

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

FEDERAL AID ROUTE NO. 53 (F.A. - 61)	SEC. 53-2-HB-1	COUNTY COOK	TOTAL SHEETS 21	SHEET NO. 1
I. P. R. REG. NO. 4 ILLINOIS PROJECT U-184 (29)				

INDEX OF SHEETS ON SHEET NO. 2

DISTRICT 10  
 RELOCATED S. B. I. ROUTE 53 (F. A. ROUTE 61) SECTION 531-2 HB-1  
 DUAL STRUCTURES OVER INDUSTRIAL AVENUE  
 PROJECT U-184 (29)  
 COOK COUNTY

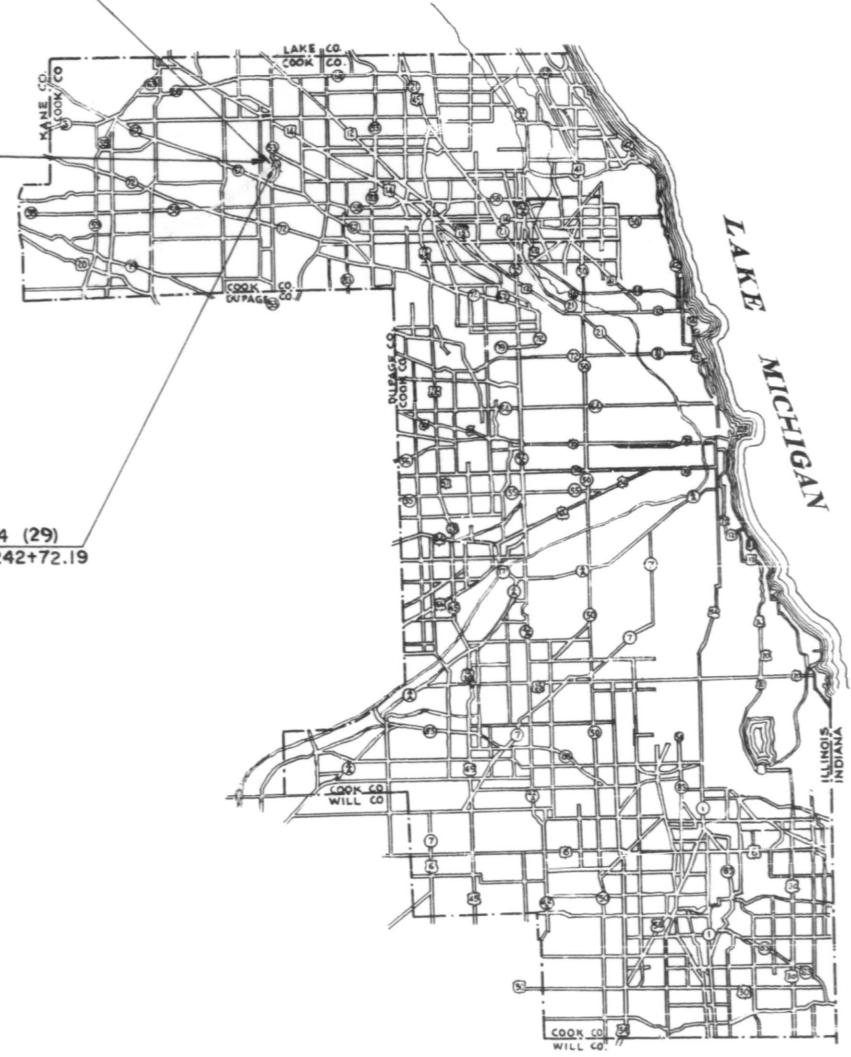
PROJECT LENGTH 155.50 LIN. FT. (0.029 MILES)



SECTION 531-2-HB-1 INCLUDES THE CONSTRUCTION OF DUAL 3-SPAN CONTINUOUS WIDE FLANGE BEAM GRADE SEPARATION STRUCTURES (TO CARRY RELOCATED ROUTE 53 OVER INDUSTRIAL AVENUE), WITH SPANS 2 AT 45'-2" AND 1 AT 59'-2" ON OPEN R. C. ABUTMENTS AND R. C. PIERS, AT STATION 243+49.94 IN THE CITY OF ROLLING MEADOWS.

PROJECT U-184 (29)  
 ENDS STA. 244+27.69

PROJECT U-184 (29)  
 BEGINS STA. 242+72.19



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

SUBMITTED 4-5-63  
*Marshall J. Kelly*  
 DISTRICT ENGINEER

EXAMINED April 19 1963  
*Ed Van Cursdall*  
 CHIEF ENGINEER OF ROAD PLANS AND CONTRACTS

PASSED April 19 1963  
*[Signature]*  
 CHIEF ENGINEER OF DESIGN

APPROVED April 19 1963  
*[Signature]*  
 CHIEF HIGHWAY ENGINEER

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

DIVISION ENGINEER DATE

PLANS PREPARED BY BUREAU OF DESIGN Wm. L. Brown DATE 4-4-63  
 APPROVED BY ASST DISTRICT ENGINEER — ENGINEERING Robert C. Manning DATE 4/4/63  
 EXAMINED BY BUREAU OF CONSTRUCTION Joseph J. Gaur DATE 4-4-63  
 EXAMINED BY BUREAU OF MAINTENANCE Edward J. Newell DATE 4-4-63  
 EXAMINED BY BUREAU OF TRAFFIC R. H. Adams DATE 4-4-63  
 EXAMINED BY BUREAU OF MATERIALS W. H. Adams DATE 4-4-63  
 ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY Wm. L. Brown DATE 4-5-63  
 DISTRICT ENGINEER

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 53 F.A. 61	531-2-HB-1	COOK	21	2
STA.		TO STA.		
U.S. BUR. PUB. ROADS, DIV. 4 ILLINOIS F.A. PROJECT				

### SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL
011001	EARTH EXCAVATION	CU. YDS.	50
016001	EMBANKMENT	CU. YDS.	33,720
020001	TRENCH BACKFILL	CU. YDS.	550
050001	CLASS A EXCAVATION FOR STRUCTURES	CU. YDS.	430
052003	CLASS X CONCRETE	CU. YDS.	1,060.7
052021	PROTECTIVE COAT	SQ. YDS.	2,100
054001	FURNISHING AND ERECTING STRUCTURAL STEEL	POUNDS	413,940
059001	REINFORCEMENT BARS	POUNDS	175,580
060004	FURNISHING CREOSOTED PILES UP TO 20 FEET	LIN. FT.	800
060005	FURNISHING CREOSOTED PILES 20.1 TO 38 FEET	LIN. FT.	3,780
060007	TEST PILES, TIMBER	EACH	2
060008	DRIVING TIMBER PILES	LIN. FT.	4,580
060043	DRIVING CONCRETE PILES	LIN. FT.	2,430
060044	FURNISHING CONCRETE PILES	LIN. FT.	2,430
060047	TEST PILES, CONCRETE	EACH	2
061001	NAME PLATES	EACH	2
066030	STORM SEWERS, TYPE 2, 24 INCH	LIN. FT.	400
066420	STORM SEWERS, TYPE 2 EXTRA STRENGTH CLAY PIPE, 18 INCH	LIN. FT.	340
072003	WATER MAIN, 8 INCH	LIN. FT.	365
075081	MANHOLES, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	8
075113	VALVE VAULTS, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	4
083002	SLOPE WALL (4")	SQ. YDS.	1,280
084001	PAVEMENT REPLACEMENT - ENTIRE	SQ. YDS.	20
107001	FIRE HYDRANT TO BE MOVED	EACH	1
072068	WATER MAIN FITTINGS AND VALVES	LUMP SUM	1
201152	ALTERNATE A ALUMINUM HANDRAIL TYPE D ALTERNATE B	LIN. FT.	606
055015	METAL HANDRAIL TYPE E	LIN. FT.	606

NOTE: FOR ITEMS OF "WATER MAIN FITTINGS AND VALVES," SEE SHEET No. 5

Two (2) signs conforming to Standard 2158-1 shall be erected at locations shown on Sheet No. 3

### INDEX OF SHEETS

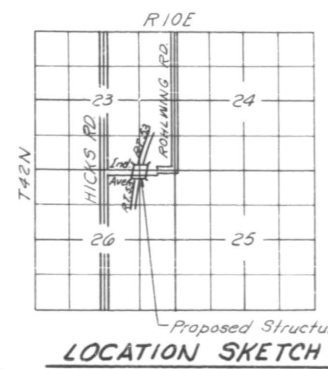
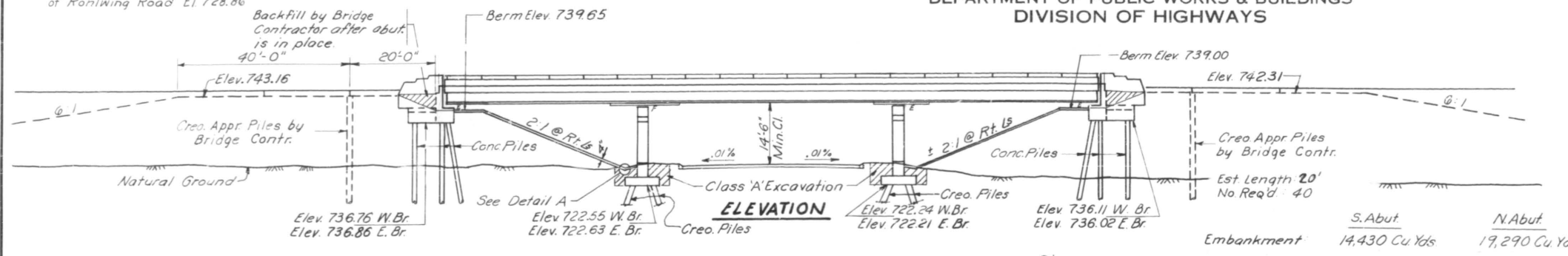
#### SHEET NO.

1. COVER SHEET
2. INDEX OF SHEETS, SUMMARY OF QUANTITIES, SIGNATURES
3. EXISTING TOPOGRAPHY AND PLAN OF PROPOSED IMPROVEMENT
4. PROFILE AND TYPICAL CROSS SECTION - RELOCATED ROUTE 53
5. DETAIL OF SEWER AND WATER MAIN RELOCATION
6. GENERAL PLAN AND ELEVATION OF STRUCTURES
7. TOP OF SLAB ELEVATIONS - WEST BRIDGE
8. TOP OF SLAB ELEVATIONS - EAST BRIDGE
9. SUPERSTRUCTURE
10. EXPANSION DEVICE
11. STRUCTURAL STEEL DETAILS
- 12-12A ALUMINUM HANDRAIL - METAL HANDRAIL
13. NORTHEAST AND SOUTHWEST ABUTMENTS
14. NORTHWEST AND SOUTHEAST ABUTMENTS
15. WING WALLS
16. PIERS
17. PILE DETAILS
18. DRIVING DATA
19. STANDARD 15165, STANDARD 1527-2, STANDARD 2114
20. STANDARD 1686-2, STANDARD 2113
21. STANDARD 1971-3, STANDARD 2158-1, STANDARD 1526-R

B.M. Cross on North Flange bolt fire hydrant on North side Industrial Ave. 500'± West of Rohlwing Road El. 728.86

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. 53 (P.A. 61)	531-2-HB-1	COOK	21	6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.	U-184 (29)



**GENERAL NOTES**

Coarse aggregate to be used in parapet handrails and end post must be absolutely free of chert, flint, limonite and soft sandstone. The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

The slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq ft. All reinforcement bars shall be lapped 20 diameters unless otherwise noted. Rivets 3/4" open holes 1 1/8" unless otherwise noted. Anchor bolts shall be set before riveting diaphragms over supports.

Roadway expansion devices shall be assembled in the shop in proper position with the end in place and shall be left assembled for shop inspection. The exposed surfaces of the expansion devices shall be given two shop coats of red lead paint.

Expansion devices are included in the quantity of Structural Steel. Est. Wt. = 29,490#.

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

Permanent forms will not be permitted in forming the concrete floor.

The contractor shall drive 2 concrete test piles and 2 timber test piles (for locations see sheet #8411) as directed by the Engineer before ordering remaining piles.

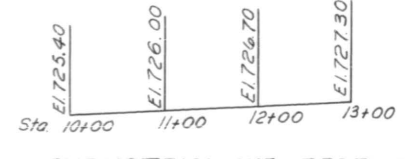
Concrete piles at abutments shall be driven in holes pre-cored through the embankment in accordance with Article 60.9(C) of the Standard Specifications.

All structural steel shall conform to ASTM Designation A-36.

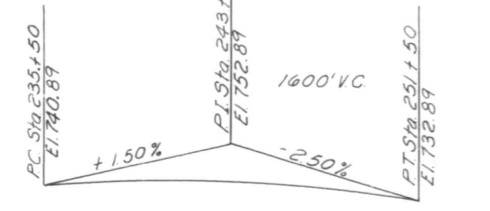
**SBI RT. 53 HORIZ. CURVE DATA**

$\Delta = 77^\circ 11' 38''$   $E = 1677.02'$   
 $D = 0^\circ 57' 17.8''$   $PC = \text{Sta. } 188 + 48.07$   
 $R = 6000'$   $PI = \text{Sta. } 236 + 37.28$   
 $L = 8083.72'$   $PT = \text{Sta. } 269 + 31.79$   
 $T = 4789.21'$

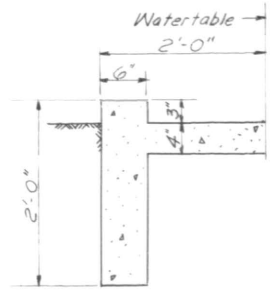
**INDUSTRIAL AVE. PROFILE**



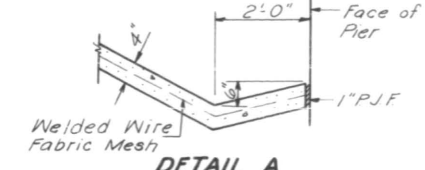
**SBI RT. 53 VERTICAL CURVE DATA**



**SECTION A-A**



**DETAIL A**



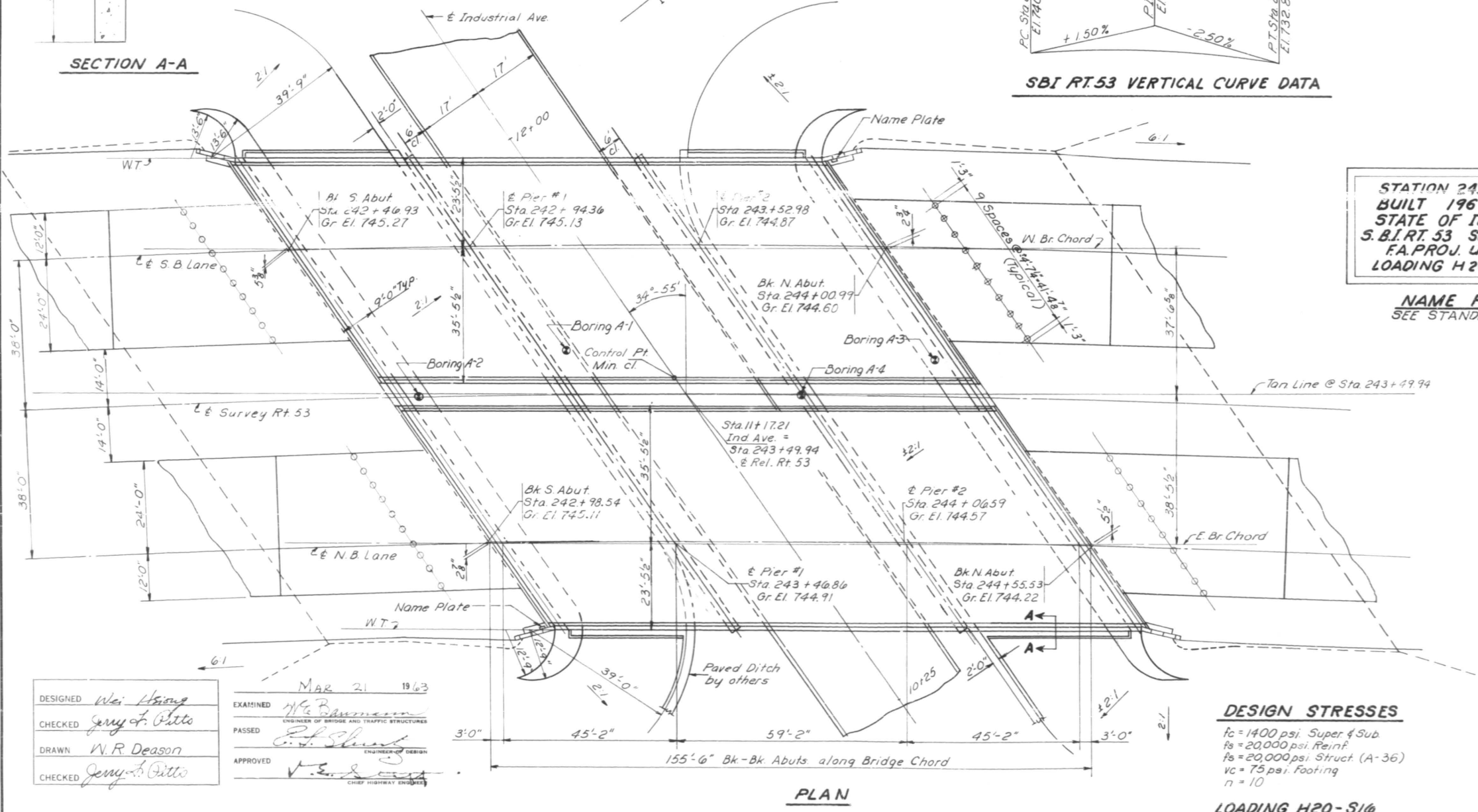
**STATION 243+49.94  
BUILT 196 BY  
STATE OF ILLINOIS  
S.B.I. RT. 53 SEC. 531-2-HB-1  
F.A. PROJ. U-184 (29)  
LOADING H20-S16**

**NAME PLATE  
SEE STANDARD 2113**

**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub	Total
Embankment	Cu Yds.			33,720
Class A Excav for Struct.	Cu Yds.		430	430
Class X Concrete	Cu Yds.	481.8	577.9	1059.7
Structural Steel	Lbs.	413,940		413,940
Aluminum Handrail	Lin Ft.	606		606
Reinforcement Bars	Lbs.	119,970	55,610	175,580
Cresoted Piles	Lin Ft.		3780	4580*
Test Piles (Timber)	Ea.		2	2
Concrete Piles	Lin Ft.		2430	2430
Test Piles (Concrete)	Ea.		2	2
Name Plates	Ea.		2	2
Slope Wall (4")	Sq Yds.			1,280
Protective Coat	Sq Yds.	2,100		2,100

\* Including 800 Lin.Ft for approach piles.



**DESIGN STRESSES**

$f_c = 1400$  psi. Super & Sub  
 $f_s = 20,000$  psi. Reinf.  
 $f_s = 20,000$  psi. Struct. (A-36)  
 $vc = 75$  psi. Footing  
 $n = 10$

**LOADING H20-S16**

**PROJ. U-184 (29)  
GENERAL PLAN & ELEVATIONS  
RELOCATED S.B.I. RT. 53  
OVER INDUSTRIAL AVENUE  
S.B.I. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94**

DESIGNED *Wei Hsiang*  
 CHECKED *Jerry F. Otto*  
 DRAWN *W. R. Deason*  
 CHECKED *Jerry F. Otto*

EXAMINED *W. E. Deason*  
 PASSED *E. J. Smith*  
 APPROVED *W. E. Deason*

MAR 21 1963

Revised 4-9-63 Borrow Excavation 40,470 Cu Yds. changed to Embankment 33,720 Cu Yds. Sta. 11+71.21 changed to Sta. 11+17.21 w. 11



STATE OF ILLINOIS  
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DIVISION OF HIGHWAYS

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For B Def.
Bk. S. Abut.	24232.255	22.051	745.746	745.746
	24236.850	15.127	745.598	745.598
	24241.454	8.207	745.450	745.450
Br Chord	24246.070	1.290	745.300	745.300
	24246.633	.447	745.282	745.282
	24250.696	5.622	745.151	745.151
	24255.332	12.532	745.001	745.001
	24259.980	19.437	744.850	744.850
	24264.637	26.340	744.699	744.699
	24269.306	33.238	744.547	744.547
E Brq. S. Abut.	24295.225	21.992	745.739	745.739
	24299.823	15.071	745.591	745.591
	24244.431	8.153	745.442	745.442
Br Chord	24249.050	1.239	745.292	745.292
	24249.614	.396	745.274	745.274
	24253.679	5.671	745.142	745.142
	24258.319	12.578	744.992	744.992
	24262.970	19.482	744.841	744.841
	24267.631	26.382	744.689	744.689
	24272.303	33.278	744.537	744.537
	24245.125	21.810	745.713	745.722
	24249.734	14.896	745.564	745.573
	24254.354	7.986	745.414	745.423
	24258.984	1.079	745.263	745.272
	24259.549	.237	745.245	745.254
	24263.625	5.823	745.112	745.121
	24268.276	12.723	744.961	744.970
	24272.938	19.618	744.809	744.818
	24277.611	26.510	744.656	744.665
	24282.295	33.399	744.503	744.512
	24255.025	21.643	745.685	745.695
	24259.645	14.737	745.534	745.545
	24264.276	7.834	745.383	745.394
	24268.918	.936	745.232	745.242
	24269.485	.095	745.213	745.224
	24273.571	5.959	745.080	745.090
	24278.234	12.850	744.927	744.938
	24282.907	19.739	744.774	744.785
	24287.592	26.623	744.621	744.631
	24292.287	33.503	744.467	744.477
	24264.925	21.493	745.655	745.662
	24269.557	14.595	745.503	745.510
	24274.200	7.700	745.351	745.358
	24278.853	.809	745.199	745.206
	24279.421	.030	745.180	745.187
	24283.517	6.078	745.046	745.053
	24288.191	12.962	744.892	744.899
	24292.876	19.842	744.738	744.745
	24297.572	26.718	744.583	744.590
	24302.279	33.591	744.428	744.435
	24274.826	21.360	745.622	745.625
	24279.470	14.469	745.470	745.472
	24284.124	7.582	745.317	745.319
	24288.788	.699	745.163	745.166
	24289.348	.140	745.144	745.147
	24293.463	6.180	745.009	745.011
	24298.149	13.056	744.855	744.857
	24302.846	19.929	744.699	744.702
	24307.553	26.797	744.544	744.546
	24312.271	33.662	744.388	744.390
E Brq. Pier 1	24279.942	21.297	745.605	745.605
	24284.591	14.411	745.452	745.452
	24289.251	7.528	745.298	745.298
Br Chord	24293.922	.648	745.144	745.144
	24294.492	.189	745.125	745.125
	24298.603	6.227	744.989	744.989
	24303.295	13.099	744.834	744.834
	24307.997	19.967	744.679	744.679
	24312.710	26.831	744.522	744.522
	24317.434	33.692	744.366	744.366

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For B Def.
	24269.844	21.189	745.569	745.580
	24274.504	14.310	745.415	745.426
	24279.175	7.435	745.261	745.271
	24303.857	.563	745.105	745.116
	24304.429	.274	745.086	745.097
	24308.550	6.304	744.950	744.960
	24313.253	13.168	744.793	744.804
	24317.967	20.028	744.637	744.647
	24322.692	26.885	744.480	744.490
	24327.427	33.738	744.322	744.332
	24299.746	21.097	745.532	745.553
	24304.418	14.226	745.376	745.398
	24309.100	7.358	745.221	745.242
	24313.793	.495	745.065	745.086
	24314.366	.341	745.045	745.067
	24318.497	6.364	744.908	744.929
	24323.212	13.221	744.751	744.772
	24327.937	20.073	744.593	744.614
	24332.673	26.922	744.434	744.456
	24337.420	33.767	744.276	744.297
	24309.648	21.022	745.492	745.523
	24314.331	14.158	745.336	745.366
	24319.025	7.299	745.179	745.210
	24323.729	.443	745.022	745.052
	24324.304	.392	745.002	745.033
	24328.445	6.409	744.864	744.895
	24333.171	13.257	744.705	744.736
	24337.907	20.102	744.547	744.577
	24342.655	26.943	744.387	744.418
	24347.413	33.780	744.227	744.258
	24319.550	20.963	745.450	745.470
	24324.245	14.107	745.293	745.313
	24328.950	7.255	745.135	745.155
	24333.666	.407	744.977	744.997
	24334.242	.427	744.957	744.977
	24338.392	6.436	744.818	744.838
	24343.130	13.277	744.658	744.678
	24347.878	20.114	744.498	744.519
	24352.636	26.947	744.338	744.358
	24357.406	33.776	744.177	744.197
	24329.453	20.920	745.406	745.416
	24334.159	14.073	745.248	745.257
	24338.875	7.229	745.089	745.098
	24343.602	.388	744.929	744.939
	24344.179	.445	744.910	744.919
	24348.340	6.447	744.769	744.779
	24353.088	13.280	744.609	744.619
	24357.848	20.109	744.448	744.458
	24362.618	26.934	744.288	744.298
	24367.399	33.755	744.124	744.134
E Brq. Pier 2	24338.531	20.896	745.364	745.364
	24343.247	14.055	745.204	745.204
	24347.973	7.219	745.044	745.044
Br Chord	24352.711	.386	744.884	744.884
	24353.289	.446	744.864	744.864
	24357.459	6.443	744.723	744.723
	24362.218	13.268	744.562	744.562
	24366.987	20.090	744.400	744.400
	24371.768	26.907	744.237	744.237
	24376.559	33.721	744.074	744.074
	24348.433	20.665	745.316	745.320
	24353.161	14.052	745.155	745.160
	24357.896	7.224	744.994	744.999
	24362.647	.399	744.833	744.837
	24367.422	.432	744.671	744.675
	24372.176	6.422	744.508	744.513
	24376.957	13.239	744.345	744.350
	24381.749	20.053	744.181	744.186
	24386.552	26.863	744.017	744.022

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For B Def.
	24358.336	20.891	745.265	745.274
	24363.075	14.066	745.104	745.113
	24367.824	7.245	744.942	744.951
	24372.583	.428	744.779	744.788
	24377.365	.402	744.759	744.769
	24377.354	6.384	744.616	744.625
	24382.135	13.194	744.453	744.462
	24386.927	20.000	744.288	744.298
	24391.730	26.801	744.124	744.133
	24396.544	33.599	743.958	743.967
	24368.239	20.913	745.213	745.223
	24372.988	14.096	745.050	745.061
	24377.749	7.283	744.887	744.898
	24382.520	.474	744.724	744.734
	24383.302	.365	744.704	744.714
	24387.301	6.330	744.559	744.570
	24392.094	13.132	744.395	744.405
	24396.897	19.930	744.229	744.240
	24401.711	26.723	744.064	744.074
	24406.536	33.513	743.897	743.907
	24378.142	20.952	745.158	745.163
	24382.902	14.143	744.995	745.000
	24387.674	7.338	744.831	744.835
	24392.456	.537	744.668	744.671
	24393.039	.292	744.646	744.651
	24397.248	6.260	744.501	744.505
	24402.052	13.053	744.335	744.340
	24406.867	19.843	744.168	744.173
	24411.682	26.629	744.001	744.006
	24416.529	33.411	743.834	743.839
E Brq. N. Abut.	24383.258	20.978	745.129	745.129
	24388.024	14.174	744.965	744.965
	24392.801	7.373	744.801	744.801
Br Chord	24397.589	.575	744.635	744.635
	24398.374	.232	744.615	744.615
	24402.388	6.217	744.469	744.469
	24407.197	13.006	744.303	744.303
	24412.017	19.792	744.136	744.136
	24416.849	26.573	743.968	743.968
	24421.691	33.351	743.800	743.800
Bk. N. Abut.	24386.229	20.996	745.112	745.112
	24390.998	14.193	744.948	744.948
	24395.779	7.395	744.783	744.783
Br Chord	24400.570	.600	744.617	744.617
	24401.355	.227	744.597	744.597
	24405.372	6.190	744.451	744.451
	24410.185	12.977	744.284	744.284
	24415.008	19.760	744.117	744.117
	24419.843	26.539	743.949	743.949
	24424.688	33.315	743.781	743.781

DESIGNED *N. H. Hays*  
CHECKED *John F. Potts*  
DRAWN *W. E. Dickerson*  
CHECKED *John F. Potts*

EXAMINED *W. E. Beermann*  
PASSED *E. J. Shantz*  
APPROVED *W. E. Beermann*  
MAR 21 1963

TOP OF SLAB ELEVATIONS  
WEST BRIDGE  
S.B.I. RT. 53 SEC. 331-2-HB-1  
COOK COUNTY  
STA. 243+49.94

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

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For & Def.
	24275.708	33.333	745.859	745.859
	24280.402	26.443	745.706	745.706
	24285.107	19.557	745.553	745.553
Bk. S. Abut	24289.823	12.674	745.399	745.399
Br. Chord	24294.550	5.796	745.245	745.245
	24298.709	.240	745.109	745.109
	24299.287	1.079	745.090	745.090
	24304.035	7.950	744.934	744.934
	24308.795	14.818	744.778	744.778
	24313.565	21.682	744.622	744.622
	24278.710	33.297	745.849	745.849
	24283.408	26.409	745.696	745.696
	24288.116	19.525	745.542	745.542
E Br. S. Abut	24292.836	12.645	745.388	745.388
Br. Chord	24297.566	5.769	745.233	745.233
	24301.728	.265	745.097	745.097
	24302.307	1.103	745.078	745.078
	24307.059	7.972	744.922	744.922
	24311.821	14.836	744.766	744.766
	24316.595	21.699	744.609	744.609
	24288.718	33.187	745.813	745.822
	24293.427	26.307	745.659	745.668
	24298.147	19.431	745.504	745.513
	24302.878	12.558	745.349	745.358
	24307.619	5.690	745.193	745.202
	24311.792	.337	745.056	745.065
	24312.372	1.174	745.037	745.046
	24317.136	8.035	744.880	744.889
	24321.910	14.893	744.723	744.732
	24326.696	21.746	744.565	744.574
	24298.725	33.093	745.775	745.786
	24303.446	26.221	745.620	745.631
	24308.178	19.353	745.464	745.475
	24312.920	12.488	745.308	745.318
	24317.673	5.628	745.151	745.162
	24321.856	.392	745.013	745.023
	24322.436	1.228	744.994	745.004
	24327.213	8.082	744.836	744.846
	24331.999	14.931	744.677	744.688
	24336.796	21.777	744.518	744.529
	24308.733	33.016	745.735	745.742
	24313.456	26.152	745.579	745.586
	24318.209	19.292	745.422	745.429
	24322.963	12.435	745.265	745.272
	24327.728	5.582	745.107	745.114
	24331.920	.431	744.968	744.975
	24332.503	1.266	744.948	744.955
	24337.290	8.111	744.789	744.796
	24342.088	14.953	744.630	744.637
	24346.897	21.790	744.470	744.477
	24318.742	32.956	745.693	745.696
	24323.485	26.099	745.536	745.538
	24328.240	19.247	745.378	745.380
	24333.005	12.398	745.219	745.222
	24337.782	5.554	745.060	745.063
	24341.985	.452	744.920	744.923
	24342.569	1.287	744.901	744.903
	24347.368	8.124	744.741	744.743
	24352.177	14.957	744.580	744.582
	24356.998	21.787	744.419	744.421
	24323.913	32.931	745.671	745.671
	24328.662	26.079	745.513	745.513
	24333.423	19.231	745.354	745.354
E Br. Pier 1	24338.194	12.386	745.195	745.195
Br. Chord	24342.977	5.545	745.035	745.035
	24347.185	.427	744.895	744.895
	24347.770	1.291	744.875	744.875
	24352.574	8.124	744.715	744.715
	24357.390	14.953	744.553	744.553
	24362.216	21.778	744.391	744.391

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For & Def.
	24333.921	32.896	745.625	745.636
	24338.682	26.052	745.466	745.477
	24343.454	19.211	745.306	745.317
	24348.237	12.375	745.146	745.157
	24353.031	.453	744.984	744.996
	24357.249	5.542	744.824	744.835
	24357.836	1.286	744.804	744.815
	24352.652	8.111	744.643	744.653
	24367.479	14.932	744.500	744.511
	24372.317	21.750	744.337	744.348
	24343.930	32.878	745.577	745.599
	24348.702	26.041	745.417	745.438
	24353.486	19.209	745.257	745.278
	24358.280	12.380	745.095	745.116
	24363.085	5.556	744.934	744.955
	24367.314	.433	744.791	744.812
	24367.902	1.264	744.771	744.792
	24372.729	8.091	744.608	744.629
	24377.568	14.895	744.445	744.466
	24382.417	21.704	744.281	744.302
	24353.938	32.876	745.528	745.558
	24358.722	26.048	745.366	745.397
	24363.517	19.223	745.205	745.235
	24368.323	12.403	745.042	745.073
	24373.140	5.586	744.879	744.910
	24377.378	.395	744.736	744.767
	24377.968	1.226	744.716	744.747
	24382.806	8.085	744.552	744.583
	24387.656	14.840	744.387	744.418
	24392.518	21.641	744.222	744.253
	24363.947	32.891	745.476	745.496
	24368.742	26.071	745.313	745.334
	24373.548	19.254	745.150	745.171
	24378.366	12.442	744.987	745.007
	24383.194	5.633	744.823	744.843
	24387.442	.341	744.678	744.699
	24388.033	1.171	744.658	744.679
	24392.884	7.972	744.493	744.513
	24397.745	14.769	744.327	744.348
	24402.618	21.562	744.161	744.181
	24373.955	32.923	745.422	745.431
	24378.762	26.110	745.258	745.268
	24383.579	19.302	745.094	745.104
	24388.408	12.497	744.929	744.939
	24393.248	5.697	744.764	744.774
	24397.506	.270	744.619	744.629
	24398.099	1.099	744.599	744.608
	24402.960	7.892	744.432	744.442
	24407.833	14.681	744.265	744.275
	24412.717	21.466	744.098	744.108
	24383.129	32.966	745.370	745.370
	24387.946	26.161	745.206	745.206
	24392.775	19.360	745.040	745.040
	24397.614	12.563	744.875	744.875
	24402.464	5.770	744.709	744.709
	24407.332	.191	744.562	744.562
	24412.205	1.018	744.542	744.542
	24417.077	7.804	744.375	744.375
	24421.961	14.585	744.207	744.207
	24426.844	21.363	744.038	744.038
	24393.137	33.030	745.312	745.316
	24397.966	26.233	745.146	745.151
	24402.805	19.440	744.980	744.985
	24407.656	12.651	744.813	744.818
	24412.517	5.866	744.646	744.650
	24416.795	.088	744.498	744.503
	24421.390	7.914	744.478	744.483
	24426.273	14.792	744.309	744.314
	24431.168	21.665	744.140	744.145
	24436.074	28.534	743.971	743.975

Beams	Station	Offset	Theoretical Grade Elevations	Grade El. Adjusted For & Def.
	24403.145	33.110	745.251	745.260
	24407.985	26.321	745.084	745.094
	24412.836	19.537	744.917	744.926
	24417.698	12.756	744.749	744.759
	24422.570	5.979	744.581	744.590
	24426.858	.031	744.433	744.442
	24427.454	.794	744.412	744.421
	24432.349	7.583	744.242	744.251
	24437.255	14.328	744.072	744.081
	24442.173	21.089	743.901	743.910
	24413.153	33.207	745.189	745.199
	24418.004	26.427	745.021	745.031
	24422.866	19.650	744.852	744.863
	24427.739	12.877	744.683	744.694
	24432.623	6.108	744.514	744.524
	24436.921	.168	744.364	744.375
	24437.518	.656	744.344	744.354
	24442.425	7.417	744.173	744.183
	24447.342	14.174	744.001	744.012
	24452.271	20.927	743.829	743.840
	24423.160	33.321	745.124	745.129
	24428.022	26.548	744.955	744.960
	24432.896	19.780	744.785	744.790
	24437.780	13.015	744.615	744.620
	24442.675	6.254	744.444	744.449
	24446.983	.321	744.294	744.299
	24447.582	.502	744.273	744.278
	24452.499	7.254	744.101	744.106
	24457.428	14.003	743.929	743.933
	24462.368	20.748	743.755	743.760
	24428.331	33.386	745.089	745.089
	24433.199	26.518	744.920	744.920
	24438.078	19.653	744.750	744.750
	24442.968	13.093	744.579	744.579
	24447.869	6.336	744.408	744.408
	24452.181	.407	744.257	744.257
	24452.781	.415	744.236	744.236
	24457.704	7.164	744.063	744.063
	24462.639	13.908	743.890	743.890
	24467.585	20.649	743.716	743.716
	24431.333	33.426	745.069	745.069
	24436.204	26.660	744.899	744.899
	24441.086	19.898	744.729	744.729
	24445.980	13.140	744.558	744.558
	24450.884	6.386	744.386	744.386
	24455.200	.459	744.235	744.235
	24459.900	.363	744.214	744.214
	24464.727	7.105	744.041	744.041
	24469.665	13.851	743.867	743.867
	24470.614	20.589	743.693	743.693

DESIGNED *Wei Hoang*  
CHECKED *Jerry F. Otto*  
DRAWN *W.E. Dickerson*  
CHECKED *Jerry F. Otto*

EXAMINED *W.E. Baumann*  
PASSED *E.S. Sh...*  
APPROVED *W.E. Baumann*

MAR 21 1963

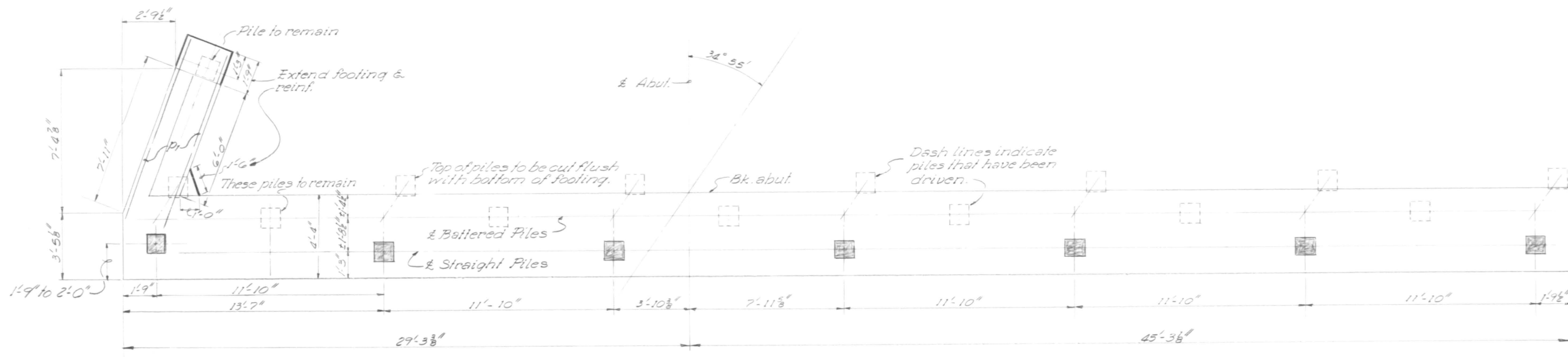
TOP OF SLAB ELEVATIONS  
EAST BRIDGE  
S.B.I. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I.				
F. A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 92  
SHEET



Note: Shaded piles indicate new piles to be driven.

PLAN - PILE CAP  
(Pile relocations)

Added Quantities  
Conc. Piles Lin. ft. = 315  
Class X Conc. Cu. yds. = 0.5

DESIGNED	
CHECKED	J.C.M.
DRAWN	
CHECKED	

SEPT 27 1963

EXAMINED	<i>W. B. Bauman</i> ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED	
APPROVED	ENGINEER OF DESIGN
	CHIEF HIGHWAY ENGINEER

PILE REVISIONS  
S. B. I. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243 + 49.94

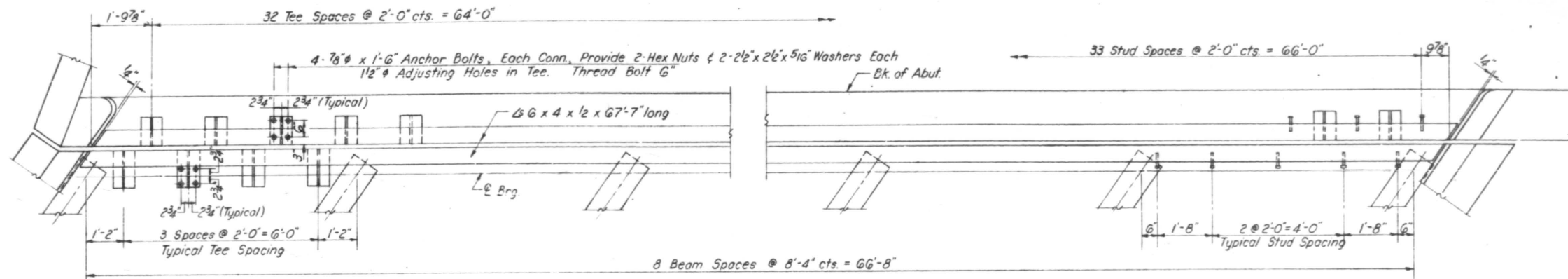
REV. SEPT. 27, 1963



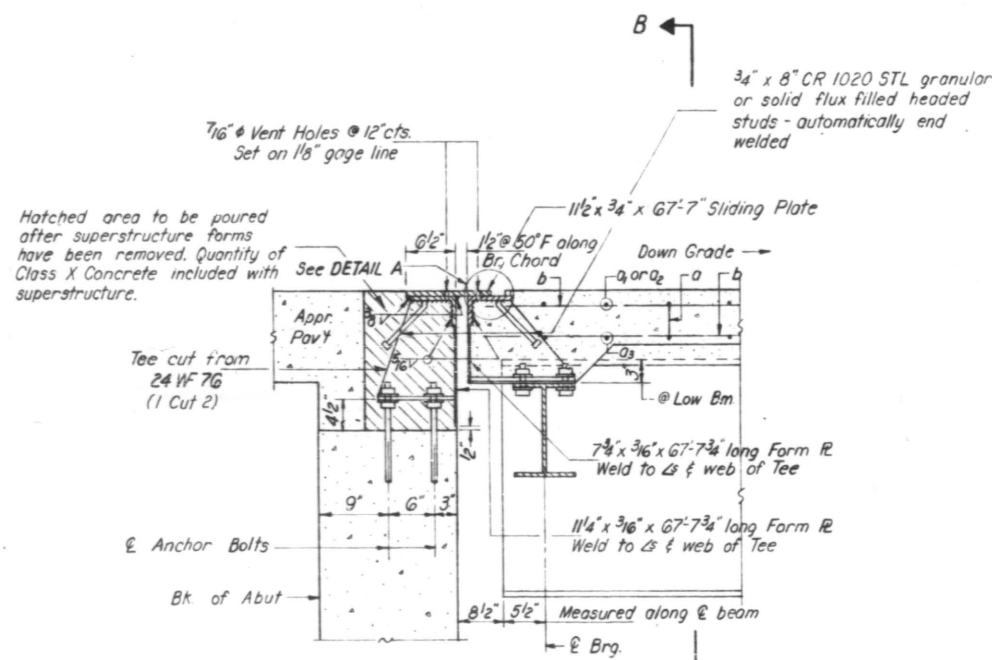
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
53	531-2	Cook	21	10
(-61)	HB-1			
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5  
13 SHEETS

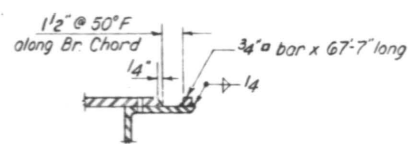


PLAN OF EXPANSION DEVICE

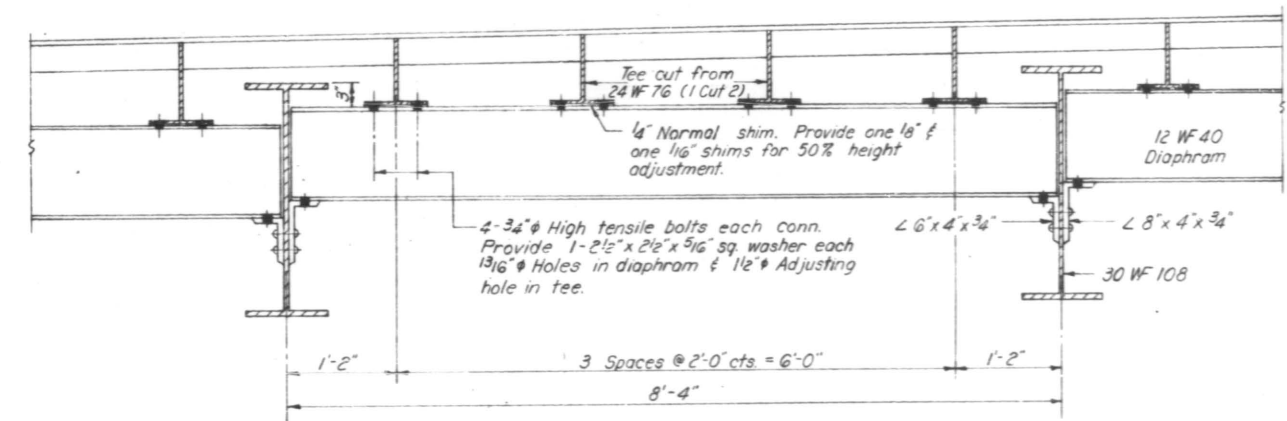


SECTION A-A

Note: The above arrangement of Sliding Plate is for S. Abut. only. For N. Abut. the Sliding Plate should be welded to angles on the Bridge Slab.



DETAIL A



SECTION B-B

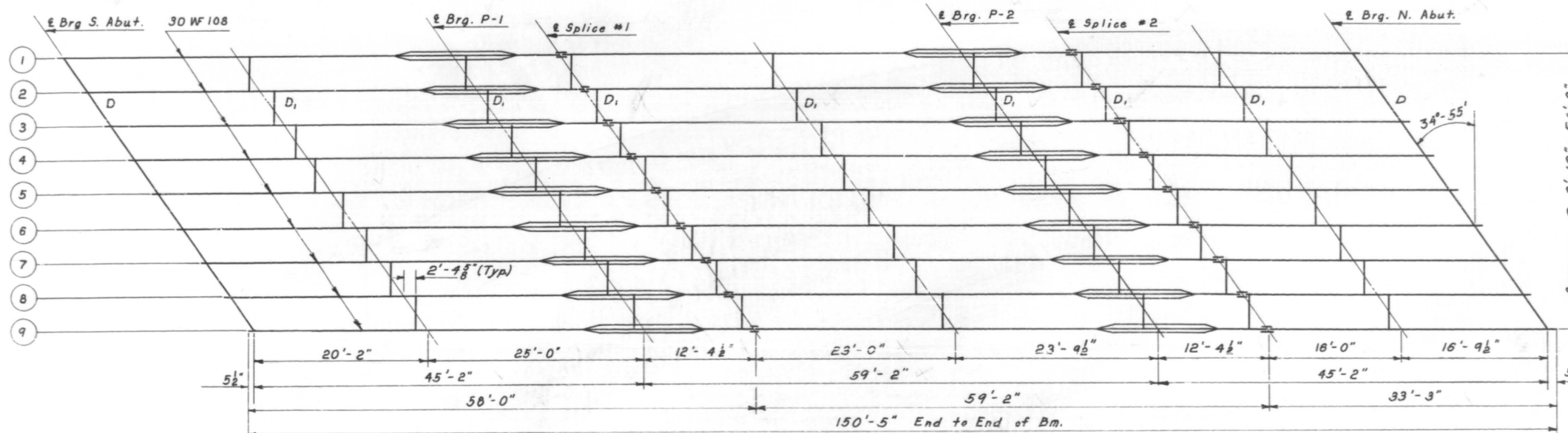
DESIGNED	Wei Heung	EXAMINED	W. B. Blummann
CHECKED	Jerry F. Otto	PASSED	E. J. Shurt
DRAWN	J. L. Armstrong	APPROVED	J. F. Otto
CHECKED	Jerry F. Otto		

MAR 21 1963

EXPANSION DEVICE  
EAST & WEST BRIDGES  
S.B.I. RT 53 SEC 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

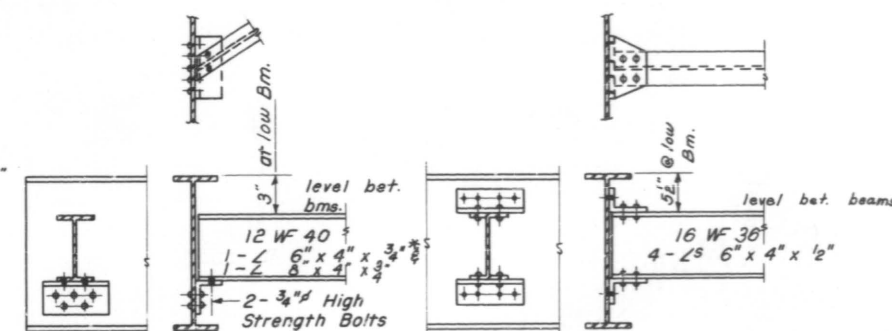
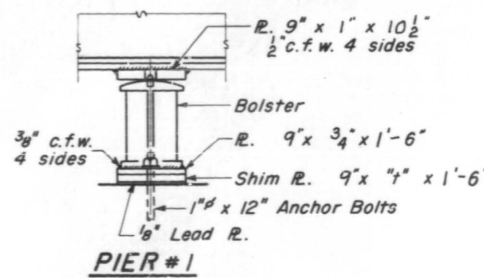
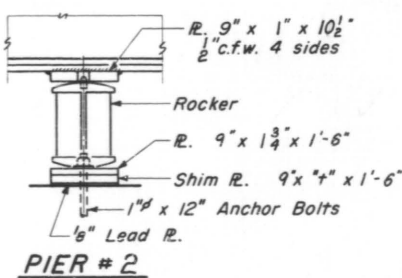
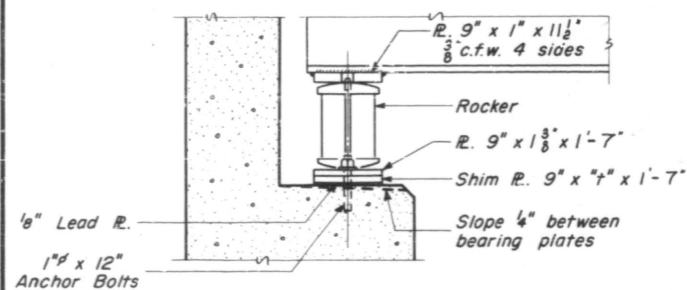
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO. 531-2 (I.A. 61)	SECTION HB-1	COUNTY Cook	TOTAL SHEETS 21	SHEET NO. 11	SHEET NO. 6 13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



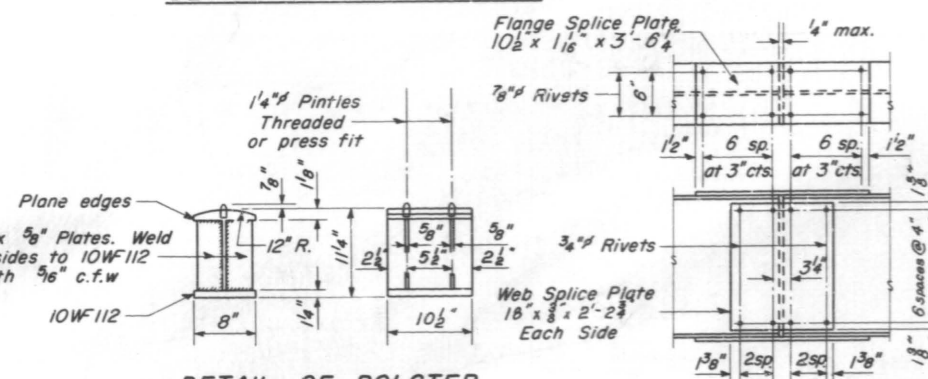
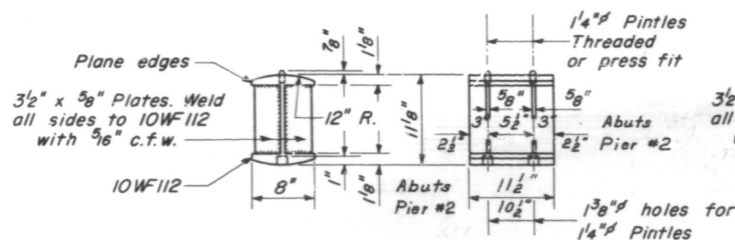
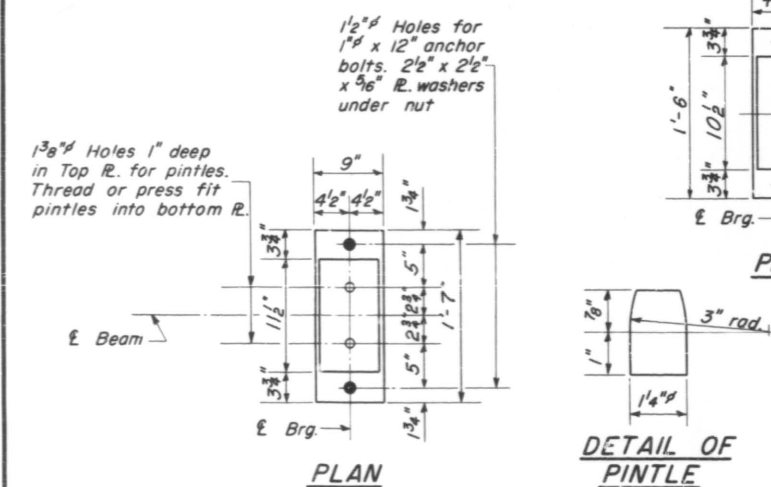
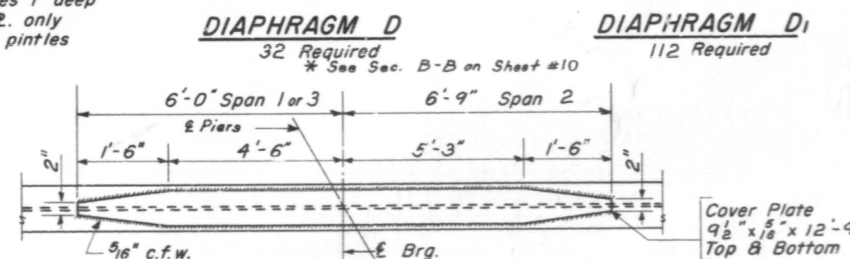
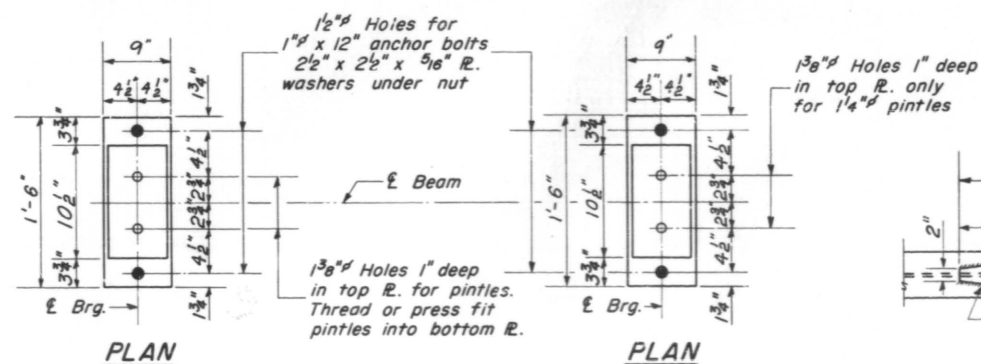
TOP BEAM ELEVATIONS

Beam No	1	2	3	4	5	6	7	8	9
W. Br.	745.17	745.02	744.87	744.72	744.56	744.39	744.26	744.05	743.89
E. Br.	744.98	744.79	744.64	744.49	744.32	744.16	744.03	743.82	743.68
Splice #1	744.88	744.73	744.58	744.43	744.26	744.10	743.97	743.76	743.60
E. Br. P-2	744.70	744.55	744.40	744.25	744.08	743.92	743.79	743.58	743.42
Splice #2	744.65	744.50	744.35	744.20	744.03	743.87	743.70	743.53	743.37
E. Br. N. Abut.	744.52	744.37	744.22	744.07	743.90	743.74	743.57	743.40	743.24
E. Br. S. Abut.	745.28	745.13	744.97	744.82	744.67	744.51	744.34	744.16	743.99
E. Br. P-1	745.03	744.88	744.72	744.57	744.42	744.26	744.09	743.91	743.74
Splice #1	744.96	744.81	744.65	744.50	744.35	744.19	744.02	743.84	743.67
E. Br. P-2	744.68	744.53	744.37	744.22	744.07	743.91	743.74	743.56	743.39
Splice #2	744.61	744.46	744.30	744.15	744.00	743.84	743.67	743.49	743.32
E. Br. N. Abut.	744.44	744.29	744.13	743.98	743.83	743.67	743.50	743.32	743.15



VALUE OF 't'

Beam No	1	2	3	4	5	6	7	8	9
West Br.	1/16"	1/16"	0"	0"	0"	0"	1/2"	0"	0"
East Br.	1/4"	1/8"	0"	0"	1/8"	1/4"	3/16"	1/16"	0"



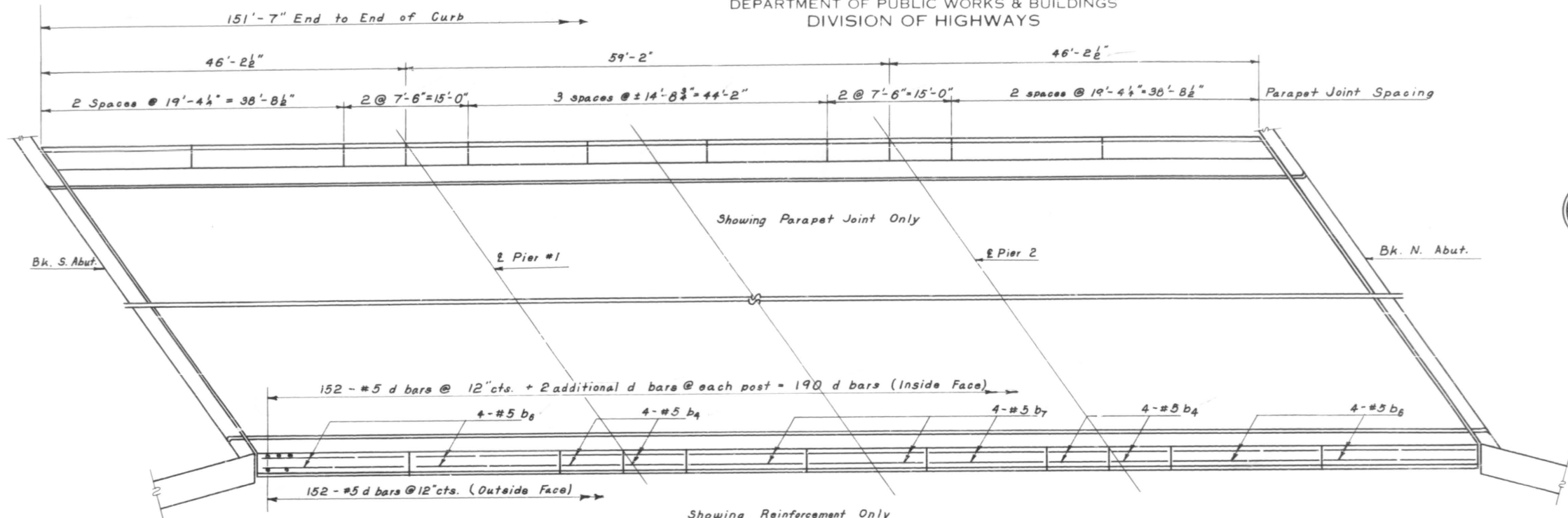
DESIGNED: *W. H. Haring*  
CHECKED: *J. F. Potts*  
DRAWN: *P. G. Barnett*  
*W. A. Sausaman Jr.*

EXAMINED: *W. H. Baumann*  
PASSED: *E. J. ...*  
APPROVED: *...*

MAR 21 1963

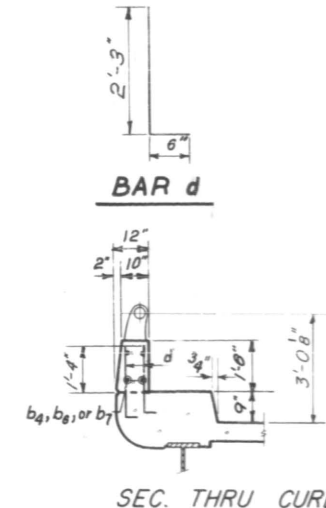
STRUCTURAL STEEL  
E. & W. BRIDGES

SBI. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

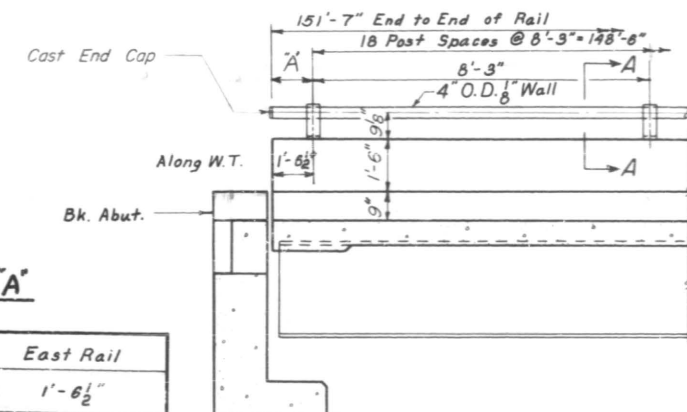


**PLAN**

South bridge shown - West bridge by rotation thru 180°



**BAR d**



**ELEVATION - END POST**

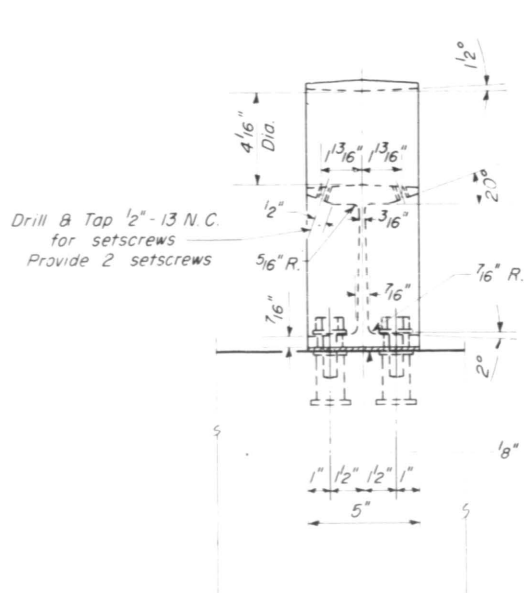
**VALUE OF "A"**

	West Rail	East Rail
East Br.	S. End 10" N. End 2'-3"	1'-6 1/2"
West Br.	1'-6 1/2"	S. End 2'-3" N. End 10"



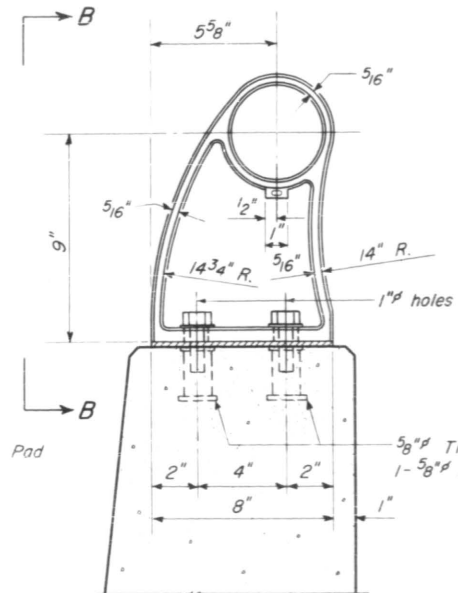
**CAST END CAP**

DRIVE FIT TYPE  
4 - Required  
Incidental to item "Aluminum Handrail"



**VIEW B-B**

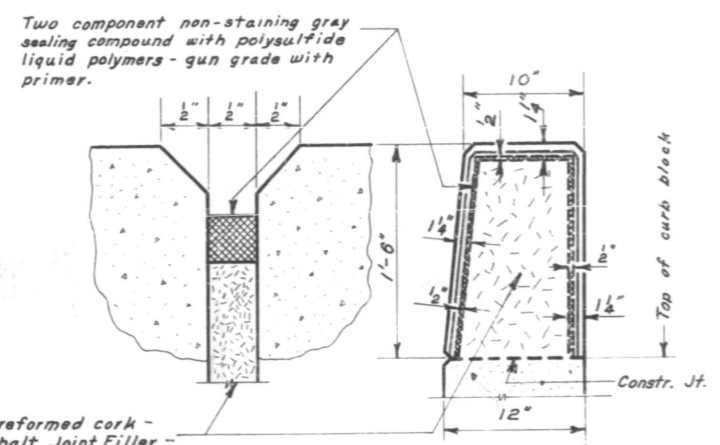
**RAIL POST DETAILS**



**SECTION A-A**

**NOTES**

- All Posts shall be placed normal to parapet
- All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy SG-70B-T6.
- All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6061-T6.
- Aluminum handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all post and gaps.
- Rail Tubing may be cut to random lengths.
- For material composition of Prefabricated Pad, See Art. 54.9 (f), (Bearings and Anchorage), of the Std. Specs.
- Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy 2024-T4.
- Aluminum handrail will 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.



**DETAIL OF JOINT IN PARAPET WALL**

**BILL OF MATERIAL**

Item	Unit	Quantity
Aluminum Handrail	Lin. Ft.	606
Class X Concrete	Cu. Yds.	31.0
Reinforcement Bars	Lbs.	6350

**BAR LIST**

BAR NO.	SIZE	LENGTH	SHAPE
b4	#5	7'-3"	—
b6	#5	18'-3"	—
b7	#5	14'-6"	—
d	#5	2'-9"	—

**TYPE D ALUMINUM HANDRAIL**

**SBI. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94**

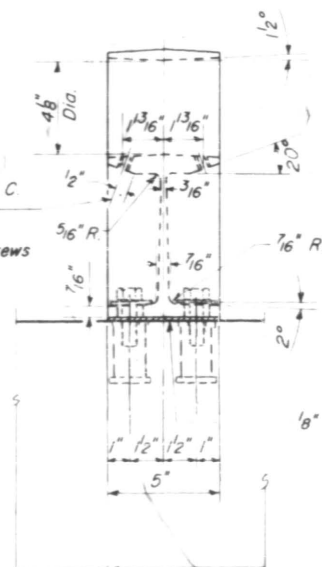
DESIGNED: Wei Heising  
CHECKED: Jerry J. Otto  
DRAWN: W. H. Barnett  
W. A. Sausaman

EXAMINED: W. E. Baumann  
PASSED: E. J. Shuck  
APPROVED: J. E. [Signature]

MAR 21 1963

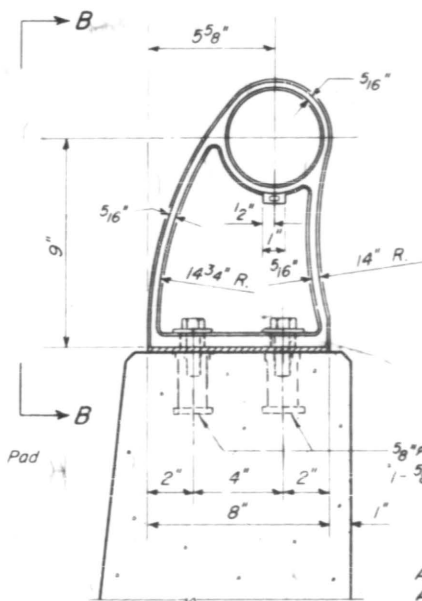
SEE SHEET 7 FOR RAIL PLAN

Drill & Tap  $\frac{1}{2}$ " - 13 N.C.  
for setscrews  
Provide 2  $\frac{1}{2}$ " x 1"  
stainless steel setscrews  
per post

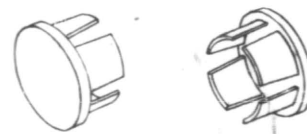


VIEW B-B

RAIL POST DETAILS



SECTION A-A

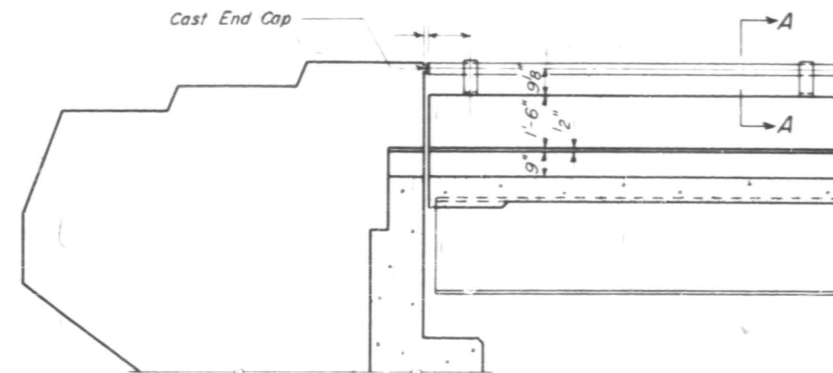


CAST END CAP  
DRIVE FIT TYPE  
4 Required  
Galvanize to ASTM. A-153.  
Incidental to item "Metal Handrail".

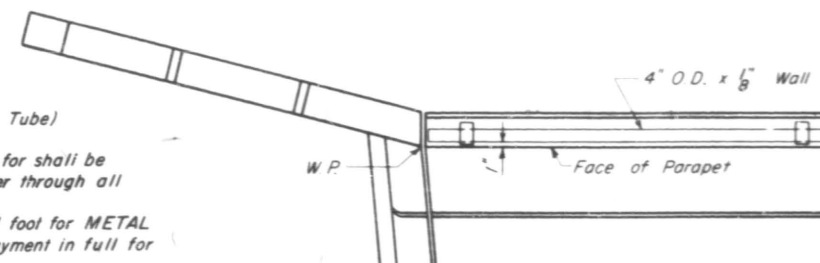
$\frac{5}{8}$ " Threaded Inserts. Provide 1- Stainless Steel Washer and  
1-  $\frac{5}{8}$ " x 2" Stainless Steel Bolt with each Insert  
4 - Required each post  
Inserts shall be cast in place.

**NOTES**

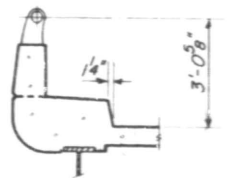
- All Posts shall be placed normal to parapet.
- All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 35018, galvanized to ASTM A-153.
- All Rail Tubing shall conform to ASTM A-53, Grade B, (Pipe or Tube) galvanized to ASTM A-120.
- Metal handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.
- Metal handrail will be paid for at the contract unit price per lineal foot for METAL HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.
- If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type I, air-dry cure.
- Rail Tubing may be cut to random lengths.
- For material composition of Prefabricated Pad, see Art 549(f), (Bearing and Anchorage), of the Standard Specifications.
- Galvanized railing shall not be painted.



ELEVATION - END POST



PLAN - END POST



SEC. THRU CURB

**BILL OF MATERIAL**

Item	Unit	Quantity
METAL HANDRAIL	Lin. Ft.	

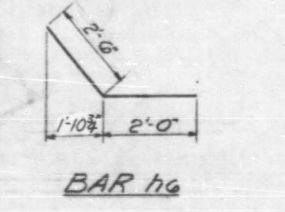
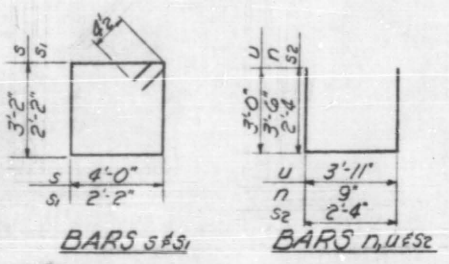
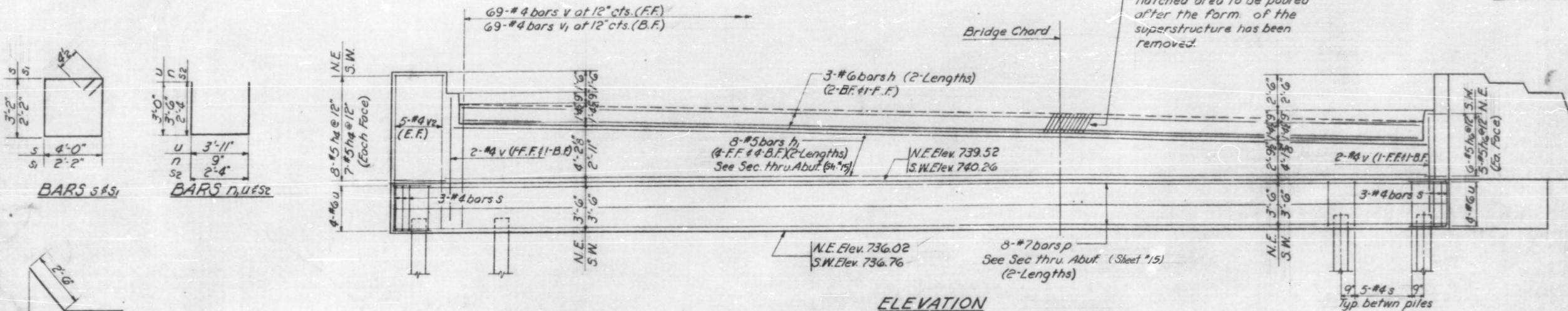
TYPE E  
METAL HANDRAIL

501.2T53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN Wm. M. Best	APPROVED
CHECKED	

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
S. I. R. L. 531-2 (A. 61)	HB-1	Cook	21	13	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

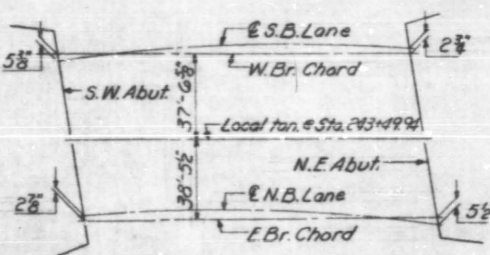
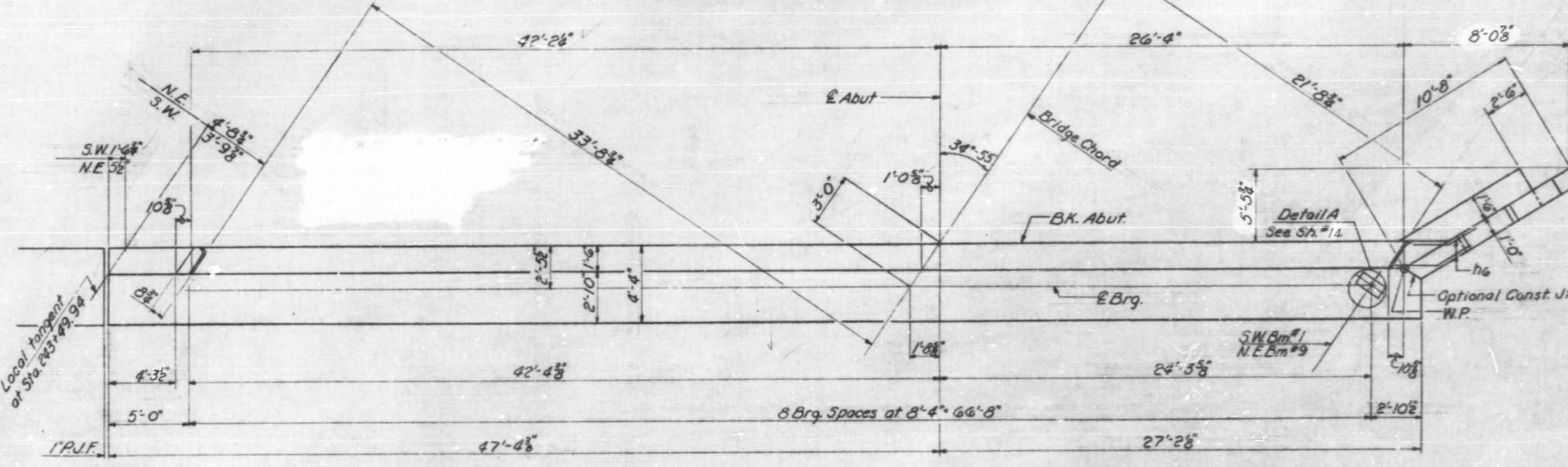


**ELEVATION**  
North East Abut. Looking North  
South West Abut. Looking South  
For Seat Elev. see Sheet #15

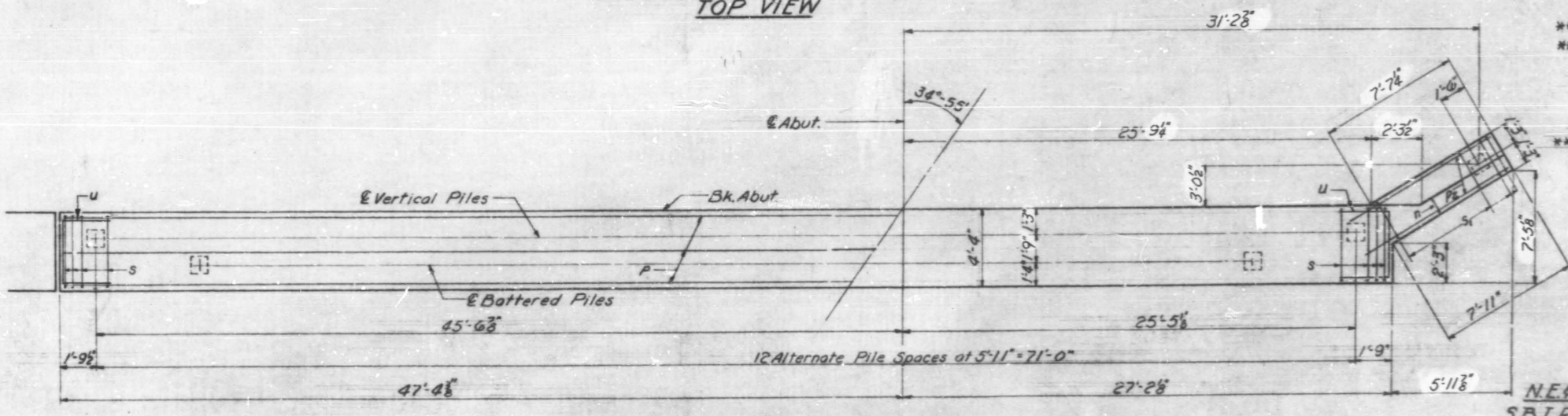
**PILE DATA**  
Type-----Concrete  
Capacity-----30 Tons  
Est. Length-----45'-0"  
No. Req'd-----26 (2 test piles  
One @ Each Abut.

**TWO ABUTMENTS  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h	12	#4	34'-9"	—
h1	32	#5	36'-0"	—
h4	30	#5	3'-0"	—
h5	4	#4	7'-9"	—
h6	22	#5	4'-6"	—
h10	30	#5	9'-3"	—
h12	3	#5	6'-9"	—
h13	3	#5	8'-9"	—
n	16	#4	7'-9"	U
p	32	#7	38'-3"	—
pe	12	#7	8'-6"	—
s	132	#4	15'-1"	□
a	14	#4	9'-5"	□
s2	116	#4	7'-0"	□
u	16	#6	9'-11"	U
v	146	#4	7'-3"	—
v1	138	#4	7'-6"	—
v2	20	#4	9'-6"	—
** Class X Concrete			Cu. Yds.	1334
** Reinforcement Bars			Lbs.	9320
Concrete Piles			Lin. Ft.	1170
Test Piles (Concrete)			Eq.	2



**KEY PLAN**  
offset measured @ Bk. of abut.

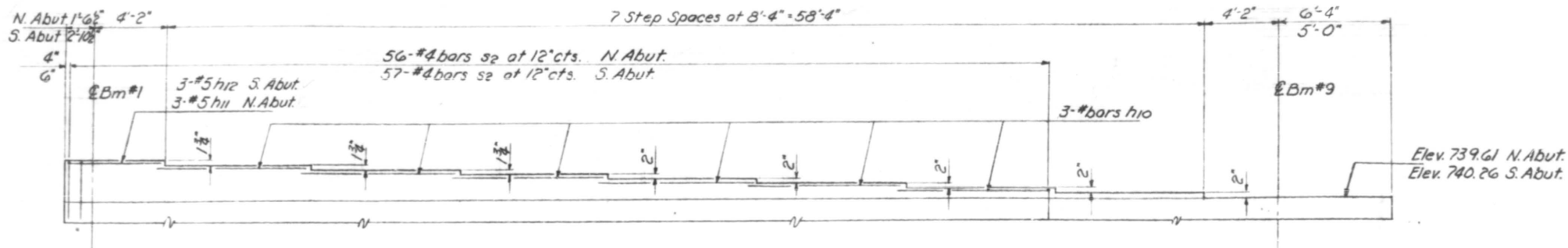


**PLAN - PILE CAP**

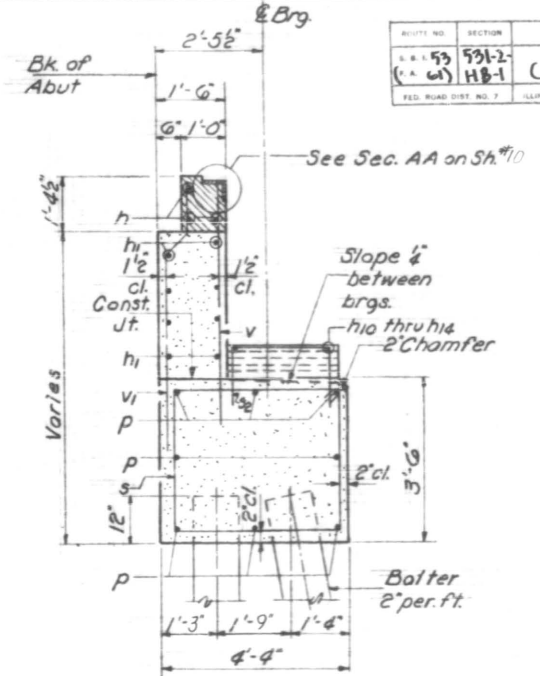
**N.E. & S.W. ABUTMENTS**  
S.B.I. RT. 53 SFC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

DESIGNED *W. H. Dickerson*  
CHECKED *J. F. Pitt*  
DRAWN *W. E. Dickerson*  
CHECKED *J. F. Pitt*  
EXAMINED *W. C. Blummann*  
PASSED *E. J. Schmitt*  
APPROVED *W. H. Dickerson*

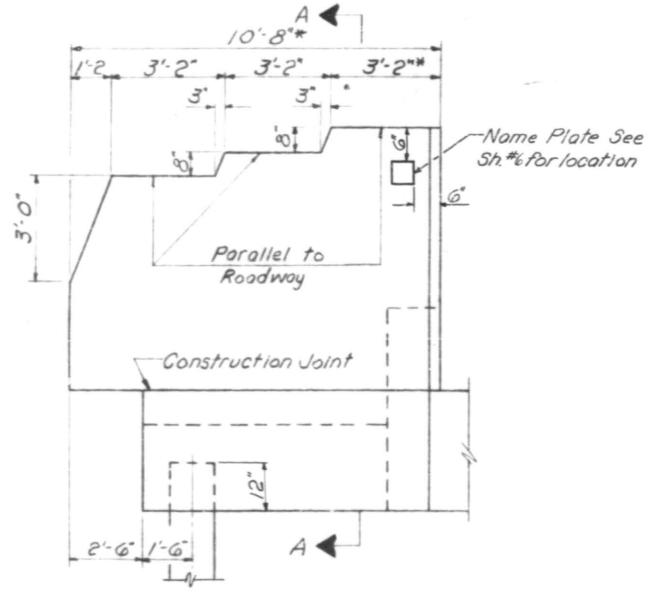
REVISED 4-9-63: Note Concerning Curb Radius Removed. W.H.



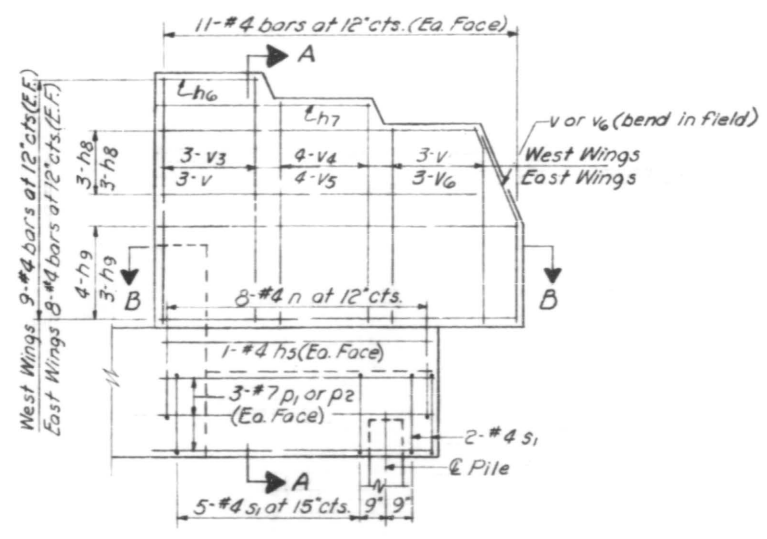
**STEP ELEVATION**  
West Bridge Only  
Bars h10 thru h12 & s2 billed with abut.



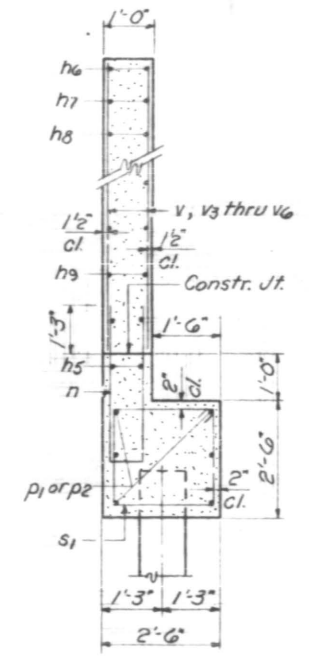
**SECTION THRU ABUTMENT**  
Space v bars to miss ties



**WING WALL ELEVATION**  
Dimensions  
\*Measured along inside face



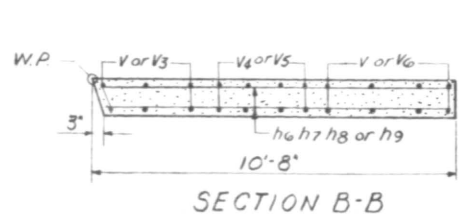
**WING WALL ELEVATION**  
Reinforcement  
Bars n, h5, p1, p2 & s1 billed with Abuts.



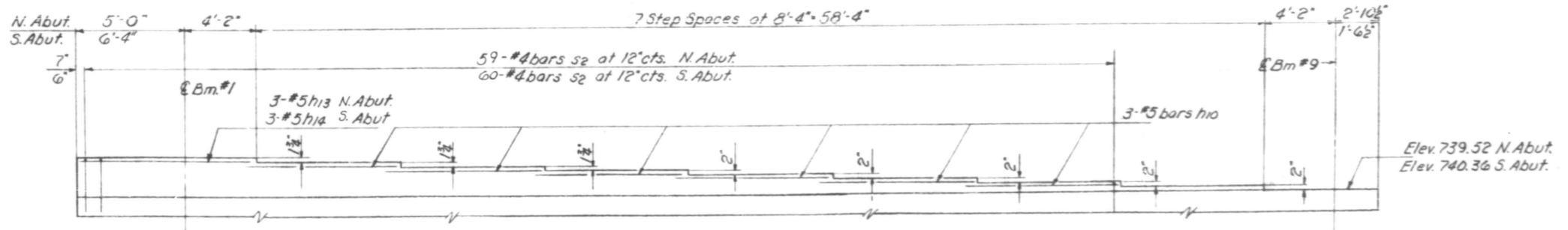
**SECTION A-A**

**4-WINGS BAR LIST**

Bar	No	Size	Length	Shape
h6	8	#4	2'-9"	---
h7	8	#4	5'-9"	---
h8	24	#4	9'-0"	---
h9	28	#4	10'-3"	---
v	28	#4	7'-3"	---
v3	12	#4	8'-6"	---
v4	16	#4	7'-9"	---
v5	16	#4	6'-6"	---
v6	16	#4	6'-0"	---



**SECTION B-B**



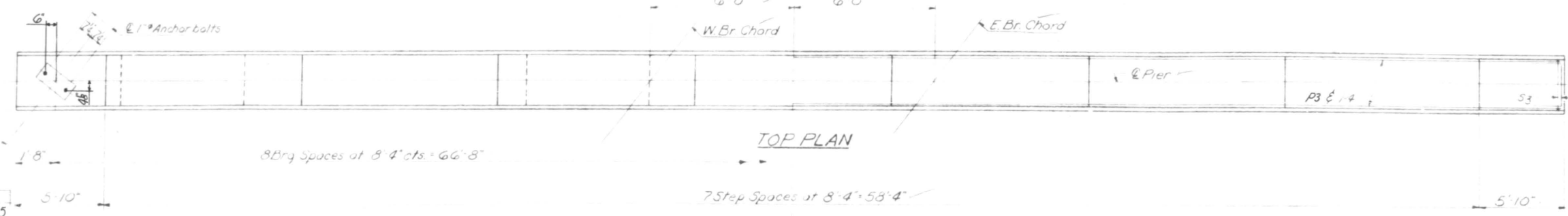
**STEP ELEVATION**  
East Bridge Only  
Bars h10, h13, h14 & s2 billed with abuts.

**WING WALLS**  
EAST & WEST BRIDGES  
S.B.I.R.T. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

DESIGNED *W.E. Dickerson*  
CHECKED *Joy F. Otto*  
DRAWN *W.E. Dickerson*  
CHECKED *Joy F. Otto*

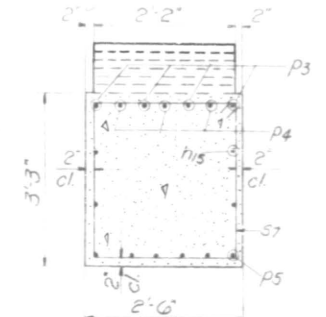
EXAMINED *W.E. Dickerson*  
PREPARED *E.S. Shultz*  
APPROVED *Joy F. Otto*

MAR 21 1963

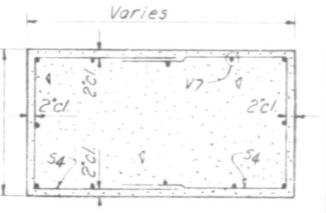


ELEVATION A&B

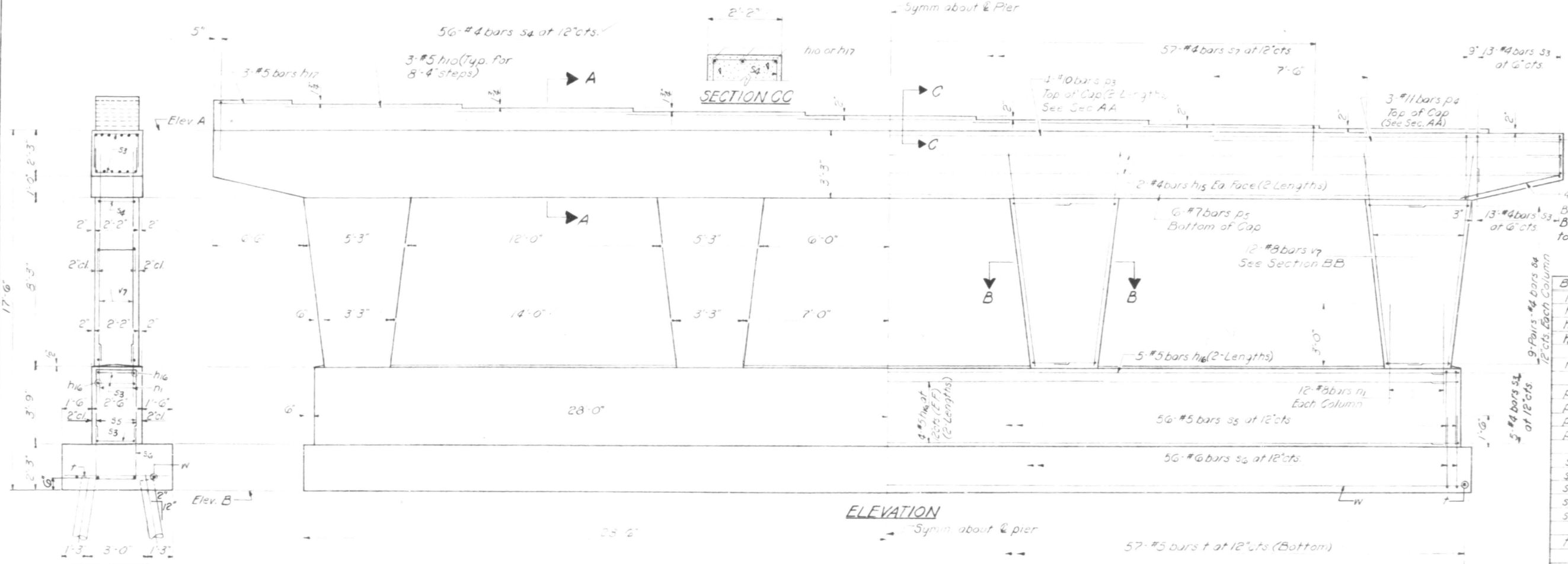
		A	B
W.Br	Pier 1	740.05	722.55
	Pier 2	733.74	722.24
E.Br	Pier 1	740.13	722.63
	Pier 2	733.71	722.21



SECTION AA



SECTION BB



ELEVATION

4-PIERS  
BILL OF MATERIAL

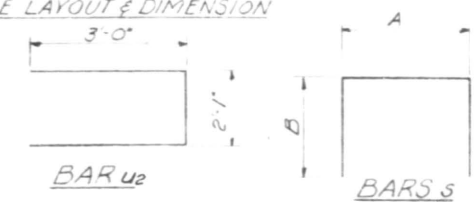
Bar	No	Size	Length	Shape
h10	72	#5	9'-3"	—
h15	32	#4	35'-6"	—
h16	104	#5	28'-9"	—
h17	12	#5	5'-6"	—
n1	192	#8	6'-9"	—
p3	32	#10	36'-0"	—
p4	24	#11	19'-0"	—
p5	24	#7	56'-0"	—
p6	24	#5	7'-6"	—
s3	248	#4	6'-0"	□
s4	512	#4	7'-10"	□
s5	224	#5	9'-2"	□
s6	224	#6	8'-8"	□
s7	228	#4	10'-11"	□
t	228	#5	5'-3"	—
u2	24	#6	8'-1"	—
v7	192	#8	11'-0"	—
w	32	#5	29'-3"	—

Class A Exc. For Stru.	Cu. Yds.	430.0
Class X Concrete	Cu. Yds.	312.9
Reinforcement Bars	Lbs.	37030
Crescated Piles	Lin. Ft.	3780
Test Piles (Timber)	Ea.	2

PIERS  
EAST & WEST BRIDGE  
S.B.I. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243+49.94

PILE DATA  
Type Crescated  
Capacity 20 Tons  
Est. Length 35'-0"  
No. Reqd 108  
Test Pile in vicinity of P-1, E Br  
in vicinity of P-2, W Br

PILE LAYOUT & DIMENSION



FOOTING PLAN

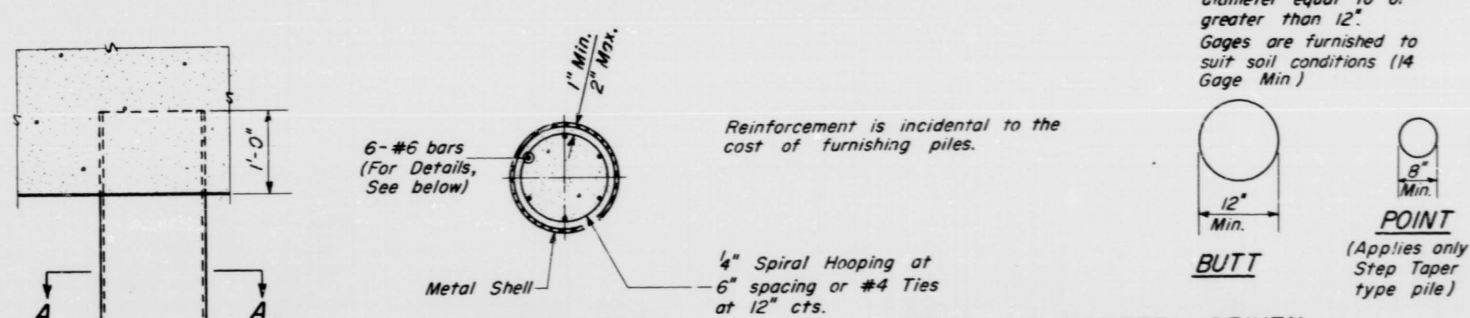
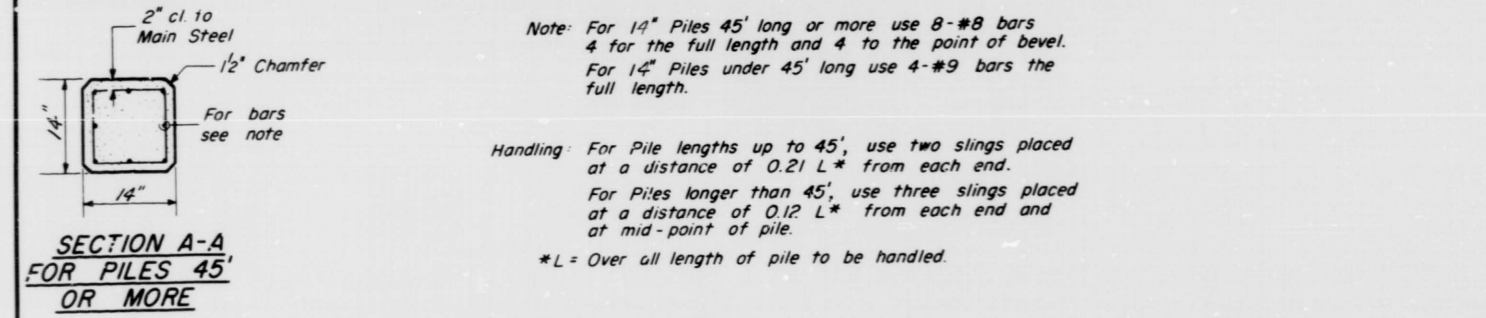
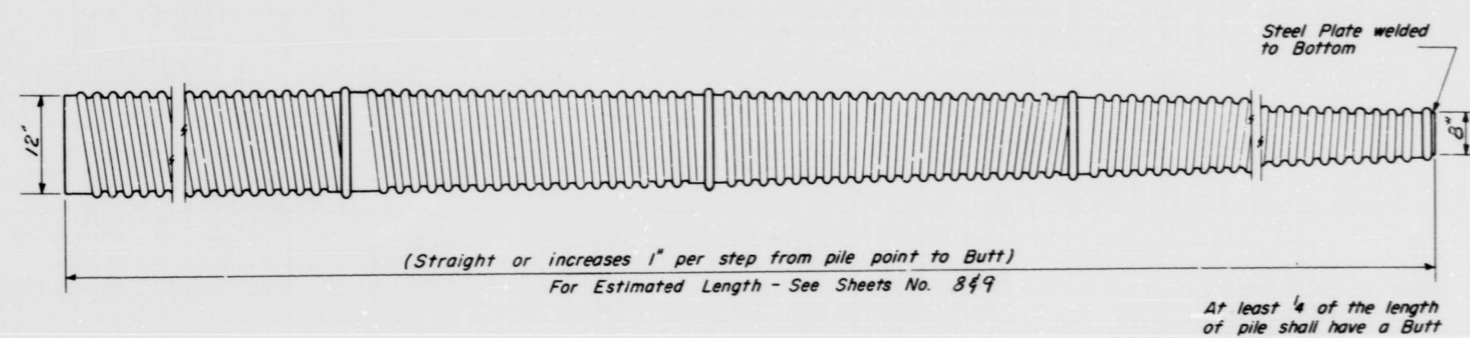
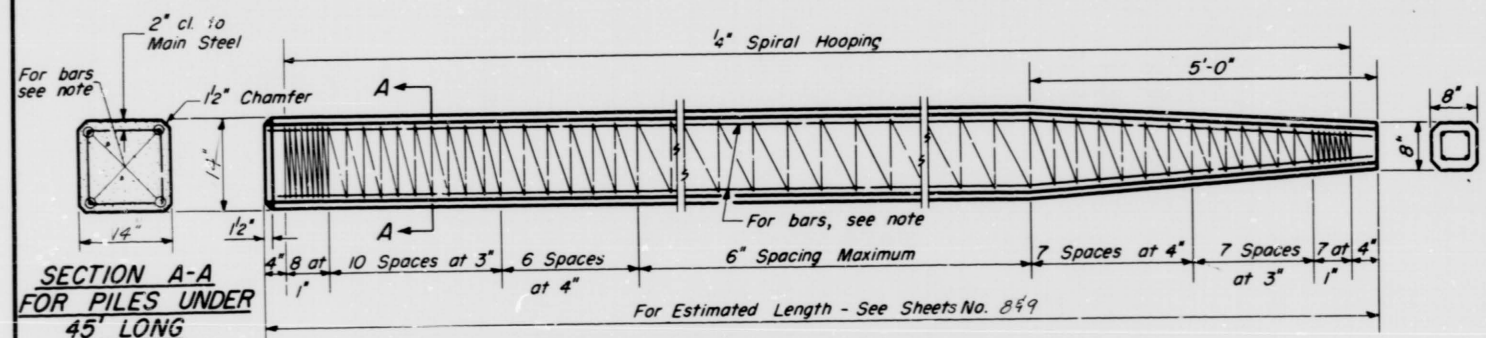
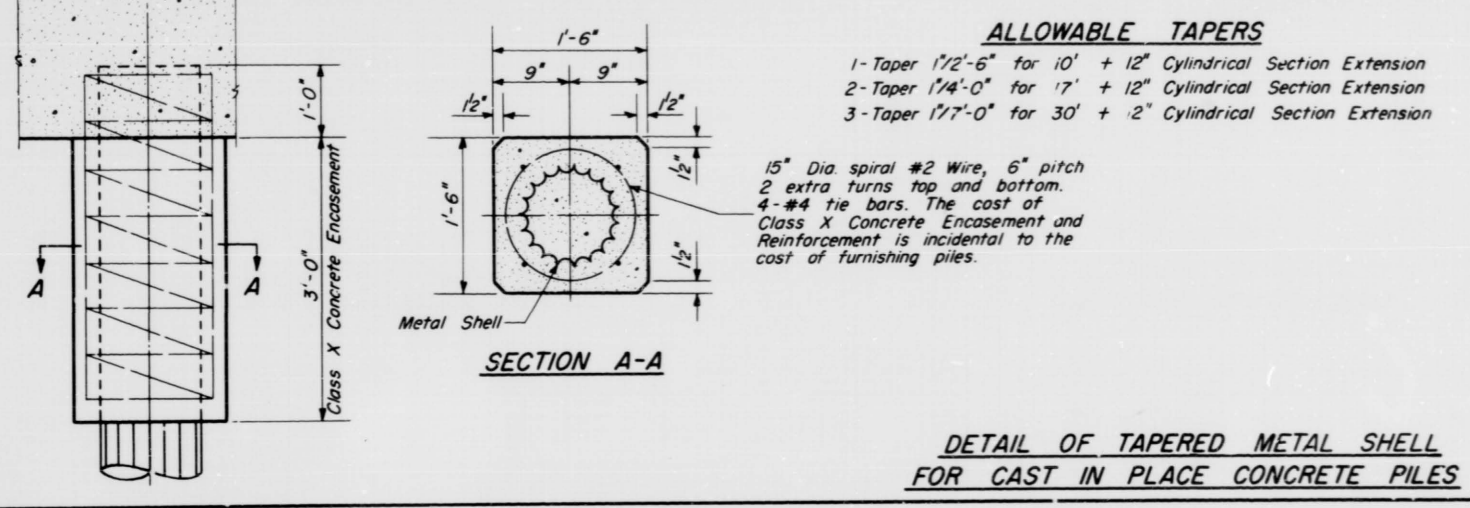
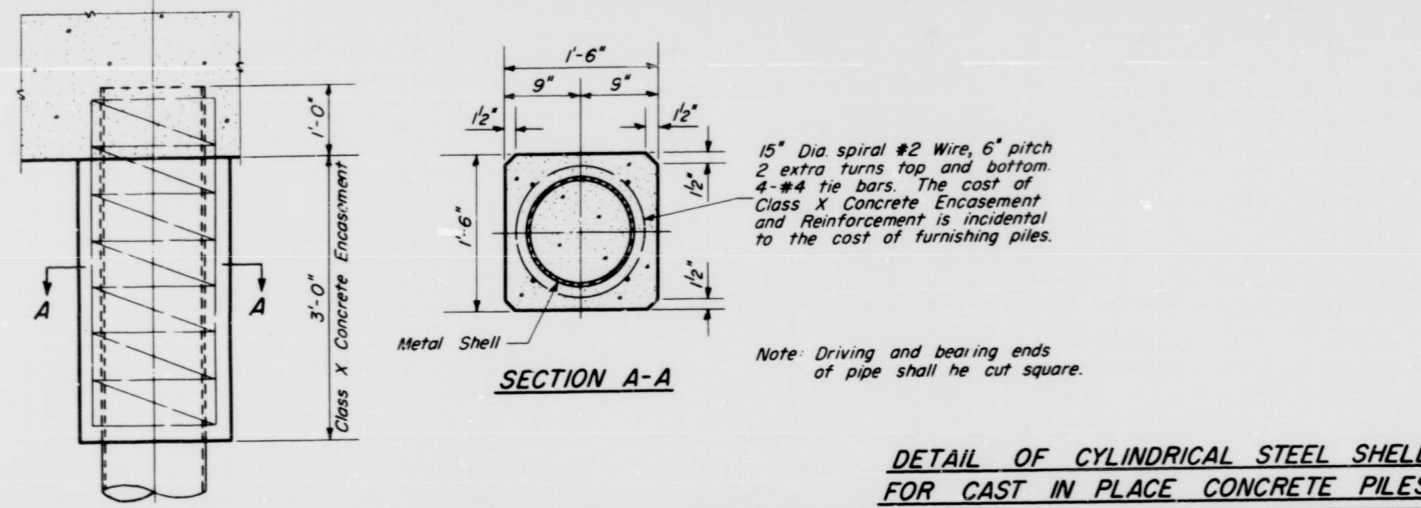
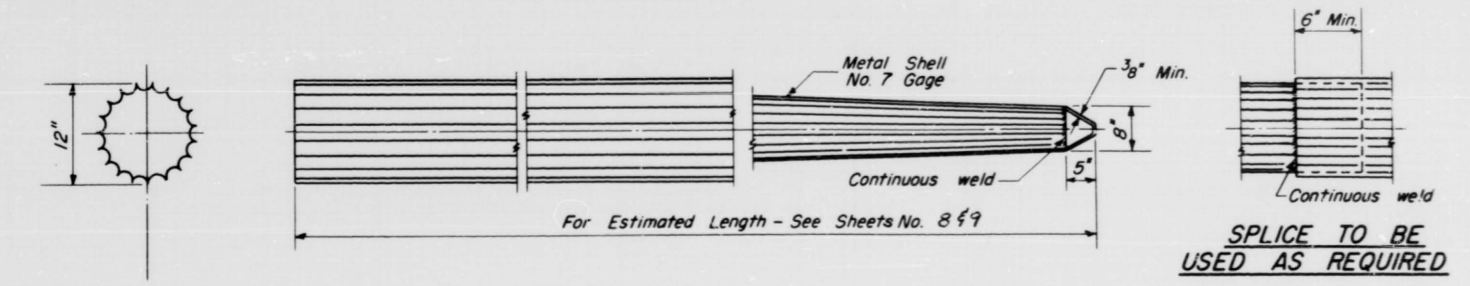
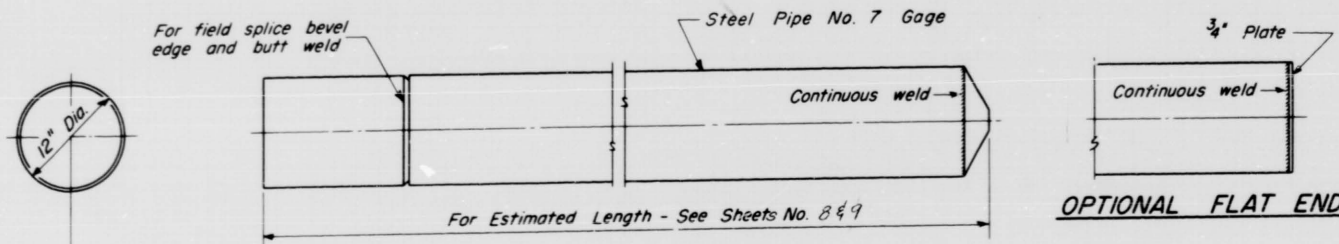
A&B DIMENSIONS

Bar	A	B
s3	2'-2"	1'-11"
s4	1'-10"	3'-0"
s5	2'-2"	3'-6"
s6	2'-2"	3'-3"

REINFORCEMENT

NOTE:  
Space reinforcement in cap to miss anchor bolts  
All edges shall have standard 3/4 chamfers except as noted.  
Four steps monolithically with cap.

DESIGNED: W.E. Dickerson  
CHECKED: J. F. Otto  
DRAWN: W.E. Dickerson  
LITHEID: J. F. Otto  
MAR 21 1963  
ENGINEER: H.E. Baumann  
SUPERVISOR: E.F. Shultz  
APPROVED: [Signature]



DESIGNED Alex Hsing  
CHECKED Jimmy J. Otto  
DRAWN W. A. Sausaman  
CHECKED Jimmy J. Otto

EXAMINED W. E. Baumann  
PASSED E. J. Shultz  
APPROVED J. E. Smith

MAR 21 1963

DETAIL OF PRECAST CONCRETE PILES

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

PILE DETAILS  
S.B.I. RT. 53 SEC. 531-2-HB-1  
COOK COUNTY  
STA. 243 + 49.94