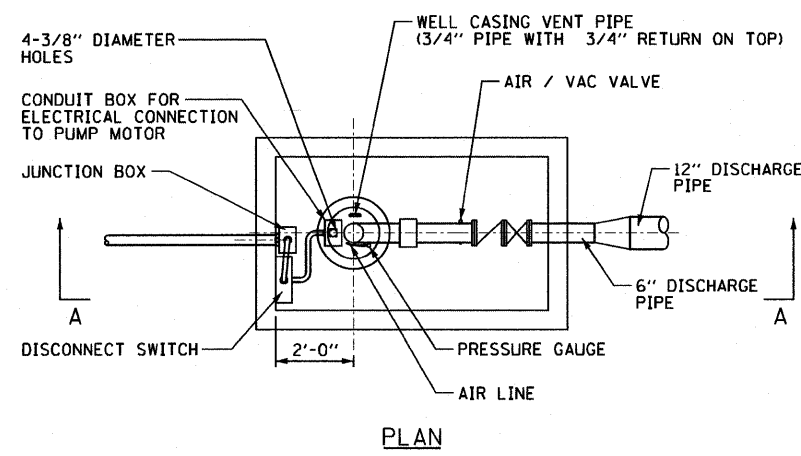
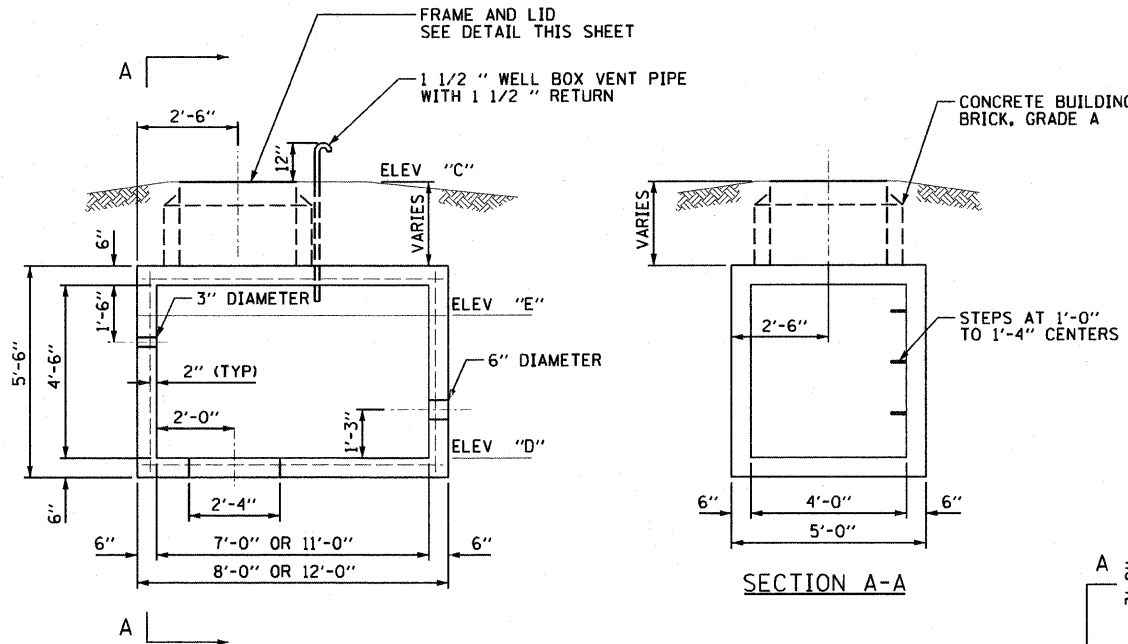


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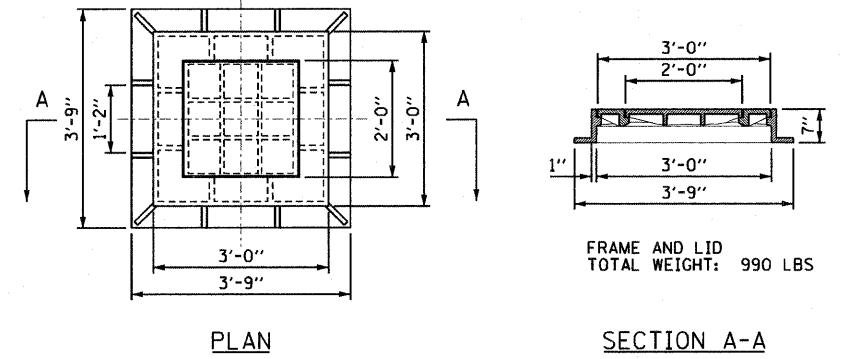
1. REMOVE THE WELL HEAD AND ASSOCIATED PIPING WITHIN THE WELL ENCLOSURE BOX FOR EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR DEEP WELL SEALING AND FILLING PROCEDURES.
2. FILL THE EXISTING PIEZOMETER WELL LOCATED IN CLOSE PROXIMITY TO EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR PIEZOMETER WELL FILLING PROCEDURES.



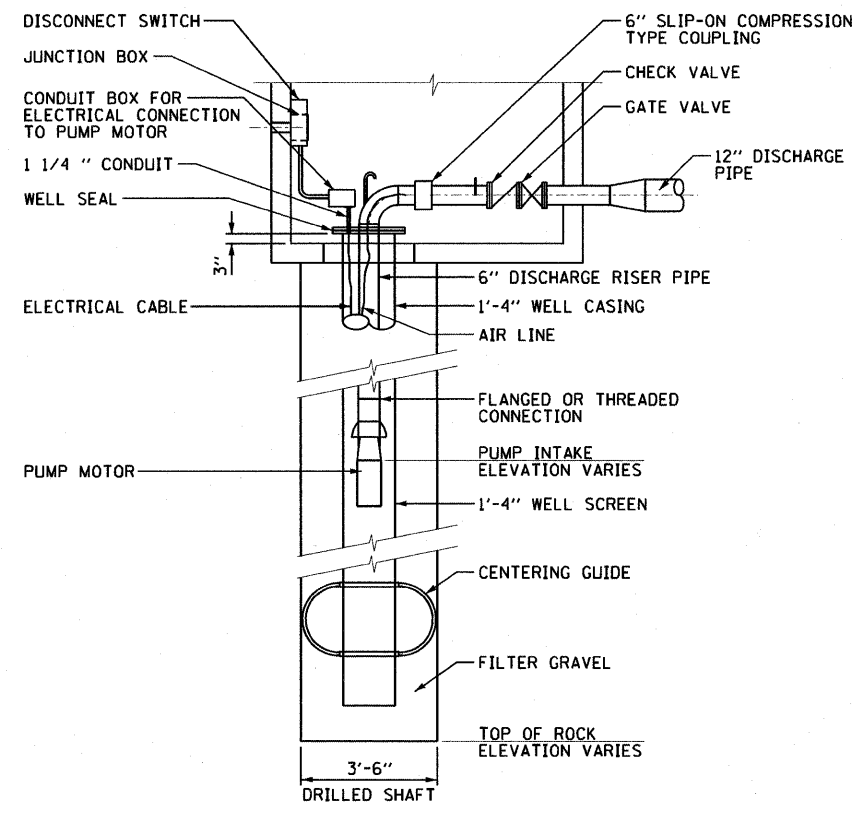
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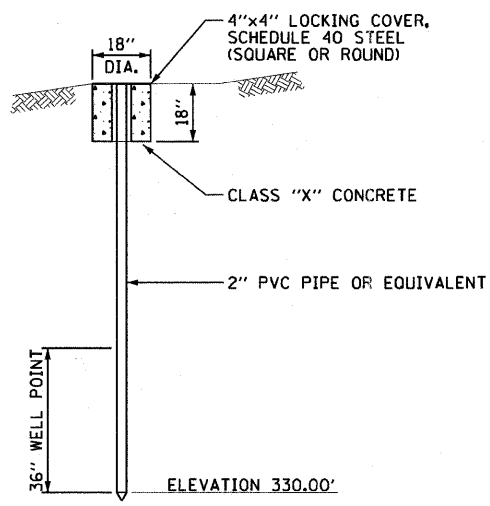
TYPICAL EXISTING WELL ENCLOSURE BOX
(NOT TO SCALE)



TYPICAL EXISTING WELL ENCLOSURE BOX FRAME & LID
(NOT TO SCALE)

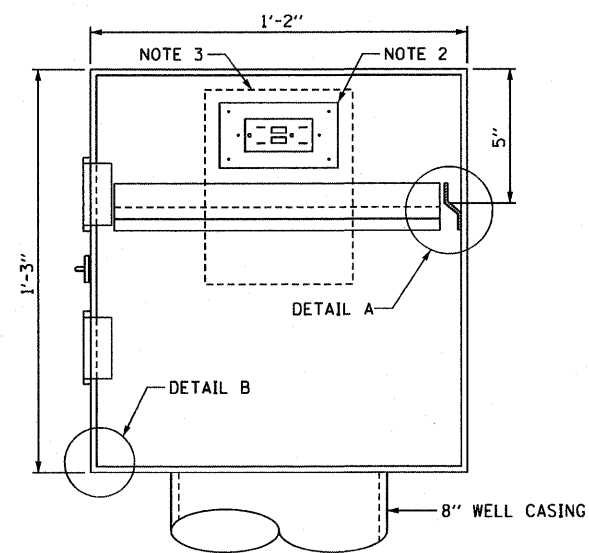
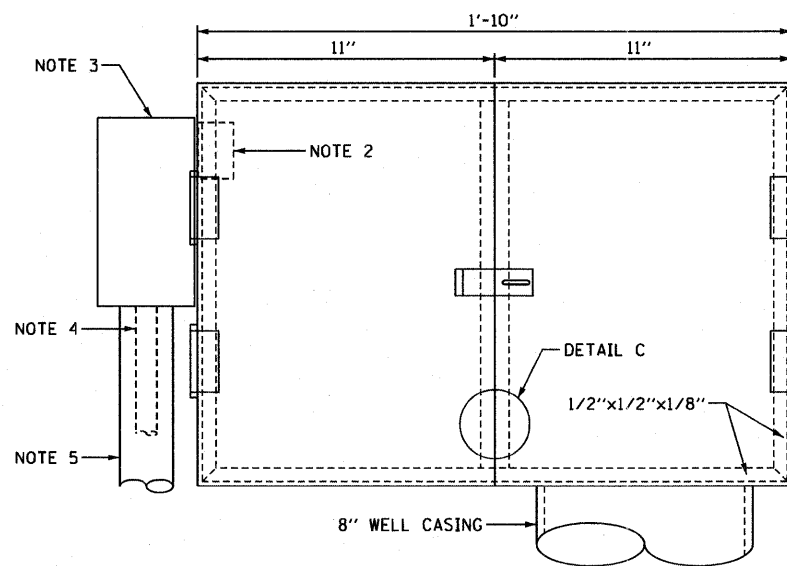
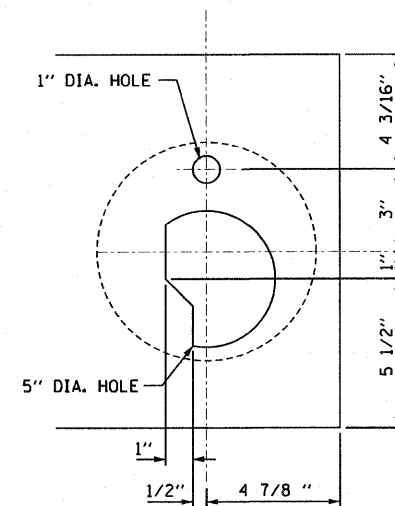
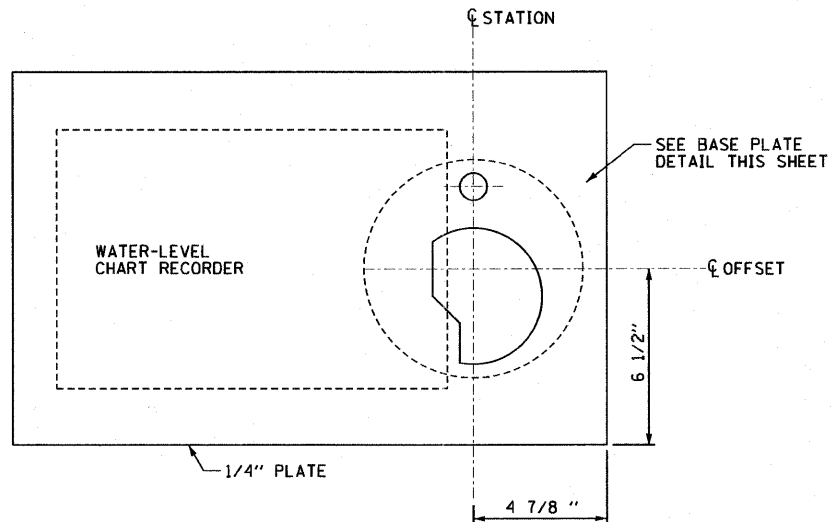
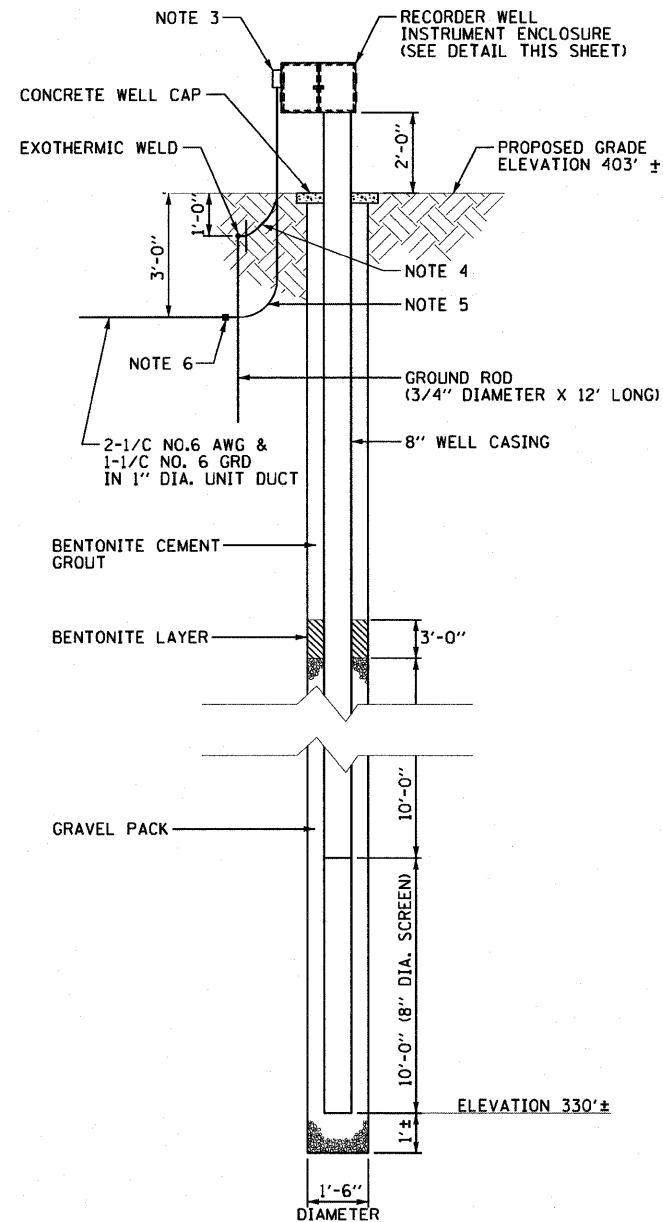


SECTION A-A
TYPICAL EXISTING DEEP WELL
(NOT TO SCALE)



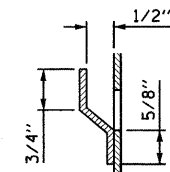
TYPICAL EXISTING PIEZOMETER WELL
(NOT TO SCALE)

EXISTING WELL ENCLOSURE DEMOLITION AND DEEP WELL ABANDONMENT				
WELL NUMBER	ENCLOSURE LID ELEV. "C"	ENCLOSURE FLOOR ELEV. "D"	REMOVAL DEPTH ELEV. "E"	SPECIAL INSTRUCTIONS
WELL NO.2	401.84	-	-	EXISTING WELL TO BE REMOVED IN CONTRACT 76C53 (BY OTHERS)
WELL NO.3	402.00	392.51	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.4	399.96	392.29	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.5	400.32	-	NONE	EXISTING WELL TO REMAIN
WELL NO.11	402.33	395.22	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.12	401.50	393.39	COMPLETE	REMOVE WELLHEAD, RISER PIPING, AND WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.13	398.85	-	NONE	EXISTING WELL TO REMAIN
WELL NO.14	400.25	-	NONE	EXISTING WELL TO REMAIN
WELL NO.15	400.20	-	NONE	EXISTING WELL TO REMAIN

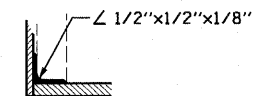


- NOTES:**
1. CONSTRUCT THE PROPOSED RECORDER WELLS AT THE LOCATIONS INDICATED ON THIS DRAWING. REFER TO SPECIAL PROVISIONS FOR INSTALLATION PROCEDURES.
 2. CAST ALUMINUM OUTDOOR "BELL" BOX WITH 15 AMPERE WEATHER RESISTANT GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE OUTLET AND GASKETED CAST COVER PLATE.
 3. STAINLESS STEEL NEMA 4X JUNCTION BOX 6 INCHES WIDE BY 8 INCHES HIGH BY 4 INCHES DEEP. SPLICE POWER FEEDER CONDUCTORS TO NO. 10 AWG CONDUCTORS TO RECEPTACLE OUTLET AND TO NO. 6 AWG GROUNDING ELECTRODE CONDUCTOR. BOND GROUNDING CONDUCTORS TO PULL BOX.
 4. 3/4 INCH DIAMETER RIGID GALVANIZED CONDUIT WITH NO. 6 AWG GROUNDING ELECTRODE CONDUCTOR TO GROUND ROD.
 5. 2 INCH DIAMETER RIGID GALVANIZED CONDUIT FOR POWER FEEDER.
 6. ADAPTER COUPLING AND REDUCER FITTING TO CONNECT UNIT DUCT TO RIGID GALVANIZED CONDUIT.
 7. BRACKET INSTALLED ON BACK AND BOTH SIDES OF ENCLOSURE.

RECORDER WELL NUMBER	STATION	OFFSET
RW NO. 2A	30+00 64E BL	105' RT
-	-	-



DETAIL A
NOTE 7



DETAIL B



DETAIL C

FILE NAME = ... \DBTRI-76C51-sht-Wells-05.dgn	USER NAME = Ientzt	DESIGNED JPC	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DEEP WELL DETAILS PROPOSED RECORDER WELL			F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 352	SHEET NO. 202
	PLOT SCALE = 2.0000' / in.	CHECKED WDS	REVISIONS -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A	CONTRACT NO. 76C51			
	PLOT DATE = MAR. 31, 2011	DATE 03/31/11	REVISIONS -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							

BENCHMARK: RFS5: Chiselled "X" in rim of manhole at St. Clair Ave. and Katherine Dunham Place
 St. Clair Sta. 54+02 13' Rt. Elev. - 413.21

EXISTING STRUCTURE:
 S.N. 082-0149, built in 1972, is a two span continuous, composite, welded plate steel girder bridge with an 8" concrete deck. The girders are 182'-4" long from centerline bearings to centerline bearings at the abutments, the bridge is 256'-0 1/4" long back to back of approach bents. The beams are supported by concrete, vaulted abutments and by a concrete framed pier. The abutments and pier are founded on creosoted timber piles, the existing approach bents are supported on concrete piles. The deck is 59'-6" minimum wide and flares to approximately 115' wide at the end of the north vaulted abutment to meet the adjacent roadway intersection. 9th Street will be closed and traffic detoured during construction. No salvage.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
 with 2008 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50)
 fy = 36,000 psi (M270 Grade 36)

LOADING HL-93

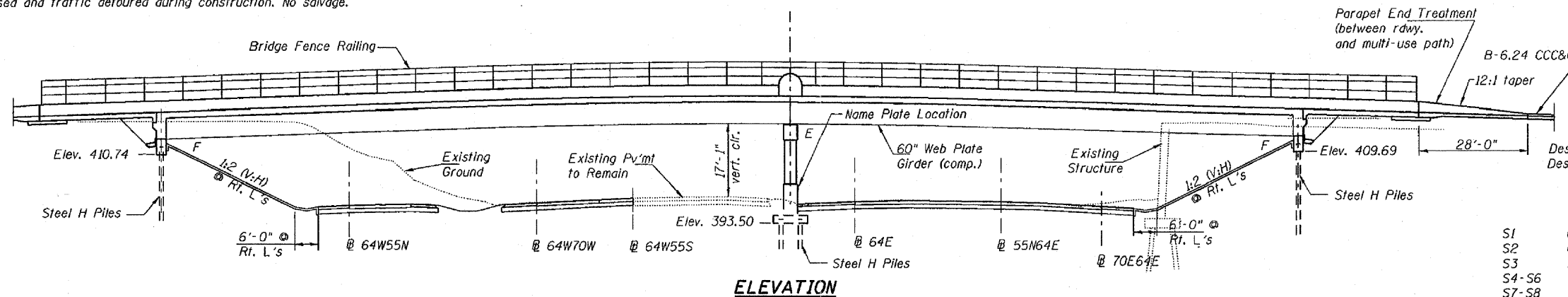
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

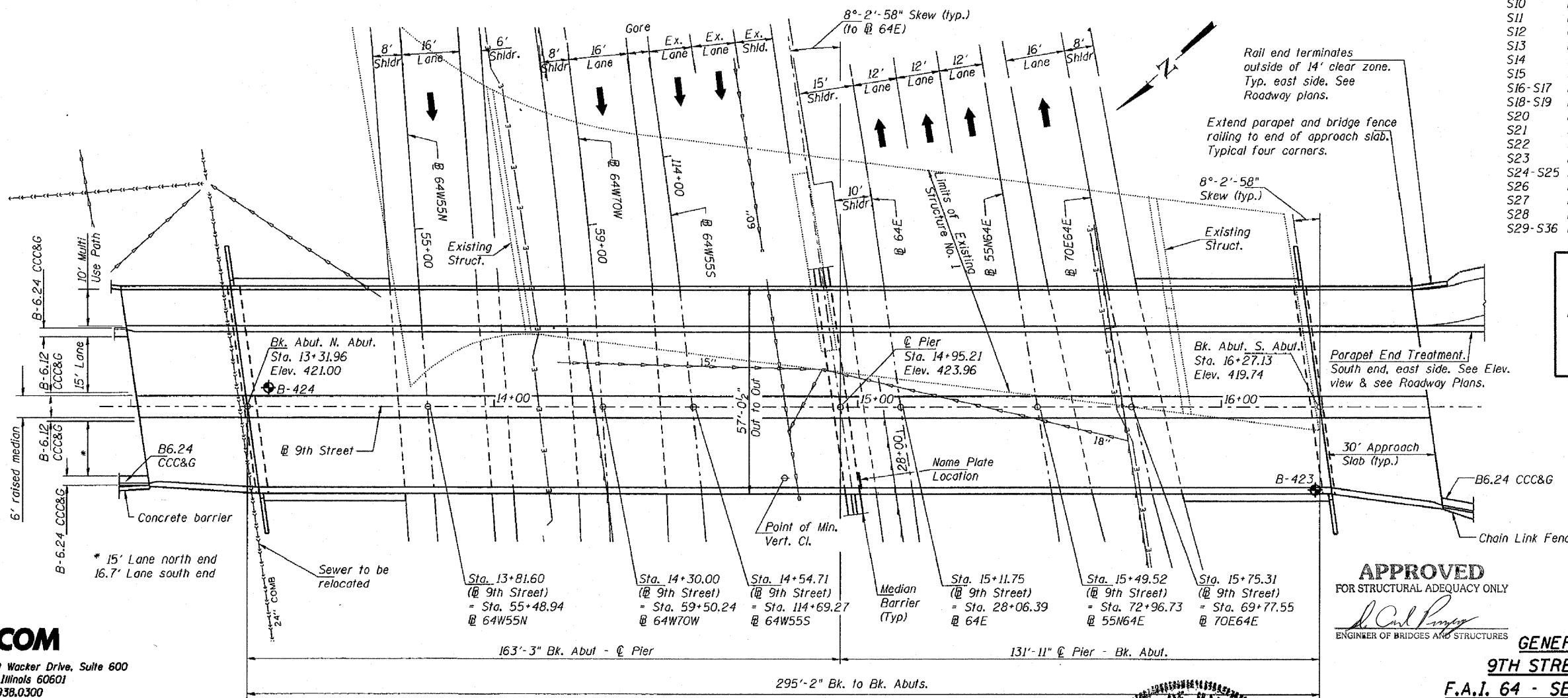
Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S₀₁) = 0.24g
 Design Spectral Acceleration at 0.2 sec. (S₀₅) = 0.54g
 Soil Site Class = D

INDEX OF SHEETS

- S1 General Plan and Elevation
- S2 General Notes and Total Bill of Material
- S3 Substructure Layout
- S4-S6 Top of Slab Elevations
- S7-S8 Top of Approach Slab Elevations
- S9 Deck Plan
- S10 Deck Cross Section
- S11 Parapet Elevations
- S12 Community Icon Parapet Details
- S13 Parapet Details
- S14 Integral Abutment Diaphragm Details
- S15 Superstructure Reinforcement & Materials Schedules
- S16-S17 Bridge Approach Slab Details
- S18-S19 Bridge Fence Railing Details
- S20 Parapet Railing Details
- S21 Structural Steel
- S22 Structural Steel Details
- S23 Bearing Details
- S24-S25 Abutments
- S26 Pier
- S27 HP Pile Details
- S28 Bar Splicer Assembly & Mechanical Splicer Details
- S29-S36 Boring Logs



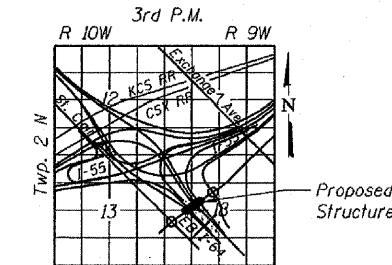
ELEVATION



STATION 28+06.39
 BUILT BY
 STATE OF ILLINOIS
 F.A.I. RT. 64, F.A.U. 9166 & F.A.U. 9180
 SEC. 82-1-3HB, 82-2N, 82-1-12RS
 LOADING HL-93
 STRUCTURE NO. 082-0326

NAME PLATE

See Std. 515001



LOCATION SKETCH

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

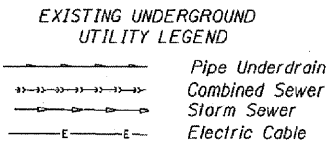
Phillip J. Lane
 ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN & ELEVATION
 9TH STREET OVER I-64 AND RAMPS
 F.A.I. 64 - SEC. 82-1-3HB, 82-2N, 85-1-12RS
 ST. CLAIR COUNTY
 STATION 28+06.39
 STRUCTURE NO. 082-0326

AECOM
 303 East Wacker Drive, Suite 600
 Chicago, Illinois 60601
 Ph: 312.938.0300
 Fax: 312.373.6806
 www.aecom.com

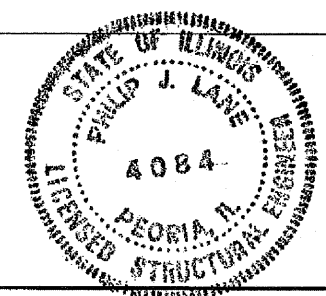
DESIGNED	- P.J.L.
CHECKED	- DDB
DRAWN	- BRD
CHECKED	- DDB

03/31/2011



PLAN

Phillip J. Lane 6/13/11
 Phillip J. Lane, Illinois Structural Engineer
 No. 081.004084, Expires 11/30/12



SHEET NO. S1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	203
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8 in. ϕ , holes 15/16 in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel:
 M270 Grade 50: 559,630 Pounds
 M270 Grade 36: 30,750 Pounds (in cross frames)

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

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

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

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

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall also be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

Sloped wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

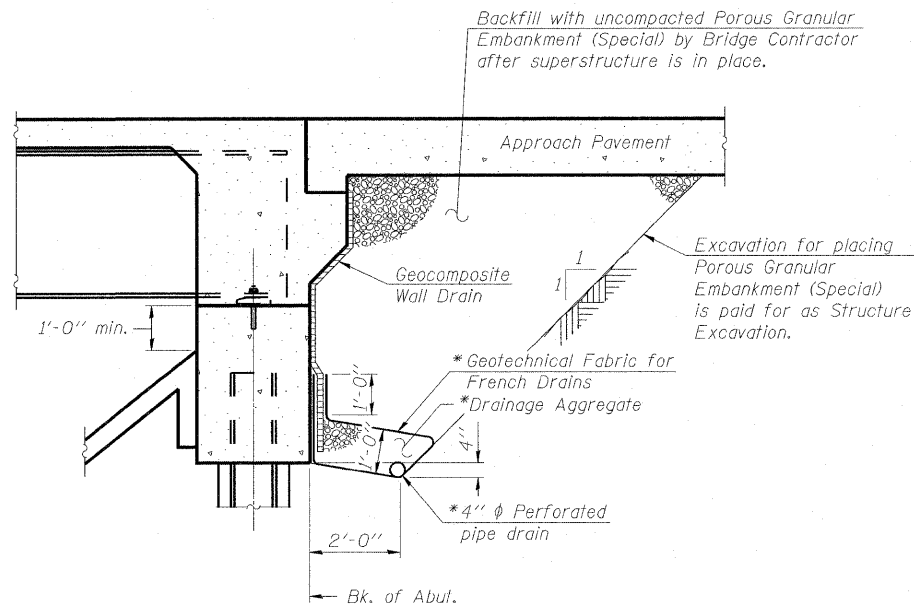
Concrete Sealer shall be applied to the designated areas of the pier. Slipforming of the parapets is not allowed.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		313	313
Removal of Existing Structures No. 1	Each	1		1
Structure Excavation	Cu. Yd.		563	563
Concrete Structures	Cu. Yd.		249.5	249.5
Concrete Superstructure	Cu. Yd.	821.8		821.8
Bridge Deck Grooving	Sq. Yd.	1,304		1,304
Concrete Encasement	Cu. Yd.		17.4	17.4
Protective Coat	Sq. Yd.	2,728		2,728
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	5,040		5,040
Reinforcement Bars, Epoxy Coated	Pound	221,140	54,440	275,580
Bar Splicers	Each	118		118
Bridge Fence Railing	Foot	354.2		354.2
Bridge Fence Railing (Sidewalk)	Foot	353.4		353.4
Parapet Railing	Foot	353.4		353.4
Slope Wall 4 Inch	Sq. Yd.		599	599
Furnishing Steel Piles HP 14x73	Foot		3,627	3,627
Furnishing Steel Piles HP 14x89	Foot		2,565	2,565
Driving Piles	Foot		6,192	6,192
Test Pile Steel HP 14x89	Each	1		1
Pile Shoes	Each		71	71
Name Plates	Each	1		1
Anchor Bolts, 1"	Each	24		24
Anchor Bolts, 1 1/4"	Each	24		24
Concrete Sealer	Sq. Ft.	2,192		2,192
Geocomposite Wall Drain	Sq. Yd.		134	134
Pipe Underdrains for Structures 4"	Foot		194	194
Braced Excavation	Cu. Yd.		125	125
Pile Extraction	Each		62	62
High Load Multi-Rotation Bearings, Guided Expansion, 650K	Each	6		6
Mechanical Splicers	Each		28	28



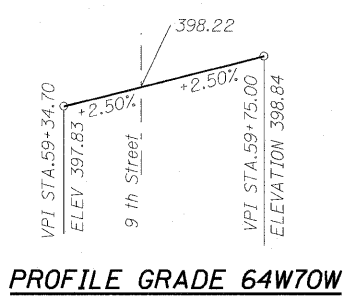
SECTION THRU INTEGRAL ABUTMENT
 (Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

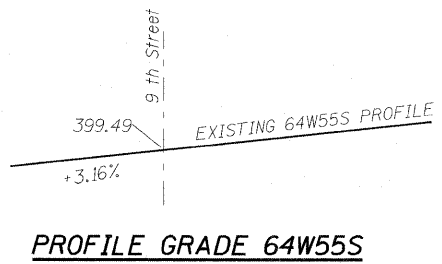
Note:
 All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

CURVE DATA FOR ROADWAYS UNDER BRIDGE

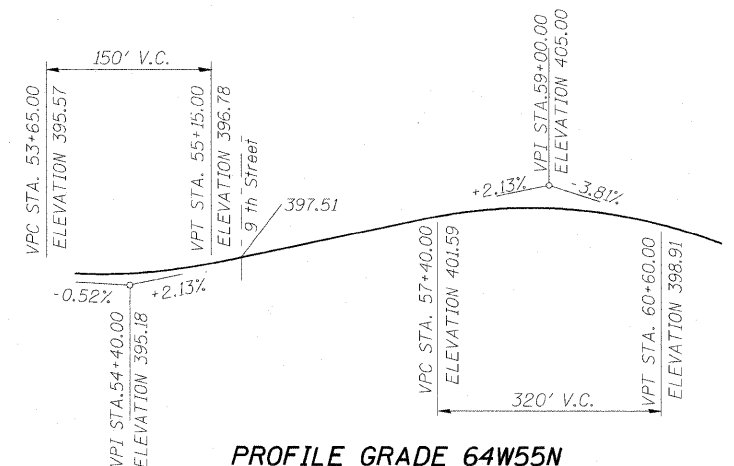
PROP. CURVE 64W70W-1 PI STA. = 59+84.84 $\Delta = 12^\circ 18' 03''$ (RT) $D = 4^\circ 01' 15''$ $R = 1,425.00'$ $T = 153.56'$ $L = 305.93'$ $E = 8.25'$ $e = 5.1\%$ $T.R. = 0.00'$ $S.E. RUN = 115.00'$ $P.C. STA. = 58+31.29$ $P.T. STA. = 61+37.22$	PROP. CURVE 70E64E-3 PI STA. = 69+25.22 $\Delta = 12^\circ 02' 09''$ (RT) $D = 6^\circ 49' 15''$ $R = 840.00'$ $T = 88.55'$ $L = 176.46'$ $E = 4.65'$ $e = 6.0\%$ $T.R. = 0.00'$ $S.E. RUN = 144.00'$ and $128.00'$ $P.C. STA. = 68+36.67$ $P.T. STA. = 70+13.12$
--	---



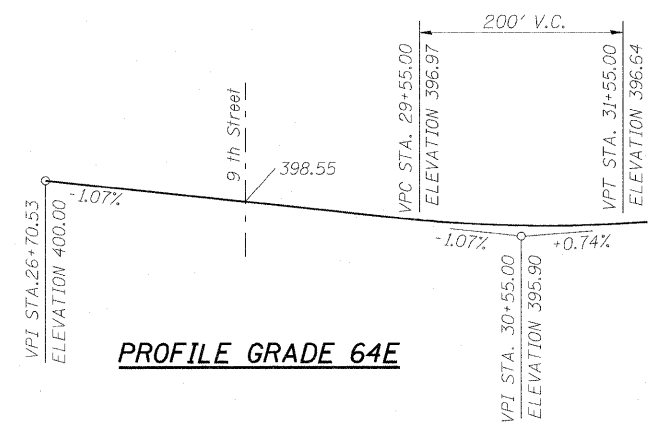
PROFILE GRADE 64W70W



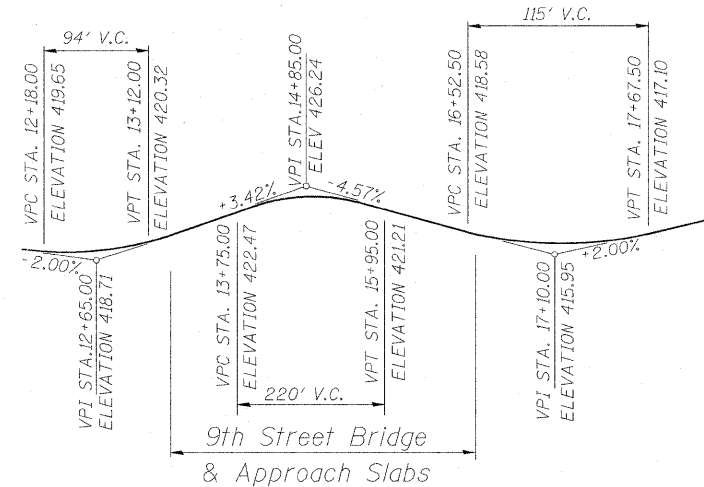
PROFILE GRADE 64W55S



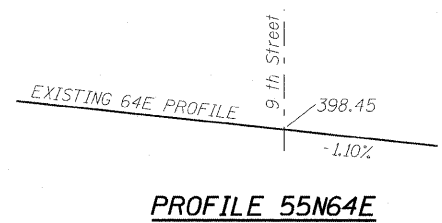
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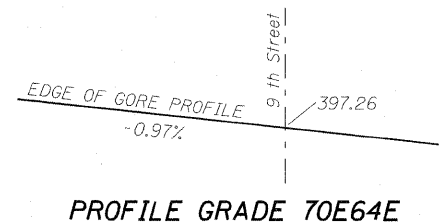
PROFILE GRADE 64E



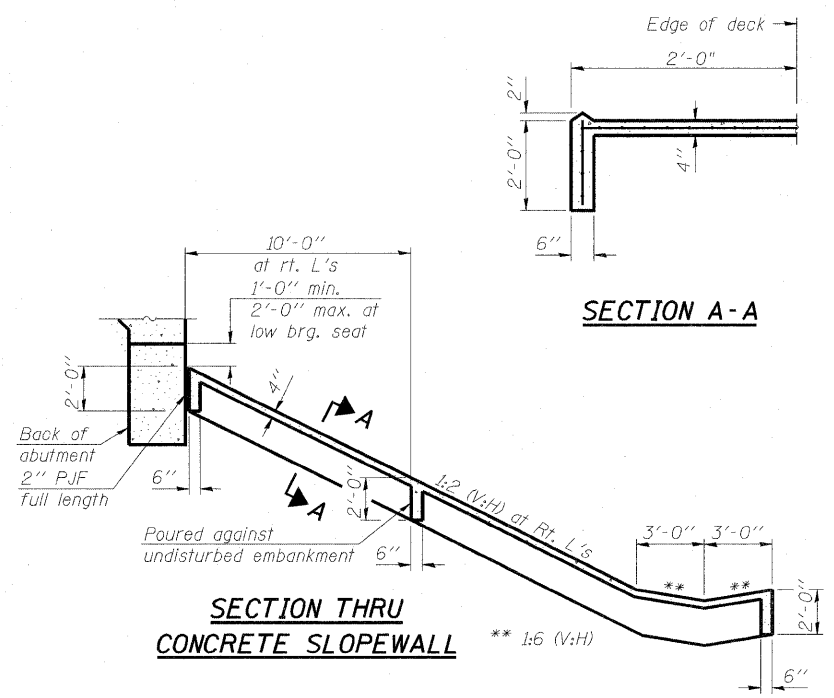
PROFILE GRADE 9th STREET



PROFILE 55N64E



PROFILE GRADE 70E64E



SECTION THRU CONCRETE SLOPEWALL

SECTION A-A

**GENERAL NOTES AND
 TOTAL BILL OF MATERIAL
 STRUCTURE NO. 082-0326**

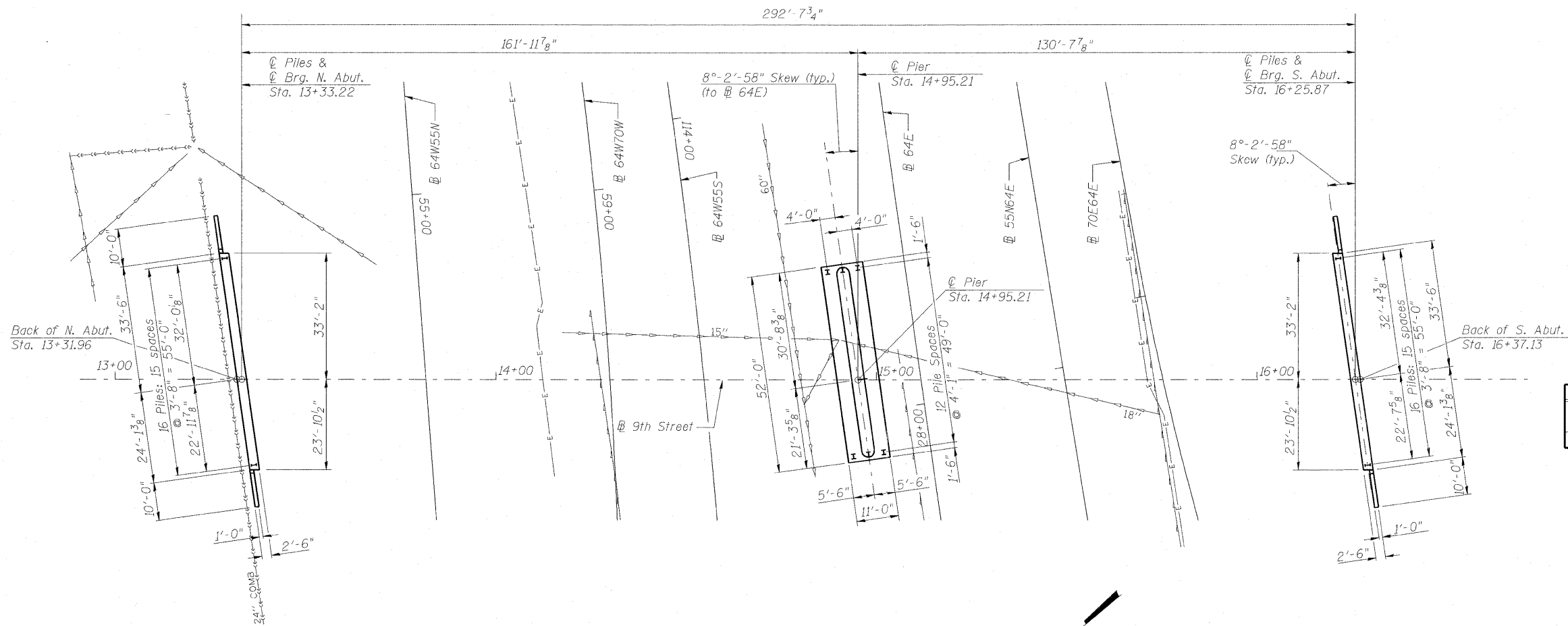
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DRAWN - BRD
CHECKED - DDB

03/31/2011

SHEET NO. S2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	204	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SUBSTRUCTURE LAYOUT

BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures No. 1	Each	1
Pile Extraction	Each	62

See Special Provisions for Removal of Existing Structures & Pile Extraction.

EXISTING UNDERGROUND
UTILITY LEGEND

- Pipe Underdrain
- Combined Sewer
- Storm Sewer
- Electric Cable

**SUBSTRUCTURE LAYOUT
STRUCTURE NO. 082-0326**

AECOM

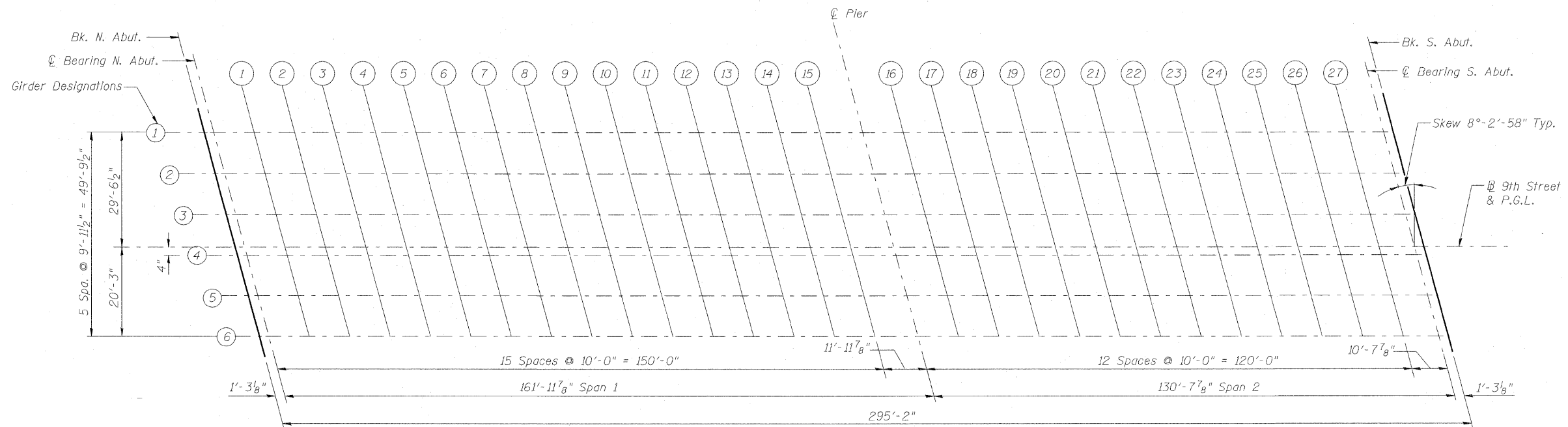
303 East Wacker Drive, Suite 600
Chicago, Illinois 60601
Ph: 312.938.0300
Fax: 312.373.6806
www.aecom.com

DESIGNED - P.J.L.
CHECKED - DDB
DRAWN - BRD
CHECKED - DDB

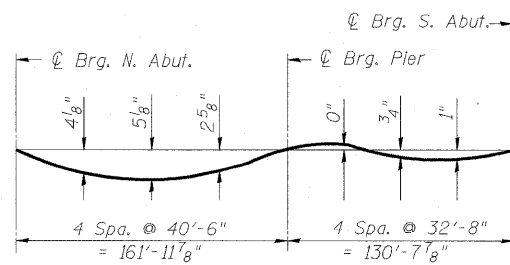
03/31/2011

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S36 SHEETS	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	205
F.A.U. 9166 / F.A.U. 9180			CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

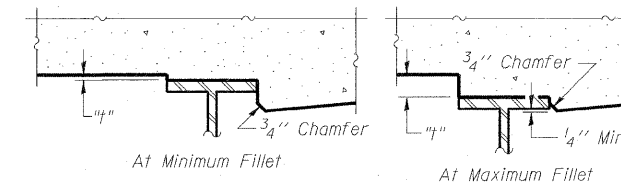


* **DEAD LOAD DEFLECTION DIAGRAM**

(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 Sheets S5 & S6 of S36.



To determine "f": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets S5 & S6 of S36, minus slab thickness, equals the fillet heights "f" above top flange of beams.

* **FILLET HEIGHTS**

* Note:

The dead load deflections shown in the diagram and used for fillet height determination are based on the Pouring Sequence shown on Sheet S9 of S36 with Pours (1) & (2) made on a single day, then hardened prior to making Pour (3) on another day.

If the Contractor elects to use a different pour placement / hardening schedule, then the deflections and fillet heights shall be re-calculated.

The cost of re-calculating deflections and adjusting fillet heights shall be included in the cost of Concrete Superstructure.

TOP OF SLAB ELEVATIONS - I
STRUCTURE NO. 082-0326

AECOM

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Fax: 312.373.6806
www.aecom.com

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CHECKED	- D.D.B.
DRAWN	- B.R.D.
CHECKED	- D.D.B.

03/31/2011

SHEET NO. S4	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	206
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER 1

Location	Station	Offset (Left)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+27.78	-29.54	420.27	420.27
Ctr. Brg. N. Abut	13+29.04	-29.54	420.31	420.31
1	13+39.04	-29.54	420.65	420.75
2	13+49.04	-29.54	421.00	421.20
3	13+59.04	-29.54	421.34	421.62
4	13+69.04	-29.54	421.68	422.03
5	13+79.04	-29.54	422.02	422.42
6	13+89.04	-29.54	422.33	422.76
7	13+99.04	-29.54	422.60	423.04
8	14+09.04	-29.54	422.84	423.26
9	14+19.04	-29.54	423.04	423.43
10	14+29.04	-29.54	423.20	423.55
11	14+39.04	-29.54	423.33	423.62
12	14+49.04	-29.54	423.42	423.64
13	14+59.04	-29.54	423.48	423.64
14	14+69.04	-29.54	423.50	423.60
15	14+79.04	-29.54	423.48	423.52
Ctr. Brg. Pier	14+91.03	-29.54	423.41	423.41
16	15+01.03	-29.54	423.31	423.29
17	15+11.03	-29.54	423.18	423.16
18	15+21.03	-29.54	423.01	423.00
19	15+31.03	-29.54	422.80	422.81
20	15+41.03	-29.54	422.56	422.59
21	15+51.03	-29.54	422.28	422.34
22	15+61.03	-29.54	421.96	422.04
23	15+71.03	-29.54	421.61	421.70
24	15+81.03	-29.54	421.22	421.31
25	15+91.03	-29.54	420.80	420.88
26	16+01.03	-29.54	420.34	420.40
27	16+11.03	-29.54	419.89	419.93
Ctr. Brg. S. Abut	16+21.69	-29.54	419.40	419.40
Bk. S. Abut	16+22.95	-29.54	419.34	419.34

GIRDER 2

Location	Station	Offset (Left)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+29.19	-19.58	420.52	420.52
Ctr. Brg. N. Abut	13+30.45	-19.58	420.56	420.56
1	13+40.45	-19.58	420.90	421.00
2	13+50.45	-19.58	421.24	421.44
3	13+60.45	-19.58	421.59	421.87
4	13+70.45	-19.58	421.93	422.28
5	13+80.45	-19.58	422.26	422.66
6	13+90.45	-19.58	422.57	423.00
7	14+00.45	-19.58	422.84	423.28
8	14+10.45	-19.58	423.07	423.49
9	14+20.45	-19.58	423.26	423.65
10	14+30.45	-19.58	423.42	423.77
11	14+40.45	-19.58	423.55	423.84
12	14+50.45	-19.58	423.63	423.85
13	14+60.45	-19.58	423.68	423.84
14	14+70.45	-19.58	423.69	423.79
15	14+80.45	-19.58	423.67	423.71
Ctr. Brg. Pier	14+92.44	-19.58	423.60	423.60
16	15+02.44	-19.58	423.49	423.47
17	15+12.44	-19.58	423.35	423.33
18	15+22.44	-19.58	423.18	423.17
19	15+32.44	-19.58	422.97	422.98
20	15+42.44	-19.58	422.72	422.75
21	15+52.44	-19.58	422.43	422.49
22	15+62.44	-19.58	422.11	422.19
23	15+72.44	-19.58	421.76	421.85
24	15+82.44	-19.58	421.36	421.45
25	15+92.44	-19.58	420.93	421.01
26	16+02.44	-19.58	420.48	420.54
27	16+12.44	-19.58	420.02	420.06
Ctr. Brg. S. Abut	16+23.10	-19.58	419.53	419.53
Bk. S. Abut	16+24.36	-19.58	419.47	419.47

GIRDER 3

Location	Station	Offset (Left)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+30.60	-9.63	420.76	420.76
Ctr. Brg. N. Abut	13+31.86	-9.63	420.81	420.81
1	13+41.86	-9.63	421.15	421.25
2	13+51.86	-9.63	421.49	421.69
3	13+61.86	-9.63	421.83	422.11
4	13+71.86	-9.63	422.17	422.52
5	13+81.86	-9.63	422.51	422.91
6	13+91.86	-9.63	422.81	423.24
7	14+01.86	-9.63	423.07	423.51
8	14+11.86	-9.63	423.30	423.72
9	14+21.86	-9.63	423.49	423.88
10	14+31.86	-9.63	423.64	423.99
11	14+41.86	-9.63	423.76	424.05
12	14+51.86	-9.63	423.84	424.06
13	14+61.86	-9.63	423.88	424.04
14	14+71.86	-9.63	423.89	423.99
15	14+81.86	-9.63	423.86	423.90
Ctr. Brg. Pier	14+93.85	-9.63	423.78	423.78
16	15+03.85	-9.63	423.68	423.66
17	15+13.85	-9.63	423.53	423.51
18	15+23.85	-9.63	423.35	423.34
19	15+33.85	-9.63	423.13	423.14
20	15+43.85	-9.63	422.88	422.91
21	15+53.85	-9.63	422.59	422.65
22	15+63.85	-9.63	422.27	422.35
23	15+73.85	-9.63	421.90	421.99
24	15+83.85	-9.63	421.50	421.59
25	15+93.85	-9.63	421.07	421.15
26	16+03.85	-9.63	420.61	420.67
27	16+13.85	-9.63	420.15	420.19
Ctr. Brg. S. Abut	16+24.51	-9.63	419.67	419.67
Bk. S. Abut	16+25.77	-9.63	419.61	419.61

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+31.96	0.00	421.00	421.00
Ctr. Brg. N. Abut	13+33.22	0.00	421.04	421.04
1	13+43.22	0.00	421.39	421.49
2	13+53.22	0.00	421.73	421.93
3	13+63.22	0.00	422.07	422.35
4	13+73.22	0.00	422.41	422.76
5	13+83.22	0.00	422.74	423.14
6	13+93.22	0.00	423.04	423.47
7	14+03.22	0.00	423.30	423.74
8	14+13.22	0.00	423.52	423.94
9	14+23.22	0.00	423.70	424.09
10	14+33.22	0.00	423.85	424.20
11	14+43.22	0.00	423.96	424.25
12	14+53.22	0.00	424.04	424.26
13	14+63.22	0.00	424.08	424.24
14	14+73.22	0.00	424.08	424.18
15	14+83.22	0.00	424.05	424.09
Ctr. Brg. Pier	14+95.21	0.00	423.96	423.96
16	15+05.21	0.00	423.85	423.83
17	15+15.21	0.00	423.70	423.68
18	15+25.21	0.00	423.52	423.51
19	15+35.21	0.00	423.29	423.30
20	15+45.21	0.00	423.04	423.07
21	15+55.21	0.00	422.74	422.80
22	15+65.21	0.00	422.41	422.49
23	15+75.21	0.00	422.04	422.13
24	15+85.21	0.00	421.64	421.73
25	15+95.21	0.00	421.20	421.28
26	16+05.21	0.00	420.74	420.80
27	16+15.21	0.00	420.29	420.33
Ctr. Brg. S. Abut	16+25.87	0.00	419.80	419.80
Bk. S. Abut	16+27.13	0.00	419.74	419.74

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03/31/2011

TOP OF SLAB ELEVATIONS - II
STRUCTURE NO. 082-0326

SHEET NO. 55	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	207
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER 4

Location	Station	Offset (Right)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+32.01	0.33	421.00	421.00
Ctr. Brg. N. Abut	13+33.27	0.33	421.04	421.04
1	13+43.27	0.33	421.38	421.48
2	13+53.27	0.33	421.72	421.92
3	13+63.27	0.33	422.07	422.35
4	13+73.27	0.33	422.41	422.76
5	13+83.27	0.33	422.74	423.14
6	13+93.27	0.33	423.03	423.46
7	14+03.27	0.33	423.29	423.73
8	14+13.27	0.33	423.51	423.93
9	14+23.27	0.33	423.70	424.09
10	14+33.27	0.33	423.85	424.20
11	14+43.27	0.33	423.96	424.25
12	14+53.27	0.33	424.03	424.25
13	14+63.27	0.33	424.07	424.23
14	14+73.27	0.33	424.08	424.18
15	14+83.27	0.33	424.04	424.08
Ctr. Brg. Pier	14+95.26	0.33	423.96	423.96
16	15+05.26	0.33	423.84	423.82
17	15+15.26	0.33	423.69	423.67
18	15+25.26	0.33	423.51	423.50
19	15+35.26	0.33	423.29	423.30
20	15+45.26	0.33	423.03	423.06
21	15+55.26	0.33	422.73	422.79
22	15+65.26	0.33	422.40	422.48
23	15+75.26	0.33	422.03	422.12
24	15+85.26	0.33	421.63	421.72
25	15+95.26	0.33	421.19	421.27
26	16+05.26	0.33	420.73	420.79
27	16+15.26	0.33	420.28	420.32
Ctr. Brg. S. Abut	16+25.92	0.33	419.79	419.79
Bk. S. Abut	16+27.18	0.33	419.73	419.73

GIRDER 5

Location	Station	Offset (Right)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+33.42	10.29	420.85	420.85
Ctr. Brg. N. Abut	13+34.68	10.29	420.89	420.89
1	13+44.68	10.29	421.23	421.33
2	13+54.68	10.29	421.57	421.77
3	13+64.68	10.29	421.92	422.20
4	13+74.68	10.29	422.26	422.61
5	13+84.68	10.29	422.58	422.98
6	13+94.68	10.29	422.87	423.30
7	14+04.68	10.29	423.12	423.56
8	14+14.68	10.29	423.34	423.76
9	14+24.68	10.29	423.52	423.91
10	14+34.68	10.29	423.66	424.01
11	14+44.68	10.29	423.77	424.06
12	14+54.68	10.29	423.84	424.06
13	14+64.68	10.29	423.88	424.04
14	14+74.68	10.29	423.88	423.98
15	14+84.68	10.29	423.84	423.88
Ctr. Brg. Pier	14+96.67	10.29	423.74	423.74
16	15+06.67	10.29	423.63	423.61
17	15+16.67	10.29	423.47	423.45
18	15+26.67	10.29	423.28	423.27
19	15+36.67	10.29	423.05	423.06
20	15+46.67	10.29	422.79	422.82
21	15+56.67	10.29	422.49	422.55
22	15+66.67	10.29	422.15	422.23
23	15+76.67	10.29	421.78	421.87
24	15+86.67	10.29	421.37	421.46
25	15+96.67	10.29	420.93	421.01
26	16+06.67	10.29	420.47	420.53
27	16+16.67	10.29	420.01	420.05
Ctr. Brg. S. Abut	16+27.33	10.29	419.53	419.53
Bk. S. Abut	16+28.59	10.29	419.47	419.47

GIRDER 6

Location	Station	Offset (Right)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut	13+34.82	20.25	420.69	420.69
Ctr. Brg. N. Abut	13+36.08	20.25	420.74	420.74
1	13+46.08	20.25	421.08	421.18
2	13+56.08	20.25	421.42	421.62
3	13+66.08	20.25	421.76	422.04
4	13+76.08	20.25	422.11	422.46
5	13+86.08	20.25	422.43	422.83
6	13+96.08	20.25	422.71	423.14
7	14+06.08	20.25	422.96	423.40
8	14+16.08	20.25	423.17	423.59
9	14+26.08	20.25	423.34	423.73
10	14+36.08	20.25	423.48	423.83
11	14+46.08	20.25	423.58	423.87
12	14+56.08	20.25	423.65	423.87
13	14+66.08	20.25	423.68	423.84
14	14+76.08	20.25	423.67	423.77
15	14+86.08	20.25	423.63	423.67
Ctr. Brg. Pier	14+98.07	20.25	423.53	423.53
16	15+08.07	20.25	423.41	423.39
17	15+18.07	20.25	423.25	423.23
18	15+28.07	20.25	423.05	423.04
19	15+38.07	20.25	422.82	422.83
20	15+48.07	20.25	422.55	422.58
21	15+58.07	20.25	422.25	422.31
22	15+68.07	20.25	421.90	421.98
23	15+78.07	20.25	421.53	421.62
24	15+88.07	20.25	421.11	421.20
25	15+98.07	20.25	420.66	420.74
26	16+08.07	20.25	420.21	420.27
27	16+18.07	20.25	419.75	419.79
Ctr. Brg. S. Abut	16+28.73	20.25	419.26	419.26
Bk. S. Abut	16+29.99	20.25	419.20	419.20

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TOP OF SLAB ELEVATIONS - III
STRUCTURE NO. 082-0326

SHEET NO. 56	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	208
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK CURB LINE

Location	Station	Offset (Left)	Theoretical Grade Elevations
End N. Appr. Pav't.	12+97.41	-32.17	419.23
A	13+07.41	-32.17	419.52
B	13+17.41	-32.17	419.86
Bk. N. Abut.	13+27.41	-32.17	420.20

EAST CURB LINE

Location	Station	Offset (Left)	Theoretical Grade Elevations
End N. Appr. Pav't.	12+99.05	-20.58	419.51
A	13+09.05	-20.58	419.81
B	13+19.05	-20.58	420.15
Bk. N. Abut.	13+29.05	-20.58	420.49

EAST EDGE OF LANE LT.

Location	Station	Offset (Left)	Theoretical Grade Elevations
End N. Appr. Pav't.	12+99.27	-19.00	419.55
A	13+09.27	-19.00	419.85
B	13+19.27	-19.00	420.19
Bk. N. Abut.	13+29.27	-19.00	420.53

WEST EDGE OF LANE LT.

Location	Station	Offset (Left)	Theoretical Grade Elevations
End N. Appr. Pav't.	13+01.39	-4.00	419.91
A	13+11.39	-4.00	420.22
B	13+21.39	-4.00	420.56
Bk. N. Abut.	13+31.39	-4.00	420.90

ROADWAY PGL

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Pav't.	13+01.96	0.00	420.00
A	13+11.96	0.00	420.32
B	13+21.96	0.00	420.66
Bk. N. Abut.	13+31.96	0.00	421.00

EAST EDGE OF LANE RT.

Location	Station	Offset (Right)	Theoretical Grade Elevations
End N. Appr. Pav't.	13+02.53	4.00	419.94
A	13+12.53	4.00	420.26
B	13+22.53	4.00	420.60
Bk. N. Abut.	13+32.53	4.00	420.94

WEST EDGE OF LANE RT.

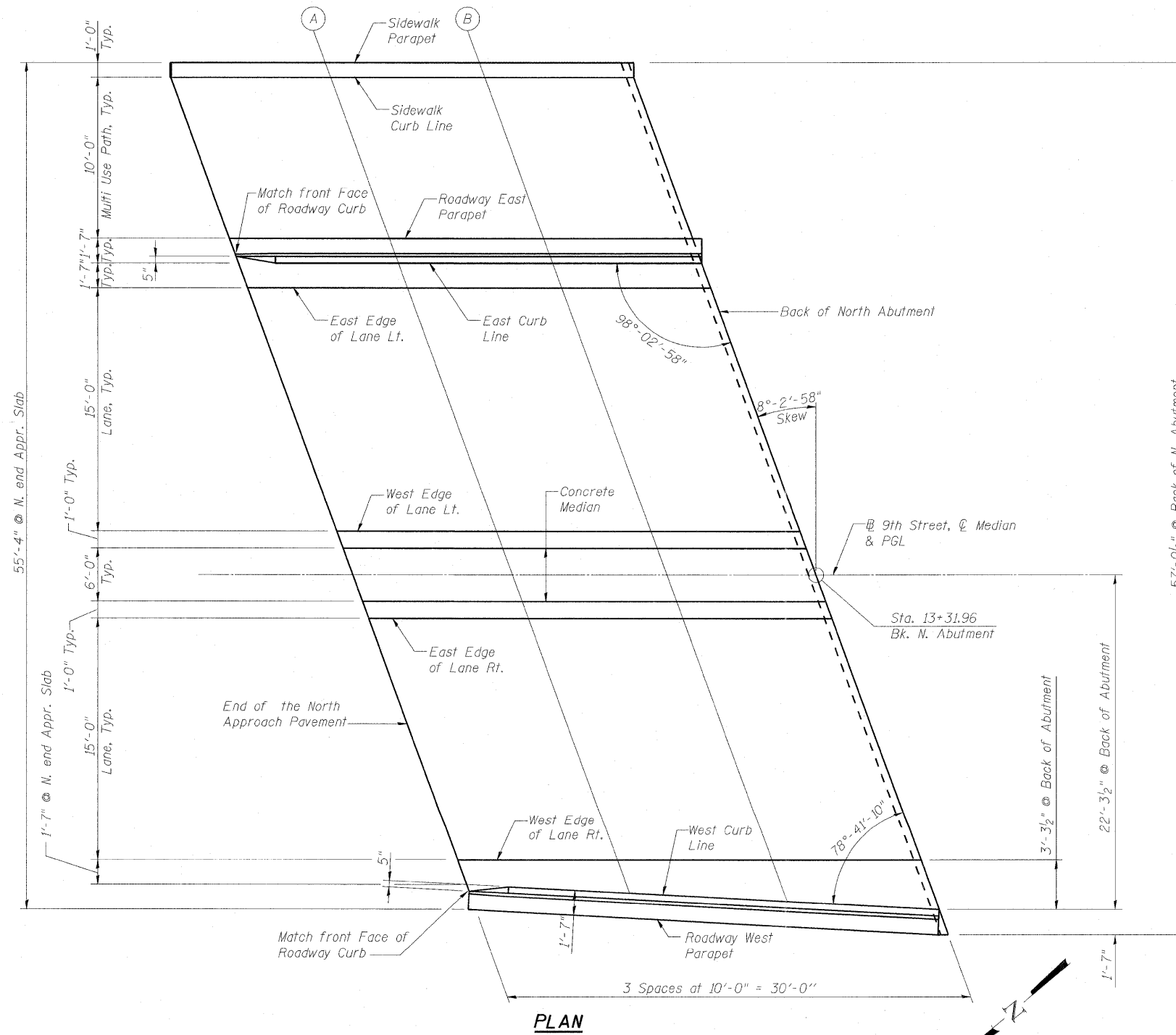
Location	Station	Offset (Right)	Theoretical Grade Elevations
End N. Appr. Pav't.	13+04.65	19.00	419.70
A	13+14.65	19.00	420.03
B	13+24.65	19.00	420.37
Bk. N. Abut.	13+34.65	19.00	420.71

WEST CURB LINE

Location	Station	Offset (Right)	Theoretical Grade Elevations
End N. Appr. Pav't.	13+05.11	20.58	419.68
A	13+15.11	21.15	420.00
B	13+25.11	21.72	420.33
Bk. N. Abut.	13+35.11	22.29	420.66

**TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 082-0326**

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	209
S36 SHEETS		F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51		
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK CURB LINE

Location	Station	Offset (Left)	Theoretical Grade Elevations
Bk. S. Abut.	16+22.58	-32.17	419.30
A	16+32.58	-32.31	418.85
B	16+42.58	-32.45	418.38
End S. Appr. Pav't.	16+52.58	-32.58	417.92

EAST CURB LINE

Location	Station	Offset (Left)	Theoretical Grade Elevations
Bk. S. Abut.	16+24.22	-20.58	419.46
A	16+34.22	-20.72	419.00
B	16+44.22	-20.86	418.54
End S. Appr. Pav't.	16+54.22	-21.00	418.08

EAST EDGE OF LANE LT.

Location	Station	Offset (Left)	Theoretical Grade Elevations
Bk. S. Abut.	16+24.44	-19.00	419.48
A	16+34.44	-19.00	419.03
B	16+44.44	-19.00	418.57
End S. Appr. Pav't.	16+54.44	-19.00	418.11

WEST EDGE OF LANE LT.

Location	Station	Offset (Left)	Theoretical Grade Elevations
Bk. S. Abut.	16+26.56	-4.00	419.69
A	16+36.56	-4.00	419.23
B	16+46.56	-4.00	418.77
End S. Appr. Pav't.	16+56.56	-4.00	418.32

ROADWAY PGL

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	16+27.13	0.00	419.74
A	16+37.13	0.00	419.28
B	16+47.13	0.00	418.83
End S. Appr. Pav't.	16+57.13	0.00	418.37

EAST EDGE OF LANE RT.

Location	Station	Offset (Right)	Theoretical Grade Elevations
Bk. S. Abut.	16+27.70	4.00	419.63
A	16+37.70	4.00	419.18
B	16+47.70	4.00	418.72
End S. Appr. Pav't.	16+57.70	4.00	418.27

WEST EDGE OF LANE RT.

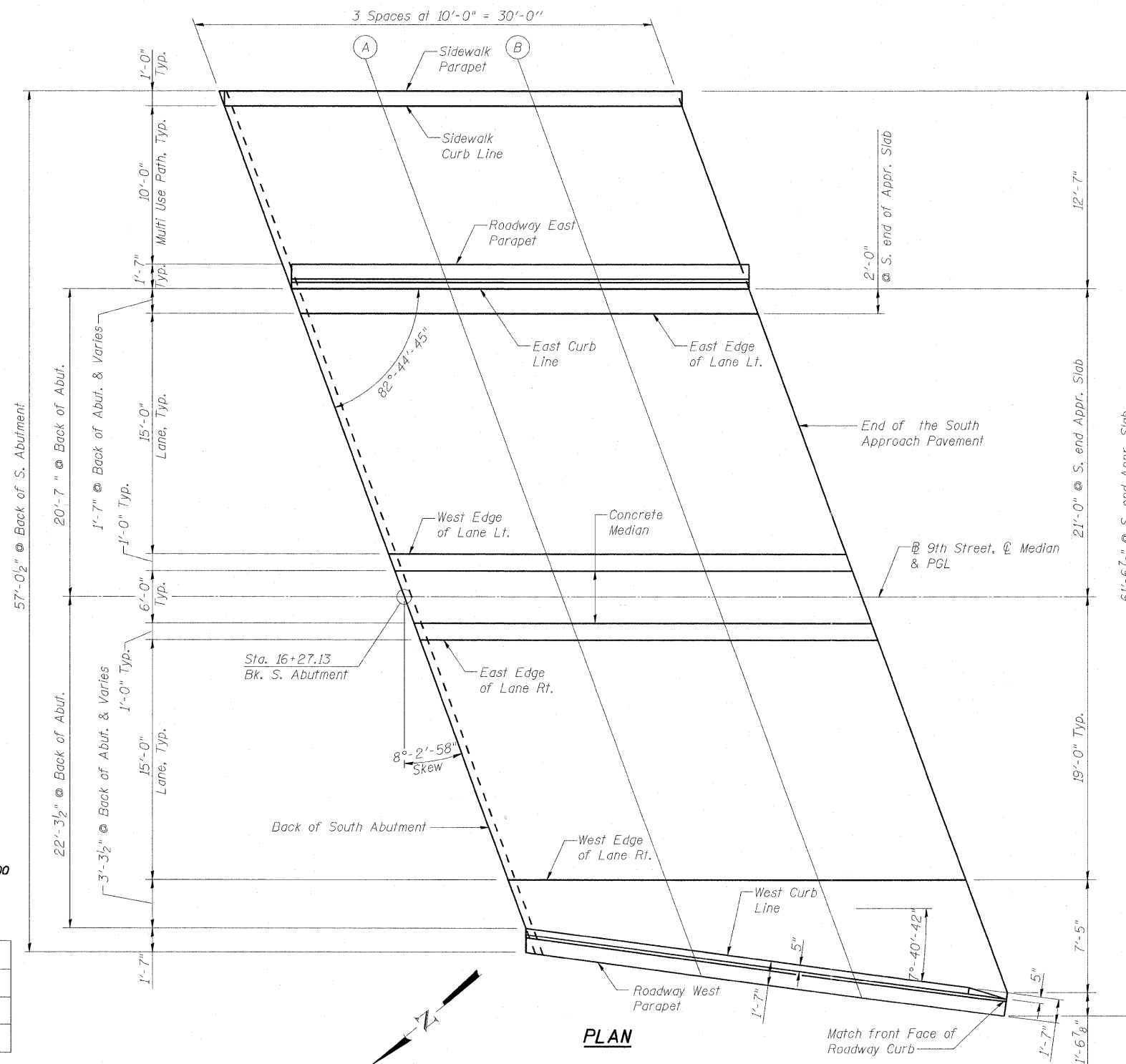
Location	Station	Offset (Right)	Theoretical Grade Elevations
Bk. S. Abut.	16+29.82	19.00	419.24
A	16+39.82	19.00	418.78
B	16+49.82	19.00	418.32
End S. Appr. Pav't.	16+59.82	19.00	417.88

WEST CURB LINE

Location	Station	Offset (Right)	Theoretical Grade Elevations
Bk. S. Abut.	16+30.28	22.29	419.15
A	16+40.48	23.67	418.66
B	16+50.67	25.04	418.16
End S. Appr. Pav't.	16+60.87	26.41	417.69

**TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 082-0326**

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S8	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	210
S36 SHEETS		F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51		
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



PLAN

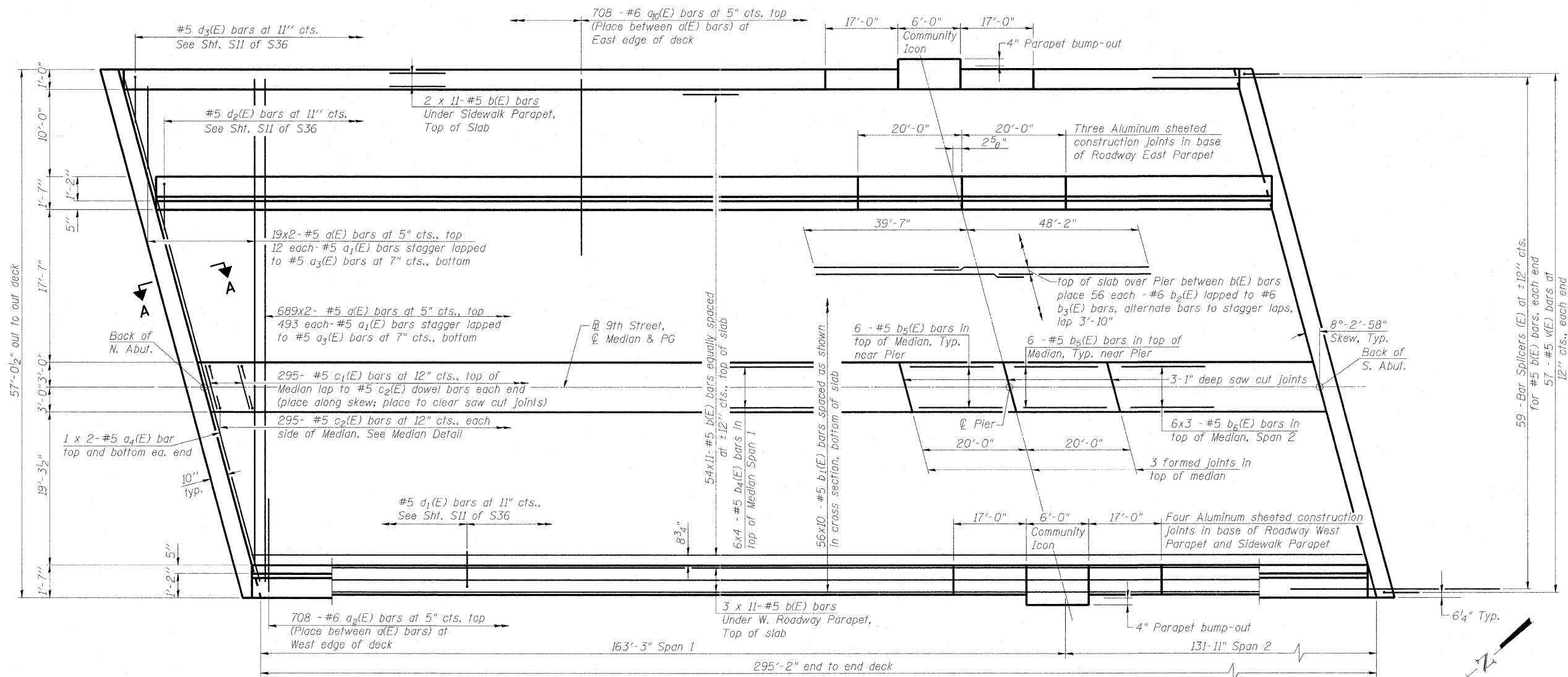
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CHECKED	- D.D.B.
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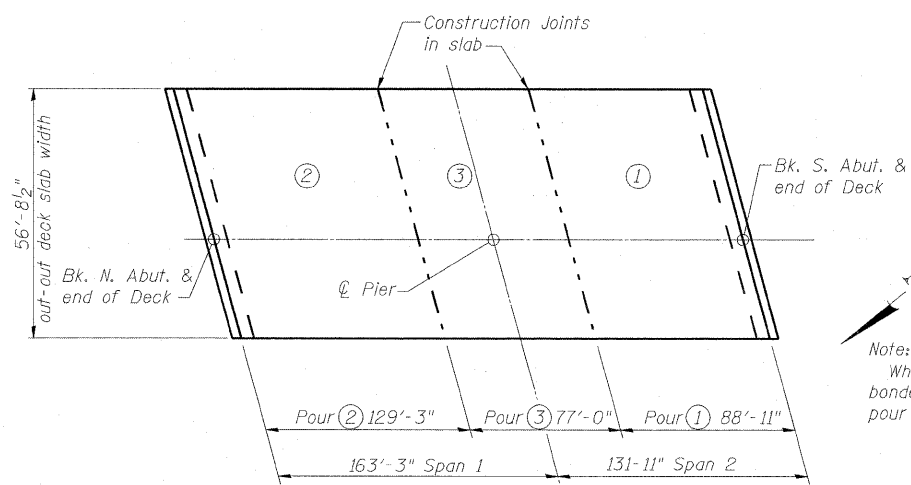
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* Order a(E), a₁(E) and a₃(E) bars full length.
Cut to fit skew and use remainder of
bars in opposite end.



DECK PLAN

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



MANDATORY DECK POURING SEQUENCE

Note:
When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
1) At least 72 hours shall have elapsed from the end of the previous pour.
2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

See notes regarding dead load deflections and fillet heights on Sht. S4 of S36. Deflections are based on Pours ① and ② being made in one day, and pour ③ on a later day.

MINIMUM BAR LAP

(Superstructure)
#4 bar = 2'-7"
#5 bar = 3'-3"
#6 b₂(E) & b₃(E) = 3'-10"
#6 m-series = 4'-5"
#8 bar = 6'-9"

DECK CROSS REFERENCES SEE:

Deck Cross Section - Sht. S10 of S36
Parapet Sections, Elevations, Joints & Details - Sht. S11 to S13 of S36
Section A-A, Integral Abutment Diaphragm Detail - Sht. S14 of S36
Reinforcement Schedules & Bill of Material - Sht. S15 of S36

DECK PLAN
STRUCTURE NO. 082-0326

AECOM

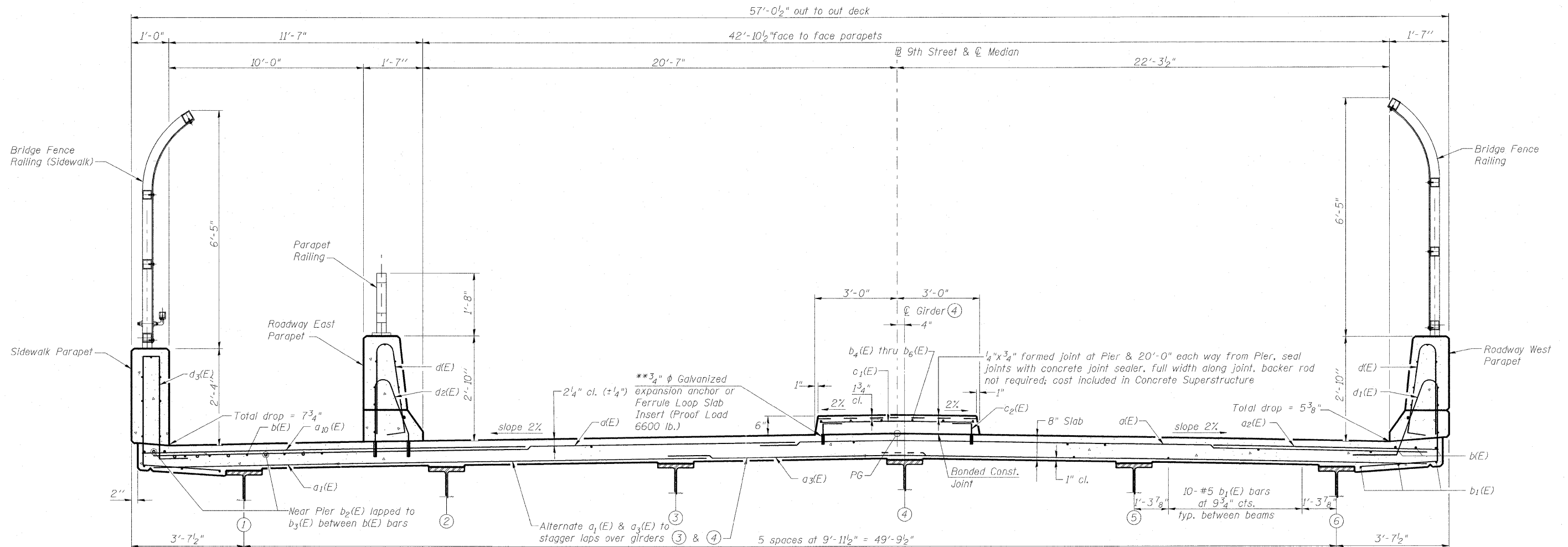
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SHEET NO. S9	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	211
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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See Sht. S18 & S19 of S36 for Bridge Fence Railing on Roadway West Parapet & Sidewalk Parapet and Sht. S20 of S36 for Parapet Railing on Roadway East Parapet

** The cost of expansion anchors / inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

DECK CROSS SECTION
(Looking South)

Note:
Reinforcement bars designated (E) shall be epoxy coated.
Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
See Lighting Plans for lighting beneath deck.

MINIMUM BAR LAP

(Superstructure)
#4 bar = 2'-7"
#5 bar = 3'-3"
#6 b₂(E) & b₃(E) = 3'-10"
#6 m-series = 4'-5"
#8 bar = 6'-9"

DECK CROSS REFERENCES SEE:

Deck Plan and Pouring Sequence - Sht. S9 of S36
Parapet Sections, Elevations, Joints & Details - Sht. S11 to S13 of S36
Integral Abutment Diaphragm Detail - Sht. S14 of S36
Reinforcement Schedules & Bill of Material - Sht. S15 of S36

DECK CROSS SECTION
STRUCTURE NO. 082-0326

AECOM

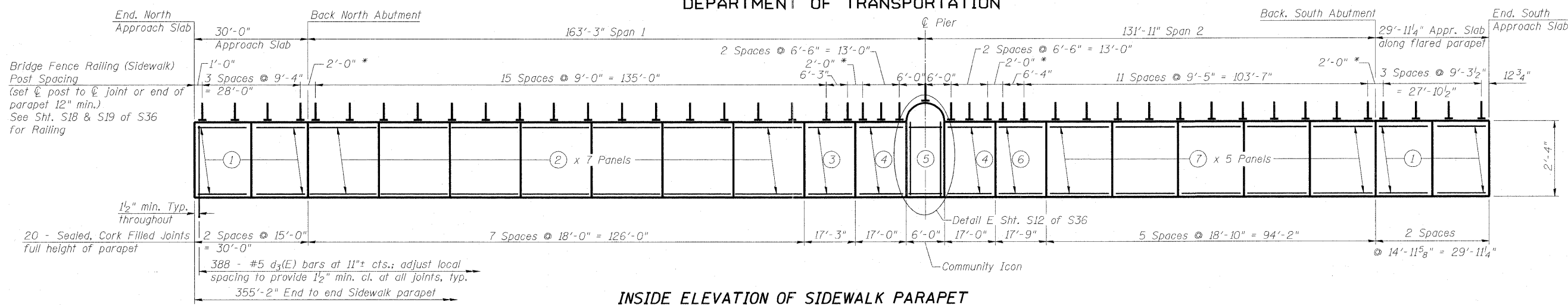
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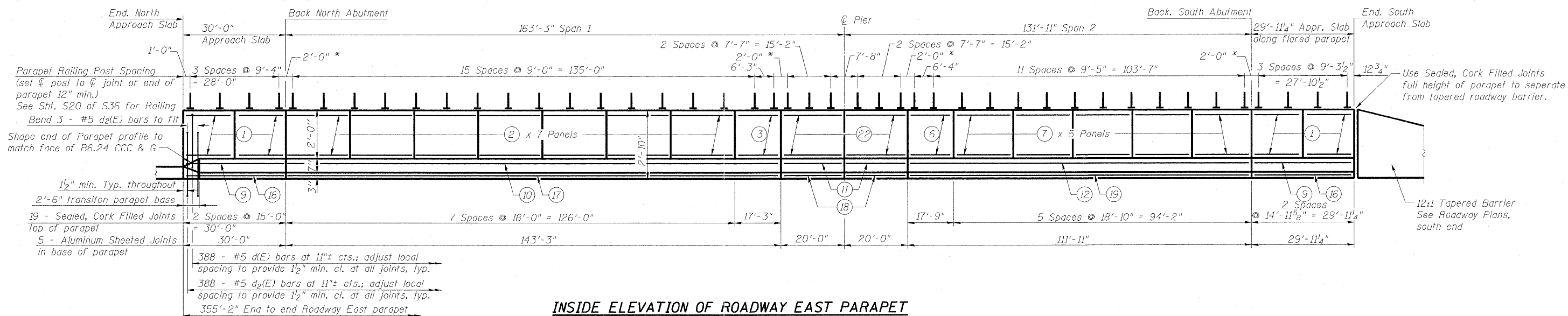
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SHEET NO. S10	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	212
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

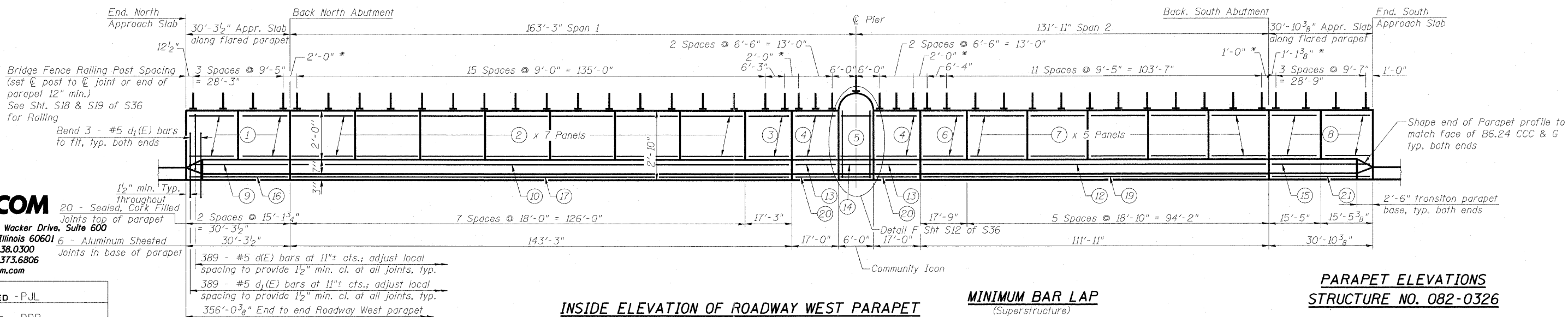
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INSIDE ELEVATION OF SIDEWALK PARAPET



INSIDE ELEVATION OF ROADWAY EAST PARAPET



INSIDE ELEVATION OF ROADWAY WEST PARAPET
(Reflected View)

MINIMUM BAR LAP

- (Superstructure)
 #4 bar = 2'-7"
 #5 bar = 3'-3"
 #6 b2(E) & b3(E) = 3'-10"
 #6 m-series = 4'-5"
 #8 bar = 6'-9"

PARAPET ELEVATIONS
STRUCTURE NO. 082-0326

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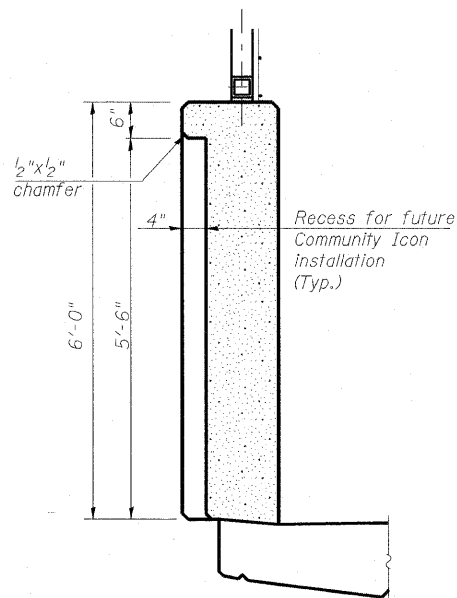
DESIGNED	- P.J.L.
CHECKED	- D.D.B.
DRAWN	- B.R.D.
CHECKED	- D.D.B.

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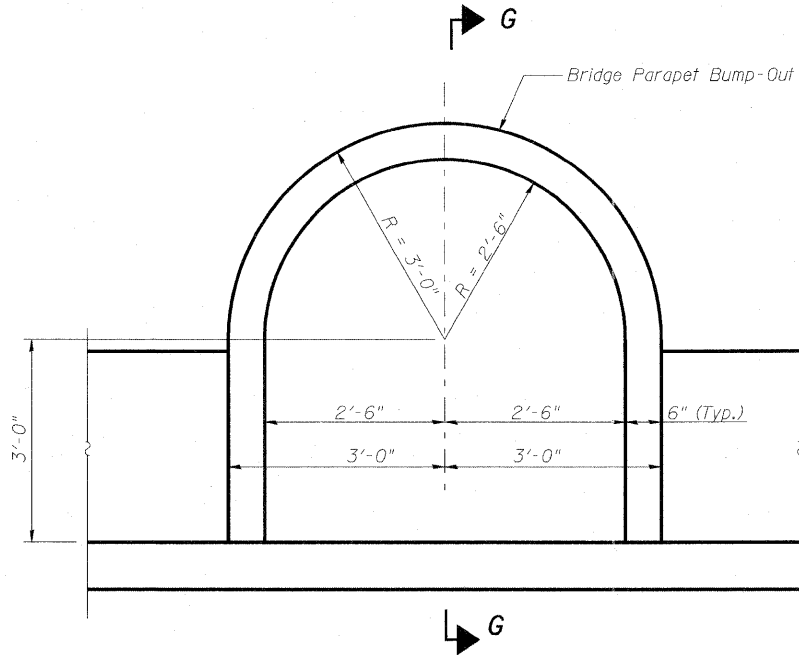
See Sht. S13 of S36 for Parapet Joint Details.
*Use double railing posts with gap see Sht. S18 & S20 of S36.

SHEET NO. S11 S36 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	213
F.A.U. 9166 / F.A.U. 9180			CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

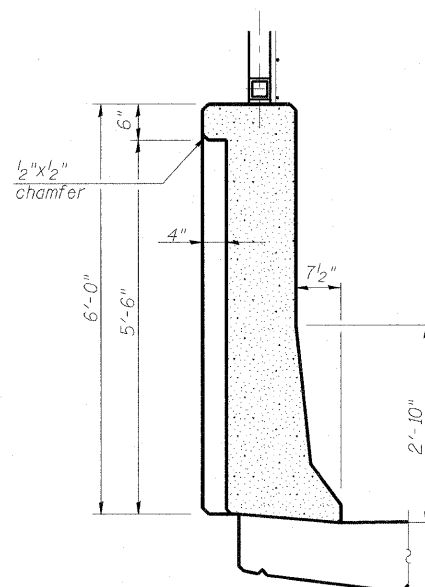
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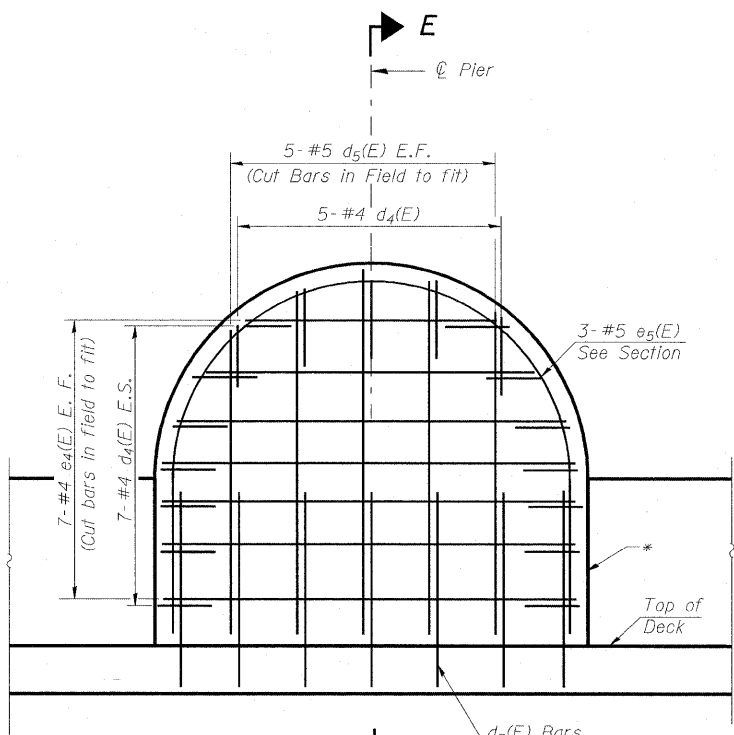
SECTION G-G
(Sidewalk Parapet)



COMMUNITY ICON PARAPET OUTSIDE FACE ELEVATION

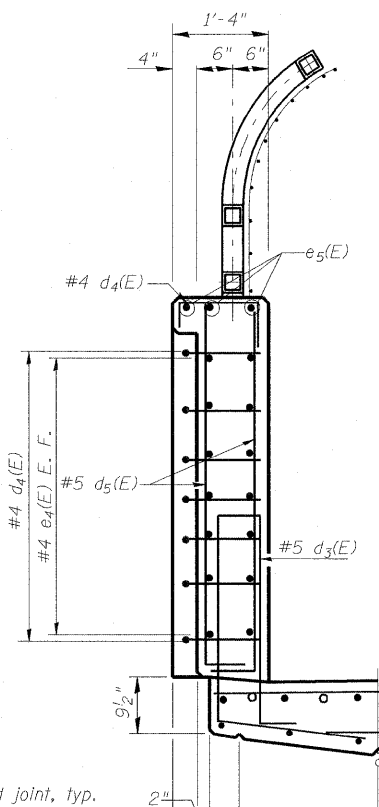


SECTION G-G
(Roadway West Parapet)



DETAIL E

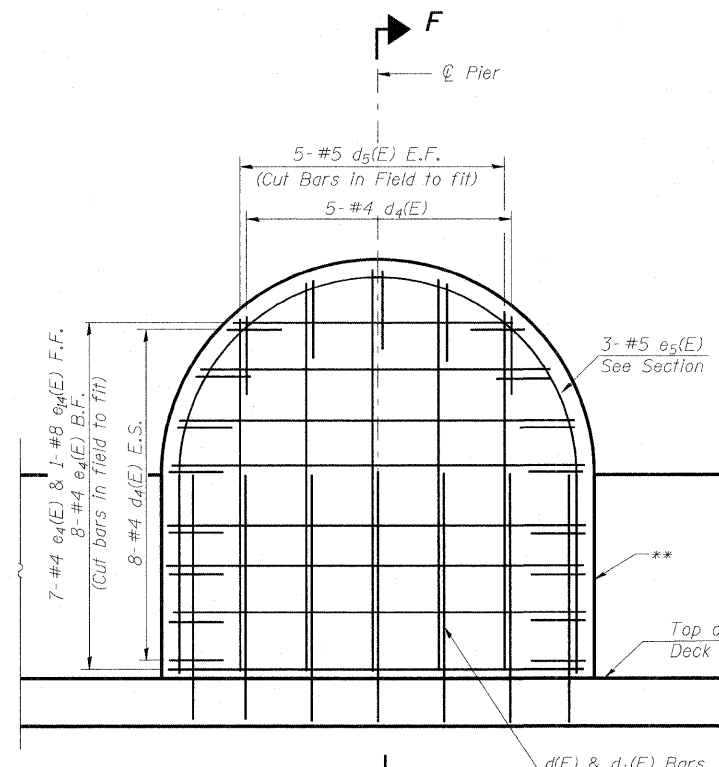
(See Community Icon Parapet Elevation for dimensions)



SECTION E-E

* Sealed, cork filled joint, typ. both sides of Community Icon. See Sht. S13 of S36 for detail.

AT SIDEWALK PARAPET

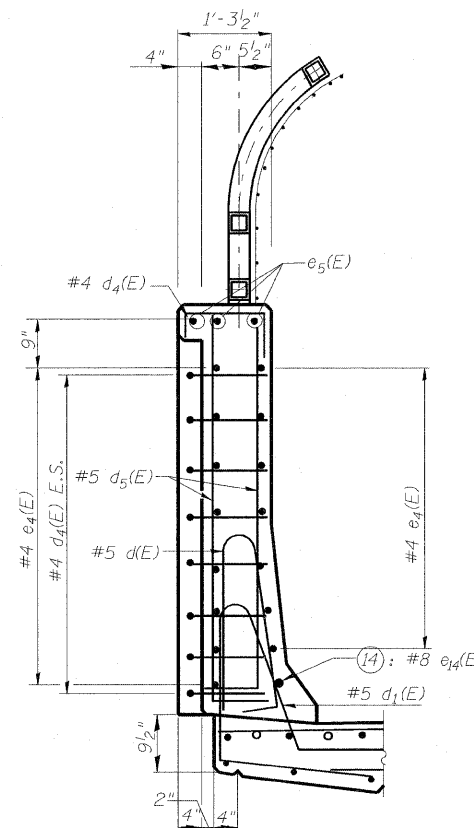


DETAIL F

(See Community Icon Parapet Elevation for dimensions)

** Aluminum sheet joint in base of parapet; sealed, cork filled joint in top of parapet, typ. both sides of Community Icon. See Sht. S13 of S36 for detail.

AT ROADWAY WEST PARAPET



SECTION F-F

**COMMUNITY ICON
PARAPET DETAILS
STRUCTURE NO. 082-0326**

AECOM

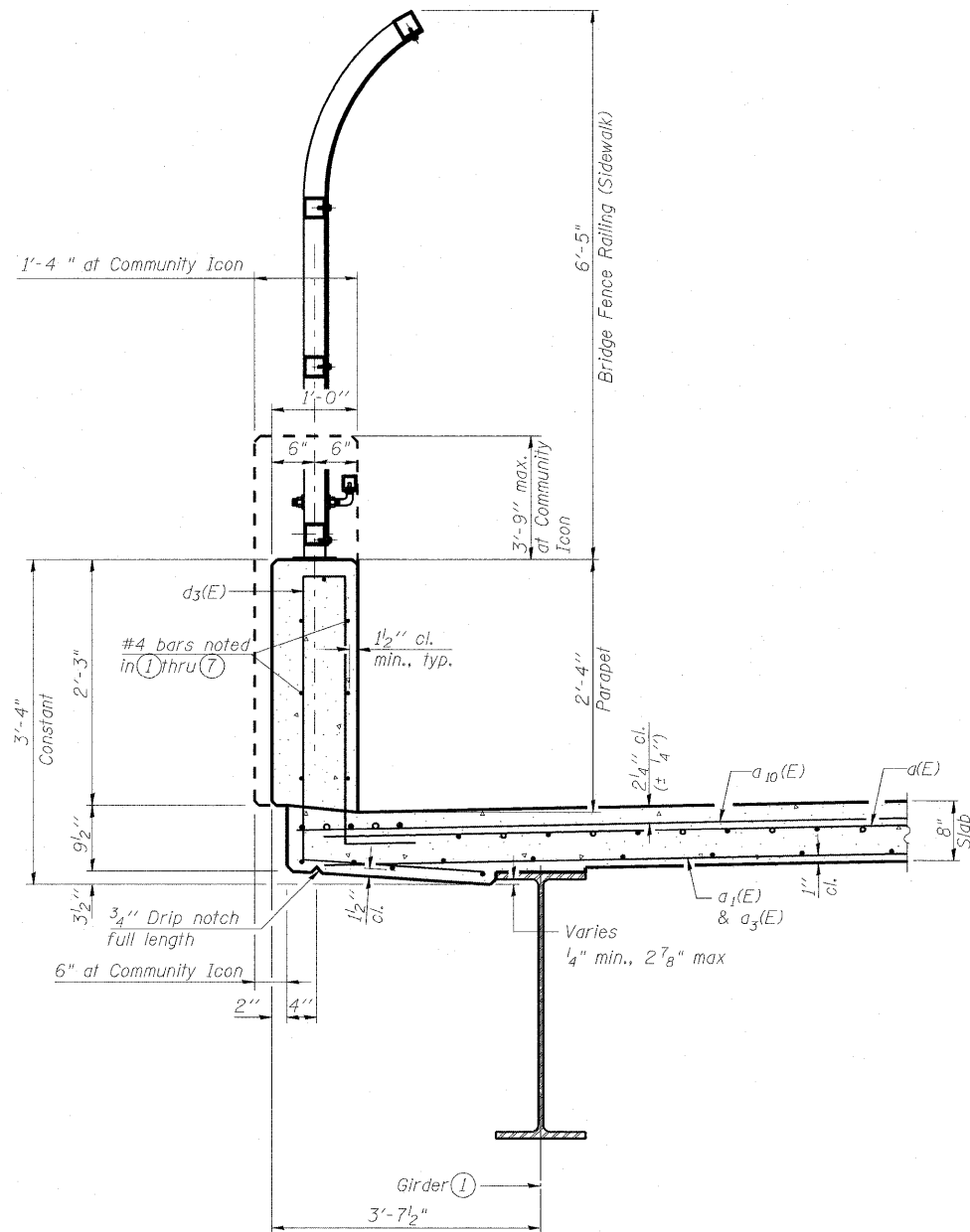
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DRAWN	- B.R.D.
CHECKED	- D.D.B.

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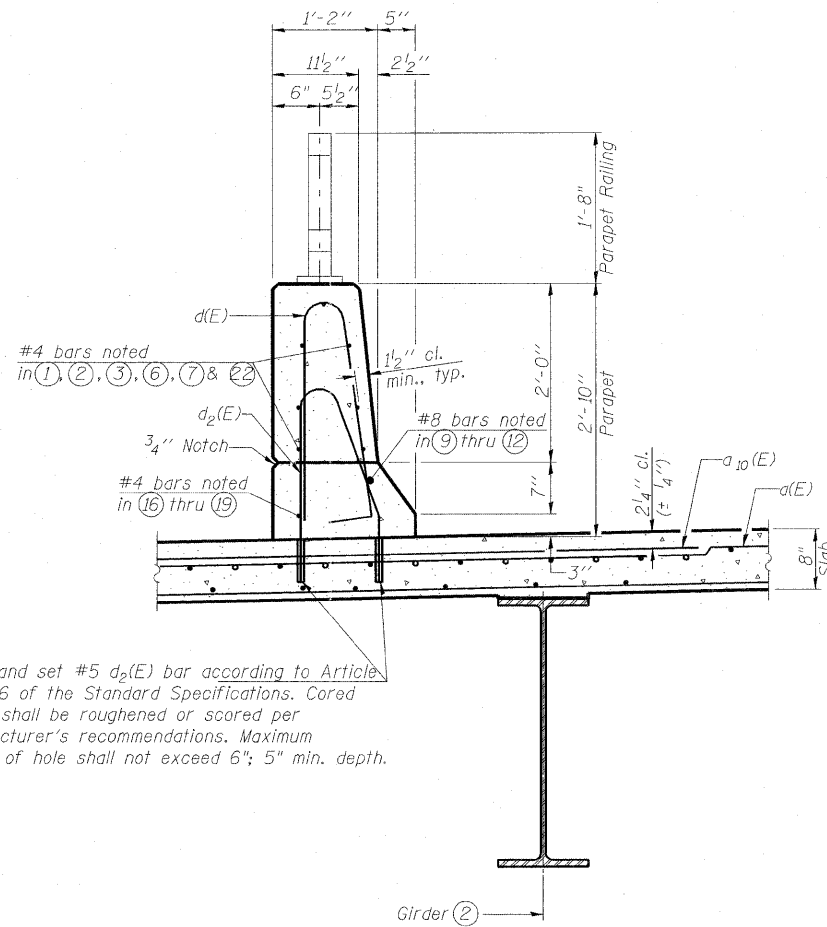
SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S12	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	214
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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SECTION THRU SIDEWALK PARAPET

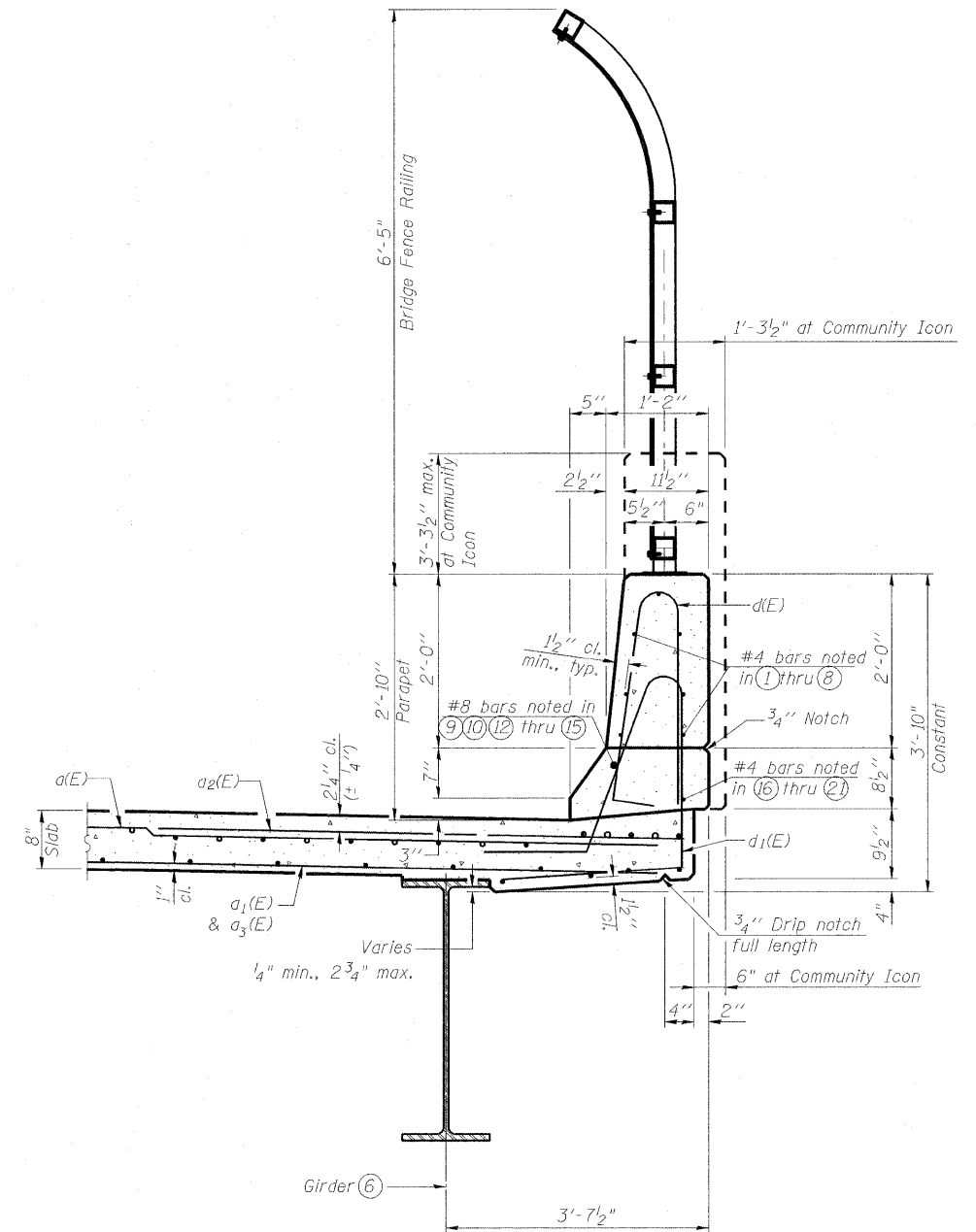
Note: 4" bump-out on outside face at Community Icon, Typ. Sidewalk and Roadway West Parapets.



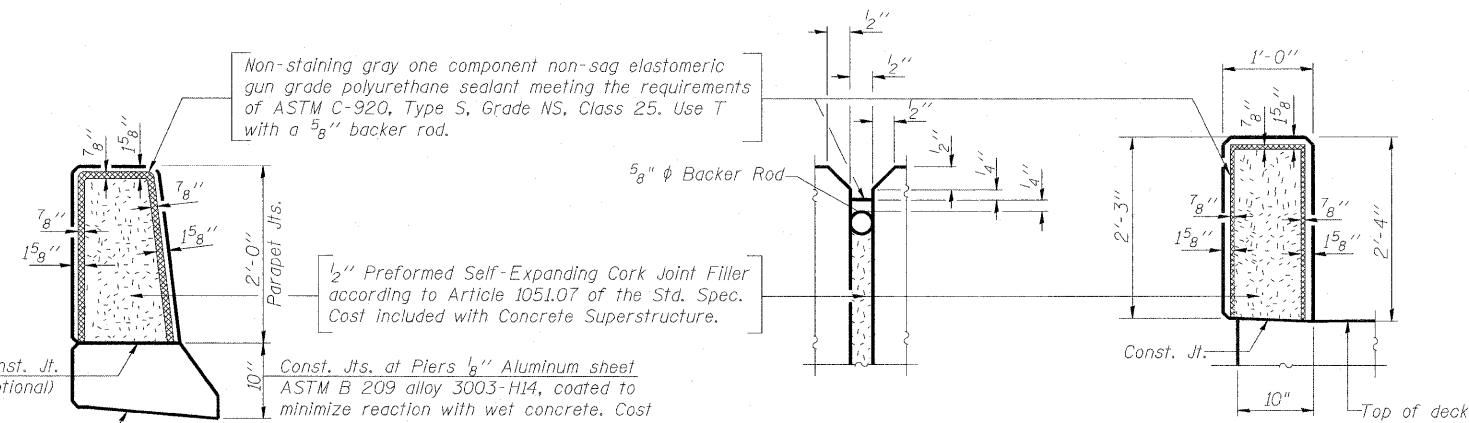
SECTION THRU ROADWAY EAST PARAPET

(See Deck Cross Section for deck reinforcement)

Core and set #5 $d_p(E)$ bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6"; 5" min. depth.



SECTION THRU ROADWAY WEST PARAPET



PARAPET JOINT DETAILS

PARAPET JOINT DETAILS AT SIDEWALK

Note:
Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
Parapet Sections shown on Bridge Deck; details similar on Bridge Approach Slabs.

Parapet Cross References:
Parapet Elevation Views - Sht. 11 of S36
Parapet Details at Community Icon - Sht. S12 of S36
Parapet Reinforcement Schedule - Sht. S15 of S36

**PARAPET DETAILS
STRUCTURE NO. 082-0326**

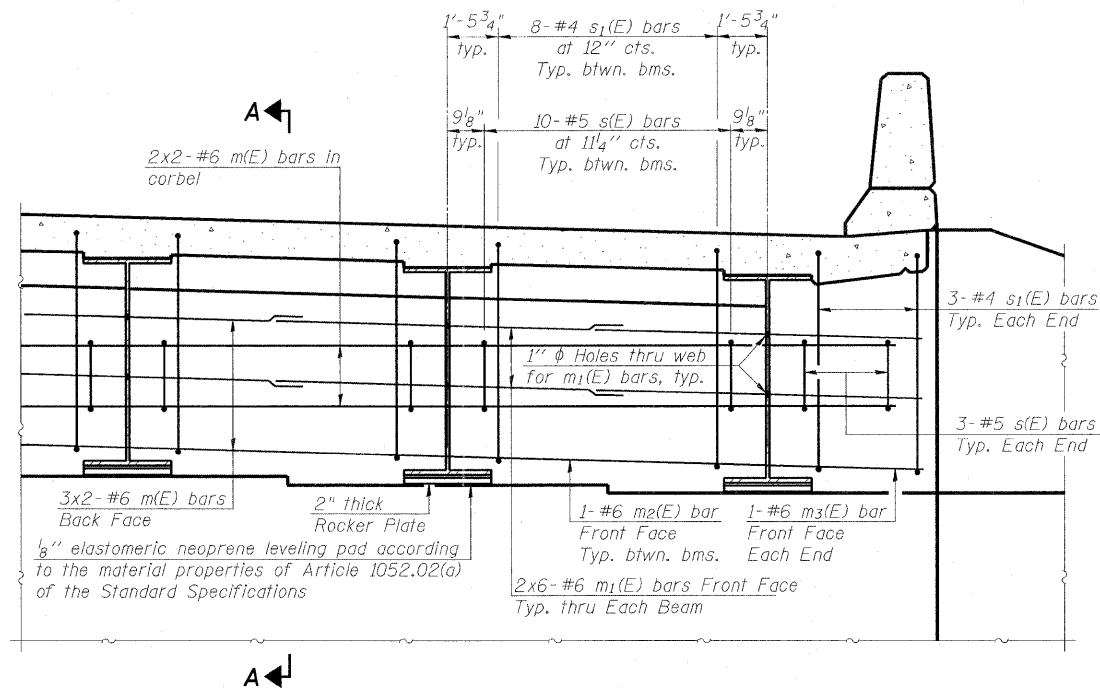
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SHEET NO. S13	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	215
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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DIAPHRAGM ELEVATION AT ABUTMENT

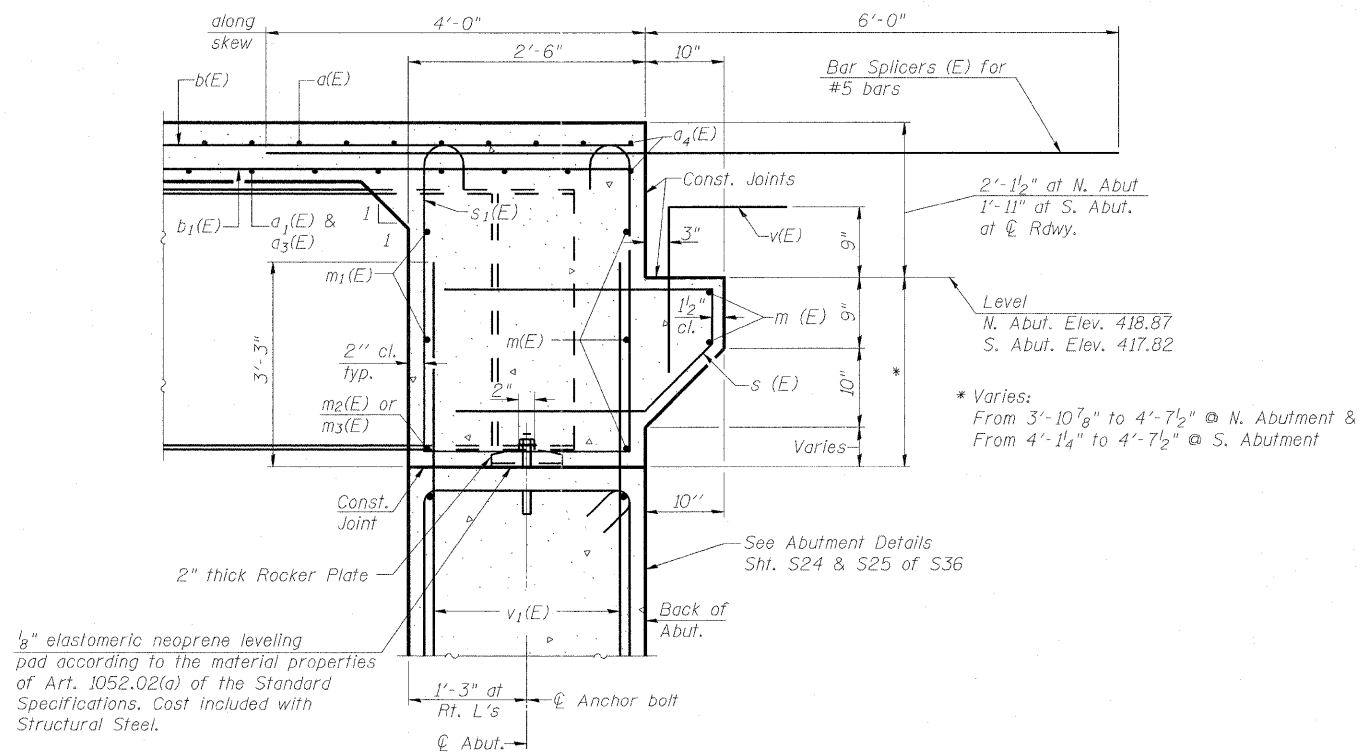
(Bearing Stiffeners not shown)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet S15 of S36.
Concrete in diaphragm is included with Concrete Superstructure on sheet S15 of S36.
For details of bars s(E) & s1(E) see sheet S15 of S36.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MINIMUM BAR LAP

(Superstructure)
#4 bar = 2'-7"
#5 bar = 3'-3"
#6 b2(E) & b3(E) = 3'-10"
#6 m-series = 4'-5"
#8 bar = 6'-9"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

See Abutment Details Sht. S24 & S25 of S36 for v1(E) bars.

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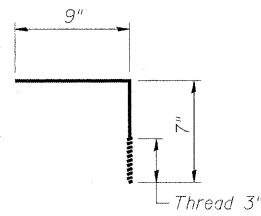
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DRAWN	- B.R.D.
CHECKED	- D.D.B.

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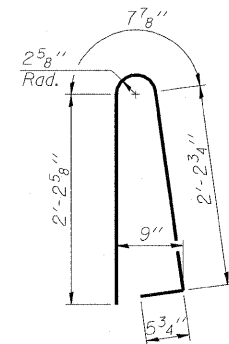
**INTEGRAL ABUTMENT
DIAPHRAGM DETAILS
STRUCTURE NO. 082-0326**

SHEET NO. S14	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	216
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

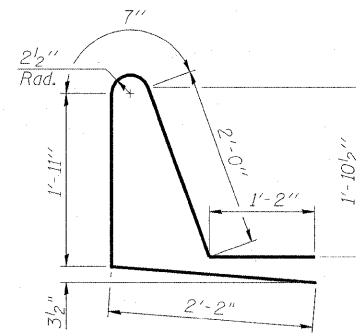
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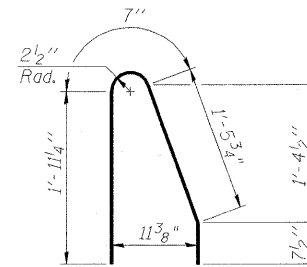
BARS c₂(E)



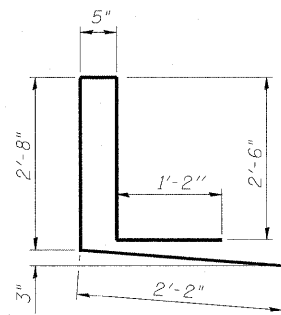
BAR d(E)



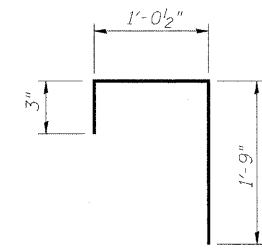
BAR d₁(E)



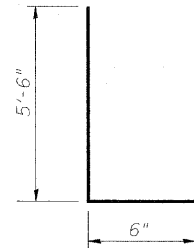
BAR d₂(E)



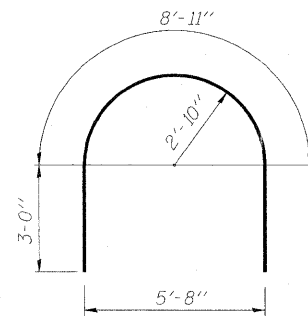
BAR d₃(E)



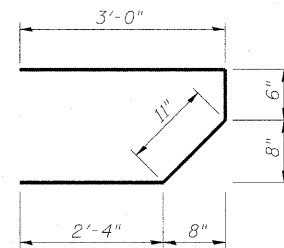
BARS d₄(E)



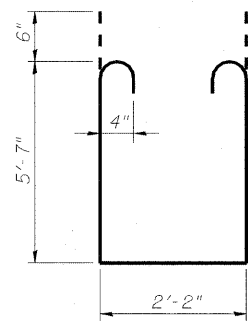
BARS d₅(E)



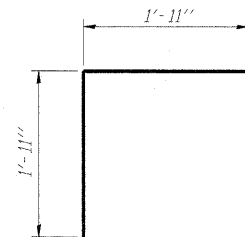
BAR e₅(E)



BAR s(E)



BAR s₁(E)



BAR v(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	1416	#5	29'-10"	—
a ₁ (E)	505	#5	25'-0"	—
a ₂ (E)	708	#6	6'-6"	—
a ₃ (E)	505	#5	34'-8"	—
a ₄ (E)	8	#5	30'-2"	—
a ₅ (E)	708	#6	15'-6"	—
b(E)	649	#5	29'-9"	—
b ₁ (E)	560	#5	32'-5"	—
b ₂ (E)	56	#6	50'-0"	—
b ₃ (E)	56	#6	41'-7"	—
b ₄ (E)	24	#5	38'-2"	—
b ₅ (E)	12	#5	19'-6"	—
b ₆ (E)	18	#5	39'-4"	—
c ₁ (E)	295	#5	5'-6"	—
c ₂ (E)	590	#5	1'-4"	—
d(E)	777	#5	5'-7"	—
d ₁ (E)	389	#5	7'-10"	—
d ₂ (E)	388	#5	4'-7 1/2"	—
d ₃ (E)	388	#5	8'-11"	—
d ₄ (E)	40	#4	3'-1"	—
d ₅ (E)	20	#5	6'-0"	—
e(E)	70	#4	14'-8"	—
e ₁ (E)	147	#4	17'-8"	—
e ₂ (E)	21	#4	16'-11"	—
e ₃ (E)	28	#4	16'-8"	—
e ₄ (E)	29	#4	5'-8"	—
e ₅ (E)	6	#5	14'-11"	—
e ₆ (E)	21	#4	17'-5"	—
e ₇ (E)	105	#4	18'-6"	—
e ₈ (E)	14	#4	15'-0"	—
e ₉ (E)	3	#8	29'-8"	—
e ₁₀ (E)	8	#8	40'-10"	—
e ₁₁ (E)	2	#8	19'-8"	—
e ₁₂ (E)	6	#8	41'-8"	—
e ₁₃ (E)	2	#8	16'-8"	—
e ₁₄ (E)	1	#8	5'-8"	—
e ₁₅ (E)	1	#8	30'-5"	—
e ₁₆ (E)	3	#4	29'-8"	—
e ₁₇ (E)	8	#4	37'-8"	—
e ₁₈ (E)	2	#4	19'-8"	—
e ₁₉ (E)	6	#4	38'-11"	—
e ₂₀ (E)	2	#4	16'-8"	—
e ₂₁ (E)	1	#4	30'-5"	—
e ₂₂ (E)	7	#4	19'-8"	—
s(E)	112	#5	6'-9"	—
s ₁ (E)	92	#4	14'-4"	—
m(E)	20	#6	30'-10"	—
m ₁ (E)	24	#6	13'-3"	—
m ₂ (E)	10	#6	9'-7"	—
m ₃ (E)	4	#6	3'-3"	—
v(E)	114	#5	3'-10"	—
Reinforcement Bars, Epoxy Coated		Pound	175,010	
Concrete Superstructure		Cu. Yds.	643.7	
Bridge Deck Grooving		Sq. Yd.	1,304	
Protective Coat		Sq. Yd.	2,728	

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

** Bill of Material this sheet includes the following Approach Slab items: Parapet Reinforcement, Parapet Concrete, Bridge Deck Grooving and Protective Coat.

PARAPET HORIZONTAL REINFORCEMENT

(See Parapet Elevations and Sections)

Designation	Description per Panel	Number of Panels		
		Stidewalk	E.Roadway	W.Roadway
* ①	7 - #4 e(E) bars	4	4	2
②	7 - #4 e ₁ (E) bars	7	7	7
③	7 - #4 e ₂ (E) bars	1	1	1
④	7 - #4 e ₃ (E) bars	2	--	2
⑤	See Detail E and Detail F Sht. S12 of S36	1	--	1
⑥	7 - #4 e ₆ (E) bars	1	1	1
⑦	7 - #4 e ₇ (E) bars	5	5	5
* ⑧	7 - #4 e ₈ (E) bars	--	--	2
* ⑨	1 - #8 e ₉ (E) bars Front Face	--	2	1
⑩	1x4 - #8 e ₁₀ (E) bars Front Face	--	1	1
⑪	1 - #8 e ₁₁ (E) bars Front Face	--	2	--
⑫	1x3 - #8 e ₁₂ (E) bars Front Face	--	1	1
⑬	1 - #8 e ₁₃ (E) bars Front Face	--	--	2
⑭	1 - #8 e ₁₄ (E) bars Front Face	--	--	1
* ⑮	1 - #8 e ₁₅ (E) bars Front Face	--	--	1
* ⑯	1 - #4 e ₁₆ (E) bars Back Face	--	2	1
⑰	1x4 - #4 e ₁₇ (E) bars Back Face	--	1	1
⑱	1 - #4 e ₁₈ (E) bars Back Face	--	2	--
⑲	1x3 - #4 e ₁₉ (E) bars Back Face	--	1	1
⑳	1 - #4 e ₂₀ (E) bars Back Face	--	--	2
* ㉑	1 - #4 e ₂₁ (E) bars Back Face	--	--	1
㉒	7 - #4 e ₂₂ (E) bars	--	2	--

* Rebar in Approach Slab Parapets.

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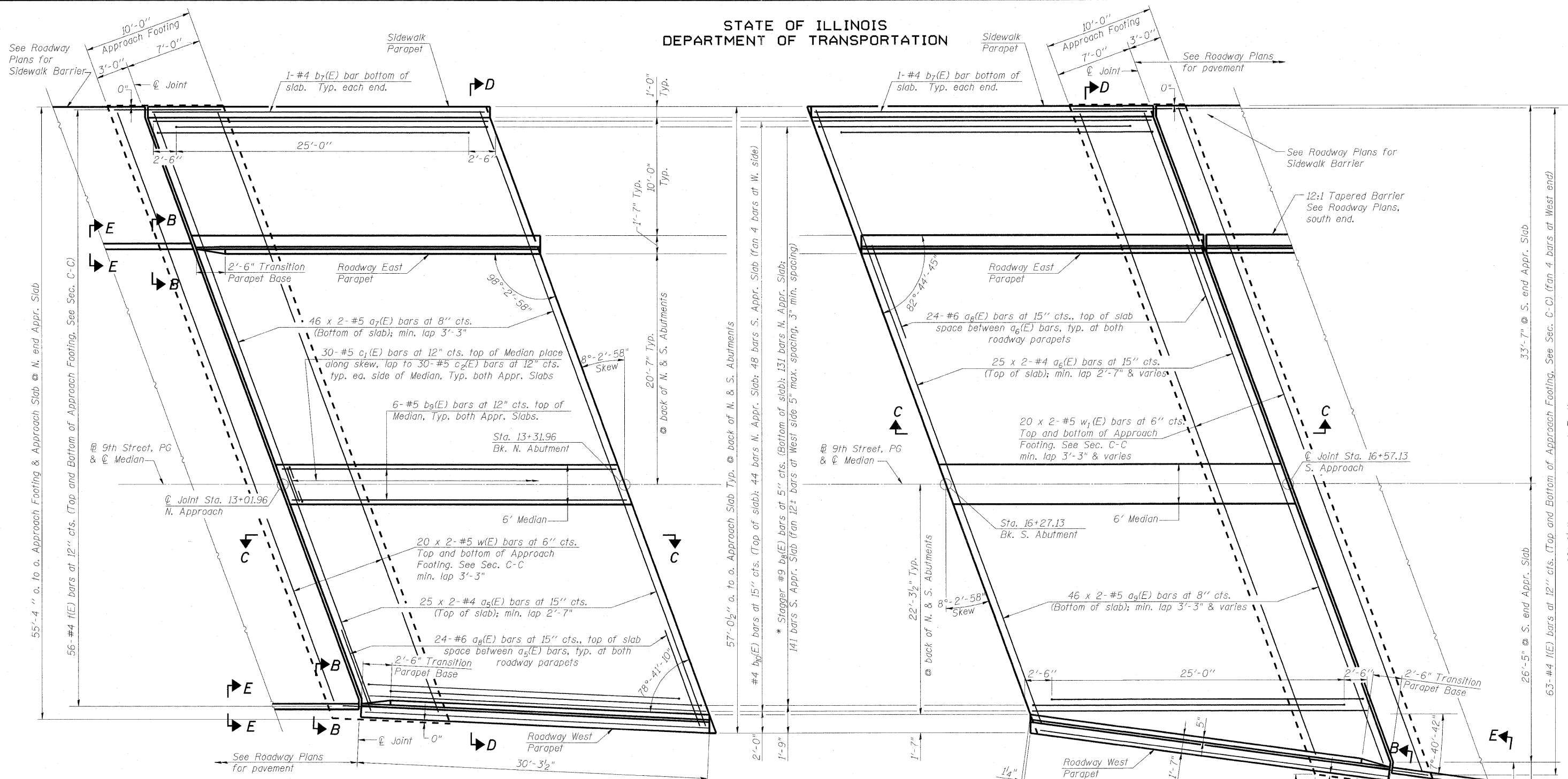
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CHECKED - D.D.B.

03/31/2011

**SUPERSTRUCTURE REINFORCEMENT
& MATERIALS SCHEDULES
STRUCTURE NO. 082-0326**

SHEET NO. S15	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	217
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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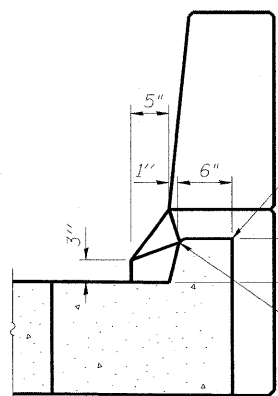


NORTH APPROACH SLAB PLAN

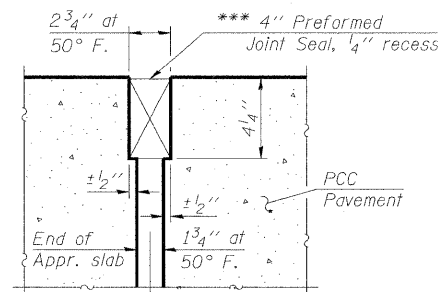
*Tilt #9 b₈(E) bars as required to maintain clearance.

SOUTH APPROACH SLAB PLAN

*Tilt #9 b₈(E) bars as required to maintain clearance.

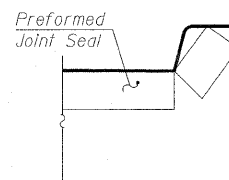


VIEW B-B



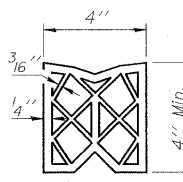
RIGID PAVEMENT

DETAIL A



VIEW E-E

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



PREFORMED JOINT SEAL

Notes:

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
a₅(E) thru a₉(E), c₁(E) and c₂(E) bar spacings measured along C Rdwy.
See Sht. S17 of S36 for Sections C-C & D-D.
See Sht. S11 & S15 of S36 for Parapet Reinforcement.
See Sht. S11 & S18 to S20 of S36 for Railing Details and Post Spacing
See Sht. S7 & S8 of S36 for Appr. Slab layout information

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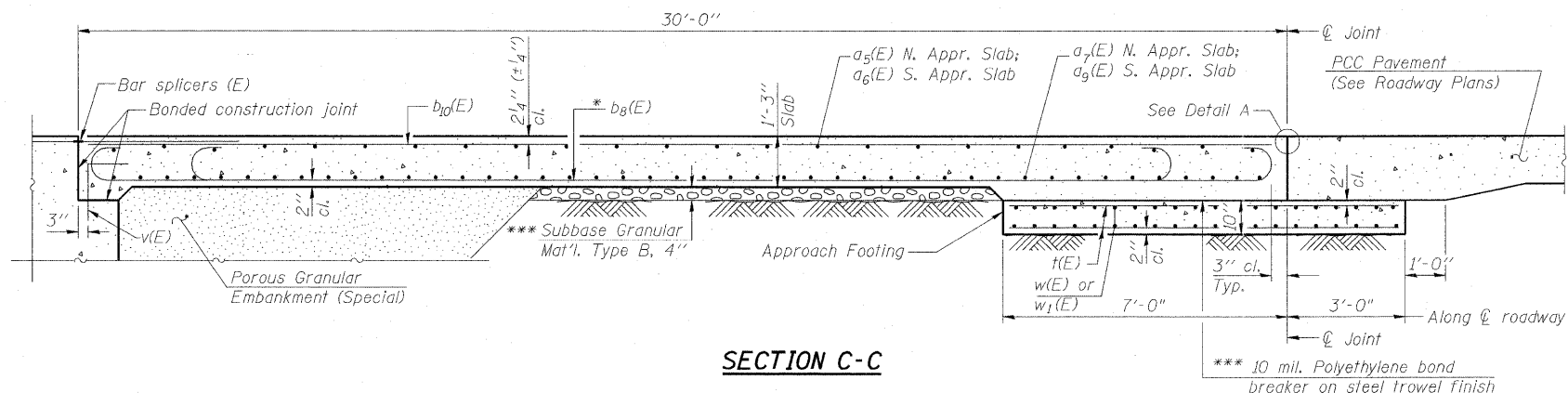
03/31/2011

BRIDGE APPROACH SLAB DETAILS - I
STRUCTURE NO. 082-0326

SHEET NO. S16	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	218
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

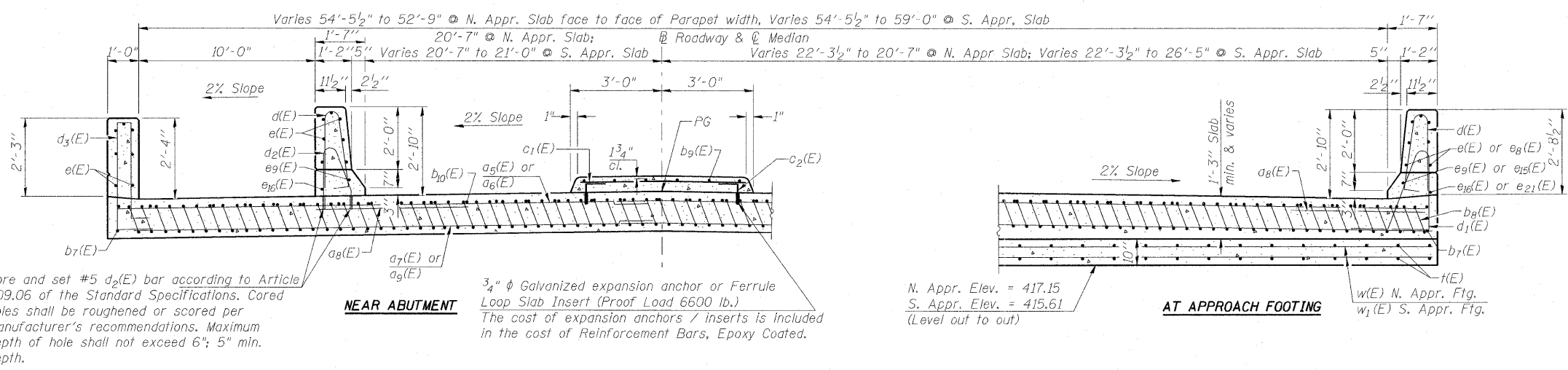
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet S16 of S36 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet S14 of S36.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet S28 of S36.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet S2 of S36.
For additional parapet details, see sheet S11 of S36.



SECTION C-C

* Tilt #9 b8(E) bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.



SECTION D-D

(See Plan for dimensions not shown)

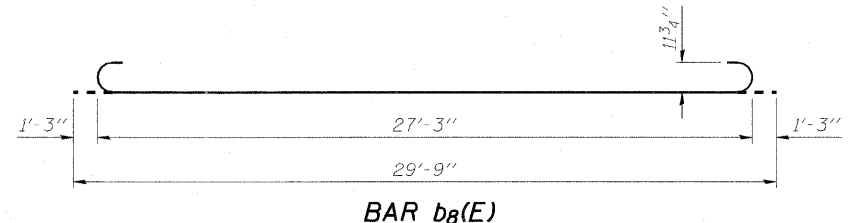
TWO APPROACHES
BILL OF MATERIAL

Bar	No.		Size	Length	Shape
	N. Appr.	S. Appr.			
a5(E)	50	--	#4	29'-11"	—
a6(E)	--	50	#4	32'-3"	—
a7(E)	92	--	#5	30'-3"	—
a8(E)	48	48	#6	6'-6"	—
a9(E)	--	92	#5	32'-7"	—
b7(E)	2	2	#4	29'-8"	—
b8(E)	131	141	#9	29'-9"	—
b9(E)	6	6	#5	29'-8"	—
b10(E)	44	48	#4	29'-8"	—
c1(E)	30	30	#5	5'-6"	—
c2(E)	60	60	#5	1'-4"	—
f(E)	112	126	#4	9'-9"	—
w(E)	80	--	#5	30'-3"	—
w1(E)	--	80	#5	32'-7"	—
** Concrete Superstructure			Cu. Yd.	178.1	
** Concrete Structures			Cu. Yd.	36.6	
** Reinforcement Bars, Epoxy Coated			Pound	46,130	

** See Sht. S15 of S36 for Parapet Reinforcement, Parapet Concrete, Bridge Deck Grooving and Protective Coat quantities.
See Sht. S15 of S36 for c2(E) bar Detail

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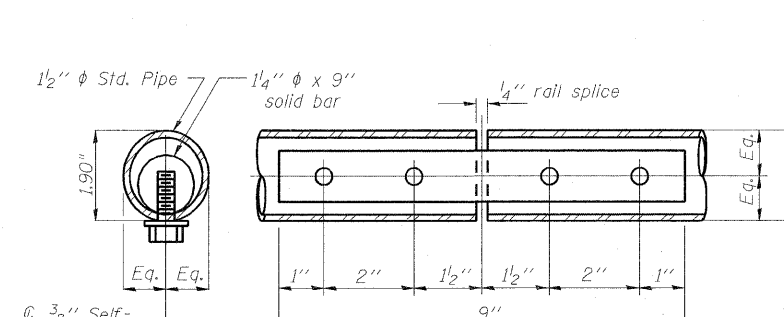
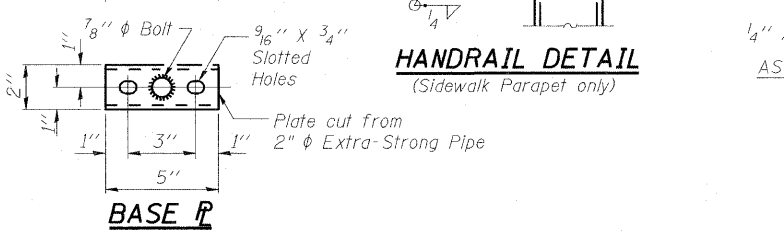
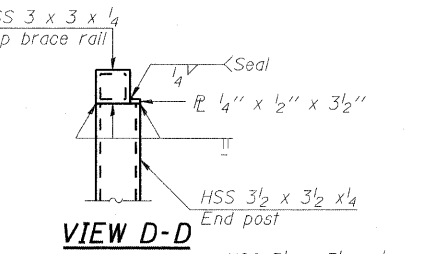
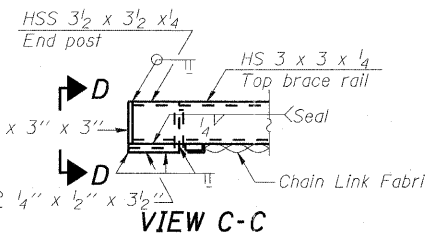
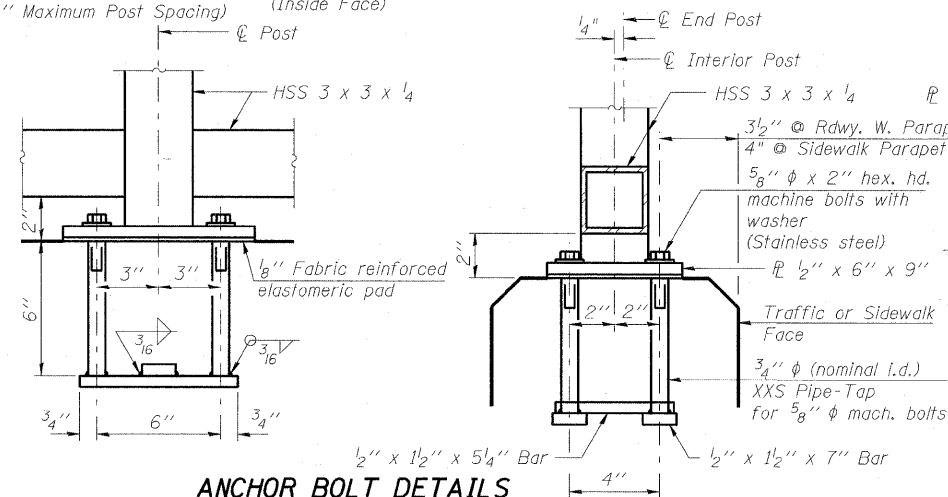
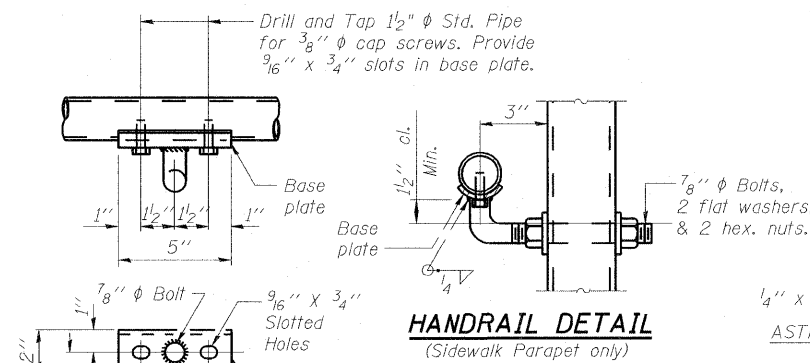
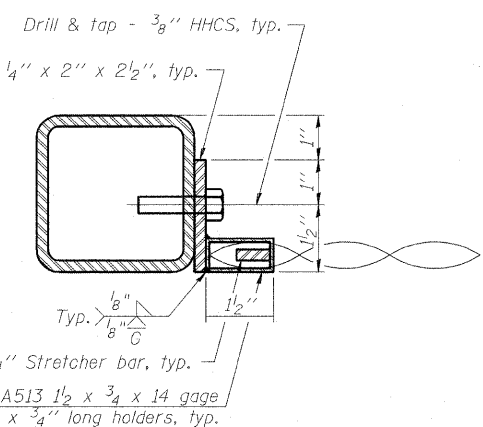
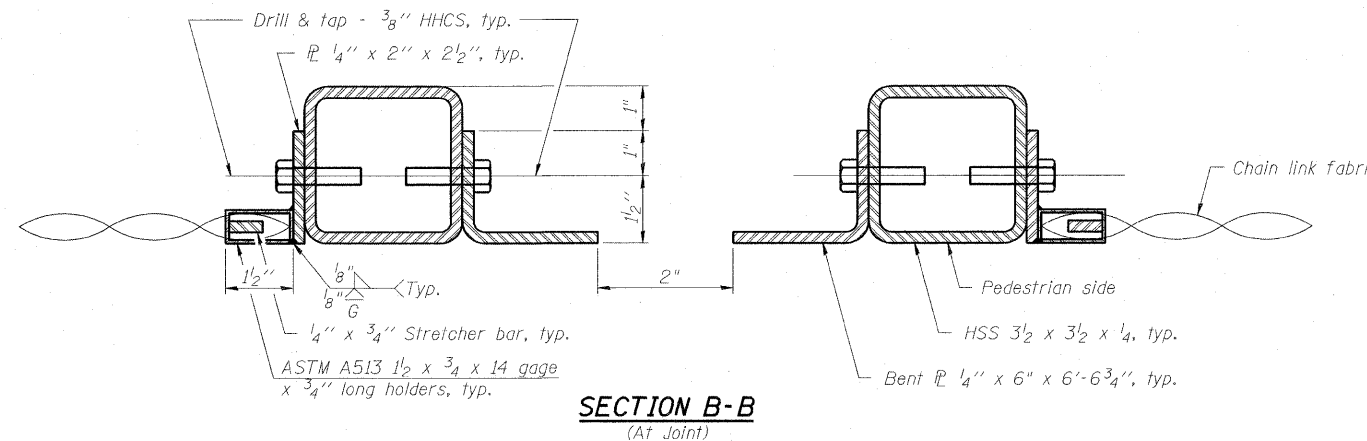
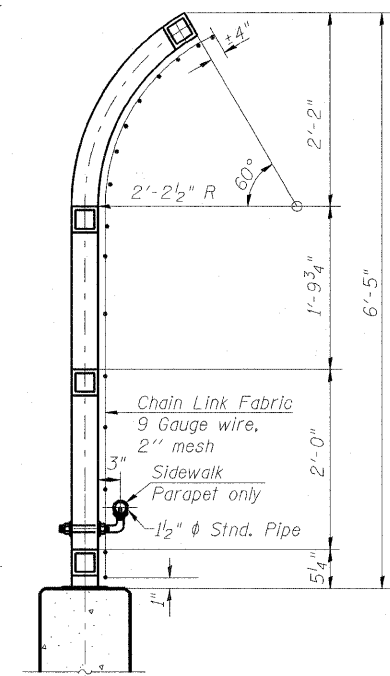
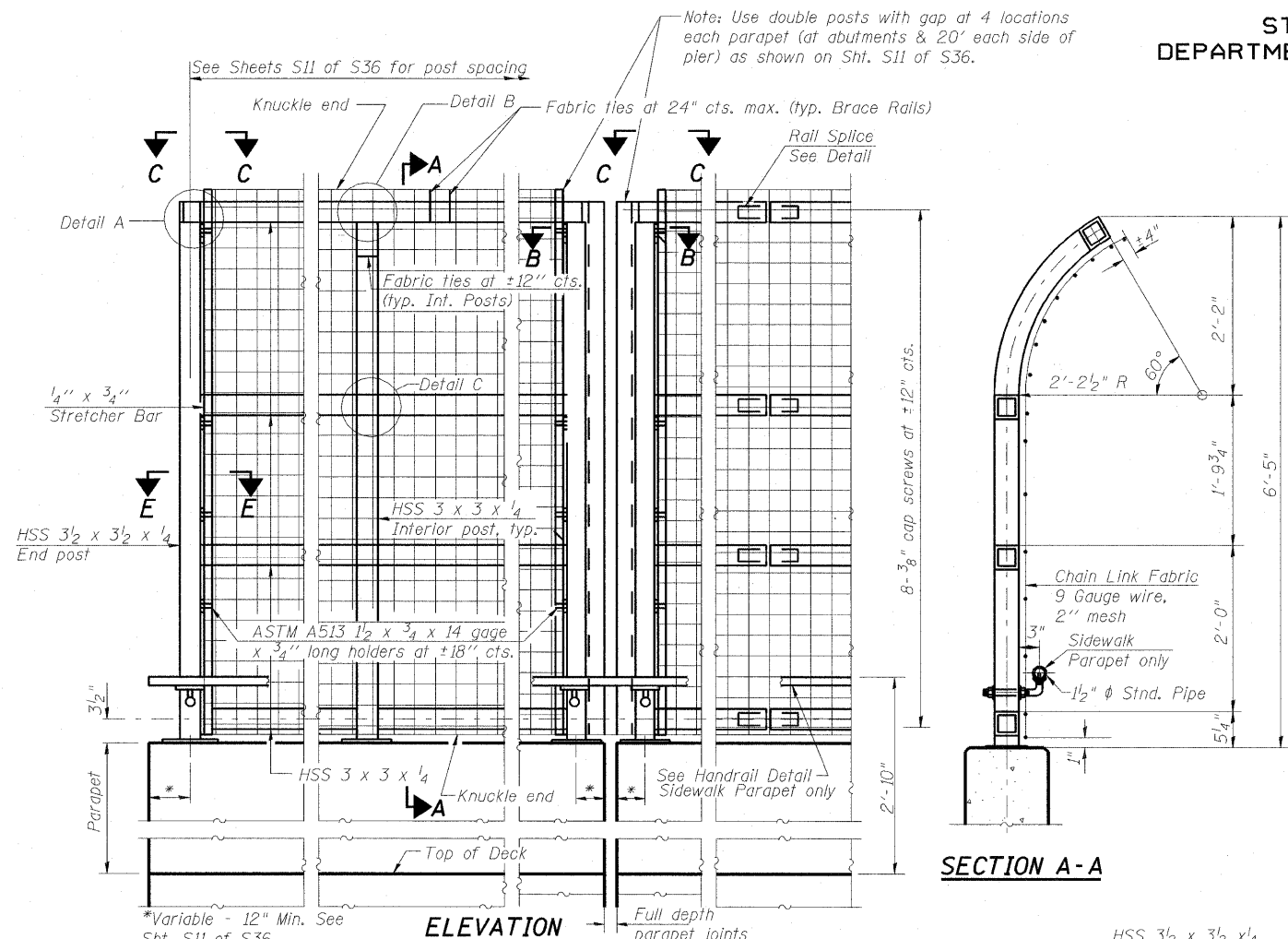
BRIDGE APPROACH SLAB DETAILS - II
STRUCTURE NO. 082-0326

SHEET NO. S17	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	219
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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Notes:

All post, railing, splices, anchor devices and plates shall be painted using the DuPont Imron 2.1 HG High Gloss Polyurethane (Includes Mix Quality "VF" or approved equal. The color of the final finish coat shall be Black.



BILL OF MATERIAL

Location	Item	Unit	Quantity
Roadway West Parapet	Bridge Fence Railing	Foot	354.2
Sidewalk Parapet	Bridge Fence Railing (Sidewalk)	Foot	353.4

**BRIDGE FENCE RAILING DETAILS - I
STRUCTURE NO. 082-0326**

SHEET NO. S18	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	220
S36 SHEETS		F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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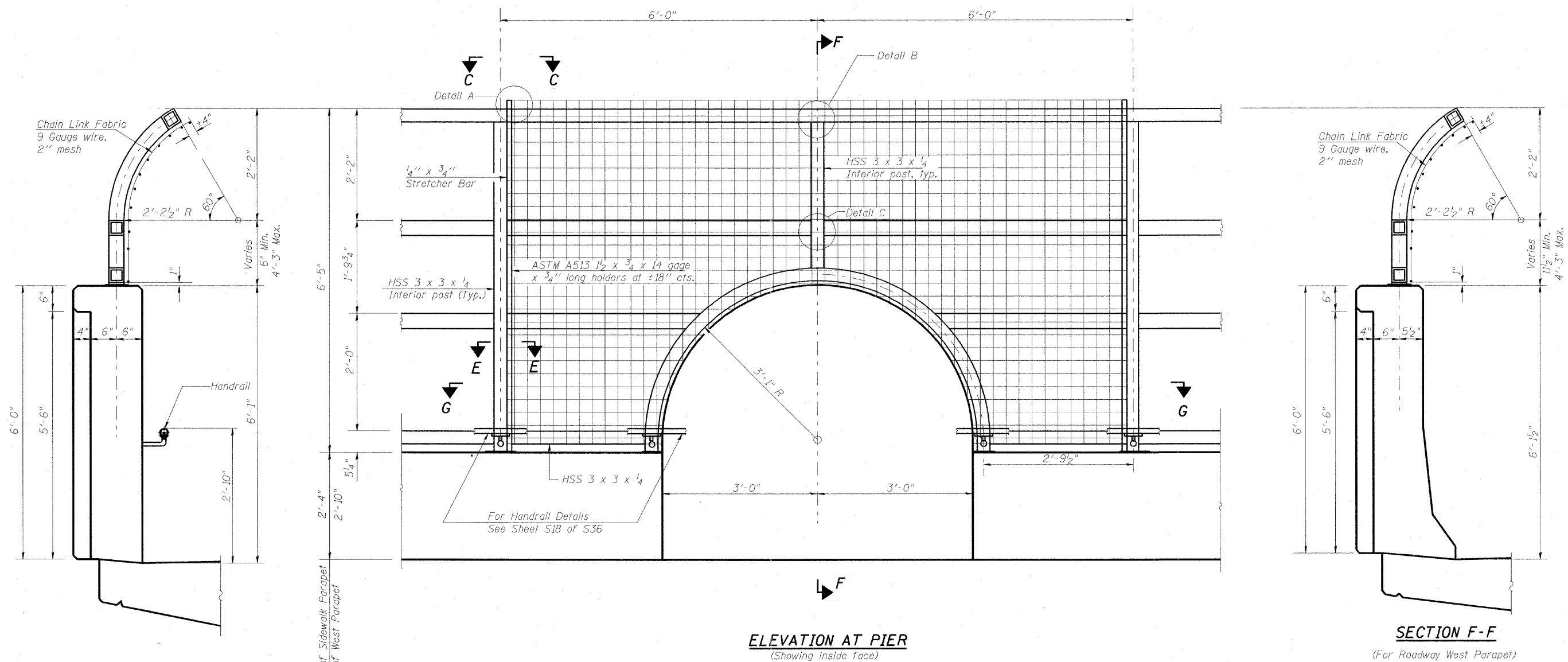
DETAIL A

DETAIL B

DETAIL C

BASE PLATE

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Note:
For details and sections see Sht. S12 of S36.

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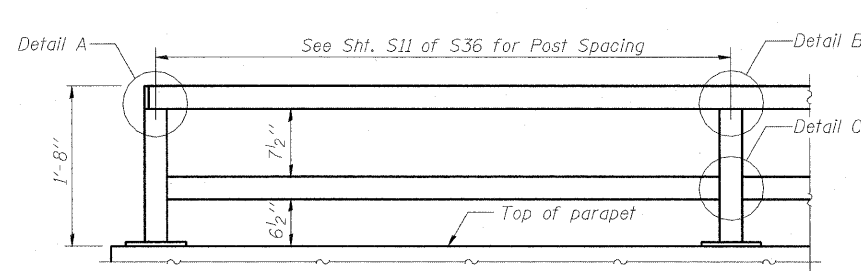
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DRAWN	-B.R.D.
CHECKED	-D.D.B.

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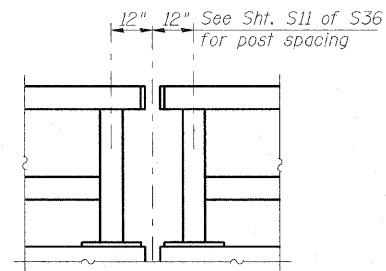
BRIDGE FENCE RAILING DETAILS - II
STRUCTURE NO. 082-0326

SHEET NO. S19	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	221
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

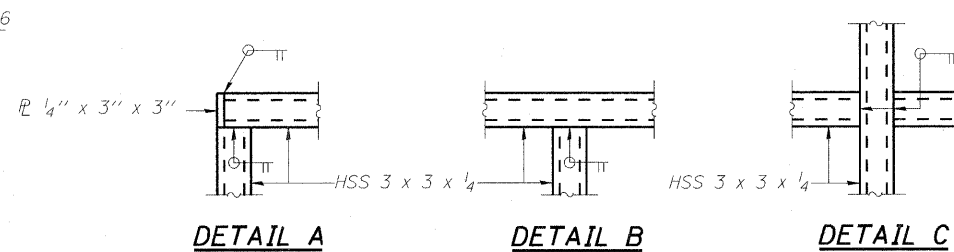
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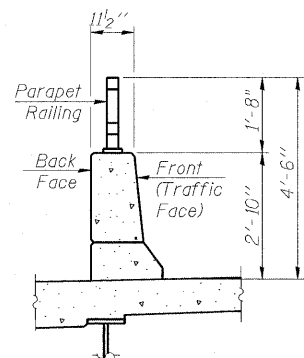
**PARAPET RAILING
ELEVATION**
(Inside Face of Two Element Rail)



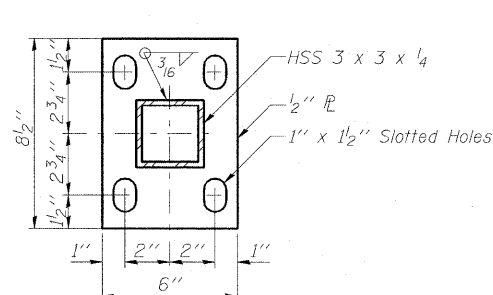
**PARAPET RAILING ELEVATION
AT FULL DEPTH PARAPET JOINT**
(Two Element Rail Shown - Three Element Rail Similar)



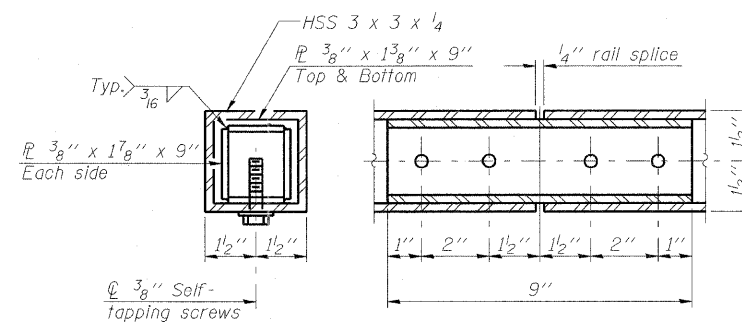
Notes:
All post, railing, splices, anchor devices and plates shall be painted using the DuPont Imron 2.1 HG High Gloss Polyurethane (Includes Mix Quality "VF") or approved equal. The color of the final finish coat shall be Black.



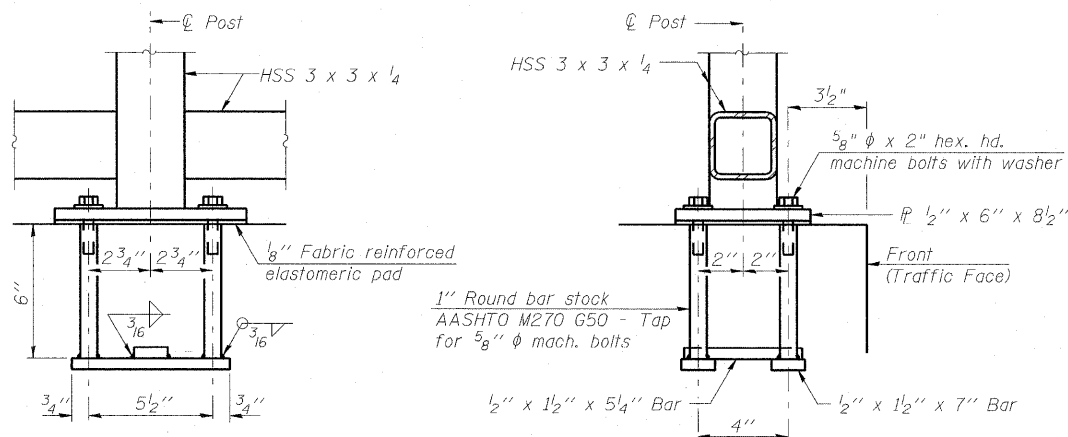
SECTION THRU DECK



BASE PL



RAIL SPLICE



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	353.4

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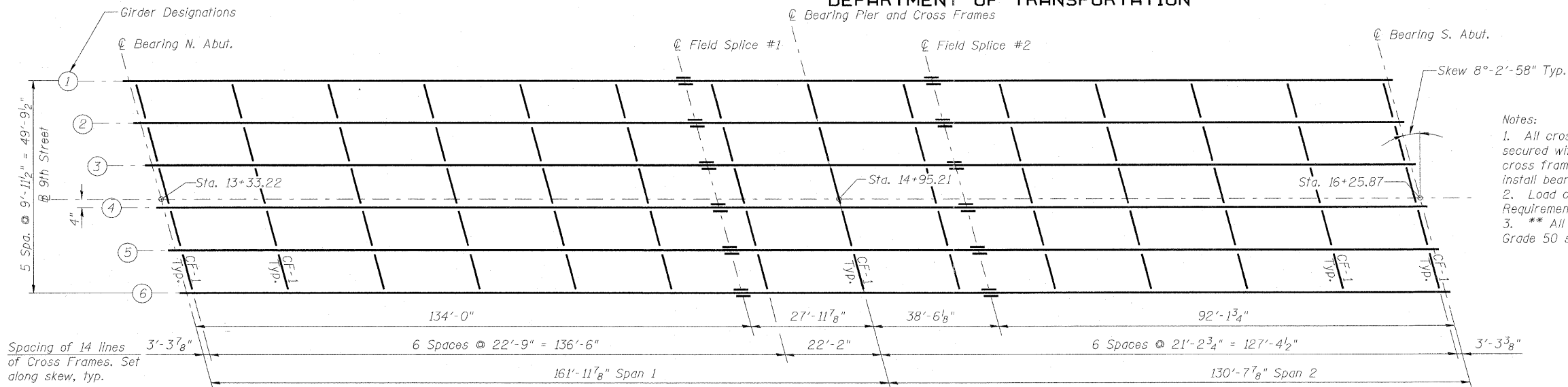
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(10'-0" Maximum Post Spacing)

**PARAPET RAILING DETAILS
STRUCTURE NO. 082-0326**

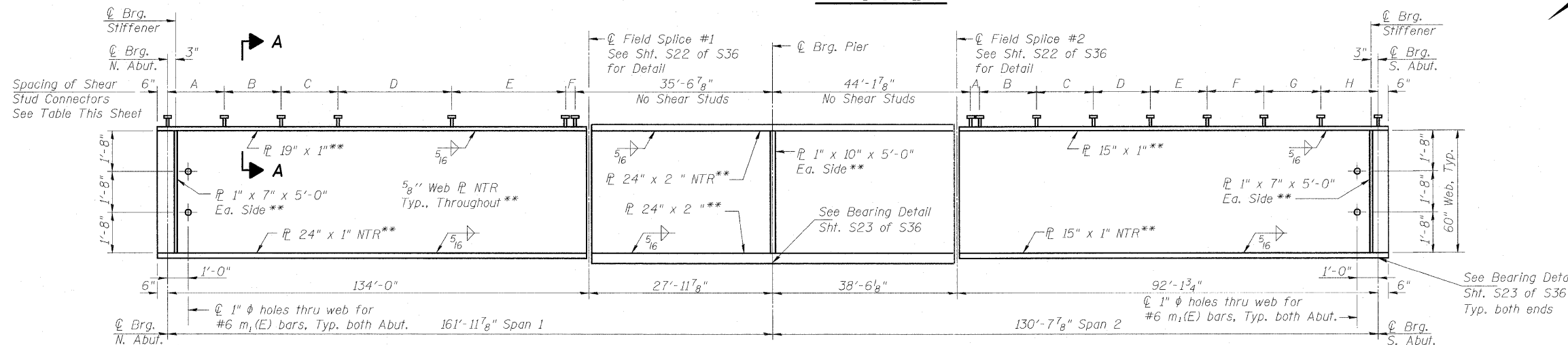
SHEET NO. S20	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	222	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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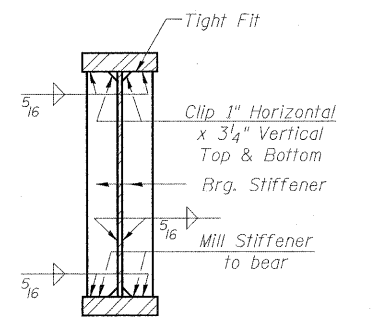


- Notes:
1. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 2. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 3. ** All girder webs, flanges and bearing stiffeners shall be AASHTO M270 Grade 50 steel.

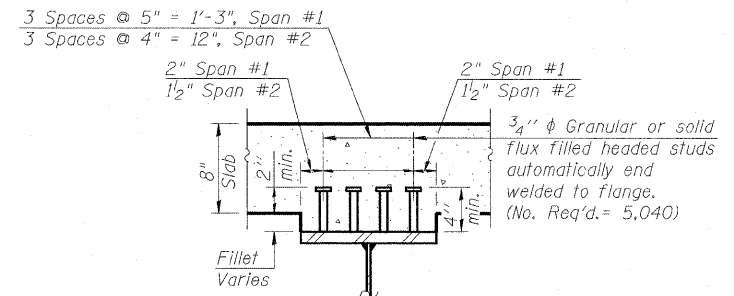
FRAMING PLAN



GIRDER ELEVATION



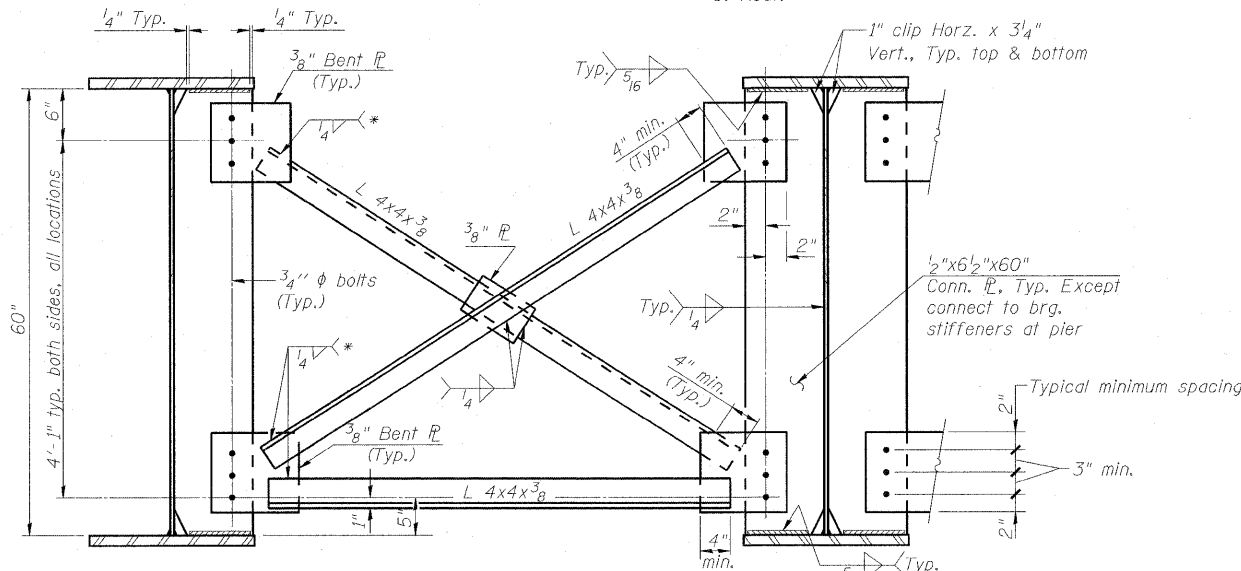
SECTION AT PIER & ABUTMENTS



SECTION A-A

SPAN #1				SPAN #2			
Space	# of Spaces	Length	Total	Space	# of Spaces	Length	Total
A	9 spaces at 11 inches	= 8'-3"		A	4 spaces at 6 inches	= 2'-0"	
B	6 spaces at 12 inches	= 6'-0"		B	38 spaces at 10 inches	= 31'-8"	
C	10 spaces at 13 inches	= 10'-10"		C	13 spaces at 15 inches	= 16'-3"	
D	48 spaces at 14 inches	= 56'-0"		D	10 spaces at 14 inches	= 11'-8"	
E	40 spaces at 13 inches	= 43'-4"		E	6 spaces at 13 inches	= 6'-6"	
F	4 spaces at 6 inches	= 2'-0"		F	7 spaces at 12 inches	= 7'-0"	
Totals: 117 Spaces, 118 Rows				Totals: 91 Spaces, 92 Rows			

SHEAR STUD SPACING (NORTH - TO - SOUTH)



TYPICAL INTERIOR CROSS FRAME - CF-1

- Notes:
- * Fillet weld angles along 3 sides on one face of gusset plate.
 - Detail 1/2" φ holes for all 3/4" φ bolts.
 - Two hardened washers required for each set of oversized holes.
 - Set Cross Frames along skew.

STRUCTURAL STEEL
STRUCTURE NO. 082-0326

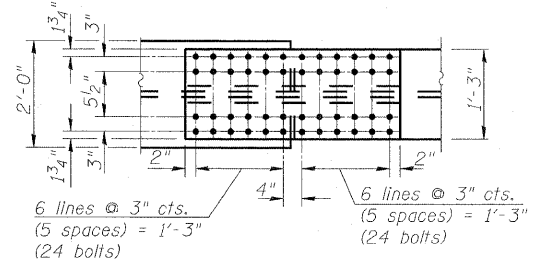
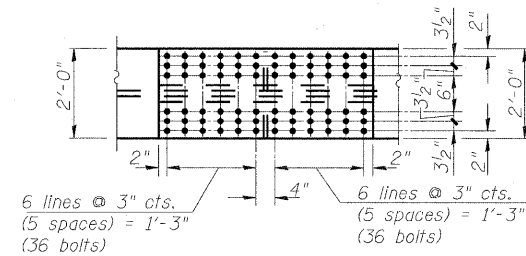
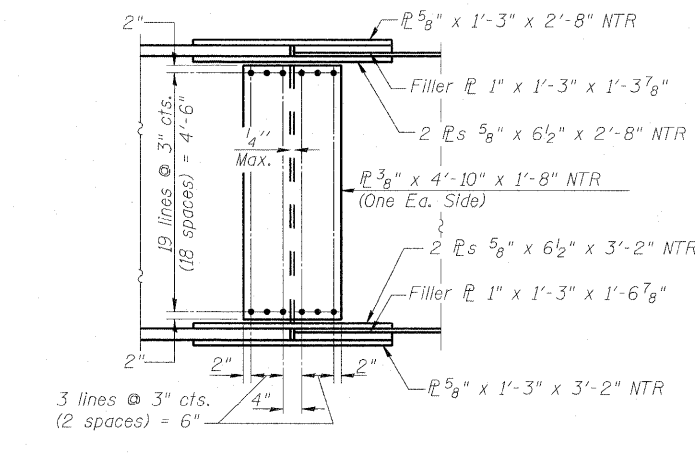
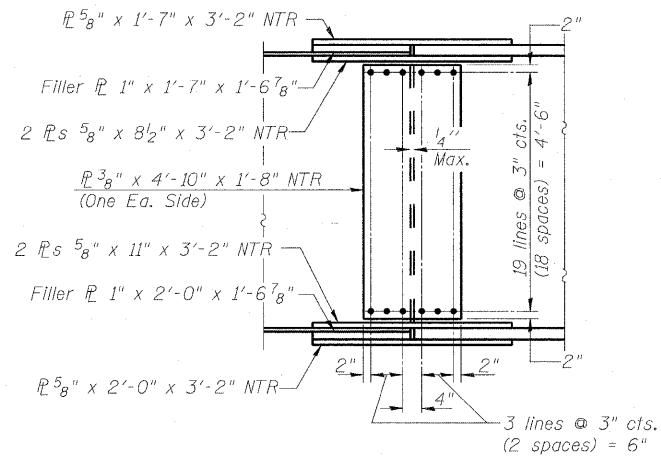
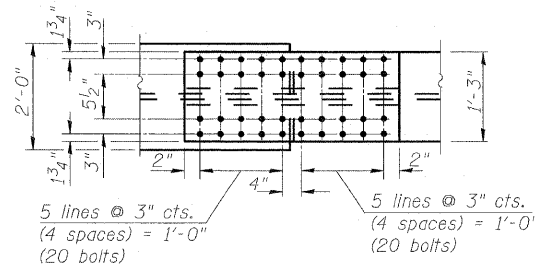
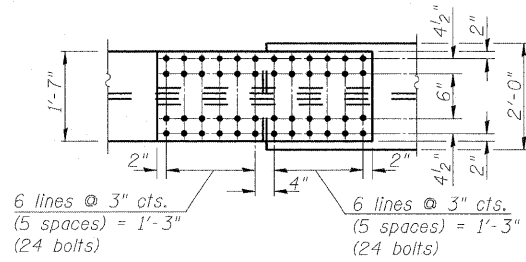
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SHEET NO. S21	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	223
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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FIELD SPLICE #1 DETAIL

FIELD SPLICE #2 DETAIL

Notes:

- All splice steel this sheet shall be AASHTO M270 Grade 50.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s (in ⁴)	50,965	103,538	39,160
$I_c(n)$ (in ⁴)	117,997	--	93,631
$I_c(3n)$ (in ⁴)	87,362	--	70,125
S_s (in ³)	1,751	3,236	1,263
$S_c(n)$ (in ³)	2,312	--	1,756
$S_c(3n)$ (in ³)	2,128	--	1,603
Z (in ³)	--	3,538	--
*** M_{DC1} (k')	1.28	1.47	1.24
*** M_{DC2} (k')	2,401	4,326	896
*** M_{DC2} (k')	0.33	0.33	0.33
*** M_{DC2} (k')	657	956	294
DW (k')	0.31	0.31	0.31
M_{DW} (k')	617	898	276
$M_k + IM$ (k')	3,392	3,210	2,529
M_u (Strength I) (k')	10,684	13,567	6,327
$\phi_r M_{nc}$ (k')	11,151	14,744	8,880
f_s DC1 (ksi)	16.5	16.0	8.5
f_s DC2 (ksi)	3.7	3.5	2.2
f_s DW (ksi)	3.5	3.3	2.1
f_s 1.3(I+IM) (ksi)	22.9	15.5	22.5
f_s (Service II) (ksi)	46.5	38.4	35.2
** f_s (Total)(Strength I) (ksi)	--	--	--
V_r (k)	36.0	--	36.9

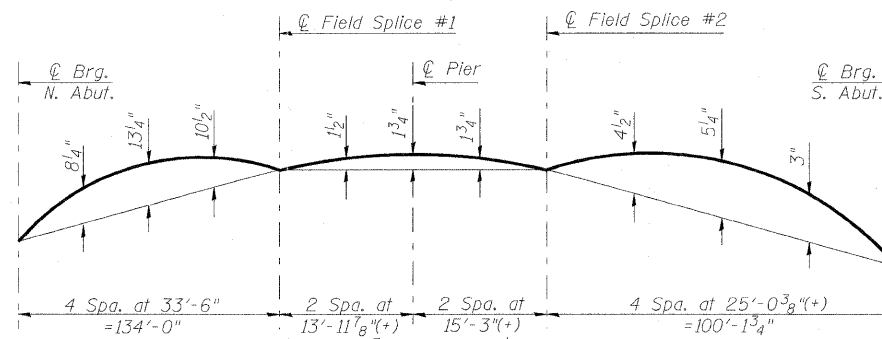
- * Compact sections
- ** Non-Compact and slender sections
- *** Tabulated values neglect effects of slab pouring sequence

	N. Abut.	Pier	S. Abut.
*** R_{DC1} (k)	80.6	258.4	51.2
*** R_{DC2} (k)	20.8	61.5	14.2
R_{DW} (k)	19.6	57.8	13.4
$R_k + IM$ (k)	136.6	270.4	127.8
R_{Total} (k)	257.6	648.1	206.6

Girder	¢ Brg. N. Abut.	¢ Spl.1	¢ Brg. Pier	¢ Spl.2	¢ Brg. S. Abut.
1	419.50	422.69	422.51	421.89	418.59
2	419.75	422.89	422.70	422.05	418.72
3	420.00	423.09	422.88	422.22	418.86
4	420.23	423.28	423.06	422.37	418.98
5	420.08	423.08	422.84	422.14	418.72
6	419.93	422.88	422.63	421.91	418.45

****For fabrication use only.

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in⁴ and in³).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).
- Z: Plastic Section Modulus of the steel section in non-composite areas (in³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_k + IM$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$
- $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_r M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_k + IM$
- f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$
- V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



CAMBER DIAGRAM

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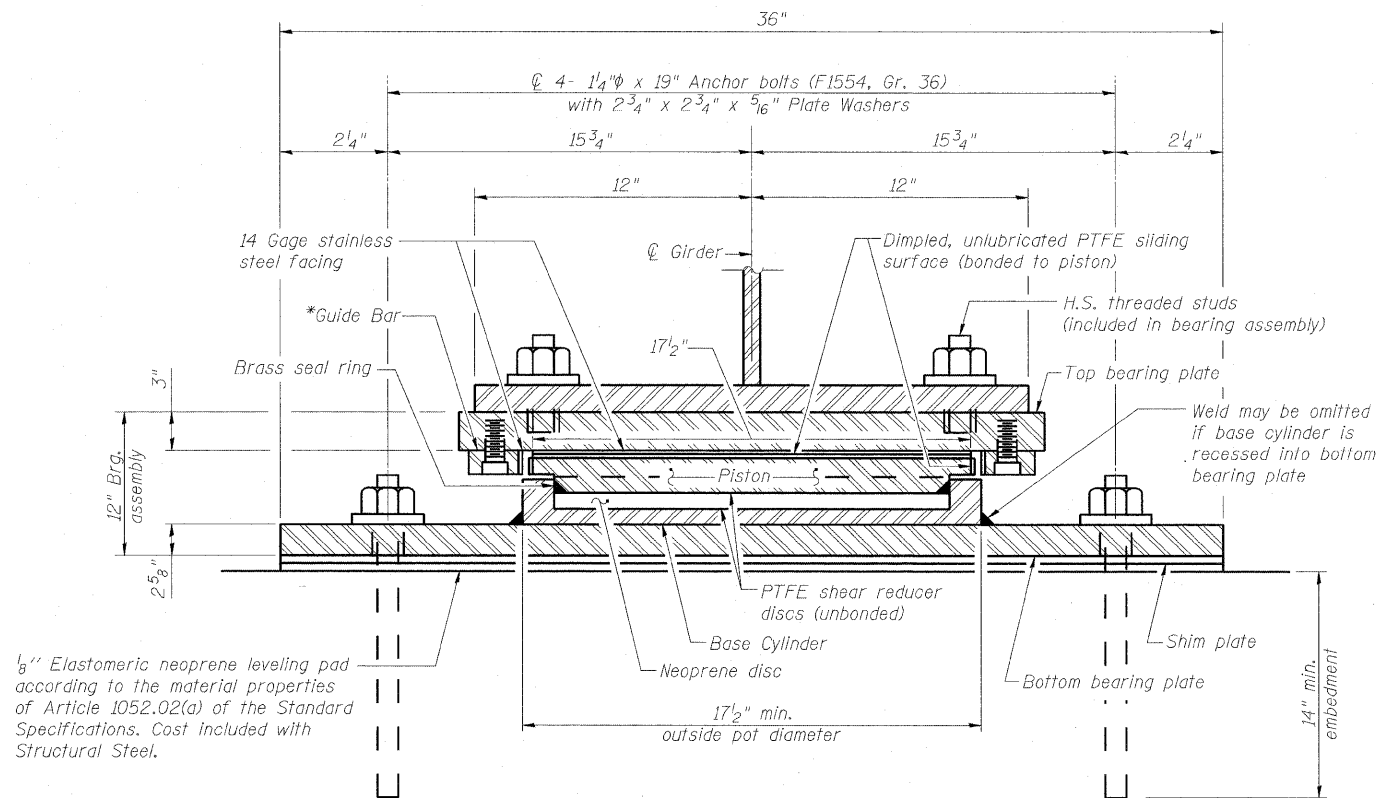
03/31/2011

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 082-0326

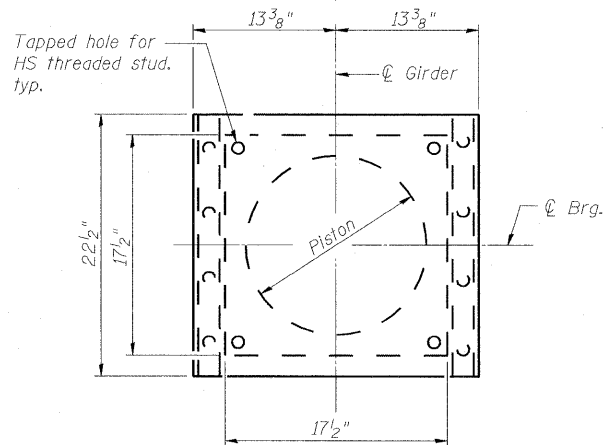
SHEET NO. S22	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	224
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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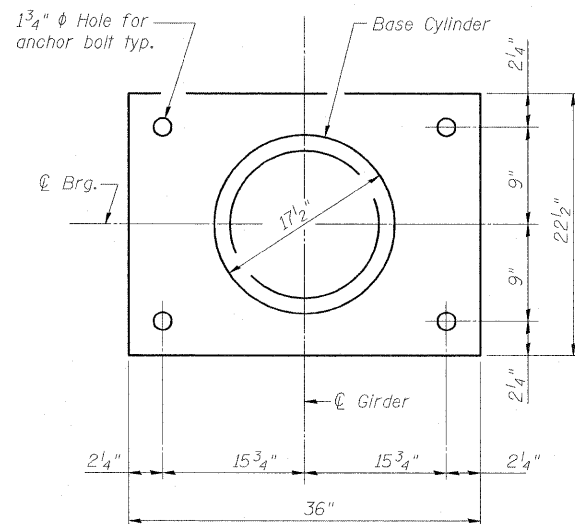
* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



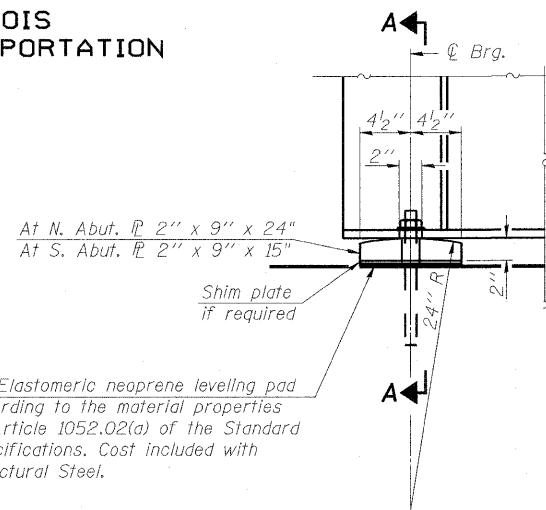
**GUIDED EXPANSION
POT BEARING AT PIER
(6 Required)**



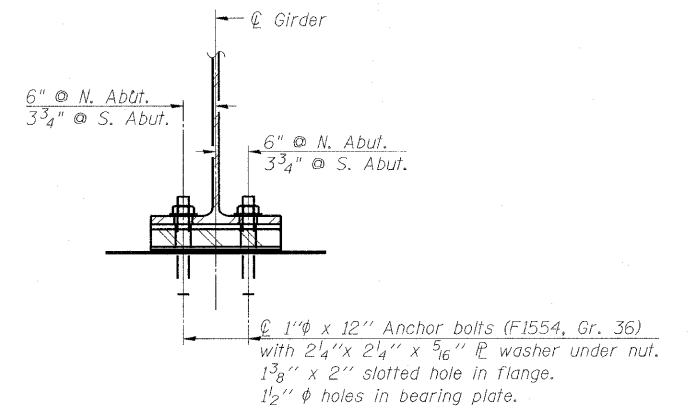
**TOP BEARING &
AND PISTON PLAN**



**BOTTOM BEARING &
BASE CYLINDER PLAN**



ELEVATION AT ABUTMENT



SECTION A-A

**FIXED BEARING AT ABUTMENTS
(12 Required)**

POT BEARING INFORMATION

Item	Unit	Guided Pier
Service Load Reactions		
Dead Load	Kips	377.7
Live Load (No Impact)	Kips	233.8
Total	Kips	611.5
Design Rotation From Service Loads (DL + LL)		
Fabrication Tolerance (0.01 Radian), Uncertainties (0.01 Radian), and Girder Slope from Vertical Curve.	Radians	0.030
Total Required Movement (Expansion + Contraction)	Inch	2"
Number of Bearings	Each	6

Notes:

Anchor bolts shall conform to Article 1006.09 of the Standard Specifications.
All anchor bolts, washers and nuts shall be galvanized according to Article 1006.09 of the Standard Specifications.
H.S. bolts in the bearing assembly shall be galvanized according to AASHTO M298, Class 50.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed Abutment bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for Pier bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
The 1/8" PTFE sheet shall be bonded directly to the piston plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
The structural steel plates of the Pot Bearing Assembly and the Fixed Bearing shall conform to the requirements of AASHTO M270, Grade 50.

BILL OF MATERIAL

Item	Unit	Total
HLMR Bearings, Guided Expansion, 650K	Each	6
Anchor Bolts 1"	Each	24
Anchor Bolts 1 1/4"	Each	24

**BEARING DETAILS
STRUCTURE NO. 082-0326**

SHEET NO. S23	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	225
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

AECOM

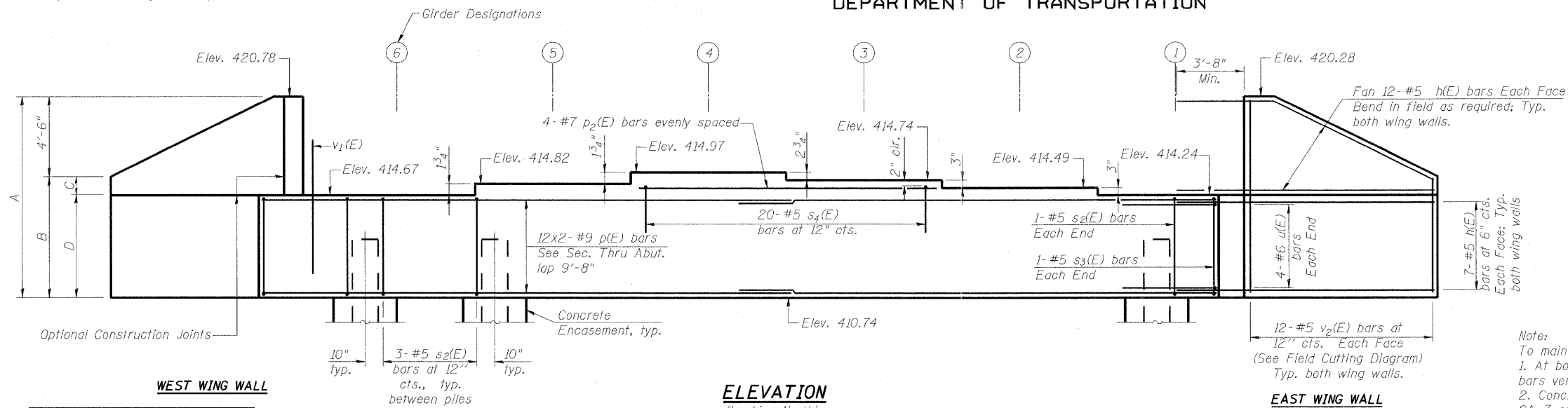
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DRAWN	-BRD
CHECKED	-P.JL

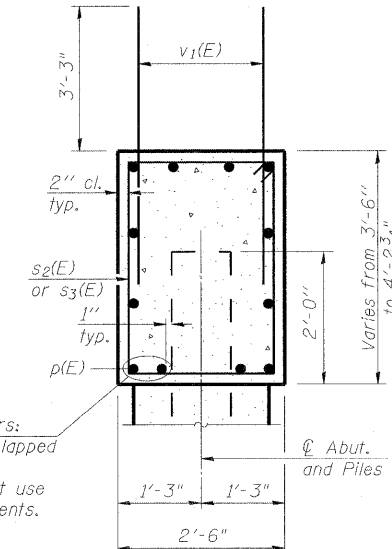
03/31/2011

STATE OF ILLINOIS
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Notes:
Four steps monolithically with cap.



ELEVATION
(Looking North)

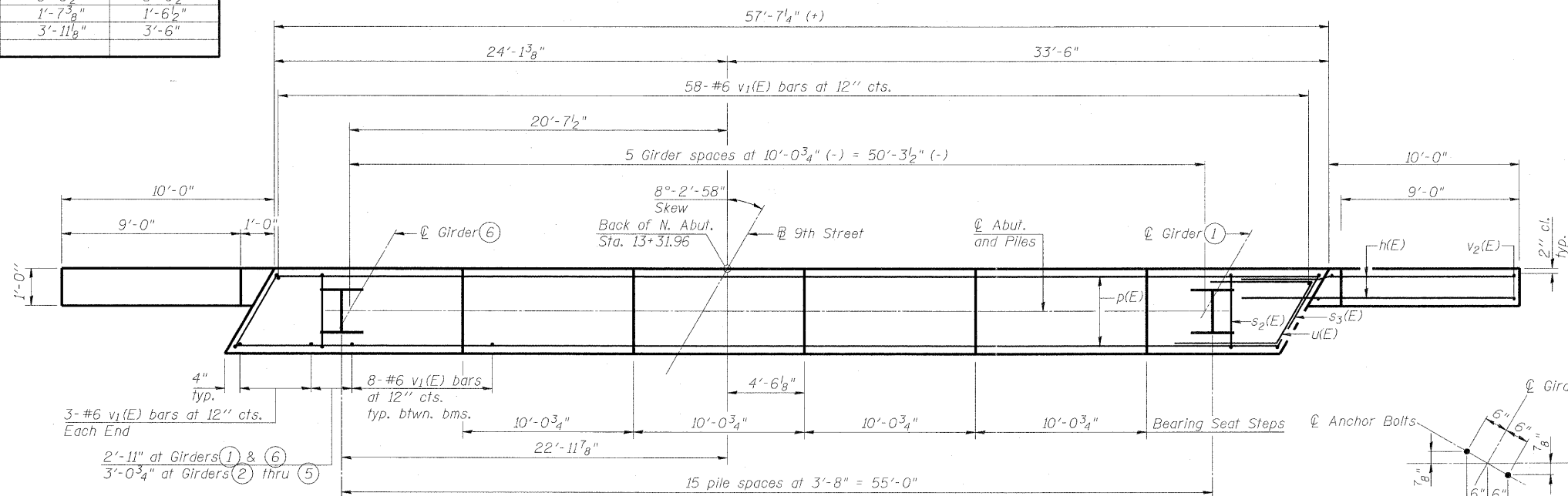


SEC. THRU ABUT.

Note:
To maintain clearance between bars:
1. At bottom p(E) bar laps, stack lapped bars vertically.
2. Concrete Class SI mix shall not use CA-7 coarse aggregate for abutments.

Wing Wall Dimensions

	West Wing Wall	East Wing Wall
A	10'-0 1/2"	9'-6 1/2"
B	5'-6 1/2"	5'-0 1/2"
C	1'-7 3/8"	1'-6 1/2"
D	3'-11 1/8"	3'-6"



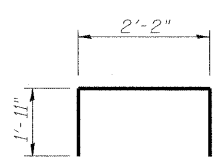
PLAN

ANCHOR BOLT LAYOUT

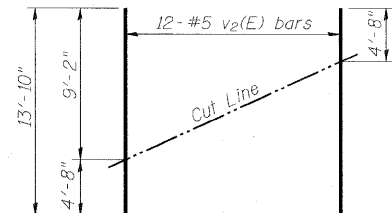
Space Reinforcement to miss Anchor Bolts

PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 372 kips
Factored Resistance Available: 186 kips
Est. Length: 91 ft.
No. Production Piles: 15
No. Test Piles: 1

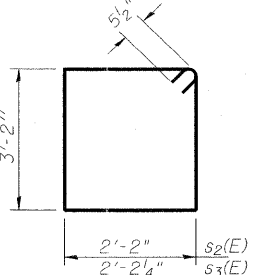


BAR s4(E)

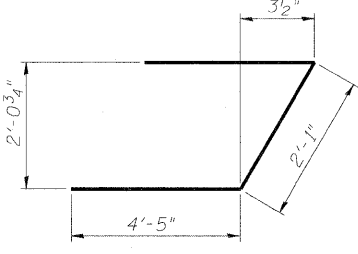


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	76	#5	13'-8"	—
p(E)	24	#9	33'-6"	—
p2(E)	4	#7	19'-9"	—
s2(E)	47	#5	11'-7"	□
s3(E)	2	#5	11'-8"	□
s4(E)	20	#5	6'-0"	□
u(E)	8	#6	10'-11"	└
v1(E)	104	#6	6'-6"	—
v2(E)	24	#5	13'-10"	—
Structure Excavation			Cu. Yd.	285
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	6,190
Furnishing - Stool Piles, HP 14x89			Foot	1,365
Driving Piles			Foot	1,365
Test Pile, HP 14x89			Each	1
Concrete Encasement			Cu. Yd.	8.7
Pile Shoes			Each	16

For details of Bar Splicers, see Sht. S28 of S36.
For details of piles and Concrete Encasement, see Sht. S27 of S36.

**NORTH ABUTMENT
STRUCTURE NO. 082-0326**

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S24	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	226
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

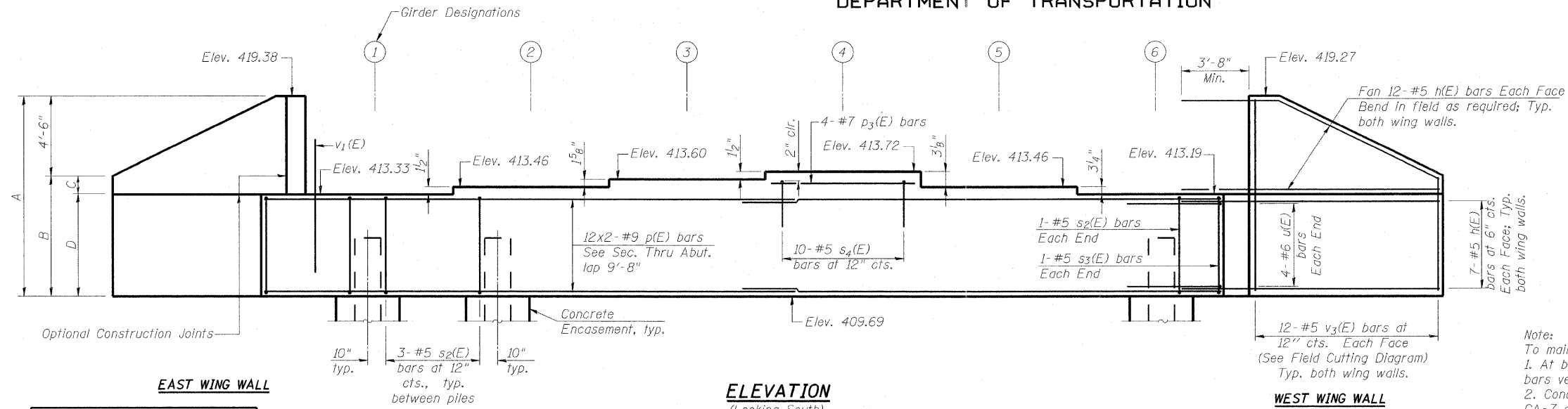
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CHECKED	- D.D.B.
DRAWN	- B.R.D.
CHECKED	- D.D.B.

03/31/2011

Notes:
Four steps monolithically with cap.

STATE OF ILLINOIS
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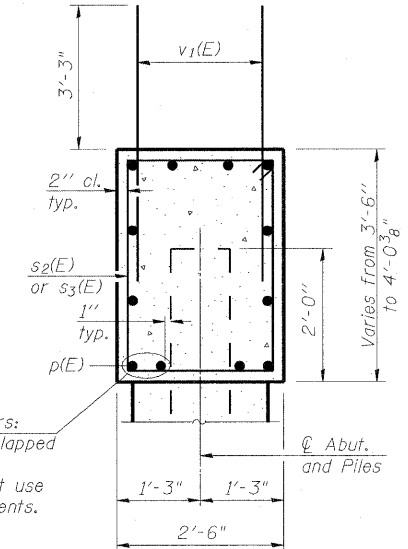


EAST WING WALL

ELEVATION
(Looking South)

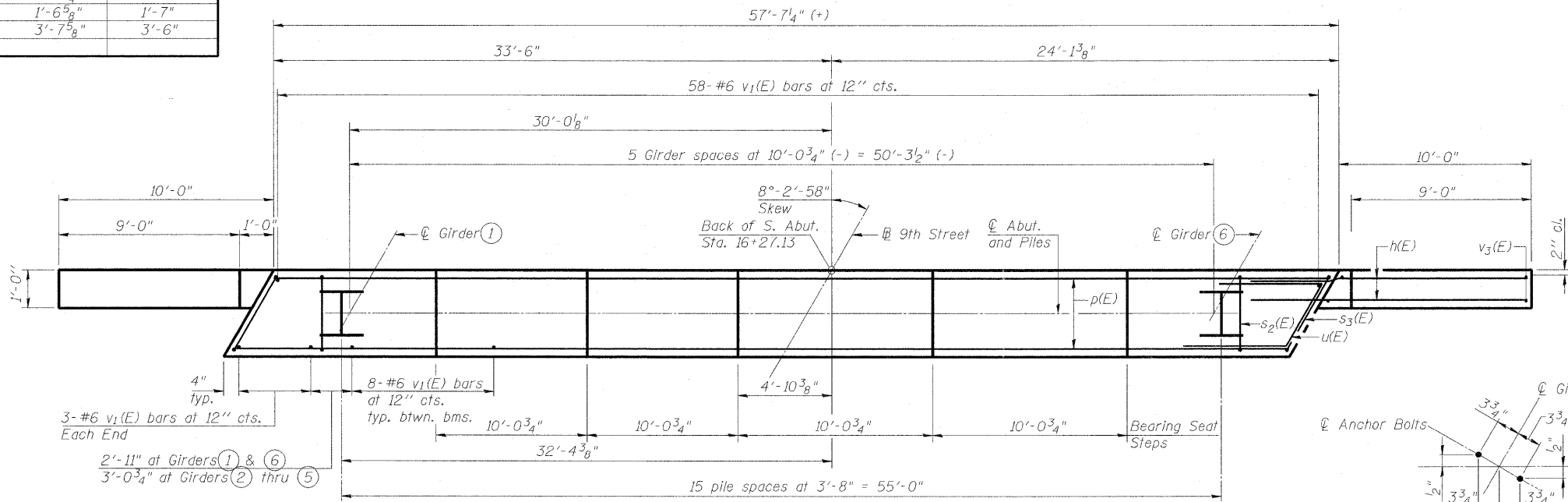
WEST WING WALL

Wing Wall Dimensions		
	East Wing Wall	West Wing Wall
A	9'-8 1/4"	9'-7"
B	5'-2 1/4"	5'-1"
C	1'-6 3/8"	1'-7"
D	3'-7 5/8"	3'-6"



SEC. THRU ABUT.

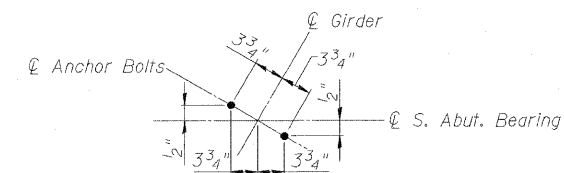
Note:
To maintain clearance between bars:
1. At bottom p(E) bar laps, stack lapped bars vertically.
2. Concrete Class SI mix shall not use CA-7 coarse aggregate for abutments.



PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 312 kips
Factored Resistance Available: 156 kips
Est. Length: 75 ft.
No. Production Piles: 16

PLAN



ANCHOR BOLT LAYOUT

Space Reinforcement to miss Anchor Bolts

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	76	#5	13'-8"	—
p(E)	24	#9	33'-6"	—
p3(E)	4	#7	9'-8"	—
s2(E)	47	#5	11'-7"	□
s3(E)	2	#5	11'-8"	□
s4(E)	10	#5	6'-0"	□
u(E)	8	#6	10'-11"	┘
v1(E)	104	#6	6'-6"	—
v3(E)	24	#5	14'-0"	—
Structure Excavation			Cu. Yd.	278
Concrete Structures			Cu. Yd.	25.8
Reinforcement Bars, Epoxy Coated			Pound	6,050
Furnishing - Steel Piles, HP 14x89			Foot	1,200
Driving Piles			Foot	1,200
Concrete Encasement			Cu. Yd.	8.7
Pile Shoes			Each	16

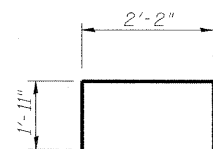
For details of Bar Splicers, see Sht. S28 of S36.
For details of piles and Concrete Encasement, see Sht. S27 of S36.

AECOM

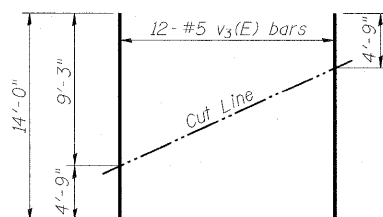
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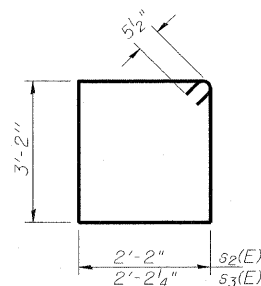


BAR s4(E)

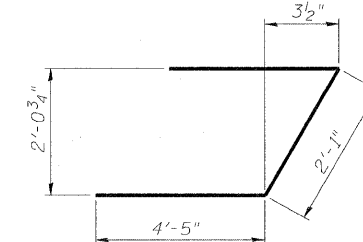


FIELD CUTTING DIAGRAM

Order v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



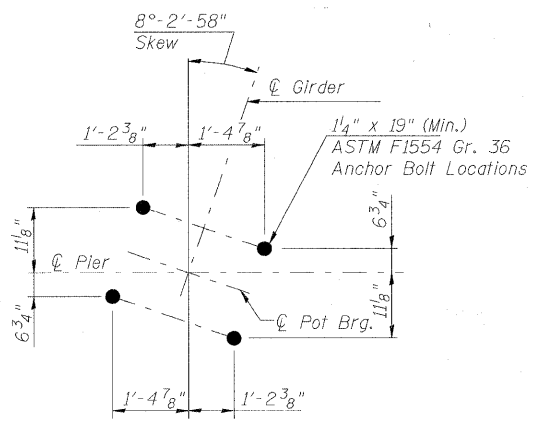
BAR u(E)

SOUTH ABUTMENT
STRUCTURE NO. 082-0326

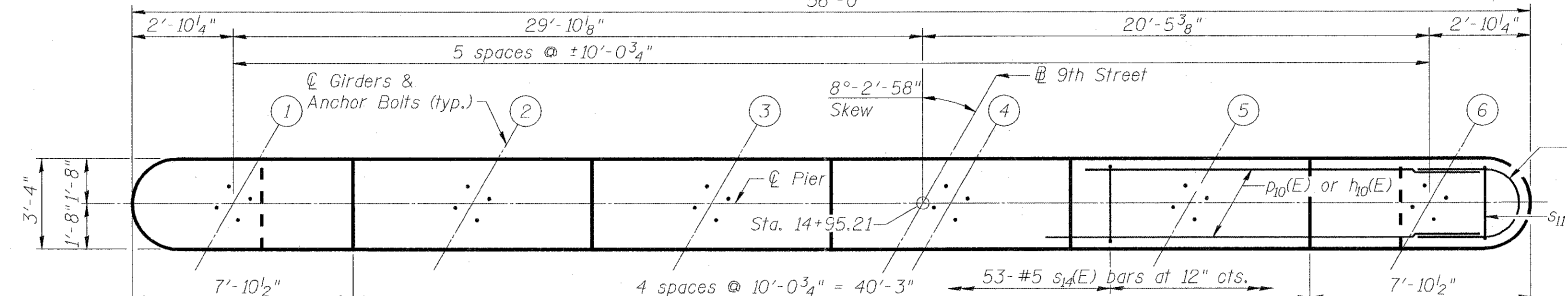
SHEET NO. S25	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	227	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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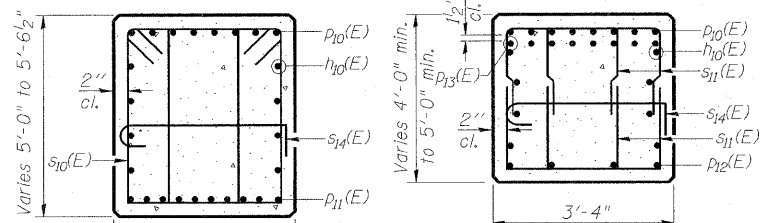
56'-0"



ANCHOR BOLT LOCATION
DETAIL

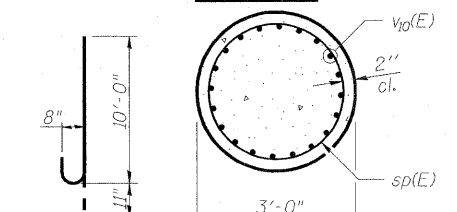


TOP PLAN



SEC. A-A

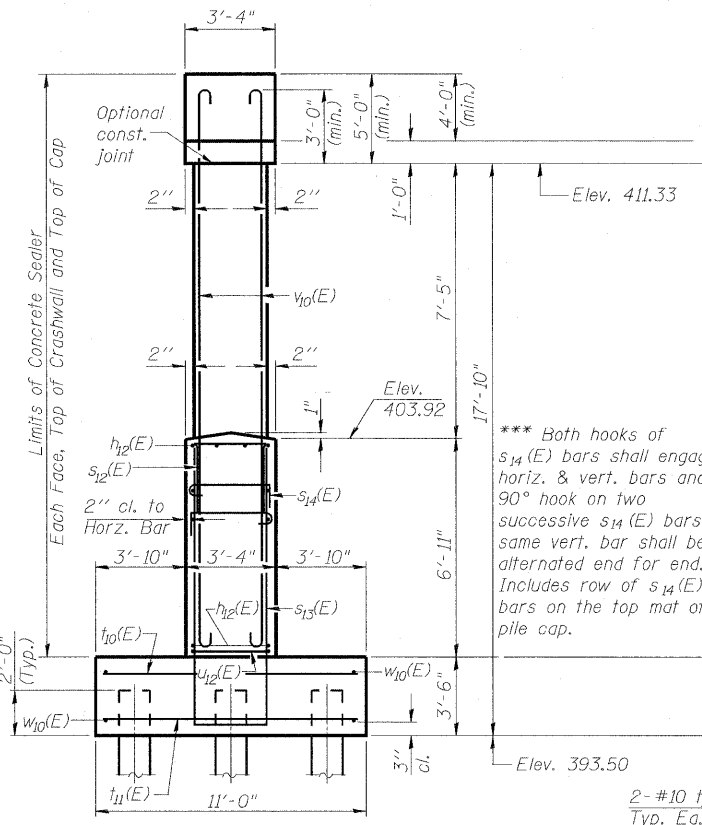
SEC. B-B



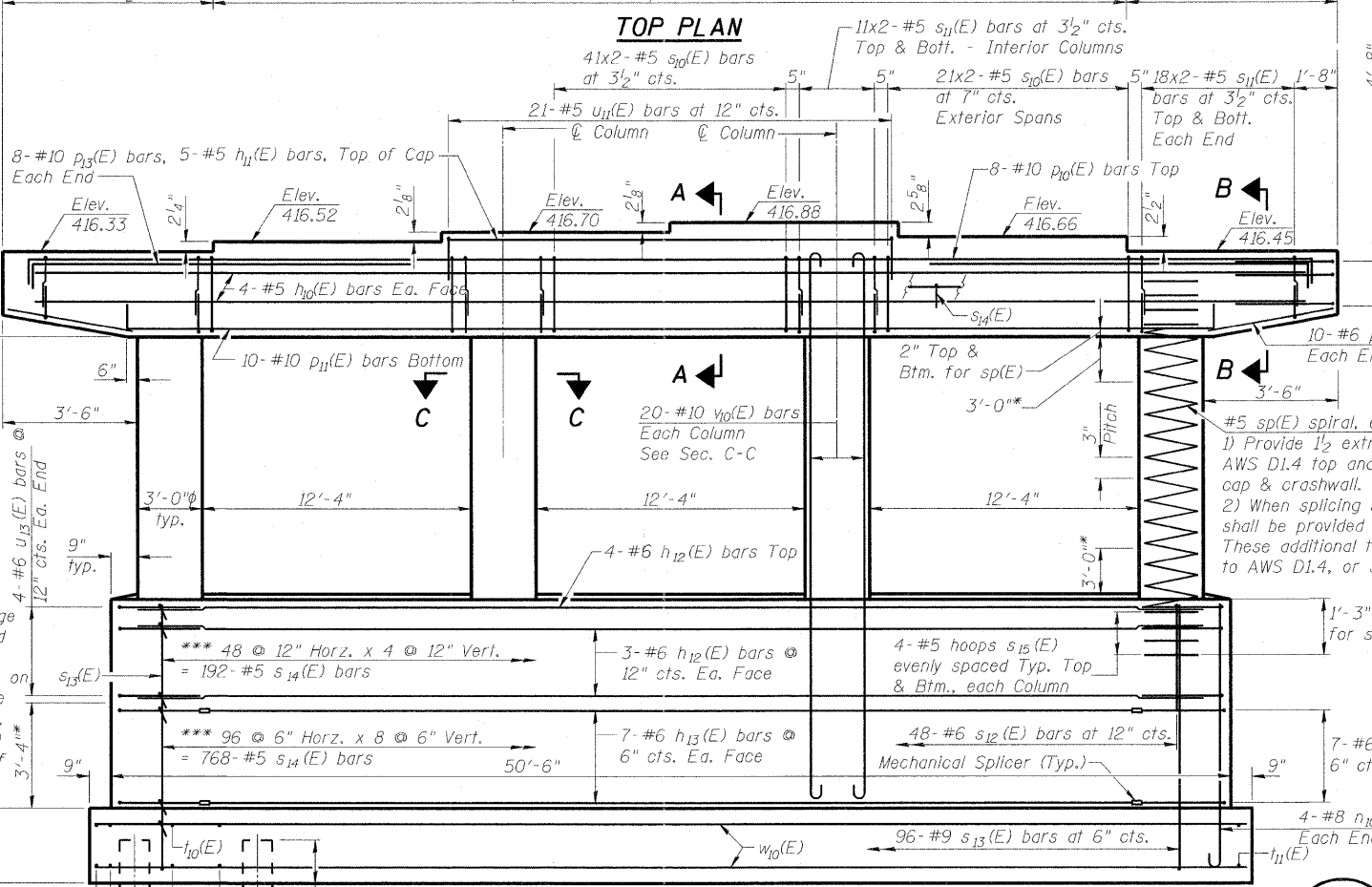
SEC. C-C

BAR n10(E) BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p10(E)	8	#5	52'-8"	—
h11(E)	5	#5	19'-8"	—
p12(E)	10	#6	41'-2"	—
h13(E)	14	#6	39'-10"	—
n10(E)	8	#8	10'-11"	U
p10(E)	8	#10	56'-4"	—
p11(E)	10	#10	53'-8"	—
p12(E)	20	#6	7'-8"	—
p13(E)	16	#10	17'-10"	—
s10(E)	166	#5	14'-3"	□
s11(E)	232	#5	10'-0"	—
s12(E)	48	#6	8'-10"	—
s13(E)	96	#9	22'-10"	—
s14(E)	1013	#5	4'-6"	—
s15(E)	32	#5	8'-4 1/2"	—
sp(E)	4	#5	7'-9"	—
h10(E)	53	#8	10'-8"	—
h11(E)	52	#10	10'-8"	—
u10(E)	10	#6	17'-11"	—
u11(E)	21	#5	7'-0"	—
u12(E)	14	#6	12'-1"	—
u13(E)	8	#6	14'-1"	—
v10(E)	80	#10	20'-2"	—
w10(E)	24	#8	51'-8"	—
Braced Excavation		Cu. Yd.	125	
Concrete Structures		Cu. Yd.	160.4	
Reinforcement Bars, Epoxy Coated		Pound	42,200	
Furnishing - Steel Piles, HP 14x73		Foot	3,627	
Driving Piles		Foot	3,627	
Pile Shoes		Each	39	
Concrete Sealer		Sq. Ft.	2,192	
Mechanical Splicers		Each	28	



END VIEW



ELEVATION
(Looking South)

BAR s10(E)

BAR v10(E)

BARS p10(E) & p11(E)

BARS u10(E) & u12(E)

BAR s15(E)

BAR u13(E)

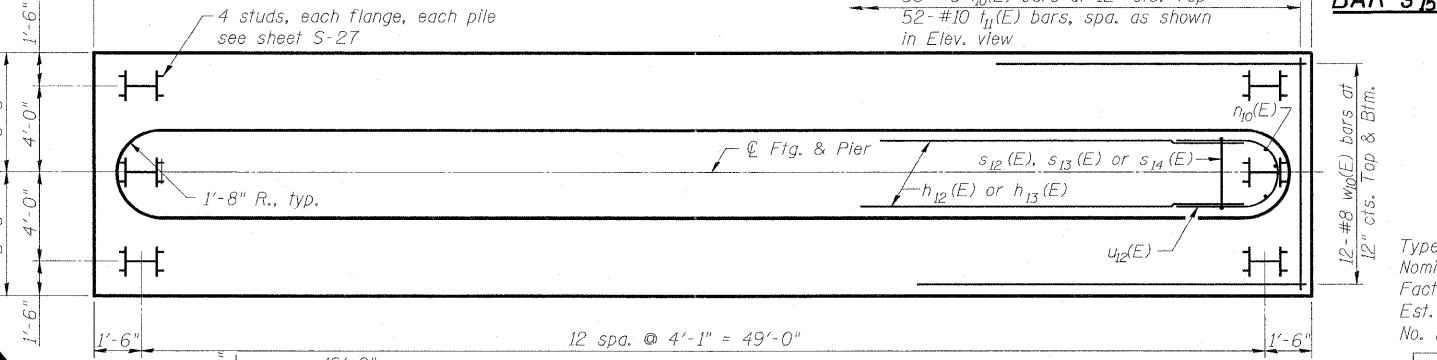
BAR p12(E)

BAR s14(E)

BARS s11(E), s12(E), s13(E), u11(E) & u12(E)

A & B DIMENSIONS

Bar	A	B
s11(E)	2'-0"	4'-0"
s12(E)	2'-10"	3'-0"
s13(E)	2'-10"	10'-0"
u11(E)	3'-0"	2'-0"



FOOTING PLAN

BAR p13(E)

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see Sht. S27 of S36.

PILE DATA
Type: HP 14x73
Nominal Required Bearing: 450 kips
Factored Resistance Available: 225 kips
Est. Length: 93'
No. Production Piles: 39

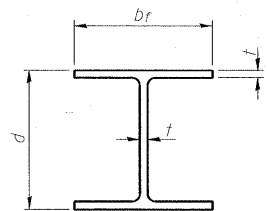
PIER
STRUCTURE NO. 082-0326

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S26	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	228
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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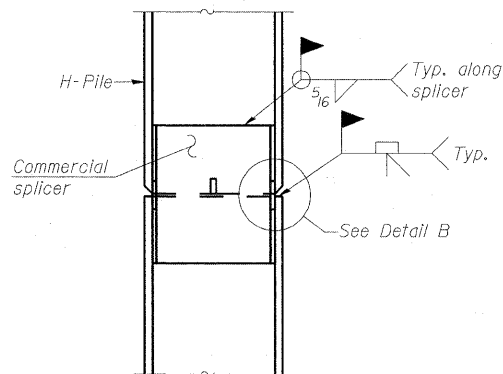
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DRAWN - BRD
CHECKED - PJL
03/31/2011

STATE OF ILLINOIS
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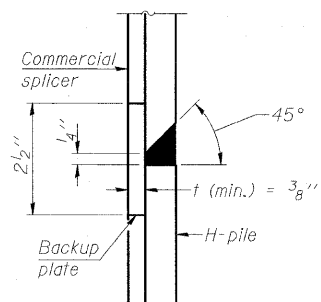


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 8/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

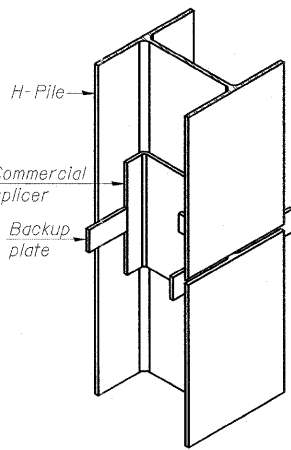


ELEVATION

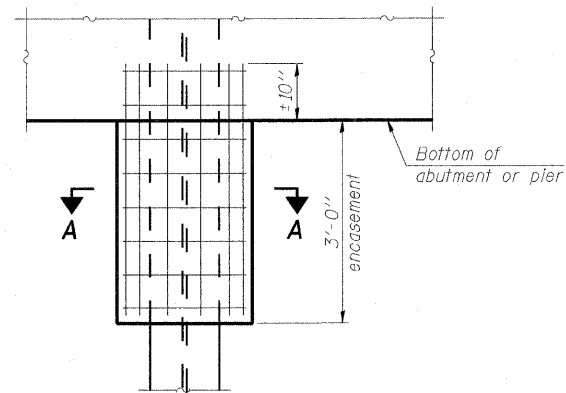


DETAIL "B"

WELDED COMMERCIAL SPLICE

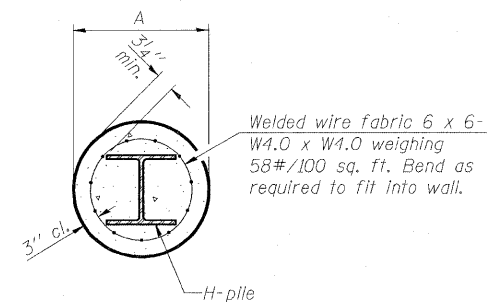


ISOMETRIC VIEW



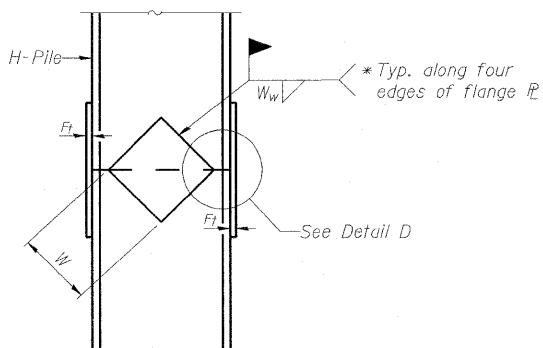
ELEVATION

PILE ENCASEMENT

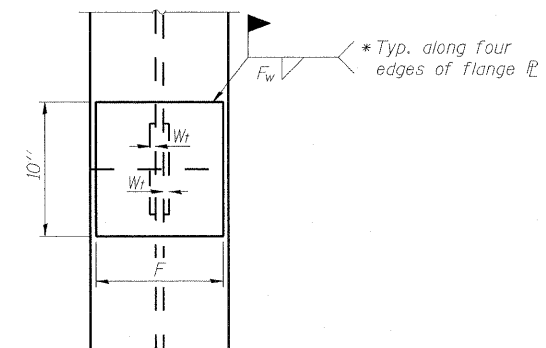


SECTION A-A

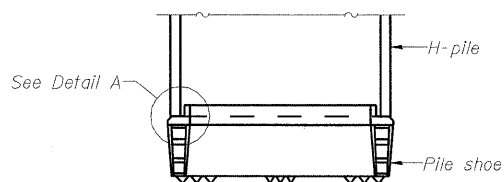
Note:
Forms for encasement may be omitted when soil conditions permit.



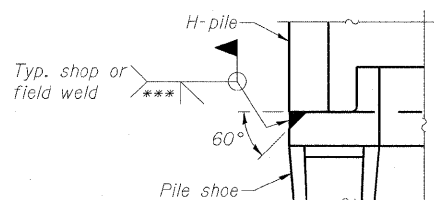
ELEVATION



END VIEW

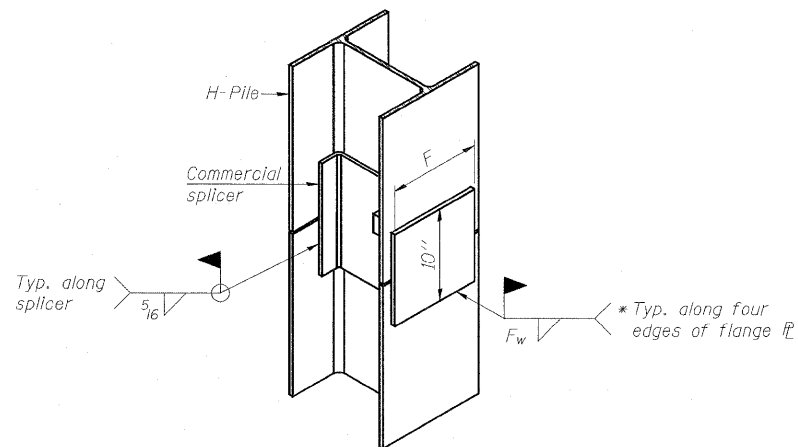


ELEVATION



DETAIL A

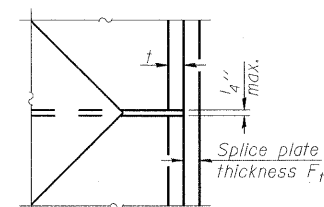
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

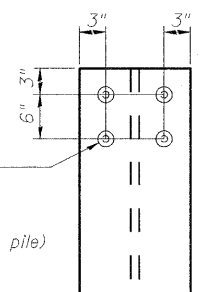
WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



DETAIL D

WELDED PLATE FIELD SPLICE



STUD DETAIL

4-3/4" φ x 4" Granular or solid Flux filled headed studs automatically end welded. Cost included with Furnishing Piles. (Typ. each flange, each pile)

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

**HP PILE DETAILS
STRUCTURE NO. 082-0326**

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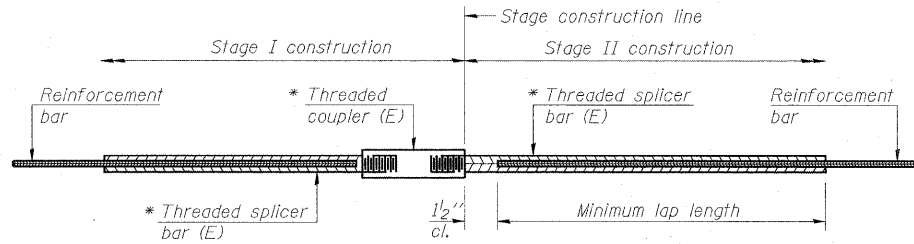
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03/31/2011 F-HP 11-1-09

SHEET NO. S27	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	229
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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STANDARD BAR SPLICER ASSEMBLY

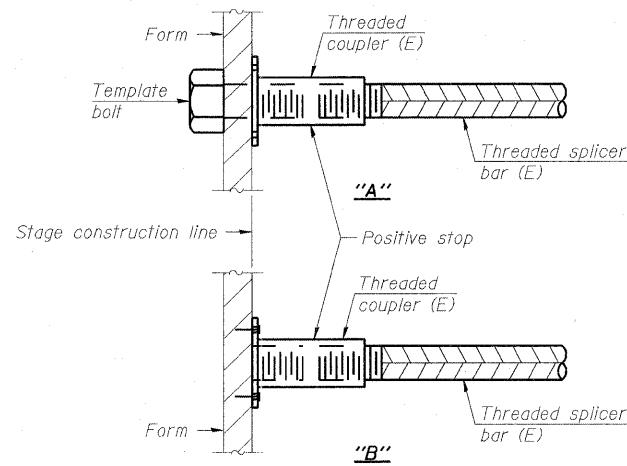
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

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

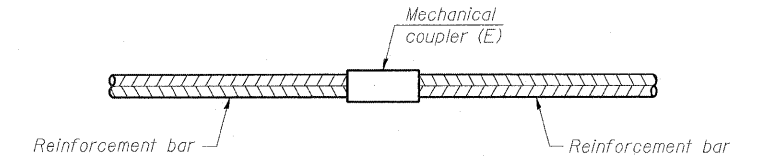
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



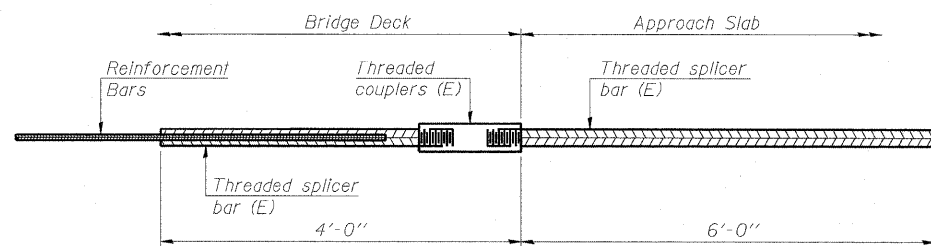
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E): Indicates epoxy coating.



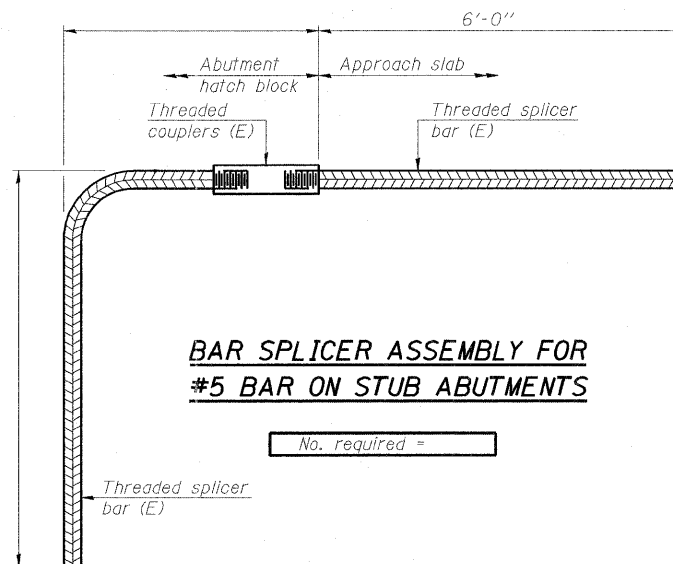
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier	#6	28



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

No. required = 118



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with Threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See special provision for Mechanical Splicers.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 082-0326**

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03/31/2011 BSD-1 11-1-09

SHEET NO. S28	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	230	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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SOIL BORING LOG

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Date 3/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326 Station NA
BORING NO. B-423 Station 16+26.06
Offset 23ft RT
Ground Surface Elev. 419.7 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Soils			
				Surface Water Elev. Unknown ft	Stream Bed Elev. Unknown ft	Groundwater Elev.:	First Encounter Not Measured ft

Soil Description	Elevation (ft)	D (ft)	B (/6")	U (tsf)	M (%)
Brown, SILTY CLAY (FILL), trace brick fragments	399.2	5			
Loose to medium dense, tan, SANDY LOAM	399.2	7	*	32	
		7			
		3			
		2	*	22	
		3			
Stiff, gray, CLAY	414.2	3			
		4	*	22	
		5			
Medium stiff, brown, SILTY CLAY	411.7	3			
		4	*	26	
		4			
Medium stiff, tan, SILTY LOAM	409.2	3			
		3	*		
		3			
		3			
		4	*	8	
		4			
Medium stiff, gray brown, SILTY CLAY	404.2	3			
		4	*	24	
		4			
		1			
		2	*	25	
		3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

BBS, from 137 (Rev. 8-99)



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ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326 Station NA
BORING NO. B-423 Station 16+26.06
Offset 23ft RT
Ground Surface Elev. 419.7 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Soils			
				Surface Water Elev. Unknown ft	Stream Bed Elev. Unknown ft	Groundwater Elev.:	First Encounter Not Measured ft

Soil Description	Elevation (ft)	D (ft)	B (/6")	U (tsf)	M (%)
Medium dense to dense, gray, FINE GRAINED SAND (continued)					
		12			
		13			
		13			
		16			
		20			
		22			
		18			
		15			
		22			
Grain size distribution conducted					
		9			
		10			
		11			
		11			
		11			
Medium dense, gray, GRAVELLY SAND	344.7				
Grain size distribution conducted					
		23			
		12			
		13			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used

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SOIL BORING: B-423
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SOIL BORING: B-423
2 OF 4

BORING LOGS - I
STRUCTURE NO. 082-0326

SHEET NO. S29	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	231
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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SOIL BORING LOG

Page 3 of 4

Date 3/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-423
Station 16+26.06
Offset 23ft RT
Ground Surface Elev. 419.7 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter Not Measured ft
Upon Completion Not Measured ft
After Hrs. Not Measured ft

DEPTH (ft)	SOIL DESCRIPTION	DRILLING METHOD	DRILL RIG/HAMMER EFFICIENCY	CME
0	Medium dense, gray, GRAVELLY SAND (continued)	HSA	CME 75	80%
334.7	Medium dense to very dense, gray, MEDIUM GRAINED SAND	HSA	CME 75	80%
303.7	Crystalline LIMESTONE - See attached Rock Core Log	HSA	CME 75	80%

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
BBS, from 137 (Rev. 8-99)



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Date 3/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-423
Station 16+26.06
Offset 23ft RT
Ground Surface Elev. 419.7 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter Not Measured ft
Upon Completion Not Measured ft
After Hrs. Not Measured ft

DEPTH (ft)	SOIL DESCRIPTION	DRILLING METHOD	DRILL RIG/HAMMER EFFICIENCY	CME
0	Crystalline LIMESTONE - See attached Rock Core Log (continued)	HSA	CME 75	80%
293.7	End of Boring	HSA	CME 75	80%

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
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SOIL BORING: B-423
4 OF 4

BORING LOGS - II
STRUCTURE NO. 082-0326

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S36	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	232
F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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SOIL BORING LOG

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ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-424
Station 13+37.77
Offset 5ft LT
Ground Surface Elev. 419.4 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode
0	TOPSOIL - 6 inches			398.9	Soft, brown, SILTY LOAM (continued)		
3	Gray, SILTY CLAY (FILL), with gravel			396.4	Stiff, brown, SILT		
7		*	12	4			
5				5		*	23
416.4	Brown, SILTY SAND (FILL), with gravel			393.9	Medium stiff, gray, SILTY CLAY		
4				0			
5		*	15	3		*	31
413.9	Medium stiff, brown, SILTY CLAY			3			
2				4			
2		*	26	3		*	24
411.4	Stiff, brown, SILTY LOAM			3			
1		1.0	29	4			
1		B		3		*	28
408.9	Stiff, brown, CLAY			3			
0				6			
2		1.1	34	7		*	24
1		B		6			
403.9	Loose, brown, SANDY LOAM			387.4	Medium dense, gray, SANDY LOAM		
2		1.4	36	382.4	Medium dense to dense, gray, FINE GRAINED SAND, trace silt		
3		S		8			
401.4	Soft, brown, SILTY LOAM			11		*	
1				12			
2		*	28				
1							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)
** Not measured due to drilling methods used

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SOIL BORING LOG

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ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-424
Station 13+37.77
Offset 5ft LT
Ground Surface Elev. 419.4 ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode
374.4	Medium dense to dense, gray, FINE GRAINED SAND, trace silt (continued)			354.4	Medium dense to dense, gray, FINE GRAINED SAND, trace silt (continued)		
8				19			
8				26			
8				19			
374.4	Grain size distribution conducted			354.4	Grain size distribution conducted		
6				17			
7				15			
7				12			
10							
14							
14							
26				33			
21				27			
20				24			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)
** Not measured due to drilling methods used

SOIL BORING: B-424
2 OF 4

BORING LOGS - III
STRUCTURE NO. 082-0326

SHEET NO. S31	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	233	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

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SOIL BORING LOG

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Date 3/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-424
Station 13+37.77
Offset 5ft LT
Ground Surface Elev. 419.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter Not Measured ft
Upon Completion Not Measured ft
After Hrs. Not Measured ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode
337.4	Medium dense to dense, gray, FINE GRAINED SAND, trace silt (continued)			-105	Very dense, gray, FINE GRAINED SAND (continued)		
-85	Dense, gray brown, MEDIUM GRAINED SAND			-110	Dense, GRAVEL, trace sand and clay	33	
329.4	Grain size distribution conducted	11		-115	Very dense, gray, FINE GRAINED SAND	22	
-90		20		-120	CRYSTALLINE LIMESTONE - See attached rock core log	22	
324.4		13		300.4		50/4"	
-95		18					
23		29					
-100							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)
** Not measured due to drilling methods used

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SOIL BORING LOG

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ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair DRILLING METHOD HSA, with MR DRILL RIG/HAMMER EFFICIENCY CME 75 / 80%

STRUCT. NO. 082-0326
Station NA
BORING NO. B-424
Station 13+37.77
Offset 5ft LT
Ground Surface Elev. 419.4 ft

Surface Water Elev. Unknown ft
Stream Bed Elev. Unknown ft
Groundwater Elev.:
First Encounter Not Measured ft
Upon Completion Not Measured ft
After Hrs. Not Measured ft

DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode	DEPTH (ft)	SOIL DESCRIPTION	UCS (tsf)	Failure Mode
-125	CRYSTALLINE LIMESTONE - See attached rock core log (continued)			-130			
290.4	End of Boring			-135			
-140							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)
** Not measured due to drilling methods used

SOIL BORING: B-424
4 OF 4

BORING LOGS - IV
STRUCTURE NO. 082-0326

SHEET NO. S32	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	234
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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ROCK CORE LOG

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ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0326 CORING BARREL TYPE & SIZE NX
Station NA
Core Diameter 2 in
BORING NO. B-423 Core Top of Rock Elev. 303.7 ft
Station 16+26.06 Begin Core Elev. 303.7 ft
Offset 23ft RT
Ground Surface Elev. 419.7 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
1	100	93	3	781.0	Hard, gray, very finely crystalline, massive, fresh, excellent quality, LIMESTONE
2	100	98	2		Clay parting
					Shale parting
293.7					End of Boring

Color pictures of the cores Yes
Cores will be stored for examination until 9-30-09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

AECOM

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www.aecom.com

ROCK CORE: B-423
1 OF 1

DESIGNED - P.J.L.
CHECKED - DDB
DRAWN - BRD
CHECKED - DDB

03/31/2011



Illinois Department
of Transportation
Division of Highways
Geotechnology, Inc.

ROCK CORE LOG

Page 1 of 1

Date 3/26/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange LOGGED BY DTC

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair CORING METHOD Wireline

STRUCT. NO. 082-0326 CORING BARREL TYPE & SIZE NX
Station NA
Core Diameter 2 in
BORING NO. B-424 Core Top of Rock Elev. 300.4 ft
Station 13+37.77 Begin Core Elev. 300.4 ft
Offset 5ft LT
Ground Surface Elev. 419.4 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
1	100	67		484.0	Hard, gray, very finely crystalline, massive, slightly weathered to fresh, LIMESTONE
2	97	97			
3	100	43			becoming argillaceous, medium to thin bedded
290.4					End of Boring

Color pictures of the cores Yes
Cores will be stored for examination until 9-30-09
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

ROCK CORE: B-424
1 OF 1

BORING LOGS - V
STRUCTURE NO. 082-0326

SHEET NO. S33	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	235	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SHELBY TUBE TEST RESULTS

Page 1 of 2

Date 3/31/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0326

BORING NO. B-423ST

Station 16+26.06 Ground Surface Elev. 419.7 ft Tube Length 30 in

Offset 23ft RT Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	S P E C I M E N T H	R E C O R D E D	UNIT	S T R E N G T H (tsf)	M O I S T U R E (%)	T R I A X I A L D A T A		T E S T T Y P E
							(pcf)	(deg)	
Brown gray, SILTY LOAM, with fine grained sand, with trace cinders, glass, wood, and roots	1-1	100			23				
Brown gray, SILTY LOAM, with fine grained sand, with trace cinders, glass, wood, and roots	1-2	100			23				
Brown gray, SILTY LOAM, with fine grained sand, with trace cinders, glass, wood, and roots	1-3	100			23				
Brown, FINE GRAINED SAND, with cinders	1-4	67			23				
Gray, SANDY LOAM, with brown fine grained sand, trace cinders, and wood fragments	2-1	100	106	0.5	24				Uc
Brown and gray, SILTY CLAY, trace fine sand and cinders	2-2	100	103	0.6	30				Uc
Brown and gray, SILTY CLAY, trace fine sand and cinders	2-3	100			30				
Gray, SILTY LOAM, trace brown sandy loam, trace cinders	3-1	100			30				
Gray, SILTY LOAM, trace brown fine grained sand	3-2	100	106	0.4	21				Uc
Gray, SILTY LOAM, trace brown fine grained sand	3-3	67			21				
Gray, CLAY, trace fine grained sand	4-1	100	115	0.8	26				Uc
Gray, CLAY	4-2	100	119	1.4	29				Uc
Gray, CLAY	4-3	67			26				
Brown gray, SILTY CLAY, trace sand, and iron staining	5-1	100	118	1.2	26				UU
Brown gray, SILTY CLAY, trace sand, and iron staining	5-2	100			26				
Brown, SANDY LOAM	5-3	67	118		28				Consol
Gray brown, SILTY SAND	6-1	100			16				
Gray brown, SILTY SAND	6-2	100			11				
Gray brown, SILTY SAND	6-3	67			13				
Brown, SILTY SAND	7-1	100			12				
Brown, SILTY SAND	7-2	100	93		14				

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-423
1 OF 2



SHELBY TUBE TEST RESULTS

Page 2 of 2

Date 3/31/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange DRILLED BY BS

SECTION 82-1 LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W

COUNTY St. Clair STRUCT. NO. 082-0326

BORING NO. B-423ST

Station 16+26.06 Ground Surface Elev. 419.7 ft Tube Length 30 in

Offset 23ft RT Begin Sampling Depth 0 ft Tube Diameter 3 in

SOIL TYPE, DESCRIPTION AND OBSERVATIONS	DEPTH (ft)	S P E C I M E N T H	R E C O R D E D	UNIT	S T R E N G T H (tsf)	M O I S T U R E (%)	T R I A X I A L D A T A		T E S T T Y P E
							(pcf)	(deg)	
Brown, SILTY SAND	7-3	100	93		9				
Brown, SILTY SAND	7-4	33	93		14				
Brown, SANDY LOAM	8-1	100			13				
Brown, SANDY LOAM	8-2	100			14				
Brown, SANDY LOAM	8-3	100	96		14				
Gray brown, SILTY SAND	9-1	100	110		28				
Gray brown, SILTY SAND	9-2	100			19				
Gray brown, SILTY SAND	9-3	100			22				
Gray, CLAY, with silt	10-1	100	113	1.3	32				UU
Gray, CLAY, with silt	10-2	100	109		32				
Brown, FINE GRAINED SAND	10-3	100			7				

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-423
2 OF 2

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03/31/2011

BORING LOGS - VI
STRUCTURE NO. 082-0326

SHEET NO. S34	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	236
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
	FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SHELBY TUBE TEST RESULTS

Page 1 of 3
Date 3/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange		DRILLED BY BS		TRIAxIAL DATA						
SECTION 82-1	LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W	DEPTH (ft)	UNIT (no)	WEIGHT (%)	STRENGTH (pcf)	UNIT WEIGHT (tsf)	MOISTURE (%)	COHESION (tsf)	PHI (deg)	TEST TYPE
SOIL TYPE, DESCRIPTION AND OBSERVATIONS										
Brown, clayey SILT (FILL), trace organics and trace sand		1-1	67			19				
Brown, clayey SILT (FILL), trace organics and trace sand		1-2	100		119	0.8	19			Uc
Brown, clayey SILT (FILL), trace organics and trace sand		1-3	83			19				
Gravel (FILL)		2-1								
Clay and Gravel (FILL)		3-1								
Brown, SILTY LOAM		4-1	100			27				
Brown, SILTY LOAM		4-2	100			27				
Brown, CLAY		4-3	67	116		35				
Brown SANDY LOAM		5-1	100							
Brown SANDY LOAM		5-2	100							
Brown, SILTY CLAY		5-3	100			37				
Brown, SILTY CLAY		5-4	67			37				
Brown, SANDY LOAM, with trace iron staining and gravel		6-1	100	110		44				CU
Brown, SANDY LOAM, with trace iron staining and gravel		6-2	100	112	0.6	31				UU
Brown and gray, CLAY, with iron staining		6-3	100							
Brown and gray, CLAY, with iron staining		6-4	83							
Brown and gray, CLAY, with fine grained sand		7-1	100							
Brown gray, CLAY		7-2	100							

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-424
1 OF 3



SHELBY TUBE TEST RESULTS

Page 2 of 3
Date 3/27/09

ROUTE FAP 998 DESCRIPTION Trilevel Interchange		DRILLED BY BS		TRIAxIAL DATA						
SECTION 82-1	LOCATION East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W	DEPTH (ft)	UNIT (no)	WEIGHT (%)	STRENGTH (pcf)	UNIT WEIGHT (tsf)	MOISTURE (%)	COHESION (tsf)	PHI (deg)	TEST TYPE
SOIL TYPE, DESCRIPTION AND OBSERVATIONS										
Brown gray, CLAY		7-3	100	111		33	0.2	25		CU
Brown, CLAY		8-1	100	110		37				CU
Brown, CLAY		8-2	100	112	1.3	38				Uc
Brown, SILTY LOAM		8-3	83			31				
Brown, SANDY LOAM		9-1								
Brown, SANDY LOAM		10-1								
Brown, MEDIUM GRAINED SAND		11-1	100							
Gray brown, SANDY LOAM		11-2	100	119		29				CU
Gray brown, SANDY LOAM		11-3	100	117		29	0.0	26		CU
Gray brown, SANDY LOAM		11-4	100	117		30				
Brown, SANDY LOAM		12-1	100							
Brown, SANDY LOAM		12-2	100	113		26				CU
Brown, FINE GRAINED SAND		12-3	100	117		25				
Brown, FINE GRAINED SAND		12-4	83							
Brown, SANDY LOAM		13-1	100							
Gray brown, CLAY		13-2	100	114		36				
Gray, CLAY		13-3	100	111	0.7	42				UU

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
The "Test Type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMPR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-424
2 OF 3

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BORING LOGS - VII
STRUCTURE NO. 082-0326

SHEET NO. S35	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	237
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Illinois Department
of Transportation
Division of Highways
Geotechnology, Inc

SHELBY TUBE TEST RESULTS

Page 3 of 3

Date 3/27/09

ROUTE	FAP 998	DESCRIPTION	Trilevel Interchange	DRILLED BY	BS	TRIAXIAL DATA							
SECTION	82-1	LOCATION	East St. Louis, IL, SEC. 7, TWP. 2N, RNG. 9W	DEPTH	S P E C I M E N T	R E C O R D S O R T	UNIT WE I G H T	S M O O T H N E S S E S	M O I S T U R E	C O H E S I V E S T R E N G T H	P H I S T O R Y T E S T I N G	T E S T T Y P E	
COUNTY	St. Clair	STRUCT. NO.	082-0326										
		Station	NA										
BORING NO.	B-424 ST	Ground Surface Elev.	419.4 ft	Tube Length	30 in								
		Station	13+57.77	Begin Sampling Depth	0 ft								
		Offset	5ft LT										
SOIL TYPE, DESCRIPTION AND OBSERVATIONS						(ft)	(no)	(%)	(pcf)	(tsf)	(%)	(tsf)	(deg)
Brown, FINE GRAINED SAND						14-1	100						
Gray, SANDY LOAM						14-2	100	111		25			
Gray, FINE GRAINED SAND						14-3	100						
Gray, FINE GRAINED SAND						14-4	50						
Gray, brown SANDY LOAM						15-1	100	116	1.8	30			UU
Gray, FINE GRAINED SAND						15-2	100						
Gray, FINE GRAINED SAND						15-3	100						
						-30							

The "Unit Weight" column indicates the "wet" or "moist" unit weight of the sample
 The "Strength" column represents the "unconfined compressive" strength of the sample (AASHTO T 208)
 The "Test type" indicates if Unconsolidated Undrained (UU) or Consolidated Undrained (CU) test procedures (AASHTO T 296 or T 297) were used

BMFR FORM 1004A (Rev. 8-99)

SHELBY TUBE TEST: B-424
3 OF 3

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03/31/2011

BORING LOGS - VIII
STRUCTURE NO. 082-0326

SHEET NO. S36	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	238
S36 SHEETS		F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51	
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

1. All structural steel shall be AASHTO M 270 Grade 36 unless noted otherwise.
2. No field welding is permitted except as specified in the contract documents.
3. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. 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.
6. 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 work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
7. Protective coat is applied to concrete deck where new concrete is exposed to weather. It shall not be applied to surfaces to which Waterproofing Membrane System is applied.
8. The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.
9. The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
10. The structural steel plates of the Bearing Assembly and steel extensions shall conform to the requirements of AASHTO M 270 Grade 50.
11. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
12. Existing reinforcement shall be cleaned and incorporated into the new construction as noted. Cost included with Concrete Removal.
13. Concrete Sealer is applied to exposed faces of substructure along abutment walls, bridge seats, backwalls, pier columns, crashwall, etc.
14. Bridge bearing seats shall be cleared of all debris before installation of new bearings. Longitudinal deck portion shall not be poured until all bearings have been replaced.
15. 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.
16. Fasteners shall be high strength bolts. Bolts 3/4"φ, open holes 15/16"φ, unless otherwise noted.
17. 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.
18. 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. See Special Provision "Cleaning and Painting New Metal Structures".
19. The existing structural steel coating and bearing assembly contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

20. 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".
21. 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.
22. See Sheet No. 301A thru. 301T for existing St. Clair Ave bridge plans. The existing plans, however, may not show all modifications that have been made to the structures over the years. The completeness of these plans is not guaranteed and no responsibility is assumed by IDOT for their accuracy.

SCOPE OF WORK

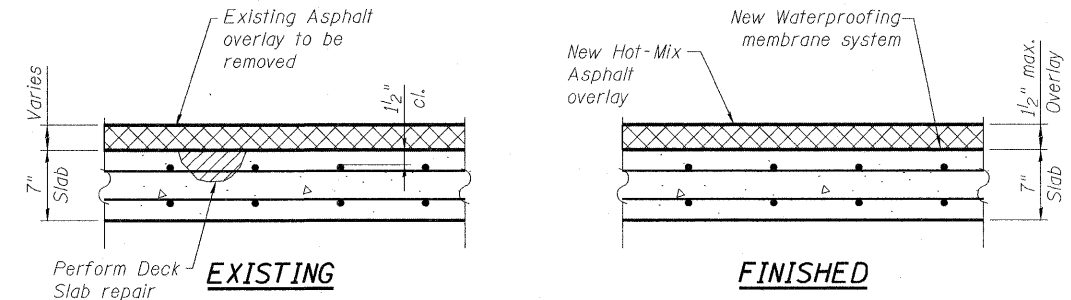
1. Remove and replace edges of bridge deck, bridge traffic rail, and pedestrian fence.
2. Install parapet and replace pedestrian fence on abutment wing walls.
3. Clean abutment caps.
4. Remove and replace abutment bearings with elastomeric bearings and steel extensions.
5. Perform structure concrete repair at both abutments and pier.
6. Perform deck repair.
7. Remove existing expansion joints and install new strip seal expansion joints.
8. Eliminate longitudinal deck expansion joint.
9. Install new floorbeams between girders G3 and G4.
10. Remove existing bridge overlay and replace with Hot-Mix Asphalt and Waterproofing Membrane System (WMS).
11. Modify approach slab at north abutment.
12. Remove existing concrete islands and replace one island along south abutment.

INDEX OF SHEETS

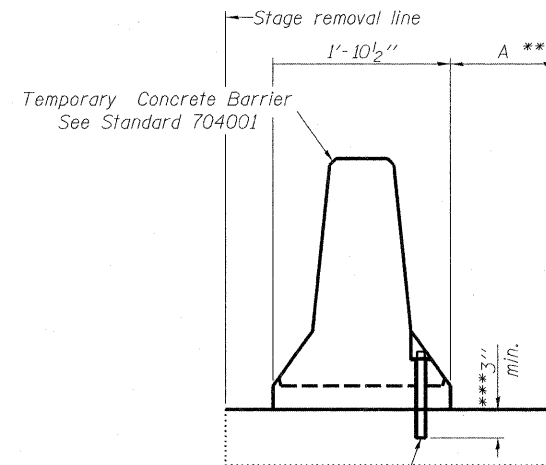
- S1. General Plan and Elevation
- S2. General Notes and Bill of Material
- S3. Stage Construction
- S4. Deck Repair Plan
- S5. Deck Repair Details
- S6. Pedestrian Fence
- S7. Steel Railing, Type SM
- S8. Railing Connection Detail
- S9. Parapet Mounted Fence Details
- S10. Approach Parapet Details
- S11. Superstructure Details I
- S12. Superstructure Details II
- S13. Expansion Joint Details
- S14. Framing Plan
- S15. Expansion Bearing Details
- S16. South Abutment Repair
- S17. North Abutment Repair
- S18. Pier Repair
- S19. Approach Slab Widening
- S20. Splitter Island Details

TOTAL BILL OF MATERIAL

Item	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	141		141
Protective Coat	Sq. Yd.	239		239
Concrete Removal	Cu. Yd.	155		155
Protective Shield	Sq. Yd.	1,801		1,801
Concrete Superstructure	Cu. Yd.	134		134
Furnishing and Erecting Structural Steel	Pound	10,740		10,740
Reinforcement Bars, Epoxy Coated	Pound	26,320		26,320
Steel Railing, Type SM	Foot	341		341
Bridge Fence Railing	Foot	223		223
Bridge Fence Railing (Sidewalk)	Foot	341		341
Preformed Joint Strip Seal	Foot	239		239
Elastomeric Bearing Assembly, Type I	Each	13		13
Anchor Bolts, 1 1/4" φ	Each	26		26
Waterproofing Membrane System	Sq. Yd.	1,649		1,649
Concrete Sealer	Sq. Ft.		8,547	8,547
Epoxy Crack Injection	Foot		52	52
Jack and Remove Existing Bearings	Each	13		13
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1,552		1,552
Structural Repair of Concrete (Depth less than or equal 5")	Sq. Ft.		599	599
Structural Repair of Concrete (Depth greater than 5")	Sq. Ft.		10	10
Deck Slab Repair (Partial)	Sq. Yd.	408		408



DECK REHAB



Drill 3-1/4" φ Holes in existing slab for 1" φ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier. See Civil plans.

** When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the slab. No anchorage is required when "A" is greater than 3'-6".

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

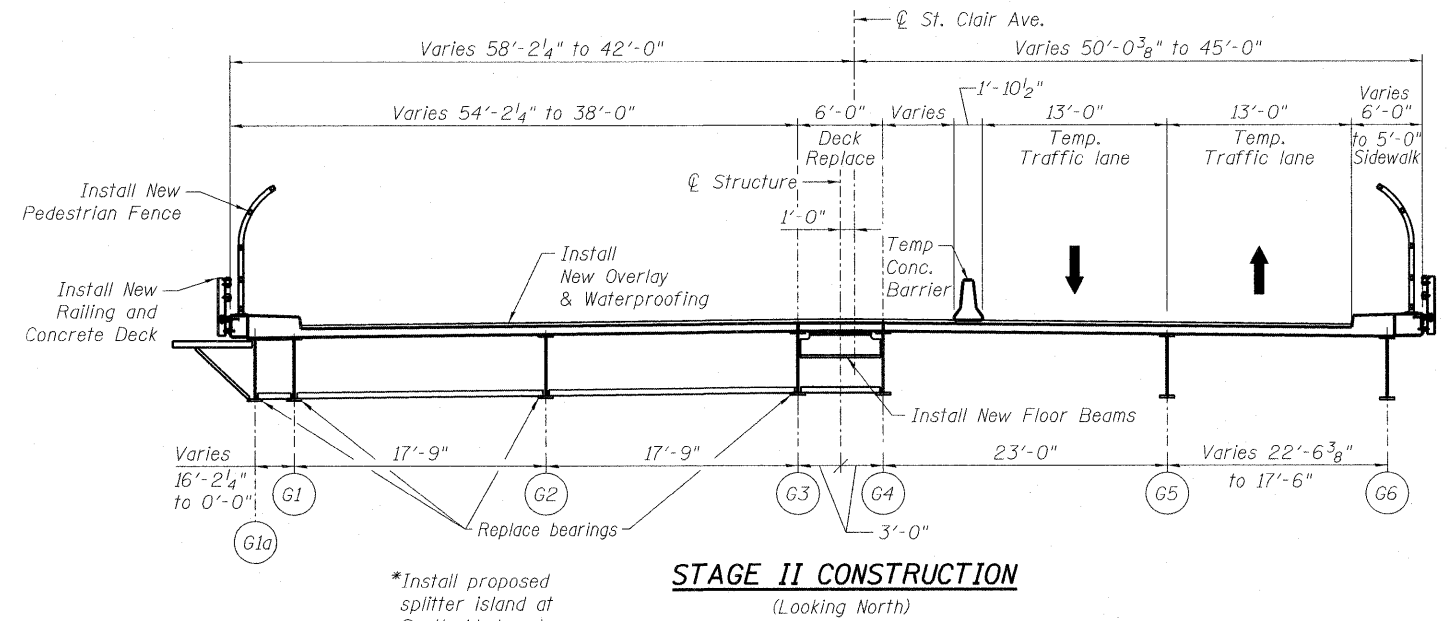
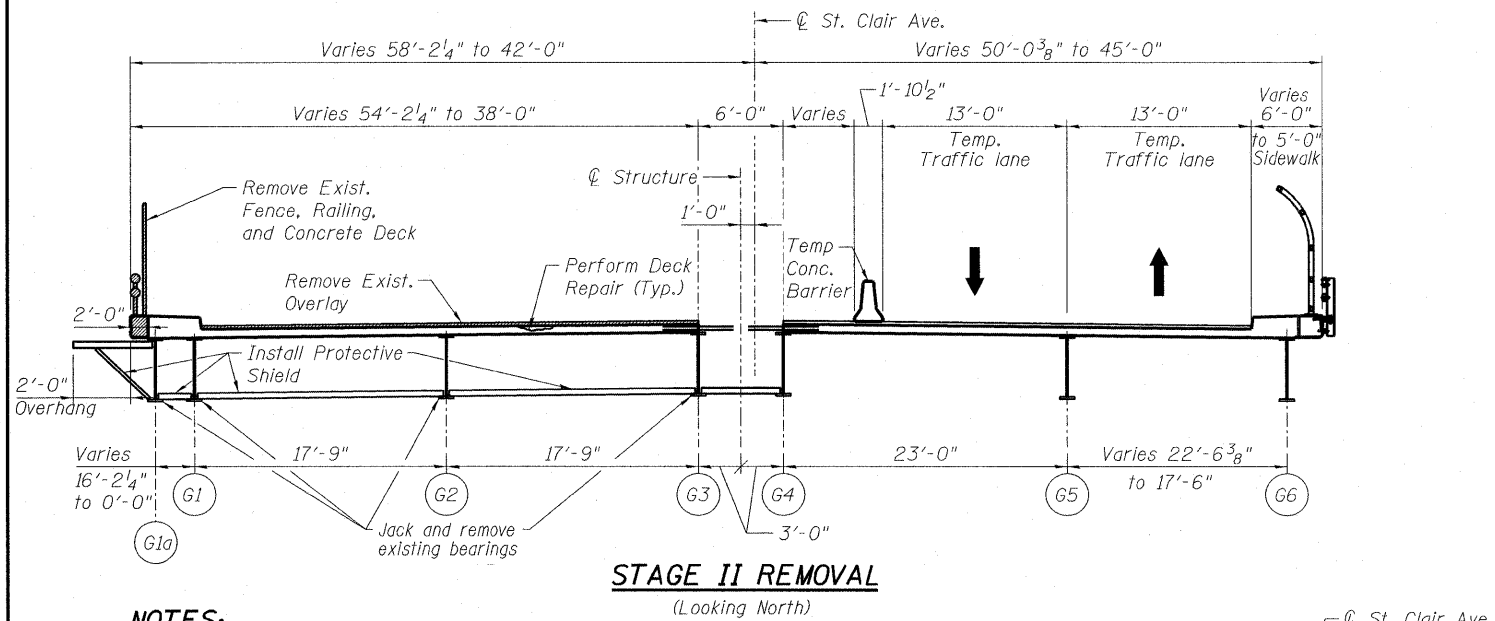
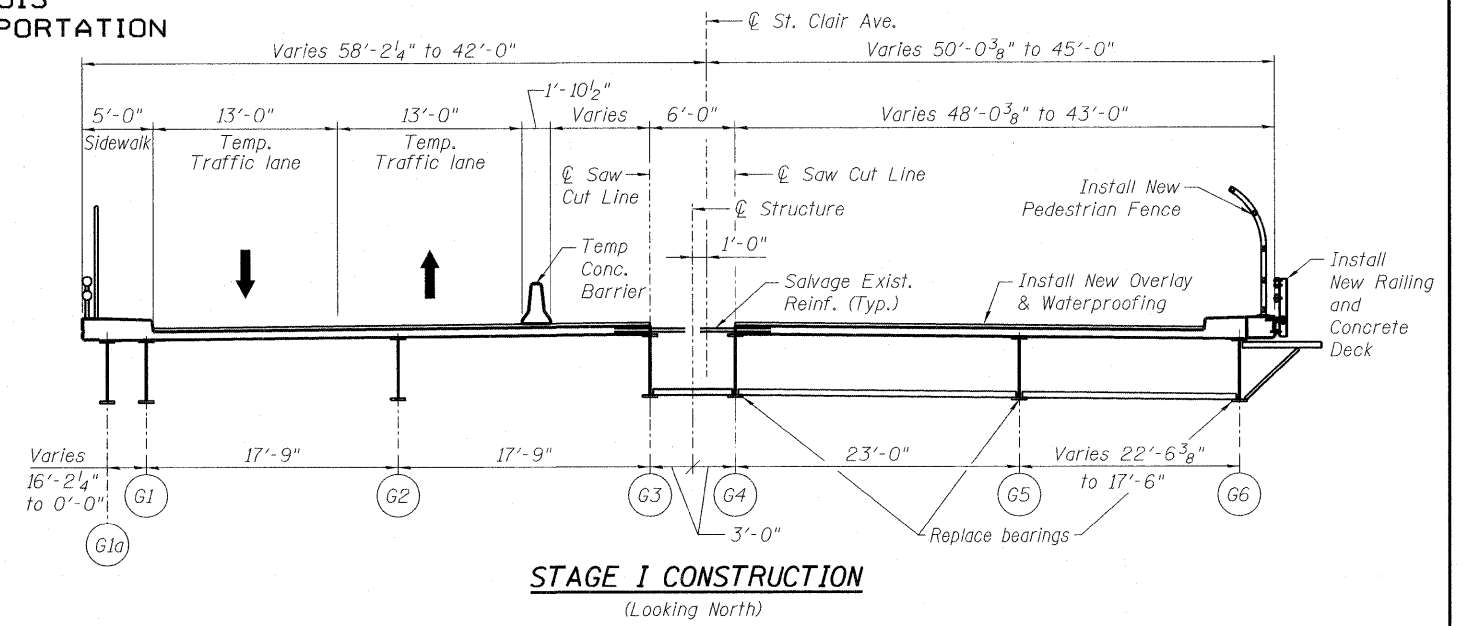
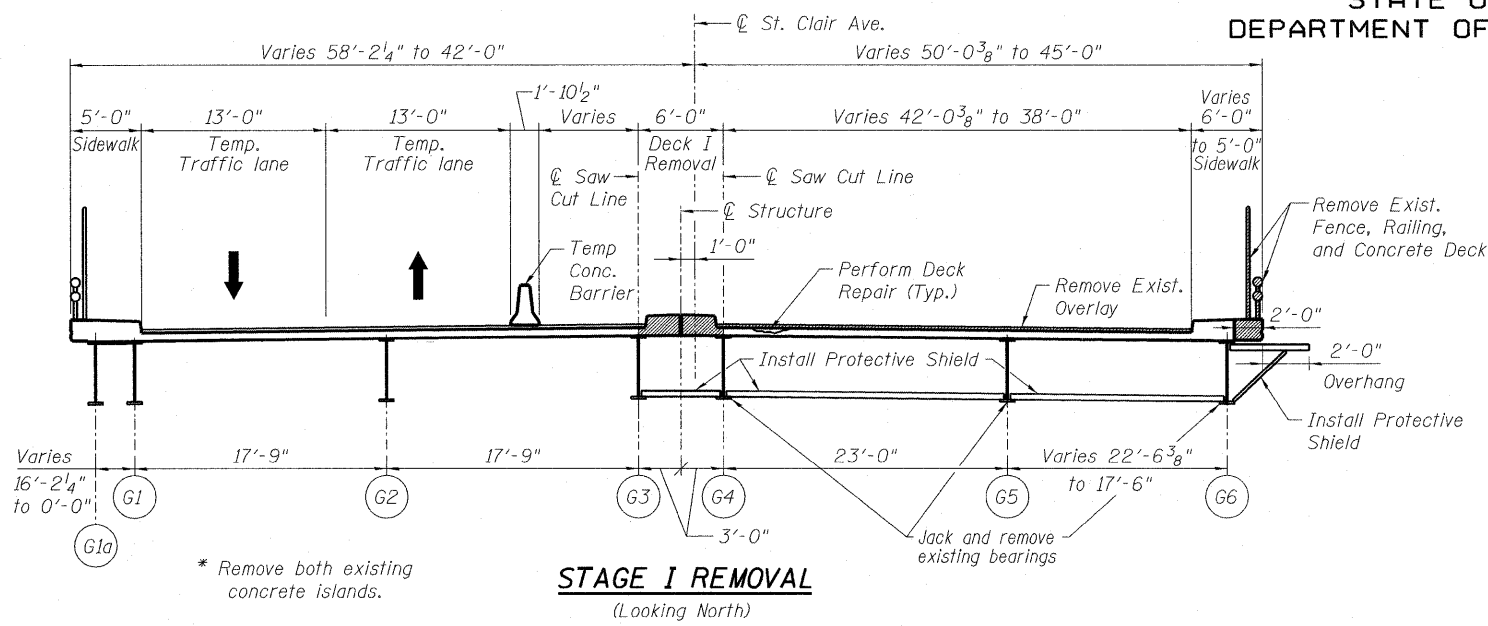
TEMPORARY CONCRETE BARRIER

**GENERAL NOTES AND
BILL OF MATERIAL
STRUCTURE NO. 082-0099**

DESIGNED - DEV
CHECKED - EJO
DRAWN - JHR
CHECKED - EJO

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S2	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	240
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

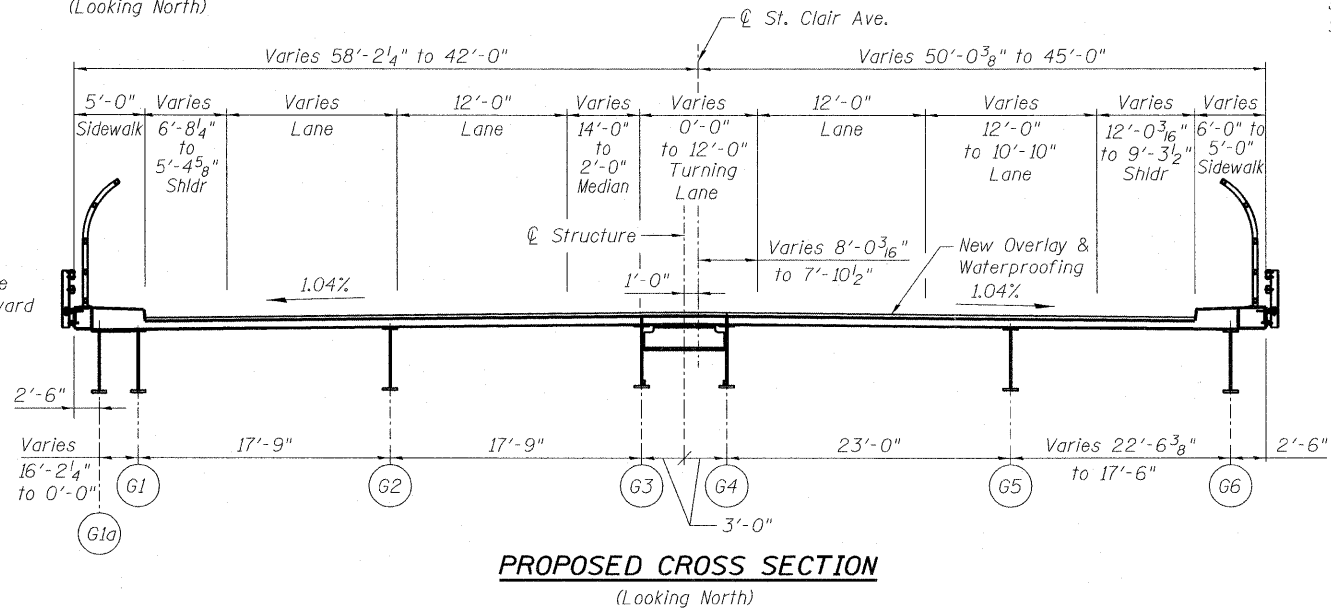


NOTES:

1. For Temporary Concrete Barrier details see Std. 704001 and sheet S2.
2. Contractor shall not pour deck in Stage II until all bearings have been replaced and floor beams are installed.
3. See sheets S6 thru S10 for pedestrian fence and traffic railing details.
4. Protective Shield shall extend from face to face of abutment bearing seat and shall extend outward as shown at each side of the deck edge.

DESIGNED -	DEV
CHECKED -	EJO
DRAWN -	MRK
CHECKED -	EJO

03/31/2011 082-0099.76C51.03.CrossSections.dgn



BILL OF MATERIAL

Item	Unit	Quantity
Protective Shield	Sq. Yd.	1,801
Waterproofing Membrane System	Sq. Yd.	1,649
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	1,552
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	139

LEGEND

Area for removal

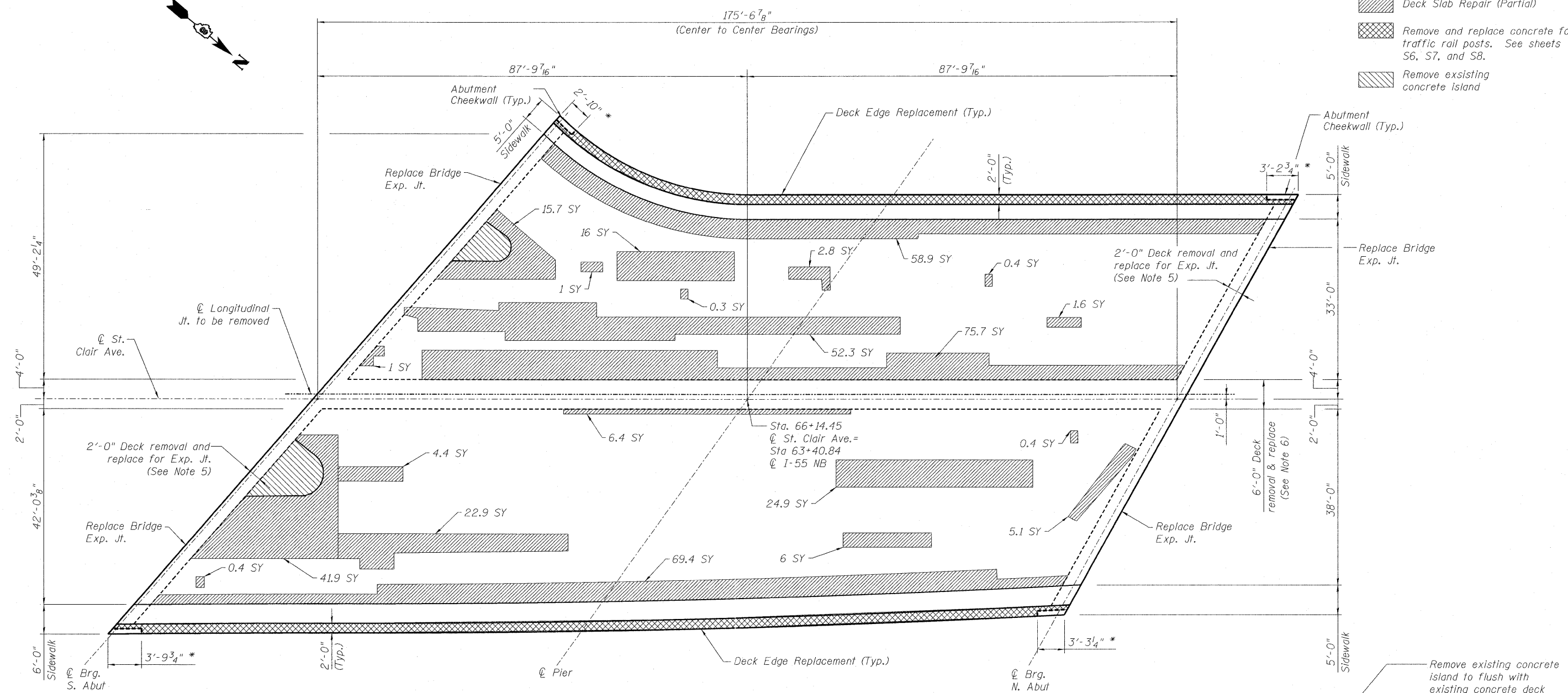
STAGE CONSTRUCTION
STRUCTURE NO. 082-0099

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S3	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	241
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND

- Deck Slab Repair (Partial)
- Remove and replace concrete for traffic rail posts. See sheets S6, S7, and S8.
- Remove existing concrete island

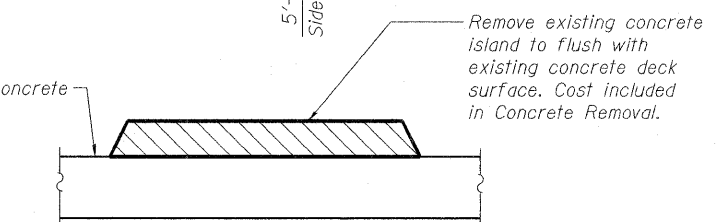


DECK PLAN

NOTES:

1. A minimum curing period of 7 days is required for all deck repairs.
2. For bridge expansion joint replacement at Abutments see Sheets S11, S12, & S13.
3. Estimated deck slab repairs are based on an infrared thermographic survey performed by AECOM that located areas of delamination and existing concrete patches.
4. The quantities shown for deck repair are for bidding purposes only. The actual areas to be repaired will be determined by the Engineer in the field.
5. For additional deck removal details and quantities for Expansion Joint replacement and Longitudinal Joint replacement see sheets S5 and S11 thru S13.
6. For pedestrian fence, traffic rail, and deck edge replacement see sheet S8. Work with this sheet.
7. At each of the four corners of the deck, there are blockouts for the abutment wingwall. Continue removal of deck around the blockouts.
8. Existing concrete islands shall also be removed from south approach areas. Island removal is part of Stage I Removal, see sheet S3.

* Dimensions determined from existing plans. Includes 1" open joint. Verify in field.



EXISTING ISLAND REMOVAL SECTION

BILL OF MATERIAL

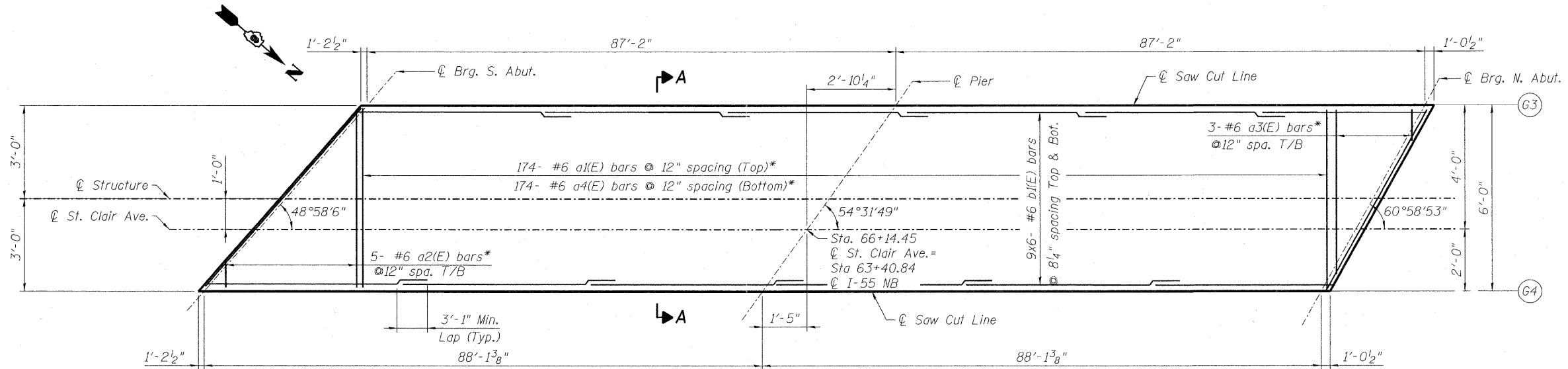
Item	Unit	Quantity
Deck Slab Repair (Partial)	Sq. Yd.	408
Concrete Removal	Cu. Yd.	59

DESIGNED - DEV
CHECKED - EJO
DRAWN - MRK
CHECKED - EJO

**DECK REPAIR PLAN
STRUCTURE NO. 082-0099**

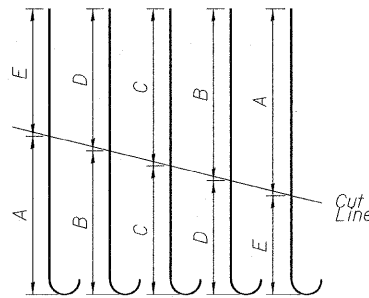
SHEET NO. S4 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	242
	F.A.U. 9166 / F.A.U. 9180			CONTRACT NO. 76C51	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

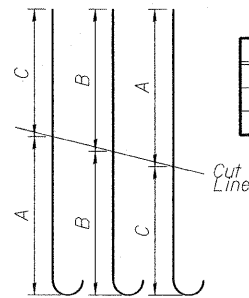


* Spacing of bars to match existing bar spacing

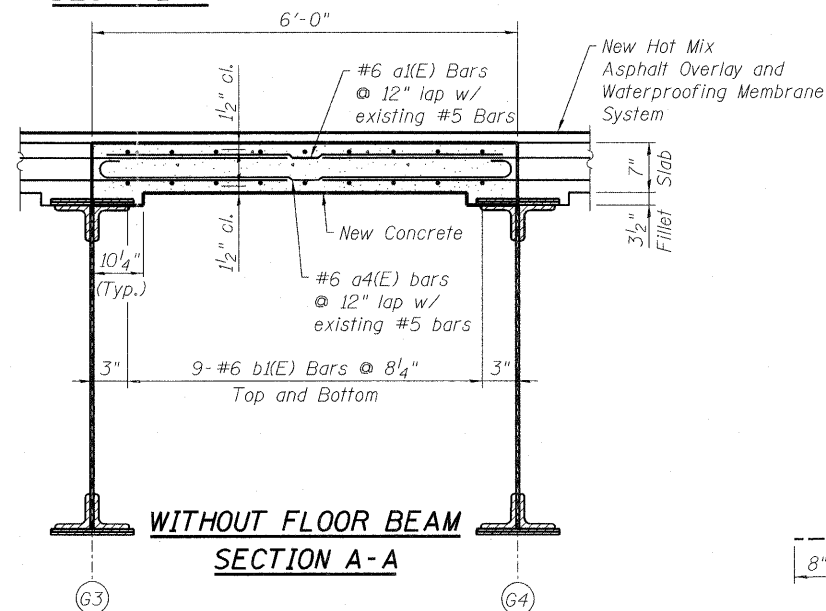
DECK PLAN



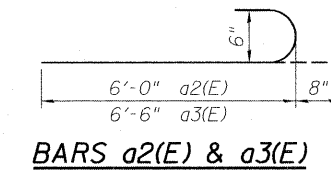
a2(E) CUT DIAGRAM



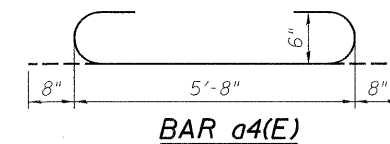
a3(E) CUT DIAGRAM



WITHOUT FLOOR BEAM
SECTION A-A



BARS a2(E) & a3(E)



BAR a4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	174	#6	5'-8"	—
a2(E)	5	#6	6'-8"	⌋
a3(E)	3	#6	7'-2"	⌋
a4(E)	174	#6	7'-0"	⌋
b1(E)	108	#6	31'-4"	—
Item		Unit	Quantity	
Reinforcement Bars, Epoxy Coated		Pound	8,560	
Concrete Removal		Cu. Yd.	48	
Concrete Superstructure		Cu. Yd.	28	

NOTES:

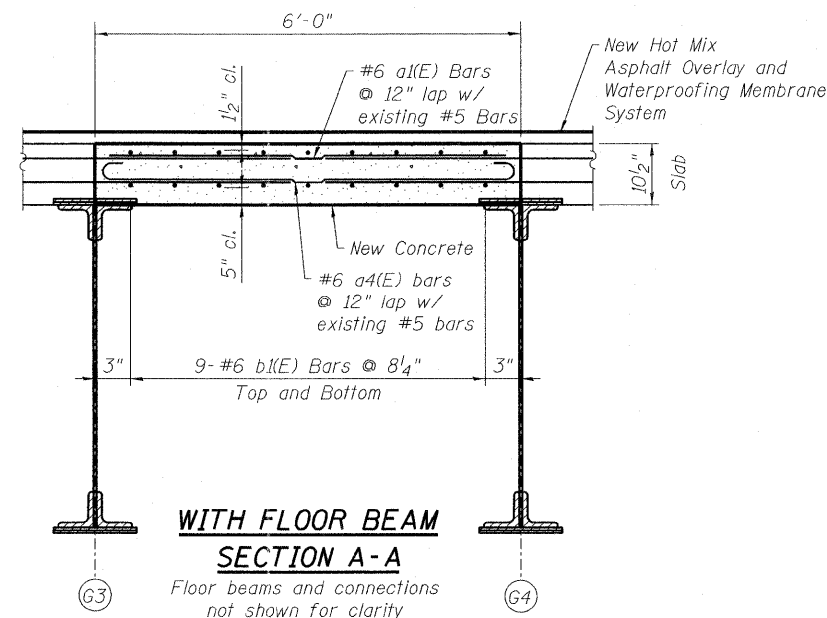
- Notation '9 x 6 bars' refers to 9 rows of bars with 6 lengths per row.
- Order a2(E) and a3(E) bars full length and cut as shown. Hook segment of a2(E) and a3(E) bars shall be used as bottom mat reinforcement with hook end placed over longitudinal beam G3 or G4. Non-hooked segments of a2(E) and a3(E) bars shall be used as top mat of reinforcement.

DECK REPAIR DETAILS
STRUCTURE NO. 082-0099

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S5	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	243
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

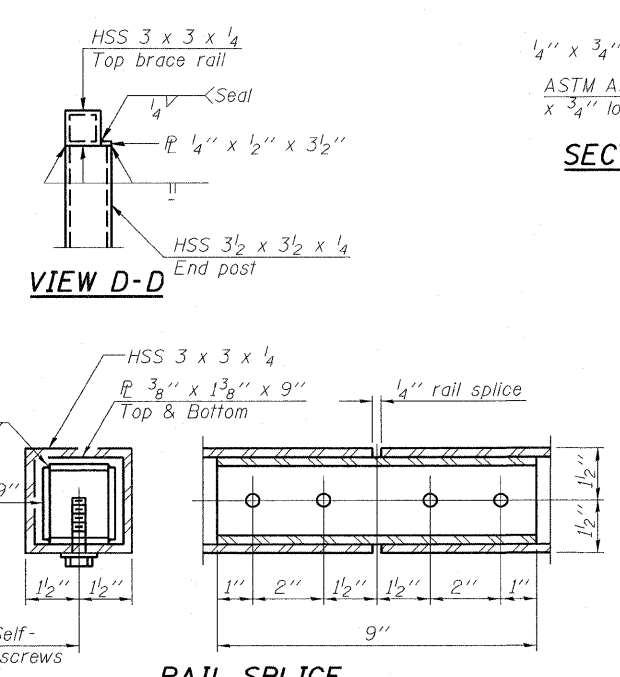
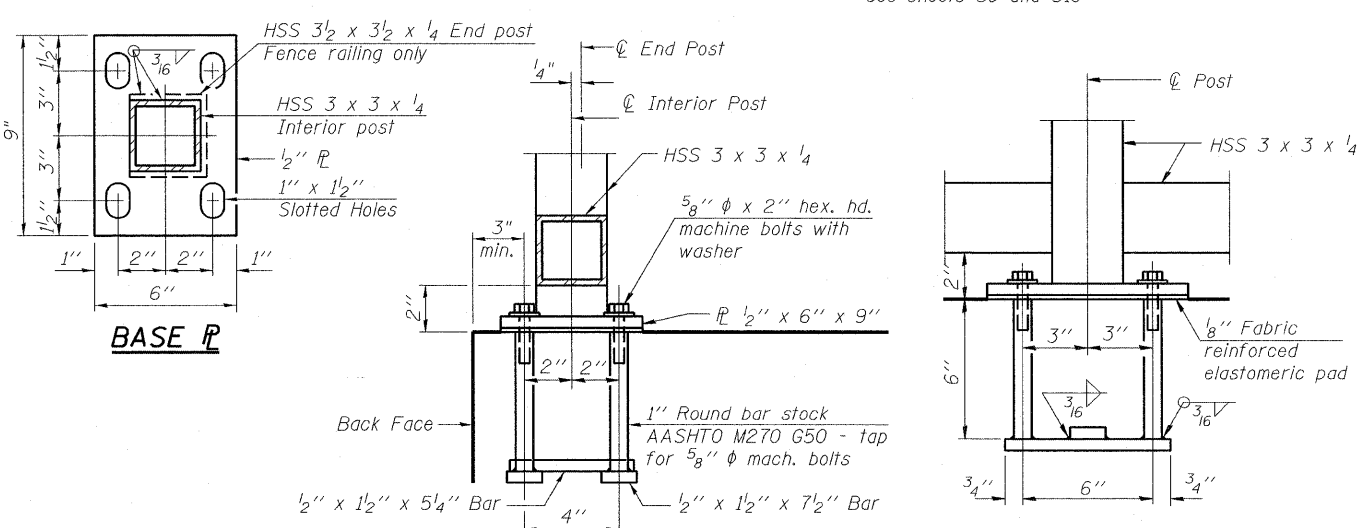
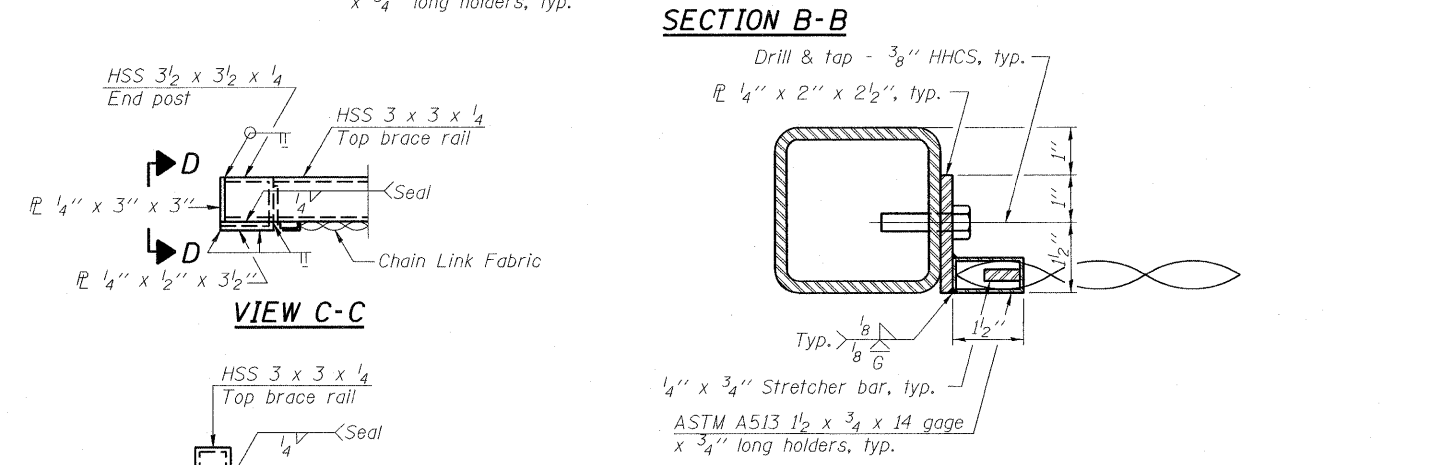
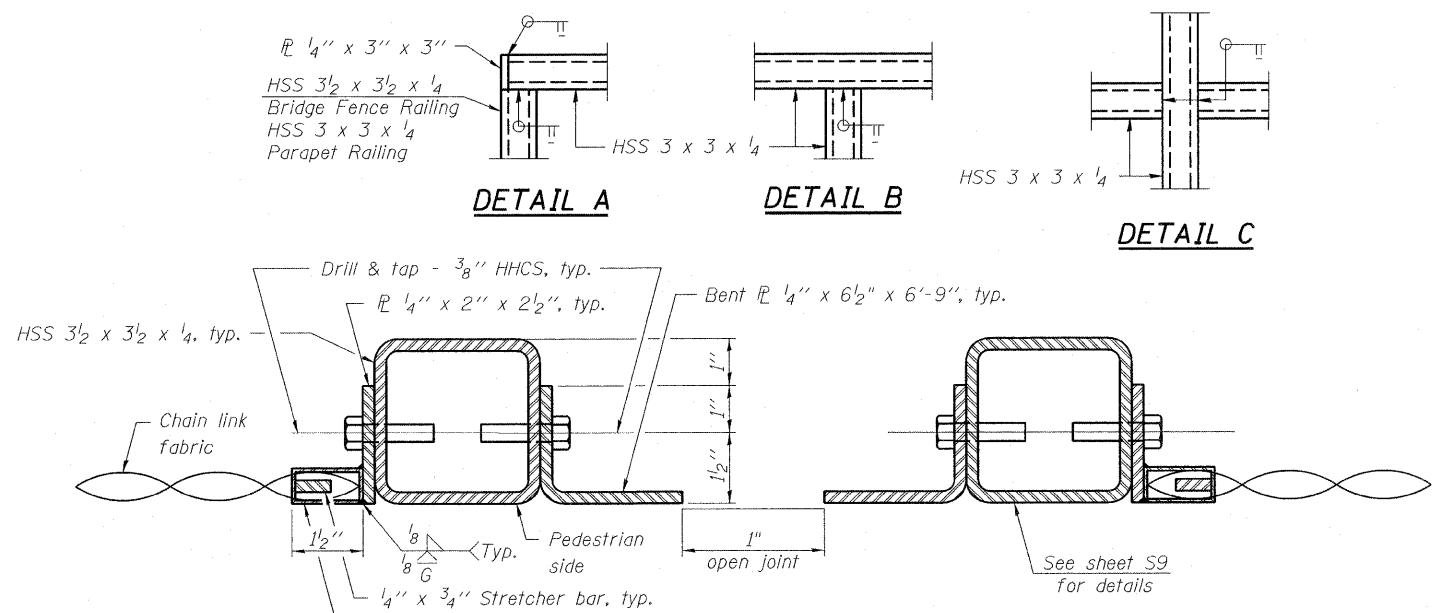
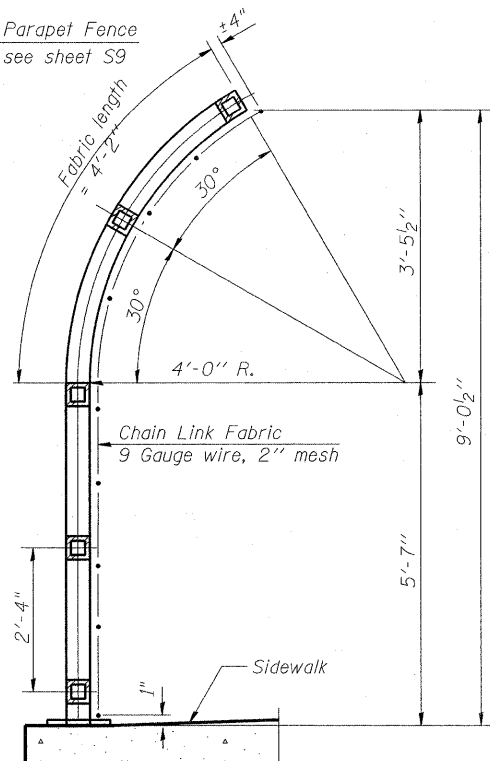
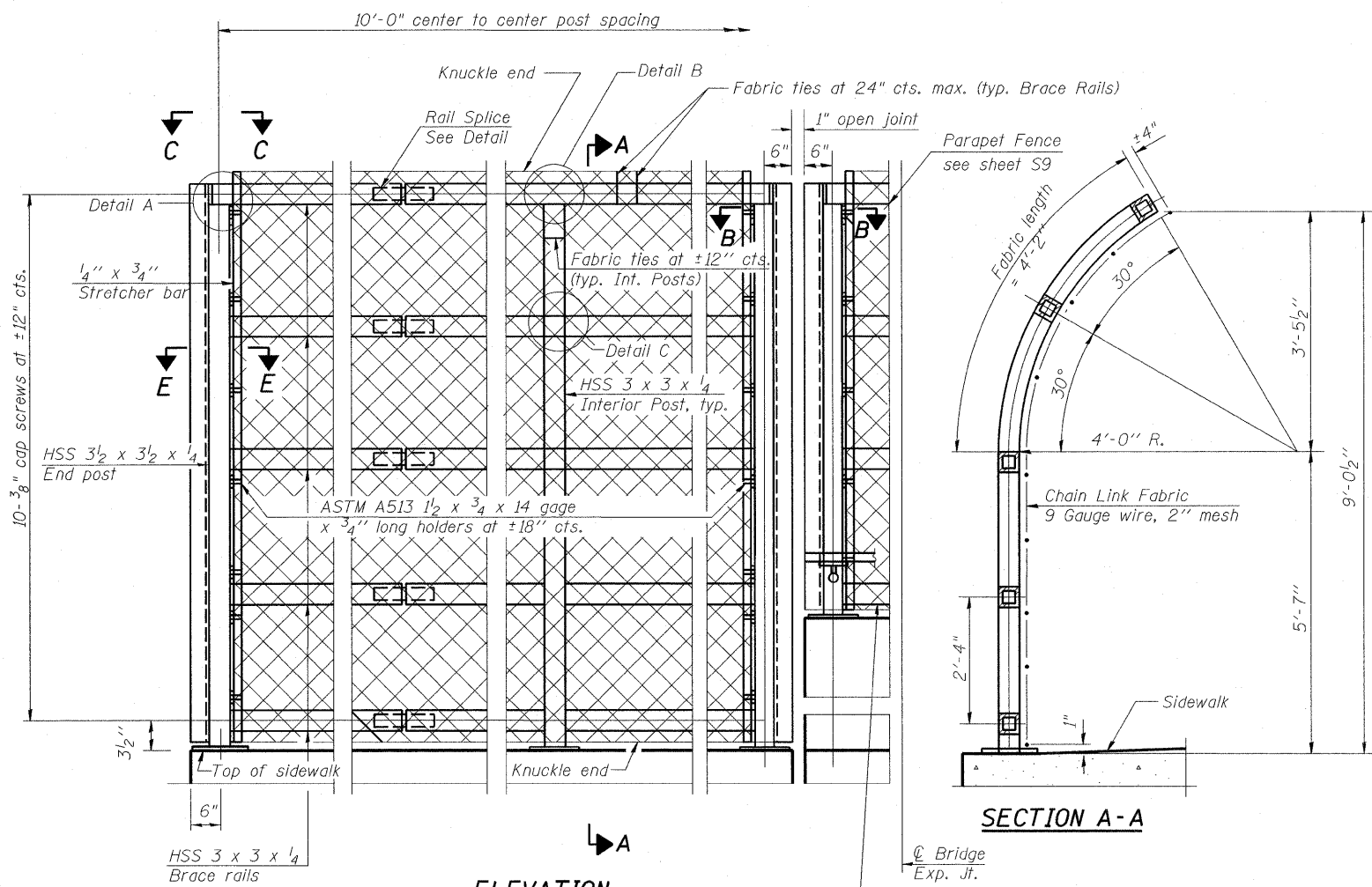
REMOVAL SECTION



WITH FLOOR BEAM
SECTION A-A

Floor beams and connections not shown for clarity

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing (Sidewalk)	Foot	341

NOTES:

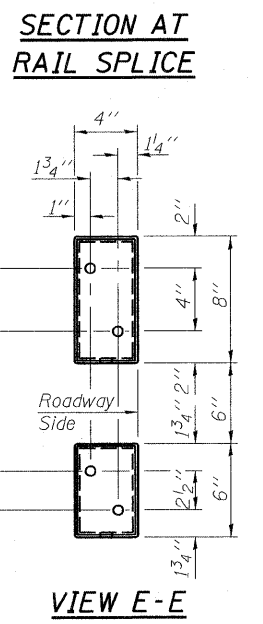
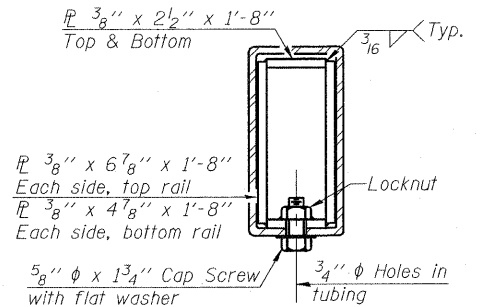
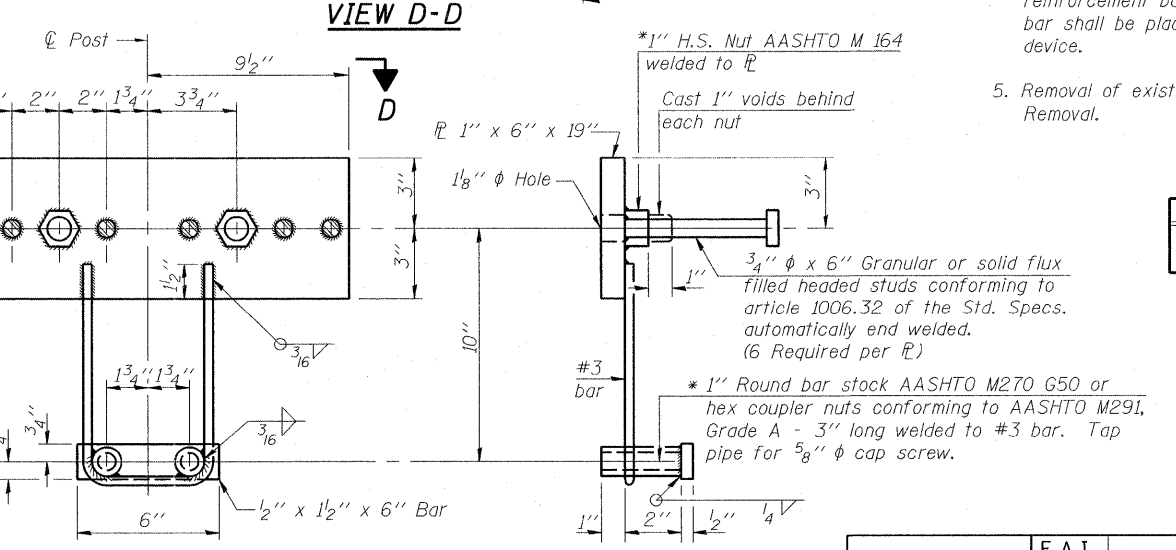
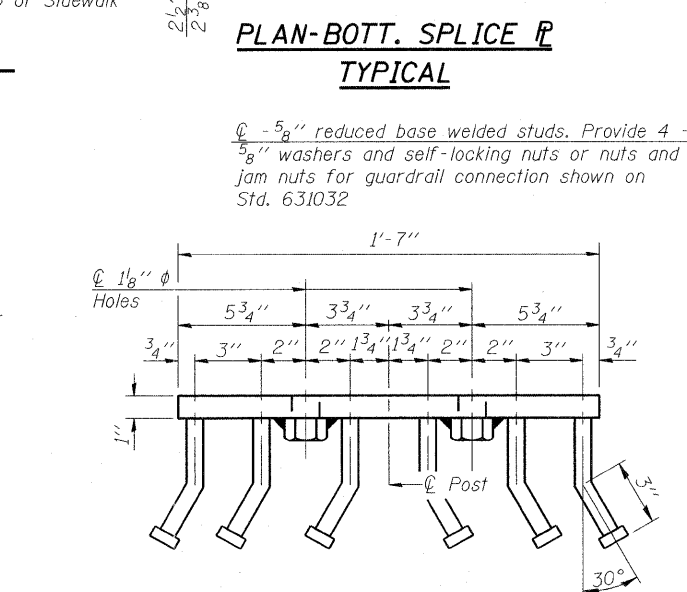
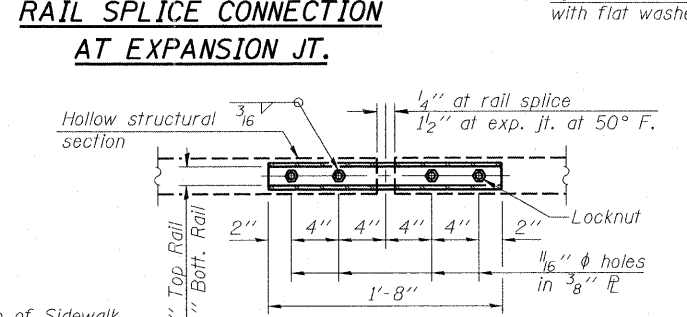
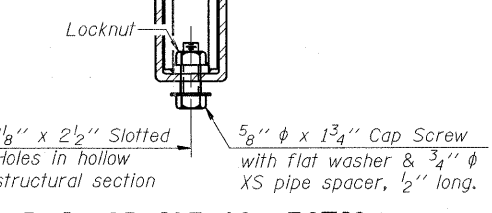
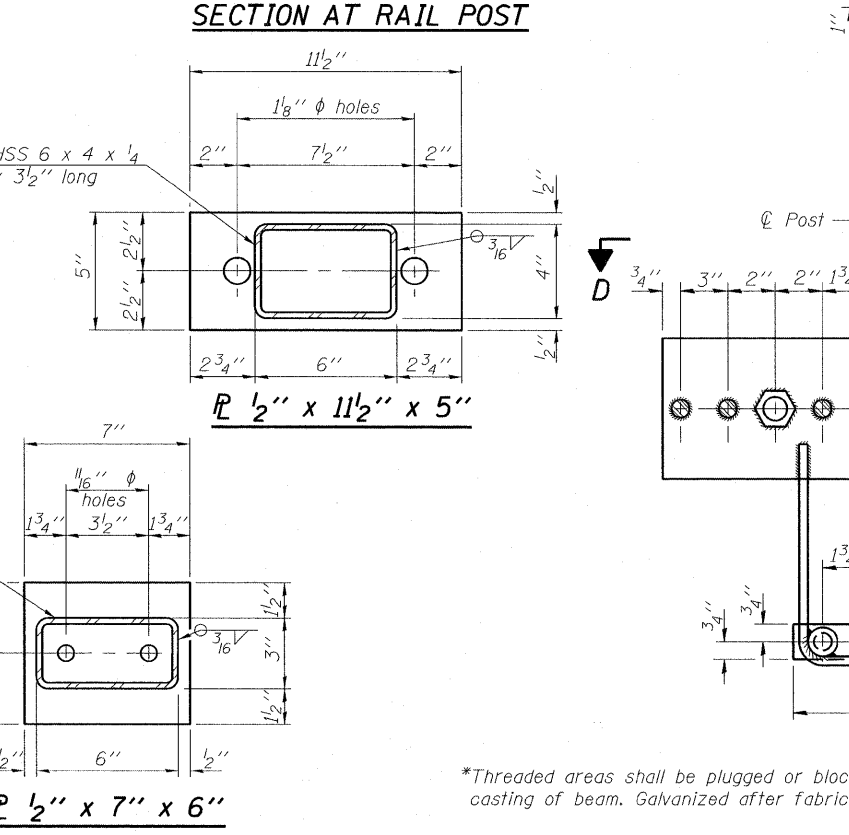
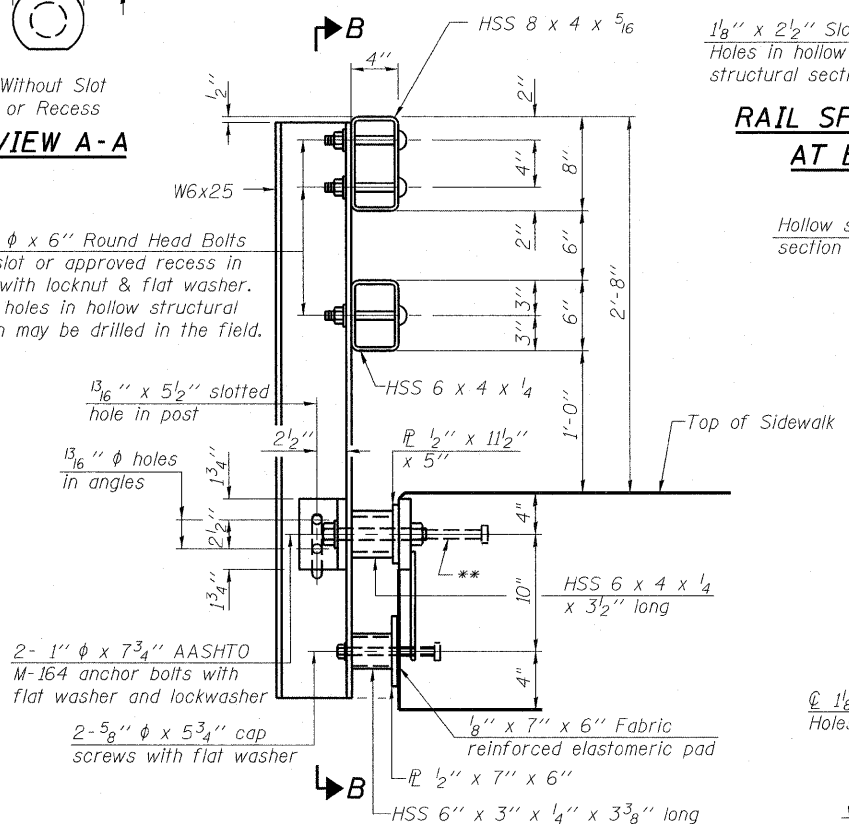
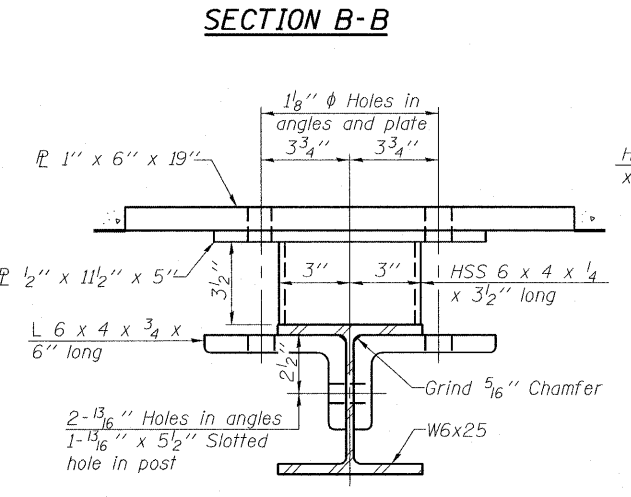
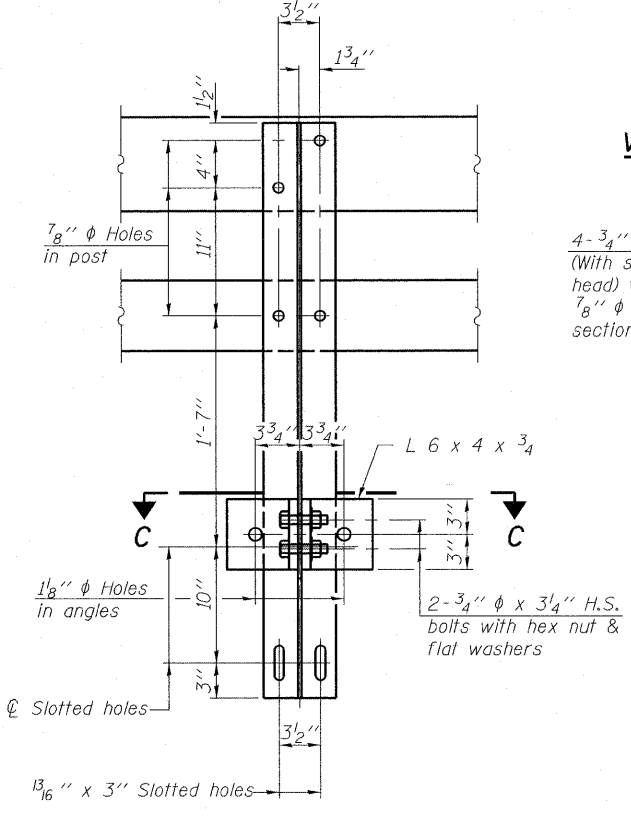
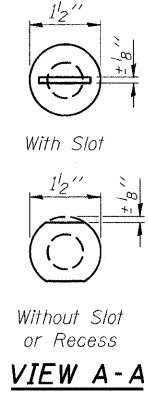
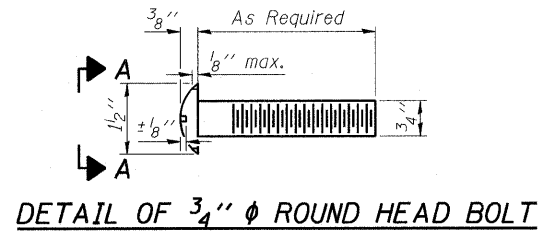
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
- Removal of existing pedestrian fence is included in cost for Concrete Removal.

**PEDESTRIAN FENCE
STRUCTURE NO. 082-0099**

DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S6	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	244
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**



NOTES:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
- Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
- The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.
- Removal of existing traffic rail is included in cost of Concrete Removal.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	341

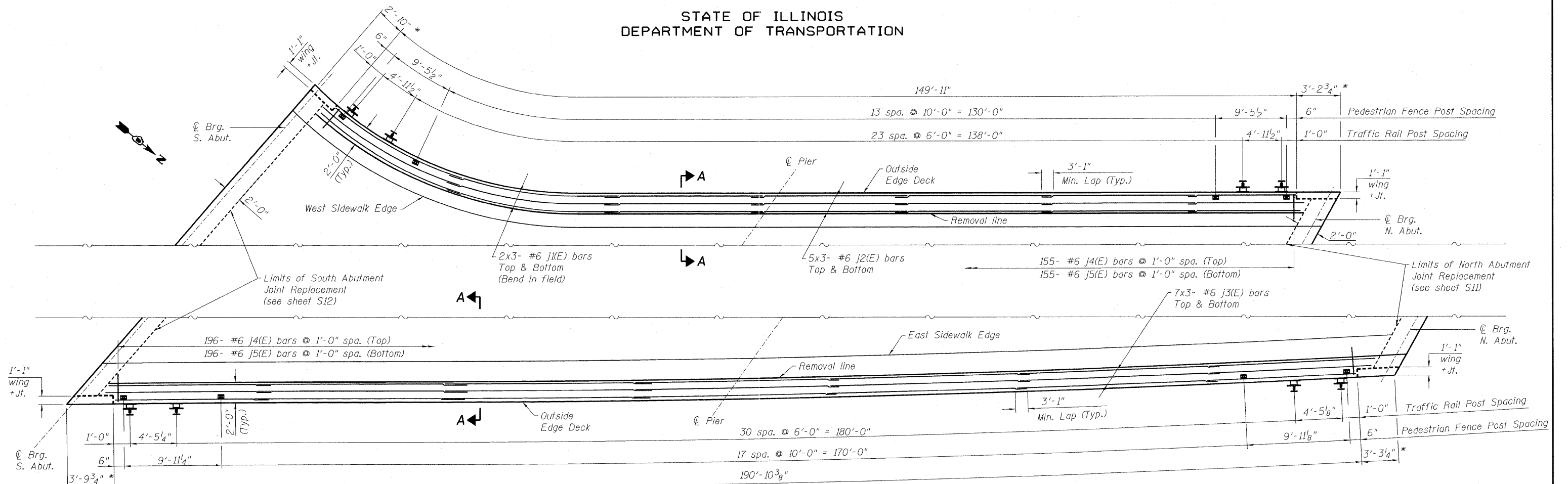
**STEEL RAILING, TYPE SM
STRUCTURE NO. 082-0099**

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	245
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

STATE OF ILLINOIS
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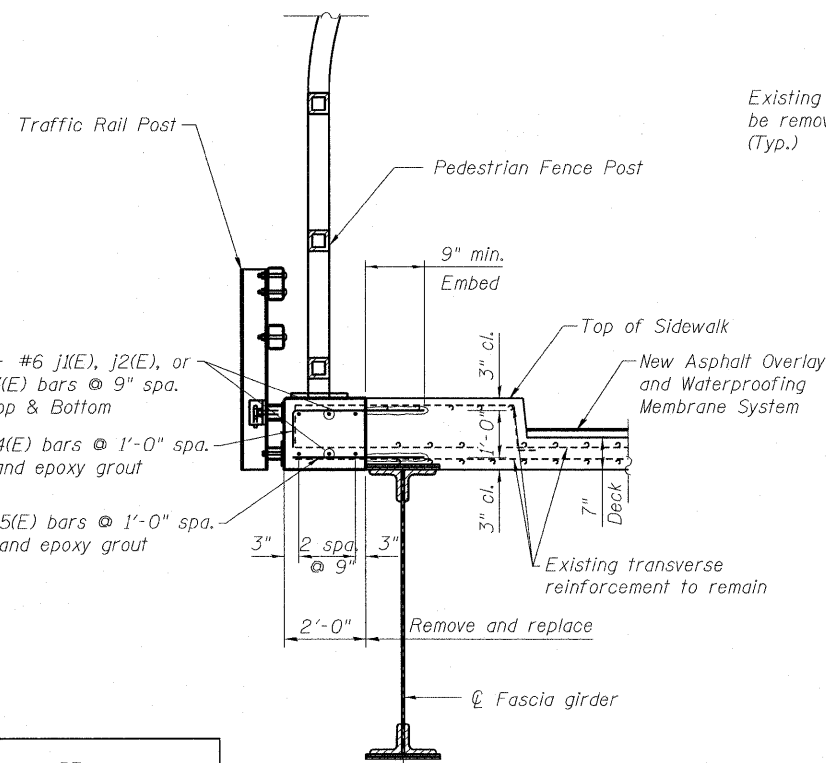


DECK EDGE REPLACEMENT PLAN

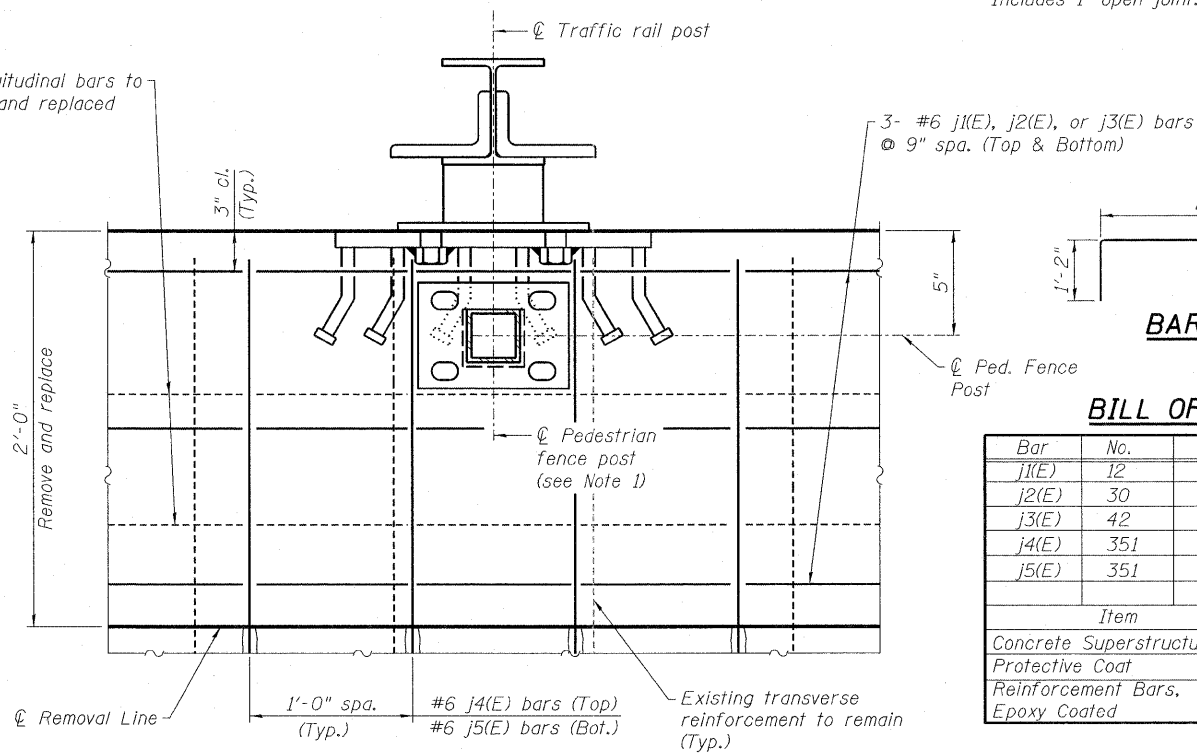
* Dimensions determined from existing plans. Includes 1" open joint. Verify in the field.

NOTES:

- Where \odot fence posts meet with \odot rail post, Contractor shall ensure studs and anchor bolts do not conflict.
- All existing transverse reinforcement to be left in place when concrete is removed and replaced. Rebar shall be cleaned and incorporated into new concrete with installation of new traffic rail and pedestrian fencing.
- Locations of reinforcement are approximate. Contractor will need to verify locations in the field and determine dimensions for embed placement prior to creation of shop drawings for traffic rail and pedestrian fence.
- Epoxy grout in accordance with Article 584 of the Standard Specifications.
- This sheet to be worked with sheets S6 and S7.
- Drilling of anchor rods included under Concrete Superstructure.
- At the corner wingwall blockouts, increase reinforcement lap lengths as necessary to fit. Work with sheet S4.
- Contractor shall not damage existing structural elements in accordance with Article 501.05 of the Standard Specifications. Any damage to existing beams shall be repaired by Contractor at no additional cost to the contract.
- Saw cutting of existing deck on top of existing beam flanges is not allowed.



SECTION A-A



TYPICAL CONNECTION DETAIL PLAN

BAR j4(E)

BILL OF MATERIAL

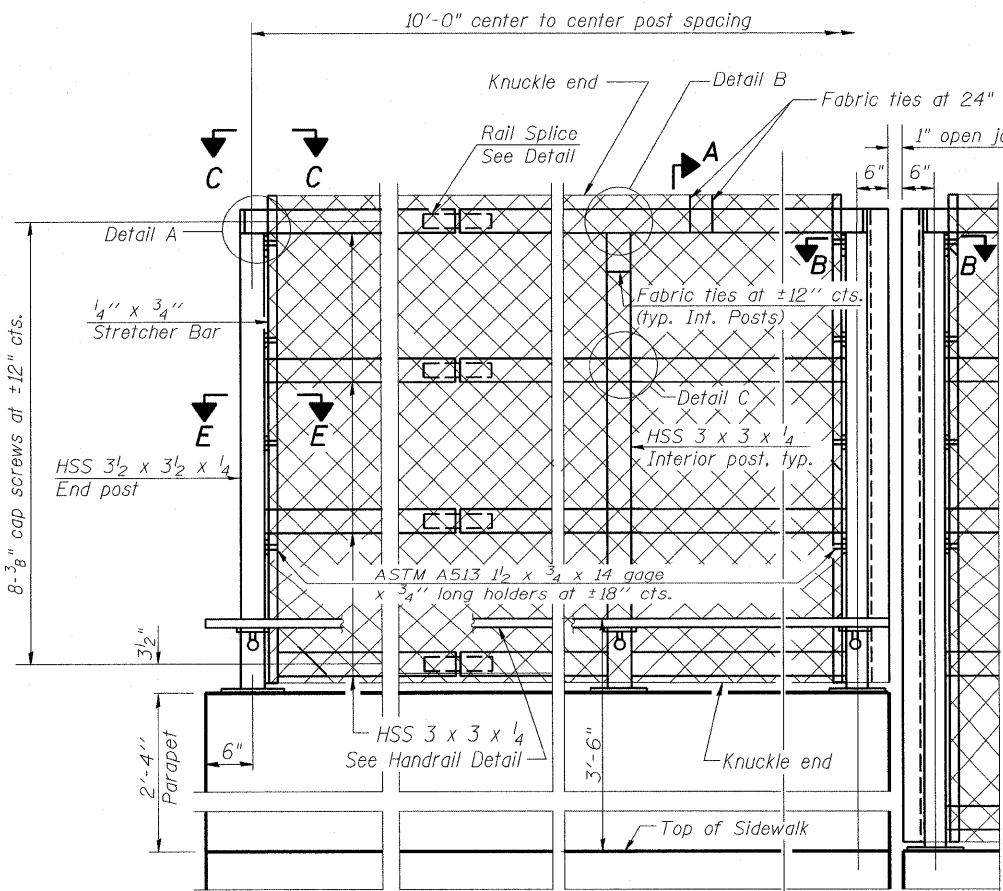
Bar	No.	Size	Length	Shape
j1(E)	12	#6	25'-0"	—
j2(E)	30	#6	29'-0"	—
j3(E)	42	#6	31'-3"	—
j4(E)	351	#6	3'-8"	—
j5(E)	351	#6	2'-6"	—
Item		Unit	Quantity	
Concrete Superstructure		Cu. Yd.	40	
Protective Coat		Sq. Yd.	79	
Reinforcement Bars, Epoxy Coated		Pound	6,980	

RAILING CONNECTION DETAIL
STRUCTURE NO. 082-0099

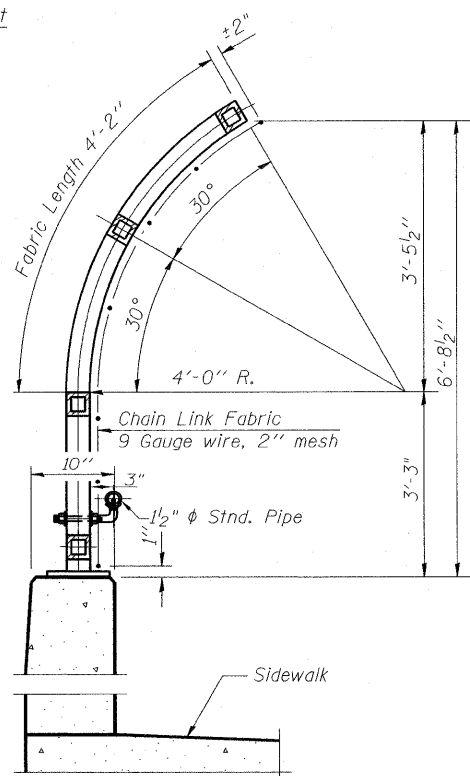
DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

SHEET NO. S8 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	246
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

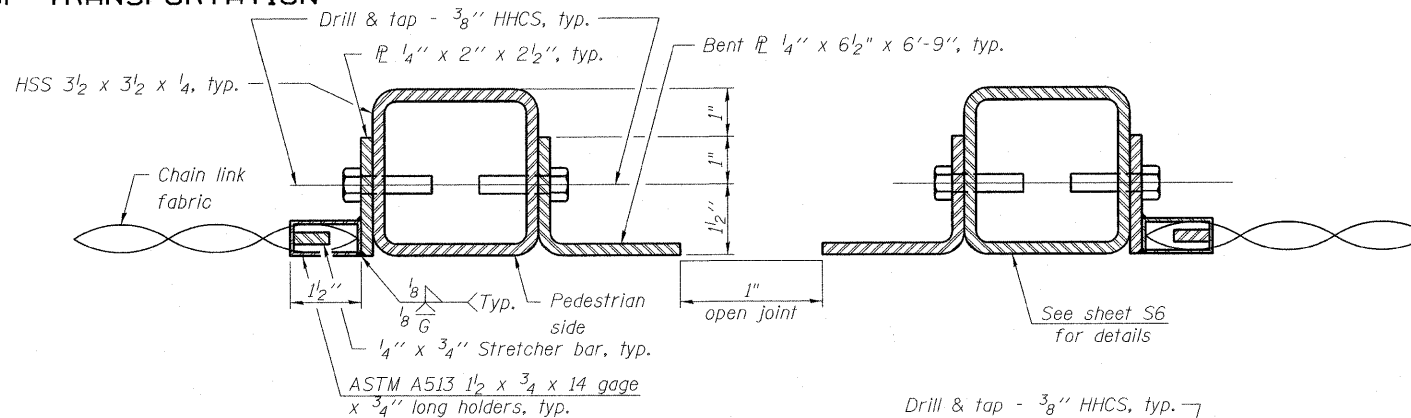
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



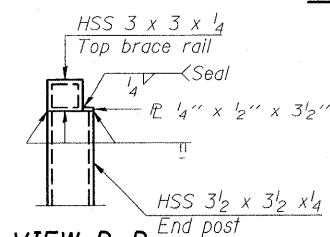
ELEVATION
(Inside Face)



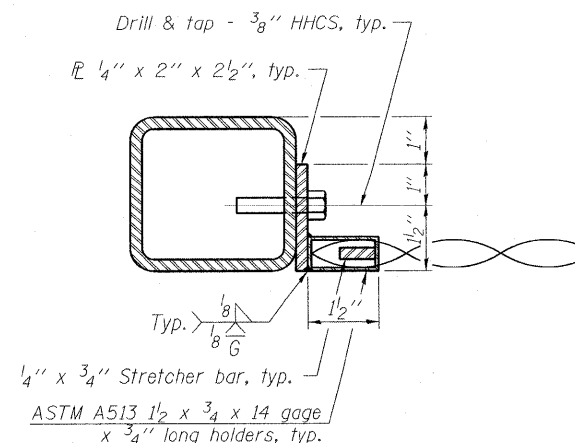
SECTION A-A



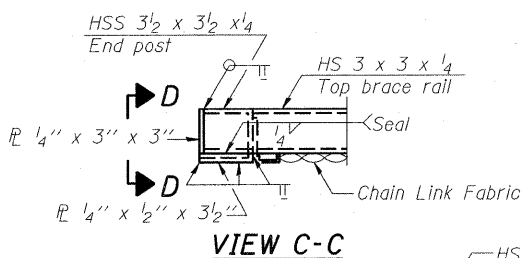
SECTION B-B



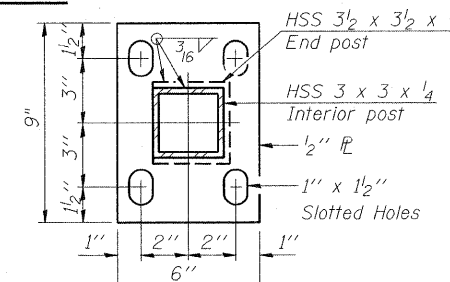
VIEW D-D



SECTION E-E



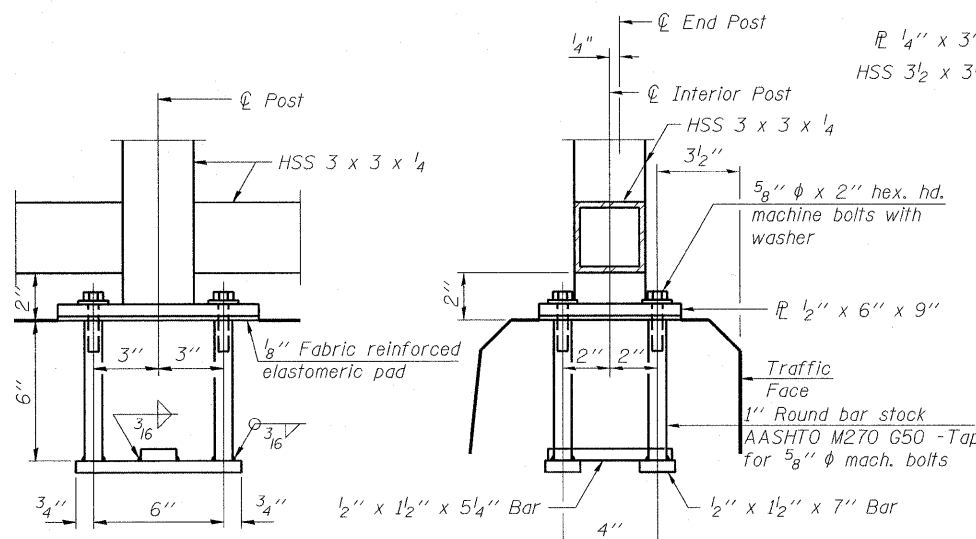
VIEW C-C



BASE P

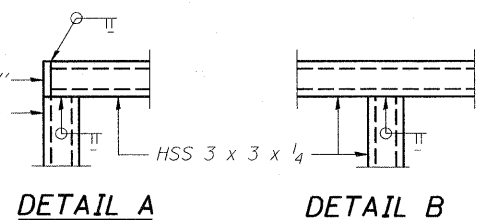
BILL OF MATERIAL

Item	Unit	Quantity
Bridge Fence Railing	Foot	223

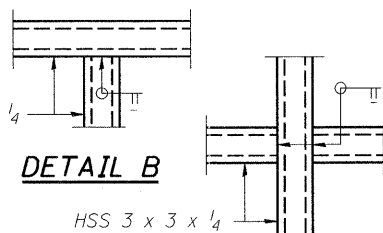


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



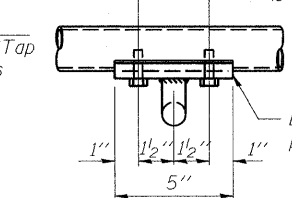
DETAIL A



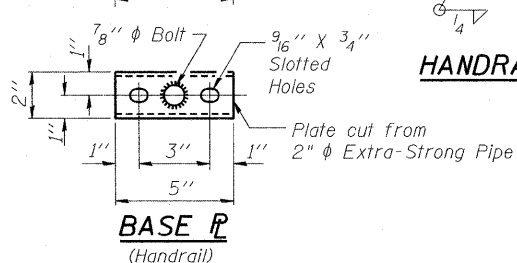
DETAIL B

DETAIL C

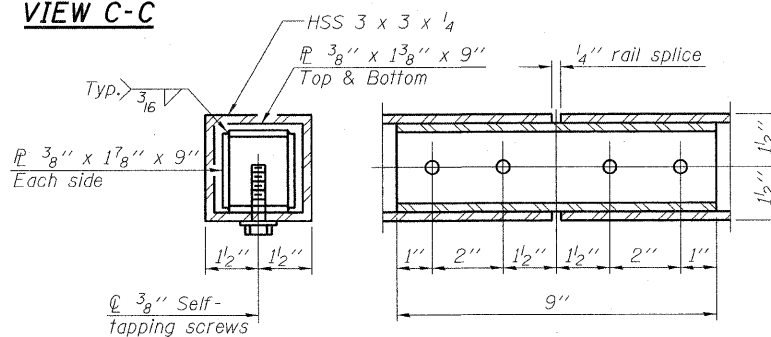
Drill and Tap 1/2" φ Std. Pipe for 3/8" φ cap screws. Provide 9/16" x 3/4" slots in base plate.



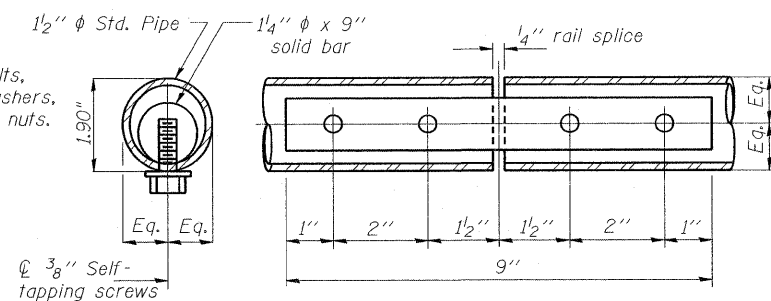
HANDRAIL DETAIL



BASE P
(Handrail)



RAIL SPLICE



HANDRAIL SPLICE

NOTES:

- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
- Removal of existing fence and traffic rail on top of wing wall is included in cost for Concrete Removal.
- For Fence Parapet Plan, see next sheet.

**PARAPET MOUNTED
FENCE DETAILS
STRUCTURE NO. 082-0099**

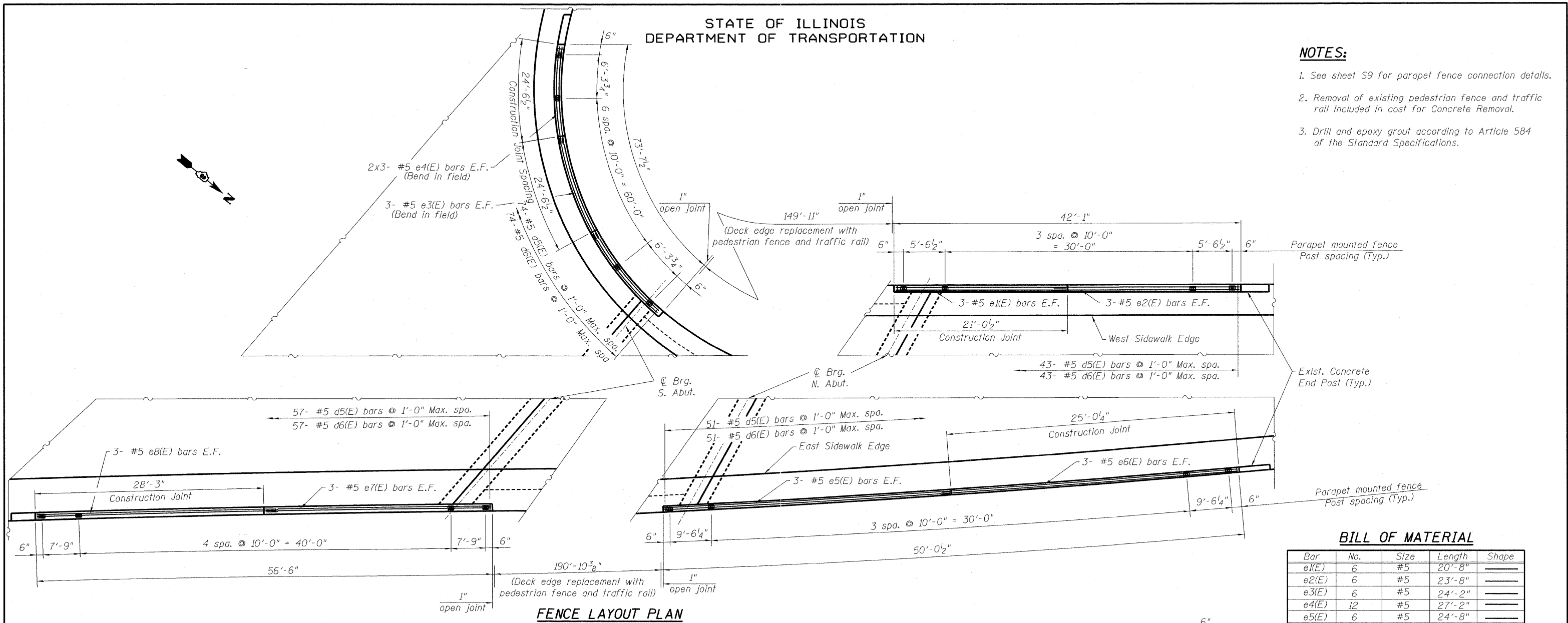
DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S9	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	247
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
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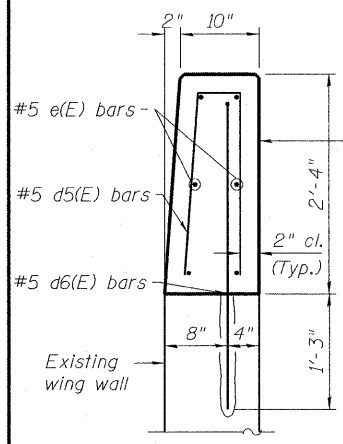
NOTES:

1. See sheet S9 for parapet fence connection details.
2. Removal of existing pedestrian fence and traffic rail included in cost for Concrete Removal.
3. Drill and epoxy grout according to Article 584 of the Standard Specifications.

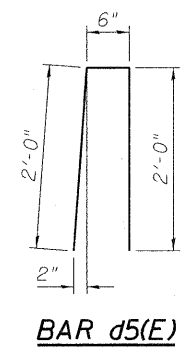
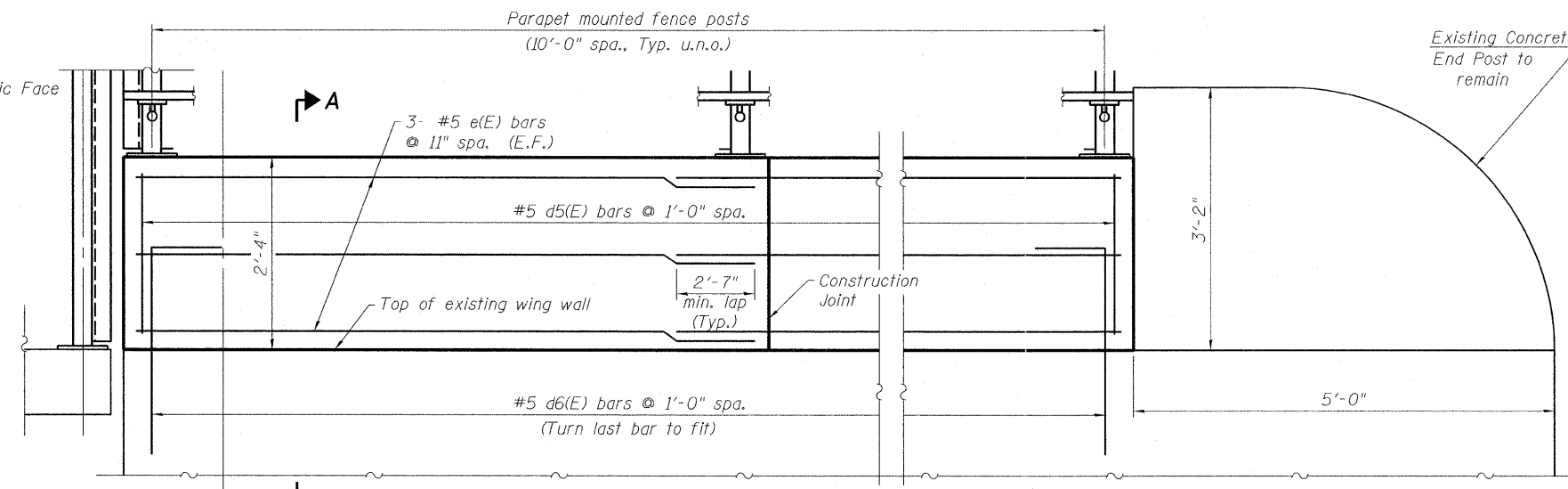


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e1(E)	6	#5	20'-8"	—
e2(E)	6	#5	23'-8"	—
e3(E)	6	#5	24'-2"	—
e4(E)	12	#5	27'-2"	—
e5(E)	6	#5	24'-8"	—
e6(E)	6	#5	27'-5"	—
e7(E)	6	#5	27'-11"	—
e8(E)	6	#5	30'-10"	—
d5(E)	225	#5	4'-6"	U
d6(E)	225	#5	4'-1"	U
Item	Unit	Quantity		
Concrete Superstructure	Cu. Yd.	18		
Protective Coat	Sq. Yd.	79		
Reinforcement Bars, Epoxy Coated	Pound	3,480		



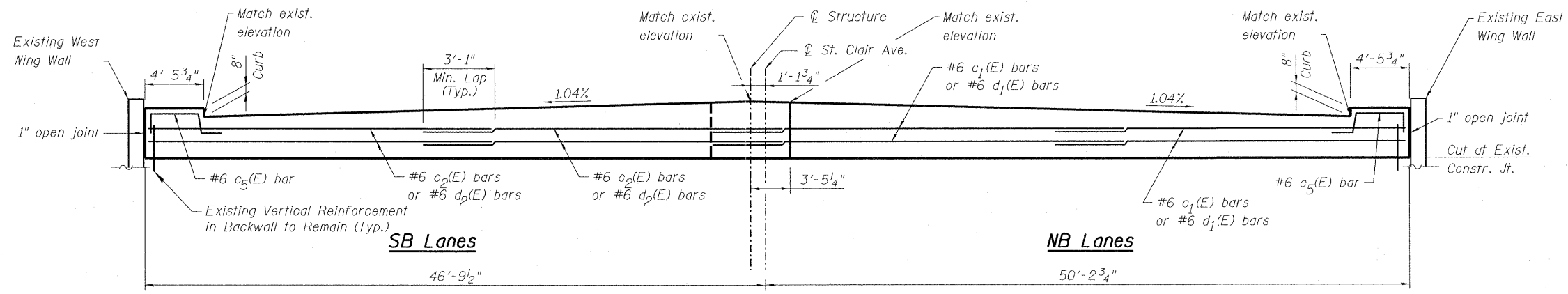
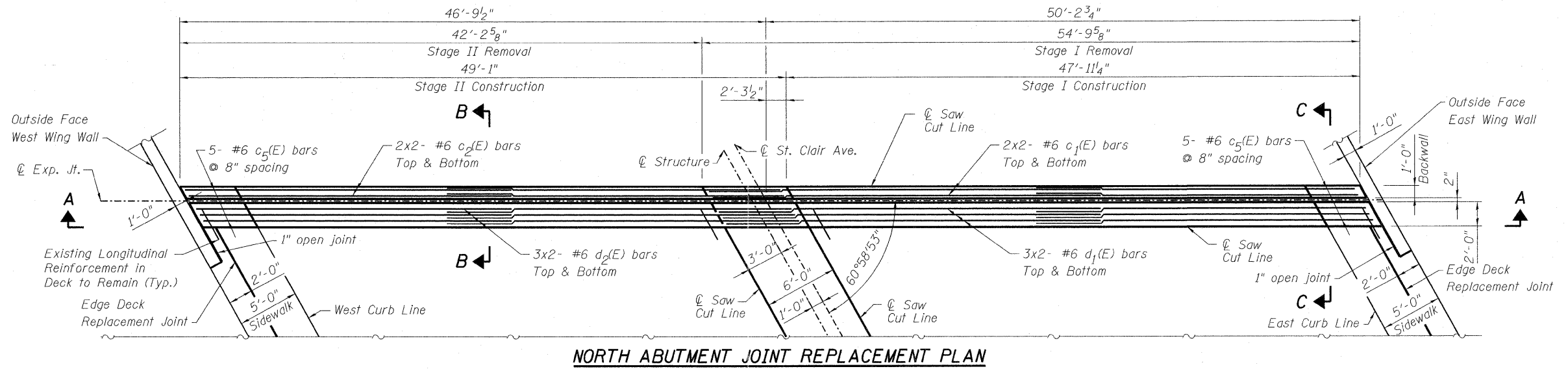
DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO



APPROACH PARAPET DETAILS
STRUCTURE NO. 082-0099

SHEET NO. S10 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	248
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



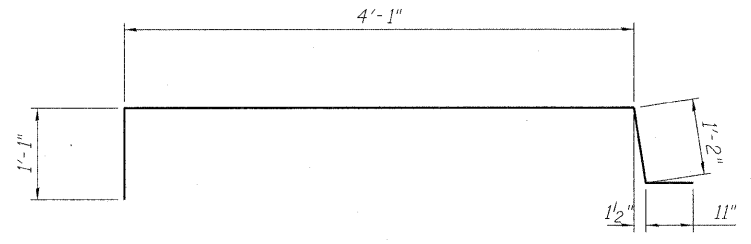
SECTION A-A

NOTES:

1. Notation '3x2 bars' refers to 3 rows of bars with 2 lengths per row.
2. All dimensions shall be verified in the field.
3. Work this sheet with sheet S13.
4. Contractor shall verify all elevations in the field to ensure smooth transition from bridge approaches to driving surface.
5. Protective Coat is applied to the top of all concrete surfaces.
6. For sections B-B and C-C see sheet S13.
7. Removal of existing expansion joint paid for under Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
c1(E)	8	#6	27'-0"	—
c2(E)	8	#6	26'-0"	—
c5(E)	10	#6	7'-3"	┌┐
d1(E)	12	#6	27'-0"	—
d2(E)	12	#6	26'-0"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	1,710		
Protective Coat	Sq. Yd.	33		
Concrete Removal	Cu. Yd.	13		
Concrete Superstructure	Cu. Yd.	13		
Prefomed Joint Strip Seal	Foot	98		



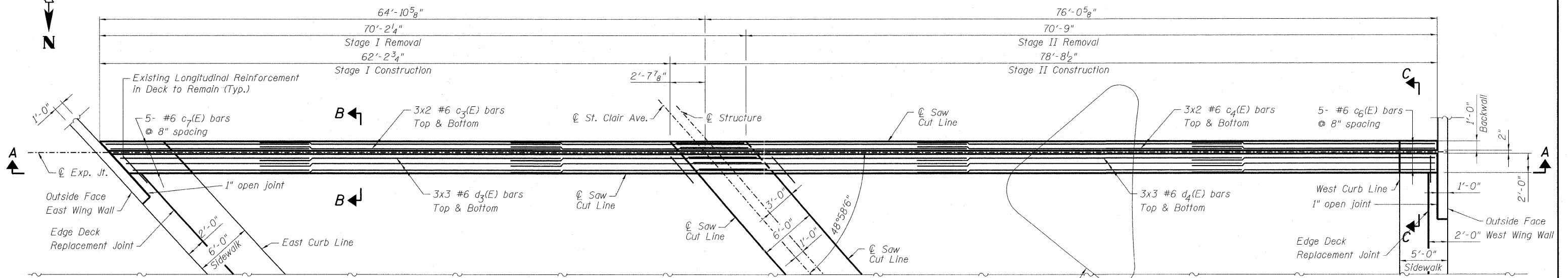
BAR c5(E)

**SUPERSTRUCTURE DETAILS I
STRUCTURE NO. 082-0099**

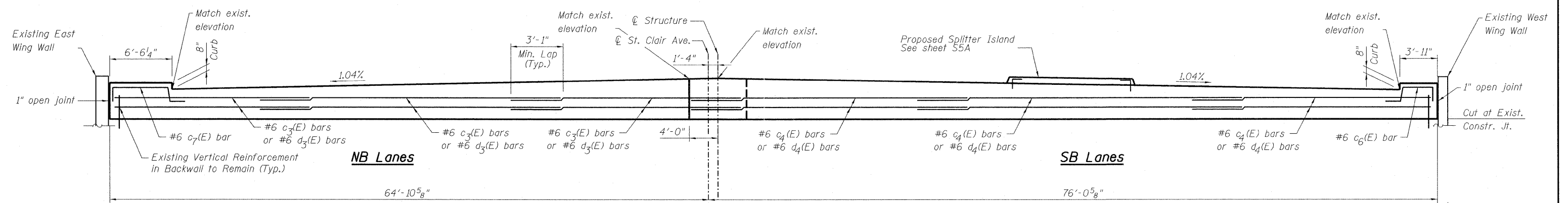
DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

SHEET NO. S11 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	249
F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SOUTH ABUTMENT JOINT REPLACEMENT PLAN



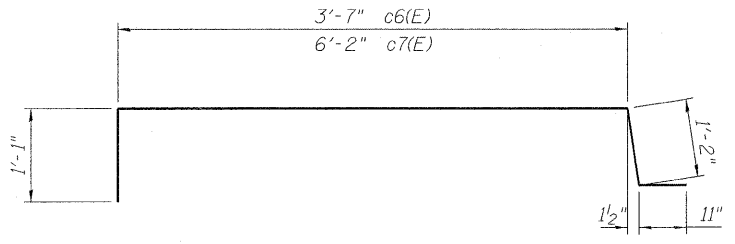
SECTION A-A

NOTES:

1. Notation '3x2 bars' refers to 3 rows of bars with 2 lengths per row.
2. All dimensions shall be verified in the field.
3. Work this sheet with sheet S13.
4. Contractor shall verify all elevations in the field to ensure smooth transition from bridge approaches to driving surface.
5. Protective Coat is applied to the top of all concrete surfaces.
6. For Sections B-B and C-C see sheet S13.
7. Removal of existing expansion joint paid for under Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
c3(E)	12	#6	23'-4"	—
c4(E)	12	#6	27'-9"	—
c6(E)	5	#6	6'-9"	┌┐
c7(E)	5	#6	9'-4"	┌┐
d3(E)	18	#6	23'-4"	—
d4(E)	18	#6	27'-9"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	2,430		
Protective Coat	Sq. Yd.	48		
Concrete Removal	Cu. Yd.	18		
Concrete Superstructure	Cu. Yd.	18		
Preformed Joint Strip Seal	Foot	141		



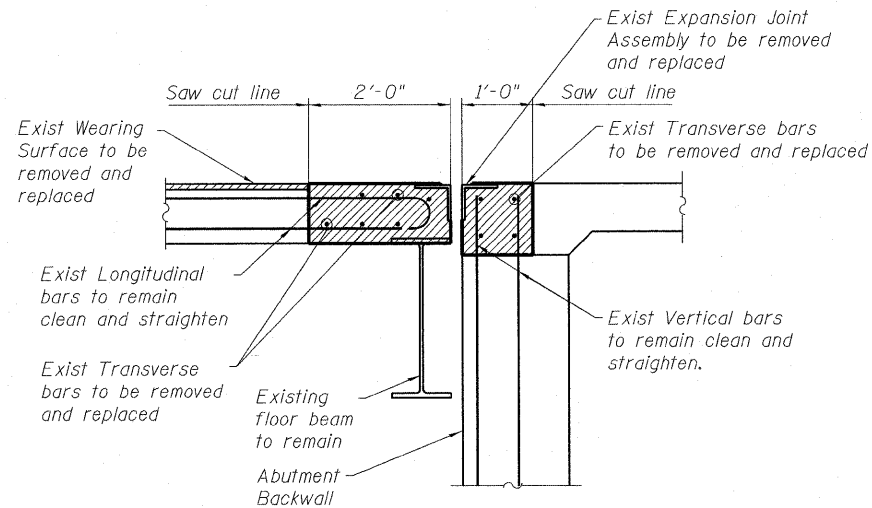
BARS c6(E) & c7(E)

**SUPERSTRUCTURE DETAILS II
STRUCTURE NO. 082-0099**

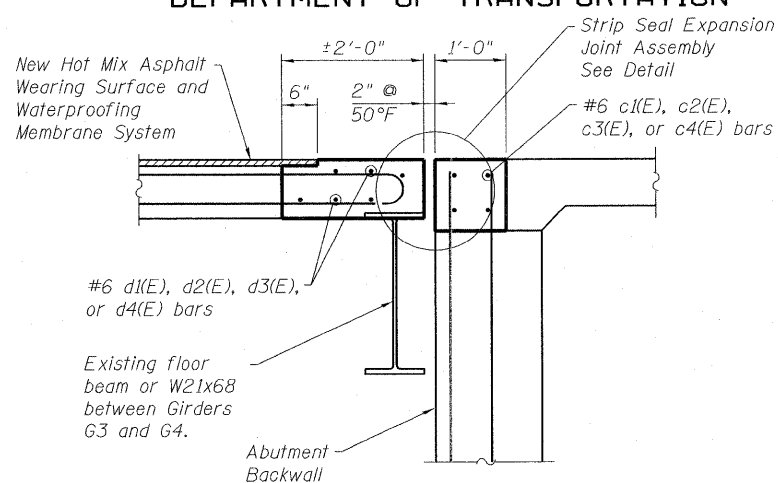
DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

SHEET NO. S12 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	250
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

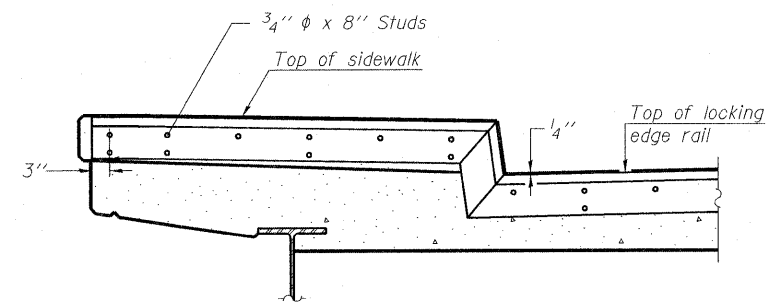
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**REMOVAL DETAIL
SECTION B-B**



**REPLACEMENT DETAIL
SECTION B-B**

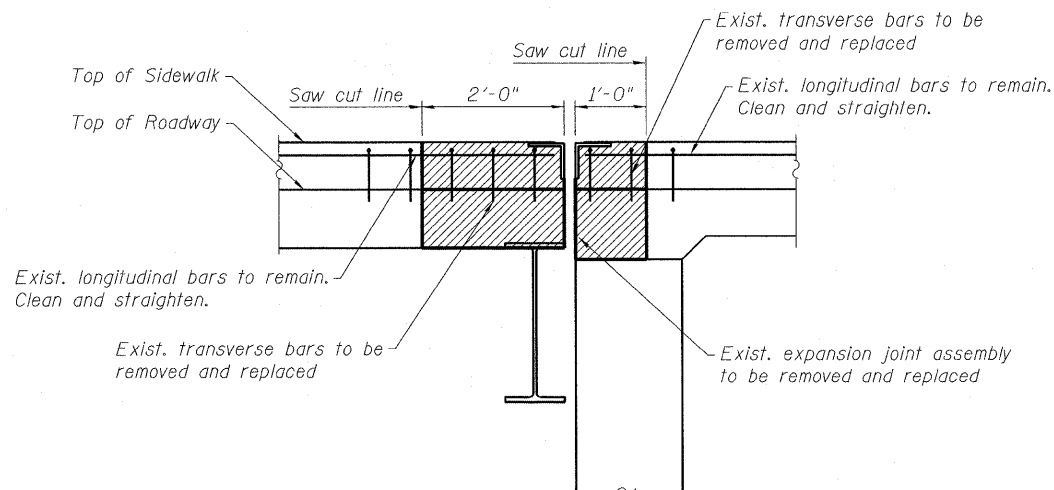


EXPANSION JOINT AT SIDEWALK

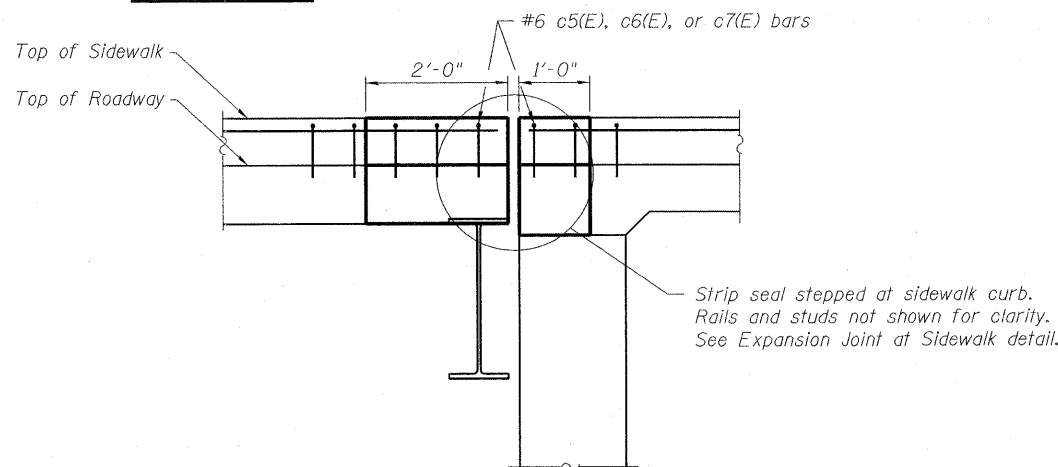
Shorter plates with a single row of studs at 12" cts. may be necessary if shallower than 9". See manufacturer's recommendation.

NOTES:

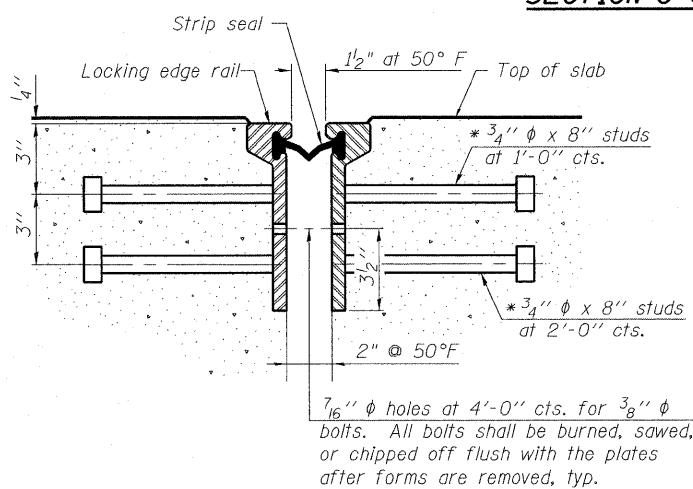
1. The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement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



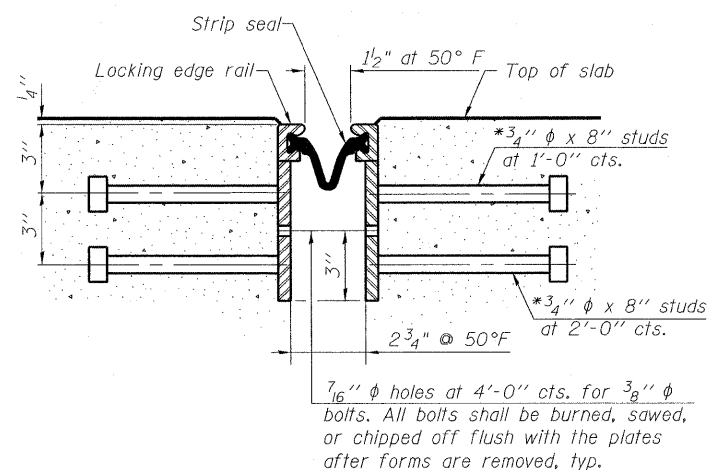
**SIDEWALK REMOVAL DETAIL
SECTION C-C**



**SIDEWALK REPLACEMENT DETAIL
SECTION C-C**



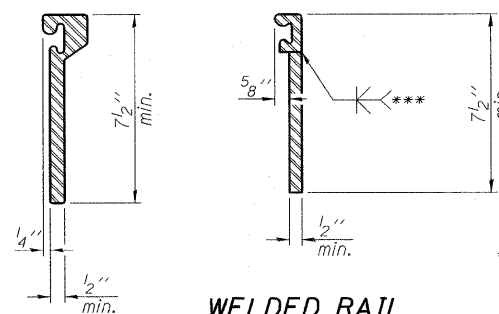
**SECTION THRU
ROLLED RAIL JOINT**



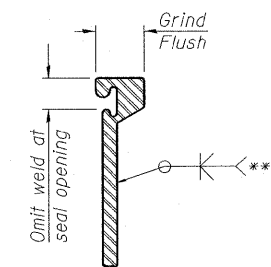
**SECTION THRU
WELDED RAIL JOINT**

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

**ROLLED
EXTRUDED RAIL**



WELDED RAIL



**LOCKING EDGE
RAIL SPLICE**

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

LOCKING EDGE RAILS

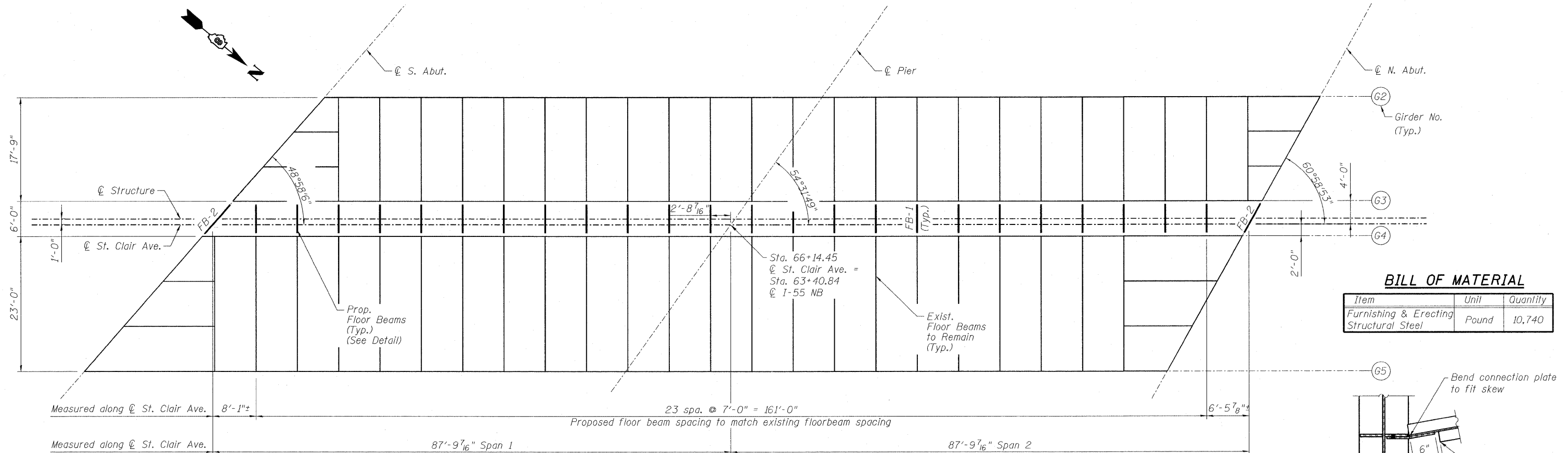
**EXPANSION JOINT DETAILS
STRUCTURE NO. 082-0099**

DESIGNED - DEV
CHECKED - EJO
DRAWN - DEV
CHECKED - EJO

STRIP SEAL EXPANSION JOINT ASSEMBLY

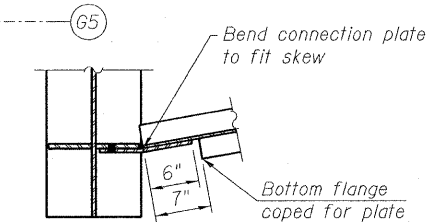
SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S13	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	251
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

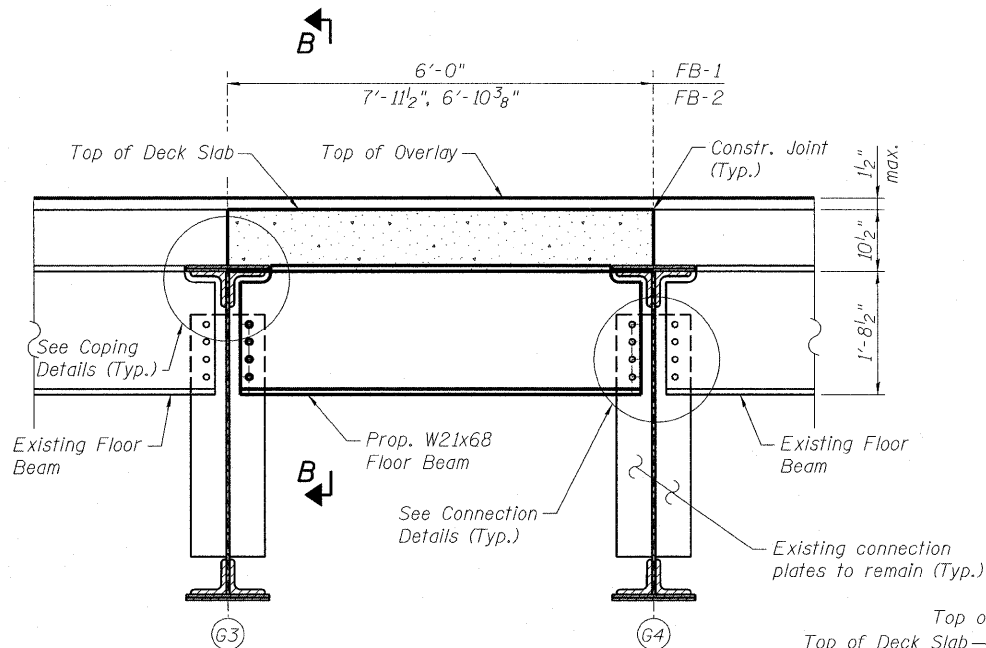


BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Pound	10,740



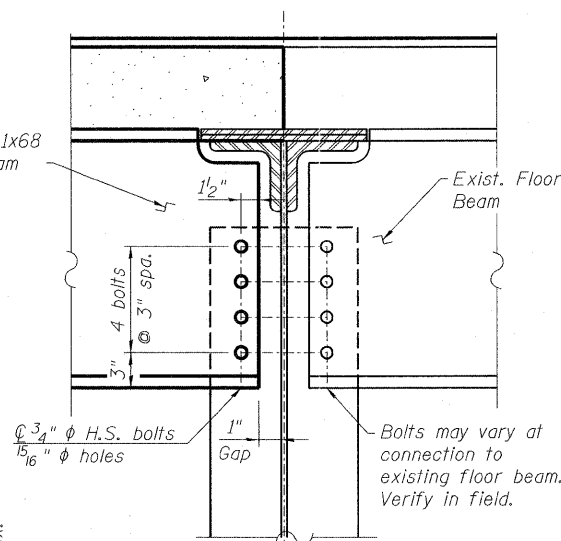
PARTIAL FRAMING PLAN



TYPICAL FLOOR BEAM DETAIL

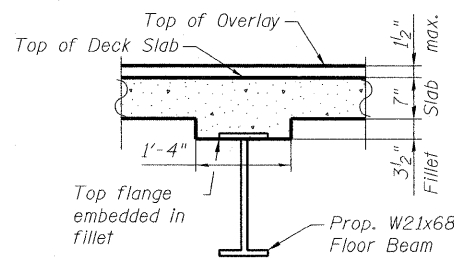
FB-1 = (24 required)
FB-2 = (2 required)

DESIGNED -	DEV
CHECKED -	EJO
DRAWN -	MRK
CHECKED -	EJO

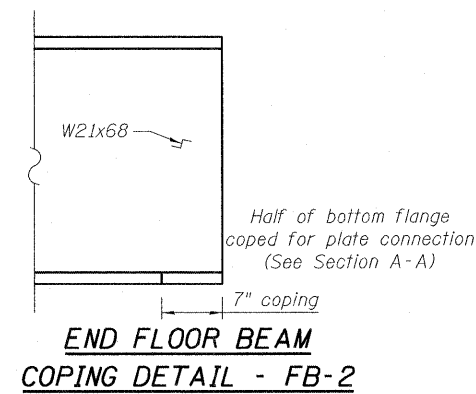


FLOOR BEAM CONNECTION DETAIL - FB-1

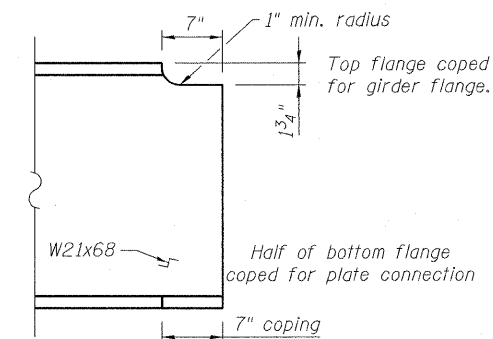
⁵/₁₆" bolt holes in new floor beams shall be shop drilled. Field drill bolt holes in connection plates to ensure proper alignment. Drilling holes included in Furnishing and Erecting Structural Steel pay item. Two hardened washers required for each set of oversized holes.



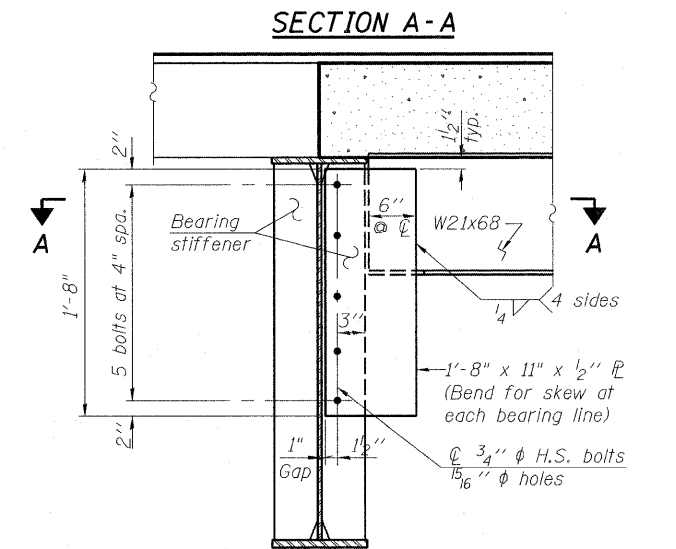
SECTION B-B



END FLOOR BEAM COPING DETAIL - FB-2



FLOOR BEAM COPING DETAIL - FB-1



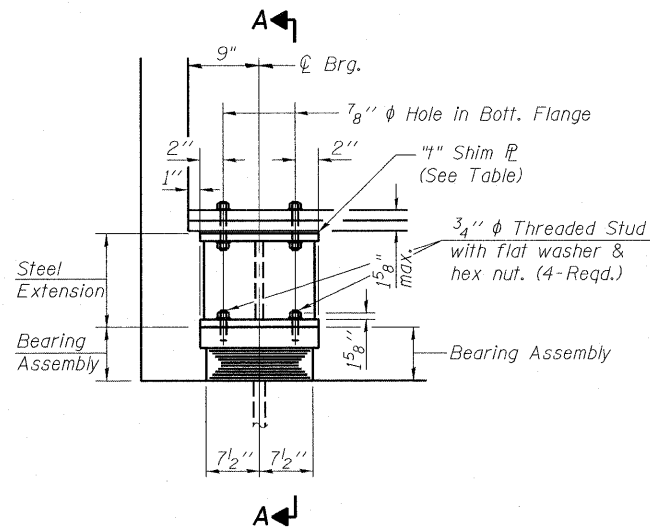
END FLOOR BEAM CONNECTION DETAIL - FB-2

⁵/₁₆" bolt holes in new floor beam connection plate shall be shop drilled. Field drill bolt holes in existing connection plate to ensure proper alignment. Drilling holes included in Furnishing and Erecting Structural Steel pay item. Two hardened washers required for each set of oversized holes.

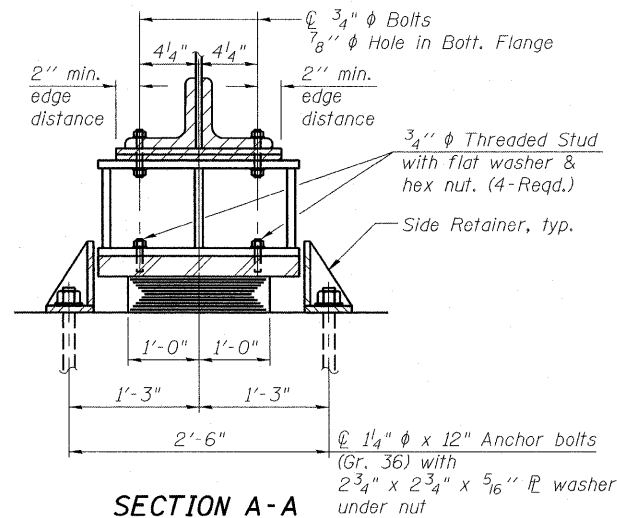
**FRAMING PLAN
STRUCTURE NO. 082-0099**

SHEET NO. S14 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	252
	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

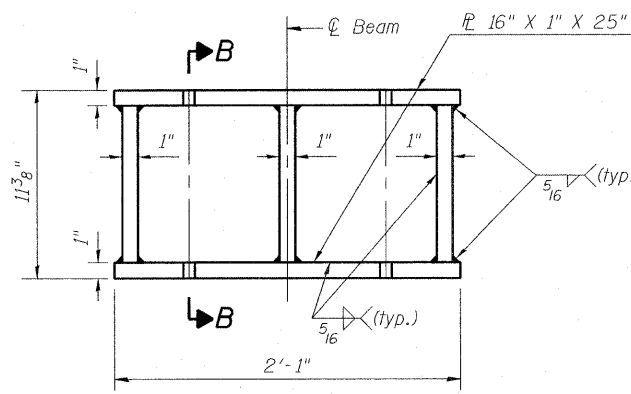
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



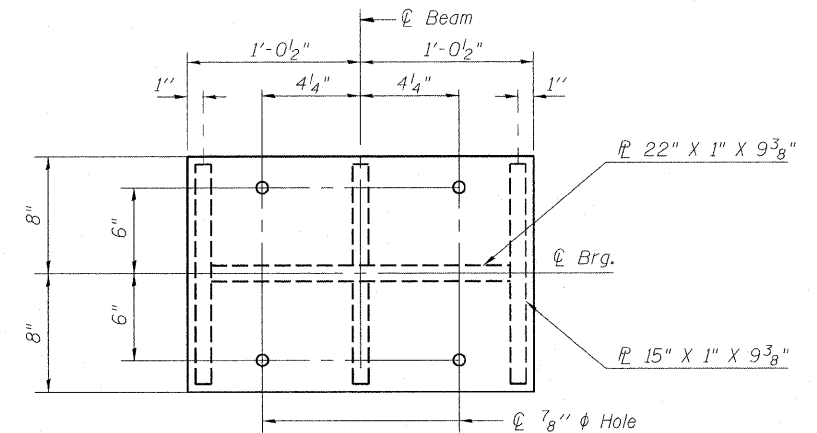
ELEVATION AT ABUT.



SECTION A-A



ELEVATION STEEL EXTENSION

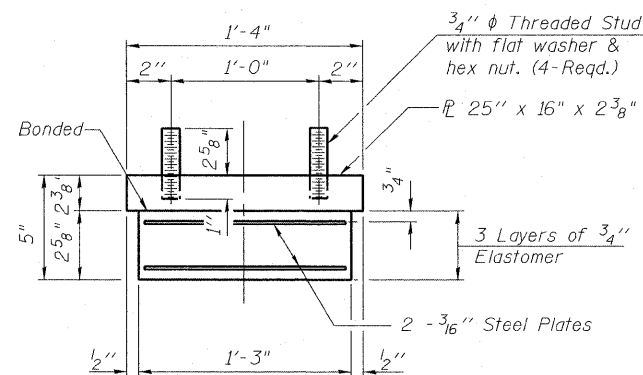


PLAN STEEL EXTENSION

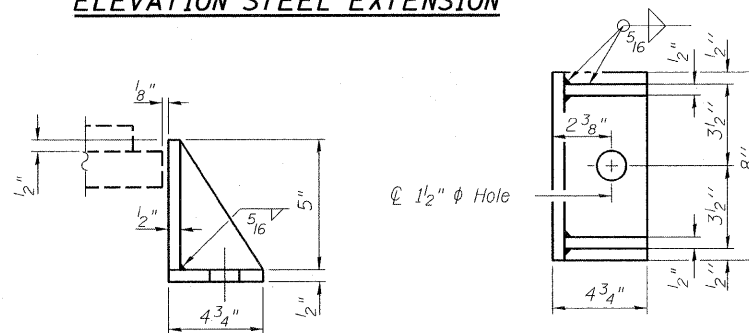
TYPE I ELASTOMERIC EXP. BRG.

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.
- Side retainers, shims, and steel extensions required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
- Shim plates shall not be placed under Bearing Assembly.
- Traffic shall be rerouted during jacking and bearing replacement so that vehicles will not be located on the jacked portion of the deck until bearing replacement is complete.
- Minimum jack capacity shall be 200 tons.
- Diaphragms and floor beams shall not be used as load carrying members in the jacking system.
- Anchor bolts for side retainers shall be installed after bearings and members are set.
- Dimensions shown for existing girders are based on existing plans and shall be field verified by Contractor prior to installation.

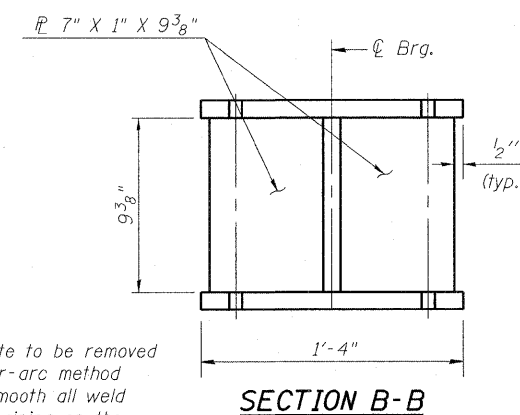


BEARING ASSEMBLY

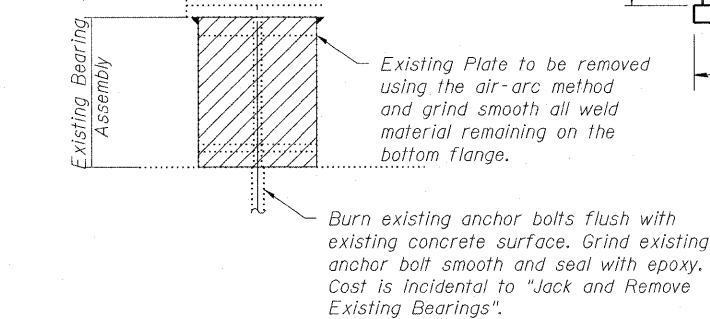


SIDE RETAINER

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



SECTION B-B



EXISTING ABUTMENT BEARING REMOVAL DETAIL

(Existing pier bearings are to remain)

Existing Beam	North Abutment Shim P, "I"	South Abutment Shim P, "I"
G-1	3 3/8"	1 3/8"
G-1A	-	1 3/8"
G-2	7 3/8"	5 3/8"
G-3	3 3/8"	1 3/8"
G-4	3 3/8"	1 3/8"
G-5	7 3/8"	5 3/8"
G-6	3 3/8"	1 3/8"

SHIM PLATE THICKNESS

REACTIONS FOR JACKING FORCES

Location	DL (kips)	LL+I (kips)	Total (kips)
South Abutment	123.7	159.8	283.5
North Abutment	117.5	159.5	277.0

BILL OF MATERIAL

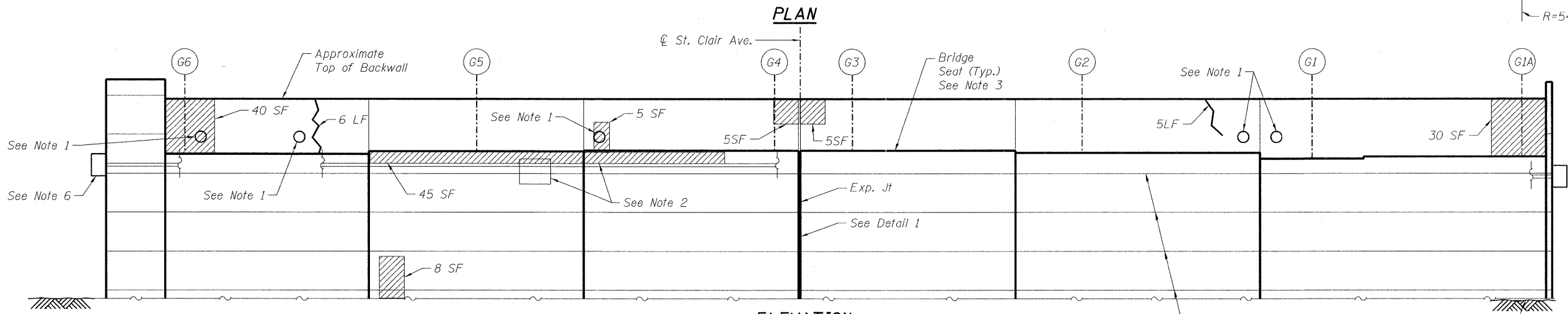
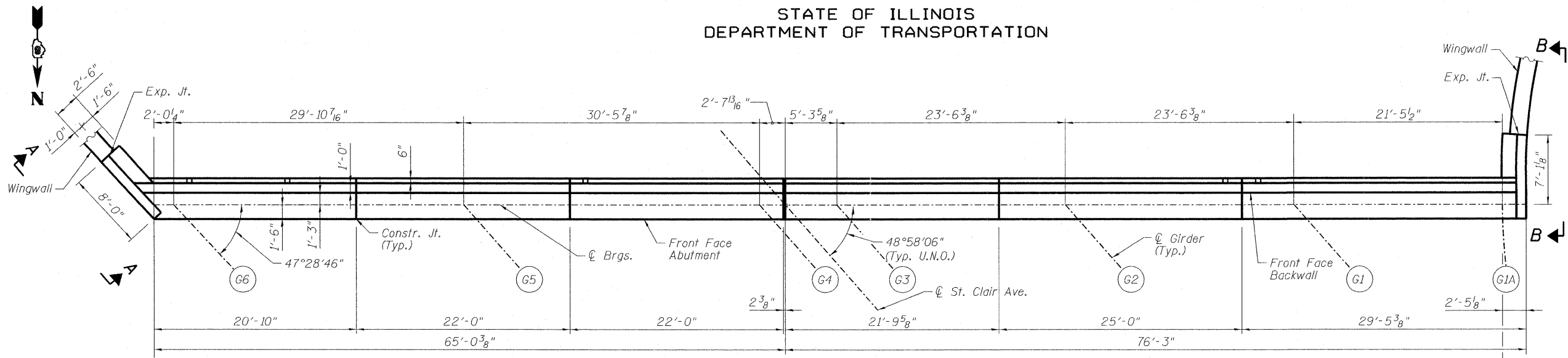
Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	13
Jack and Remove Existing Bearings	Each	13
Anchor Bolts, 1/4" φ	Each	26

EXPANSION BEARING
DETAILS
STRUCTURE NO. 082-0099

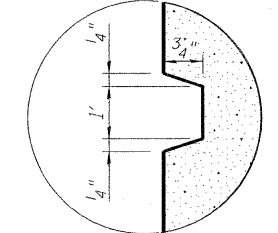
DESIGNED - DD
CHECKED - EJO
DRAWN - DD
CHECKED - EJO

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S15	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	253
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



- NOTES:**
1. \bigcirc Denotes existing 2" ϕ conduit with sleeve thru the backwall. The Contractor shall protect the conduit during repair work and replace at no additional cost if damaged by the Contractor. Cost included with Structural Repair of Concrete.
 2. The Contractor is advised that conduit and luminaries are attached to the front face of abutment. The Contractor shall field verify location of existing conduits and luminaries to avoid any damage. The Contractor shall coordinate the abutment repair work with the removal of the existing underpass lighting system under Contract 76C54. The cost for this work shall be included in the Unit Price for Structural Repair of Concrete.
 3. The Contractor shall clean all debris, scrap steel plates, stone, bituminous material, chunks of concrete etc. from the bridge seats, and around existing bearings. Cost included with Structural Repair of Concrete.
 4. Superstructure and deck not shown for clarity.
 5. Concrete Sealer shall be applied to front face of abutment, backwall, and bridge seat.
 6. The Contractor shall coordinate the abutment repair work with installation on new ITS conduit(s) under Contract 76C36. The cost for this work shall be included in the Unit Price for Structural Repair of Concrete.

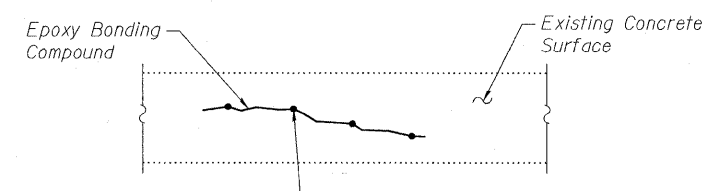
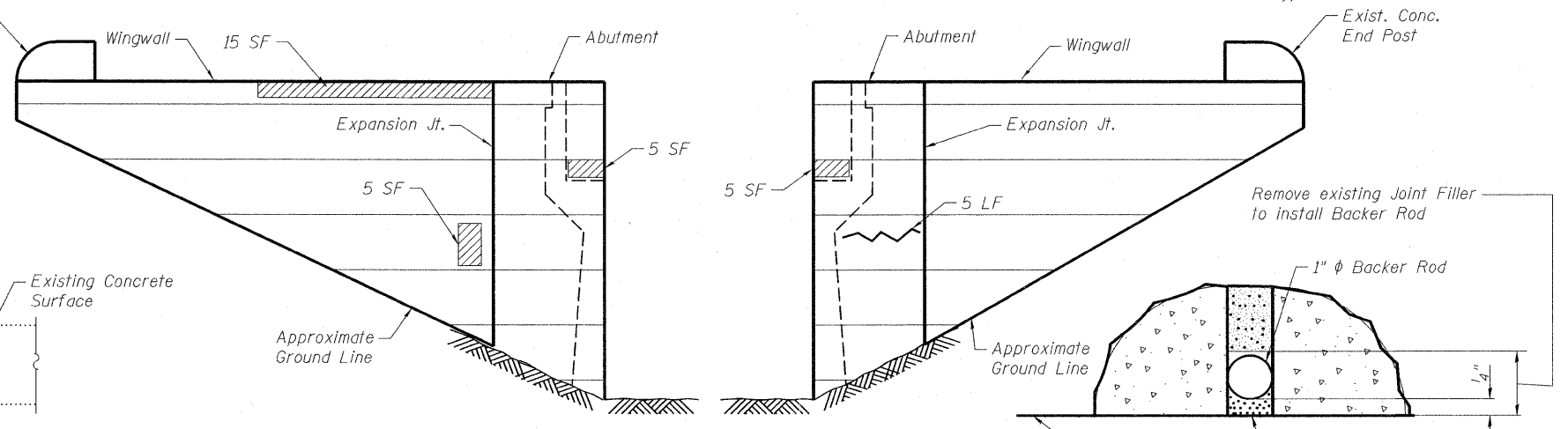


Note: The Contractor shall restore rustications in the repair areas. Cost included with Structural Repair of Concrete.

- LEGEND**
- Epoxy Crack Injection
 - Area of structural repair of concrete (depth equal to or less than 5")

BILL OF MATERIAL

Item	Unit	Quantity
Structural repair of concrete (depth equal to or less than 5")	Sq Ft	168
Epoxy Crack Injection	Foot	16
Concrete Sealer	Sq. Ft.	3,534



EPOXY CRACK INJECTION

Horizontal and vertical cracks shall have one way injection ports installed in accordance with section 590 of Std. Spec.

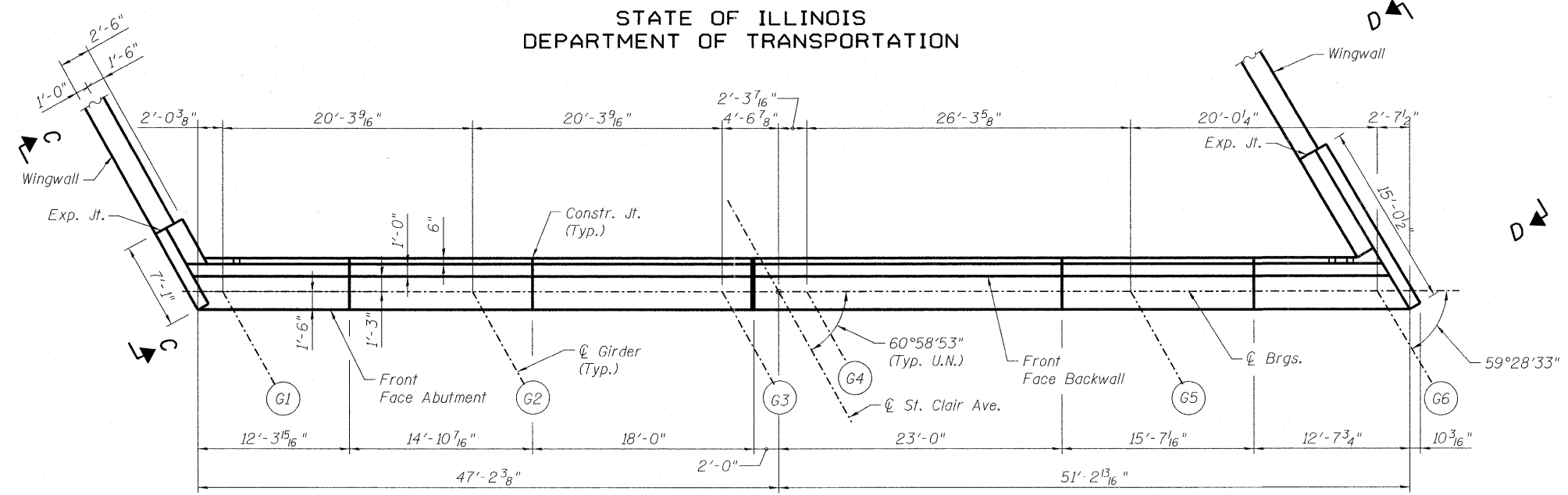
DETAIL 1
Cost included with Structural Repair of Concrete.

**SOUTH ABUTMENT REPAIR
STRUCTURE NO. 082-0099**

DESIGNED - WLB
CHECKED - EJO
DRAWN - JHR
CHECKED - EJO

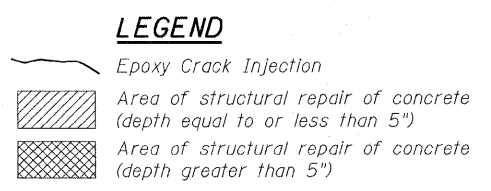
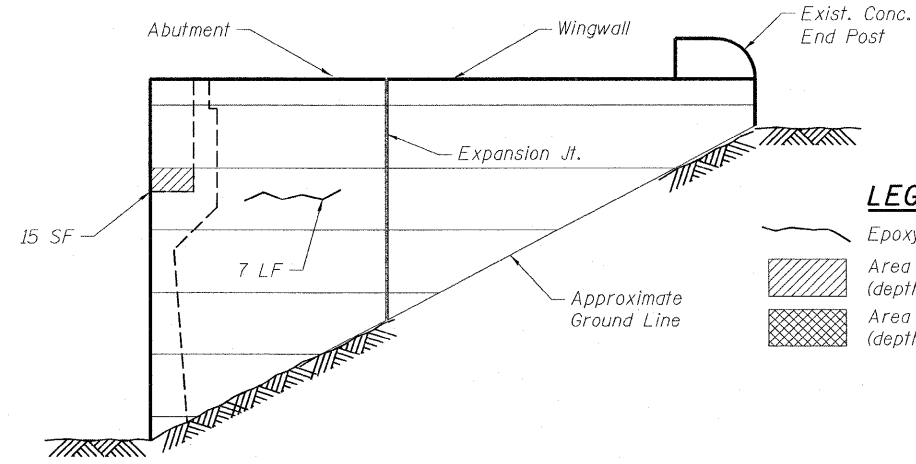
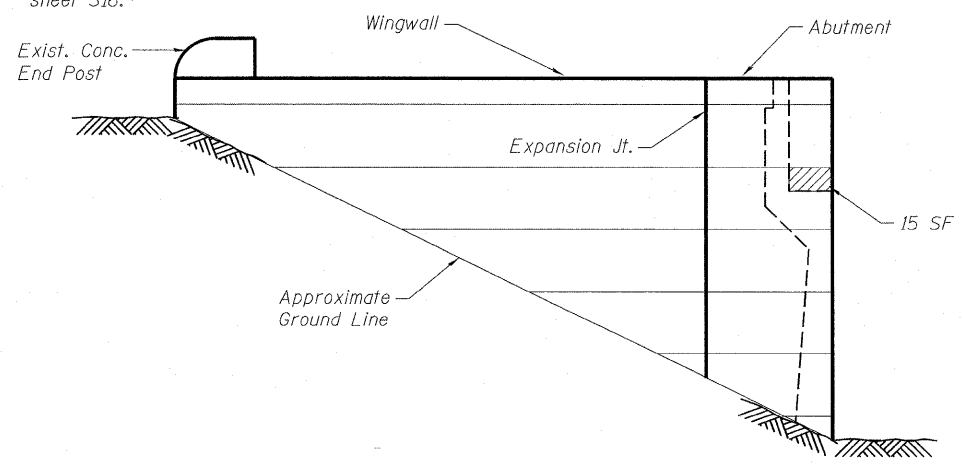
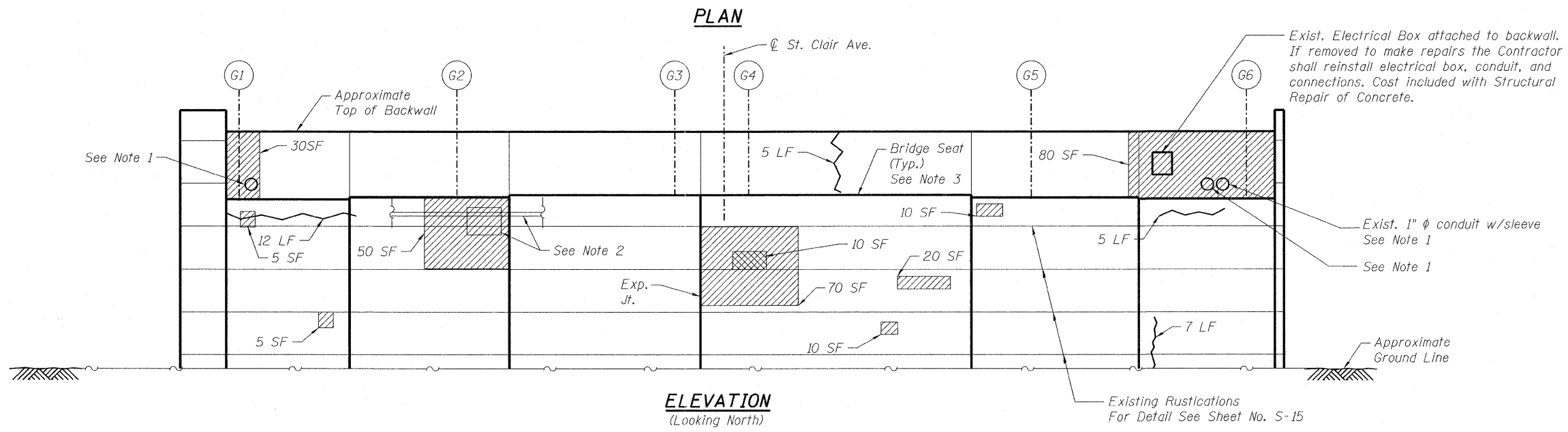
SHEET NO. S16 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	254
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
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NOTES:

- Denotes existing 2" ϕ conduit with sleeve thru the backwall unless noted otherwise. The Contractor shall protect the conduit during repair work and replace at no additional cost if damaged by the Contractor. Cost included with Structural Repair of Concrete.
- The Contractor is advised that conduit and luminaries are attached to the front face of abutment. The Contractor shall field verify location of existing conduits and luminaries to avoid any damage. The Contractor shall coordinate the abutment repair work with the removal of the existing underpass lighting system under Contract 76C54. The cost for this work shall be included in the Unit Price for Structural Repair of Concrete.
- The Contractor shall clean all debris, scrap steel plates, stone, bituminous material, chunks of concrete etc. from the bridge seats, and around existing bearings. Cost included with Structural Repair of Concrete.
- Superstructure and deck not shown for clarity.
- Concrete Sealer shall be applied to front face of abutment, backwall, and bridge seat.
- For Epoxy Crack Injection, Expansion joint, and Rustication Details see sheet S16.



BILL OF MATERIAL

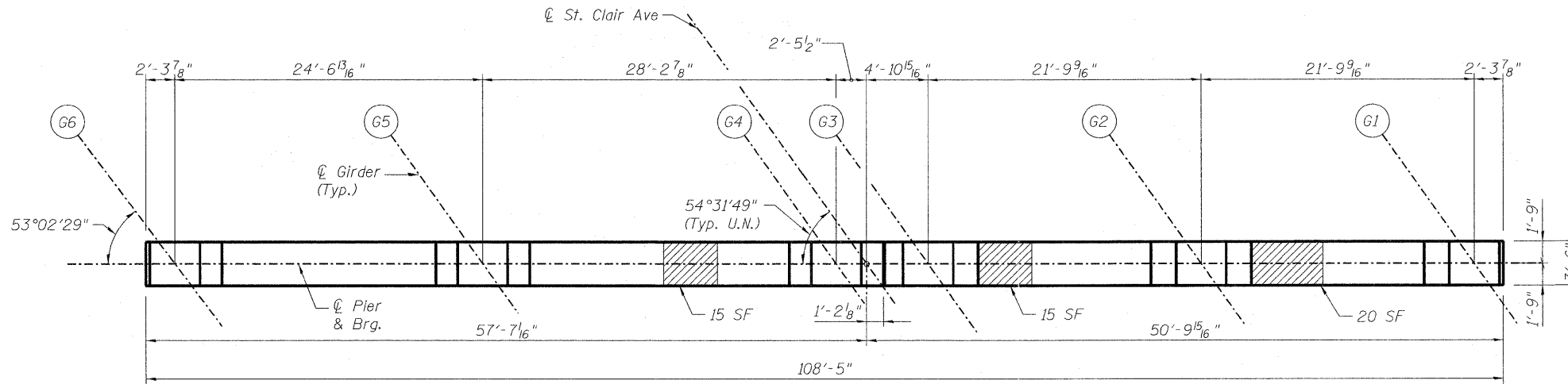
Item	Unit	Quantity
Structural repair of concrete (depth equal to or less than 5")	Sq Ft	310
Structural repair of concrete (depth greater than 5")	Sq Ft	10
Epoxy Crack Injection	Foot	36
Concrete Sealer	Sq. Ft.	2,430

**NORTH ABUTMENT REPAIR
STRUCTURE NO. 082-0099**

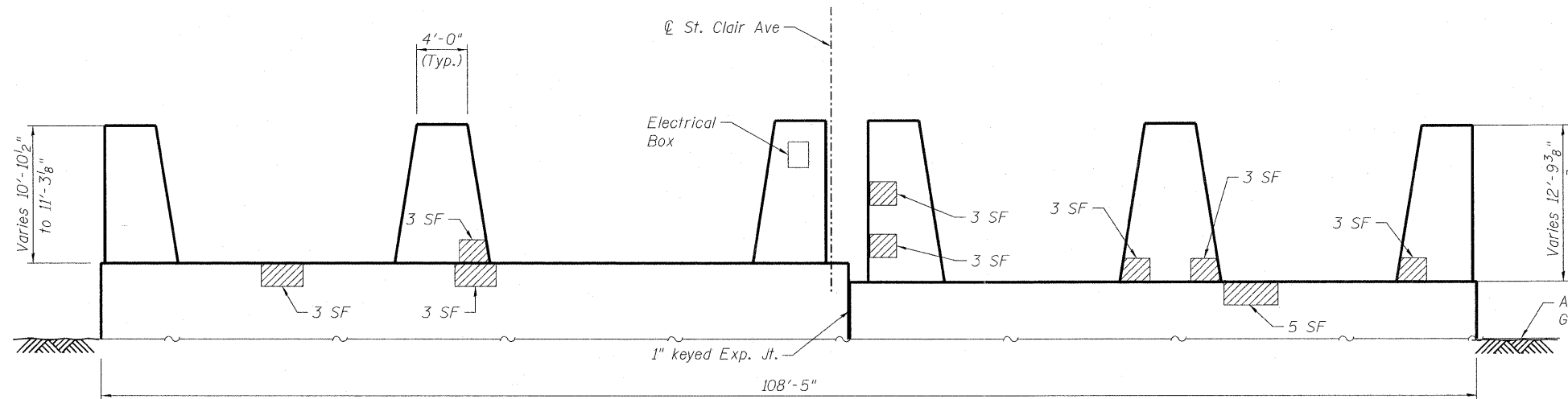
DESIGNED - WLB
CHECKED - EJO
DRAWN - JHR
CHECKED - EJO

SHEET NO. S17 S20 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	255
	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

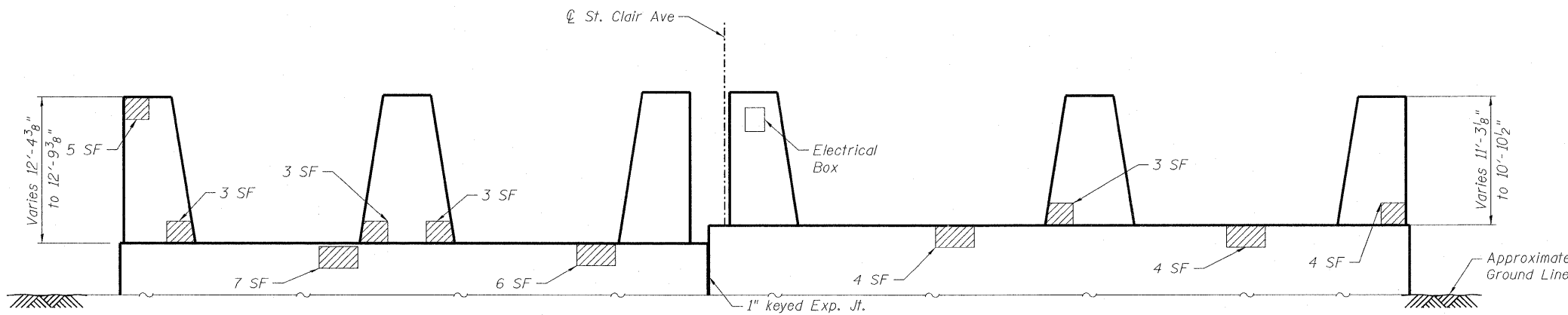


PLAN



ELEVATION-NORTH FACE

(Looking South)



ELEVATION-SOUTH FACE

(Looking North)

BILL OF MATERIAL

Item	Unit	Quantity
Structural repair of concrete (depth equal to or less than 5")	Sq Ft	121
Concrete Sealer	Sq Ft	2,583

LEGEND

Area of structural repair of concrete (depth equal to or less than 5")

END VIEW

(West Face)

END VIEW

(East Face)

NOTES:

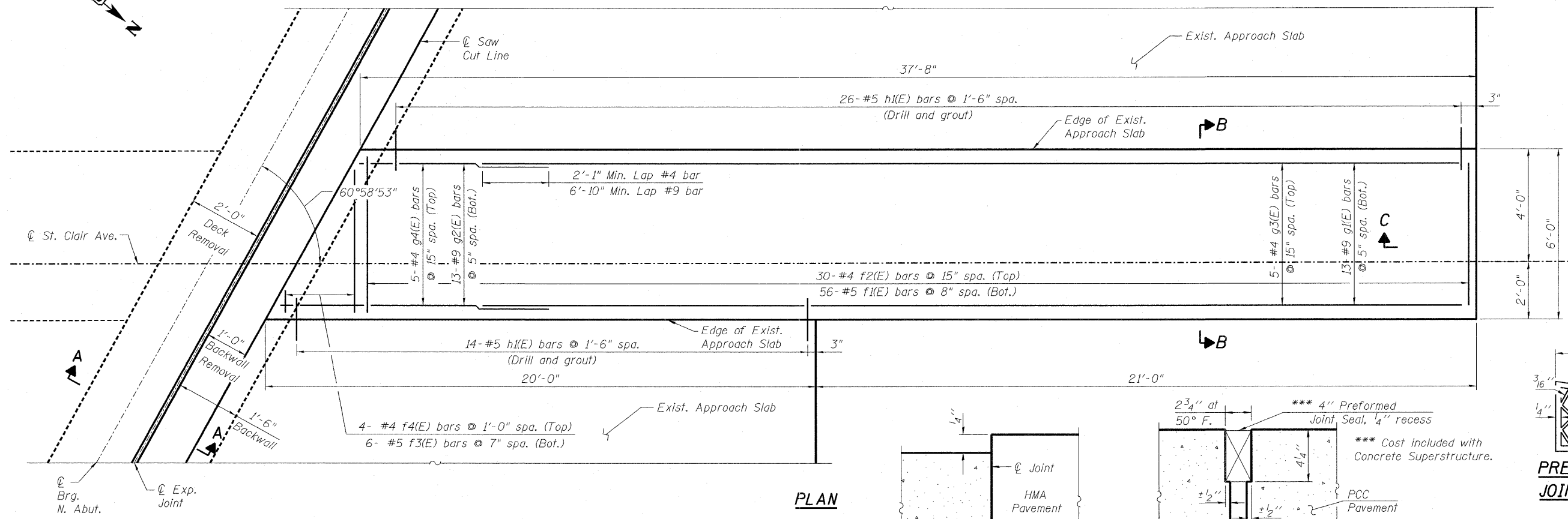
- Deck and Superstructure not shown for clarity.
- The Contractor is advised that conduit, luminaries and electrical boxes are attached to the center pier. The Contractor shall protect the electrical equipment from damage. If removed to make repairs the Contractor shall reinstall the equipment. Cost included with Structural Repair of Concrete.
- Concrete Sealer shall be applied to vertical faces of pier columns and exposed horizontal and vertical faces of crash wall.

PIER REPAIR
STRUCTURE NO. 082-0099

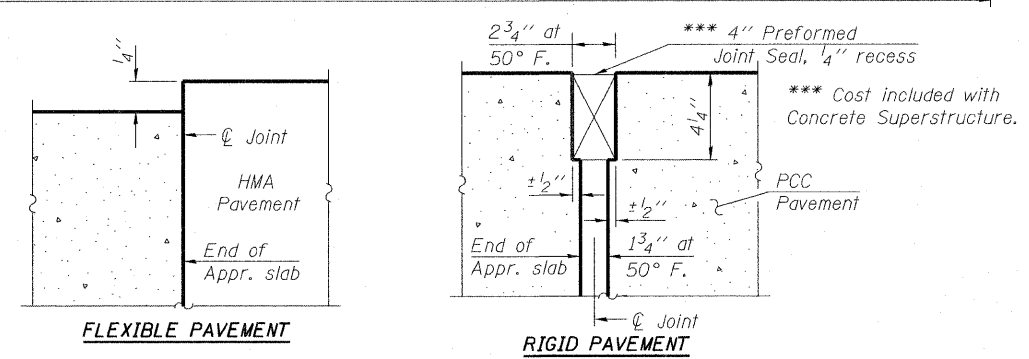
DESIGNED - WLB
CHECKED - EJO
DRAWN - JHR
CHECKED - EJO

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S18	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	256
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

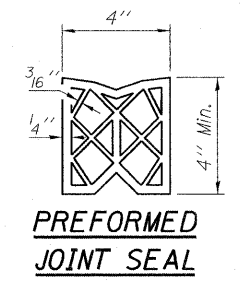
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



DETAIL A



PREFORMED JOINT SEAL

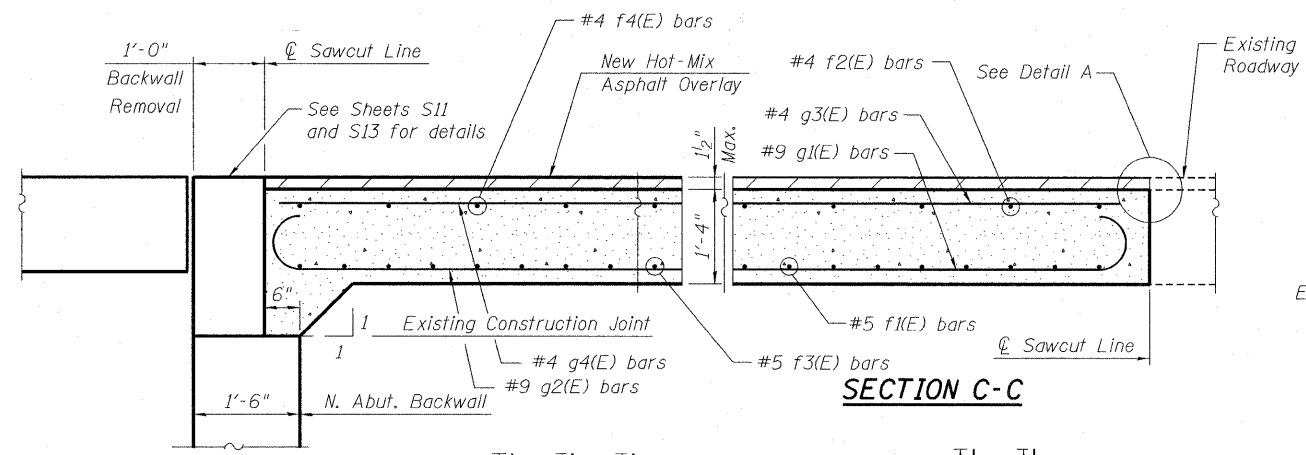
LEGEND:



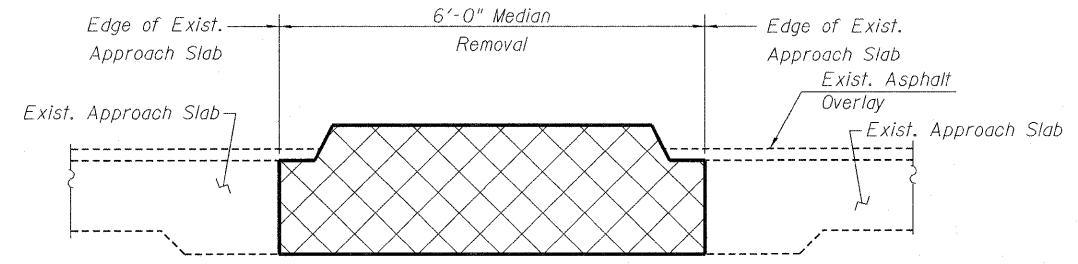
Concrete Removal

BILL OF MATERIAL

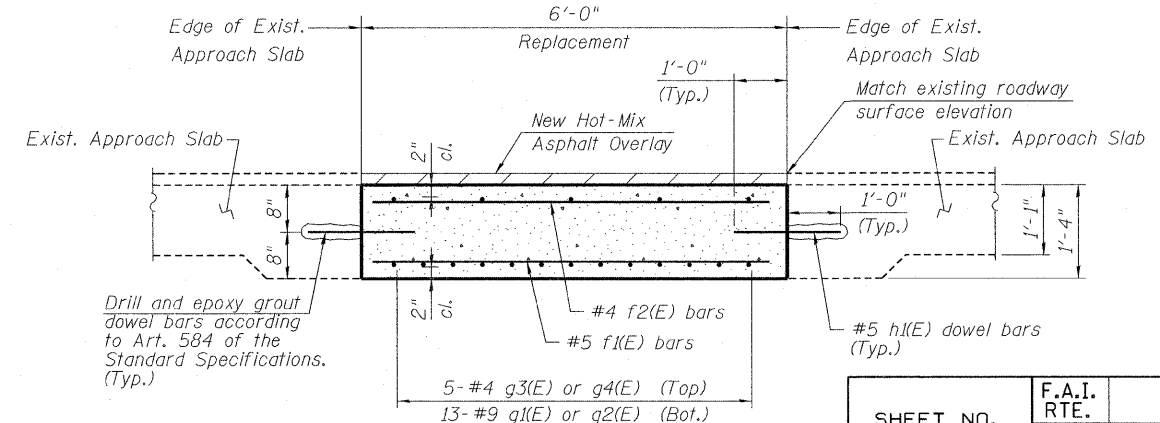
Bar	No.	Size	Length	Shape
f1(E)	56	#5	5'-8"	—
f2(E)	30	#4	5'-8"	—
f3(E)	3	#5	5'-4"	—
f4(E)	2	#4	5'-4"	—
g1(E)	13	#9	31'-3"	U
g2(E)	13	#9	18'-9"	U
g3(E)	5	#4	30'-0"	—
g4(E)	5	#4	12'-9"	—
h(E)	40	#5	2'-0"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	2,910		
Concrete Removal	Cu. Yd.	17		
Concrete Superstructure	Cu. Yd.	12		
Hot-Mix Asphalt Surface Course, Mix "D", N70	Ton	2		



SECTION C-C

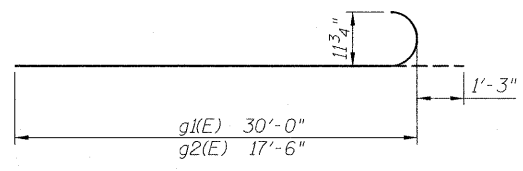


SECTION B-B REMOVAL

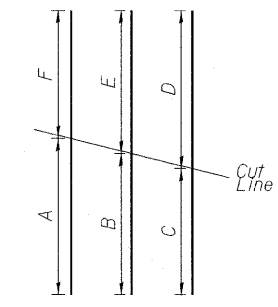


SECTION B-B WIDENING

SECTION A-A

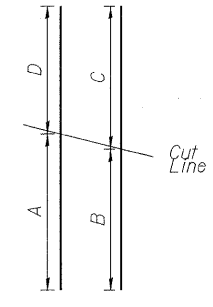


BARS g1(E) & g2(E)



f3(E) CUT DIAGRAM

Segment	Length
A	4'-8"
B	3'-10"
C	3'-0"
D	2'-4"
E	1'-6"
F	8"



f4(E) CUT DIAGRAM

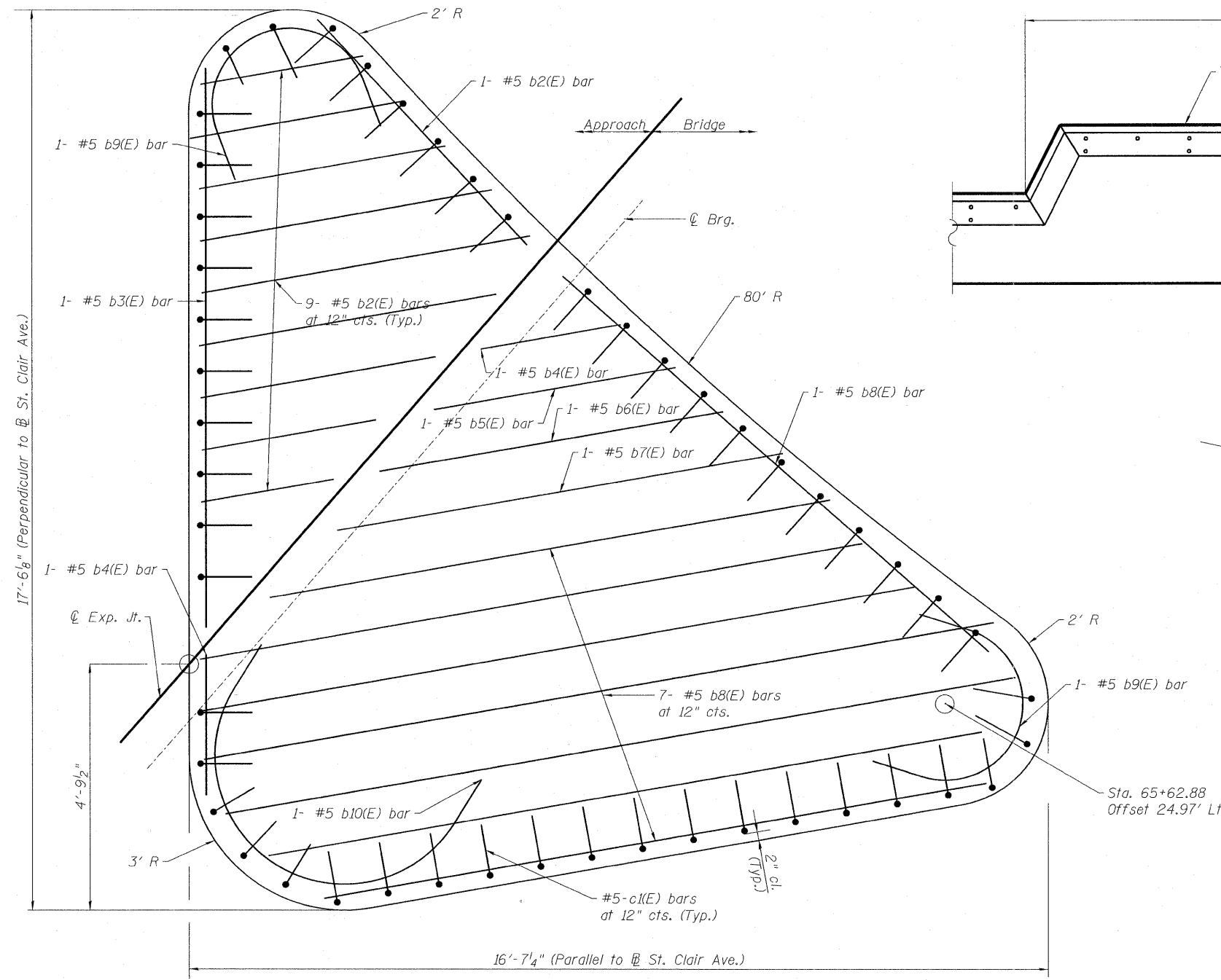
Segment	Length
A	4'-8"
B	3'-4"
C	2'-0"
D	8"

DESIGNED - DEV
CHECKED - EJO
DRAWN - GF
CHECKED - EJO

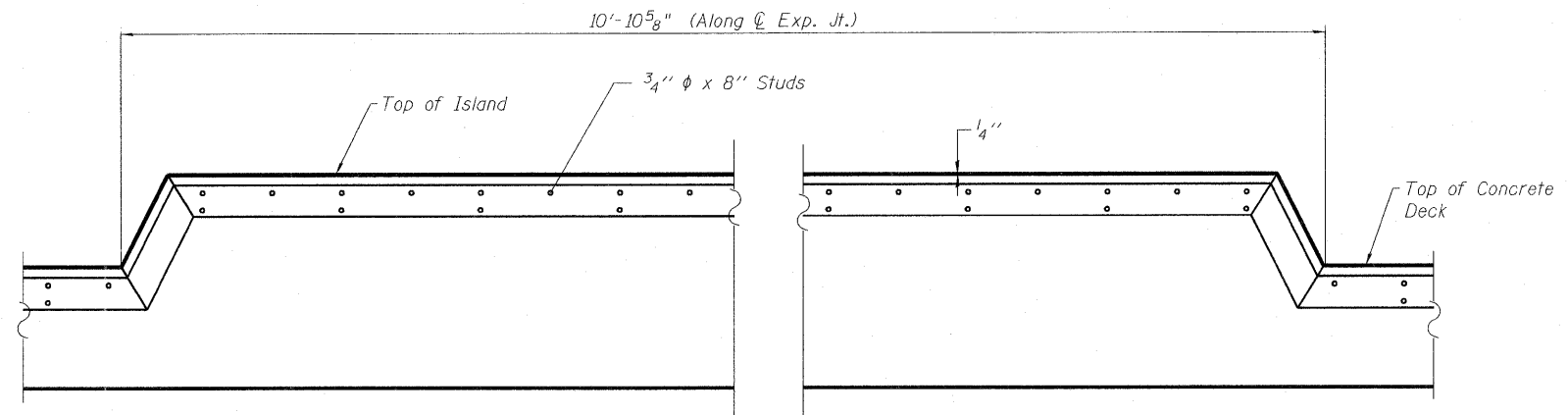
APPROACH SLAB WIDENING
STRUCTURE NO. 082-0099

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S19	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	257
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

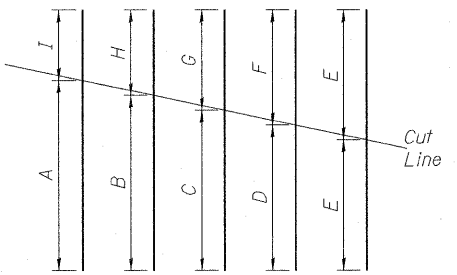
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SPPLITTER ISLAND PLAN

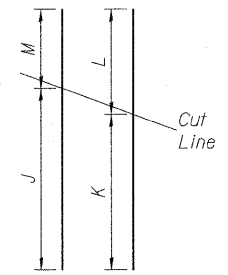


EXPANSION JOINT DETAIL



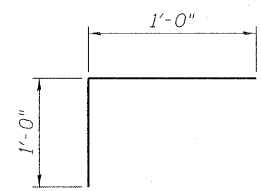
b2(E) CUT DIAGRAM

Segment	Length
A	6'-6"
B	6'-0"
C	5'-6"
D	5'-0"
E	4'-6"
F	4'-0"
G	3'-6"
H	3'-0"
I	2'-6"

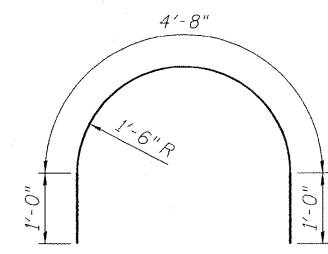


b8(E) CUT DIAGRAM

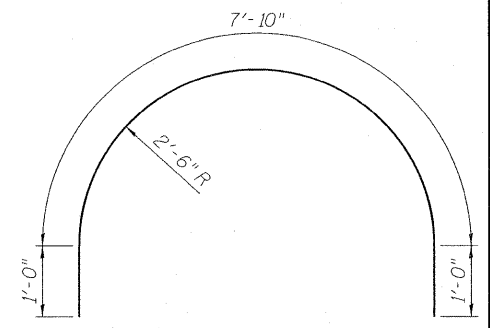
Segment	Length
J	15'-6"
K	13'-6"
L	13'-0"
M	11'-0"



BAR c1(E)



BAR b9(E)

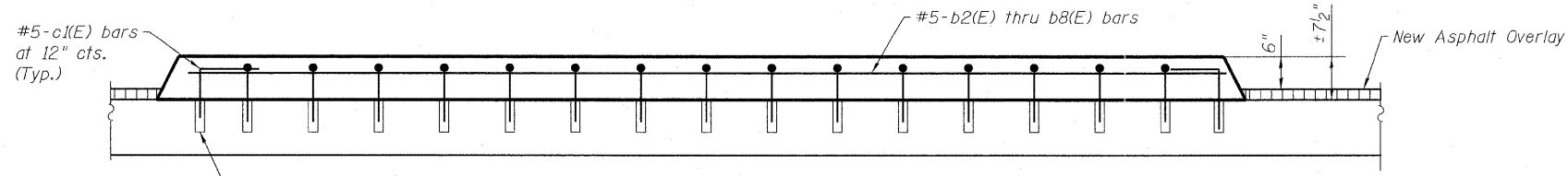


BAR b10(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b2(E)	5	#5	9'-0"	—
b3(E)	1	#5	10'-9"	—
b4(E)	2	#5	2'-9"	—
b5(E)	1	#5	4'-9"	—
b6(E)	1	#5	6'-9"	—
b7(E)	1	#5	8'-9"	—
b8(E)	4	#5	26'-6"	—
b9(E)	2	#5	6'-8"	U
b10(E)	1	#5	9'-10"	U
c1(E)	50	#5	2'-0"	L

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	330
Concrete Superstructure	Cu. Yd.	5.0



SPPLITTER ISLAND SECTION

* Epoxy grouting to be done in accordance with Art. 584 of the Standard Specifications.

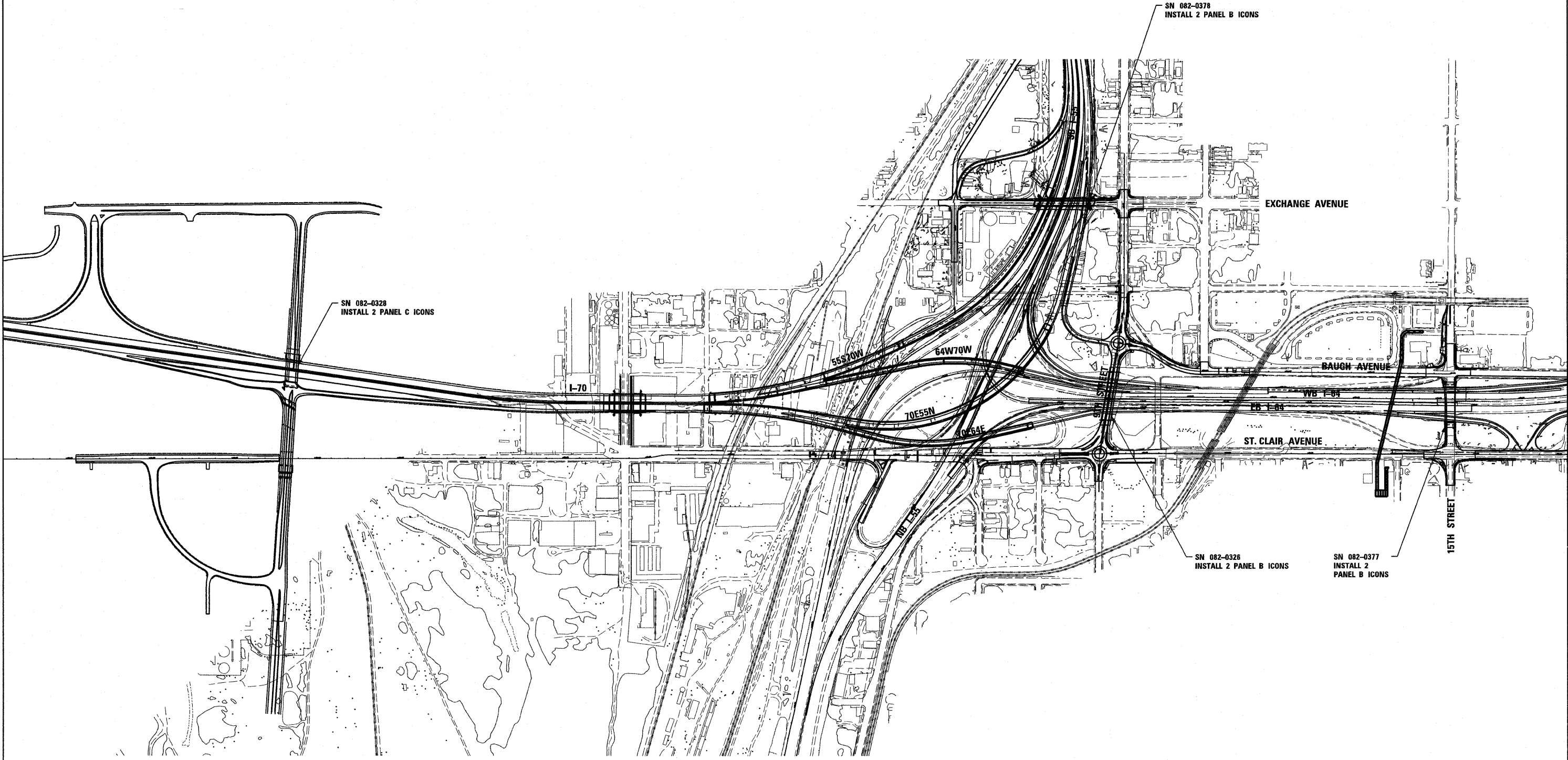
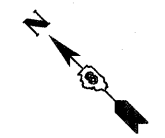
NOTES:

1. Installation of Preformed Joint Strip shall follow guidelines on sheets S12 and S13
2. Proposed Splitter Island shall be installed as part of Stage II Construction.
3. Cost of Drill & Grout included in Reinforcement Bars, Epoxy Coated.

**SPPLITTER ISLAND DETAILS
STRUCTURE NO. 082-0099**

DESIGNED - DEV
CHECKED - ATB
DRAWN - JHR
CHECKED - ATB

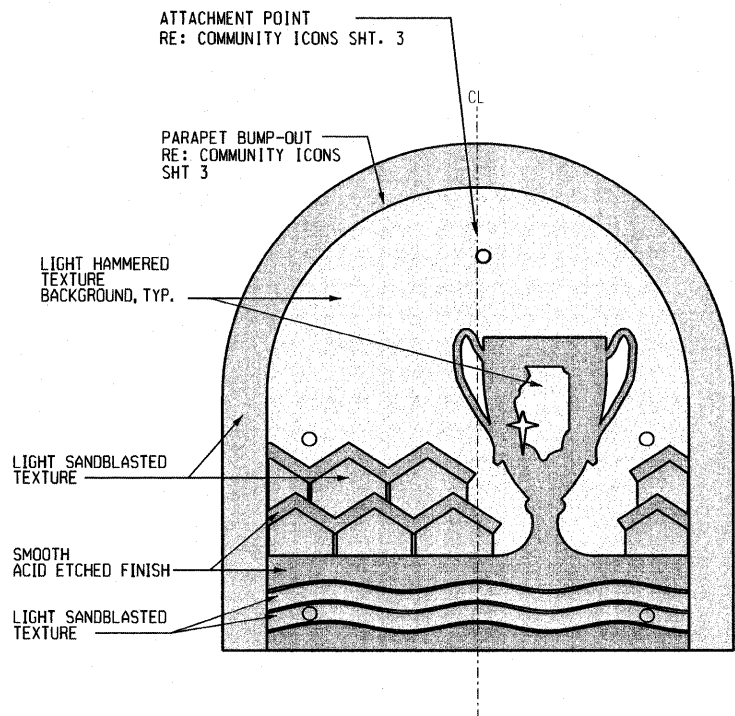
SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S20	64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	257A
S20 SHEETS	F.A.U. 9166 / F.A.U. 9180		CONTRACT NO. 76C51		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



NOTE:
 PROVIDE 1 (EACH) PANEL B ICON AND 1 (EACH) PANEL C ICON TO THE DISTRICT AS A SPARE. THE SPARE ICONS ARE TO BE STORED AT THE BOWMAN YARD FOR ANY FUTURE REPLACEMENT NEEDS.

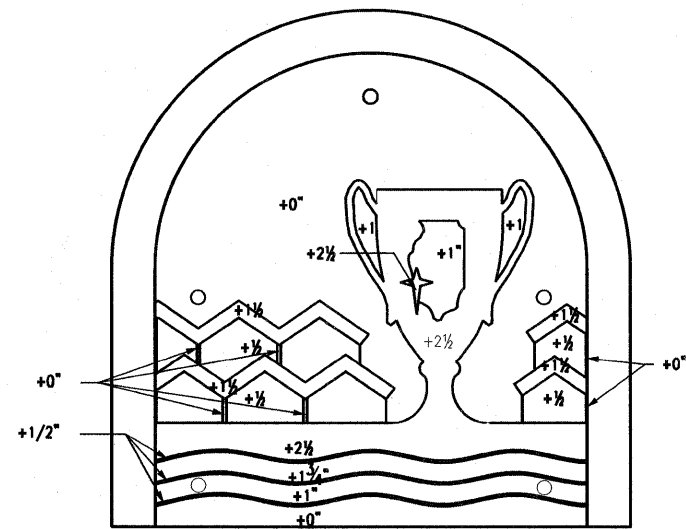
FILE NAME = DBTRI-76C51-Mainline Details 01.dgn	USER NAME = searsb	DESIGNED	REVISOR	DATE	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMUNITY ICON DETAILS LOCATION MAP	SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN MR	REVISOR				• 82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	258					
		CHECKED DBM	REVISOR				• 9166/9180/9213/9214	CONTRACT NO. 76C51							
		DATE 03/31/2011	REVISOR				FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT								

- NOTE:**
1. VERIFY ALL DIMENSIONS AS PART OF FINAL DESIGN DETAILING.
 2. DIMENSIONS SHOWN FOR PANEL ATTACHMENT ANCHORS ARE APPROXIMATE. FINAL SIZE, TYPE, NUMBER AND LOCATIONS OF STAINLESS STEEL ANCHORS TO BE COORDINATED WITH LAYOUT OF ICON IMAGE AS PART OF PANEL PRECAST MANUFACTURER'S ENGINEERED SHOP DRAWING.
 3. RELIEF FOR ICON PANELS ARE REFERENCED IN INCHES WITH "0" EQUAL TO 4" PANEL THICKNESS- ALL RELIEF IS IN OFFSET, LEVEL PLANES EXCEPT AS NOTED BELOW
 - A. HAND AND CUP SILHOUETTES TO BE SCULPTED (ROUNDED FORM) RATHER THAN OFFSET LEVEL PLANE
 - B. STAR SIDES TO BE ANGLED FROM EDGES TO HIGH POINTS AT CENTER OF RAYS RATHER THAN OFFSET LEVEL PLANES
 4. CAD FILE OF 2-D ICON LINE DRAWINGS WILL BE PROVIDED TO FORM LINER FABRICATOR FOR PRODUCING THE MASTER MOLD.
 5. PROVIDE MULTI-USE FORM LINERS AND THE NUMBER OF PANELS OF EACH ICON DESIGN AS NOTED BELOW TO IDOT DISTRICT 8 FOR STORAGE AT LOCATION DETERMINED BY IDOT (BOWMAN YARD)
 - PANEL B- PROVIDE 6 PANELS FOR INSTALLATION AND 1 PANEL FOR EXTRA INVENTORY.
 - PANEL C- PROVIDE 2 PANELS FOR INSTALLATION AND 1 PANEL FOR EXTRA INVENTORY.
 6. VERIFY IN FIELD DIMENSIONS FOR ALL PARAPET BUMP-OUTS (ICON PANEL OPENINGS) PRIOR TO FABRICATION OF ICON PANELS.



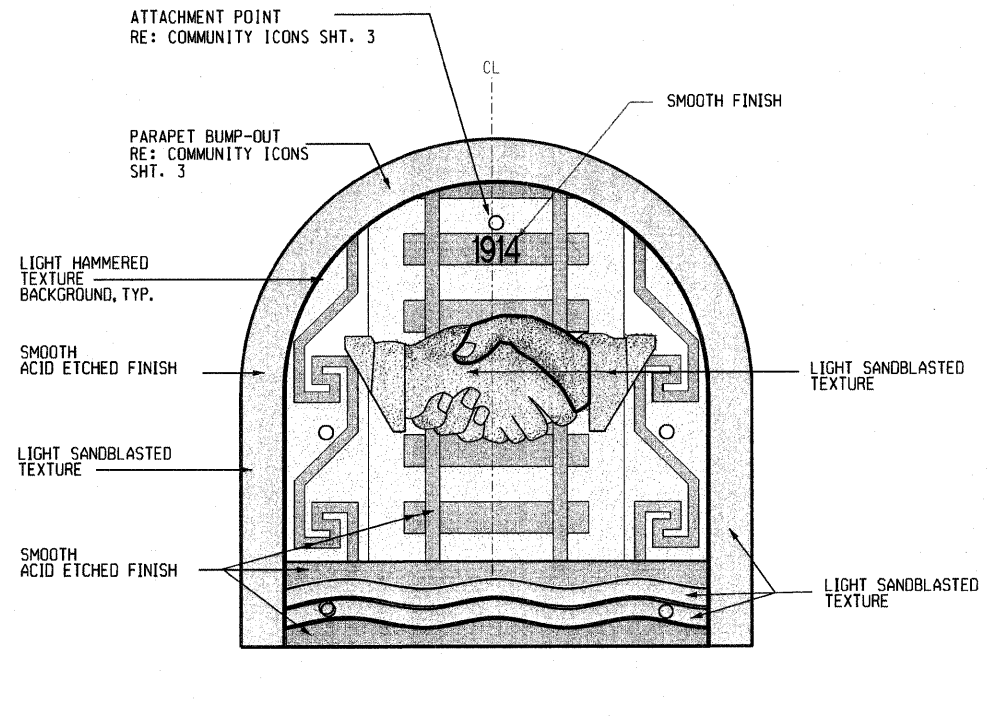
1
2 Icon Design- Panel B- East St. Louis, IL
Front Elevation

N.T.S.
INSTALL 2 EACH @ SN #082-0326
INSTALL 2 EACH @ SN #082-0377
INSTALL 2 EACH @ SN #082-0378
PROVIDE 1 EACH TO DISTRICT AS SPARE



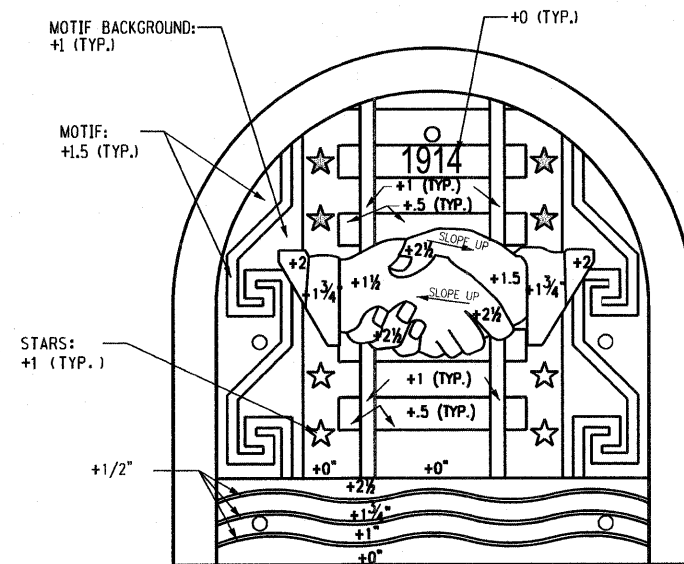
3
2 Icon Design- Panel B- East St. Louis, IL
Relief Offset Elevations

N.T.S.



2
2 Icon Design- Panel C- Fairmont City, IL
Front Elevation

N.T.S.
INSTALL 2 EACH @ SN #082-0328
PROVIDE 1 EACH TO DISTRICT AS SPARE

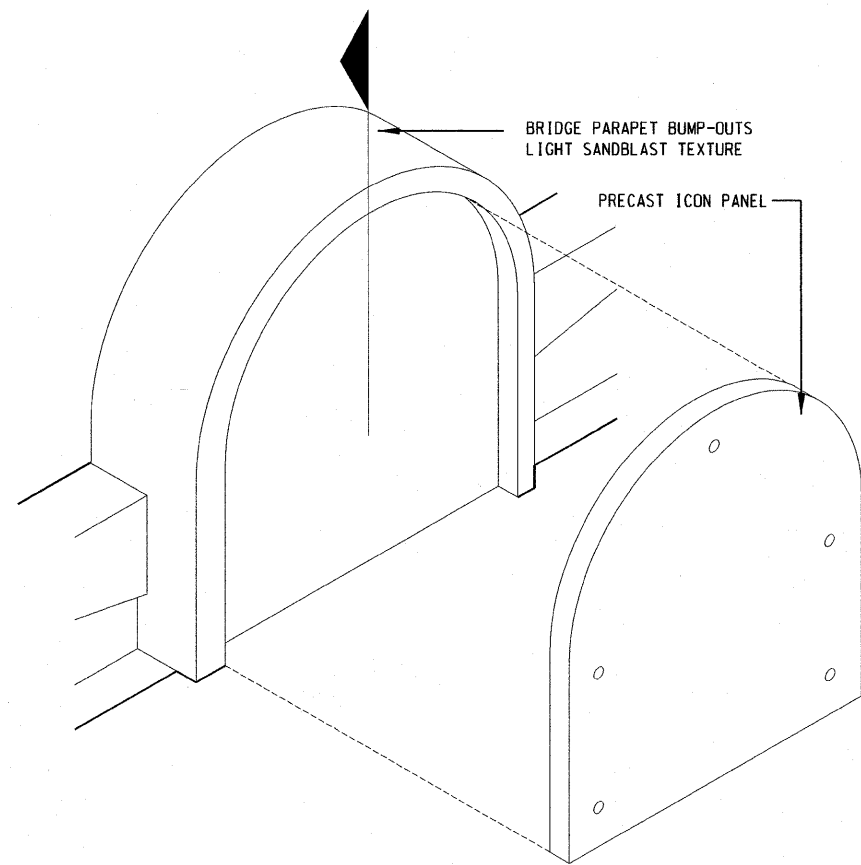


4
2 Icon Design- Panel C- Fairmont City, IL
Relief Offset Elevations

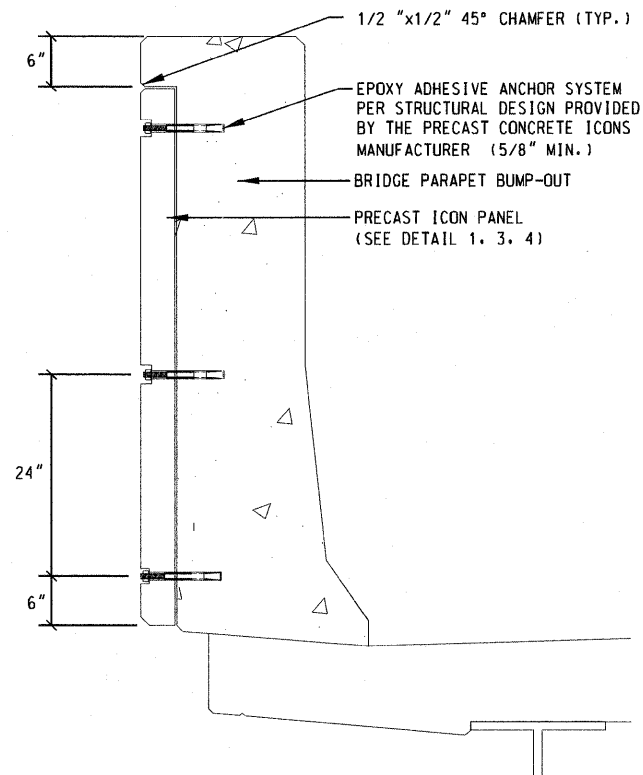
N.T.S.

Community Icon Panel Applicable to Gateway Bridges

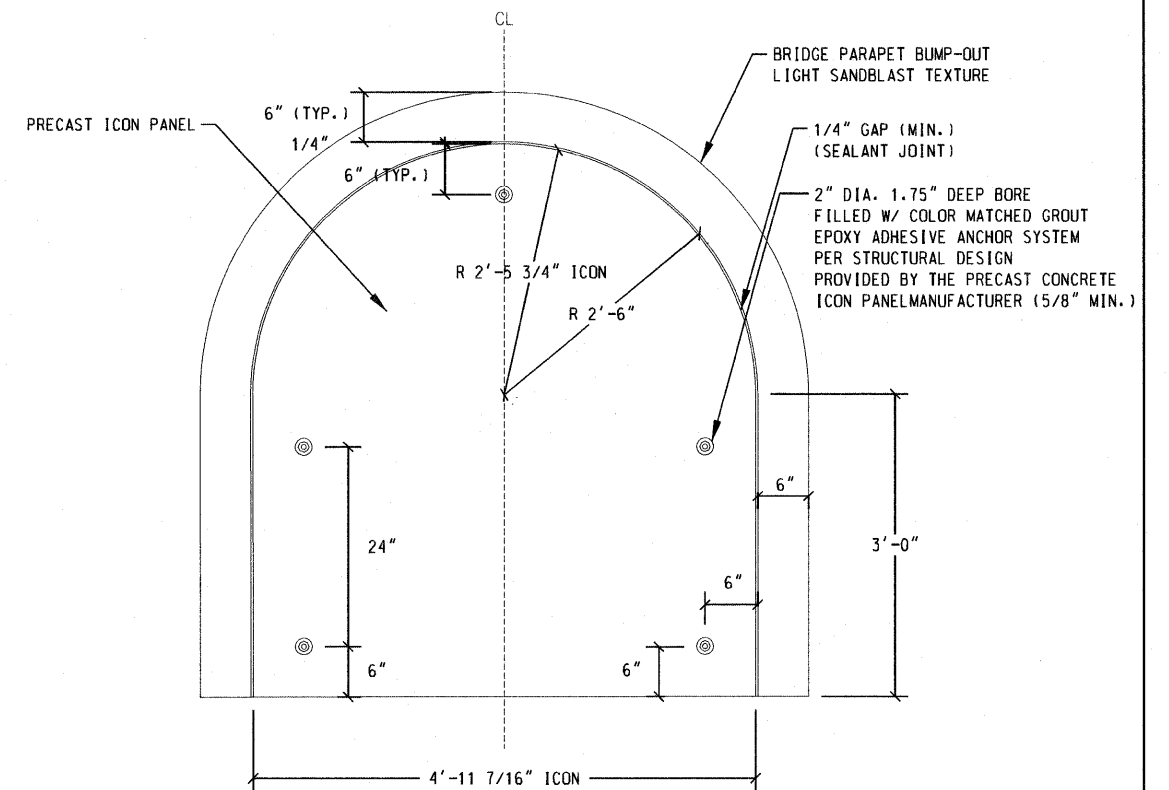
FILE NAME = D8TR1-76C51-Mainline_Details_02.dgn	USER NAME = sear-sb	DESIGNED	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMUNITY ICON DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN MR	REVISED -					• 82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	259	
		CHECKED DBM	REVISED -					• 9166/9180/9213/9214			CONTRACT NO. 76C51	
		DATE 03/03/2011	REVISED -					FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
				SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA.								



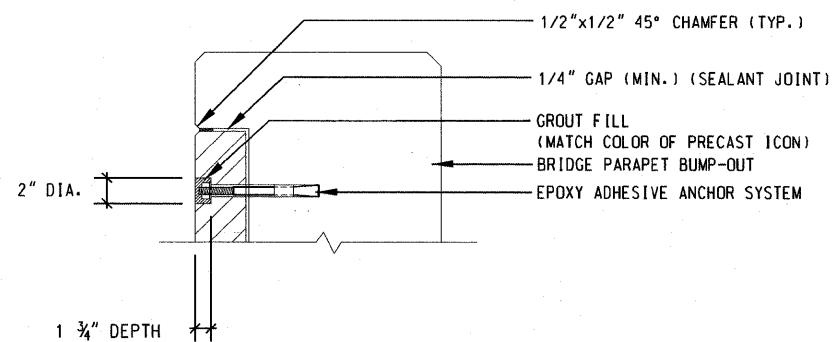
1 Icon Detail - Isometric View
3 N.T.S.



2 Icon Detail - Parapet Section
3 N.T.S.



3 Icon Detail - Parapet Elevation
3 N.T.S.



4 Icon Detail - Chamfer
3 N.T.S.

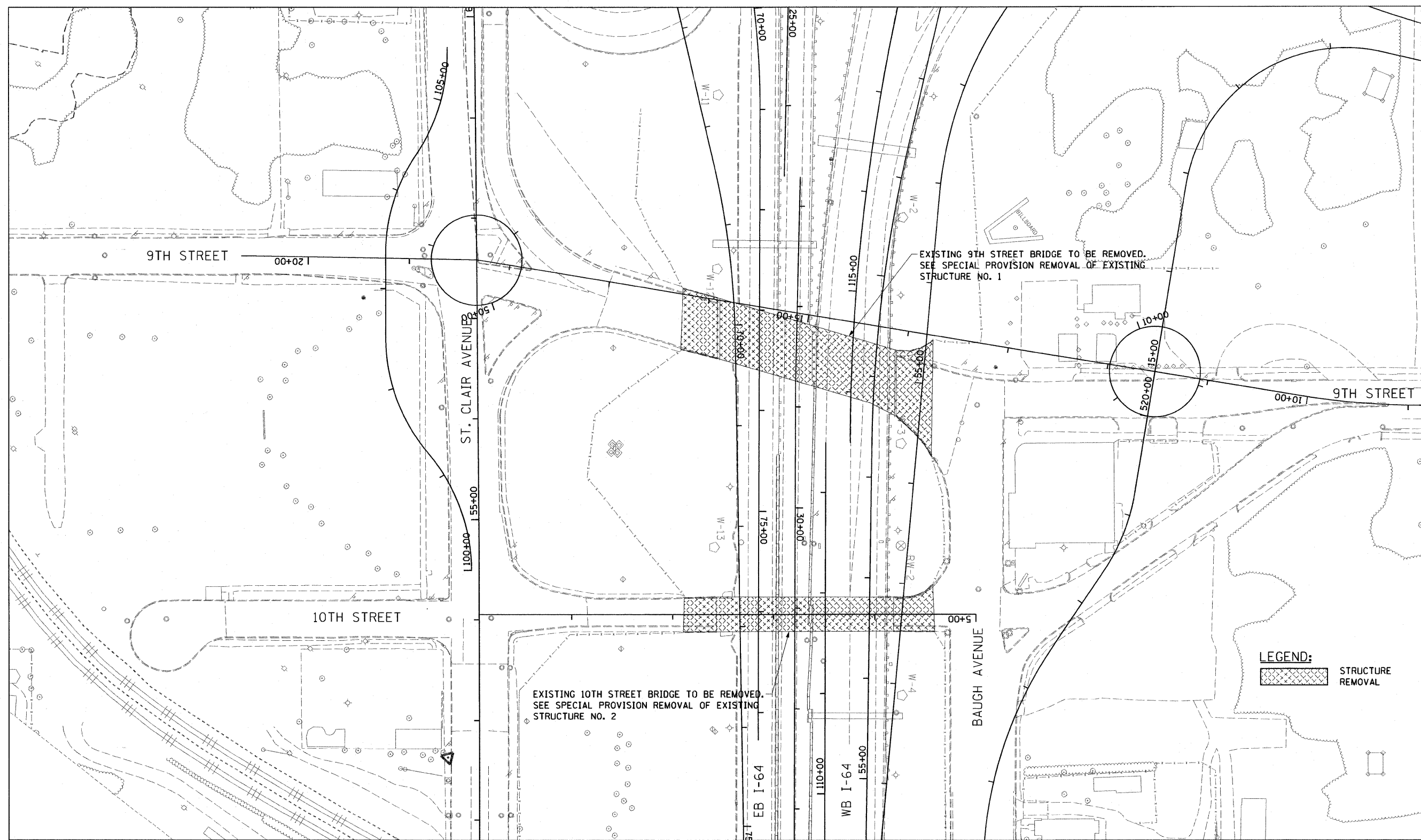
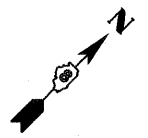
NOTE:

VERIFY ALL DIMENSIONS AS PART OF FINAL DESIGN DETAILING.

DIMENSIONS SHOWN FOR PANEL ATTACHMENT ANCHORS ARE APPROXIMATE. FINAL SIZE, TYPE, NUMBER AND LOCATIONS OF STAINLESS STEEL ANCHORS TO BE COORDINATED WITH LAYOUT OF ICON IMAGE AS PART OF PANEL PRECASTER'S ENGINEERED SHOP DRAWING.

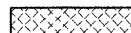
Community Icon Panel Applicable to Gateway Bridges

FILE NAME = DBTRI-76C51-Mainline Details 03.dgn	USER NAME = sear-sb	DESIGNED	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMUNITY ICON DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN MR	REVISED -					• 82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	260	
		CHECKED DBM	REVISED -					• 9166/9180/9213/9214	CONTRACT NO. 76C51			
		DATE 03/31/2011	REVISED -					FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT			
				SCALE: NONE	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.					



EXISTING 10TH STREET BRIDGE TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING
STRUCTURE NO. 2

EXISTING 9TH STREET BRIDGE TO BE REMOVED.
SEE SPECIAL PROVISION REMOVAL OF EXISTING
STRUCTURE NO. 1

LEGEND:
 STRUCTURE
REMOVAL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1
REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1

FILE NAME =
D8T-r-76C51-shr-demo81.dgn

USER NAME = BhattA
 PLOT SCALE = 100.000' / in.
 PLOT DATE = 6/14/2011

DESIGNED ATB
 DRAWN PHP
 CHECKED ATB
 DATE 03/31/2011

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

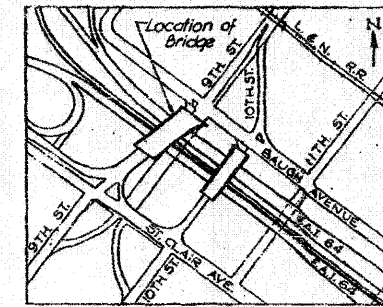
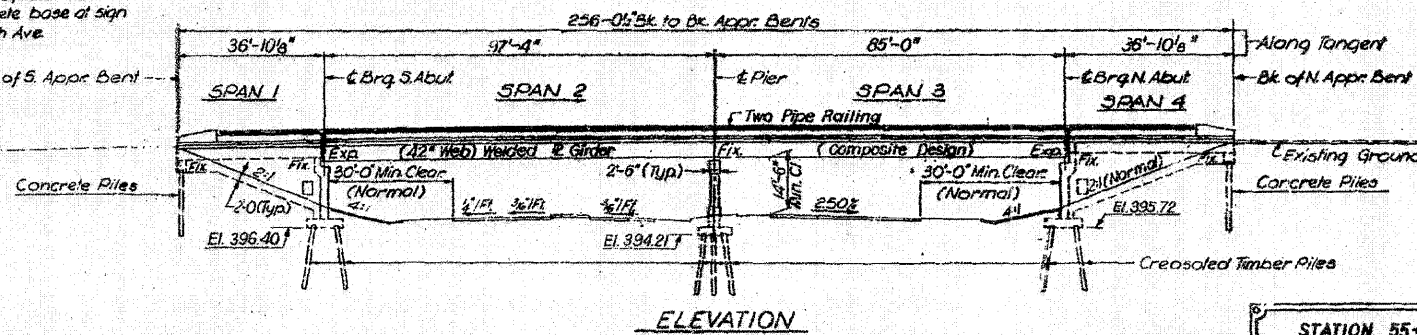
STRUCTURAL REMOVAL PLAN

SCALE: 1" = 50' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
• 82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	261	
• 9166/9180/9213/9214	CONTRACT NO. 76C51			
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FOR INFORMATION ONLY

B.M. 6-B El. 419.778 Cut square South Easterly corner concrete base of sign NW corner 9th & Bough Ave.



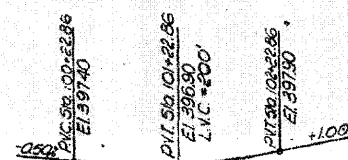
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 64	82-1HB	ST. CLAIR	110	58
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT EMP. 64-1(66)		

GENERAL NOTES

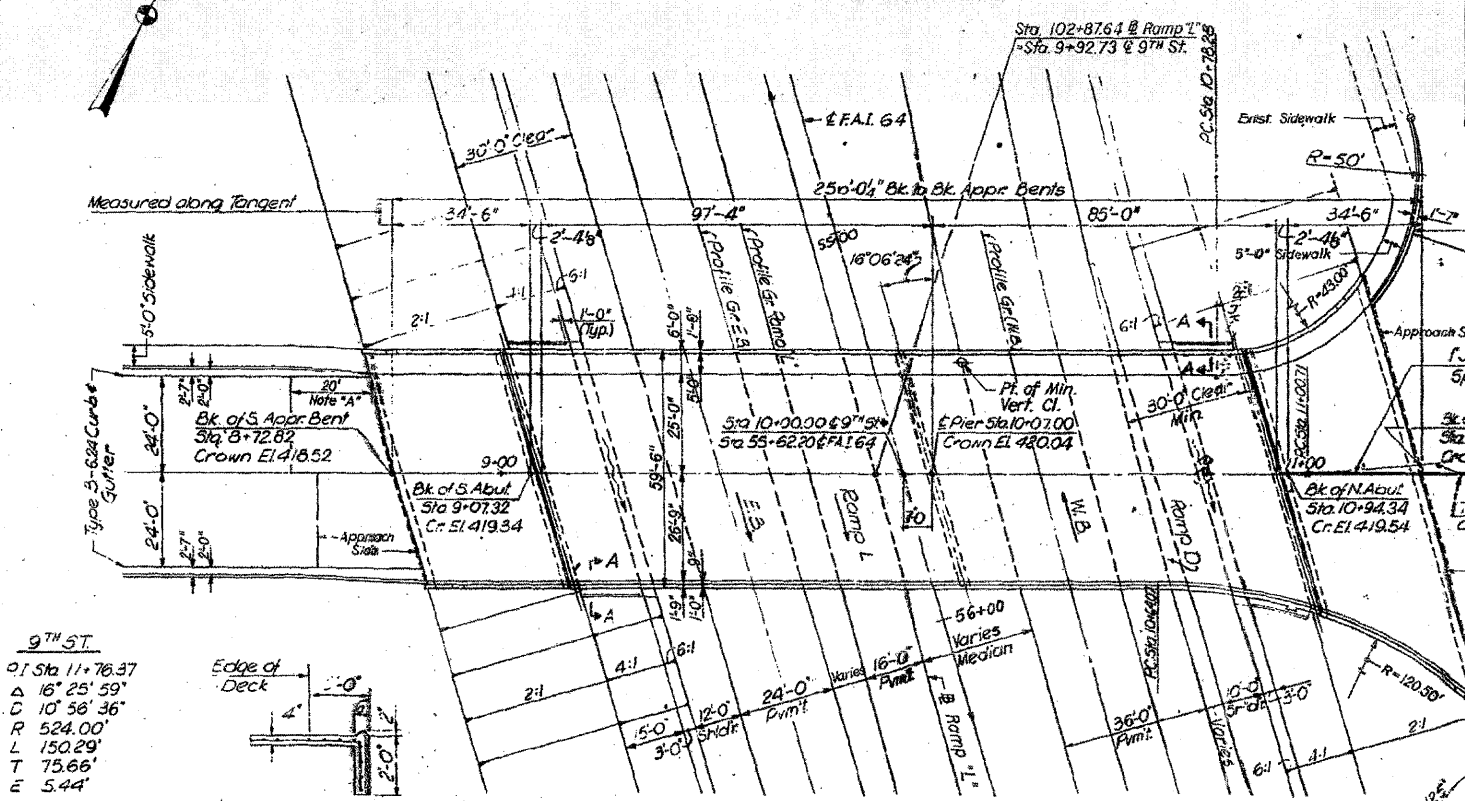
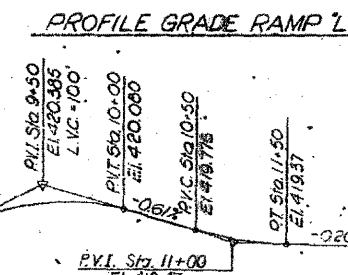
All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Field connections shall be bolted using high strength bolts. Bolts 3/4" φ, open holes 13/16" φ, unless otherwise noted.

STATION 55+62.20
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 82-1HB
F.A. PROJ. EMP. 64-1(66)
LOADING HS20

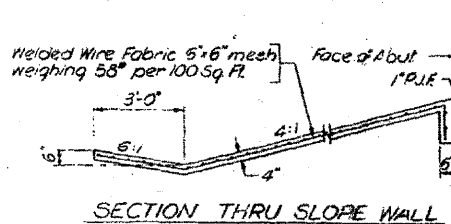


NAME PLATE
See Sht. 213
For Location see Sht. No. 16



9th ST.
O1 Sta 11+76.37
Δ 16' 25' 59"
D 10' 56' 36"
R 524.00'
L 150.29'
T 75.66'
E 5.44'

SECTION A-A



PROFILE GRADE OF F.A.I. RT. 64 (WESTBOUND)

PROFILE GRADE OF F.A.I. RT. 64 (EASTBOUND)

DESIGN STRESSES AND LOADS

- $f_s = 248,000$ psi Prestressing Steel
 - $f_{si} = 173,600$ psi
 - $f_c = 5,000$ psi Prestressed Concrete
 - $f_{ci} = 4,000$ psi
 - $f_s = 1,200$ psi Superstructure Substructure
 - $f_c = 1,400$ psi
 - $f_s = 20,000$ psi Reinforcement
 - $f_c = 20,000$ psi Structural Steel (A-36)
 - $v_c = 75$ psi Footings
- LIVE LOAD DEFLECTION: 1/200 Composite
LOADING: HS20-44
Future Wearing Surface = 25 #/ft.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Structure Excavation	Cu. Yds.	—	690	690
Furnishing and Erecting Precast Prestressed Concrete I-Beams (36)	Lin. Ft.	748	—	748
Class X Concrete	Cu. Yds.	5432	4396	9828
Protective Coat	Sq. Yds.	1901	—	1901
Furnish and Erect Structural Steel	Lump Sum	1	—	1
Reinforcement Bars	Lbs.	123,178	42,040	165,218
Furnish Creosoted Piles (20' to 38')	Lin. Ft.	—	1071	1071
Test Piles Timber	Ea.	—	1	1
Driving Timber Piles	Lin. Ft.	—	2621	2621
Driving Concrete Piles	Lin. Ft.	—	888	888
Furnishing Concrete Piles	Lin. Ft.	—	888	888
Test Pile Concrete	Ea.	—	1	1
Name Plates	Ea.	—	2	2
Slope Wall 4"	Sq. Yds.	—	352	352
Aluminum Railing Type L	Lin. Ft.	487	—	487
Stud Shear Connectors	Each	3,326	—	3,326
Pref. Joint Sealer	Lin. Ft.	130	—	130
Steel Railing Type M	Lin. Ft.	487	—	487

Calculated Plan Weight of Structural Steel = 310,400 Lbs.

Furnish Creosoted Piles (up to 20') (Lin. Ft.) 1550

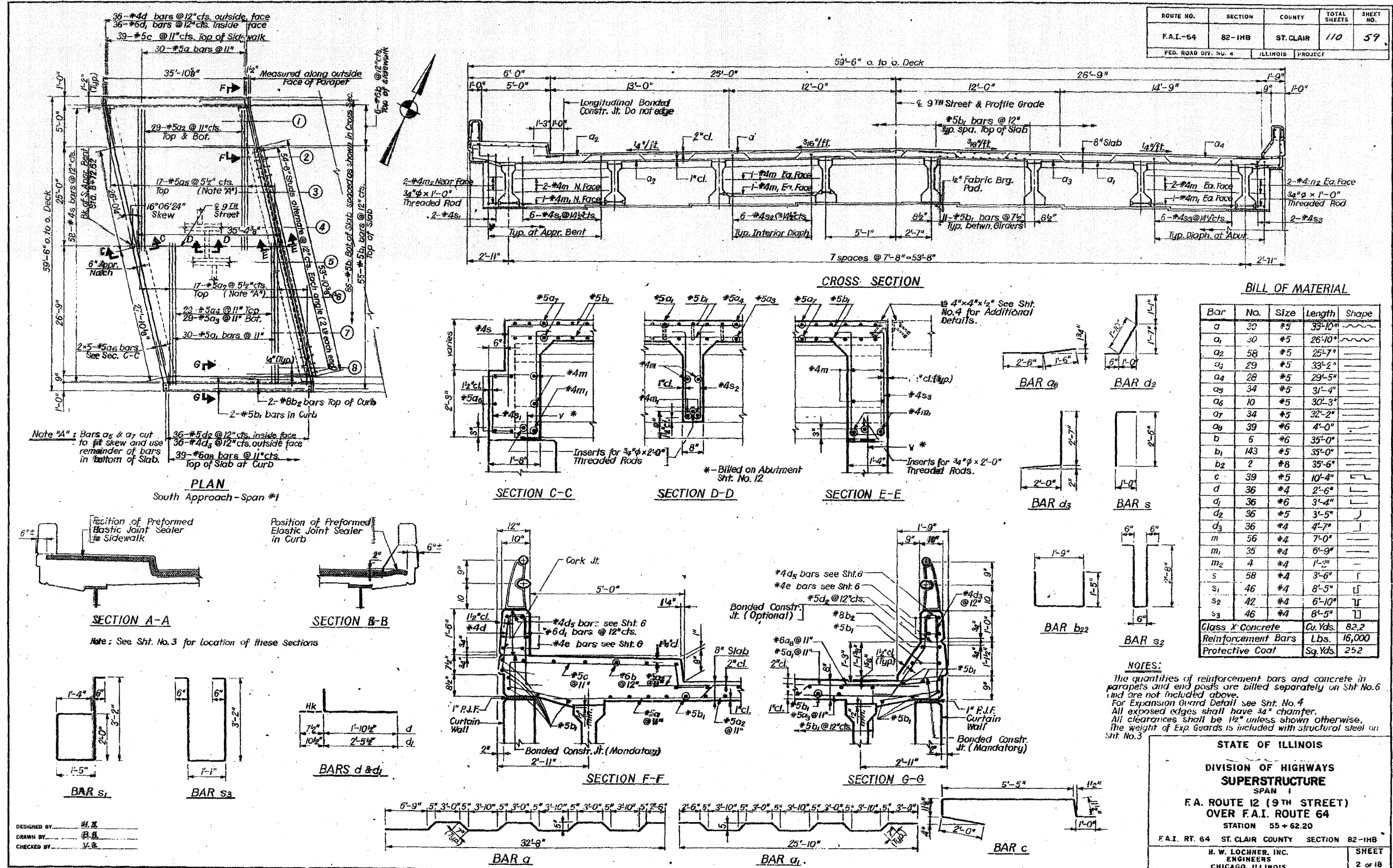
STATE OF ILLINOIS
DIVISION OF HIGHWAYS
GENERAL PLAN
F.A. ROUTE 12 (9TH STREET)
OVER F.A.I. ROUTE 64

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 64	ST. CLAIR COUNTY	SECTION 82-1HB	352	262
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS				SHEET 1 of 16

Rev. E-18-69 Class X Conc from 98' 2" C. 11' L to 98' 2" C. 11' L, Rein from 158,840' to 165,110' SWL Rev. A-8-69 Furn Creosoted Piles from 2315 Lin. Ft. to 1071 Lin. Ft. Added Furn. Cre. Piles 1550 Lin. Ft. Rev. E-17-70 F.A.E. Slab Steel from 3744 Lb. to 3744 Lb. & Rev. Notes L.I.

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	59
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



BILL OF MATERIAL

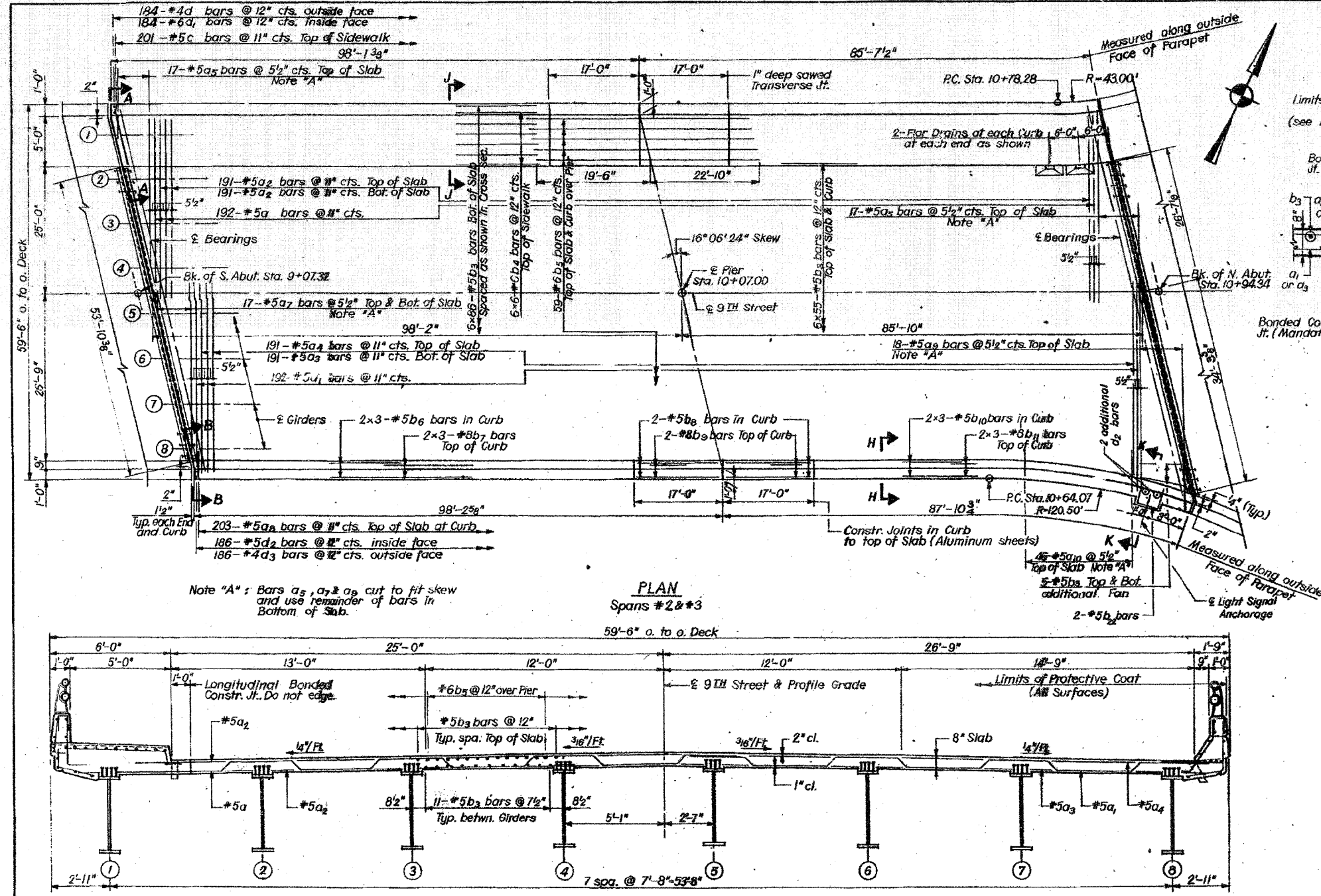
Bar	No.	Size	Length	Shape
a	30	#5	33'-10"	~
a ₁	30	#5	26'-10"	~
a ₂	58	#5	25'-7"	~
a ₃	29	#5	33'-2"	~
a ₄	28	#5	29'-5"	~
a ₅	34	#5	31'-4"	~
a ₆	10	#5	30'-3"	~
a ₇	34	#5	32'-2"	~
a ₈	39	#6	4'-0"	~
b	6	#6	35'-0"	~
b ₁	143	#5	35'-0"	~
b ₂	2	#8	35'-6"	~
c	39	#5	10'-4"	~
d	36	#4	2'-6"	~
d ₁	36	#6	3'-4"	~
d ₂	36	#5	3'-5"	~
d ₃	36	#4	4'-7"	~
m	56	#4	7'-0"	~
m ₁	35	#4	6'-9"	~
m ₂	4	#4	1'-0"	~
s	58	#4	3'-6"	~
s ₁	46	#4	8'-5"	~
s ₂	42	#4	6'-10"	~
s ₃	46	#4	8'-5"	~
Class X Concrete			Cu. Yds.	82.2
Reinforcement Bars			Lbs.	16,000
Protective Coat			Sq. Yds.	252

NOTES:
 The quantities of reinforcement bars and concrete in parapets and end posts are billed separately on Sht. No. 6 and are not included above.
 For Expansion Guard Detail, see Sht. No. 4.
 All exposed edges shall have 3/4" chamfer.
 All clearances shall be 1/2" unless shown otherwise.
 The weight of Exp. Guards is included with structural steel on Sht. No. 3.

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SUPERSTRUCTURE
 SPAN I
 F.A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55+62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 2 OF 18

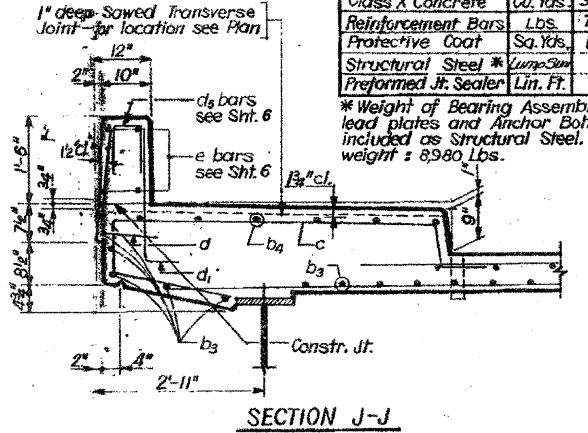
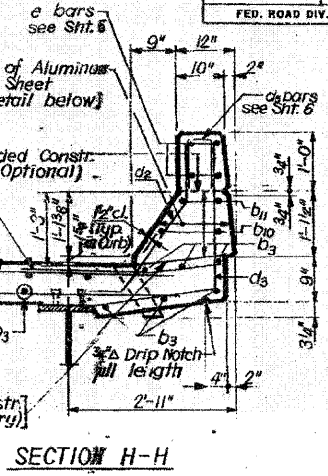
FOR INFORMATION ONLY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	60
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	192	#5	33-10	
a1	192	#5	26-10	
a2	382	#5	25-7	
a3	191	#5	33-2	
a4	191	#5	29-5	
a5	34	#5	31-4	
a7	17	#5	32-2	
a9	203	#6	4-0	
a9	16	#5	38-2	
a10	46	#5	8-6	
b22	2	#5	4-7	
b4	856	#5	31-5	
b4	36	#6	31-8	
b5	59	#6	42-4	
b6	6	#5	27-10	
b7	6	#8	28-5	
b8	4	#5	16-9	
b9	4	#8	16-9	
b10	6	#5	24-5	
b11	6	#8	25-0	
c	201	#5	10-4	
d	184	#4	2-6	
d1	184	#6	3-4	
d2	188	#5	3-5	
d3	186	#4	4-7	
Class X Concrete			Cu. Yds.	320.2
Reinforcement Bars			Lbs.	78,410
Protective Coat			Sq. Yds.	1299
Structural Steel			Lump Sum	1
Preformed Jt. Sealer			Lin. Ft.	130



NOTES:

The quantities of reinforcement bars and concrete in parapets are billed separately on Sht. No. 6 and are not included above.

For Expansion Guard Detail see Sht. No. 4. Weight of Expansion Guards is included with Structural Steel on this Sheet.

All exposed edges shall have 3/4" chamfer.

All clearances shall be 1/2" unless shown otherwise.

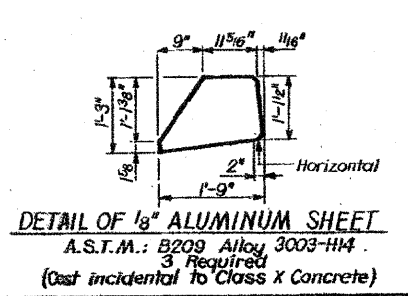
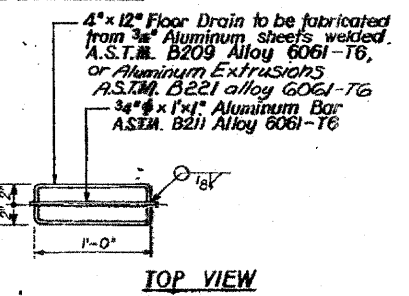
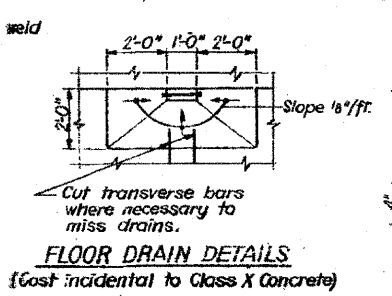
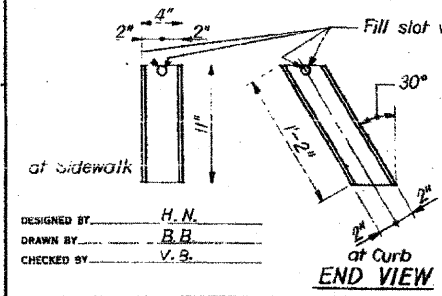
Bar laps = 24 dia.

For Sections A-A and B-B see Sht. 2

For Bar Diagrams see Sht. No. 2

Bars indicated thus 2x3-#5b6 etc, indicate 2 lines of bars with 3 lengths per line.

For Section K-K and Light Signal Anchorage Details see Sht. No. 7A.

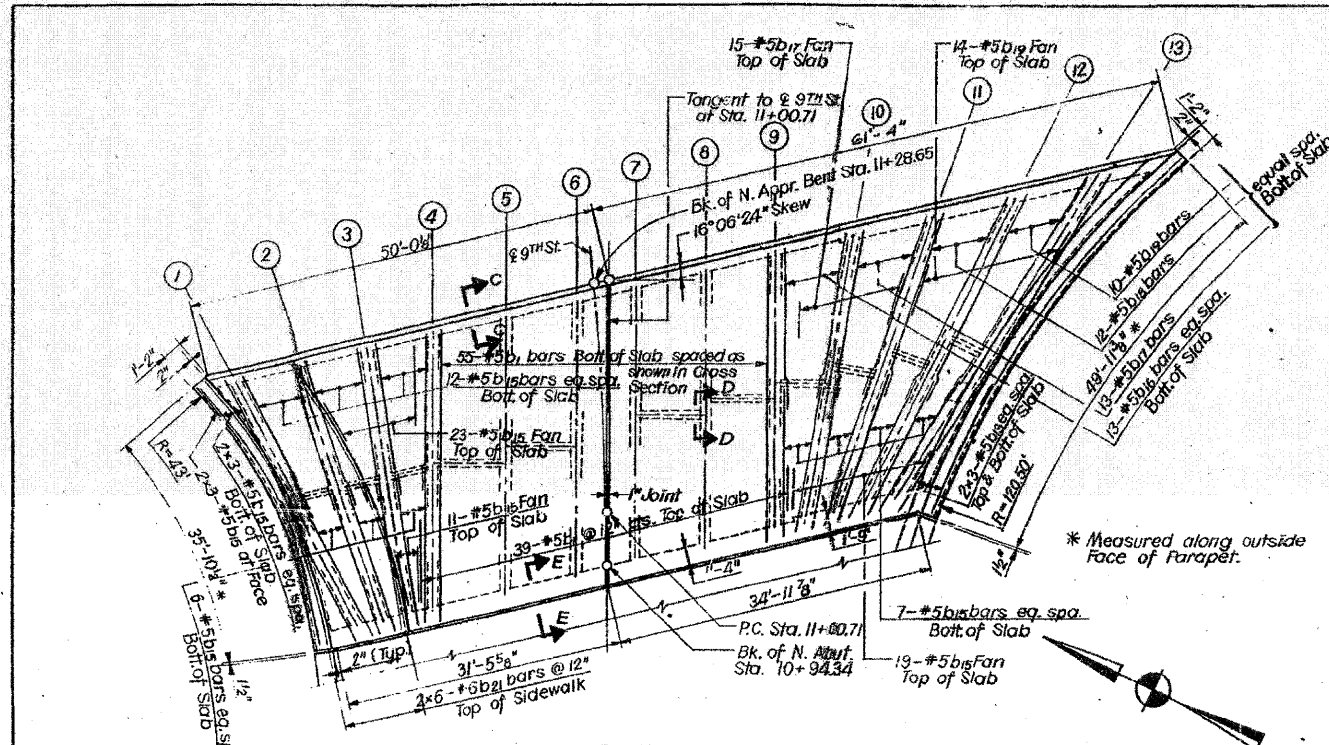


STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SUPERSTRUCTURE
 SPANS 2 AND 3
 F.A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55 + 62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 3 of 18

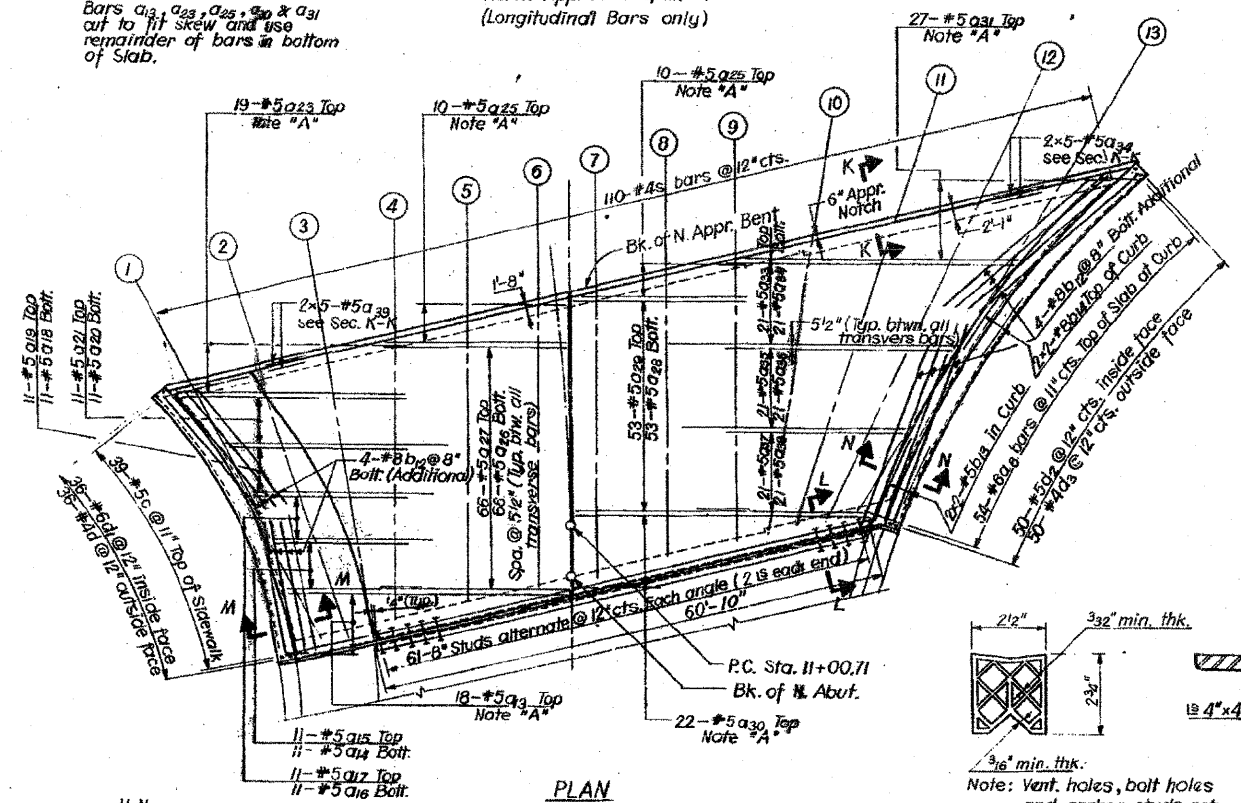
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL-64	82-1HB	ST. CLAIR	110	61
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



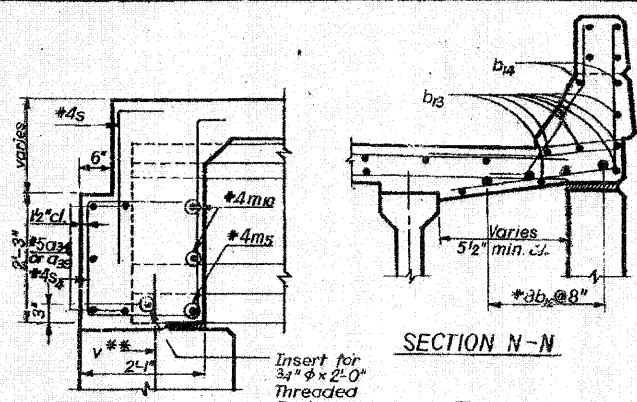
Note "A":
Bars a₁, a₂, a₃, a₄ & a₅ cut to fit skew and use remainder of bars at bottom of Slab.

PLAN
North Approach-Span #4
(Longitudinal Bars only)



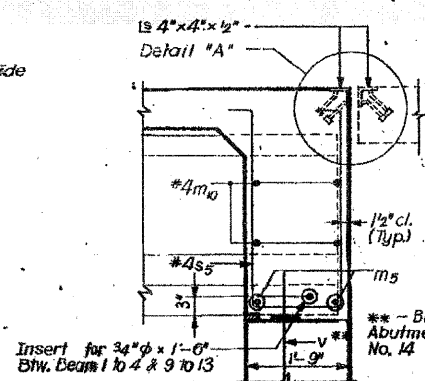
DESIGNED BY: H. N.
DRAWN BY: B. B.
CHECKED BY: V. B.

PLAN
North Approach-Span #4
(Transverse Bars)



SECTION K-K

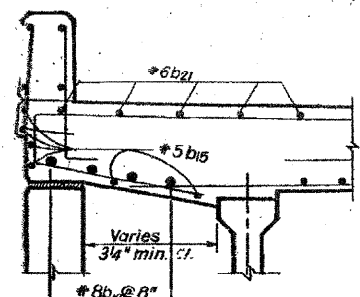
SECTION N-N



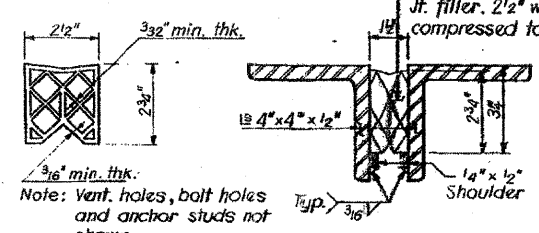
SECTION L-L

BAR S5

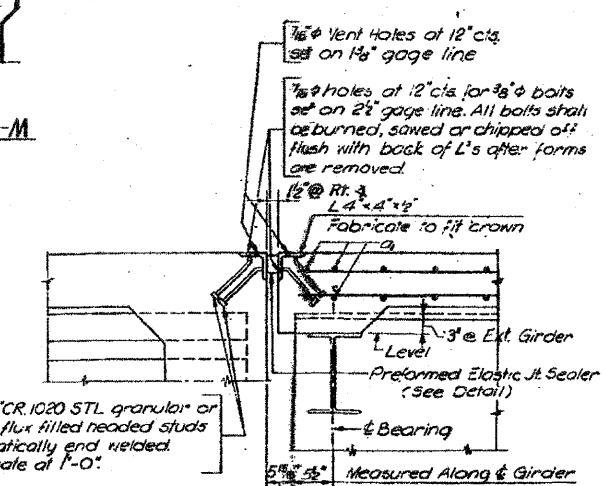
BAR S4



SECTION M-M



DETAIL OF PREFORMED ELASTIC JOINT SEALER



DETAIL "A"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a ₁	18	#5	31-0		
a ₂	11	#5	15-5		
a ₃	11	#5	16-9		
a ₄	11	#5	18-6		
a ₅	11	#5	19-6		
a ₆	11	#5	23-0		
a ₇	11	#5	23-6		
a ₈	11	#5	28-6		
a ₉	11	#5	29-0		
a ₁₀	19	#5	32-0		
a ₁₁	20	#5	17-6		
a ₁₂	66	#5	19-3		
a ₁₃	66	#5	15-3		
a ₁₄	53	#5	18-9		
a ₁₅	53	#5	14-9		
a ₁₆	22	#5	32-3		
a ₁₇	27	#5	37-0		
a ₁₈	21	#5	34-0		
a ₁₉	31	#5	31-0		
a ₂₀	21	#5	28-6		
a ₂₁	21	#5	24-6		
a ₂₂	21	#5	23-9		
a ₂₃	21	#5	19-9		
a ₂₄	10	#5	26-0		
a ₂₅	54	#6	4-0		
b ₁	94	#5	35-0		
b ₂	16	#8	18-0		
b ₃	16	#5	25-4		
b ₄	4	#6	25-9		
b ₅	147	#5	18-3		
b ₆	13	#5	19-9		
b ₇	29	#5	22-3		
b ₈	12	#5	25-6		
b ₉	24	#5	29-0		
b ₁₀	12	#6	18-6		
c	39	#5	10-4		
d	36	#4	2-6		
e	36	#6	3-4		
f	50	#5	3-5		
g	50	#7	4-7		
m ₁	6	#4	4-10		
m ₂	6	#4	4-0		
m ₃	27	#4	7-2		
m ₄	6	#4	6-6		
m ₅	8	#4	4-0		
m ₆	26	#4	3-0		
m ₇	18	#4	2-0		
m ₈	38	#4	7-8		
m ₉	6	#4	1-9		
s	110	#4	3-6		
s ₁	71	#4	8-5		
s ₂	59	#4	6-10		
s ₃	47	#4	8-5		
s ₄	27	#4	9-3		
s ₅	9	#4	8-10		
Class X Concrete				Cu. Yds.	116.8
Reinforcement Bars				Lbs.	26,940
Protective Coat				Sq. Yds.	350

Notes:
The quantities of reinforcement bars and concrete in parapets and end posts are billed separately on Shit. No. 6 and are not included above.
All exposed edges shall have 3/4" chamfer
All clearance shall be 1/2" unless shown otherwise.
The weight of Exp. Guards is included with structural steel on Sheet No. 5.
For Sidewalk and Curb Details see Sh. 2.
For Section C-C, D-D & E-E see Sh. 2.
For Bar Diagrams see Sh. 2.
For Cross Sections see Sh. 5.
Work this sheet in conjunction with Sh. 5.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
SUPERSTRUCTURE
SPAN 4
F. A. ROUTE 12 (9TH STREET)
OVER F. A. ROUTE 64
STATION 55 + 62.20
F. A. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	62
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

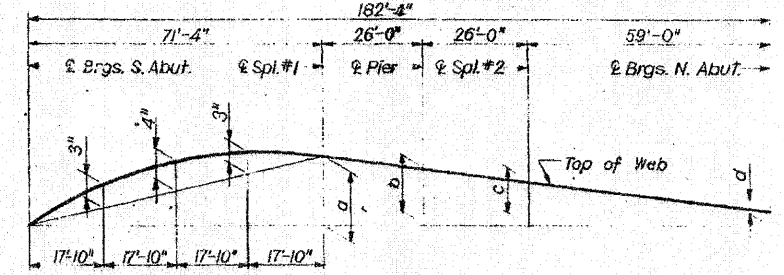
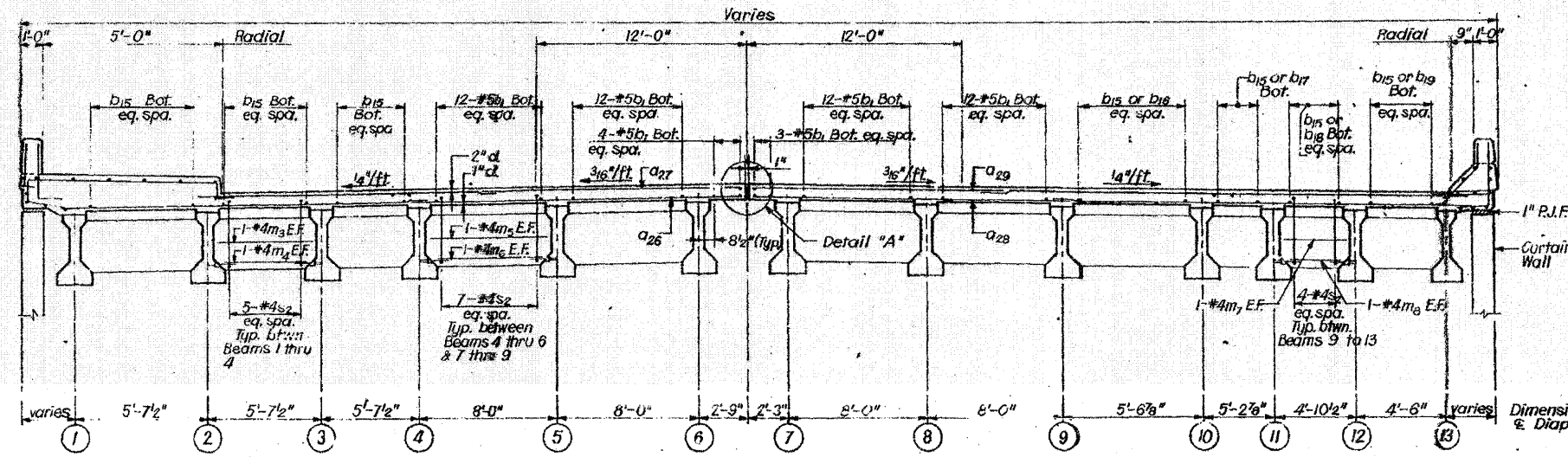
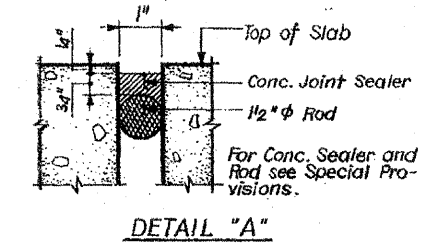
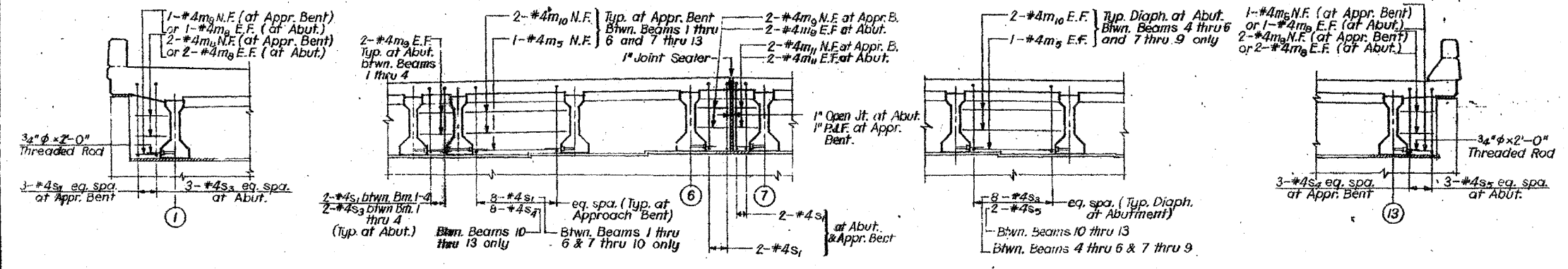


TABLE OF DIMENSIONS a, b, c & d

Beam Dimen.	1	2	3	4	5	6	7	8
a	11 1/2"	9 3/4"	9"	8 1/2"	7 1/2"	7 3/8"	6 3/4"	5 3/4"
b	9 3/4"	8 1/4"	7 7/8"	6 7/8"	6"	5 3/8"	4 9/16"	3 15/16"
c	8 3/8"	6 7/8"	5 7/8"	5 3/8"	4 5/8"	3 5/8"	2 3/4"	2 3/16"
d	4 9/16"	3 15/16"	3 8/8"	2 3/8"	1 1/8"	1 1/8"	3/8"	-1/4"

Dimensions along & Diaphragm

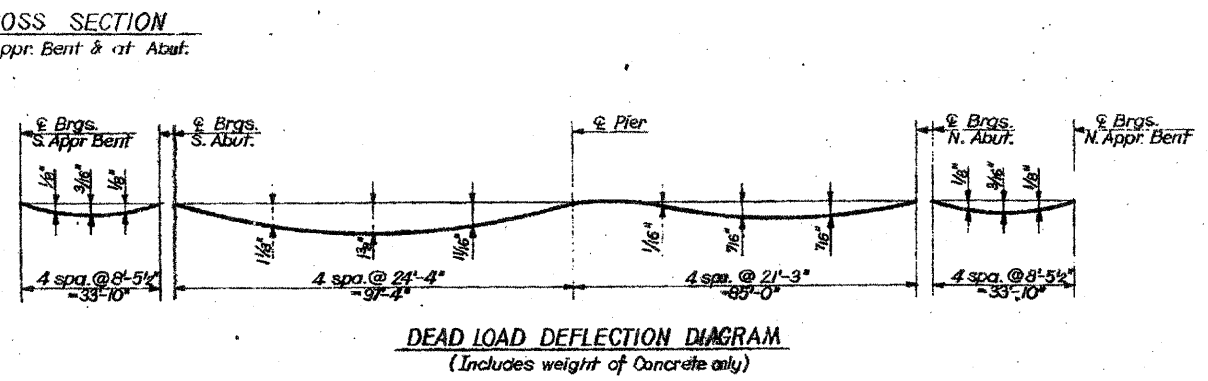


FILLET HEIGHTS - GIRDER SPANS

To determine "t": After all structural steel has been erected elevations of the top flanges of the girders shall be taken at intervals shown on Sht. No. 8. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sht. No. 8 minus Slab thickness equals the fillet heights "t" above top of Girders.

FILLET HEIGHTS - APPR. SPANS

To determine "t": After all precast prestressed beams have been erected elevations of the top flanges of the beams shall be taken at intervals shown on Sht. 8. These elevations subtracted algebraically from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown minus slab thickness, equals the fillet heights "t". A positive value of "t" equals the fillet height above the top of the beam. A negative value of "t" not to exceed 1/2" equals the embedment of the beam above the theoretical bottom of slab elevation.

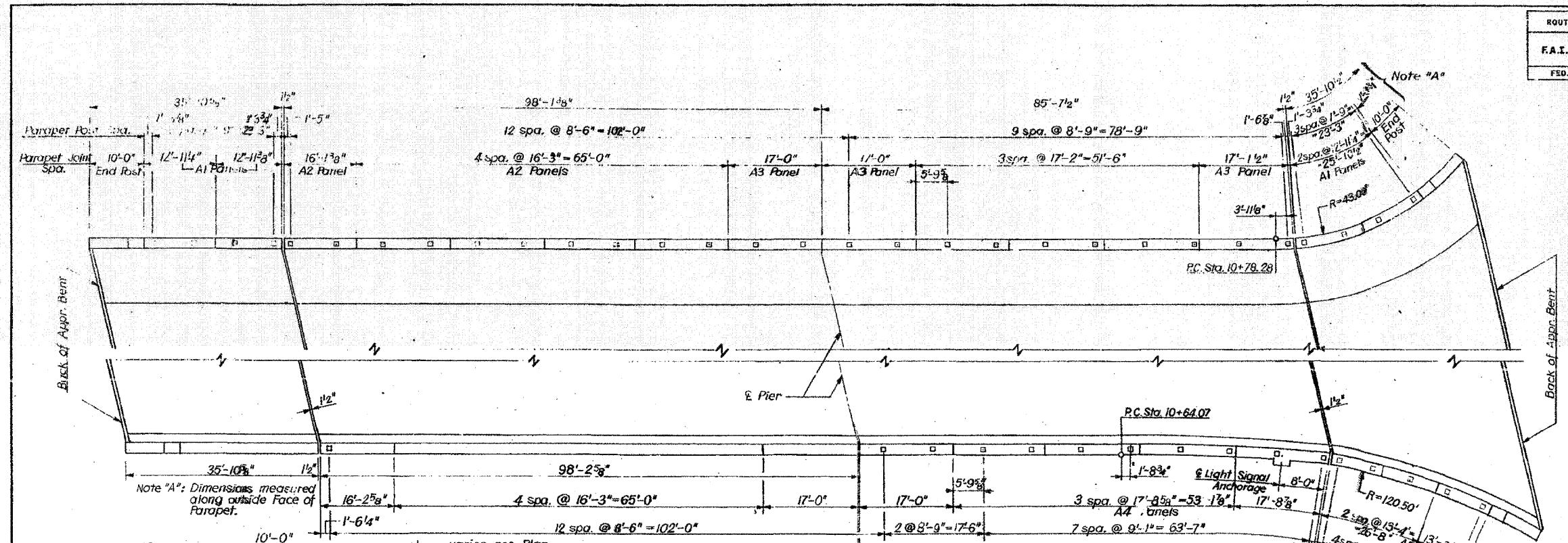


STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SUPERSTRUCTURE DETAILS
 F.A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55+62.20
 E.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
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FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	63
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



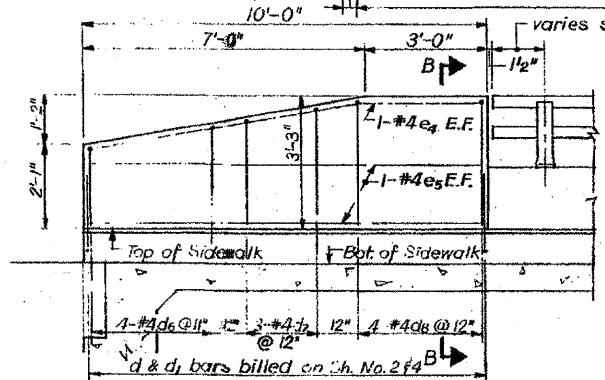
LOCATION OF PANEL REINFORCEMENT

Panel	No Panels	Bar	No. Bars*
A1	6	e ₁	24
A2	10	e ₁	40
A3	8	e ₂	32
A4	4	e ₃	16
A5	3	e ₆	12

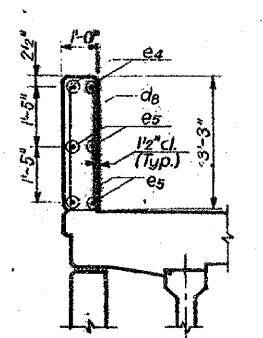
PARAPETS & RAILS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d ₅	122	#4	2-1	□
d ₆	6	#4	4-7	□
d ₇	14	#4	5-9	□
d ₈	8	#4	6-9	□
d ₉	8	#4	3-9	□
d ₁₀	6	#4	5-1	□
e	24	#4	12-9	—
e ₁	40	#4	15-11	—
e ₂	32	#4	16-10	—
e ₃	16	#4	17-5	—
e ₄	8	#4	9-10	—
e ₅	15	#4	9-9	—
e ₆	12	#4	13-0	—
r	2	#5	4-3	□
Class X Concrete			Cu. Yds.	24.0
Reinforcement Bars			Lbs.	1,760
Aluminum Railing			Lin. Ft.	487

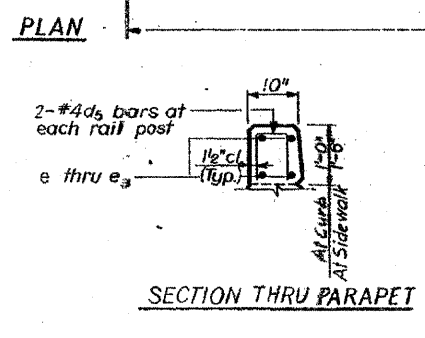
* 2 bars E.F. for Each Panel



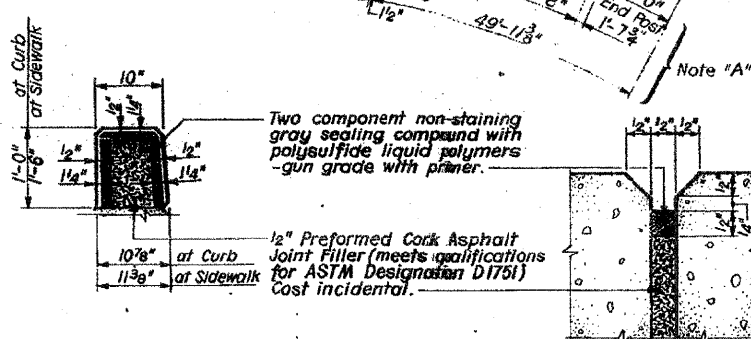
END POST DETAIL AT SIDEWALK (2 Req'd)



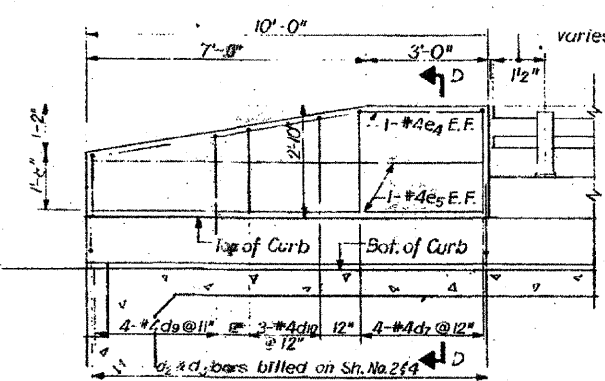
SECTION B-B



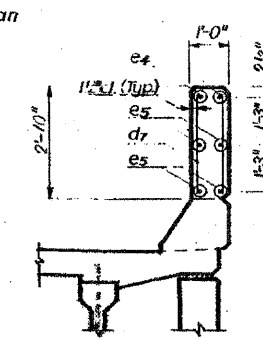
SECTION THRU PARAPET



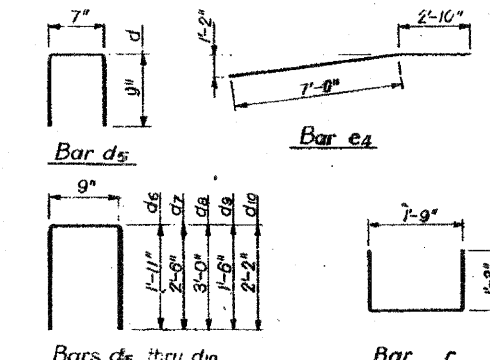
PARAPET JOINT DETAIL



END POST DETAIL AT CURB (2 Req'd)



SECTION D-D



Bars d₅ thru d₁₀

Bar r

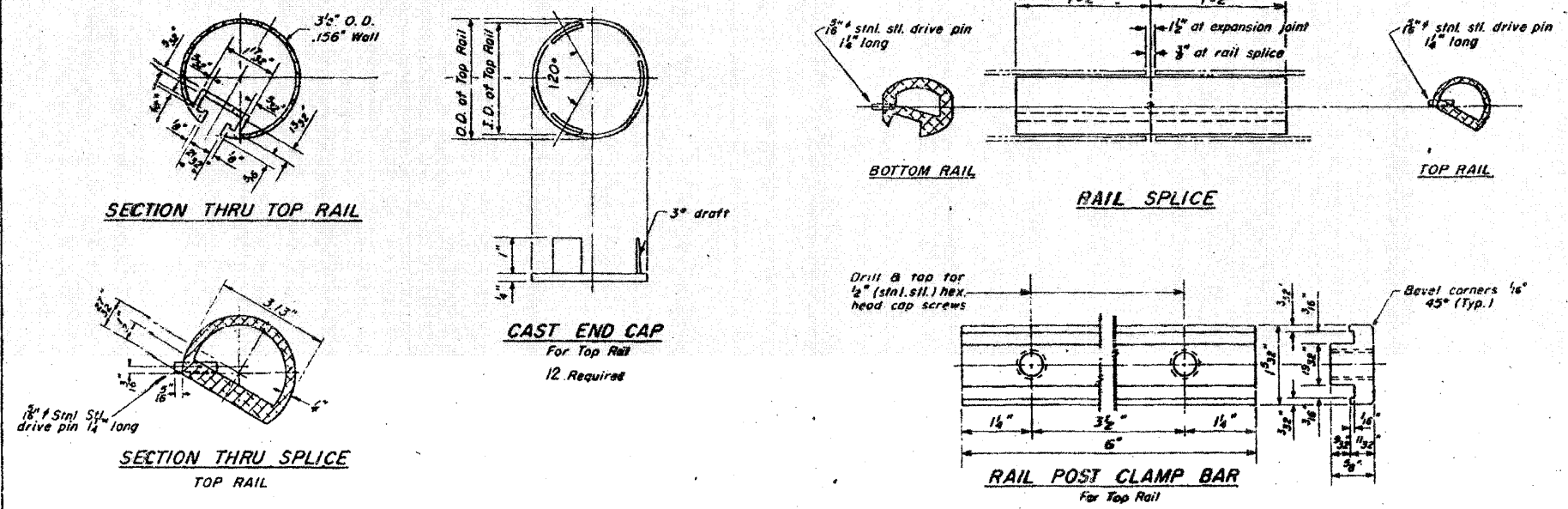
DESIGNED BY: H.N.
DRAWN BY: B.B.
CHECKED BY: H.N. & V.B.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
ALUMINUM RAILING
F.A. ROUTE 12 (9TH STREET)
OVER F.A.I. ROUTE 64
STATION 55+62.20
F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
6 OF 18

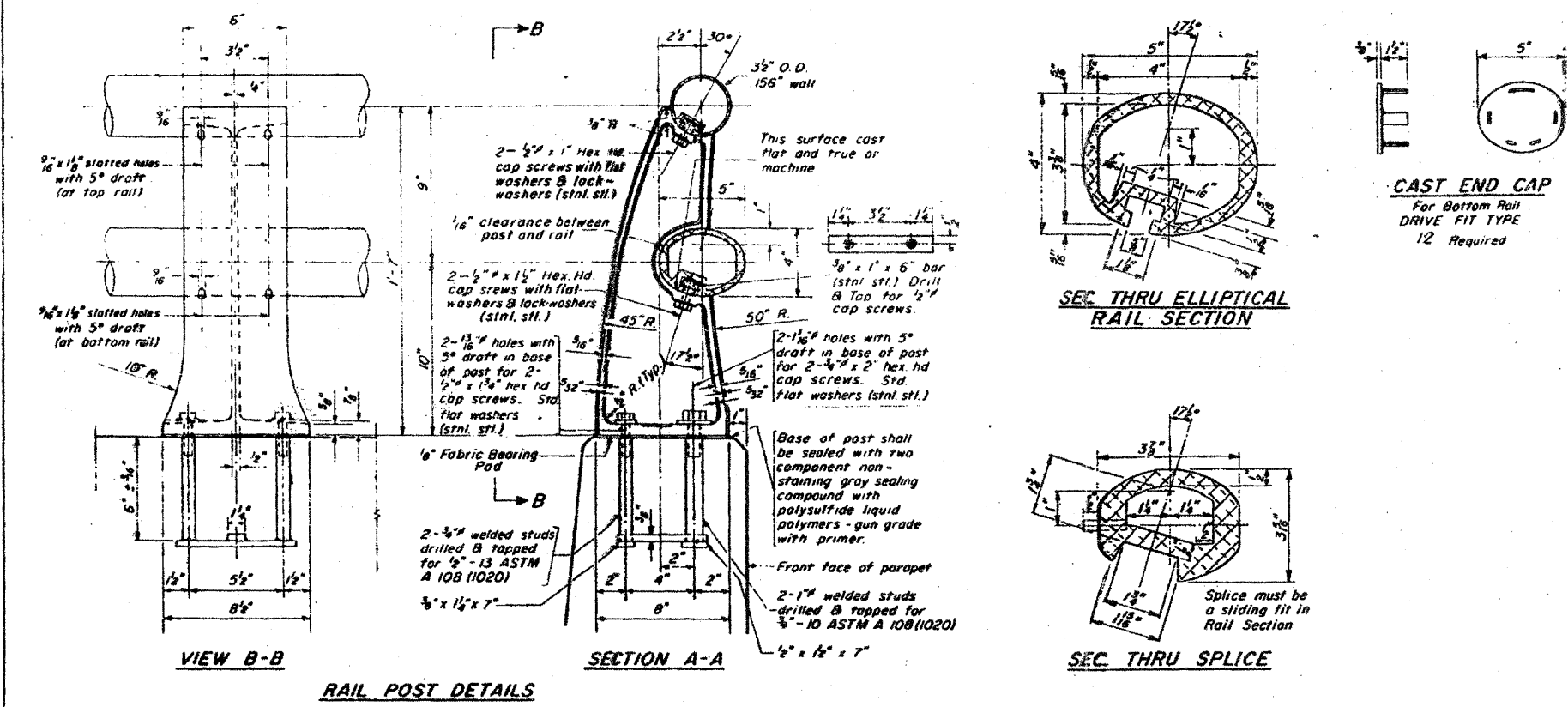
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	67
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



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

METHOD OF MEASUREMENT: Aluminum railing shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.
BASIS OF PAYMENT: Aluminum railing shall be paid for at the contract unit price per lineal foot for ALUMINUM RAILING TYPE L measured as specified, in accordance with Section 508 of the Standard Specifications, except as noted.
Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM RAILING TYPE L.
Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade. High spots shall be ground and low spots shimmed.
Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



BILL OF MATERIAL

Item	Unit	Quantity
ALUMINUM RAILING TYPE L	Lin. Ft.	487

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
ALUMINUM RAILING
F.A. ROUTE 12 (9TH STREET)
OVER F.A.I. ROUTE 64
STATION 55 + 62.20
F.A.I. RT 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC
ENGINEERS
CHICAGO, ILLINOIS

SHEET
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FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I-64	82-1HB	ST. CLAIR	110	65
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

NOTES:

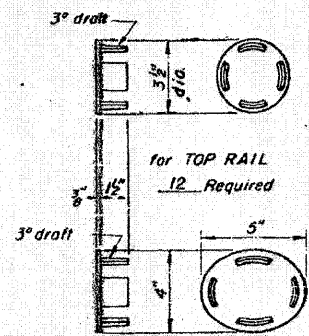
All Posts shall be normal to parapet.
 All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 35018, galvanized to ASTM A-152.
 All Rail Tubing shall conform to applicable requirements of ASTM A-53, Grade B, (pipe or tube) galvanized to ASTM A-120.

Provide 1/8" and 2/16" galvanized sheet steel shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.
 If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type 1, air-dry cure.

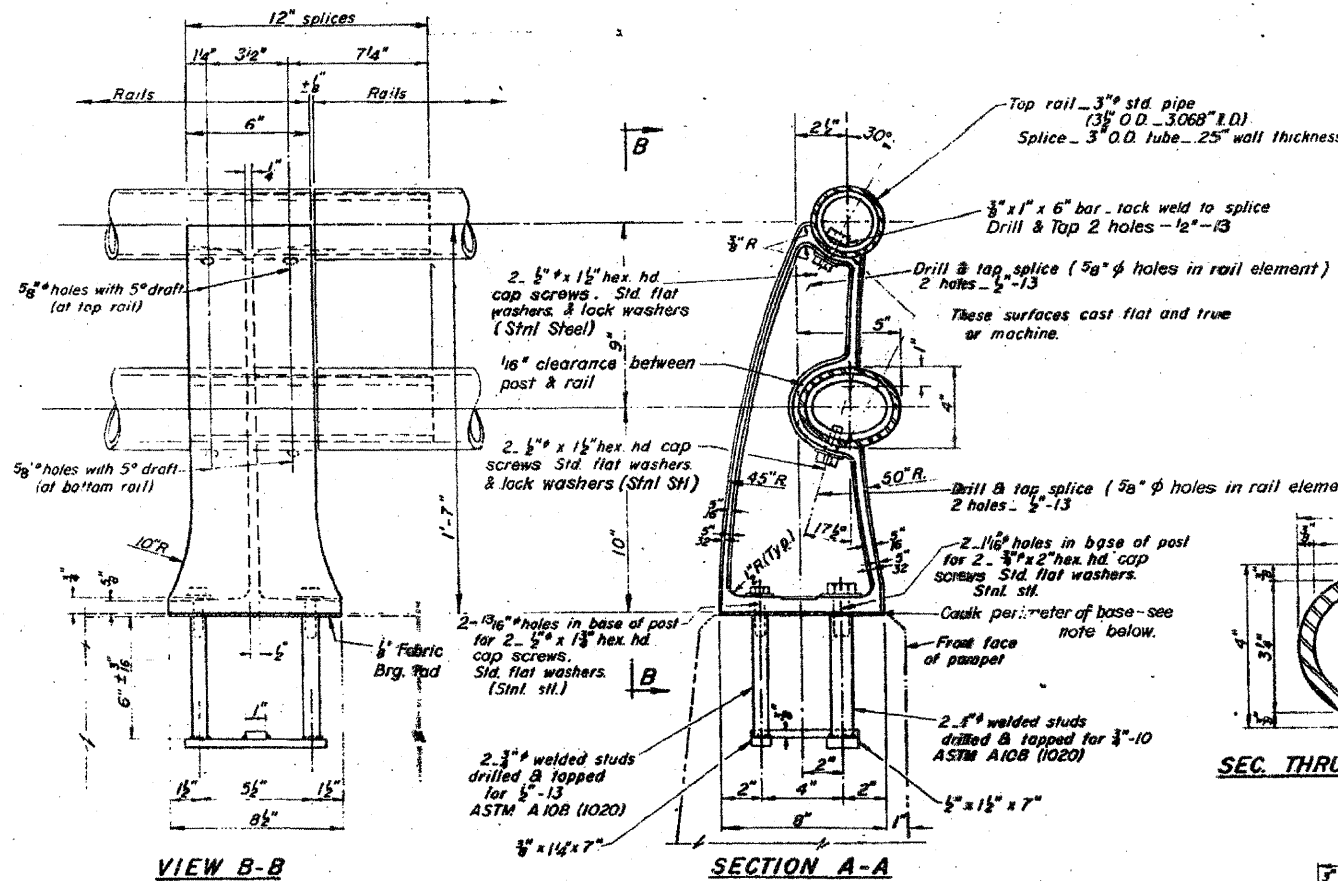
METHOD of MEASUREMENT: Steel railing shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.

BASIS of PAYMENT: Steel railing will be paid for at the contract unit price per lineal foot for STEEL RAILING TYPE M, measured as specified, in accordance with Section 508 of the Standard Specifications, except as noted.

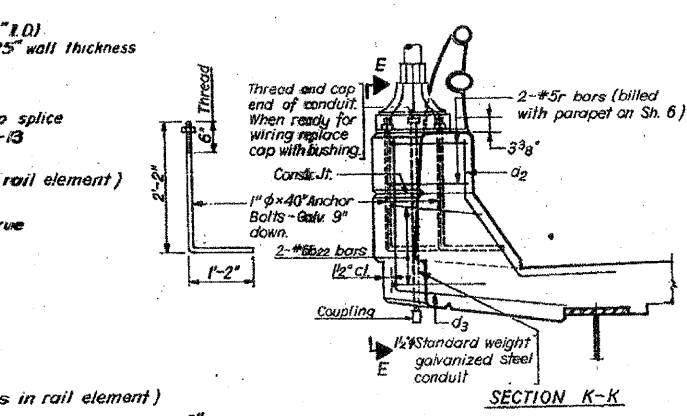
Cost of rail splice and caps and hardware to be incidental to item STEEL RAILING TYPE M.



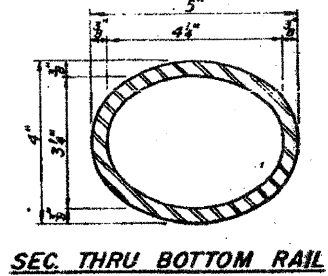
CAST END CAPS
 DRIVE FIT TYPE
 for BOTTOM RAIL
 12 Required



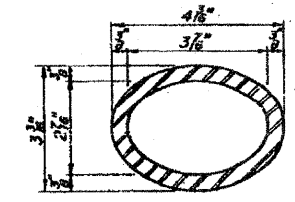
RAIL POST DETAILS



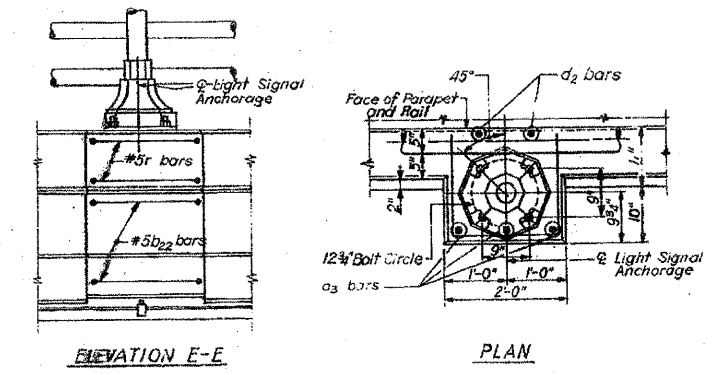
SECTION K-K



SEC. THRU BOTTOM RAIL



SEC. THRU BOTTOM SPLICE



LIGHT SIGNAL ANCHORAGE DETAILS

(Cost incidental to Bridge Structure)
 For location see Sh. 3

*BILL of MATERIAL

Item	Unit	Quantity
STEEL RAILING TYPE M	Lin. Ft.	487

* Material - Railing

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
STEEL RAILING TYPE M
 F. A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55+62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 7A OF 18

DESIGNED BY: H.N.
 DRAWN BY: B.B.
 CHECKED BY: V.D.

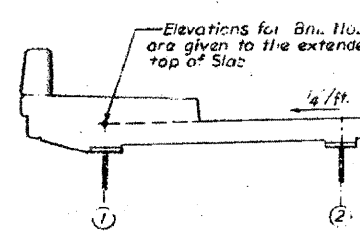
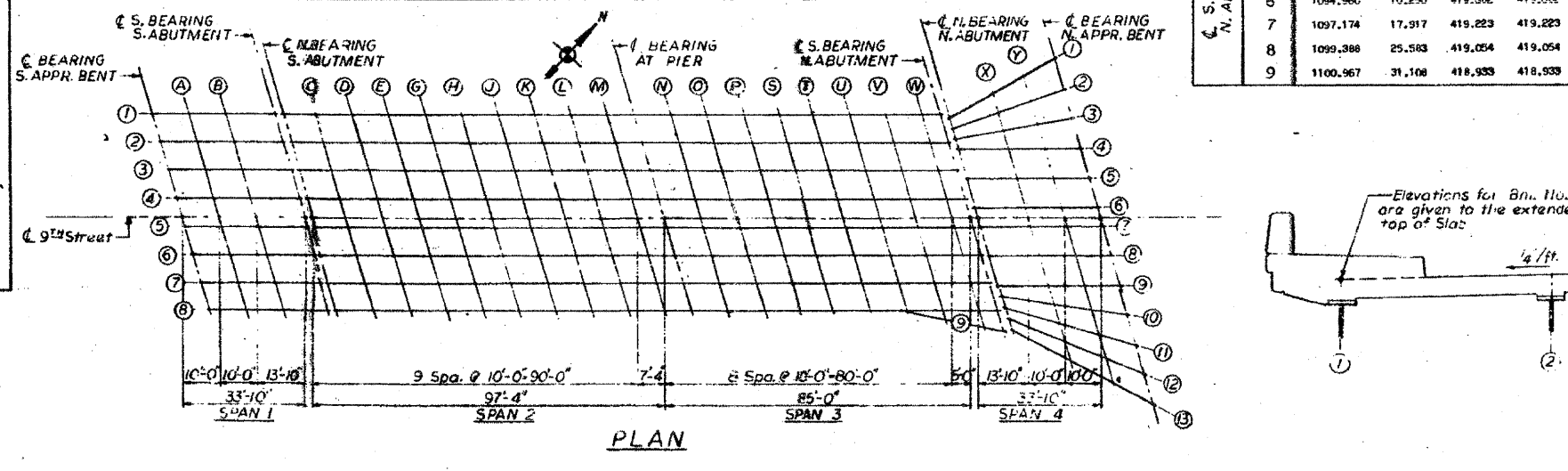
Note: Seal base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.

Note: Splice must be sliding fit in Rail Section.

FOR INFORMATION ONLY

SPAN 4						SPAN 2						SPAN 3					
ELEV. LINE	BEAM No.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.	ELEV. LINE	BEAM No.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.	ELEV. LINE	BEAM No.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
C BEARING N. ABUTMENT	1	1086.021	- 36.677	419.069	419.089	C BEARING S. ABUTMENT	1	901.558	- 28.083	418.632	418.691	C BEARING AT PIER	1	998.892	- 28.083	419.565	419.565
C BEARING N. ABUTMENT	2	1086.784	- 36.034	419.141	419.141	C BEARING S. ABUTMENT	2	903.771	- 20.417	418.932	418.902	C BEARING AT PIER	2	1001.105	- 20.417	419.711	419.711
C BEARING N. ABUTMENT	3	1087.547	- 36.392	419.192	419.192	C BEARING S. ABUTMENT	3	905.985	- 12.750	419.112	419.112	C BEARING AT PIER	3	1003.318	- 12.750	419.857	419.857

SPAN 1					
ELEV. LINE	BEAM No.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
C BEARING S. ABUTMENT	1	866.002	- 28.083	417.631	417.631
C BEARING S. ABUTMENT	2	868.215	- 20.417	418.044	418.044
C BEARING S. ABUTMENT	3	870.429	- 12.750	418.257	418.257
C BEARING S. ABUTMENT	4	872.643	- 5.083	418.434	418.434
C BEARING S. ABUTMENT	5	874.857	- 2.583	418.526	418.526
C BEARING S. ABUTMENT	6	877.071	- 10.250	418.460	418.460
C BEARING S. ABUTMENT	7	879.285	- 17.917	418.363	418.363
C BEARING S. ABUTMENT	8	881.499	- 25.584	418.258	418.258

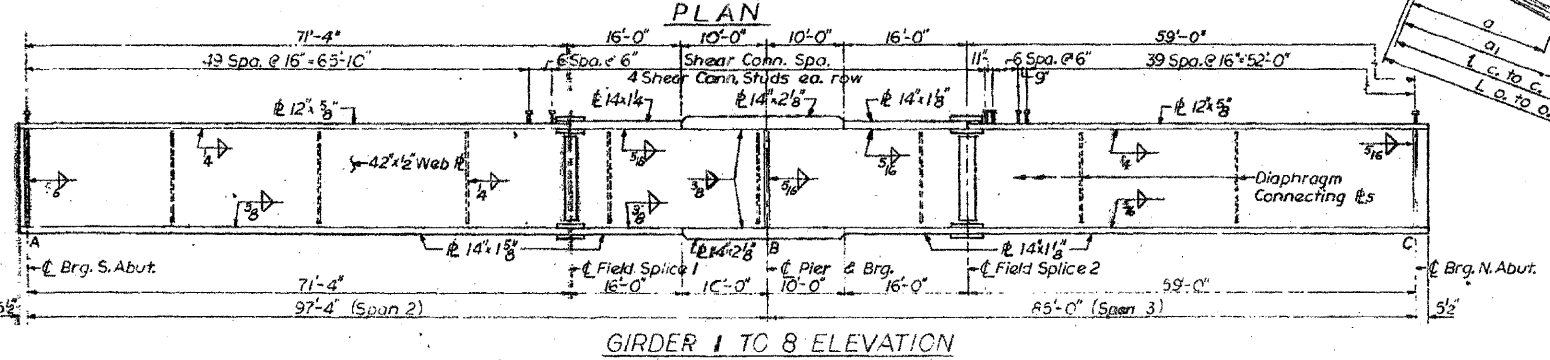
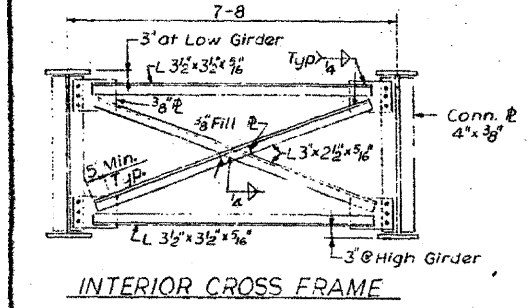
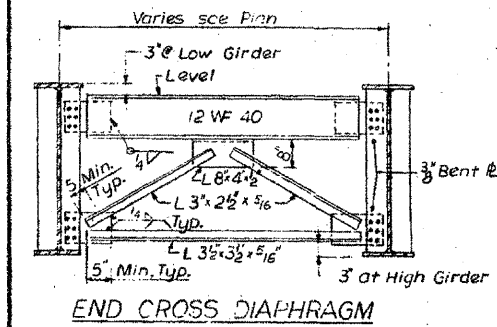
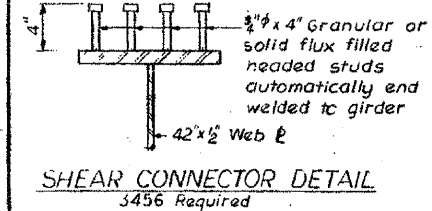
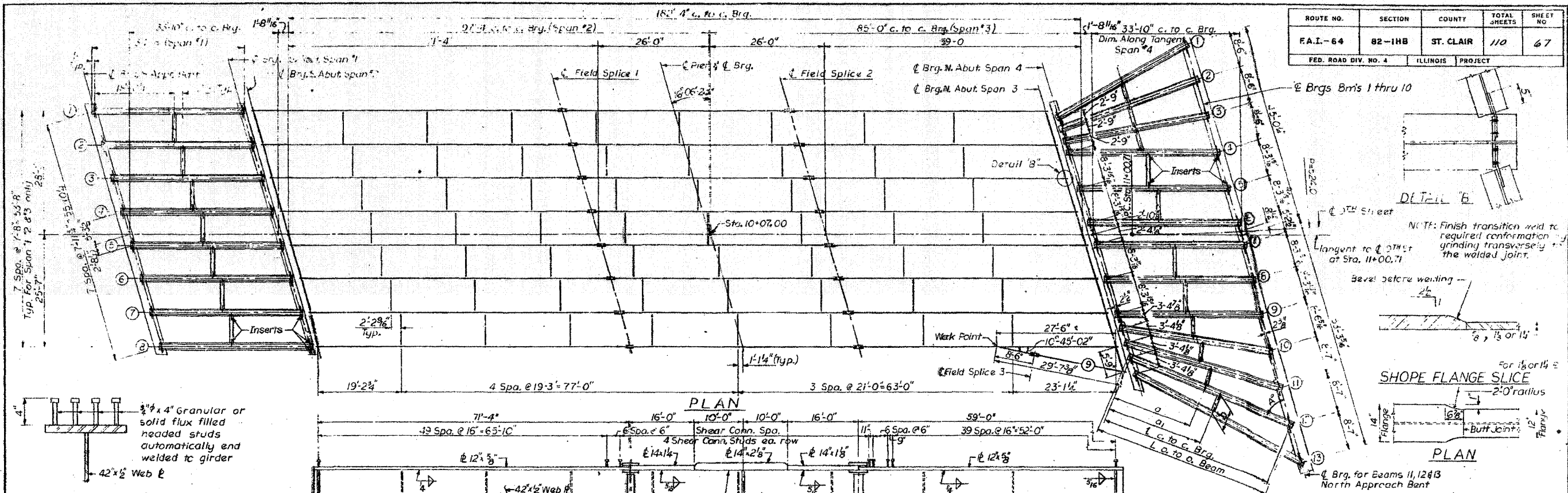


STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
TABLES OF ELEVATIONS
 F. A. ROUTE 12 (9TH STREET)
 OVER F. A. I. ROUTE 64
 STATION 55 + 62.20
 F. A. I. RT. 64 ST. CLAIR COUNTY SECTION 82-1NB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 8 OF 18

FILE NAME = DBT1-882-0325-sht-p1n9.dgn	DESIGNED BY	V.B.	DESIGNED	-	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN - 9TH STREET	F.A. RTE.	82-1-3NB, 82-2N, 82-1-12RS	COUNTY	ST. CLAIR	TOTAL SHEETS	352	SHEET NO.	270		
	DRAWN BY	V.B.	DRAWN	PP			REVISER	-	SECTION	82-1-3NB, 82-2N, 82-1-12RS	COUNTY	ST. CLAIR	TOTAL SHEETS	352	SHEET NO.	270
	CHECKED BY	H.M.	CHECKED	AB			REVISER	-	CONTRACT	9166/9180/9213/9214	COUNTY	ST. CLAIR	TOTAL SHEETS	352	SHEET NO.	270
	PLOT SCALE	480.000' / ft.	CHECKED	AB			REVISER	-	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	COUNTY	ST. CLAIR	TOTAL SHEETS	352	SHEET NO.	270
	PLOT DATE	MAR. 31, 2011	DATE	03/31/2011			REVISER	-	CONTRACT NO.	76C51	COUNTY	ST. CLAIR	TOTAL SHEETS	352	SHEET NO.	270

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	67
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

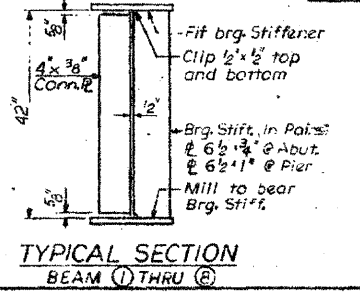


Beam	L	l	a	a ₁	D	A ²
1	34'-3 1/2"	33'-5 1/2"	—	16'-8 3/8"	5'-7 1/2"	103'-36'-00"
2	33'-4 1/2"	32'-6 7/8"	16'-3 1/2"	16'-3 1/2"	5'-7 1/2"	93'-43'-15"
3	33'-6 1/2"	32'-8 1/2"	16'-4 1/2"	16'-4 1/2"	5'-7 1/2"	83'-37'-02"
4	34'-8"	33'-10"	16'-11"	18'-0 3/8"	8'-0"	73'-53'-36"
5	34'-8"	33'-10"	15'-9 3/8"	18'-0 3/8"	8'-0"	73'-53'-36"
6	34'-8"	33'-10"	15'-9 3/8"	18'-0 3/8"	8'-0"	73'-53'-36"
7	34'-8"	33'-10"	—	18'-0 3/8"	8'-0"	73'-53'-36"
8	34'-8"	33'-10"	15'-9 3/8"	18'-0 3/8"	8'-0"	73'-53'-36"
9	34'-8"	33'-10"	15'-9 3/8"	17'-3 3/8"	5'-6 3/8"	73'-53'-36"
10	36'-0 1/2"	35'-2 3/8"	16'-6"	18'-6 3/8"	5'-6 3/8"	65'-40'-4 1/2"
11	38'-6 3/8"	37'-8 3/8"	17'-4"	20'-1 3/8"	5'-2 3/8"	58'-24'-06"
12	41'-6 1/2"	40'-8 1/2"	18'-6"	21'-9 3/8"	4'-10 1/2"	52'-06'-15"
13	44'-11 1/2"	44'-1 1/2"	19'-10"	—	4'-6"	46'-43'-27"

LOADS	SPAN 1 & 4		SPAN 2 & 3							
	Moment (Ft.k)	Shear (kips)	Moment (Ft. kip)		Reaction (kips)			Shear @ Pier		
	Span	Abutment	A Span 2	Pier	A Span 3	S. Abut.	Pier	N. Abut.	Vea	Vec
D.L.	186	20.4	625	-1226	334	35.0	115.1	25.5	60.3	54.8
S.D.L.	47	5.5	268	-319	174	13.8	38.7	11.5	20.2	18.5
L.L.	238	36.4	864	-601	725	44.4	68.9	43.6	47.0	46.5
Imp.	71	10.8	192	-140	173	9.9	15.9	10.3	10.5	11.0
Total	542	73.1	1928	-2286	1403.2	238.6	91.0	138.1	138.1	131.0

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 9
Brig. S. Abut.	417.34	418.15	418.36	418.53	418.62	418.54	418.44	418.32	—
Splice 1	418.86	418.96	419.11	419.24	419.26	419.14	418.97	418.80	—
Brig. Pier	418.75	418.84	418.98	419.10	419.12	418.99	418.82	418.65	—
Splice 2	418.64	418.72	418.85	418.96	418.98	418.84	418.67	418.50	—
Brig. N. Abut.	418.32	418.47	418.62	418.73	418.76	418.63	418.47	418.30	418.18
S.I. 3	—	—	—	—	—	—	—	418.36	418.36

Location	Span 2	Span 3	Pier
STEEL SECTION			
I _s	15,115	13,070	32,067
S _{rs}	336	509	1387
S _{bs}	941	724	1387
COMPOSITE SECTION			
I _c	2,096	39,124	—
S _{yc}	5,472	5,905	—
S _{bc}	4,356	1,054	—



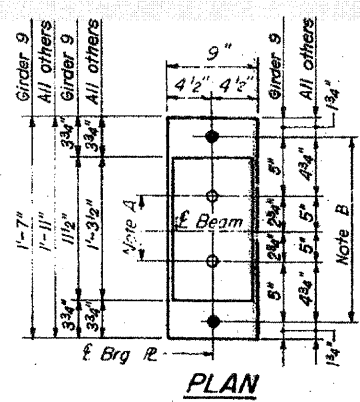
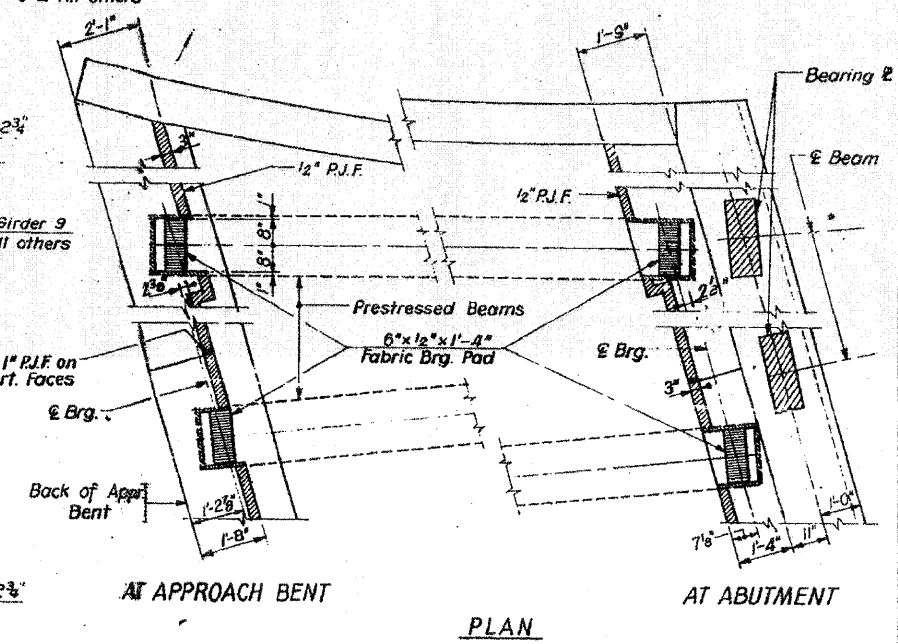
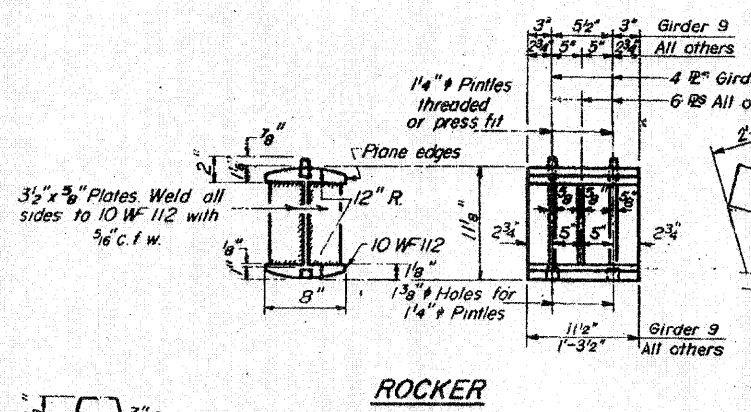
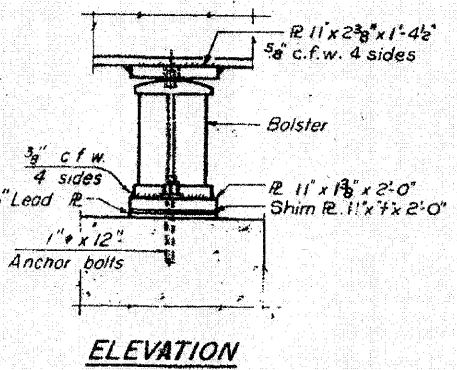
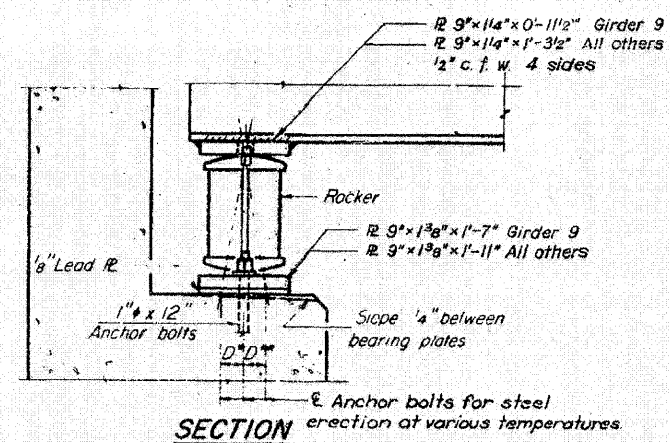
STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
FRAMING PLAN
 F. A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55+62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB

H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

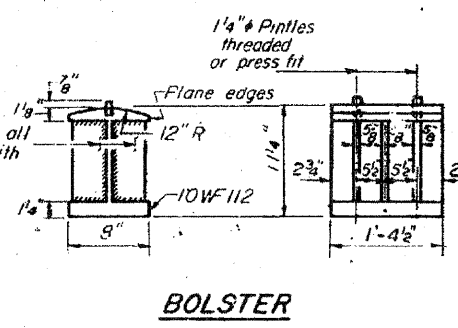
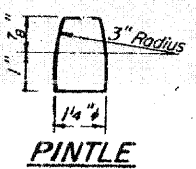
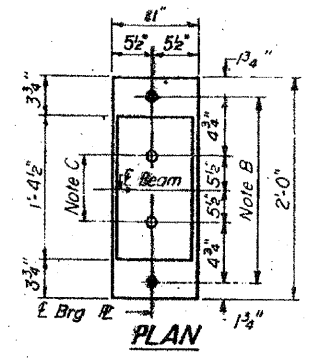
SHEET 9 of 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	68
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



NOTE A
 1 3/8" φ Holes - 1" deep in top R for pintles. Thread or press fit pintles into bolt.
 NOTE B
 1/2" φ Holes for 1" φ anchor bolts 2 1/2" x 2 1/2" x 5/16" R Washers under nut.
 NOTE C
 1 3/8" φ Holes 1" deep in top R only for 1 1/4" φ pintles.

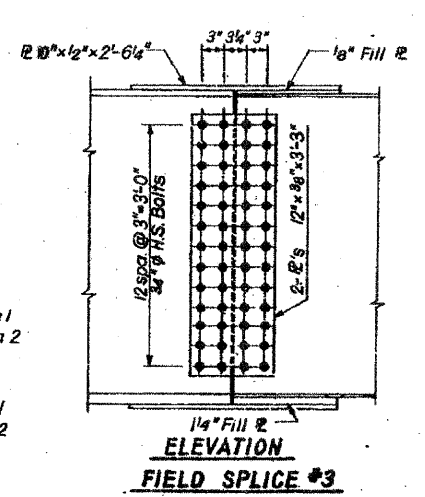
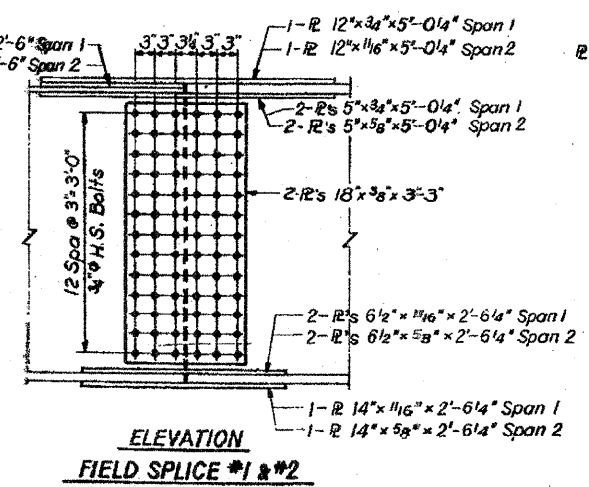
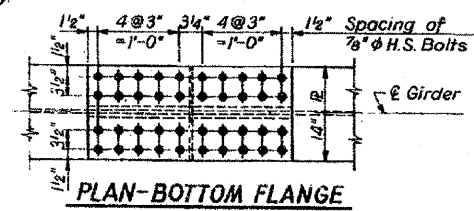
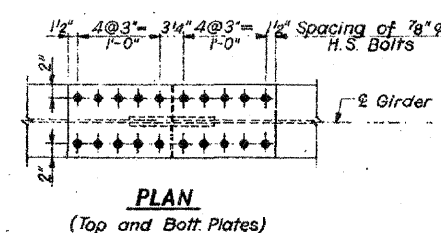
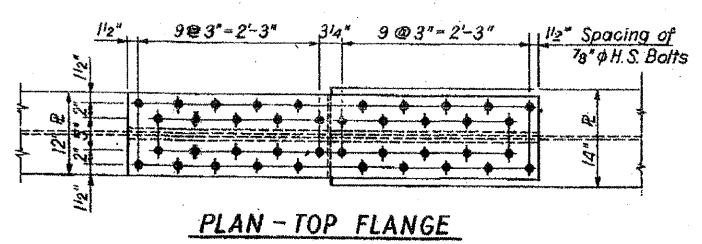


SHIM "t" (THICKNESSES)

Location	Girder	1	2	3	4	5	6	7	8
S. Abutment									
Pier					1/4"				
N. Abutment						3/8"			

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
 D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
 D** (Side of brg. toward fixed brg.)
 D** = 1/8" 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.

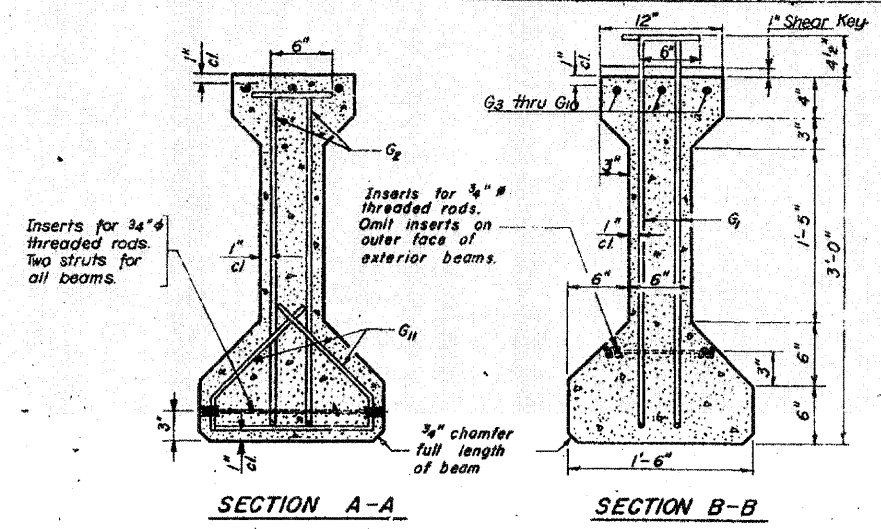
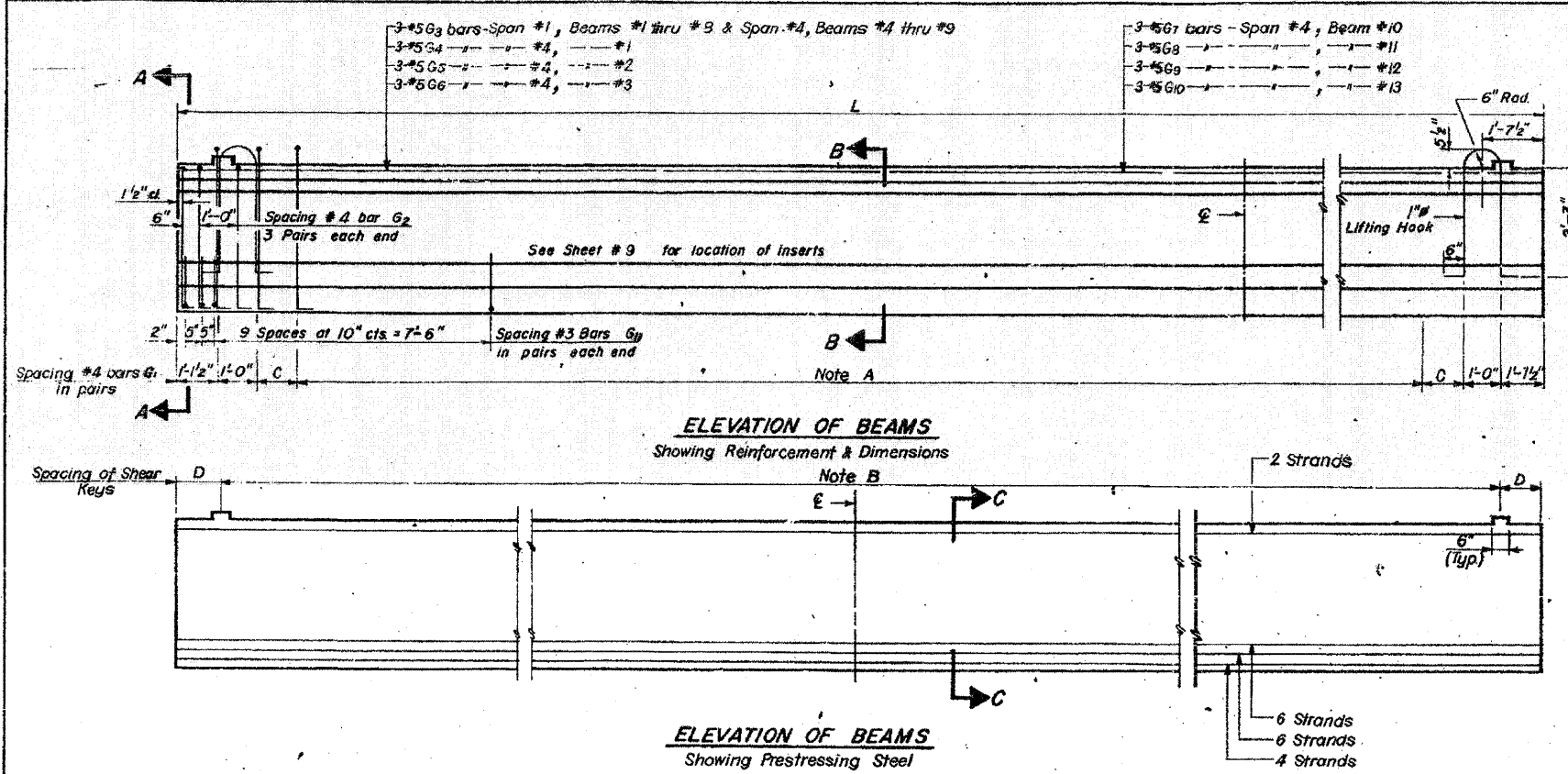


DESIGNED BY: H.N.
 DRAWN BY: V.B.
 CHECKED BY: H.N.

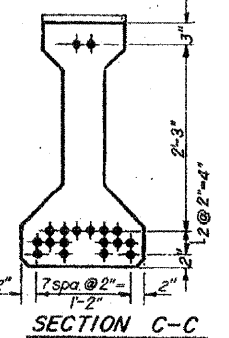
STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 BEARING DETAILS
 F.A. ROUTE 12 (9TH STREET) OVER F.A.I. ROUTE 64
 STATION 55 + 62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS
 SHEET 10 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	69
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



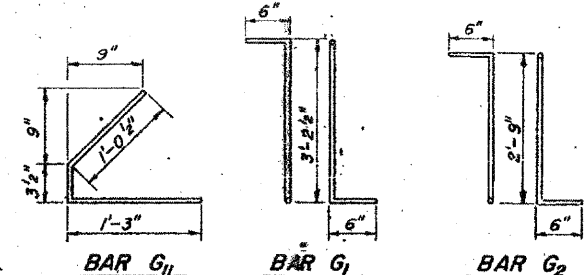
NOTE:
An alternate prestressing strand pattern using Extra High Strength Strand 270 ksi is permitted. See Special Provision.



Span No.	Beam No.	Dimensions			Note A	Note B	No. of Beams
		L	C	D			
1	1 thru 8	34'-8"	11'2"	10"	19 @ 1'-6" = 28'-6"	11 @ 3'-0" = 33'-0"	14
4	4 thru 9						
	1	34'-3 1/4"	1'-6 1/2"	7 5/8"	18 @ 1'-6" = 27'-0"	11 @ 3'-0" = 33'-0"	1
	2	33'-4 7/8"	1'-0 5/8"	7 1/8"	18 @ 1'-6" = 27'-0"	11 @ 2'-11" = 32'-1"	1
	3	33'-6 1/2"	1'-1 3/4"	7 3/4"	18 @ 1'-6" = 27'-0"	11 @ 2'-11" = 32'-1"	1
	10	36'-0 3/4"	10 3/8"	6 3/8"	20 @ 1'-6" = 30'-0"	12 @ 2'-11" = 35'-0"	1
	11	38'-6 3/8"	1'-4 1/8"	10 3/16"	21 @ 1'-6" = 31'-6"	13 @ 2'-10" = 36'-10"	1
	12	41'-6 1/4"	1'-4 5/8"	11 1/8"	23 @ 1'-6" = 34'-6"	14 @ 2'-10" = 39'-8"	1
	13	44'-11 1/8"	1'-7 1/8"	7 1/8"	25 @ 1'-6" = 37'-6"	15 @ 2'-11" = 43'-9"	1

BAR LIST

Bar	No.	Size	Length	Shape
G1	1028	#4	4-2 1/2	TL
G2	252	#4	3-9	TL
G3	42	#5	34-5	---
G4	3	#5	34-0	---
G5	3	#5	33-2	---
G6	3	#5	33-3	---
G7	3	#6	35-9	---
G8	3	#6	38-3	---
G9	3	#5	41-3	---
G10	3	#5	44-8	---
G11	1008	#3	2-7	L

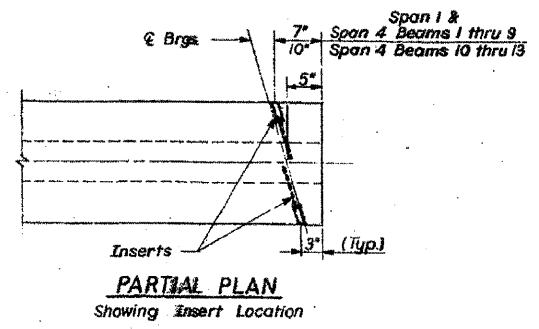


NOTES

All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per linear foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 36 In." See Specifications for additional information regarding materials, Prestressing equipment, construction and handling methods and other requirements for Precast Prestressed Concrete I-Beams. Prestressing Steel shall have a nominal diameter of 1/8". Inserts for 3/4" threaded rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams. Steel for lifting hooks shall be non-deformed bars of structural or intermediate grade billet steel. End of beams to be encased with cast in place concrete shall not be coated with asphalt paint.

BILL OF MATERIAL

Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 36"	Lin Ft	748



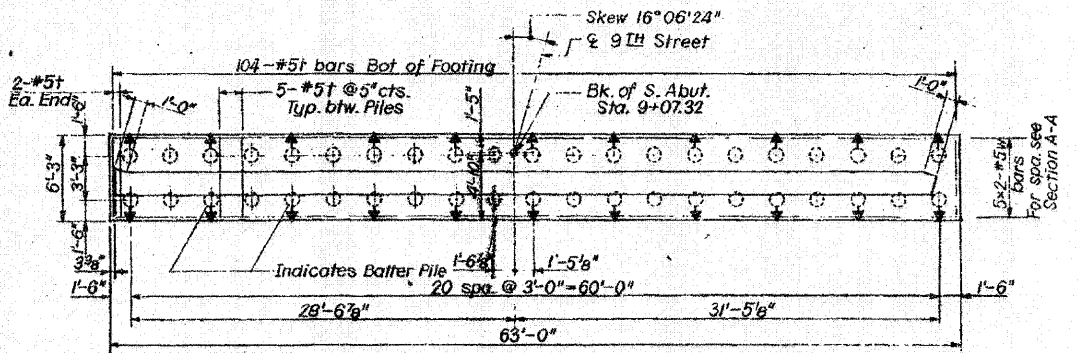
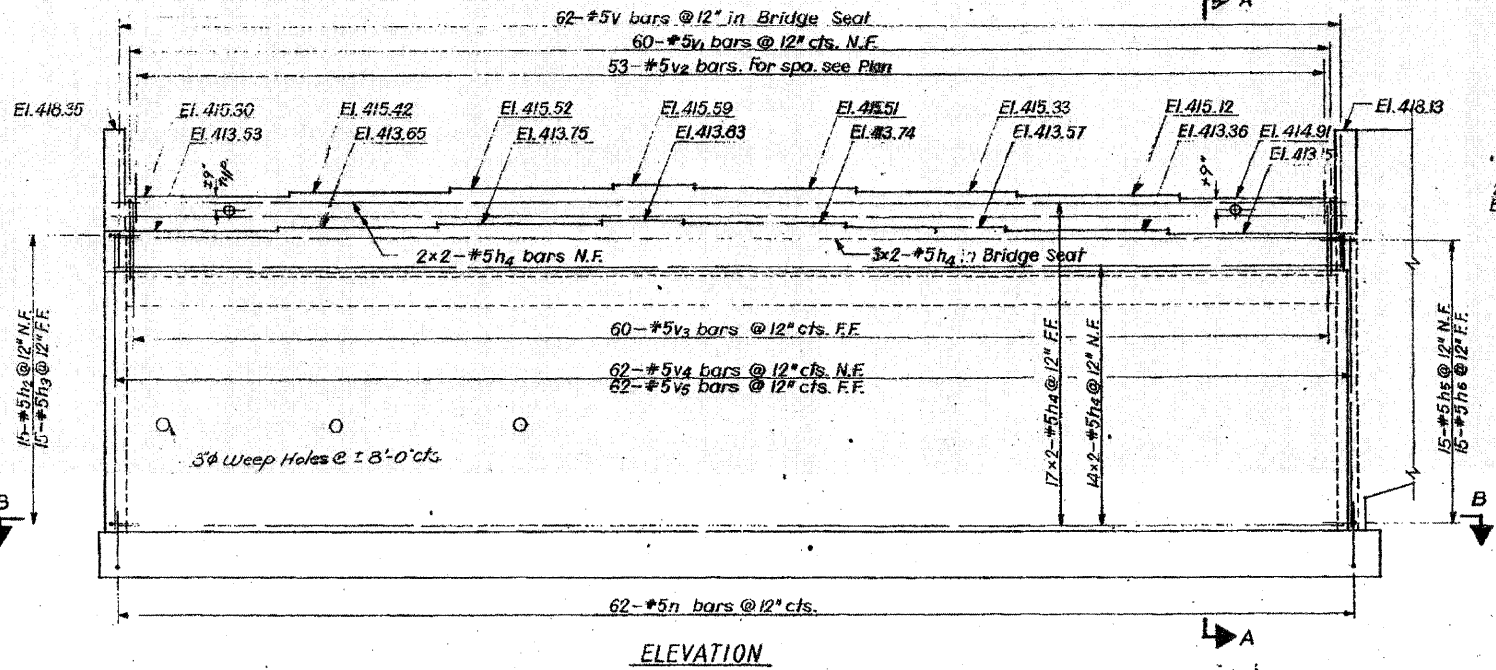
DESIGNED BY: H.N.
DRAWN BY: B.B.
CHECKED BY: H.N.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
PRESTRESSED BEAM DETAILS
F.A. ROUTE 12 (9TH STREET)
OVER F.A.I. ROUTE 64
STATION 55+62.20
F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

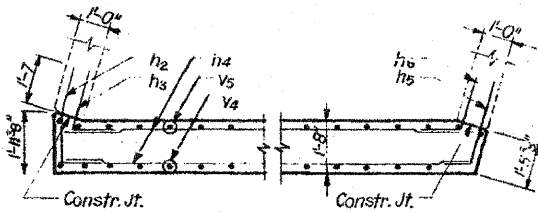
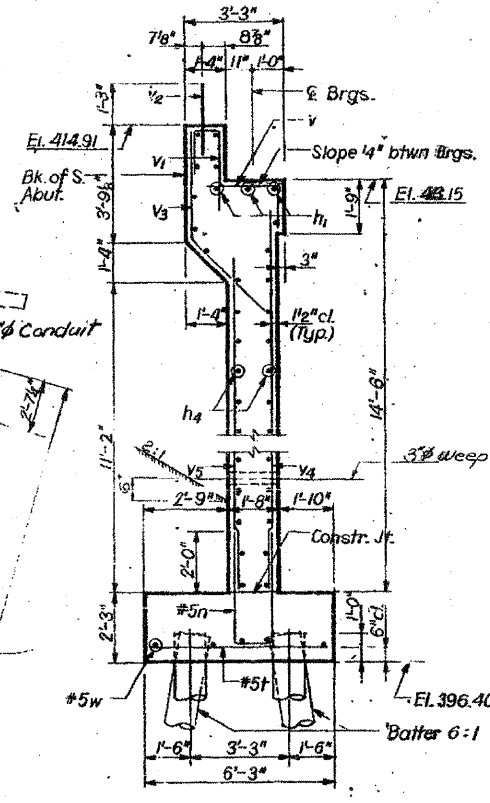
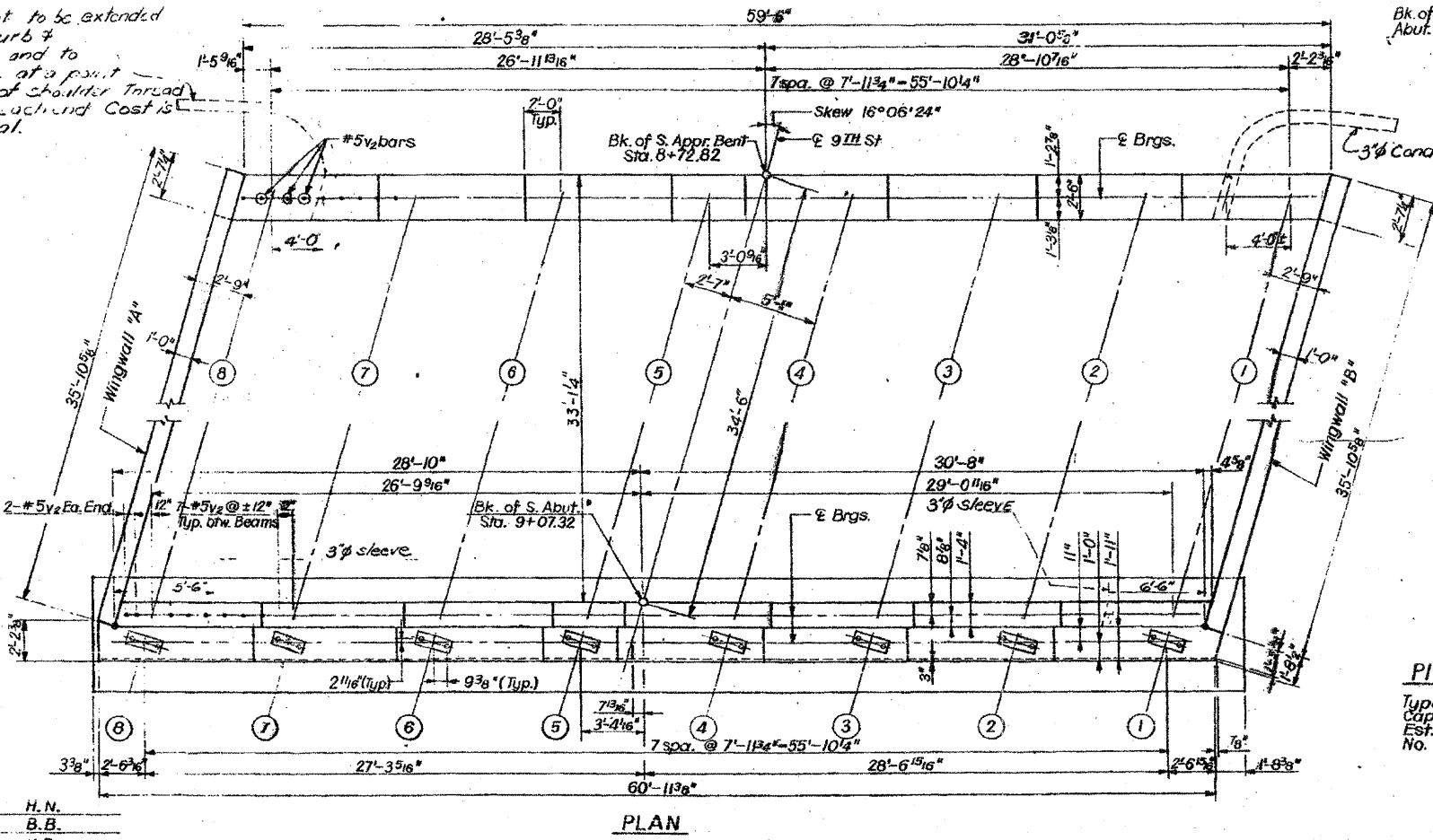
SHEET NO. 11 of 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	70
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



3" Conduit to be extended beyond curb & sidewalk and to terminate at a point outside of shoulder thread and cap each end. Cost is incidental.



KEY TO NOTATION

N.F. = Near Face
 F.F. = Far Face
 E.F. = Each Face

Note:

In placing reinforcement bars care shall be taken to clear Anchor Bolts. Four steps nonolithically with cap. For Bar List, Bill of Material and Bar Bending Diagrams see Sheet No. 13 Work this sheet in conjunction with Sheet 13 Bars indicated thus 15x2-#4 etc. indicates 15 lines of bars with 2 lengths per line. For chamfer Detail see Sht. No. 14

PILE DATA

Type: Creosoted Timber
 Capacity: 22 Ton
 Est. Length: 15 Ft.
 No. Req'd: 42

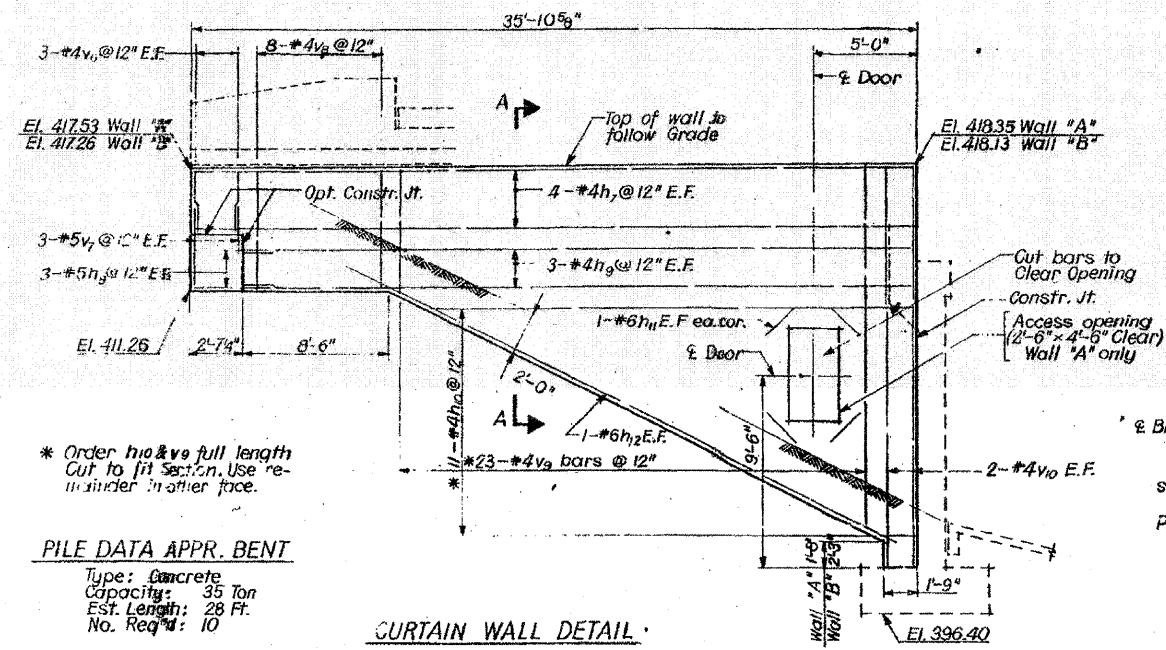
DESIGNED BY: H.N.
 DRAWN BY: B.B.
 CHECKED BY: Y.B.

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SOUTH ABUTMENT
 F.A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55 + 62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS SHEET
 12 OF 18

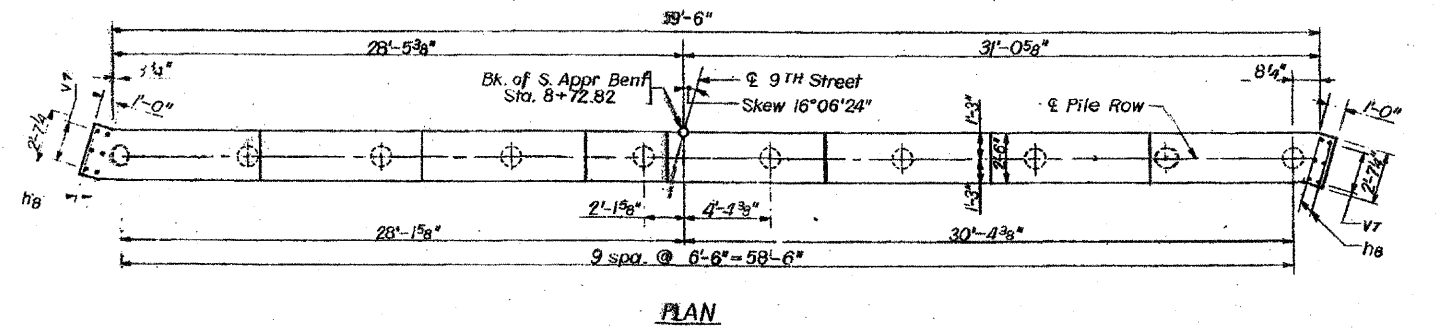
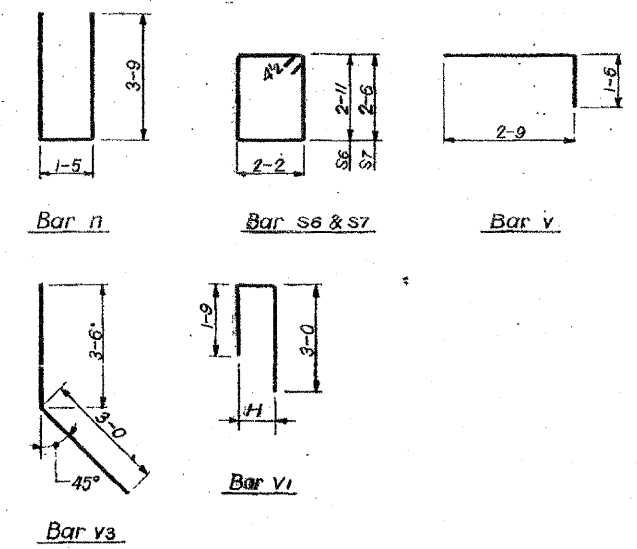
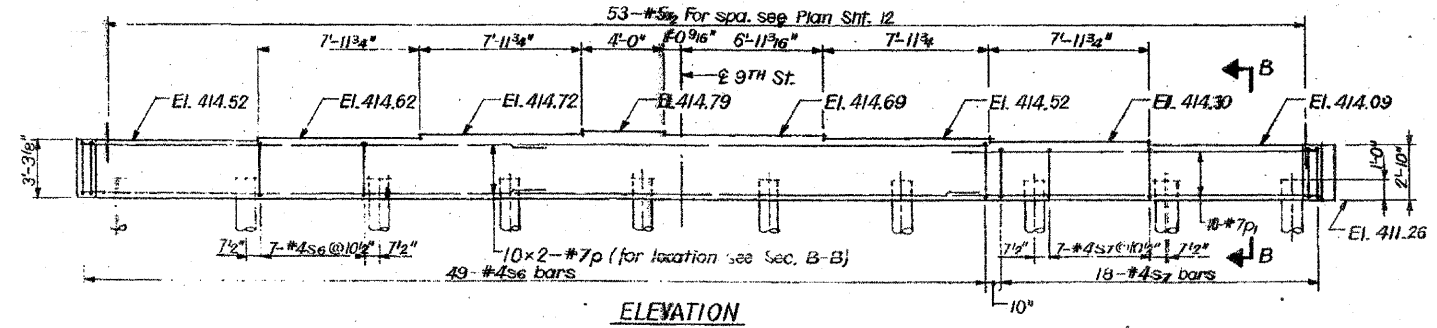
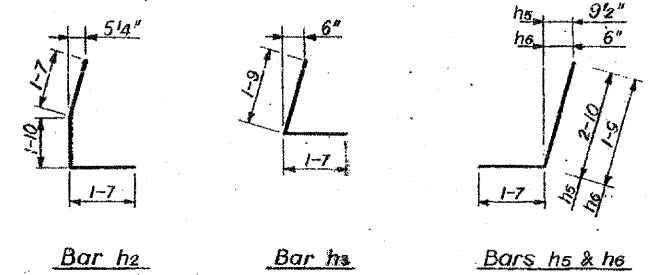
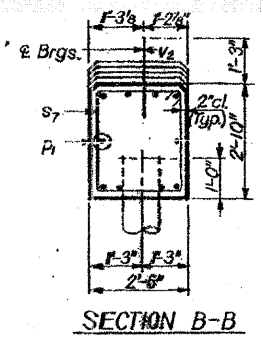
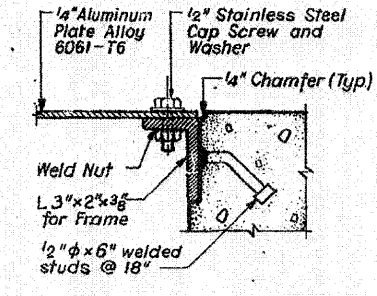
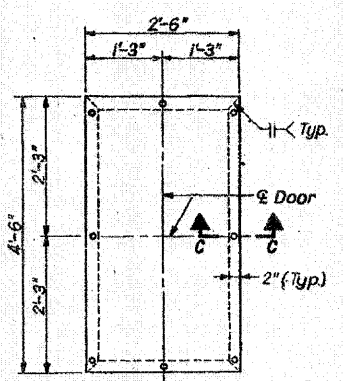
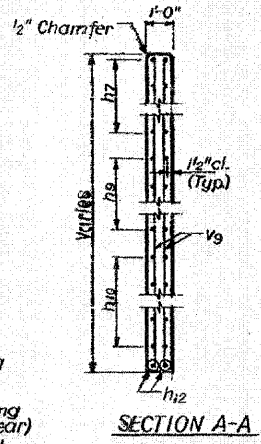
FILE NAME = DBT11-082-0326-sht-pln3.dgn	USER NAME = moronik	DESIGNED PP	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLAN - 9TH STREET			F.A. RTE. 82-1-3HB, 82-2N, 82-1-12RS	TOTAL SHEETS 352	SHEET NO. 274
	PLOT SCALE = 480,000' / ft.	CHECKED AB	REVISD -		SCALE: NONE	SHEET NO. 13 OF 19 SHEETS	STA. TO STA.	ST. CLAIR	CONTRACT NO. 76C51	
	PLOT DATE = MAR. 31, 2011	DATE 03/31/2011	REVISD -					ILLINOIS FED. AID PROJECT		
								FED. ROAD DIST. NO. (ILLINOIS) FED. AID PROJECT		

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	71
FED. ROAD DIV. NO. 1		ILLINOIS	PROJECT	



PILE DATA APPR. BENT
Type: Concrete
Capacity: 35 Ton
Est. Length: 28 Ft.
No. Req'd: 10



DESIGNED BY: H.N.
DRAWN BY: B.B.
CHECKED BY: V.B.

BILL OF MATERIAL

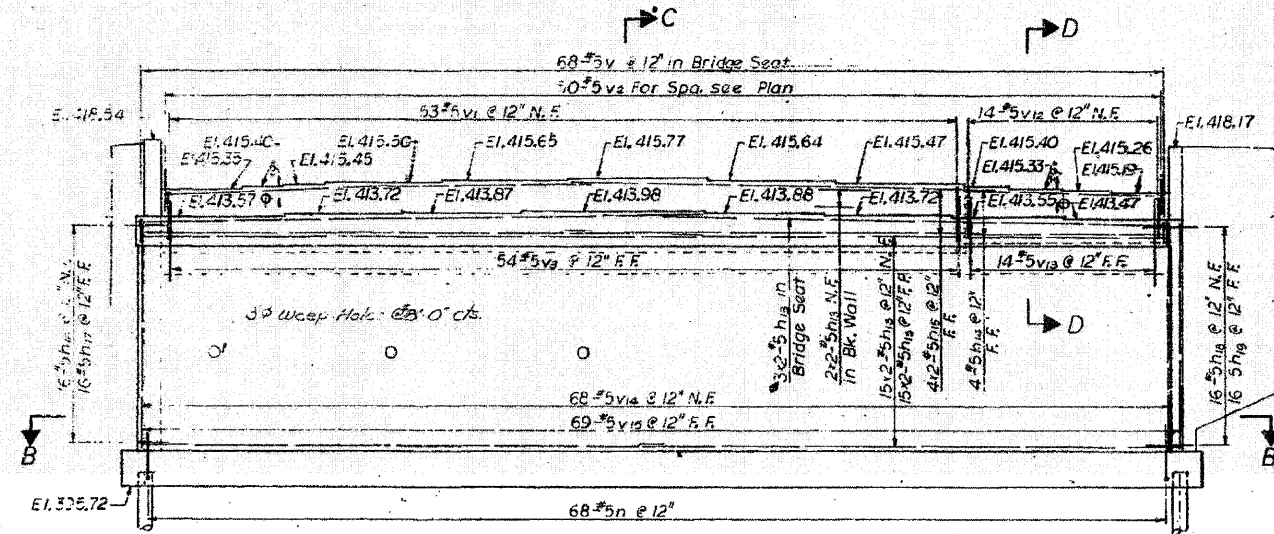
Bar	No.	Size	Length	Shape
h ₂	15	#5	5-0	L
h ₃	15	#5	3-4	L
h ₄	72	#5	31-2	L
h ₅	15	#5	4-5	J
h ₆	15	#5	3-4	J
h ₇	16	#4	35-7	---
h ₈	12	#5	3-8	---
h ₉	12	#4	33-1	---
h ₁₀	22	#4	25-6	---
h ₁₁	8	#6	3-0	---
h ₁₂	4	#6	31-0	---
n	62	#5	8-11	U
p	20	#7	23-0	---
pi	10	#7	19-0	---
s ₆	49	#4	10-11	J
s ₇	16	#4	10-1	J
t	104	#5	6-0	---
v	62	#5	4-3	J
v ₁	60	#5	5-10	J
v ₂	106	#5	2-6	---
v ₃	60	#5	6-6	L
v ₄	62	#6	14-0	---
v ₅	62	#5	12-6	---
v ₆	12	#4	2-8	---
v ₇	12	#5	4-7	---
v ₈	32	#4	6-0	---
v ₉	46	#4	23-10	---
v ₁₀	8	#4	19-4	---
w	10	#5	32-3	---
Item	Unit	Total		
Class X Concrete	Cu. Yds.	148.9		
Reinforcement Bars	Lbs.	11,530		
Concrete Piles	Lin. Ft.	280		
Crescoted Timber Piles	Lin. Ft.	630		

NOTES:
Work this sheet in conjunction with Sheet No. 12

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
SOUTH ABUTMENT WINGWALLS AND APPROACH BENT
F.A. ROUTE 12 (3TH STREET) OVER F.A.I. ROUTE 64
STATION 55+62.20
F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS
SHEET 13 of 18

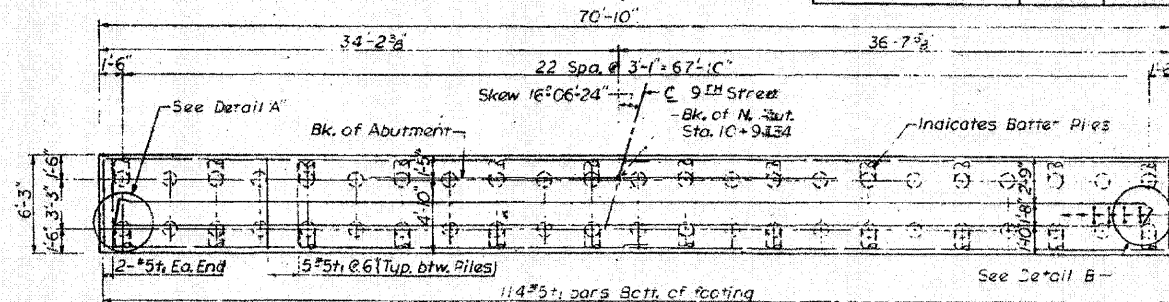
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	72
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

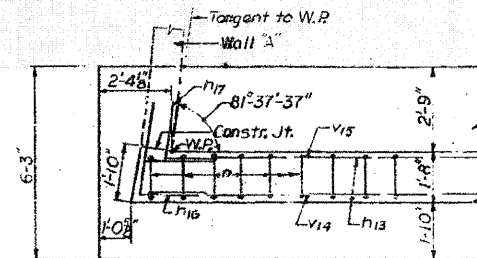


ELEVATION

3" Conduit to be extended beyond curb and sidewalk and to terminate at a point outside of shoulder. Thread and cap each end. Cast is incidental.

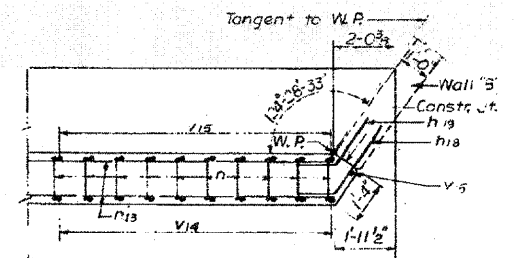


SECTION B-B

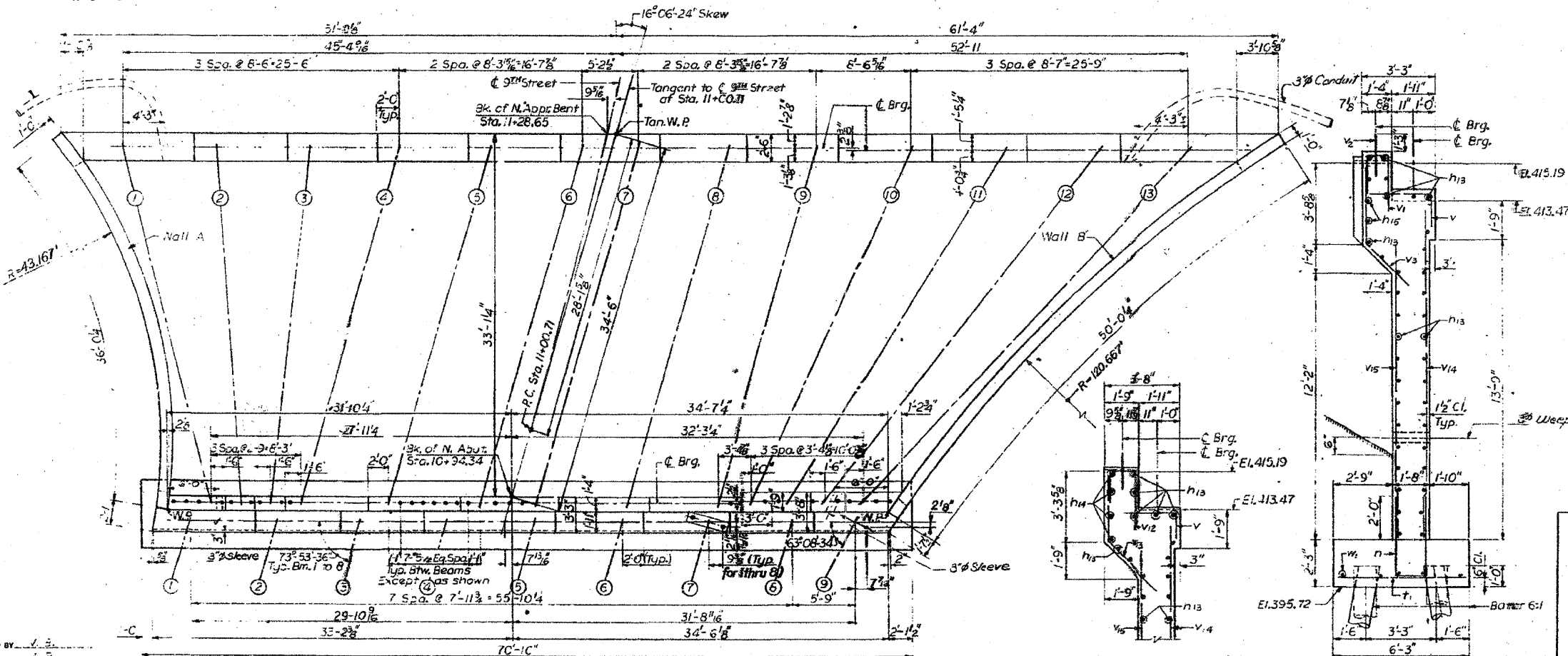


DETAIL 'A'

CHAMFER DETAIL



DETAIL 'B'



PLAN

SECTION D-D

SECTION C-C

PILE DATA

Type: Crossed Timber
Capacity: 22 Tons
Est. Length: 20 Ft.
No. Required: 46

KEY TO NOTATION

E.F. - Each Face
N.F. - Near Face
F.F. - Far Face

NOTES

In placing reinforcement bars care shall be taken to clear Anchor Bolts. Four steps monolithically with cast. For Bar List, Bill of Material and Bar Bending Diagrams see Sheet No. 15. Work this sheet in conjunction with Sp. No. 15.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
NORTH ABUTMENT
F.A. ROUTE 12 (9TH STREET)
OVER F.A.I. ROUTE 64
STATION 55+62.20
F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
14 of 18

FILE NAME =
D8T1-082-0326-sht-pln15.dgn

USER NAME = maronk
DESIGNED PP
DRAWN AB
CHECKED AB
PLOT SCALE = 480,000 / ft.
PLOT DATE = MAR. 31, 2011

DESIGNED -
DRAWN -
CHECKED -
DATE 03/31/2011

REVISED -
REVISED -
REVISED -
REVISED -

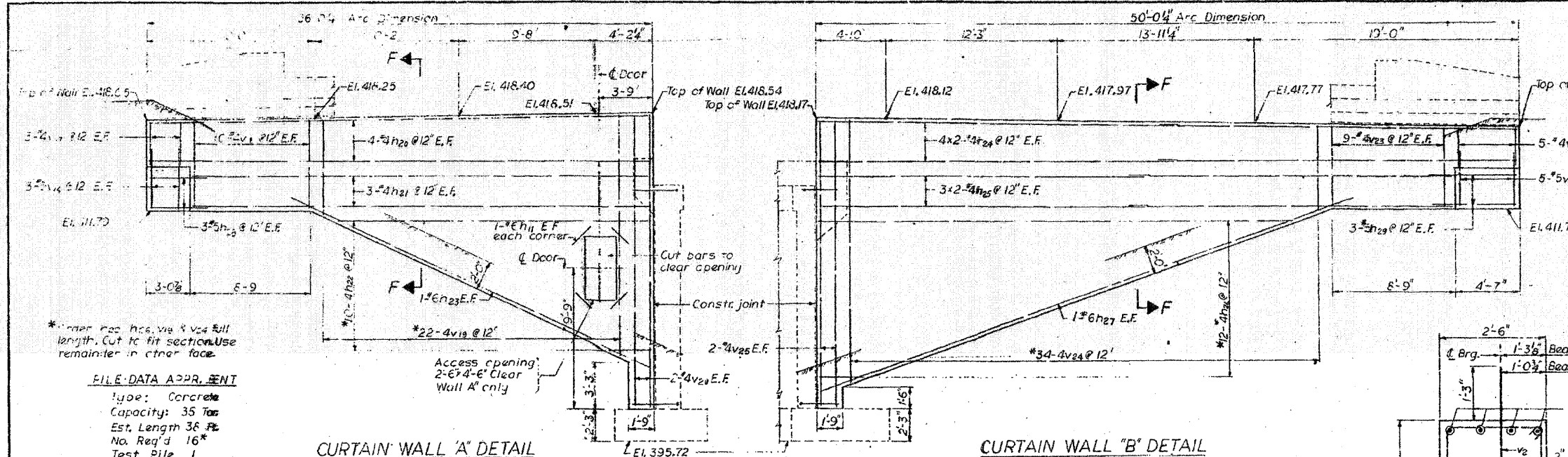
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 9TH STREET

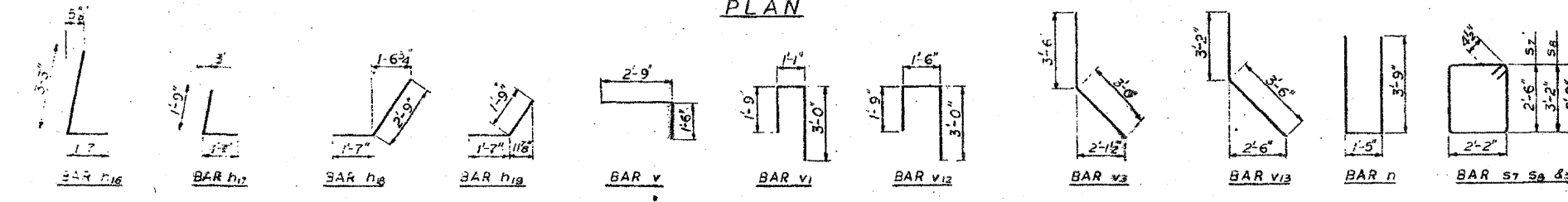
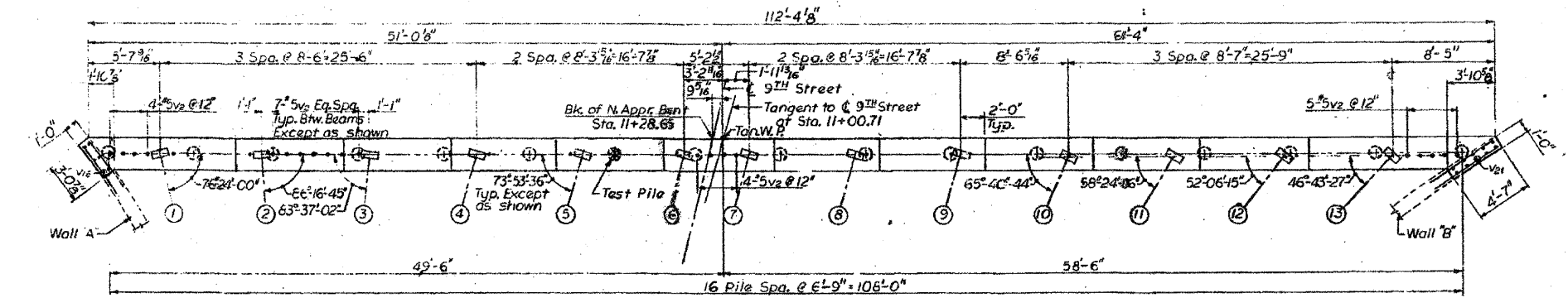
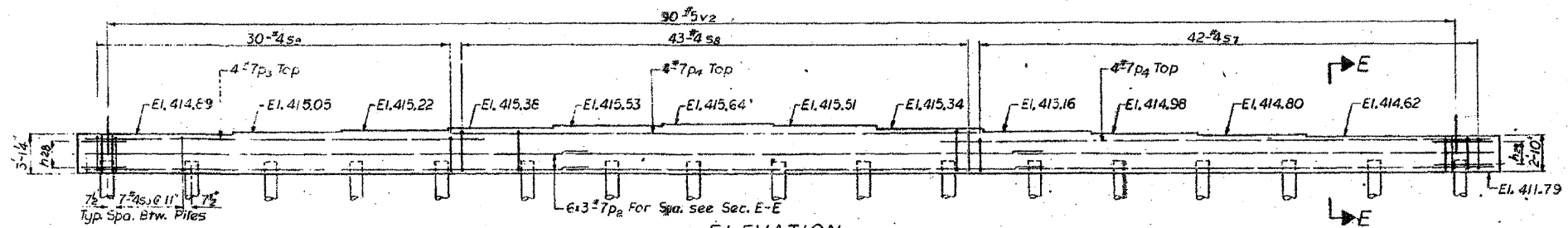
SCALE: NONE SHEET NO. 15 OF 19 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	276	
9166/9180/9213/9214	CONTRACT NO.	76C51		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

FOR INFORMATION ONLY



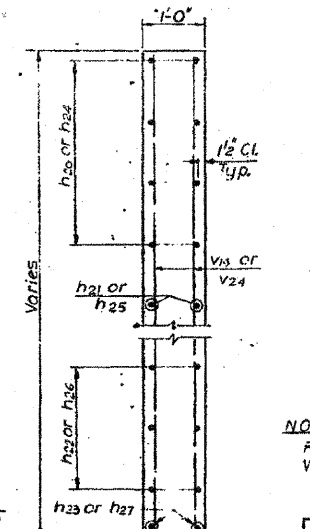
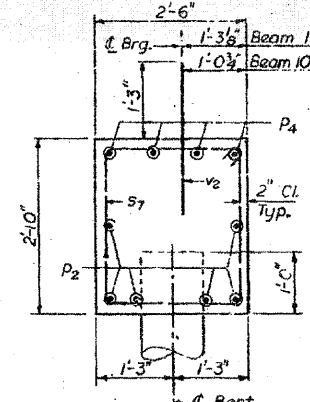
FILE DATA APPR. SENT
 Type: Concrete
 Capacity: 35 Ton
 Est. Length 36 Ft
 No. Req'd 16*
 Test Pile 1
 * Does not include Test Pile



DESIGNED BY: V.B.
 DRAWN BY: V.B.
 CHECKED BY: H.N.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	73
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

Bar	No.	Size	Length	Shape
h11	8	#6	3'-0"	
h13	70	#5	34'-6"	
h14	4	#5	15'-6"	
h15	8	#5	26'-3"	
h16	16	#5	4'-10"	
h17	16	#5	3'-4"	L
h18	16	#5	4'-1"	L
h19	16	#5	3'-4"	L
h20	8	#4	35'-9"	
h21	6	#4	32'-9"	
h22	10	#4	25'-6"	
h23	2	#6	29'-0"	
h24	16	#4	25'-0"	
h25	12	#4	23'-3"	
h26	12	#4	37'-0"	
h27	2	#6	40'-0"	
h28	6	#5	4'-6"	
h29	6	#5	6'-0"	
v	66	#5	4'-3"	
v1	53	#5	5'-10"	
v2	140	#5	2'-6"	
v3	54	#5	6'-2"	
v12	14	#5	6'-3"	
v13	14	#5	6'-8"	
v14	68	#5	15'-3"	
v15	69	#5	13'-3"	
v16	6	#5	4'-3"	
v17	6	#4	3'-0"	
v18	20	#4	6'-0"	
v19	22	#4	23'-3"	
v20	4	#4	20'-5"	
v21	10	#5	3'-11"	
v22	10	#4	2'-9"	
v23	18	#4	5'-6"	
v24	34	#4	24'-3"	
v25	4	#4	20'-1"	
n	66	#5	8'-11"	
p2	18	#7	38'-4"	
p3	4	#7	31'-0"	
p4	8	#7	42'-0"	
s7	42	#4	10'-1"	
s8	43	#4	11'-5"	
s9	30	#4	10'-7"	
t1	114	#5	6'-0"	
w1	10	#5	36'-0"	
Item	Unit	Total		
Class IX Concrete	Cu. Yds.	186.0		
Reinforcement Bars	Lbs.	14,360		
Concrete Piles	Lin. Ft.	608		
Crossed Timber Piles	Lin. Ft.	920		
Test Pile Concrete	Each	1		

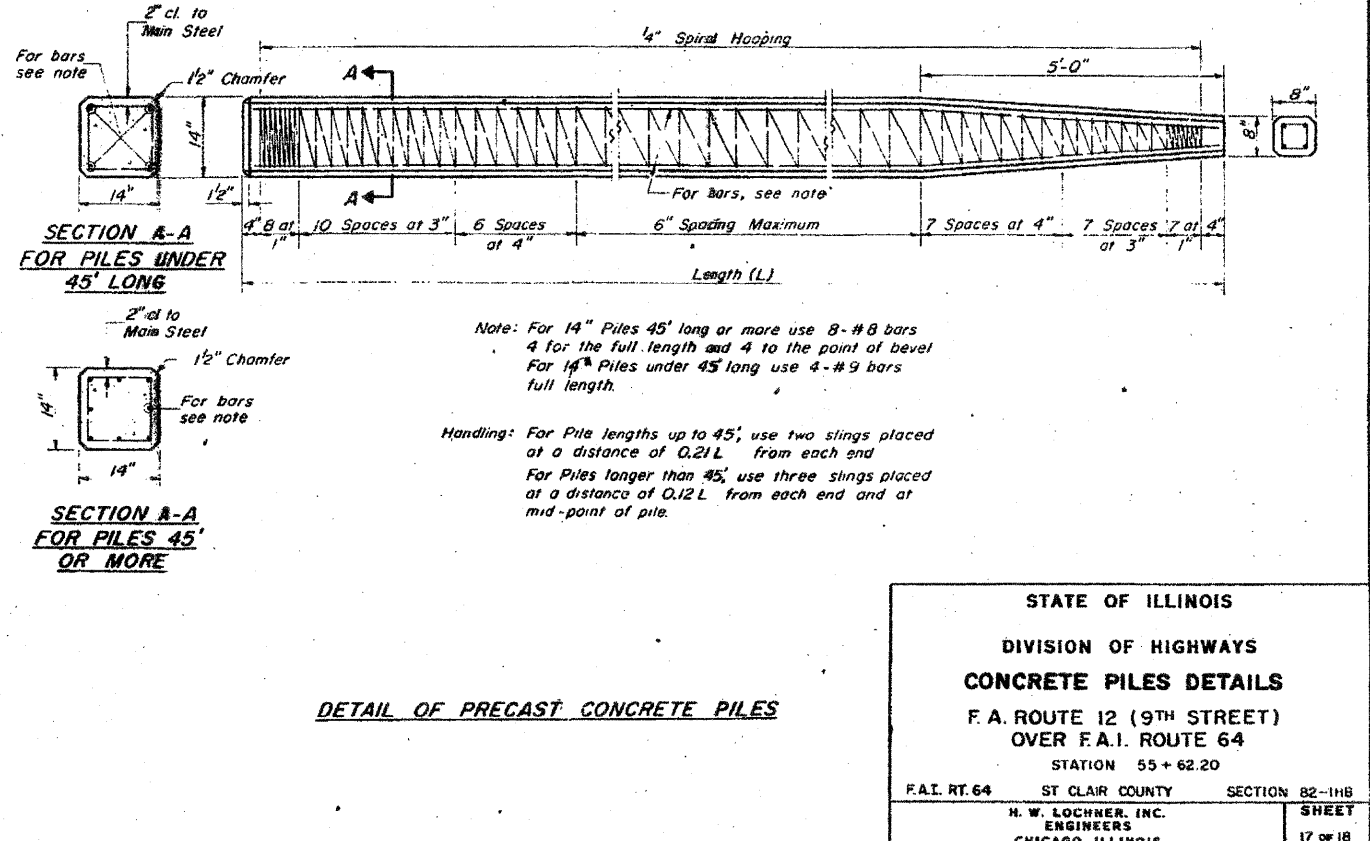
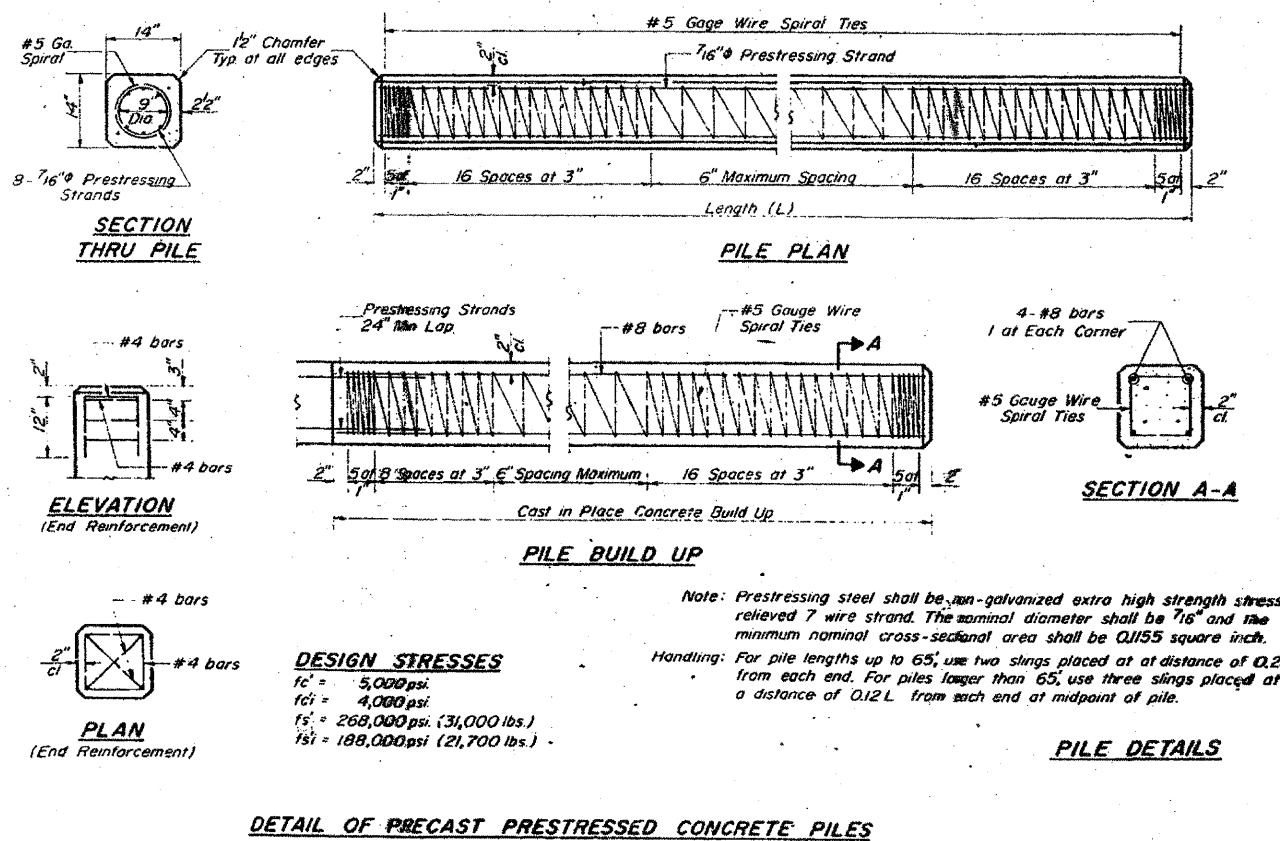
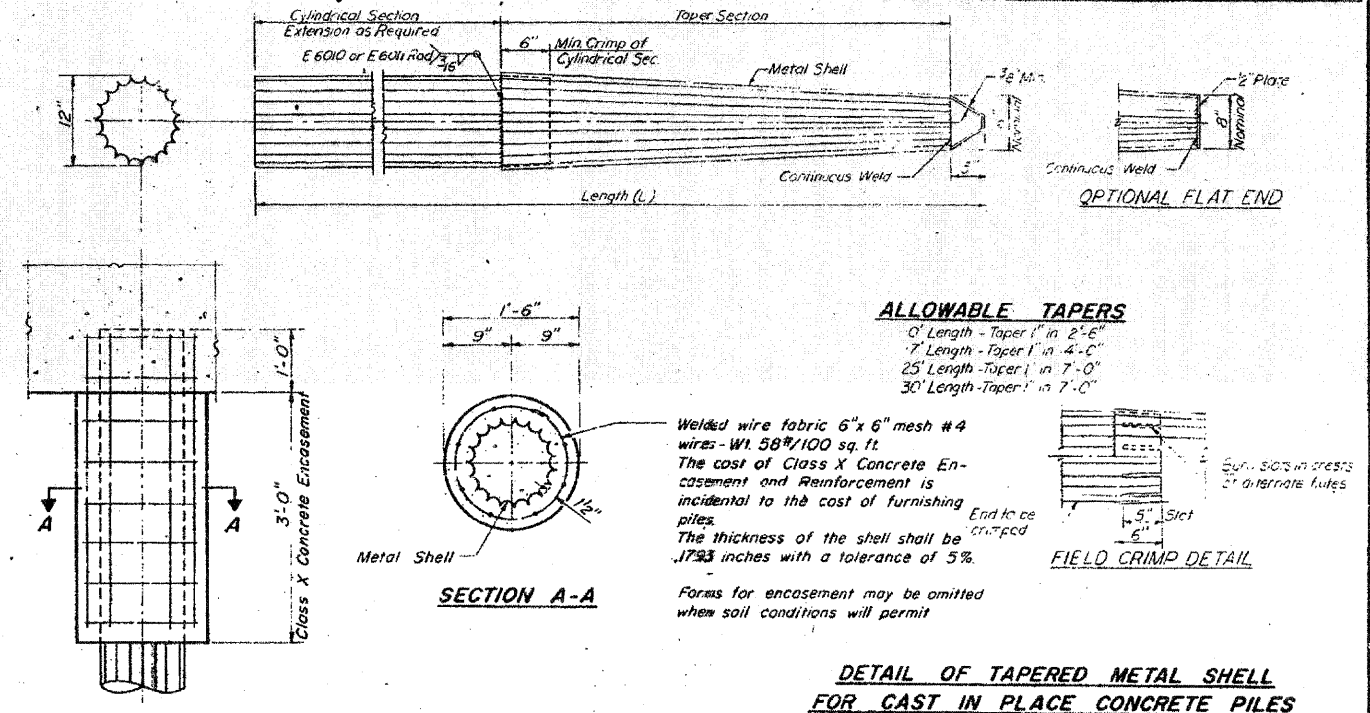
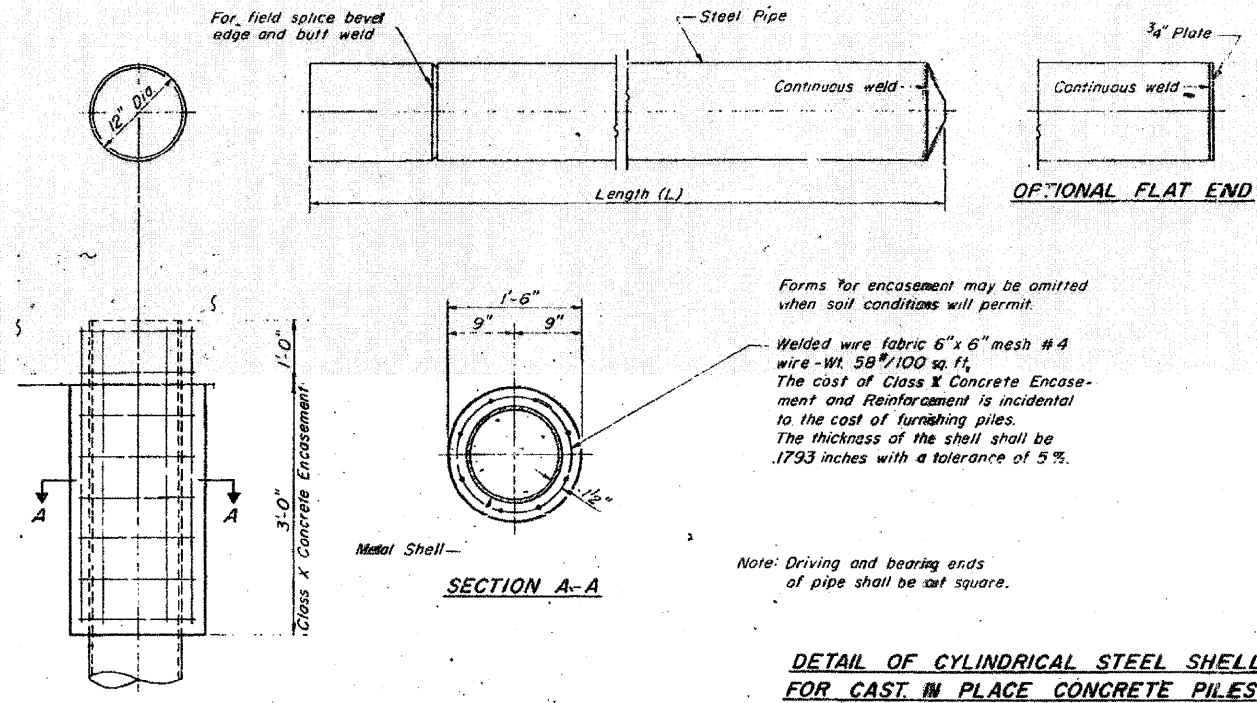


NOTES:
 For Detail of Aluminum Door see Sheet No. 15
 Work this sheet in conjunction with Sh. No. 14

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 NORTH ABUTMENT
 WINGWALLS AND APPROACH BENT
 F.A. ROUTE 12 (9TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 55+62.20
 F.A.I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 15 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	75
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



STATE OF ILLINOIS				
DIVISION OF HIGHWAYS				
CONCRETE PILES DETAILS				
F. A. ROUTE 12 (9TH STREET) OVER F.A.I. ROUTE 64				
STATION 55 + 62.20				
F.A.I. RT.64	ST CLAIR COUNTY	SECTION 82-1HB		
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS				SHEET 17 OF 18

FILE NAME = D8T1-082-0326-sht-p1r18.dgn

USER NAME = maronak
 PLOT SCALE = 482,000 / ft.
 PLOT DATE = MAR. 31, 2011

DESIGNED
 DRAWN PP
 CHECKED AB
 DATE 03/31/2011

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 9TH STREET

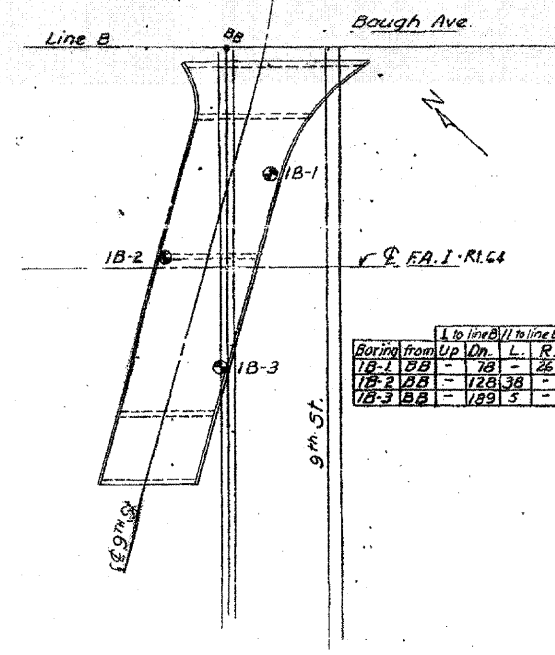
SCALE: NONE SHEET NO. 18 OF 19 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	279	
9166/9180/9213/9214		CONTRACT NO. 76C51		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I. 64	82-1HB	ST. CLAIR	110	76
FED. ROAD DIST. NO. 4 ILLINOIS PROJECT				

1B-1					1B-2					1B-3				
ELEV.	DEPTH	N	QU	DESCRIPTION	ELEV.	DEPTH	N	QU	DESCRIPTION	ELEV.	DEPTH	N	QU	DESCRIPTION
419.25	0.5			Concrete sidewalk	418.81	1.0			Concrete pavement	419.0				
	2.5					2.5			Small gravel and brown fine sand, moist, med. dense.					Fill, concrete cement blocks, bricks & sand.
	4.0					4.0	19							
	5.0			Fine brown sand & silt, moist, loose.		5.0								
	6.5					6.5	15		Brown silt with fine sand, moist, medium dense.					
	7.5					7.5	11				7.5			
410.0	9.0				410.0	9.0				410.0	8			
	10.0					10.0					9.0			Grey & brown silt, trace of clay, moist, loose.
	11.5					11.5	3				10.0	9		
	12.5					12.5					11.5			
	14.0			Grey & brown silt, trace of clay, moist, loose.		14.0	6		Brown & grey silt with fine sand, moist, loose.		14.0	11		Grey & brown silt, trace of clay, moist, medium dense.
	15.0					15.0	7				15.0	19	1080	
	16.5					16.5	7				16.5			
	17.5					17.5					17.5			
	19.0			Grey & brown silt, trace of clay, moist, medium dense.	400.0	19.0	11		Brown & grey silt with fine sand, moist, med. dense.	400.0	21	2070		Grey & brown clay, fine layers of silt, moist, very tough.
	20.0					20.0					20.0			
	21.5					21.5	7		Grey silt with trace of clay, layers of fine brown sand, moist, loose.		21.5	16		Grey brown silt, trace of clay, moist, med. dense.
	22.5			Coarse to fine brown sand & silt, moist, dense.		22.5					22.5			
	24.0					24.0	9				23	3050		Grey clay, layers of silt, moist, very tough.
	25.0					25.0					24.0			
	26.5					26.5	37				25.0			
	27.5			Fine brown sand, little silt, moist, medium dense.		27.5					26.5			Grey silt & grey fine sand, moist, medium dense.
	29.0					29.0	34				27.5			
390.0	30.0				390.0	30.0			Fine brown sand, trace of silt, moist, dense.	390.0	29.0			
	31.5					31.5	33				30.0	33		Fine yellow sand, trace of silt, moist, dense.
	32.5			Fine brown sand, little silt, moist, loose.		32.5					31.5			
	34.0					34.0	34				32.5	31		
	35.0					35.0					34.0			
	36.5					36.5	62		Fine brown sand, trace of silt, moist, very dense.		35.0			
	37.5			Fine grey sand, little silt, moist, medium dense.		37.5					36.5	78		
380.0	39.0			Fine grey sand, little silt, moist, dense.	380.0	39.0	59		Fine grey sand, trace of silt, moist, very dense.	380.0	39.0	61		Fine yellow sand, trace of silt, moist, very dense.
	40.0					40.0					40.0			
	41.5					41.5	25		Grey fine sand, layers of grey clay, moist, med. dense.		41.5	66		
	42.5					42.5					42.5			Grey fine sand, trace of silt, very dense.
	44.0			Fine grey sand, little silt, moist, medium dense.		44.0	31		Grey fine sand, layers of grey clay, moist, dense.	375.0	44.0	73		
	45.0					45.0					44.0			End of bore
	46.5					46.5	41		Fine grey sand, little silt, moist, dense.		45.0			
	47.5					47.5					46.5			
	49.0					49.0	58		Grey fine sand, little silt, moist, very dense.		47.5			
370.0	50.0			Grey fine sand, layers of dark grey silt, moist, dense.	370.0	50.0					49.0			
	51.5					51.5	44				50.0			
	52.5					52.5					51.5			
	54.0			Fine grey sand, little silt, moist, very dense.		54.0	38		Grey fine sand, little silt, moist, dense.		52.5			
	55.0					55.0					54.0			
362.75	56.5			End of bore.	362.31	56.5			Fine grey sand, little silt, moist, very dense.		55.0			
							68							



LEGEND
 W.L. --- Water level below ground surface 24 hrs after completion.
 Qu --- Unconfined Compressive Strength (p.s.f.)
 N --- Penetration Blows per foot acquired by driving a 2" O.D. Split Spoon Sampler with a 140# weight drop 30 inches
 Method of bore - Washout

Drawn by: M.V.D.
 Checked by: B.M.

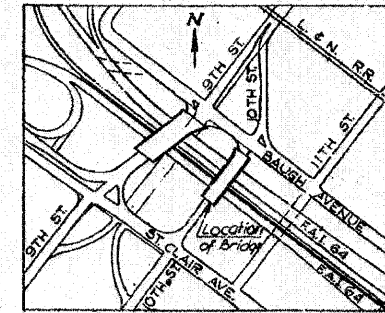
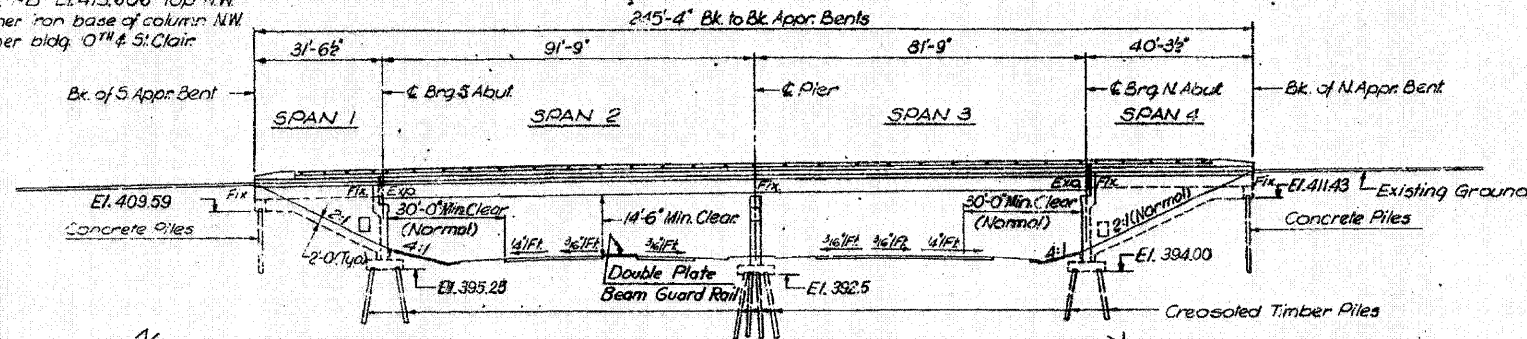
Date of bore February 13, 1958

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 BORING LOGS
 F.A. ROUTE 12 (9TH ST.)
 OVER F.A.I. R1.64
 STATION 55+62.20
 F.A.I. R1.64 ST. CLAIR CO. SECTION 82-1HB
 H. W. LOCHNER, INC.
 CONSULTING ENGINEERS
 CHICAGO, ILLINOIS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	77
FED ROAD DIV. NO. 4	ILLINOIS PROJECT			

B.M. 1-B El. 415.606 Top NW corner iron base of column NW corner bldg. 10th & 5th Clair



STATION 58+17.87
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 82-1HB
F.A. PROJ. EMP. I-64-1(66)
LOADING HS 28

NAME PLATE
See Std 2113

DESIGN STRESSES AND LOADS

- $f_s = 248,000$ psi - Prestressing Steel
 - $f_{si} = 173,600$ psi
 - $f_c = 5,000$ psi - Prestressed Concrete
 - $f_{ci} = 4,000$ psi
 - $f_c = 1,200$ psi - Superstructure
 - $f_c = 1,400$ psi - Substructure
 - $f_s = 20,000$ psi - Structural Steel (A-36)
 - $f_s = 20,000$ psi - Reinforcement
 - $f_c = 75$ psi - Footings
- LIVE LOAD DEFLECTION: $\frac{L}{200}$ Composite
 * Alternate $f_s = 270,000$ psi is permitted.
 * LOADING: H520-44

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.

FIELD CONNECTIONS SHALL BE BOLTED USING HIGH STRENGTH BOLTS. BOLTS 3/4" ϕ , OPEN HOLES 1 1/8" ϕ , UNLESS OTHERWISE NOTED.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED IN THE BOTTOM OF FLANGE OF BEAMS OR GIRDERS NOR ON THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER SUPPORTS.

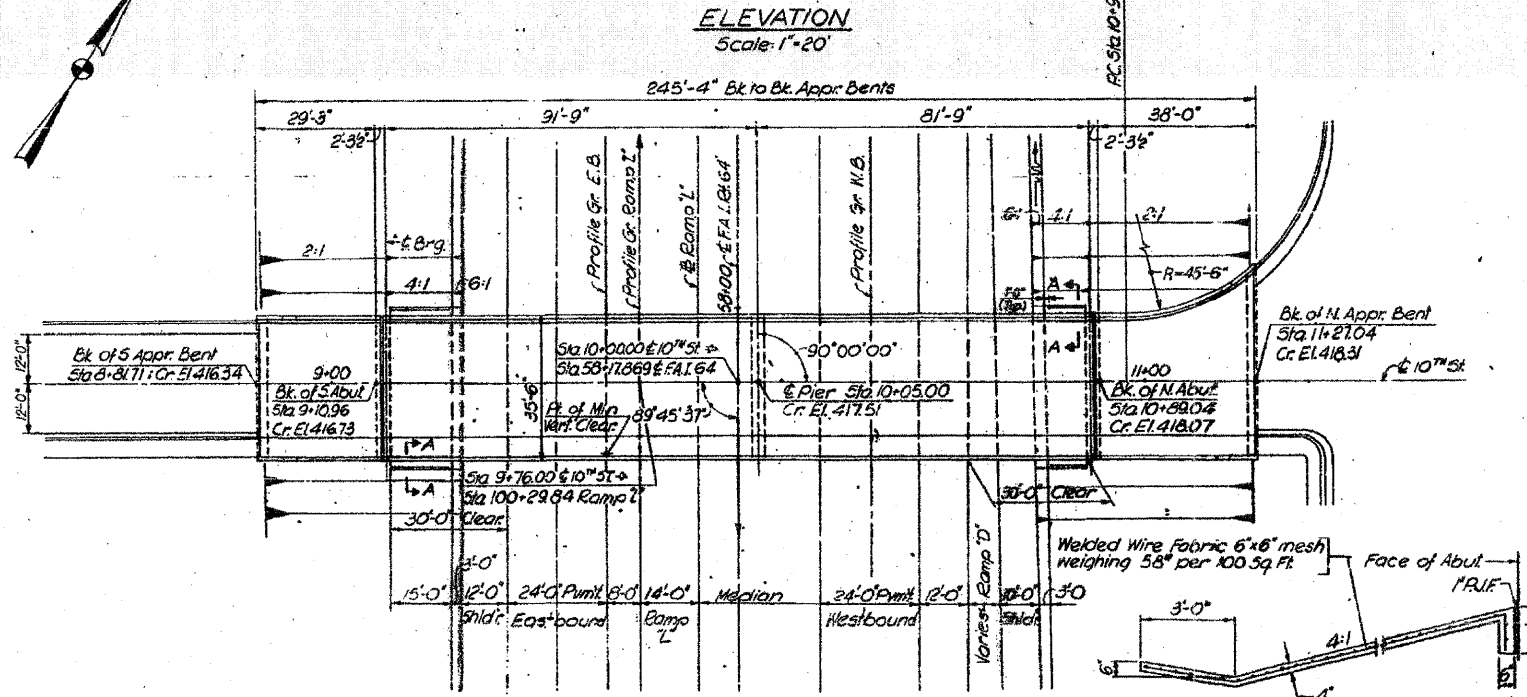
SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" MESH, WEIGHING 58# PER 100 SQ. FT.

THE CONTRACTOR SHALL DRIVE ONE (1) CONCRETE TEST PILE IN A PERMANENT LOCATION AT THE NORTH APPROACH BENT AND ONE (1) TIMBER TEST PILE IN THE VICINITY OF THE PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

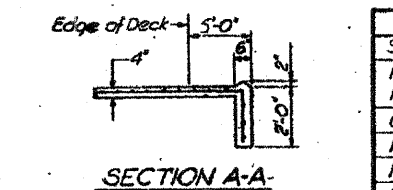
An alternate strand pattern using Extra High Strength Prestressing strand (270 ksi) is permitted.

FUTURE WEARING SURFACE - 25# SQ. FT.

Calculated Plain Weight of Structural Steel = 179,300



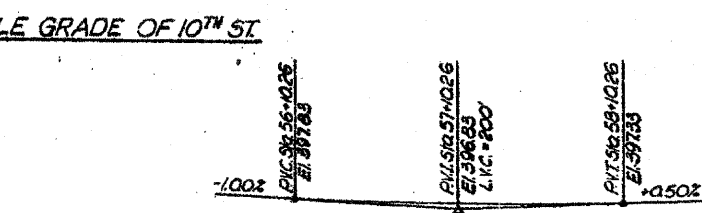
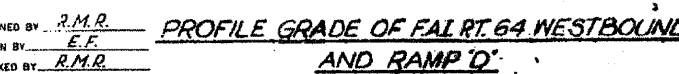
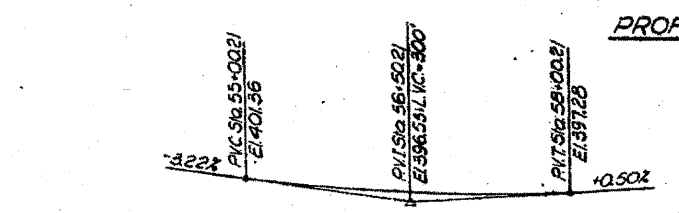
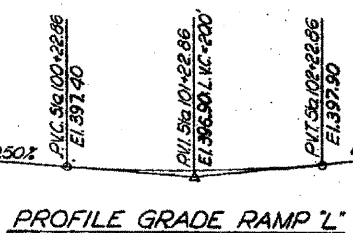
SECTION THRU SLOPE WALL



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Structure Excavation	Cu. Yds.		428	428
Furnishing and Erecting Precast Prestressed Concrete I-Beams (36')	Lin. Ft.	380		380
Class II Concrete	Cu. Yds.	324.8	265.0	589.8
Protective Coat	Sq. Yds.	1075		1075
Furnish and Erect Structural Steel	Lump Sum	1		1
Stud Shear Connectors	Ea.	2460		2460
Reinforcement Bars	Lbs.	68680	23600	92280
Furnish Creosoted Piles (up to 20')	Lin. Ft.		1492	1492
Driving Timber Piles	Lin. Ft.		1492	1492
Test Pile Timber	Ea.		1	1
Driving Concrete Piles	Lin. Ft.		553	553
Furnishing Concrete Piles	Lin. Ft.		553	553
Test Pile Concrete	Ea.		1	1
Name Plates	Ea.		2	2
Slope Wall 4"	Sq. Yds.		162	162
Aluminum Railing Type 'L'	Lin. Ft.	453		453
Steel Railing Type 'M'	Lin. Ft.	453		453
Preformed Joint Sealer	Lin. Ft.	71		71

* Alternate Railing



DESIGNED BY: R.M.R.
DRAWN BY: E.F.
CHECKED BY: R.M.R.

Rev. 2-18-69 Reinf. from 90,030' to 90,280' J.M. Rev. 4-8-69 Furn. Creos. Piles from 1300 Lin. Ft. to 1492 Lin. Ft. Rev. 2-17-70 F&E. Str. Steel from 179,300' to Lump Sum & Rev. Notes. L.W. Ec. Slope Wall & from 162 sq yds. to 162 sq yds. 12-8-71 J.M.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
GENERAL PLAN
F.A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 1 OF 18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 10TH STREET

FILE NAME = D8T1-082-0150-shr-pln21.dgn

USER NAME = mronsk
DESIGNED
DRAWN PP
CHECKED AB
PLOT SCALE = 480,000 / 1 ft.
PLOT DATE = MAR. 31, 2011

DESIGNED
DRAWN PP
CHECKED AB
DATE 03/31/2011

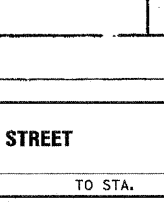
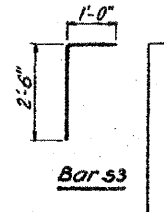
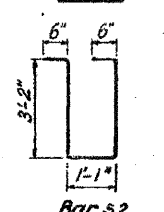
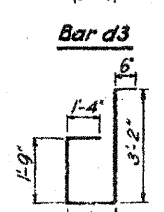
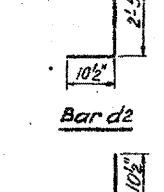
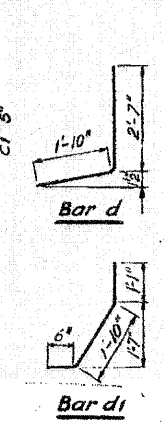
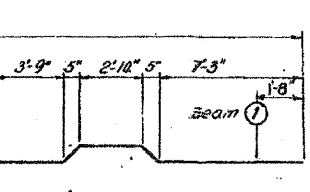
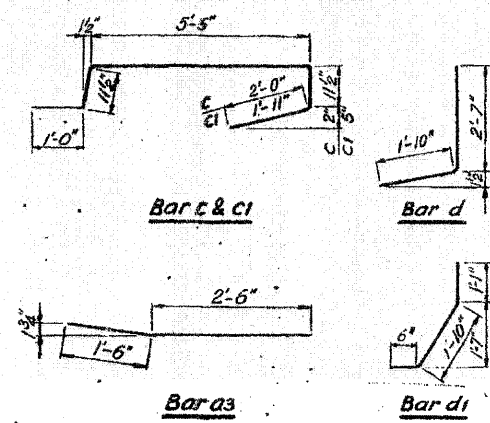
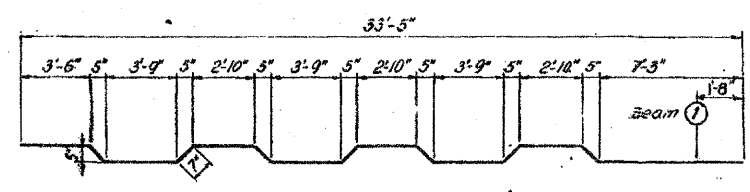
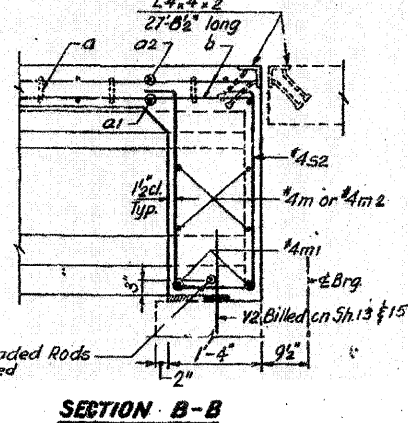
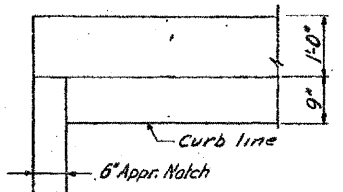
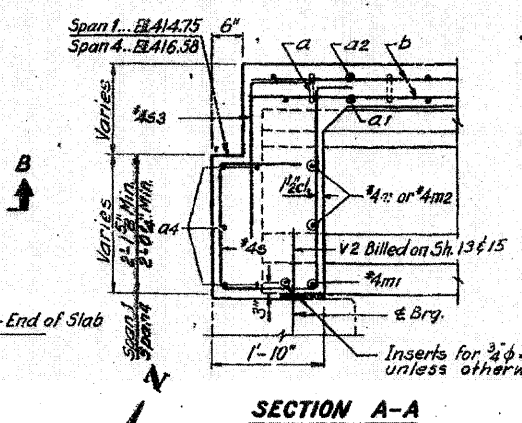
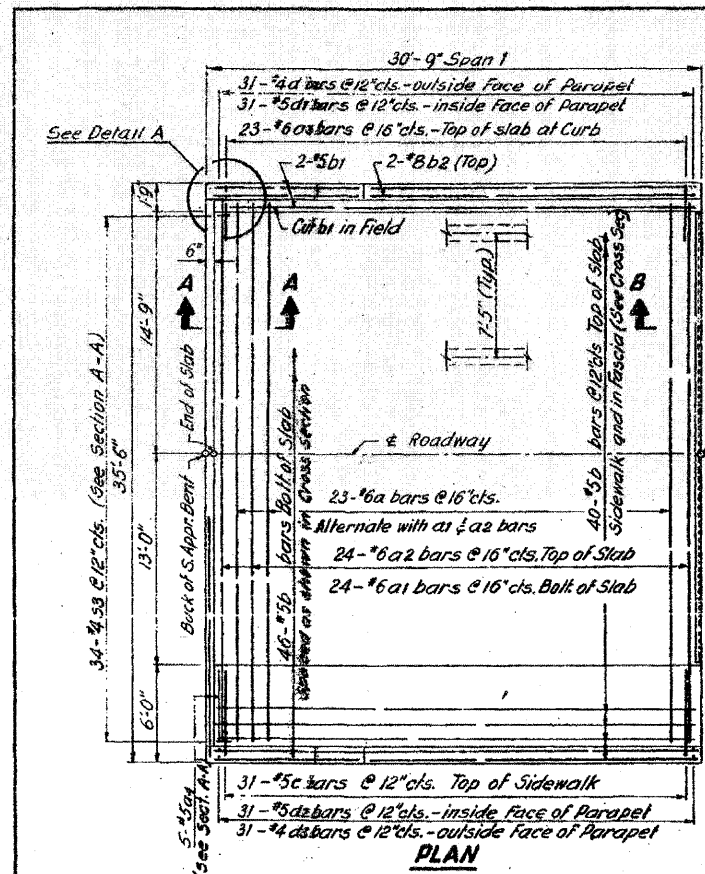
REVISED -
REVISED -
REVISED -
REVISED -

SCALE: NONE SHEET NO. 1 OF 19 SHEETS STA. TO STA.

F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
• 82-1-3HB, 82-2N, 82-1-12RS ST. CLAIR 352 281
• 9166/9180/9213/9214 CONTRACT NO. 76C51
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

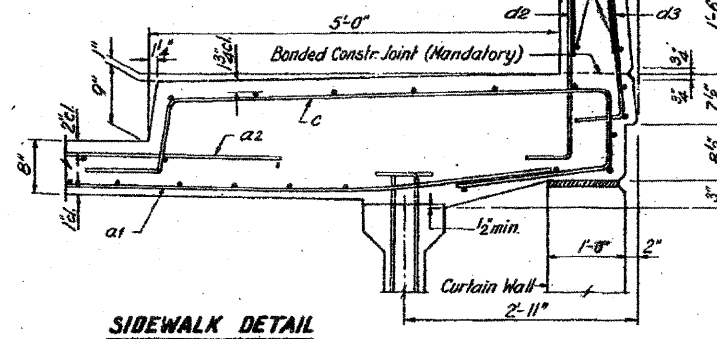
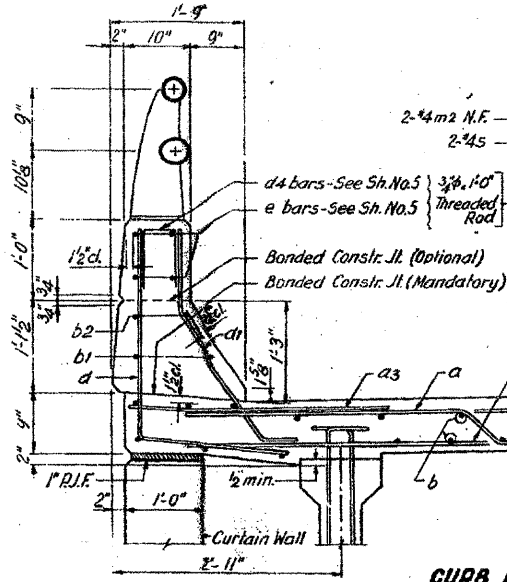
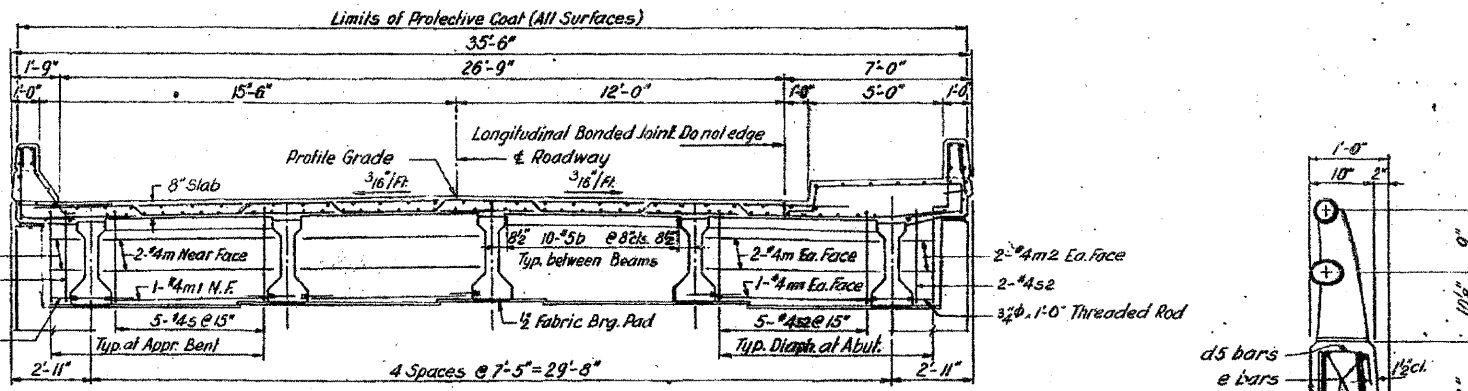
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-IHB	ST. CLAIR	110	78
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



BILL OF MATERIAL

Bar No.	Size	Length	Shape
a	23 #6	34'-7"	
a1	24 #6	33'-6"	
a2	24 #6	30'-0"	
a3	23 #6	4'-0"	
a4	5 #5	32'-8"	
b	86 #5	30'-0"	
b1	2 #5	30'-6"	
b2	2 #8	30'-6"	
c	31 #5	10'-4"	
d	31 #4	4'-5"	
d1	31 #5	3'-5"	
d2	31 #5	3'-4"	
d3	31 #4	2'-6"	
m	24 #4	6'-8"	
m1	12 #4	5'-8"	
m2	12 #4	1'-3"	
s	24 #4	8'-4"	
s2	24 #4	8'-5"	
s3	34 #4	3'-6"	
Item			Unit
Reinforcement Bars			Lbs. 7000
Class X Concrete			Cu Yds. 44.0
Protective Coat			Sq Yds. 132



NOTES:
 Bars indicated thus 2x3-#5 etc. indicate 2 lines of bars with 3 lengths per line.
 Minimum bar laps = 24 bar diameters.
 All edges shall have 3/4" chamfer.
 All clearances shall be 1/2" unless shown otherwise.

NOTES:
 The quantities of reinforcement bars and concrete in parapets and end posts are billed separately on sheet No.5 and are not included above.
 For Expansion Guard Detail see Sh. No.3
 All exposed edges shall have 3/4" chamfer.
 All clearances shall be 1/2" unless shown otherwise.
 The weight of Expansion Guards is included with structural steel on Sh. No.3

DESIGNED BY: R.M.R.
 DRAWN BY: L.S.
 CHECKED BY: R.M.R.

As of 11-13-69 Reinf from 1990 to 1992 S.M.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 10TH STREET

FILE NAME =
 081-082-0150-shr-pln02.dgn

USER NAME = maronik
 DESIGNED
 DRAWN PP
 CHECKED AB
 PLOT SCALE = 480,000 / ft.
 PLOT DATE = MAR. 31, 2011

REVIS
 REVIS
 REVIS
 REVIS

DATE 03/31/2011

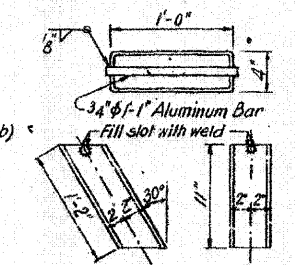
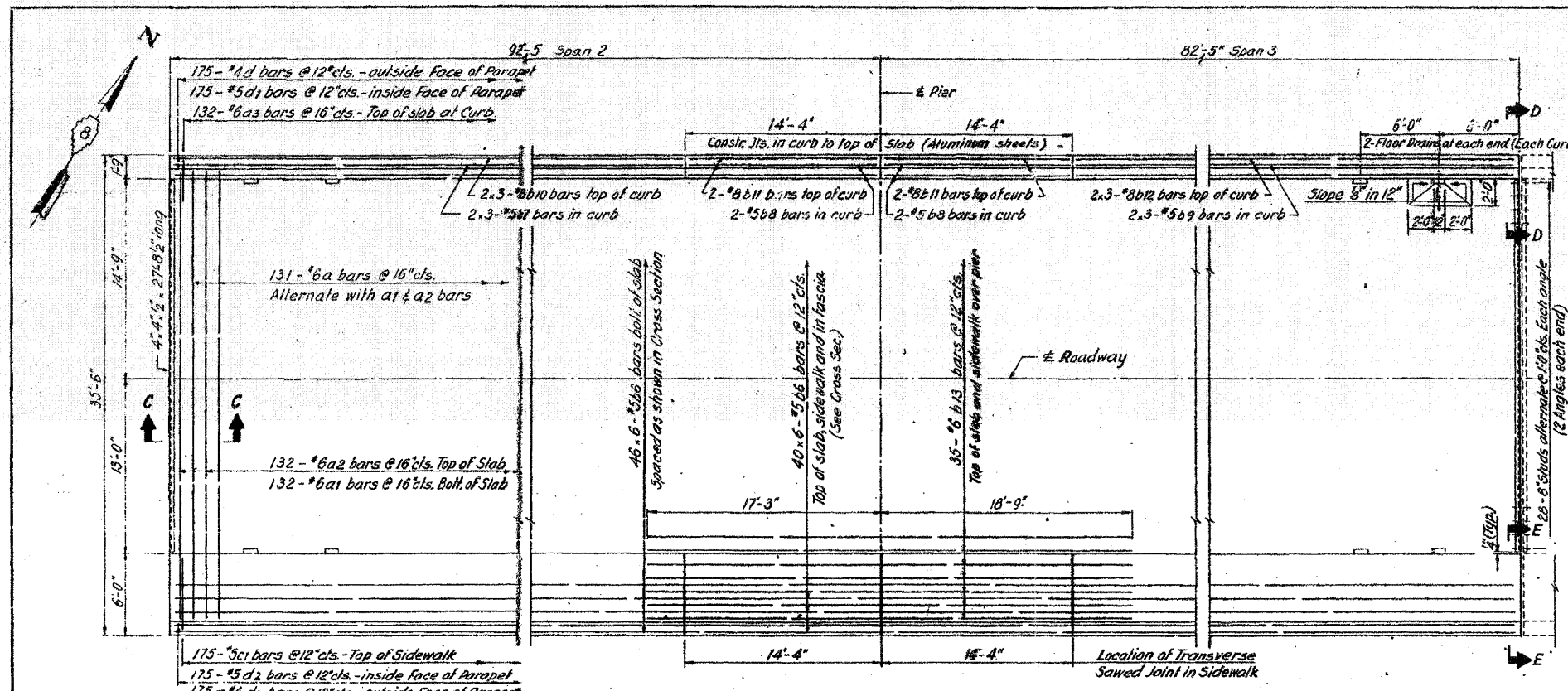
SCALE: NONE SHEET NO. 2 OF 19 SHEETS STA. TO STA.

F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 82-1-3HB, 82-2N, 82-1-12RS ST. CLAIR 352 282
 9166/9180/9213/9214 CONTRACT NO. 76C51
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

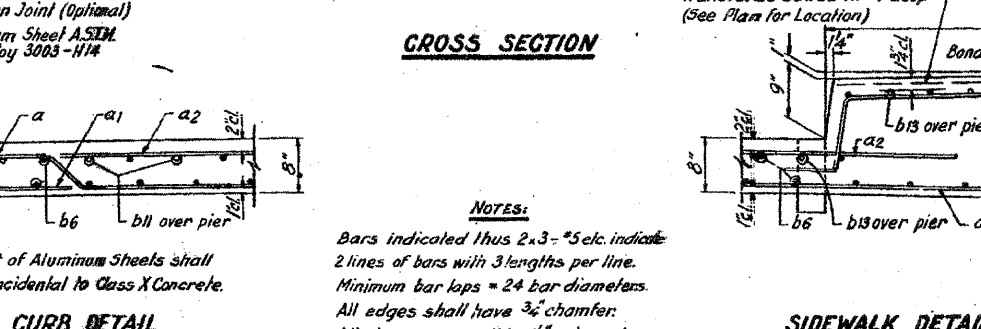
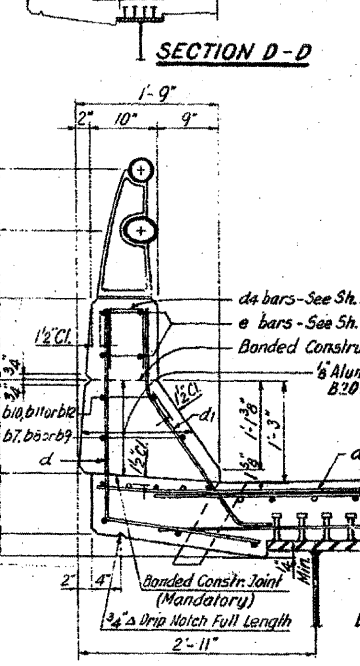
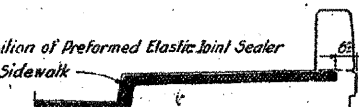
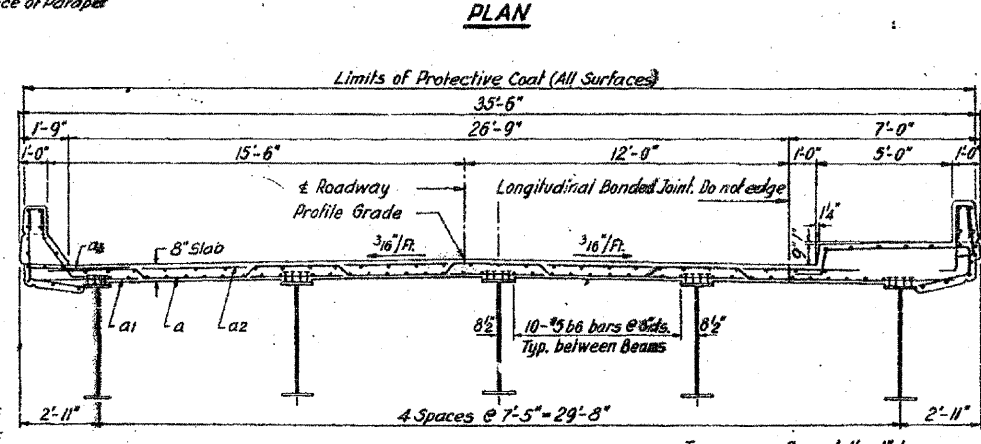
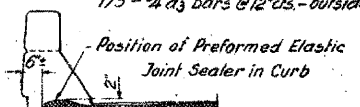
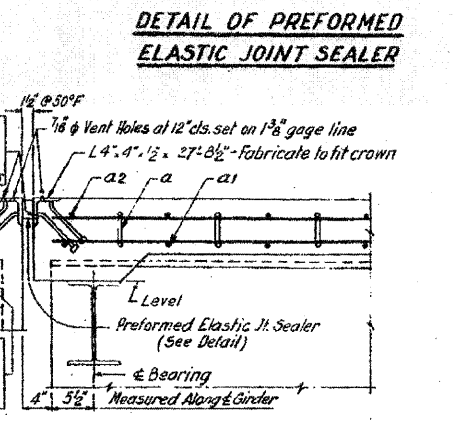
STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SUPERSTRUCTURE
 SPAN 1
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-IHB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 2 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 64	82-1HB	ST. CLAIR	110	79
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



NOTE:
Vent holes bolt holes and anchor studs not shown.



NOTES:
Bars indicated thus 2x3-#5 etc. indicate 2 lines of bars with 3 lengths per line. Minimum bar laps = 24 bar diameters. All edges shall have 3/8\"/>

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	131	#6	34'-7"	
a1	132	#6	33'-6"	
a2	132	#6	30'-0"	
a3	132	#6	4'-0"	
b6	516	#5	30'-2"	
b7	6	#5	26'-9"	
b8	4	#5	14'-0"	
b9	6	#5	23'-5"	
b10	6	#8	27'-3"	
b11	4	#8	14'-0"	
b12	6	#8	23'-11"	
b13	35	#6	36'-0"	
c1	175	#5	10'-3"	

Bar	No.	Size	Length	Shape
d	175	#4	4'-5"	
d1	175	#5	3'-5"	
d2	175	#5	3'-4"	
d3	175	#4	2'-6"	

Item	Unit	Total
Reinforcement Bars	Lbs.	43,500
Structural Steel *	Lump Sum	1
Class X Concrete	Cu. Yds.	199.7
Preformed Joint Sealer	Lin. Ft.	71
Protective Coat	Sq. Yds.	761

* Weight of Bearing Assemblies with lead plates and Anchor Bolts is included as Structural Steel. Weight = 5370 Lbs. The quantities of Reinforcement Bars and Class X Concrete in parapets are billed separately on Sheet No. 5 and are not included above. For Bar bending diagrams see Sh. No. 2.

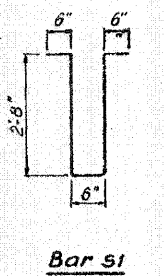
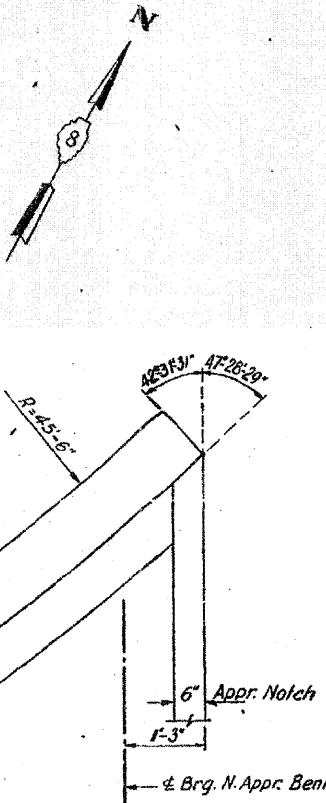
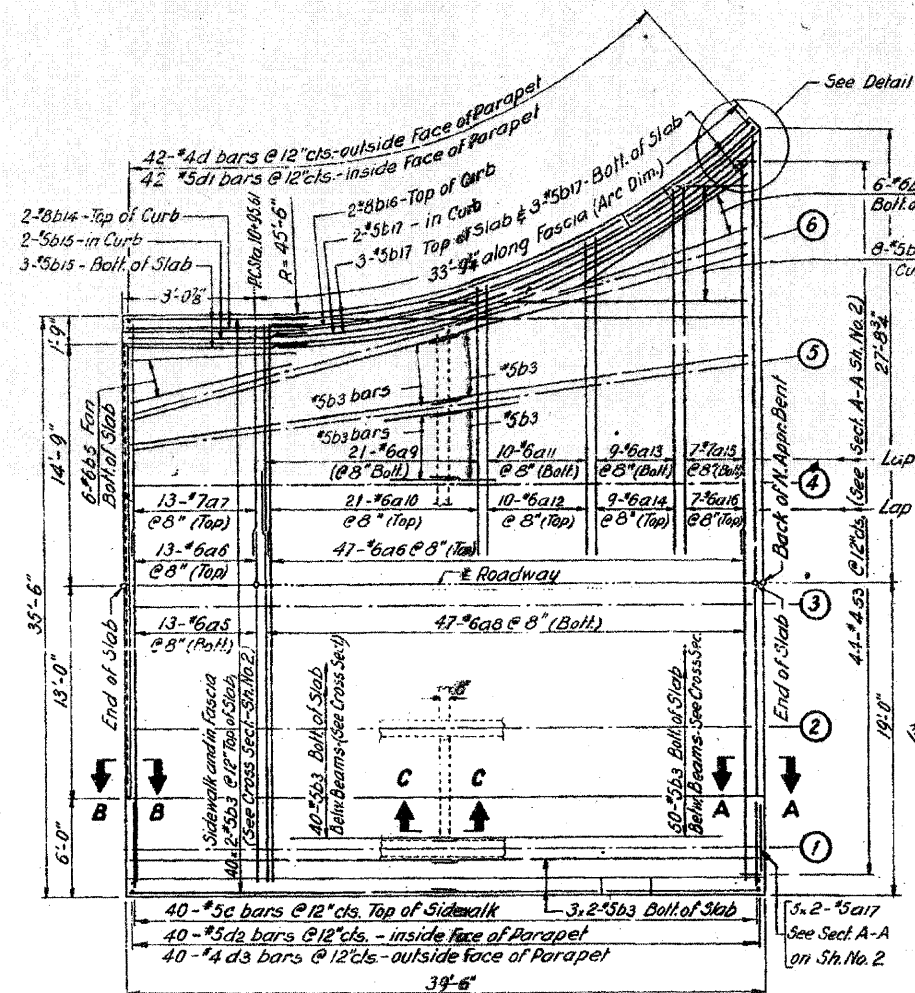
DESIGNED BY: R.M.R.
DRAWN BY: L.S.
CHECKED BY: R.M.R.

Rev. 2-18-69 Reinf From 43,390* to 43,570* S.M.

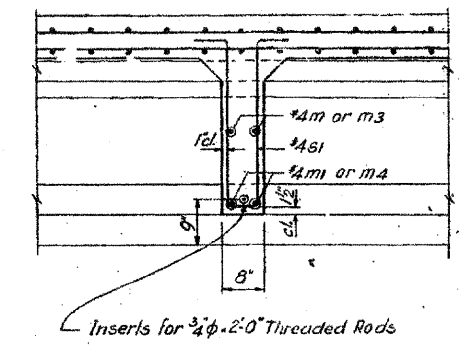
STATE OF ILLINOIS
DIVISION OF HIGHWAYS
SUPERSTRUCTURE
SPANS 2 AND 3
F. A. ROUTE 12 (10TH STREET)
OVER F. A. ROUTE 64
STATION 58+17.87
F. A. I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 3 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	80
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

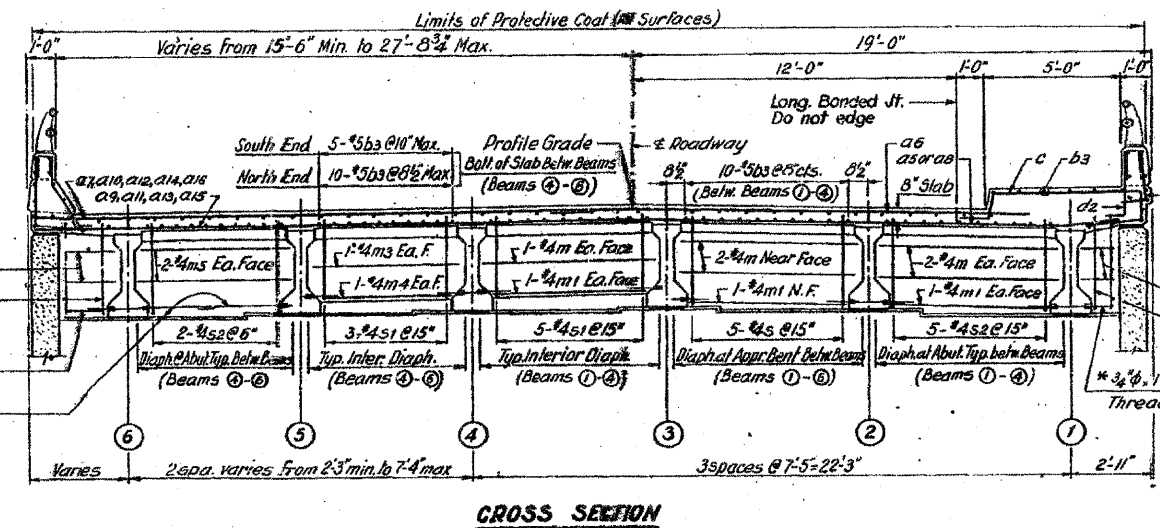
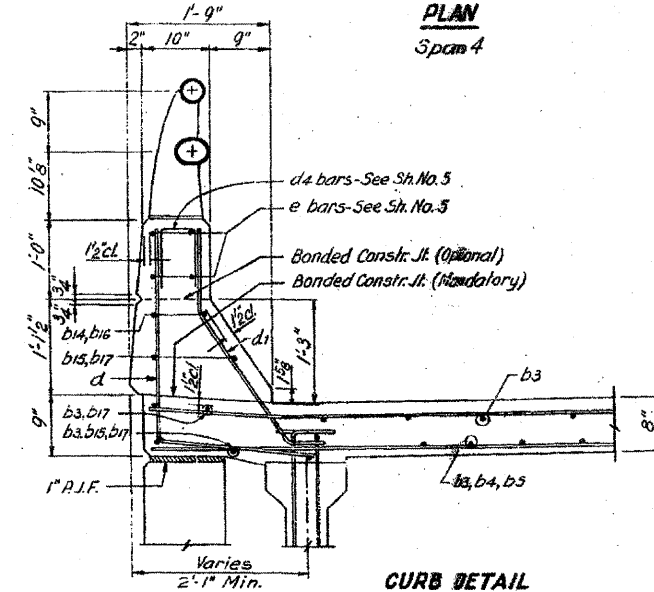


NOTE:
 For Sections A-A and B-B see sheet No. 2
 For Sidewalk Details and additional Notes see Sheet No. 2
 For Bar details not shown see sheet No. 2



BILL OF MATERIAL

Bar No.	Size	Length	Shape
a5	13 #6	34'-0"	—
a6	60 #6	17'-9"	—
a7	13 #7	14'-6"	—
a8	47 #6	24'-11"	—
a9	21 #6	12'-9"	—
a10	21 #6	16'-6"	—
a11	10 #6	15'-6"	—
a12	10 #6	19'-3"	—
a13	9 #6	18'-6"	—
a14	9 #6	22'-3"	—
a15	7 #7	21'-3"	—
a16	7 #6	25'-9"	—
a17	10 #5	22'-9"	—
b3	184 #5	20'-1"	—
b4	6 #6	12'-0"	—
b5	6 #6	10'-0"	—
b14	2 #8	11'-0"	—
b15	5 #5	11'-0"	—
b16	2 #8	32'-7"	—
b17	8 #5	32'-7"	—
c	40 #5	10'-4"	—
d	42 #4	4'-5"	—
d1	42 #5	3'-5"	—
d2	40 #5	3'-4"	—
d3	40 #4	2'-6"	—
m	28 #4	6'-8"	—
m1	17 #4	5'-8"	—
m2	6 #4	1'-3"	—
m3	9 #4	3'-9"	—
m4	6 #4	3'-3"	—
m5	8 #4	1'-8"	—
m6	2 #4	4'-3"	—
s	30 #4	8'-4"	—
s1	21 #4	6'-10"	—
s2	24 #4	8'-5"	—
s3	44 #4	3'-6"	—
Item	Unit	Total	
Reinforcement Bars	Lbs.	13,480	
Class X Concrete	Cu. Yds.	60.6	
Protective Coat	Sq. Yds.	182	

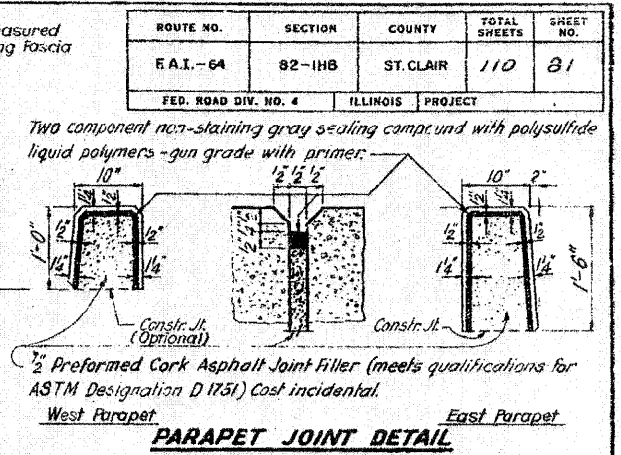
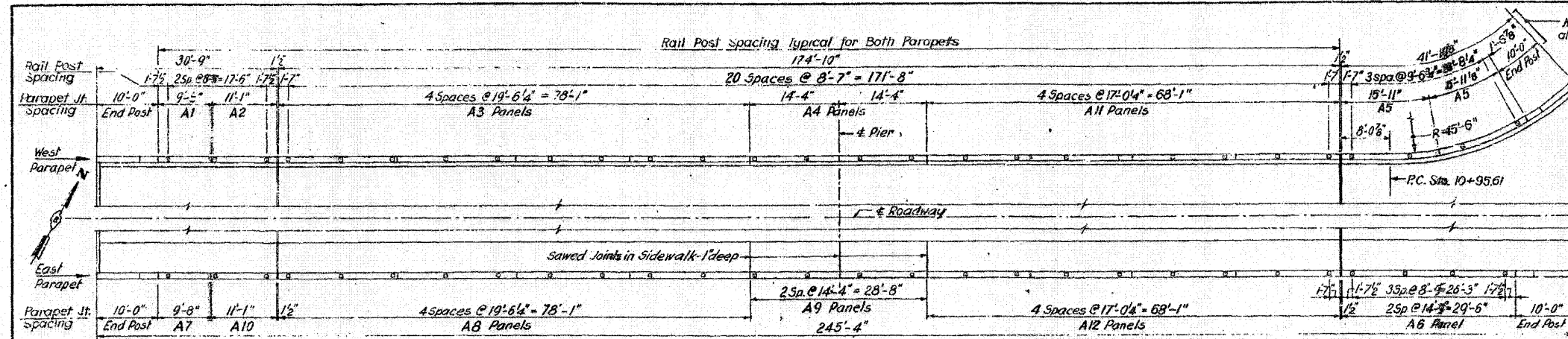


STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 SUPERSTRUCTURE
 SPAN 4
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

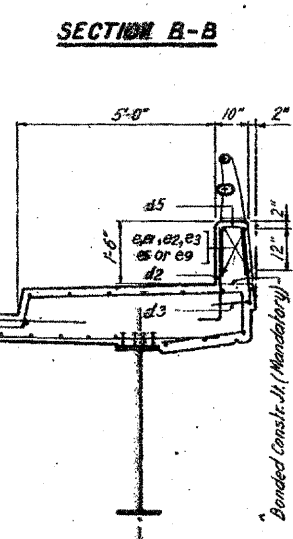
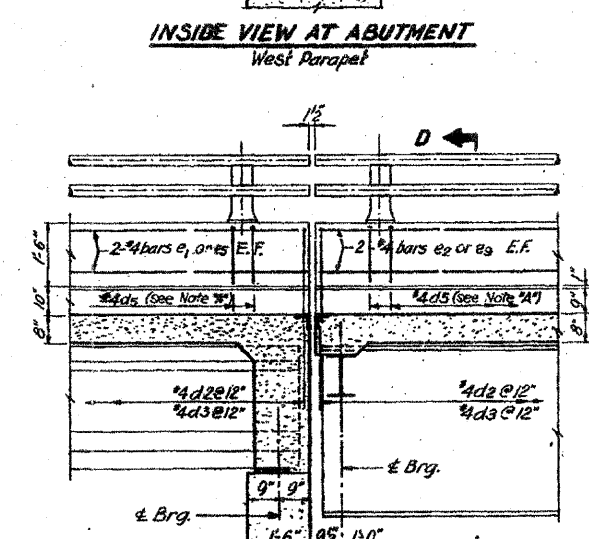
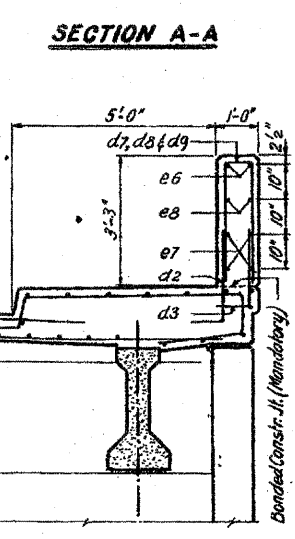
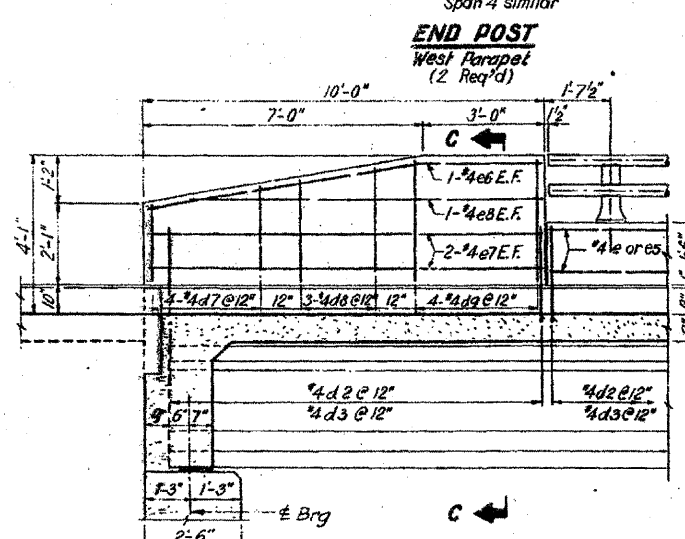
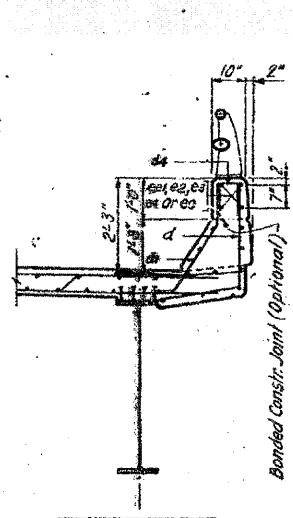
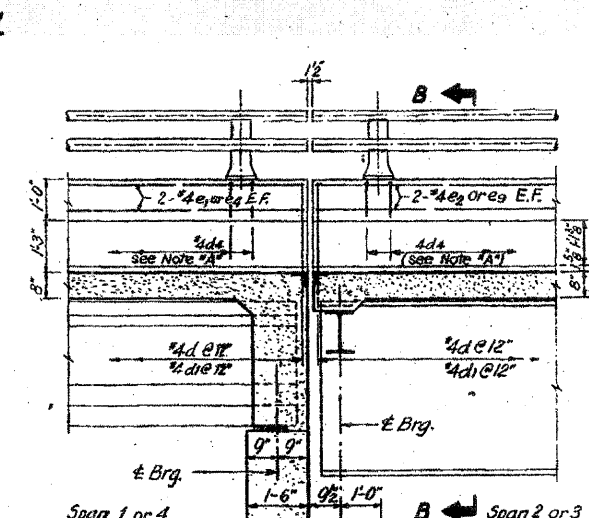
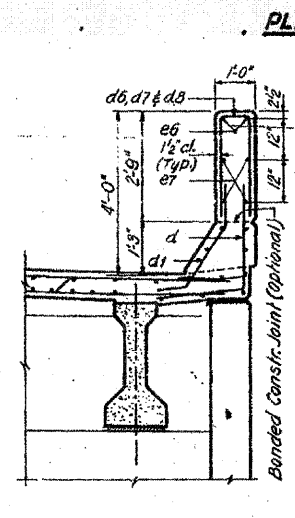
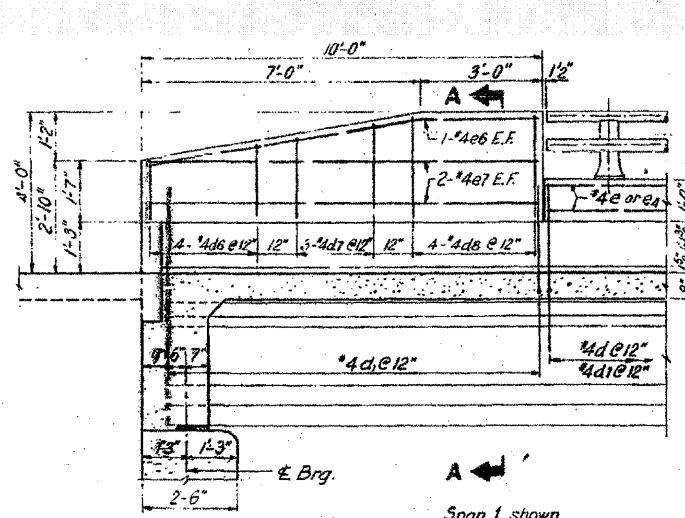
DESIGNED BY: R.M.R.
 DRAWN BY: L.S.
 CHECKED BY: R.M.R.

Rev. 2-18-69 Revert From 13,440' to 13,480' SM

FOR INFORMATION ONLY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	81
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



BAR LIST

Panel	No. Panels	Bar	No. Bar	Size
A1	1	e1	4	#4
A2	1	e1	4	#4
A3	4	e2	16	#4
A4	2	e3	8	#4
A5	2	e4	8	#4
A6	2	e5	8	#4
A7	1	e	4	#4
A8	4	e2	16	#4
A9	2	e3	8	#4
A10	1	e1	4	#4
A11	4	e3	16	#4
A12	4	e3	16	#4

BILL OF MATERIAL

Bar	No.	Size	Length	St.ipe
d4	56	#4	2'-11"	□
d5	56	#4	2'-11"	□
d6	8	#4	3'-7"	□
d7	14	#4	4'-7"	□
d8	14	#4	5'-9"	□
d9	8	#4	6'-7"	□
e	8	#4	9'-5"	---
e1	8	#4	10'-10"	---
e2	32	#4	19'-3"	---
e3	16	#4	14'-1"	---
e4	8	#4	15'-8"	---
e5	8	#4	14'-6"	---
e6	8	#4	9'-9"	---
e7	16	#4	9'-9"	---
e8	4	#4	8'-6"	---
e9	32	#4	16'-9"	---

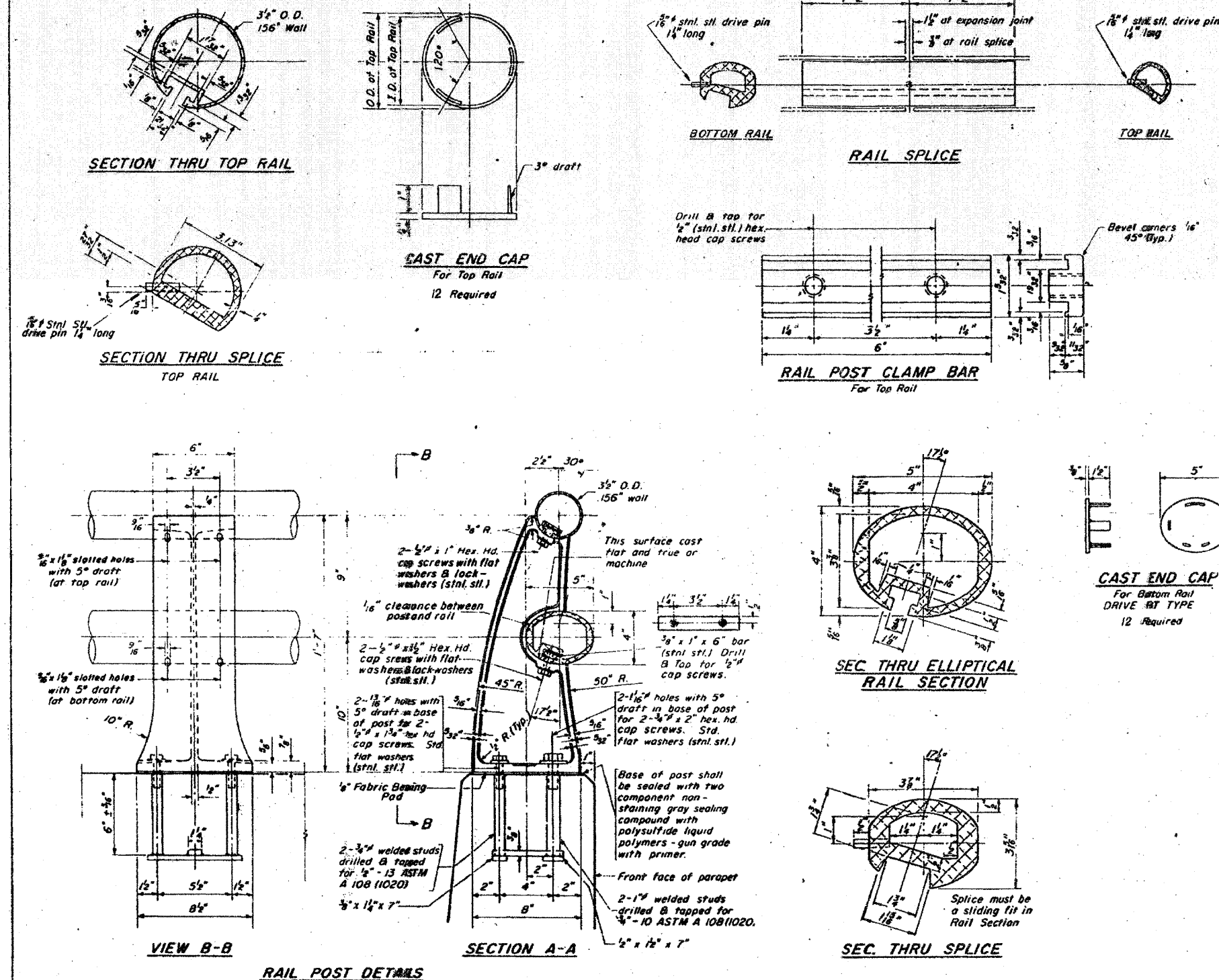
Item	Unit	Total
Class X Concrete	Cu. Yds.	20.5
Reinforcement Bars	Lbs.	1710

DESIGNED BY: R.M.R.
 DRAWN BY: L.S.
 CHECKED BY: R.M.R.

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
PARAPET AND RAILING LAYOUT
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET
 5 of 13

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F A I - 64	82-1HB	ST. CLAIR	110	82
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



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

METHOD of MEASUREMENT: Aluminum railing shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.
BASIS of PAYMENT: Aluminum railing shall be paid for at the contract unit price per lineal foot for ALUMINUM RAILING TYPE "L" measured as specified, in accordance with Section 508 of the Standard Specification except as noted.
 Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM RAILING TYPE "L".
 Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade, high spots shall be ground and low spots shimmed.
 Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 12% in 2 inches.

BILL OF MATERIAL

Item	Unit	Total
Aluminum Railing Type "L"	Lin Ft.	453

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
ALUMINUM RAILING TYPE L
 F. A. ROUTE 12 (10TH STREET)
 OVER F. A. I. ROUTE 64
 STATION 58+17.87
 F. A. I. RT. 64 ST. CLAIR COUNTY SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 6 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	83
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

NOTES:

All Posts shall be normal to parapet.
 All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 35018, galvanized to ASTM A-153.
 All Rail Tubing shall conform to applicable requirements of ASTM A-53, Grade B, (pipe or tube) galvanized to ASTM A-120.

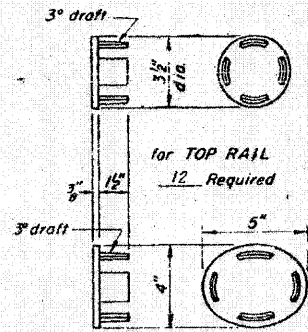
Provide 1- $\frac{1}{2}$ " and 2- $\frac{1}{2}$ " galvanized sheet steel shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type 1, air-dry cure.

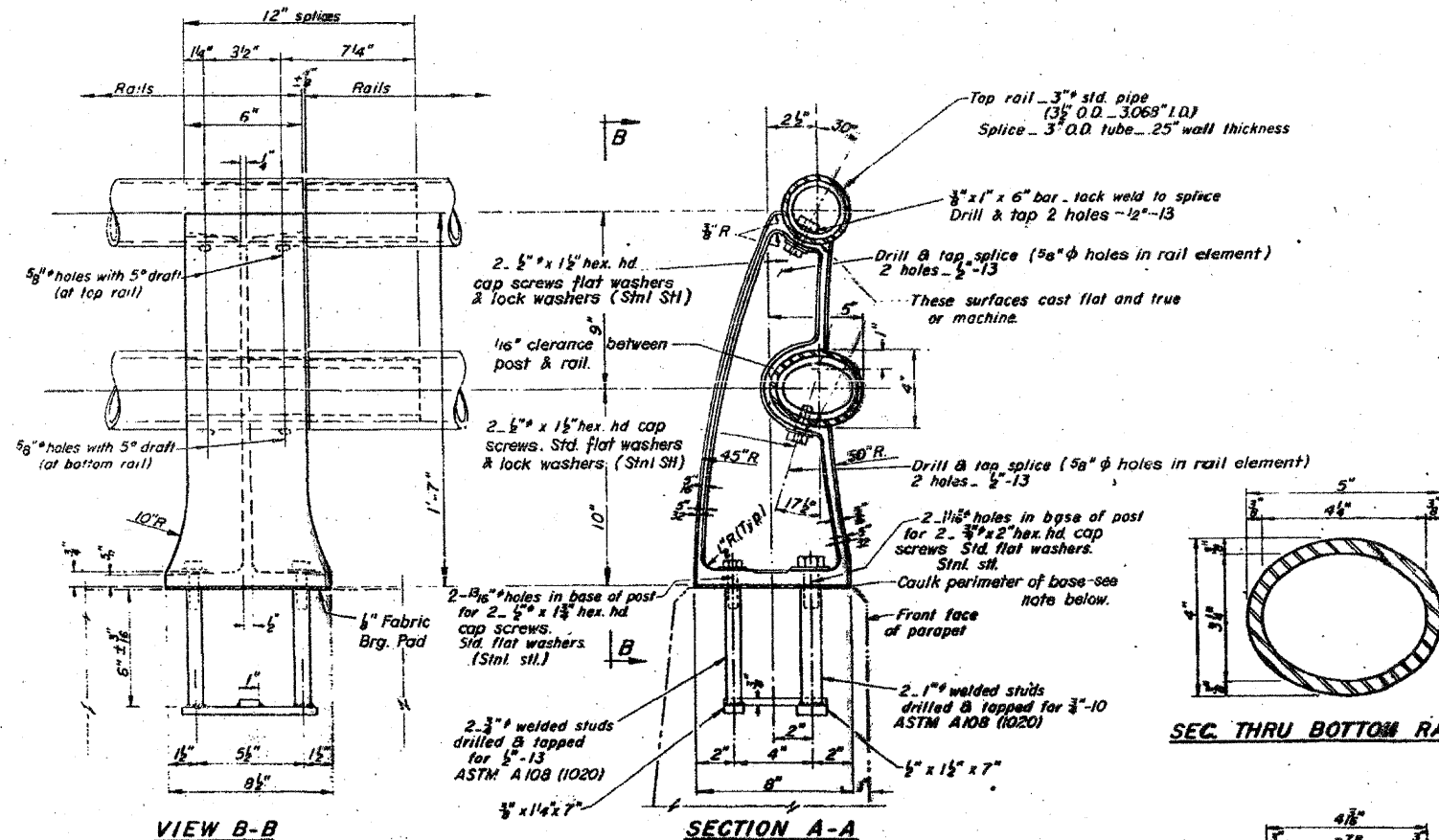
METHOD of MEASUREMENT: Steel railing shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.

BASIS of PAYMENT: Steel railing will be paid for at the contract unit price per lineal foot for STEEL RAILING TYPE M, measured as specified, in accordance with Section 508 of the Standard Specifications, except as noted.

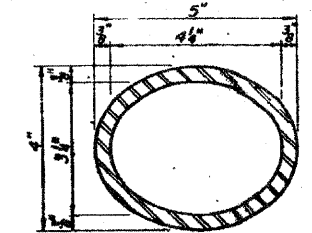
Cost of rail splice, end caps and hardware to be incidental to item STEEL RAILING TYPE M.



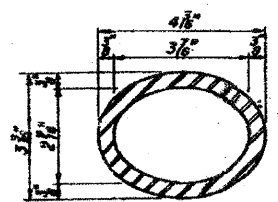
CAST END CAPS
 DRIVE FIT TYPE
 for TOP RAIL
 12 Required
 for BOTTOM RAIL
 12 Required



RAIL POST DETAILS



SEC. THRU BOTTOM RAIL



SEC. THRU BOTTOM SPLICE

*BILL of MATERIAL

Item	Unit	Quantity
STEEL RAILING TYPE M	Lin. Ft.	453

* Alternate Railing

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 STEEL RAILING TYPE M
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87

F.A.I. RT. 64	ST. CLAIR CO.	SECTION 82-1HB	SHEET
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS			6A of 18

DESIGNED BY: R.M.P.
 DRAWN BY:
 CHECKED BY:

Note! Seal base of post to parapet with two component non-staining grey sealing compound with polysulfide liquid polymers - gun grade with primer.

Note! Splice must be sliding fit in Rail Section.

FILE NAME =
 D8T1-082-0150-shr-pln07.dgn

USER NAME = maransk	DESIGNED	REVISED -
PLOT SCALE = 480,000 / / ft.	DRAWN PP	REVISED -
PLOT DATE = MAR. 31, 2011	CHECKED AB	REVISED -
	DATE 03/31/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLAN - 10TH STREET

SCALE: NONE SHEET NO. 7 OF 19 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	287	
9166/9180/9213/9214		CONTRACT NO. 76C51		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

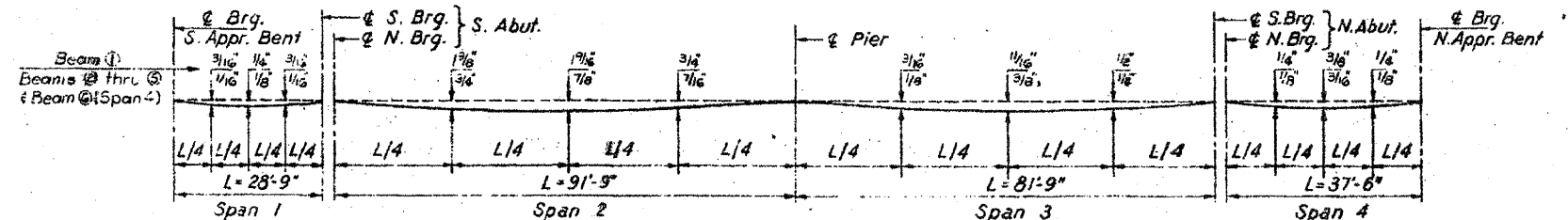
SPAN 1					
ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
S. Brg. S. Appr. Bent	5	882,960	- 13,583	416,150	416,150
	4	882,960	- 6,167	416,265	416,265
	3	882,960	1,250	416,342	416,342
	2	882,960	8,667	416,226	416,226
	1	882,960	16,083	416,159	416,159
A	5	892,960	- 13,583	416,293	416,301
	4	892,960	- 6,167	416,408	416,417
	3	892,960	1,250	416,485	416,494
	2	892,960	8,667	416,369	416,378
	1	892,960	16,083	416,302	416,319
B	5	902,960	- 13,583	416,426	416,434
	4	902,960	- 6,167	416,541	416,550
	3	902,960	1,250	416,618	416,627
	2	902,960	8,667	416,502	416,511
	1	902,960	16,083	416,435	416,452
S. Brg. South Abut.	5	911,710	- 13,583	416,534	416,534
	4	911,710	- 6,167	416,650	416,650
	3	911,710	1,250	416,727	416,727
	2	911,710	8,667	416,611	416,611
	1	911,710	16,083	416,544	416,544

SPAN 2											
ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.	ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
S. Brg. South Abut.	5	912,252	- 13,583	416,553	416,553	G	5	963,252	- 13,583	417,026	417,026
	4	912,252	- 6,167	416,669	416,669		4	963,252	- 6,167	417,141	417,141
	3	912,252	1,250	416,745	416,745		3	963,252	1,250	417,218	417,218
	2	912,252	8,667	416,630	416,630		2	963,252	8,667	417,102	417,102
	1	912,252	16,083	416,562	416,562		1	963,252	16,083	417,036	417,158
C	5	922,252	- 13,583	416,657	416,698	H	5	973,252	- 13,583	417,393	417,146
	4	922,252	- 6,167	416,782	416,814		4	973,252	- 6,167	417,208	417,261
	3	922,252	1,250	416,859	416,900		3	973,252	1,250	417,285	417,338
	2	922,252	8,667	416,743	416,775		2	973,252	8,667	417,169	417,222
	1	922,252	16,083	416,676	416,732		1	973,252	16,083	417,102	417,196
D	5	932,252	- 13,583	416,771	416,828	J	5	982,252	- 13,583	417,159	417,191
	4	932,252	- 6,167	416,897	416,944		4	982,252	- 6,167	417,274	417,306
	3	932,252	1,250	416,963	417,020		3	982,252	1,250	417,351	417,363
	2	932,252	8,667	416,848	416,905		2	982,252	8,667	417,235	417,267
	1	932,252	16,083	416,780	416,881		1	982,252	16,083	417,168	417,224
E	5	942,252	- 13,583	416,885	416,939	K	5	992,252	- 13,583	417,225	417,238
	4	942,252	- 6,167	416,981	417,054		4	992,252	- 6,167	417,340	417,353
	3	942,252	1,250	417,058	417,131		3	992,252	1,250	417,417	417,430
	2	942,252	8,667	416,942	417,015		2	992,252	8,667	417,301	417,314
	1	942,252	16,083	416,874	417,005		1	992,252	16,083	417,234	417,257
F	5	952,252	- 13,583	416,950	417,027		5	1002,252	- 13,583	417,268	417,281
	4	952,252	- 6,167	417,066	417,143		4	1002,252	- 6,167	417,382	417,395
	3	952,252	1,250	417,143	417,220		3	1002,252	1,250	417,459	417,472
	2	952,252	8,667	417,027	417,104		2	1002,252	8,667	417,343	417,356
	1	952,252	16,083	416,959	417,036		1	1002,252	16,083	417,276	417,300

SPAN 3											
ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.	ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
S. Brg. at Pier	5	1005,000	- 13,583	417,302	417,302	L	5	1055,000	- 13,583	417,632	417,668
	4	1005,000	- 6,167	417,418	417,418		4	1055,000	- 6,167	417,748	417,783
	3	1005,000	1,250	417,495	417,495		3	1055,000	1,250	417,825	417,860
	2	1005,000	8,667	417,379	417,379		2	1055,000	8,667	417,709	417,744
	1	1005,000	16,083	417,311	417,311		1	1055,000	16,083	417,641	417,704
M	5	1015,000	- 13,583	417,369	417,369	Q	5	1065,000	- 13,583	417,698	417,730
	4	1015,000	- 6,167	417,484	417,483		4	1065,000	- 6,167	417,814	417,846
	3	1015,000	1,250	417,561	417,560		3	1065,000	1,250	417,891	417,923
	2	1015,000	8,667	417,445	417,444		2	1065,000	8,667	417,775	417,807
	1	1015,000	16,083	417,377	417,377		1	1065,000	16,083	417,707	417,764
N	5	1025,000	- 13,583	417,434	417,441	R	5	1075,000	- 13,583	417,764	417,785
	4	1025,000	- 6,167	417,550	417,557		4	1075,000	- 6,167	417,880	417,900
	3	1025,000	1,250	417,627	417,634		3	1075,000	1,250	417,957	417,977
	2	1025,000	8,667	417,511	417,518		2	1075,000	8,667	417,841	417,861
	1	1025,000	16,083	417,443	417,456		1	1075,000	16,083	417,773	417,810
O	5	1035,000	- 13,583	417,500	417,520	S. Brg. North Abut.	5	1085,750	- 13,583	417,842	417,842
	4	1035,000	- 6,167	417,616	417,636		4	1085,750	- 6,167	417,958	417,958
	3	1035,000	1,250	417,693	417,712		3	1085,750	1,250	418,034	418,034
	2	1035,000	8,667	417,577	417,599		2	1085,750	8,667	417,919	417,919
	1	1035,000	16,083	417,509	417,544		1	1085,750	16,083	417,851	417,851

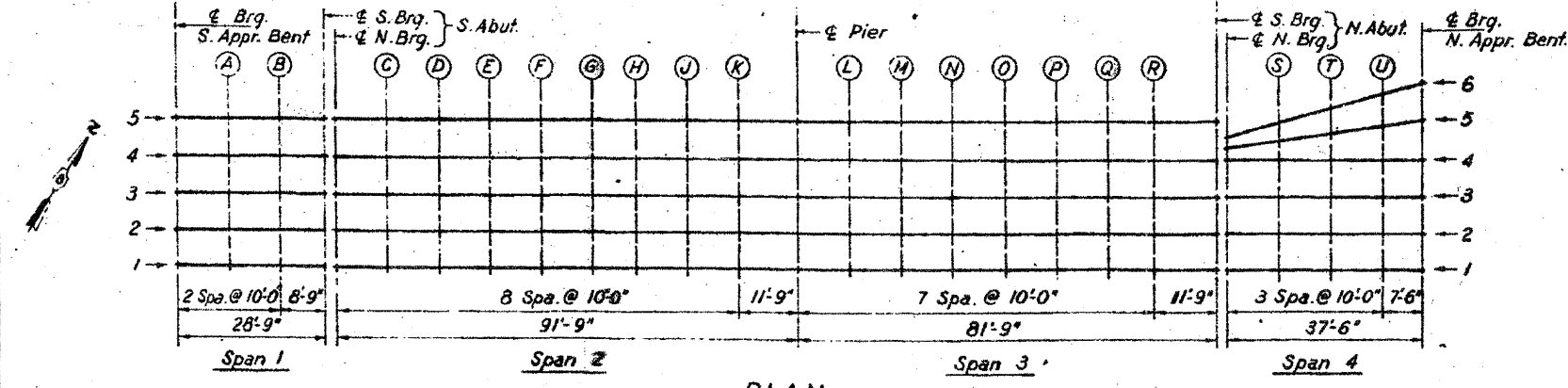
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	84
FED. ROAD DIV. NO. 1 ILLINOIS PROJECT				

SPAN 4					
ELEV. LINE	BEAM NO.	STATION	OFFSET	THEO. TOP OF ROAD	THEO. ADJ. FOR D.L.
S. Brg. North Abut.	6	1088,292	- 10,667	417,898	417,898
	5	1088,292	- 8,417	417,933	417,933
	4	1088,292	- 6,166	417,968	417,968
	3	1088,292	1,250	418,044	418,044
	2	1088,292	8,667	417,929	417,929
	1	1088,292	16,083	417,861	417,861
C	6	1098,292	- 13,378	417,921	417,933
	5	1098,292	- 9,772	417,977	417,989
	4	1098,292	- 6,167	418,034	418,046
	3	1098,292	1,250	418,110	418,122
	2	1098,292	8,667	417,995	418,007
	1	1098,292	16,083	417,927	417,951
T	6	1108,292	- 16,083	417,945	417,960
	5	1108,292	- 11,128	418,022	418,037
	4	1108,292	- 6,167	418,100	418,111
	3	1108,292	1,250	418,176	418,191
	2	1108,292	8,667	418,061	418,077
	1	1108,292	16,083	417,993	418,020
U	6	1118,292	- 18,800	417,969	417,976
	5	1118,292	- 12,463	418,067	418,077
	4	1118,292	- 6,167	418,166	418,175
	3	1118,292	1,250	418,242	418,252
	2	1118,292	8,667	418,127	418,139
	1	1118,292	16,083	418,059	418,077
S. Brg. N. Appr. Bent	6	1125,792	- 20,833	417,986	417,986
	5	1125,792	- 13,500	418,101	418,101
	4	1125,792	- 6,167	418,215	418,215
	3	1125,792	1,250	418,292	418,292
	2	1125,792	8,666	418,176	418,176
	1	1125,792	16,083	418,109	418,109



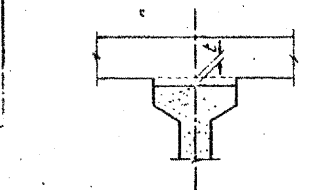
DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

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 shown on this sheet.



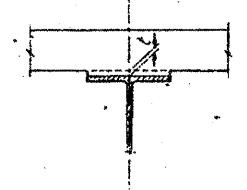
PLAN

DESIGNED BY: R.M.R.
DRAWN BY: J.L.
CHECKED BY: R.M.R.



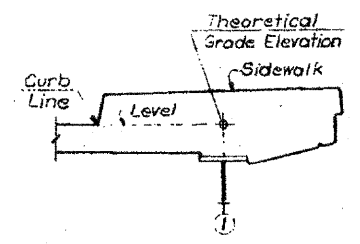
FILLET HEIGHTS-APPR. SPANS

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted algebraically from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown minus slab thickness equals the fillet heights "t". A positive value of "t" equals the fillet height above the top of the beam. A negative value of "t" not to exceed "2" equals the embedment of the beam above the theoretical bottom of slab elevation.



FILLET HEIGHTS-GIRDER SPANS

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

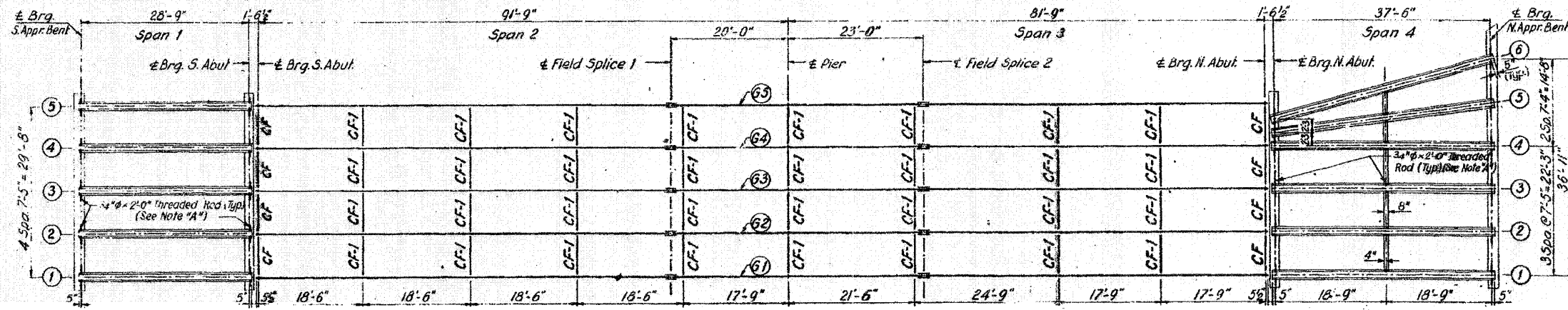


LOCATION OF THEO. GRADE ELEVATION - BEAM 1

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
TABLES OF ELEVATIONS
F. A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 7 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	85
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



Note "A": For lengths of threaded rod other than 2'-0" see st. Nos. 2 & 4.

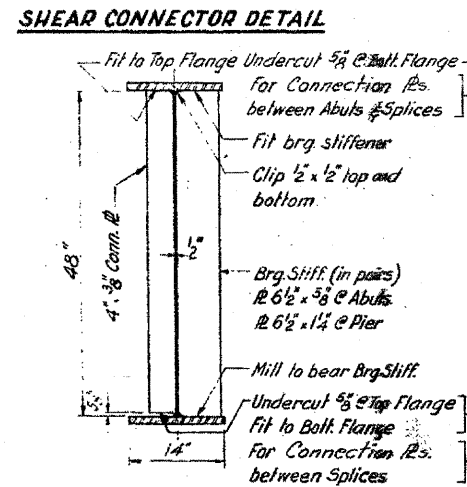
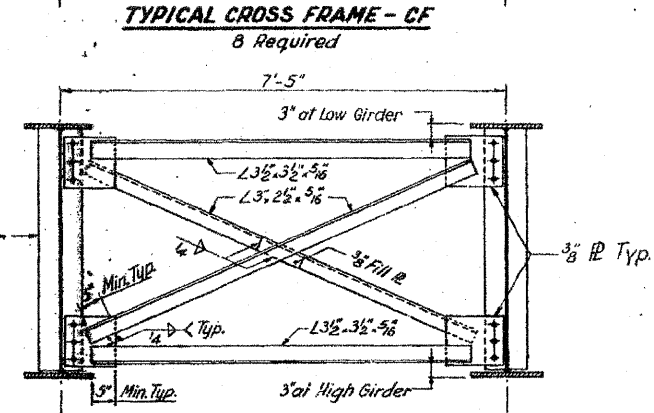
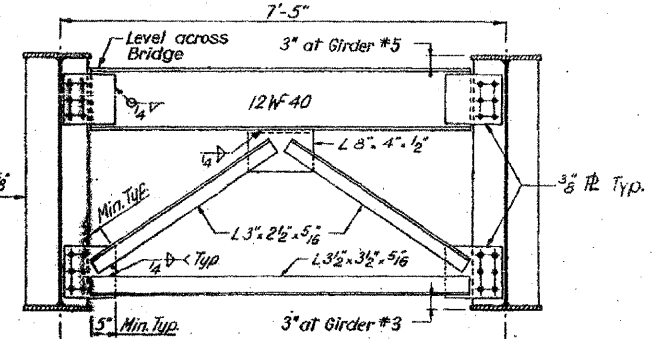
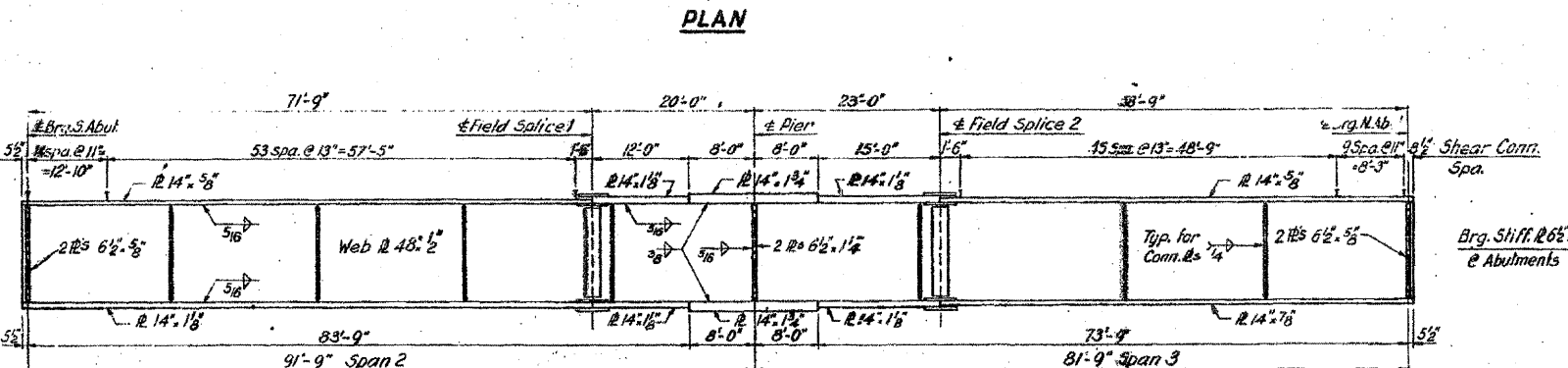
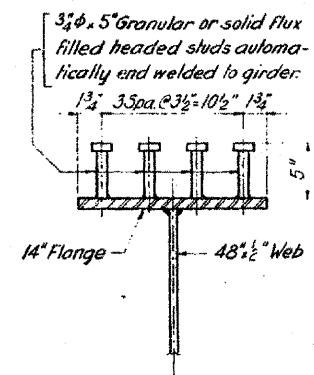


TABLE OF MOMENTS AND SHEARS (Interior Beam)

	SPAN 1		SPAN 2						SPAN 4				
	Moment (Ft-Kip)	Shear (Kips)	Moment (Ft-Kip)	Reaction (Kips)	Shear (Kips)				Moment (Ft-Kip)	Shear (Kips)			
	Span	Abutment	Abutment	Pier	Abutment	Pier	Abutment	1/4 Pt. Span	1/2 Pt. Span	3/4 Pt. Span	Pier	Span	Abutment
D.L.	116	17	550	1060	32	108						214	22
S.D.L.	28	4	180	230	10	30	10	4	3	9	15	48	5
L.L.	180	32	756	625	43	71	43	32	24	35	46	273	36
IMP	54	10	174	145	10	17	10	7	6	8	11	82	11
TOTAL	378	63		2060	95	226	63	43	33	52	72	617	74

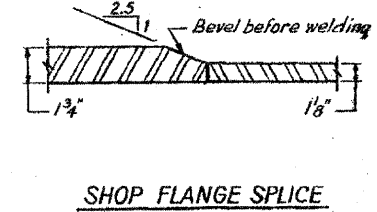
TOP OF WEB ELEVATIONS (For Fabrication only)

	61	62	63	64	65
± Bearing South Abutment	415.833	485.900	416.016	415.939	415.824
± Field Splice 1	416.356	416.424	416.540	416.463	416.347
± Bearing Pier	416.488	416.556	416.672	416.595	416.479
± Field Splice 2	416.640	416.708	416.824	416.747	416.631
± Bearing North Abutment	417.113	417.189	417.305	417.228	417.113

GIRDER PROPERTIES

Steel Sections	
I _s	17500 in ⁴
S _{rs}	607 in ³
S _{bs}	833 in ³
Composite Section	
I _c	45100 in ⁴
S _{rc}	5100 in ³
S _{bc}	1102 in ³

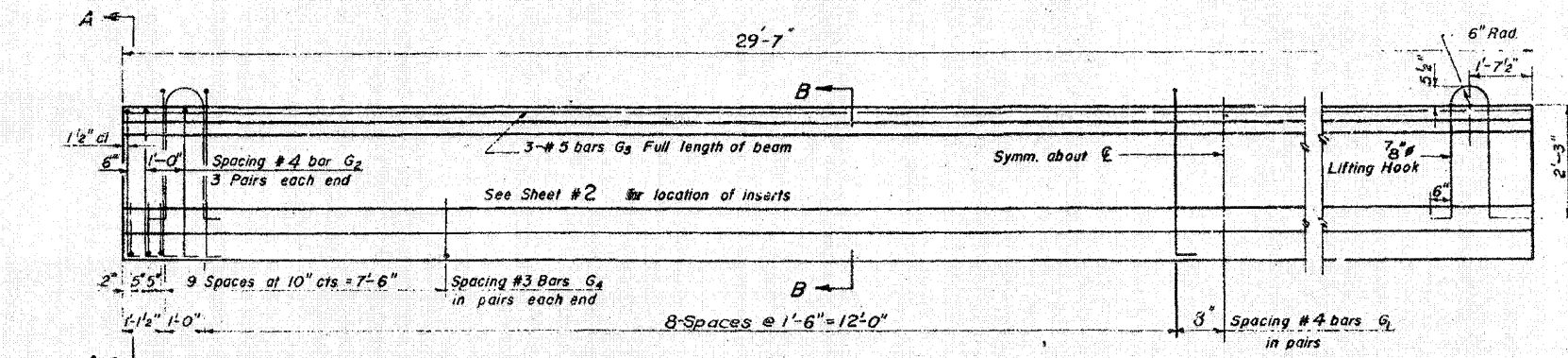
Section Modulus at Pier = 1312 in³
* ± Pt. Span 2



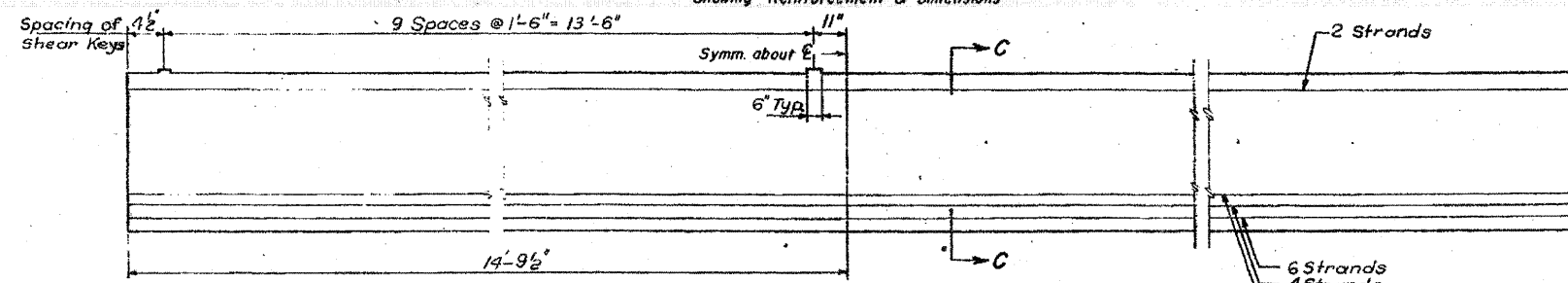
STATE OF ILLINOIS
DIVISION OF HIGHWAYS
FRAMING PLAN AND STEEL DETAILS
F. A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS
SHEET 8 OF 18

FOR INFORMATION ONLY

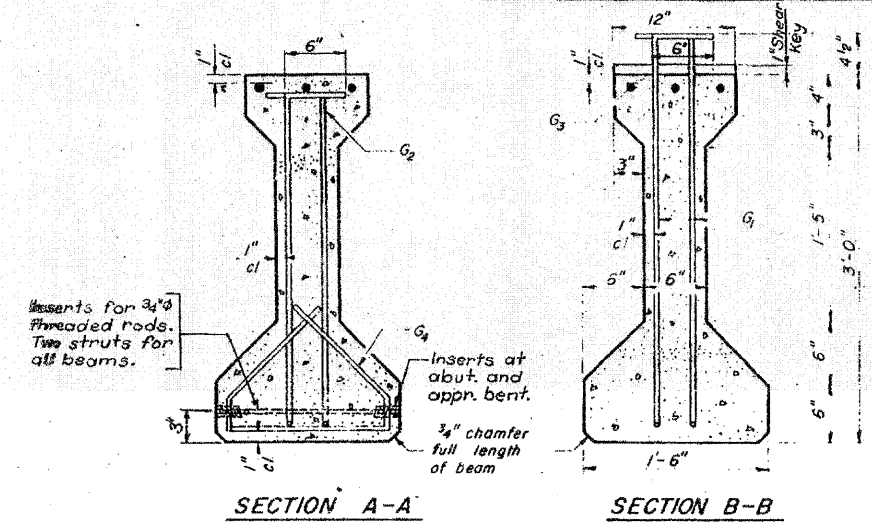
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	86
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



ELEVATION OF BEAMS - SPAN I
Showing Reinforcement & Dimensions

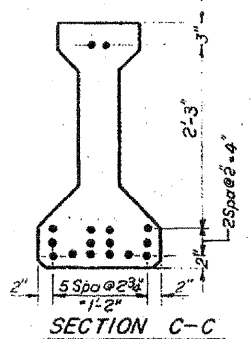


ELEVATION OF BEAMS - SPAN I
Showing Prestressing Steel

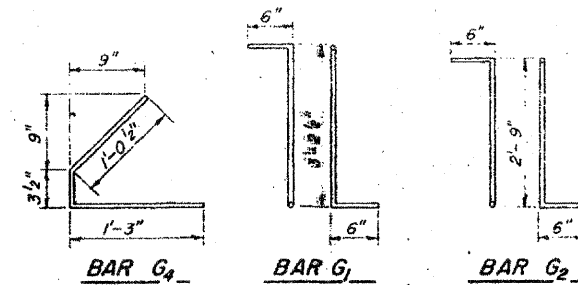


SECTION A-A

SECTION B-B



SECTION C-C



BAR G4

BAR G1

BAR G2

* BAR LIST

Bar	No.	Size	Length	Shape
G1	40	#4	4'-2 1/2"	7L
G2	12	#4	3'-9"	7L
G3	3	#5	29'-5"	—
G4	48	#3	2'-7"	L

* For one beam only

BILL OF MATERIAL

Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 36"	Lin. Ft.	148

NOTES

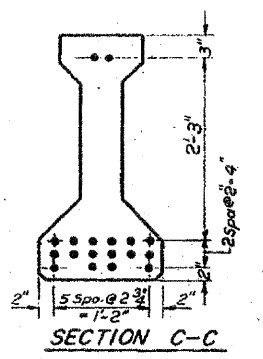
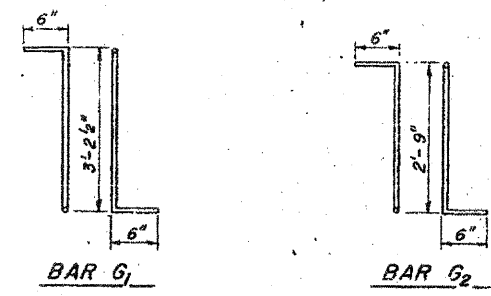
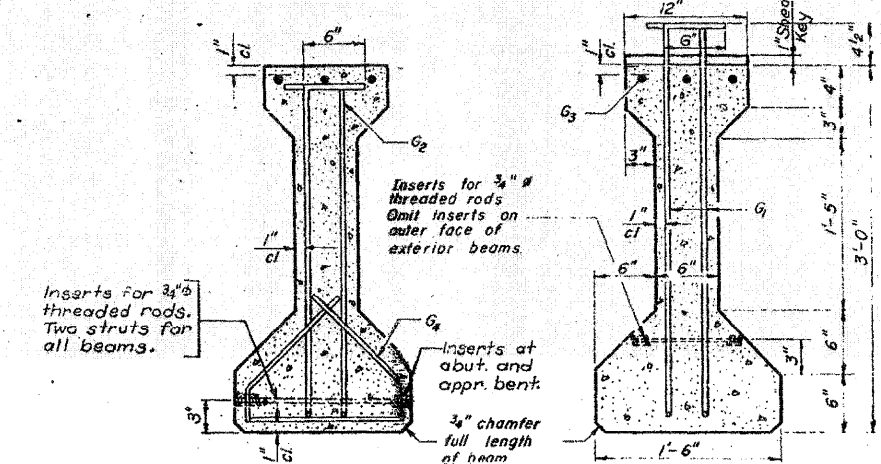
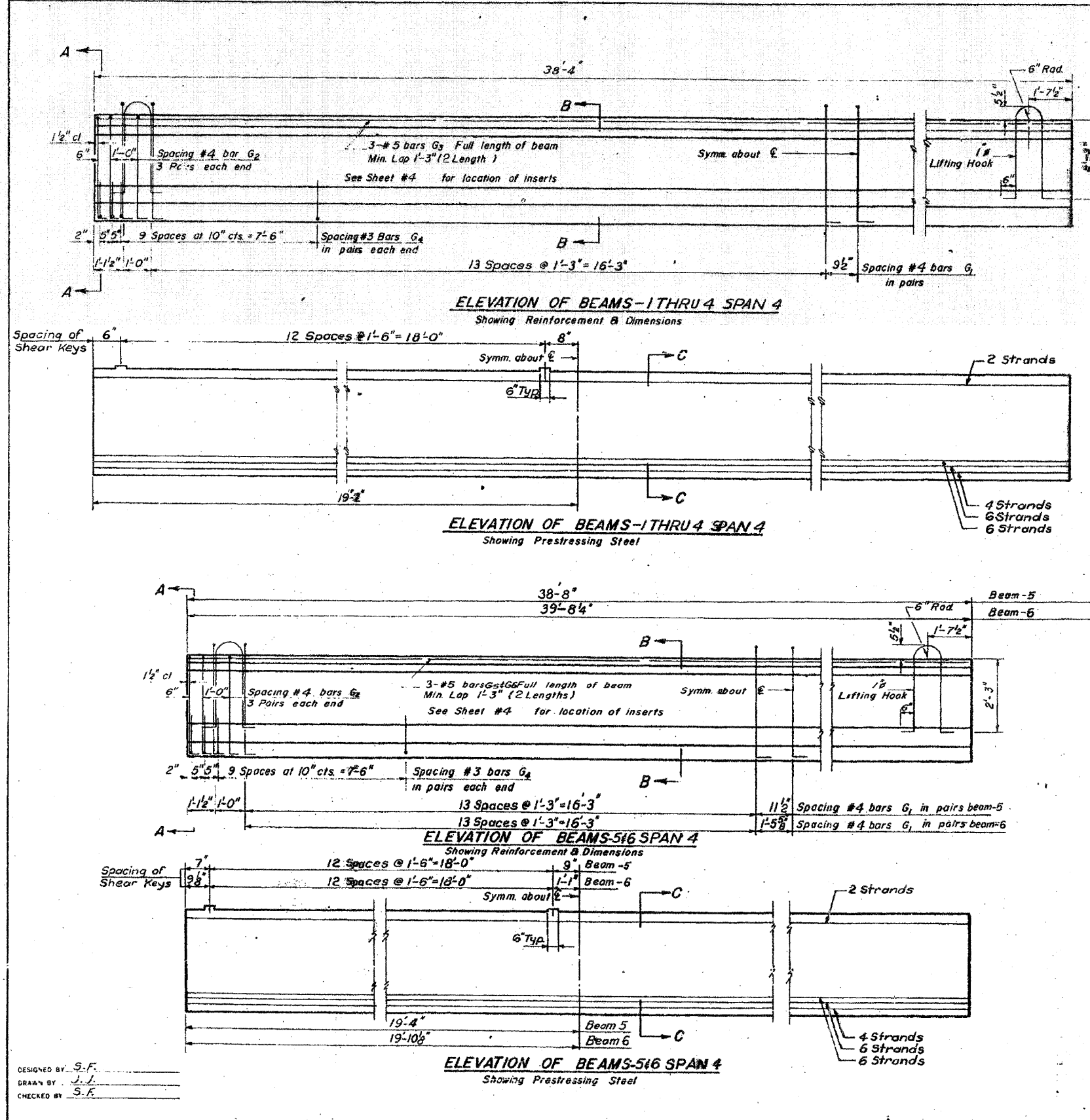
All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per linear foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 36 In." See Standard Specifications for additional information regarding materials, Prestressing equipment, construction and handling methods and other requirements for Precast Prestressed Concrete I-Beams. Prestressing Steel shall have a nominal diameter of 7/16". Inserts for 3/4" threaded rods are to be two strut, coil type. Steel for lifting hooks shall be non-deformed bars of structural or intermediate grade billet steel. End of beams to be encased with Cast in Place Concrete shall not be coated with asphalt paint.

DESIGNED BY: S.F.
DRAWN BY: J.H.
CHECKED BY: S.F.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
PRESTRESSED BEAM DETAILS
SPAN I
F.A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS SHEET 9 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82 - 1HB	ST. CLAIR	110	87
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



*** BAR LIST**

Beams	Bar	No.	Size	Length	Shape
1 THRU 6	G1	62	#4	4'-2 1/2"	TL
"	G2	12	#4	3'-9"	TL
1 THRU 4	G3	6	#5	19'-9"	—
1 THRU 6	G4	48	#3	2'-7"	L
5	G5	6	#5	20'-0"	—
6	G6	6	#5	20'-6"	—

* For one beam only

NOTES

All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per linear foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 36 In."

See Standard Specifications for additional information regarding materials, Prestressing equipment, construction and handling methods and other requirements for Precast Prestressed Concrete I-Beams.

Prestressing Steel shall have a nominal diameter of 1/8".

Inserts for 3/4" threaded rods are to be two strut coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Steel for lifting hooks shall be non-deformed bars of structural or intermediate grade billet steel.

End of beams to be encased with cast in place concrete shall not be coated with asphalt paint.

BILL OF MATERIAL

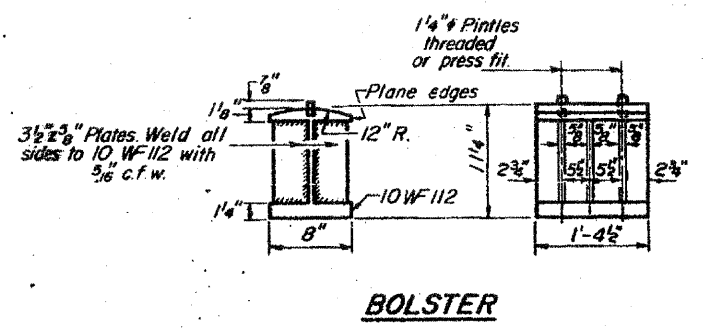
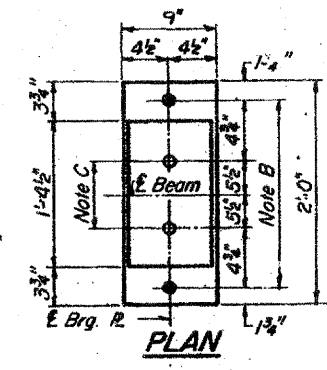
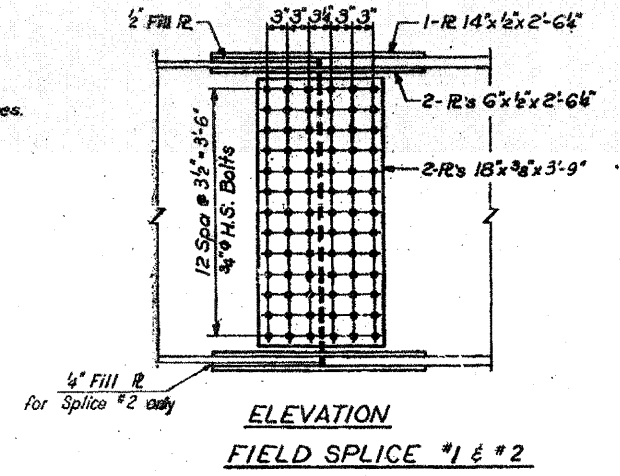
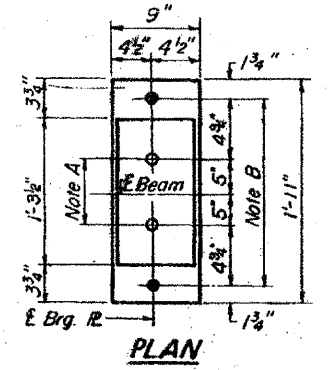
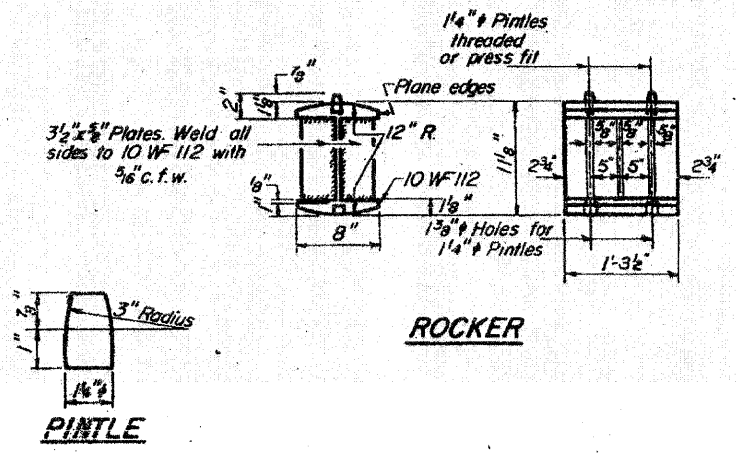
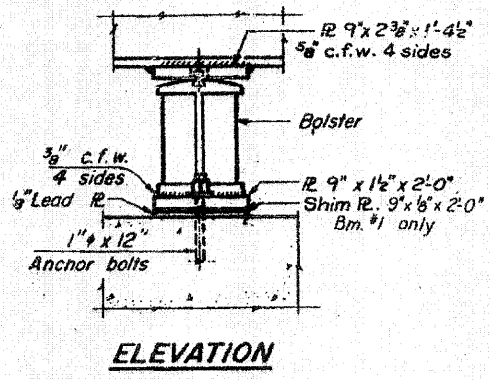
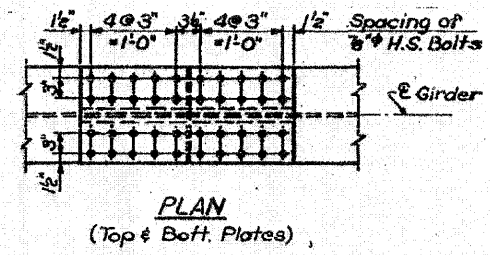
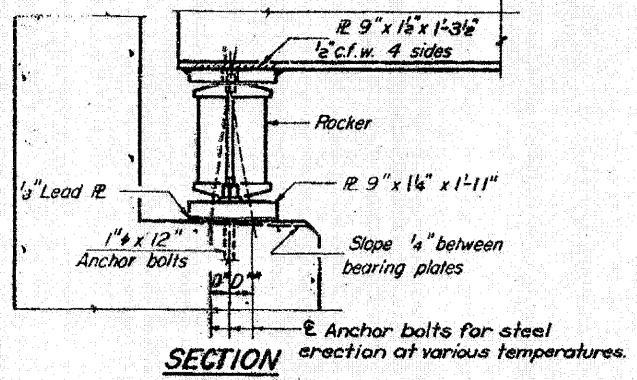
Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 36"	Lin. Ft.	232

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
PRESTRESSED BEAM DETAILS
 SPAN 4
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

DESIGNED BY: S.F.
 DRAWN BY: J.L.
 CHECKED BY: S.F.

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	88
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS

- a) D^* (Side of brg. away from fixed brg.)
 $D^* = \frac{1}{8}$ " per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
- D^{**} (Side of brg. toward fixed brg.)
 $D^{**} = \frac{1}{8}$ " 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.

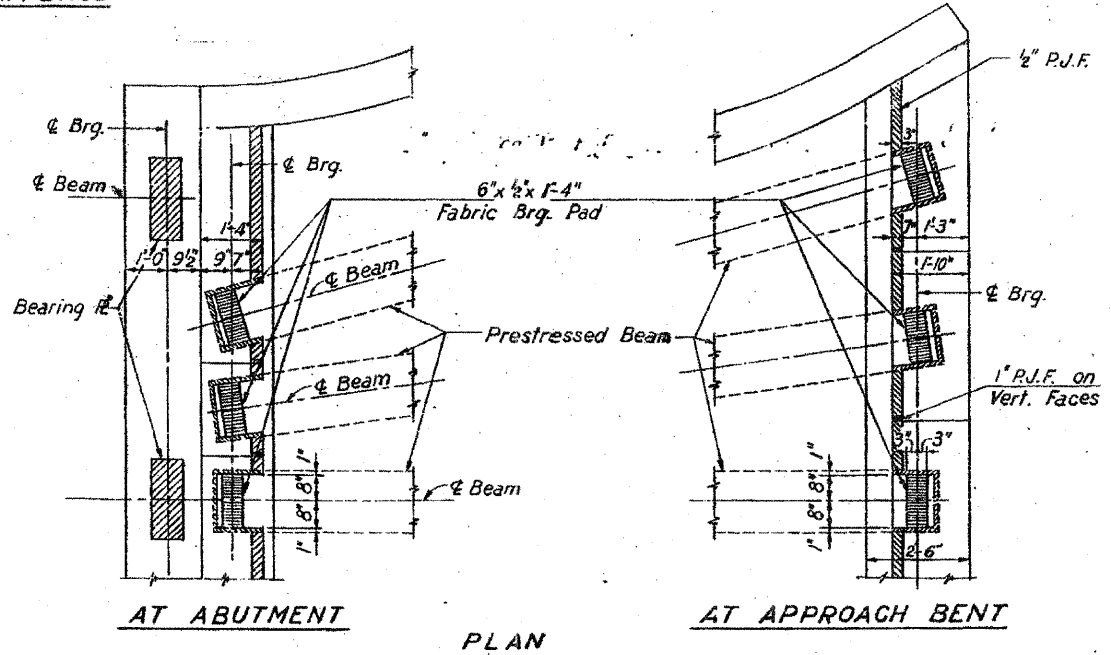
NOTE A
1 3/8" Holes - 1" deep in top R for pintles. Thread or press fit pintles into bottom R.

NOTE B
1 1/2" Holes for 1" anchor bolts. 2 1/2" x 2 1/2" x 5/16" R Washers under nut.

NOTE C
1 3/8" Holes 1" deep in top R only for 1 1/4" pintles.

TOP OF BEAM ELEVATIONS
(Spans 1 & 4)

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
Brig. S. Appr. Bent	415.47	415.54	415.66	415.58	415.46	—
Brig. S. Abut.	415.86	415.92	416.04	415.96	415.85	—
Brig. N. Abut.	417.17	417.24	417.36	417.28	417.25	417.21
Brig. N. Appr. Bent	417.42	417.49	417.61	417.53	417.41	417.30



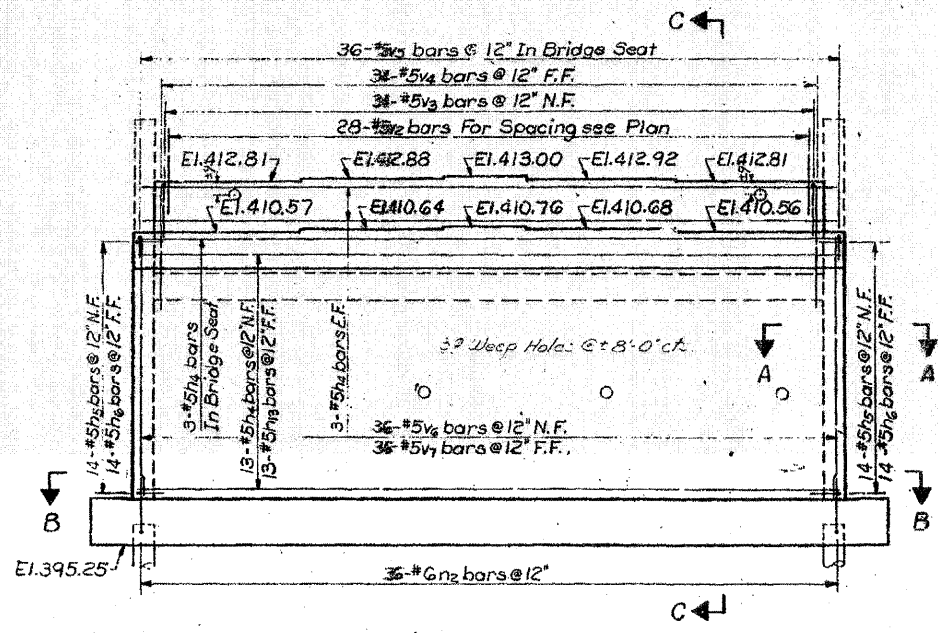
DESIGNED BY: R.M.R.
DRAWN BY: T.L.
CHECKED BY: S.F.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
BEARING DETAILS
F.A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 56+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET 11 of 18

FOR INFORMATION ONLY

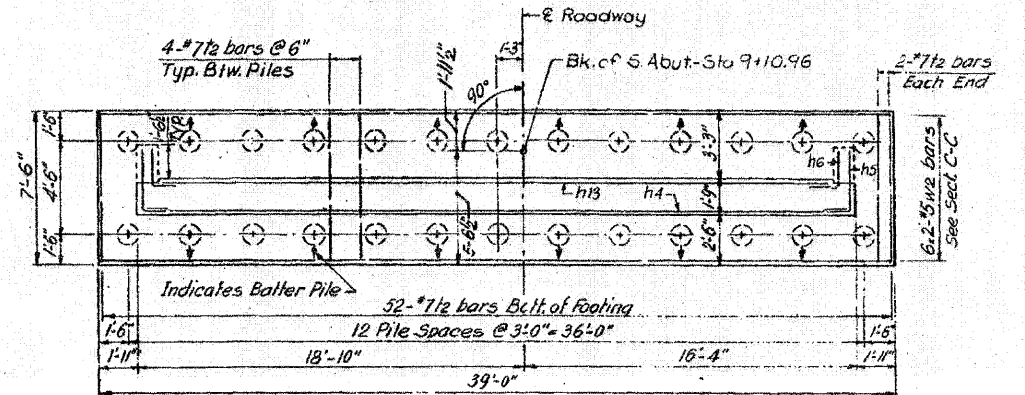
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	89
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



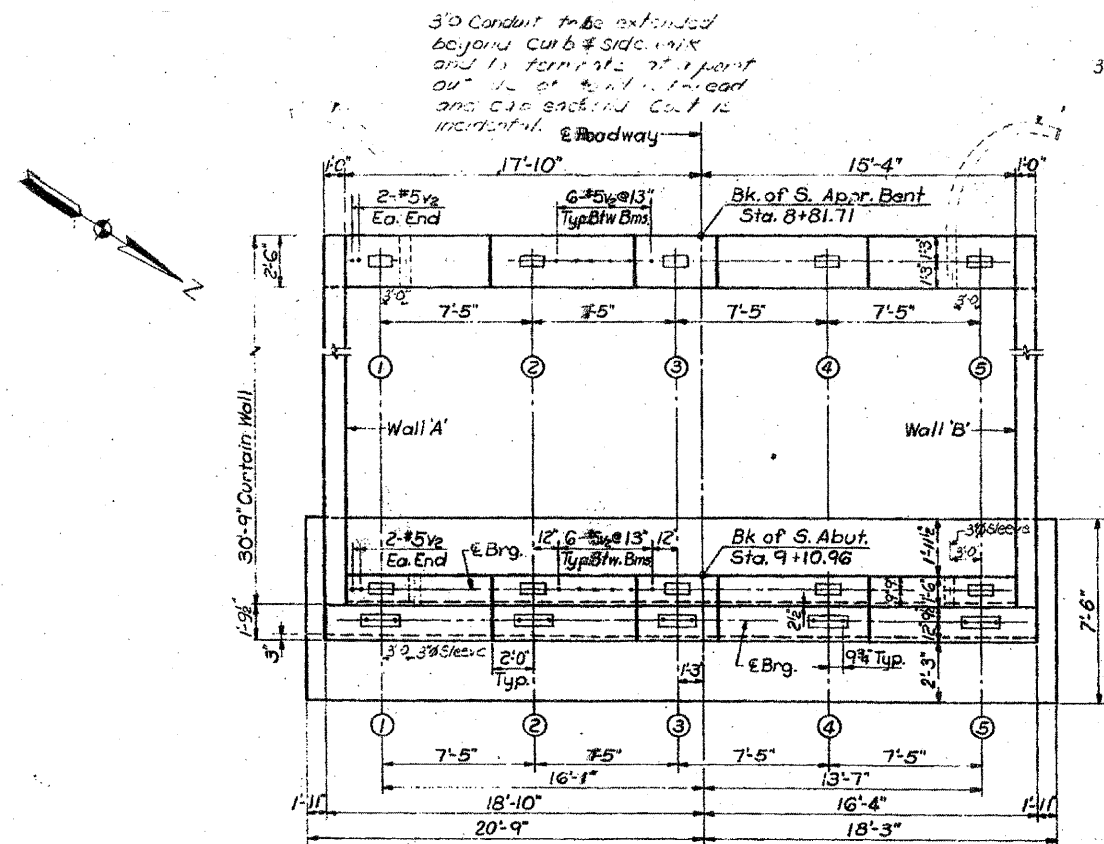
ELEVATION

KEY TO NOTATION
 N.F. = Near Face
 F.F. = Far Face
 C.F. = Each Face

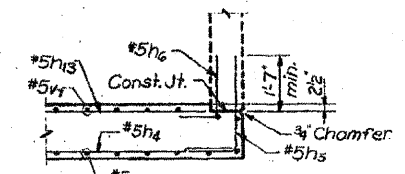
PILE DATA
 Type: Timber
 Capacity: 23 Ton.
 Est Length: 20 Ft
 No. Required: 26



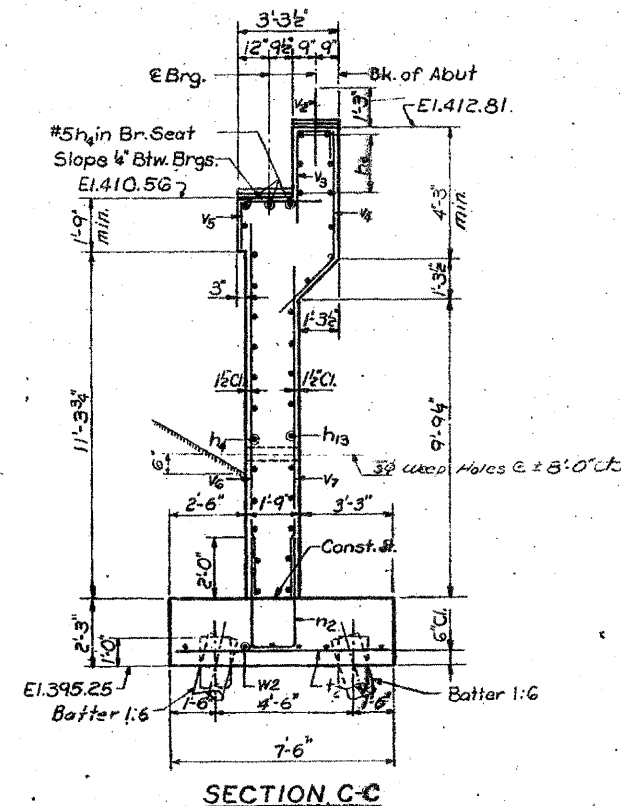
SECTION B-B



PLAN



SECTION A-A



SECTION C-C

NOTES:
 In placing reinforcement bars care shall be taken to clear Anchor Bolts.
 Pour steps monolithically with cap.
 For Bar List, Bill of Material and bar bending diagrams see Sheet No.13
 Work this sheet in conjunction with Sheet No.13

STATE OF ILLINOIS			
DIVISION OF HIGHWAYS			
SOUTH ABUTMENT			
F. A. ROUTE 12 (10TH STREET) OVER F.A.I. ROUTE 64			
STATION 58+17.87			
F.A.I. RT. 64	ST. CLAIR CO.	SECTION 82-1HB	
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS			SHEET 12 OF 13

DESIGNED BY: S.F.
 DRAWN BY: JCS
 CHECKED BY: S.F.

FILE NAME =	USER NAME =	DESIGNED	REVISED
D8T1-982-0150-shr-p1n13.dgn	maronak	PP	-
PLOT SCALE = 480,000 / ft.	CHECKED	AB	-
PLOT DATE = MAR. 31, 2011	DATE	03/31/2011	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

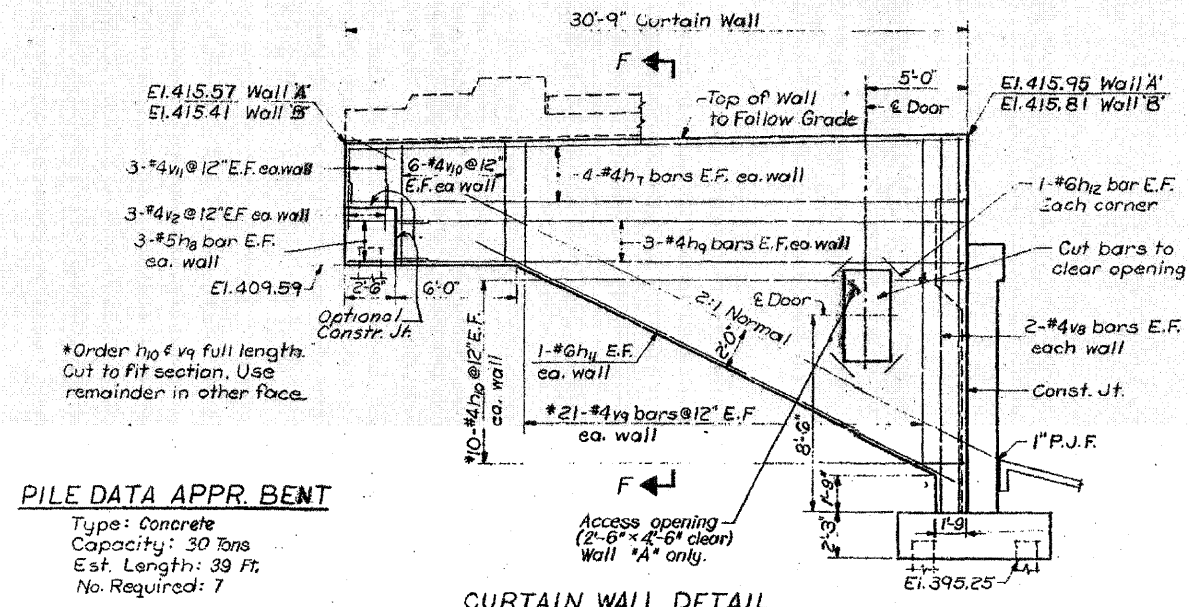
EXISTING BRIDGE PLAN - 10TH STREET

SCALE: NONE SHEET NO. 13 OF 19 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-1-3HB, 82-2N, 82-1-12RS		ST. CLAIR	352	293
9166/9180/9213/9214		CONTRACT NO. 76C51		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

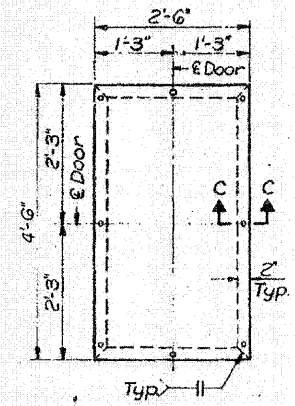
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	90
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



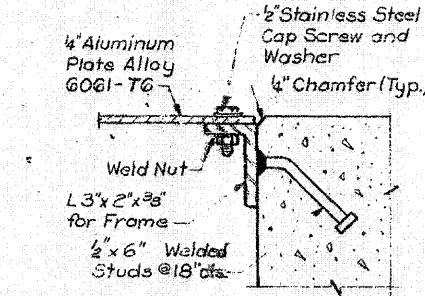
PILE DATA APPR. BENT

Type: Concrete
Capacity: 30 Tons
Est. Length: 39 Ft.
No. Required: 7

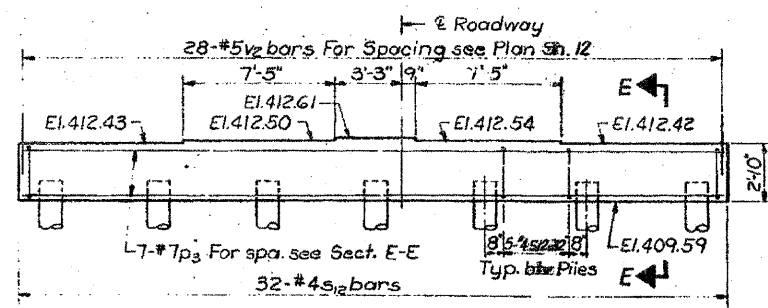
CURTAIN WALL DETAIL



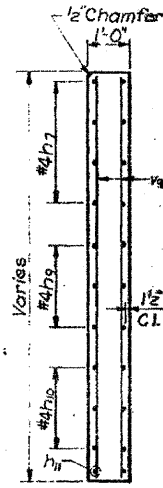
DOOR ELEVATION
(Cast of Door and Door Frame incidental to Class X Concrete)
2 Required



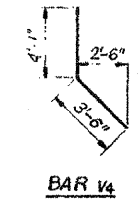
SECTION C-C



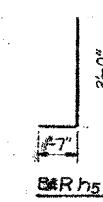
ELEVATION



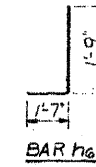
SECTION F-F



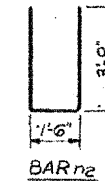
BAR V4



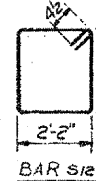
BAR H5



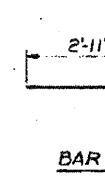
BAR H6



BAR H2



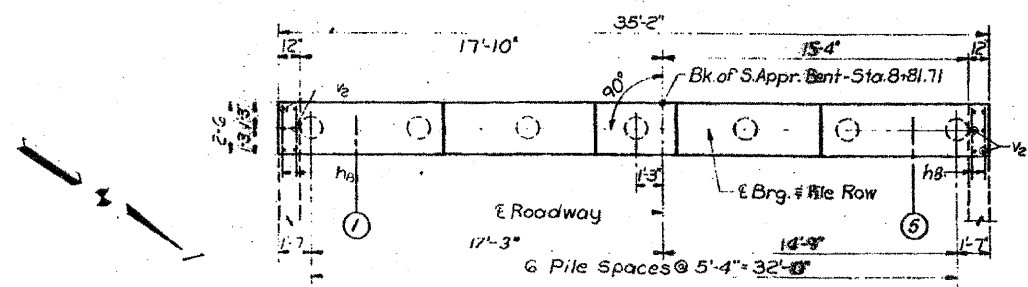
BAR S12



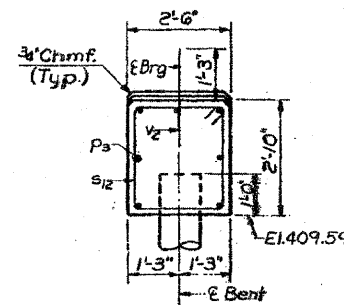
BAR V5



BAR V3



PLAN



SECTION E-E

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h4	22	#5	34'-10"	
h5	28	#5	4'-7"	
h6	28	#5	3'-4"	
h7	16	#4	30'-5"	
h8	12	#5	3'-7"	
h9	12	#4	27'-11"	
h10	20	#4	23'-9"	
h11	4	#6	25'-0"	
h12	8	#6	3'-0"	
h13	13	#5	32'-10"	
n2	36	#6	9'-0"	
Pa	7	#7	34'-10"	
s12	32	#4	10'-1"	
v2	52	#7	7'-2"	
v2	68	#5	2'-6"	
v3	34	#5	6'-0"	
v4	34	#5	7'-7"	
v5	36	#5	4'-4"	
v6	36	#5	12'-7"	
v7	36	#5	11'-0"	
v8	8	#4	18'-1"	
v9	42	#4	21'-3"	
v10	24	#4	5'-7"	
v11	12	#4	2'-9"	
w2	12	#5	20'-0"	

Item	Unit	Quantity
Class X Concrete	Cu.Yds.	95.5
Reinforcement Bars	Lbs.	7300
Concrete Piles	Lin. Ft.	273
Timber Piles	Lin. Ft.	520

NOTE:
Work this sheet in conjunction with Sheet No.12

DESIGNED BY S.F.
DRAWN BY J.C.S.
CHECKED BY S.F.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
**SOUTH ABUTMENT
WINGWALLS AND APPROACH BENT**
F.A. ROUTE 12 (10TH STREET)
OVER F.A.I. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET
13 of 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-64	82-1HB	ST. CLAIR	110	91
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

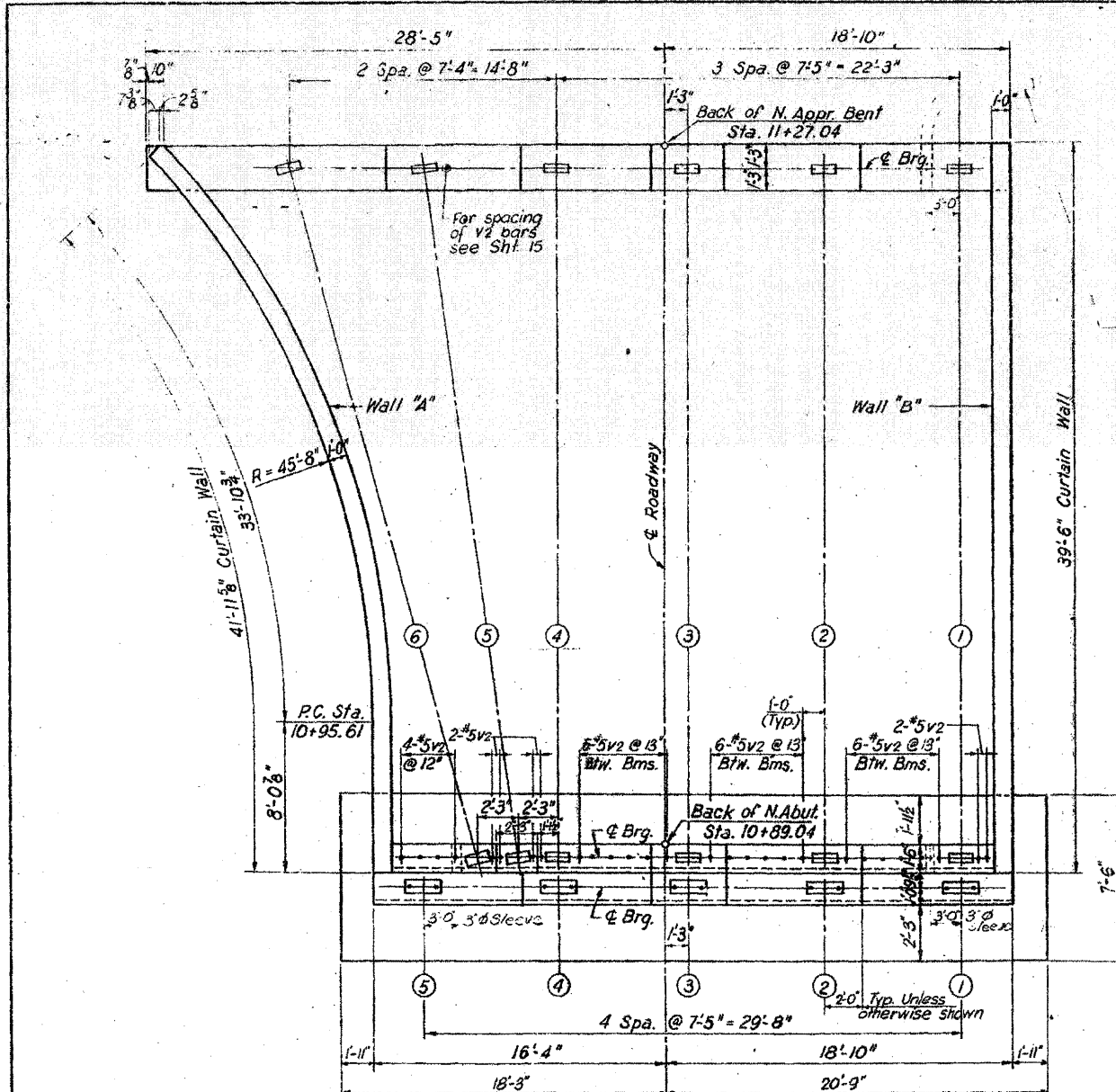
KEY TO NOTATION

N.F. = Near Face
 F.F. = Far Face
 E.F. = Each Face

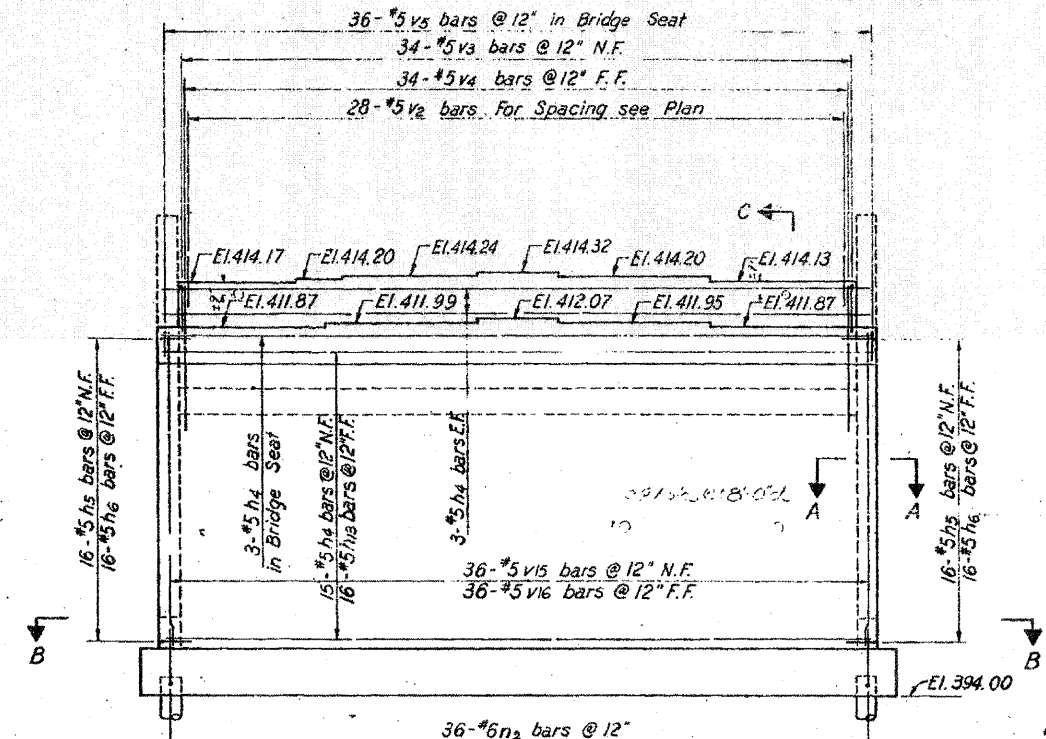
PILE DATA

Type: Timber
 Capacity: 23 Tons
 Est. Length: 14 Ft.
 No. Required: 26

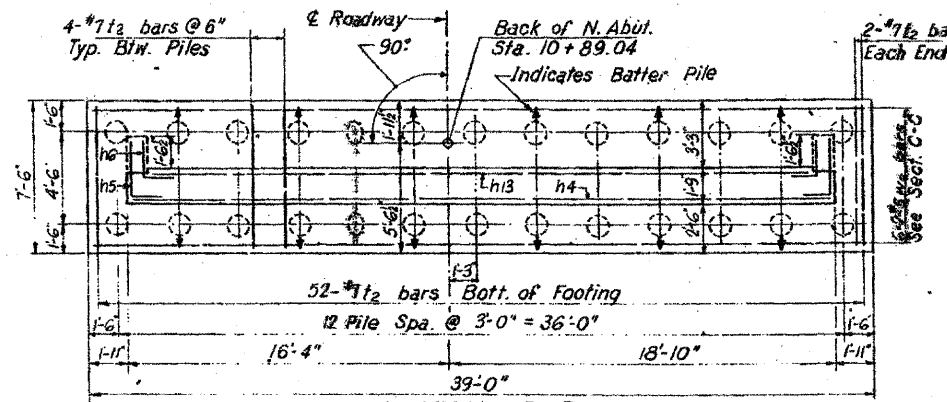
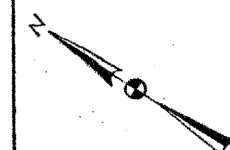
3" Conduit to be extended beyond curb and sidewalk and to terminate at a point outside of shoulder. Thread and cap each end. Co. T is minimal.



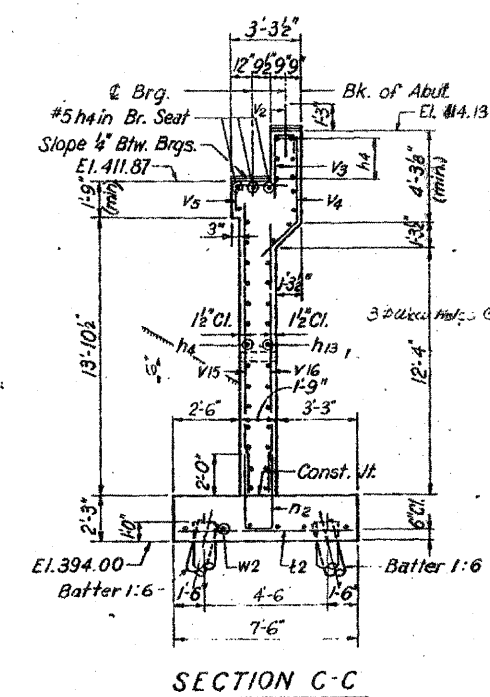
PLAN



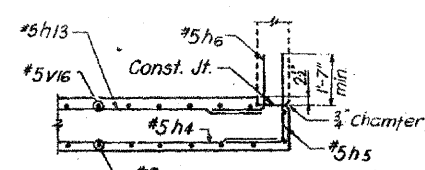
ELEVATION



SECTION B-B



SECTION C-C



SECTION A-A

NOTES:

In placing reinforcement bars care shall be taken to clear anchor bolts.
 Four steps monolithically with cap.
 For Bar List, Bill of Material and bar bending diagrams see Sheet No. 15
 Work this sheet in conjunction with Sheet No. 15

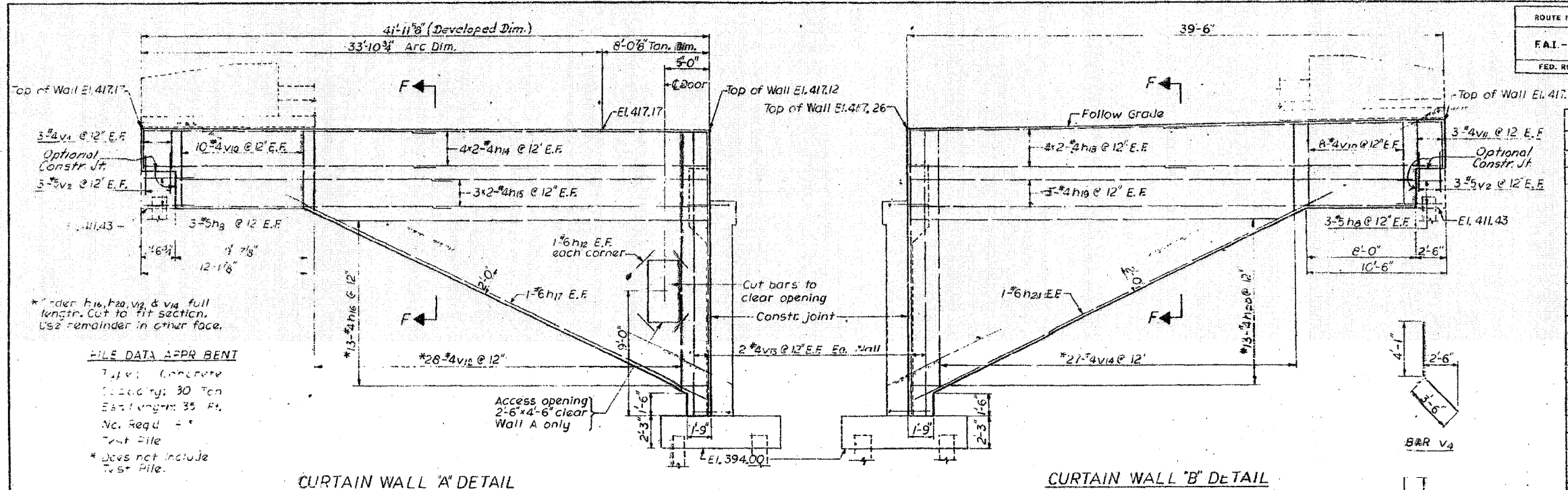
DESIGNED BY S.F.
 DRAWN BY T.L.
 CHECKED BY S.F.
 APPROVED BY

STATE OF ILLINOIS
 DIVISION OF HIGHWAYS
 NORTH ABUTMENT
 F.A. ROUTE 12 (10TH STREET)
 OVER F.A.I. ROUTE 64
 STATION 58+17.87
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

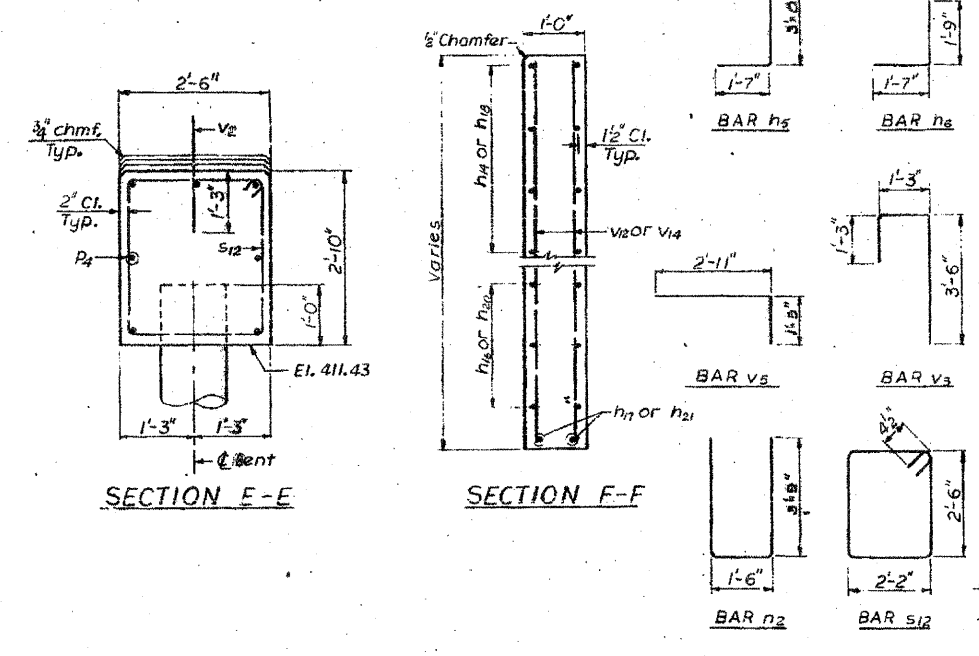
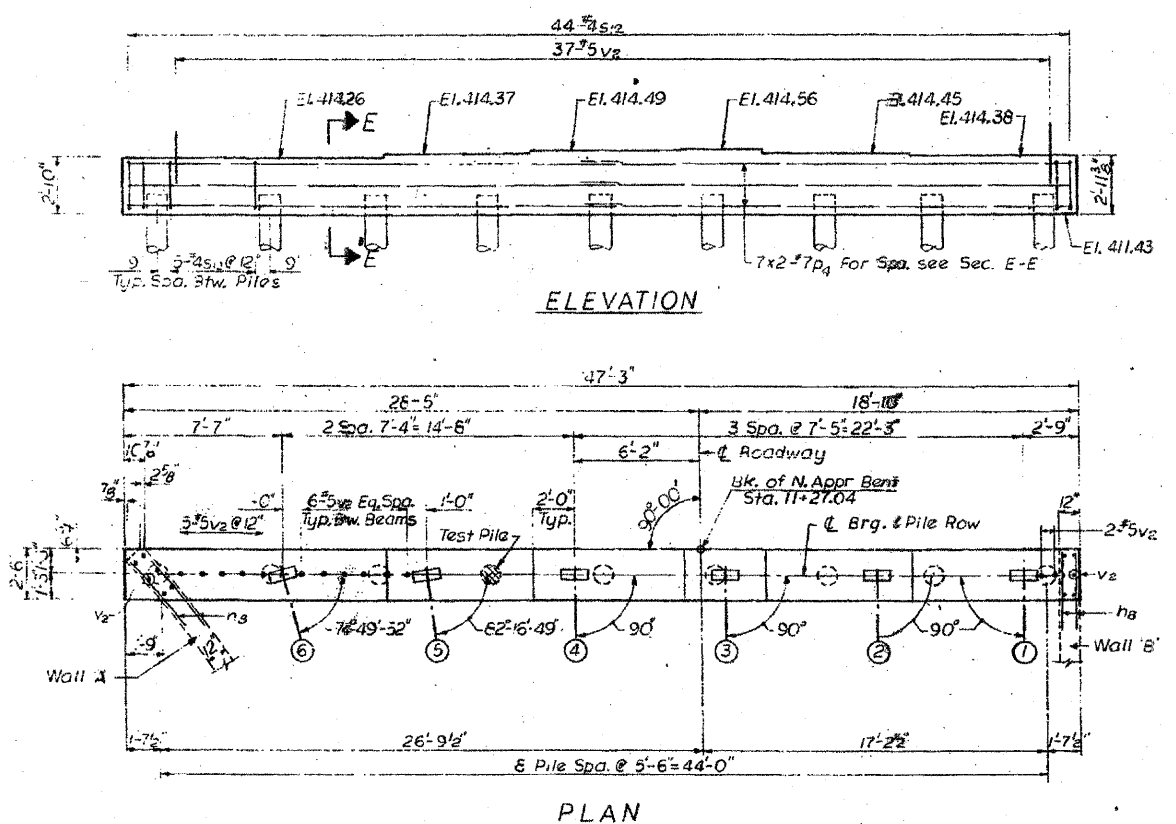
SHEET 14 OF 18

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-64	82-1HB	ST. CLAIR	110	92
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h1	24	#5	34'-10"	
h5	32	#5	4'-7"	
h6	32	#5	3'-4"	
h8	12	#5	3'-7"	
h12	8	#6	3'-0"	
h13	16	#5	32'-10"	
h14	16	#5	21'-6"	
h15	12	#4	20'-4"	
h16	13	#4	30'-6"	
h17	10	#6	34'-6"	
h18	10	#4	20'-3"	
h19	6	#4	36'-8"	
h20	13	#4	29'-6"	
h21	2	#6	34'-0"	
h2	36	#6	9'-0"	
p4	14	#7	24'-10"	
s12	44	#4	10'-1"	
t2	52	#7	7'-2"	
v2	77	#5	2'-6"	
v3	34	#5	6'-0"	
v4	34	#5	7'-7"	
v5	36	#5	4'-4"	
v10	36	#4	5'-7"	
v11	12	#4	2'-9"	
v12	28	#4	24'-0"	
v13	6	#4	20'-7"	
v14	27	#4	25'-0"	
v15	36	#5	15'-2"	
v16	36	#5	13'-7"	
w2	12	#5	20'-0"	
Item	Unit	Total		
Class X Concrete	Cu. Yds.	113.6		
Reinforcement Bars	Lbs.	8840		
Concrete Piles	Lin. Ft.	250		
Timber Piles	Lin. Ft.	364		
Test Pile Concrete	Each	1		



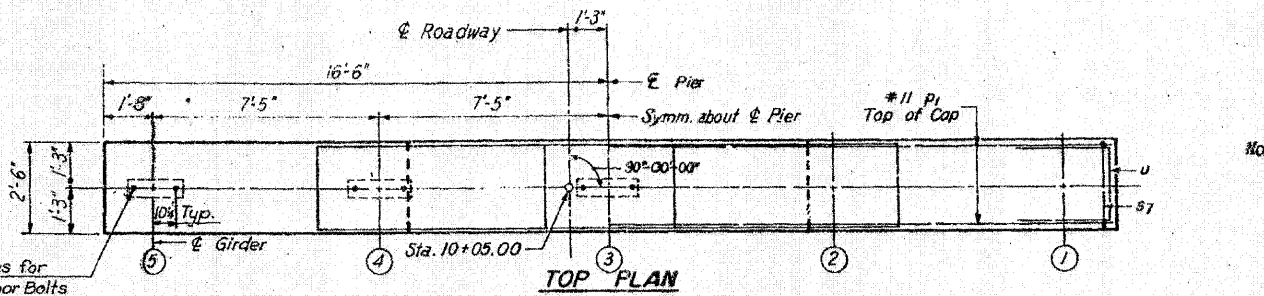
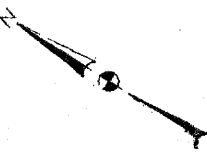
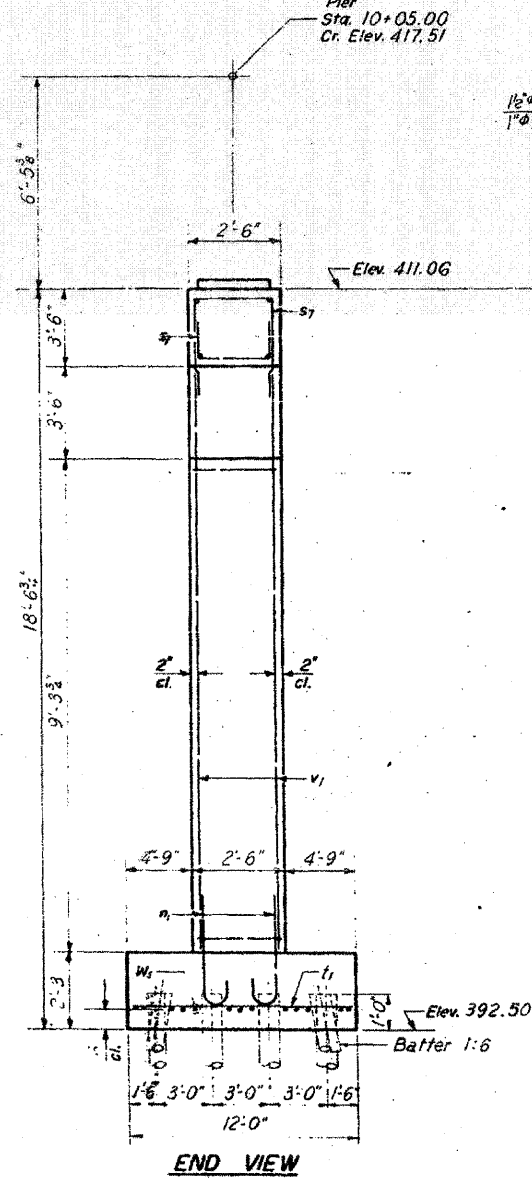
NOTES:
For Detail of Aluminum Door see Sh. No. 13
Work this sheet in conjunction with Sh. No. 14

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
NORTH ABUTMENT
WINGWALLS AND APPROACH BENT
F.A. ROUTE 12 (10TH STREET)
OVER FAI. ROUTE 64
STATION 58+17.87
F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 15 OF 18

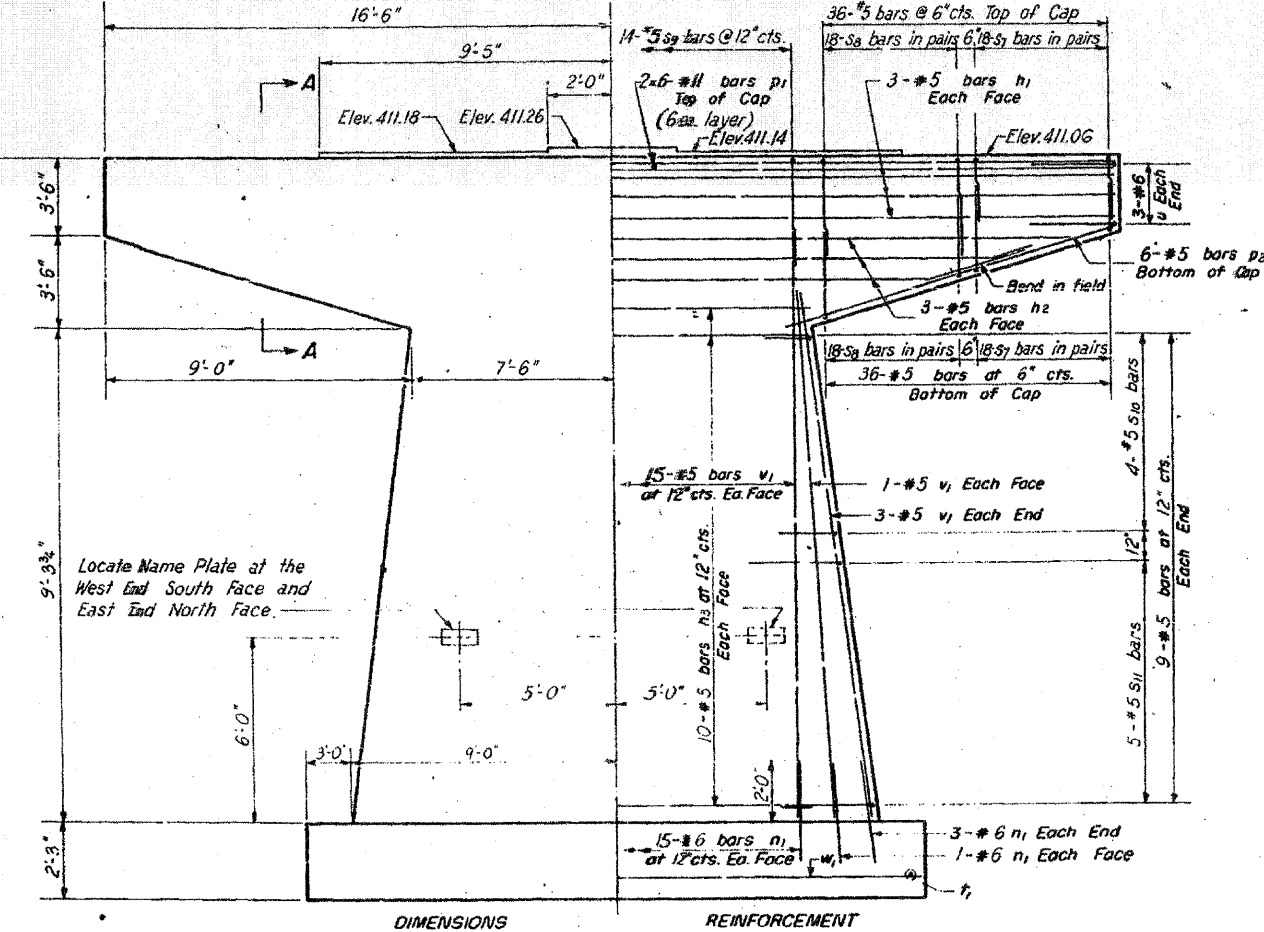
FOR INFORMATION ONLY

PILE DATA

Type Creosoted Timber Pile
Capacity 23 Tons
Est. Length 19 Ft.
No. Reqd. 32*
* Does not include Test Pile

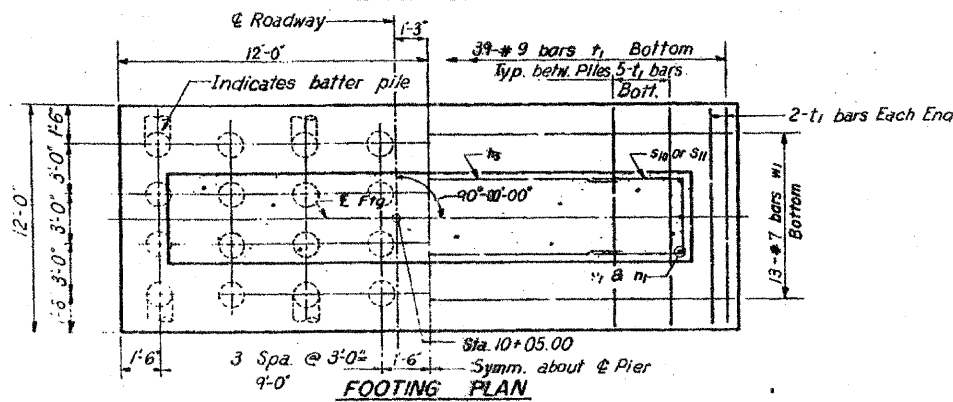


TOP PLAN



DIMENSIONS REINFORCEMENT

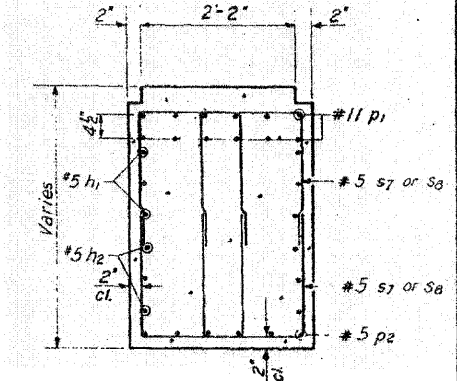
ELEVATION



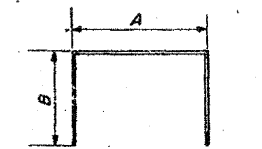
FOOTING PLAN

Note: All edges shall have standard 3/4" chamfers except footings. Space reinforcement in cap to miss anchor bolts. Min. bar laps = 24 dia. unless otherwise noted. Pile steps monolithically with cap.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F. A. I. - 64	82-1HB	ST. CLAIR	110	93
FED. ROAD DIST. NO. 3 ILLINOIS PROJECT				



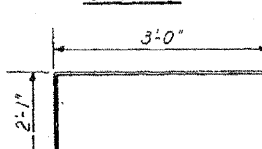
SECTION A-A



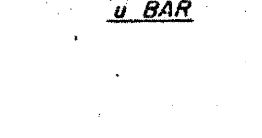
A & B DIMENSIONS

Bar	A	B
s7	1'-5"	3'-0"
s8	1'-5"	4'-0"
s9	2'-2"	4'-3"
s10	2'-2"	2'-0"
s11	2'-2"	2'-6"

s BARS



u BAR



n1 BAR

BILL OF MATERIAL

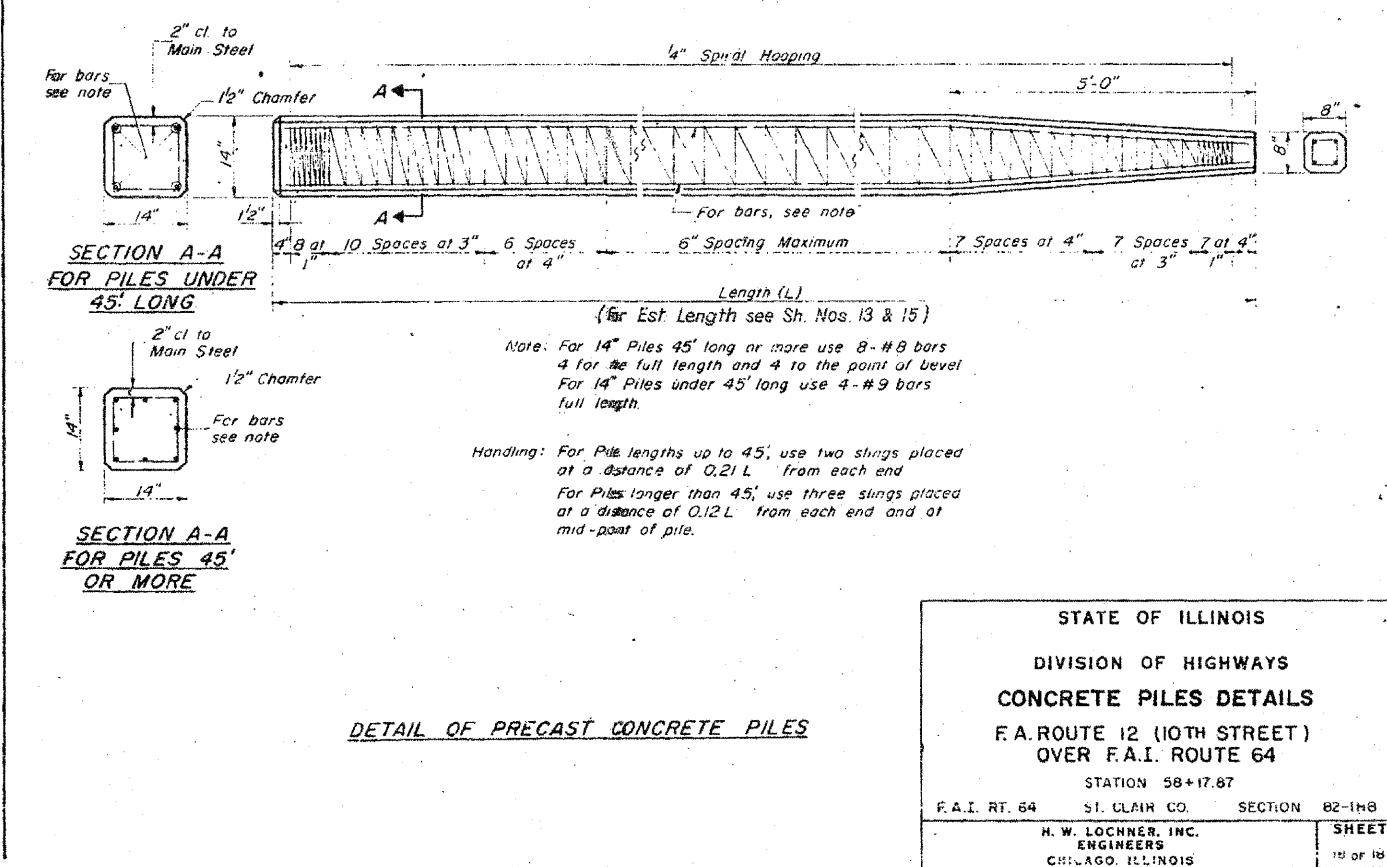
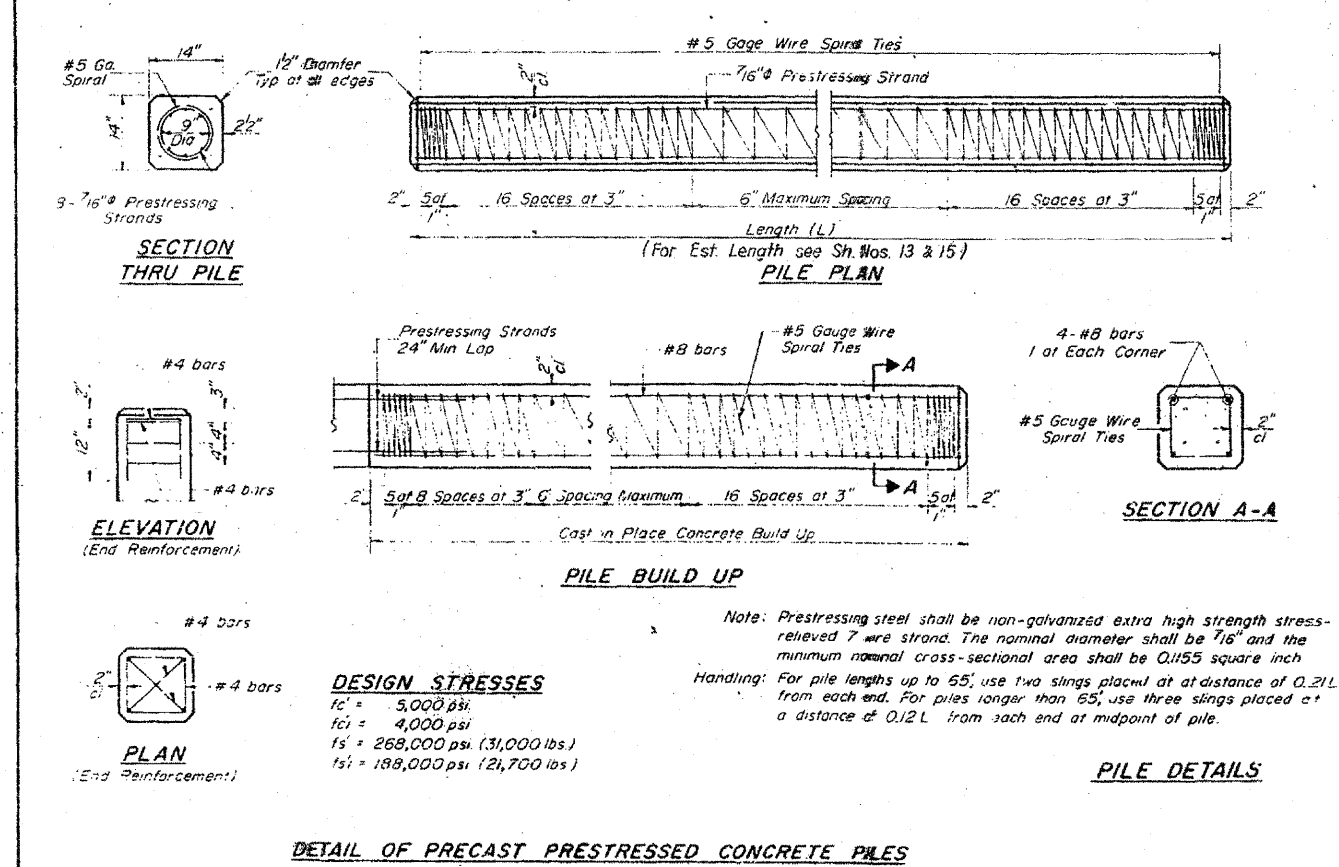
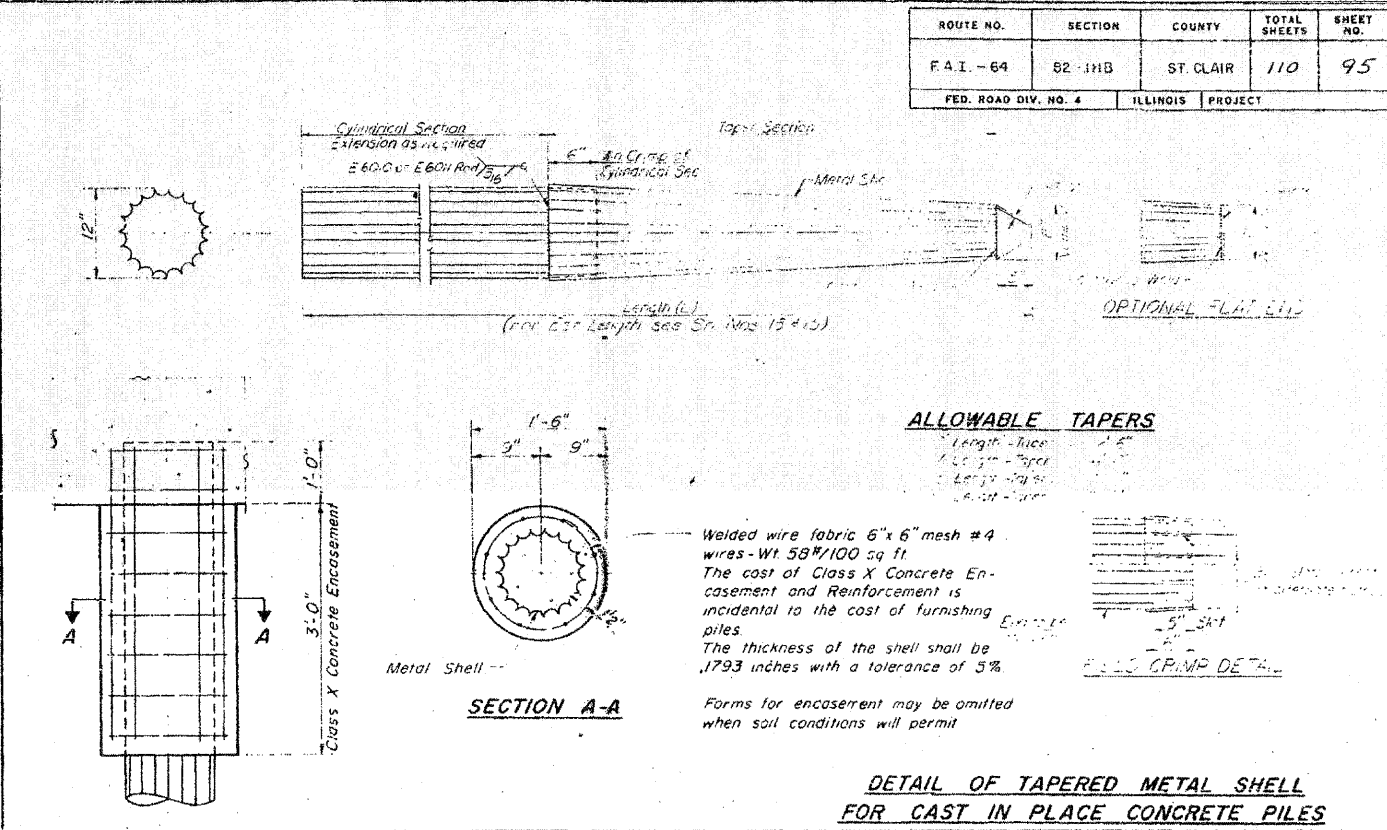
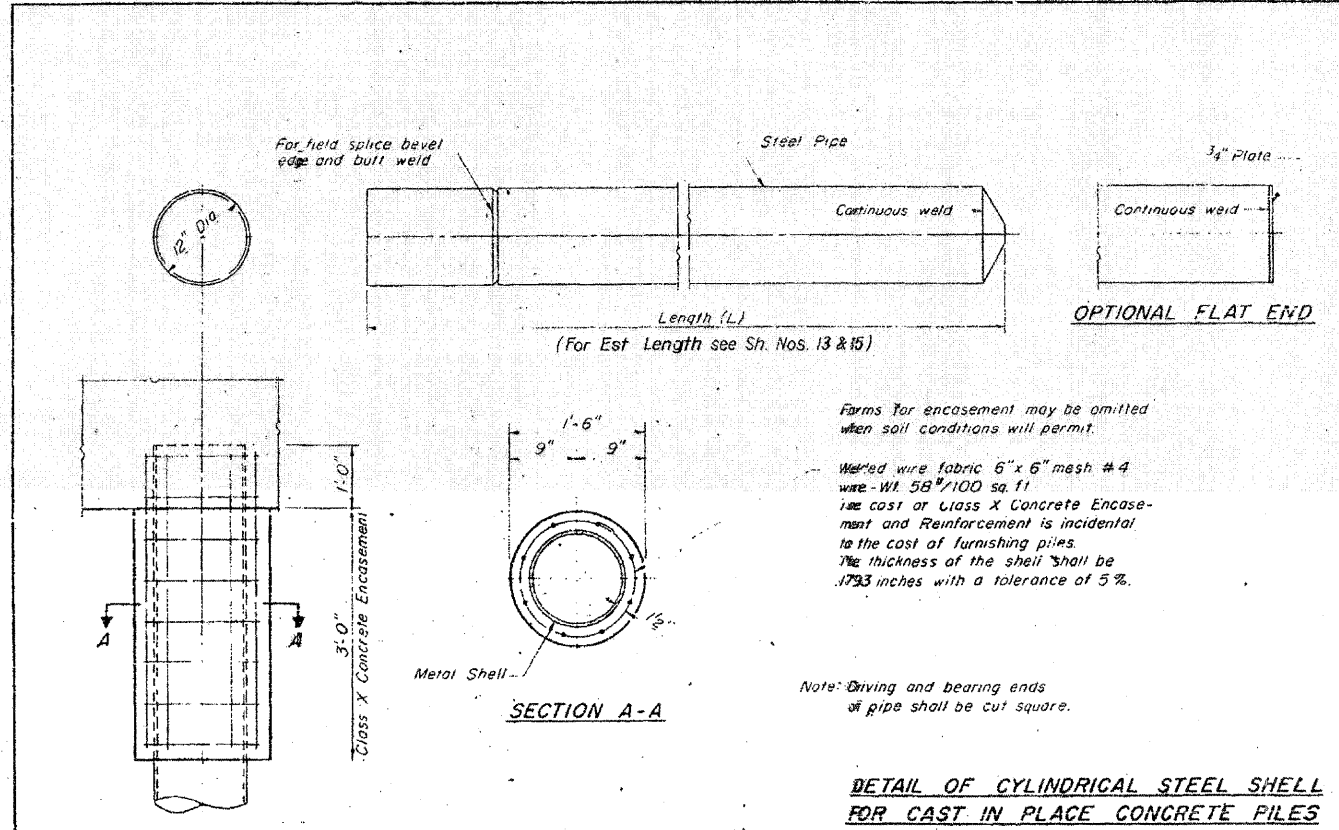
Bar	No.	Size	Length	Shape
h1	6	#5	32'-8"	—
h2	6	#5	23'-6"	—
h3	20	#5	14'-6"	—
n1	40	#6	4'-8"	U
p1	12	#11	32'-8"	—
p2	12	#5	10'-6"	—
s7	72	#5	7'-5"	□
s8	72	#5	9'-5"	□
s9	14	#5	10'-8"	□
s10	8	#5	6'-2"	□
s11	10	#5	7'-2"	□
t1	39	#9	11'-6"	—
u	6	#6	8'-1"	□
v1	40	#5	3'-0"	—
w1	13	#7	23'-3"	—
Class X Concrete		cu. Yds	55.9	
Reinforcement Bars		Lbs.	7460	
Timber Piles		Lin. Ft.	324	
Test Pile		Each	1	
Name Plates		Each	2	

DESIGNED BY R.M.R.
DRAWN BY T.L.
CHECKED BY R.M.R.

STATE OF ILLINOIS
DIVISION OF HIGHWAYS
PIER
F. A. ROUTE 12 (10TH STREET)
OVER F. A. ROUTE 64
STATION 58+17.87
F. A. I. RT. 64 ST. CLAIR CO. SECTION 62-1HB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

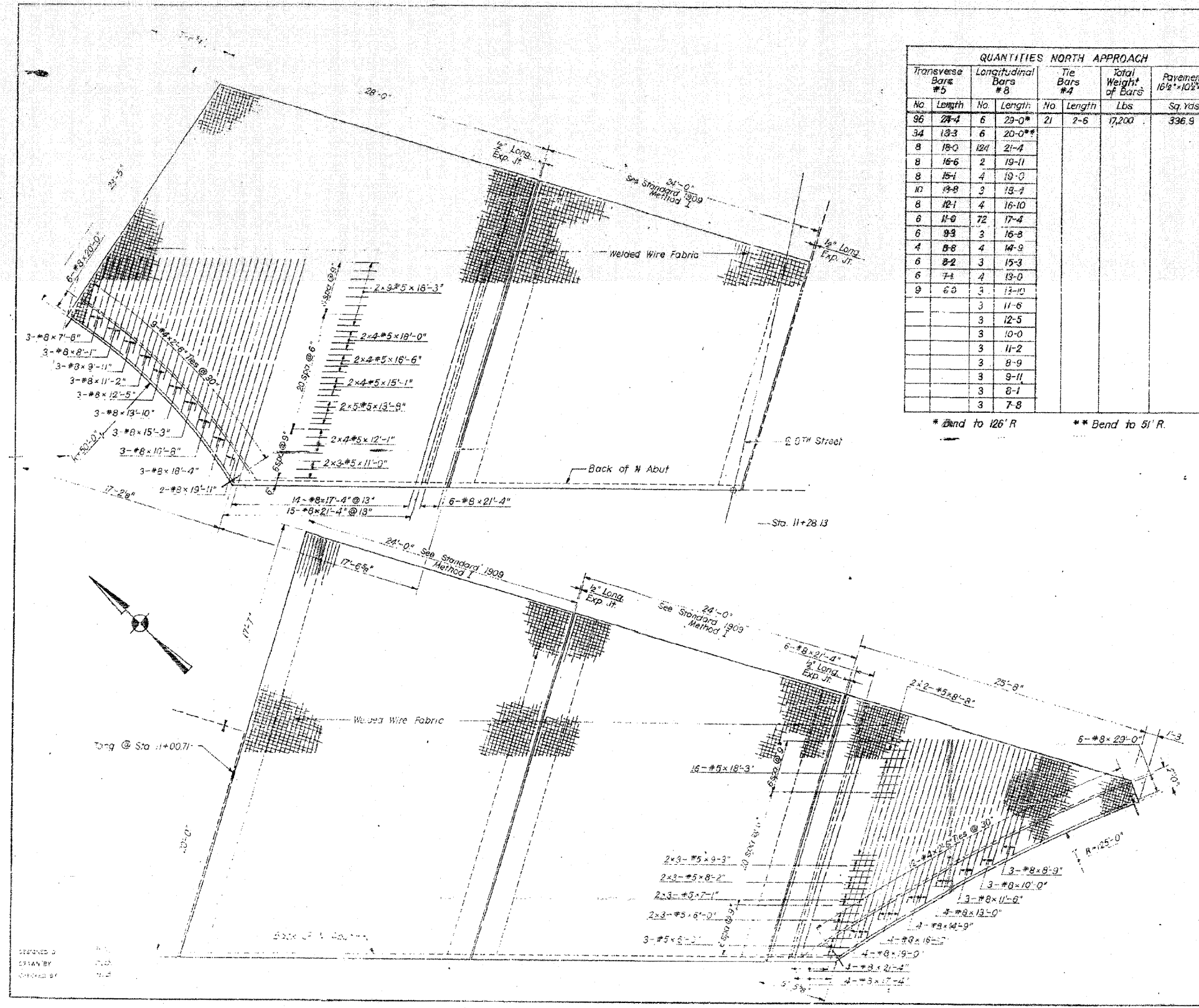
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1H8	ST. CLAIR	110	95
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



STATE OF ILLINOIS			
DIVISION OF HIGHWAYS			
CONCRETE PILES DETAILS			
F.A. ROUTE 12 (10TH STREET) OVER F.A.I. ROUTE 64			
STATION 58+17.87			
F.A.I. RT. 64	ST. CLAIR CO.	SECTION 82-1H8	
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS			SHEET 19 OF 19

FOR INFORMATION ONLY



QUANTITIES NORTH APPROACH						
Transverse Bars #5	Length	Longitudinal Bars #8	Length	Tie Bars #4	Length	Total Weight of Bars Lbs
96	28-4	6	29-0*	21	7-6	17,200
34	13-3	6	20-0**			
8	18-0	124	21-4			
8	16-6	2	19-11			
8	15-1	4	19-0			
10	19-8	3	18-7			
8	12-1	4	16-10			
6	11-0	72	17-4			
6	9-3	3	16-8			
4	8-8	4	14-9			
6	8-2	3	15-3			
6	7-4	4	13-0			
9	6-0	3	13-10			
		3	11-6			
		3	12-5			
		3	10-0			
		3	11-2			
		3	8-9			
		3	9-11			
		3	8-1			
		3	7-8			

* Bend to 126' R ** Bend to 51' R.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	82-1-1	ST. CLAIR	56	38
FED. ROAD DIST. NO. 4	ILLINOIS	PROJECT		

QUANTITIES SOUTH APPROACH (STD 1909 METHOD I)						
Transverse Bars #5	Length	Longitudinal Bars #8	Length	Tie Bars #4	Length	Total Weight of Bars Lbs
66	24-4	52	21-4	22	7-6	6,250
		36	17-4			

Note:
 For Standard 24' Approach Slabs see Standard 1909 Method I.
 For General Notes see Standard 1909
 For longitudinal section thru center of slab and edge of slab see Std 1909
 For sectional view of concrete slab see Std. 1909

STATE OF ILLINOIS

APPROACH SLABS

F.A. ROUTE 12 (9TH STREET) OVER F.A.I. 64

H. W. LUDWIG, INC. ENGINEERS CHICAGO, ILL.