

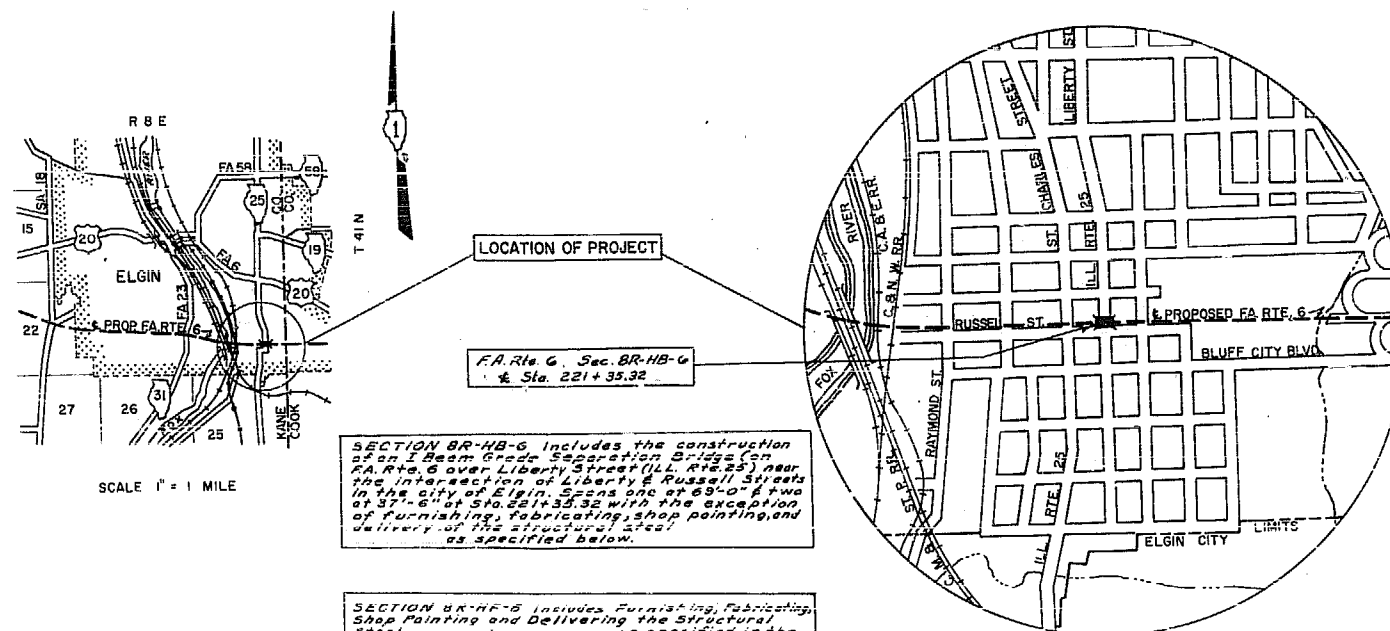
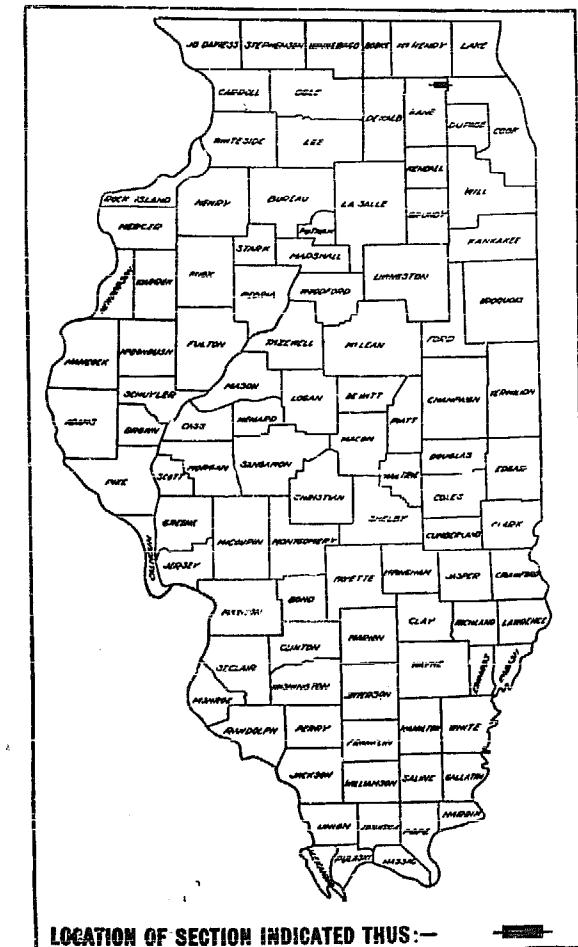
**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID HIGHWAY**

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
6	BR-HB-6 BR-HF-6	KANE	15 6	1
S. P. R. REG. 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.

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



SECTION BR-HB-6 includes the construction of an I-Beam Grade Separation Bridge (on F.A. Rte. 6 over Liberty Street (Ill. Rte. 25) near the intersection of Liberty & Russell Streets in the city of Elgin. Spans one at 69'-0" & two at 37'-6" at Sta. 221+35.32 with the exception of furnishing, fabricating, shop painting, and delivery of the structural steel as specified below.

SECTION BR-HF-6 includes furnishing, fabricating, shop painting and delivering the Structural Steel as specified in the Note, for an I-Beam Grade Separation Structure (on F.A. Rte. 6 over Liberty Street (Ill. Rte. 25) near the intersection of Liberty & Russell Streets in the city of Elgin. Spans one at 69'-0" & two at 37'-6" at Sta. 221+35.32.

**Note:**  
 Structural Steel shall be delivered F.O.B. National Street Station in the city of Elgin of the Chicago, Milwaukee, St. Paul and Pacific R.R. except that delivery may be made F.O.B. Bridge Site by truck if suitable arrangements are made with the contractor for Section BR-HB-6.

SCALE 1" = 800 FEET  
 Net Length Of Project U-613(3)  
 1475 Lin. Ft. = .288 Mile

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

SUBMITTED Sept. 15, 1958  
*E. S. Magowan*  
 DISTRICT ENGINEER

EXAMINED Sept. 26, 1958  
*Arthur J. ...*  
 ENGINEER OF ROAD PLANS AND CONTRACTS

PASSED Sept. 26, 1958  
*...*  
 CHIEF ENGINEER

APPROVED Sept. 26, 1958  
*...*  
 CHIEF HIGHWAY ENGINEER

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

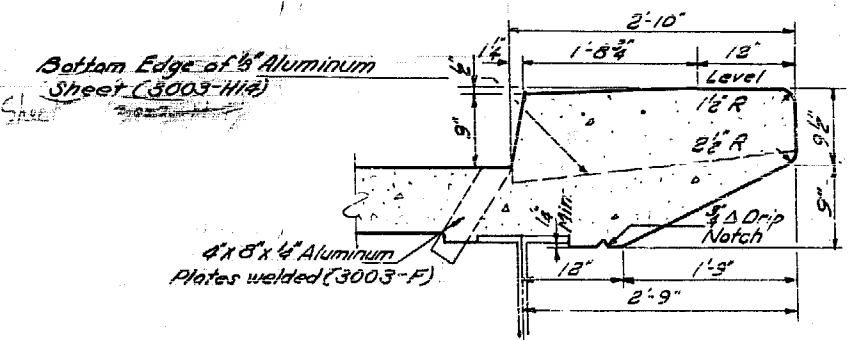
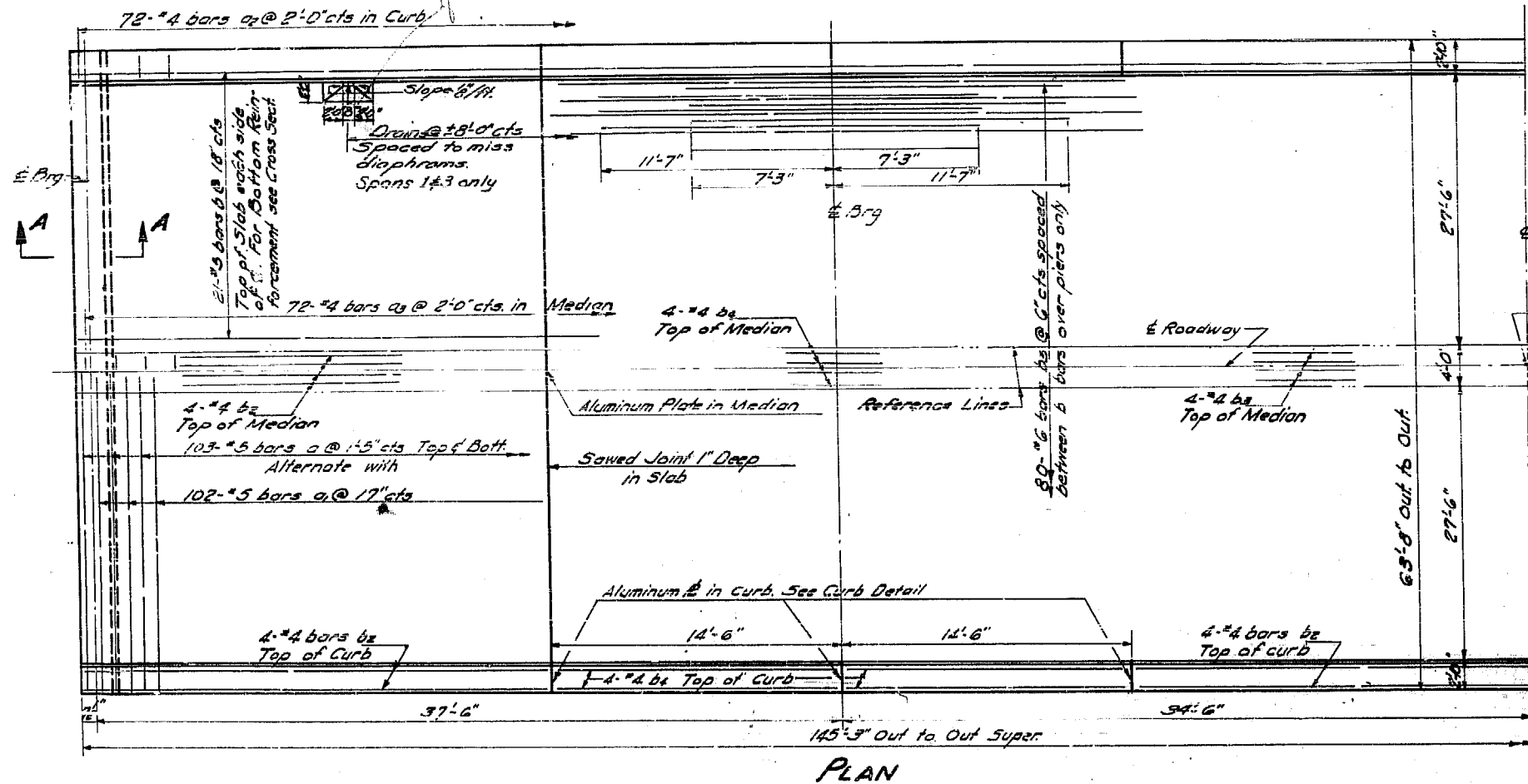
APPROVED \_\_\_\_\_  
 DIVISION ENGINEER

DATE \_\_\_\_\_

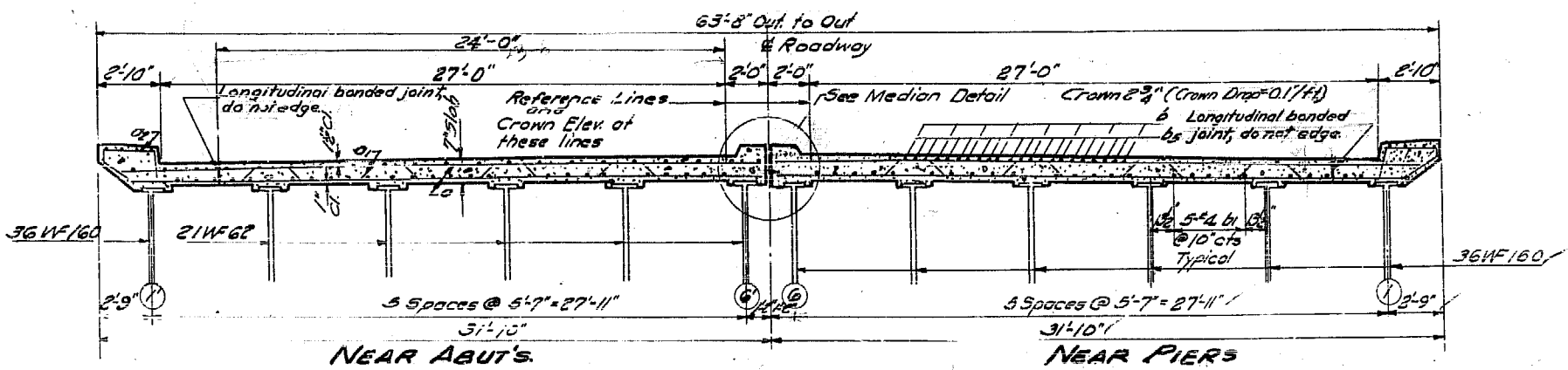
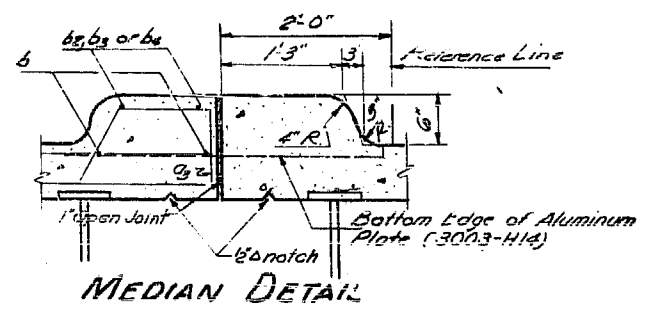
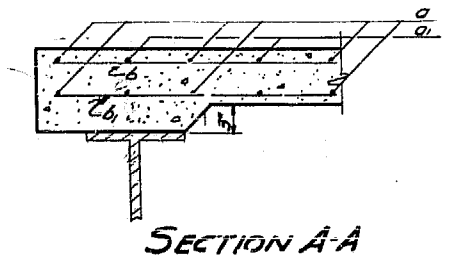
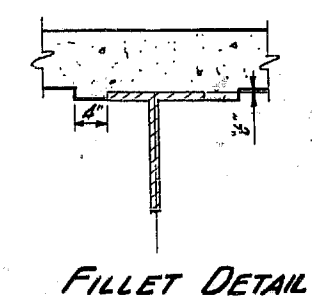


**METHOD OF DETERMINING FILLET HEIGHT**

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 deflections for these points, determined from the DL Deflection Diagram. The elevations so obtained, subtracted from the Theoretical grade elevations, minus the floor thickness, equals the fillet heights above top of beam.



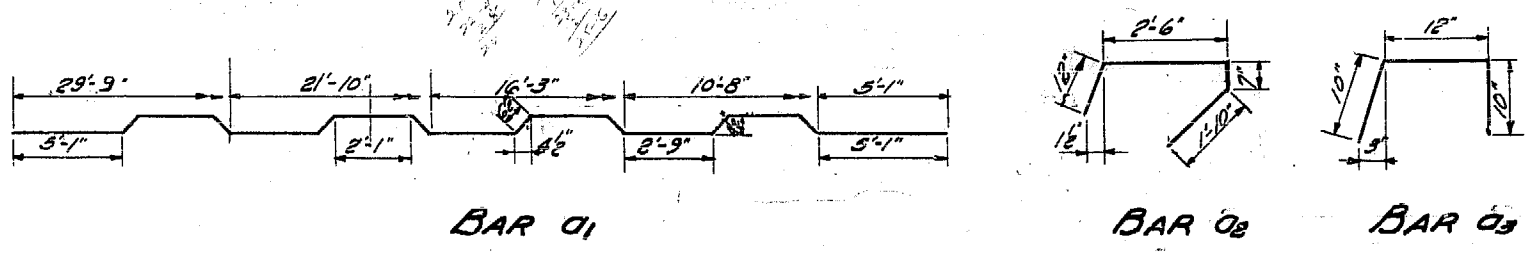
Cost of Aluminum Sheets and Floor Drains to be incidental to Contract.



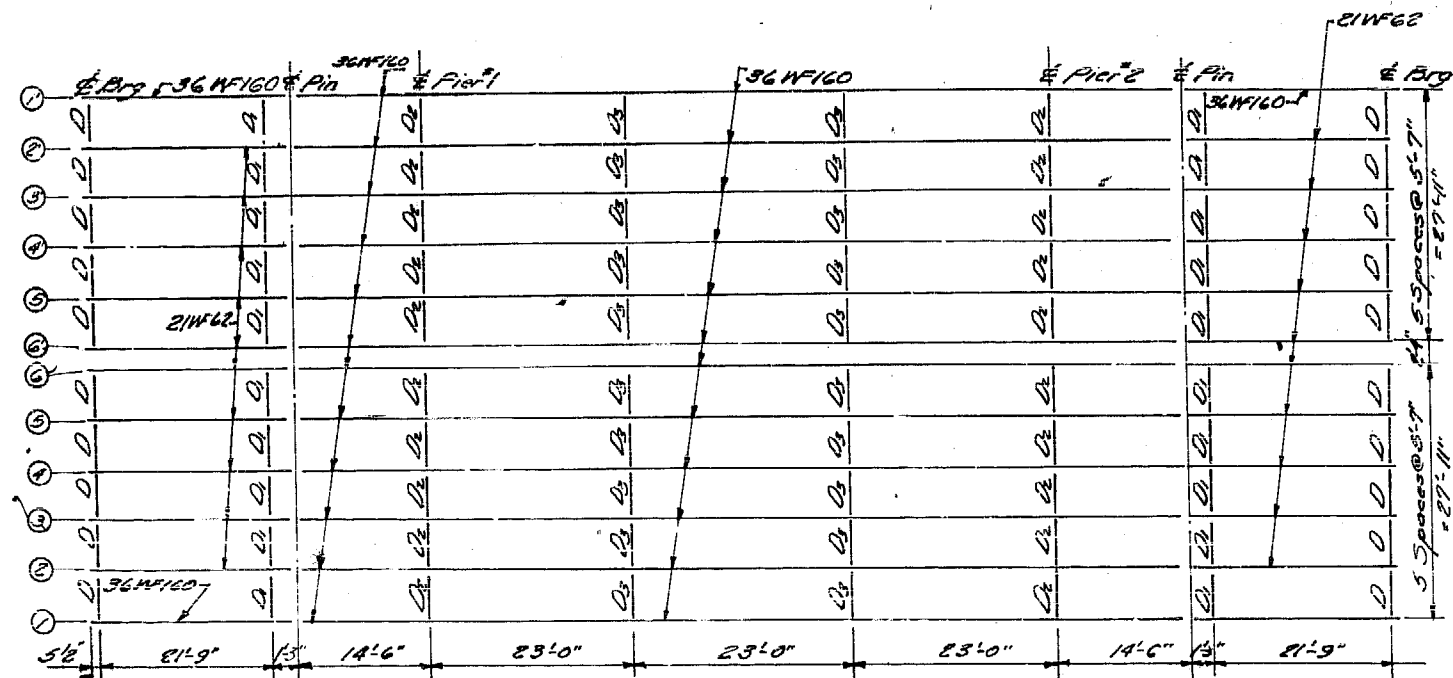
**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
a	#12	5 30'-0"	
a1	#04	5 31'-1"	
a2	#44	4 5'-11"	U
a3	#44	4 2'-8"	U
b	#94	5 21'-9"	
b1	#50	1 22'-3"	
b2	#4	4 23'-4"	
b3	#2	4 20'-6"	
b4	#48	4 14'-2"	
b5	#60	6 13'-10"	
Class X Concrete			Cu. Yds. 244.5
Reinforcement Bars			Lbs. 57,880
Structural Steel			Lbs. 276,200

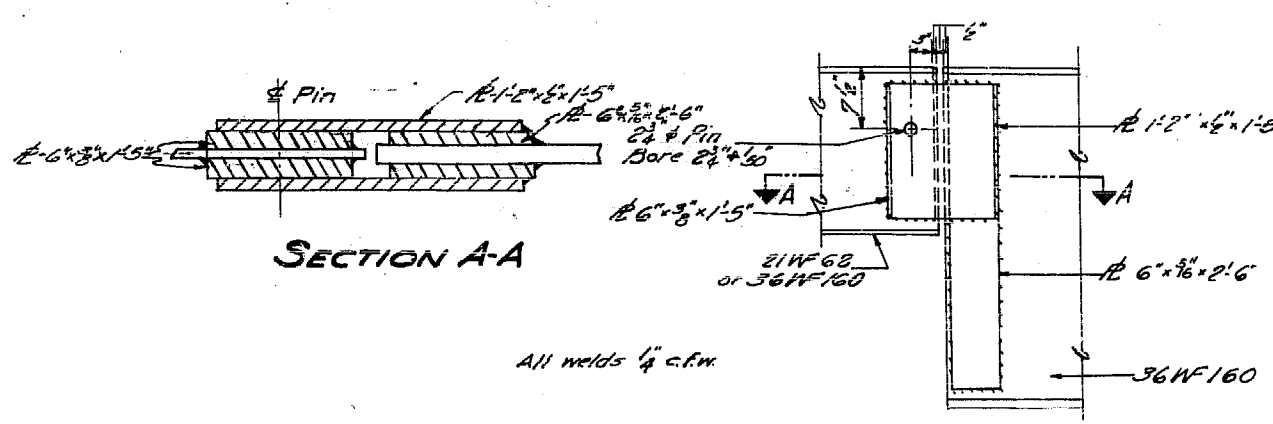
DESIGNED: [Signature]  
 CHECKED: [Signature]  
 DRAWN: [Signature]  
 EXAMINED: [Signature] DATE 30 19 58  
 PASSED: [Signature]  
 APPROVED: [Signature]



**SUPERSTRUCTURE**  
 F.A. RT. 6 SEC. BR-HB-6  
 KANE COUNTY  
 STA. 221+35.32

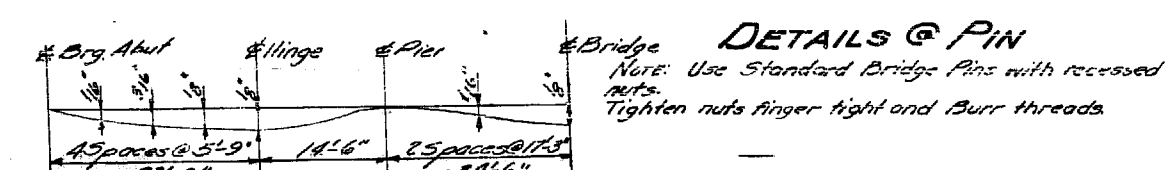


PLAN OF STRUCTURAL STEEL



SECTION A-A

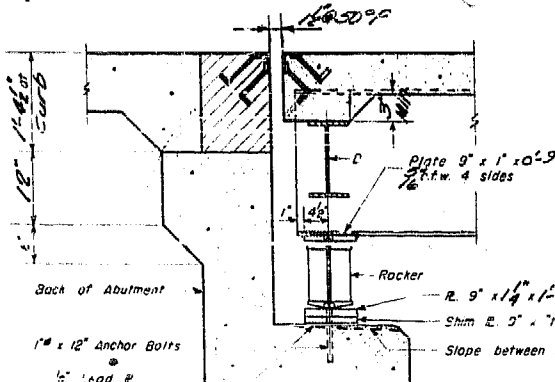
All welds 1/4 c.f.w.



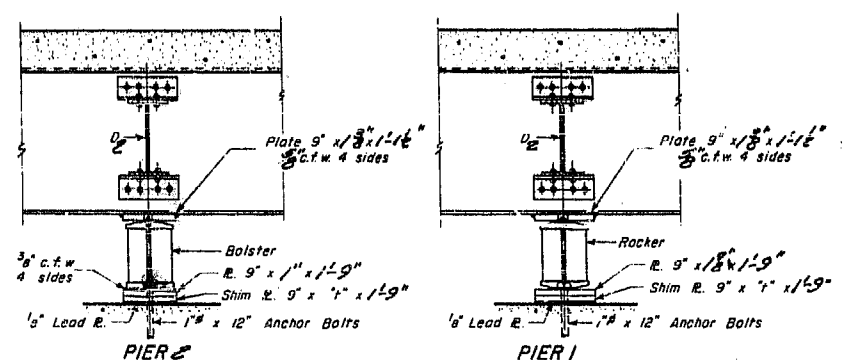
DL DEFLECTION DIAGRAM

DETAILS @ PIN

Note: Use Standard Bridge Pins with recessed nuts. Tighten nuts finger tight and Burr threads.

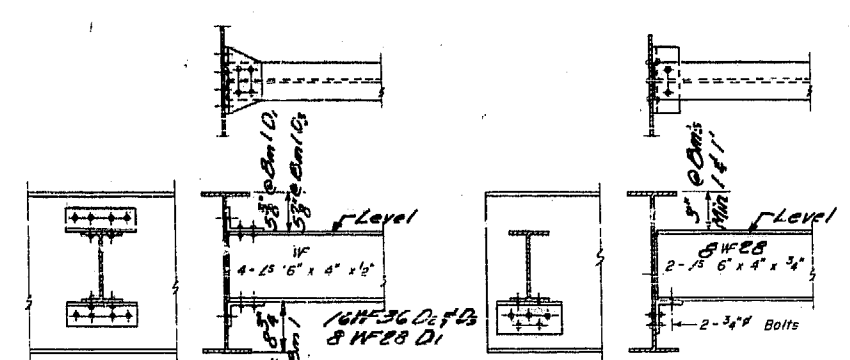


SECTION AT ABUTMENT



PIER 2

PIER 1

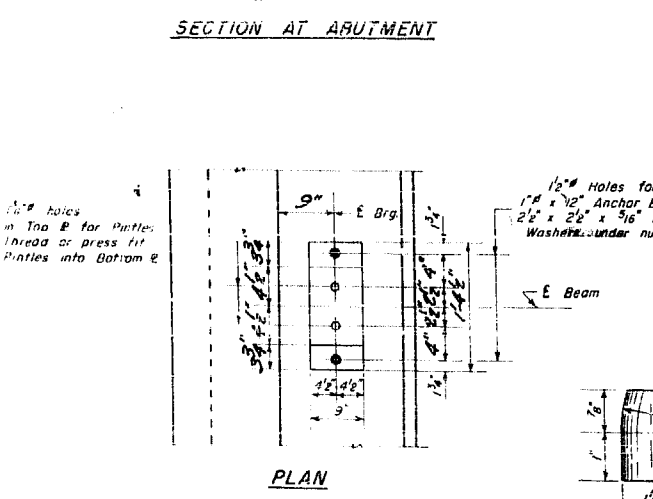


DIAPHRAGMS D1, D2, D3

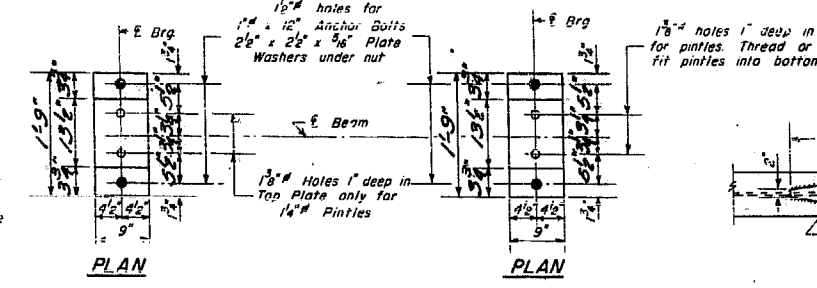
DIAPHRAGM D4

Location	Org. W. Ab.	W. Hinge	E. Hinge	Org. E. Ab.
Elav. Em'.	750.70	750.38	748.85	748.44
Bm 2	750.75	750.43	748.90	748.49
Bm 3	750.80	750.48	748.95	748.54
Bm 4	750.85	750.53	749.00	748.59
Bm 5	750.90	750.58	749.05	748.64
Bm 6	750.95	750.63	749.10	748.69

Note: All Beams are parallel.

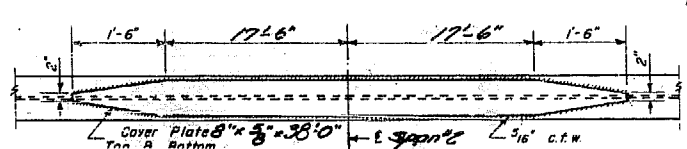


PLAN

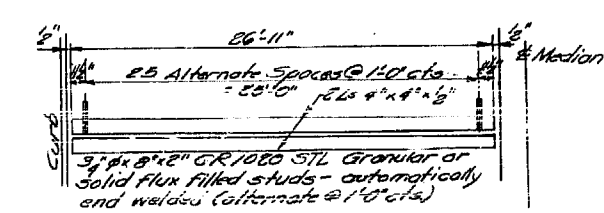


PLAN

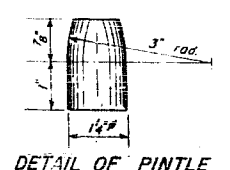
PLAN



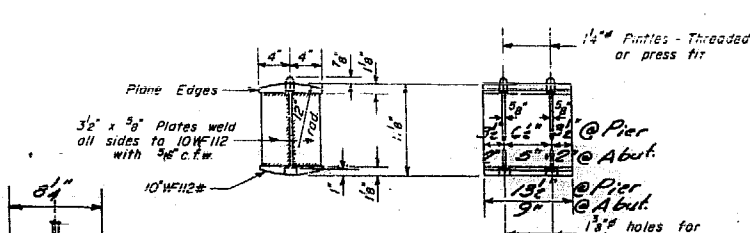
DETAIL OF COVER PLATES



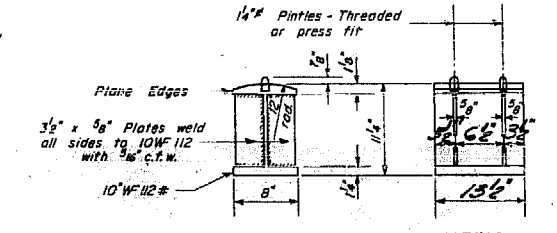
DETAILS OF EXPANSION DEVICE



DETAIL OF PINTLE



DETAIL OF BEARING AT PIER 1



DETAIL OF BEARING AT PIER 2

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: [Signature]  
EXAMINED: [Signature]  
PASSED: [Signature]  
APPROVED: [Signature]

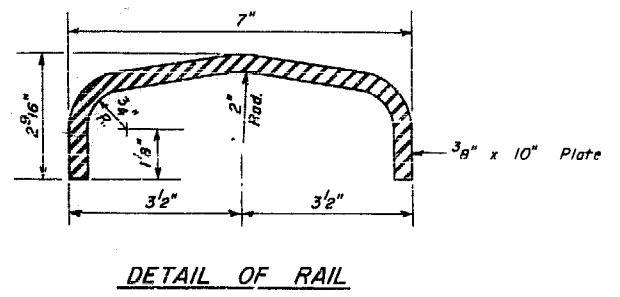
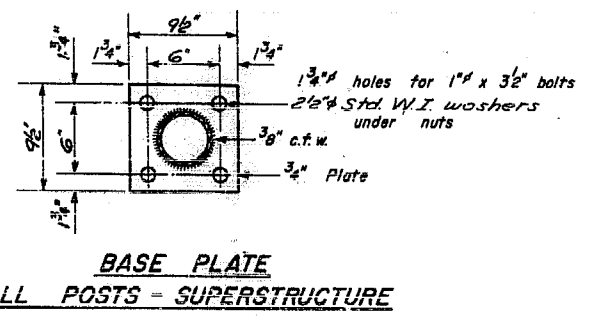
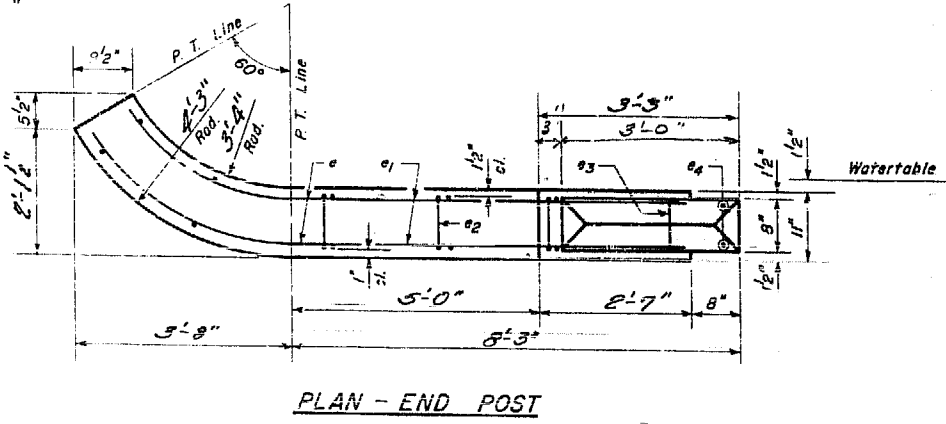
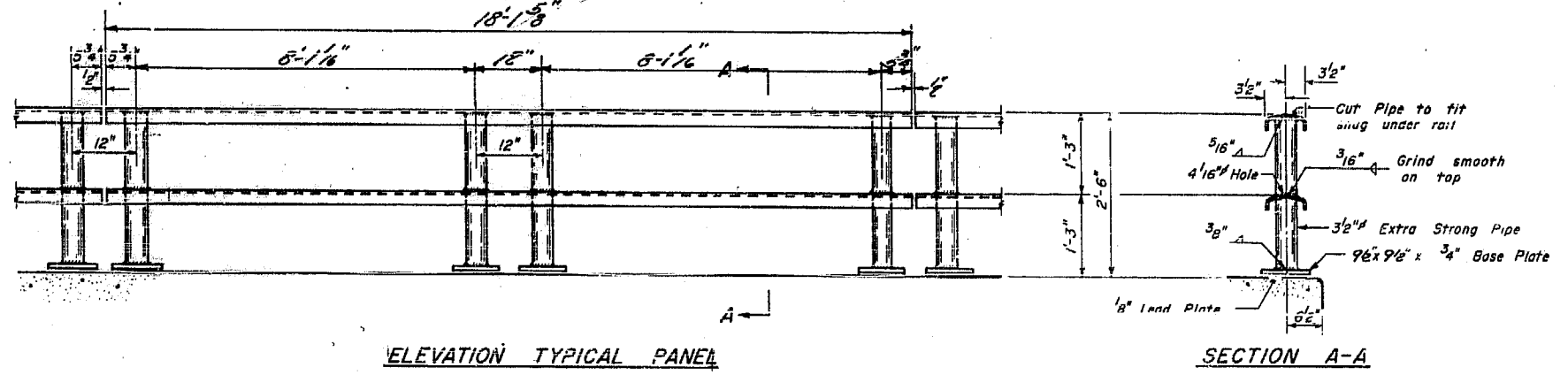
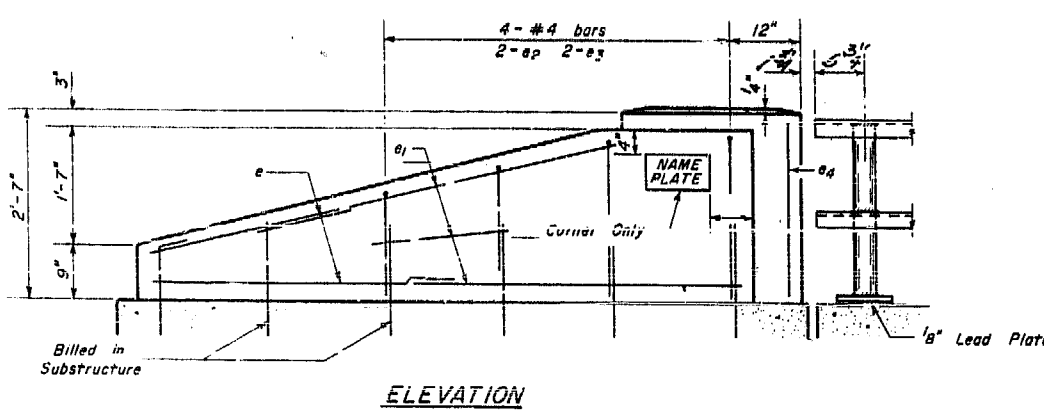
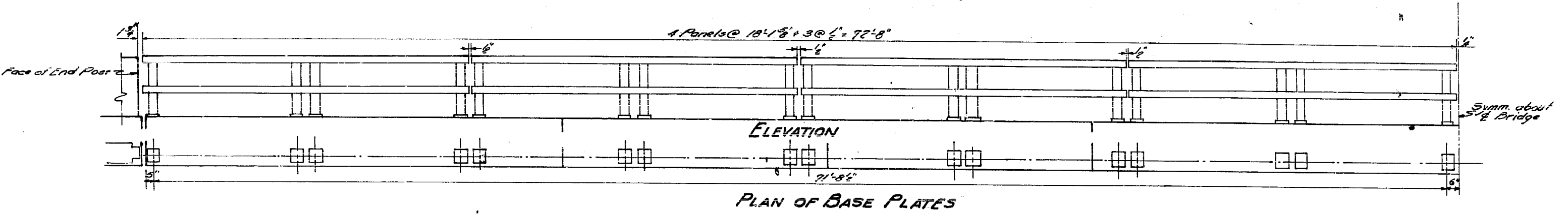
	1	2	3	4	5	6
Abutts			9'6"		9'6"	
Piers		9'6"		9'6"		9'6"

STRUCTURAL STEEL  
P.A. RT. 6 SEC. 8R-HB-6  
KANE COUNTY  
STA. 221+3532

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 6	BR-HB-6	KANS	15	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7  
OF 8 SHEETS



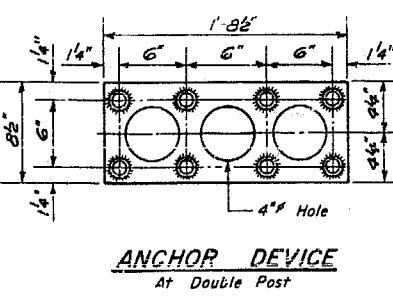
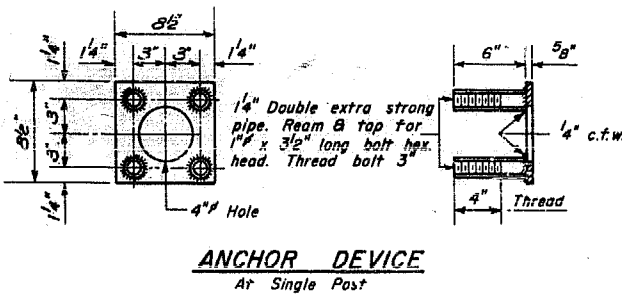
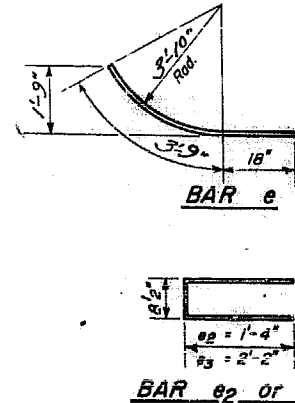
**BILL OF MATERIAL**

Handrail Concrete	Cu Yd	2.9
Reinforcement Bars	Lbs.	230
Metal Handrail	Lin. Ft.	291

Note: Provide 2-1/4" x 1-1/8" shim plates for 50% of rail posts. Punch shim plates same as base plate.

**BILL OF REINFORCEMENT**

Bar	No.	Size	Length	Shape
e	16	#4	52'-9"	
e1	24	#4	71'-0"	
e2	8	#4	3'-4"	
e3	8	#4	5'-0"	
e4	8	#4	2'-3"	



HANDRAIL DETAILS  
F.A. RT. 6 SEC. 8-R-HB-6  
KANE COUNTY  
STA. 221+35.32

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: W.A. Sausaman  
CHECKED: [Signature]

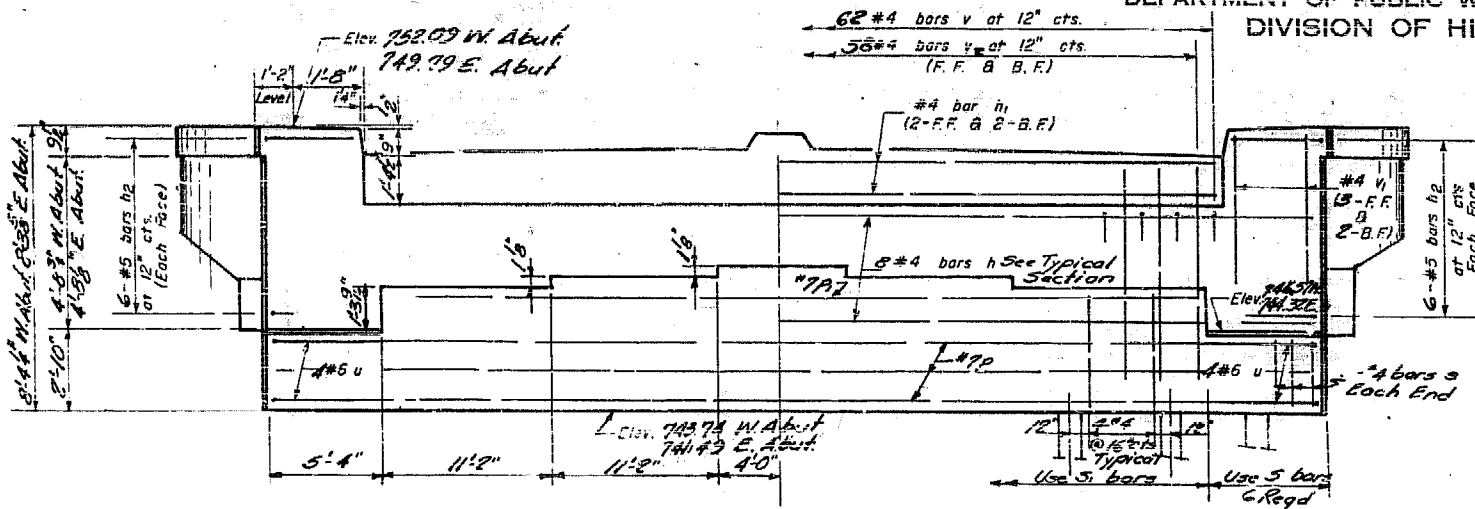
EXAMINED: [Signature]  
PASSED: [Signature]  
APPROVED: [Signature]

DEC. 30 19 58

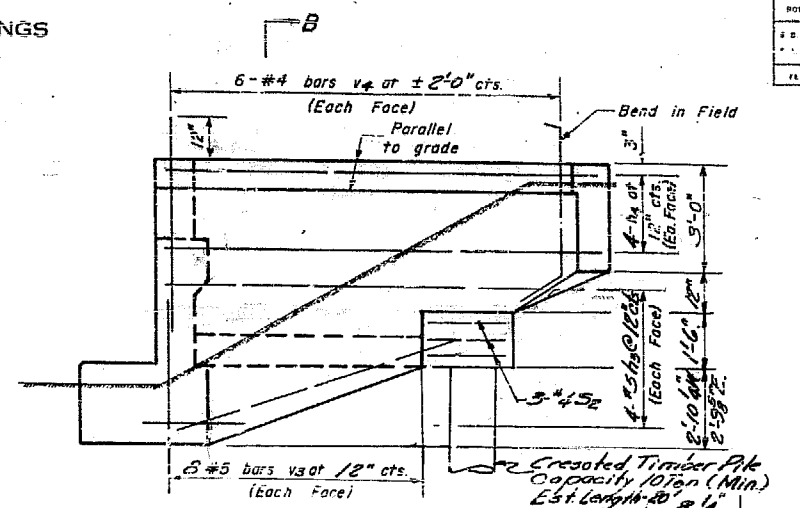
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	8R-HB-6	KANE	15	8
F&D ROAD DIST. NO. 7		ILLINOIS		REC. AID. PROJ. NO.

SHEET NO. 8  
8 SHEETS



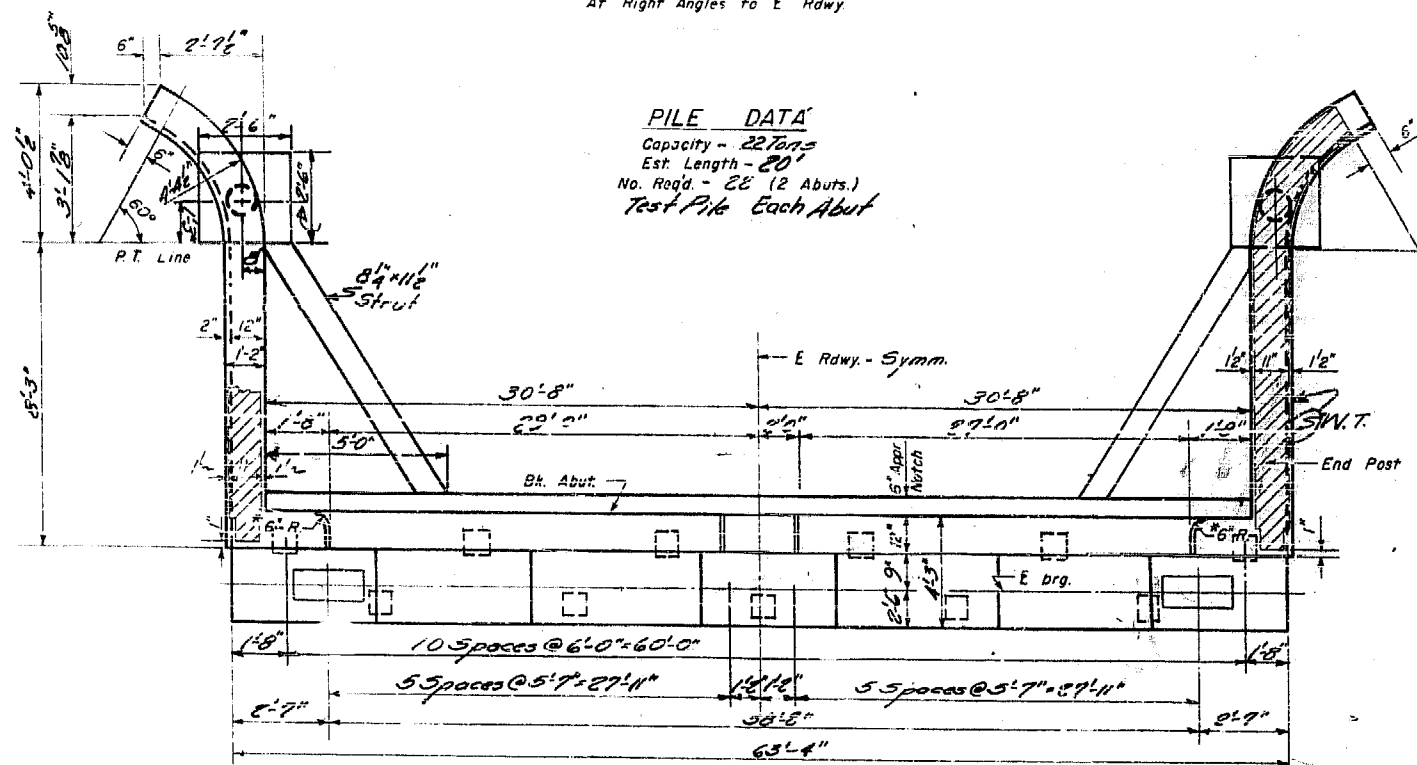
ELEVATION  
At Right Angles to E. Rdwy



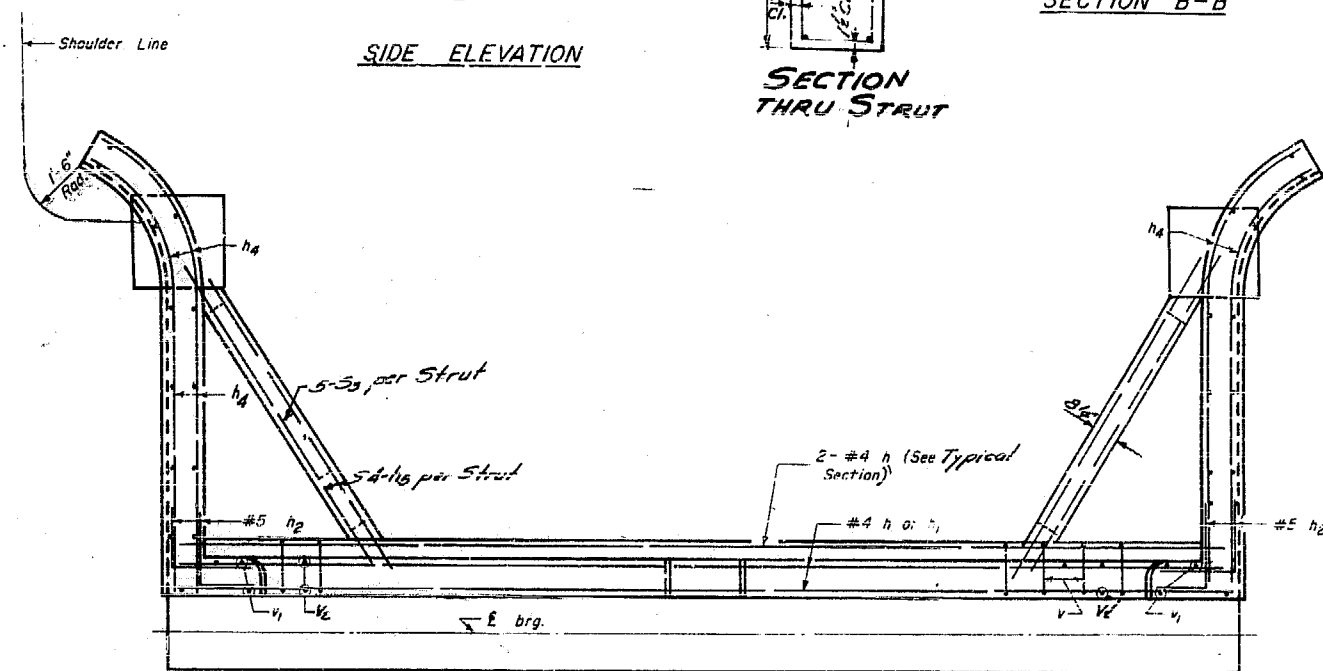
SIDE ELEVATION

SECTION B-B

SECTION THRU STRUT



PLAN OF ABUTMENT  
Dimensions



PLAN OF ABUTMENT  
Reinforcement & Pile Spacing

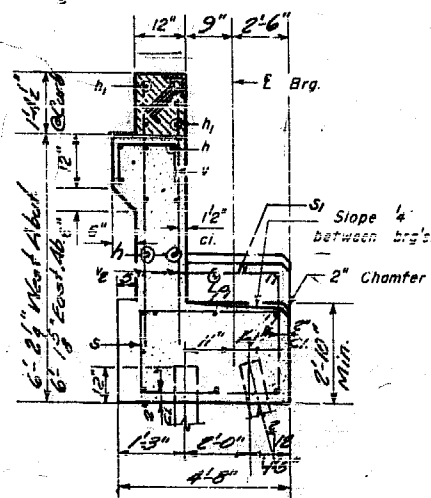
BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
h	32	#4	31'6"	—					
h1	16	#4	30'0"	U	16	#6	12'5"	—	
h2	48	#5	1'0"	L					
h3	32	#5	8'0"	—					
h4	32	#5	12'0"	—					
h5	16	#6	11'0"	—	v	12A	#4	2'9"	□
					v1	20	#4	6'6"	—
P1	32	#7	33'0"	—	v2	16	#4	1'5"	—
P1	12	#7	27'9"	—	v3	64	#4	6'0"	—
S	24	#4	13'7"	□	v4	48	#4	1'0"	—
S1	63	#4	16'0"	□					
S2	12	#4	9'5"	□					
S3	20	#3	3'0"	□					

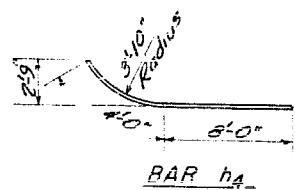
BILL OF MATERIAL

Item	Unit	Quantity
Class X Concrete	Cu Yd.	113.8
Reinforcement Bars	Lb.	7400
Concrete Piles	Lin. Ft.	400
Test Piles - Conc.	Each	TWO
Corroded Piles	Lin. Ft.	20

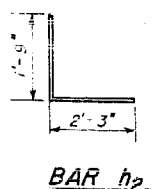
ABUTMENTS  
F.A. R.T.G. SEC. 8-HB-6  
KANE COUNTY  
STA. 221+55.32



TYPICAL SECTION THRU ABUTMENT



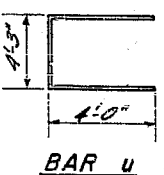
BAR h4



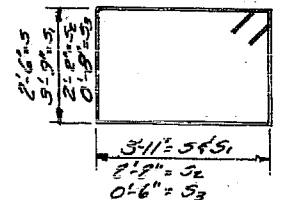
BAR h2



BAR v



BAR u



BARS S1, S2, S3

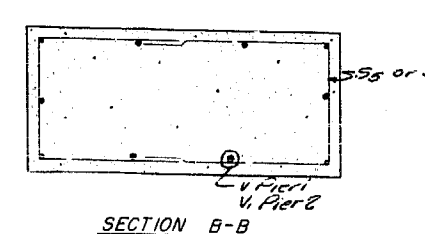
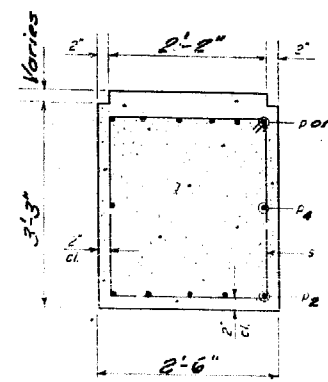
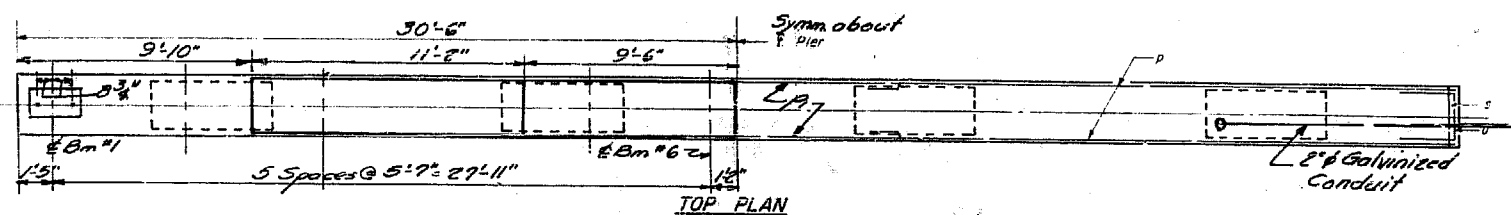
Note: Contractor shall construct curb without radius when a curb B gutter arc to be used on bridge approaches (See Road Plans).

SIGNED: *[Signature]*  
EXAMINED: *[Signature]*  
AWD: W. A. Sausaman  
DEC 30 1958

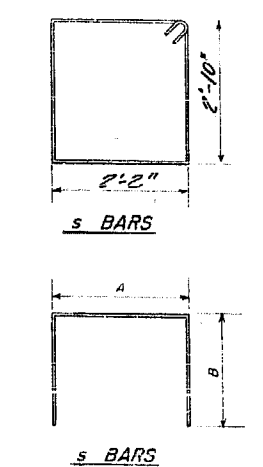
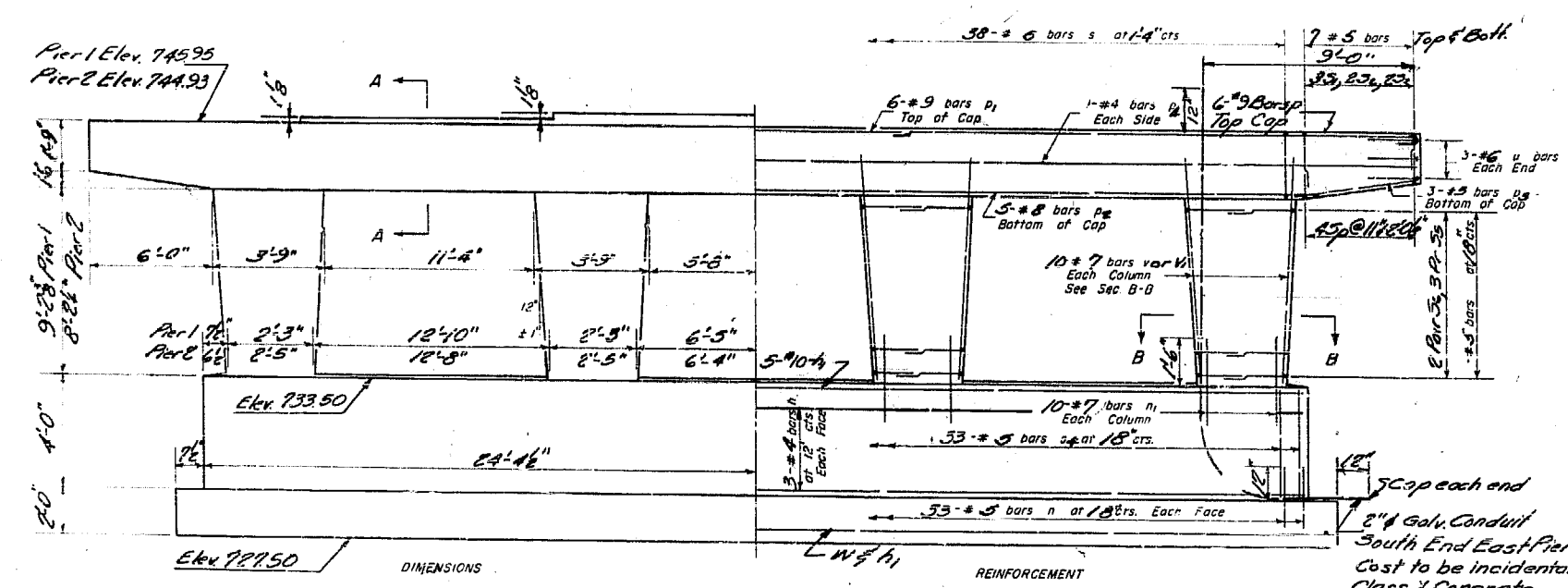
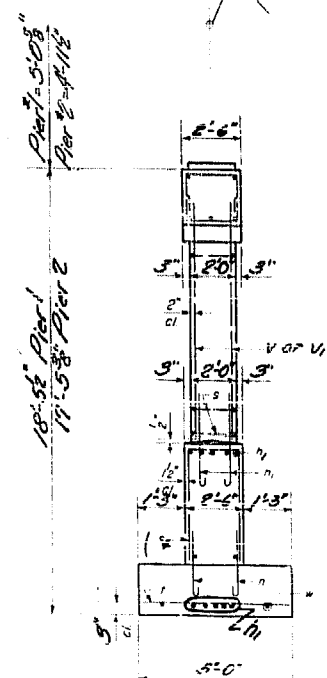
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.L.	F.A. 6	KANE	15	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 9  
8 SHEETS



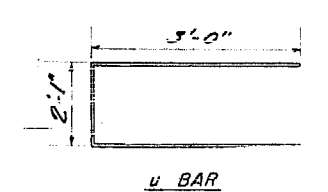
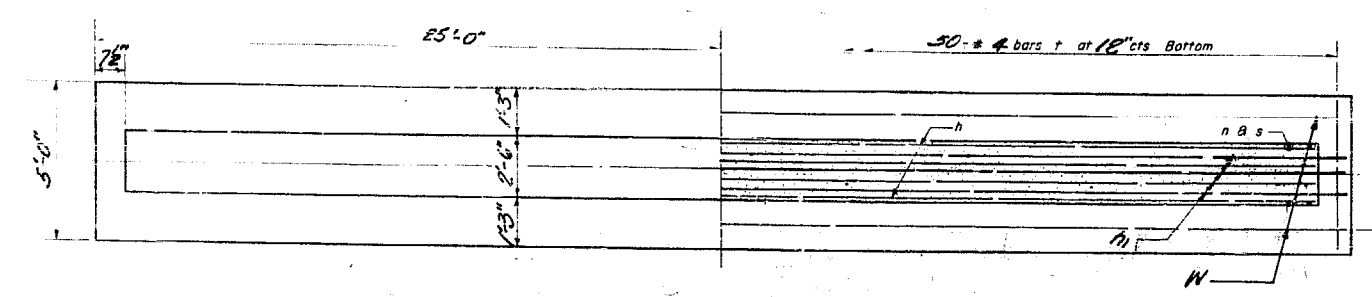
Pier #1 Sta 221+00.82  
Gr. El. 740.99  
Pier #2 Sta 221+69.82  
Gr. El. 749.91



PIER #2  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n	56	#4	25'-0"	□
n1	20	#10	18'-3"	□
n	192	#5	2'-7"	□
n1	80	#7	3'-10"	□
n	24	9	25'-3"	□
p1	12	9	17'-0"	□
p2	30	8	17'-0"	□
p3	12	5	7'-0"	□
p4	8	4	32'-0"	□
s	76	5	10'-9"	□
s1	24	5	6'-5"	□
s2	16	5	5'-8"	□
s3	16	5	5'-2"	□
s4	66	5	9'-8"	□
s5	48	4	7'-0"	□
s6	32	4	5'-6"	□
u	100	4	4'-9"	□
u	12	#6	8'-1"	□
v	40	#7	12'-0"	□
v1	40	#7	11'-0"	□
w	20	#4	26'-0"	□

Class X Concrete Cu Yds 1249  
Reinforcement Bars lbs 15010

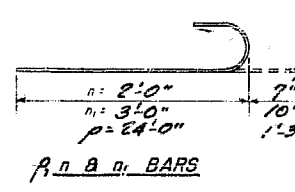


DESIGNED: *J. Fisher*  
CHECKED: *W. A. Sausaman*  
DRAWN: *W. A. Sausaman*  
CHECKED: *W. A. Sausaman*

EXAMINED: *W. A. Sausaman*  
PASSED: *E. J. Stuntz*  
APPROVED: *W. A. Sausaman*

DEC. 30 1958

Max Soil Pressure = 3.2 Tons/sq ft  
Ave. Soil Pressure = 2.3 Tons/sq ft



PIERS  
F.A. RT. 6 SEC. 8-HD-6  
KANE COUNTY  
STA. 221+35.32

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

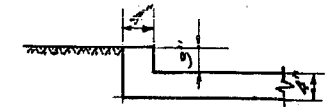
PROJECT NO.	SECTION	THICKNESS	TOTAL SHEETS	SHEET NO.
6	GRAB-6	KANE	15	10
SHEET NO.		SHEETS		

EAST ABUT		Elevation	Blow per Foot	Gr.
Boring No. 1 Boring located at Station 222+10, 15 Ft Lt Centerline.				
Surface of Ground	732.1			
Dark sandy silty gravelly clay.	729.0			
	727.0	75		
Very dense brown well graded subangular gravel.	726.0			
	724.5	74		
	723.5			
	722.5			
Medium brown well graded subangular gravel.	721.0	27		
	720.0			
Very dense brown well graded fine sand.	719.5	114		
	718.5			
	717.5			
	717.0	124		
Very dense brown well graded subangular gravel.	716.0			
	714.5	110		
	713.5			
	713.0			
Very stiff gray clay till.	712.0	25	2.66	
	711.0			
	710.0			
	709.5	16	1.52	
	708.5			
Stiff gray clay till.	707.0			
	706.0	16	1.48	
	704.5			
	703.5	15	1.38	
	703.0			
	702.0			
	701.0	25	2.75	
Very stiff gray clay till.	599.5	32	3.10	
	598.5			
	597.0			
	596.0	29	3.55	

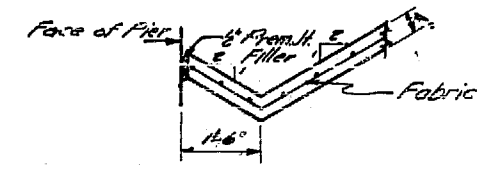
PIER 2		Elevation	Blow per Foot	Gr.
Boring No. 2 Boring located at Station 221+71, 15 Ft Rt Centerline.				
Surface of Ground	732.0			
Black silty clay.	731.0			
Very stiff mottled clay till.	727.5			
	727.0	82		
Very dense brown subangular well graded gravel.	726.0			
	724.5	64		
	723.5			
	723.0			
	722.0	20		
	721.0			
Medium brown subangular poorly graded gravel.	719.5	19		
	718.5			
	717.5			
	717.0	80		
Very dense brown subangular poorly graded silty clayey gravel.	716.0			
	714.5	20		
Stiff gray clay till.	713.5			Lost Sample
	712.0	7	1.55	
	711.0			
	709.5	13	1.92	
Stiff gray clay till.	708.5			
	707.0			
	706.0	12	1.72	
	705.0			
	704.5	15	3.14	
	703.5			
	702.0			
Very stiff gray clay till.	701.0	26	3.55	
	701.0			
	699.5	27	3.66	
	698.5			
	698.0			
Hard gray clay till.	697.0	31	4.00	
	696.0			
	695.0			
Very stiff gray clay till.	694.5	33	3.72	
	693.5			

PIER 1		Elevation	Blow per Foot	Gr.
Boring No. 3 Boring located at Station 221+00, 15 Ft Lt Centerline.				
Surface of Ground	732.6			
Medium brown silty sand and gravel.	720.5			
	720.5	35		
Dense brown subangular well graded gravel.	727.5			
	726.5			
	725.5			
	725.0	56		
Very dense brown subangular poorly graded gravel.	724.0			
	722.5			
	721.5	59		
	720.5			
	720.0	47		
	719.0			
Dense brown subangular poorly graded gravel.	717.5	41		
	716.5			
	715.5			
	715.0	102		
Very dense brown subangular poorly graded gravel.	714.0			
	712.5	140		
Very dense brown subangular poorly graded gravel.	711.5			
	710.0	RECURAL		
	709.0			
Hard gray stoney clay till.	708.5	85	6.54	
	707.5			
	706.5			

WEST ABUT		Elevation	Blow per Foot	Gr.
Boring No. 4 Boring located at Station 220+62, 15 Ft Rt Centerline.				
Surface of Ground	732.5			
Stiff black sandy silty clay.	729.5			
Very dense brown poorly graded subangular gravel.	727.0	77		
	726.0			
	725.0			
	724.5	34		
	723.5			
	722.0			
Dense brown well graded subangular gravel.	721.0			
	719.5	40		
	718.5			
	717.0	46		
	716.0			
	715.0			
	714.5	56		
Very dense brown well graded subangular gravel.	713.5			
	712.0			
Very dense brown well graded subangular gravel.	711.0	68		
	710.0			
	709.5			
Hard gray stoney clay till.	708.5	52	7.00	
	707.0			
	706.0	70	Measured	



SECTION A-A  
See Sheet #1



SECTION THRU GUTTER

Station 221+35.32  
Built 1954 by  
State of Illinois  
F.A.R.T. 6 Sec. 6R-NB-6  
F.A. Prod. U-613 (A)  
Loading HPO-516

NAME PLATE DATA  
See Standard 2113

DESIGNED: [Signature]  
CHECKED: [Signature]  
DRAWN: [Signature]  
CHECKED: [Signature]  
EXAMINED: [Signature] DEC. 30 1958  
PASSED: [Signature]  
APPROVED: [Signature]

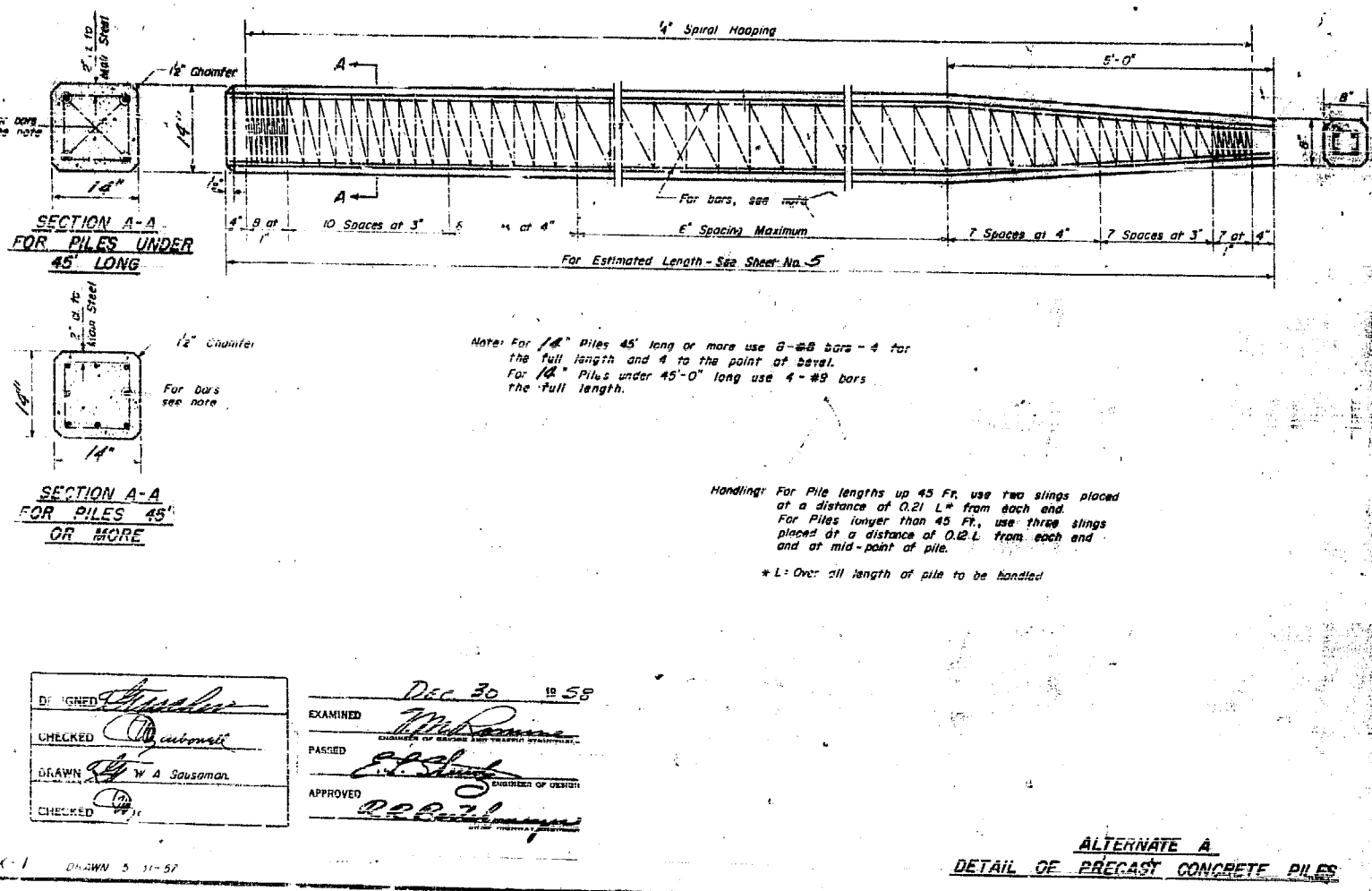
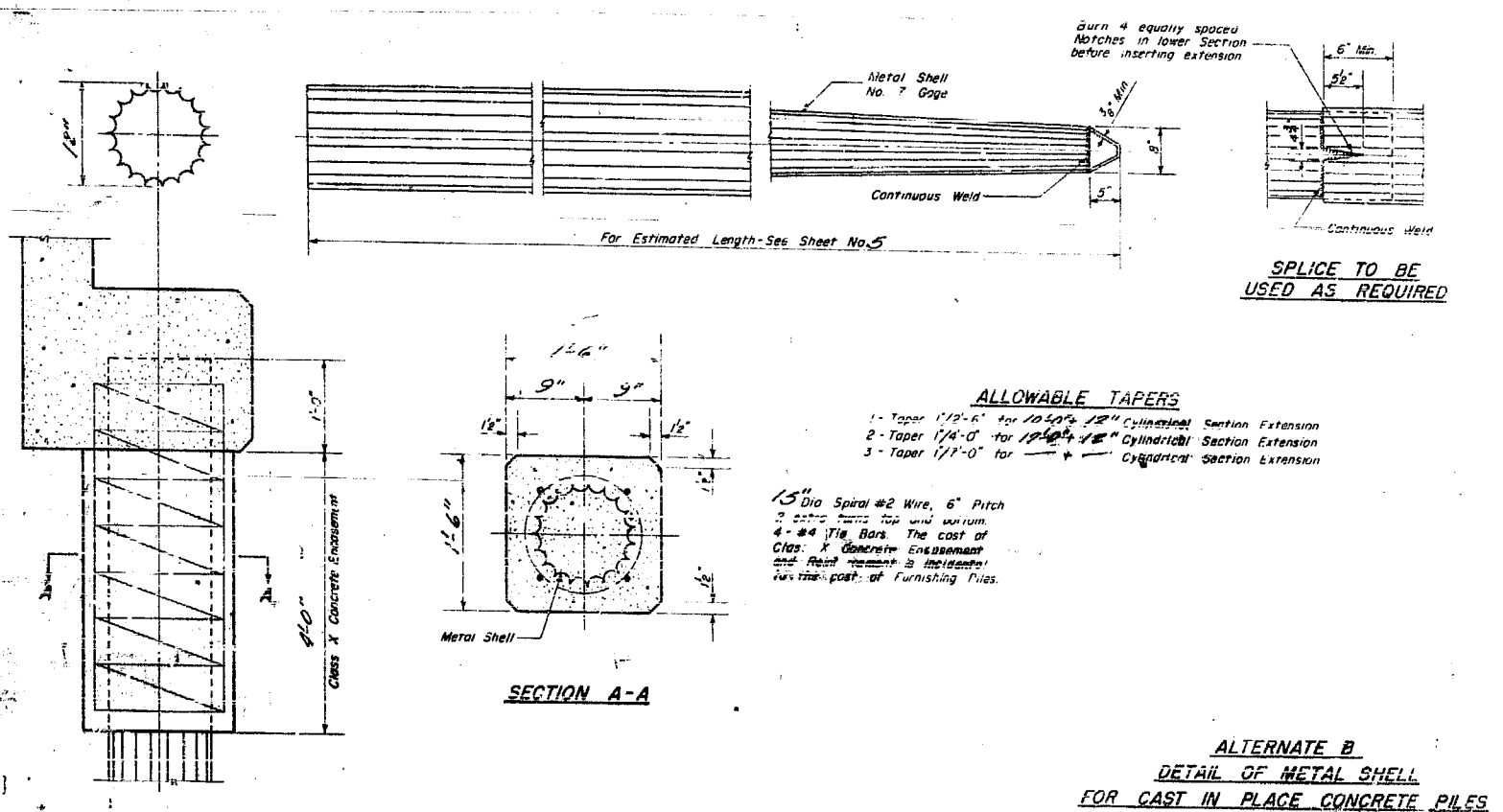
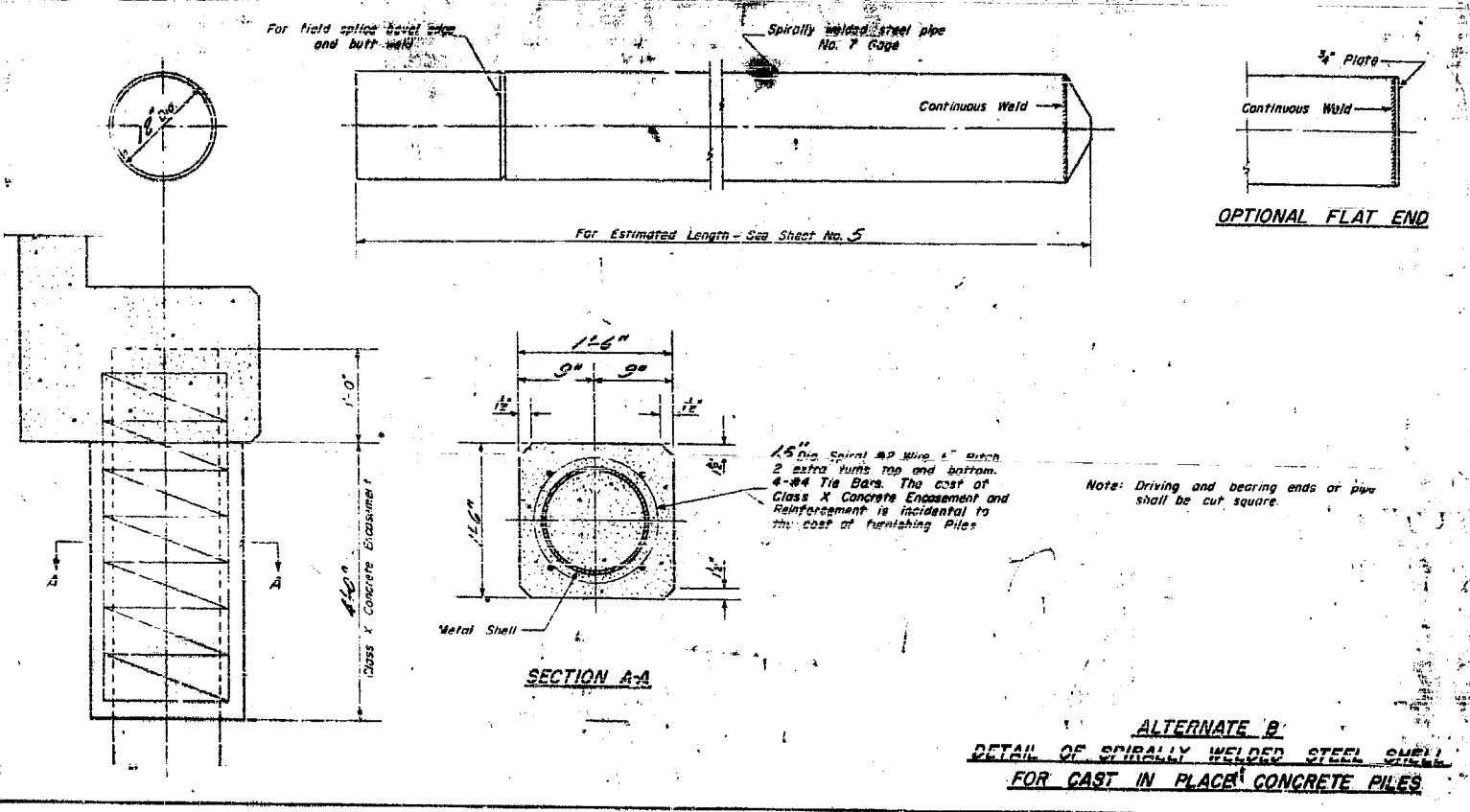
BORING DATA  
F.A.R.T. 6 SEC. 6R-NB-6  
KANE COUNTY  
STA. 221+35.32



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

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A. 6	8R-HB-6	KANE	15	11
FEA ROAD DIST. NO. 1	ILLINOIS	FEA. JOB PROJECT		

SHEET NO. 8  
8 SHEETS



PILE DETAILS  
F.A. RTE 6 SEC 8R-HB-6  
KANE COUNTY  
STA. 221 + 35.32