

S.M. #14 DH Nail in roof 22' Elm
 110' Rt Sta. 167+84 Elev. 759.35
 Existing Structure: None

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
82	48-3	Kane	20	16	7 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT.					

HORIZ. CURVE DATA (F.A. 6)
 $\Delta = 16^{\circ}21'$ $D = 146'$
 $T = 649.84$ $L = 1290.79'$
 $E = 46.58'$ $R = 4323.44'$

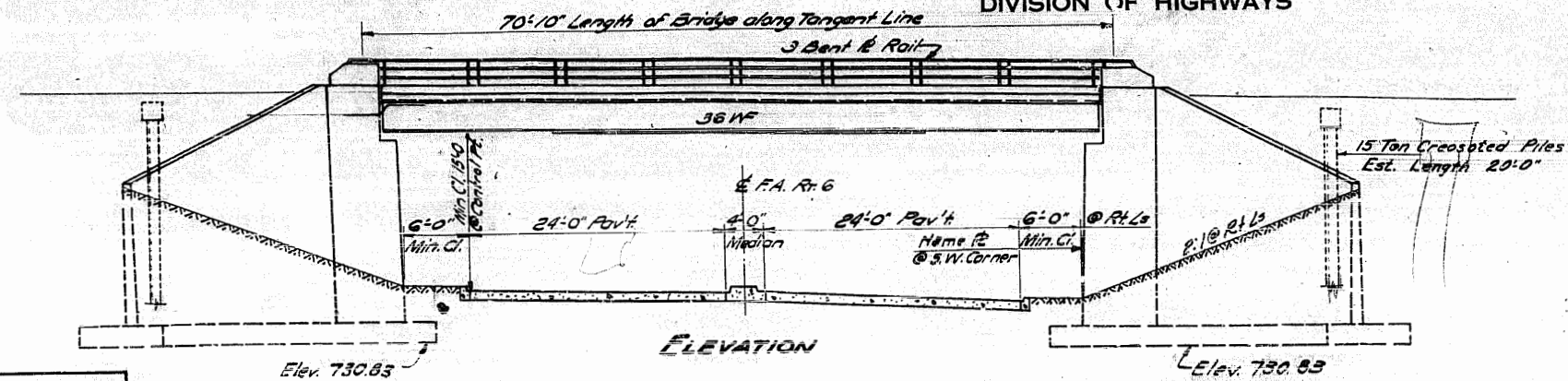
$SE = 0.02\%$
 $PI Sta. 172+89.57$
 Sta. from north to south

FOR INFORMATION ONLY

Sta. 176+58.26 (F.A. 6)
 = Sta. 4+00.00 (Rt. 31)

HORIZ. CURVE DATA (Rt. 31)
 $\Delta = 6^{\circ}42'$ $D = 2532'$
 $L = 11702'$ $L = 235.72'$
 $E = 3.42'$ $R = 1993.90'$

$SE = 0.030\%$
 $PI Sta. = 3+55.87$
 Sta. from north to south



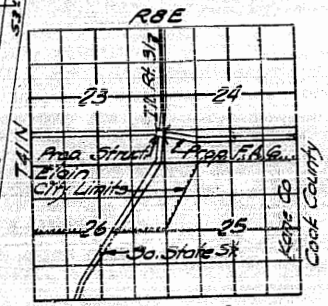
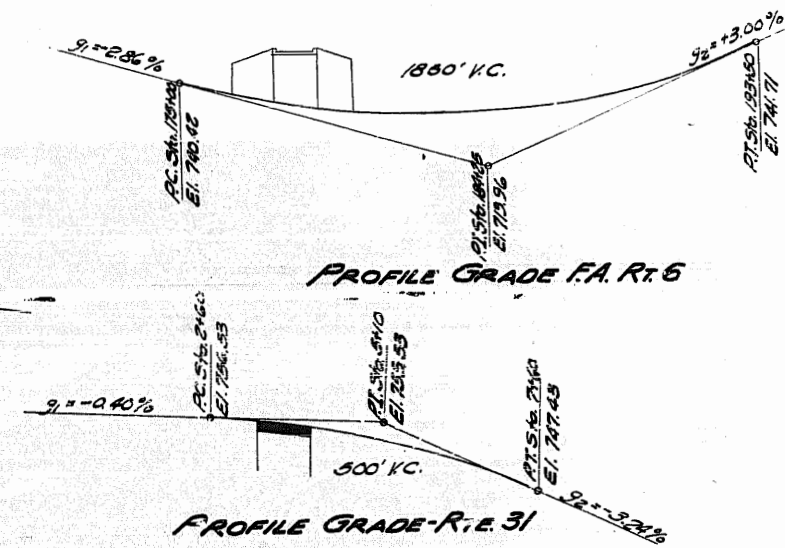
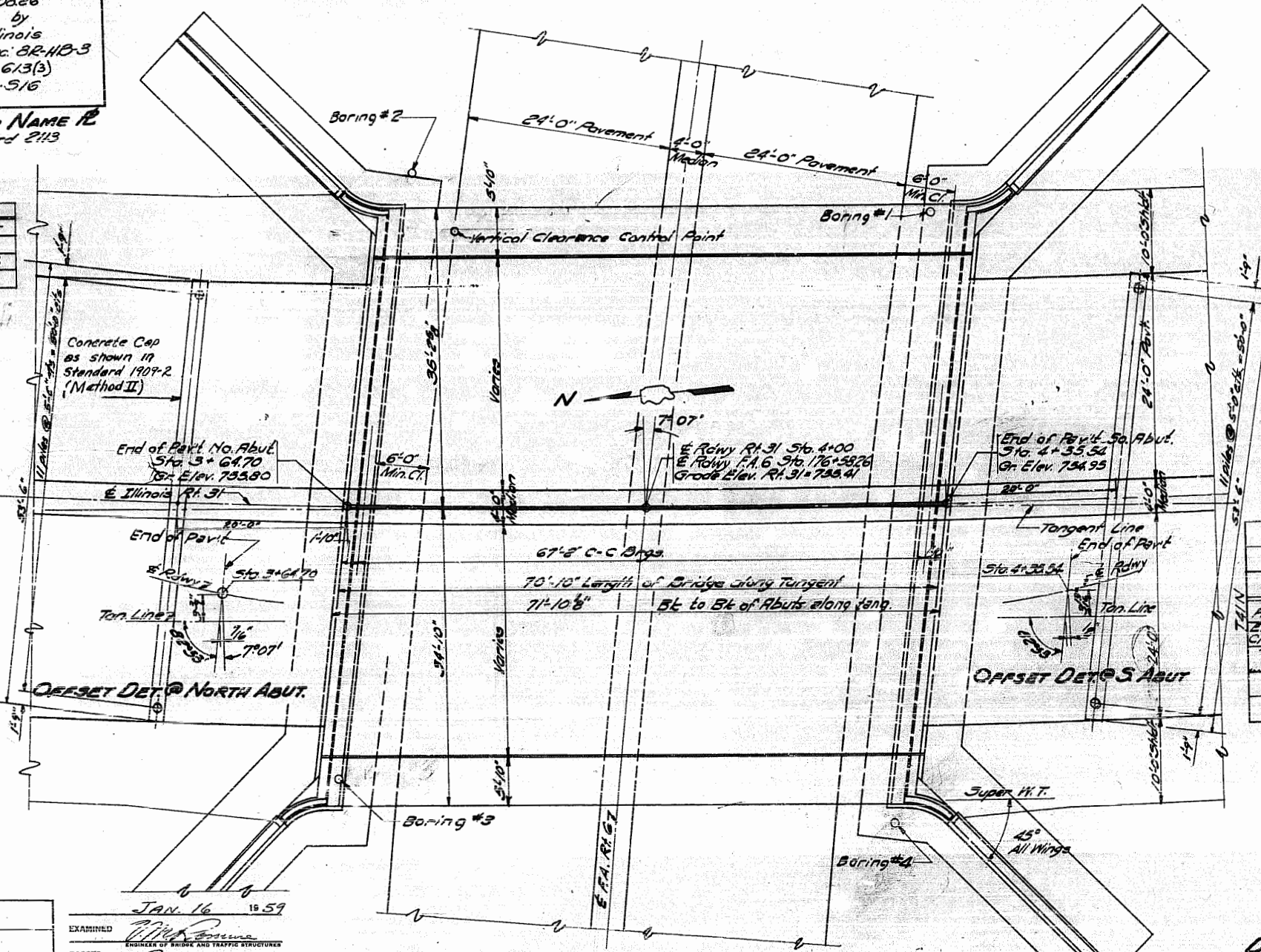
Station 176+58.26
 Built 195 by
 State of Illinois
 F.A. Rt. 6 Sec. 8R-HB-3
 Proj. U-613(3)
 Loading H20-S16

LETTERING FOR NAME 12
 See Standard 2113

BILL OF MATERIAL
 (For Approach Cap)

No.	Size	Length-Shape
32	#8	27'-3"
84	#4	3'-10"

Class X Conc. Cu. Yds. 7.4
 Reinforcement Bars Lbs 2670
 Quantities included in
 Total Bill of Material



TOTAL BILL OF MATERIALS

Item	Super	Sub	Total
Class "X" Concrete	Cu. Yds. 1372	368.2	505.4
Handrail Concrete	Cu. Yds. 2.0		2.0
Reinforcement Bars	Lbs. 22,790	82,410	105,200
Structural Steel	Lbs. 149,190		149,190
Class A Excavation for Struct.	Cu. Yds.		1,160
Metal Handrail	Lin. Ft. 138		138
Name Plates	Each		cne
Creosoted Piles	Lin. Ft. 440		440
Corrugated Metal Pipe-6" Perf.	Lin. Ft. 250		250

DESIGNED C. J. Rohrer
 CHECKED C. W. Shub
 DRAWN C. J. R. Rutherford
 CHECKED C. W. S.

JAN 16 1959
 EXAMINED
 PASSED
 APPROVED

DESIGN STRESSES
 $f_c = 1400$ p.s.i. Super
 $f_c = 1000$ p.s.i. Sub
 $f_s = 20,000$ p.s.i. Reinf.
 $f_s = 18,000$ p.s.i. Struct.
 $n = 10$
 Max. Footing Press. = 5.25 kips/sq.ft.
 10-5/16-44

GENERAL PLAN & ELEVATION
 PROJECT U613(3)
 S. STATE ST. (Rt. 31) OVER F.A. Rt. 6
 F.A. Rt. 6 Sec. 8R-HB-3
 KANE COUNTY
 STA. 176 + 58.26

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

PROJECT NO.	SECTION	SUBJECT	SHEET NO.	TOTAL SHEETS
6	SR HS-3	Kane	30	17

SHEET NO. 2
7 SHEETS

FOR INFORMATION ONLY

Kane County
Sta. 176+59.26

General Notes

- Class X concrete shall be used throughout except in end posts.
- Handrail concrete shall be used in end posts.
- The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.
- Rivets 3/4" ϕ , Open holes 13/16" ϕ , unless noted.
- Field connections riveted, unless noted.
- Railing shall be adjusted to true alignment after curbs have been poured.
- All rollers, rockers, bearing plates, load plates, sines and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel.
- Anchor bolts shall be set before riveting diaphragms over supports.
- All steel handrail posts shall be vertical.
- Expansion guards shall be fabricated and erected in accordance with Article 51.13(d) of the Standard Specifications.
- Expansion guards are included in quantity of Structural Steel.
- Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Articles 56.1 to 56.5 inclusive of the Standard Specifications.
- All paint shall be furnished and applied by the Contractor.
- The following surfaces of the bridge shall be waterproofed; the back of the abutment walls and wing walls. Waterproofing shall be done in accordance with Article 51.21 of the Standard Specifications.
- Shear connectors (Std. Conn. as shown in detail on sheet 4), cover plates and main stringers shall be of ASTM-A-373 structural steel.
- Boring Data are shown on the plans only as a guide to bidders in estimating soil conditions which may be encountered in the work.

Boring No. 1	Along Center Line	Station	Station	Along Center Line
Boring located at Station 176+92, 29 Ft. Lt. Center-line.			737.0	55
Surface of Ground.	756.8	734.5	736.0	
Stiff brown sandy clay.		733.5	735.0	
		732.0	732.0	97
	753.5	731.0	731.0	
		729.5	729.5	102
Very dense brown and gray subangular well graded gravel.	752.0	728.5	728.5	
	751.0	728.0	728.0	
		727.0	727.0	104
	749.5	726.0	726.0	
	748.5	725.0	725.0	
Dense brown subangular well graded gravel.	748.0	724.5	724.5	
	747.0	723.5	723.5	250
	746.0	723.0	723.0	
Very dense brown subangular well graded gravel.	745.0	722.0	722.0	88
	744.5	721.0	721.0	
	743.5	720.0	720.0	
	742.5	719.5	719.5	250
Dense brown subangular well graded gravel.	742.0	719.0	719.0	
	741.0	718.5	718.5	250
Very dense brown well graded subangular gravel.	740.0	718.0	718.0	
	739.5	717.0	717.0	300
	739.0	716.5	716.5	

Boring No. 2	Along Center Line	Station	Station	Along Center Line
Boring located at Station 176+92, 32 Ft. Lt. Center-line.			736.5	
Surface of Ground.	757.9	735.5	735.5	73
Stiff brown sandy clay.		734.5	734.5	
		733.0	733.0	63
	754.5	732.0	732.0	
		730.5	730.5	60
		729.5	729.5	
		728.0	728.0	64
		727.5	727.5	
		726.0	726.0	114
Very dense brown subangular well graded gravel.		725.5	725.5	
		725.0	725.0	
		724.5	724.5	76
		723.5	723.5	
		723.0	723.0	
		722.0	722.0	250
		720.5	720.5	
		719.5	719.5	
	736.0			
	737.0			

Boring No. 3	Along Center Line	Station	Station	Along Center Line
Boring located at Station 176+23, 33 Ft. Lt. Center-line.			737.5	61
Surface of Ground.	757.5	736.5	736.5	
Stiff brown sandy clay.		735.0	735.0	96
		734.0	734.0	
		733.5	733.5	
		732.5	732.5	83
	754.0	731.5	731.5	
		730.0	730.0	
		729.5	729.5	108
		729.0	729.0	
		727.5	727.5	128
		726.5	726.5	
		725.0	725.0	300
		724.0	724.0	
		723.5	723.5	
		722.5	722.5	88
		721.5	721.5	
		720.5	720.5	
		720.0	720.0	218
		719.0	719.0	
		717.5	717.5	250
		716.5	716.5	

Boring No. 4	Along Center Line	Station	Station	Along Center Line
Boring located at Station 176+23, 33 Ft. Lt. Center-line.			727.0	88
Surface of Ground.	757.1	726.0	726.0	
Stiff brown sandy clay.		725.0	725.0	77
		724.5	724.5	
		723.5	723.5	
		722.5	722.5	108
	754.5	722.0	722.0	
		721.0	721.0	
		719.5	719.5	500+
		718.5	718.5	
		717.0	717.0	440
		716.0	716.0	
		737.0	737.0	92
		736.0	736.0	
		735.0	735.0	79
		734.5	734.5	
		733.5	733.5	
		732.0	732.0	92
		731.0	731.0	
		729.5	729.5	57
		728.5	728.5	
		728.0	728.0	

DESIGNED: O. J. Rohrer
CHECKED: C. W. Black
DRAWN: Rutherford
CHECKED: C. W. Black

EXAMINED: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]

JAN. 16 19 59

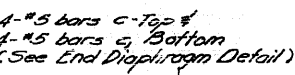
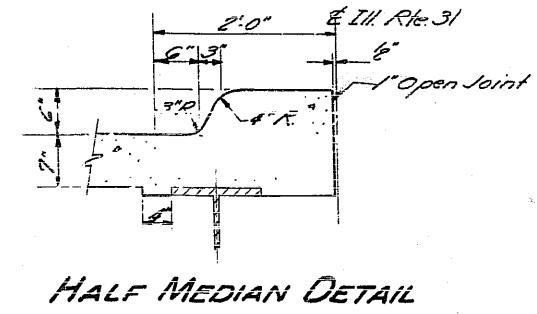
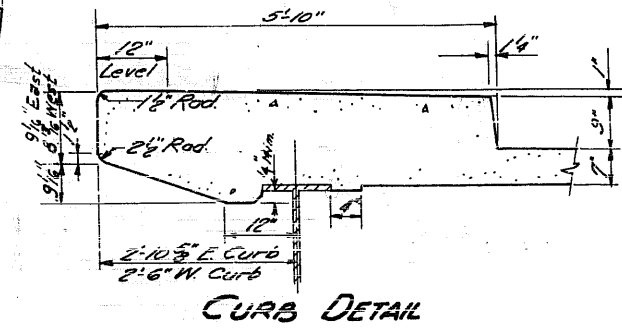
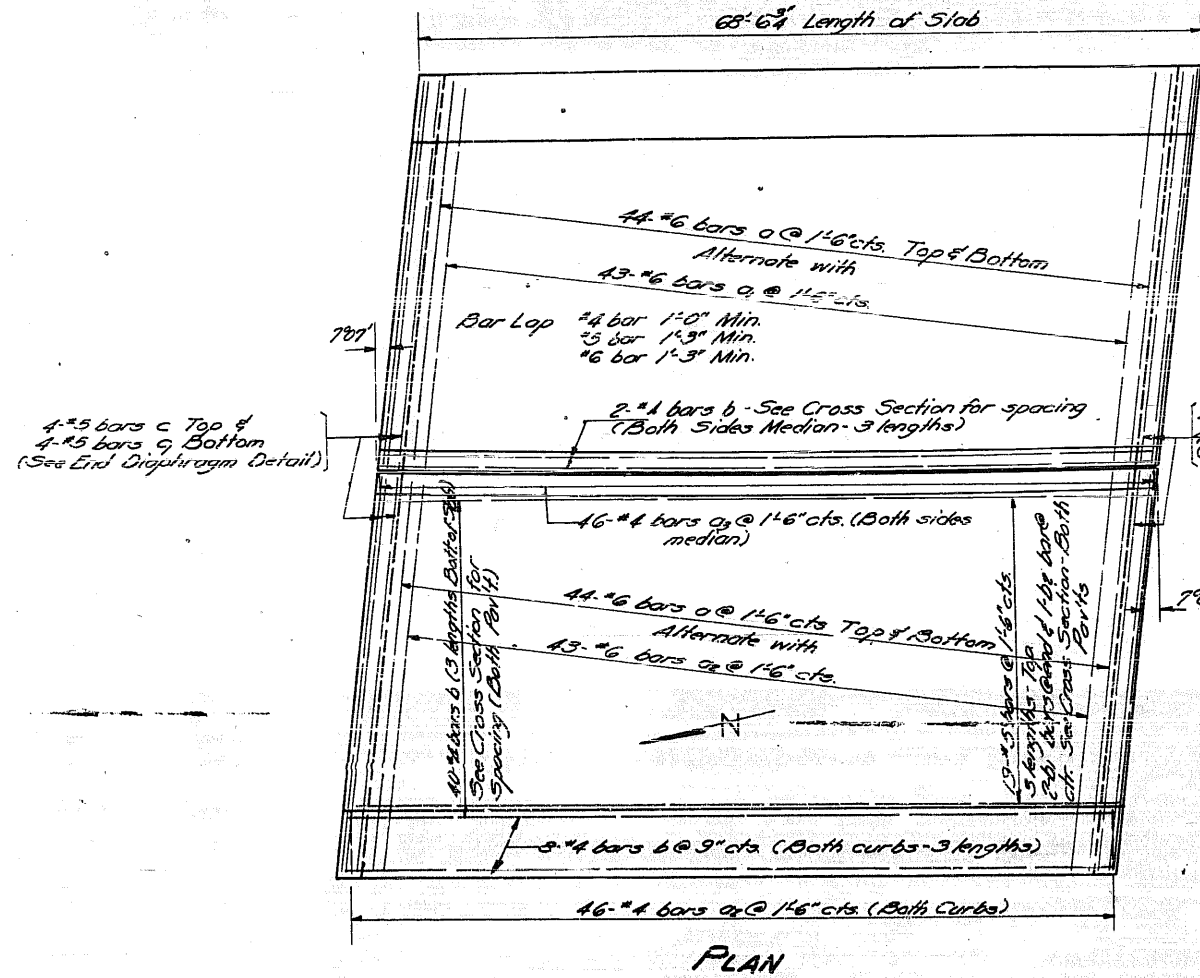
GENERAL NOTES & BORING DATA

F.A. STE. 6 SEC. 8R-HS-3
KANE COUNTY
Sta. 176+59.26

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

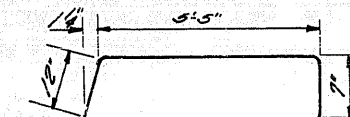
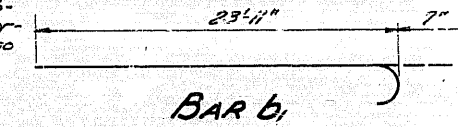
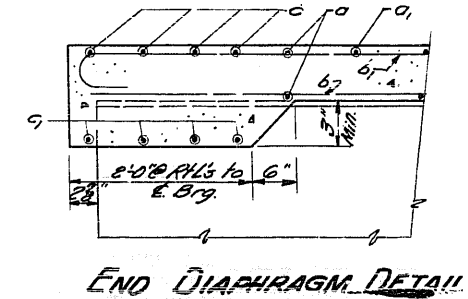
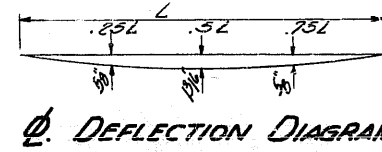
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	HB-3	Kane	30	18
F.A. No.		SHEETS		
7		7		

FOR INFORMATION ONLY

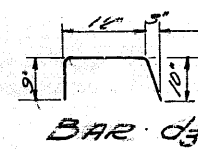


METHOD OF DETERMINING FILLET

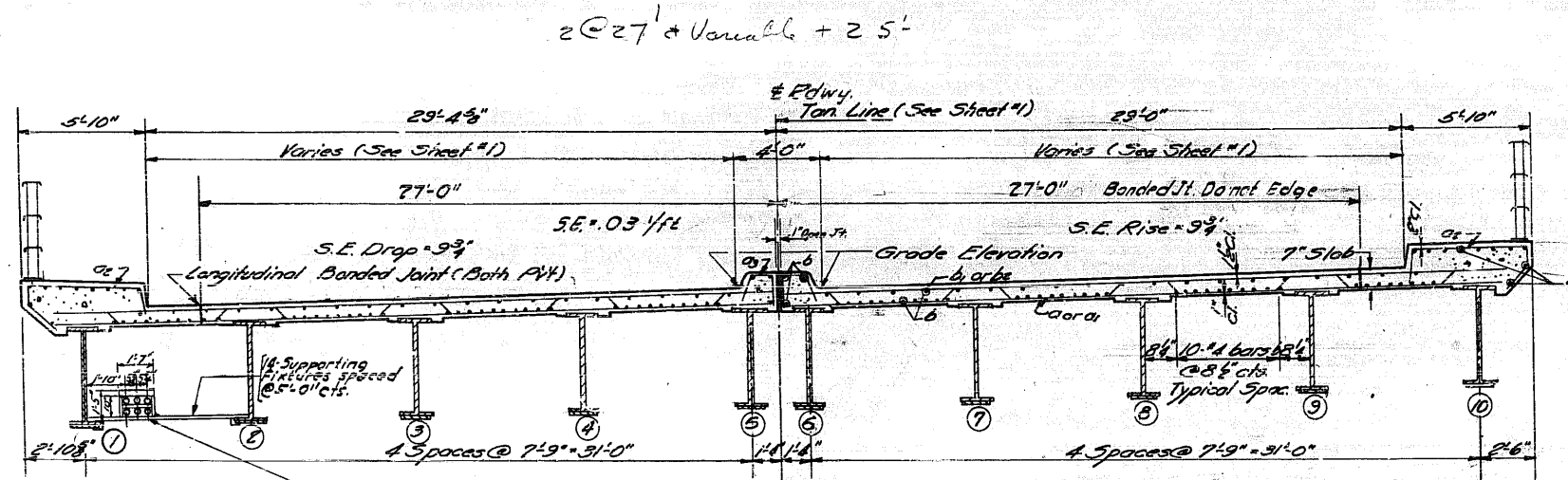
After all structural steel has been erected, elevations of the top flanges of all beams shall be taken at intervals not to exceed 10 feet. From these elevations subtract the increment of deflection for these points, determined from the Deflection Diagram. The elevations so obtained, minus floor thickness, subtracted from the theoretical grade, equals fillet heights above top of beam.



BAR d2

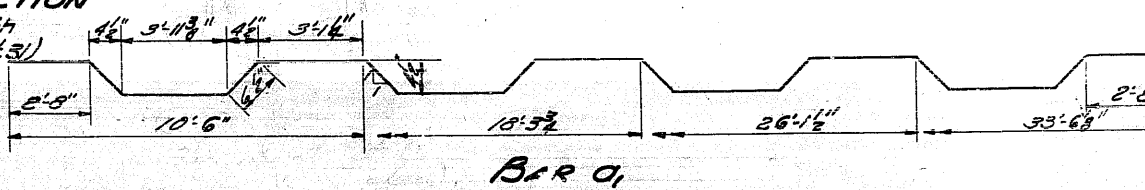


BAR d3



CROSS SECTION

Looking South
Sta. 4+00 (Rt. 3)



BAR a1

BILL OF MATERIAL

Bar No	Size	Length	Shape
a	176	6	33'-0"
a1	86	6	34'-0"
a2	32	4	8'-6"
a3	32	4	8'-7"
b	318	4	23'-6"
b1	76	5	24'-6"
b2	38	5	24'-0"
c	16	5	33'-0"
c1	64	3	7'-9"
Class X Concrete		Cu. Yds.	13.72
Reinforcement Bars		Lbs.	22,790
Structural Steel		Lbs.	149,150

SUPERSTRUCTURE

F.A. RTE. 6 SEC. 8-R-HB-3
KANE COUNTY
STA. 176+58.26

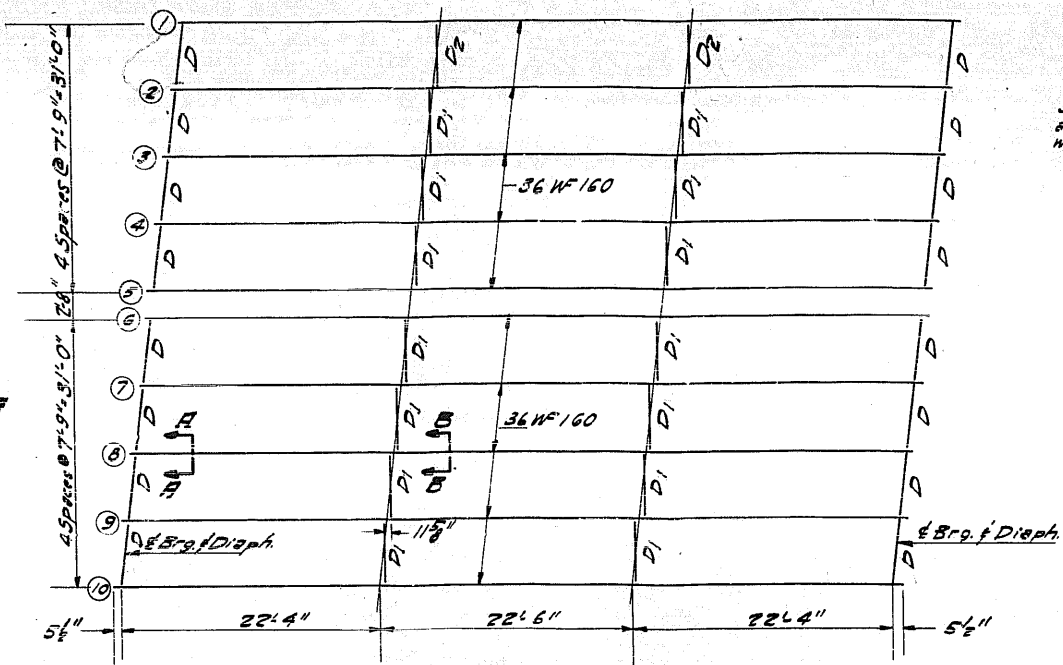
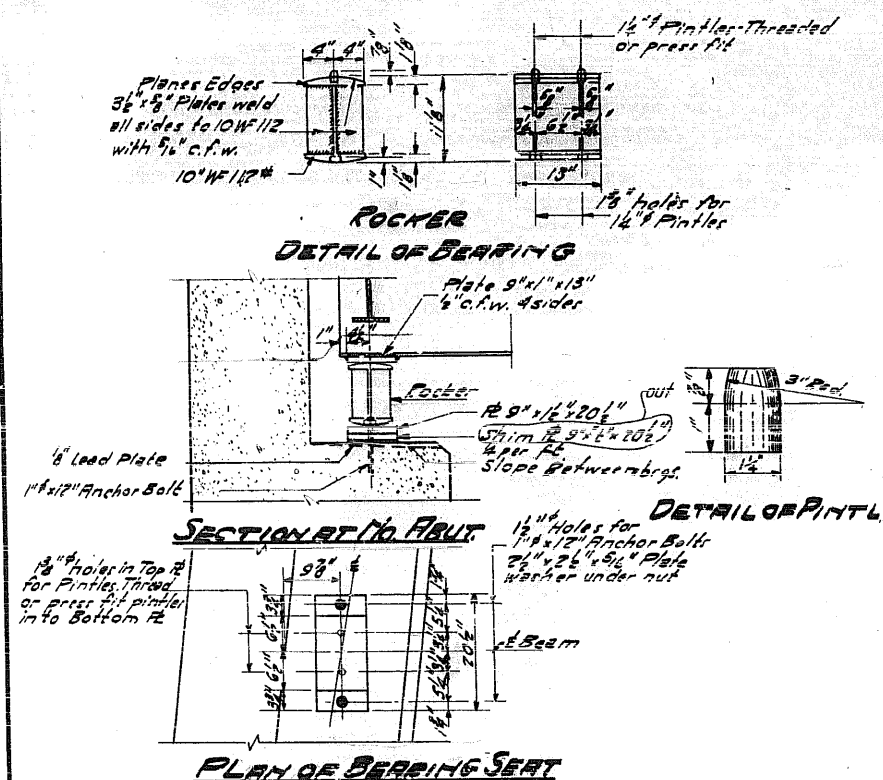
DESIGNED	J. J. Bohrer
CHECKED	C. W. Black
DRAWN	C. J. R. Rotherford
CHECKED	C. W. Black
EXAMINED	Jan 16 19 57
PASSED	[Signature]
APPROVED	[Signature]

All material for conduits to be furnished and installed by Bell Telephone Co. except as noted on sheets 5 and 6

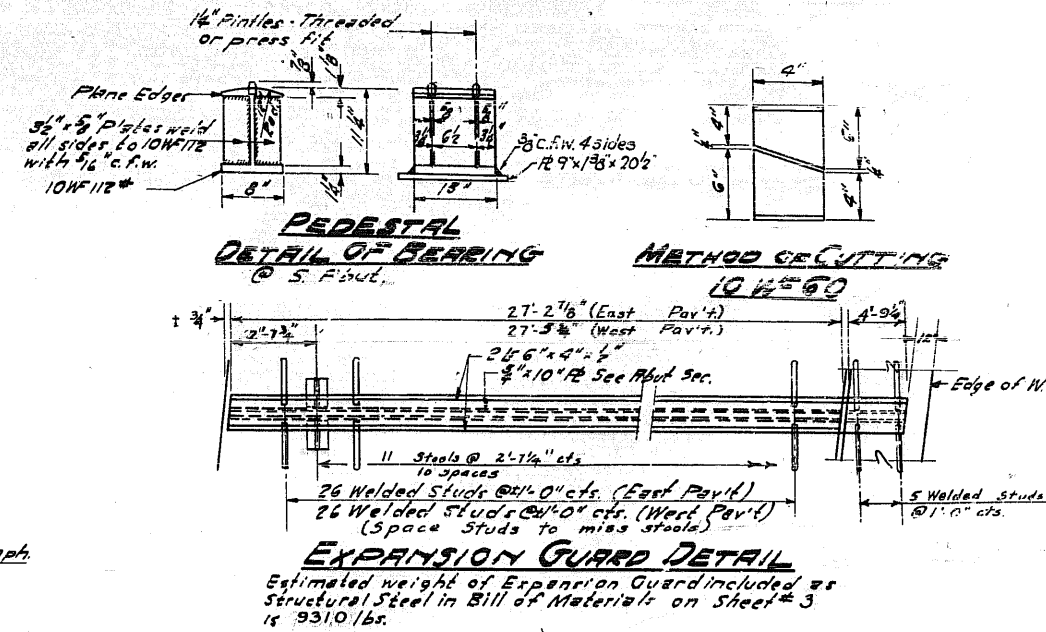
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

FOR INFORMATION ONLY

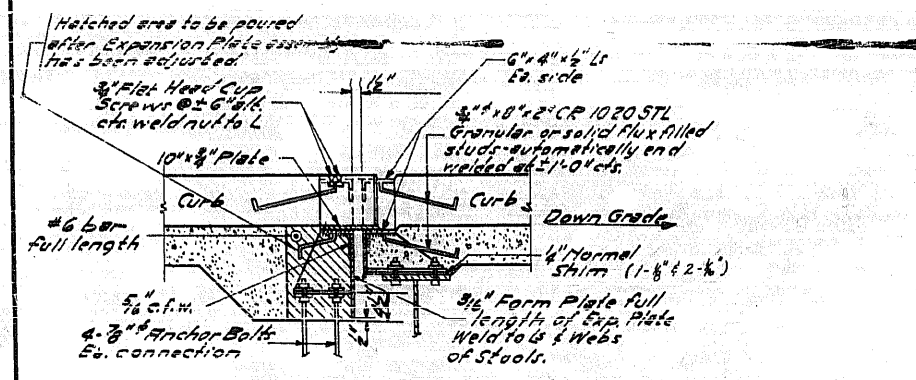
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	8B	Kane	30	19
F.A. 6	HB-3			7 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



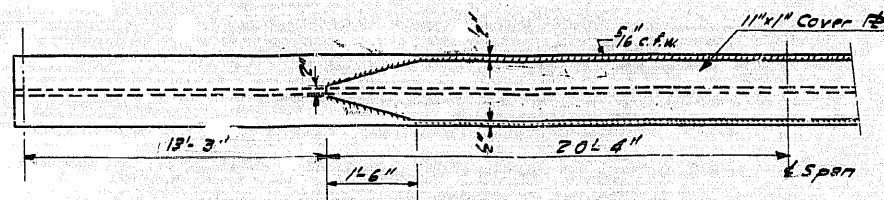
PLAN STRUCTURAL STEEL



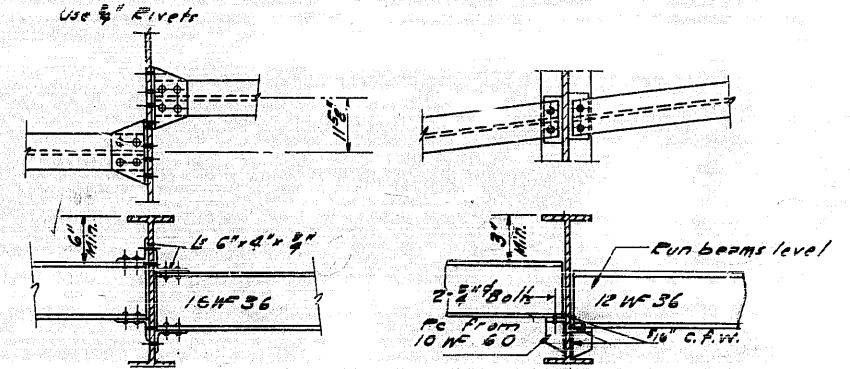
EXPANSION GUARD DETAIL
Estimated weight of Expansion Guard included as Structural Steel in Bill of Materials on Sheet # 3 is 9310 lbs.



SECTION A-A



DETAIL OF BOTTOM COVER PLATE

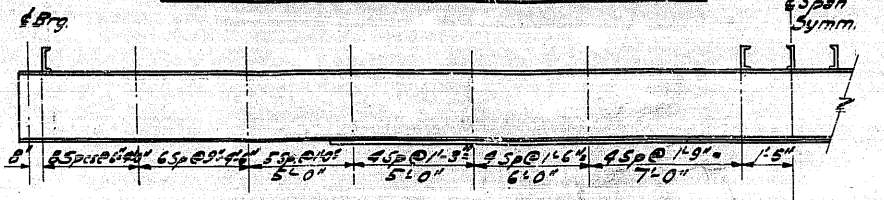


DIAPHRAGM D1
14 Req'd.
SEC. B-B

DIAPHRAGM D
16 Req'd.
SEC. A-A

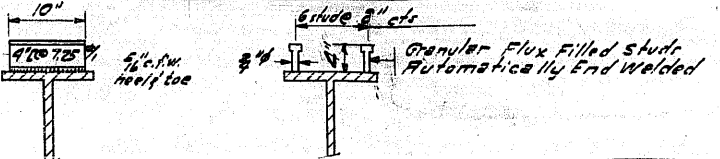
ELEVATIONS TOP OF SLAB (above 6' Brn.)

Beam	1 pt.	2 pt.	3 pt.	4 pt.	5 pt.	6 pt.	7 pt.	8 pt.	9 pt.	10 pt.	6' Brn.
1	754.84	754.70	754.65	754.56	754.45	754.34	754.24	754.13	754.01		
2	755.08	755.99	754.89	754.80	754.70	754.59	754.49	754.38	754.26		
3	755.32	755.23	755.14	755.04	754.94	754.84	754.73	754.62	754.51		
4	755.56	755.48	755.38	755.29	755.19	755.08	754.98	754.87	754.76		
5	755.80	755.71	755.63	755.53	755.43	755.33	755.23	755.11	755.00		
6	755.77	755.68	755.59	755.49	755.40	755.29	755.19	755.08	754.97		
7	756.01	755.92	755.83	755.72	755.64	755.54	755.44	755.32	755.21		
8	756.25	756.16	756.07	755.98	755.88	755.78	755.68	755.57	755.46		
9	756.49	756.40	756.31	756.22	756.13	756.03	755.93	755.82	755.71		
10	756.74	756.64	756.55	756.46	756.37	756.27	756.17	756.06	755.95		



SHEAR CONNECTOR SPACING

#5	755.79	755.70	755.60	755.51	755.41	755.31	755.20	755.10	754.99
#6	755.77	755.70	755.61	755.51	755.42	755.31	755.21	755.10	754.99



SHEAR CONNECTORS
Alternate Types

N. & S. ABUT.
TABLE OF "L" DIMENSIONS

BEAM NO.	L
#5	38"

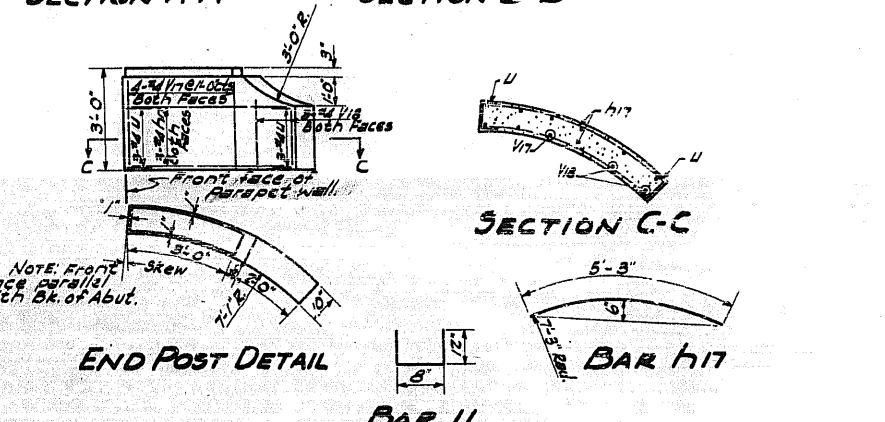
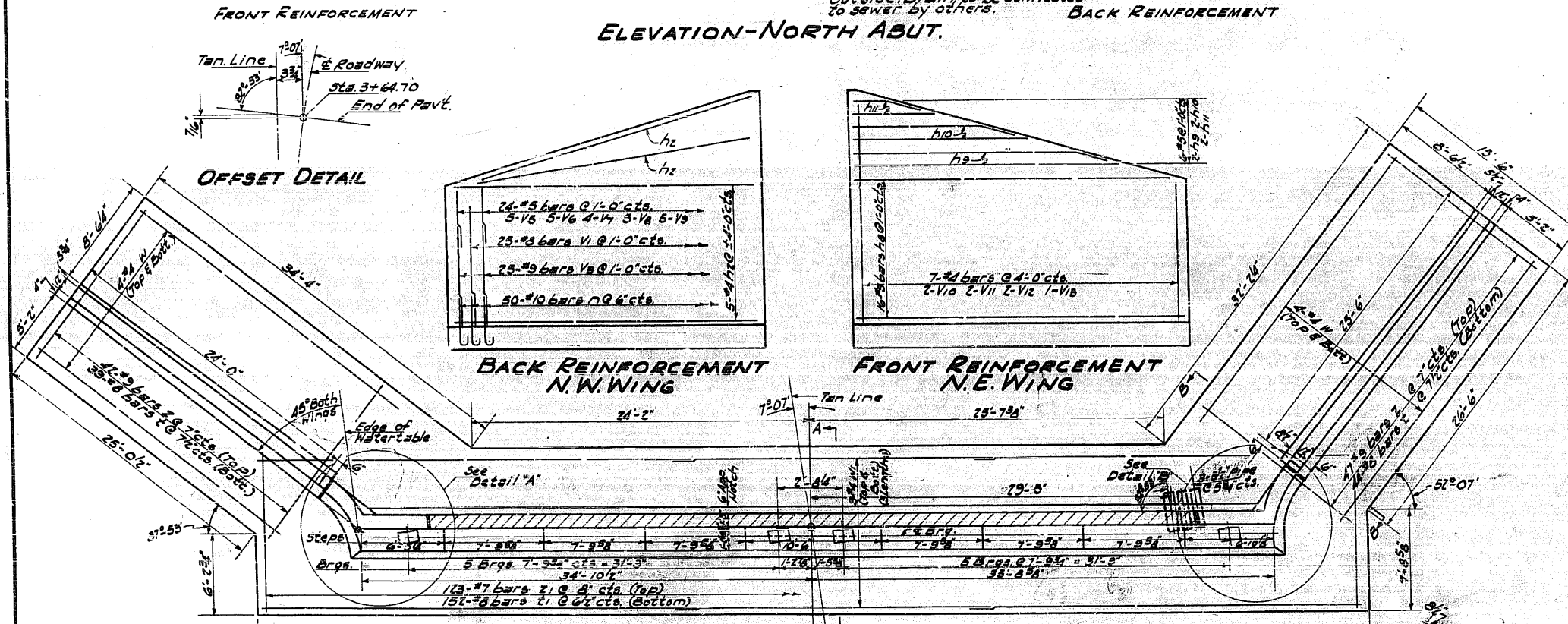
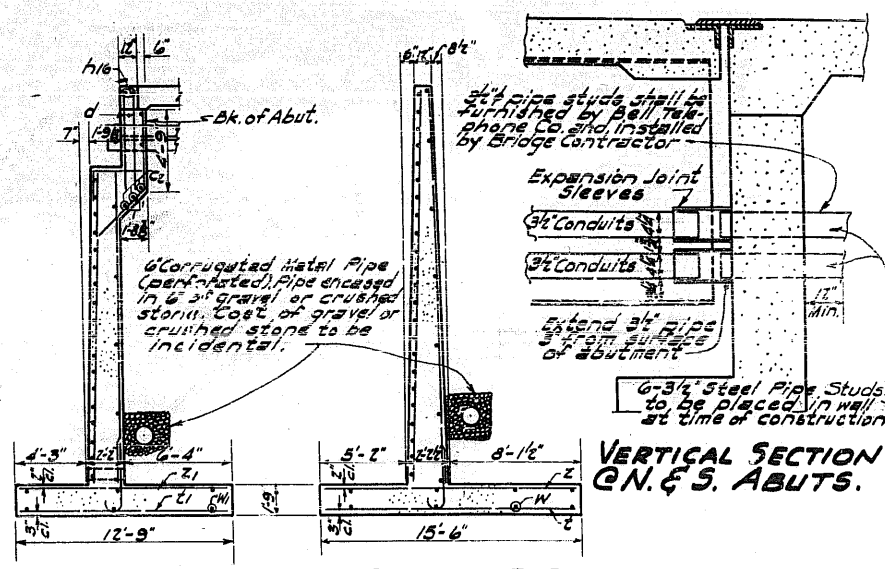
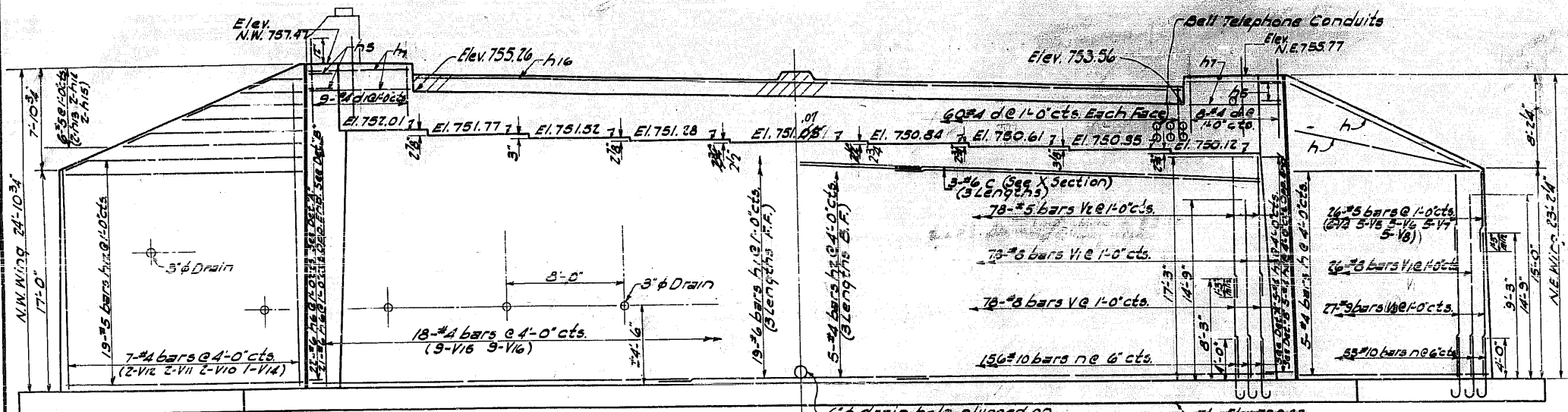
DESIGNED Og Rohrer
CHECKED CW Shick
DRAWN Og R. Mercado
CHECKED CW Shick

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

Jan. 16 19 57

Revised Oct. 21, 1959 C.W. Shick

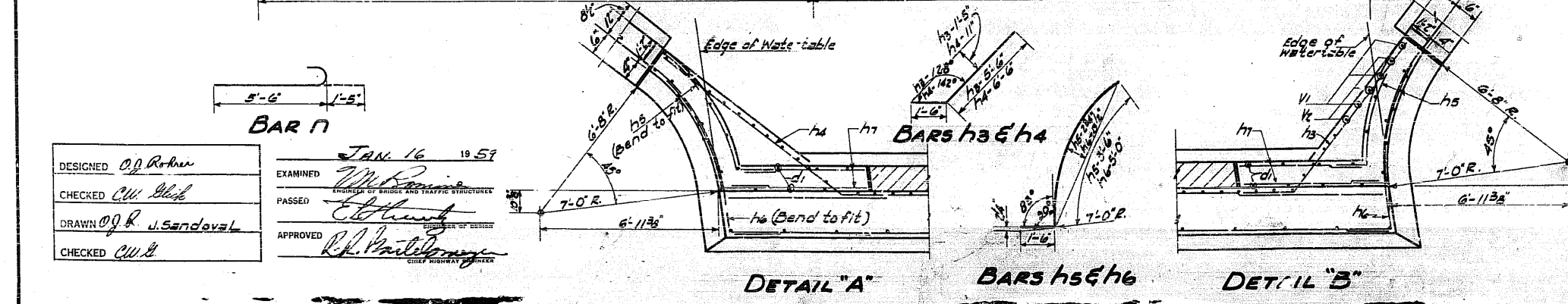
STRUCTURAL STEEL
BEARING DETAILS
F.A. RTE. 6 SEC. 8B-HB-3
KANE COUNTY
Sta. 176+58.26



BILL OF MATERIAL - NORTH ABUTMENT

BAR	No.	SIZE	LENGTH	SHAPE	BAR	No.	SIZE	LENGTH	SHAPE
C2	9	#6	24'-6"		V6	10	#5	5'-0"	
d	120	#4	5'-0"		V6	10	#5	6'-0"	
d1	17	#4	6'-0"		V7	9	#5	7'-6"	
h	7	#4	25'-6"		V8	10	#5	9'-0"	
h1	57	#6	24'-3"		V9	5	#5	11'-0"	
h2	22	#4	24'-3"		V10	4	#4	21'-0"	
h3	5	#4	7'-0"		V11	4	#4	19'-0"	
h4	5	#4	8'-0"		V12	4	#4	17'-0"	
h5	8	#4	5'-0"		V13	1	#4	15'-6"	
h6	43	#6	6'-6"		V14	1	#4	24'-0"	
h7	4	#4	5'-6"		V15	9	#4	18'-3"	
h8	16	#5	25'-6"		V16	9	#4	17'-3"	
h9	2	#5	21'-0"		V17	16	#4	3'-6"	
h10	2	#5	14'-0"		V18	3	#4	14'-9"	
h11	2	#5	7'-0"		W	12	#4	2'-8"	
h12	19	#5	24'-3"		W	16	#4	26'-0"	
h13	2	#5	19'-6"		W1	18	#4	28'-3"	
h14	2	#5	12'-6"		Z	89	#9	15'-3"	
h15	2	#5	5'-6"		Z	123	#7	12'-6"	
h16	2	#4	29'-0"						
h17	12	#4	5'-3"						
n	259	#10	6'-11"						
t	83	#8	15'-3"						
t1	152	#8	12'-6"						
v	78	#6	8'-3"						
v1	129	#5	12'-3"						
v2	78	#5	12'-3"						
v3	57	#9	9'-3"						
v4	6	#5	3'-0"						

Class X Concrete Cu.Yds. 12.9
Reinforcement Bars Lbs. 39870
Handrail Concrete Cu.Yds. 1.0
Perforated Metal Pipe (6") Lin.Ft. 120



DESIGNED: O.P. Rohrer
CHECKED: C.W. Clark
DRAWN: O.P. R. J. Sandoval
CHECKED: C.W. Clark

EXAMINED: M. J. ...
PASSED: ...
APPROVED: R. J. ...

JAN 16 1957

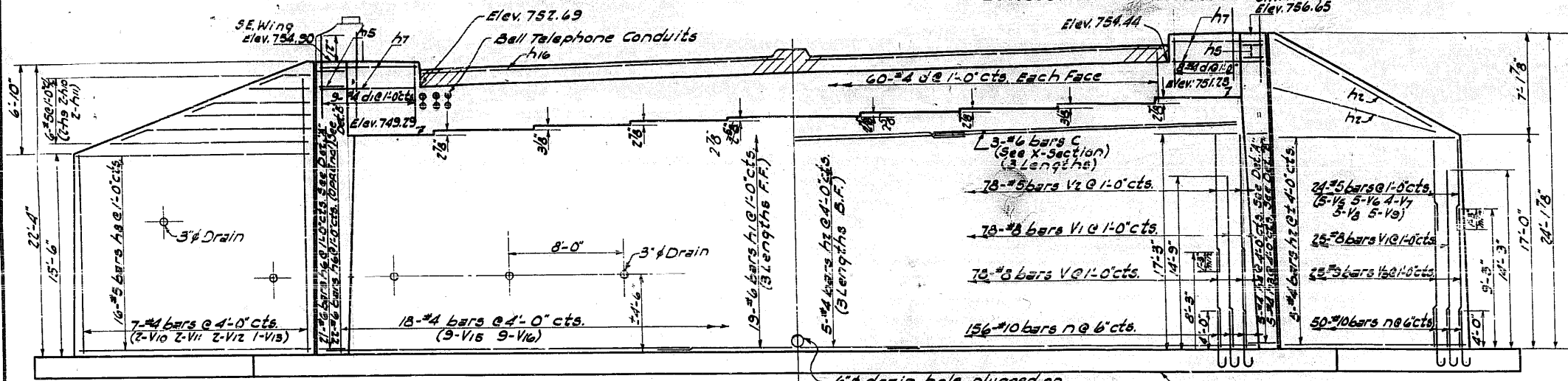
NORTH ABUTMENT

F.A.R.T. 6 SEC. 3R-HB-3
KANE COUNTY
STA. 176+58.26

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

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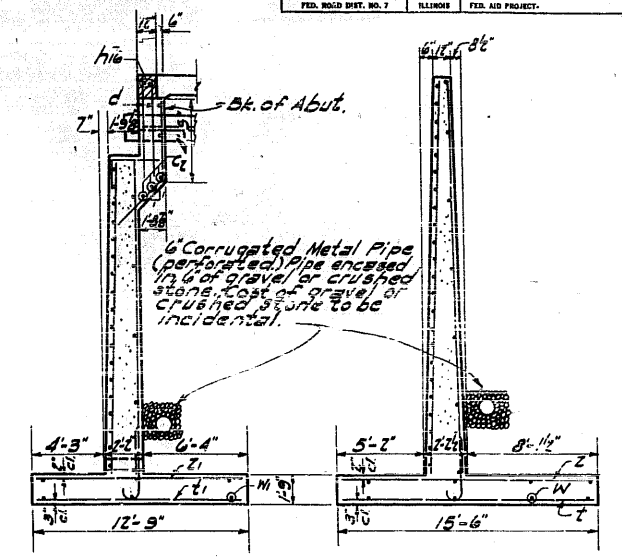
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6	8R	Kane	30	21
SHEET NO. 6				
7 SHEETS				



FRONT REINFORCEMENT

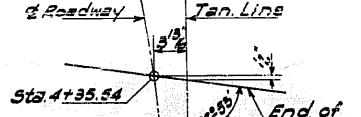
ELEVATION-SOUTH ABUT.

BACK REINFORCEMENT

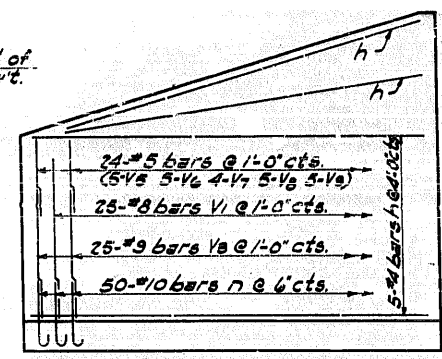


SECTION A-A

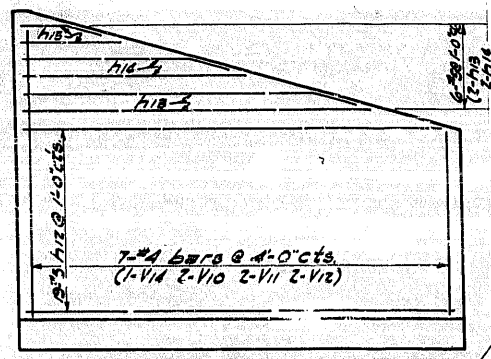
SECTION B-B



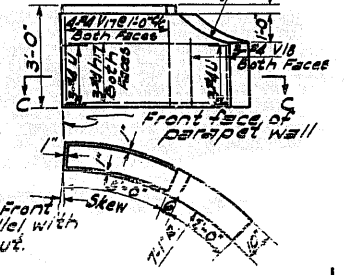
OFFSET DETAIL



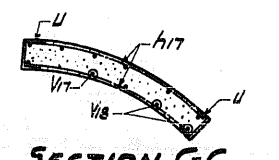
BACK REINFORCEMENT S.E. WING



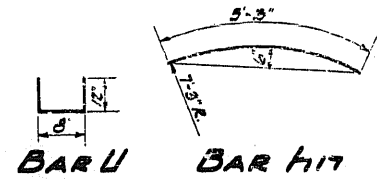
FRONT REINFORCEMENT S.W. WING



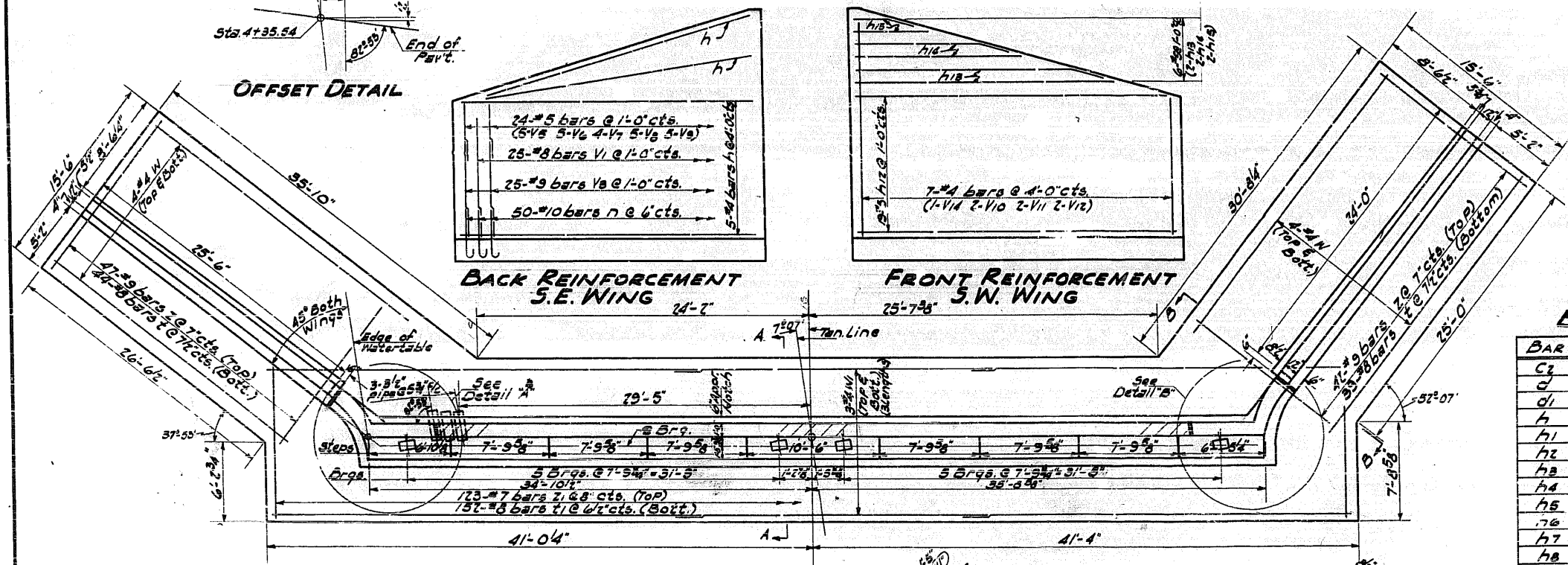
END POST DETAIL



SECTION C-C

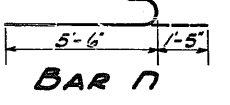


BAR U BAR H17

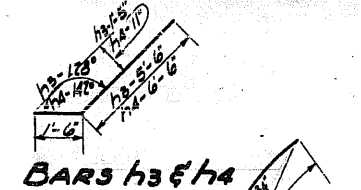


BILL OF MATERIAL - SOUTH ABUTMENT

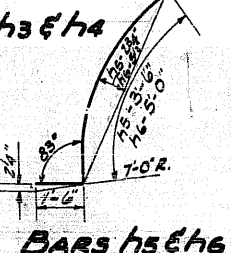
BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
C	9	#6	24'-6"	—	V5	10	#5	5'-0"	—
d	120	#4	5'-0"	—	V6	10	#5	6'-0"	—
d1	17	#4	6'-0"	—	V7	8	#5	7'-6"	—
h	7	#4	25'-6"	—	V8	10	#5	9'-0"	—
h1	57	#6	24'-3"	—	V9	10	#5	11'-0"	—
h2	22	#4	24'-3"	—	V10	4	#4	21'-0"	—
h3	5	#4	7'-0"	J	V11	4	#4	19'-0"	—
h4	5	#4	8'-0"	J	V12	4	#4	17'-0"	—
h5	8	#4	5'-0"	J	V13	1	#4	15'-6"	—
h6	43	#6	6'-6"	J	V14	1	#4	24'-0"	—
h7	4	#4	5'-6"	—	V15	9	#4	18'-3"	—
h8	16	#5	25'-6"	—	V16	9	#4	17'-3"	—
h9	2	#5	21'-0"	—	V17	16	#4	2'-6"	—
h10	2	#5	14'-0"	—	V18	3	#4	1'-3"	—
h11	2	#5	7'-0"	—	W	16	#4	26'-0"	—
h12	19	#5	24'-3"	—	W1	18	#4	23'-3"	—
h13	2	#5	19'-6"	—	Z	89	#9	15'-3"	—
h14	2	#5	12'-6"	—	Z1	123	#7	12'-6"	—
h15	2	#5	5'-6"	—	Class X Concrete Cu.Yds. 178.9				
h16	4	#4	29'-0"	—	Reinforcement Bars Lbs. 39870				
h17	12	#4	5'-3"	—	Handrail Concrete Cu.Yds. 1.0				
n	256	#10	6'-11"	—	Perforated Metal Pipe (6") Lin.Ft. 130				
t	89	#8	15'-3"	—	SOUTH ABUTMENT				
z	152	#8	12'-6"	—	F.A. RT. 6 SEC. 8R-HB-3				
u	12	#4	2'-8"	—	KANE COUNTY				
v	78	#8	8'-3"	—	STA. 176+58.26				
v1	123	#8	14'-3"	—					
v2	78	#5	12'-3"	—					
v3	50	#9	9'-3"	—					



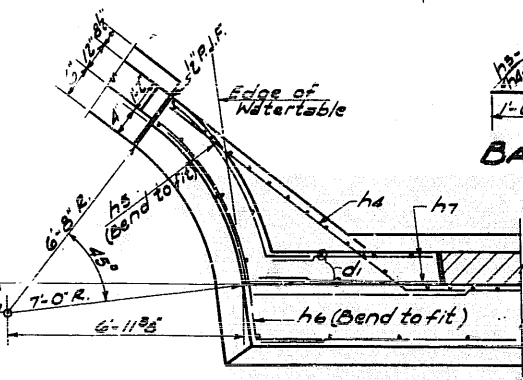
BAR N



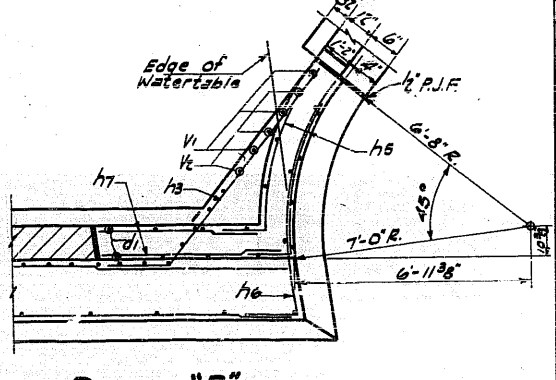
BARS h3 & h4



BARS h5 & h6



DETAIL A



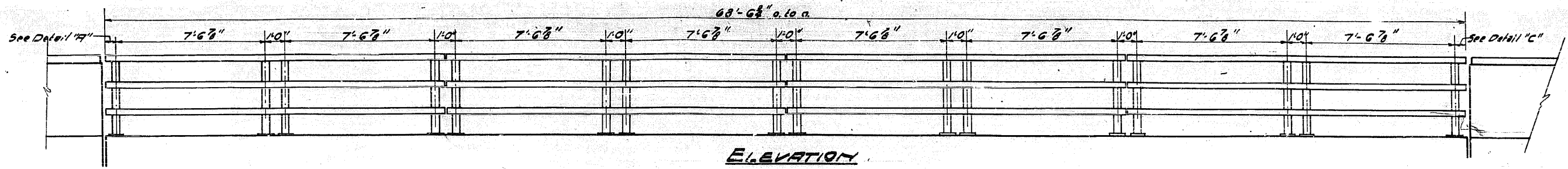
DETAIL B

DESIGNED	O.J. Rehner	EXAMINED	JAN. 16 1959 M. Roman
CHECKED	C.W. Wick	PASSED	E. Elliott
DRAWN	a.J. Rehner J. Sandoval	APPROVED	R.H. Patel
CHECKED	C.W. A.		

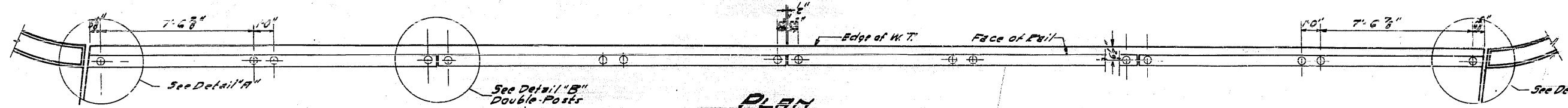
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

FOR INFORMATION ONLY

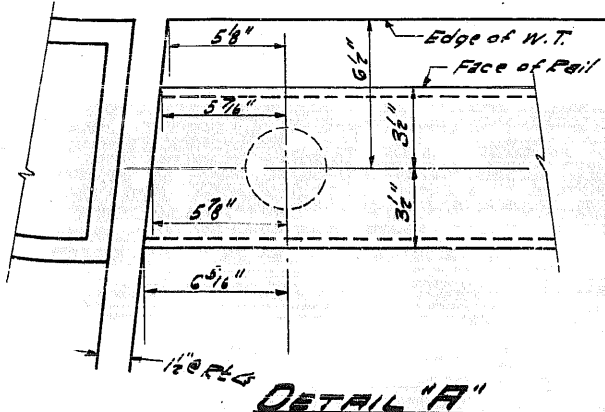
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
6	SR HB-3	Kane	30	22	7 SHEETS
ILLINOIS	FED. AID PROJECT				



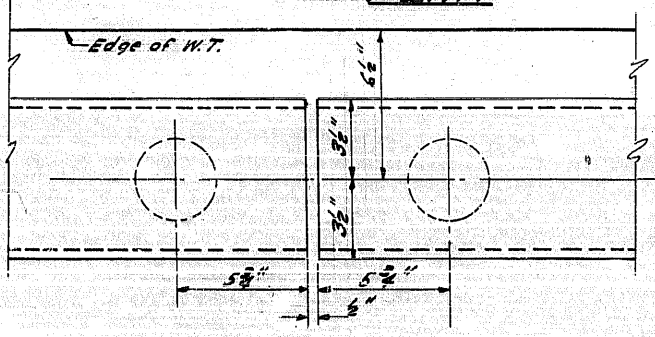
ELEVATION



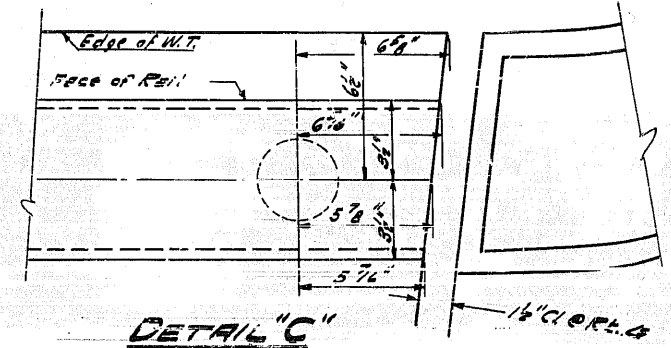
PLAN



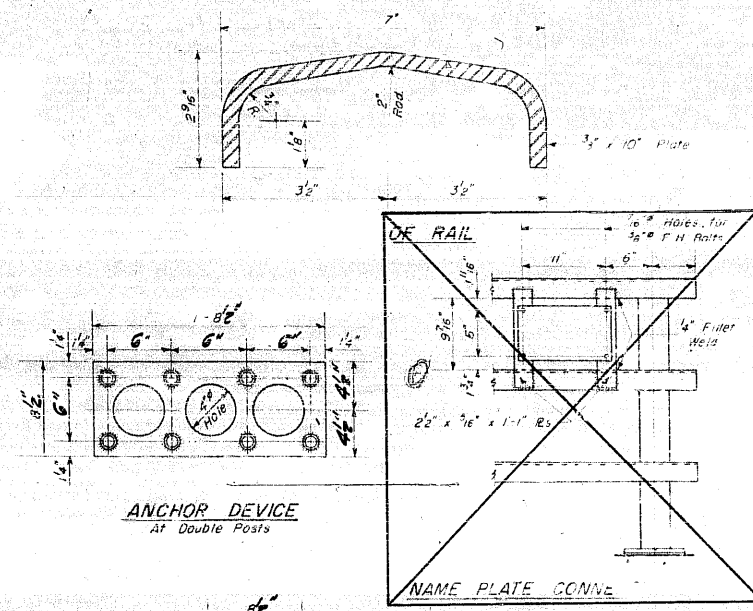
DETAIL "A"



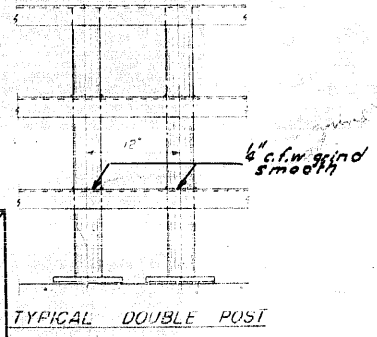
DETAIL "B"



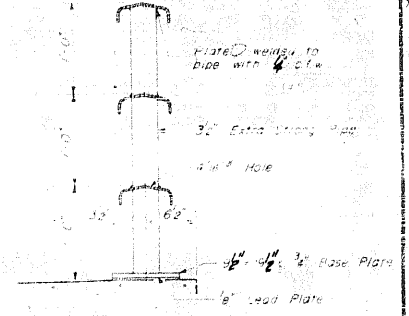
DETAIL "C"



ANCHOR DEVICE
At Double Posts

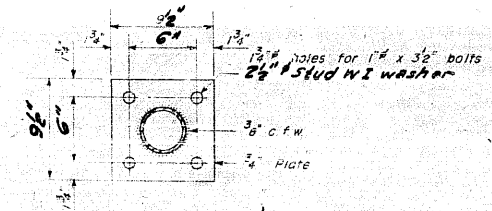


TYPICAL DOUBLE POST

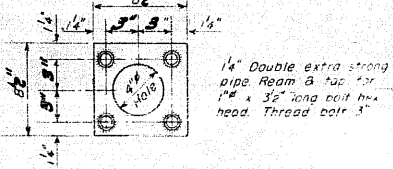


TYPICAL CROSS SECTION

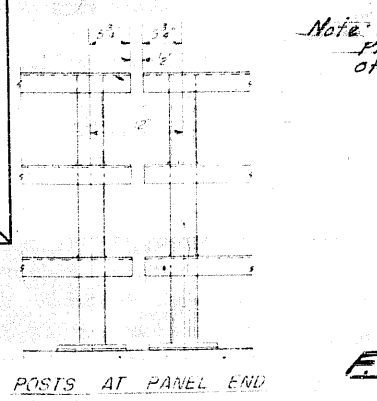
Note: Provide 1-1/2" & 1-1/2" Shim for 50% of Rail Posts. Punch same as base plate.



BASE PLATE
ALL POSTS - SUPERSTRUCTURE



ANCHOR DEVICE
At Single Post



POSTS AT PANEL END

DESIGNED: O.J. Rohrer
CHECKED: C.W. Hill
DATE: 1/16/59
APPROVED: P.H. Bantlinger

BILL OF MATERIAL
Metal Handrail Lin Ft. 138

HANDRAIL
F.A. P.T.E. 6 SEC. 3R-HB-3
KANE COUNTY
STA. 170+59.26