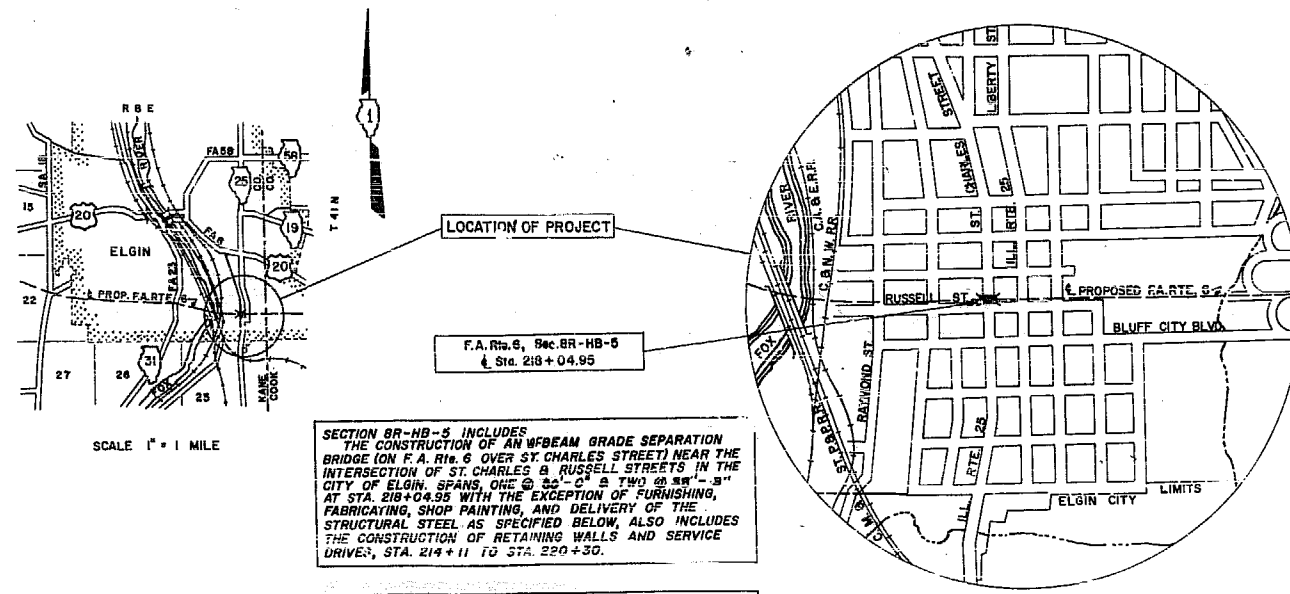


**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID HIGHWAY**

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
6	BR-HB-5 BR-HF-5	KANE	22	1
I. P. & RES. NO. 4		ILLINOIS PROJECT	U-613(3)	

SCALES  
 PLAN 1 INCH = 20 FT.  
 PROFILE, HOR. 1 INCH = 20 FT.  
 PROFILE, VERT. 1 INCH = 10 FT.  
 CROSS-SECTIONS 1 INCH = 5 FT.

F.A. ROUTE 6  
 SECTION 8R-HB-5, 8R-HF-5  
 KANE COUNTY  
 PROJECT U-613(3)



**SECTION 8R-HB-5 INCLUDES**  
 THE CONSTRUCTION OF AN W-BEAM GRADE SEPARATION BRIDGE (ON F.A. Rte. 6 OVER ST. CHARLES STREET) NEAR THE INTERSECTION OF ST. CHARLES & RUSSELL STREETS IN THE CITY OF ELGIN. SPANS, ONE @ 22'-0" & TWO @ 33'-0" AT STA. 218+04.95 WITH THE EXCEPTION OF FURNISHING, FABRICATING, SHOP PAINTING, AND DELIVERY OF THE STRUCTURAL STEEL AS SPECIFIED BELOW. ALSO INCLUDES THE CONSTRUCTION OF RETAINING WALLS AND SERVICE DRIVE, STA. 214+11 TO STA. 220+30.

**SECTION 8R-HF-5 INCLUDES**  
 THE FURNISHING, FABRICATING, SHOP PAINTING, AND DELIVERY OF THE STRUCTURAL STEEL AS SPECIFIED IN THE NOTE, FOR AN W-BEAM GRADE SEPARATION STRUCTURE (ON F.A. Rte. 6 OVER ST. CHARLES STREET) NEAR THE INTERSECTION OF ST. CHARLES & RUSSELL STREETS IN THE CITY OF ELGIN. SPANS, ONE @ 22'-0" & TWO @ 33'-0" AT STA. 218+04.95

**NOTE:**  
 STRUCTURAL STEEL SHALL BE DELIVERED F.O.B. NATIONAL STREET SIDING OF THE CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC R.R. IN THE CITY OF ELGIN, EXCEPT THAT DELIVERY MAY BE MADE F.O.B. BRIDGE SITE BY TRUCK IF SUITABLE ARRANGEMENTS ARE MADE WITH THE CONTRACTOR FOR SECTION 8R-HB-5

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

SUBMITTED December 10, 1958  
 BY D. B. Magowan  
 PROJECT ENGINEER

EXAMINED Jan 7, 1959  
 BY R. W. Van Dusen  
 CHIEF ENGINEER

PASSED Jan 7, 1959  
 BY [Signature]  
 SUPERVISOR OF DESIGN

APPROVED Jan 7, 1959  
 BY [Signature]  
 DIVISION ENGINEER

APPROVED Jan 7, 1959  
 BY [Signature]  
 DIRECTOR

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

APPROVED \_\_\_\_\_  
 DIVISION ENGINEER

DATE \_\_\_\_\_

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-6	8-11B-5	KANE	12	11
ILLINOIS HIGHWAY PROJECT				

SHEET NO. 11  
SHEETS

B.M. 24 - E. out of fire hydrant N.E. corner of St. Charles & Russell Sts. - Elev. 734.67  
No Existing Structure.

GENERAL NOTES

Class X Concrete shall be used throughout except in handrail end posts.  
Handrail concrete shall be used in handrail end posts.  
The concrete floor slab shall be finished in accordance with Article 5.13 of the Standard Specifications.  
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, #4 wires, weighing 58# per 100 sq. ft.  
Piles for abutments shall be precast in accordance with Article 60.9(c) of the Standard Spec. Everts & open holes 4"x4", unless noted.  
Field connections riveted, unless noted.

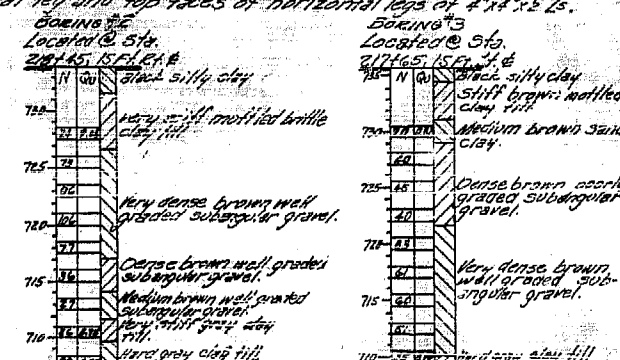
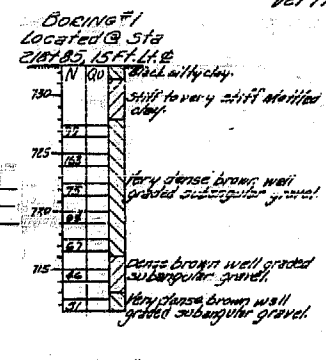
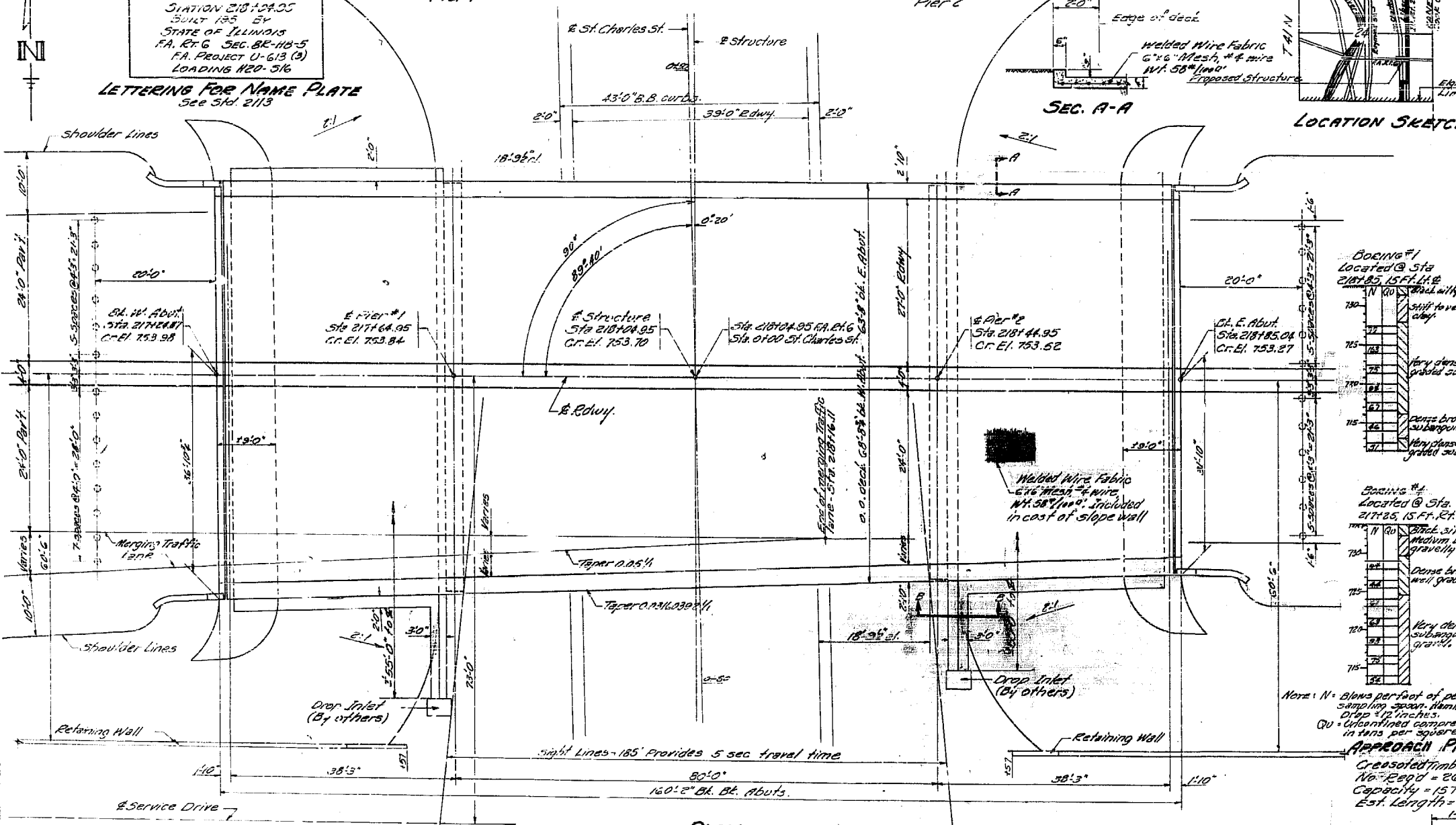
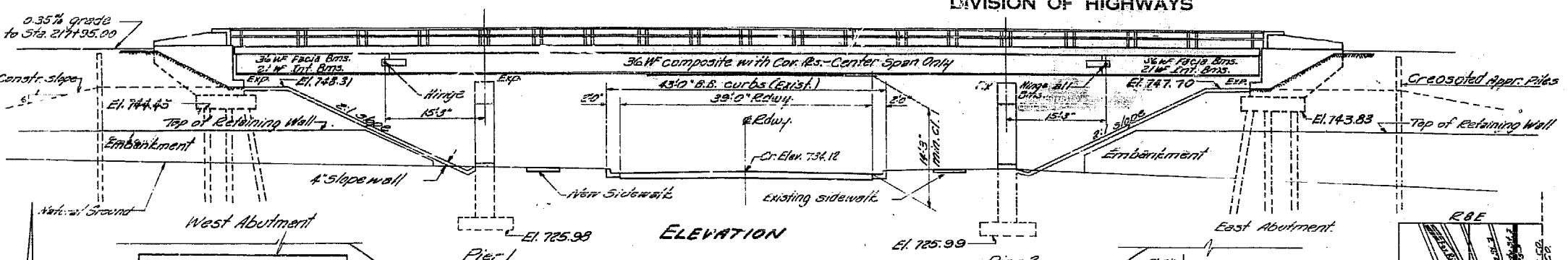
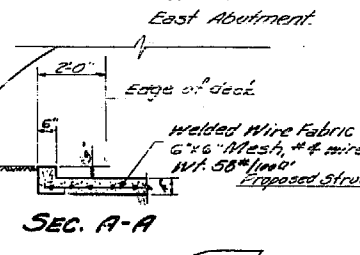
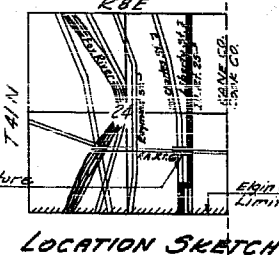
All bolsters, rockers, bearing plates, lead plates, pinfiles and anchor bolts shall be fabricated and set in accordance with Article 5.13 of the Standard Specifications and are included in quantity of structural steel.  
Anchor bolts shall be set before riveting diaphragms or supports.

Except as otherwise provided all structural steel shall receive one shop coat of red lead paint and two coats of aluminum paint. See Articles 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive 2 conc. test piles in permanent locations as directed by the Engineer before ordering remainder of piles, one test pile at East Abutment and one test pile at West Abutment.

Expansion joints shall be fabricated and installed in accordance with Article 5.13 (d) of the Standard Specifications. Expansion guards are included in quantity of structural steel. Est. Wt. 1060 lbs.

The following surfaces of expansion guards shall be given two shop coats of red lead paint; outside face of vertical leg and top faces of horizontal legs of 4"x4"x5 ls.



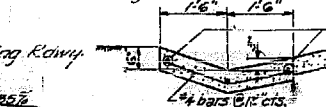
TOTAL BILL OF MATERIAL - SEC. 82-11B-5

Item	Unit	Superstr.	Substr.	Total
Class X Concrete	Cu Yds	276.3	397.1	673.4
Handrail Concrete	Cu Yds	2.9		2.9
Reinforcement Bars	Lbs.	44,850	28,770	73,620
Structural Steel	Lbs.	500,630		500,630
4" Slope Wall	Sq Yds		623	623
Concrete Piles	Lin. Ft.		520	520
Conc. Test Piles	Each		2	2
Metal Handrail	Lin. Ft.	316		316
Class X EXCAV for Str	Cu Yds		447	447
Borrow Excav	Cu Yds		17,580	17,580
Creosoted Piles	Lin. Ft.		790	790
Name Plates	Each	One		One

Note: N = Blows per foot of penetration of sampling spoon, Hammer Wt. 350 lbs. Drop 24 inches.  
QU = Unconfined compressive strength in tons per square foot.

APPROACH PILE DATA

Creosoted Timber Piles  
No. 22qd = 26  
Capacity = 15 Tons  
Est. Length = 27'-0"



SEC. B-B  
Thru Type A Gutter.  
Gutter to be paid for as sq. Yds. of Slope Wall. Est. lgh. 2'-0"

DESIGNED	A. P. Smith
CHECKED	T. Tamm
DRAWN	E. Rush
CHECKED	T. Tamm

EXAMINED	Dec 31 1952
PASSED	
APPROVED	R. R. Bateman

DESIGN STRESSES

f<sub>c</sub> = 1000 psi (Super)  
f<sub>s</sub> = 20,000 psi (Rein)  
f<sub>s</sub> = 15,000 psi (Struct)  
f<sub>c</sub> = 75 psi (Pier Pile)  
Pier Pile Pressure = Max. 2.5 psi  
Average 2.0 psi

CURVE DATA - F.A. RT. 6

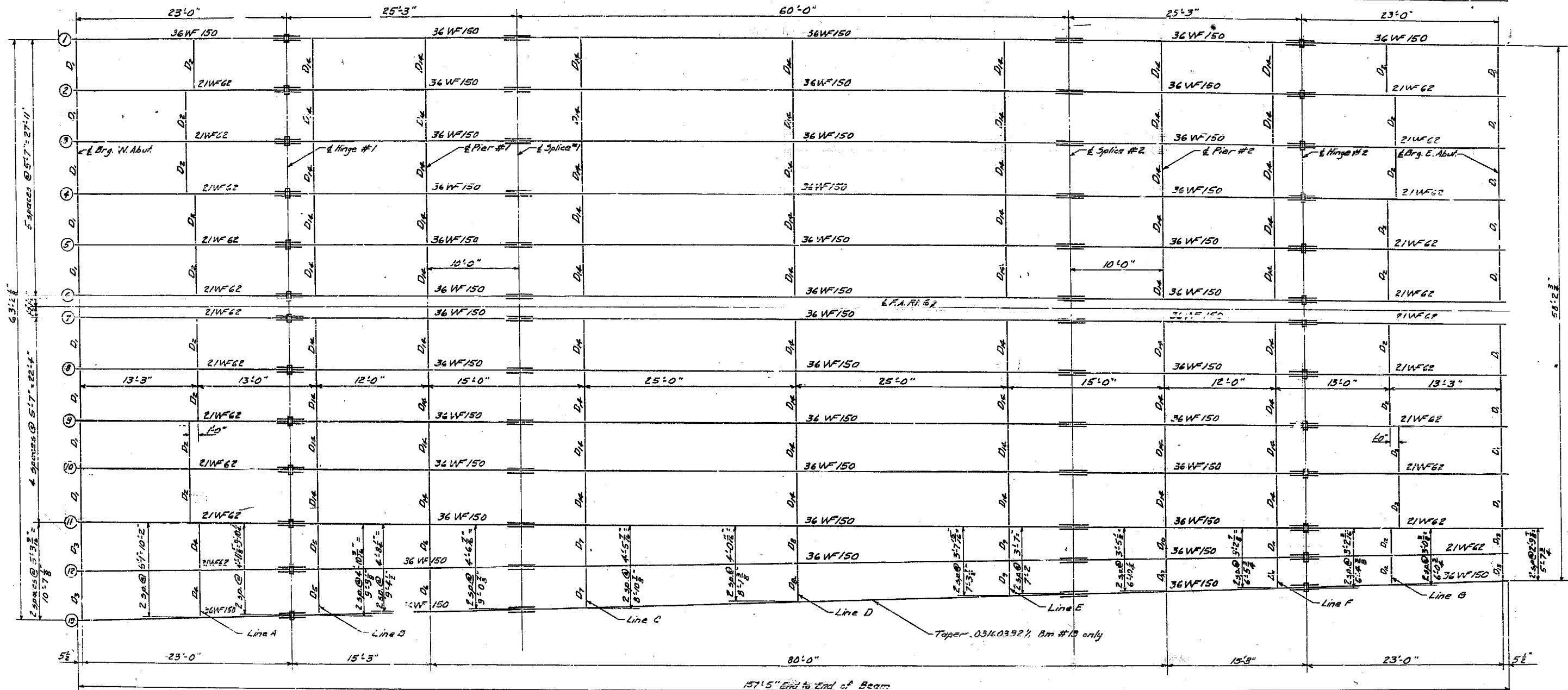
PROFILE - ST. CHARLES ST.

GENERAL PLAN & ELEVATION  
ELGIN BY-PASS OVER ST. CHARLES STREET  
PROJECT U-613(3)  
F.A. RT. 6 SEC. 82-11B-5  
KANE COUNTY  
STA. 218+04.95

LOADING #20-516-44

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
6	8P-1155	KANE	22	13	11 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. A D PROJECT		

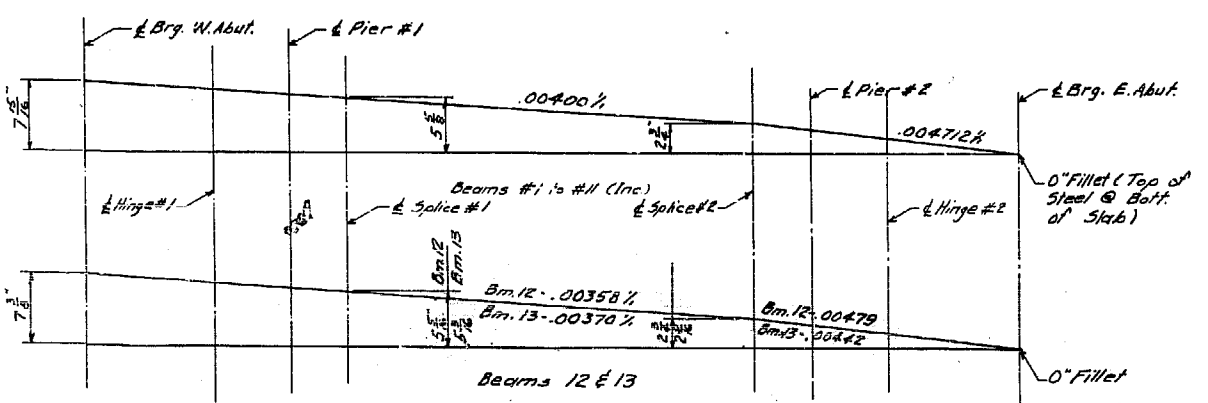


ELEV. TOP OF BEAMS (FOR FABRICATION ONLY)\*

Loc. Beam	&Brg. W. Abut.	&Hinge #1	&Brg. Pier #1	&Splice #1	&Splice #2	&Brg. Pier #2	&Hinge #2	&Brg. E. Abut.
#1	753.11	753.02	752.96	752.92	752.68	752.63	752.56	752.45
#2	753.16	753.07	753.01	752.97	752.73	752.68	752.61	752.50
#3	753.22	753.12	753.06	753.02	752.78	752.73	752.66	752.56
#4	753.27	753.18	753.12	753.08	752.84	752.79	752.72	752.61
#5	753.32	753.23	753.17	753.13	752.89	752.84	752.77	752.66
#6	753.38	753.29	753.22	753.18	752.94	752.89	752.82	752.72
#7	753.43	753.34	753.28	753.24	752.99	752.94	752.87	752.76
#8	753.48	753.39	753.32	753.28	753.04	752.99	752.92	752.82
#9	753.53	753.44	753.38	753.34	753.09	753.04	752.97	752.86
#10	753.58	753.49	753.42	753.38	753.14	753.09	753.02	752.92
#11	753.63	753.54	753.48	753.44	753.19	753.14	753.07	752.96
#12	753.68	753.59	753.52	753.48	753.24	753.19	753.12	753.02
#13	753.73	753.64	753.58	753.54	753.29	753.24	753.17	753.06

\*Does not include @ Deflection.

STRUCTURAL STEEL LAYOUT



CAMBER DIAGRAM OF BEAMS

BILL OF MATERIAL

ITEM	UNITS	QUANTITY
Structural Steel	Lbs.	509,340

STRUCTURAL STEEL LAYOUT  
ELGIN BY-PASS OVER ST. CHARLES ST.  
F.A. RT. 6 SECTION 8P-1155  
KANE COUNTY  
STATION 218+04.95

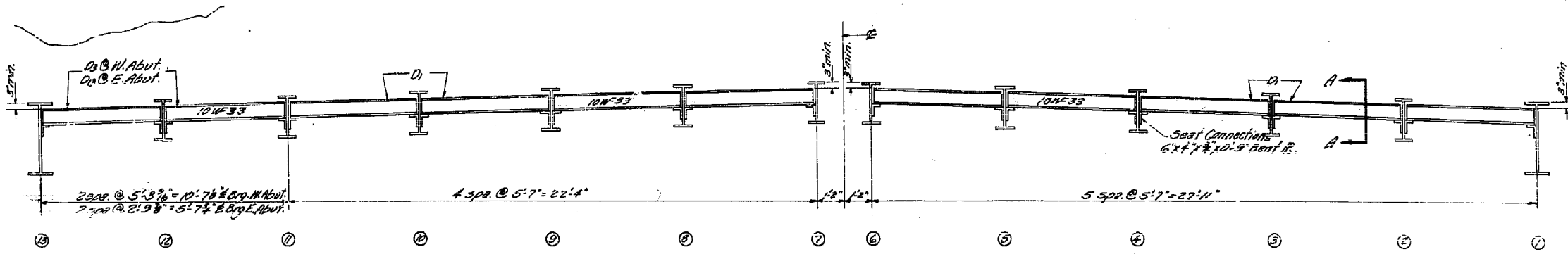
DESIGNED: *[Signature]*  
CHECKED: T. Tanaka  
DRAWN: W.A.S. J. Ganci  
CHECKED: T. Tanaka

EXAMINED: *[Signature]*  
PASSED: *[Signature]*  
APPROVED: *[Signature]*

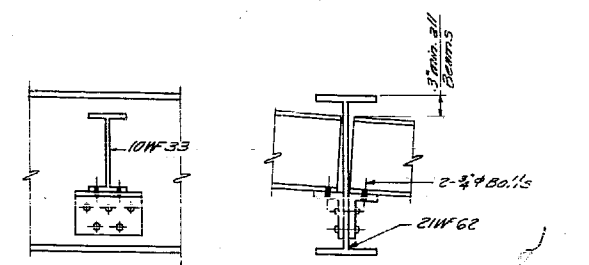
Dec. 31 1952

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET I.D.
6	BRIDGES	KANE	22	1A	11 SHEETS
F.L. 6		FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT	

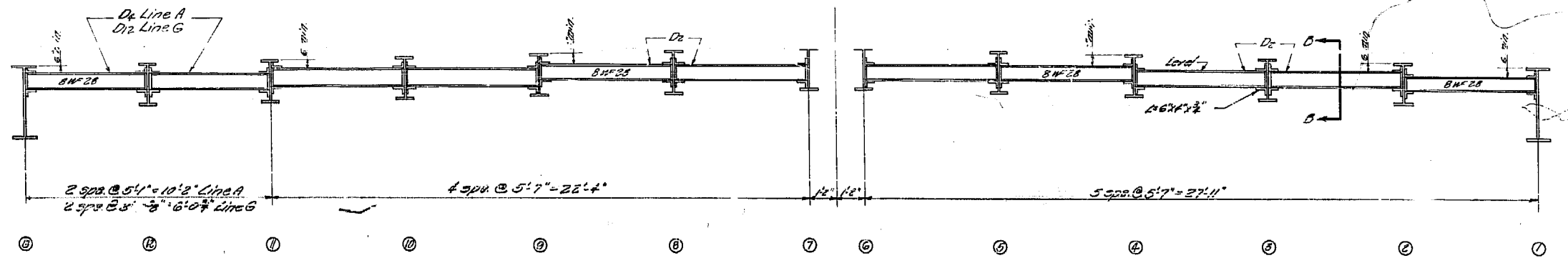


DIAPHRAGM D<sub>1</sub>, D<sub>3</sub> & D<sub>13</sub> @ E. & W. ABUTMENTS.  
Looking West

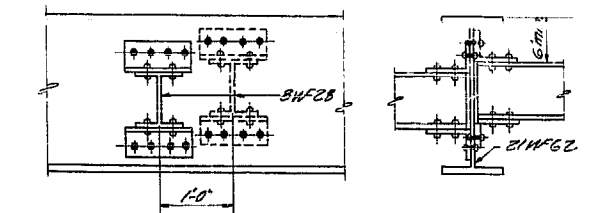


SECTION A-A

D<sub>1</sub> Reqd. 16 Ea.  
D<sub>3</sub> Reqd. 2 Ea.  
D<sub>13</sub> Reqd. 2 Ea.

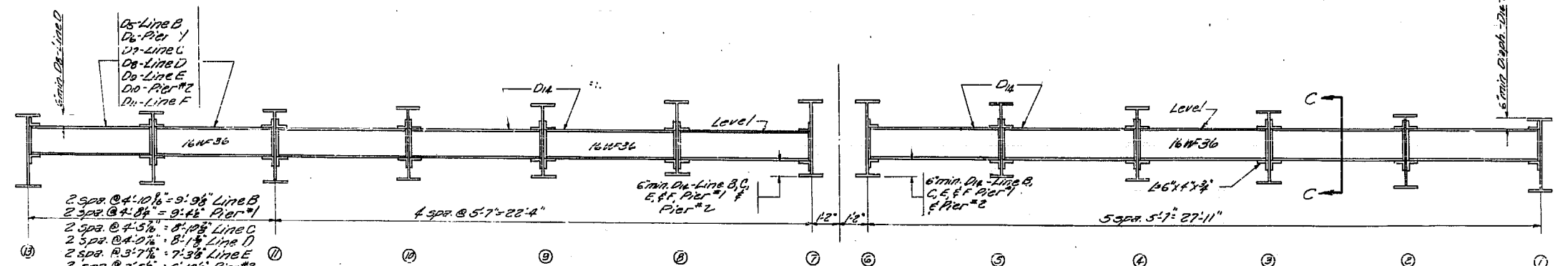


DIAPHRAGM D<sub>2</sub>, D<sub>4</sub> & D<sub>12</sub> @ LINE A & LINE G  
Looking West

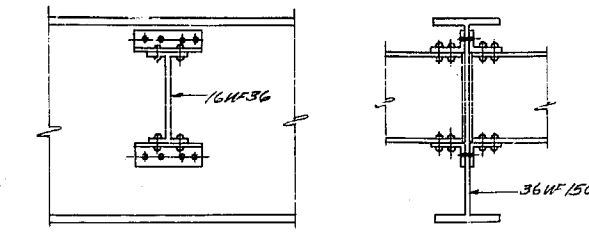


SECTION B-B

D<sub>2</sub> Reqd. 16 Ea.  
D<sub>4</sub> Reqd. 2 Ea.  
D<sub>12</sub> Reqd. 2 Ea.



DIAPHRAGM D<sub>5</sub> TO D<sub>11</sub> @ LINE B, C, D, E & F, PIER #1 & PIER #2  
Looking West



SECTION C-C

D<sub>5</sub> to D<sub>11</sub> (inc.) Reqd. 2 Ea.  
D<sub>11</sub> Reqd. 63 Ea.

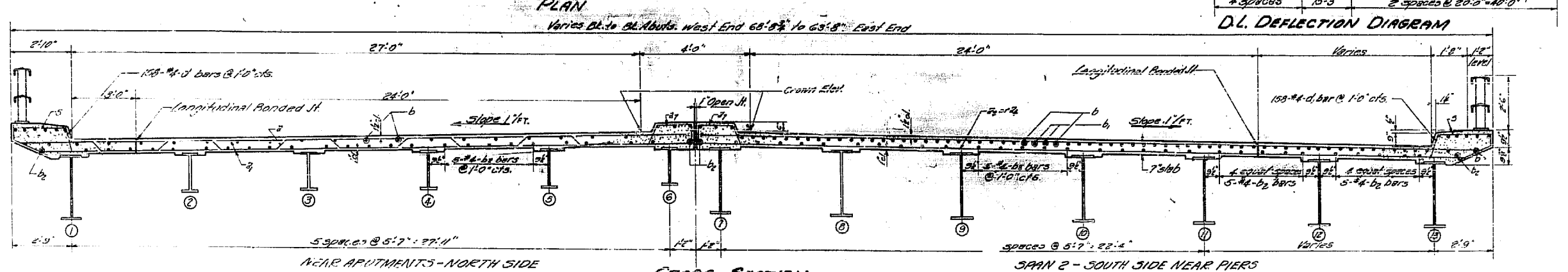
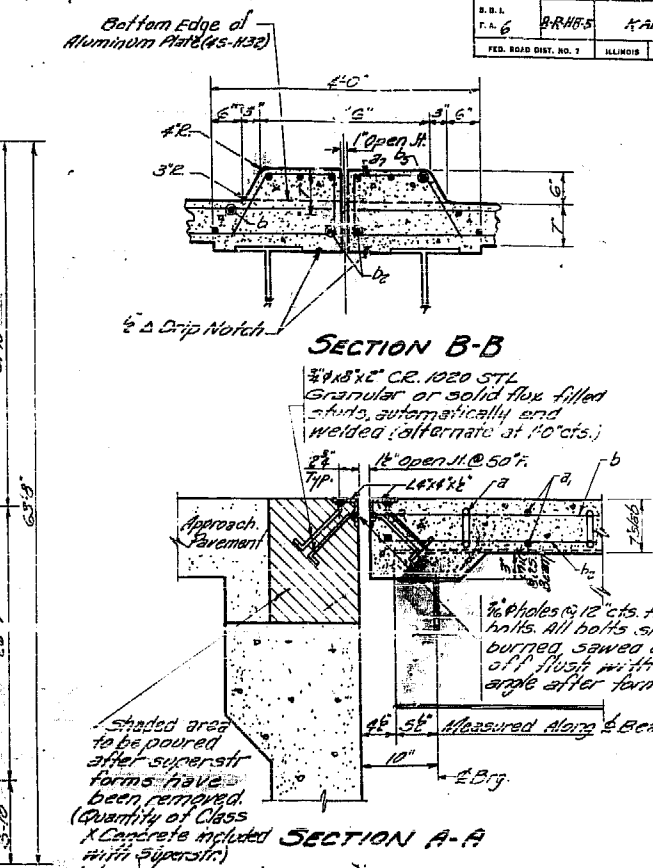
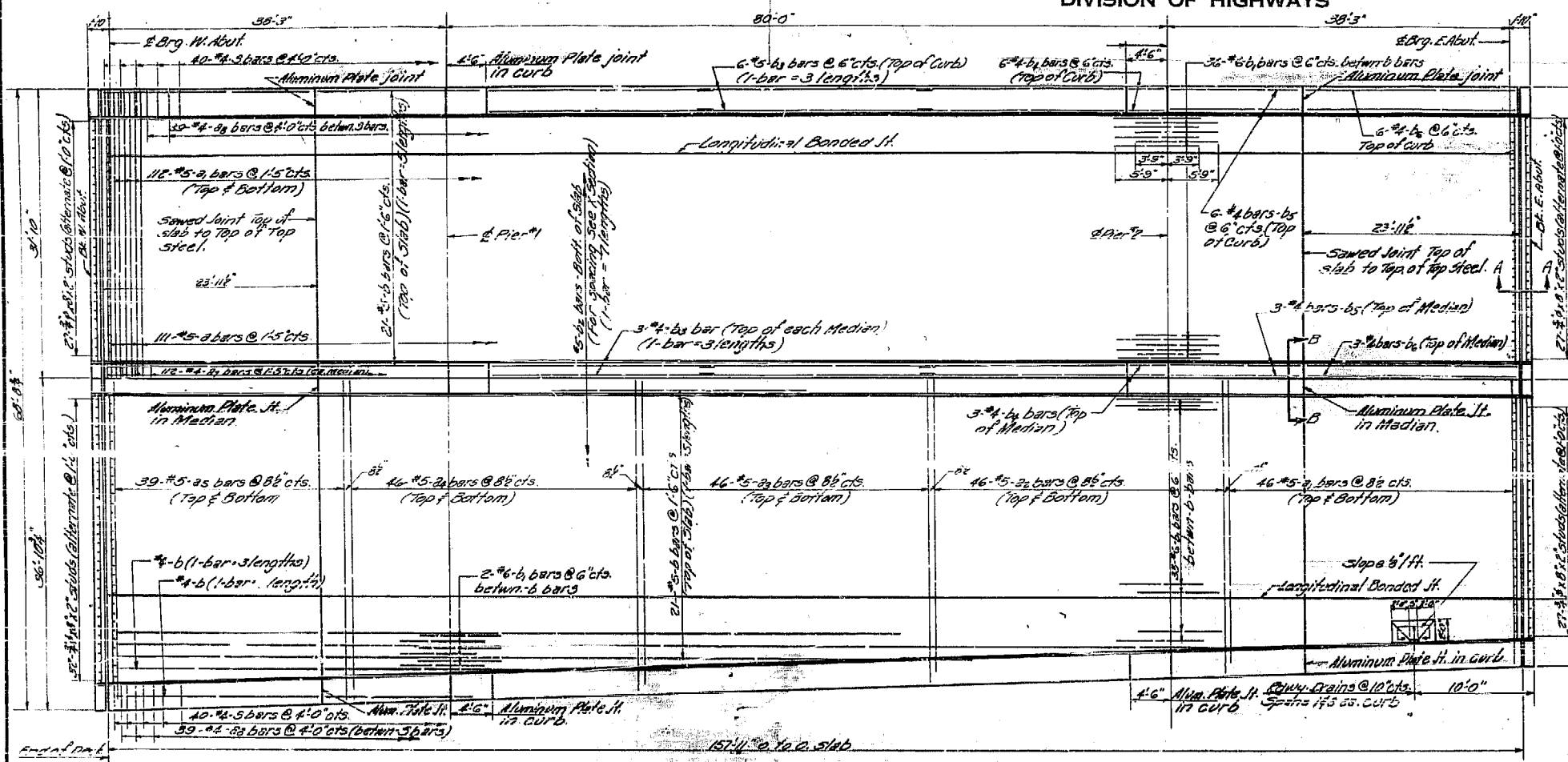
DESIGNED	H. R. Luff	EXAMINED	Dec. 31, 1958
CHECKED	T. Tams	PASSED	[Signature]
DRAWN	WAS: E. Ruff	APPROVED	[Signature]
CHECKED	T. Tams		

DIAPHRAGM DETAILS  
ELGIN BY-PASS OVER ST. CHARLES ST.  
F.A. RT. 6 - SEC. 8 R. 48-5  
KANE COUNTY  
STA. 218+04.95

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L.	BR 48-5	KANE	22	15
F.A.R.T.	NO. 7	ILLINOIS	FED. AID PROJECT.	

SHEET NO. 4  
11 SHEETS

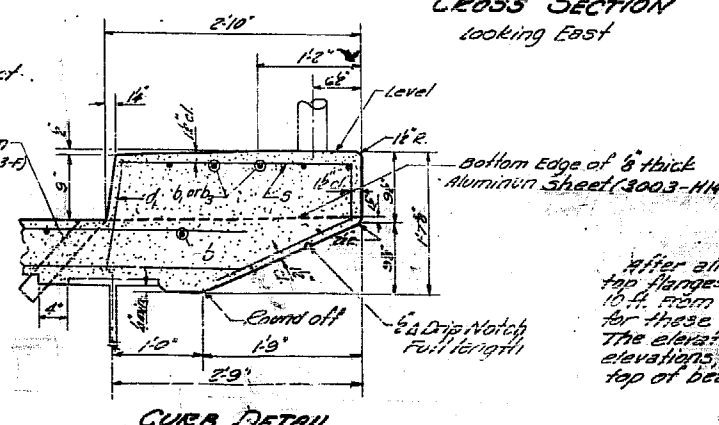


BILL OF MATERIAL - SUPER.

Bar	No.	Size	Length	Shape
a	111	#5	32'-7"	
a1	316	#5	30'-3"	
a2	92	#5	37'-3"	
a3	92	#5	32'-3"	
a4	92	#5	33'-3"	
a5	78	#5	34'-3"	
a7	224	#4	3'-9"	
a8	78	#4	3'-9"	
b	214	#5	32'-6"	
b1	152	#6	9'-6"	
b2	418	#4	23'-3"	
b3	57	#4	24'-3"	
b4	36	#4	4'-3"	
b5	36	#4	16'-9"	
b6	36	#4	23'-6"	
c	80	#4	5'-0"	
d	316	#4	11'-3"	

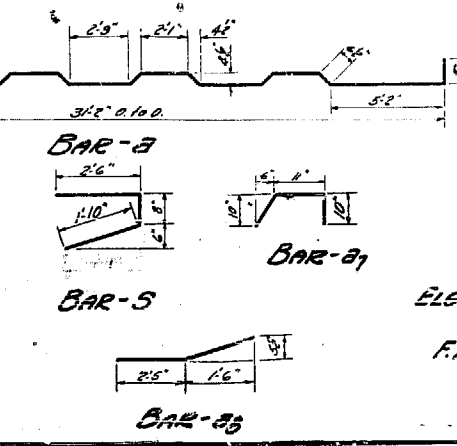
Class A Concrete CU W.S. 576.3  
Reinforcement Bars Lbs. 44,650  
Structural Steel Lbs. 17,110  
RUBBER PLATE Each Wire

NOTE: Cost of Aluminum plates and floor drains incidental to contract.



METHOD OF DETERMINING FILLET HEIGHT - 2"  
After all Structural Steel has been erected, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflection for these points, determined from the D.L. deflection diagram. The elevations so obtained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beams.

Note: In all cases provide a minimum clearance of 3/8" between transverse slab bars and top of Cover Plates, Spline Plates or Top Flange of Beam when Cover Plates are not used.



SLAB DETAILS -  
ELSIN BY-PASS OVER ST. CHARLES ST.  
PROJECT U-G13(3)  
F.A.R.T. 6 SEC. BR HB-5  
KANE COUNTY  
STA. 218+04.95

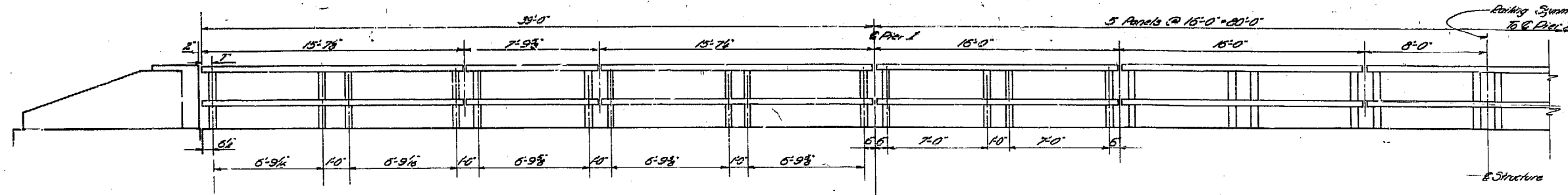
DESIGNED	A. M. A. Huff	EXAMINED	DEC. 31, 1958
CHECKED	T. Tanaka	APPROVED	R. R. [Signature]
DRAWN	W.A.S. E. Rush		
CHECKED	T. Tanaka		



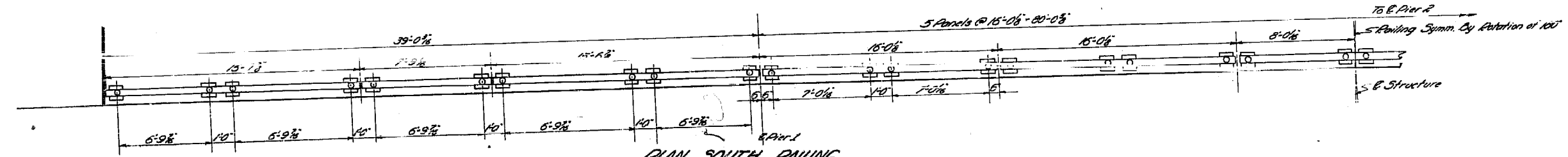


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

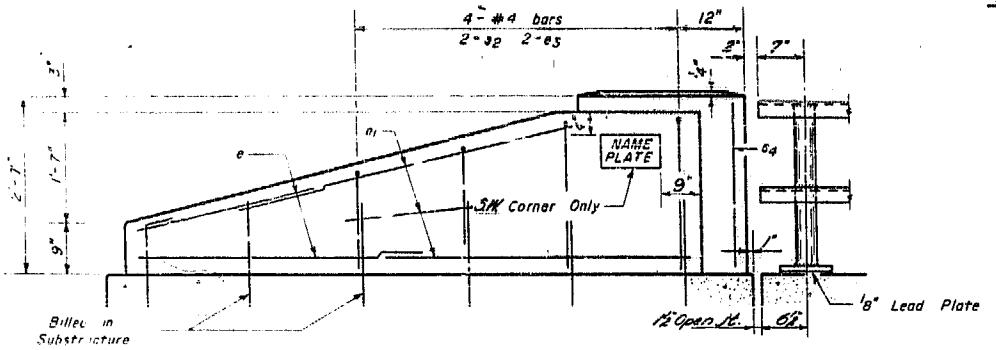
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
6	8-B	KANE	22	17	11 SHEETS
FED. ROAD DIST. NO. 3		ILL. ROAD DIST. NO. 1		FED. AID PROJECT	



ELEVATION NORTH FACING

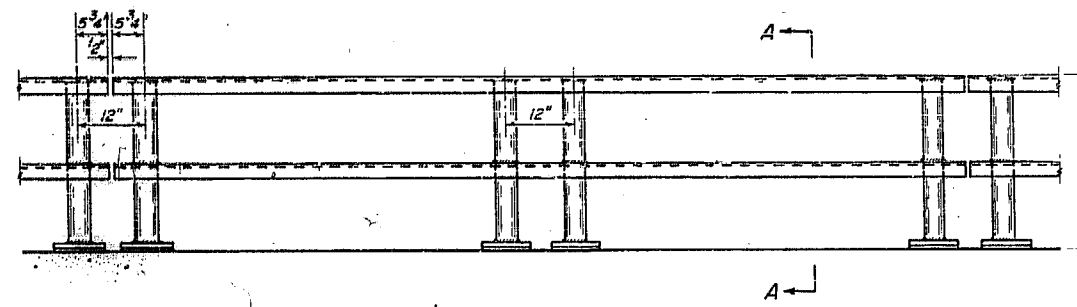


PLAN SOUTH FACING

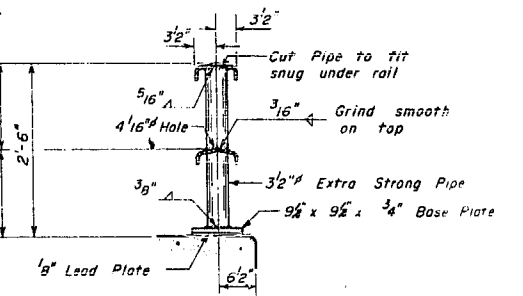


ELEVATION

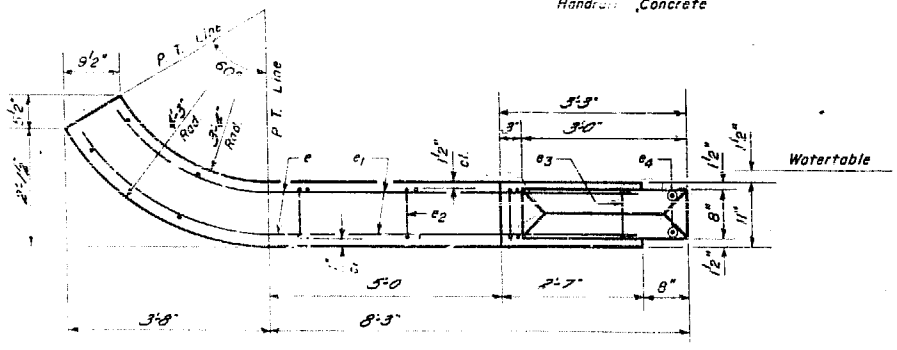
Note All Post to be Handrail Concrete



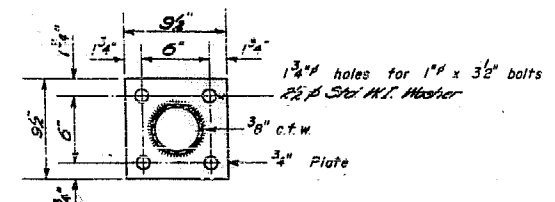
ELEVATION TYPICAL PANEL



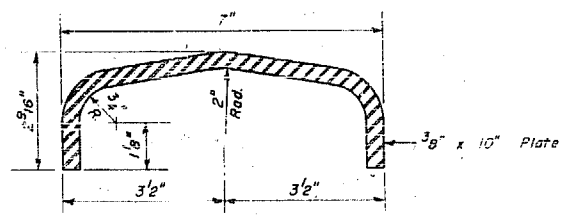
SECTION A-A



PLAN - END POST



BASE PLATE  
ALL POSTS - SUPERSTRUCTURE



DETAIL OF RAIL

BILL OF MATERIAL

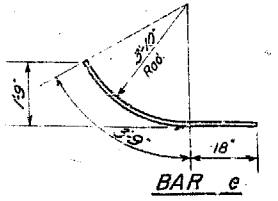
Handrail Concrete	Cu. Yd.	29
Reinforcement Bars	Lbs.	240
Metal Handrail	Lin. Ft.	216

DESIGNED	H. A. Hoff
CHECKED	T. Tanaka
DRAWN	H. L. Jacobs
CHECKED	T. Tanaka

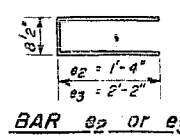
EXAMINED	K. M. Romine
PASSED	C. J. Shuck
APPROVED	R. R. Burt

BILL OF REINFORCEMENT

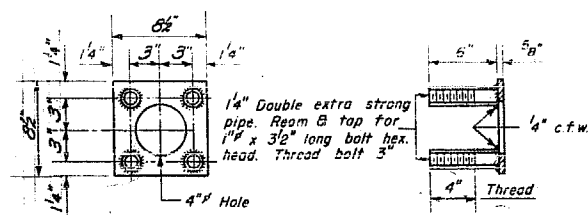
Bar	No.	Size	Length	Shape
e	16	#4	5'-3"	
e1	24	#4	7'-9"	
e2	8	#4	3'-4"	
e3	6	#4	5'-0"	
e4	8	#4	2'-3"	



BAR e

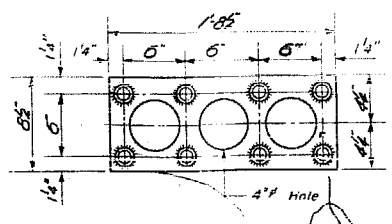


BAR e2 or e3



ANCHOR DEVICE  
At Single Post

Note: Provide 2-1/4" x 1-1/2" shim base plates for 50% of rail posts.

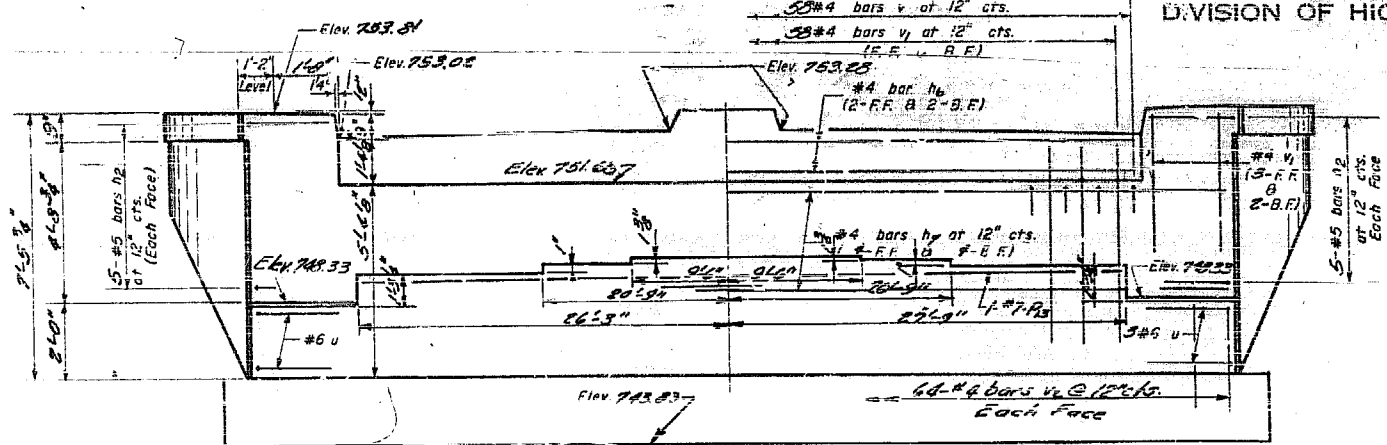


ANCHOR DEVICE  
At Double Post

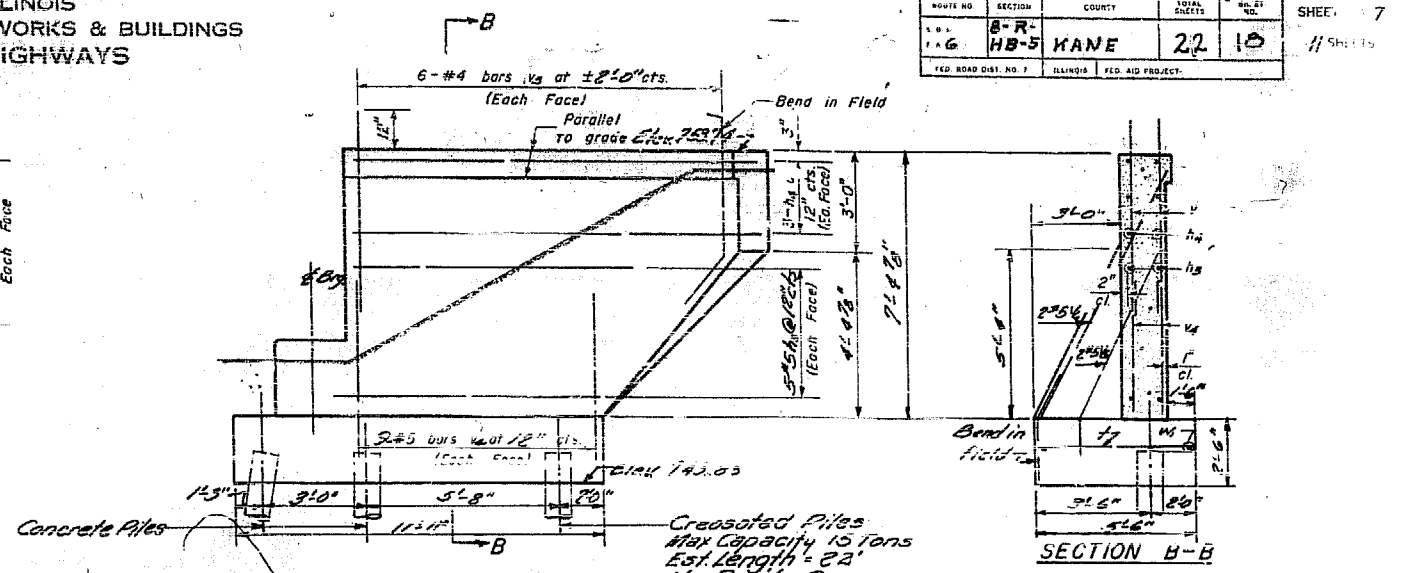
HANDRAIL DETAILS  
ELGIN BY-PASS OVER ST. CHARLES ST.  
F.A. PT. 6 ~ SEC. 82-HB-5  
KANE COUNTY  
STA. 218+04.95

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	NO. 21	SHEET
8-R	HB-5	KANE	22	18	7
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

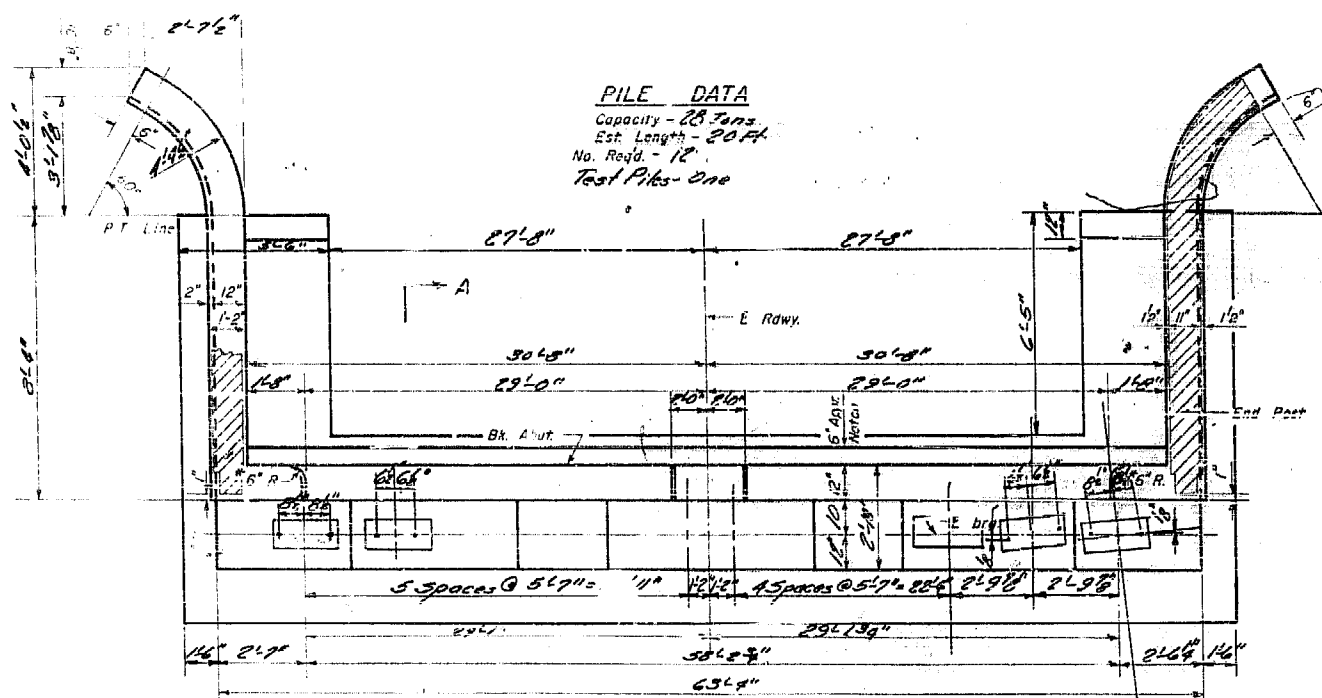


**ELEVATION**  
At Right Angle to E. Roadway



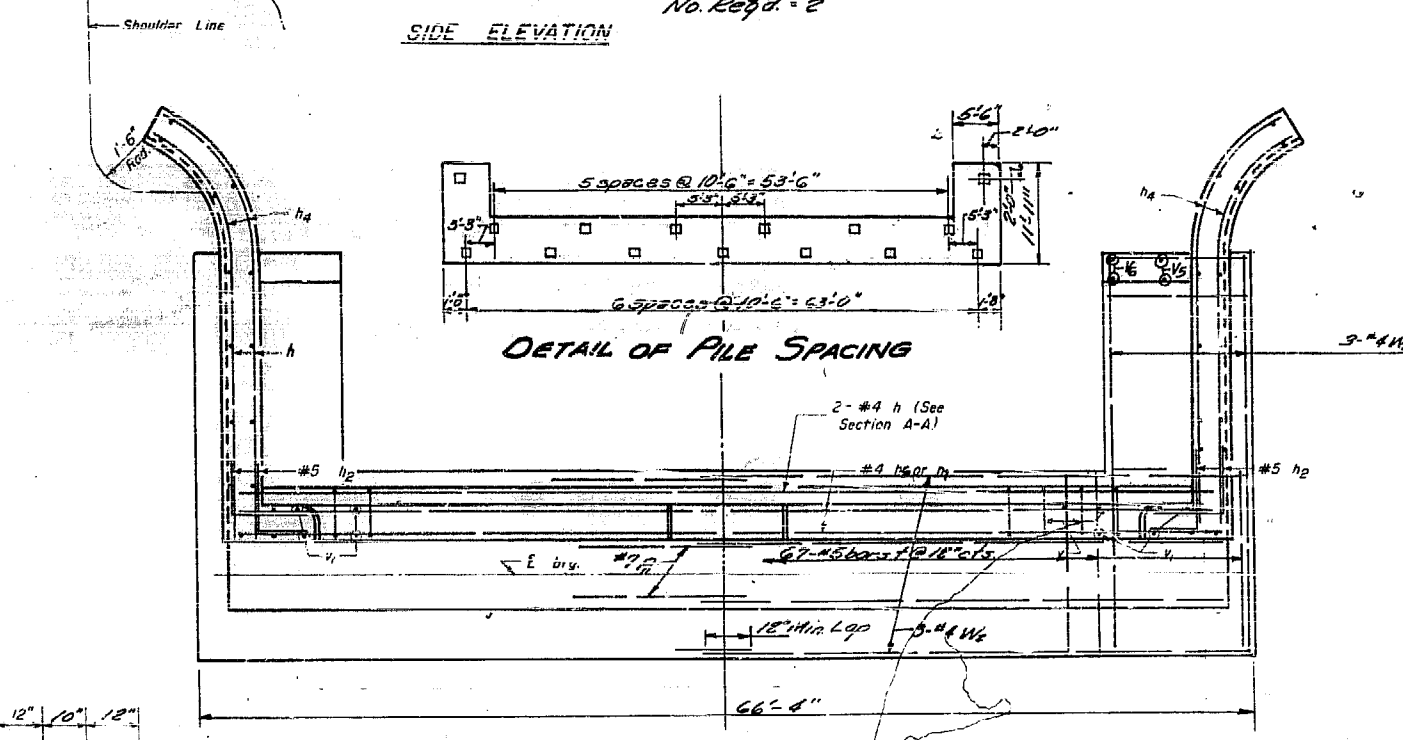
**SIDE ELEVATION**

**SECTION B-B**



**PILE DATA**  
Capacity - 23 tons  
Est. Length - 20 ft.  
No. Req'd. - 12  
Test Piles - One

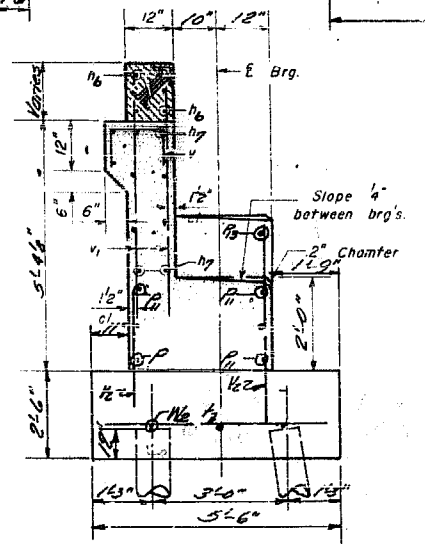
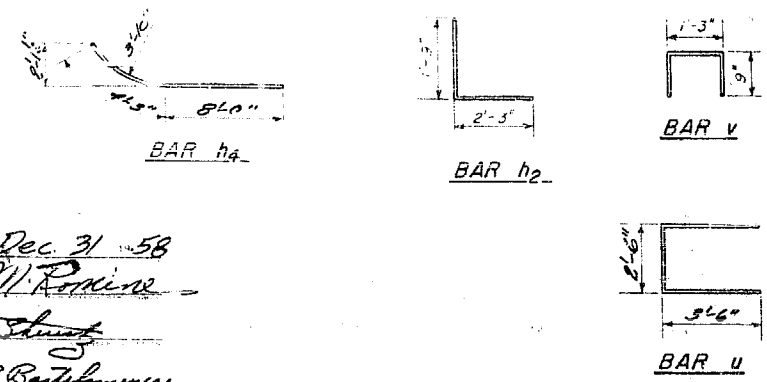
**PLAN OF ABUTMENT**  
Dimensions



**DETAIL OF PILE SPACING**

**PLAN OF ABUTMENT**  
Reinforcement

\* Note: Contractor shall construct curb without radius when a curb & gutter are to be used on bridge approaches (See Road Plans)



**SECTION A-A**

**BILL OF REINFORCEMENT**

Bar No.	Size	Length	Shape	Bar No.	Size	Length	Shape
h2	20	#5	4'-0"	u	6	#6	9'-6"
h3	20	#5	9'-0"	v	58	#4	2'-9"
h4	12	#5	12'-3"	w	128	#4	4'-3"
h5	8	#4	29'-6"	x	24	#4	6'-3"
h6	20	#4	32'-0"	y	36	#5	4'-6"
h7	12	#7	32'-6"	z	6	#4	9'-0"
h8	2	#7	27'-9"	aa	6	#4	28'-9"
h9	4	#5	6'-0"	ab	6	#4	9'-0"
h10	4	#5	3'-0"	ac	6	#4	28'-9"

**BILL OF MATERIAL**

Item	Unit	Quantity
Concrete	Cu. Yd.	72.2
Reinforcement Bars	Lb.	3850
Concrete Piles	Lin. Ft.	240
Concrete Test Piles	Each	One
Crested Piles	Lin. Ft.	4-

**EAST ABUTMENT**  
**ELGIN BYPASS OVER**  
**ST. CHARLES ST.**  
**F.A. Rt. 6 SEC. 8-R-HB-5**  
**KANE COUNTY**  
**STA. 218+04.35**

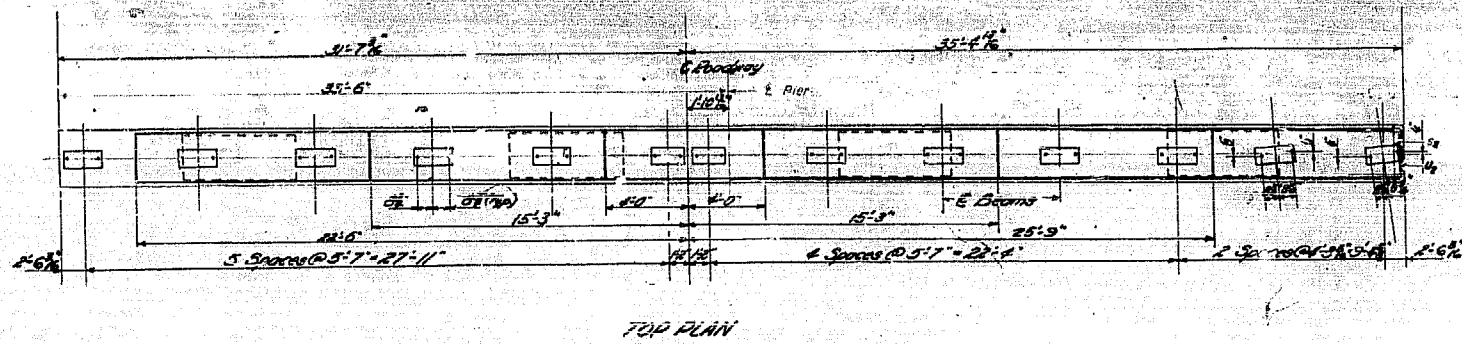
DESIGNED: *Wm. D. Smith*  
CHECKED: *T. Tanaka*  
DRAWN: *W. A. Sausaman*  
DATE: *Dec 31 58*  
APPROVED: *RR Bartschinger*



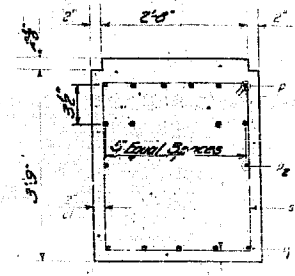


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

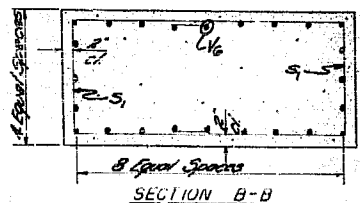
ROUTE NO.	ACTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
6	B-R HB-5	KANE	22	20	11 SHEETS
FED. ROAD DIST. NO. 7	BLANK	FED. AID PROJECT			



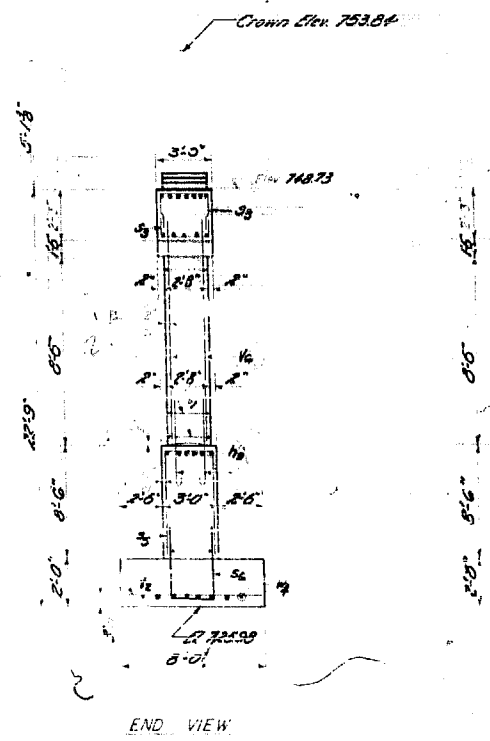
TOP PLAN



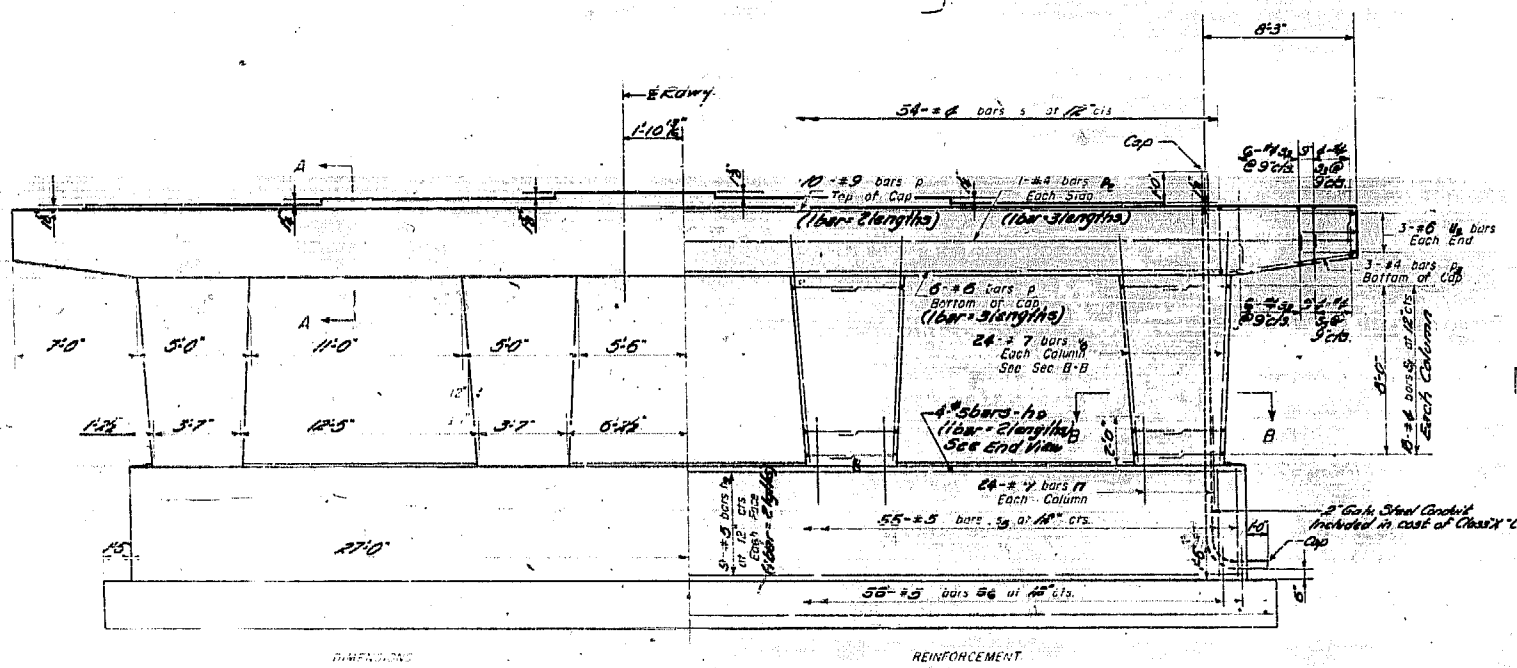
SECTION A-A



SECTION B-B



END VIEW

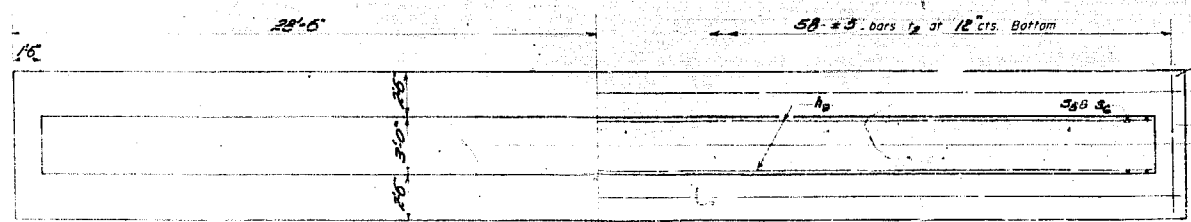


ELEVATION  
looking East

5 BARS

3x3x3x3 BARS

Bar	A	B
1	2'-4"	2'-0"
2	2'-8"	2'-1"
3	2'-8"	1'-8"
4	2'-8"	0'-4"
5	2'-8"	3'-3"



FOOTING PLAN

BAR	No.	Size	Length
10	44	#9	17'-5"
17	96	#7	4'-0"
18	20	#9	34'-6"
19	18	#6	15'-0"
20	6	#4	23'-3"
21	6	#4	7'-3"
5	54	#5	12'-11"
6	72	#4	8'-4"
7	24	#4	6'-10"
8	16	#4	6'-0"
9	55	#5	19'-2"
10	55	#5	7'-2"
11	58	#5	7'-9"
12	6	#5	10'-7"
13	96	#7	10'-6"
14	16	#4	23'-0"

Gross X Concrete Cu Yds 126.9  
Reinforcement Bars LBS 10,520  
Class A Reinforcement Cu Yds 225

DESIGNED: Wm. A. Smith  
CHECKED: T. Tanski  
DRAWN: M. Woods  
CHECKED: T. Tanski

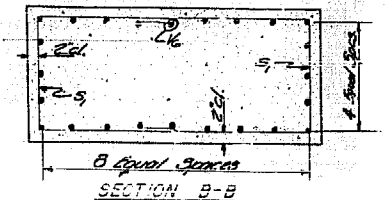
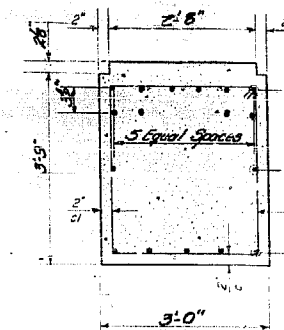
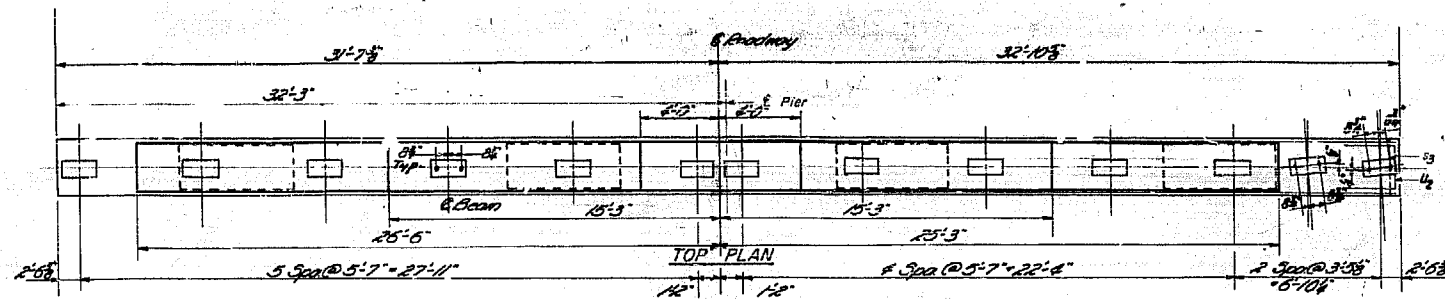
EXAMINED: V.M. Romaine  
PASSED: J.P. Shurt  
APPROVED: R.R. Bartholomew

DEC. 31 1958

PIER 1  
ELGIN BY-PASS OVER ST. CHARLES ST.  
S.A. P-6 ~ SEC. 8R-HB-5  
KANE COUNTY  
STA. 218+0495

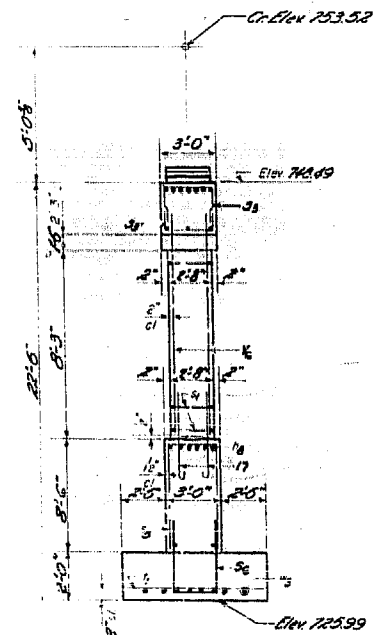
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
11-5	22	HAINE	22	21	11 SHEETS



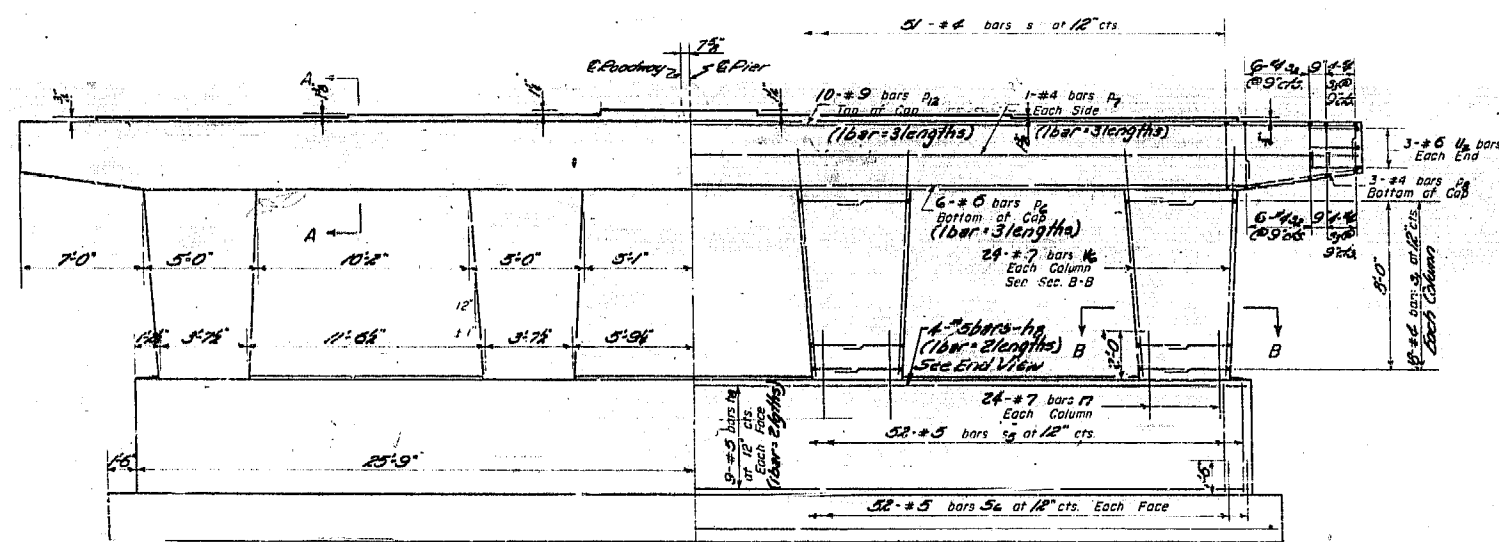
SECTION A-A

SECTION B-B

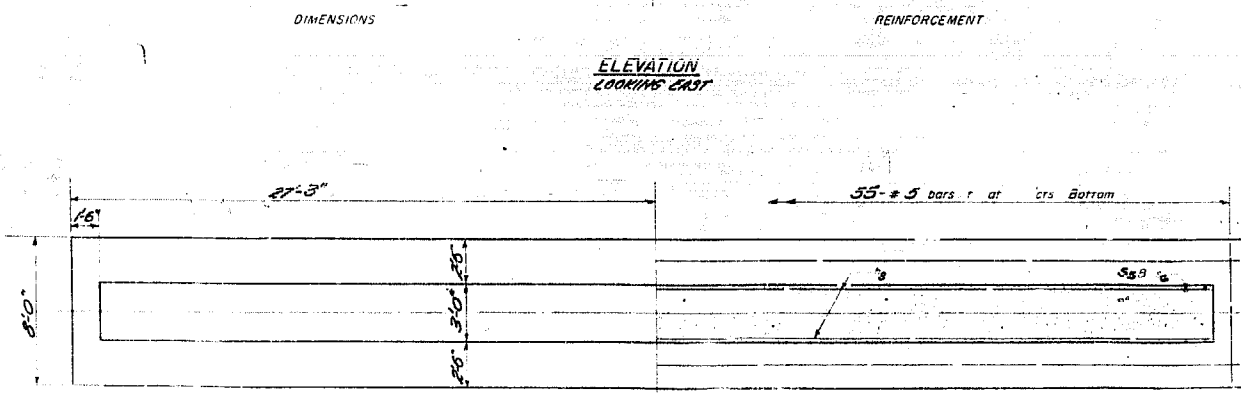


END VIEW

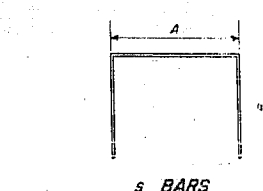
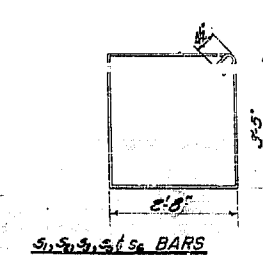
Note: All walls shall have standard 1/4" chamfer except footing.



ELEVATION  
LOOKING EAST

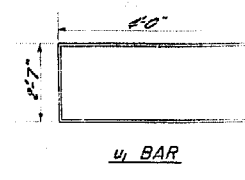


FOOTING PLAN



A & B DIMENSIONS

Bar	A	B
S1	2'-4"	3'-0"
S2	2'-8"	2'-1"
S3	2'-8"	1'-5"
S4	2'-8"	8'-4"
S5	2'-8"	3'-3"



U BAR

PIER 2  
BILL OF MATERIAL

Bar	No	Size	Length	Shank
18	44	#5	26'-3"	
17	96	#7	4'-0"	
15	20	#9	33'-6"	
16	18	#6	17'-9"	
17	6	#4	27'-3"	
18	6	#4	7'-3"	
S	51	#4	12'-11"	
S1	12	#4	8'-4"	
S2	24	#4	6'-10"	
S3	15	#4	6'-0"	
S4	52	#5	19'-4"	
S5	53	#5	9'-2"	
2	55	#5	7'-9"	
4	6	#5	10'-7"	
1/2	96	#7	10'-6"	
1/3	16	#4	27'-9"	
Class X Concrete			Cu Yds.	121.5
Reinforcement Bars			LBS	10,880
Class A Excavation			Cu Yds.	221

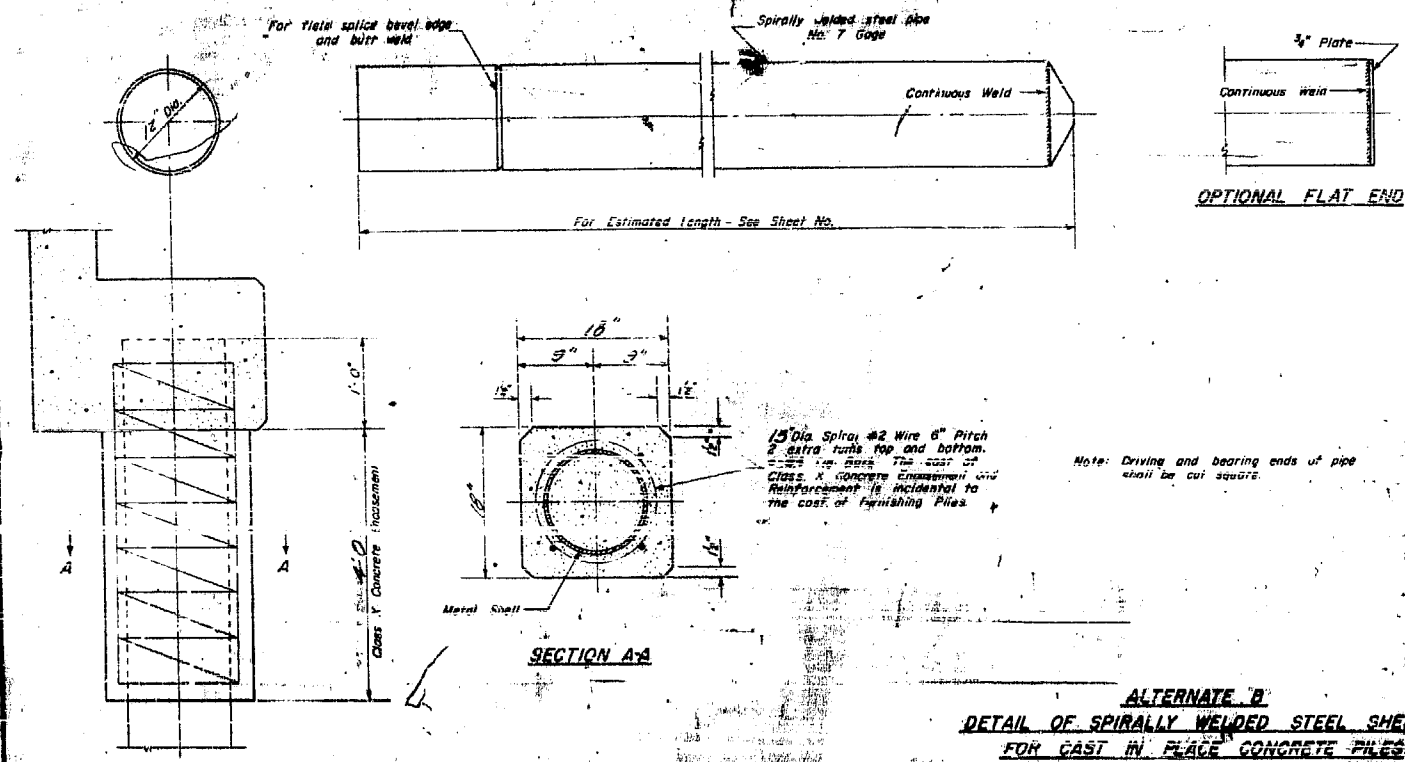
DESIGNED: *Tom P. Smith*  
CHECKED: *T. Tanski*  
DRAWN: *W. A. Sausman*  
CHECKED: *T. Tanski*

EXAMINED: *Dec 31 1958*  
*R. M. Romine*  
PASSED: *Chief of Highway and Traffic Structures*  
APPROVED: *Chief Highway Engineer*

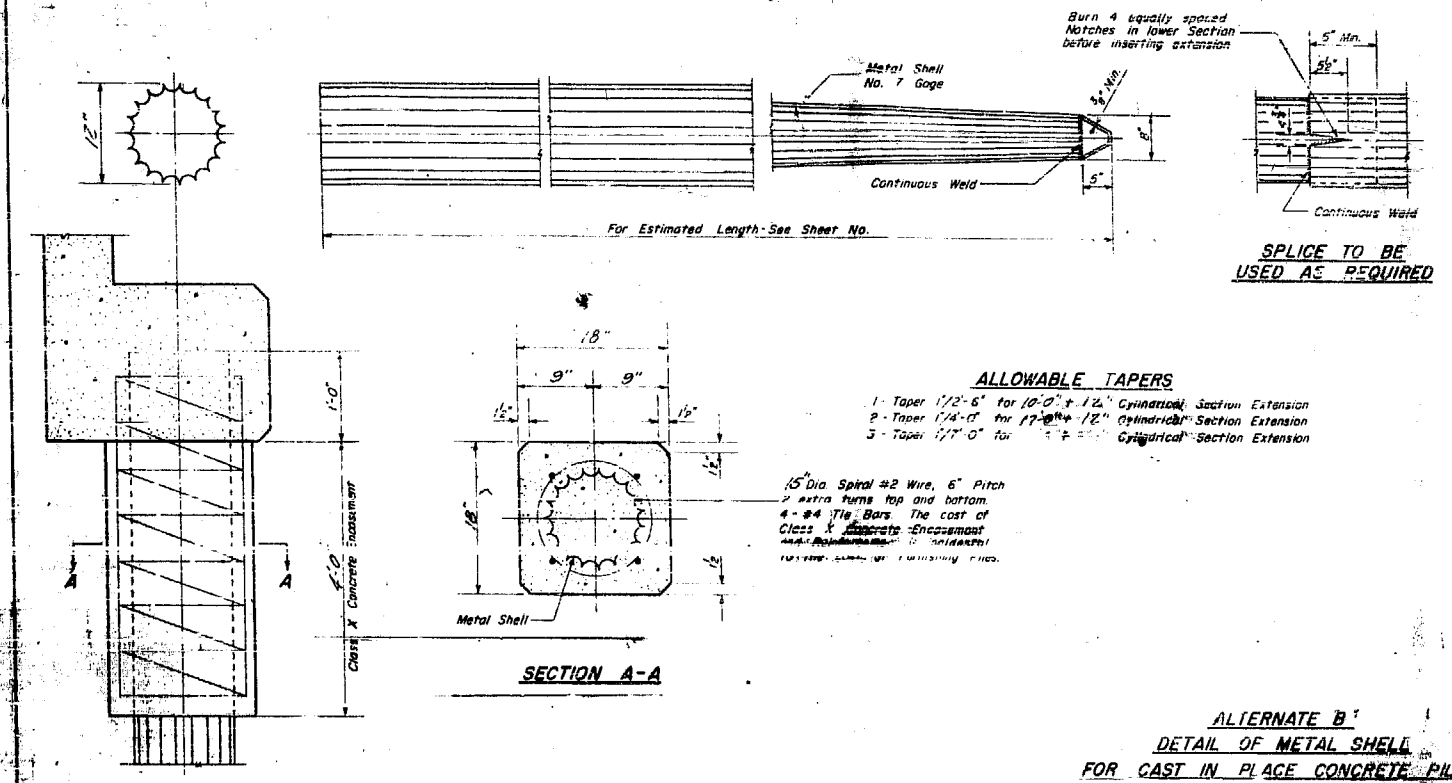
PIER 2  
ELGIN BY-PASS OVER ST. CHARLES ST.  
F.A.P. 6 - Sec. 82 - HB-5  
HAINE COUNTY  
STA. 218 + 04.95

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

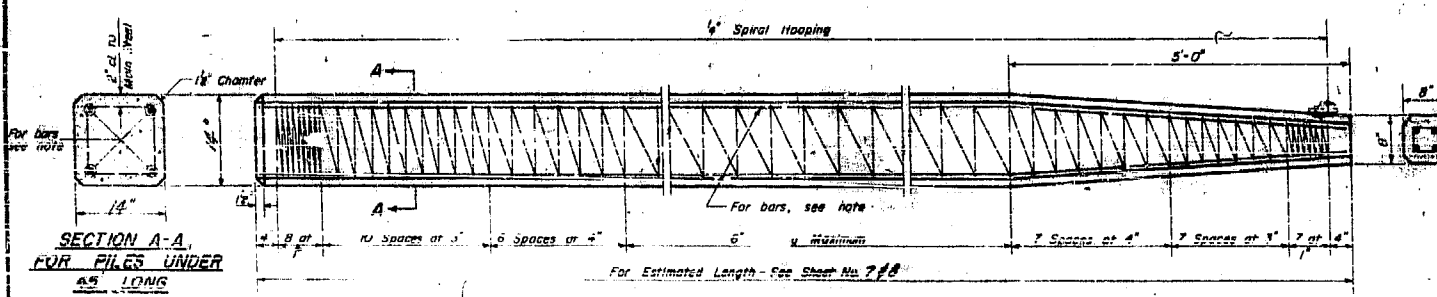
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. //
2-2	HB-5	KANE	22	22	// SHEETS
FED. ROAD DIST. NO. 1	BARRETT	FED. AID PROJECT			



ALTERNATE B  
DETAIL OF SPIRALLY WELDED STEEL SHELL  
FOR CAST IN PLACE CONCRETE PILES



ALTERNATE B  
DETAIL OF METAL SHELL  
FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

Note: For 14" Piles 45' long or more use 4-#8 bars 4 for the full length and 4 to the point of bevel.  
For 14" Piles under 45'-0" long use 4-#5 bars the full length.

Handling: For Pile lengths up to 45 Ft. use two slings placed at a distance of 0.2 L from each end.  
For Piles longer than 45 Ft. use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

\* L: Over all length of pile to be handled.

ALTERNATE A  
DETAIL OF PRECAST CONCRETE PILES

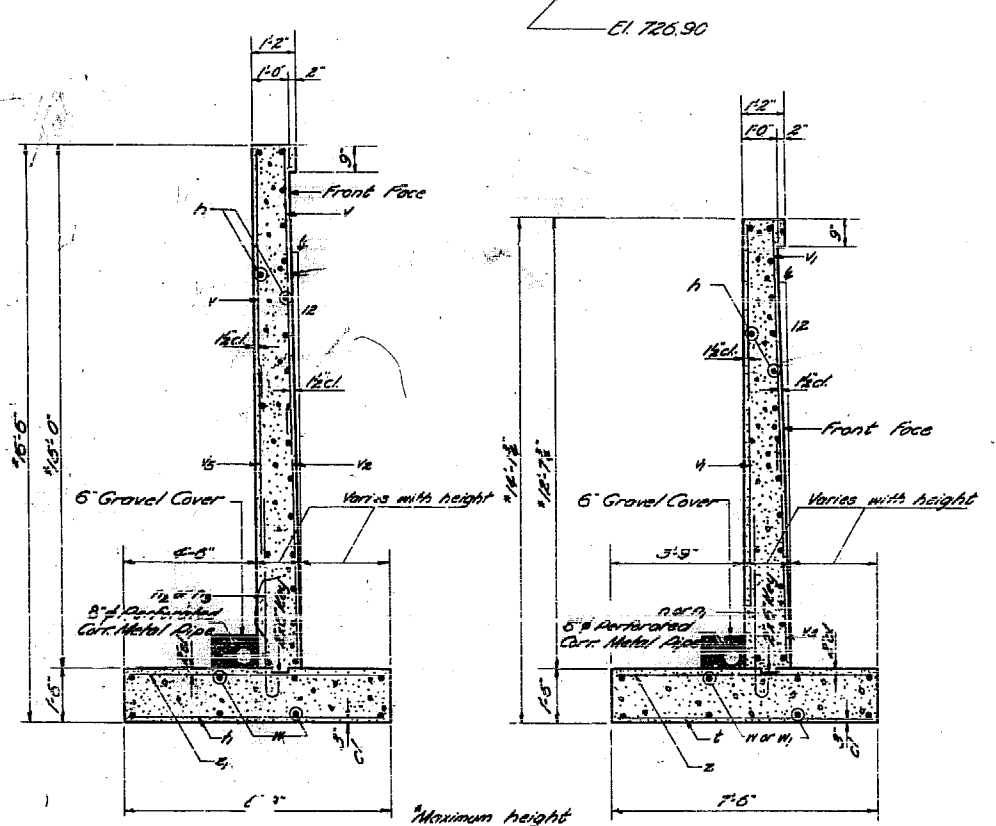
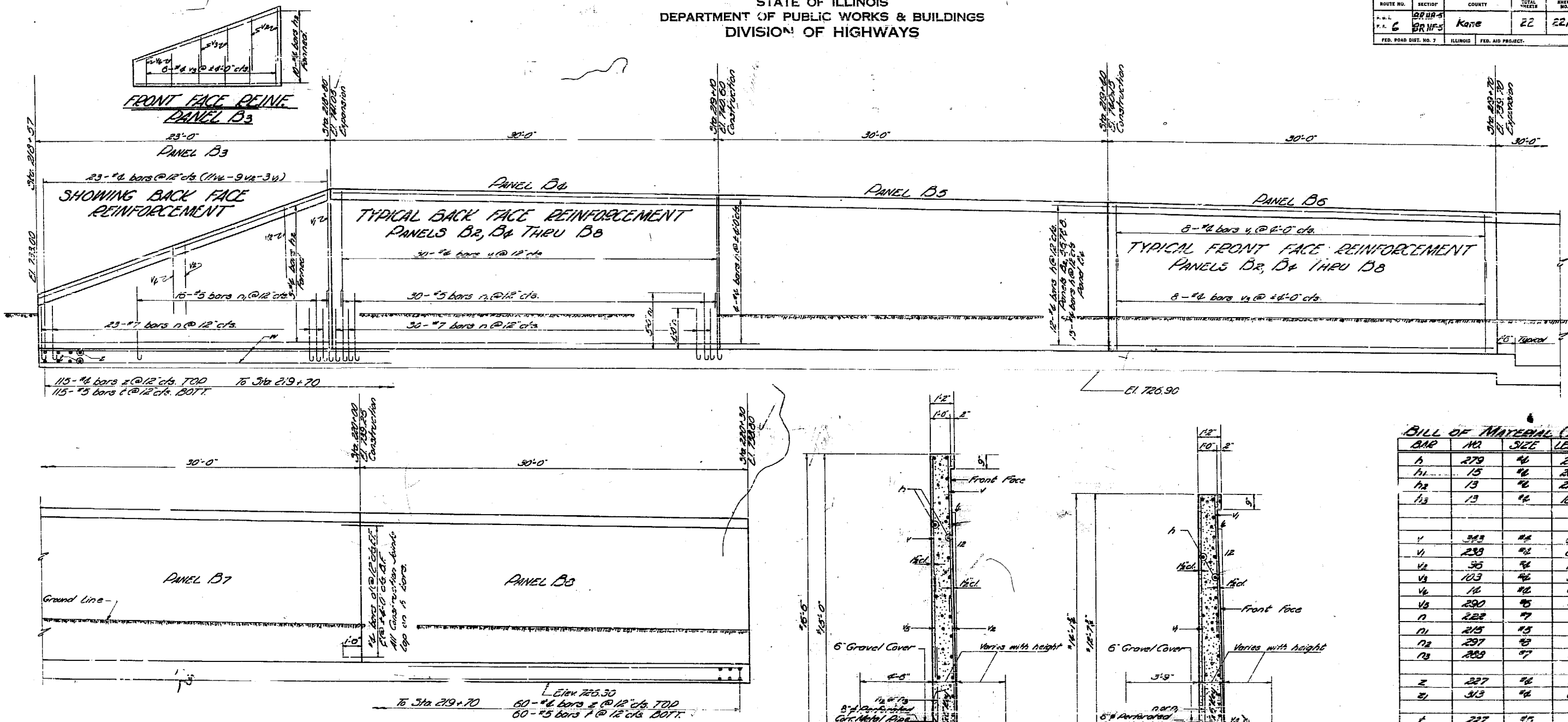
DESIGNED	<i>Tom A. Sand</i>	EXAMINED	<i>Dec. 31 1958</i>
CHECKED	<i>T. Tavano</i>	PASSED	<i>[Signature]</i>
DRAWN	<i>W. A. Sausman</i>	APPROVED	<i>[Signature]</i>
CHECKED	<i>T. Tavano</i>		

PILE DETAIL  
ELGIN BY-PASS OVER ST. CHARLES  
F.A. 27.6 SEC. 82-HB-5  
KANE COUNTY  
STA. 218+04.95

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	BRHB-5 BRHF-5	Kane	22	22A
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. /  
SHEETS



BILL OF MATERIAL (2 WALLS)

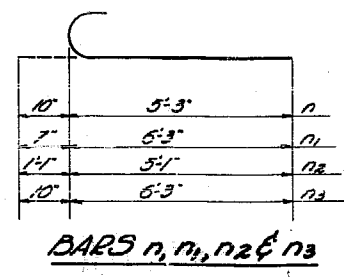
BAR	NO.	SIZE	LENGTH	SHAPE
h	279	#6	29'-9"	—
h1	15	#6	20'-9"	—
h2	13	#6	22'-9"	—
h3	13	#6	18'-9"	—
v	343	#4	5'-6"	—
v1	239	#4	8'-0"	—
v2	30	#4	7'-0"	—
v3	103	#4	5'-0"	—
v4	14	#4	6'-0"	—
v5	290	#5	3'-6"	—
n	222	#7	6'-1"	C
n1	215	#5	6'-10"	C
n2	297	#5	6'-2"	C
n3	289	#7	7'-1"	C
z	227	#6	7'-3"	—
z1	313	#6	8'-6"	—
f	227	#5	7'-3"	—
f1	412	#5	8'-6"	—
w	135	#4	3'-0"	—
w1	8	#4	25'-0"	—
d	193	#4	2'-0"	—
Class X Concrete		Cu Yds.	3219	
Reinforcement Bars		Lbs.	36,990	
Class A Excav for Struct.		Cu Yds.	340	
Perforated Corr. Metal Pipe Lin. Ft.		**	619	
Porous Granular Embankment		Cu Yds.	40	

**GENERAL NOTES**  
Class X Concrete shall be used throughout.  
The back of the wall from the top of footing to ground line shall be waterproofed in accordance with Article 51.21 of the Standard Specifications.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Class X Concrete	Cu Yds.	3219
Reinforcement Bars	Lbs.	36,990
Perforated Corrugated Metal Pipe	Lin. Ft.	619
Class A Excavation for Structures	Cu Yds.	340
Porous Granular Embankment	Cu Yds.	40

**DESIGN STRESSES**  
F<sub>c</sub> 1000 psi  
F<sub>s</sub> 20,000 psi  
n = 10  
Max. Footing Pressure = 3.22 K/P.



DESIGNED: [Signature]  
CHECKED: M. S. Raville  
DRAWN: [Signature]  
CHECKED: [Signature]  
EXAMINED: M. Romie  
PASSED: [Signature]  
APPROVED: R. B. [Signature]

LAYOUT OF RETAINING WALLS  
F.A.P. 6 (SEC. 8.P) Sec. BRHB-5  
KANE COUNTY  
STATIONS 218+57 TO 220+30

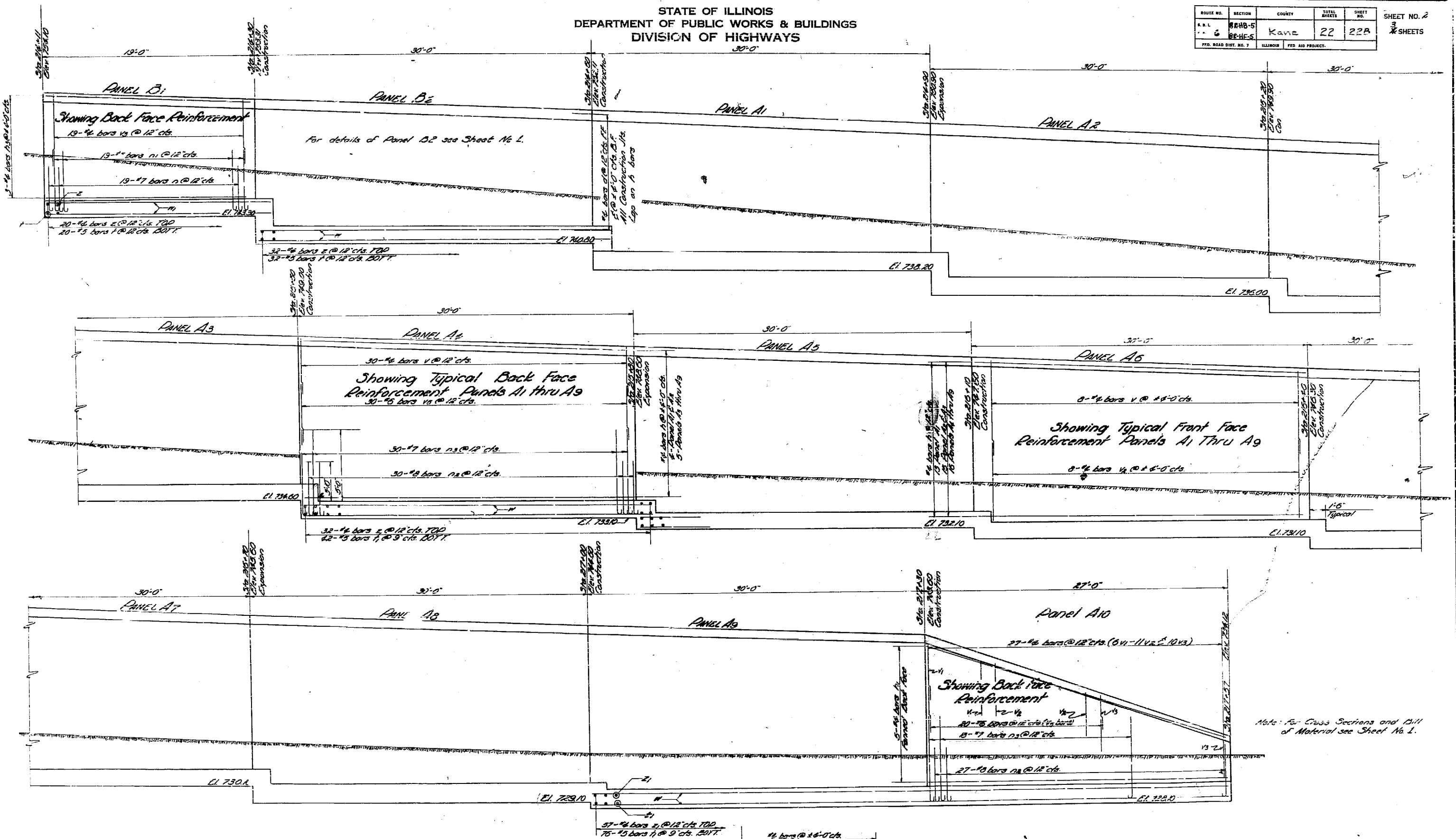
\*\*Includes 100' of 8" Perforated Corr. Metal Pipe for future connection to main sewer.



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	BR-HB-5	KANE	22	22A
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT.	

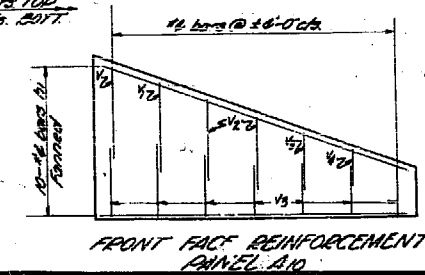
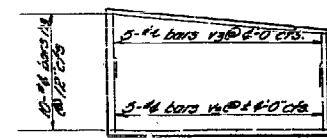
SHEET NO. 2  
3 SHEETS



Note: For Cross Sections and Bill of Material see Sheet No. 1.

DESIGNED *[Signature]*  
CHECKED *[Signature]*  
DRAWN *[Signature]*  
CHECKED *[Signature]*

Nov. 19 19 58  
EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*



ELEVATION OF RETAINING WALLS  
F.A. PT. 6 (SEC. 8B) Sec. 8R-HB-5  
KANE COUNTY BR-HB-5  
STATIONS 214+11 TO 217+57.

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

BR-HB-5	Kane	22	22C
BR-HF-5			

SHEET NO 3  
5 SHEETS

FOUNDATION BORINGS

Project: Ridge Detention Wall on Russell St  
Station: 214+11 to 214+57  
Date: July 23, 1958  
County: Kane

Elevation	Blows per Foot	Notes
749.5		Surface of Ground
748.5		Medium to dense brown silty clay
747.5	6.04	Hard brown clay till
746.5	10.00	
745.5	12.00	
744.5	15.00	
743.5	18.00	
742.5	22.00	
741.5	25.00	
740.5	28.00	
739.5	32.00	
738.5	35.00	
737.5	38.00	
736.5	42.00	
735.5	45.00	
734.5	48.00	
733.5	52.00	
732.5	55.00	
731.5	58.00	
730.5	62.00	

Very dense brown pebbly graded subangular sand and associated gravel.  
Surface of Ground.  
Medium brown sand and gravel.  
Very stiff brown clay till.  
Hard brown sandy clay.  
Very dense brown subangular well graded gravel.  
Hard brown clay till.  
Hard gray clay till.

FOUNDATION BORINGS

Project: Ridge Detention Wall on Russell St  
Station: 215+00 to 215+48  
Date: July 23, 1958  
County: Kane

Elevation	Blows per Foot	Notes
730.0		Surface of Ground
729.0		Medium brown sand and gravel
728.0	2.00	Very stiff brown clay till
727.0	4.00	Hard brown sandy clay
726.0	6.00	
725.0	8.00	
724.0	10.00	
723.0	12.00	
722.0	14.00	
721.0	16.00	
720.0	18.00	
719.0	20.00	
718.0	22.00	
717.0	24.00	
716.0	26.00	
715.0	28.00	
714.0	30.00	
713.0	32.00	
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538.0	382.00	
537.0	384.00	
536.0	386.00	
535.0	388.00	
534.0	390.00	
533.0	392.00	
532.0	394.00	
531.0	396.00	
530.0	398.00	
529.0	400.00	
528.0	402.00	
527.0	404.00	
526.0	406.00	
525.0	408.00	
524.0	410.00	
523.0	412.00	
522.0	414.00	
521.0	416.00	
520.0	418.00	
519.0	420.00	
518.0	422.00	
517.0	424.00	
516.0	426.00	
515.0	428.00	
514.0	430.00	
513.0	432.00	
512.0	434.00	
511.0	436.00	
510.0	438.00	
509.0	440.00	
508.0	442.00	
507.0	444.00	
506.0	446.00	
505.0	448.00	
504.0	450.00	
503.0	452.00	
502.0	454.00	
501.0	456.00	
500.0	458.00	
499.0	460.00	
498.0	462.00	
497.0	464.00	
496.0	466.00	
495.0	468.00	
494.0	470.00	
493.0	472.00	
492.0	474.00	
491.0	476.00	
490.0	478.00	
489.0	480.00	
488.0	482.00	
487.0	484.00	
486.0	486.00	
485.0	488.00	
484.0	490.00	
483.0	492.00	
482.0	494.00	
481.0	496.00	
480.0	498.00	
479.0	500.00	
478.0	502.00	
477.0	504.00	
476.0	506.00	
475.0	508.00	
474.0	510.00	
473.0	512.00	
472.0	514.00	
471.0	516.00	
470.0	518.00	
469.0	520.00	
468.0	522.00	
467.0	524.00	
466.0	526.00	
465.0	528.00	
464.0	530.00	
463.0	532.00	
462.0	534.00	
461.0	536.00	
460.0	538.00	
459.0	540.00	
458.0	542.00	
457.0	544.00	
456.0	546.00	
455.0	548.00	
454.0	550.00	
453.0	552.00	
452.0	554.00	
451.0	556.00	
450.0	558.00	
449.0	560.00	
448.0	562.00	
447.0	564.00	
446.0	566.00	
445.0	568.00	
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443.0	572.00	
442.0	574.00	
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439.0	580.00	
438.0	582.00	
437.0	584.00	
436.0	586.00	
435.0	588.00	
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432.0	594.00	
431.0	596.00	
430.0	598.00	
429.0	600.00	
428.0	602.00	
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421.0	616.00	
420.0	618.00	
419.0	620.00	
418.0	622.00	
417.0	624.00	
416.0	62	