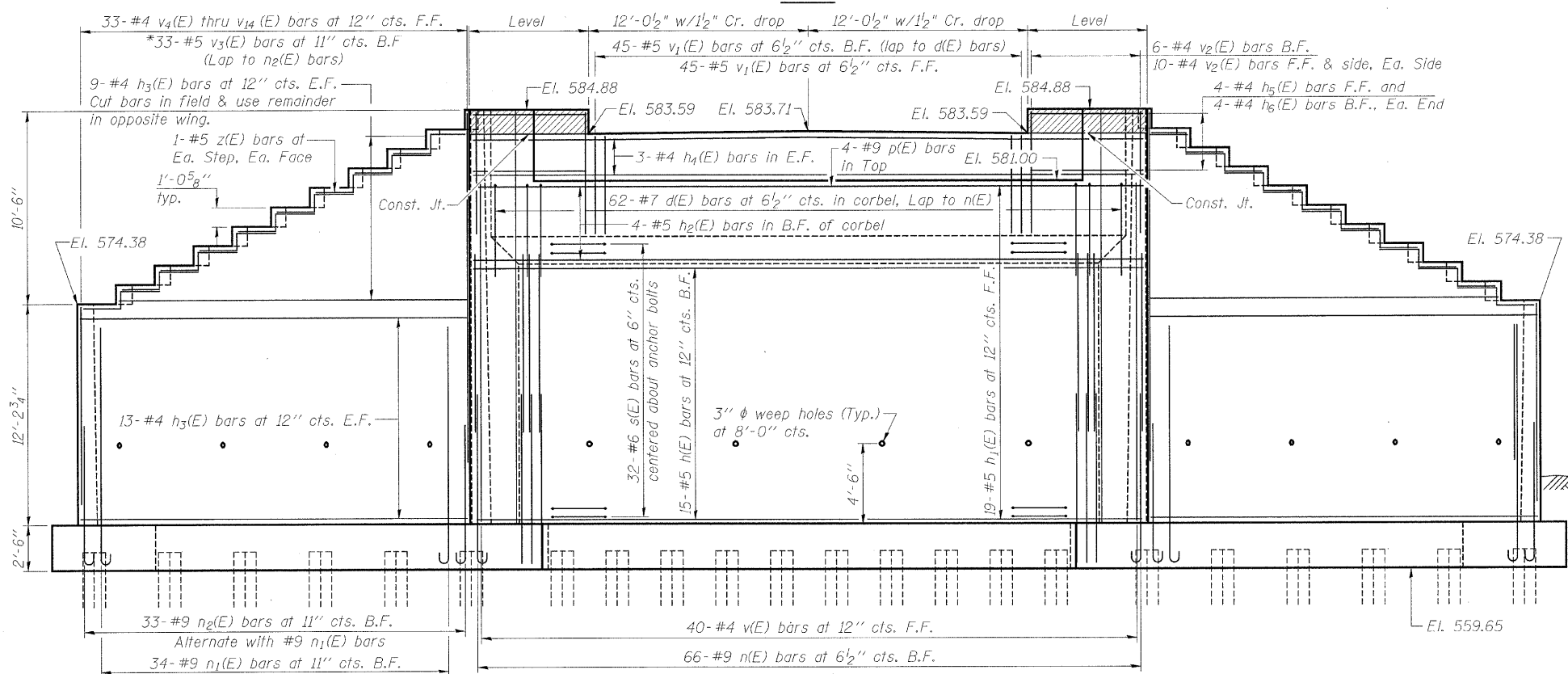
STRUCTURAL SHEET NO. 9C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	122
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

**PILE DATA**

Type: HP 14x89  
Nominal Required Bearing: 705 kips  
Factored Resistance Available: 346 kips  
Est. Length: 54'  
No. Production Piles: 41  
No. Test Piles: 1

\*See Field Cutting Diagram

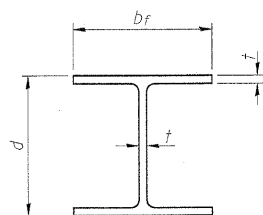
**ELEVATION**



FILE NAME = s:\Structure\1066D05\Drawings\Structure\Abutment.dgn

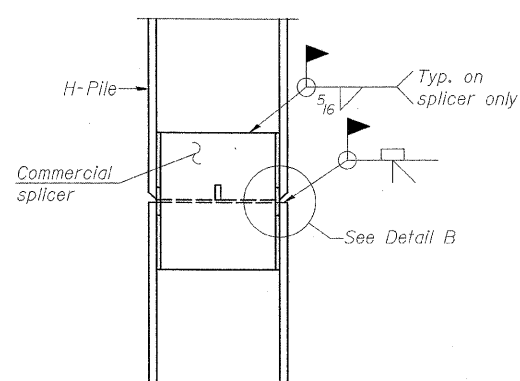




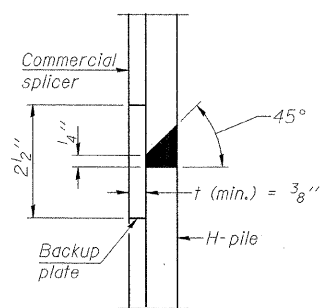


**STEEL PILE TABLE**

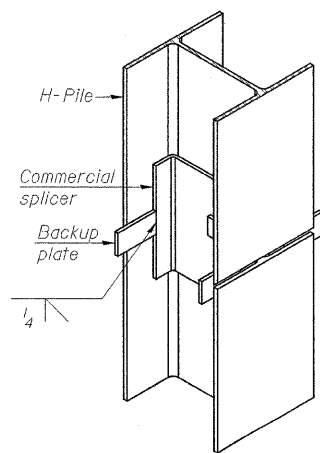
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

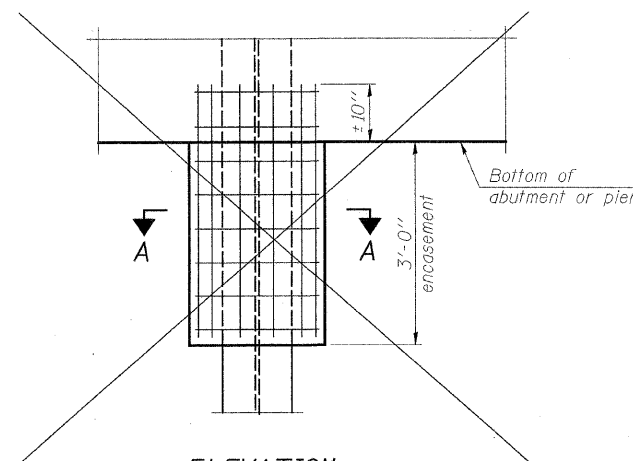


**DETAIL "B"**



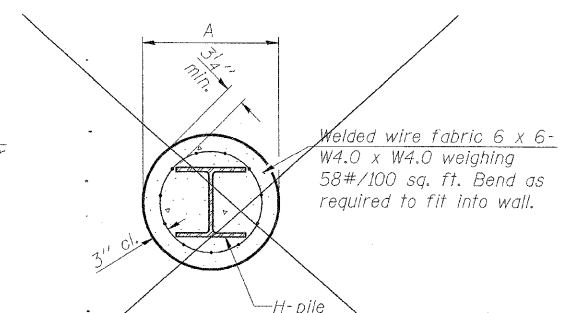
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



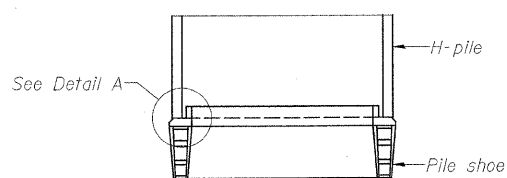
**ELEVATION**

**PILE ENCASEMENT**

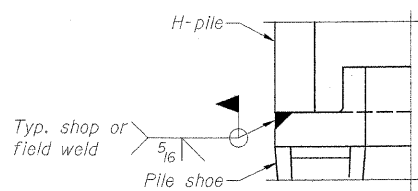


**SECTION A-A**

Note: Forms for encasement may be omitted when soil conditions permit.

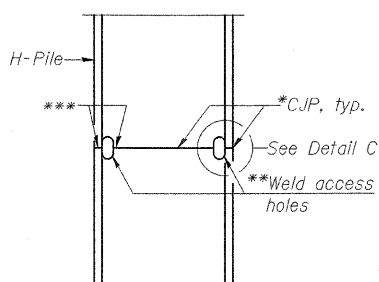


**ELEVATION**

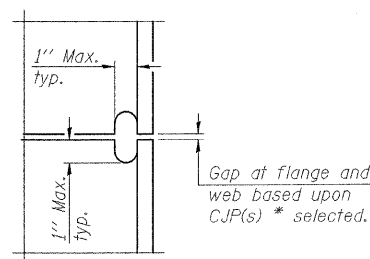


**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**ELEVATION**



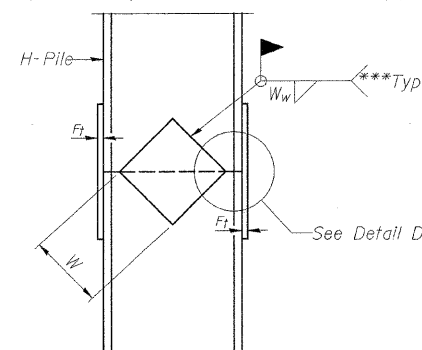
**DETAIL C**

**COMPLETE PENETRATION WELD SPLICE**

\* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

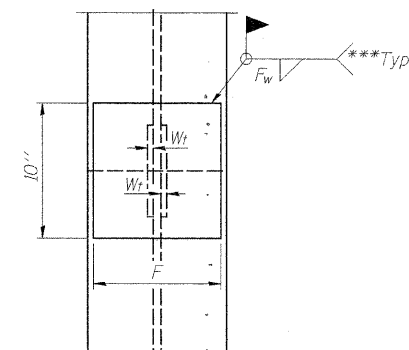
\*\* Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

\*\*\* Interrupt welds 1/4" from end of each pile.



**ELEVATION**

**DETAIL D**



**END VIEW**

**WELDED PLATE FIELD SPLICE**

Designation	F <sup>*</sup>	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

**NOTE:**  
The steel H-piles shall be according to AASHTO M270 Grade 50.

**PILE DETAILS**  
T.R. 271A OVER WEST BUREAU CREEK  
STATION 60+00  
S.N. 006-4376  
WHA #1066D05

STRUCTURAL SHEET NO. 11C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	124
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyand, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **101** DATE STARTED **4-23-09** DATE COMPLETED **2-19-10** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **580.5** WHILE DRILLING **10.5'**  
 END OF BORING **520.5** AT END OF BORING **Wash Boring**  
 24 HOURS



LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.3	580.2	Bituminous Concrete
							1.4	579.1	FILL - SAND and GRAVEL
	1	SS	10	5.0			3.5	577.0	FILL - Brown silty SAND, little gravel, damp (SM)
	2	SS	4	11.5	1.0*	124	6.0	574.5	FILL - Brown and black silty CLAY, little sand, trace gravel, trace organic, very moist (CL)
	3	SS	6	14.6	0.5*		8.5	572.0	FILL - Brown very silty CLAY, trace to little sand, trace gravel, occasional Cobbles, very moist (CL)
	4	SS	3	23.0			11.0	669.5	Very loose brown sandy SILT, trace clay, gravel and organic, occasional clay seams, very moist (CL) [Possible Fill]
	5	SS	5						
	6	SS	10						Loose to firm brown silty medium to fine SAND, trace to little gravel, occasional silt seams and Cobbles, wet (SM) Sample 7: Poor recovery presumably due to a Cobble.
	7	SS	26						
	8	SS	30	9.7	4.5*		18.0	562.5	
	9	SS	31	10.3	6.58 4.5*				Hard pinkish-gray and gray silty CLAY and very silty CLAY layers, little to some sand, trace gravel, moist (CL/CL-ML)
	10	SS	24	10.6	4.5*				
	11	SS	48	21.3			28.0	554.5	Dense light gray clayey SILT, trace to little fine sand, moist (ML)
	12	SS	56	8.6	4.5*		28.0	552.5	
	13	SS	39	10.7	4.5*				Hard pinkish-gray and gray very silty CLAY, trace to little sand, trace gravel, occasional sand seams, moist (CL)

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 60.0' Page 1 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyand, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **101** DATE STARTED **4-23-09** DATE COMPLETED **2-19-10** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **580.5** WHILE DRILLING **10.5'**  
 END OF BORING **520.5** AT END OF BORING **Wash Boring**  
 24 HOURS



LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							35		
	14	SS	40	9.8	4.5*				Hard pinkish-gray and gray very silty CLAY, trace to little sand, trace gravel, occasional sand seams, moist (CL)
	15	SS	41	10.0	4.5*				
	16	SS	57	10.4	4.5*		48.0	532.5	
	17	SS	54	13.1	4.5*				Hard gray very silty CLAY, little sand, trace gravel, moist (CL)
	18	SS	26				58.0	522.5	Firm gray silty fine SAND, numerous clayey silt layers, wet (SM/ML)
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 60.0' Page 2 of 2

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyand, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **102** DATE STARTED **4-23-09** DATE COMPLETED **2-19-10** JOB **L-73,147**  
 ELEVATIONS WATER LEVEL OBSERVATIONS  
 GROUND SURFACE **581.4** WHILE DRILLING **14.0'**  
 END OF BORING **521.4** AT END OF BORING **Wash Boring**  
 24 HOURS



LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	Qu	Y DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.2	581.2	Bituminous Concrete
							1.6	579.8	FILL - Brown SAND and GRAVEL
	1	SS	80/1*	5.8			3.5	577.9	FILL - Brown silty SAND, GRAVEL and CINDERS, occasional Cobbles, damp
	2	SS	14	6.1			6.0	575.4	FILL - Light brown medium to fine SAND, trace to little gravel, trace silt, trace coal, damp (SP)
	3	SS	8	13.2					
	4	SS	9	11.8					FILL - Light brown and brown silty medium to fine SAND, trace gravel, moist (SM)
	5	SS	14	7.0			11.0	570.4	
	6	SS	20	13.6			14.0	567.4	FILL - Light gray silty SAND, trace to little gravel, trace P. C. Concrete pieces, damp (SM)
	7	SS	13	11.0	4.5*		17.0	564.4	Firm light brown silty medium to fine SAND, little gravel, wet (SM)
	8	SS	24	9.7	4.5*				
	9	SS	25	9.9	6.43 4.5*				
	10	SS	24	10.8	4.0*				Hard pinkish-gray very silty CLAY, trace to little sand, trace gravel, occasional sand seams, moist (CL)
	11	SS	24	10.0	4.5*				
	12	SS	20	10.7	4.5*				
	13	SS	77	6.9			33.0	548.4	Very dense gray SILT, little to some sand, little gravel, trace clay, occasional Cobbles, moist (ML)

DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 60.0' Page 1 of 2

BORING LOGS  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05

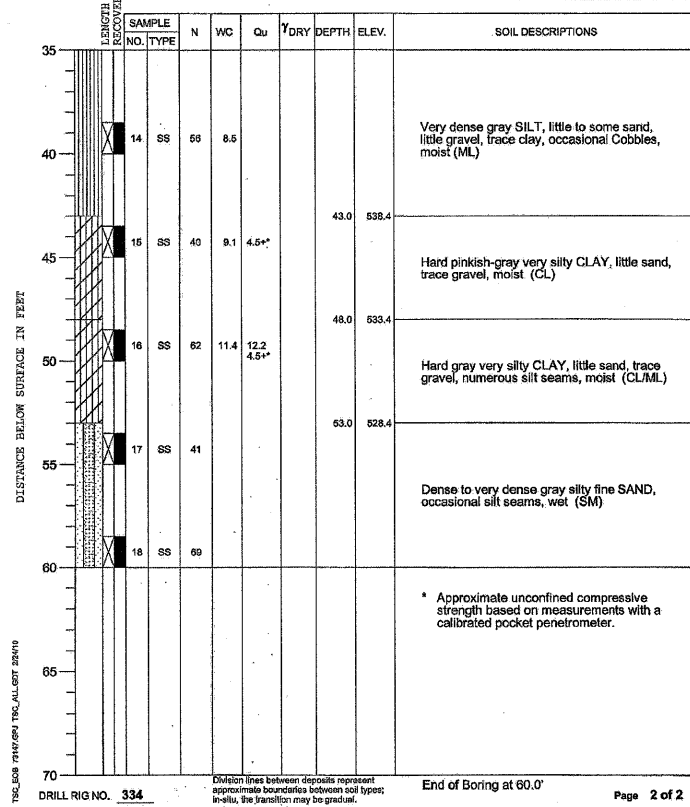
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	188	05-00195-00-BR	BUREAU	127	125
	CONTRACT NO. 87380				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

FILE NAME = \\s\mst\1066D05\Bureau\Drawings\Historical\Structure\Boring\03-09-09

PROJECT **County Highway 8 over RR/Canal Bridge, 1400 North Avenue, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Inc., Dixon, Illinois**  
 BORING **102** DATE STARTED **4-23-09** DATE COMPLETED **2-19-10** JOB **L-73,147**



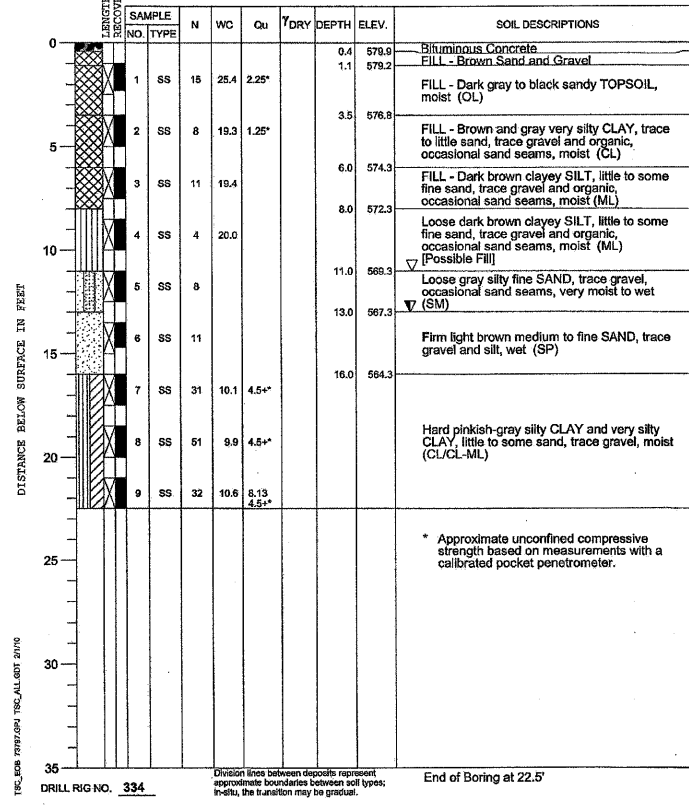
ELEVATIONS  
 GROUND SURFACE **581.4** WHILE DRILLING **14.0'**  
 END OF BORING **521.4** AT END OF BORING  
 WATER LEVEL OBSERVATIONS  
 24 HOURS



PROJECT **Slope Stability & Settlement Analysis, Co. Hwy. 8 over RR/Canal Bridge, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Dixon, Illinois**  
 BORING **103** DATE STARTED **9-4-09** DATE COMPLETED **9-4-09** JOB **L-73,797**



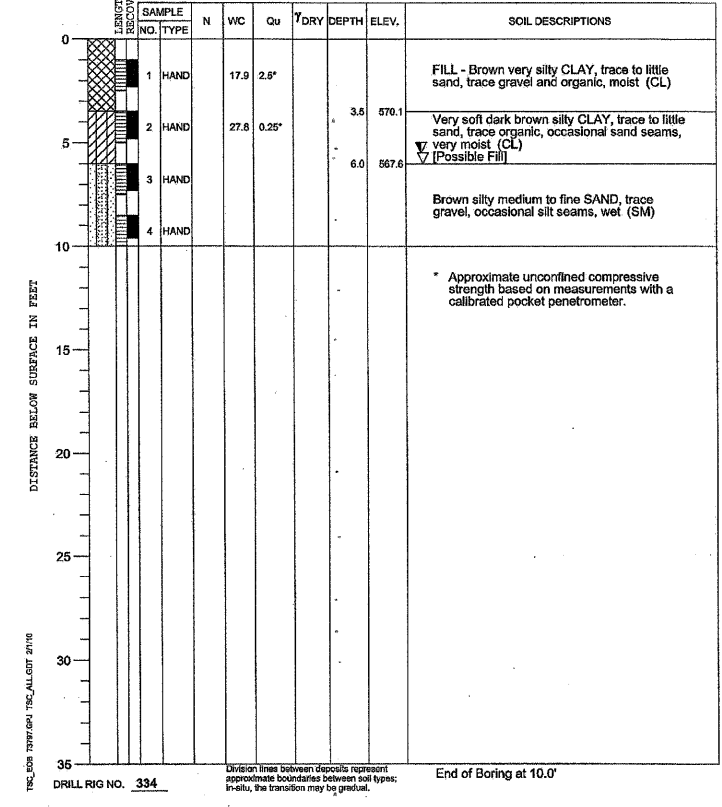
ELEVATIONS  
 GROUND SURFACE **580.3** WHILE DRILLING **13.0'**  
 END OF BORING **557.8** AT END OF BORING  
 WATER LEVEL OBSERVATIONS  
 24 HOURS



PROJECT **Slope Stability & Settlement Analysis, Co. Hwy. 8 over RR/Canal Bridge, Wyanet, IL**  
 CLIENT **Willett, Hofmann and Associates, Dixon, Illinois**  
 BORING **104** DATE STARTED **9-4-09** DATE COMPLETED **9-4-09** JOB **L-73,797**



ELEVATIONS  
 GROUND SURFACE **573.8** WHILE DRILLING **5.5'**  
 END OF BORING **563.8** AT END OF BORING  
 WATER LEVEL OBSERVATIONS  
 24 HOURS



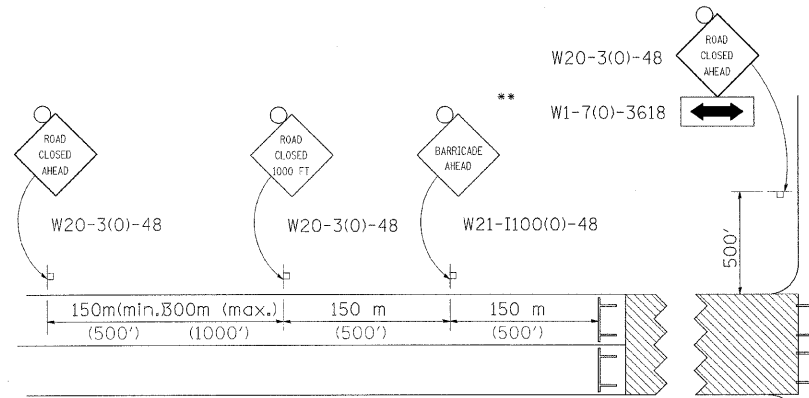
BORING LOGS  
 T.R. 271A OVER WEST BUREAU CREEK  
 STATION 60+00  
 S.N. 006-4376  
 WHA #1066D05

STRUCTURAL SHEET NO. 13C OF 13C SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	188	05-00195-00-BR	BUREAU	127	126
CONTRACT NO. 87380					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)					

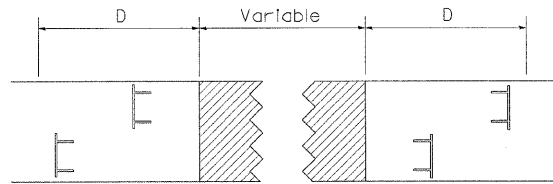
# TRAFFIC CONTROL FOR ROAD CLOSURE

DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	

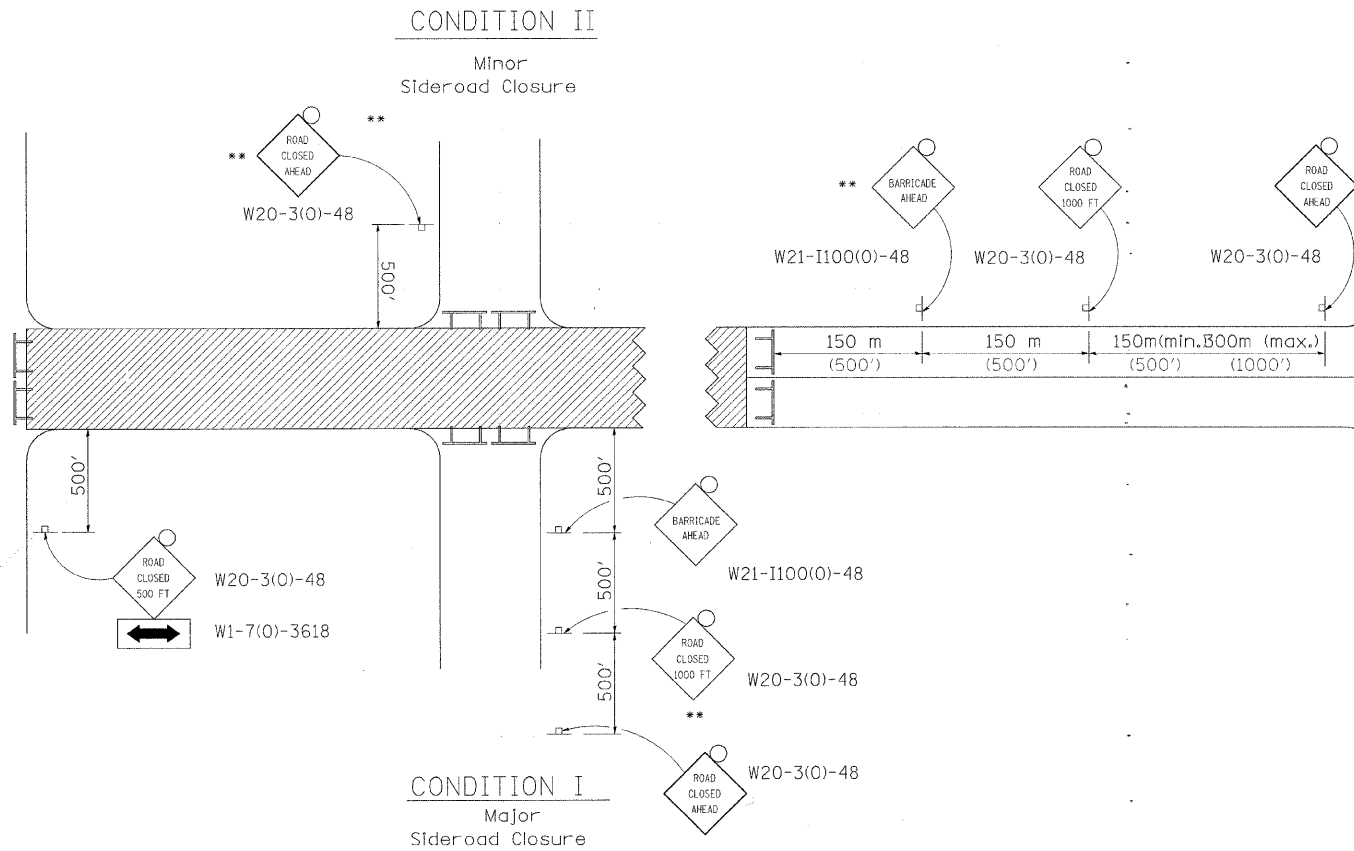
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	



ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To All Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 600 m (2000') an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.



## SYMBOLS

- Work area
- Type III Barricade with Flashers
- Sign with flashing light

## GENERAL NOTES

Longitudinal dimensions may be adjusted to fit field conditions.

When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.

Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.

\*\* Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic.

Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.

All dimensions are in millimeters (inches) unless otherwise shown.

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**CONSULTING ENGINEERS**  
 809 East Second Street Dixon, IL 61021  
 Phone 815.284.3381 Fax 815.284.3385  
 Design Firm # 184-00918  
 www.willettthofmann.com

USER NAME =	DESIGNED -	REVISIONS -
PLOT SCALE =	CHECKED -	REVISIONS -
PLOT DATE =	DATE -	REVISIONS -

**BUREAU COUNTY**  
**BRIDGE REPLACEMENT**  
**FAS 188 (C.H. 8) OVER IAIS RAILROAD & THE HENNIPEN CANAL**

**WHA STD. 804 TYPICAL APPLICATION FOR ROAD CLOSURE**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	05-00195-00-BR	BUREAU	127	127
STA.	TO STA.	CONTRACT NO. 87380		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT BRS-0188(118)				