04-24-2026 LETTING ITEM 152

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	1
	ILLINOIS	CONTRACT NO. 74D61		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

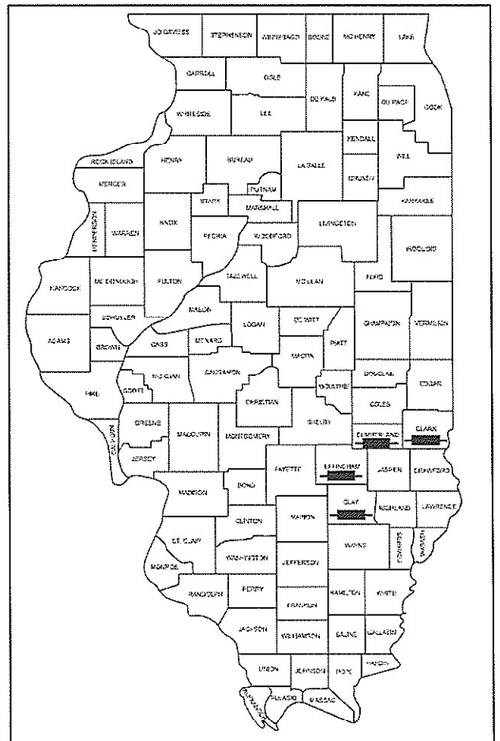
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

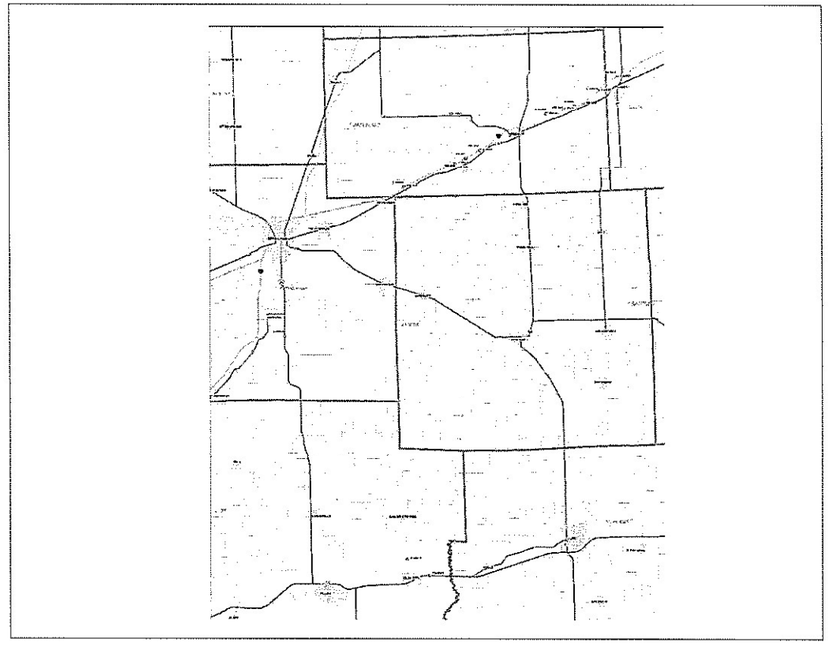
VARIOUS ROUTES
SECTION D7 BRIDGE PAINTING 2026-1
VARIOUS COUNTIES
BRIDGE PAINTING

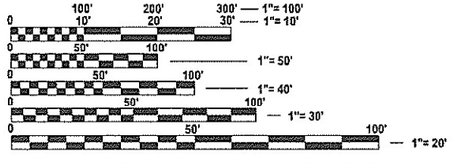
C-97-061-25

D-97-030-25



LOCATION OF SECTION INDICATED THUS: -





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

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

PROJECT ENGINEER: MATT BOWER
PROJECT MANAGER: DAKOTA KINCAID

CONTRACT NO. 74D61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January, 08 20 26
Teresa C. Price
REGIONAL ENGINEER

March 20 20 26
cc
ENGINEER OF DESIGN AND ENVIRONMENT

March 20 20 26
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING THE BRIDGE AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE PLANS AND THE SPECIAL PROVISIONS.

ALL DECK DRAINS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED

ONLY STRUCTURAL STEELIS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC QP1 AND QP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS, LIST OF STANDARDS, AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4-7	LOCATION MAPS
8-71	EXISTING STRUCTURE PLANS

STANDARD NO.	DESCRIPTION
000001-09	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
643001-03	SAND MODULE IMPACT ATTENUATORS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE,15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701201-05	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-19	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701400-12	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701901-11	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES ". ALL STRUCTURAL STEEL, INCLUDING BEAMS, BEARING, AND DIAPHRAGMS, SHALL BE CLEANED BY SSPC-SP10- NEAR WHITE METAL BLAST CLEANING. CLEANING AND PAINTING OF THE EXISTING STRUURAL STEELSHALL BE SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". THIS STRUCTURE CONTAINS LEAD PAINT. THE DESIGNED AREAS PER NEAR WHITE METAL BLAST CLEANING - SSPC-SP10 SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1- OZ/E/U.

LOCATION #1
ROUTE: FAI 70
MARKED: I-70
STATION: 730+15.52
STRUCTURE NUMBER: 012-0039, TR 189 OVER I-70
CLARK COUNTY
2 AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #2
ROUTE: FAI 70
MARKED: I-70
STATION: 434+42.89
STRUCTURE NUMBER: 018-0016, FAS 679 (CH 17) OVER I-70
CUMBERLAND COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #3
ROUTE: FAI 70
MARKED: I-70
STATION: 407+78.69
STRUCTURE NUMBER: 018-0017, FAS 701 (CH 6) OVER I-70
CUMBERLAND COUNTY
2 AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #4
ROUTE: FAI 70
MARKED: I-70
STATION: 482+10.00
STRUCTURE NUMBER: 018-0031, CH 24 OVER I-70
CUMBERLAND COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #5
ROUTE: FAI 70
MARKED: I-70
STATION: 91+35.20
STRUCTURE NUMBER: 018-0035, TR 68 OVER I-70
CUMBERLAND COUNTY
NO AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #6
ROUTE: FAI 70
MARKED: I-70
STATION: 352+80.00
STRUCTURE NUMBER: 018-0036, TR 134 OVER I-70
CUMBERLAND COUNTY
NO AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #7
ROUTE: FAI 70
MARKED: I-70
STATION: 348+75.00
STRUCTURE NUMBER: 018-0038, TR 240 A OVER I-70
CUMBERLAND COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #8
ROUTE: FAI 70
MARKED: I-70
STATION: 529+81.08
STRUCTURE NUMBER: 018-0039, TR 268 OVER I-70
CUMBERLAND COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #9
ROUTE: FAI 70
MARKED: I-70
STATION: 207+348.825
STRUCTURE NUMBER: 018-0051, I-70 (WB) OVER RANGE CREEK
CUMBERLAND COUNTY
NO AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #10
ROUTE: FAI 70
MARKED: I-70
STATION: 207+348.825
STRUCTURE NUMBER: 018-0052, I-70 (EB) OVER RANGE CREEK
CUMBERLAND COUNTY
NO AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #11
ROUTE: FAI 70
MARKED: I-70
STATION: 621+41.81
STRUCTURE NUMBER: 018-0053,TR 288 OVER I-70
CUMBERLAND COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #12
ROUTE: FAP-327
MARKED: US 50
STATION: 227+18.48
STRUCTURE NUMBER: 013-0004, FAP-327 (US-50) OVER LITTLE WABASH RIVER
CLAY COUNTY
1 AIR MONITOR WILL BE REQUIRED AT THIS LOCATION

LOCATION #13
ROUTE: FAP-828
MARKED: DIETERICH BLACK TOP
STATION: 1297+83.10
STRUCTURE NUMBER: 013-0019, FAP-828 (DIETERICH BLACK TOP) OVER LITTLE WABASH RIVER
CLAY COUNTY
2 AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

LOCATION #14
ROUTE: FAP-328A
MARKED: US 45
STATION: 439+65.00
STRUCTURE NUMBER: 025-0092, FAP-328 (US-45) OVER WEST SALT CREEK
EFFINGHAM COUNTY
NO AIR MONITORS WILL BE REQUIRED AT THIS LOCATION

REV - MS

MODEL: Index of Sheets [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-gennote.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 11/26/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, STANDARDS

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

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	2
FAI-70, FAP-327, FAP-828, FAP-328A		CONTRACT NO. 74D61		
ILLINOIS | FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% STATE	CUMBERLAND & CLARK COUNTY BRIDGE 0047 NONE	EFFINGHAM & CLAY COUNTY BRIDGE 0047 NONE
67100100	MOBILIZATION	L SUM	1	0.8	0.2	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	20	20	0	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	20	20	0	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	3	0	3	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.8	0.2	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	4200	3300	900	
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	100	50	50	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	8100	8100	0	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	17	11	6	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	27	27	0	
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1	0	
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1	0	
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	1	0	
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1	1	0	
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1	1	0	
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1	1	0	
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1	1	0	
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM	1	1	0	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% STATE	CUMBERLAND & CLARK COUNTY BRIDGE 0047 NONE	EFFINGHAM & CLAY COUNTY BRIDGE 0047 NONE
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM	1	1	0	
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	L SUM	1	1	0	
Z0007111	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 11	L SUM	1	1	0	
Z0007113	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 13	L SUM	1	0	1	
Z0007115	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 14	L SUM	1	0	1	
Z0007123	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 12	L SUM	1	0	1	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	0	
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1	0	
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1	0	
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	1	0	
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1	1	0	
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1	1	0	
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1	1	0	
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM	1	1	0	
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM	1	1	0	
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM	1	1	0	
Z0010511	CLEANING AND PAINTING STEEL BRIDGE NO. 11	L SUM	1	1	0	
Z0010512	CLEANING AND PAINTING STEEL BRIDGE NO. 12	L SUM	1	0	1	

REV - MS

MODEL: Summary of Quantities [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-SOQ.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	3
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% STATE CUMBERLAND & CLARK COUNTY BRIDGE 0047 NONE	EFFINGHAM & CLAY COUNTY BRIDGE 0047 NONE
Z0010513	CLEANING AND PAINTING STEEL BRIDGE NO. 13	L SUM	1	1	0
Z0010514	CLEANING AND PAINTING STEEL BRIDGE NO. 14	L SUM	1	1	0

REV - MS

MODEL: Summary Of Quantities 2 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d112179b\D774D61-sht-SOQ.dgn

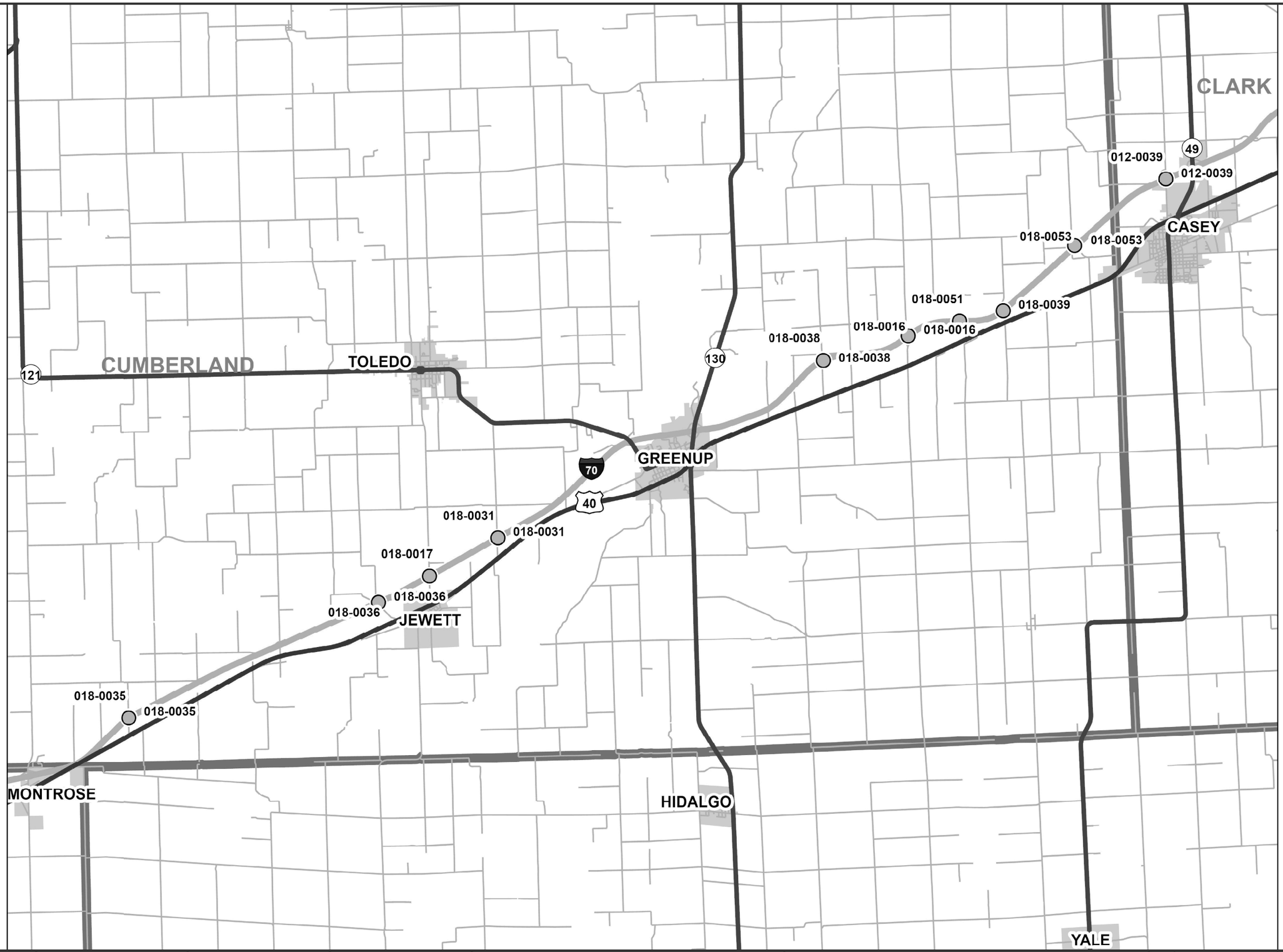
USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	4
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			



MODEL: Location Map 1 [Sheet]
FILE NAME: c:\pw_work\pwtool\illinois.gov_dakota.kincaid@illinois.gov\d112179b\D774D61-sht-location-sht.dgn

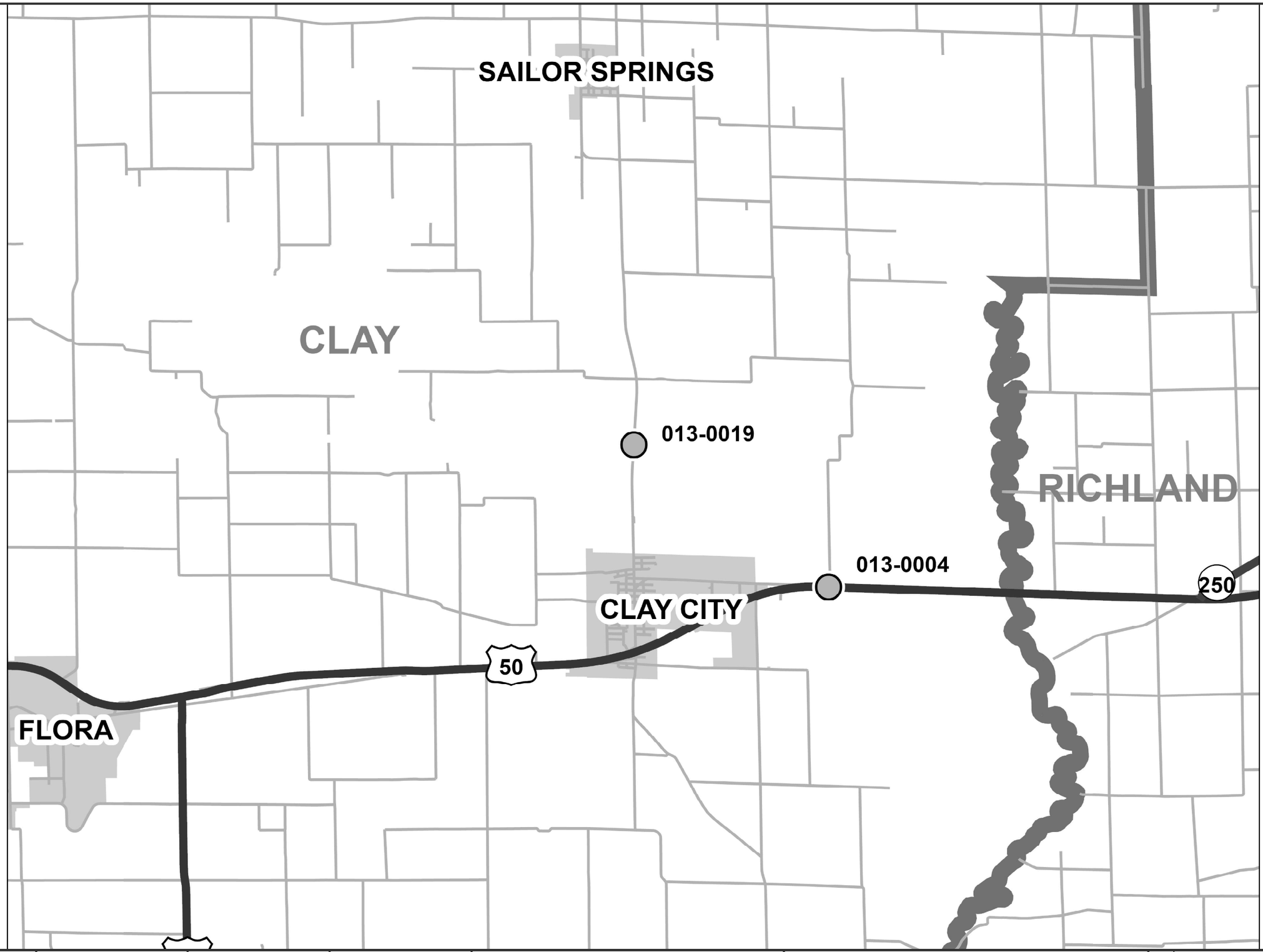
USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP

SCALE: | SHEET A001 OF 3 SHEETS | STA. | TO STA.

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	5
	FAI-70, FAP-327, FAP-828, FAP-328	CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			



MODEL: Location Map 2 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-location-sht.dgn

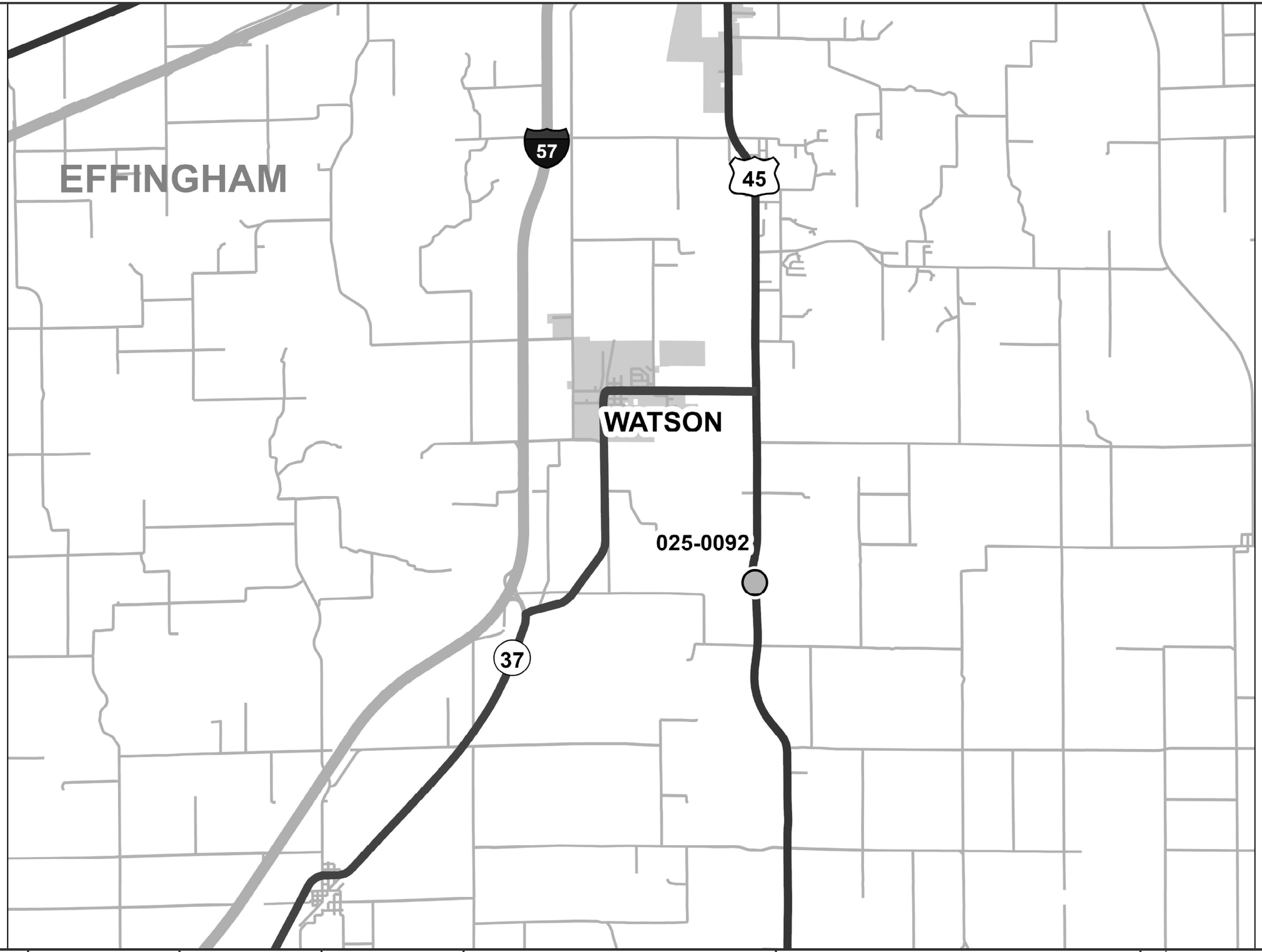
USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP

SCALE: | SHEET A002 OF 3 SHEETS | STA. | TO STA.

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	6
	FAI-70, FAP-327, FAP-828, FAP-328	CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			



USER NAME = dakota.kincaid	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 10/9/2025	DATE -	REVISED -	

LOCATION MAP

SCALE: | SHEET A003 OF 3 SHEETS | STA. | TO STA.

VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	7
	FAI-70, FAP-327, FAP-828, FAP-328	CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Location Map 3 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d11217961D774D61-sht-location-sht.dgn

E.A.I.R.T. 70 Sta. in A.P. 23.1' Rt.
Sta. 778 + 84 El. 257.64

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 70	12-49 HB-1	CLARK	39	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
9 SHEETS

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end posts must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope walls shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 55# per 100 sq. ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

Rivets ¾" ø, open holes 13/16" unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

Exposed surfaces of the expansion devices inaccessible after erection shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint and anchor studs shall not be painted.

Expansion guards are included in the quantity of structural steel. Est. weight = 830 lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for field paint.

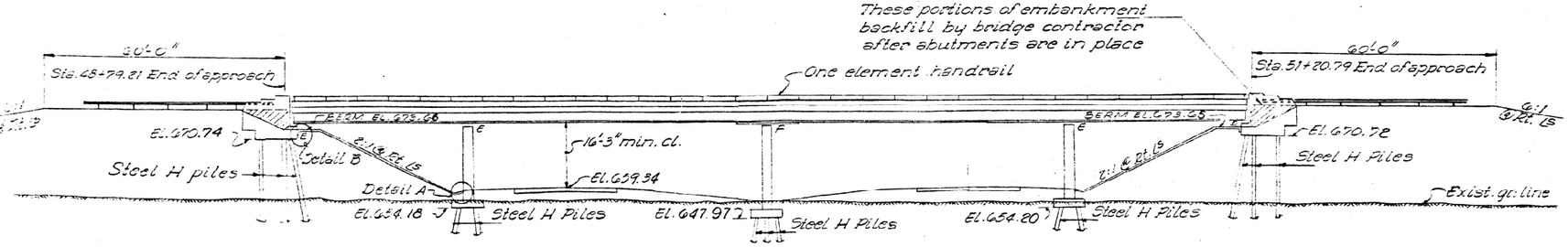
All structural steel shall conform to A.S.T.M. designation A-36.

Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

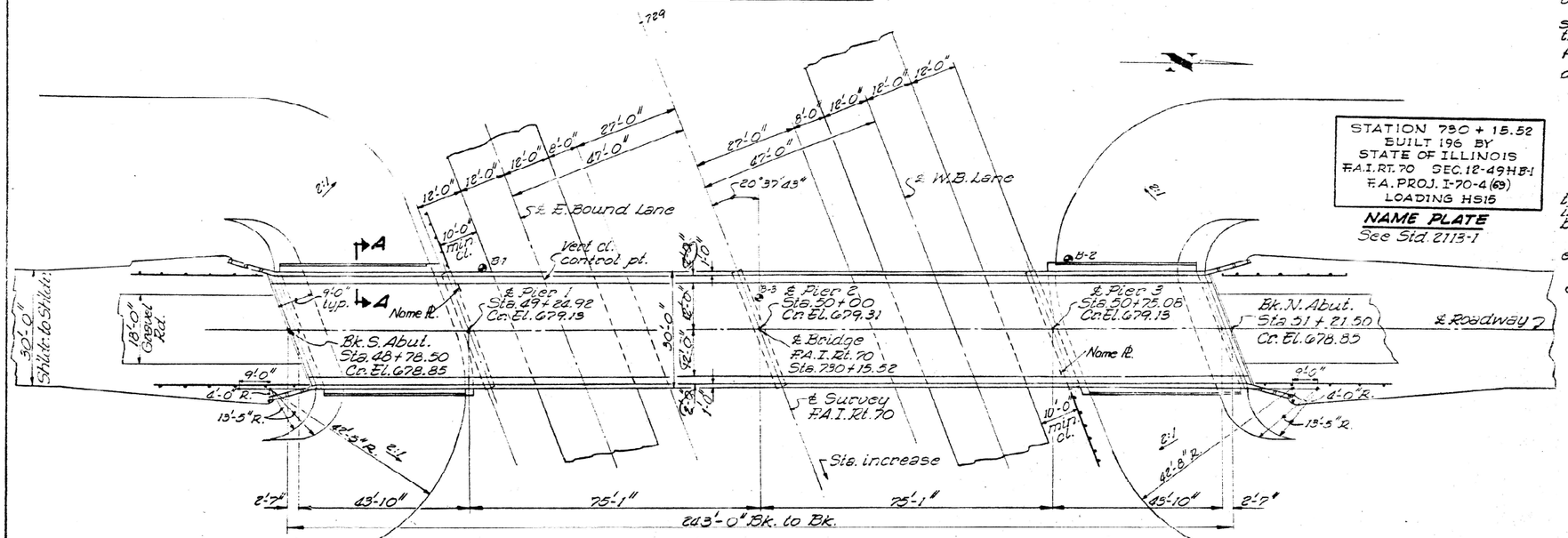
The contractor shall drive one steel test pile at the North abutment and one steel test pile at pier #3 in permanent locations as directed by the engineer before ordering remainder of piles.

Excavation for portions of structure in the embankments shall not be classified.

Permanent forms will not be permitted in forming the concrete floor.



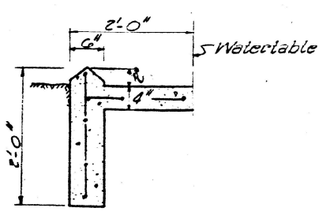
ELEVATION



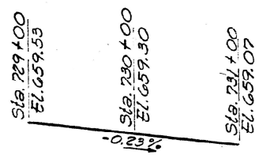
PLAN

STATION 750 + 15.52
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-49 HB-1
F.A. PROJ. I-70-4(69)
LOADING HS15

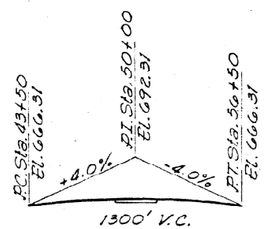
NAME PLATE
See Std. 2113-1



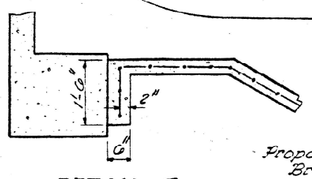
SEC. A-A



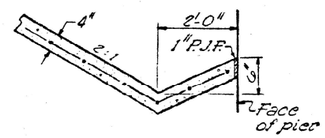
GRADE F.A.I.



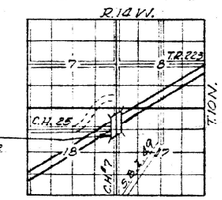
C.H.#7 V.C. DATA



DETAIL B



DETAIL A



LOCATION PLAN

TOTAL BILL OF MATERIALS

Item	Unit	Super.	Sub.	Total
Class A Excs. for Struct.	Cu. yds.			105
Class X Concrete	Cu. yds.	210.4	207.1	417.5
* Protective Coat	Sq. yds.	930		930
Structural Steel	Lbs.	187610		187610
Aluminum Handrail	Lin. ft.	460		460
Reinforcement Bars	Lbs.	50520	17470	67990
Steel Piles (BBP36)	Lin. ft.		1,474	1,474
Test Piles (Steel)	Each			2
Name Plates	Each			2
Slope Wall (4")	Sq. yds.		336	336

* Includes use on inside vertical face, top & exposed ends of abutment wings.

DESIGN STRESSES

f'c = 1,400 psi.... Super. & Sub.
fs = 20,000 psi..... Reinf.
fs = 20,000 psi..... Struct.
Vc = 75 psi..... Flngs.
n = 10
½ Deflection L/1000

LOADING HS15-44

DESIGNED J. Y. Khawaja
CHECKED Pun C. Wang
DRAWN J. Mullenix
CHECKED Pun C. Wang

11-3 1965
EXAMINED Carl E. Thurman Jr. — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED H. J. Alton — ENGINEER OF DESIGN
APPROVED [illegible] — CHIEF HIGHWAY ENGINEER

GENERAL PLAN & ELEVATION
C.H.#7 OVER F.A.I. RT. 70 SEC. 12-49 HB-1
CLARK COUNTY
STATION 750 + 15.52

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwdot\illinois.gov - dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-012-0039.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 012-0039

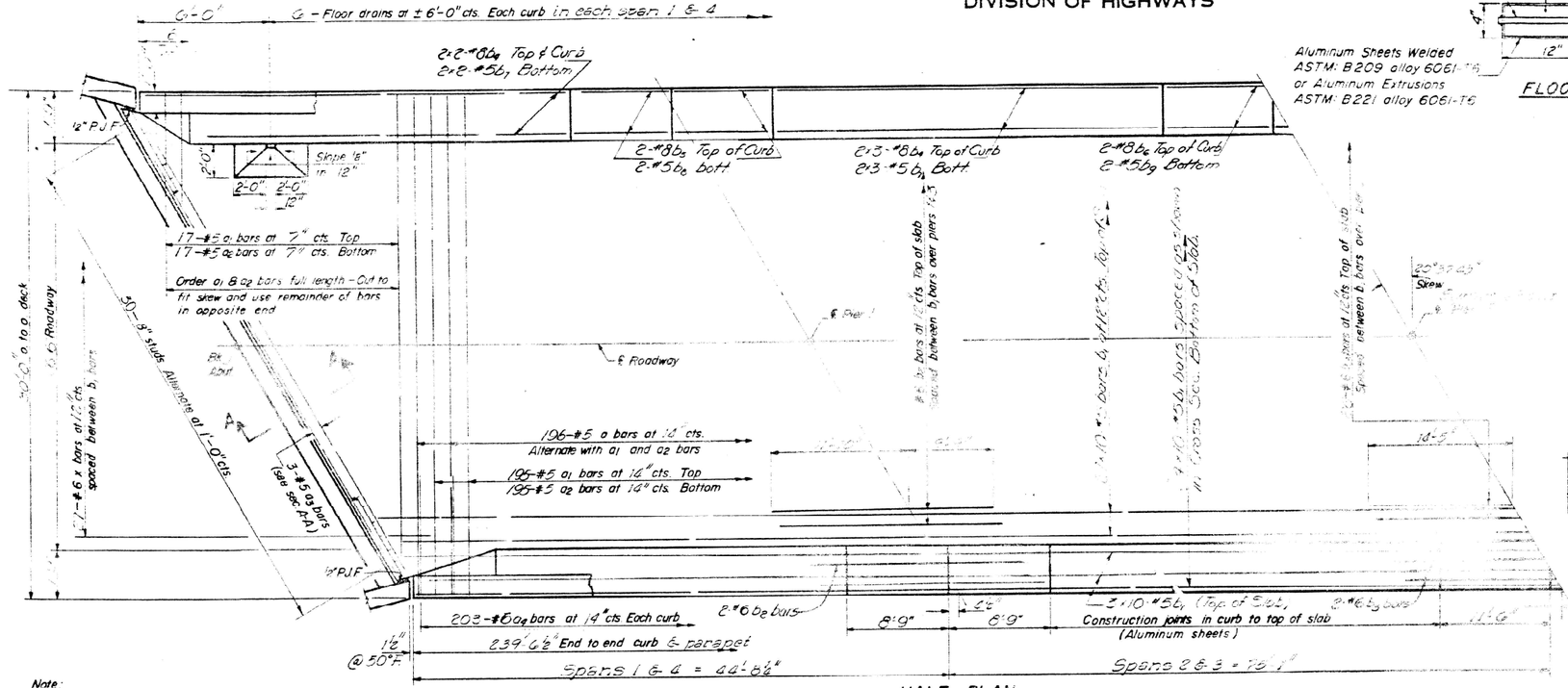
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	8
	CLARK COUNTY	CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

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

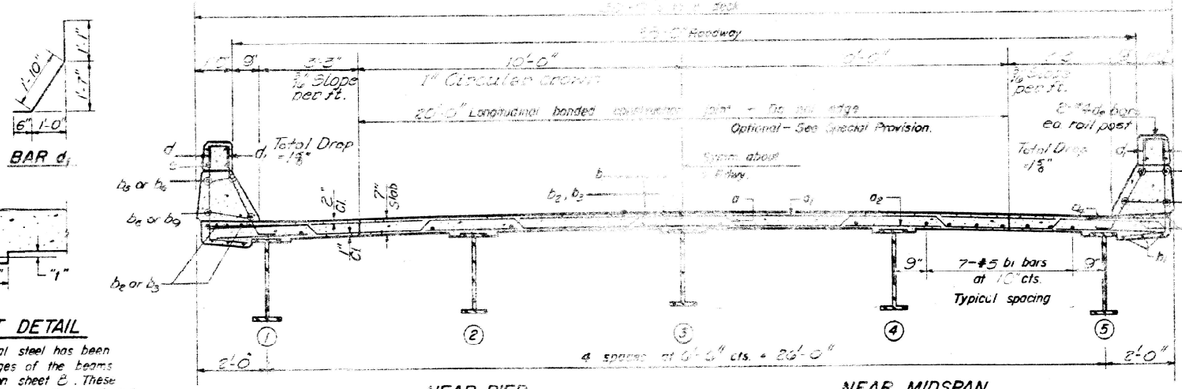
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-4 S HB-1	CLARK	39	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
9 SHEETS

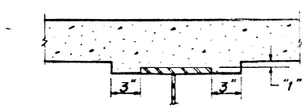


HALF PLAN

Note:
Bars indicated thus 20x3 -#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 20 dia.

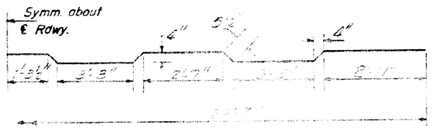


NEAR PIER NEAR MIDSPAN

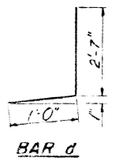


STANDARD FILLET DETAIL

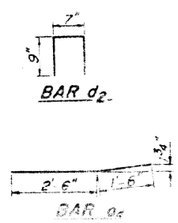
To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 2. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 8, minus slab thickness, equals the fillet heights "f" above top of beams.



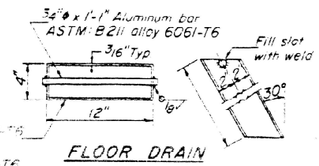
CROSS SECTION
Looking North



BAR d

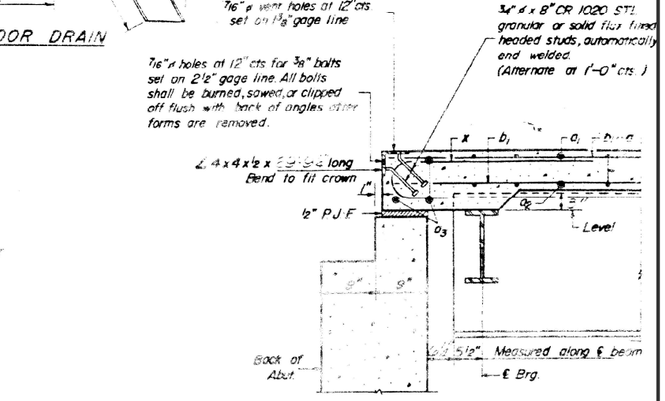


BAR d2 BAR a5

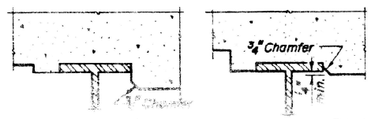


FLOOR DRAIN

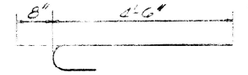
Aluminum Sheets Welded
ASTM: B209 alloy 6061-T6
or Aluminum Extrusions
ASTM: B221 alloy 6061-T6



SECTION A-A



DETAIL A



BAR x

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	196	#5	3'-__"	
a1	215	#5	56'-3"	
a2	215	#5	67'-4"	
a3	6	#5	29'-6"	
a4	406	#6	4'-0"	
b1	470	#5	26'-9"	
b2	60	#6	21'-7"	
b3	30	#6	28'-10"	
b4	20	#8	12'-6"	
b5	16	#8	8'-6"	
b6	8	#8	11'-3"	
b7	40	#5	19'-0"	
b8	16	#5	6'-6"	
b9	8	#5	11'-3"	
c	420	#4	3'-7"	
x	54	#6	5'-2"	
a1	430	#5	3'-5"	
Reinforcement Bars			Lbs.	9[illegible]
* Structural Steel			Lbs.	10761
Class X Concrete			Cu. Yd.	52.3

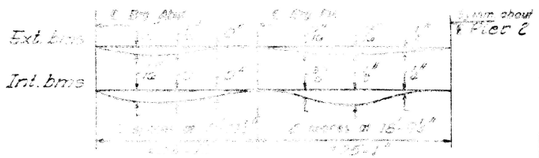
* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt = 7000 lbs.

Note: For percentage of d, e & b see Sheet #3.



CURB SECTION

Cost of Aluminum Sheets and Sheets shall be incidental to Class X Concrete



DEAD LOAD DEFLECTION DIAGRAM

Camber required of concrete [illegible] The above deflections are [illegible] the camber [illegible] deflections [illegible]

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 12-49HB
CLARK COUNTY
STATION 730 + 15.58

DESIGNED	J. Y. Khayyat	11-3	19 65
CHECKED	Pun C. Dang	EXAMINED	Paul E. Lumman
CHECKED	P.G. Barnett J. Mullenix	PASSED	H. J. Alton
DRAWN	D.L. Beemer	APPROVED	
CHECKED	Pun C. Dang		

I-5 — R (>15°) 10-10-62 Rev. 11-1-62

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 012-0039

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

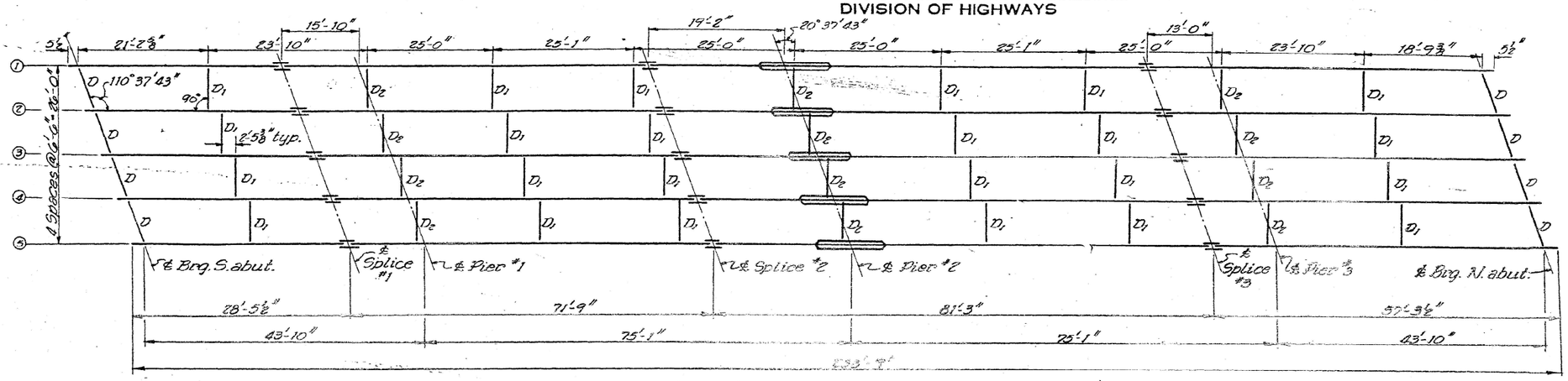
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	VARIOUS	71	9
	CLARK COUNTY	CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-012-0039.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-4B HB-1	CLARK	39	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 4
9 SHEETS



STEEL FRAMING PLAN

All beams are 33 WF130

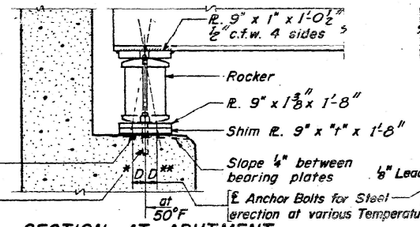
SHIM PLATES "t"

Bm No.	1	2	3	4	5
℄ Brg. S. abut.	–	–	1/16"	1/8"	1/8"
℄ Pier #1	–	–	1/16"	1/8"	1/8"
℄ Pier #2	–	–	1/16"	1/8"	1/8"
℄ Pier #3	–	–	1/16"	1/8"	1/8"
℄ Brg. N. abut.	–	–	1/16"	1/8"	1/8"

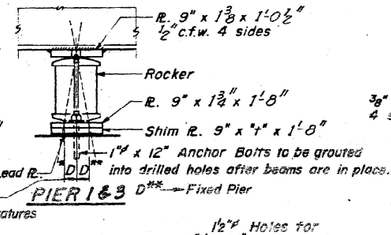
TABLE OF MOMENTS AND REACTIONS - INTERIOR BEAMS

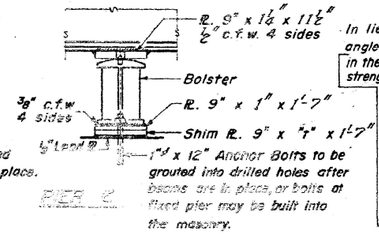
	Moments (K-ft.)				Reactions (K)		
	D.L. Span 1	Pier 1	D.L. Span 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	81.0	319.8	206.1	318.0	12.5	58.2	73.2
L.L.	190.0	710.0	270.0	294.5	23.6	32.4	35.8
Imp.	56.1	58.5	69.0	73.5	7.0	9.0	9.0
Total	327.1	594.3	551.1	886.0	43.1	99.6	118.0

Note: Run all diaphragms level.

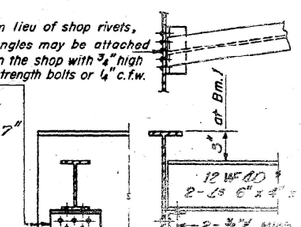


SECTION AT ABUTMENT

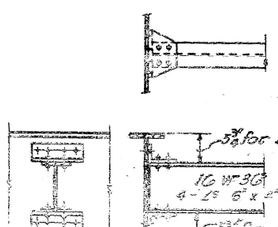




In lieu of shop rivets, angles may be attached in the shop with ⅞" high strength bolts or ¼" c.f.w.



DIAPHRAGM D
8 Required

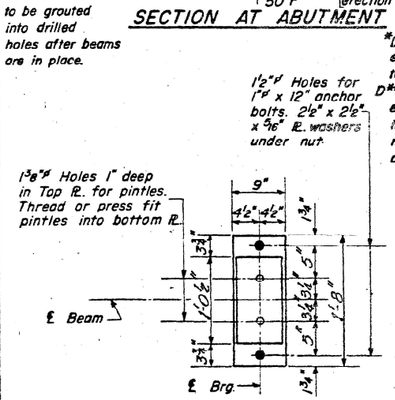


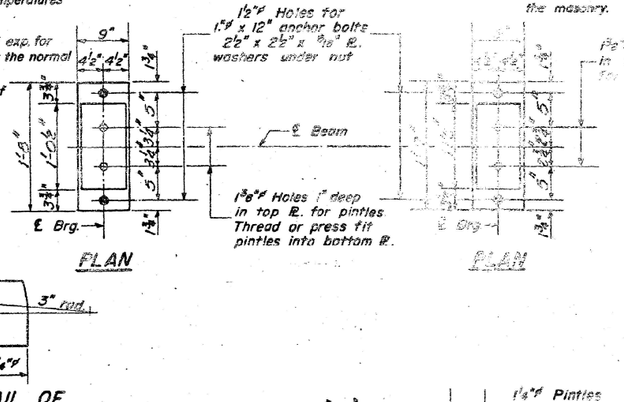
DIAPHRAGM D1 & D2
D1 22 Required
D2 12 Required

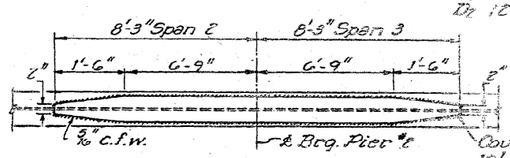
* ELEVATIONS TOP OF WF

	Beam 1	2	3	4	5
℄ Brg. S. Abut.	678.17	678.28	678.32	678.29	678.18
℄ Splice 1	678.29	678.40	678.44	678.41	678.30
℄ Pier 1	678.35	678.46	678.50	678.47	678.36
℄ Splice 2	678.56	678.67	678.71	678.68	678.57
℄ Pier 2	678.53	678.64	678.68	678.65	678.54
℄ Splice 3	678.43	678.54	678.58	678.55	678.44
℄ Pier 3	678.37	678.48	678.52	678.49	678.38
℄ Brg. N. Abut.	678.16	678.27	678.31	678.28	678.17

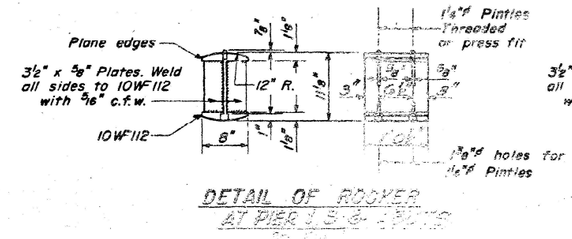
* For the correct top of WF Elevations subtract (.04') from the elevations shown.



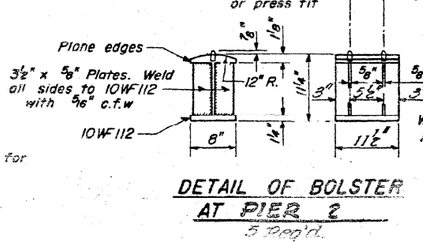




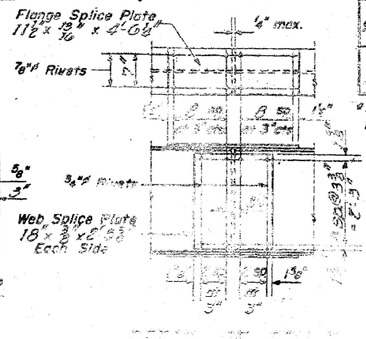
COVER PLATE



DETAIL OF ROCKER AT PIER 1 & 3



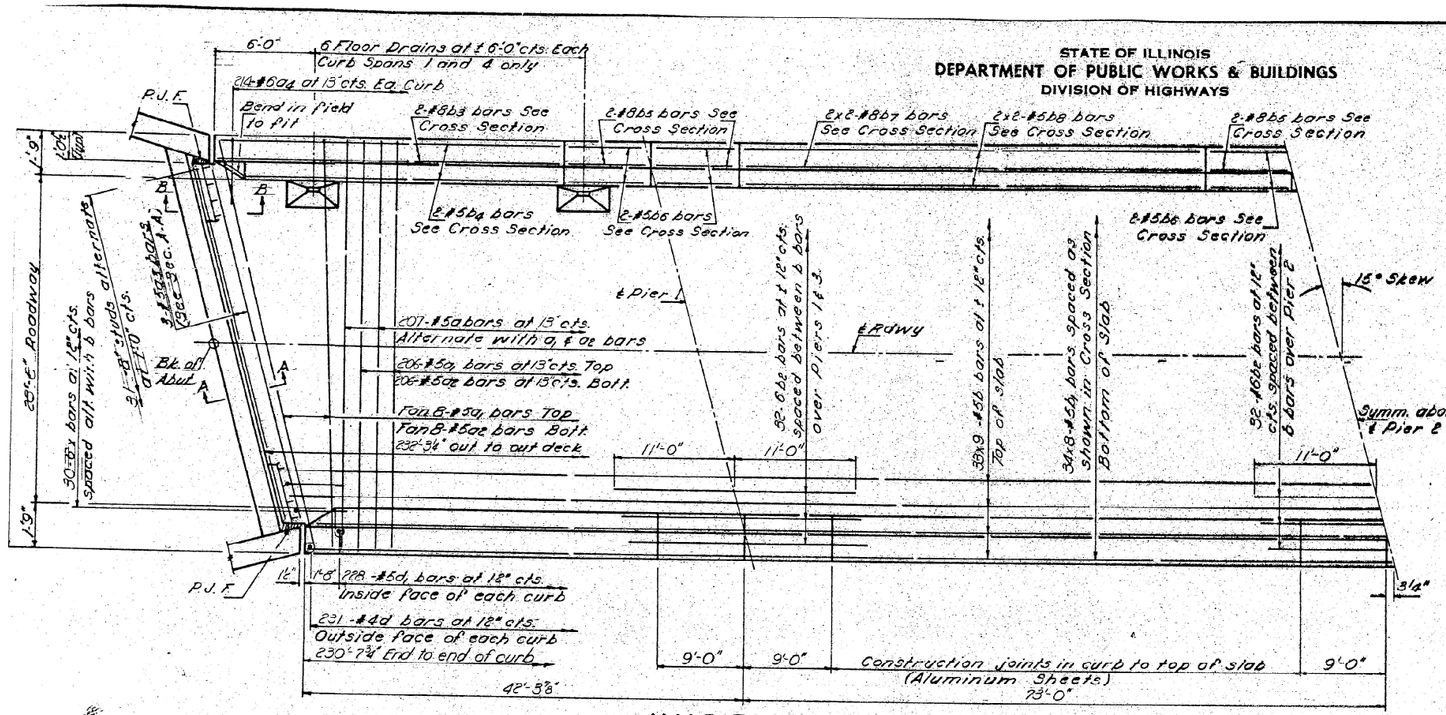
DETAIL OF BOLSTER AT PIER 2
5 Req'd.


Flange Splice Plate 11½" x 1⅜" x 4'-6½"
⅛" max.
⅞"ϕ Rivets
7½"
3⅛"ϕ Rivets
Web Splice Plate 18" x ⅜" x 6'-3" Each Side
3"
3"
3"

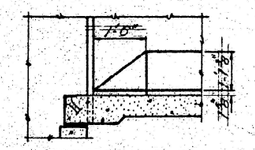
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SECTION NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R.A.-, R.A.S.-TO	18-4B, HB-1	CUMBERLAND	37	12
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

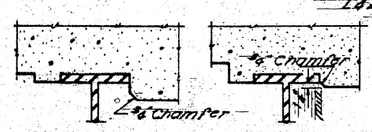
SHEET NO. 2
10 SHEETS



HALF PLAN



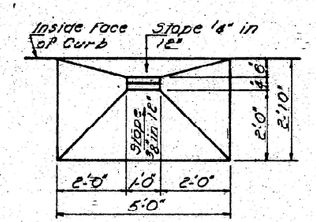
SECTION B-B



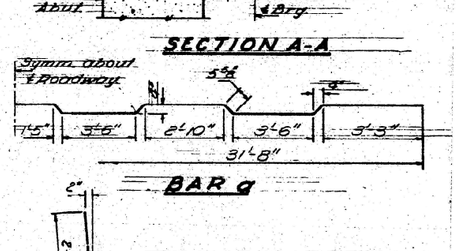
DETAIL A

7/16" ϕ vent holes at 18" cts. set on 1'-8" gage line.
11/16" ϕ holes at 12" cts. for ¾" bolts set on 2½" gage line. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed.
¾"x8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (alternate at 1'-0" cts.)
1¾"x4½"x16"x30'-11¾" Bend to fit crown
℄ P.J.F.
Level
Brn. 5
9" 9"
5'-0" ±½" Measured along ℄ Brn.
Back of Abut.
℄ Brg.

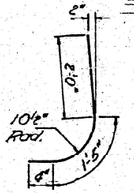
SECTION A-A



FLOOR DRAIN PLAN



BAR a

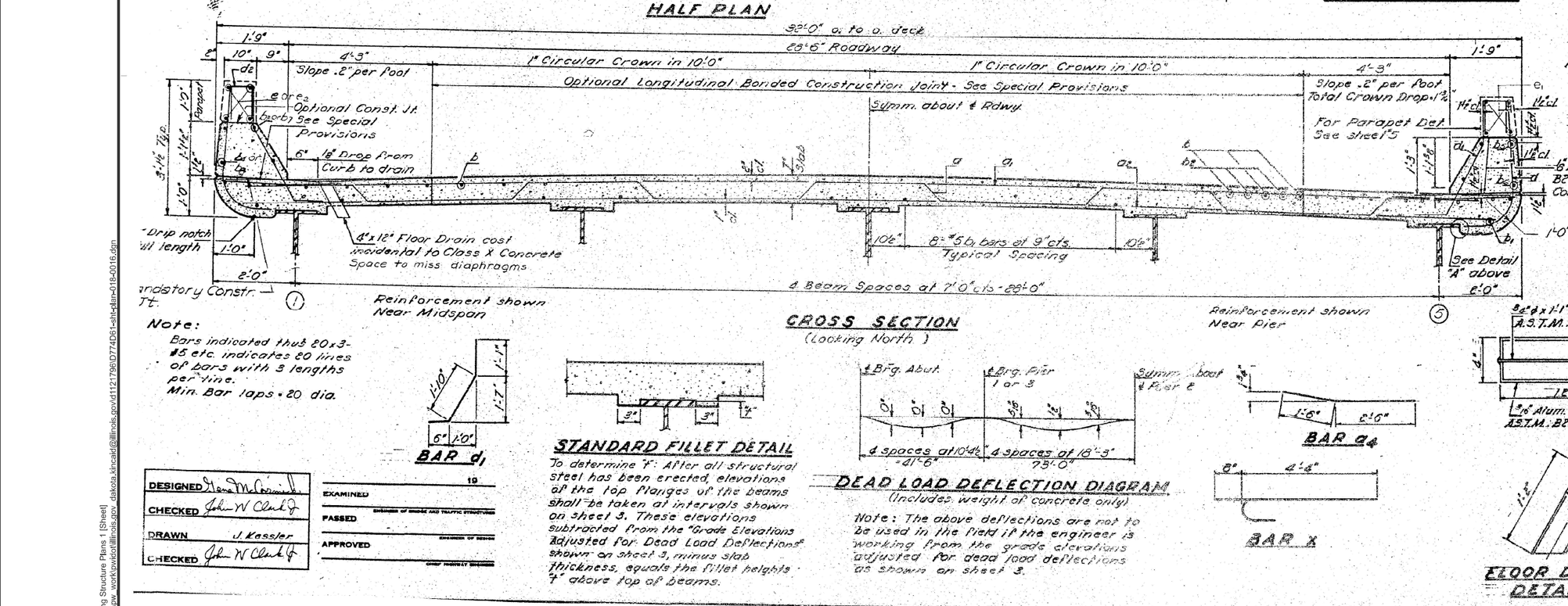


BAR d

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	207	#5	32'-9"	
a1	222	#5	31'-5"	
a2	222	#5	31'-0"	
a3	6	#5	30'-9"	
a4	428	#6	4'-0"	
b	297	#5	27'-3"	
b1	272	#5	30'-6"	
b2	96	#6	22'-0"	
b3	8	#8	35'-0"	
b4	8	#5	35'-0"	
b5	24	#8	8'-9"	
b6	24	#5	8'-9"	
b7	16	#8	28'-3"	
b8	16	#5	28'-3"	
d	462	#4	3'-9"	
d1	456	#5	3'-5"	
x	60	#6	5'-0"	
Reinforcement Bars			Lbs.	51,280
Structural Steel			Lbs.	165,130
Class X Concrete			Cu. Yds.	224.0

The quantities of longitudinal reinforcement and Class X Concrete in the parapets are shown on sheet 5 and are not included in the above quantities.
Wt. of brg. assemblies with lead plates and anchor polts are included as structural steel. Est. Wt. = 6870 lbs.



CROSS SECTION
(Looking North)

Note:
Bars indicated thus 80x3-#5 etc. indicates 80 lines of bars with 3 lengths per line.
Min. Bar laps = 20 dia.

BAR d1

STANDARD FILLET DETAIL

To determine "Y": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "Y" above top of beams.

DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.

BAR a4

BAR X

FLOOR DRAIN DETAILS

DESIGNED	Hans M Schmidt
CHECKED	John W Clark Jr
DRAWN	J. Kassler
CHECKED	John W Clark Jr

EXAMINED 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF BRIDGES
APPROVED
CHIEF HIGHWAY ENGINEER

SUPERSTRUCTURE

F.A.I. RT. 70 SEC. 18-4B, HB-1
CUMBERLAND COUNTY
STA. 434+42.89

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0016

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	11
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

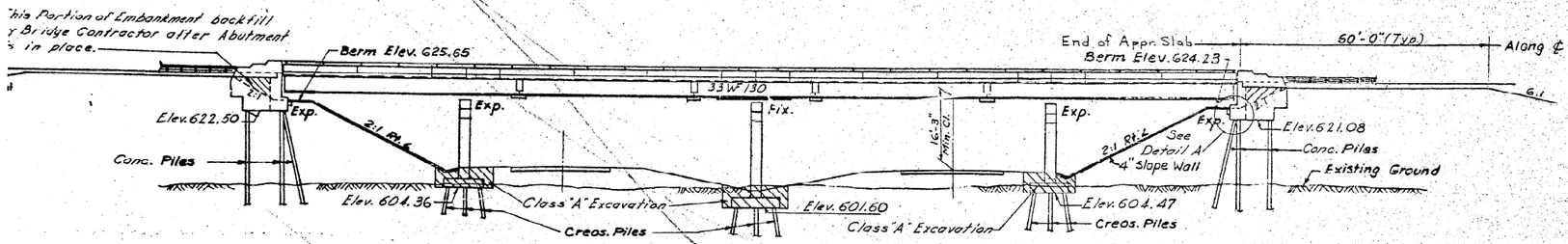
MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121790\D774061-sht-plan-018-0016.dgn

IM: Boat Spike in Power Pole
91' Left of STA. 433+55, Elev. 609.45

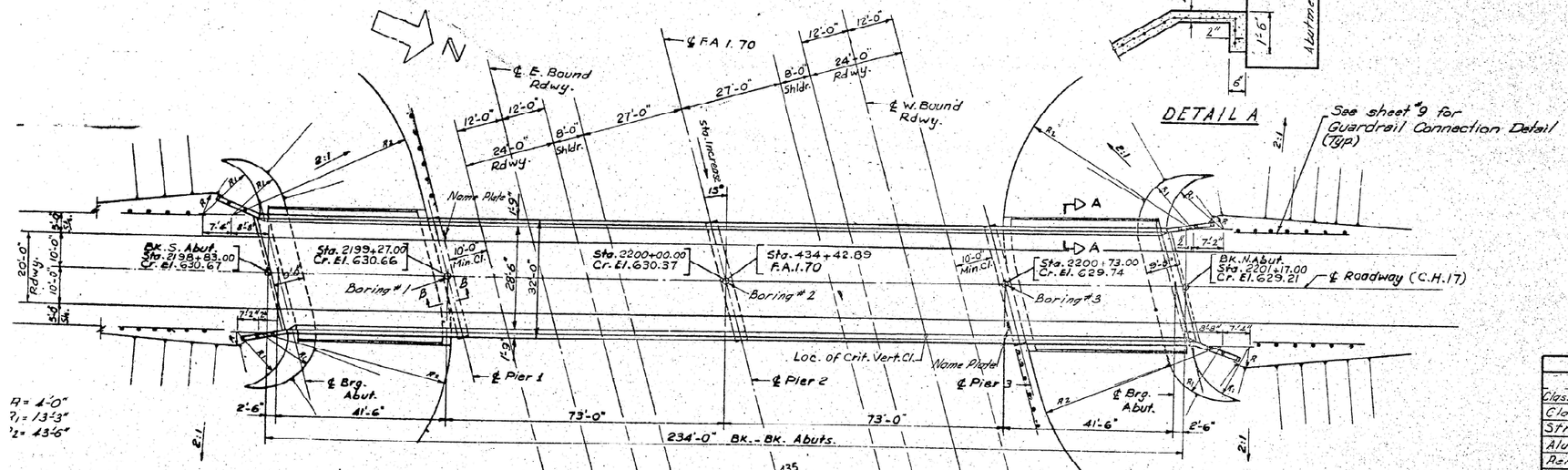
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-4B HB-1	CUMBERLAND	37	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

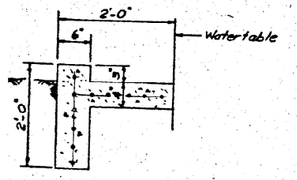
SHEET NO. 1
10 SHEETS



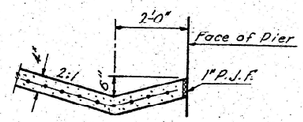
ELEVATION



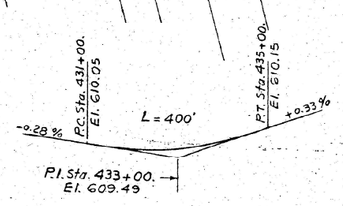
PLAN



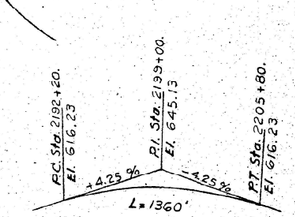
SEC. A-A



SEC. B-B



PROFILE - F.A.I. 70



PROFILE - C.H.17

DETAIL A

See sheet 9 for Guardrail Connection Detail (Typ.)

STATION 434+42.89
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-4BHB-1
F.A. PROJ. I-70-4(69)
LOADING HS 15

NAME PLATE LETTERING
(See Std. 2113-1)

DESIGNED Fred J. Stone
CHECKED Geo. McConnell
DRAWN J. Kessler
CHECKED Geo. McConnell

APRIL 12 1965
EXAMINED Carl Tunnell — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H.H. Gehlsen — ENGINEER OF DESIGN
APPROVED J.E. Bunt — CHIEF ENGINEER

DESIGN STRESSES
f_c = 1400 psi
f_s = 20,000 psi (Reinf.)
f_s = 20,000 psi (Struct.)
v = 75 psi (Flgs.)
n = 10

Allowable ℄ Defl. = L/1000

LOADING HS15-44

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 5.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets 3/4 " ϕ, Open Holes 13/16" ϕ, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 870 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See special provisions.

Concrete piles at abutments shall be driven in holes precored thru the embankment in accordance with Article 50.9 (c) of the Standard Specifications.

The contractor shall drive one concrete test pile at the South Abutment, in a permanent location, and one timber test pile in the vicinity of Pier 3 as directed by the Engineer before ordering the remainder of piles.

Permanent forms will not be permitted in forming the concrete floor.

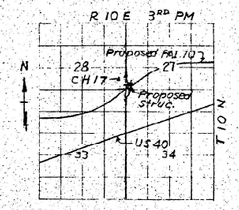
Excavation for portions of structure in the embankments shall not be classified.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE FLANGE PLATES OR FOR A DISTANCE OF 6" OF THE GRAB RAIL FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB	TOTAL
Class "A" Excavation for Structures	Cu. Yds.		170	170
Class X Concrete	Cu. Yds.	238.9	233.6	472.5
Structural Steel	Lbs.	185,150		185,150
Aluminum Handrail	Lin. Ft.	461		461
Reinforcement Bars	Lbs.	53,330	18,150	71,480
Creosoted Piles (Up to 20')	Lin. Ft.		1,011	1,011
Test Piles (Timber)	Each		1	1
Concrete Piles	Lin. Ft.		697	697
Test Piles (Concrete)	Each		1	1
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		390	390
* Protective Coat	Sq. Yds.	950		950

* Includes application on top, inside face and exposed end of wingwall.



LOCATION PLAN

GENERAL PLAN & ELEVATION
C.H.17 OVER F.A.I. RT. 70

F.A.I. RT. TO SEC. 18-4BHB-1
CUMBERLAND COUNTY
STA. 434 + 42.89

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0016

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

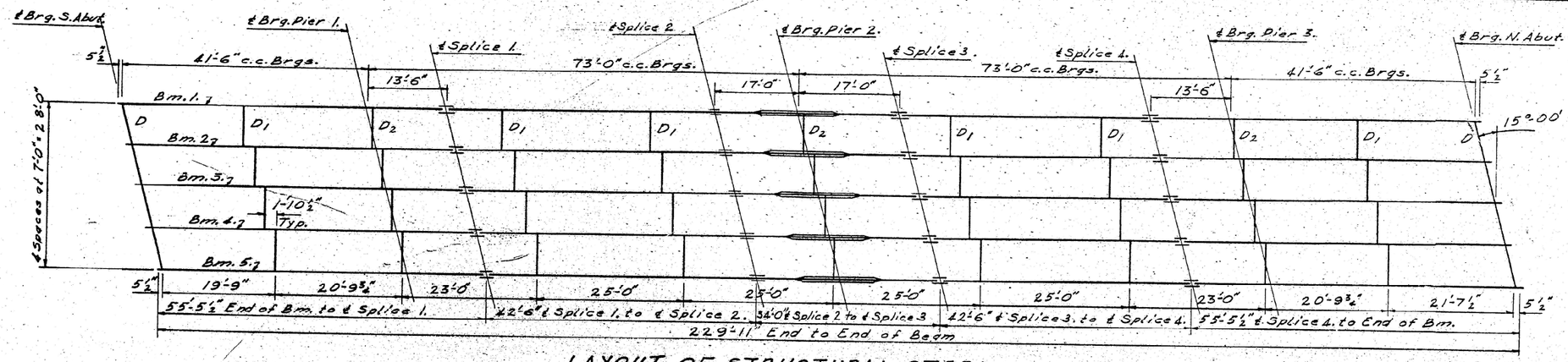
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	12
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dakota\dillinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0016.dgn

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

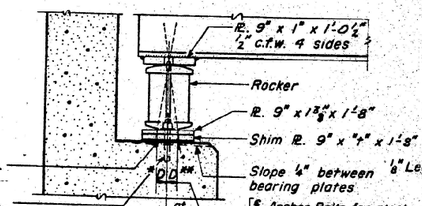
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-4B HB-1	CUMBERLAND	37	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4.
10 SHEETS

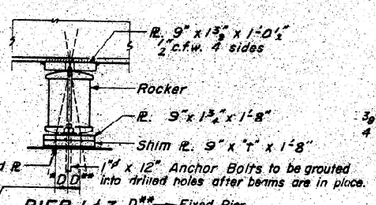


LAYOUT OF STRUCTURAL STEEL

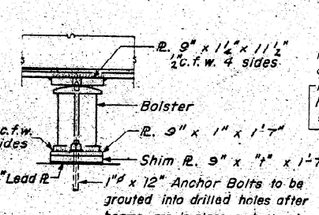
(All Beams 33 WF 130)



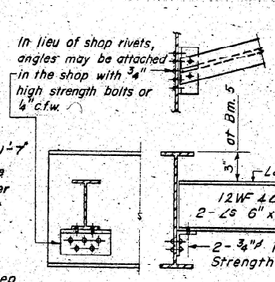
SECTION AT ABUTMENT



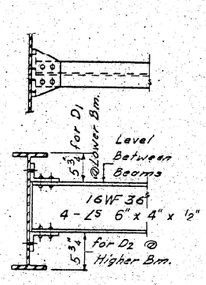
PIER 1 & 3



PIER 2



DIAPHRAGM D
8 Required



DIAPHRAGM D1 & D2
24 D1 & 12 D2 Required

MOMENTS AND REACTIONS - INT. BMS.

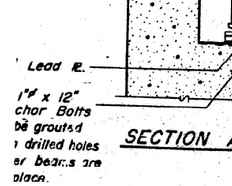
	MOMENTS				REACTIONS		
	℄ Sp. 1	Pier 1	℄ Sp. 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	68.0	326.5	218.1	527.3	12.1	50.3	75.8
L.L.	190.6	225.1	285.0	301.2	25.5	33.6	33.3
Imp.	57.2	62.1	72.1	76.2	7.7	9.3	8.4
total	315.8	614.0	575.2	905.2	45.3	103.2	117.5

Moments are in ft-kips And Reactions in kips

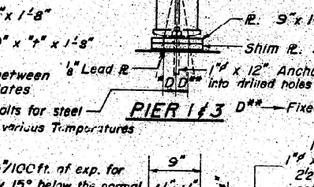
* ELEVATION TOP OF WF

Location Beam	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	630.00	630.09	630.12	630.06	629.94
℄ Brg. Pier 1.	629.92	630.01	630.04	629.98	629.86
℄ Splice 1.	629.90	629.99	630.02	629.96	629.84
℄ Splice 2	629.74	629.83	629.86	629.80	629.68
℄ Brg. Pier 2	629.64	629.73	629.76	629.70	629.58
℄ Splice 3	629.54	629.63	629.66	629.60	629.48
℄ Splice 4	629.17	629.25	629.29	629.23	629.11
℄ Brg. Pier 3.	629.03	629.12	629.15	629.09	628.97
℄ Brg. N. Abut.	628.58	628.67	628.70	628.64	628.52

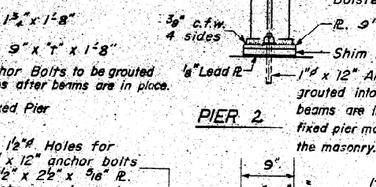
* Lower all top of WF elevations by .04'



PLAN

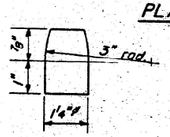


PLAN



PLAN

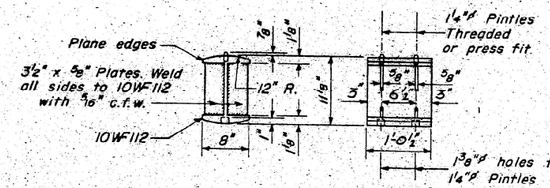
*D = ⅛"/100 ft. of exp. for every 15° below the normal temp. of 50°.
D** = ⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°.



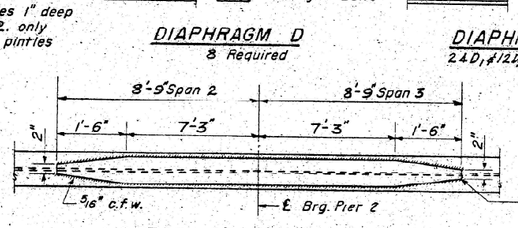
DETAIL OF PINTLE

TABLE OF "t" DIMENSIONS

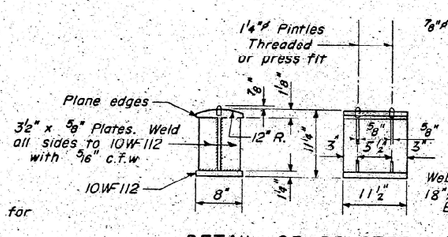
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	¾"	⅝"	¾"	0"	0"



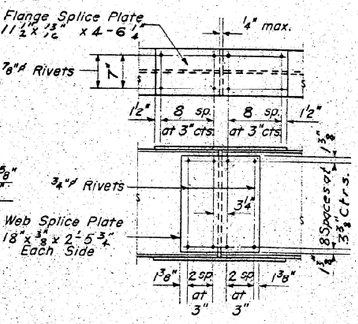
DETAIL OF ROCKER AT PIER 1 & 3 & ABUTS



DETAIL OF COVER PLATE



DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

DESIGNED Fred Stone
CHECKED Dave McConnell
P.G. Barnett Jim Kessler
DRAWN W. A. Sousoman Jr.
CHECKED Dave McConnell

APRIL 12 1965
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

2-C 7-2-62 Rev. 11-9-62 . Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 18-48 HB-1
CUMBERLAND COUNTY
STATION 434+42.89

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwdot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D7774D61-sht-plan-018-0016.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0016

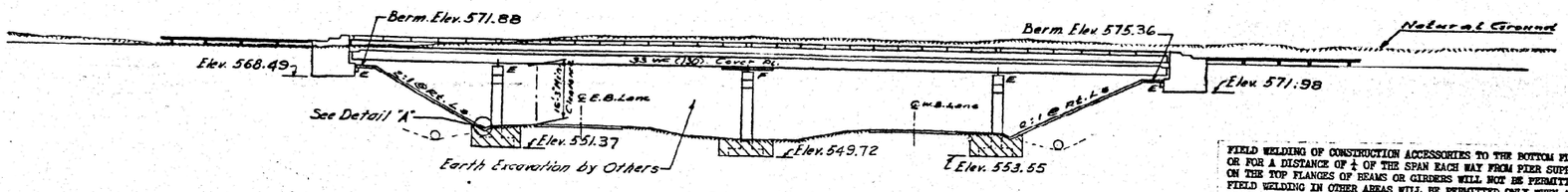
SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	13
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

B.M.: "46-R.R. Spike SE Root 16" Tree 185' Lt. Sta. 405+35 FAI 70 & Elev. 566.86

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

F.A.I. 70	18-46 HB-1	CUMBERLAND	37	12	SHEET NO. 1 9 SHEETS
					I-16-70-4(51)109



Elevation
Scale 1"=20'-0"

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 5I.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets ⅞" ϕ, Open Holes 15/16" ϕ, unless otherwise noted.

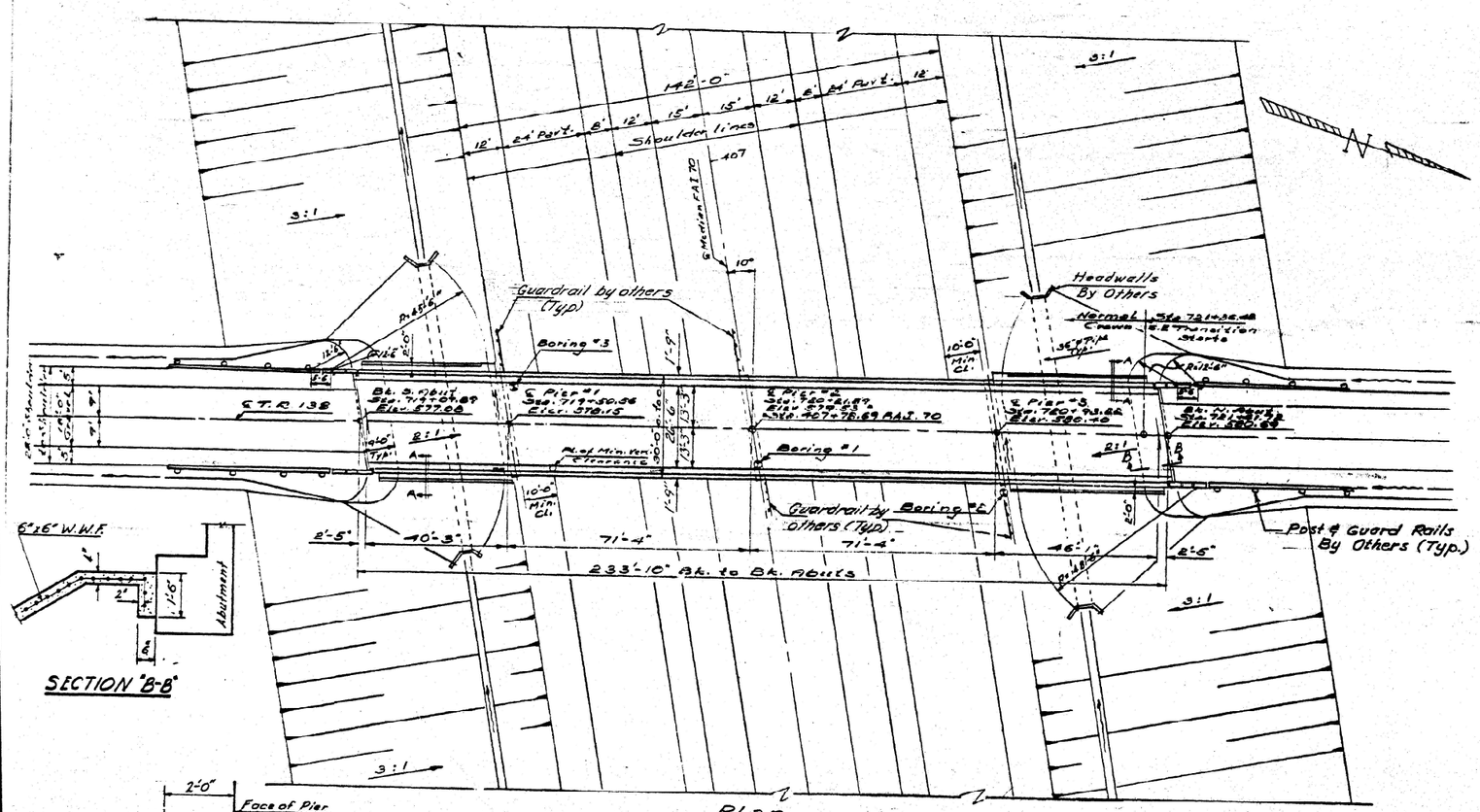
Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessable after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 670 Lbs.

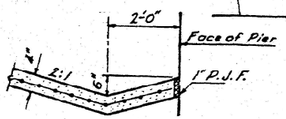
Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See: Special Provisions for field paint.

Permanent forms will not be permitted in forming the concrete floor.

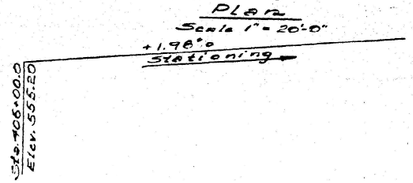


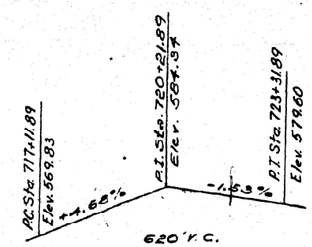
PLAN
Scale 1"=20'-0"

SECTION "B-B"



DETAIL "A"





DESIGNED	S. Engagy
CHECKED	Pun C. Wang
DRAWN	J. Kessler
CHECKED	S.E. & P.W.

EXAMINED Carl E. Hummard — June 7, 1965
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. L. Allen
ENGINEER OF DESIGN
APPROVED V.E. Ford
CHIEF ENGINEER

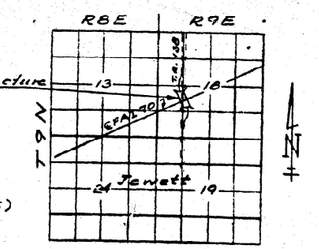
MAX. SOIL PRESSURE

For Abuts.= 3.0 kips/sq. ft.
For Pier 1 & 3 = 4.9 kips/sq. ft.
For Pier 2 = 8.0 kips/sq. ft.

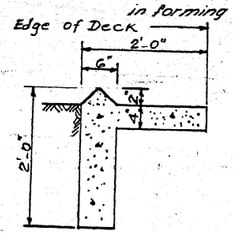
Proposed Structure

DESIGN STRESSES

fc = 1400 psi. Super. & Sub
Vc = 75 psi Footing
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct. (A-36)
n = 10
Allow. L.L. Def. = 1/800
Loading: HS 15-44



Location Sketch



SECTION A-A

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class "A" Excavation for Structures	Cu. Yds.		313	313
Class "Y" Concrete	Cu. Yds.	206.6	214.2	420.8
Structural Steel	Lbs.	100,670		180,670
Aluminum Handrail	Lin. Ft.	461		461
Reinforcement Bars	Lbs.	47,500	17,670	65,170
Name Plates	Each		2	2
Slope Wall (4")	Sq. Yds.		370	370
Protective Coat	Sq. Yds.	910		910
Pipe Culvert 36"ϕ (Type 2A)	Lin. Ft.		182	182

*Includes Excavation for Slope Wall.

T.R. 138 Curve Data.

P.I. Sta. 723+80.89
Δ = 31° 00' 00" (Rt.)
R = 477.47'
T = 132.41'
L = 258.34
E = 18.02
D = 12°-00'-00"
P.C. Sta. 722+48.48
P.T. Sta. 725+06.82
SE = 0.08 ft./ft.
SE attained Sta. 721+36.48 to Sta. 723+04.48
Sta. 726+18.82 to Sta. 724+50.82
Remove Crown.

STATION 407+78.69
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-46HB-1
F.A. PROJ. I-16-70-4(51)
LOADING HS 15

NAME PLATE LETTERING

(See Std. 2113-1)

GENERAL PLAN & ELEVATION

PROJ. I-16-70-4(51)109
T.R. 138 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-46 HB-1
CUMBERLAND COUNTY
STATION 407+78.69

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS 018-0017	
	DRAWN -	REVISED -			
	CHECKED -	REVISED -		SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.	
PLOT DATE = 12/2/2025	DATE -	REVISED -			

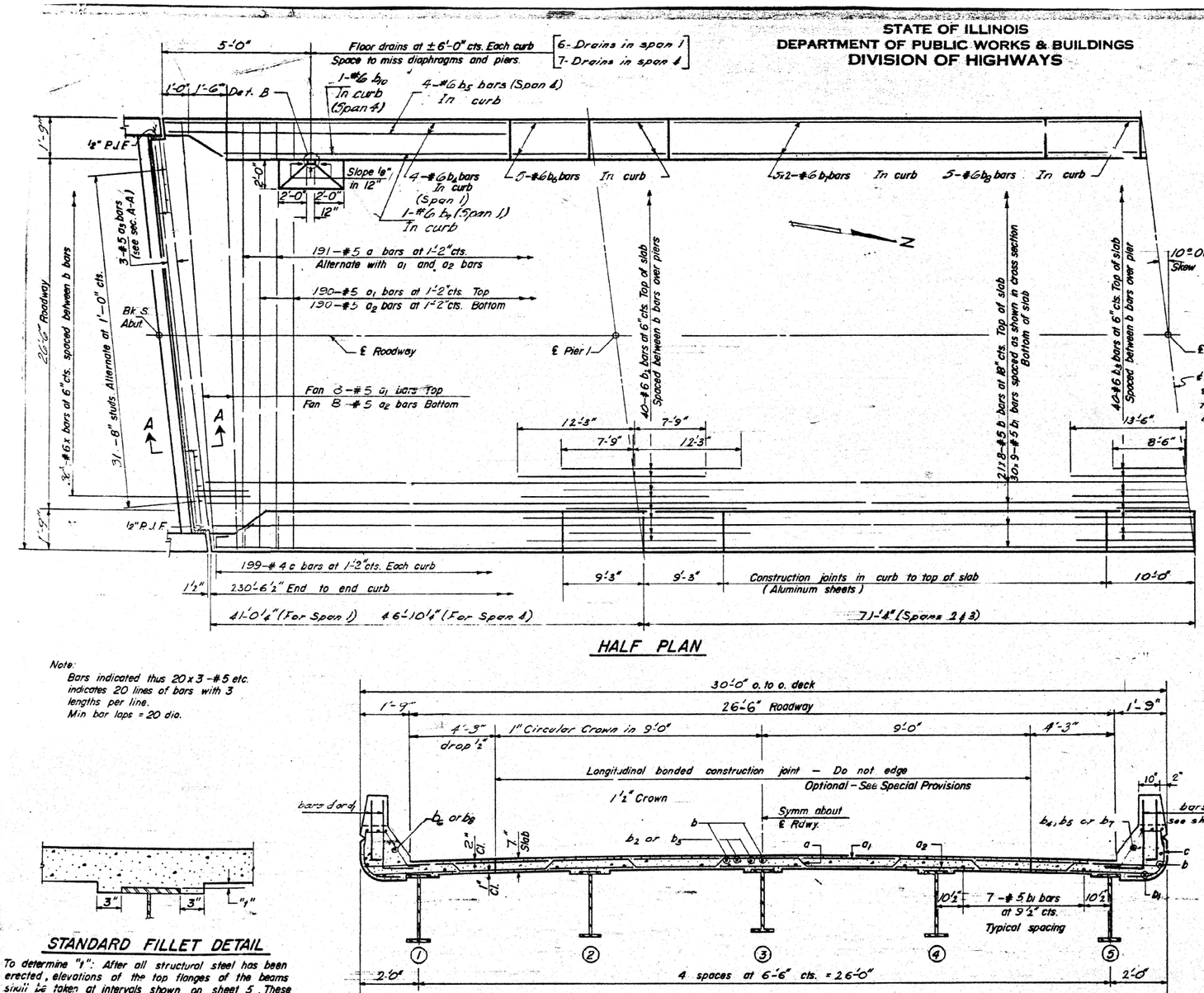
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	14
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwfed\illinois_gov_dakota.kincaid@illinois.gov\d1121795\D774D61-sht-plan-018-0017.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
A.A.I. F.A.I. 70	18-4G HB-1	CUMBERLAND	37	13

SHEET NO. 2
9 SHEETS



HALF PLAN

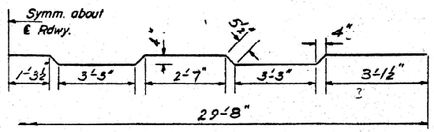
Note:
Bars indicated thus 20 x 3 -#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.

NEAR PIER NEAR MIDSPAN

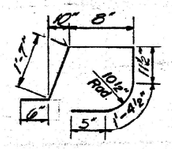
CROSS SECTION
Looking North

STANDARD FILLET DETAIL

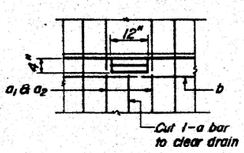
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 5, minus slab thickness, equals the fillet heights "t" above top of beams.



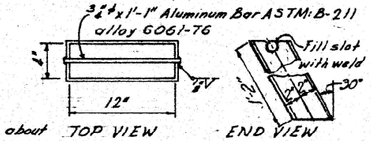
BAR a



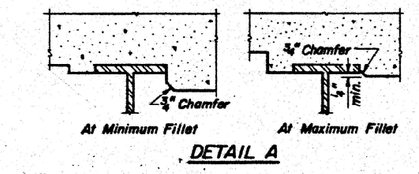
BAR c



TYP. DETAIL AT DRAIN



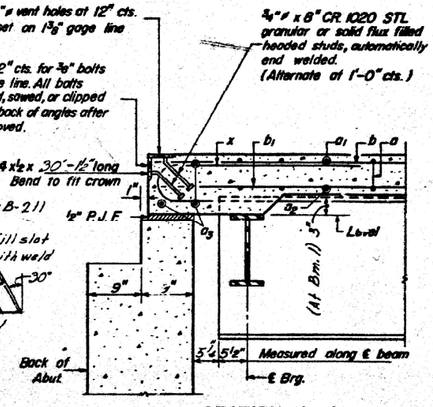
DETAIL B



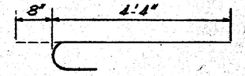
DETAIL A

CURB DETAIL

Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete.



SECTION A-A

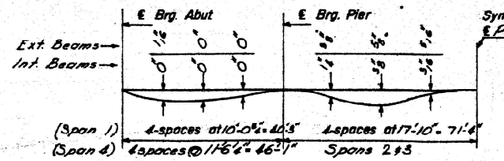


BAR x

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	191	#5	30'-8"	
a1	206	#5	29'-8"	
a2	206	#5	29'-0"	
a3	6	#5	23'-7"	
b10	2	#6	34'-9"	
b	168	#5	30'-0"	
b1	270	#5	26'-9"	
b2	80	#6	20'-0"	
b3	40	#6	22'-0"	
b4	8	#6	31'-7"	
b5	8	#6	37'-5"	
b6	40	#6	8'-11"	
b7	40	#6	26'-9"	
b8	20	#6	9'-8"	
c	398	#4	5'-9"	
b9	2	#6	29'-0"	
x	72	#6	5'-0"	
Reinforcement Bars			Lbs.	90260
* Structural Steel			Lbs.	180670
Class X Conc. sta			Cu. Yd.	191.4

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt = 7,030 Lbs.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 5

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 18-4GHB-1
CUMBERLAND COUNTY

DESIGNED	S. Engazy
CHECKED	Paul C. Wang
P.G. Barnett	J. Kessler
DRAWN	D.L. Beemer
CHECKED	S.E. & P.W.

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES — JUNE 7 1965
PASSED — ENGINEER OF DESIGN
APPROVED — STATE HIGHWAY ENGINEER

I-5-R (≦ 15°) 10-10-62 Rev. 11-1-63 5-1-64

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0017

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

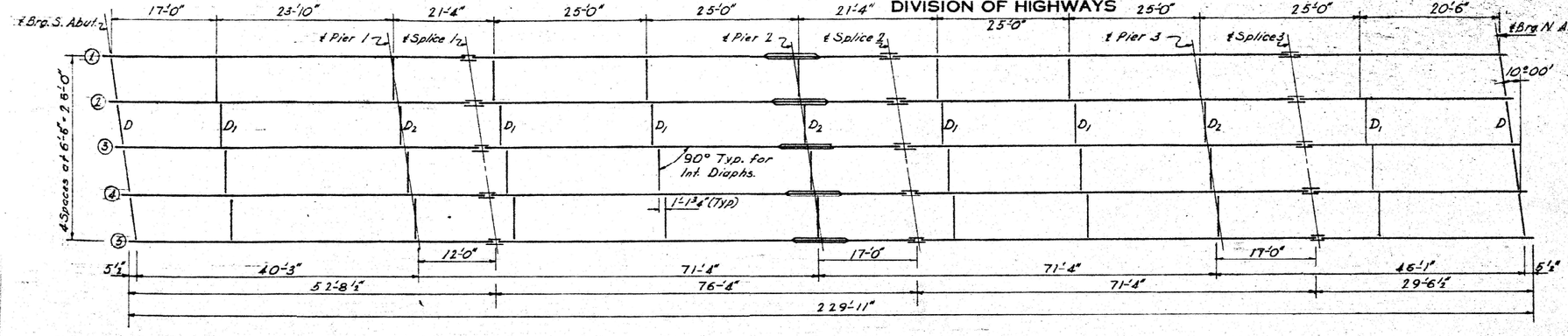
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	15
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov - dakota.kincaid@illinois.gov\d1217916\D774D61-sht-plan-018-0017.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 70	18-46 HB-1	CUMBERLAND	37	14
FED. ROAD DIST. NO. 7	RANGE	FED. AID PROJECT		

SHEET NO. 3
9 SHEETS



PLAN

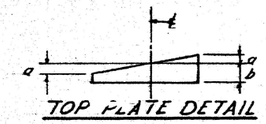
All Beams 33 WF 130 With Cover Plates 10 1/2" x 3/8" x 16'-0" at Pier 2 Only

TABLE OF MOMENTS & REACTIONS - INTERIOR BMS

	MOMENTS - Ft. kips					REACTIONS - kips		
	℄ Sp. 1	Pier 1/3	℄ Sp. 2	Pier 2		Abut.	Pier 1/3	Pier 2
D.L.	78.2	292.0	190.5	468.0		11.1	55.0	69.5
L.L.	213.0	204.0	259.0	266.0		24.5	31.4	30.9
Imp.	60.3	56.0	65.5	74.0		7.4	8.8	7.9
Total	351.5	552.0	515.0	808.0		43.0	95.2	108.3

TABLE OF "℄" DIMENSIONS FOR ALL ABUTS. & PIERS

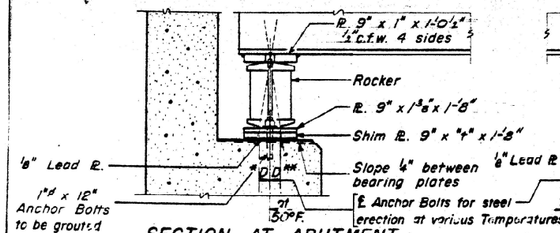
Beam 2	1/2"
Beam 3	1/8"
All Others	0"



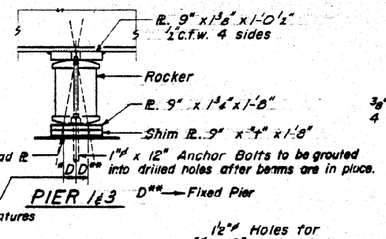
TOP PLATE DETAIL

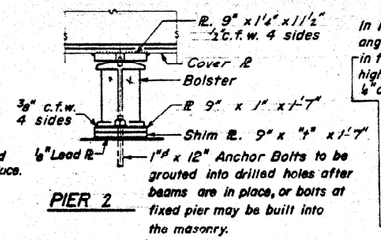
TABLE OF "a" and "b"

S. Abut.		Pier 1		Pier 2		Pier 3		N. Abut.	
a	b	a	b	a	b	a	b	a	b
1/8"	1"	1/8"	1 3/8"	1/16"	1 1/16"	0"	1 3/8"	0"	1"

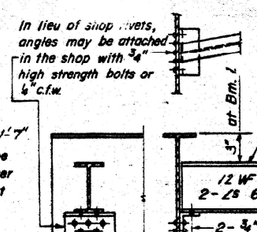


SECTION AT ABUTMENT

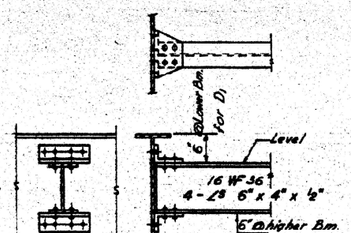




In lieu of shop rivets, angles may be attached in the shop with 3/4" high strength bolts or 4" c.f.w.



DIAPHRAGM D
8 Required

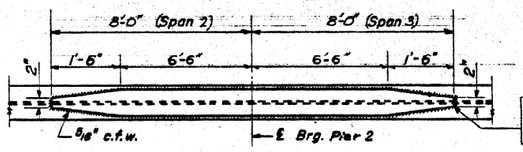


DIAPHRAGM D1 & D2
Total 36 Required

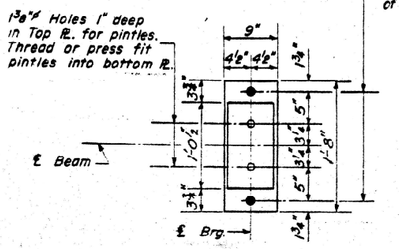
*ELEVATION TOP OF WF
(For Fabrication only)

Beam No.	1	2	3	4	5
℄ Brg-S. Abut.	576.43	576.55	576.61	576.60	576.53
℄ Pier 1	577.37	577.49	577.55	577.54	577.47
℄ Splice 1	577.65	577.77	577.83	577.82	577.75
℄ Pier 2	578.69	578.81	578.87	578.86	578.79
℄ Splice 2	578.99	579.11	579.17	579.16	579.09
℄ Pier 3	579.55	579.67	579.73	579.72	579.65
℄ Splice 3	579.72	579.85	579.91	579.90	579.82
℄ Brg-N. Abut.	579.91	580.04	580.10	580.09	580.01

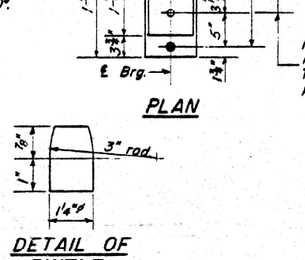
* Reduce elevations 1/2" from values in the table.



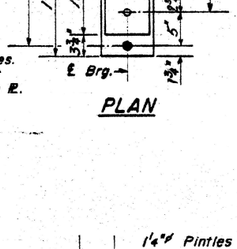
DETAIL OF COVER PLATE



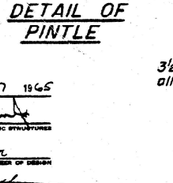
PLAN



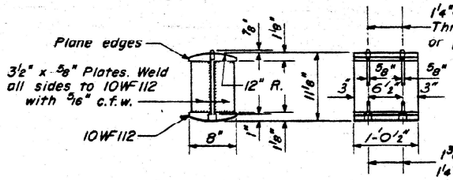
PLAN



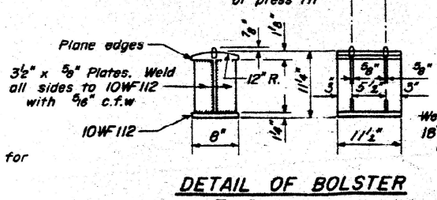
PLAN



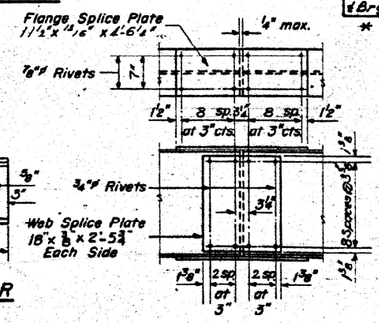
DETAIL OF PINTLE



DETAIL OF ROCKER AT ABUTS & PIERS 1 & 3
(20 Req'd)



DETAIL OF BOLSTER AT PIER 2
(5 Req'd)



DETAIL OF SPLICE

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 18-46 HB-1
CUMBERLAND COUNTY

DESIGNED	J. Engen	
CHECKED	Pius C. Wang	
P.G. Barnett	J. Kessler	
DRAWN	W. A. Sousaman Jr.	
CHECKED	S.E. & P.W.	

EXAMINED — June 7 1965 — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121795\D7742D61-e3f1-4da1-018-0017.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0017

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

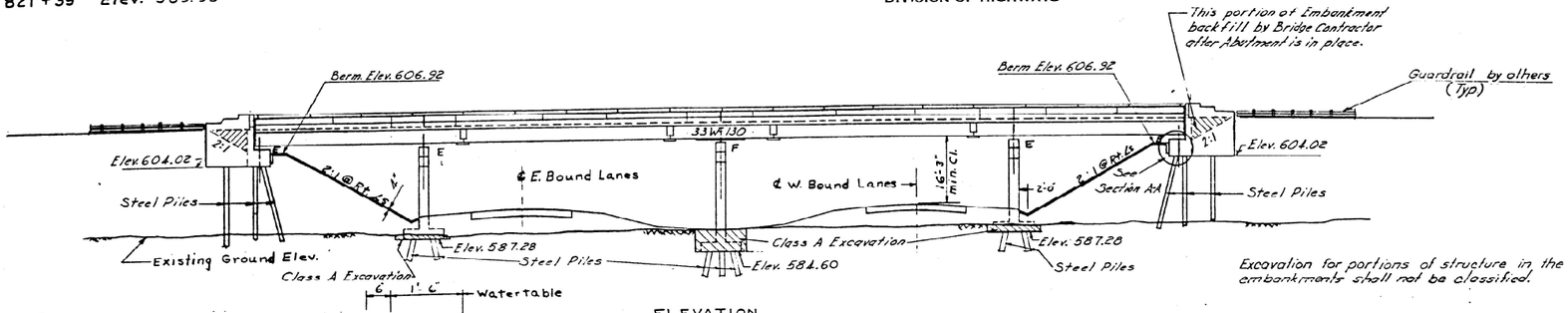
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	16
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-4&HB-2	Cumberland	25	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: I-16-70-4(51)107		

SHEET NO. 1.
9 SHEETS

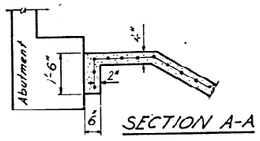
B.M. # 52 - R.R. Spike in P.P. 25' Lt.
Sta. 821+39 Elev. 589.99

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

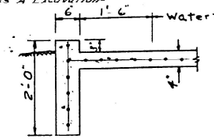


ELEVATION

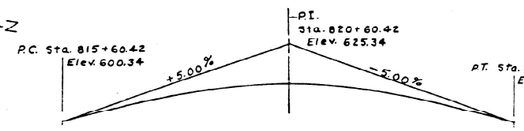
Excavation for portions of structure in the embankments shall not be classified.



SECTION A-A



SECTION B-B



PROFILE C.H. # 2

1,000' V.C.

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 5.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets $\frac{3}{4}$" ℄, Open Holes $\frac{13}{16}$" ℄, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessable after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 860 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for field paint. See Article 561 to 565 inclusive of the Standard Specifications.

Piles to be Driven to Refusal.

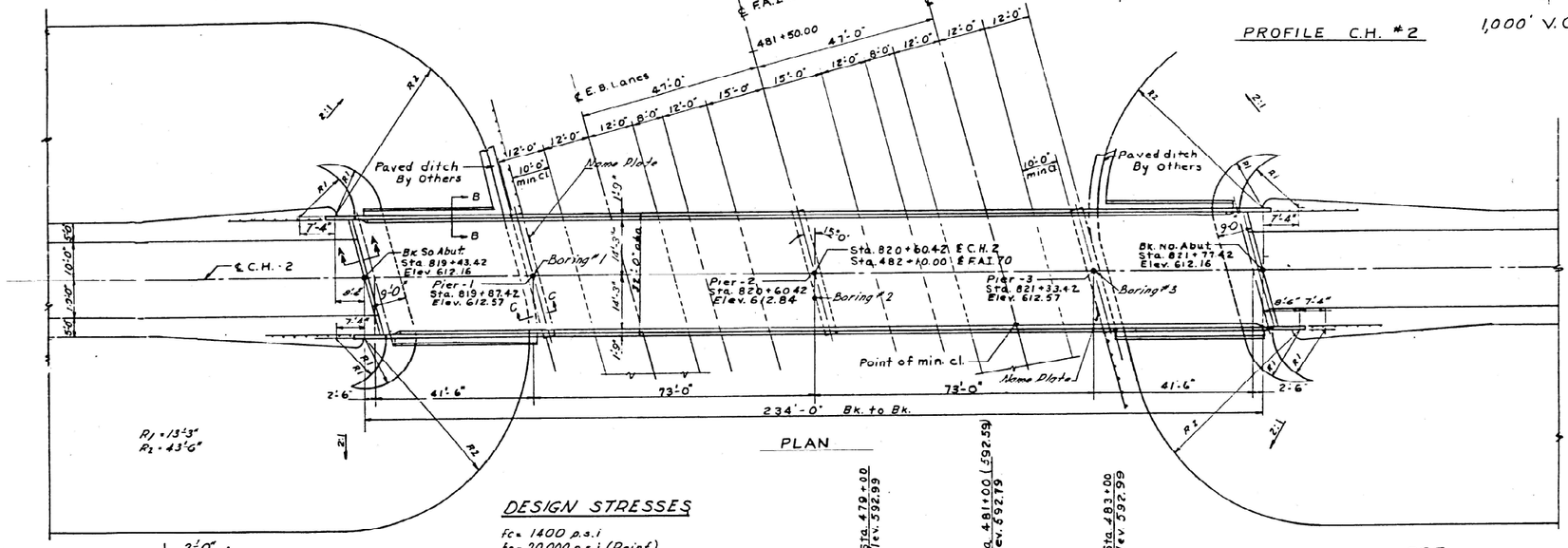
Permanent forms will not be permitted in forming the concrete floor.

The Contractor shall drive two steel test Piles, one at the South Abutment and one at Pier #3, each in a permanent location as directed by the Engineer before ordering the remainder of piles.

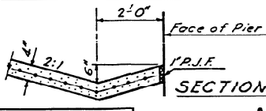
FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF $\frac{1}{4}$ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
I				
Class 'A' Excavation for Structures	Cu. Yds		80	80
Class X Concrete	Cu. Yds.	218.7	228.0	446.7
Structural Steel	Lbs.	184,820		184,820
Aluminum Handrail	Lin. Ft.	461		461
Reinforcement Bars	Lbs.	51,880	18,400	70,280
Steel Piles (8BP36)	Lin. Ft.		1,249	1,249
Test Piles Steel (8BP36)	Each		2	2
Name Plates	Each			2
SlopeWall (4")	Sq. Yds.		390	390
Protective Coat	Sq. Yds.	950		950



PLAN



SECTION C-C

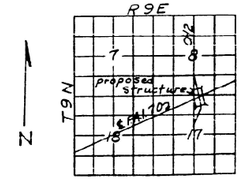
DESIGN STRESSES

fc = 1400 p.s.i
fs = 20,000 p.s.i. (Reinf.)
fs = 20,000 p.s.i. (Struct)
v = 75 p.s.i. (Ftgs)
n = 10
Allow LL Defl. = 1/800

LOADING HS15-44

400' V.C.

Profile F.A.I. 70



LOCATION SKETCH

DESIGNED	Fred Stone	EXAMINED	APRIL 8 1965
CHECKED	Hans McConnell	PASSED	
DRAWN	Glen M Ritchie J. Kessler	APPROVED	
CHECKED	Hans McConnell		

STATION 482+10.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-46HB-2
F.A. PROJ. I-16-70-4(51)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)

GENERAL PLAN & ELEVATION
PROJ. I-16-70-4(51)107
C.H.-2 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-46 HB-2
CUMBERLAND COUNTY
STA. 482 + 10.00

Rev. 3-30-67 E.R.M. Lowered all bottom of footing elev. by .04; Changed Class X Concrete from 447.8 cu yds to 459.6 Changed reinforcement from 67,720 lbs. to 67,740 lbs. Added Guardrail . . .

Rev. 8-25-67 E.R.M. Changed Class X Concrete from 459.6 Cu. Yds. to 446.7 Cu. Yds., Structural Steel changed from 184,710 lbs. to 184,820 lbs. changed Reinforcement 67,740 lbs. to 70,280 lbs.

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0031.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0031

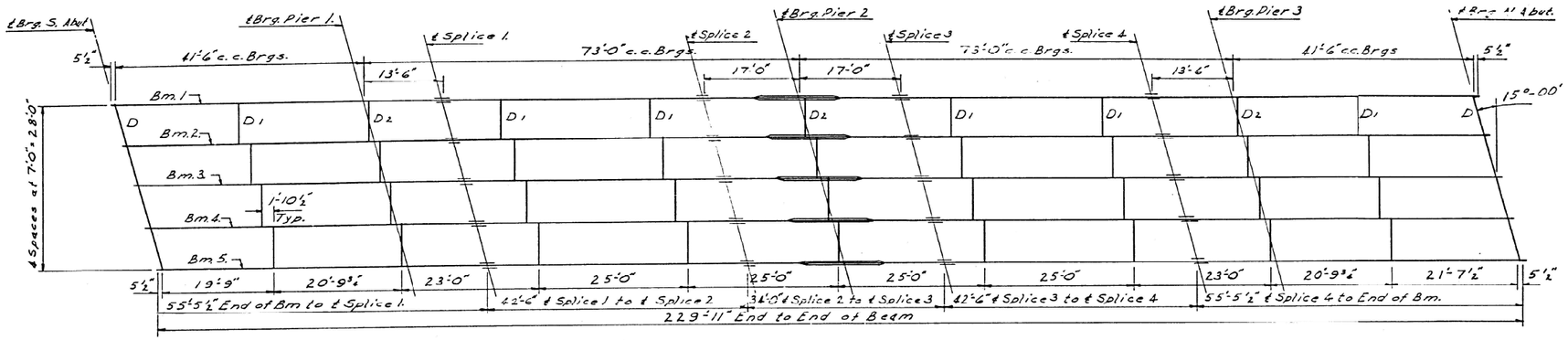
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	17
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

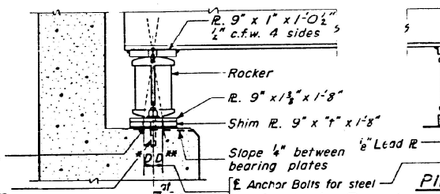
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.S. 70	18-46 HB-2	Cumberland	25	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

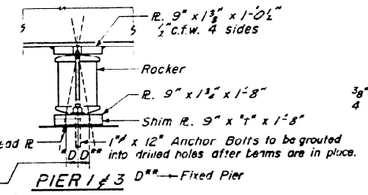
SHEET NO. 2.
9 SHEETS



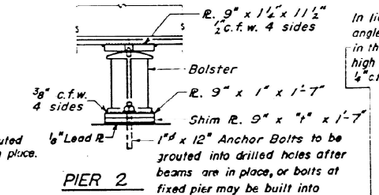
LAYOUT OF STRUCTURAL STEEL
(All Beams 33WF130)



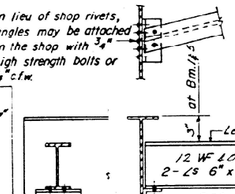
SECTION AT ABUTMENT



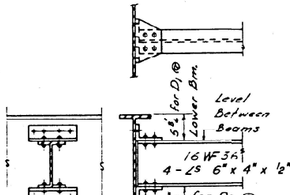
PIER 1 & 3



PIER 2



DIAPHRAGM D
8 Required



DIAPHRAGM D1 & D2
2 D1 & 1 D2 Required

MOMENTS AND REACTIONS - INT. BMS.

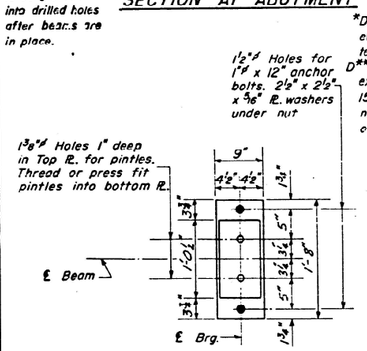
	MOMENTS				REACTIONS		
	℄ Sp 1	Pier 1	℄ Sp 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	68.0	326.5	218.1	527.8	12.1	60.3	15.8
L.L.	190.6	225.1	285.0	301.2	25.5	33.6	33.5
Imp.	57.2	62.4	72.1	76.2	7.7	9.3	8.4
Total	315.8	614.0	575.2	905.2	45.3	103.2	117.5

Moments are in ft. kips And Reactions in kips

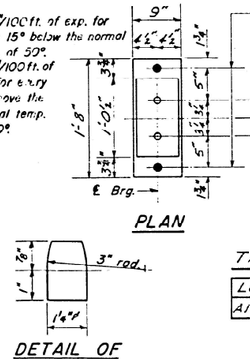
ELEVATION TOP OF WF *

Location / Beam	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	611.46	611.57	611.62	611.57	611.46
℄ Brg. Pier 1	611.78	611.89	611.94	611.89	611.78
℄ Splice 1	611.89	612.00	612.05	612.00	611.89
℄ Splice 2	612.08	612.19	612.24	612.19	612.08
℄ Brg. Pier 2	612.08	612.19	612.24	612.19	612.08
℄ Splice 3	612.08	612.19	612.24	612.19	612.08
℄ Splice 4	611.89	612.00	612.05	612.00	611.89
℄ Brg. Pier 3	611.78	611.89	611.94	611.89	611.78
℄ Brg. N. Abut.	611.66	611.57	611.62	611.57	611.46

* Lower all top of WF beam elevation by .04



PLAN

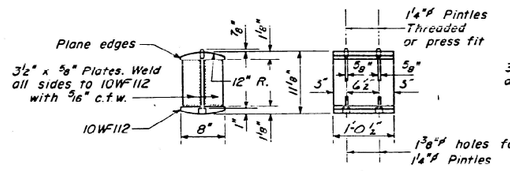


DETAIL OF PINTLE

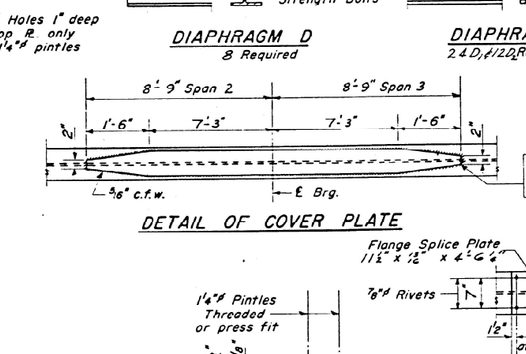
PLAN

TABLE OF "t" DIMENSIONS

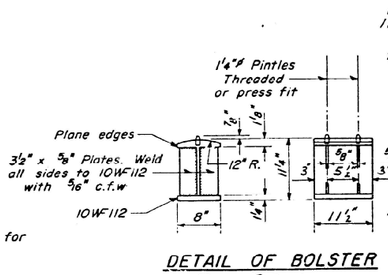
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	5/8"	0"	0"



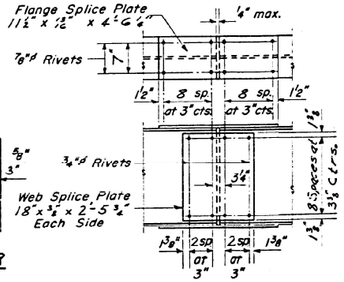
DETAIL OF ROCKER AT PIER 1 & 3 & ABUTS.



DETAIL OF COVER PLATE



DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

DESIGNED	Fred Stone	EXAMINED	APRIL 8 1965
CHECKED	Jean McConnell	PASSED	
P.G. Barnett / DRAWN	Jim Kessler / W. A. Sousaman Jr.	APPROVED	
CHECKED	Jean McConnell		

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63
Rev. 3-30-67 E.R.M. Lowered all top of WF elevation by .04

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 18-46 HB-2
CUMBERLAND COUNTY
STATION 482+10.00

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-018-0031.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0031

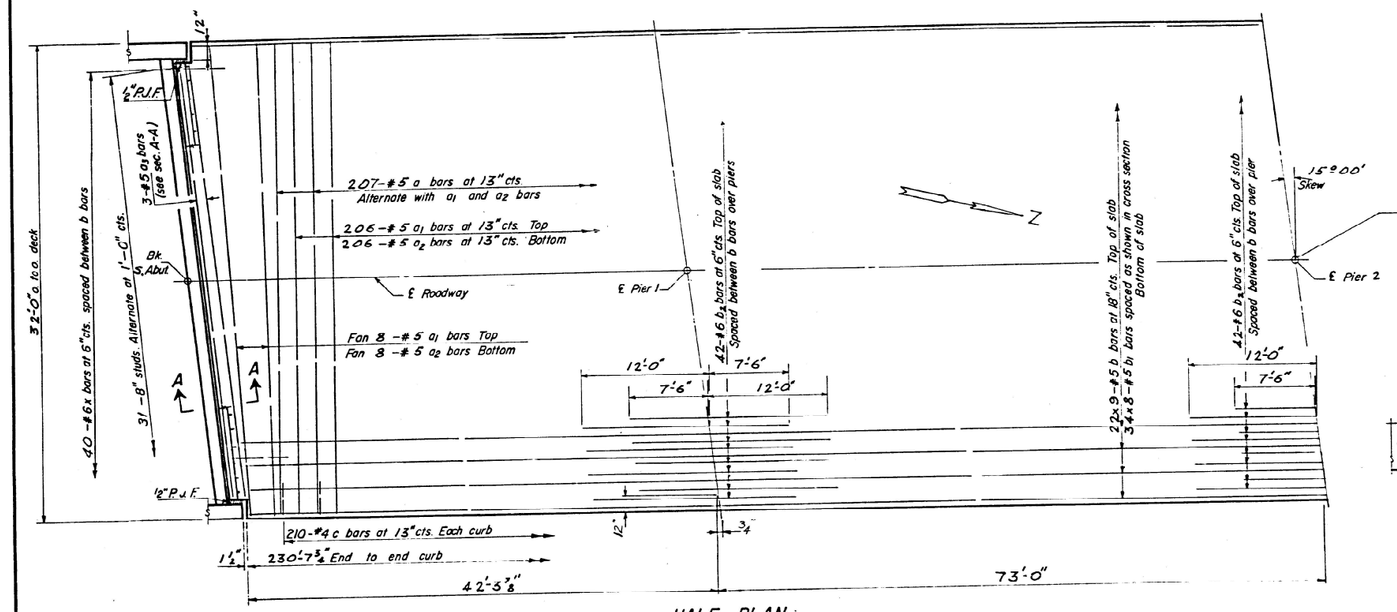
SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	18
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

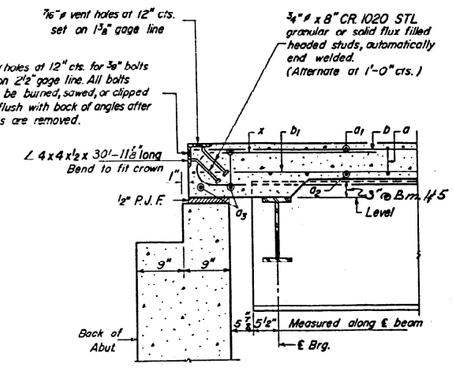
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.R. 70	18-4HB-2	Cumberland	25	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

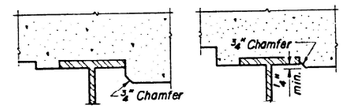
SHEET NO. 2
9 SHEETS



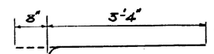
HALF PLAN



SECTION A-A

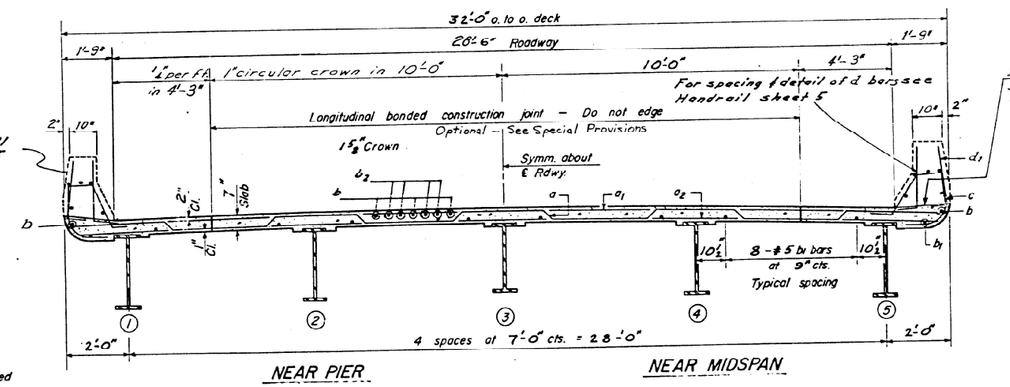


DETAIL A

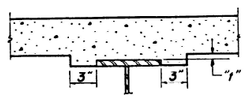


BAR x

Note:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.

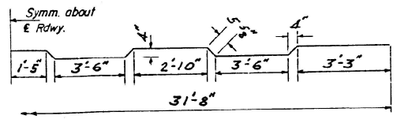


NEAR PIER NEAR MIDSPAN



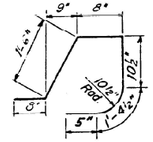
STANDARD FILLET DETAIL

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "f" above top of beams.



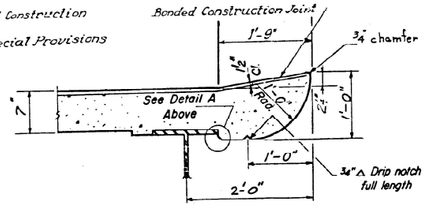
CROSS SECTION
(Looking North)

BAR a



BAR c

Bonded Construction Joint. See Special Provisions

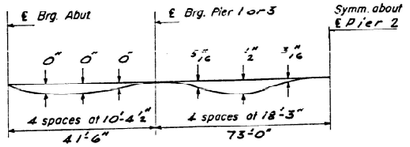


CURB DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	207	#5	32'-9"	~
a₁	222	#5	31'-8"	—
a₂	222	#5	31'-0"	—
a₃	6	#5	30'-6"	—
b	198	#5	27'-3"	—
b₁	272	#5	30'-6"	—
b₂	126	#6	19'-6"	—
c	420	#4	5'-6"	⊐
d	462	#6	5'-9"	L
x	80	#6	4'-0"	C
Reinforcement Bars			Lbs.	45,760
Structural Steel			Lbs.	184,820
Class X Concrete			Cu. Yd.	174.0

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel.
Est. Wt. = 6,870 Lbs.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.

DESIGNED	Fred Stone	
CHECKED	Gene McCormick	
P.G. Barnett	Jim Kessler	
DRAWN	G.M.R. D.L. Beamer	
CHECKED	Gene McCormick	
EXAMINED		APRIL 8 1965
PASSED		ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
APPROVED		ENGINEER OF DESIGN
		CHIEF HIGHWAY ENGINEER

I-5-R (≦ 15°) 10-10-62 Rev. 11-1-63

Rev. 3-30-67 E.R.M. Changed slab thickness from 6½" to 7" and top clearance from 1½" to 2". Changed Class X Concrete from 222.3 cu yds. to 233.8 cu yds.

Rev. 8-25-67 E.R.M. Changed 2'-0" curb to safety curb, Structural Steel changed from 184,710# to 184,820# Class 'X' Concrete from 233.8 Cu Yds. to 174.0 Cu Yds. Reinforcement Bars changed from 49,710# to 45,760#

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 18-46HB-2
CUMBERLAND COUNTY
STATION 482+10.00

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0031

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

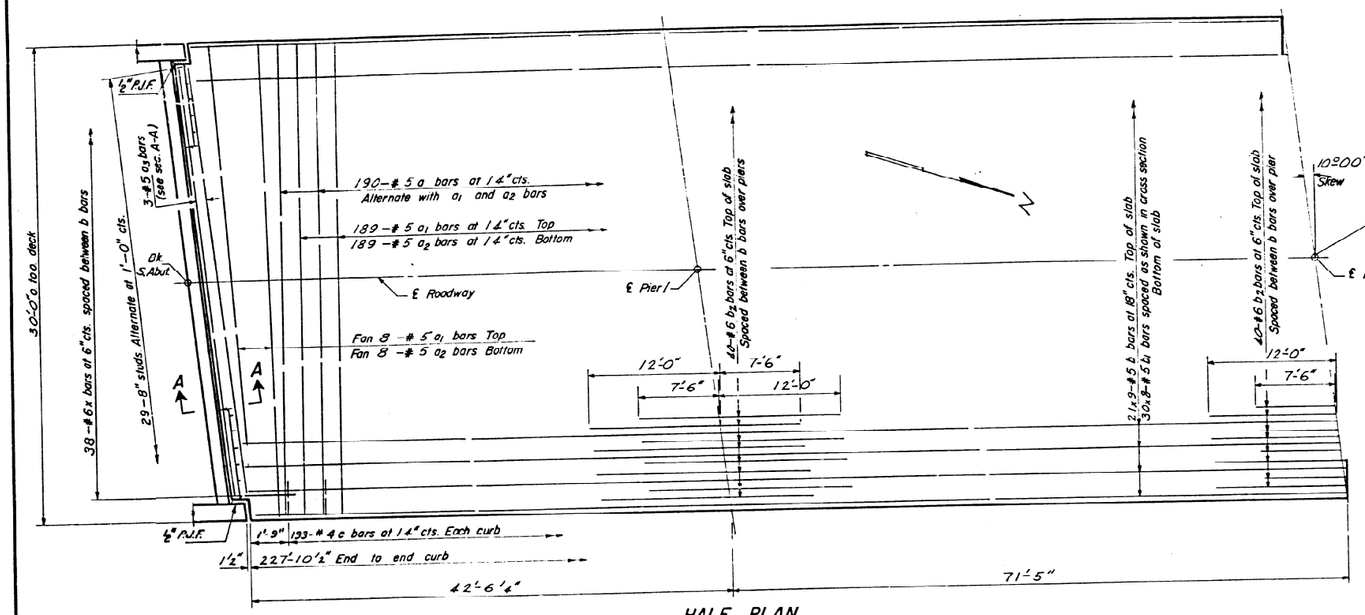
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	19
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwlot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D7774D61-sht-plan-018-0031.dgn

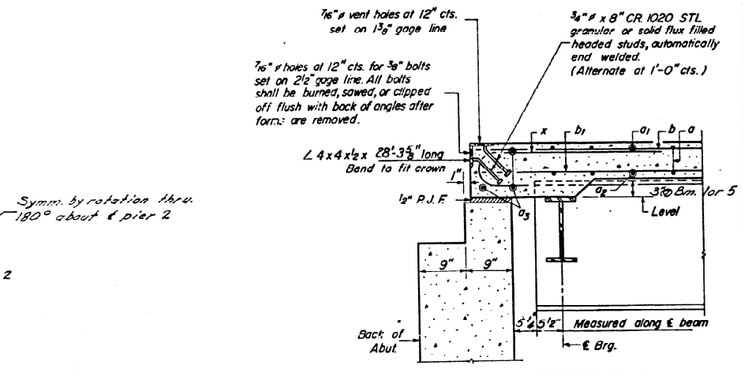
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-45 HB	CUMBERLAND	27	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

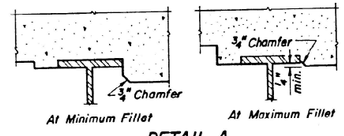
SHEET NO. 2.
9 SHEETS



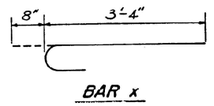
HALF PLAN



SECTION A-A

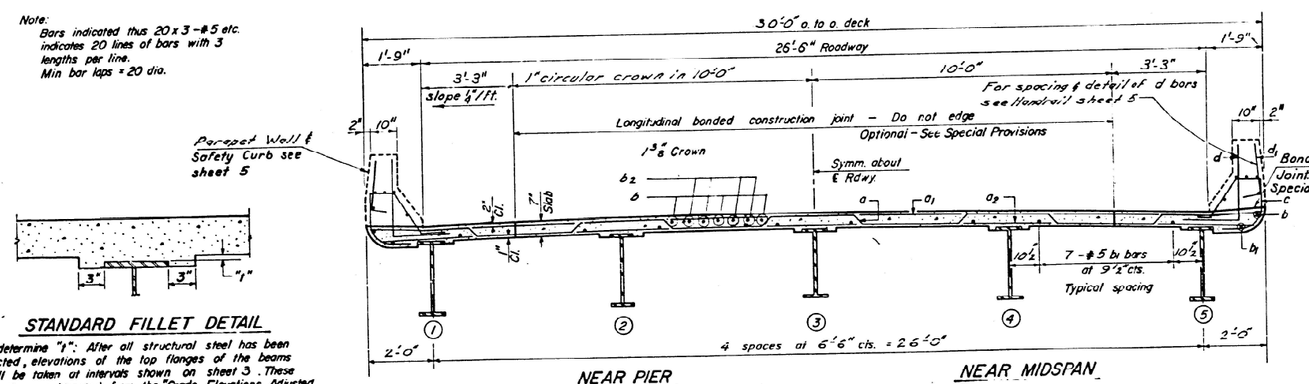


DETAIL A



BAR x

Note:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.

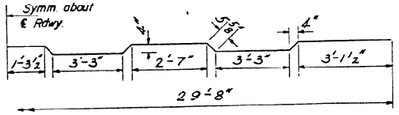


NEAR PIER NEAR MIDSPAN

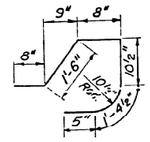
CROSS SECTION
(Looking North)

STANDARD FILLET DETAIL

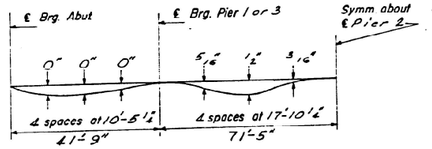
To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "f" above top of beams.



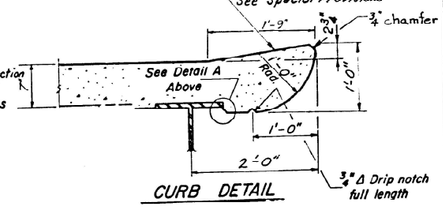
BAR a



BAR c



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.



CURB DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	190	# 5	30'-9"	~
a1	205	# 5	29'-8"	—
a2	205	# 5	29'-0"	—
a3	6	# 5	28'-0"	—
b	189	# 5	26'-6"	—
b1	210	# 5	29'-9"	—
b2	120	# 6	19'-6"	—
c	386	# 4	5'-6"	⊐
d	456	# 6	5'-9"	L
x	76	# 6	4'-0"	C
Reinforcement Bars			Lbs.	40,810
* Structural Steel			Lbs.	182,130
Class X Concrete			Cu. Yd.	161.9

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt. = 6,870 Lbs.

DESIGNED	Fred Stone	EXAMINED	April 19 1965
CHECKED	Rene McCormick		CHIEF ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
P.G. Barnett	J. Kessler	PASSED	
DRAWN	D.L. Beemer		ENGINEER OF DESIGN
CHECKED	Rene McCormick	APPROVED	CHIEF HIGHWAY ENGINEER

I-5-R (≦ 15°) 10-10-62 Rev. 11-1-63 5-1-64

Rev. 2-15-67 E.R.M. Changed Slab thickness from 6½" to 7" & changed clearance of top bar from 1½" to 2" Changed Class X Concrete from 210.4 Cu. Yds to 221.0 Cu. Yds.

Revised: 8-25-67 E.R.M. Changed 2'-0" curb to Safety Curb, Structural Steel Changed from 182,020 lbs. to 182,130 lbs., Class 'X' Concrete changed from 221.0 Cu Yds. to 161.9 Cu Yds. Reinforcement Bars changed from 44,700 lbs. to 40,810 lbs.

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 18-45HB
CUMBERLAND COUNTY
STATION 91+35.20

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 10/9/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0035

SCALE: SHEET 1 OF 3 SHEETS STA. TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	20
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

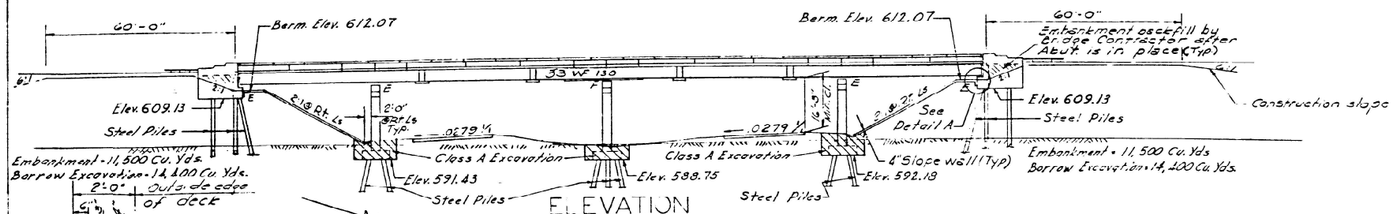
MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d11217961D7774D61-sht-plan-018-0035.dgn

ΔM"B RR Spike in power pole 103' Rt.
F.A.I. Rte. 70 Sta 90+40 Elev. 596.26

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

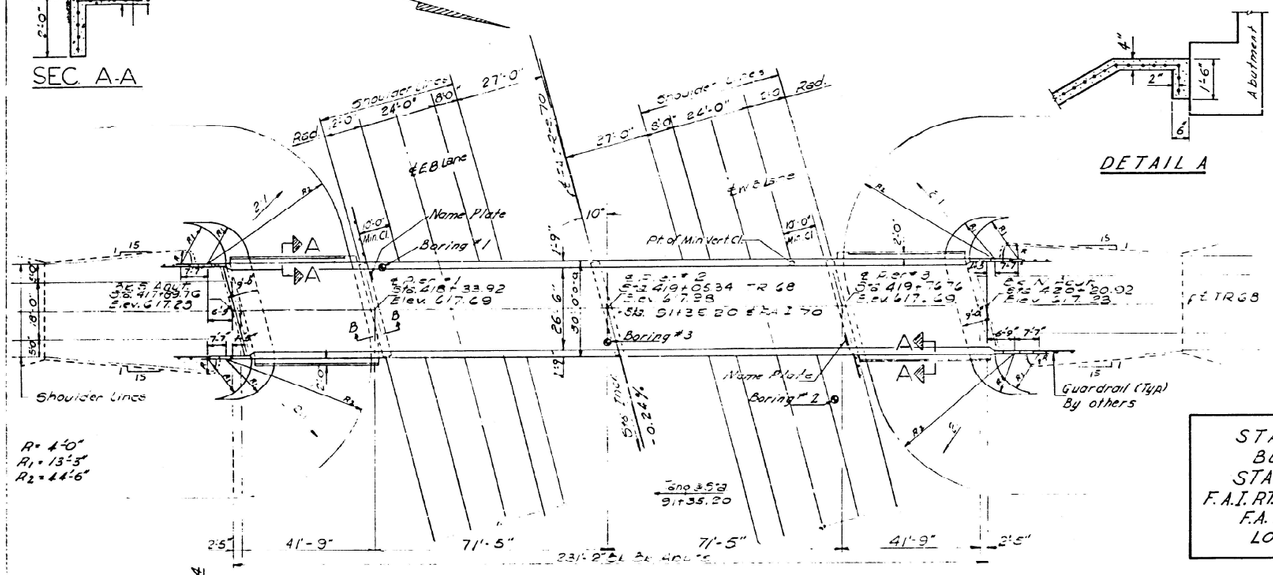
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-45HB	CUMBERLAND	21	10

SHEET NO. 1.
9 SHEETS
STA. 91+35.20 (SI) 139

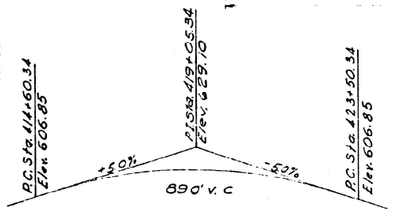


ELEVATION

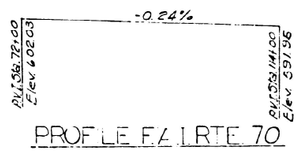
SEC. A-A



PLAN
Appr. Scale: 1" = 20'-0"

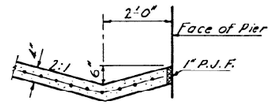


PROFILE T.R. 68



PROFILE F.A.I. RTE. 70

DETAIL A



SEC. B-B

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 511.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets ¾ ", Open Holes 13/16", unless otherwise noted.

Anchor bars shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessable after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 790 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for field paint.

All Piles shall be driven to refusal.

Permanent Forms will not be permitted in forming the concrete floor.

The Contractor shall drive two steel test piles, one at the South Abutment and one at Pier #3, each in a permanent location as directed by the Engineer before ordering the remainder of piles.

EXCAVATION FOR PORTIONS OF STRUCTURES IN THE EMBANKMENTS SHALL NOT BE CLASSIFIED.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class 'A' Excavation for Structures	Cu. Yds.		150	150
Class X Concrete	Cu. Yds.	205.5	212.8	418.3
Structural Steel	Lbs.	182,130		182,130
Aluminum Handrail	Lin. Ft.	456		456
Reinforcement Bars	Lbs.	46,870	17,430	64,300
Steel Piles (BBP36)	Lin. Ft.		1,147	1,147
Test Piles Steel (BBP36)	Each		2	2
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		370	370
Protective Coat	Sq. Yds.	890		890

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

STATION 91+35.20
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT 70 SEC. 18-45 HB
F.A. PROJ. I-IG-70-4(51)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)

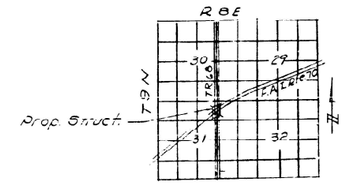
CURVE DATA
(F.A.I. RTE. 70)

P.I. Sta. 89+61.42
Δ = 17°-29'-40" (Rt.)
D = 1°00'-00"
R = 5729.58'
T = 881.58'
L = 1749.44'
E = 67.43' (Sta 89+54.56)
S.E. = 0.0279 ½
P.C. Sta. 80+79.84
P.T. Sta. 98+29.28
S.E. Attained Sta. 79+46.51 to Sta. 81+46.51
S.E. Removed Sta. 97+62.61 to Sta. 99+62.61

DESIGN STRESSES

fc = 1400 psi. Super. & Sub.
fc = 75 psc. Ftgs.
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct. (A-36)
n = 10
Allow ¼ Deflection = 1060

LOADING HS15-44



LOCATION PLAN

GENERAL PLAN & ELEVATION
PROJ. I-IG-70-4(51)107
T.R. 68 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-45HB
CUMBERLAND COUNTY
STA. 91+35.20

DESIGNED	Fred Stone	APRIL 14 1965
CHECKED	Dane McCormick	EXAMINED
CHECKED	J.P.Z. ink	PASSED
DRAWN	J. Kessler	APPROVED
CHECKED	Dane McCormick	

Rev. 2-15-67 C.R.M. Straightened Wingwalls & added Guardrail. Lowered all Fig. Elev. by .04'. Changed Class X concrete from 420.3 Cu. Yds. to 434.5 Cu. Yds. Changed Reinforcement Bars from 61,700 Lbs. to 62,260 Lbs.

Rev. 8-25-67 Changed 8" Curb to 8" Rdwy. Curb. Class X Concrete from 394.5 to 418.3 Cu. Yds. Structural Steel from 180,020 to 182,130 Lbs. Reinf. Bars from 62,260 to 64,300 Lbs.

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D7T4D61-sht-plan-018-0035.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0035

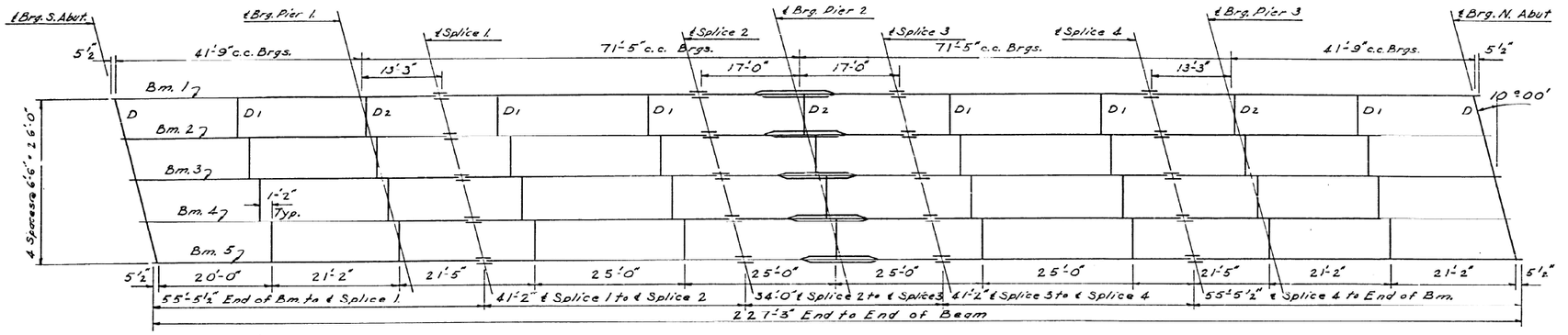
SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	21
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

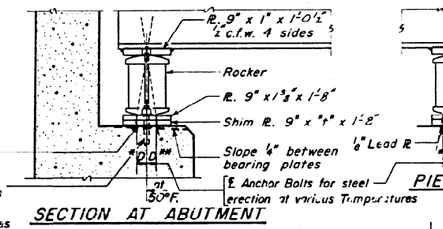
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

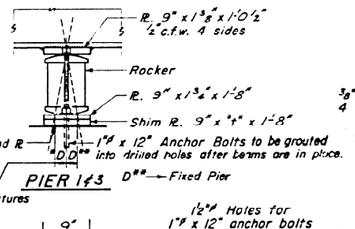
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-45 H.B.	CUMBERLAND	21	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

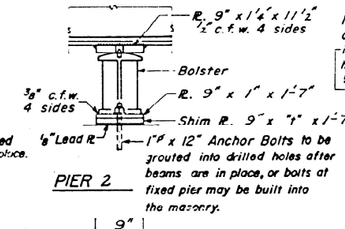
SHEET NO. 4.
9 SHEETS

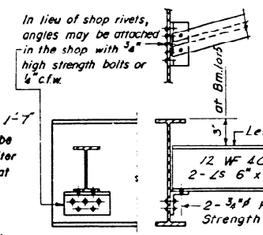


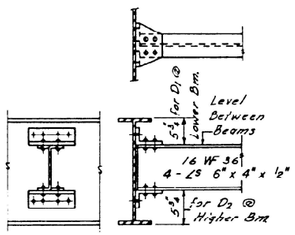
LAYOUT OF STRUCTURAL STEEL
(All Beams 33 WF 130)











MOMENTS AND REACTIONS - INT. BMS.

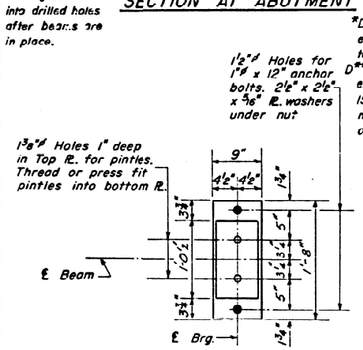
	MOMENTS				REACTIONS		
	.4 Sp. 1	Pier 1	.5 Sp. 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	65.2	313.2	209.2	506.4	11.5	57.5	72.3
L.L.	177.7	211.0	264.8	282.4	23.7	31.2	30.7
Imp.	53.3	58.6	67.0	71.6	7.1	8.6	7.8
Total	296.2	582.6	541.0	860.2	42.3	97.3	110.8

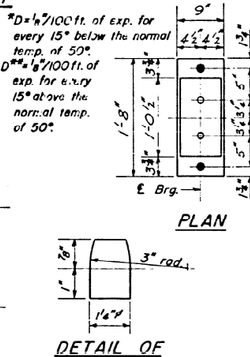
Moments are in ft. kips And Reactions in kips

ELEVATION TOP OF WF*

Loc. / Bm.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	616.57	616.67	616.71	616.67	616.57
℄ Brg. Pier 1.	616.93	617.03	617.07	617.03	616.93
℄ Splice 1	617.05	617.15	617.19	617.15	617.05
℄ Splice 2	617.23	617.33	617.37	617.33	617.23
℄ Brg. Pier 2	617.23	617.33	617.37	617.33	617.23
℄ Splice 3	617.23	617.33	617.37	617.33	617.23
℄ Splice 4	617.05	617.15	617.19	617.15	617.05
℄ Brg. Pier 3	616.93	617.03	617.07	617.03	616.93
℄ Brg. N. Abut.	616.57	616.67	616.71	616.67	616.57

* Lower all Top of W Elevations by .04'





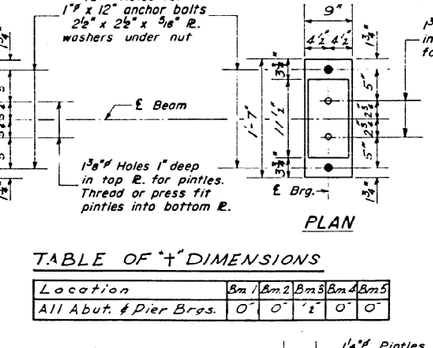
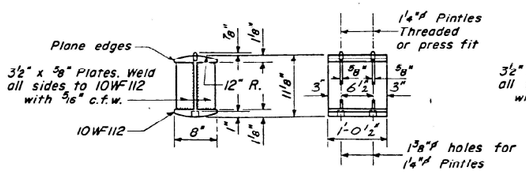
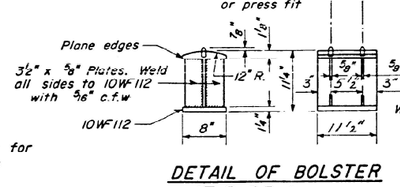
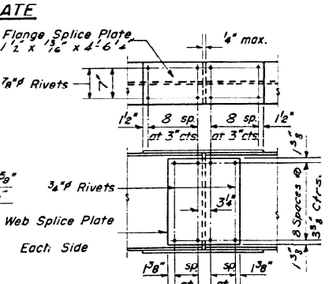


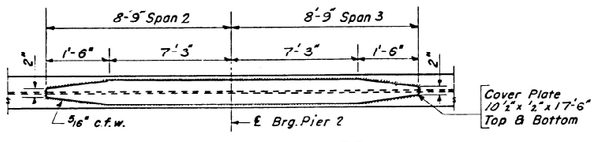
TABLE OF "t" DIMENSIONS

Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	1"	0"	0"









DESIGNED	Fred J. Stone
CHECKED	Hans McConnell
P.G. Barnett / J.K. Essler	
DRAWN	W.A. Sausaman Jr.
CHECKED	Hans McConnell

APRIL 14 1965

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

Rev. 2-15-67 E.R.M. Lowered top of W Elev. by .04'

STRUCTURAL STEEL
F.A.I. RT. TO SEC. 18-45 HB
CUMBERLAND COUNTY
STATION 91+35.20

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0035

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

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	22
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

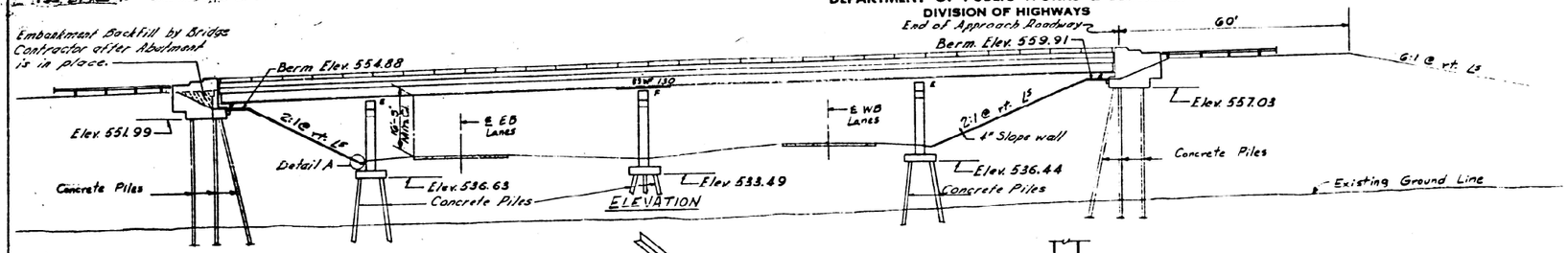
MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwtoffillinois_gov_dakota.kincaid@illinois.gov\d1121795\D774D61-sht-plan-018-0035.dgn

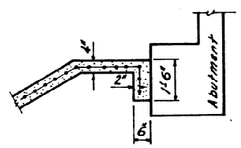
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 70	18-46HB & 46B-1	CUMBERLAND	63	11

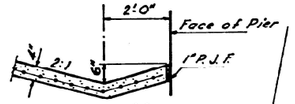
SHEET NO. 1
11 SHEETS

T.R.N.S.W. in Power Pole (REA Corp.) 155' Lt. Rdwy. 70 Sta. 353+60 El. 531.46



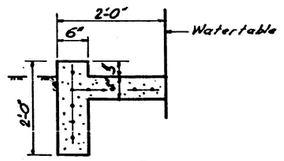


SECTION "B-B"



DETAIL "A"

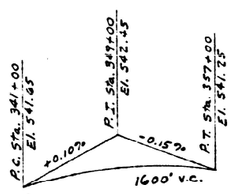
PLAN



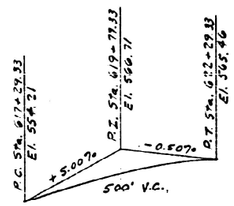
SECTION "A-A"

STATION 352+80.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-46HB
F.A. PROJ. I-70-4(39)
LOADING HS 15

NAME PLATE LETTERING
(See Std. 2113-1)



FAI 70 PROFILE



TR 134 V.C. DATA

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 5.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36.
Rivets $\frac{3}{4}$"ϕ, Open Holes $\frac{13}{16}$", unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessable after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 670 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 561 to 565 inclusive of the Standard Specifications.

Concrete piles at abutments shall be driven in holes precored thru the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

The contractor shall drive 2 Concrete test Piles one each at the North Abutment and Pier 2 in a permanent location, as directed by the Engineer before ordering the remainder of piles.

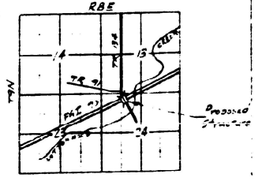
Permanent forms will not be permitted in forming the concrete deck.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class 'A' Excavation for Structure	Cu. Yds.		150	150
Class 'X' Concrete	Cu. Yds.	213.6	213.5	427.1
Structural Steel	Lbs.	182,030		182,030
Aluminum Handrail	Lin. Ft.	466		466
Reinforcement Bars	Lbs.	45,890	16,890	62,780
Concrete Piles	Lin. Ft.		3,738	3,738
Test Piles (Concrete)	Each		2	2
Name Plates	Each		2	2
Slope Wall (4")	Sq. Yds.		380	380
Protective Coat	Sq. Yds	920		920

* Includes Excav. for Slope Wall.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.



DESIGNED S. Engey
CHECKED Pun C. Wang
DRAWN J. Hessler
CHECKED S.E. & P.W.

JUNE 8 1965
EXAMINED Earl Thurmond
PASSED H. J. Oetzel
APPROVED J. E. Stoff

DESIGN STRESSES
f_c = 1400 psi. (Super. & Sub.)
f_s = 20,000 psi. (Reinf.)
f_s = 20,000 psi. (Struct.)
v_c = 75 psi. (Slags)
n = 10
Deflection = $\frac{L}{1000}$

LOADING HS15-44

GENERAL PLAN & ELEVATION
PROJ. I-70-4(39)112
T.R. RT. 134 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-46 H.B.
CUMBERLAND COUNTY
STATION 352+80.00

Revision: 12-13-66 S.E. Added guardrails.

Revised 12-22-66

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwdot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-pln-018-0036.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0036

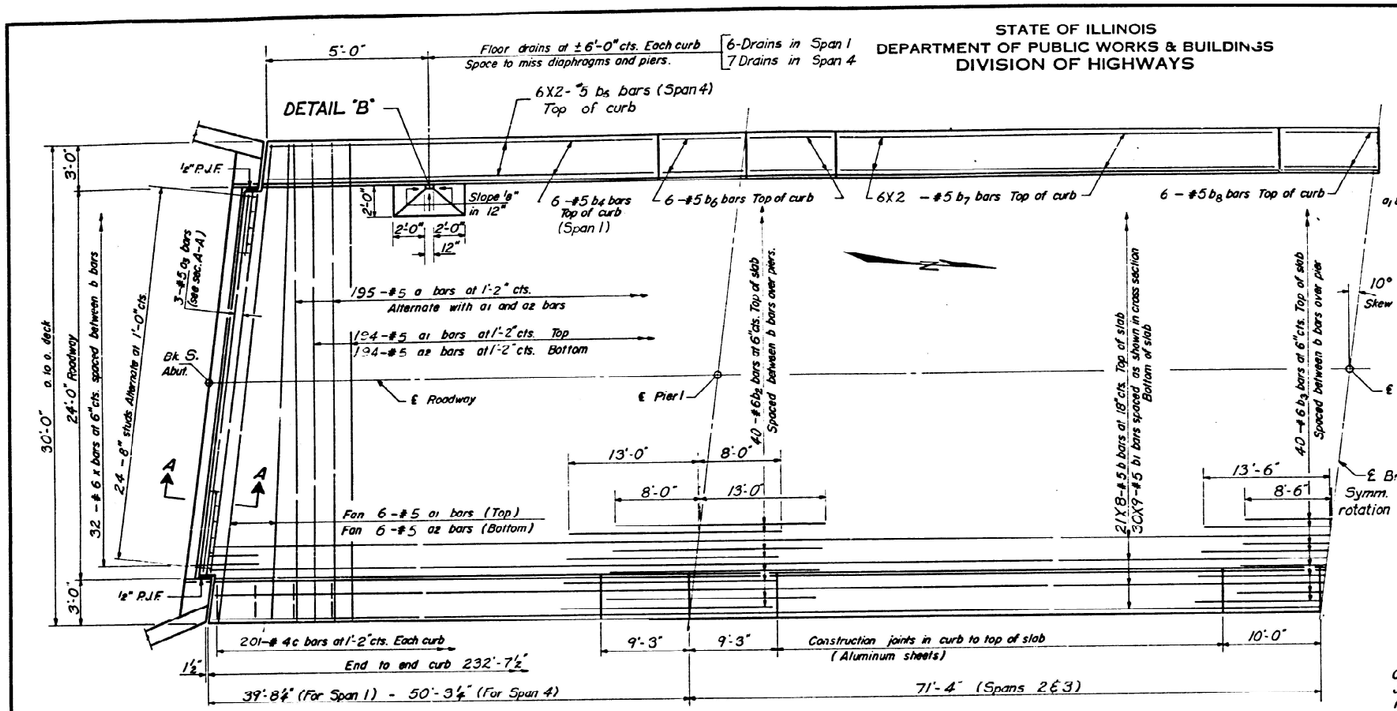
SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	23
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

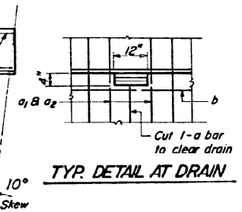
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.R.S. F.A.I. 70	18-46HB 446 446-1	CUMBERLAND	63	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 2
// SHEETS

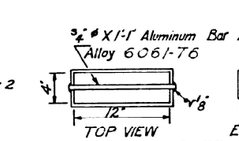
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



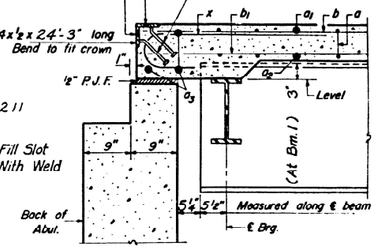
HALF PLAN



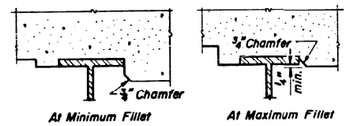
TYP. DETAIL AT DRAIN



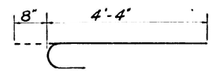
FLOOR DRAIN DETAIL "B"



SECTION A-A

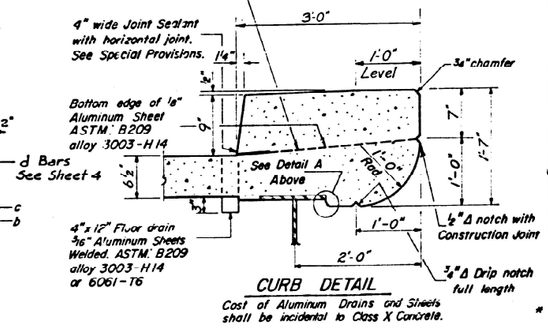


DETAIL A



BAR x

Optional Construction Joint - See Special Provisions. Not permitted with longitudinal joints.



CURB DETAIL

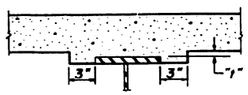
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	195	#5	30'-8"	
a1	206	#5	29'-8"	
a2	206	#5	29'-0"	
a3	6	#5	23'-11"	
b	168	#5	30'-3"	
b1	270	#5	27'-0"	
b2	80	#6	21'-0"	
b3	40	#6	22'-0"	
b4	12	#5	30'-0"	
b5	24	#5	21'-0"	
b6	48	#5	8'-11"	
b7	48	#5	26'-9"	
b8	24	#5	9'-8"	
c	402	#4	5'-3"	
x	64	#6	5'-0"	
Reinforcement Bars			Lbs.	40,690
* Structural Steel			Lbs.	182,080
Class X Concrete			Cu. Yd.	180.8

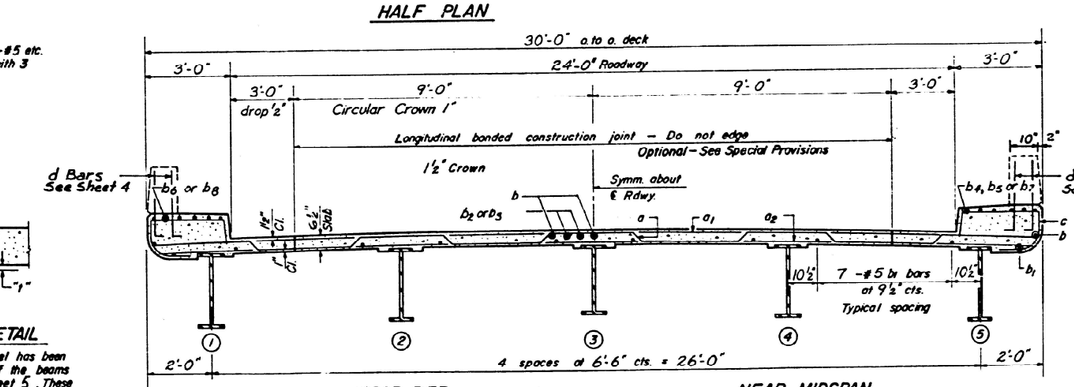
* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est Wt = 7,050 lbs.

Note:
Bars indicated thus 20 x 3 -#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.



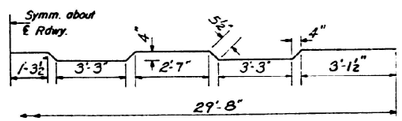
STANDARD FILLET DETAIL

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 5, minus slab thickness, equals the fillet heights "t" above top of beams.

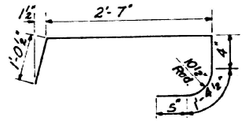


NEAR PIER NEAR MIDSPAN

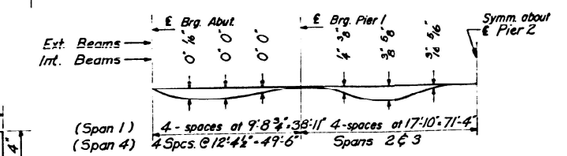
CROSS SECTION
Looking South



BAR a



BAR c



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 5.

DESIGNED	S. Engen	
CHECKED	Pam C. Wang	
P.G. Barnett	J. Carman	
DRAWN	D.L. Beemer	
CHECKED	S.E. & P.W.	

June 3, 1965
EXAMINED
PASSED
APPROVED
Engineer of Bridges and Traffic Structures
Chief Highway Engineer

I-5-L (≤ 15°) 10-10-62 Rev. 11-1-63 5-1-64

SUPERSTRUCTURE
FAI. RTE. 70 SEC. 18-46HB
CUMBERLAND COUNTY
STA. 352+80.00

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\pwtool\illinois.gov_dakota.kincaid\d1121796\D774D61-sht-dan-018-0036.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0036

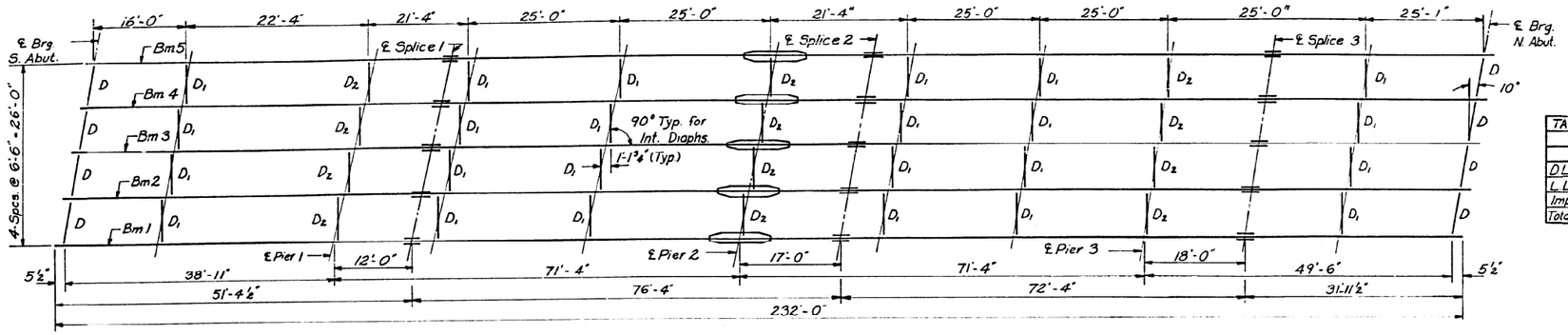
SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	24
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 70	18-6 GMC 6&B D.I. R.I.	CUMBERLAND	63	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 3
// SHEETS



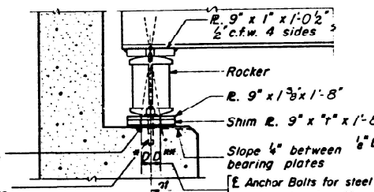
PLAN

All Beams 33WF130 With Cover Plates
10½"X⅞"X16'-0" @ Pier 2 Only

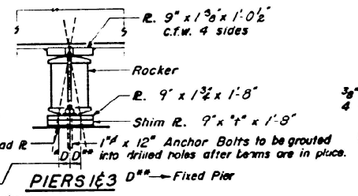
TABLE OF MOMENTS & REACTIONS - INTERIOR BEAMS							
	MOMENTS - FT. KIPS				REACTIONS - KIPS		
	045p-1	Piers 1&3	055p-2	Pier 2	Abut.	Piers 1&3	Pier 2
D.L.	78.2	292.0	190.5	468.0	11.1	55.0	69.5
L.L.	210.0	207.0	259.0	266.0	24.5	31.4	30.9
Imp.	63.3	53.0	65.5	74.0	7.4	8.3	7.9
Total	351.5	552.0	515.0	808.0	43.0	95.2	108.3

TABLE OF "t" DIMENSIONS FOR ALL ABUTS & PIERS

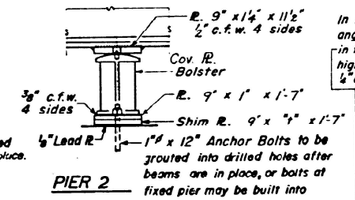
Beam 2	⅝"
Beam 3	1⅛"
All Other Beams	0"



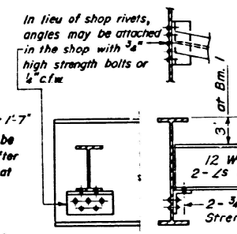
SECTION AT ABUTMENT



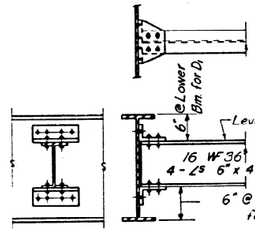
PIERS 1&3 D** = Fixed Pier



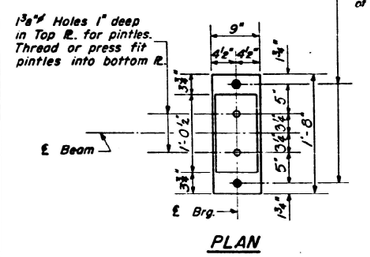
PIER 2



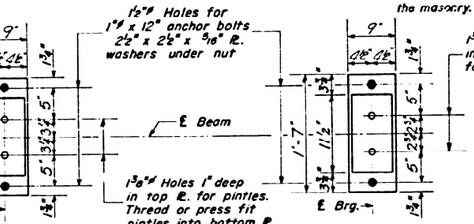
DIAPHRAGM D
8 - Required



DIAPHRAGM D_1 & D_2
Total 36 - Required

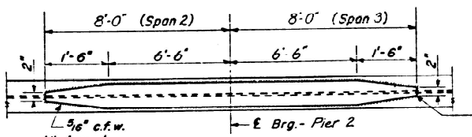


PLAN



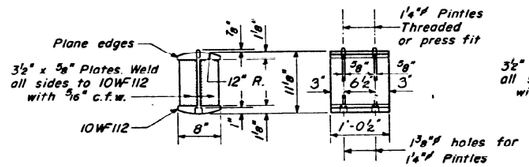
PLAN

PLAN

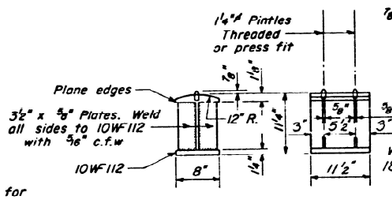


DETAIL OF COVER PLATE

DETAIL OF PINTLE



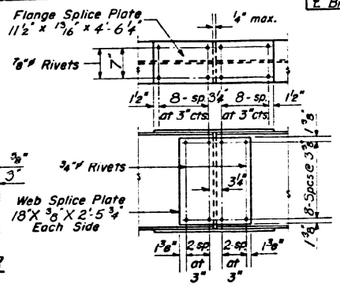
DETAIL OF ROCKER AT ABUTS & PIERS 1&3
(20 Req'd)



DETAIL OF BOLSTER AT PIER 2
(5 Req'd.)

ELEVATION TOP OF WF
(For Fabrication Only)

Beam No.	1	2	3	4	5
℄ Brg. - S. Abut.	559.39	559.52	559.59	559.59	559.52
℄ Pier 1	560.59	560.72	560.79	560.78	560.72
℄ Splice 1	560.96	561.09	561.16	561.15	561.09
℄ Pier 2	562.41	562.55	562.61	562.61	562.55
℄ Splice 2	562.83	562.96	563.03	563.03	562.96
℄ Pier 3	563.72	563.85	563.92	563.92	563.86
℄ Splice 3	564.02	564.15	564.22	564.22	564.15
℄ Brg. - N. Abut.	564.42	564.55	564.62	564.62	564.55



DETAIL OF SPLICE

STRUCTURAL STEEL
FAI. RTE. 70 SEC. 18-46HB
CUMBERLAND COUNTY
STA. 352+80.00

DESIGNED	J. Engen	
CHECKED	Pius C. Wang	
P.G. Barnett	J. Carmain	
DRAWN	W.A. Swissmann Jr.	
CHECKED	S.E. & P.W.	

EXAMINED June 8 1965
PASSED
APPROVED

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwtool\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774061-sht-plan-018-0036.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLAN 018-0036

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

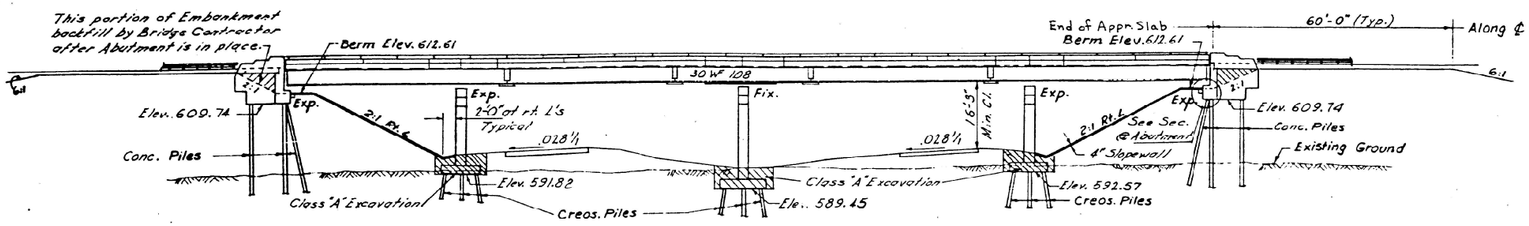
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	25
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

B.M. Boat Spike in power pole of southwest corner of intersection 550' Lt. of Sta. 349+50, Elev. 596.877

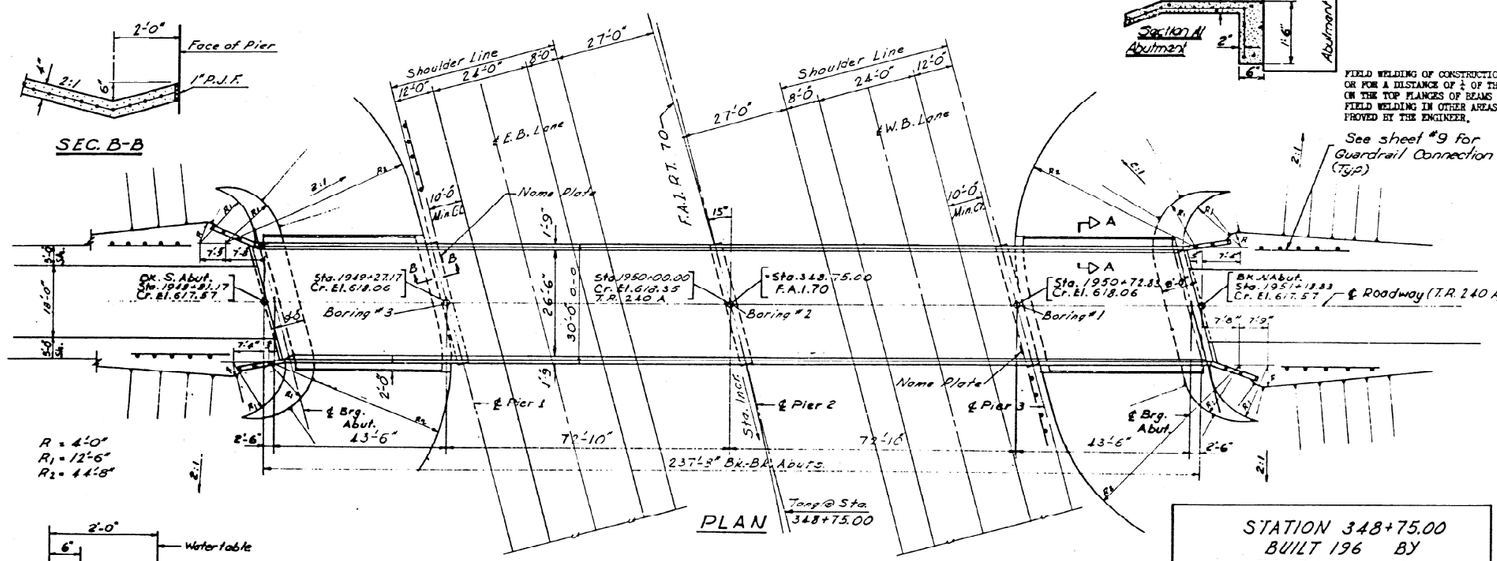
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-4B HB	Cumberland	38	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1.
10 SHEETS



ELEVATION



PLAN

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF $\frac{1}{4}$ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 511.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets $\frac{3}{4}$" ℄, Open Holes $\frac{13}{16}$" ℄, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 810 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See special provision.

Concrete piles at abutments shall be driven in holes precored thru the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

The contractor shall drive one concrete test pile at the South Abutment, in a permanent location, and one timber test pile in the vicinity of Pier #3 as directed by the Engineer before ordering the remainder of piles.

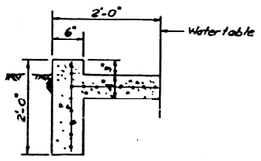
Permanent forms will not be permitted in forming the concrete floor.

Excavation for portions of structure in the embankments shall not be classified.

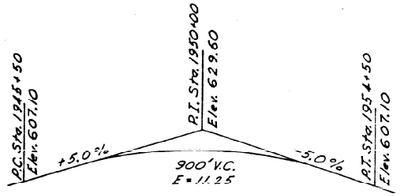
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class "A" Excavation for Structures	Cu. Yds.		160	160
Class "X" Concrete	Cu. Yds.	232.5	215.5	448.0
Structural Steel	Lbs.	158,170		158,170
Aluminum Handrail	Lin. Ft.	469		469
Reinforcement Bars	Lbs.	49,040	17,100	66,140
Creosoted Piles (Up to 20')	Lin. Ft.		816	816
Test Piles (Timber)	Each		1	1
Concrete Piles	Lin. Ft.		612	612
Test Piles (Concrete)	Each		1	1
Name Plates	Each			2
Slopewall (4")	Sq. Yds.		390	390
* Protective Coat	Sq. Yds.	910		910

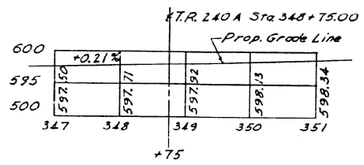
* Includes application on top, inside face and exposed end of wingwall.



SEC. A-A



PROFILE T.R. 240A



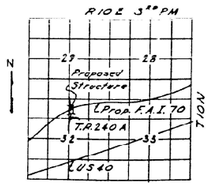
PROFILE F.A.I. RT. 70

STATION 348+75.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-4B HB
F.A. PROJ. I-70-4(69)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)

CURVE DATA
P.I. Station 351+12.87
Δ = 42°11'-07.88"
D = 1°-0'
R = 5,729.58'
T = 2,210.03'
L = 4,218.55'
E = 411.46'
S.E. = 0.028 1/2

DESIGN STRESSES
f_c = 1400 psi
f_s = 20,000 psi (Reinf.)
f_s = 20,000 psi (Struct.)
v_c = 75 psi (Flgs.)
n = 10
℄ Deflection = 1/660 (Span 1/2 ℄)
1/360 (Span 2 1/2)



LOCATION PLAN

GENERAL PLAN & ELEVATION

T.R. 240A OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-4B HB
CUMBERLAND COUNTY
STA. 348+75.00

LOADING HS15-44

DESIGNED	Fred Stone
CHECKED	Hans McConnell
DRAWN	J. Kessler
CHECKED	Hans McConnell

EXAMINED — April 9 1965 — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — H.G. Otten — ENGINEER OF DESIGN
APPROVED — J.E. Stahl — DIRECTOR OF HIGHWAYS

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0038

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

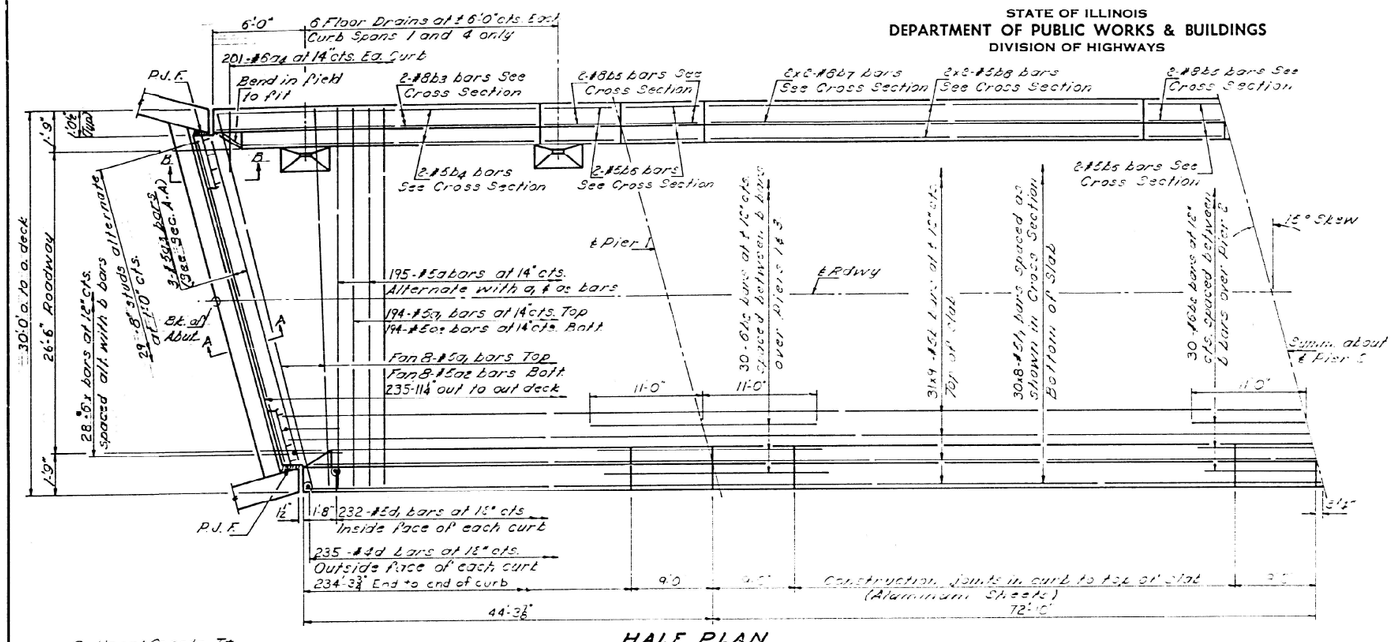
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	26
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwtool\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0038.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-HBNB	Cumberland	88	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

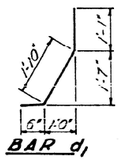
SHEET NO. 2
10 SHEETS



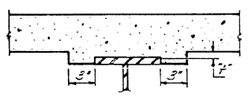
HALF PLAN

CROSS SECTION
(Looking North)

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. Bar laps = 20 dia.

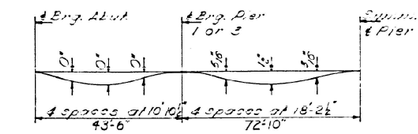


BAR d_1



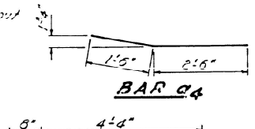
STANDARD FILLET DETAIL

To determine "Y": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "Y" above top of beams.

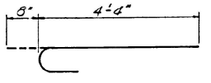


DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only).

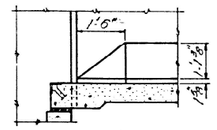
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.



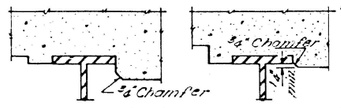
BAR a_4



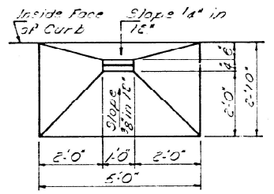
BAR X



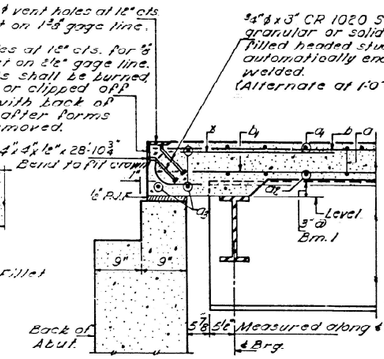
SECTION B-B



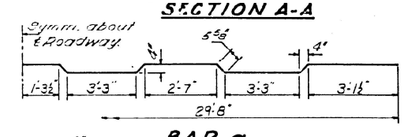
DETAIL A



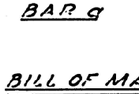
FLOOR DRAIN PLAN



SECTION A-A



BAR a

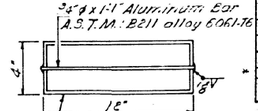


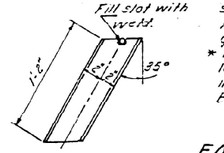
BAR d

BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	195	#5	30'-9"	
a_1	210	#5	29'-8"	
a_2	210	#5	29'-0"	
a_3	6	#5	28'-6"	
a_4	402	#6	4'-0"	
b	279	#5	27'-3"	
b_1	240	#5	30'-6"	
b_2	90	#6	22'-0"	
b_3	8	#8	35'-0"	
b_4	8	#5	35'-0"	
b_5	24	#8	8'-9"	
b_6	24	#5	8'-9"	
b_7	16	#8	26'-0"	
b_8	16	#5	28'-0"	
d	470	#4	3'-9"	
d_1	464	#5	3'-5"	
x	56	#6	5'-0"	
Reinforcement Bars			Lbs.	46,970
Structural Steel			Lbs.	158,170
Class X Concrete			Cu. Yds	217.3

The quantities of longitudinal reinforcement and Class X Concrete in the parapets are shown on sheet 5 and are not included in the above quantities.
* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt. = 6870 lbs.





FLOOR DRAIN DETAILS

SUPERSTRUCTURE
FAI RT. 70 SEC. 18-48 HB
CUMBERLAND COUNTY
STA. 345 + 75.00

DESIGNED	Hans McGuire
CHECKED	John W Clark Jr
DRAWN	J. Kessler
CHECKED	John W Clark Jr

EXAMINED
PASSED
APPROVED
19

Rev. 4-19-68

Rev. Rf Pr. off. 4/13/68

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\dot\illinois.gov_dakota.kincaid@illinois.gov\d1217961D7774D61-sht-plan-018-0038.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0038

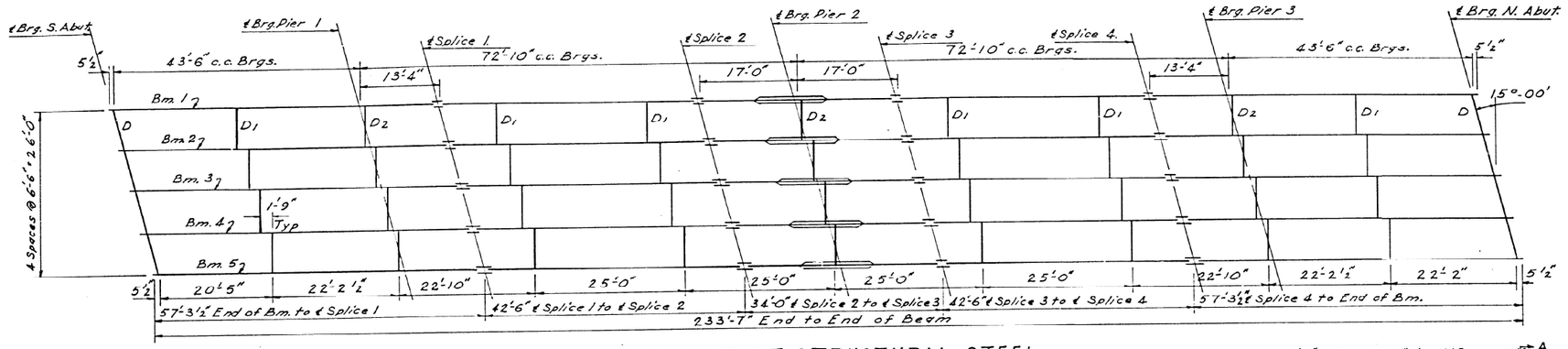
SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	27
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

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

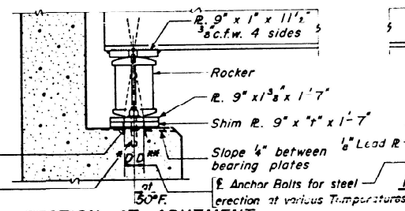
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT 70	10—48HB	Cumberland	38	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 4.
10 SHEETS

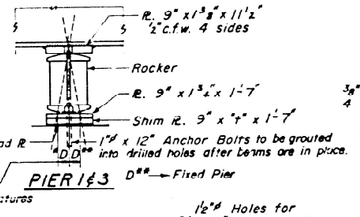


LAYOUT OF STRUCTURAL STEEL

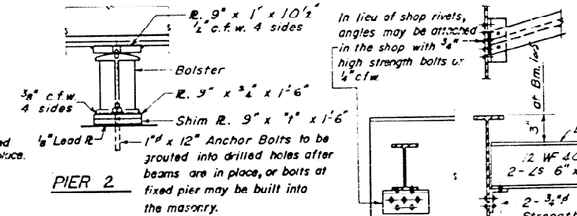
(All Beams 30WF 108)



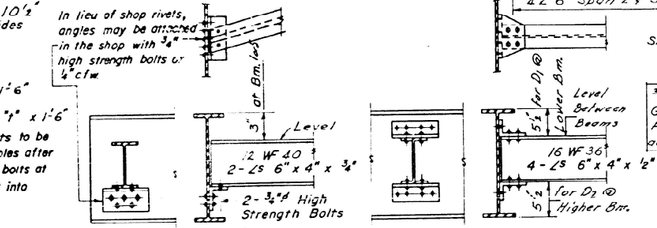
SECTION AT ABUTMENT



PIER 1 & 3

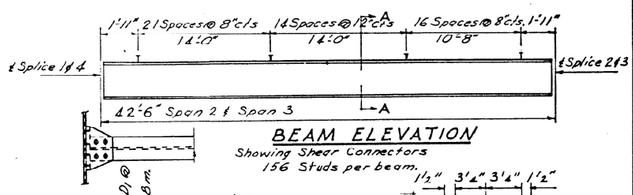


PIER 2

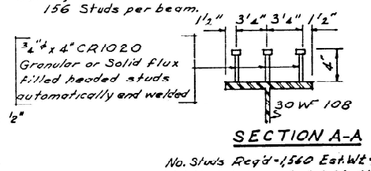


DIAPHRAGM D
8 Required

DIAPHRAGM D1 & D2
24 D1 & 12 D2 Required



BEAM ELEVATION
Showing Shear Connectors
156 Studs per beam.



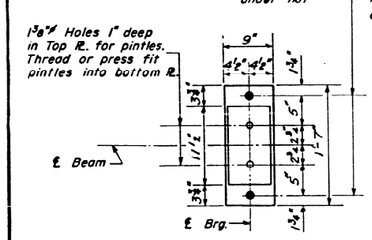
SECTION A-A

No. Studs Req'd = 1560 Est Wt = 960 Lb.
Weight of studs are included in the quantity of Struct. Steel on sh. 2

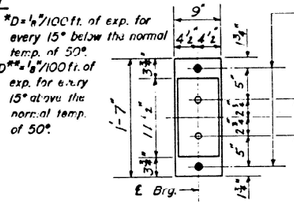
ELEVATION TOP OF WF

Loc. / Bm.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	616.90	617.00	617.04	617.00	616.90
℄ Brg. Pier 1.	617.30	617.40	617.44	617.40	617.30
℄ Splice 1	617.42	617.52	617.56	617.52	617.42
℄ Splice 2	617.62	617.72	617.76	617.72	617.62
℄ Brg. Pier 2	617.62	617.72	617.76	617.72	617.62
℄ Splice 3	617.62	617.72	617.76	617.72	617.62
℄ Splice 4	617.42	617.52	617.56	617.52	617.42
℄ Brg. Pier 3	617.30	617.40	617.44	617.40	617.30
℄ Brg. N. Abut.	616.90	617.00	617.04	617.00	616.90

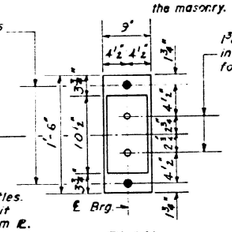
Lower all Top of WF elevations by .04'



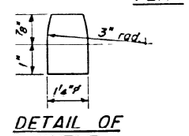
PLAN



PLAN



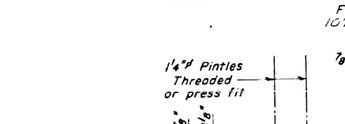
PLAN



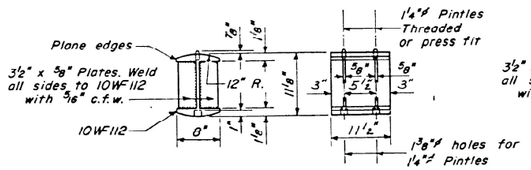
DETAIL OF PINTLE

TABLE OF "†" DIMENSIONS

Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	½"	0"	0"

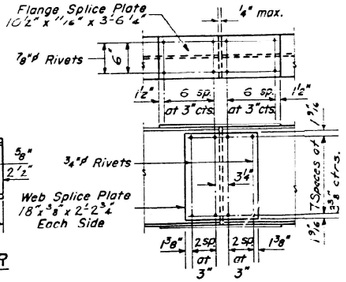


DETAIL OF COVER PLATE



DETAIL OF ROCKER AT ABUTS. & PIER 1 & 3

DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

DESIGNED	Fred Stone	EXAMINED	April 9 1965
CHECKED	Dana McConnell	PASSED	H. J. Otten, Engineer of Design
CHECKED	P.G. Barnett J. Kessler	APPROVED	V. E. Graff, Chief Highway Engineer
DRAWN	W.A. Sousemon Jr.		
CHECKED	Dana McConnell		

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL
F.A.I. RT 70 SEC. 18-48HB
CUMBERLAND COUNTY
STATION 348+75.00

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwdot\illinois.gov_dakota.kincaid@illinois.gov\d1121795\D774D61-sht-plan-018-0038.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0038

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

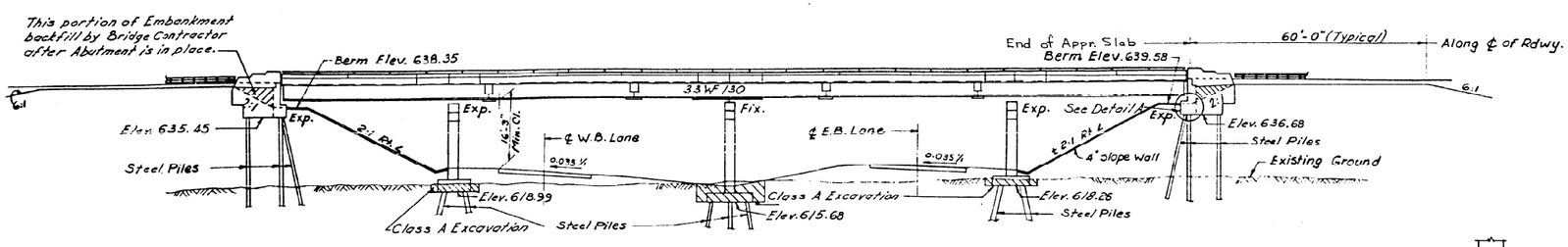
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	28
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

B.M.: R.R. Spike in Power Pole
435' Right of Sta. 528+00
on West Side of Bituminous Road Elev. 621.639

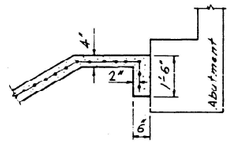
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18B-48HB-2	Cumberland	29	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

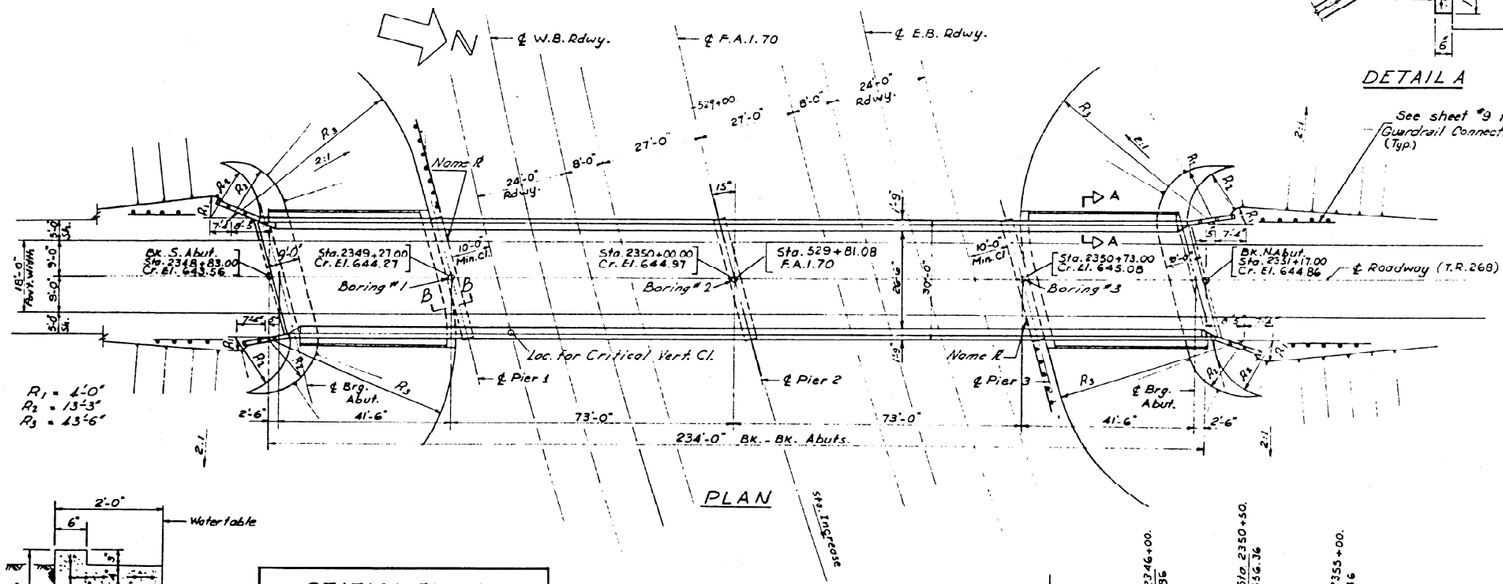
SHEET NO. 1
9 SHEETS



ELEVATION



DETAIL A



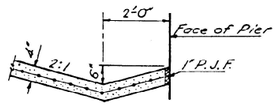
PLAN

SEC. A-A

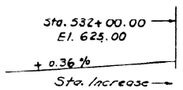
STATION 529+81.08
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-48HB-2
F.A. PROJ. I-70-4(69)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)

DESIGNED	Fred Stone	APRIL 8 1965
CHECKED	Hans McConnell	EXAMINED
DRAWN	J. Nessler	PASSED
CHECKED	Hans McConnell	APPROVED



SEC. B-B



PROFILE - F.A.I. 70

PROFILE - T.R. 268

CURVE DATA - F.A.I. 70
Δ = 40° - 50' - 24.48"
D = 1° - 15'
P.I. - Sta. 517 + 34.75
R = 4583.66'
T = 1706.48'
L = 3267.21'
E = 307.35'
S.E. = 0.035 %

DESIGN STRESSES
fc = 1400 psi
fs = 20,000 psi (Reinf.)
fs = 20,000 psi (Struct.)
v = 75 psi (Flgs.)
n = 10
Allowable ℄ Defl. = 1/1000

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 5I.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36. Rivets $\frac{3}{4}$"ϕ, Open Holes $\frac{15}{16}$"ϕ, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 810 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See special provisions.

Permanent forms will not be permitted in forming the concrete floor.

All piles shall be driven to refusal.

The contractor shall drive two steel test piles, one at the South Abutment and one at Pier #3, each in a permanent location as directed by the Engineer before ordering the remainder of piles.

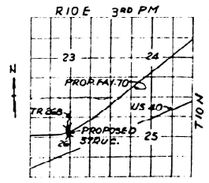
Excavation for portions of structure in the embankments shall not be classified.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF $\frac{1}{4}$ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class A Excavation for Structure	Cu. Yds.		140	140
Class X Concrete	Cu. Yds.	230.9	211.7	442.6
Structural Steel	Lbs.	183,860		183,860
Aluminum Handrail	Lin. Ft.	461		461
Reinforcement Bars	Lbs.	48,620	17,010	65630
Steel Piles (BBP36)	Lin. Ft.		1,105	1,105
Test Piles Steel (BBP36)	Each.		2	2
Nome Plates	Each		2	2
Slope Wall (4")	Sq Yds.		370	370
Protective Coat	Sq. Yds.	900		900

* Includes application on top, inside face and exposed end of wingwall.



LOCATION PLAN

GENERAL PLAN & ELEVATION
T.R. 268 OVER F.A.I. 70

F.A.I. RT. 70 SEC. 18-48HB-2
CUMBERLAND COUNTY
STA. 529 + 81.08

LOADING HS15-44

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

EXISTING STRUCTURE PLANS 018-0039

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

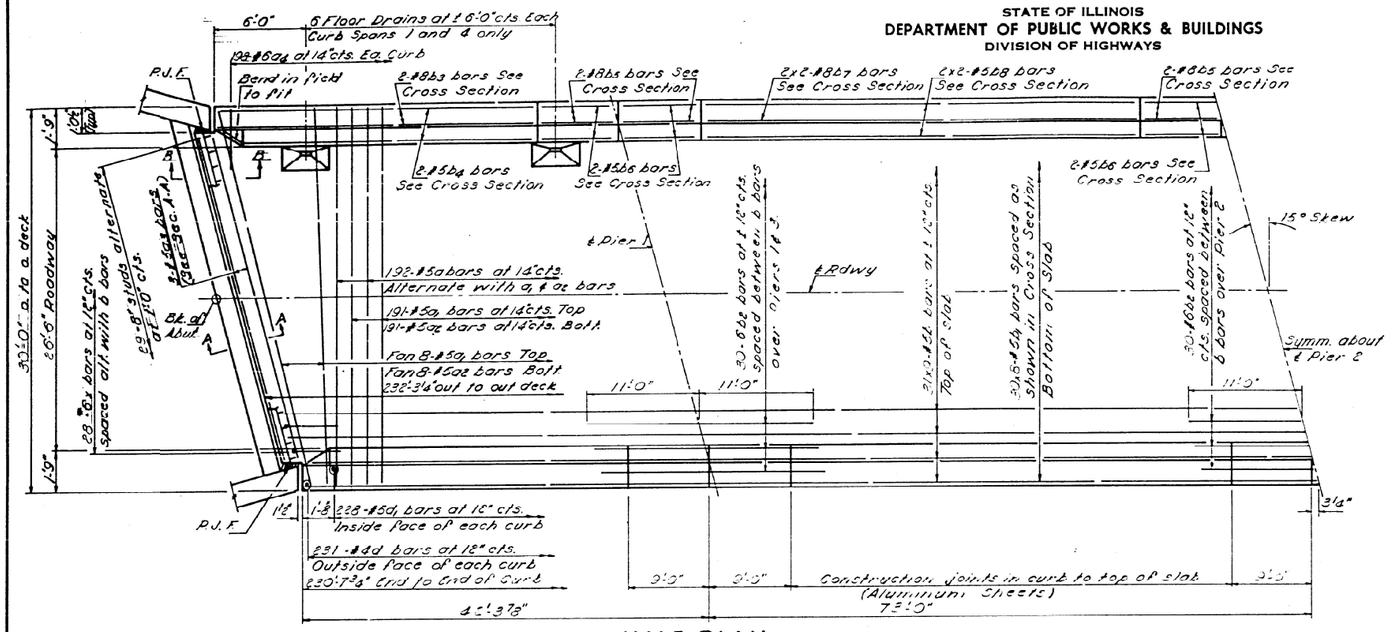
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	29
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0039.dgn

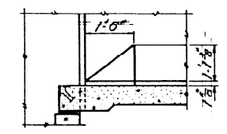
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

STATE ROAD DIST. NO. 9	F.A.I. 70	18-4B-2	Cumberland	29	11
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT			

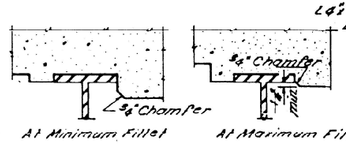
SHEET NO. 2
3 SHEETS



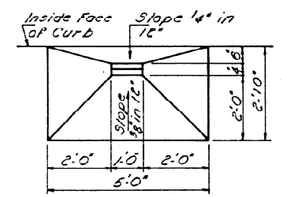
HALF PLAN



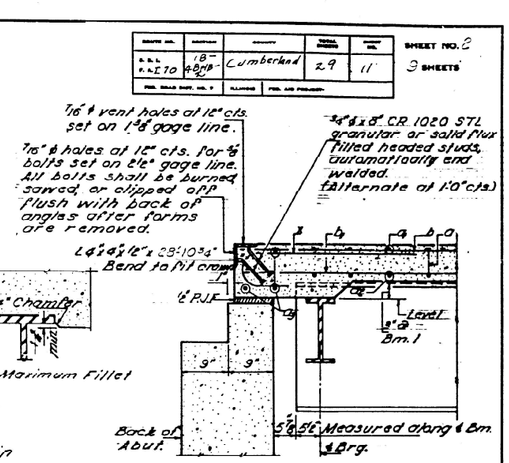
SECTION B-B



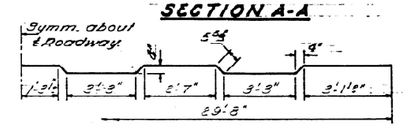
DETAIL A



FLOOR DRAIN PLAN



SECTION A-A



BAR a



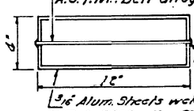
BAR d

BILL OF MATERIAL

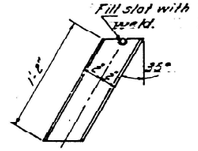
Bar	No.	Size	Length	Shape
a	192	#5	30'-9"	
a1	207	#5	29'-8"	
a2	207	#5	29'-0"	
a3	6	#5	28'-8"	
a4	396	#6	4'-0"	
b	279	#5	27'-3"	
b1	240	#5	30'-6"	
b2	90	#6	28'-0"	
b3	8	#8	33'-0"	
b4	8	#5	29'-0"	
b5	24	#8	8'-9"	
b6	24	#5	8'-9"	
b7	16	#8	28'-3"	
b8	16	#5	28'-9"	
d	462	#4	3'-9"	
d1	456	#5	3'-5"	
x	56	#6	5'-0"	
Reinforcement Bars			Lbs.	46570
* Structural Steel			Lbs.	18306?
Class X Concrete			Cu. Yds.	816.0

The quantities of longitudinal Reinforcement and Class X Concrete in the parapets are shown on sheet 5 and are not included in the above quantities.

* Wt. of Brg. Assemblies with lead plates & anchor bolts are included as structural steel. Est. Wt. = 6870 Lbs.



⅜" Alum. Sheets welded A.S.T.M.: B209 alloy 6061-T6

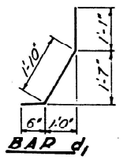


FLOOR DRAIN DETAILS

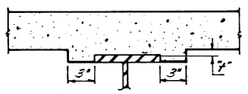
Optional Constr. Jt.
30'-0" c. to c. deck
26'-6" Roadway
1'-9"
6"
10" 9"
3'-3"
1" Circular Crown in 10'-0"
1" Circular Crown in 10'-0"
3'-3"
Slope ½" per foot
Optional Longitudinal Bonded Construction Joint - See Special Provisions
Symm. about ℄ Rdwy.
Slope ½" per foot
Total Crown Drop 1½"
1'-9"
For Parapet Det. See sheet 5
3'-1½" Typ.
1'-10"
Parapet
1'-1½"
2"
1'-10"
6" 18" Drop from Curb to drain
See Special Provisions
6'-6" 6'-8"
¾" Drip notch full length
1'-0"
2'-0"
6"x16" Floor Drain cast incidental to Class X Concrete Space to miss diaphragms
10'-6" 7-#5b4 bars at 3'-6" c/s. Typical Spacing
10'-6"
1'-3"
1'-1½"
1½" Alum. Sheets A.S.T.M. B209 alloy 3003-H14 Cast incidental.
1'-0" Radius
See Detail "A" above
2'-0"
4 Beam Spaces at 6'-5" c/s = 26'-0"
Mandatory Constr. Jt. (1)
Reinforcement shown Near Midspan
Reinforcement shown Near Pier
(5)

CROSS SECTION
(Looking North.)

Note:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. Bar laps = 20 dia.

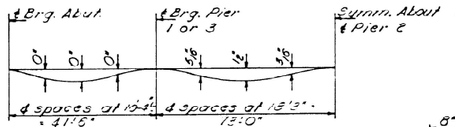


BAR d1



STANDARD FILLET DETAIL

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "f" above top of beams.



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.



BAR a4

BAR x

DESIGNED	Hans McConnell	EXAMINED	19
CHECKED	J.L. W Clark	PASSED	
DRAWN	J. Kessler	APPROVED	
CHECKED	John W Clark		

Rev. 4-19-68

Rw. Rg Br. Office 4/12/68

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 18-4BHB-2
CUMBERLAND COUNTY
STATION 529+81.08

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D7746t1-sht-plan-018-0039.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0039

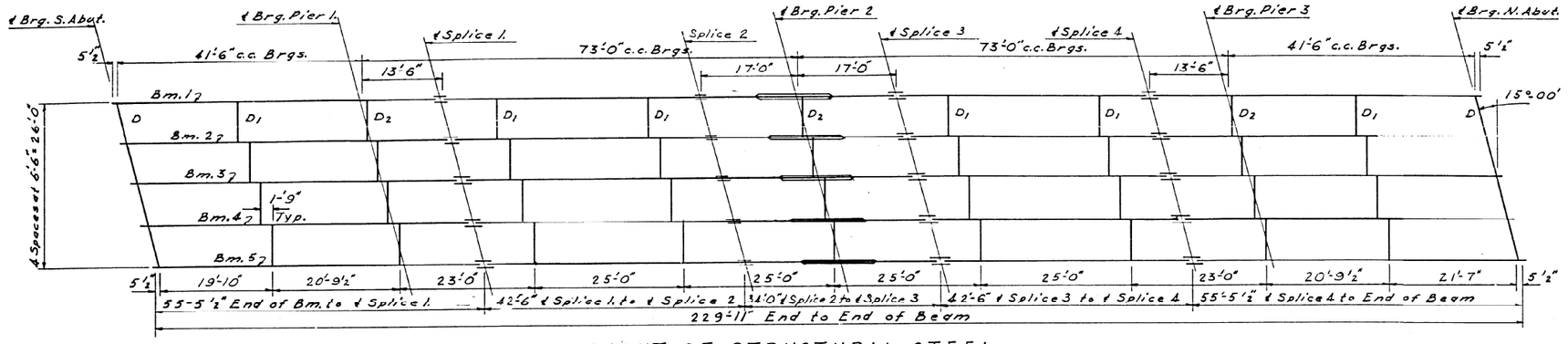
SCALE: | SHEET 2 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	30
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

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

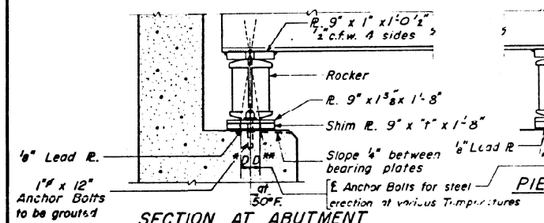
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I 70	18-42HB-2	Cumberland	29	13.
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 4.
9 SHEETS.

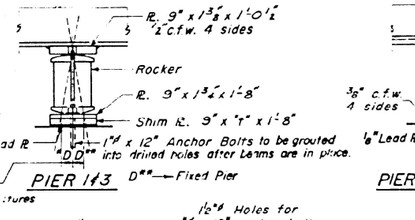


LAYOUT OF STRUCTURAL STEEL

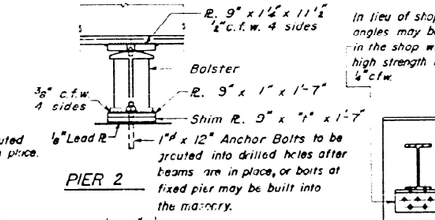
(All Beams 33 WF 130)



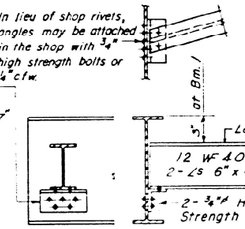
SECTION AT ABUTMENT



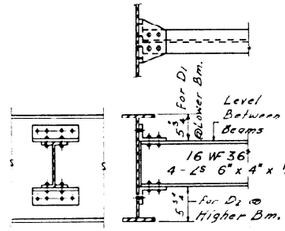
PIER 1 & 3



PIER 2



DIAPHRAGM D
8 Required



DIAPHRAGM D1 & D2
24 D1 & 12 D2 Required

MOMENTS AND REACTIONS - INT. BMS.

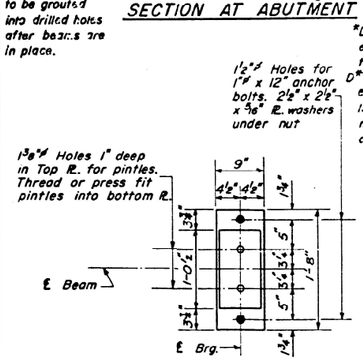
	MOMENTS				REACTIONS		
	.4 Sp. 1	Pier 1	.5 Sp. 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	65.2	313.2	209.2	506.4	11.5	57.5	72.3
L.L.	177.7	211.0	264.0	282.4	23.7	31.2	30.7
Imp.	53.3	58.4	67.0	71.4	7.1	8.6	7.8
total	296.2	582.6	541.0	860.2	42.3	97.3	110.8

Moments are in ft. kips And Reactions in kips

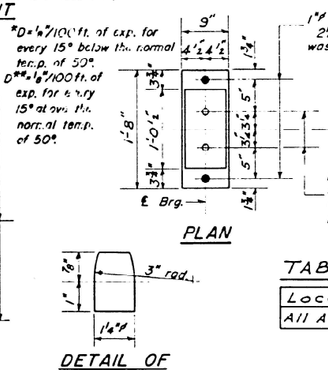
*ELEVATION TOP OF WF

Loc. — BM.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut	642.89	642.99	643.07	643.05	642.97
℄ Brg. Pier 1.	643.49	643.59	643.67	643.65	643.57
℄ Splice 1.	643.68	643.78	643.86	643.84	643.76
℄ Splice 2	644.08	644.18	644.26	644.24	644.16
℄ Brg. Pier 2	644.17	644.27	644.35	644.33	644.25
℄ Splice 3	644.26	644.36	644.44	644.42	644.34
℄ Splice 4	644.30	644.40	644.48	644.46	644.38
℄ Brg. Pier 3	644.26	644.36	644.44	644.42	644.34
℄ Brg. N. Abut.	644.12	644.22	644.30	644.28	644.20

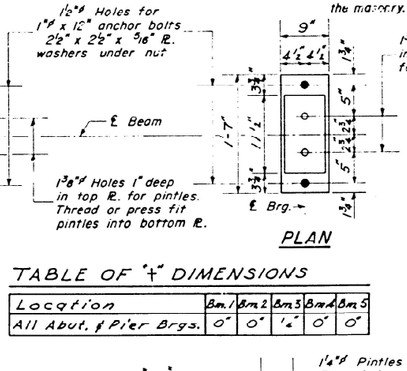
*Lower all Top of WF Elevations by .04



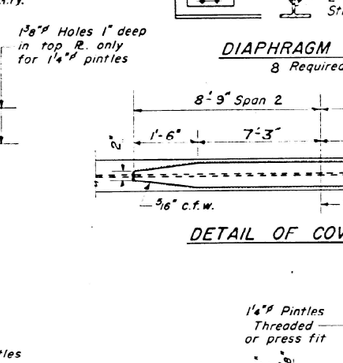
PLAN



PLAN



PLAN

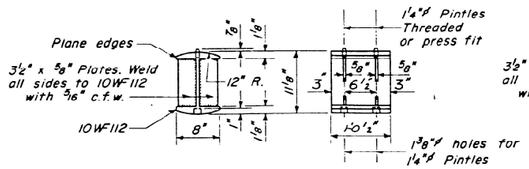


DETAIL OF COVER PLATE

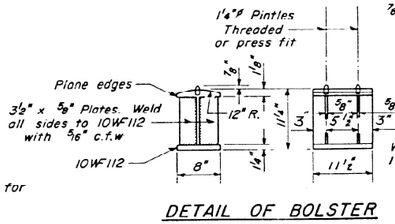
DETAIL OF PINTLE

TABLE OF "t" DIMENSIONS

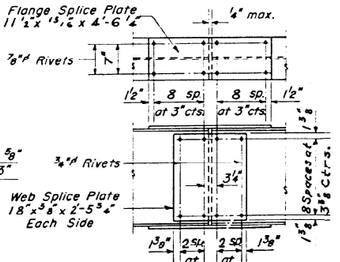
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	1/4"	0"	0"



DETAIL OF ROCKER AT PIER 1 & 3 & ABUTS



DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

DESIGNED Fred Stone
CHECKED Dana McConnell
P.G. Bonett Jim Kessler
DRAWN W.A. Sousamon Jr.
CHECKED Dana McConnell

APRIL 8 1965
EXAMINED — DIRECTOR OF BRIDGE AND TRAFFIC ENGINEERING
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL
F.A.I RT 70 SEC. 18-42HB-2
CUMBERLAND COUNTY
STATION 529 + 81.08

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-018-0039.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0039

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

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	31
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	85
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

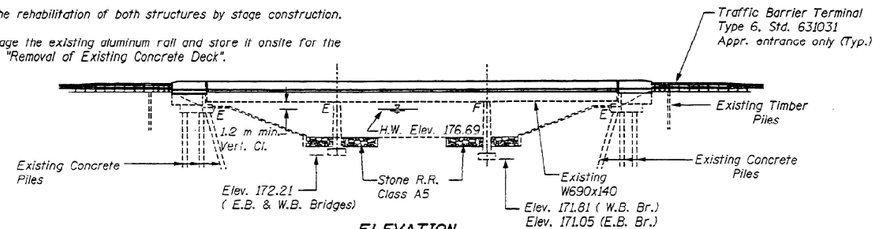
SHEET 1 OF 22 SHEETS

EXISTING STRUCTURE.
Str. No. 018-0051 (W.B.) & Str. No. 018-0052 (E.B.). Built as F.A.I. Rt. 70, Sec.18-48B in 1969. The Superstructure consists of a R.C. Deck with O. to O. width of 12.8 m. supported on 3-span continuous steel beams with Bk. to Bk. Abutment length of 41.046 m. The Substructure consists of R.C. Pile Bent Abutments and R.C. Solid Piers. The Existing Deck to be replaced and beams to be raised due to proposed grade raise.

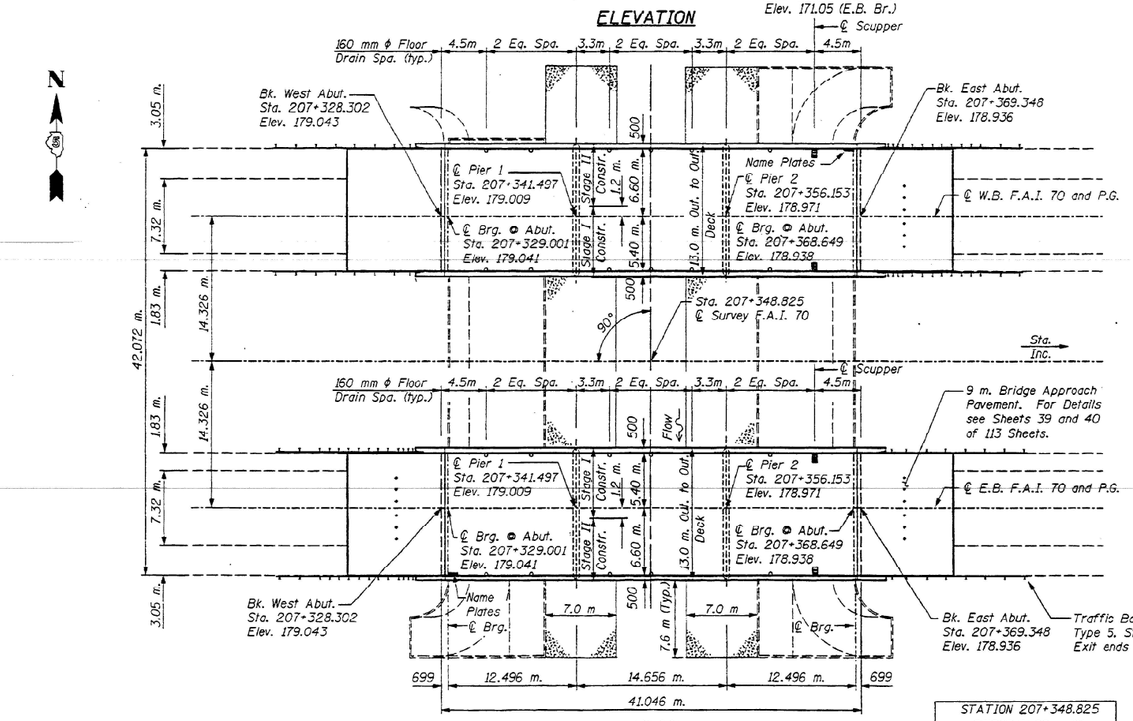
Traffic shall be maintained during the rehabilitation of both structures by stage construction.

The Contractor shall remove and salvage the existing aluminum rail and store it onsite for the District to pick up. Cost included in "Removal of Existing Concrete Deck".

BENCHMARK: ℄ Disk (Stamped Sta. 500+28.27 Elev. 602.15 Ft.) in median of F.A.I. 70 at Sta. 207+747.587, Elev. = 183.535

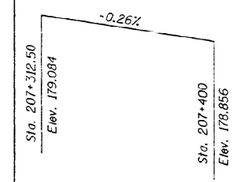


ELEVATION



PLAN

STATION 207+348.825 REBUILT 20 BY STATE OF ILLINOIS F.A.I. RT. 70 SEC. 18-48BR F.A. PROJ. LOADING MS18 & ALT. STR. NO. 018-0051	STATION 207+348.825 REBUILT 20 BY STATE OF ILLINOIS F.A.I. RT. 70 SEC. 18-48BR F.A. PROJ. LOADING MS18 & ALT. STR. NO. 018-0052



PROFILE GRADE

Along ℄ E.B. and W.B. Pavement

UPCHURCH AND ASSOCIATES
CHAMPAIGN, IL (217) 398-2336
MATTOON, IL (217) 238-3177

DESIGN SPECIFICATIONS

AASHTO 1996 with 1997, 1998 and 1999 Interim Specifications

1995 Seismic Retrofitting Guidelines for Highway Bridges (FHWA/RD -94/052)

DESIGN STRESSES

Field Units

Exist. Construction	New Construction
f'c = 9.65 MPa	f'c = 24 MPa
fs = 138 MPa (Reinf.)	fy = 400 MPa (Reinf.)
fs = 138 MPa (M270 Grade 250)	Fy = 250 MPa (Structural Steel) (M270M Grade 250)
	Fy = 345 MPa (Structural Steel) (M270M Grade 345)

LOADING MS18 & ALT.

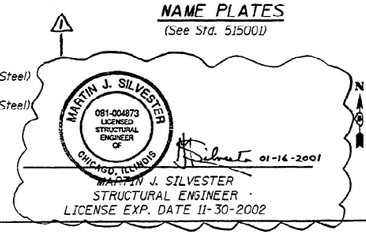
Allow 1.2 kN/m² for future wearing surface

SEISMIC DATA

Seismic Performance Category (SPC) = A
Acceleration Coefficient (A) = 0.070
Site Coefficient (S) = 2.0

NAME PLATES

(See Std. 515001)



GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts M20, open holes 22mm ϕ, unless otherwise noted.
2. The Structural Steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270M Grade 345
3. Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
4. Anchor bolts shall be set before bolting diaphragms over supports.
5. Reinforcement bars shall conform to the requirements of AASHTO M 31M, M 42M or M 53M Grade 400.
6. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
7. Bridge Seat Sealer shall be applied to the seat area of the abutments.
8. All dimensions are in millimeters (mm) except as noted.
9. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
10. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 3 mm adjusting shims shall be provided for each bearing and placed as detailed.
11. Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
12. All existing construction accessories welded to the top flange over the pier(s) between the quarter points of the beams or girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that can not be removed by grinding approximately ¼ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.
13. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
14. Existing structural steel shall only be cleaned as required by the Special Provision Cleaning and Painting Adjacent Areas of Existing Steel Structures.
15. All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type I.
16. Field painting of structural steel shall be done under a separate painting contract.
17. Clean and relocate existing name plate adjacent to new plate. Cost included with Name Plates.

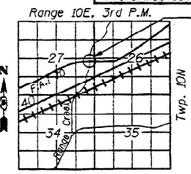
APPROVED

FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	m^2		813	813
Filter Fabric for use with Riprap	m^2		813	813
Structural Steel Removal	Kg	470		470
Removal of Existing Concrete Deck	Each	2		2
Structure Excavation	m^3		28	28
Bridge Deck Grooving	m^2	910		910
Protective Coat	m^2	1168		1168
Concrete Structures	m^3		28.4	28.4
Concrete Superstructure	m^3	282.7		282.7
Reinforcement Bars, Epoxy Coated	Kg	37110	4150	41260
Concrete Removal	m^3		17.2	17.2
Drainage Scupper, DS 33	Each	1		1
Floor Drains	Each	24		24
Name Plates	Each	2		2
Elastomeric Bearing Assembly, Type I	Each	28		28
Elastomeric Bearing Assembly, Type II	Each	14		14
Furnishing and Erecting Structural Steel	kg	3690	1590	5280
Stud Shear Connectors	Each	5502		5502
Bituminous Concrete Surface Removal (Asbestos)	m^2	977		977
Jacking Existing Superstructure	L.Sum	0.50		0.50
Bar Splicers	Each	768	48	816
Bridge Seat Sealer	m^2		40	40
Preformed Joint Seal 64 mm	m	24.6		24.6
Preformed Joint Seal 102 mm	m	24.6		24.6



LOCATION SKETCH

REVISIONS	
NAME	DATE
1 REVISED	02/02
-mjs	

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE: 1:100 DRAWN BY: RMH
DATE: JULY 2000 CHECKED BY: MJS

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0051 & 018-0052

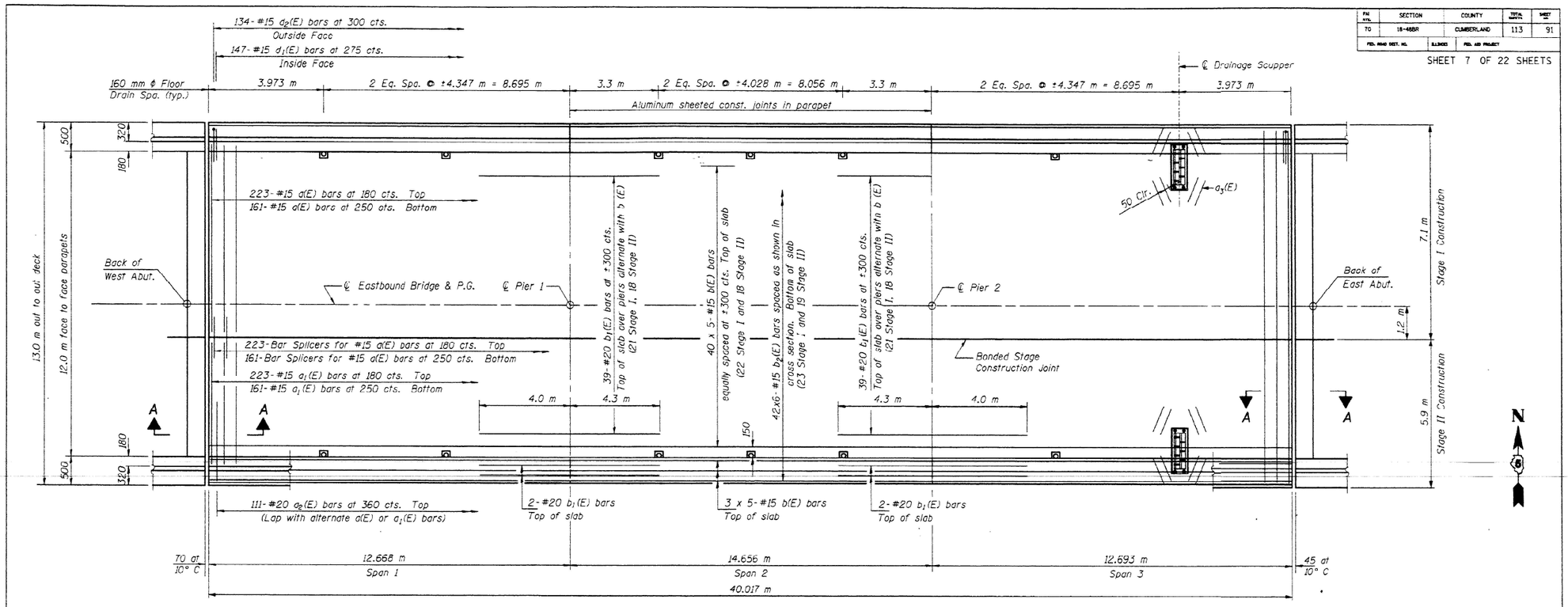
SCALE: | SHEET 1 OF 8 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	32
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\dot\dillinois.gov_dakota.kincaid@illinois.gov\d1121796\D7740\61-sht-plan-018-0051&018-0052.dgn

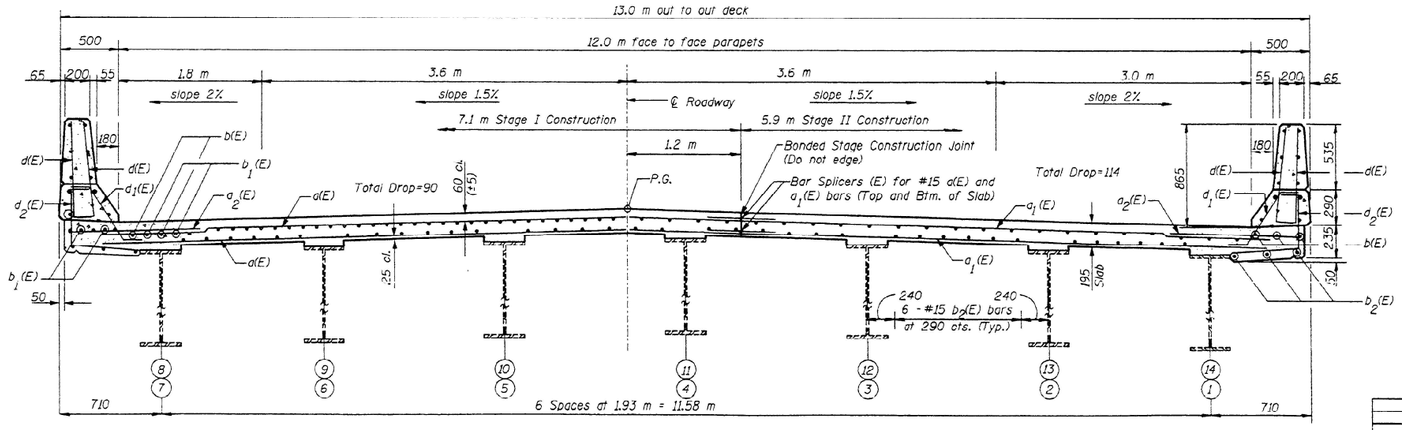
FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	91
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET 7 OF 22 SHEETS



PLAN

(Eastbound Bridge Deck shown)
(Westbound Bridge Deck, similar)



NEAR PIER — NEAR MIDSPAN

CROSS SECTION

(Eastbound Bridge - Looking East)
(Westbound Bridge - Looking West)

MIN. BAR LAP

#15 bars = 510
#20 bars = 640

Notes: See Sheet # 8 of 22 for superstructure details, Section A-A and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3- #15 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet # 8 of 22 for parapet reinforcement.
All dimensions are in millimeters (mm) except as noted.
See Sheet # 20 of 22 for bar splicer details.
Cut longitudinal reinforcement to clear Drainage Scupper.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DECK REINFORCEMENT
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE: DRAWN BY: RWH
DATE: JULY 2000 CHECKED BY: MJS

DREIN041 JAV 5-15-2001

UPCHURCH AND ASSOCIATES
MILLSIDE, IL. (708) 448-2322
MATTOON, IL. (217) 258-2777

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw workfile\of\illinois.gov dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0051&018-0052.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

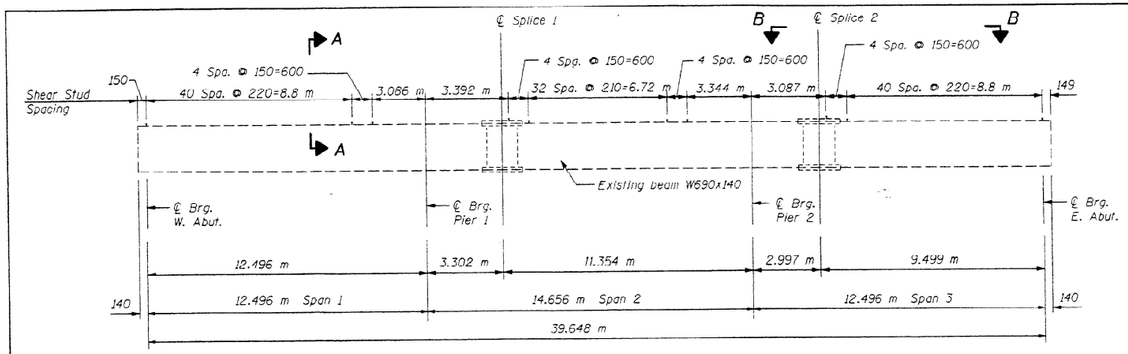
EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: SHEET 2 OF 8 SHEETS STA. TO STA.

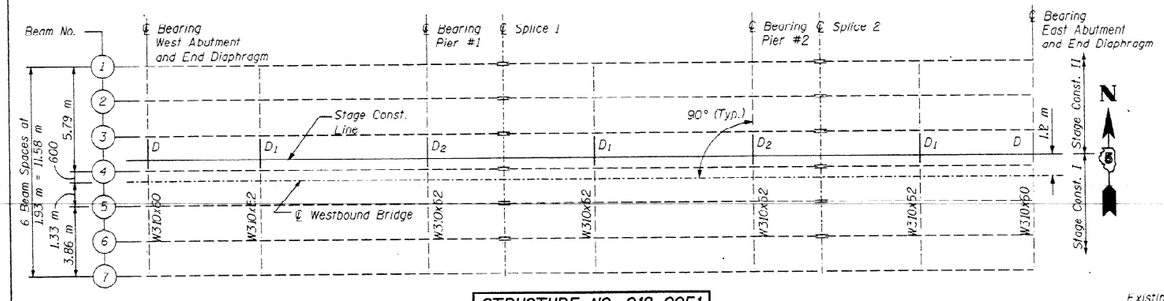
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	33
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	93
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

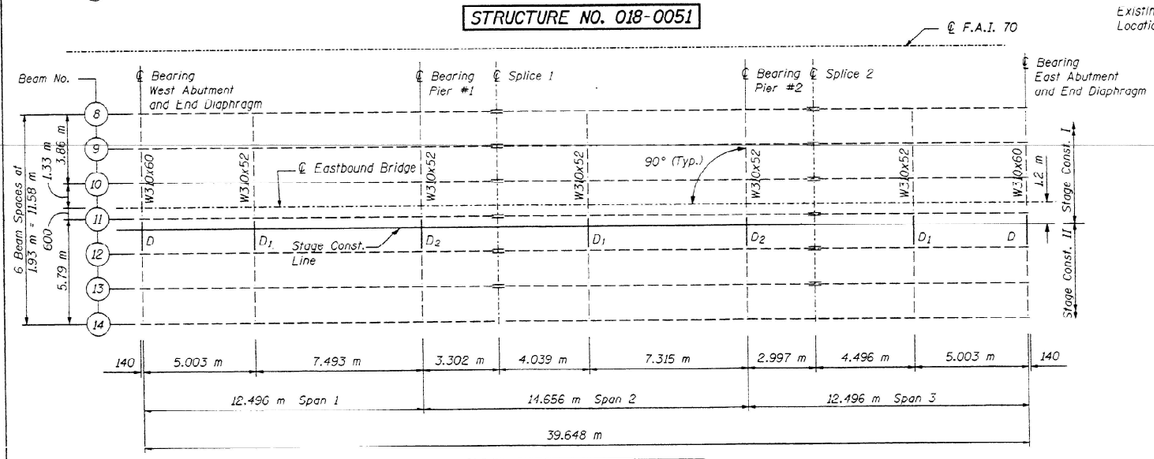
SHEET 9 OF 22 SHEETS



ELEVATION



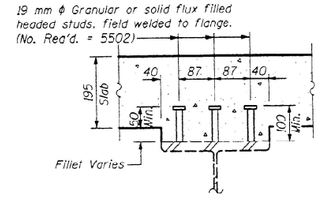
STRUCTURE NO. 018-0051



STRUCTURE NO. 018-0052

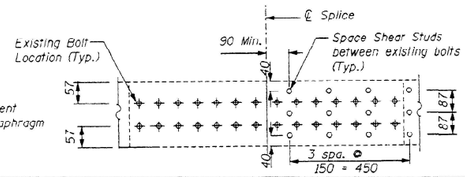
FRAMING PLAN

TOP OF BEAM ELEVATIONS				
LOCATION	W. Abut.	Pier 1	Pier 2	E. Abut.
Beams 1 & 14	178.718	178.672	178.631	178.615
Beams 2 & 13	178.757	178.711	178.670	178.654
Beams 3 & 12	178.790	178.744	178.703	178.687
Beams 4 & 11	178.819	178.773	178.732	178.716
Beams 5 & 10	178.808	178.762	178.721	178.705
Beams 6 & 9	178.779	178.733	178.692	178.676
Beams 7 & 8	178.742	178.696	178.655	178.639



SECTION A-A

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(10^6 mm⁴)	1361	1361	1361
Ic (n)	(10^6 mm⁴)	4125		4125
Ic (3n)	(10^6 mm⁴)	3051		3051
Ss	(10^3 mm³)	3982	3982	3982
Sc (n)	(10^3 mm³)	6221		6221
Sc (3n)	(10^3 mm³)	5621		5621
Z	(10^3 mm³)			
wℓ	(kN/m)	10.72	14.58	10.72
Mwℓ	(kN·m)	122	252	91
sℓ	(kN/m)	3.87		3.87
Msℓ	(kN·m)	51		50
Mℓ	(kN·m)	312	158	326
M (Imp)	(kN·m)	94	47	98
S_3[Mℓ+M(Imp)]	(kN·m)	677	342	706
Ma	(kN·m)	1105	772	1101
Mu	(kN·m)	1450		1470
fsℓ non comp	(MPa)	31	61	23
fsℓ (comp)	(MPa)	9		9
fs_3(ℓ+Imp)	(MPa)	109	86	114
fs (Overload)	(MPa)	149	150	146
fs (Total)	(MPa)		195	
VR	(kN)	179		166



PLAN VIEW B-B

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
Rℓ	(kN)	71	218
R$_L$	(kN)	157	187
Imp.	(kN)	47	56
R (Total)	(kN)	275	461

Notes: For details of new diaphragm D_1, see sheet 10 of 22.
For details of Temporary removal and reinstallation of diaphragms D_1 and D_2, see sheet 10 of 22.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$I_{c(3n)}$ and $S_{c(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$I_{c(3n)}$ and $S_{c(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment)=1.3[Mwℓ + Msℓ + S_3(Mℓ + M Imp)].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to Mwℓ + Msℓ + S_3(Mℓ + M Imp).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[Mwℓ + Msℓ + S_3(Mℓ + M Imp)].

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE: N.T.S. DRAWN BY: RMH
DATE: JULY 2000 CHECKED BY: MJS

UPCHURCH AND ASSOCIATES
PLOTTED: JUL 01 06 2001

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-0184-00518&018-00520.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

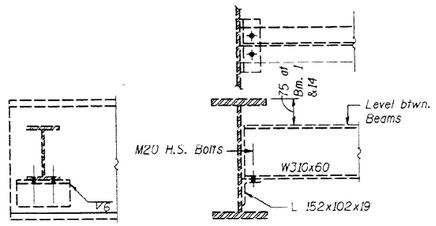
EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: | SHEET 3 OF 8 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	34
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

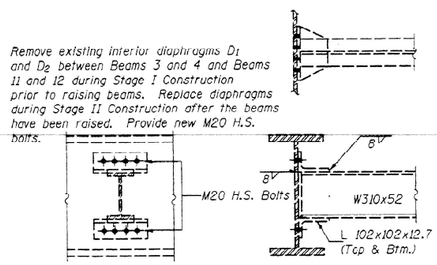
FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	94
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET 10 OF 22 SHEETS



EXISTING END DIAPHRAGM D

4 to be Removed.
Cost of disconnecting and removing existing end diaphragms D included with Structural Steel Removal.

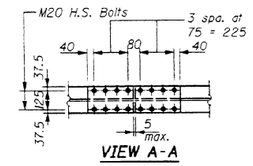


INTERIOR DIAPHRAGM D1 or D2

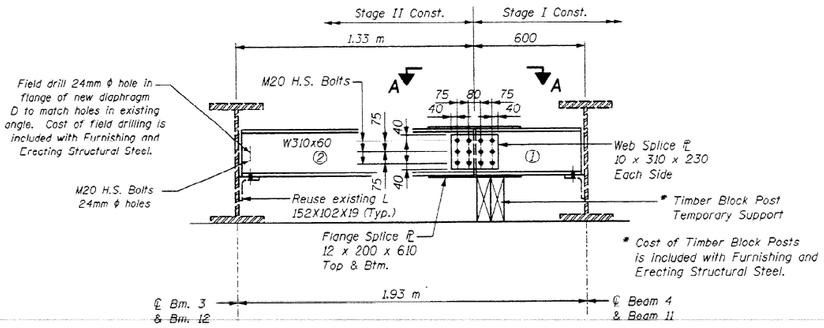
4 D_2 to be removed and reinstalled
6 D_1 to be removed and reinstalled

Note: Two hardened washers shall be required over all oversize holes for diaphragms.

Cost of disconnecting, removing, temporarily storing and reinstalling existing interior diaphragms D_1 and D_2 is included with Jacking Existing Superstructure.



VIEW A-A



END DIAPHRAGM D

4 Required
(Westbound Bridge - Looking East)
(Eastbound Bridge - Looking West)

DIAPHRAGM D CONSTRUCTION SEQUENCE

1. Order new Diaphragm D in two sections.
2. Remove Existing Diaphragm during Stage I Construction prior to raising beams.
3. Attach section ① of Diaphragm to Beam 4 or Beam 11 and top flange splice ℄ during Stage I Construction.
4. Place Timber Block Posts between section ① of diaphragm and abutment bearing seat.
5. Construct Reinforced Concrete deck slab.
6. Raise existing beams during Stage II Construction.
7. Attach section ② of diaphragm to Beam 3 or Beam 12 and section ① of diaphragm during Stage II Construction.
8. Attach web splice plates to sections ① and ② of diaphragms.
9. Remove Timber Block Posts.
10. Attach bottom flange splice plate to sections ① and ② of diaphragms.

All dimensions are in millimeters (mm) except as noted.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

FRAMING PLAN DETAILS
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE: DRAWN BY: RMH
DATE: JULY 2000 CHECKED BY: MJS

UPCHURCH AND ASSOCIATES
HILLSIDE, IL. (708) 449-9991
MATTOON, IL. (217) 235-3177

FREELSON JAN 06-14-2000

MODEL: Existing Structure Plans 4 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0051&018-0052.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

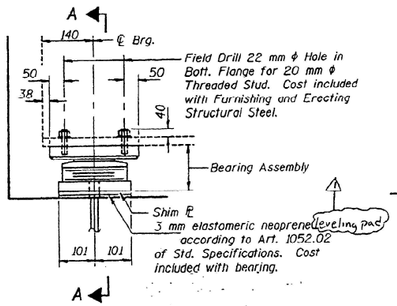
EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: SHEET 4 OF 8 SHEETS STA. TO STA.

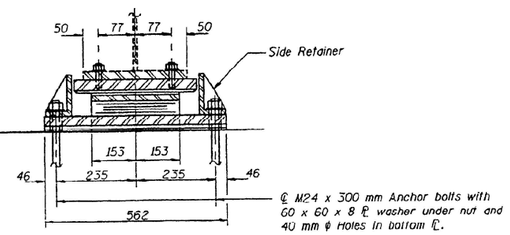
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	35
		CONTRACT NO. 74D61		
		ILLINOIS FED. AID PROJECT		

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	95
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET 11 OF 22 SHEETS



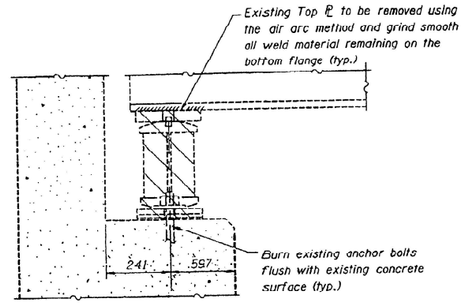
ELEVATION AT ABUT.



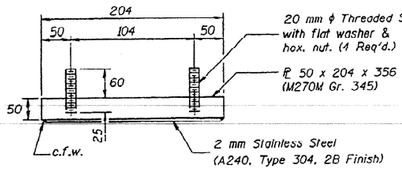
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. AT WEST ABUT.

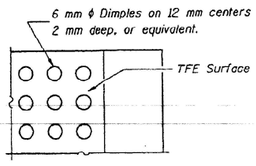
Notes:
See sheet #18 for Anchor Bolt installation.
All dimensions are in millimeters (mm) except as noted.



AT ABUTMENTS



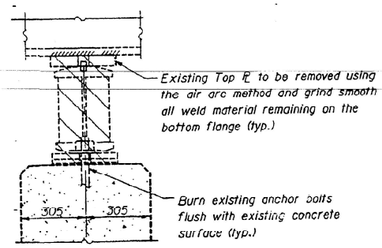
TOP BEARING ASSEMBLY (TYPE II)



PLAN-TFE SURFACE

PROCEDURE FOR JACKING EXISTING SUPERSTRUCTURE

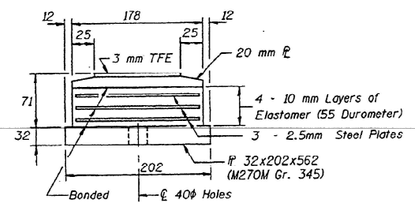
1. Jacking and Removing Existing Bearings shall be done after existing deck removal is completed.
2. The Contractor shall submit for approval by the Engineer, plans for lifting and cribbing existing beams and installing new bearings prior to commencing any related work. This work shall be done for each stage after existing concrete deck is removed and prior to pouring of the new concrete deck. The maximum dead load reaction per beam (weight of steel only) at abutments is 6.6 kN and at piers is 20.7 kN. Minimum jack capacity is 15 kN at abutments and 45 kN at Piers.
3. Prior to ordering any material, the Engineer shall verify shim plate thicknesses required at each bearing.
4. Diaphragms between Stage I and II shall be disconnected prior to jacking, and reconnected using new H.S. bolts after jacking is completed. See sheet 10 of 22.
5. There shall be at least one jack per bearing and the jack shall be placed close to the bearing. The Steel Beams shall be raised a maximum of 6 mm and shall be blocked in position on temporary cribbing until after the completion of the installation of new bearings.
6. All Beams at all supports shall be lifted simultaneously in each stage such that the relative elevation between adjacent beams does not vary by more than 3 mm from their original relative elevations, and such that the relative elevations between adjacent substructure units does not vary more than 6 mm during or after jacking operations.
7. Remove the existing anchor bolts flush with the concrete surface and remove existing bearing
8. Anchor bolts shall be set before bolting diaphragms over supports.
9. The new bearings shall be in place and the jacks shall be lowered before the new concrete deck is poured.
10. All work required to lift beams, disconnect and reconnect diaphragms and remove existing bearings and anchor bolts together with temporary cribbing shall be paid for at the unit price for "Jacking Existing Superstructure." See Special Provisions.
11. Jacking shall be from abutments or slopewalls, and from piers.



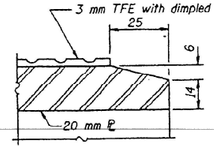
AT PIERS

EXISTING BEARING REMOVAL

Hatched areas indicate removal of Existing Bearing.
"Cost included with "Jacking Existing Superstructure".



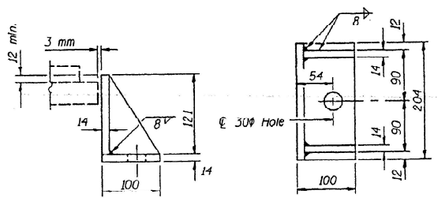
BOTTOM BEARING ASSEMBLY (TYPE II)



SECTION THRU TFE

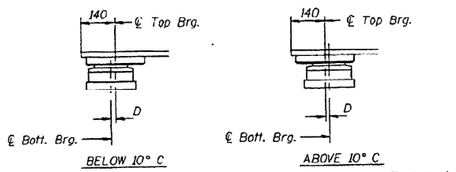
Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8° C temp. change from the normal temp. of 10° C.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	14

REVISIONS	
NAME	DATE
1 REVISED - MJS	07/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE:
DRAWN BY: RWH
DATE: JULY 2000
CHECKED BY: MJS

BEDET-041 JAG 05-13-2000

UPCHURCH AND ASSOCIATES
PROFESSIONAL ENGINEERS
MAHOMET, ILLINOIS 61853
MATTOON, IL. (217) 235-3777

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0051 & 018-0052

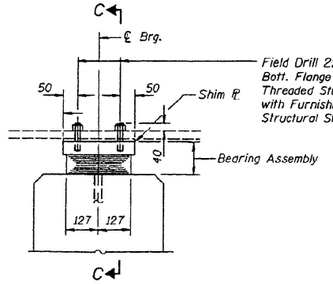
SCALE: | SHEET 5 OF 8 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	36
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

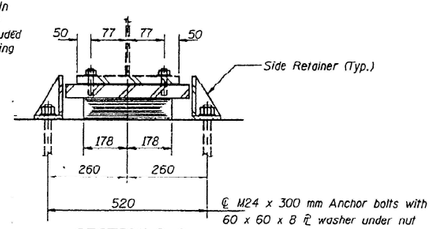
MODEL: Existing Structure Plans 5 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121795\D7745061-sht-plan-018-0051&018-0052.dgn

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	18-48BR	CUMBERLAND	113	96
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET 12 OF 22 SHEETS

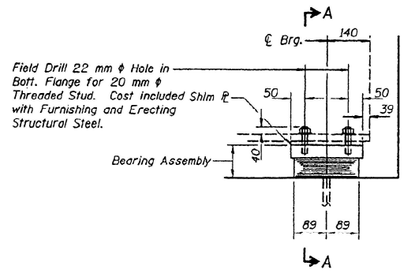


ELEVATION AT PIER

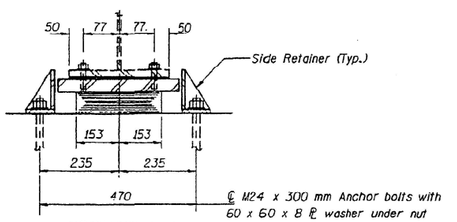


SECTION C-C

TYPE I ELASTOMERIC EXP. BRG. AT PIER 1

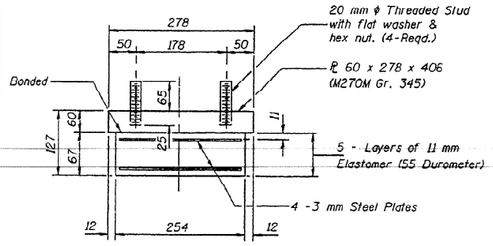


ELEVATION AT ABUT.



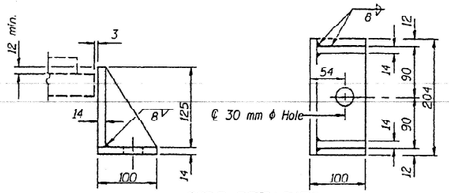
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT EAST ABUT.



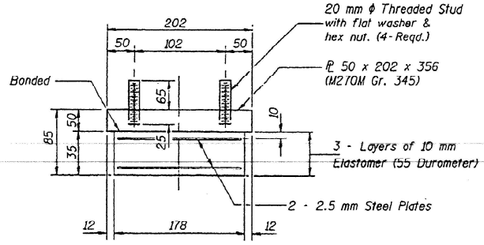
BEARING ASSEMBLY

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



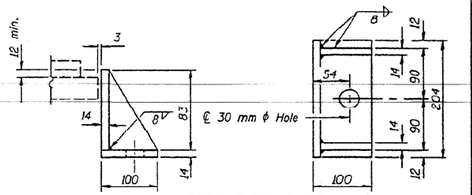
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



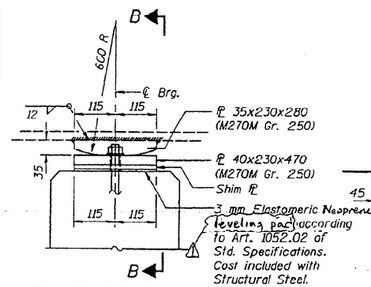
BEARING ASSEMBLY

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

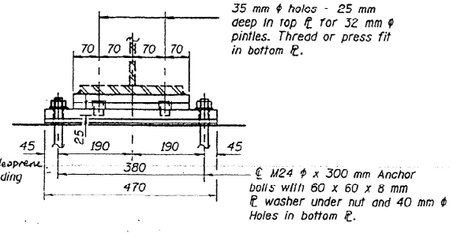


SIDE RETAINER

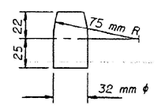
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



ELEVATION AT PIER



SECTION B-B



PINTLE

FIXED BEARING DETAILS AT PIER 2

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet # 18 for Anchor Bolt installation.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	28

All dimensions are in millimeters (mm) except as noted.

REVISIONS

NAME	DATE
1 REVISED - MJS	07/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
F.A.I. RTE. 70 OVER RANGE CREEK
SECTION 18-48BR STA. 207+348.825
CUMBERLAND COUNTY
S.N. 018-0051 (W.B.) & S.N. 018-0052 (E.B.)

SCALE: N.T.S. DRAWN BY: RMH
DATE: JULY 2000 CHECKED BY: MJS

BEDETZ-SHI JAN 05-16-2001

UPCHURCH AND ASSOCIATES
MILLSTADT, IL (708) 446-3330
MATTOON, IL (217) 235-3171

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: | SHEET 6 OF 8 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	37
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 6 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774061-sht-plan-018-0051&018-0052.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 70	18-488	Cumberland	24	6
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT:		

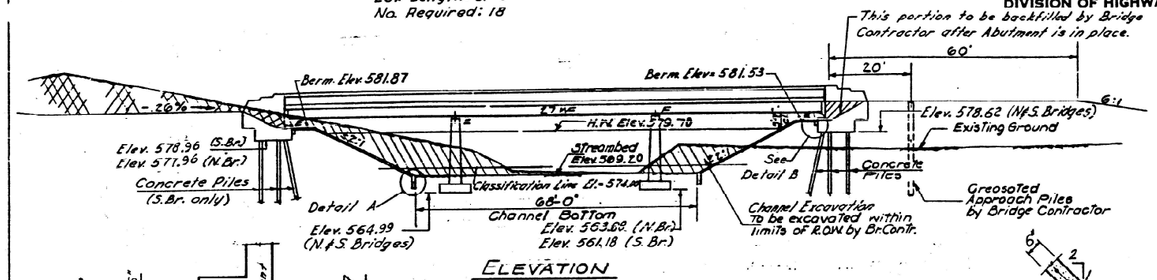
SHEET NO. 1
13 SHEETS

BM: Boat spike in root of 10" Oak South of East-West fence 210 ft ± of Sta. 490+05 Elev. 575.898

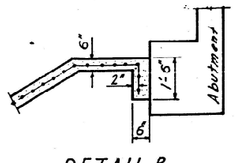
APPROACH PILE DATA

Type: Creosoted
Est Length: 21'-0"
No. Required: 18

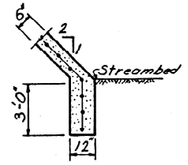
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



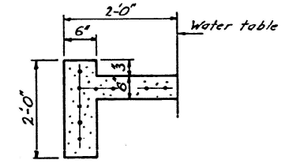
ELEVATION



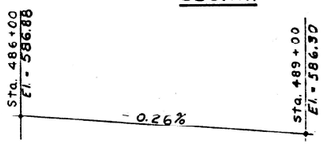
DETAIL B



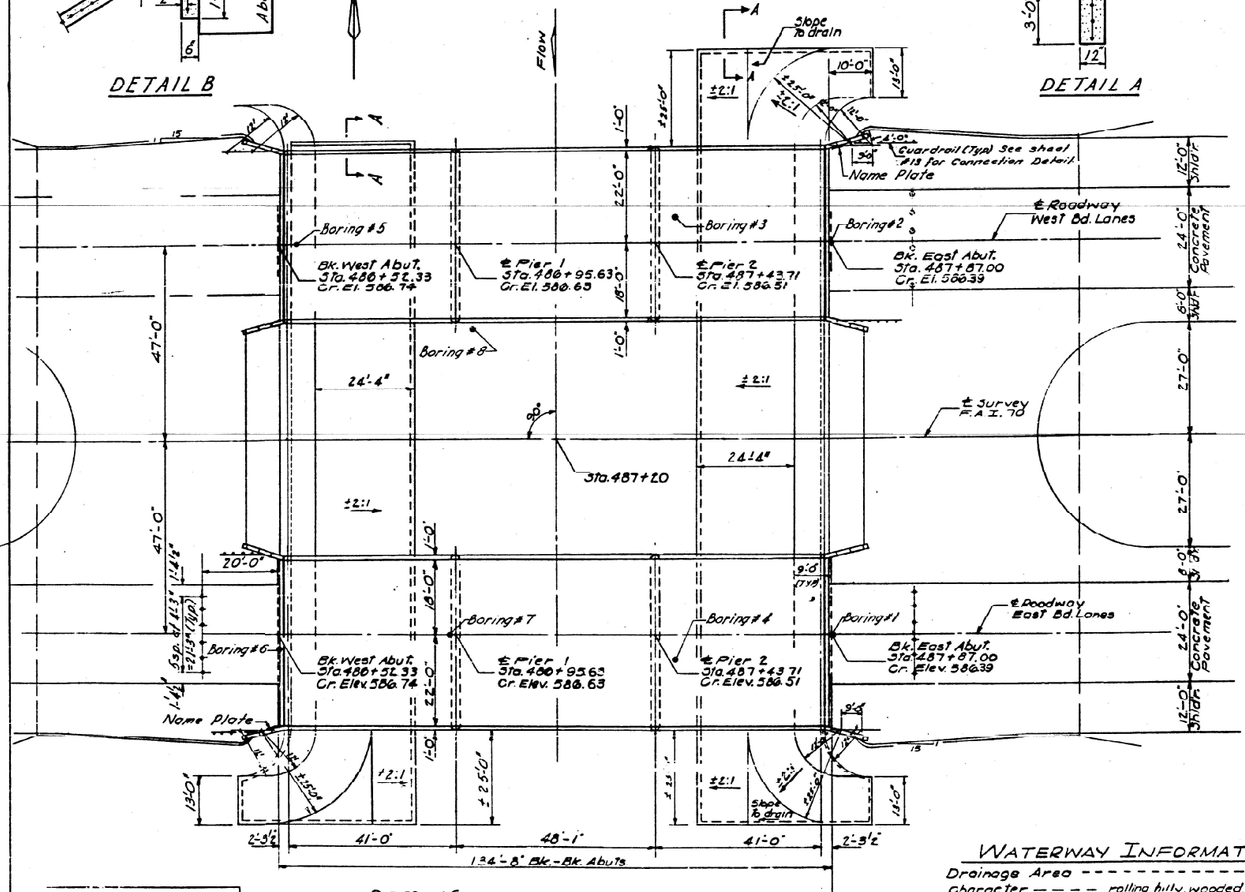
DETAIL A



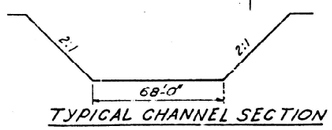
SEC. A A



PROFILE - F.A.I. RT. 70



PLAN



TYPICAL CHANNEL SECTION

STATION 487+20.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 18-488
F.A. PROJ. I-70-4(60).
LOADING HS20 & ALT.

NAME PLATE LETTERING
(See Std. 2113-1)

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 511.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

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

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36.

Rivets ¾ "ϕ, Open Holes ¹³⁄₁₆ "ϕ, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 4 400 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 561 to 565 inclusive of the Standard Specifications.

Concrete piles at abutments shall be driven in holes precored thru the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

The contractor shall drive Two Concrete test piles, one at the E. Abutment (N. Bridge) and one at the W. Abutment (S. Bridge) all in permanent locations, as directed by the Engineer before ordering the remainder of Piles.

Excavation for portions of structure in the embankments shall not be classified.

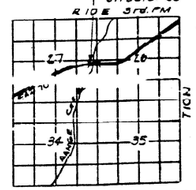
Permanent forms will not be permitted in forming the concrete floor.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS OR THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
	Cu. Yds.			
* Class "A" Excavation for Structures	Cu. Yds.		180	180
* Class "B" Excavation for Structures	Cu. Yds.		415	415
Class "A" Concrete	Cu. Yds.		319.1	319.1
Class "X" Concrete	Cu. Yds.	309.3	163.3	472.6
Structural Steel	Lbs.	224,840		224,840
Aluminum Handrail	Lin. Ft.	526		526
Reinforcement Bars	Lbs.	70,800	28,520	99,320
** Preformed Joint Sealer	Lin. Ft.	168		168
Creosoted Piles	Lin. Ft.		378	378
Concrete Piles	Lin. Ft.		901	901
Test Piles (Concrete)	Each		2	2
Name Plates	Each	2		2
Slope Wall (6")	Sq. Yds.			1480
Protective Coat	Sq. Yds.	1,370		1,370

* Includes excavation for slopewall.
** At Abutments only, extend out to out of deck.



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area ---------- 11,100 Acres
Character ---- rolling, hilly, wooded, cultivated, ver es
Required Opening --- (50 Yr. Fl) ---- 900 Sq Ft

Proposed Opening ---------- 900 Sq Ft

DESIGN STRESSES

fc = 1400 psi. (Super. & Sub)
fs = 20,000 psi. (Reinf.)
fs = 20,000 psi. (Struct.)
fc = 75 psi (FTgs)
n = 10
f.s. = 1600

LOADING H S 20-44 & ALT.

DESIGNED	Paul Cherry-Wong	
CHECKED	John W Clark Jr	
DRAWN	J. Kessler	
CHECKED	John W Clark Jr	
EXAMINED	Oct. 28 1965	
PASSED		
APPROVED		

GENERAL PLAN & ELEVATION
F.A.I. RT. 70 SEC 18-488
OVER RANGE CREEK
CUMBERLAND COUNTY
STATION 487+20.00

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: | SHEET 7 OF 8 SHEETS | STA. | TO STA.

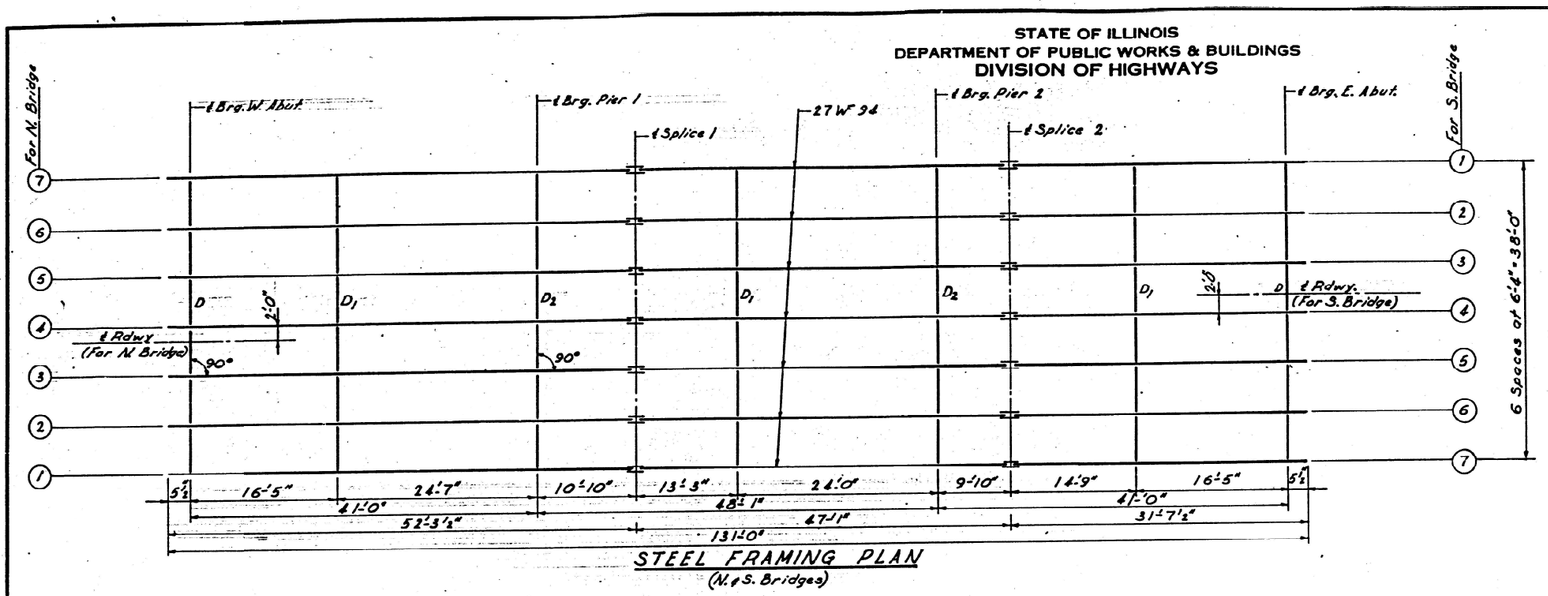
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	38
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 7 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid\d1121796\D774D61-sht-plan-018-0051&018-0052.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-488	Cumberland	24	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
13 SHEETS



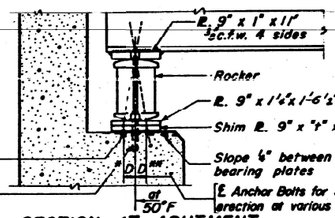
STEEL FRAMING PLAN
(N. & S. Bridges)

TABLE OF MOMENTS AND REACTIONS
(Interior Beams)

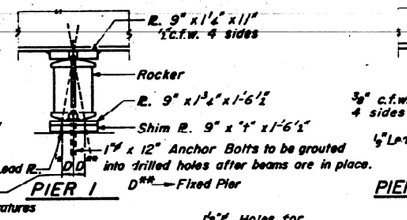
	Moments (K-Ft)			Reactions (K)	
	.4 Sp. 1	Pier 1	.5 Sp. 2	Abut.	Pier 1
D. L.	110.0	179.0	80.5	14.1	44.5
L. L.	216.0	166.6	208.0	33.2	38.0
Imp.	64.0	49.0	61.5	9.8	11.2
Total	390.0	394.6	350.0	57.1	93.7

TABLE OF "t" DIMENSIONS

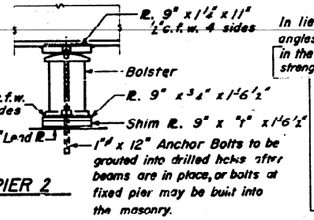
Bm. No.	1	2	3	4	5	6	7
t	0	0	0	1/8"	0	0	0



SECTION AT ABUTMENT

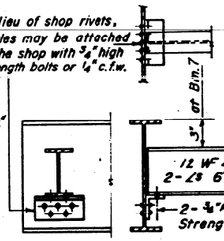


PIER 1



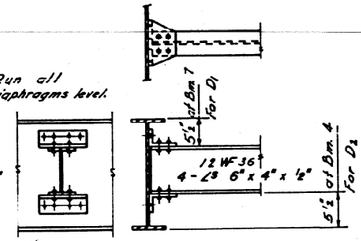
PIER 2

In lieu of shop rivets, angles may be attached in the shop with ⅞" high strength bolts or ¼" c.f.w.



DIAPHRAGM D
(24 Required)

Note: Run all diaphragms level.

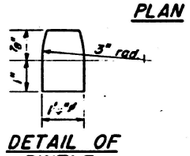


DIAPHRAGM D1 or D2
(24 D2 Required
36 D1 Required)

PLAN

PLAN

PLAN

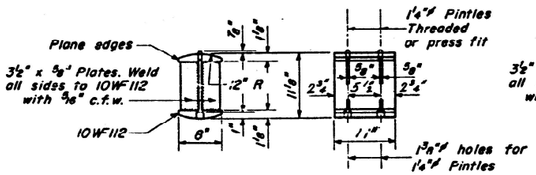


DETAIL OF PINTLE

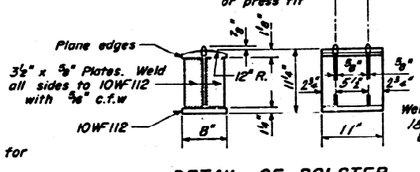
*ELEVATION TOP OF WF
For Fabrication only

Beam No.	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. E. Abut.
1	585.95	585.80	585.76	585.66	585.64	585.61
2	586.08	585.93	585.89	585.79	585.77	585.74
3	586.16	586.01	585.97	585.87	585.85	585.82
4	586.17	586.02	585.98	585.88	585.86	585.83
5	586.11	585.96	585.92	585.82	585.80	585.77
6	585.99	585.84	585.80	585.70	585.68	585.65
7	585.86	585.71	585.67	585.57	585.55	585.52

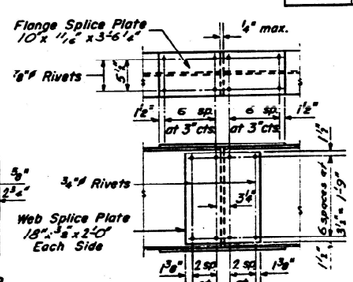
*All elevations to be lowered by 0.04 ft.



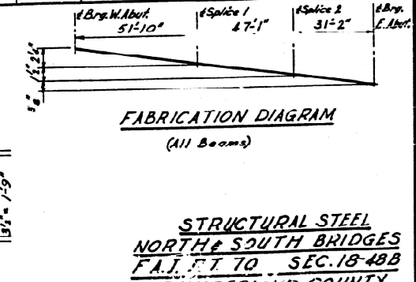
DETAIL OF ROCKER AT ABUTS & PIER 1
(42 Req'd)



DETAIL OF BOLSTER AT PIER 2
(14 Req'd)



DETAIL OF SPLICE



FABRICATION DIAGRAM
(All Beams)

DESIGNED	Liu Cheng Wang	EXAMINED	Oct. 28 1965
CHECKED	John W. Clodfelter	PASSED	
P.G. Barnett / DRAWN	J. Kessler / W. A. Sausemen Jr.	APPROVED	
CHECKED	John W. Clodfelter		

I-2 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL NORTH & SOUTH BRIDGES
F.A.I. RT. 70 SEC. 18-488
CUMBERLAND COUNTY
STATION 487+20.00

MODEL: Existing Structure Plans 8 [Sheet]
FILE NAME: c:\pw_work\pwlot\illinois.gov_dakota.kincaid@illinois.gov\d1121795\D7774D61-sht-plan-018-0051&018-0052.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0051 & 018-0052

SCALE: | SHEET 8 OF 8 SHEETS | STA. | TO STA.

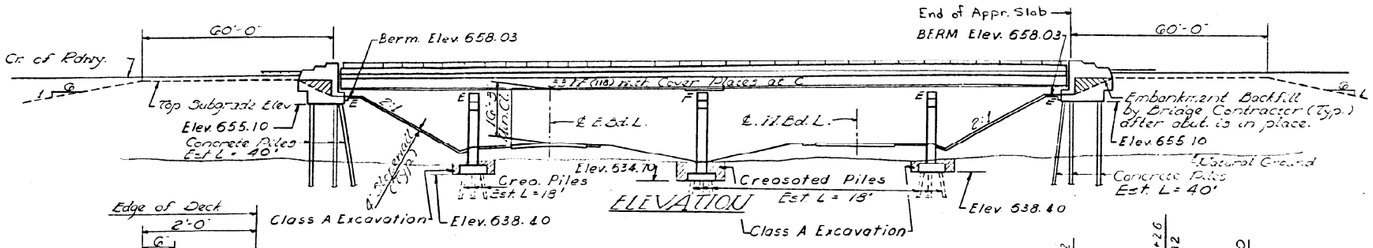
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	39
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

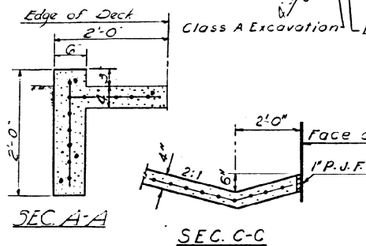
B.M.: 94' Rt. Sta. 616+64 F.A.I. Rt. 70
Railroad Spike in power pole. Elev. 641.18

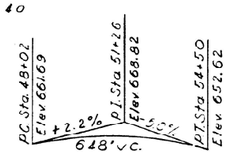
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-49HB	CUMBERLAND	38	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

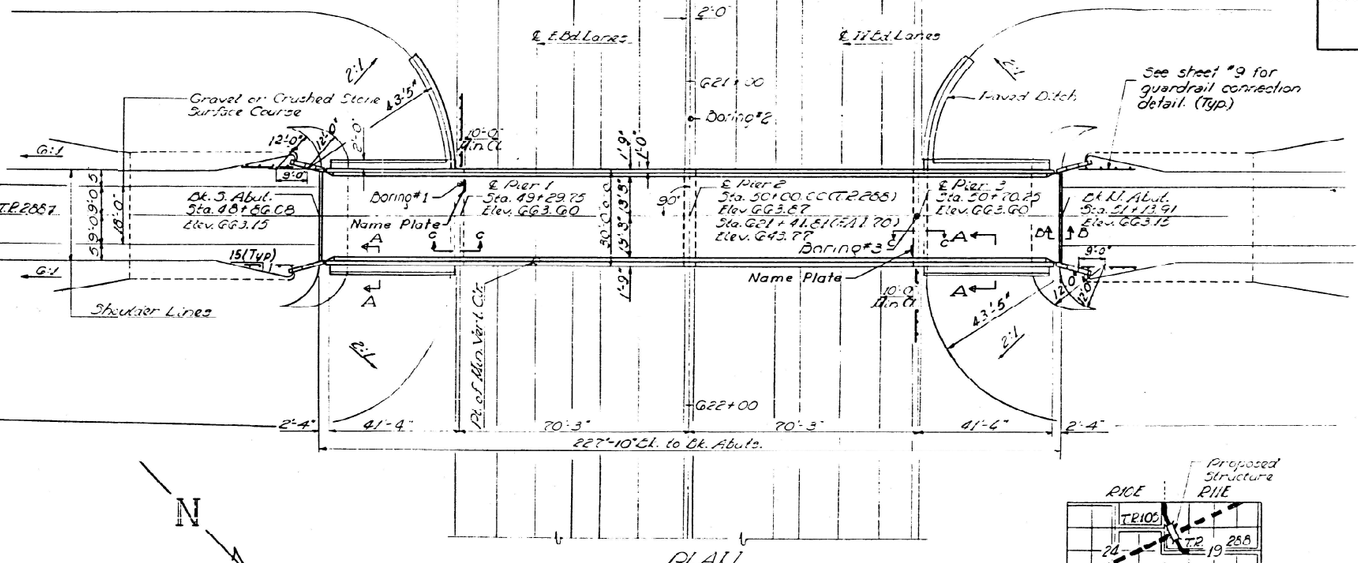
SHEET NO. 1
10 SHEETS







PROPOSED PROFILE
(TYP. RD. 288)



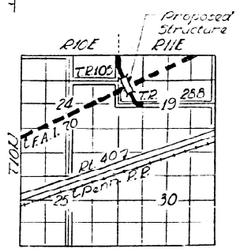
PLAN

DESIGN STRESSES

f_c = 1400 p.s.i. Sub & Super
f_s = 20000 p.s.i. Reinf.
f_b = 20000 p.s.i. Struct. (A-36)
v_c = 75 p.s.i. Pigs.
n = 10
Allowable $\frac{L}{D} = \frac{L}{11000}$

LOADING H 15-44

DESIGNED	Stanley S. Lin	EXAMINED	AUG. 30 1965
CHECKED	Tai-Fook Ch	PASSED	
DRAWN	J. Kessler	APPROVED	
CHECKED	Tai-Fook Ch		



LOCATION SKETCH

STATION 621+41.81
BUILT 196 BY
STATE of ILLINOIS
F.A.I. RT. 70 SEC. 18-49HB
F.A. PROJ. I-70-4(69)
LOADING HS-15

NAME PLATE
(See Std. 2113-1)

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 51.19 of the Std. Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 dia min. unless otherwise shown.

All structural steel shall conform to A.S.T.M. A-36

Rivets ¾" ϕ, Open holes 13/16 ϕ unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight - 780 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for field paint.

Permanent forms will not be permitted in forming the concrete floor.

Concrete piles at abutments shall be driven in holes precored thru the embankment in accordance with Article 60.9 (c) of the Std Specifications.

The contractor shall drive one concrete test pile at the South Abutment, in a permanent location, and one timber test pile in the vicinity of pier No. 2 as directed by the engineer before ordering the remainder of piles.

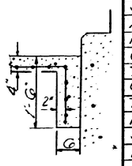
Field welding of construction accessories to the bottom flanges, or for a distance of ¼ of the span length each way from pier supports on the top flanges of beams or girders, will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

Excavation for portions of structures in the embankments shall not be classified.

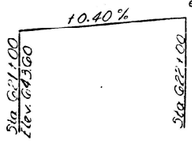
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class "A" Excav. for struct.	Cu. Yds.		90	90
Class "X" Concrete	Cu. Yds.	194.8	193.2	388.0
Structural Steel	Lbs.	166510		166510
Aluminum Handrail	Lin. Ft.	449		449
Reinforcement Bars	Lbs.	43830	15790	59620
Concrete Piles	Lin. Ft.			680
Test Piles (Concrete)	Each			1
Creosoted Piles (to 20')	Lin. Ft.			918
Test Piles (Timber)	Each			1
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.			376
Protective Coat	Sq. Yds.			870

* Includes application on inside face, top, and exposed end of wingwall.



SEC. B-B



PROPOSED PROFILE
F.A.I. RT. 70

GENERAL PLAN & ELEVATION

T.R. 288 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 18-49HB
CUMBERLAND COUNTY
STATION 621+41.81

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-018-0053.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

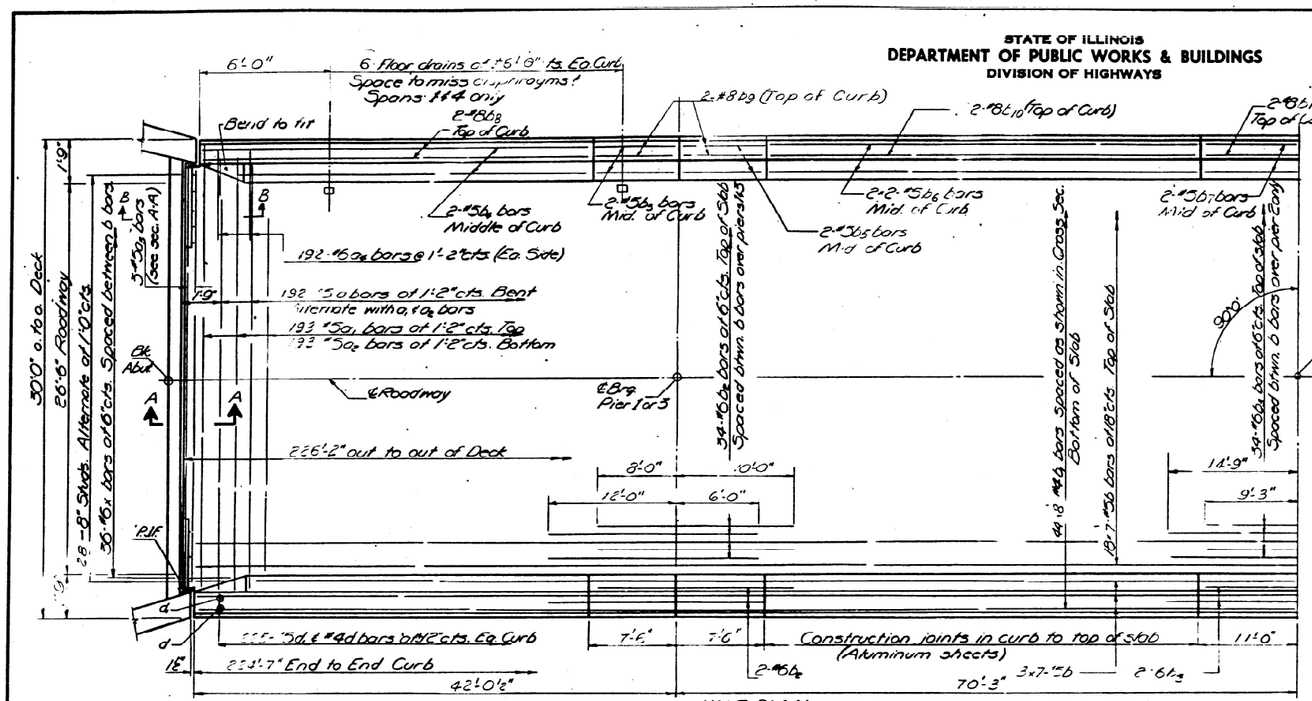
EXISTING STRUCTURE PLANS 018-0053

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	40
		CONTRACT NO. 74D61		
		ILLINOIS	FED. AID PROJECT	

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

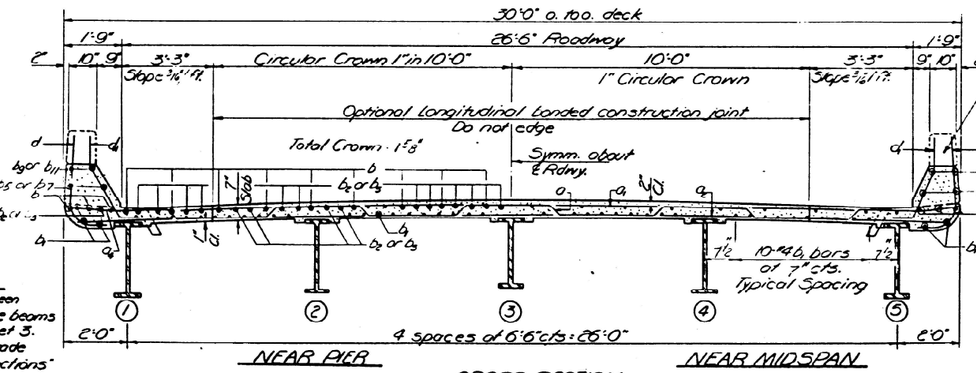
					SHEET NO. 3
FAI 70	18-BHB CUMBERLAND Co. 38		11		10 SHEETS



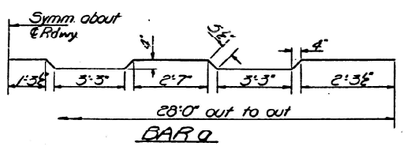
Note:
Bars indicated thus 20 @ 2'-5" c-c/c indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 30 dia.

STANDARD FILLET DETAIL

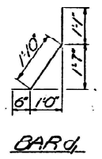
To determine "f". After all structural steel has been erected elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "f" above top of beams.



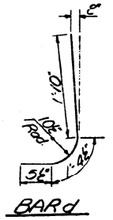
NEAR PIER — CROSS SECTION — NEAR MIDSPAN



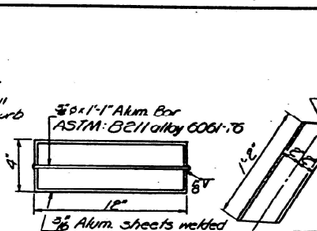
BAR a



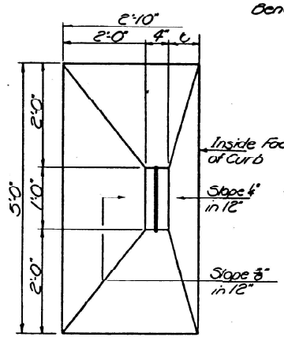
BAR d



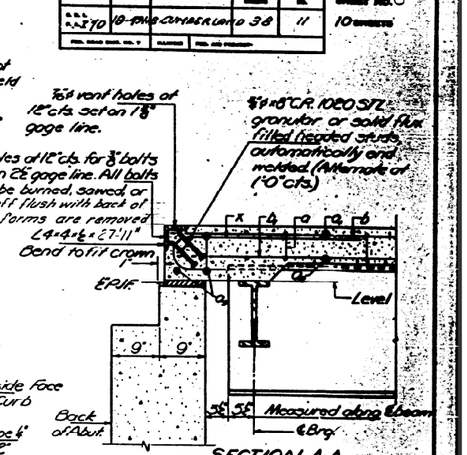
BAR d



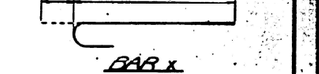
TYP. DETAIL AT DRAIN



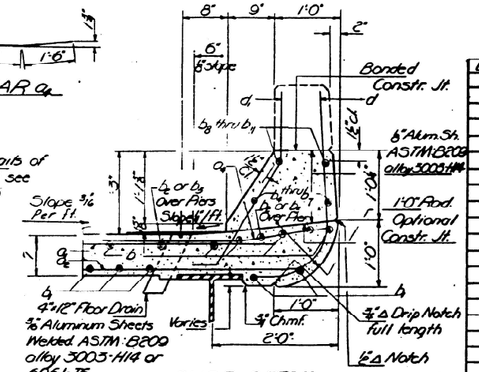
FLOOR DRAIN DETAIL



SECTION A-A

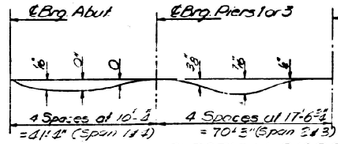


BAR x



CURB DETAIL

Cost of Aluminum Drains & Sheets shall be incidental to Class X Concrete



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	192	#5	29'-0"	
a1	193	#5	28'-0"	
a2	193	#5	29'-0"	
a3	6	#5	27'-6"	
a4	384	#6	4'-0"	
b	168	#5	32'-3"	
b1	352	#4	29'-6"	
b2	76	#6	13'-0"	
b3	38	#6	24'-0"	
b4	8	#5	24'-3"	
b5	16	#5	7'-3"	
b6	16	#5	7'-6"	
b7	8	#5	10'-3"	
b8	3	#9	33'-5"	
b9	16	#8	7'-3"	
b10	8	#8	51'-6"	
b11	8	#8	10'-3"	
d	450	#4	3'-8"	
d1	450	#5	3'-5"	
x	72	#6	5'-0"	C
Reinforcement Bars			Lbs.	42510
Structural Steel			Lbs.	16650
Class "X" Concrete			Cu. Yd.	180.2

Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt. = 6870 Lbs.

SUPERSTRUCTURE
FAI RT. 70 SEC. 18-49HB
CUMBERLAND COUNTY
STA. 621+41.81

DESIGNED	S. Finn	EXAMINED	19
CHECKED	[illegible]	PASSED	
DRAWN	Dick Ferrando	APPROVED	
CHECKED	G.M.		

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0053

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

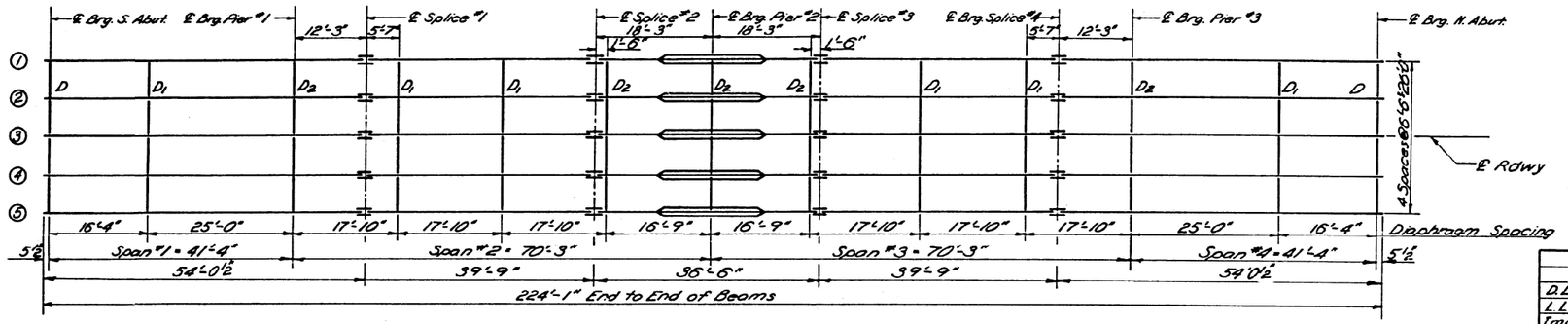
FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	41
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\dotillinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-018-0053.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	18-4HB	CUMBERLAND	38	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
10 SHEETS

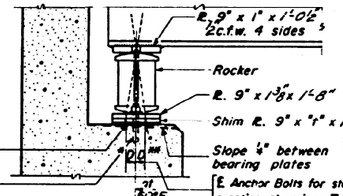


STEEL FRAMING PLAN
(All Beams are 33WF 118)

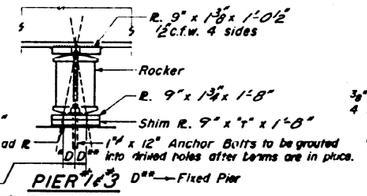
TABLE OF MOMENTS & REACTIONS - INTERIER BEAMS

	MOMENTS				REACTIONS		
	.4sp.1&4	Pier 1&3	.5sp.2&3	Pier 2	N.&S.Abut	Pier 1&3	Pier 2
D.L.	72.1	284.5	184	467.0	11.7	54.1	68.0
L.L.	173.9	203.0	253	267.8	23.6	31.1	33.0
Imp.	52.0	56.5	65	68.6	7.1	8.7	8.5
Total	298.0	544.0	502.0	803.4	42.4	93.9	109.5

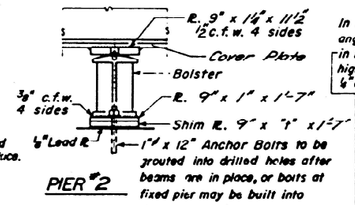
Moments are in Ft.-Kips
Reactions are in Kips



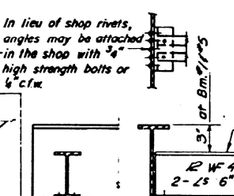
SECTION AT ABUTMENT



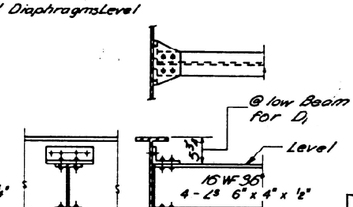
PIER #1 & #3



PIER #2



DIAPHRAGM D
8 Required

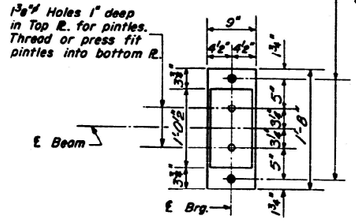


DIAPHRAGM D1 & D2
24 Required D1
20 Required D2

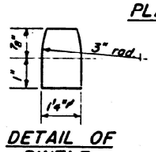
*ELEVATION TOP OF WF

Beam / Location	Bm 1&5	Bm 2&4	Bm 3
℄ Brg. N. & S. Abut	662.52	662.62	662.66
℄ Brg. Pier 1 & 3	662.88	662.98	663.02
℄ Splice 1 & 4	662.99	663.09	663.13
℄ Splice 2 & 3	663.15	663.25	663.29
℄ Brg. Pier 2	663.15	663.25	663.29

* Lower All Elevations 0.04 ft



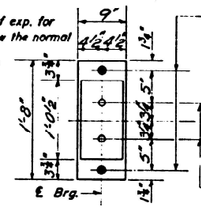
PLAN



DETAIL OF PINTLE

*D=1/8"/100 ft. of exp. for every 15° below the normal temp. of 50°.
D""=1/8"/100 ft. of exp. for every 15° above the normal temp. of 50°.

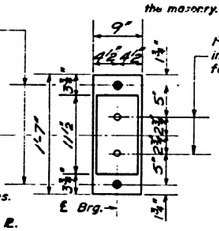
1 1/2"ø Holes for 1" x 12" anchor bolts. 2 1/2" x 2 1/2" x 5/16" ℄ Brg. washers under nut



PLAN

1 1/2"ø Holes for 1" x 12" anchor bolts 2 1/2" x 2 1/2" x 5/16" ℄ Brg. washers under nut

1 3/8"ø Holes 1" deep in top ℄ Brg. for pintles. Thread or press fit pintles into bottom ℄ Brg.

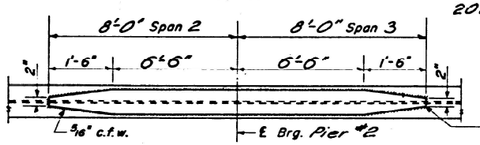


PLAN

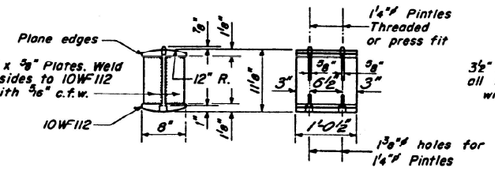
1 3/8"ø Holes 1" deep in top ℄ Brg. only for 1 1/4"ø pintles

VALUE OF "t"

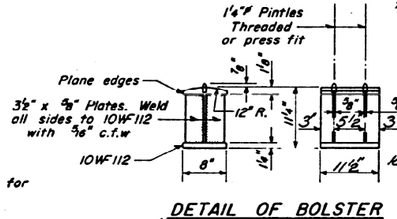
	Bm 1&5	Bm 2&4	Bm 3
t	0	0	3/16"



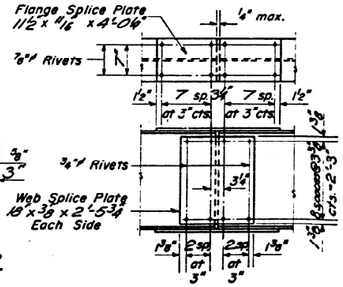
DETAIL OF COVER PLATE



DETAIL OF ROCKER AT ABUT. & PIER #1 & #3



DETAIL OF BOLSTER AT PIER #2



DETAIL OF SPLICE

DESIGNED	Stanley S. Lin
CHECKED	Tai Yung Ch
DRAWN	R.G. Bernatt, R.H. Summer, W.A. Sansaman Jr.
CHECKED	Tai Yung Ch

EXAMINED — Aug. 30 1965 — Chief Bridge Engineer
PASSED — Director of Highways
APPROVED — Chief Highway Engineer

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63.

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 18-4HB
CUMBERLAND COUNTY
STA. 621+41.81

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\dot\dotillinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-018-0053.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 018-0053

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

FAI 70	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CUMBERLAND	71	42
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

F.A.99 (S.B.I.12)	7-2B-I-DL	CLAY	3	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED STATE BOND ISSUE HIGHWAY

DISTRICT 7

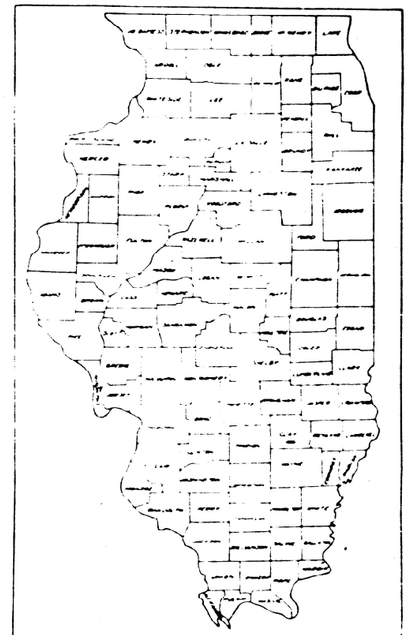
F.A. RTE. 99 (S.B.I. RTE.12)

SECTION 7-2B-I-DL

CLAY COUNTY

SLT-97-001-78

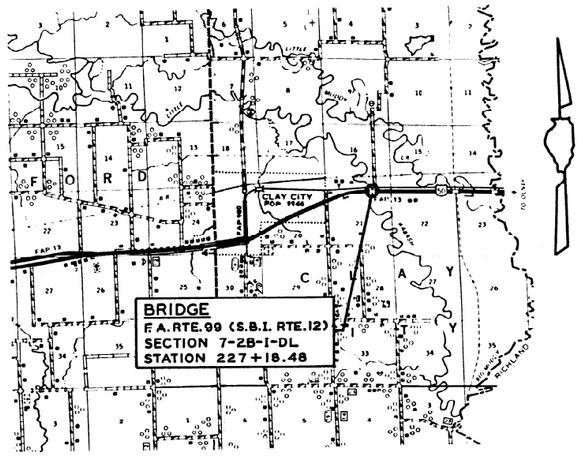
STR. NO. 013-0004



LOCATION OF SECTION INDICATED THUS:—

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET, GENERAL NOTES, SUMMARY OF QUANTITIES
2	GENERAL PLAN AND ELEVATION
3	ELASTOMERIC BEARING DETAILS, JACKING & CRIBBING DETAILS
	STANDARD 2298-4
	STANDARD 2299-7
	STANDARD 2300-1
	STANDARD 2301-3
	STANDARD 2302-3
	STANDARD 2303-4



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUBMITTED Aug. 30 1978
H.L. Weeks
DISTRICT ENGINEER

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JULY 1, 1976, THE "MIMEOGRAPHED SPECIFICATIONS" AND THE SPECIAL PROVISIONS, INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF REMOVING SIX (6) EXISTING ROCKER BEARINGS (FROZEN) AND REPLACING WITH NEW ELASTOMERIC BEARINGS AT PIER # 1.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS OR COPY OF THAT STANDARD INCLUDED IN THESE PLANS.

0 1 2 Mi.
APPROXIMATE SCALE

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
507004	FURNISHING & ERECTING STRUCTURAL STEEL	LBS.	3,760
	ELASTOMERIC BEARINGS	EACH	6
Z10260	JACKING AND CRIBBING	L.S.	1.0

180K

CLAY COUNTY SECTION 7-2B-I-DL F.A. ROUTE 99 (S.B.I. RTE.12)

013-0004

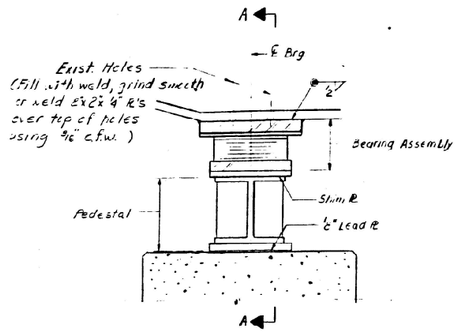
MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS 013-0004	FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -				D7 BRIDGE PAINTING 2026-1	CLAY	71	43
	CHECKED -	REVISED -					CONTRACT NO. 74D61		
PLOT DATE = 12/2/2025	DATE -	REVISED -		SCALE: SHEET 1 OF 14 SHEETS STA. TO STA.		ILLINOIS	FED. AID PROJECT		

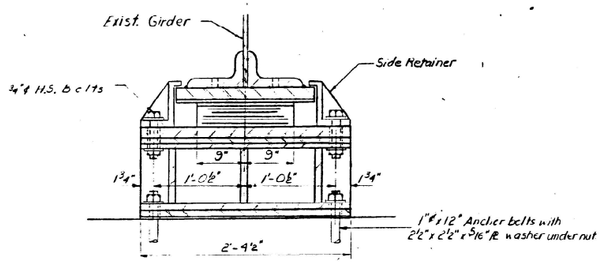
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 99 (S.B.I-12)	7-2B I-DL	CLAY	3	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

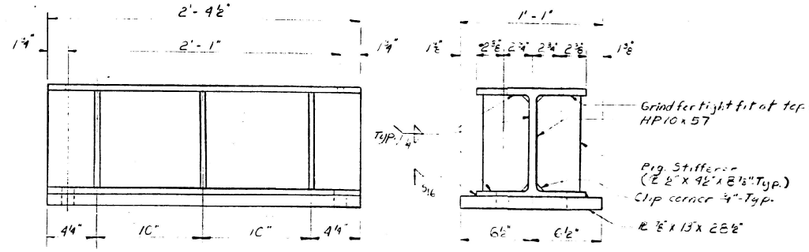
SHEET NO. 1
SHEETS 1



SECTION AT PIER 1



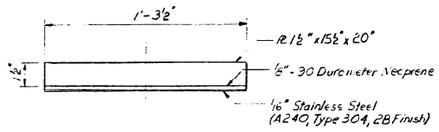
SECTION A-A



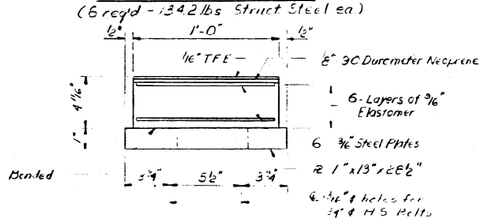
PEDESTAL
(6 req'd - 2536 lbs. Struct. Steel ea.)

Drill 7/8"ϕ holes in top flange of HP10x57 and 1¼"ϕ holes in bottom flange of HP10x57 and ⅜" thick plate.

TYPE II TFE ELASTOMERIC EXP. BRG.

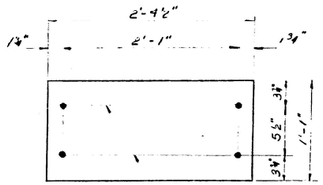


TOP BEARING ASSEMBLY
(6 req'd - 1342 lbs Struct Steel ea.)



BOTTOM BEARING ASSEMBLY
(6 req'd - 1069 lbs Struct Steel ea.)

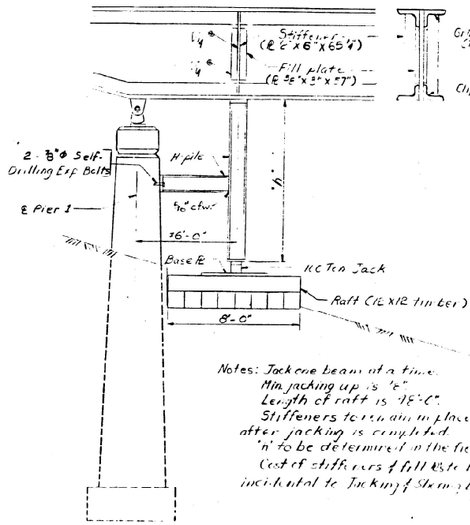
These Elastomeric Bearings contain features for which patents have been granted or applied for. Free license for projects governed by these standards may be obtained by applying to Tel-Pro Incorporated, Steckie, Illinois.



SHIM PL
(t"x 13" x 28½")

t : dimensions

Beam	t	no req'd
Fascia		none
1st Interior	1⅜"	2
2nd Interior	4"	2



Notes: Jack one beam at a time.
Min. jacking up is "t".
Length of raft is 48'-0".
Stiffeners to remain in place after jacking is completed.
"n" to be determined in the field.
Cost of stiffeners & fill plate to be incidental to Jacking & Storing Exist. Beams.

JACKING DETAILS

GENERAL NOTES

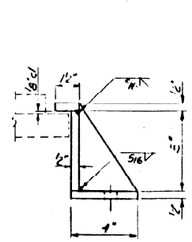
All new Structural Steel shall conform to ASTM Classification A-36.

All Structural Steel shall receive shop applied red lead paint and two field coats of aluminum paint to match existing paint.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Structural Steel	lbs	3760
Elastomeric Bearings	Ea.	6
Jacking and Storing Exist. Beams	L.S.	L.S.



SIDE RETAINER
(12 req'd - 22.5 lb Struct Steel ea.)

DESIGNED	Robert P. Krause
CHECKED	J. Gregg
DRAWN	Robert P. Krause
CHECKED	P. E.

EXAMINED — FEBRUARY 17 1977
PASSED
APPROVED

Br No 013-0004

NEW BEARINGS: DETAILS
FA Rt 99 SEC. 7-2-B-I
CLAY COUNTY
STATION 227+16.48

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

SCALE: | SHEET 2 OF 14 SHEETS | STA. | TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	44
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

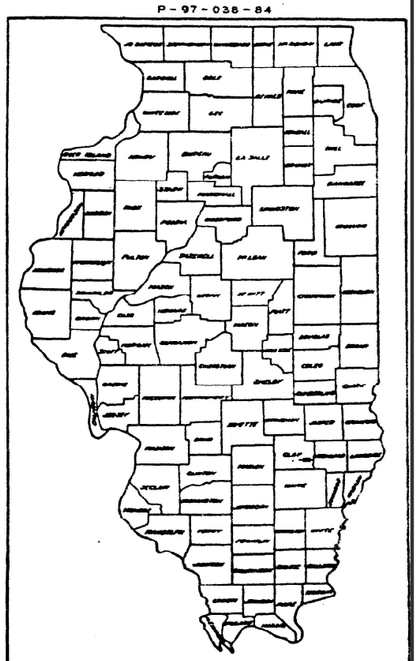
MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\dillinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

CLAY CO. SEC. (7-2-B)I I & R 6-27-86 27

4000-013

F.A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 99	(7-2-B)I	CLAY	18	1
F.H.W.A. PROJ. NO.	ILLINOIS	PROJECT		

P-97-038-84



LOCATION OF SECTION INDICATED THUS:-

INDEX OF SHEETS

PG. NO.	TITLE
1	COVER SHEET
2	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	STAGE CONSTRUCTION DETAILS
4-17C	BRIDGE PLANS
18	RETROFIT RAIL AND MISCELLANEOUS DETAILS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 18.

STD. 1886-4	SYMBOLS AND ABBREVIATIONS
STD. 2230-14	STEEL PLATE BEAM GUARD RAIL
STD. 2298-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2299-10	DESIGN OF TRAFFIC CONTROL DEVICES
STD. 2300-3	FLAGGER TRAFFIC CONTROL SIGN
STD. 2301-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2302-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2303-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2305-5	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2306-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2307-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2308-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STD. 2336-3	TRAFFIC BARRIER TERMINAL TYPE 1 & 1A
STD. 2340-4	TRAFFIC BARRIER TERMINAL TYPE 3 & 3A
STD. 2381	TEMPORARY EROSION CONTROL SYSTEMS
STD. 2383-1	TEMPORARY CONCRETE BARRIER
STD. 2409	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

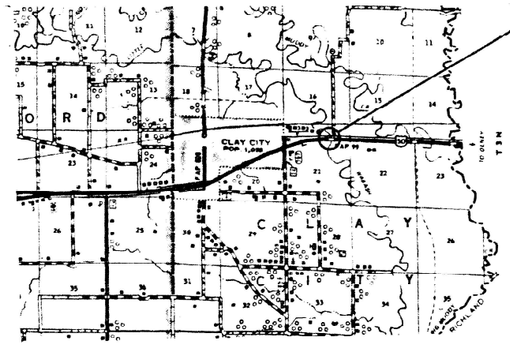
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A. RTE. 99 (U.S. RTE. 50)

SECTION (7-2-B) I

CLAY COUNTY

C-97-030-86



F.A. RTE. 99 (U.S. RTE. 50)
SECTION (7-2-B) I
CLAY COUNTY
BEGINS STA. 224 + 35.83
ENDS STA. 229 + 65.17

GROSS LENGTH OF PROJECT = 529.34 FT. = 0.100 MI.
NET LENGTH OF PROJECT = 529.34 FT. = 0.100 MI.

0 2 MI.
APPROXIMATE SCALE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Submitted April 25 86 M. A. Siegel
Recommended 5-23 86 W. W. Wilson
Approved 5-23 1986 John C. Baker
5-23 86 Thomas E. Hennessy
DIRECTOR OF HIGHWAYS

013-0004

CONTRACT NO. 42048

CLAY COUNTY SECTION (7-2-B) I F.A. ROUTE 99

7-99

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

SCALE: SHEET 3 OF 14 SHEETS STA. TO STA.

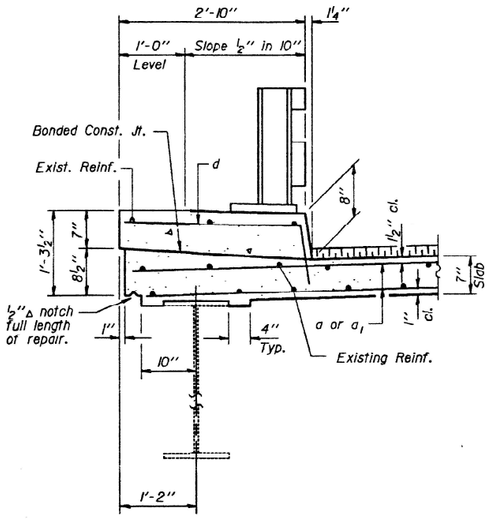
FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	45
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 3 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1217961D7774D61-sht-plan-013-0004.dgn

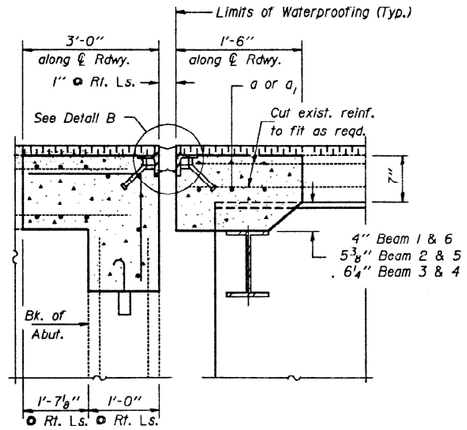
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 99	(1-2-B)II	CLAY	18	8

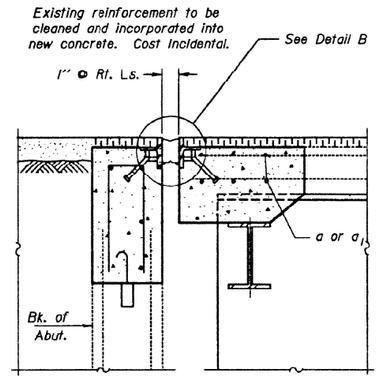
SHEET NO. 5
17 SHEETS



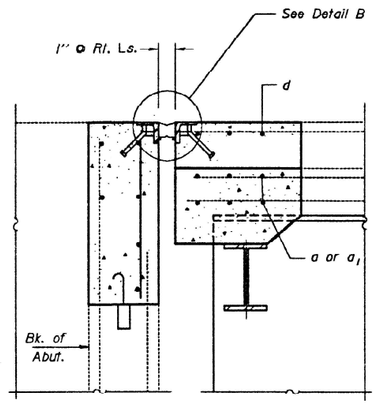
SECTION THRU SIDEWALK



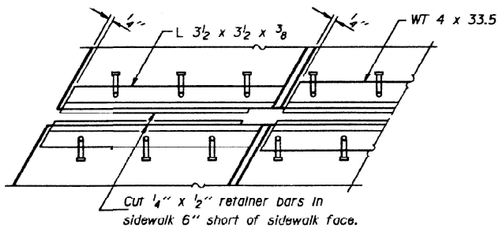
SECTION C-C



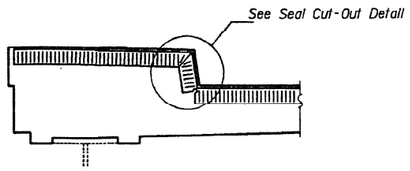
SECTION D-D



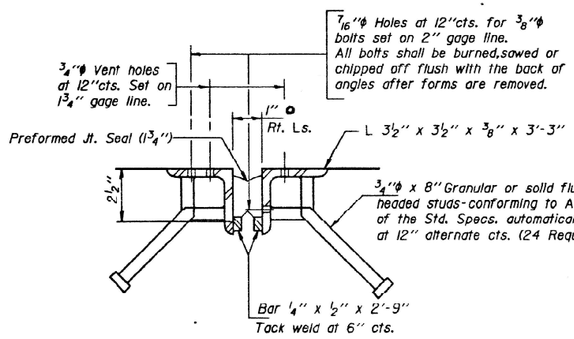
SECTION E-E



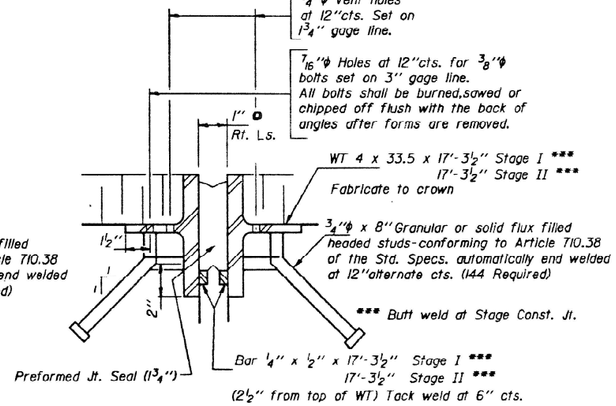
PLAN



TYPICAL SEAL TREATMENT AT SIDEWALK

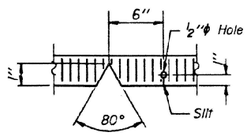


DETAIL B
(Thru Sidewalk)

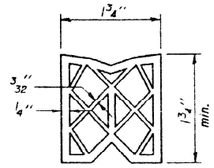


DETAIL B
(Thru Roadway)

Notes: See Sheet #6 of 17 for Bill of Material.
See Sheet #16 of 17 for details at abutments.



SEAL CUT-OUT



PREFORMED JOINT SEAL (1¾")

DESIGNED	Todd E. Adams	
CHECKED	Robert T. Bae	
DRAWN	J.T. Downing	
CHECKED	TEA RTB	

May 23 1986
EXAMINED Engineer of Bridge Design
PASSED James T. Kaufman Engineer of Bridges and Structures
APPROVED Director of Highways

S-1-D 12-1-83

SUPERSTRUCTURE DETAILS
AT ABUTMENTS
F.A. RT. 99 SEC. (7-2-B)I
CLAY COUNTY
STATION 227+18.48

MODEL: Existing Structure Plans 4 [Sheet]
FILE NAME: c:\pw_work\swdot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

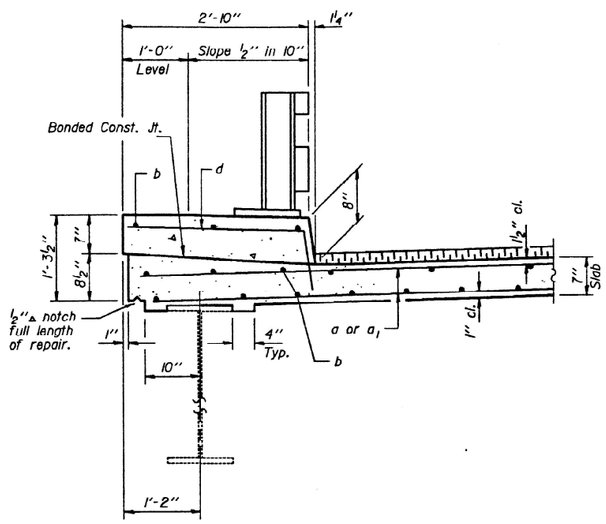
SCALE: | SHEET 4 OF 14 SHEETS | STA. | TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	46
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

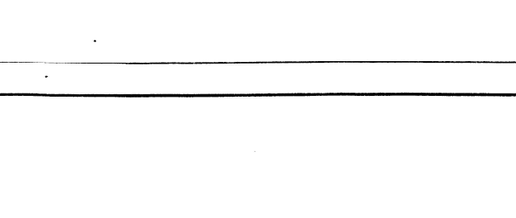
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 99	(7-2-B)I	CLAY	18	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

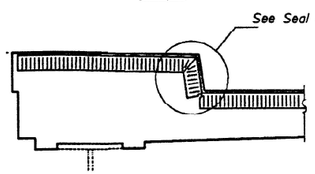
SHEET NO. 6
17 SHEETS



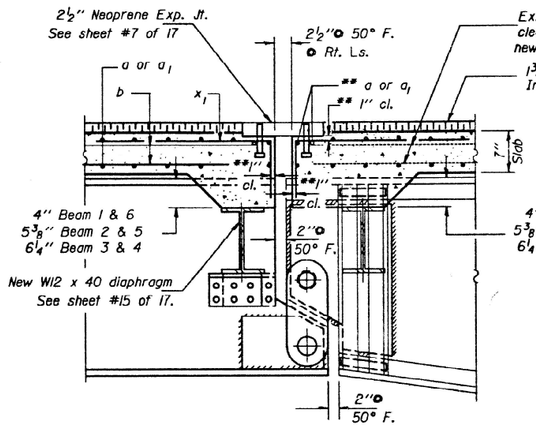
SECTION THRU SIDEWALK



PLAN

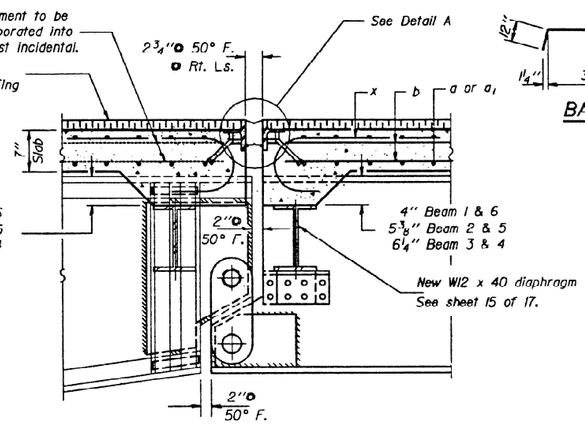


TYPICAL SEAL TREATMENT AT SIDEWALK



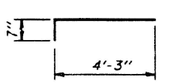
SECTION A-A
(Hinge #1)

** Place a & a1 bars in back of anchor bolts as shown if required to maintain 1" cl. (+0-⅛"). Anchor bolts should be tied to a & a1 bars.

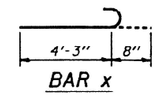


SECTION B-B
(Hinge #2)

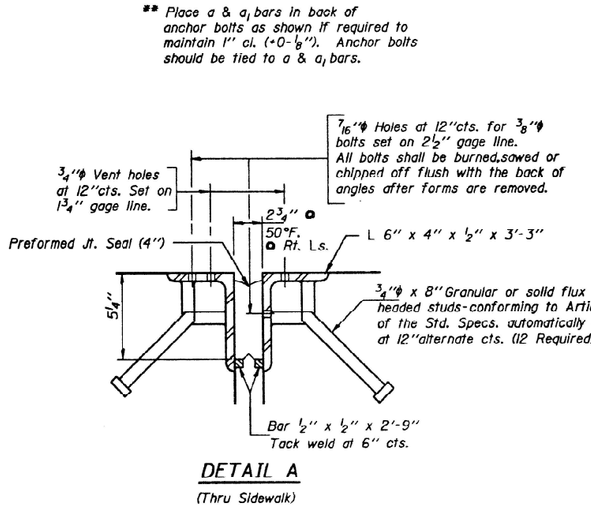
BAR d



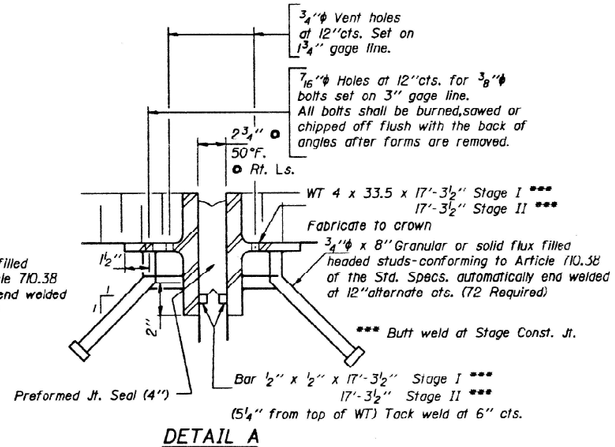
BAR x1



BAR x



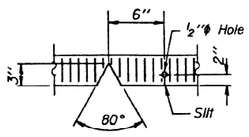
DETAIL A
(Thru Sidewalk)



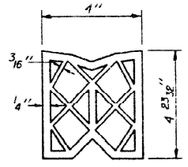
DETAIL A
(Thru Roadway)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	76	#5	22'-0"	
a1	76	#5	20'-3"	
b	138	#4	5'-9"	
d	64	#4	4'-0"	
x	124	#6	4' 11"	
x1	124	#6	4'-10"	
Reinforcement Bars			Lbs.	5870
Class X Concrete			Cu. Yds.	44.5



SEAL CUT-OUT



PREFORMED JOINT SEAL (4")

DESIGNED	Todd E. Ahrens	May 23 1983
CHECKED	Robert T. Bos	EXAMINED Raj D. Kaspar ENGINEER OF BRIDGE DESIGN
DRAWN	J.T. Downing	PASSED James T. Rahrun ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	TEA RTB	APPROVED DIRECTOR OF HIGHWAYS

S-1-D 12-1-83

SUPERSTRUCTURE DETAILS
AT HINGES
F.A. RT. 99 SEC. (7-2-B)I
CLAY COUNTY
STATION 227+18.48

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 10/9/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

SCALE: | SHEET 5 OF 14 SHEETS | STA. | TO STA.

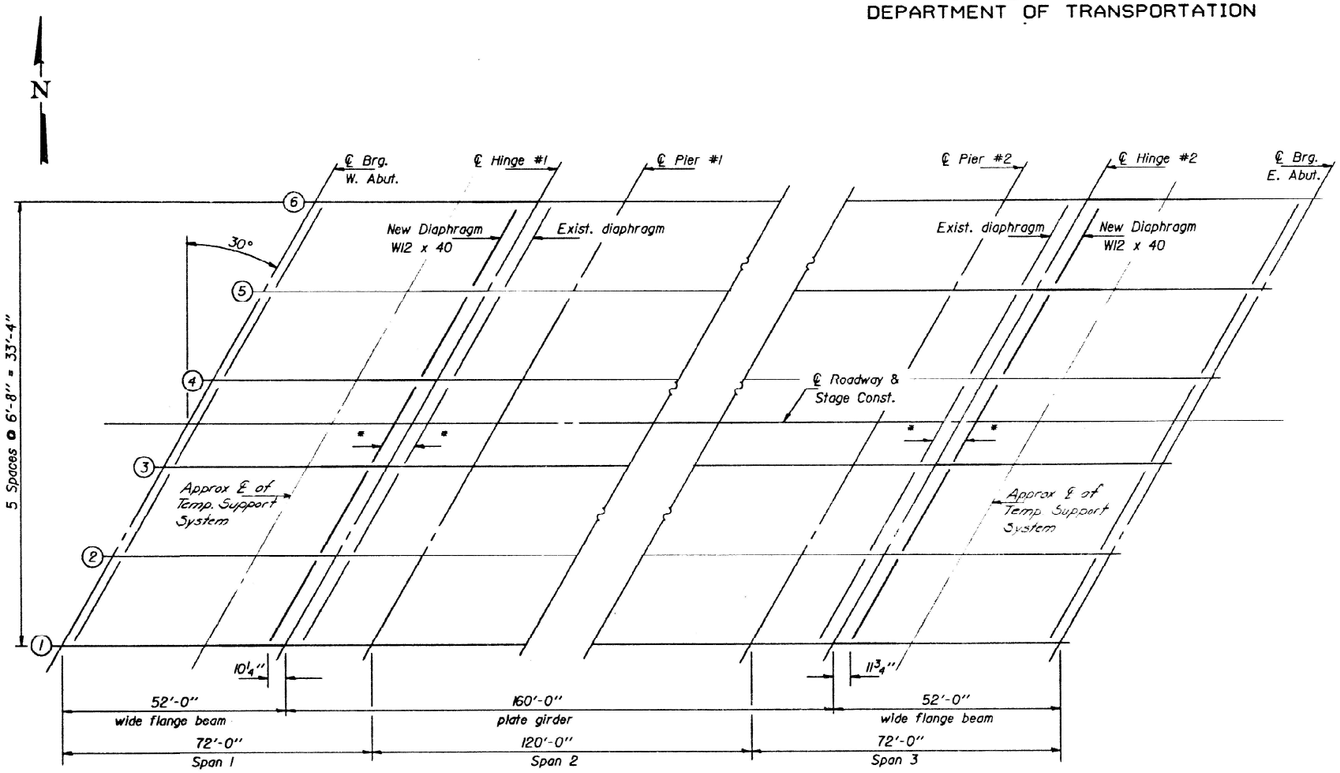
FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	47
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 5 [Sheet]
FILE NAME: c:\pw_work\pwtoolfillinois_gov_dakota.kincaid@illinois.gov\d1121795\D7T4D61-sht-sd1an-013-0004.dgn

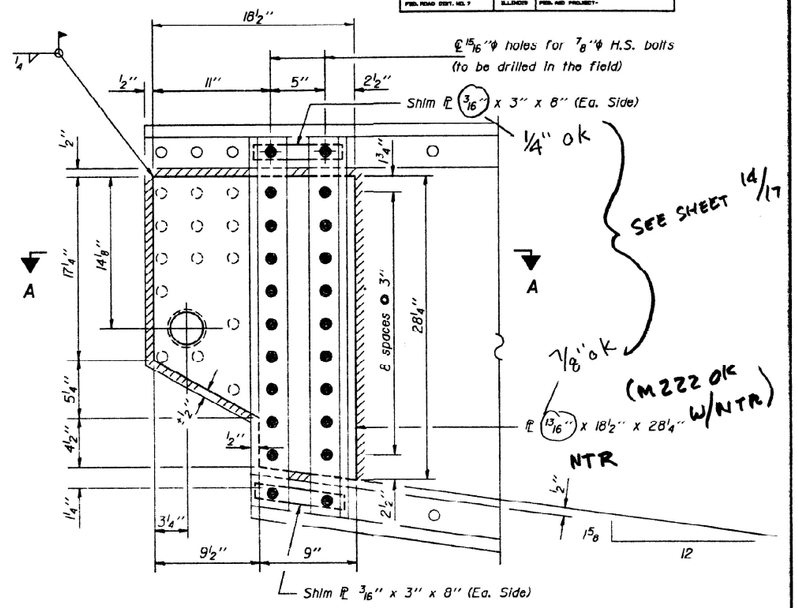
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 99	(7-2-B)I	CLAY	18	16

SHEET NO. 13
17 SHEETS



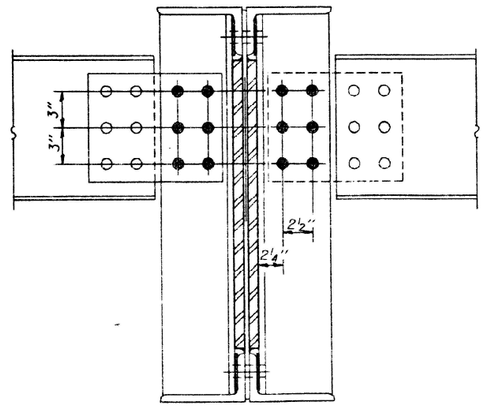
FRAMING PLAN



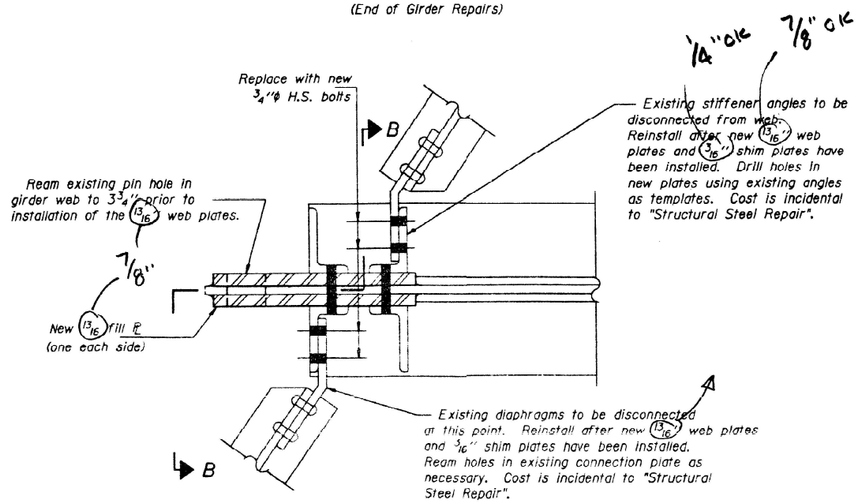
ELEVATION
(End of Girder Repairs)

* Diaphragms shall be installed during Stage I construction and temporarily supported until Stage II steel repairs are complete. Remove existing concrete drop beam as necessary to allow placement of the new diaphragm.
Cost is incidental to "Structural Steel Repair".

Note: The Contractor shall submit computations and details of the Temporary Support System for approval prior to commencing work at the hinges. The Temporary Support System shall be used to maintain the beam at its original elevation. Only one beam at a time shall be spliced while coinciding with stage construction.
Each existing beam in spans 1 & 3 shall be measured and accurately cut to facilitate splicing of the new 5 ft. beam section while reestablishing a 2 inch gap at (50° F.) between the beam and girder at the hinge. The pin and link plates shall be installed and aligned prior to tightening of the bolts in the splice.



SECTION B-B



SECTION A-A

DESIGNED	Todd E. Adams
CHECKED	Robert T. Bono
DRAWN	J.T.Downing
CHECKED	TEA RTB

May 23 1986
EXAMINED Craig D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED James T. Kaplan ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL REPAIRS
F.A. RT. 99 SEC. (7-2-B)I
CLAY COUNTY
STATION 227+18.48

MODEL: Existing Structure Plans 6 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

EXISTING STRUCTURE PLANS 013-0004

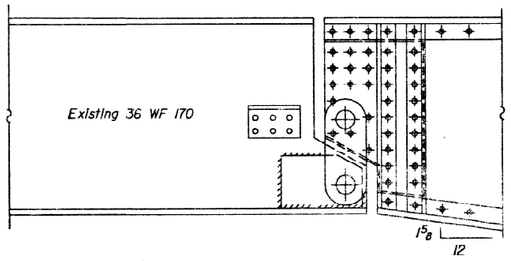
SCALE: SHEET 6 OF 14 SHEETS STA. TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	48
		CONTRACT NO. 74D61		
		ILLINOIS FED. AID PROJECT		

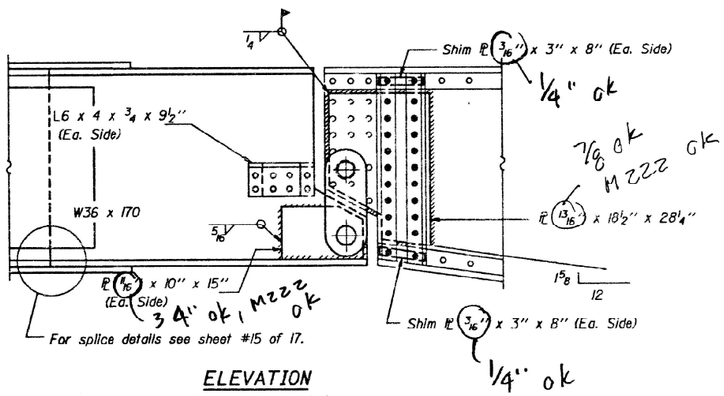
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 99	(7-2-B)I	CLAY	18	17

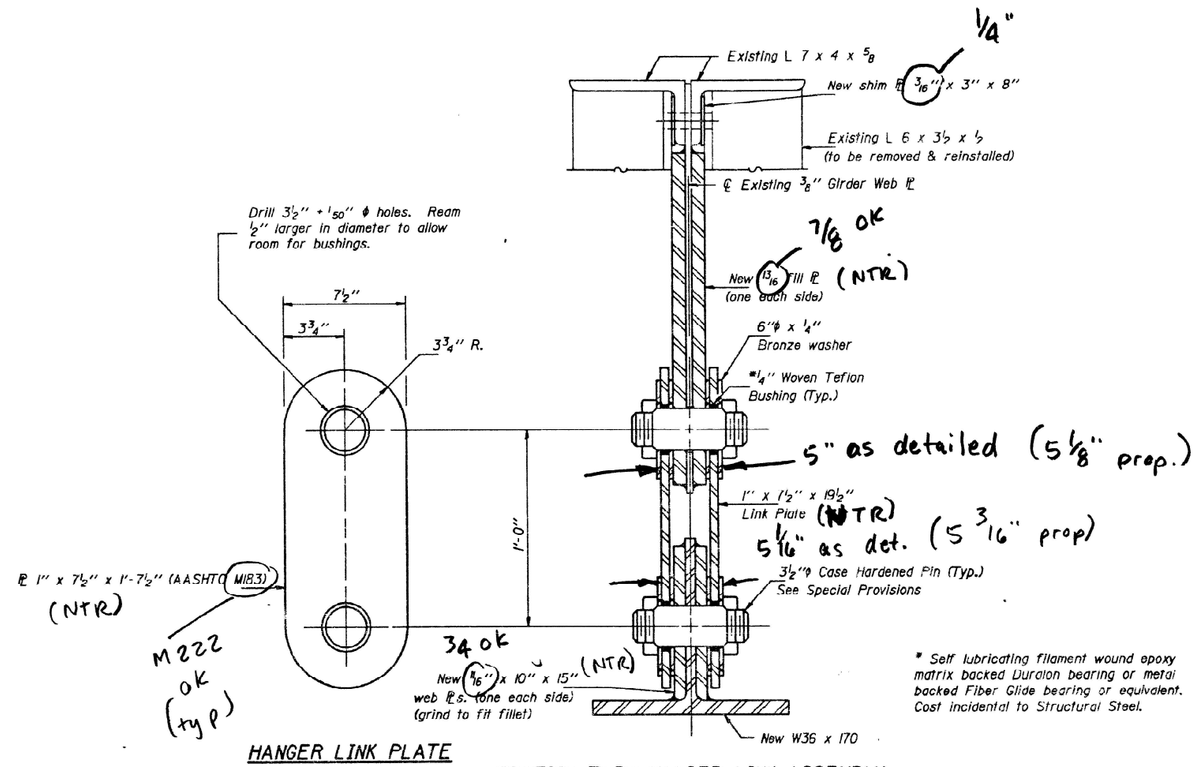
SHEET NO. 14
17 SHEETS



ELEVATION
(Existing Hinge Joint)



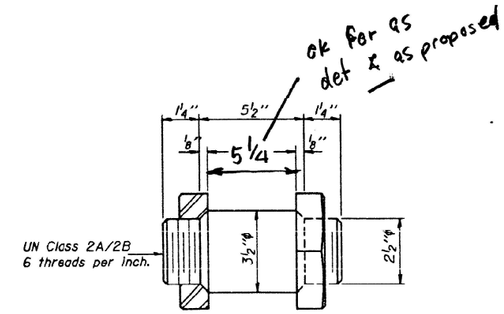
ELEVATION
(Repaired Hinge Joint)



HANGER LINK PLATE
(24 Required)

SECTION THRU HANGER LINK ASSEMBLY

* Self lubricating filament wound epoxy matrix backed Duralon bearing or metal backed Fiber Glide bearing or equivalent. Cost incidental to Structural Steel.



PIN DETAIL
Nuts should be snugged up finger tight and threads burred.

Increasing PL thickness' 1/16" due to non-availability of 11/16" & 13/16" PL oked by TEA
Also, allowing substitution of M222 steel for M183 ok (with proper surface prep) since M183 mat'l not avail w/NTR (M222 will be NTR & of proposed thicknesses.

JE 9/16/86

STRUCTURAL STEEL REPAIRS
F.A. RT. 99 SEC. (7-2-B)I
CLAY COUNTY
STATION 227+18.48

DESIGNED	[signature]
CHECKED	Robert T Boro
DRAWN	J.T.Downing
CHECKED	TEA RTB

May 23 1986
EXAMINED Iraj I. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn — ENGINEER OF BRIDGE AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

MODEL: Existing Structure Plans 7 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

SCALE: SHEET 7 OF 14 SHEETS STA. TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	49

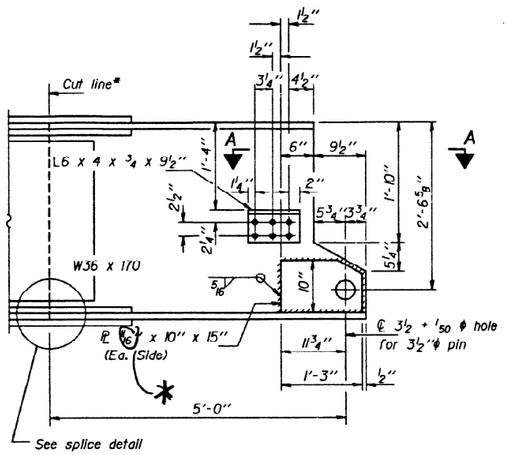
CONTRACT NO. 74D61
ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 99	(7-2-B)I	CLAY	18	17A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
17 SHEETS

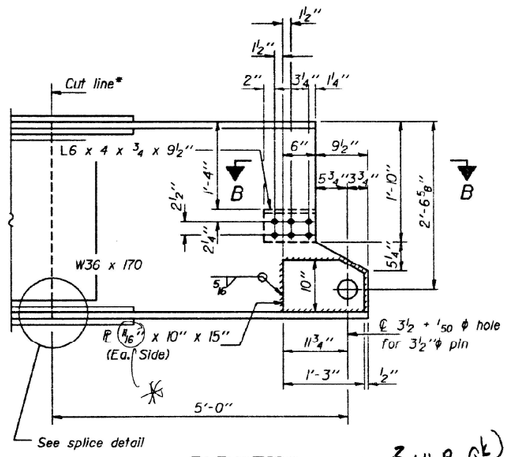
* Measurement and marking of the cut line shall be approved by the Engineer prior to any cutting of the beam.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

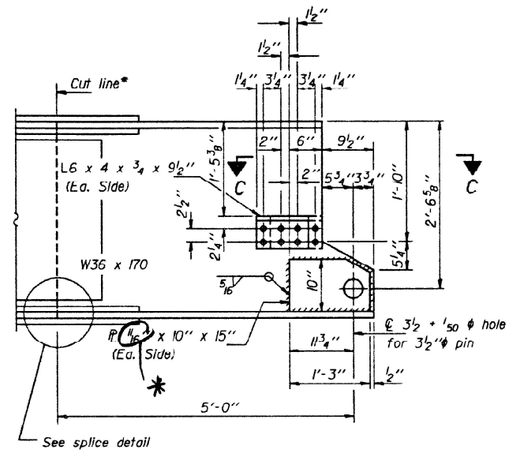
Beam #6 - Hinge #1
Beam #1 - Hinge #2
(2 Required)



ELEVATION

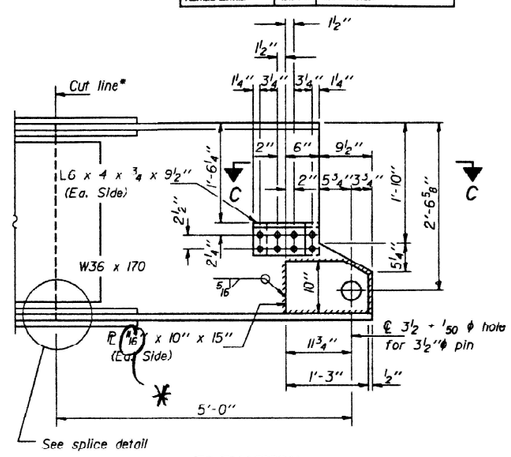
Beam #1 - Hinge #1
Beam #6 - Hinge #2
(2 Required)

* 3/4" PL ok
M222 ok
(NTR) 14/17



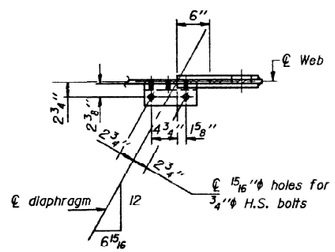
ELEVATION

Beam #2 & #5 - Hinge #1
Beam #2 & #5 - Hinge #2
(4 Required)

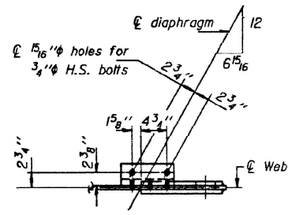


ELEVATION

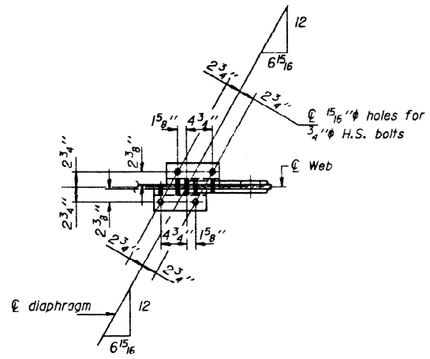
Beam #3 & #4 - Hinge #1
Beam #3 & #4 - Hinge #2
(4 Required)



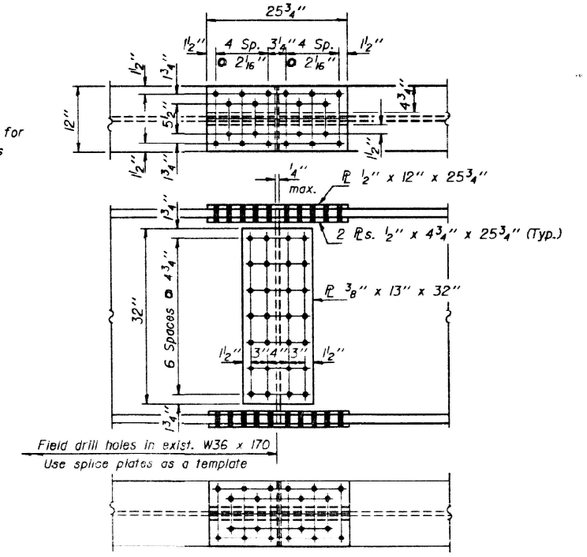
SECTION A-A



SECTION B-B

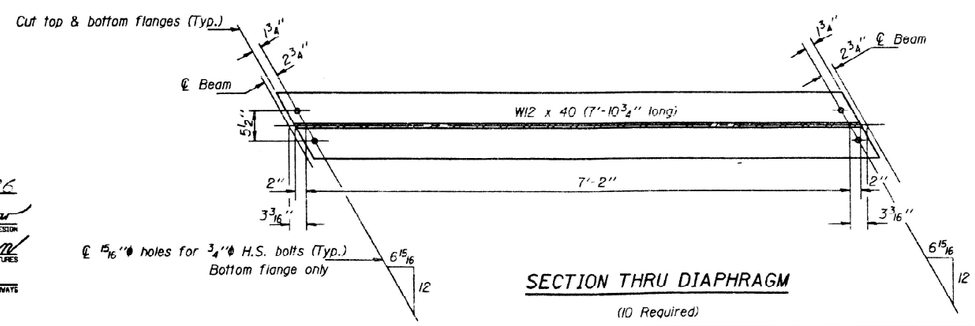


SECTION C-C



SPLICE DETAIL

All holes in splice 15/16" ϕ for 7/8" ϕ H.S. bolts.



SECTION THRU DIAPHRAGM

(10 Required)

DESIGNED	Todd E. Atkins	
CHECKED	Robert T. Bono	
DRAWN	J.T.Downing	
CHECKED	TEA	RTB

May 23 1996
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGE AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL REPAIRS
F.A. RT. 99 SEC. (7-2-B)I
CLAY COUNTY
STATION 227+18.48

MODEL: Existing Structure Plans 8 [Sheet]
FILE NAME: c:\pw_work\dwidot\illinois.gov_dakota.kincaid@illinois.gov\d112179b\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

SCALE: | SHEET 8 OF 14 SHEETS | STA. | TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	50
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

BOND ISSUE ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 13	7-2-B	CLAY	38	1
	7-2-F	RICHLAND	109	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	FI-70(10)	
FA 13	7		147	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES

PLAN	1 INCH 100 FT.
PROFILE, HOR.	1 INCH 100 FT.
PROFILE, VERT.	1 INCH 10 FT.
CROSS SECTIONS	1 INCH 5 FT.

7-2B,
F.A. ROUTE 13 SEC. 7, CLAY & RICHLAND CO'S.
PROJECT FI-70(10)

INDEX OF SHEETS

SHEET No. 1 TITLE SHEET
" " 2 TYPICAL CROSS-SECTIONS, SPECIAL ANCHOR WALLS, SPECIAL
" " 3 SUMMARY OF QUANTITIES, SPECIAL GRADING SECTION
" " 4 GRADING SECTION, PIPE CULVERT & PAVED DITCH, RUNOFF DEPTH OF INLETS TYPES 1 & 2, SPECIAL HEAD WALL & EARTH RIDGE
" " 5 LOCATIONS OF SPECIAL HEAD WALLS & SPECIAL EARTH RIDGE, & SCHEDULE OF CLASS X CONCRETE
" " 6 STANDARDS 730, 134 & 1107
" " 7 STANDARDS 1076, 1847, 1876 & 1097
" " 8 STANDARDS 20172, 068 & 1906
" " 9 STANDARD 1999
" " 10 STANDARDS 1171 & 20158 & 8310
" " 11 STANDARDS 1972, 766R & 19
" " 12 STANDARD 8132
" " 13 SPECIAL CULVERT DESIGN STA 42+53(), 52+20(), 72+82(), 182+24()
" " 14 SPECIAL CULVERT DESIGN STA 210+30(), 330+34(), 426+96()
" " 15 SPECIAL CULVERT DESIGN STA 135+32()
" " 16 SPECIAL CULVERT DESIGN STA 151+42()
" " 17 SPECIAL CULVERT DESIGN STA 151+42()
87039 PLAN & PROFILE STA. 4+93 TO STA. 428+50 & MARGINAL ROADS & APPROACHES
39781A7 CROSS-SECTIONS

SECTION 7-2-B INCLUDES:

Construction of a steel I-beam and steel deck girder bridge spans: 2@72'-0", 1@120'-0" over the Little Wabash River at Sta. 227+18.48(), with the exception of furnishing and fabricating of Struct. Steel and metal handrail furnishing and applying the shop coat of paint and delivery of the materials fab. the unloading point Clay City, Illinois;

Construction of a steel Ebeam bridge spans 1@40'-0", 2@55'-0", 2@61'-0", 1@76'-0" over the Little Muddy River at Sta. 291+65.75(), with the exception of furnishing and fabricating of Structural Steel and metal handrail, furnishing and applying the shop coat of paint and delivery of the materials fab. the unloading point Clay City, Illinois;

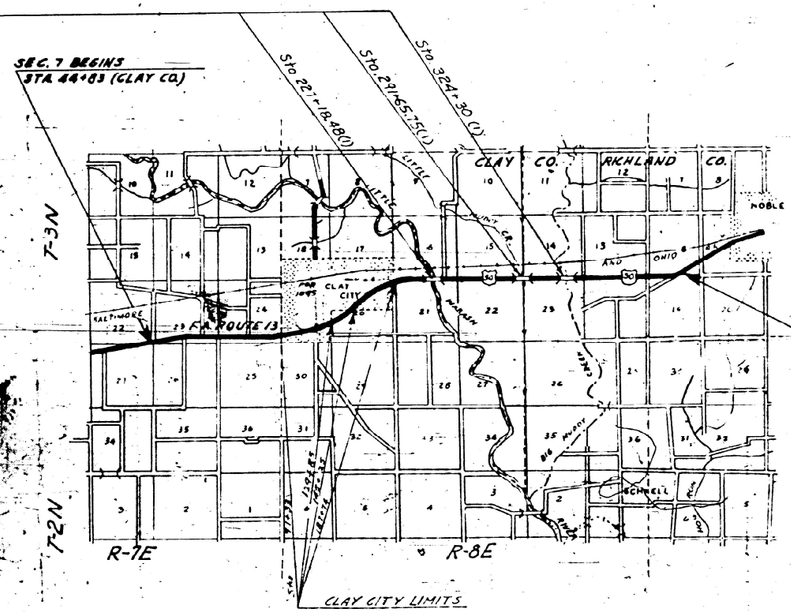
Construction of a steel I-beam bridge spans 8@40'-0", 1@50'-0", 2@61'-0", 1@76'-0" over Big Muddy Creek at Sta. 324+30(), with the exception of furnishing and fabricating of Struct. Steel and metal handrail, furnishing and applying the shop coat of paint and delivery of the materials fab. the unloading point Clay City, Illinois.

SECTION 7-2-F INCLUDES:

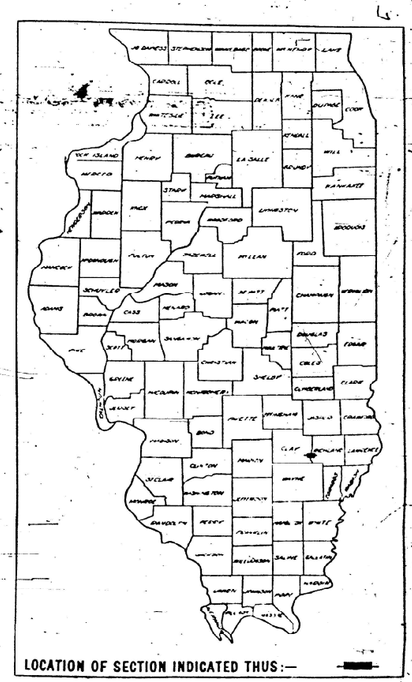
Furnishing and fabricating of struct. steel and metal handrail furnishing and applying the shop coat of paint and delivery of the struct. steel and metal handrail fab. Clay City, Illinois for a steel I-beam and steel deck girder bridge spans 2@72', 1@120' over the Little Wabash River at Sta. 227+18.48();

Furnishing and fabricating of Struct. Steel and metal handrail furnishing and applying the shop coat of paint and delivery of the Struct. Steel and metal handrail fab. Clay City Illinois for a steel I-beam bridge Spans: 4@40'-0", 2@55'-0", 2@61'-0", 1@76'-0" over the Little Muddy River at Sta. 291+65.75();

Furnishing and fabricating of Struct. Steel and metal handrail furnishing and applying the shop coat of paint and delivery of the struct. steel and metal handrail fab. Clay City, Ill. for a steel I-beam bridge Spans: 8@40'-0", 1@50'-0", 2@61'-0", 1@76'-0", over Big Muddy Creek at Sta. 324+30().



LAYOUT
APPROXIMATE SCALE 1" = 1 MILE
NET LENGTH OF LAYOUT 43,181.95 FEET = 8.1784 MILES



LOCATION OF SECTION INDICATED THUS:—

OMISSIONS
STA. 225+45.75 TO STA. 228+34.25
STA. 289+20.75 TO STA. 294+10.75
STA. 380+66.7 TO STA. 387+93.25

EQUATION STA. 4+00 BACK = STA. 0+00 AHEAD

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED: MAY 15 19 71
R. H. MAJOR
DIRECTOR
RECOMMENDED FOR APPROVAL
CHIEF ENGINEER
PASSED
CHIEF CLERK
APPROVED
SECRETARY

7-25

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
RECOMMENDED FOR APPROVAL:
[redacted]
DISTRICT ENGINEER — DATE
APPROVED:
[redacted]
DIVISION ENGINEER — DATE

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCUTRE PLANS 013-0004

SCALE: | SHEET 9 OF 14 SHEETS | STA. | TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	51
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 9 [Sheet]
FILE NAME: c:\pw_work\dot\dotillinois.gov_dakota.kincaid\d1127f96\D7742b1-slhl-plan-013-0004.dgn

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

F.A. ROUTE NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 13	7-2-B 7-2-F	Clay Richland	38 17	6 3
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
11 SHEETS

S.N. South end East Abutment Bridge Seat)
Old Bridge - E. Abt. 223+15, Elev. 426.02

Existing Structure Steel Thru Truss (Span 4 @ 170')
on Concrete Abutments on piling
to remain on North Lane.

ELEVATION

Scale: 1" = 15'-0"

PLAN

Scale: 1" = 15'-0"

BORING DATA

Station 226+33
on ℄

Elev.	Depth	
419.6		
413.6	6	Very Soft
407.6	12	
401.6	18	Soft
395.6	24	Medium Soft
393.3	26.3	
392.6	27	
390.6	29	
387.6	32	
385.6	34	
380.65	38.95	Hard
380.6	39	Very Hard

Station 226+97
3' Lt. ℄

Elev.	Depth	
410.6		
404.6	6	Soft
402.6	8	Silty Clay (Damp)
398.6	12	
394.6	16	Soft Sandy Clay
392.6	18	Silty Clay (Wet)
389.1	21.5	
386.6	24	Hard Sandy Loam (Wet)
384.6	26	
382.6	28	Very Hard Silty Clay
380.6	30	
380.1	30.5	

Station 227+45
on ℄

Elev.	Depth	
420.1		
414.1	6	Soft
408.1	12	
402.1	18	Medium Stiff
396.1	24	
393.2	26.9	Stiff
390.2	29.8	
386.0	34	
382.0	38	Medium Hard
381.4	38.6	Very Hard
379.75	40.25	

Station 227+97.1
11' Rt. ℄

Elev.	Depth	
419.4		
416.5	2.9	Very Soft Silty Clay (Damp)
413.4	6	
409.9	9.5	Medium Stiff Silty Clay (Damp)
406.4	13	Stiff Sand Clay (Moist)
396.4	23	Stiff Sandy Loam Gray Coarse (Wet)
380.9	38.5	Very Hard Lightly Cemented Sand to Sandstone
379.4	40	

STATION 227+18.48(1)
BUILT 19 BY
STATE OF ILLINOIS
F.A. RTE. 13 SEC. 7-2BF
F.A. PROJ. F.I-70(10)
LOADING H20-516

LETTERING FOR NAME PLATE
See Standard 1882

TOTAL BILL OF MATERIAL
Section 7-2-B

Item		Superstructure	Substructure	Total
Class X Concrete	Cu. Yds.	253.6	49.8	303.4
Class A Concrete	Cu. Yds.		274.5	274.5
Handrail Concrete	Cu. Yds.	1.6		1.6
Reinforcement Bars	Lbs.	45050	11380	56430
16" R.C. Piles (85'lg.)	Lin. Ft.		340	340
Untreated Piles (20'lg.)	Lin. Ft.		1400	1400
Test Piles (Conc.)	Each		2	2
Test Piles (Timber)	Each		2	2
Slope wall	Sq. Yds.		422	422
Class A Excav. for Structure	Cu. Yds.		340	340
Class B Excav. for Structure	Cu. Yds.		160	160
Name Plates	Each	1		1
Borrow Excavation	Cu. Yds.		1240	1240
Tree Removal in Dia. ("Foot")	In. Dia.		172	172
Tree Removal in Dia. (over 18 dia)	In. Dia.		210	210
Structural Steel	Lbs.	408640		408640
Metal Handrail	Lin. Ft.	534		534

TOTAL BILL OF MATERIAL
Section 7-2-F

Item				
Structural Steel	Lbs.	408640		408640
Metal Handrail	Lin. Ft.	534		534

GENERAL NOTES

Handrail Concrete shall be used in Handrail Posts.
Class X Concrete shall be used in superstructure and Abutments.
Class A Concrete shall be used in Piers.
Concrete floor slab shall be finished in accordance with Art. 61.3(e) of the Standard Specifications and shall be poured in one continuous operation within the limits of the longitudinal bonded joints. For each unit.
All connections shall be riveted.
All holes for splices shall be punched 1/16" and reamed to proper size with all girders assembled in shop in proper position with or without cross frames in place. Leave assembled for shop inspection.
Structural steel to receive one shop coat of red lead paint after inspection and two field coats of aluminum paint. Red lead paint for shop coat shall be furnished and applied by Contractor for Sec. 7-2-A. Paint for field spotting and two coats aluminum paint shall be furnished and applied by Contractor for Sec. 7-2-B.
All rollers, rockers, shoes, bearing plates, load plates, and anchor bolts shall be furnished painted and set in accordance with Art. 14.3 (a) of the Standard Specifications and are included for payment as structural steel.
Estimated Weight: 9335 Lbs.
For Metal Handrail see Special Provisions.
Anchor Bolts shall be set before riveting diaphragms over Abutments and Piers.
Contractor shall drive two untreated timber test piles and two precast concrete test piles in permanent locations as directed by the Engineer before ordering the remainder of the timber piles or casting the remainder of the concrete piles.
Layout of Slopewall may be varied to suit ground conditions as directed by Engineer in the field.
Embankment to be constructed in accordance with Sec. 16 of the Standard Specifications, before Superstructure is placed from Borrow Excavation.
Boring Data are shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.
Borrow Excavation shall be obtained from borrow pit right of Stations 210+00 to 222+00

DESIGN STRESSES

f_s	18000 #/in²	Structural
f_s	20000 #/in²	Reinforcement
f_c	1400 #/in²	
n	10	

H20-516 Loading

WATERWAY INFORMATION

Waterway Area	Present	Proposed
Little Wabash	1529 sq. ft.	1529 sq. ft.
Little Muddy	3086 sq. ft.	3423 sq. ft.
Big Muddy	6178 sq. ft.	6273 sq. ft.
Overflow Bridges	4810 sq. ft.	
Total	15331 sq. ft.	11397 sq. ft.
Drainage Area		2,430 Acres
Character		Level, Rolling
Equiv. C' Talbot		.482

GENERAL PLAN & ELEVATION
LITTLE WABASH RIVER
PROJECT F.I-70 (10)
F.A. RTE. 13 (SBI RTE. 12) SEC. 7-2-BF
CLAY COUNTY
STA. 227+18.48 (1)

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS 013-0004			
	DRAWN -	REVISED -					
	CHECKED -	REVISED -		SCALE:	SHEET 10 OF 14 SHEETS	STA.	TO STA.
PLOT DATE = 12/2/2025	DATE -	REVISED -					

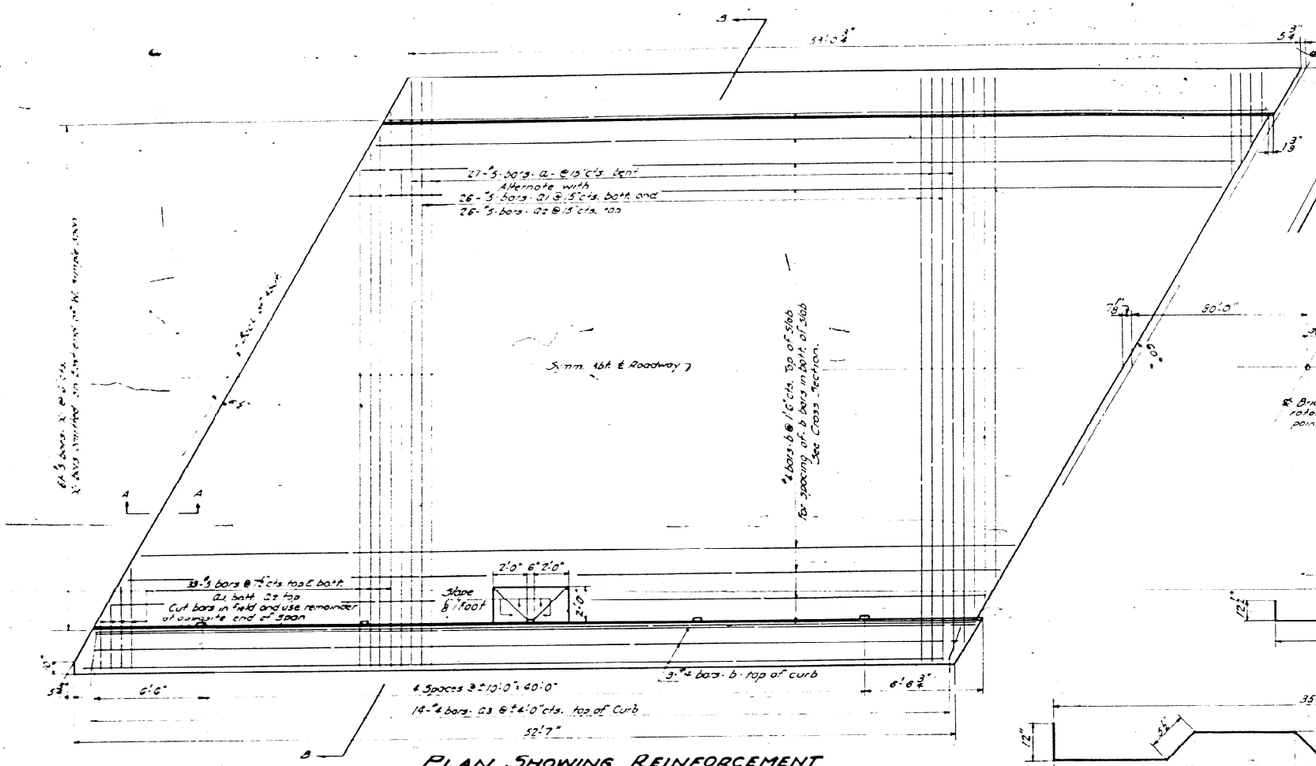
FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	52
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 10 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid\d0\illinois.gov\d1121796\D774D61-sht-gen-013-0004.dgn

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

F.A. Route	Section	County	Total Sheets	Sheet No.
FA 13	7-2B	Clay-Richland	38	7

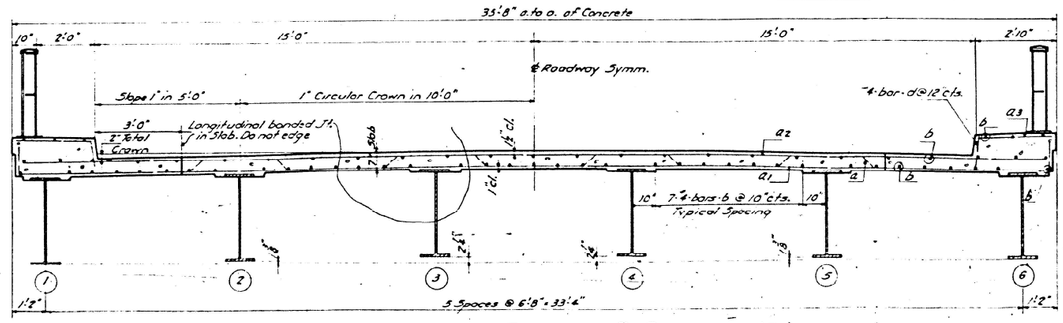
SHEET NO. 2
11 SHEETS



PLAN SHOWING REINFORCEMENT
Scale: 1/4" = 1'-0"

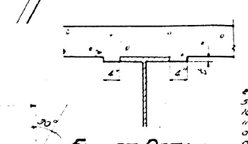
West Simple Span shown. East Simple Span Symm. when rotated 180° about ℄ Bridge except as shown.

CURB AND FLOOR DRAIN DETAIL
Scale: 1" = 1'-0"



SECTION B-B
Scale: 3/16" = 1'-0"

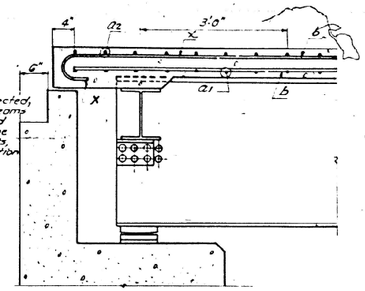
DEAD LOAD DEFLECTION DIAGRAM
℄ Slab only



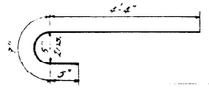
FILLET DETAIL

℄ Bridge Symm when rotated 180° abt this point except as shown

Method of Determining "f"
After all Structural Steel has been erected, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflection for these points, determined from the dead load deflection diagram. The elevations so attained subtracted from the theoretical grade elevations minus floor thickness, equals the fillet heights, f.

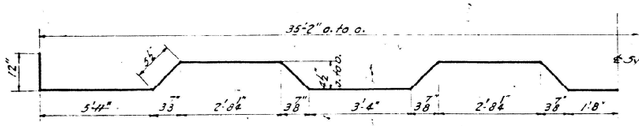


SECTION A-A



BAR X

BAR a1



BAR a

BILL OF MATERIAL

BAR	NO.	SIZE*	LENGTH	SHAPE
a	54	#5	39'-3	
a1	118	#5	37'-3	
a2	118	#5	33'-0	
a3	56	#4	2'-6	
b	288	#4	27'-6"	
d	216	#4	1'-0"	
X	183	#5	5'-6"	
Class X Concrete			Cu. Yds.	103.2
Reinforcement Bars *			Lbs.	17630

* All bars to be round ASTM A305-49. The size number is the number of 8ths in the nominal diameter.

SLAB DETAILS
LITTLE WABASH RIVER
PROJECT FT-7060
F.A. RTE. 13 (81 RTE. 12) SEC. 7-2-B
CLAY COUNTY
STA. 227+18.48(1)

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0004

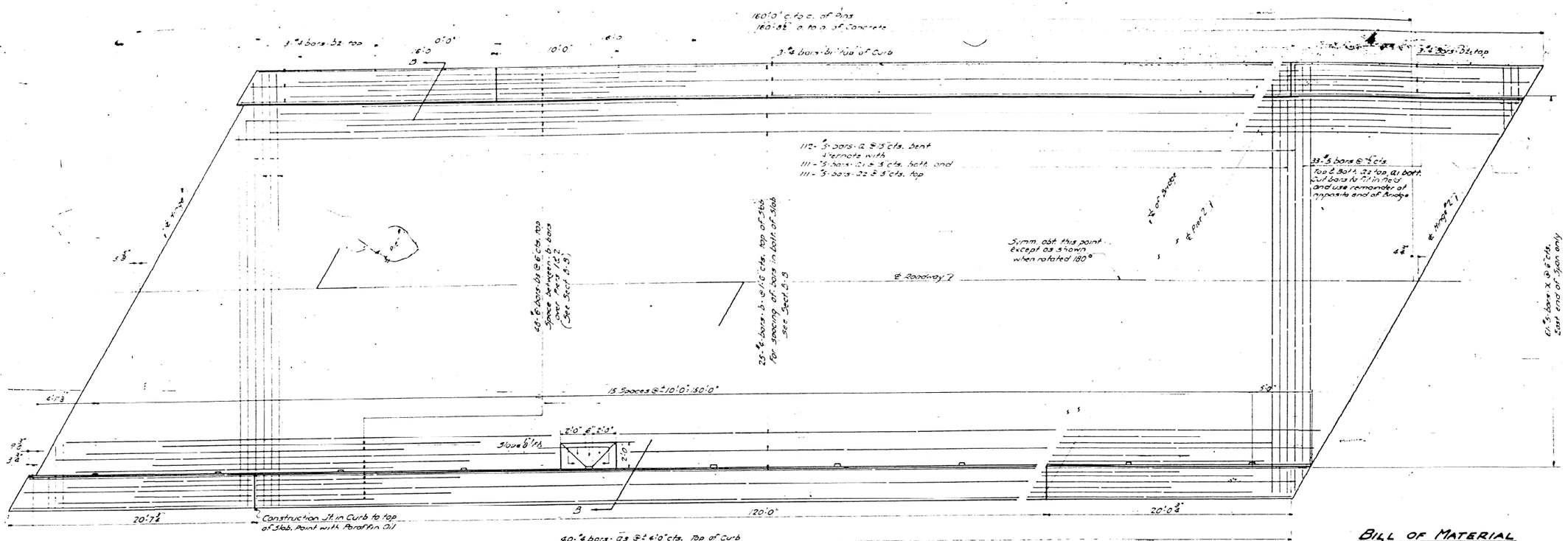
SCALE: | SHEET 11 OF 14 SHEETS | STA. | TO STA.

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	53
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 11 [Sheet]
FILE NAME: c:\pw_work\pwfot\illinois.gov\ dakota.kincaid@illinois.gov\d1121795\D7742061-sht-pln-013-0004.dgn

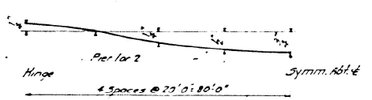
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.					
13	7-2-8	Clay-Richland	38	8	SHEET 3

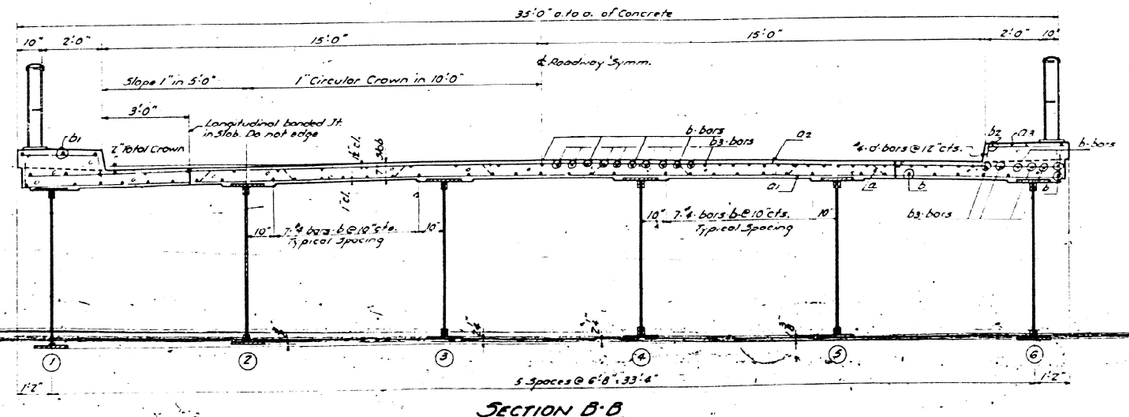


PLAN SHOWING REINFORCEMENT
Scale ¼"=1'-0"

Note: For Fillet Detail Curb and Floor Drain Detail, and detail of bars-a, a1 and bar-X See Sheet 2



℄ DEFLECTION DIAGRAM
℄ Slab only



SECTION B-B
Scale: 1/16"=1'-0"

BILL OF MATERIAL

BAR	No.	SIZE*	LENGTH	SHAPE
a	112	#5	38'-3"	
a1	144	#5	37'-3"	
a2	144	#5	35'-0"	
a3	80	#4	2'-6"	
b	372	#4	27'-6"	
b1	30	#4	24'-9"	
b2	12	#4	19'-0"	
b3	96	#6	26'-0"	
d	320	#4	1'-0"	
X	61	#5	5'-6"	
Class-X-Concrete			Cu. Yds.	150.4
Reinforcement Bars*			Lbs.	27250

* All bars shall be round ASTM A305-49
The size number is the number of 1/8 inches in the nominal diameter.

SLAB DETAILS
LITTLE WABASH RIVER
PROJECT FI-70(10)
F.A. RTE. 13 (SBI RTE. 12) SEC. 7-2-8
CLAY COUNTY
STA. 227+18.48(1)

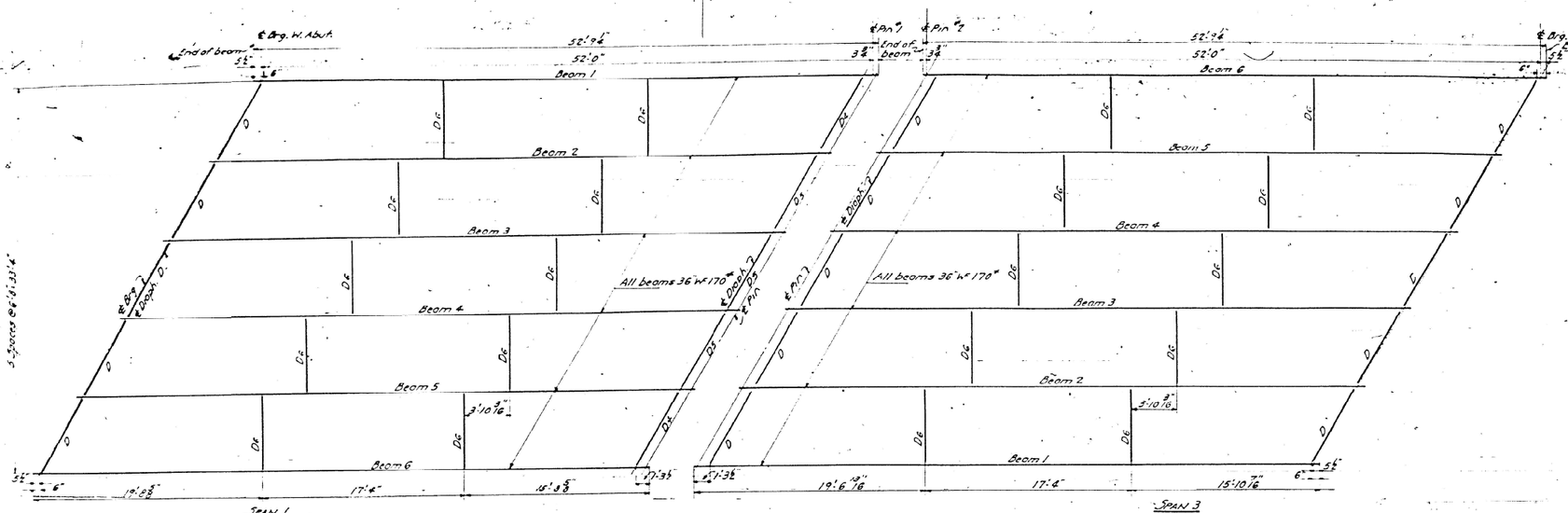
MODEL: Existing Structure Plans 12 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE PLANS 013-0004	FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -				D7 BRIDGE PAINTING 2026-1	CLAY	71	54
	CHECKED -	REVISED -					CONTRACT NO. 74D61		
PLOT DATE = 12/2/2025	DATE -	REVISED -		SCALE: SHEET 12 OF 14 SHEETS STA. TO STA.		ILLINOIS	FED. AID PROJECT		

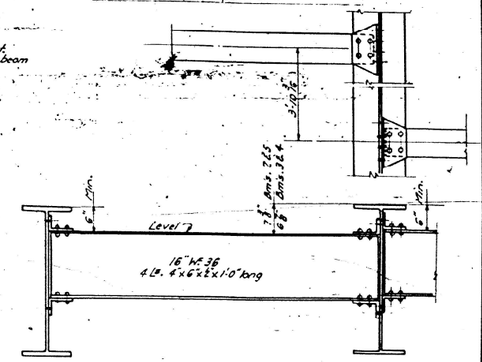
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

BOND ISSUE ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 13	7-2-B 7-2-F	Clay- Richland	38 17	9 4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEETS 4
11 SHEETS

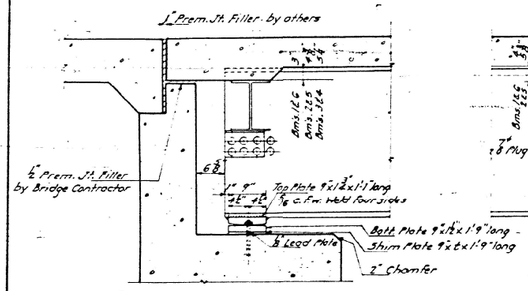


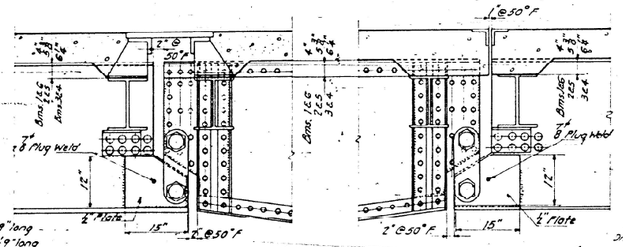
PLAN STEEL LAYOUT



DETAIL OF DIAPHRAGM D6

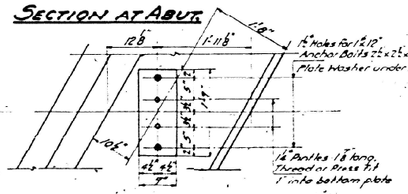
20 Required
For detail of diaphragms D, D3 & D5
See Sheet 5
For detail of diaphragms D, D4 & D5
See Sheet 6





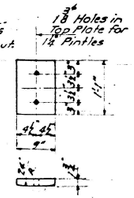
DETAIL OF HINGE #1

DETAIL OF HINGE #2

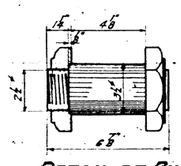


SECTION AT ABUT.

PLAN

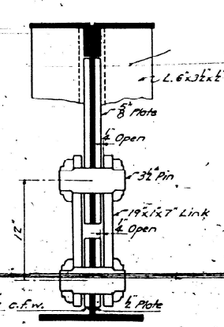


TOP PLATE

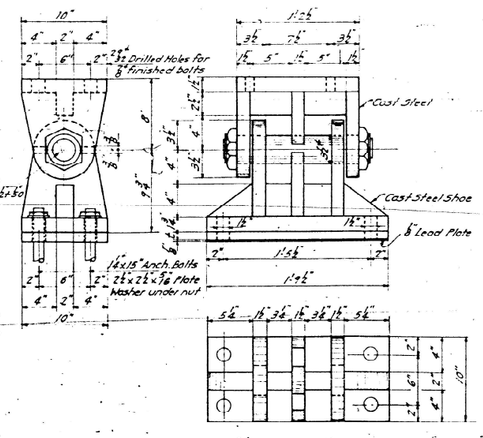


DETAIL OF PIN

Scale: 3"=1'-0"
24 Required



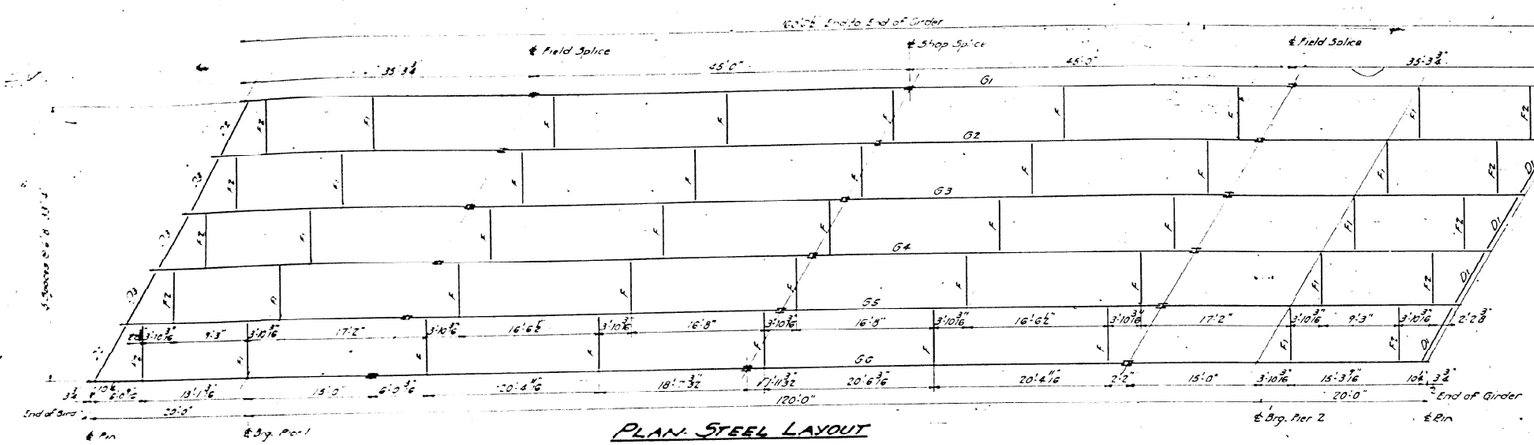
SECTION THRU HINGE


10"
4"
2"
6"
2"
4"
2⅜" Drilled Holes for ⅞" Finished Bolts
3½" Pin Drill Hole 3⅜" for
2½"
2½"
6"
6"
2"
2"
4"
2"
4"
10"
1'-2½"
3½"
7½"
3½"
1½"
5"
1½"
5"
1½"
Cast Steel
Cast-Steel Shoe
⅞" Lead Plate
1'-5½"
2"
2"
1'-9½"
6"
6"
6

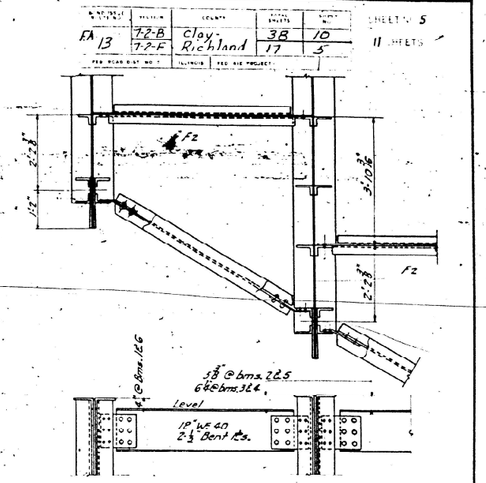
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 13	7-2-B	Clay	38	10
	7-2-F	Richland	17	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

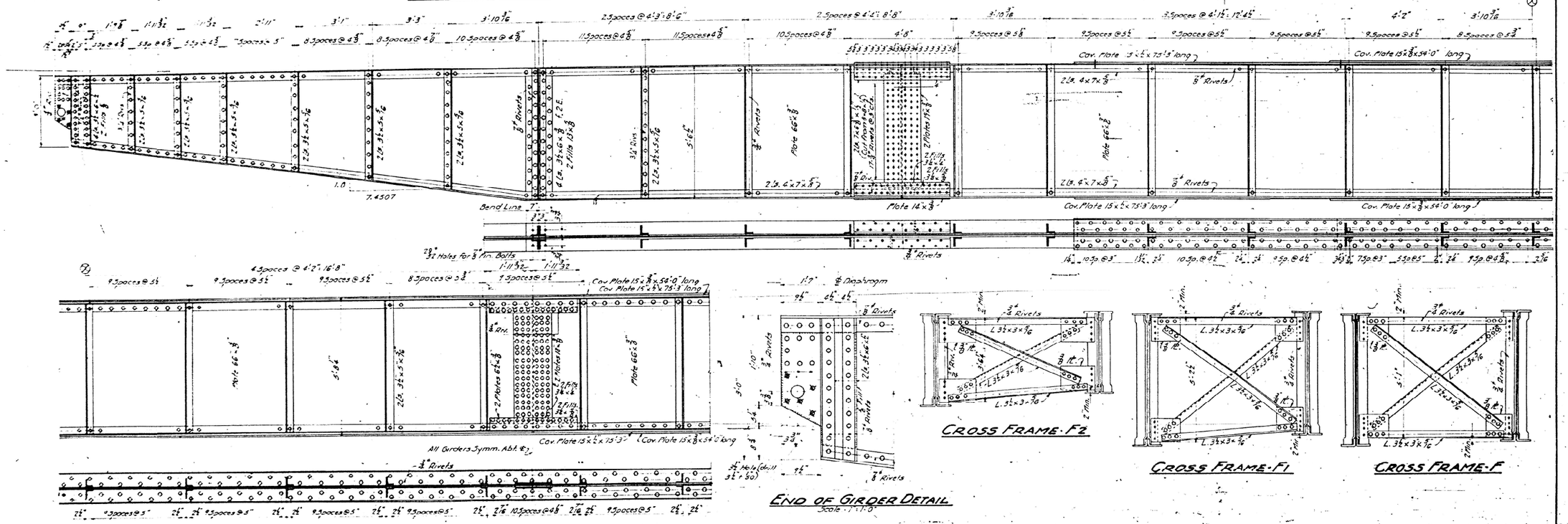
SHEETS 5
11 SHEETS



PLAN. STEEL LAYOUT



DETAIL OF DIAPHRAGM D1 D2 & D3



GIRDER DETAILS
LITTLE WABASH RIVER
PROJECT FI-70 (10)
F.A. RTE. 13(SBI RTE. 12) SEC. 7-~~8~~-F
CLAY COUNTY
STA. 227+18.48(1)

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	EXISTING STRUCTURE PLANS 013-0004
	CHECKED -	REVISED -	SCALE: SHEET 14 OF 14 SHEETS STA. TO STA.
PLOT DATE = 12/2/2025	DATE -	REVISED -	

FAP-327	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	56
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 14 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0004.dgn

F94438 #105 11-17-2000 FAP RTE 828 Clay County Sec. (107B, 107B-2)BR I&R Copy #105

105

100%
1-9-2002

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(107B, 107B-2)BR	CLAY	63	1
ROUTE SERVICE				

* BHF-F-828(19)
D-97-006-93

013-0019

INDEX OF SHEETS

SHEET NO.	ITEM
1	TITLE SHEET
2	GENERAL NOTES AND TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
4-5	PLAN AND PROFILE
6-7	STAGE CONSTRUCTION DETAILS
8-53	BRIDGE PLANS
54-63	CROSS SECTIONS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 63

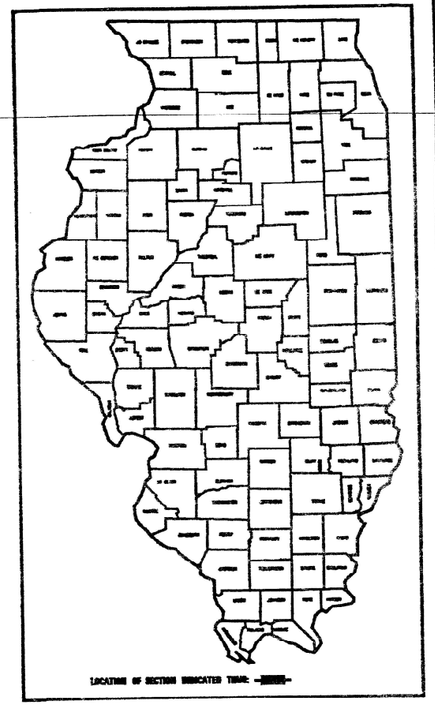
000001-03	SYMBOLS AND ABBREVIATIONS
001001	AREAS OF REINFORCEMENT BARS
280001-01	TEMPORARY EROSION CONTROL SYSTEMS
420401-02	BRIDGE APPROACH PAVEMENT
503001	CONCRETE PARAPET SLIP-FORMING OPTION
515001	NAME PLATES FOR BRIDGES
630001-02	STEEL PLATE BEAM GUARDRAIL
630201	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631031-02	TRAFFIC BARRIER TERMINAL, TYPE 6
631051	TRAFFIC BARRIER TERMINAL, TYPE 11
635006	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011	REFLECTOR MARKER AND MOUNTING DETAILS
701001	OFF-ROAD OPER., 2-L, 2-W, 15' MIN. AWAY
701006-01	OFF-ROAD OPER., 2-L, 2-W, 15' TO 24' AWAY
701011	OFF-ROAD MOVING OPERATIONS, 2-L, 2-W, DAY ONLY
701201-01	LANE CLOSURE, 2-L, 2-W, DAY ONLY ON-RD TO 600MM OFF-RD
701301-01	LANE CLOSURE, 2-L, 2-W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2-L, 2-W, MOVING DAY OPERATIONS
701321-03	LANE CLOSURE, 2-L, 2-W, BRIDGE WITH BARRIER
701326-01	LANE CLOSURE, 2-L, 2-W, PAVEMENT WIDENING
702001-01	TRAFFIC CONTROL DEVICES
704001	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

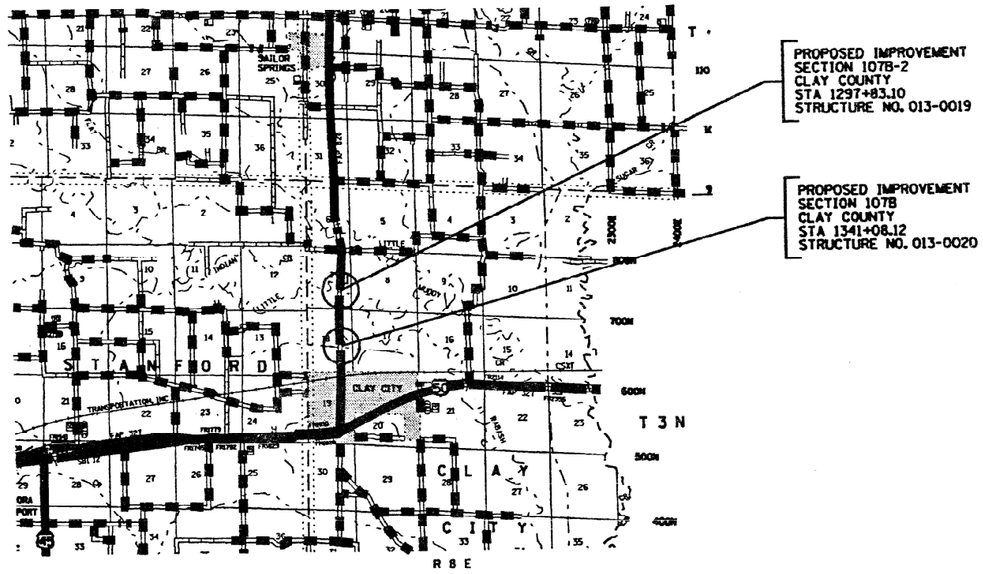
PLANS FOR PROPOSED FEDERAL HIGHWAY PROJECT

FAP RT 828 (CLAY CITY- MONTROSE ROAD)
SECTION (107B, 107B-2)BR
PROJECT NO. BHF-F-828 (19)
BRIDGE DECK REPLACEMENT
CLAY COUNTY

C-97-041-00

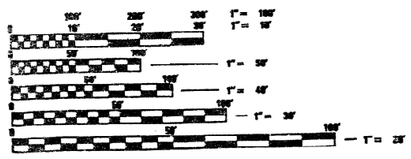


LOCATION OF SECTION INDICATED THUS: —



PROPOSED IMPROVEMENT
SECTION 107B-2
CLAY COUNTY
STA 1297+83.10
STRUCTURE NO. 013-0019

PROPOSED IMPROVEMENT
SECTION 107B
CLAY COUNTY
STA 1341+08.12
STRUCTURE NO. 013-0020



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

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

1997 ADT 1750
GROSS LENGTH = 1044 FEET = 0.20 MILES
NET LENGTH = 1044 FEET = 0.20 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug. 30 20 00
DISTRICT ENGINEER
20
ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION
OCTOBER 13, 20 00
ENGINEER OF DESIGN AND ENVIRONMENT
OCTOBER 13, 20 00
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF
THE STATE OF ILLINOIS

SEAL

7-130

CONTRACT NO. 94438

TOWNSHIP : CLAY CITY T3N-R8E SEC 7 & 18 013-0019

'T ENGINEER : COLLINS OF ORI-Akron
_EADER : B.LEWIS
_HONE : 217/342-3951 EX 313

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	EXISTING STRUCTURE PLANS 013-0019
	CHECKED -	REVISED -	
PLOT DATE = 10/9/2025	DATE -	REVISED -	SCALE: SHEET 1 OF 11 SHEETS STA. TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	57
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure 1 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 828	107B-2) BR	CLAY	63	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

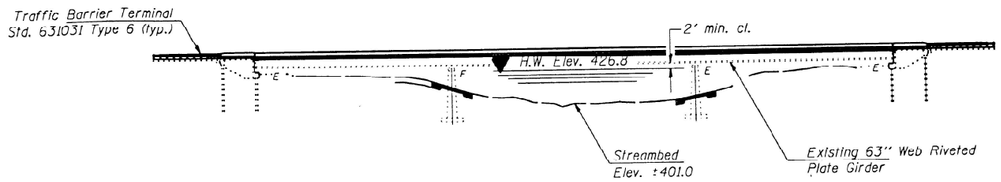
SHEET NO. 1
16 SHEETS

Bench Mark: Chiseled "a" N.E. corner S.N. 013-0019 Elev. 436.48

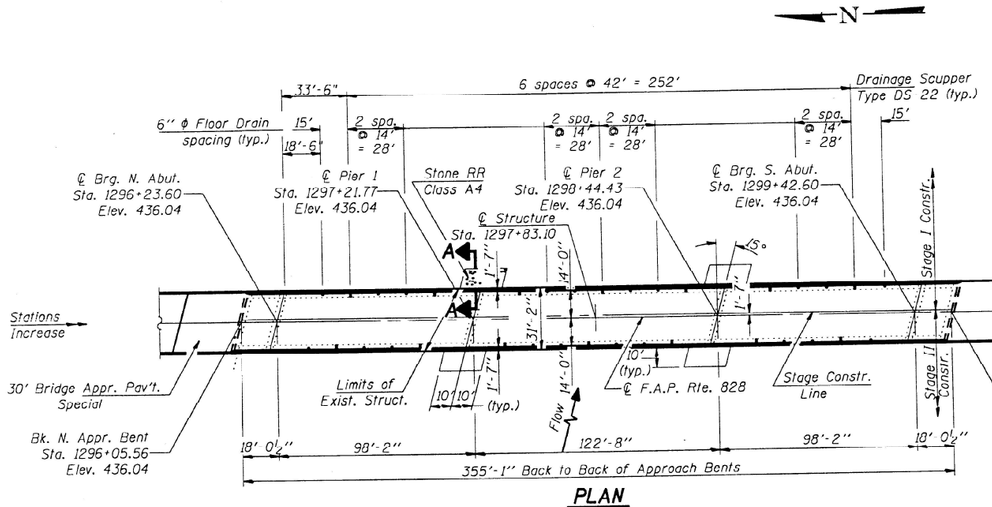
Existing Structure: S.N. 013-0019 built in 1953 as F.A. Rte. 160, Section 107 B,F at Sta. 1297+83.10. Existing structure consists of a reinforced concrete deck on riveted plate girders supported on vaulted abuts. and solid spread footing piers, 353'-0" Bk.-Bk. appr. bents, 30'-4" O.-O. deck. Concrete deck to be removed and replaced. One lane of traffic to be maintained using stage construction.

No salvage

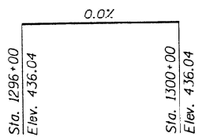
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



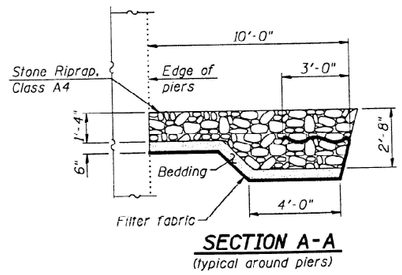
ELEVATION



PLAN



PROFILE GRADE
(along P.G.)



SECTION A-A
(typical around piers)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Concrete Removal	Cu. Yd.	6.0		6.0
Concrete Superstructure	Cu. Yd.	372		372
Neoprene Expansion Joint 2"	Foot	31		31
Neoprene Expansion Joint 4"	Foot	31		31
Bridge Deck Grooving	Sq. Yd.	1024.5		1024.5
Stud Shear Connectors	Each	2680		2680
Reinforcement Bars, Epoxy Coated	Pound	86260		86260
Name Plates	Each	1		1
Drainage Scuppers, DS-22	Each	14		14
Floor Drains	Each	20		20
Protective Coat	Sq. Yd.	1393		1393
Bar Splicers	Each	1137		1137
Temporary Bridge Rail	Foot	710		710
Structural Steel Repair	Pounds	630		630
Stone Riprap, Class A4	Sy.Yd.		200	200
Structural Steel Removal	Pounds	3860		3860
Furnishing & Erecting Structural Steel	Pounds	38220		38220
Access Door	Each		2	2
Filter Fabric for use w/Riprap	Sy.Yd.		200	200
High Performance Enhanced Shotcrete	Sq. Ft.		9.0	9.0
Slopewall Removal	Sq. Yd.		34.0	34.0
Slopewall, 6"	Sq. Yd.		34.0	34.0
Jack and Remove Existing Bearings (Special)	Each	5		5
Elastomeric Bearing Assembly Type II	Each	5		5

1

Note: Stage III Constr. and Stage IV Constr. not shown in plan view. See sheet 2 of 16 for all staging details.

1

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$" ϕ, open holes $\frac{13}{16}$" ϕ, unless otherwise noted.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

All existing construction accessories welded to the top flange over the piers between the quarter points of the girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that can not be removed by grinding approximately $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.

Field painting of structural steel shall be done under a seperate painting contract.

Existing structural steel shall only be cleaned as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Structures".

All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I.

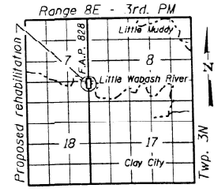
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

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

Supplemental Requirements for Notch Toughness Zone 2 shall be applicable to components subject to tensile stress. These components are indicated in the plans by NTR.

Slope wall shall be reinforced with welded wire fabric. 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

1



LOCATION SKETCH

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 & 1998 Interims
1995 Seismic Retrofitting Guidelines for Highway Bridges (FHWA/RD-94/052)

DESIGN STRESSES

New Construction
Field Units

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36 ksi (Structural Steel) AASHTO M270 Grade 36

SEISMIC DATA

Seismic Performance Category (SPC) - A
Bedrock Acceleration Coefficient (A) = 8.7%g
Site Coefficient (S) = 1.2

STATION 1297+83.10
REBUILT BY
STATE OF ILLINOIS
F.A.P. RT. 828 SECTION (107B-2)BR
F.A. PROJECT:
LOADING HS20
STR. NO. 013-0019

NAME PLATE
See Std. 515001

The existing Name Plate shall be cleaned and relocated next to the new Name Plate. Cost included with Name Plates.

GENERAL PLAN
MONTROSE-CLAY CITY ROAD OVER
LITTLE WABASH RIVER
F.A.P. ROUTE 828 - SECTION (107B-2)BR
CLAY COUNTY
STATION 1297+83.10
STRUCTURE NO. 013-0019

DESIGNED	Amy Ellers	
CHECKED	Nicholas Jack	Frank Lowry
DRAWN	Michael R. Gillette	
CHECKED	AJE NWJ	

October 12 2000
EXAMINED Thomas J. Domagalski / ENGINEER OF BRIDGES & STRUCTURES
PASSED Robert E. Anderson / ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
CARL C. CRAFTON
062-004655
REGISTERED
STRUCTURAL ENGINEER

EXPIRES 11-30-2000

1 Revised 7-10-2001 J.S.B.

...\projects\rps00005\0130019.dgn 07/20/2001 01:51:38 PM

MODEL: Existing Structure 2 [Sheet]
FILE NAME: c:\pw_work\dakota\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

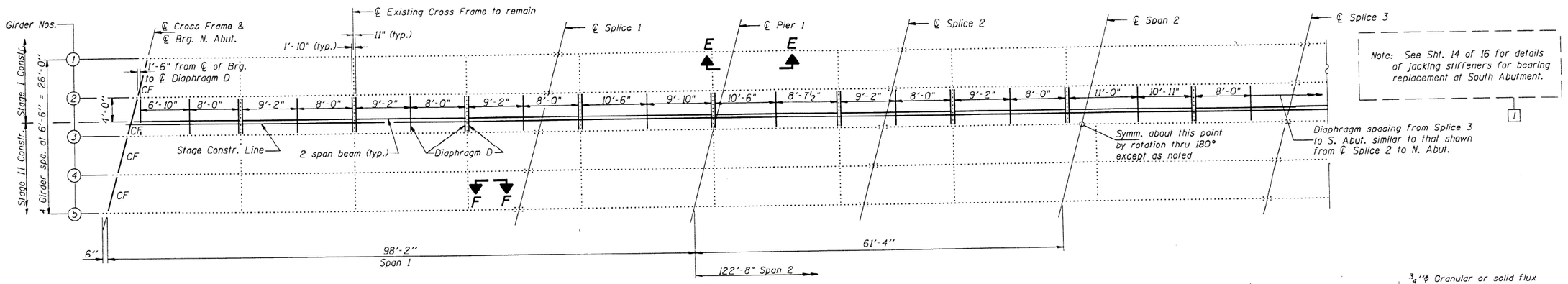
SCALE: | SHEET 2 OF 11 SHEETS | STA. | TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	58
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

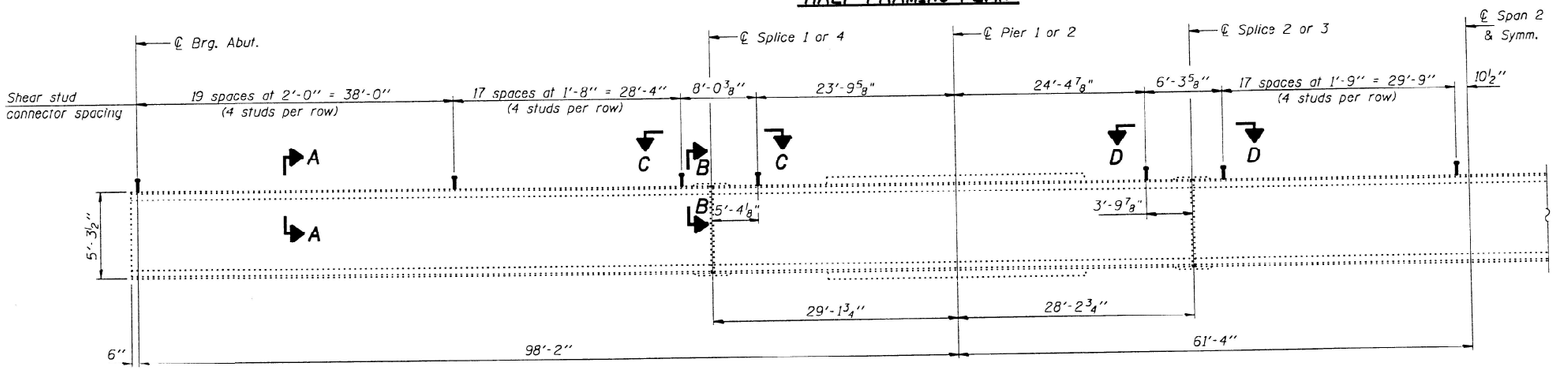
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 828	(107B-2)A BR	CLAY	63	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12
16 SHEETS

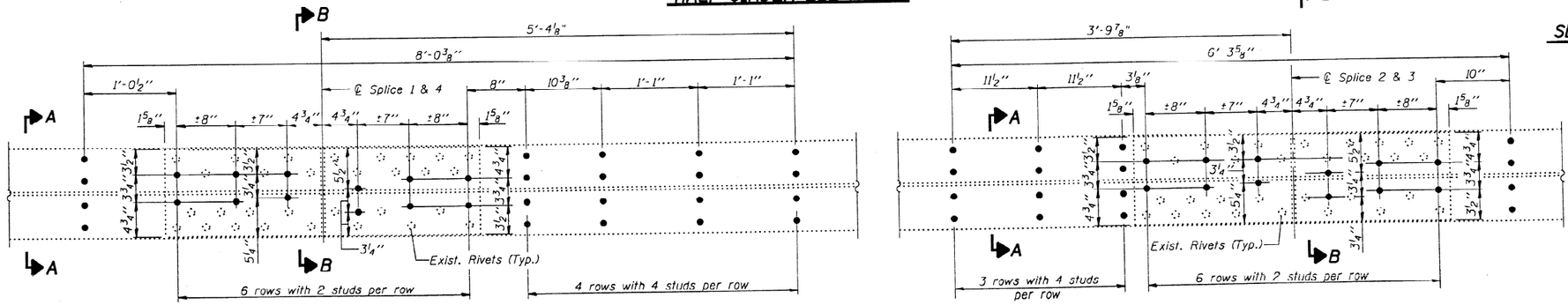
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HALF FRAMING PLAN

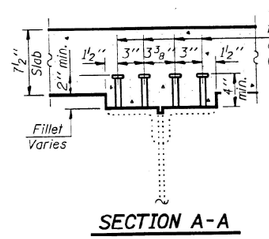


HALF GIRDER ELEVATION

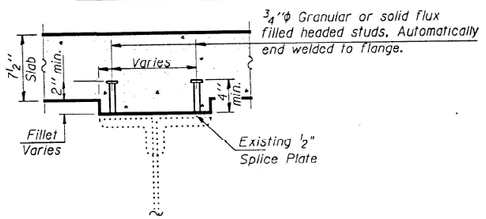


VIEW C-C

VIEW D-D



SECTION A-A



SECTION B-B

Notes: Remove existing cross frames at abutments. Cost included with Structural Steel Removal.

Install new cross frames, new diaphragms and new 2 span beam as shown. See sheet 14 of 16 for details. Cost included with Furnishing & Erecting Structural Steel.

Field verify all dimensions prior to ordering all steel.

New diaphragms and 2 span beams shall be installed during Stage I Construction prior to pouring deck.

For details of Structural Steel Repairs at View E-E, F-F, see sheet 13 of 16.

DESIGNED	AJE
CHECKED	NJW
DRAWN	Michael R. Gillette / Frank Lowry
CHECKED	AJE/NJW

October 12 2000

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 828 - SECTION (107B-2)BR
CLAY COUNTY
STATION 1297+83.10

1 Revised 7-10-2001 J.S.B.

...\projects\rps00005\0130019.dgn 07/20/2001 01:52:10 PM

MODEL: Existing Structure 3 [Sheet]
FILE NAME: c:\pw_work\dakota@illinois.gov\d1121796\D774061-sht-plan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

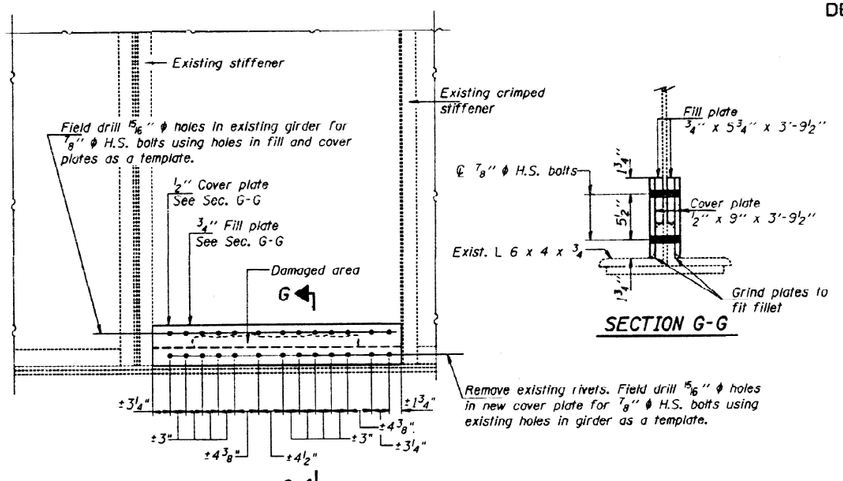
SCALE: | SHEET 3 OF 11 SHEETS | STA. | TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	59
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 828	(107B-2) BR	CLAY	63	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



VIEW E-E

See sheet 12 of 16 for location.

SECTION G-G

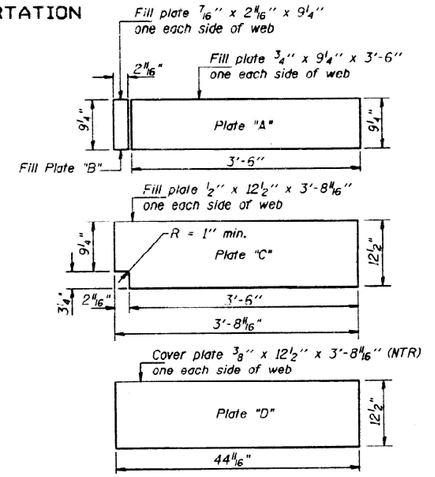


PLATE "A", "B", "C" AND "D" DETAILS

INTERIOR GIRDER MOMENT TABLE				
		0.4 Span 1 0.6 Span 3	0.5 Span 2	Piers
Is	(in⁴)	33999	33999	51028
Ic	(in⁴)	71502	71502	——
Ic (3n)	(in⁴)	53854	53854	——
Ss	(in³)	1071	1071	1570
Sc	(in³)	1379	1379	——
Sc(3n)	(in³)	1269	1269	——
ℓ	(K/ft.)	0.79	0.79	1.12
MℓL	('K)	502.3	453.8	1402.6
sℓ	(K/ft.)	0.33	0.33	——
MsℓL	('K)	233.0	252.2	——
ML	('K)	741.0	784.3	647.4
M (Imp)	('K)	166	158.4	137.9
5/3(ML+I)	('K)	1511.7	1571.2	1308.8
Ma	('K)	2921.1	2960.4	3524.7
Mu	('K)	3576	3576	——
fsℓ non-comp	(k.s.i.)	5.6	5.1	10.7
fsℓ (comp)	(k.s.i.)	2.2	2.4	——
fs 5/3(L+I)	(k.s.i.)	13.2	13.7	10.0
fs (Overload)	(k.s.i.)	21.0	21.2	20.7
fs (Total)	(k.s.i.)	——	——	26.9
VR	(K)	51.1	52.1	——

INTERIOR GIRDER REACTION TABLE			
		Abuts.	Piers
RℓL	(K)	40.8	138.1
RL	(K)	37.8	63.8
Imp.	(K)	8.5	14.3
R (Total)	(K)	87.1	216.2

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n), Ic(3n) and Sc(n), Sc(3n) are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).

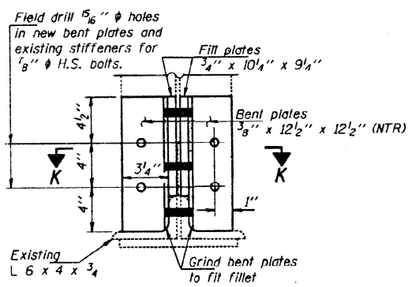
VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment)=1.3[MℓL + Msℓ +5/3(ML + I)].

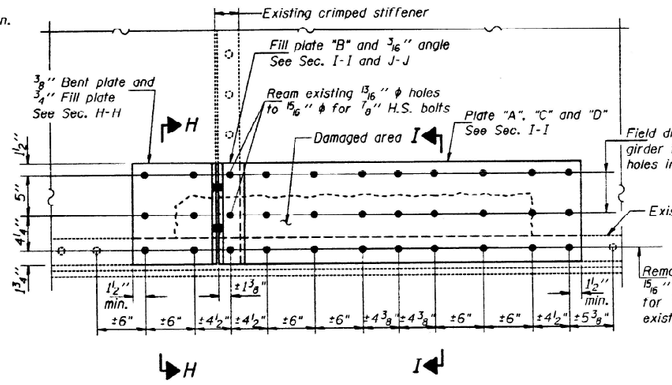
Mu is the Full Plastic Moment Capacity for Compact, Braced section.

fs (Overload) is the sum of the stresses due to MℓL + Msℓ +5/3(ML + I).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[MℓL + Msℓ +5/3(ML + I)].

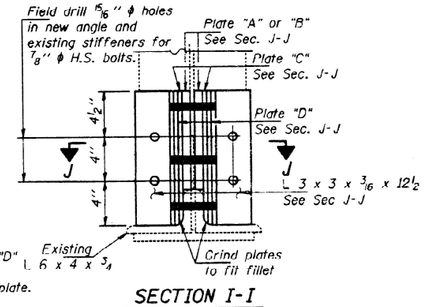


SECTION H-H



VIEW F-F

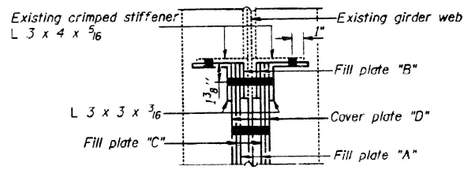
See sheet 12 of 16 for location.



SECTION I-I

SECTION K-K

New plates and angles on other side of crimped stiffener shown in Section J-J.



SECTION J-J

New bent plates and fill plates on other side of crimped stiffener shown in Section K-K.

Notes: Field verify all dimensions prior to ordering all steel.
Work this sheet with sheet 12 of 16.
Cost of rivet removal, new material and all field drilling shown on this sheet included with Structural Steel Repair.
"NTR" denotes plates to which Notch Toughness Requirements are applicable.

DESIGNED	AJE
CHECKED	NJW
DRAWN	Michael R. Gillette
CHECKED	AJE/NJW

October 12 2006
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 828 - SECTION (107B-2)BR
CLAY COUNTY
STATION 1297+83.10

MODEL: Existing Structure 4 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

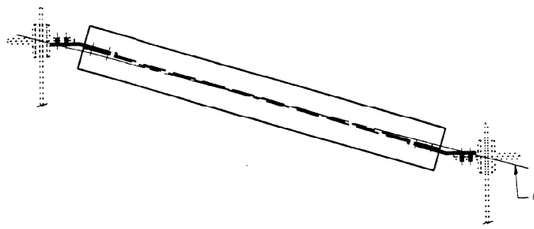
SCALE: | SHEET 4 OF 11 SHEETS | STA. | TO STA.

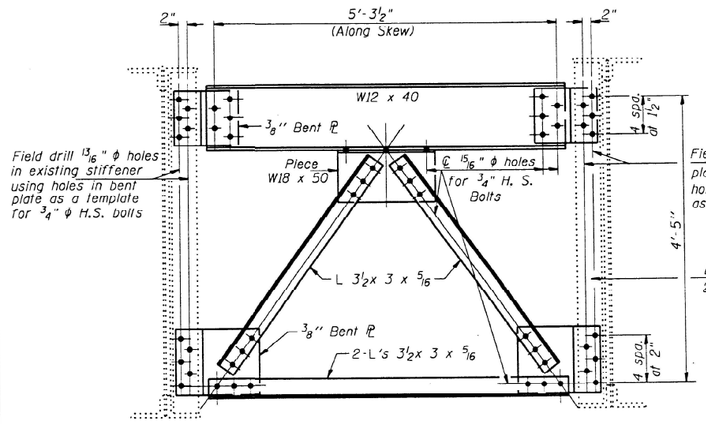
FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	60
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 828	(107B-2) BR	CLAY	63	21
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

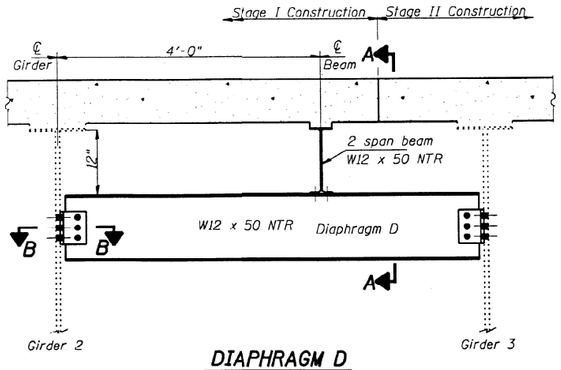
SHEET NO. 14
16 SHEETS





CROSS FRAME CF

(No. Required = 8)
(Field verify dimensions)



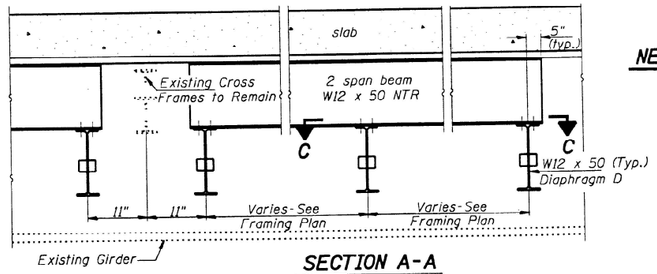
DIAPHRAGM D

(48 required)

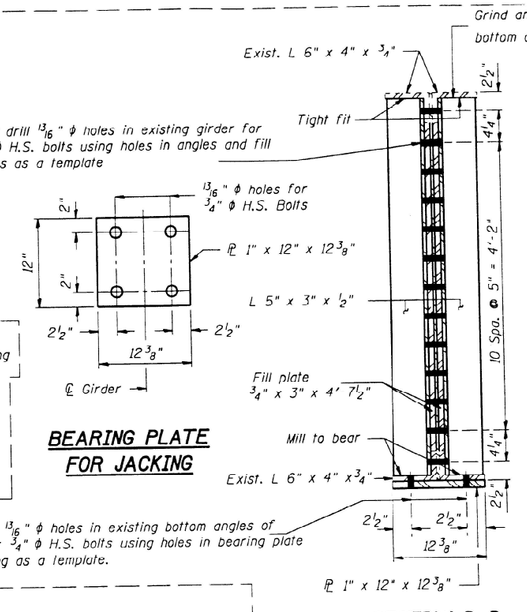
TABLE OF 2 SPAN BEAM LENGTHS

Number of Beams Required	Length Required
2	16'-5"
9	18'-0"
2	21'-2"
2	20'-0"
1	22'-9"

(Field verify dimensions)

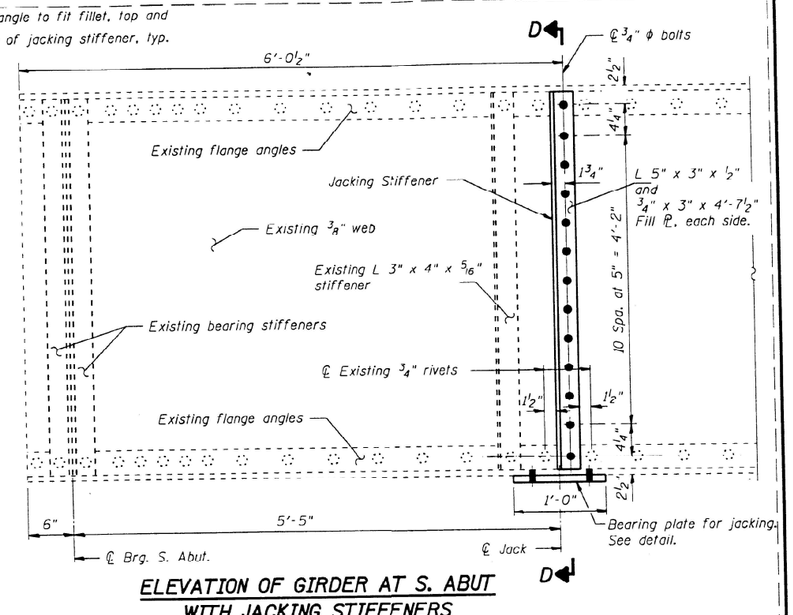


SECTION A-A



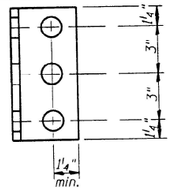
BEARING PLATE FOR JACKING

SECTION D-D

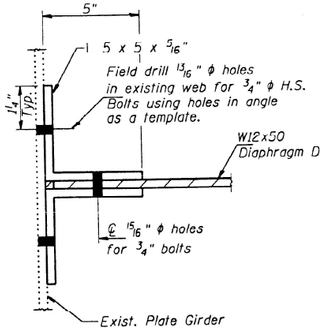


ELEVATION OF GIRDER AT S. ABUT WITH JACKING STIFFENERS

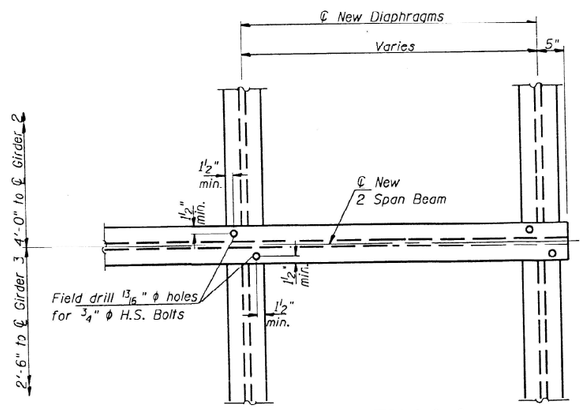
(Required at all 5 Girders)



NEW L 5 X 5 X 5/16



SECTION B-B



SECTION C-C

Notes: Work this sheet with 12 of 16.
Cost of all new bolts, angles, fill plates, diaphragms, 2 span beams, Cross frames and field drilling included with Furnishing & Erecting Structural Steel.
Two hardened washers shall be required over all oversize holes for diaphragms.
"NTR" denotes members to which Notch Toughness Requirements are applicable. These members are the diaphragms D and the 2 span beams.

DESIGNED	AJE
CHECKED	NJW
DRAWN	Frank Lowry Michael R. Gillette
CHECKED	AJE/NJW

October 12 2000
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 828 - SECTION (107B-2)BR
CLAY COUNTY
STATION 1297+83.10

1 Revised 7-10-2001 J.S.B.

...\projects\rps00005\0130019.dgn 07/20/2001 01:52:27 PM

MODEL: Existing Structure 5 [Sheet]
FILE NAME: c:\pw-work\pwlot\illinois.gov-dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

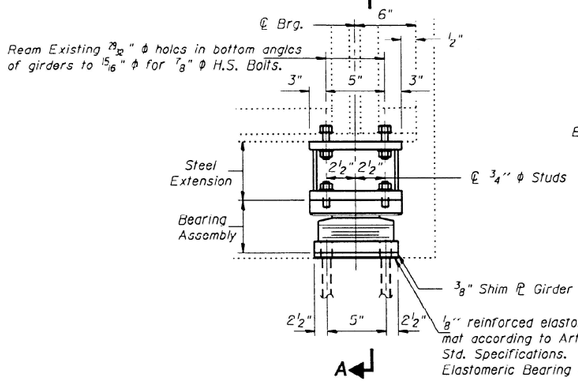
EXISTING STRUCTURE PLANS 013-0019

SCALE: | SHEET 5 OF 11 SHEETS | STA. | TO STA.

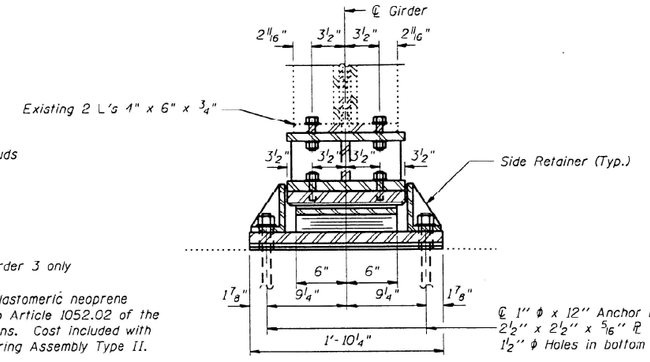
FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	61
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

					SHEET NO. 14b
F.A.P. 828	(107B-2) BR	CLAY	63	21b	16 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

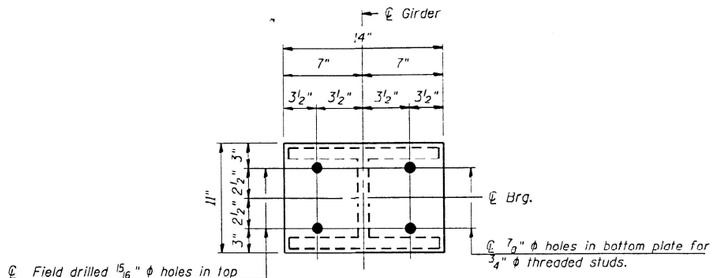
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT SOUTH ABUTMENT

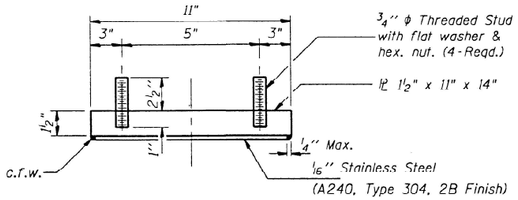


SECTION A-A

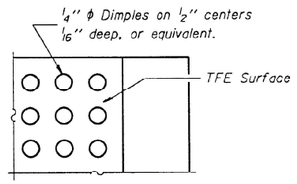


PLAN TOP AND BOTTOM PLATE

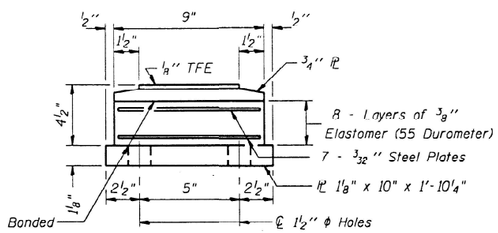
TYPE II TFE ELASTOMERIC EXP. BRG.



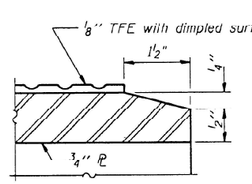
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



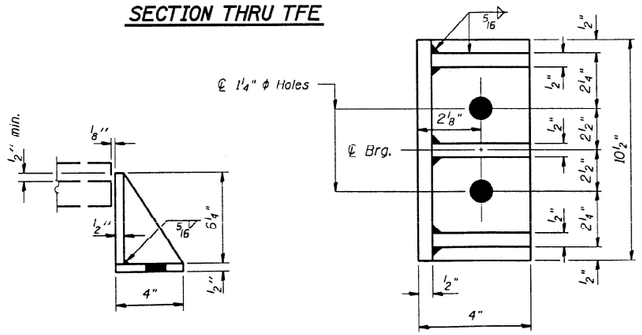
BOTTOM BEARING ASSEMBLY



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

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

SECTION THRU TFE



SIDE RETAINER

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

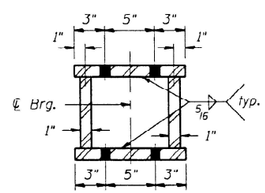
Notes:

New steel extensions, side retainers, connection bolts and anchor bolts are included in Furnishing and Erecting Structural Steel.

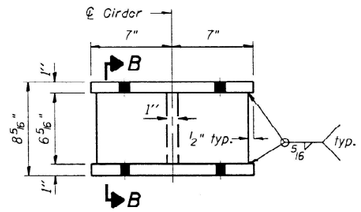
See Sheet 14c of 16 for Anchor Bolt installation.

Prior to ordering any material, the Contractor shall verify in the field all bearing height, steel extension, and shim thickness dimensions and hole locations.

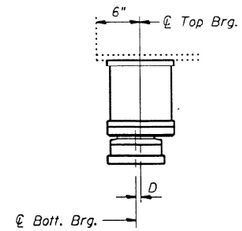
The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.



SECTION B-B

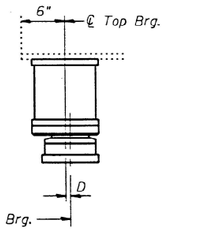


STEEL EXTENSION DETAIL



BELOW 50°F.

(Move bott. brg. away from fixed brg.)



ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

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 II	Each	5
* Furnishing and Erecting Structural Steel	Pound	2320

* Includes jacking stiffeners, fill plates, connection bolts, and bearing plate for jacking on Sht. 14 of 16

BEARING DETAILS
F.A.P. ROUTE 828 - SECTION (107B-2)BR
CLAY COUNTY
STATION 1297+83.10
STRUCTURE NO. 013-0019

DESIGNED	JSB
CHECKED	CME
DRAWN	Frank Lowry
CHECKED	JSB/CME

20

EXAMINED

ENGINEER OF STRUCTURAL SERVICES

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

1 New Sheet 7-10-2001 J.S.B.

...\projects\rps00005\0130019.dgn 07/20/2001 01:52:54 PM

MODEL: Existing Structure 6 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

SCALE: | SHEET 6 OF 11 SHEETS | STA. | TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	62
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

SEC	COUNTY	TOTAL SHEETS	SHEET NO.
160	107-F-2 107-B-2	71	7
	CLAY		11
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

SCALES (Except as otherwise noted.)

PLAN	1 INCH = 100 FT
PROFILE HOR	1 INCH = 100 FT
PROFILE VERT	1 INCH = 10 FT
CROSS SECTIONS	1 INCH = 5 FT

APPROXIMATE SCALE 1 INCH = 8 MILE FOR LAYOUT, THIS SHEET

F.A. RT. 160 SECTION ~~107-~~ 107-B-2 107-F-2

PROJECT F-538 ( )

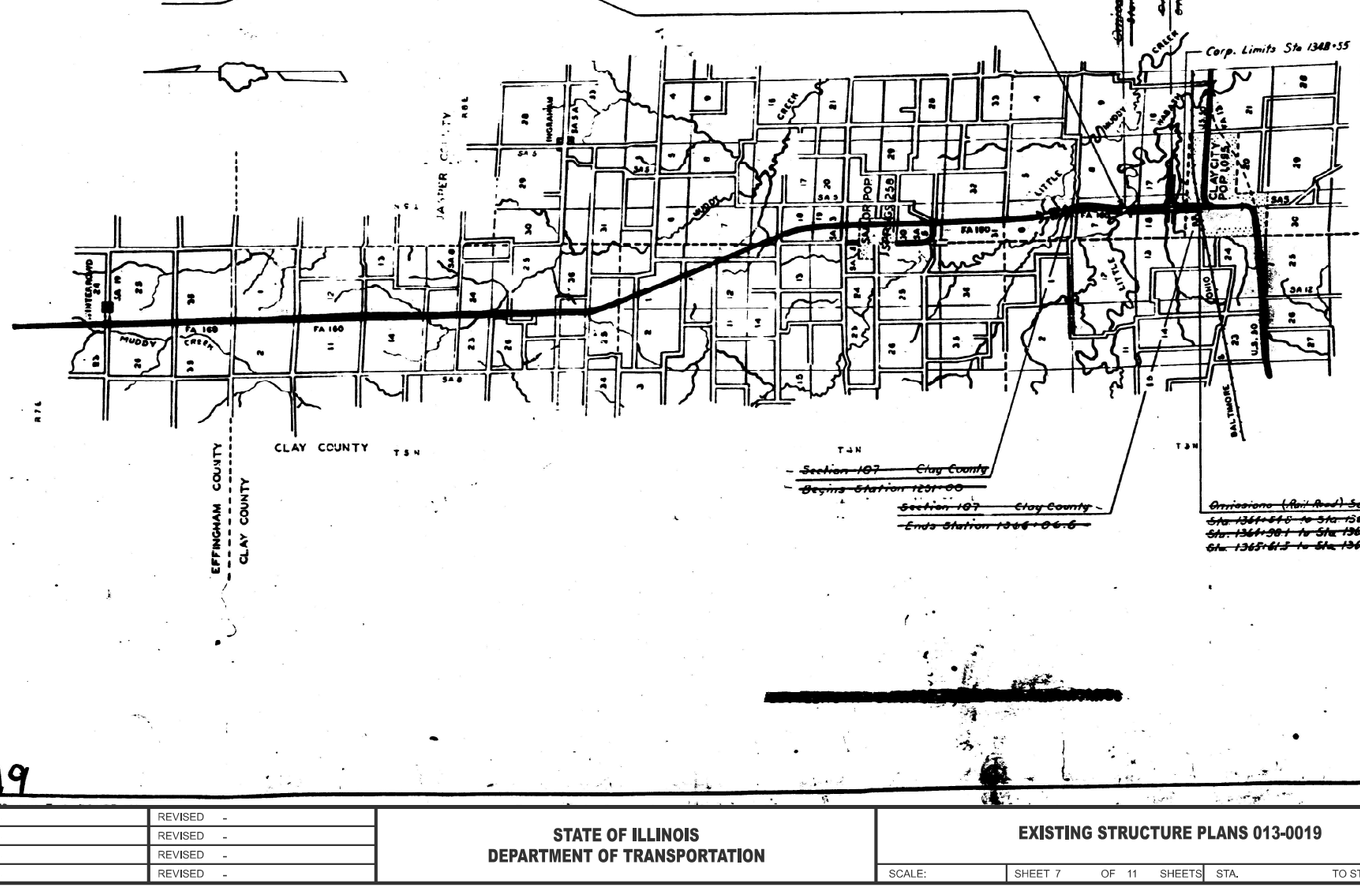
CLAY COUNTY

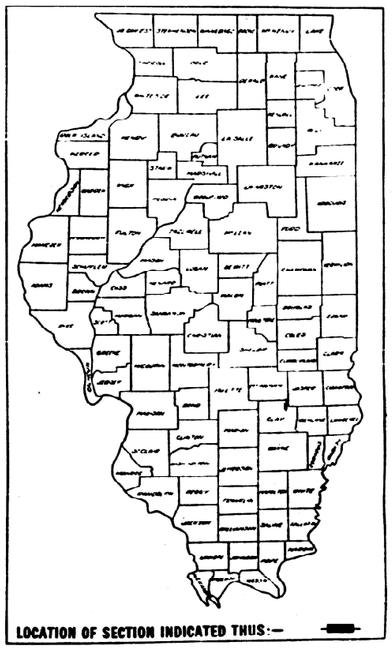
Section 107-B-2

Includes the construction of a 3-Span Continuous Plate Girder Bridge on R.C. Pile Bent Abutments, and Soiled Piers (Carrying F.A. Route 160 over the Little Wabash River) spans 2 at 98'-2" and 1 at 122'-8" at Sta. 1297+83.1, a point near the center of the S.E. 1/4 of Section 7, T-3-N, R-8-E, of the 3rd P.M.; 2 Approach Spans 2 at 15'-0" and the construction and removal of a temporary detour, with the exception of furnishing and fabricating structural steel and metal handrail, furnishing and applying shop coat of paint and delivery of the structural steel and metal handrail f.o.b. Clay City.

Section 107-F-2

Includes the furnishing and fabrication of structural steel and metal handrail, furnishing and applying shop coat of paint and delivery of the structural steel and metal handrail f.o.b. Clay City, for a 3-Span Continuous Plate Girder Bridge (carrying F.A. Route 160 over the Little Wabash River) Spans, 2 at 98'-2" and 1 at 122'-8" at Sta. 1297+83.1.





LOCATION OF SECTION INDICATED THUS:—

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

RECOMMENDED	4-29	53
EXAMINED	6-5	53
PASSED	6-8	53
APPROVED	6-7	53
APPROVED	6-8	53

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL

[redacted] DATE

[redacted] DATE

013-0019

REC'D 7-28

013-0019

MODEL: Existing Structure 7 [Sheet]
FILE NAME: c:\pw_workspace\dot\illinois.gov_dakota.kincaid@illinois.gov\d1127961D774D61-sht-plan-013-0019.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

SCALE: | SHEET 7 OF 11 SHEETS | STA. | TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	63
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

B.M.: Top No. End Concrete Window Ledge So. of entrance to Water works Building Lt. Sta. 1301+50, El. 431.72

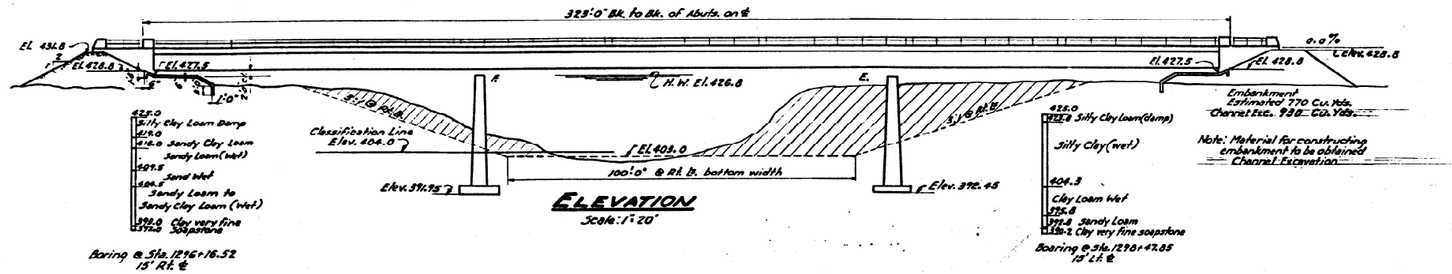
Existing Structure: I-Beam Spans 1 @ 15.5' 1 @ 45' and thru truss Span @ 95.16' Itdwy. Steel tubes and concrete abutments to be removed by Contractor before new structure is built. I-Beams and Truss shall become the property of the Contractor.

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

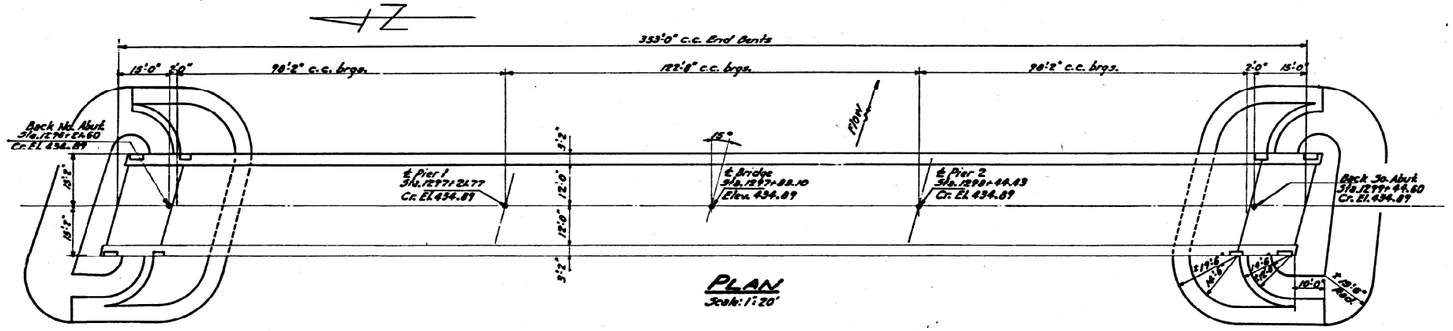
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 160	107-B-2	Clay	11	6
	107-F-2		8	3

FED. ROAD DIST. NO. 2 | ILLINOIS | FED. AID PROJECT

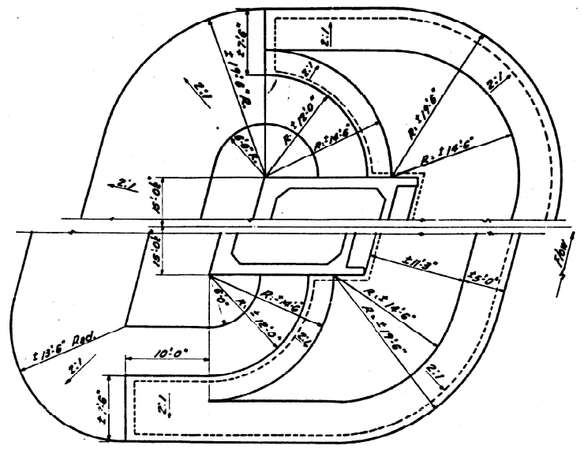
SHEET NO. 1
6 SHEETS



ELEVATION
Scale: 1" = 20'



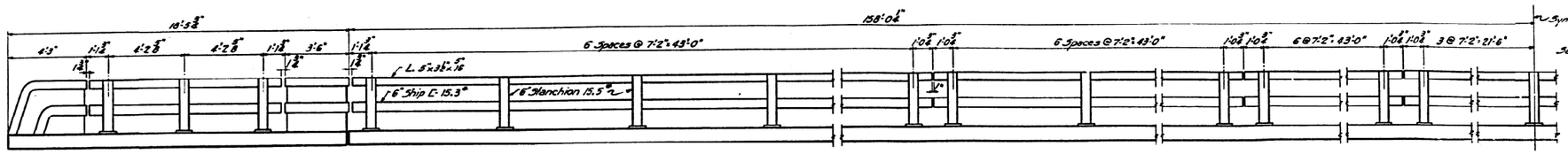
PLAN
Scale: 1" = 20'


2:1
10'-0"
Flow
10'-0"
10'-0"
10'-0"

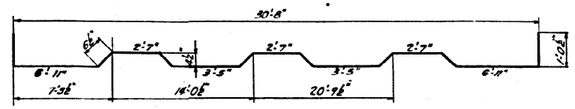
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I.	107-B-2	Clay	11	7
F.A. 160	107-F-2		8	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

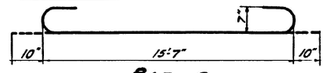
SHEET NO 2.
6 SHEETS



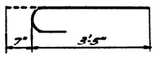
RAIL ELEVATION



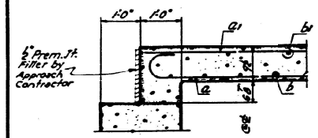
BAR Q3



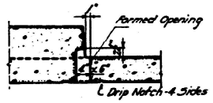
BAR a



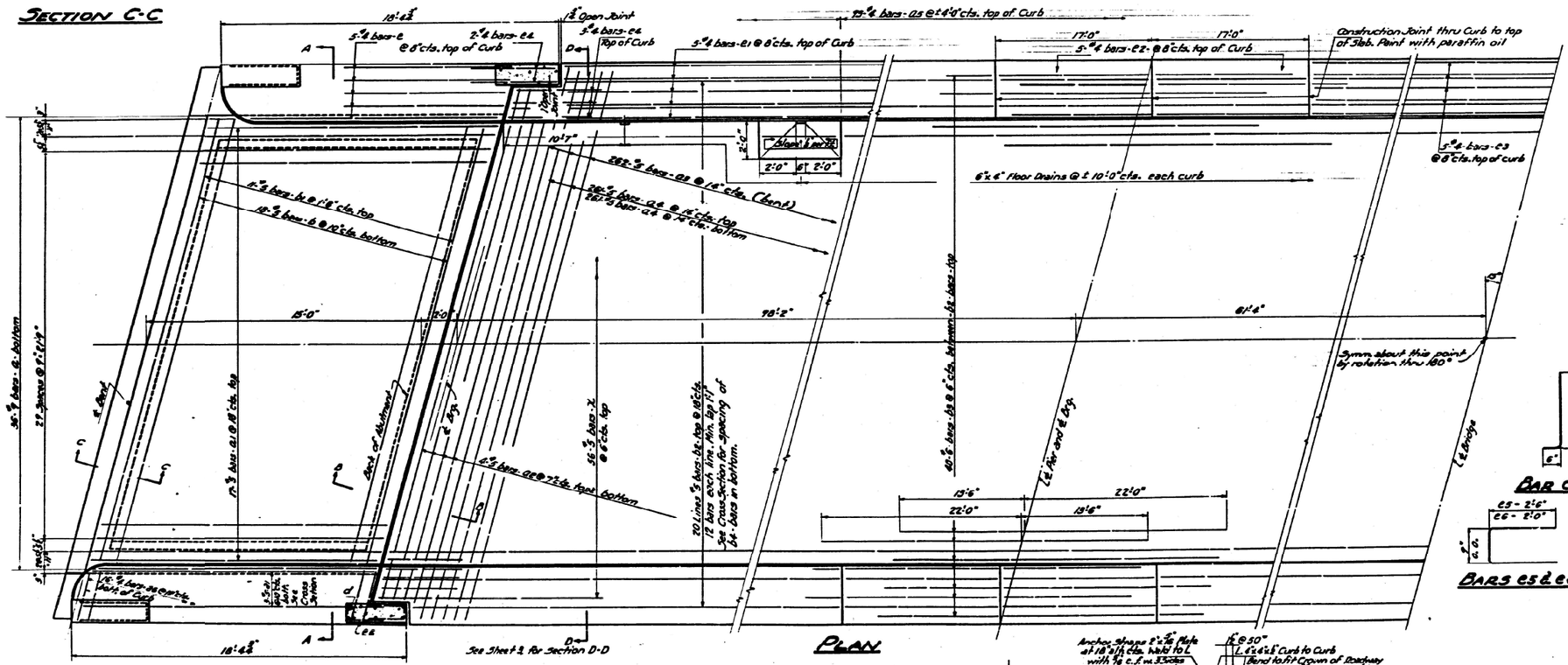
BAR X



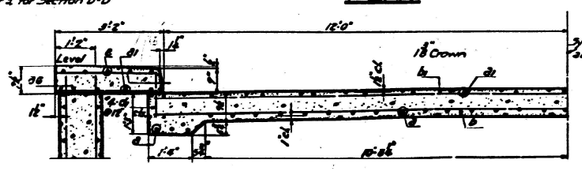
SECTION C-C



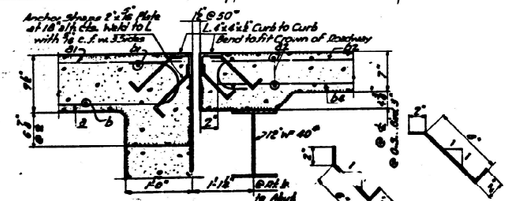
FLOOR DRAIN



PLAN



HALF SECTION A-A



SECTION B-B

BAR d

BARS e5 & e6

BILL OF MATERIAL SUPER.

BAR	NO.	SIZE	LENGTH	SHAPE
Q	72	#9	17'-3"	
Q1	48	#5	19'-6"	
Q2	16	#5	28'-6"	
Q3	262	#5	33'-9"	
Q4	322	#5	30'-7"	
Q5	186	#4	2'-9"	
Q6	66	#4	3'-0"	
b	36	#5	25'-9"	
b1	22	#4	25'-9"	
b2	240	#5	28'-0"	
b3	80	#5	35'-6"	
b4	408	#4	28'-0"	
d	48	#5	31'-7"	
d1	710	#4	7'-0"	
e	20	#5	13'-6"	
e1	60	#4	27'-0"	
e2	40	#4	16'-9"	
e3	30	#4	30'-0"	
e4	20	#4	6'-6"	
e5	16	#4	5'-7"	
e6	32	#4	4'-9"	
X	118	#5	6'-0"	
Class 'X' Concrete			Cu. Yds.	32.2
Handrail Concrete			Cu. Yds.	3.2
Reinforcement Bars			Lbs.	35790
Structural Steel			Lbs.	939160
Name Plates			Each	1
Metal Handrail			Lin. Ft.	675

DESIGNED	W.R. Owen	Oct 27	-52
CHECKED	C.A.T.	W.E. Hansen	
DRAWN	H.D.	E.C. Hinsey	
TRACED	C.A.T.	F.N. Barker	

SUPERSTRUCTURE
[redacted]
LITTLE WABASH RIVER
F.A. ROUTE 160 - SECTION 107-B&F
CLAY COUNTY
STA. 12+97.63

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

SCALE: | SHEET 9 OF 11 SHEETS | STA. | TO STA.

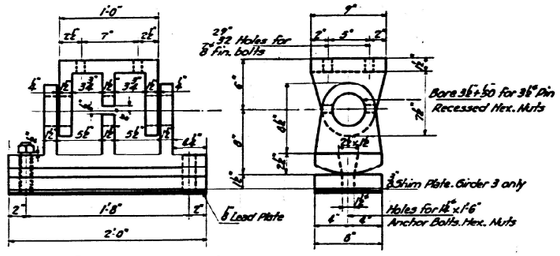
FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	65
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure 9 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

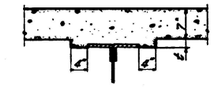
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S.	107B-2	Clay	11	8
F.A. 160	107F-2		8	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
6 SHEETS

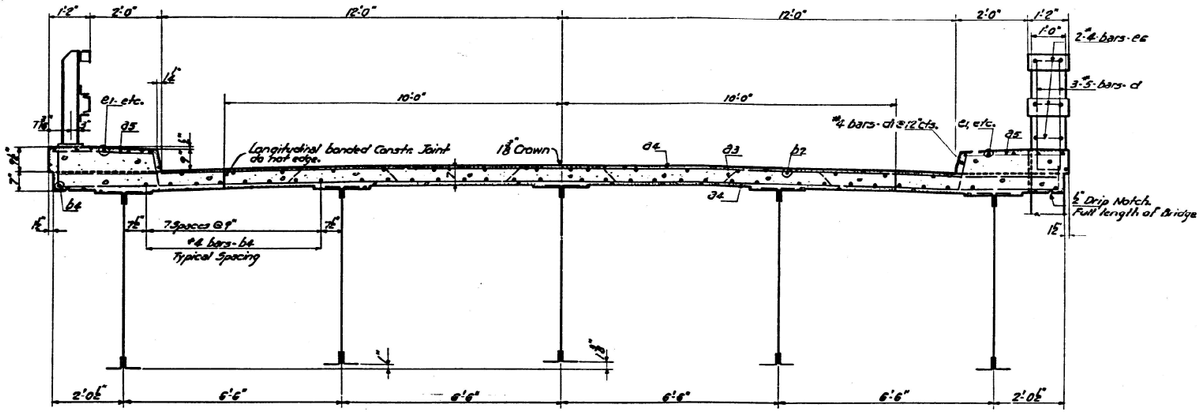


BEARING AT ABUTMENTS
10 Sets Req'd.

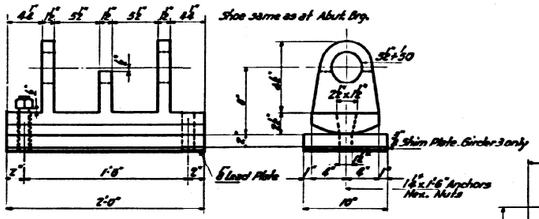


FILLET DETAIL
Fillet height "f" equals difference between under side of flange angles and bottom of slab plus Dead Load Deflection.

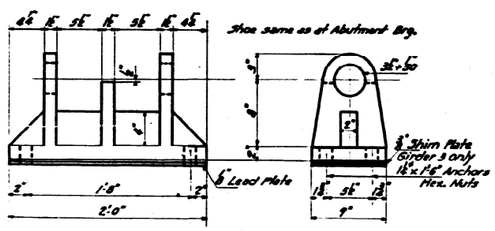
Rockers, bolsters and shoes shall be cast steel. Estimated 5940 Lbs.
Bearing plates and shim plates shall be Structural Steel.
All rockers, bolsters, shoes, pins, bearing plates, load plates and anchor bolts shall be finished, painted and set in accordance with Art. 516 of the Specifications and are included for payment as Structural Steel. Estimated 9450 Lbs.



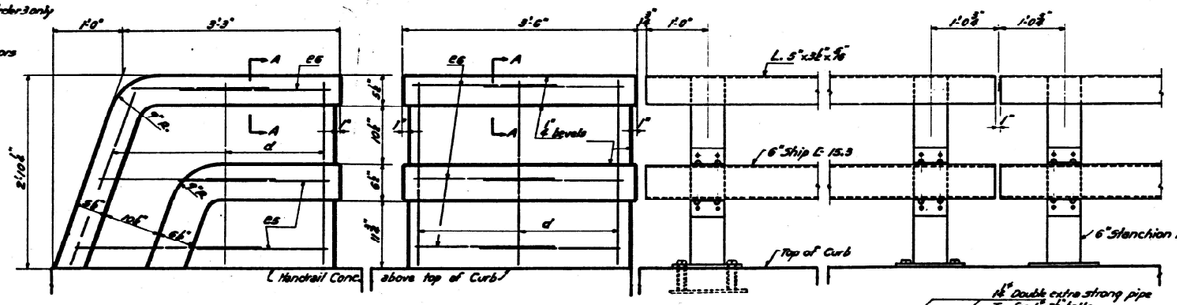
SECTION D-D
See Sheet No. 2

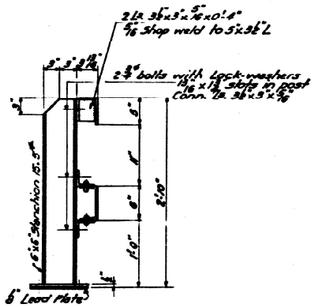


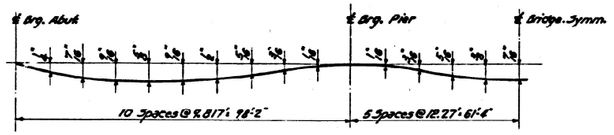
BEARING AT PIER 2
5 Sets Req'd.



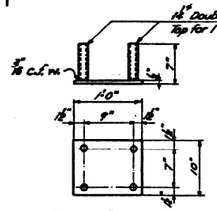
BEARING AT PIER 1
5 Sets Req'd.



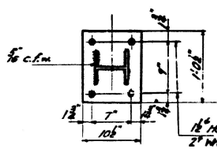


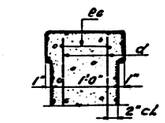


DEAD LOAD DEFLECTION DIAGRAM



RAIL POST ANCHOR





SECTION A-A

Bolt posts to anchors for inspection and shipment. Lin. Ft. of Metal Handrail is measured face to face of concrete rail posts.
Paint same as for Structural Steel except that anchors shall not be painted.

DESIGNED	W.E. Hanson	Oct 27	1932
CHECKED			
DRAWN	W.E.H. W. Miller		
CHECKED			

SUPERSTRUCTURE DETAILS
[redacted]
LITTLE WABASH RIVER
F.A. ROUTE 160 - SECTION 107 B & F
CLAY COUNTY
STA. 1297+83

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

SCALE: | SHEET 10 OF 11 SHEETS | STA. | TO STA.

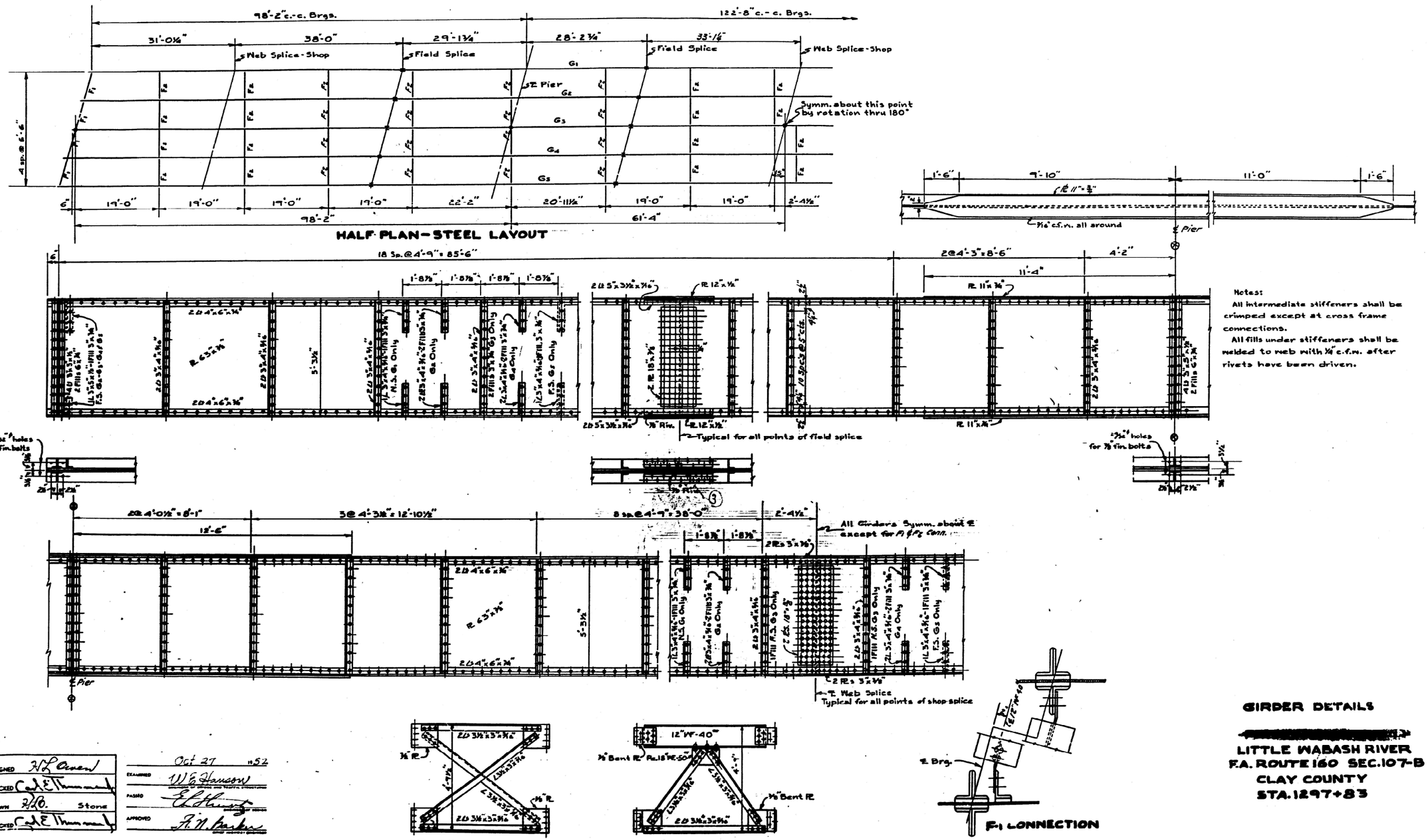
FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	66
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure 10 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D7745D61-sht-dan-013-0019.dgn

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I.	107-B-2	Clay	11	9
F.A. 160	107-F-2		8	6

SHEET NO. 4
6 SHEETS



Notes:
All intermediate stiffeners shall be crimped except at cross frame connections.
All fills under stiffeners shall be welded to web with ¼" c.f.w. after rivets have been driven.

GIRDER DETAILS

[redacted]

LITTLE WABASH RIVER
F.A. ROUTE 160 SEC. 107-B
CLAY COUNTY
STA. 1297+83

DESIGNED	H.L. Owen
CHECKED	Carl E. Thurman
DRAWN	H.L.O. Stone
CHECKED	Carl E. Thurman

Oct 27 1952
EXAMINED W. E. Hanson
PASSED E. L. Hunt
APPROVED F. N. Barker

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/2/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 013-0019

SCALE: SHEET 11 OF 11 SHEETS STA. TO STA.

FAP-828	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	CLAY	71	67
		CONTRACT NO. 74D61		
		ILLINOIS FED. AID PROJECT		

MODEL: Existing Structure 11 [Sheet]
FILE NAME: c:\pw_work\pwidot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-013-0019.dgn

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 25 FA 84	3BR-4	EFFINGHAM	21	4
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
SHEETS 16

BM CHISELED "O" EAST END OF NORTH ABUTMENT
ELEV. 484.86

EXISTING STRUCTURE #025-0025 WAS BUILT IN 1921 AS A THREE SPAN R.C. SLAB BRIDGE WITH SOLID PIERS AND CLOSED ABUTMENTS. IN 1935 THE STRUCTURE WAS WIDENED TO 34'-4" OUT-TO-OUT USING P.P.C. DECK BEAMS. OVERALL LENGTH OF STRUCTURE IS 70.57 FEET BACK-TO-BACK OF ABUTMENTS. THE EXISTING STRUCTURE WILL BE REPLACED WITH AN ENTIRELY NEW BRIDGE. NO SALVAGE.

TRAFFIC WILL BE MAINTAINED BY USING STAGE CONSTRUCTION AND TRAFFIC SIGNALS.

WATERWAY INFORMATION

DRAINAGE AREA = 10.7 SQ. MI. LOWGRADE ELEV. = 486.55 @ STA. 436+00

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST.	OPENING SQ. FT. PROP.	NAT. H.W.E.	HEAD-FT. EXIST	HEAD-FT. PROP	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	50	2899	515	933	484.6	1.29	0.48	485.89	485.08
BASE	100	3327	523	953	484.8	1.70	0.60	486.50	485.40
MAX. CALC.	500	4321		1003	485.3		0.58		485.88

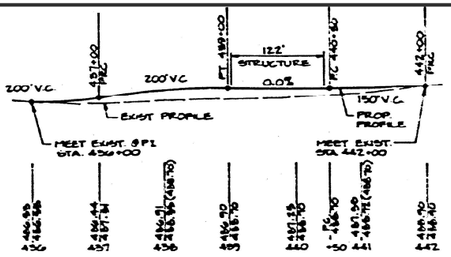
DESIGN STRESSES

CAST-IN-PLACE CONCRETE:
f'c = 3,500 psi. fy = 60,000 psi (REINFORCEMENT)

STRUCTURAL STEEL
AASHTO M222 STEEL (fy = 50,000 psi), UNPAINTED
DESIGNED BY STRENGTH DESIGN METHOD

DESIGN SPECIFICATIONS:
1989 AASHTO SPECIFICATIONS & 1984, 1985 & 1986 INTERIM SPECIFICATIONS.

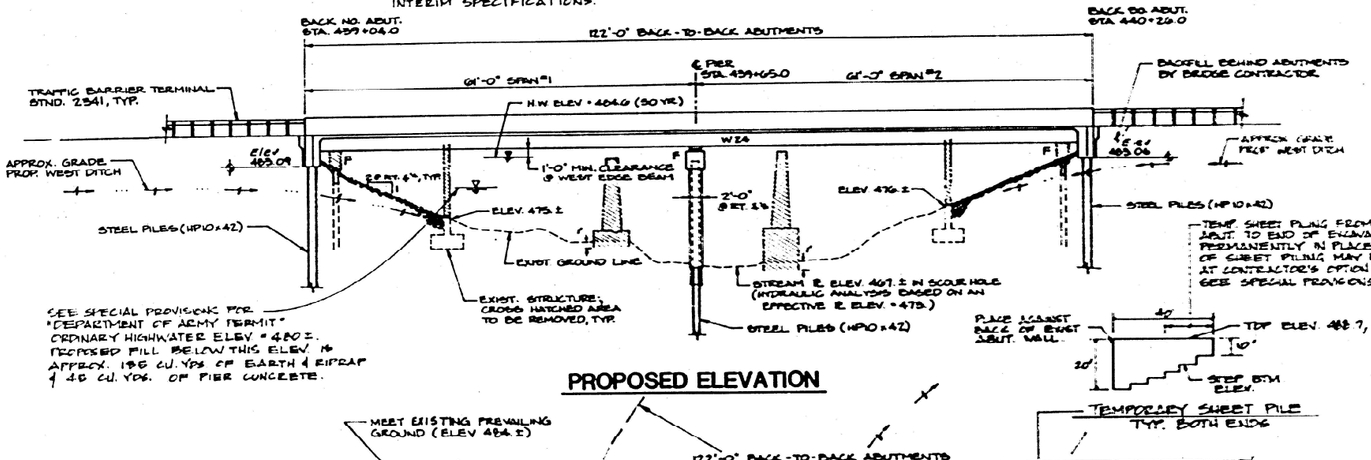
LOADING AASHTO HS 20-44 WITH ALLOWANCE FOR 25psf FUTURE WEARING SURFACE.



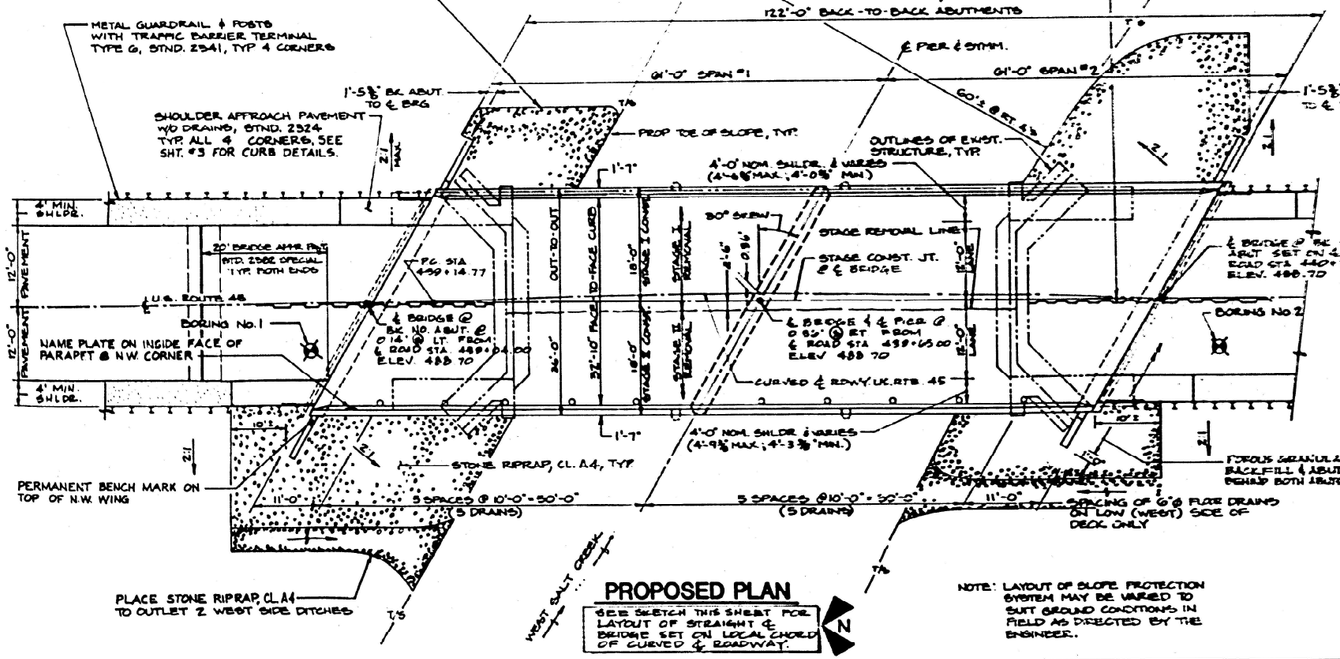
PROPOSED PROFILE

*Quantity does not include bridge deck surface

ITEM	UNIT	SUPERSTR	SUBSTR	TOTAL
Porous Granular Embankment	Cu. Yds.		63	63
Removal of Existing Structures	Each	1		1
Floor Drains	Each	10		10
Protective Coat	Sq. Yds.	105		105
Class X Concrete	Cu. Yds.		89.9	89.9
Furnishing & Erecting Structural Steel	L. Sum	1		1
Structure Excavation	Cu. Yds.		172	172
Reinforcement Bars	Pound		9,140	9,140
Reinforcement Bars, Epoxy Coated	Pound	31,170		31,170
Steel Piles HP10x42	Lin. Ft.		988	988
Stud Shear Connectors	Each	2,280		2,280
Name Plates	Each	1		1
Stone Riprap, Class A4	Sq. Yds.		490	490
Temporary Bridge Rail	Lin. Ft.	79		79
INSTALL TEMPORARY CONCRETE BARRIER	Lin. Ft.	554		554
Temporary Sheet Piling	Sq. Ft.		1,200	1,200
Abutment Drains	Each		2	2
Permanent Benchmarks	Each		1	1
Filter Fabric For Use with Riprap	Sq. Yds.		490	490
Traffic Barrier Terminal, Type II	Each	2		2
Test Piles – Steel HP10 x 42	Each		1	1
Relocate Temporary Concrete Barrier	Lin. Ft.	474		474
Class X Concrete Superstructure	Cu. Yds.	155.0		155.0



PROPOSED ELEVATION



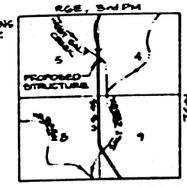
PROPOSED PLAN

SEE SKETCH THIS SHEET FOR LAYOUT OF STRAIGHT & BRIDGE SET ON LOCAL CHORD OF CURVED ℄ ROADWAY.

NOTE: LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN FIELD AS DIRECTED BY THE ENGINEER.

STATION 439+65.0
BUILT 1998 BY
STATE OF ILLINOIS
SBI RT. 25 SEC. 3BR-4
FA PROJ. BRSE.9(ALT.)
LOADING HS 20
STR. NO. 025-0092

NAME PLATE
(SEE Std. 2113)



LOCATION SKETCH

GENERAL NOTES

1. SEE SHEET NO. 2 FOR BORING DATA.
2. FASTENERS ARE ASTM A325, TYPE 3, BOLTS 7/8" ø, OVER SIZED HOLES 15/16" ø, UNLESS OTHERWISE NOTED.
3. CALCULATED WEIGHT OF STRUCTURAL STEEL = 104,938 LBS.
4. THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.
5. ALL STRUCTURAL STEEL SHALL BE AASHTO M 222.
6. AASHTO M 222 STRUCTURAL STEEL SHALL NOT BE PAINTED.
7. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
8. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.
9. THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE SPLICE PLATE MATERIAL AND THE WIDE FLANGE BEAMS.
10. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
11. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY CHANGING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
12. THE CONTRACTOR SHALL DRIVE ONE HP 10 X 42 STEEL TEST PILE IN A PERMANENT LOCATION AT THE NORTH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
13. THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE AND PLACE CURBING THE FLOWSHIELD ALL MATERIALS EXCAVATED FOR STRUCTURE AT THE PIER AND ABUTMENTS. THE COST FOR COMPLYING WITH THIS REQUIREMENT IS INCLUDED IN THE PRICE FOR STRUCTURE EXCAVATION.

I. SEE STANDARD 2113.
2. LOCATE AS SHOWN IN PLAN VIEW.
3. F.A. PROJECT NUMBER TO BE PROVIDED BY DISTRICT.

Philip J. Lane
ILLINOIS REGISTERED STRUCTURAL ENGINEER NO. 4084
Date
STATE OF ILLINOIS PHILIP J. LANE 4084 REGISTERED STRUCTURAL ENGINEER

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
James J. Rybarczyk
Engineer of Bridges & Structures

CURVE DATA

PC STA 439+14.77
PI STA 442+00.72
PT STA 444+85.54
Δ = 07°-36'-40"
L = 311.042'
D = 01°-30'-00"
E = 9.30'
T = 205.946'
R = 3,817.26'
ME = 0.02½'
SA = STA 438+00 TO STA 439+75



HORIZONTAL CURVE & OFFSET DATA
— NO SCALE —

DESIGNED	P.J.L.
CHECKED	S.B.B.
DRAWN	C.E.S., D.E.H.
CHECKED	P.J.L.

GENERAL PLAN & ELEVATION

S.N. 025-0092
U.S. ROUTE 45 (F.A.P. 84)
OVER WEST SALT CREEK
STATION 439+65.0
SECTION 3BR-4
EFFINGHAM COUNTY, ILLINOIS

USER NAME = dakota.kincaid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 10/9/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 025-0092

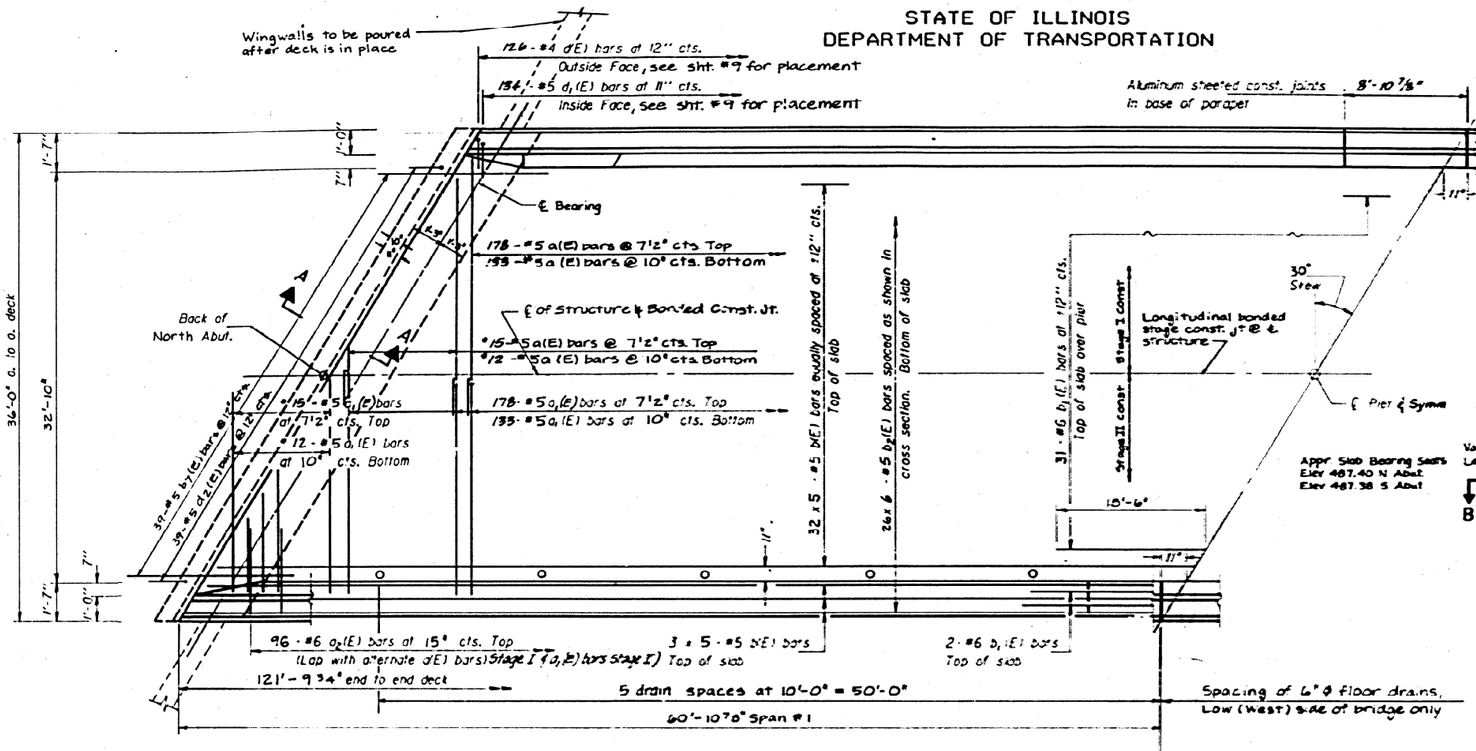
SCALE: | SHEET 1 OF 4 SHEETS | STA. | TO STA.

FAP-328	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	EFFINGHAM	71	68
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

MODEL: Existing Structure Plans 1 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1127\96\D774D61-sht-plan-025-0092.dgn

					SHEET NO. 5
25 84	SBR-4	EFFINGHAM	21	8	SHEETS 16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DESIGNED	PJL
CHECKED	S.R.B.
DRAWN	DBR
CHECKED	PJL.

DECK DETAILS

U.S. ROUTE 45 (F.A.P. 84)
OVER WEST SALT CREEK
STATION 439+65.0
SECTION 3BR-4
EFFINGHAM COUNTY, ILLINOIS

MODEL: Existing Structure Plans 2 [Sheet]
FILE NAME: c:\pw_work\dot\illinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-dan-025-0092.dgn

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

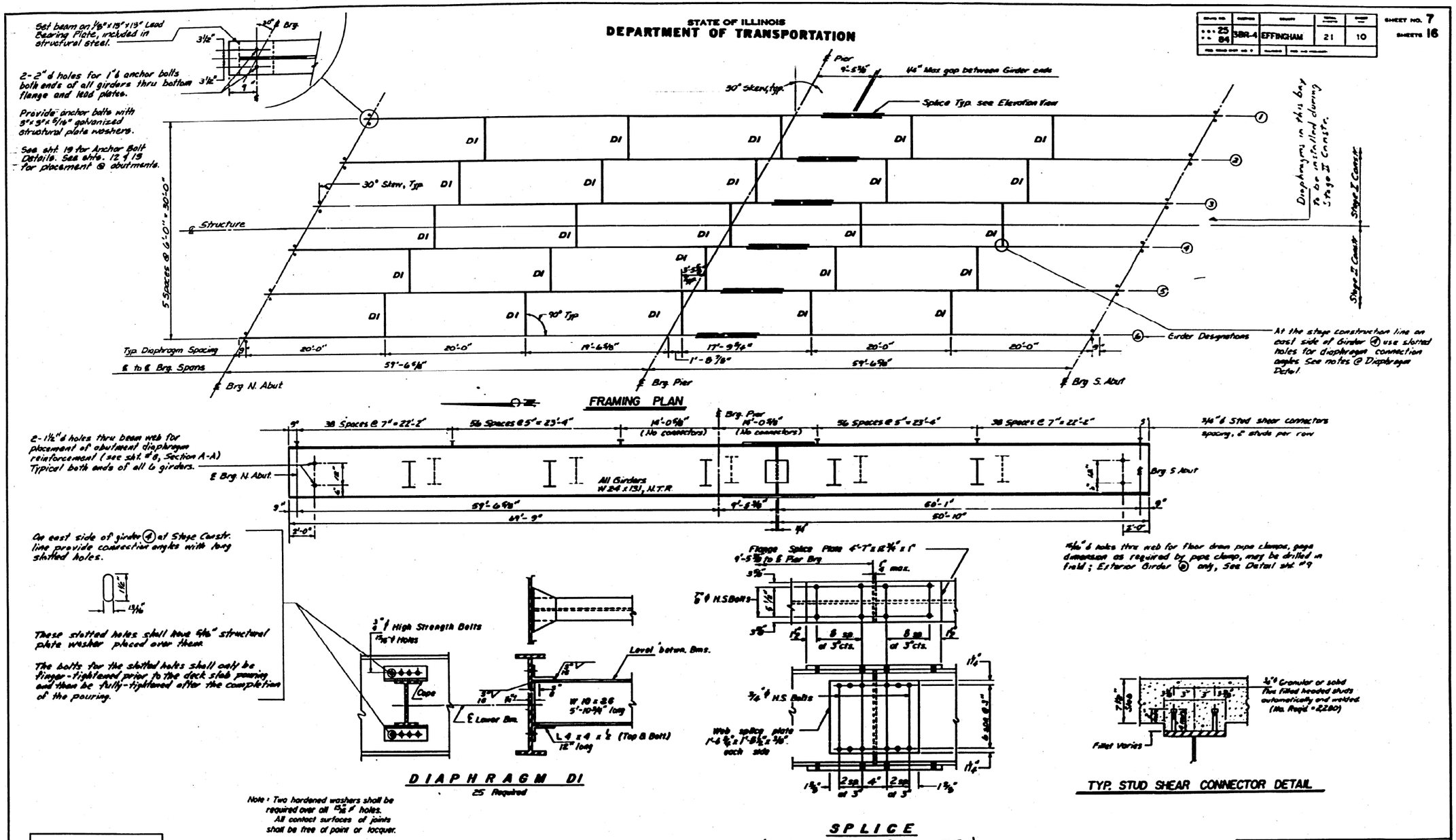
EXISTING STRUCTURE PLANS 025-0092

SCALE: | SHEET 2 OF 4 SHEETS | STA. | TO STA.

FAP-328	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	EFFINGHAM	71	69
		CONTRACT NO. 74D61		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

25 04	3BR-4	EFFINGHAM	21	10	SHEET NO. 7 SHEETS 16



FRAMING PLAN

2-1½" ϕ holes thru beam web for placement of abutment diaphragm reinforcement (see sht. # 8, Section A-A) Typical both ends of all 6 girders.

⅝" ϕ holes thru web for floor drain pipe clamps, gage dimension as required by pipe clamp, may be drilled in field; Exterior Girder ⑥ only, See Detail sht. # 9

On east side of girder ④ at Stage Constr. line provide connection angles with long slotted holes.

These slotted holes shall have ⅝" structural plate washer placed over them.

The bolts for the slotted holes shall only be finger-tightened prior to the deck slab pouring and then be fully-tightened after the completion of the pouring.

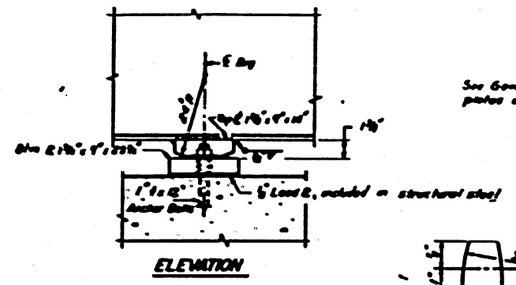
DIAPHRAGM D1
25 Required

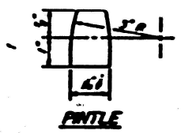
Note: Two hardened washers shall be required over all 15/16" ϕ holes. All contact surfaces of joints shall be free of paint or lacquer.

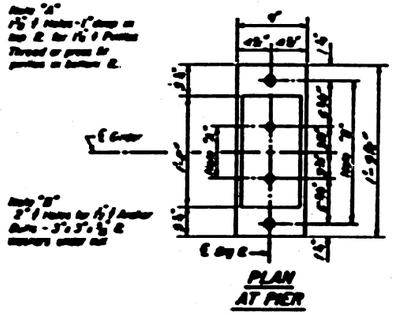
SPLICE
(All Flange & Web Splice Plates are N.T.R.)

¾" ϕ Granular or solid Thru filled headed shots automatically end welded. (Min. Req'd = 2280)
7/8"
3"
3"
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION







Note : See sht 19 for Anchor Bolts

See General Note #3 on sht #6 for steel shim plates included in and incidental to structure steel

TOP OF *BEAM* ELEVATIONS

BEAM	CEN. BRG. N. ABUT.	CEN. BRG. PIER	SPLICE	CEN. BRG. S. ABUT.
1	489.048	488.197	488.225	488.210
2	487.971	488.072	488.098	488.089
3	487.927	487.956	487.961	487.968
4	487.856	487.842	487.840	487.847
5	487.749	487.725	487.721	487.726
6	487.642	487.608	487.603	487.606

STAGE CONST. JOINT @ CENTER OF STRUCTURE

Location	Station	Offset Right (+) Left (-)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. N. ABUT.	43903.958	-0.140	488.701	488.701
CENTER BRG.	43805.661	-0.121	488.701	488.701
A	43815.482	0.008	488.700	488.733
B	43825.440	0.125	488.698	488.743
C	43835.440	0.218	488.696	488.744
D	43845.440	0.287	488.694	488.726
E	43855.441	0.334	488.693	488.704
CENTER PIER	43864.998	0.356	488.693	488.693
F	43874.998	0.357	488.693	488.705
G	43885.000	0.335	488.693	488.728
H	43895.003	0.289	488.694	488.762
I	44005.001	0.220	488.696	488.763
J	44015.001	0.128	488.697	488.726
CENTER BRG.	44024.557	0.018	488.700	488.700
BK. S. ABUT.	44026.000	0.000	488.700	488.700

Is and Ix are the moment of inertia and section modulus of the steel section used in computing f_b (Total & Overload)
Is and Ix are the moment of inertia and section modulus of the composite section used in computing f_b (Total & Overload)
with a live moment $L + I$ equal shear range as given

Plastic Moments of the superimposed loads
M_p (Applied Moment) = 1.3 [pdl + ma l + s (str + il)]
M_p is the Full Plastic Moment Capacity computed according to AASHTO 10.48.1 and 10.50.1.1
f_b (Overload) is the sum of the stresses due to pdl + ma l + s (str + il)
f_b (Total) is the sum of the stresses due to 1.3 [pdl + ma l + s (str + il)]

	Steel	Pier
I_x (in⁴)	4,009	4,889
I_y (in⁴)	41.01	—
S_x (in³)	309	309
S_y (in³)	4918	—
$\bar{y}$ (min)	0.733	1.859
M_p (k)	1918	4954.0
r_y (min)	0.678	—
M_y (k)	623	—
M_x (k)	2483	6471
M_{temp} (k)	124	324
M_{perm} (k)	7319	6548
M_{str} (k)	4378.0	4378.0
M_{il} (k)	3005.4	—
n (Superimposed Dead)	30	10.5
n (Temp. Dead)	17	—
n (Perm. Dead)	9.0	9.0
n (Permanent Load)	17.0	30.1
n (Temp.)	—	17.0
M_D (k)	649	—

	Steel	Pier
M_p (k)	1918	7340
M_{LL} (k)	3217	4301
f_{temp} (ksi)	0.6	0.7
f_{perm} (ksi)	0.1	0.2

AS REVISED

DESIGNED	P.J.L.
CHECKED	G.F.E.
DRAWN	B.E.H.
CHECKED	P.J.L.

I-2-6 12-1-83

As Revised 1-9-89 L.W.

PIER BEARINGS

U.S. ROUTE 40 (FAP 328)
OVER WEST SALT CREEK
STATION 439+68.0
SECTION 328-4
EFFINGHAM COUNTY, ILLINOIS

USER NAME = dakota.kincaid	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 12/2/2025	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS 025-0092

SCALE: | SHEET 4 OF 4 SHEETS | STA. | TO STA.

FAP-328	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 BRIDGE PAINTING 2026-1	EFFINGHAM	71	71
		CONTRACT NO. 74D61		
	ILLINOIS FED. AID PROJECT			

MODEL: Existing Structure Plans 4 [Sheet]
FILE NAME: c:\pw_work\pwlotillinois.gov_dakota.kincaid@illinois.gov\d1121796\D774D61-sht-plan-025-0092.dgn