

F.A.S. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
770	I-HB I-VB	MADISON	70	1

FOR
INDEX OF SHEETS
SUMMARY OF QUANTITIES

SEE
SHEET NO.
5
6

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL-AID SECONDARY PROJECT

SET NO. 2
OF 3 SETS

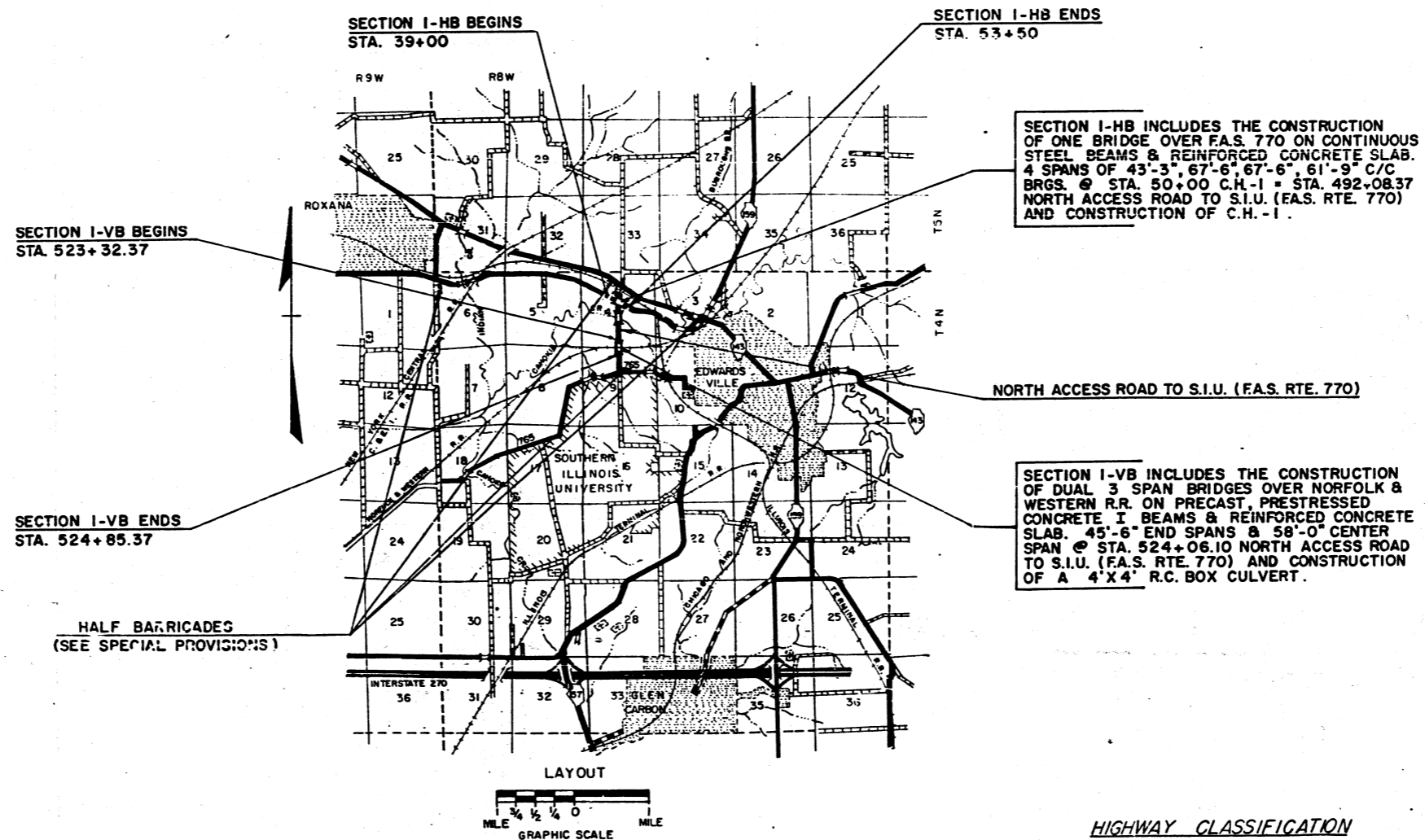
P-98-662-00

PLAN 1 INCH = 100 FEET
PROFILE HOR. 1 INCH = 100 FEET
PROFILE VERT. 1 INCH = 10 FEET
CROSS SECTIONS 1 INCH = 10 FEET
CROSS SECTIONS 1 INCH = 5 FEET

F.A.S. ROUTE 770 SECTION I-HB MADISON COUNTY
F.A.S. ROUTE 770 SECTION I-VB MADISON COUNTY
NORTH ACCESS ROAD TO SOUTHERN ILLINOIS UNIVERSITY
HIGHWAY BRIDGES AND APPROACHES



LOCATION OF SECTION INDICATED THUS:



NET LENGTH OF SECTION I-HB = 1450.00 FEET = 0.2746 MILES
NET LENGTH OF SECTION I-VB = 153.00 FEET = 0.029 MILES

HIGHWAY CLASSIFICATION

F.A.S. ROUTE 770 1425(85)-3-2-0.20(P.C.C.-20)
C.H. ROUTE 1 450(36)-V-0.039(P.C.C.-20)

APPROVED

FOR STRUCTURAL AGENCY ONLY

Engineer of Local Roads and Streets

HURST-ROSCHE INC.
HILLSBORO, ILL.

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

SUBMITTED 5-23-67
Robert E. Kromb
DISTRICT ENGINEER

PASSED 19____
ENGINEER OF LOCAL ROADS AND STREETS

APPROVED 19____
CHIEF HIGHWAY ENGINEER

APPROVED 19____
DIRECTOR

060-0142 NB / 0143 SB

Reel 8-6
524+06.10

060-0142 NB/0143 SB

GENERAL NOTES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 770	1-VB 1-HB	MADISON	70	5
FED. ROAD DIV. NO. 7 ILLINOIS PROJECT				

The work included in Section 1-HB consists of: The construction of one bridge over F.A.S. Route 770 on continuous steel beams and reinforced concrete slab, 4 spans of 43'-3", 67'-6", 61'-6", C/C Bridges at Station 50+00 CH-1 = Station 492+03.37 North Access Road to SIU (FAS Rte 770) and the construction of CH-1; a 20 ft. 8" standard reinforced P.C.C. pavement; drainage structures and other incidental work necessary to complete this section.

The work included in Section 1-VB, includes the furnishing and construction of dual three (3) span bridges on precast, prestressed concrete I Beams and reinforced concrete slab having 45'-6" end spans and 58'-0" center span, carrying Federal-aid Secondary Route 770 over the Norfolk and Western R.R. at Station 524+06.10, the construction of a 4'x4' reinforced concrete box culvert and channel change at Station 522+15, and the relocation of a 12" water main, the construction of the supporting members for relocating a 22" oil pipe line, and other incidental work necessary to complete this section.

No payment will be made for overhaul of any material from any source on these sections.

One 20 ft. standard reinforced P.C. Pavement 8" shall be constructed on CH-1 & Boam Road in accordance with the typical sections and as directed by the Engineer.

Estimated Quantities:
2708 Sq. Yds. Portland Cement Concrete Pavement 8"
2708 Sq. Yds. Pavement Fabric

Stabilized Sub-Base 4" thick shall be placed under the proposed 8" Portland Cement Concrete Pavement in accordance with the typical sections and as directed by the Engineer.

Estimated Quantities:
3132 Sq. Yds. Stabilized Sub-Base 4"

Gravel or Crushed Stone Shoulders Type B, shall be constructed in accordance with Standard 2187-2 and as directed by the Engineer.

Estimated Quantities:
64 Tons Gravel or Crushed Stone Shoulders Type B

A strip of sod 18" wide shall be placed on each side of paved ditches and paved ditch structures, and as directed by the Engineer.

Estimated Quantities:
554 Sq. Yds. Sodding
3 Units Supplemental Watering
389 In. diameter tree removal (6 to 15 inch diameter) throughout section 1-HB
591 In. diameter tree removal (over 15 inch diameter) throughout section 1-HB
3 Each stump removal throughout section 1-HB
320 In. diameter tree removal (6 to 15 inch diameter) throughout section 1-VB
182 In. diameter tree removal (over 15 inch diameter) throughout section 1-VB

The contractor shall furnish and erect Right of Way Markers in accordance with Standard 1744-1 at locations shown on the plans. Nine (9) each Furnishing and Erecting Right of Way Markers have been allowed for this work.

All stationing refers to the survey centerline except as shown on the plans.

Datum used for survey is U.S.G.S.

Where section or sub-section monuments are encountered, the Engineer shall be notified before such monuments are removed. The contractor shall protect and carefully preserve all property markers and monuments until the owner, an authorized surveyor, or agent has witnessed or otherwise referenced their location.

All turf areas having a 3:1 or steeper slope, slopes greater than 10 feet in height, or other areas designated on the plans or directed by the Engineer shall have seeding Class III. Small flat areas between slopes or at the edges of slopes shall be included as Class III. All other turf areas shall have Seeding Class II. The total of the quantities for Seeding Classes II and III is the total area to be seeded. See Special Provisions."

The pavement, sub-base and shoulders as shown on the cross section templates for F.A.S. 770 Sec. 1 in these plans do not agree with the standard drawings for pavement, stabilized sub-base or stabilized shoulders. The earthwork as shown in the Summary of Quantities and the balance quantities have been revised to agree with Standard 2235 and Standard 2237.

Following Utility Companies have Facilities within the limits of construction which may require adjustment:
Illinois Power Co.
Illinois Bell Telephone Co.
Texas Pipe Line Co.
City of Edwardsville Water

COUNTY HIGHWAY 1

HIGHWAY CLASS V

STRUCTURAL DESIGN TRAFFIC: YEAR 1976 : PC = 352

S.U. = 49 M.U. = 4

CLASS V ROAD

MINIMUM SOIL SUPPORT. CBR = 4 - 5

PERCENT OF S.D.T. IN DESIGN LANE: U_p = 50 U_s = 50
U_m = 50

T.F. = .039

Class II. A total of 240 lbs. per acre of the three nutrients shall be applied in accordance with the ratio 10-6-4 for Seeding

Class III. A total of 200 lbs. per acre of the three nutrients shall be applied in accordance with the ratio 10-20-20 for Seeding

Sub-Base Granular Material Type A, 6" thick shall be placed under all bridge approach slabs instead of the Stabilized

Sub-base.

LEGEND

- RIGHT-OF-WAY MARKERS TO BE SET
- PROPOSED RIGHT OF-WAY LINE
- A/C — ACCESS CONTROL LINE
- O — EXISTING HIGH PRESSURE OIL LINE
- W — EXISTING 12" WATER LINE

INDEX OF SHEETS

SHEET NO.	TITLE
1	Cover Sheet
2	North Access Road to S.I.U. - Typical Cross Section
3	County Highway 1 - Typical Cross Sections
4	County Highway 1 - Entrance, Paved Ditch & Rip-Rap Details
5	General Notes, Index of Sheets and Legend
6	Summary of Quantities & Class "X" Concrete Schedule
7	County Highway 1, Plan and Profile
8	North Access Road - Plan and Profile
9	Intersection Details - County Highway 1 with North Access Road
10	County Highway 1 Culvert Profiles
11-23	Section 1-HB Bridge Plans
24	North Access Road Plan & Profile
25	Oil Line Details
26	Water Line Relocation Details
27	Box Culvert Details
28-41	Section 1-VB Bridge Plans
42-45	Cross Sections - County Highway 1
46-61	Cross Sections - North Access Road
62	Standard 2230-2
63	Standards 2231, 21686-3
64	Standard 1909-8
65	Standard 2093
66	Standards 1975, 2130
67	Standards 2115-1, 2173-1, 2187-4, 2143-1
68	Standards 2220-1, 1683-2, 1744-1
69	Standards 1766-4, 2208-2
70, A	Standards 2113-1, 2114, 2253

* These Standards are Included after Set No 3

SUMMARY OF QUANTITIES

PROJECT S-770(101)

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE	BRIDGE	ROADWAY		
				SEC. I-VB	SEC. I-HB	(COUNTY HIGHWAY 1)		
	LOCATION			STA. 523+32.37 TO STA. 524+85.37	STA. 489+66.65 TO STA. 51+31.65	STA. 39+00 TO STA. 53+50		
	CONSTRUCTION TYPE CODE			X181	X731	7223	Y005	CE58
010001	Tree Removal (6 to 15 inch diameter)	In. Dia.	709	320	---	389	---	---
010002	Tree Removal (over 15 inch diameter)	In. Dia.	773	182	---	593	---	---
010005	Tree Removal, Acres	Acres	12.9	---	---	12.9	---	---
010011	Stump Removal	Each	3.3	---	---	3	---	---
011001	Earth Excavation	Cu. Yd.	175,914	144,703	23,900	7,311	---	---
011018	Muck Removal	Cu. Yd.	100	---	---	100	---	---
020001	Channel Excavation	Ton	270	270	---	---	---	---
024001	Sub-base Granular Material Type A 6"	Sq. Yds.	40	---	---	40	---	---
024015	Stabilized Sub-Base 4"	Sq. Yds.	3,132	---	---	3,132	---	---
026003	Gravel or Crushed Stone Shoulders, Type B	Ton	64	---	---	64	---	---
025003	Gravel or Crushed Stone Base Course, Type B	Ton	71	---	---	71	---	---
048006	Portland Cement Concrete Pavement 6"	Sq. Yd.	2,708	---	---	2,708	---	---
048011	Portland Cement Concrete Pavement 16 1/2 - 10 1/2 - 15 1/2	Sq. Yd.	118	---	---	118	---	---
048019	Pavement Fabric	Sq. Yd.	2,708	---	---	2,708	---	---
049017	Removal of Existing Structures No. 1	Each	1	1	---	---	---	---
049018	Removal of Existing Structures No. 2	Each	1	---	---	---	---	---
050001	Class A Excavation for Structures	Cu. Yd.	553	256	287	---	---	---
051020	Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Lin. Ft.	1,795	1,795	---	---	---	---
052003	Class X Concrete	Cu. Yd.	1,446.7	1,005.2	441.5	---	---	---
052018	Class X Concrete (Headwalls)	Cu. Yd.	17.2	---	---	17.2	---	---
052021	Protective Coat	Sq. Yds.	5,052	1,338	888	2,826	---	---
054001	Furnishing and Erecting Structural Steel	Pounds	217,207	17,427	193,780	---	---	---
056962	Pipe Culvert Type 1A, R.C.C.P. 18"	Lin. Ft.	38	---	---	38	---	---
058034	Pipe Culvert Type 2A, R.C.C.P. 36"	Lin. Ft.	162	---	---	162	---	---
059001	Reinforcement Bars	Pounds	264,340	155,630	94,900	5,810	---	---
059005	Furnishing Crosotod Piles 20.1 to 38 feet	Lin. Ft.	1,536	1,536	---	---	---	---
059006	Driving Timber Piles	Lin. Ft.	1,536	1,536	---	---	---	---
059027	Furnishing Steel Piles 8SP35	Each	8,790	8,790	---	---	---	---
059036	Test Pile Steel 8SP35	Each	2	---	---	---	---	---
059037	Driving Steel Piles	Lin. Ft.	8,790	8,790	---	---	---	---
059043	Driving Concrete Piles	Lin. Ft.	459	---	459	---	---	---
059044	Furnishing Concrete Piles	Each	1	---	1	---	---	---
059047	Test Pile Concrete	Each	4	---	2	---	---	---
051001	Name Plates	Sq. Yds.	70	---	---	---	70	---
052003	Broken Concrete Repair	Lin. Ft.	297	297	---	---	---	---
072056	Water Main 12"	Lin. Ft.	1	---	---	1	---	---
075105	Inlets, Type A, Type 11 Frame	Each	225	---	---	225	---	---
080052	Combination Concrete Curb and Gutter Type B-5.24	Lin. Ft.	1,102	---	---	1,102	---	---
082001	Pavement Removal	Sq. Yds.	585	---	---	585	---	---
082004	Gutter Removal	Lin. Ft.	2,048	1,604	444	---	---	---
083002	Slope Wall 4 Inch	Sq. Yds.	1,663	---	---	---	1,663	---
091004	Exposed Ditch 5 Feet	Lin. Ft.	1,412.5	---	---	1,412.5	---	---
094001	Steel Plate Beam Guard Rail	Each	9	---	---	9	---	---
104001	Furnishing and Erecting Right of Way Markers	Each	0.4	---	---	---	0.4	---
110025	Seeding, Class II	Acres	3.8	---	---	---	3.8	---
110026	Seeding, Class III	Acres	8.4	---	---	---	8.4	---
111002	Straw for Asphalt Coated Mulch	Ton	840	---	---	---	840	---
111003	Emulsified Asphalt	Gal.	554	---	---	---	554	---
112001	Sodding	Sq. Yds.	3	---	---	---	3	---
112002	Supplemental Watering	Units	200	---	---	---	200	---
113014	Nitrogen Fertilizer Nutrients	Pounds	333	---	---	---	333	---
113015	Phosphorous Fertilizer Nutrients	Pounds	323	---	---	---	323	---
113016	Potassium Fertilizer Nutrients	Pounds	144	---	---	144	---	---
158035	Pipe Culvert Type 4A R.C.C.P. 72"	Lin. Ft.	1,087	603	484	---	---	---
Z00004	Aluminum Handrail	Tons	19	---	---	---	19	---
Z00142	Incidental Bituminous Surface	Lump Sum	2	1	1	---	---	---
Z01023	Bridge Seat Sealant	Lump Sum	1	1	---	---	---	---
Z01065	Railroad Protective Lustrance	Each	1	---	---	---	---	1
Z01398	Engineers Field Office Type A	Each	4	4	---	---	---	---
Z01448	Settlement Plates	Each	1	---	---	---	---	1
Z00450	Removing Building No. 1	Each	1	---	---	---	---	1
Z00451	Removing Building No. 2	Each	1	---	---	---	---	1
Z00452	Removing Building No. 3	Each	1	---	---	---	---	1

CLASS X CONCRETE SCHEDULE

LOCATION	HEADWALLS	BOX CULVERT	BRIDGE	REINF. BARS	STRUCTURAL STEEL	CONCRETE PILES	TIMBER PILES	STEEL PILES
	CU. YD.	CU. YD.	CU. YD.	POUND	POUND	LIN. FT.	LIN. FT.	LIN. FT.
C.H. I								
45+69.00	16.5			1020				
48+86.85				2880				
50+00.00			441.5	94900	193780	459		
51+31.65				2880				
51+77.00	0.7			30				
NORTH ACCESS RD.								
520+67.00		156.8		29820	1627*			2240*
522+15.00								
524+06.10			848.4	132810	7900		1536	6550
TOTALS	17.2	156.8	1289.9	264340	203307	459	1536	8780

CLASS X CONCRETE (HEADWALLS) = 17.2 CU. YD.
 CLASS X CONCRETE = 1446.7 CU. YD.
 REINFORCEMENT BARS = 264,340 POUNDS

*Utility Structure

Revised from Pipe Culvert Type 2A, R.C.C.P. 36" to Pipe Culvert Type 2A, 36" on 10-18-67

B.M. NO. 7-C, 6" SPIKE IN TELEGRAPH POLE
182' LT. STA. 524+42 ELEV. 463.77

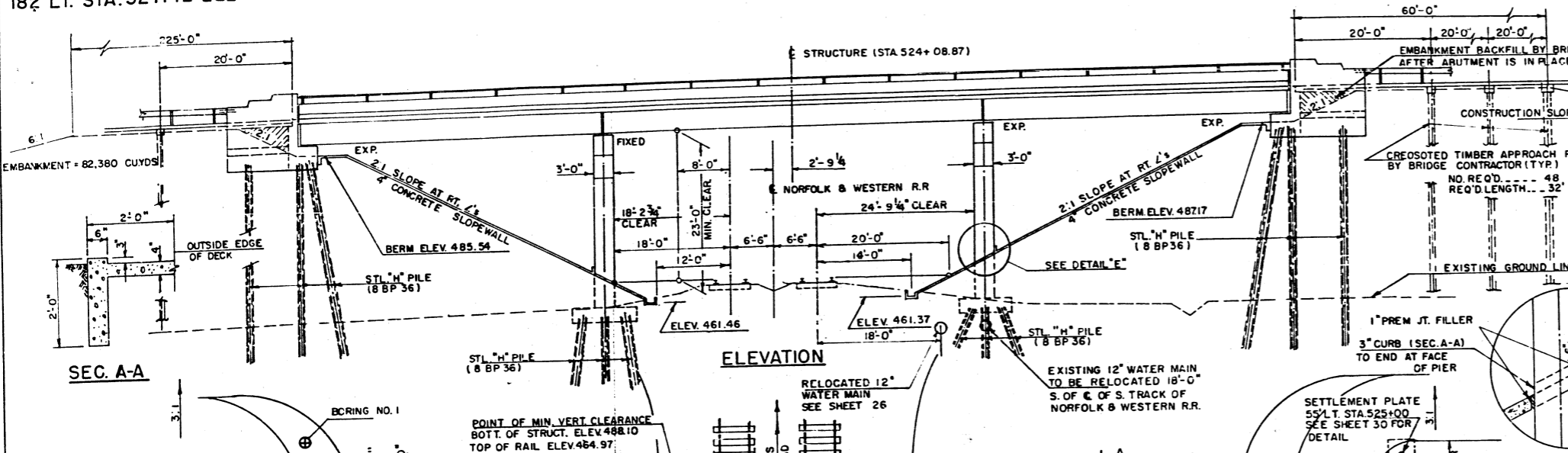
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 770	I-VB	MADISON	70	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

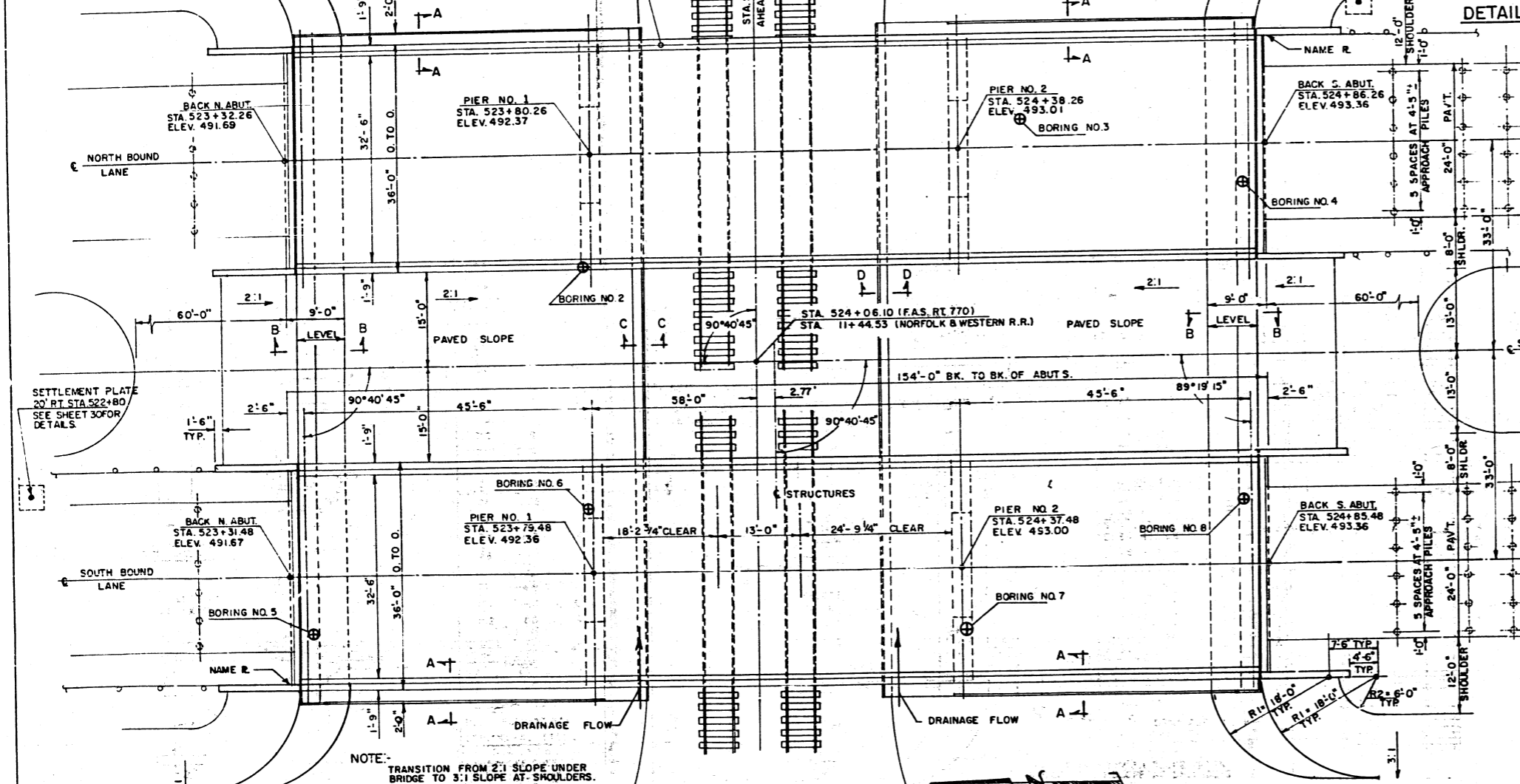
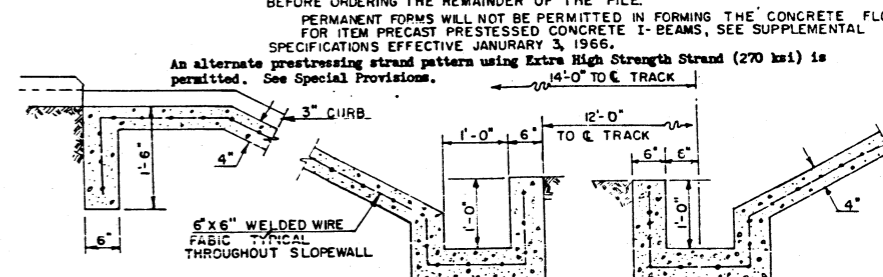
FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF 1/4 OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

GENERAL NOTES

- COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND END POSTS MUST BE FREE OF CHERT, FLINT, LIMONITE, LIGNITE, AND SOFT SANDSTONE.
- THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATION.
- SLOPE WALLS SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH WEIGHING 58 LBS PER 100 SQ. FT.
- ALL REINFORCEMENT BARS SHALL BE LAPPED A MINIMUM OF 20 DIAMETERS UNLESS OTHERWISE SHOWN.
- THE EXPOSED SURFACES OF THE EXPANSION GUARD SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT, THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT, ANCHOR STUDS SHALL NOT BE PAINTED.
- EXPANSION GUARDS ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL ESTIMATED WEIGHT = 3590 LBS.
- EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF PAINT. SEE SPECIAL PROVISIONS FOR FIELD PAINT.
- THE CONTRACTOR SHALL DRIVE ONE 8BP36 TEST PILE IN A PERMANENT LOCATION AT N ABUTMENT W. STRUCTURE AND ONE 8BP36 TEST PILE AT PIER NO. 2 E. STRUCTURE BEFORE ORDERING THE REMAINDER OF THE PILE.
- PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR. FOR PRECAST PRESTRESSED CONCRETE I-BEAMS, SEE SUPPLEMENTAL SPECIFICATIONS EFFECTIVE JANUARY 3, 1966.
- An alternate prestressing strand pattern using Extra High Strength Strand (270 ksi) is permitted. See Special Provisions.



NOTE: EXCAVATION FOR PORTION OF STRUCTURES IN EMBANKMENTS SHALL NOT BE CLASSIFIED.



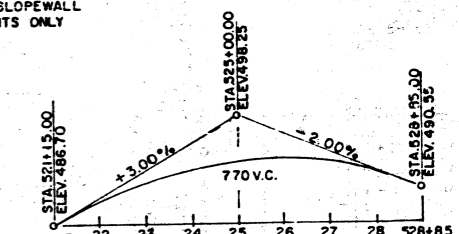
STATION 524+06.10
BUILT 196 BY
STATE OF ILLINOIS
F.A.S. RT. 770, SEC. I-VB
F.A. PROJECT S-770(10)
LOADING H S 20
NAMEPLATE
SEE STD. 2113-1

TOTAL BILL OF MATERIAL

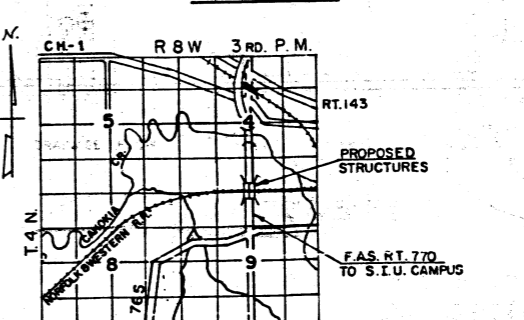
ITEM	UNIT	SUPER.	SUB.	TOTAL
* CLASS A EXCAVATION FOR STRUCTURES	CU.YDS.		266	266
STRUCTURAL STEEL	LBS.	7900		7900
FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE "I" BEAMS, 42"	LIN. FT.	1796		1796
CLASS X CONCRETE	CU.YDS.	363.9	484.5	848.4
ALUMINUM HANDRAIL	LIN. FT.	603		603
REINFORCEMENT BARS	LBS	67,980	50,830	118,810
CREOSOTED PILES	LIN. FT.			1536
STEEL H PILES (8 BP 36)	LIN. FT.		6550	6550
TEST PILE (STEEL H PILE 8 BP 36)	EACH		2	2
SLOPEWALL (4")	SQ. YDS.		1604	1604
PROTECTIVE COAT	SQ. YDS.	1338		1338
* BRIDGE SEAT SEALANT	LUMP SUM		1	1
NAME PLATES	EACH		2	2

* INCLUDES EXCAVATION FOR SLOPEWALL
** TO BE APPLIED AT ABUTMENTS ONLY

STATION	ELEVATION						
	250' LT.	200' LT.	100' LT.	C	100' RT.	200' RT.	300' RT.
523+97	465.04	465.02	464.98	464.96	464.93	464.87	464.81
524+02	465.04	465.02	464.98	464.95	464.92	464.85	464.80
524+10	464.96	464.94	464.89	464.89	464.90	464.88	464.86
524+15	464.97	464.94	464.89	464.88	464.91	464.88	464.86



NORFOLK & WESTERN RAILROAD
RAIL DATA



PROPOSED PROFILE
F.A.S. ROUTE 770

NOTE: STATION 20+42, 18.5' RT. R.R.
MILE POST MARKED 468

GENERAL PLAN & ELEVATION
F.A.S. ROUTE 770 - SEC. I-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524+06.10

DESIGNED	G.E.P.	EXAMINED	
CHECKED	D.M.R.	PASSED	
DRAWN	J.P.E.	APPROVED	
CHECKED	G.E.P.		

DESIGN STRESSES

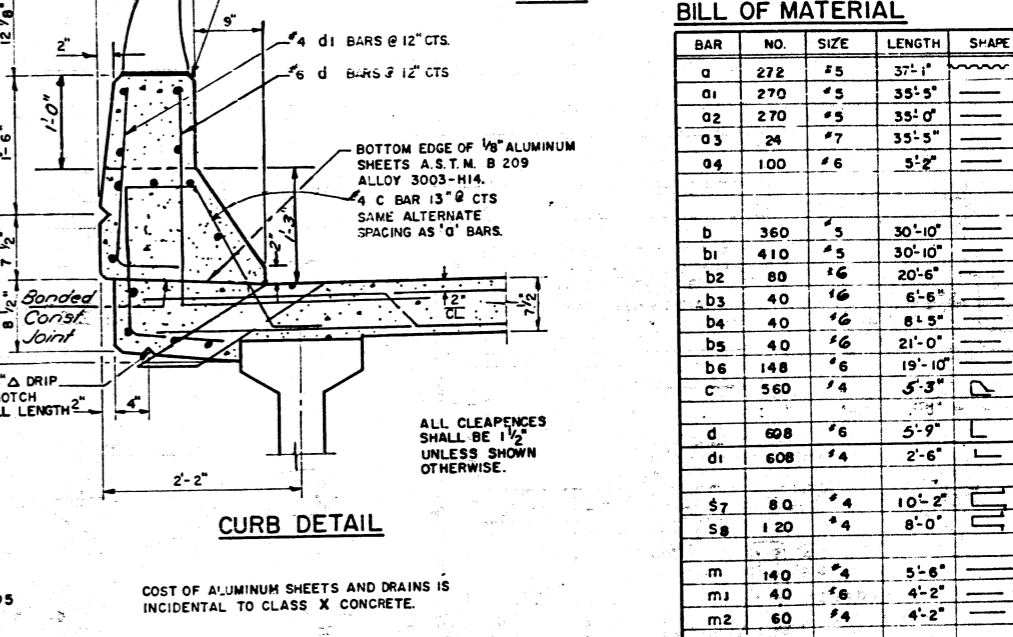
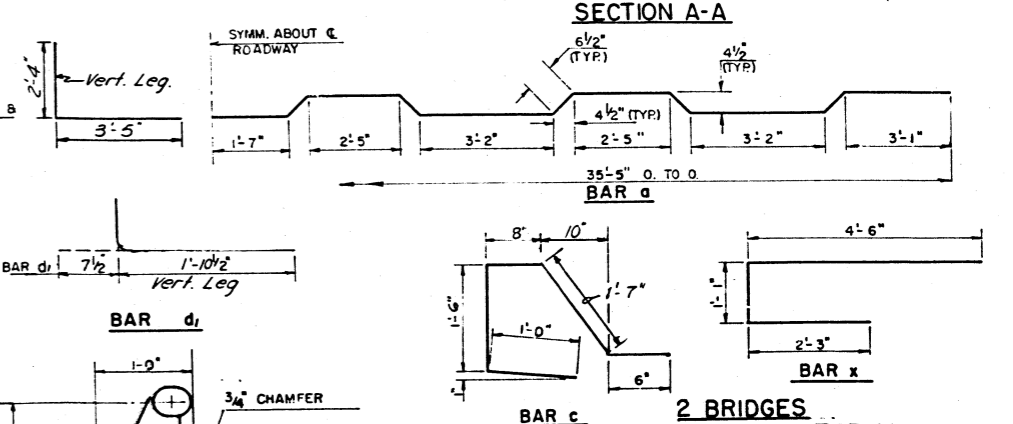
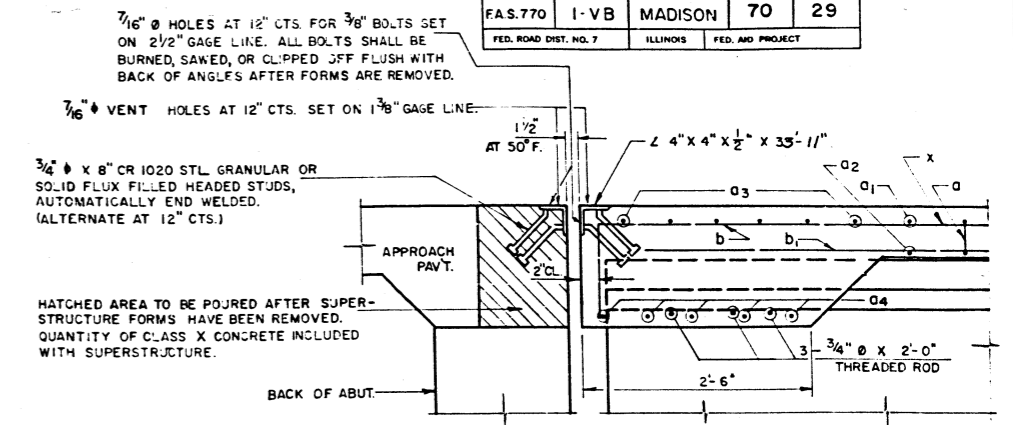
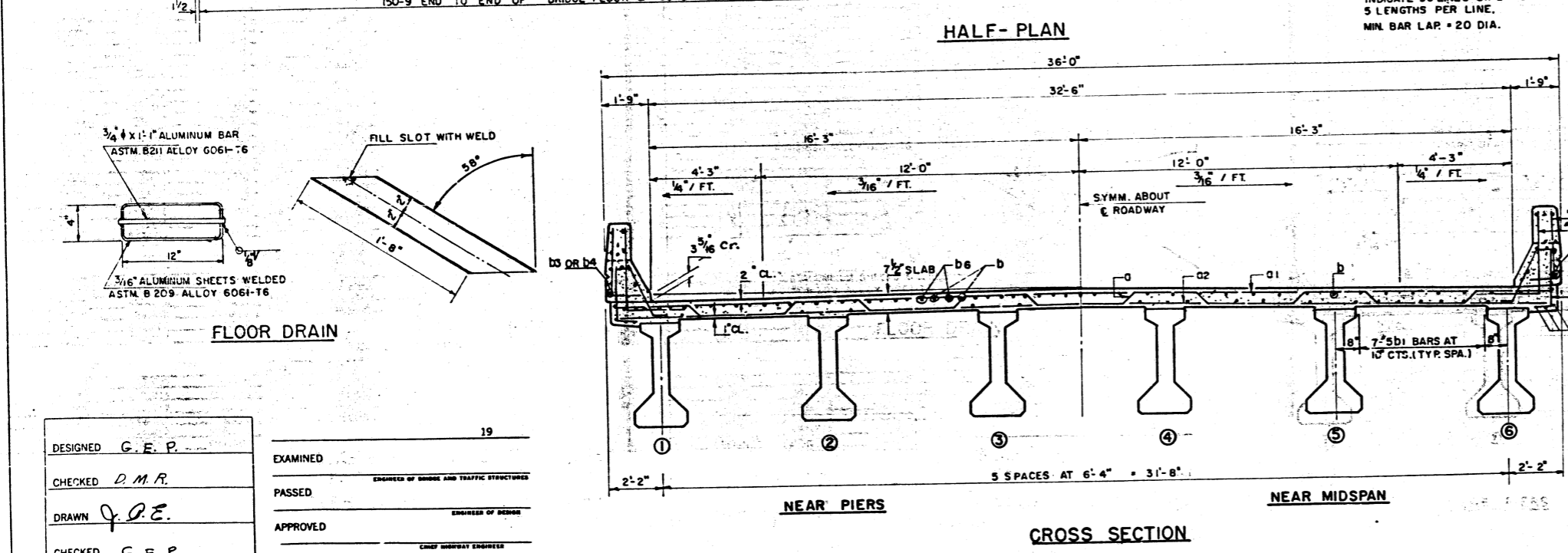
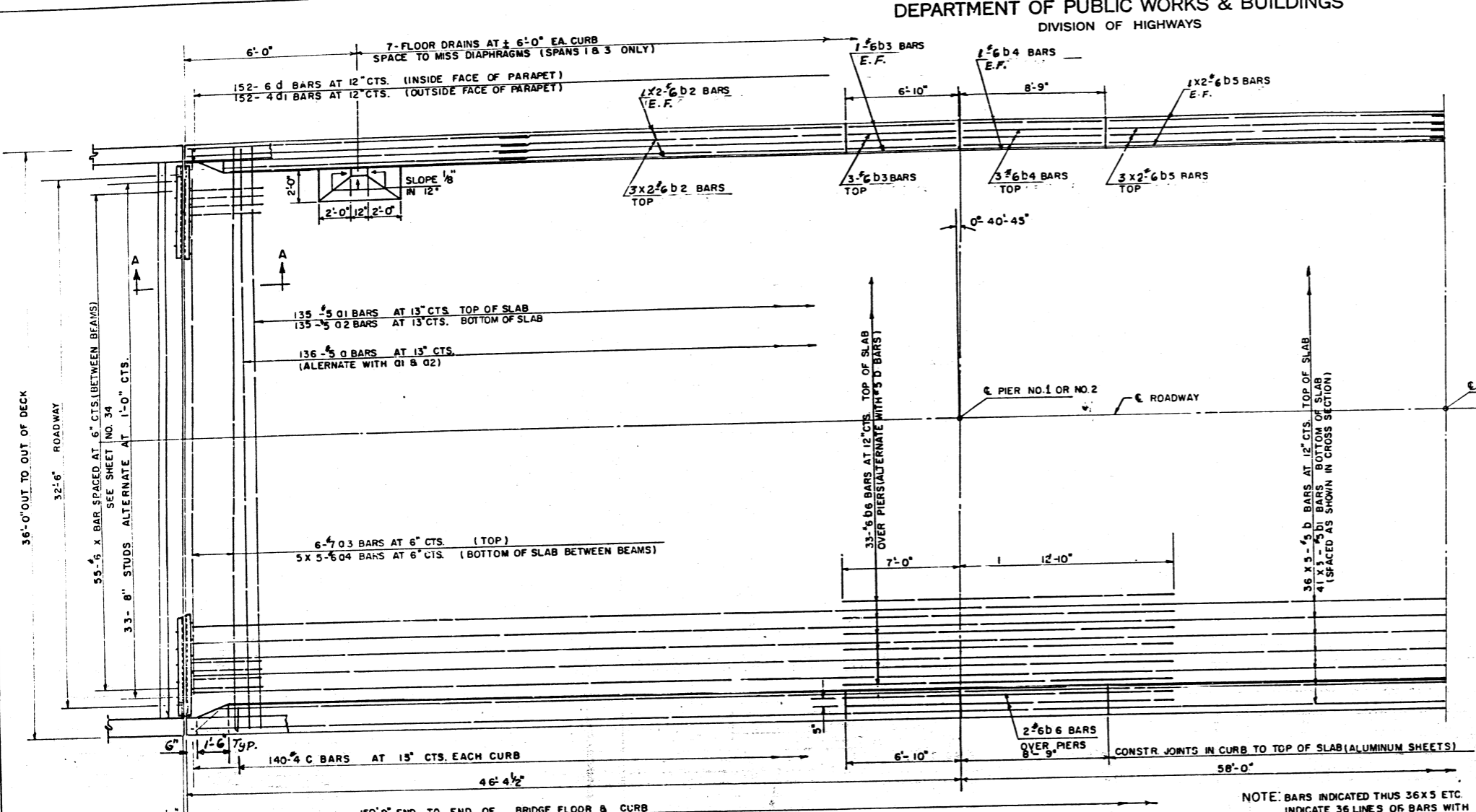
PRESTRESSED CONC. UNIT	CAST IN PLACE UNIT
f _c = 5,000 p.s.i.	f _c = 1,400 p.s.i.
f _{ci} = 4,000 p.s.i.	V _c = 75 p.s.i. (FOOTING)
f _s = 248,000 p.s.i. (7/16" CABLE)	f _s = 20,000 p.s.i. (REINF.)
f _s = 173,600 p.s.i. (7/16" CABLE)	n = 10

HS 20-44 LOADING

Rev. Reinf. Super. from 79,300' to 84,980' Total from 129,030' to 132,810' 9-20-67 J.M.J.

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS. 770	I-VB	MADISON	70	29
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



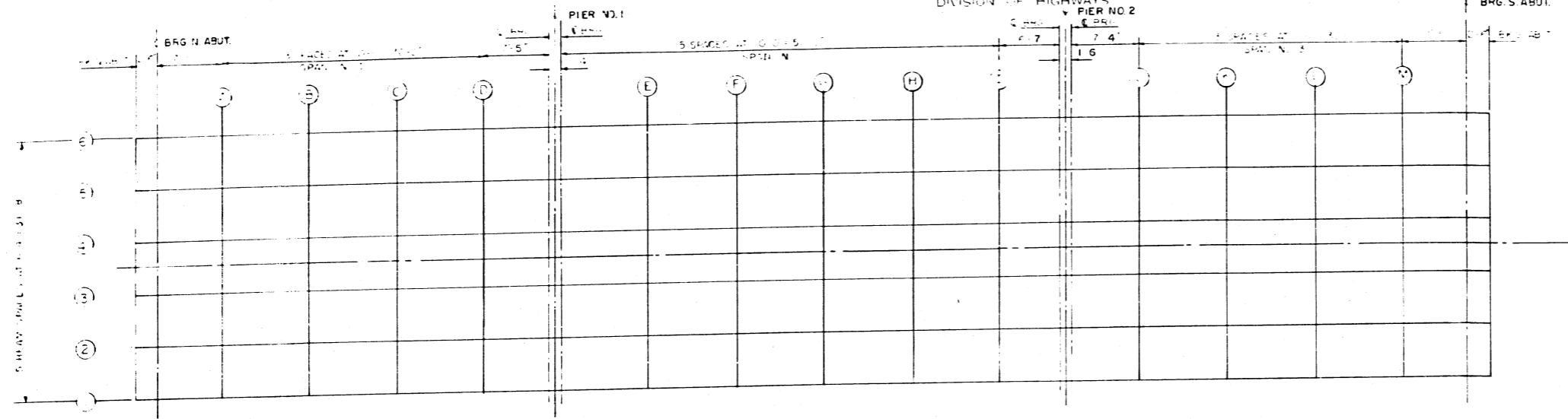
**2 BRIDGES
 BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
a	272	#5	37'-1"	
a1	270	#5	35'-5"	
a2	270	#5	35'-0"	
a3	24	#7	35'-5"	
a4	100	#6	3'-2"	
b	360	#5	30'-10"	
b1	410	#5	30'-10"	
b2	80	#6	20'-6"	
b3	40	#6	6'-6"	
b4	40	#6	8'-5"	
b5	40	#6	21'-0"	
b6	148	#6	19'-10"	
c	560	#4	5'-3"	
d	608	#6	5'-9"	
d1	608	#4	2'-6"	
d2	60	#4	10'-2"	
d3	120	#4	8'-0"	
m	140	#6	5'-6"	
m1	40	#6	4'-2"	
m2	60	#4	4'-2"	
x	220	#6	7'-10"	

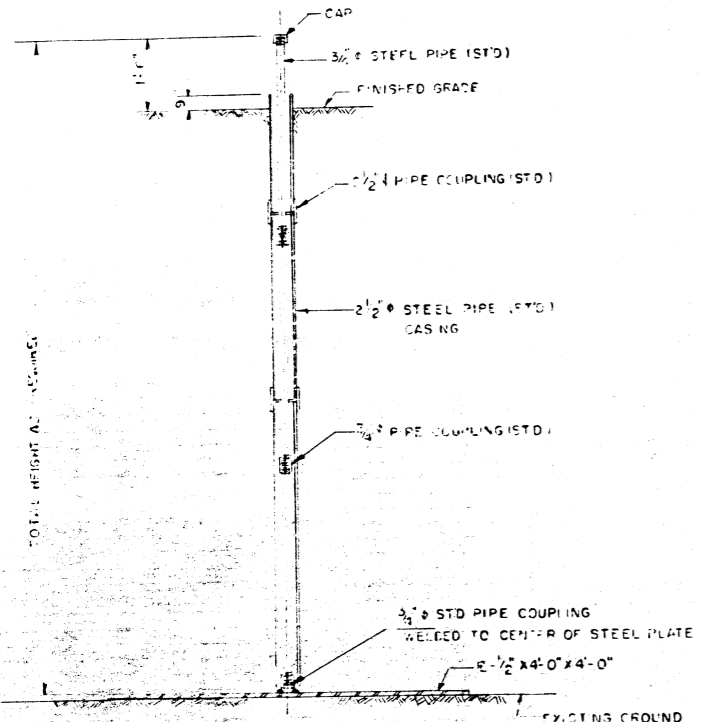
**SUPERSTRUCTURE DETAILS
 F.A.S. ROUTE 770 - SEC. I-VB
 OVER NORFOLK & WESTERN R.R.
 MADISON COUNTY
 STA. 524+06.10**

DESIGNED G. E. P.
 CHECKED D. M. P.
 DRAWN G. P. E.
 CHECKED G. E. P.

EXAMINED _____
 PASSED _____
 APPROVED _____



PLAN



SETTLEMENT PLATE DETAILS

SETTLEMENT PLATES TO BE PLACED AT LOCATIONS SHOWN ON THE GENERAL PLAN PRIOR TO CONTRACTORS PLACEMENT OF BILL FOR SECTION 1-VB TO BE PAID FOR AT THE CONTRACT UNIT PRICE FOR SETTLEMENT PLATES (EACH) SEE SPECIAL PROVISIONS

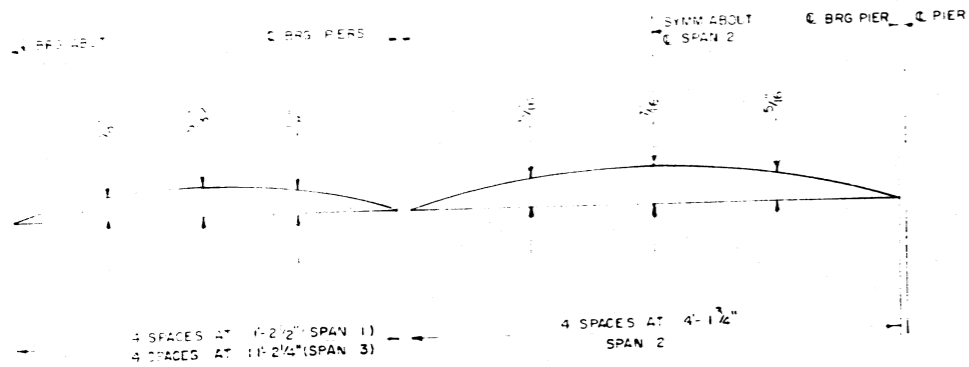
A.E.P.
G.M.R.
C.P.E.
A.E.P.

SPAN NO. 1		SPAN NO. 2		SPAN NO. 3										
BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415
2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538
3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675
4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828
5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995
6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275
1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415
2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538
3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675
4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828
5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995
6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275

SPAN NO. 1		SPAN NO. 2		SPAN NO. 3										
BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415
2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538
3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675
4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828
5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995
6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275

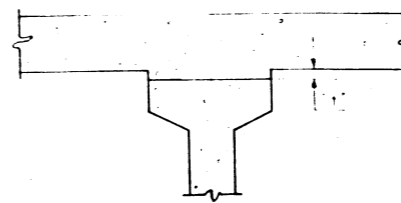
SPAN NO. 1		SPAN NO. 2		SPAN NO. 3										
BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION	BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415	1	524+00.00	15.633	491.415	491.415
2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538	2	524+00.00	5.500	491.538	491.538
3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675	3	524+00.00	1.118	491.675	491.675
4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828	4	524+00.00	0.000	491.828	491.828
5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995	5	524+00.00	1.118	491.995	491.995
6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275	6	524+00.00	5.500	492.275	492.275

SLAB ELEVATIONS E. STRUCTURE
FAS ROUTE 770-SEC 1-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06 10



DEAD LOAD DEFLECTION DIAGRAM
 (INCLUDES WEIGHT OF CONCRETE SLAB 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 33 & 31



TO DETERMINE "f" AFTER ALL PRECAST PRESTRESSED BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN SHEETS 3 & 4. THESE ELEVATIONS SUBTRACTED ALGEBRAICALLY FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS SHOWN ON SHEETS 3 & 4, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "f". A POSITIVE VALUE OF "f" EQUALS THE FILLET HEIGHT ABOVE THE TOP OF THE BEAM, A NEGATIVE VALUE OF "f", NOT TO EXCEED 1/2", EQUALS THE EMBEDMENT OF THE BEAM ABOVE THE THEORETICAL BOTTOM OF SLAB ELEVATION

FILLET HEIGHTS

SPAN NO. 1

BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
SP. 1	1			
	2			
	3			
	4			
	5			
	6			
SP. 2	1			
	2			
	3			
	4			
	5			
	6			
A	1			
	2			
	3			
	4			
	5			
	6			
B	1			
	2			
	3			
	4			
	5			
	6			
C	1			
	2			
	3			
	4			
	5			
	6			
D	1			
	2			
	3			
	4			
	5			
	6			
E BRG PIER NO. 1	1			
	2			
	3			
	4			
	5			
	6			

SPAN NO. 2

BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
E BRG PIER NO. 1	1			
	2			
	3			
	4			
	5			
	6			
F	1			
	2			
	3			
	4			
	5			
	6			
G	1			
	2			
	3			
	4			
	5			
	6			
H	1			
	2			
	3			
	4			
	5			
	6			
I	1			
	2			
	3			
	4			
	5			
	6			
E BRG PIER NO. 2	1			
	2			
	3			
	4			
	5			
	6			

SPAN NO. 3

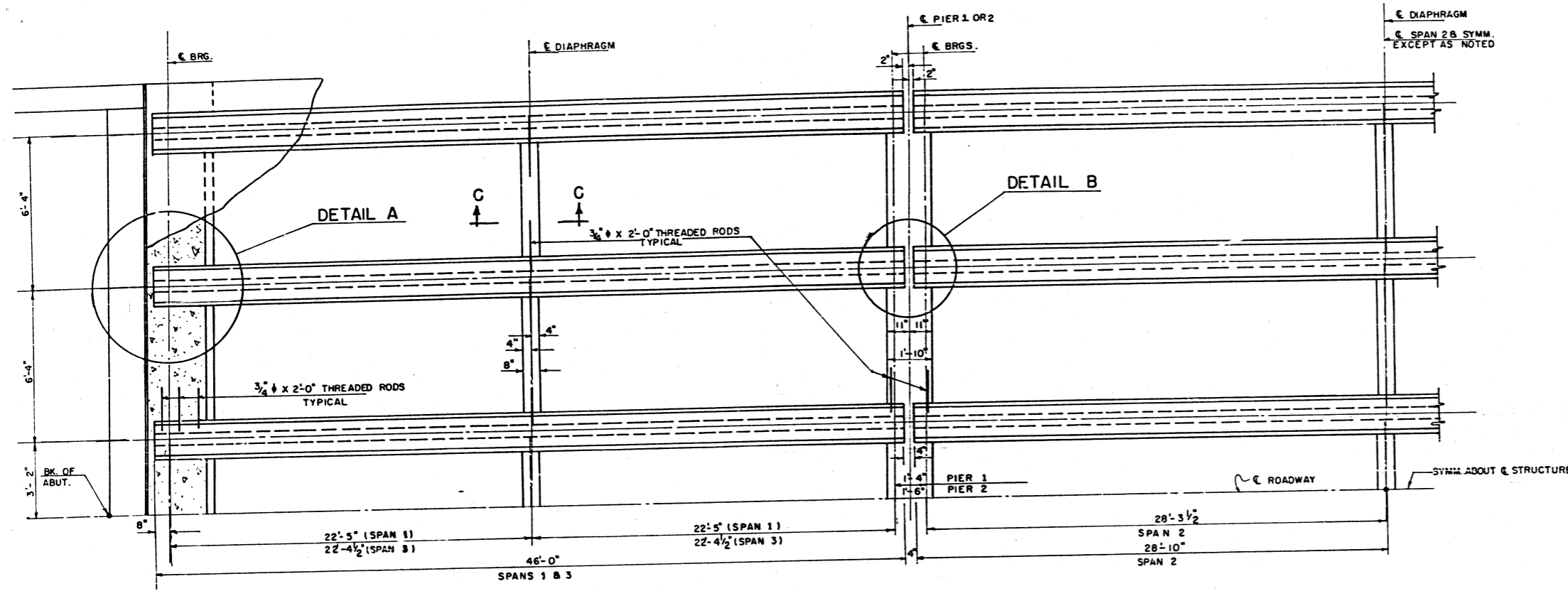
BEAM	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
52438C42	1		117	
	2		192	
	3		267	
	4		342	
	5		417	
	6			
J	1			
	2			
	3			
	4			
	5			
	6			
K	1			
	2			
	3			
	4			
	5			
	6			
L	1			
	2			
	3			
	4			
	5			
	6			
E BRG ABUT	1			
	2			
	3			
	4			
	5			
	6			
M	1			
	2			
	3			
	4			
	5			
	6			

H.C.P.
 S.M.R.
 J.E.
 H.C.P.

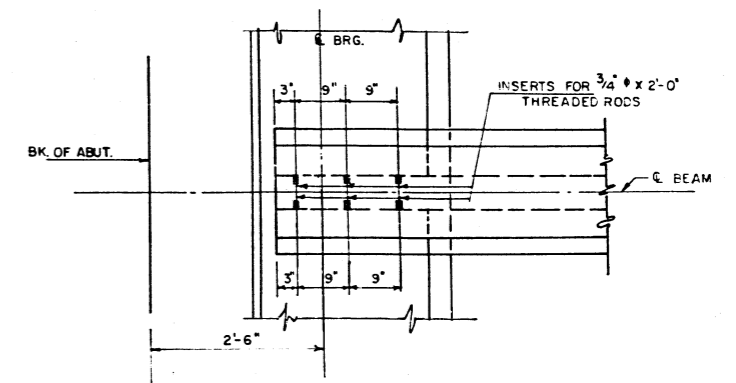
EXAMINED
 PASSED
 APPROVED

SLAB ELEVATIONS W. STRUCTURE
 FAS ROUTE 770-SEC 1-VB
 OVER NORFOLK & WESTERN RR.
 MADISON COUNTY
 STA. 524 + 06.10

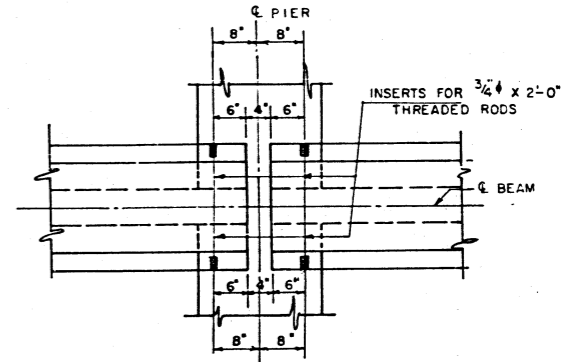
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 770	1-VB	MADISON	70	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



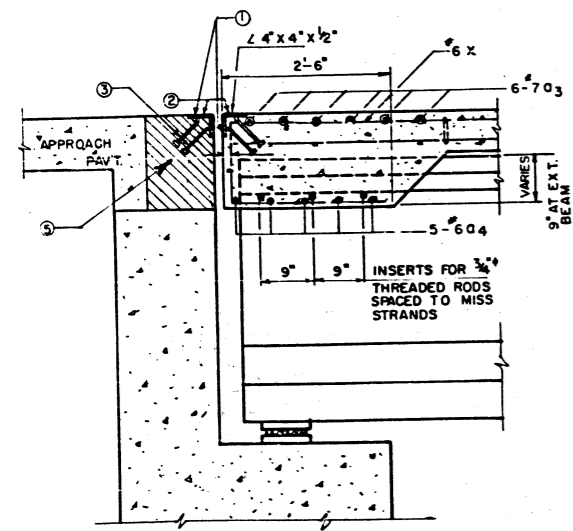
QUARTER FRAMING PLAN



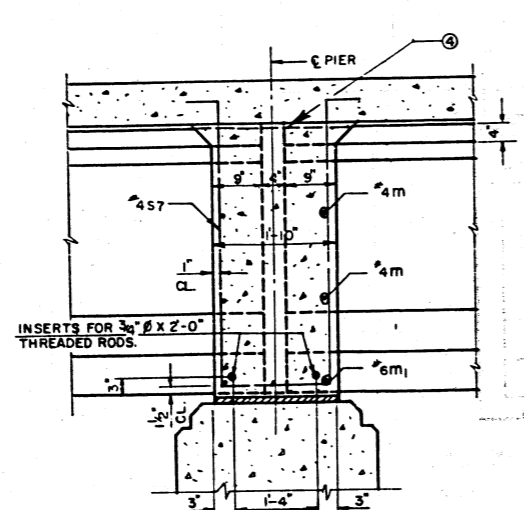
DETAIL A



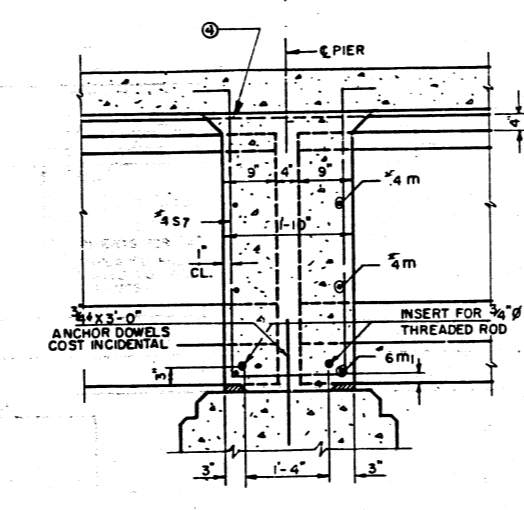
DETAIL B



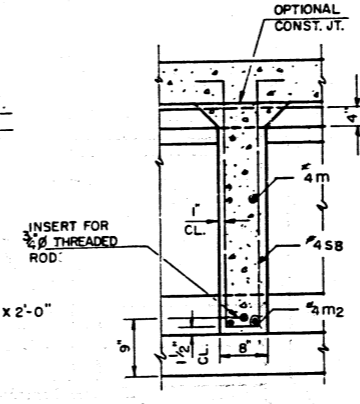
SECTION AT ABUTMENT



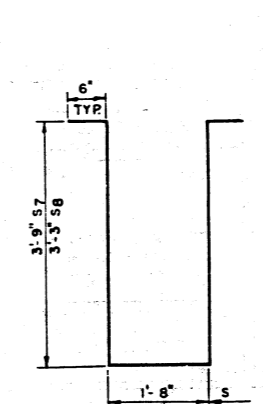
PIER NO. 2
N. BOUND
AND
S. BOUND



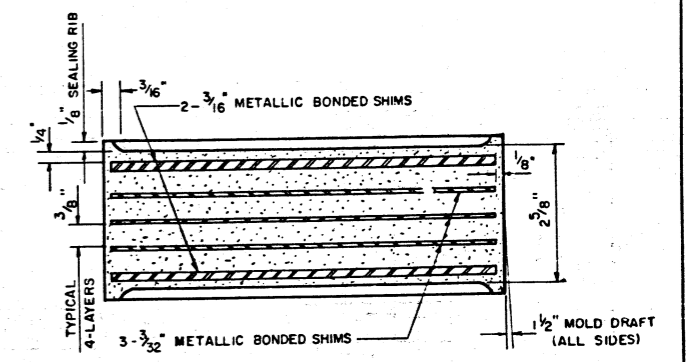
PIER NO. 1
N. BOUND
AND
S. BOUND



SECTION C-C



BAR S & S1



ELASTOMERIC BEARING DETAIL
SEE SHEET NO. 34

DESIGNED	G.E.P.
CHECKED	D.M.R.
DRAWN	J.P.E.
CHECKED	G.E.P.

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

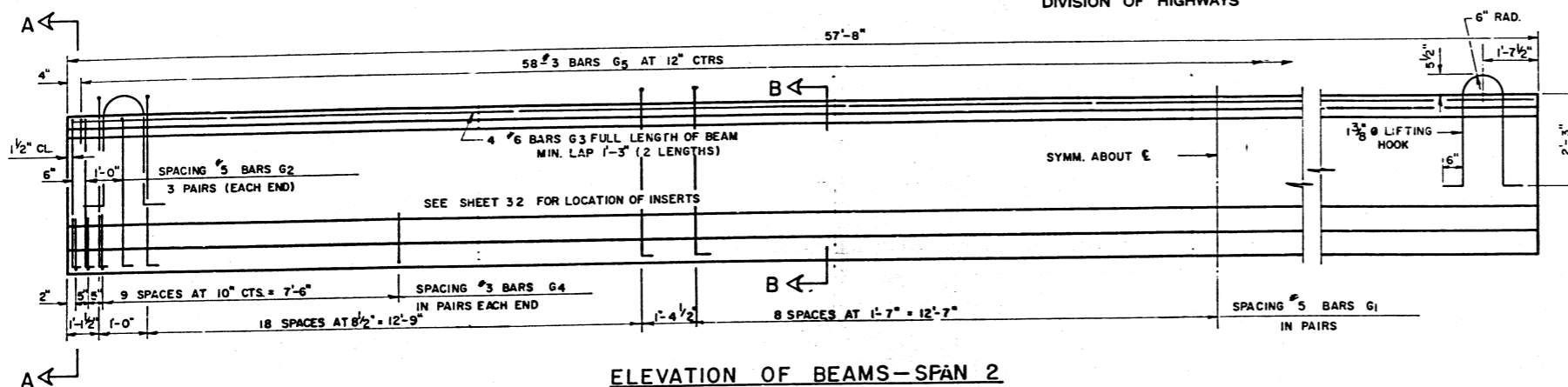
- 1/2" HOLES AT 12" CTS FOR 3/8" BOLTS SET ON NORMAL GAGE LINE. ALL BOLTS SHALL BE BURNED, SAWED OR CHIPPED OFF FLUSH WITH THE BACK OF ANGLES AFTER FORMS ARE REMOVED.
- 1/8" VENT HOLES AT 12" CTS SET ON 1 3/8" GAGE LINE.
- 3/8" x 8" CR 1020 STL GRANULAR OR SOLID FLUX FILLED HEADED STUDS-AUTOMATICALLY END WELDED; ALTERNATE AT 1'-0" CTS.
- POUR DIAPHRAGM FLUSH WITH TOP OF BEAM CONCRETE IN SLAB ABOVE THIS LINE SHALL BE PLACED N.T LESS THAN 45 MINUTES NOR MORE THAN 90 MINUTES AFTER DIAPHRAGM HAS BEEN POURED.
- HATCHED AREA TO BE POURED AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. QUANTITY OF CLASS X CONCRETE INCLUDED WITH SUPERSTRUCTURE.

BARS a3, a4, m, m1, m2;
S7 & S8 ARE INCLUDED IN BILL
OF MATERIAL ON SHEET NO. 29

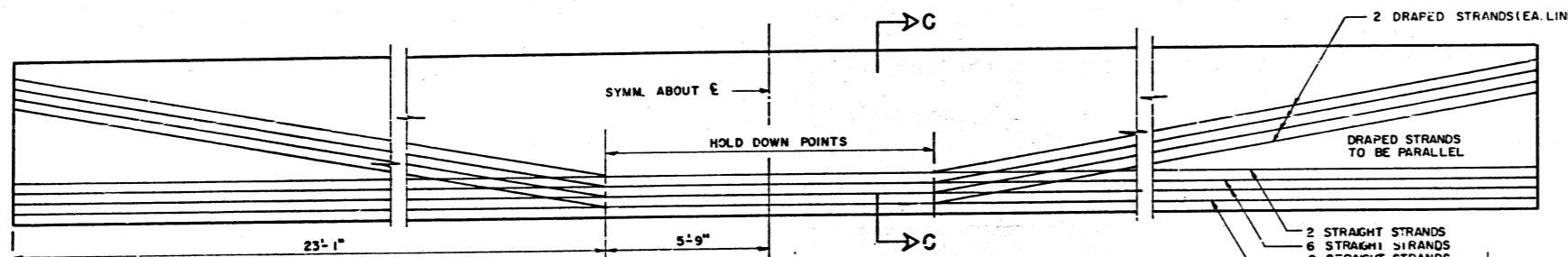
FRAMING DETAILS
F.A.S. ROUTE 770-SEC. 1-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06.10

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

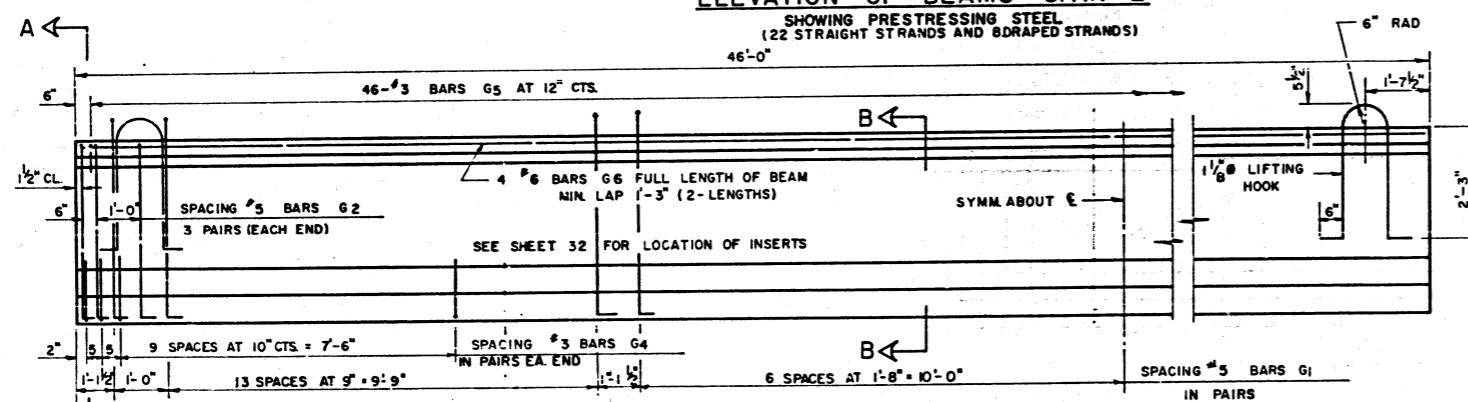
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS. 770	I-VB	MADISON	70	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



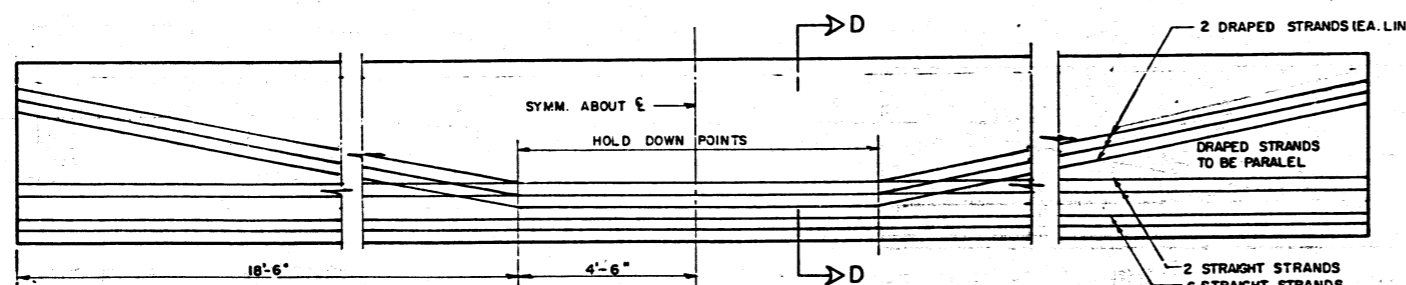
ELEVATION OF BEAMS-SPAN 2
SHOWING REINFORCEMENT & DIMENSIONS



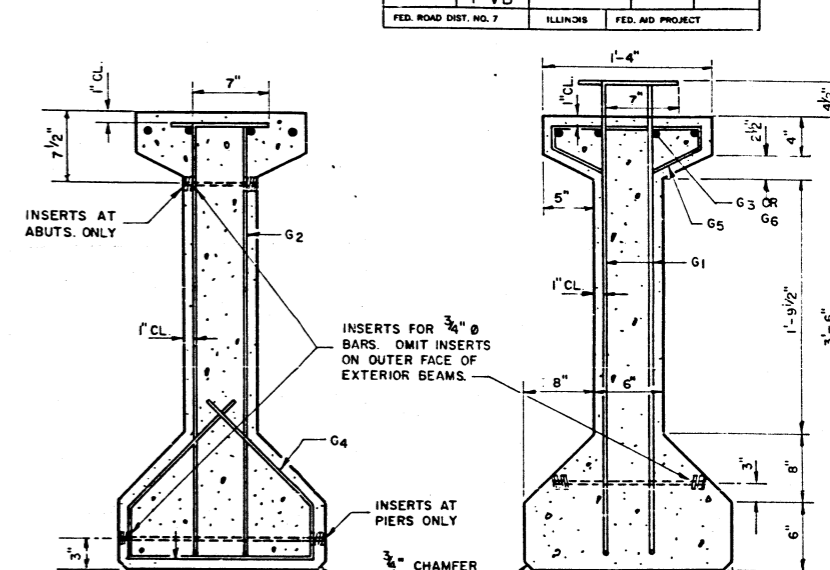
ELEVATION OF BEAMS-SPAN 2
SHOWING PRESTRESSING STEEL
(22 STRAIGHT STRANDS AND 8 DRAPED STRANDS)



ELEVATION OF BEAMS - SPANS 1 & 3
SHOWING REINFORCEMENT & DIMENSIONS

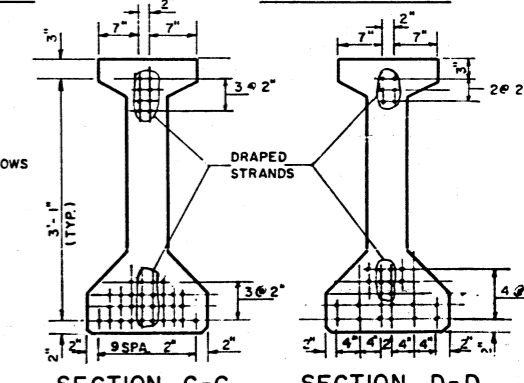


ELEVATION OF BEAMS - SPANS 1 & 3
SHOWING PRESTRESSING STEEL
(16 STRAIGHT STANDS AND 6 DRAPED STRANDS)



SECTION A-A

SECTION B-B



SECTION C-C

SECTION D-D

DETAIL OF EXTERIOR BEAM ENDS OVER PIERS

*BAR SCHEDULE

BAR NO.	NO. SPAN 1 & 3	NO. SPAN 2	SIZE	LENGTH	SHAPE
G1	86	114	#5	4'-0 1/2"	7L
G2	12	12	#5	4'-3"	7L
G3		8	#6	29'-6"	—
G4	48	48	#3	3'-3 1/2"	7
G5	46	58	#3	2'-7"	5
G6	8		#6	23'-8"	—

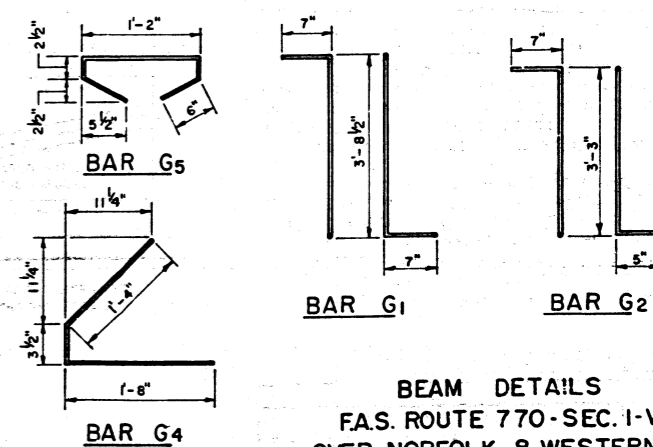
* FOR ONE BEAM ONLY

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 LINEAL FOOT OF "FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 42 IN." SEE SUPPLEMENTAL 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 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. ENDS OF BEAMS TO BE ENCASED WITH CAST IN PLACE CONCRETE SHALL NOT BE COATED WITH ASPHALT PAINT.

BILL OF MATERIAL 2 BRIDGES

ITEM	UNIT	TOTAL
FURNISHING & ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 42"	LIN. FT.	1796.0

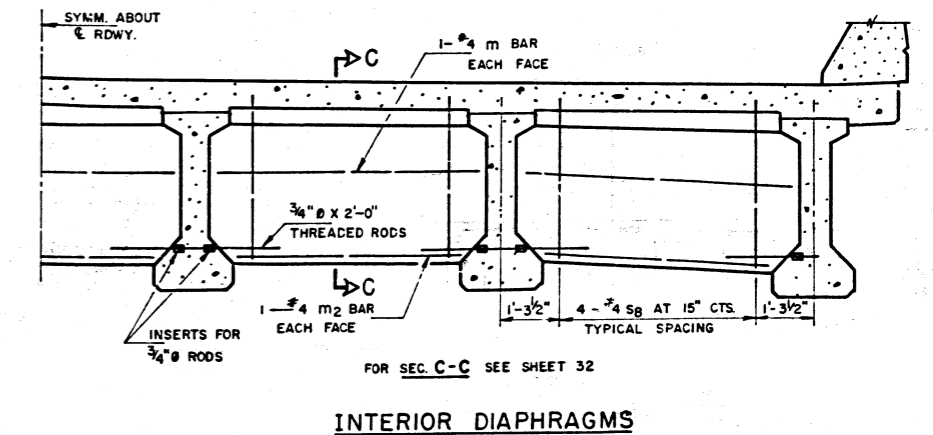
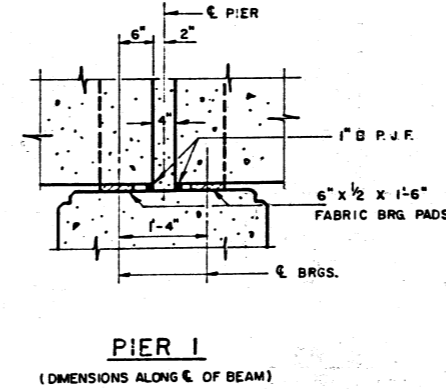
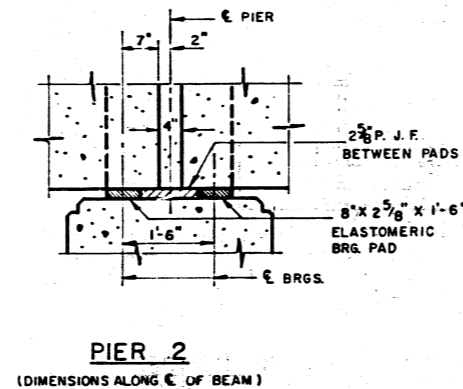
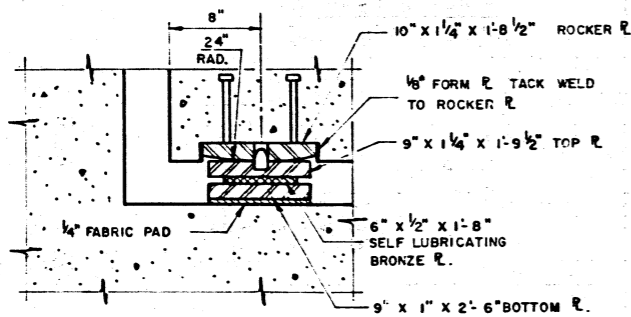
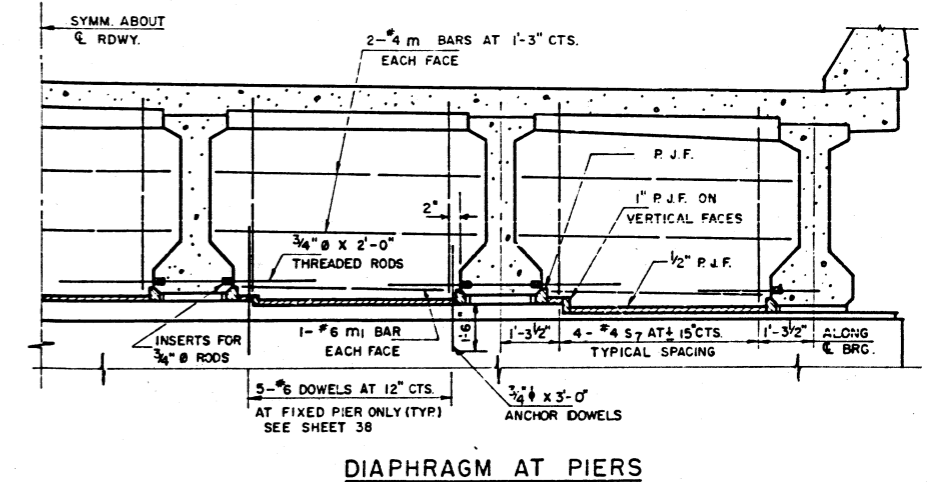
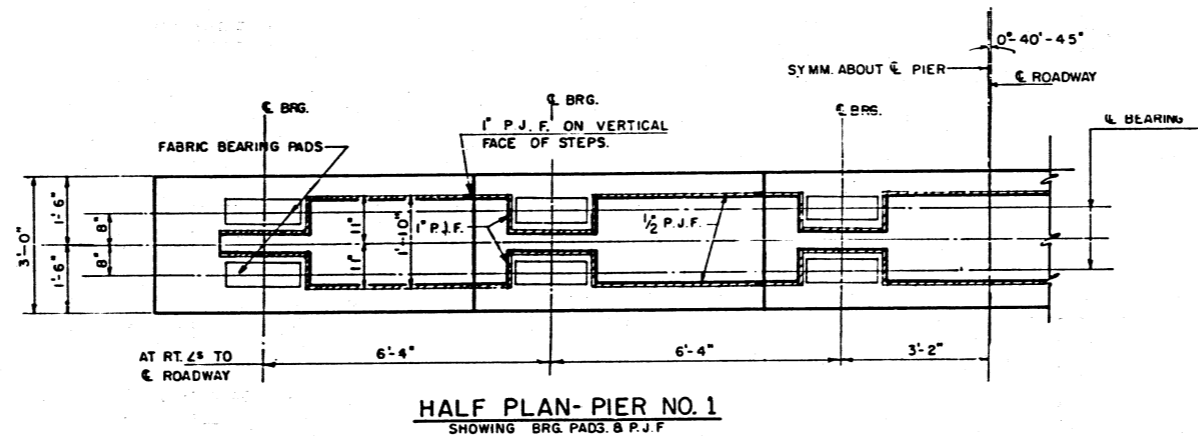
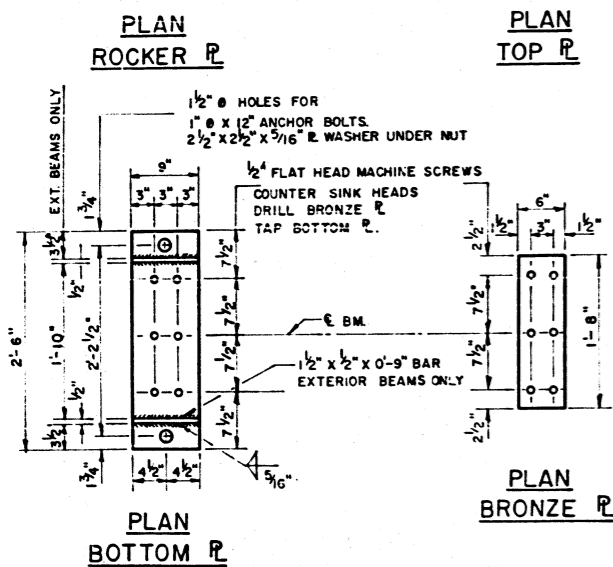
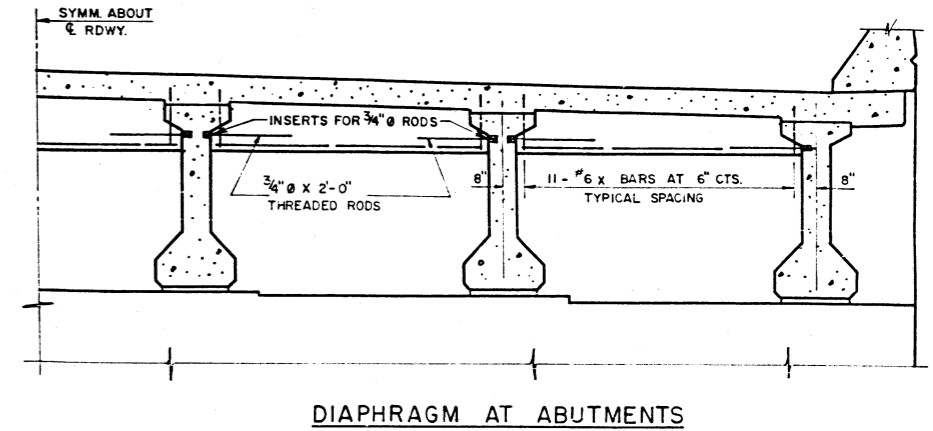
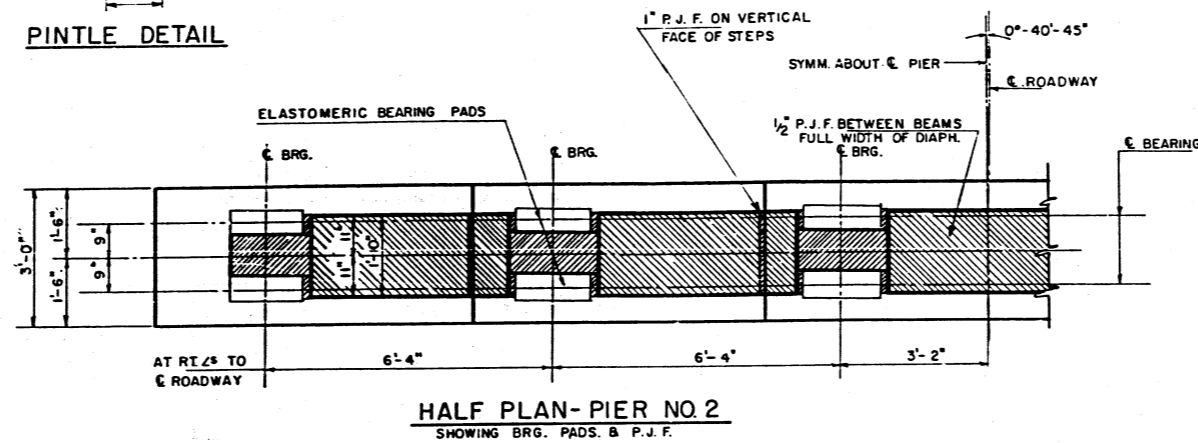
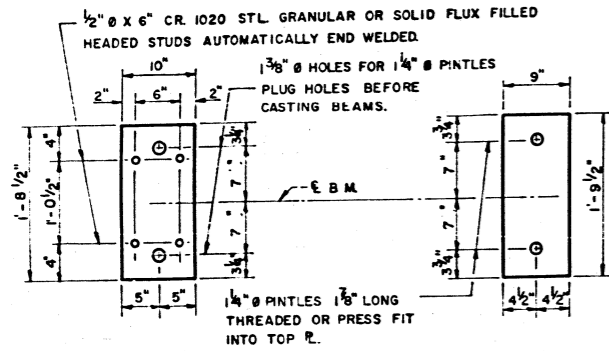
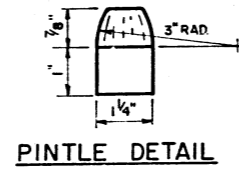
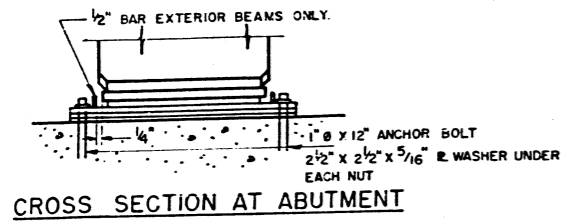


BEAM DETAILS
FAS. ROUTE 770-SEC. I-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06.10

DESIGNED G.E.P.	19
CHECKED D.M.R.	EXAMINED
DRAWN J.P.L.	PASSED
CHECKED G.E.P.	APPROVED

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA S 770	1-VB	MADISON	70	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



DESIGNED	G.E.P.	19
CHECKED	D.M.R.	EXAMINED
DRAWN	J.S.E.	PASSED
CHECKED	G.E.P.	APPROVED

NOTE:
WEIGHT OF ARMOR ANGLES AND STUDS; TOP PLATES, BOTTOM PLATES, BRONZE PLATES AND SHIM PLATES OF BEARING ASSEMBLIES IS INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL ON SHEET NO. 29.
COST OF ROCKER R CAST INTO BEAM IS INCLUDED IN THE COST OF FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I BEAMS.

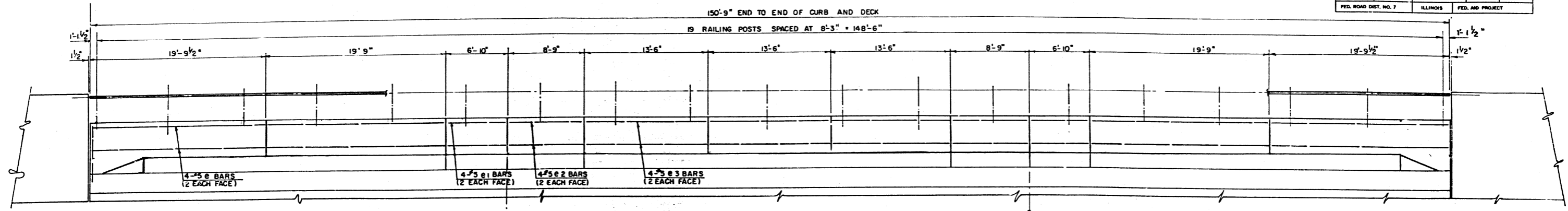
FRAMING & BEARING DETAILS
F.A.S. ROUTE 770- SEC. 1-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524+06.10

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

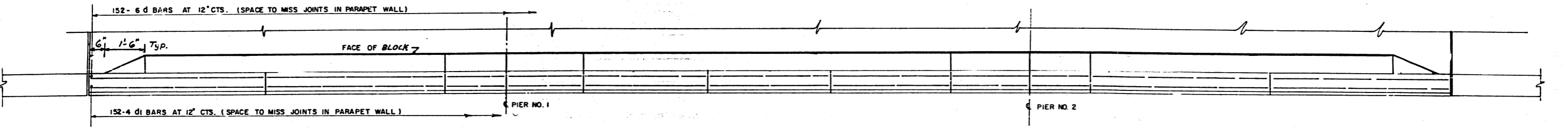
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 770	I-VB	MADISON	70	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

150'-9" END TO END OF CURB AND DECK

19 RAILING POSTS SPACED AT 8'-3" = 148'-6"

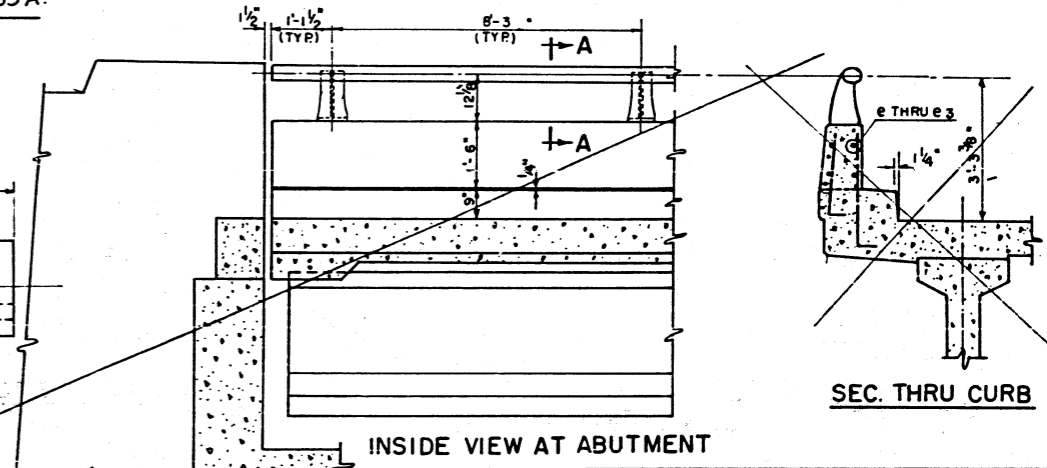
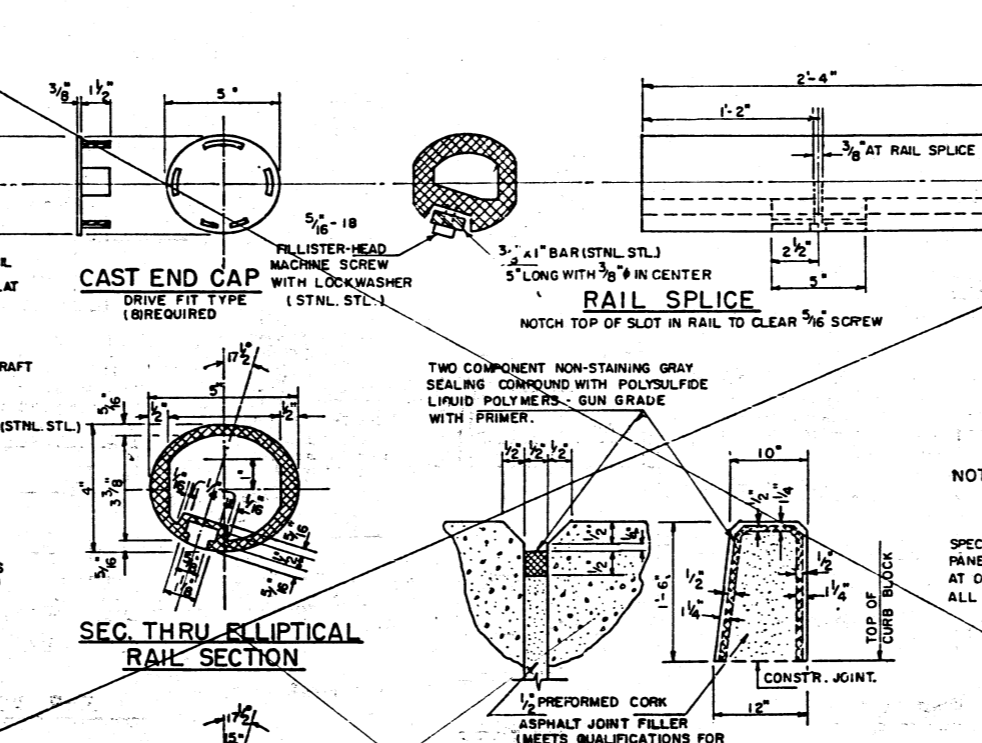
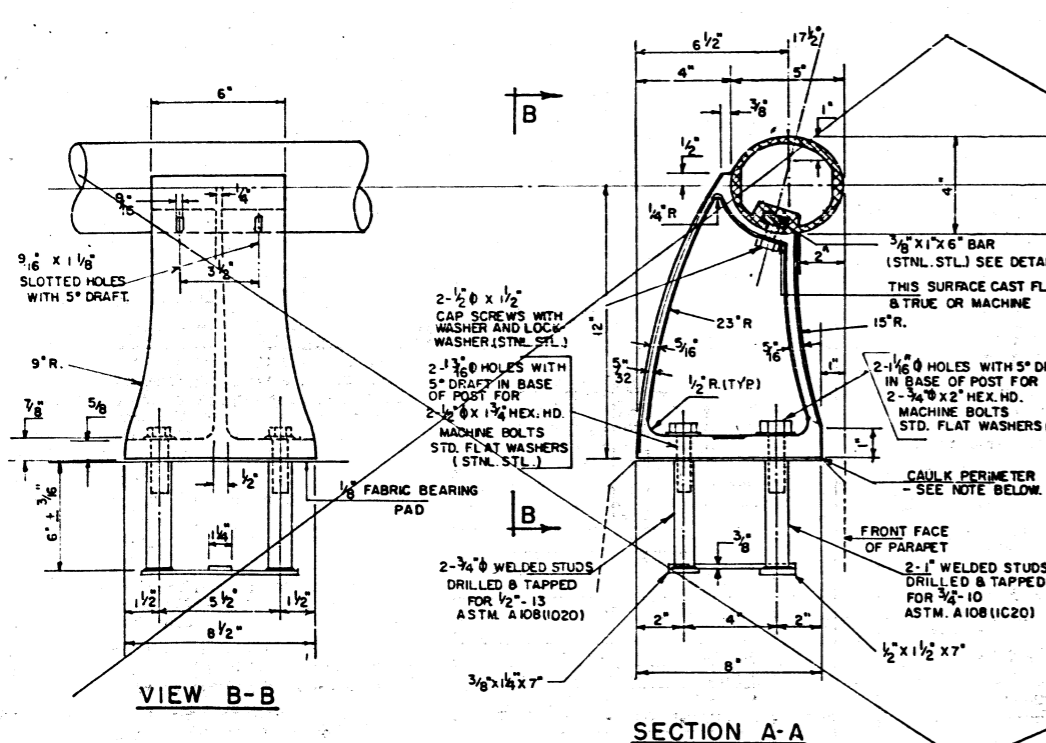


ELEVATION- RAIL & PARAPET



PLAN

For rail details see sheet 35A.



NOTES:
ALL POSTS SHALL BE NORMAL TO PARAPET
ALL ALUMINUM ALLOY EXTRUDED RAIL SHALL CONFORM TO ASTM SPECIFICATION B-221 ALLOY 6061-T6 AND SHALL EXTEND A MINIMUM OF 2 PANEL LENGTHS (AS TACHED TO A MINIMUM OF 3 POSTS) EXCEPT AT ENDS OR AT OPEN JOINTS WHERE A MINIMUM OF 1 PANEL LENGTH IS REQUIRED. ALL JOINTS IN RAILING MUST BE SPICED AS PER DETAIL.
SEE SPECIAL PROVISIONS FOR FOLLOWING MATERIAL SPECIFICATIONS
CAST ALUMINUM ALLOY BRIDGE POST- ALLOY A344-T4
STAINLESS STEEL BARS, CAP SCREWS, WASHERS AND LOCKWASHERS
FABRIC BEARING PAD.

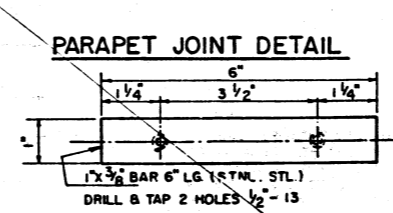
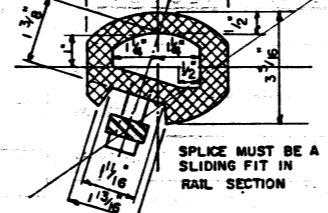
**2 STRUCTURES
PARAPET & RAILS
BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
e	64	#5	19'-5"	
e1	32	#5	6'-6"	
e2	32	#5	8'-4"	
e3	48	#5	13'-2"	
REINFORCEMENT BARS			LBS.	2450.0
ALUMINUM HANDRAIL			LIN. FT.	603.0
CLASS X CONCRETE			CU. YDS.	203

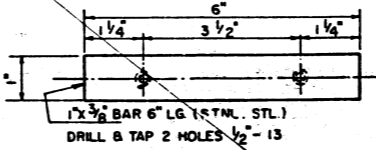
DESIGNED G.E.P.
CHECKED D.M.R.
DRAWN J.P.E.
CHECKED G.E.P.

RAIL POST DETAILS
19
EXAMINED
PASSED
APPROVED

NOTE:
SEAL PERIMETER OF BASE OF POSTS TO PARAPET WITH TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMERS - GUN GRADE WITH PRIMER.



PARAPET JOINT DETAIL



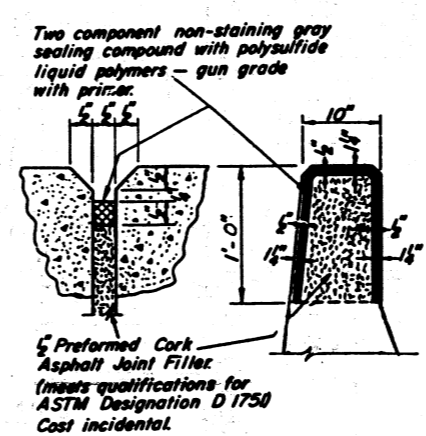
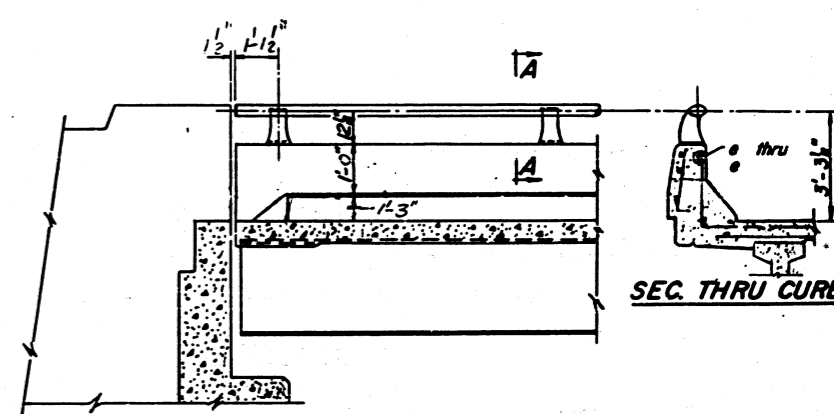
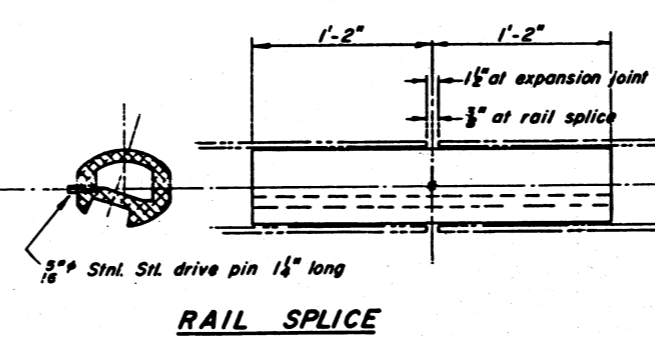
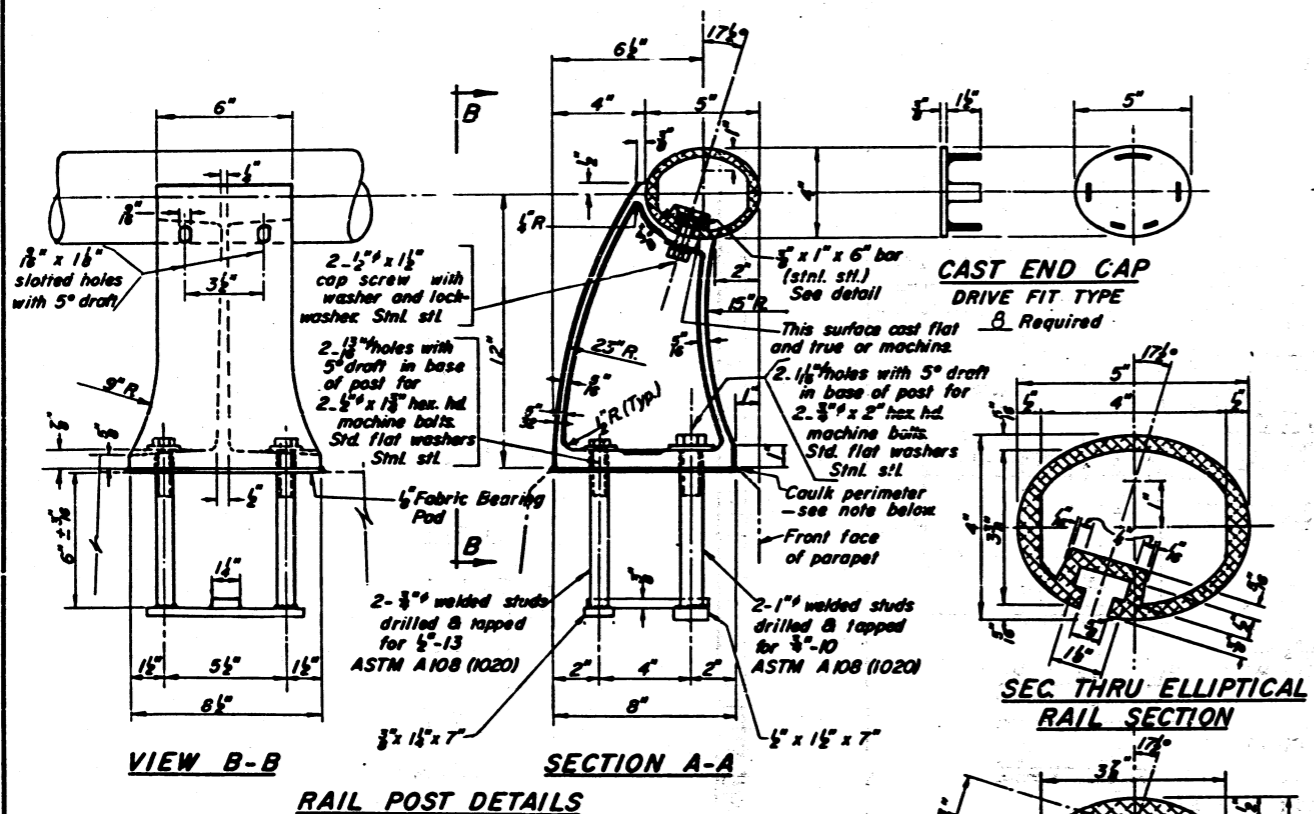
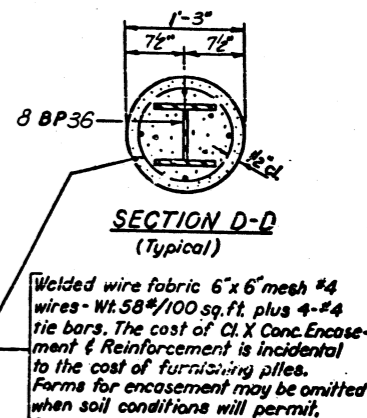
CLAMP BAR

SEC. THRU SPLICE

9-20-67 J.M.J. Rev. class "x" conc. from 30.7 to 20.7 cu. yds.

ALUMINUM HANDRAIL
F.A.S. ROUTE 770- SEC. I-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06 10

For joint spacing, post spacing & bill of material see sheet # 35 of 70.



NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6 and 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.

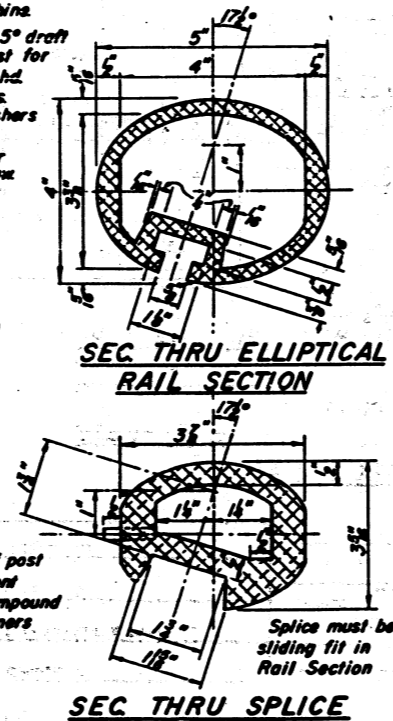
See Special Provisions for following Material Specifications:
 Cast Aluminum Alloy Bridge Post—Alloy A344-T4.
 Stainless Steel Bars, Cap Screws, Washers and Lockwashers.
 Fabric Bearing Pad.

METHOD of MEASUREMENT: Aluminum handrail 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 handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1-1/2" and 2-1/2" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade—high spots shall be ground, and low spots shimmed.



PARAPETS & RAILS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
1		#5		
2		#5		
3		#5		
4		#5		
5		#5		
6		#5		
7		#5		
8		#5		
9		#5		
10		#5		
11		#5		
12		#5		
13		#5		
14		#5		
15		#5		
16		#5		
17		#5		
18		#5		
19		#5		
20		#5		
21		#5		
22		#5		
23		#5		
24		#5		
25		#5		
26		#5		
27		#5		
28		#5		
29		#5		
30		#5		
31		#5		
32		#5		
33		#5		
34		#5		
35		#5		
36		#5		
37		#5		
38		#5		
39		#5		
40		#5		
41		#5		
42		#5		
43		#5		
44		#5		
45		#5		
46		#5		
47		#5		
48		#5		
49		#5		
50		#5		
51		#5		
52		#5		
53		#5		
54		#5		
55		#5		
56		#5		
57		#5		
58		#5		
59		#5		
60		#5		
61		#5		
62		#5		
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78		#5		
79		#5		
80		#5		
81		#5		
82		#5		
83		#5		
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86		#5		
87		#5		
88		#5		
89		#5		
90		#5		
91		#5		
92		#5		
93		#5		
94		#5		
95		#5		
96		#5		
97		#5		
98		#5		
99		#5		
100		#5		

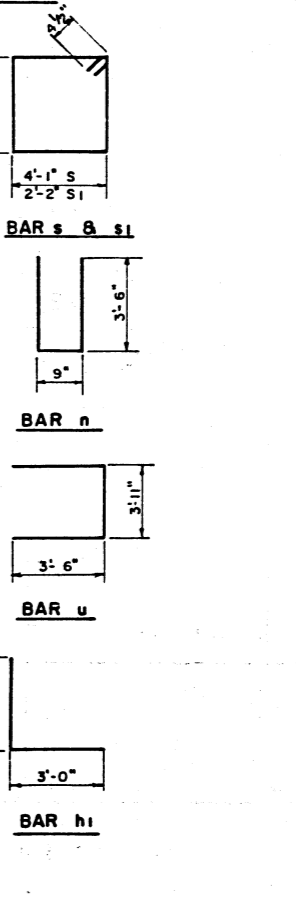
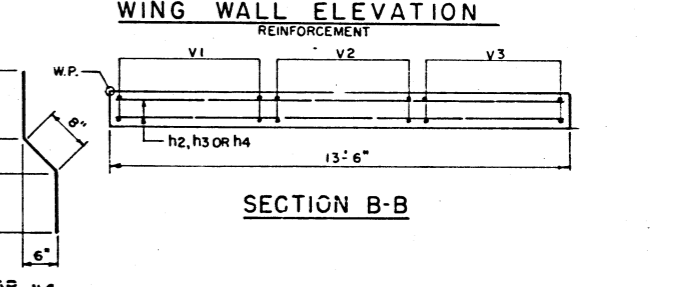
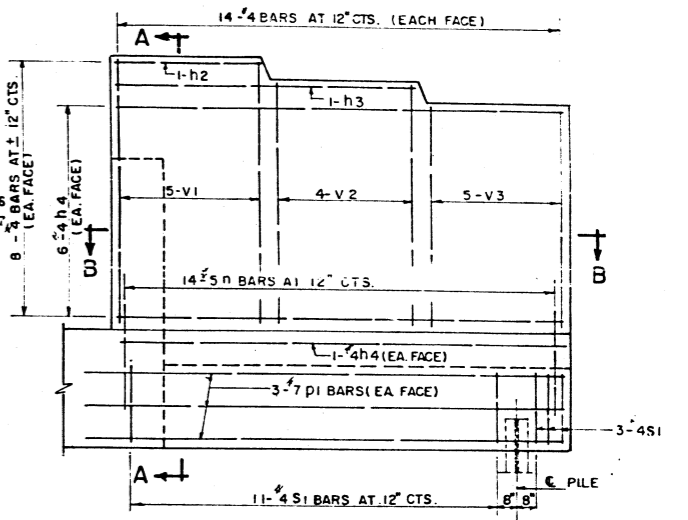
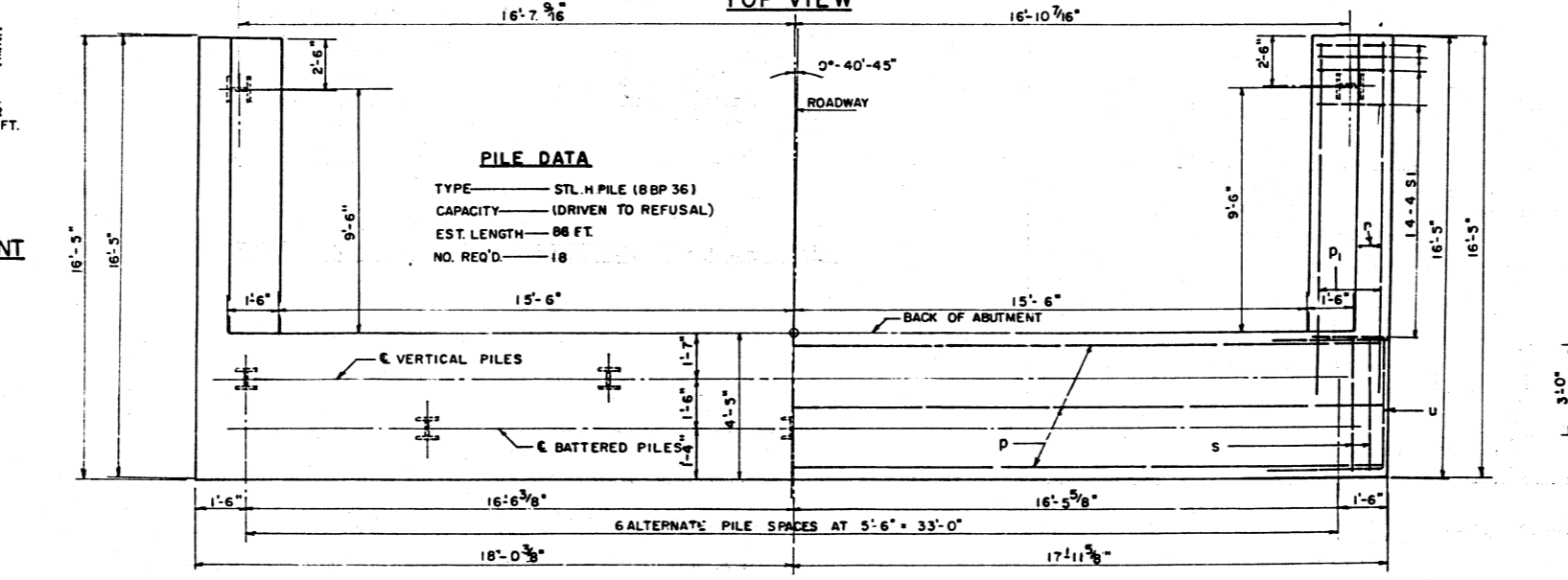
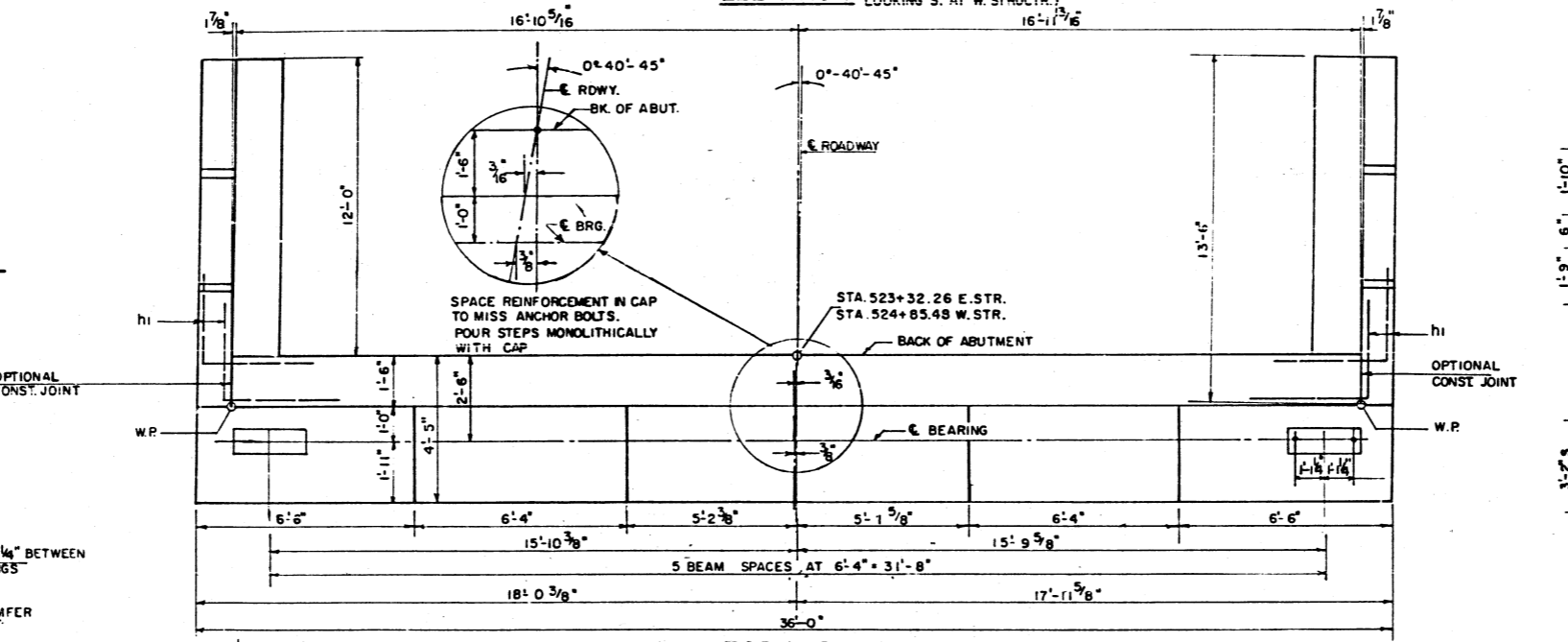
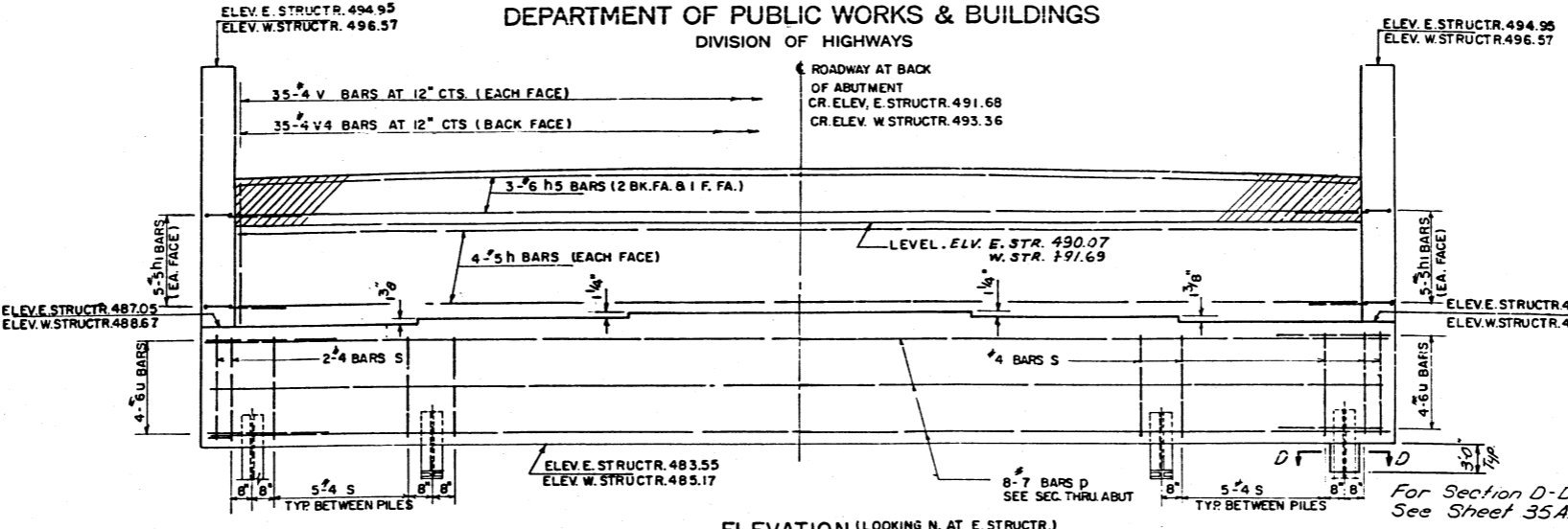
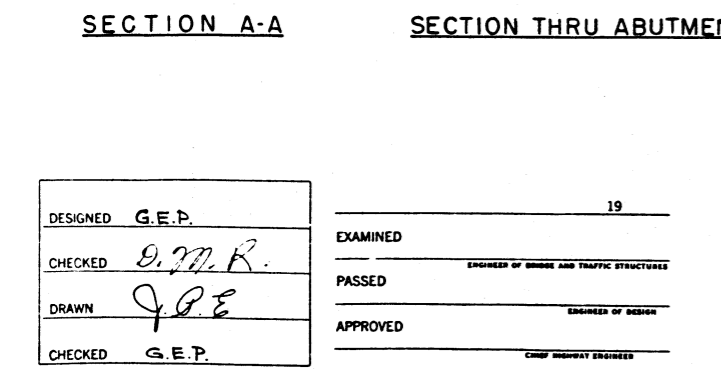
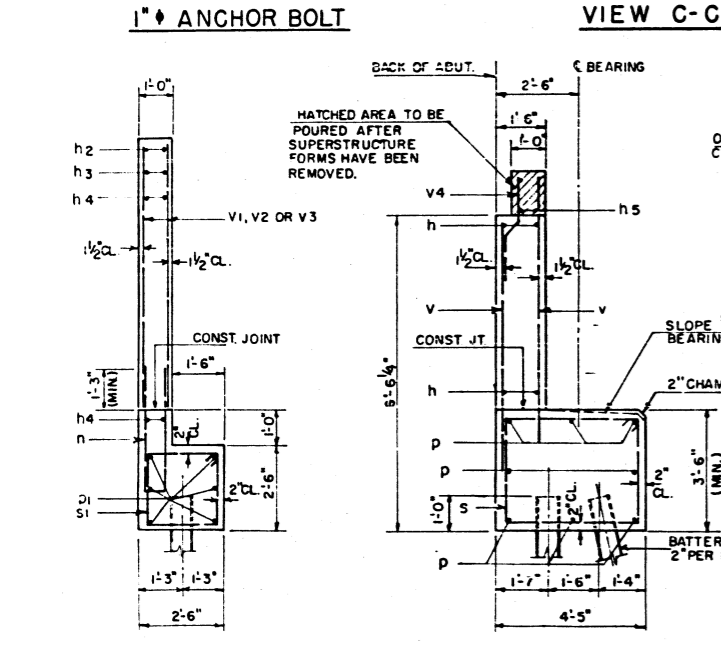
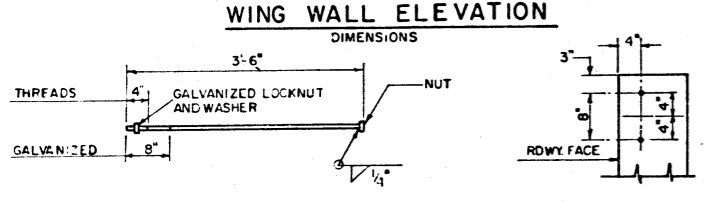
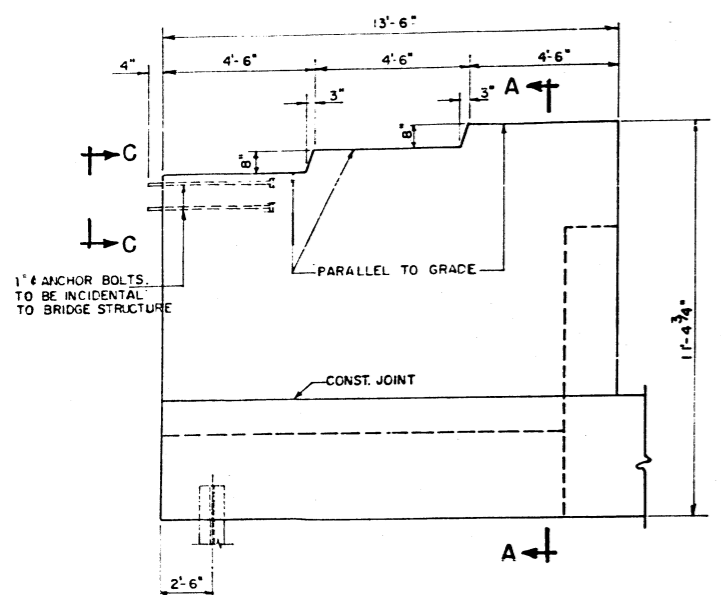
ALUMINUM HANDRAIL

F.A.S. ROUTE 770
SECTION I-VB
MADISON COUNTY
STA. 524+06.10

DESIGNED	19	Note: Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers—gun grade with primer.
CHECKED		
DRAWN		
CHECKED		

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS. 770	I-VB	MADISON	70	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



BILL OF MATERIAL
 (2 ABUTMENTS)

BAR	NO.	SIZE	LENGTH	SHAPE
h	16	#5	33'-8"	—
h1	40	#5	6'-0"	—
h2	8	#4	4'-2"	—
h3	8	#4	8'-8"	—
h4	56	#4	13'-2"	—
h5	12	#6	33'-8"	—
n	56	#5	7'-9"	U
p	16	#7	35'-8"	—
p1	24	#7	13'-9"	—
s	68	#4	15'-3"	□
s1	56	#4	9'-5"	□
u	16	#6	10'-11"	U
v	140	#4	5'-0"	—
v1	40	#4	6'-8"	—
v2	32	#4	5'-10"	—
v3	40	#4	5'-2"	—
v4	70	#4	4'-3"	—
CLASS X CONCRETE		CU. YDS	84.9	
REINFORCEMENT BARS		LBS.	13300	
STEEL H PILE (8 BP 36)		LIN. FT.	1548	

N. ABUTMENT - EAST STRUCTURE
 S. ABUTMENT - WEST STRUCTURE
 F.A.S. ROUTE 770-SEC. I-VB
 OVER NORFOLK & WESTERN R.R.
 MADISON COUNTY
 STA. 524 + 06.10

DESIGNED G.E.P.
 CHECKED G.M.R.
 DRAWN J.P.E.
 CHECKED G.E.P.

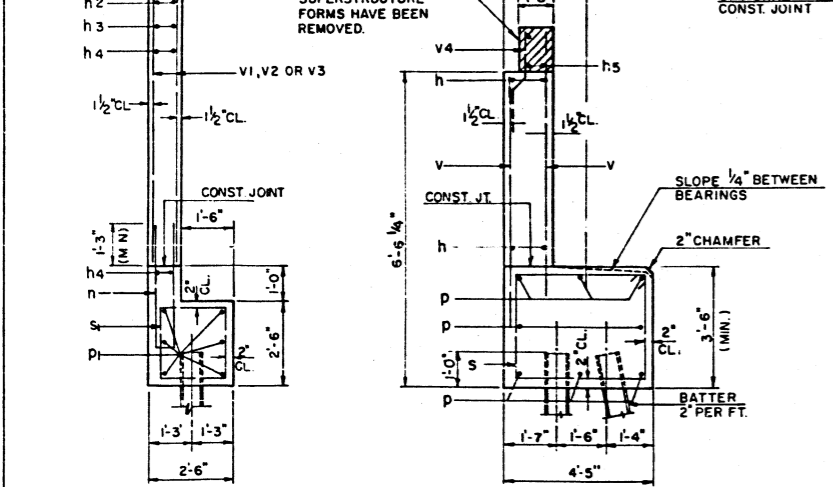
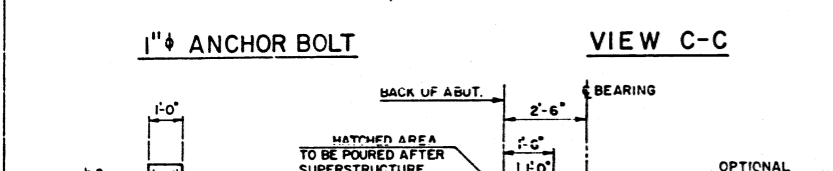
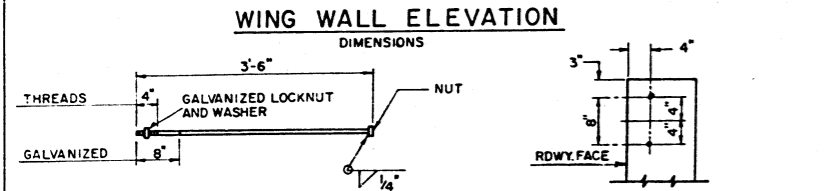
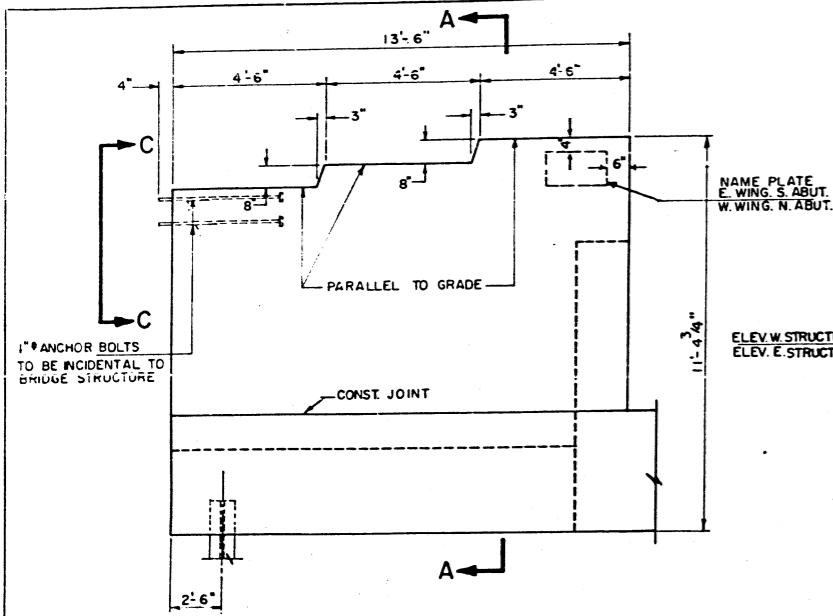
EXAMINED
 PASSED
 APPROVED

19

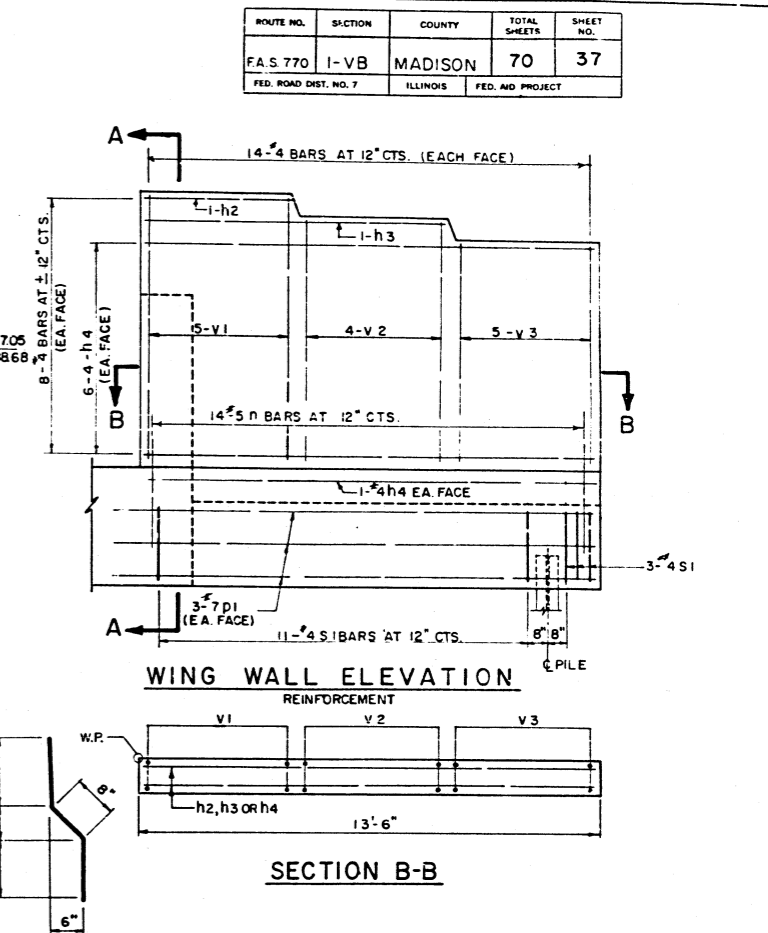
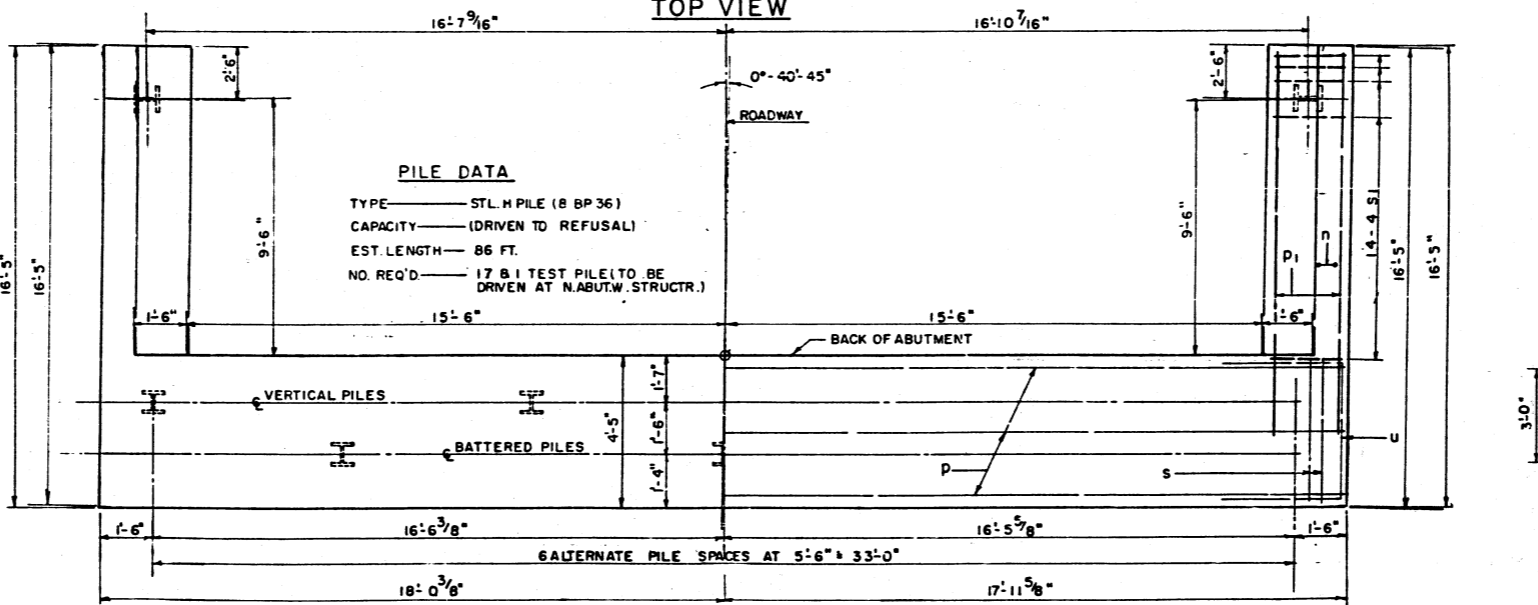
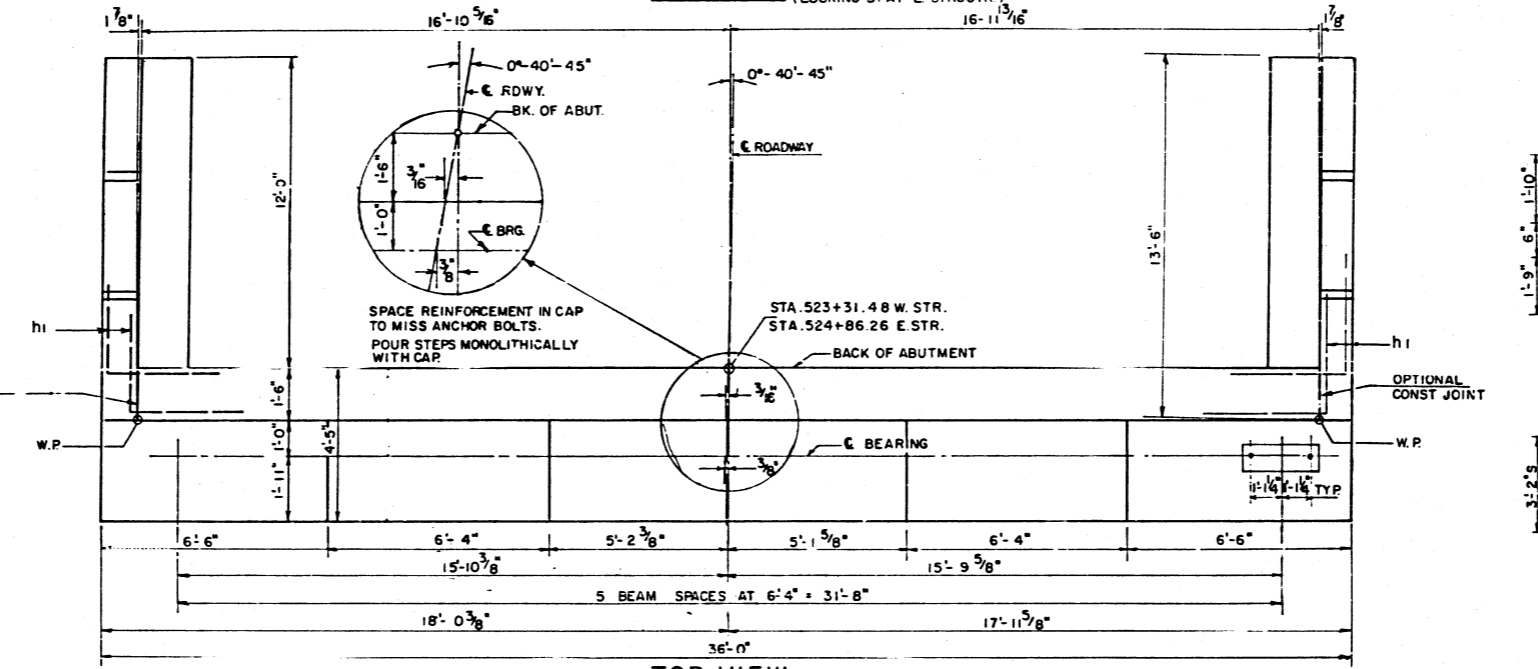
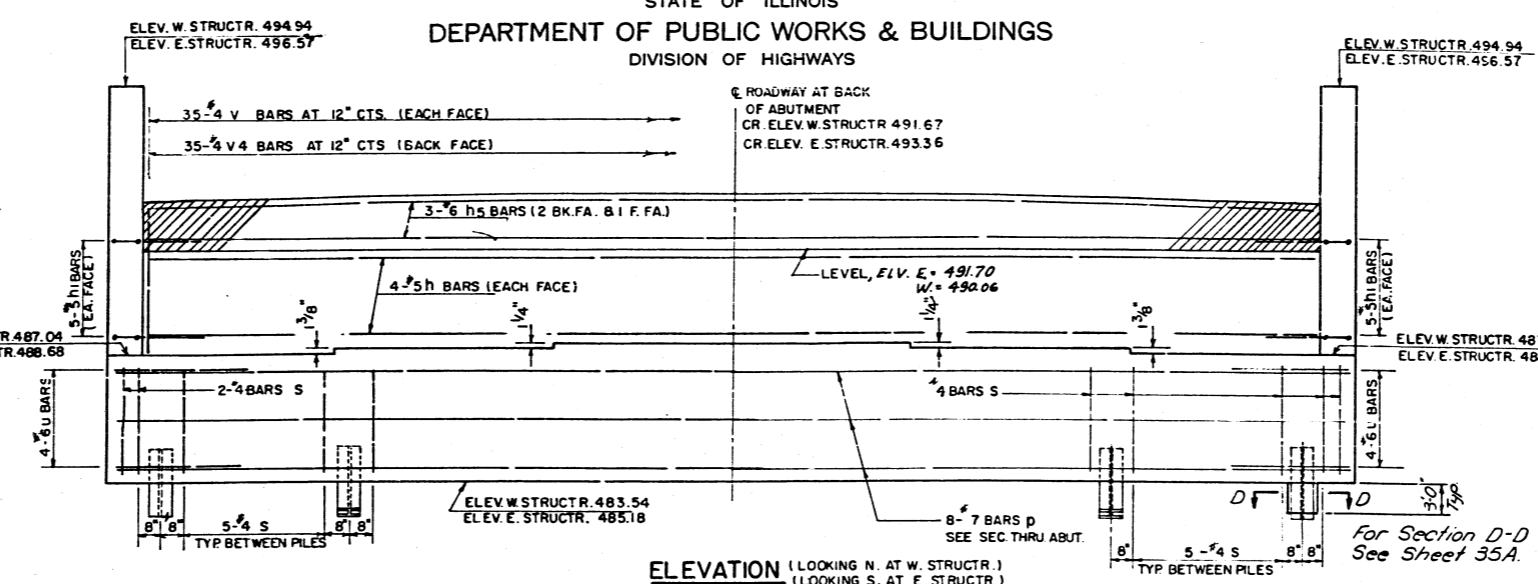
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
 ENGINEER OF DESIGN
 CHIEF HIGHWAY ENGINEER

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA S. 770	I-VB	MADISON	70	37
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



DESIGNED	G. E. P.	19
CHECKED	G. E. P.	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	G. E. P.	ENGINEER OF DESIGN
CHECKED	G. E. P.	CHIEF HIGHWAY ENGINEER



BILL OF MATERIAL (2 ABUTMENTS)

BAR	NO	SIZE	LENGTH	SHAPE
h	16	#5	33'-8"	—
h1	40	#5	6'-0"	L
h2	8	#4	4'-2"	—
h3	8	#4	8'-8"	—
h4	56	#4	13'-2"	—
h5	12	#6	33'-8"	—
n	56	#5	7'-9"	U
p	16	#7	35'-8"	—
p1	24	#7	13'-9"	—
s	68	#4	15'-3"	D
S1	56	#4	9'-5"	D
u	16	#6	10'-11"	U
v	140	#4	5'-0"	—
V1	40	#4	6'-8"	—
V2	32	#4	5'-10"	—
V3	40	#4	5'-2"	—
V4	70	#4	4'-3"	—
CLASS "X" CONCRETE		CU. YDS.	84.9	
REINFORCEMENT BARS		LBS.	13,300	
STEEL H PILE (8 BP 36)		LIN. FT.	1452	
TEST PILE (STL. H PILE 8 BP 36)		EACH	1	
NAME PLATES		EACH	2	

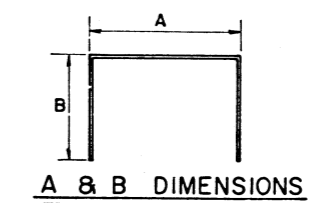
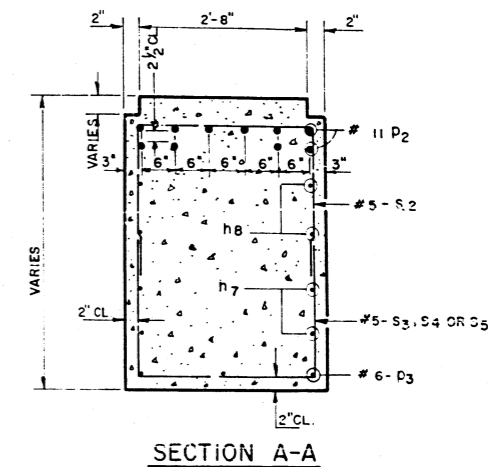
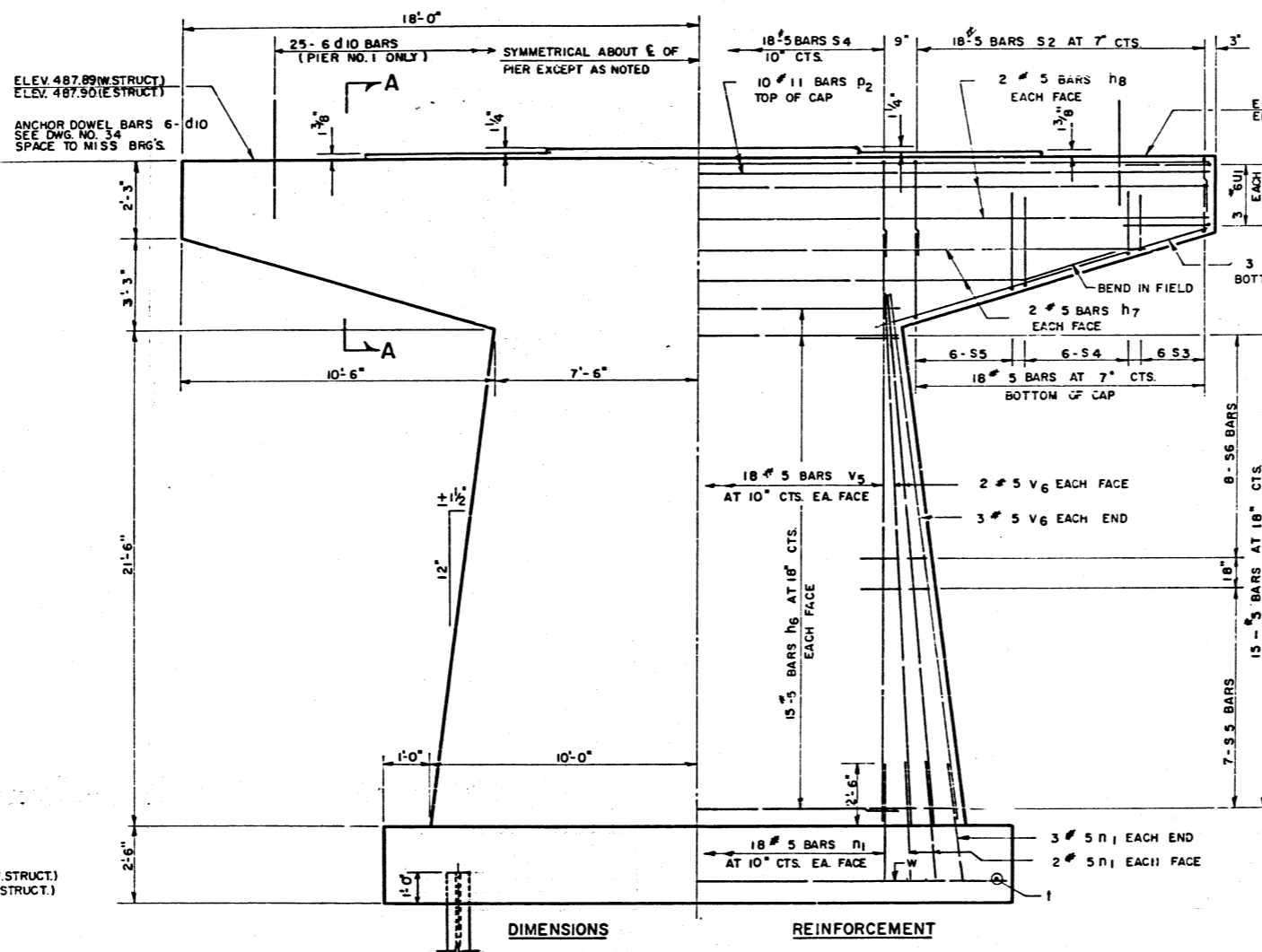
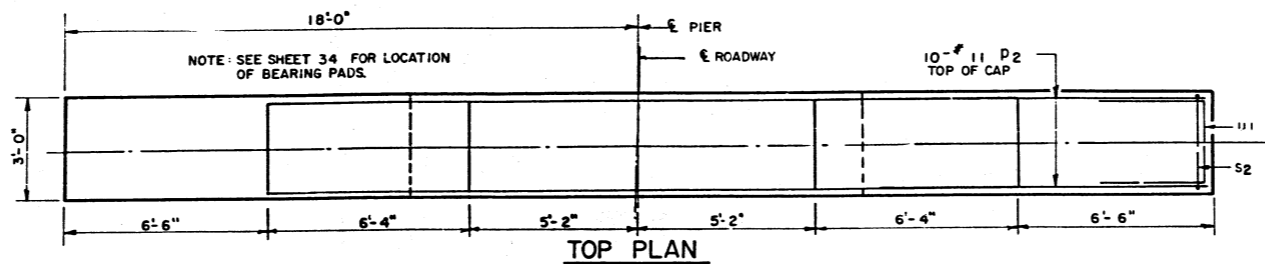
N. ABUTMENT-WEST. STRUCTURE
S. ABUTMENT-EAST. STRUCTURE
FA S. ROUTE 770-SEC. I-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06.10

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

ROUTE NO.	SCTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 770	I-VB	MADISON	70	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

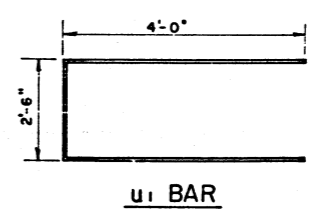
PILE DATA

TYPE — STEEL H PILE (8 BP 35)
CAPACITY — DRIVEN TO REFUSAL
EST. LENGTH — 60 FT.
NO. REQUIRED — 30

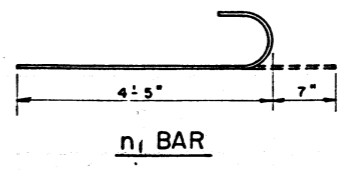


BAR	A	B
S2	2'-8"	1'-11"
S3	2'-8"	2'-0"
S4	2'-8"	3'-1"
S5	2'-8"	4'-2"
S6	2'-8"	2'-9"

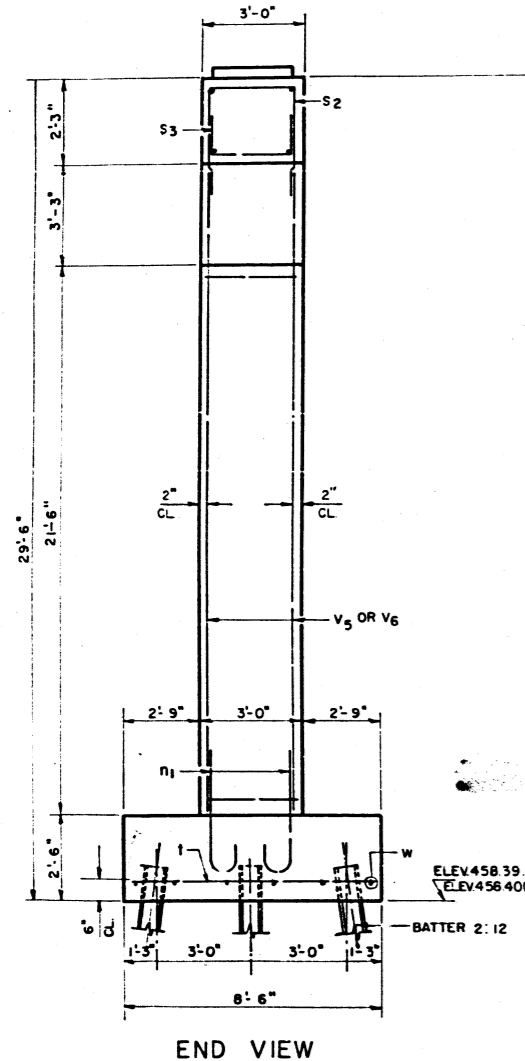
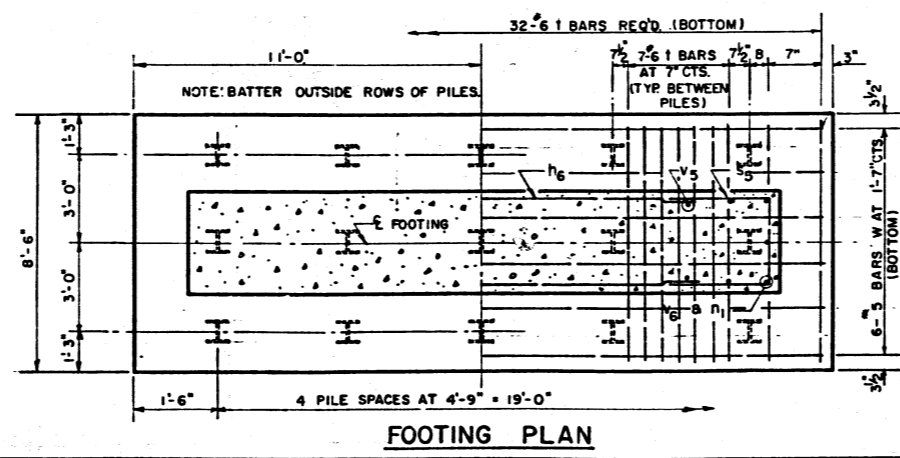
s BARS



u1 BAR



n1 BAR



END VIEW

PIER NO. 1 N.B. & S.B.
BILL OF MATERIAL-2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h6	60	#5	14'-8"	—
h7	16	#5	29'-0"	—
h8	16	#5	35'-8"	—
n1	100	#5	5'-0"	U
p2	20	#11	35'-8"	—
p3	12	#6	11'-9"	—
s2	72	#5	6'-6"	□
s3	24	#5	6'-8"	□
s4	60	#5	8'-10"	□
s5	52	#5	11'-0"	□
s6	32	#5	8'-2"	□
v5	72	#5	24'-10"	—
v6	28	#5	22'-9"	—
w	12	#5	21'-8"	—
d10	25	#6	3'-0"	—
CLASS X CONCRETE			CU. YDS.	155.4
REINFORCEMENT BARS			LBS.	12,090
STEEL H PILE (8BP35)			LIN. FT.	1800

PIER NO. 1 - WEST STRUCTURE
PIER NO. 1 - EAST STRUCTURE
F.A.S. ROUTE 770-SEC. 1-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA. 524 + 06.10

DESIGNED	G.E.P.
CHECKED	D.M.R.
DRAWN	J.P.E.
CHECKED	G.E.P.

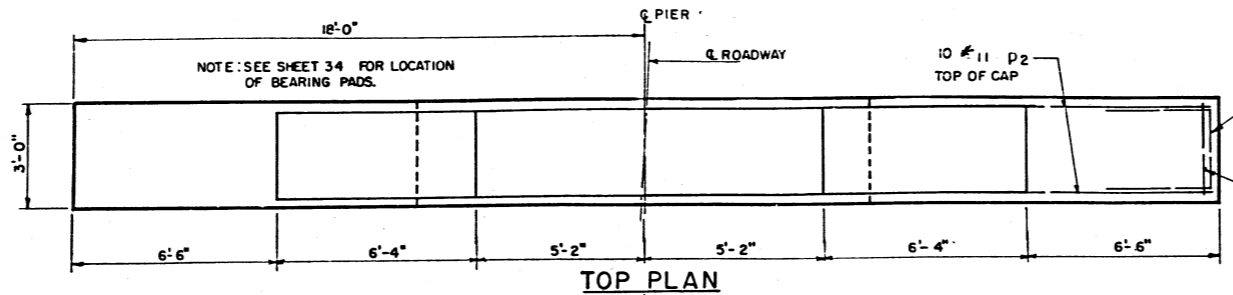
EXAMINED	19
PASSED	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
APPROVED	ENGINEER OF DESIGN
	CHIEF HIGHWAY ENGINEER

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

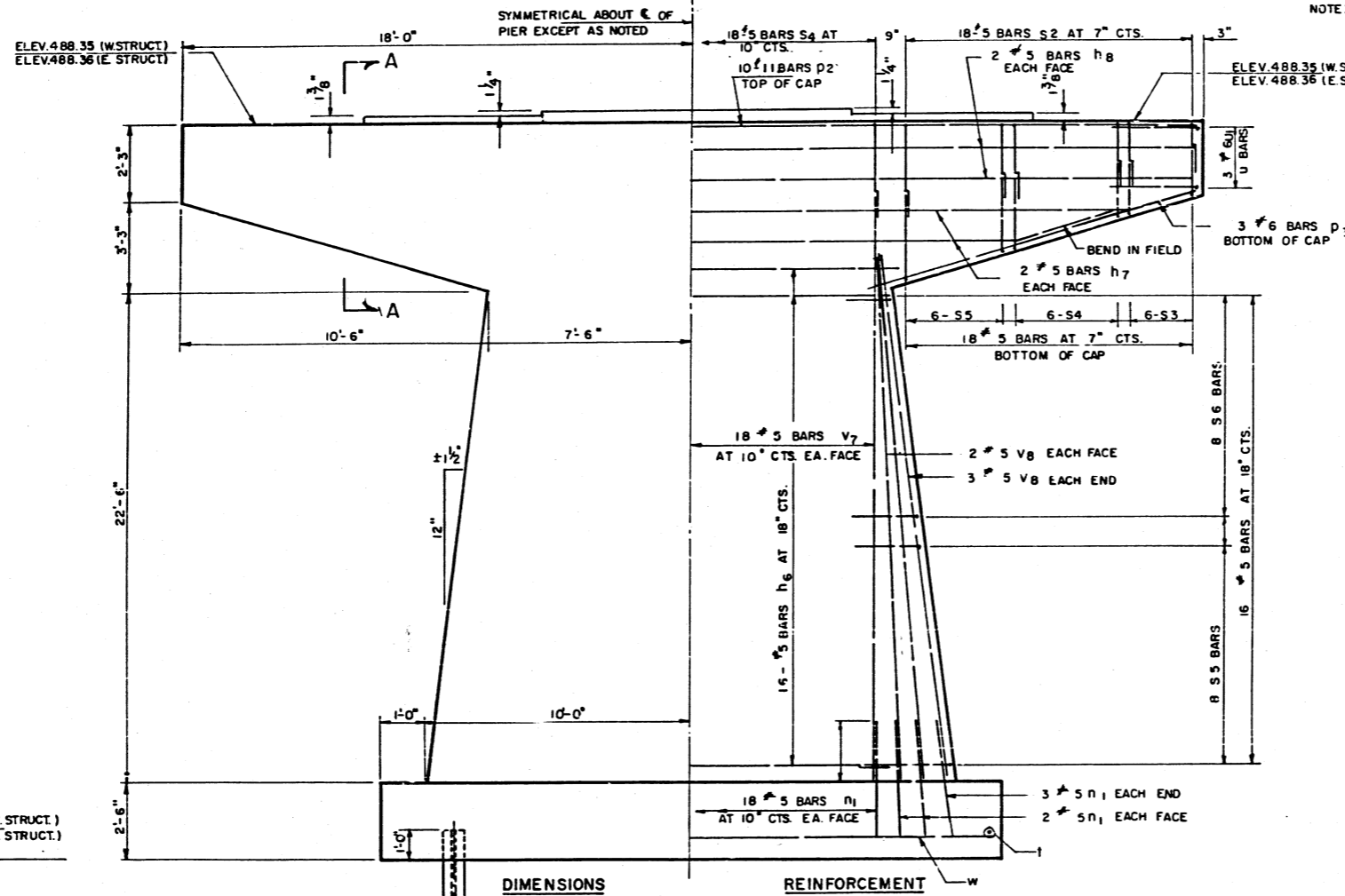
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 770	I-VB	MADISON	70	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

PILE DATA

TYPE — STEEL H PILE (8BP36)
CAPACITY — DRIVEN TO REFUSAL
EST. LENGTH — 60 FT.
NO. REQUIRED — 29 & 1 TEST PILE
TO BE DRIVEN AT PIER NO. 2
OF THE EAST STRUCTURE



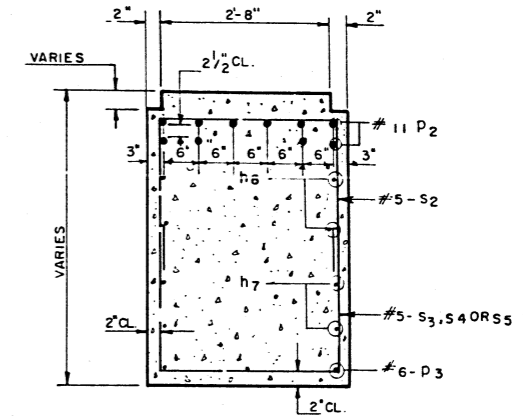
TOP PLAN



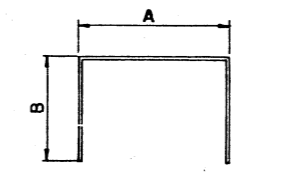
DIMENSIONS

REINFORCEMENT

ELEVATION



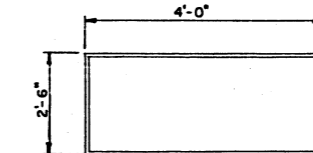
SECTION A-A



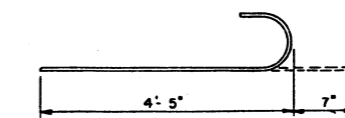
A & B DIMENSIONS

BAR	A	B
S2	2'-8"	1'-11"
S3	2'-8"	2'-0"
S4	2'-8"	3'-1"
S5	2'-8"	4'-2"
S6	2'-8"	2'-5"

S BARS



u1 BAR



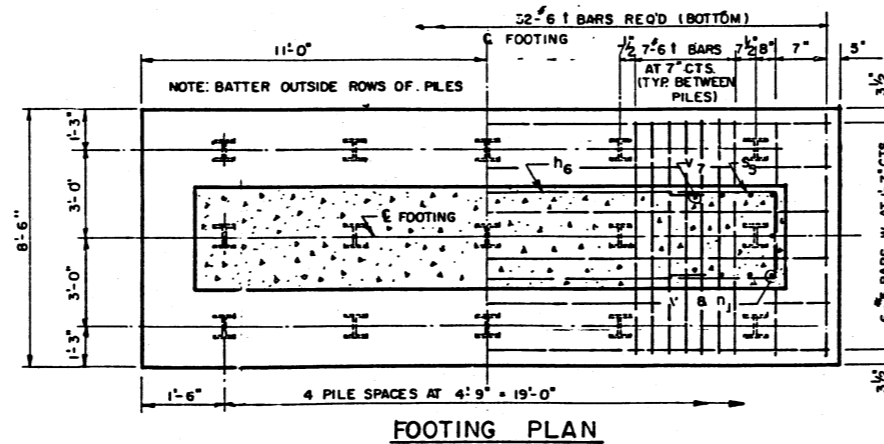
h1 BAR

PIER NO. 2 N.B. & PIER NO. 2 S.B.
BILL OF MATERIAL 2-PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h6	64	#5	14'-8"	—
h7	16	#5	29'-0"	—
h8	16	#5	35'-8"	—
n1	100	#5	5'-0"	U
P2	20	#11	35'-8"	—
P3	12	#6	11'-9"	—
S2	72	#5	6'-6"	□
S3	24	#5	6'-8"	□
S4	60	#5	8'-10"	□
S5	52	#5	11'-0"	□
S6	32	#5	8'-2"	□
t	32	#6	8'-2"	—
u1	12	#6	10'-6"	U
V7	72	#5	25'-10"	—
V8	28	#5	23'-9"	—
W	12	#5	21'-8"	—
CLASS X CONCRETE			CUYDS.	159.3
REINFORCEMENT BARS			LBS.	12,140
STEEL H PILE (8BP36)			LN. FT.	1740
TEST PILE (STL. H PILE 8BP36)			EACH	1

PIER NO. 2 - WEST STRUCTURE
PIER NO. 2 - EAST STRUCTURE
F.A.S. ROUTE 770-SEC. 1-VB
OVER NORFOLK & WESTERN R.R.
MADISON COUNTY
STA 524 + 06.10

DESIGNED	G. E. P.	19
CHECKED	D. M. A.	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	J. P. P.	DRAWER OF DESIGN
CHECKED	G. E. P.	CHIEF BRIDGE ENGINEER



FOOTING PLAN

Project: Bridge Over Norfolk & Western R.R. Date: 1962 July 65. Boring Engineer: Kelly. Station: 524+08.87

Project: Bridge Over Norfolk & Western R.R. Date: 20621 July 65. Boring Engineer: Kelly. Station: 524+08.87

Project: Bridge Over Norfolk & Western R.R. Date: 16 July 65. Boring Engineer: Kelly. Station: 524+08.87

Project: Bridge Over Norfolk & Western R.R. Date: 15 July 65. Boring Engineer: Kelly. Station: 524+08.87

Table with columns for Elevation, N, Qu (blows/ft.), w (%), and Soil Description. Includes entries like 'DARK BROWN SILTY CLAY LOAM' and 'STIFF VERY WET'.

Table with columns for Elevation, N, Qu (blows/ft.), w (%), and Soil Description. Includes entries like 'R.R. FILL MATERIAL WITH GRAVEL' and 'MEDIUM MOIST'.

Table with columns for Elevation, N, Qu (blows/ft.), w (%), and Soil Description. Includes entries like 'DARK BROWN SILTY CLAY LOAM' and 'MEDIUM VERY WET'.

Table with columns for Elevation, N, Qu (blows/ft.), w (%), and Soil Description. Includes entries like 'BLUE-GREY CLAY LOAM' and 'MEDIUM VERY WET'.

N - Standard Penetration Test Blows per foot to Drive 2" O.D. Split Spoon Sampler 12" with 140# Hammer Falling 30". S.N. - No Sample. Qu - Unconfined Compressive Strength - 1/4" S.T. - Shelby Tube. Type Failure: B - Bulge Failure, S - Shear Failure, E - Est. Value, A.S. - Auger Sample.

Handwritten notes: K.P.P., S.M.R., D.E., M.C.P.

BORINGS FAS ROUTE 770+SEC 1+WB OVER NORFOLK & WESTERN R.R. MADISON COUNTY STA 524+08.10

Project: Western RR
 Section: 1-VB
 County: Madison

Bridge: Over Norfolk & Western RR
 Station: 524+08.87
 Date: 6.9 July 68
 Boring Engineer: Kelly
 Drilling Tech.: White

Boring No.: 6
 Station: 523+79
 Offset: 23' R
 Surface Water El.:
 Groundwater El. At:
 Completion: 454.3
 After: 24 Hours: 454.3

Elevation	N	Qu (k.s.f.)	w (%)	Remarks
462.0				Ground Surface
458.0	4	B	29	MEDIUM WET
455.5	9	B	23	STIFF MOIST
454.0				
453.0	11	B	34	MEDIUM MOIST
451.5				
450.5	10	B	31	STIFF VERY WET
449.5				
448.0	9	B	34	STIFF VERY WET
446.5				
445.0	10	B	25	STIFF WET
444.0				
443.0	10	B	27	MEDIUM WET
441.5				
440.5	14	B	51	STIFF VERY WET
439.0				
438.0	14	B	30	STIFF VERY WET
436.5				
435.5	16	B	32	STIFF VERY WET
434.0				
433.0	12	E	33	STIFF VERY WET
431.5				
430.5	11	NP	32	LOOSE VERY WET
429.0				
428.0	10	NP		LOOSE SAND
426.5				
425.5	10	NP		LOOSE SAND
424.0				
423.0	10	NP		LOOSE SAND
421.5				
420.5	10	NP		LOOSE SAND
419.0				
418.0	10	NP		LOOSE SAND
416.5				
415.5	10	NP		LOOSE SAND
414.0				
413.0	10	NP		LOOSE SAND
411.5				
410.5	10	NP		LOOSE SAND
409.0				
408.0	10	NP		LOOSE SAND
406.5				
405.5	10	NP		LOOSE SAND
404.0				
403.0	10	NP		LOOSE SAND
401.5				END OF BORING

Elevation	N	Qu (k.s.f.)	w (%)	Remarks
462.0				Ground Surface
461.8	10	B	41	STIFF VERY WET
459.3				
458.3	4	B	29	MEDIUM WET
455.8	8	B	25	STIFF WET
454.3				
453.3	8	E	19	MEDIUM MOIST
451.8				
450.8	11	B	28	STIFF WET
450.3				
448.3	10	B	27	STIFF WET
446.8				
445.8	11	B	39	STIFF VERY WET
444.3				
443.3	12	B	29	MEDIUM WET
441.8				
440.8	12	B	32	STIFF VERY WET
439.3				
438.3	4	A.S.		SOFT VERY WET
436.8				
435.8	3	A.S.		SOFT VERY WET
434.3				
433.3	11	B	36	STIFF VERY WET
431.8				
430.8	14	A.S.		STIFF WET
429.3				
428.3	13	A.S.		STIFF WET
426.8				
426.8				
425.8	15	A.S.		STIFF MOIST
424.3				
423.3	14	A.S.		STIFF VERY WET
421.8				
420.8	12	B	32	STIFF VERY WET
419.3				
418.3	4	A.S.		SOFT VERY WET
416.8				
415.8	3	A.S.		SOFT VERY WET
414.3				
413.3	11	B	36	STIFF VERY WET
411.8				
410.8	14	A.S.		STIFF WET
409.3				
408.3	13	A.S.		STIFF WET
406.8				
406.8				
405.8	15	A.S.		STIFF MOIST
404.3				
403.3	16	A.S.		STIFF WET
401.8				END OF BORING
401.7				END OF BORING

N - Standard Penetration Test
 Blows per foot to Drive 2" O.D.
 Split Spoon Sampler 12" with
 140# Hammer Falling 50".
 S.N. - No Sample
 Qu - Unconfined Compressive
 Strength - $\frac{1}{2}$ sf
 NP - Non Plastic
 w - Water Content - percent -
 age of oven dry weight - %
 S.T. - Shelby Tube

Type Failure
 B - Bulge Failure
 S - Shear Failure
 E - Est. Value
 A.S. - Auger Sample

Project: Western RR
 Section: 1-VB
 County: Madison

Boring No.: 7
 Station: 524+38
 Offset: 43' E
 Surface Water El.:
 Groundwater El. At:
 Completion: 452.2
 After: 24 Hours: 452.2

Elevation	N	Qu (k.s.f.)	w (%)	Remarks
462.2				Ground Surface
461.7				RAILROAD FILL MATERIAL ROCK & CONCRETE
460.2				
459.2	13	B	42	MEDIUM VERY WET
457.7				
456.7	5	B	27	MEDIUM WET
454.2				
453.2	6	B	28	STIFF WET
451.7				
450.7	8	B	29	STIFF WET
449.2				
448.2	8	B	34	STIFF VERY WET
446.7				
445.7	7	B	35	STIFF VERY WET
444.2				
443.2	4	E	34	STIFF VERY WET
441.7				
440.7	11	B	29	STIFF WET
439.2				
438.2	10	B	33	STIFF VERY WET
436.7				
435.7	12	B	30	MEDIUM VERY WET
434.2				
433.2	9	B	30	SOFT WET
431.7				
430.7	14	E	30	STIFF WET
429.2				
428.2	17	S	28	STIFF WET
426.7				
425.7	14	B	30	STIFF WET
424.2				
423.2	16	B	32	STIFF VERY WET
421.7				
420.7	11	B	29	STIFF WET
419.2				
418.2	10	B	33	STIFF VERY WET
416.7				
415.7	12	B	30	MEDIUM VERY WET
414.2				
413.2	9	B	30	SOFT WET
411.7				
410.7	14	E	27	STIFF WET
409.2				
408.2	9		19	WET
406.7				
405.7	12		28	WET
404.2				
403.2	16		28	WET
401.7				END OF BORING

Project: Western RR
 Section: 1-VB
 County: Madison

Boring No.: 8
 Station: 524+38
 Offset: 43' E
 Surface Water El.:
 Groundwater El. At:
 Completion: 452.2
 After: 24 Hours: 452.2

Elevation	N	Qu (k.s.f.)	w (%)	Remarks
462.2				Ground Surface
461.7				RAILROAD FILL MATERIAL ROCK & CONCRETE
460.2				
459.2	13	B	42	MEDIUM VERY WET
457.7				
456.7	5	B	27	MEDIUM WET
454.2				
453.2	6	B	28	STIFF WET
451.7				
450.7	8	B	29	STIFF WET
449.2				
448.2	8	B	34	STIFF VERY WET
446.7				
445.7	7	B	35	STIFF VERY WET
444.2				
443.2	4	E	34	STIFF VERY WET
441.7				
440.7	11	B	29	STIFF WET
439.2				
438.2	10	B	33	STIFF VERY WET
436.7				
435.7	12	B	30	MEDIUM VERY WET
434.2				
433.2	9	B	30	SOFT WET
431.7				
430.7	14	E	30	STIFF WET
429.2				
428.2	17	S	28	STIFF WET
426.7				
425.7	14	B	30	STIFF WET
424.2				
423.2	16	B	32	STIFF VERY WET
421.7				
420.7	11	B	29	STIFF WET
419.2				
418.2	10	B	33	STIFF VERY WET
416.7				
415.7	12	B	30	MEDIUM VERY WET
414.2				
413.2	9	B	30	SOFT WET
411.7				
410.7	14	E	27	STIFF WET
409.2				
408.2	9		19	WET
406.7				
405.7	12		28	WET
404.2				
403.2	16		28	WET
401.7				END OF BORING

401.8
 END OF BORING
 HARD
 SHALE OR ROCK
 (PENETRATED 3" WITH
 100 BLOWS)