11-06-2026 LETTING ITEM 107

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	1
	ILLINOIS	CONTRACT NO. 74E48		

I-70 CLARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAS ROUTE 1707 (US 40) / FAI ROUTE 70 (I-70)
SECTION D7 BRIDGE PAINTING 2027-1
PROJECT NHPP-STP-HJJN(405)
BRIDGE PAINTING
CUMBERLAND COUNTY, CLARK COUNTY

C-97-090-26

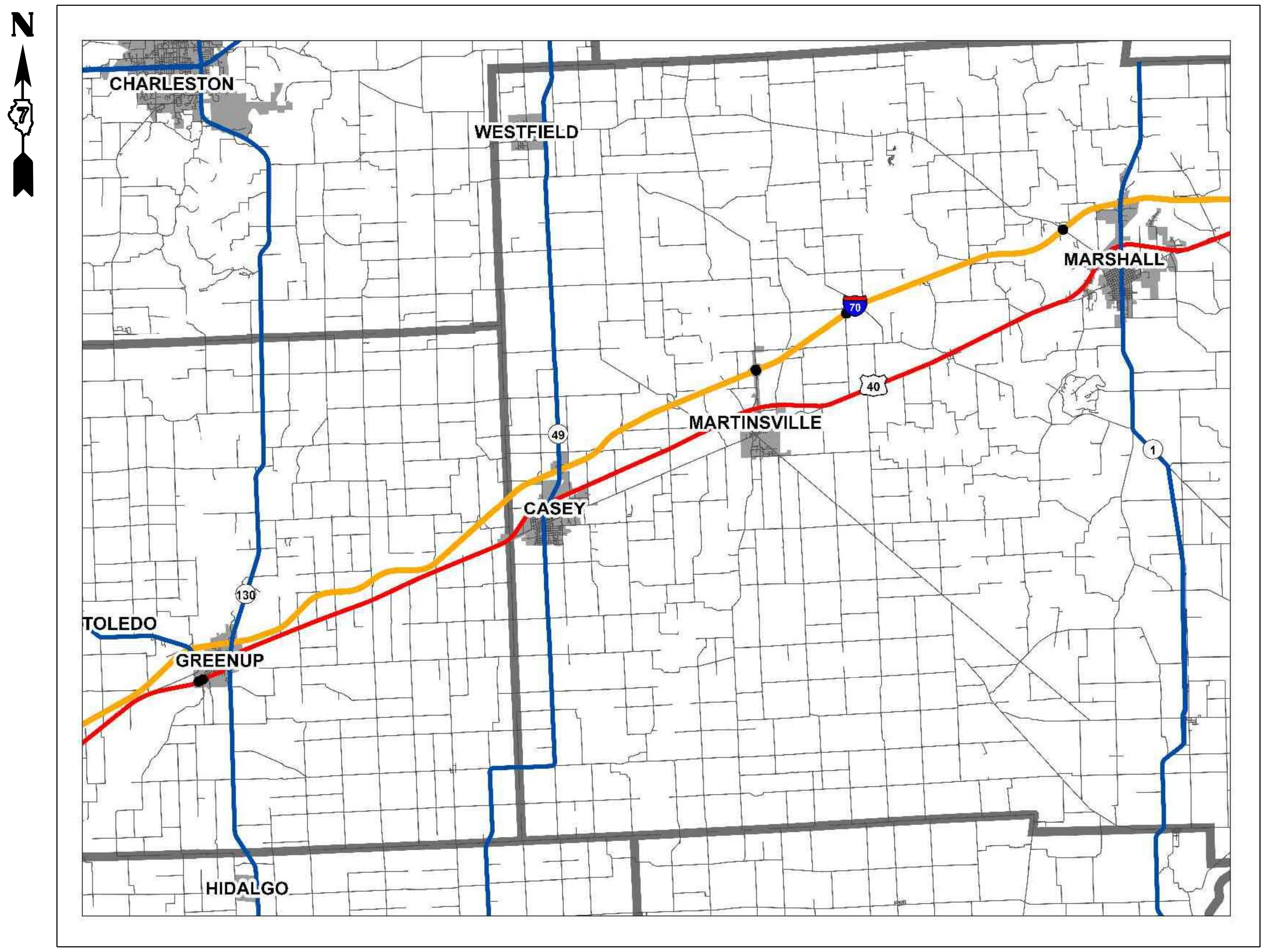
FOR INDEX OF SHEETS, SEE SHEET NO. 2

US 40: ADT = 1750 (2027)
MU = 150 (2027)

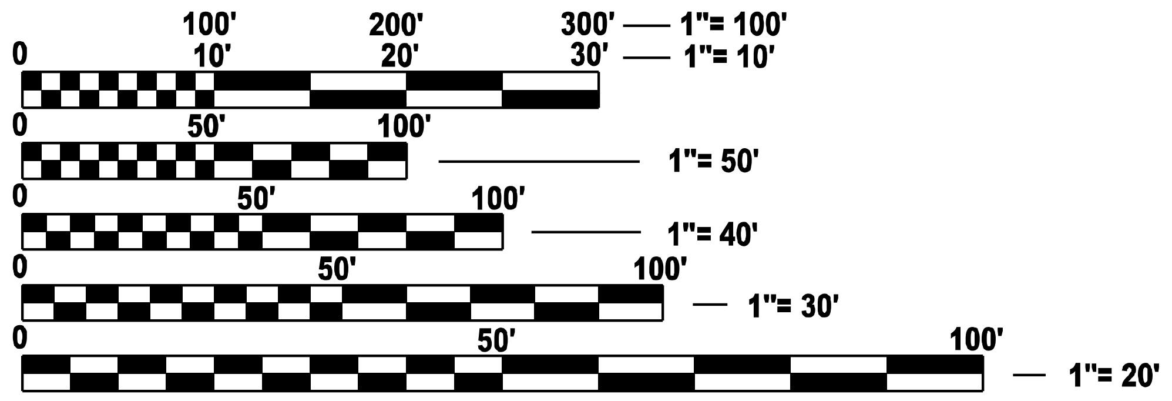
I-70: ADT = 25,800 (2027)
MU = 13,800 (2027)

D-97-071-26

LOCATION OF SECTION INDICATED THUS: - ▬ OR ▨



SEE MAP OF LOCATIONS FOR LOCATIONS OF STRUCTURES



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: KALEB HIRTZEL
PROJECT MANAGER: MARIA BLOEMER
PHONE: (217)342-8243

CONTRACT NO. 74E48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 6, 20 26
Teresa C. Price
REGIONAL ENGINEER

October 2 20 26
ENGINEER OF DESIGN AND ENVIRONMENT

October 2 20 26
5
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES, & HIGHWAY STANDARDS
3-4	SUMMARY OF QUANTITIES
5-6	MAPS OF LOCATIONS
7-81	EXISTING STRUCTURE DETAILS
82-83	DISTRICT DETAILS - REAL-TIME TRAFFIC CONTROL SYSTEM

THE FOLLOWING HIGHWAY STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET IN THE PLANS.

HIGHWAY STANDARDS

SHEET NO.	ITEM
000001-09	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
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

COMMITMENTS:

NONE.

GENERAL NOTES

SSPC QP1 (AND QP2) CONTRACTOR CERTIFICATION IS REQUIRED FOR THIS CONTRACT.

LEAD PAINT:

LOCATIONS - #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #13, #14

FULL PAINTING IN THE "PAINT ONLY" PROGRAM.
COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

ALL STRUCTURE STEEL, INCLUDING BEAMS, BEARINGS, AND DIAPHRAGMS SHALL BE CLEANED BY NEAR WHITE METAL BLAST CLEANING - SSPC-SP10. ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

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

THESE STRUCTURES CONTAIN LEAD PAINT.

THE DESIGNATED AREAS CLEANED PER NEAR WHITE METAL BLAST CLEANING - SSPC-SP10 SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U.

NON-LEAD PAINT:

LOCATIONS - #12, #15

FULL PAINTING IN THE "PAINT ONLY" PROGRAM.
COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

ALL STRUCTURE STEEL, INCLUDING BEAMS, BEARINGS, AND DIAPHRAGMS SHALL BE CLEANED BY NEAR WHITE METAL BLAST CLEANING - SSPC-SP10. ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

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

THESE STRUCTURES CONTAIN NON-LEAD PAINT.

THE DESIGNATED AREAS CLEANED PER NEAR WHITE METAL BLAST CLEANING - SSPC-SP10 SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U.

LOCATION #12

BRIDGE: 018-0009
ROUTE: FAS 1707
MARKED: US 40
STATION: 773+44.13 (US 40)
SN: 018-0009
FEATURE CROSSED: MILL ROAD (MS 5990)

4 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #15

BRIDGE: 018-0010
ROUTE: FAS 1707
MARKED: US 40
STATION: 778+76.20 (US 40)
SN: 018-0010
FEATURE CROSSED: LINCOLN ST (MS 1230)

4 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #1

BRIDGE: 012-0027
ROUTE: FAS 686
MARKED: CH 6
STATION: 1205+01.03 (FAI 70); 120+00.00 (CH 6)
SN: 012-0027
FEATURE CROSSED: I-70

1 AIR MONITOR SHALL BE REQUIRED AT THIS LOCATION

LOCATION #2

BRIDGE: 012-0028
ROUTE: FAS 688
MARKED: CH 8
STATION: 1545+70.70 (FAI 70); 130+00.00 (CH 8)
SN: 012-0028
FEATURE CROSSED: I-70

7 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #3

BRIDGE: 012-0029
ROUTE: FAS 689
MARKED: CH 9
STATION: 1079+73.46 (FAI 70); 50+00.00 (CH 9)
SN: 012-0029
FEATURE CROSSED: I-70

3 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #4

BRIDGE: 012-0030
ROUTE: FAS 1660
MARKED: CH 20
STATION: 344+00.00 (FAI 70); 720+00.00 (CH 20)
SN: 012-0030
FEATURE CROSSED: I-70

1 AIR MONITOR SHALL BE REQUIRED AT THIS LOCATION

LOCATION #5

BRIDGE: 012-0040
ROUTE: CH 23
MARKED: CH 23
STATION: 954+25.85 (FAI 70); 50+00.00 (CH 23)
SN: 012-0040
FEATURE CROSSED: I-70

1 AIR MONITOR SHALL BE REQUIRED AT THIS LOCATION

LOCATION #6

BRIDGE: 012-0042
ROUTE: TR 183 B
MARKED: TR 183 B
STATION: 1117+32.00 (FAI 70); 30+00.00 (TR 183 B)
SN: 012-0042
FEATURE CROSSED: I-70

0 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #7

BRIDGE: 012-0044
ROUTE: TR 223
MARKED: TR 223
STATION: 819+49.58 (FAI 70); 50+00.00 (TR 223)
SN: 012-0044
FEATURE CROSSED: I-70

0 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #8

BRIDGE: 012-0048
ROUTE: FAP 832
MARKED: ILL 49
STATION: 757+93.89 (FAI 70); 50+00.00 (ILL 49)
SN: 012-0048
FEATURE CROSSED: I-70

3 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #9

BRIDGE: 012-0049
ROUTE: TR 48
MARKED: TR 48
STATION: 865+81.81 (FAI 70); 50+00.00 (TR 48)
SN: 012-0049
FEATURE CROSSED: I-70

2 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #10

BRIDGE: 012-0052
ROUTE: FAI 70 (EB)
MARKED: I-70 (EB)
STATION: 1348+41.00 (FAI 70)
SN: 012-0052
FEATURE CROSSED: MILL CREEK

0 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #11

BRIDGE: 012-0053
ROUTE: FAI 70 (WB)
MARKED: I-70 (WB)
STATION: 1348+41.00 (FAI 70)
SN: 012-0053
FEATURE CROSSED: MILL CREEK

0 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #13

BRIDGE: 012-0054
ROUTE: FAI 70 (EB)
MARKED: I-70 (EB)
STATION: 1640+69.68 (FAI 70)
SN: 012-0054
FEATURE CROSSED: ILL 1 (FAP 332)

4 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

LOCATION #14

BRIDGE: 012-0055
ROUTE: FAI 70 (WB)
MARKED: I-70 (WB)
STATION: 1640+69.68 (FAI 70)
SN: 012-0055
FEATURE CROSSED: ILL 1 (FAP 332)

4 AIR MONITORS SHALL BE REQUIRED AT THIS LOCATION

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PLOT DATE = 8/5/2026

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DATE -

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REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES,
& HIGHWAY STANDARDS

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	2

CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT
I-70
CLARK

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP 90 FED/10 STATE CONSTRUCTION CODE CUMBERLAND BRIDGE 0047 VARIOUS	STP 80 FED/20 STATE CONSTRUCTION CODE CLARK BRIDGE 0047 VARIOUS
67100100	MOBILIZATION	L SUM	1		1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	13		13
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	2	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1		1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1		1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	2	
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	12	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	4500	600	3900
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	100	12	88
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	4500	600	3900
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	15	2	13
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	15	2	13
X5060610	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 12	L SUM	1	1	
X5060615	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 15	L SUM	1	1	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP 90 FED/10 STATE CONSTRUCTION CODE CUMBERLAND BRIDGE 0047 VARIOUS	STP 80 FED/20 STATE CONSTRUCTION CODE CLARK BRIDGE 0047 VARIOUS
X7010118	TEMPORARY RUMBLE STRIPS (SPECIAL)	EACH	8		8
X7011854	REAL-TIME TRAFFIC CONTROL CENTRAL BASE UNIT	CAL MO	16		16
X7011860	REAL-TIME TRAFFIC CONTROL WARNING SIGN	CAL MO	128		128
X7011862	REAL-TIME TRAFFIC MONITORING SENSOR UNIT	CAL MO	256		256
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1		1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1		1
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1		1
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1		1
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1		1
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1		1
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1		1
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM	1		1
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM	1		1
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	L SUM	1		1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	3
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT

I-70
CLARK

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP 90 FED/10 STATE CONSTRUCTION CODE CUMBERLAND BRIDGE 0047 VARIOUS	STP 80 FED/20 STATE CONSTRUCTION CODE CLARK BRIDGE 0047 VARIOUS
Z0007111	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 11	L SUM	1		1
Z0007113	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 13	L SUM	1		1
Z0007115	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 14	L SUM	1		1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1		1
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1		1
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1		1
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1		1
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1		1
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM	1		1
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM	1		1
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM	1		1
Z0010511	CLEANING AND PAINTING STEEL BRIDGE NO. 11	L SUM	1		1

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP 90 FED/10 STATE CONSTRUCTION CODE CUMBERLAND BRIDGE 0047 VARIOUS	STP 80 FED/20 STATE CONSTRUCTION CODE CLARK BRIDGE 0047 VARIOUS
Z0010512	CLEANING AND PAINTING STEEL BRIDGE NO. 12	L SUM	1	1	
Z0010513	CLEANING AND PAINTING STEEL BRIDGE NO. 13	L SUM	1		1
Z0010514	CLEANING AND PAINTING STEEL BRIDGE NO. 14	L SUM	1		1
Z0010515	CLEANING AND PAINTING STEEL BRIDGE NO. 15	L SUM	1	1	

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PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

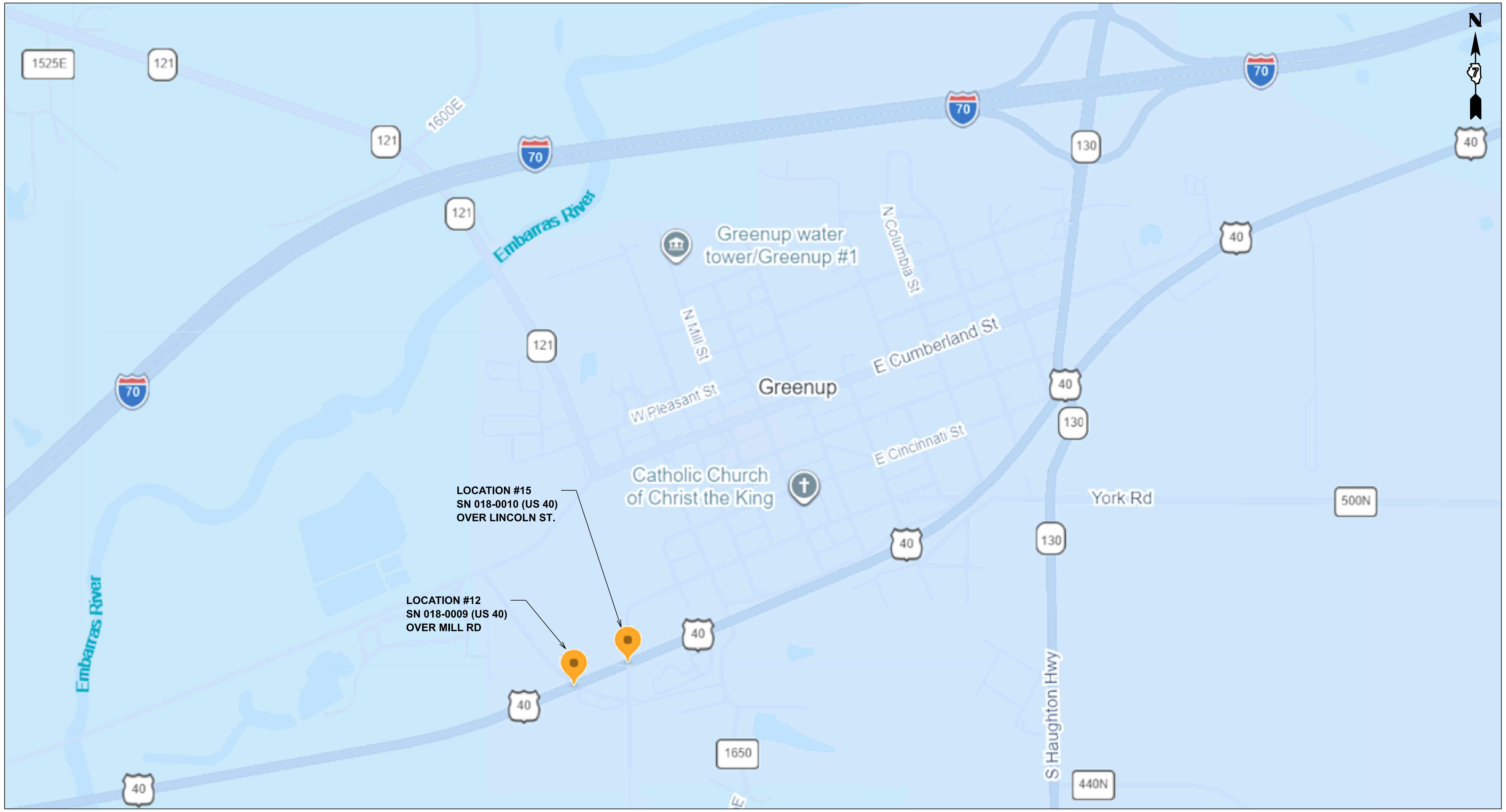
SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	4
		CONTRACT NO. 74E48		
	ILLINOIS FED. AID PROJECT			

I-70

CLARK

US 40 PAINTING LOCATIONS



LOCATION #15
SN 018-0010 (US 40)
OVER LINCOLN ST.

LOCATION #12
SN 018-0009 (US 40)
OVER MILL RD

NOT TO SCALE

MODEL: 74E48 - 4 [Sheet]
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PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

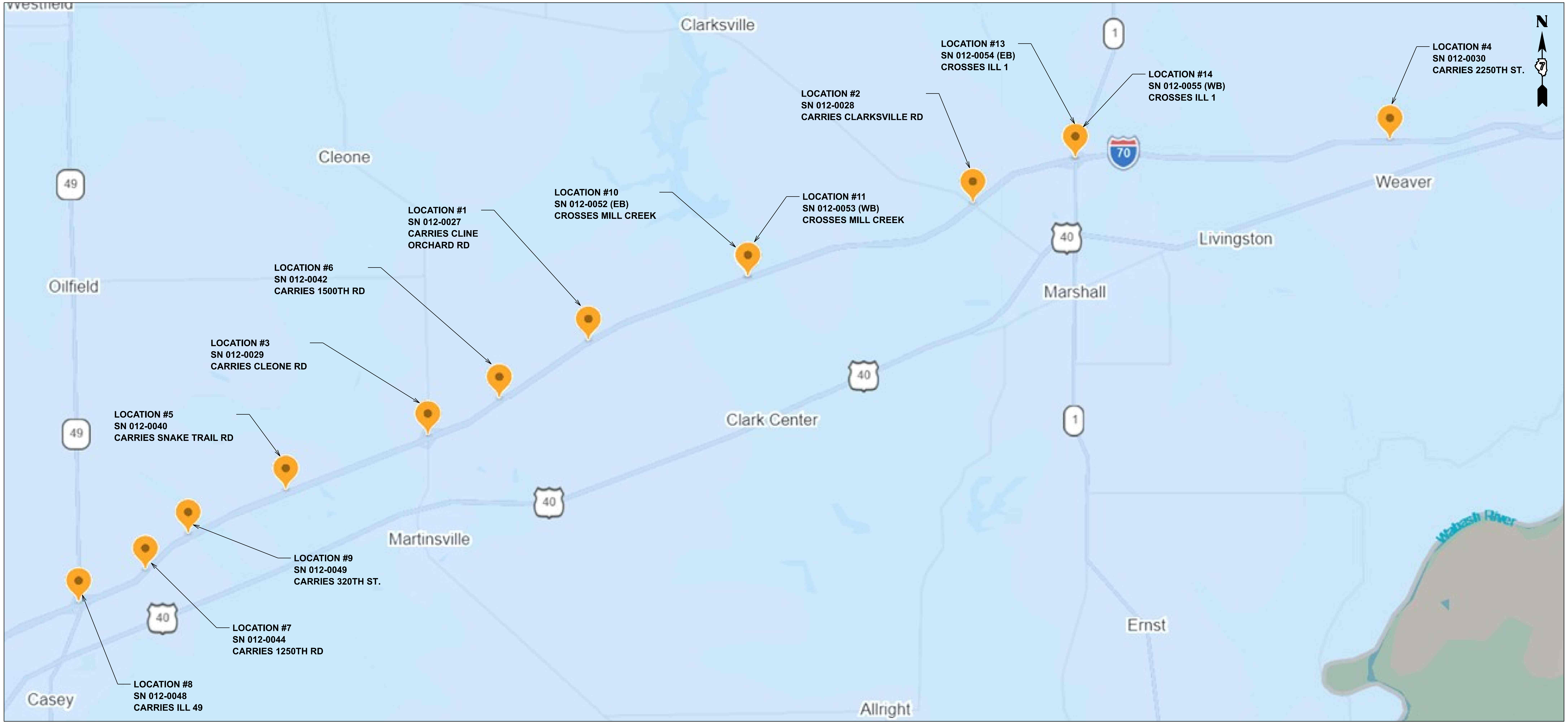
MAP OF LOCATIONS
CUMBERLAND COUNTY

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	5
		CONTRACT NO. 74E48		
	ILLINOIS FED. AID PROJECT			

I-70 CLARK

INTERSTATE 70 PAINTING LOCATIONS



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PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAP OF LOCATIONS
CLARK COUNTY

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	6
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

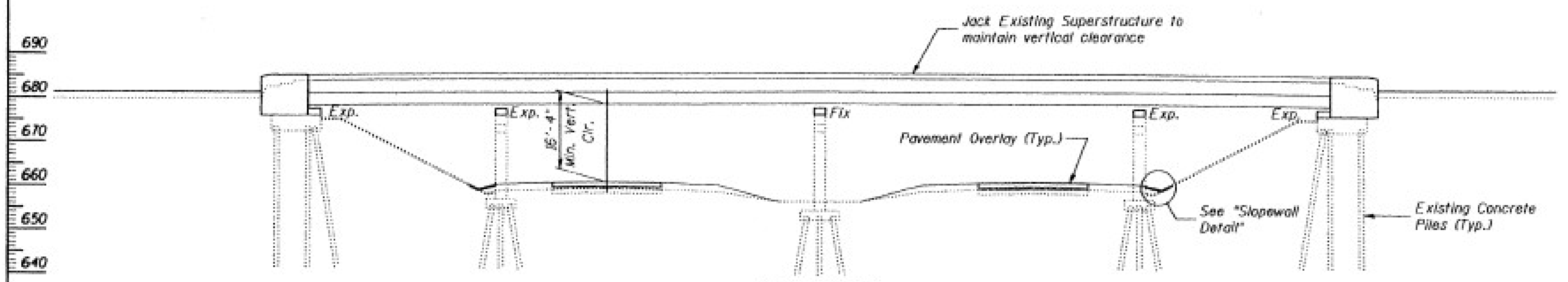
Bench Mark: #418 - PSM near the ℄ of I-70 Sta. 1203+46 Elev. 656.13.
Existing Structure: SN 012-0027, four span 235'-6" back to back abutments, 30'-0" out to out width, wide flange steel beams with concrete deck on pile cap abutments and hammerhead piers supported by concrete piles. Built in 1969 as F.A.I. Route 70, Section 12-5IHB-1 at Sta. 1205+01.03.

SHEET 1
OF 11

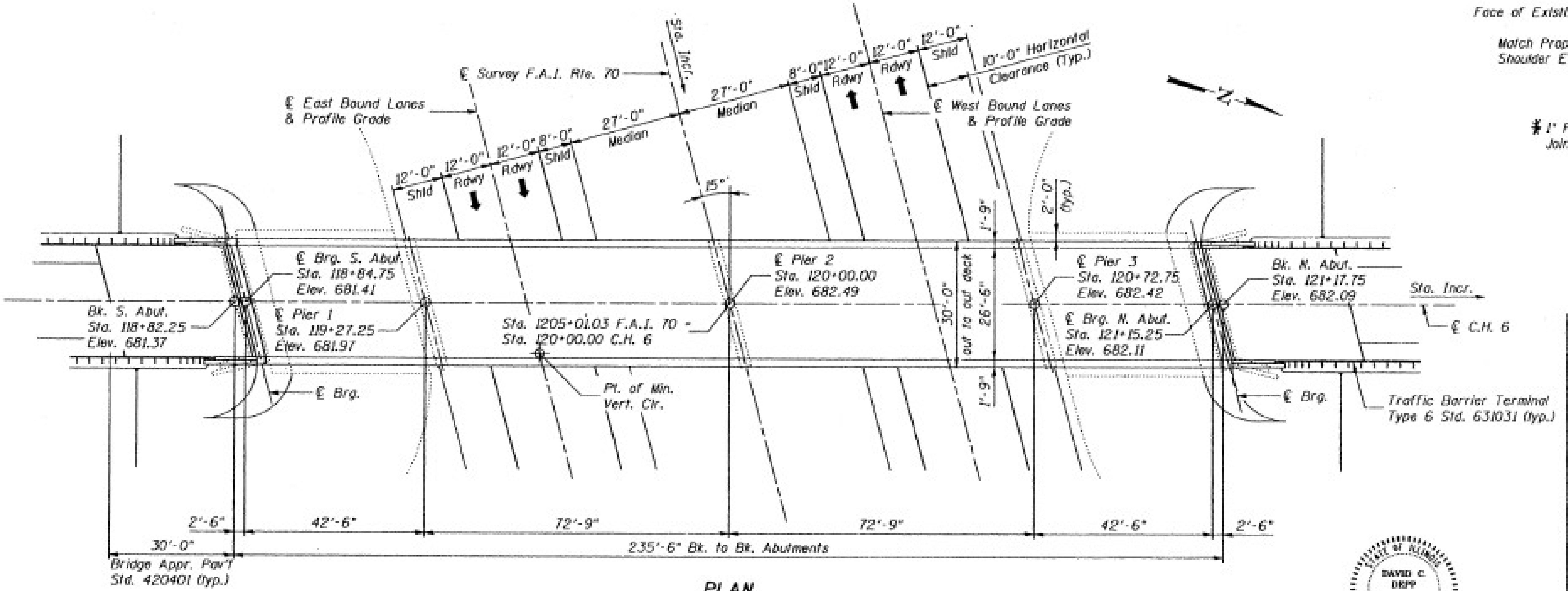
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	12-5IHB-1BR	CLARK	759	194
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

INDEX OF SHEETS

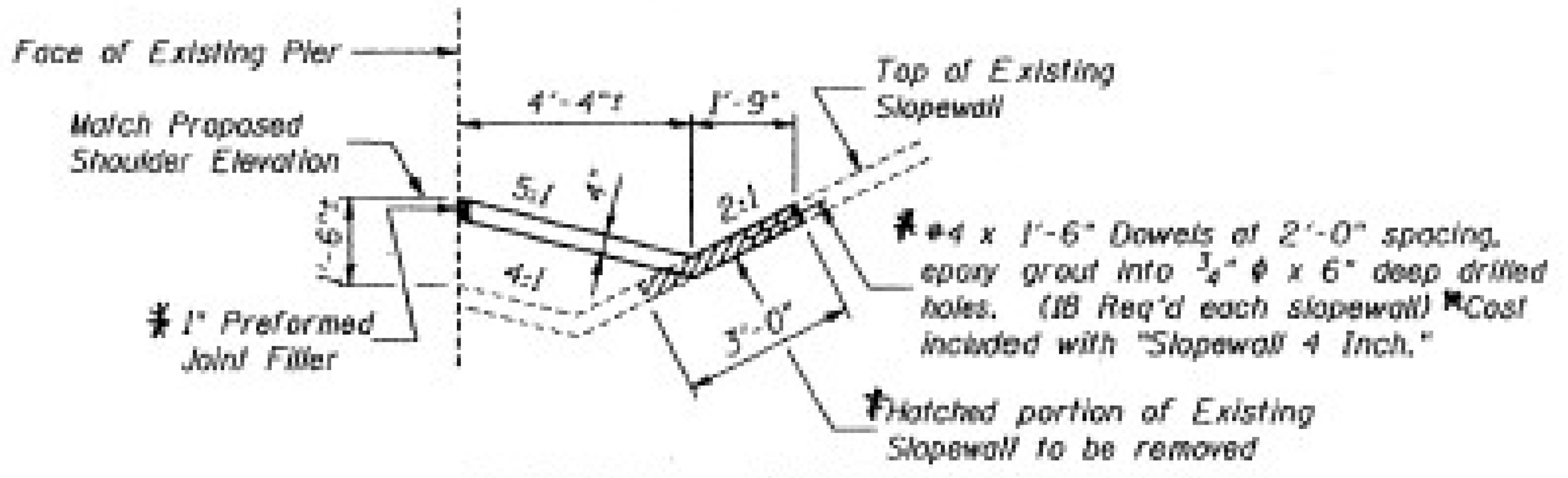
Sheet No.	Description
1	General Plan, Bill of Mat'l, Sheet Index
2	General Notes & Jacking Procedure
3	Superstructure Plan & Typical Section
4	Superstructure Details
5	Bearing Details
6	Anchor Bolts
7	Abutments (Concrete Removal)
8-9	Abutment Details
10	Piers 1, 2 & 3
11	Bar Splicer Assembly



ELEVATION


Sta. Incr.
℄ Survey F.A.I. Rte. 70
℄ East Bound Lanes & Profile Grade
12'-0" Shld
12'-0" Rdwy
12'-0" Rdwy
8'-0" Shld
27'-0" Median
27'-0" Median
8'-0" Shld
12'-0" Rdwy
12'-0" Rdwy
12'-0" Shld
10'-0" Horizontal Clearance (Typ.)
℄ West Bound Lanes & Profile Grade
15°±
1'-9"
2'-0" (Typ.)
℄ Brg. S. Abut. Sta. 118+84.75 Elev. 681.41
Bk. S. Abut. Sta. 118+82.25 Elev. 681.37
℄ Pier 1 Sta. 119+27.25 Elev. 681.97
Sta. 1205+01.03 F.A.I. 70 = Sta. 120+00.00 C.H. 6
℄ Pier 2 Sta. 120+00.00 Elev. 682.49
Pt. of Min. Vert. Clr.
30'-0" out to out deck
26'-6"
1'-9"
℄ Pier 3 Sta. 120+72.75 Elev. 682.42
℄ Brg. N. Abut. Sta. 121+15.25 Elev. 682.11
Bk. N. Abut. Sta. 121+17.75 Elev. 682.09
Sta. Incr.
℄ C.H. 6
℄ Brg.
℄ Brg.
Traffic Barrier Terminal Type 6 Std. 631031 (typ.)
N
2'-6"
42'-6"
72'-9"
72'-9"
42'-6"
2'-6"
30'-0"
235'-6" Bk. to Bk. Abutments
Bridge Appr. Pav't Std. 420401 (typ.)

PLAN


Face of Existing Pier
Match Proposed Shoulder Elevation
4'-4"±
1'-9"
Top of Existing Slopewall
5:1
4"
2:1
1'-6"±
4:1
3'-0"
‡ 1" Preformed Joint Filler

* #4 x 1'-6" Dowels at 2'-0" spacing, epoxy grout into $\frac{3}{4}$" ϕ x 6" deep drilled holes. (18 Req'd each slopewall) *Cost included with "Slopewall 4 Inch."

‡ Hatched portion of Existing Slopewall to be removed

SLOPEWALL DETAIL

TOTAL BILL OF MATERIAL

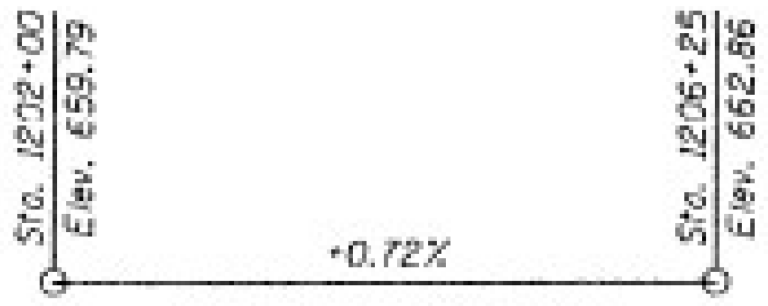
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	--	136	136
Concrete Removal	Cu Yd	6.5	22.6	29.1
Slope Wall Removal	Sq Yd	--	24	24
Structure Excavation	Cu Yd	--	136	136
Silicone Joint Sealer, 2"	Foot	58	--	58
Concrete Structures	Cu Yd	--	68.0	68.0
Concrete Superstructure	Cu Yd	4.8	9.4	14.2
Protective Coat	Sq Yd	16	16	32
Elastomeric Bearing Assembly, Type I	Each	--	10	10
Elastomeric Bearing Assembly, Type II	Each	--	10	10
Furnishing And Erecting Structural Steel	Pound	--	2930	2930
Cleaning And Painting Steel Bridge No. 4	L Sum	1	--	1
Containment And Disposal Of Lead Paint Cleaning Residue No. 4	L Sum	1	--	1
Reinforcement Bars, Epoxy Coated	Pound	700	6620	7320
Slope Wall 4 Inch	Sq Yd	--	50	50
Bridge Seat Sealer	Sq Ft	--	170	170
Jacking Existing Superstructure, No. 4	Each	1	--	1
Bar Splicers	Each	56	--	56

DAVID C. DEPP
081-005017

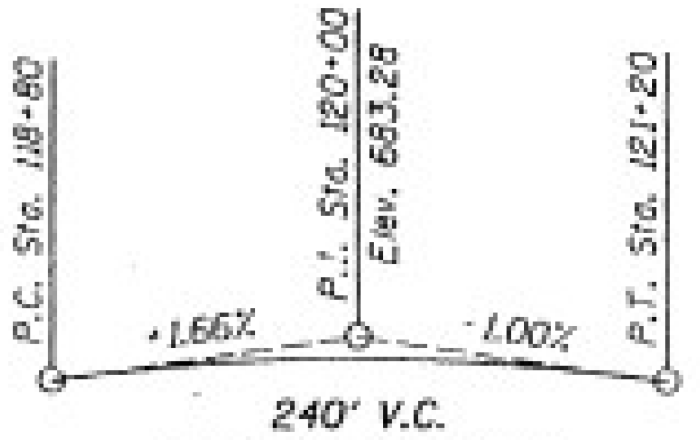
Signed: David Depp
Date: 3-14-2002
Lic. Expires: 11-30-2002

Johnson, Depp & Quisenberry
Consulting Engineers Springfield, Illinois

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	CDB/DCD



PROFILE GRADE
F.A.I. RTE. 70
(Proposed)



PROFILE GRADE
C.H. 6
(Proposed)

DESIGN STRESSES

New Construction

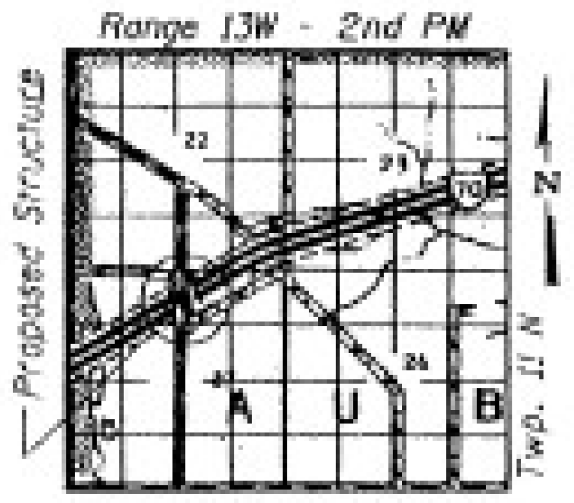
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 36,000 psi (Structural Steel)

Existing Structure

f_c = 1,400 psi
f_s = 20,000 psi (Reinforcement)
f_s = 20,000 psi (Structural Steel)

DESIGN SPECIFICATIONS

1996 AASHTO with Interims thru 2000



LOCATION SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
C.H. 6 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-5IHB-1)BR
CLARK COUNTY
STATION 1205+01.03
STRUCTURE NO. 012-0027

MODEL: 74E48 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

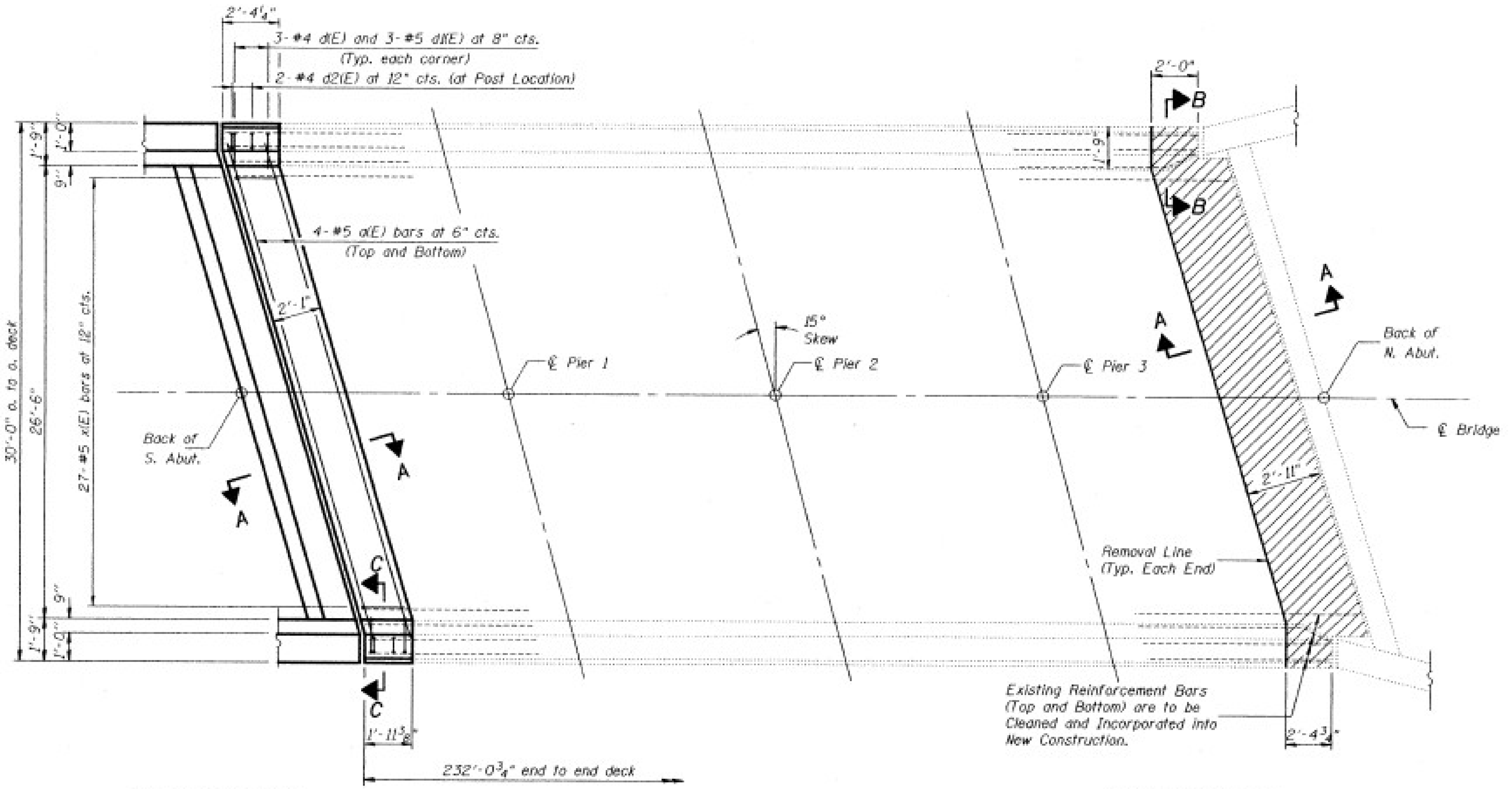
SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	7
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

SHEET 3
OF 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	(12-51HB-1)BR	CLARK	759	196
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

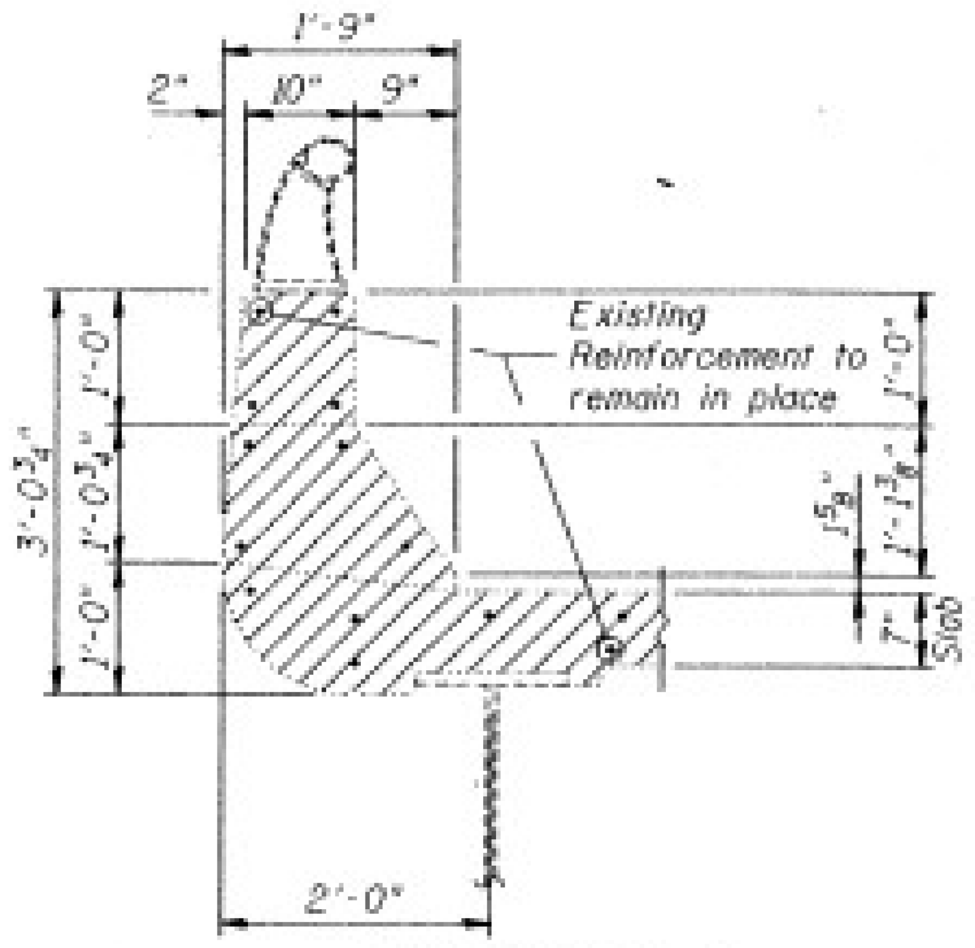


NEW CONSTRUCTION
(Typical Each End of Deck)

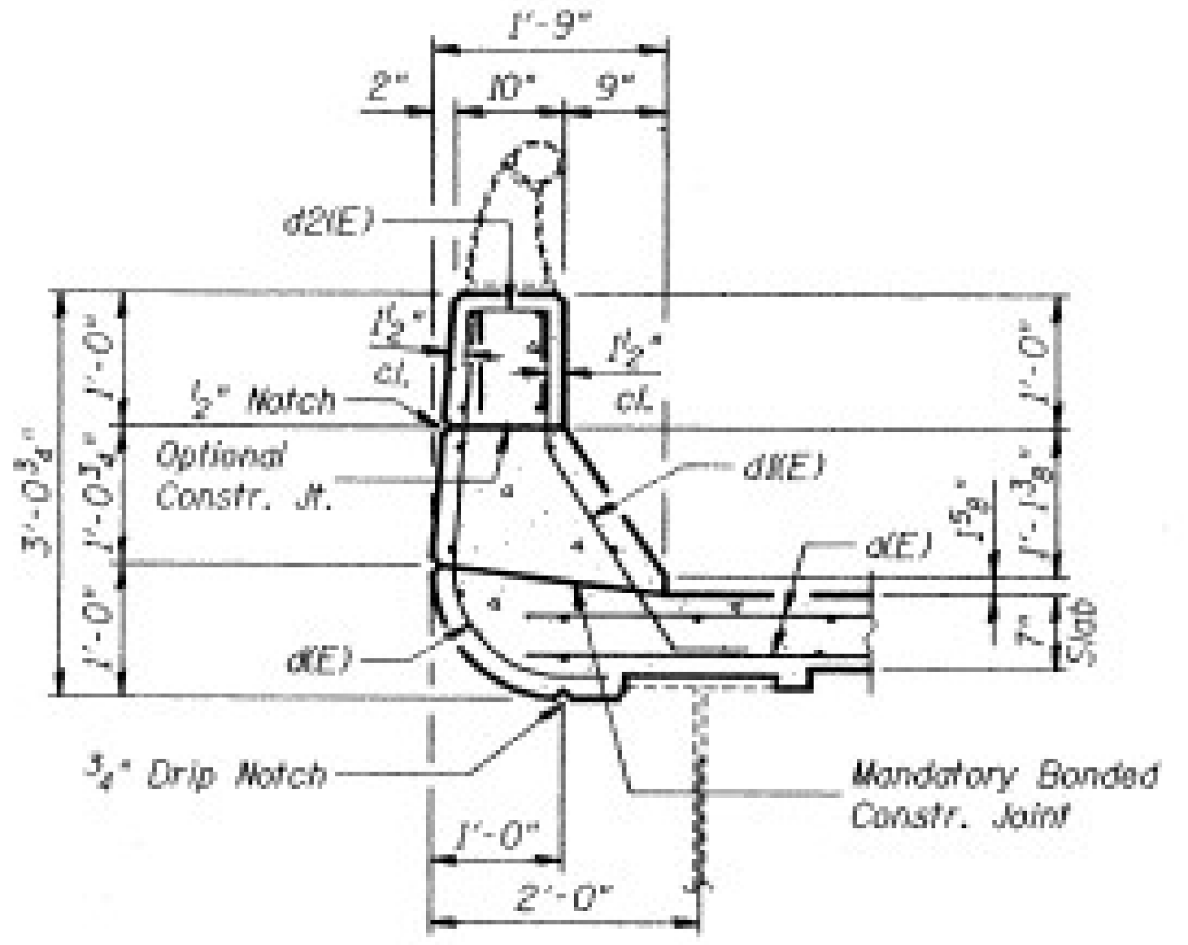
PLAN

CONCRETE REMOVAL
(Typical Each End of Deck)

▨ Indicates Limits of Concrete Removal.



SECTION B-B

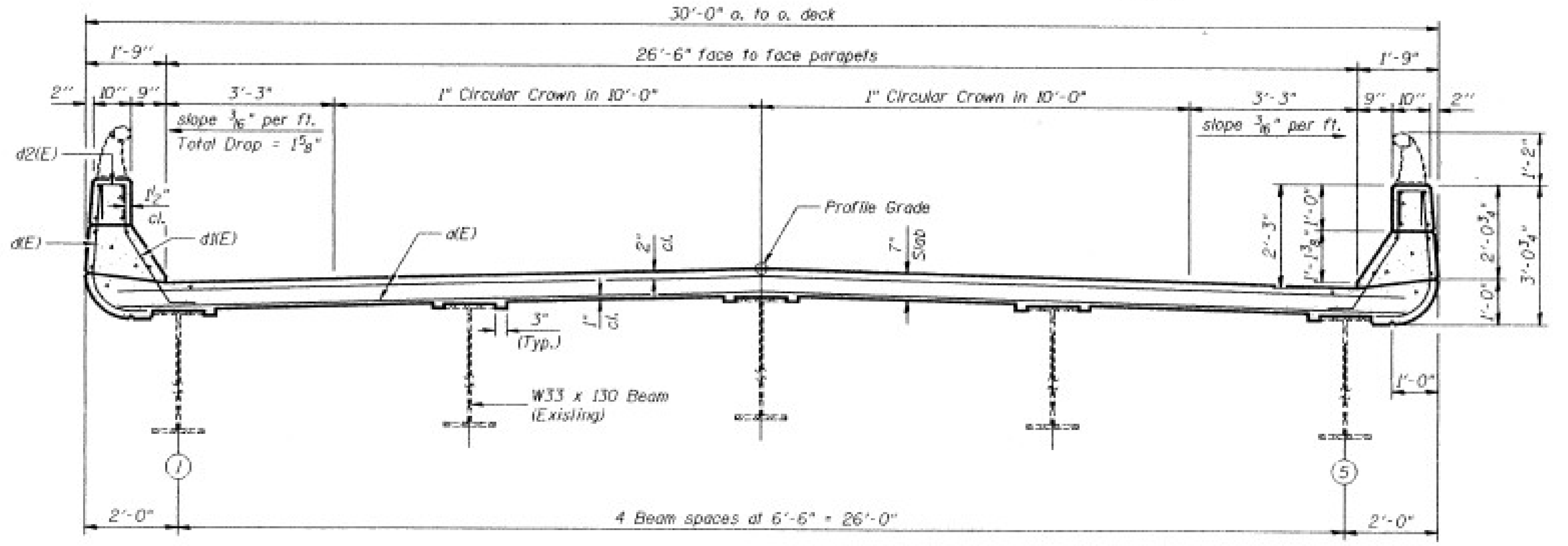


SECTION C-C

Notes:
Contractor shall protect the existing handrail and posts during Concrete removal and incorporate them into the new construction. Cost included with Concrete Removal.

Existing longitudinal reinforcement bars projecting from the deck and parapets are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cut the existing reinforcement as required so that it will end 2" from the edge of the new deck. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

See following sheet for Section A-A.



CROSS SECTION AT END OF DECK
(Looking North)

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
C.H. 6 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-51HB-1)BR
CLARK COUNTY
STATION 1205+01.03
STRUCTURE NO. 012-0027

MODEL: 74E49 [Sheet]
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

SCALE: SHEET 2 OF 6 SHEETS STA. TO STA.

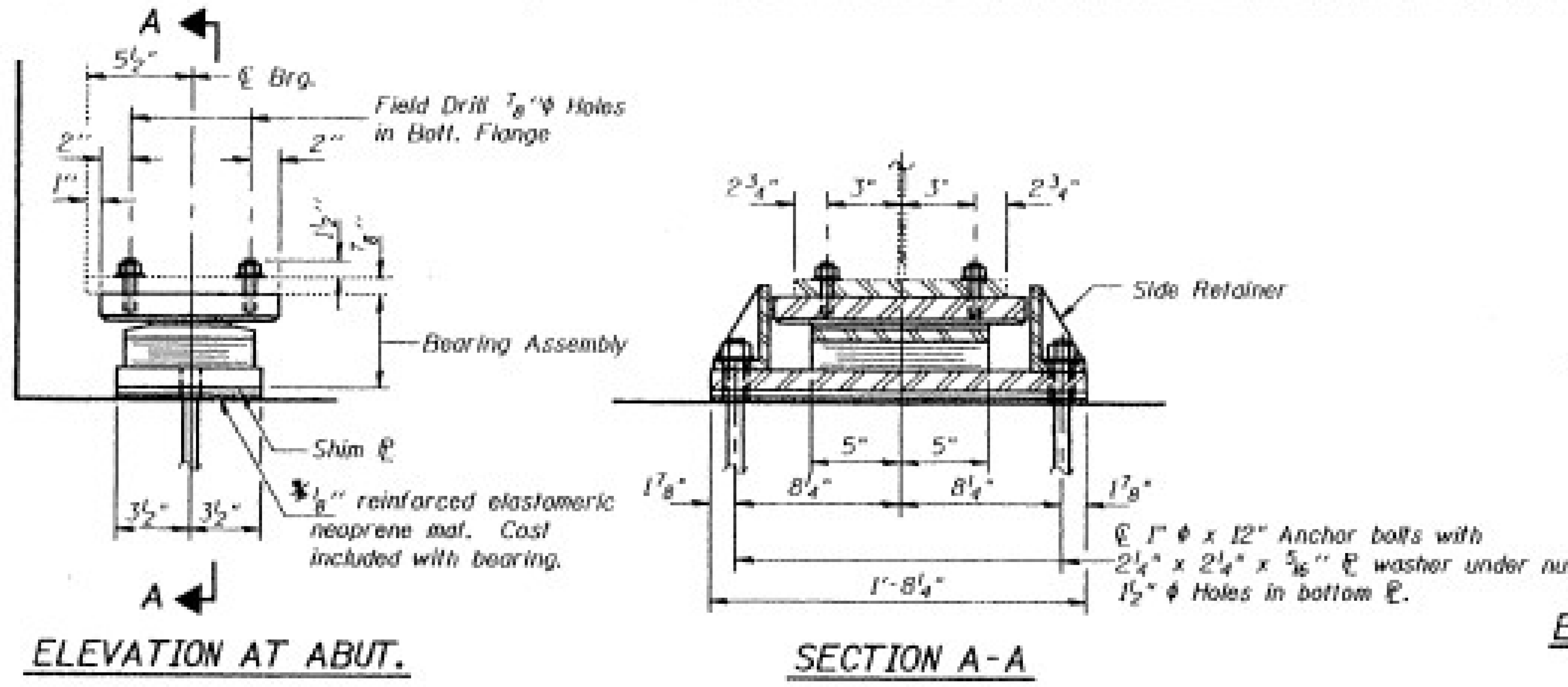
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	8
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70

CLARK

SHEET 5
OF 11

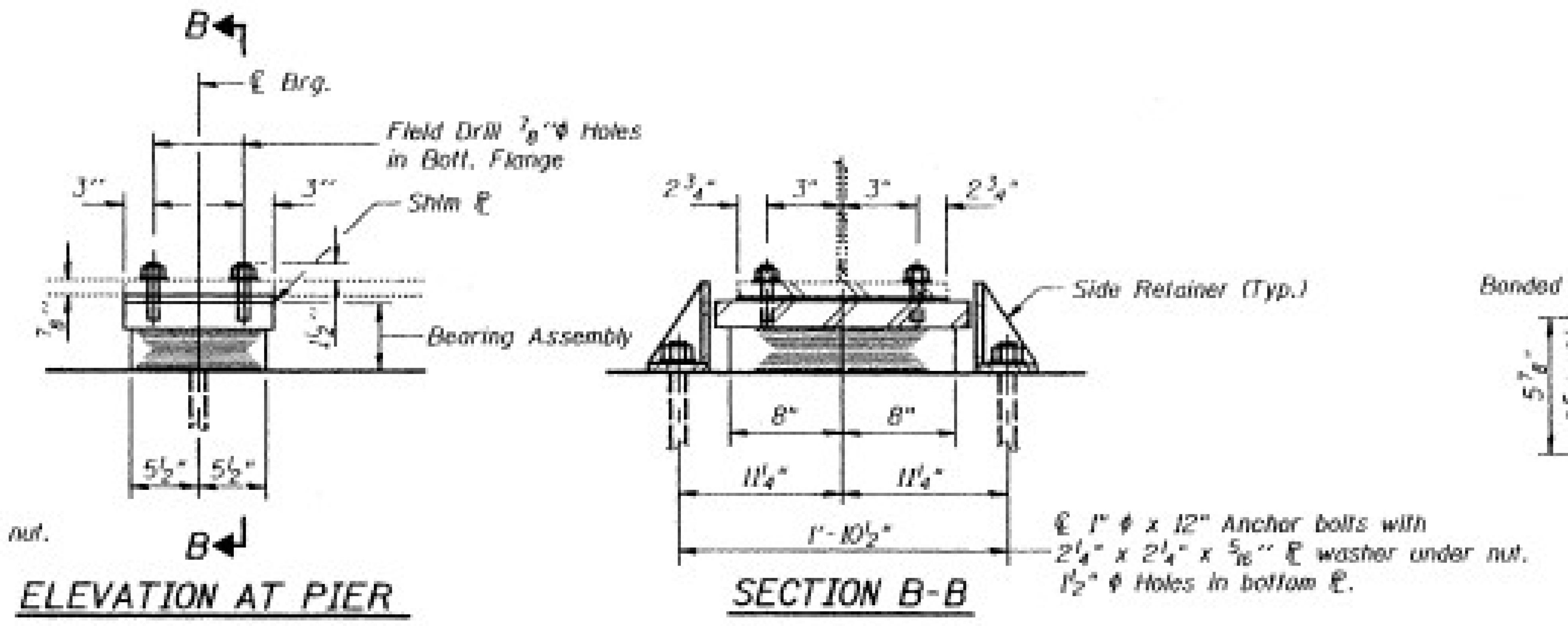
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	12-51HB-1BR	CLARK	759	198
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		


A
A
5 1/2"
℄ Brg.
2"
2"
1"
Field Drill 7/8"ϕ Holes in Bott. Flange
Bearing Assembly
Shim ℘
3 1/2"
3 1/2"
*7/8" reinforced elastomeric neoprene mat. Cost included with bearing.
2 3/4"
3"
3"
2 3/4"
Side Retainer
1 7/8"
8 1/4"
8 1/4"
5"
5"
1 7/8"
1'-8 1/4"
℘ 1" ϕ x 12" Anchor bolts with 2 1/4" x 2 1/4" x 5/16" ℘ washer under nut. 1 1/2" ϕ Holes in bottom ℘.

ELEVATION AT ABUT.

SECTION A-A

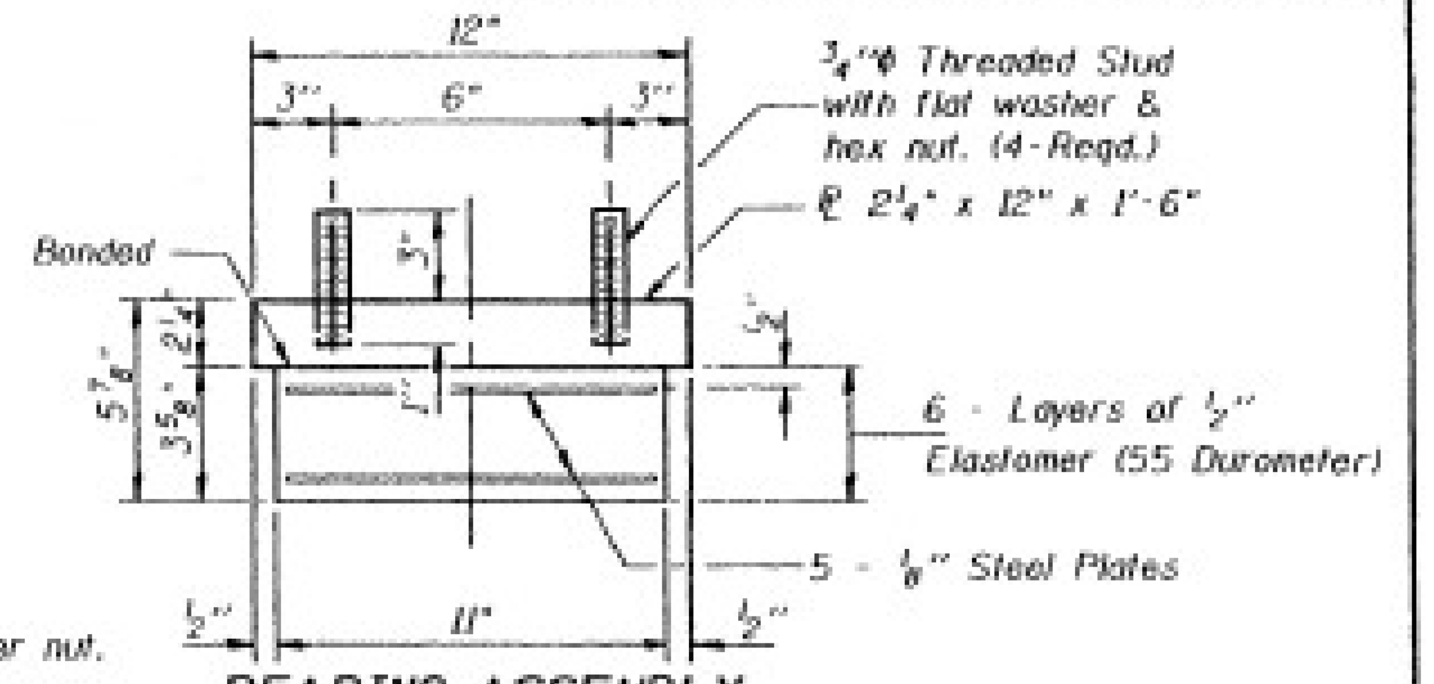
TYPE II ELASTOMERIC EXP. BRG. - AT ABUTMENTS


B
B
℄ Brg.
Field Drill 7/8"ϕ Holes in Bott. Flange
Shim ℘
3"
3"
Bearing Assembly
5 1/2"
5 1/2"
2 3/4"
3"
3"
2 3/4"
Side Retainer (Typ.)
8"
8"
11 1/4"
11 1/4"
1'-10 1/2"
℘ 1" ϕ x 12" Anchor bolts with 2 1/4" x 2 1/4" x 5/16" ℘ washer under nut. 1 1/2" ϕ Holes in bottom ℘.

ELEVATION AT PIER

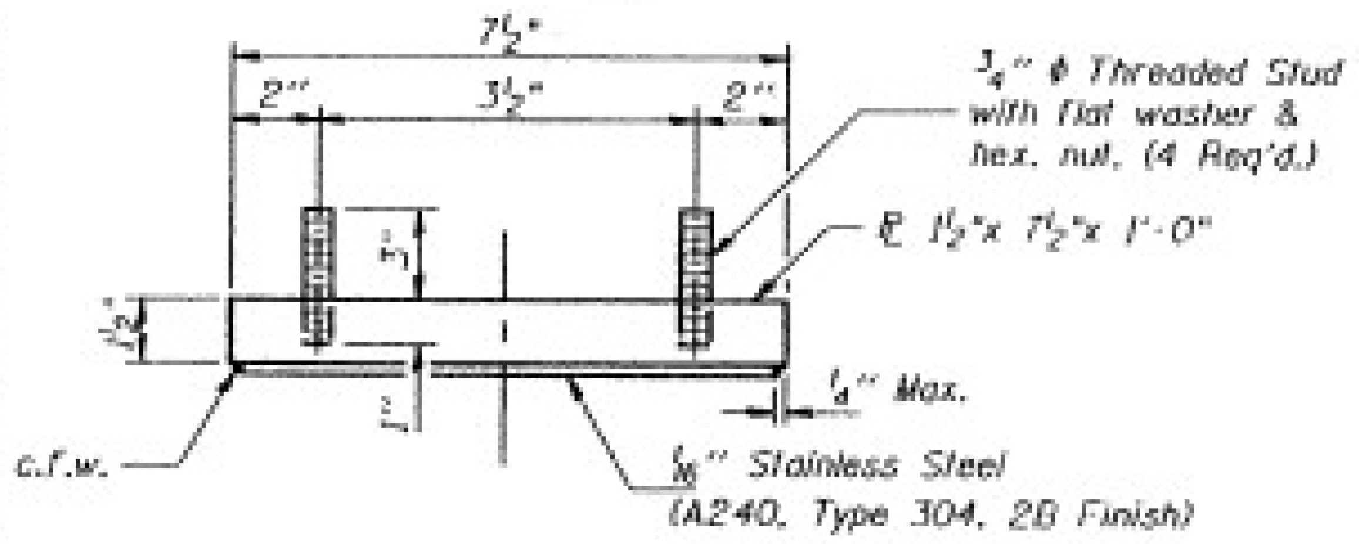
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. - AT PIERS 1 & 3

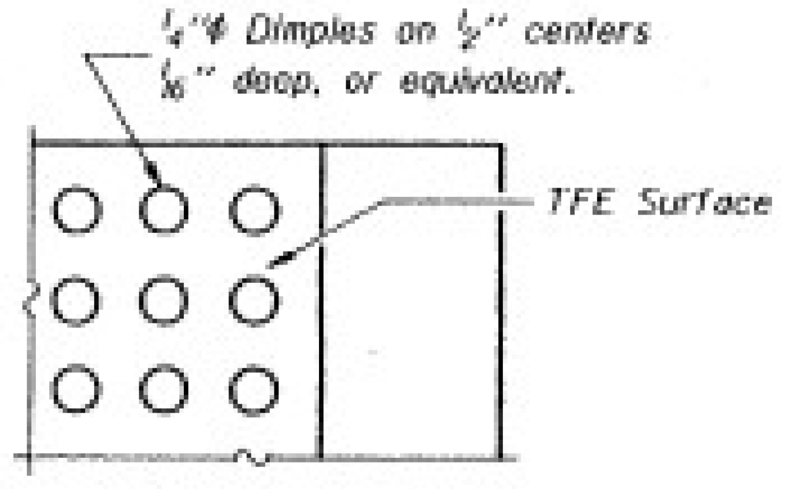

12"
3"
6"
3"
3/4"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
℘ 2 1/4" x 12" x 1'-6"
Bonded
5 7/8"
3 5/8"
6 - Layers of 1/2" Elastomer (55 Durometer)
5 - 1/8" Steel Plates
1/2"
11"
1/2"

BEARING ASSEMBLY

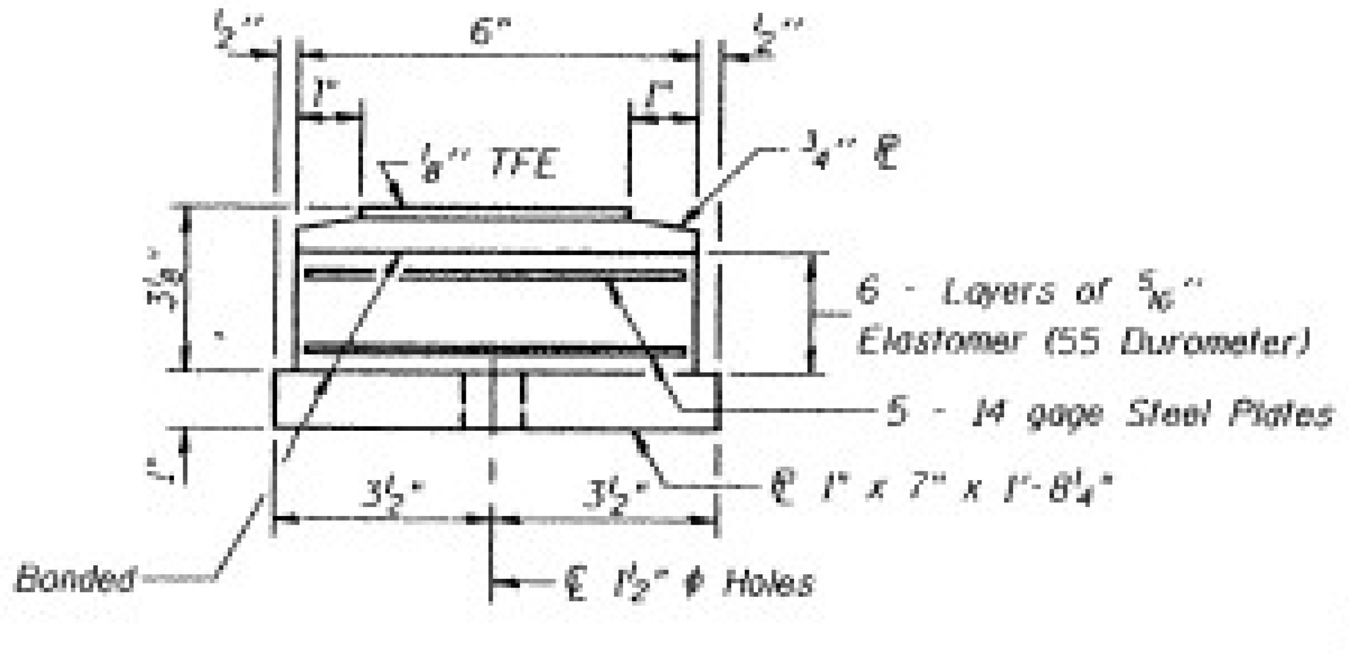
Note: Shim plates shall not be placed under Bearing Assembly.


7 1/2"
2"
3 1/2"
2"
3/4" ϕ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
℘ 1 1/2" x 7 1/2" x 1'-0"
1/4" Max.
c.f.w.
1/16" Stainless Steel (A240, Type 304, 2B Finish)

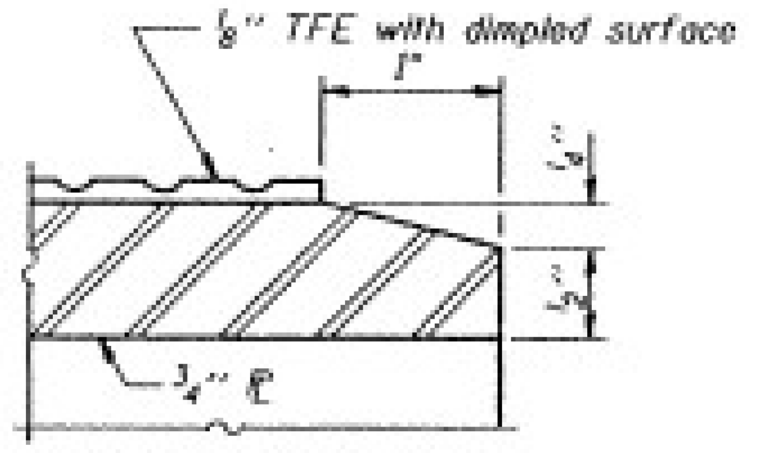
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



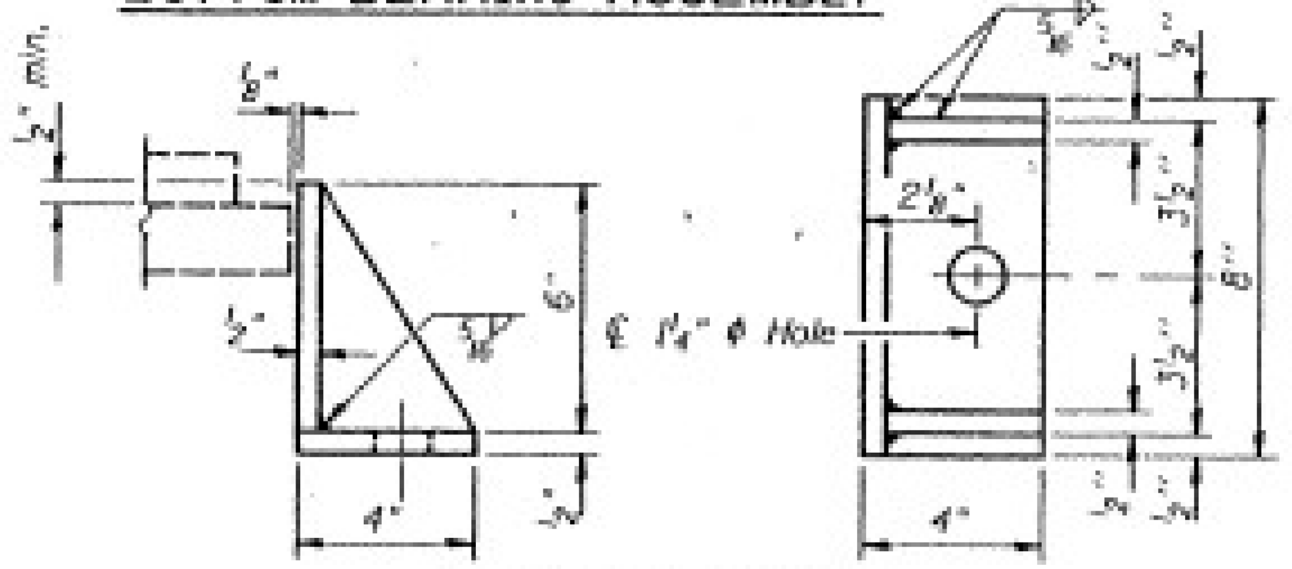
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

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.



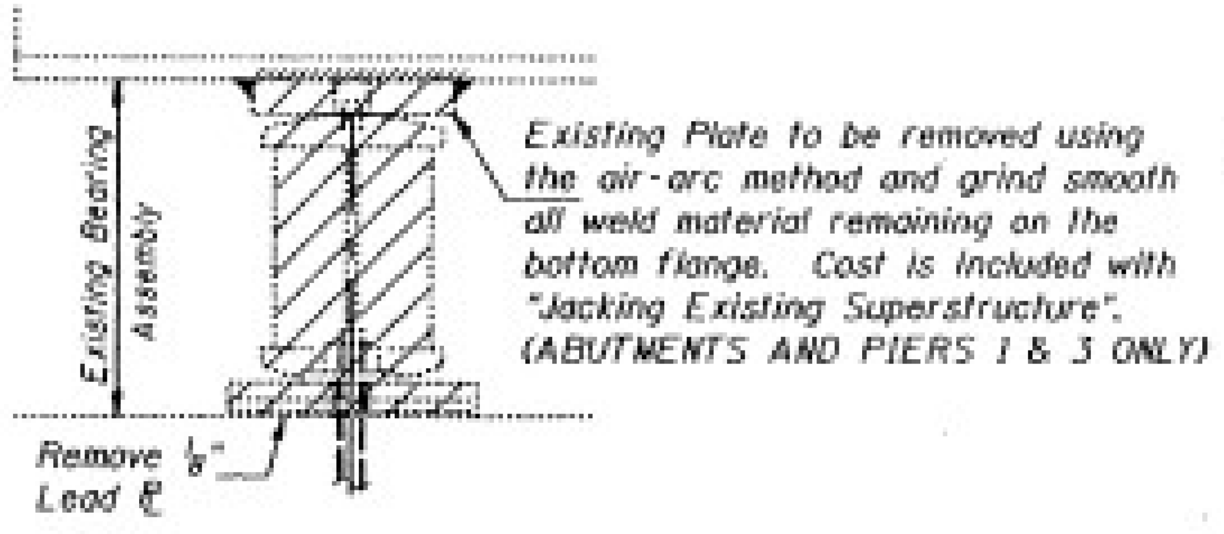
SIDE RETAINER

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

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Roy
CHECKED	DCD/CDB

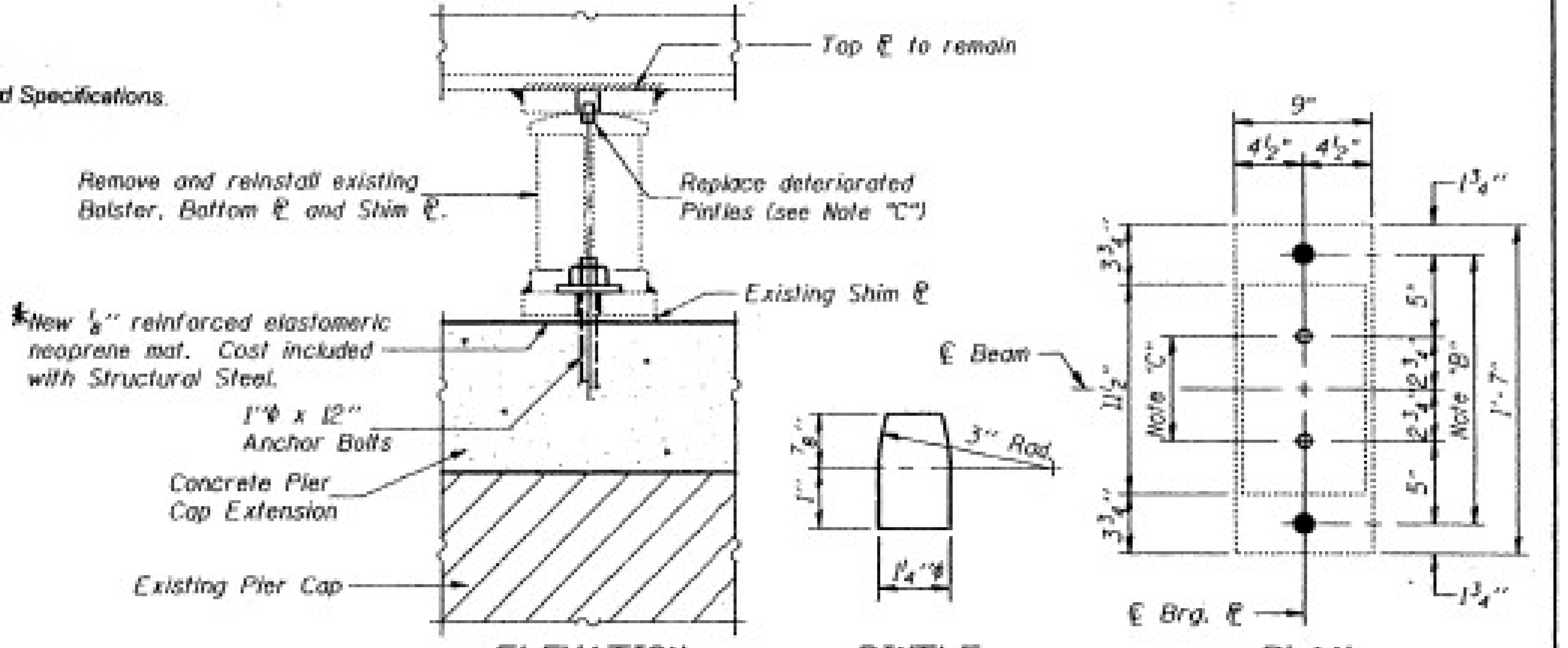
I-2-E2 4-30-99

* In accordance with Article 1052.02 of the Standard Specifications.



Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange. Cost is included with "Jacking Existing Superstructure". (ABUTMENTS AND PIERS 1 & 3 ONLY)

EXISTING BEARING REMOVAL DETAIL


Top ℘ to remain
Remove and reinstall existing Bolster, Bottom ℘ and Shim ℘.
Replace deteriorated Pintles (see Note "C")
Existing Shim ℘
*New 1/8" reinforced elastomeric neoprene mat. Cost included with Structural Steel.
1"ϕ x 12" Anchor Bolts
Concrete Pier Cap Extension
Existing Pier Cap
1"
7/8"
3" Rad.
1 1/4"ϕ
9"
4 1/2"
4 1/2"
1 3/4"
3 3/4"
11 1/2"
3 3/4"
5"
2 1/4"
2 1/4"
5"
Note "C"
Note "B"
1'-7"
℄ Beam
℄ Brg. ℘
1 3/4"

ELEVATION

PINTLE

PLAN

EXISTING FIXED BEARING - AT PIER 2

Remove and reinstall existing pier bearings.
Cost included with Jacking Existing Superstructure.

Note "B"
Existing 1 1/2"ϕ Holes for 1"ϕ Anchor Bolts- 5/16" x 2 1/2" x 2 1/2" ℘ Washer under nut.

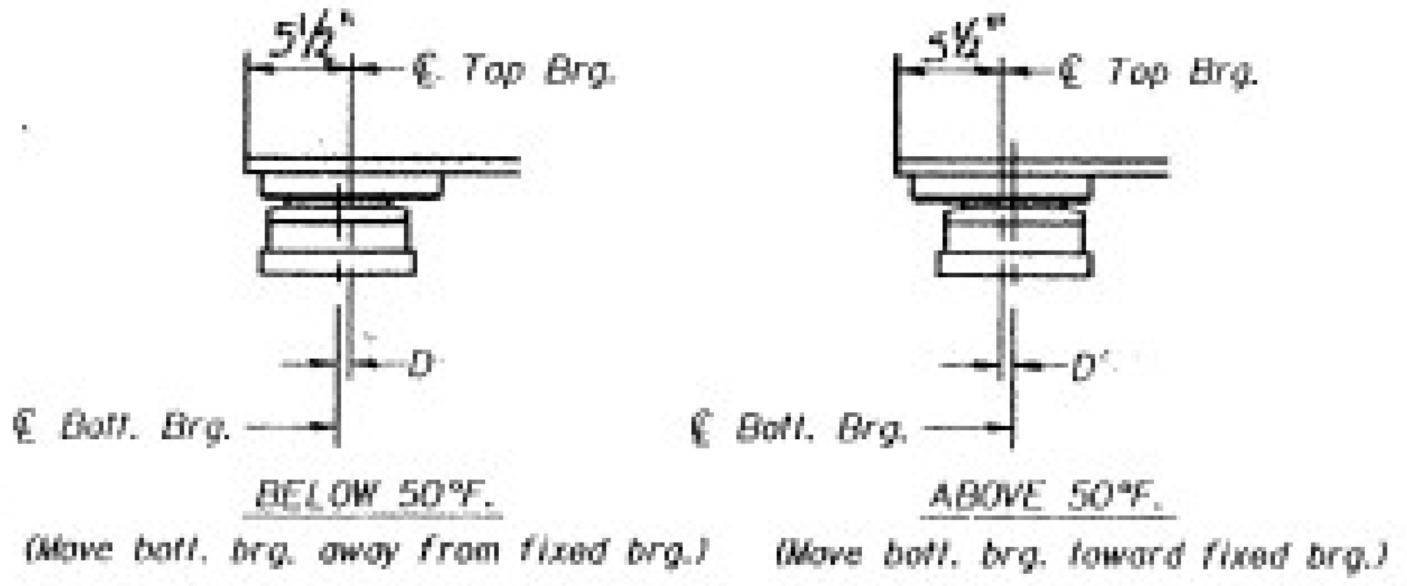
Note "C"
Existing 1 3/8"ϕ Holes-1" deep in Top ℘ for 1 1/4"ϕ Pintles. Replace deteriorated Pintles as directed by the Engineer. Thread or press fit Pintles in Bolster.

SHIM THICKNESS TABLE

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
Abuts. & Piers *	-	-	1/2"	1/4"	3/8"

* Reuse Existing Shims at Pier 2.

INTERIOR GIRDER REACTION TABLE				
		Abuts.	Piers 1 & 3	Pier 2
R (DL)	(K)	12.0	58.0	70.0
R (LL)	(K)	23.8	31.9	34.4
R (Imp)	(K)	7.1	8.8	8.7
R (Total)	(K)	42.9	98.7	113.1



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.

NOTES FOR BEARING ASSEMBLY

Removal and reinstallation of beam diaphragms may be required to facilitate drilling holes for Bearings and Anchor Bolts. Cost shall be included with "Jacking Existing Superstructure."

Side Retainers, Shim Plates, Connection Bolts and Anchor Bolts are included with "F & E Structural Steel."

See sheet 6 for Anchor Bolt installation.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Elastomeric Bearing Assembly Type II	Each	10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
C.H. 6 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-51HB-1)BR
CLARK COUNTY
STATION 1205+01.03
STRUCTURE NO. 012-0027

MODEL: 74E50 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

SCALE: SHEET 3 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	9
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

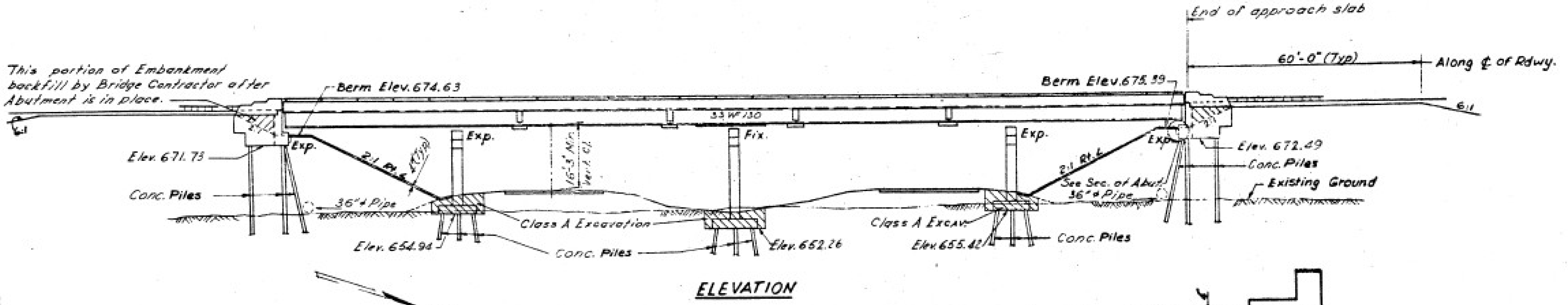
I-70 CLARK

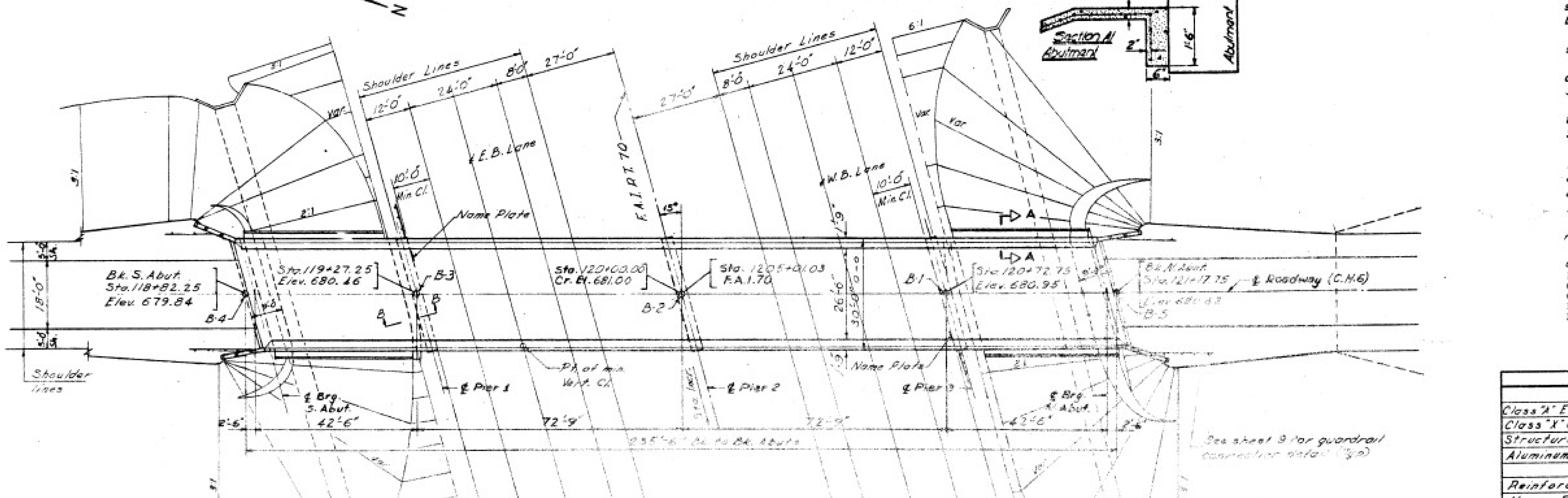
B.M.: R.R. Spike in Power Pole West Side of
C.H. 6, 225' North of Intersection ℄
F.A.I. Rt. 70 and ℄ C.H. 6, Elev. 659.14

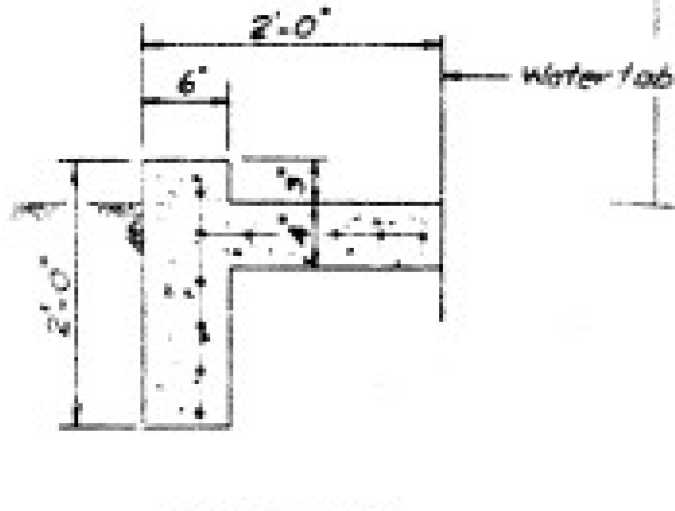
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	12-51 HB-1	CLARK	25	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: I-70-4(70)135		

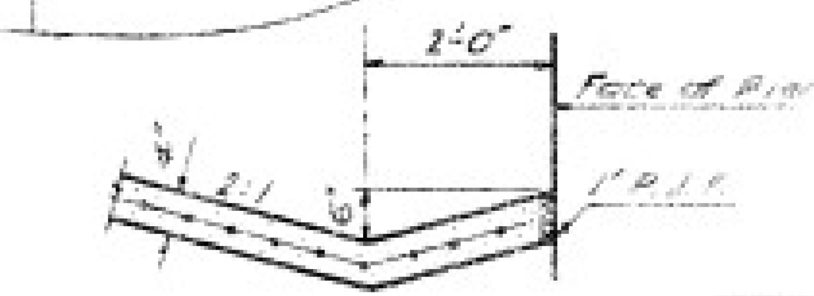
SHEET NO. 1
10 SHEETS







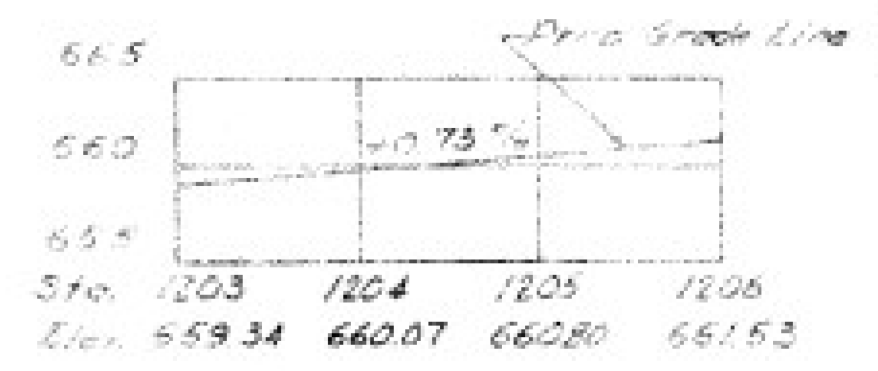
SEC. A-A



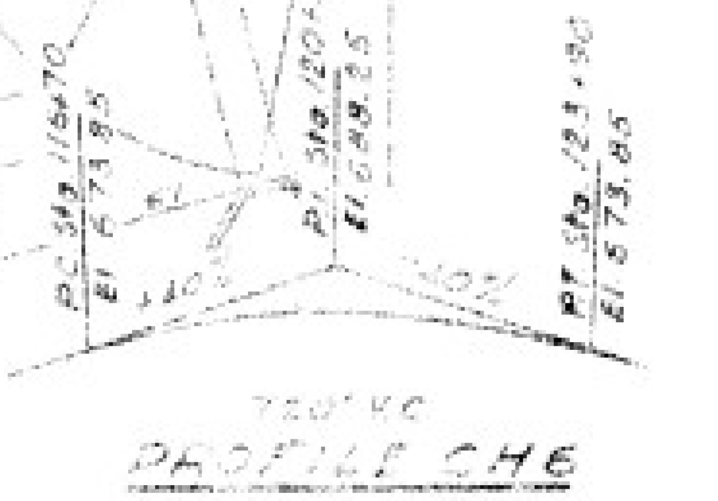
SEC. B-B

STATION 1205+01.03
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-51HB-1
F.A. PROJ. I-70-4(70)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)



PROFILE F.A.I. RT. 70



PROFILE C.H.6

DESIGN STRESSES
f_c = 1400 psi
f_s = 20,000 psi (Reinf.)
f_s = 20,000 psi (Struct.) (A-36)
V = 75 psi (Brgs.)
n = 10
Allowable ℄ Deflection $\frac{L}{800}$

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. 51.19 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 Provisions.

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 South Abutment and one at Pier 3 each 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 floor.

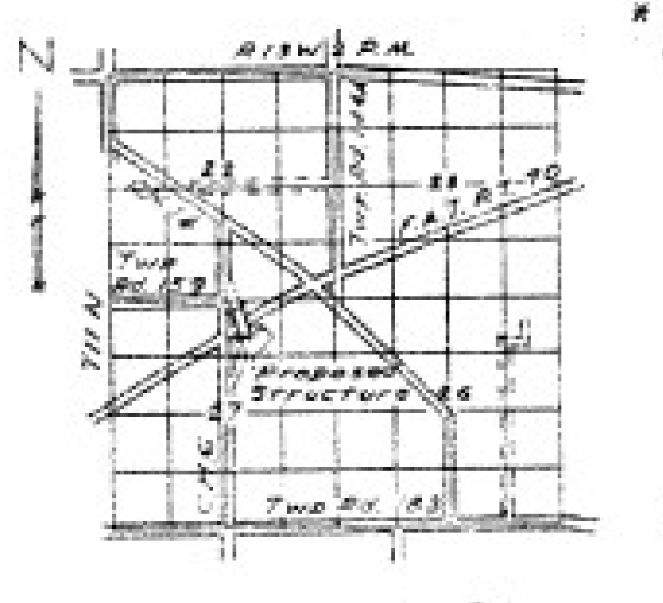
Excavation for portions of structures in the embankments shall not be classified.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ½ 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 Struct.	Cu. Yds.		140	140
Class "X" Concrete	Cu. Yds.	206.2	206.6	412.8
Structural Steel	Lbs.	185060		185,060
Aluminum Handrail	Lin. Ft.	464		464
Reinforcement Bars	Lbs.	48130	16940	65070
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		380	380
* Protective Coat	Sq. Yds.	900		900
Concrete Piles	Lin. Ft.		1,186	1,186
Test Piles (Concrete)	Each		2	2

* Includes application on inside face, top & exposed ends of wingwalls.



LOCATION PLAN

GENERAL PLAN & ELEVATION
PROJ I-70-4(70)135
C.H.6 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 12-51HB-1
CLARK COUNTY
STA. 1205+01.03

DESIGNED	Fred Stone
CHECKED	Gene McCormick
DRAWN	J. Kessler
CHECKED	Gene McCormick

Aug. 5 1965
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED F. J. Alton
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

MODEL: 74E51 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

SCALE: SHEET 4 OF 6 SHEETS STA. TO STA.

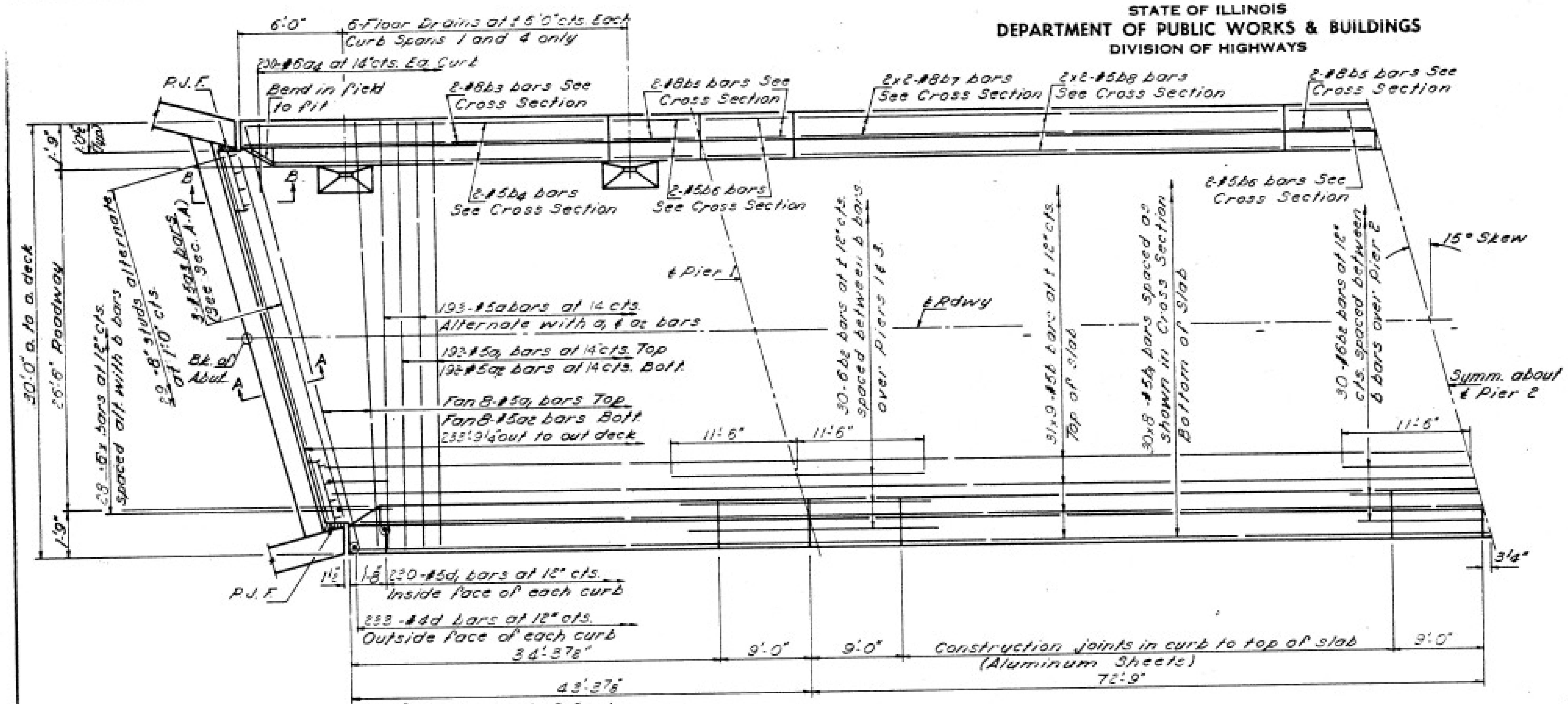
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	10
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

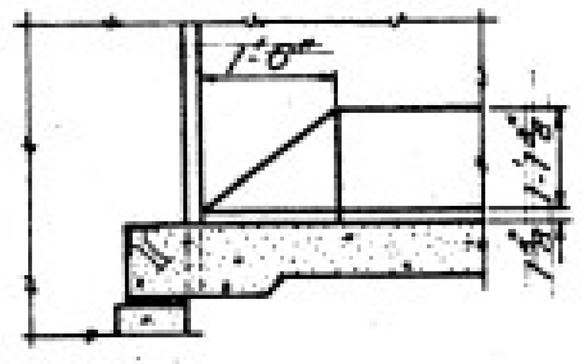
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 70	12-51 HB-1	CLARK	25	11

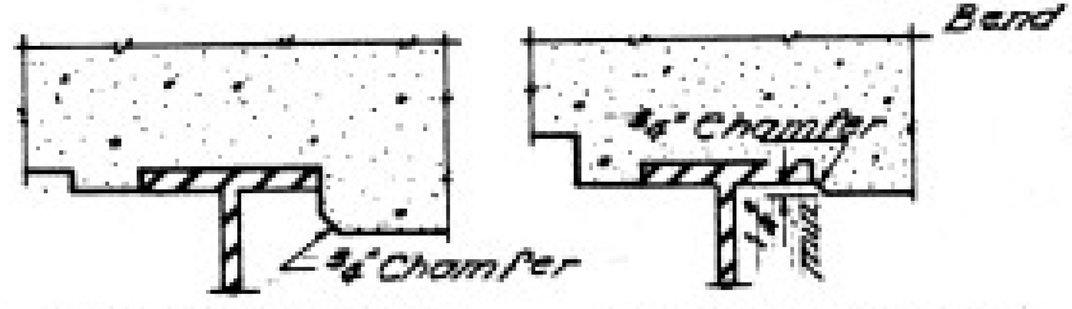
SHEET NO. 2
10 SHEETS


6'-0"
6-Floor Drains at 25'-0" cts. Each Curb Spans 1 and 4 only
230-#6a4 at 14" cts. Ea. Curb
P.J.F.
Bend in field to fit
2-#8b3 bars See Cross Section
2-#8b5 bars See Cross Section
2x2-#8b7 bars See Cross Section
2x2-#5b8 bars See Cross Section
2-#8b5 bars See Cross Section
2-#5b4 bars See Cross Section
2-#5b6 bars See Cross Section
2-#5b6 bars See Cross Section
15° Skew
℄ Pier 1
℄ Rdwy
193-#5a bars at 14 cts. Alternate with a1 & a2 bars
193-#5a1 bars at 14 cts. Top
193-#5a2 bars at 14 cts. Bott.
Fan 8-#5a3 bars Top
Fan 8-#5a2 bars Bott.
233'-9¼" out to out deck
30-6b2 bars at 12" cts. spaced between b bars over Piers 1 & 3
31x9-#5b1 bars at 1' 12" cts. Top of slab
30x8-#5b bars Spaced as shown in Cross Section Bottom of slab
30-#6b2 bars at 12" cts. spaced between b bars over Pier 2
Symm. about ℄ Pier 2
11'-6"
11'-6"
11'-6"
30'-0" o. to o. deck
26'-6" Roadway
28-#5x bars at 12" cts. spaced alt. with b bars alternate
3-#5a3 bars See Sec. A-A
29-#8" 3 studs at 1'0" cts.
Bk. of Abut.
1'-9"
1'-9"
P.J.F.
230-#5d1 bars at 12" cts. Inside face of each curb
233-#4d bars at 12" cts. Outside face of each curb
34'-3⅞"
9'-0"
9'-0"
Construction joints in curb to top of slab (Aluminum Sheets)
9'-0"
72'-9"
43'-3⅞"
232'-1⅜" End to End of Curb
3¼"

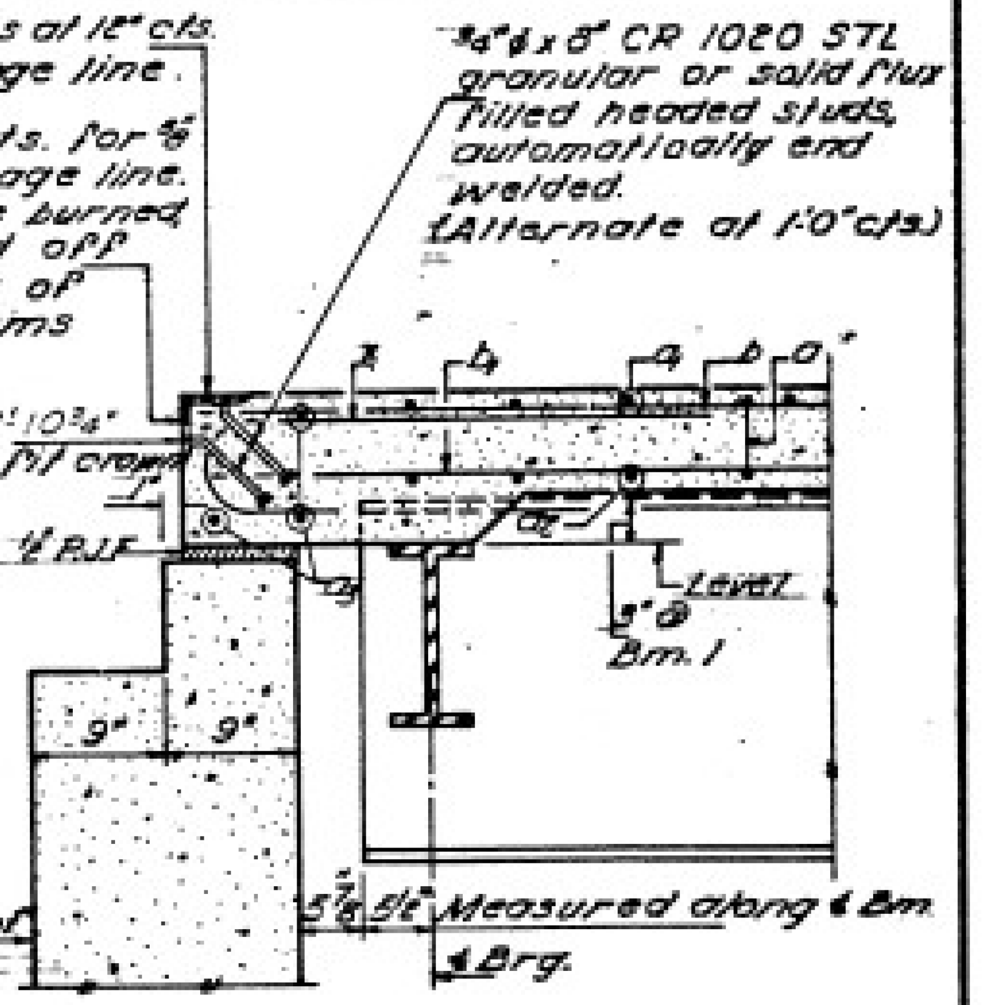
HALF PLAN



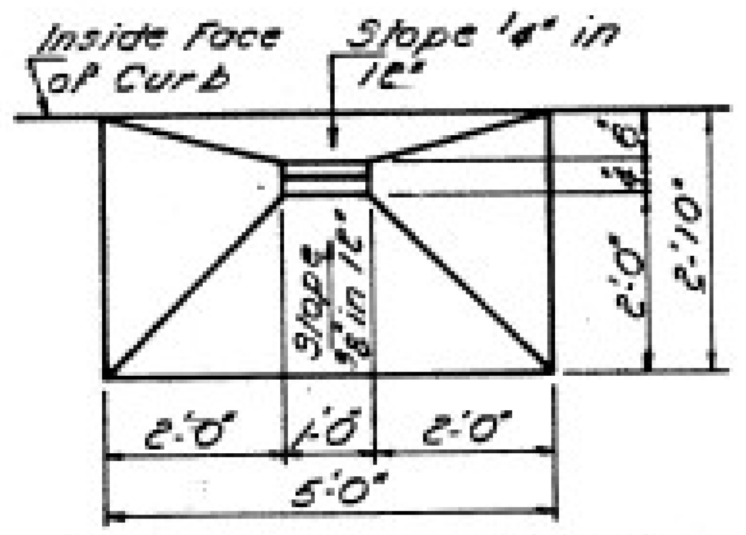
SECTION B-B



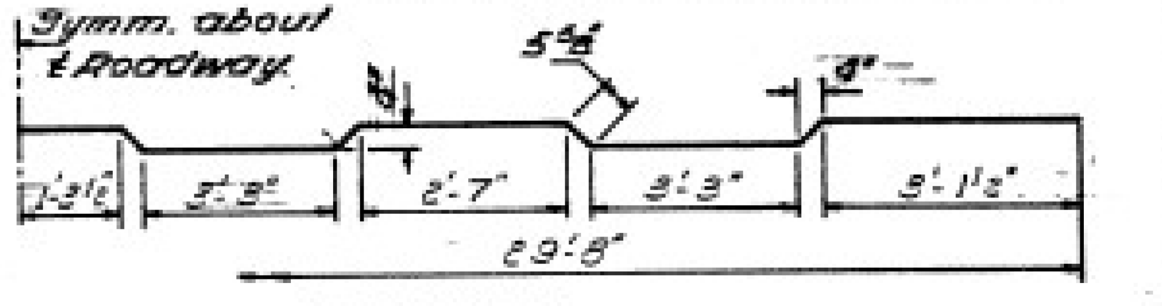
DETAIL A


7/16" ϕ vent holes at 12" cts. set on 1⅜" gage line.
7/16" ϕ holes at 12" cts. for ⅜" 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" ϕ x 8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts)
L 4"x4"x½"x28'-10¾" Bend to fit crown
½" P.J.F.
Level
3" @ Bm. 1
9"
9"
Back of Abut.
5⅝" 2⅝" Measured along ℄ Bm.
℄ Brg.

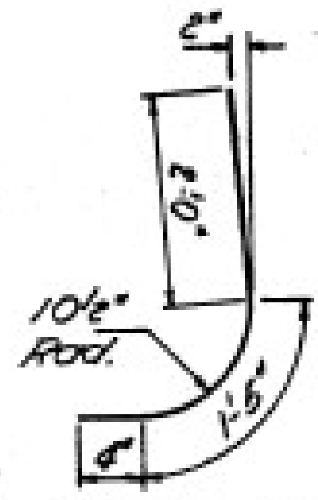
SECTION A-A



FLOOR DRAIN PLAN



BAR a



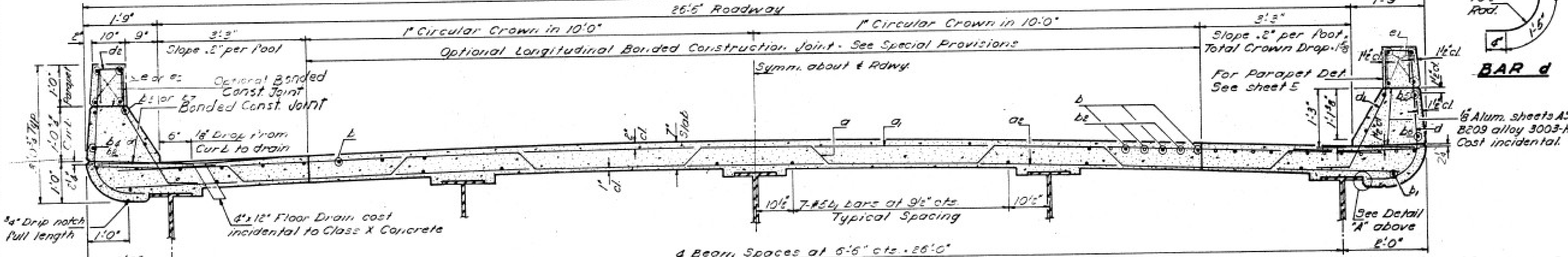
BAR d

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	193	#5	30'-9"	〜
a1	208	#5	29'-8"	—
a2	208	#5	29'-0"	—
a3	6	#5	28'-7"	—
a4	400	#6	4'-0"	—
b	279	#5	27'-3"	—
b1	240	#5	30'-6"	—
b2	90	#6	23'-0"	—
b3	8	#8	34'-0"	—
b4	8	#5	34'-0"	—
b5	24	#8	8'-9"	—
b6	24	#5	8'-9"	—
b7	16	#8	28'-0"	—
b8	16	#5	28'-0"	—
d	466	#4	3'-9"	⌣
d1	450	#5	3'-5"	⌣
x	56	#6	4'-0"	⊃
* Reinforcement Bars			Lbs.	46,770
** Structural Steel			Lbs.	185060
* Class X Concrete			Cu. Yds.	191.2

* — 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 Brg. assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt. 6870 Lbs.


30'-0" o. to o. deck
26'-6" Roadway
1'-9"
1'-9"
10"
9"
3'-3"
3'-3"
1" Circular Crown in 10'-0"
1" Circular Crown in 10'-0"
Slope .2" per foot
Slope .2" per foot, Total Crown Drop - 1⅜"
Optional Longitudinal Bonded Construction Joint - See Special Provisions
Symm. about ℄ Rdwy.
For Parapet Det. See sheet 5
Optional Bonded Const. Joint
Bonded Const. Joint
6"
⅛" Drop from Curb to drain
1'-0"
7" Slab
3" cl.
1" cl.
1½" cl.
¾" Drip notch full length
1'-0"
2'-0"
6"x12" Floor Drain cost incidental to Class X Concrete
10½"
7-#5b4 bars at 9½" cts. Typical Spacing
10½"
See Detail "A" above
⅛" Alum. sheets ASTM B209 alloy 3003-H14 Cost incidental.
4 Beam Spaces at 6'-6" cts. = 26'-0"
2'-0"
1
5

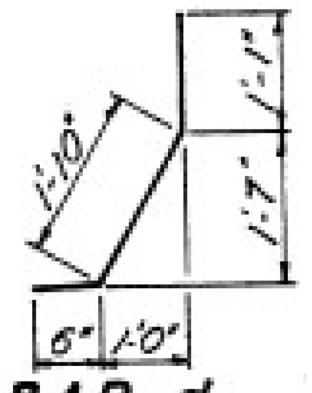
Reinforcement shown Near Midspan

Reinforcement shown Near Pier

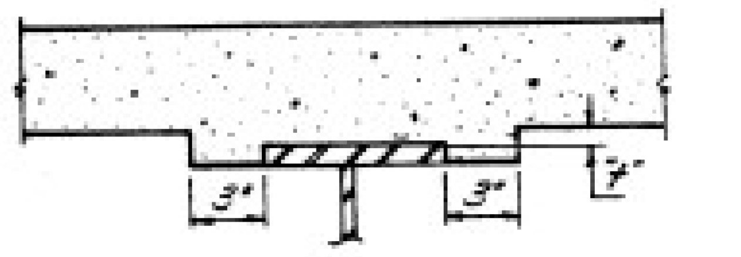
CROSS SECTION

(Looking North)

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

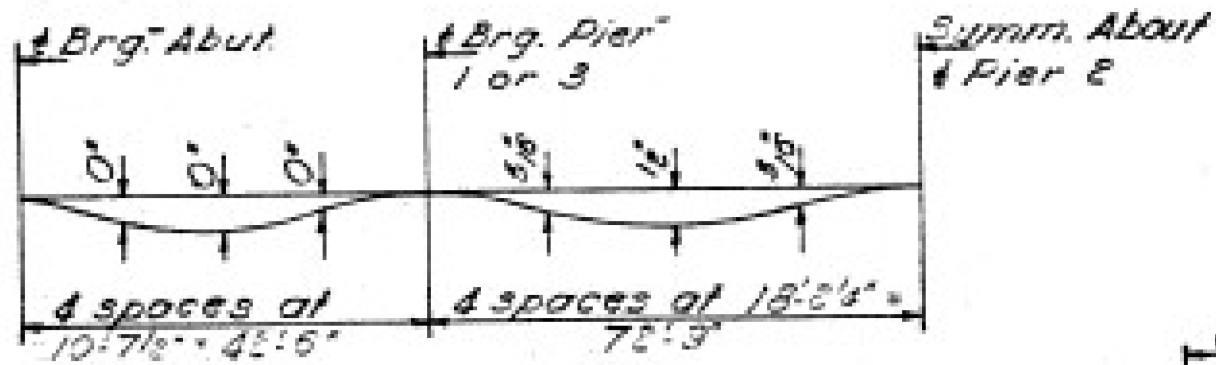


BAR d1



STANDARD FILLET DETAIL

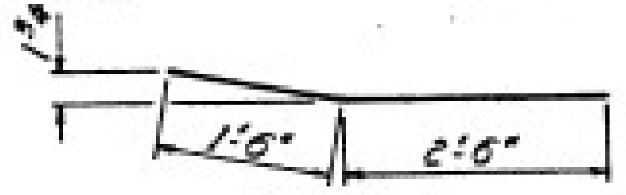
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet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



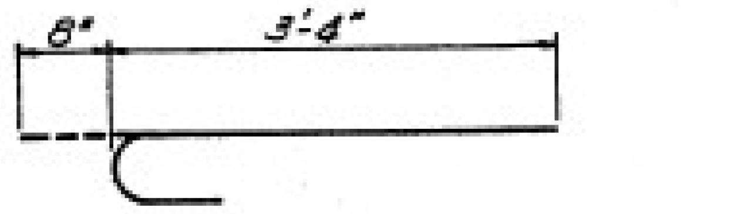
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

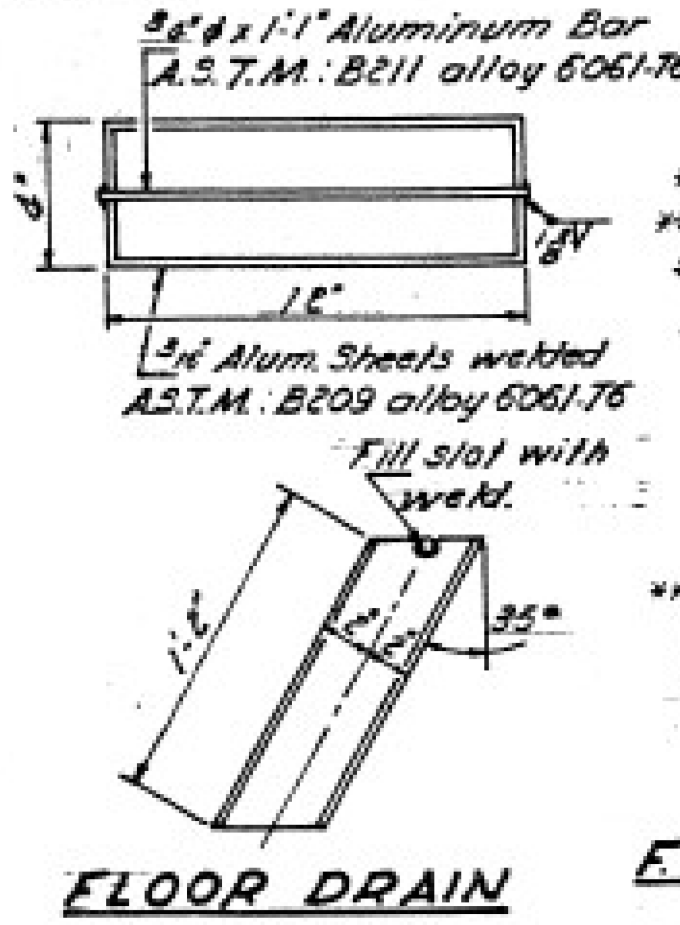
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.



BAR a4



BAR x


⅜"ϕx1'-1" Aluminum Bar A.S.T.M.: B211 alloy 6061-T6
4"
12"
⅛"
⅛" Alum. Sheets welded A.S.T.M.: B209 alloy 6061-T6
Fill slot with weld.
1'-2"
35°

FLOOR DRAIN DETAILS

SUPERSTRUCTURE
F.A.I. RT 70 SEC. 12-51 HB-1
CLARK COUNTY
STATION 1205+01.03

DESIGNED	Geo. McCormick	
CHECKED	John H. Clark	EXAMINED
DRAWN	J. Kessler	PASSED
CHECKED	John H. Clark	APPROVED

19

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

SCALE: SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	11
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

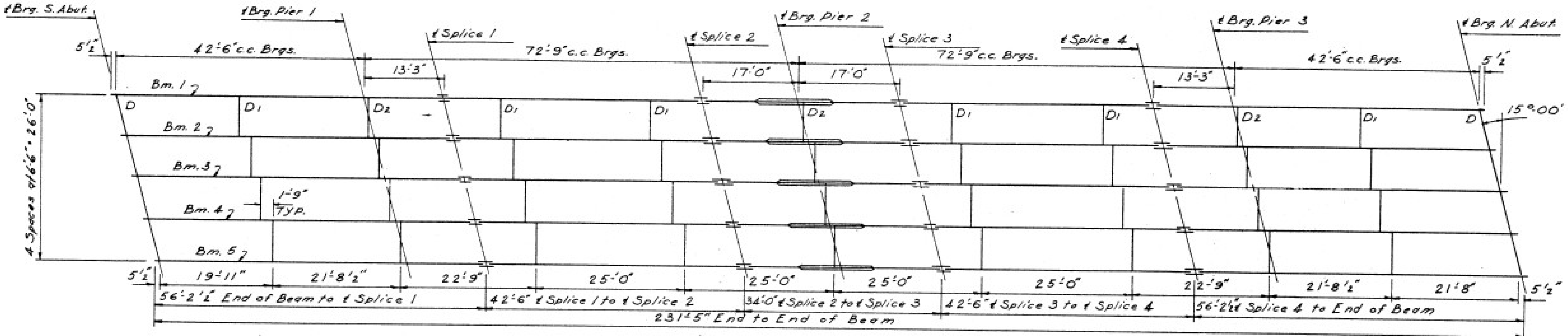
I-70 CLARK

MODEL: 74E52 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

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

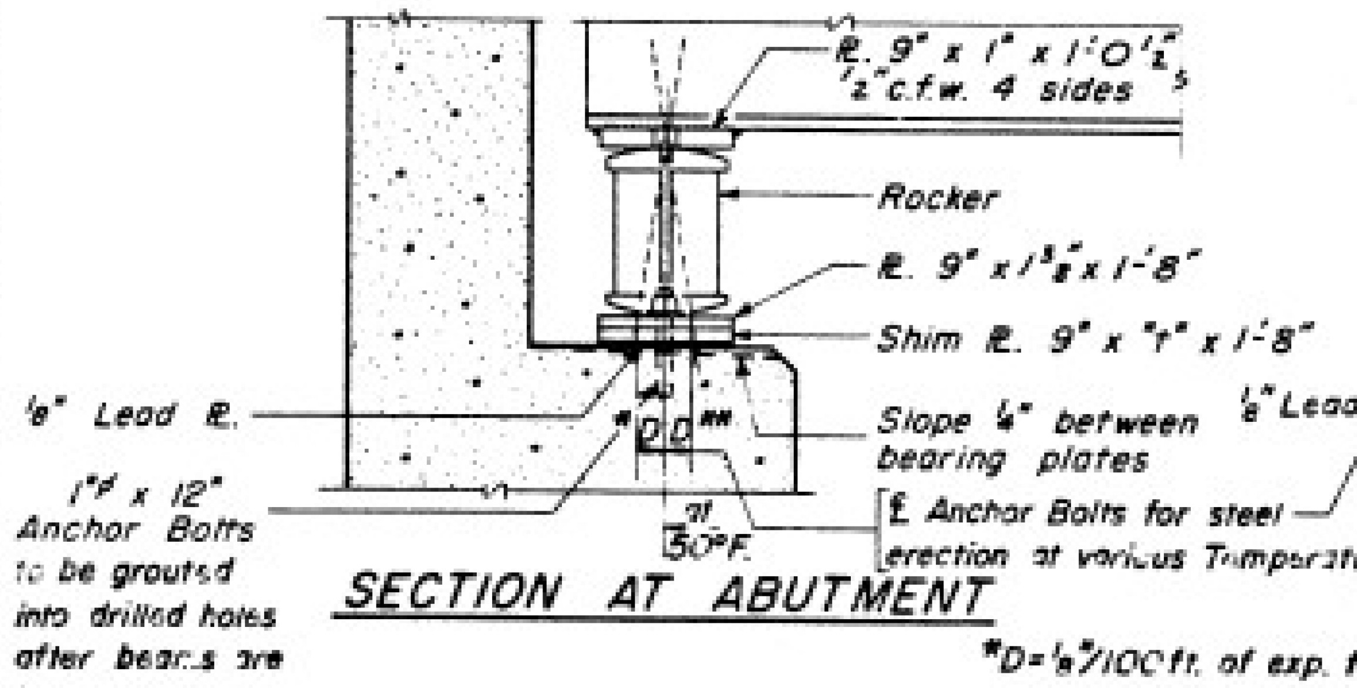
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-51 HB-1	CLARK	25	13

SHEET NO. 4
10 SHEETS

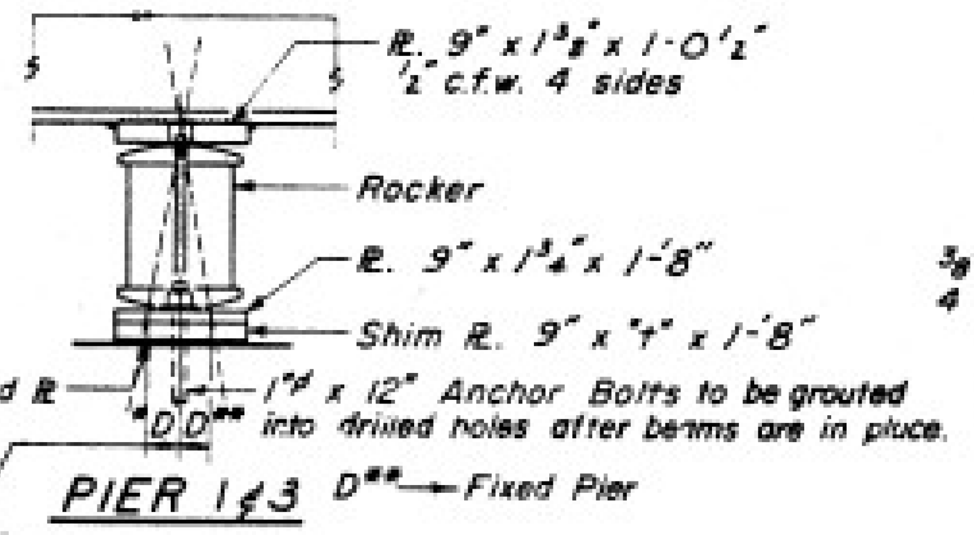


LAYOUT OF STRUCTURAL STEEL

(All Beams 33 WF 130)

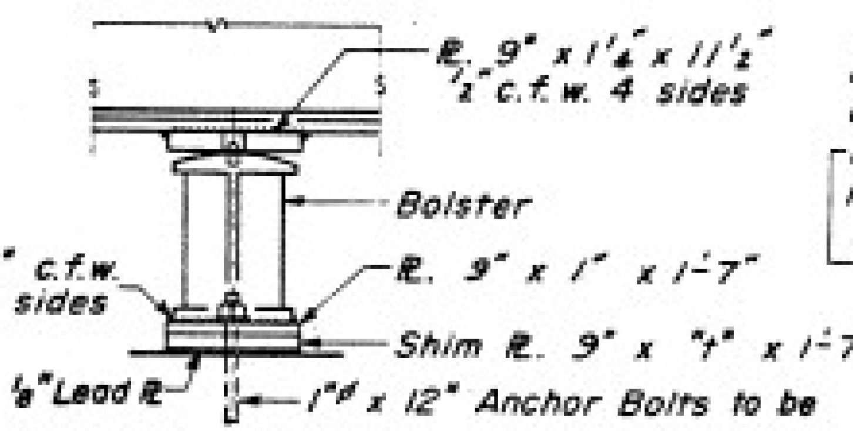

PL. 9" x 1" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1⅝" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
Slope ¼" between bearing plates
1"ϕ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
*D D**
at 50°F.
℄ Anchor Bolts for steel erection at various Temperatures

SECTION AT ABUTMENT

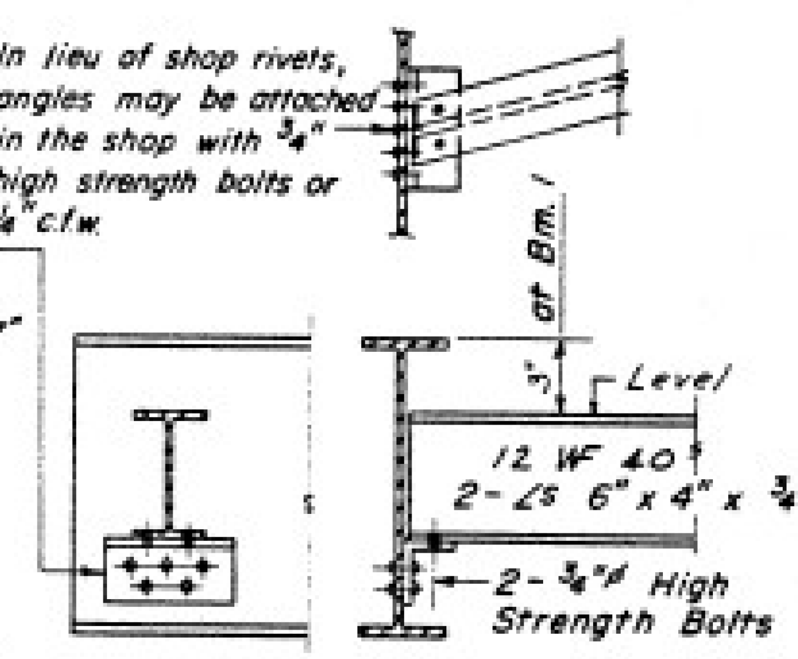

PL. 9" x 1⅝" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1¾" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
*D D**
1"ϕ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.

PIER 1 & 3

D** — Fixed Pier

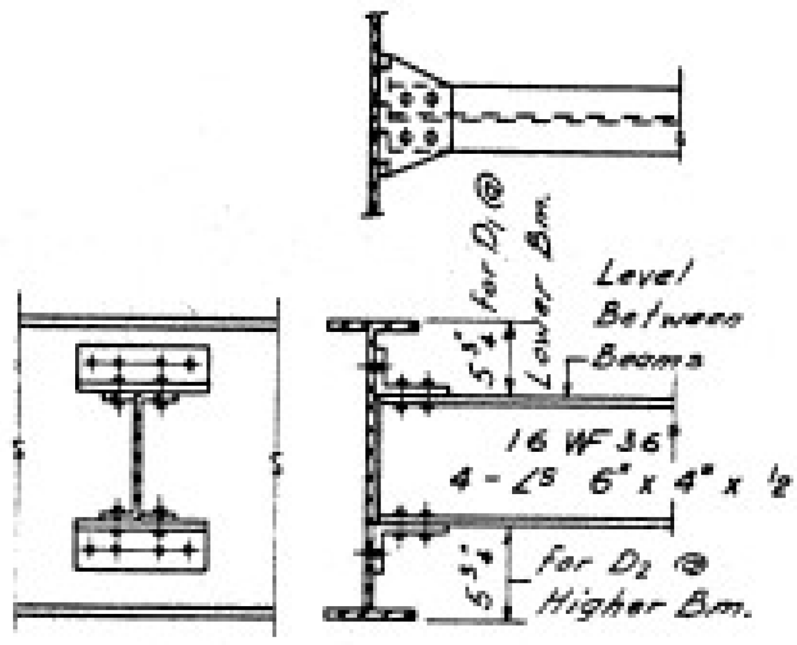

PL. 9" x 1¼" x 11½"
½" c.f.w. 4 sides
Bolster
⅜" c.f.w. 4 sides
PL. 9" x 1" x 1'-7"
Shim PL. 9" x "t" x 1'-7"
⅛" Lead PL.
1"ϕ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.

PIER 2


In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
3" at Bm. 1
Level
12 WF 40
2 - ∠s 6" x 4" x ¾"
2 - ¾"ϕ High Strength Bolts

DIAPHRAGM D

8 Required



DIAPHRAGM D1 & D2

24 D1 & 12 D2 Required

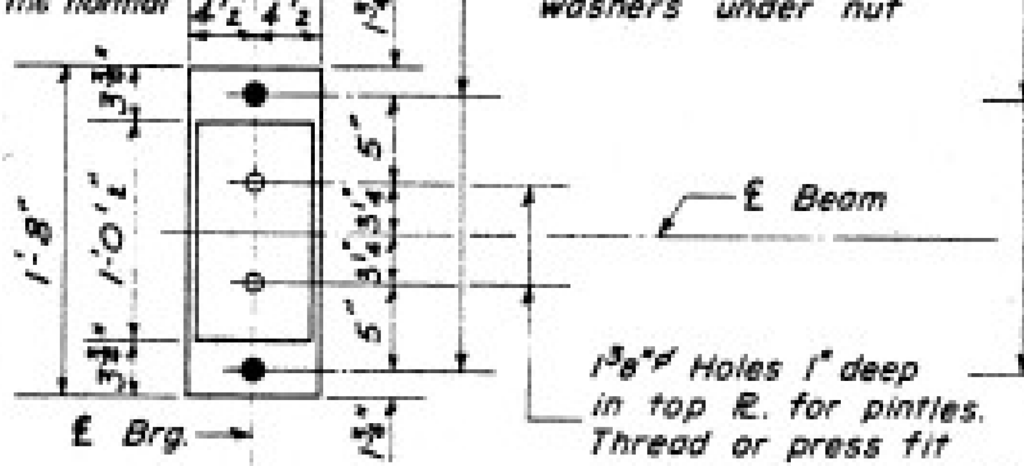
MOMENTS AND REACTIONS - INT. BMS

	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	264.8	282.4	23.7	31.2	30.7
Imp.	5[illegible]	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

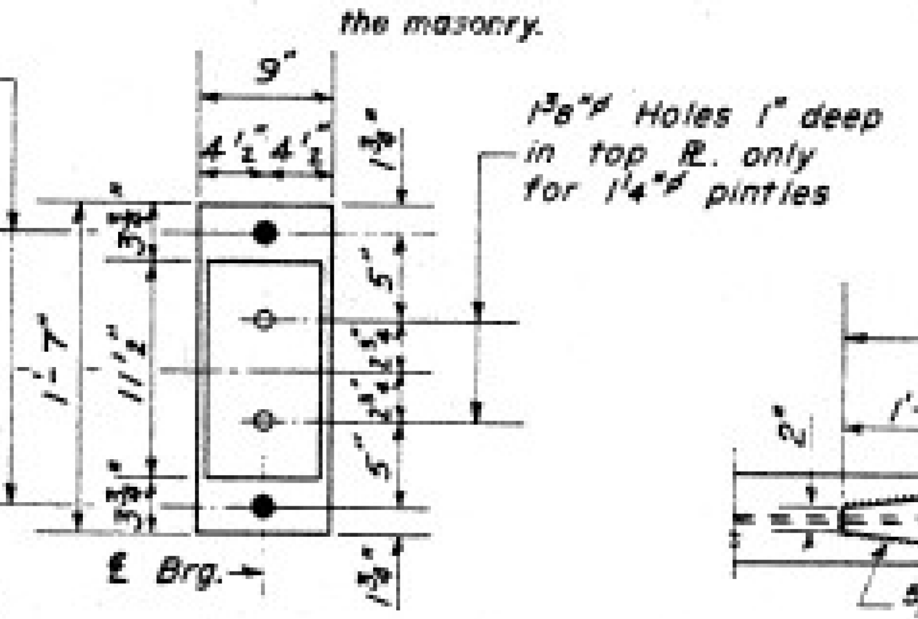
Moments are in ft. kips And Reactions in kips

1½"ϕ Holes for 1"ϕ x 12" anchor bolts. 2½" x 2½" x 5/16" PL. washers under nut

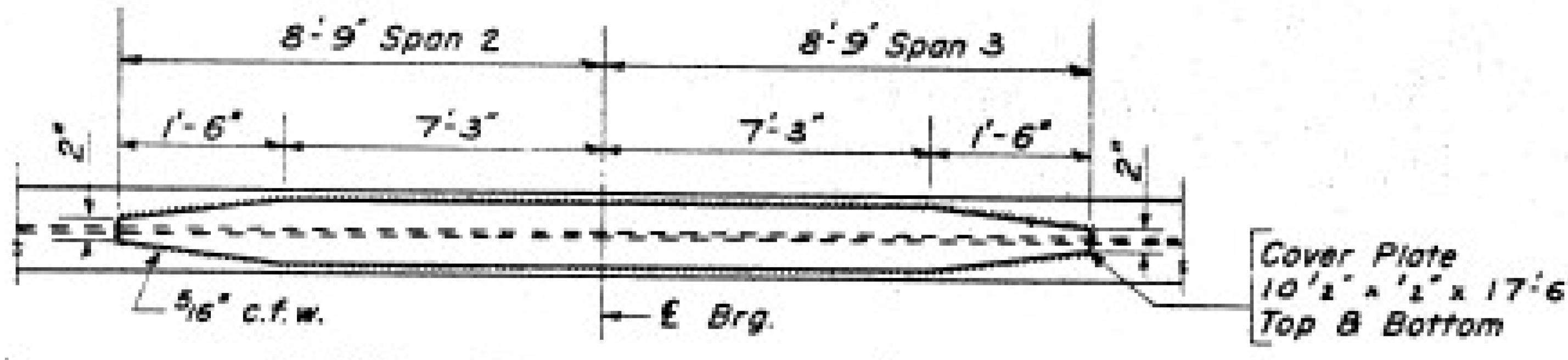
*D = ⅛"/100 ft. of exp. for every 15° below the normal temp. of 50°.
D** = ⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°.



PLAN


1½"ϕ Holes for 1"ϕ x 12" anchor bolts 2½" x 2½" x 5/16" PL. washers under nut
℄ Beam
1⅜"ϕ Holes 1" deep in top PL. for pintles. Thread or press fit pintles into bottom PL.
9"
4½" 4½"
1'-7"
11½"
5"
1⅜"
℄ Brg.
1⅜"ϕ Holes 1" deep in top PL. only for 1¼"ϕ pintles

PLAN



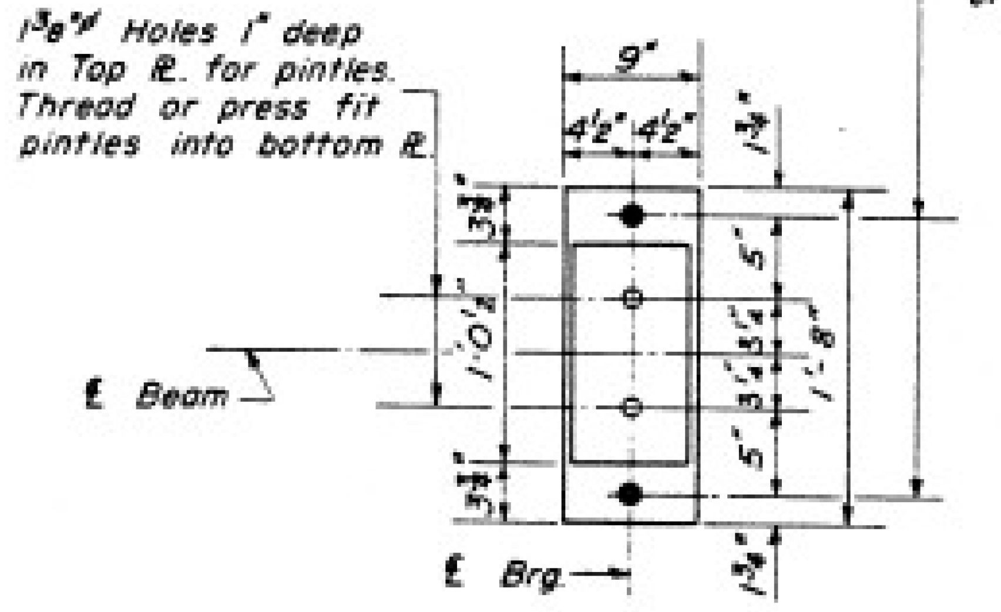
DETAIL OF COVER PLATE

*ELEVATION TOP OF WF For Fabrication only

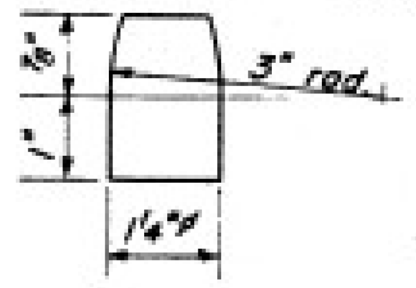
Loc. \ BM.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	679.17	679.27	679.32	679.29	679.20
℄ Brg. Pier 1	679.69	679.79	679.84	679.81	679.72
℄ Splice 1	679.85	679.95	680.00	679.97	679.88
℄ Splice 2	680.19	680.29	680.34	680.31	680.22
℄ Brg. Pier 2	680.24	680.34	680.39	680.36	680.27
℄ Splice 3	680.29	680.39	680.44	680.41	680.32
℄ Splice 4	680.24	680.34	680.39	680.36	680.27
℄ Brg. Pier 3	680.17	680.27	680.32	680.29	680.20
℄ Brg. N. Abut.	679.93	680.03	680.08	680.05	679.96

*Lower all top of WF elevations by 0.04 ft.

1½"ϕ Holes for 1"ϕ x 12" anchor bolts. 2½" x 2½" x 5/16" PL. washers under nut


1⅜"ϕ Holes 1" deep in Top PL. for pintles. Thread or press fit pintles into bottom PL.
9"
4½" 4½"
1⅝"
1'-0½"
1'-8"
5"
3¼"
℄ Beam
℄ Brg.

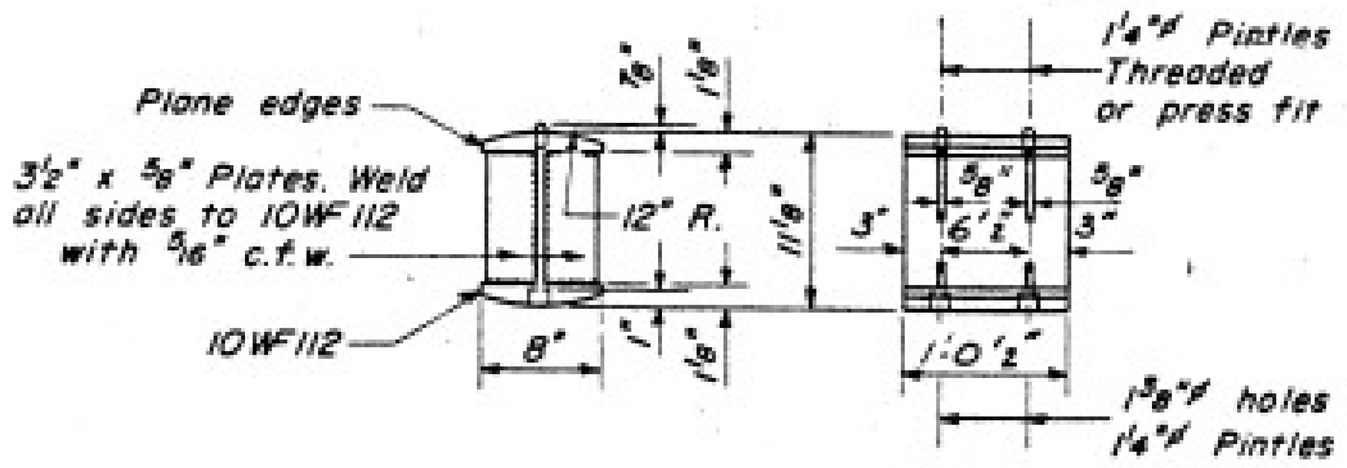
PLAN



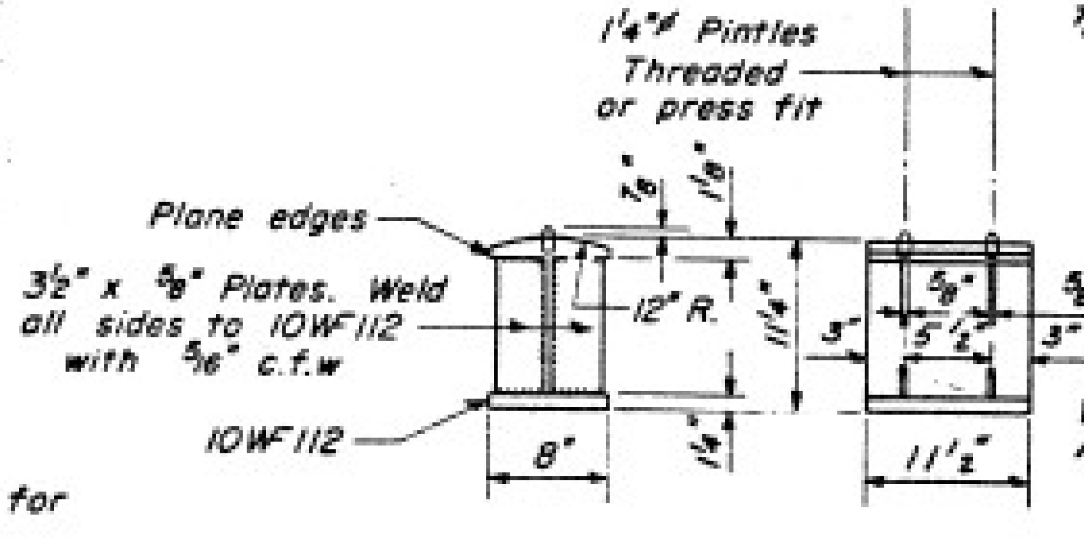
DETAIL OF PINTLE

TABLE OF "t" DIMENSIONS

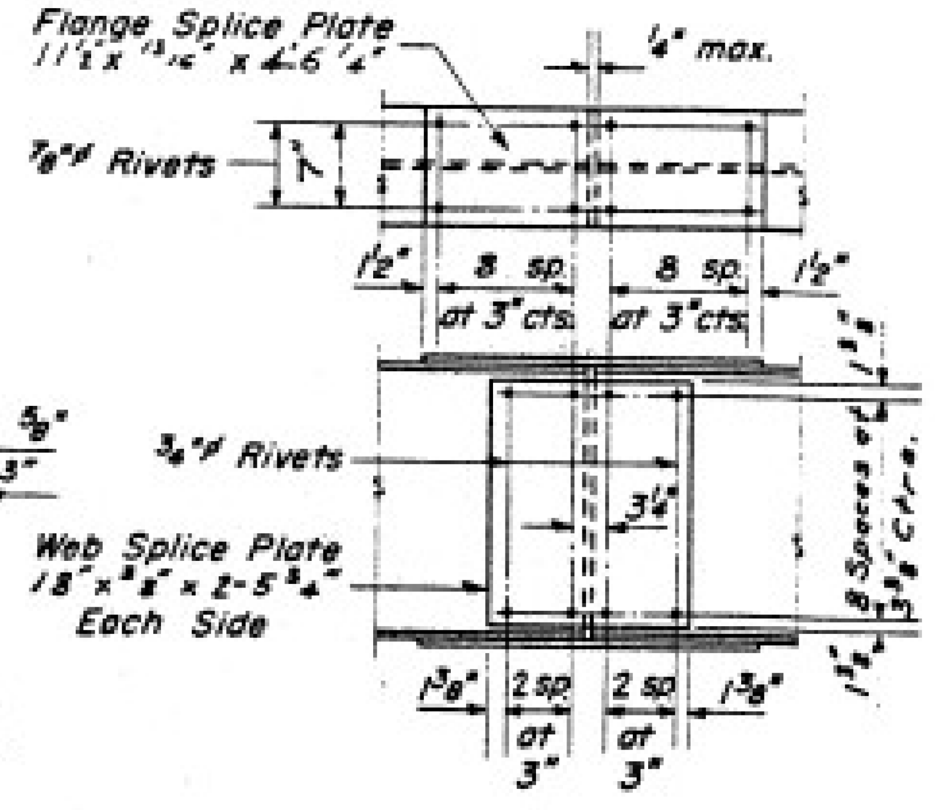
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	½"	¼"	⅜"


Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w.
10WF112
12" R.
11⅛"
8"
1"
3"
⅝"
6½"
1'-0½"
1¼"ϕ Pintles Threaded or press fit
1⅜"ϕ holes for 1¼"ϕ Pintles

DETAIL OF ROCKER AT 1 & 3 & ABUTS


1¼"ϕ Pintles Threaded or press fit
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w
10WF112
12" R.
11¼"
8"
3"
⅝"
5½"
11½"

DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 12-51HB-1
CLARK COUNTY
STATION 1205+01.03

DESIGNED Fred Stone
CHECKED Gene McCormick
P.G. Bomett J. Kessler
DRAWN W. A. Sausaman Jr.
CHECKED Gene McCormick

Aug. 5 1965
EXAMINED C.R.E.
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Alton
ENGINEER OF DESIGN
APPROVED V. E. Staff
CHIEF HIGHWAY ENGINEER

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

MODEL: 74E53 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0027

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	12

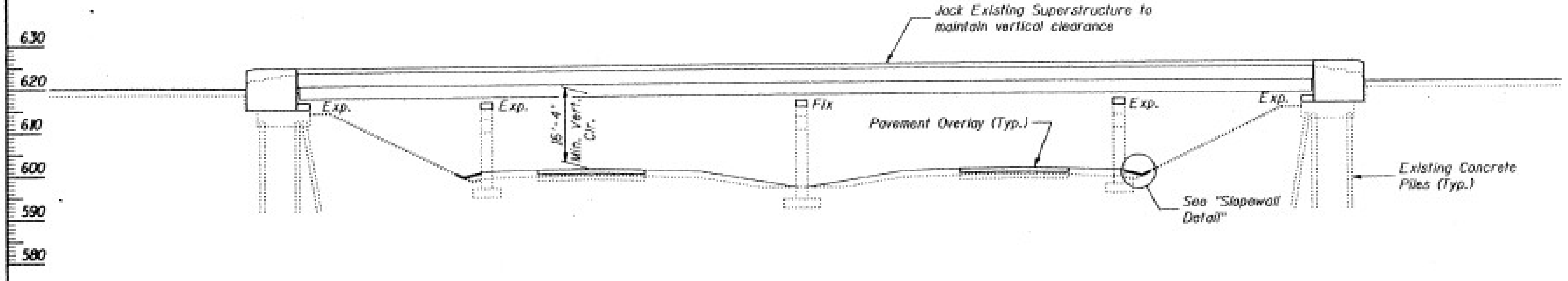
CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT
I-70 CLARK

Bench Mark: #404 - Iron pin with IDOT cap ±78' Lt. Sta. 1549+08 Elev. 595.94.

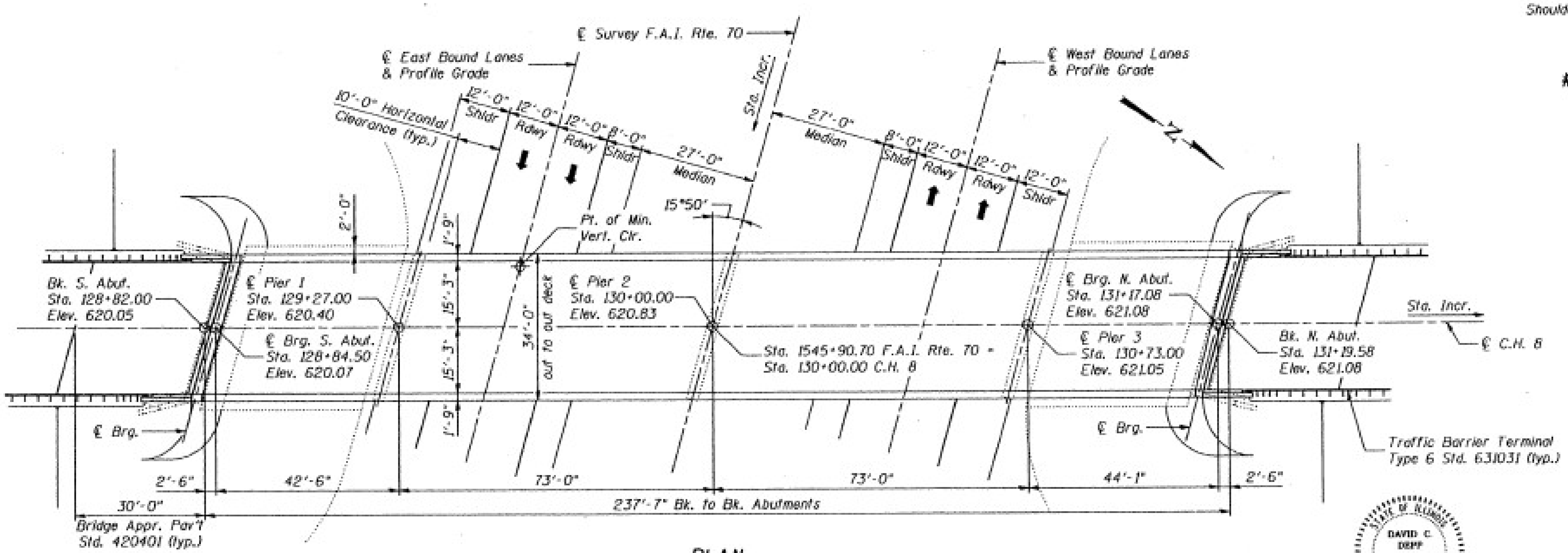
Existing Structure: SN 012-0028, four span 237'-7" back to back abutments, 34'-0" out to out width, wide flange steel beams with concrete deck on pile cap abutments and hammerhead piers supported by Spread Footings. Built in 1968 as F.A.I. Route 70, Section 12-52HB-1 at Sta. 1545+90.70.

SHEET 1
OF 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	12-52HB-1BR	CLARK	759	216
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		



ELEVATION

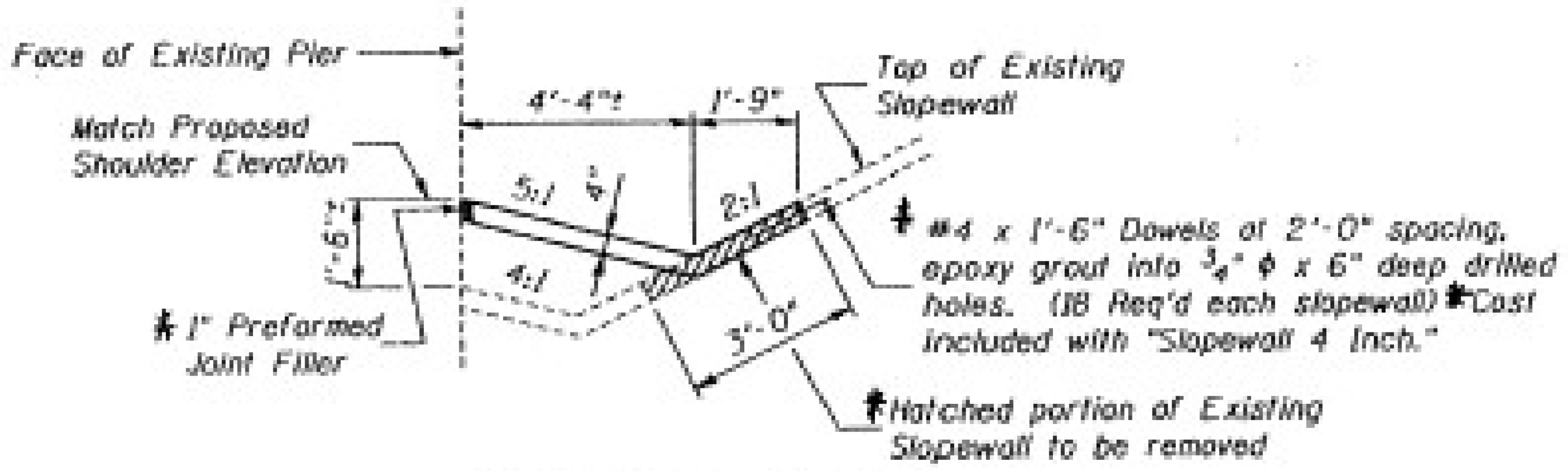


℄ Survey F.A.I. Rte. 70
℄ East Bound Lanes & Profile Grade
℄ West Bound Lanes & Profile Grade
10'-0" Horizontal Clearance (typ.)
12'-0" Shldr
12'-0" Rdwy
12'-0" Rdwy
8'-0" Shldr
27'-0" Median
27'-0" Median
8'-0" Shldr
12'-0" Rdwy
12'-0" Rdwy
12'-0" Shldr
Sta. Incr.
N
2'-0"
1'-9"
15'-3"
15'-3"
1'-9"
34'-0" out to out deck
Pt. of Min. Vert. Clr.
15°50'
Bk. S. Abut. Sta. 128+82.00 Elev. 620.05
℄ Pier 1 Sta. 129+27.00 Elev. 620.40
℄ Brg. S. Abut. Sta. 128+84.50 Elev. 620.07
℄ Pier 2 Sta. 130+00.00 Elev. 620.83
Sta. 1545+90.70 F.A.I. Rte. 70 = Sta. 130+00.00 C.H. 8
℄ Brg. N. Abut. Sta. 131+17.08 Elev. 621.08
℄ Pier 3 Sta. 130+73.00 Elev. 621.05
Bk. N. Abut. Sta. 131+19.58 Elev. 621.08
Sta. Incr.
℄ C.H. 8
℄ Brg.
℄ Brg.
Traffic Barrier Terminal Type 6 Std. 631031 (typ.)
2'-6"
42'-6"
73'-0"
73'-0"
44'-1"
2'-6"
237'-7" Bk. to Bk. Abutments
30'-0"
Bridge Appr. Pav't Std. 420401 (typ.)

PLAN

INDEX OF SHEETS

Sheet No.	Description
1	General Plan, Bill of Mat'l, Sheet Index
2	General Notes & Jacking Procedure
3	Superstructure Plan & Typical Section
4	Superstructure Details
5	Bearing Details
6	Anchor Bolts
7	Abutments (Concrete Removal)
8-9	Abutment Details
10	Piers 1, 2 & 3
11	Bar Splicer Assembly



‡ 1" Preformed Joint Filler

‡ #4 x 1'-6" Dowels at 2'-0" spacing, epoxy grout into ¾" ϕ x 6" deep drilled holes. (18 Req'd each slopewall) ‡ Cost included with "Slopewall 4 Inch."

‡ Hatched portion of Existing Slopewall to be removed

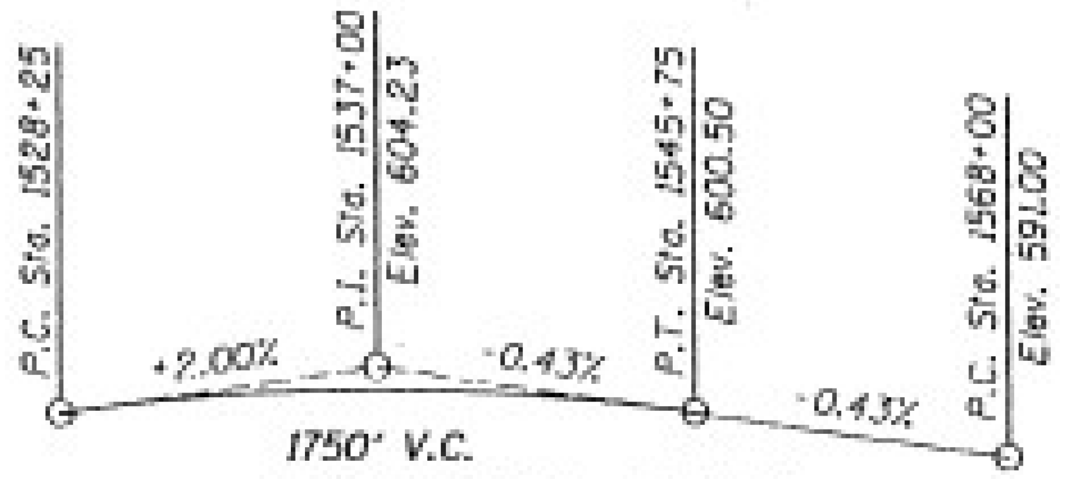
SLOPEWALL DETAIL

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	--	158	158
Concrete Removal	Cu Yd	7.6	26.8	34.4
Slope Wall Removal	Sq Yd	--	28	28
Structure Excavation	Cu Yd	--	158	158
Silicone Joint Sealer, 2"	Foot	66	--	66
Concrete Structures	Cu Yd	--	72.8	72.8
Concrete Superstructure	Cu Yd	5.6	9.8	15.4
Protective Coat	Sq Yd	17	16	33
Elastomeric Bearing Assembly, Type I	Each	--	10	10
Elastomeric Bearing Assembly, Type II	Each	--	10	10
Furnishing And Erecting Structural Steel	Pound	--	3300	3300
Cleaning And Painting Steel Bridge No. 6	L Sum	1	--	1
Containment And Disposal Of Lead Paint Cleaning Residue No. 6	L Sum	1	--	1
Reinforcement Bars, Epoxy Coated	Pound	800	7170	7970
Slope Wall 4 Inch	Sq Yd	--	56	56
Bridge Seat Sealer	Sq Ft	--	182	182
Jacking Existing Superstructure, No. 6	Each	1	--	1
Bar Splicers	Each	64	--	64

DAVID C. DEPP
081-005117

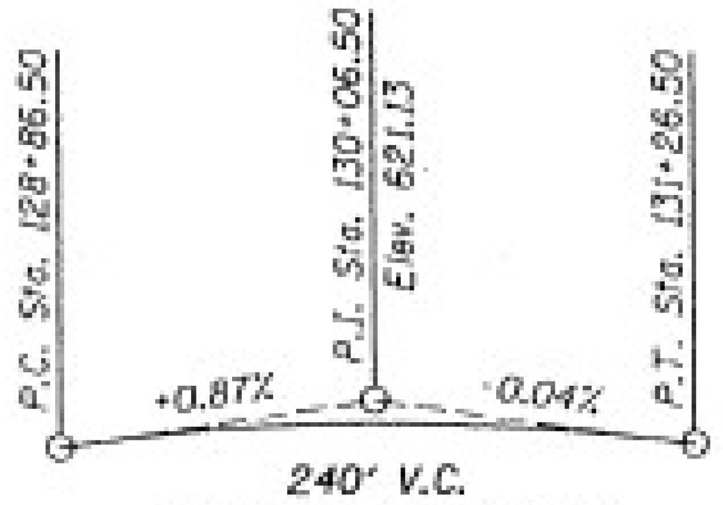
Signed: David Depp
Date: 3-14-2002
Lic. Expires: 11-30-2002



P.C. Sta. 1528+25
P.I. Sta. 1537+00 Elev. 604.23
P.T. Sta. 1545+75 Elev. 600.50
P.C. Sta. 1568+00 Elev. 591.00
+2.00%
-0.43%
-0.43%

1750' V.C.

PROFILE GRADE
F.A.I. RTE. 70
(Proposed)



240' V.C.

PROFILE GRADE
C.H. 8
(Proposed)

DESIGN STRESSES

New Construction

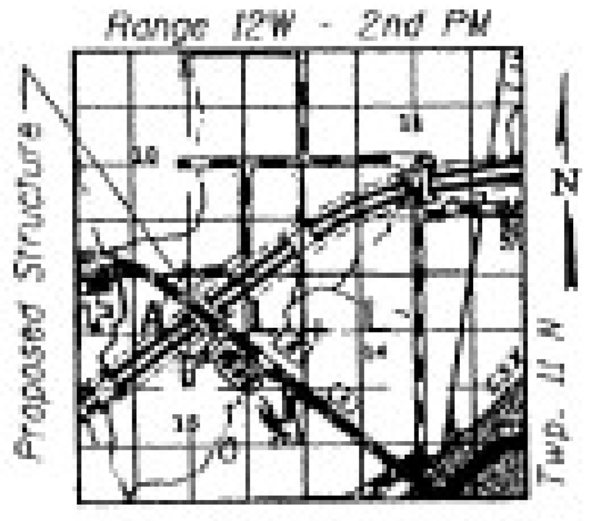
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 36,000 psi (Structural Steel)

Existing Structure

f_c = 1,400 psi
f_s = 20,000 psi (Reinforcement)
f_s = 20,000 psi (Structural Steel)

DESIGN SPECIFICATIONS

1996 AASHTO with Interims thru 2000



LOCATION SKETCH

Johnson, Depp & Quisenberry
Consulting Engineers Springfield, Illinois

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	CDB/DCD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
C.H. 8 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-52HB-1)BR
CLARK COUNTY
STATION 1545+90.70
STRUCTURE NO. 012-0028

MODEL: EXISTING PLANS 28 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0028

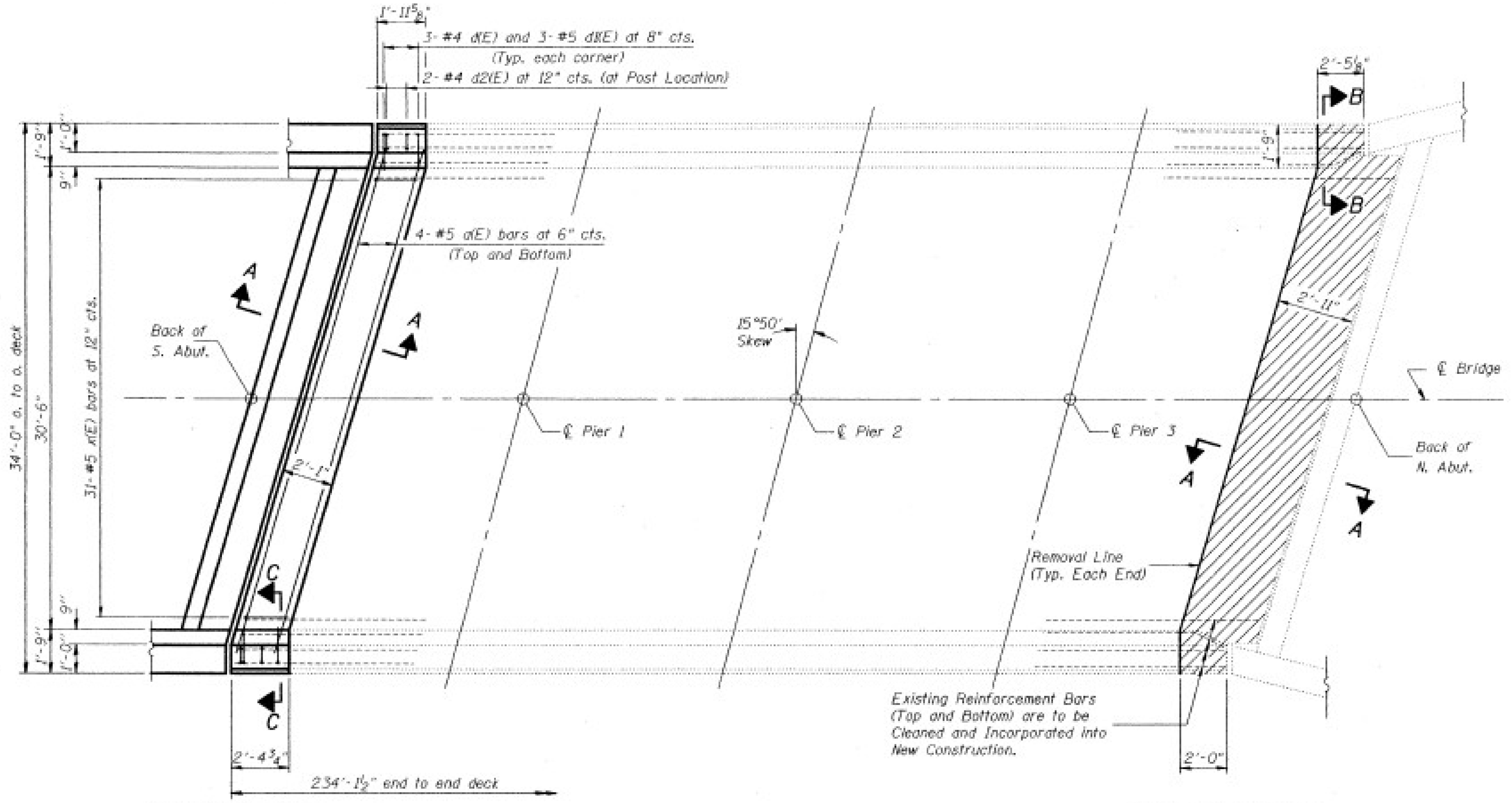
SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	13
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

SHEET 3
OF 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	12-52HB-1)BR	CLARK	759	218
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

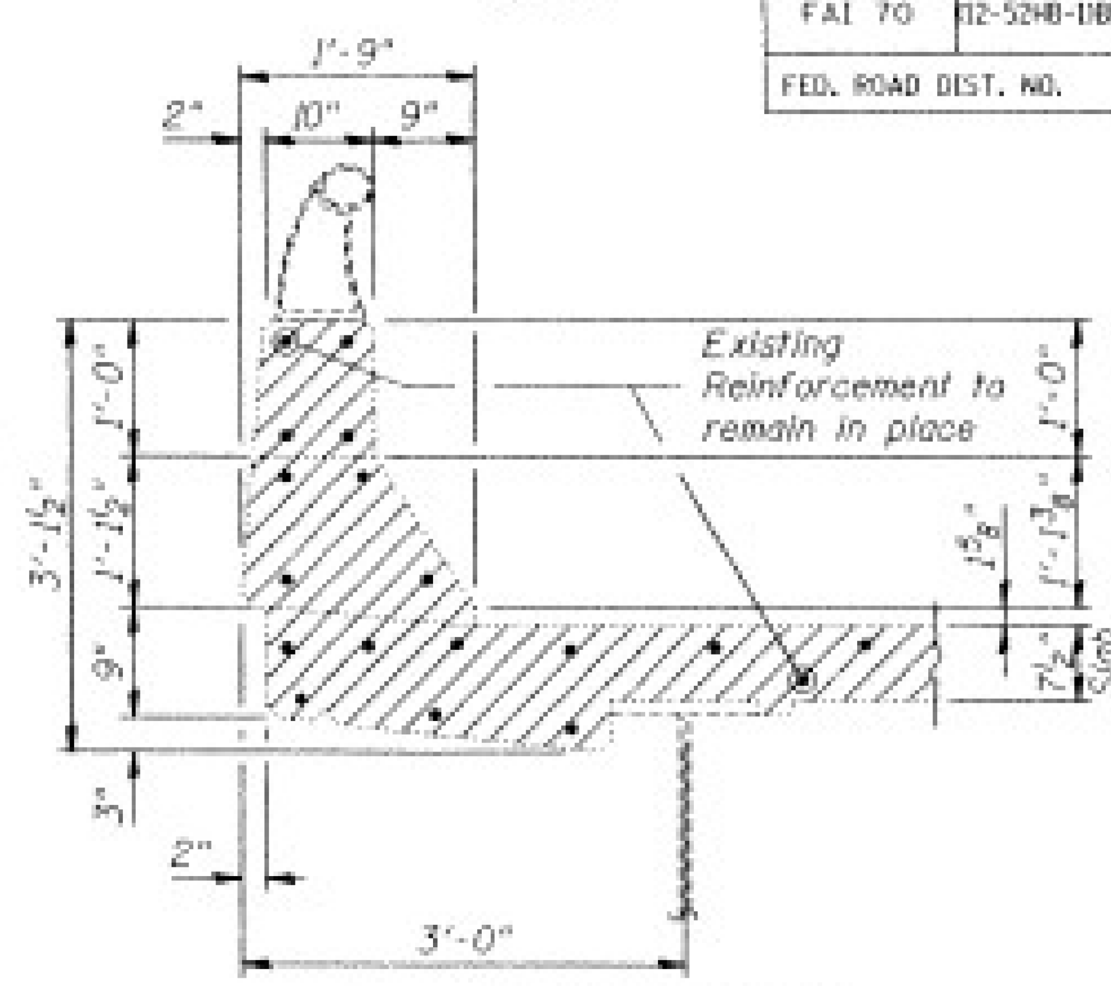


NEW CONSTRUCTION
(Typical Each End of Deck)

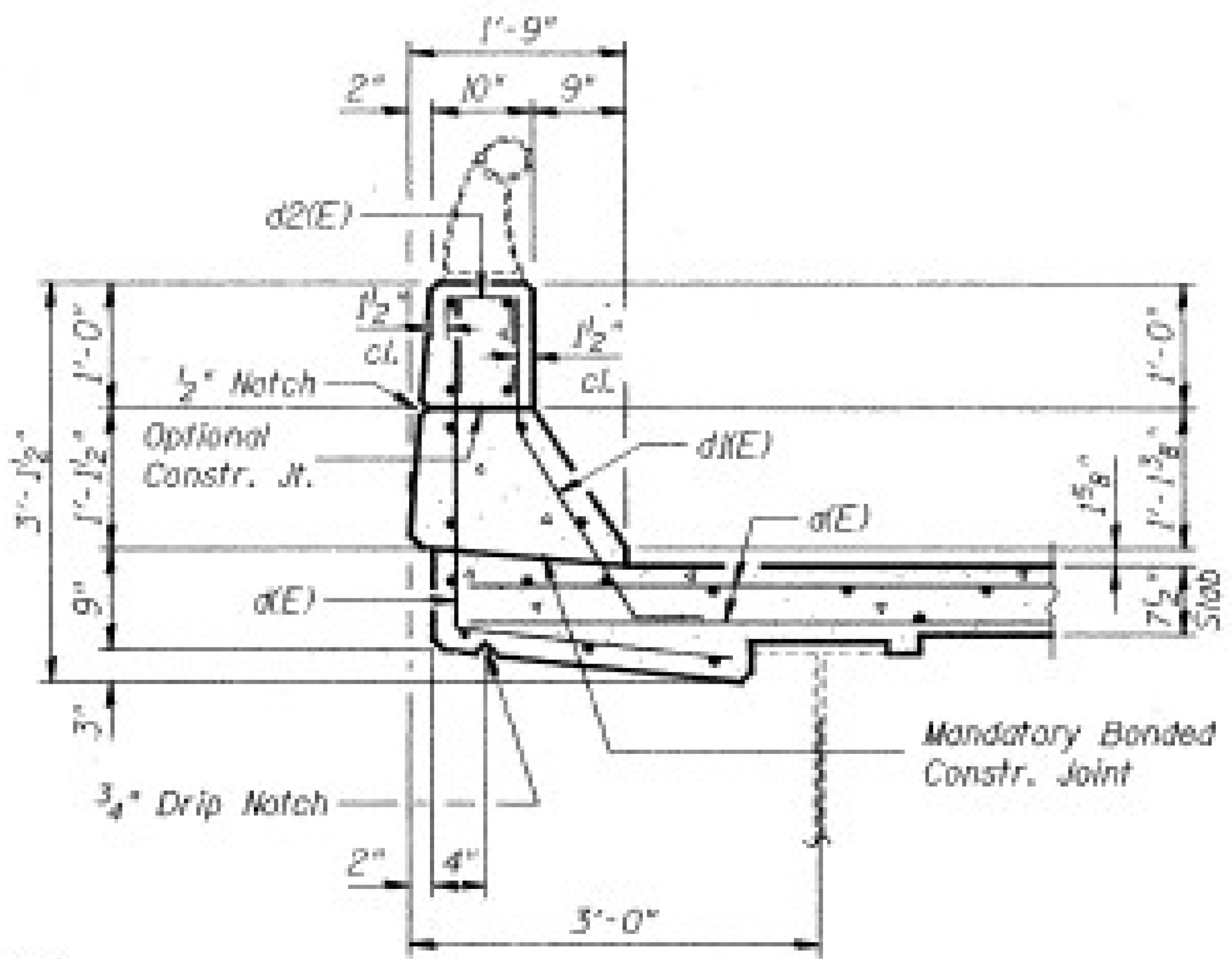
CONCRETE REMOVAL
(Typical Each End of Deck)

PLAN

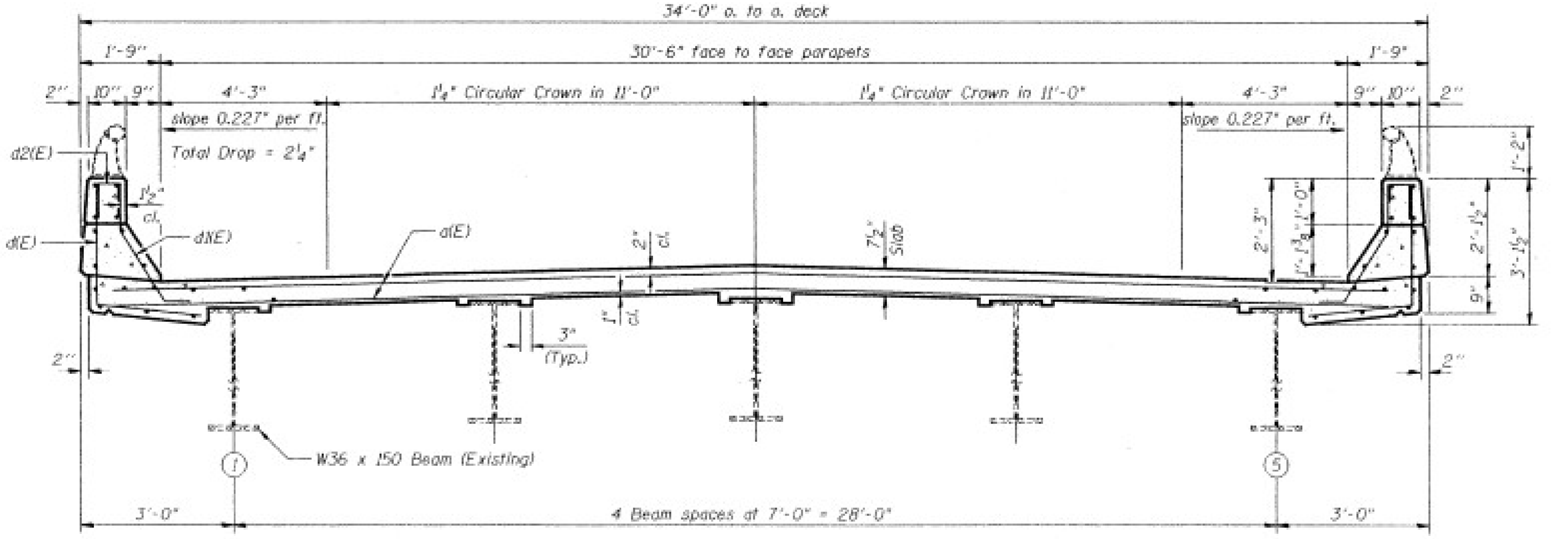
▨ Indicates Limits of Concrete Removal.



SECTION B-B



SECTION C-C



CROSS SECTION AT END OF DECK
(Looking North)

Notes:

Contractor shall protect the existing handrail and posts during Concrete removal and incorporate them into the new construction. Cost included with Concrete Removal.

Existing longitudinal reinforcement bars projecting from the deck and parapets are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cut the existing reinforcement as required so that it will end 2" from the edge of the new deck. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

See following sheet for Section A-A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB

SUPERSTRUCTURE
C.H. 8 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-52HB-1)BR
CLARK COUNTY
STATION 1545+90.70
STRUCTURE NO. 012-0028

MODEL: EXISTING PLANS 29 [Sheet]
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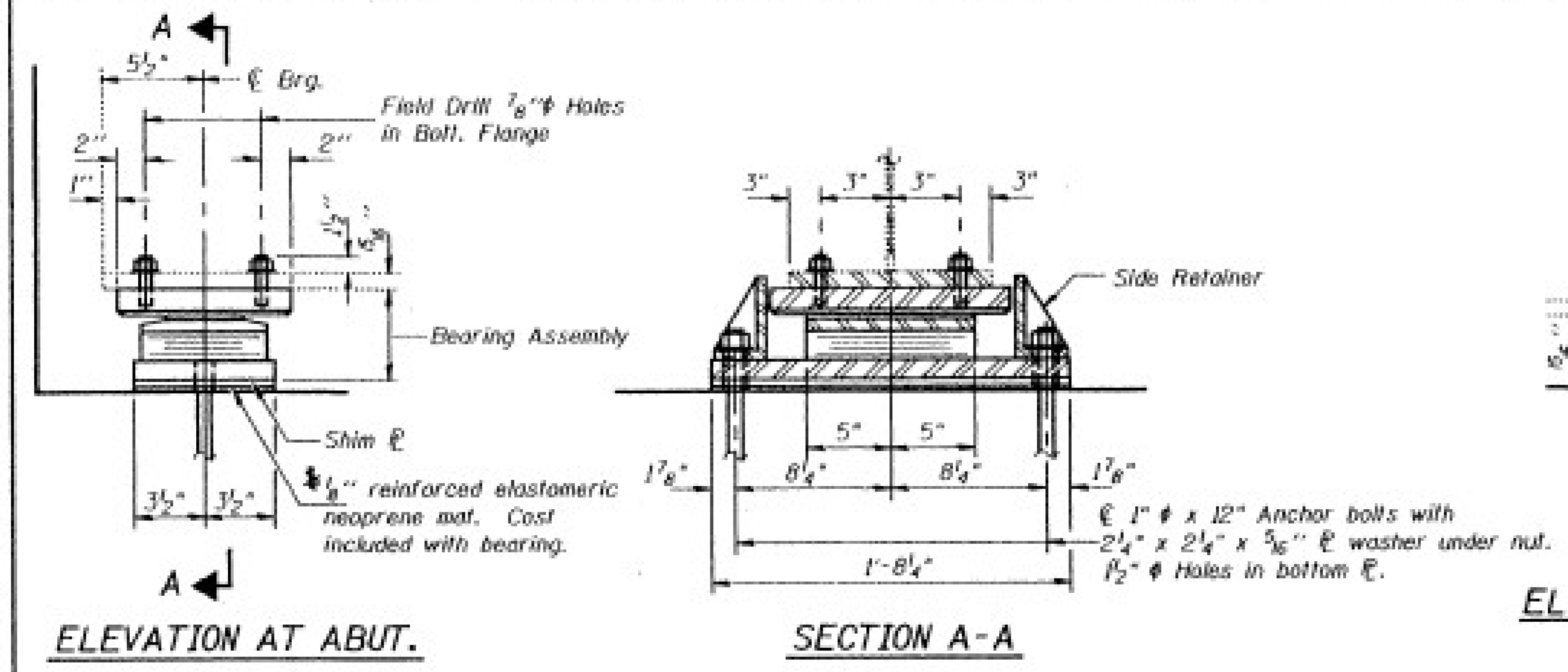
SHEET 5
OF 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-52HB-1BR	CLARK	759	220
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

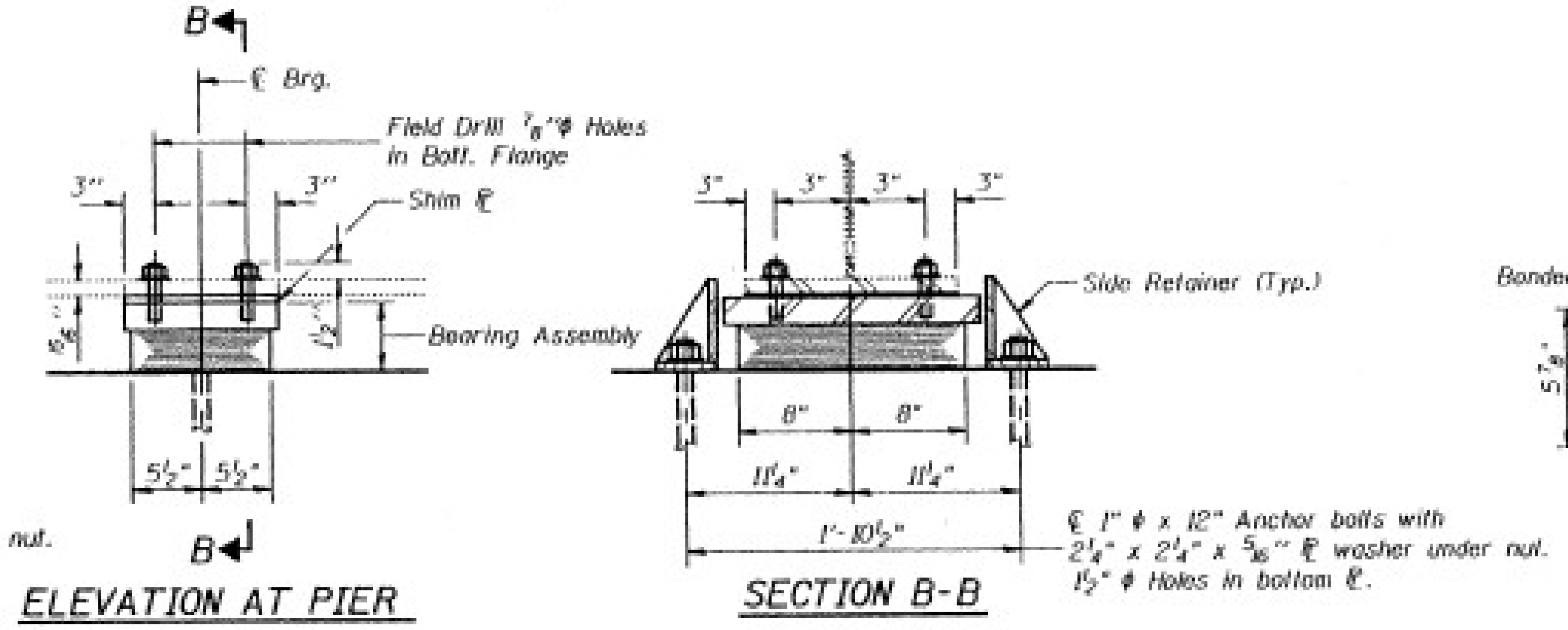


A
5½"
℄ Brg.
Field Drill ⅞"ϕ Holes in Bott. Flange
2"
2"
1"
Bearing Assembly
Shim ℞
*⅛" reinforced elastomeric neoprene mat. Cost included with bearing.
3½"
3½"
A
3"
3"
3"
3"
Side Retainer
5"
5"
1⅞"
8¼"
8¼"
1⅞"
1'-8¼"
℄ 1" ϕ x 12" Anchor bolts with 2¼" x 2¼" x 5/16" ℞ washer under nut. 1½" ϕ Holes in bottom ℞.

ELEVATION AT ABUT.

SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. - AT ABUTMENTS

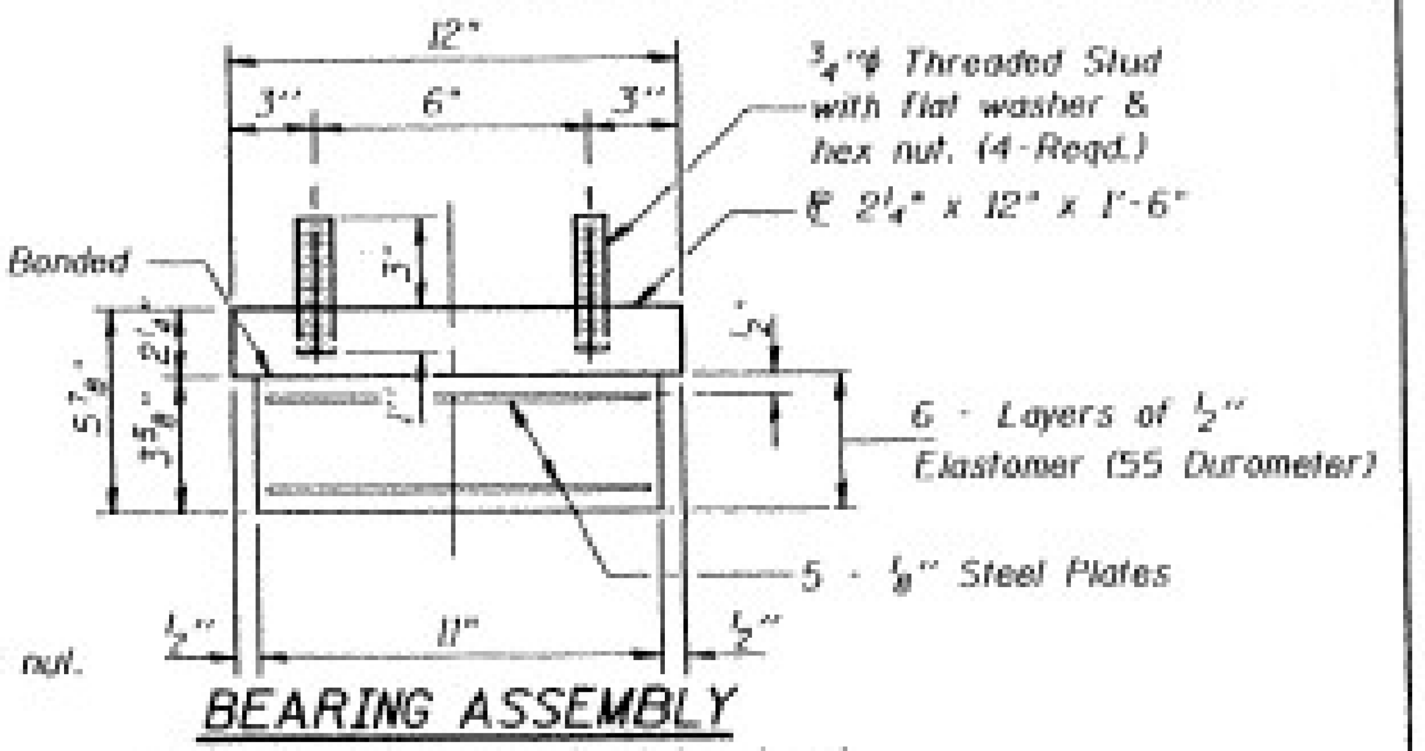


B
℄ Brg.
Field Drill ⅞"ϕ Holes in Bott. Flange
3"
3"
Shim ℞
Bearing Assembly
5½"
5½"
B
3"
3"
3"
3"
Side Retainer (Typ.)
8"
8"
11¼"
11¼"
1'-10½"
℄ 1" ϕ x 12" Anchor bolts with 2¼" x 2¼" x 5/16" ℞ washer under nut. 1½" ϕ Holes in bottom ℞.

ELEVATION AT PIER

SECTION B-B

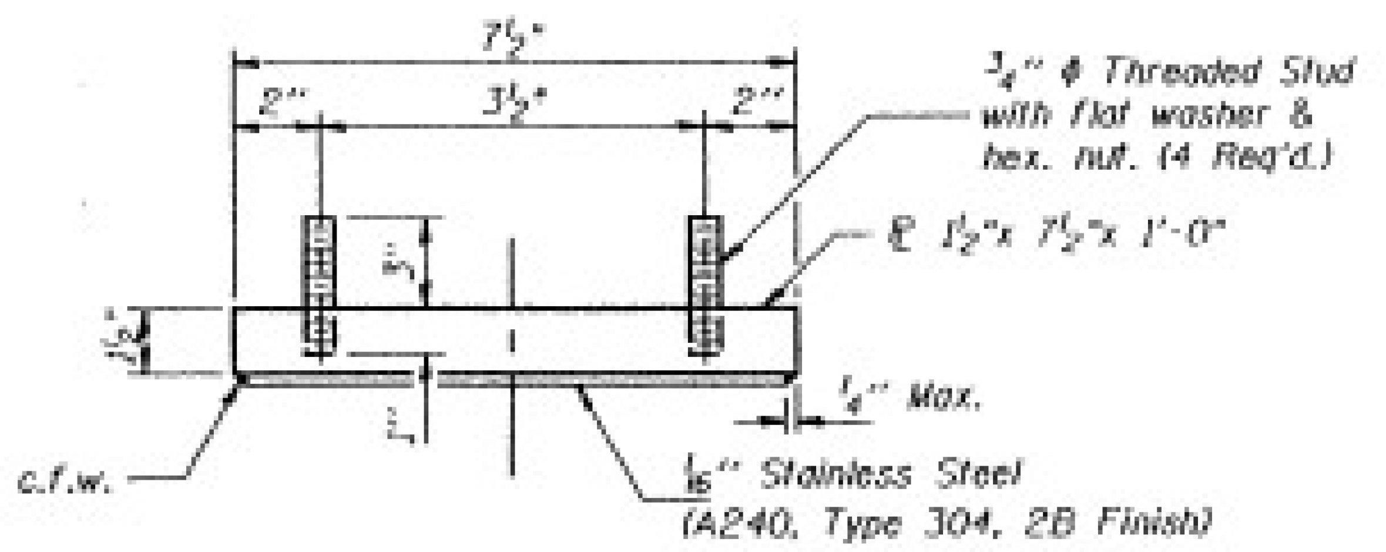
TYPE I ELASTOMERIC EXP. BRG. - AT PIERS 1 & 3



12"
3"
6"
3"
¾"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
℞ 2¼" x 12" x 1'-6"
Bonded
6 - Layers of ½" Elastomer (55 Durometer)
5 - ⅛" Steel Plates
½"
11"
½"

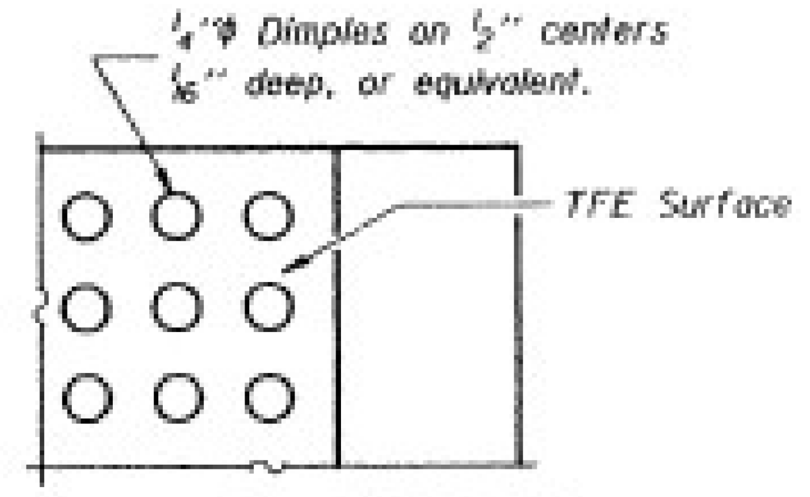
BEARING ASSEMBLY

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

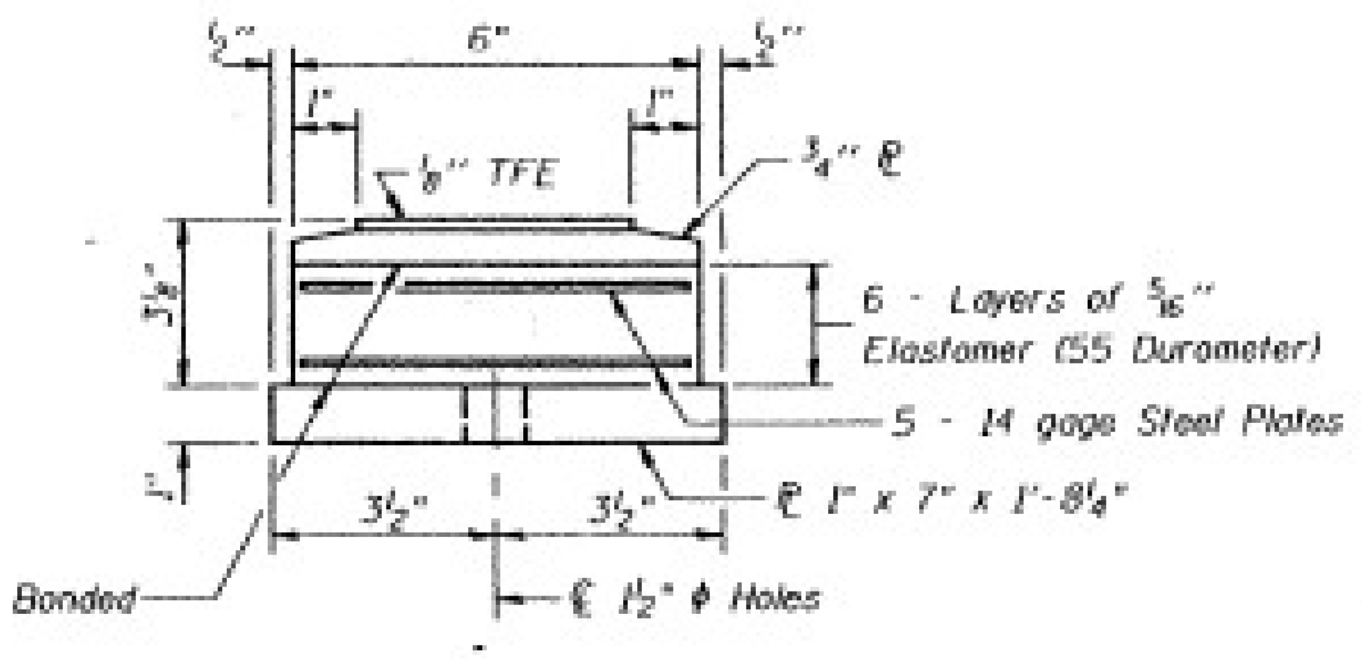


7½"
2"
3½"
2"
¾" ϕ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
℞ 1½"x 7½"x 1'-0"
¼" Max.
c.f.w.
1/16" Stainless Steel (A240, Type 304, 2B Finish)

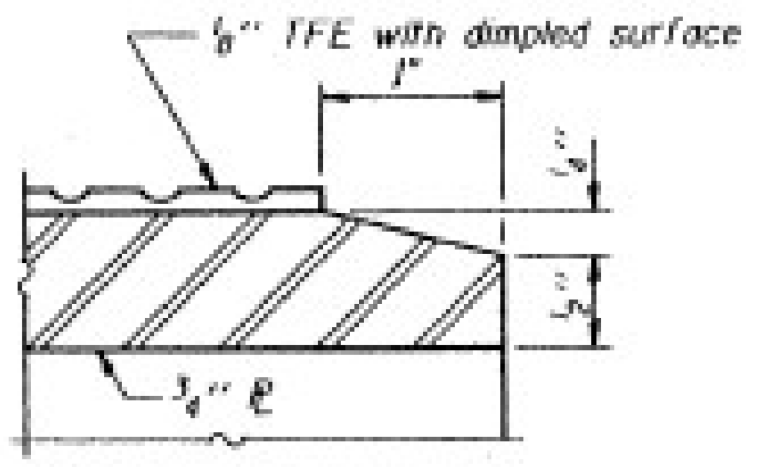
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



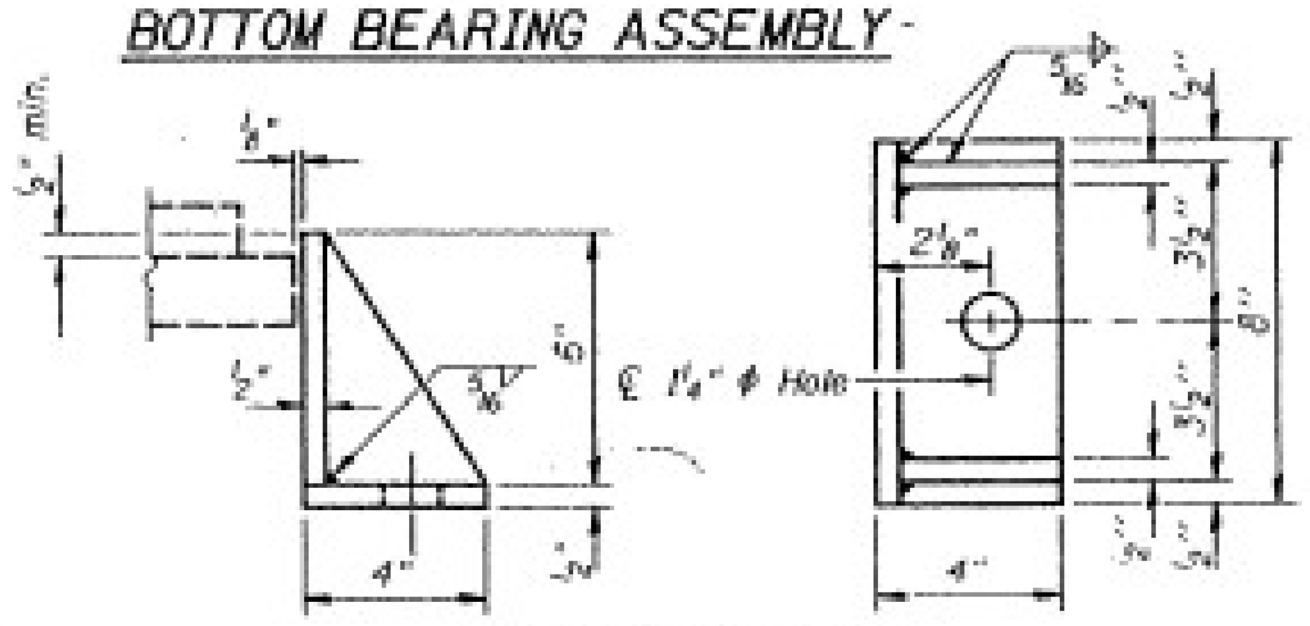
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

Note: The ⅛" 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 ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



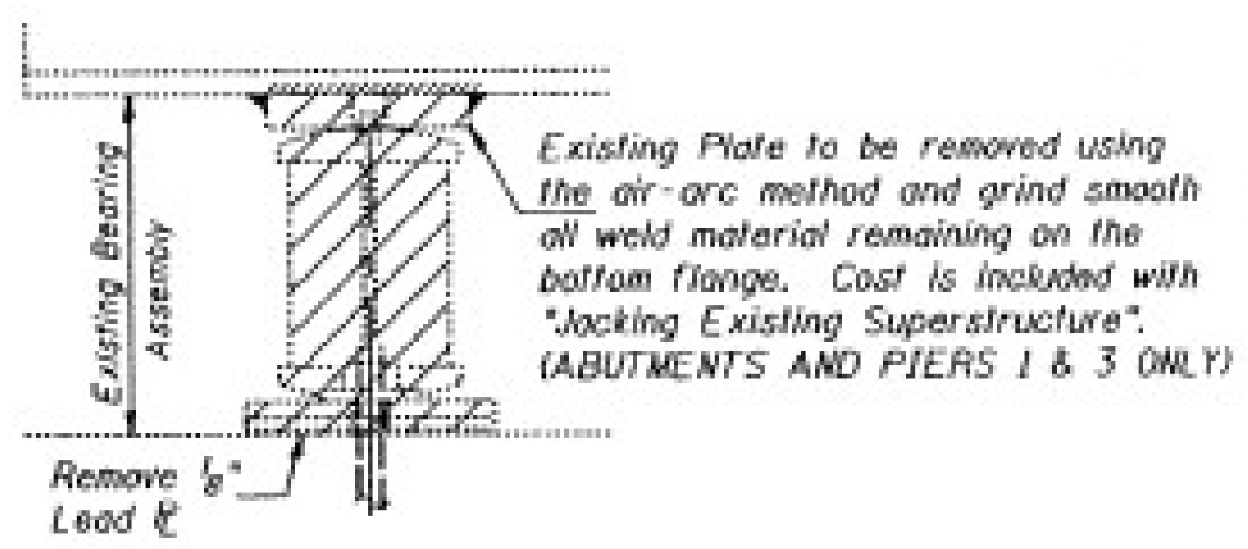
SIDE RETAINER

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

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB

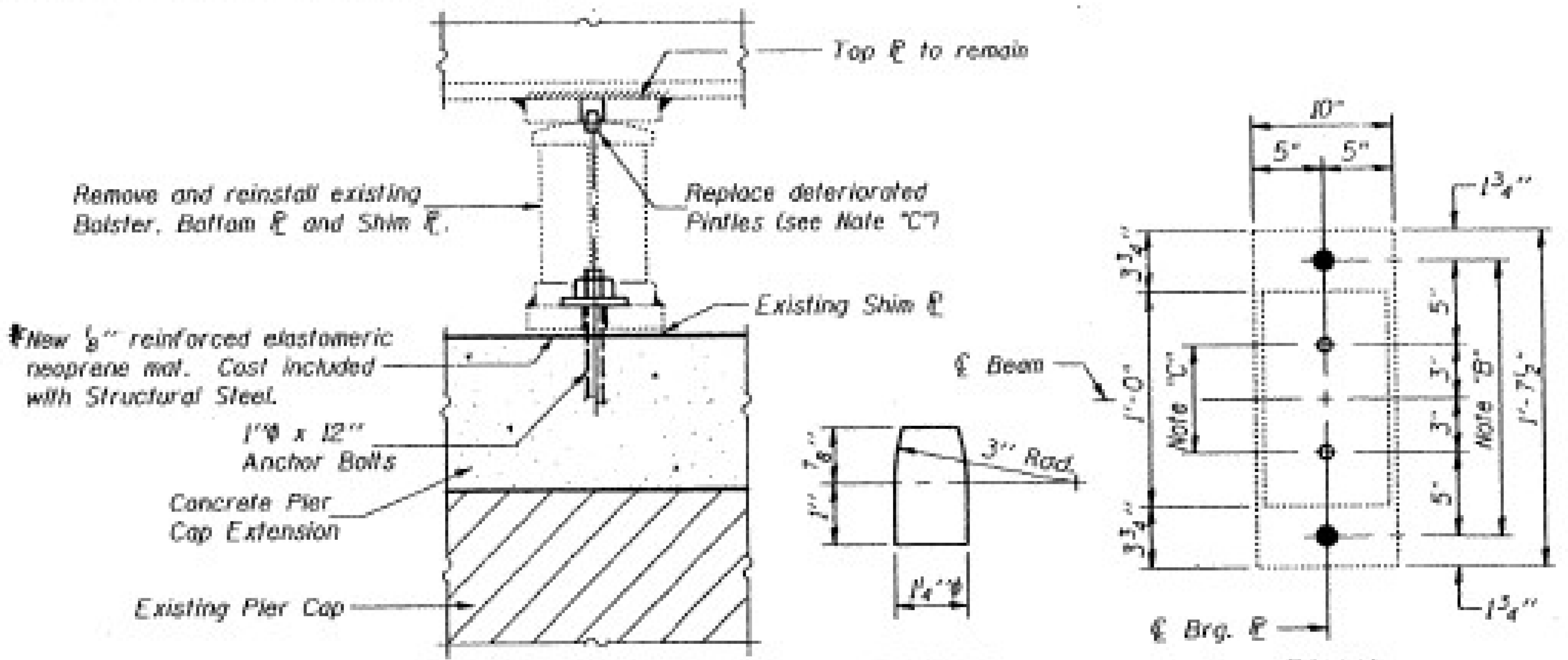
I-2-E2 4-30-99

* In accordance with Article 1052.02 of the Standard Specifications.



Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange. Cost is included with "Jacking Existing Superstructure". (ABUTMENTS AND PIERS 1 & 3 ONLY)
Existing Bearing Assembly
Remove ⅛" Lead ℞

EXISTING BEARING REMOVAL DETAIL



Top ℞ to remain
Remove and reinstall existing Bolster, Bottom ℞ and Shim ℞.
Replace deteriorated Pintles (see Note "C")
Existing Shim ℞
*New ⅛" reinforced elastomeric neoprene mat. Cost included with Structural Steel.
1"ϕ x 12" Anchor Bolts
Concrete Pier Cap Extension
Existing Pier Cap
3" Rad.
1¼"ϕ
10"
5"
5"
1¾"
℄ Beam
Note "C"
Note "B"
1'-0"
1'-7½"
℄ Brg. ℞
1¾"

ELEVATION

PINTLE

PLAN

EXISTING FIXED BEARING - AT PIER 2

Remove and reinstall existing pier bearings.
Cost included with Jacking Existing Superstructure.

Note "B"
Existing 1½"ϕ Holes for 1"ϕ Anchor Bolts-5/16" x 2½" x 2½" ℞ Washer under nut.

Note "C"
Existing 1⅜"ϕ Holes-1" deep in Top ℞ for 1¼"ϕ Pintles. Replace deteriorated Pintles as directed by the Engineer. Thread or press fit Pintles in Bolster.

SHIM THICKNESS TABLE

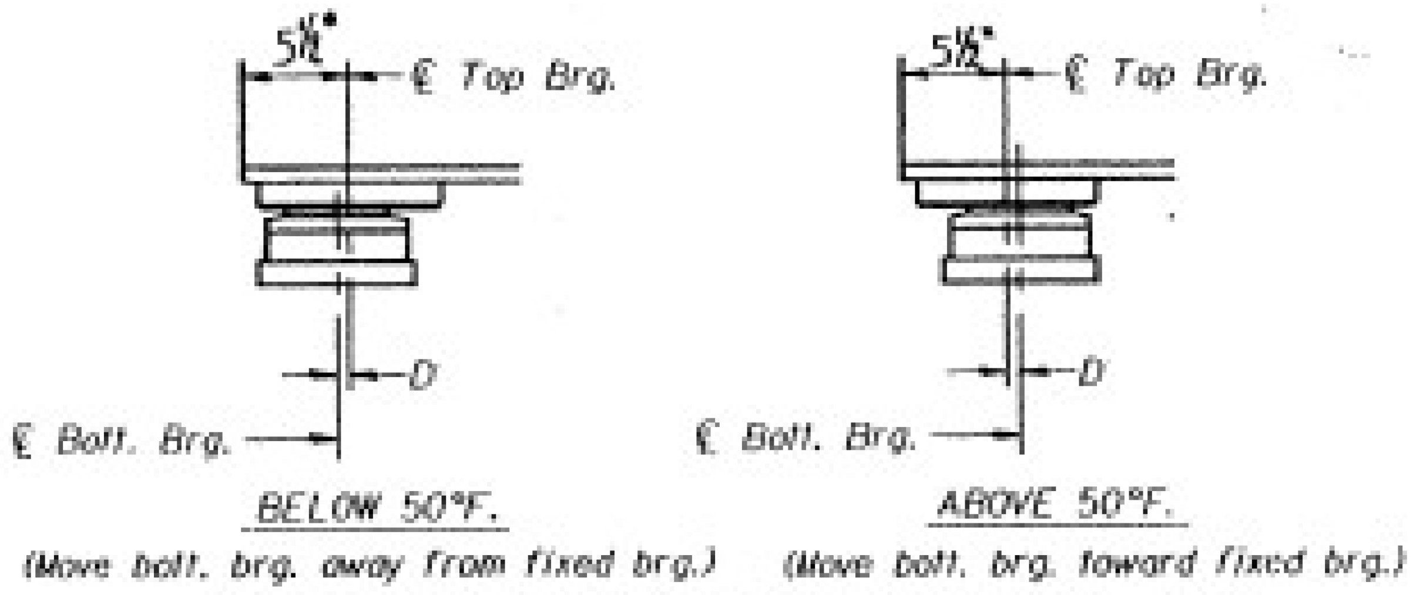
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
Abuts. & Piers *	½"	¼"	1/16"	-	-

* Reuse Existing Shims at Pier 2.

INTERIOR GIRDER REACTION TABLE				
		Abuts.	Piers 1 & 3	Pier 2
R (DL)	(K)	15.7	76.8	95.3
R (LL)	(K)	34.2	45.8	49.5
R (Imp)	(K)	10.3	12.4	12.4
R (Total)	(K)	60.2	135.0	154.2

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Elastomeric Bearing Assembly Type II	Each	10



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=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

NOTES FOR BEARING ASSEMBLY

Removal and reinstallation of beam diaphragms may be required to facilitate drilling holes for Bearings and Anchor Bolts. Cost shall be included with "Jacking Existing Superstructure."

Side Retainers, Shim Plates, Connection Bolts and Anchor Bolts are included with "F & E Structural Steel."

See sheet 6 for Anchor Bolt installation.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
C.H. 8 OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-52HB-1)BR
CLARK COUNTY
STATION 1545+90.70
STRUCTURE NO. 012-0028

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0028

SCALE: SHEET 3 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	15
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

MODEL: EXISTING PLANS 30 [Sheet]
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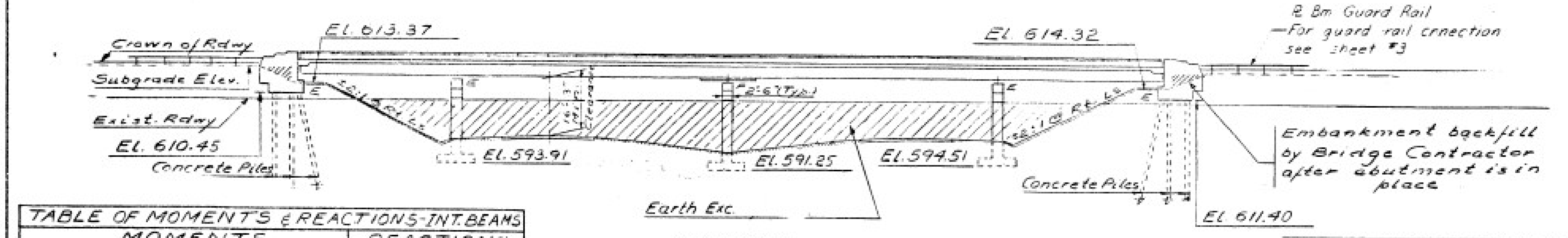
B.M. Top of R.O.W. Marker on West Side C.H.8, ±400' Rt.
℄ F.A.I. Rte 70 Sta. 1546+90, Elev. 613.32.

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-52 HB-1	CLARK	41	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT I-70-4(74)142		

SHEET NO. 1
10 SHEETS



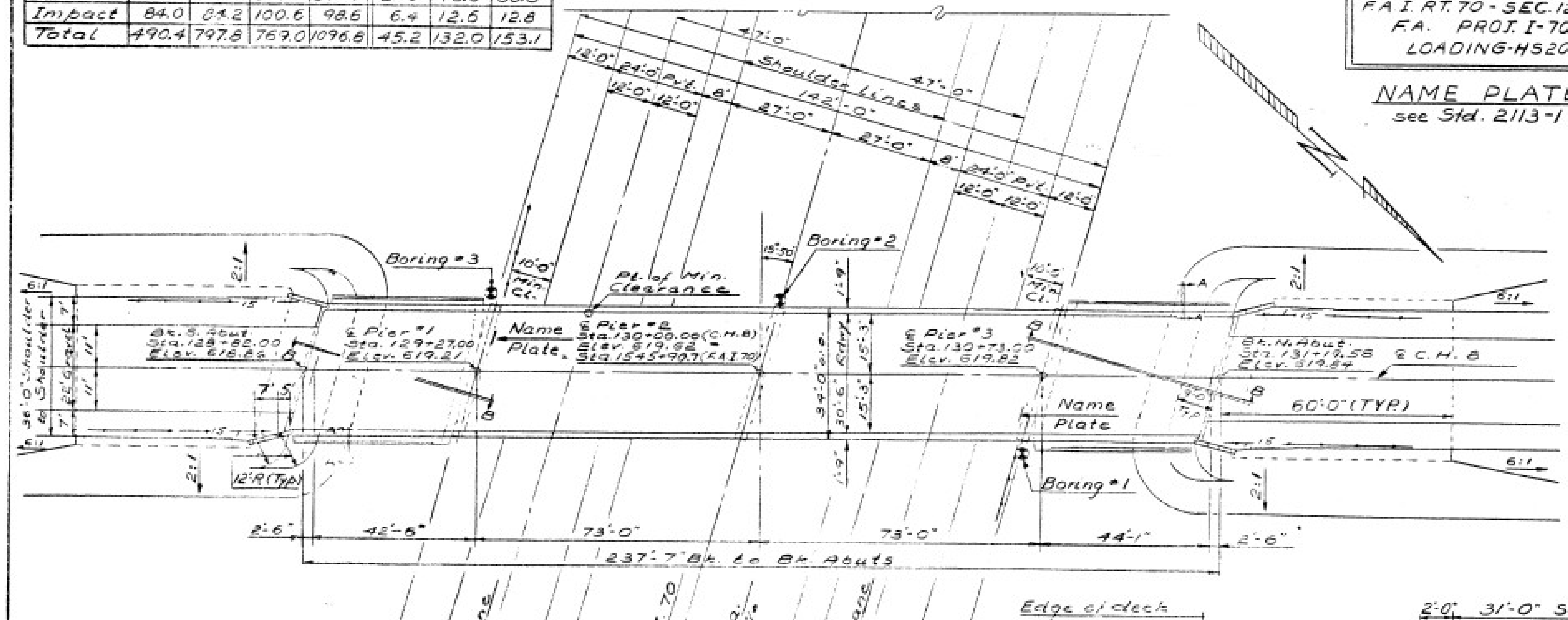
ELEVATION

TABLE OF MOMENTS & REACTIONS-INT. BEAMS

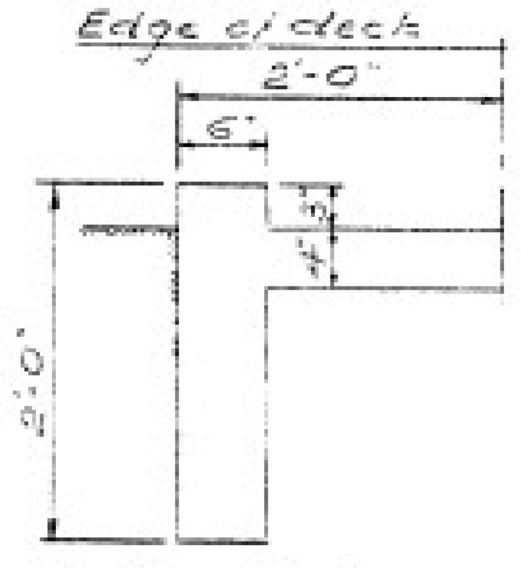
	MOMENTS				REACTIONS		
	.4sp.4	Pier 3	.5sp3	Pier 2	N.Abut.	Pier 3	Pier 2
Dead Load	122.5	406.5	270.0	607.5	17.2	73.4	89.8
Live Load	283.9	307.1	398.4	390.7	21.6	46.0	50.5
Impact	84.0	84.2	100.6	98.6	6.4	12.6	12.8
Total	490.4	797.8	769.0	1096.8	45.2	132.0	153.1

STA. 1545+90.7
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 70 - SEC. 12-52HB-1
F.A. PROJ. I-70-4(4)
LOADING-HS20

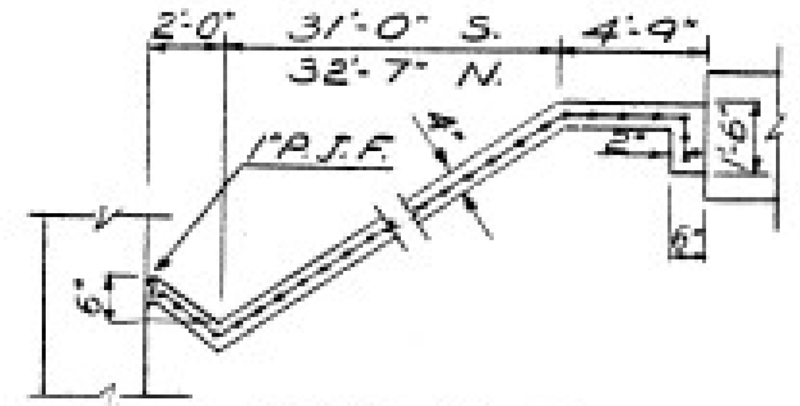
NAME PLATE
see Std. 2113-1



PLAN



Section A-A



SEC. B-B

GENERAL NOTES.

Class X concrete shall be used thruout.

Coarse aggregate to be used in parapet handrail 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 Art. 51.19 of std. Specifications.

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

The exposed surfaces of expansion guards shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of structural steel. Est. weight #880

All structural steel shall comply with specifications for structural steel ASTM A-36 & except as otherwise provided, all structural steel shall receive one shop coat of red lead paint & two field coats of paint. See Special Provisions for field painting.

Slope wall shall be reinforced with welded wire fabric 6"×6" mesh, weighing 58# per 100 sq. ft.

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

Anchor bolts shall be set before fastening diaphragms over supports.

The contractor shall drive 1 test pile at North Abutment 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.

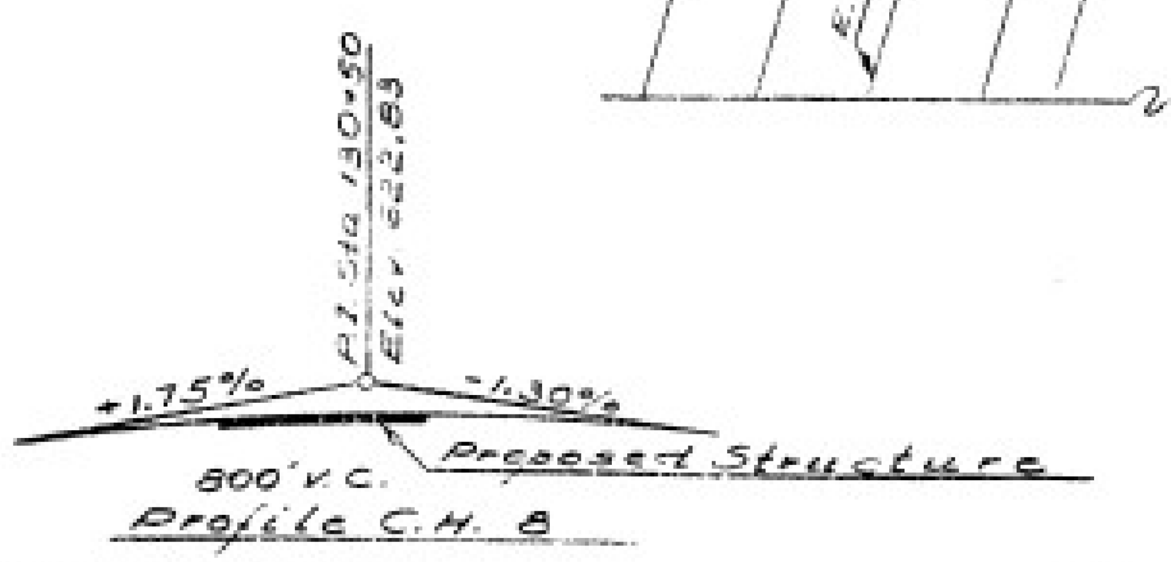
Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE DECK.

TOTAL BILL OF MATERIAL

Item		Super	Sub.	Total
* Class "A" Excav. for Struct.	Cu. Yds		145.	145.
Class X concrete	Cu. Yds	243.6	213.1	456.7
Protective coat	Sq. Yds	1018		1018
Structural steel	Lbs	210,730		210,730
Aluminum Handrail	Lin. Ft.	469		469
Reinforcement bars	Lbs	61,820	16,540	78,360
Concrete piles	Lin. Ft.		456	456
Test piles (Concrete)	Each		1	1
Name plates	Each		2	2
Slope wall (4")	Sq. Yds			417

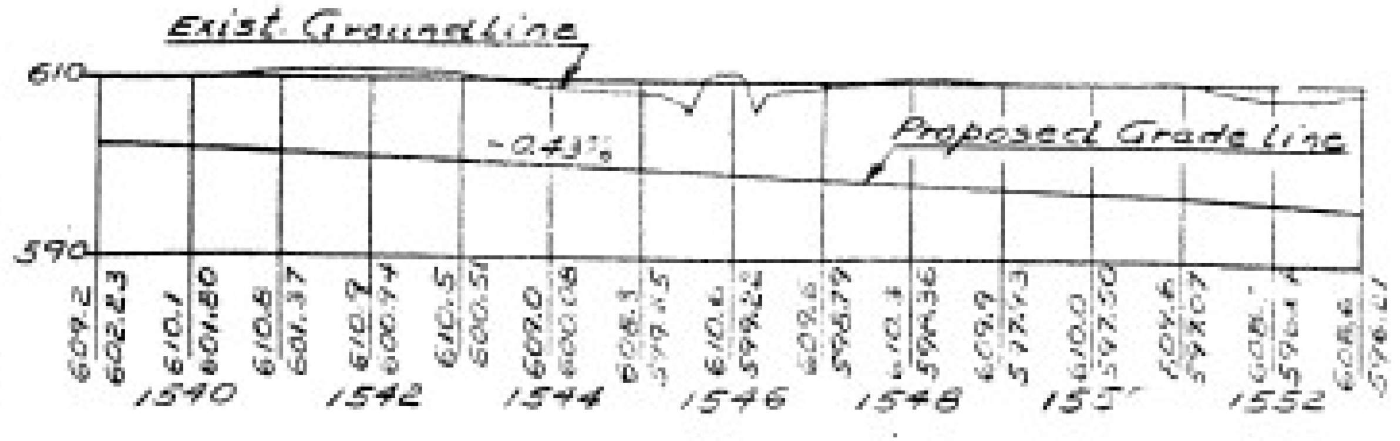
* Includes excavation for Slope wall.



Profile C.H. 8

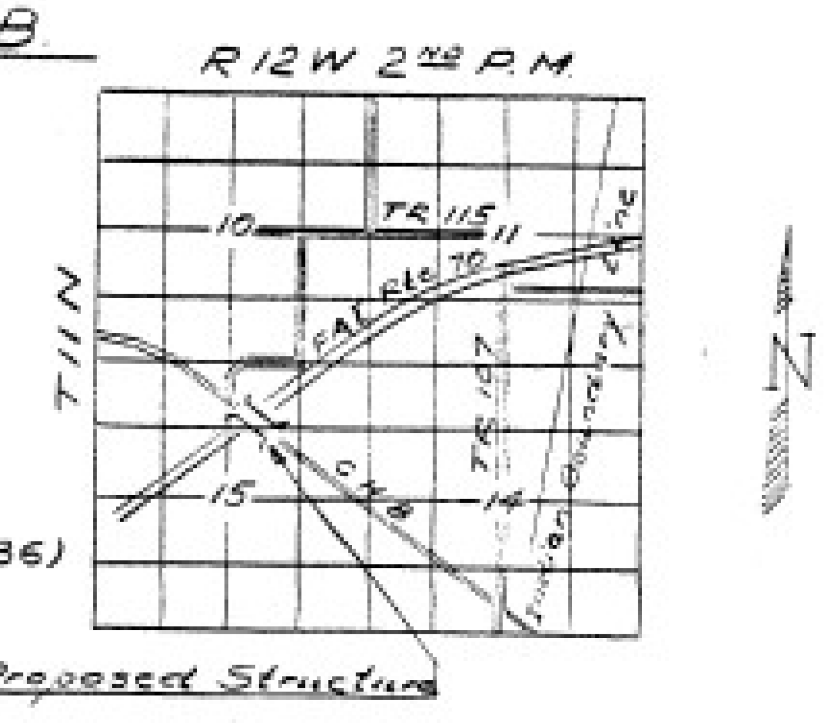
DESIGNED	Li-ming Chou
CHECKED	
DRAWN	V.H.
CHECKED	

OCT. 15 1965
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER



Profile F.A.I. 70

Design Stresses
f_c = 1400 psi Super
V_c = 75 psi Ftgs.
f_s = 20,000 psi. Reinf.
f_s = 20,000 psi. Struct. (A-36)
n = 10
℄ Deflection = $\frac{L}{1000}$
Loading HS 20-44



Location Sketch

GENERAL PLAN & ELEVATION
PROJ.: I-70-4(74)142
C.H.8 over F.A.I. RT. 70
F.A.I. RT. 70 - SECTION 12-52 HB - 1
CLARK COUNTY
STA. 1545 + 90.7

MODEL: EXISTING PLANS 31 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

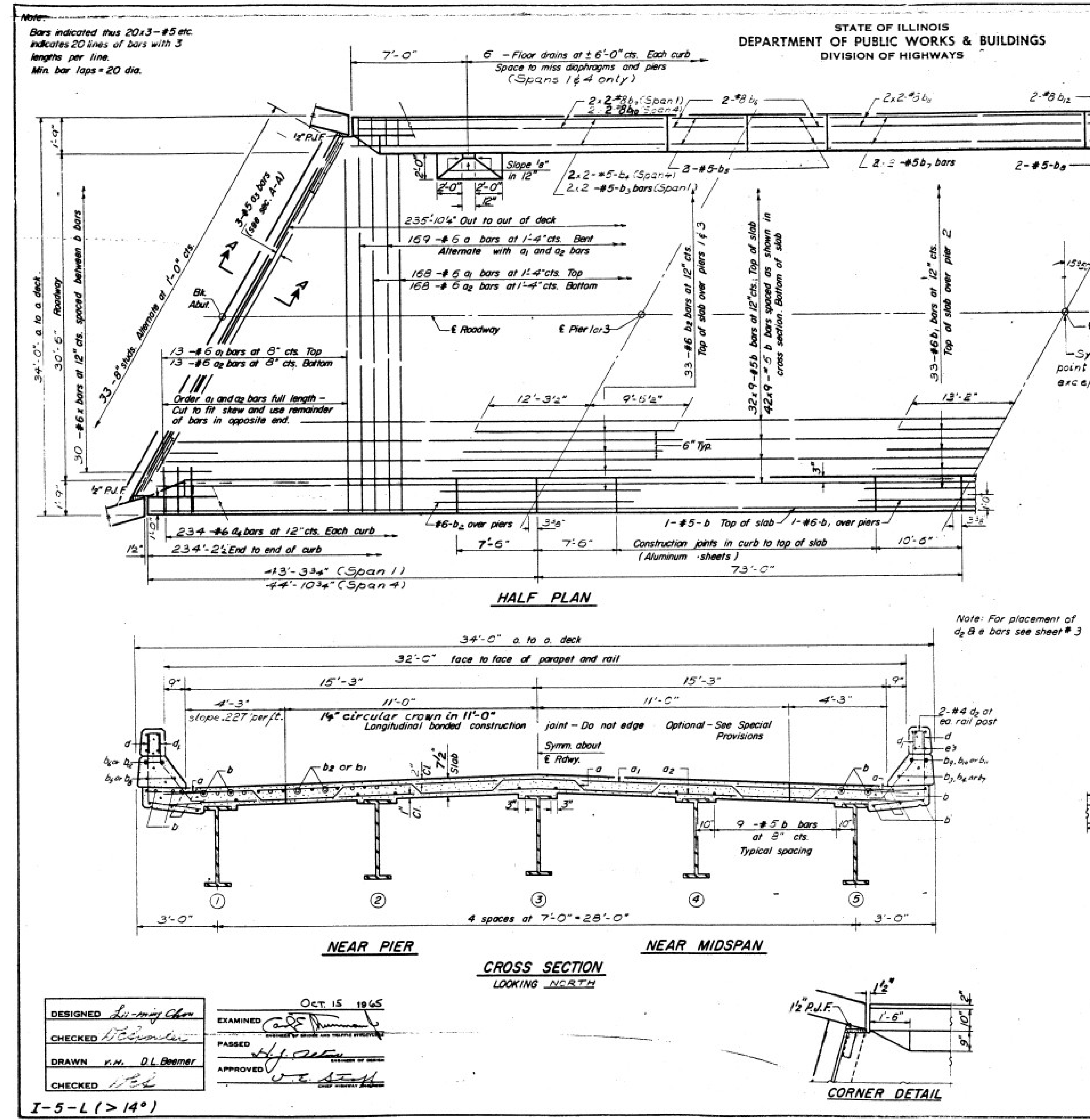
USER NAME = Maria.Bloemer
PLOT DATE = 7/29/2026
DESIGNED - REVISED -
DRAWN - REVISED -
CHECKED - REVISED -
DATE - REVISED -
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
EXISTING STRUCTURE DETAILS
SN 012-0028
SCALE: SHEET 4 OF 6 SHEETS STA. TO STA.
F.A.S RTE. 1707 | SECTION D7 BRIDGE PAINTING 2027-1 | COUNTY CUMBERLAND | TOTAL SHEETS 83 | SHEET NO. 16
CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT
I-70
CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-52 HB-1	CLARK	41	14

SHEET NO. 2
10 SHEETS

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



7'-0"
6 - Floor drains at ± 6'-0" cts. Each curb
Space to miss diaphragms and piers
(Spans 1 & 4 only)
2x2-#8b1 (Span 1)
2x2-#8b10 (Span 4)
2-#8 b6
2x2-#5 b8
2-#8 b12
½" P.J.F.
2'-0"
2'-0"
2'-0"
12"
Slope ⅛" in 12"
2x2-#5-b4 (Span 4)
2x2-#5-b3 bars (Span 1)
2-#5-b5
2-2-#5b7 bars
2-#5-b8
235'-10¼" Out to out of deck
169-#6 a bars at 1'-4" cts. Bent
Alternate with a1 and a2 bars
168-#6 a1 bars at 1'-4" cts. Top
168-#6 a2 bars at 1'-4" cts. Bottom
3-#5 a3 bars (see sec. A-A)
33-⅜" studs. Alternate at 1'-0" cts.
A
A
Bk. Abut.
℄ Roadway
℄ Pier 1 or 3
33-#6 b2 bars at 12" cts. Top of slab over piers 1 & 3
32,9-#5 b bars at 12" cts. Top of slab
42,9-#5 b bars spaced as shown in cross section. Bottom of slab
33-#6 b1 bars at 12" cts. Top of slab over pier 2
15°
Skew
℄ Pier 2
Symmetrical about this point by rotation thru 180° except as noted.
34'-0" o. to o. deck
30'-6" Roadway
30-#6 x bars at 12" cts. spaced between b bars
1'-9"
1'-9"
13-#6 a1 bars at 8" cts. Top
13-#6 a2 bars at 8" cts. Bottom
Order a1 and a2 bars full length - Cut to fit skew and use remainder of bars in opposite end.
12'-3½"
9'-6½"
13'-2"
6" Typ.
3"
1'-0"
½" P.J.F.
234-#6 a4 bars at 12" cts. Each curb
234'-2½" End to end of curb
#6-b2 over piers
3'-3"
1-#5-b Top of slab
1-#6-b1 over piers
3'-3"
1½"
7'-6"
7'-6"
Construction joints in curb to top of slab (Aluminum sheets)
10'-6"
43'-3¾" (Span 1)
44'-10¾" (Span 4)
73'-0"

HALF PLAN

Note: For placement of d2 & e bars see sheet # 3

34'-0" o. to o. deck
32'-0" face to face of parapet and rail
9"
15'-3"
15'-3"
9"
4'-3"
11'-0"
11'-0"
4'-3"
slope .227 per ft.
1¼" circular crown in 11'-0"
Longitudinal bonded construction joint - Do not edge
Optional - See Special Provisions
Symm. about ℄ Rdwy.
2-#4 d2 at ea. rail post
d
d1
d
e3
b3 or b4
b5 or b6
a
b
b2 or b1
2" Cl.
7½" Slab
1" Cl.
a
a1
a2
3"
3"
9-#5 b bars at 8" cts.
Typical spacing
10"
10"
b9, b10 or b11
b7, b8 or b7
b
b
①
②
③
④
⑤
3'-0"
4 spaces at 7'-0" = 28'-0"
3'-0"

NEAR PIER — NEAR MIDSPAN

CROSS SECTION

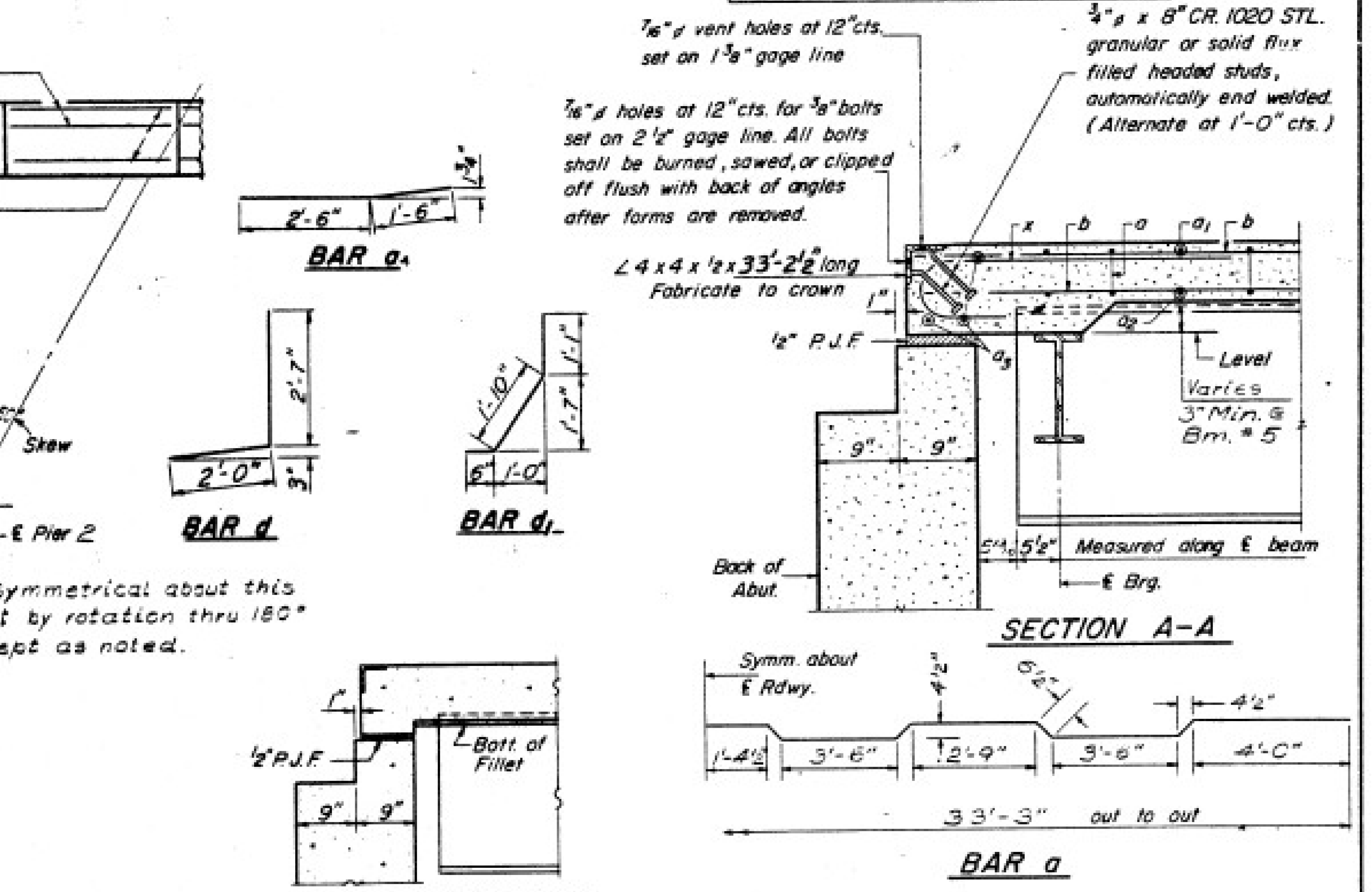
LOOKING NORTH

1½"
1½" P.J.F.
1'-6"
2"
10"
9"

CORNER DETAIL

DESIGNED Lu-ming Chen
CHECKED
DRAWN V.H. D.L. Beemer
CHECKED
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER
Oct. 15 1965

I-5-L (> 14°)



2'-6"
1'-6"
1'-3"
BAR a4
2'-7"
2'-0"
3"
BAR d
1'-10"
1'-7"
1'-1"
6"
1'-0"
BAR d1
1"
½" P.J.F.
Bott. of Fillet
9"
9"
7/16" ø vent holes at 12" cts. set on 1⅜" gage line
7/16" ø holes at 12" cts. for ⅜" 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" ø x 8" CR. 1020 STL. granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts.)
∠4x4x½x33'-2½" long
Fabricate to crown
1"
½" P.J.F.
x
b
a
a1
b
a2
a3
Level
Varies
3" Min. @ Bm. # 5
9"
9"
5¼"
5½"
Measured along ℄ beam
℄ Brg.
Back of Abut.
Symm. about ℄ Rdwy.
4½"
6½"
4'2"
1'-4½"
3'-6"
2'-9"
3'-6"
4'-0"
33'-3" out to out

SECTION AT ABUTMENT
(Between Exterior Bm. & Wing Wall)

SECTION A-A

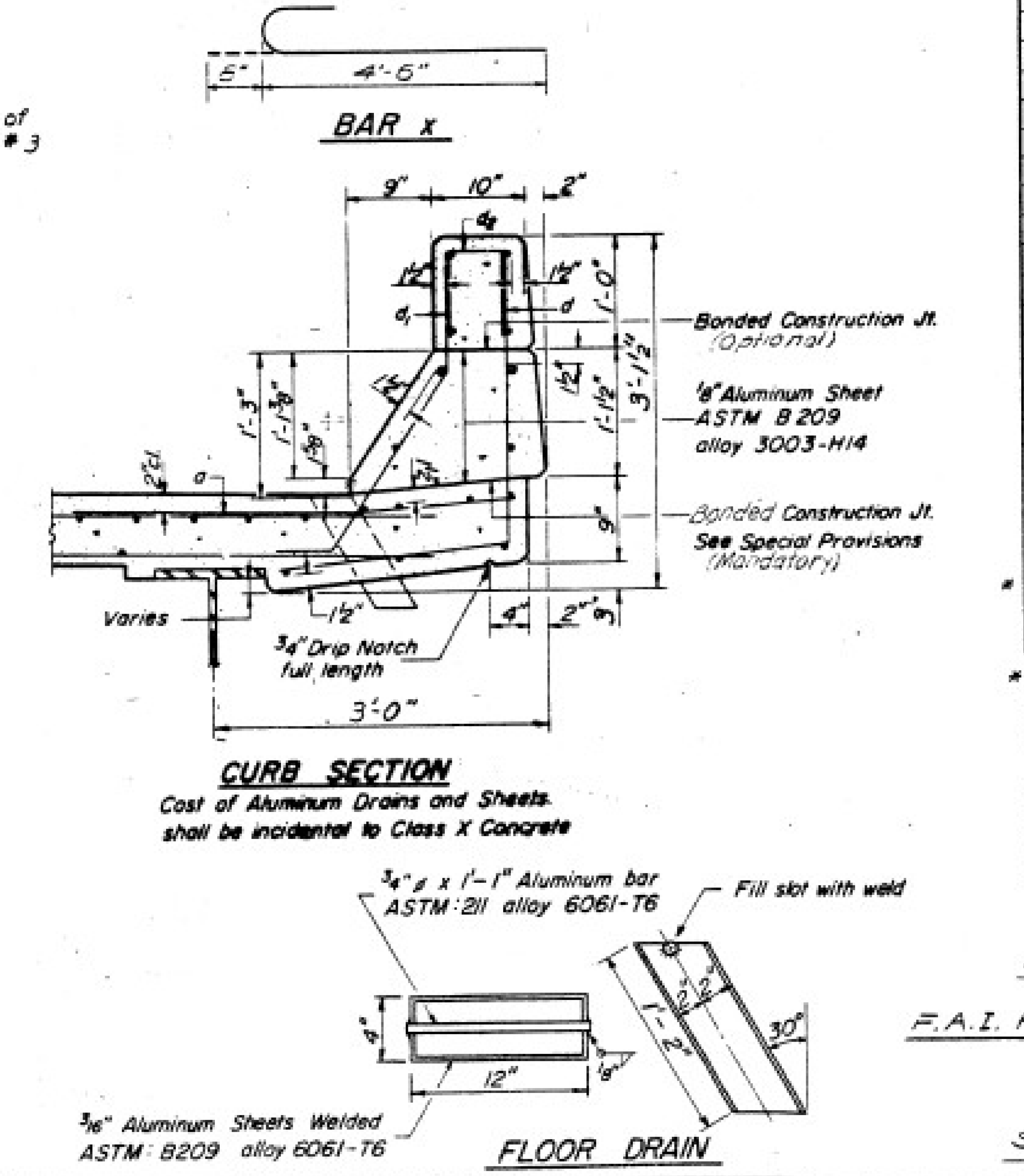
BAR a

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	169	#5	34'-7"	〰
a1	181	#6	33'-3"	—
a2	181	#5	32'-0"	—
a3	6	#5	33'-0"	—
a4	468	#6	4'-0"	—
b	684	#5	27'-3"	—
b1	35	#6	25'-4"	—
b2	70	#6	21'-0"	—
b3	8	#5	18'-3"	—
b4	8	#5	19'-3"	—
b5	16	#5	9'-2"	—
b6	16	#6	7'-2"	—
b7	16	#5	27'-11"	—
b8	8	#5	10'-5"	—
b9	8	#8	16'-5"	—
d	470	#4	4'-7"	—
d1	470	#5	3'-5"	—
b10	8	#8	19'-6"	—
x	60	#6	5'-2"	⊂
b11	16	#8	28'-3"	—
*b12	8	#8	10'-2"	—
* Structural Steel			Lbs.	210,730
Class X Concrete			Cu. Yd.	228.0
Reinforcement Bars			Lbs.	59,820

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel.
Est. Wt. = 7870 #

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet # 3



5"
4'-6"
BAR x
9"
10"
2"
d2
1½"
d
d1
1'-0"
1'-3"
1'-1⅜"
5⅜"
3'-1½"
1'-1½"
2" Cl.
a
9"
Bonded Construction Jt. (Optional)
⅛" Aluminum Sheet ASTM B 209 alloy 3003-H14
Bonded Construction Jt. See Special Provisions (Mandatory)
Varies
1½"
4"
2"
3"
¾" Drip Notch full length
3'-0"
¾" ø x 1'-1" Aluminum bar ASTM: 211 alloy 6061-T6
Fill slot with weld
4"
12"
1'-2"
1½"
30°
3/16" Aluminum Sheets Welded ASTM: B209 alloy 6061-T6

CURB SECTION

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

FLOOR DRAIN

SUPERSTRUCTURE
F.A.I. Rt. 70 - SEC. 12-52 HB-1
CLARK COUNTY
STA. 1545 + 90.7

MODEL: EXISTING PLANS 32 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0028

SCALE: SHEET 5 OF 6 SHEETS STA. TO STA.

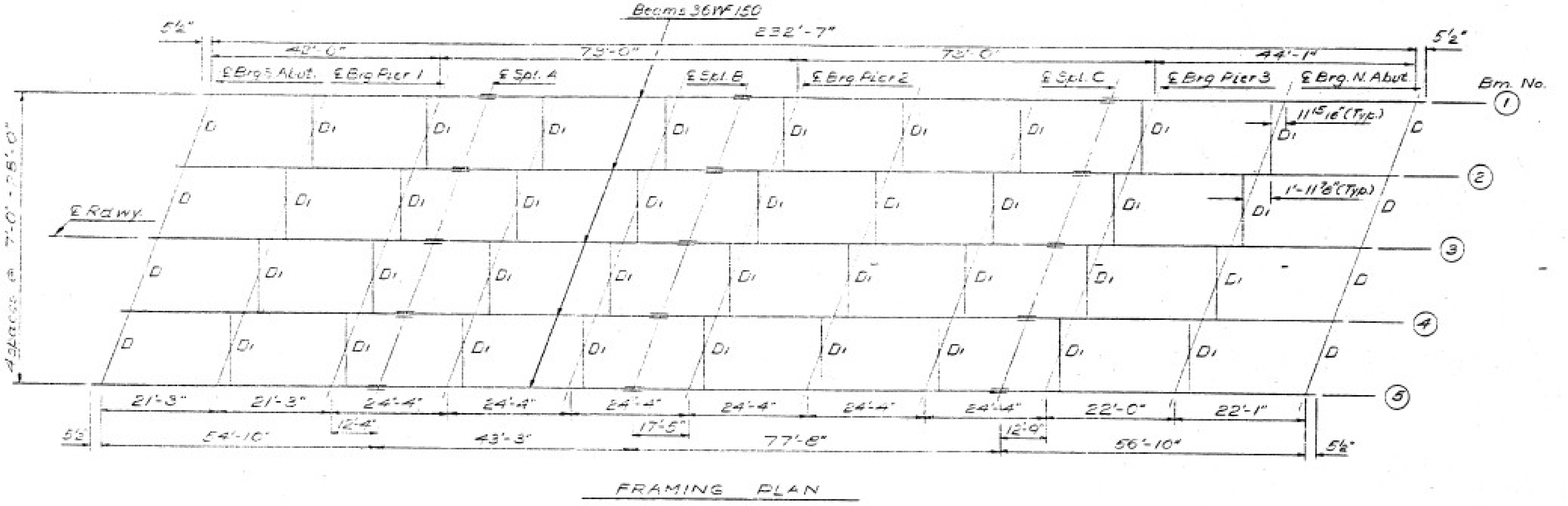
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	17
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT
I-70
CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-52 HB-1	CLARK	41	16

SHEET No. 6
10 SHEETS



FRAMING PLAN

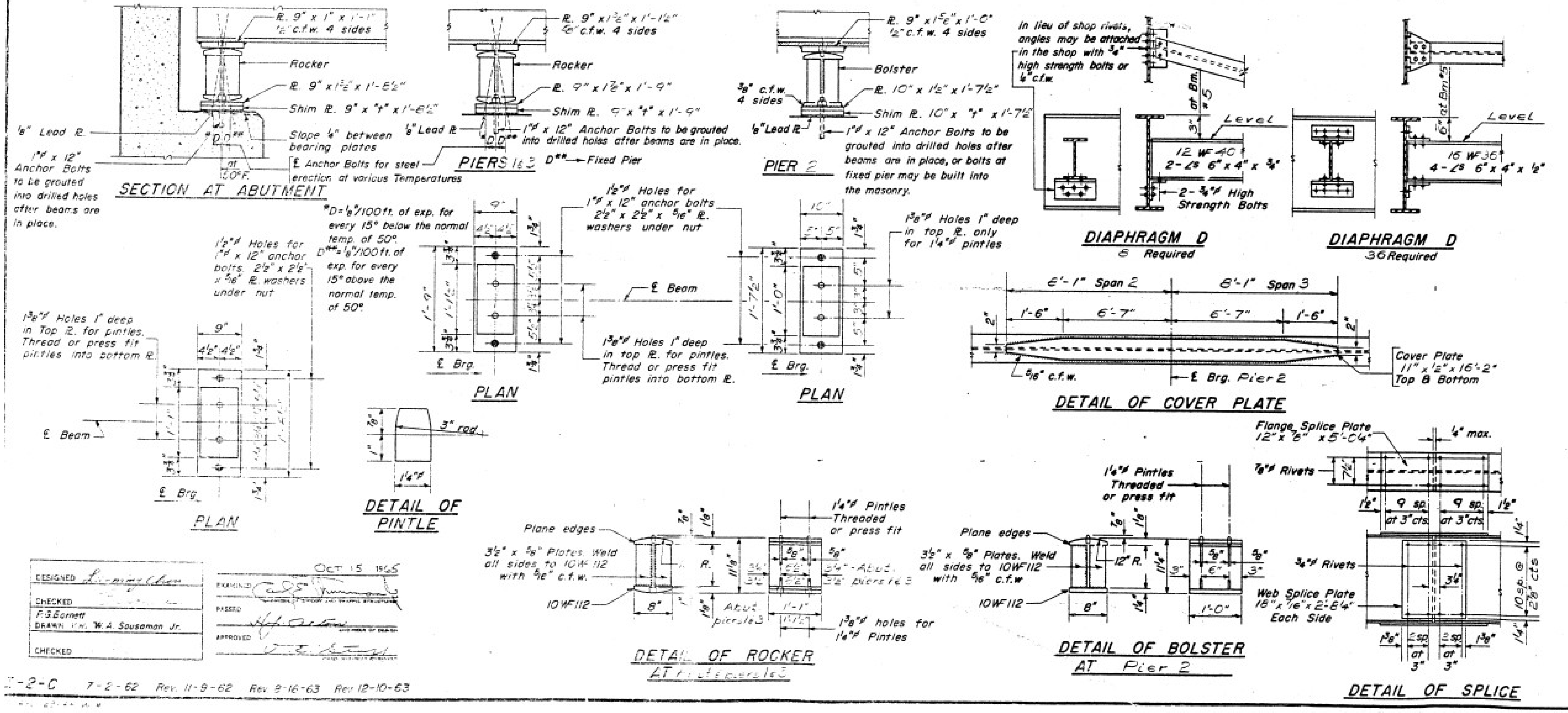
*ELEVATION TOP OF WF

Loc. / Bm.	℄ Brg. S. Abut.	℄ Brg. Pier 1	℄ Splice A	℄ Splice B	℄ Brg. Pier 2	℄ Splice C	℄ Brg. Pier 3	℄ Brg. N. Abut.
5	618.107	618.393	618.476	618.726	618.761	618.973	618.993	619.061
4	618.236	618.522	618.605	618.855	618.910	619.102	619.122	619.190
3	618.288	618.574	618.657	618.907	618.962	619.154	619.174	619.242
2	618.255	618.541	618.624	618.874	618.929	619.121	619.141	619.209
1	618.146	618.432	618.515	618.765	618.820	619.012	619.032	619.100

*1 Corrected Elevations are 0.042' lower

THICKNESS OF SHIM PLATE

Bm. No.	1	2	3	4	5
All Locations	½"	¼"	11/16"	0	0


℞. 9" x 1" x 1'-1"
½" c.f.w. 4 sides
Rocker
℞. 9" x 1½" x 1'-6½"
Shim ℞. 9" x "t" x 1'-6½"
⅛" Lead ℞.
Slope ¼" between bearing plates
1"⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
*D.D**
at 120°F.
℄ Anchor Bolts for steel erection at various Temperatures
SECTION AT ABUTMENT
℞. 9" x 1½" x 1'-1½"
⅝" c.f.w. 4 sides
Rocker
℞. 9" x 1½" x 1'-9"
Shim ℞. 9" x "t" x 1'-9"
⅛" Lead ℞.
1"⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
PIERS 1 & 3
D** → Fixed Pier
℞. 9" x 1⅝" x 1'-0"
½" c.f.w. 4 sides
Bolster
⅜" c.f.w. 4 sides
℞. 10" x 1½" x 1'-7½"
Shim ℞. 10" x "t" x 1'-7½"
⅛" Lead ℞.
1"⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.
PIER 2
*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°.
1½"⌀ Holes for 1"⌀ x 12" anchor bolts. 2½" x 2½" x 5/16" ℞. washers under nut
1⅜"⌀ Holes 1" deep in Top ℞. for pintles. Thread or press fit pintles into bottom ℞.
9"
4½" 4½"
℄ Beam
℄ Brg.
PLAN
1½"⌀ Holes for 1"⌀ x 12" anchor bolts 2½" x 2½" x 5/16" ℞. washers under nut
1⅜"⌀ Holes 1" deep in top ℞. for pintles. Thread or press fit pintles into bottom ℞.
1'-9"
1'-1½"
℄ Beam
℄ Brg.
PLAN
10"
5" 5"
1⅜"⌀ Holes 1" deep in top ℞. only for 1¼"⌀ pintles
1'-7½"
1'-0"
℄ Brg.
PLAN
3" rad.
1¼"⌀
DETAIL OF PINTLE
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w.
10WF112
8"
1'-1"
1¼"⌀ Pintles Threaded or press fit
1⅜" holes for 1¼"⌀ Pintles
3¾" - Abut.
3½" piers 1 & 3
DETAIL OF ROCKER
AT Abut. & piers 1 & 3
In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
3" at Bm. #5
Level
12 WF 40
2-∠s 6" x 4" x ⅜"
2-¾"⌀ High Strength Bolts
DIAPHRAGM D
8 Required
6" at Bm. #5
Level
16 WF 36
4-∠s 6" x 4" x ½"
DIAPHRAGM D
36 Required
8'-1" Span 2
8'-1" Span 3
1'-6"
6'-7"
6'-7"
1'-6"
2"
5/16" c.f.w.
℄ Brg. Pier 2
Cover Plate 11" x ½" x 16'-2" Top & Bottom
DETAIL OF COVER PLATE
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w
10WF112
1¼"⌀ Pintles Threaded or press fit
12" R.
8"
1'-0"
DETAIL OF BOLSTER
AT Pier 2
Flange Splice Plate 12" x ⅝" x 5'-0¼"
¼" max.
⅞"⌀ Rivets
1½"
9 sp. at 3" cts.
9 sp. at 3" cts.
1½"
¾"⌀ Rivets
Web Splice Plate 15" x 7/16" x 2'-8¼" Each Side
10 sp. @ 2⅞" cts.
1⅜"
2 sp. at 3"
DETAIL OF SPLICE

DESIGNED [illegible]
CHECKED
F.G. Barnett
DRAWN V.H. W.A. Sausaman Jr.
CHECKED
OCT 15 1965
EXAMINED
PASSED
APPROVED

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

STRUCTURAL STEEL

F.A.I. Rt. 70 - SEC. 12-52 HB-1

CLARK COUNTY
STA. 1545+90.7

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0028

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	18
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT
I-70
CLARK

MODEL: EXISTING PLANS 33 [Sheet]
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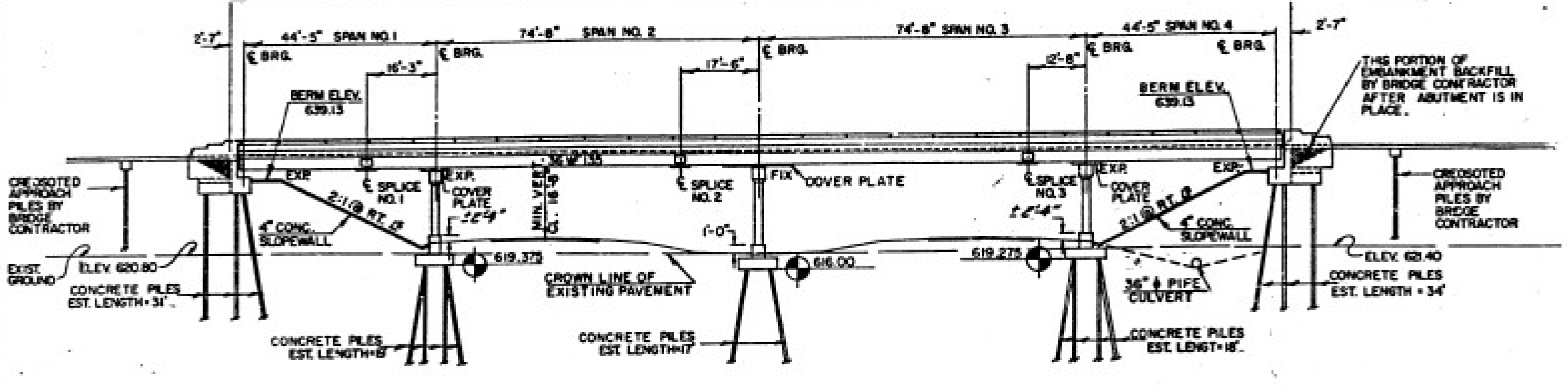
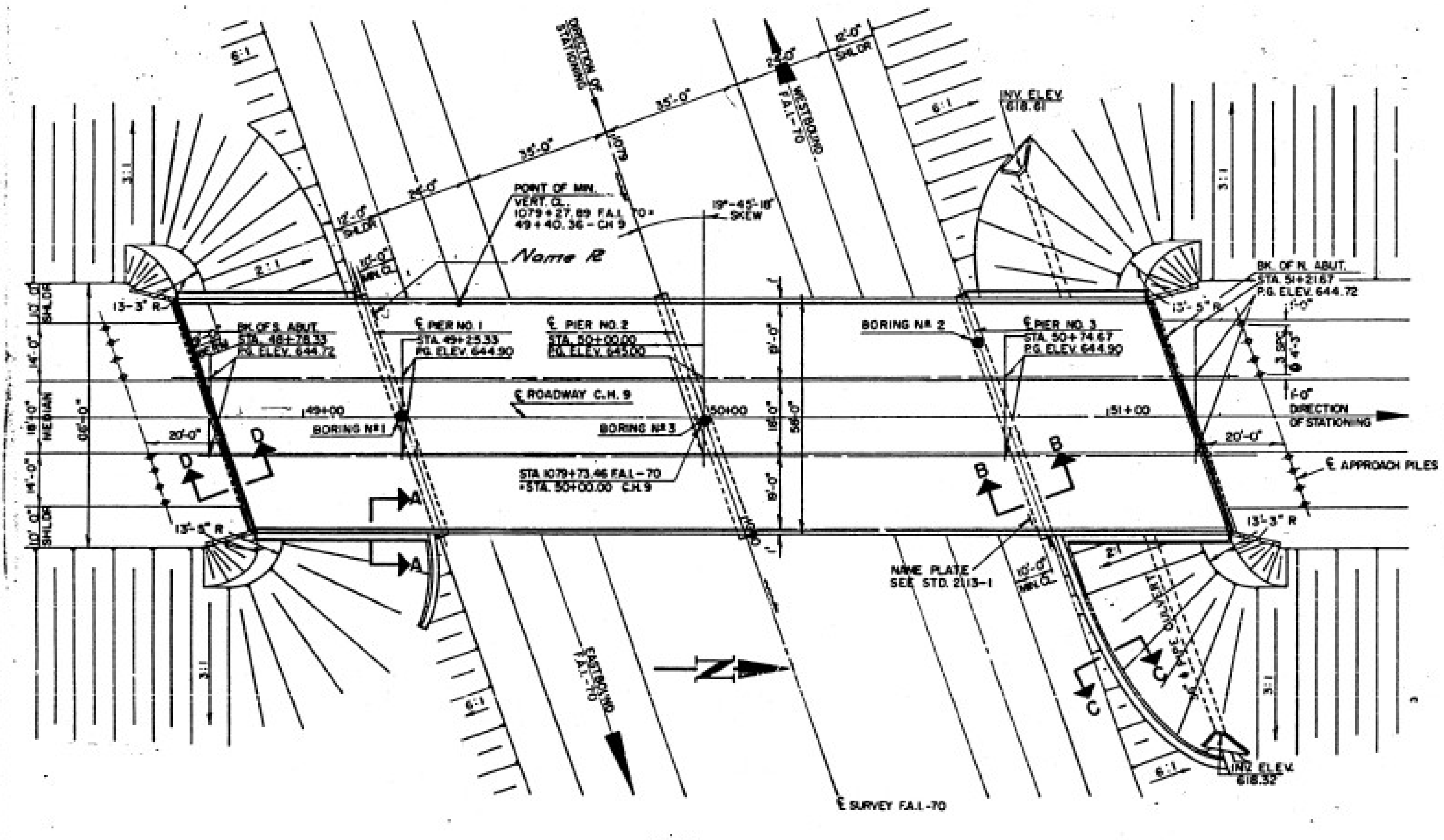
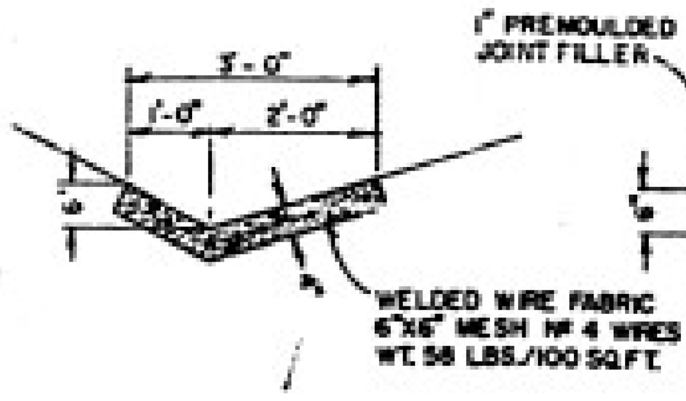

243'-4" BACK TO BACK OF ABUTMENTS
2'-7"
44'-5" SPAN NO. 1
74'-8" SPAN NO. 2
74'-8" SPAN NO. 3
44'-5" SPAN NO. 4
2'-7"
℄ BRG.
16'-3"
17'-6"
12'-8"
BERM ELEV. 639.13
THIS PORTION OF EMBANKMENT BACKFILL BY BRIDGE CONTRACTOR AFTER ABUTMENT IS IN PLACE.
CREOSOTED APPROACH PILES BY BRIDGE CONTRACTOR
EXP.
℄ SPLICE NO. 1
EXP. COVER PLATE
FIX
COVER PLATE
℄ SPLICE NO. 2
℄ SPLICE NO. 3
2:1 @ RT. ∠
4" CONC. SLOPEWALL
MIN. VERT. CL. 16'-0"
EXIST. GROUND
ELEV. 620.80
CONCRETE PILES EST. LENGTH = 31'
619.375
CROWN LINE OF EXISTING PAVEMENT
616.00
619.275
36" ∅ PIPE CULVERT
ELEV. 621.40
CONCRETE PILES EST. LENGTH = 34'
CONCRETE PILES EST. LENGTH = 8'
CONCRETE PILES EST. LENGTH = 17'
CONCRETE PILES EST. LENGTH = 18'

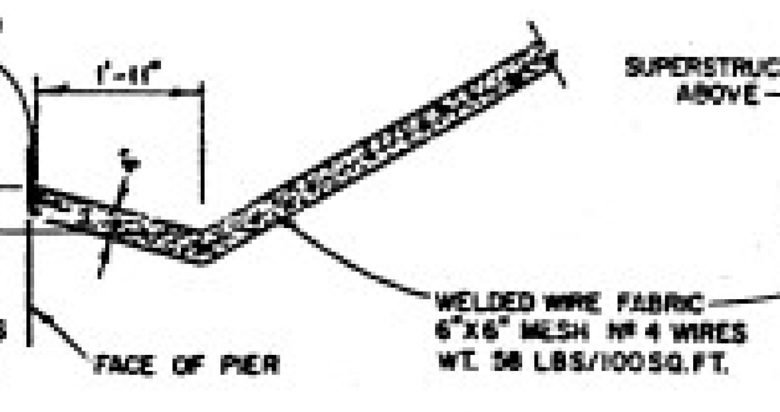
ELEVATION


DIRECTION OF STATIONING
WESTBOUND F.A.I.-70
EASTBOUND F.A.I.-70
12'-0" SHLDR.
35'-0"
24'-0"
INV. ELEV. 618.61
POINT OF MIN. VERT. CL. 1079+27.89 F.A.I. 70 = 49+40.36 - CH 9
19°-45'-18" SKEW
Name P.
6:1
3:1
2:1
13'-3" R
BK. OF S. ABUT. STA. 48+78.33 P.G. ELEV. 644.72
℄ PIER NO. 1 STA. 49+25.33 P.G. ELEV. 644.90
℄ PIER NO. 2 STA. 50+00.00 P.G. ELEV. 645.00
BORING Nº 2
℄ PIER NO. 3 STA. 50+74.67 P.G. ELEV. 644.90
BK. OF N. ABUT. STA. 51+21.67 P.G. ELEV. 644.72
℄ ROADWAY C.H. 9
149+00
150+00
151+00
BORING Nº 1
BORING Nº 3
DIRECTION OF STATIONING
℄ APPROACH PILES
STA. 1079+73.46 F.A.I.-70 = STA. 50+00.00 C.H. 9
NAME PLATE SEE STD. 2113-1
20'-0"
SHLDR.
MEDIAN
INV. ELEV. 618.32
℄ SURVEY F.A.I.-70
N

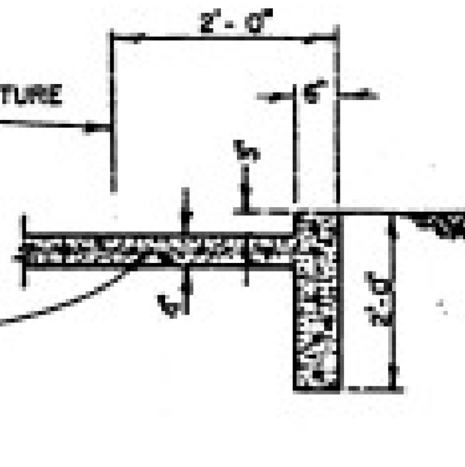
PLAN


3'-0"
1'-0"
2'-0"
WELDED WIRE FABRIC 6"X6" MESH Nº 4 WIRES WT. 58 LBS./100 SQ.FT.

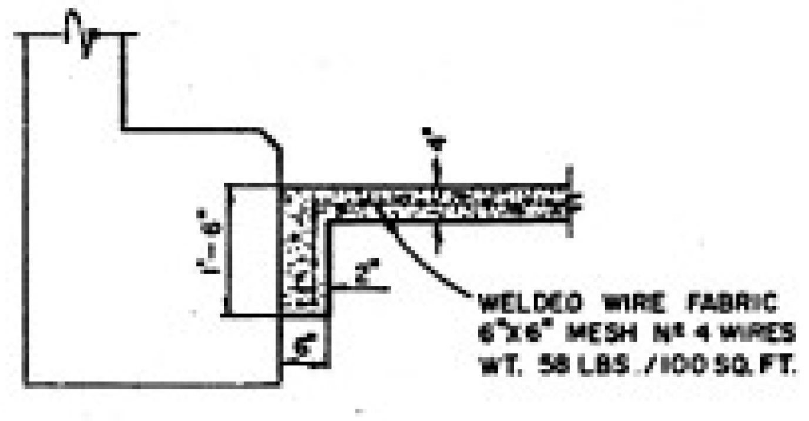
SECTION C-C


1" PREMOULDED JOINT FILLER
1'-11"
SUPERSTRUCTURE ABOVE
FACE OF PIER
WELDED WIRE FABRIC 6"X6" MESH Nº 4 WIRES WT. 58 LBS./100 SQ.FT.

SECTION B-B



SECTION A-A


1'-6"
2"
WELDED WIRE FABRIC 6"X6" MESH Nº 4 WIRES WT. 58 LBS./100 SQ.FT.

SECTION D-D

Rev. Class X Conc. Super 424.3 to 410.3, Sub 337.7 to 343.3 Total 758.9 to 753.6 cu. yds. Reinf. Bars Super 112,240 to 114,930, Sub 39,860 to 41,380, Total 152,100 to 156,310 lbs.
Conc. Piles Sub & Total from 1709 to 1627 Lin. Ft. 3-11-68 A.P.H.

Rev. 5-1-68 Re. bars sub - 41,380 to 41,970 Total 156,900 3-11-68

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
EARTH EXCAVATION	INCLUDED IN ROADWAY QUANTITIES			
* CLASS "X" EXCAVATION FOR STRUCTURES	CU. YDS.	——	202.5	202.5
CLASS "X" CONCRETE	CU. YDS.	410.3	343.3	753.6
STRUCTURAL STEEL	LBS.	362,190	——	362,190
ALUMINUM HANDRAIL	LIN. FT.	480	——	480
REINFORCEMENT BARS	LBS.	114,930	41,970	156,900
CRESOTED PILES (UP TO 20')	LIN. FT.	——	320	320
*** CONCRETE PILES	LIN. FT.	——	1627	1627
TEST PILES CONCRETE	EACH	——	3	3
NAME PLATES	EACH	——	2	2
SLOPE WALL (4")	SQ. YDS.	——	730	730
PROTECTIVE COAT	SQ. YDS.	1,640	——	1,640
** BRIDGE SEAT SEALANT	L. S.	——	L.S.	L.S.

* EXCAVATION FOR PORTIONS OF STRUCTURES IN THE EMBANKMENTS SHALL NOT BE CLASSIFIED.
** AT ABUTMENTS ONLY
*** DOES INCLUDE TEST PILES

GENERAL NOTES

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE DECK.

CONCRETE

1. COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND END POST MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE, AND SOFT SANDSTONE.
2. THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.
3. SLOPEWALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH, WEIGHING 58 LBS. PER 100 SQ. FT.
4. ALL REINFORCEMENT BARS SHALL BE LAPPED 20 DIAMETERS UNLESS OTHERWISE SHOWN.

STRUCTURAL STEEL

5. RIVETS 3/4" ∅, OPEN HOLES 13/16" ∅ UNLESS OTHERWISE NOTED.
6. ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER SUPPORTS.
7. ALL BOLSTERS, ROCKERS, BEARING PLATES, LEAD PLATES, PINTLES, AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 51.15 OF THE STANDARD SPECIFICATIONS.
8. THE EXPOSED SURFACES OF THE EXPANSION GUARD SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. THE ANCHOR STUDS SHALL NOT BE PAINTED.
9. EXPANSION GUARDS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 51.13 (D) OF THE STANDARD SPECIFICATIONS.
10. STRUCTURAL STEEL TOTAL POUNDAGE INCLUDES 13,380 LBS. FOR BEARING ASSEMBLIES AND 2,300 LBS. FOR EXPANSION GUARDS.
11. EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF *PAINT* SEE ARTICLE 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS *AND SPECIAL PROVISIONS*

SUBSTRUCTURE

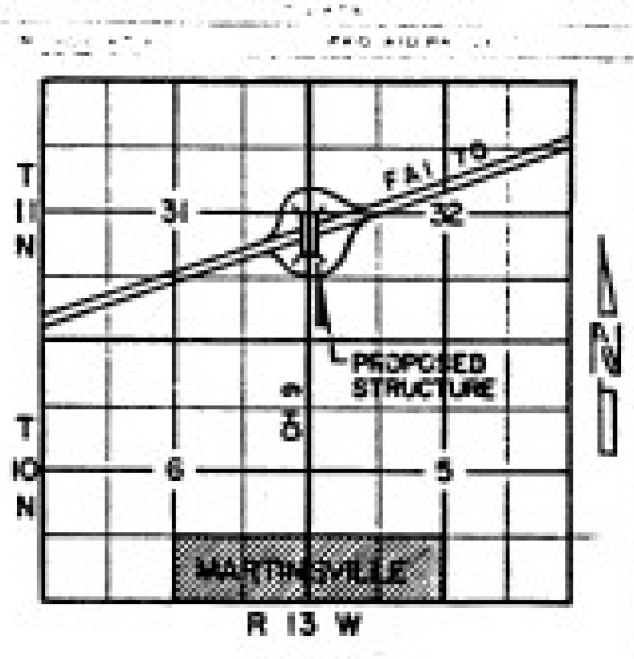
12. THE CONTRACTOR SHALL DRIVE 3 CONCRETE TEST PILES IN PERMANENT LOCATION, ONE AT EACH ABUTMENT AND ONE AT PIER Nº 2 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
13. THE CONTRACTOR SHALL PRECORE APPROACH PILES TO A DEPTH EQUAL TO 75% OF THE LENGTH OF THE PILES AND THEN DRIVE PILES TO PLAN LENGTH OR A MAXIMUM OF 24 TONS BEARING CAPACITY, WHICHEVER IS ACHIEVED FIRST.
14. FOR BRIDGE SEAT SEALANT, SEE SPECIAL PROVISIONS.
15. PILING SHALL BE EITHER PRECAST CONCRETE OR STEEL TAPERED FLUTED (CONCRETE FILLED) SEE STANDARD, SHEET 15 OF 15.

Field welding of construction accessories to the bottom flanges or for a distance of 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.

STATION 1079+73.46
BUILT 196_ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-50HB-1
F.A. PROJECT I-70-4(70)
LOADING HS20

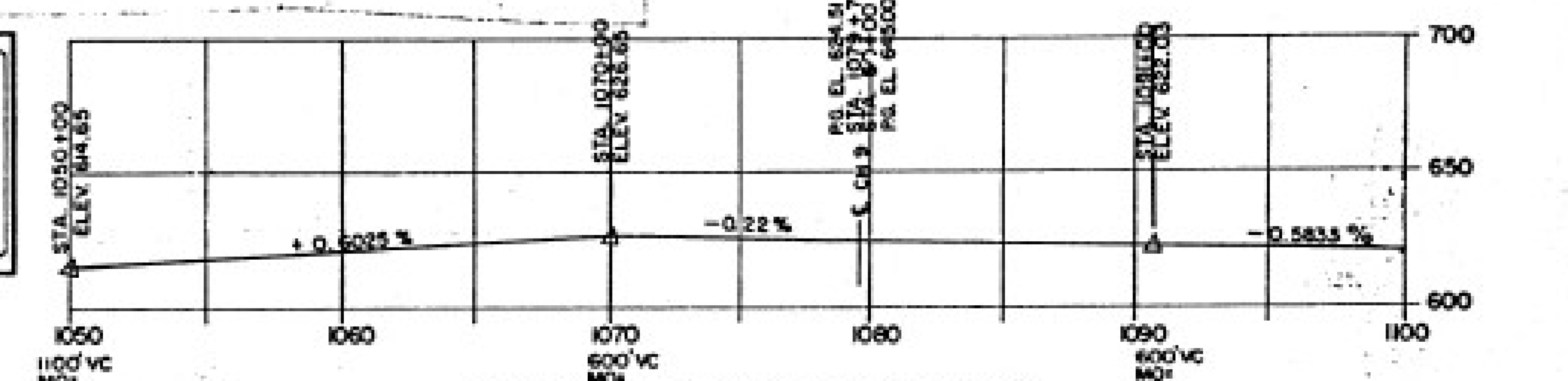
NAME PLATE

SEE STD. 2113-1



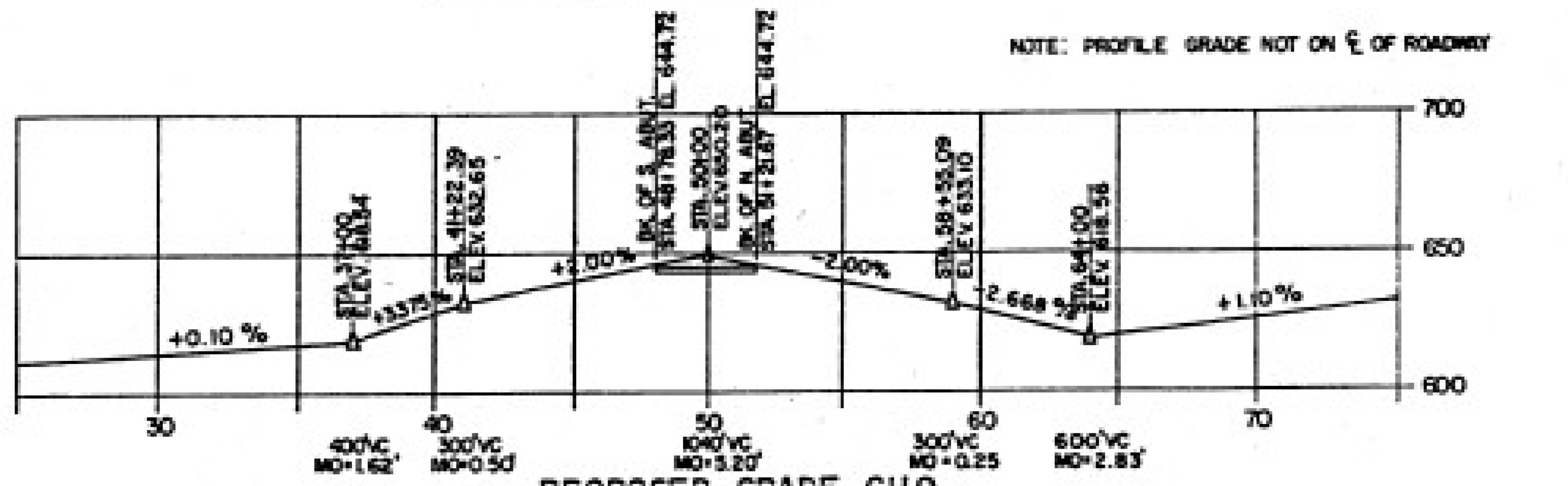
R 13 W

LOCATION SKETCH



PROPOSED GRADE FAI ROUTE 70

NOTE: PROFILE GRADE NOT ON ℄ OF ROADWAY



PROPOSED GRADE CH 9

APPROACH PILES FOR METHOD II

TYPE - CREOSOTED TIMBER
REQUIRED LENGTH
SOUTH ABUTMENT 20
NORTH ABUTMENT 20
Nº REQUIRED EACH ABUTMENT 8
LIN. FT. 320
REFER TO GENERAL NOTES

DESIGN STRESSES

f_c = 1400 P.S.I. (SUPER & SUBSTRUCTURE)
f_s = 20,000 P.S.I. (REINF.)
f_s = 20,000 P.S.I. (STRUCTURAL) A-36
v_c = 75 P.S.I. (FOOTINGS)
n = 10
LOADING HS-20-44 PLUS 18 lbs./sq.ft. WEARING SURFACE
ALLOWABLE LIVE LOAD DEFLECTION: NON-COMPOSITE - L/1000
LIVE LOAD DEFLECTIONS BASED UPON FOUR (4) STRINGERS RESISTING EACH LANE LOAD

REVISIONS	DATE	NAME
CURB CONFIGURATION	1-22-68	JAH
QUANTITIES, SPLICE LOCATIONS, NAME PLATE, PILE	3-8-66	JAH

ROCHESTER AND GOODELL
ENGINEERS INCORPORATED
BOX 371 SALEM, ILLINOIS PH 380

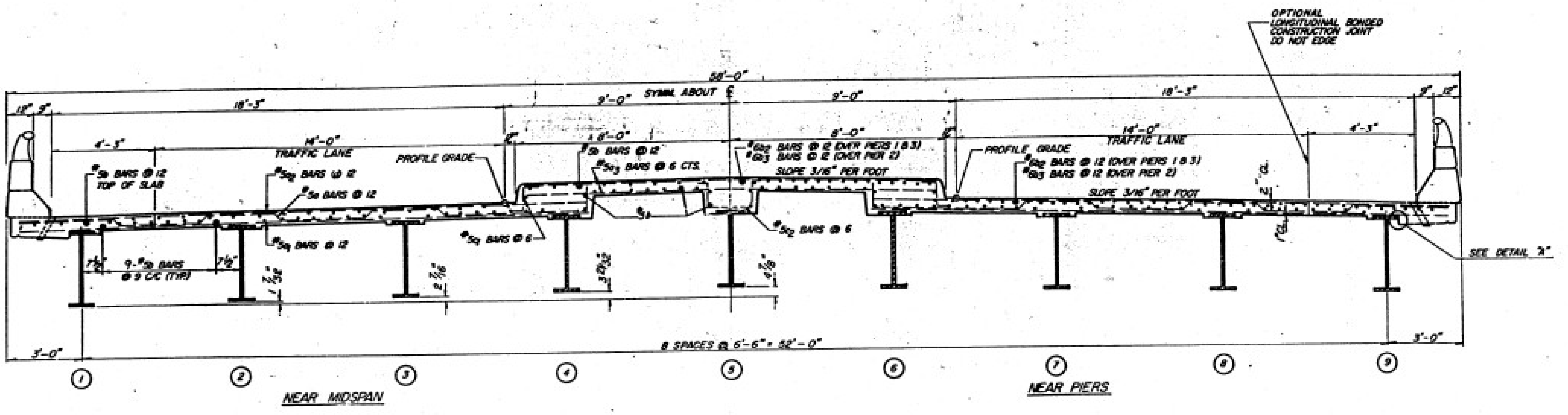
C.H. 9 OVER F.A.I. RTE. 70
GENERAL PLAN AND ELEVATION
PROJECT I-70-4(70)133
F.A.I. ROUTE 70 SECTION 12-50HB-1
CLARK COUNTY, ILLINOIS
STA. 1079+73.46

DESIGNED J.A. HOFSTETTER
DRAWN L. SHALER
CHECKED J.A. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: NONE
DATE FEB. 3, 1966

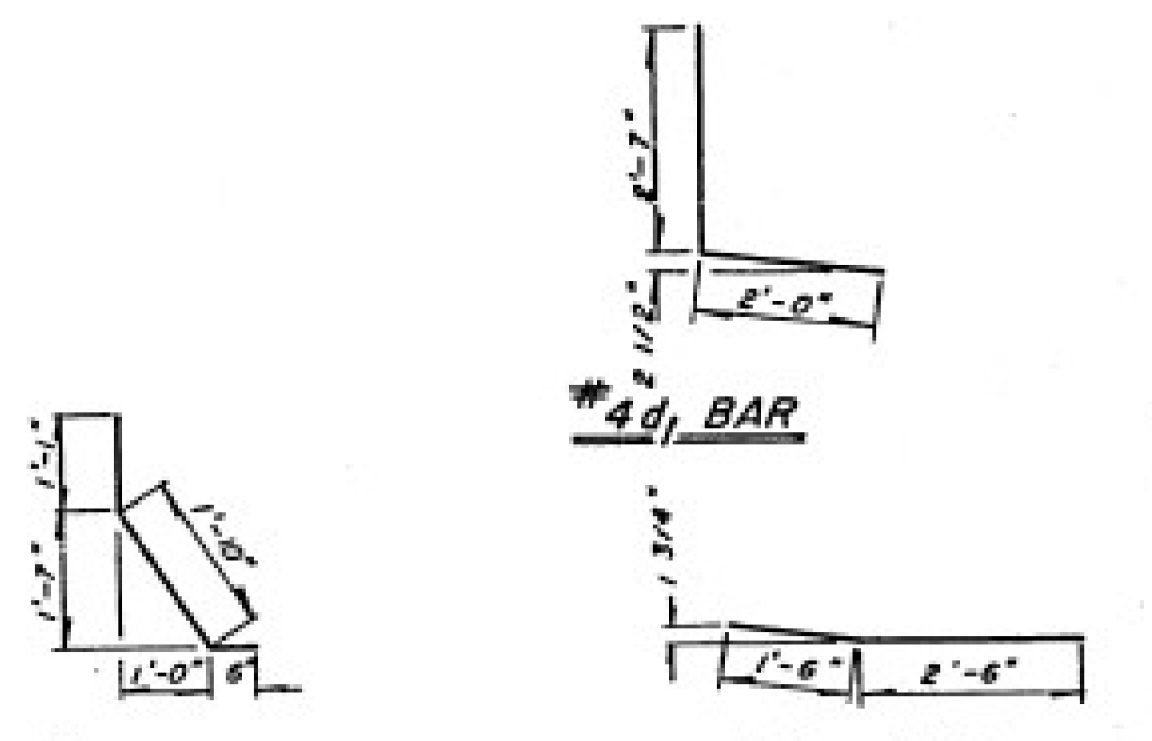
MODEL: EXISTING PLANS-29-2 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

F.A.I 70	12-50 HB-1	CLARK	58	25

SHEET 4 OF 15 SHEETS



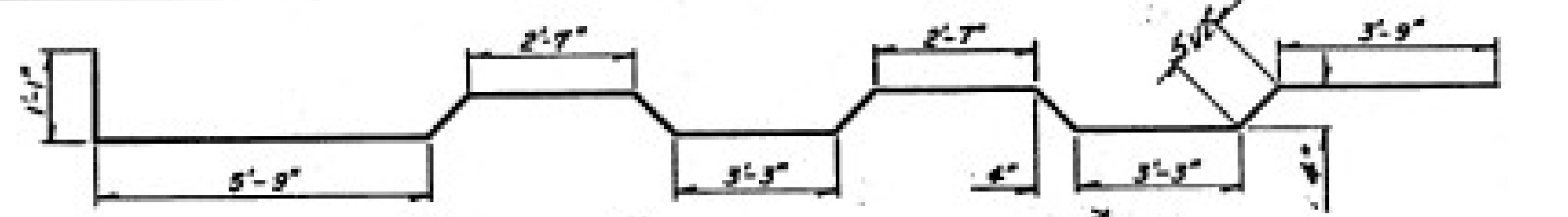
CROSS SECTION



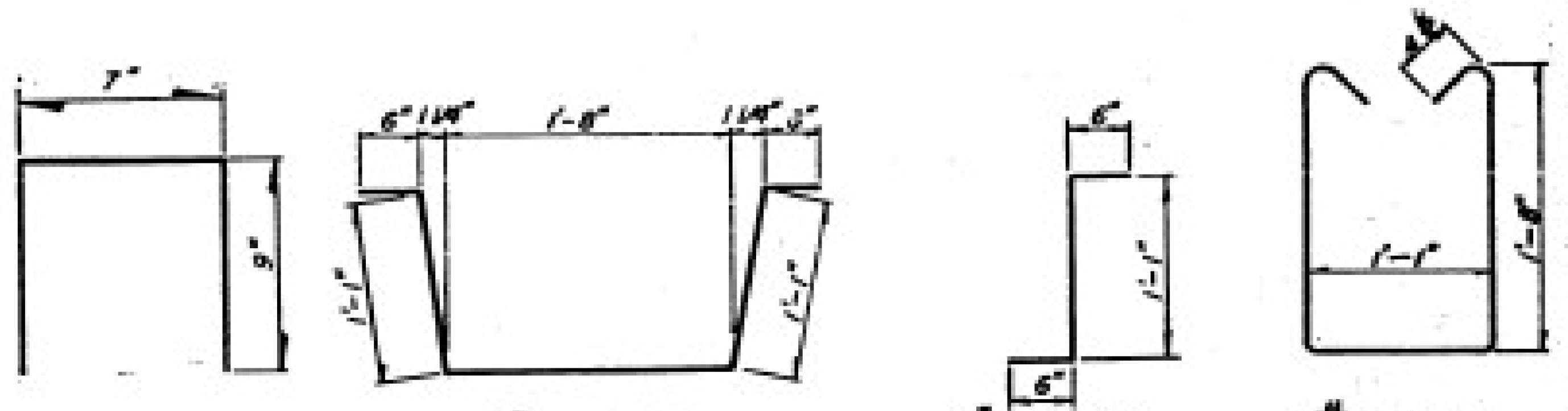
#5d BAR

#4d1 BAR

#6a5 BAR



#5a BAR

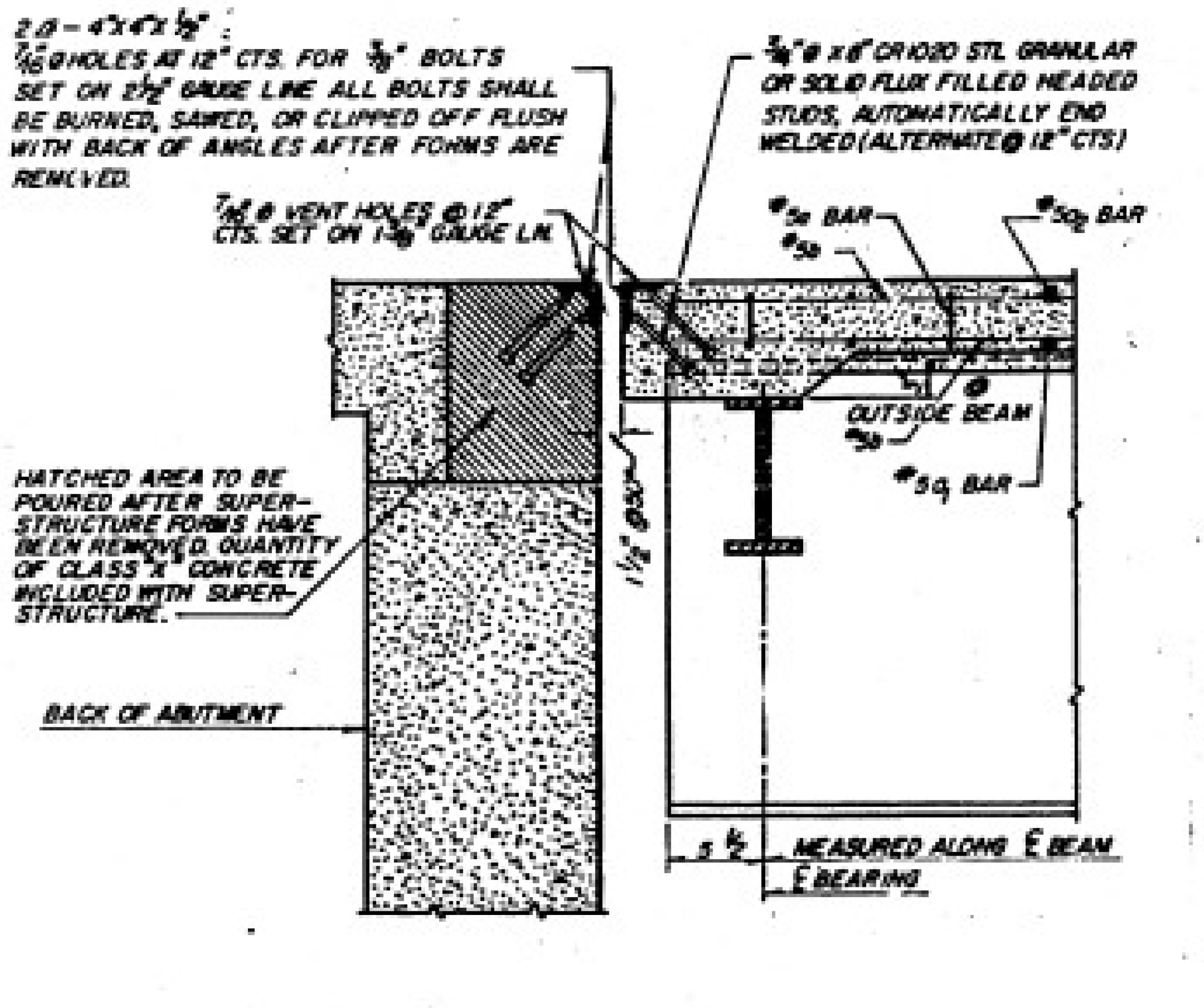


#4d2 BAR

#5c2 BAR

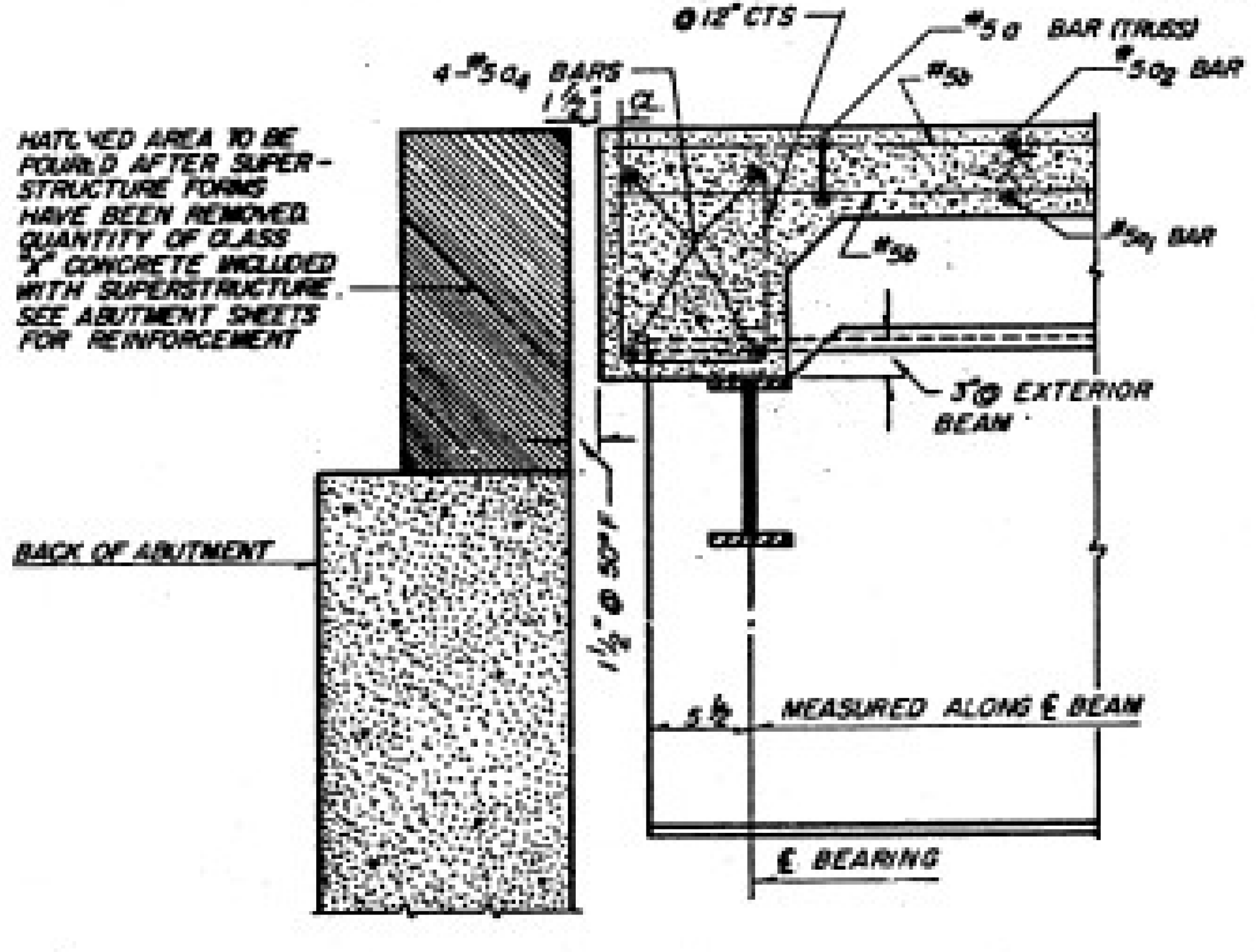
#5c1 BAR

#4s BAR



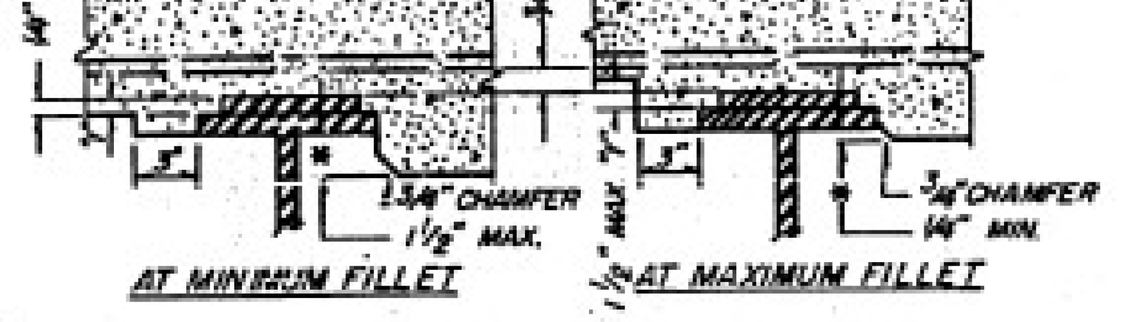
2 ∠ - 4"x4"x½" :
⁷⁄₁₆ Ø HOLES AT 12" CTS. FOR ⅜" BOLTS SET ON 2½" GAUGE LINE ALL BOLTS SHALL BE BURNED, SAWED, OR CLIPPED OFF FLUSH WITH BACK OF ANGLES AFTER FORMS ARE REMOVED.
⅞" Ø VENT HOLES @ 12" CTS. SET ON 1⅜" GAUGE LN.
⅜" Ø x 6" CR1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS, AUTOMATICALLY END WELDED (ALTERNATE @ 12" CTS)
#5a BAR
#5b
#5a2 BAR
OUTSIDE BEAM
#5b
#5a1 BAR
HATCHED AREA TO BE POURED AFTER SUPER-STRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS "X" CONCRETE INCLUDED WITH SUPER-STRUCTURE.
BACK OF ABUTMENT
5½
MEASURED ALONG ℄ BEAM
℄ BEARING

SECTION A-A

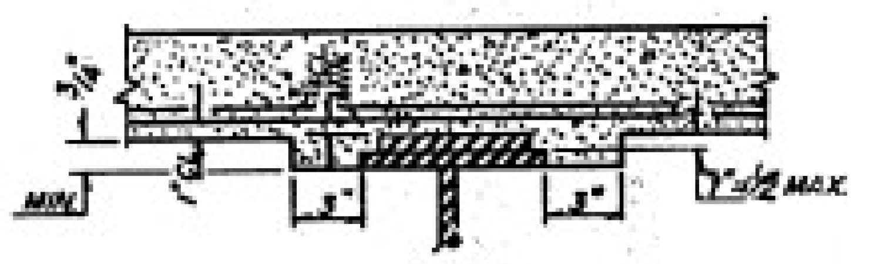


#6a5 BARS @ 12" CTS
4-#5a4 BARS
#5a BAR (TRUSS)
#5a2 BAR
#5b
#5a1 BAR
#5b
HATCHED AREA TO BE POURED AFTER SUPER-STRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS "X" CONCRETE INCLUDED WITH SUPERSTRUCTURE. SEE ABUTMENT SHEETS FOR REINFORCEMENT
3"℄ EXTERIOR BEAM
BACK OF ABUTMENT
1½" Ø 50°F
5½
MEASURED ALONG ℄ BEAM
℄ BEARING

SECTION B-B



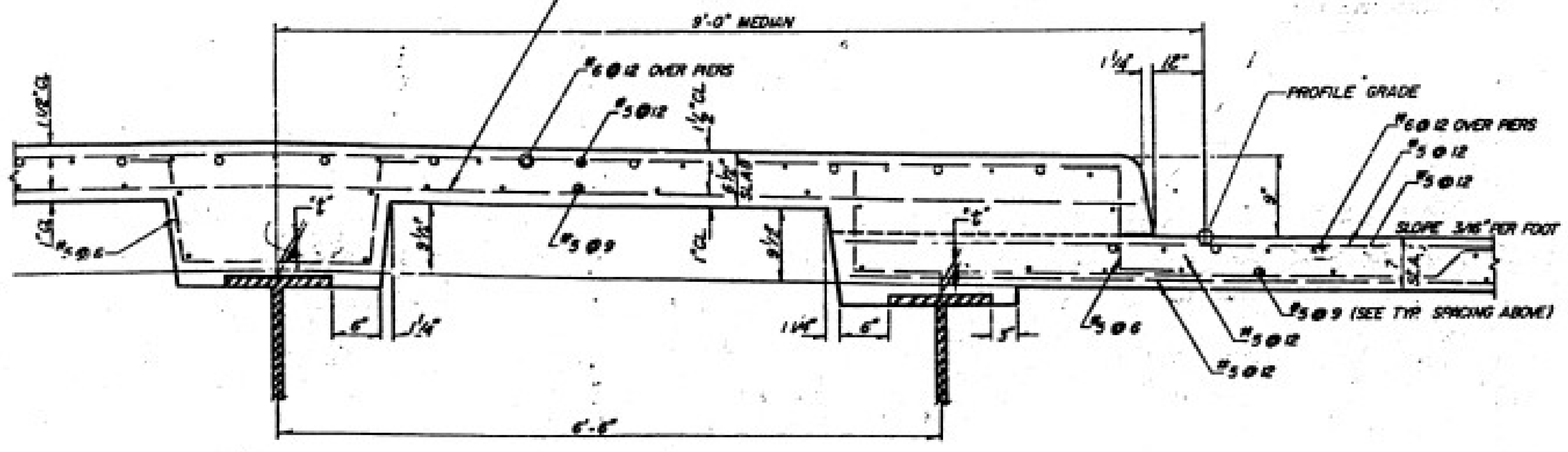
DETAIL "A"



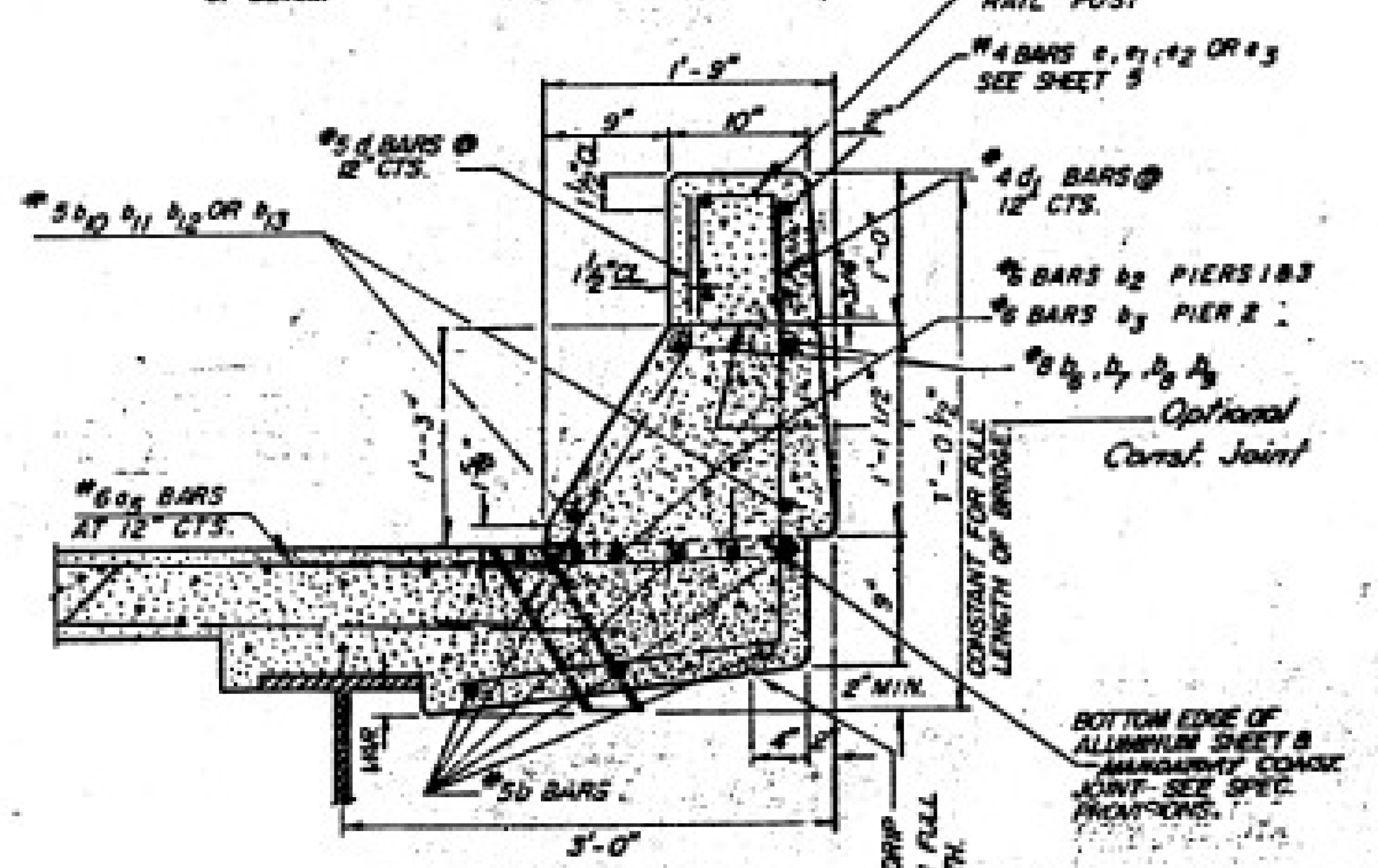
TYPICAL FILLET DETAIL

METHOD OF DETERMINING FILLET HEIGHTS "t"

AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE STATIONS SHOWN ON SHEET 13. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN ON SHEETS 13 & 14, MINUS FLOOR THICKNESS EQUALS THE FILLET HEIGHTS ABOVE TOP OF BEAM.



MEDIAN DETAIL



2 #4d2 BARS AT EACH RAIL POST
#4 BARS e, e1, e2 OR e3 SEE SHEET 5
1'-9"
9"
10"
#5d BARS @ 12" CTS.
#5b10 b11 b12 OR b13
#4d1 BARS @ 12" CTS.
#6 BARS b2 PIERS 1 & 3
#6 BARS b3 PIER 2
#8b6, b7, b8, b9
Optional Const. Joint
#6a5 BARS AT 12" CTS.
1'-0½"
CONSTANT FOR FULL LENGTH OF BRIDGE
2" MIN.
#5b BARS
5'-0"
¾" Ø DRIP NOTCH FULL LENGTH.
BOTTOM EDGE OF ALUMINUM SHEET & WATERPROOF CONST. JOINT - SEE SPEC. PROVISIONS.

CURB DETAIL

BILL OF MATERIALS – SUPERSTRUCTURE

SLAB, MEDIAN, CURB & PARAPET

BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
a	510	5	24'-6"	⊓⊔⊓⊔					
a1	538	5	21'-3"	—	c1	956	5	2'-1"	ʃ
a2	538	5	23'-0"	—	c2	478	5	4'-0"	⌴
a3	956	5	16'-6"	—					
a4	8	5	16'-0"	—	d	478	5	3'-5"	⌵
a5	538	6	4'-0"	—	d1	478	4	4'-7"	—/
					d2	104	4	2'-0"	⊐
					e	32	4	17'-4"	—
b	1015	5	35'-3"	—	e1	32	4	9'-6"	—
					e2	16	4	7'-2"	—
b2	120	6	21'-8"	—	e3	48	4	18'-8"	—
b3	60	6	24'-6"	—	s	38	4	5'-2"	⊔
b6	16	8	18'-6"	—					
b7	16	8	9'-8"	—					
b8	8	8	7'-2"	—					
b9	24	8	20'-0"	—					
b10	16	5	18'-0"	—	CLASS "X" CONCRETE *		CU.YDS.	394.9	
b11	16	5	9'-8"	—	REINF. BARS		LBS.	112,970	
b12	8	5	7'-2"	—	STRUCT. STEEL **		LBS.	362,190	
b13	24	5	19'-9"	—					

* INCLUDES 8.2 CU.YDS. CLASS "X" CONCRETE CAST ON ABUTMENTS
** WEIGHTS OF BEARING ASSEMBLIES WITH LEAD PLATES AND ANCHOR BOLTS (13,380) LBS., AND EXPANSION DEVICES (2,300 LBS) INCLUDED

REVISIONS	DATE	NAME
CURB CONFIGURATION	1-25-68	JAH
MIN. MAX FILLET, FACIA DIM.		
4" JOINT SEALANT	3-6-68	JAH

ROCHESTER, BODDEJ, MOLDOVAN, & STARK
BOX 391 - SALEM, ILLINOIS - PH 350

CH 9 OVER F.A.I. ROUTE 70

SUPERSTRUCTURE SLAB DETAILS

F.A.I. ROUTE 70 SECTION 12-50HB-1
CLARK COUNTY, ILLINOIS
STA. 1079 + 73.46

DESIGNED J. HOFSTETTER
DRAWN L. SHULER
CHECKED J. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: NONE
DATE FEB. 3, 1966

Rev. Class X Conc. changed from 400.0 to 394.8 cu yds. 3-11-68 A.R.H.
Reinf. Bars changed from 110,280 to 112,970#.

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS
SN 012-0029

SCALE: SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	20

CONTRACT NO. 74E48

ILLINOIS FED. AID PROJECT

I-70

CLARK

NOTE:
ALL ELEVATIONS SHOWN ARE AT THE TOP OF THE TOP FLANGE OF BEAM, NOT COVER PLATE.
FOR DIAPHRAGM DETAILS SEE SHEET No. 7

ALL BEAMS 36 WF135
FOR DIAPHRAGMS SEE SHEET No. 7
D IS 12 WF40
D_1 AND D_2 ARE 16 WF36

STRESS TABLE

STRUCTURE SYMMETRICAL ABOUT PIER Nº 2

TABLE OF MOMENTS AND REACTIONS - INTERIOR BEAMS

	MOMENTS (FOOT KIPS)				REACTIONS (KIPS)		
	4 POINT SPANS 1 & 4	PIERS 1 & 3	5 POINT SPANS 2 & 3	PIER 2	ABUT N & S	PIERS 1 & 3	PIER 2
D. L.	91.34	347.33	241.85	483.70	13.12	62.15	74.06
L. L.	206.66	328.06	301.55	385.65	33.22	42.59	51.68
IMP.	60.76	88.56	75.39	96.03	╳	╳	╳
TOTAL	358.76	763.95	618.79	965.37	46.34	104.74	125.74

S. 36 WF 135 — 438.60 + 11 x 1/2 COVER PLATES = 622.16^{3}
I. 36 WF 135 — 7,796.10 + 11 x 1/2 COVER PLATES = 11,370^{4}

℄ MEDIAN & ℄ BRIDGE

SHIM PLATE "t" DIMENSIONS

SOUTH ABUTMENT	BEAM	⑨	NONE
PIER No. 1	BEAM	⑨	1/2" SHIM
PIER No. 2	BEAM		NONE
PIER No. 3	BEAM	①	3/4" SHIM
NORTH ABUTMENT	BEAM	①	NONE

T-LBS = 70#

STRUCTURAL STEEL TOTAL POUNDAGE 362,100 LBS. INCLUDES 13,380 LBS. FOR BEARING ASSEMBLIES, 2,210 LBS. FOR EXPANSION DEVICES.

ROCHESTER, GOODELL, MOLDOVAN, AND SPAN
ENGINEERS INCORPORATED
SALEM, ILLINOIS

C.H. 8 OVER F.A.I. ROUTE 70
STRUCTURAL STEEL DETAILS
SECTION 12-50HB-1
CLARK COUNTY, ILLINOIS
STA. 1079+73.46
SCALE NONE

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0029

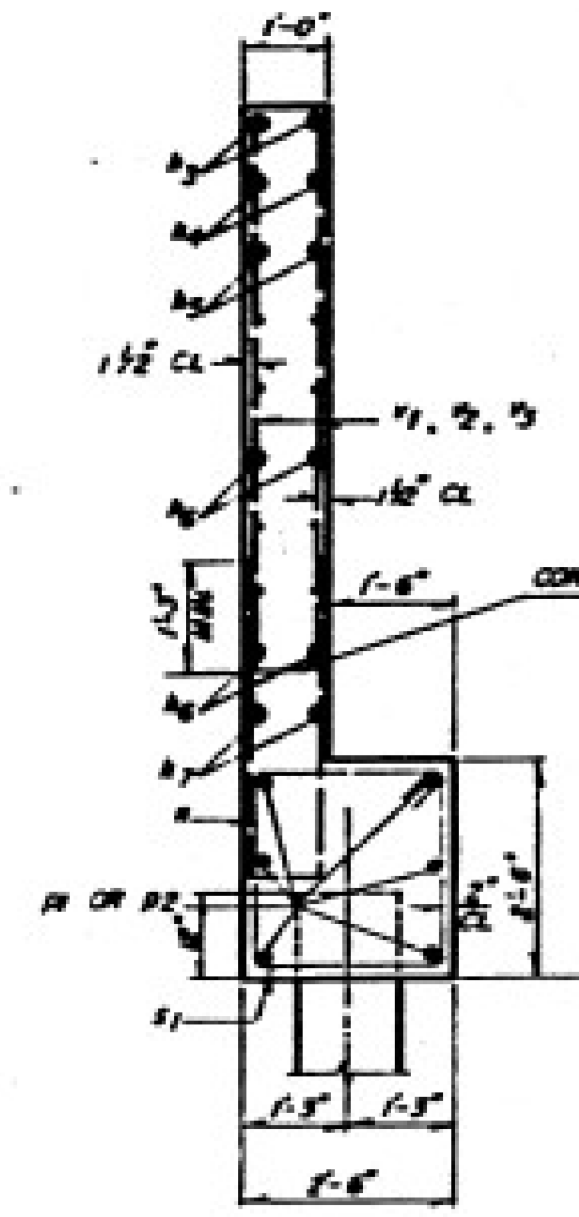
SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	21
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

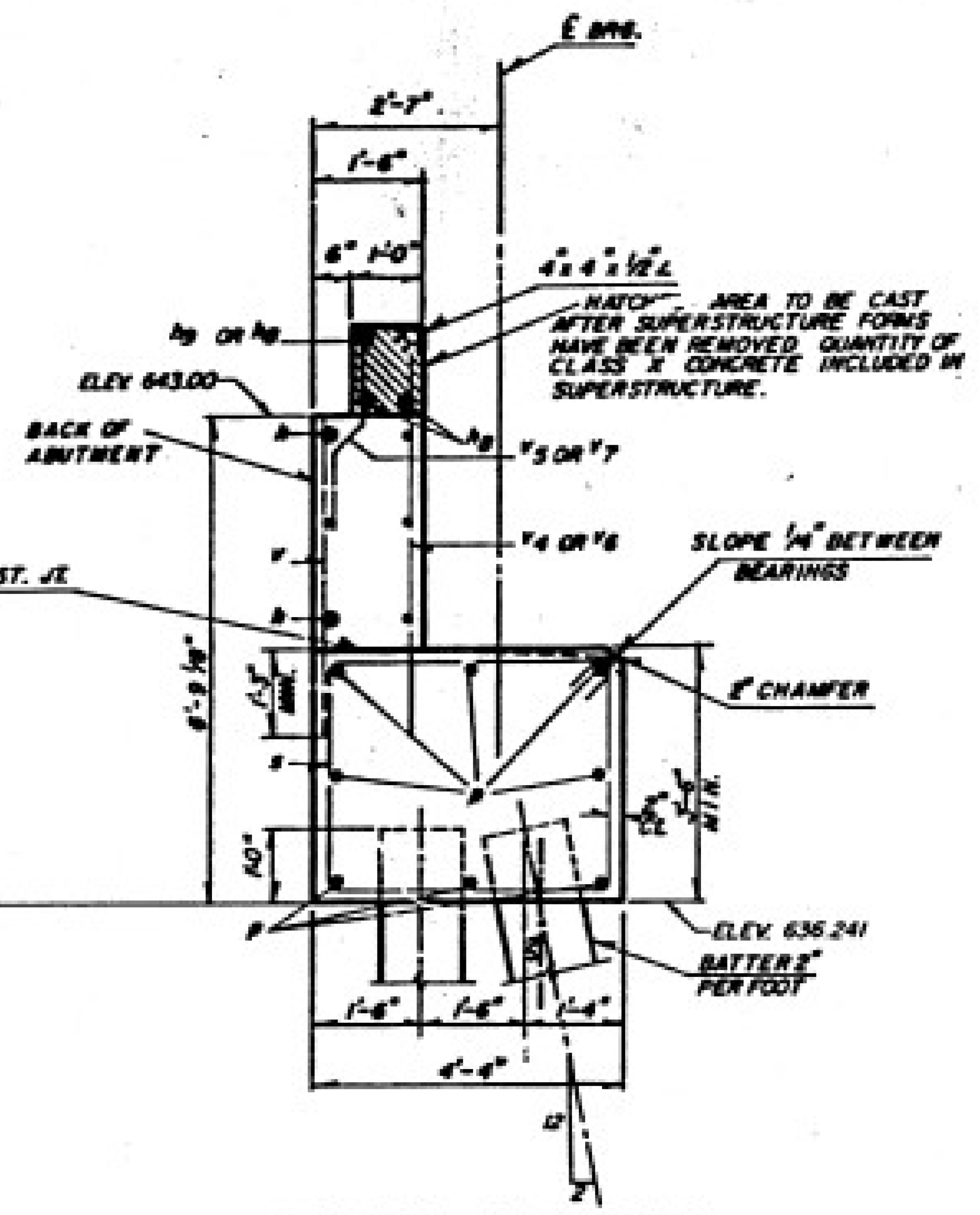
I-70 CLARK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-50 HB-1	CLARK	48	28
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

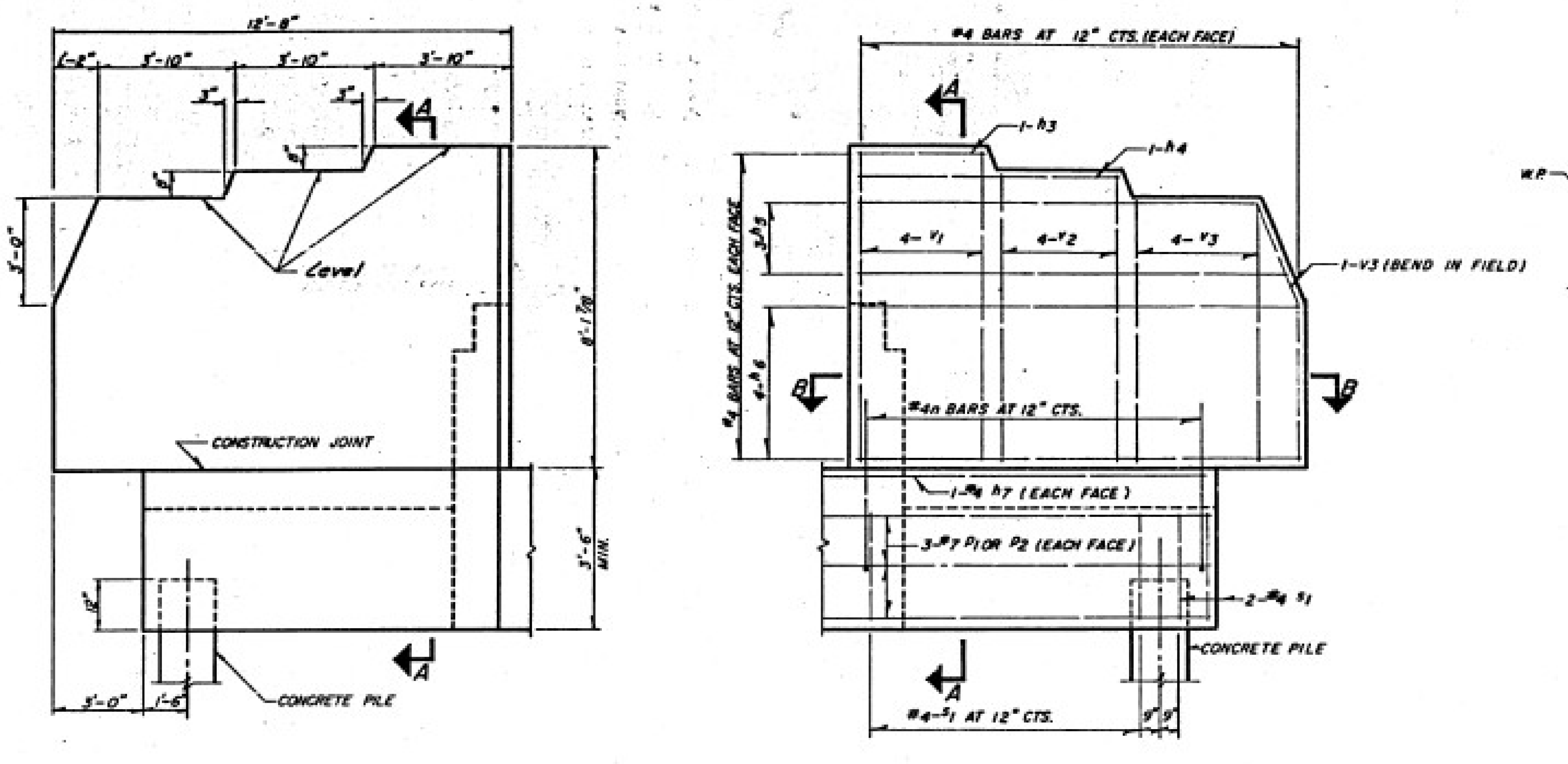
SHEET 7 OF 15 SHEETS



SECTION A-A



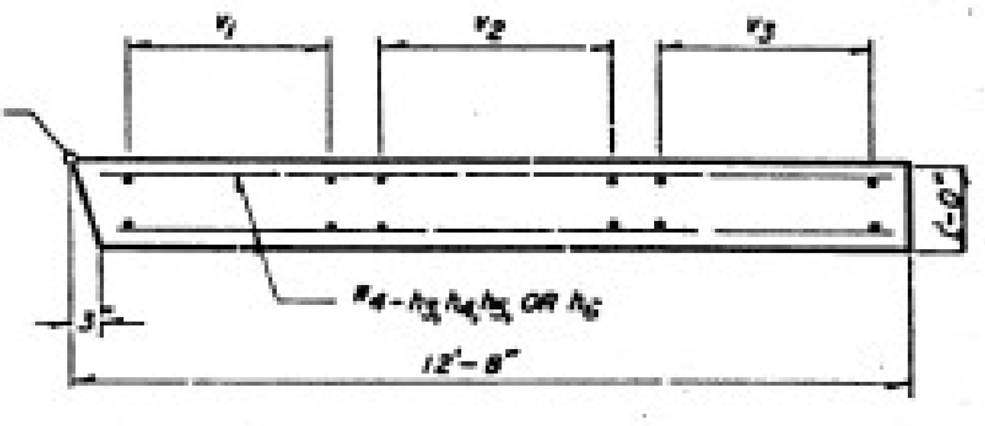
SEC. THRU ABUTMENT



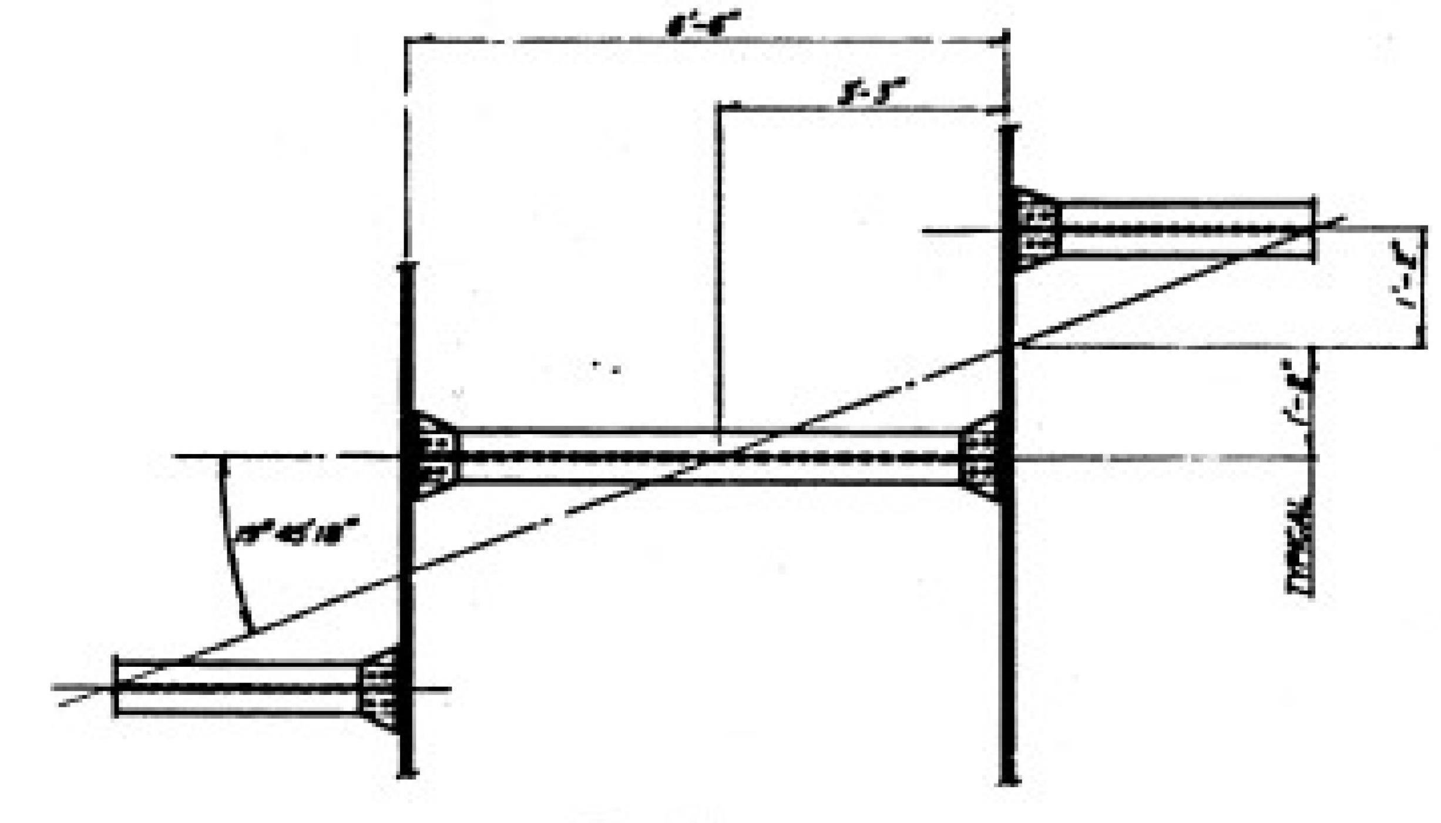
DIMENSIONS

REINFORCEMENT

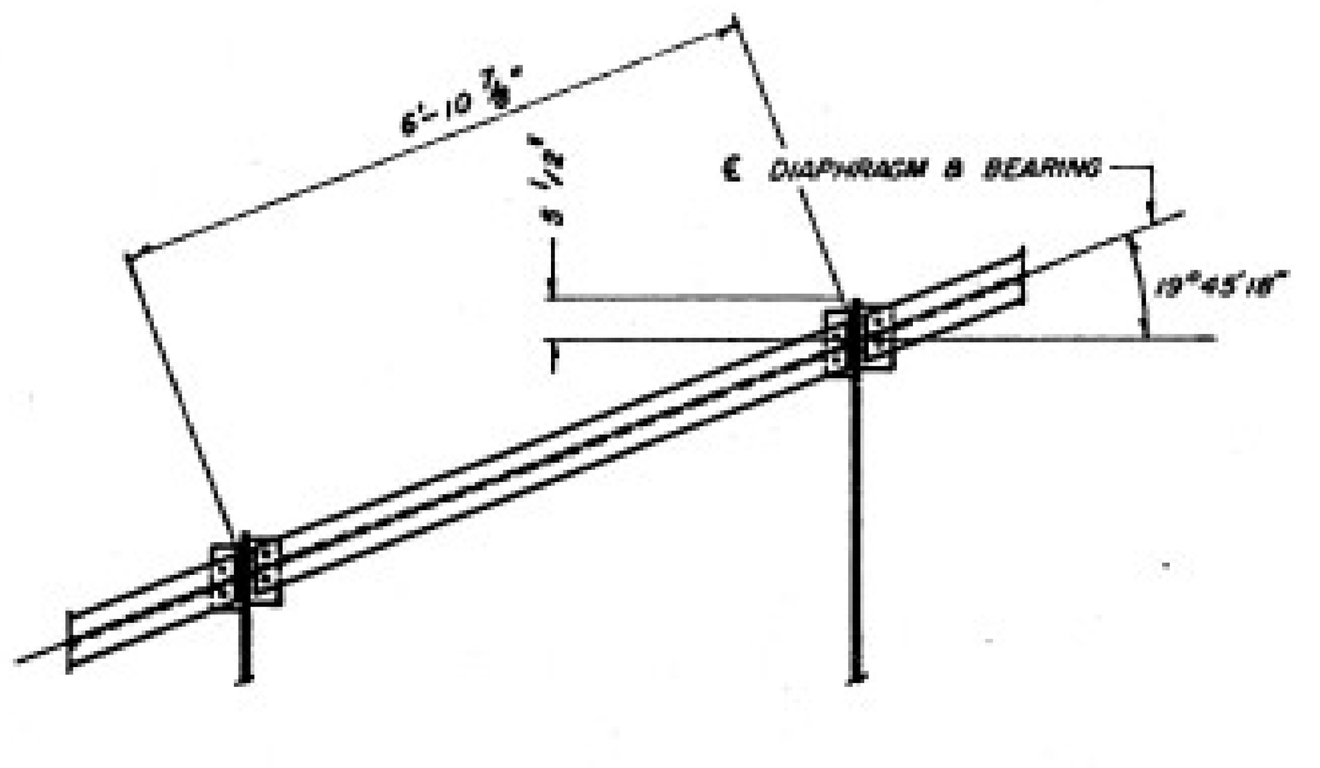
WING WALL ELEVATION



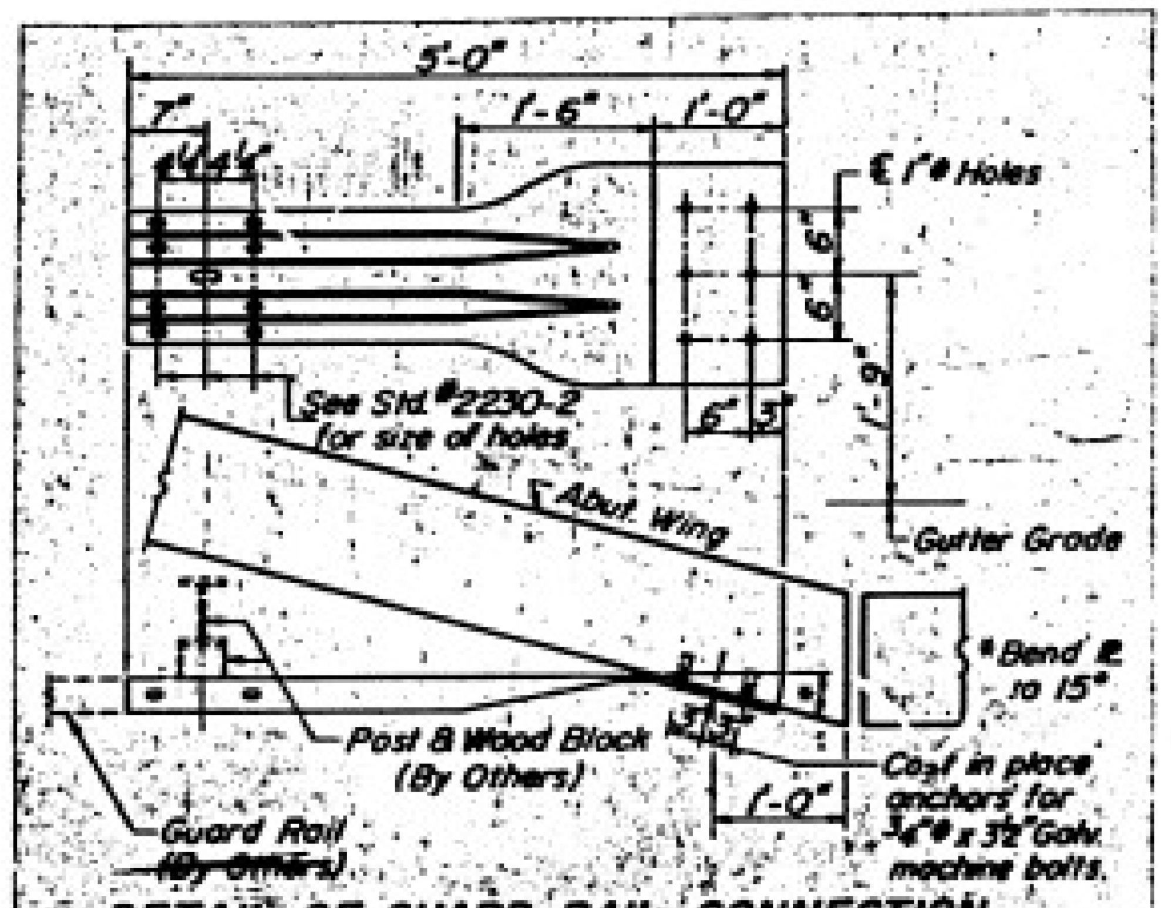
SECTION B-B



PLAN

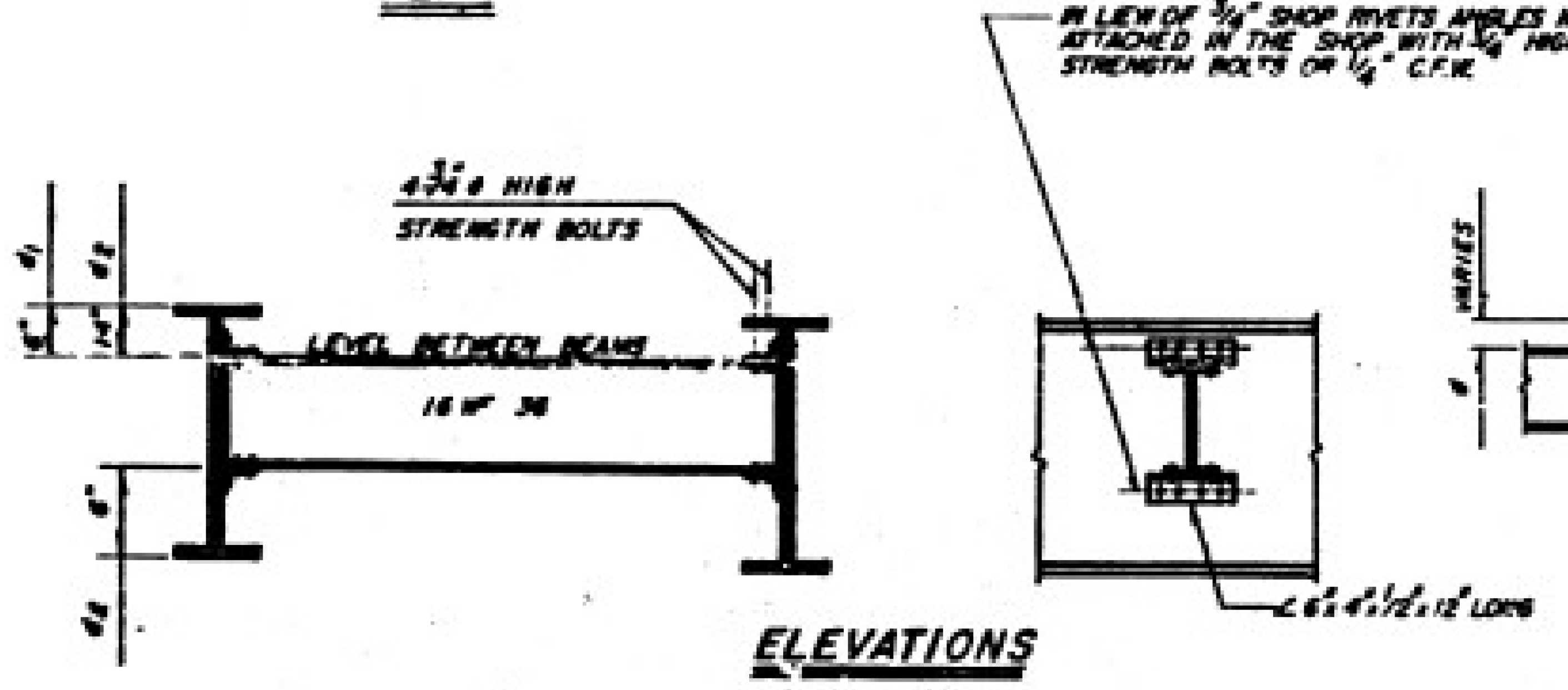


PLAN


5'-0"
7"
4¼ 4¼
1'-6"
1'-0"
℄ 1" ⌀ Holes
6"
6"
1'-9"
See Std. #2230-2 for size of holes
6"
3"
℄ Abut. Wing
Gutter Grade
Bend ℄ to 15°
Post & Wood Block (By Others)
3½
1'-0"
Cast in place anchors for ¾" ⌀ x 3½" Galv. machine bolts.
Guard Rail (By Others)

DETAIL OF GUARD RAIL CONNECTION

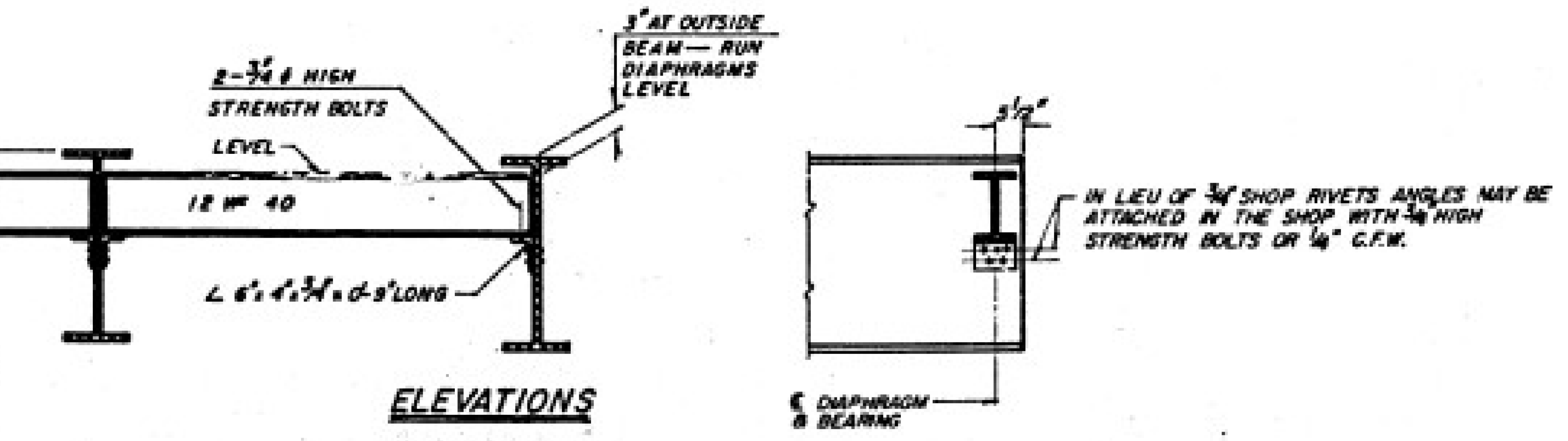
Cost of terminal section, bolts and anchors are incidental to Bridge Contract.


IN LIEU OF ¾" SHOP RIVETS ANGLES MAY BE ATTACHED IN THE SHOP WITH ¾" HIGH STRENGTH BOLTS OR ¼" C.F.W.
4-¾" ⌀ HIGH STRENGTH BOLTS
d1
d2
6"
LEVEL BETWEEN BEAMS
16 W 36
6"
d4
∠6"x4"x½"x12" LONG

ELEVATIONS

DIAPHRAGMS D_1 & D_2

	REQUIRED
8	BEAMS
32	CONNECTORS
2,44	FASTENERS


3" AT OUTSIDE BEAM — RUN DIAPHRAGMS LEVEL
2-¾" ⌀ HIGH STRENGTH BOLTS
LEVEL
VARIES
6"
12 W 40
∠6"x4"x¾"x0-9" LONG
5½"
IN LIEU OF ¾" SHOP RIVETS ANGLES MAY BE ATTACHED IN THE SHOP WITH ¾" HIGH STRENGTH BOLTS OR ¼" C.F.W.
℄ DIAPHRAGM & BEARING

ELEVATIONS

DIAPHRAGM D

	REQUIRED
16	BEAMS
32	CONNECTORS
91	FASTENERS

REVISIONS			
DIAPHRAGM CONN.	3-8-66	J.A.H.	
	DATE	NAME	

ROCHESTER, GOODELL, MOLDOVAN, AND SPAIN
ENGINEERS INCORPORATED
BOX 271 SALEM, ILLINOIS

C.H. 9 OVER F.A.I. RTE. 70
ABUTMENT & DIAPHRAGM DETAILS
F.A.I. ROUTE 70 SECTION 12-50HB-1
CLARK COUNTY, ILLINOIS
STA. 1079+73.46

DESIGNED J.A. HOFSTETTER
DRAWN L. SHULER
CHECKED J.A. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: NONE
DATE FEB. 3, 1966

MODEL: EXISTING PLANS-29-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0029

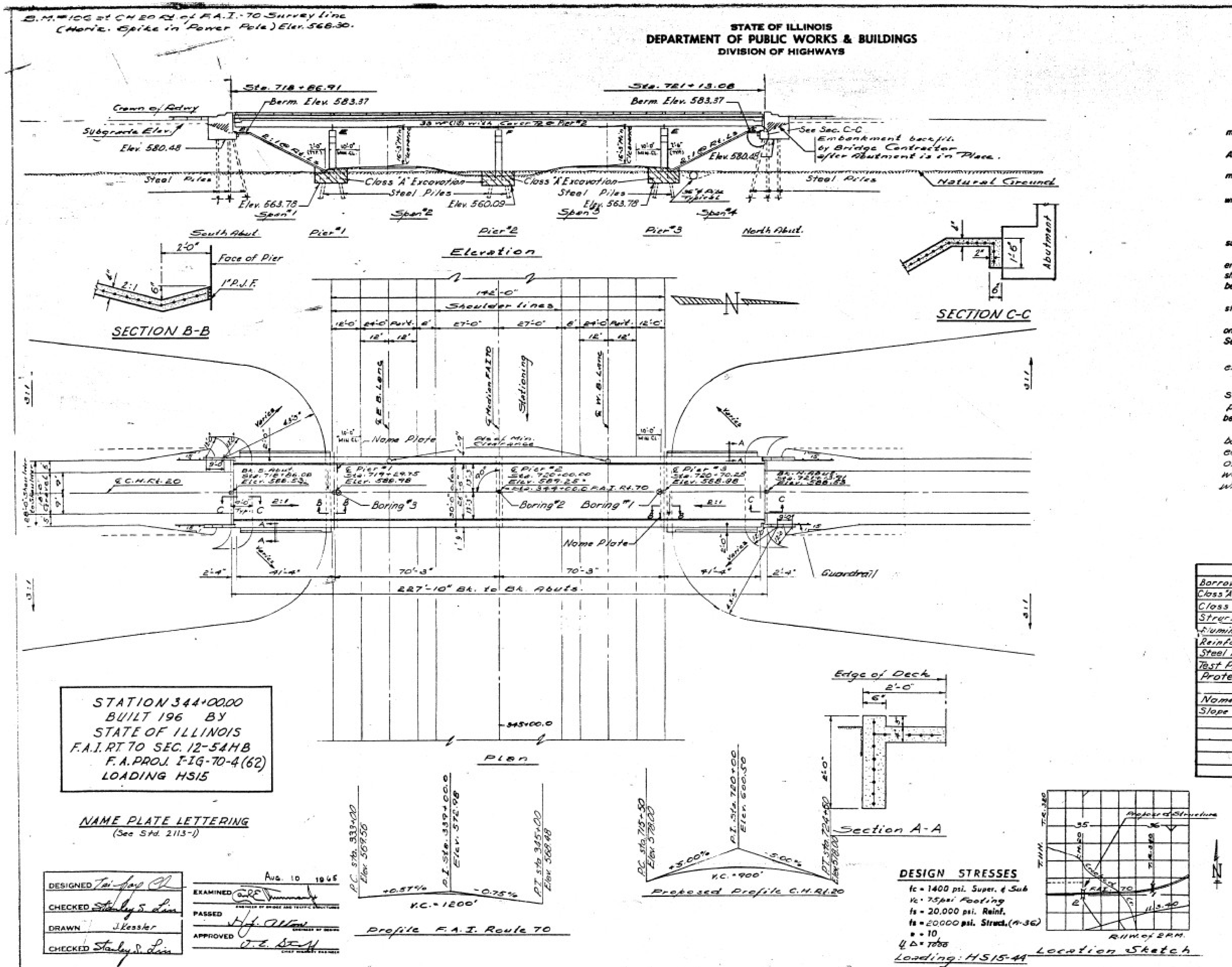
SCALE: SHEET 4 OF 4 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	22
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.I.-70	12-54HB	CLARK	38	13	9 SHEETS
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT I-IG-70-4(62)147			



STATION 344+00.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-54HB
F.A. PROJ. I-IG-70-4(62)
LOADING HS15

NAME PLATE LETTERING
(See Std. 2113-1)

DESIGNED	Tai-Hay Ch
CHECKED	Stanley S. Lin
DRAWN	J. Kessler
CHECKED	Stanley S. Lin

Aug. 10 1965
EXAMINED Carl E. Thunman — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Allen — ENGINEER OF DESIGN
APPROVED J. E. Still — CHIEF HIGHWAY ENGINEER

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
L Δ = 1/1000
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. 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 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, 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 = 740 Lbs.

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

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

The contractor shall drive two steel test piles one at the South Abutment and one at Pier #2, all 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 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.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE DECK.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Borrow Excavation	Cu. Yds.			16140
Class "A" Excavation for Structures	Cu. Yds.		170	170
Class X Concrete	Cu. Yds.	213.8	188.4	402.2
Structural Steel	Lbs.	166,490		166,490
Aluminum Handrail	Lin. Ft.	449		449
Reinforcement Bars	Lbs.	44220	15,760	59980
Steel Piles (8BP36)	Lin. Ft.		1557	1557
Test Piles Steel (8BP36)	Each		2	2
Protective Coat	Sq. Yds.	890		890
Name Plates	Each		2	2
Slope Wall (4")	Sq. Yds.		376	376

GENERAL PLAN & ELEVATION
PROJECT I-IG-70-4(62)147
C.H. RT. 20 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 12-54HB
CLARK COUNTY
STATION 344+00

MODEL: EXISTING PLANS-30-1 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS
SN 012-0030

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

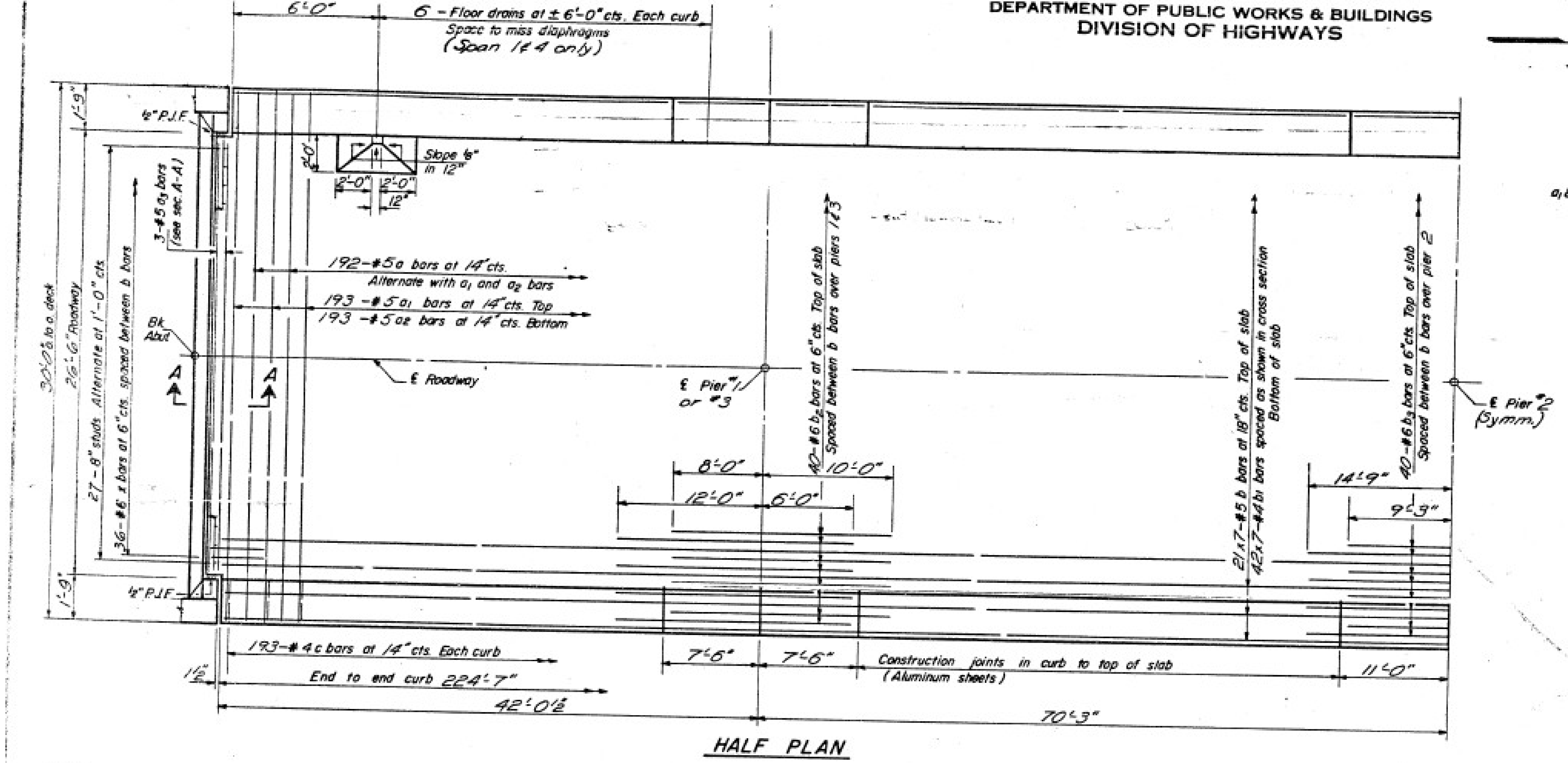
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	23
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-54HB	CLARK	38	15

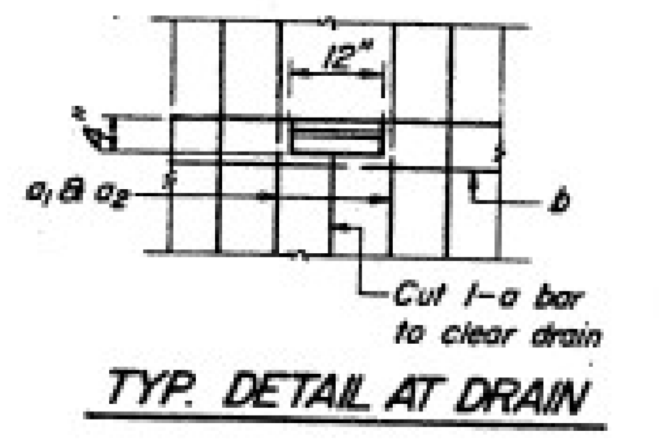
SHEET NO. 3
9 SHEETS



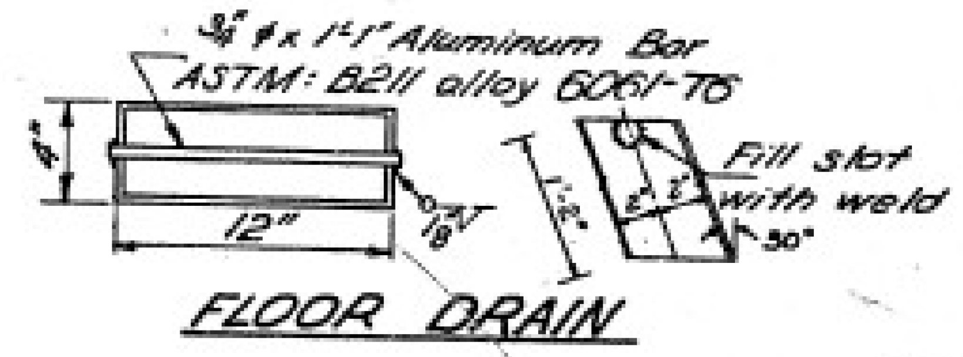
6'-0"
6 - Floor drains at ± 6'-0" cts. Each curb
Space to miss diaphragms
(Span 1 & 4 only)
N
½" P.J.F.
Slope ⅛" in 12"
2'-0" 2'-0" 12"
3-#5 a₃ bars (see sec. A-A)
30'-0" o. to o. deck
26'-6" Roadway
27-8" studs Alternate at 1'-0" cts.
36-#6 x bars at 6" cts. spaced between b bars
Bk. Abut.
A A
192-#5 a bars at 14" cts. Alternate with a₁ and a₂ bars
193-#5 a₁ bars at 14" cts. Top
193-#5 a₂ bars at 14" cts. Bottom
℄ Roadway
℄ Pier #1 or #3
40-#6 b₂ bars at 6" cts. Top of slab Spaced between b bars over piers 1 & 3
21x7-#5 b bars at 18" cts. Top of slab
42x7-#4 b₁ bars spaced as shown in cross section Bottom of slab
40-#6 b₃ bars at 6" cts. Top of slab Spaced between b bars over pier 2
℄ Pier #2 (Symm.)
8'-0" 10'-0" 12'-0" 6'-0" 14'-9" 9'-3"
193-#4 c bars at 14" cts. Each curb
7'-6" 7'-6"
Construction joints in curb to top of slab (Aluminum sheets)
11'-0"
1½"
End to end curb 224'-7"
42'-0½"
70'-3"
1'-9" 1'-9"

HALF PLAN

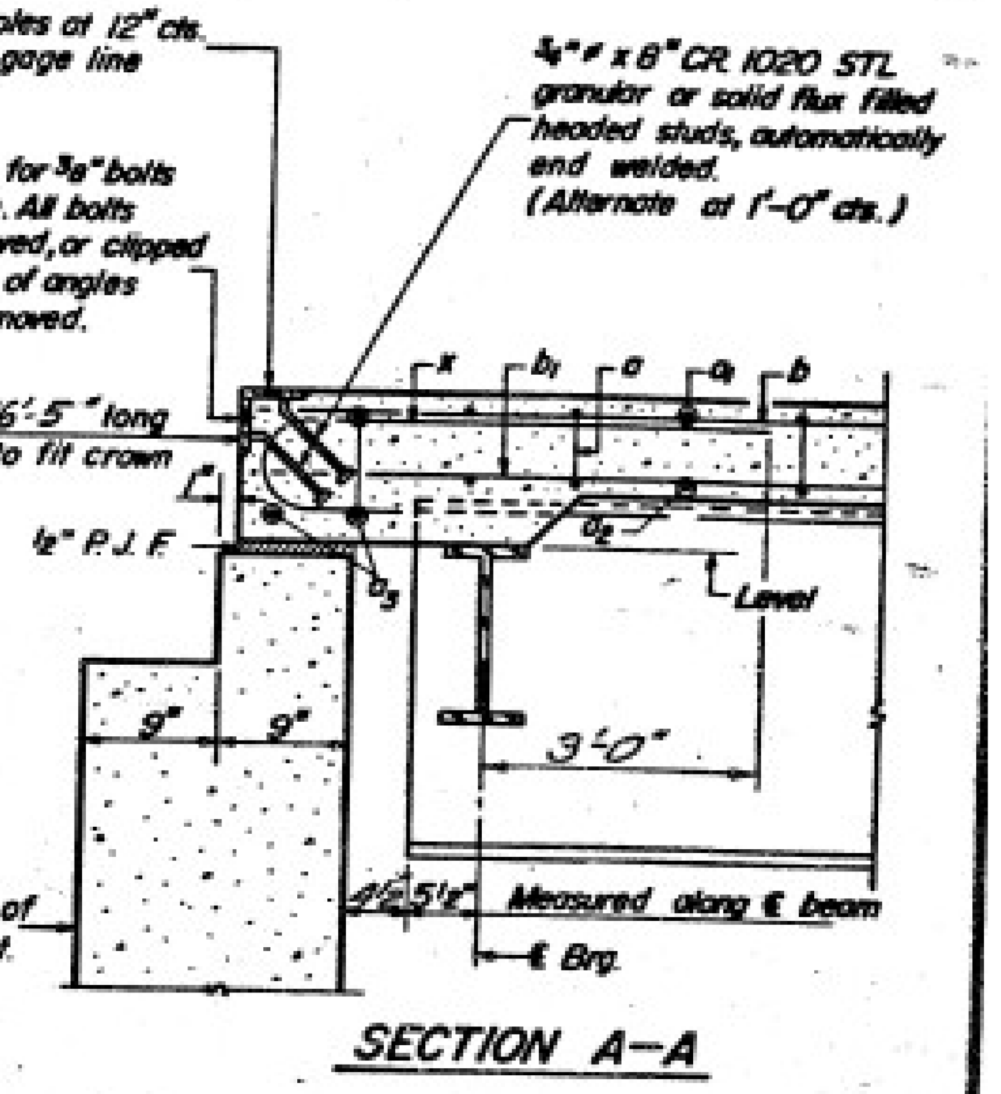
Note:
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.



TYP. DETAIL AT DRAIN

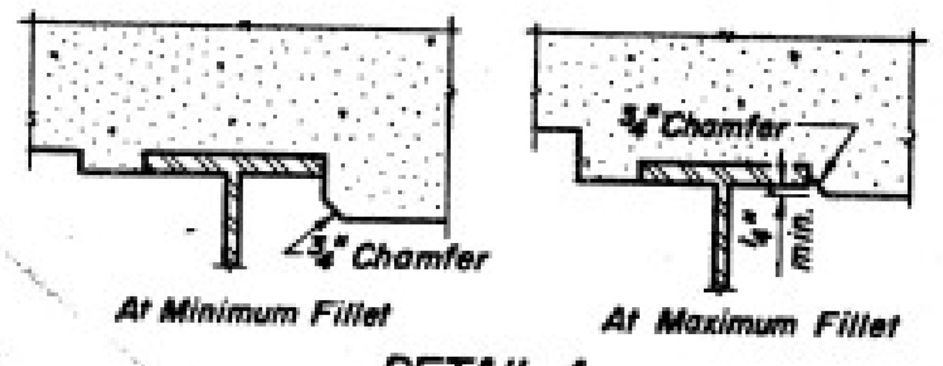


FLOOR DRAIN

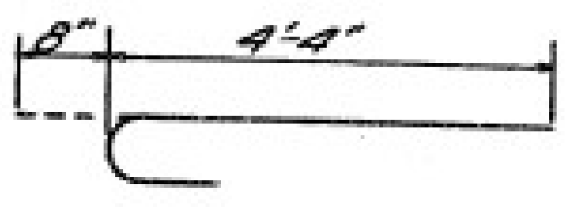


7/16" ⌀ vent holes at 12" cts. set on 1⅜" gage line
⅞" ⌀ x 8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts.)
7/16" ⌀ holes at 12" cts. for ⅜" ⌀ bolts set on 2½" gage line. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed.
∠ 4x4x½ x 26'-5" long Bend to fit crown
½" P.J.F.
x b₁ a a₁ b
a₂ a₃
Level
9" 9"
3'-0"
Back of Abut.
4½" 5½" Measured along ℄ beam
℄ Brg.

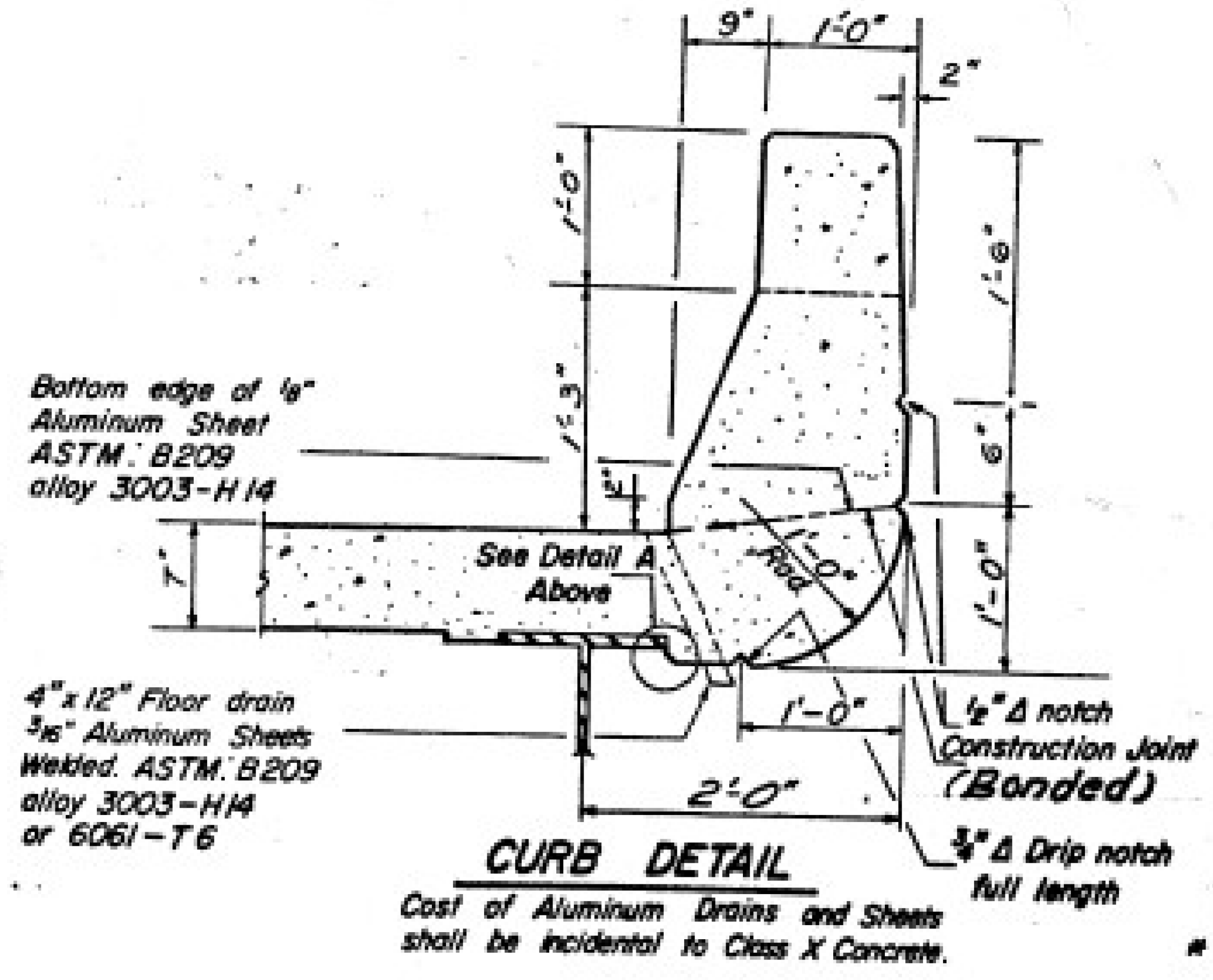
SECTION A-A



DETAIL A



BAR x



9" 1'-0"
2"
1'-0"
1'-6"
1'-3"
6"
Bottom edge of ⅛" Aluminum Sheet ASTM: B209 alloy 3003-H14
See Detail A Above
7"
1'-0"
4" x 12" Floor drain 3/16" Aluminum Sheets Welded. ASTM: B209 alloy 3003-H14 or 6061-T6
1'-0"
2'-0"
½" Δ notch Construction Joint (Bonded)
¾" Δ Drip notch full length

CURB DETAIL

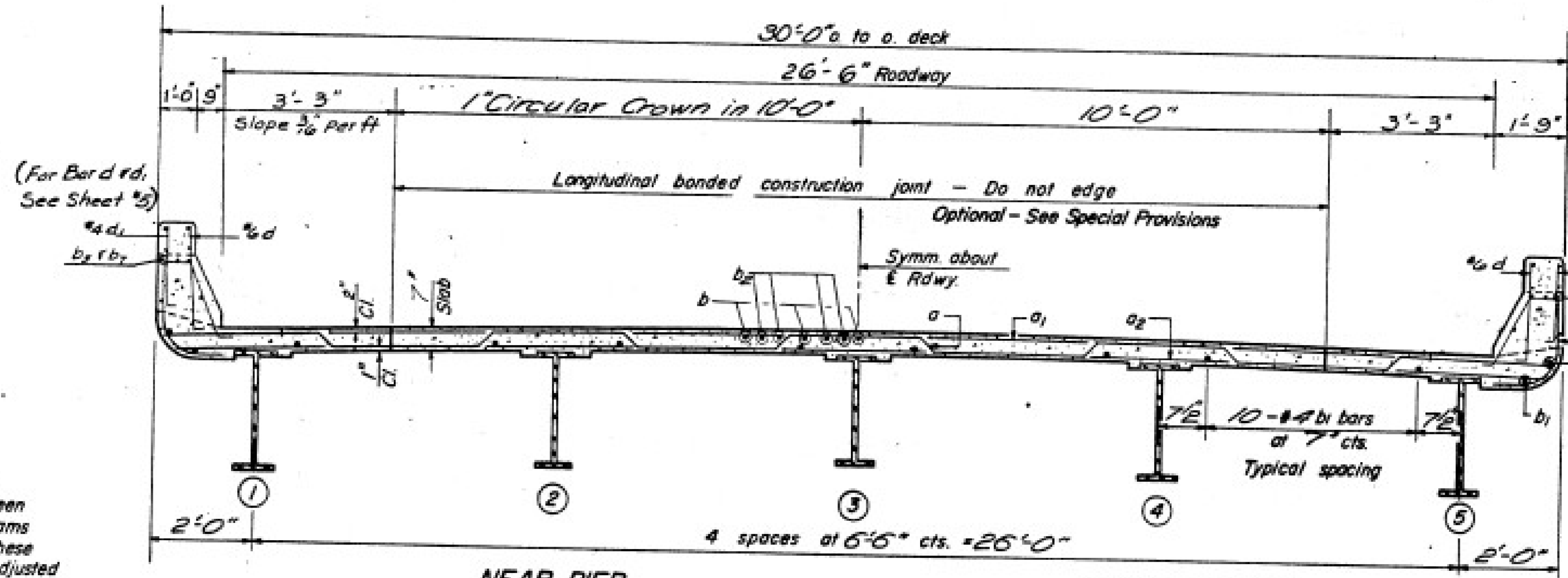
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	192	#5	30'-8"	〰
a₁	193	#5	29'-8"	—
a₂	193	#5	29'-0"	—
a₃	6	#5	23'-8"	—
b	147	#5	33'-3"	—
b₁	294	#4	33'-3"	—
b₂	80	#6	18'-0"	—
b₃	40	#6	24'-0"	—
d	450	#6	2'-9"	⌐
d₁	450	#4	2'-6"	⌐
c	386	#4	5'-9"	⊐
x	72	#6	5'-0"	⊏
Reinforcement Bars			Lbs.	37970
# Structural Steel			Lbs.	166490
Class X Concrete			Cu. Yd.	173.2

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

Note:
1. Work this sheet with sheet #5
2. The lengths and quantities of longitudinal reinforcement and Class X Concrete in curb and parapets are not included in above quantities See sheet #5

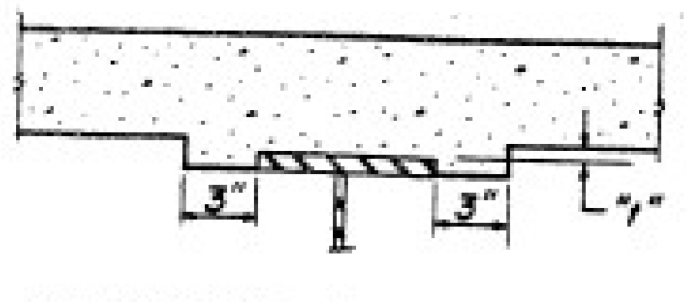


30'-0" o. to o. deck
26'-6" Roadway
1'-0" 9"
3'-3"
Slope 3/16" Per ft
1" Circular Crown in 10'-0"
10'-0"
3'-3"
1'-9"
Longitudinal bonded construction joint - Do not edge
Optional - See Special Provisions
(For Bar d & d₁ See Sheet #5)
#4 d₁
#6 d
b₂ & b₃
Symm. about ℄ Rdwy.
b₂
b
a
a₁
a₂
7" Slab
2" Cl.
1" Cl.
#6 d
#4 d₁
b₂ & b₃
c
b
b₁
7½ 10-#4 b₁ bars at 7" cts. Typical spacing 7½
① ② ③ ④ ⑤
2'-0"
4 spaces at 6'-6" cts. = 26'-0"
2'-0"

NEAR PIER

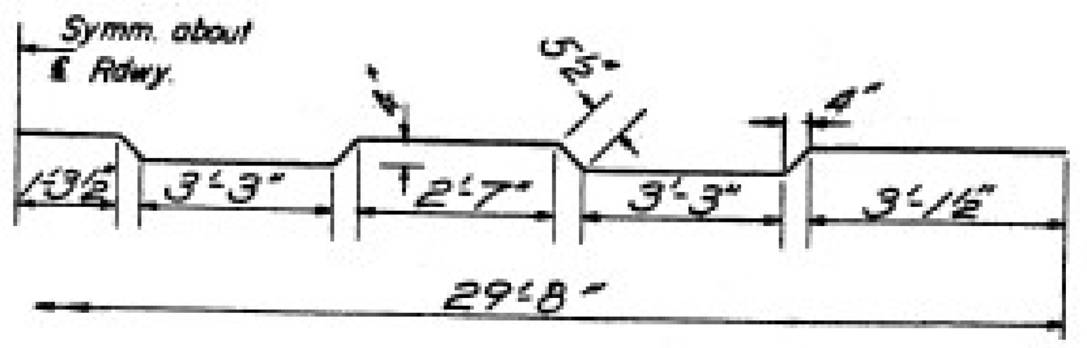
NEAR MIDSPAN

CROSS SECTION

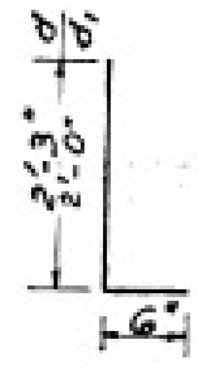


STANDARD FILLET DETAIL

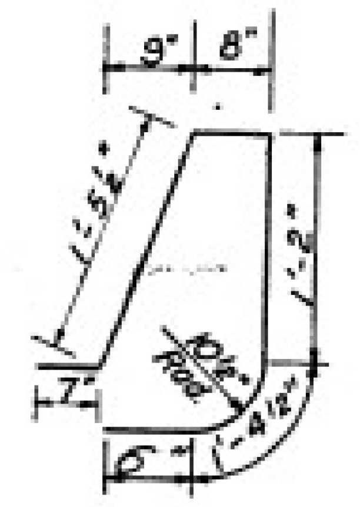
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet . These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet , minus slab thickness, equals the fillet heights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



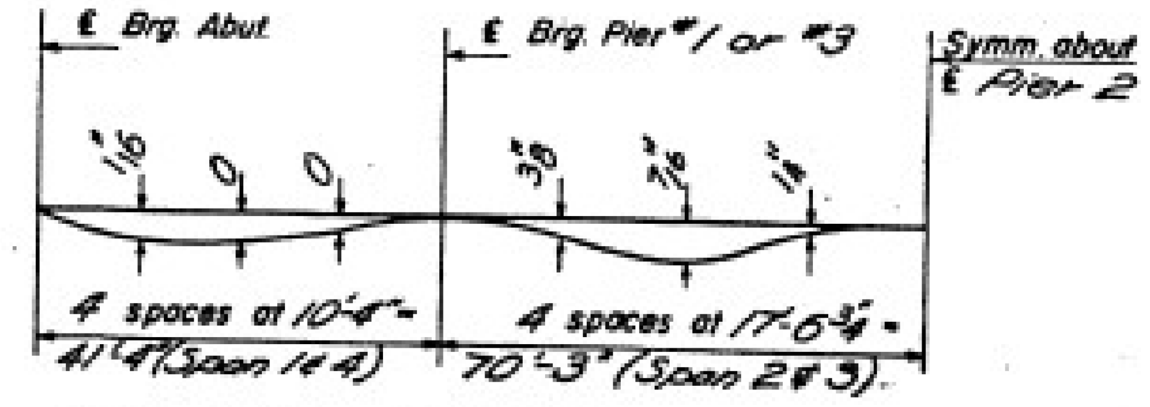
BAR a



BAR d & d₁



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 #2.

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 12-54-HB
CLARK COUNTY
STA. 344+00

DESIGNED Tai-Hong Ch
CHECKED Stanley S. Lin
P.G. Barnett A. P. Summer
DRAWN D.L. Beemer
CHECKED Stanley S. Lin

Aug. 10 1965
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Aston
ENGINEER OF DESIGN
APPROVED V. E. Staff
CHIEF HIGHWAY ENGINEER

I-5-0 10-10-62 Rev. 11-1-63 5-1-64

Rev. 3-10-67 S.L. Slab thickness changed from 6½" to 7" Class X Conc. changed from 179.8 cu yds. to 190.3 cu yds. and clear cover a1 to slab changed from 1½" to 2".

Rev. 5-31-67 S.L. Curb Changed. Class X Conc. changed from 190.3 Cu. Yds. to 173.2 Cu. Yds. Reinforcement Bars changed from 38100 lbs to 37970 lbs.

MODEL: EXISTING PLANS-30-2 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0030

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

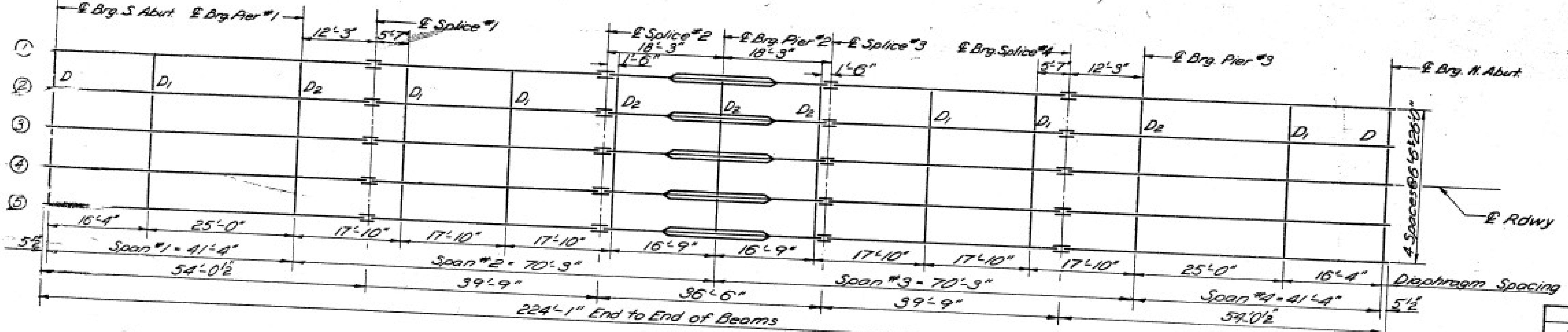
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	24
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT
I-70 CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	12-54HB	CLARK	38	16

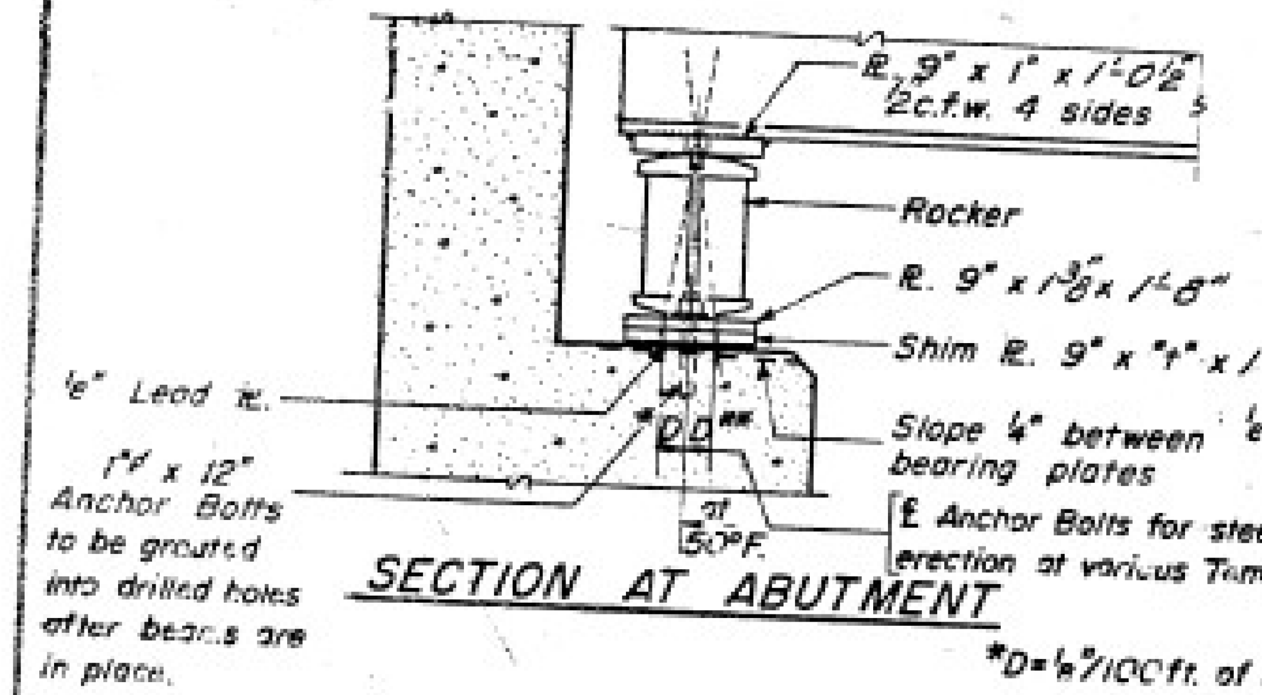
SHEET NO. 4
9 SHEETS



STEEL FRAMING PLAN
(All Beams are 33WF 118)

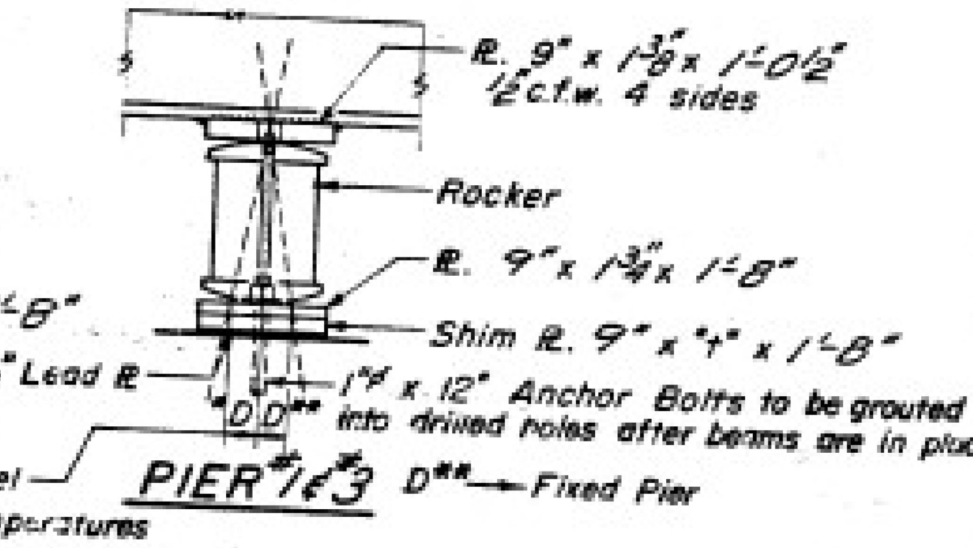
TABLE OF MOMENTS & REACTIONS
INTERIER BEAMS

	MOMENTS				REACTIONS		
	4 sp. 1 & 4	Pier 1 & 3	5 sp. 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



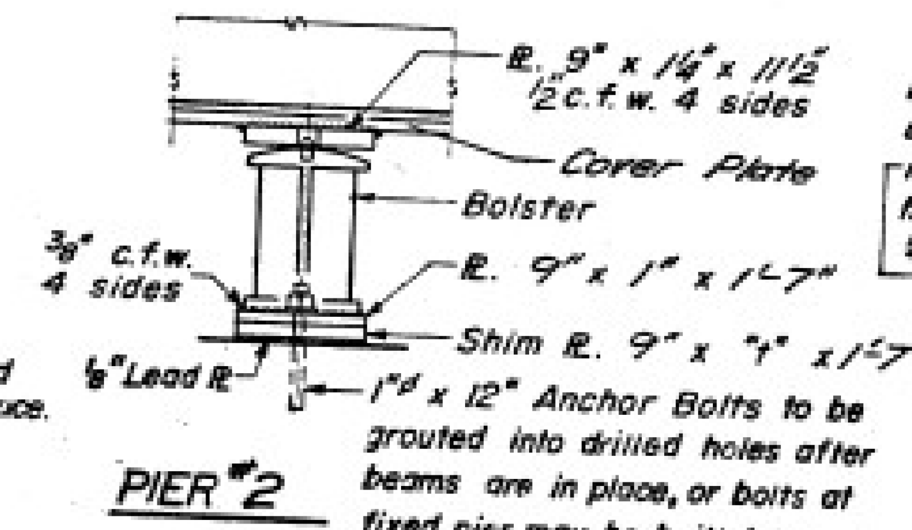
⅊ 9" x 1" x 1'-0½"
½" c.f.w. 4 sides
Rocker
⅊ 9" x 1⅜" x 1'-8"
Shim ⅊ 9" x "t" x 1'-8"
⅛" Lead ⅊
1"ø x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
Slope ¼" between bearing plates
D**
at 50°F.

SECTION AT ABUTMENT



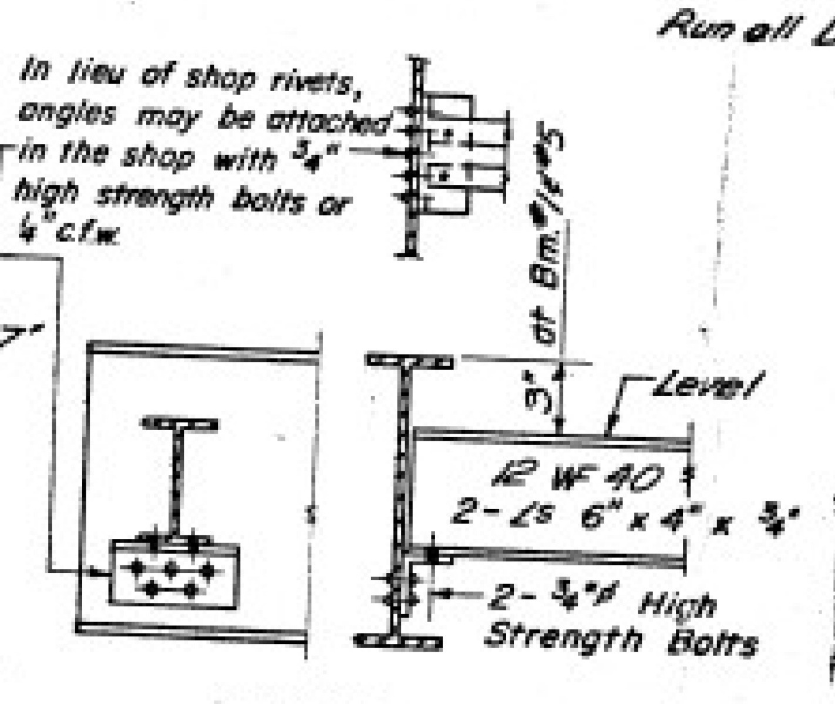
⅊ 9" x 1⅜" x 1'-0½"
½" c.f.w. 4 sides
Rocker
⅊ 9" x 1¾" x 1'-8"
Shim ⅊ 9" x "t" x 1'-8"
⅛" Lead ⅊
1"ø x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
£ Anchor Bolts for steel erection at various Temperatures
D** — Fixed Pier

PIER #1 & 3



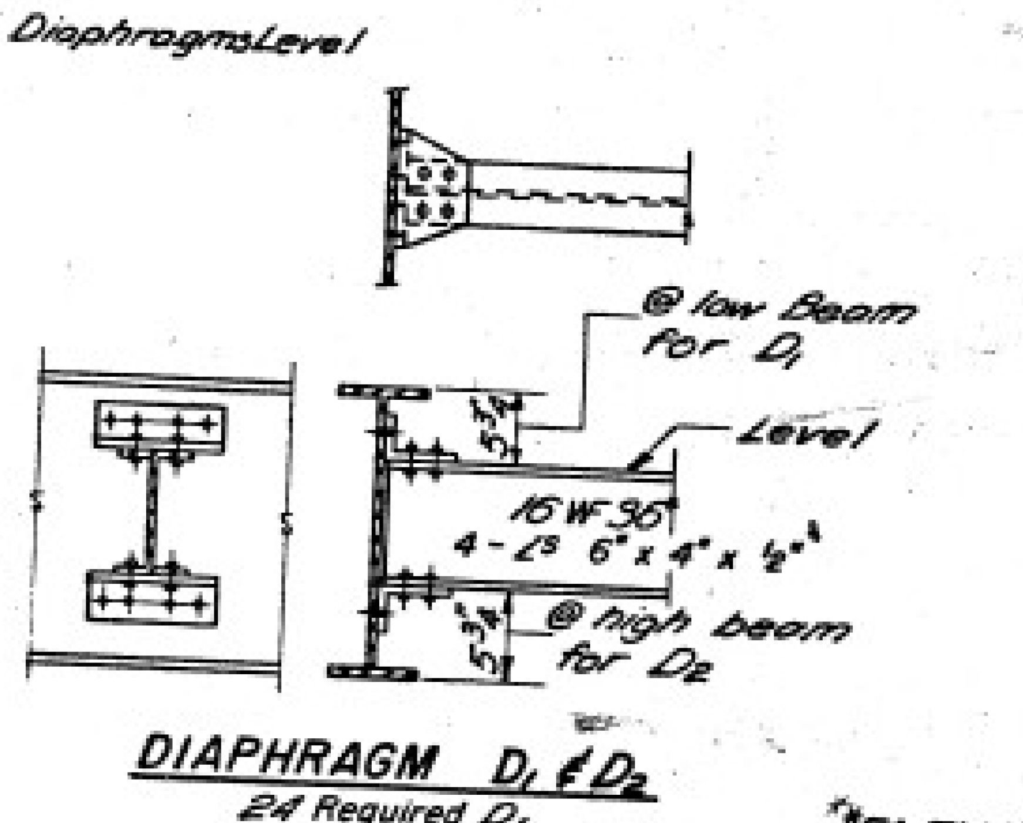
⅊ 9" x 1¼" x 11½"
½" c.f.w. 4 sides
Cover Plate
Bolster
⅊ 9" x 1" x 1'-7"
⅜" c.f.w. 4 sides
⅛" Lead ⅊
Shim ⅊ 9" x "t" x 1'-7"
1"ø x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.

PIER #2



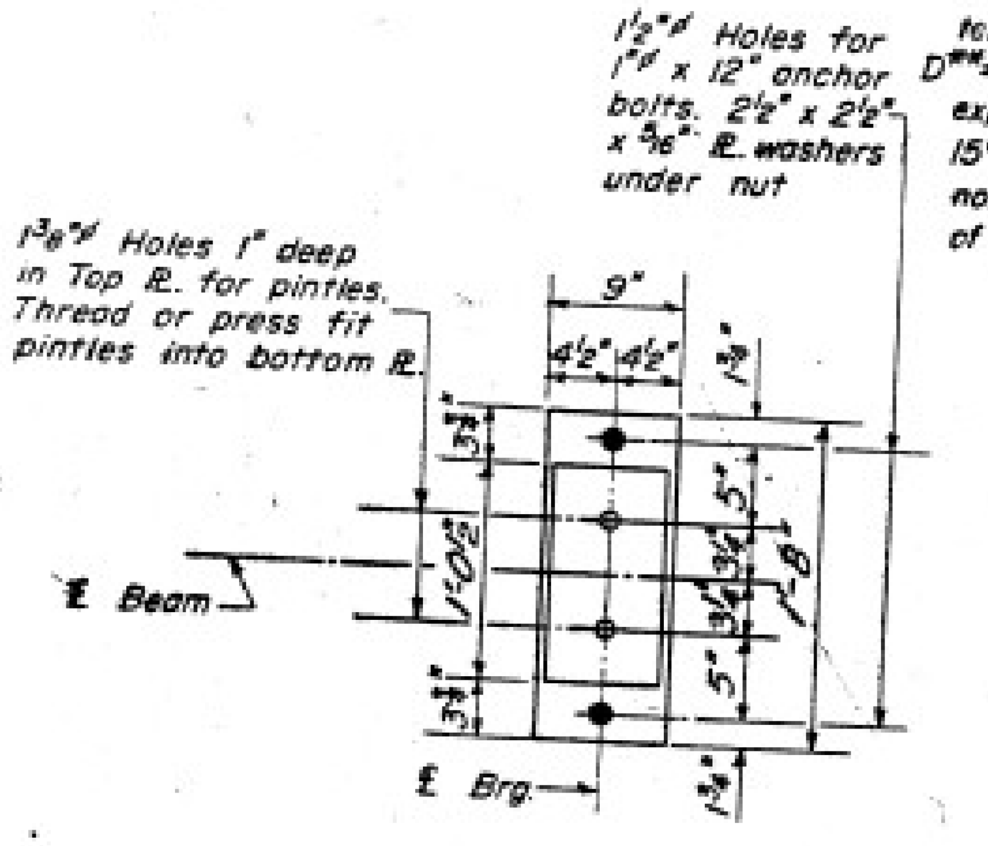
In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
at Bm. #1 & #5
3"
Level
12 WF 40
2-∠s 6" x 4" x ⅜"
2-¾"ø High Strength Bolts

DIAPHRAGM D
8 Required



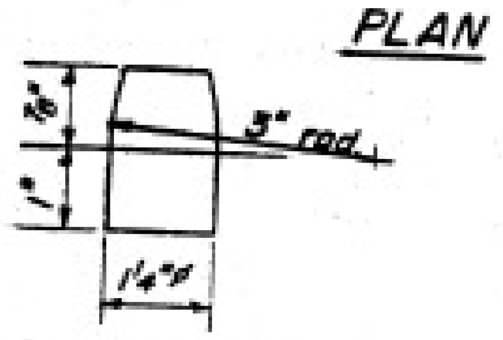
DIAPHRAGM D1 & D2
24 Required D1
20 Required D2

*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°.

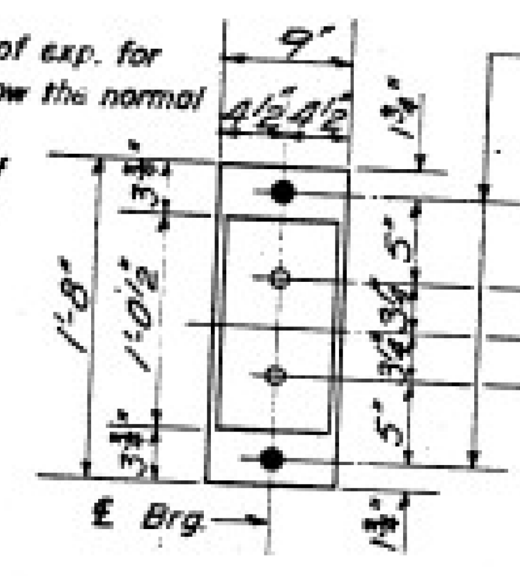


1⅜"ø Holes 1" deep in Top ⅊ for pintles. Thread or press fit pintles into bottom ⅊.
1½"ø Holes for 1"ø x 12" anchor bolts. 2½" x 2½" x 5/16" ⅊ washers under nut
9"
4½"
4½"
£ Beam
1'-0½"
1'-8"
£ Brg.

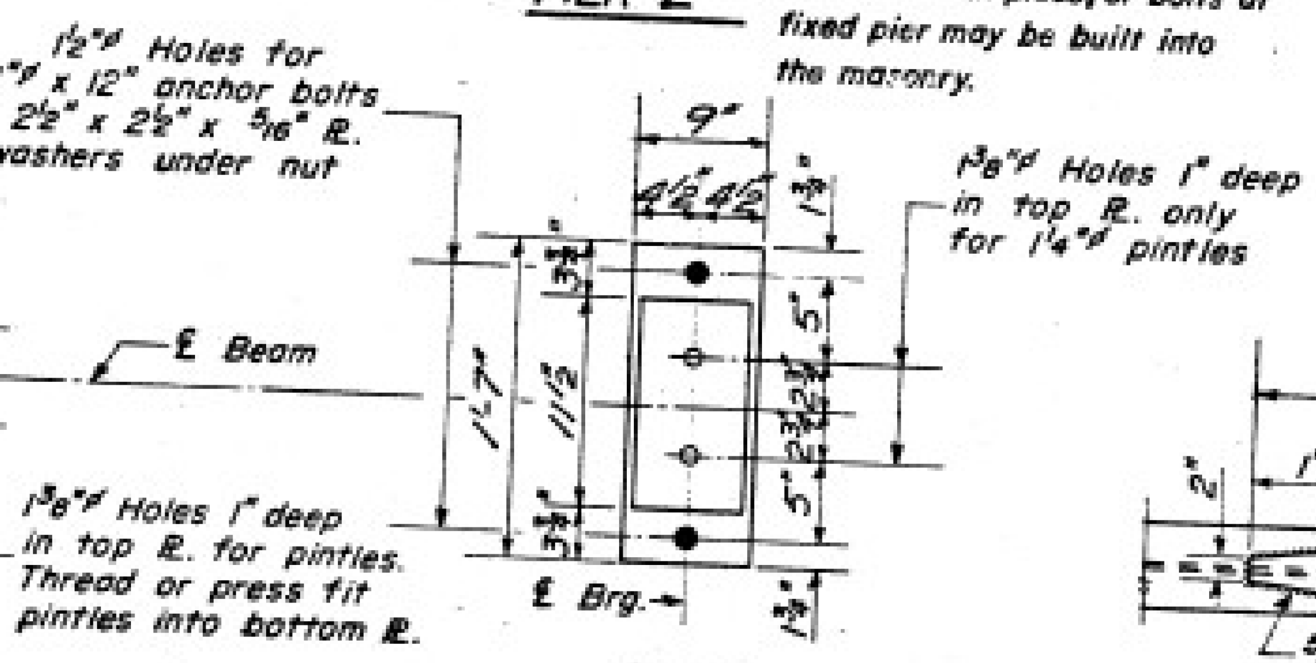
PLAN



DETAIL OF PINTLE



PLAN

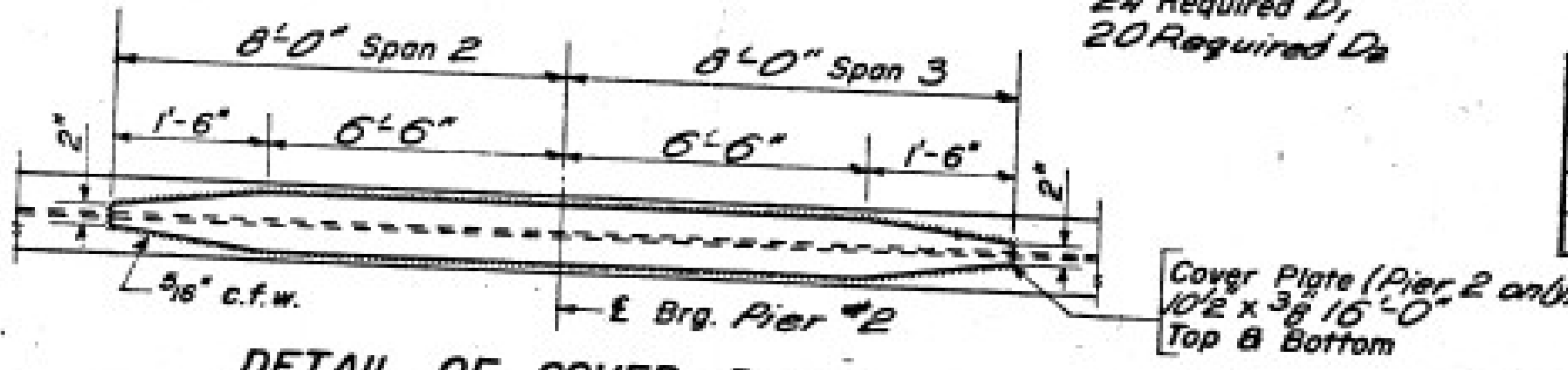


1½"ø Holes for 1"ø x 12" anchor bolts 2½" x 2½" x 5/16" ⅊ washers under nut
£ Beam
1⅜"ø Holes 1" deep in top ⅊ for pintles. Thread or press fit pintles into bottom ⅊.
1⅜"ø Holes 1" deep in top ⅊ only for 1¼"ø pintles
9"
4½"
4½"
1'-7"
11½"
£ Brg.

PLAN

VALUE OF "t"

	Bm. 1 & 5	Bm. 2 & 4	Bm. 3
t	0	0	½"

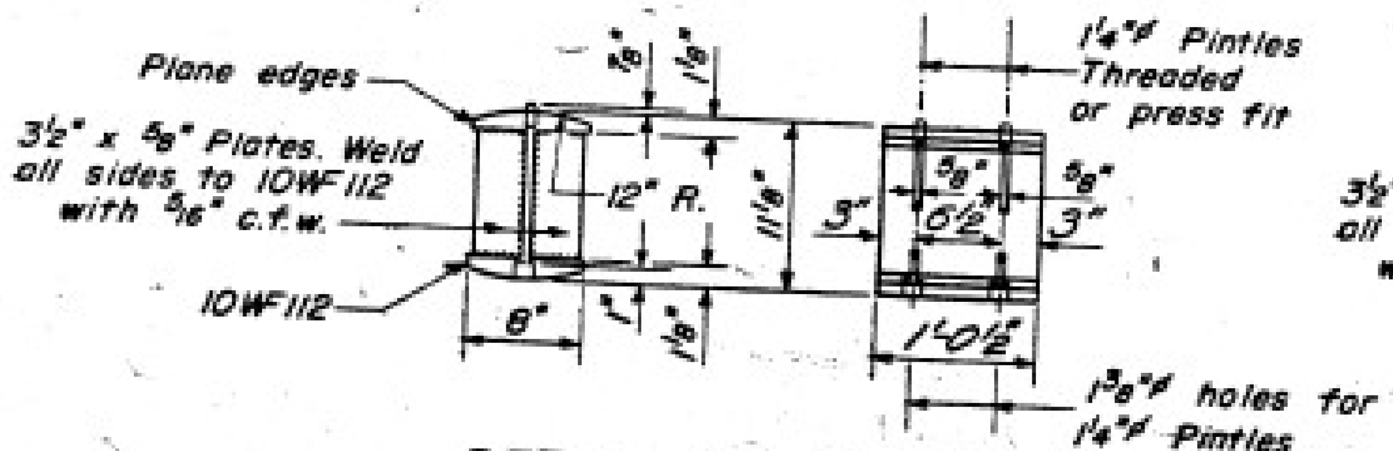


DETAIL OF COVER PLATE

**ELEVATION TOP OF WF

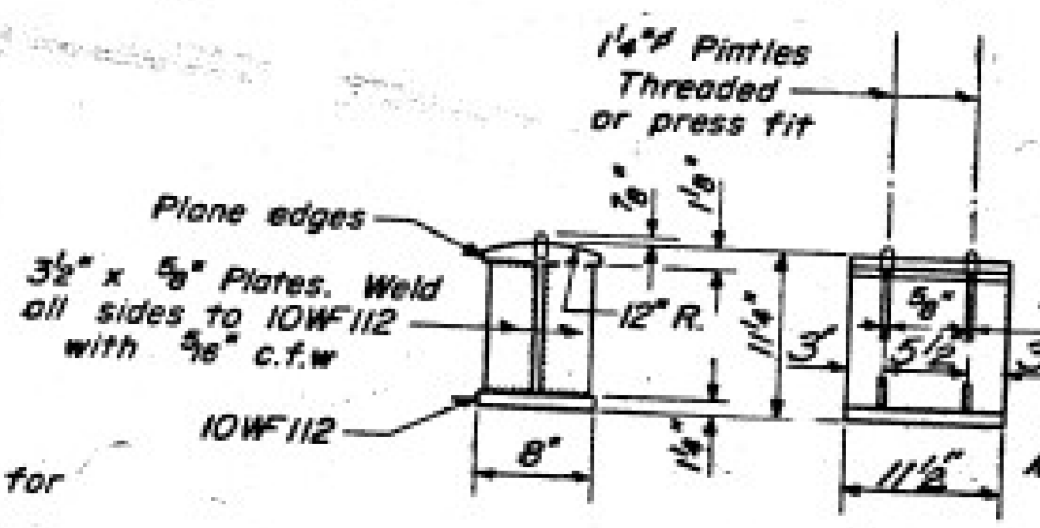
Beam No.	£ Brg. N & S. Abut.	£ Brg. Pier #1 & #3	£ Splice #1 & #4	£ Splice #2 & #3	£ Brg. Pier #2
#1 & 5	587.90	588.26	588.37	588.54	588.54
#2 & #4	588.00	588.36	588.47	588.64	588.64
#3	588.04	588.40	588.51	588.68	588.68

* All elevations shown above to be lowered ½"



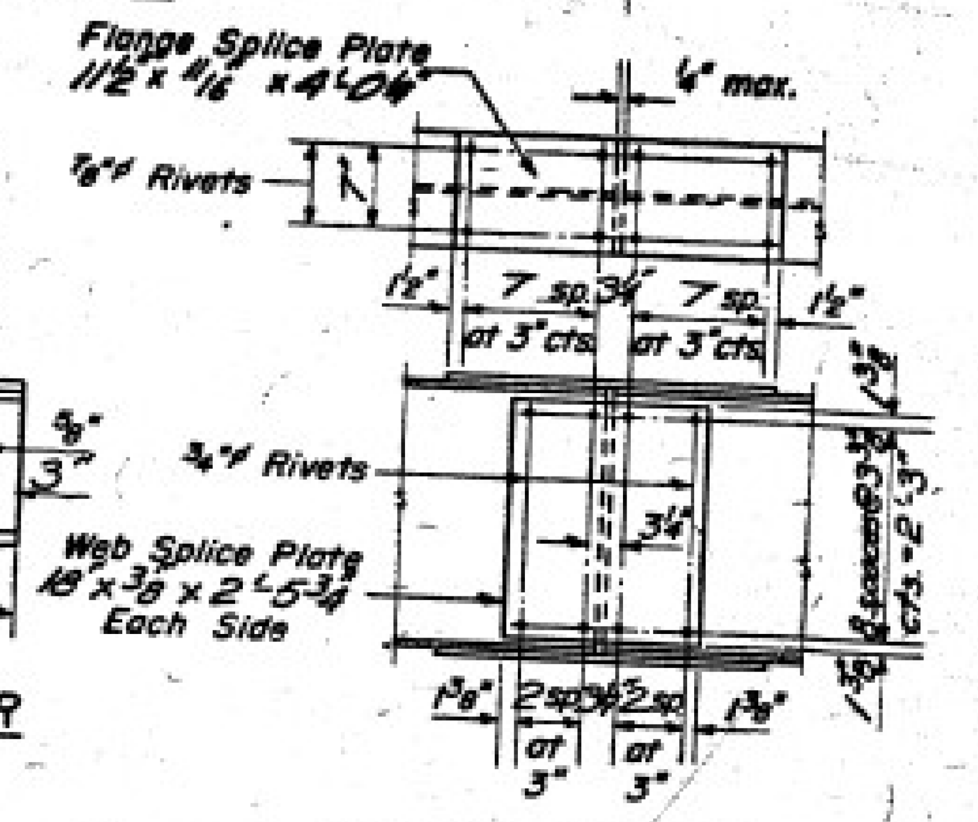
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w.
10WF112
12" R.
1¼"ø Pintles Threaded or press fit
1⅜"ø holes for 1¼"ø Pintles
8"
1'-0½"
6½"
3"
3"
11⅛"

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



1¼"ø Pintles Threaded or press fit
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w.
10WF112
12" R.
8"
11½"
5½"
3"
3"

DETAIL OF BOLSTER
AT PIER #2



DETAIL OF SPLICE

DESIGNED Tai-Fong Chen
CHECKED Stanley S. Lin
P.G. Barnett R.E. Summer
DRAWN W.A. Sousamon Jr.
CHECKED Stanley S. Lin

Aug. 10 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
Rev. 3-16-67 S.L. All elevations of Top of WF lowered ½"

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 12-54-HB
CLARK COUNTY
STA. 344+00

MODEL: EXISTING PLANS-30-3 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

EXISTING STRUCTURE DETAILS
SN 012-0030

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	25
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

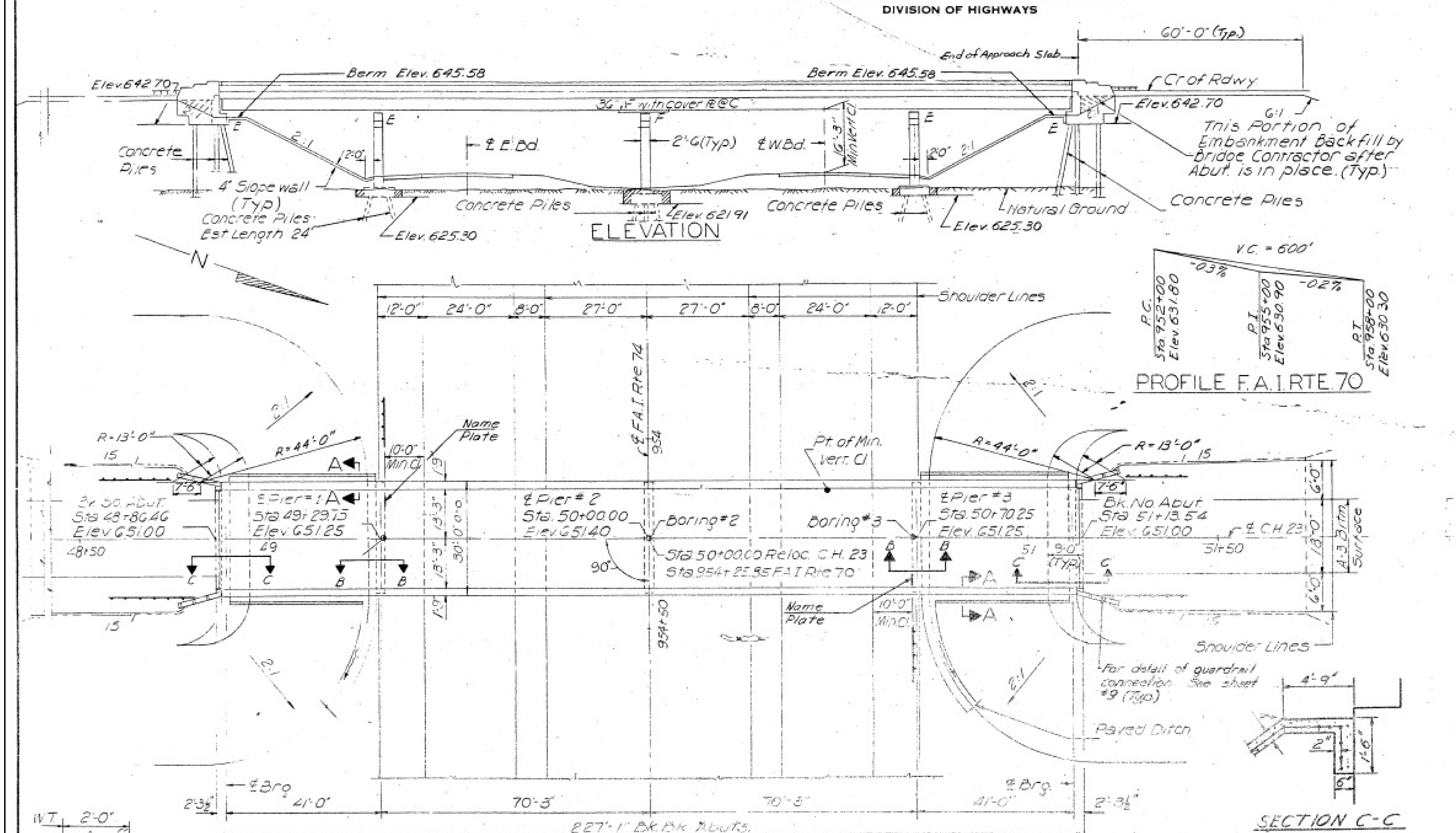
I-70
CLARK

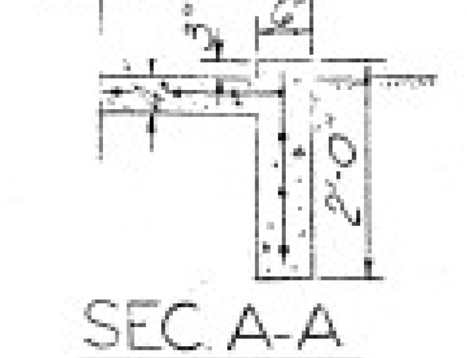
B.M. Cross cut square on S.E. corner south headwall N. side Existing C.H. 25, 378' Rt. Sta. 952+32, Elev. 627.17

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-50HB	CLARK	38	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
10 SHEETS

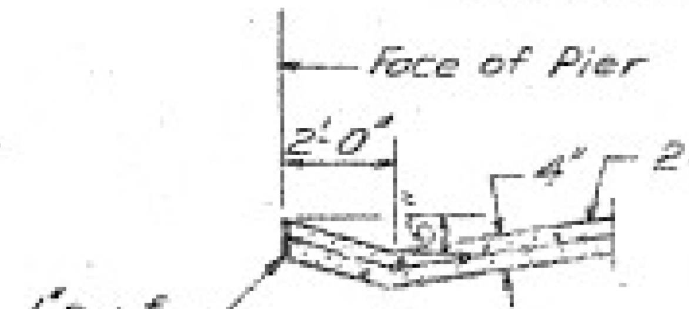




SEC. A-A

STATION 954+25.85
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-50HB
F.A. PROJ. I-70-4(70)
LOADING HS 15

NAME PLATE
See Standard 2113-1



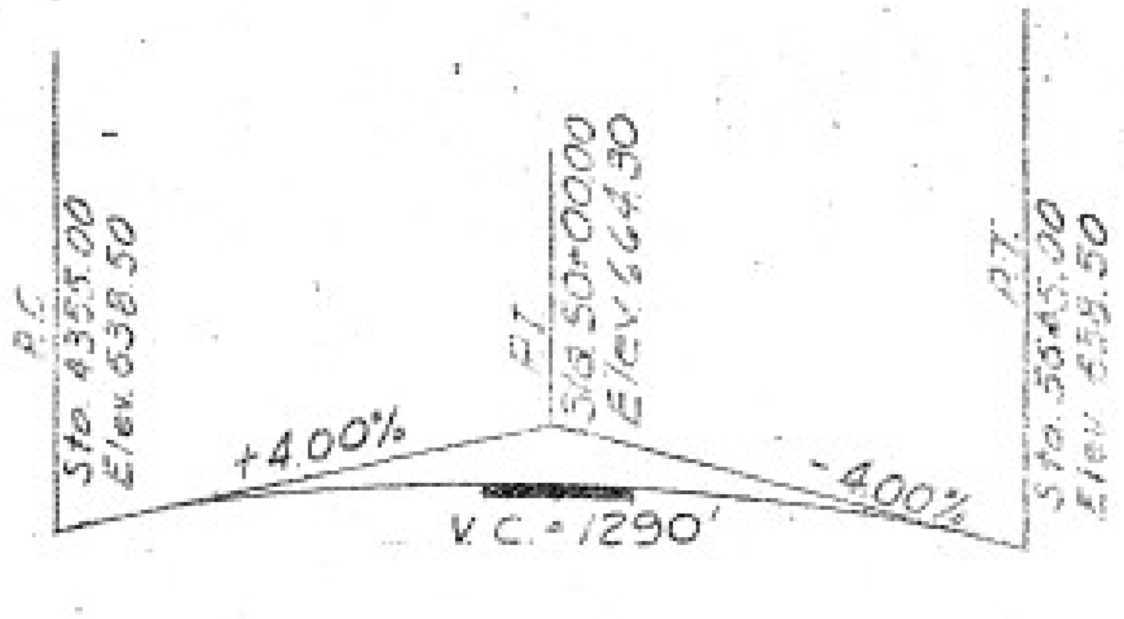
SECTION B-B

DESIGN STRESSES

fc = 1400 psi Super & Sub
fs = 20,000 psi Reinf.
fs = 20,000 psi Struct.
vc = 75 psi Ftgs.
n = 10
ALLOW ℄ Δ = 1/1000
LOADING HS15

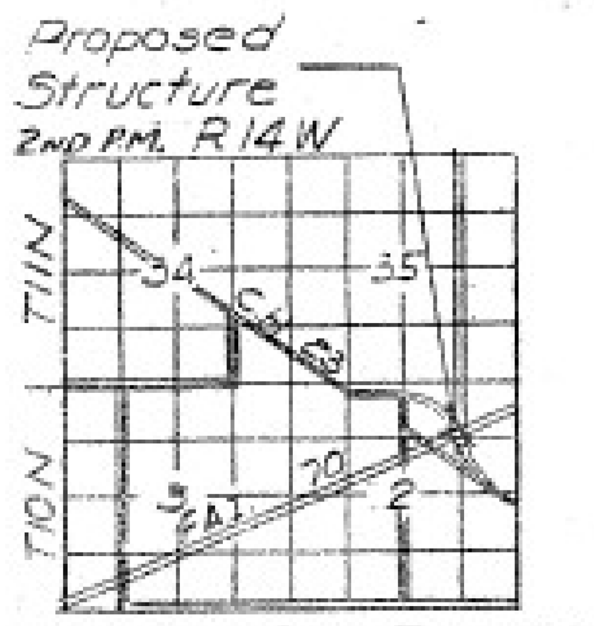
DESIGNED Stanley S. Lin
CHECKED John Hayes
DRAWN R. P. Summer
CHECKED John Hayes

Nov. 19 1965
EXAMINED C. P. Thunman ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Alton ENGINEER OF DESIGN
APPROVED J. E. Staff CHIEF HIGHWAY ENGINEER



P.C. Sta. 43+55.00 Elev. 638.50
P.I. Sta. 50+00.00 Elev. 664.30
P.T. Sta. 56+45.00 Elev. 638.50
+4.00%
-4.00%
V.C. = 1290'

PROFILE RELOC. C.H. 23



LOCATION PLAN

GENERAL NOTES

Coarse aggregate to be used in parapet handrails 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 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 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.

Permanent forms will not be permitted in forming the conc. Floor.

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

The contractor shall drive two concrete test piles, one at the South Abutment, and one at Pier #2, 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.

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.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excav. for Struct.	Cu. Yds.		80	80
Class X Concrete	Cu. Yds.	197.7	195.4	393.1
Structural Steel	Lbs.	151940		151940
Aluminum Handrail	Lin. Ft.	448		448
Reinforcement Bars	Lbs.	52740	16970	69710
Concrete Piles	Lin. Ft.		1480	1480
Test Piles (Concrete)	Ea.		2	2.
Name Plates	Ea.		2	2
Slope Wall (4")	Sq. Yds.		370	370
Protective Coat	Sq. Yds.	870		870

GENERAL PLAN & ELEVATION
RELOC. C.H. 23 OVER F.A.I. RTE. 70
PROJ. I-70-4(70)133
F.A.I. RT. 70 SEC. 12-50HB
CLARK COUNTY
STA 954+25.85

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0040

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	26
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

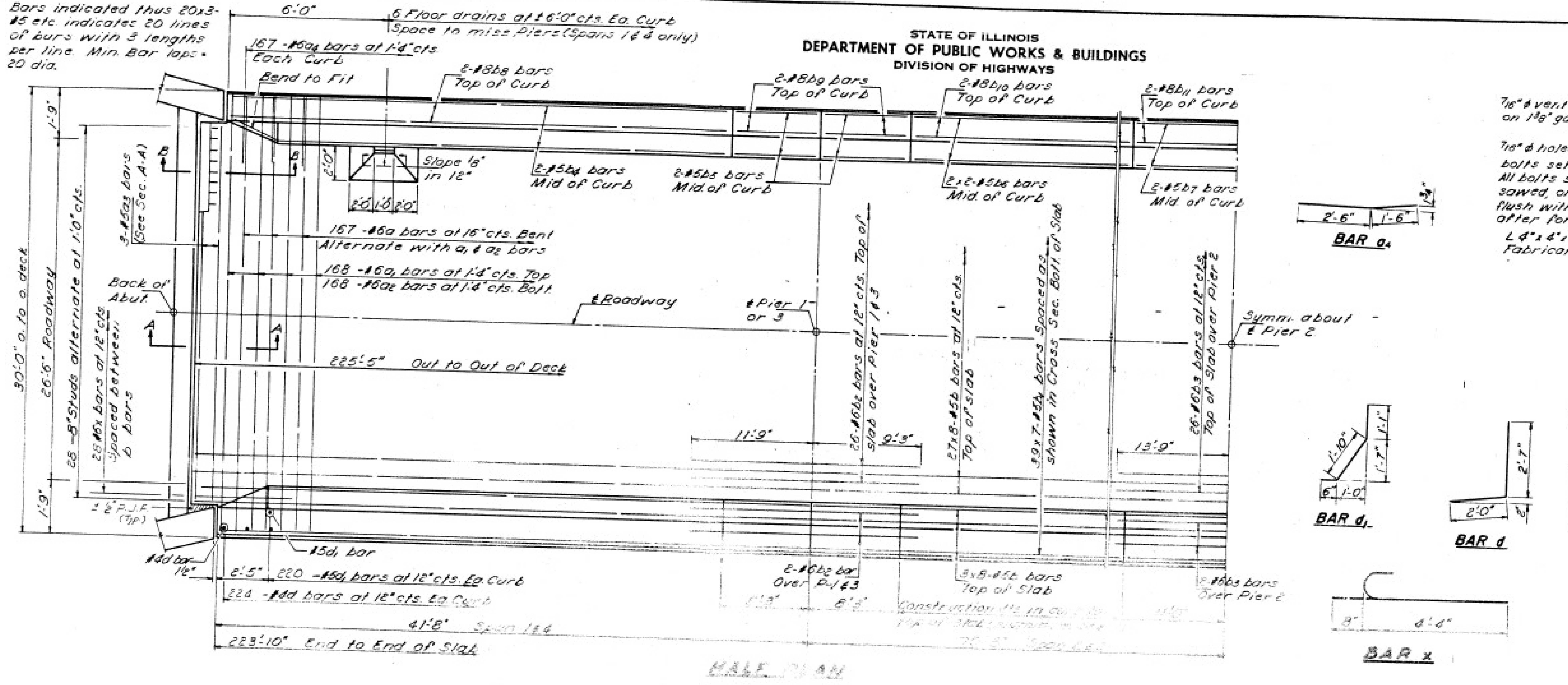
I-70 CLARK

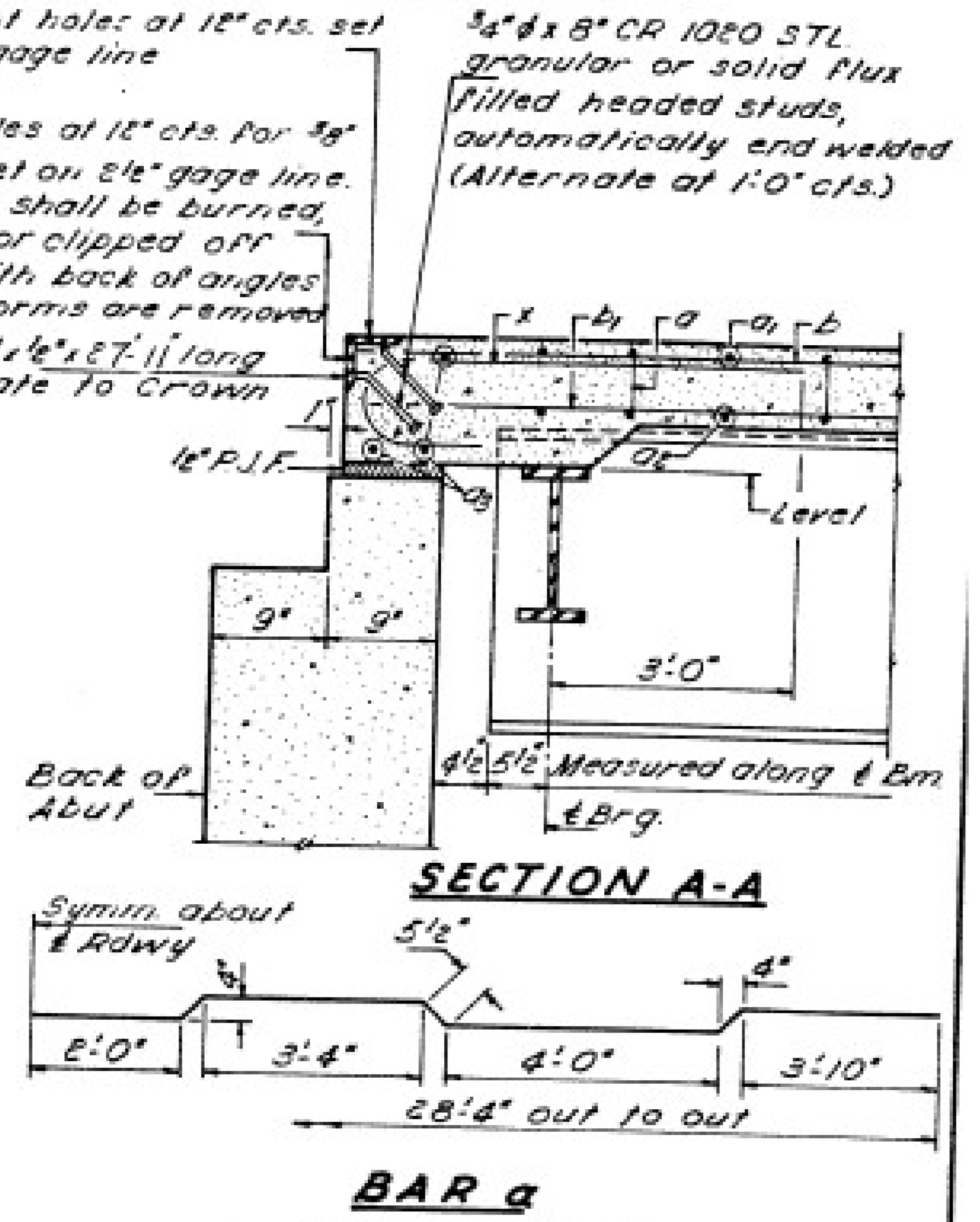
Note
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Min. Bar laps = 20 dia.

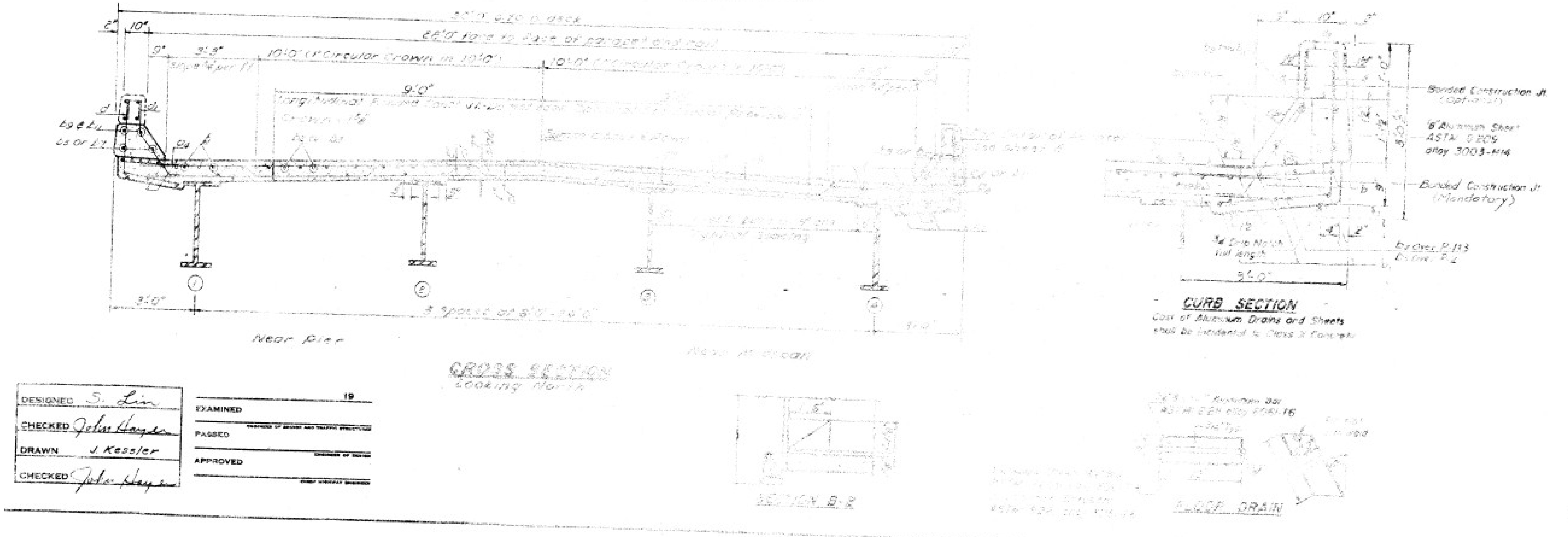
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-50HB	CLARK	38	11

SHEET NO. 3
10 SHEETS


6'-0"
6 Floor drains at ±6'-0" cts. Ea. Curb
Space to miss Piers (Spans 1 & 4 only)
167-#6a4 bars at 1'-4" cts. Each Curb
Bend to Fit
2-#8b8 bars Top of Curb
2-#8b9 bars Top of Curb
2-#8b10 bars Top of Curb
2-#8b11 bars Top of Curb
Slope 1/8" in 12"
2-#5b4 bars Mid of Curb
2-#5b5 bars Mid. of Curb
2x2-#5b6 bars Mid. of Curb
2-#5b7 bars Mid. of Curb
3-#5a3 bars (See Sec. A-A)
167-#6a bars at 16" cts. Bent Alternate with a1 & a2 bars
168-#6a1 bars at 1'-4" cts. Top
168-#6a2 bars at 1'-4" cts. Bott.
Back of Abut.
℄ Roadway
℄ Pier 1 or 3
Symm. about ℄ Pier 2
225'-5" Out to Out of Deck
30'-0" o. to o. deck
26'-6" Roadway
28-5" Studs alternate at 1'-0" cts.
28-#5b bars at 12" cts. Spaced between b bars
1'-9"
1'-9"
1 1/2" P.J.F. (Typ)
#4d bar
1 1/2"
#5d1 bar
2'-5"
220-#5d1 bars at 12" cts. Ea. Curb
224-#4d bars at 12" cts. Ea. Curb
41'-8" Span 1 & 4
223'-10" End to End of Slab
11'-9"
9'-3"
13'-9"
26-#6b2 bars at 12" cts. Top of Slab over Pier 1 & 3
27x8-#5b bars at 12" cts. Top of Slab
39x7-#5b1 bars Spaced as shown in Cross Sec. Bott. of Slab
26-#6b3 bars at 12" cts. Top of Slab over Pier 2
2-#6b2 bar Over P-1 & 3
2x8-#5b bars Top of Slab
2-#6b3 bars Over Pier 2
Construction Jts.
HALF PLAN
2'-6"
1'-6"
BAR a4
1'-10"
1'-1"
1'-2"
6"
1'-0"
BAR d1
2'-7"
2'-0"
BAR d
8"
4'-4"
BAR x


7/16" ϕ vent holes at 12" cts. set on 1 3/8" gage line
7/16" ϕ holes at 12" cts. for 3/8" bolts set on 2 1/2" gage line. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed
L 4"x4"x1/2"x27'-11" long Fabricate to Crown
3/4" ϕ x 8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded (Alternate at 1'-0" cts.)
x
b1
a
a1
b
a2
a3
1 1/2" P.J.F.
Level
9"
9"
3'-0"
Back of Abut
1/2" 5 1/2" Measured along ℄ Bm.
℄ Brg.
SECTION A-A
Symm. about ℄ Rdwy
5 1/2"
2'-0"
3'-4"
4'-0"
3'-10"
28'-4" out to out
BAR a


30'-0" o. to o. deck
26'-6" Face to Face of parapet and rail
10"
9'-9"
10'-0" (1" Circular Crown in 10'-0")
9'-0"
b9 & b11
b5 or b7
Near Pier
Near Abutment
3'-0"
5 Spaces at 8'-0" = 40'-0"
CROSS SECTION
Looking North
Bonded Construction Jt. (Optional)
6" Aluminum Sheet ASTM B209 alloy 3003-H14
Bonded Construction Jt. (Mandatory)
b2 Over P. 1 & 3
b3 Over P. 2
5'-0"
CURB SECTION
Cost of Aluminum Drains and Sheets shall be included in Class X Concrete
SECTION B-B
FLOOR DRAIN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	167	#6	29'-1"	⌇
a1	168	#6	29'-4"	—
a2	168	#6	28'-8"	—
a3	6	#5	27'-8"	—
a4	334	#6	4'-0"	⌐
b	264	#5	29'-9"	—
b1	273	#5	33'-3"	—
b2	60	#6	21'-0"	—
b3	30	#6	27'-6"	—
b4	8	#5	33'-0"	—
b5	16	#5	8'-0"	—
b6	16	#5	26'-0"	—
b7	8	#5	10'-9"	—
b8	8	#8	33'-3"	—
b9	16	#8	8'-0"	—
b10	8	#8	50'-9"	—
b11	8	#8	10'-9"	—
d	[illegible]	#4	4'-7"	⌊
d1	440	#5	3'-5"	⌊
x	[illegible]	#6	5'-0"	⊂

Reinforcement Bars	Lbs.	51420
* Structural Steel	Lbs.	151940
Class X Concrete	Cu. Yds.	183.2

* Weight of bearing assemblies with lead plates and anchor bolts are included as structural steel.
Est. Weight = 5980 Lbs
The lengths and quantities of reinf. bars and Class X Concrete in parapets are not included in above quantities See sheet 5.

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 12-50HB
CLARK COUNTY
STA. 954+25.85

DESIGNED S. Lin
CHECKED John Hayes
DRAWN J. Kessler
CHECKED John Hayes
EXAMINED
19
PASSED
APPROVED

MODEL: EXISTING PLANS-40-2 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0040

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

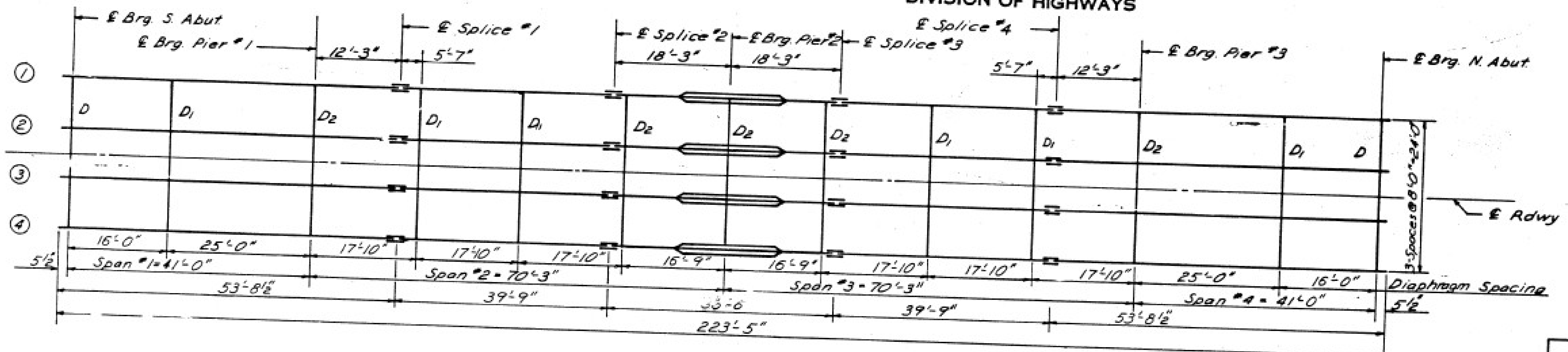
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	27
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-50HB	CLARK	38	12

SHEET NO. 4
10 SHEETS

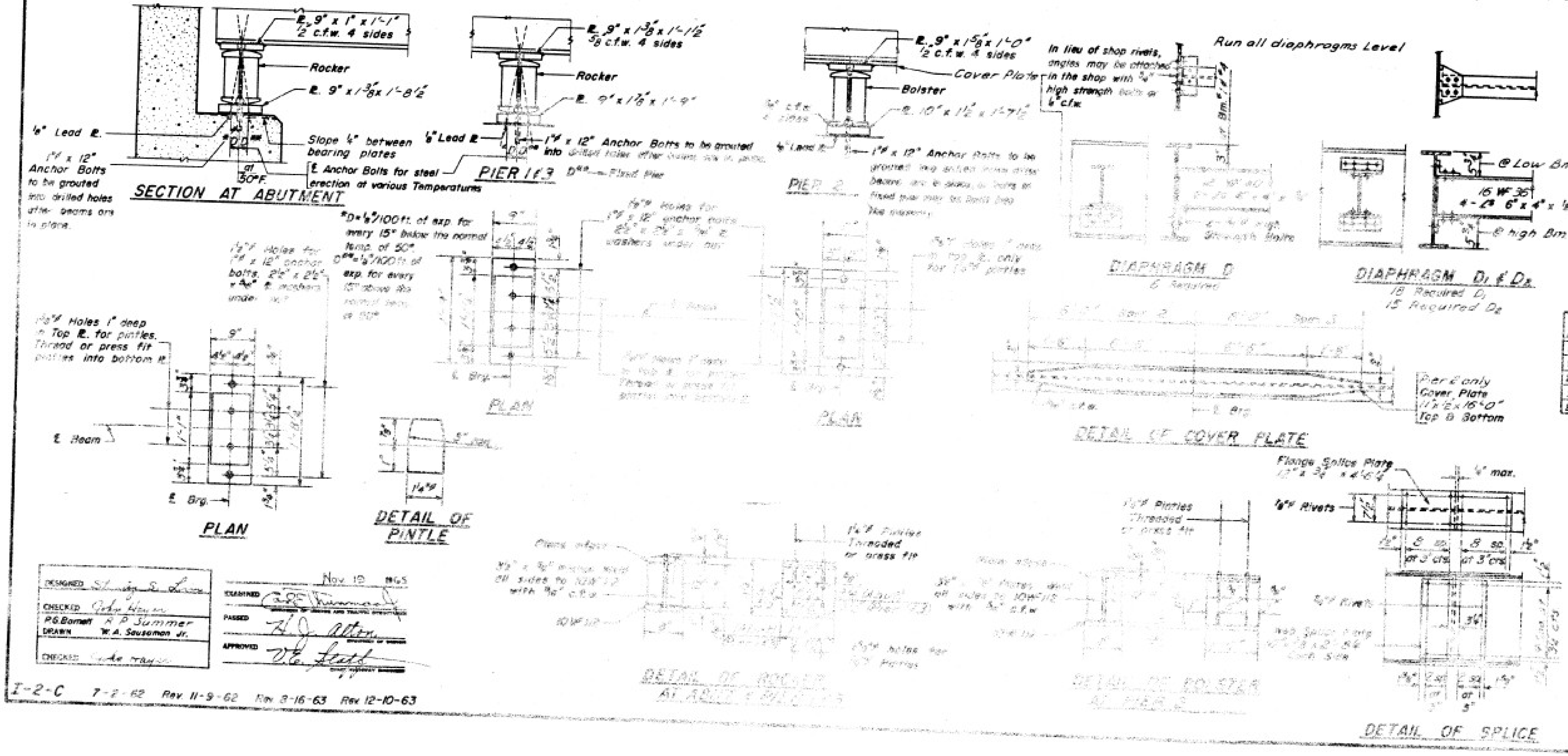


STEEL FRAMING PLAN
(all Beams are 36 WF 135)

TABLE OF MOMENTS & REACTIONS INTERIOR BEAMS

	MOMENTS				REACTIONS		
	4sp.1&4	Pier 1&3	5sp.2&3	Pier 2	N&S Abut.	Pier 1&3	Pier 2
D. L.	83.8	330.9	213.8	543.4	13.7	63.4	79.6
L. L.	214.6	250.9	312.7	333.6	27.8	38.6	41.1
Imp.	55.8	65.2	81.3	86.7	8.3	10.8	10.7
Total	354.2	647.0	607.8	963.7	49.8	112.8	131.4

Moments are in Ft.-Kips
Reactions are in Kips



℄ 9" x 1" x 1'-1"
½ c.f.w. 4 sides
Rocker
℄ 9" x 1⅜" x 1'-8½"
⅛" Lead ℄
1"Ø x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
Slope ¼" between bearing plates
℄ Anchor Bolts for steel erection at various Temperatures
at 50°F.
SECTION AT ABUTMENT
*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°
℄ 9" x 1⅜" x 1'-1½"
⅝ c.f.w. 4 sides
℄ 9" x 1⅞" x 1'-9"
1"Ø x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
PIER 1 & 3
D** — Fixed Pier
℄ 9" x 1⅝" x 1'-0"
½ c.f.w. 4 sides
Cover Plate
Bolster
℄ 10" x 1½" x 1'-7½"
PIER 2
In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
Run all diaphragms Level
@ Low Bm. for D1
16 WF 36
4 - ∠s 6" x 4" x ⅜"
@ high Bm. for D2
DIAPHRAGM D
6 Required
DIAPHRAGM D1 & D2
18 Required D1
15 Required D2
1½"Ø Holes for 1"Ø x 12" anchor bolts, 2½" x 2½" x ⅜" ℄ washers under nut
1⅛"Ø Holes 1" deep in Top ℄ for pintles. Thread or press fit pintles into bottom ℄.
℄ Beam
℄ Brg.
PLAN
DETAIL OF PINTLE
PLAN
PLAN
Pier 2 only
Cover Plate
1¼" x 12" x 16'-0"
Top & Bottom
DETAIL OF COVER PLATE
Flange Splice Plate
⅞"Ø Rivets
¼" max.
DETAIL OF ROCKER AT ABUT. & PIERS 1 & 3
DETAIL OF BOLSTER AT PIER 2
DETAIL OF SPLICE

DESIGNED Shirley S. Lee
CHECKED John Hayes
P.G. Barnett R. P. Summer
DRAWN W. A. Sausaman Jr.
CHECKED John Hayes

Nov 19 1965
EXAMINED
PASSED H. J. Alton
APPROVED V. E. Staff

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

*ELEVATION TOP OF WF

Beam / Location	Bm. #1 & #4	Bm. #2 & 3
℄ Brg. N & S. Abut.	650.33	650.48
℄ Brg. Pier #1 & #3	650.51	650.66
℄ Splice #1 & 4	650.56	650.71
℄ Splice #2 & #3	650.66	650.81
℄ Brg. Pier #2	650.66	650.81

* Lower all elevations .01 ft

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 12-50HB
CLARK COUNTY
STA. 954+25.85

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0040

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	28

CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT

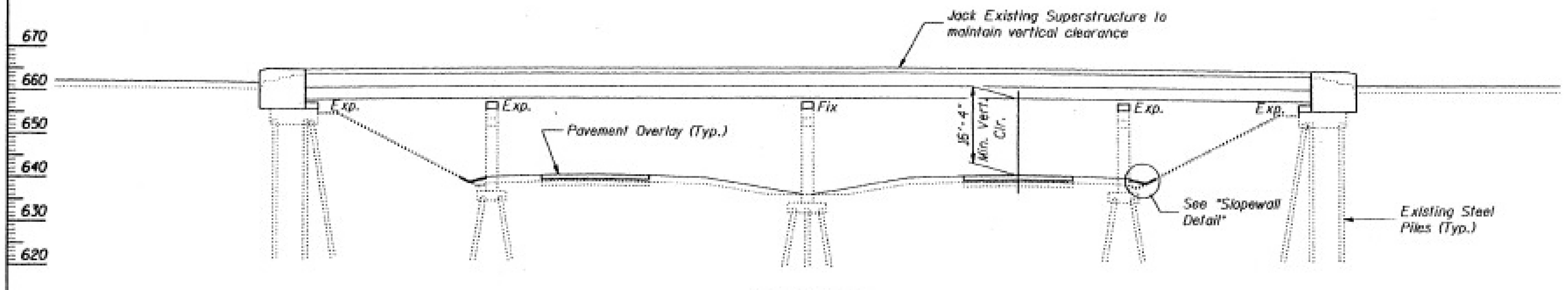
I-70 CLARK

MODEL: EXISTING PLANS-40-3 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

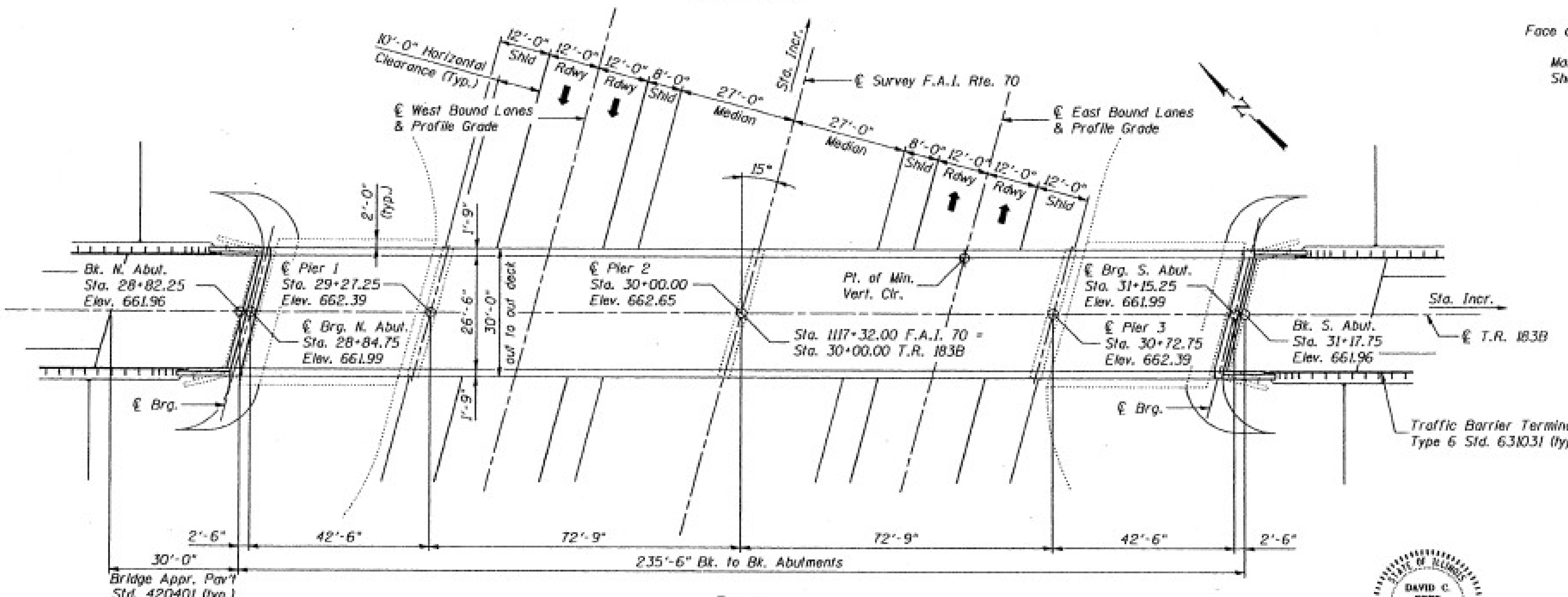
Bench Mark: #442 - Aluminum Disk ±3' North of the CL of I-70 Sta. 1110+68 Elev. 629.45.
Existing Structure: SN 012-0042, four span 235'-6" back to back abutments, 30'-0" out to out width, wide flange steel beams with concrete deck on pile cap abutments and hammerhead piers supported by steel piles. Built in 1969 as F.A.I. Route 70, Section 12-51HB at Sta. 1117+32.00.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	(12-51HB)BR	CLARK	759	183
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	

SHEET 1 OF 11



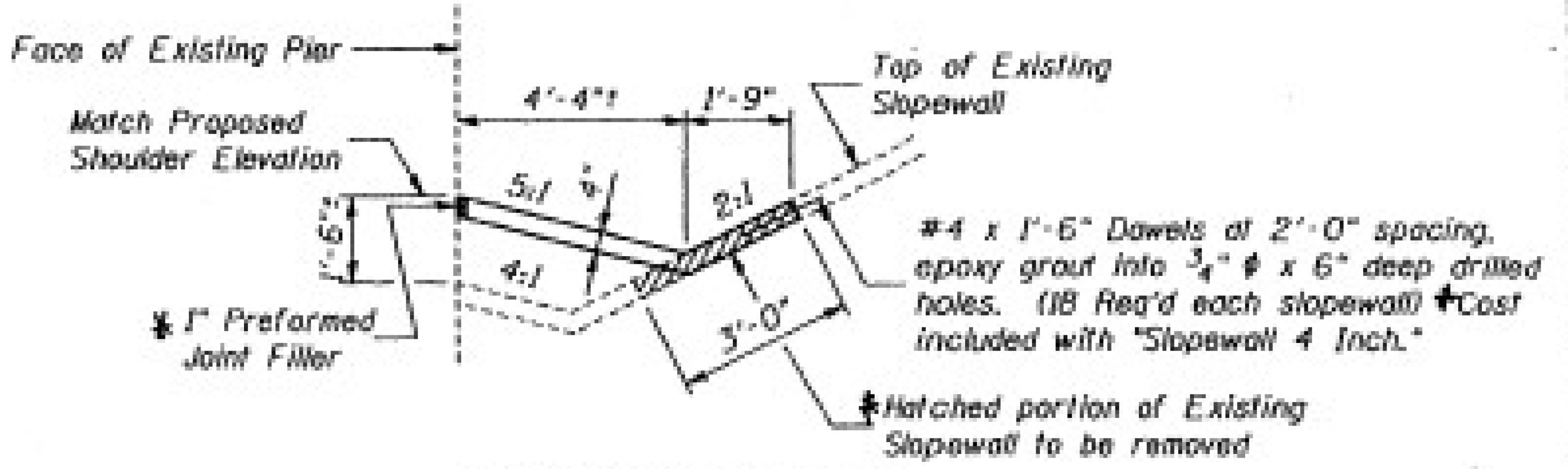
ELEVATION


10'-0" Horizontal Clearance (Typ.)
12'-0" Shld
12'-0" Rdwy
12'-0" Rdwy
8'-0" Shld
27'-0" Median
27'-0" Median
8'-0" Shld
12'-0" Rdwy
12'-0" Rdwy
12'-0" Shld
Sta. Incr.
℄ Survey F.A.I. Rte. 70
℄ West Bound Lanes & Profile Grade
℄ East Bound Lanes & Profile Grade
N
15°
2'-0" (typ.)
1'-9"
26'-6"
30'-0" out to out deck
1'-9"
Bk. N. Abut. Sta. 28+82.25 Elev. 661.96
℄ Pier 1 Sta. 29+27.25 Elev. 662.39
℄ Brg. N. Abut. Sta. 28+84.75 Elev. 661.99
℄ Pier 2 Sta. 30+00.00 Elev. 662.65
Pt. of Min. Vert. Clr.
Sta. 1117+32.00 F.A.I. 70 = Sta. 30+00.00 T.R. 183B
℄ Brg. S. Abut. Sta. 31+15.25 Elev. 661.99
℄ Pier 3 Sta. 30+72.75 Elev. 662.39
Bk. S. Abut. Sta. 31+17.75 Elev. 661.96
Sta. Incr.
℄ T.R. 183B
℄ Brg.
℄ Brg.
Traffic Barrier Terminal Type 6 Std. 631031 (typ.)
2'-6"
42'-6"
72'-9"
72'-9"
42'-6"
2'-6"
30'-0"
235'-6" Bk. to Bk. Abutments
Bridge Appr. Pav't Std. 420401 (typ.)

PLAN

INDEX OF SHEETS

Sheet No.	Description
1	General Plan, Bill of Mat'l, Sheet Index
2	General Notes & Jacking Procedure
3	Superstructure Plan & Typical Section
4	Superstructure Details
5	Bearing Details
6	Anchor Bolts
7	Abutments (Concrete Removal)
8-9	Abutment Details
10	Piers 1, 2 & 3
11	Bar Splicer Assembly


Face of Existing Pier
Match Proposed Shoulder Elevation
4'-4"±
1'-9"
Top of Existing Slopewall
1'-6"
5:1
4:1
2:1
3'-0"
¥ 1" Preformed Joint Filler
#4 x 1'-6" Dowels at 2'-0" spacing, epoxy grout into ¾" ϕ x 6" deep drilled holes. (18 Req'd each slopewall) ¥Cost included with "Slopewall 4 Inch."
¥Hatched portion of Existing Slopewall to be removed

SLOPEWALL DETAIL

TOTAL BILL OF MATERIAL

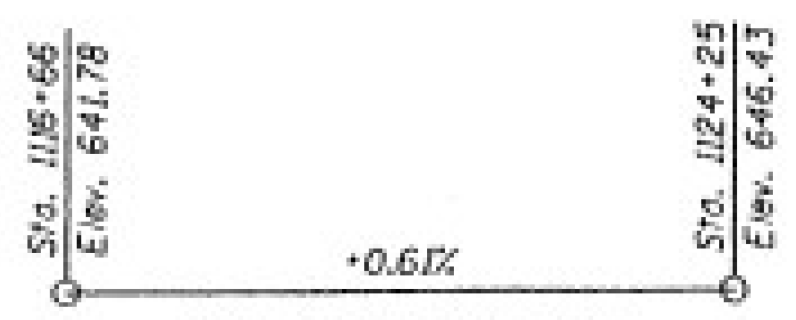
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	--	130	130
Concrete Removal	Cu Yd	6.5	22.6	29.1
Slope Wall Removal	Sq Yd	--	24	24
Structure Excavation	Cu Yd	--	130	130
Silicone Joint Sealer, 2"	Foot	58	--	58
Concrete Structures	Cu Yd	--	61.9	61.9
Concrete Superstructure	Cu Yd	4.8	9.4	14.2
Protective Coat	Sq Yd	16	16	32
Elastomeric Bearing Assembly, Type I	Each	--	10	10
Elastomeric Bearing Assembly, Type II	Each	--	10	10
Furnishing And Erecting Structural Steel	Pound	--	2930	2930
Cleaning And Painting Steel Bridge No. 3	L Sum	1	--	1
Containment And Disposal Of Lead Paint Cleaning Residue No. 3	L Sum	1	--	1
Reinforcement Bars, Epoxy Coated	Pound	700	6460	7160
Slope Wall 4 Inch	Sq Yd	--	50	50
Bridge Seal Sealer	Sq Ft	--	170	170
Jacking Existing Superstructure, No. 3	Each	1	--	1
Bar Splicers	Each	56	--	56

DAVID C. DEPP
081-005117

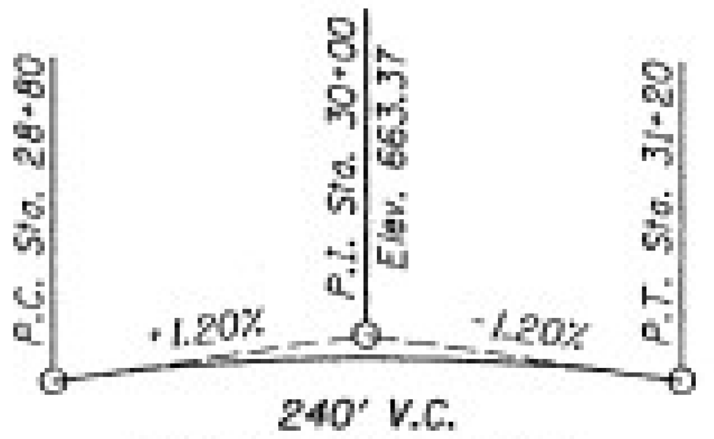
Signed: David Depp
Date: 3-14-2002
Lic. Expires: 11-30-2002

Johnson, Depp & Quisenberry
Consulting Engineers Springfield, Illinois

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB



PROFILE GRADE
F.A.I. RTE. 70
(Proposed)



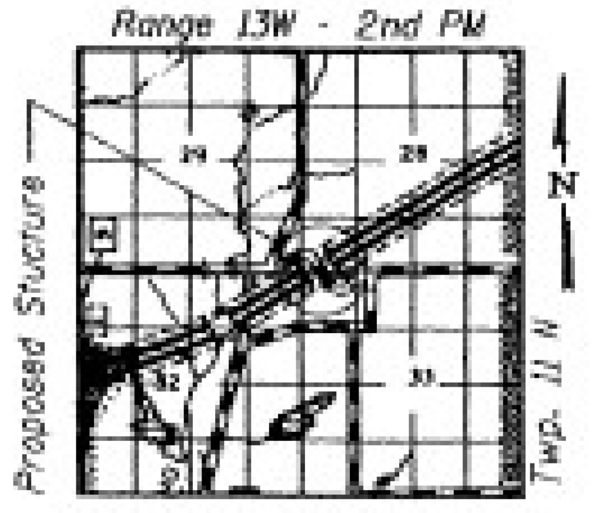
PROFILE GRADE
T.R. 183B
(Proposed)

DESIGN STRESSES

New Construction
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 36,000 psi (Structural Steel)

Existing Structure
f_c = 1,400 psi
f_s = 20,000 psi (Reinforcement)
f_s = 20,000 psi (Structural Steel)

DESIGN SPECIFICATIONS
1996 AASHTO with Interims thru 2000



LOCATION SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
T.R. 183B OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-51HB)BR
CLARK COUNTY
STATION 1117+32.00
STRUCTURE NO. 012-0042

MODEL: EXISTING PLANS-42-1 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

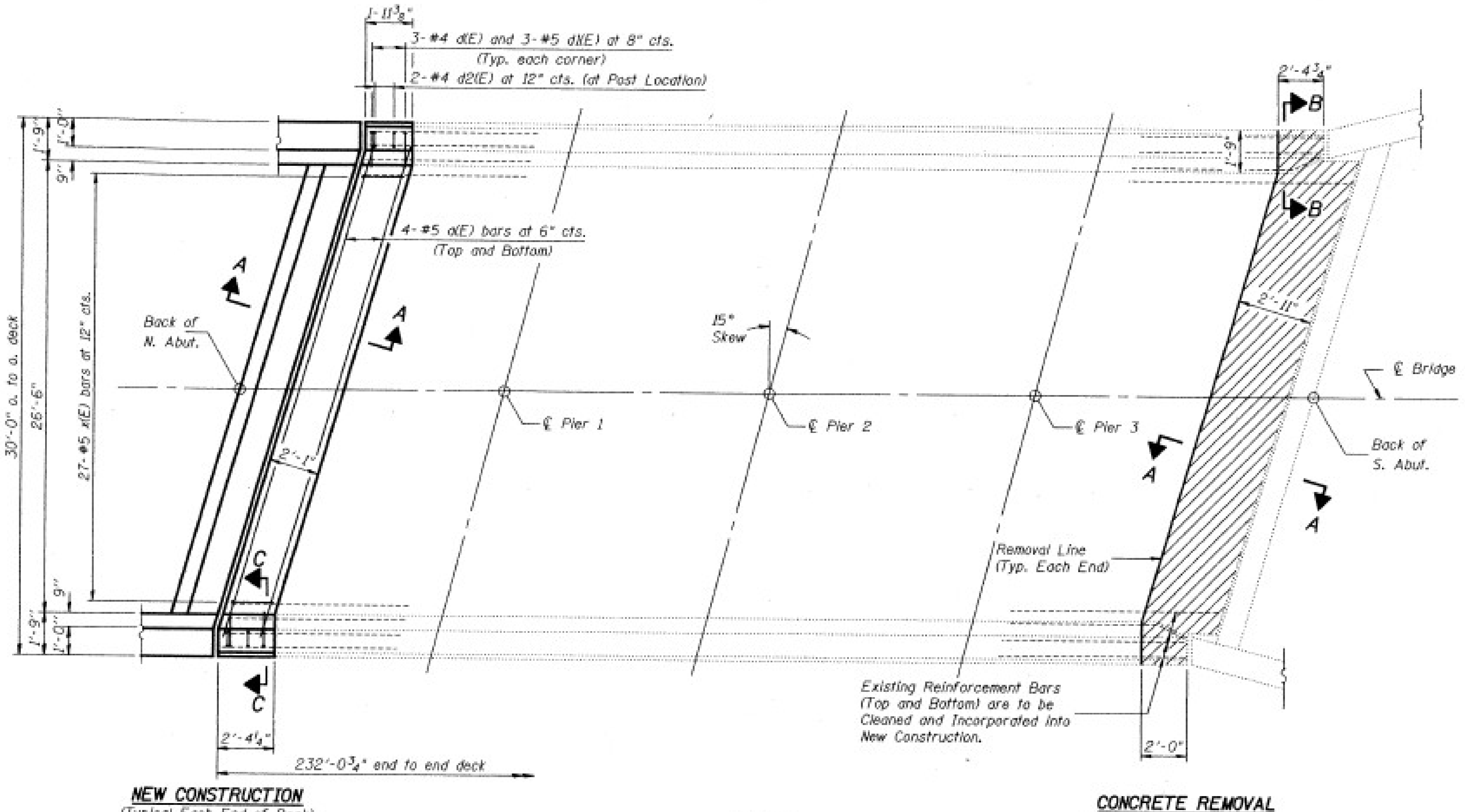
SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	29
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70 CLARK

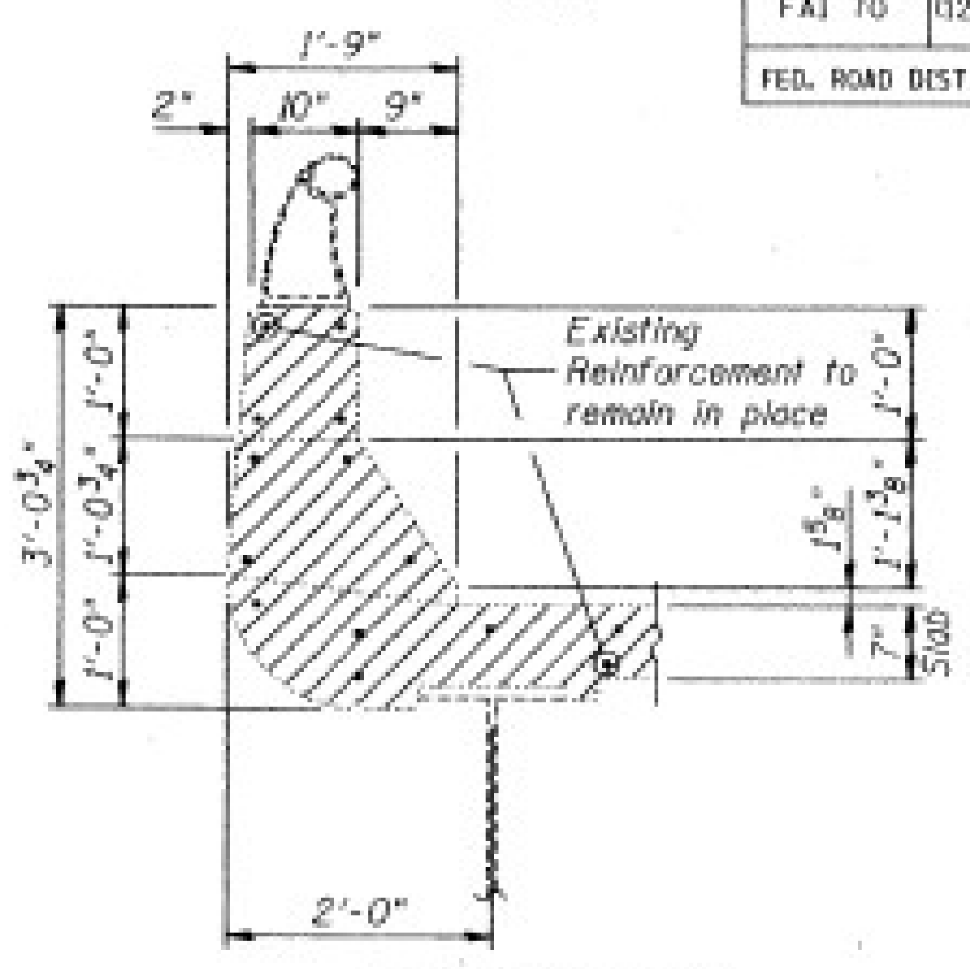
SHEET 3
OF 11

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	(12-51HB)BR	CLARK	759	185
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		

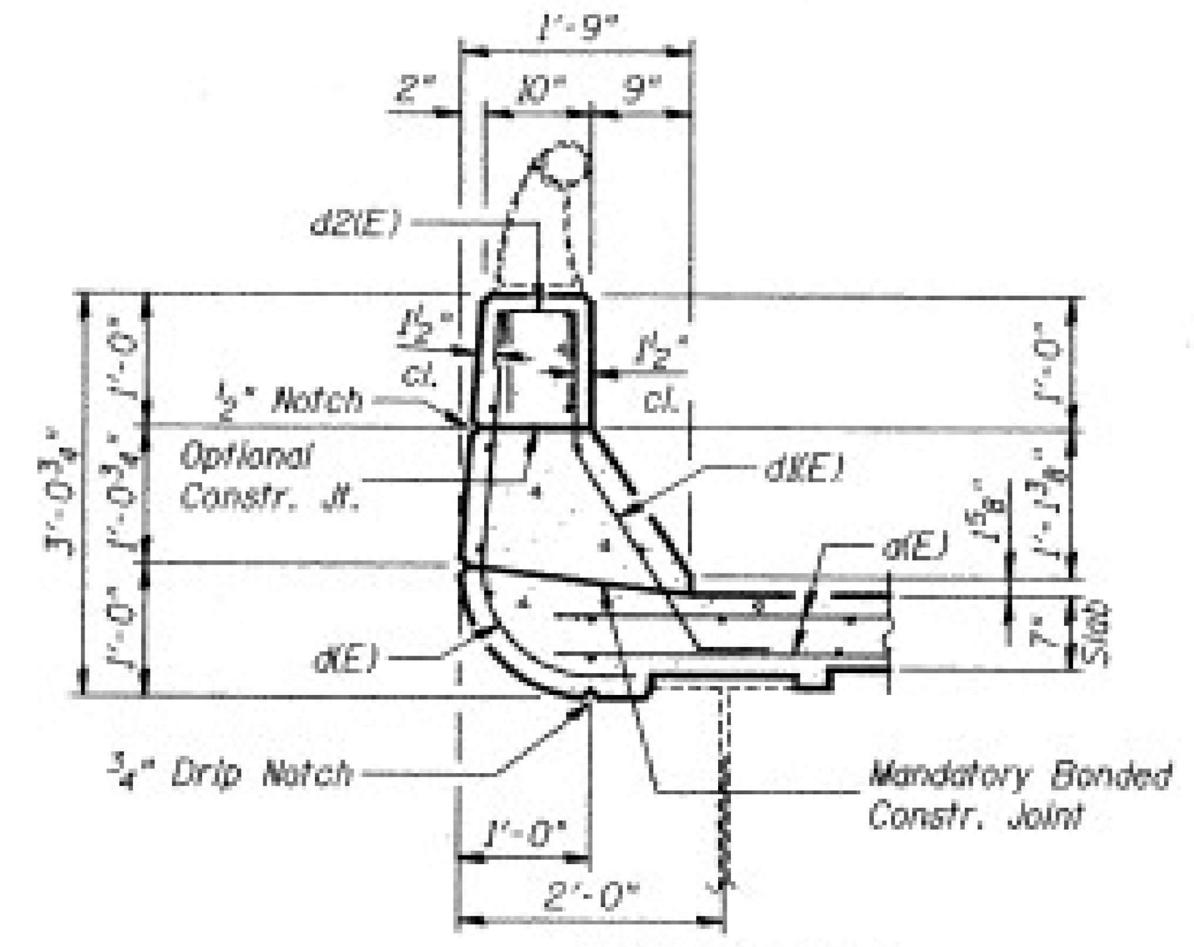


PLAN

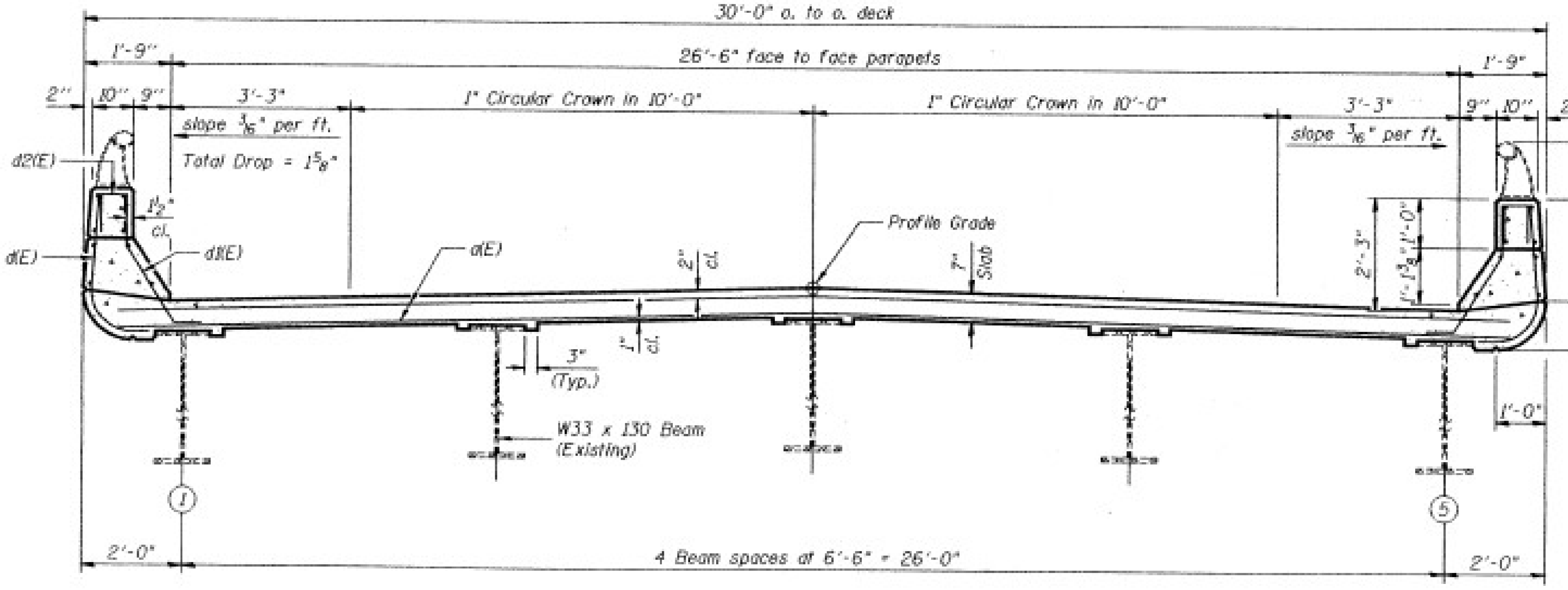
▨ Indicates Limits of Concrete Removal.



SECTION B-B



SECTION C-C



CROSS SECTION AT END OF DECK
(Looking South)

Notes:

Contractor shall protect the existing handrail and posts during Concrete removal and incorporate them into the new construction. Cost included with Concrete Removal.

Existing longitudinal reinforcement bars projecting from the deck and parapets are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cut the existing reinforcement as required so that it will end 2" from the edge of the new deck. Any reinforcement bars damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

See following sheet for Section A-A.

DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
T.R. 183B OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-51HB)BR
CLARK COUNTY
STATION 1117+32.00
STRUCTURE NO. 012-0042

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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

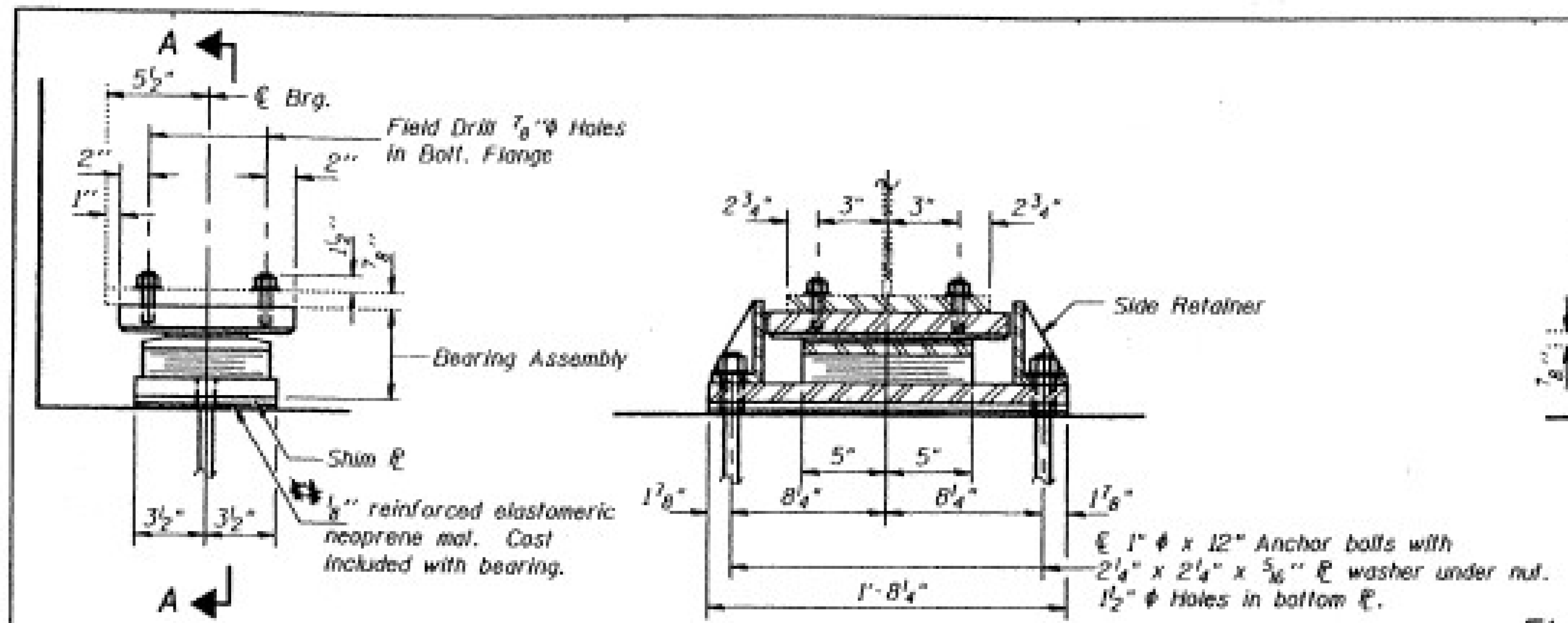
SCALE: SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	30
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

SHEET 5
OF 11

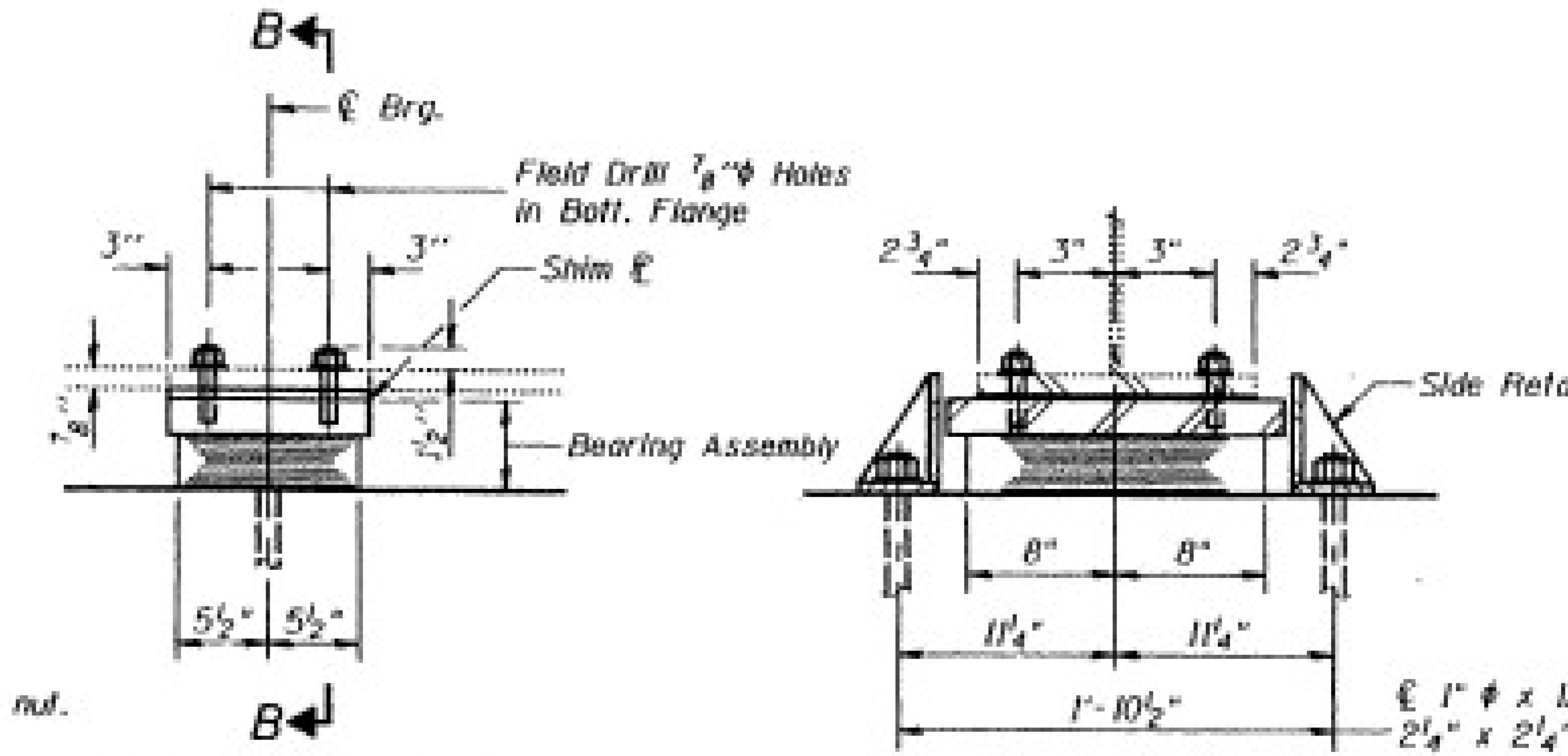
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	(12-51HB)BR	CLARK	759	187
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		


A
5½"
℄ Brg.
Field Drill ⅞"ϕ Holes in Bott. Flange
2"
2"
1"
1½"
⅞"
Bearing Assembly
Shim ℗
3½"
3½"
** ⅛" reinforced elastomeric neoprene mat. Cost included with bearing.
A
2¾"
3"
3"
2¾"
Side Retainer
5"
5"
1⅞"
8¼"
8¼"
1⅞"
1'-8¼"
℄ 1" ϕ x 12" Anchor bolts with 2¼" x 2¼" x 5/16" ℗ washer under nut. 1½" ϕ Holes in bottom ℗.

ELEVATION AT ABUT.

SECTION A-A

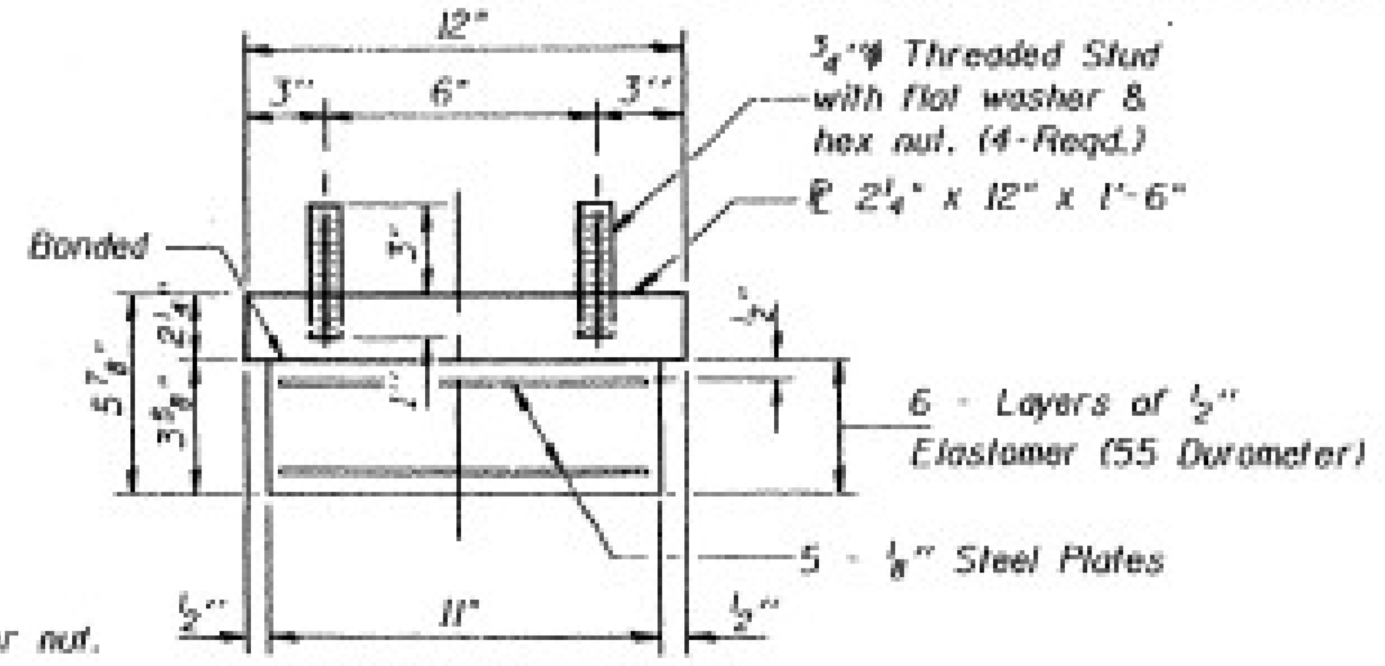
TYPE II ELASTOMERIC EXP. BRG. - AT ABUTMENTS


B
℄ Brg.
Field Drill ⅞"ϕ Holes in Bott. Flange
3"
3"
Shim ℗
⅞"
1½"
Bearing Assembly
5½"
5½"
B
2¾"
3"
3"
2¾"
Side Retainer (Typ.)
8"
8"
11¼"
11¼"
1'-10½"
℄ 1" ϕ x 12" Anchor bolts with 2¼" x 2¼" x 5/16" ℗ washer under nut. 1½" ϕ Holes in bottom ℗.

ELEVATION AT PIER

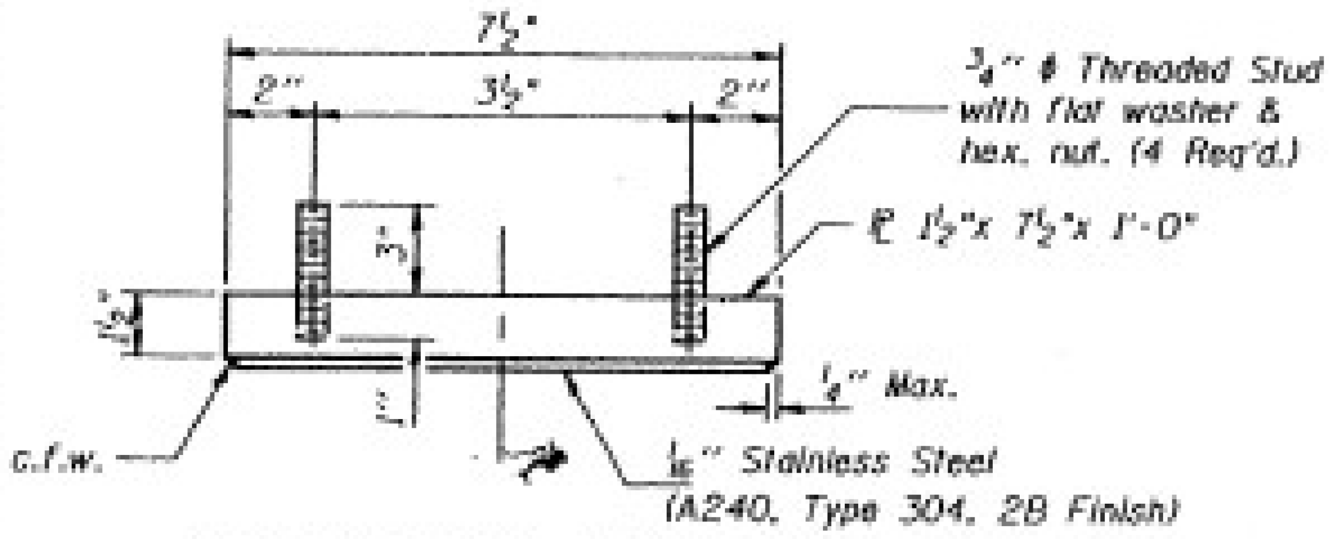
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. - AT PIERS 1 & 3

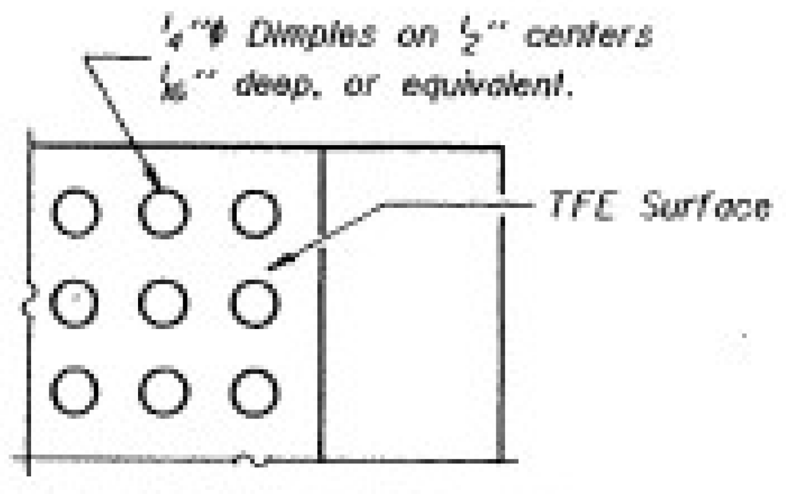

12"
3"
6"
3"
¾"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
℗ 2¼" x 12" x 1'-6"
Bonded
3"
2¼"
5⅞"
3⅝"
1"
½"
6 - Layers of ½" Elastomer (55 Durometer)
5 - ⅛" Steel Plates
½"
11"
½"

BEARING ASSEMBLY

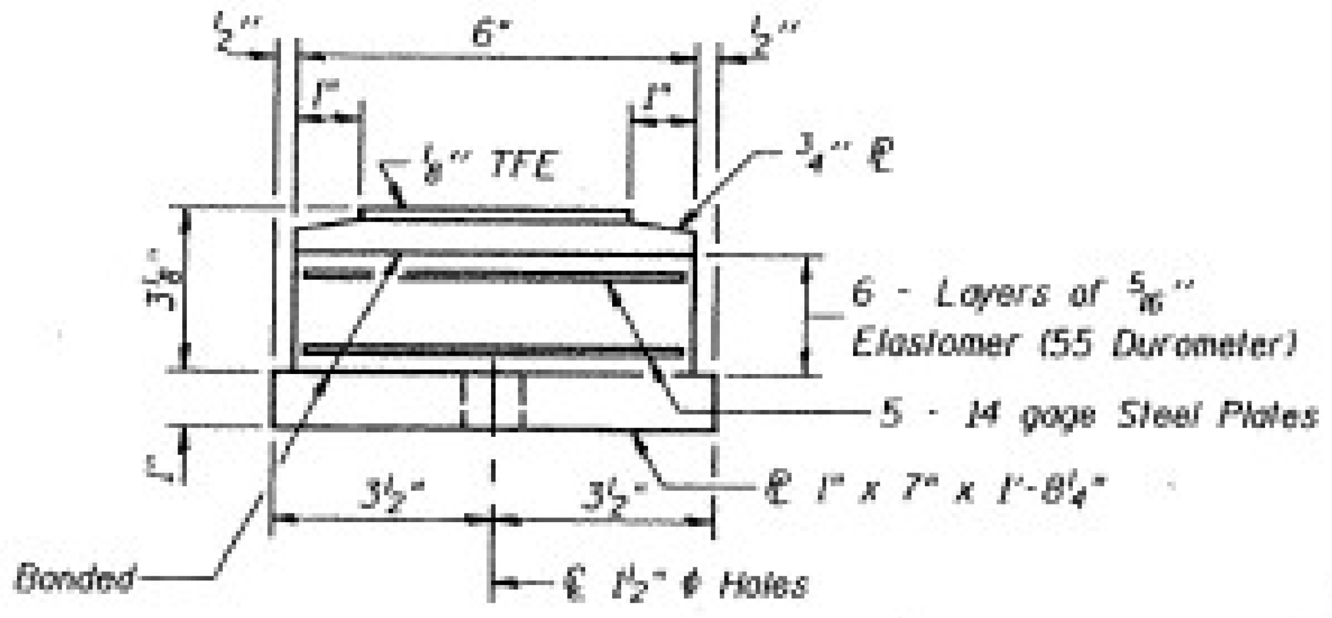
Note: Shim plates shall not be placed under Bearing Assembly.


7½"
2"
3½"
2"
¾" ϕ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
℗ 1½"x 7½"x 1'-0"
3"
1½"
1"
¼" Max.
c.f.w.
1/16" Stainless Steel (A240, Type 304, 2B Finish)

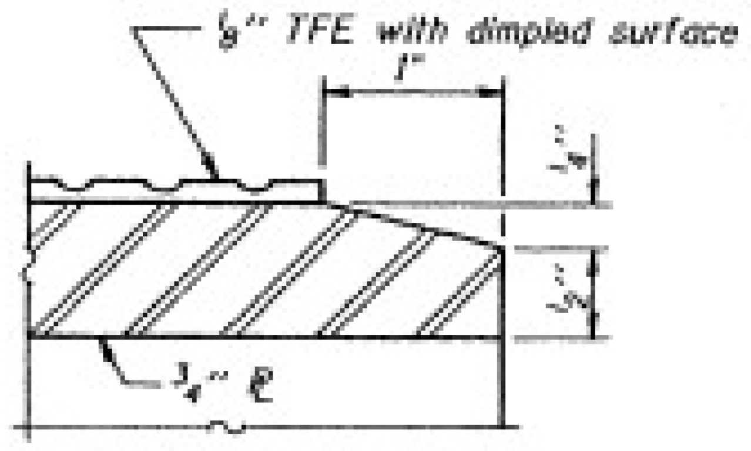
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



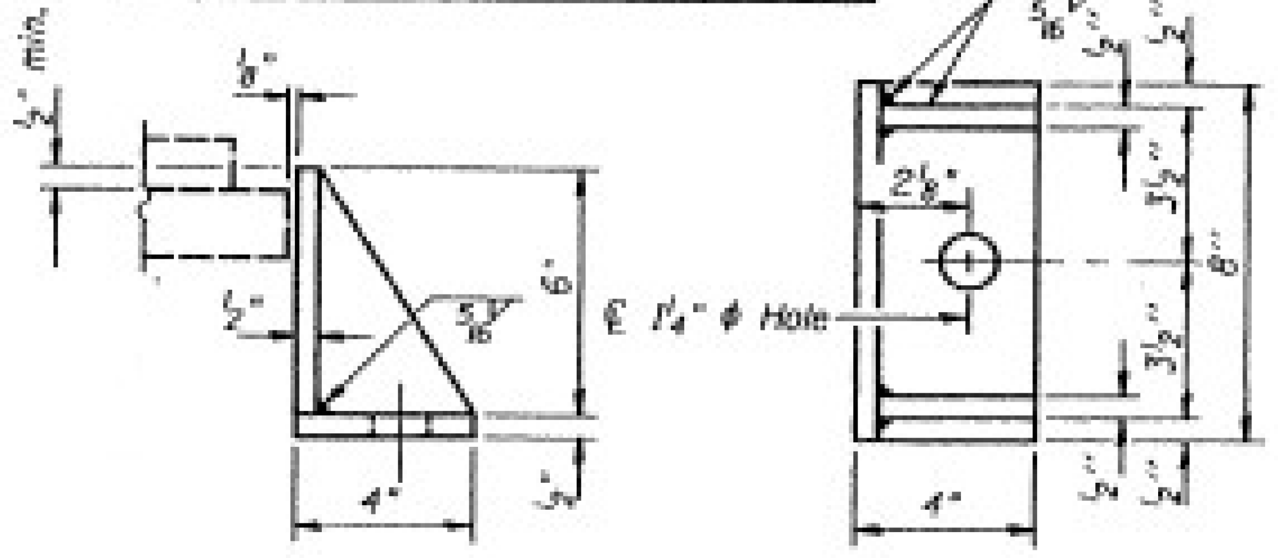
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

Note: The ⅛" 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 ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



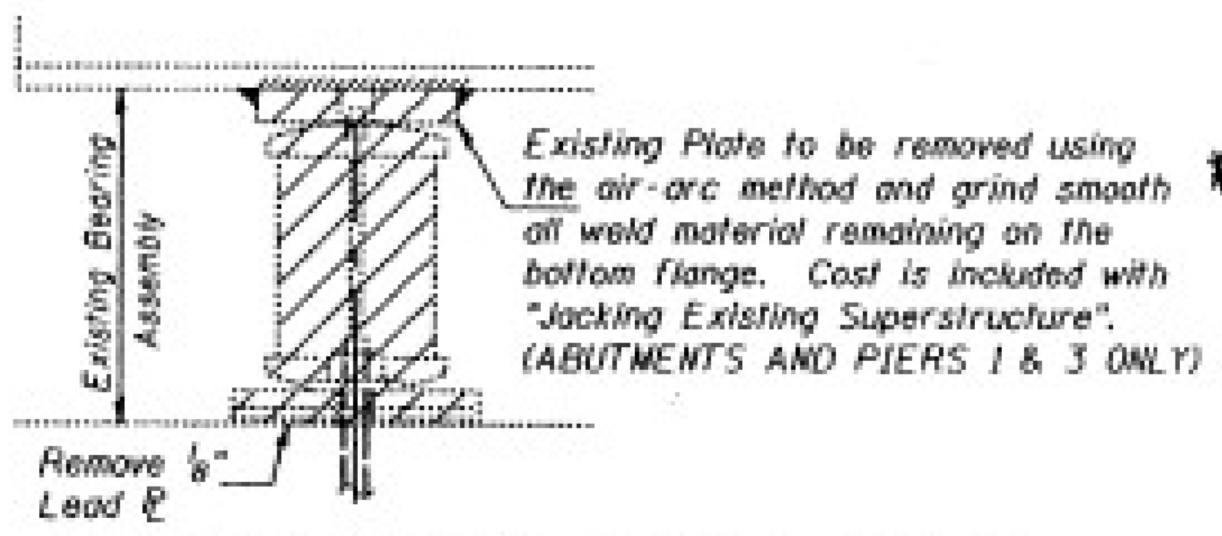
SIDE RETAINER

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

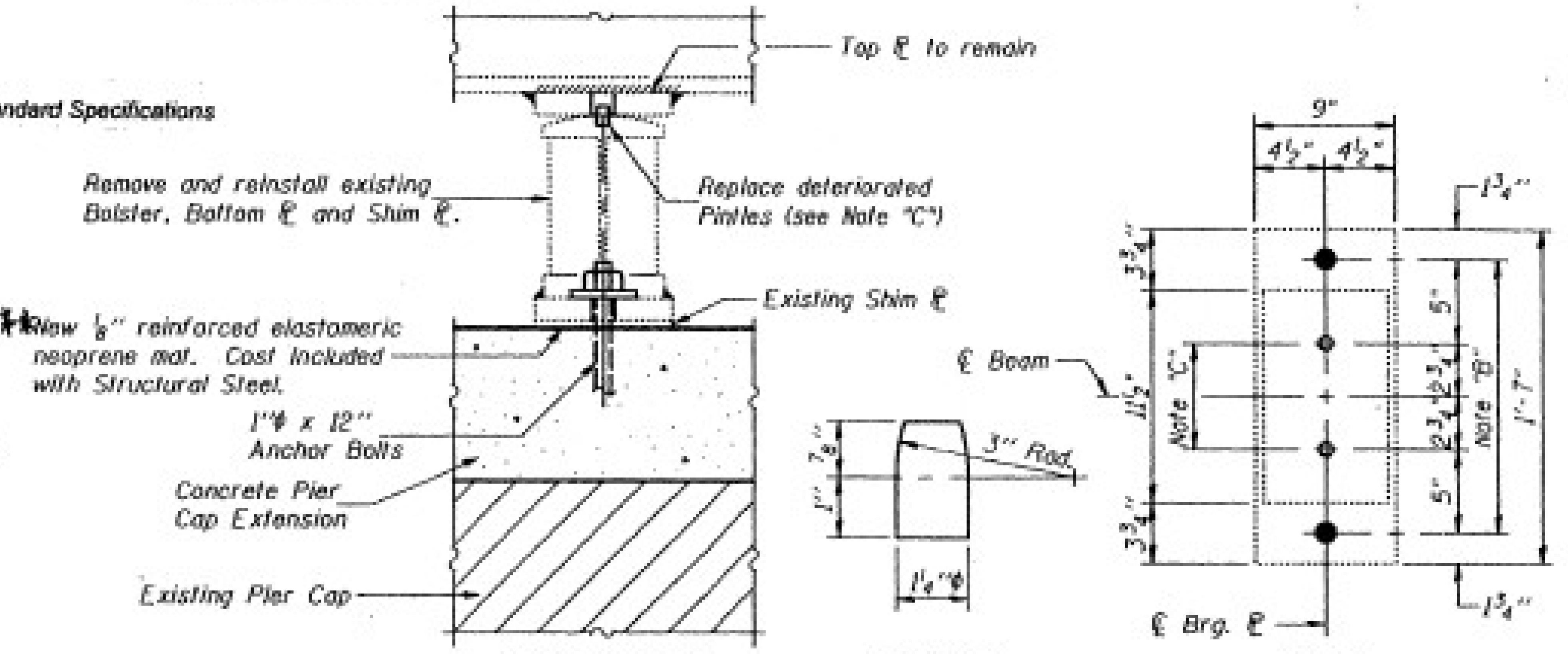
DESIGNED	CDB
CHECKED	DCD
DRAWN	P. Ray
CHECKED	DCD/CDB

I-2-E2 4-30-99

* In accordance with Article 1052.02 of the Standard Specifications


Existing Bearing Assembly
Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange. Cost is included with "Jacking Existing Superstructure". (ABUTMENTS AND PIERS 1 & 3 ONLY)
Remove ⅛" Lead ℗

EXISTING BEARING REMOVAL DETAIL


Top ℗ to remain
Remove and reinstall existing Bolster, Bottom ℗ and Shim ℗.
Replace deteriorated Pintles (see Note "C")
Existing Shim ℗
** New ⅛" reinforced elastomeric neoprene mat. Cost included with Structural Steel.
1"ϕ x 12" Anchor Bolts
Concrete Pier Cap Extension
Existing Pier Cap
⅞"
1"
3" Rad.
1¼"ϕ
℄ Beam
9"
4½"
4½"
1¾"
3¾"
11½"
Note "C"
5"
2¾"
2¾"
5"
Note "B"
1'-7"
3¾"
1¾"
℄ Brg. ℗

ELEVATION PINTLE PLAN

EXISTING FIXED BEARING - AT PIER 2

Remove and reinstall existing pier bearings.
Cost included with Jacking Existing Superstructure.

Note "B"
Existing 1½"ϕ Holes for 1"ϕ Anchor Bolts-5/16" x 2½" x 2½" ℗ Washer under nut.

Note "C"
Existing 1⅜"ϕ Holes-1" deep in Top ℗ for 1¼"ϕ Pintles. Replace deteriorated Pintles as directed by the Engineer. Thread or press fit Pintles in Bolster.

SHIM THICKNESS TABLE

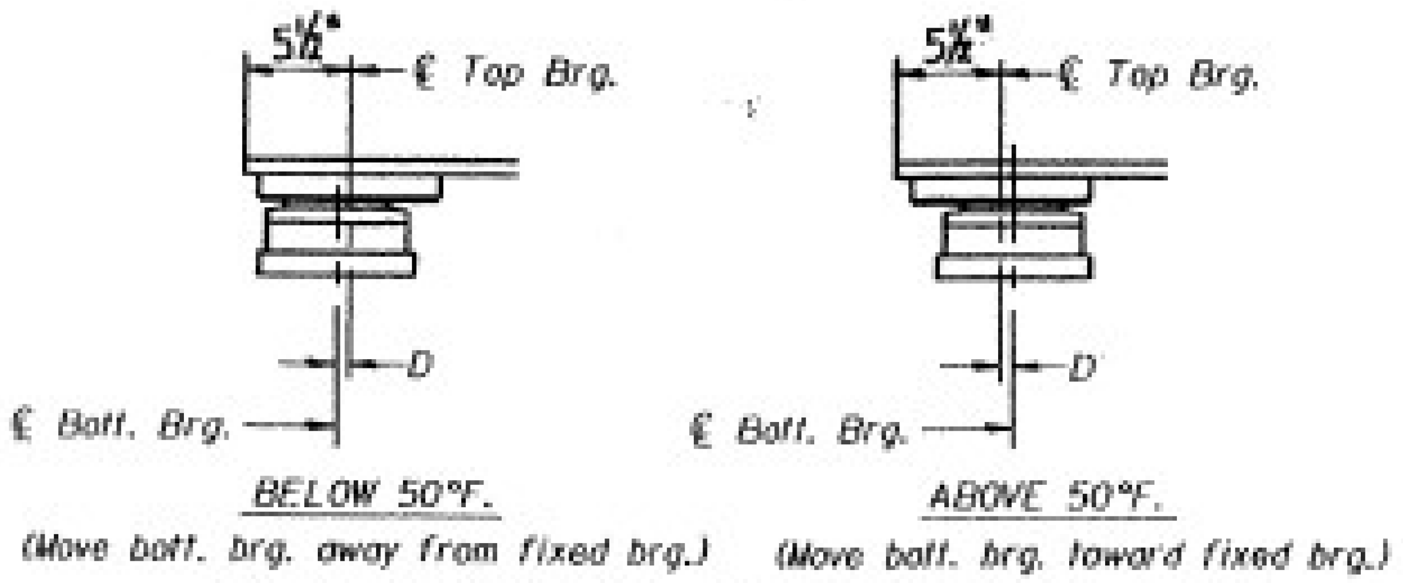
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
Abuts. & Piers *	-	-	½"	-	-

* Reuse Existing Shims at Pier 2.

INTERIOR GIRDER REACTION TABLE				
		Abuts.	Piers 1 & 3	Pier 2
R (DL)	(K)	12.0	58.0	70.0
R (LL)	(K)	23.8	31.9	34.4
R (Imp)	(K)	7.1	8.8	8.7
R (Total)	(K)	42.9	98.7	113.1

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Elastomeric Bearing Assembly Type II	Each	10



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=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

NOTES FOR BEARING ASSEMBLY

Removal and reinstallation of beam diaphragms may be required to facilitate drilling holes for Bearings and Anchor Bolts. Cost shall be included with "Jacking Existing Superstructure."

Side Retainers, Shim Plates, Connection Bolts and Anchor Bolts are included with "F & E Structural Steel."

See sheet 6 for Anchor Bolt installation.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
T.R. 183B OVER
F.A.I. ROUTE 70
F.A.I. ROUTE 70 SECTION (12-51HB)BR
CLARK COUNTY
STATION 1117+32.00
STRUCTURE NO. 012-0042

MODEL: EXISTING PLANS-42-3 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

SCALE: SHEET 3 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	31
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

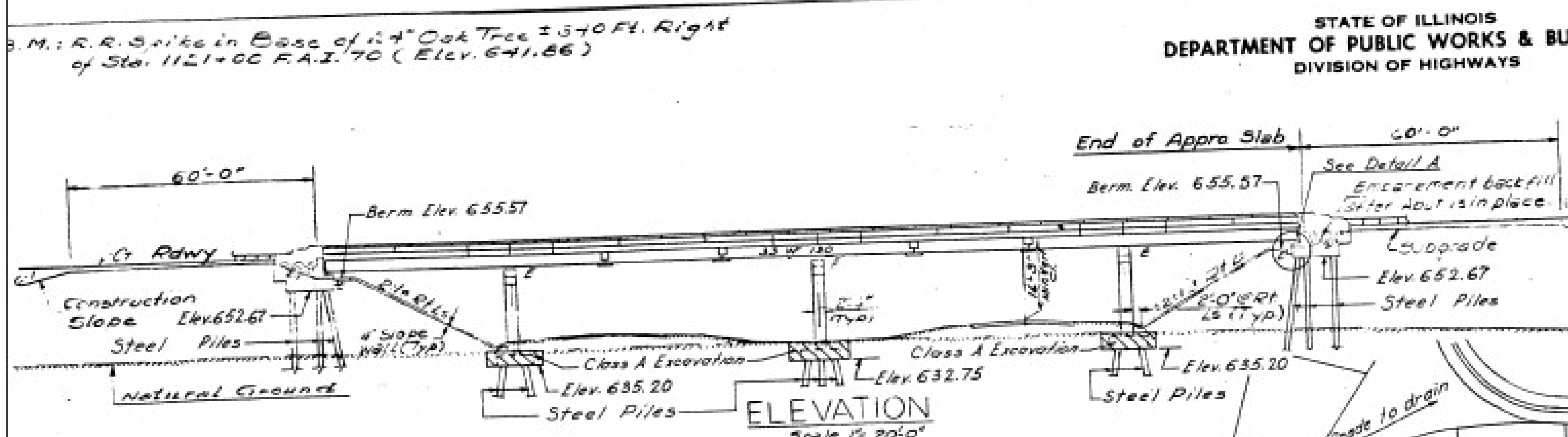
I-70 CLARK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-51HB	CLARK	25	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT I-70-4(70)133		

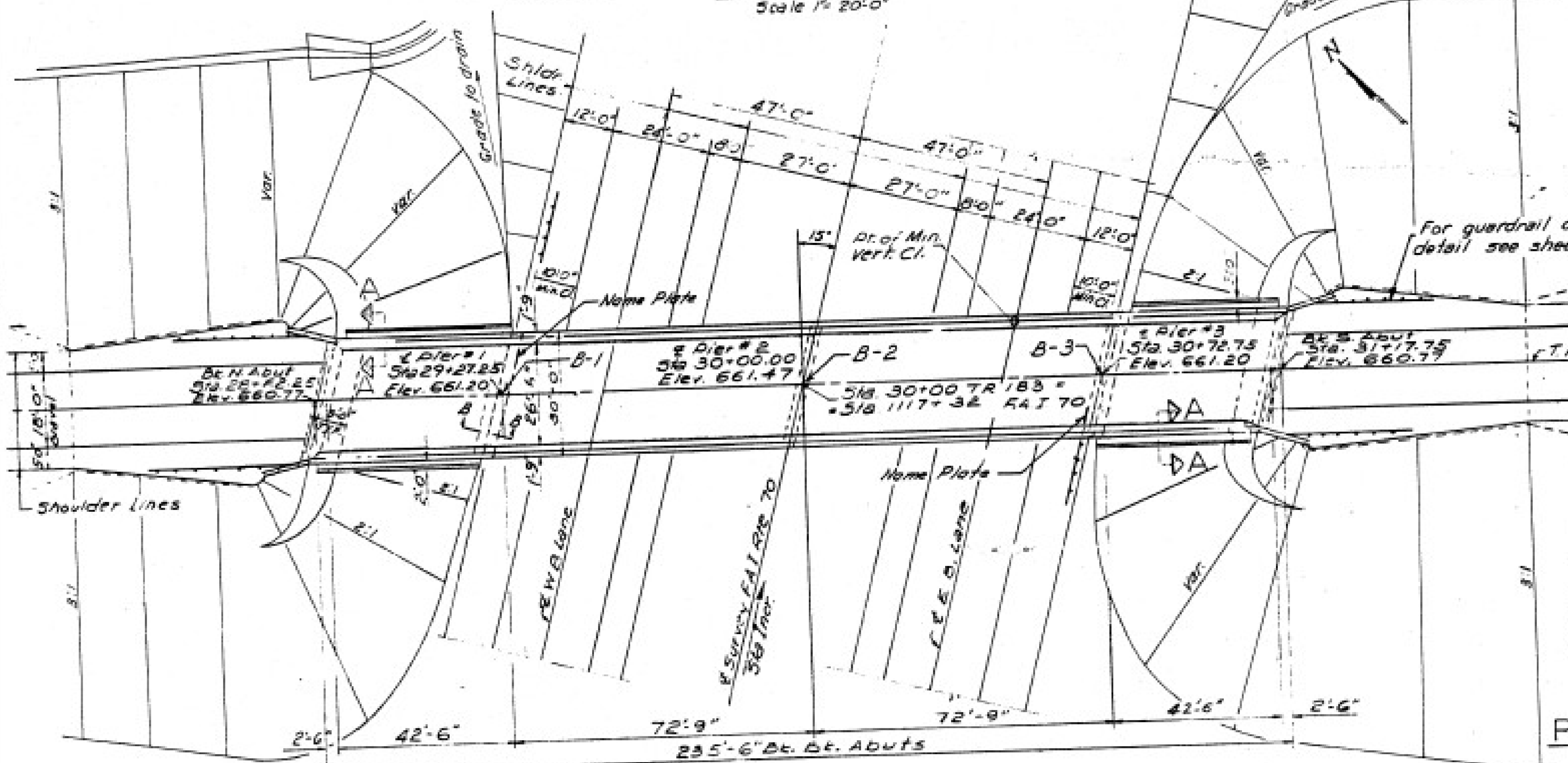
SHEET NO. 1
9 SHEETS

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

B.M.: R.R. Spike in Base of 24" Oak Tree ± 340 Ft. Right of Sta. 1121+00 F.A.I. 70 (Elev. 641.86)

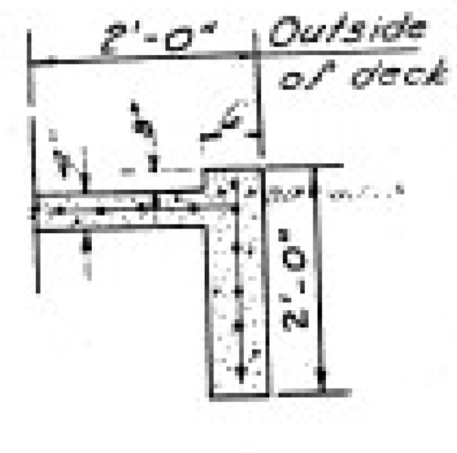


ELEVATION
Scale 1" = 20'-0"

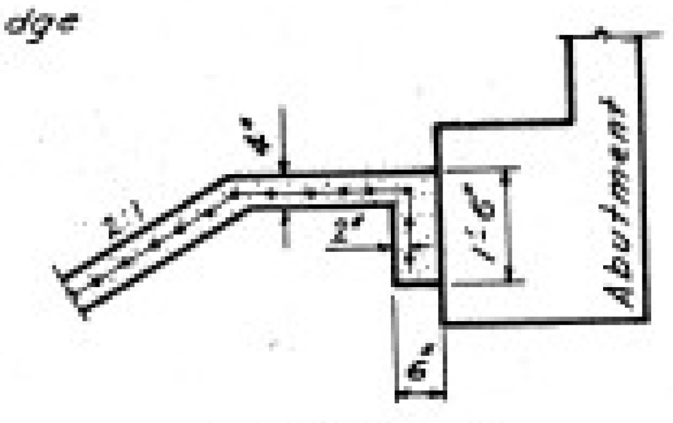


Grade to drain
Grade to drain
Shldr Lines
47'-0"
12'-0"
24'-0"
12'-0"
27'-0"
47'-0"
27'-0"
8'-0"
24'-0"
12'-0"
15°
Pt. of Min. Vert. Cl.
For guardrail connection detail see sheet #9
Name Plate
℄ Pier #1 Sta 29+27.25 Elev. 661.20
℄ Pier #2 Sta 30+00.00 Elev. 661.47
℄ Pier #3 Sta. 30+72.75 Elev. 661.20
Bk. N. Abut Sta. 28+82.25 Elev. 660.77
Bk. S. Abut Sta. 31+17.75 Elev. 660.77
B-1
B-2
B-3
Sta. 30+00 T.R. 183 = Sta 1117+32 F.A.I. 70
℄ T.R. 183
A
A
Name Plate
Shoulder Lines
℄ W.B. Lane
℄ Survey F.A.I. Rte 70 Sta 1117+32
℄ E.B. Lane
var.
2:1
2:1
2'-6"
42'-6"
72'-9"
72'-9"
42'-6"
2'-6"
235'-6" Bk. Bk. Abuts

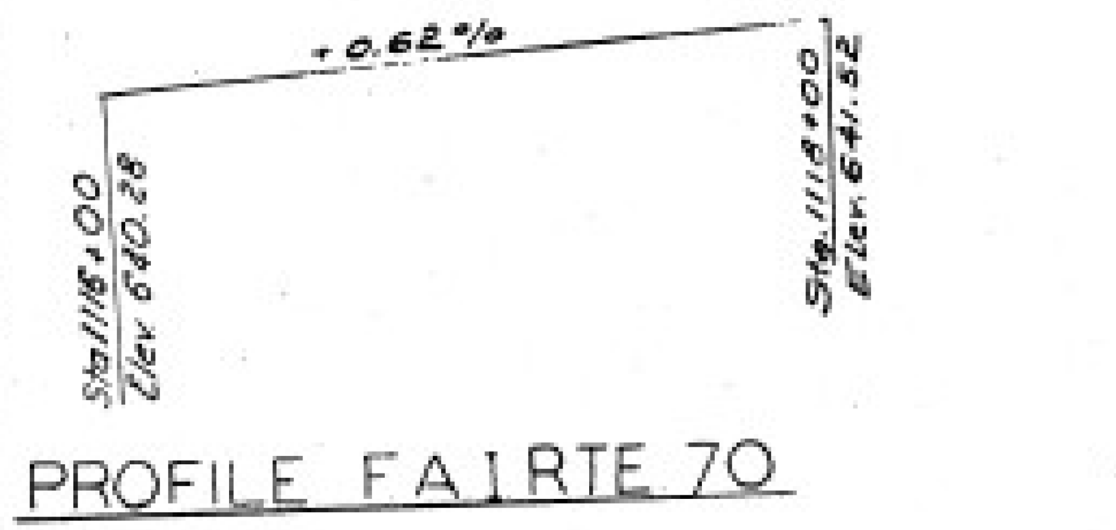
PLAN
Scale 1" = 20'-0"



SEC A-A



DETAIL A



PROFILE F.A.I. RTE 70

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 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" ⌀, Open Holes 15/16" ⌀, 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 = 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.

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

All Piles shall be driven to refusal.

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

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ⅓ 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.

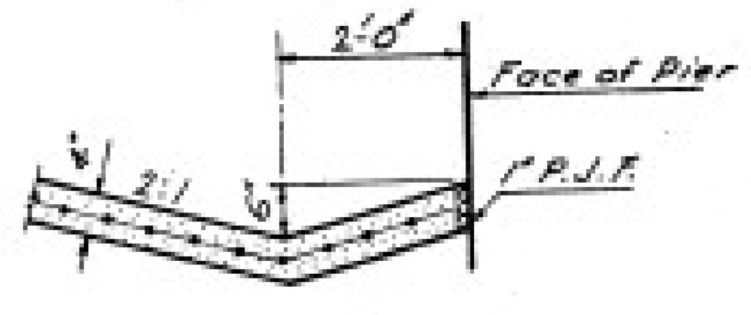
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class "A" Excavation for Structures	Cu. Yds.		140	140
Class X Concrete	Cu. Yds.	206.2	209.9	416.1
Structural Steel	Lbs.	184,900		184,900
Aluminum Handrail	Lin. Ft.	464		464
Reinforcement Bars	Lbs.	48,130	17,090	65,220
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		380	380
* Protective Coat	Sq. Yds	900		900
Steel Piles (8BP36)	Lin. Ft.		1203	1203
Test Piles Steel (8BP36)	Each		2	2

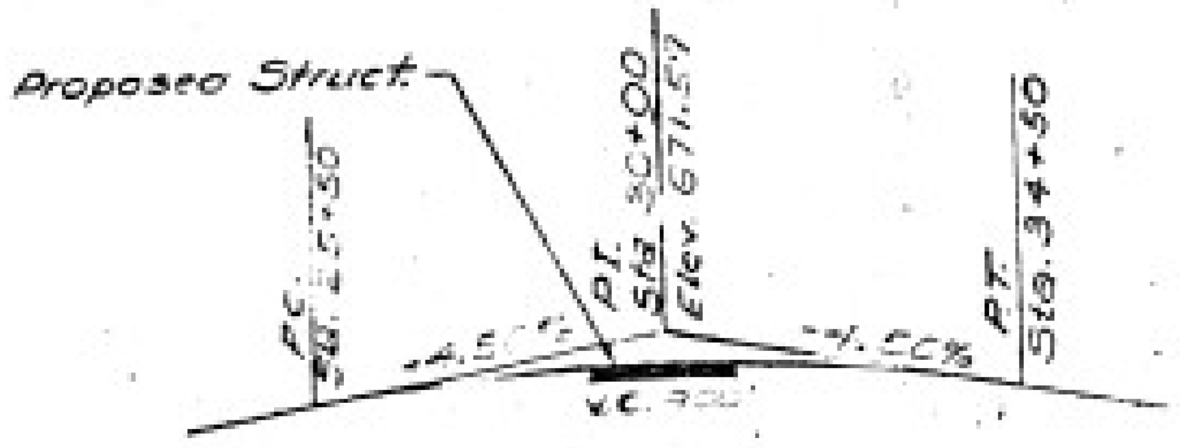
* Includes application on top, inside face and exposed end of wingwalls.

STATION 1117+32.00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-51HB
F.A. PROJ. I-70-4(70)
LOADING HS 15

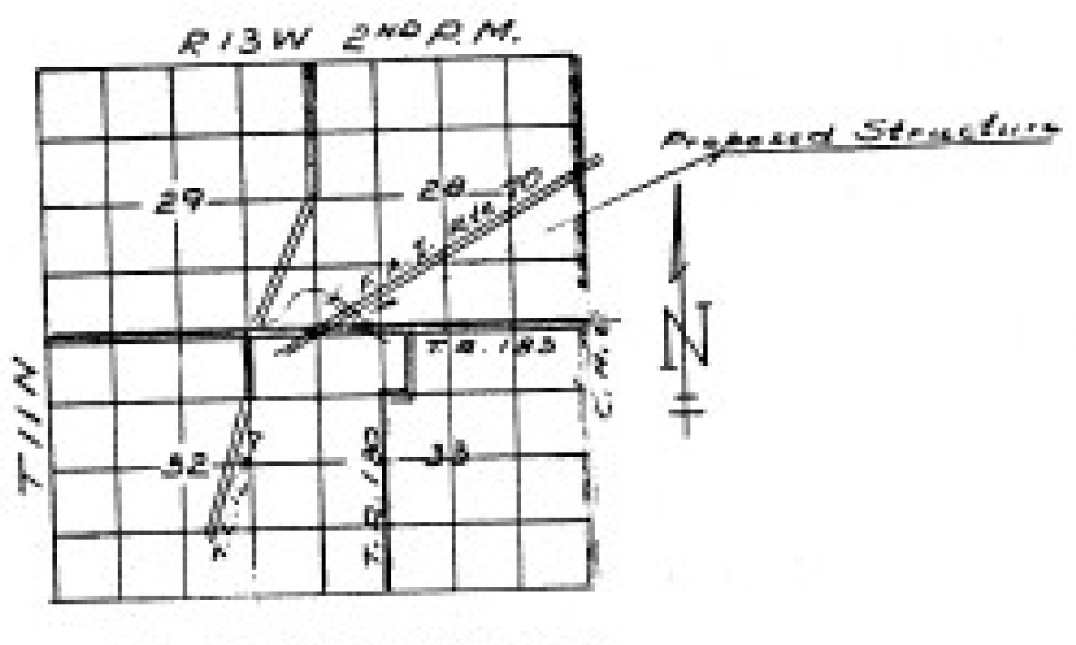
NAME PLATE LETTERING
(See Std. 2113-1)



SEC. B-B



PROFILE T.R. 183



LOCATION PLAN

DESIGN STRESSES
fc = 1400 psi. Super. & Sub
Vc = 75 psi. Ftgs.
fs = 20 000 psi. Reinf.
fs = 20,000 psi Struct. (A-36)
n = 10
Allowable ℄ Defl. 7000
LOADING HS15-44

DESIGNED Fred Stone
CHECKED Gene McCormick
DRAWN J. Kessler
CHECKED Gene McCormick

Aug. 5 1965
EXAMINED C. E. Thunman Jr.
PASSED H. J. Alton
APPROVED T. E. Shaff

GENERAL PLAN & ELEVATION
PROJ. I-70-4(70)133
T.R. 183 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 12-51HB
CLARK COUNTY
STATION 1117+32.00

MODEL: EXISTING PLANS-42-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

SCALE: SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	32
	CONTRACT NO. 74E48			
	ILLINOIS FED. AID PROJECT			

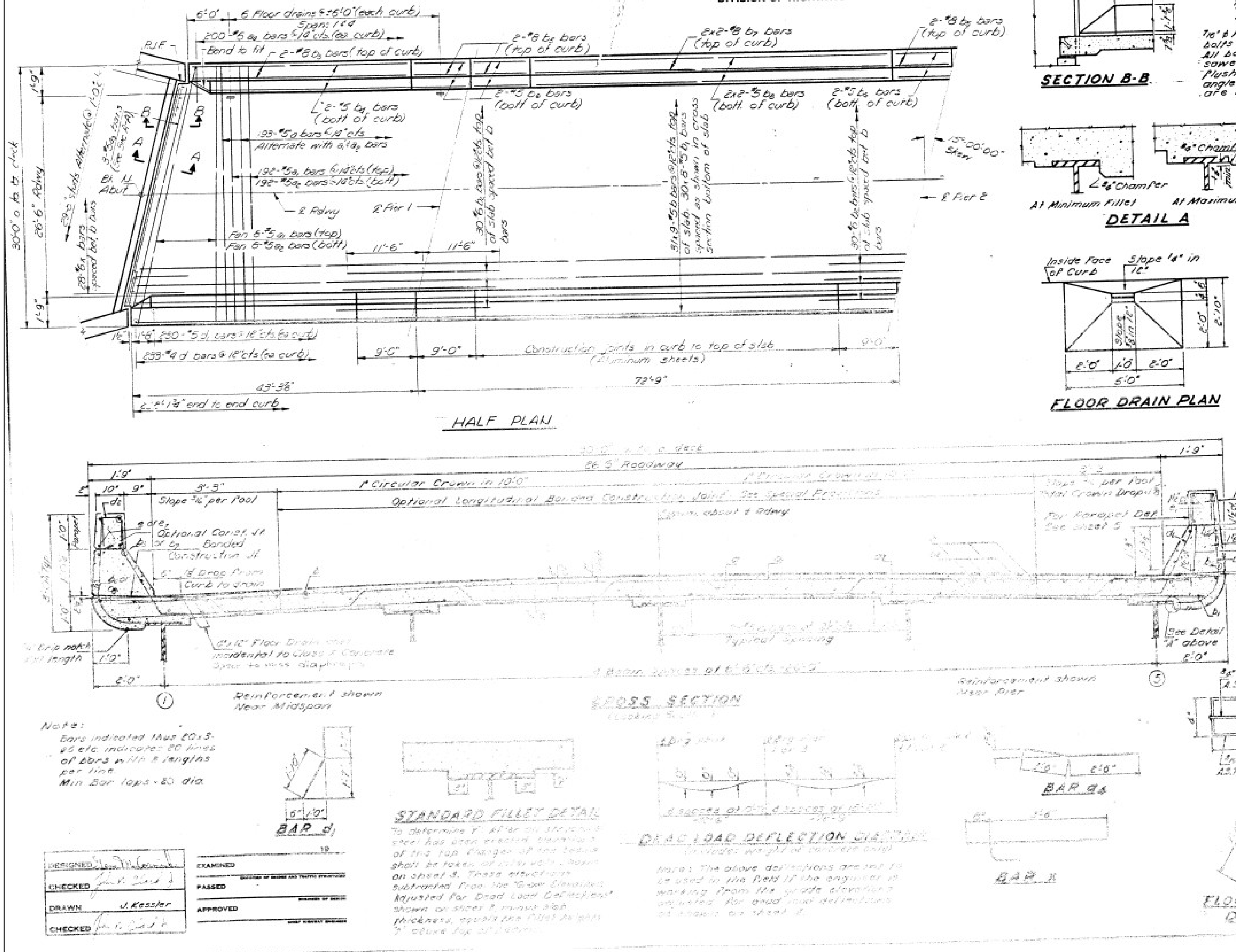
I-70
CLARK

MODEL: EXISTING PLANS-42-5 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

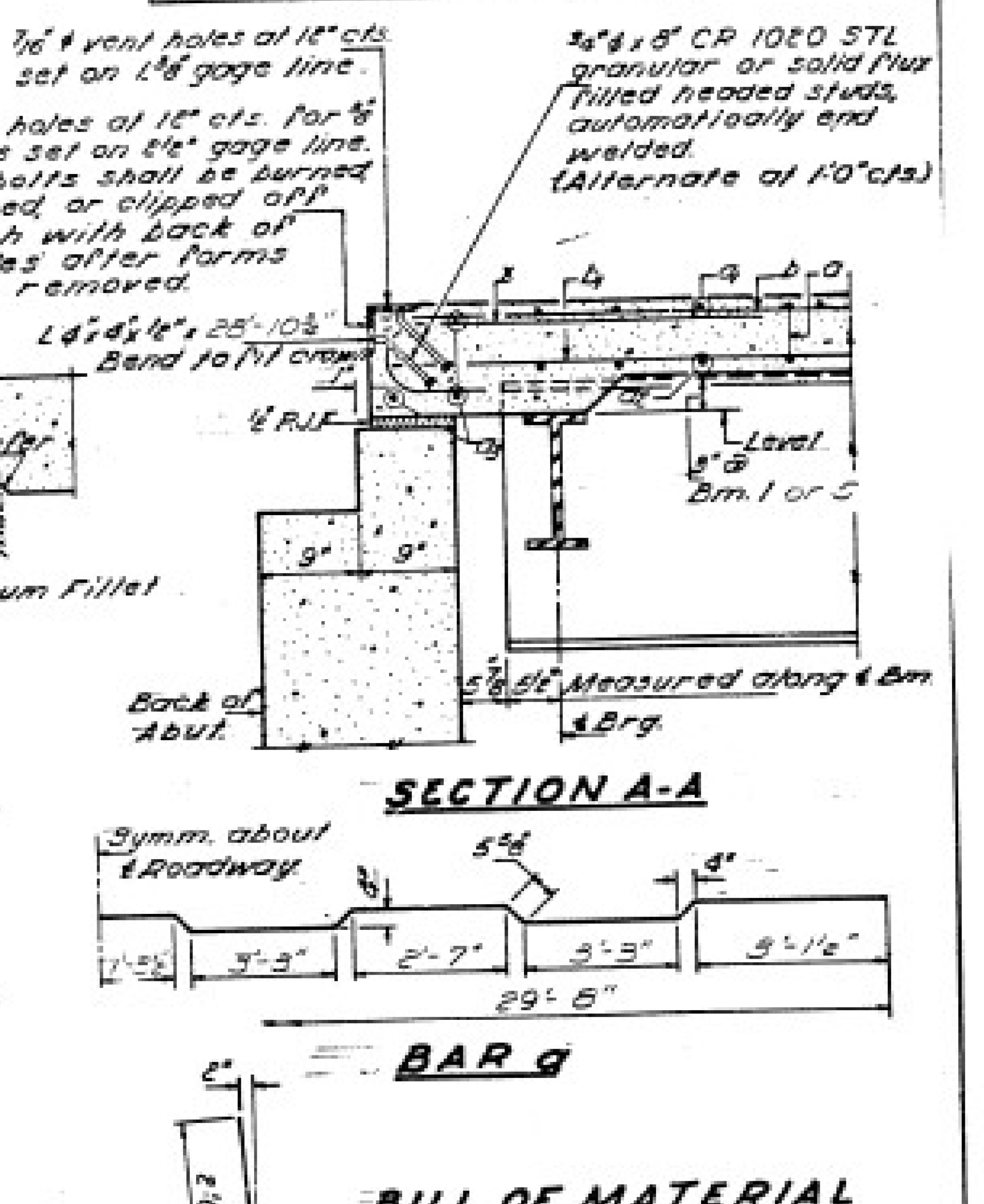
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-51HB	CLARK	25	12

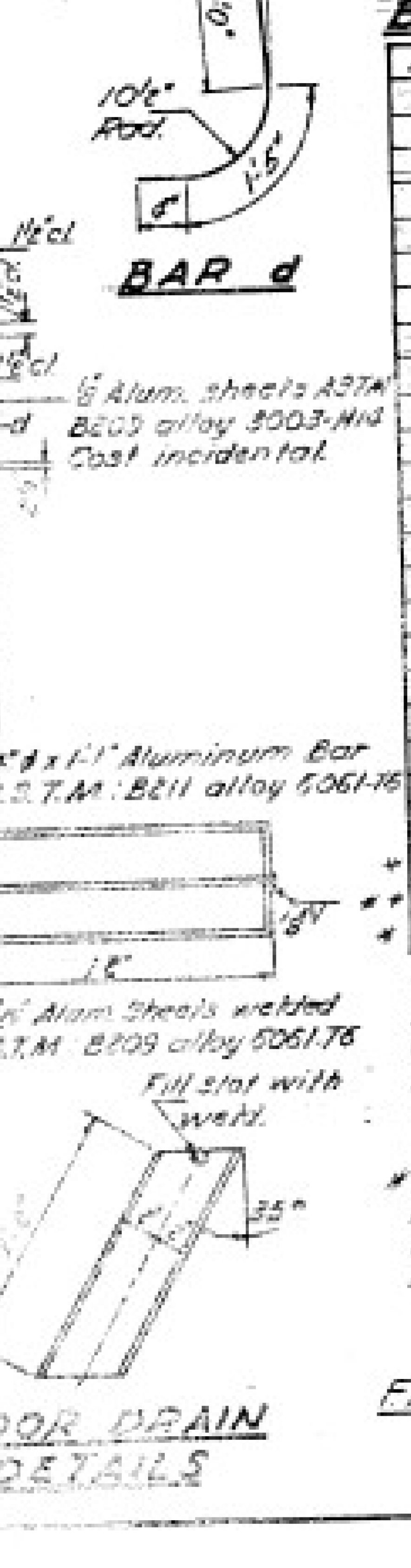
SHEET NO. 2
9 SHEETS

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


6'-0"
6 Floor drains @ ±6'-0" (each curb)
Span 1 & 4
200-#5 a₄ bars @ 14" cts (ea. curb)
Bend to fit
2-#8 b₃ bars (top of curb)
2-#8 b₃ bars (top of curb)
2x2-#8 b₇ bars (top of curb)
2-#8 b₅ bars (top of curb)
2-#5 b₄ bars (bott. of curb)
2-#5 b₆ bars (bott. of curb)
2x2-#5 b₈ bars (bott. of curb)
2-#5 b₆ bars (bott. of curb)
RJF
B
B
A
A
Bk. ℄ Abut.
30'-0" o. to o. deck
26'-6" Rdwy.
1'-9"
1'-9"
193-#5 a bars @ 18" cts
Alternate with a₁ & a₂ bars
192-#5 a₁ bars @ 18" cts (top)
192-#5 a₂ bars @ 18" cts (bott.)
℄ Rdwy.
℄ Pier 1
℄ Pier 2
15°-00'-00" Skew
Fan 6-#5 a₃ bars (top)
Fan 6-#5 a₃ bars (bott.)
11'-6"
11'-6"
30-6 b₁ bars @ 12" cts top of slab spaced bet. b bars
31x9-#5 b bars @ 12" cts top of slab, 30 x 6-#5 b₁ bars spaced as shown in cross section bottom of slab
30-6 b₂ bars @ 12" cts top of slab spaced bet. b bars
28-3 b₄ bars spaced bet. b bars
230-#5 d₁ bars @ 18" cts (ea. curb)
233-#4 d bars @ 18" cts (ea. curb)
9'-0"
9'-0"
9'-0"
Construction joints in curb to top of slab (Aluminum sheets)
43'-3⅝"
72'-9"
end to end curb
HALF PLAN
30'-0" o. to o. deck
26'-6" Roadway
1'-9"
1'-9"
10"
9"
3'-3"
Slope 3/16" per foot
1" Circular Crown in 13'-0"
Optional Longitudinal Bonded Construction Joint - See Special Provisions
Symm. about ℄ Rdwy.
Slope per foot
Total Crown Drop
For Parapet Det. See Sheet 5
Optional Const. Jt. or Bonded Construction Jt.
Drop from Curb to drain
6"x12" Floor Drain incidental to Class X Concrete
Typical Spacing
See Detail "A" above
4 Beam Spaces at 6'-6" cts = 26'-0"
2'-0"
1'-9"
8'-0"
1
5
Reinforcement shown Near Midspan
Reinforcement shown Near Pier
CROSS SECTION
SECTION B-B
1'-6"
At Minimum Fillet
At Maximum Fillet
¾" Chamfer
¾" Chamfer
DETAIL A
Inside Face of Curb
Slope ¼" in 12"
2'-0"
1'-0"
2'-0"
5'-0"
2'-0"
2'-10"
FLOOR DRAIN PLAN
BAR d₁
6"
10"
STANDARD FILLET DETAIL
DEAD LOAD DEFLECTION DIAGRAM
BAR a₄
BAR x
FLOOR DRAIN DETAILS

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. Bar laps = 30 dia.


7/16" ⌀ vent holes at 12" cts. set on 1⅜ gage line
7/16" ⌀ holes at 12" cts. for ⅜" 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"⌀ x 8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts)
L 4"x4"x½" x 28'-10⅝" Bend to fit crown
½" RJF
Level
Bm. 1 or 5
9"
9"
Back of Abut.
Measured along ℄ Bm.
℄ Brg.
SECTION A-A
Symm. about ℄ Roadway
3'-3"
2'-7"
3'-3"
3'-1½"
29'-8"
BAR a


2"
10½" Rad.
BAR d
½" Alum. sheets ASTM B209 alloy 3003-H14 Cost incidental.
⅜"x1½" Aluminum Bar A.S.T.M. B211 alloy 6061-T6
⅛" Alum. Sheets welded A.S.T.M. B209 alloy 6061-T6
Fill slot with weld.
35°

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	193	#5	30'-9"	〰
a₁	208	#5	29'-5"	—
a₂	208	#5	29'-0"	—
a₃	6	#5	28'-7"	—
a₄	400	#5	4'-0"	—
b	279	#5	27'-3"	—
b₁	290	#5	30'-6"	—
b₂	90	#6	25'-0"	—
b₃	8	#8	34'-0"	—
b₄	8	#5	34'-0"	—
b₅	24	#8	8'-9"	—
b₆	24	#5	8'-9"	—
b₇	16	#8	25'-0"	—
b₈	16	#5	28'-0"	—
d	466	#4	3'-9"	⌣
d₁	460	#5	3'-5"	⌣
x	56	#6	4'-0"	⊃

* Reinforcement Bars	Lbs.	44770
** Structural Steel	Lbs.	154900
* Class X Concrete	Cu. Yds.	131.2

* 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. = 6370 lbs.

SUPERSTRUCTURE
FAI RT. 70 SEC 12-51 HB
CLARK COUNTY
STA. 1117+32.00

DESIGNED		EXAMINED	
CHECKED		PASSED	
DRAWN	J. Kessler	APPROVED	
CHECKED			

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

SCALE: | SHEET 5 OF 6 SHEETS | STA. | TO STA.

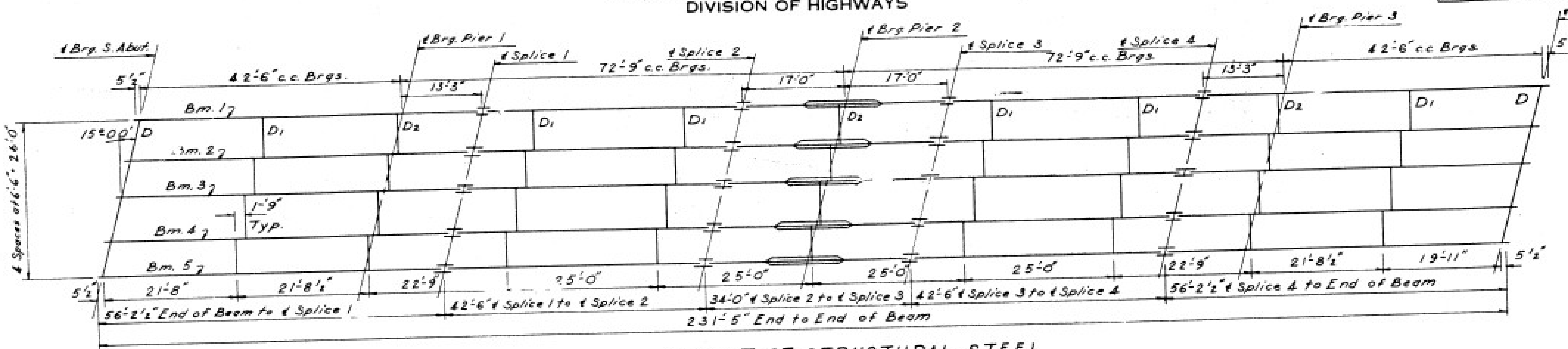
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	33

CONTRACT NO. 74E48
ILLINOIS | FED. AID PROJECT

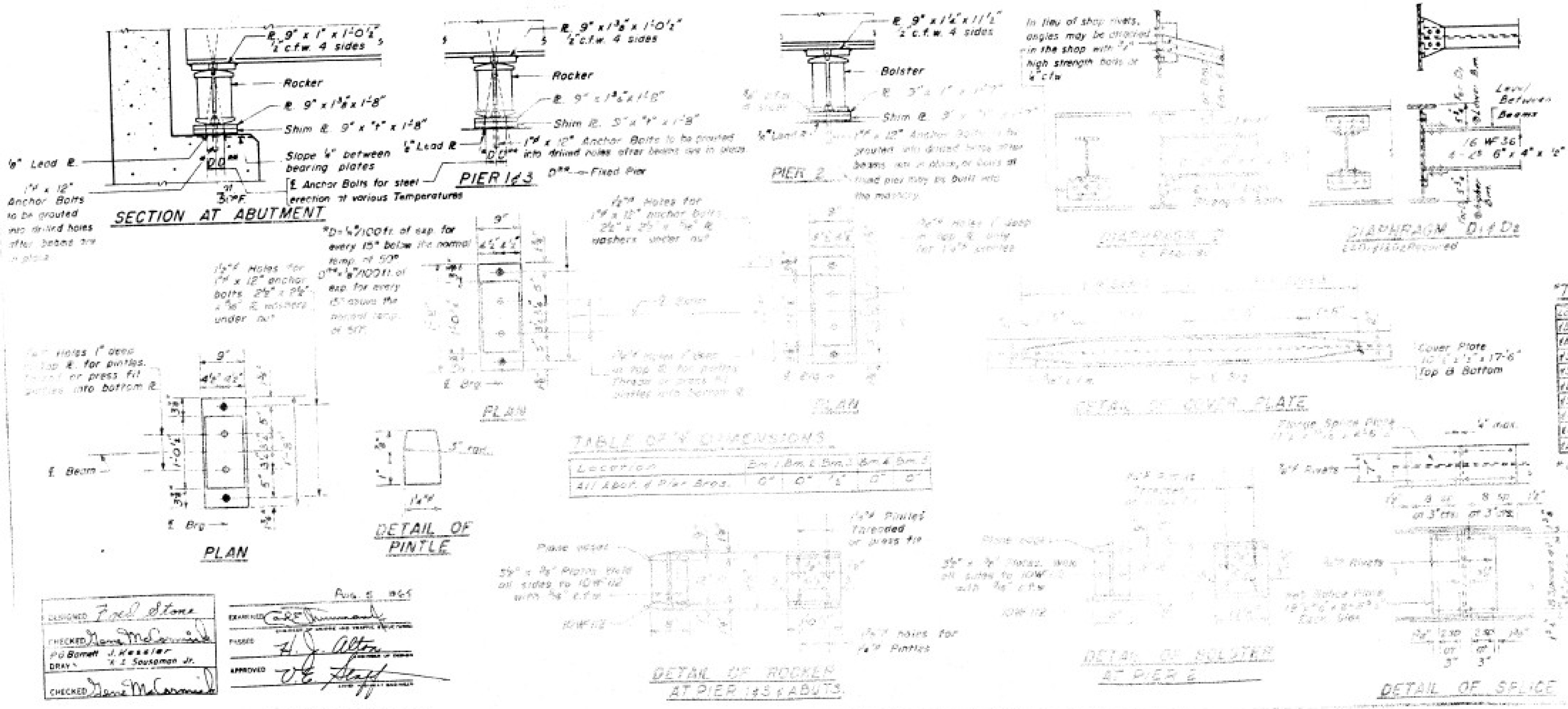
I-70
CLARK

70	12-51 HB	CLARK	25	14	9 SHEETS

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



LAYOUT OF STRUCTURAL STEEL
(All Beams 33 WF 130)



PL. 9" x 1" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1⅜" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
Slope ⅛" between bearing plates
¢ Anchor Bolts for steel erection at various Temperatures
1" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
30°F.
D**
SECTION AT ABUTMENT
PL. 9" x 1⅜" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1⅜" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
1" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
PIER 1 & 3
D** — Fixed Pier
*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°
1½" Holes for 1" x 12" anchor bolts 2½" x 2½" x ⁵⁄₁₆" PL. washers under nut
PL. 9" x 1¼" x 11½"
½" c.f.w. 4 sides
Bolster
Shim PL.
PIER 2
1" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.
In lieu of shop rivets, angles may be connected in the shop with ⅞" high strength bolts or ¼" c.f.w.
DIAPHRAGM D
Level Between Beams
16 WF 36
4 - ∠s 6" x 4" x ½"
DIAPHRAGM D1 & D2
PLAN
9"
4½" 4½"
¢ Beam
¢ Brg
PLAN
DETAIL OF PINTLE
1¼"
3" rad.
PLAN
TABLE OF "t" 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
Cover Plate 10" x ½" x 17'-6" Top & Bottom
Flange Splice Plate
⅞" Rivets
DETAIL OF ROCKER AT PIER 1 & 3 & ABUTS.
DETAIL OF BOLSTER AT PIER 2
DETAIL OF SPLICE

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	58.4	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

*TOP OF WF ELEVATIONS For fabrication only

Loc. \ Bm.	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
¢ Brg. N. Abut.	660.11	660.21	660.25	660.21	660.11
¢ Brg. Pier 1	660.45	660.55	660.59	660.55	660.45
¢ Splice 1	660.55	660.65	660.69	660.65	660.55
¢ Splice 2	660.73	660.83	660.87	660.83	660.73
¢ Brg. Pier 2	660.73	660.83	660.87	660.83	660.73
¢ Splice 3	660.73	660.83	660.87	660.83	660.73
¢ Splice 4	660.55	660.65	660.69	660.65	660.55
¢ Brg. Pier 3	660.45	660.45	660.59	660.55	660.45
¢ Brg. S. Abut.	660.11	660.21	660.25	660.21	660.11

*Lower all top of WF elevations by .04'

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 12-51 HB
CLARK COUNTY
STATION 1117+32.00

DESIGNED Fred Stone
CHECKED Gene McCormick
P.G. Barnett J. Kessler
DRAWN E. I. Sousoman Jr.
CHECKED Gene McCormick

Aug. 5 1965
EXAMINED Carl Drummond
PASSED H. J. Alton
APPROVED V. E. Staff

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

MODEL: EXISTING PLANS-42-6 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0042

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	34
		CONTRACT NO. 74E48		

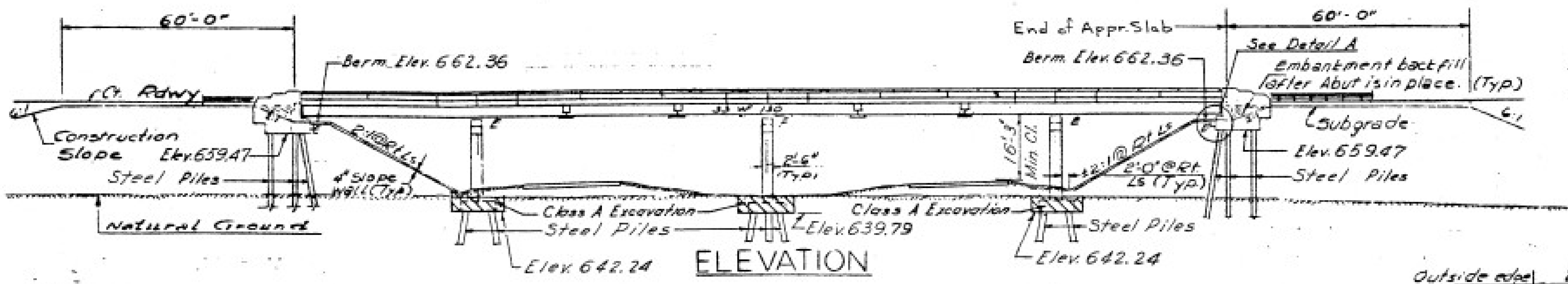
ILLINOIS FED. AID PROJECT

I-70 CLARK

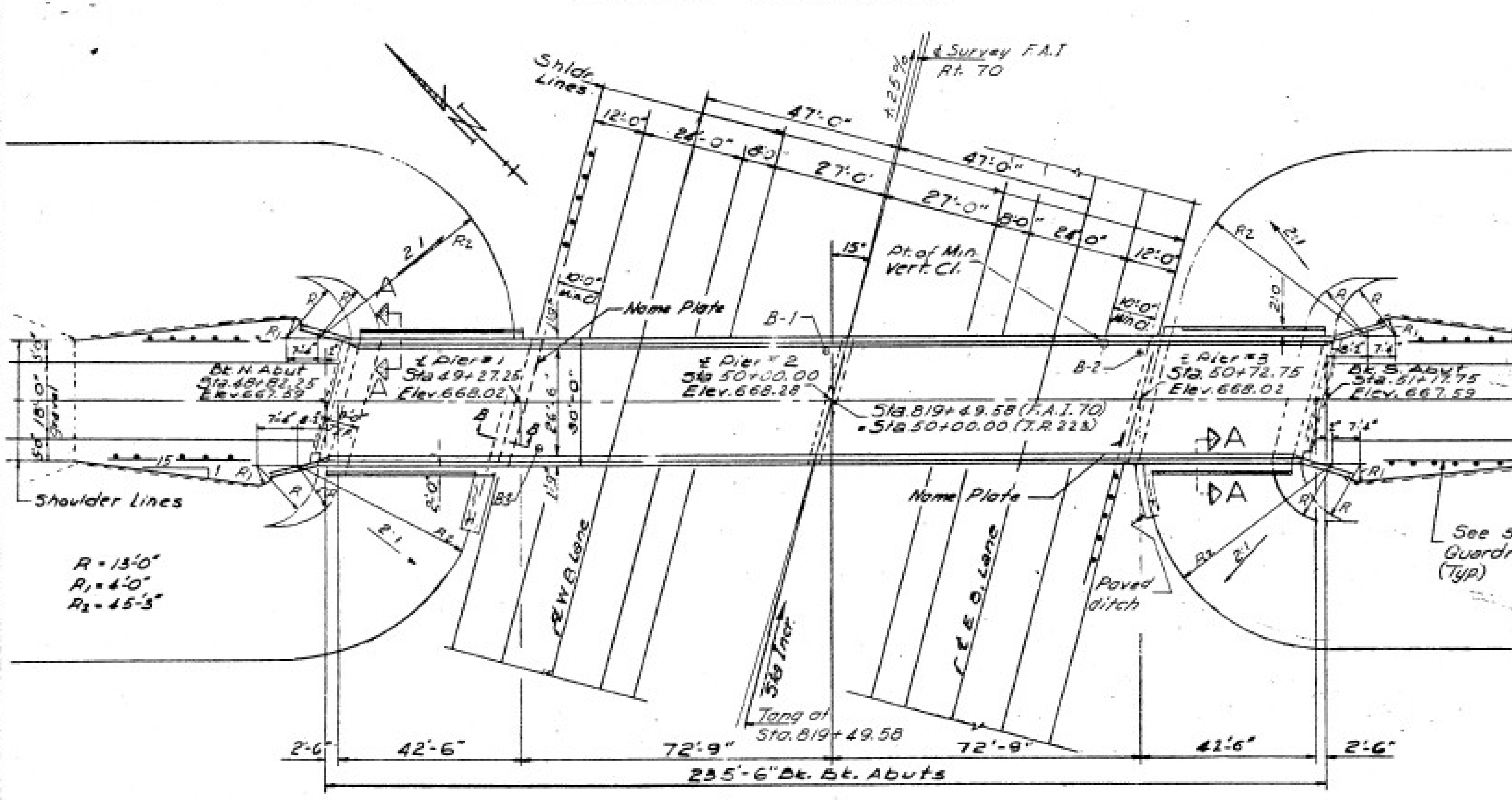
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-49HB-3	CLARK	30	8

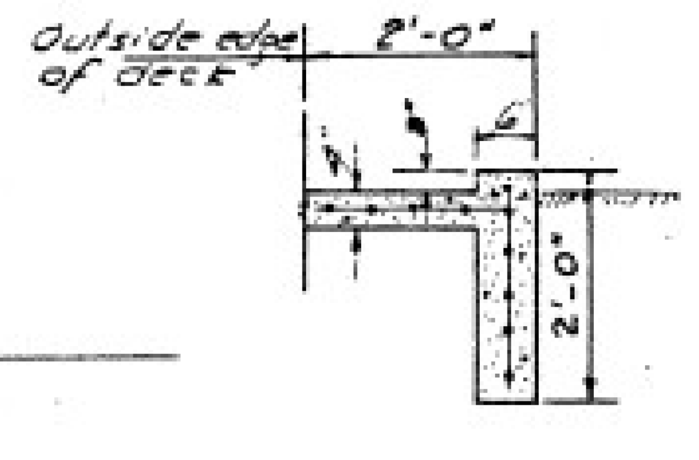
SHEET NO. 1
9 SHEETS



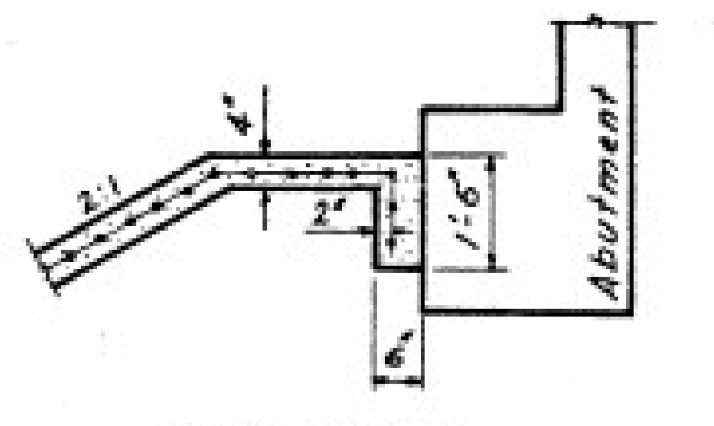
ELEVATION



PLAN



SEC A - A



DETAIL A

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 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" 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 = 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.

The Contractor shall drive two steel test piles, one at the South Abutment and one at Pier 1, each in a permanent location as directed by the Engineer before ordering the remainder of piles.

All Piles shall be driven to refusal.

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

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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class "A" Excavation for Structures	Cu. Yds.		170	170
Class X Concrete	Cu. Yds.	230.2	209.0	439.2
Structural Steel	Lbs.	184,900		184,900
Aluminum Handrail	Lin. Ft.	464		464
Reinforcement Bars	Lbs.	48,760	17,010	65770
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		380	380
* Protective Coat	Sq. Yds.	900		900
Steel Piles (8BP36)	Lin. Ft.		1,753	1,753
Test Piles Steel (8BP36)	Each		2	2

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

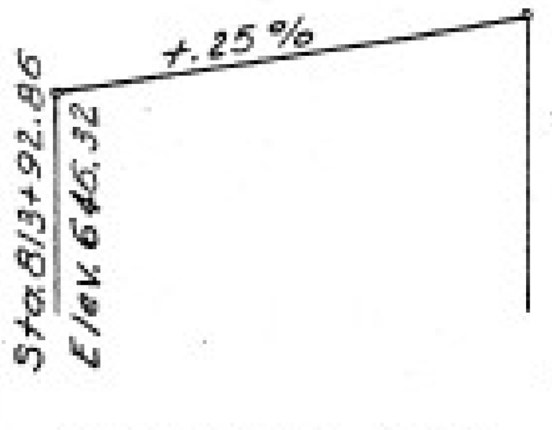
STATION 819+49.58
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-49HB-3
F.A. PROJ. I-70-4(69)
LOADING HS 15

HORIZ. CURVE DATA (FAI)

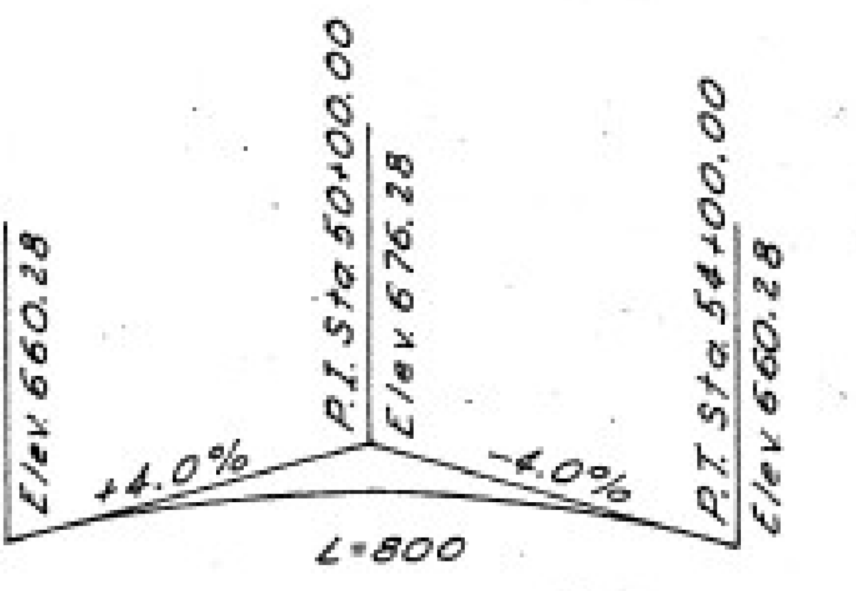
P.I. Sta. 813+40.62	R = 6611.05
Δ = 29°-15'-19.48"	T = 1725.46
D = 0°-52'	L = 3375.62

S.E. = 0.024 ⅟₁

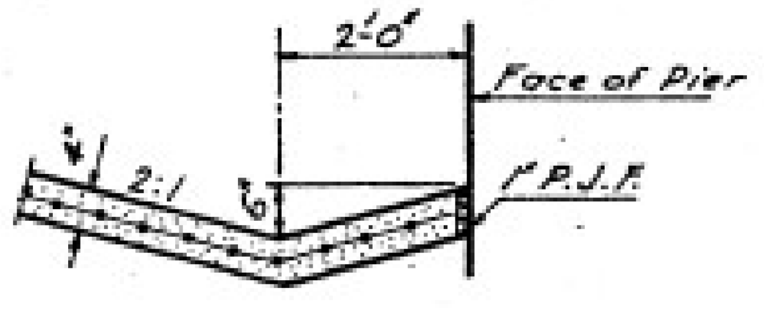
NAME PLATE LETTERING
(See Std. 2115-1)



PROFILE F.A.I. RT. 70



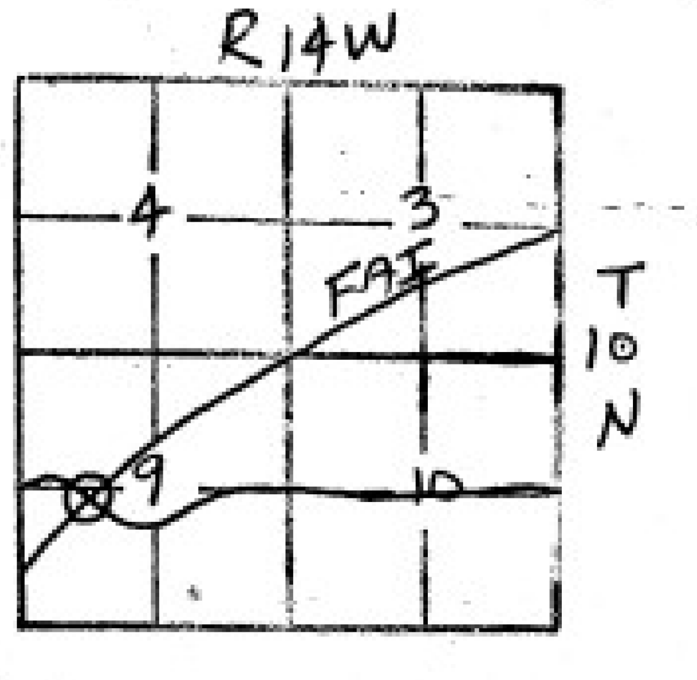
PROFILE T.R. 223



SEC. B-B

DESIGN STRESSES

fc = 1400 psi. Super. & Sub.
Vc = 75 psi. Ftgs.
fs = 20,000 psi. Reinf.
fs = 20,000 psi Struct. (A-36)
n = 10
Allowable ℄ Defl. ~~7080~~
LOADING HS15-44



DESIGNED Fred Stone
CHECKED Gene McCormick
DRAWN J. Kessler
CHECKED Gene McCormick

Aug. 5 1965
EXAMINED C. R. E. Thunman Jr.
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Alton
ENGINEER OF DESIGN
APPROVED W. E. Staff
CHIEF HIGHWAY ENGINEER

GENERAL PLAN & ELEVATION

T.R. 223 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 12-49HB-3
CLARK COUNTY
STATION 819+49.58

MODEL: 74E48-44-1 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0044

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	35

CONTRACT NO. 74E48
ILLINOIS | FED. AID PROJECT

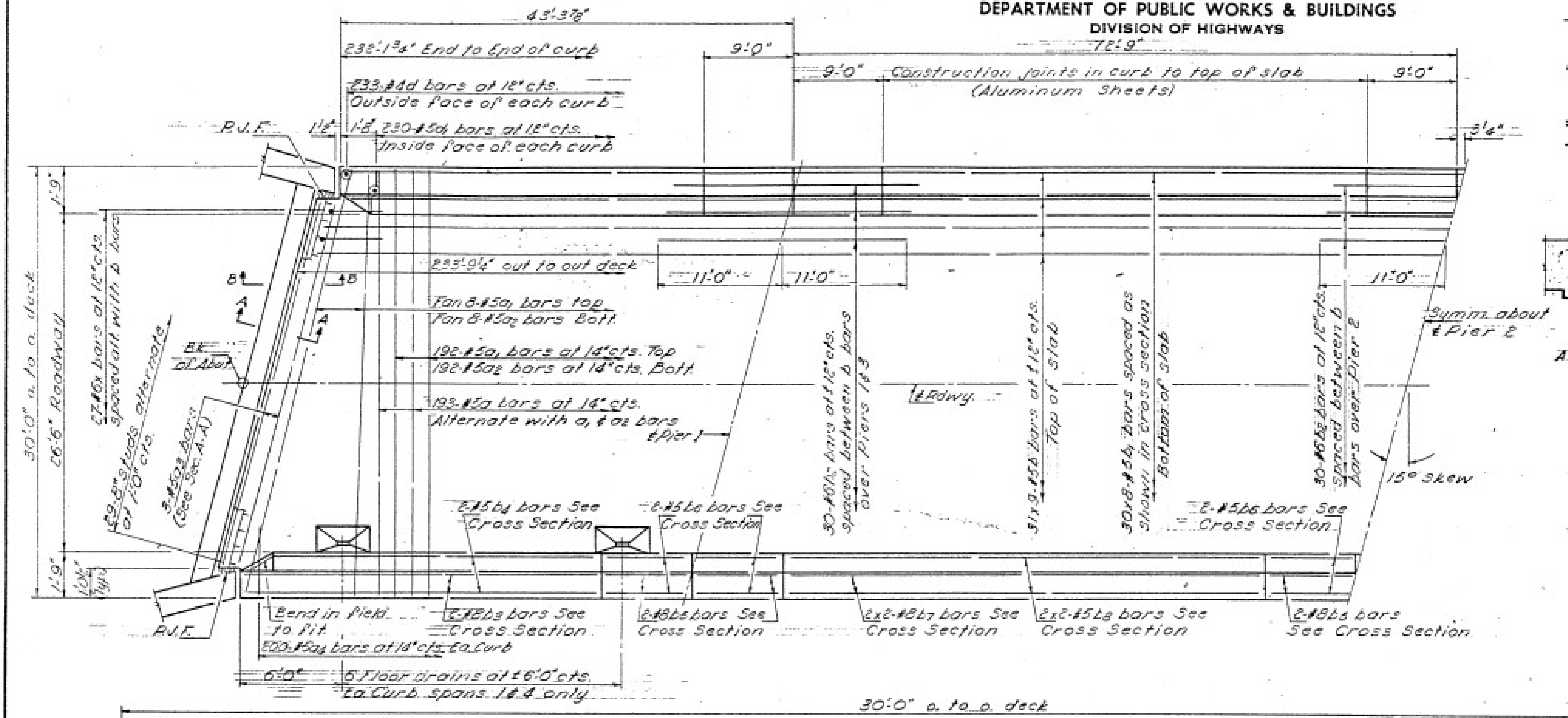
I-70
CLARK

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

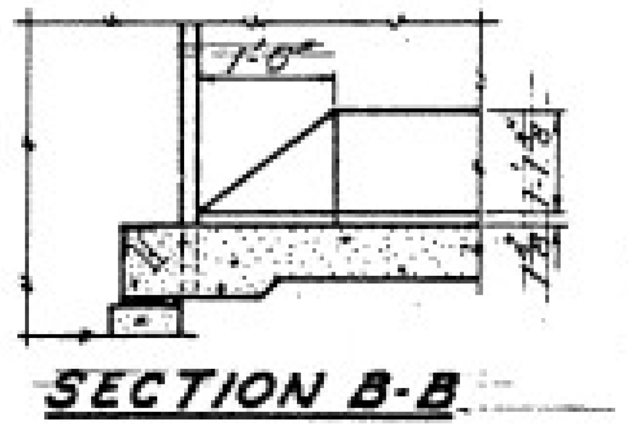
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 70	12-49HB -3	CLARK	30	9

FED. ROAD DIST. NO. 5 | ILLINOIS | FED. AID PROJECT

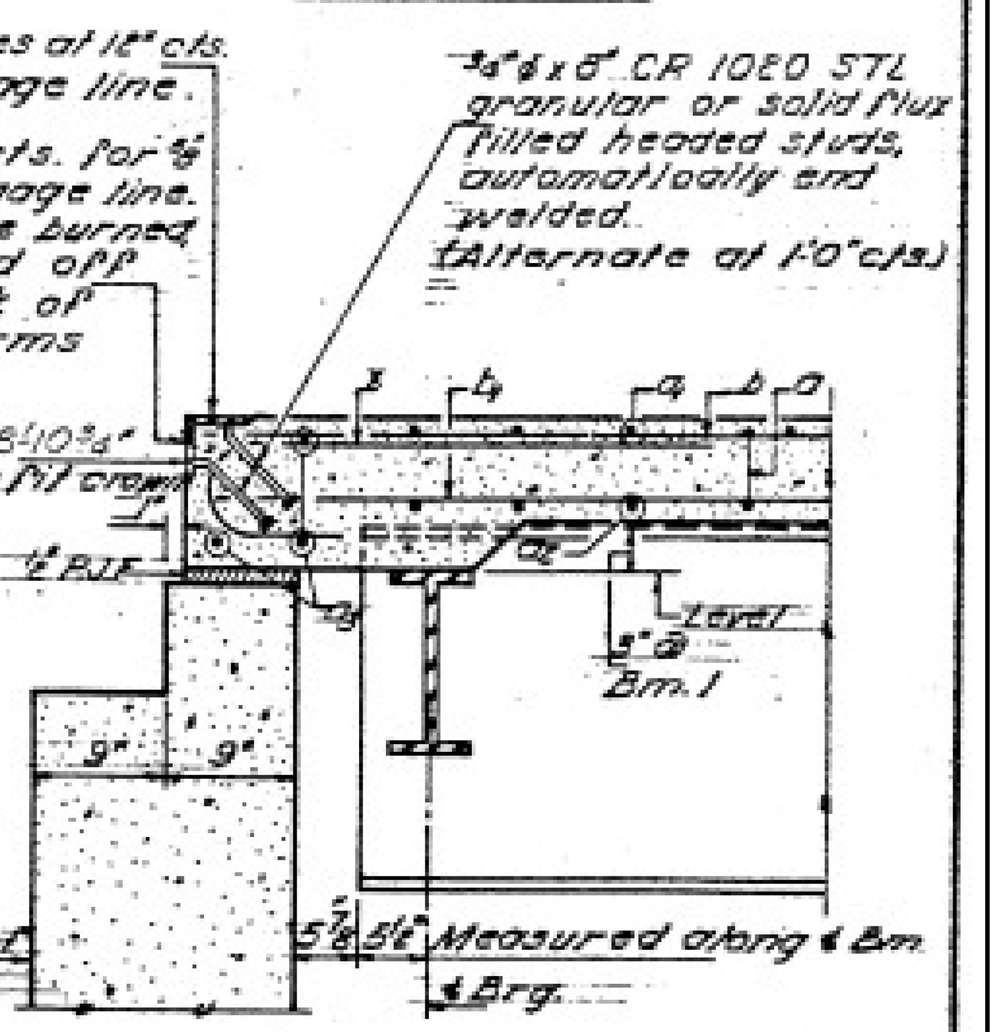
SHEET NO. 2
9 SHEETS



43'-3⅞"
238'-1¾" End to End of curb
9'-0"
72'-9"
233-#4d bars at 12" cts.
Outside face of each curb
9'-0" Construction joints in curb to top of slab
(Aluminum Sheets)
9'-0"
1'6" 1'-8" 230-#5d₁ bars at 12" cts.
Inside face of each curb
3'-4"
P.J.F.
1'-9"
B
A
B
A
233'-9¼" out to out deck
11'-0"
11'-0"
11'-0"
Fan 8-#5a₃ bars top
Fan 8-#5a₃ bars Bott.
Symm. about ℄ Pier 2
192-#5a₁ bars at 14" cts. Top
192-#5a₂ bars at 14" cts. Bott.
193-#5a bars at 14" cts.
Alternate with a₁ & a₂ bars
℄ Pier 1
℄ Rdwy.
Bk. of Abut.
30'-0" o. to o. deck
26'-6" Roadway
27-#6x bars at 12" cts. spaced alt with b bars
3-#5a₃ bars (See Sec. A-A)
29-8" studs alternate at 1'-0" cts.
30-#6b₅ bars at 12" cts. spaced between b bars over Piers 1 & 3
31 x 3-#5b bars at 1'-6" cts. Top of slab
30 x 8-#5b₁ bars spaced as shown in cross section Bottom of slab
30-#6b₂ bars at 12" cts. spaced between b bars over Pier 2
15° skew
2-#5b₄ bars See Cross Section
2-#5b₆ bars See Cross Section
2-#5b₆ bars See Cross Section
1'-9"
10½" Typ.
Bend in field to fit
2-#8b₃ bars See Cross Section
2-#8b₅ bars See Cross Section
2x2-#8b₇ bars See Cross Section
2x2-#5b₈ bars See Cross Section
2-#8b₅ bars See Cross Section
P.J.F.
200-#5a₄ bars at 14" cts. Ea. Curb
6'-0"
6 Floor drains at ±6'-0" cts.
Ea. Curb spans 1 & 4 only

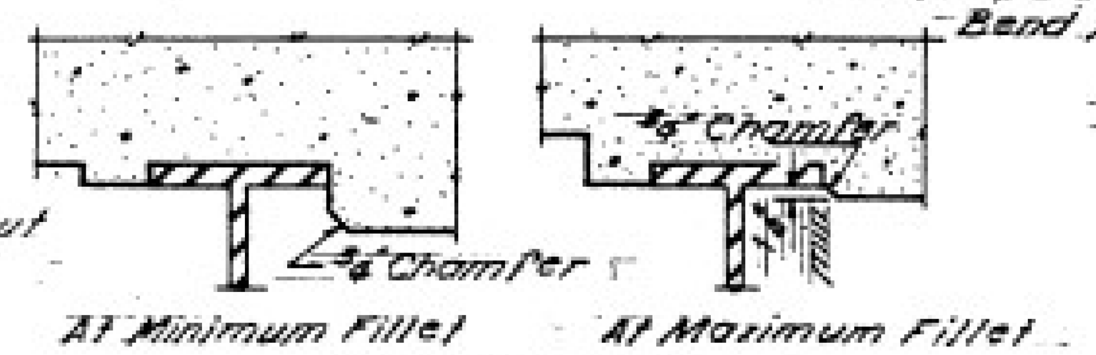


SECTION B-B

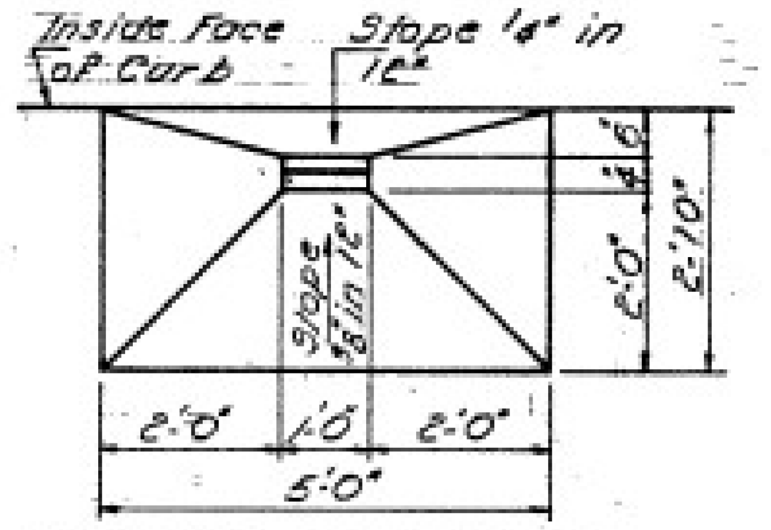


7/16" ⌀ vent holes at 12" cts. set on L⅝ gage line.
⅞" ⌀ holes at 12" cts. for ⅝ bolts set on 2½" gage line. All bolts shall be burned sawed, or clipped off flush with back of angles after forms are removed.
¾" ⌀ x 6" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts.)
L 4"x4"x½" x 238'-10¾" Bend to fit crown
½" PJF
x
b₄
a
b-a
a₂
a₃
Level
Bm. 1
9"
9"
Back of Abut.
5⅛ 5⅛ Measured along ℄ Bm.
℄ Brg.

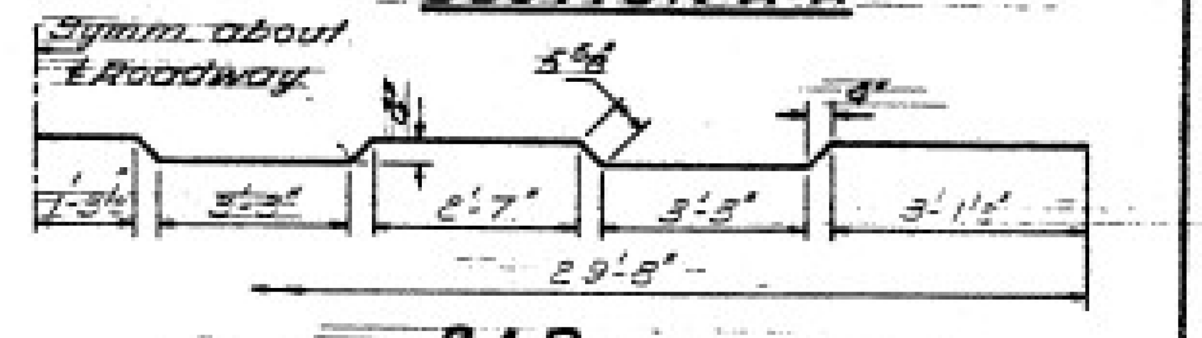
SECTION A-A



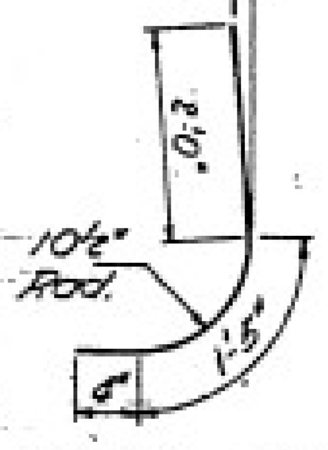
DETAIL A



FLOOR DRAIN PLAN



BAR a



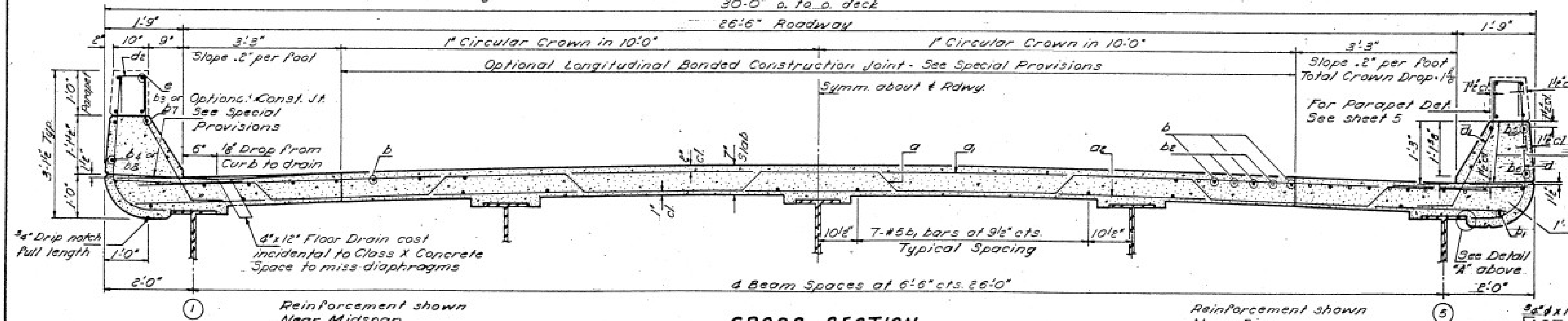
BAR d

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	193	#5	30'-3"	〰
a₁	208	#5	29'-8"	—
a₂	208	#5	29'-0"	—
a₃	6	#5	28'-6"	—
a₄	400	#6	4'-0"	—
b	279	#5	27'-3"	—
b₁	240	#5	30'-6"	—
b₂	90	#6	22'-0"	—
b₃	8	#8	34'-0"	—
b₄	8	#5	34'-0"	—
b₅	24	#8	8'-9"	—
b₆	24	#5	8'-9"	—
b₇	16	#8	28'-0"	—
b₈	16	#5	28'-0"	—
d	466	#4	3'-9"	⌐
d₁	460	#5	3'-5"	⌐
x	54	#6	5'-0"	⊐
Reinforcement Bars			Lbs.	45710
Structural Steel			Lbs.	184900
Class X Concrete			Cu. Yds.	215.2

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.



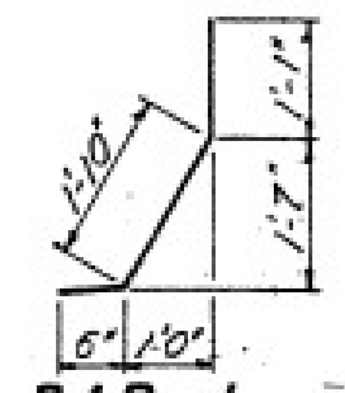
30'-0" o. to o. deck
26'-6" Roadway
1'-9"
1'-9"
2"
10"
9"
3'-3"
1" Circular Crown in 10'-0"
1" Circular Crown in 10'-0"
3'-3"
d₂
e
Slope .2" per foot
Optional Longitudinal Bonded Construction Joint - See Special Provisions
Slope .2" per foot
Total Crown Drop-1⅝
Parapet
1'-0"
b₃ or b₇
Optional Const. Jt. See Special Provisions
Symm. about ℄ Rdwy.
For Parapet Det. See sheet 5
1½" cl.
1½" cl.
3'-1½" Typ.
1'-1½"
6"
⅛" Drop from Curb to drain
b
a
a₁
a₂
b₂
b₄
d
b₈
2" cl.
7" Slab
1'-3"
1'-1½"
d₁
b₆
⅛" Alum. sheets ASTM B209 alloy 3003-H14 Cost incidental.
1'-0"
1'-0"
¾" Drip notch full length
1'-0"
4"x12" Floor Drain cost incidental to Class X Concrete Space to miss diaphragms
1" cl.
10½"
7-#5b₁ bars at 9½" cts.
Typical Spacing
10½"
1'-0" Rad.
See Detail "A" above
2'-0"
4 Beam Spaces at 6'-6" cts. 26'-0"
2'-0"
1
5

Reinforcement shown Near Midspan

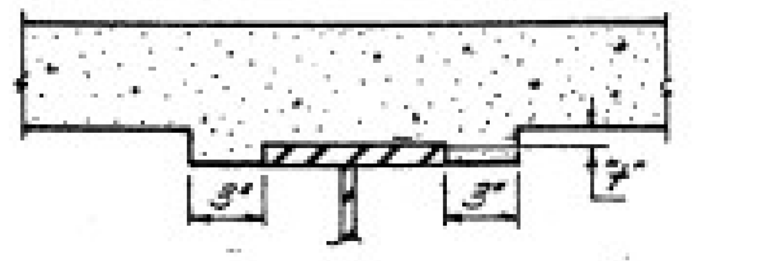
Reinforcement shown Near Pier

CROSS SECTION
(Looking South)

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

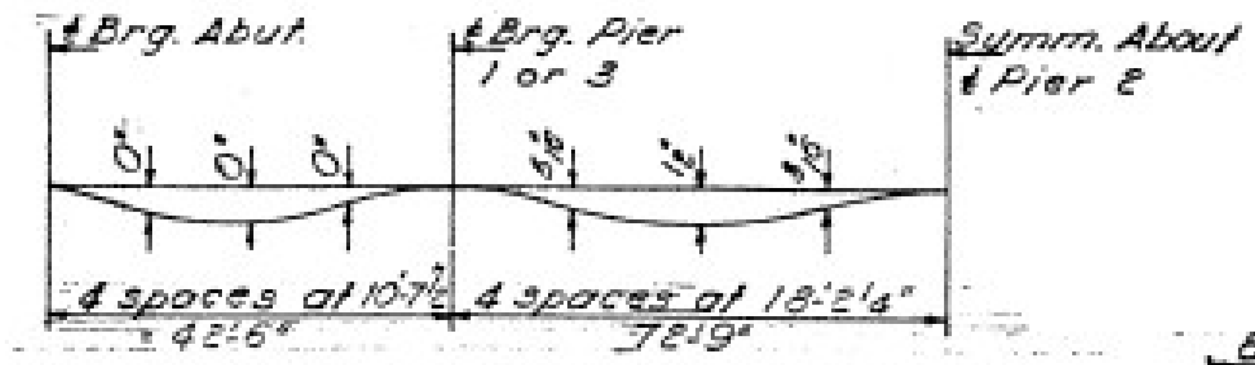


BAR d₁



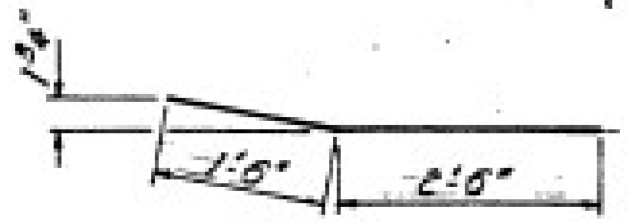
STANDARD FILLET DETAIL

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 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet heights "t" above top of beams.

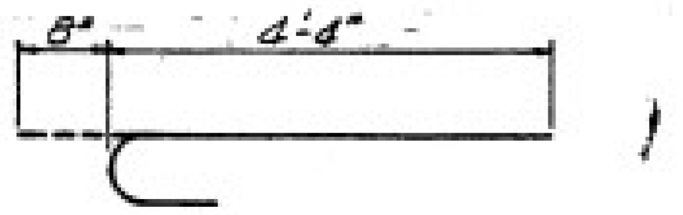


DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

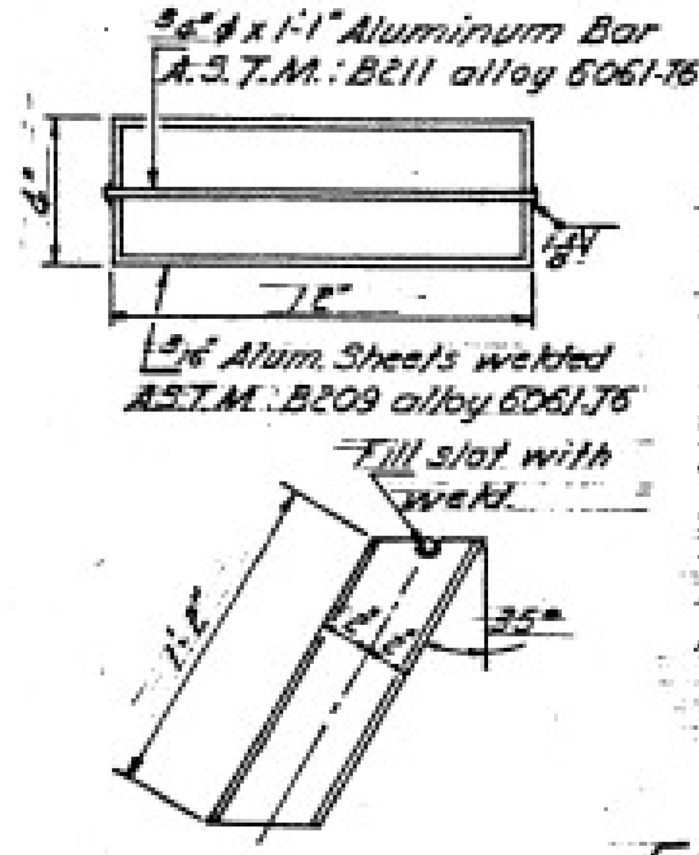
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 3.



BAR a₄



BAR x



⅝" ⌀ x 1'-1" Aluminum Bar A.S.T.M.: B211 alloy 6061-T6
2"
⅛"
1'2"
⅛" Alum. Sheets welded A.S.T.M.: B209 alloy 6061-T6
Fill slot with weld
1'-2"
35°

FLOOR DRAIN DETAILS

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 12-49HB-3
CLARK COUNTY
STATION 819+49.58

19

DESIGNED Geo. McConnell
CHECKED John N Clark Jr
DRAWN J. Kessler
CHECKED John N Clark Jr
EXAMINED
PASSED
APPROVED

MODEL: 74E48-44-2 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0044

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	36

CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT

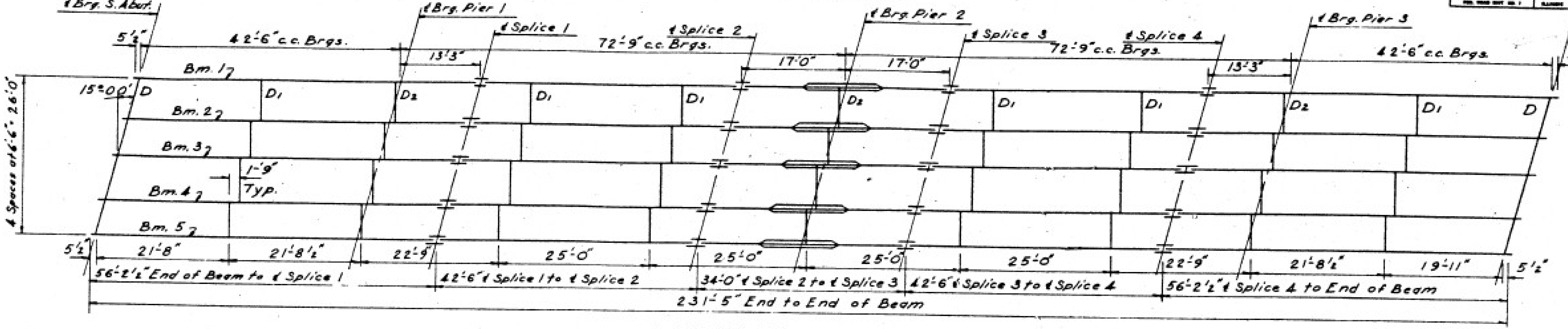
I-70

CLARK

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

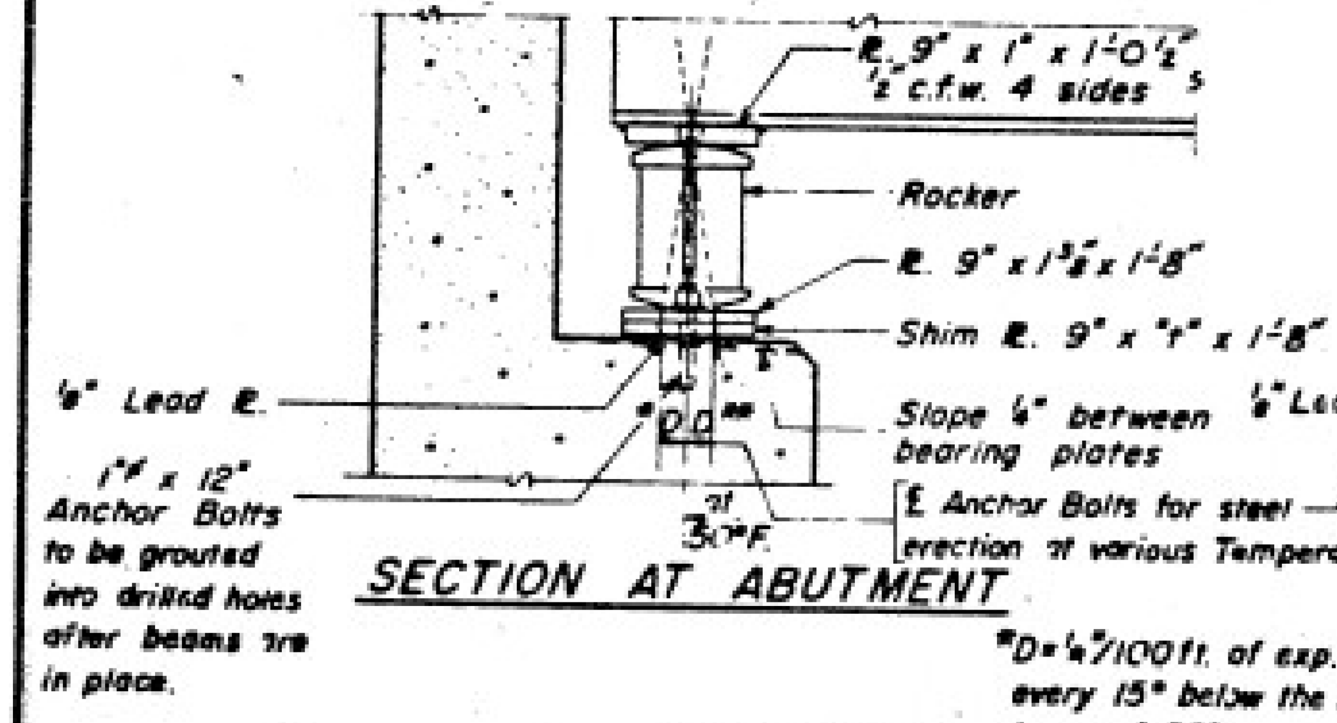
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-49HB-3	CLARK	30	11

SHEET NO. 4.
9 SHEETS

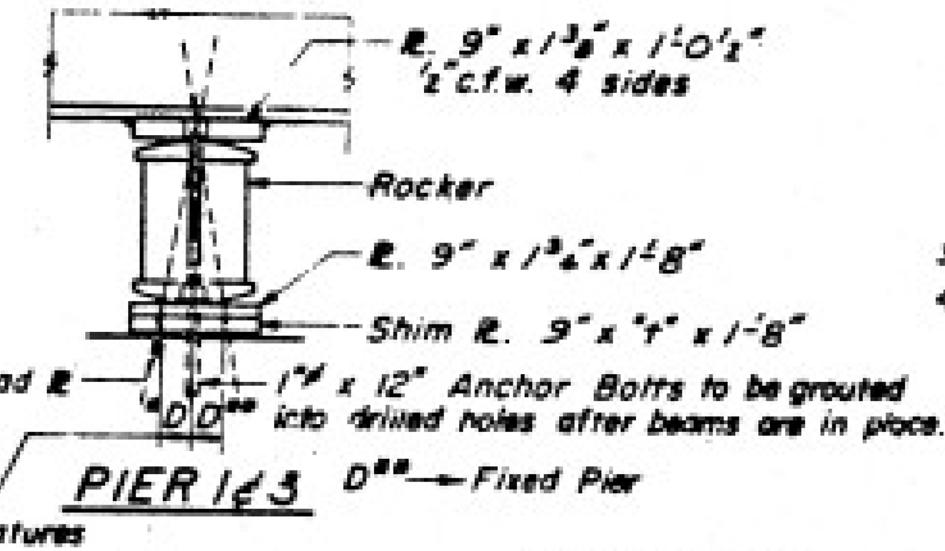


LAYOUT OF STRUCTURAL STEEL

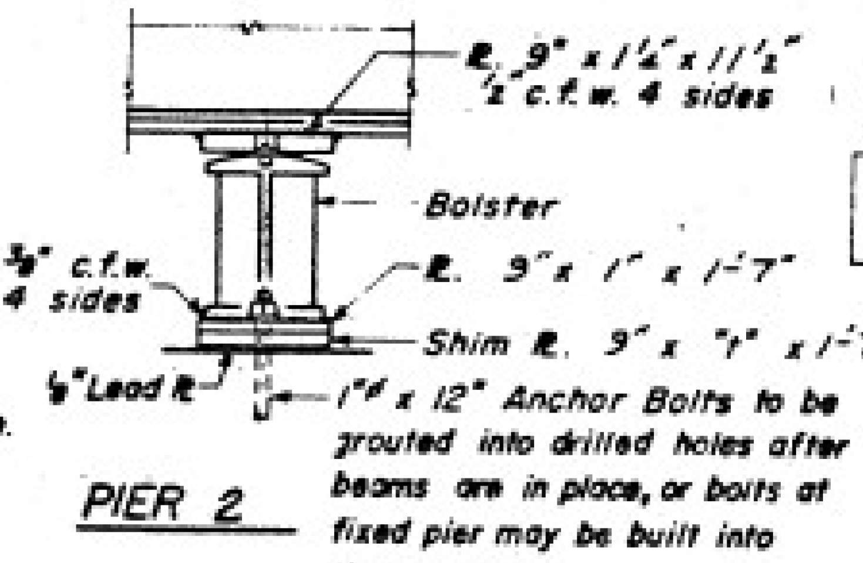
(All Beams 33 WF 130)


PL. 9" x 1" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1⅜" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
Slope ¼" between bearing plates
*D D**
1" ⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
at 30° F.
℄ Anchor Bolts for steel erection at various Temperatures

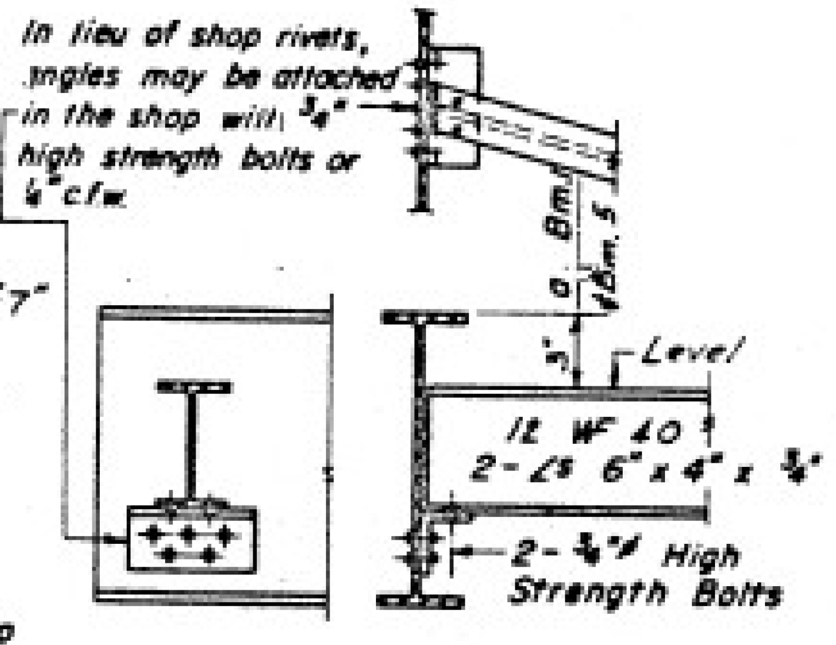
SECTION AT ABUTMENT


PL. 9" x 1⅜" x 1'-0½"
½" c.f.w. 4 sides
Rocker
PL. 9" x 1⅜" x 1'-8"
Shim PL. 9" x "t" x 1'-8"
⅛" Lead PL.
D D**
1" ⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
D** → Fixed Pier

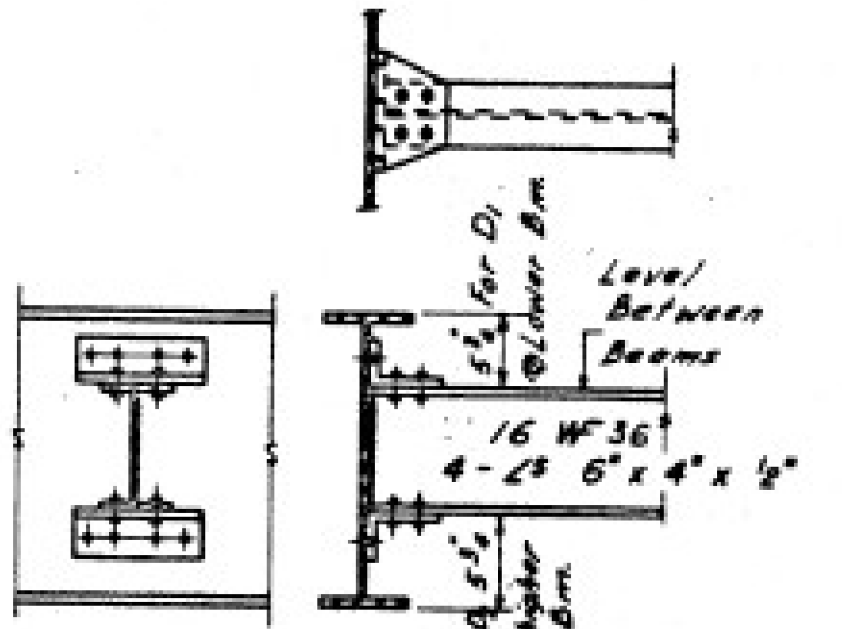
PIER 1 & 3


PL. 9" x 1¼" x 11½"
½" c.f.w. 4 sides
Bolster
⅜" c.f.w. 4 sides
PL. 9" x 1" x 1'-7"
Shim PL. 9" x "t" x 1'-7"
⅛" Lead PL.
1" ⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.

PIER 2


In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
℄ Bm.
℄ Bm. 5
3"
Level
12 WF 40
2-∠s 6" x 4" x ⅜"
2-¾" ⌀ High Strength Bolts

DIAPHRAGM D
8 Required



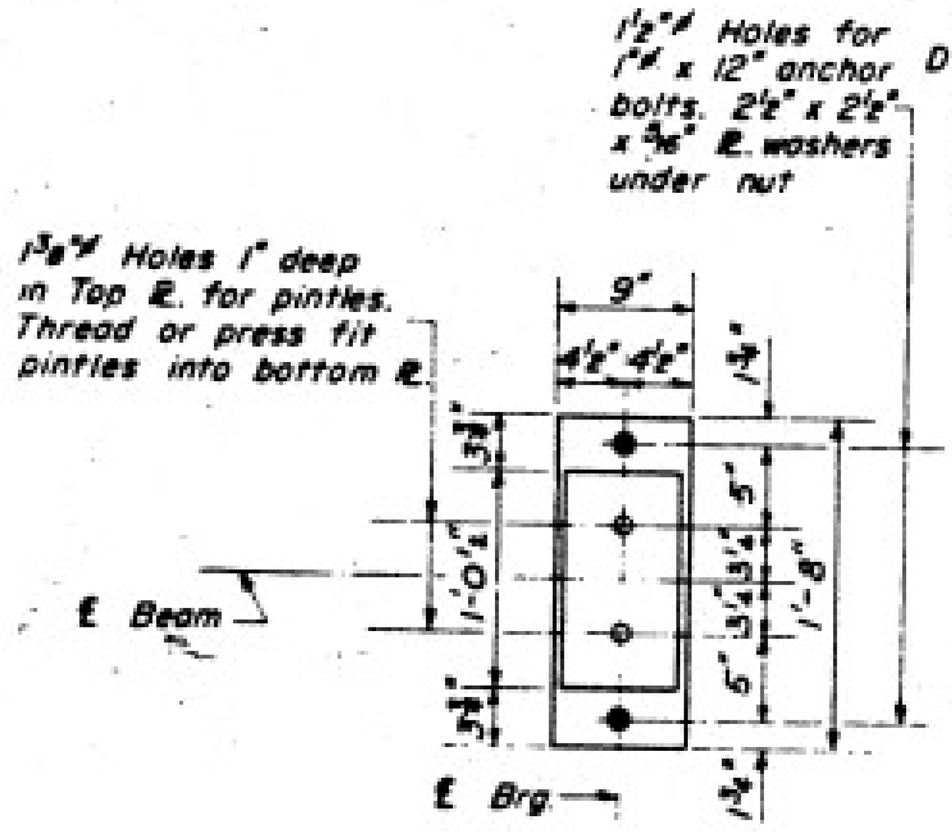
DIAPHRAGM D1 & D2
24 D1 & 12 D2 Required

MOMENTS AND REACTIONS - INT. BMS.

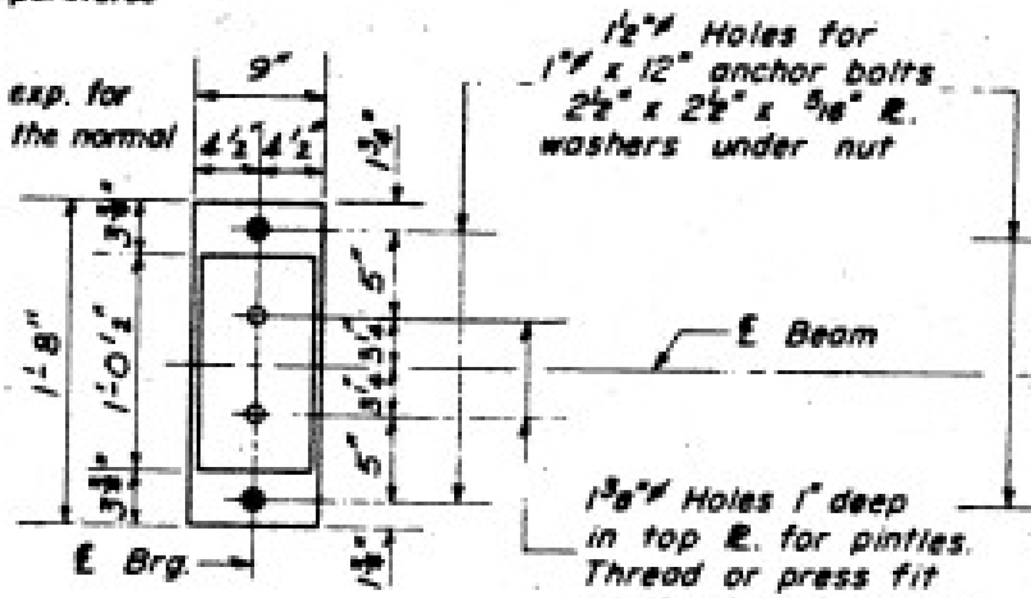
	MOMENTS				REACTIONS		
	.4 Sp. 1	Pier 1	.5 Sp. 2	Pier 2	Abut.	Pier 1	Pier 2
D.L.	65.2	313.2	209.2	506.4	11.5	57.5	72.3
L.L.	177.7	211.0	264.8	282.4	23.7	31.2	30.7
Imp.	53.3	58.4	67.0	71.4	7.1	8.6	7.8
total	296.2	582.6	541.0	860.2	42.3	97.3	110.8

Moments are in ft.-kips And Reactions in kips

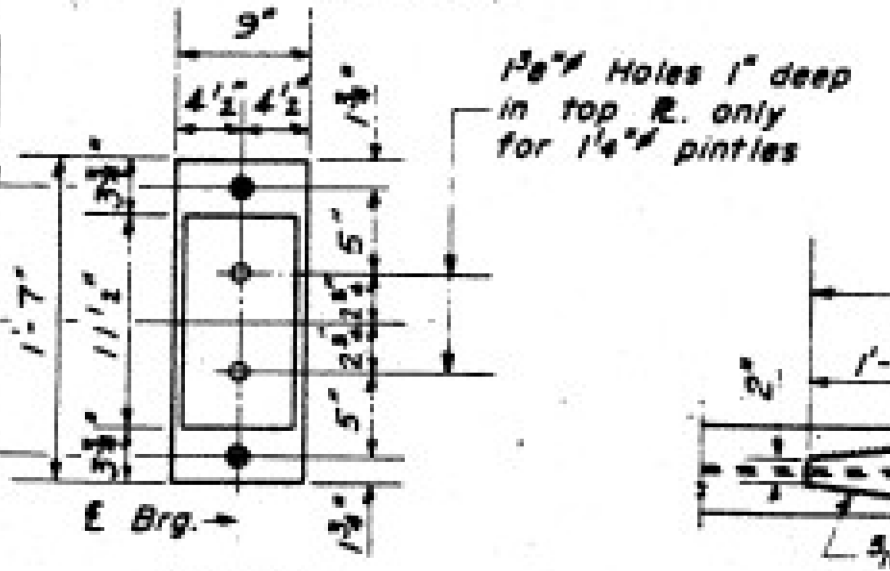
*D = ¼"/100 ft. of exp. for every 15° below the normal temp. of 50°.
D** = ⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°.


1½" ⌀ Holes for 1" ⌀ x 12" anchor bolts. 2½" x 2½" x 5/16" PL. washers under nut
1⅜" ⌀ Holes 1" deep in Top PL. for pintles. Thread or press fit pintles into bottom PL.
9"
4½" 4½"
1⅝"
3⅜"
1'-0½"
1'-8"
5"
3¼" 3¼"
℄ Beam
℄ Brg.

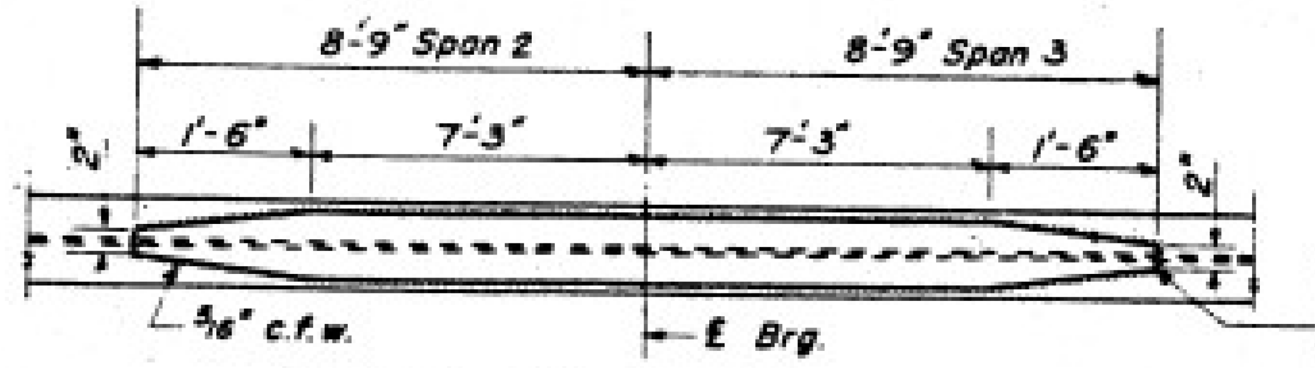
PLAN


1½" ⌀ Holes for 1" ⌀ x 12" anchor bolts 2½" x 2½" x 5/16" PL. washers under nut
9"
4½" 4½"
1⅝"
3⅜"
1'-8"
1'-0½"
5"
3¼" 3¼"
℄ Beam
℄ Brg.
1⅜" ⌀ Holes 1" deep in top PL. for pintles. Thread or press fit pintles into bottom PL.

PLAN



PLAN

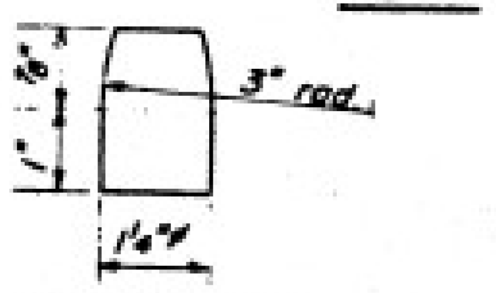


DETAIL OF COVER PLATE

*TOP OF WF ELEVATIONS

Loc. \ BM. No.	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5
℄ Brg. N. Abut.	666.91	667.01	667.05	667.01	666.91
℄ Brg. Pier 1	667.24	667.34	667.38	667.34	667.24
℄ Splice 1	667.34	667.44	667.48	667.44	667.34
℄ Splice 2	667.52	667.62	667.66	667.62	667.52
℄ Brg. Pier 2	667.52	667.62	667.66	667.62	667.52
℄ Splice 3	667.52	667.62	667.66	667.62	667.52
℄ Splice 4	667.34	667.44	667.48	667.44	667.34
℄ Brg. Pier 3	667.24	667.34	667.38	667.34	667.24
℄ Brg. S. Abut.	666.91	667.01	667.05	667.01	666.91

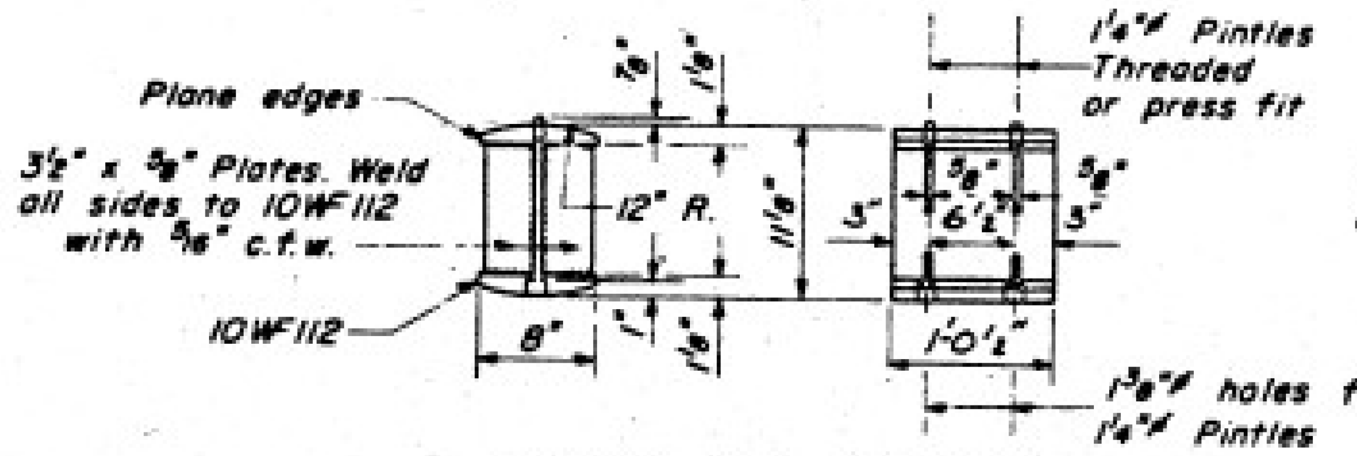
*Lower all top of WF elevations by .04'



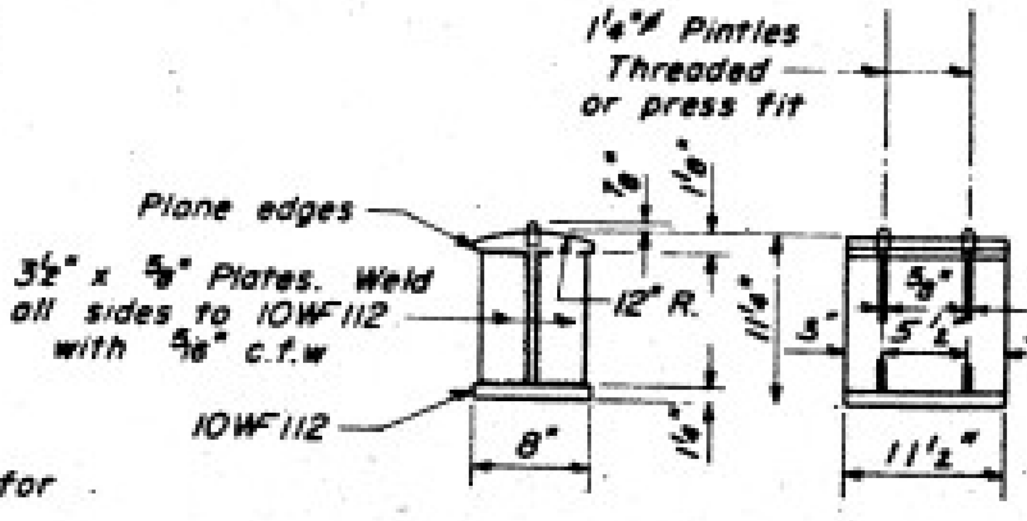
DETAIL OF PINTLE

TABLE OF "t" DIMENSIONS

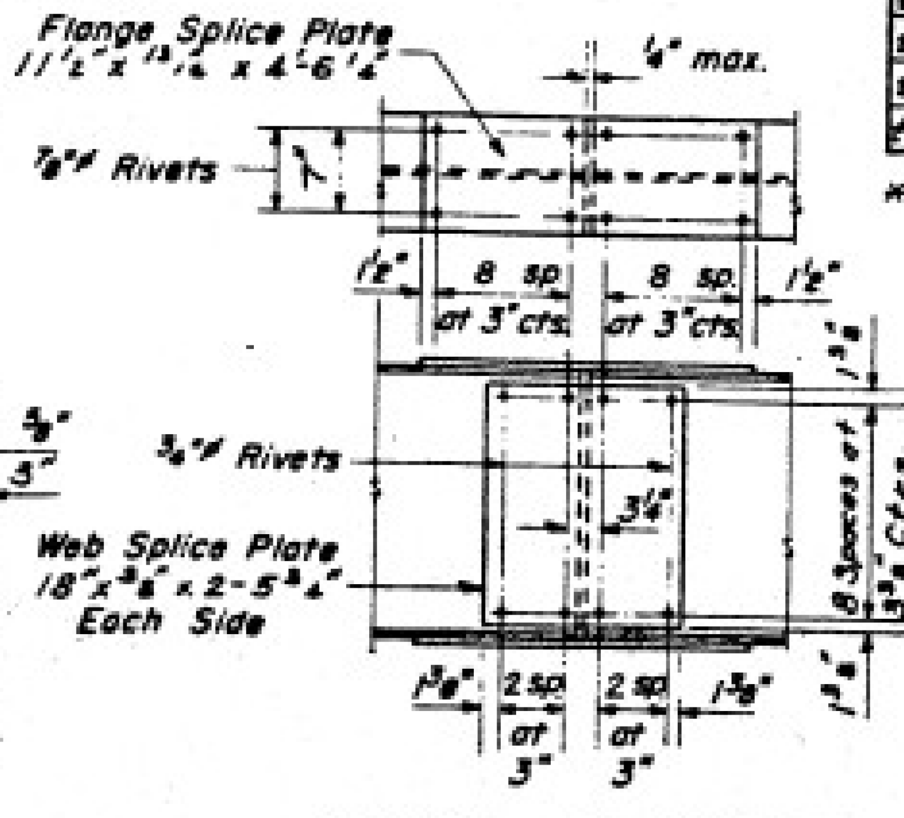
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	½"	0"	0"


Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w.
10WF112
12" R.
⅝"
1⅛"
11⅛"
8"
1"
1⅛"
1¼" ⌀ Pintles Threaded or press fit
⅝"
6½"
3"
3"
1'-0½"
1⅜" ⌀ holes for 1¼" ⌀ Pintles

DETAIL OF ROCKER
AT PIER 1 & 3 & ABUTS.


1¼" ⌀ Pintles Threaded or press fit
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w
10WF112
12" R.
⅝"
1⅛"
11¼"
8"
⅝"
5½"
3"
3"
11½"

DETAIL OF BOLSTER
AT PIER 2



DETAIL OF SPLICE

DESIGNED	Fred Stone
CHECKED	Gene McCormick
DRAWN	P.G. Barnett J. Kessler W. A. Sousamon Jr.
CHECKED	Gene McCormick

AUG. 5 1965
EXAMINED Carl E. Timmons
PASSED L. J. Alton
APPROVED V. E. Staff

T-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. 12-49HB-3
CLARK COUNTY
STATION 819+49.58

MODEL: 74E48-44-3 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

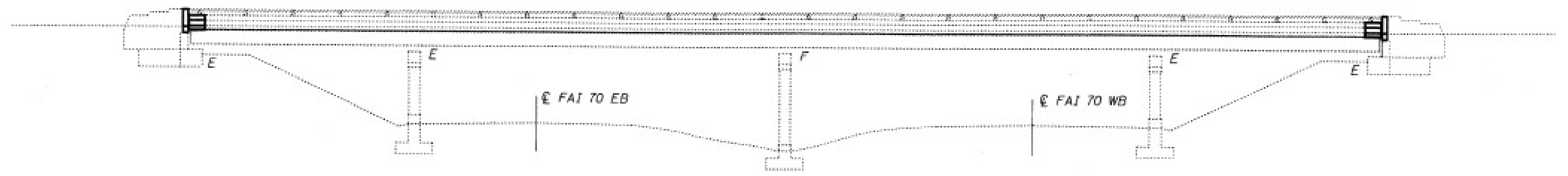
EXISTING STRUCTURE DETAILS
SN 012-0044

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

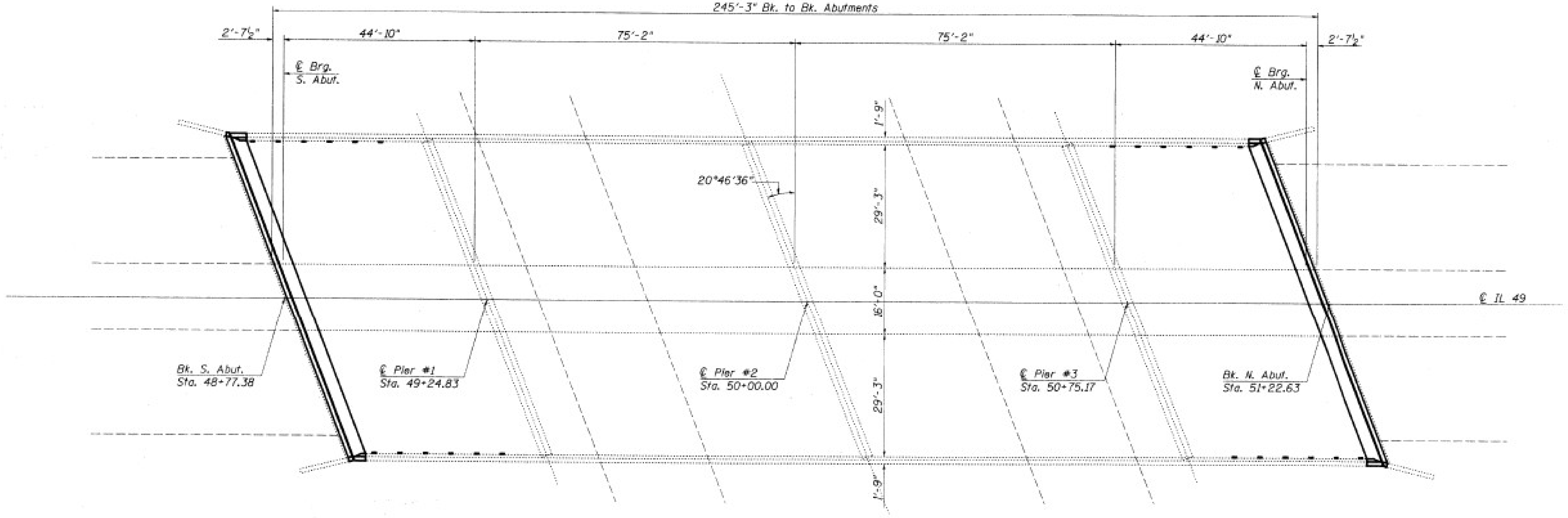
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	37
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

I-70 CLARK

The existing four span reinforced continous steel multi-beam structure was constructed in 1969 as FAI-70 section 12-49HB-2 at Sta. 757+93.89. SN. 012-0048 carries IL 49 (FAP 832) over FAI 70. The proposed project consists of new expansion joints and new elastomeric bearings.



ELEVATION



PLAN

DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS

Expires 11/30/2012

MODEL: 74E48-48-1 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

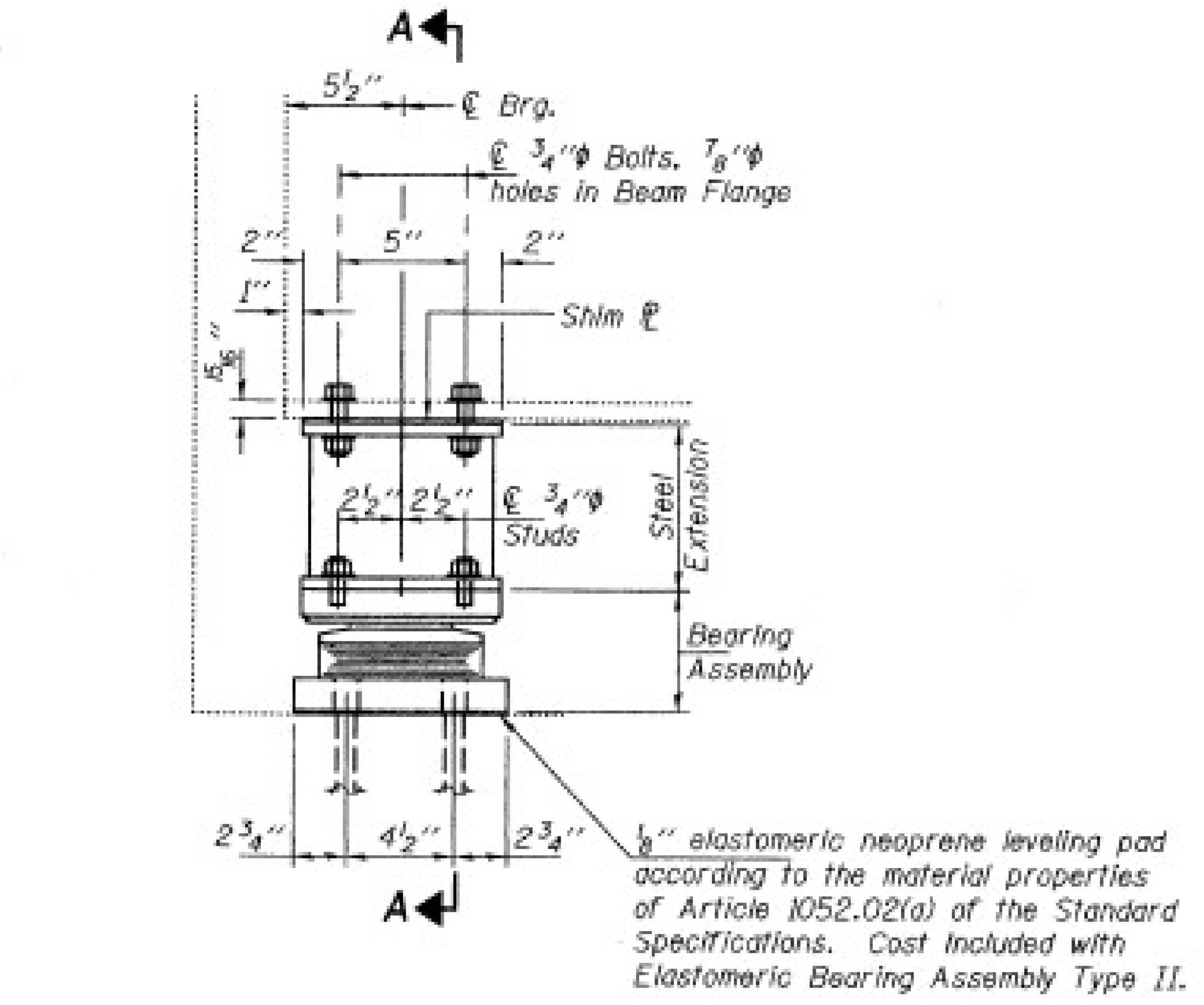
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

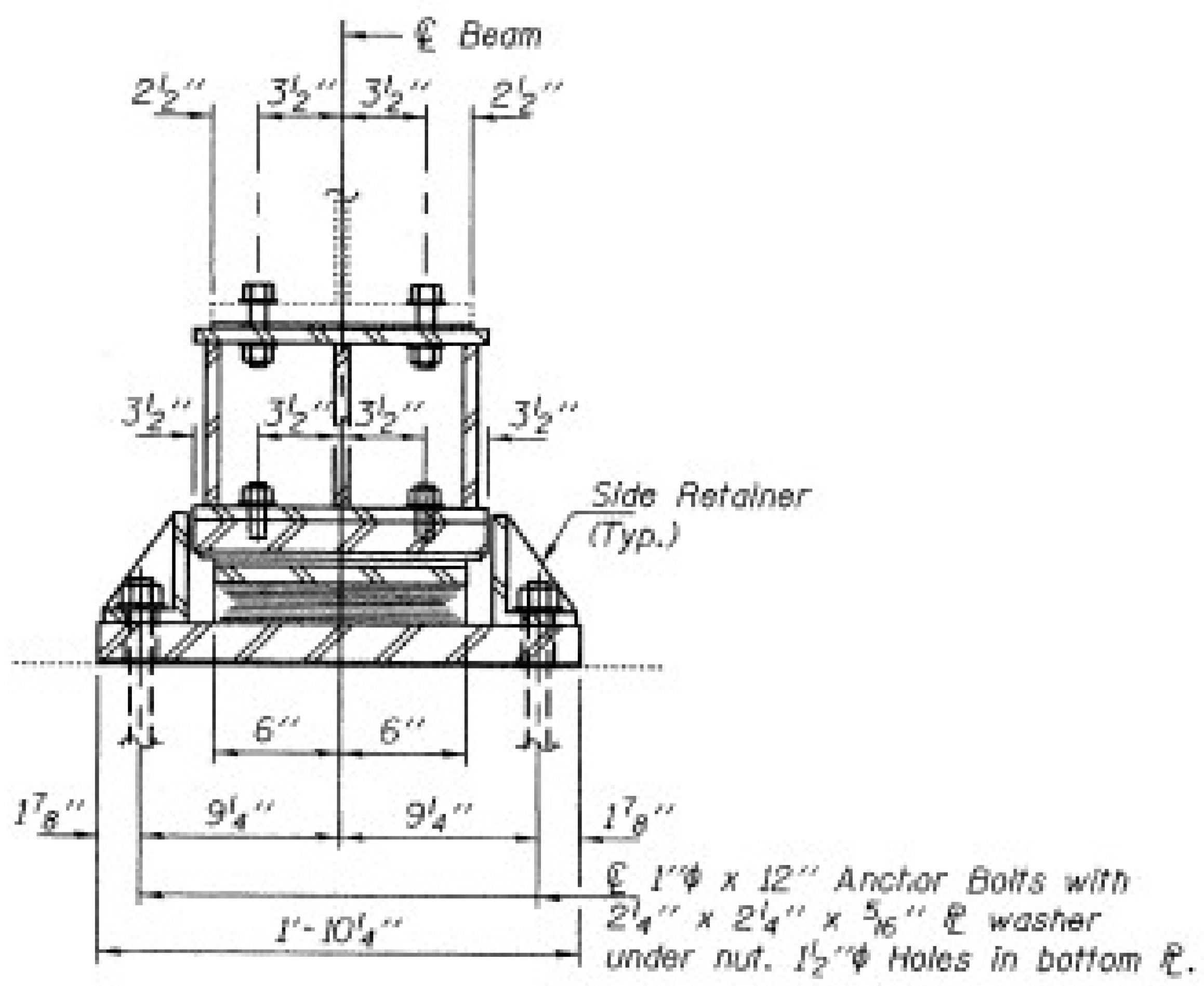
SCALE: SHEET 1 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	38
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK


A
5 1/2"
℄ Brg.
℄ 3/4"φ Bolts, 7/8"φ holes in Beam Flange
2"
5"
2"
1"
15/16"
Shim ℞
2 1/2" 2 1/2"
℄ 3/4"φ Studs
Steel Extension
Bearing Assembly
2 3/4" 4 1/2" 2 3/4"
1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Elastomeric Bearing Assembly Type II.
A

ELEVATION AT ABUTMENT



SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.

BEAM REACTIONS

R℞	(K)	15.8
RL	(K)	34.4
Imp.	(K)	10.1
R (Total)	(K)	60.3

Notes:

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

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

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Min. jack capacity = 30 Tons.

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

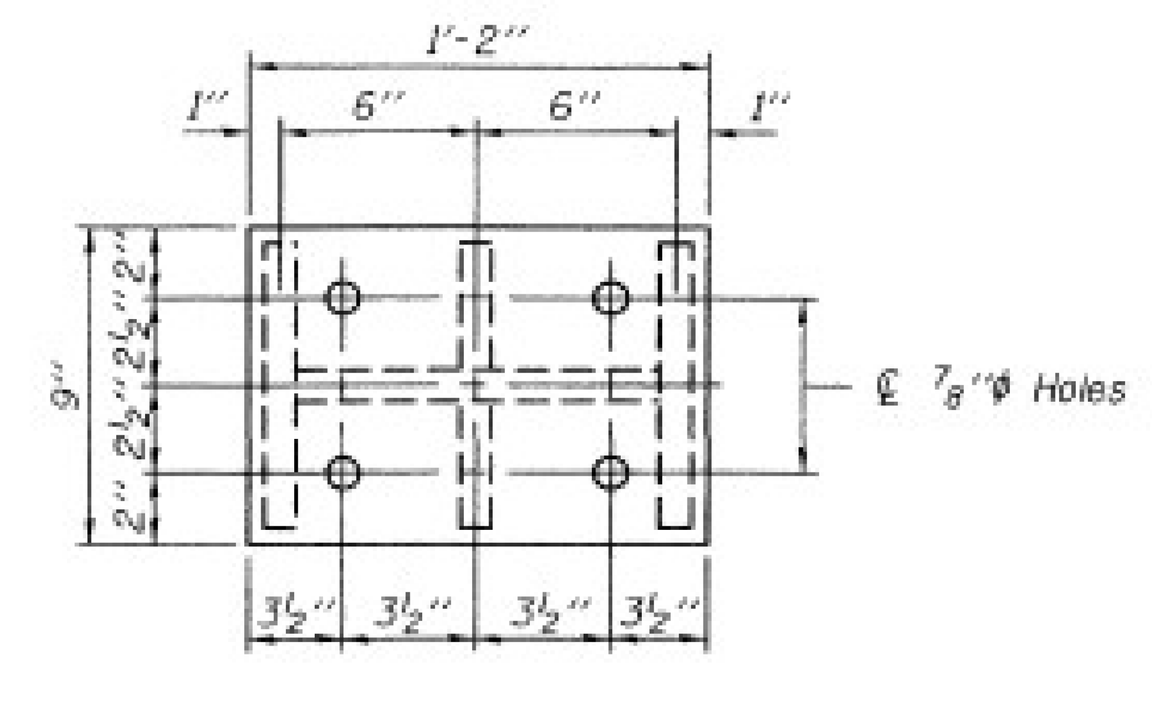
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

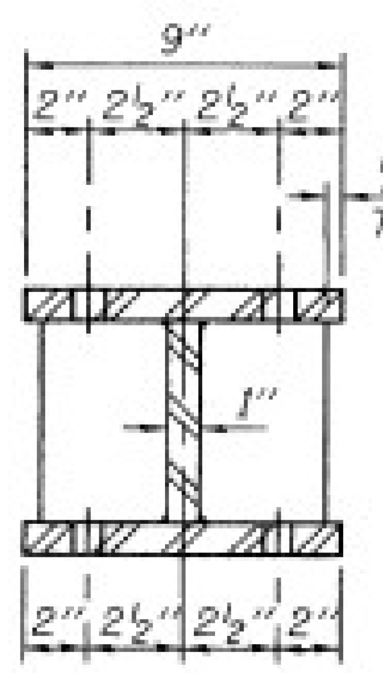
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.

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

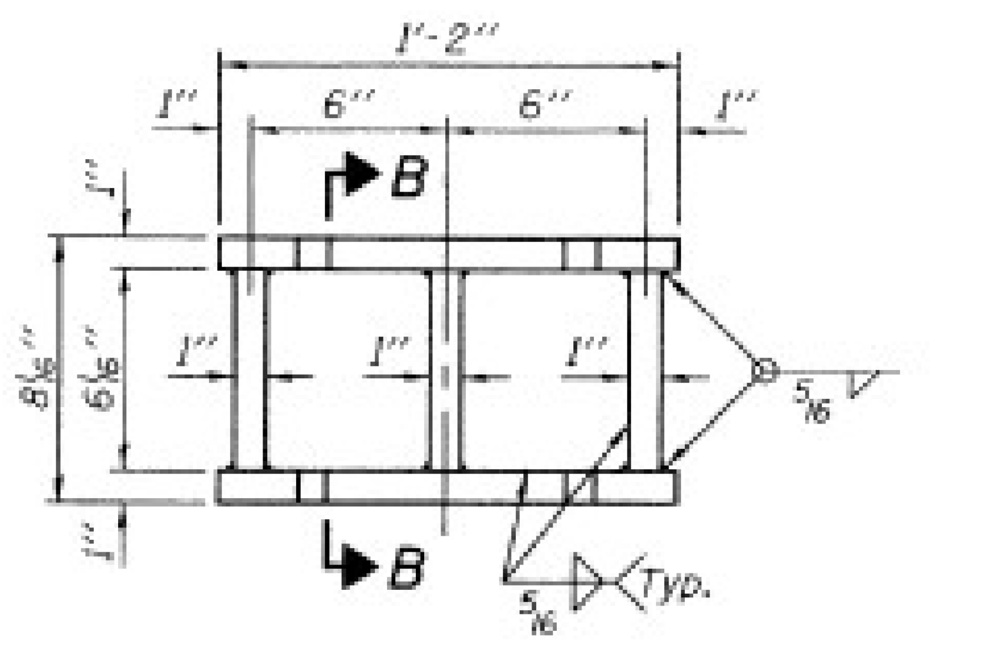
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



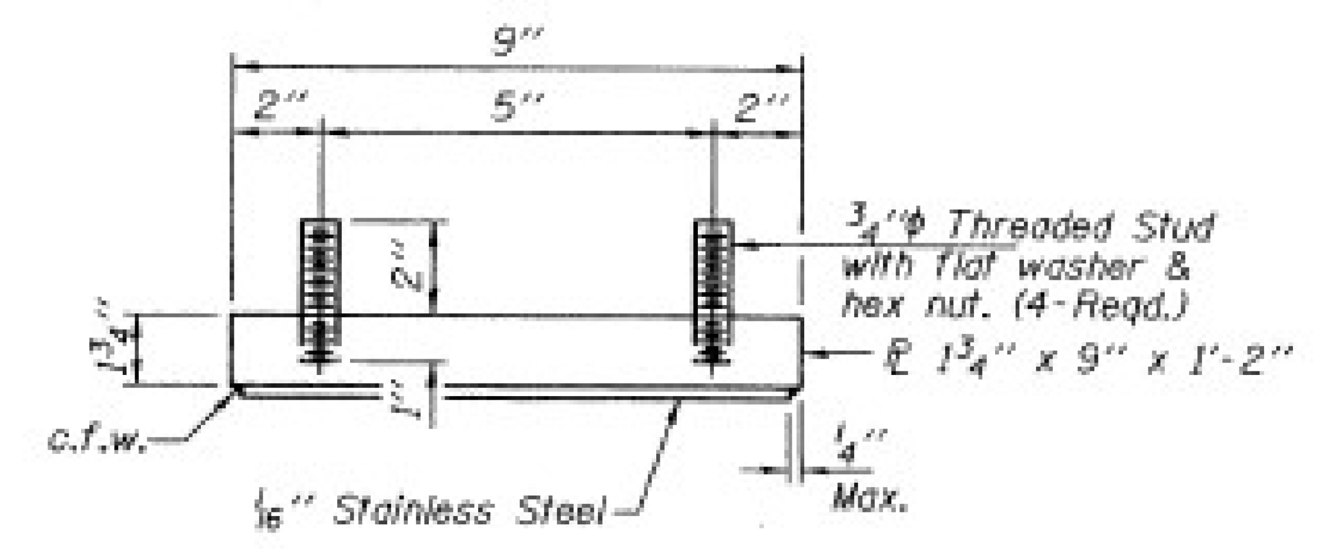
PLAN TOP AND BOTTOM PLATE



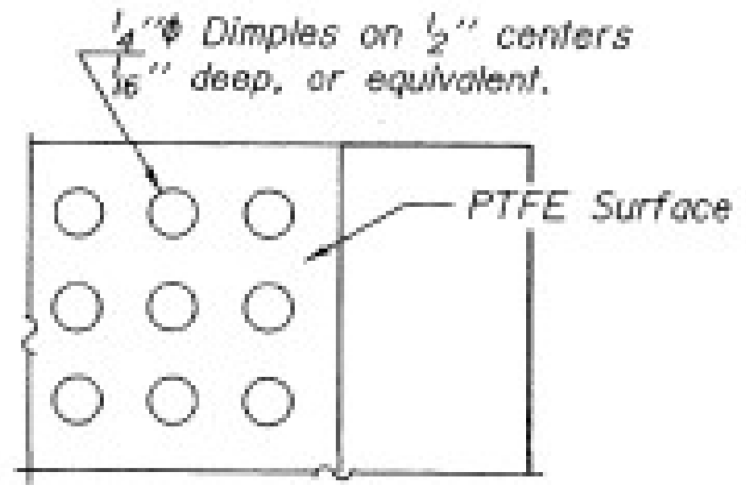
SECTION B-B



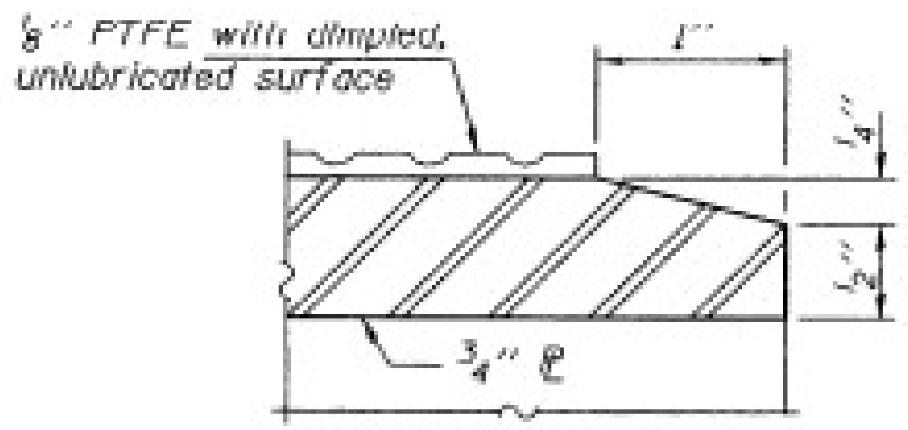
STEEL EXTENSION DETAIL



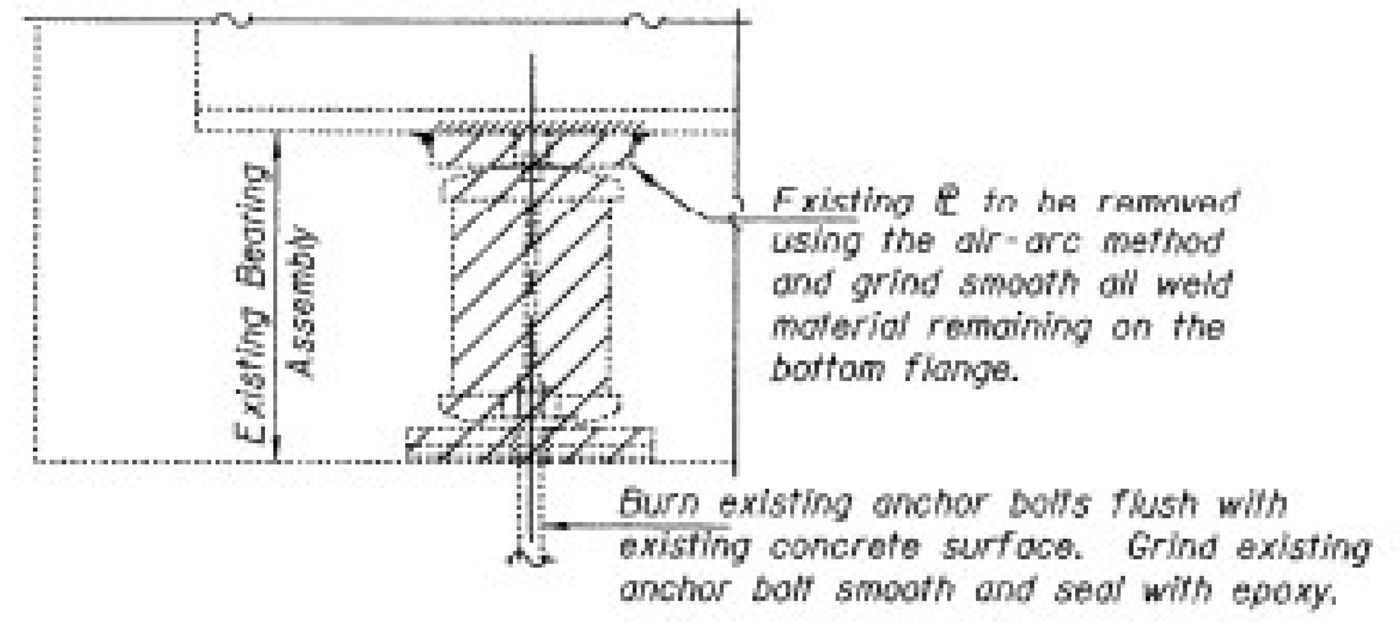
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

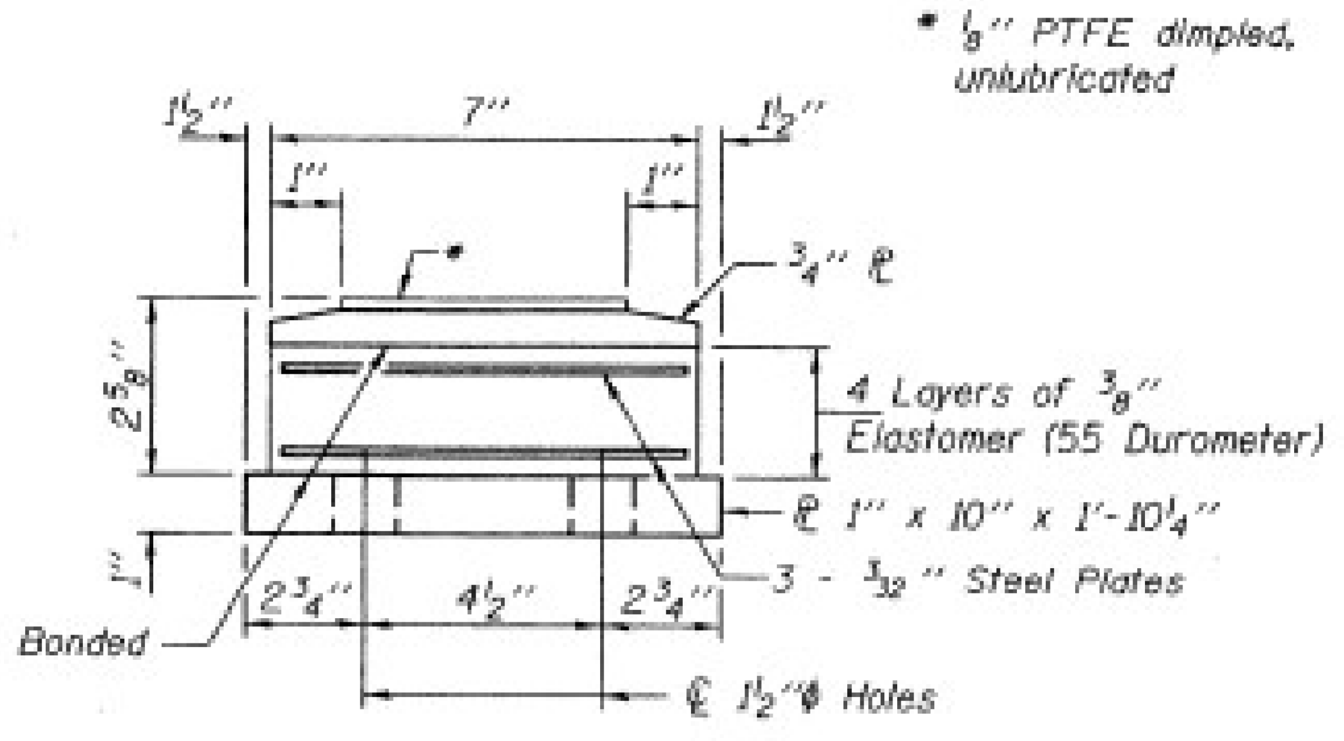


SECTION THRU PTFE

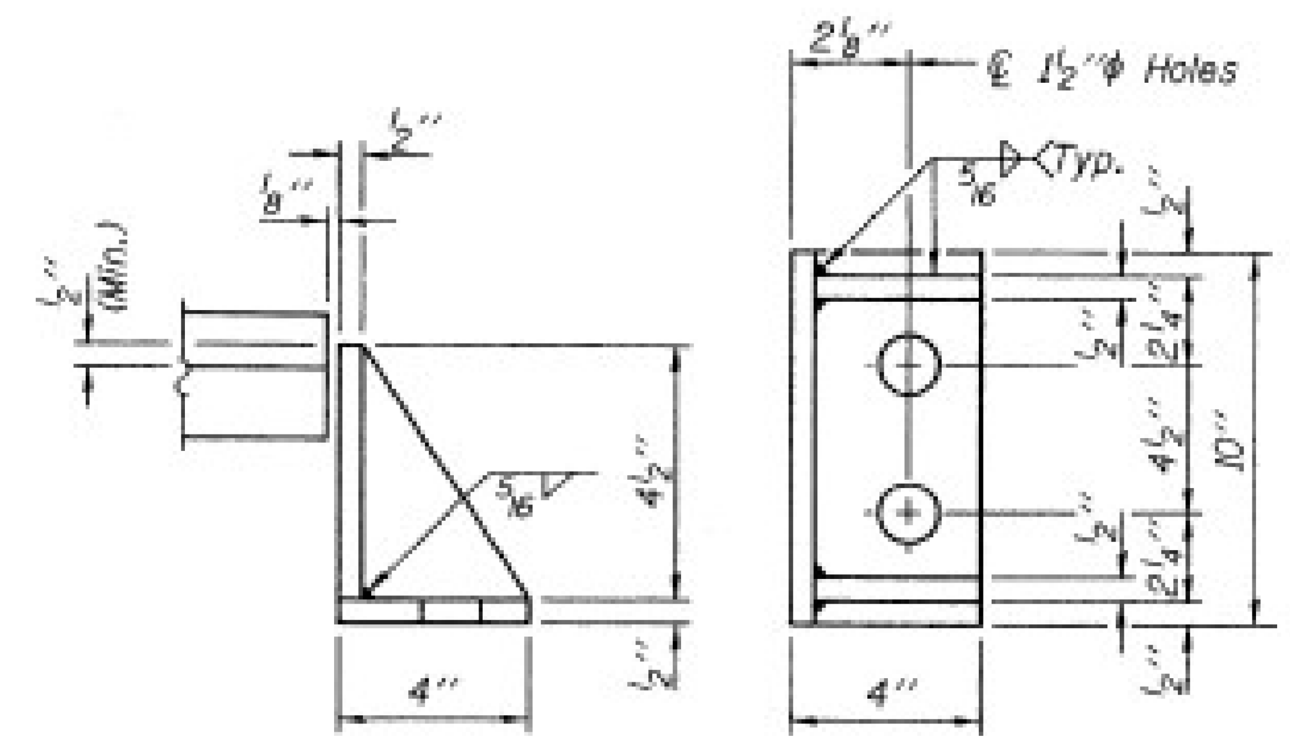

Existing Bearing Assembly
Existing ℞ to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

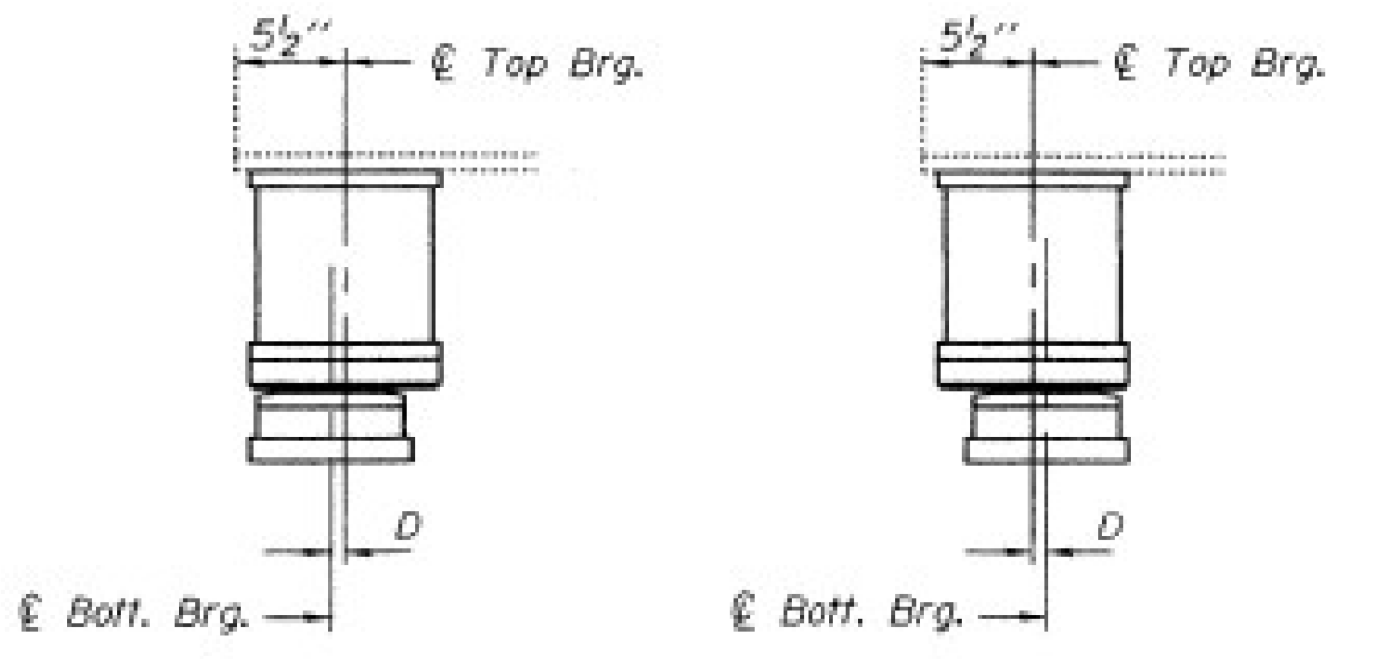


BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



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.

TWO ABUTMENTS BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	24
Jack and Remove Existing Bearings	Each	24
Furnishing and Erecting Structural Steel	Pound	3170
Anchor Bolts 1"φ	Each	96

TYII/REPS 12-03-2008

MODEL: 74E48-48-2 [Sheet]
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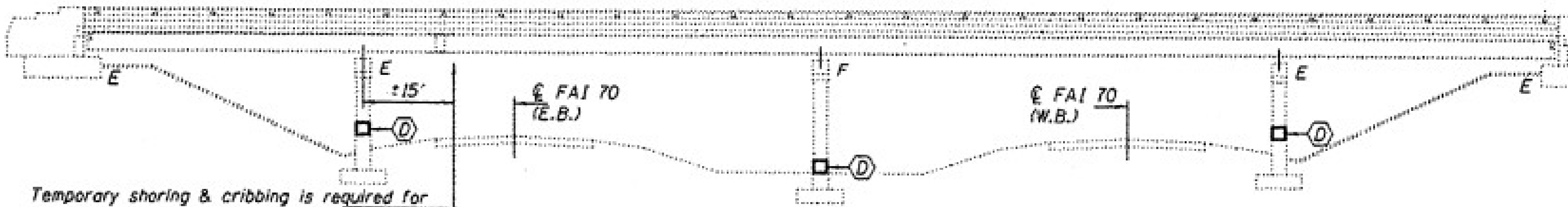
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 2 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	39
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

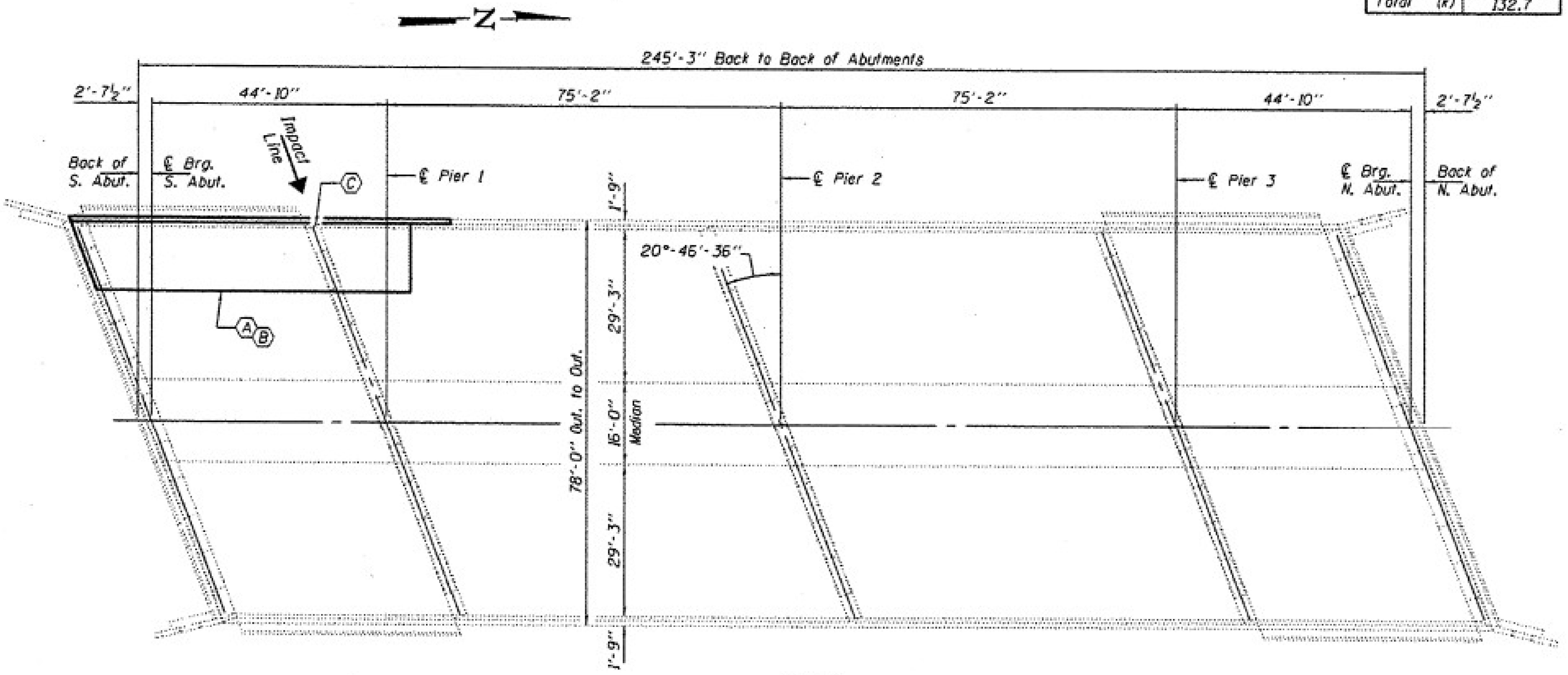
I-70 CLARK



Temporary shoring & cribbing is required for Beams 1 & 2. The shoring & cribbing shall be removed as soon as possible after the repair is completed, to minimize Traffic Control.

ELEVATION

REACTION TABLE AT TEMPORARY SHORING		
℄	(k)	74.3
℄	(k)	46.3
Imp.	(k)	12.1
Total	(k)	132.7



PLAN

- Ⓐ - Remove & Replace section of Beams 1 & 2.
- Ⓑ - Remove & Replace Concrete Bridge Deck.
- Ⓒ - Remove & Replace portion of pier cap & Westernmost column & repair crashwall.
- Ⓓ - Crashwall extension at all piers.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36. unless otherwise noted.

Fasteners shall be high strength bolts. Flange splice holes shall be $^{15}/_{16}$"ϕ for $^{7}/_{8}$"ϕ bolts. Web splice holes shall be $^{13}/_{16}$"ϕ for $^{3}/_{4}$"ϕ bolts.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing".

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Gray, Munsell No. 5B 7/1.

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

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Diaphragm connection holes shall be $^{15}/_{16}$"ϕ for $^{3}/_{4}$"ϕ bolts. Two hardened washers shall be required at diaphragm connections.

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

All soot on the underside of the bridge shall be removed according to Article 592 of the Standard Specifications, to the satisfaction of the engineer. This work shall also include bearings & extensions at beams 1 & 2 at the South Abutment.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	35.0
Concrete Superstructure	Cu. Yd.	29.7
Furnishing and Erecting Structural Steel	Pound	20550
Structural Steel Removal	Pound	20550
Concrete Structures	Cu. Yd.	42.6
* Protective Coat	Sq. Yd.	102.8
Floor Drains	Each	5
Remove and Re-Erect Existing Handrail	Foot	72
Preformed Joint Strip Seal	Foot	14
Reinforcement Bars, Epoxy Coated	Pound	14640
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	49.4
Temporary Shoring and Cribbing	L. Sum	1
Mechanical Splicers	Each	259
Bridge Washing No. 1	Each	1

* On new Superstructure concrete only

DAVID CARL PUZEY
081-005470

EXPIRES 11-30-2016

DESIGNED

MODEL: 74E48-48-3 [Sheet]
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 3 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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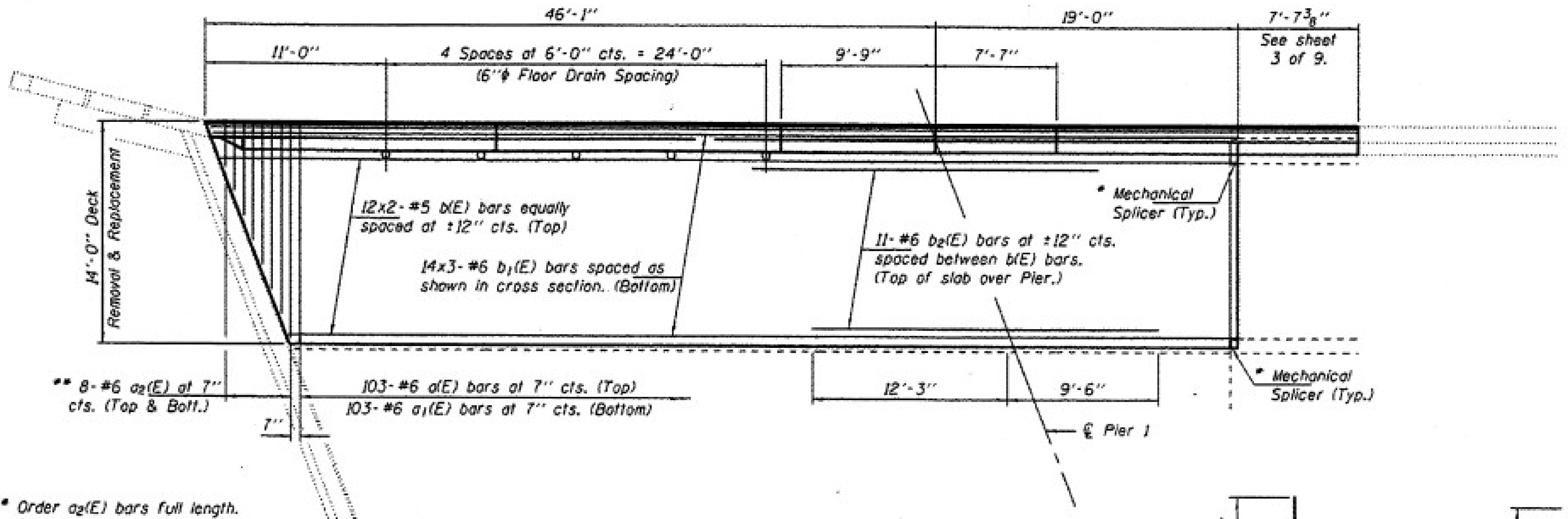
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

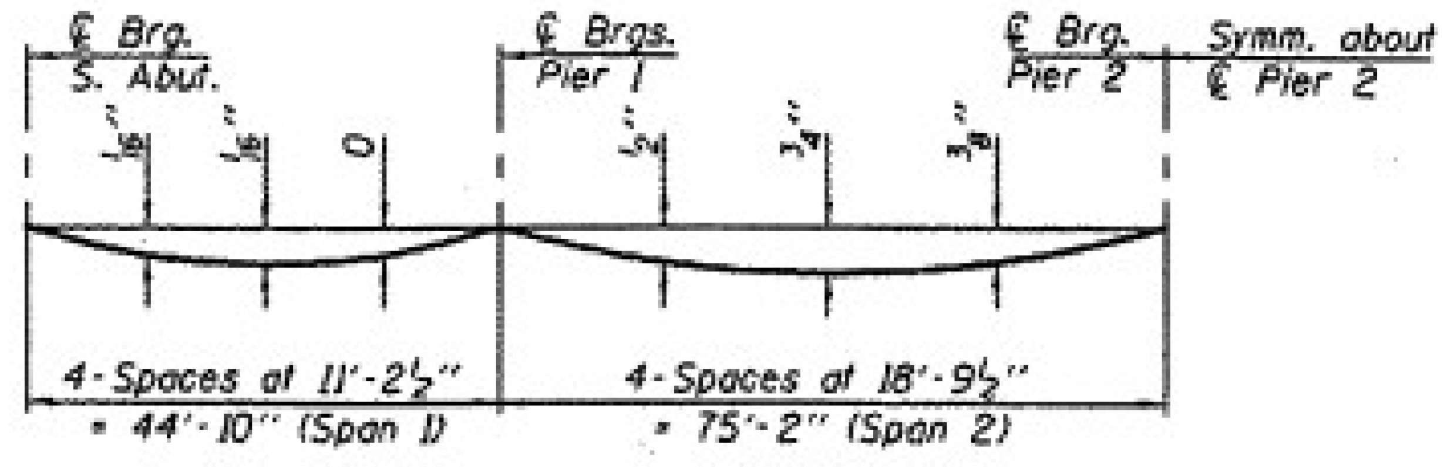
I-70 CLARK


46'-1"
19'-0"
7'-7 3/8"
See sheet 3 of 9.
11'-0"
4 Spaces at 6'-0" cts. = 24'-0"
(6"φ Floor Drain Spacing)
9'-9"
7'-7"
14'-0" Deck Removal & Replacement
12x2-#5 b(E) bars equally spaced at ±12" cts. (Top)
14x3-#6 b1(E) bars spaced as shown in cross section. (Bottom)
11-#6 b2(E) bars at ±12" cts. spaced between b(E) bars. (Top of slab over Pier.)
* Mechanical Splicer (Typ.)
** 8-#6 a2(E) at 7" cts. (Top & Bott.)
103-#6 a(E) bars at 7" cts. (Top)
103-#6 a1(E) bars at 7" cts. (Bottom)
7"
12'-3"
9'-6"
℄ Pier 1
* Mechanical Splicer (Typ.)

** Order a_2(E) bars full length. Cut to fit skew and use in top & bottom of slab.

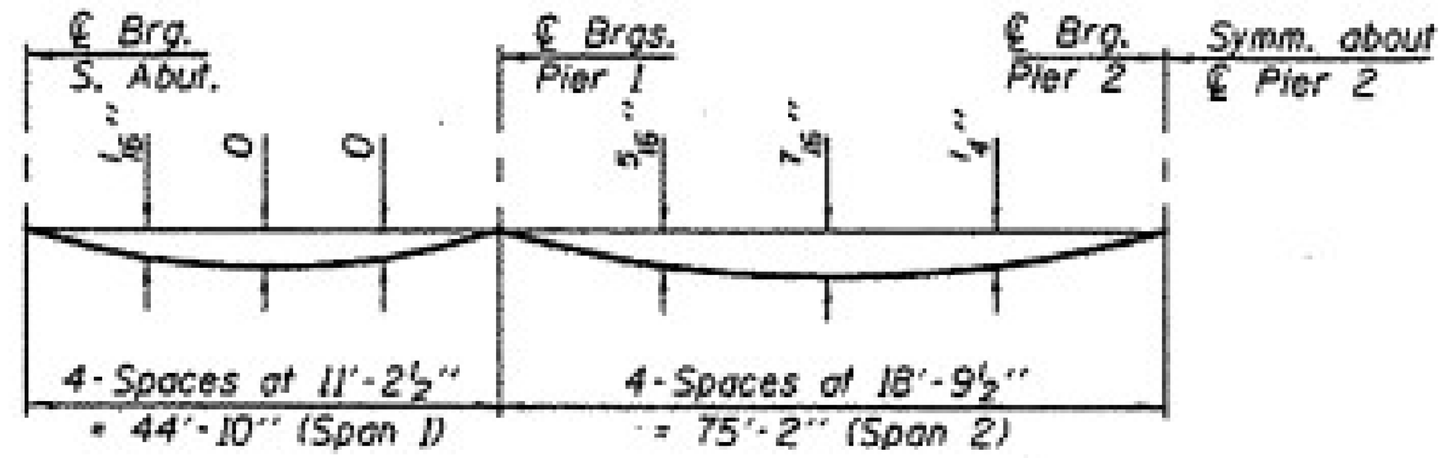
PARTIAL DECK PLAN

* Existing reinforcement to extend 6" min. into concrete removal area to facilitate installation of Mechanical Splicers.



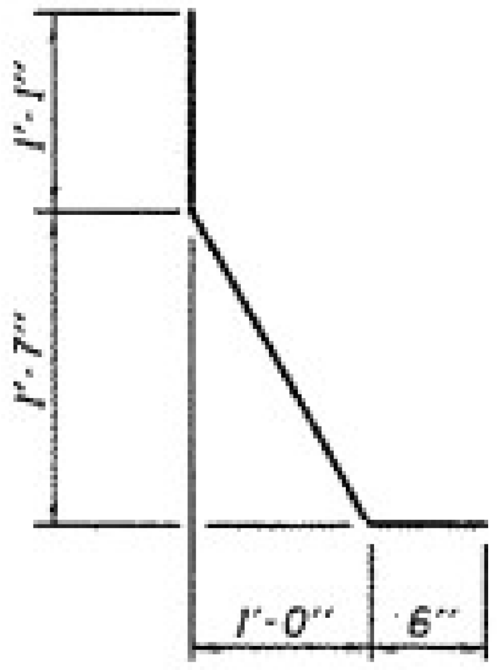
DEAD LOAD DEFLECTION DIAGRAM - BEAM 1

(Includes weight of concrete, excluding beams).

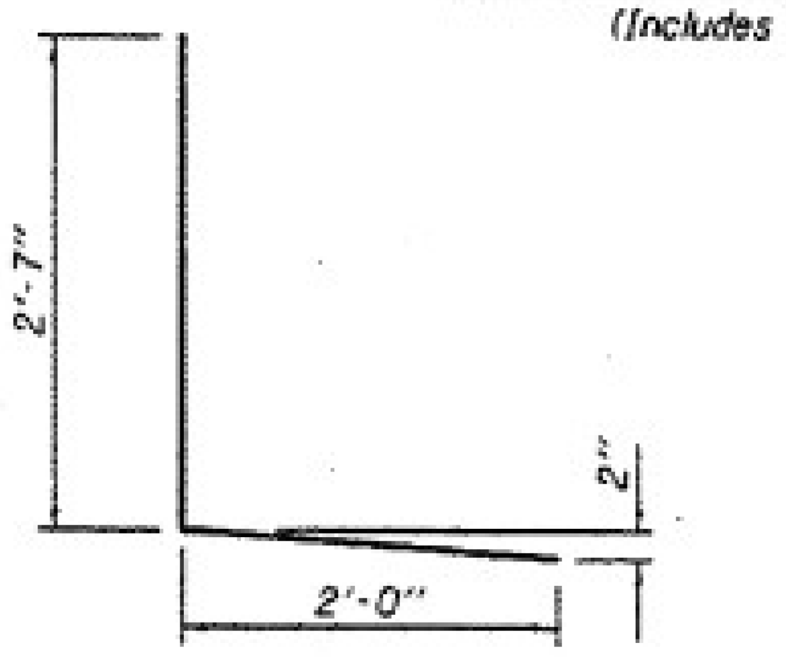


DEAD LOAD DEFLECTION DIAGRAM - BEAM 2

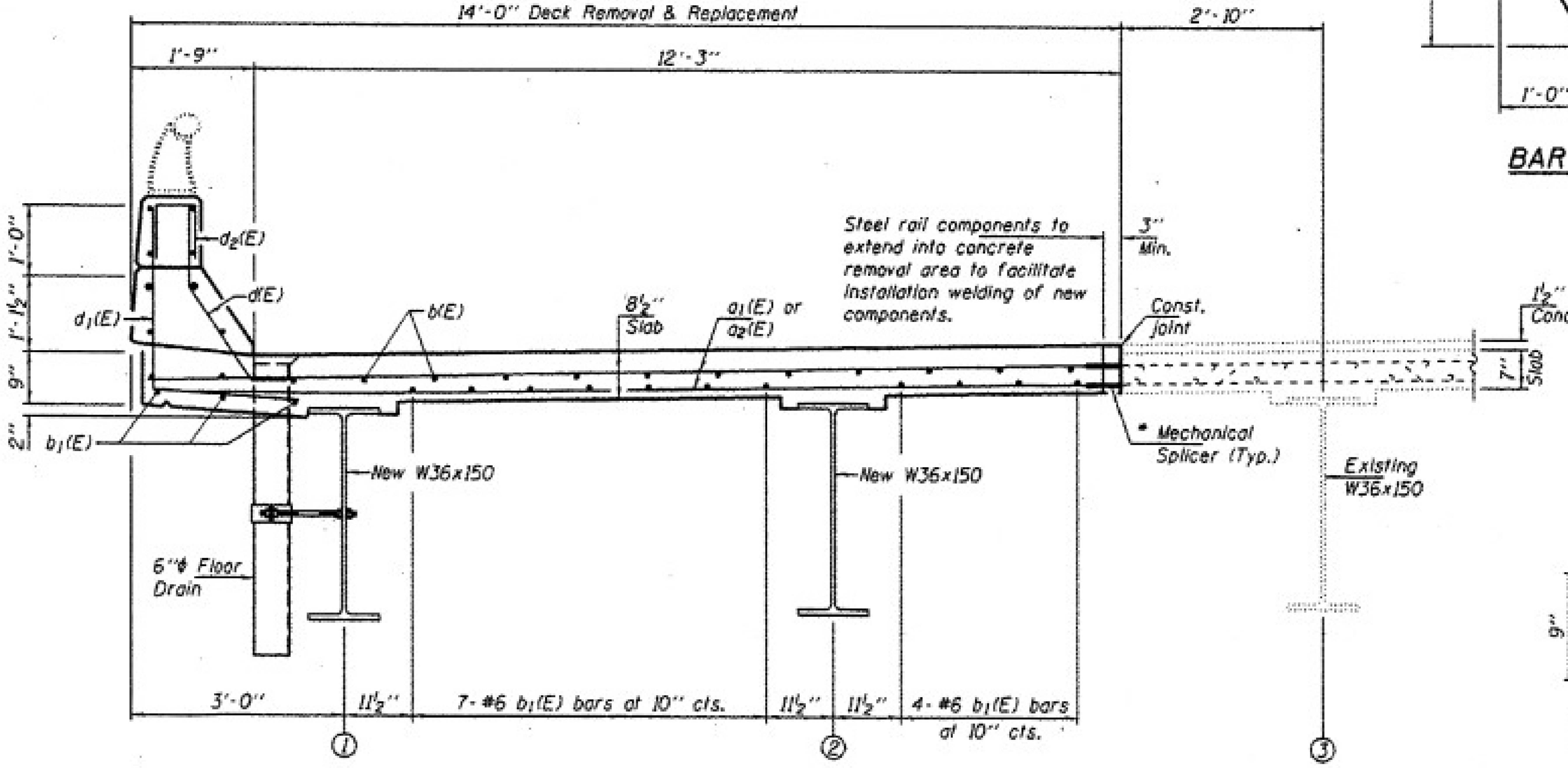
(Includes weight of concrete, excluding beams).



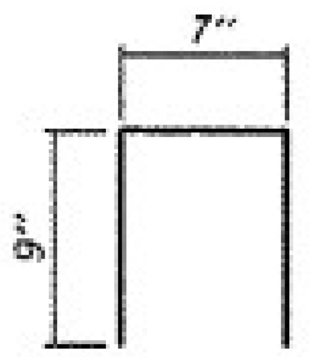
BAR d(E)



BAR d_1(E)


14'-0" Deck Removal & Replacement
2'-10"
1'-9"
12'-3"
1'-0"
1'-1½"
9"
2"
d2(E)
d(E)
d1(E)
b(E)
b1(E)
8½" Slab
a1(E) or a2(E)
Steel rail components to extend into concrete removal area to facilitate installation welding of new components.
3" Min.
Const. joint
1½" Microsilica Concrete Overlay
7" Slab
* Mechanical Splicer (Typ.)
Existing W36x150
New W36x150
New W36x150
6"φ Floor Drain
3'-0"
11½"
7-#6 b1(E) bars at 10" cts.
11½"
11½"
4-#6 b1(E) bars at 10" cts.
①
②
③

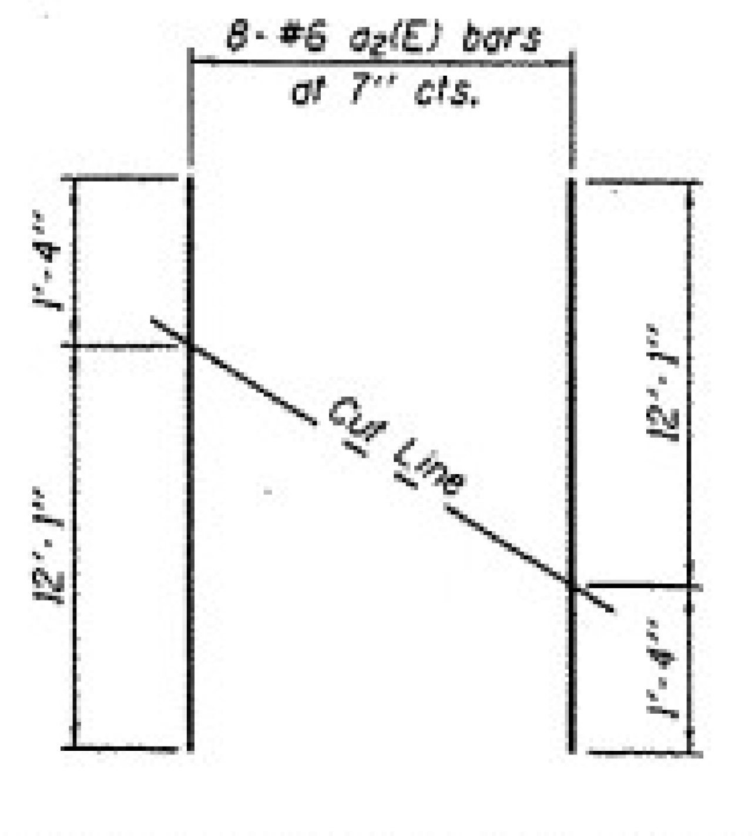
SECTION THRU DECK



BAR d_2(E)

MIN. BAR LAP

#5 Bar = 2'-7"
#6 Bar = 3'-1"



BAR a_2(E) CUTTING DIAGRAM

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	103	#6	13'-7"	——
a_1(E)	103	#6	12'-10"	——
a_2(E)	8	#6	13'-5"	——
b(E)	24	#5	33'-8"	——
b_1(E)	42	#6	23'-8"	——
b_2(E)	11	#6	21'-9"	——
d(E)	65	#5	3'-5"	⌊
d_1(E)	68	#4	4'-7"	L
d_2(E)	16	#4	2'-1"	⊓
e(E)	8	#4	17'-7"	——
e_1(E)	4	#4	9'-5"	——
e_2(E)	4	#4	7'-3"	——
e_3(E)	4	#4	18'-8"	——
e_4(E)	4	#8	20'-7"	——
e_5(E)	2	#8	9'-5"	——
e_6(E)	2	#8	7'-3"	——
e_7(E)	2	#8	11'-1"	——
e_8(E)	4	#5	19'-3"	——
e_9(E)	2	#5	9'-5"	——
e_{10}(E)	2	#5	7'-3"	——
e_{11}(E)	2	#5	11'-1"	——
Concrete Removal			Cu. Yd.	29.7
Concrete Superstructure			Cu. Yd.	29.7
Reinforcement Bars, Epoxy Coated			Lbs.	8100

Reinforcement bars designated (E) shall be epoxy coated.

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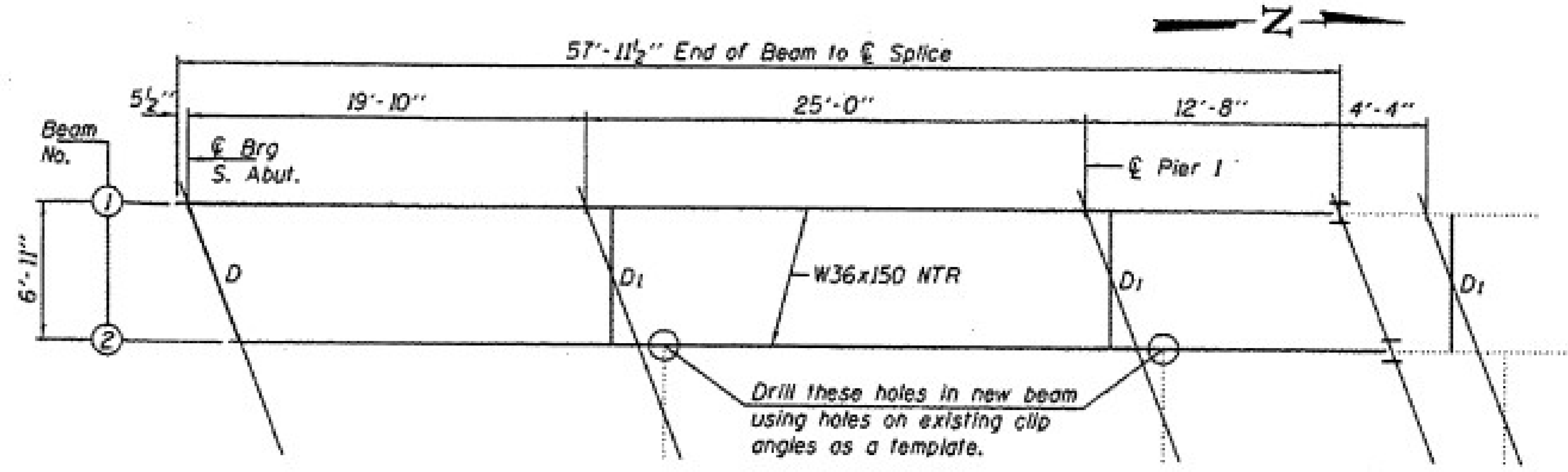
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 4 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	41
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

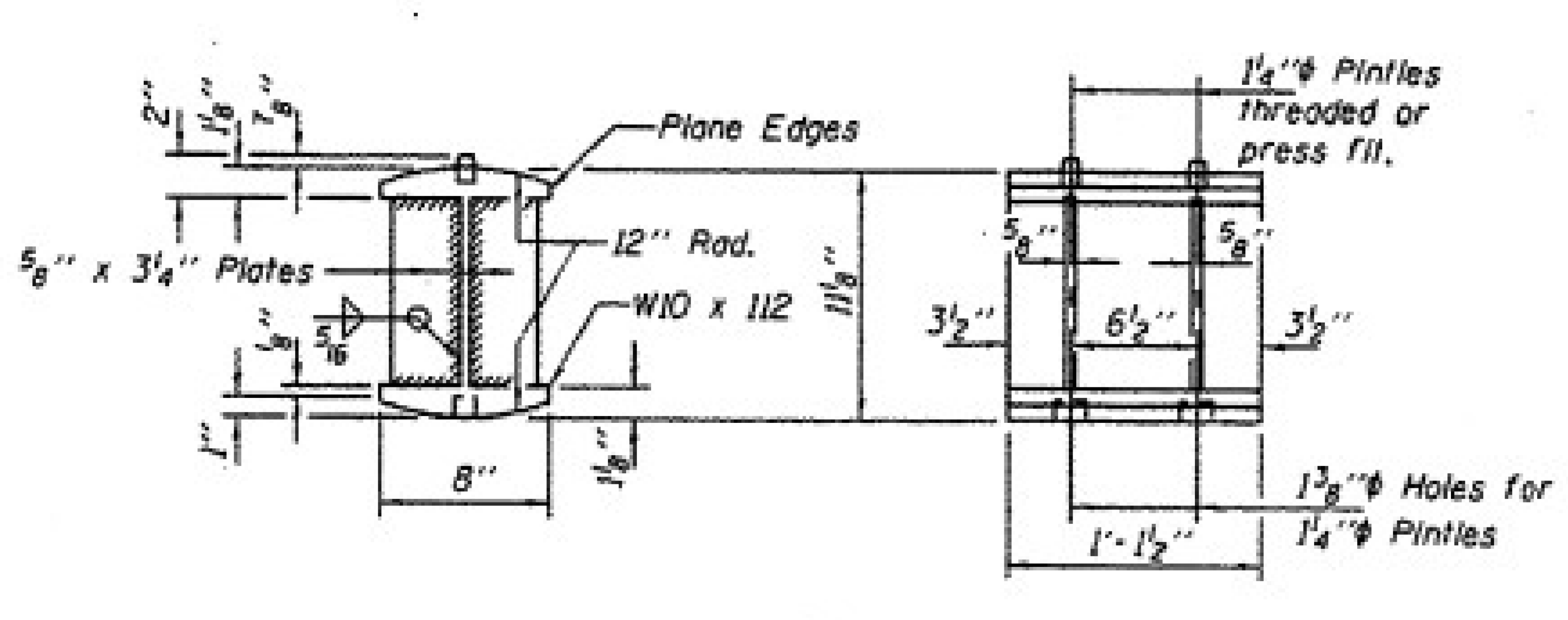
I-70 CLARK



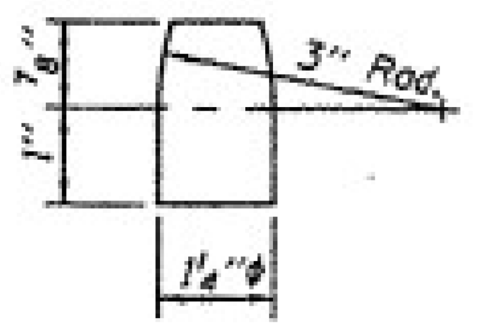
57'-11½" End of Beam to ℄ Splice
5½"
19'-10"
25'-0"
12'-8"
4'-4"
Beam No.
℄ Brg S. Abut.
℄ Pier 1
6'-11"
①
②
D
D1
W36x150 NTR
Drill these holes in new beam using holes on existing clip angles as a template.
Z

PARTIAL FRAMING PLAN

Note:
Natural camber of new beam shall be placed upward for fabrication.



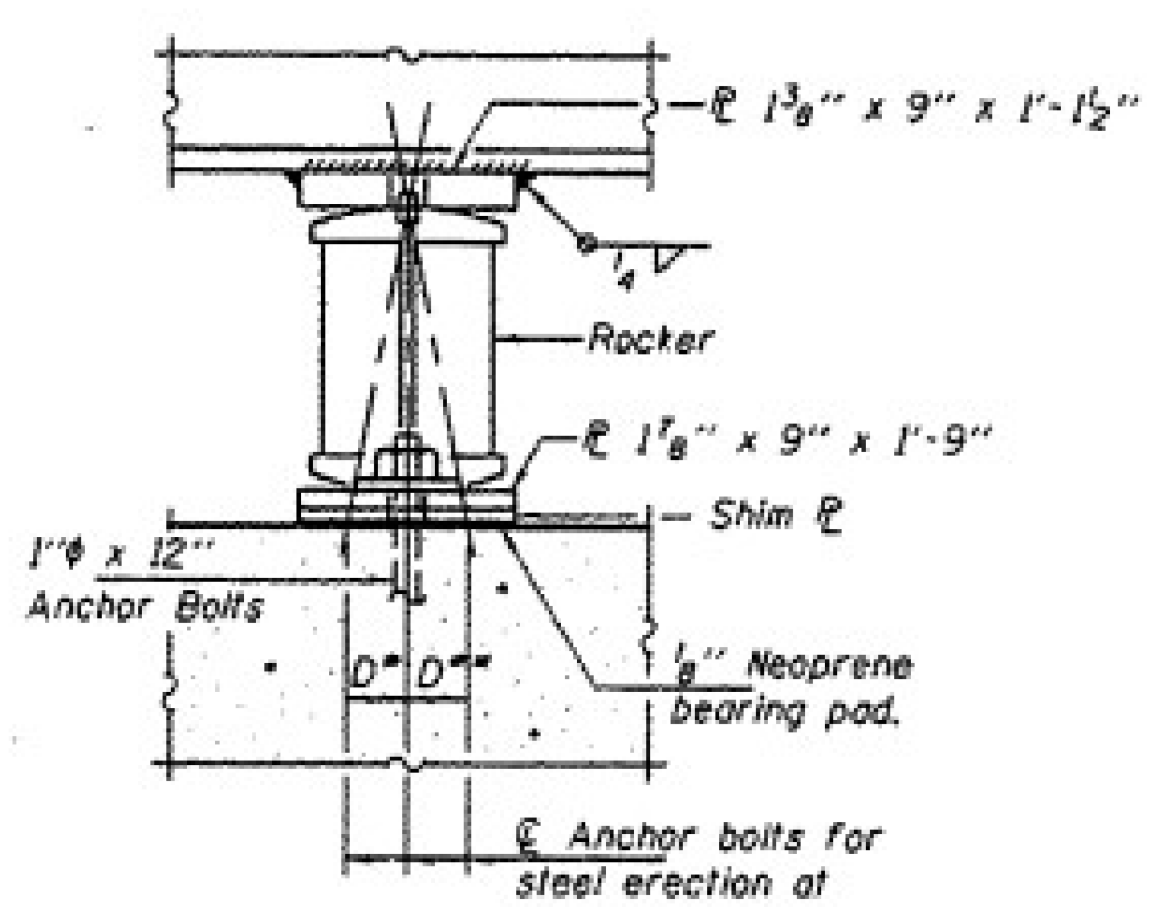
ROCKER



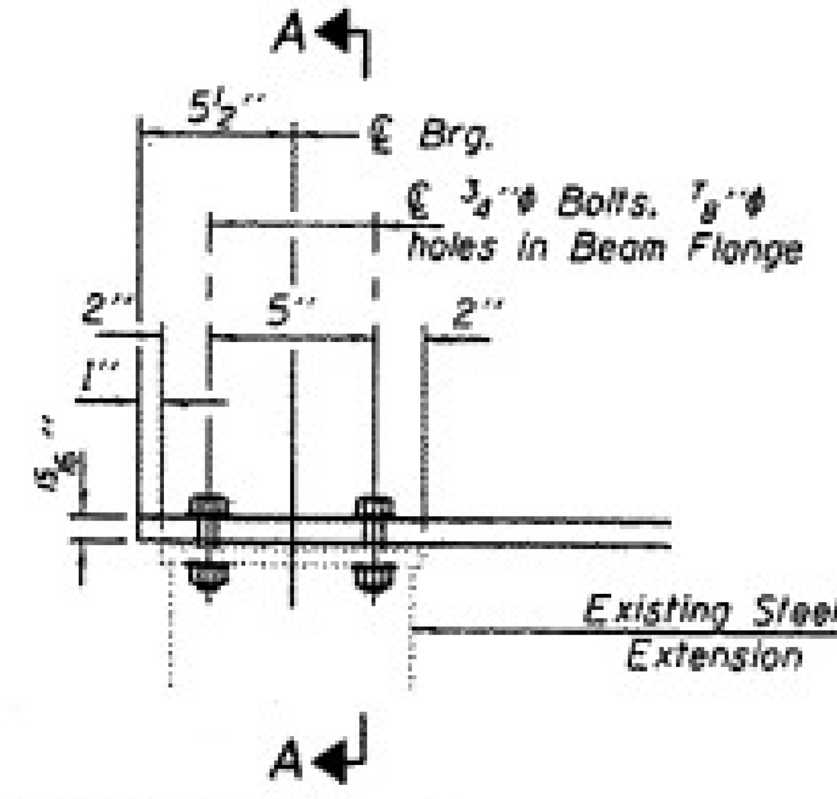
PINTLE

Note "A"
1⅜"ϕ Holes-1" deep in top ℄ for 1¼"ϕ Pintles. Thread or press fit pintles in bottom ℄.

Note "B"
1½"ϕ Holes for 1"ϕ Anchor Bolts - 5⁄16" x 2½" x 2½" ℄ washer under nut.

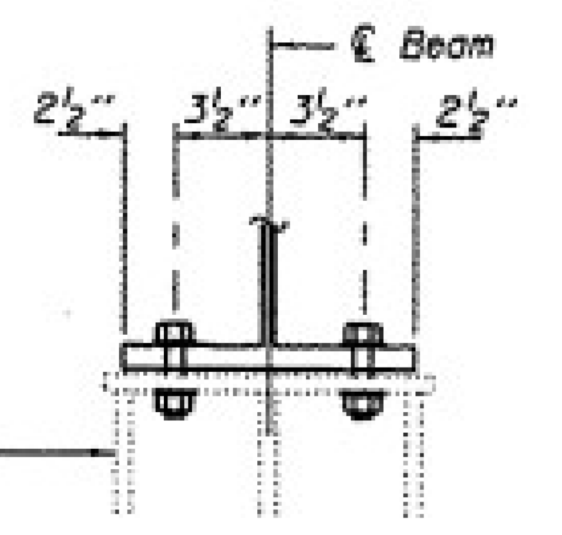


ELEVATION



ELEVATION AT ABUTMENT

(Typical at beams 1 & 2 only)



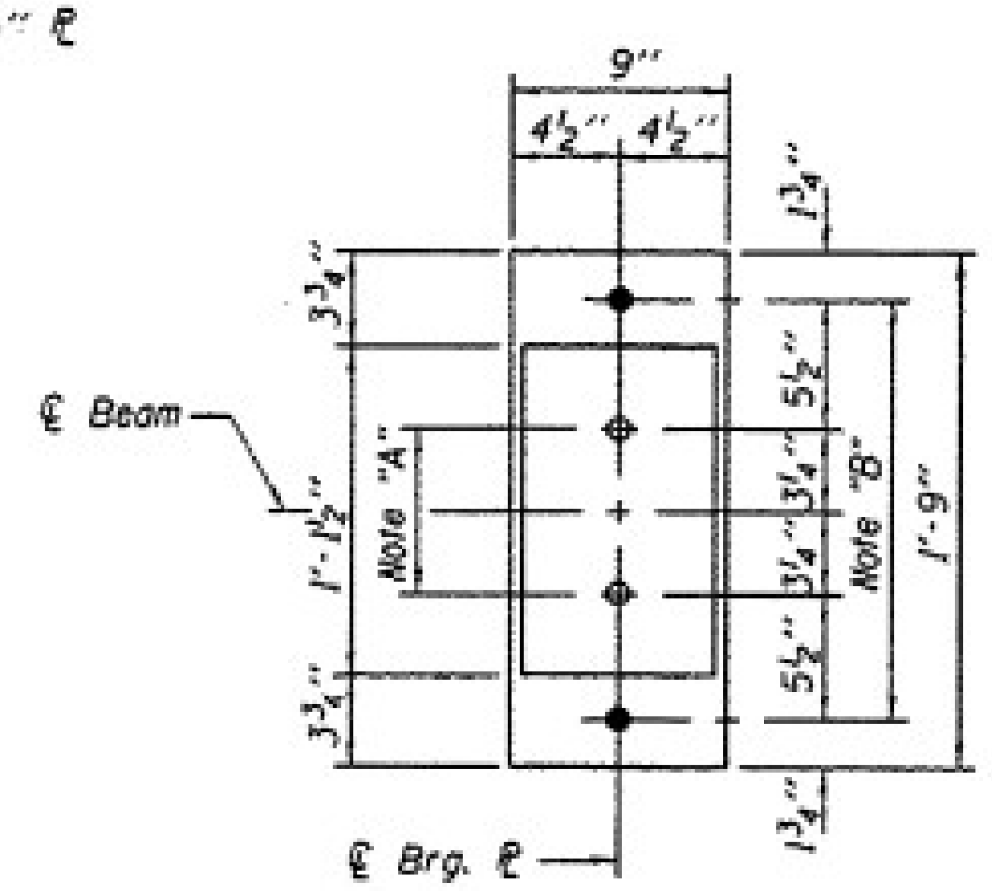
SECTION A-A

○ - Use holes in existing steel as template.
● - Use holes in new steel as template.

D* (Side of brg. away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
D** (Side of brg. toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.

After beams have been erected and dimensions D* & D** determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheet #7 of 9.

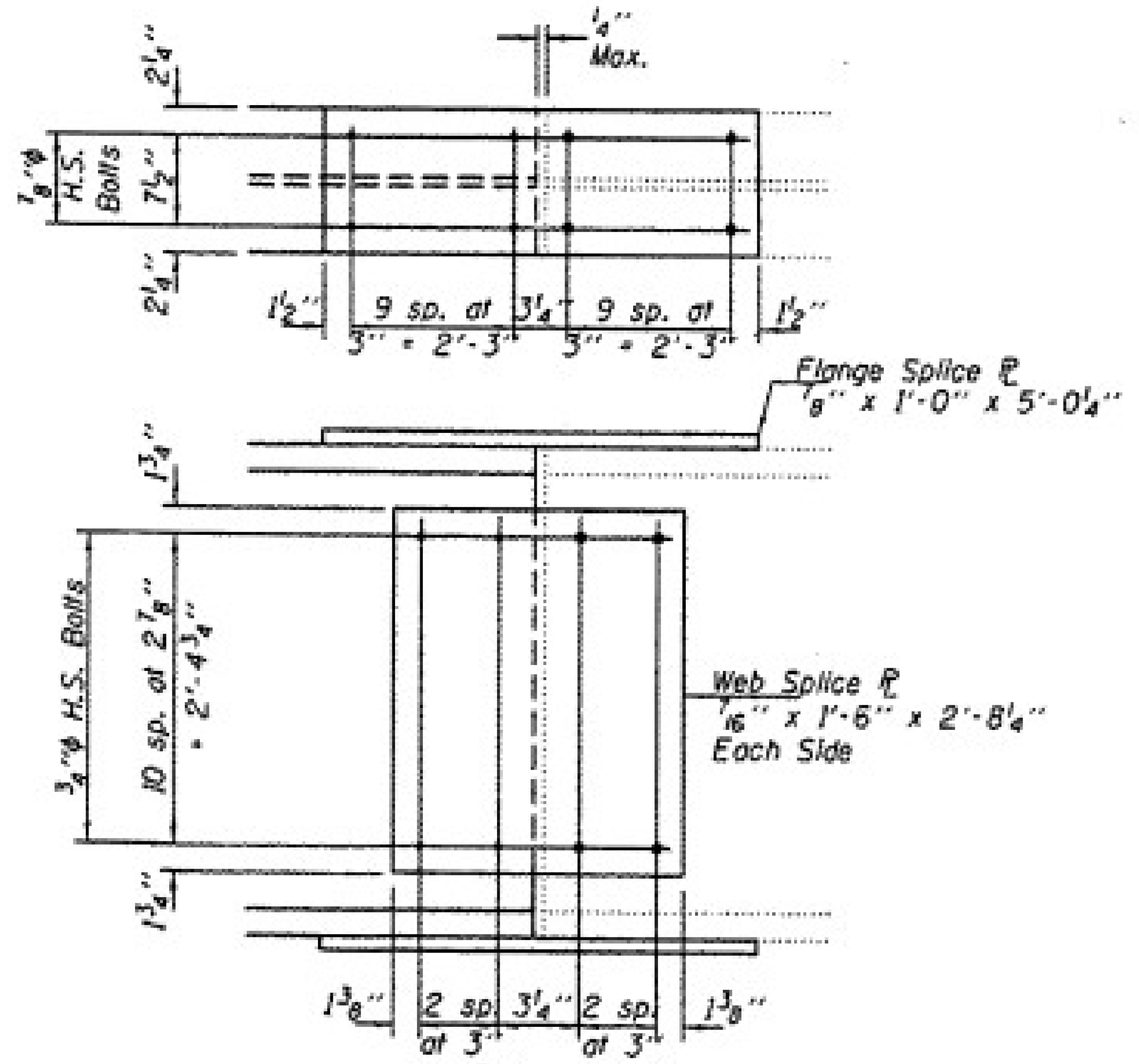
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



PLAN AT PIER 1

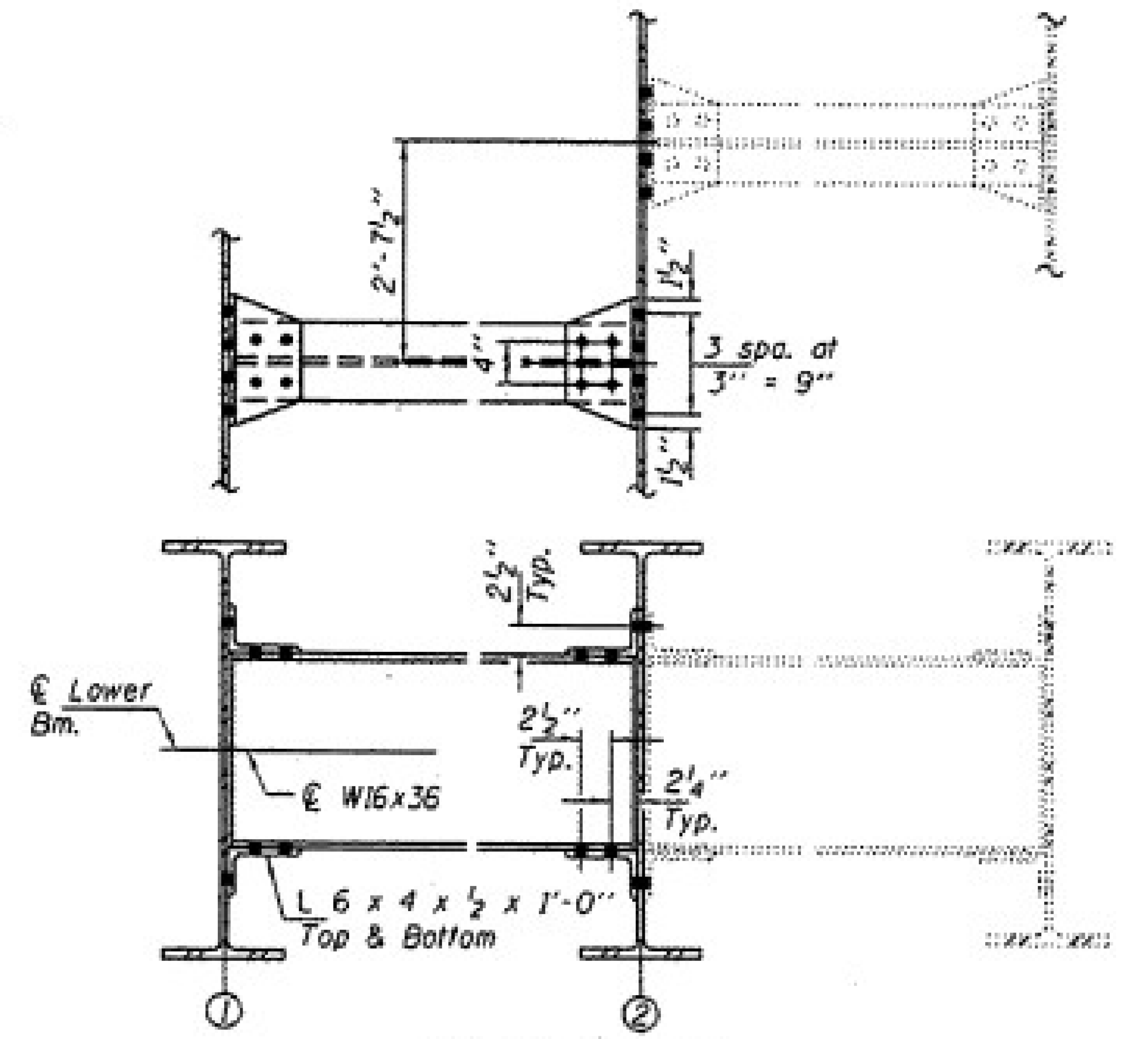
BEARING ASSEMBLY DETAILS

(Typical at beams 1 & 2 only)



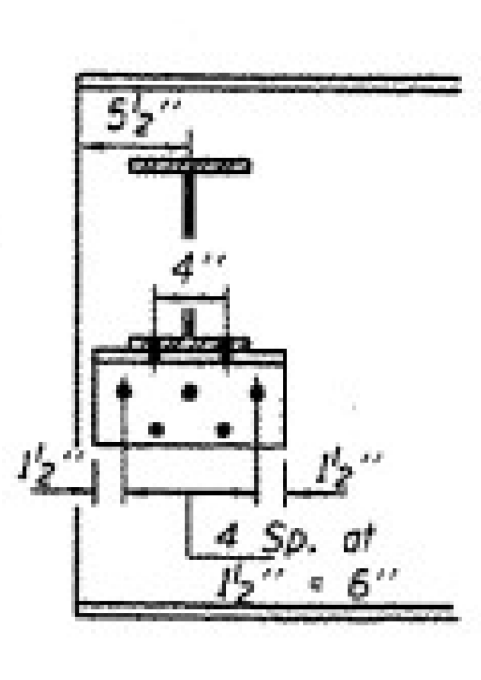
DETAIL OF SPLICE

All splice plates shall be NTR

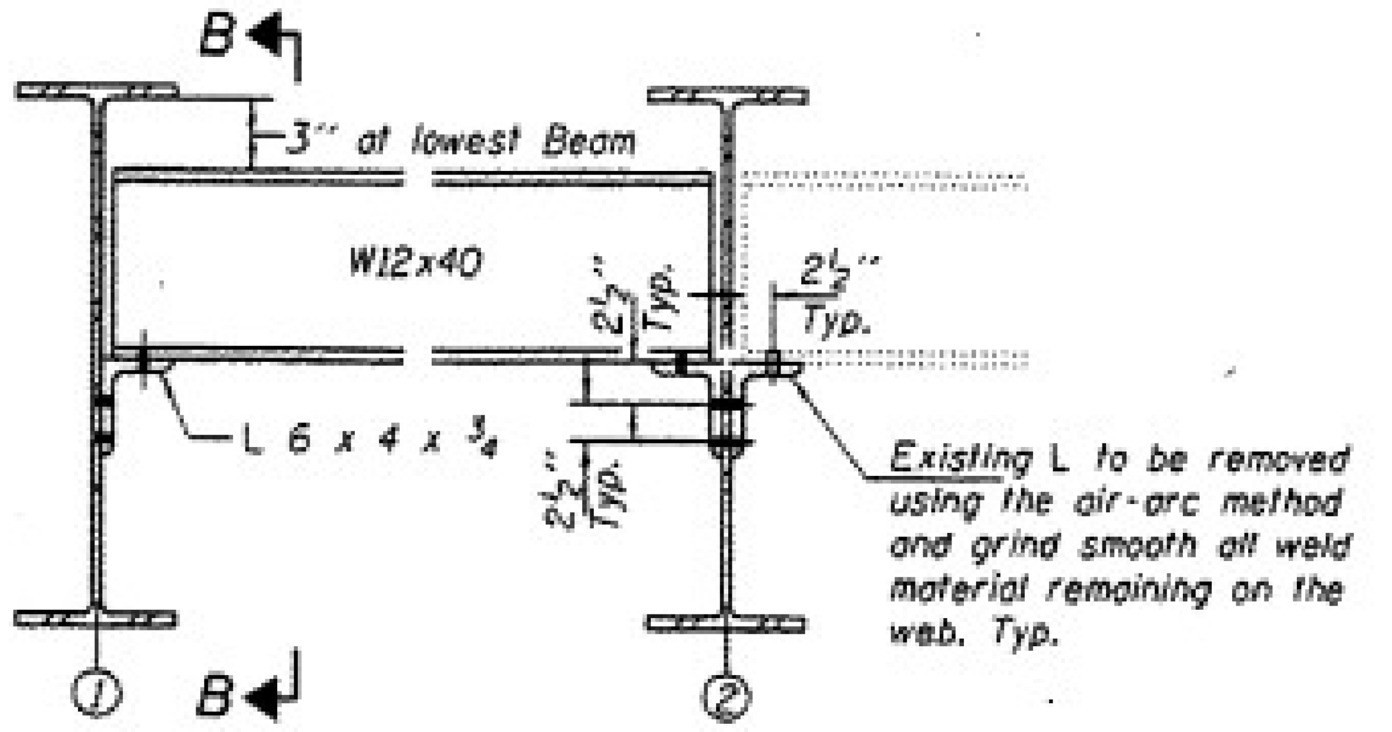


DIAPHRAGM D1

3 Required



SECTION B-B



B
3" at lowest Beam
W12x40
2½" Typ.
L 6 x 4 x ¾
Existing L to be removed using the air-arc method and grind smooth all weld material remaining on the web. Typ.
①
②
B

DIAPHRAGM D

1 Required

Fasteners shall be high strength bolts. Bolts ¾"ϕ, open holes 13⁄16"ϕ, unless otherwise noted.

DESIGNED SMR

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 5 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	42
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

I-70 CLARK

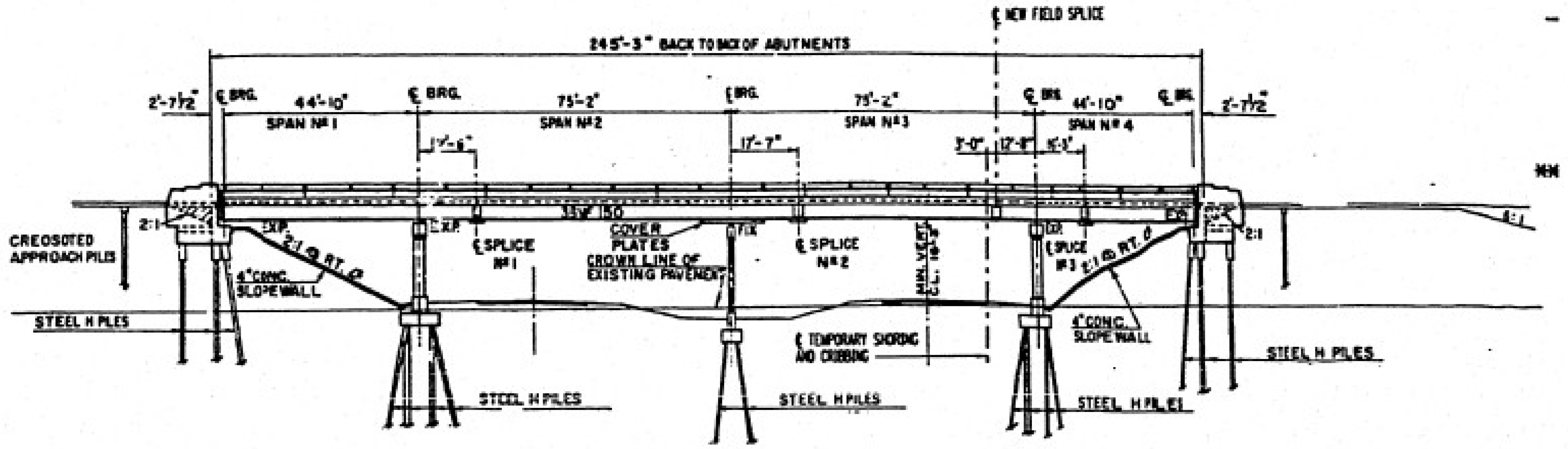
012-0048

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	*	CLARK		
FED.ROAD DIST.NO.		ILLINOIS	PROJECT	

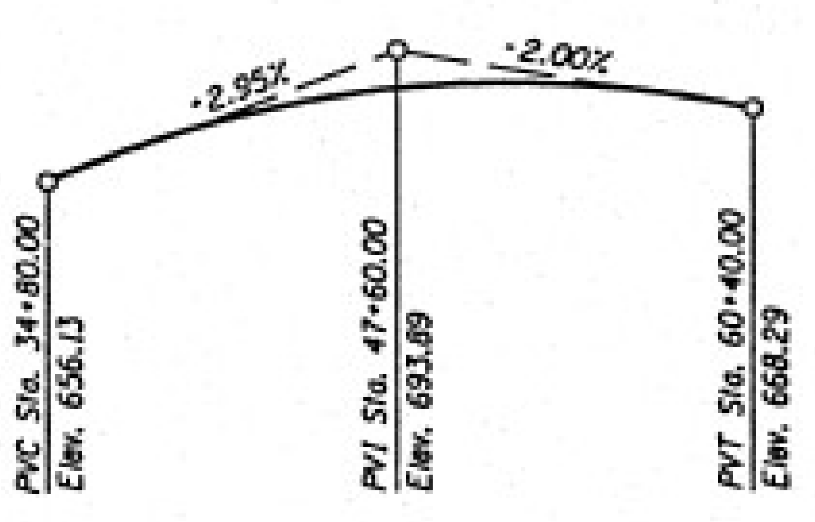
*12-49HB-2

Sheet No. 1
of 9 Sheets

Original Bench Mark:
Chiseled square on south headwall on
West side S.B.I. 49, 159' Rt. of F.A.I. 70
Sta. 756+87, Elev. 656.11



ELEVATION



PROFILE GRADE

GENERAL NOTES

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 for the deck, all loose rust, loose mill scale and all other loose, detrimental foreign material shall be removed from the portions of flanges of stringers (girders) in contact with concrete. The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP-3 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be incidental to Contract.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" adjusting shims, of the dimension of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".

The Inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the Acrylic finish coat shall be Interstate Green, Munsell No.7.5G 4/8. See Special Provision for "Cleaning and Painting Metal Structures".

All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled ¾" dia. and reamed in the field to ¹³⁄₁₆" dia. for ¾" dia. bolts, unless otherwise noted. Holes shall be subpunched or subdrilled ¹³⁄₁₆" dia. and reamed in the field to ¹⁵⁄₁₆" dia. for ⅞" dia. bolts, unless otherwise noted.

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.

All new structural steel shall conform to AASHTO Classification M-270, Grade 36.

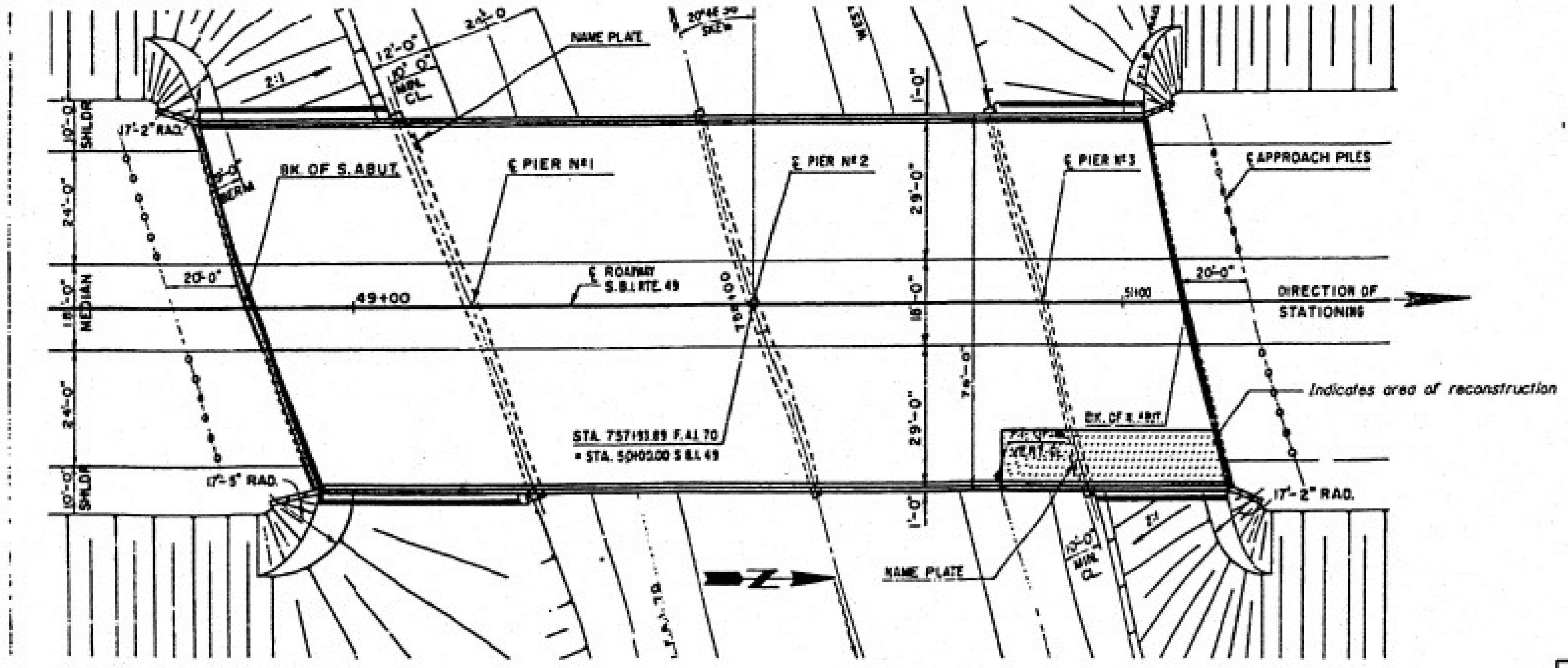
DESIGN STRESSES

fc = 1400 psi (Super)
fs = 24,000 psi (Reinf)
fs = 20,000 psi (Struct)

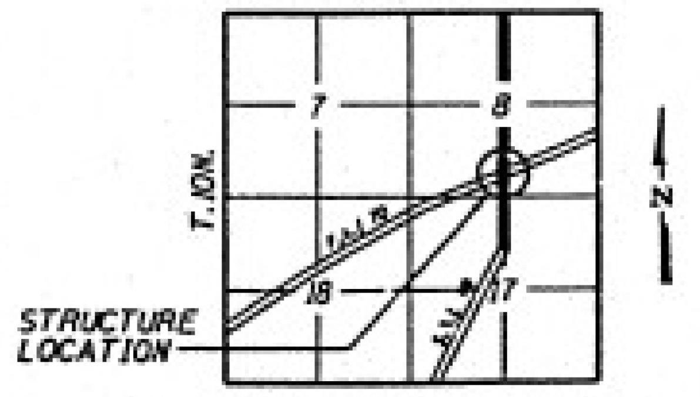
LOADING HS20

Allow 18 lbs./sq. ft. wearing surface

[illegible]



PLAN



LOCATION SKETCH

TOTAL BILL OF MATERIAL SN 012-0048

Item	Unit	Super	Sub	Total
Concrete Removal	Cu Yd	- -	4.8	4.8
Reinforcement Bars, Epoxy Coated	Pound	8270	1670	9940
Removal of Existing Superstructure	L Sum	1	- -	1
Floor Drains	Each	5	- -	5
Concrete Structures	Cu Yd	- -	4.8	4.8
Concrete Superstructure	Cu Yd	26.2	- -	26.2
Bridge Deck Grooving	Sq Yd	77.7	- -	77.7
Protective Coat	Sq Yd	96.0	- -	96.0
Furnishing and Erecting Structural Steel	Pound	20,320	- -	20,320
Removing and Re-erecting Existing Railing	Foot	72	- -	72
Protective Shield	Sq Yd	40.0	- -	40.0
High Performance Enhanced Shotcrete	Sq Ft	- -	10.0	10.0
Bridge Deck Microsilica Concrete Overlay, 1½"	Sq Yd	85.0	- -	85.0
Temporary Shoring and Cribbing	L Sum	- -	- -	1

GENERAL PLAN AND ELEVATION

REVISIONS		
NO.	DATE	INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.I. RTE. 70
SEC. 12-49HB-2
SN 012-0048
STA. 757+93.89
CLARK COUNTY

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS

DRAWN BY RLKing DATE 6/96
CHECKED BY JWC DATE 6/96
BOOK NUMBER
PROJECT No. 3824-22
SHEET No.

MODEL: 74E48-48-6 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 6 OF 12 SHEETS STA. TO STA.

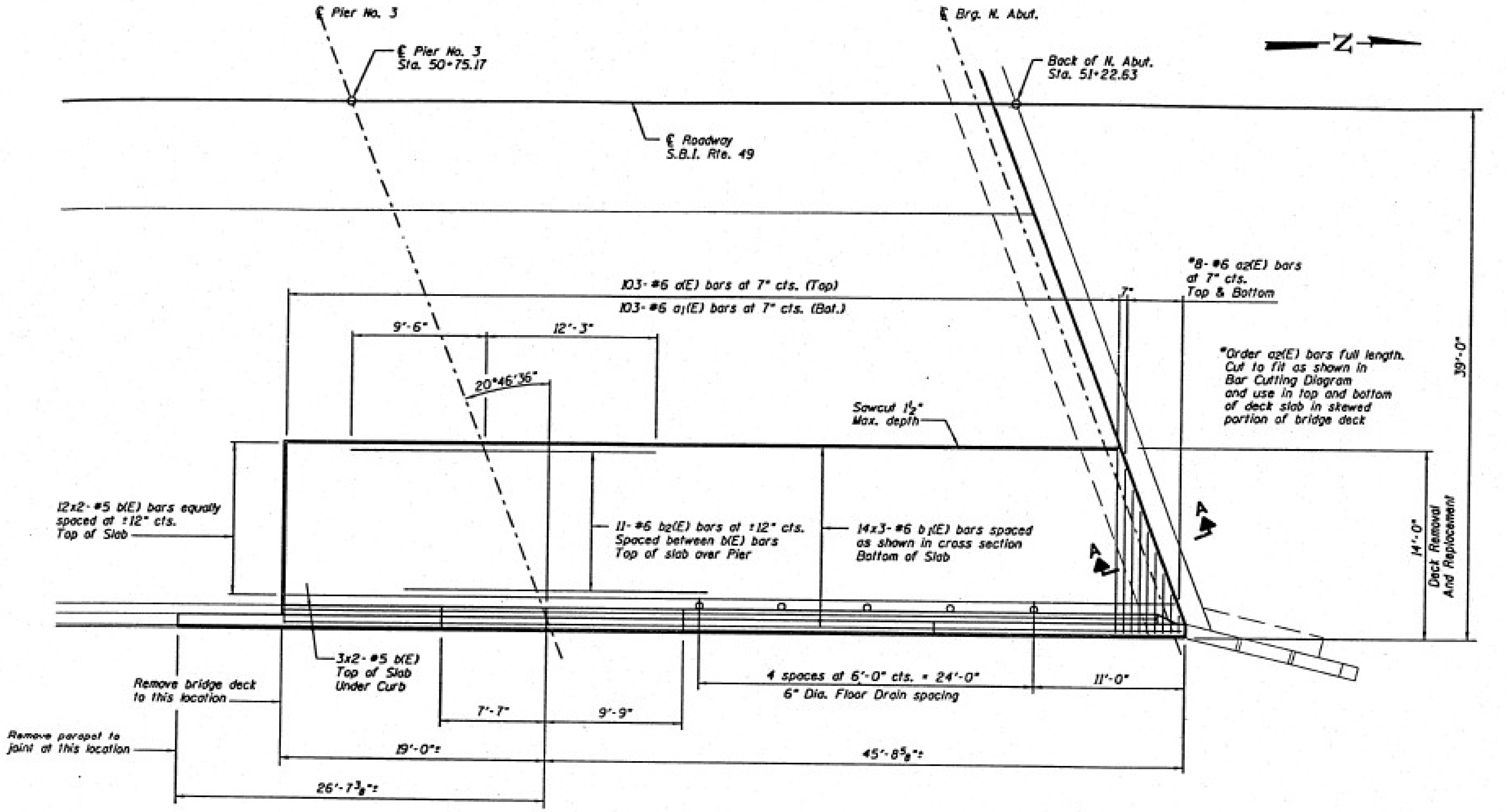
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	43
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

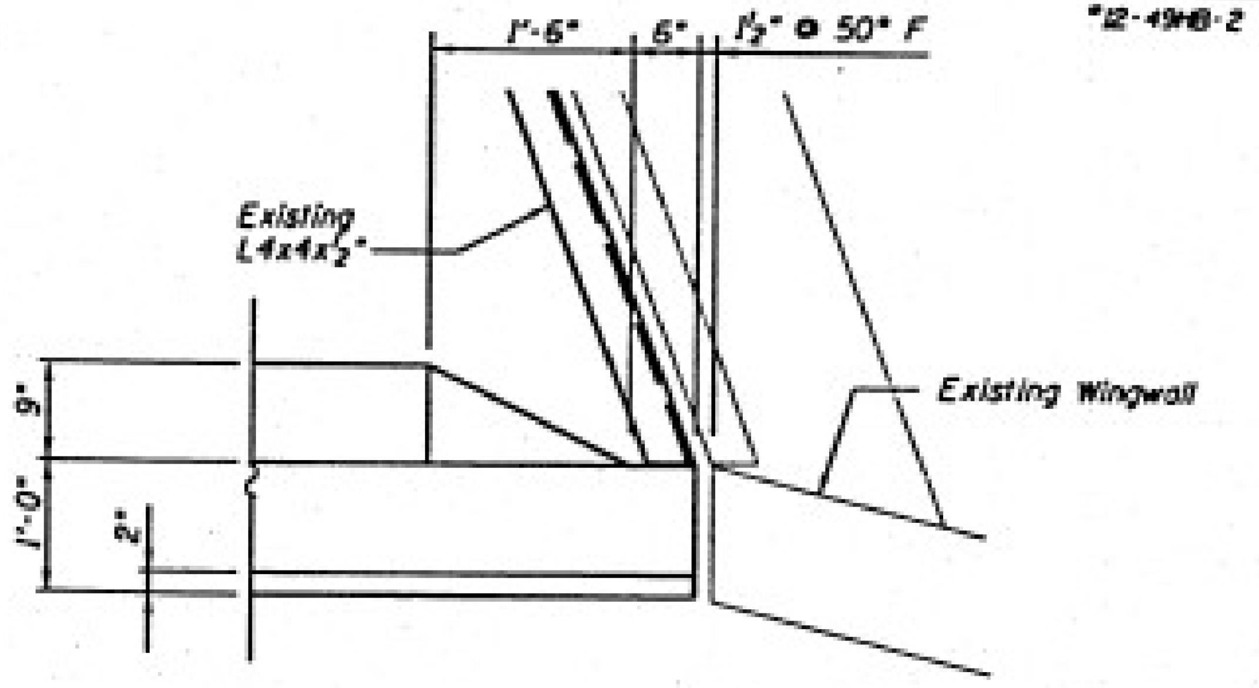
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	*	CLARK		
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

*12-49HB-2

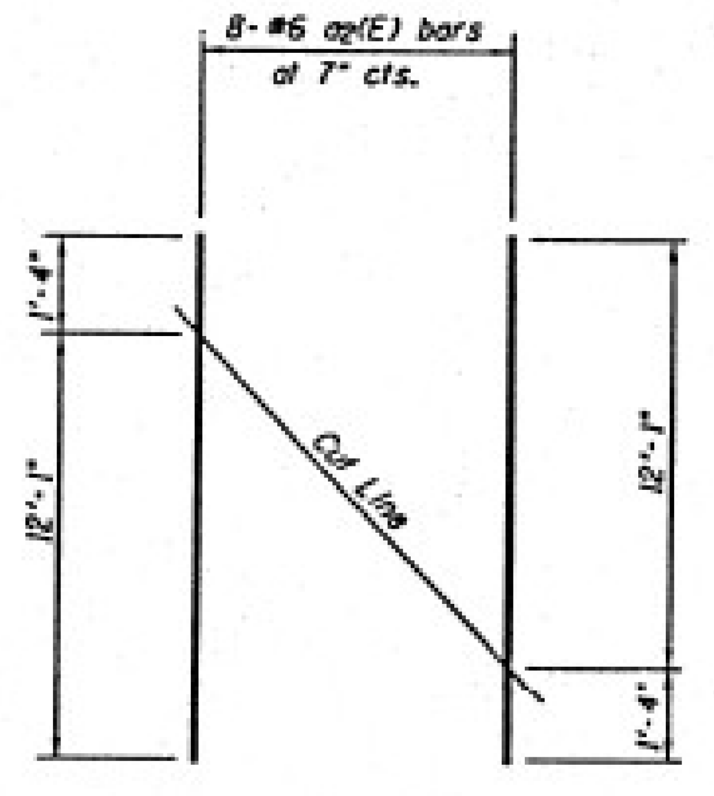
Sheet No. 3
of 9 Sheets



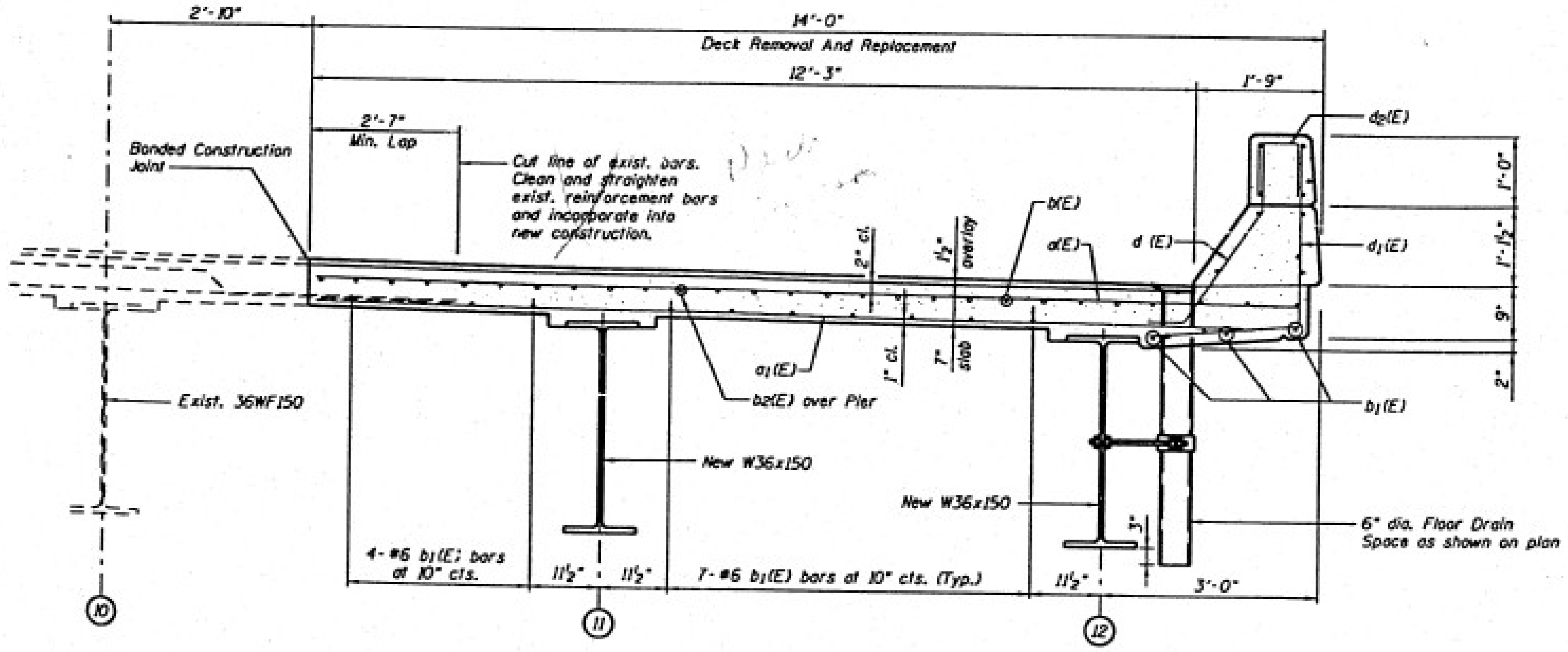
PARTIAL PLAN



DETAIL AT BRIDGE CURB & EXPANSION JOINT



BAR a2(E) CUTTING DIAGRAM



SECTION THRU DECK

MIN. BAR LAP

#5 bar = 2'-2"
#6 bar = 2'-7"

Notes:
See Sheet No. 4 for superstructure details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 5x2-#5 indicates 5 lines of bars with 2 lengths per line.

See Sheet No. 4 curb and parapet reinforcement.

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Removal of Existing Superstructure".

DECK PLAN AND DETAILS

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE RLKing 6/96
	DATE	INITIALS		CHECKED BY DATE JWC 6/96
1			F.A.I. RTE. 70 SEC. 12-49HB-2 SN 012-0048 STA. 757+93.89 CLARK COUNTY	BOOK NUMBER
2				PROJECT No. 3824-22
3				
4				
5				
6				
7			HOMER L. CHASTAIN & ASSOCIATES, LLP CONSULTING ENGINEERS	SHEET No.
8				
9				
10				

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS SN 012-0048
	DRAWN -	REVISED -		
	CHECKED -	REVISED -		
PLOT DATE = 7/29/2026	DATE -	REVISED -		SCALE: SHEET 7 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	44
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

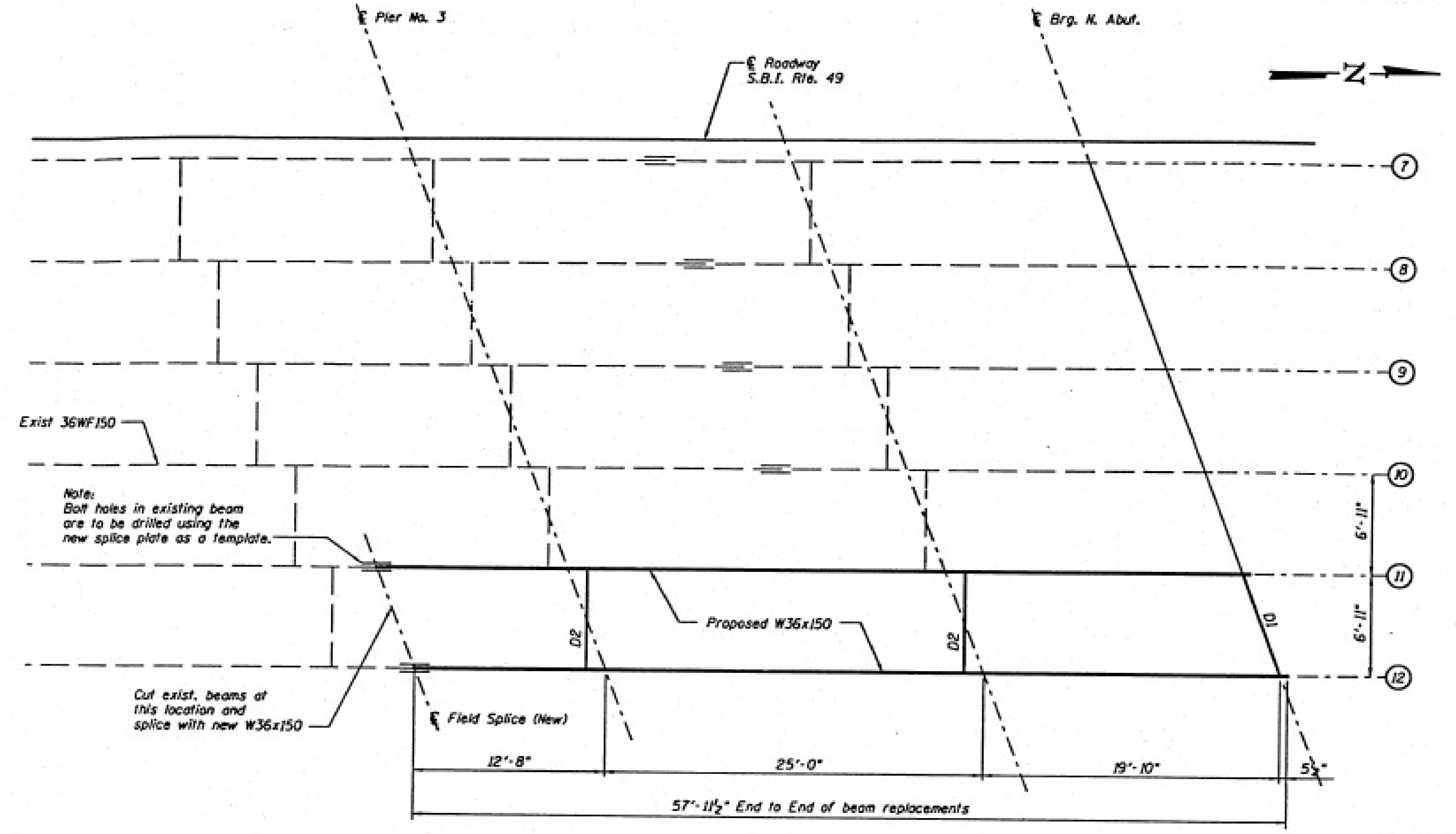
I-70 CLARK

MODEL: 74E48-48-7 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

Sheet No. 5
of 9 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	*	CLARK		
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

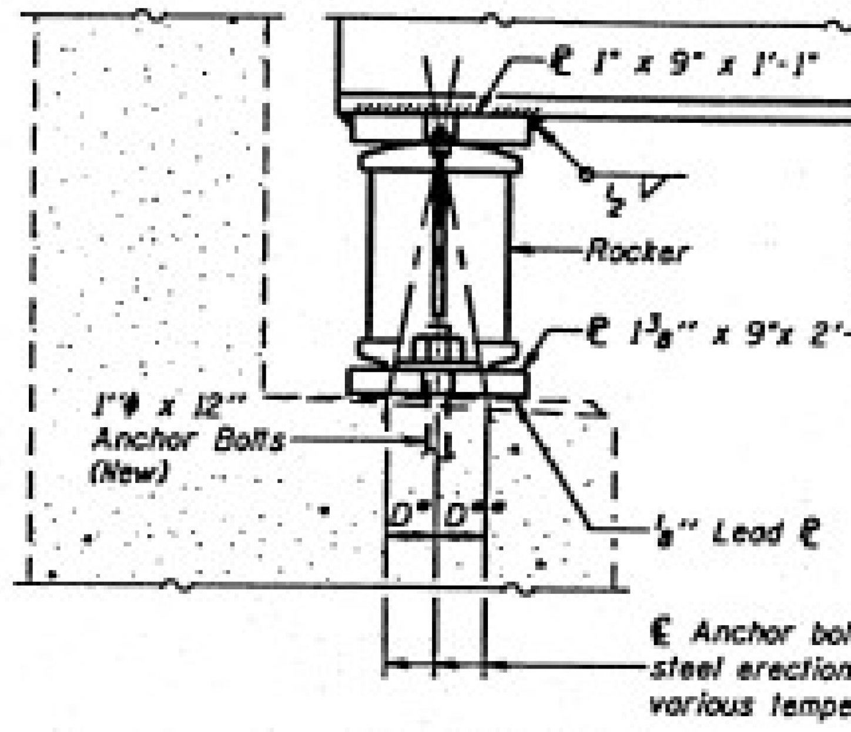
*12-49HB-2



Note:
Bolt holes in existing beam
are to be drilled using the
new splice plate as a template.

Cut exist. beams at
this location and
splice with new W36x150

PARTIAL FRAMING PLAN



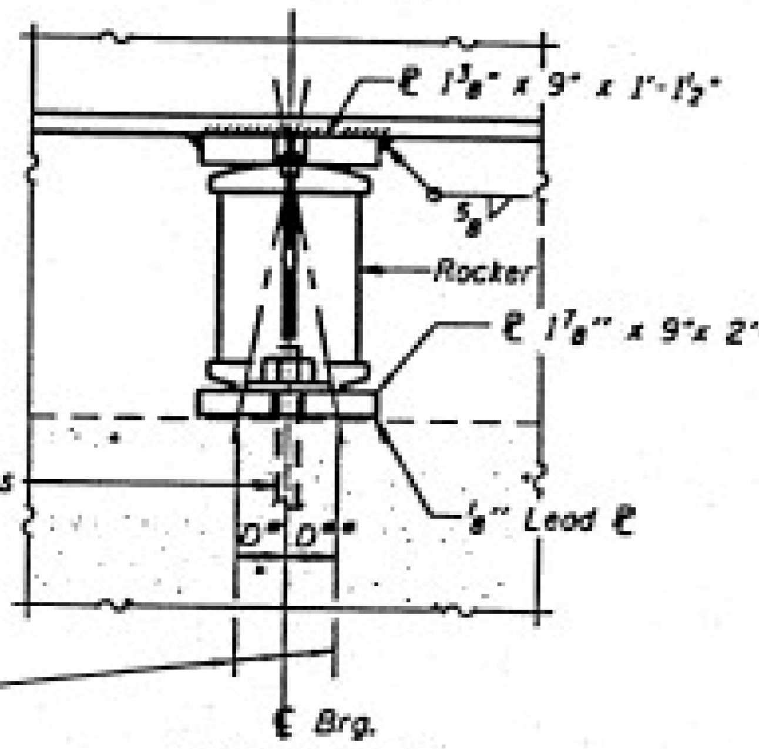
Note:
Burn existing anchor bolts
flush with existing concrete
surface. Grind existing anchor
bolt smooth and seal with epoxy.

℄ Anchor bolts for
steel erection at
various temperatures.

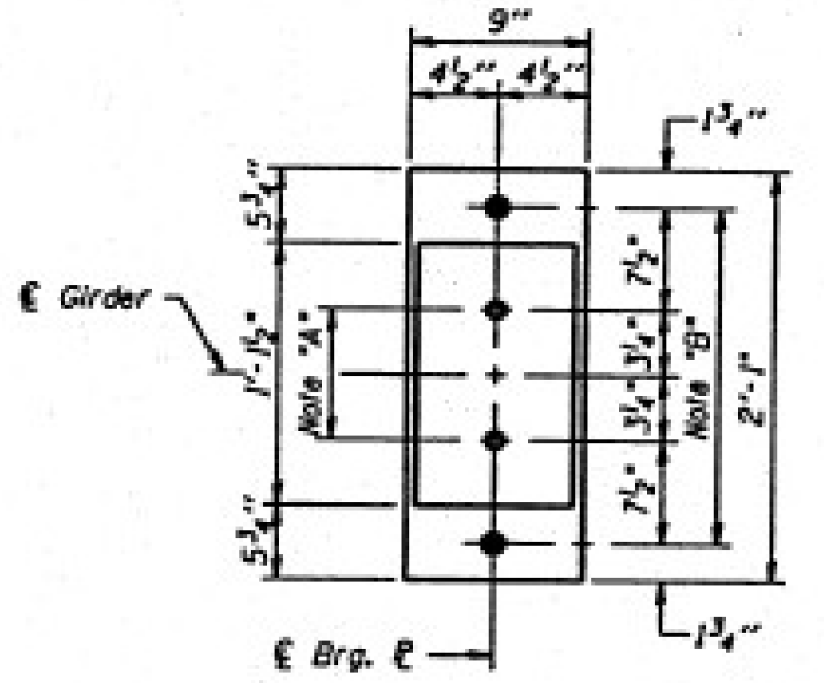
ELEVATION

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

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



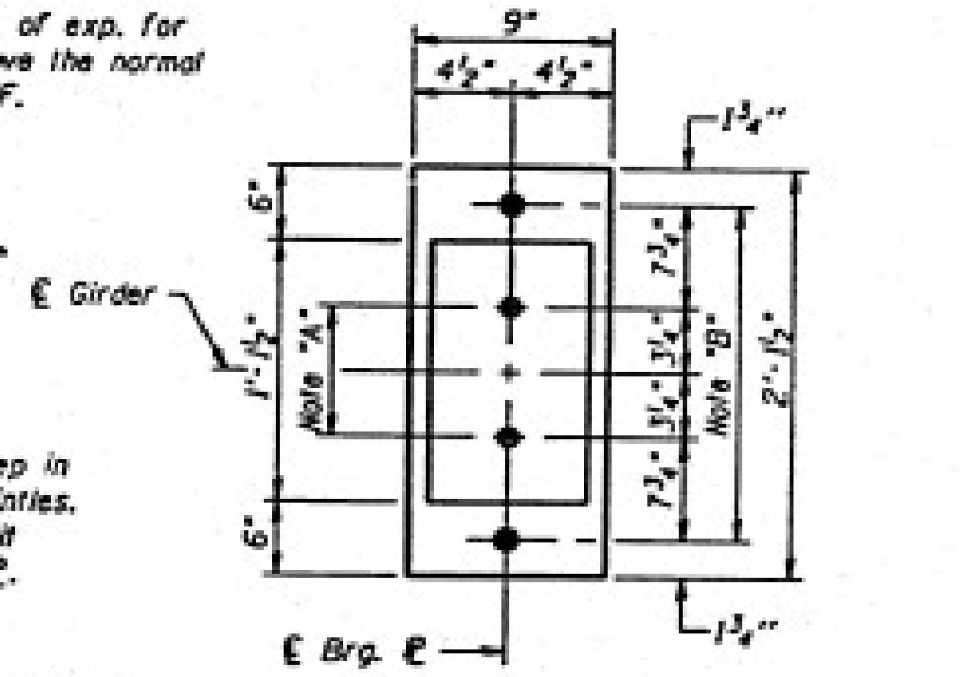
ELEVATION



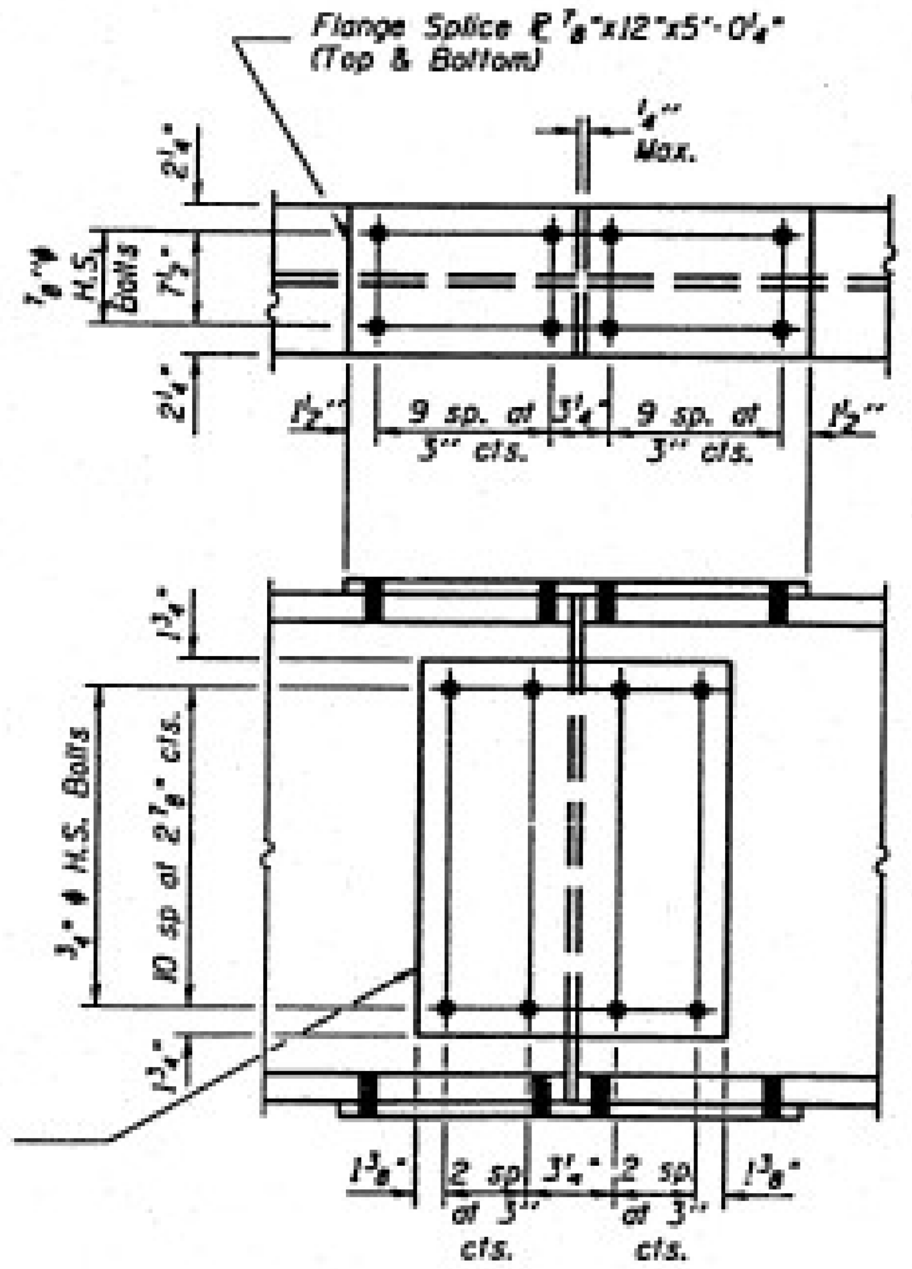
PLAN
AT N. ABUTMENT

Note "A"
1⅜"ϕ Holes-1" deep in
top ⅊ for 1¼"ϕ Pintles.
Thread or press fit
pintles in bottom ⅊.

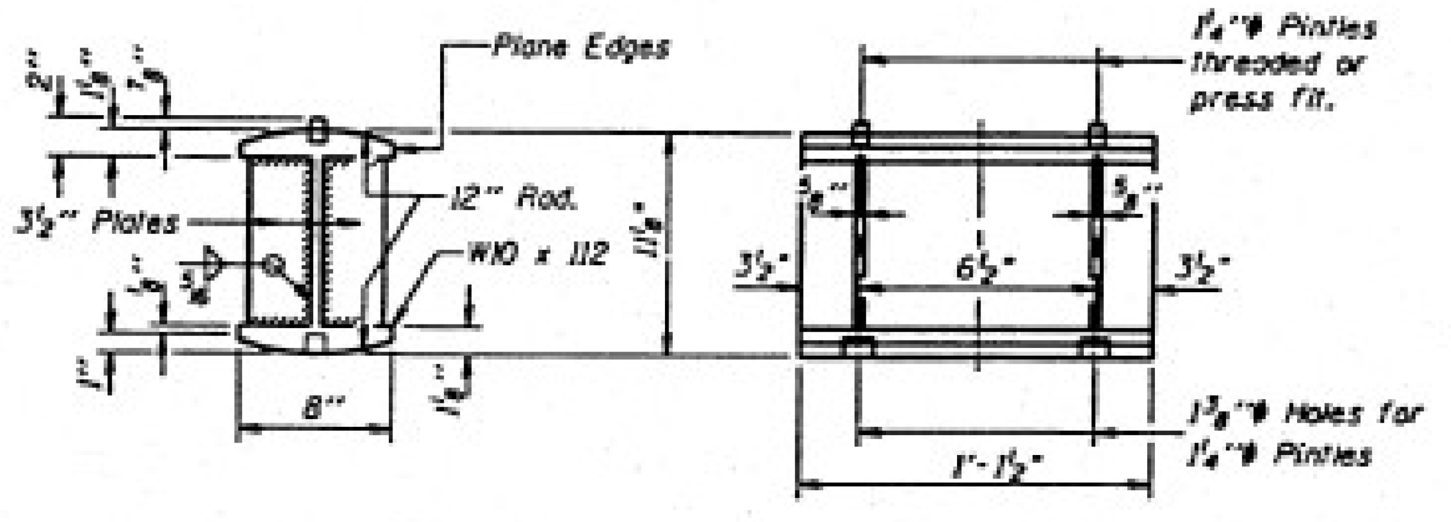
Note "B"
1½"ϕ Holes for 1"ϕ Anchor
Bolts-2½" x 2½" x 5/16" ⅊
washer under nut.



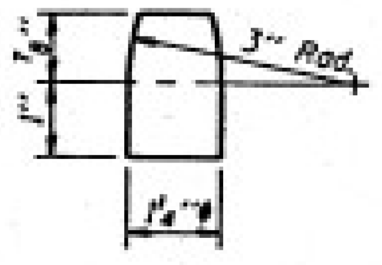
PLAN
AT PIER NO. 3



SPLICE



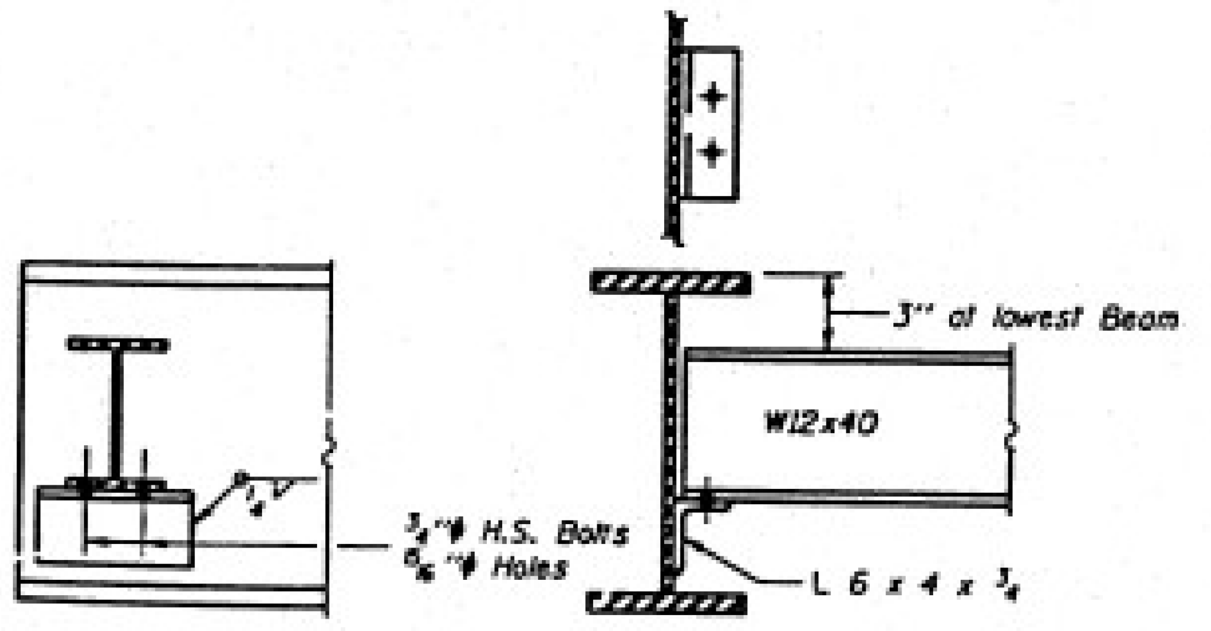
ROCKER



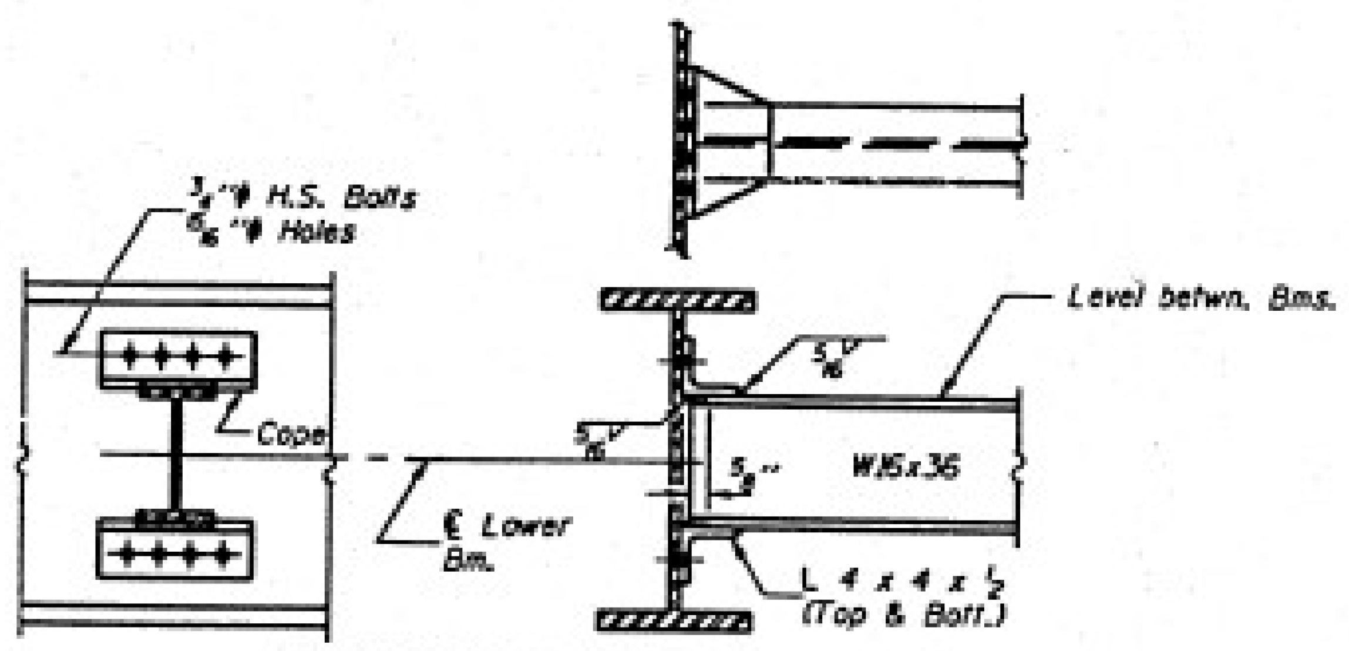
PINTLE

TOP OF BEAM ELEVATIONS

	℄ Field Splice	℄ Pier 3	℄ Brg. N. Abut.
Beam 11	677.62	677.60	677.59
Beam 12	677.51	677.49	677.47



DIAPHRAGM D1
(1 Required)



DIAPHRAGM D2
(2 Required)

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

STRUCTURAL STEEL DETAILS

REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.I. RTE. 70
SEC. 12-49HB-2
SN 012-0048
STA. 757+93.89
CLARK COUNTY

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS

DRAWN BY DATE RLKing 6/96
CHECKED BY DATE JWC 6/96
BOOK NUMBER
PROJECT No. 3824-22
SHEET No.

MODEL: 74E48-48-8 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

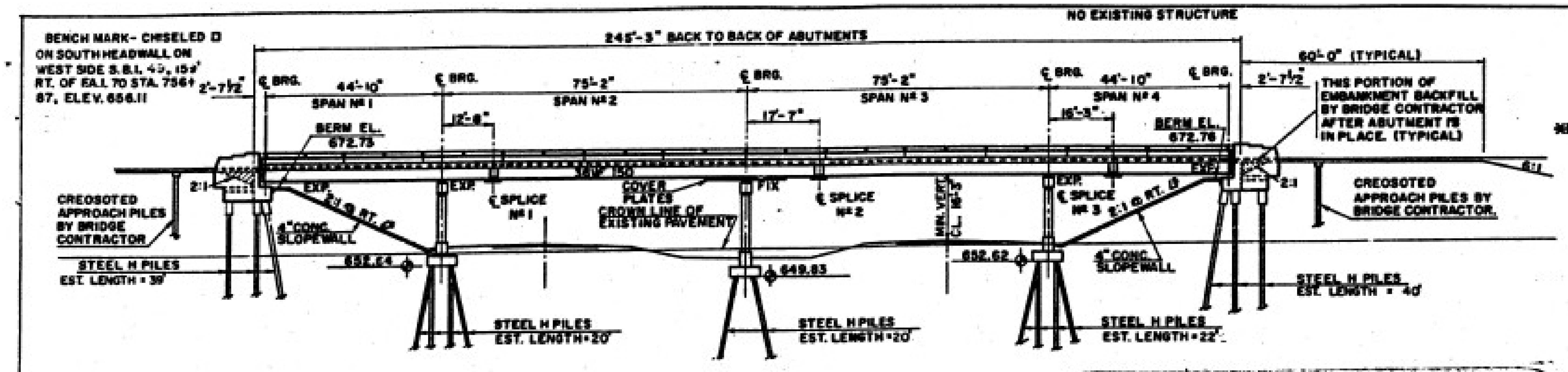
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 8 OF 12 SHEETS STA. TO STA.

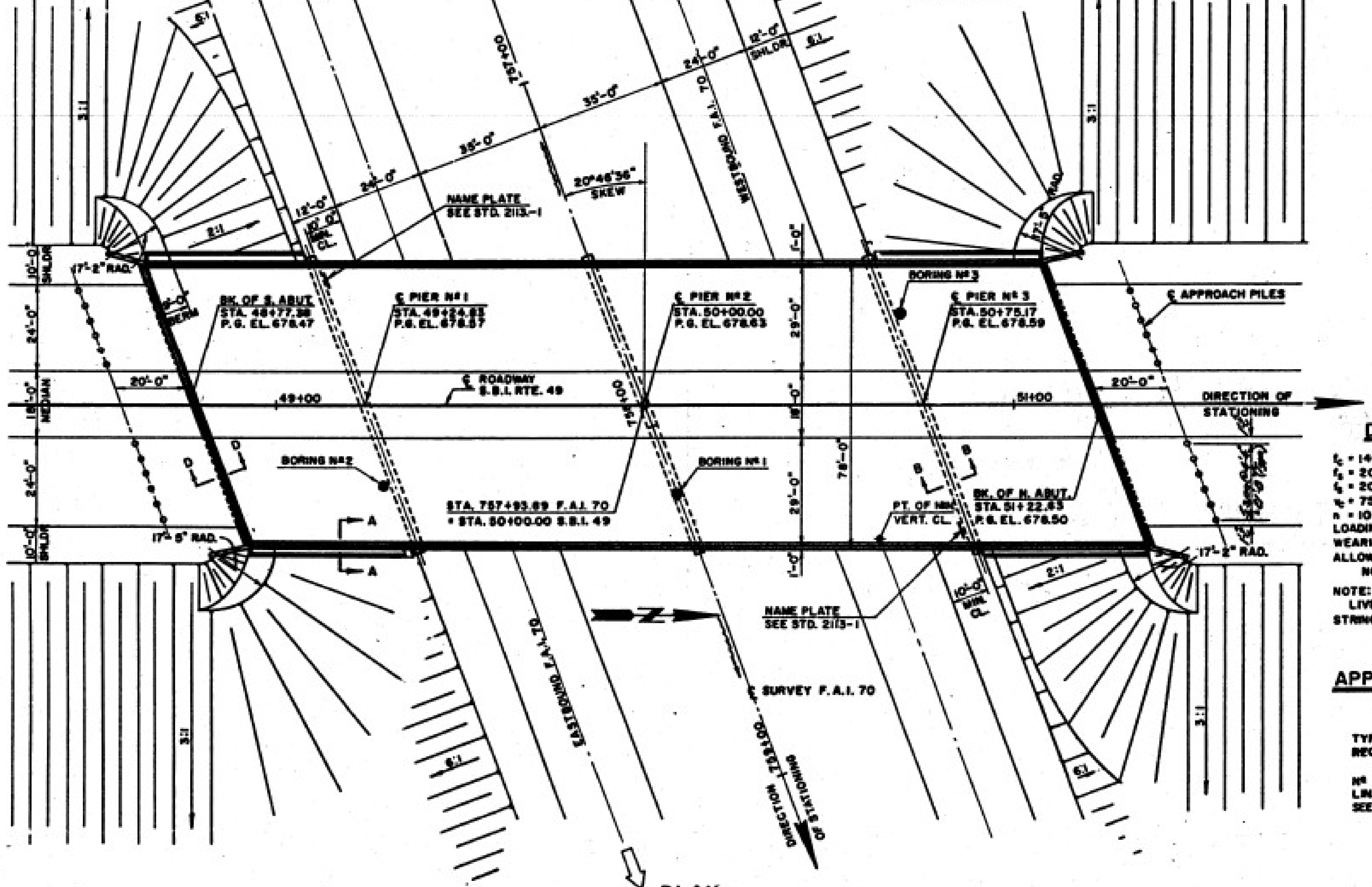
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	45
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

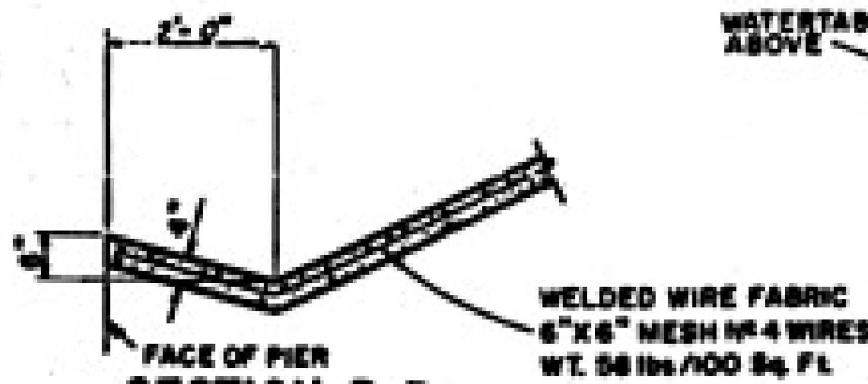

NO EXISTING STRUCTURE
BENCH MARK- CHISELED □ ON SOUTH HEADWALL ON WEST SIDE S.B.I. 49, 15± RT. OF F.A.I. 70 STA. 756+87, ELEV. 656.11
245'-3" BACK TO BACK OF ABUTMENTS
60'-0" (TYPICAL)
2'-7½"
℄ BRG.
44'-10"
SPAN Nº 1
75'-2"
SPAN Nº 2
75'-2"
SPAN Nº 3
44'-10"
SPAN Nº 4
12'-6"
17'-7"
16'-1"
BERM EL. 672.73
BERM EL. 672.76
THIS PORTION OF EMBANKMENT BACKFILL BY BRIDGE CONTRACTOR AFTER ABUTMENT IS IN PLACE. (TYPICAL)
EXP.
FIX
℄ SPLICE Nº 1
℄ SPLICE Nº 2
℄ SPLICE Nº 3
COVER PLATES
CROWN LINE OF EXISTING PAVEMENT
MIN. VERT. CL. 16'-5"
2:1
6:1
CREOSOTED APPROACH PILES BY BRIDGE CONTRACTOR
4" CONC. SLOPEWALL
652.64
649.83
652.62
STEEL H PILES EST. LENGTH = 39'
STEEL H PILES EST. LENGTH = 20'
STEEL H PILES EST. LENGTH = 20'
STEEL H PILES EST. LENGTH = 22'
STEEL H PILES EST. LENGTH = 40'

ELEVATION

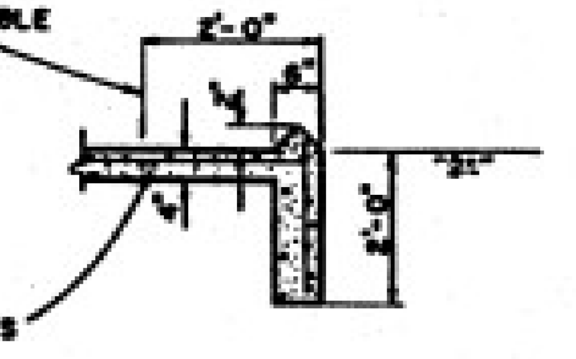
Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.


757+00
WESTBOUND F.A.I. 70
EASTBOUND F.A.I. 70
35'-0"
24'-0"
12'-0"
SHLDR.
20°46'36" SKEW
NAME PLATE SEE STD. 2113-1
17'-2" RAD.
17'-5" RAD.
BK. OF S. ABUT. STA. 48+77.38 P.G. EL. 676.47
℄ PIER Nº 1 STA. 49+24.83 P.G. EL. 678.57
℄ PIER Nº 2 STA. 50+00.00 P.G. EL. 678.63
℄ PIER Nº 3 STA. 50+75.17 P.G. EL. 678.59
BORING Nº 3
℄ APPROACH PILES
℄ ROADWAY S.B.I. RTE. 49
49+00
51+00
758+00
20'-0"
DIRECTION OF STATIONING
MEDIAN
BORING Nº 2
BORING Nº 1
STA. 757+93.89 F.A.I. 70 = STA. 50+00.00 S.B.I. 49
PT. OF MIN. VERT. CL.
BK. OF N. ABUT. STA. 51+22.63 P.G. EL. 678.50
NAME PLATE SEE STD. 2113-1
℄ SURVEY F.A.I. 70
DIRECTION OF STATIONING
3:1
2:1
6:1

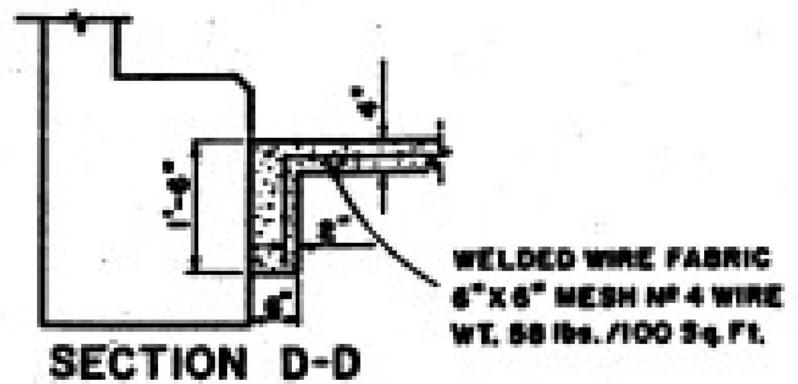
PLAN


2'-0"
FACE OF PIER
WELDED WIRE FABRIC 6"X6" MESH Nº 4 WIRES WT. 58 lbs./100 Sq. Ft.

SECTION B B



SECTION A-A


WELDED WIRE FABRIC 6"X6" MESH Nº 4 WIRE WT. 58 lbs./100 Sq. Ft.

SECTION D-D

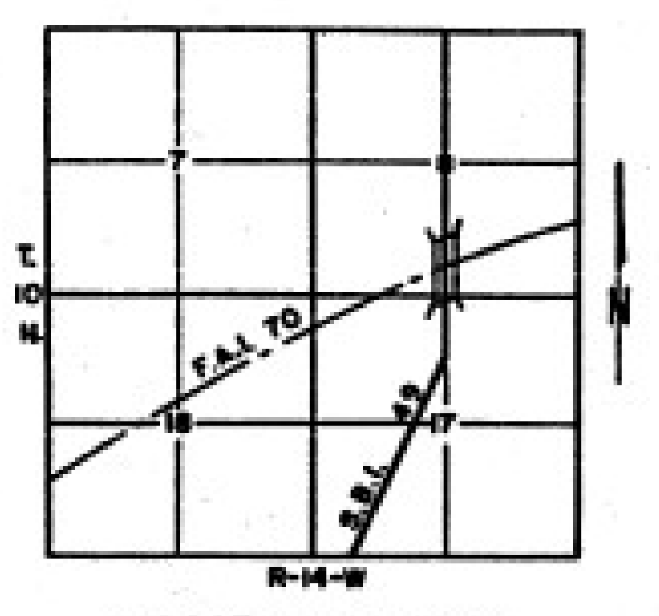
TOTAL BILL OF MATERIALS

SHEET 1 OF 14 SHEETS

	ITEM	UNIT	SUPER	SUB	TOTAL
	EARTH EXCAVATION	INCLUDED IN ROADWAY QUANTITIES			
**	CLASS "A" EXCAVATION FOR STRUCTURES	CU. YDS.	——	590.7	590.7
	CLASS "X" CONCRETE	CU. YDS.	538.5	475.1	1013.6
	STRUCTURAL STEEL	LBS.	525,790	——	525,790
	ALUMINUM HANDRAIL	LIN. FT.	484	——	484
	REINFORCEMENT BARS	LBS.	143,070	63,010	206,080
	CREOSOTED PILES (UP TO 20')	LIN. FT.	——	468	468
	STEEL PILES (8 BP 36)	LIN. FT.	——	3,104	3,104
	TEST PILES STEEL	EACH	——	3	3
	NAME PLATES	EACH	——	2	2
	SLOPE WALL (4")	SQ. YDS.	——	800	800
	PROTECTIVE COAT	SQ. YDS.	2,071.4	——	2,071.4
	BRIDGE SEAT SEALANT *	L.S.		1	1

* AT ABUTMENTS ONLY
** EXCAVATION FOR PORTIONS OF STRUCTURES IN THE EMBANKMENTS SHALL NOT BE CLASSIFIED.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	12-49 HB-2	CLARK	57	11
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



LOCATION SKETCH

GENERAL NOTES

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

CONCRETE

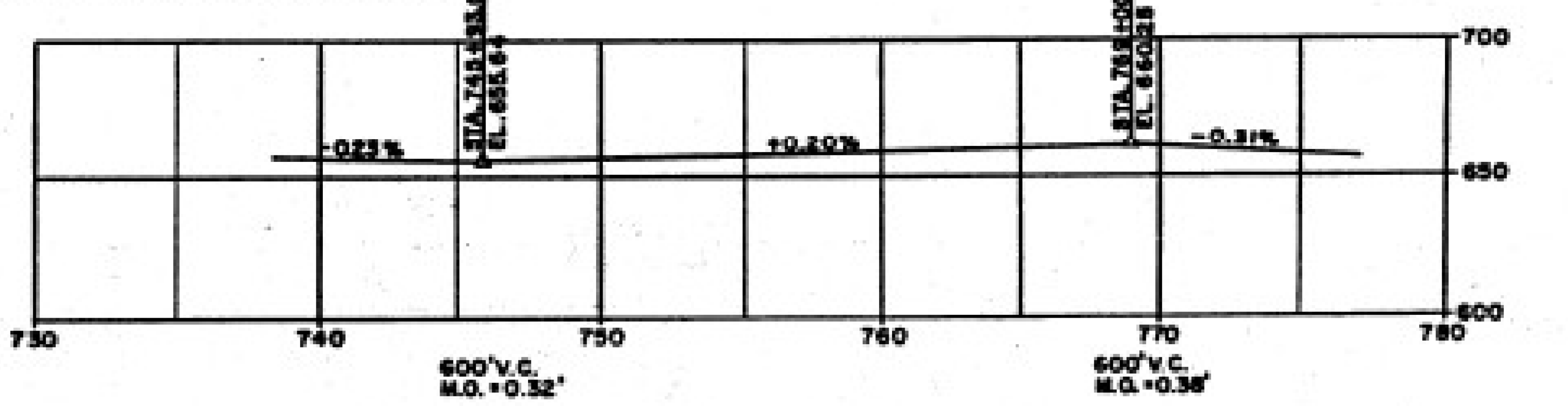
1. COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND END POST MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE.
2. THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.
3. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH, WEIGHING 58# PER 100 SQ. FT.
4. ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.

STRUCTURAL STEEL

5. RIVETS ¾"Φ, OPEN HOLES 13/16"Φ UNLESS OTHERWISE NOTED.
6. ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER SUPPORTS.
7. ALL BOLSTERS, ROCKERS, BEARING PLATES, LEAD PLATES, PINTLES AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 51.15 OF THE STANDARD SPECIFICATIONS.
8. THE EXPOSED SURFACES OF THE EXPANSION GUARD SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED.
9. EXPANSION GUARDS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 51.13 (D) OF THE STANDARD SPECIFICATIONS.
10. STRUCTURAL STEEL TOTAL POUNDAGE INCLUDES 8,000 LBS. FOR BEARING ASSEMBLIES AND 3,520 LBS. FOR EXPANSION GUARDS.
11. EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF PAINT. SEE ARTICLE 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS *AND SPECIAL PROVISIONS FOR FIELD PAINT.*

SUBSTRUCTURE

12. THE CONTRACTOR SHALL DRIVE 3, STEEL H TEST PILES IN PERMANENT LOCATION, ONE AT EACH ABUTMENT AND ONE AT PIER Nº 2 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
13. THE CONTRACTOR SHALL PRECORE APPROACH PILES TO A DEPTH EQUAL TO 75% OF THE LENGTH OF THE PILES AND THEN DRIVE PILES TO PLAN LENGTH OR A MAXIMUM OF 24 TONS BEARING CAPACITY, WHICHEVER IS ACHIEVED FIRST.
14. FOR BRIDGE SEAT SEALANT, SEE SPECIAL PROVISIONS.

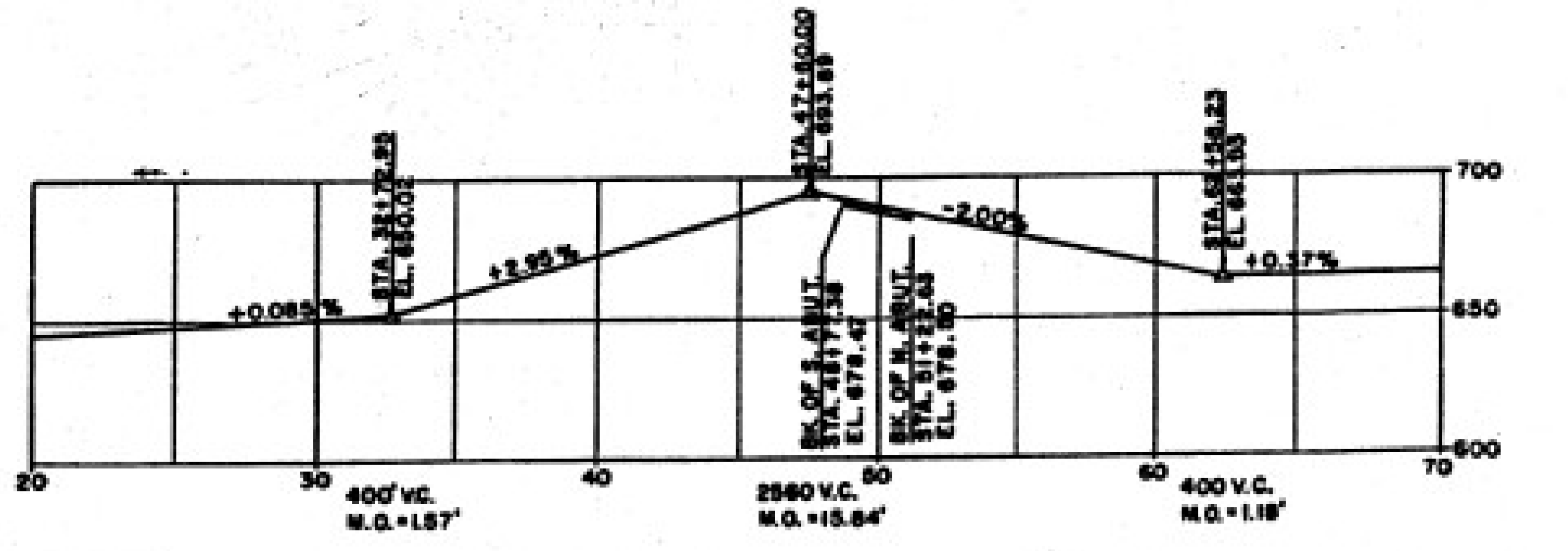


PROPOSED GRADE F.A.I. ROUTE 70

DESIGN STRESSES

f_c = 1400 P.S.I. (SUPER & SUBSTRUCTURE)
f_s = 20,000 P.S.I. (REINF.)
f_s = 20,000 P.S.I. (STRUCTURAL) A-36
v_c = 75 P.S.I. (FOOTING)
n = 10
LOADING HS20 PLUS 18 lbs./Sq. Ft. WEARING SURFACE
ALLOWABLE LIVE LOAD DEFLECTION
NON-COMPOSITE – L/1000

NOTE:
LIVE LOAD DEFLECTIONS BASED UPON 5 STRINGERS RESISTING 2 LANE LOADS.



PROPOSED GRADE S.B.I. ROUTE 49

APPROACH PILES FOR

METHOD II

TYPE = CREOSOTED TIMBER
REQD. LENGTH = 20' S. ABUT.
19' N. ABUT.
Nº REQD. = 12 EACH ABUT.
LIN. FT. = 468
SEE GENERAL NOTES

STATION 757+93.89
BUILT 196_ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-49HB-2
F.A. PROJ. I-70-4(9)
LOADING HS20

NAME PLATE

SEE STD. 2113-1

NAME	DATE	REVISIONS
J.A.H.	1-22-68	BILL OF MATERIAL
J.A.H.	1-15-66	EST. PILE LENGTHS
J.A.H.	1-15-66	QUANTITIES

ROCHESTER AND GOODELL
ENGINEERS INCORPORATED
BOX 371 SALEM, ILLINOIS PH 380

S.B.I. ROUTE 49 OVER F.A.I. ROUTE 70
GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 70 SECTION 12-49HB-2
CLARK COUNTY, ILLINOIS
STA. 757+93.89

DESIGNED C.D. GRIGG
DRAWN R.E. WEST
CHECKED J.A. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: NONE
DATE 12-23-65

Rev. 2-13-68 Class X Conc. Super from 545.2 to 538.6 cu yds, Sub from 445.0 to 475.1 cu yds, Total from 1190.2 to 1013.6 cu yds.
Reinf. Bars total from 191,080 to 206,080 lbs & Steel Piles from 3603 to 3104 lin. ft.

App. by Br. Off. 2/13/68

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 9 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	46
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

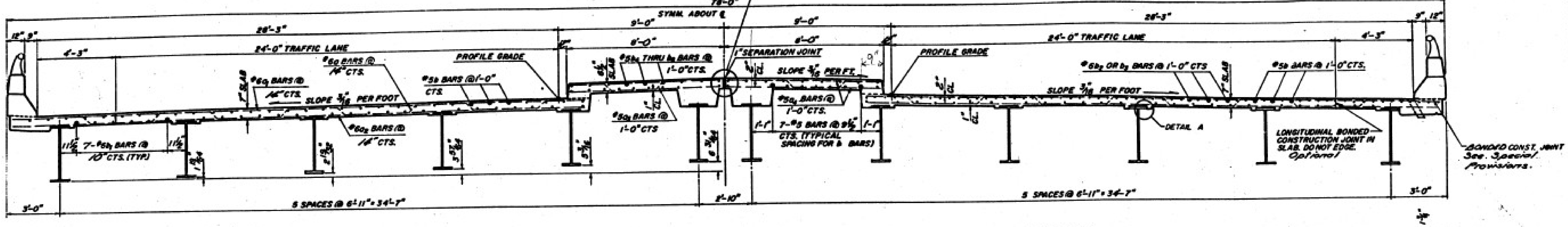
MODEL: 74E48-48-9 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

SHEET 6 OF 14 SHEETS

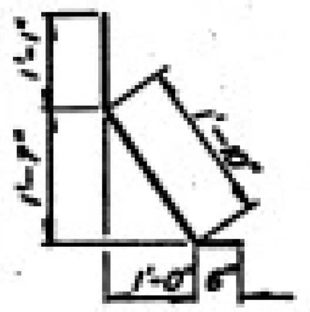
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	12-49 HB-2	CLARK	57	16

STA. TO STA.

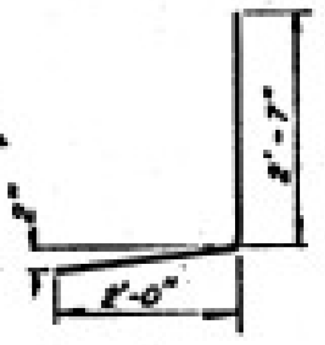
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT



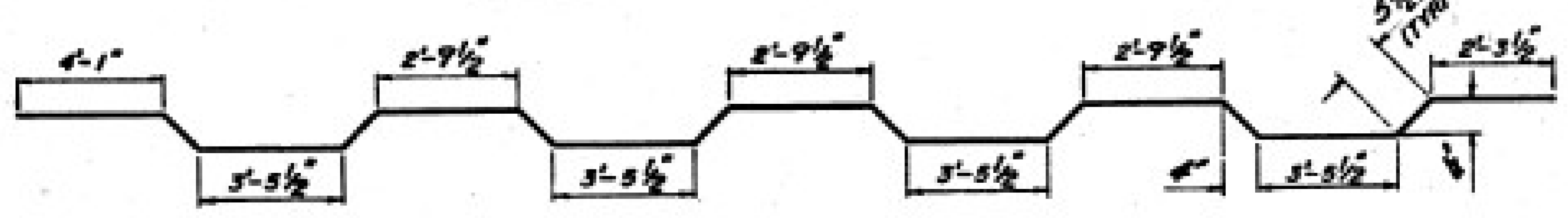
CROSS SECTION



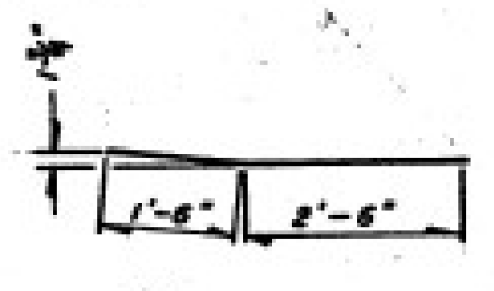
#5d BAR



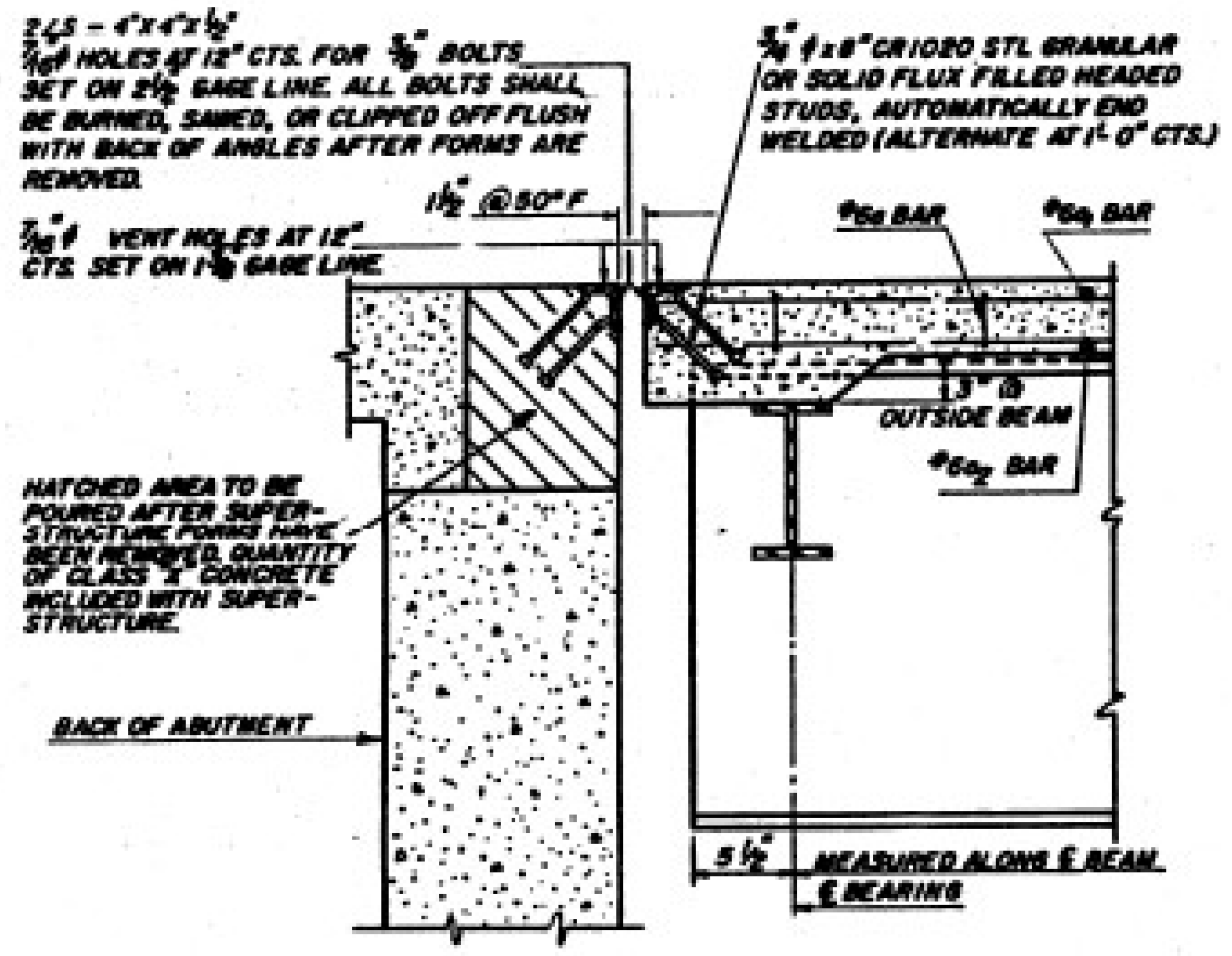
#4d1 BAR



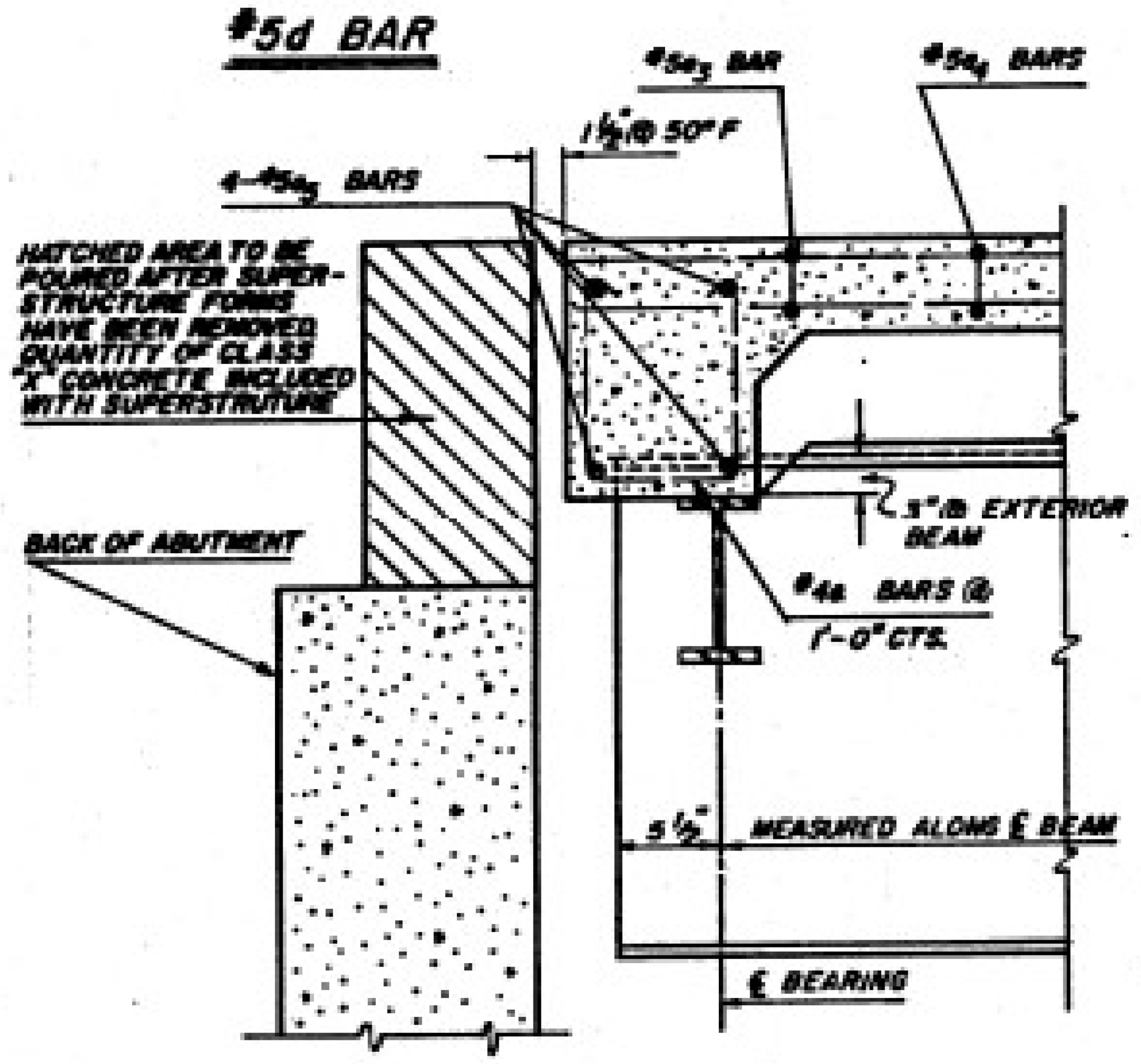
#6a BAR



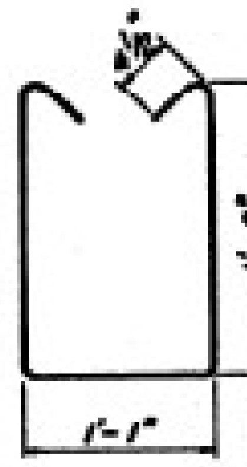
#6a7 BAR


2∠S – 4"x4"x1/2"
7/16"φ HOLES AT 12" CTS. FOR 3/8" BOLTS SET ON 2 1/2 GAGE LINE. ALL BOLTS SHALL BE BURNED, SAWED, OR CLIPPED OFF FLUSH WITH BACK OF ANGLES AFTER FORMS ARE REMOVED.
7/16"φ VENT HOLES AT 12" CTS. SET ON 1 3/4 GAGE LINE.
1 1/2" @ 50° F
3/4"φ x 6" CR1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS, AUTOMATICALLY END WELDED (ALTERNATE AT 1'-0" CTS.)
#6a BAR
#6a1 BAR
3" @ OUTSIDE BEAM
#6a2 BAR
HATCHED AREA TO BE POURED AFTER SUPER-STRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS "X" CONCRETE INCLUDED WITH SUPER-STRUCTURE.
BACK OF ABUTMENT
5 1/2" MEASURED ALONG ℄ BEAM
℄ BEARING

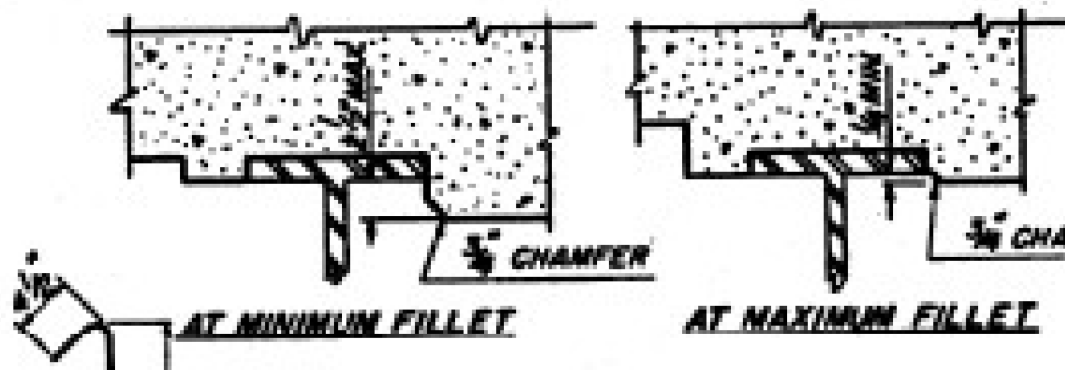
SECTION A-A


#5a3 BAR
#5a4 BARS
4-#5a5 BARS
1 1/2" @ 50° F
HATCHED AREA TO BE POURED AFTER SUPER-STRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS "X" CONCRETE INCLUDED WITH SUPERSTRUTURE
BACK OF ABUTMENT
3" @ EXTERIOR BEAM
#4a BARS @ 1'-0" CTS.
5 1/2" MEASURED ALONG ℄ BEAM
℄ BEARING

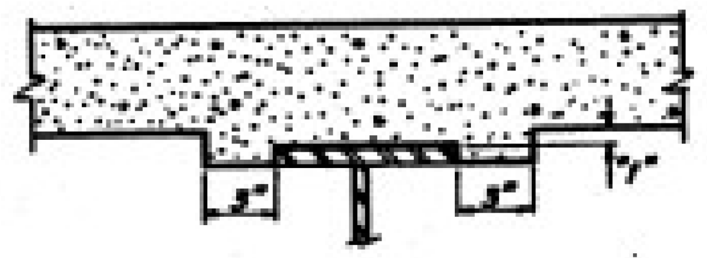
SECTION B-B



#4s BAR



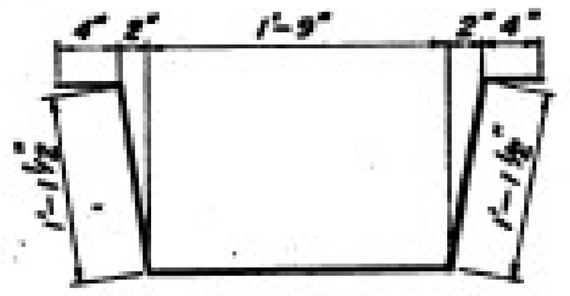
DETAIL "A"



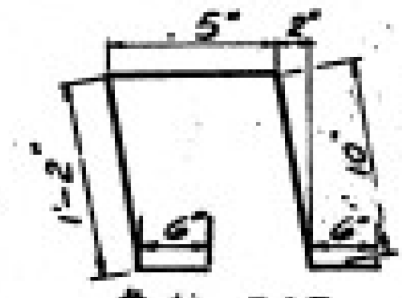
TYPICAL FILLET DETAIL

METHOD OF DETERMINING FILLET HEIGHTS "t"

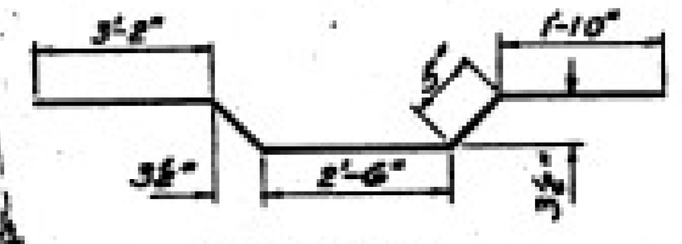
AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE STATIONS SHOWN ON SHEET 3. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN ON SHEETS 3 & 4, MINUS FLOOR THICKNESS EQUALS THE FILLET HEIGHTS ABOVE TOP OF BEAM.



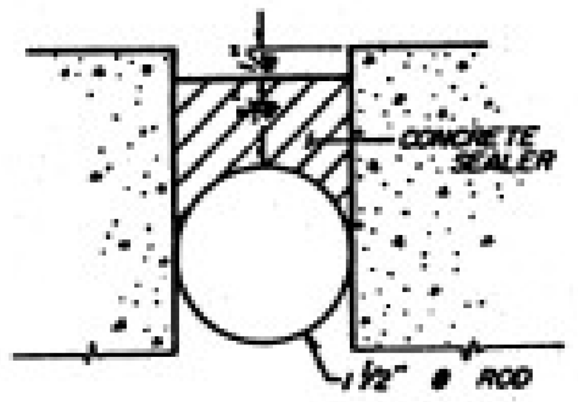
#4c2 BAR



#4c1 BAR

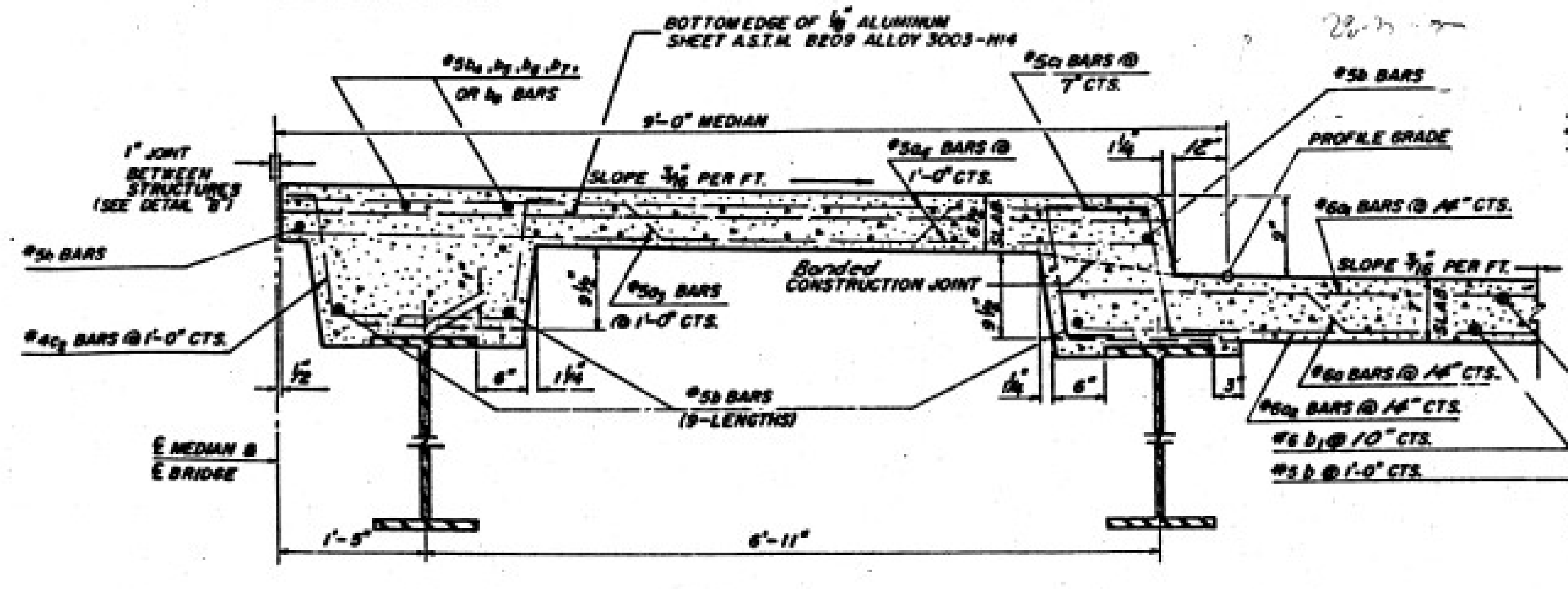


#5a3 BAR

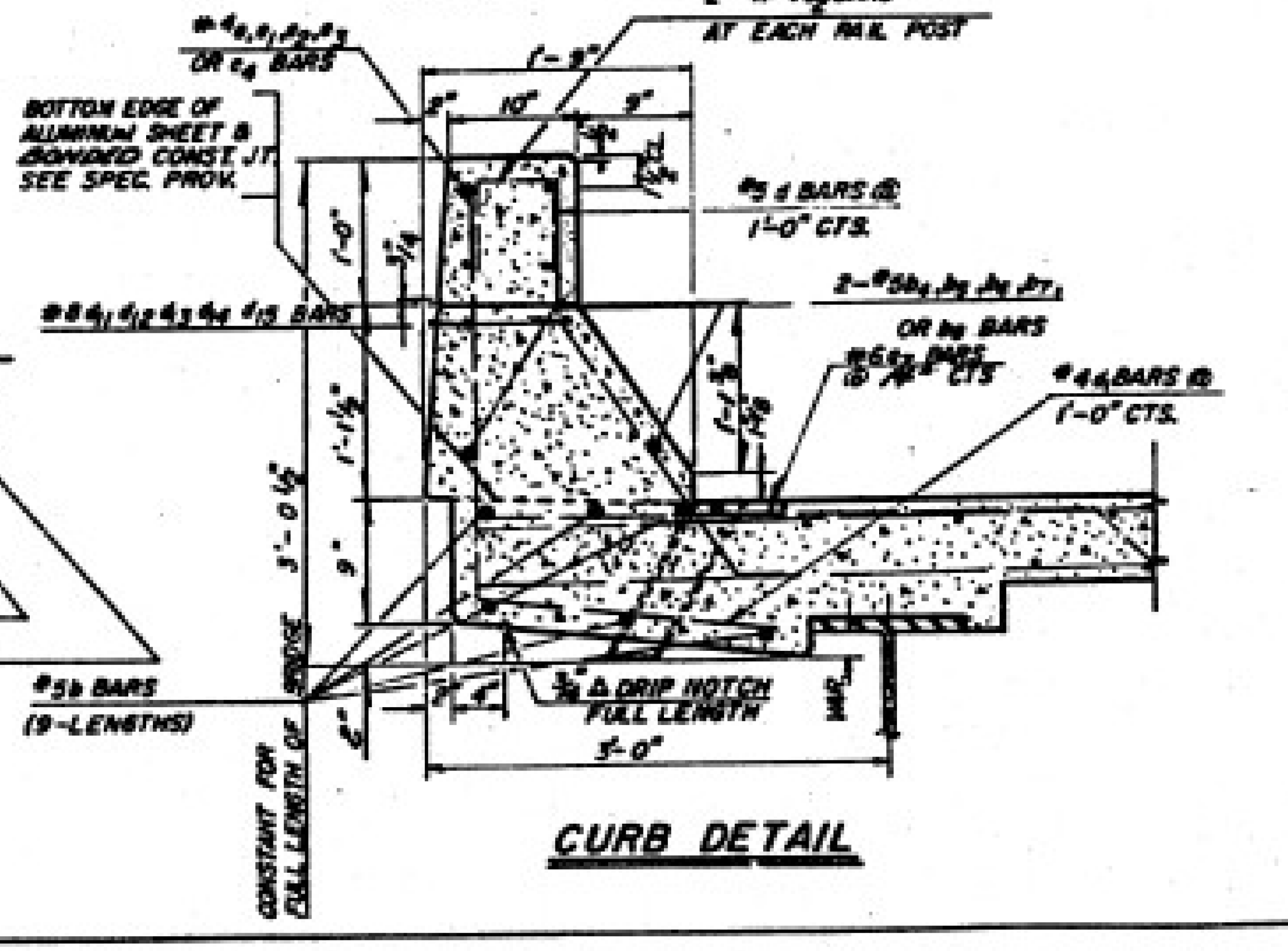


DETAIL B

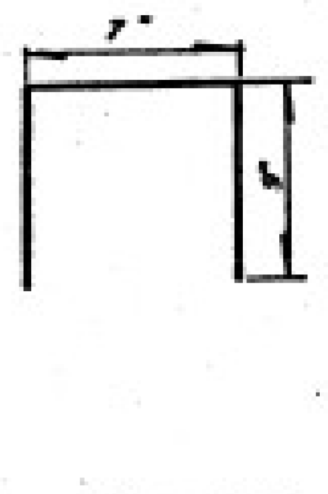
SEE SPECIAL PROVISIONS



MEDIAN DETAIL


#4e, e1, e2, e3, e4 OR c4 BARS
2-#4d2 BARS AT EACH RAIL POST
BOTTOM EDGE OF ALUMINUM SHEET & BONDED CONST. JT. SEE SPEC. PROV.
1'-9"
10"
9"
#5d BARS @ 1'-0" CTS.
#4d, d1, e2, e3, e4, c3 BARS
2-#5b4, b5, b6, b7, OR b8 BARS
#6a BARS @ 14" CTS
#4c BARS @ 1'-0" CTS.
#5b BARS (9-LENGTHS)
3/4" Δ DRIP NOTCH FULL LENGTH
3'-0"
CONSTANT FOR FULL LENGTH OF BRIDGE 3'-0 1/2"

CURB DETAIL



#4d2 BAR

BILL OF MATERIALS – SUPERSTRUCTURE

SLAB, MEDIAN & CURB

BAR	Nº	SIZE	LENGTH	SHAPE	BAR	Nº	SIZE	LENGTH	SHAPE
a	370	#6	32'-3"	⌇	b9	8	#8	9'-5"	—
a1	388	#6	31'-4"	—					
a2	424	#6	31'-3"	—	c1	828	#5	3'-5"	⌐
a3	478	#5	8'-4"	⌣	c2	244	#4	4'-8"	⌣
a4	962	#5	8'-1"	—					
a5	16	#5	8'-10"	—	d	488	#5	3'-5"	∟
a6	36	#6	31'-4"	—	d1	488	#4	4'-7"	∟
a7	414	#6	4'-0"	—	d2	104	#4	2'-11"	⊐
b	846	#5	27'-11"	—					
b1	504	#6	28'-2"	—	e	48	#4	18'-8"	—
b2	128	#6	21'-9"	—	e1	32	#4	17'-8"	—
b3	64	#6	26'-4"	—	e2	16	#4	9'-5"	—
b4	88	#5	29'-1"	—	e3	16	#4	7'-3"	—
b5	66	#5	24'-8"	—	e4	16	#4	10'-2"	—
b6	44	#5	10'-2"	—					
b7	44	#5	7'-3"	—	s	40	#4	5'-2"	⊔
b8	44	#5	9'-5"	—	CLASS "X" CONC. *			CU. YDS.	538.5
b11	16	#8	29'-1"	—	REINF. BARS			LBS.	143,010
b12	12	#8	24'-8"	—	STRUCTURAL STEEL **			LBS	525,790
b13	8	#8	10'-2"	—					
b14	8	#8	7'-3"	—					

* INCLUDES 10.2 CU. YDS. CLASS "X" CONCRETE CAST ON ABUTMENTS

** WEIGHTS OF BEARING ASSEMBLIES (18,000 LBS.) AND EXPANSION DEVICES (3,800 LBS.) ARE INCLUDED AS STRUCTURAL STEEL.

Parapet Quantities are included in the above Bill of Material.

ROCHESTER AND GOODELL
ENGINEERS INCORPORATED
BOX 371 SALEM, ILLINOIS PH 300

REVISIONS	DATE	NAME
CURB CONFIGURATION	1-22-66	J.A.H.
JOINTS & REINF.	1-15-66	J.A.H.

S.B.I. ROUTE 49 OVER F.A.I. ROUTE 70
SUPERSTRUCTURE SLAB DETAILS
F.A.I. ROUTE 70 SECTION 12-49 HB-2
CLARK COUNTY, ILLINOIS
STA. 757+93.89

DESIGNED C.D. GRIGG
DRAWN R.E. WEST
CHECKED J.A. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: NONE
DATE 12-23-65

Rev. Cl. X Conc. from 545.2 Cu. Yds. to 538.5 Cu. Yds. Reinf. from 131,080# to 143,010# 2-23-66 N.R.F.

MODEL: 74E48-48-10 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 10 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	47

CONTRACT NO. 74E48

ILLINOIS FED. AID PROJECT

I-70 CLARK

SHEET 8 OF 14 SHEETS
F.A.I.-70 | 12-49 HB-2 | CLARK | 57 | 18
FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT
℄ BEARING SOUTH ABUTMENT EL. 677.44
℄ PIER Nº 1
℄ SPLICE Nº 1
℄ PIER Nº 2
℄ SPLICE Nº 2
℄ PIER Nº 3
℄ SPLICE Nº 3
℄ BEARING NORTH ABUTMENT
20°46'36"
℄ MEDIAN & ℄ BRIDGE
5 SPACES @ 6'-11" = 34'-7"
2'-10"
D
D1
D2
19'-10"
25'-0"
17'-0"
22'-5"
13'-4"
17'-7"
16'-3"
12'-8"
5½"
57'-11½"
80'-1"
73'-10"
29'-0½"
44'-10"
75'-2"
240'-11" END TO END OF BEAMS
NOTE: ALL BEAMS 36 WF 150
ALL ELEVATIONS SHOWN ARE AT THE TOP OF THE TOP FLANGE.
FRAMING PLAN
SHIM PLATE "t" DIMENSIONS
S. ABUTMENT NONE
PIER Nº 1 ½ @ BEAM 12
PIER Nº 2 NONE
PIER Nº 3 ½ @ BEAM 1
N. ABUTMENT NONE
COVER PLATE 11" x 9/16 x 12'-0" LONG, BEAMS 1 & 12
11" x ½ x 12'-0" LONG BEAMS 2 THRU 11
TOP & BOTTOM
5/16 C.F.W.
℄ BRG. PIER Nº 2
DETAIL OF COVER PLATE
PIER Nº 2 ONLY
SECTION AT ABUTMENT
PIER 1 & 3
PIER 2
DETAIL OF ROCKER AT PIER 1, 3 & ABUTS.
DETAIL OF BOLSTER AT PIER 2
ROCKER
BOLSTER
SHIM
COVER PLATE
LEAD PL.
SLOPE ⅛" BETWEEN BEARING PLATES
℄ ANCHOR BOLTS FOR STEEL ERECTION AT VARIOUS TEMPERATURES
1" ø x 12" ANCHOR BOLTS TO BE GROUTED INTO DRILLED HOLES AFTER BEAMS ARE IN PLACE.
1" ø x 12" ANCHOR BOLTS TO BE GROUTED INTO DRILLED HOLES AFTER BEAMS ARE IN PLACE, OR BOLTS AT FIXED PIER MAY BE BUILT INTO THE MASONRY.
D = FIXED PIER
PLANE EDGES
10 WF 112
FLANGE SPLICE PLATE 12" x 7/8 x 3'-0¾
WEB SPLICE PLATE 1'-6 x 7/16 x 2'-9¼ EACH SIDE
¾" ø RIVETS
DETAIL OF SPLICE
DETAIL OF PINTLE
PLAN
℄ BEAM
℄ BRG.
NOTE
FOR DIAPHRAGM DETAILS SEE SHEET Nº 11
FOR BEARING ANCHOR BOLT PLAN, SEE SHEET Nº 11
ROCHESTER AND GOODELL
ENGINEERS INCORPORATED
BOX 371 SALEM, ILLINOIS PH 380
S.B.I. ROUTE 49 OVER F.A.I. ROUTE 70
STRUCTURAL STEEL DETAILS
F.A.I. ROUTE 70
SECTION 12-49HB-2
CLARK COUNTY, ILLINOIS
STA. 757+93.09
DESIGNED C.D. GRIGG
DRAWN R.E. WEST
CHECKED A. HOFSTETTER
APPROVED E. MOLDOVAN
SCALE: N.T.S.
DATE 12-23-65
COVER PLATES 1-15-66 JAH
ADD DIAPHRAGMS 1-15-66 JAH
REVISIONS DATE NAME

MODEL: 74E48-48-11 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: | SHEET 11 OF 12 SHEETS | STA. | TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	48
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70

CLARK

HATCHED AREA TO BE CAST AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS "X" CONCRETE INCLUDED IN SUPERSTRUCTURE.

Welded wire fabric 6"x6" mesh #4 wires - Wt. 58#/100 sq. ft. plus 4-#4 tie bars. The cost of Cl. X Conc. Encasement & Reinforcement is incidental to the cost of furnishing piles. Forms for encasement may be omitted when soil conditions will permit.

NOTES: THE DEFLECTIONS SHOWN ON THE "DEAD LOAD DEFLECTION DIAGRAM" ARE NOT FOR USE IN THE FIELD IF THE ENGINEER IS WORKING FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" ON SHEETS 3 & 4. UPWARD DEFLECTIONS ARE NEGATIVE (-).

IN LIEU OF SHOP RIVETS ANGLES MAY BE ATTACHED WITH 3/4" ⌀ HIGH STRENGTH BOLTS OR 7/8" C.F.W.

Cost of terminal section, bolts and anchors are incidental to Bridge Contract.

MODEL: 74E48-48-12 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0048

SCALE: SHEET 12 OF 12 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	49
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

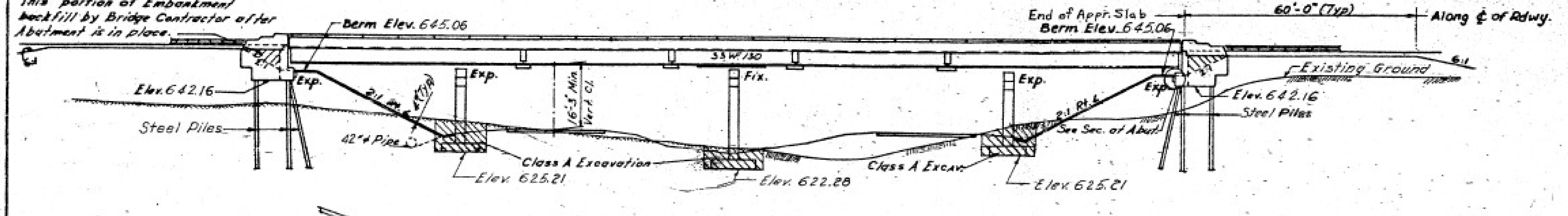
I-70 CLARK

B.M.: R.R. Spike in power pole 282' Rt. Station 866+74-F.A.I. 70-Elevation 653.76

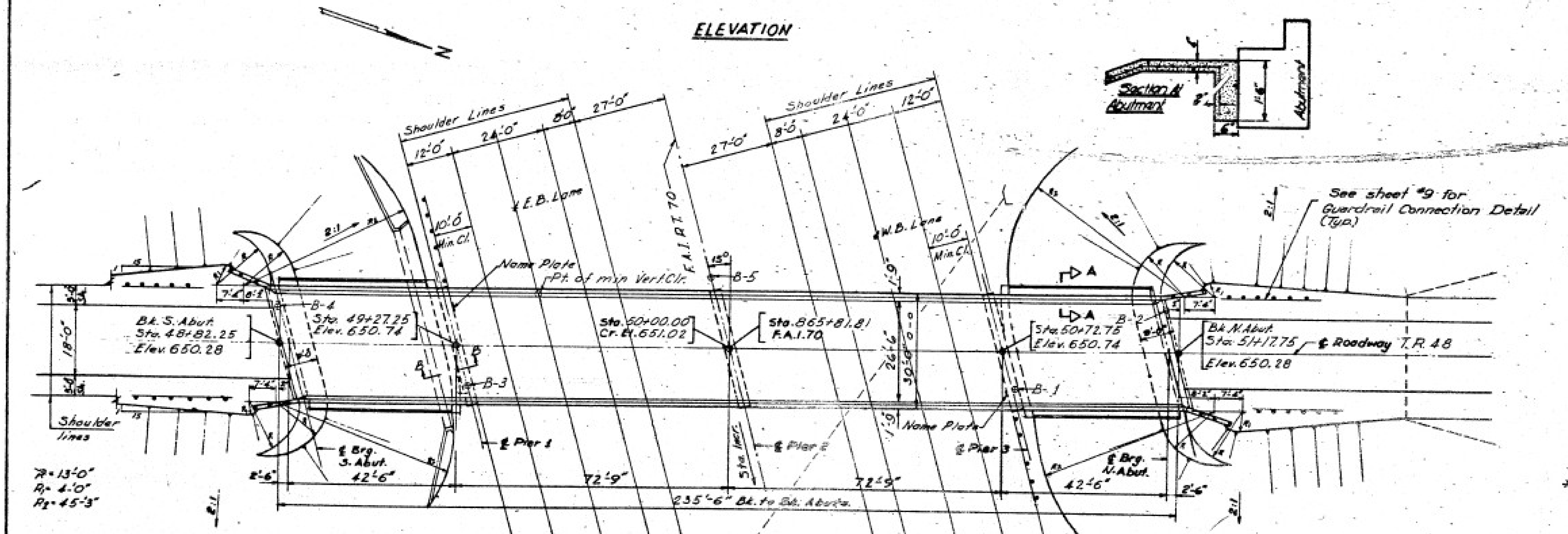
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

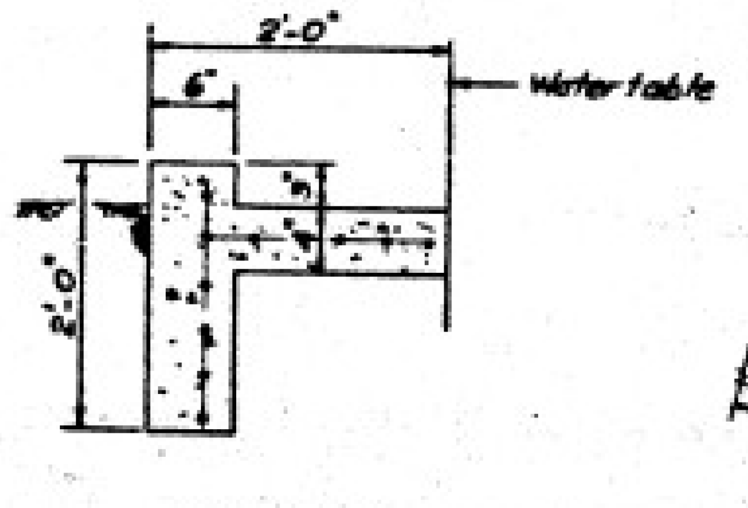
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. I 70	12-49HB-4	CLARK	20	7

SHEET NO. 1
9 SHEETS

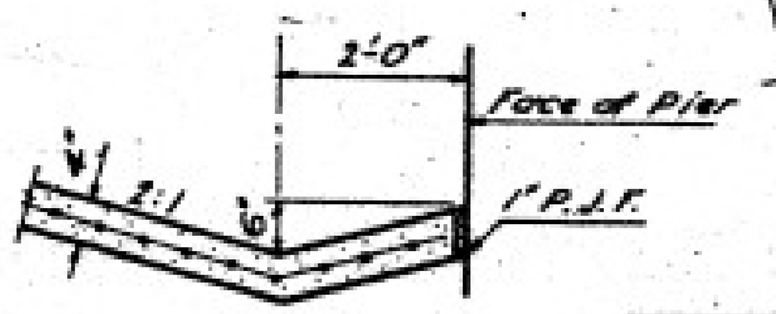


ELEVATION

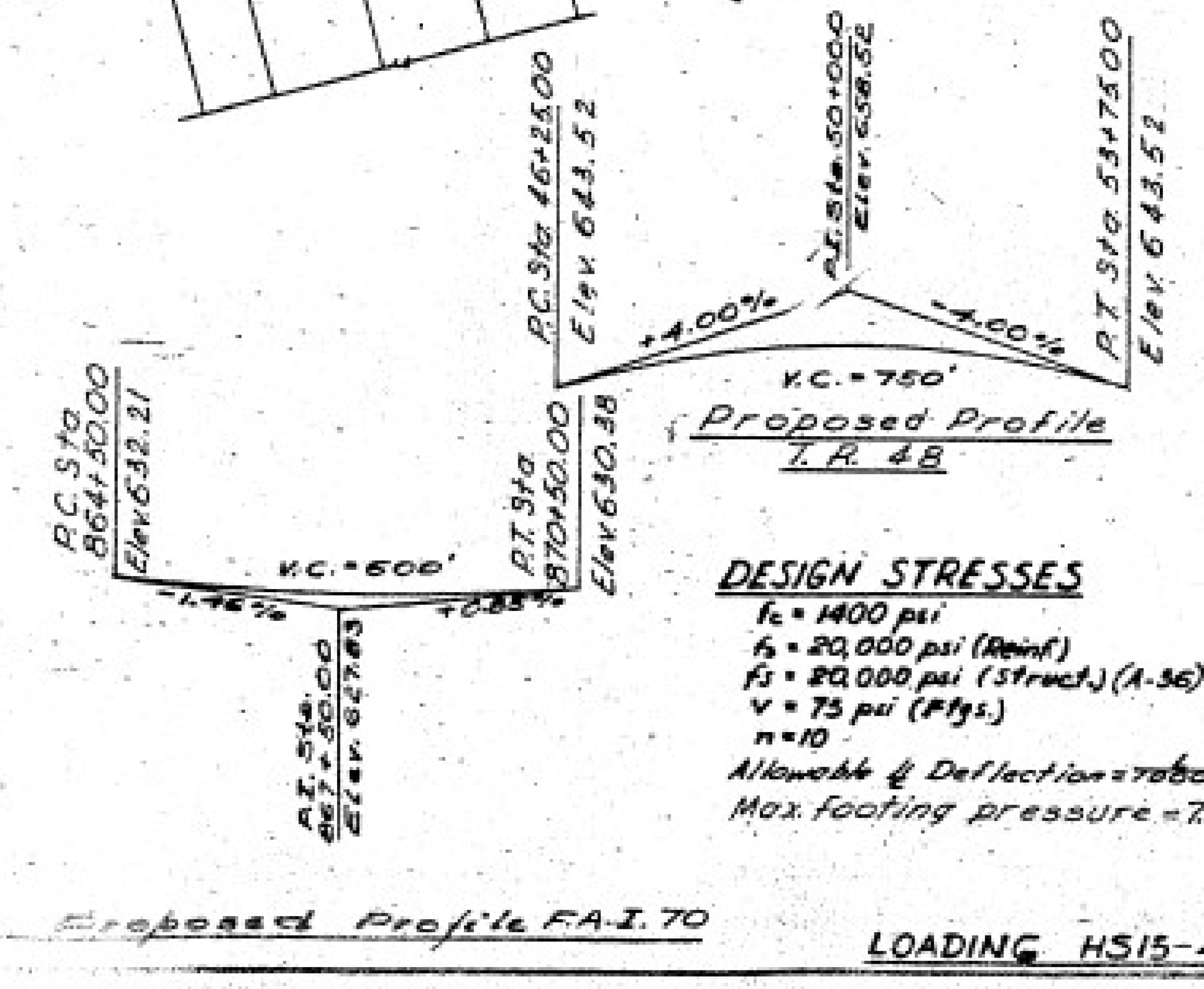




SEC. A-A

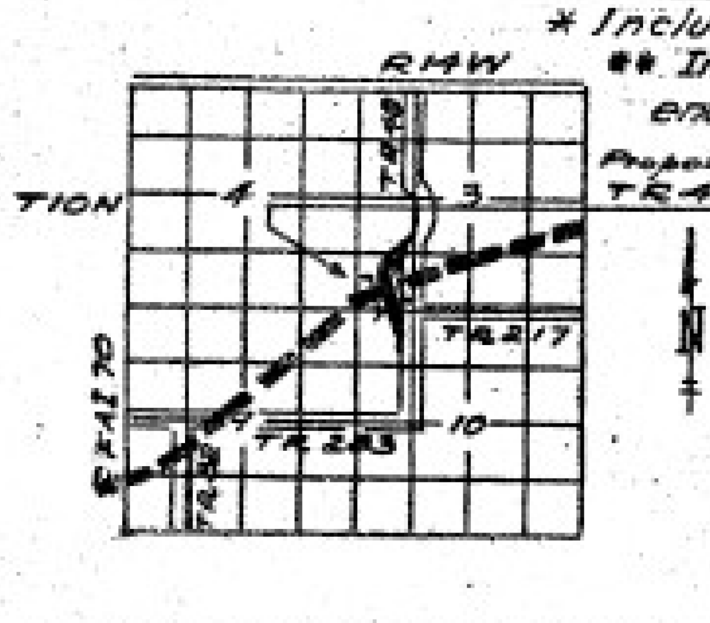


SEC. B-B



Proposed Profile T.R. 48

Proposed Profile F.A.I. 70



Location Sketch

STATION 865+81.81
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-49 HB-4
F.A. PROJ. I-70-4(63)
LOADING HS 15

NAME PLATE LETTERING
(See Std. 2113-1)

DESIGNED Fred Stone
CHECKED Gene McCormick
DRAWN J. Kessler
CHECKED Gene McCormick

Aug 9 1965
EXAMINED Carl E. Thurman
PASSED
APPROVED

DESIGN STRESSES

f_c = 1400 psi
f_s = 20,000 psi (Reinf.)
f_s = 20,000 psi (Struct.) (A-36)
v = 75 psi (Ftgs.)
n = 10
Allowable ℄ Deflection = ~~7080~~
Max. footing pressure = 7.2 K.S.F.

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 ¾" ⌀, Open Holes 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 provisions.

The Contractor shall drive one Steel test pile at the South abutment, 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 floor.

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 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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
* Class "A" Excavation for Struct.	Cu. Yds		230	230
Class "X" Concrete	Cu. Yds.	230.2	207.1	437.3
Structural Steel	Lbs.	184,900		184,900
Aluminum Handrail	Lin. Ft.	464		464
Reinforcement Bars	Lbs.	48,760	16,780	65,540
Name Plates	Each			2
Slope Wall (4")	Sq. Yds.		380	380
** Protective Coat	Sq. Yds.	900		900
Steel Piles (8BP36)	Lin. Ft.		510	510
Test Piles Steel (8BP36)	Each		1	1

* Includes Excavation for slope wall.
** Includes application on top, inside face and exposed end of wingwall.

GENERAL PLAN & ELEVATION

TR48 OVER F.A.I. RT. 70
F.A.I. RT. 70 SEC. 12-49HB-4
CLARK COUNTY
STATION 865+81.81

MODEL: 74E48-49-1 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0049

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	50
	CONTRACT NO. 74E48			
	ILLINOIS FED. AID PROJECT			

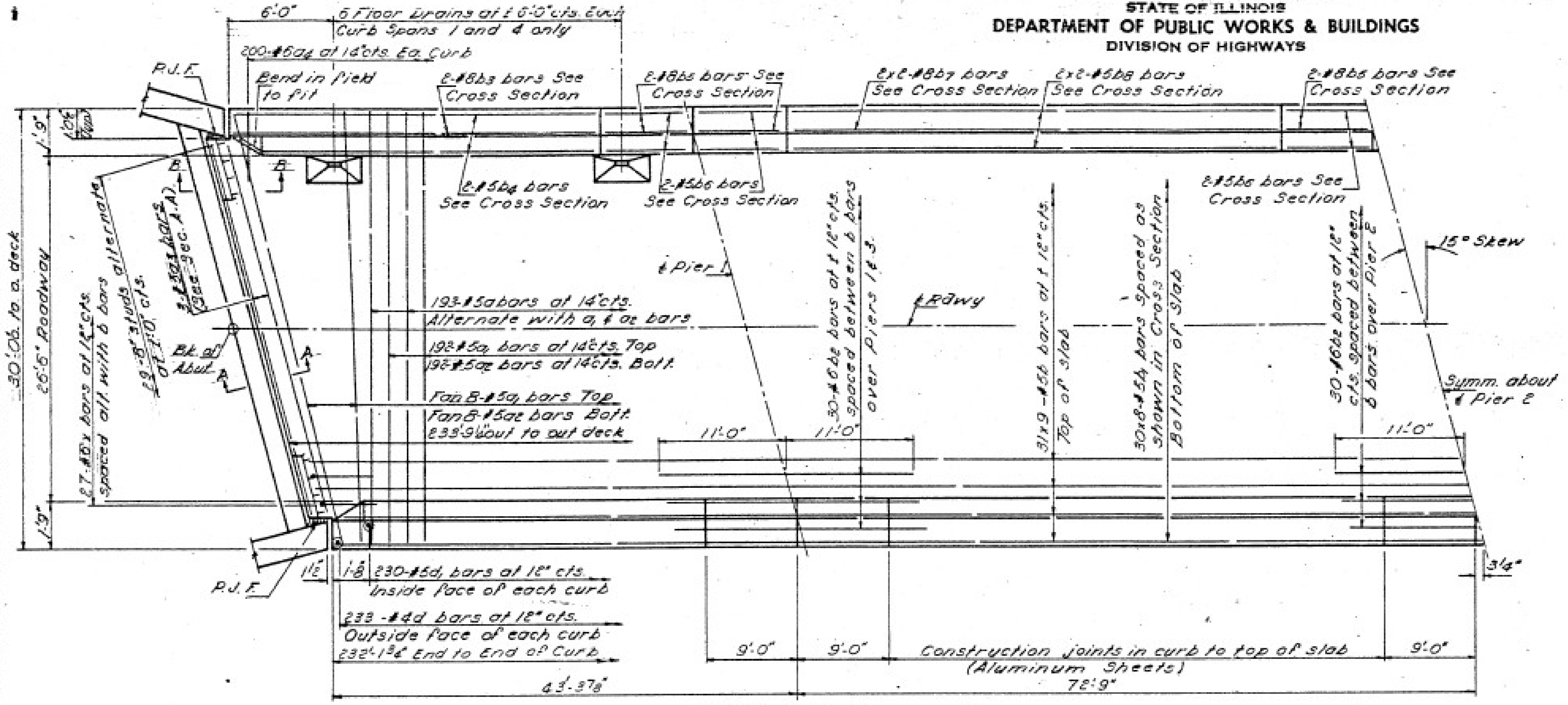
I-70 CLARK

MODEL: 74E48-49-2 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

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

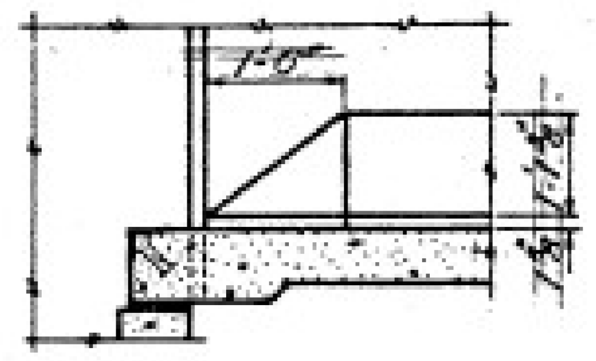
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-49HB-4	CLARK	20	8

SHEET NO. 2
9 SHEETS

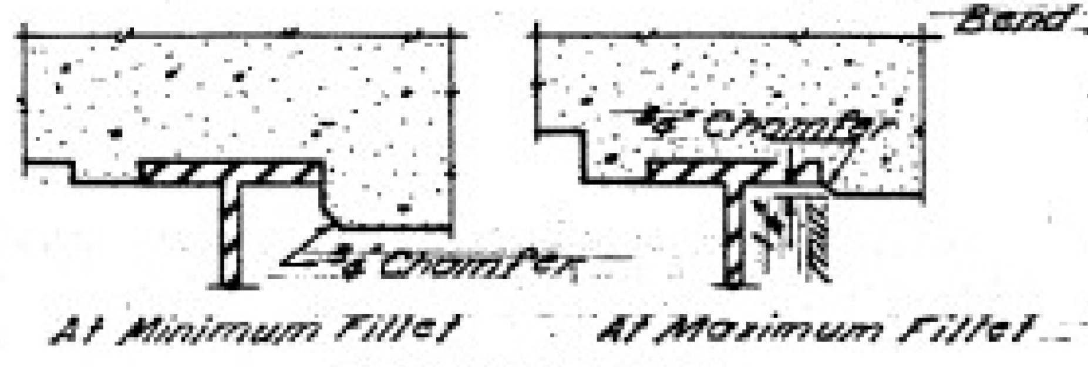


6'-0"
5 Floor Drains at ± 6'-0" cts. Each Curb Spans 1 and 4 only
200-#6a4 at 14" cts. Ea. Curb
P.J.F.
Bend in field to fit
2-#8b3 bars See Cross Section
2-#8b5 bars See Cross Section
2x2-#8b7 bars See Cross Section
2x2-#5b8 bars See Cross Section
2-#8b5 bars See Cross Section
2-#5b4 bars See Cross Section
2-#5b6 bars See Cross Section
2-#5b6 bars See Cross Section
B
B
1'-9"
1'-9"
30'-0" o. to o. deck
26'-6" Roadway
27-#5b1 bars at 12" cts. spaced alt. with b bars alternate
29-8" studs at 1'-0" cts.
2-#5a3 bars (See Sec. A-A)
Bk. of Abut.
A
A
℄ Pier 1
℄ Rdwy
15° Skew
193-#5a bars at 14" cts. Alternate with a1 & a2 bars
192-#5a1 bars at 14" cts. Top
192-#5a2 bars at 14" cts. Bott.
Fan 8-#5a1 bars Top
Fan 8-#5a2 bars Bott.
233-9" out to out deck
30-#6 b2 bars at 1'-6" cts. spaced between b bars over Piers 1 & 3
31x9-#5b bars at ± 12" cts. Top of slab
30x8-#5b1 bars Spaced as shown in Cross Section Bottom of Slab
30-#6b2 bars at 12" cts. spaced between b bars over Pier 2
Symm. about ℄ Pier 2
11'-0"
11'-0"
11'-0"
1½"
1-8"
3/4"
P.J.F.
230-#5d1 bars at 12" cts. Inside face of each curb
233-#4d bars at 12" cts. Outside face of each curb
232'-1¾" End to End of Curb
9'-0"
9'-0"
Construction joints in curb to top of slab (Aluminum Sheets)
9'-0"
43'-3⅞"
72'-9"

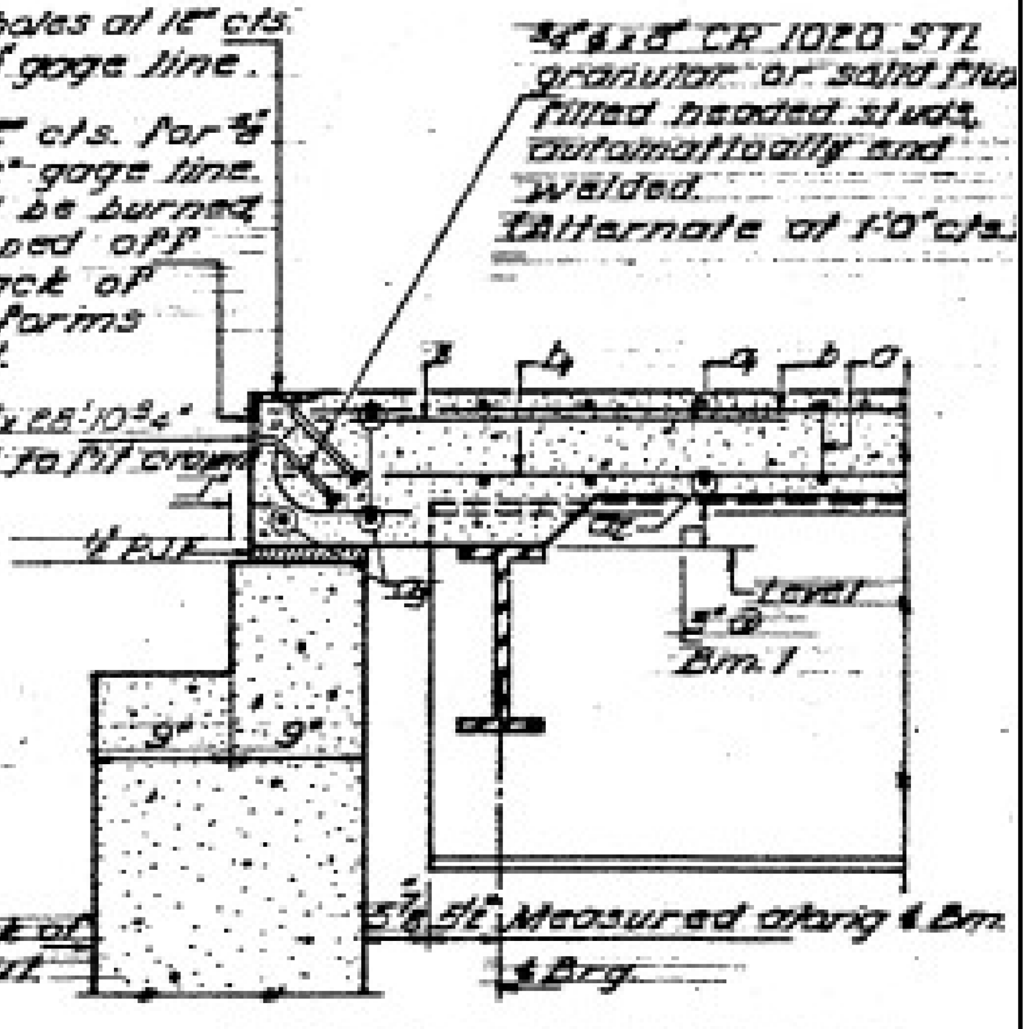
HALF PLAN



SECTION B-B

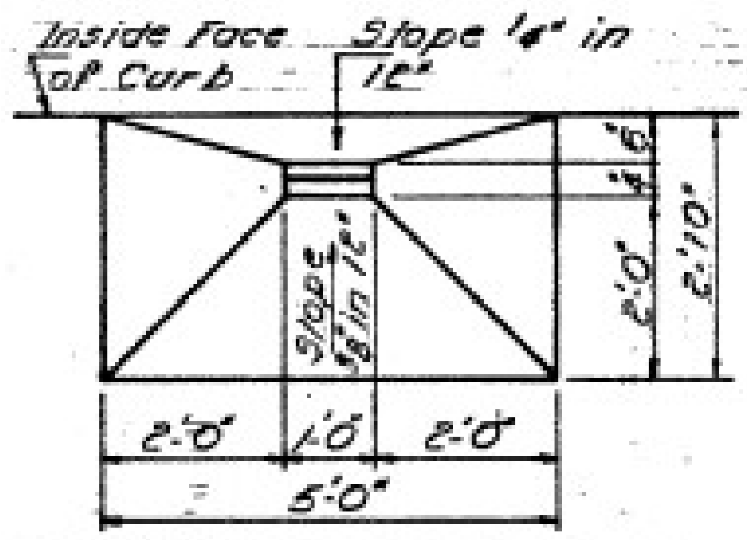


DETAIL A

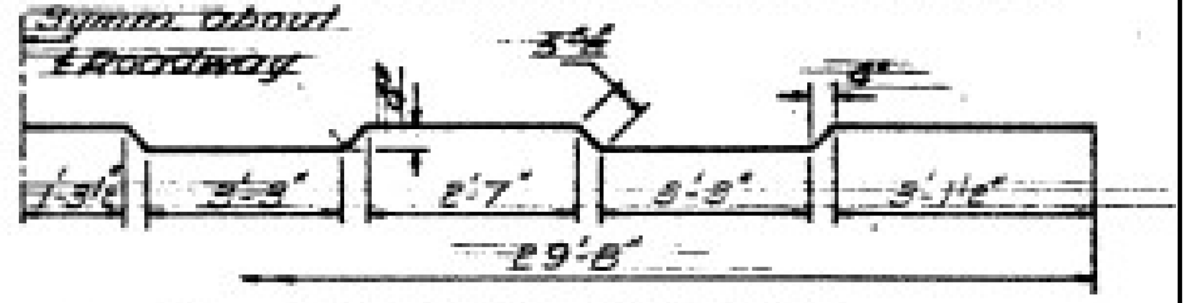


7/16" ɸ vent holes at 12" cts. set on 1⅜" gage line.
7/8" ɸ holes at 12" cts. for ⅝" bolts set on 2½" gage line. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed.
¾" ɸ x 8" CR 1020 STL granular or solid flux filled headed studs automatically end welded. Alternate at 1'-0" cts.
L 6"x4"x½" x 28'-10¾" Bend to fit crown
℄ P.J.F.
b
a
b-a
9"
9"
Level
2"
℄ Bm. 1
Back of Abut.
1'-5½" Measured along ℄ Bm.
℄ Brg.

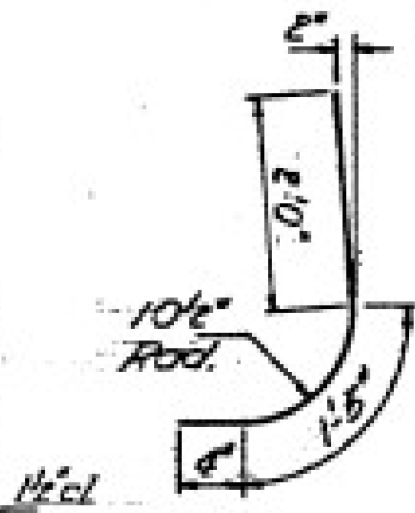
SECTION A-A



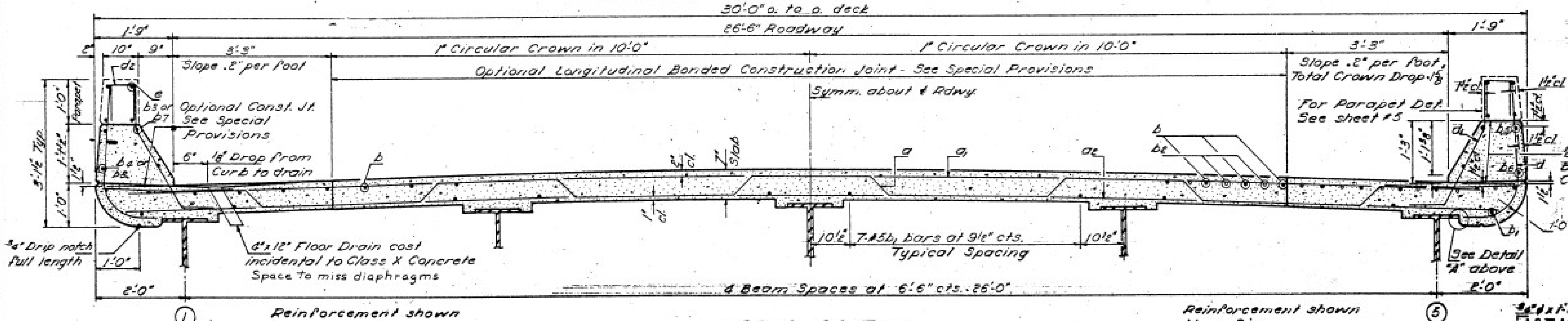
FLOOR DRAIN PLAN



BAR a



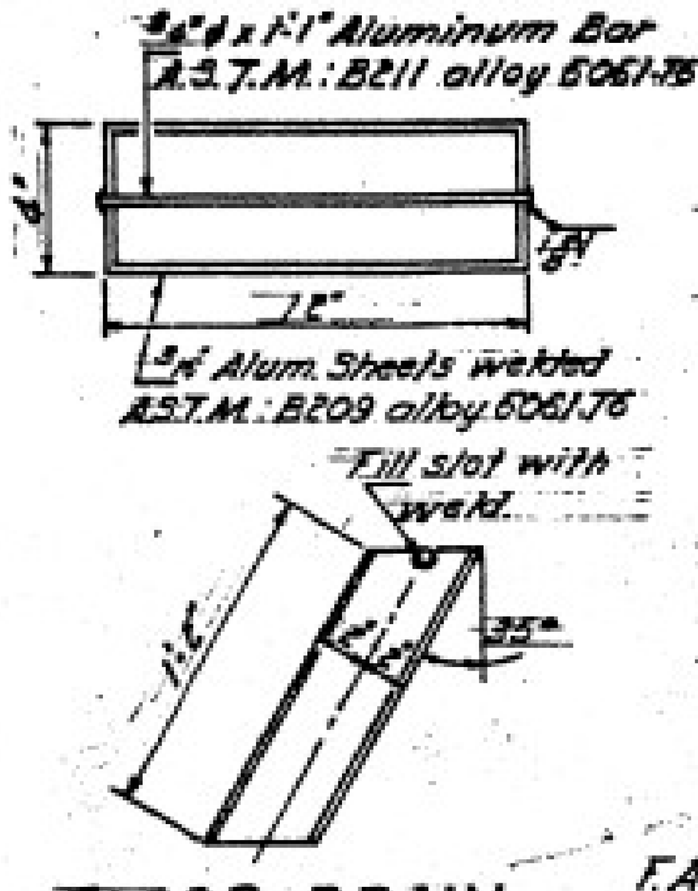
BAR d



30'-0" o. to o. deck
26'-6" Roadway
1'-9"
1'-9"
2"
10"
9"
3'-3"
1" Circular Crown in 10'-0"
1" Circular Crown in 10'-0"
3'-3"
Slope .2" per foot
Optional Longitudinal Bonded Construction Joint - See Special Provisions
Slope .2" per foot, Total Crown Drop 1⅛"
Symm. about ℄ Rdwy.
For Parapet Det. See sheet #5
d2
e
b3 or b7
Optional Const. Jt. See Special Provisions
1'-0" Parapet
1'-1½"
3'-1½" Typ.
1'-0"
1½"
6"
⅛" Drop from Curb to drain
b6
d1
b5
b
a
a1
a2
b
b2
2" cl.
7" Slab
1" cl.
1½" cl.
1½" cl.
1½" cl.
1'-3"
1'-1½"
d1
d
b6
b1
¾" Drip notch full length
1'-0"
6"x12" Floor Drain cost incidental to Class X Concrete
Space to miss diaphragms
10½"
7-#5b1 bars at 9½" cts.
Typical Spacing
10½"
1/8" Alum. sheets ASTM B209 alloy 3003-H14 Cost incidental.
1'-0" Radius
See Detail "A" above
2'-0"
4 Beam Spaces at 6'-6" cts. - 26'-0"
2'-0"
①
⑤
Reinforcement shown Near Midspan
Reinforcement shown Near Pier

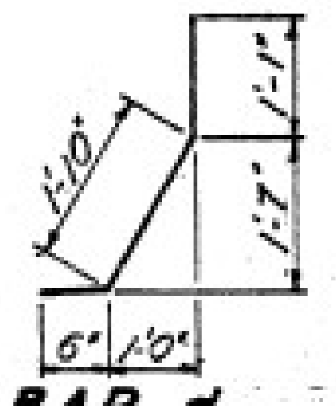
CROSS SECTION

(Looking North)

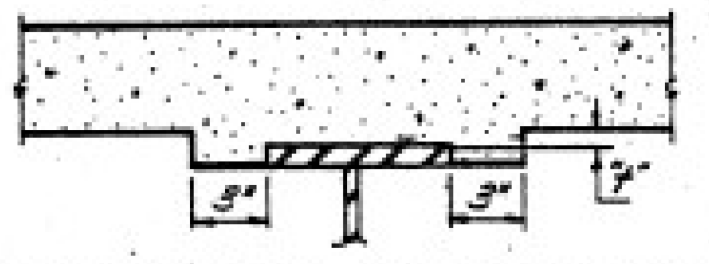


¾"ɸ x 1'-1" Aluminum Bar A.S.T.M.: B211 alloy 6061-T6
4"
1/8"
12"
1/8" Alum. Sheets welded A.S.T.M.: B209 alloy 6061-T6
Fill slot with weld.
1'-2"
35°

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

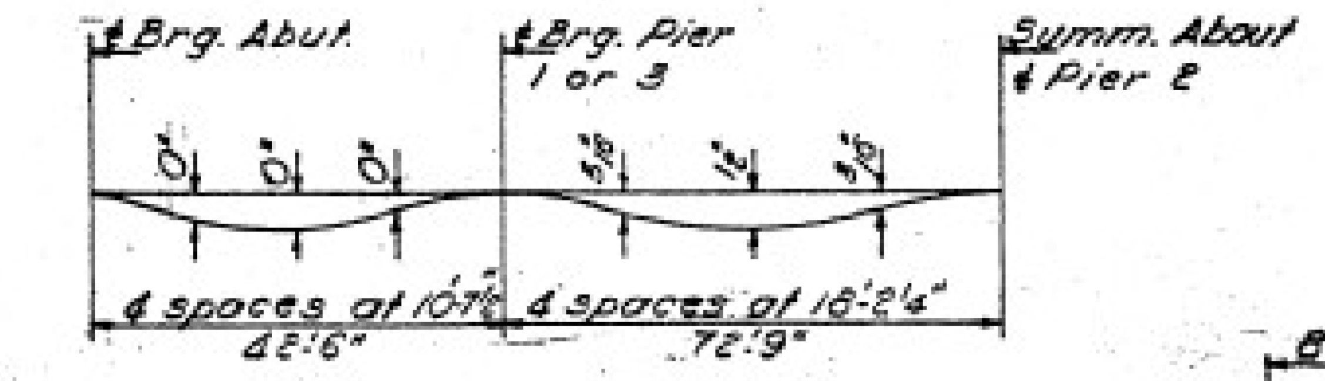


BAR d1



STANDARD FILLET DETAIL

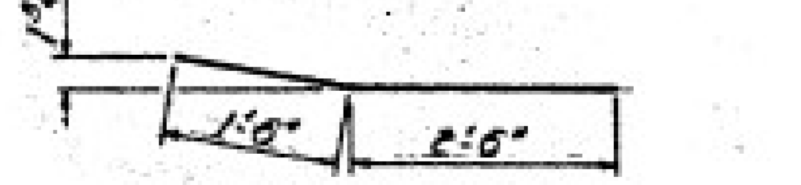
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 3. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 3, minus slab thickness, equals the fillet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



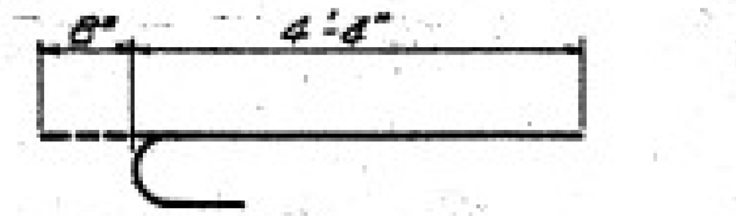
DEAD LOAD DEFLECTION DIAGRAM

(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

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	193	#5	30'-9"	〰
a1	208	#5	29'-8"	—
a2	208	#5	29'-0"	—
a3	6	#5	28'-6"	—
a4	400	#6	4'-0"	—
b	279	#5	27'-3"	—
b1	240	#5	30'-6"	—
b2	90	#6	22'-0"	—
b3	8	#8	34'-0"	—
b4	8	#5	34'-0"	—
b5	24	#8	8'-9"	—
b6	24	#5	8'-9"	—
b7	16	#8	28'-0"	—
b8	16	#5	28'-0"	—
d	466	#4	3'-9"	
d1	460	#5	3'-5"	
x	54	#6	5'-0"	
Reinforcement Bars			Lbs.	46710
Structural Steel			Lbs.	184900
Class X Concrete			Cu. Yds.	515.2

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.

SUPERSTRUCTURE
F.A.I. RT. 70 SEC. 12-49HB-4
CLARK COUNTY
STATION 865+81.81

DESIGNED	Glenn McCormick
CHECKED	John W Clark Jr
DRAWN	J. Kessler
CHECKED	John W Clark Jr

19
EXAMINED
PASSED
APPROVED

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

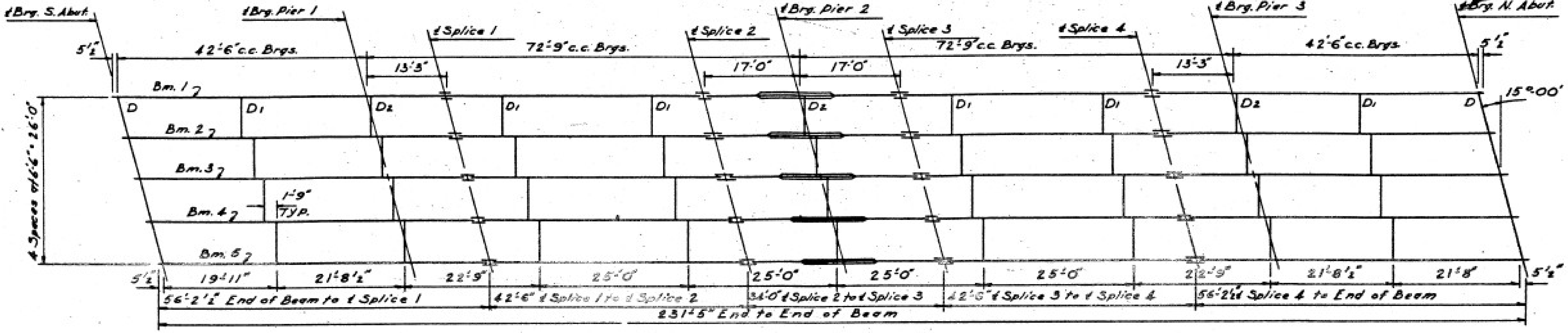
EXISTING STRUCTURE DETAILS
SN 012-0049

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	51

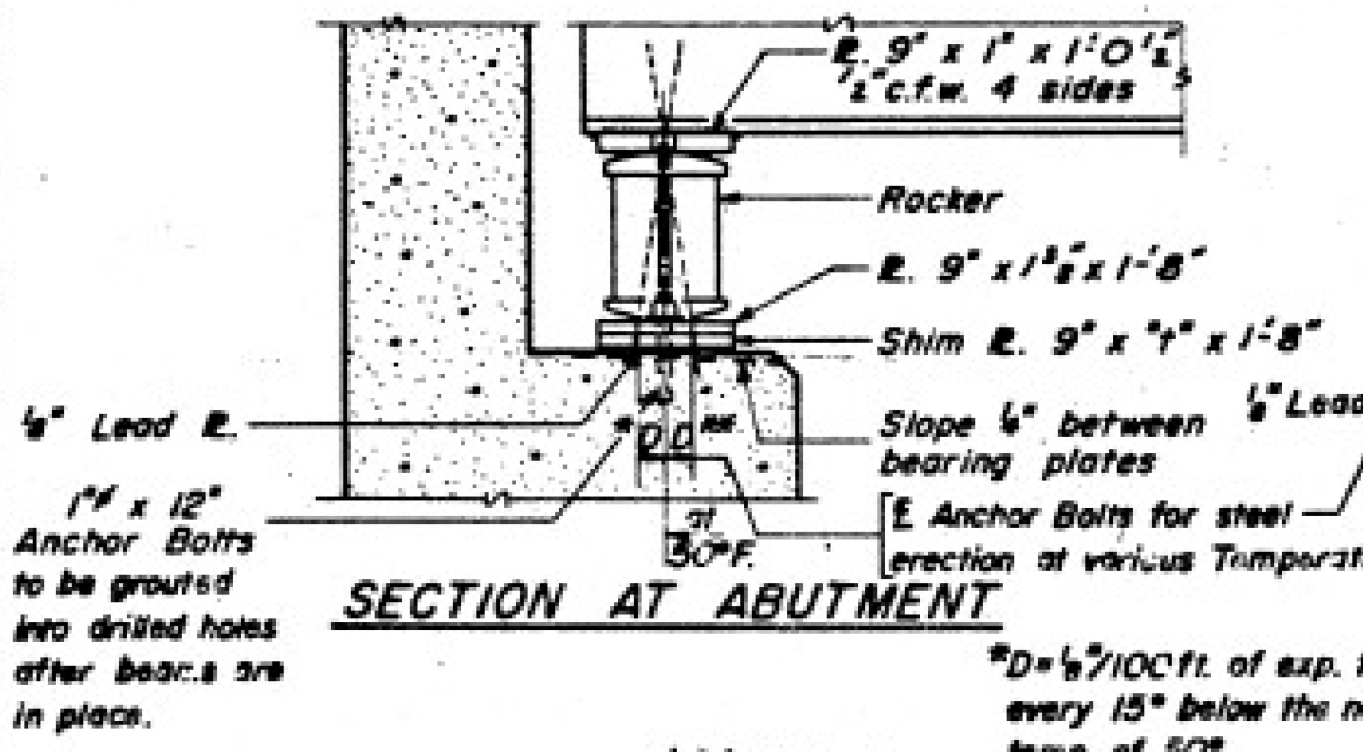
CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT
I-70
CLARK

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



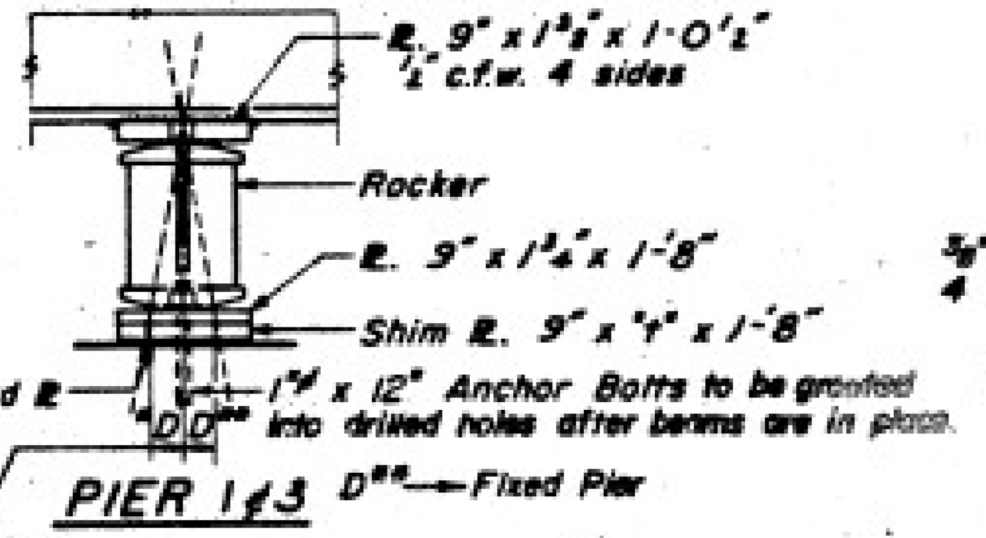
LAYOUT OF STRUCTURAL STEEL

(All Beams 33 WF 130)

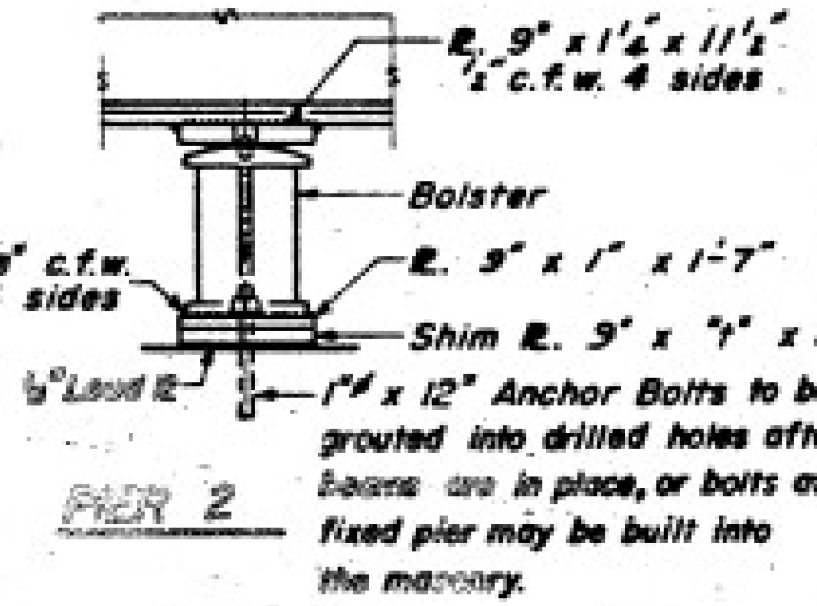


R. 9" x 1" x 1'-0½"
½" c.f.w. 4 sides
Rocker
R. 9" x 1⅜" x 1'-8"
Shim R. 9" x ⅛" x 1'-8"
⅛" Lead R.
Slope ⅛" between bearing plates
1" ∅ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
DD
30°F.
℄ Anchor Bolts for steel erection at various Temperatures

SECTION AT ABUTMENT

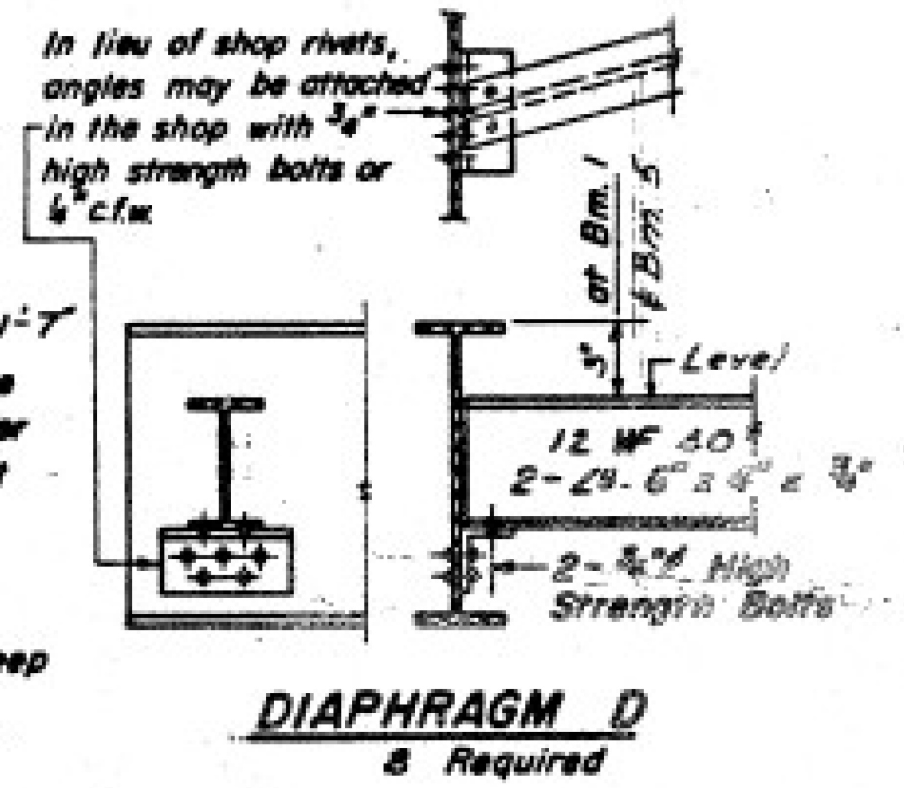


PIER 1 & 3



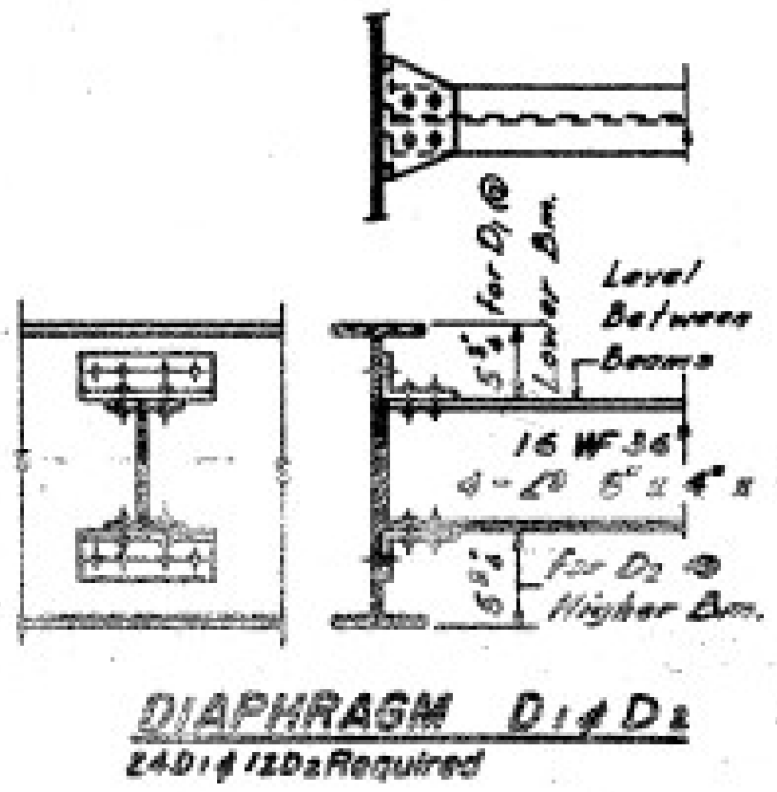
R. 9" x 1½" x 11½"
½" c.f.w. 4 sides
Bolster
⅜" c.f.w. 4 sides
R. 9" x 1" x 1'-7"
Shim R. 9" x ⅛" x 1'-7"
⅛" Lead R.
1" ∅ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.

PIER 2



In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.
3" at Bm. 1
℄ Bm. 5
Level
12 WF 40
2-∠s 6" x 4" x ⅜"
2-¾" ∅ High Strength Bolts

DIAPHRAGM D
8 Required



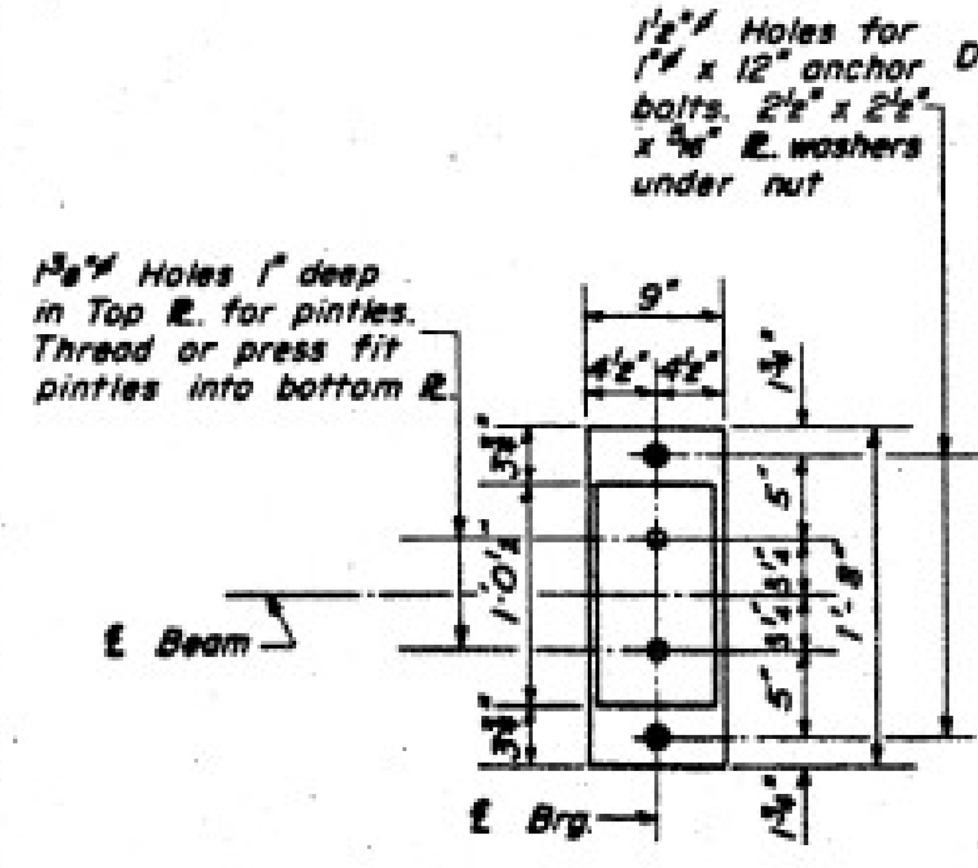
DIAPHRAGM D1 & D2
24 D1 & 12 D2 Required

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	264.8	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

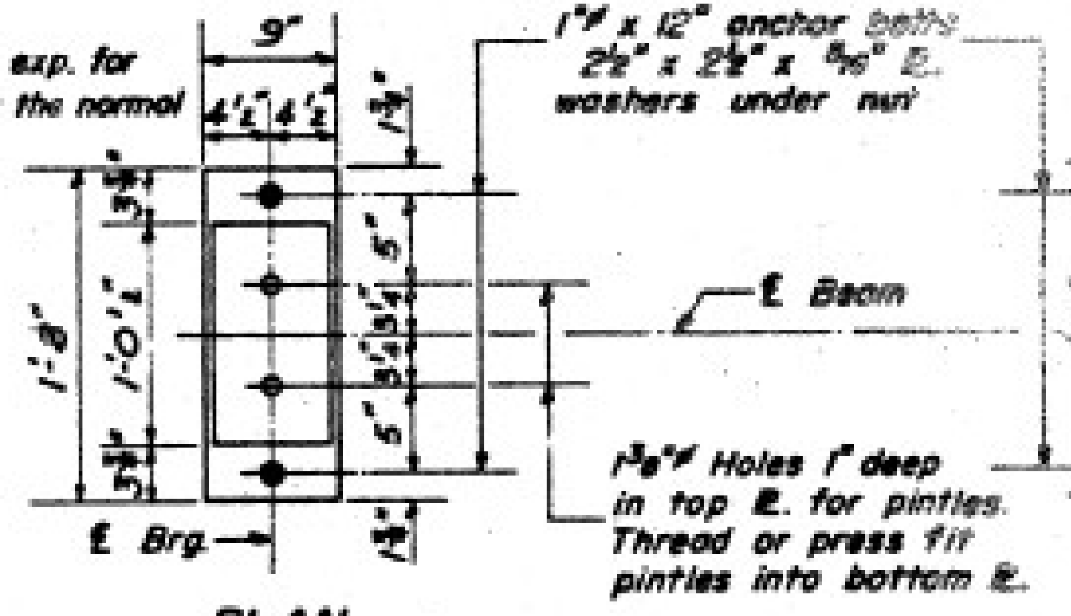
Moments are in ft. kips And Reactions in kips

*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°.



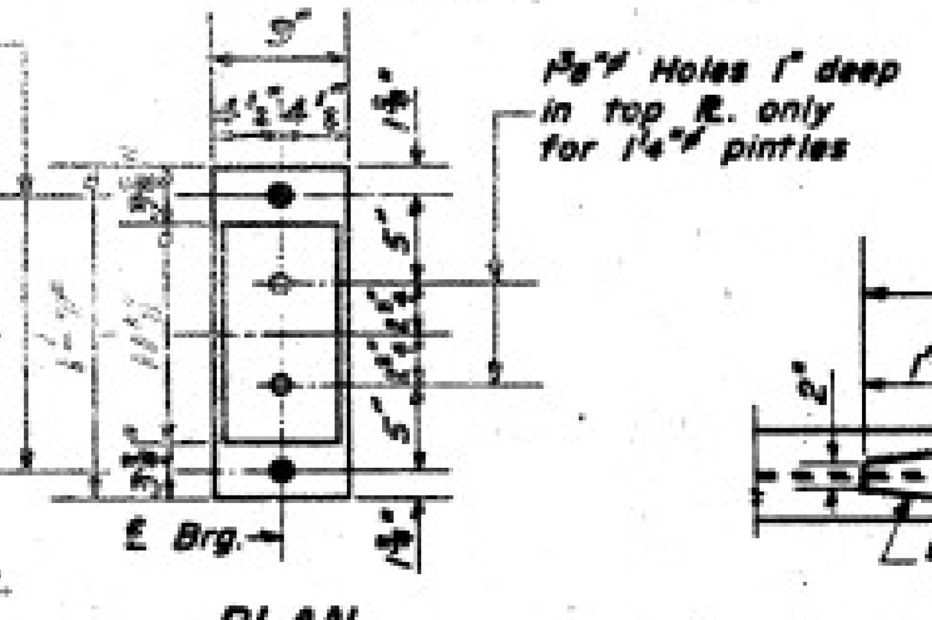
1½" ∅ Holes for 1" ∅ x 12" anchor bolts. 2½" x 2½" x ⅜" R. washers under nut
1⅜" ∅ Holes 1" deep in Top R. for pintles. Thread or press fit pintles into bottom R.
9"
4½"
4½"
℄ Beam
1'-0½"
1'-8"
℄ Brg.

PLAN

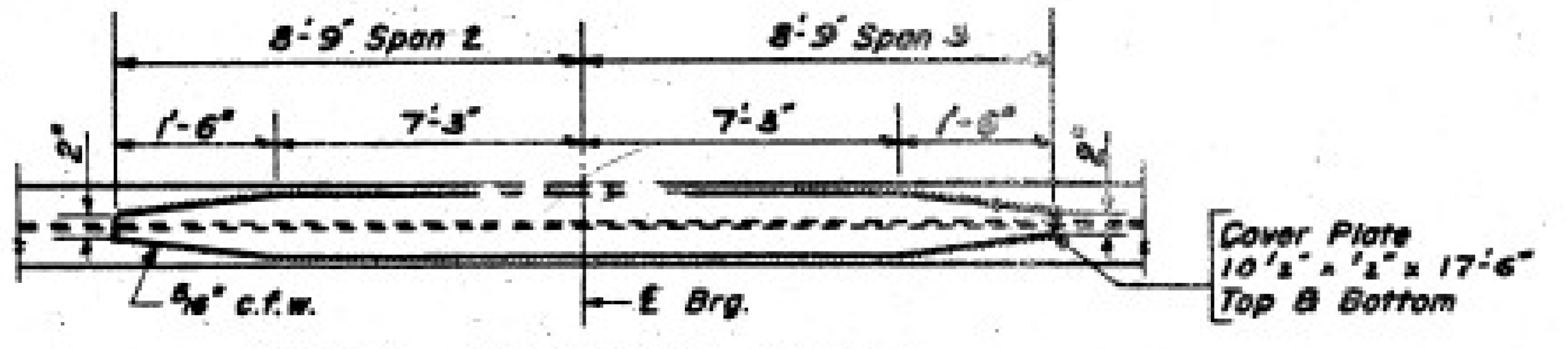


1½" ∅ Holes for 1" ∅ x 12" anchor bolts 2½" x 2½" x ⅜" R. washers under nut
9"
4½"
4½"
1'-8"
1'-0½"
℄ Beam
1⅜" ∅ Holes 1" deep in top R. for pintles. Thread or press fit pintles into bottom R.
℄ Brg.

PLAN



PLAN

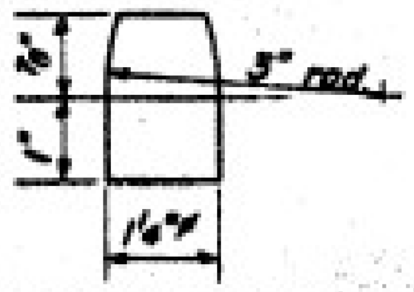


DETAIL OF COVER PLATE

*ELEVATION TOP OF WF

LOC. \ BM.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
℄ Brg. S. Abut.	649.60	649.70	649.74	649.70	649.60
℄ Brg. Pier 1	649.96	650.06	650.10	650.06	649.96
℄ Splice 1	650.07	650.17	650.21	650.17	650.07
℄ Splice 2	650.26	650.36	650.40	650.36	650.26
℄ Brg. Pier 2	650.26	650.36	650.40	650.36	650.26
℄ Splice 3	650.26	650.36	650.40	650.36	650.26
℄ Splice 4	650.07	650.17	650.21	650.17	650.07
℄ Brg. Pier 3	649.96	650.06	650.10	650.06	649.96
℄ Brg. N. Abut.	649.60	649.70	649.74	649.70	649.60

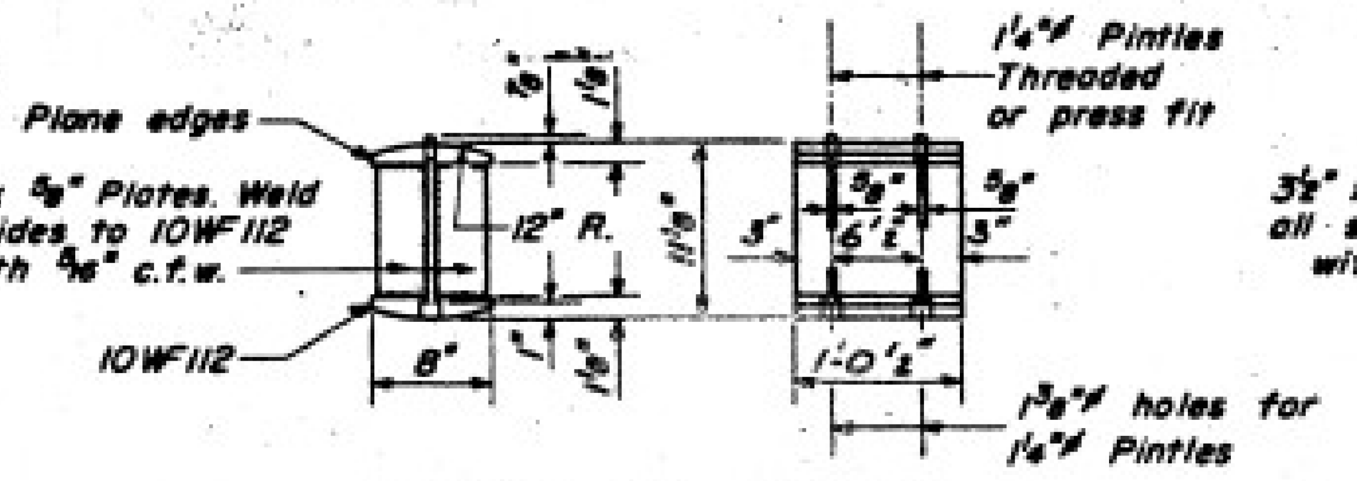
*Lower all Top of WF Elevations by .04 ft.



DETAIL OF PINTLE

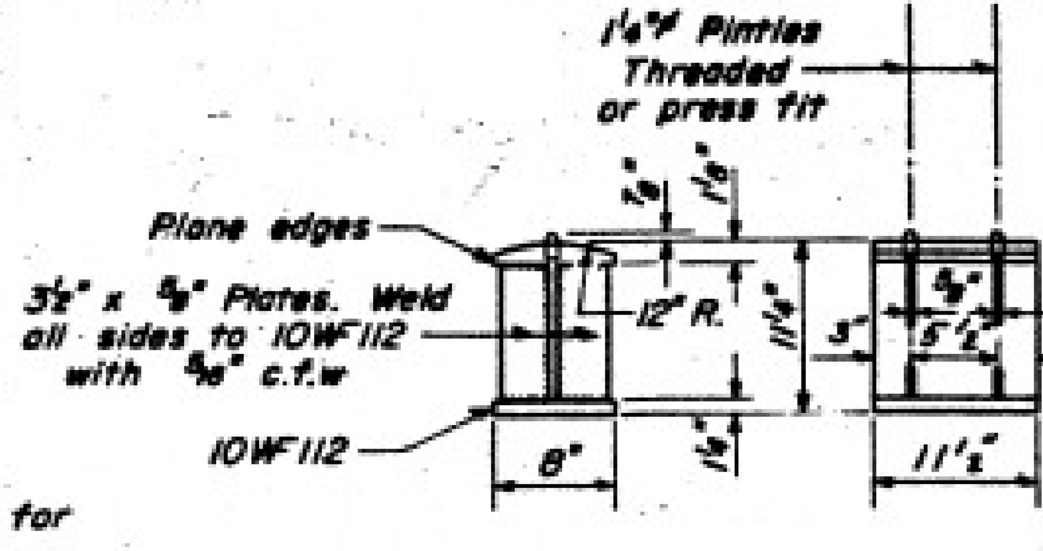
TABLE OF "t" DIMENSIONS

Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
All Abut. & Pier Brgs.	0"	0"	⅛"	0"	0"



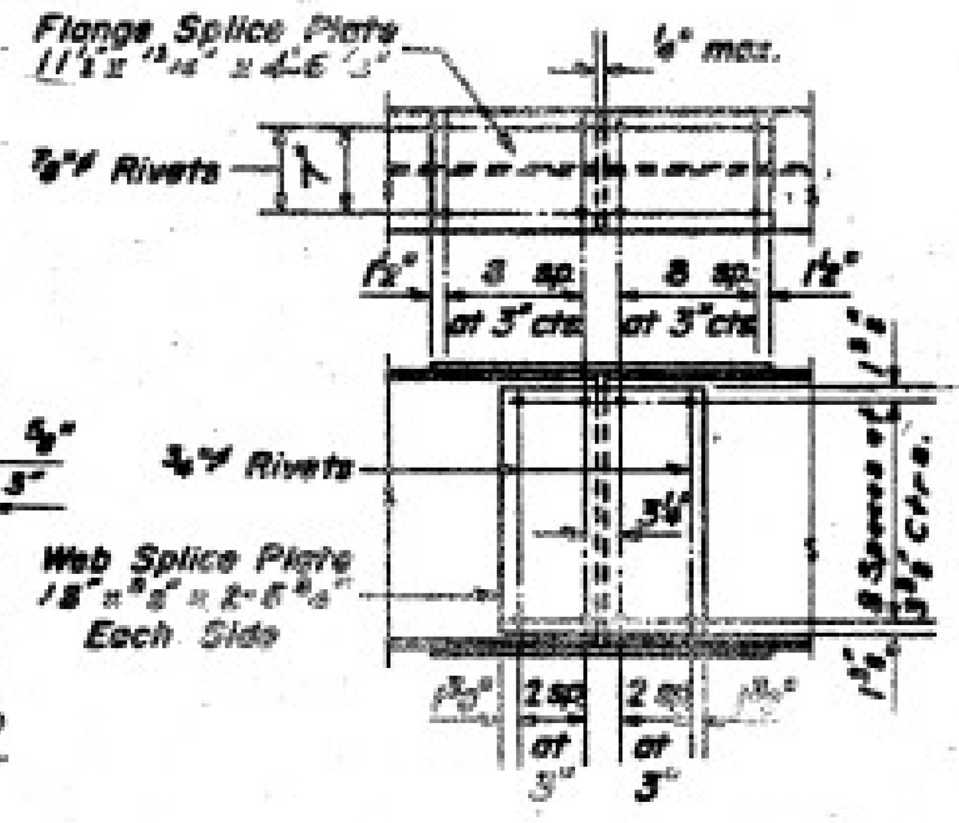
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5⁄16" c.f.w.
10WF112
12" R.
8"
1'-0½"
1¼" ∅ Pintles Threaded or press fit
1⅜" ∅ holes for 1¼" ∅ Pintles

DETAIL OF ROCKER
AT ABUT. & PIERS 1 & 3



1¼" ∅ Pintles Threaded or press fit
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5⁄16" c.f.w.
10WF112
12" R.
8"
11½"

DETAIL OF BOLSTER
AT PIER 2



DETAIL OF SPLICE

STRUCTURAL STEEL
F.A.I. RT. 70 SEC. 12-49HB-4
CLARK COUNTY
STATION 865+81.81

DESIGNED	Fred Stone
CHECKED	Gene McCormick
DRAWN	P.G. Barnett J. Koester W. A. Sausaman Jr.
CHECKED	Gene McCormick

EXAMINED Aug. 9 1965
ENGINEER OF BRIDGES 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

MODEL: 74E48-49-3 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0049

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	52

CONTRACT NO. 74E48
ILLINOIS FED. AID PROJECT

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	12-51B	CLARK	25	6

SHEET NO. 1
15 SHEETS

WATERWAY INFORMATION

Drainage Area 12000 Acres
Character Hilly, wooded & Cultiv
Road Opening (50 Yr Fl) 1100 Sq Ft

Proposed Opening 1100 Sq. Ft
Ordinary Water Elev 539.5
Low Water Elev 536.9

DESIGN STRESSES

fc = 1400 psi Super & Sub
fs = 20000 psi Reinf.
fs = 20000 psi Struct
vc = 75 psi Ftgs
n = 10

Live Load Deflection = L/1000
LOADING HS 20-44 & ALT.

GENERAL PLAN & ELEVATION
F.A.I. RT. 70 OVER MILL CREEK
PROJ. I-70-4(65)138
F.A.I. RT. 70 SEC 12-51B
CLARK COUNTY
STA. 1348+41.00

DESIGNED
CHECKED
DRAWN F.M.
CHECKED
EXAMINED
PASSED
APPROVED

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0052 & SN 012-0053

SCALE: SHEET 1 OF 5 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	53
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

MODEL: 74E48-52-1 [Sheet]
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MODEL: 74E48-52-2 [Sheet]
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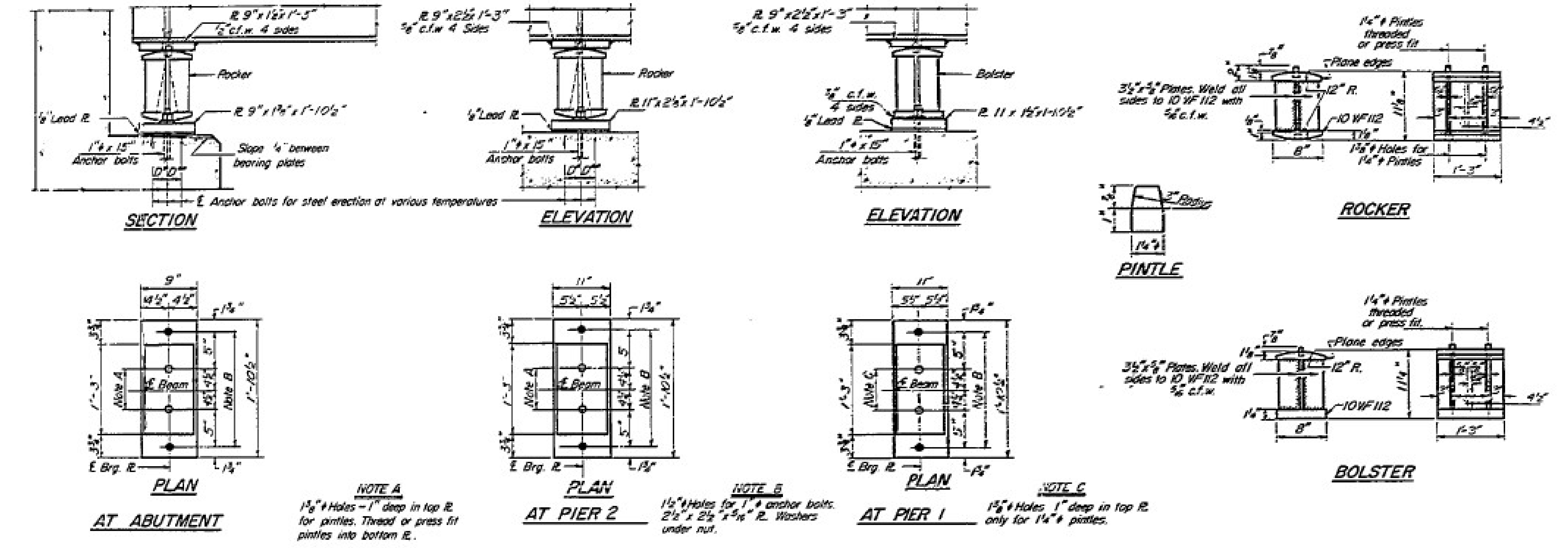
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. 70	12-51B	CLARK	25	13

SHEET NO. 7
15 SHEETS



SECTION

ELEVATION

ELEVATION

PINTLE

ROCKER

PLAN AT ABUTMENT

PLAN AT PIER 2

PLAN AT PIER 1

BOLSTER

NOTE A
1⅜" ϕ Holes – 1" deep in top R for pintles. Thread or press fit pintles into bottom R.

NOTE B
1½" ϕ Holes for 1" ϕ anchor bolts. 2½" x 2½" x 5/16" R. Washers under nut.

NOTE C
1⅜" ϕ Holes 1" deep in top R only for 1¼" ϕ pintles.

BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
D** (Side of brg. toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50° F.

b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

TABLE OF MOMENTS AND REACTIONS – INTERIOR BEAMS

	MOMENTS			REACTIONS	
	.4 Span 1	Pier 1	.5 Span 2	Abut.	Pier 1
D.L.	392	849	401	28.1	99.5
L.L.	530	530	552	39.8	58.1
Imp.	135	127	126		
Total	1057	1506	1079	67.9	157.6

Moments – Ft. Kips
Reactions – Kips

DESIGNED [illegible] Flores
CHECKED [illegible] Wang
J. R. Evans
DRAWN P.G. Barnett
CHECKED JJW

Aug. 30 1966
EXAMINED
PASSED H. J. Alton
APPROVED

I-2-B 9-1-65

BEARING DETAILS
F.A.I. RT. 70 SEC 12-51B
CLARK COUNTY
STA. 1348 + 41.00

USER NAME = Maria.Bloemer
PLOT DATE = 7/29/2026

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0052 & SN 012-0053

SCALE: SHEET 2 OF 5 SHEETS STA. TO STA.

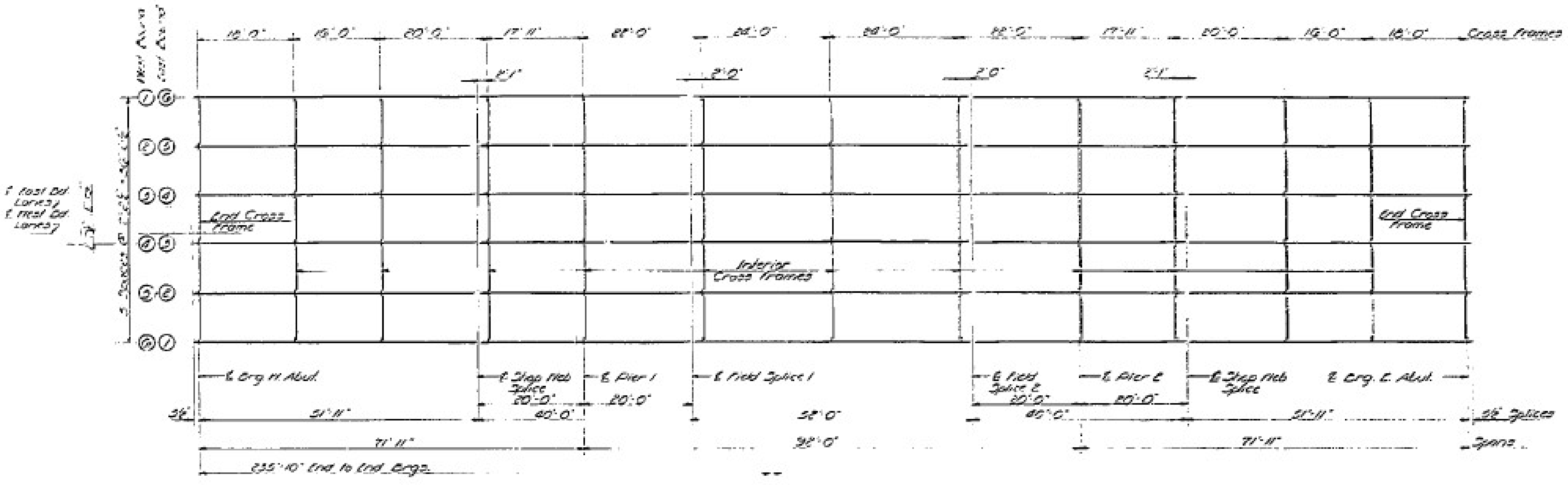
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	54
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

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

F.A.I. RTE. 70	12-51B	CLARK	25	16

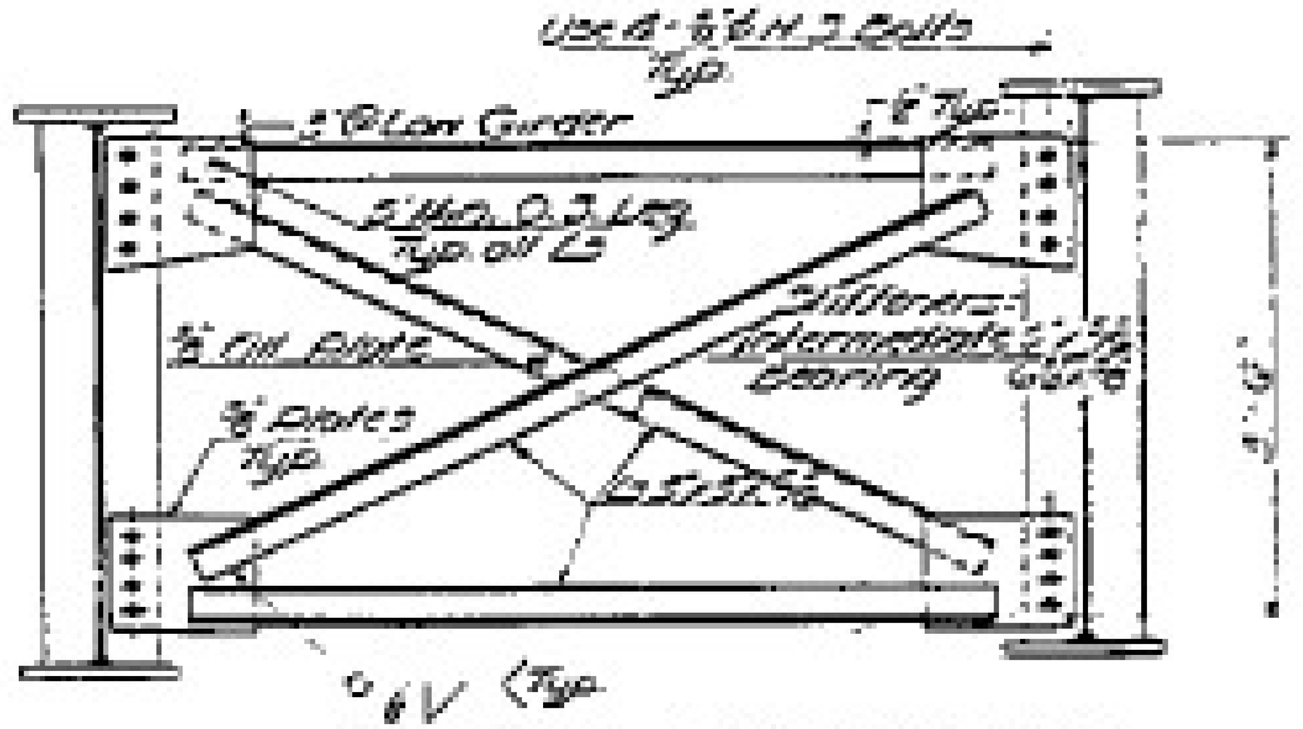
SHEET NO. 6
15 SHEETS



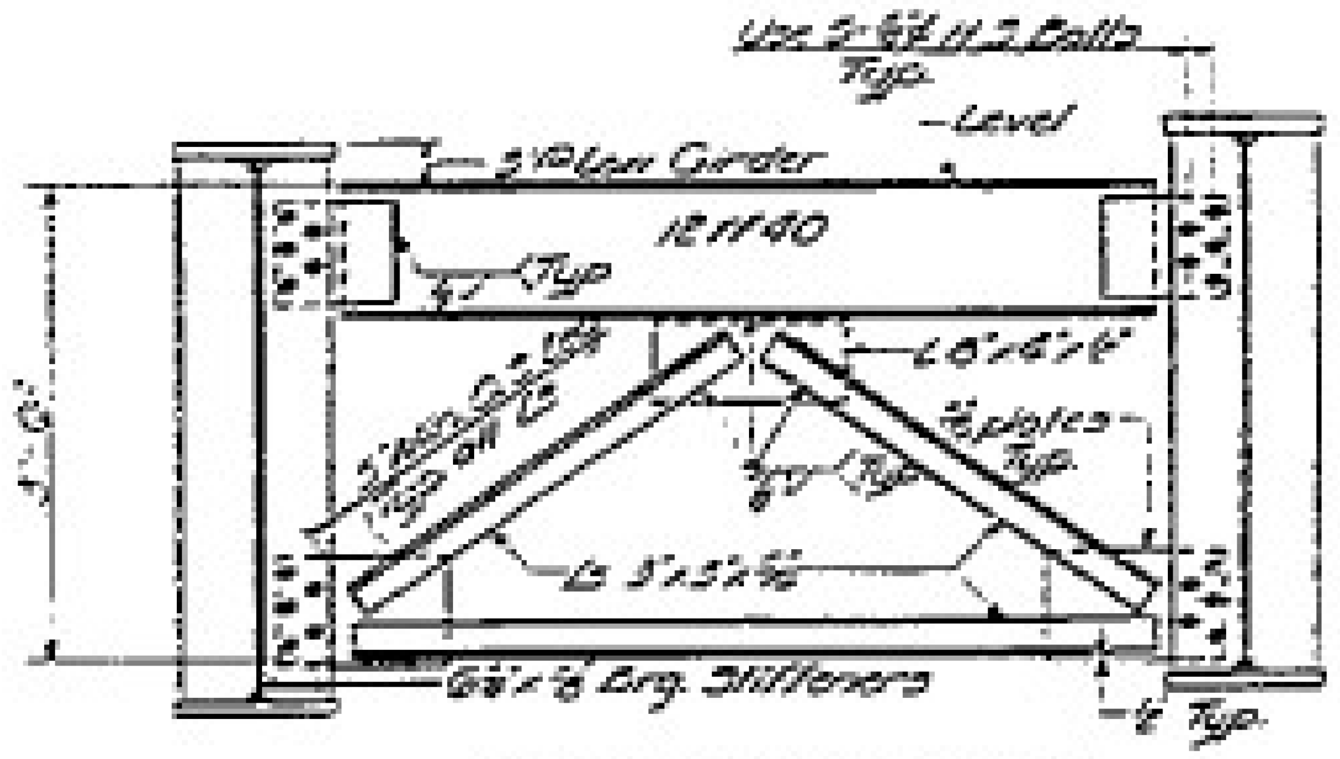
FRAMING PLAN

ELEVATION TOP OF WEB

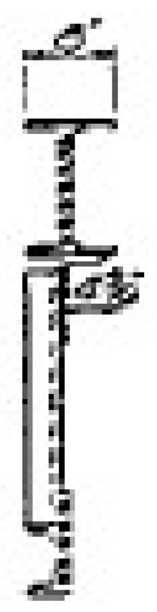
Location \ Beam	1	2	3	4	5	6
℄ Brg. W. Abut.	562.228	562.378	562.495	562.557	562.445	562.312
℄ Pier 1	562.264	562.414	562.531	562.593	562.481	562.348
℄ Field Splice 1	562.276	562.424	562.541	562.603	562.491	562.358
℄ Field Splice 2	562.516	562.666	562.783	562.845	562.733	562.600
℄ Pier 2	562.694	562.844	562.961	563.023	562.911	562.778
℄ Brg. E. Abut.	562.334	563.484	563.601	563.663	563.551	563.418

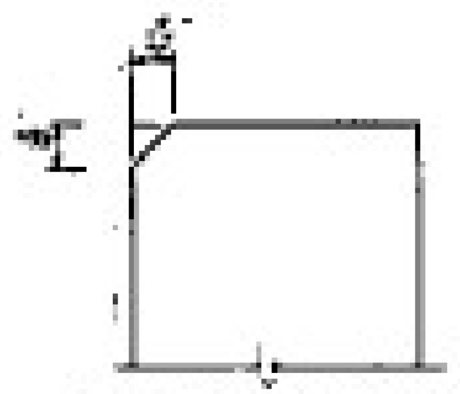


INTERIOR CROSS FRAME
110 Required



END CROSS FRAME
20 Required





STIFFENER CUT
(All Stiffeners Top & Bott.)

DESIGNED Jim & M Peary
CHECKED Jim W.
DRAWN
CHECKED

Aug. 30 1966
EXAMINED
PASSED
APPROVED

FRAMING PLAN
F.A.I. RT. 70 SEC. 12-51B
CLARK COUNTY
STA 1348+41.00

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PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0052 & SN 012-0053

SCALE: SHEET 3 OF 5 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	55
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT

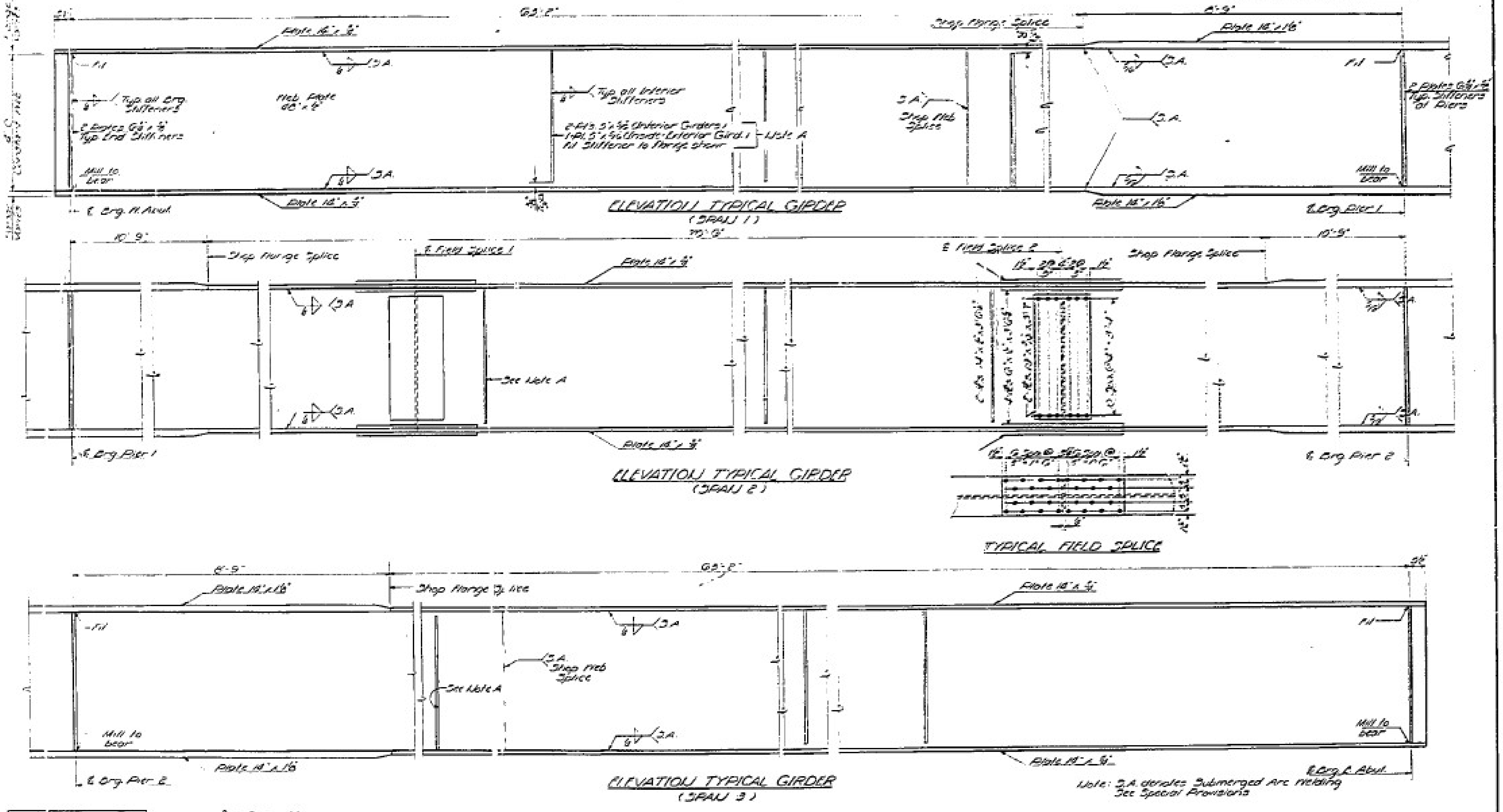
I-70 CLARK

MODEL: 74E48-52-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

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

F.A.I. RT. 70	12-51B	CLARK	25	15

SHEET NO. 9
15 SHEETS



ELEVATION TYPICAL GIRDER
(SPAN 1)

ELEVATION TYPICAL GIRDER
(SPAN 2)

TYPICAL FIELD SPLICE

ELEVATION TYPICAL GIRDER
(SPAN 3)

Note: 3A denotes Submerged Arc Welding
See Special Provisions

DESIGNED	James M. Pierce
CHECKED	Jos. Harrison
DRAWN	Jacobs
CHECKED	N.W.

Aug. 30 1964

EXAMINED
PASSED H. J. Alton
APPROVED

GIRDER ELEVATIONS
F.A.I. RT. 70 - SEC. 12-51B
CLARK COUNTY
STA. 1348+41.00

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**EXISTING STRUCTURE DETAILS** **SN 012-0052 & SN 012-0053**	
	DRAWN -	REVISED -			
	CHECKED -	REVISED -			
PLOT DATE = 7/29/2026	DATE -	REVISED -		SCALE: SHEET 4 OF 5 SHEETS STA. TO STA.	

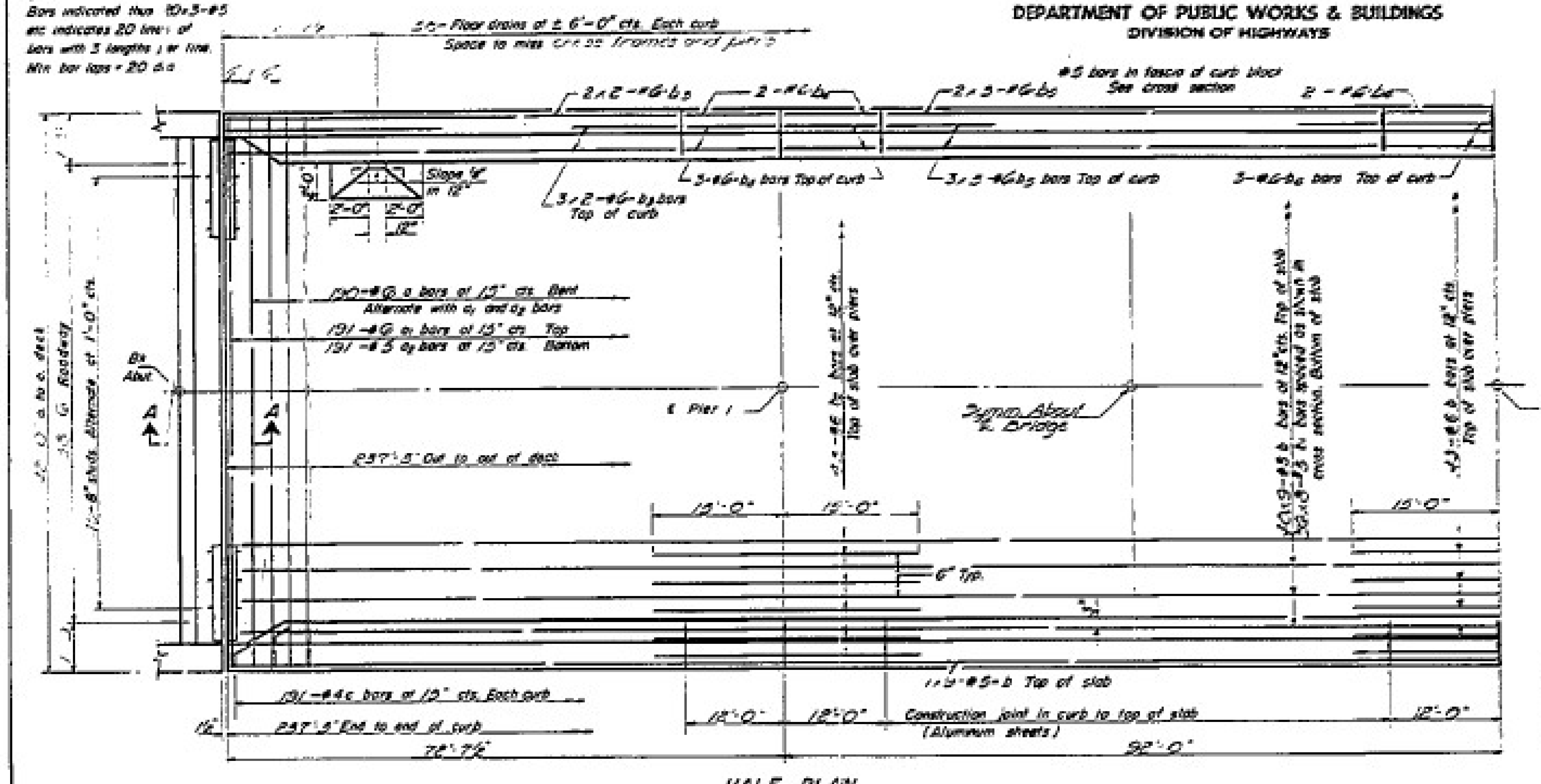
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	56
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70 CLARK

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

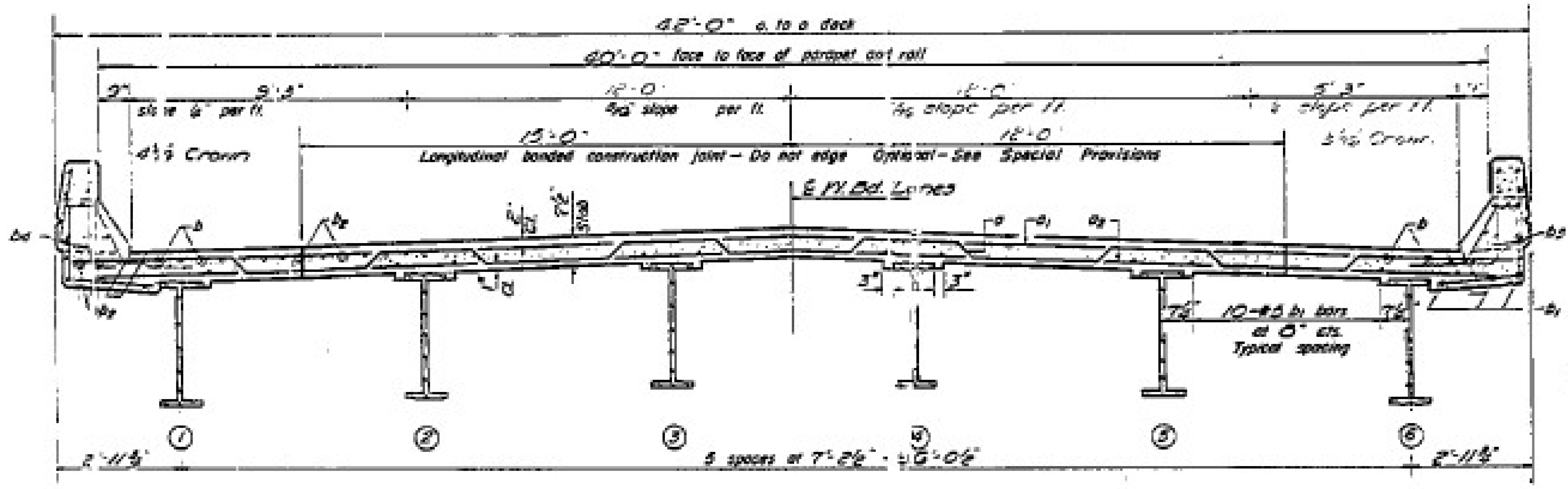
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. RTE 70	12-51B	CLARK	25	18	SHEET NO. 12 15 SHEETS



Floor drains at ± 6'-0" cts. Each curb
Space to miss cross frames and joints
#5 bars in fascia of curb block
See cross section
2 x 2-#6-b3
2-#6-b4
2 x 3-#6-b5
2-#6-b4
Slope 1/8" in 12"
2'-0"
2'-0"
12"
3 x 2-#6-b3 bars Top of curb
3-#6-b4 bars Top of curb
3 x 3-#6-b5 bars Top of curb
3-#6-b4 bars Top of curb
190-#6 a bars at 15" cts. Bent Alternate with a1 and a2 bars
191-#6 a1 bars at 15" cts. Top
191-#5 a2 bars at 15" cts. Bottom
℄ Brg. Abut.
A
A
℄ Pier 1
Symm. About ℄ Bridge
℄ Pier 2
43-#6 b bars at 12" cts. Top of slab over piers
43-#6 b bars at 12" cts. Top of slab over piers
237'-5" Out to out of deck
15'-0"
15'-0"
15'-0"
6" Typ.
11 x 9-#5-b Top of slab
191-#4 c bars at 12" cts. Each curb
237'-5" End to end of curb
18'-0"
18'-0"
Construction joint in curb to top of slab (Aluminum sheets)
12'-0"
72'-7½"
92'-0"

HALF PLAN

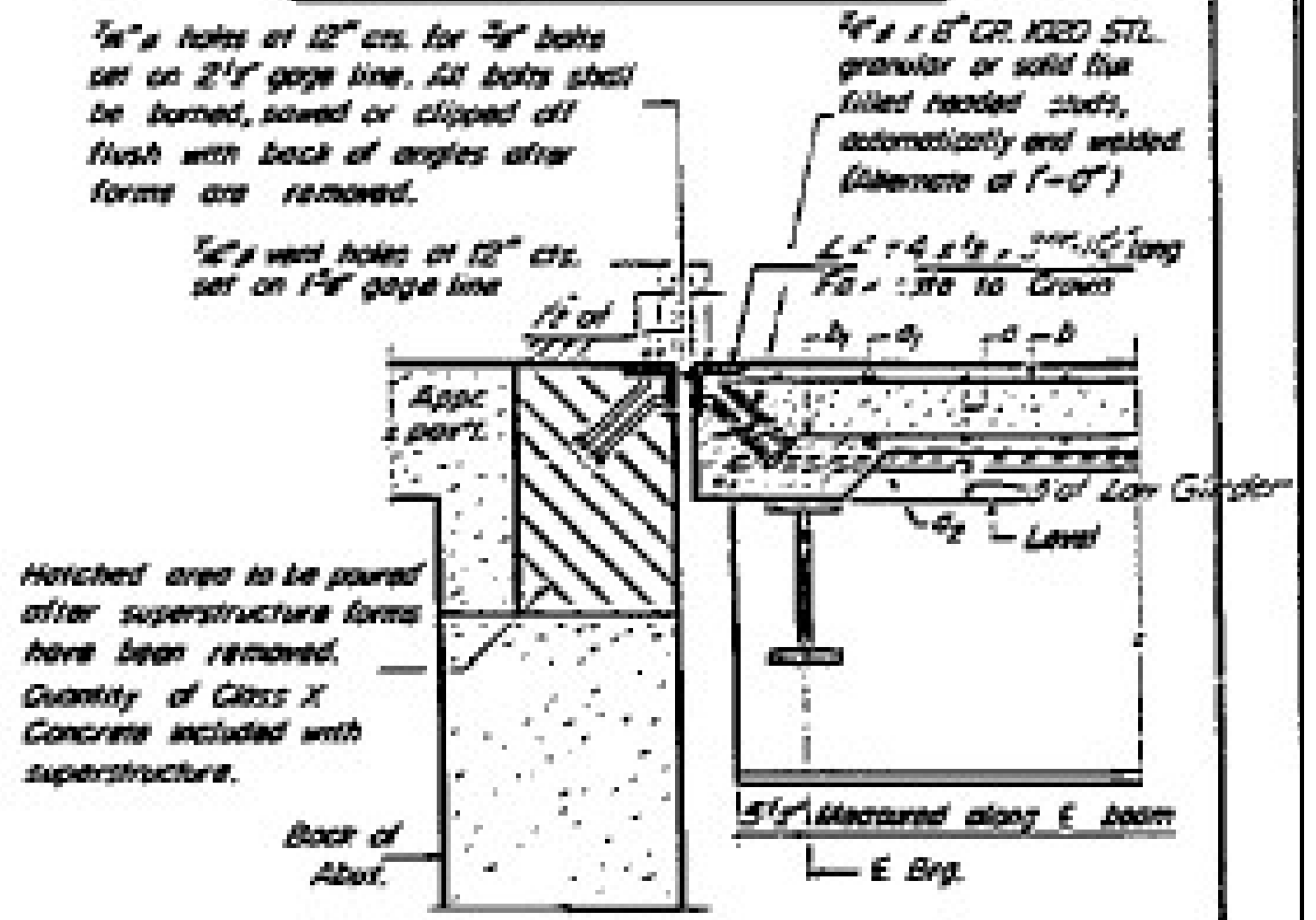


42'-0" o. to o. deck
40'-0" face to face of parapet and rail
9'-3"
12'-0"
12'-0"
5'-3"
slope ¼" per ft.
slope per ft.
slope per ft.
slope per ft.
4½" Crown
15'-0"
18'-0"
Longitudinal bonded construction joint - Do not edge. Optional - See Special Provisions
3½" Crown
℄ W. Bd. Lanes
b
b2
a
a1
a2
b
b5 or b1
b4
d
3"
3"
10-#5 b1 bars at 0" cts. Typical spacing
1
2
3
4
5
6
5 spaces at 7'-2½" = 36'-0½"
2'-11¾"
2'-11¾"

NEAR PIER

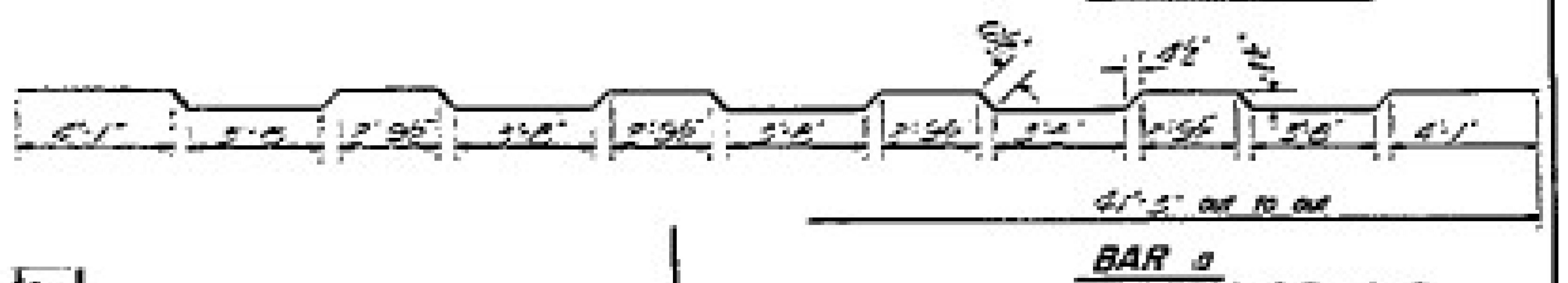
NEAR MIDSPAN

CROSS SECTION
LOOKING EAST
East Bd. Lanes similar by rotation thru 180°

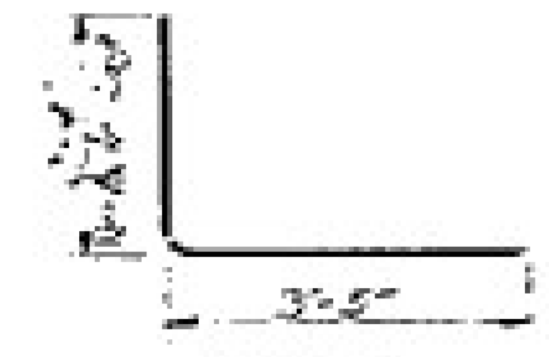


⅞"ø holes at 12" cts. for ¾" bolts set on 2¼" gage line. All bolts shall be burned, sawed or clipped off flush with back of angles after forms are removed.
⅞"ø vent holes at 12" cts. set on 1⅝" gage line
¾"ø x 6" CR. 1020 STL. granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0")
Appr. slab
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.
Back of Abut.
b of Low Girder
a2
Level
5¼" Measured along ℄ beam
℄ Brg.

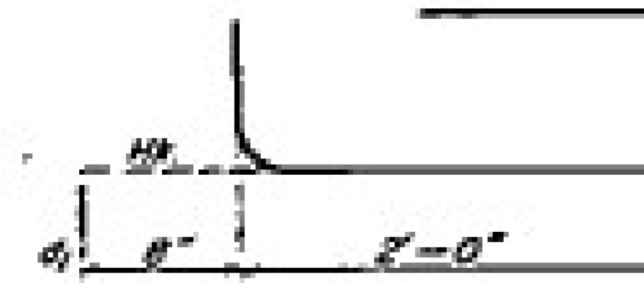
SECTION A-A



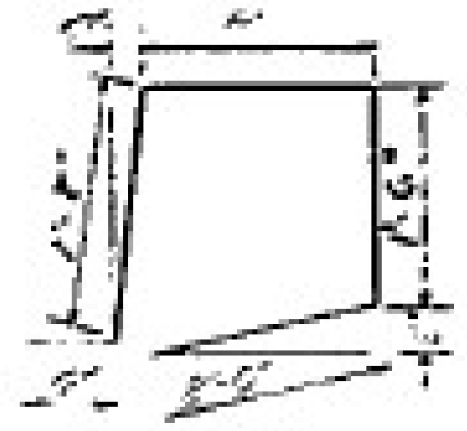
BAR a



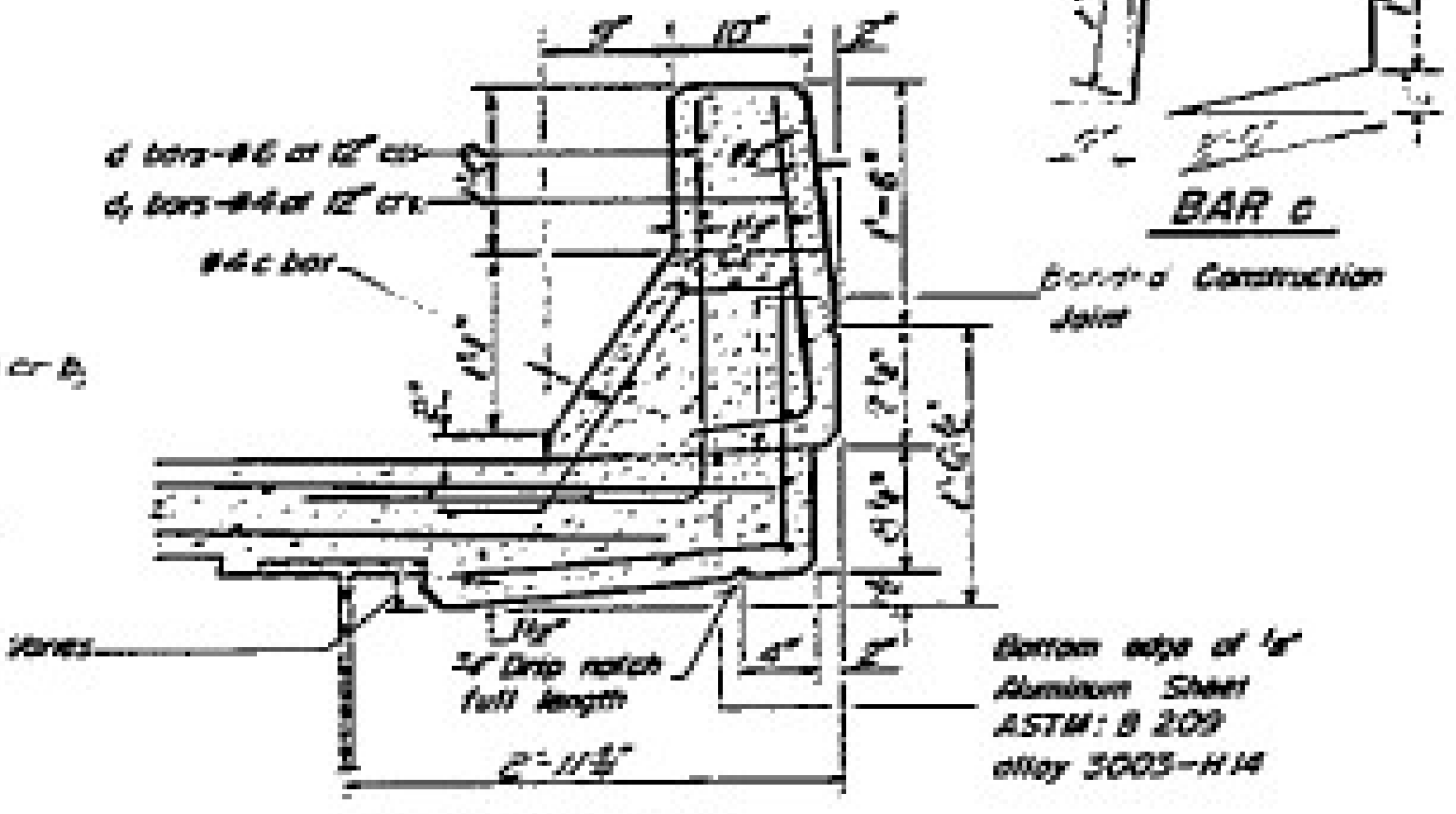
BAR d



BAR d1



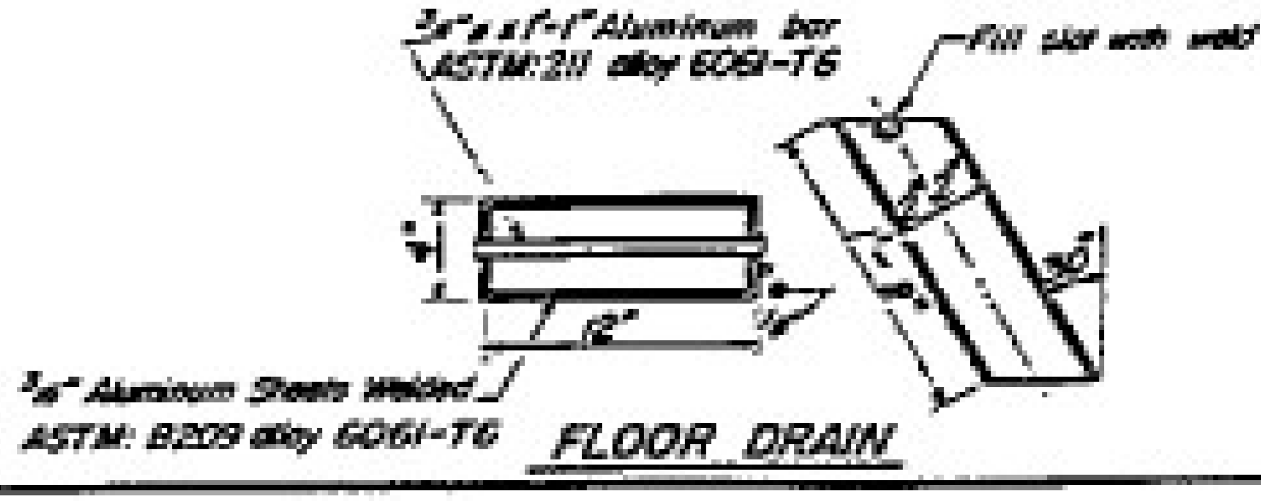
BAR c



9"
10"
2"
d bars-#6 at 12" cts.
d1 bars-#4 at 12" cts.
#4 c bar
1'-6"
Bonded Construction Joint
Varies
3/8" Drip notch full length
4"
2"
2'-11¾"
Bottom edge of ⅛" Aluminum Sheet ASTM: B 209 alloy 3003-H14

CURB SECTION

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



3/8" x 1'-1" Aluminum bar ASTM: 211 alloy 6061-T6
Fill slot with weld
12"
3/16" Aluminum Sheets Welded
ASTM: B209 alloy 6061-T6

FLOOR DRAIN

2 BRIDGES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	380	#6	43'-7"	~~~
a1	381	#6	41'-3"	—
a2	382	#5	40'-3"	—
b	756	#5	27'-0"	—
b1	696	#5	30'-6"	—
b2	258	#6	30'-0"	—
b3	60	#6	30'-9"	—
b4	60	#6	11'-9"	—
b5	60	#5	23'-3"	—
c	764	#4	5'-5"	⊐
d	952	#6	3'-9"	∟
d1	952	#4	2'-8"	∟
Reinforcement Bars			Lbs.	146,020
* Structural Steel			Lbs.	559,760
Class X Concrete			Cu.Yd.	547.2

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel.
Est. Wt. = 15,110 #

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet 13

2 BRIDGES
SUPERSTRUCTURE
F.A.I. RT. 70 - SEC. 12-51B
CLARK COUNTY
STA. 1348 + 41.00

DESIGNED
CHECKED
DRAWN D. L. Boemer
CHECKED

Aug. 30 1966
EXAMINED
PASSED
APPROVED

I-6-0

8-16-67 Revised Curbs Changed Cl. X Conc. from 530.6 to 547.2 C.Y.
Changed Re-Bar from 139,850 to 146,020 # J.N.P.

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0052 & SN 012-0053

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	57
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

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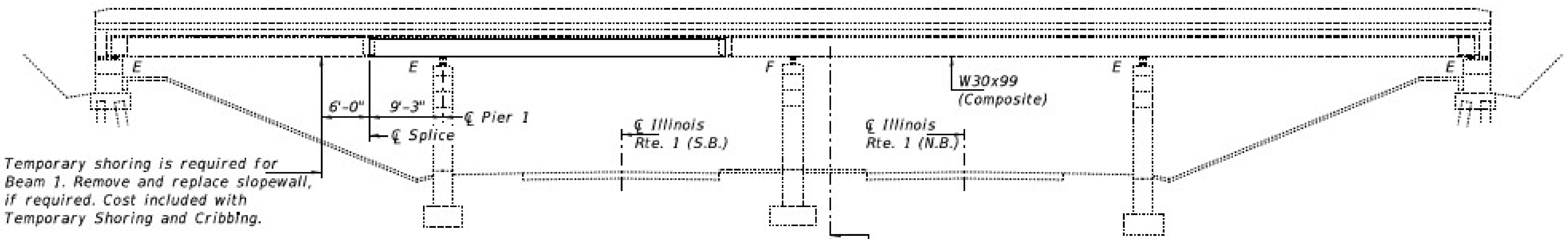
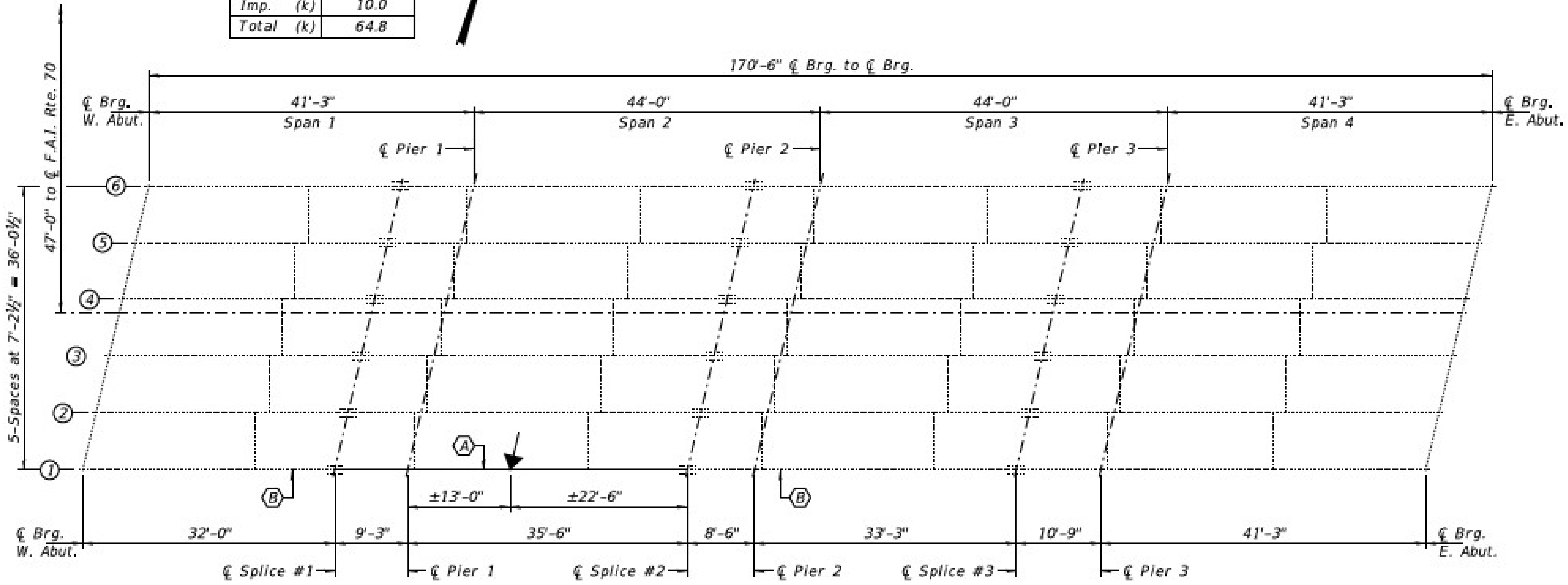


Temporary shoring is required for Beam 1. Remove and replace slopewall, if required. Cost included with Temporary Shoring and Cribbing.

Temporary shoring may be required at Beam 1 to facilitate alignment of existing splice. Use 12" x 12" Timbers or HP's to be paid for as Temporary Shoring and Cribbing.

ELEVATION

REACTION TABLE AT TEMPORARY SHORING FOR SPAN 1		
D_L	(k)	21.4
L_L	(k)	33.4
Imp.	(k)	10.0
Total	(k)	64.8



FRAMING PLAN

Ⓐ – Remove & Replace Partial Beam Segment.

Ⓑ – Straighten Beam if necessary.

Impact Line ▶

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

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

Fasteners shall be high strength bolts. Flange splice holes shall be 15/16"Ø for 7/8"Ø bolts. Web splice holes shall be 13/16"Ø for 3/4"Ø bolts.

Diaphragm connection holes shall be 15/16"Ø for 3/4"Ø bolts. Two hardened washers shall be required at diaphragm connections.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5G 4/8.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Removal	Pound	4510
Furnishing & Erecting Structural Steel	Pound	4980
Temporary Slab Support System	L.S.	1
Temporary Shoring & Cribbing	L.S.	1
Beam Straightening	L.S.	1

DAVID CARL PUZEY
081-005470

Expires: November 30, 2022

MODEL: 74E48-54-1 [Sheet]
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

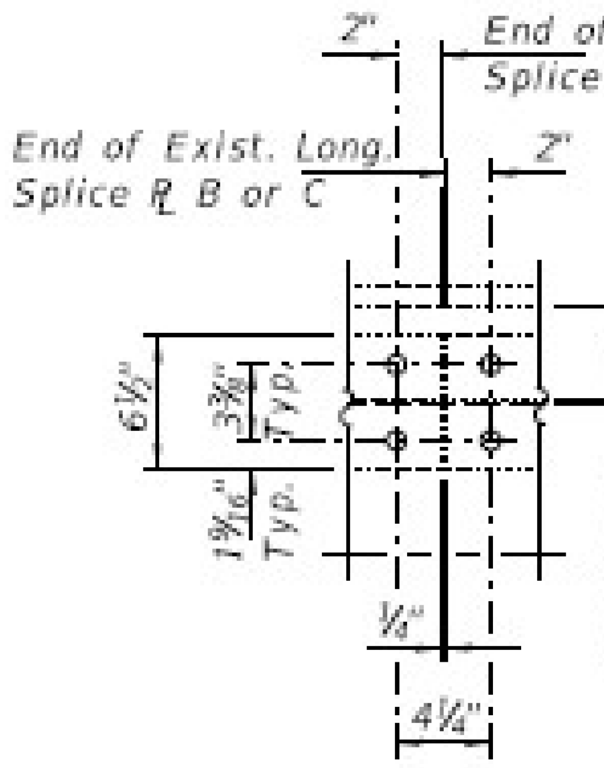
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	58
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

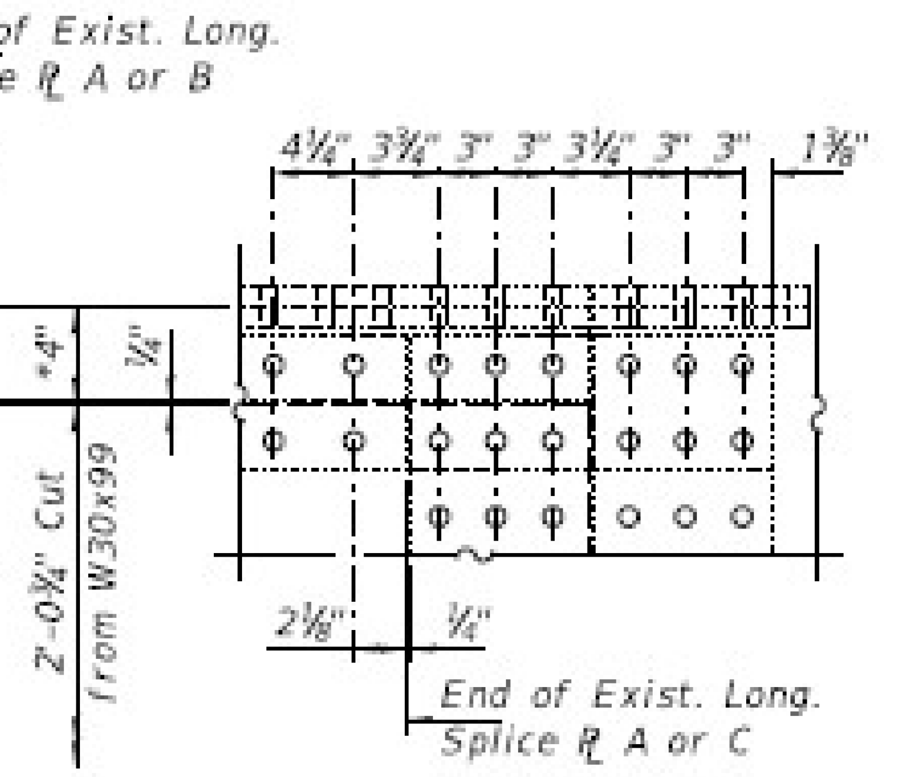
2⅛"
121-Spaces at 4¼" = 42'-10¼"
2⅛"
Exist. ⅛" Shim/Fill Plate (Typ.)
End of Long. Splice ℞ A
Exist. Continuity ℞ A ½" x 6½" x 3'-7¾" (NTR) (Typ. ea. side)
Exist. Long. Splice ℞ A ½" x 6½" x 14'-6⅛" (NTR) (Typ. ea. side)
Exist. Continuity ℞ B ½" x 6½" x 4'-3" (NTR) (Typ. ea. side)
Exist. Long. Splice ℞ B ½" x 6½" x 14'-1¾" (NTR) (Typ. ea. side)
Exist. Continuity ℞ B ½" x 6½" x 4'-3" (NTR) (Typ. ea. side)
Exist. Long. Splice ℞ C ½" x 6½" x 14'-6⅛" (NTR) (Typ. ea. side)
Exist. Continuity ℞ A ½" x 6½" x 3'-7¾" (NTR) (Typ. ea. side)
End of Long. Splice ℞ C
Re-use ⅛" Shim/Fill Plate (Typ.)
Existing 30WF99 (Composite)
7-Spaces at 3⅜" = 1'-11⅝"
See Detail A
2'-0¾" Cut from W30x99
New Side Clip ∠ 4x4x½ x 6"
2½" Typ.
New Bottom Clip ∠ 6x4x½ x 12"
W30x99 (N.T.R.)
See Detail B
See Detail B
New Side Clip ∠ 4x4x½ x 6"
New Bottom Clip ∠ 6x4x½ x 12"
2½" Typ.
See Detail A
Re-use existing Web Splice ℞ ⅜" x 1'-6" x 2'-2¾" (Typ. ea. side, ea. splice)
Re-use exist. Bott. Flange ℞ ⅝" x 10½" x 3'-6¼"
See Brg. ℞ Details
℄ Diaphragm
3-Spaces at 3" = 9" (Typ.)
℄ Diaphragm
New Bottom Flange ℞ ⅝" x 10½" x 3'-6¼"
9'-2⅞"
±10¼"
22'-0"
℄ Splice
℄ Brg. Pier 1
℄ Splice
⅛"
44'-8¾" New Beam Segment
⅛"
44'-9" ℄ Splice to ℄ Splice

PARTIAL OUTSIDE ELEVATION – BEAM 1

(Looking North)



DETAIL B

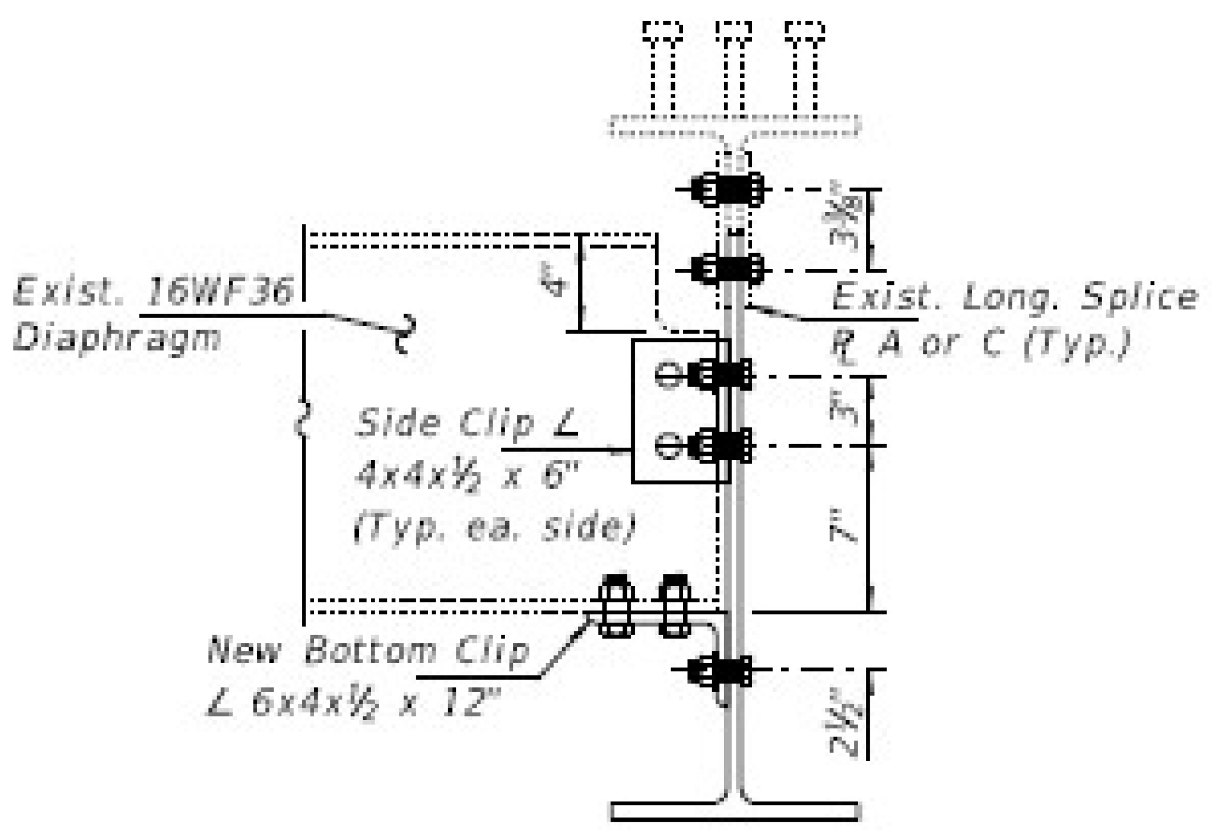

End of Exist. Long. Splice ℞ A or B
4¼" 3¾" 3" 3" 3¼" 3" 3"
1⅞"
*4"
¼"
2'-0¾" Cut from W30x99
2⅛"
¼"
End of Exist. Long. Splice ℞ A or C

DETAIL A

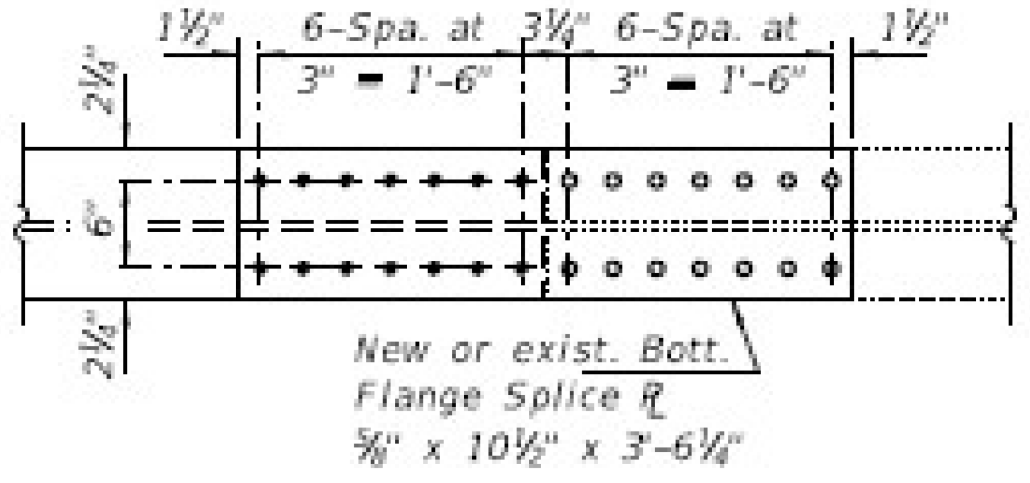
BOLT HOLE LEGEND

○ - Field Drill holes in new steel using existing steel as template or use new bolts.

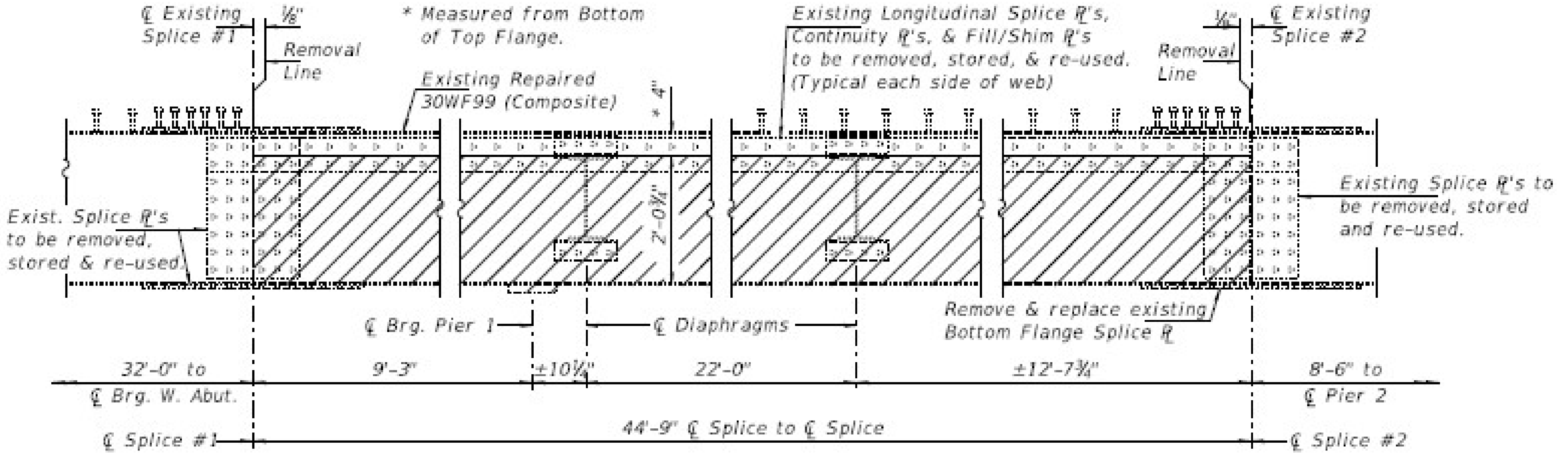
● - Shop Drilled holes in new steel. Use new steel as template to field drill holes in existing steel.


Exist. 16WF36 Diaphragm
4"
3⅜"
Exist. Long. Splice ℞ A or C (Typ.)
Side Clip ∠ 4x4x½ x 6" (Typ. ea. side)
3"
7"
New Bottom Clip ∠ 6x4x½ x 12"
2½"

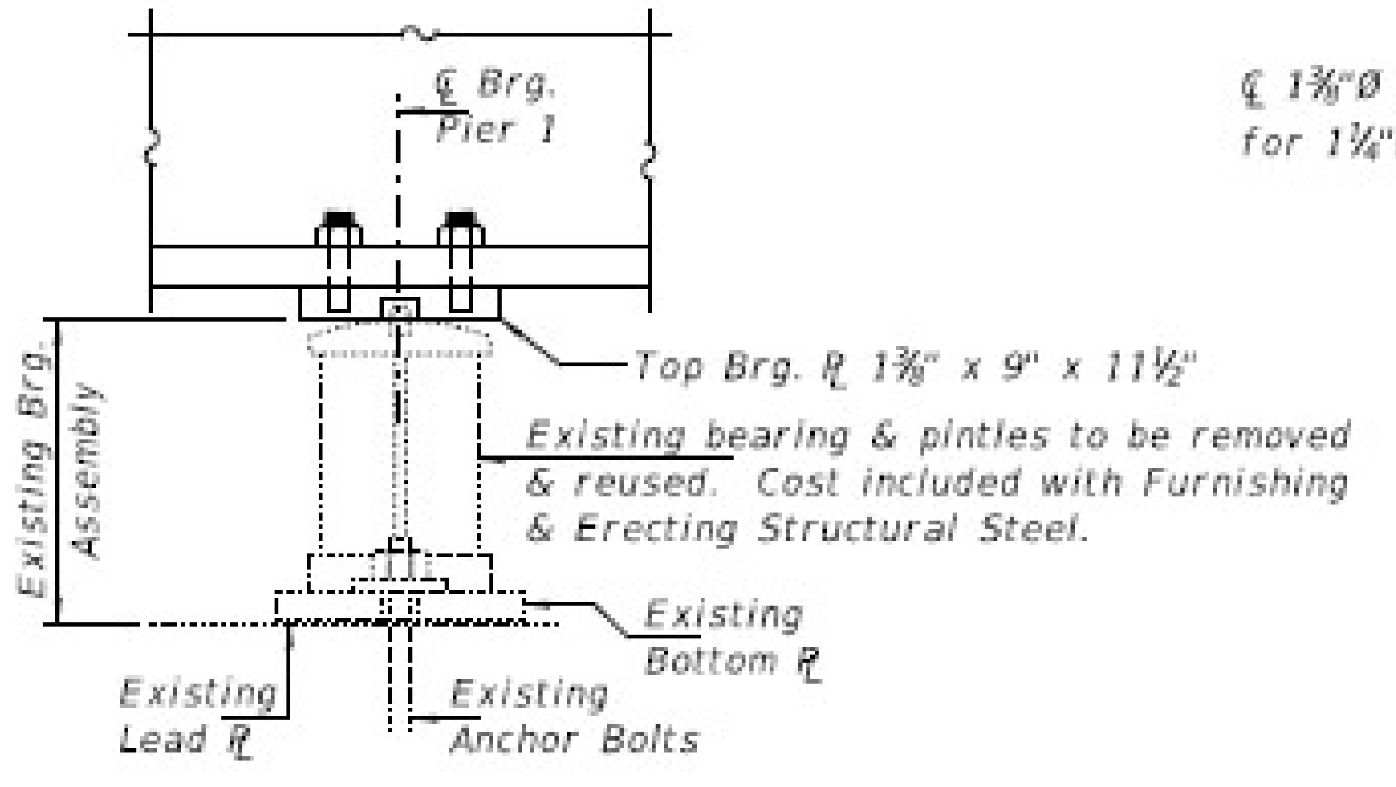
DIAPHRAGM CONNECTION DETAILS



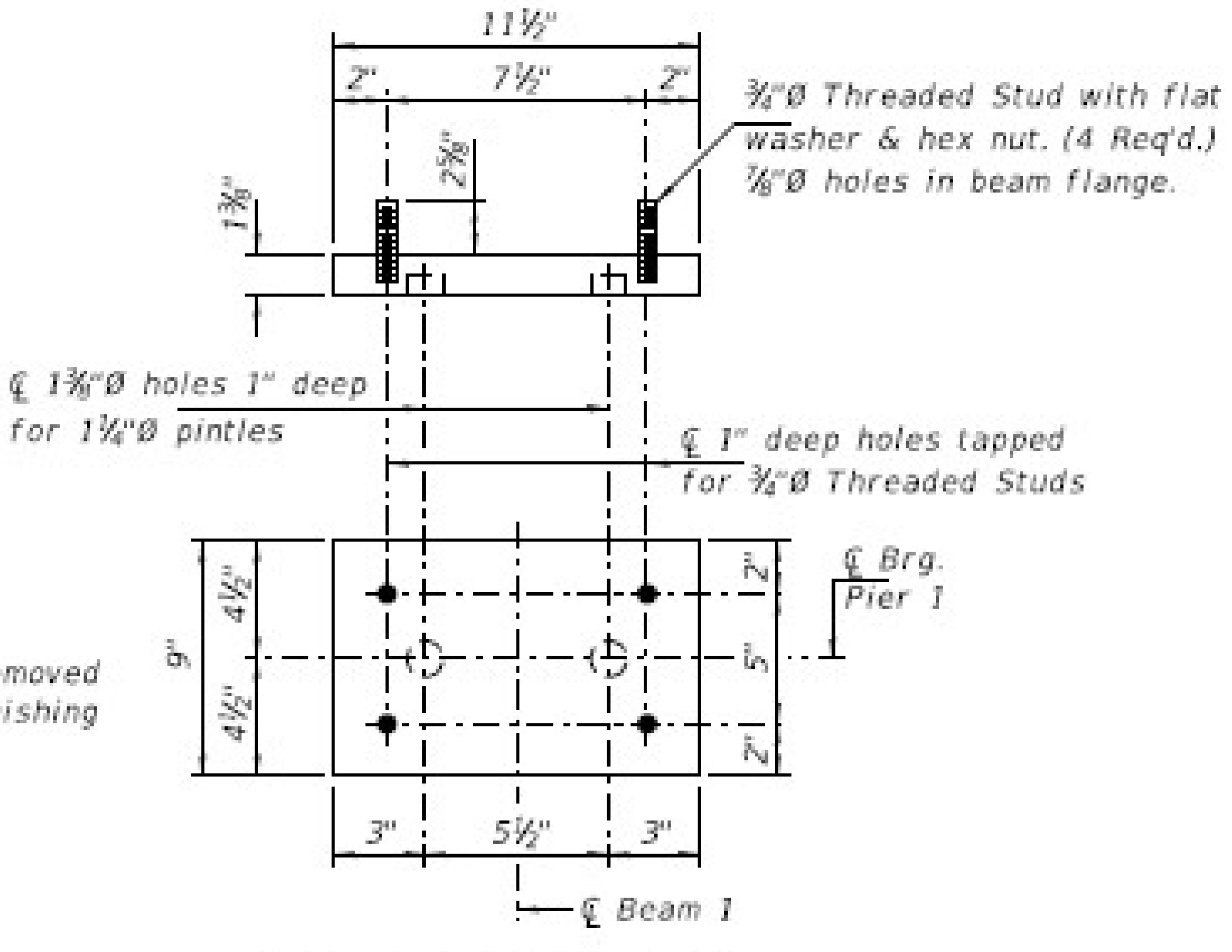
TYPICAL BOTTOM FLANGE SPLICE


℄ Existing Splice #1
⅛"
Removal Line
* Measured from Bottom of Top Flange.
Existing Repaired 30WF99 (Composite)
* 4"
Existing Longitudinal Splice ℞'s, Continuity ℞'s, & Fill/Shim ℞'s to be removed, stored, & re-used. (Typical each side of web)
⅛"
Removal Line
℄ Existing Splice #2
Exist. Splice ℞'s to be removed, stored & re-used
2'-0¾"
Existing Splice ℞'s to be removed, stored and re-used.
℄ Brg. Pier 1
℄ Diaphragms
Remove & replace existing Bottom Flange Splice ℞
32'-0" to ℄ Brg. W. Abut.
9'-3"
±10¼"
22'-0"
±12'-7¾"
8'-6" to ℄ Pier 2
℄ Splice #1
44'-9" ℄ Splice to ℄ Splice
℄ Splice #2

BEAM SEGMENT REMOVAL DETAIL


℄ Brg. Pier 1
Top Brg. ℞ 1⅜" x 9" x 11½"
Existing bearing & pintles to be removed & reused. Cost included with Furnishing & Erecting Structural Steel.
Existing Brg. Assembly
Existing Bottom ℞
Existing Lead ℞
Existing Anchor Bolts

BRG. ELEVATION AT PIER 1


11½"
2"
7½"
2"
¾"Ø Threaded Stud with flat washer & hex nut. (4 Req'd.) ⅞"Ø holes in beam flange.
1⅜"
2⅝"
℄ 1⅜"Ø holes 1" deep for 1¼"Ø pintles
℄ 1" deep holes tapped for ¾"Ø Threaded Studs
℄ Brg. Pier 1
9"
4½"
4½"
2"
5"
2"
3"
5½"
3"
℄ Beam 1

TOP BEARING PLATE

℞ 1⅜" x 9" x 11½" (1-Req'd)

MODEL: 74E48-54-2 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

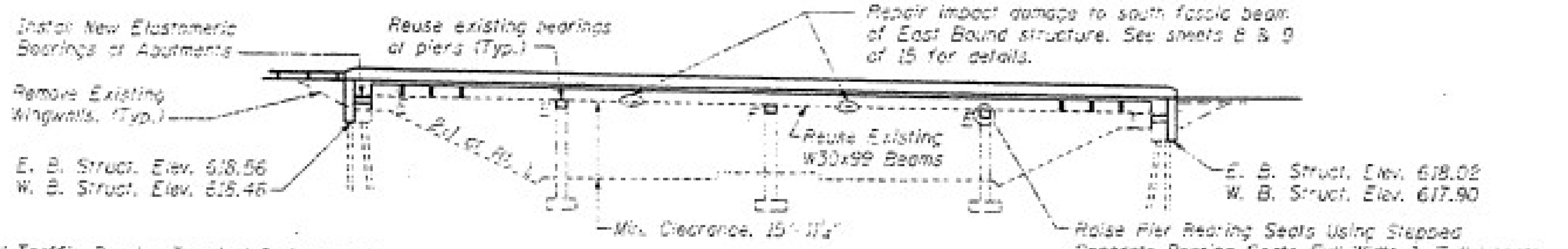
EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	59
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

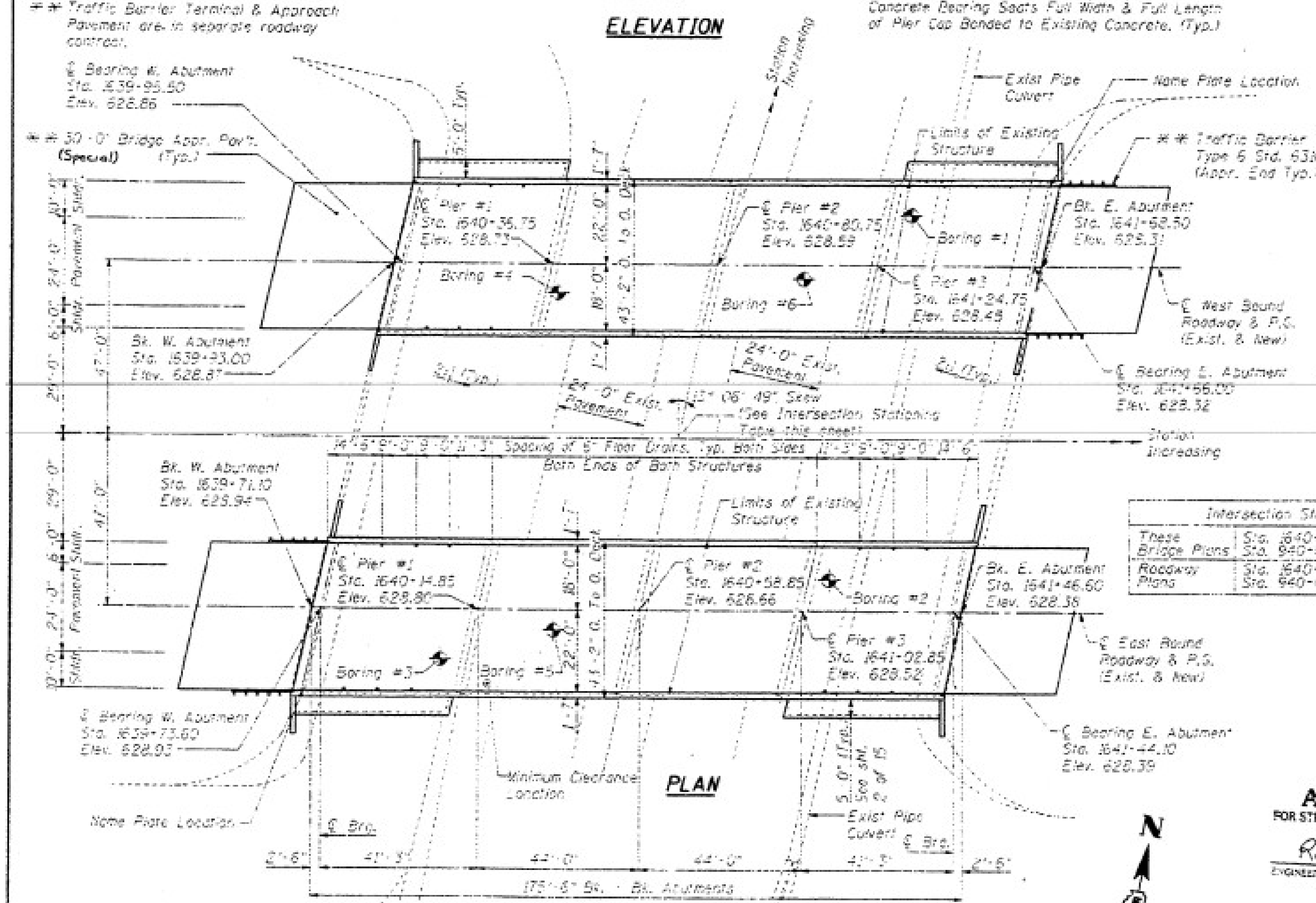
I-70 CLARK

Bench Mark: Chiseled "□" on top of southwest wingwall of bridge 012-0054 at Sta. 1639+71.10, Elev. 629.46
Note: All Elevations, including references to previously constructed elements, have been converted to NAV88 datum.
The superstructure consists of a R.C. deck 172'-2" long by 42'-0" wide on four-span, rolled steel stringers.
Existing Structures: No. 012-0054 (E.B.) & 012-0055 (W.B.) built as F.A.I. Rte. 70, Sec. 12-53HB-3 in 1969,
supported on pile bent spill thru abuts & double hammerhead piers on spread footings.
No salvage



Install New Elastomeric Bearings at Abutments
Reuse existing bearings at piers (Typ.)
Repair impact damage to south fascia beam of East Bound structure. See sheets 8 & 9 of 15 for details.
Remove Existing Wingwalls. (Typ.)
2:1 or Rt.
Reuse Existing W30x99 Beams
E. B. Struct. Elev. 618.56
W. B. Struct. Elev. 618.46
Min. Clearance, 15'-11¼"
E. B. Struct. Elev. 618.02
W. B. Struct. Elev. 617.90
Raise Pier Bearing Seats Using Stepped Concrete Bearing Seats Full Width & Full Length of Pier Cap Bonded to Existing Concrete. (Typ.)

ELEVATION



** Traffic Barrier Terminal & Approach Pavement are in separate roadway contract.
℄ Bearing W. Abutment Sta. 1639+95.50 Elev. 628.86
** 30'-0" Bridge Appr. Pav't. (Special) (Typ.)
5'-0" Typ.
Station Increasing
Exist Pipe Culvert
Name Plate Location
Limits of Existing Structure
** Traffic Barrier Terminal Type 6 Std. 631031 (Appr. End Typ.)
℄ Pier #1 Sta. 1640+36.75 Elev. 628.73
℄ Pier #2 Sta. 1640+80.75 Elev. 628.59
Boring #1
Bk. E. Abutment Sta. 1641+62.50 Elev. 628.31
Boring #4
Boring #6
℄ Pier #3 Sta. 1641+24.75 Elev. 628.45
℄ West Bound Roadway & P.G. (Exist. & New)
Bk. W. Abutment Sta. 1639+93.00 Elev. 628.87
2:1 (Typ.)
24'-0" Exist. Pavement
℄ Bearing E. Abutment Sta. 1641+56.00 Elev. 628.32
24'-0" Exist. Pavement
13° 06' 49" Skew (See Intersection Stationing Table this sheet)
Station Increasing
14'-6" 9'-0" 9'-0" 11'-3" Spacing of 6" Floor Drains, Typ. Both Sides 11'-3" 9'-0" 9'-0" 14'-6" Both Ends of Both Structures
Bk. W. Abutment Sta. 1639+71.10 Elev. 628.94
Limits of Existing Structure
℄ Pier #1 Sta. 1640+14.85 Elev. 628.80
℄ Pier #2 Sta. 1640+58.85 Elev. 628.66
Boring #2
Bk. E. Abutment Sta. 1641+46.60 Elev. 628.38
℄ Pier #3 Sta. 1641+02.85 Elev. 628.52
℄ East Bound Roadway & P.G. (Exist. & New)
Boring #3
Boring #5
℄ Bearing W. Abutment Sta. 1639+73.60 Elev. 628.93
℄ Bearing E. Abutment Sta. 1641+44.10 Elev. 628.39
Minimum Clearance Location
5'-0" (Typ.) See Sht. 2 of 15
Exist Pipe Culvert
Name Plate Location
℄ Brg.
℄ Brg.
2'-6"
41'-3"
44'-0"
44'-0"
41'-3"
2'-6"
175'-6" Bk. - Bk. Abutments
10'-0" Shldr.
24'-0" Pavement
6'-0" Shldr.
29'-0"
47'-0"
24'-0"
43'-2" O. to O. Deck
18'-0"
22'-0"
1'-1"
41'-2" O. To O. Deck

Intersection Stationing	
These Bridge Plans	Sta. 1640+69.68 F.A.I. 70 = Sta. 940-05.00 IL. Rte. 1
Roadway Plans	Sta. 1640+70.05 F.A.I. 70 = Sta. 940-05.18 IL. Rte. 1

PLAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	****	CLARK	1034	342
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

**** SECTION (12-52HB-3) BR
JOB NO. - D95-040-93

SHEET NO. 1
15 SHEETS

GENERAL NOTES

1. 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.

2. Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.

3. Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

4. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

5. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each new & existing bearing to be reused in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/8" adjusting shims shall be provided for each bearing and placed as detailed. The cost of the shim plates for all bearings except the Type I Elastomeric Bearings is included with "Furnishing and Erecting Structural Steel".

6. 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 and diaphragms 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 and diaphragms 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 beams shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 1/8" 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.

7. The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project. See Special Provisions.

8. Procedure for Jacking Existing Superstructure, **No. 1 or No. 2:**
Jacking existing superstructure and relocating existing bearings and installing new bearings shall be done after existing deck removal is complete. The Contractor shall submit for approval by the Engineer plans for lifting existing beams and installing 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. All beams at all supports shall be lifted simultaneously such that the relative elevation between adjacent beams does not vary by more than 1/8" from their original relative elevations and such that the relative elevation between adjacent substructure units does not vary by more than 1/4" during or after jacking operations. The maximum dead load reaction per beam (weight of Steel only) at abutments is 2.1k and at piers is 5.6k. Minimum rated jack safe working load capacity is 3.0k at the abutments and 7.0k at the Piers. Prior to ordering any material, the Engineer shall verify shim plate thicknesses required at each bearing. When jacking from diaphragms, hardwood blocking shall be placed with snug fit between the bottom of the top flange of the beam and the top of the top flange of the diaphragm. There shall be at least one jack per bearing and the jack shall be placed close to the bearing. The steel shall be raised and shall be blocked in position until after the completion of the installation of new bearing seats and bearings. Remove the existing anchor bolts flush with the concrete surface and grind smooth. At the abutments the rockers and bottom plates shall be removed, leaving the existing top plate intact. At the Piers the existing bearing assemblies shall be cleaned and reused. The bearings shall be in place, anchor bolts shall be set and the jacks shall be lowered before the new concrete deck is poured.

9. Clean and relocate existing name plates adjacent to new plates. Cost included with "Name Plates."

10. For notes regarding cleaning and painting of steel, see sheet 8 of 15.

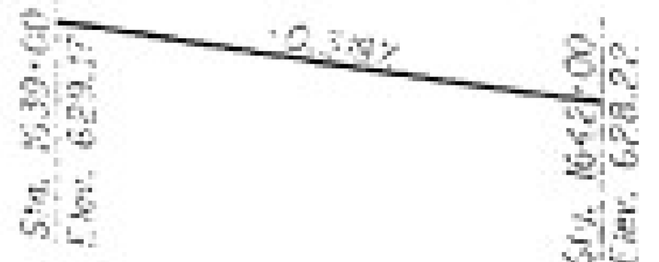
11. The beam strengthening plates (details shown on sht. 9 of 15) shall conform to the Supplementa Requirements for Notch Toughness Zone 2.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Philip J. Lane
Illinois Licensed Structural Engineer No. 4084
License Expires: 11/30/2002

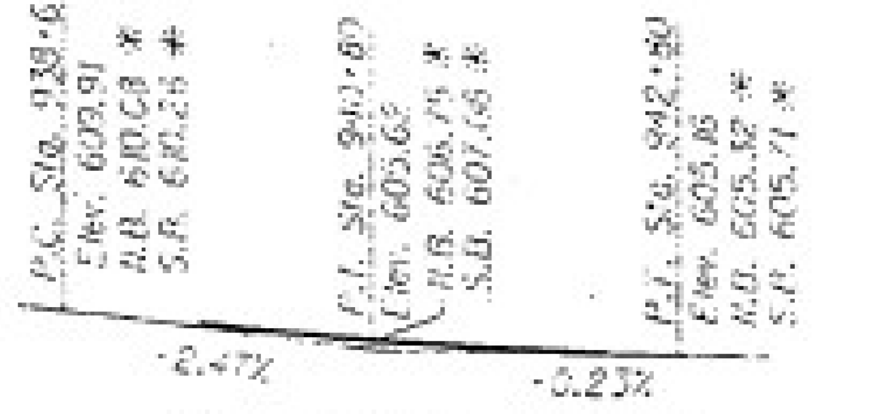
4084

8/28/01
Date



PROFILE F.A.I. 70

DESIGNED	PJL
CHECKED	WDL
DRAWN	BSB/PWA
CHECKED	DAK



PROFILE IL. RTE. 1

Showing Original Design P.G. (Surveyed as noted *.)

IL. RTE. 1
HORIZONTAL CURVE DATA

(1998 Survey)
Δ = 21° 37' 09"
D = 0° 36' 03"
R = 9534.64
T = 1820.45
L = 3597.66
E = 172.24
P.C. = 938+80.40
P.I. = 957+00.85
P.T. = 974-78.06
S.E. = 0.0168%, (Per Existing Plan Does Not Agree With Survey)

STATION 1640+69.68
REBUILT BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. (12-52HB-3) BR
F.A. PROJ
LOADING HS20 & ALT.
STR. NO. 012 - ***

NAME PLATE

1. See Std. 515001
2. See General Note #9 this sheet.
3. *** Structure No. East Bound: 012-0054
West Bound: 012-0055

DESIGN SPECIFICATIONS

AASHTO 1996 with 1997, 1998 and 1999 Interims

LOADING HS20-44 & ALT.

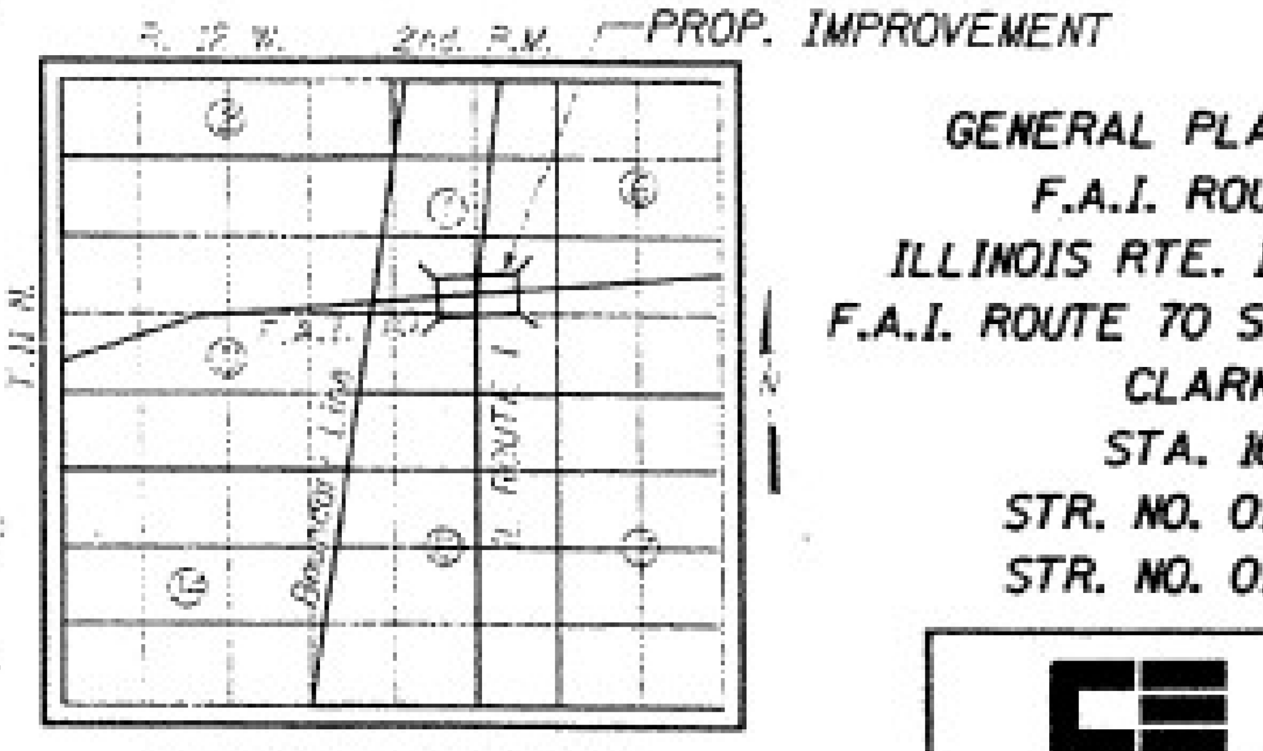
Allow 50 psf for future wearing surface

DESIGN STRESSES

f'_c (existing & new) = 3,500 psi
f_y (existing reinforcing) = 40,000 psi
f_y (existing beams) = 36,000 psi
f_y (new structural steel) = 36,000 psi (AASHTO M270 Gr. 36)
f_y (new reinforcing) = 60,000 psi

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 6.5%
Site Coefficient (S) = 1.0



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. ROUTE 70 OVER
ILLINOIS RTE. 1 (F.A.P. RTE. 332)
F.A.I. ROUTE 70 SECT. (12-52HB-3) BR
CLARK COUNTY
STA. 1640+69.68
STR. NO. 012-0054 (E.B.)
STR. NO. 012-0055 (W.B.)

CLARK ENGINEERS, INC.
331 NE Jefferson Ave.
Peoria, Illinois 61602
PH(309)676-8464
FAX(309)676-5445
IL Design Firm Registration No. 184-00817

MODEL: 74E48-54-3 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	60
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70
CLARK

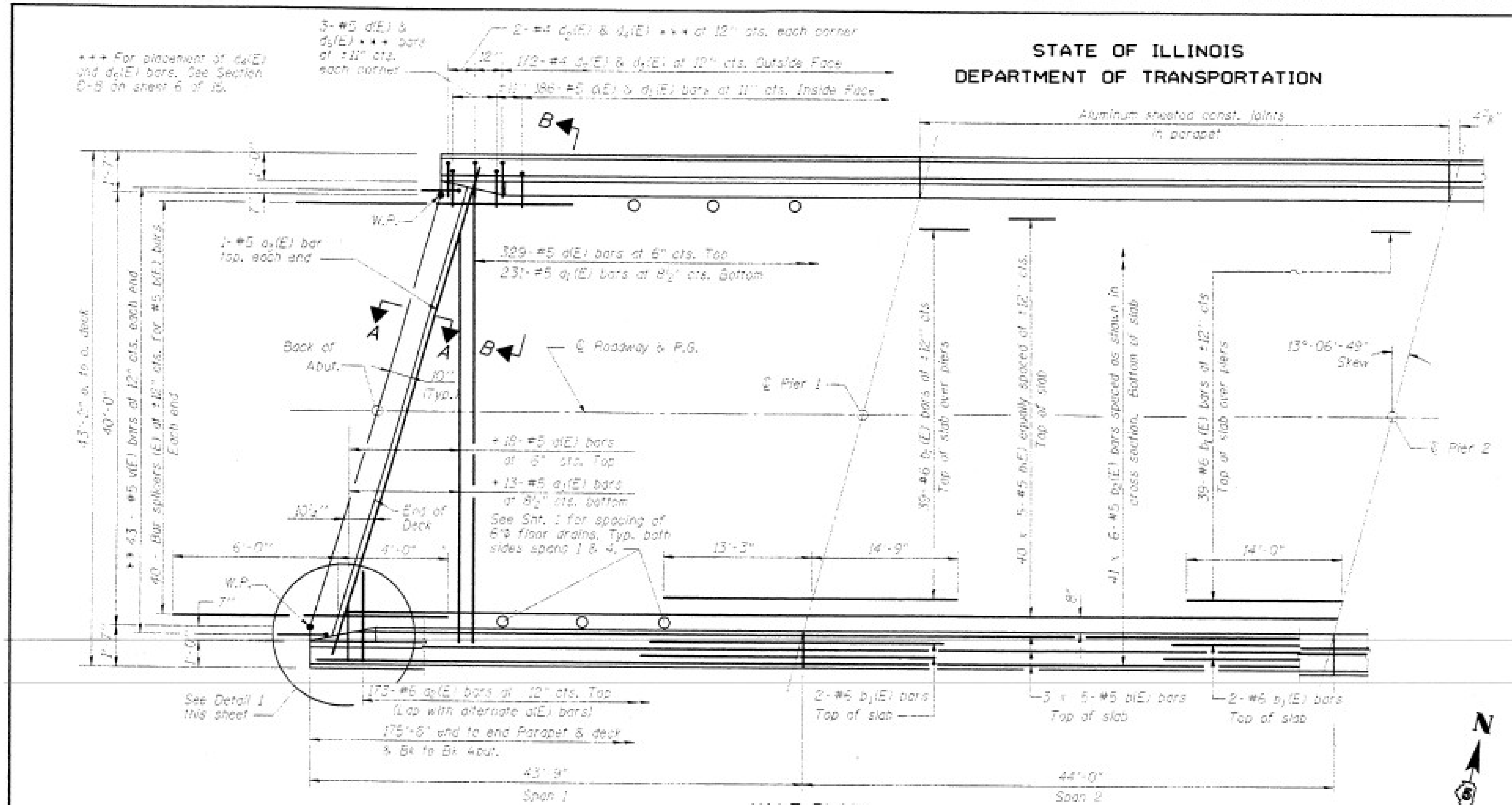
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	* * * *	CLARK	103A	346
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

* * * * SECTION (12-52HB-3) BR
JOB NO. - 095-040-93

SHEET NO. 5
15 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* * * For placement of d_4(E) and d_5(E) bars. See Section B-B on sheet 6 of 15.



3- #5 d(E) & d_5(E) * * * bars at ±11" cts. each corner
2- #4 d_2(E) & d_3(E) * * * at 12" cts. each corner
12"
173- #4 d_2(E) & d_3(E) at 10" cts. Outside Face
11" 186- #5 d(E) & d_1(E) bars at 11" cts. Inside Face
B
Aluminum sheeted const. joints in parapet
$4\frac{1}{2}$"
1'-7"
W.P.
1- #5 a_2(E) bar top, each end
329- #5 d(E) bars at 6" cts. Top
231- #5 a_1(E) bars at $8\frac{1}{2}$" cts. Bottom
43'-2" o. to o. deck
40'-0"
43 - #5 v(E) bars at 12" cts. each end
40 - Bar splicers (E) at ±12" cts. for #5 b(E) bars Each end
A
A
B
Back of Abut.
10" (Typ.)
℄ Roadway & P.G.
℄ Pier 1
39- #6 b_2(E) bars at ±12" cts. Top of slab over piers
40 x 5- #5 b(E) equally spaced at ±12" cts. Top of slab
41 x 6- #5 b_1(E) bars spaced as shown in cross section. Bottom of slab
39- #6 b_2(E) bars at ±12" cts. Top of slab over piers
13°-06'-49" Skew
℄ Pier 2
+ 18- #5 d(E) bars at 6" cts. Top
+ 13- #5 a_1(E) bars at $8\frac{1}{2}$" cts. bottom
See Sht. 1 for spacing of 6"φ floor drains. Typ. both sides spans 1 & 4.
$10\frac{1}{2}$"
End of Deck
6'-0"
4'-0"
13'-3"
14'-9"
14'-0"
8"
W.P.
7"
1'-7"
See Detail 1 this sheet
175- #6 a_2(E) bars at 12" cts. Top (Lap with alternate d(E) bars)
175'-6" end to end Parapet & deck & Bk to Bk Abut.
2- #6 b_2(E) bars Top of slab
3 x 5- #5 b(E) bars Top of slab
2- #6 b_2(E) bars Top of slab
43'-9"
Span 1
44'-0"
Span 2
N

HALF PLAN

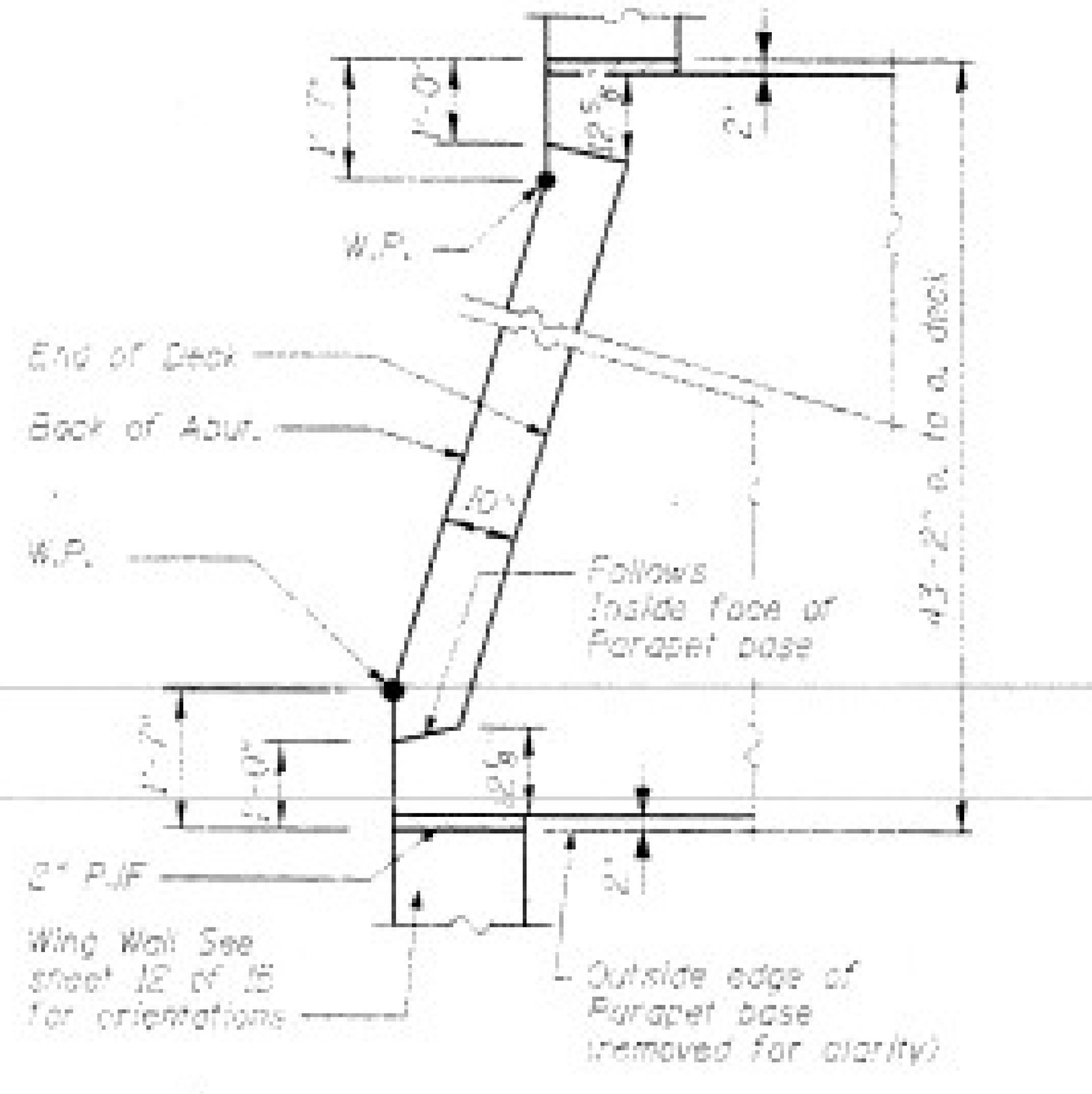
West half of EB bridge shown, east half similar.
WB bridge similar to EB bridge by 180° rotation

* Order a(E) & a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

** Space v (E) bars at 12" cts. along skew.

"W.P." indicates working point at intersection of back of Abutment (& end of deck & back of diaphragm) with projected face of parapet. See sheet 12 of 15.

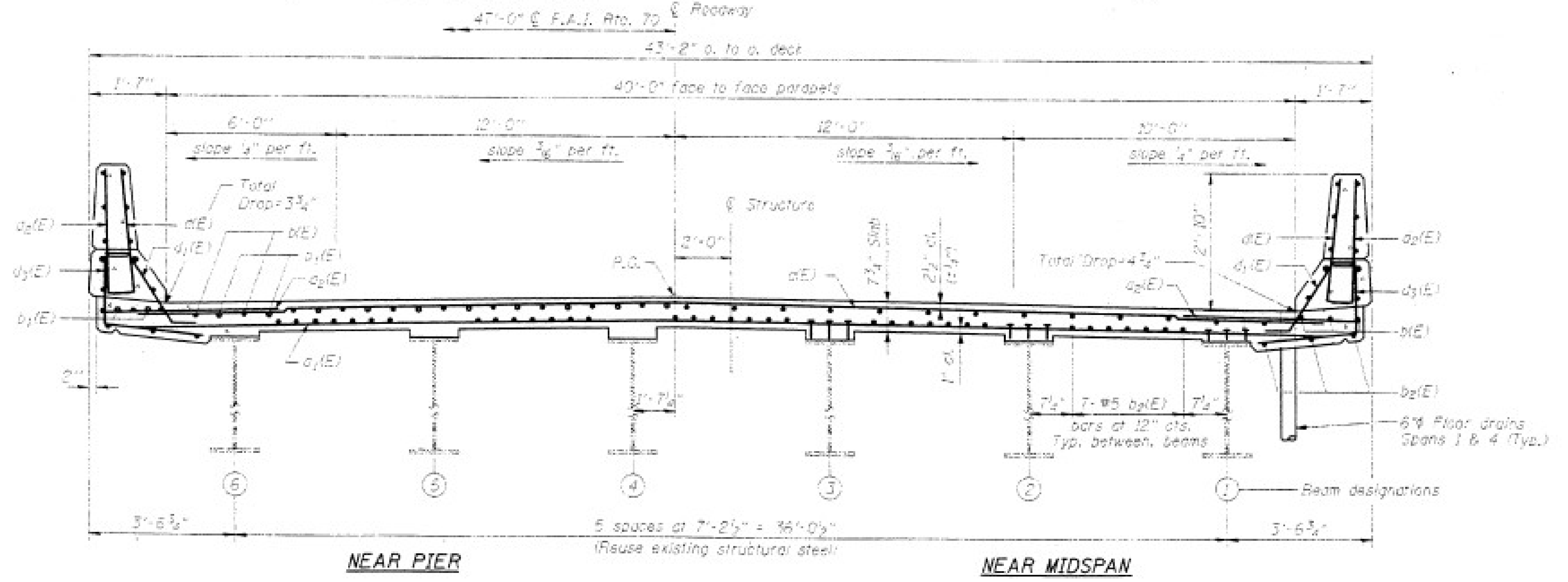
Notes:
See Sheet #7 of 15 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3- #5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet #7 of 15 for parapet reinforcement.
Min. lap for #5 bars - 2'-2"
See sheet #6 of 15 for Sections A-A & B-B.



1'-7"
1'-0"
$2\frac{5}{8}$"
2"
W.P.
End of Deck
Back of Abut.
10"
W.P.
Follows inside face of Parapet base
43'-2" o. to o. deck
1'-7"
1'-0"
$2\frac{5}{8}$"
2"
2" P.J.F.
Wing Wall See sheet 12 of 15 for orientations
Outside edge of Parapet base (removed for clarity)

DETAIL 1

End of deck similar at both ends of both EB and WB structures. Approach pavement and parapet not shown.



CROSS SECTION
(Looking in direction of travel)

DESIGNED	PJL
CHECKED	WDL
DRAWN	BSB/PWA
CHECKED	DAK

DECK DETAILS
F.A.I. ROUTE 70 OVER
ILLINOIS RTE. 1 (F.A.P. RTE. 332)
F.A.I. ROUTE 70 SECT. (12-52HB-3) BR
CLARK COUNTY
STA. 1640+69.68
STR. NO. 012-0054 (E.B.)
STR. NO. 012-0055 (W.B.)

CLARK ENGINEERS, INC.
111 NE Jefferson Ave.
Peoria, Illinois 61602
PH(309)673-8464
FAX(309)673-5445
IL Design Firm Registration No. 184-00671

MODEL: 74E48-54-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	61
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70 CLARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	****	CLARK	1034	347
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

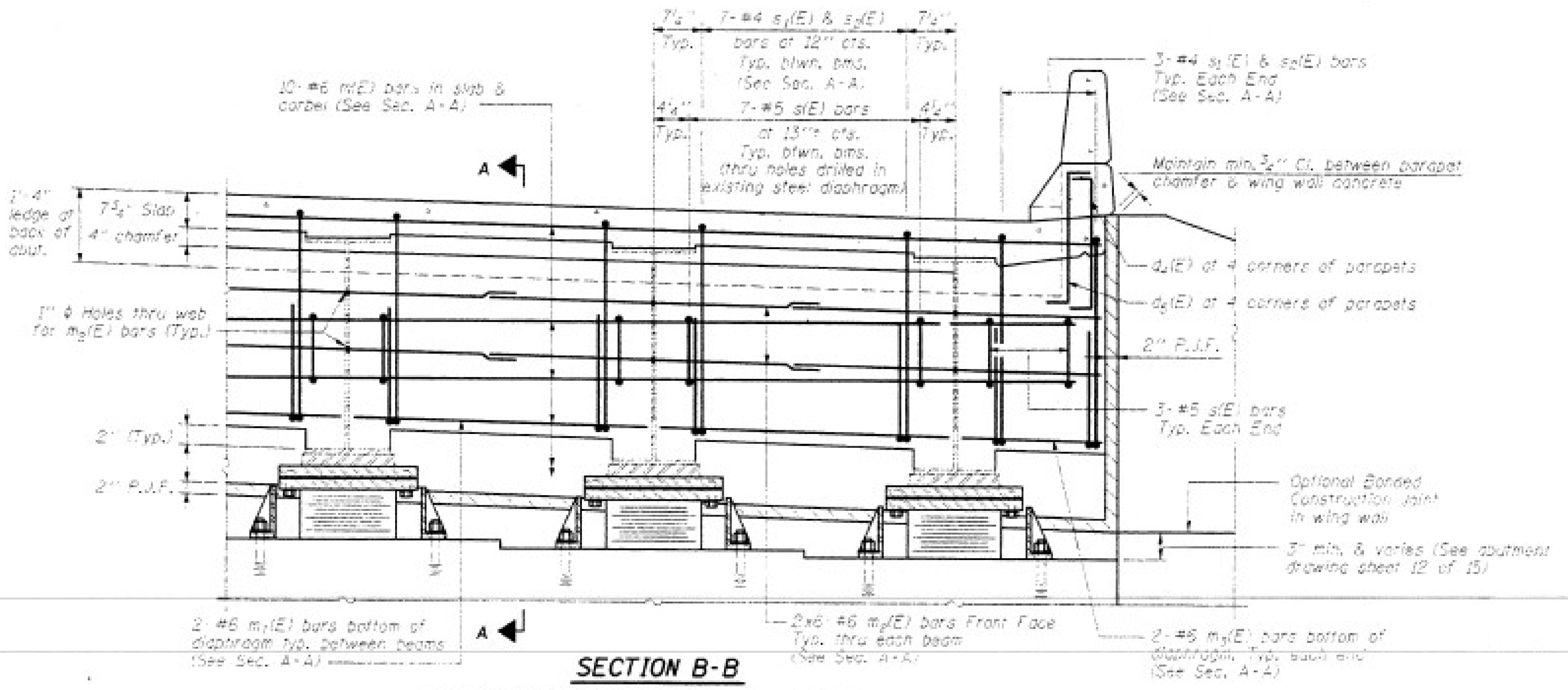
**** SECTION (12-52HB-3) BR
JOB NO. - 095-040-93

SHEET NO. 6
15 SHEETS

Notes:
Reinforcement bars in diaphragm are billed with Superstructure on sheet 7 of 15.
Concrete in diaphragm is included with High Performance Concrete Superstructure on sheet 7 of 15.
For details of bars s (E), s_1(E) and s_2(E) see sheet 7 of 15.
The s(E), s_1(E) and s_2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Bars indicated thus 1 x 4-#5 etc. indicates 1 line of bars with 4 lengths per line.

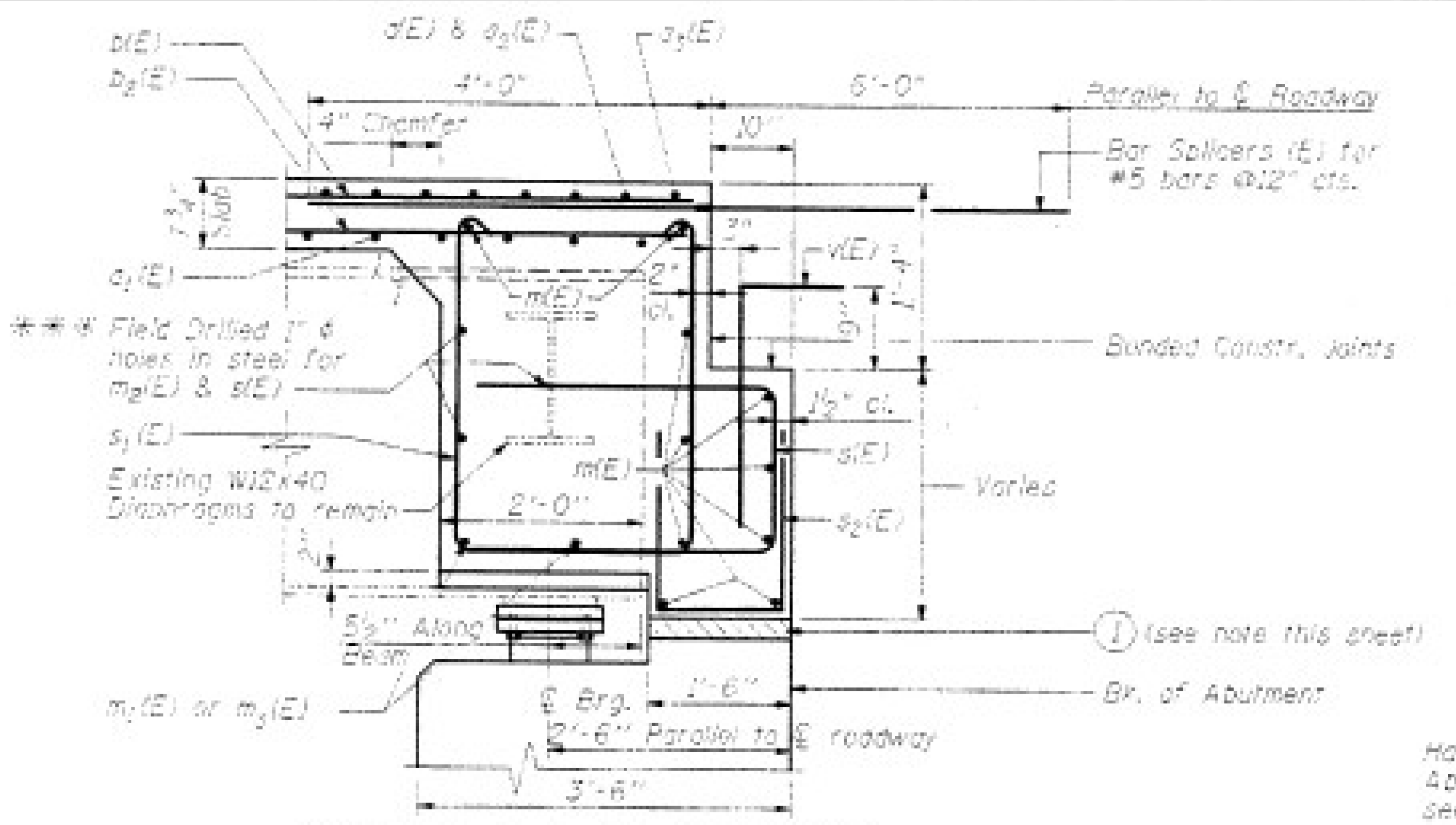
MIN. BAR LAP

#6 bar = 2'-9"


7¼" Typ.
7-#4 s_1(E) & s_2(E) bars at 12" cts. Typ. btwn. bms. (See Sec. A-A)
7¼" Typ.
4¼" Typ.
7-#5 s(E) bars at 13"± cts. Typ. btwn. bms. (thru holes drilled in existing steel diaphragm)
4¼" Typ.
10-#6 m(E) bars in slab & corbel (See Sec. A-A)
A
1'-4" ledge at back of abut.
7⅝" Slab
4" chamfer
1" ϕ Holes thru web for m_2(E) bars (Typ.)
2" (Typ.)
2" P.J.F.
3-#4 s_1(E) & s_2(E) bars Typ. Each End (See Sec. A-A)
Maintain min. ¾" Cl. between parapet chamfer & wing wall concrete
d_1(E) at 4 corners of parapets
d_2(E) at 4 corners of parapets
2" P.J.F.
3-#5 s(E) bars Typ. Each End
Optional Bonded Construction Joint in wing wall
3" min. & varies (See abutment drawing sheet 12 of 15)
2-#6 m_1(E) bars bottom of diaphragm typ. between beams (See Sec. A-A)
A
2x6-#6 m_2(E) bars Front Face Typ. thru each beam (See Sec. A-A)
2-#6 m_3(E) bars bottom of diaphragm, Typ. each end (See Sec. A-A)

SECTION B-B
DIAPHRAGM ELEVATION AT ABUTMENT

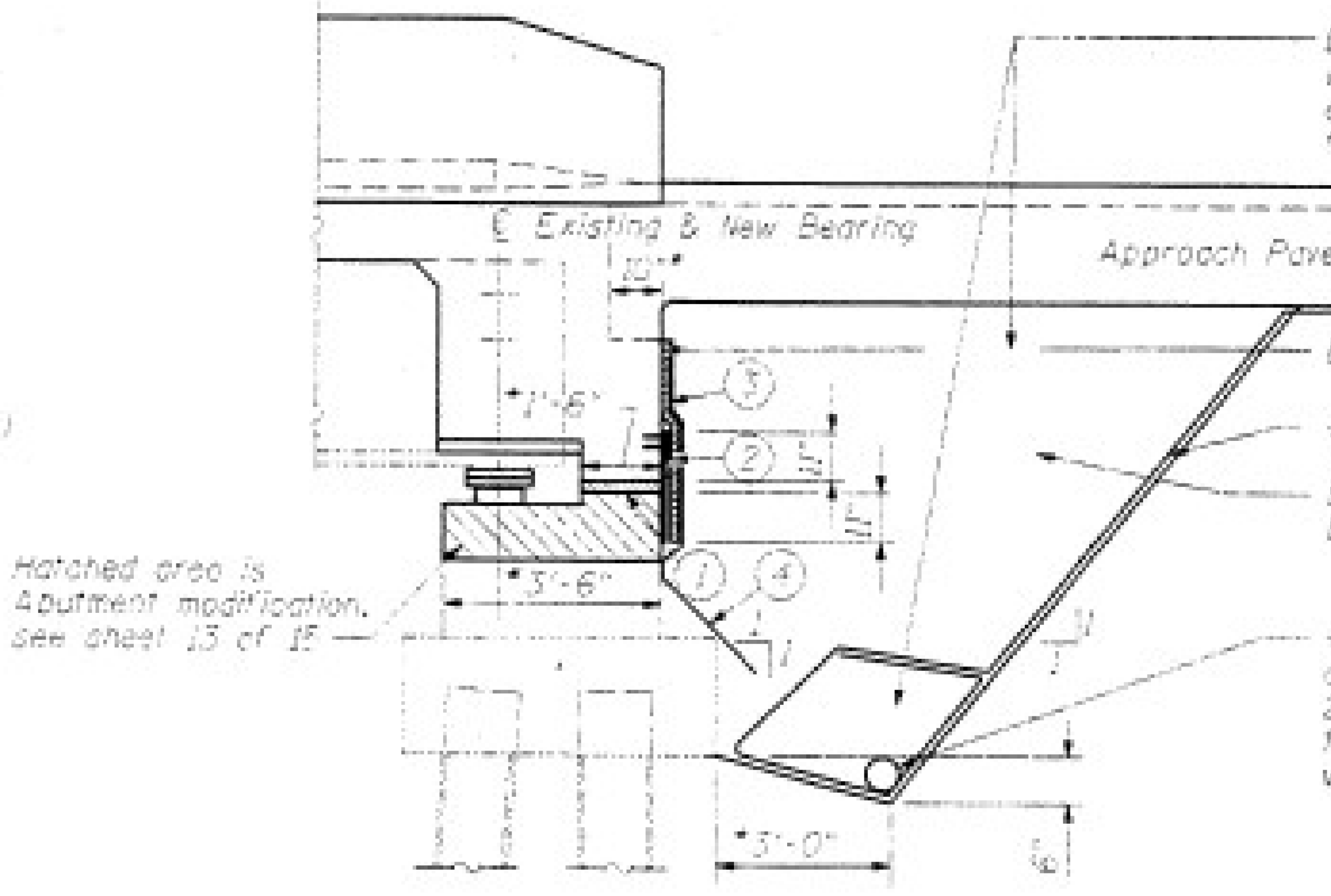
(Existing steel diaphragms not shown.)



SECTION A-A AT ABUTMENT

(Dimensions at right angles to abutment, except as shown.)
*** Cost included with High Performance Concrete Superstructure.

Showing Reinforcement & Diaphragm Details



Backfill with uncompacted porous granular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place. Limits shall be 1'-0" from end of each wing wall.

Bk. of Existing and New Abutment

** Geotechnical fabric for french drains

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

** A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2' x 2' area of porous granular embankment. The 2' x 2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslope. Adjust pipe to clear wing wall.

** Included in the cost of "Porous Granular Embankment."

ABUTMENT BACKFILL, DRAINAGE & SEALING DETAILS

* At Right Angles

① 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to abutment cap with approved adhesive (full width of cap).

② ⅛" thick Fabric Reinforced Elastomeric Mat attached to the abutment cap using a ⅜"x 5" steel plate (full width of cap) and ½" ϕ studs with nuts and washers at 12" cts. See Special Provisions.

③ 2" Preformed Joint Filler (Section 1051 of the Standard Specifications) bonded to superstructure (full width of cap).

④ Geocomposite Wall Drain (full width of cap plus extend 3' minimum onto wingwalls).

Items ①, ②, ③ & ④ shall be included in the cost of "High Performance Concrete Superstructure".

DECK DETAILS
F.A.I. ROUTE 70 OVER
ILLINOIS RTE. 1 (F.A.P. RTE. 332)
F.A.I. ROUTE 70 SECT. (12-52HB-3) BR
CLARK COUNTY
STA. 1640+69.68
STR. NO. 012-0054 (E.B.)
STR. NO. 012-0055 (W.B.)

DESIGNED	PJL
CHECKED	WDL
DRAWN	BSB/PWA
CHECKED	DAK

CLARK ENGINEERS, INC.
111 NE Jefferson Ave.
Peoria, Illinois 61602
PH(309)676-8464
FAX(309)676-5445
IL Design Firm Registration
No. 184-00871

MODEL: 74E48-54-5 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	62
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

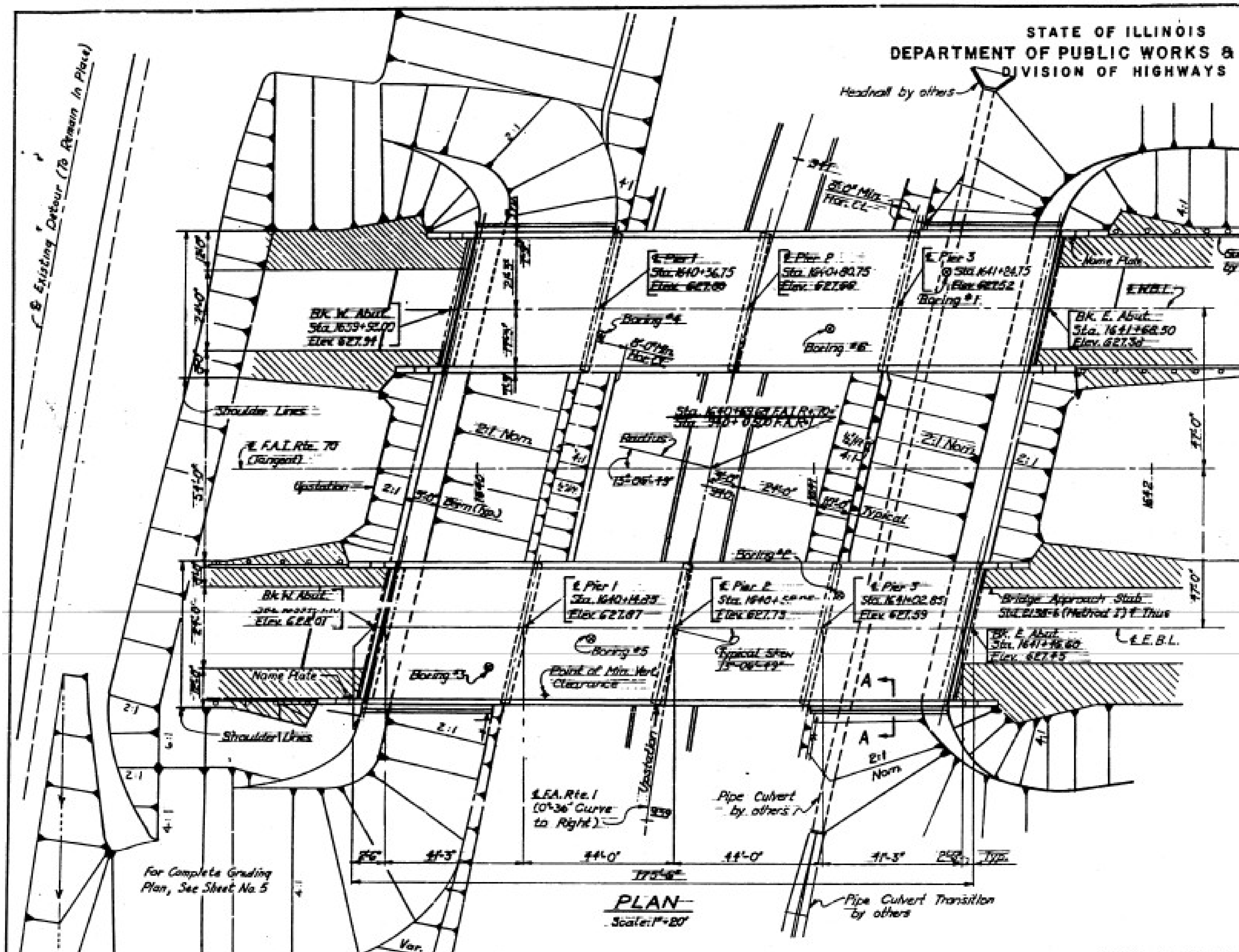
I-70 CLARK

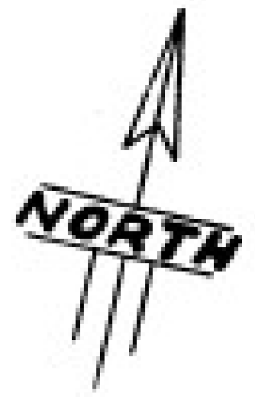
MODEL: 74E48-54-6 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

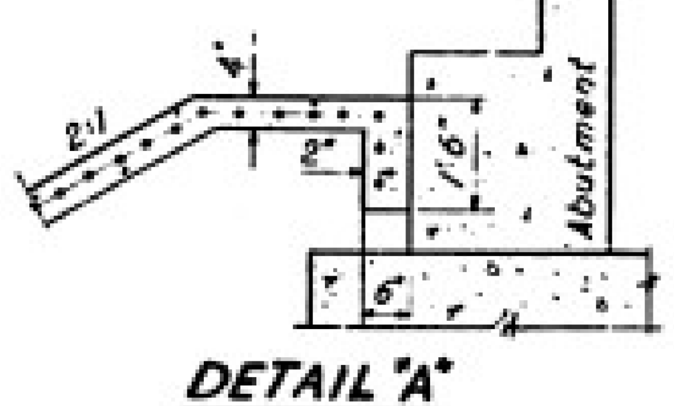
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	12-52HB3	CLARK	26	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT I-70-4(66) 146		

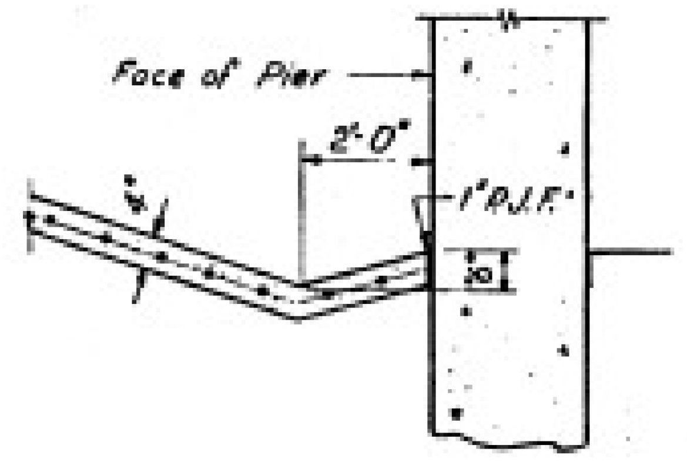
SHEET NO.
SHEETS


Headwall by others
℄ Existing Detour (To Remain in Place)
35.0' Min. Hor. Cl.
Guardrail & Post by others (Typ.)
Name Plate
℄ W.B.L.
℄ Pier 1 Sta. 1640+36.75 Elev. 627.89
℄ Pier 2 Sta. 1640+80.75 Elev. 627.66
℄ Pier 3 Sta. 1641+24.75 Elev. 627.52
Boring #1
Bk. W. Abut. Sta. 1639+92.00 Elev. 627.94
Boring #4
8'-0" Min. Hor. Cl.
Boring #6
Bk. E. Abut. Sta. 1641+68.50 Elev. 627.38
Shoulder Lines
Sta. 1640+69.68 F.A.I. Rte. 70 / Sta. 940+05.00 F.A. Rte. 1
Radius
13°-06'-49"
℄ F.A.I. Rte. 70 (Tangent)
Upstation
2:1 Nom.
3'-0" Berm (Typ.)
24'-0"
Typical
Boring #2
℄ Pier 1 Sta. 1640+14.25 Elev. 627.87
℄ Pier 2 Sta. 1640+58.25 Elev. 627.73
℄ Pier 3 Sta. 1641+02.85 Elev. 627.59
Bk. W. Abut.
Elev. 628.01
Bridge Approach Slab Std. 2138-6 (Method I) 4 Thus
℄ E.B.L.
Bk. E. Abut. Sta. 1641+46.60 Elev. 627.45
Boring #5
Boring #3
Typical Skew 13°-06'-49"
Point of Min. Vert. Clearance
Name Plate
Shoulder Lines
A
A
2:1 Nom.
4:1
2:1
℄ F.A. Rte. 1 (0°-36' Curve to Right)
Pipe Culvert by others
Upstation
For Complete Grading Plan, See Sheet No. 5
26'-6"
44'-3"
44'-0"
44'-0"
44'-3"
25'-6"
Typ.
175'-6"
Pipe Culvert Transition by others
Var.
34.0'
51'-0"
47'-0"
164.2
PLAN
Scale: 1"=20'





DETAIL "A"



DETAIL "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. 51.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"×6" 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.

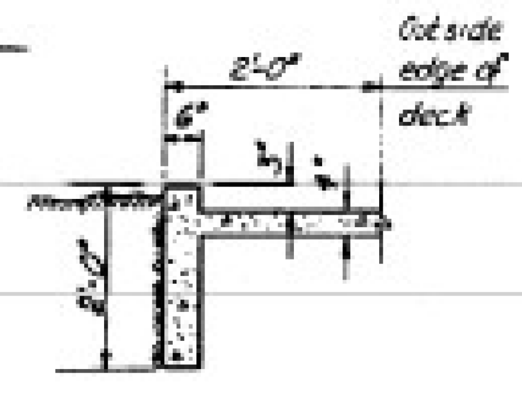
Anchor bolts shall be set before fastening diaphragms over supports.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Estimated weight

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 DECK.



SECTION A-A

STATION 1640+69.68
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 12-52 HB-3
F.A. PROJ. I-70-4(66)
LOADING HS20-44 & ALT.

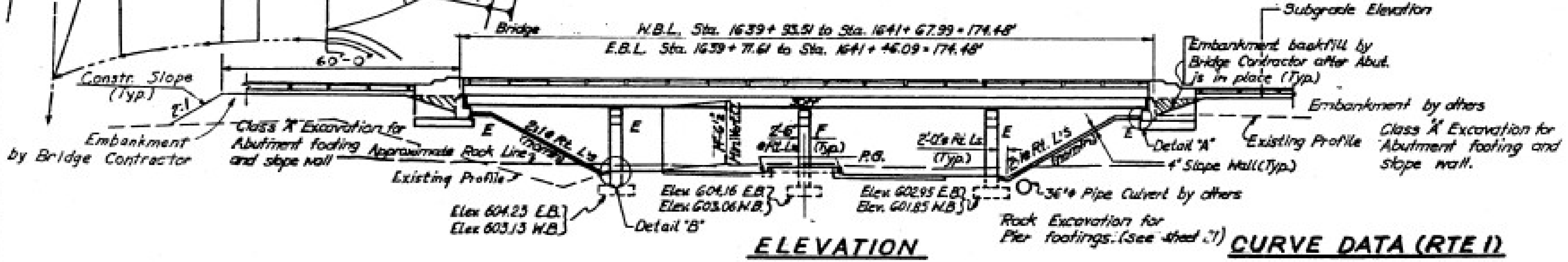
NAME PLATE

See St'd. 2115-1

TOTAL BILL OF MATERIAL

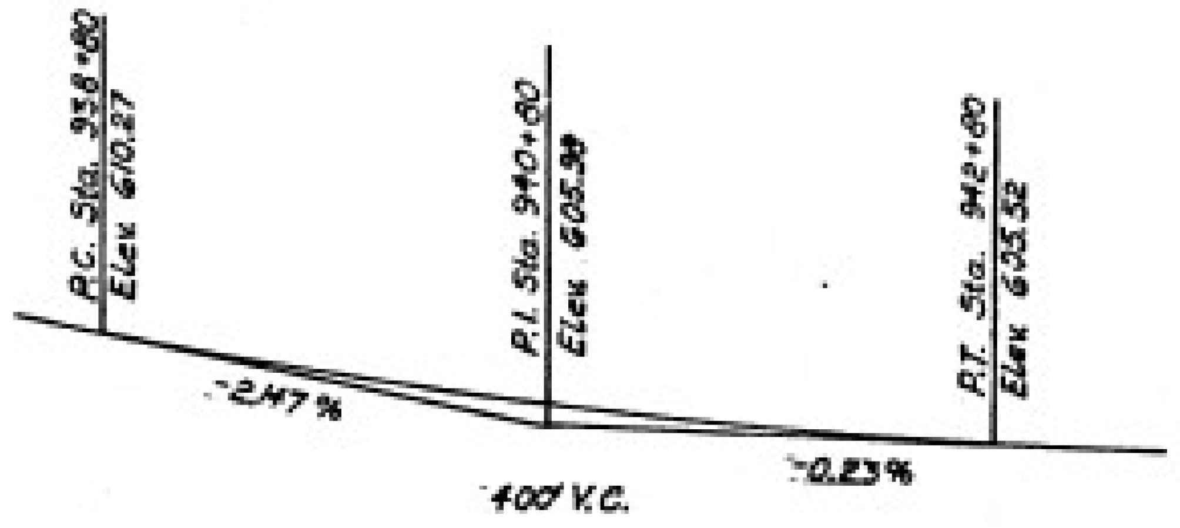
ITEM	UNIT	SUPER.	SUB.	TOTAL
Class "A" Excavation for Structures	Cu Yds.		1,105	1,105
Rock Excavation For Structures	Cu Yds.		150	150
Structural Steel	Lbs.	263,972		263,972
Aluminum Handrail	Lin. Ft.	689		689
Reinforcement Bars	Lbs.	115,499	56,557	172,056
Name Plates	Each		2	2
Slope Wall (4")	Sq. Yds.		1390	1390
Protective Coat	Sq. Yds.	1,780		1,780
Bridge Seat Sealant	Lump Sum			1
Class "X" Concrete	Cu. Yd.	405.3	491.6	896.9

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

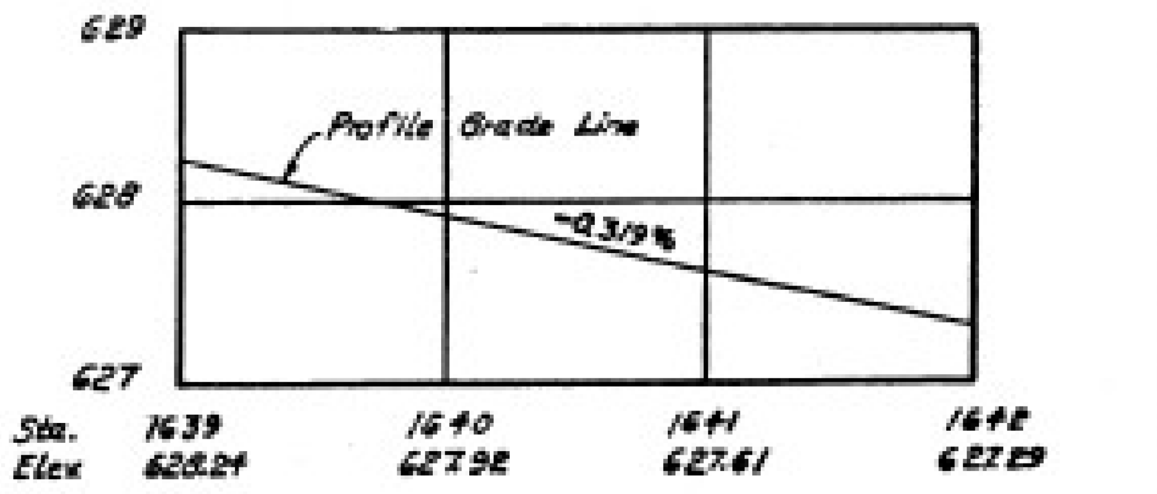

Bridge
60'-0"
Constr. Slope (Typ.)
2:1
Embankment by Bridge Contractor
W.B.L. Sta. 1639+93.51 to Sta. 1641+67.99 = 174.48'
E.B.L. Sta. 1639+71.61 to Sta. 1641+46.09 = 174.48'
Subgrade Elevation
Embankment backfill by Bridge Contractor after Abut. is in place (Typ.)
Embankment by others
Class "A" Excavation for Abutment footing and slope wall
Approximate Rock Line
Existing Profile
E
E
F
F
E
E
P.G.
2'-0" Rt. Ls. (Typ.)
Elev. 604.25 E.B.
Elev. 603.13 W.B.
Detail "B"
Elev. 604.16 E.B.
Elev. 603.06 W.B.
Elev. 602.95 E.B.
Elev. 601.85 W.B.
36"ϕ Pipe Culvert by others
Rock Excavation for Pier footings. (see sheet 21)
Detail "A"
4" Slope Wall (Typ.)
Existing Profile
Class "A" Excavation for Abutment footing and slope wall.

ELEVATION

Scale: 1"=20'



PROFILE F.A. RTE. 1



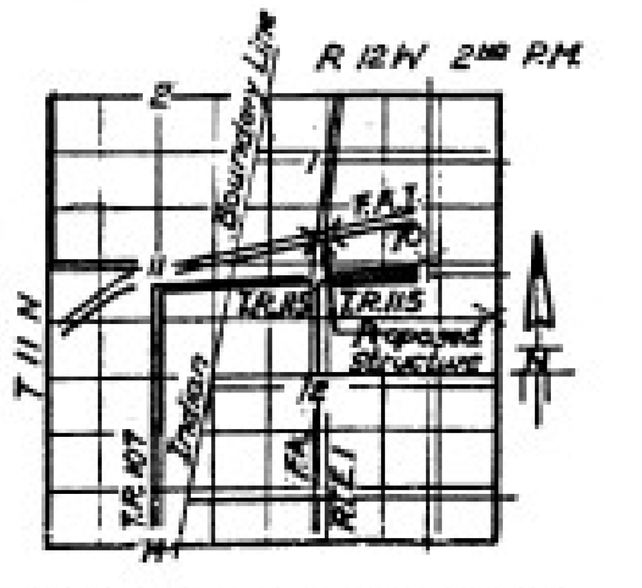
PROFILE F.A.I. RTE. 70

DESIGN STRESSES

f_c = 1400 p.s.i. Super & Sub.
V_c = 75 p.s.i. Ftgs.
f_s = 20,000 p.s.i. Reinf.
f_s = 20,000 p.s.i. Struct. (A-36)
n = 10
Loading HS 20-44 & Alt.
L.L. Defl. 1/800 (Non Composite)

CURVE DATA (RTE 1)

Δ = 21°-45'-00"
R = 9549.30
T = 1,832'
L = 3,619.5
E = 174.1
D = 0°-36'-00"
P.C. = STA. = 938+71.23
P.I. STA. = 957+03.23
P.T. STA. = 974+90.73
S.E. = 0.0166'/'



LOCATION PLAN

GENERAL PLAN & ELEVATION

F.A.I. RTE. 70 OVER F.A. RTE. 1
PROJECT I-70-4(66) 146
F.A.I. RTE. 70 SEC. 12-52 HB-3
CLARK COUNTY
STA. 1640+69.68 ℄ F.A.I. RTE. 70
STA. 940+05.00 F.A. RTE. 1

HWY. CLASSIFICATION

	D.H.V. (A.D.T)	CLASS	M.P.H.
F.A. Rte 1	1070	B-3	70
F.A.I. Rte 70	1980	B-1	70

B.M. Chiseled square on top of N.E. corner of culvert headwall, East side of Rte. 1 ± 690' rt. ℄ F.A.I. Rte. 70 Sta. 1639+10, Elev. 631.08

Existing Stuctures - None

DESIGNED	
CHECKED	
DRAWN	P. Fischer G. Tejeda
CHECKED	E.R. Harvey

Oct. 8, 1967
EXAMINED C.E. Thunmann Jr.
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W.E. Baumann
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

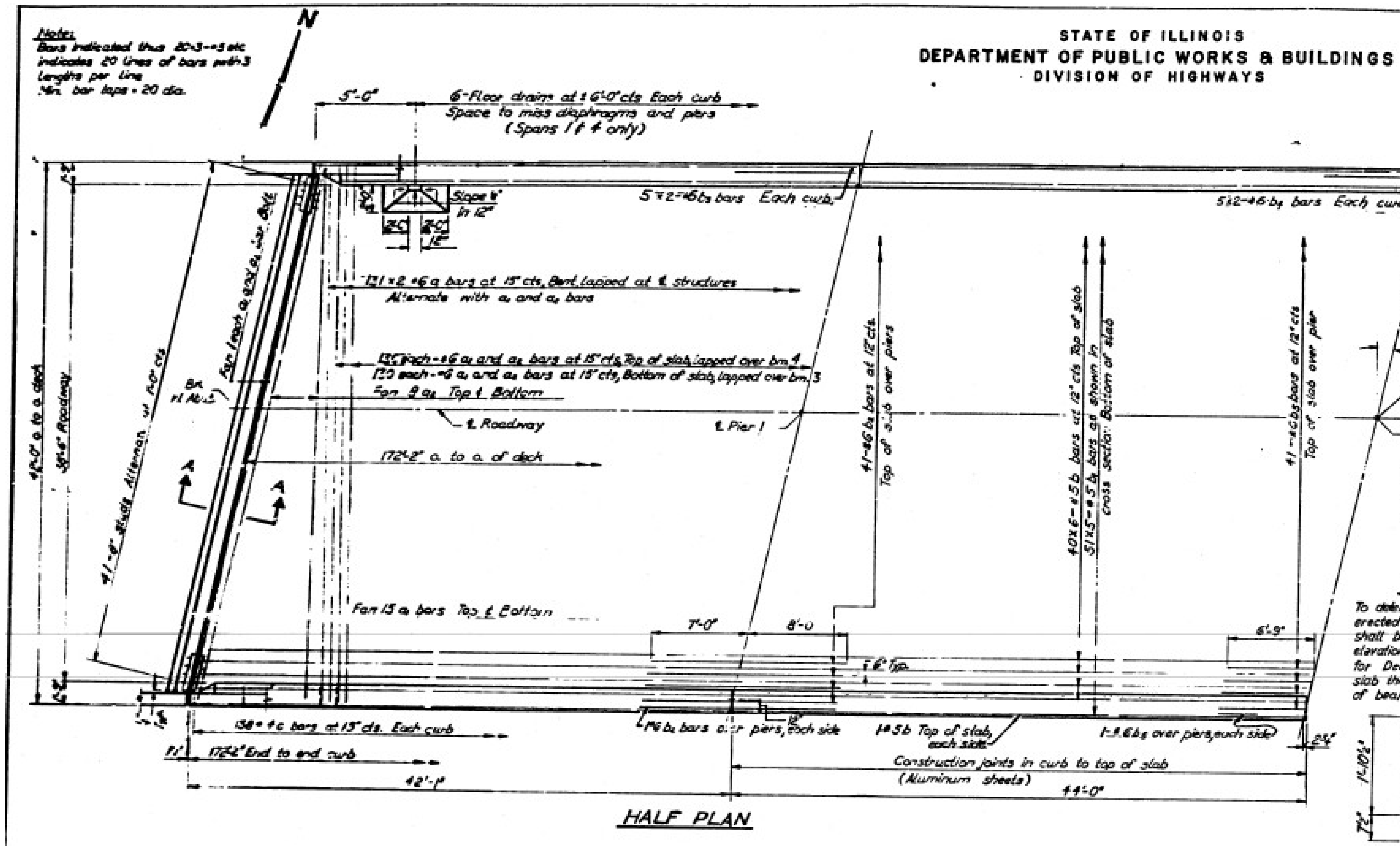
Rev. 10-6-67 DES Quantities of Reinf. Bars chg. from 113,675 to 115,499 Super, 170,232 to 172,056 Total

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

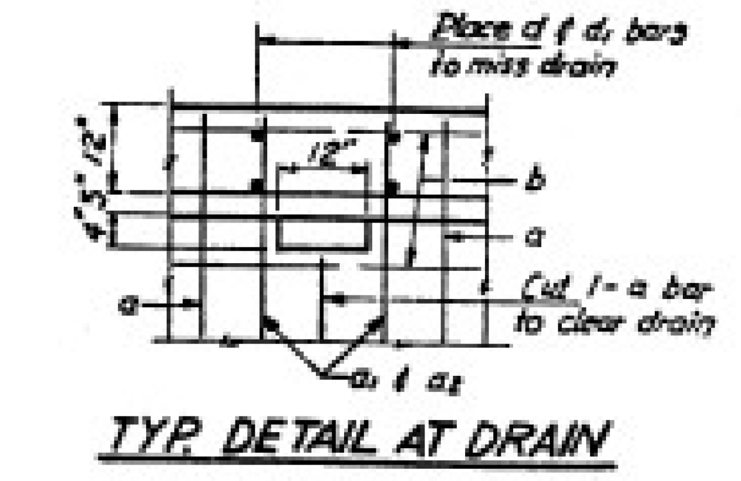
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 70	12-52HB-3	CLARK	26	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

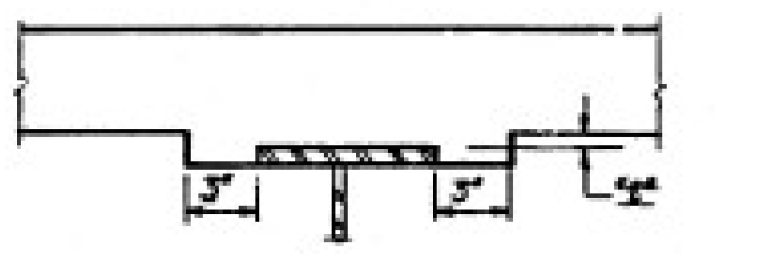
SHEET NO.
SHEETS


N
5'-0"
6-Floor drains at 16'-0" cts Each curb
Space to miss diaphragms and piers
(Spans 1 & 4 only)
Slope ¼" in 12"
5-#2=#6 b₃ bars Each curb
5½2-#6 b₄ bars Each curb
121 x 2 #6 a bars at 15" cts, Bent, lapped at ℄ structures
Alternate with a₁ and a₂ bars
135 each-#6 a₁ and a₂ bars at 15" cts, Top of slab, lapped over bm 4
135 each-#6 a₁ and a₂ bars at 15" cts, Bottom of slab, lapped over bm 3
Fan 8 a₁ Top & Bottom
℄ Roadway
℄ Pier 1
172'-2" a. to a. of deck
Fan 13 a₁ bars Top & Bottom
41-#6 b₂ bars at 12" cts Top of slab over piers
40x6-#5 b bars at 12" cts Top of slab
51x5-#5 b₁ bars as shown in cross section Bottom of slab
41-#6 b₂ bars at 12" cts Top of slab over pier
13°-06'-49" Skew
Symm. by rotation thru 180° about ℄ Pier 2
℄ Pier 2
42'-0" a. to a. deck
38'-6" Roadway
41'-8" shaft Alternate at 1'-0" cts
Bar (each a, a₁ & a₂) bar Bolts
Bk. rd. Abut.
A
A
7'-0"
8'-0"
6'-9"
6" Typ.
138-#4 c bars at 15" cts. Each curb
172'-2" End to end curb
1-#6 b₂ bars over piers, each side
1-#5 b Top of slab, each side
1-#6 b₂ over piers, each side
Construction joints in curb to top of slab (Aluminum sheets)
42'-1"
44'-0"
2½"

HALF PLAN

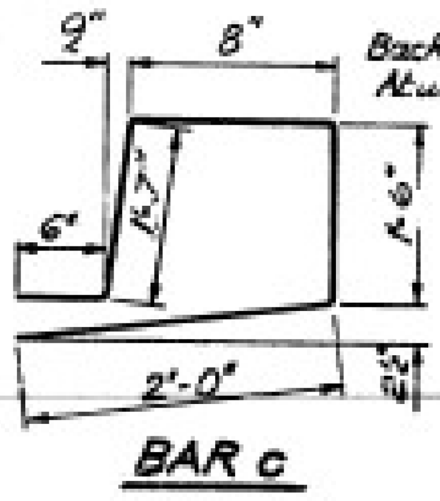


TYP. DETAIL AT DRAIN

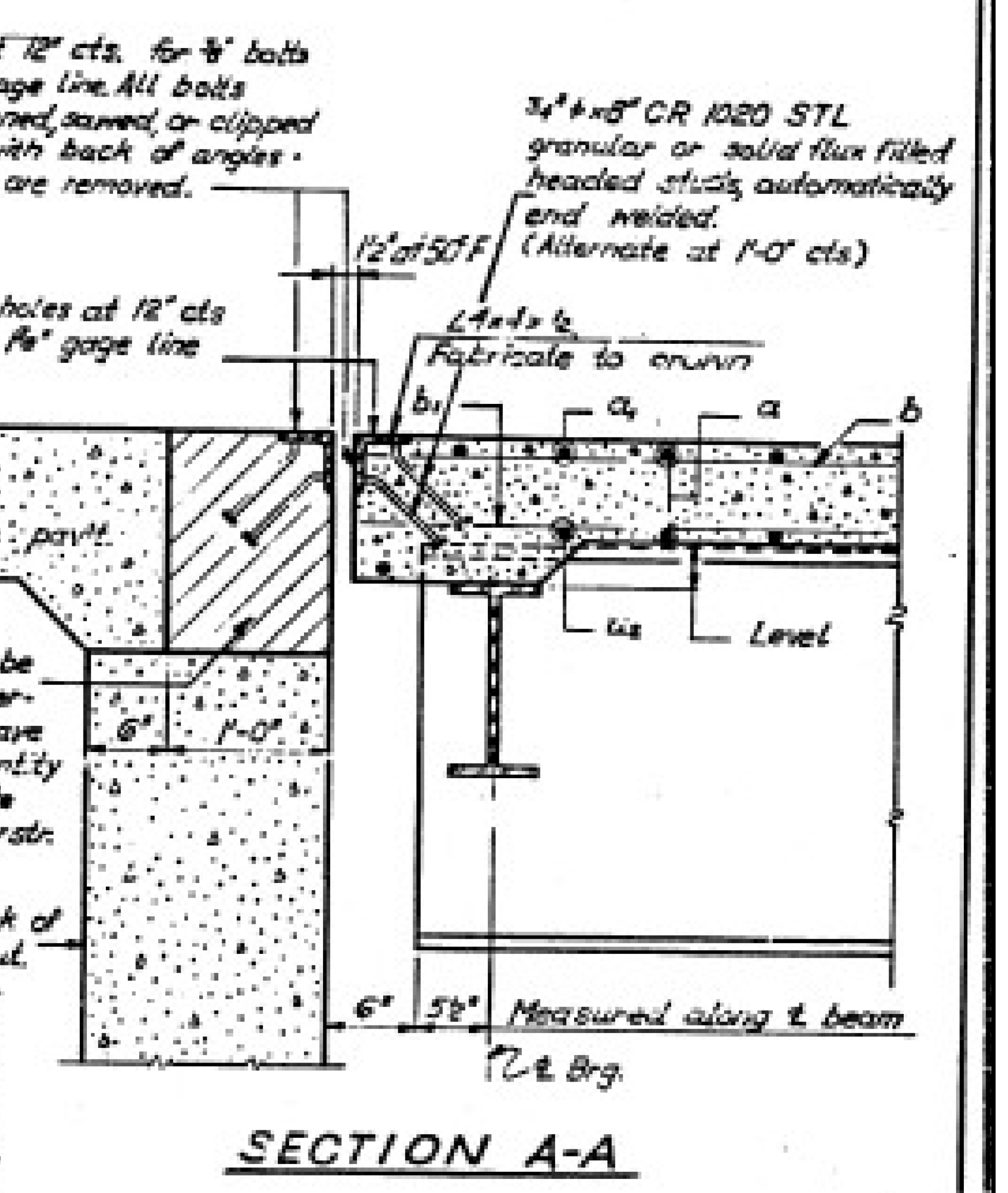


STANDARD FILLET DETAIL

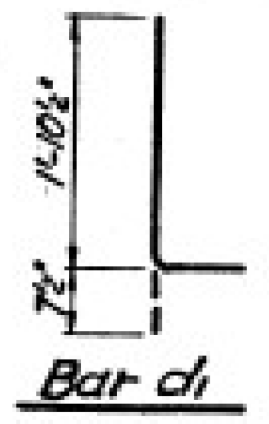
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets 15&16. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 14, minus slab thickness, equals the fillet heights "t" above top of beams.



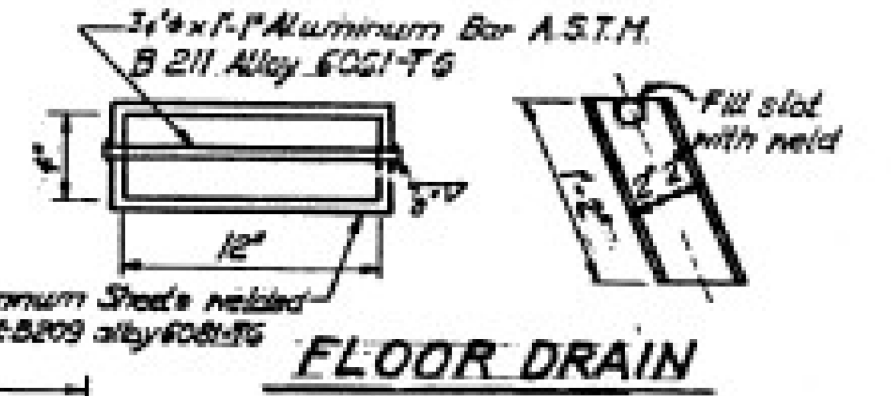
BAR c


⁷⁄₁₆"⌀ holes at 12" cts. for ⅜" 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"⌀×5" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts)
12" of 50 F
⁵⁄₁₆"⌀ vent holes at 12" cts set on 1⅝" gage line
L4×4×½
Fabricate to crown
b₁
a₁
a
b
Appr. pavt.
t's
Level
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstr.
6"
1'-0"
Back of Abut.
6"
5½"
Measured along ℄ beam
℄ Brg.

SECTION A-A



Bar d₁


3½"×1'-1" Aluminum Bar A.S.T.M. B 211 Alloy 6061-T6
Fill slot with weld
⅝" Aluminum Sheets welded A.S.T.M. B209 alloy 6061-T6
12"
1'-9"
4"
1'-2"

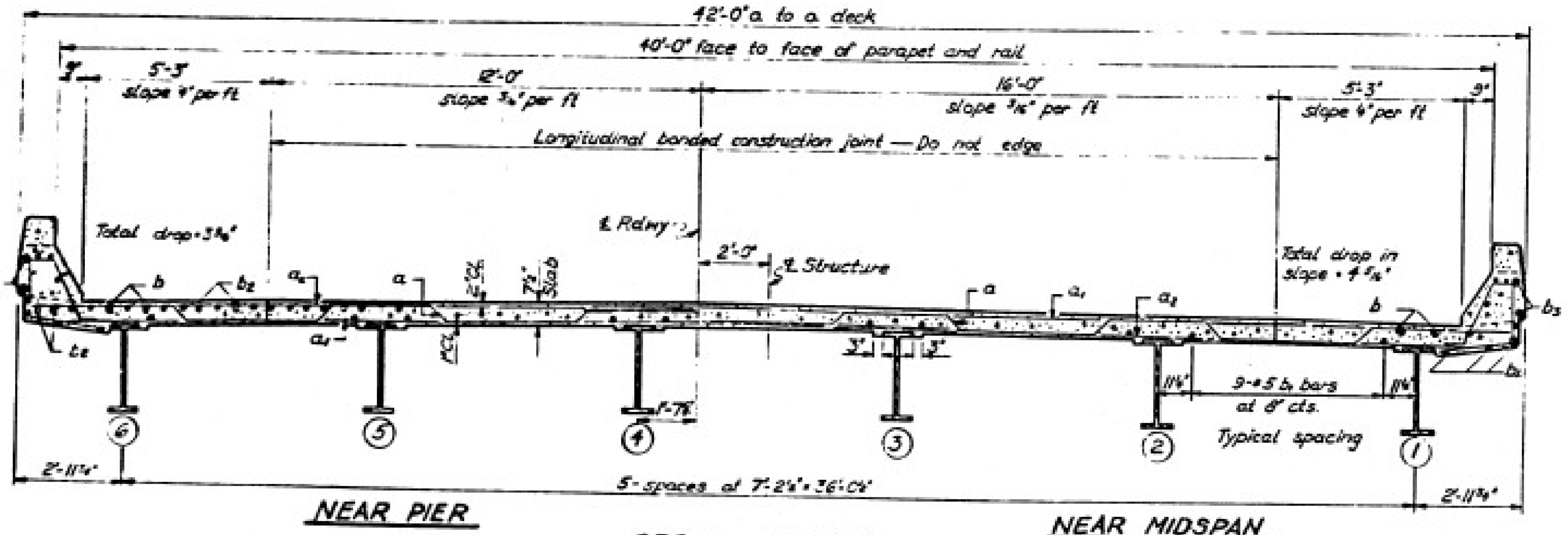
FLOOR DRAIN

FOR 2-BRIDGES
BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	524	#6	22'-7"	∿
a₁	640	#6	25'-3"	—
a₂	584	#6	18'-3"	—
b	504	#5	29'-6"	—
b₁	510	#5	35'-4"	—
b₂	172	#6	15'-0"	—
b₃	80	#6	21'-5"	—
b₄	60	#6	22'-5"	—
b₅	86	#6	15'-6"	—
c	552	#4	6'-3"	⊏
d	692	#6	5'-9"	⊏
d₁	692	#4	2'-6"	⊏
Reinforcement Bars			Lbs	112,678
* Structural Steel			Lbs	263,972
Class X Concrete			Cu Yd	405.3

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel.
Est Wt = 15,492 Lbs

The lengths and quantities of longitudinal reinforcement in parapets are not included in above quantities. See sheet 18.

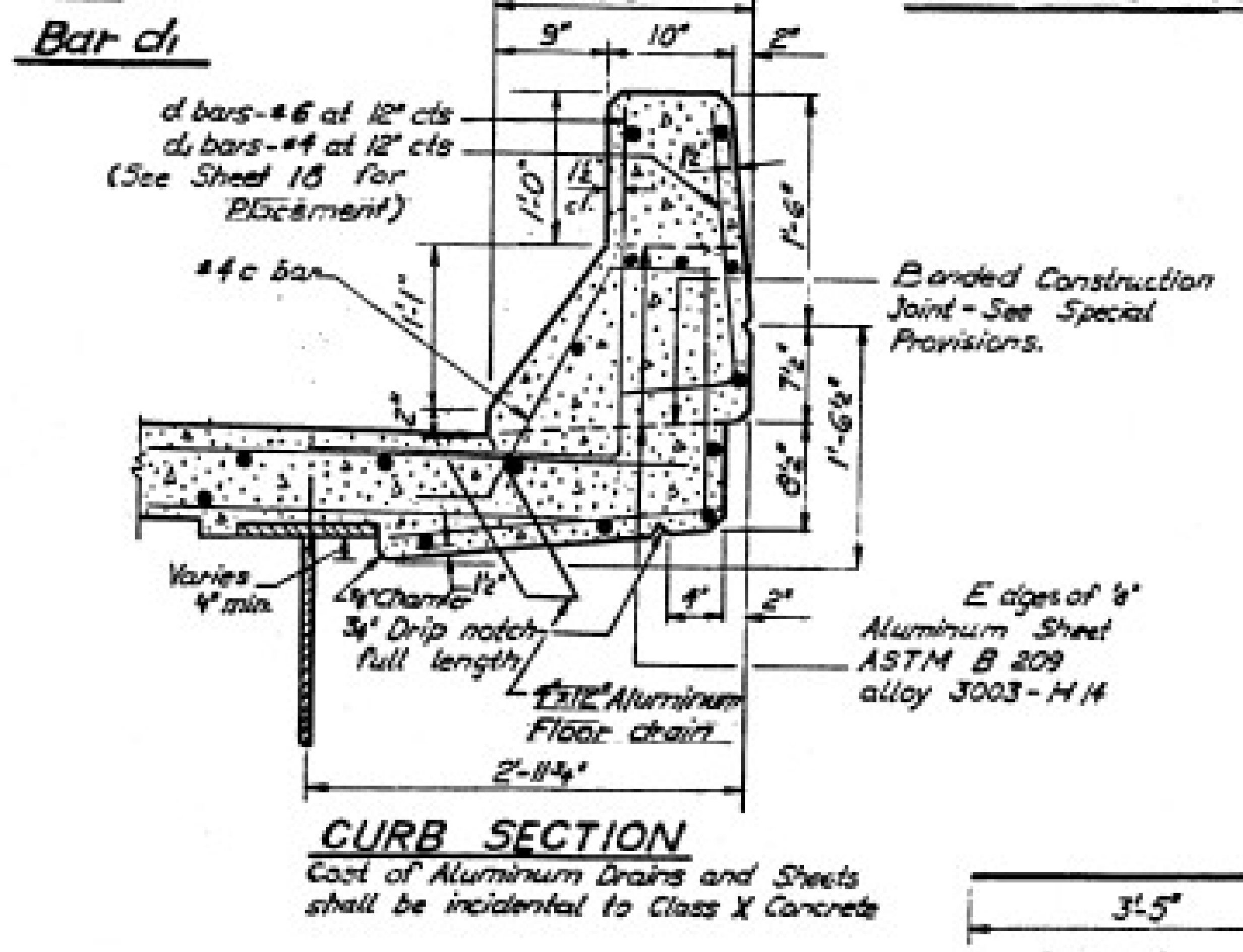


NEAR PIER

CROSS SECTION

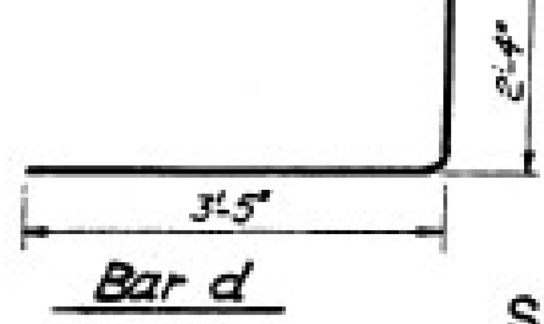
LOOKING EAST-S-BRIDGE (E.B.L.)
LOOKING WEST-N-BRIDGE (W.B.L.)

NEAR MIDSPAN

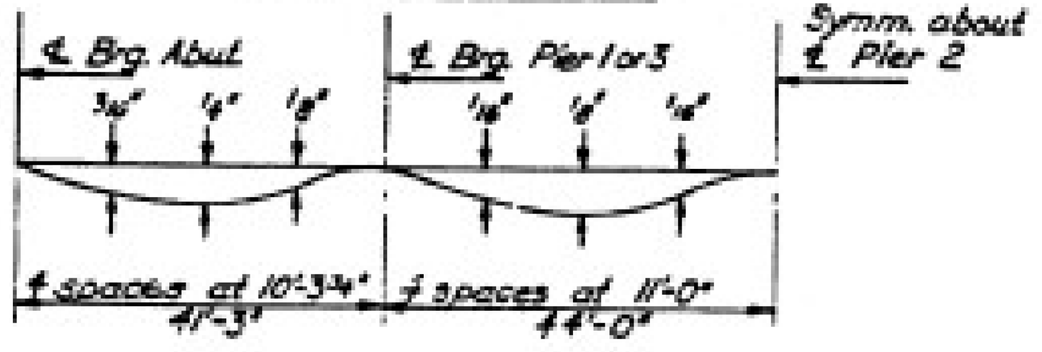

9"
10"
2"
d bars-#6 at 12" cts
d₁ bars-#4 at 12" cts
(See Sheet 18 for Placement)
#4 c bar
1'-0"
1'-6"
Bonded Construction Joint - See Special Provisions.
7½"
1'-6¾"
8½"
Varies 4" min.
¾" Chamfer
¾" Drip notch, full length
1"×12" Aluminum Floor drain
Edges of ⅛" Aluminum Sheet ASTM B 209 alloy 3003-H14
4"
2"
2'-11¾"

CURB SECTION

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

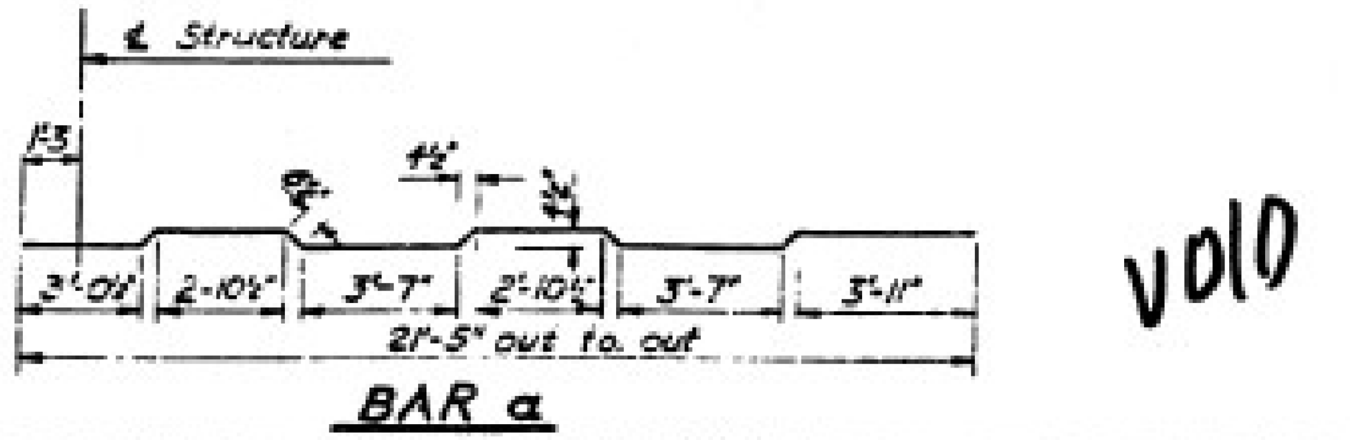


Bar d



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 theoret. grade elevs. adjusted for dead load deflections as shown on sheet 15&16.



BAR a

VOID

DESIGNED E.R. Harvey
CHECKED G.A. Tejeda
DRAWN P.I. Fischer
CHECKED G.A. Tejeda

Oct. 9 1967
EXAMINED
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED W.E. Baumann
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

SUPERSTRUCTURE

F.A.I. RTE. 70 OVER F.A. RTE. 1
PROJECT I-70
F.A.I. RTE. 70 SEC. 12-52 HB-3
CLARK COUNTY
STA. 1640+69.68 ℄ F.A.I. RTE. 70
STA. 940+05.00 F.A. RTE. 1

Rev. 10-6-67 DES Quantities of Reinf. Bars chg. from 110,854 to 112,478;

MODEL: 74E48-54-7 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

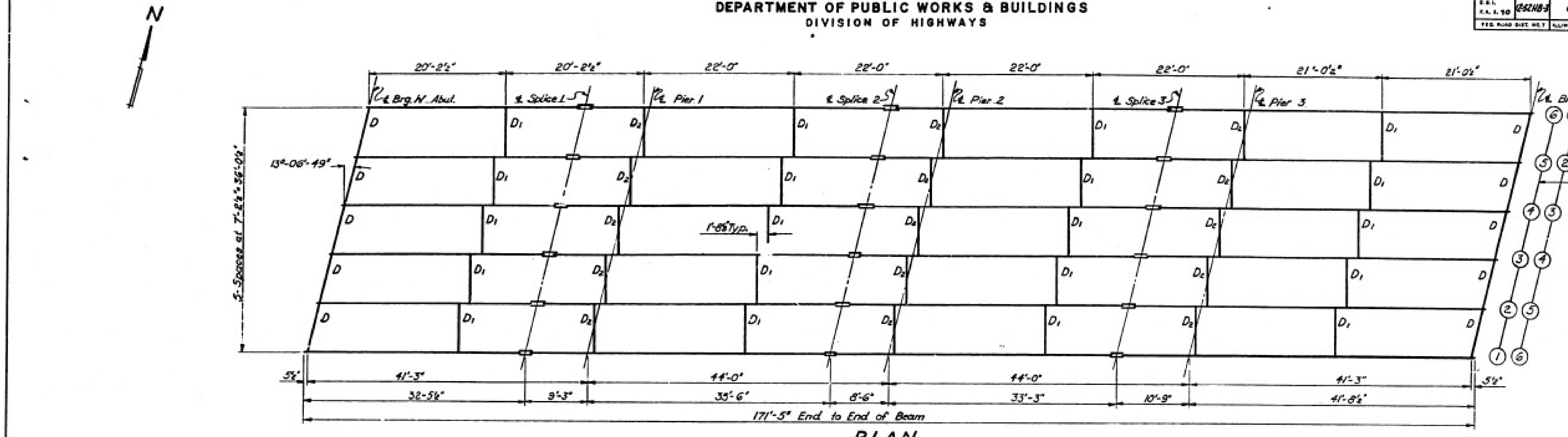
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	64
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. F.A. I. 70	12-52HB-3	CLARK	26	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. / SHEETS



⑥ ① ⑤ ② ④ ③ ③ ④ ② ⑤ ① ⑥

NORTH Bridge (W.B.L.)

SOUTH Bridge (E.B.L.)

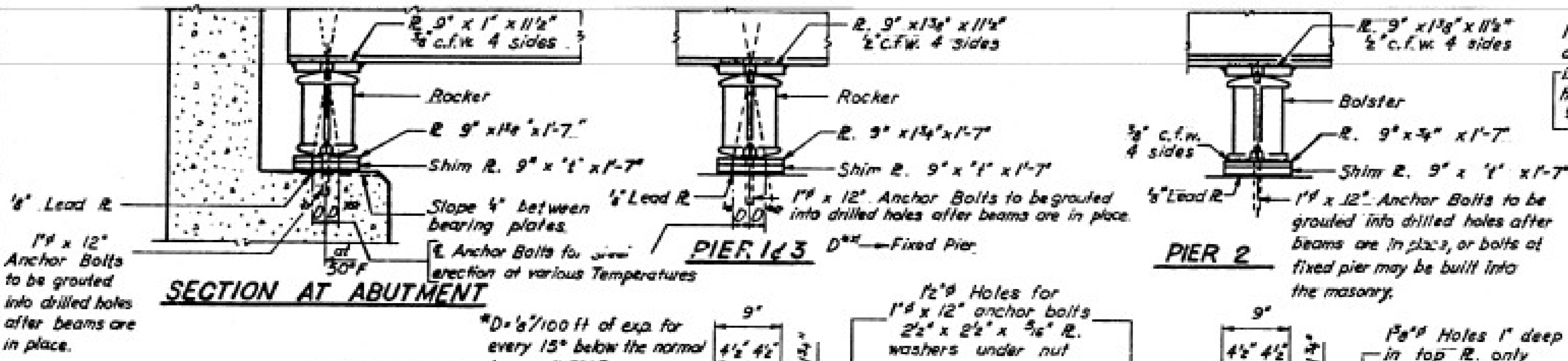
PLAN

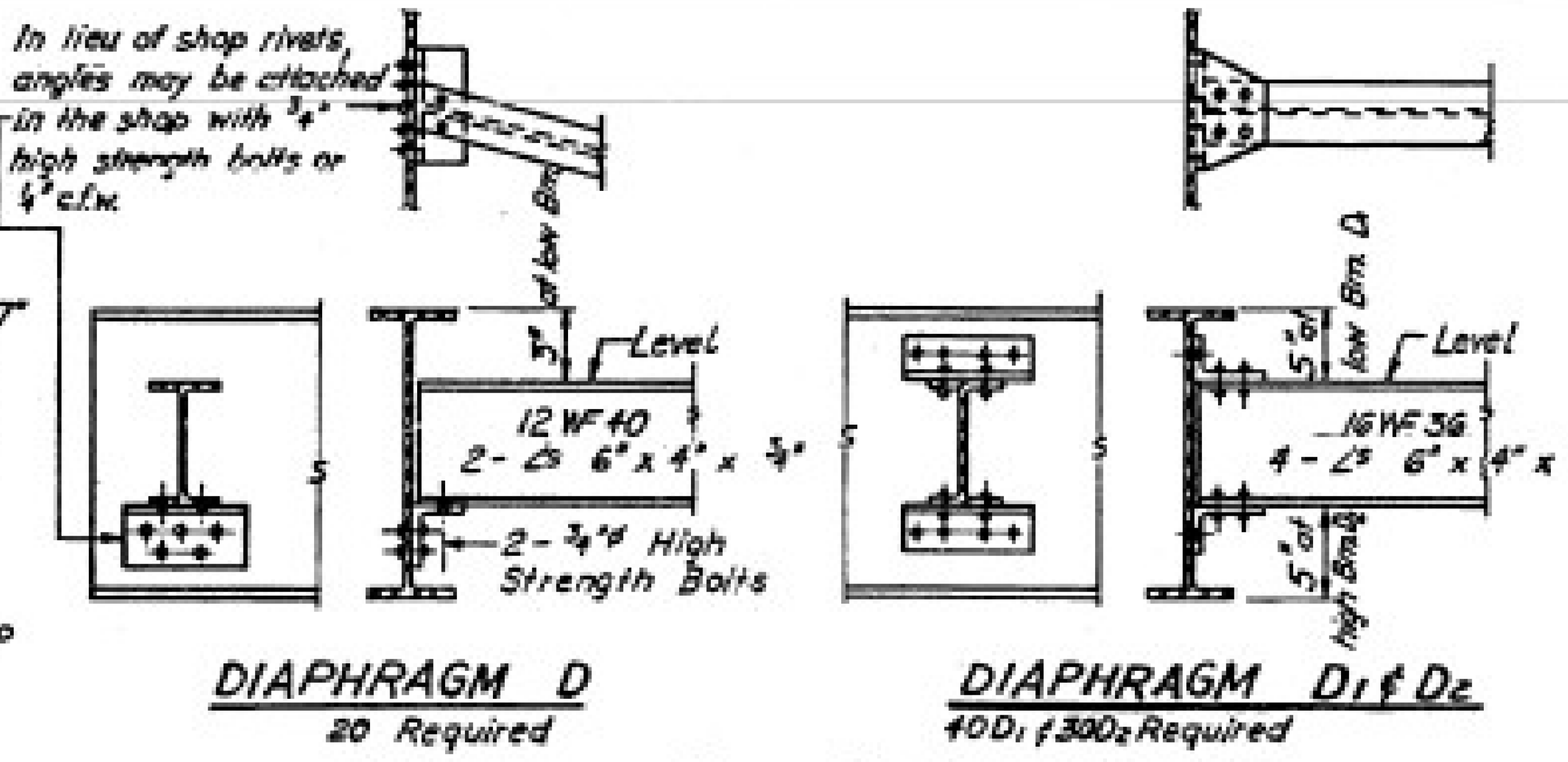
All beams 30WF 99

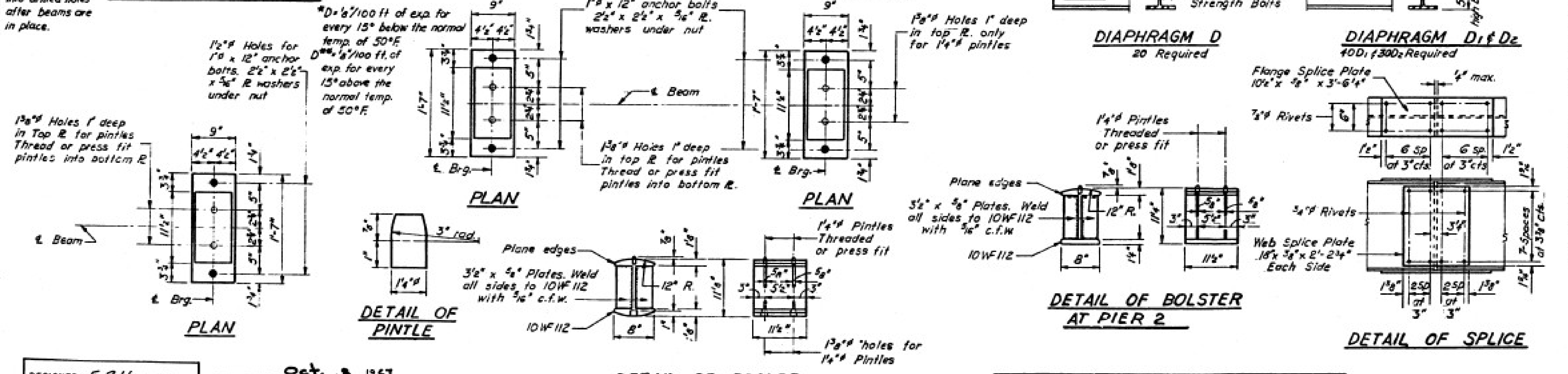
TABLE OF "t" DIMENSIONS ALL ABUTS. & PIERS

Beam No.	E.B.L. Bridge	W.B.L. Bridge
Beam 1	0"	0"
Beam 2	0"	0"
Beam 3	0"	0"
Beam 4	0"	0"
Beam 5	0"	0"
Beam 6	*	0"

* ~~Use ⅝" Shim ℞ @ Bm. 6 on all piers in the South Bridge, E.B.L~~ "t" dimension is 0"(zero) at the abutments.


℞ 9" x 1" x 11½"
⅜" c.f.w. 4 sides
Rocker
℞ 9" x 1⅛" x 1'-7"
Shim ℞. 9" x "t" x 1'-7"
⅛" Lead ℞
1"⌀ x 12" Anchor Bolts to be grouted into drilled holes after beams are in place.
Slope ¼" between bearing plates.
at 50°F
℄ Anchor Bolts for steel erection at various Temperatures
SECTION AT ABUTMENT
℞ 9" x 1⅜" x 11½"
½" c.f.w. 4 sides
Rocker
℞. 9" x 1¼" x 1'-7"
Shim ℞. 9" x "t" x 1'-7"
⅛" Lead ℞.
1"⌀ x 12". Anchor Bolts to be grouted into drilled holes after beams are in place.
D**—Fixed Pier
PIER 1 & 3
℞. 9" x 1⅜" x 11½"
½" c.f.w. 4 sides
Bolster
⅜" c.f.w. 4 sides
℞. 9" x ¾" x 1'-7"
Shim ℞. 9" x "t" x 1'-7"
⅛" Lead ℞.
1"⌀ x 12". Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.
PIER 2




*D=⅛"/100 ft of exp. for every 15° below the normal temp. of 50°F.
D**=⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°F.
1½"⌀ Holes for 1"⌀ x 12" anchor bolts. 2½" x 2½" x ⅝" ℞ washers under nut
1⅜"⌀ Holes 1" deep in Top ℞ for pintles Thread or press fit pintles into bottom ℞
9"
4½" 4½"
1'-7"
11½"
℄ Beam
℄ Brg.
PLAN
1½"⌀ Holes for 1"⌀ x 12" anchor bolts 2½" x 2½" x ⅝" ℞. washers under nut
1⅜"⌀ Holes 1" deep in top ℞ for pintles Thread or press fit pintles into bottom ℞.
℄ Beam
℄ Brg.
PLAN
1⅜"⌀ Holes 1" deep in top ℞. only for 1¼"⌀ pintles
℄ Brg.
PLAN
3" rad.
1¼"⌀
DETAIL OF PINTLE
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF 112 with 5/16" c.f.w.
12" R.
10WF112
8"
11½"
1¼"⌀ Pintles Threaded or press fit
1⅜"⌀ holes for 1¼"⌀ Pintles
1¼"⌀ Pintles Threaded or press fit
Plane edges
3½" x ⅝" Plates. Weld all sides to 10WF112 with 5/16" c.f.w
12" R.
10WF112
8"
11½"
DETAIL OF BOLSTER AT PIER 2
Flange Splice Plate 10½" x ⅝" x 3'-6¼"
¼" max.
⅞"⌀ Rivets
1½"
6 sp. at 3" cts.
6 sp. at 3" cts.
1½"
¾"⌀ Rivets
Web Splice Plate 18" x ⅜" x 2'-2¼" Each Side
7-Spaces at 3⅛" Cts.
1⅜"
2 sp. at 3"
2 sp. at 3"
1⅜"
DETAIL OF SPLICE

DETAIL OF ROCKER AT PIER 1 & 3 & ABUTS.

ELEVATION TOP OF WF

NORTH BRIDGE (W.B.L.)

Location	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6
℄ Brg. W. Abut.	626.92	627.05	627.17	627.24	627.13	627.00
℄ Splice 1	626.81	626.95	627.06	627.14	627.02	626.90
℄ Pier 1	626.79	626.92	627.04	627.11	626.99	626.87
℄ Splice 2	626.67	626.81	626.92	627.00	626.88	626.76
℄ Pier 2	626.65	626.78	626.90	626.97	626.85	626.73
℄ Splice 3	626.54	626.67	626.79	626.86	626.75	626.62
℄ Pier 3	626.51	626.64	626.76	626.83	626.71	626.59
℄ Brg. E. Abut.	626.37	626.51	626.62	626.70	626.58	626.46

SOUTH BRIDGE (E.B.L.)

Location	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6
℄ Brg. W. Abut.	627.02	627.14	627.25	627.31	627.18	627.05
℄ Splice 1	626.91	627.04	627.14	627.21	627.08	626.95
℄ Pier 1	626.89	627.01	627.11	627.18	627.05	626.92
℄ Splice 2	626.77	626.90	627.00	627.06	626.94	626.80
℄ Pier 2	626.75	626.87	626.97	627.04	626.91	626.78
℄ Splice 3	626.64	626.76	626.87	626.95	626.81	626.67
℄ Pier 3	626.61	626.73	626.83	626.90	626.77	626.64
℄ Brg. E. Abut.	626.47	626.60	626.70	626.77	626.64	626.50

These elevations do not include any allowance for deflection

TABLE OF MOMENTS & REACTIONS - INTERIOR BEAMS

	MOMENTS				REACTIONS		
	.4 Sp. 1	Pier 1	.5 Sp. 2	Pier 2	Abut. 1	Pier 1	Pier 2
D. L.	136.3	201.9	78.2	156.3	17.0	51.3	44.7
L. L.	240.2	161.5	205.6	175.0	38.9	41.1	41.5
Imp.	72.1	54.4	51.7	52.5	11.7	12.3	12.4
Total	448.6	437.8	345.5	383.8	67.6	104.7	98.6

Moments are in ft.-Kips and Reactions in Kips.

DESIGNED	E. R. Harvey
CHECKED	G. A. Tejeda
DRAWN	P. J. Fischer
CHECKED	G. A. Tejeda

Oct. 8 1967
EXAMINED Carl F. [illegible]
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W. E. Baumann
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

STRUCTURAL STEEL

F.A.I. RTE. 70 OVER F.A. RTE. 1
PROJECT I-70
F.A.I. RTE. 70 SEC. 12-52 HB-3
CLARK COUNTY
STA. 1640+69.68 ℄ F.A.I. RTE. 70
STA. 940+05.00 F.A. RTE. 1

MODEL: 74E48-54-8 [Sheet]
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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 012-0054 & SN 012-0055

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	65
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

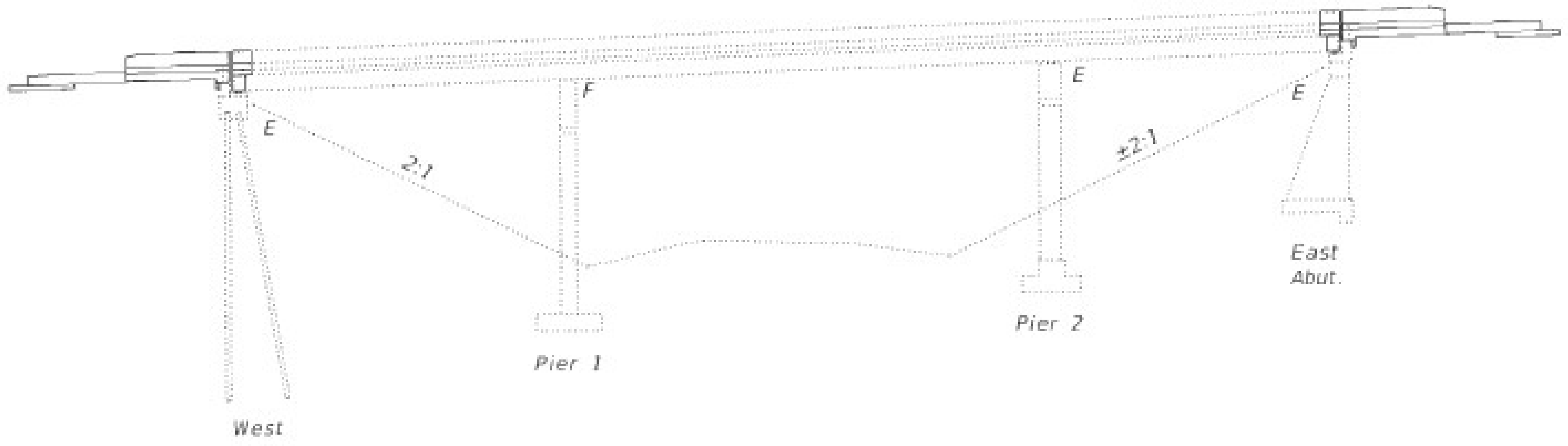
Existing Structure: SN 018-0009 was originally built as FA Route 12, Section FX-VBR in 1950. In 1990, the bridge was shortened, the superstructure replaced with 3-span concrete deck on steel I-beams, and the substructure modified. The structure carries US-40 over Mill Road. The bridge length is 173'-9" back to back abutments and the width is 33'-2" out to out. The proposed project consists of bridge deck repair, new concrete overlay, new deck expansion devices, new elastomeric bearings, new concrete approach slabs, and substructure structural repair of concrete.

Traffic to be detoured.

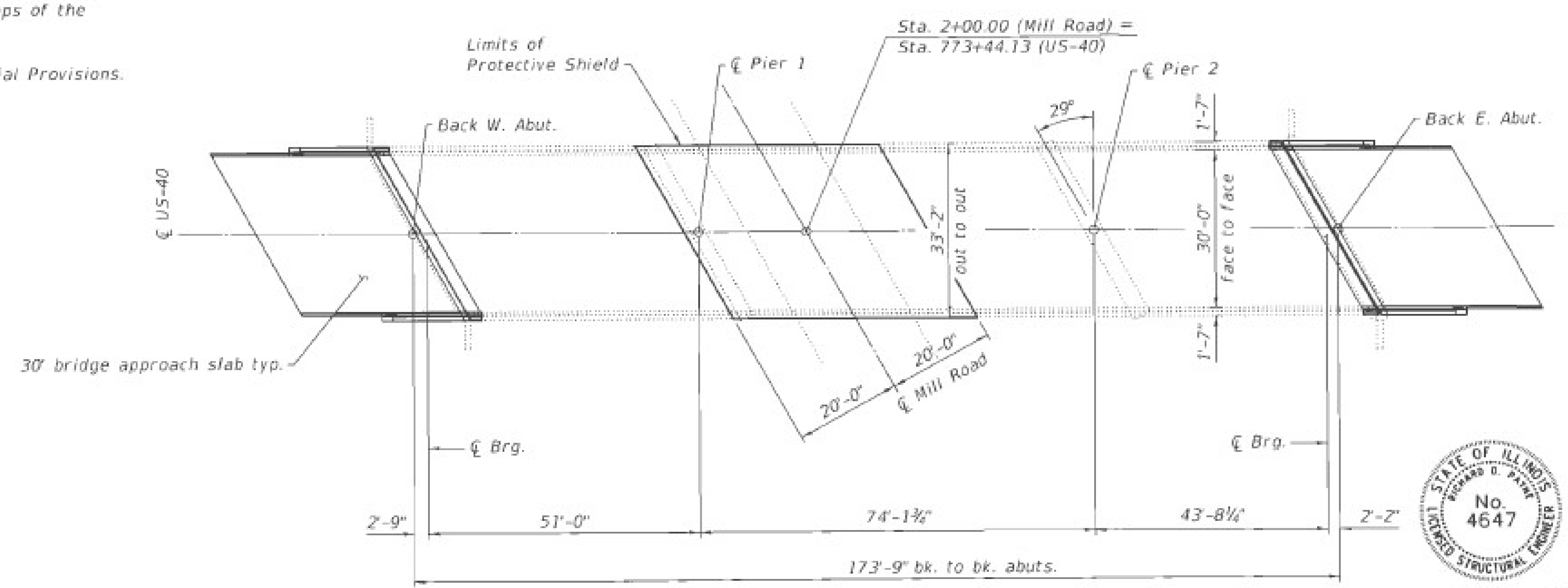
No salvage.

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
4. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.
5. Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
6. Prior to pouring the new concrete deck and end diaphragms, all heavy and loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
7. All structural steel shall conform to AASHTO Classification M-270 Gr. 36 unless otherwise noted.
8. Protective coat shall be applied to areas of Concrete Superstructure consisting of the front face and top of the parapet and wingwall and the top surface of the expansion joint reconstruction. Protective coat shall also be applied to the new overlay area, and areas of Concrete Superstructure (Approach Slab) including the front faces and tops of the curbs.
9. Synthetic fibers should be added to the Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2¼". See Special Provisions.



ELEVATION



PLAN

RICHARD D. PAYNE
No. 4647

EXPIRES 11-30-2020

SIGNATURE

07-23-2020
DATE

USER NAME = Maria.Bloemer
PLOT DATE = 7/29/2026

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 1 OF 9 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	66
		CONTRACT NO. 74E48		

ILLINOIS FED. AID PROJECT

I-70 CLARK

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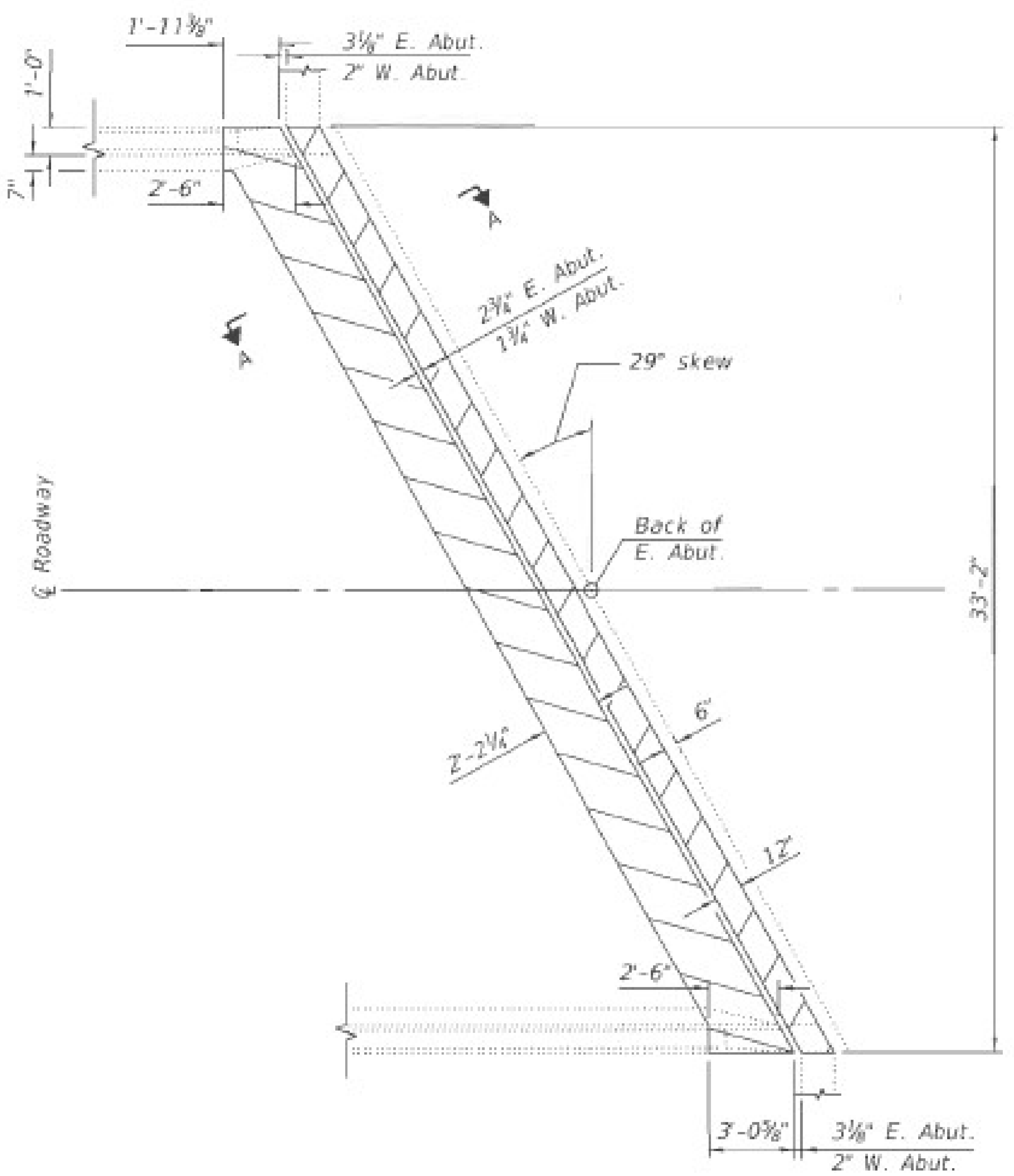
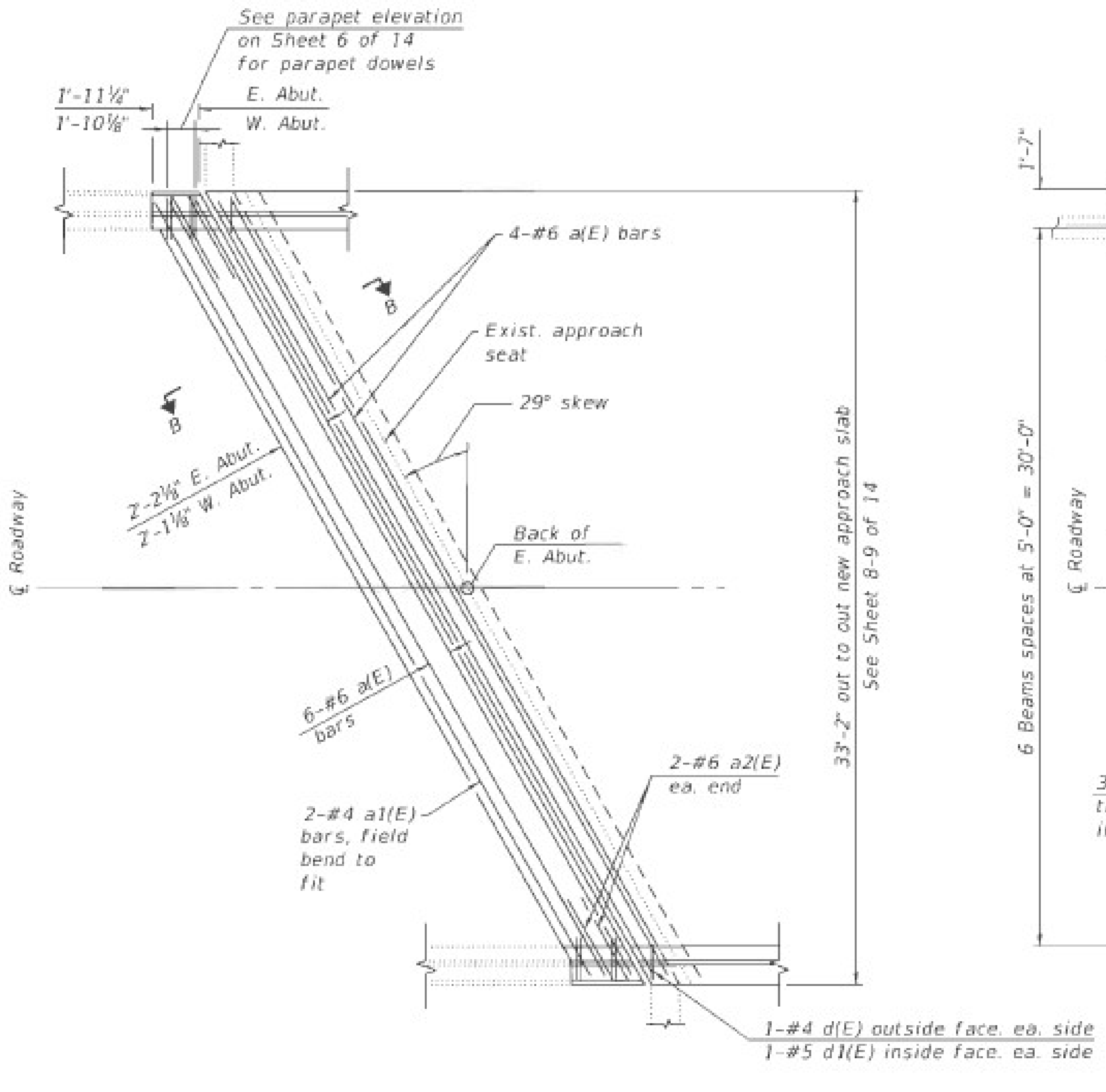
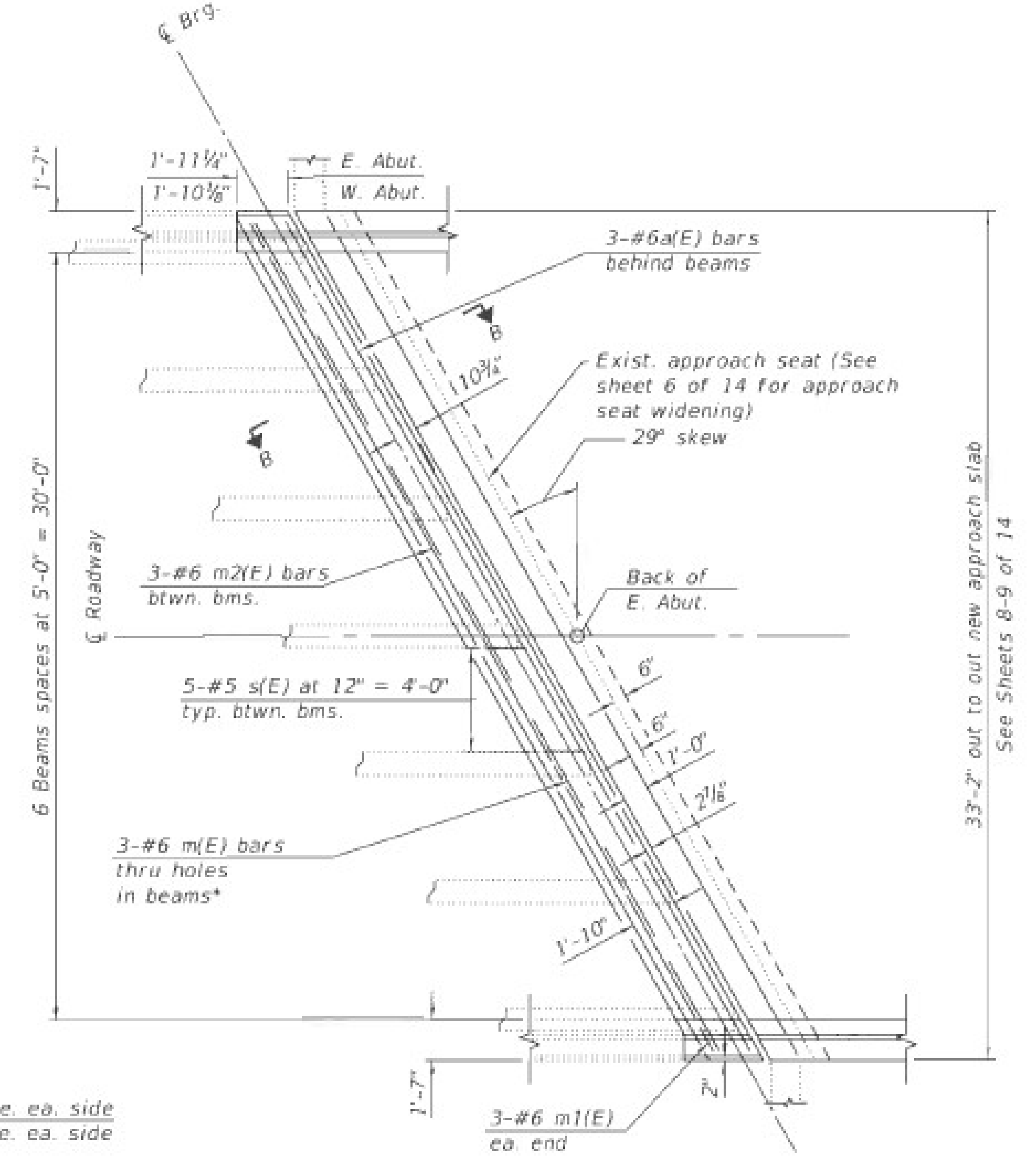


EAST ABUTMENT REMOVAL



EAST ABUTMENT REPLACEMENT

(Showing all rebar except in diaphragm)

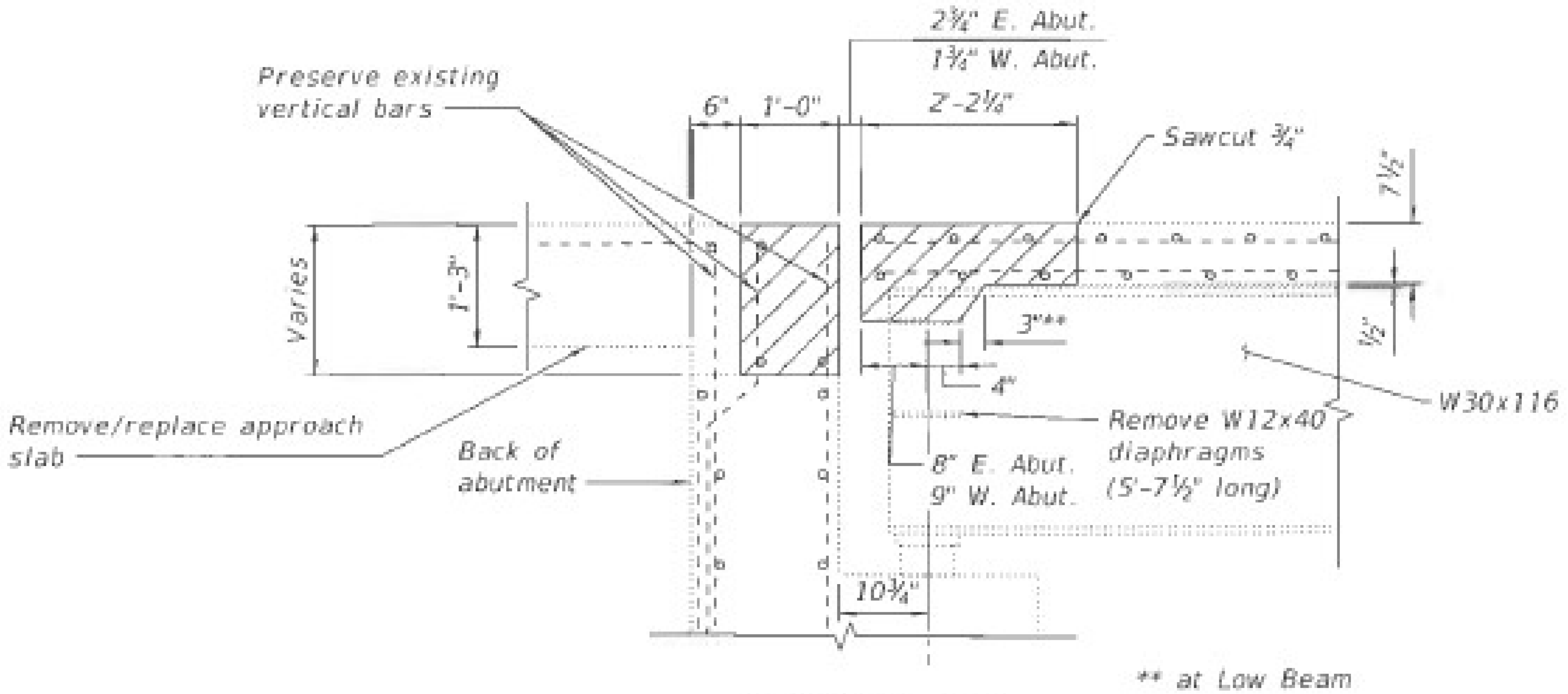


EAST ABUTMENT REPLACEMENT

(Showing rebar in diaphragm only)

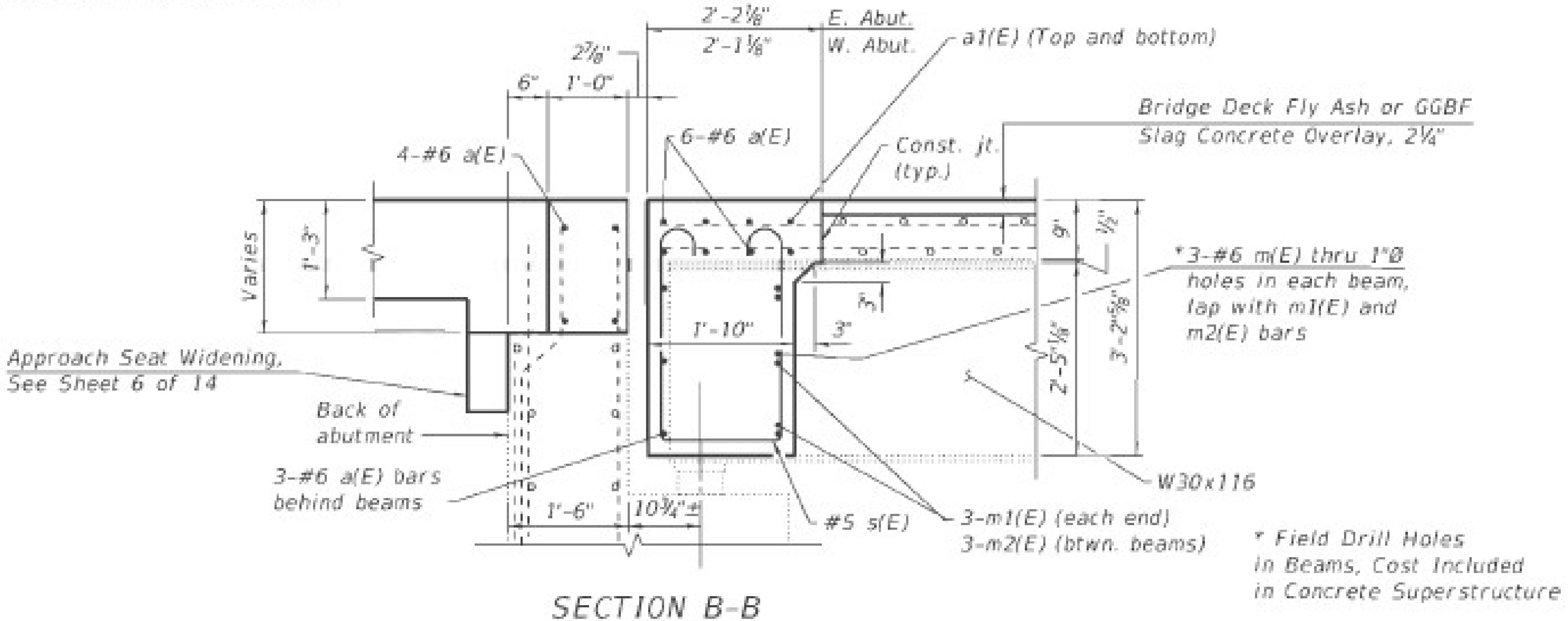
EAST ABUTMENT DECK PLAN VIEWS

(East Abutment shown, West Abutment similar)



SECTION A-A

** at Low Beam



SECTION B-B

* Field Drill Holes
in Beams, Cost Included
in Concrete Superstructure

MODEL: 74E48-09-2 [Sheet]
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PLOT DATE = 7/29/2026	DATE -	REVISED -	

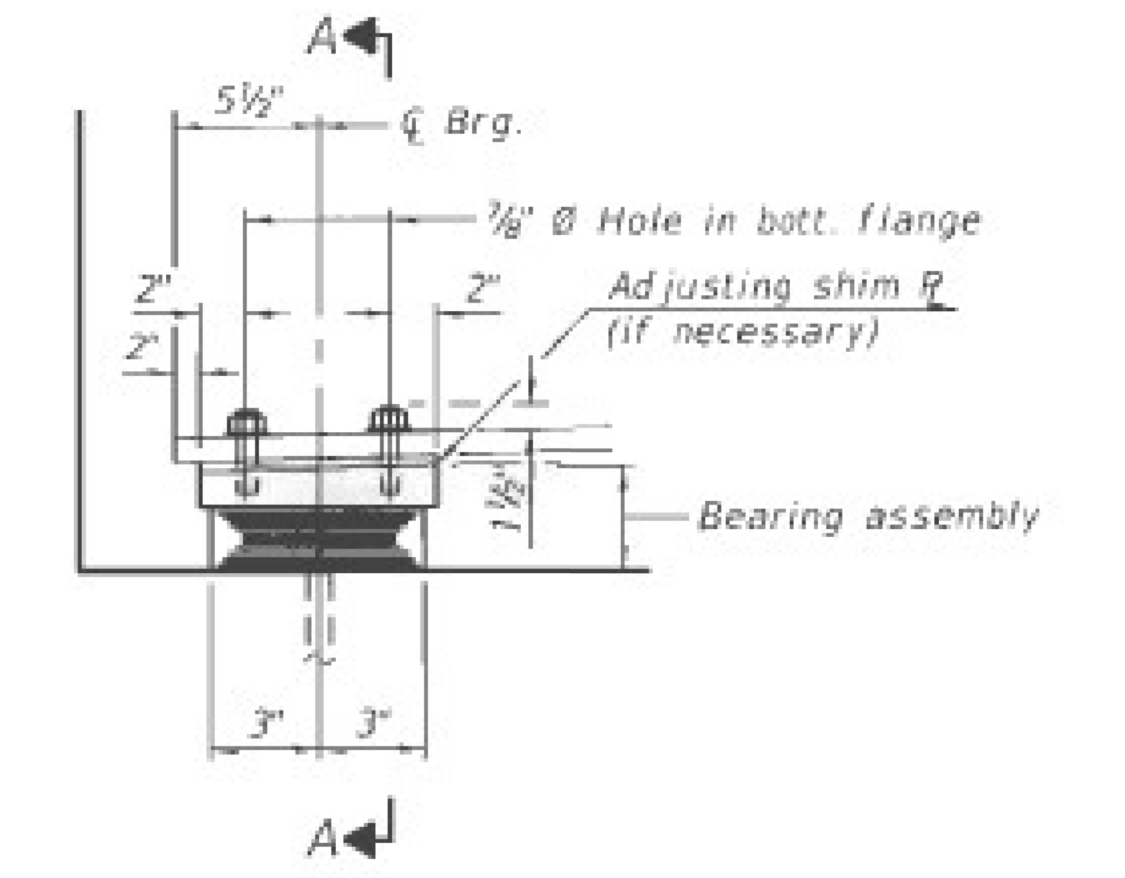
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 2 OF 9 SHEETS STA. TO STA.

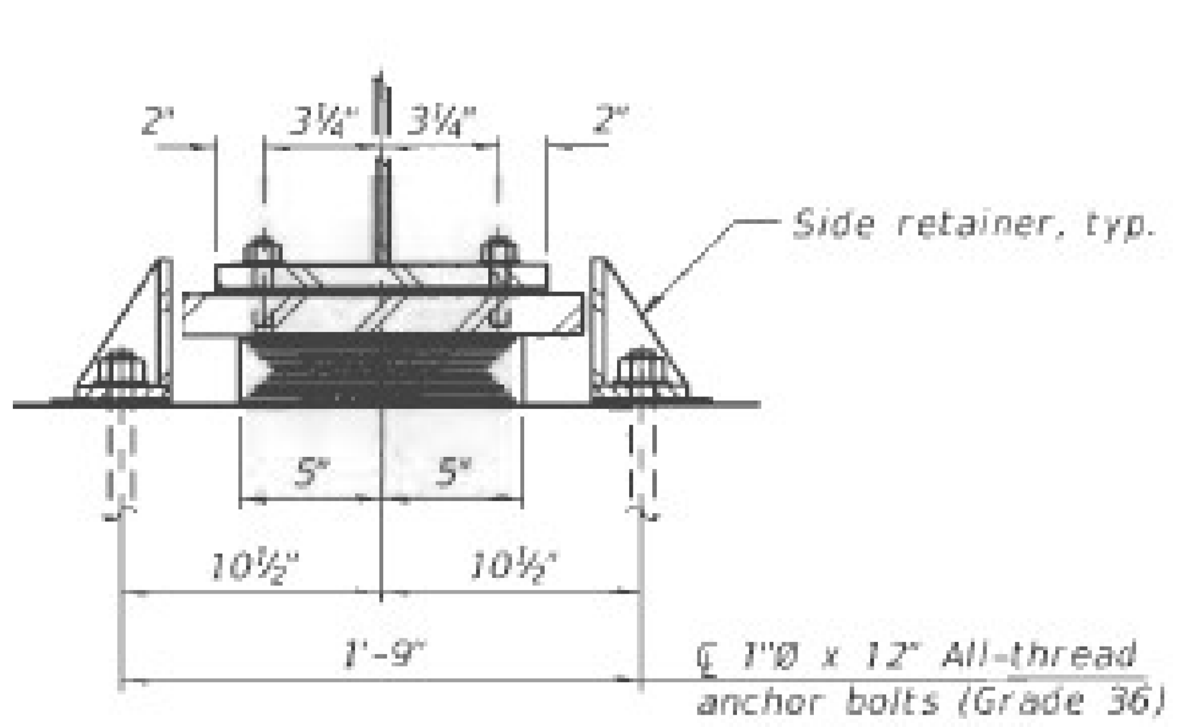
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	67
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK



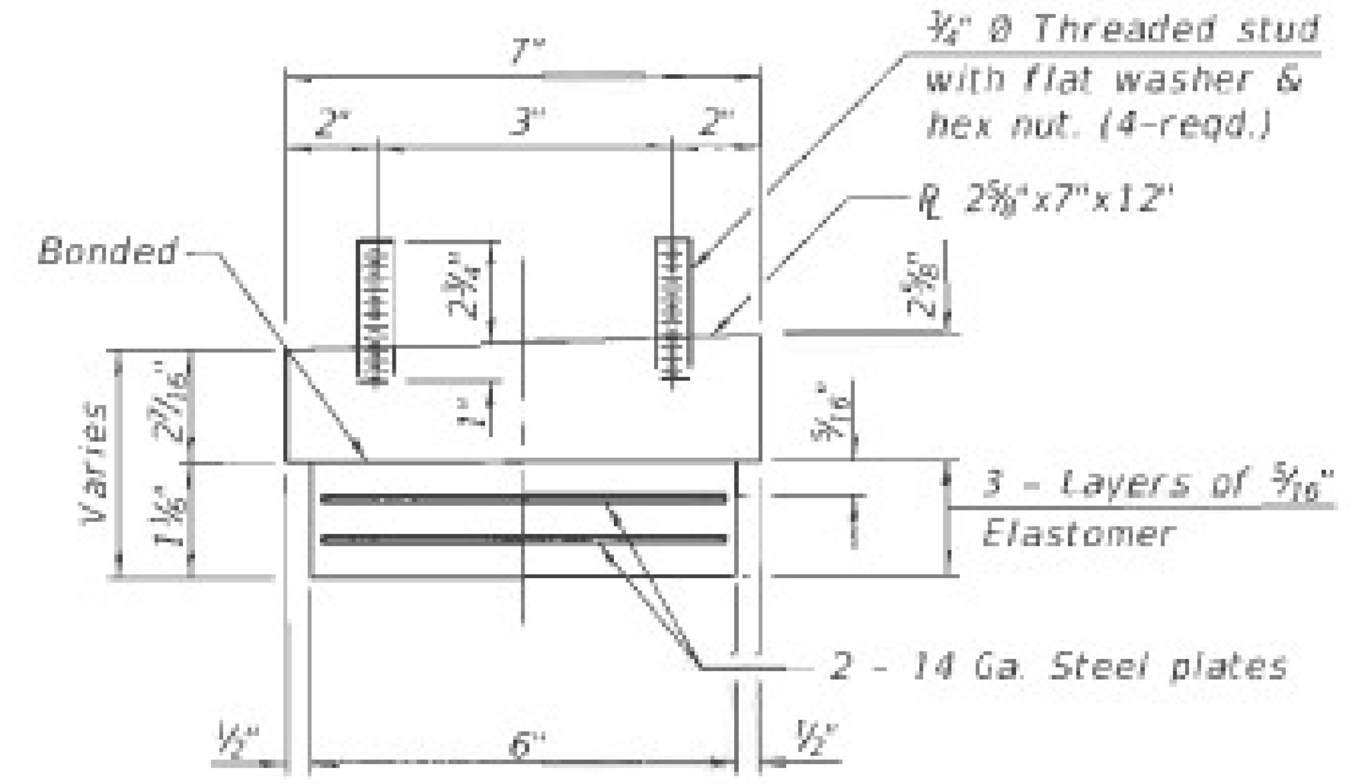
ELEVATION AT WEST ABUT.

(Looking North)


2"
3¼"
3¼"
2"
Side retainer, typ.
5"
5"
10½"
10½"
1'-9"
℄ 1"Ø x 12" All-thread anchor bolts (Grade 36)
2¼" x 2¼" x 5/16" ℞ washer under nut.

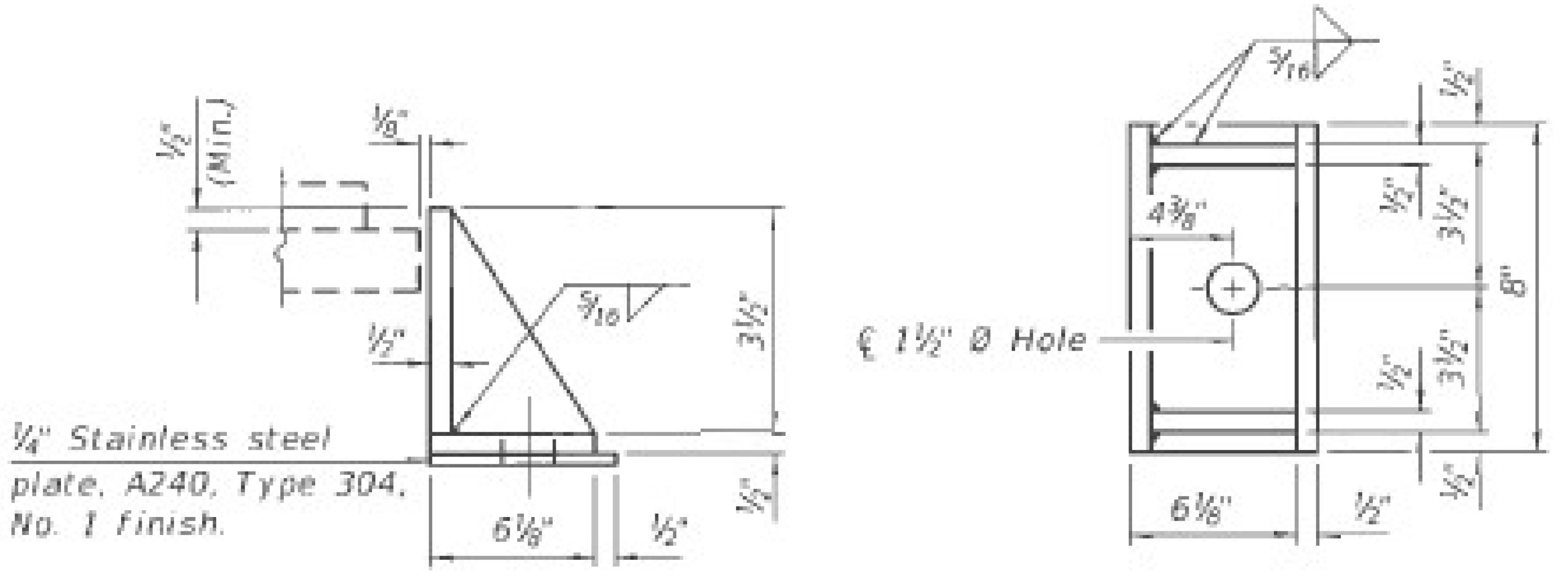
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.


7"
2"
3"
2"
¾" Ø Threaded stud with flat washer & hex nut. (4-reqd.)
℞ 2⅝"x7"x12"
Bonded
2¾"
2⅝"
Varies
2⁷⁄₁₆"
1"
9/16"
1⅛"
3 - Layers of 5/16" Elastomer
2 - 14 Ga. Steel plates
½"
6"
½"

BEARING ASSEMBLY WEST ABUT.

(Looking North)



SIDE RETAINER

(14 Required see Beam Layout)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BEAM REACTIONS

R_D	(K)	19.0
R_L	(K)	26.0
Imp.	(K)	7.3
R (Total)	(K)	52.3

Notes:

Diaphragm removal should be performed prior to drilling holes. Cost included with Concrete Superstructure.

New shim plates and connection bolts are included with Elastomeric Bearing Assembly, Type I.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

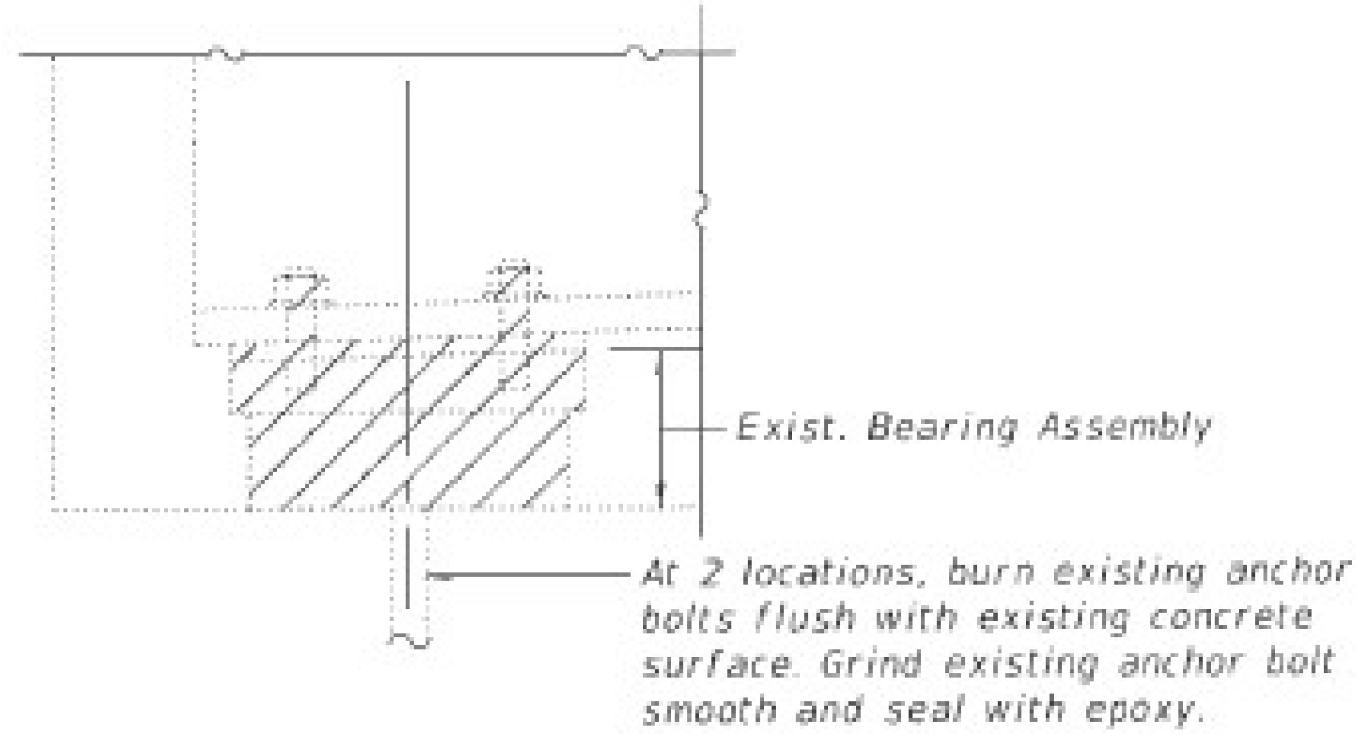
Min. jack capacity = 30 tons.

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

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

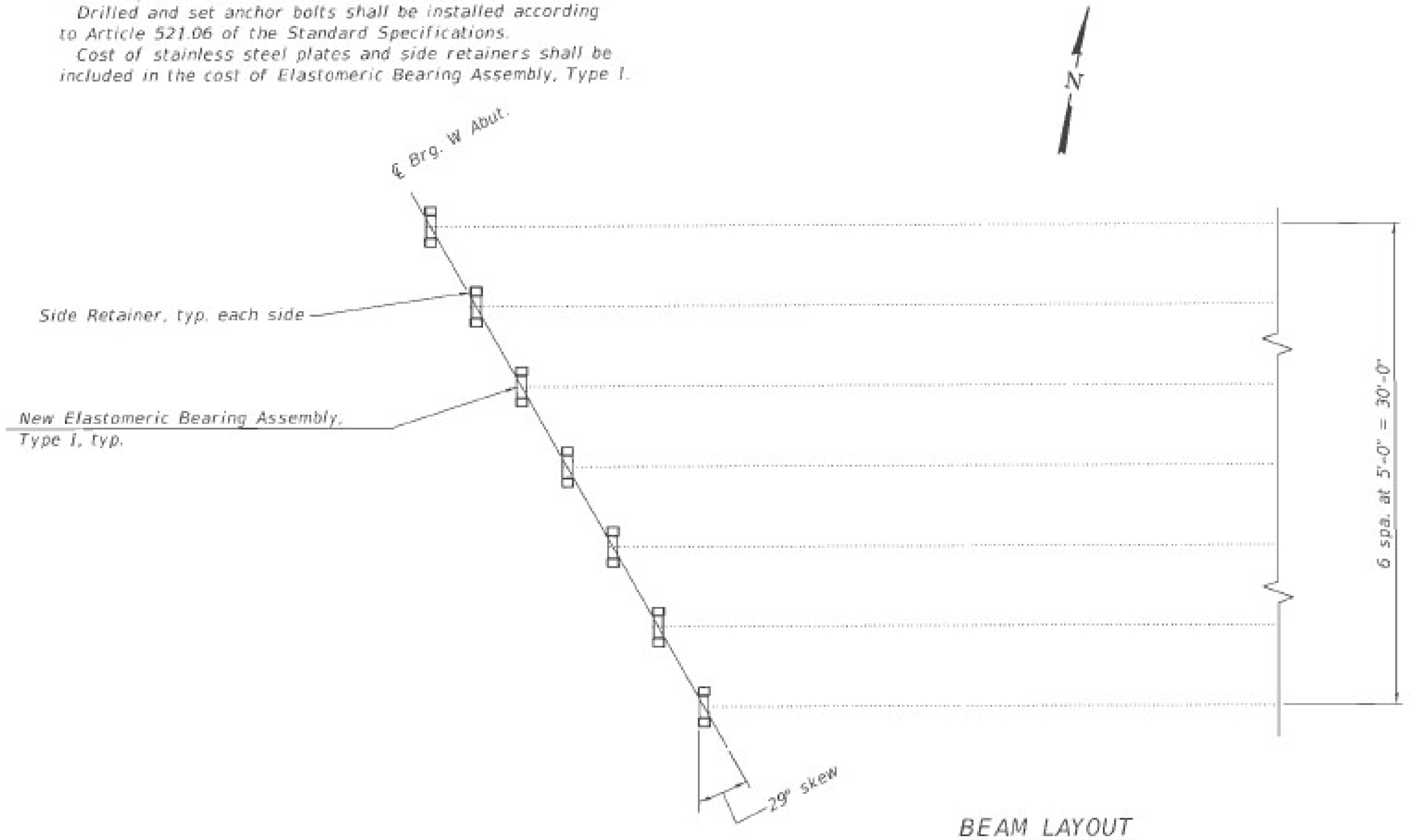
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of stainless steel plates and side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.


Exist. Bearing Assembly
At 2 locations, burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost Included with Jack and Remove Existing Bearings.


N
℄ Brg. W Abut.
Side Retainer, typ. each side
New Elastomeric Bearing Assembly, Type I, typ.
6 spa. at 5'-0" = 30'-0"
29° skew

BEAM LAYOUT

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Anchor Bolts, 1"	Each	14

MODEL: 74E48-09-3 [Sheet]
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ers\kam\Desktop\SN018-0009\SP SN 018-0009\SN 018-0009-74973-10-WAbutBr.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

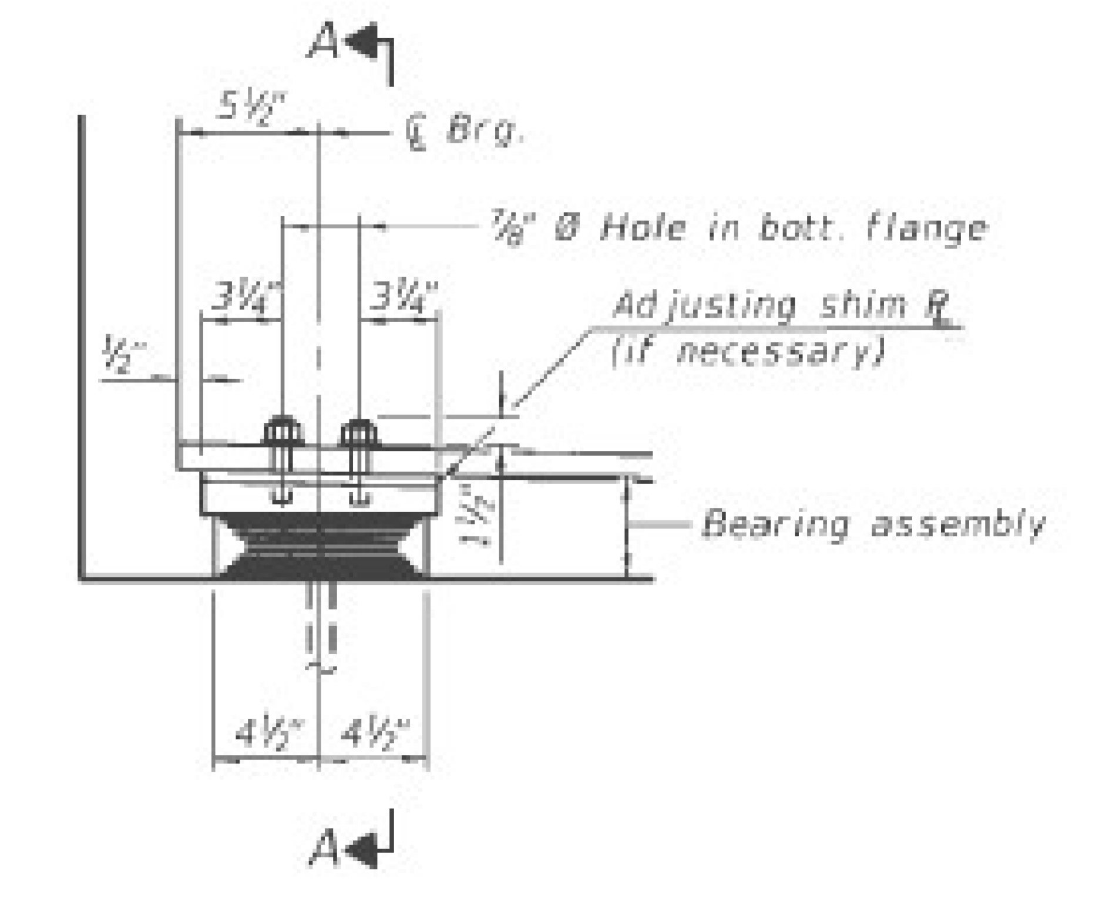
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 3 OF 9 SHEETS STA. TO STA.

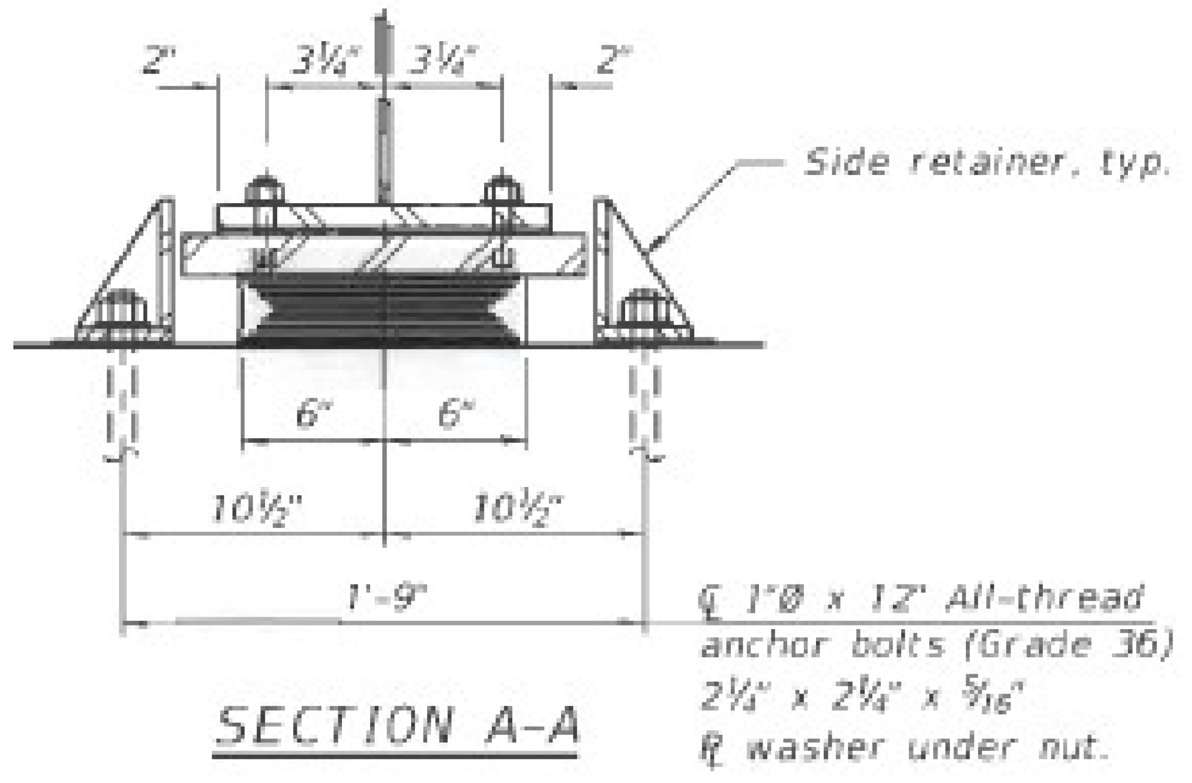
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	68
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK



ELEVATION AT EAST ABUT.

(Looking South)



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

R_D	(K)	15.4
R_L	(K)	24.9
Imp.	(K)	7.3
R (Total)	(K)	47.6

Notes:

Diaphragm removal should be performed prior to drilling holes. Cost included with Concrete Superstructure.

New shim plates and connection bolts are included with Elastomeric Bearing Assembly, Type I.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

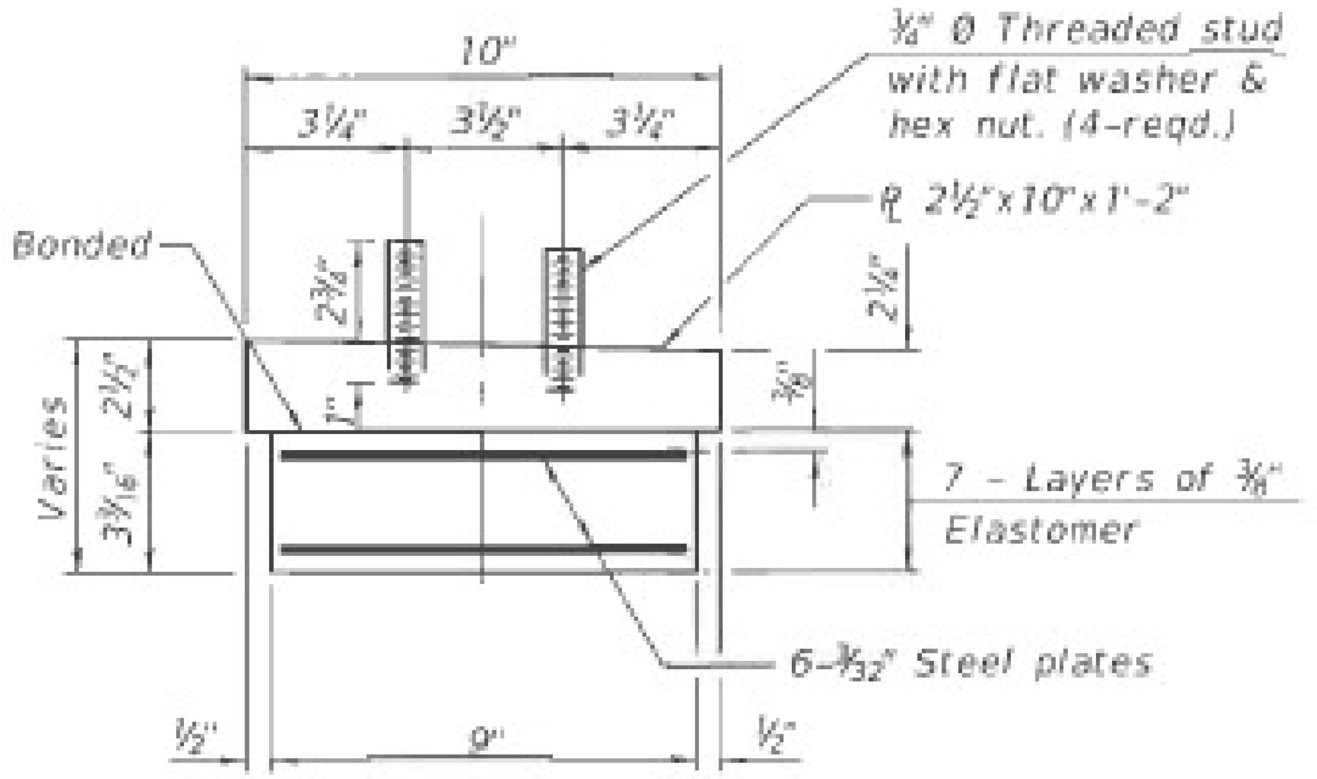
Min. jack capacity = 30 tons.

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

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

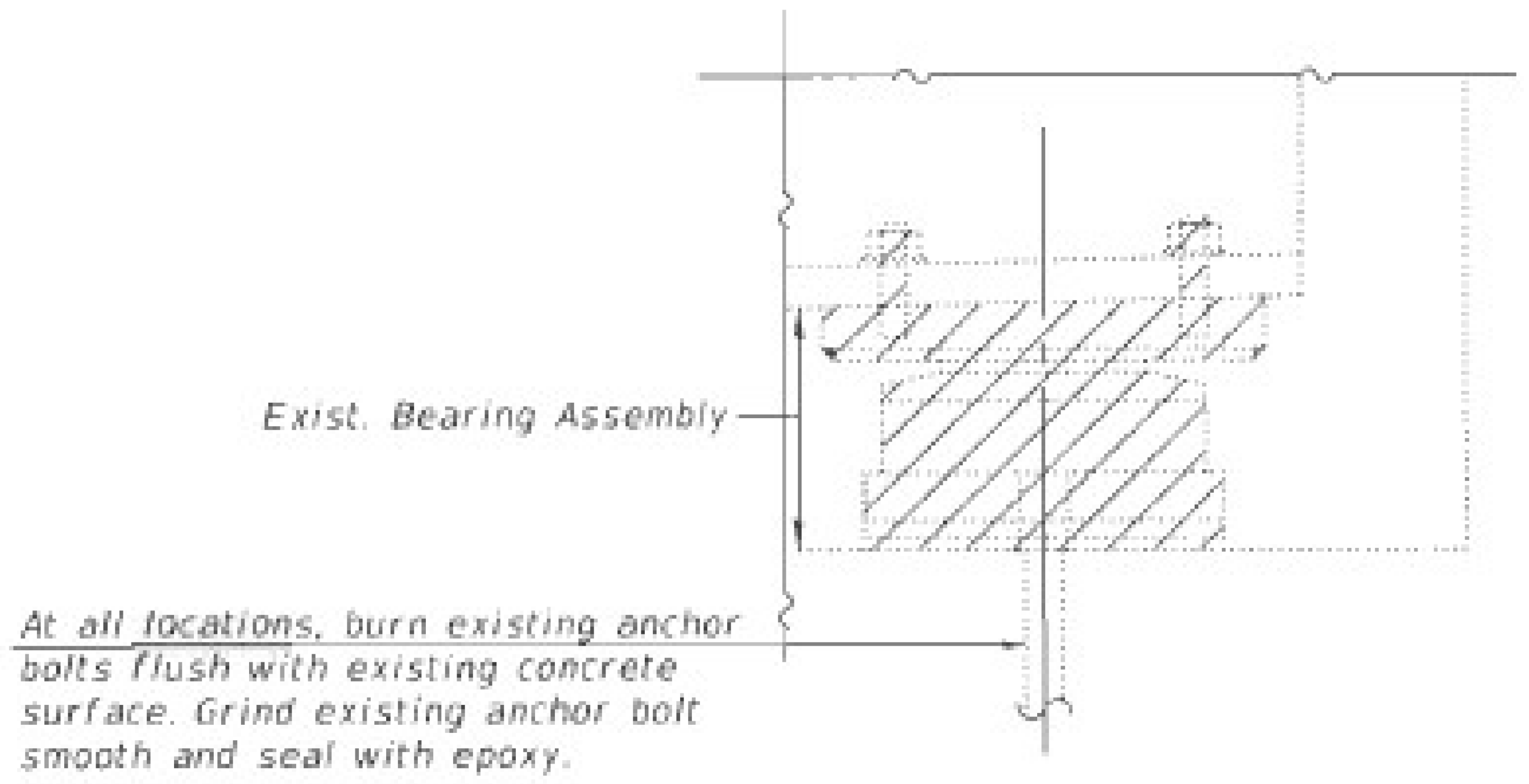
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Cost of stainless steel plates and side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



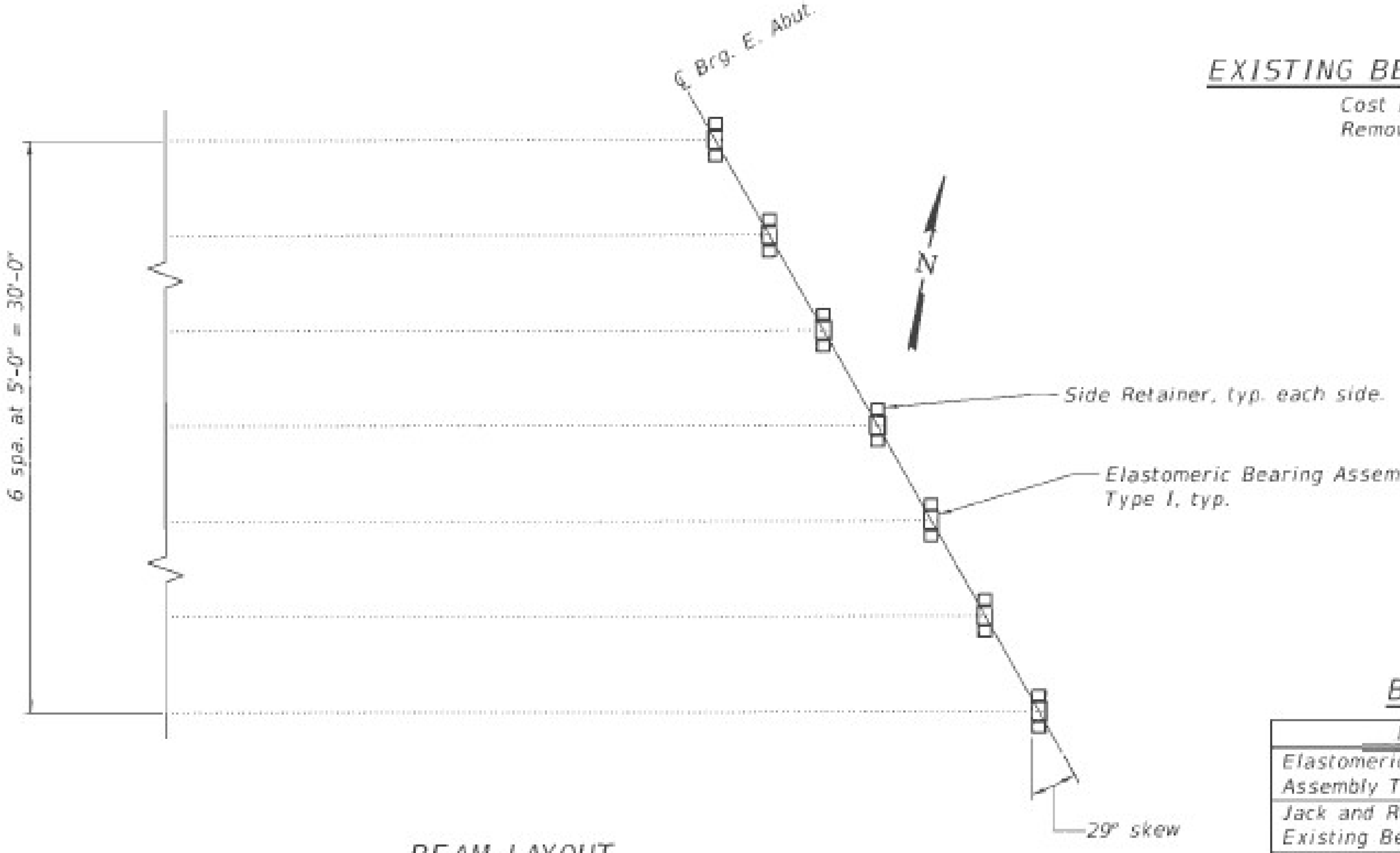
BEARING ASSEMBLY EAST ABUT.

(Looking South)

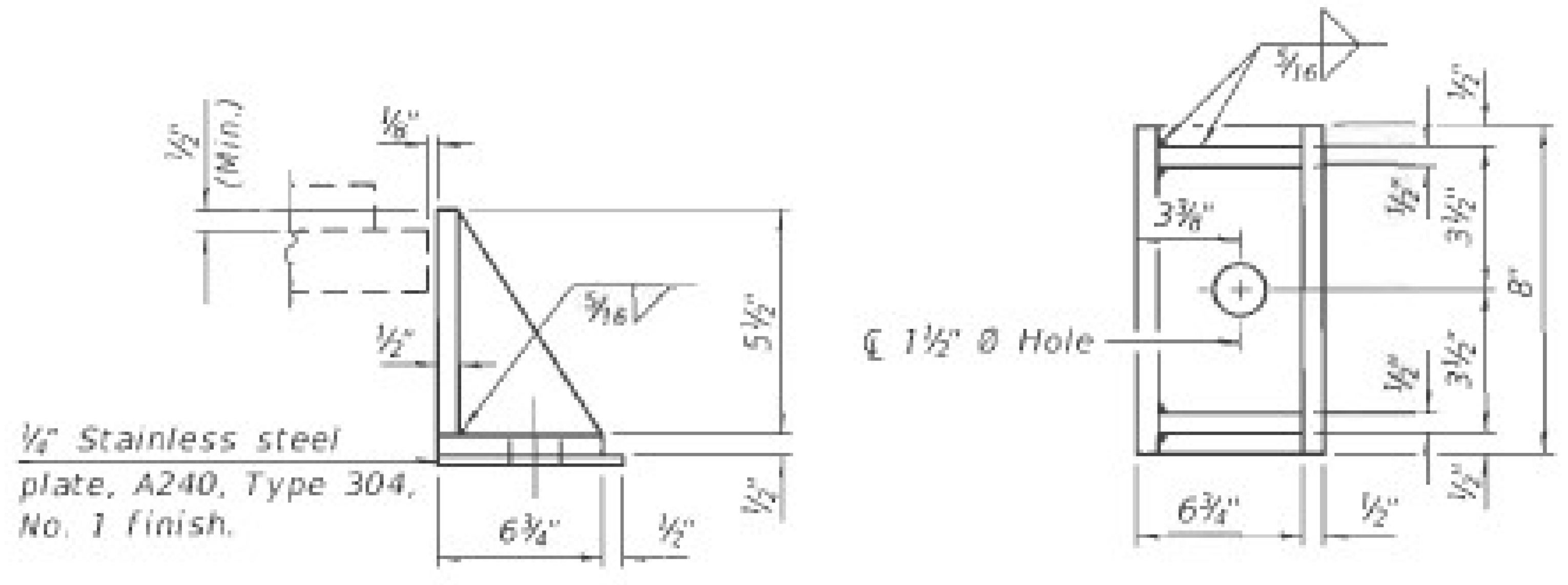

Exist. Bearing Assembly
At all locations, burn existing anchor
bolts flush with existing concrete
surface. Grind existing anchor bolt
smooth and seal with epoxy.

EXISTING BEARING REMOVAL DETAIL

Cost Included with Jack and Remove Existing Bearings.



BEAM LAYOUT



SIDE RETAINER

(14 Required see Beam Layout)
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7
Jack and Remove Existing Bearings	Each	7
Anchor Bolts, 1"	Each	14

MODEL: 74E48-09-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 4 OF 9 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	69
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

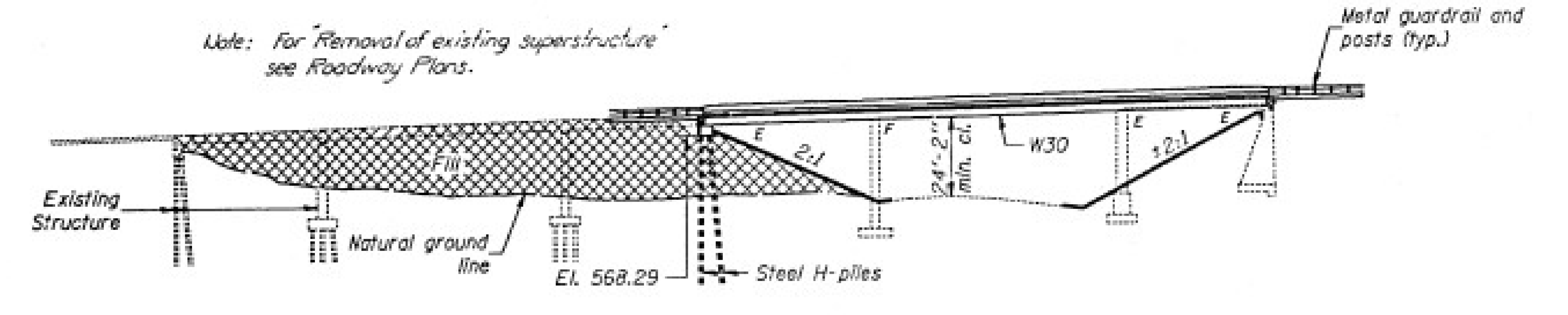
Bench Mark: Chiseled square on South East wingwall, Elev. 581.37
Existing Structure: 018-0009; Built in 1950 as F.A. Route 12 Section FX-VBR, five span continuous steel I-beam bridge with spill-thru abutments. 32'-4" o. to o. and 334'-0" bk. to bk. The contractor shall remove the entire superstructure and replace it with a new shortened 3 span superstructure on the existing East abutment, the two existing piers over Mill Road, and a new West abutment.
Traffic to be detoured.
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

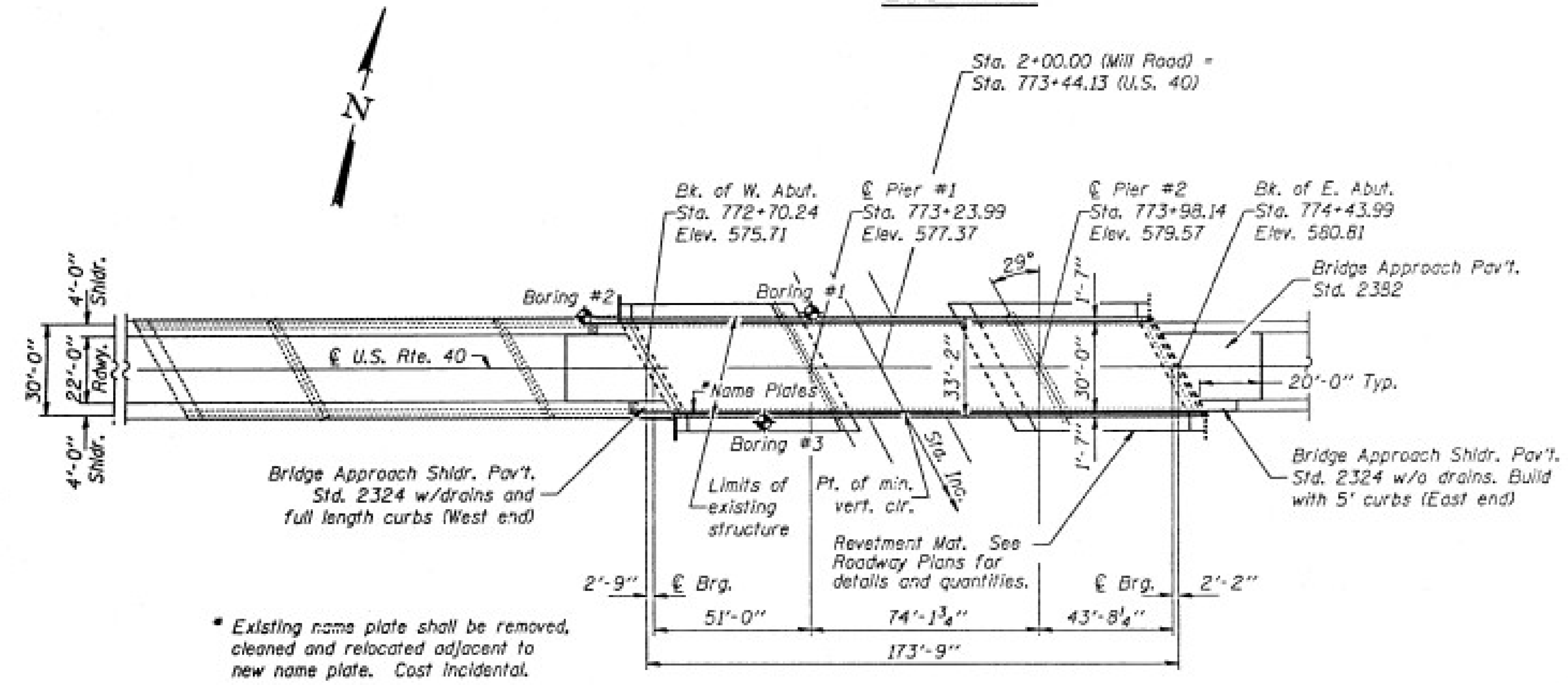
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A. OR 12	FX-VBR	CUMBERLAND	45	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
16 SHEETS

Note: For "Removal of existing superstructure" see Roadway Plans.



ELEVATION



N
Sta. 2+00.00 (Mill Road) = Sta. 773+44.13 (U.S. 40)
Bk. of W. Abut. Sta. 772+70.24 Elev. 575.71
℄ Pier #1 Sta. 773+23.99 Elev. 577.37
℄ Pier #2 Sta. 773+98.14 Elev. 579.57
Bk. of E. Abut. Sta. 774+43.99 Elev. 580.81
29°
1'-7"
Bridge Approach Pav't. Std. 2382
Boring #2
Boring #1
4'-0" Shldr.
22'-0" Rdwy.
30'-0"
4'-0" Shldr.
℄ U.S. Rte. 40
*Name Plates
33'-2"
30'-0"
1'-7"
20'-0" Typ.
Boring #3
Sta. 1001
Bridge Approach Shldr. Pav't. Std. 2324 w/drains and full length curbs (West end)
Limits of existing structure
Pt. of min. vert. clr.
Revetment Mat. See Roadway Plans for details and quantities.
Bridge Approach Shldr. Pav't. Std. 2324 w/o drains. Build with 5' curbs (East end)
2'-9"
℄ Brg.
℄ Brg.
2'-2"
51'-0"
74'-1¾"
43'-8¼"
173'-9"

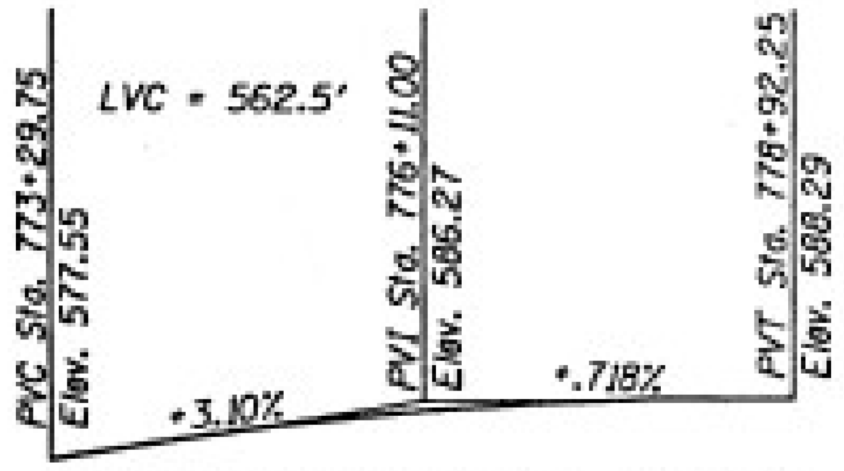
* Existing name plate shall be removed, cleaned and relocated adjacent to new name plate. Cost incidental.

PLAN

STATION 773+56.95
REBUILT 19 BY
STATE OF ILLINOIS
O.R. 12 SECTION FX-VBR

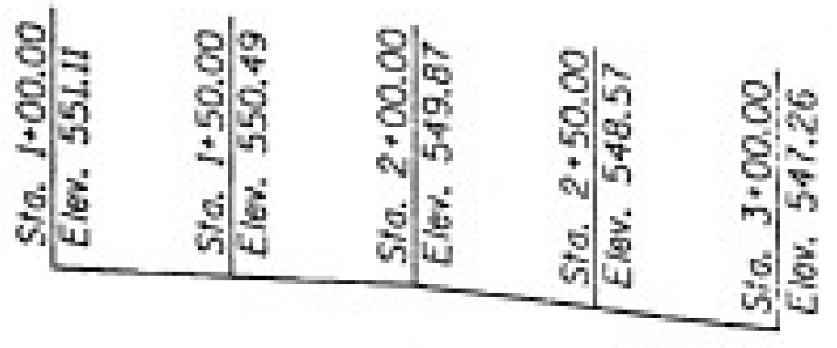
LOADING HS20
STR. NO. 018-0009

NAME PLATE
See Std. 2113



LVC = 562.5'
PVC Sta. 773+29.75 Elev. 577.55
PVI Sta. 776+11.00 Elev. 586.27
PVT Sta. 778+92.25 Elev. 588.29
+3.10%
+.718%

PROPOSED PROFILE GRADE



Sta. 1+00.00 Elev. 551.11
Sta. 1+50.00 Elev. 550.49
Sta. 2+00.00 Elev. 549.87
Sta. 2+50.00 Elev. 548.57
Sta. 3+00.00 Elev. 547.26

EXISTING PROFILE GRADE
(Mill Road)

DESIGNED	Walter J. Hill
CHECKED	
DRAWN	W.D.C.
CHECKED	W J H GR

December 20 1987
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

DESIGN SPECIFICATIONS

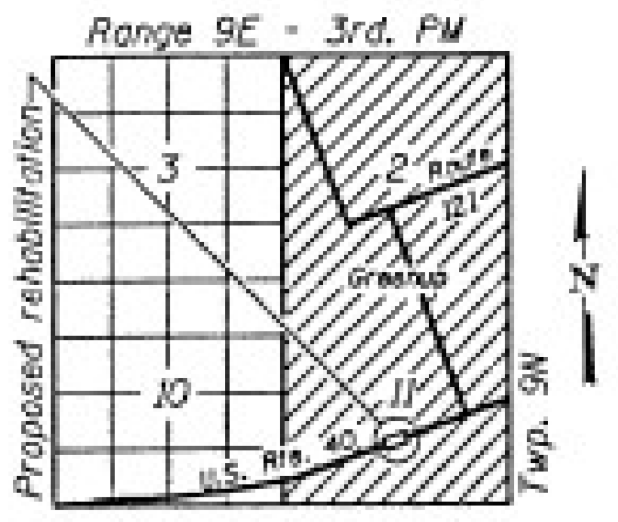
AASHTO (1983) and applicable Interims (1984 thru 1988)

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36,000 psi (structural steel)



LOCATION SKETCH

GENERAL NOTES

See Proposal for Boring Data.

Fasteners shall be high strength bolts . Bolts ⅞"ϕ, open holes $^{15}/_{16}$"ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 165,620 Lbs.

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel. The color of the final finish coat shall be munsell standard 7.5G 4/8 Interstate Green.

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.

Anchor bolts shall be set before bolting diaphragms over supports.

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 wide flange beams and all splice plate material of the wide flange beams.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the West abutment.

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.

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and ¾"ϕ hooked bolts.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive one Steel HP8 x 36 test pile in a permanent location at West abutment as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the abutments. Est. quantity = 180 Sq. Ft.

TOTAL BILL OF MATERIAL

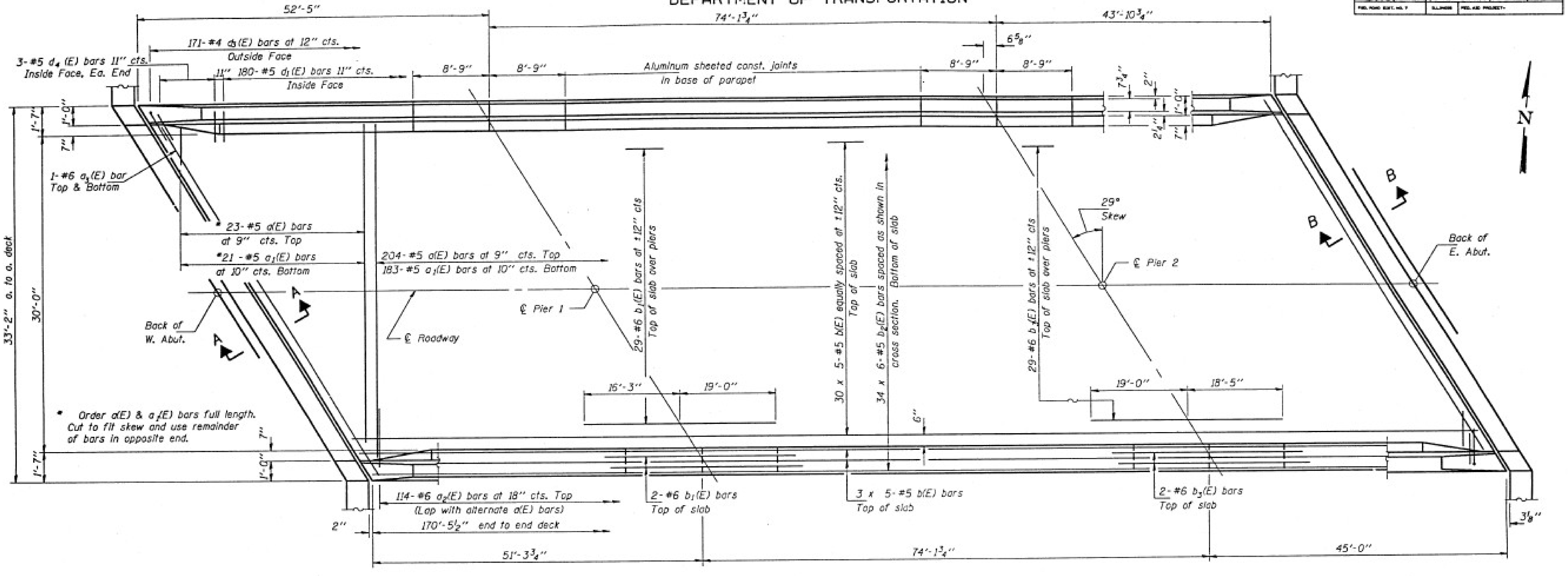
ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.		11.9	11.9
Expansion Bolts ¾"	Each		216	216
Structure Excavation	Cu. Yd.		61	61
Preformed Joint Seal 2½"	Lin. Ft.	38		38
Preformed Joint Seal 4"	Lin. Ft.	38		38
Class X Concrete Superstructure	Cu. Yd.	177		177
Protective Coat	Sq. Yd.	139		139
Elastomeric Bearing Assembly Type I	Each	14		14
Elastomeric Bearing Assembly Type II	Each	7		7
Class X Concrete	Cu. Yd.		51.6	51.6
Structural Steel	L.S.	.62		.62
Stud Shear Connectors	Each	2604		2604
Reinforcement Bars, Epoxy Coated	Pound	39670	4840	44510
Steel Piles HP8 x 36	Lin. Ft.		270	270
Test Pile Steel HP8 x 36	Each		1	1
Name Plates	Each	1		1
Bridge Seat Sealer	L.S.		.5	.5

GENERAL PLAN
U.S. ROUTE 40 OVER
MILL ROAD
O.R. 12 - SECTION FX-VBR
CUMBERLAND COUNTY
STATION 773+56.95
STRUCTURE NO. 018-0009

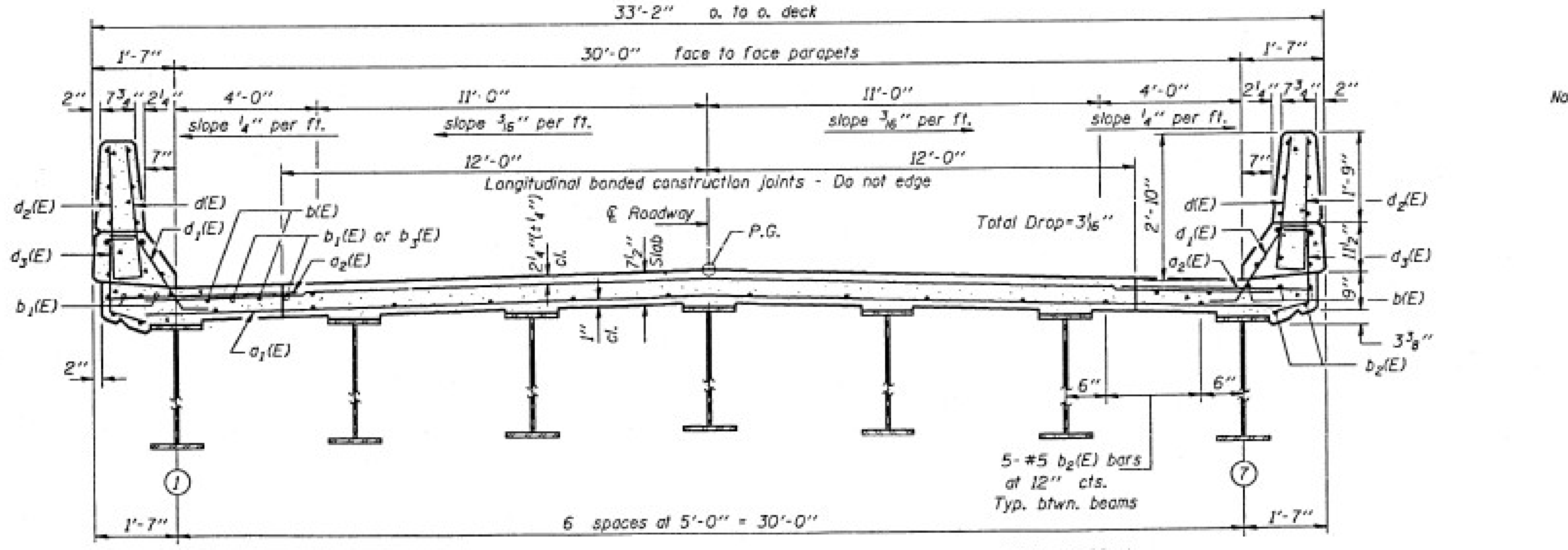
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. OR 12	FX-VBR	CUMBERLAND	45	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
16 SHEETS



PLAN



CROSS SECTION
(Looking East)

Notes: See Sheet #5 of 16 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet #6 of 16 for Sec. A-A & B-B.

MIN. BAR LAP
#5 Bar = 1'-8"

SUPERSTRUCTURE
O.R. 12 SECTION FX-VBR
CUMBERLAND COUNTY
STATION 773+56.95

DESIGNED	Walt J Holly
CHECKED	Rosado
DRAWN	J.T.Downing
CHECKED	GR

Dec. 20 1989
EXAMINED Jorj D. Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

S-1-R(>15°) 12-31-87

MODEL: 74E48-09-6 [Sheet]
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	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 6 OF 9 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	71
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

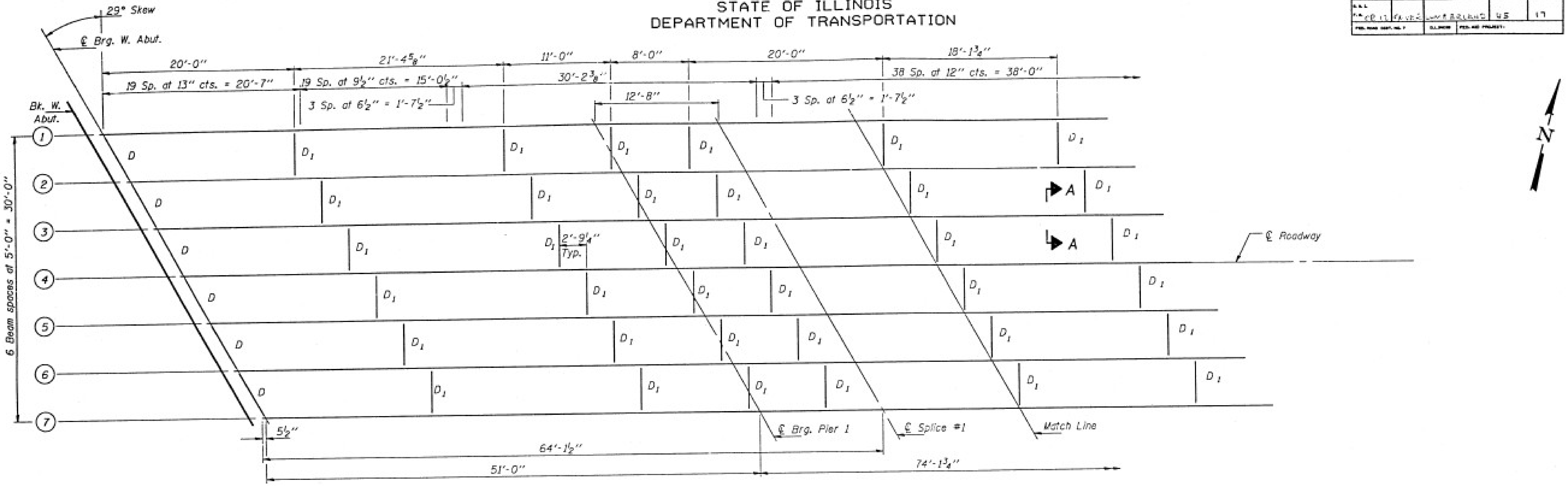
I-70 CLARK

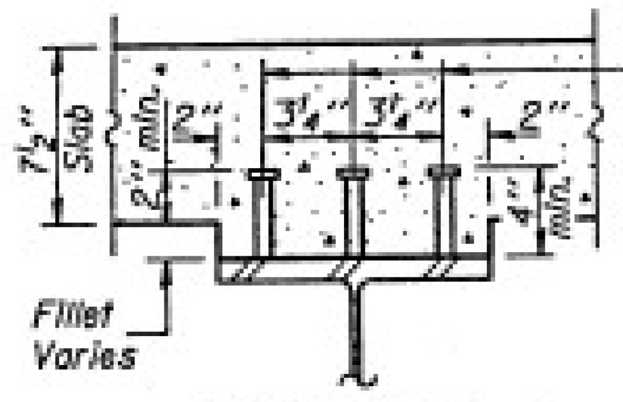
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. O.R. 12	FX-VBR	CUMBERLAND	45	17

FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:

SHEET NO. 7
16 SHEETS

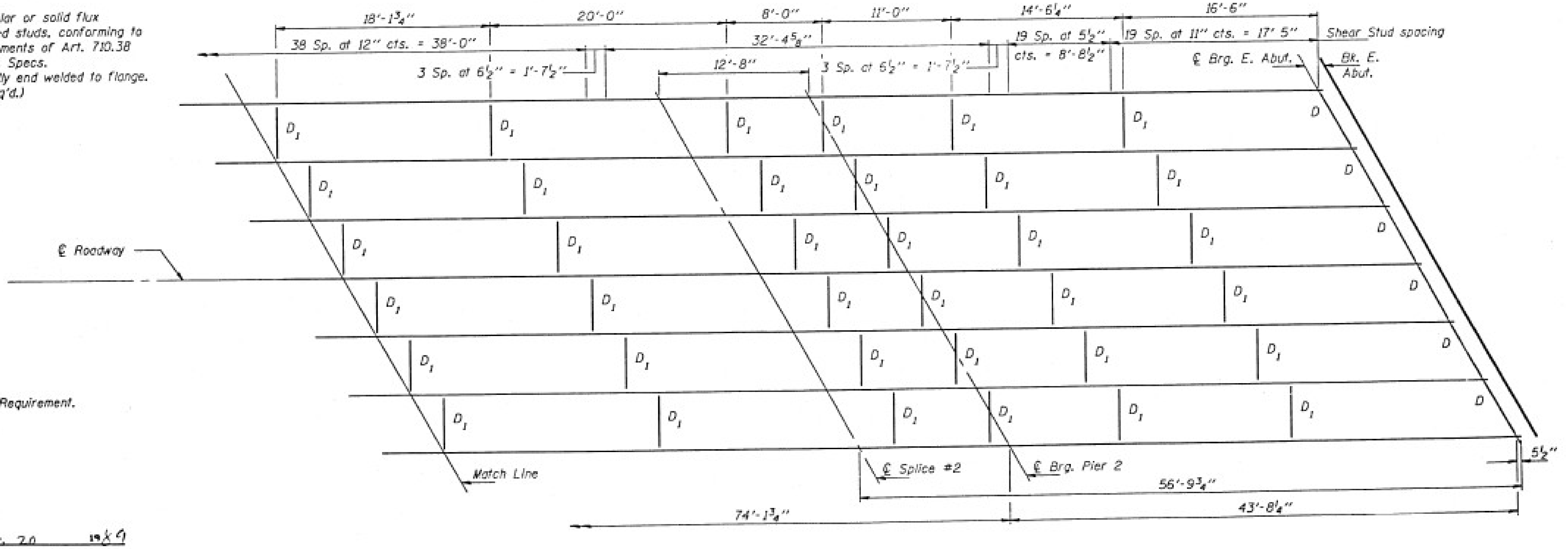
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





¾''ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (2604 Req'd.)

SECTION A-A



Notes: N.T.R. designates Notch Toughness Requirement.
Work this sheet with sh.#8 of 16.

FRAMING PLAN
(All Beams are W30 x 116 N.T.R.)

DESIGNED Walt J Hell
CHECKED
DRAWN J.T.Downing
CHECKED W J H

Dec. 20 1969
EXAMINED Oraj L Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL
O.R. 12 SECTION FX-VBR
CUMBERLAND COUNTY
STATION 773+56.95

MODEL: 74E48-09-7 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-Existing Structure Details.dgn

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	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE: SHEET 7 OF 9 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	72
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* TOP OF BEAM ELEVATIONS

Location	Beam #1	Beam #2	Beam #3	Beam #4	Beam #5	Beam #6	Beam #7
℄ Brg. W. Abut.	574.60	574.79	574.95	575.12	575.13	575.13	575.12
℄ Brg. Pier 1	576.13	576.32	576.48	576.65	576.66	576.66	576.65
Splice #1	576.52	576.70	576.87	577.03	577.04	577.04	577.03
Splice #2	577.98	578.16	578.32	578.48	578.48	578.48	578.46
℄ Brg. Pier 2	578.36	578.53	578.69	578.84	578.84	578.84	578.82
℄ Brg. E. Abut.	579.61	579.78	579.94	580.09	580.08	580.07	580.04

* For fabrication only.

INTERIOR BEAM MOMENT TABLE

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in 4)	4930	4930	4930	4930	4930
Ic	(in 4)	12895		12895		12895
Ss	(in 3)	329	329	329	329	329
Sc	(in 3)	485		485		485
Z	(in 3)	378	378	378	378	378
D	(K/ft.)	.618	.86	.618	.86	.618
M D	('K)	87.8	-314.1	173.7	-314.8	45.8
s D	(K/ft.)	.242		.242		.242
Ms D	('K)	42.9		87.8		25.2
M L	('K)	253.4	173.6	335.4	157.3	199.2
M (Imp)	('K)	70.9	46.3	83.8	45.2	59.7
$\frac{5}{3}$(M L + I)	('K)	540.5	-366.5	698.7	-354.2	431.5
Ma	('K)	872.6	923.8	1248.3	859.7	653.3
Mu	('K)	2058	1134	2058	1134	2058
fs D non-comp	(k.s.i.)	3.2	12.6	6.3	11.5	1.7
fs D (comp)	(k.s.i.)	1.1		2.2		.6
fs $\frac{5}{3}$(L + I)	(k.s.i.)	13.4	13.4	17.3	12.9	10.7
fs (Overload)	(k.s.i.)	17.7	26.0	25.8	24.4	13.0
VR	(K)	37.4		38.6		37.0

INTERIOR BEAM REACTION TABLE

		W. Abut.	Pier 1	Pier 2	E. Abut.
R D	(K)	15.2	60.9	57.5	11.6
R L	(K)	26	32.6	31.7	24.9
Imp.	(K)	7.3	8.8	8.6	7.5
R (Total)	(K)	48.5	102.3	97.8	44.0

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

Ic and Sc 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.

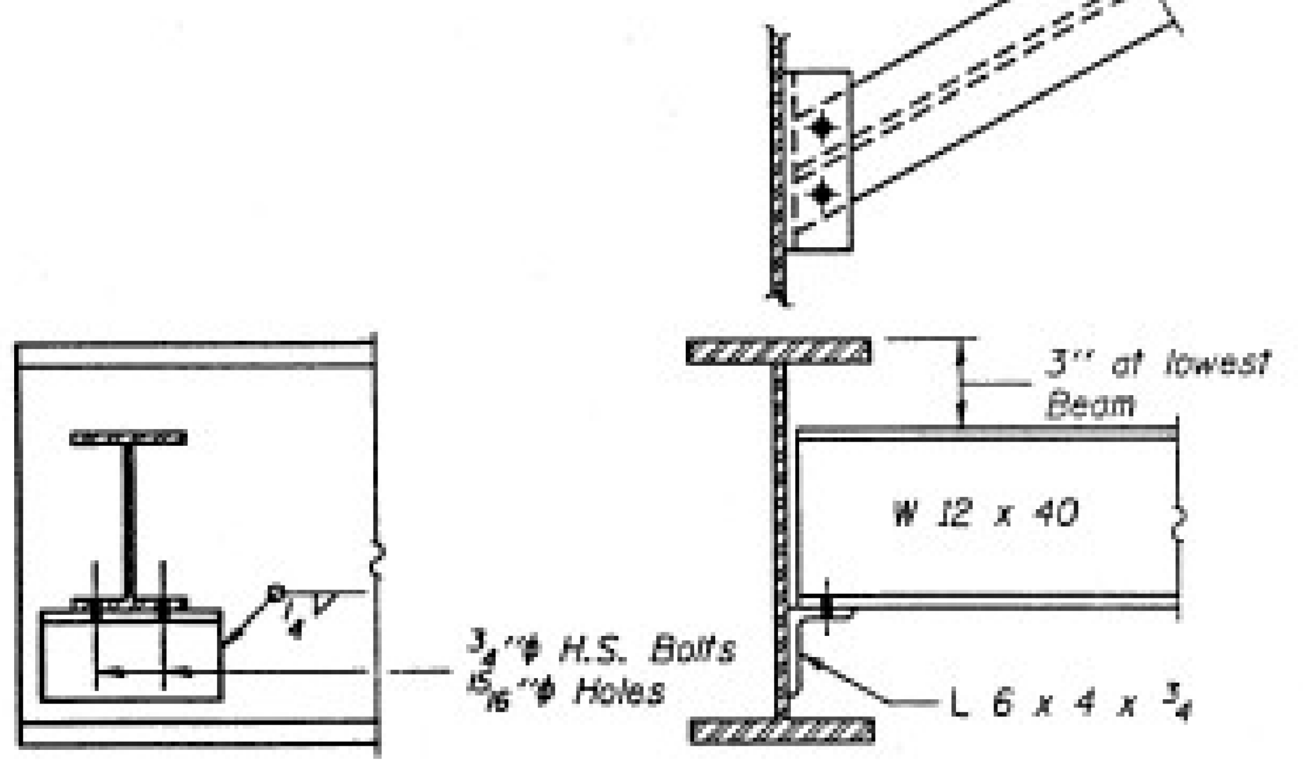
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

Ma (Applied Moment)=1.3[M D + Ms D + $\frac{5}{3}$(M L + I)].

Mu is the Full Plastic Moment Capacity for Compact, Braced section.

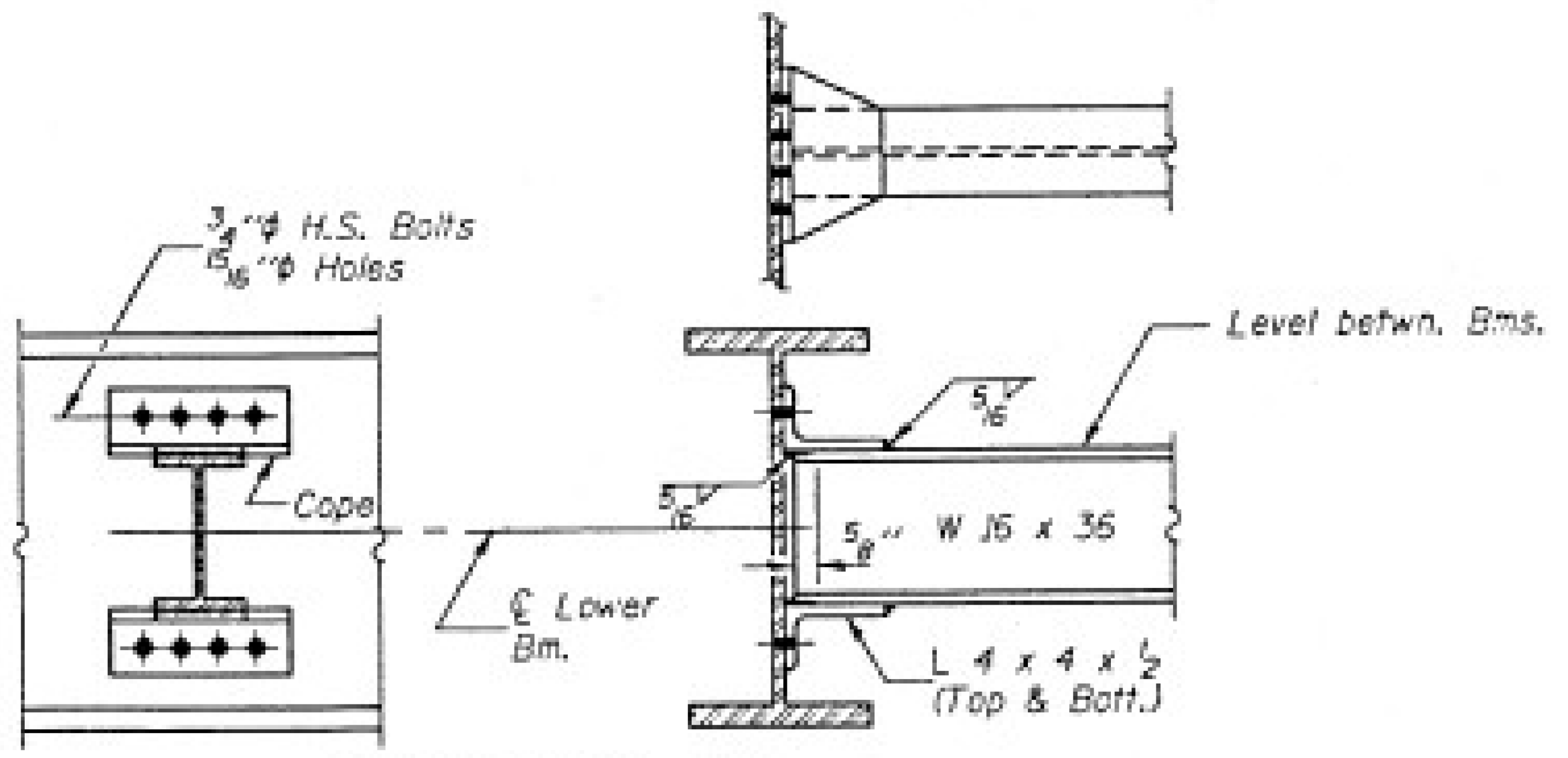
fs (Overload) is the sum of the stresses due to M D + Ms D + $\frac{5}{3}$(M L + I).

fs (Total) is the sum of the stresses due to 1.3[M D + Ms D + $\frac{5}{3}$(M L + I)].



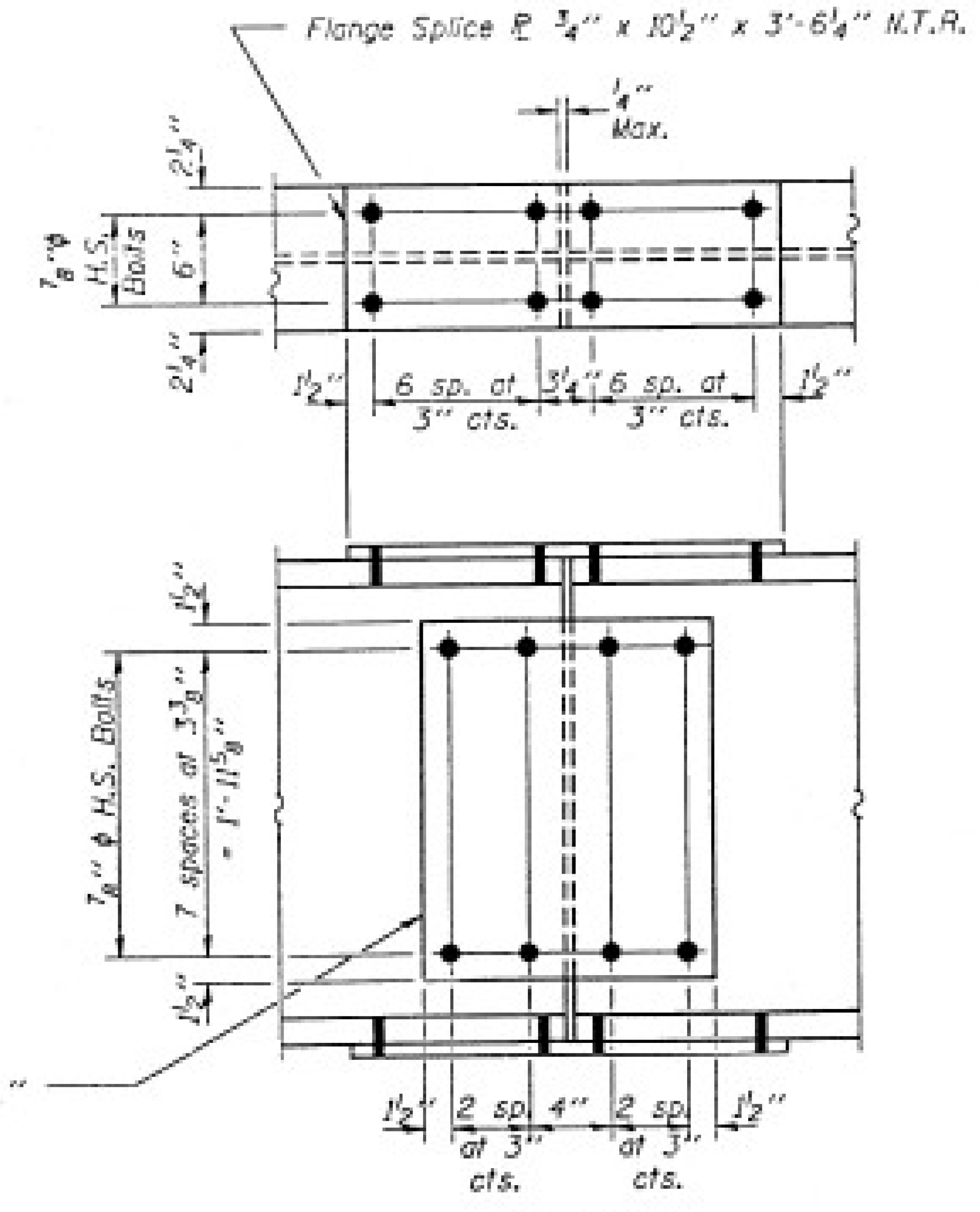
DIAPHRAGM D

12 Required



DIAPHRAGM D1

60 Required



SPLICE

Note: Two hardened washers shall be required over all $\frac{15}{16}$''ϕ holes.

DESIGNED Walter J. Hill
CHECKED
DRAWN J.T.Downing
CHECKED WJH GR

Dec. 20 1959
EXAMINED
PASSED James T. Rayburn
APPROVED

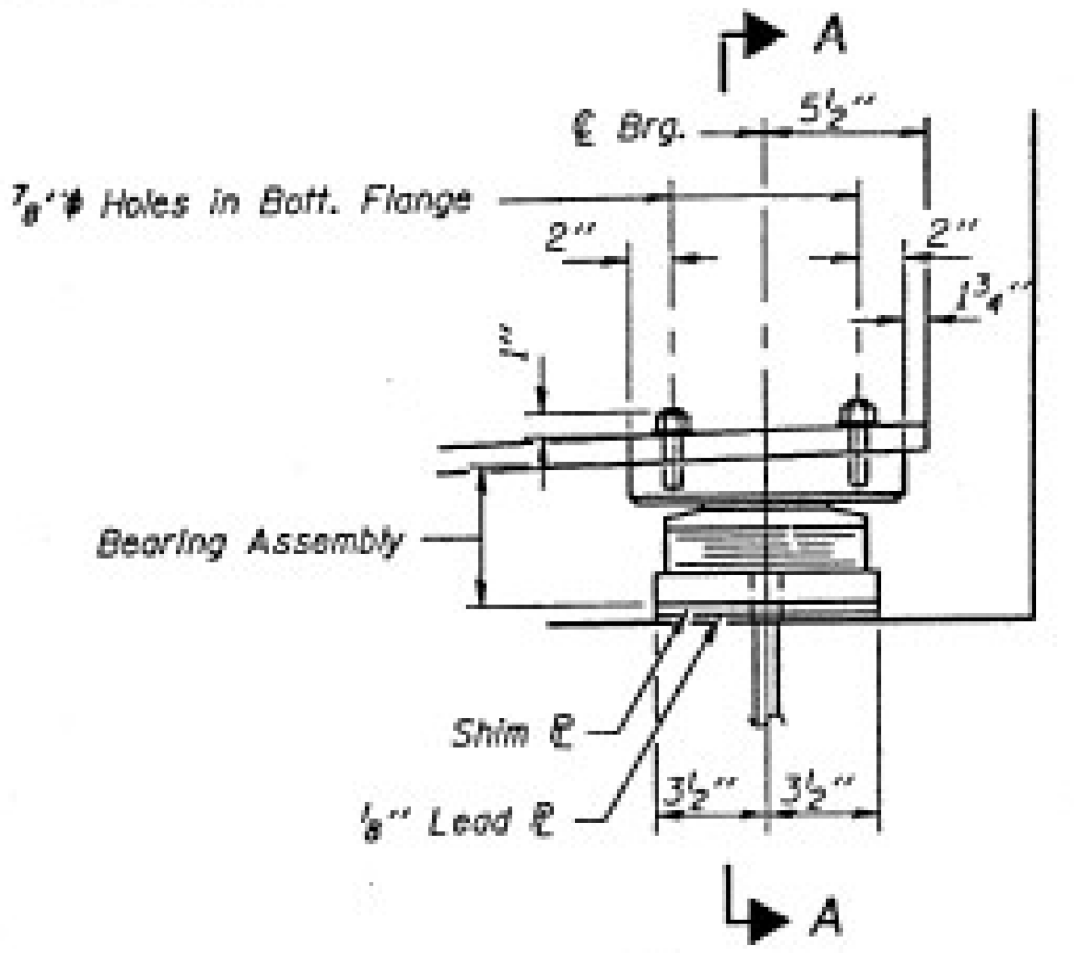
I-2-D 8-30-80

STRUCTURAL STEEL DETAILS
O.R. 12 SECTION FX-VBR
CUMBERLAND COUNTY
STATION 773+56.95

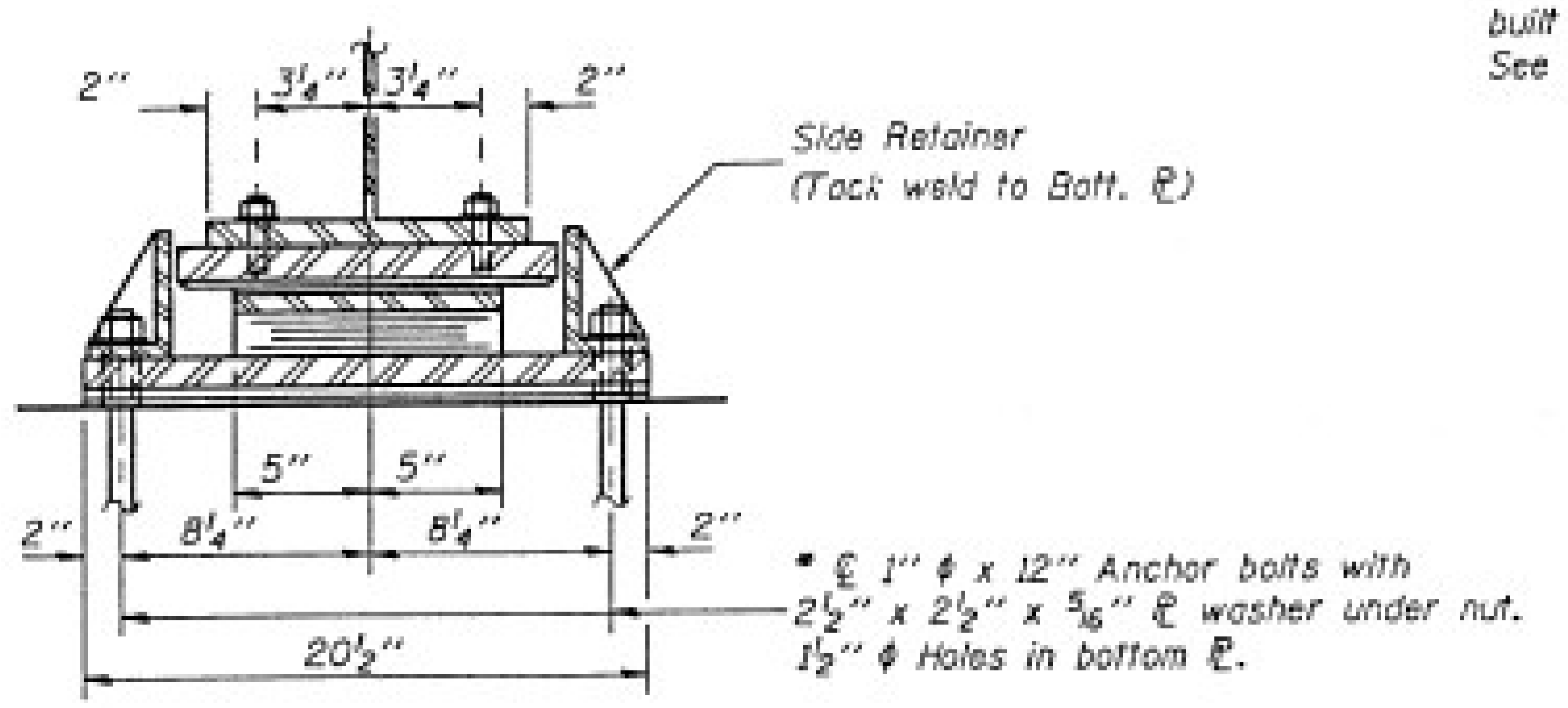
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A. OR 12	FX-VBR	CUMBERLAND	45	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 9
16 SHEETS



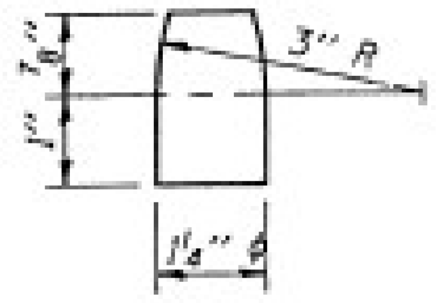
ELEVATION AT EAST ABUT.


2"
3¼"
3¼"
2"
Side Retainer
(Tack weld to Bott. ℞)
5"
5"
2"
8¼"
8¼"
2"
20½"
* ℄ 1" ϕ x 12" Anchor bolts with 2½" x 2½" x 5/16" ℞ washer under nut. 1½" ϕ Holes in bottom ℞.

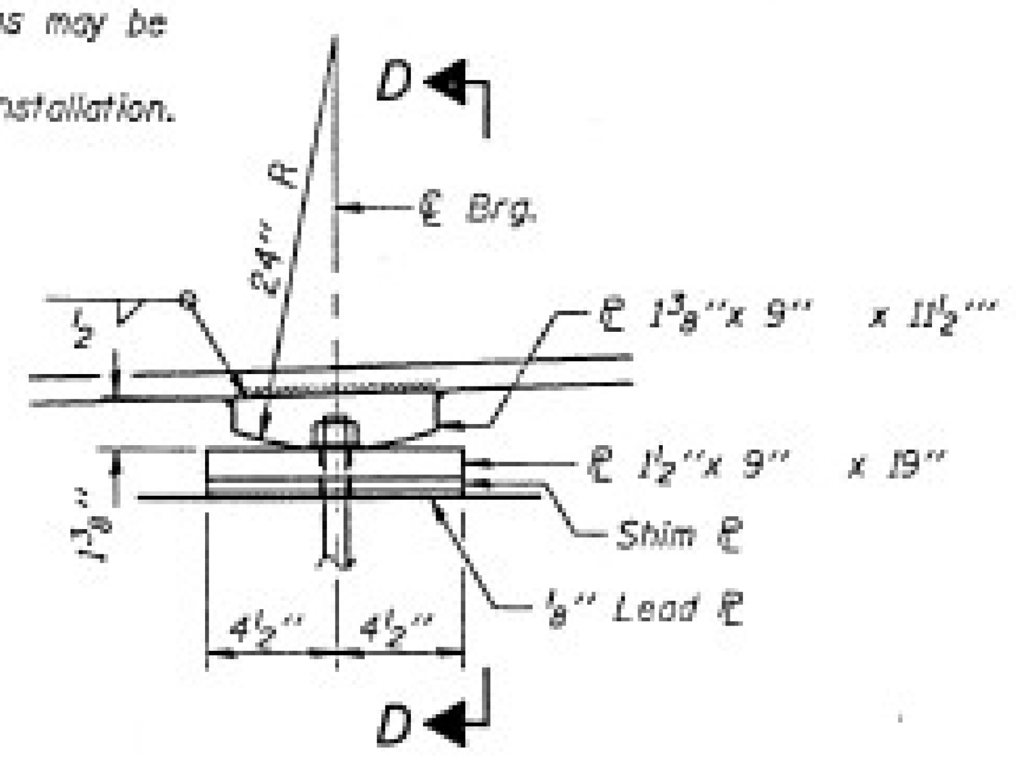
SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.

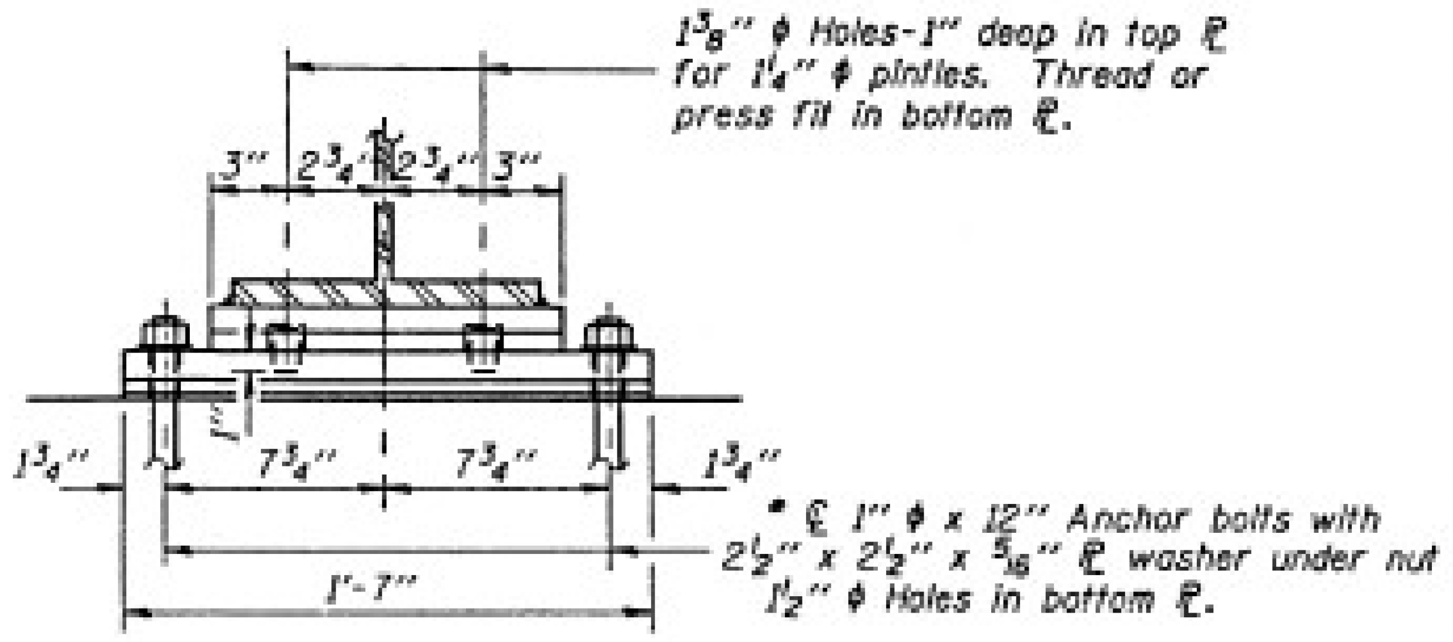
* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet #16 of 16 for Anchor Bolt Installation.



PINTLE

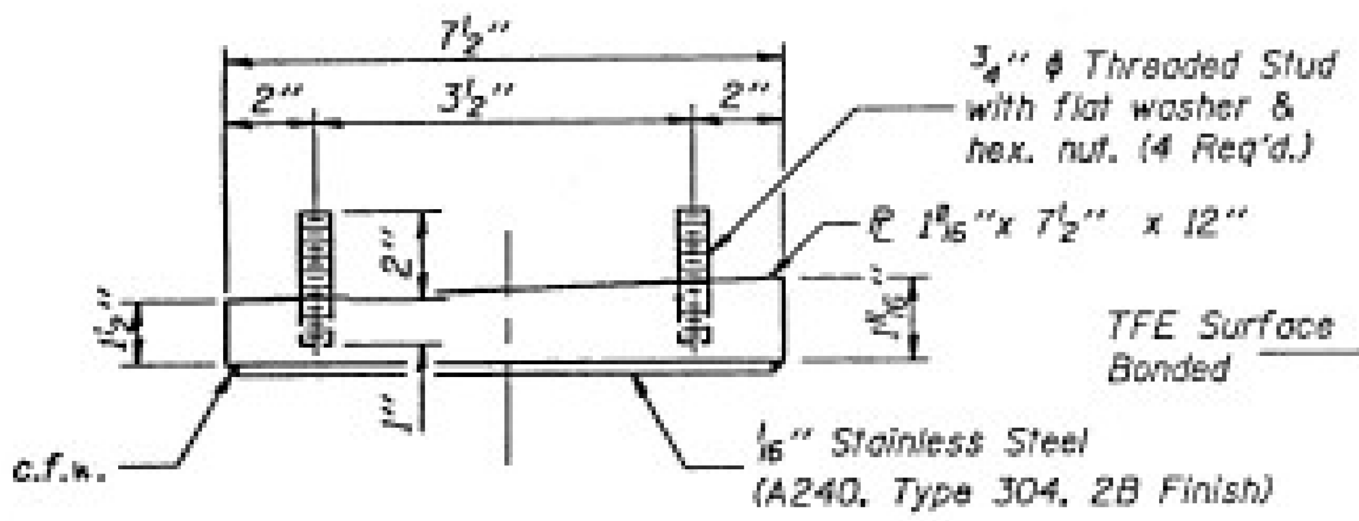


ELEVATION AT PIER 1

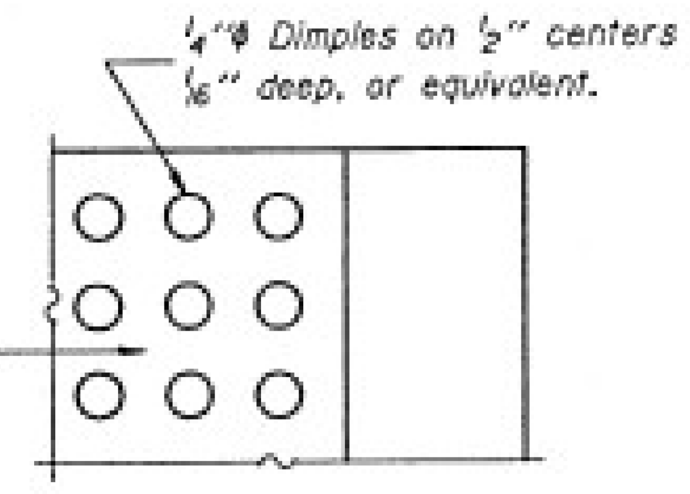

1⅜" ϕ Holes-1" deep in top ℞ for 1¼" ϕ pintles. Thread or press fit in bottom ℞.
3"
2¾"
2¾"
3"
1"
1¾"
7¾"
7¾"
1¾"
1'-7"
* ℄ 1" ϕ x 12" Anchor bolts with 2½" x 2½" x 5/16" ℞ washer under nut 1½" ϕ Holes in bottom ℞.

SECTION D-D

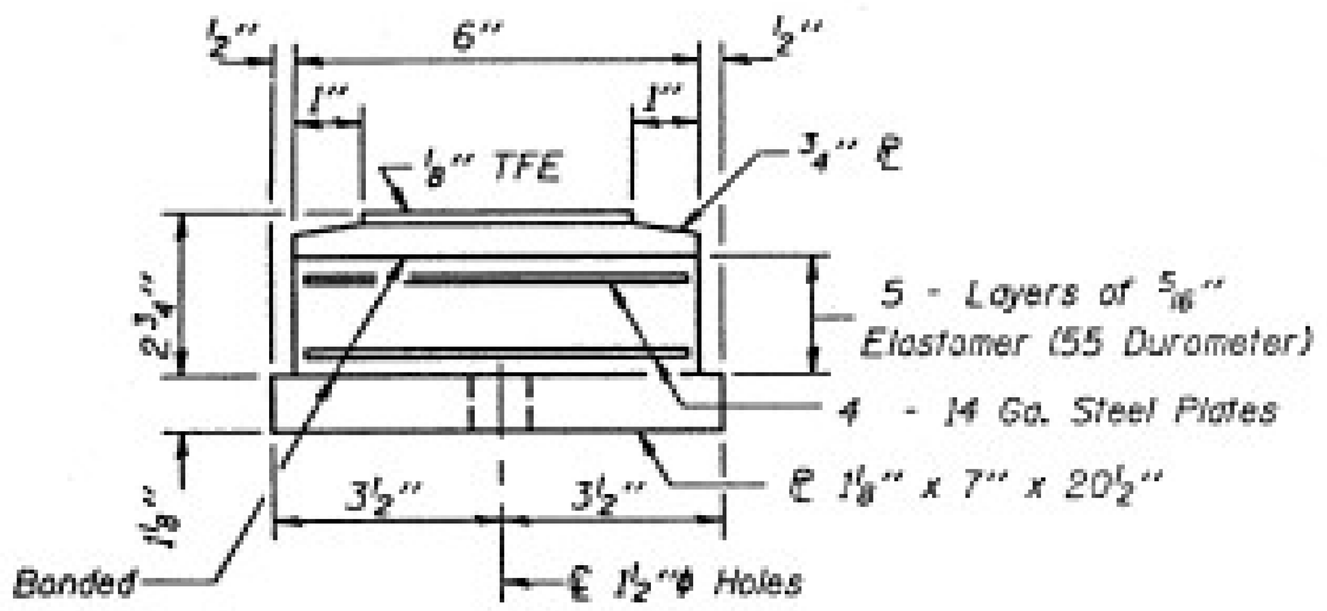
FIXED BEARING


7½"
2"
3½"
2"
¾" ϕ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
℞ 1⅝"x 7½" x 12"
2"
1½"
1"
1/16"
c.f.w.
1/16" Stainless Steel (A240, Type 304, 2B Finish)

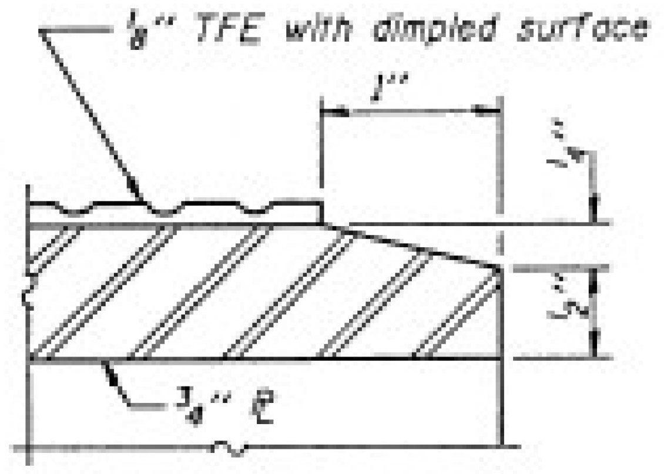
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



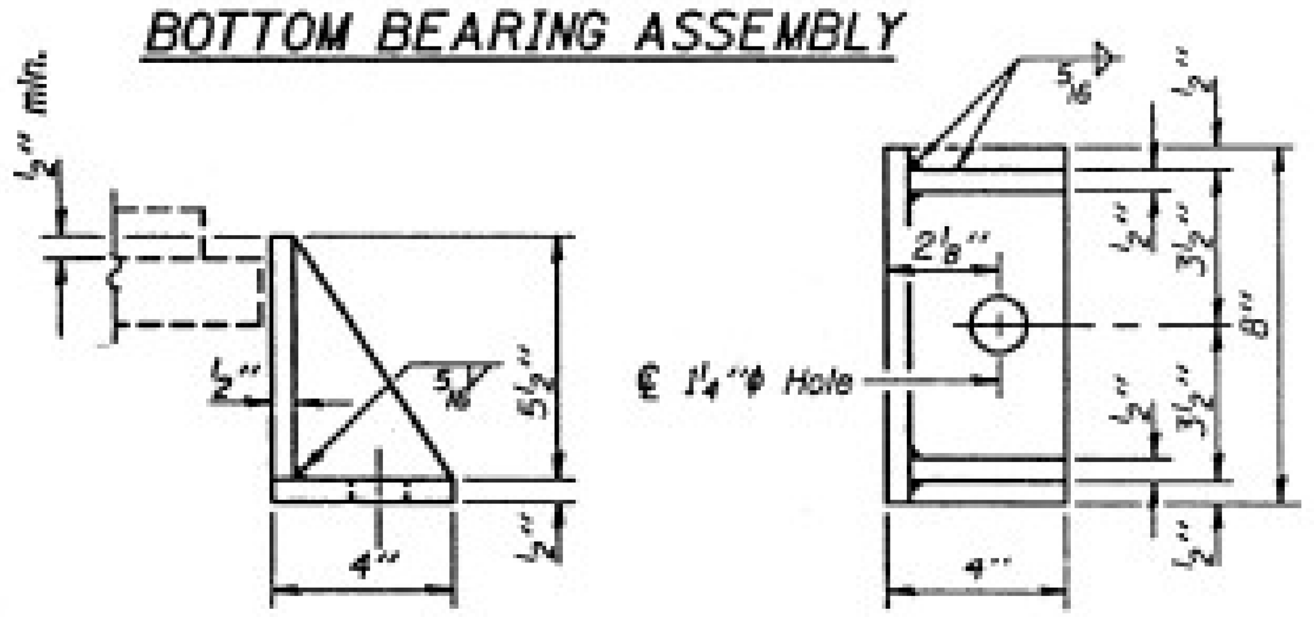
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

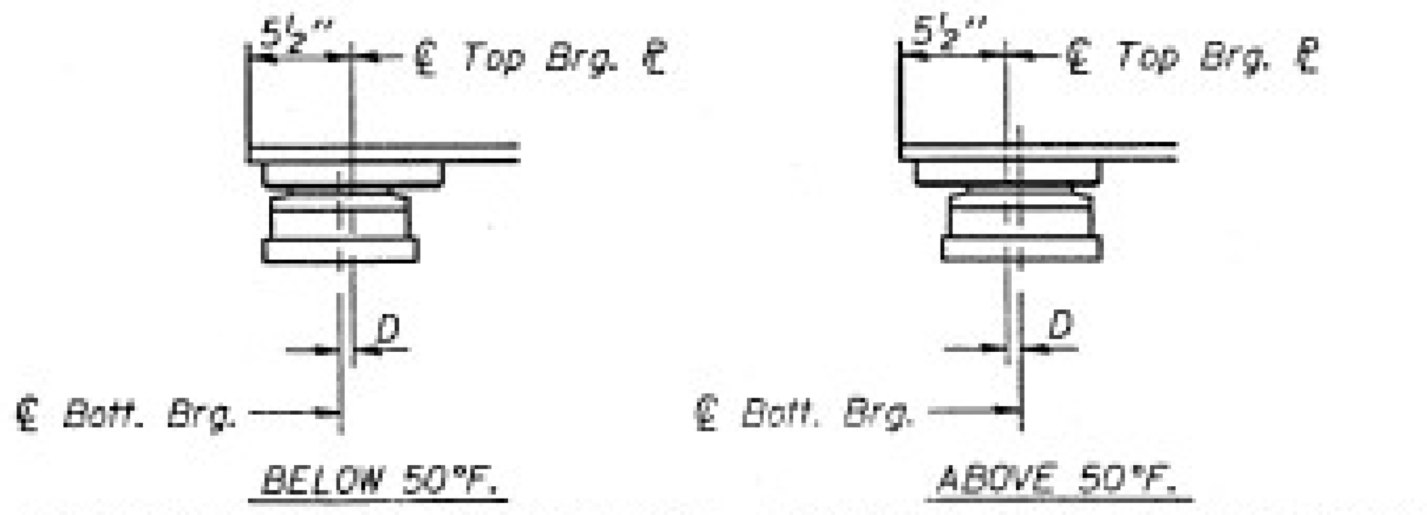
Note: The $\frac{1}{8}$" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of $\frac{1}{8}$" 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.

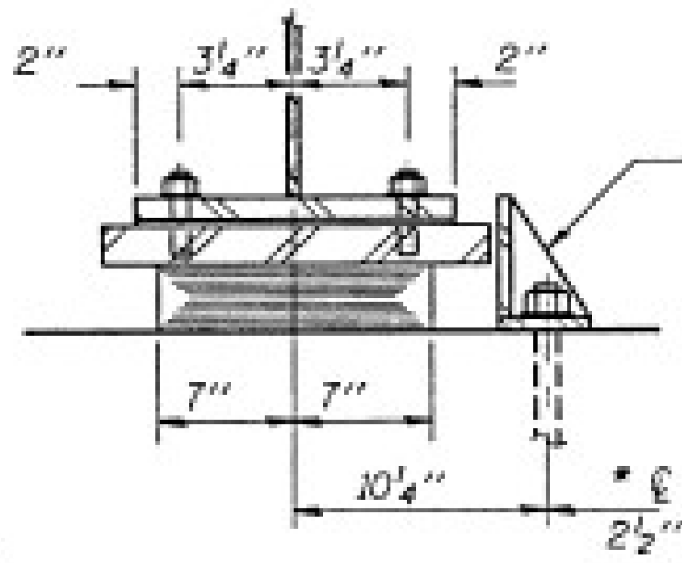


BELOW 50°F.
(Move bott. brg. away from fixed brg.)

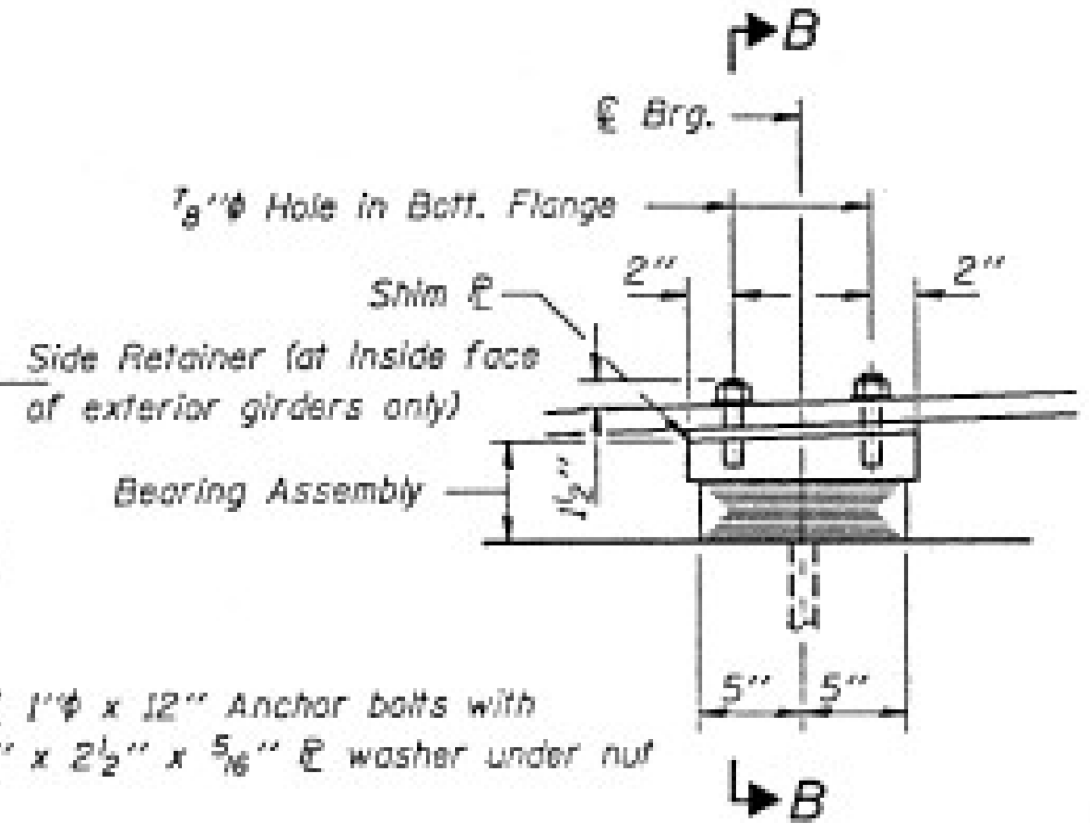
ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=$\frac{1}{8}$" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

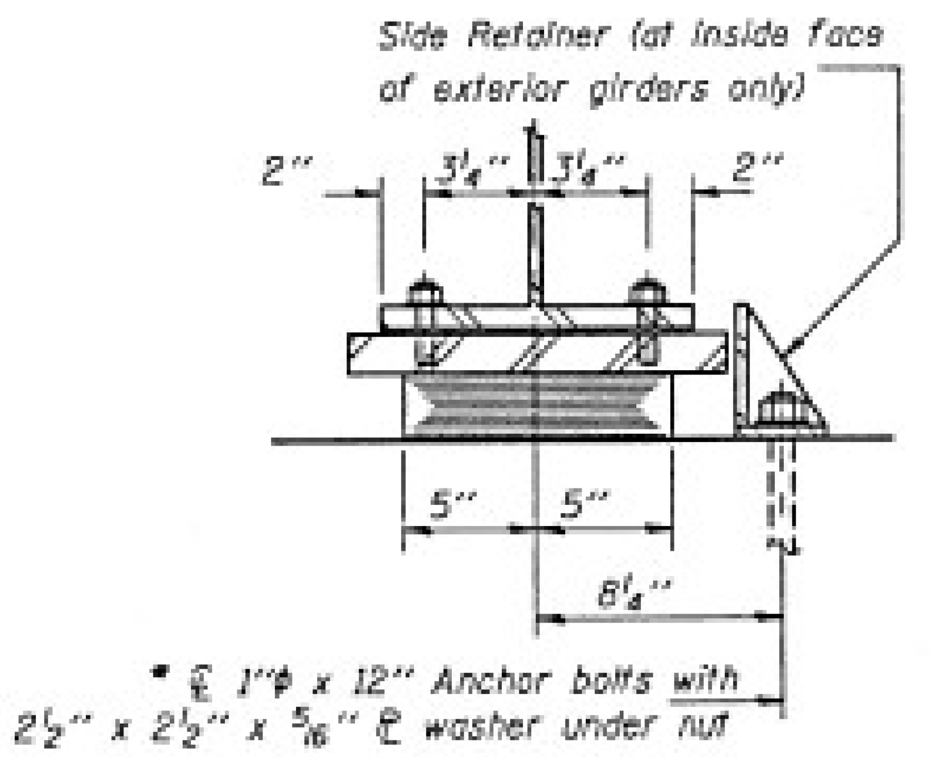

2"
3¼"
3¼"
2"
7"
7"
10¼"
* ℄ 1"ϕ x 12" Anchor bolts with 2½" x 2½" x 5/16" ℞ washer under nut

SECTION B-B

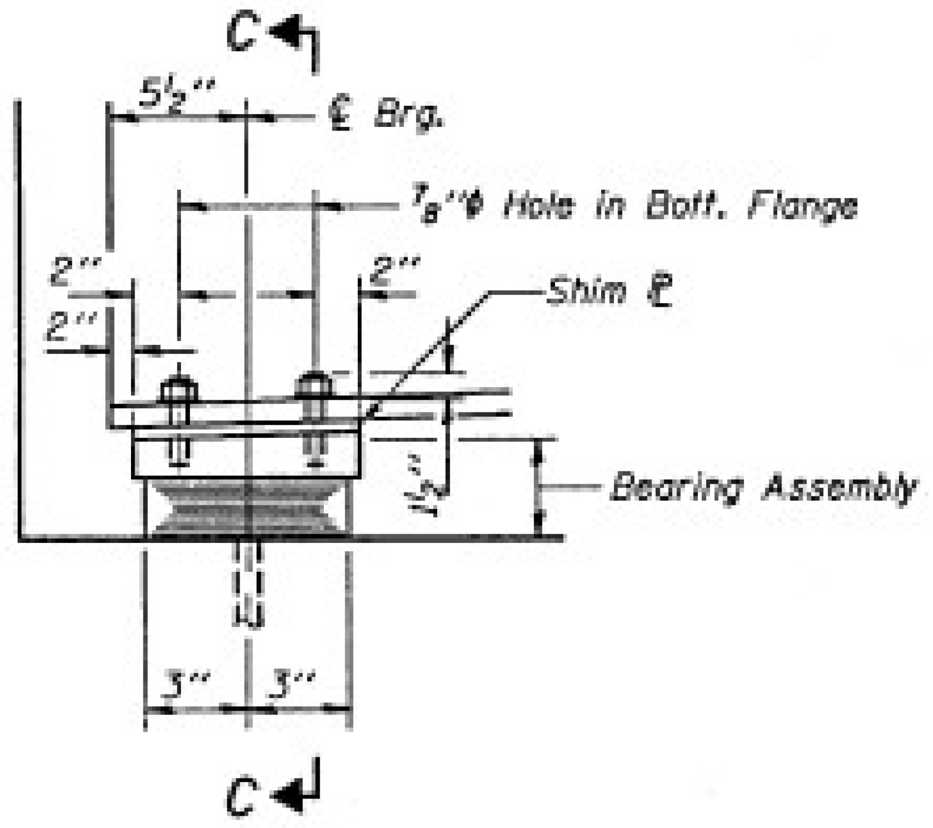


ELEVATION AT PIER 2

TYPE I ELASTOMERIC EXP. BRG.

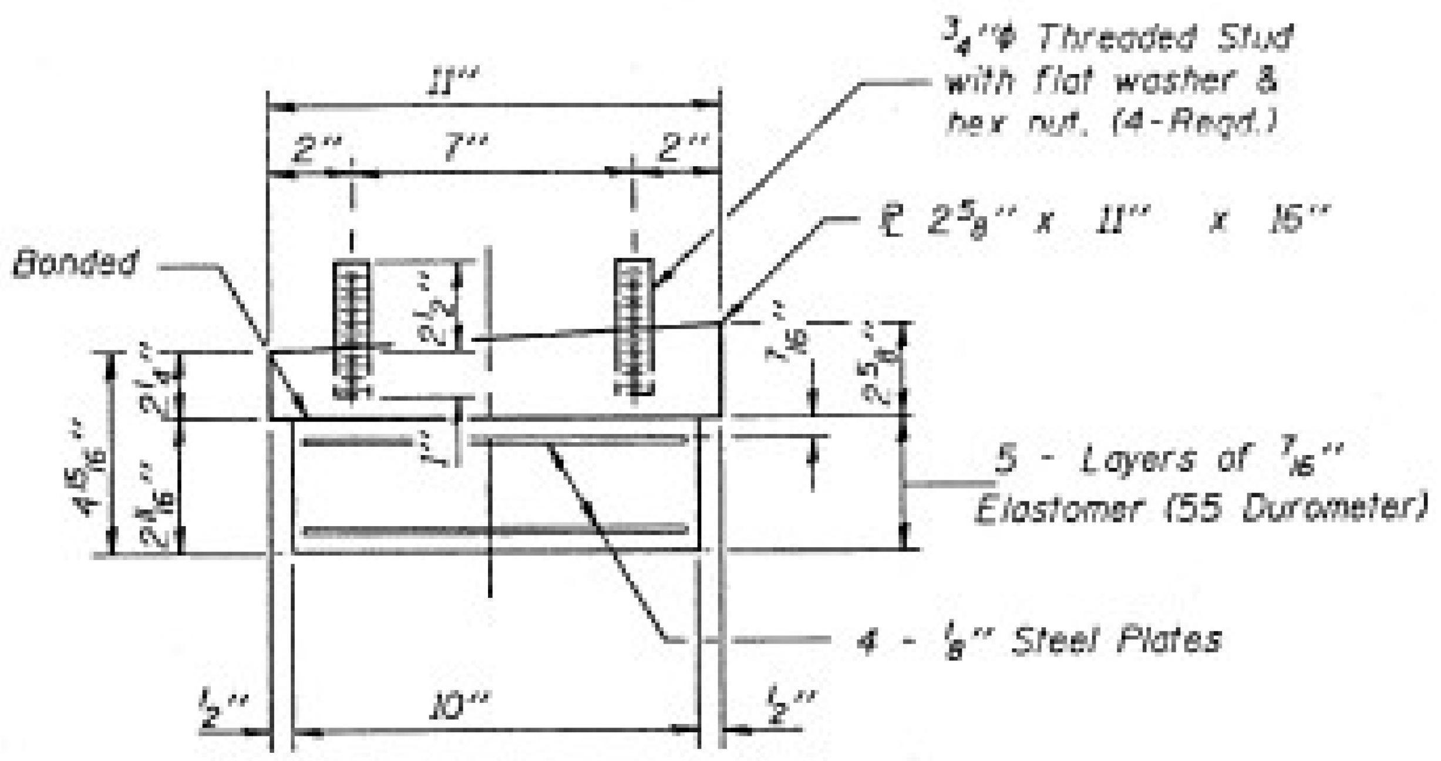

Side Retainer (at inside face of exterior girders only)
2"
3¼"
3¼"
2"
5"
5"
8¼"
* ℄ 1"ϕ x 12" Anchor bolts with 2½" x 2½" x 5/16" ℞ washer under nut

SECTION C-C

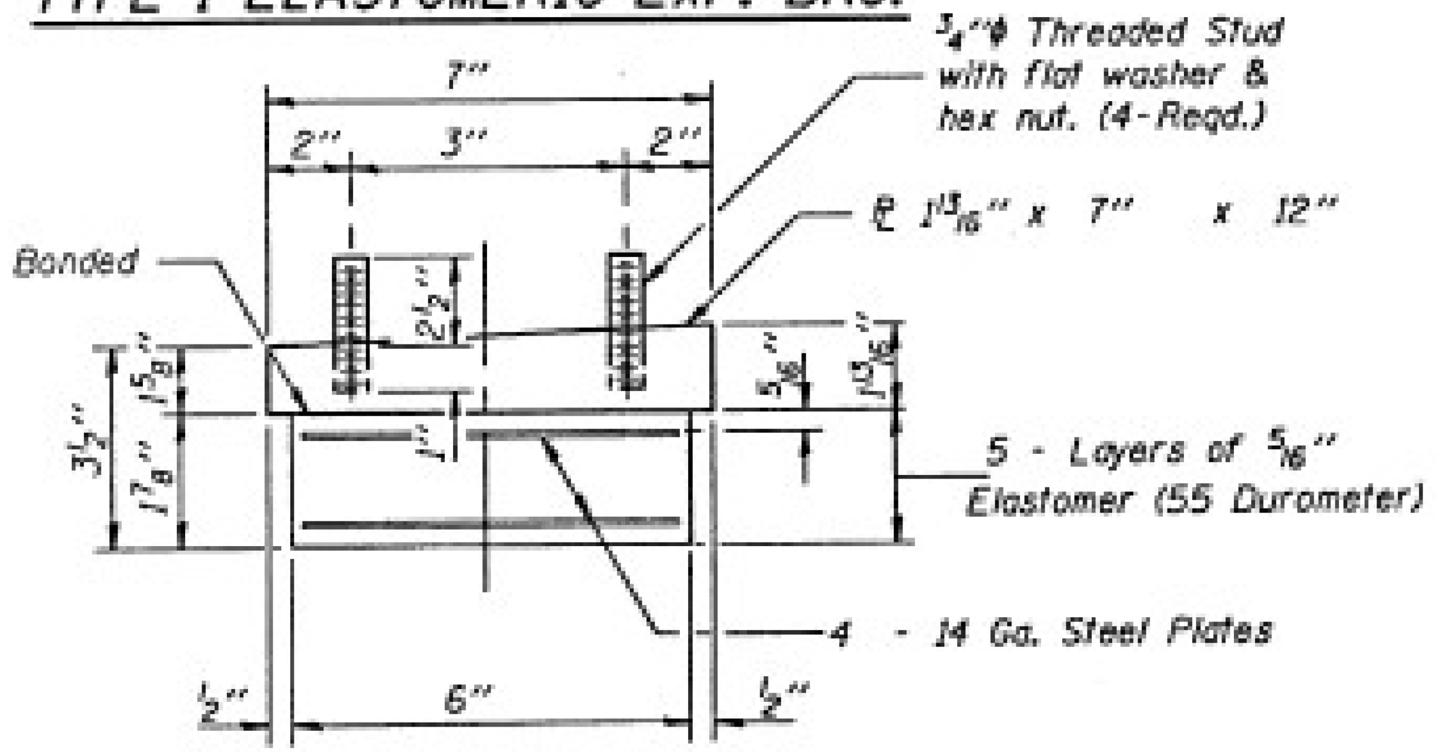


ELEVATION AT WEST ABUT.

TYPE I ELASTOMERIC EXP. BRG.


¾"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
11"
2"
7"
2"
℞ 2⅝" x 11" x 16"
Bonded
2½"
7/16"
2⅝"
4 15/16"
2¼"
2 5/16"
1"
5 - Layers of 7/16" Elastomer (55 Durometer)
4 - ⅛" Steel Plates
½"
10"
½"

BEARING ASSEMBLY PIER 2


¾"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
7"
2"
3"
2"
℞ 1 13/16" x 7" x 12"
Bonded
2½"
3½"
1⅞"
1⅝"
1"
5/16"
1 13/16"
5 - Layers of 5/16" Elastomer (55 Durometer)
4 - 14 Ga. Steel Plates
½"
6"
½"

BEARING ASSEMBLY W. ABUT.

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Elastomeric Bearing Assembly Type II	Each	7

DESIGNED Walter J. Hill
CHECKED Jerome Rauch
DRAWN J.T.Downing
CHECKED WJH GR

Dec. 20 1989
EXAMINED Dragi D. Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

I-2-E1 12-1-83

BEARINGS
O.R. 12 SECTION FX-VBR
CUMBERLAND COUNTY
STATION 773+56.95

MODEL: 74E48-09-9 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer
PLOT DATE = 7/29/2026

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0009

SCALE:
SHEET 9 OF 9 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	74
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

I-70
CLARK

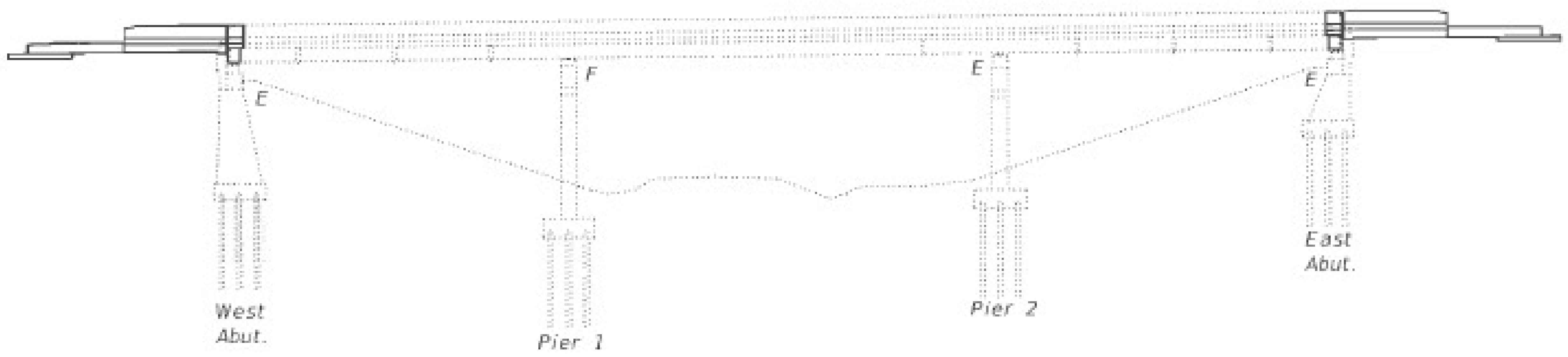
Existing Structure: SN 018-0010 was originally built as FA Route 12, Section FX-VBF in 1950. In 1990, the superstructure was replaced with a 3-span concrete deck on steel I-beams, and the substructure was modified. The structure carries US-40 over Lincoln Drive. The bridge length is 175'-6" back to back abutments and the width is 33'-2" out to out. The proposed project consists of bridge deck repair, new concrete overlay, new deck expansion devices, new concrete approach slabs, and substructure concrete repairs.

Traffic to be detoured.

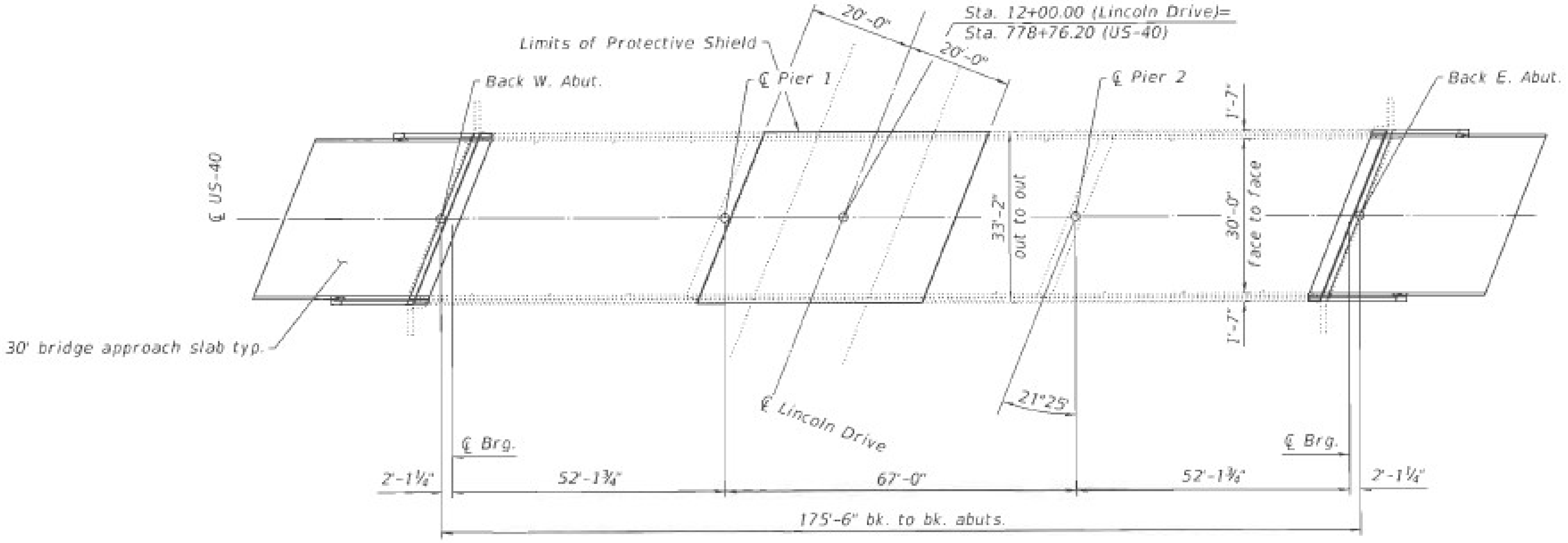
No salvage.

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
4. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.
5. Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
6. Prior to pouring the new concrete deck and end diaphragms, all heavy and loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
7. Protective coat shall be applied to areas of Concrete Superstructures consisting of the front face and top of the parapet and wingwall and the top surface of the expansion joint reconstruction. Protective coat shall also be applied to the new overlay area, and areas of Concrete Superstructure (Approach Slab) including the front faces and tops of the curbs.
8. Synthetic fibers should be added to the Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2¼". See Special Provisions.



ELEVATION



PLAN

No. 4647

RICHARD D. PAYNE

11-30-2020

SIGNATURE

07-23-2020

DATE

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING STRUCTURE DETAILS SN 018-0010	
	DRAWN -	REVISED -			
	CHECKED -	REVISED -			
PLOT DATE = 7/29/2026	DATE -	REVISED -		SCALE:	SHEET 1 OF 7 SHEETS STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	75
		CONTRACT NO. 74E48		
	ILLINOIS FED. AID PROJECT			

I-70

CLARK

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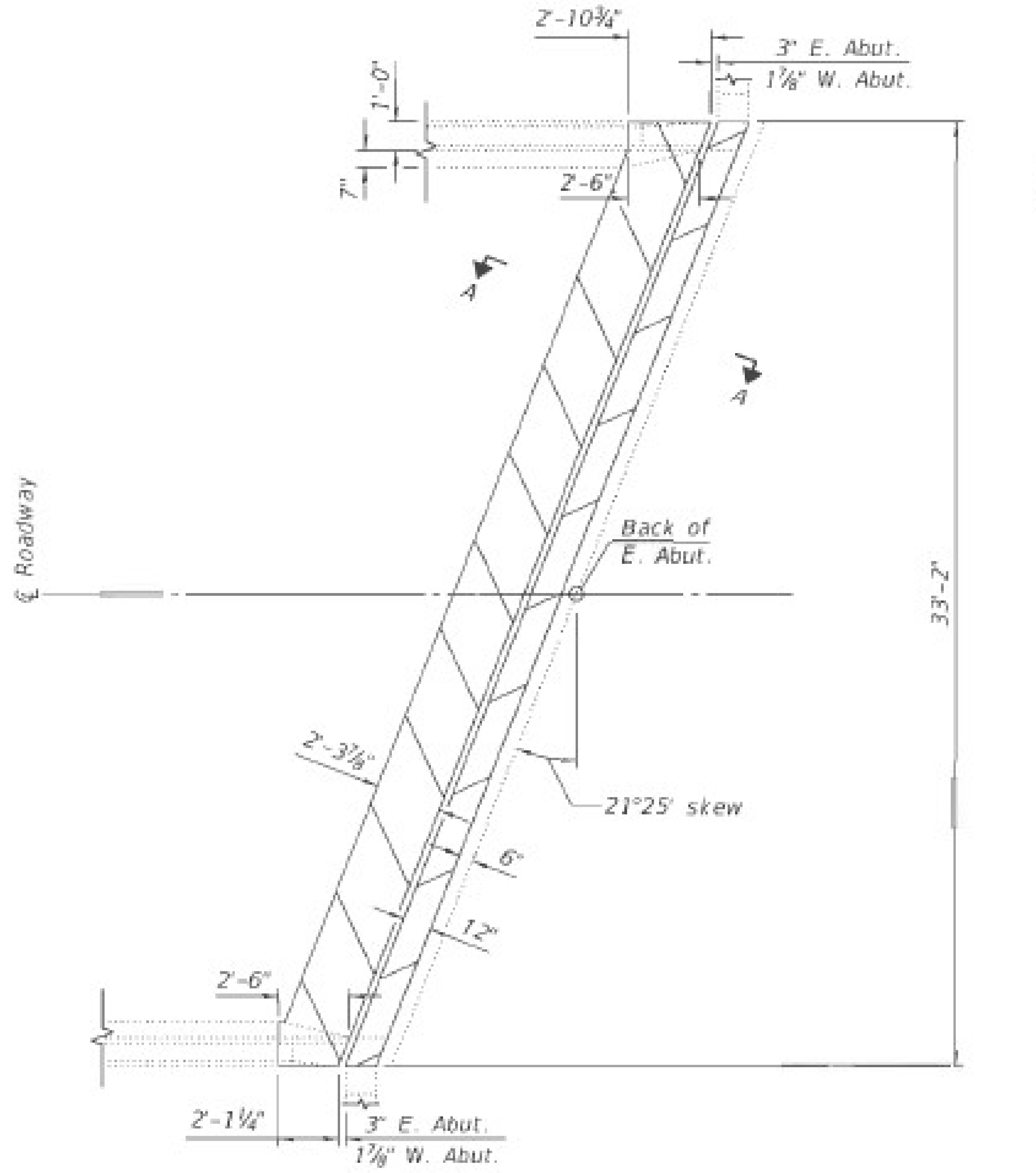
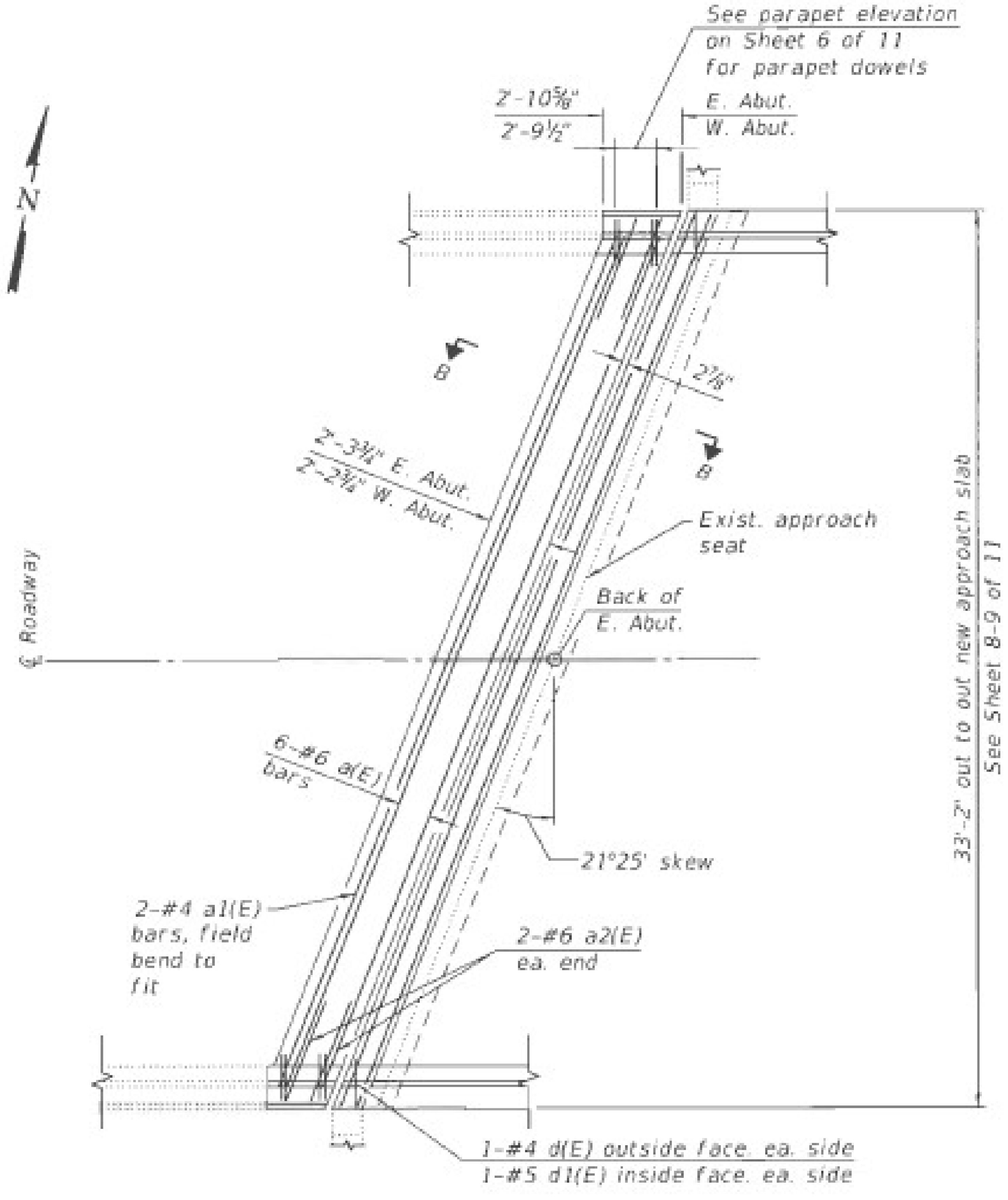
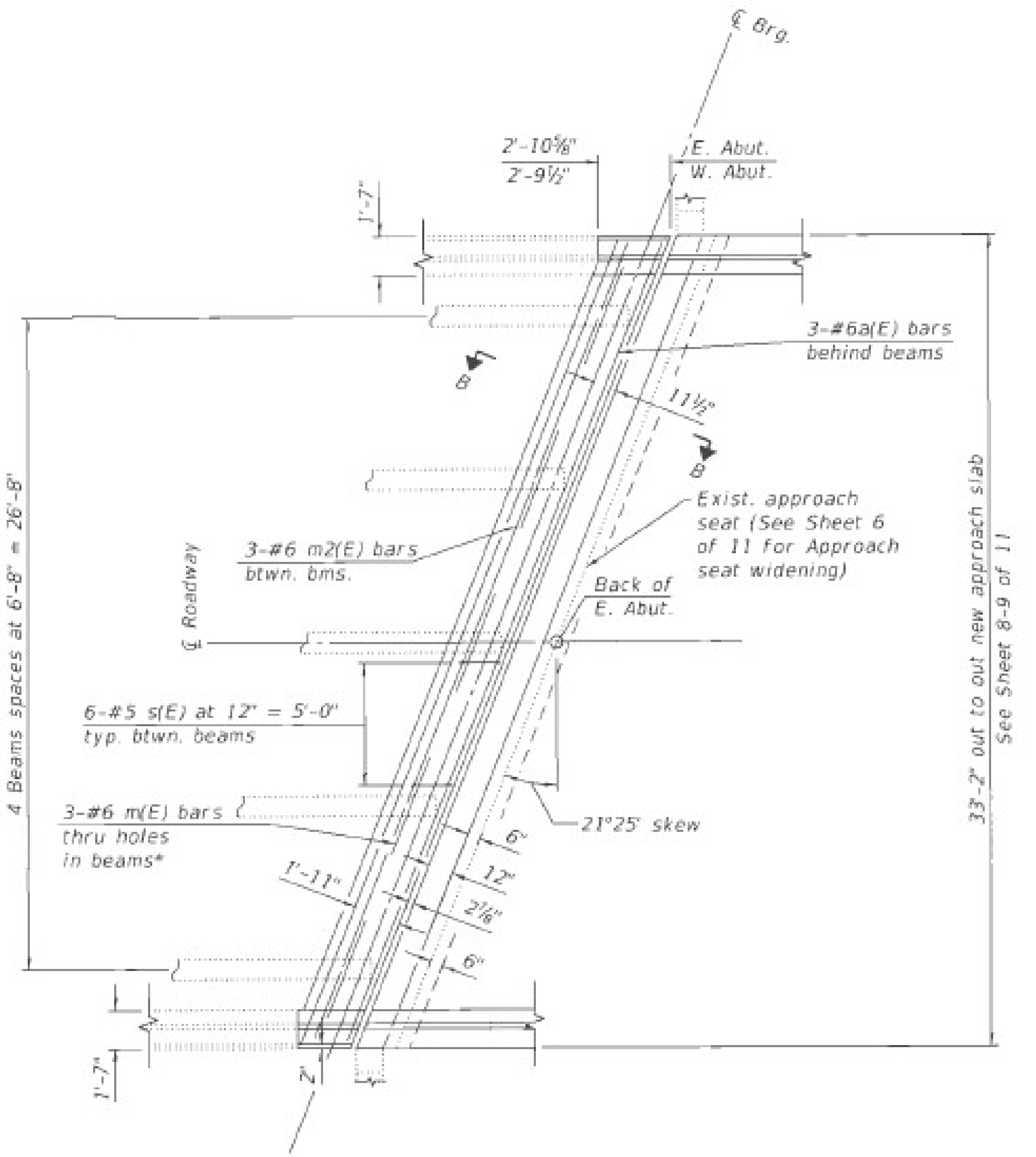


EAST ABUTMENT REMOVAL



EAST ABUTMENT REPLACEMENT

(Showing all rebar except in diaphragm)

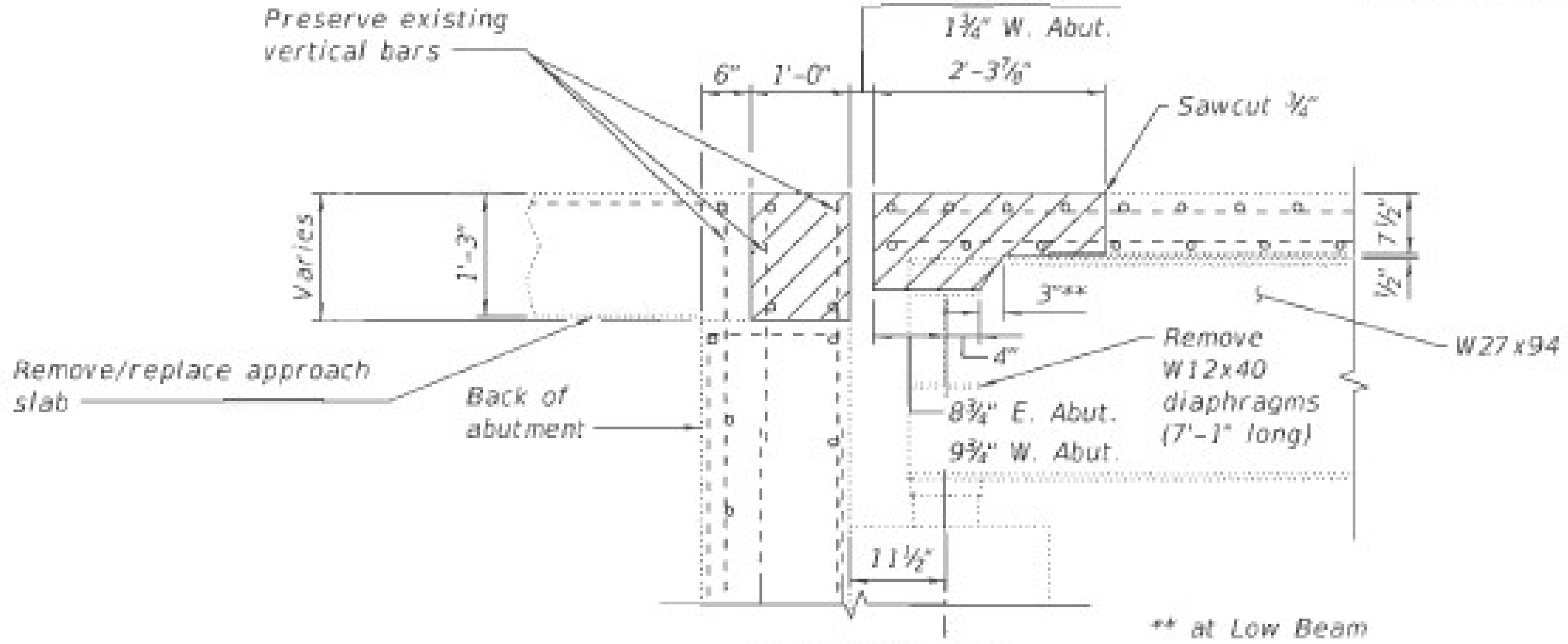


EAST ABUTMENT REPLACEMENT

(Showing rebar in diaphragm only)

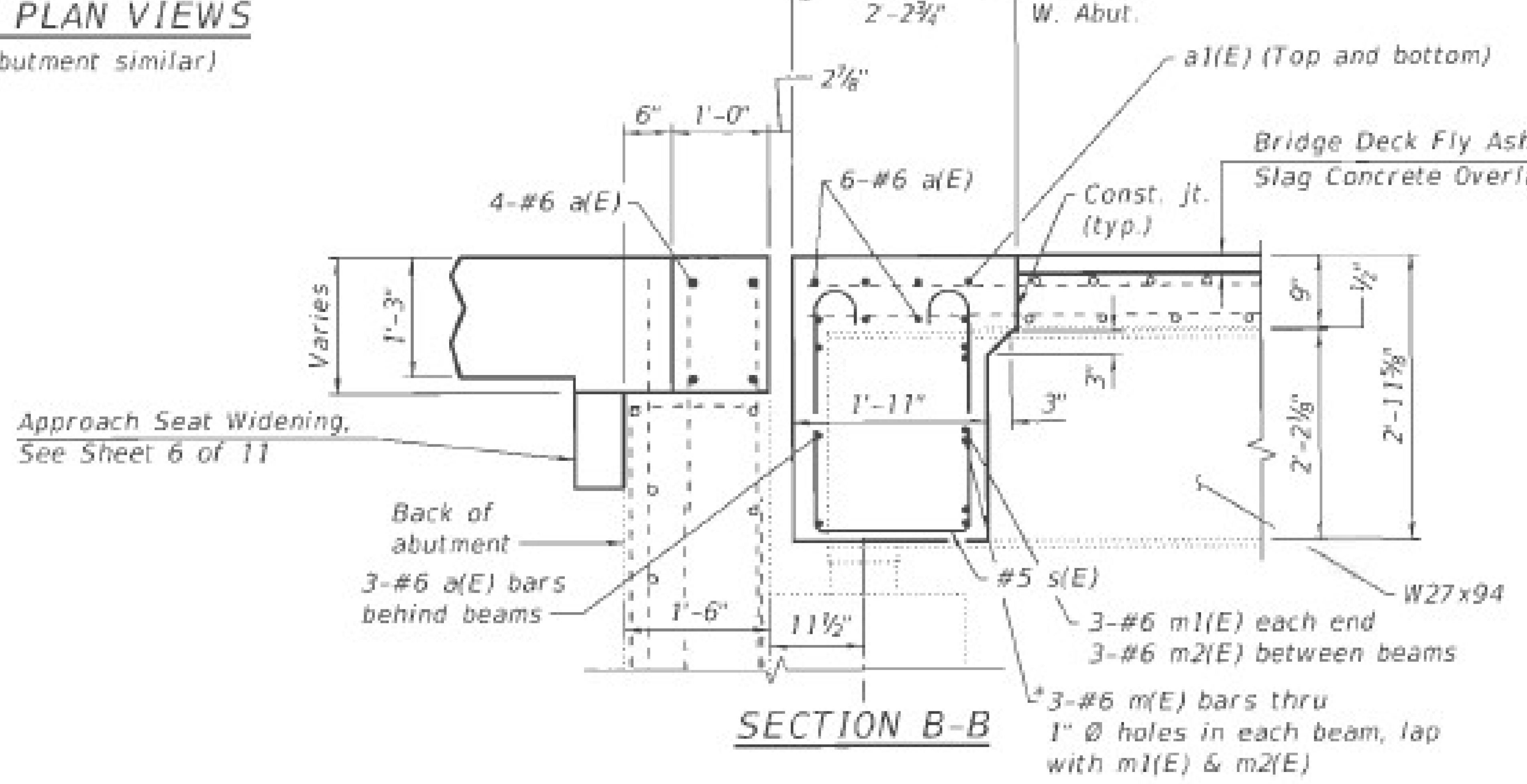
EAST ABUTMENT DECK PLAN VIEWS

(East Abutment shown, West Abutment similar)



SECTION A-A

** at Low Beam



SECTION B-B

* Field drill holes
in Beams, Cost included
in Concrete Superstructure

MODEL: 74E48-10-2 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**EXISTING STRUCTURE DETAILS** **SN 018-0010**		
	DRAWN -	REVISED -				
	CHECKED -	REVISED -				
PLOT DATE = 7/29/2026	DATE -	REVISED -		SCALE:	SHEET 2 OF 7 SHEETS	STA. TO STA.

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	76
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

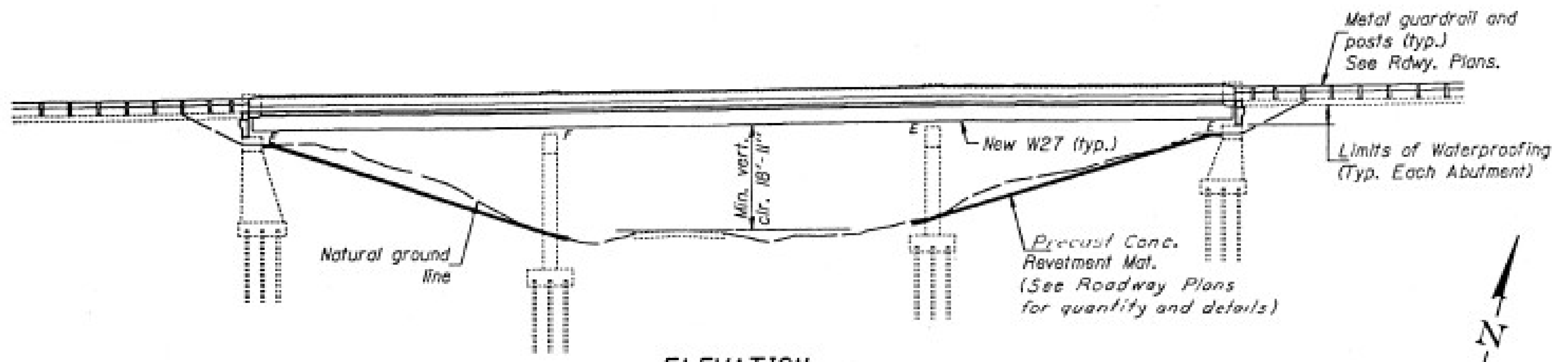
I-70 CLARK

Bench Mark: Chiseled square on North East wingwall, Elev. 589.26

Existing Structure: 018-0010; Built in 1950 as F.A. Route 12 Section FX-VBF, three span continuous steel I-beam bridge with spill-thru abutments. 32'-4" o. to o. and 175'-6" bk. to bk. The contractor shall remove the existing superstructure and replace it with a new superstructure.
Traffic to be detoured.
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1
13 SHEETS



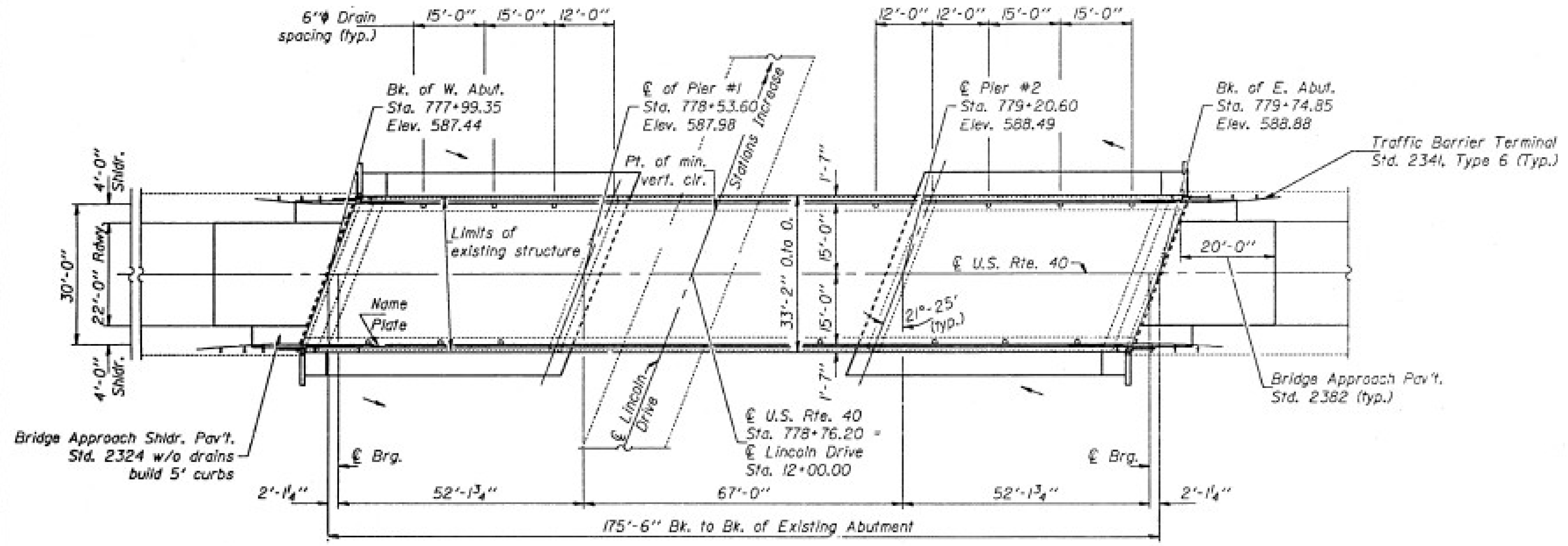
Metal guardrail and posts (typ.) See Rdwy. Plans.
New W27 (typ.)
Min. vert. clr. 18'-11"
Limits of Waterproofing (Typ. Each Abutment)
Natural ground line
Precast Conc. Revetment Mat. (See Roadway Plans for quantity and details)

ELEVATION

STATION 778+81.00
BUILT 19 BY
STATE OF ILLINOIS
O.R. RT. 12 SEC. FX-HBR
LOADING HS20
STR. No. 018-0010

NAME PLATE

See Std. 2113



N
6"ϕ Drain spacing (typ.)
15'-0"
15'-0"
12'-0"
12'-0"
12'-0"
15'-0"
15'-0"
Bk. of W. Abut. Sta. 777+99.35 Elev. 587.44
℄ of Pier #1 Sta. 778+53.60 Elev. 587.98
Stations Increase
℄ Pier #2 Sta. 779+20.60 Elev. 588.49
Bk. of E. Abut. Sta. 779+74.85 Elev. 588.88
Traffic Barrier Terminal Std. 2341, Type 6 (Typ.)
Pt. of min. vert. clr.
4'-0" Shldr.
30'-0"
22'-0" Rdwy.
4'-0" Shldr.
Limits of existing structure
1'-7"
33'-2" O.to O.
15'-0"
15'-0"
1'-7"
℄ U.S. Rte. 40
20'-0"
Name Plate
21°-25' (typ.)
℄ Lincoln Drive
℄ U.S. Rte. 40 Sta. 778+76.20 = ℄ Lincoln Drive Sta. 12+00.00
Bridge Approach Pav't. Std. 2382 (typ.)
Bridge Approach Shldr. Pav't. Std. 2324 w/o drains build 5' curbs
℄ Brg.
℄ Brg.
2'-1¼"
52'-1¾"
67'-0"
52'-1¾"
2'-1¼"
175'-6" Bk. to Bk. of Existing Abutment

PLAN

GENERAL NOTES

Fasteners shall be high strength bolts . Bolts ⅞"ϕ, open holes $^{15}/_{16}$"ϕ, unless otherwise noted.

Calculated weight of M 183 Structural Steel = 16,880 Lbs.

Calculated weight of M 223 Grade 50 Structural Steel = 84,380 Lbs.

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise noted. The color of the final finish coat shall be munsell standard 7.5G 4/8 Interstate Green.

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.

Anchor bolts shall be set before bolting diaphragms over supports.

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 wide flange beams and all splice plate material of the wide flange beams.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

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

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.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" 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, shims of the dimensions of top plate shall be provided and placed as detailed.

Bridge Seat Sealer shall be applied to the seat area of the abutments. Est. quantity = 178 Sq. Ft.

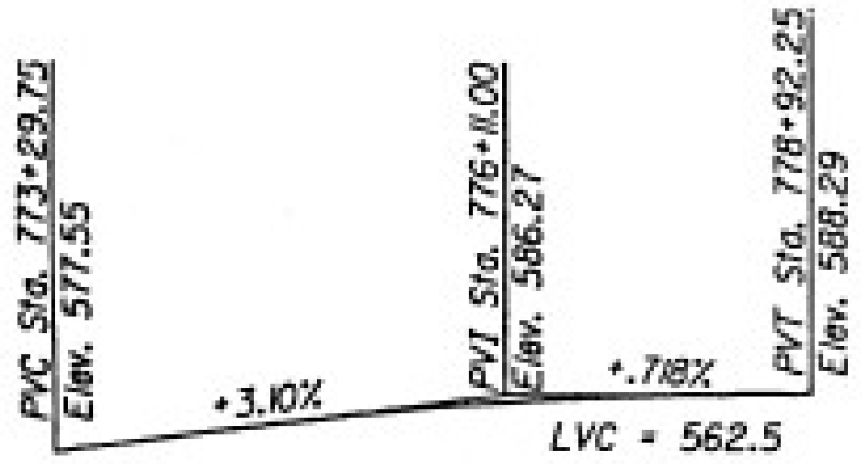
Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and ¾"ϕ x 9" hooked bolts.

For cantilever forming brackets, see Special Provisions.

The back face of Closed Abutments shall be waterproofed according to Article 503.11 of the Standard Specifications.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		15	15
Expansion Bolts ¾"	Each		140	140
Structure Excavation	Cu. Yd.		108	108
Floor Drains	Each	14		14
Preformed Joint Seal 2½"	Lin. Ft.	36		36
Preformed Joint Seal 4"	Lin. Ft.	36		36
Class X Concrete Superstructure	Cu. Yd.	177.5		177.5
Protective Coat	Sq. Yd.	141		141
Elastomeric Bearing Assembly, Type I	Each	10		10
Elastomeric Bearing Assembly, Type II	Each	5		5
Class X Concrete	Cu. Yd.		24.7	24.7
Structural Steel	L. S.	.38		.38
Stud Shear Connectors	Each	2,320		2,320
Reinforcement Bars, Epoxy Coated	Lbs.	43,060	3,350	46,410
Name Plates	Each	1		1
Bridge Seat Sealer	L. S.		.5	.5



PVC Sta. 773+29.75 Elev. 577.55
+3.10%
PVI Sta. 776+11.00 Elev. 586.27
+.718%
PVT Sta. 778+92.25 Elev. 588.29
LVC = 562.5

PROPOSED PROFILE GRADE

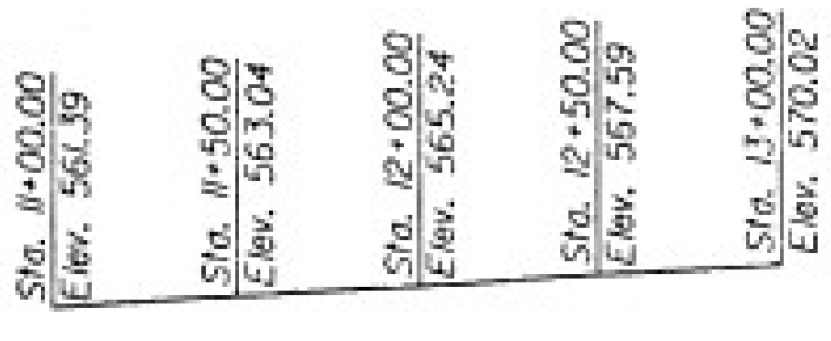
DESIGNED	Mark P Tomson
CHECKED	
DRAWN	W.D.C.
CHECKED	GRA

December 20 1989

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS



Sta. 11+00.00 Elev. 561.39
Sta. 11+50.00 Elev. 563.04
Sta. 12+00.00 Elev. 565.24
Sta. 12+50.00 Elev. 567.59
Sta. 13+00.00 Elev. 570.02

EXISTING PROFILE GRADE

(Lincoln Drive)

DESIGN SPECIFICATIONS

AASHTO (1983) and applicable Interims (1984 thru 1988)

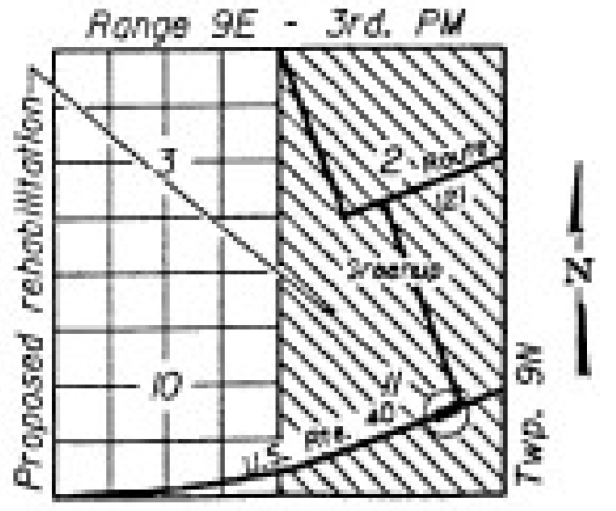
LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel M223 Grade 50)
f_y = 36,000 psi (structural steel M183)



LOCATION SKETCH

GENERAL PLAN
U.S. ROUTE 40 OVER
LINCOLN DRIVE
O.R. 12 - SECTION FX-HBR
CUMBERLAND COUNTY
STATION 778+81.00
STRUCTURE NO. 018-0010

MODEL: 74E48-10-3 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermn\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0010

SCALE: | SHEET 3 OF 7 SHEETS | STA. | TO STA.

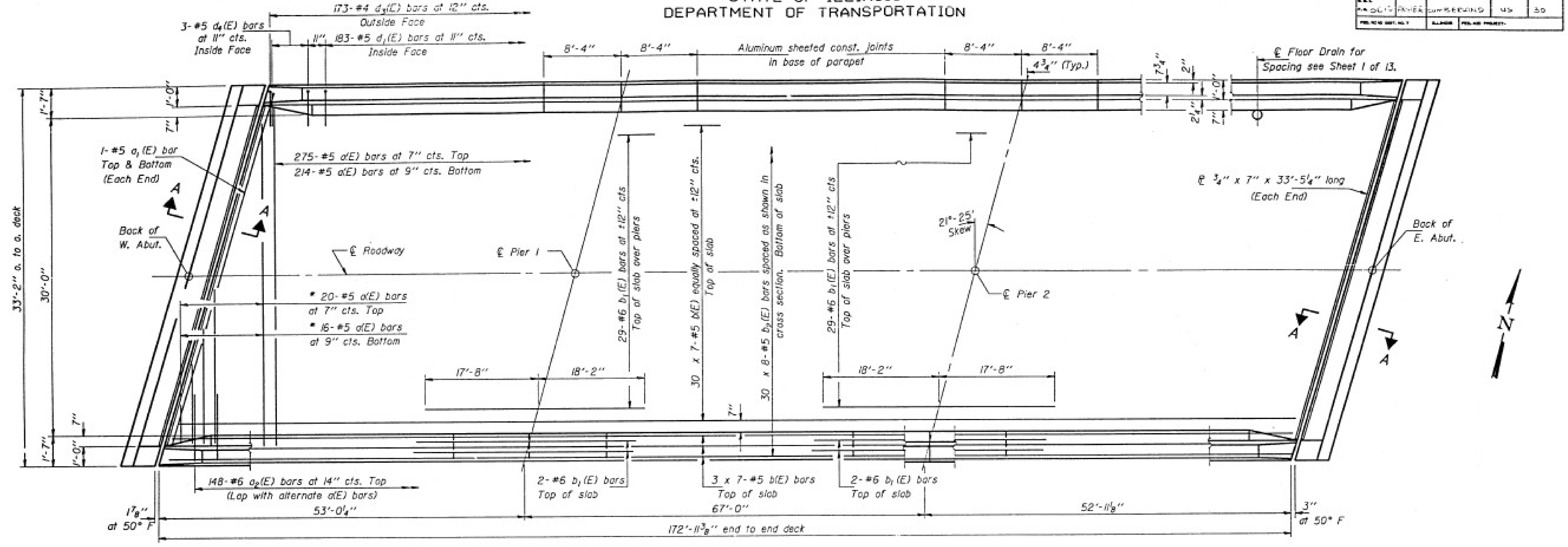
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	77
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70
CLARK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 0C17	FX-HBR	CUMBERLAND	45	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
13 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

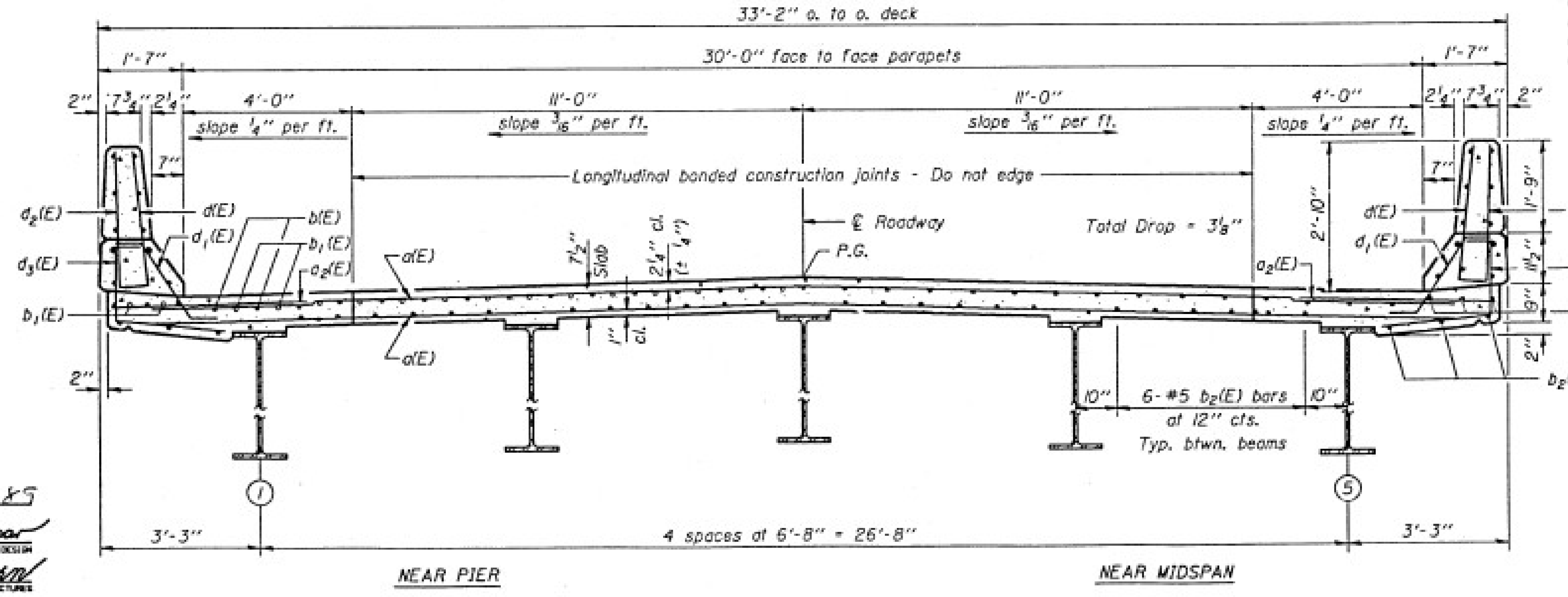

173-#4 d₃(E) bars at 12" cts.
Outside Face
3-#5 d₄(E) bars at 11" cts. Inside Face
11", 183-#5 d₁(E) bars at 11" cts.
Inside Face
8'-4"
8'-4"
Aluminum sheeted const. joints in base of parapet
8'-4"
8'-4"
4¾" (Typ.)
7¾"
2"
1'-0"
2¼"
7"
℄ Floor Drain for Spacing see Sheet 1 of 13.
1'-0"
1'-7"
7"
1-#5 a₁(E) bar Top & Bottom (Each End)
275-#5 a(E) bars at 7" cts. Top
214-#5 a(E) bars at 9" cts. Bottom
℄ ¾" x 7" x 33'-5¼" long (Each End)
A
A
Back of W. Abut.
33'-2" o. to o. deck
30'-0"
℄ Roadway
℄ Pier 1
29-#6 b₁(E) bars at ±12" cts Top of slab over piers
30 x 7-#5 b(E) equally spaced at ±12" cts. Top of slab
30 x 8-#5 b₂(E) bars spaced as shown in cross section. Bottom of slab
29-#6 b₁(E) bars at ±12" cts Top of slab over piers
21°-25' Skew
℄ Pier 2
Back of E. Abut.
* 20-#5 a(E) bars at 7" cts. Top
* 16-#5 a(E) bars at 9" cts. Bottom
17'-8"
18'-2"
18'-2"
17'-8"
7"
A
A
N
7"
1'-7"
1'-0"
148-#6 a₂(E) bars at 14" cts. Top (Lap with alternate a(E) bars)
2-#6 b₁(E) bars Top of slab
3 x 7-#5 b(E) bars Top of slab
2-#6 b₁(E) bars Top of slab
1⅞" at 50° F
53'-0¼"
67'-0"
52'-11⅛"
3" at 50° F
172'-11⅜" end to end deck

PLAN

* Order a(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.

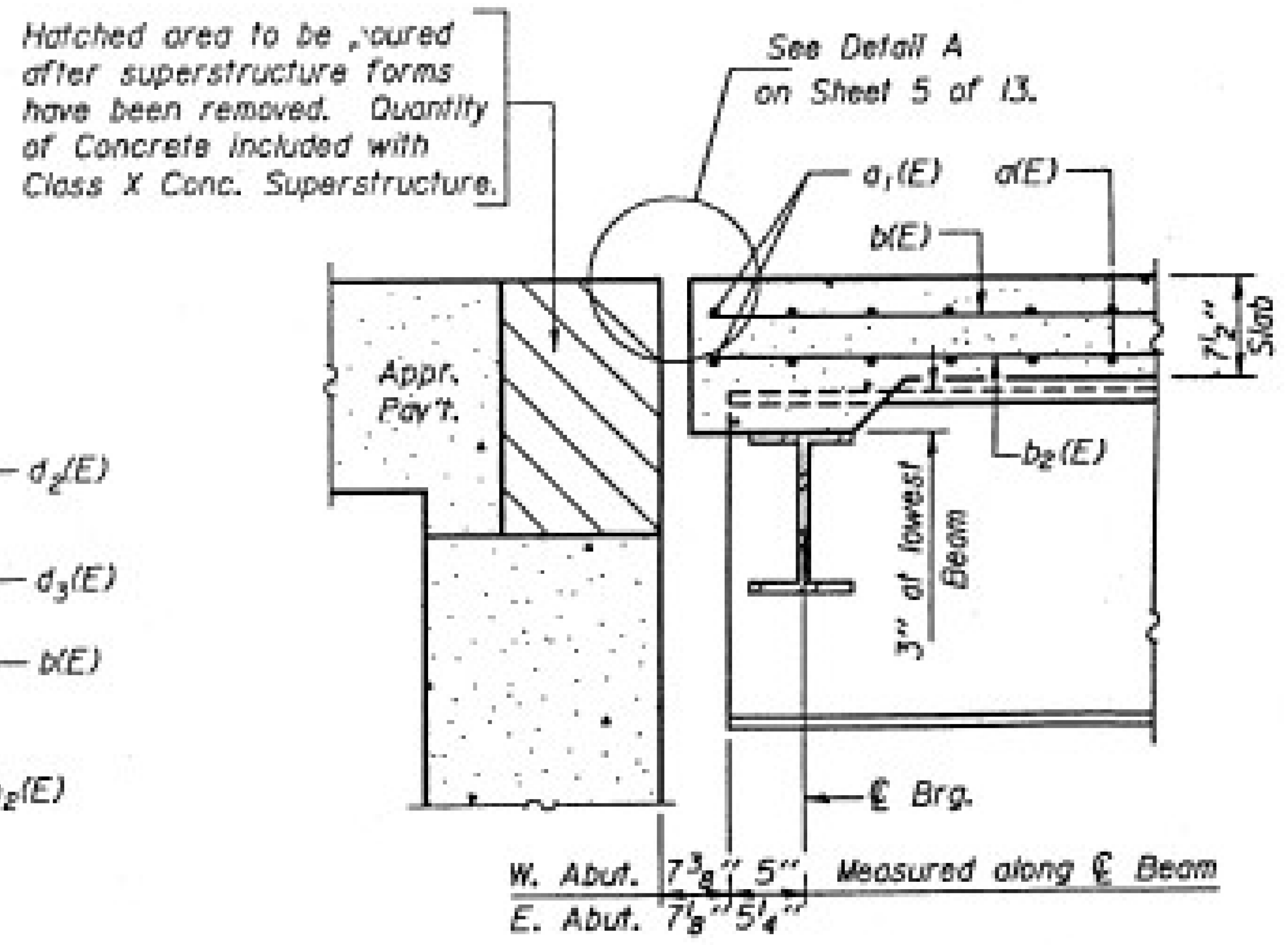
MINIMUM BAR LAPS
#5 bars 1'-8"

Notes: See Sheet 5 of 13 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 5 of 13 for parapet reinforcement.



CROSS SECTION
(Looking East)

Hatched area to be poured after superstructure forms have been removed. Quantity of Concrete included with Class X Conc. Superstructure.



SECTION A-A

SUPERSTRUCTURE
O.R. RT. 12 SEC. FX-HBR
CUMBERLAND COUNTY
STA. 778+81.00

DESIGNED Mark P. Tran
CHECKED R. Albrecht
DRAWN Paul Summer
CHECKED GRA

Dec. 20 1985
EXAMINED Ozaj J. Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

S-1-L(K15°) 12-31-87

MODEL: 74E48-10-4 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0010

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

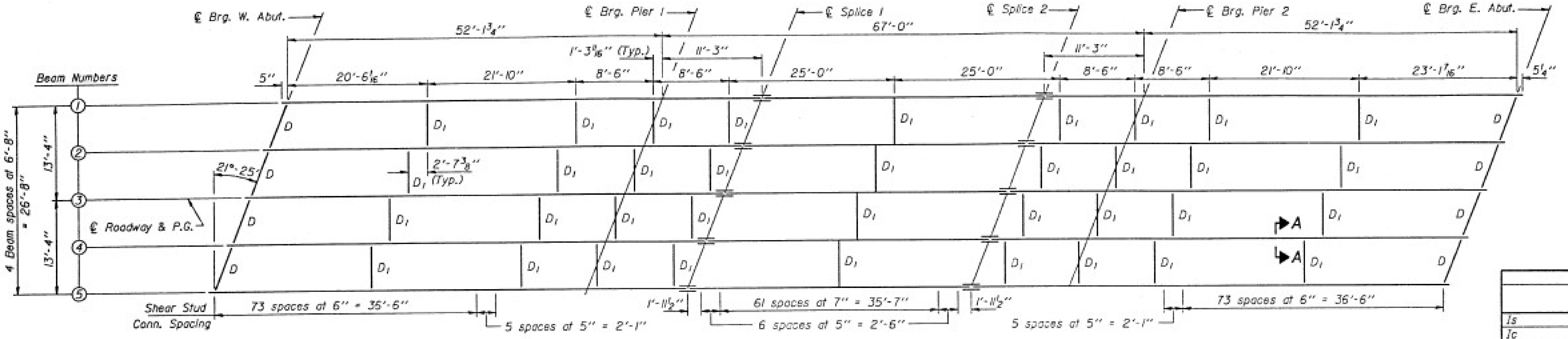
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	78
		CONTRACT NO. 74E48		
		ILLINOIS FED. AID PROJECT		

I-70 CLARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

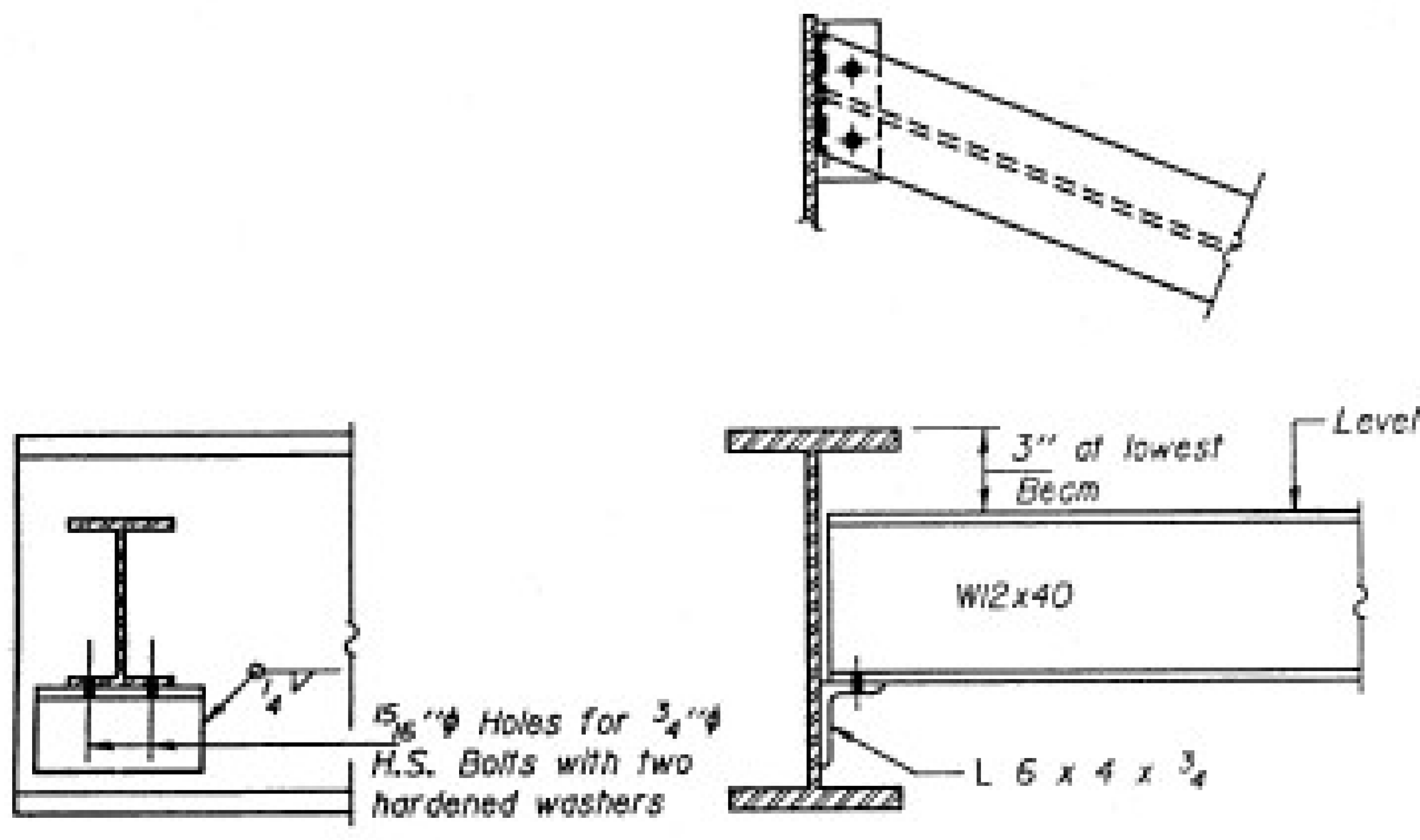
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. R 12	FX-HBR	CUMBERLAND	45	32

SHEET NO. 6
13 SHEETS



FRAMING PLAN

All beams are W27x94.



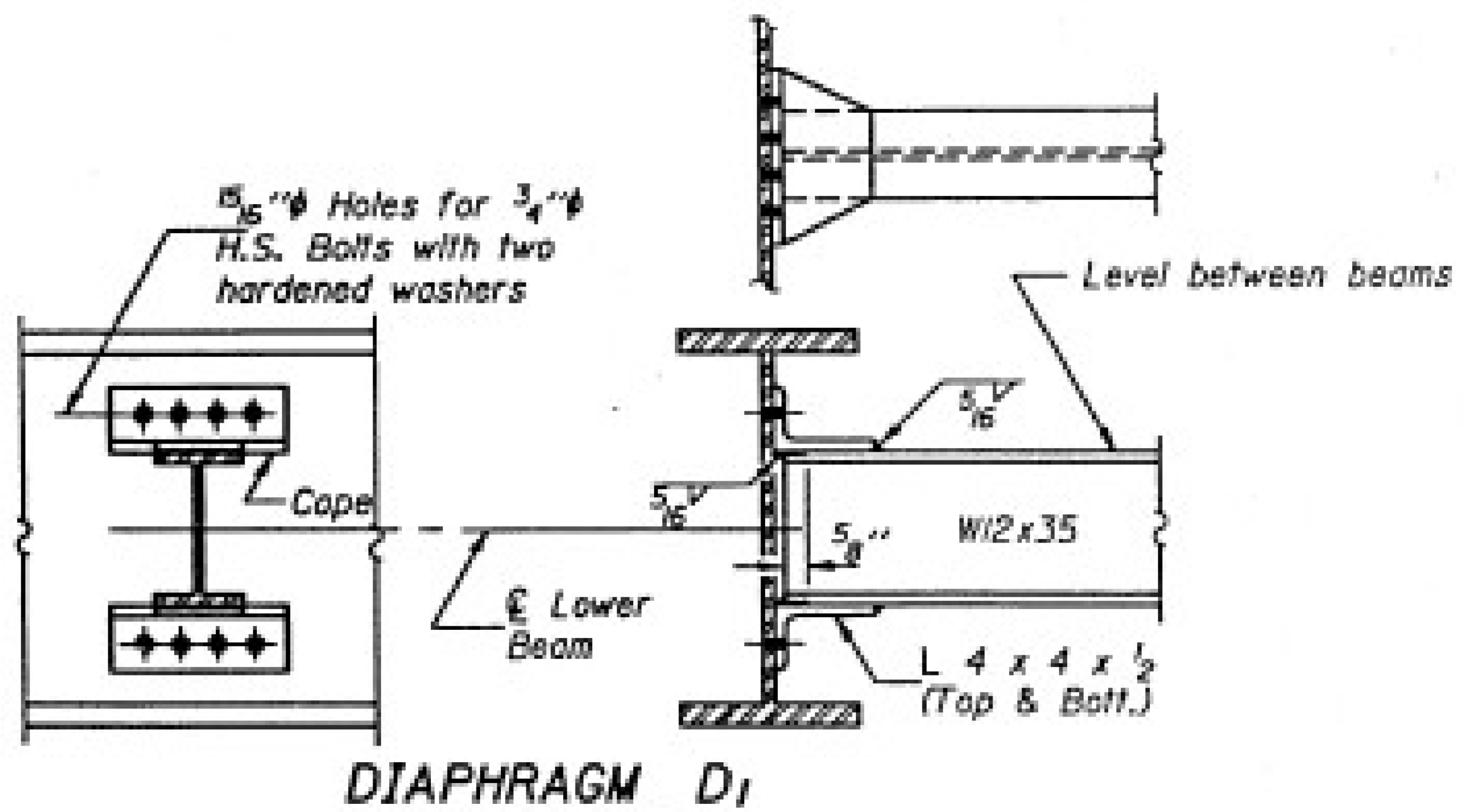
3" at lowest Beam
Level a. to a.
W12x40
¼
$\frac{15}{16}$"ϕ Holes for ¾"ϕ H.S. Bolts with two hardened washers
L 6 x 4 x ¾

DIAPHRAGM D

8 Required

Top of Beam Elevations					
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
℄ Brg. W. Abut.	586.63	586.72	586.80	585.66	586.52
℄ Brg. Pier 1	587.10	587.20	587.28	587.15	587.01
℄ Splice 1	587.20	587.30	587.38	587.25	587.12
℄ Splice 2	587.53	587.63	587.72	587.59	587.46
℄ Brg. Pier 2	587.62	587.72	587.80	587.68	587.54
℄ Brg. E. Abut.	588.02	588.12	588.20	588.08	587.94

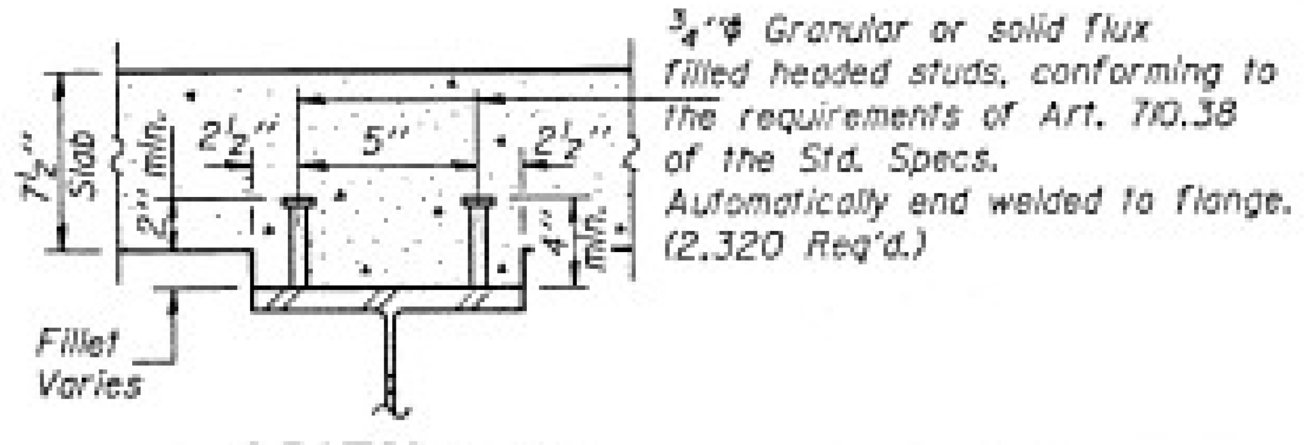
(For Fabrication Only. Does not include Dead Load Deflections)



$\frac{15}{16}$"ϕ Holes for ¾"ϕ H.S. Bolts with two hardened washers
Cope
Level between beams
$\frac{5}{16}$
$\frac{5}{16}$
$\frac{5}{8}$"
W12x35
℄ Lower Beam
L 4 x 4 x ½ (Top & Bott.)

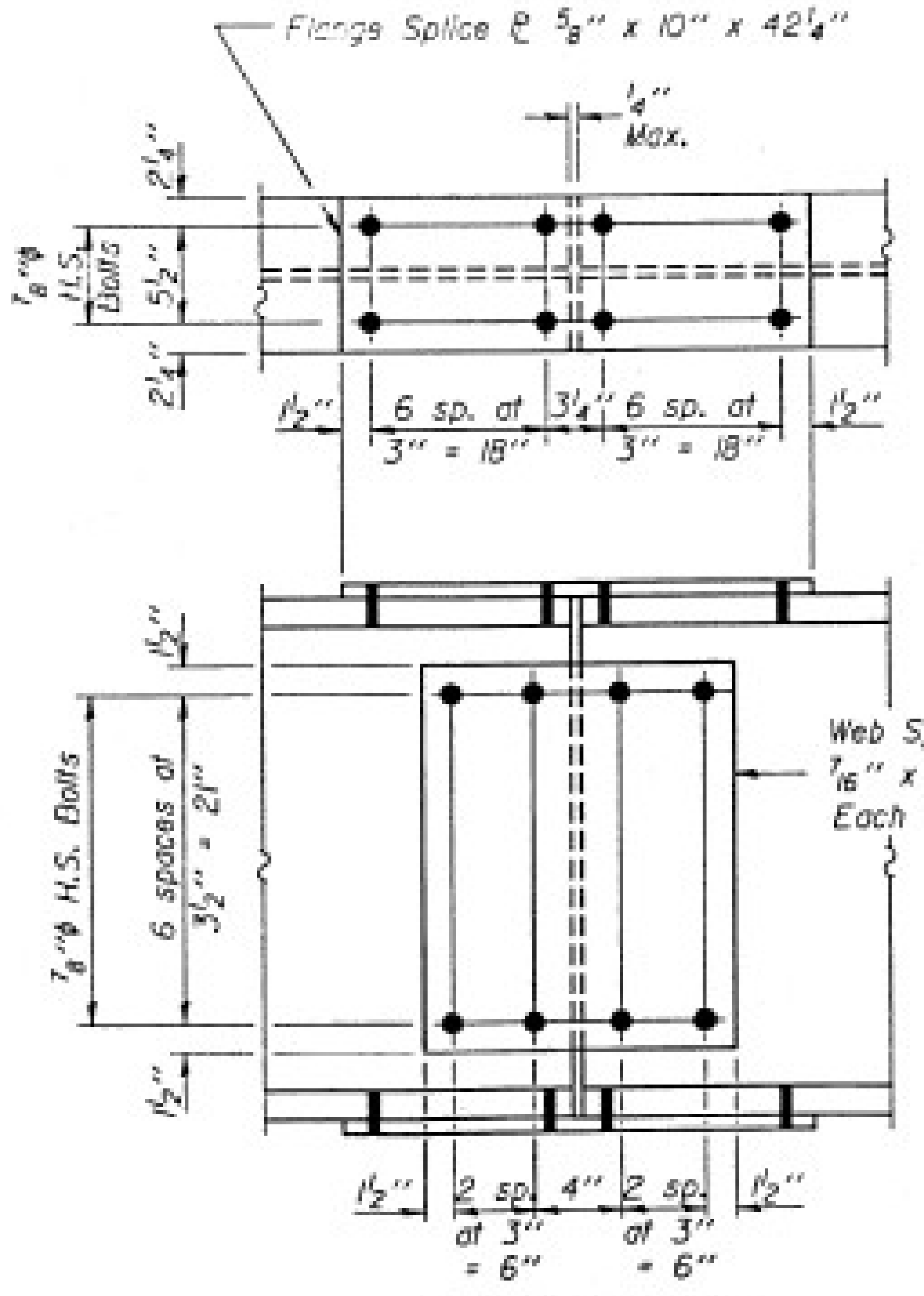
DIAPHRAGM D₁

36 Required



7½" Slab
2" min.
2½"
5"
2½"
4" min.
Fillet Varies
¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (2,320 Req'd.)

SECTION A-A



SPLICE 1 & 2

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 & 0.6 Sp. 3	Piers	0.5 Sp. 2
Is	(in⁴)	3,270	3,270	3,270
Ic	(in⁴)	9,720		9,720
Ss	(in³)	243	243	243
Sc	(in³)	374		374
Ᵽ	(K/ft.)	0.753	1.067	0.753
Mᵽ	('K)	136.6	359.1	149.6
sᵽ	(K/ft.)	0.314		0.314
Msᵽ	('K)	67.9		89.9
MŁ	('K)	348.6	197.6	407.1
M (Imp)	('K)	98.3	53.6	105.8
$\frac{5}{3}$(MŁ + I)	('K)	744.8	418.7	854.8
Ma	('K)	1,234.1	1,011.3	1,422.6
Mu	('K)	2,168		2,168
fsᵽ non-comp	(k.s.i.)	6.7	17.7	7.4
fsᵽ (comp)	(k.s.i.)	2.2		2.9
fs$\frac{5}{3}$(Ł + I)	(k.s.i.)	23.9	20.7	27.4
fs (Overload)	(k.s.i.)	32.8	38.4	37.7
fs (Total)	(k.s.i.)		49.9	
VR	(K)	48.8		51.1

INTERIOR BEAM REACTION TABLE			
		S. Abut.	Piers
Rᵽ	(K)	20.9	70.5
RŁ	(K)	34.8	41.9
Imp.	(K)	9.8	11.4
R (Total)	(K)	65.5	123.8

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

Ic and Sc 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[Mᵽ + Msᵽ + $\frac{5}{3}$(MŁ + I)].

Mu is the Full Plastic Moment Capacity for Compact. Braced section.

fs (Overload) is the sum of the stresses due to Mᵽ + Msᵽ + $\frac{5}{3}$(MŁ + I).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[Mᵽ + Msᵽ + $\frac{5}{3}$(MŁ + I)].

Notes: The beams and their splice plate material shall be AASHTO M223, Grade 50. All beams and splice plate material shall conform to the Supplemental Requirements for Notch Toughness Zone 2.

DESIGNED Mark P. Traxon
CHECKED M. R. Allen
DRAWN Paul Summer
CHECKED GRA

Dec. 20 1982
EXAMINED Oraj D. Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

I-2-D 8-30-80

STRUCTURAL STEEL
O.R. RT. 12 SEC. FX-HBR
CUMBERLAND COUNTY
STA. 778+81.00

MODEL: 74E48-10-5 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 7/29/2026	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0010

SCALE: SHEET 5 OF 7 SHEETS STA. TO STA.

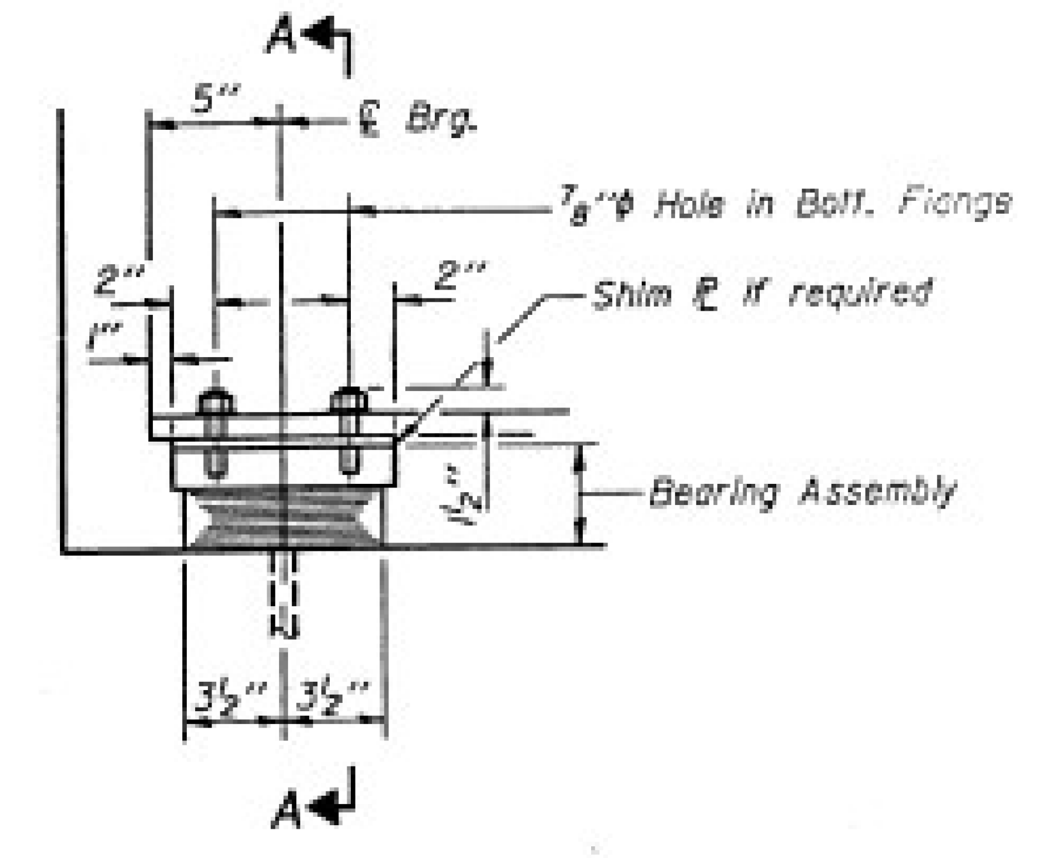
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	79
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

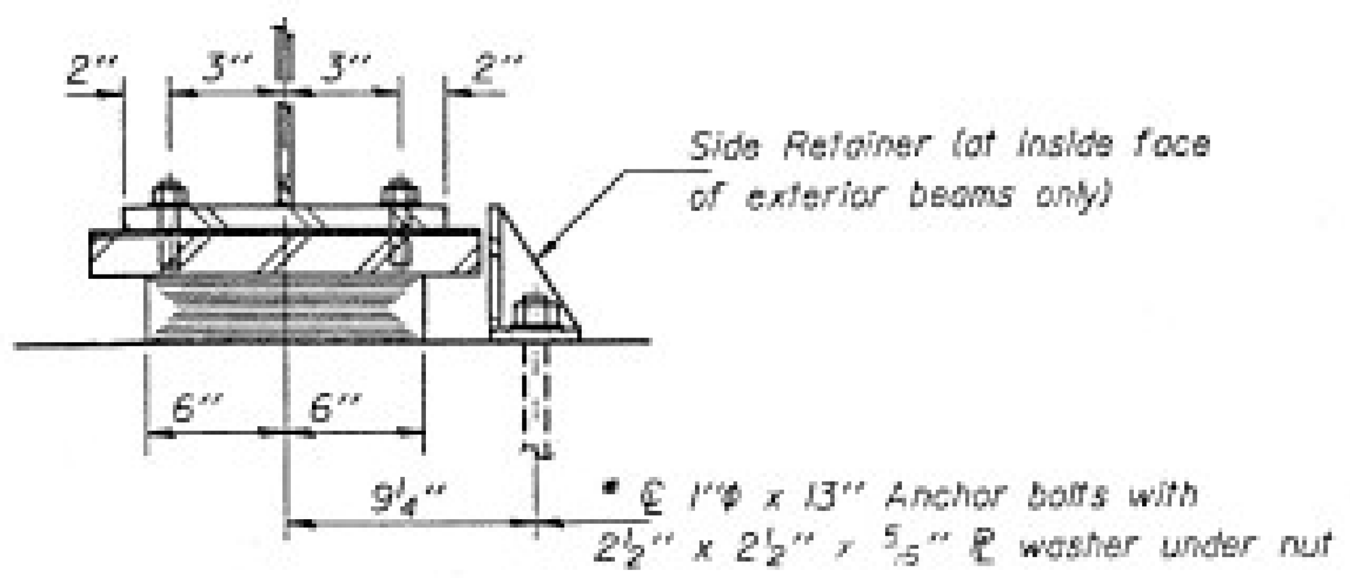
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A. 12	FX-HBR	CUMBERLAND	45	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
13 SHEETS

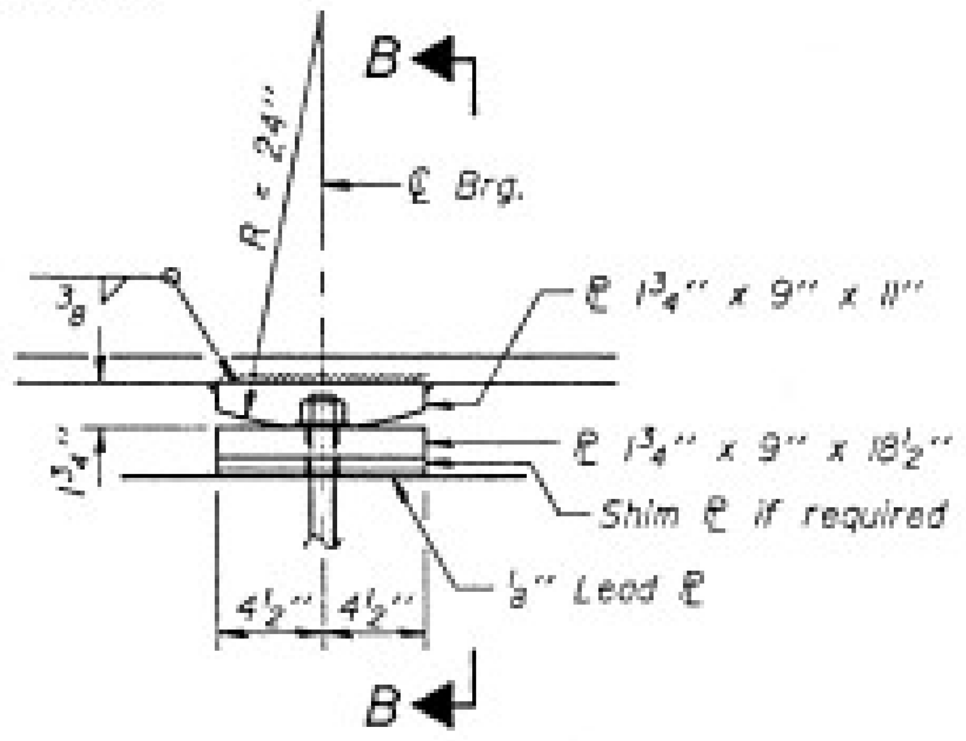


ELEVATION AT W. ABUTMENT

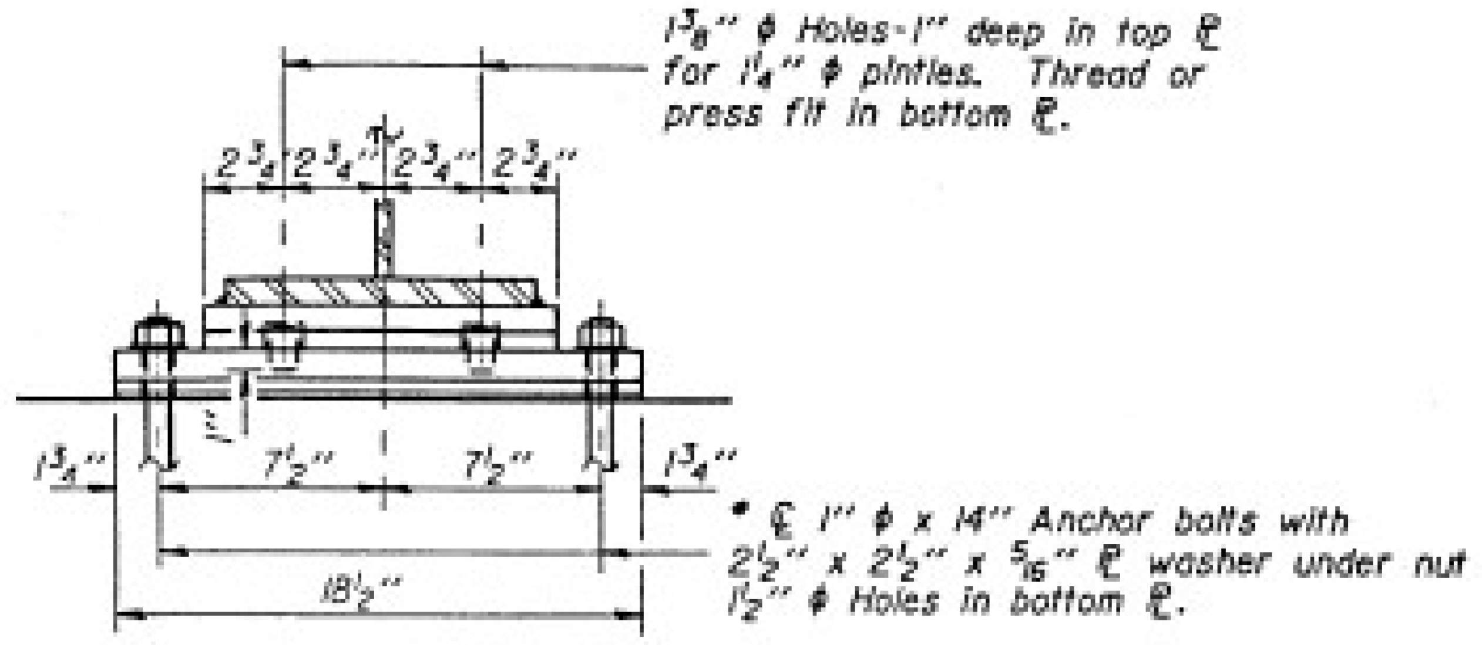

2"
3"
3"
2"
Side Retainer (at inside face of exterior beams only)
6"
6"
9¼"
* ℄ 1"ϕ x 13" Anchor bolts with 2½" x 2½" x 5⁄16" ℙ washer under nut

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



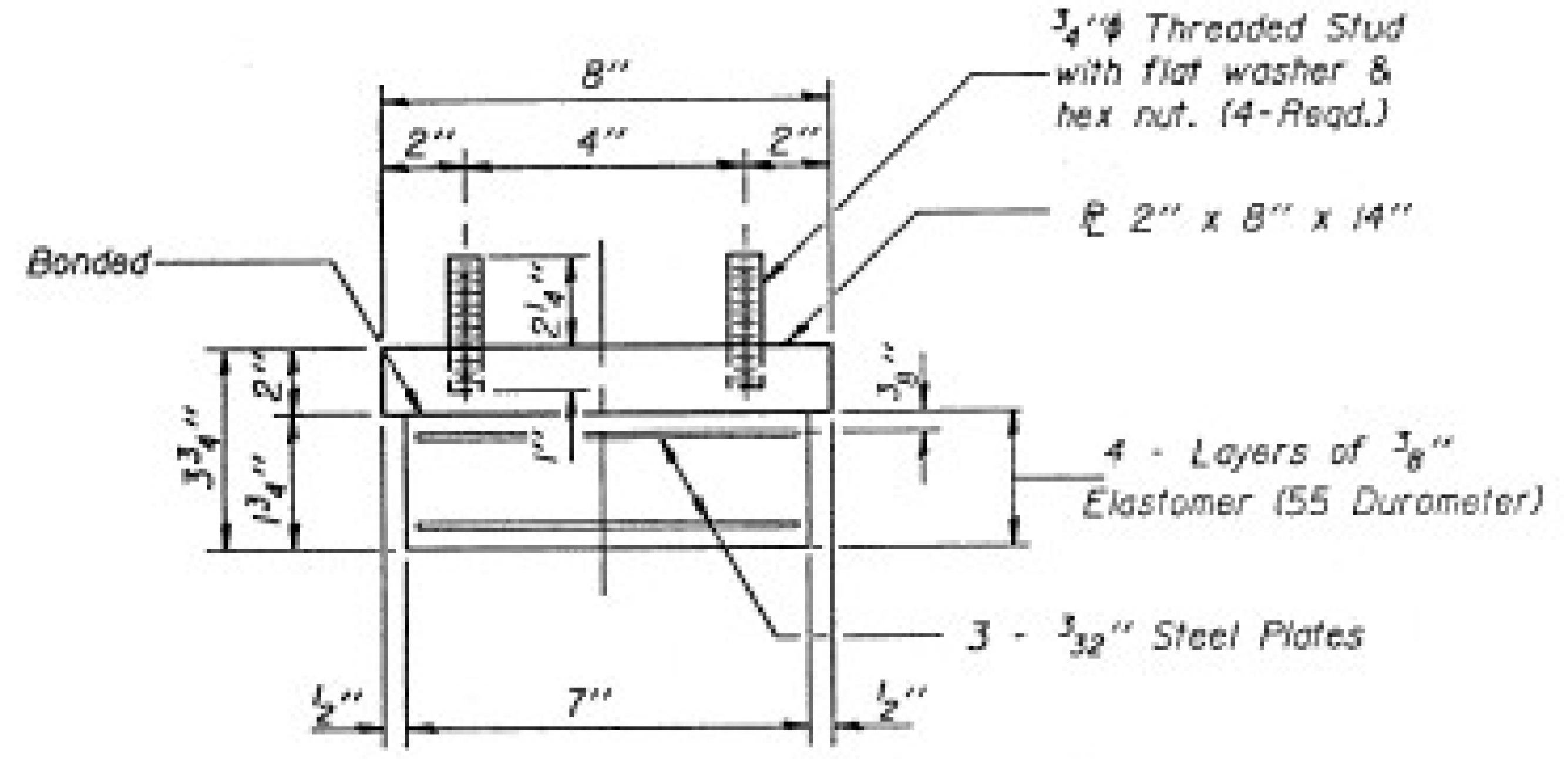
ELEVATION AT PIER I


1⅜" ϕ Holes-1" deep in top ℙ for 1¼" ϕ pintles. Thread or press fit in bottom ℙ.
2¾"
2¾"
2¾"
2¾"
1¾"
7½"
7½"
1¾"
18½"
* ℄ 1" ϕ x 14" Anchor bolts with 2½" x 2½" x 5⁄16" ℙ washer under nut
1½" ϕ Holes in bottom ℙ.

SECTION B-B

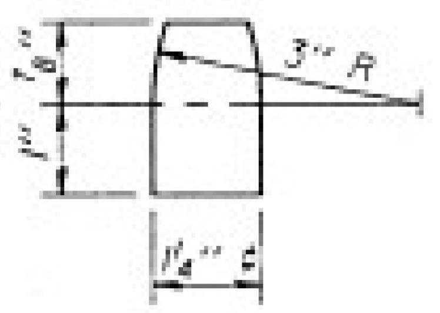
* Notes: Anchor bolts at Pier may be built into the masonry.
See sheet 9 of 13 for Anchor Bolt Installation.

FIXED BEARING

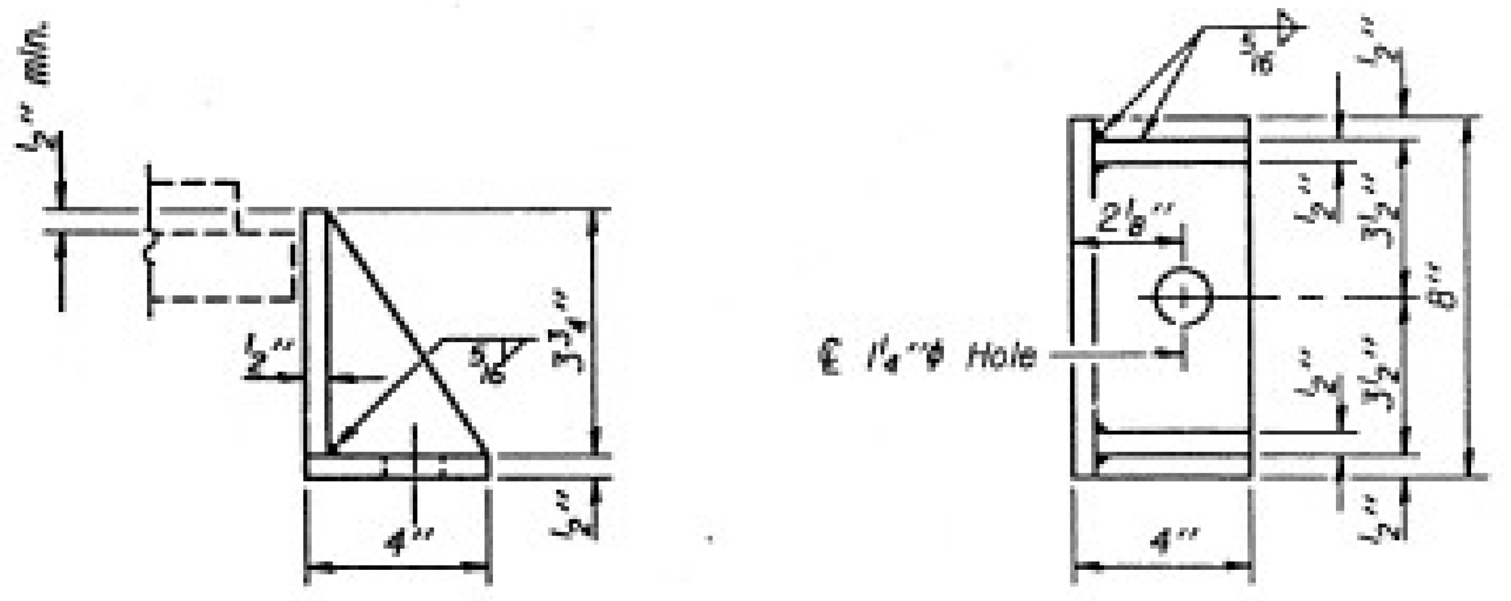

8"
2"
4"
2"
¾"ϕ Threaded Stud with flat washer & hex nut. (4-Reqd.)
ℙ 2" x 8" x 14"
Bonded
2¼"
3¾"
2"
1¾"
⅜"
1"
4 - Layers of ⅜" Elastomer (55 Durometer)
3 - 3⁄32" Steel Plates
½"
7"
½"

BEARING ASSEMBLY

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



PINTLE



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5

DESIGNED	Mark P. Thomas
CHECKED	R. Albrecht
DRAWN	Paul Summer
CHECKED	GRA

Dec. 20 1989

EXAMINED Oraj D. Kaspar
ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

BEARING DETAILS
O.R. RT. 12 SEC. FX-HBR
CUMBERLAND COUNTY
STA. 778+81.00

MODEL: 74E48-10-6 [Sheet]
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USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0010

SCALE: SHEET 6 OF 7 SHEETS STA. TO STA.

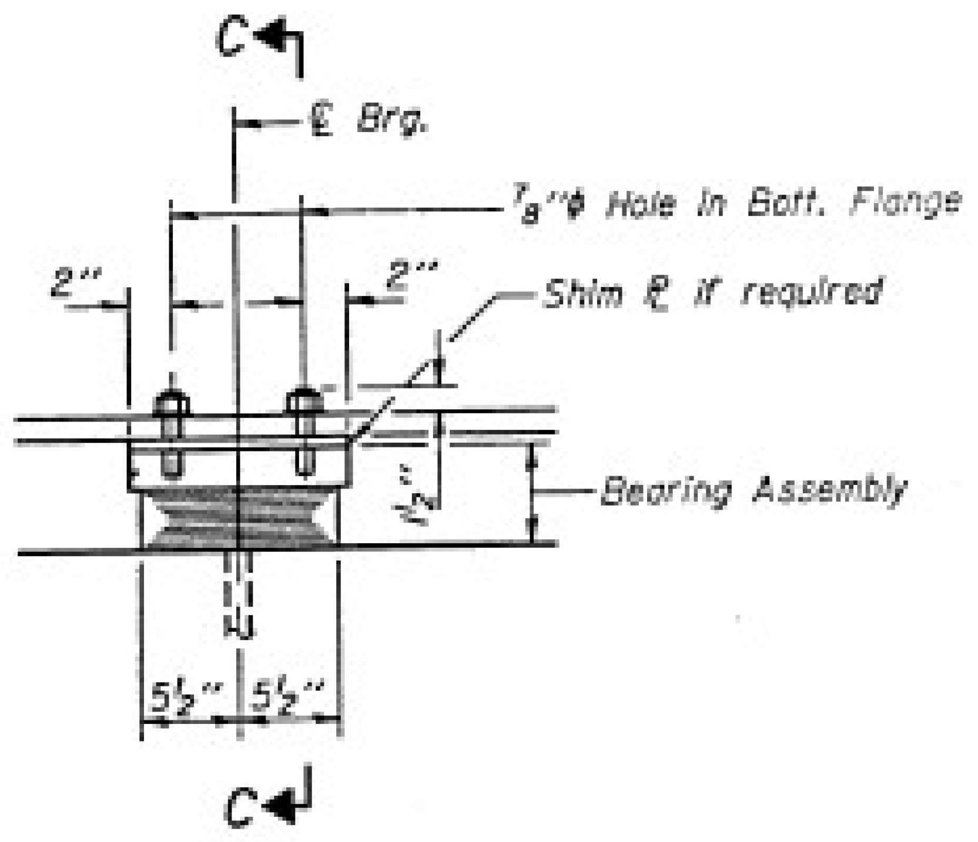
F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	80
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

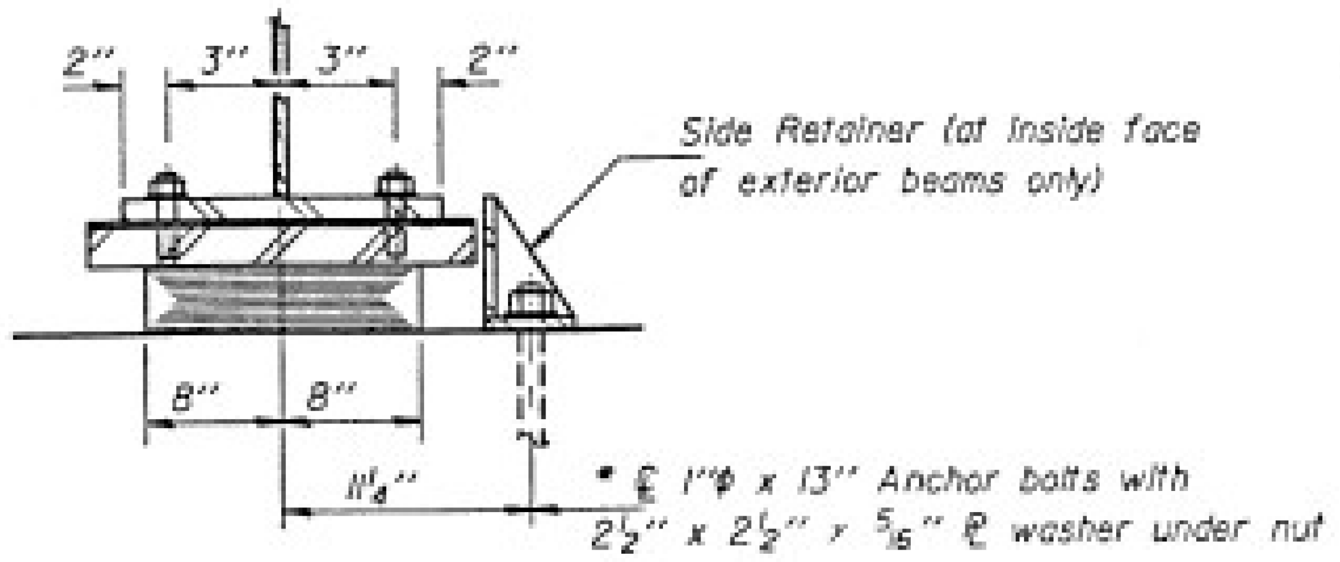
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. O.R. 12	FX-HBR	CUMBERLAND	45	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
13 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

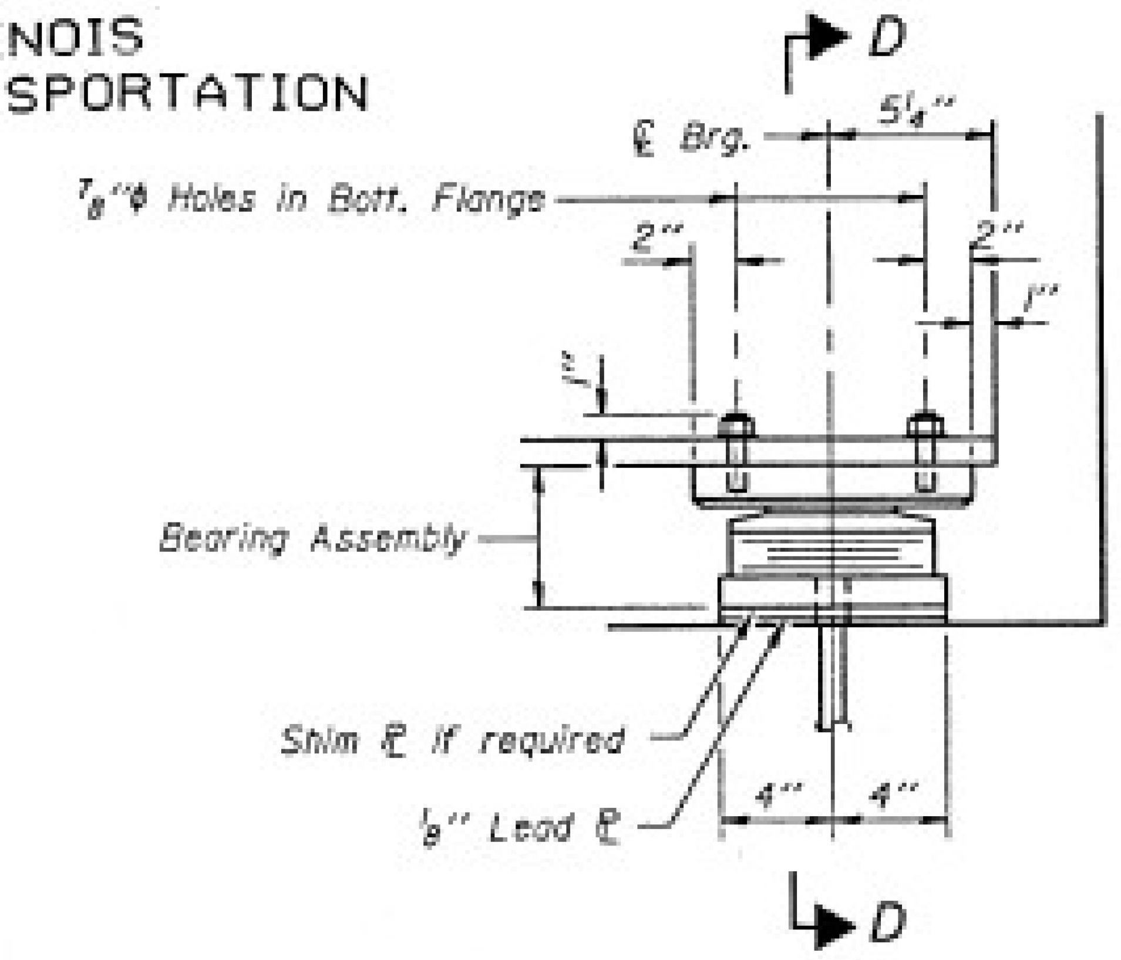


ELEVATION AT PIER 2

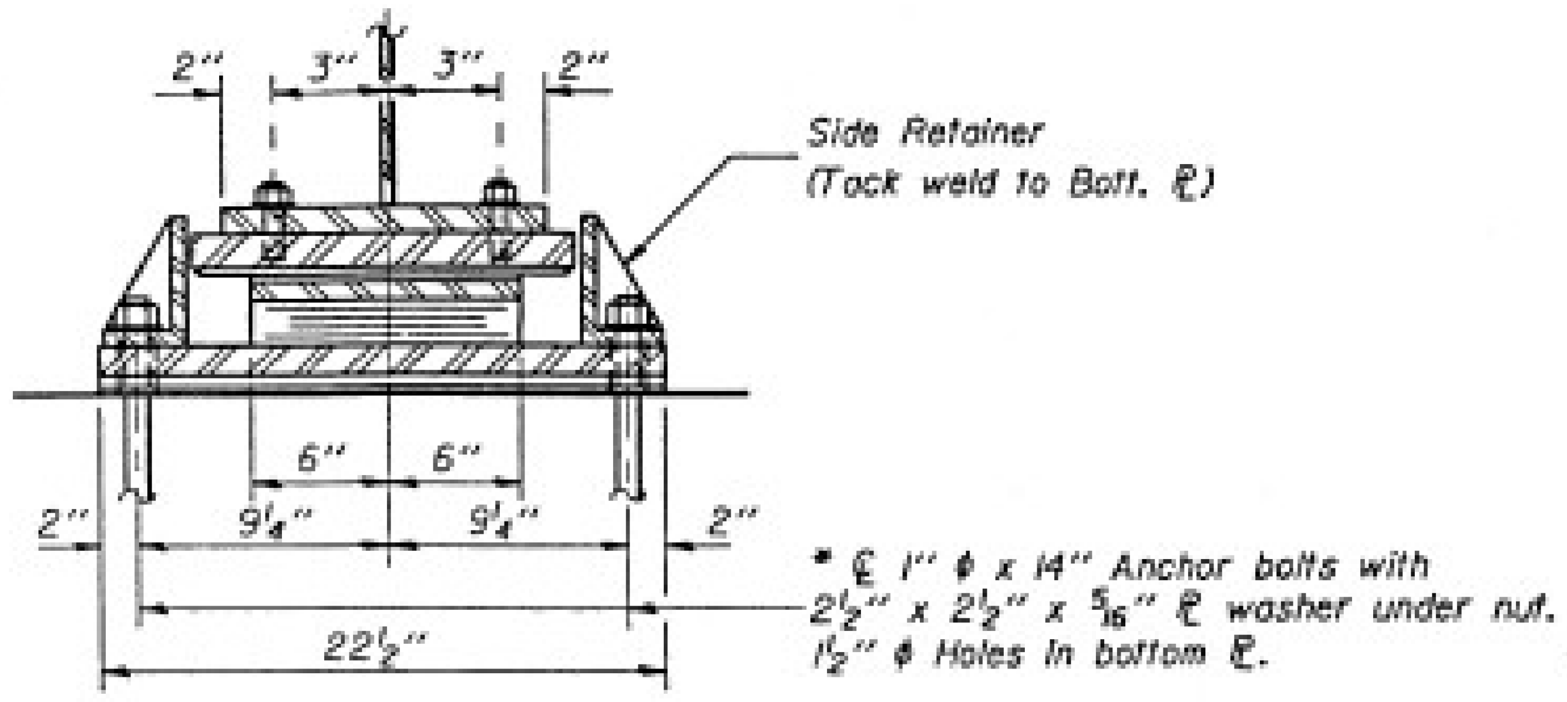

2"
3"
3"
2"
Side Retainer (at inside face of exterior beams only)
8"
8"
11 1/4"
* ℄ 1"φ x 13" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" PL washer under nut

SECTION C-C

TYPE I ELASTOMERIC EXP. BRG.

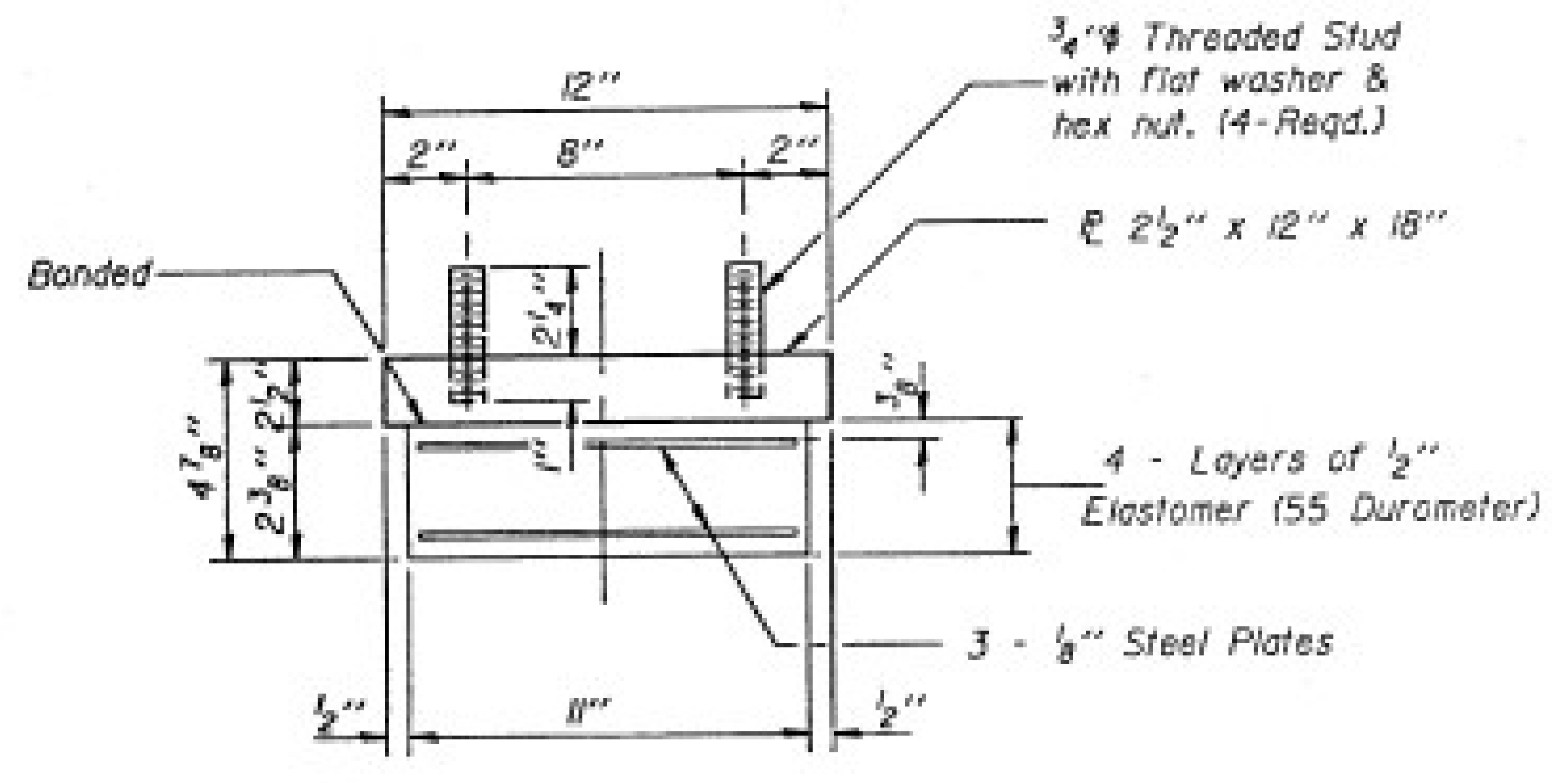


ELEVATION AT E. ABUTMENT


2"
3"
3"
2"
Side Retainer (Tack weld to Bott. PL)
6"
6"
2"
9 1/4"
9 1/4"
2"
22 1/2"
* ℄ 1" φ x 14" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" PL washer under nut.
1 1/2" φ Holes in bottom PL.

SECTION D-D

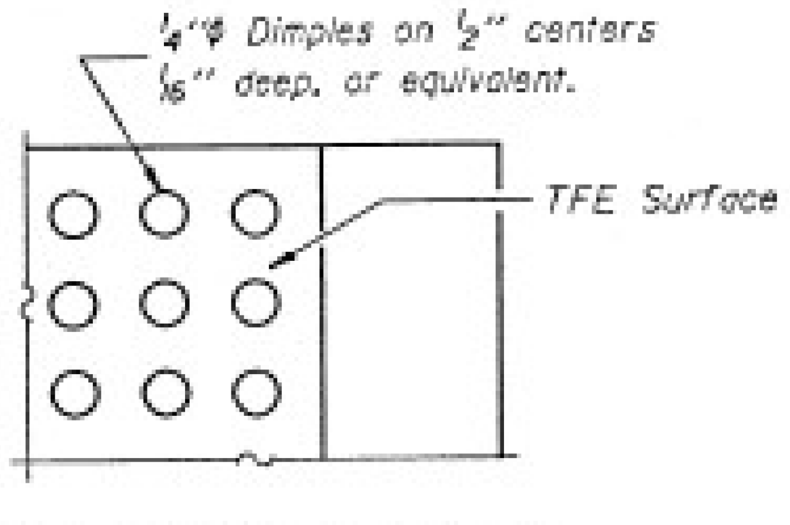
TYPE II ELASTOMERIC EXP. BRG.


12"
2"
8"
2"
3/4"φ Threaded Stud with flat washer & hex nut. (4-Reqd.)
PL 2 1/2" x 12" x 18"
Bonded
2 1/4"
4 7/8"
2 1/2"
2 3/8"
1"
1/8"
4 - Layers of 1/2" Elastomer (55 Durometer)
3 - 1/8" Steel Plates
1/2"
11"
1/2"

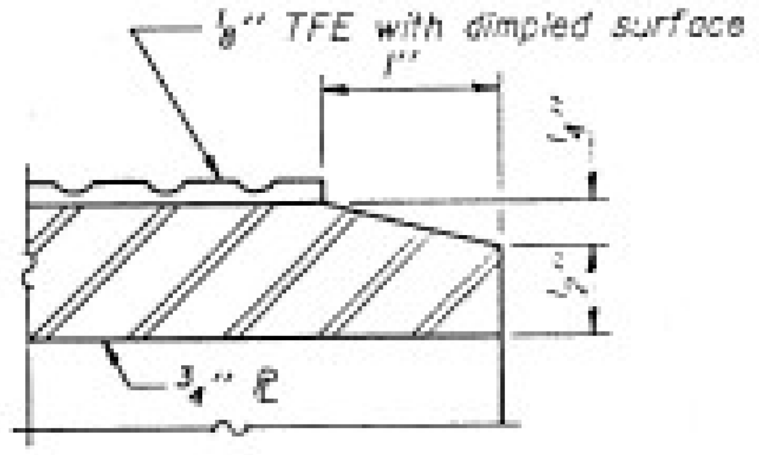
BEARING ASSEMBLY

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

* Notes: Anchor bolts at Pier may be built into the masonry.
See sheet 9 of 13 for Anchor Bolt installation.

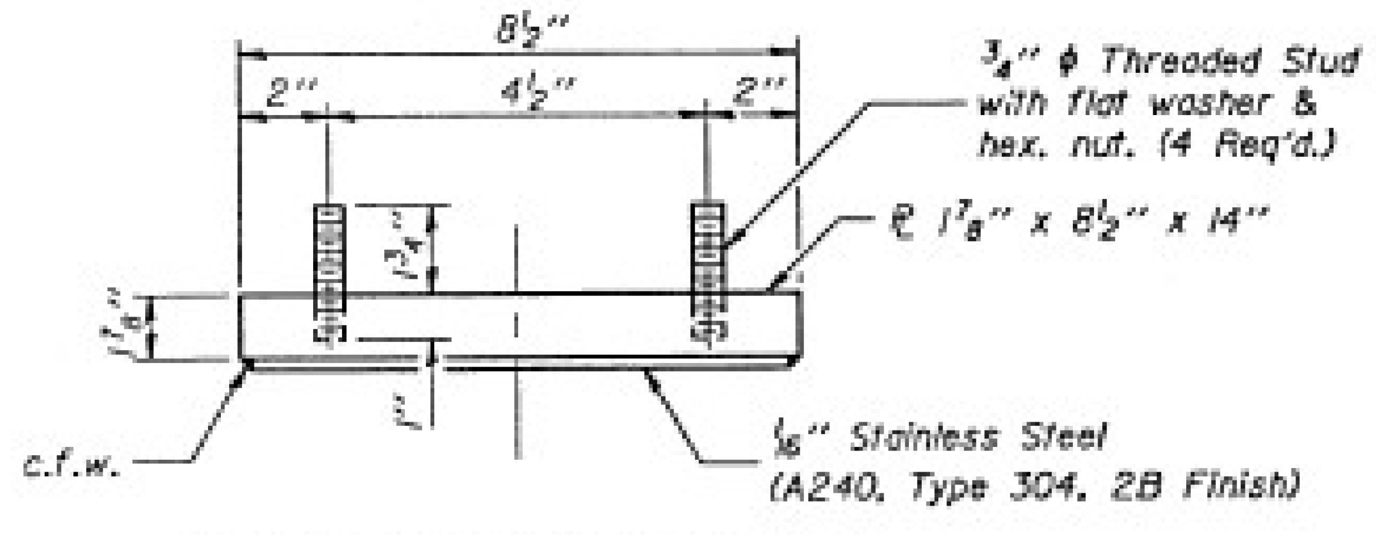


PLAN-TFE SURFACE

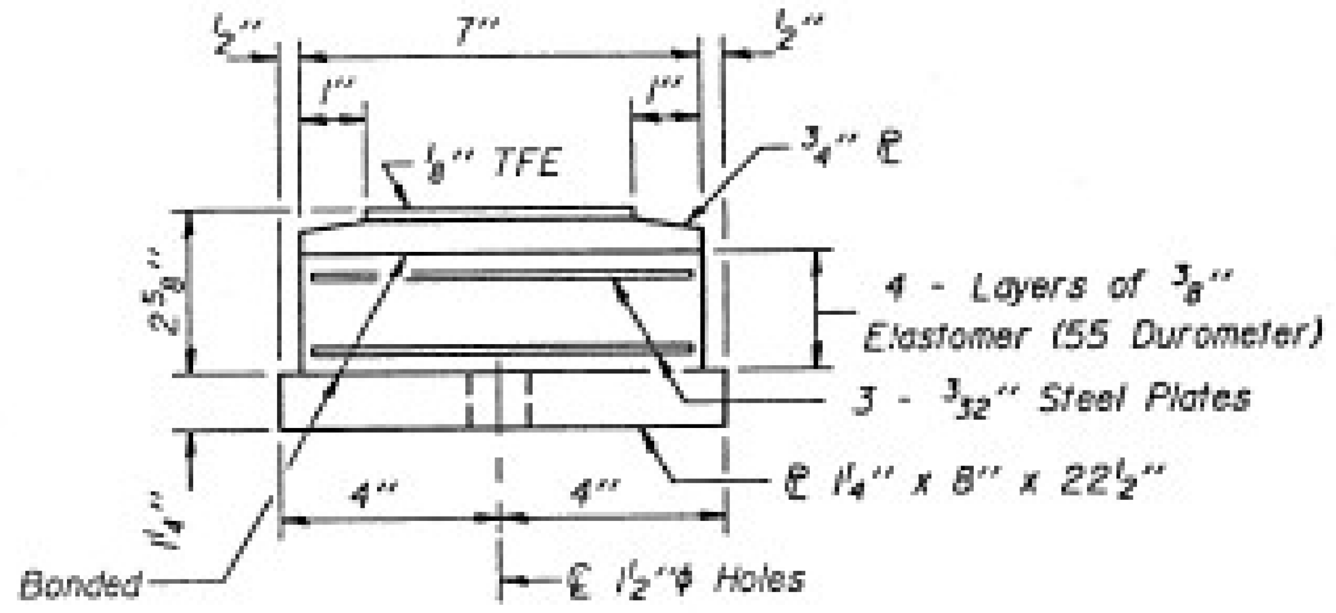


SECTION THRU TFE

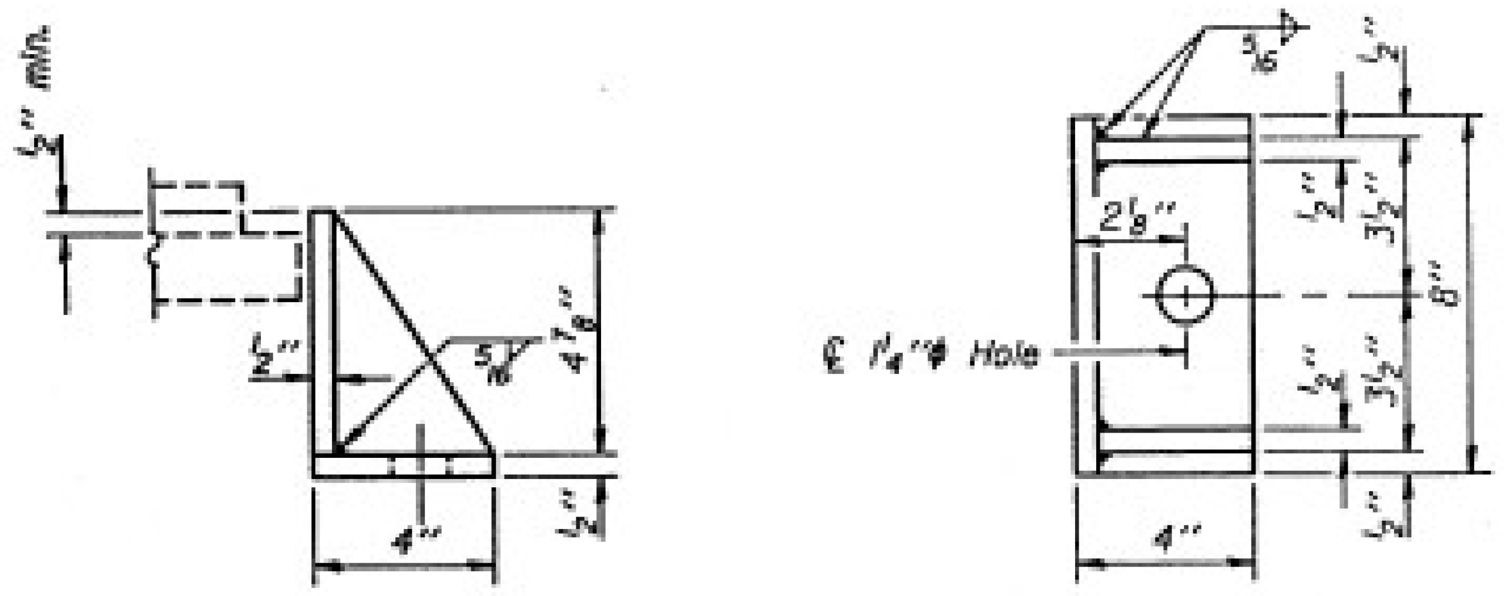
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.


8 1/2"
2"
4 1/2"
2"
3/4" φ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
PL 1 7/8" x 8 1/2" x 14"
1 3/4"
1 7/8"
1"
c.f.w.
1/16" Stainless Steel (A240, Type 304, 2B Finish)

TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY

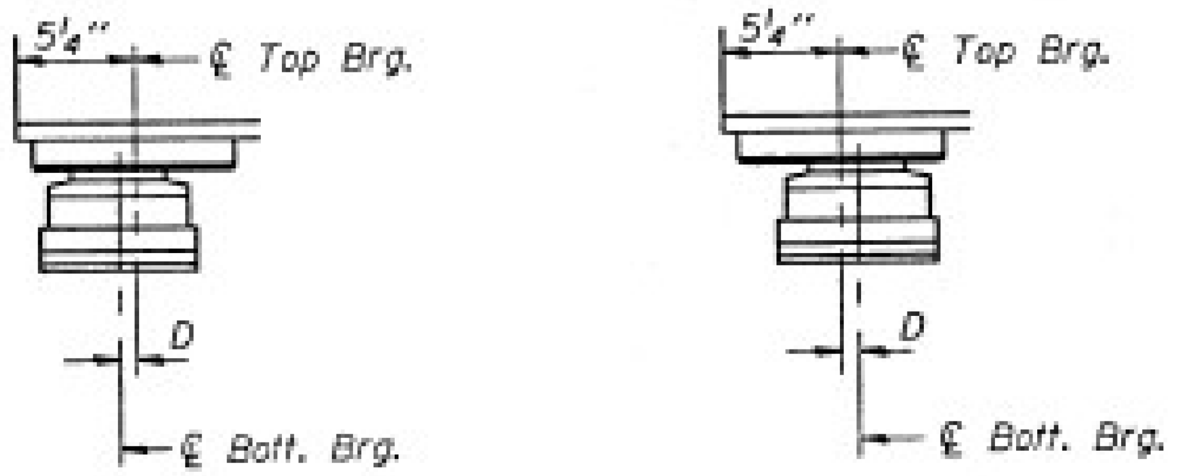


SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5
Elastomeric Bearing Assembly Type II	Each	5



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.

DESIGNED Mark P. Timm
CHECKED
DRAWN Paul Summer
CHECKED GRA

Dec. 20 1989
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED James T.
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

BEARING DETAILS
O.R. RT. 12 SEC. FX-HBR
CUMBERLAND COUNTY
STA. 778+81.00

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 7/29/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE DETAILS
SN 018-0010

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

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	81
	CONTRACT NO. 74E48			
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK

MODEL: 74E48-10-7 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemerm\d1225539\D774E48-sheets-Existing Structure Details.dgn

LEGEND

REAL-TIME TRAFFIC CONTROL WARNING SIGN
PROJECT SIGN SHALL BE 48" X 96" SIGN THAT SAYS
"STOPPED TRAFFIC NEXT MILE WHEN FLASHING"

STOPPED TRAFFIC
NEXT MILE
WHEN FLASHING

SINGLE PORTABLE CHANGEABLE MESSAGE SIGN PLACED 1 MILE
IN ADVANCE OF THE REAL-TIME TRAFFIC CONTROL WARNING SIGN.
IT SHALL READ: "RIGHT/LEFT LANE CLOSED// X MILES AHEAD".
THIS PORTABLE CHANGEABLE MESSAGE SIGN IS INCLUDED IN STANDARD 701400.

Ⓢ REAL-TIME TRAFFIC MONITORING SENSOR UNIT

NOTE:

1. THE NUMBER OF REAL-TIME TRAFFIC CONTROL WARNING SIGNS MAY BE CHANGED AS DIRECTED BY THE ENGINEER. RELOCATION OF THE REAL-TIME TRAFFIC CONTROL STATIC IS INCLUDED IN THE REAL-TIME TRAFFIC CONTROL PAY ITEMS.
2. REAL-TIME TRAFFIC CONTROL MONITORING SENSOR UNITS SPACED APPROXIMATELY EVERY ½ MILE AND REAL-TIME TRAFFIC CONTROL WARNING SIGNS SPACED EVERY 1 MILE OR AS DIRECTED BY THE ENGINEER.
3. THE FIRST REAL-TIME TRAFFIC CONTROL MONITORING SENSOR UNIT IS TO BE PLACED 250 FEET UPSTREAM OF THE TAPER.
4. THE SECOND REAL-TIME TRAFFIC CONTROL MONITORING SENSOR UNIT IS TO BE PLACED 250 FEET IN ADVANCE OF THE RIGHT LANE/LEFT LANE CLOSED ½ MILE SIGN (STANDARD 701400).
5. THE FIRST REAL-TIME TRAFFIC CONTROL WARNING SIGN IS TO BE PLACED 500 FEET IN ADVANCE OF THE RIGHT LANE/LEFT LANE CLOSED 1 MILE SIGN (STANDARD 701400).
6. THE NUMBER OF RTTCS DEVICES MAY BE REDUCED BASED ON THE LOCATION OF THE PORTABLE CHANGEABLE MESSAGE SIGN PER STANDARD 701400.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

MODEL: 74E48 - RTTCS [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-District Details_RTTC.dgn

USER NAME = Maria.Bloemer	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
	CHECKED -	REVISED -	
PLOT DATE = 8/10/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT DETAIL
REAL-TIME TRAFFIC CONTROL SYSTEM

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

DISTRICT 7 DETAIL NO. 45AAAAAA

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	82
		CONTRACT NO. 74E48		
		ILLINOIS	FED. AID PROJECT	

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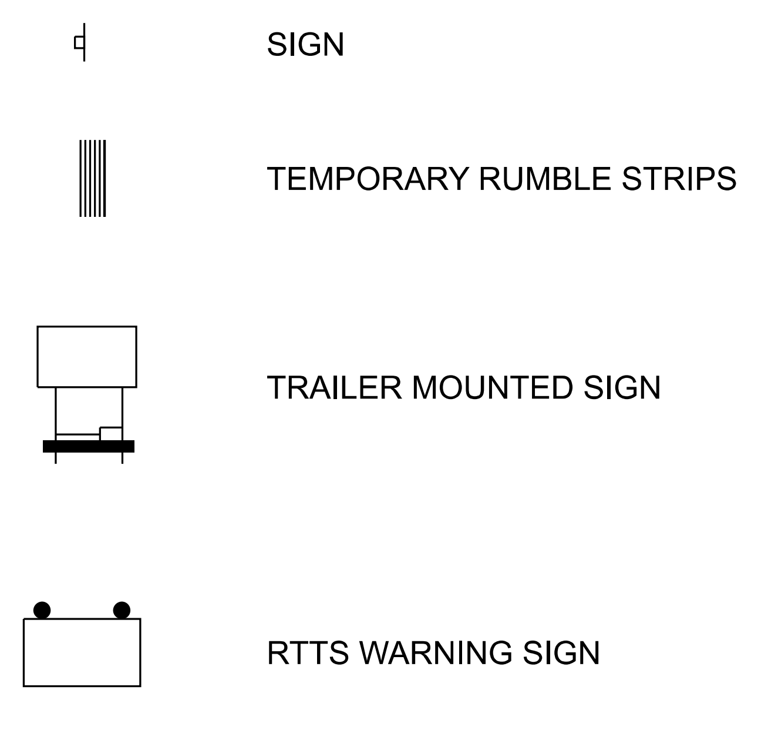
CLARK

SYMBOLS



GENERAL NOTES:

REMOVE THE TEMPORARY RUMBLE STRIPS (SPECIAL)
PRIOR TO THE REMOVAL OF THE ADVANCE WARNING SIGNS.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

MODEL: 74E48 - RTTCS-1 [Sheet]
FILE NAME: c:\pw_work\pwidot\bloemermr\d1225539\D774E48-sheets-District Details_RTTC.dgn

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	CHECKED -	REVISED -	
PLOT DATE = 8/10/2026	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT DETAIL
REAL-TIME TRAFFIC CONTROL SYSTEM

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

DISTRICT 7 DETAIL NO. 45AAAAAA

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	D7 BRIDGE PAINTING 2027-1	CUMBERLAND	83	83
		CONTRACT NO. 74E48		
	ILLINOIS	FED. AID PROJECT		

I-70 CLARK