FEDERAL AID ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	1
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT I-IG-74-2(31)31		

P-94-001-00

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

SEE SHEET NO. 2 FOR INDEX OF PLAN SHEETS

SCALES ····· PLAN ····· 0 100 200
PROFILE ····· HOR. 0 100 200
VER. 0 10 20
CROSS SECTIONS HOR. 0 10 20
VER. 0 5 10

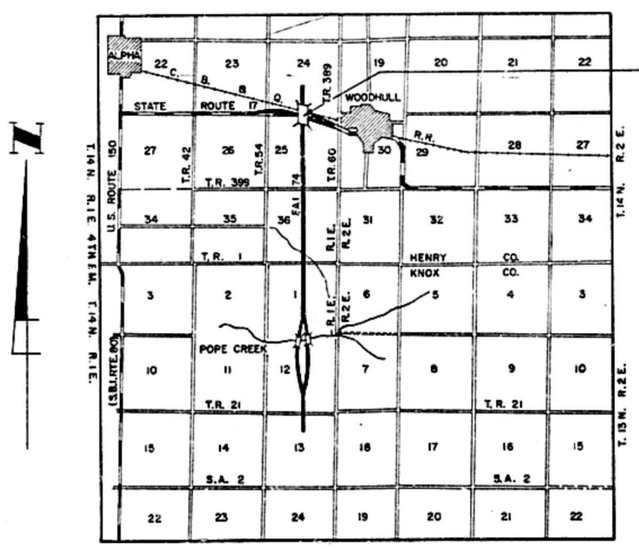
F. A. I. ROUTE 74 SECTION 37-24 HVB

PROJECT I-IG-74-2(31)31

HENRY COUNTY

C-94-020-64

LOCATION OF SECTION INDICATED THUS:—



SECTION 37-24 HVB INCLUDES:
TWO (2) PARALLEL, 4 SPAN CONTINUOUS STEEL WF BEAM RR. GRADE SEPARATION STRUCTURES (CARRYING F.A.I. RTE. 74 AND RAMPS OVER S.B.I. RTE. 69 (ILL. RTE. 17) AND C.B. & Q. R.R.) ON RC PIERS ON TIMBER PILES AND CONC. PILE BENT ABUTMENTS (SPANS 53'-6", 67'-8", 67'-8", 54'-6") AT STA. 22+64.70 (F.A.I. 74) AND THE CONSTRUCTION OF EARTH EMBANKMENT AND DETOUR ROAD.

LAYOUT

1 1/2 0 1
APPROX. SCALE IN MILES

NET LENGTH OF PROJECT
= 246.34 FT. = .047 MILES

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
2-23-65
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED Nov. 18 1964
Dist. Engineer
RECEIVED April 13 1965
CHIEF ENGINEER
PASSED April 13 1965
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED April 13 1965
CHIEF ENGINEER
APPROVED April 13 1965
DIRECTOR

PLANS PREPARED BY
MISSMAN, STANLEY, FARMER & ASSOCIATES
CIVIL ENGINEERS
ROCK ISLAND, ILLINOIS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER DATE

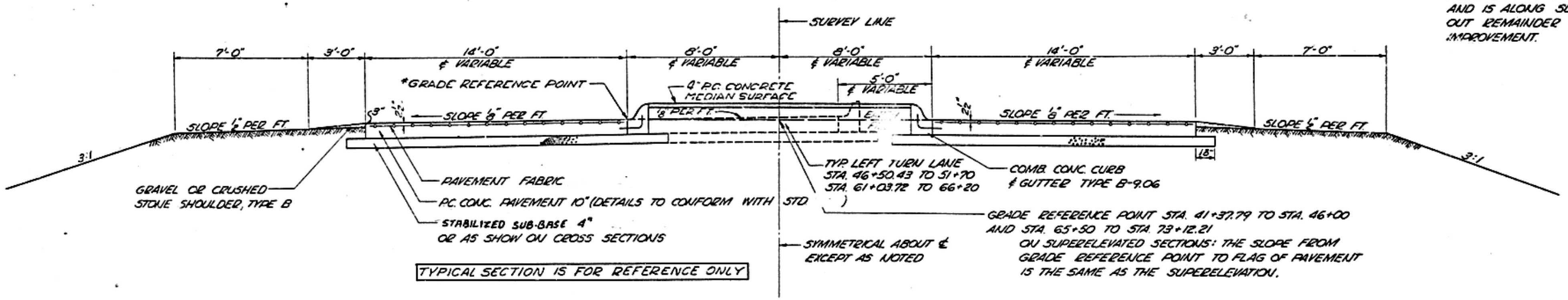
CONTRACT NO. 24127

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

TYPICAL SECTION THROUGH S.B.I. ROUTE 83 (ILL. ROUTE 17) RELOCATED

STATION 41+37.79 TO STATION 73+12.21

*GRADE REFERENCE POINT IS AS SHOWN FROM STA. 46+00 TO 65+50 ONLY AND IS ALONG SURVEY LINE THROUGHOUT REMAINDER OF S.B.I. RTE. 83 IMPROVEMENT.



TYPICAL SECTION IS FOR REFERENCE ONLY

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE X531

QUANTITY	UNIT	ITEMS	CODE NO.	47% I	53% IG	STATE
1	UNIT	HEDGE REMOVAL	010006	0.5	0.5	
870	CU YD	EARTH EXCAVATION	011001	409	461	
87746	CU YD	BORROW EXCAVATION	013001	41241	46505	
757	TON	GRAVEL OR CRUSHED STONE BASE COURSE TYPE A	029001	356	401	
666	GALS	BITUMINOUS MATERIALS (PRIME COAT)	044001	313	353	
173	TON	COVER COAT MIXTURE COMPLETE	044002	81	92	
552	CU YD	CLASS A EXCAVATION FOR STRUCTURES	050001	259	293	
13984	CU YD	CLASS X CONCRETE	052003	657.2	741.2	
2710	SQ YD	PROTECTIVE COAT	052021	1274	1436	
608260	POUND	FURNISHING & ERECTING STRUCTURAL STEEL	054001	285882	322378	
50	LIN FT	PIPE CULVERT, TYPE 1, CORRUGATED METAL CULVERT PIPE 15"	058394	24	26	
245[illegible]80	POUND	REINFORCEMENT BARS	059001	117303	132277	
6980	LIN FT	FURNISHING CREOSOTED PILES 20.1 TO 38 FEET	060005	3281	3699	
2	EACH	TEST PILE TIMBER	060007	1	1	
7620	LIN FT	DRIVING TIMBER PILES	060008	3581	4039	
4415	LIN FT	DRIVING CONCRETE PILES	060043	2075	2340	
4415	LIN FT	FURNISHING CONCRETE PILES	060044	2075	2340	
2	EACH	TEST PILE CONCRETE	060047	1	1	
2	EACH	NAME PLATES	061001	1	1	
540	SQ YD	PAVEMENT REMOVAL	082001	254	286	
2127	SQ YD	SLOPE WALL 4 INCH	083002	1000	1127	
8	EACH	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	104001	4	4	
1756	SQ YD	SODDING	112001	825	931	
984	LIN FT	ALUMINUM HANDRAIL	Z00004	462	522	
2	EACH	PERMANENT BARRICADES	Z00176	1	1	
*2745	LIN FT	WOVEN WIRE FENCE	Z0102[illegible]	1070	1205	470
1	L SUM	BRIDGE SEAT SEALANT	Z01023	1	0	
1	L SUM	RAILROAD PROTECTIVE SERVICES	Z01065	0	1	
** 1	EACH	ENGINEERS FIELD OFFICE TYPE A	Z01398	0.5	0.5	
8	EACH	DELINEATORS	Z20278	4	4	
640	LIN FT	TRANSPORTING TIMBER PILES	X02890	300	340	

** TYPE CODE CE-58

*470 LIN. FT. TEMP. WOVEN WIRE FENCE – FEDERAL NON-PARTICIPATING

INDEX OF SHEETS

TYPICAL SECTION THRU PROPOSED IMPROVEMENT

F.A.I. 74

SURVEY LINE STA. 10+00 TO STA. 154+85.28 — TO CONFORM TO STANDARD 2181-2 EXCEPT THE DEPRESSED MEDIAN IS 64'

THE NOMINAL THICKNESS FOR SUB-BASE GRANULAR MATERIAL AND GRAVEL OR CRUSHED STONE SHOULDERS TYPE A; BASE AND SURFACE COURSES ARE SHOWN ON THE TYPICAL SECTION, STANDARDS, SCHEDULES OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESSES OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PER CENT OF NOMINAL THICKNESS AT ANY LOCATION.

THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

HIGHWAY CLASSIFICATION

F.A.I. RTE. 74

965 — T — 70 — 1985

MAXIMUM GRADE	3.0%
LENGTH OF MAX. GRADE	756'
MIN. STOPPING SIGHT DISTANCE	738'
MIN. HORIZONTAL RADIUS	TANGENT

S.B.I. RTE. 83

397 – M – 70 – 1986

MAXIMUM GRADE	+0.44%
LENGTH OF MAX. GRADE	1500'
MIN. STOPPING SIGHT DISTANCE	1000'
MIN. HORIZONTAL RADIUS	3819.72'

ONE (1) SIGN CONFORMING TO STD. 2153-4 SHALL BE ERECTED AT LOCATIONS SHOWN ON THE PLANS SHEET NO. 4

SUBMITTED 11-5-64
Martin J. Sikorsse
DISTRICT DESIGN ENGINEER

EXAMINED _____
DISTRICT CONSTRUCTION ENGINEER

EXAMINED Nov. 2, 1964
W. E. Arntner
DISTRICT MAINTENANCE ENGINEER

EXAMINED Nov 5 1964
M. F. Barr
DISTRICT TRAFFIC ENGINEER

ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY

DATE Nov 18 1964
Bill Costello
DISTRICT ENGINEER

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENDRY	37	3

T.14 N., R.1 E. OF THE 4TH P.M.
SECTION 24

SEC. 37-24 HVB
STA. 21+04.45 - STA. 29+52.79
EAST STR. STA. 21+14.74 TO 29+69.08
WEST STR. STA. 20+94.16 TO 29+42.50

WILLIAM E. SHETLER

P.O.T. 10+00.00
3/4" PIPE

P.O.T. 21+27.32
1/2" STEEL ROD

P.O.T. 23+61.06
3/4" PIPE

T.14 N., R.1 E. OF THE 4TH P.M.
SECTION 25

P.O.T. 36+42.25
1/2" ⊕ STEEL ROD

FILL EXIST. WELL BY 5'±FEB

SURVEY LINE & ℄ PROPOSED IMPROVEMENT F.A.I. 74

22+64.70 F.A.I. RTE. 74 =
33+00 S.B.I. RTE. 83 RELOC.

℄ 805.1

TEMPORARY WOVEN WIRE FENCE

76°50'20"

89°50'00"

115'
9+98.69

℄ LT. PVM'T.

REMOVE HEDGE

LIMITS OF EMBANKMENT BY BRG. CONTR.

SARA BUCKLEY, ETAL

HEDGE TREES

℄ SECTION LINE

℄ 815.0

FRANCES MURPHY & BERNADINE MURPHY WELCH

PROPOSED R.O.W. LINES

℄ 803.2

LIMITS OF EMBANKMENT BY BRIDGE CONTRACTOR

MAY JOHNSON

POT. 10+00.00

POT. 21+27.32

POT. 23+61.06

POT. 36+42.25

RAMP "A"

RAMP "B"

RAMP "C"

RAMP "D"

13+85.63
RAMP D
40'

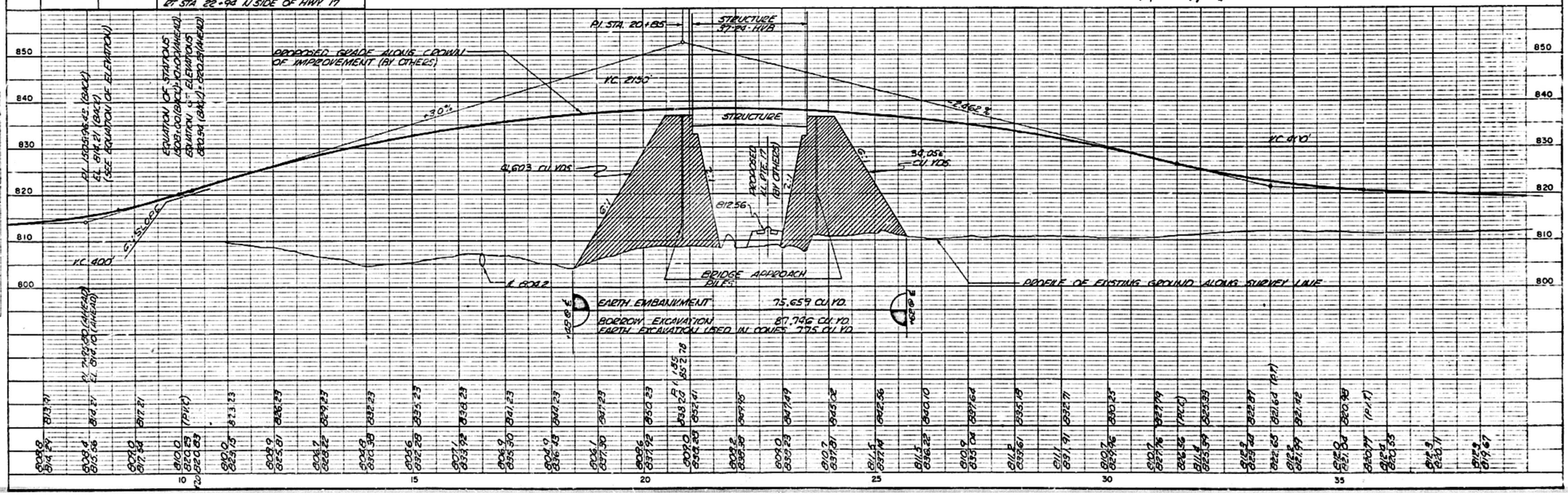
HEDGE REMOVAL UNITS
STA. 19+69 TO 20+64 1.0

WOVEN WIRE FENCE 2745 LIN.FT.
RIGHT OF WAY MARKERS 8 EACH

STANLEY & CORA MONTGOMERY

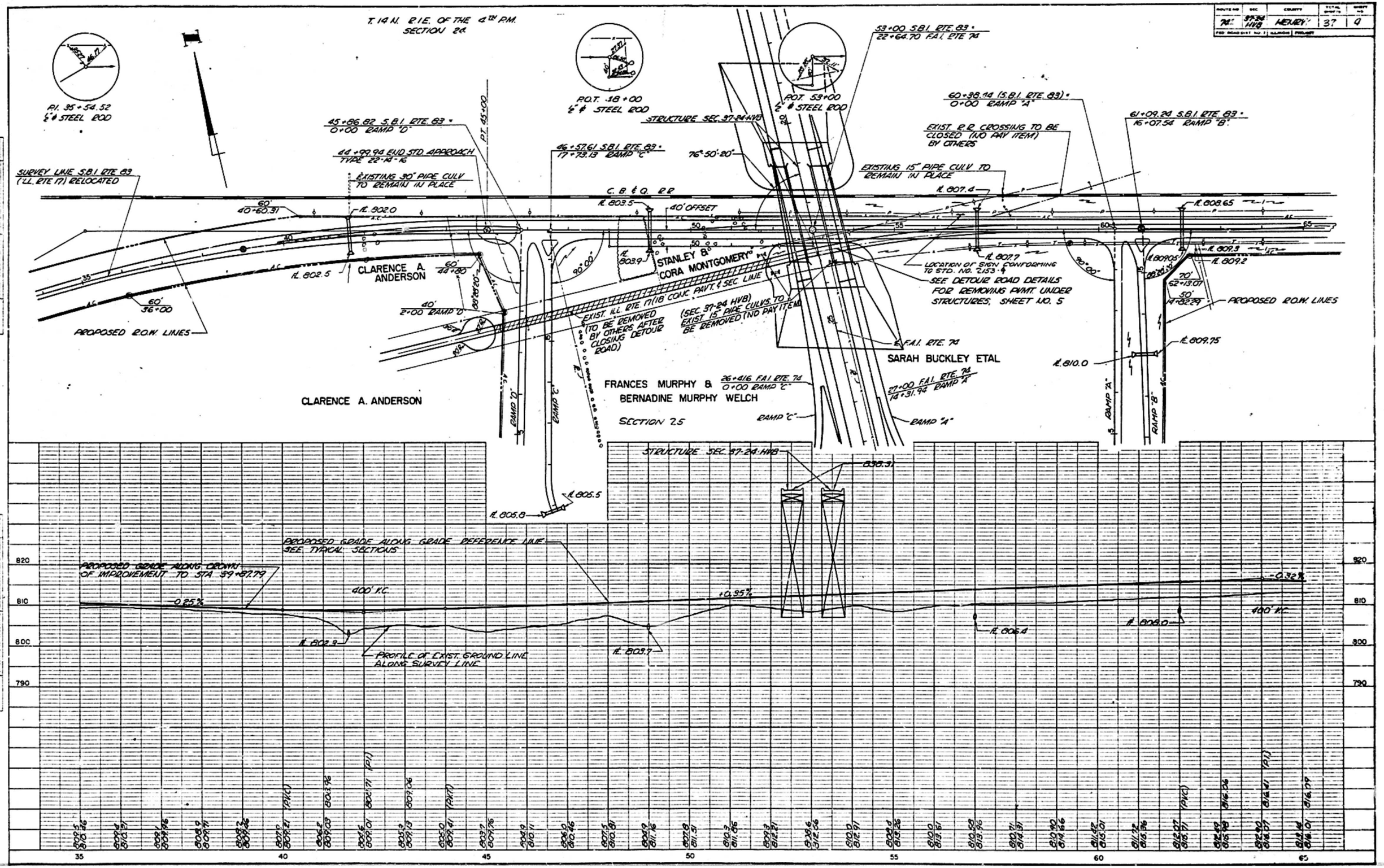
LEGEND
- RIGHT OF WAY MARKERS
- WOVEN WIRE FENCE
- R.O.W. MARKERS BY OTHERS

B. M.	ELEV.	DESCRIPTION
B.M. #1	813.194	SPK. & W. IN POST OF E-W FENCE 118' LT. STA. 9+98 = EL. 813.11 SEC. 37-4 BACK
B.M. #2	809.852	CHIS. SQ. TOP OF CONC. BOX CULV. 128' RT. STA. 22+94 N. SIDE OF HWY. 17



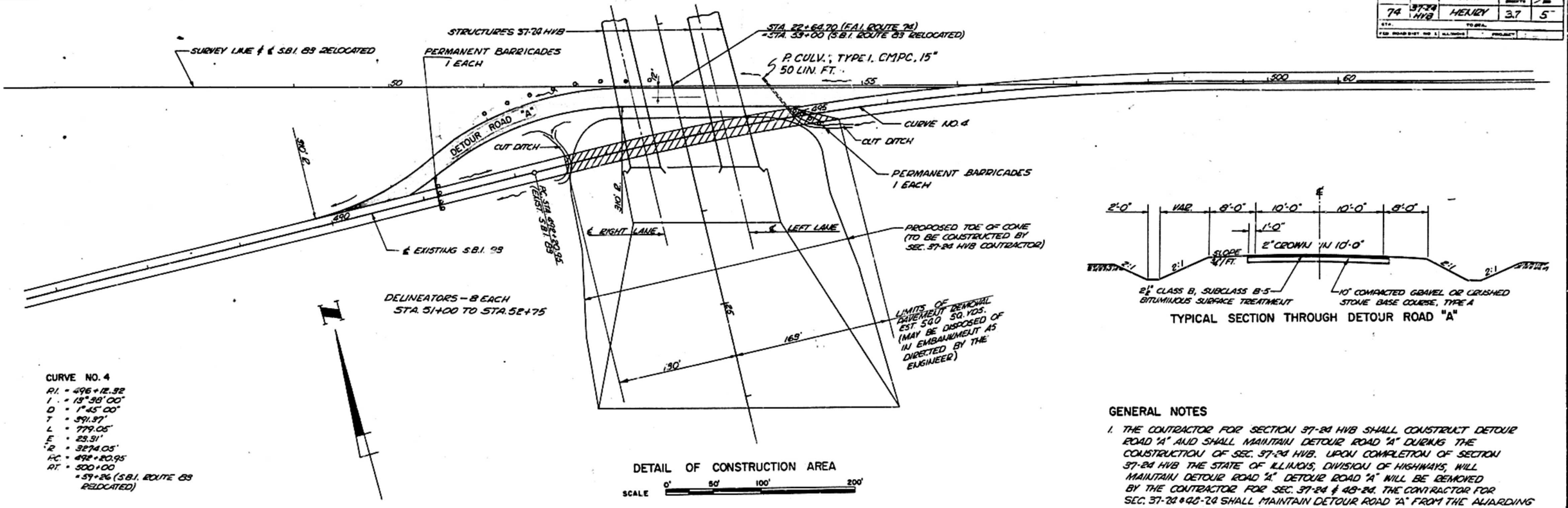
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	97-24 HVB	HENRY	37	9

FED. ROAD DIST. NO. 7 | ILLINOIS | PROJECT



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	3.7	5

STA. TO STA.
FED. ROAD DIST. NO. 5 ILLINOIS PROJECT



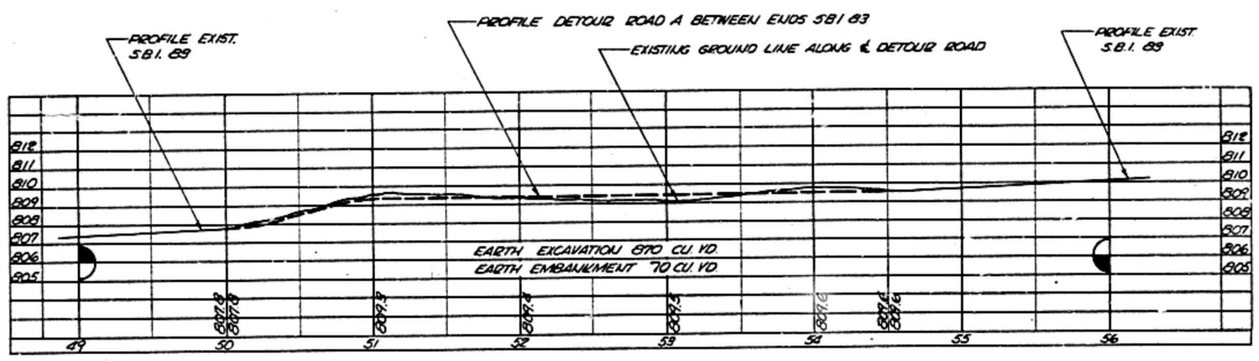
TYPICAL SECTION THROUGH DETOUR ROAD "A"

DETAIL OF CONSTRUCTION AREA

SCALE 0' 50' 100' 200'

CURVE NO. 4

R.I. = 496+12.32
I = 13°38'00"
D = 1°45'00"
T = 591.37'
L = 779.05'
E = 23.31'
R = 3274.05'
P.C. = 492+20.95
P.T. = 500+00
= 59+26 (S.B.I. ROUTE 83 RELOCATED)



PROFILE

GENERAL NOTES

1. THE CONTRACTOR FOR SECTION 37-24 HVB SHALL CONSTRUCT DETOUR ROAD "A" AND SHALL MAINTAIN DETOUR ROAD "A" DURING THE CONSTRUCTION OF SEC. 37-24 HVB. UPON COMPLETION OF SECTION 37-24 HVB THE STATE OF ILLINOIS, DIVISION OF HIGHWAYS, WILL MAINTAIN DETOUR ROAD "A." DETOUR ROAD "A" WILL BE REMOVED BY THE CONTRACTOR FOR SEC. 37-24 & 48-24. THE CONTRACTOR FOR SEC. 37-24 & 48-24 SHALL MAINTAIN DETOUR ROAD "A" FROM THE AWARDING OF THE CONTRACT FOR SEC. 37-24 & 48-24 UNTIL IT IS REMOVED BY HIM.
2. USE 775 CU. YDS. EXCESS EARTH EXCAVATION FROM DETOUR ROAD TO CONSTRUCT EMBANKMENT CONES.

SUMMARY OF QUANTITIES

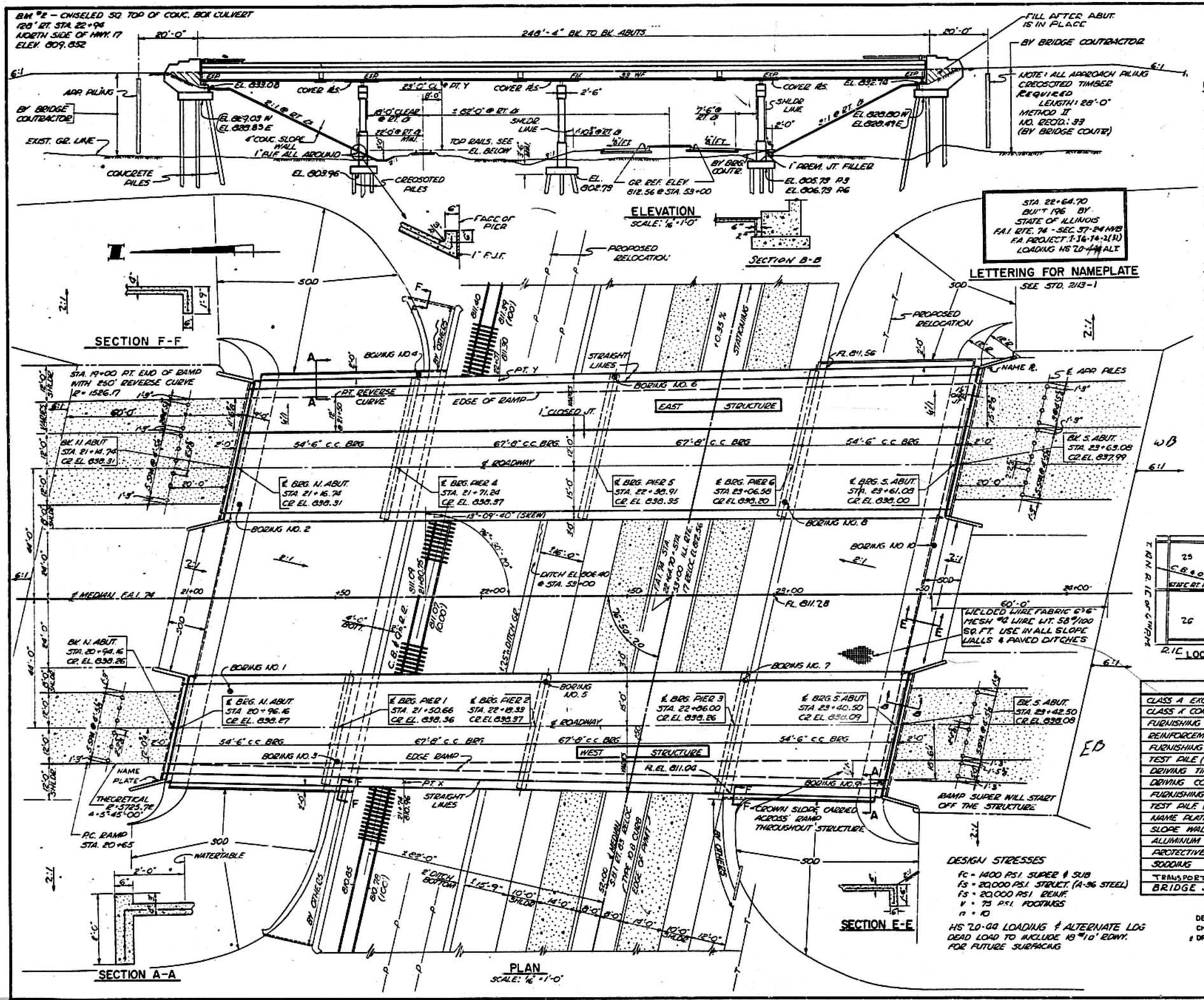
ITEM	UNITS	QUAN.
EARTH EXCAVATION	CU. YD.	870
GRAVEL OR CRUSHED STONE BASE COURSE TYPE A	TON	757
BITUMINOUS MATERIALS (PRIME COAT)	GAL.	666
COVER COAT MIXTURE COMPLETE	TON	173

DETOUR ROAD "A"
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	6

FED. ROAD DIST. NO. 7 ILLINOIS PROJ. I-X76-2(31)131

B.M. #2 – CHISELED SQ. TOP OF CONC. BOX CULVERT 128' RT. STA. 22+94 NORTH SIDE OF HWY. 17 ELEV. 809.852



GENERAL NOTES

CLASS X CONCRETE SHALL BE USED THROUGHOUT. COARSE AGGREGATE WHICH IS TO BE USED IN PARAPET HANDRAILS AND END POSTS MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE.

THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS AND SHALL BE POURED IN ONE CONTINUOUS OPERATION ON EITHER SIDE OF LONGITUDINAL CONSTRUCTION JOINTS.

ALL ROCKERS, BOLSTERS, BEARING PLATES, PINTLES, 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 EST. 21470 LBS.

ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAMS OVER PIERS AND ABUTMENTS.

"BRIDGE SEAT SEALANT" SHALL BE USED ON ALL ABUTMENT SEATS. SEE SPECIAL PROVISIONS.

ALL RIVETS 3/4" ϕ, OPEN HOLES 13/16" ϕ EXCEPT IN BEAM SPLICES. BEAM SPLICES SHALL BE SUBPUNCHED, REAMED AND MATCH-MARKED. SUBPUNCH 7/16" ϕ AND REAM TO PROPER SIZE.

ALL WF BEAMS SHALL BE SHOP ASSEMBLED TO THEIR PROPER GRADE AND ALIGNMENT WITH OR WITHOUT DIAPHRAMS, INSPECTED AND REAMED WHILE SO ASSEMBLED.

EXCEPT AS OTHERWISE PROVIDED FOR, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUM. PAINT. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR. STRUCT. STEEL SHALL BE INSPECTED BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING.

ALL STRUCTURAL STEEL SHALL BE ASTM DESIGNATION A-36.

THE CONTRACTOR SHALL DRIVE 2 TEST PILES IN PERMANENT LOCATIONS FOR THE ABUTMENTS AS SHOWN ON SHEET 12 AND SHEET 23 AND 2 TIMBER TEST PILES IN THE VICINITY OF PIER 2 AND PIER 5 AS DIRECTED BY THE ENGINEER, BEFORE ORDERING THE REMAINDER OF THE PILING.

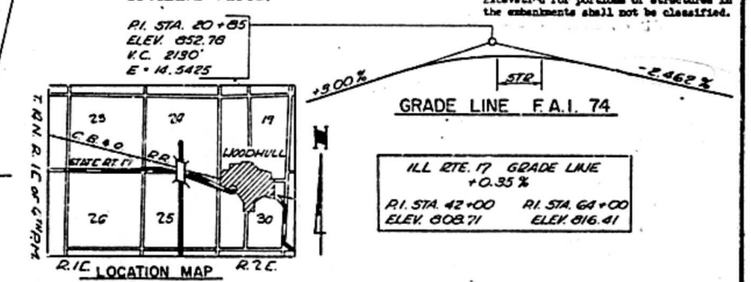
ABUTMENT PILES SHALL BE PRECORED THRU EMBANKMENT IN ACCORDANCE WITH ARTICLE 60.9(c) OF THE STANDARD SPECS.

THE CONTRACTOR SHALL FINISH TO FINAL LINES AND SOD THOSE AREAS SO INDICATED ON THE PLANS.

PAVED DITCHES AND CUT OFF WALL ARE INCLUDED IN QUANTITY OF SLOPE WALL.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.

Excavation for portions of structures in the embankments shall not be classified.



BILL OF MATERIAL (2 STRUCTURES)

ITEM	UNITS	SUPER	SUB	TOTAL
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.		552	552
CLASS X CONCRETE	CU. YD.	651.0	747.0	1398.0
FURNISHING & ERECTING STRUCTURAL STEEL	LBS.	608260		608260
REINFORCEMENT BARS	LBS.	150410	99170	249580
FURNISHING CREOSOTED PILES (20.0' TO 38')	LIN. FT.		6980	6980
TEST PILE (TIMBER)	EA.		2	2
DRIVING TIMBER PILES	LIN. FT.		7620	7620
DRIVING CONCRETE PILES	LIN. FT.		0015	0015
FURNISHING CONCRETE PILES	LIN. FT.		0015	0015
TEST PILE (CONCRETE)	EA.		2	2
NAME PLATE	EA.	2		2
SLOPE WALL (4 INCH)	SQ. YD.		2127	2127
ALUMINUM HANDRAIL	LIN. FT.	984		984
PROTECTIVE COAT	SQ. YD.	2710		2710
SODDING	SQ. YD.		1756	
TRANSPORTING CREOSOTED PILES	LIN. FT.		640	640
BRIDGE SEAT SEALANT	LUMP SUM	1		1

DESIGN STRESSES

fc = 1400 PSI. SUPER & SUB
fs = 20,000 PSI. STRUCT. (A-36 STEEL)
fs = 20,000 PSI REINF.
v = 75 PSI. FOOTINGS
n = 10

HS 20-44 LOADING & ALTERNATE LOAD DEAD LOAD TO INCLUDE 18"/10' RDWY. FOR FUTURE SURFACING

DESIGNED BY: T.D. GAZDA
CHECKED BY: J. DUHLAP & S. SCHOLL
& DRAWN BY: T.D.G. & J.T.

GENERAL PLAN AND ELEVATION
F.A.I. RTE. 74 SEC 37-24 HVB
PROJ. I-X6-74-2(31)131
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

STRUCTURES BY ROBERT HOFMANN & ASSOCIATES, CONSULTING ENGINEERS, DIXON, ILLINOIS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	7
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

BORING NO. 1

35' RT. OF ℄ STA. 21+15
NO. ABUT. W. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 809.30
2.0	16		STIFF DARK BROWN TO LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
1.0	7		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.0	7		
6		800	MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.0	7		
6			
1.2	6		
6		795	
2.4	14		MEDIUM DARK BROWN PEAT
6			
2.4	6		
6		790	
2.2	7		MEDIUM GRAY CLAY
6			
1.4	18		STIFF GRAY CLAY
6		785	
1.5	16		
6			
1.2	12		STIFF GRAY CLAY LOAM (TILL)
6		780	
1.5	20		
6			
1.5	26		
6		775	VERY STIFF GRAY CLAY LOAM (TILL)
1.5	28		
6			
3.3	43		
6		770	
3.5	50		
6			
5.1	66		
6		765	HARD GRAY CLAY LOAM (TILL)
2.5	60		
6			
2.5	60		
6			
6	49	760	HARD GRAY SANDY LOAM
6	50		
6			
6.5	59		HARD GREY SANDY CLAY LOAM (TILL)
6			

℄ END OF BORING ELEV. 756.3

BORING NO. 2

32' LT. OF ℄ STA. 21+15
NO. ABUT. E. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 809.30
2.0	22		STIFF BLACK TO BROWN AND GRAY SILTY CLAY
6		805	
1.0	10		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.0	8		
6		800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.0	11		
6			
0.4	9		
6		795	
	20		MEDIUM DARK BROWN PEAT
	16		
		790	
1.0	9		
6			
1.6	15		STIFF GRAY CLAY
6		785	
2.2	18		VERY STIFF GRAY CLAY
6			
1.6	16		
6		780	STIFF GRAY CLAY LOAM (TILL)
1.0	16		
6			
3.7	31		
6		775	
7.8	77		VERY STIFF GRAY CLAY LOAM (TILL)
6			
5.1	77		
6		770	
7.8	77		
6			
6.0	31		
6		765	
6.0	86		
6			
6.3	56		
6			
6.0	81		HARD GRAY CLAY LOAM (TILL)
6		760	
6.0	65		
6			
5.1	67		
6			
2.5	56		
6		755	
3.4	77		VERY STIFF GRAY CLAY LOAM (TILL)
6		750	
3.4	77		
6			

℄ END OF BORING ELEV. 758.8

BORING NO. 3

60' RT. OF ℄ STA. 21+71
PIER 1 W. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 808.8
1.1	16		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
1.1	16		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.7	14		
6		800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.6	9		
6			
1.3	22		
6		795	
1.8	19		STIFF DARK BROWN PEAT
6			
2.0	11		MEDIUM GRAY CLAY
6		790	
1.7	15		
6			
1.8	19		STIFF GRAY CLAY
6		785	
1.5	20		STIFF GRAY CLAY LOAM (TILL)
6			
		780	MEDIUM GRAY SILTY LOAM AND SANDY LOAM (LAYERS)
2.6	26		
6			
2.6	25	775	VERY STIFF GRAY CLAY LOAM (TILL)
3.3	31		
6			
3.5	36	770	
6			
2.6	41		
6			
5.0	65	765	
5.0	66		
6			
5.5	68	760	HARD GRAY CLAY LOAM (TILL)
6			
7.7	65		
6			

℄ END OF BORING ELEV. 757.9

BORING NO. 4

77' LT. OF ℄ STA. 21+71
PIER 4 E. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 808.7
1.5	12		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
2.5	6		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.0	11		
6		800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.0	8		
6			
1.5	7		
6		795	STIFF LIGHT BROWN AND LIGHT GRAY CLAY LOAM
1.0	11		
6			
1.5	16		STIFF DARK BROWN PEAT
6		790	
2.9	10		MEDIUM GRAY CLAY
6			
1.6	16	785	STIFF GRAY CLAY
1.5	15		
6			
1.5	15		STIFF GRAY CLAY LOAM (TILL)
6		780	
5.2	51		
6			
3.3	70	775	
7.0	76		VERY STIFF GRAY CLAY LOAM (TILL)
6			
5.1	78	770	
6			
5.5	57		
6			
4.4	66	765	
6			
6.9	61		
6			
7.8	70	760	HARD GRAY CLAY LOAM (TILL)
6			
7.8	68		
6			
5.5	65	755	
6			
3.3	51		
6			
4.1	61		
6			

℄ END OF BORING ELEV. 750.7

BORING NO. 5

37' RT. OF ℄ STA. 22+39
PIER 2 W. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 808.6
2.0	11		STIFF DARK BROWN SILTY CLAY
6		805	
1.0	7		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6			
0.8	7		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6		800	
1.5	8		STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.5	9		
6		795	
	21		
	16		STIFF DARK BROWN PEAT
		790	
1.0	9		
6			STIFF GRAY CLAY
1.2	11	785	
1.2	18		STIFF GRAY CLAY LOAM (TILL)
6			
2.2	20	780	
6			
2.4	21		
6			
2.5	18	775	VERY STIFF GRAY CLAY LOAM (TILL)
2.7	25		
6			
2.2	19	770	
6			
2.5	29		
6			
4.7	26	765	HARD DARK GRAY CLAY
4.7	67		VERY STIFF GRAY CLAY LOAM (TILL)
6			
2.8	67		
6		760	
5.8	67		HARD GRAY CLAY LOAM (TILL)
6			
5.2	52	755	
6			
2.0	37		
6			

℄ END OF BORING ELEV. 753.1

BORING NO. 6

77' LT OF ℄ STA. 22+39
PIER 5 E. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 809.7
2.0	16		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
1.2	8		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.6	10		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY LOAM
6		800	
1.2	7		
6			
2.8	11		
6		795	STIFF DARK BROWN PEAT
1.2	11		
6			
2.0	12		MEDIUM GRAY CLAY
6			
1.2	15		STIFF GRAY CLAY
6		785	
1.6	16		
6			
1.5	15		
6		780	STIFF GRAY CLAY LOAM (TILL)
1.1	14		
6			
2.5	25		
6		775	
2.5	25		
6			
2.0	20		
6		770	
2.0	23		
6			
2.0	23		
6		765	
2.0	20		
6			HARD GRAY CLAY LOAM (TILL)
2.0	20		
6		760	
2.0	20		
6			
2.5	26		
6		755	
2.5	26		
6			

℄ END OF BORING ELEV. 751.7

BORING NO. 7

32' RT. OF ℄ STA. 23+07
PIER 3 W. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 808.5
1.6	18		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
1.6	8		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.6	8		
6		800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.6	9		
6			
2.8	10		
6		795	STIFF DARK BROWN PEAT
	22		
1.1	6		
6		790	STIFF LIGHT GRAY SILTY CLAY LOAM
1.1	9		
6			
1.7	15		
6		785	STIFF GRAY CLAY LOAM (TILL)
1.1	15		
6			
2.2	17		
6		780	
1.3	10		
6			
1.9	15		
6		775	VERY STIFF GRAY CLAY LOAM (TILL)
3.7	80		
6			
3.0	52	770	
6			
0.9	47		
6			
0.7	35	765	
6			
5.7	66		
6			
0.9	47		
6		760	HARD GRAY CLAY LOAM (TILL)
0.7	35		
6			
3.0	60	755	
6			
2.0	46		
6			

℄ END OF BORING ELEV. 753.0

BORING NO. 8

32' LT OF ℄ STA. 23+07
PIER 6 E. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 808.8
1.1	14		STIFF BROWN AND GRAY SILTY CLAY
6		805	
0.7	4		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.0	9		
6		800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.0	9		
6			
1.4	5		
6		795	
0.8	14		MEDIUM DARK BROWN PEAT
5			
0.8	13		
5		790	
1.0	11		
6			STIFF GRAY CLAY
1.4	14	785	
1.4	14		
6			
1.5	16		STIFF GRAY CLAY LOAM (TILL)
6		780	
1.8	10		
6			
3.5	41		
6		775	
3.5	35		VERY STIFF GRAY CLAY LOAM (TILL)
6			
3.5	35	770	
6			
3.2	37		VERY STIFF GRAY CLAY
6			
2.6	32	765	HARD GRAY CLAY
6			
2.0	32		HARD GRAY CLAY LOAM (TILL)
6			
	32	760	DENSE GRAY SANDY GRAVELLY LOAM
5.7	56		
6			HARD GRAY CLAY LOAM (TILL)
	41	755	
	100		
			DENSE GRAY SANDY GRAVELLY LOAM
	32		

℄ END OF BORING ELEV. 750.8

BORING NO. 9

65' RT. OF ℄ STA. 23+67
S. ABUT. W. BRIDGE

qu	N	Elev.	Description
			℄ GROUND ELEV. 807.9
1.7	10		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6		805	
1.0	10		STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
6			
1.8	15		
6		800	
1.7	9		STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.7	17		
6		795	STIFF DARK BROWN PEAT
1.7	18		
6			
1.1	6		
6		790	MEDIUM GRAY CLAY
2.8	10		
6			
1.8	14		STIFF GRAY CLAY LOAM (TILL)
6		785	
0.8	8		MEDIUM LIGHT GRAY SANDY CLAY LOAM
6			
1.5	15		STIFF GRAY CLAY LOAM (TILL)
6		780	
2.8	14		
6			
1.5	10		
6		775	VERY STIFF GRAY CLAY LOAM (TILL)
2.5	25		
6			
1.1	10	770	
6			
1.7	11		STIFF GRAY SILTY CLAY LOAM (TRACE OF ORGANIC MATERIAL)
6			
1.8	17	765	
6			STIFF LIGHT GRAY CLAY
1.8	18		
6			
2.8	28	760	
6			
3.0	60		VERY STIFF GRAY CLAY LOAM (TILL)
3.0	58	755	
6			
5.7	78		
6			
6.1	53	750	HARD GRAY CLAY LOAM (TILL)
5			
6.1	52		
6			

℄ END OF BORING ELEV. 747.9

BORING NO. 10

17' LT. OF ℄ STA. 23+67
S. ABUT. E. BRIDGE

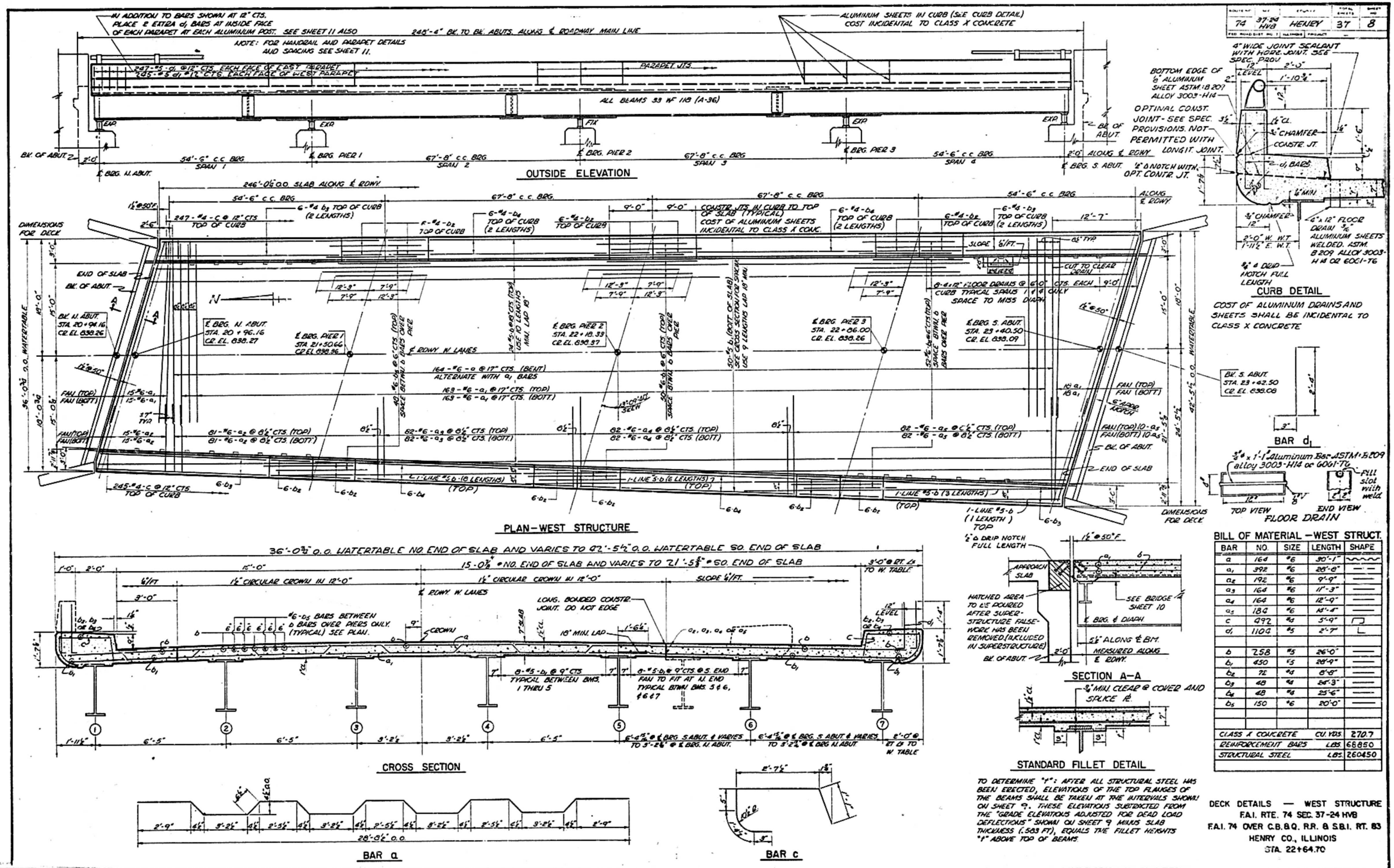
qu	N	Elev.	Description
		810	℄ GROUND ELEV. 810.6
1.7	16		VERY STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY
6		805	
2.6	6		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
2.0	8		MEDIUM LIGHT BROWN AND LIGHT GRAY SILTY LOAM
1.8	11	800	STIFF LIGHT BROWN AND LIGHT GRAY SILTY LOAM
6			
1.5	9		VERY STIFF LIGHT BROWN AND LIGHT GRAY SILTY CLAY LOAM
6			
1.5	14	795	
6			STIFF DARK BROWN PEAT
0.8	17		
5			
1.6	9	790	
1.6	17		STIFF GRAY CLAY
6			
1.3	14	785	
6			
1.0	18		
6			STIFF GRAY CLAY LOAM (TILL)
1.8	15	780	
1.8	16		
6			
1.2	17	775	
6			VERY STIFF GRAY CLAY LOAM (TILL)
1.2	17		
6			
2.6	52	770	HARD GRAY CLAY LOAM (TILL)
6			HARD DK. BR. SILTY CLAY LOAM (TRACE OF ORGANIC MATERIAL)
6.0	77		
6			
		765	
		760	DENSE GRAY POORLY GRADED FINE SAND
	67	755	HARD BROWN SILTY LOAM
5.3	37		VERY STIFF GRAY CLAY
6			
5.2	70		HARD GRAY CLAY LOAM
6			

℄ END OF BORING ELEV. 750.1

N - STANDARD PENETRATION TEST - BLOWS PER FOOT TO DRIVE 2" O.D. SPLIT SPOON SAMPLER 12" WITH 140 LB. HAMMER FALLING 30".
qu - UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²
B - BULGE FAILURE
S - SHEAR FAILURE
E - ESTIMATED VALUE

BORINGS
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B. & Q. R.R. & S.B.I. RT. 83
HENRY CO. ILLINOIS
STA. 22+64.70

ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	8



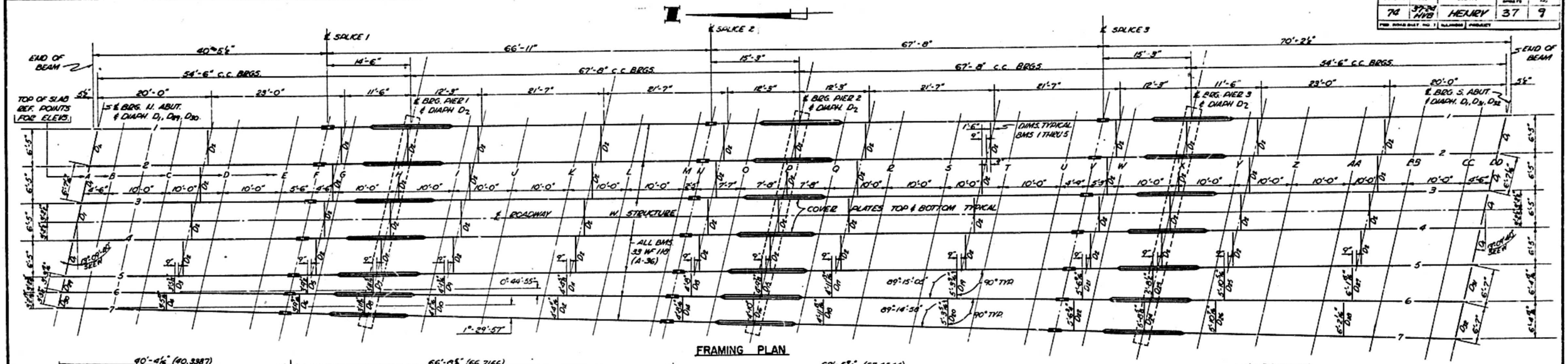
TO DETERMINE "f": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE INTERVALS SHOWN ON SHEET 9. THESE ELEVATIONS SUBTRACTED FROM THE "GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" SHOWN ON SHEET 9 MINUS SLAB THICKNESS (.583 FT), EQUALS THE FILLET HEIGHTS "f" ABOVE TOP OF BEAMS.

BILL OF MATERIAL — WEST STRUCT.

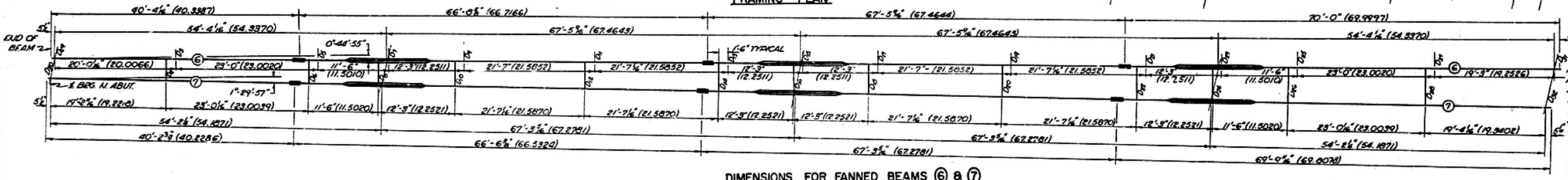
BAR	NO.	SIZE	LENGTH	SHAPE
a	164	#6	30'-1"	
a_1	392	#6	28'-8"	
a_2	192	#6	9'-9"	
a_3	164	#6	11'-3"	
a_4	164	#6	12'-9"	
a_5	184	#6	13'-8"	
c	492	#4	5'-9"	
d_1	1104	#5	2'-7"	
b	258	#5	26'-0"	
b_1	450	#5	28'-9"	
b_2	72	#4	8'-8"	
b_3	48	#4	24'-3"	
b_4	48	#4	25'-6"	
b_5	150	#6	20'-0"	
CLASS X CONCRETE			CU. YDS.	270.7
REINFORCEMENT BARS			LBS.	68850
STRUCTURAL STEEL			LBS.	260450

DECK DETAILS — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	9
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT		



FRAMING PLAN



DIMENSIONS FOR FANNED BEAMS ⑥ & ⑦

NOTE: ALL INTER. DIAPHS. AT ℄ TO ℄ BEAMS FOR BMS. 1 THRU 5. FOR BEAMS 6 AND 7 SEE FRAMING PLAN. DIMS. SHOWN FOR DIAPHS. BETWN. BMS. 5 & 6 AND 6 & 7. ARE C.C. BMS. MEASURED ALONG ℄ DIAPHS.

GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS

LOCATION	BM. 1	BM. 2	BM. 3	BM. 4	BM. 5	BM. 6	BM. 7
A	838.07	838.19	838.26	838.26	838.19	838.12	838.05
B	838.09	838.21	838.28	838.27	838.20	838.13	838.07
C	838.13	838.24	838.31	838.31	838.23	838.16	838.10
D	838.15	838.26	838.33	838.33	838.25	838.18	838.12
E	838.16	838.27	838.34	838.34	838.26	838.19	838.12
F	838.16	838.27	838.34	838.34	838.27	838.19	838.12
G	838.15	838.27	838.34	838.34	838.27	838.19	838.12
H	838.15	838.28	838.35	838.35	838.27	838.20	838.11
I	838.18	838.29	838.37	838.37	838.29	838.21	838.13
J	838.20	838.31	838.39	838.39	838.31	838.22	838.15
K	838.22	838.32	838.40	838.40	838.32	838.23	838.16
L	838.21	838.32	838.40	838.40	838.32	838.23	838.16
M	838.20	838.31	838.39	838.39	838.31	837.22	838.14
N	838.19	838.31	838.38	838.38	838.31	838.22	838.13
O	838.17	838.29	838.37	838.37	838.30	838.20	838.11
P	838.16	838.28	838.36	838.36	838.29	838.20	838.10
Q	838.16	838.28	838.36	838.36	838.29	838.19	838.09
R	838.17	838.28	838.36	838.36	838.29	838.19	838.10
S	838.17	838.28	838.35	838.36	838.29	838.19	838.10
T	838.15	838.27	838.34	838.34	838.27	838.17	838.08
U	838.12	838.24	838.31	838.32	838.25	838.14	838.04
V	838.10	838.22	838.29	838.30	838.23	838.12	838.02
W	838.08	838.20	838.28	838.28	838.21	838.11	838.00
X	838.04	838.17	838.25	838.25	838.18	838.08	837.96
Y	838.03	838.15	838.23	838.23	838.16	838.05	837.94
Z	838.01	838.13	838.21	838.21	838.14	838.03	837.92
AA	837.99	838.11	838.19	838.19	838.12	838.01	837.90
BB	837.95	838.07	838.15	838.15	838.09	837.97	837.86
CC	837.90	838.02	838.10	838.11	838.04	837.92	837.80
DD	837.87	838.00	838.08	838.08	838.01	837.89	837.77

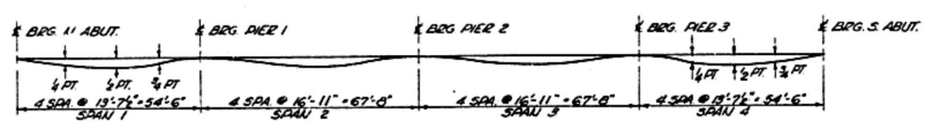
TABLE OF DEAD LOAD DEFLECTIONS

LOCATION		BM. 1	BM. 2	BM. 3	BM. 4	BM. 5	BM. 6	BM. 7
¼ PT.	SPAN 1	3/8"	1/4"	1/4"	1/4"	5/16"	11/32"	11/32"
½ PT.	SPAN 1	13/32"	1/4"	1/4"	1/4"	7/32"	3/16"	5/16"
¾ PT.	SPAN 1	3/16"	1/8"	1/8"	1/8"	3/32"	1/16"	5/32"
¼ PT.	SPAN 2	11/32"	9/32"	9/32"	7/32"	3/16"	5/32"	5/16"
½ PT.	SPAN 2	9/16"	11/32"	11/32"	9/32"	5/16"	1/4"	1/4"
¾ PT.	SPAN 2	11/32"	9/32"	3/32"	3/32"	3/16"	1/8"	3/32"
¼ PT.	SPAN 3	11/32"	9/32"	3/32"	7/32"	3/16"	3/16"	3/16"
½ PT.	SPAN 3	9/16"	11/32"	5/32"	9/32"	11/32"	5/16"	13/32"
¾ PT.	SPAN 3	11/32"	9/32"	3/32"	7/32"	7/32"	3/16"	7/32"
¼ PT.	SPAN 4	3/16"	1/8"	1/8"	1/8"	3/32"	3/32"	3/16"
½ PT.	SPAN 4	13/32"	1/4"	1/4"	1/4"	1/4"	1/4"	13/32"
¾ PT.	SPAN 4	3/8"	1/4"	1/4"	1/4"	7/32"	7/32"	3/8"

* ELEVATIONS OF TOP OF WF BEAMS

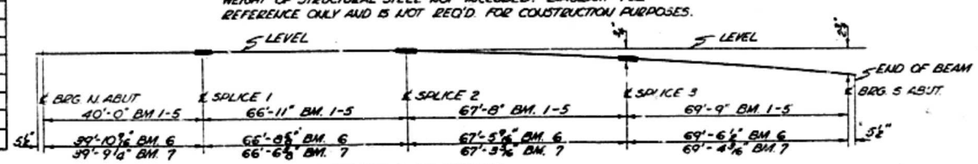
LOCATION	BM. 1	BM. 2	BM. 3	BM. 4	BM. 5	BM. 6	BM. 7
℄ BRG. N. ABUT.	837.47	837.60	837.67	837.67	837.60	837.51	837.41
℄ SPLICE 1	837.47	837.60	837.67	837.67	837.60	837.51	837.41
℄ PIER 1	837.47	837.60	837.67	837.67	837.60	837.51	837.41
℄ SPLICE 2	837.47	837.60	837.67	837.67	837.60	837.51	837.41
℄ PIER 2	837.46	837.59	837.66	837.66	837.59	837.50	837.40
℄ SPLICE 3	837.41	837.54	837.61	837.61	837.54	837.45	837.35
℄ PIER 3	837.37	837.50	837.57	837.57	837.50	837.41	837.31
℄ BRG. S. ABUT.	837.24	837.37	837.44	837.44	837.37	837.28	837.18

* ELEVATIONS REFER TO TOP OF TOP FLANGES OF ACTUAL ROLLED BEAMS. DOES NOT INCLUDE SPLICE PLATE OR COVER PLATES. THESE ELEVATIONS ARE THEORETICAL AND ARE TO BE USED FOR FABRICATION OF STRUCTURAL STEEL AND DO NOT INCLUDE ANY ALLOWANCE FOR DEFLECTION.



DEAD LOAD DEFLECTION DIAGRAM

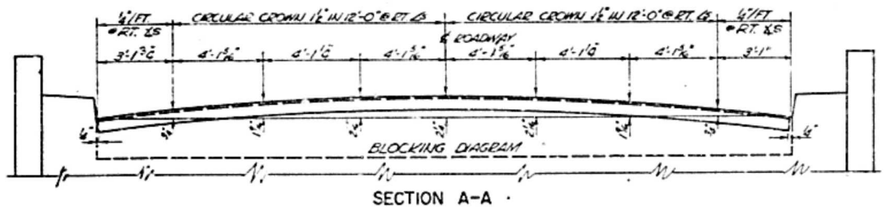
WEIGHT OF STRUCTURAL STEEL NOT INCLUDED. DIAGRAM FOR REFERENCE ONLY AND IS NOT REQ'D. FOR CONSTRUCTION PURPOSES.



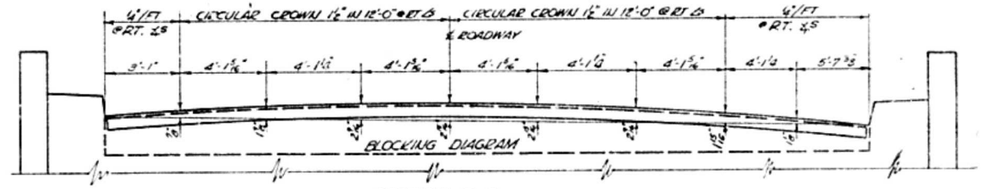
PROFILE OF BEAMS

STRUCTURAL STEEL — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

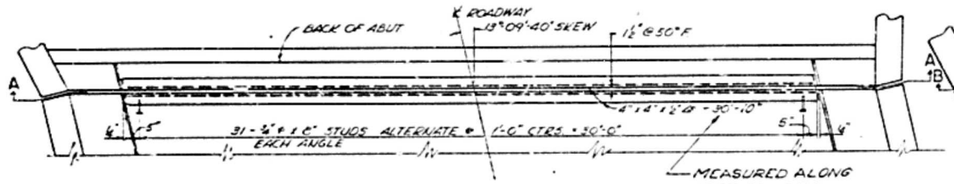
74	37-24 HVB	HENRY	37	10



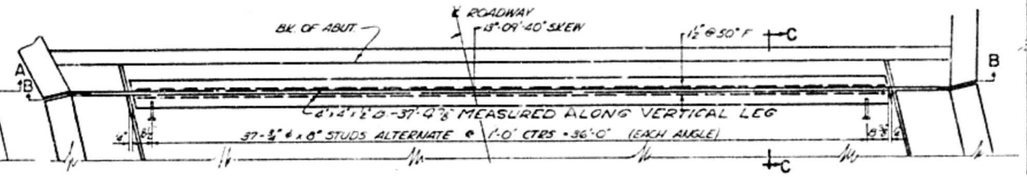
SECTION A-A



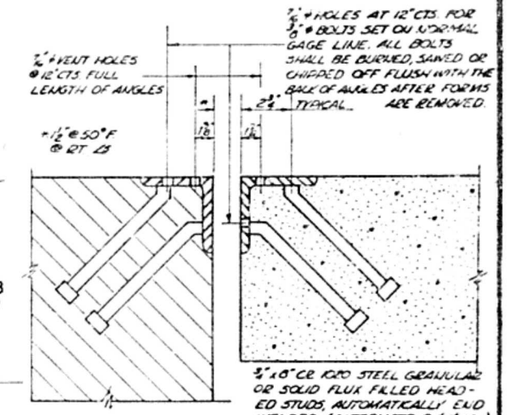
SECTION B-B



PLAN OF EXPANSION GUARD - N. ABUTMENT



PLAN OF EXPANSION GUARD - S. ABUTMENT



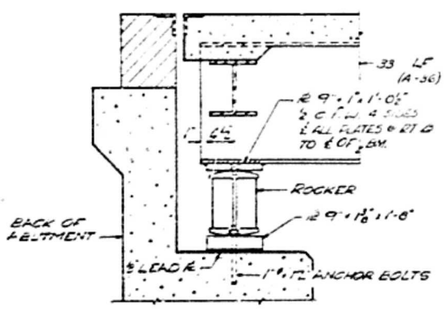
SECTION C-C

NOTE: ROADWAY EXPANSION GUARD SHALL BE FABRICATED TO FIT THE ROADWAY. GUARD SHALL BE ASSEMBLED IN PROPER POSITION IN SHOP FOR INSPECTION. ALL EXPOSED SURFACES SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED.

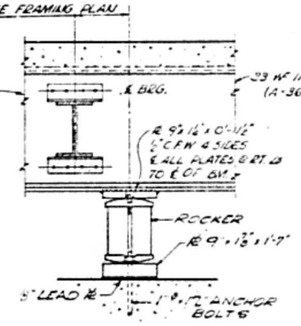
EST. WEIGHT OF STRUCTURAL STEEL REQUIRED FOR EXPANSION GUARDS = 1880 LBS. THE WEIGHTS OF THE ANGLES AND STUDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL.

The location of the anchor bolts and vertical alignment of the expansion bearings shall be adjusted to the temperature at the time of erection. See Art. 5.4.9(17).

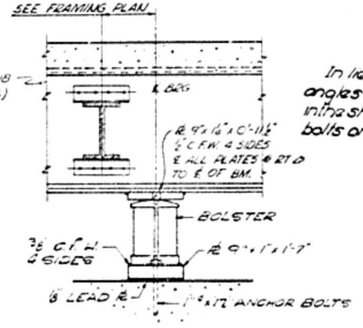
Anchor Bolts shall be grouted into drilled holes of for beams are in place, or bolts at fixed pier may be built into the masonry.



SECTION AT ABUTMENTS

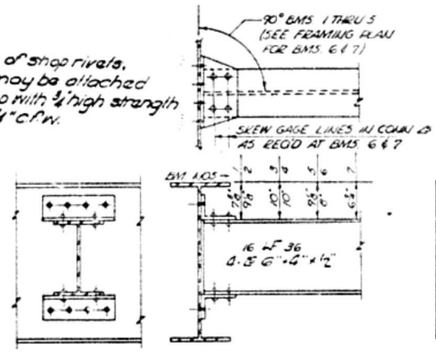


PIER 1 & 3

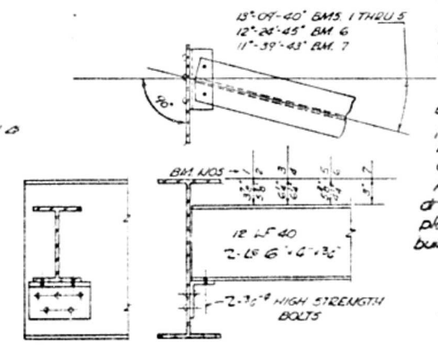


PIER 2

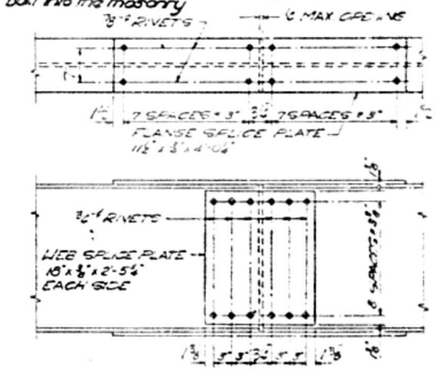
In lieu of shop rivets, angles may be attached in the shop with ¾" high strength bolts or ¼" c.f.w.



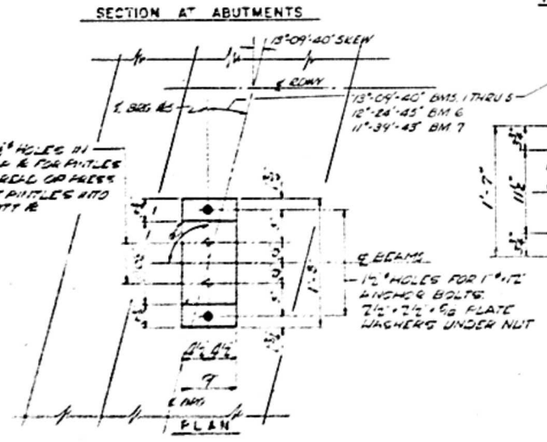
ALL INTERMEDIATE DIAPHRAGMS

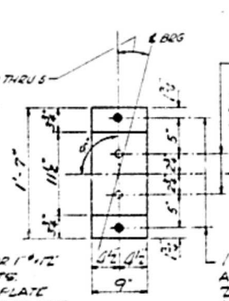


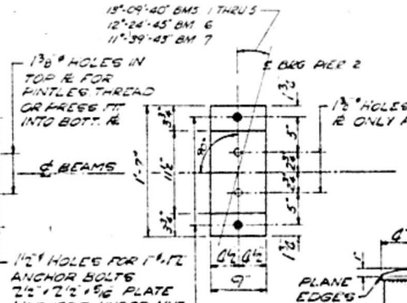
ALL END DIAPHRAGMS

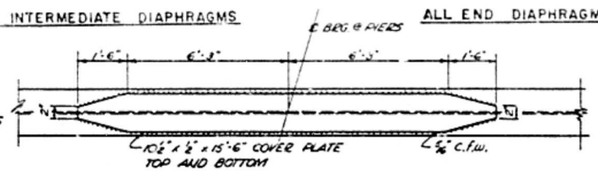


DETAIL OF SPLICE

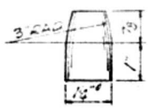




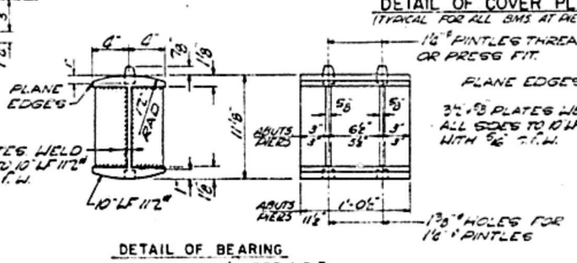




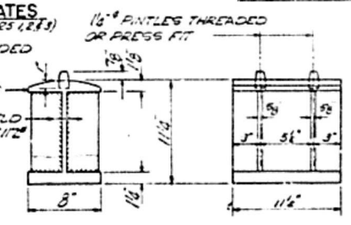
DETAIL OF COVER PLATES
(TYPICAL FOR ALL BMS. AT PIERS 1, 2 & 3)



DETAIL OF PINTLE



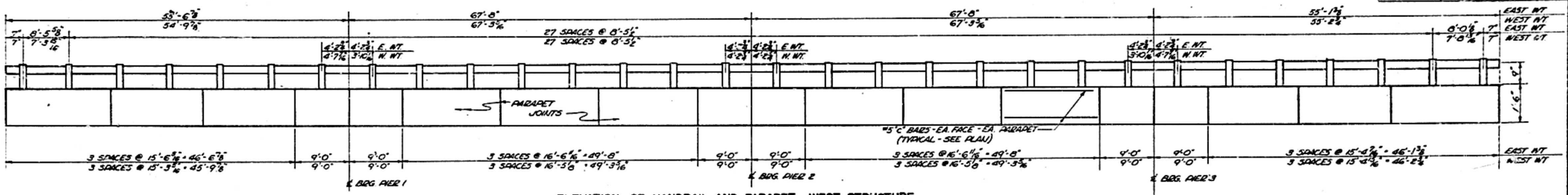
DETAIL OF BEARING
ABUTS. AND PIERS 1 & 3



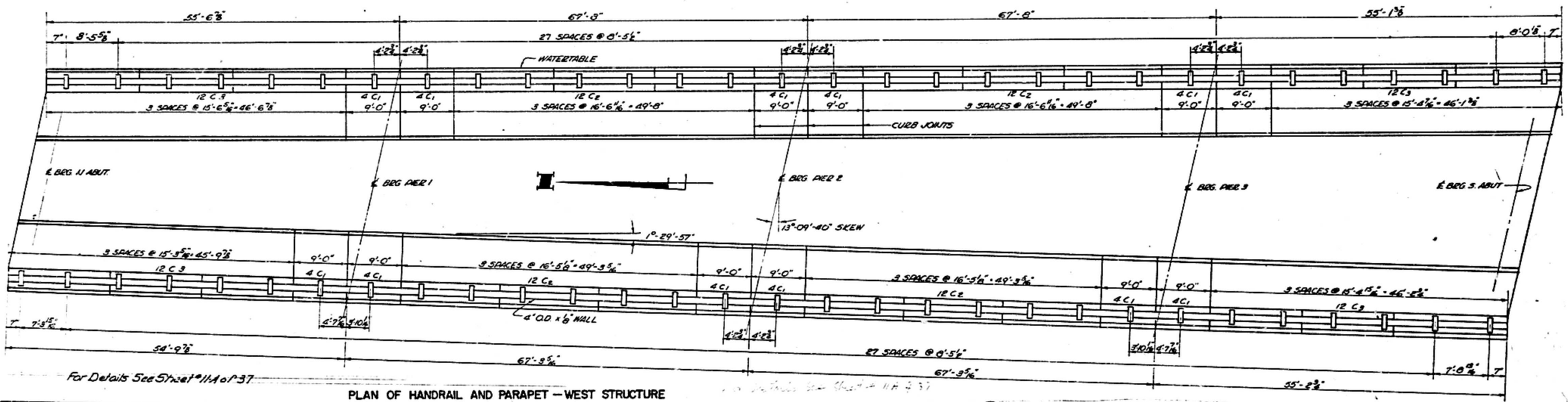
DETAIL OF BEARING AT PIER 2

STRUCTURAL STEEL DETAILS - WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

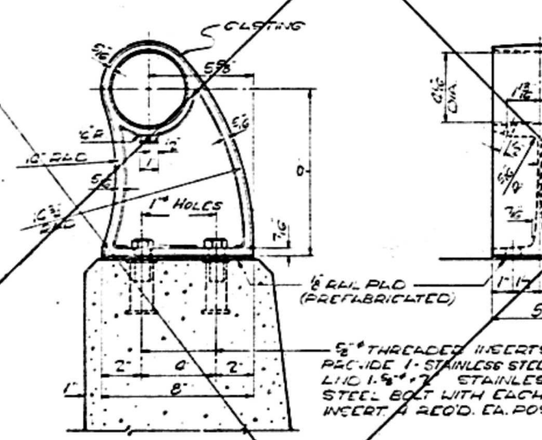
74	37-24 HVB	HENRY	37	11



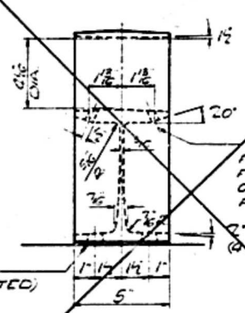
ELEVATION OF HANDRAIL AND PARAPET – WEST STRUCTURE

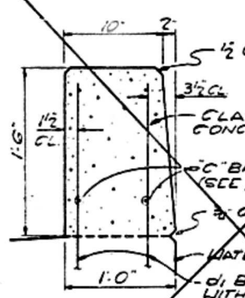


PLAN OF HANDRAIL AND PARAPET – WEST STRUCTURE

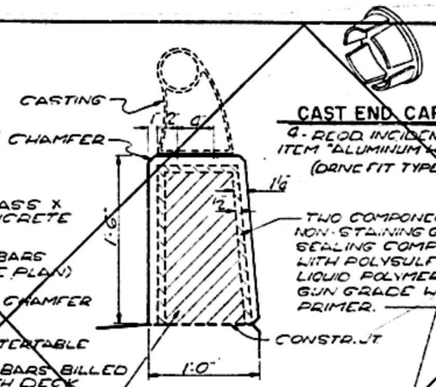


RAIL POST DETAILS





DETAIL OF PARAPET

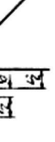


CAST END CAP

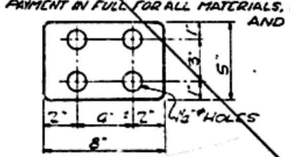
4 - REQ'D. INCIDENTAL TO ITEM "ALUMINUM HANDRAIL" (DRIVE FIT TYPE)

DETAIL OF PARAPET

1/2" PREFORMED CORK-ASPHALT JOINT FILLER (MEETS QUALIFICATIONS FOR ASTM DESIGNATION D 1751), COST INCIDENTAL



JOINT DETAIL



RAIL PAD

PROVIDE 1 PER POST

GENERAL NOTES:

ALL POSTS SHALL BE PLACED NORMAL TO PARAPET.
ALL POSTS SHALL BE OF ALUMINUM CONFORMING TO A.S.T.M. SPECIFICATION B-108 ALLOY 56-T08-T6.
ALL RAIL TUBING SHALL BE OF ALUM. CONFORMING TO A.S.T.M. SPECIFICATION B-235 ALLOY 6061 OR 6062-T6.

RAIL TUBING MAY EXTEND A MAX. OF 3 PANEL LENGTHS FOR MATERIAL COMPOSITION OF PREFABRICATED PAD SEE ARTICLE 50.9 (f) (BEARINGS & ANCHORAGE), OF THE STANDARD SPECIFICATIONS.
SET SCREWS SHALL BE OF ALUMINUM CONFORMING TO A.S.T.M. SPECIFICATION B-211 ALLOY 2020-T4.
ALUMINUM HANDRAIL SHALL BE MEASURED IN LIN. FT. THE LENGTH PAID FOR SHALL BE THE OVERALL LENGTH ALONG THE TOP LONGITUDINAL RAILING MEMBER THROUGH ALL POSTS AND GAPS.
ALUMINUM HANDRAIL WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LIN. FT. FOR ALUMINUM HANDRAIL, MEASURED AS SPECIFIED, WHICH PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIALS, FABRICATION, TRANSPORTATION AND ERECTION.

BILL OF MATERIAL

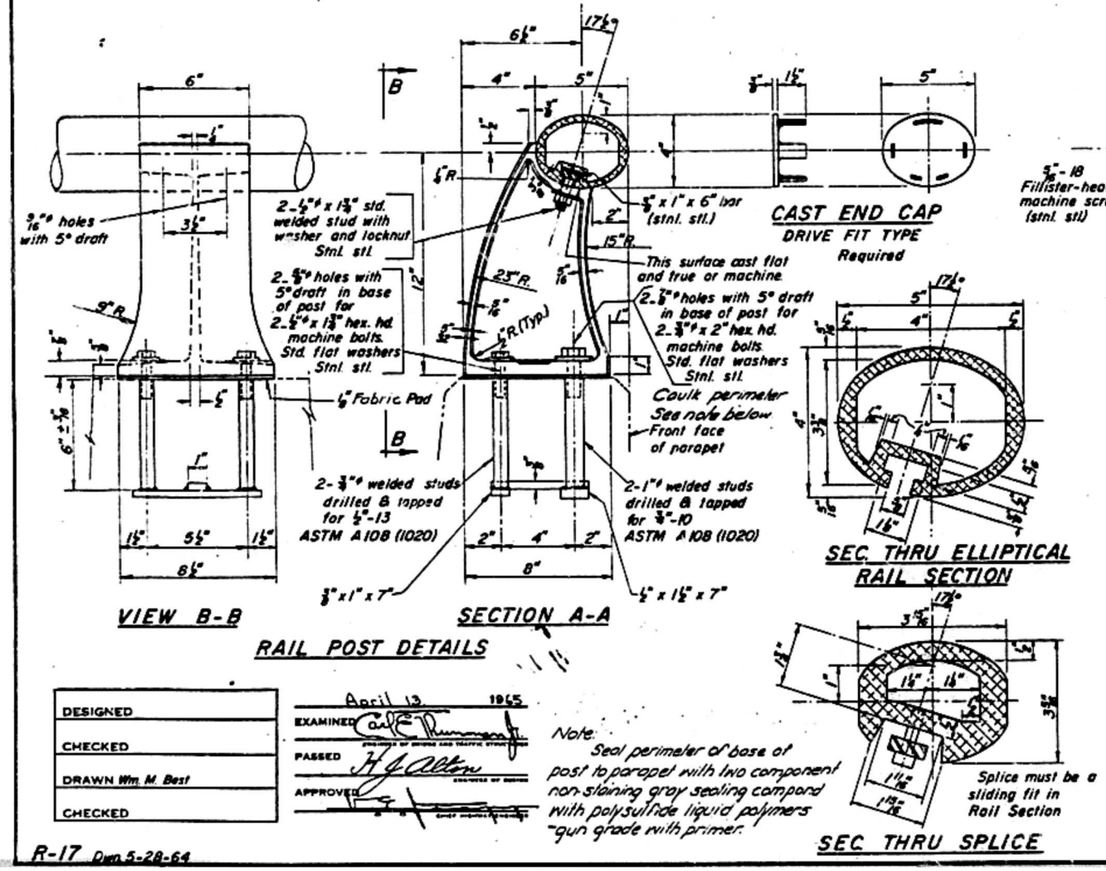
BAR	NO	SIZE	LENGTH	SHAPE
C_1	48	#5	8'-9"	—
C_2	48	#5	16'-2"	—
C_3	48	#5	15'-0"	—
CLASS X CONCRETE CU YDS				25.0
REINFORCEMENT BARS LBS				2000
ALUMINUM HANDRAIL LIN FT				491

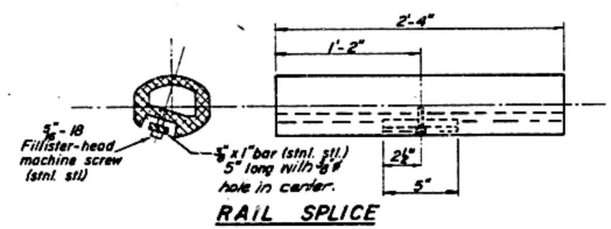
WEST STRUCTURE
HANDRAIL AND PARAPET DETAILS
F.A.I. RTE. 74 SEC 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

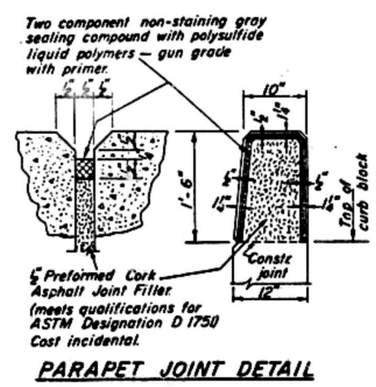
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

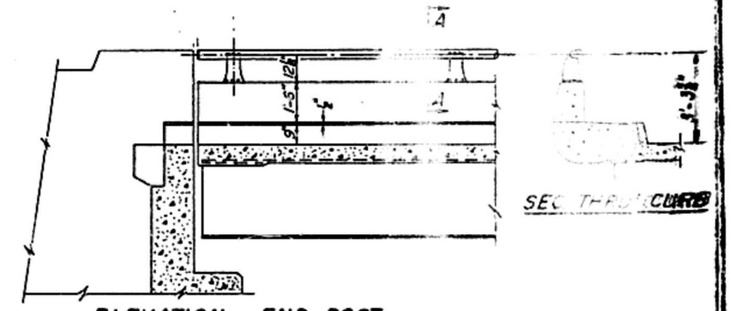
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	97-2-HVB	HENRY	37	4

For Parapet Joint Spacing and Handrail Post Spacing
See Sheet #11 of 37









NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post— Alloy 344-T4.
Stainless Steel Welded Stud Bolts, Washers, and Locknuts.

Fabric Bearing Pad.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

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

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

Provide 1-6" and 2-1/4" Aluminum Shims for 25% of the posts. Rail element shall be parallel to Grade — high spots shall be ground, and low spots shall be shimmed.

BILL OF MATERIAL

Item	Unit	Qty
ALUMINUM HANDRAIL	Lin. Ft.	[illegible]

ALUMINUM HANDRAIL

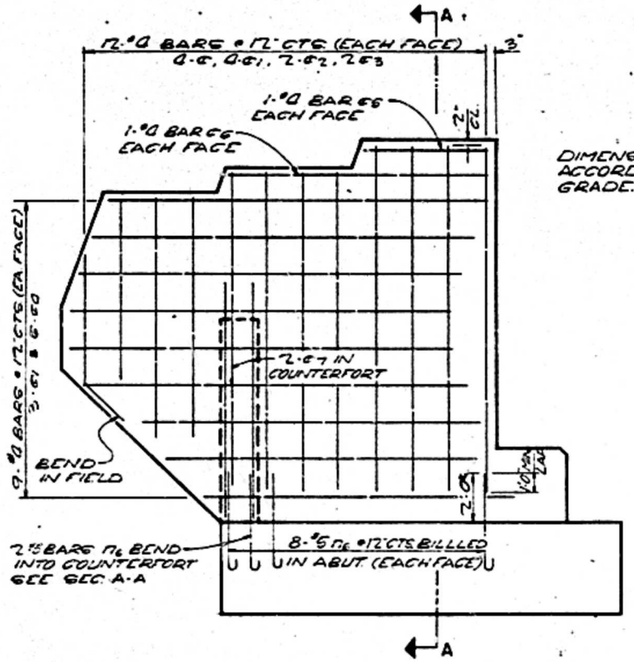
WEST STRUCTURE
F.A.I. 74 SEC. 97-2-HVB
HENRY COUNTY
STA. [illegible] 64.70

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

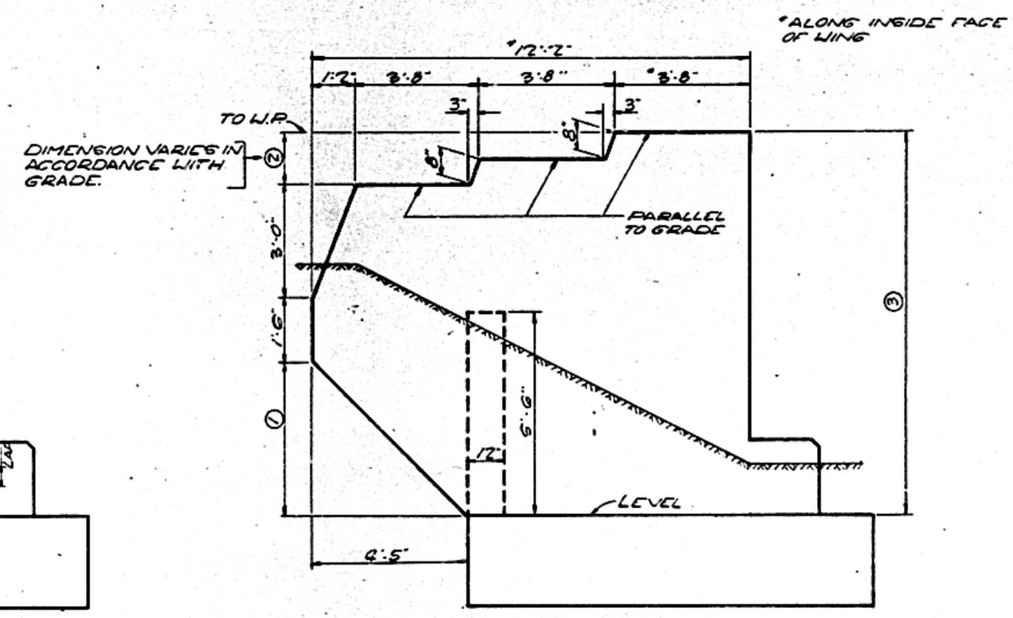
April 13 1965
EXAMINED Carl E. Rumsey
PASSED H. G. Allen
APPROVED

R-17 Dwn. 5-28-64

74	37-24 HVB	HENRY	37	12



ELEVATION

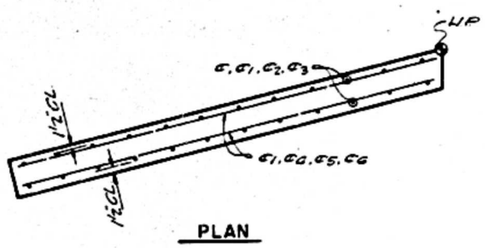


ELEVATION

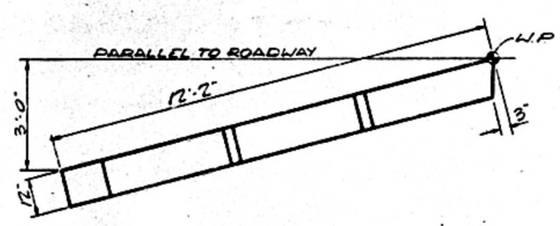
TABLE FOR END POST DIMENSIONS

END POST	DIM. ①	②	③	CU. YDS. CONC. CU. YDS.
A	3'-11⅝"	1'-7"	10'-0⅝"	3.90
B	3'-11⅝"	1'-7"	10'-0⅝"	3.90
C	4'-0"	1'-7"	10'-1"	3.90
D	3'-10⅜"	1'-7"	9'-11⅝"	3.90

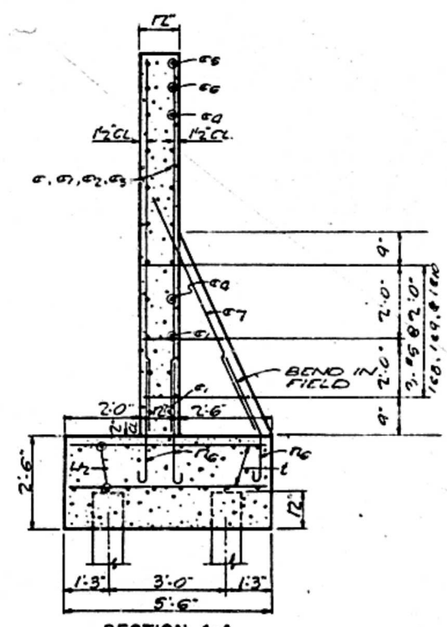
SEE ABUTMENT SHEETS FOR END POST DESIGNATION



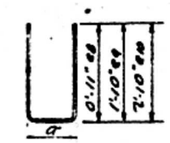
PLAN



PLAN



SECTION A-A



BARS #8, #9, #10

4 END POSTS

BILL OF MATERIAL

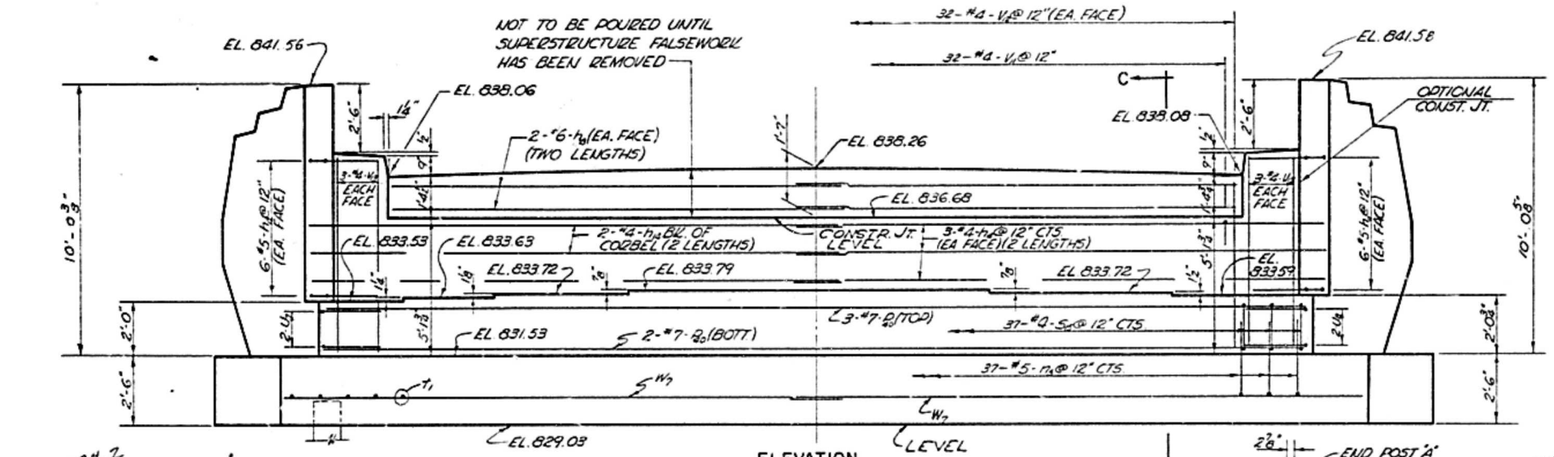
BAR	NO.	SIZE	LENGTH	SHAPE
G	32	#9	9'-3"	—
G1	36	#9	8'-6"	—
G2	16	#9	6'-6"	—
G3	16	#9	6'-0"	—
G4	40	#9	10'-6"	—
G5	8	#9	3'-6"	—
G6	8	#9	7'-0"	—
G7	8	#6	7'-0"	—
G8	4	#6	7'-7"	U
G9	4	#5	6'-6"	U
G10	4	#6	6'-5"	U
CLASS X CONCRETE CU. YD.				158 *
REINFORCEMENT BARS LBS.				1150 *

* THESE QUANTITIES INCLUDED WITH TOTALS SHOWN ON ABUT. SHEETS

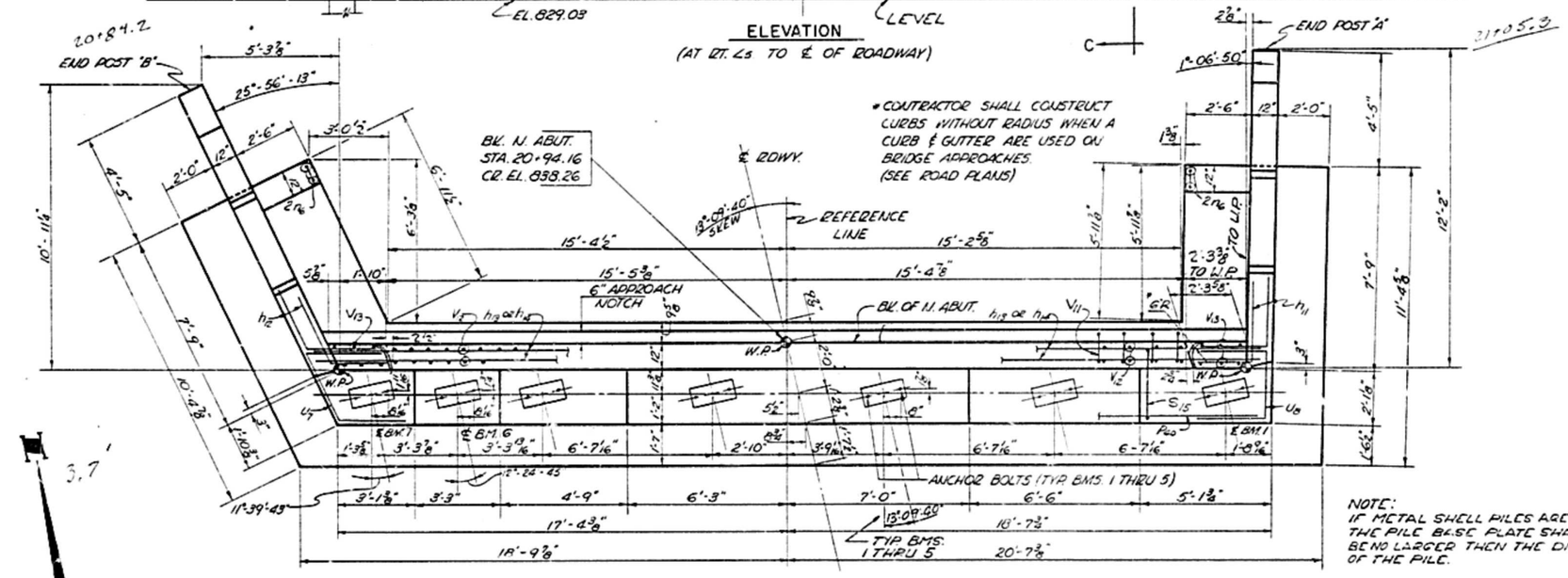
END POST DETAILS — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET
74	37-24 HVB	HENRY	37	13

F.A.I. ROAD DIST. NO. 1 | ILLINOIS | PROJECT

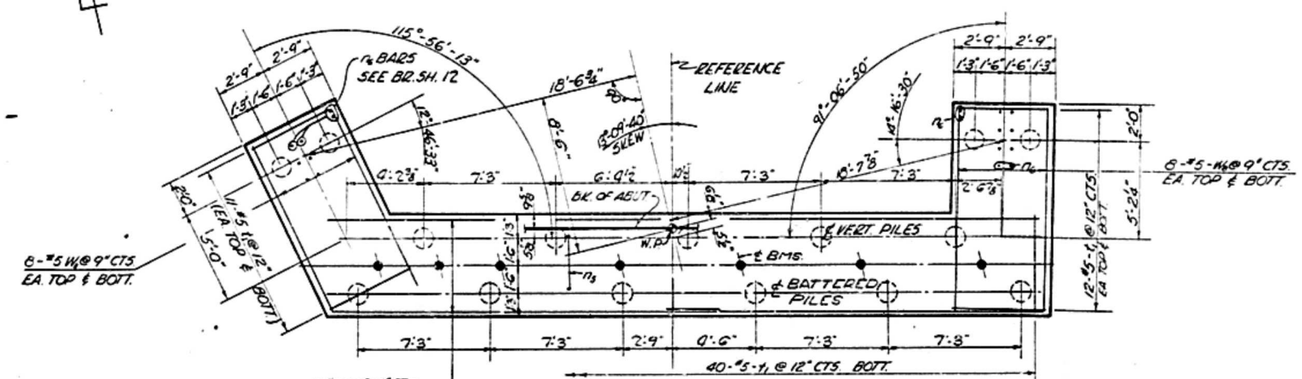


ELEVATION
(AT RT. ∠s TO ℄ OF ROADWAY)

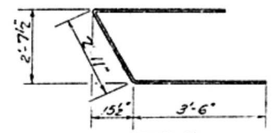


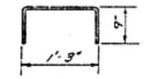
TOP PLAN
SCALE 3/8" = 1'-0"

NOTE:
IF METAL SHELL PILES ARE USED THE PILE BASE PLATE SHALL BE NO LARGER THEN THE DIAMETER OF THE PILE.

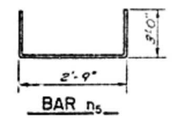


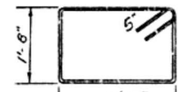
FOOTING PLAN (SHOWING PILE SPACING & REINF.)
SCALE: 1/4" = 1'-0"

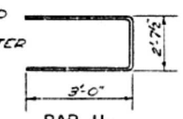

BAR U_7

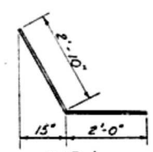

BAR V_{11}

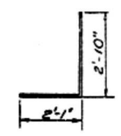

BAR n_6

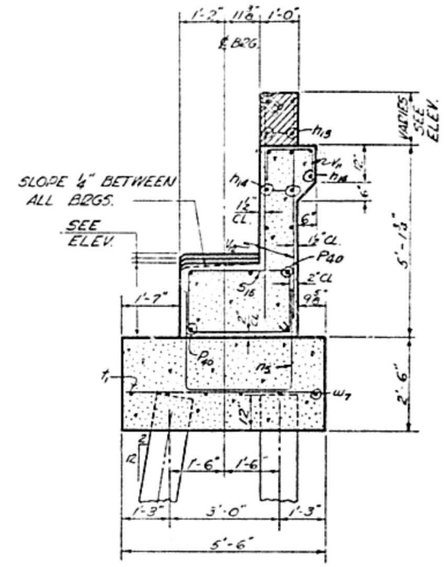

BAR n_5


BAR S_{15}


BAR U_8


BAR h_{12}


BAR h_{11}



SECTION C-C

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
h_{11}	12	#5	4'-11"	
h_{12}	12	#5	4'-10"	
n_{13}	8	#5	16'-0"	
n_{14}	16	#4	19'-3"	
n_5	37	#5	8'-9"	
n_6	36	#5	4'-1"	
P_{40}	5	#7	35'-6"	
U_7	2	#6	9'-11"	
U_8	2	#6	8'-8"	
f_1	86	#5	5'-3"	
S_{15}	37	#4	9'-8"	
V_{11}	32	#4	2'-9"	
V_{12}	64	#4	6'-3"	
V_{13}	12	#4	7'-0"	
W_7	12	#5	21'-3"	
W_8	32	#5	10'-6"	

PILE DATA

TYPE: CONCRETE
MINIMUM CAPACITY: 85 TONS
EST. LENGTH: 70 FT.
NO. REQ'D.: 15

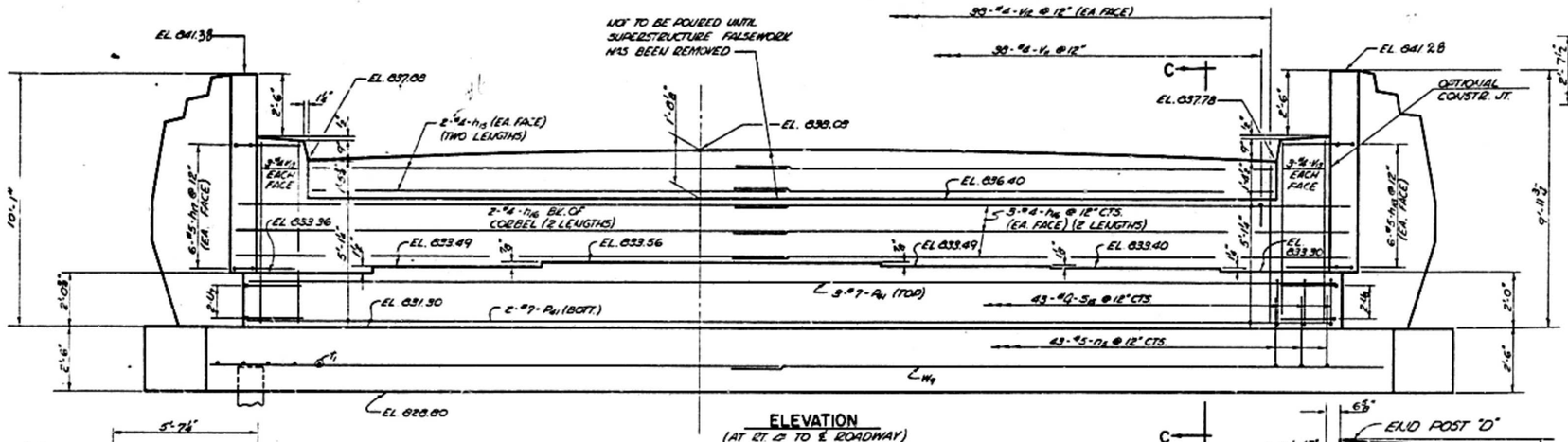
BILL OF MATERIAL

ITEM	UNIT	QUAN.
CLASS X CONCRETE	CU. YDS	48.3
REINFORCEMENT BARS	LBS	3610
CONCRETE PILES	LIN. FT.	1050

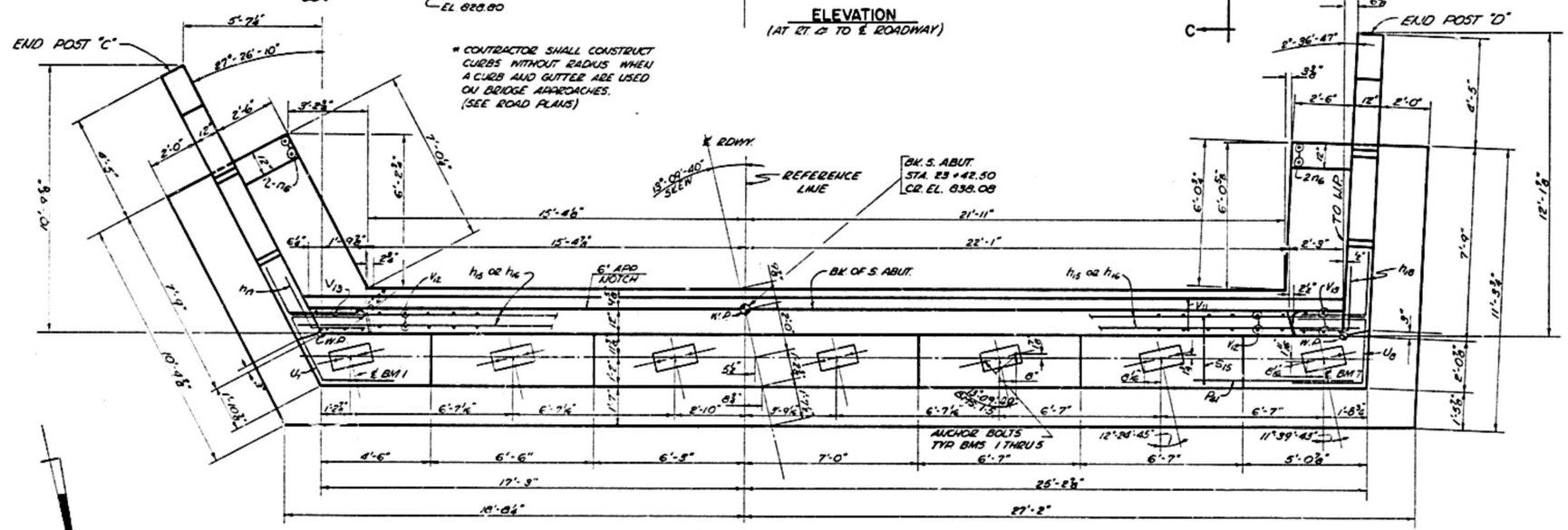
NOTE: BILL OF MATERIAL INCLUDES REINFORCEMENT BARS AND CLASS X CONCRETE FOR END POSTS.

NORTH ABUTMENT — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.& Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22 + 64.70

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	10

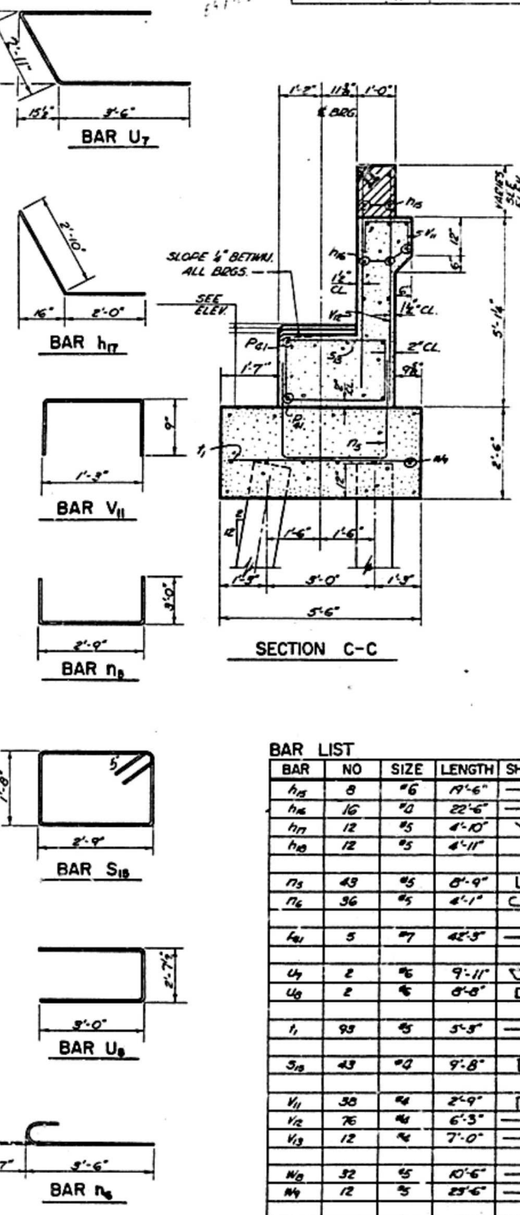


ELEVATION
(AT ℄ OF TO ℄ ROADWAY)

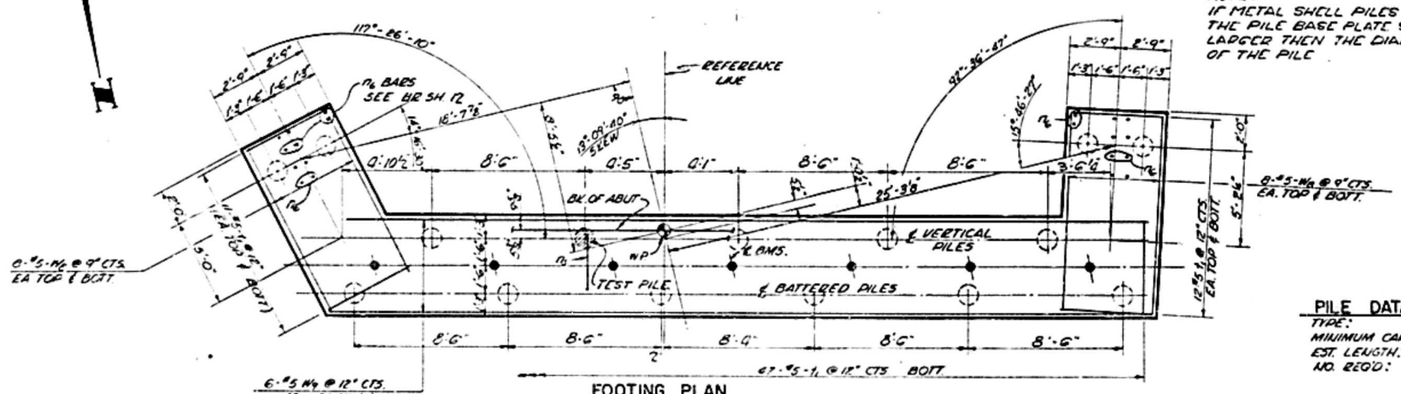


TOP PLAN
SCALE: ⅜" = 1'-0"

* CONTRACTOR SHALL CONSTRUCT CURBS WITHOUT RADIUS WHEN A CURB AND GUTTER ARE USED ON BRIDGE APPROACHES. (SEE ROAD PLANS)



NOTE:
IF METAL SHELL PILES ARE USED THE PILE BASE PLATE SHALL BE NO LARGER THEN THE DIAMETER OF THE PILE



FOOTING PLAN
(SHOWING PILE SPACING AND REINF.)
SCALE: ¼" = 1'-0"

PILE DATA

TYPE:	CONCRETE
MINIMUM CAPACITY:	65 TONS
EST. LENGTH:	75 FT.
NO. REQ'D:	10+1 TEST PILE

BILL OF MATERIALS

ITEM	UNIT	QUAN.
CLASS X CONCRETE	CU. YDS	54.0
REINFORCEMENT BARS	LBS.	3950
CONCRETE PILES	LIN. FT.	1050
TEST PILE (CONCRETE)	EACH	1

NOTE: BILL OF MATERIAL INCLUDES REINF. BARS AND CLASS X CONCRETE FOR END POSTS.

BAR LIST

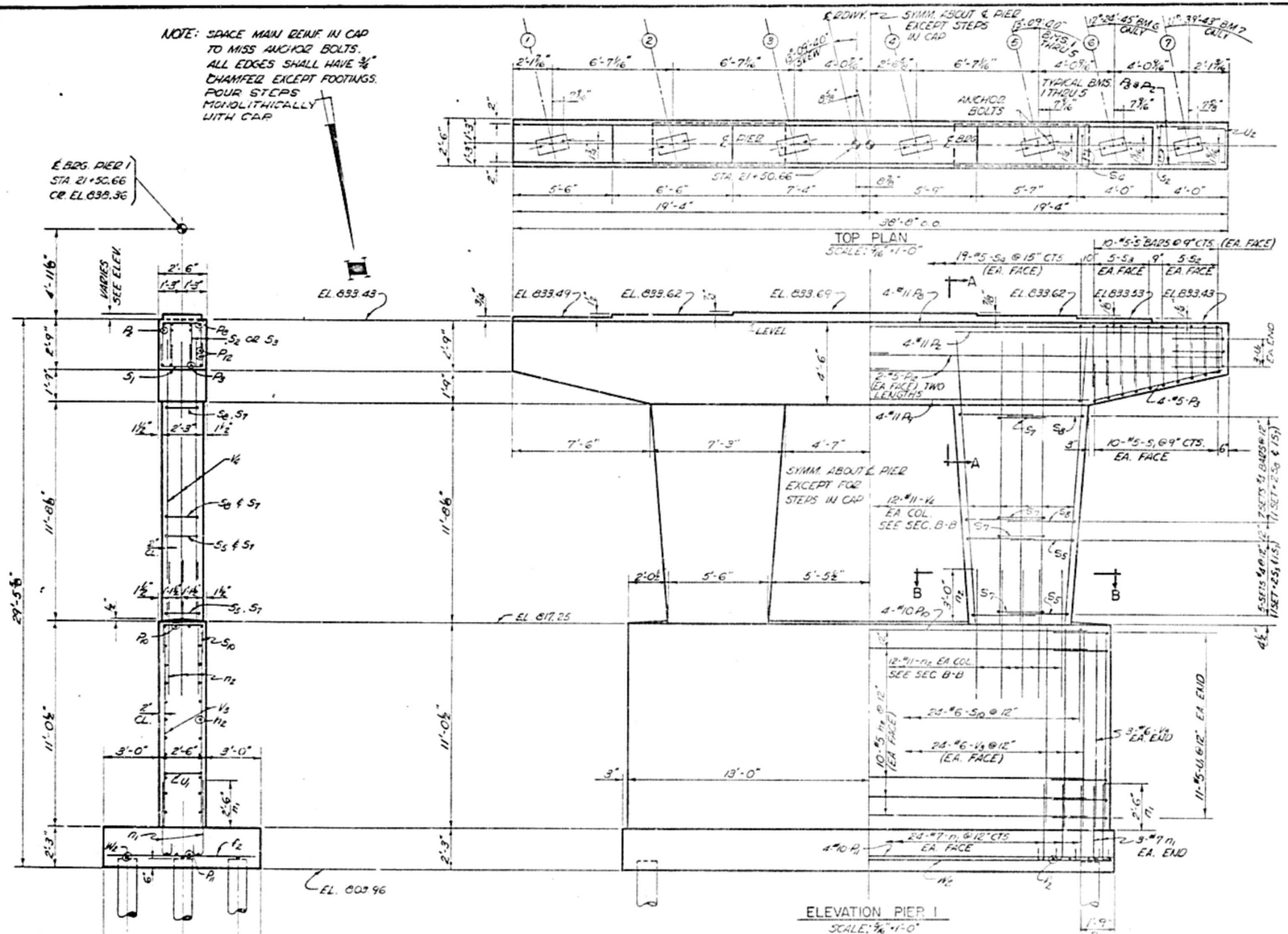
BAR	NO	SIZE	LENGTH	SHAPE
h_{15}	8	#6	19'-6"	
h_{16}	16	#9	22'-6"	
h_{17}	12	#5	4'-10"	
h_{18}	12	#5	4'-11"	
n_3	43	#5	8'-9"	
n_6	36	#5	4'-1"	
t_{21}	5	#7	42'-3"	
U_7	2	#6	9'-11"	
U_8	2	#6	8'-8"	
t_1	93	#5	5'-3"	
S_{18}	43	#9	9'-8"	
V_{11}	38	#4	2'-9"	
V_{12}	76	#4	6'-3"	
V_{13}	12	#4	7'-0"	
W_8	32	#5	10'-6"	
W_4	12	#5	23'-6"	

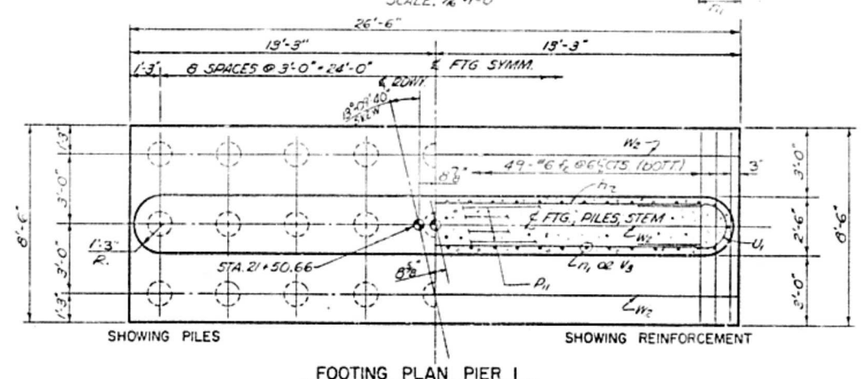
SOUTH ABUTMENT — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	15

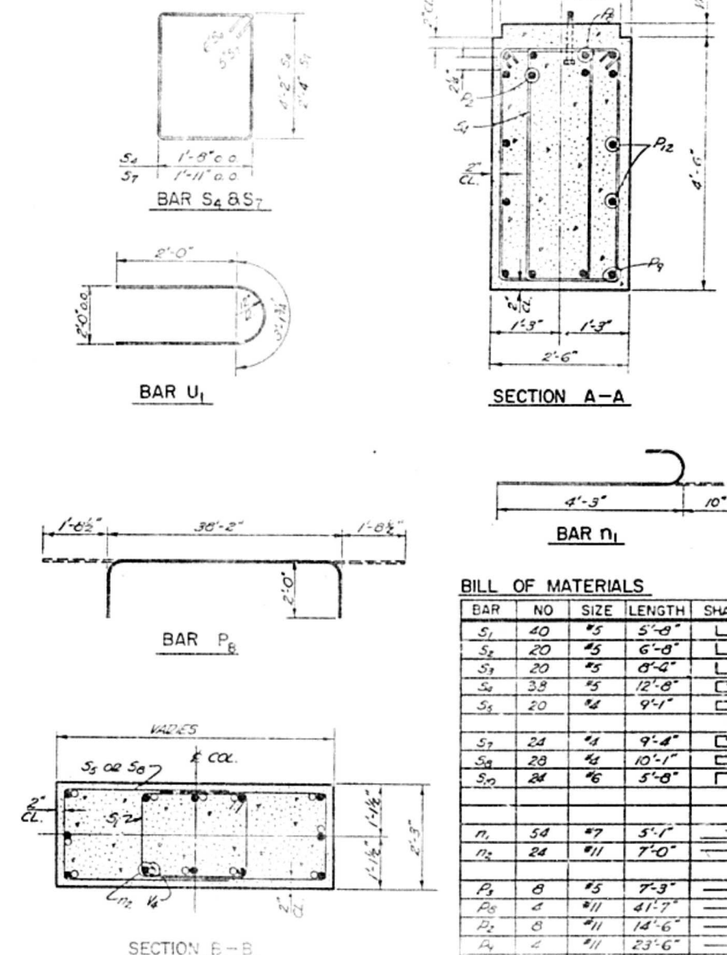
NOTE: SPACE MAIN REINF IN CAP TO MISS ANCHOR BOLTS. ALL EDGES SHALL HAVE 3/4" CHAMFER EXCEPT FOOTINGS. POUR STEPS MONOLITHICALLY WITH CAP

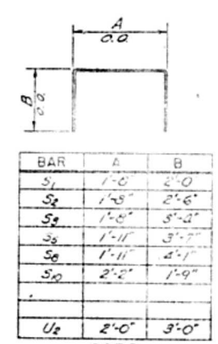
NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER AND ℄ ROWY. DO NOT COINCIDE SEE FOOTING PLAN AND TOP 1" IN.





FOOTING PLAN PIER 1
SCALE: 3/16" = 1'-0"





BAR	A	B
S_1	1'-0"	2'-0"
S_2	1'-9"	2'-6"
S_3	1'-8"	3'-3"
S_5	1'-11"	3'-7"
S_8	1'-11"	4'-1"
S_{10}	2'-2"	1'-9"
U_2	2'-0"	3'-0"

BARS
$S_1, S_2, S_3, S_5, S_8, S_{10}$ & U_2

PILE DATA

TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TON
EST. LENGTH: 35 FT.
NO. REQ'D: 27

BILL OF MATERIALS

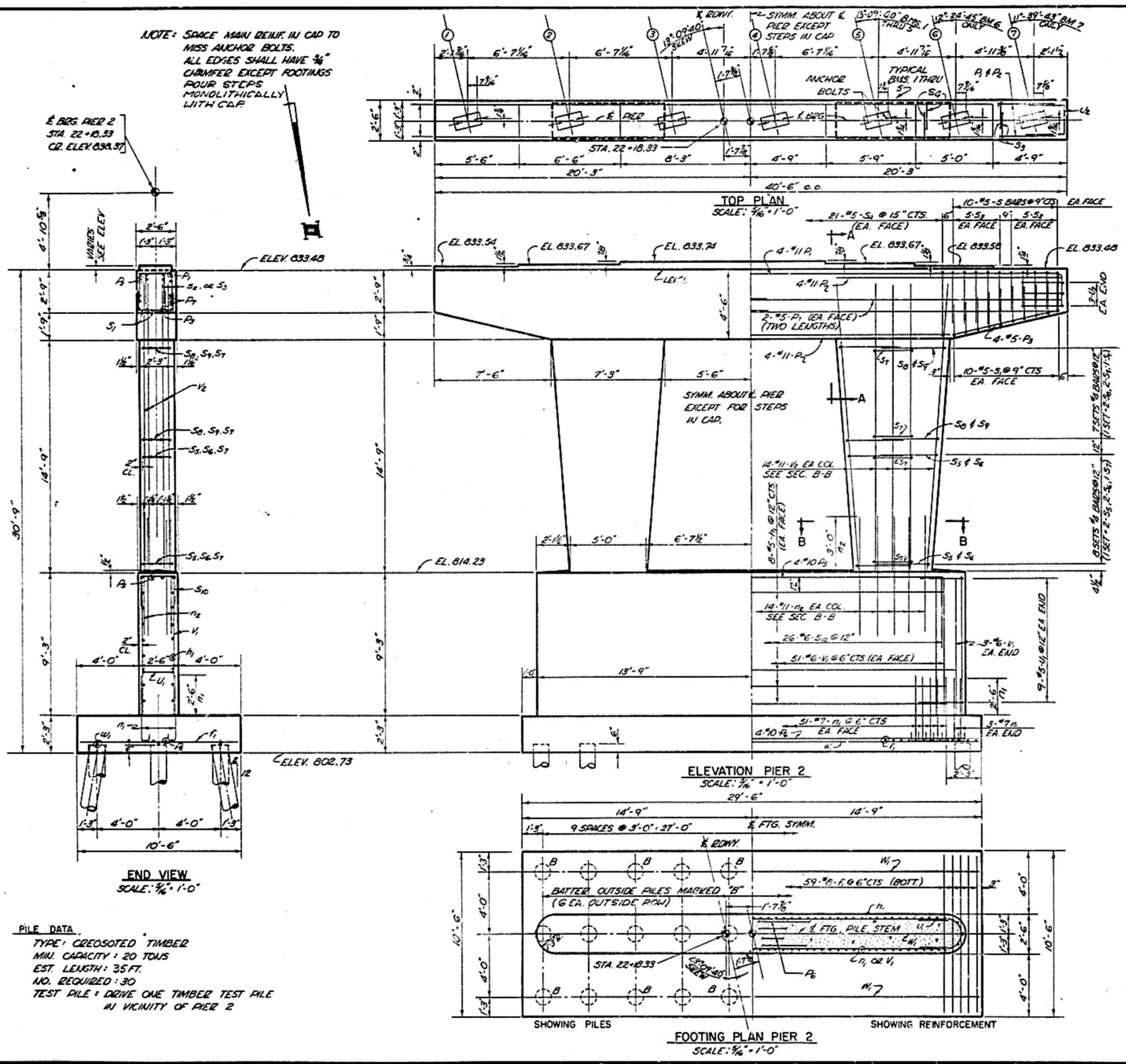
BAR	NO	SIZE	LENGTH	SHAPE
S_1	40	#5	5'-8"	U
S_2	20	#5	6'-8"	U
S_3	20	#5	8'-4"	U
S_4	38	#5	12'-8"	D
S_5	20	#4	9'-1"	C
S_7	24	#4	9'-4"	D
S_8	28	#4	10'-1"	C
S_{10}	24	#6	5'-8"	Π
n_1	54	#7	5'-1"	
n_2	24	#11	7'-0"	
P_2	8	#5	7'-3"	
P_8	4	#11	41'-7"	
P_2	8	#11	14'-6"	
P_4	4	#11	23'-6"	
P_{12}	4	#10	23'-6"	
P_{11}	4	#10	26'-0"	
P_{12}	8	#5	20'-0"	
U_1	22	#5	7'-2"	
U_2	6	#6	8'-0"	C
W_2	3	#6	26'-0"	
f_2	49	#6	8'-3"	
n_2	20	#5	25'-6"	
V_3	54	#6	10'-9"	
V_4	24	#11	15'-3"	
CLASS X CONCRETE CU. YDS				72.3
REINFORCEMENT BARS LBS				10520
CREOSOTED PILES LIN. FT				925
CLASS A EXCAV. FOR STR. CU. YD				62

PIER 1 — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

74	37-24 HVB	HENRY	37	16

NOTE: SPACE MAIN REINF. IN CAP TO MISS ANCHOR BOLTS. ALL EDGES SHALL HAVE 3/4" CHAMFER EXCEPT FOOTINGS POUR STEPS MONOLITHICALLY WITH CAP.

NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER & ℄ ROWY. DO NOT COINCIDE. SEE FOOTING PLAN AND TOP PLAN.



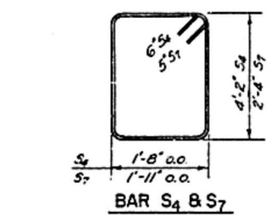
END VIEW
SCALE: 5/16" = 1'-0"

ELEVATION PIER 2
SCALE: 5/16" = 1'-0"

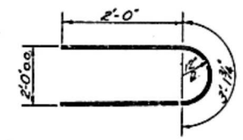
FOOTING PLAN PIER 2
SCALE: 5/16" = 1'-0"

PILE DATA

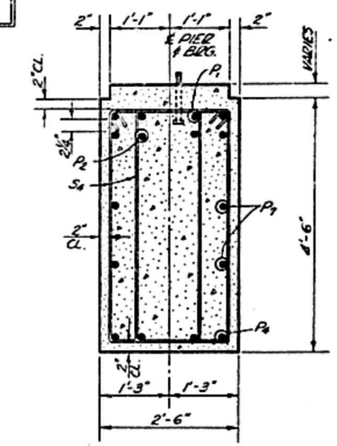
TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TONS
EST. LENGTH: 35 FT.
NO. REQUIRED: 30
TEST PILE: DRIVE ONE TIMBER TEST PILE IN VICINITY OF PIER 2



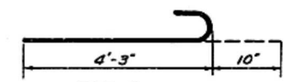
BAR S_4 & S_7



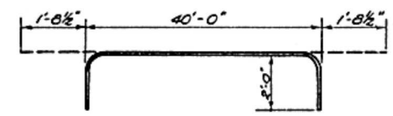
BAR U_1



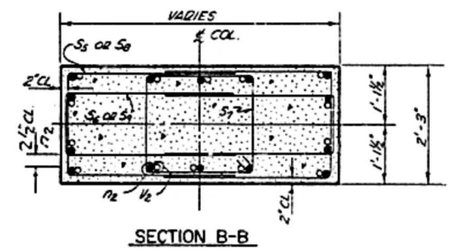
SECTION A-A



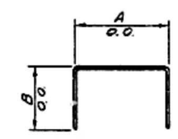
BAR n_1



BAR P_1



SECTION B-B



BAR	A	B
S_1	1'-8"	2'-0"
S_2	1'-8"	2'-6"
S_3	1'-8"	3'-0"
S_5	1'-11"	3'-7"
S_6	1'-9"	3'-7"
S_8	1'-11"	4'-1"
S_9	1'-3"	4'-1"
S_{10}	2'-2"	1'-9"
U_2	2'-0"	3'-0"

BARS
$S_1, S_2, S_3, S_5, S_6, S_8, S_9, S_{10} U_2$

BILL OF MATERIAL

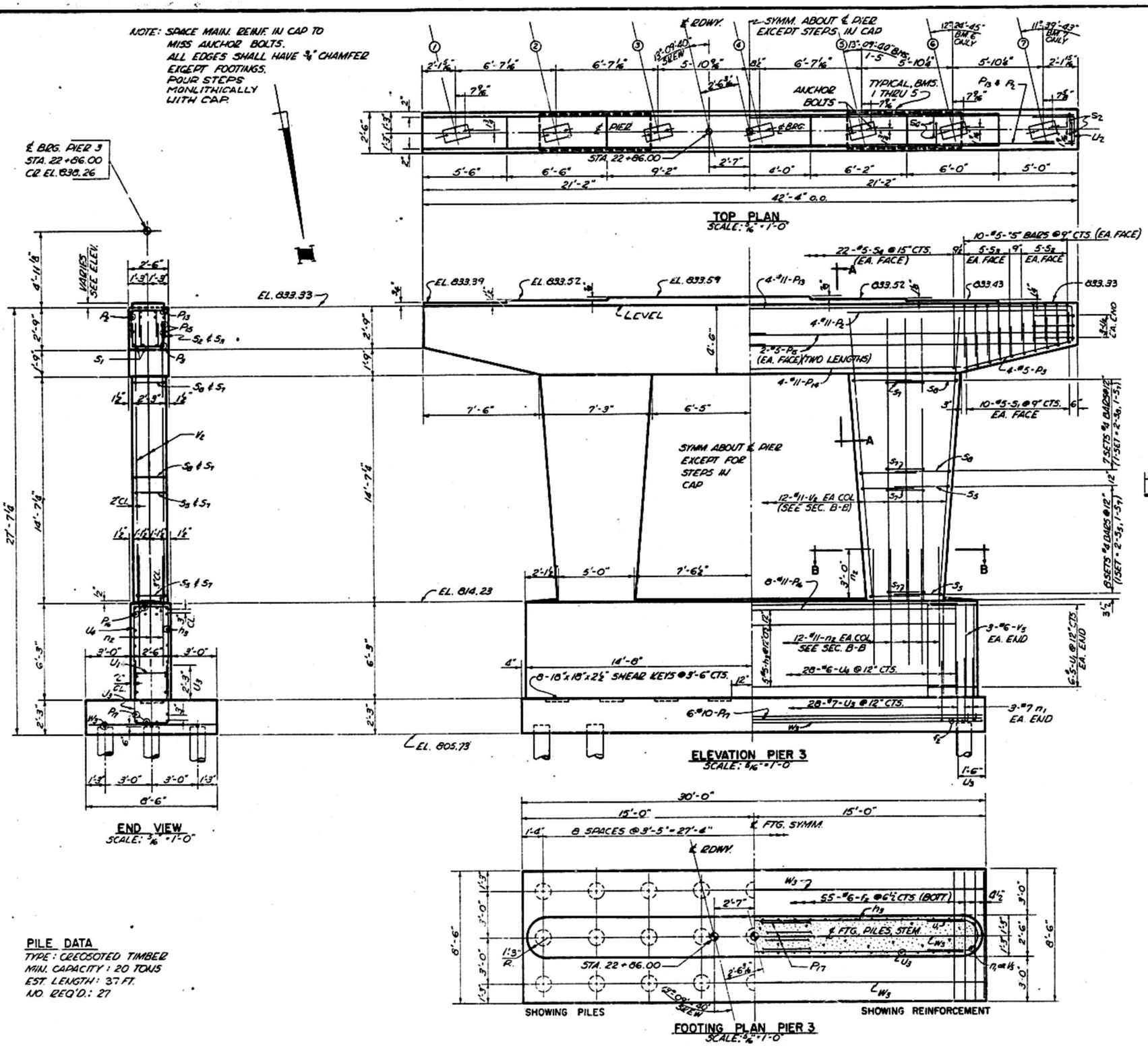
BAR	NO	SIZE	LENGTH	SHAPE
S_1	40	#5	5'-8"	U
S_2	20	#5	6'-8"	U
S_3	20	#5	8'-8"	U
S_4	42	#5	12'-8"	
S_5	32	#4	9'-1"	
S_6	32	#4	8'-5"	
S_7	30	#4	9'-4"	
S_8	28	#4	10'-1"	
S_9	28	#4	9'-5"	
S_{10}	26	#6	5'-8"	
n_1	108	#7	5'-1"	
n_2	28	#11	7'-0"	
P_1	4	#11	43'-5"	
P_2	8	#11	14'-6"	
P_3	8	#5	7'-3"	
P_4	4	#11	25'-3"	
P_5	4	#10	25'-0"	
P_6	4	#10	29'-0"	
P_7	8	#5	21'-0"	
U_1	18	#5	7'-2"	
U_2	6	#6	8'-0"	
W_1	3	#6	29'-0"	
f_1	59	#8	10'-3"	
h_1	16	#5	25'-0"	
V_1	108	#6	9'-0"	
V_2	28	#11	18'-6"	
CLASS X CONCRETE			CU. YDS	79.7
REINFORCEMENT BARS			LBS	14 240
CREOSOTED PILES			LIN. FT.	1050
TEST PILE (TIMBER)			EA.	1
CLASS A EXCAV. FOR STR.			CU. YD.	106

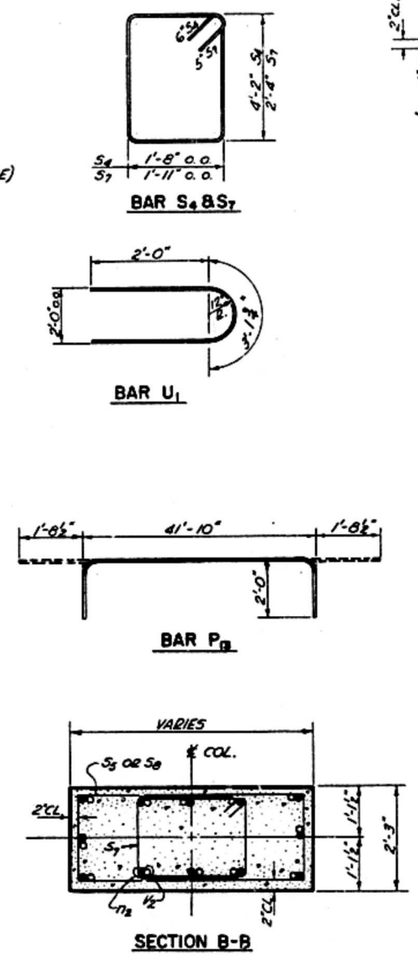
PIER 2 — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B. & Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

74	37-24 HVB	HENRY	37	17

NOTE: SPACE MAIN. REINF. IN CAP TO MISS ANCHOR BOLTS.
ALL EDGES SHALL HAVE ¾" CHAMFER EXCEPT FOOTINGS.
POUR STEPS MONLITHICALLY WITH CAP.

NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER AND ℄ RDWY. DO NOT COINCIDE. SEE FOOTING PLAN AND TOP PLAN.





BAR	A	B
S_1	1'-8"	2'-0"
S_2	1'-8"	2'-6"
S_3	1'-8"	3'-4"
S_5	1'-11"	3'-7"
S_8	1'-11"	4'-1"
U_2	2'-0"	3'-0"
U_3	2'-2"	4'-0"
U_4	2'-2"	6'-0"

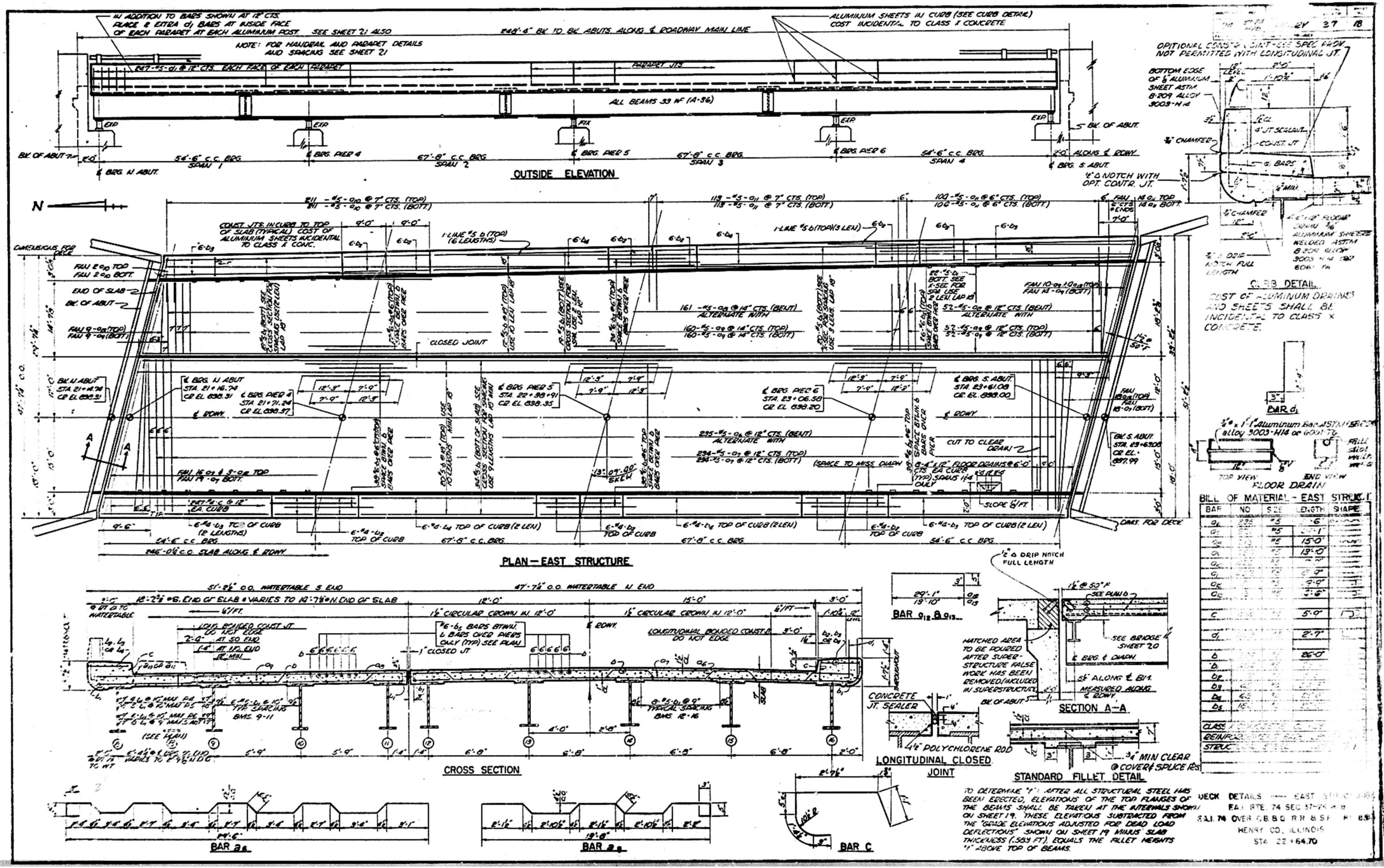
BARS

BILL OF MATERIAL

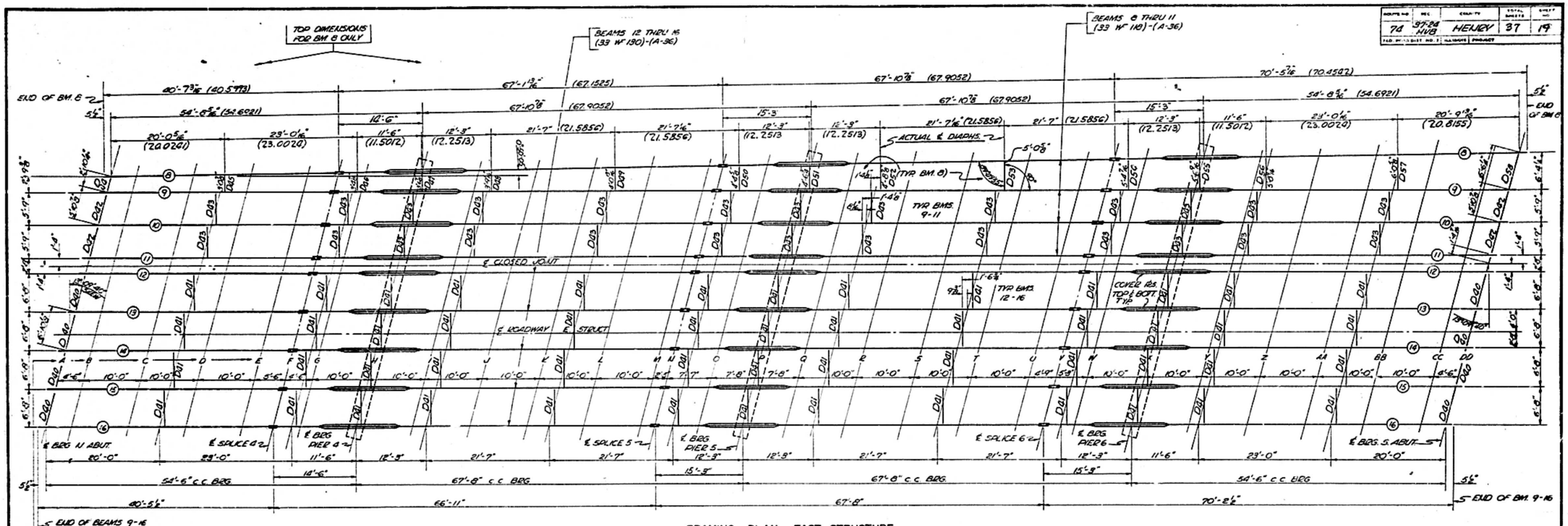
BAR	NO	SIZE	LENGTH	SHAPE
S_1	40	#5	5'-8"	
S_2	20	#5	6'-8"	
S_3	20	#5	8'-8"	
S_4	44	#4	12'-8"	
S_5	32	#4	9'-1"	
S_7	30	#4	9'-6"	
S_8	28	#4	10'-1"	
n_1	6	#7	5'-1"	
n_2	24	#11	7'-0"	
P_2	8	#11	14'-6"	
P_3	8	#5	7'-3"	
P_{13}	4	#11	45'-3"	
P_{14}	4	#11	27'-3"	
P_{15}	8	#5	22'-0"	
P_{16}	8	#11	26'-9"	
P_{17}	6	#10	29'-9"	
U_4	28	#6	14'-2"	
U_1	12	#5	7'-2"	
U_2	6	#6	8'-0"	
U_3	28	#7	10'-2"	
W_3	3	#6	29'-9"	
f_2	55	#6	8'-3"	
h_3	10	#5	26'-9"	
V_3	6	#6	6'-0"	
V_2	24	#11	18'-6"	
CLASS X CONCRETE			CU. YDS	69.4
REINFORCEMENT BARS			LBS	11600
CREOSOTED PILES			LIN. FT.	999
CLASS A EXCAV. FOR STR.			CU. YD.	55

PILE DATA
TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TONS
EST. LENGTH: 37 FT.
NO. REQ'D.: 27

PIER 3 — WEST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70


IN ADDITION TO BARS SHOWN AT 12" CTS. PLACE 2 EXTRA d1 BARS AT INSIDE FACE OF EACH PARAPET AT EACH ALUMINUM POST. SEE SHEET 21 ALSO
NOTE: FOR HANDRAIL AND PARAPET DETAILS AND SPACING SEE SHEET 21
ALUMINUM SHEETS IN CURB (SEE CURB DETAIL) COST INCIDENTAL TO CLASS X CONCRETE
248'-4" BK. TO BK. ABUTS. ALONG ℄ ROADWAY MAIN LINE
247-#5-d1 @ 12" CTS. EACH FACE OF EACH PARAPET
PARAPET J13
ALL BEAMS 33 WF (A-36)
EXP
FIX
BK. OF ABUT.
℄ BRG. N. ABUT.
54'-6" c.c. BRG. SPAN 1
℄ BRG. PIER 4
67'-8" c.c. BRG. SPAN 2
℄ BRG. PIER 5
67'-8" c.c. BRG. SPAN 3
℄ BRG. PIER 6
54'-6" c.c. BRG. SPAN 4
℄ BRG. S. ABUT.
ALONG ℄ ROWY.
OUTSIDE ELEVATION
N
COUST. JTS. IN CURB TO TOP OF SLAB (TYPICAL) COST OF ALUMINUM SHEETS INCIDENTAL TO CLASS X CONC.
1-LINE #5 b (TOP) (6 LENGTHS)
1-LINE #5 b (TOP) (3 LEN.)
211 -#5-a10 @ 7" CTS. (TOP)
211 -#5-a10 @ 7" CTS. (BOTT.)
113 -#5-a11 @ 7" CTS. (TOP)
113 -#5-a11 @ 7" CTS. (BOTT.)
100 -#5-a11 @ 6" CTS. (TOP)
100 -#5-a11 @ 6" CTS. (BOTT.)
EXIT 2 a10 TOP
EXIT 2 a10 BOTT.
END OF SLAB
BK. OF ABUT
EXIT 9 a9 (TOP)
EXIT 9 a9 (BOTT.)
CLOSED JOINT
161 -#5-a8 @ 14" CTS. (BENT) ALTERNATE WITH
160-#5-a9 @ 14" CTS. (TOP)
160-#5-a9 @ 14" CTS. (BOTT.)
57-#5-a8 @ 12" CTS. (BENT) ALTERNATE WITH
57-#5-a9 @ 12" CTS. (TOP)
57-#5-a9 @ 12" CTS. (BOTT.)
℄ BRG. N. ABUT STA. 21+16.74 CP EL. 898.31
℄ BRG. PIER 4 STA. 21+71.24 CP EL. 898.37
℄ BRG. PIER 5 STA. 22+98+91 CP EL. 898.35
℄ BRG. PIER 6 STA. 23+06.58 CP EL. 898.20
℄ BRG. S. ABUT. STA. 23+61.08 CP. EL. 899.00
℄ ROWY.
235-#5-a8 @ 12" CTS. (BENT) ALTERNATE WITH
234-#5-a9 @ 12" CTS. (TOP)
234-#5-a9 @ 12" CTS. (BOTT.)
(SPACE TO MISS DIADH.)
CUT TO CLEAR DRAIN
BK. S. ABUT. STA. 23+63.08 CP. EL. 897.99
SLOPE 1/8" FT.
DIMS. FOR DECK
PLAN — EAST STRUCTURE
51'-2 1/2" O.O. WATERTABLE S. END
47'-7 1/2" O.O. WATERTABLE N. END OF SLAB
12'-0"
15'-0"
1 1/2" CIRCULAR CROWN IN 12'-0"
LONGITUDINAL BOUDED CONST. JT. DO NOT EDGE
1" CLOSED JT.
CROSS SECTION
BAR a8
BAR a9
BAR C
BAR a12 & a13
CONCRETE JT. SEALER
1/4" POLYCHLORENE ROD
LONGITUDINAL CLOSED JOINT
SEE BRIDGE SHEET 20
℄ BRG. & DIADH.
SECTION A-A
3/4" MIN CLEAR @ COVER & SPLICE RS
STANDARD FILLET DETAIL
TO DETERMINE "Y": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE INTERVALS SHOWN ON SHEET 19. THESE ELEVATIONS SUBTRACTED FROM THE "GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" SHOWN ON SHEET 19 MINUS SLAB THICKNESS (.583 FT.) EQUALS THE FILLET HEIGHTS "Y" ABOVE TOP OF BEAMS.
OPTIONAL CONST. JOINT - SEE SPEC. PROV. NOT PERMITTED WITH LONGITUDINAL JT.
BOTTOM EDGE OF 1/8" ALUMINUM SHEET ASTM B-209 ALLOY 3003-H14
CONST. JT.
CHAMFER
CURB DETAIL
COST OF ALUMINUM DRAINS AND SHEETS SHALL BE INCIDENTAL TO CLASS X CONCRETE.
BAR d1
TOP VIEW
END VIEW
FLOOR DRAIN
BILL OF MATERIAL - EAST STRUCT.
BAR
NO
SIZE
LENGTH
SHAPE
CLASS
REINF.
STRUC.
DECK DETAILS — EAST STRUCTURE
FAI RTE. 74 SEC. 37-7R-1 & B
FAI 74 OVER C.B.Q. R.R. & S.F.
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	97-24 HVB	HENRY	37	19



FRAMING PLAN – EAST STRUCTURE

NOTE: ALL INTERMEDIATE DIAPHRAGMS AT RT ANGLES TO ℄ ROADWAY. DIMENSIONS SHOWN AT DIAPHS BETWEEN BMS 8 & 9 ARE C. TO C. BEAMS MEASURED ALONG ℄ DIAPHS.

GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS

LOCATION	BM. 8	BM. 9	BM. 10	BM. 11	BM. 12	BM. 13	BM. 14	BM. 15	BM. 16
A	837.87	837.93	838.06	838.16	838.21	838.30	838.30	838.23	838.10
B	837.89	837.94	838.06	838.18	838.23	838.31	838.32	838.24	838.12
C	837.92	837.97	838.09	838.20	838.25	838.34	838.35	838.27	838.15
D	837.93	837.98	838.10	838.22	838.27	838.36	838.36	838.29	838.17
E	837.93	837.98	838.11	838.22	838.27	838.36	838.36	838.29	838.17
F	837.92	837.99	838.11	838.22	838.27	838.36	838.36	838.29	838.17
G	837.92	837.99	838.11	838.22	838.27	838.36	838.37	838.30	838.17
H	837.91	837.99	838.10	838.22	838.27	838.36	838.37	838.30	838.16
I	837.92	837.99	838.12	838.23	838.28	838.37	838.38	838.31	838.18
J	837.94	838.00	838.13	838.24	838.29	838.38	838.39	838.32	838.20
K	837.94	838.01	838.13	838.24	838.29	838.39	838.40	838.33	838.21
L	837.93	838.00	838.12	838.24	838.29	838.38	838.39	838.32	838.21
M	837.91	837.98	838.11	838.22	838.27	838.37	838.38	838.31	838.19
N	837.90	837.98	838.10	838.22	838.27	838.36	838.37	838.30	838.18
O	837.87	837.96	838.08	838.20	838.26	838.34	838.35	838.29	838.16
P	837.85	837.95	838.07	838.19	838.24	838.33	838.34	838.27	838.14
Q	837.85	837.94	838.06	838.18	838.24	838.32	838.33	838.27	838.14
R	837.85	837.94	838.06	838.18	838.23	838.32	838.33	838.27	838.15
S	837.84	837.93	838.06	838.16	838.22	838.31	838.32	838.25	838.14
T	837.81	837.90	838.03	838.14	838.19	838.29	838.30	838.24	838.12
U	837.77	837.87	838.00	838.11	838.17	838.26	838.27	838.21	838.09
V	837.74	837.85	837.97	838.09	838.15	838.24	838.25	838.18	838.06
W	837.72	837.83	837.96	838.08	838.13	838.22	838.23	838.17	838.05
X	837.68	837.79	837.92	838.04	838.10	838.19	838.20	838.13	838.01
Y	837.65	837.77	837.89	838.01	838.07	838.16	838.17	838.11	837.99
Z	837.62	837.74	837.87	837.99	838.04	838.13	838.15	838.08	837.97
AA	837.60	837.71	837.84	837.95	838.01	838.11	838.12	838.06	837.94
BB	837.55	837.67	837.79	837.91	837.97	838.06	838.08	838.01	837.90
CC	837.48	837.61	837.74	837.86	837.92	838.01	838.03	837.96	837.84
DD	837.45	837.59	837.71	837.84	837.89	837.98	838.00	837.90	837.81

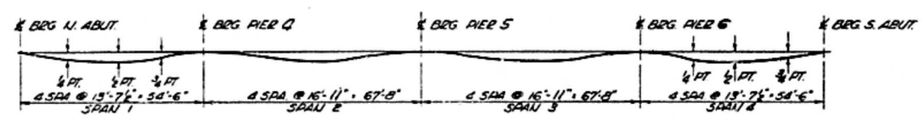
TABLE OF DEAD LOAD DEFLECTIONS

LOCATION		BM. 8	BM. 9	BM. 10	BM. 11	BM. 12	BM. 13	BM. 14	BM. 15	BM. 16
1/4 PT.	SPAN 1	11/32"	3/16"	7/32"	5/32"	5/32"	7/32"	7/32"	7/32"	11/32"
1/2 PT.	SPAN 1	13/32"	3/16"	1/4"	3/16"	3/16"	1/4"	1/4"	1/4"	3/8"
3/4 PT.	SPAN 1	5/32"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	5/32"
1/4 PT.	SPAN 2	5/16"	5/32"	3/16"	5/32"	5/32"	3/16"	3/16"	3/16"	5/16"
1/2 PT.	SPAN 2	17/32"	9/32"	3/16"	1/4"	1/4"	3/16"	3/16"	3/16"	1/2"
3/4 PT.	SPAN 2	5/16"	5/32"	3/16"	5/32"	5/32"	3/16"	3/16"	3/16"	9/32"
1/4 PT.	SPAN 3	5/16"	3/16"	3/16"	5/32"	5/32"	3/16"	3/16"	3/16"	9/32"
1/2 PT.	SPAN 3	17/32"	3/16"	3/16"	1/4"	1/4"	3/16"	3/16"	3/16"	1/2"
3/4 PT.	SPAN 3	11/32"	3/16"	3/16"	5/32"	5/32"	3/16"	3/16"	3/16"	5/16"
1/4 PT.	SPAN 4	3/16"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	5/32"
1/2 PT.	SPAN 4	13/32"	1/4"	1/4"	3/16"	3/16"	1/4"	1/4"	1/4"	3/8"
3/4 PT.	SPAN 4	3/8"	7/32"	7/32"	5/32"	5/32"	7/32"	7/32"	7/32"	11/32"

* ELEVATIONS OF TOP OF WF BEAMS

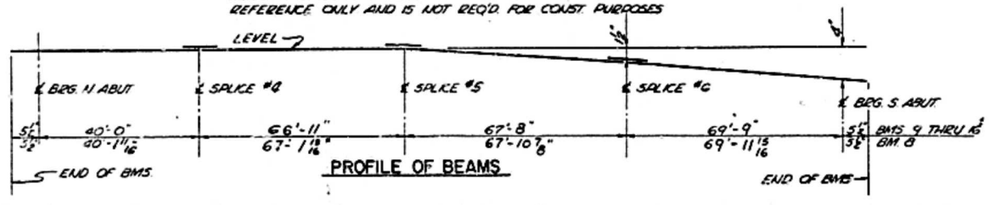
LOCATION	BM. 8	BM. 9	BM. 10	BM. 11	BM. 12	BM. 13	BM. 14	BM. 15	BM. 16
℄ BRG. N. ABUT.	837.21	837.32	837.44	837.56	837.61	837.70	837.70	837.64	837.50
℄ SPLICE 4	837.21	837.32	837.44	837.56	837.61	837.70	837.70	837.64	837.50
℄ PIER 4	837.21	837.32	837.44	837.56	837.61	837.70	837.70	837.64	837.50
℄ SPLICE 5	837.21	837.32	837.44	837.56	837.61	837.70	837.70	837.64	837.50
℄ PIER 5	837.18	837.29	837.41	837.53	837.59	837.67	837.67	837.61	837.47
℄ SPLICE 6	837.08	837.19	837.31	837.43	837.48	837.57	837.57	837.51	837.37
℄ PIER 6	837.03	837.14	837.26	837.38	837.43	837.52	837.52	837.46	837.32
℄ BRG. S. ABUT.	836.97	836.98	837.10	837.22	837.27	837.36	837.36	837.30	837.16

* ELEVATIONS REFER TO TOP OF TOP FLANGES OF ACTUAL ROLLED BEAMS. DOES NOT INCLUDE SPLICE PLATE OR COVER PLATES. THESE ELEVATIONS ARE THEORETICAL AND ARE TO BE USED FOR FABRICATION OF STRUCTURAL STEEL AND DO NOT INCLUDE ANY ALLOWANCE FOR DEFLECTION.



DEAD LOAD DEFLECTION DIAGRAM

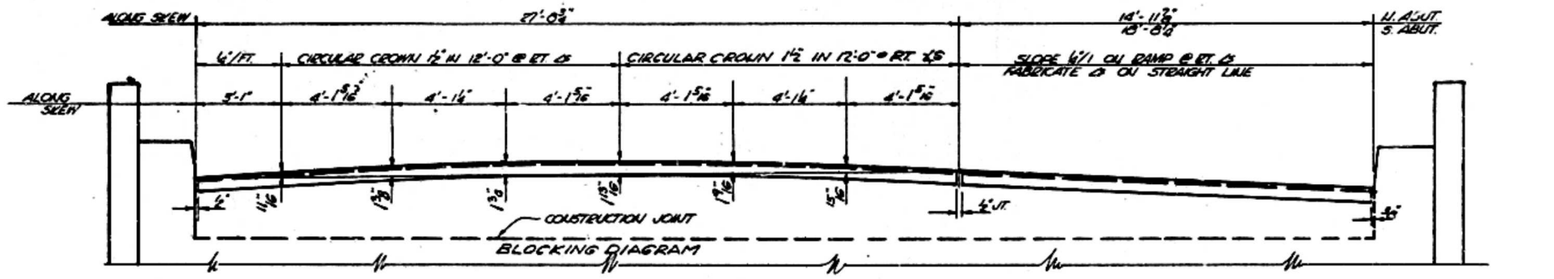
WEIGHT OF STRUCTURAL STEEL NOT INCLUDED. DIAGRAM FOR REFERENCE ONLY AND IS NOT REQ'D. FOR CONST. PURPOSES



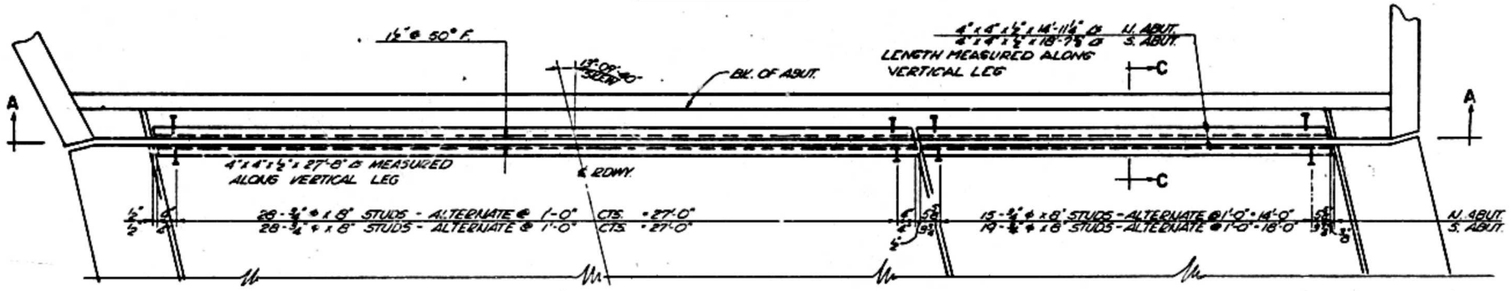
PROFILE OF BEAMS

STRUCTURAL STEEL — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.B.Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

74	37-24 HVB	HENRY	37	20

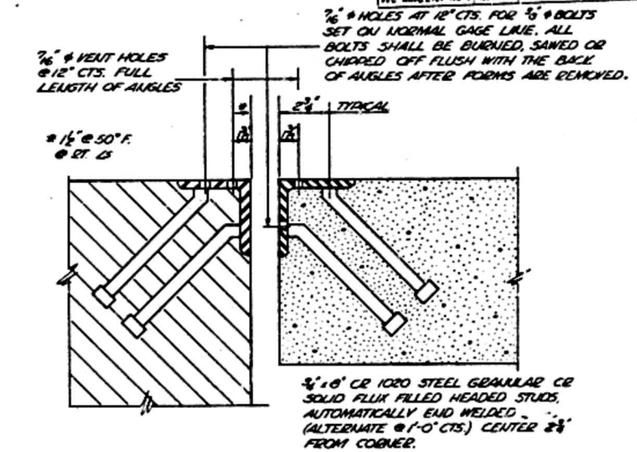


SECTION A-A



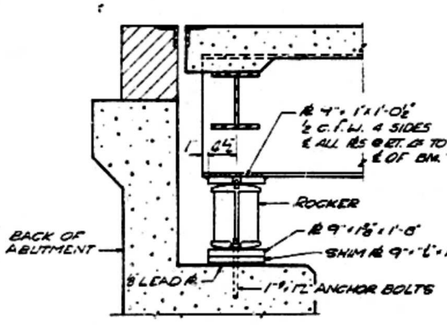
PLAN OF EXPANSION GUARD — EAST STRUCTURE

(SHOWN AT N. ABUT. - S. ABUT. SIMILAR)

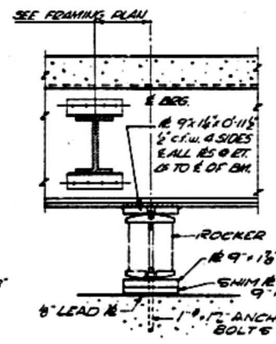


SECTION C-C

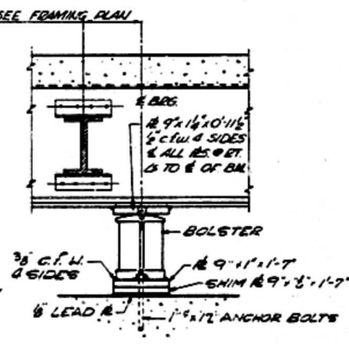
NOTE: ROADWAY EXPANSION GUARD SHALL BE FABRICATED TO FIT THE ROADWAY. GUARD SHALL BE ASSEMBLED IN PROPER POSITION IN SHOP FOR INSPECTION. ALL EXPOSED SURFACES SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED. EST. WEIGHT OF STRUCTURAL STEEL REQUIRED FOR EXPANSION GUARDS = 2460 LBS. THE WEIGHTS OF THE ANGLES AND STUDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL.



SECTION AT ABUTMENTS

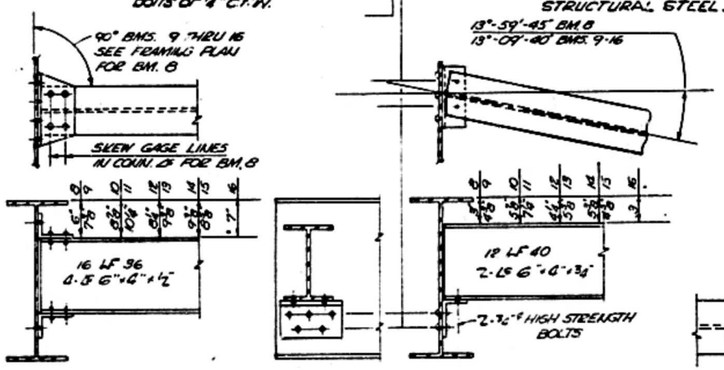


PIER 4 & 6



PIER 5

In lieu of shop rivets, angles may be attached in the shop with 3/4" high strength bolts or 1/4" C.F.W.



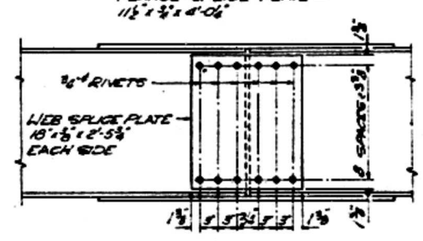
ALL INTERMEDIATE DIAPHRAGMS

ALL END DIAPHRAGMS

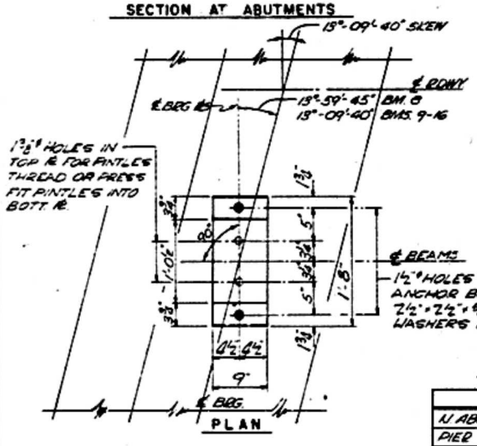
Bearings and Anchorage

The location of the anchor bolts and vertical alignment of the expansion bearings shall be adjusted to the temperature at the time of erection. See Art. 5.4.9(F)

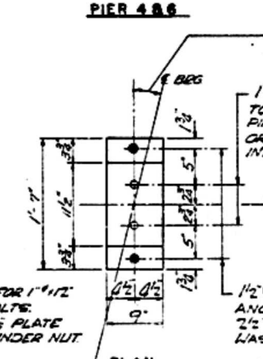
Anchor Bolts shall be grouted into drilled holes after bearings are in place, or bolts at fixed pier may be built into the masonry



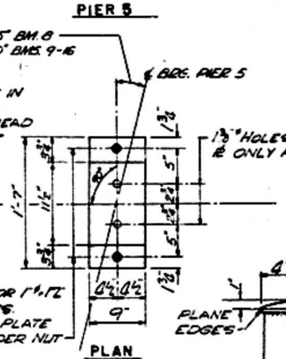
DETAIL OF SPLICE



PLAN



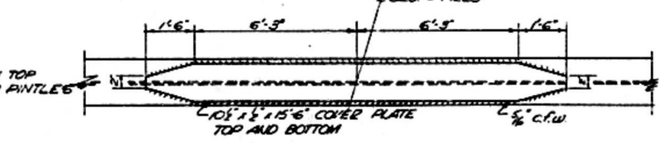
PLAN



PLAN

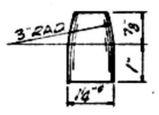
TABLE OF "U" DIMENSIONS

	8	9	10	11	12	13	14	15	16
N. ABUT.					3/8"				
PIER 4					3/8"				
PIER 5					3/8"				
PIER 6					3/8"				
S. ABUT.					3/8"				

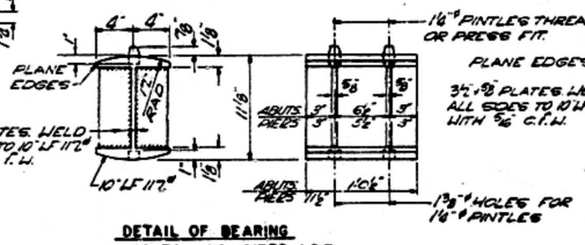


DETAIL OF COVER PLATES

(TYPICAL FOR ALL BMS. AT PIERS 4, 5, & 6)

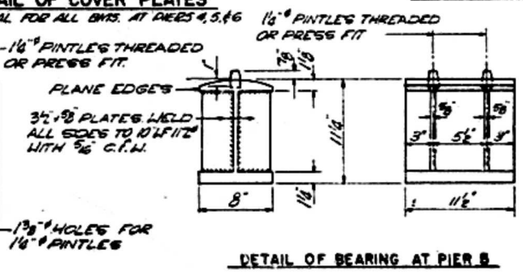


DETAIL OF PINTLE



DETAIL OF BEARING

ABUTS. AND PIERS 1 & 3



DETAIL OF BEARING AT PIER 8

STRUCTURAL STEEL DETAILS — EAST STRUCTURE

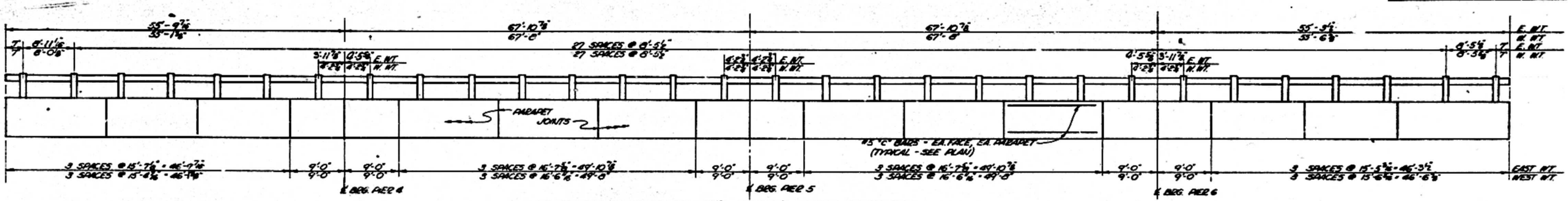
F.A.I. RTE. 74 SEC. 37-24 HVB

F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83

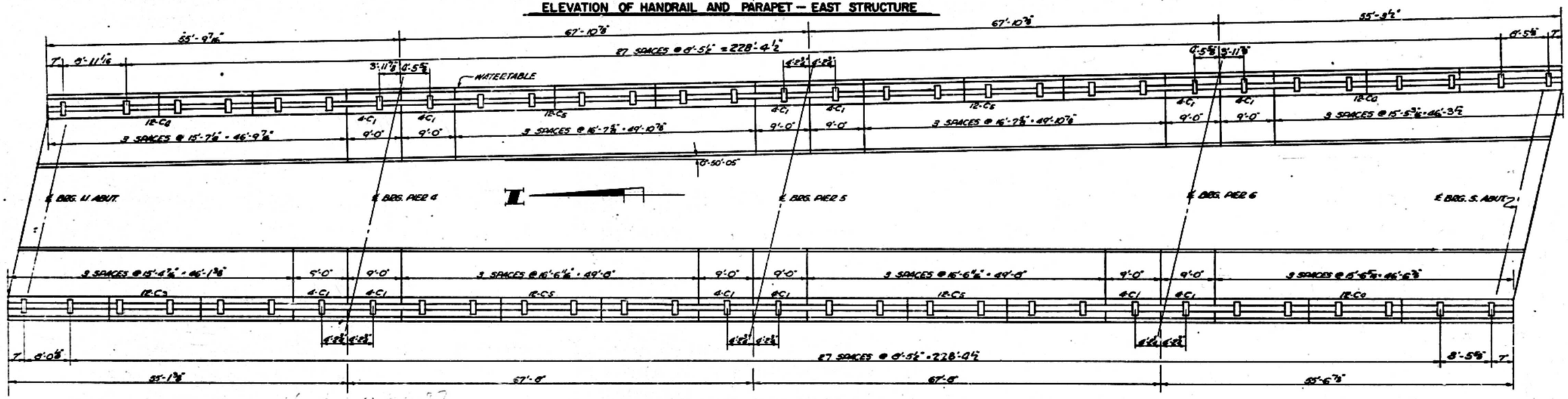
HENRY CO., ILLINOIS

STA. 22+64.70

74	37-24 HVB	HENRY	37	21

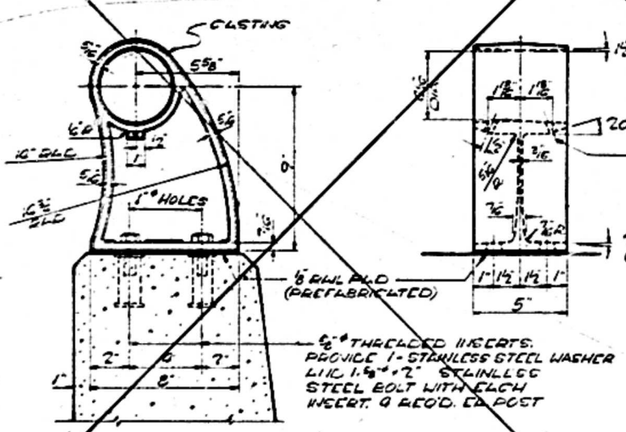


ELEVATION OF HANDRAIL AND PARAPET — EAST STRUCTURE

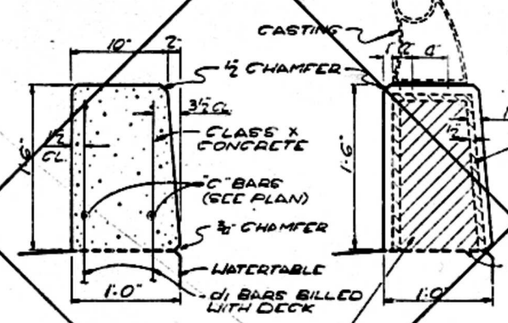


For Details See Sheet #BIA of P.37

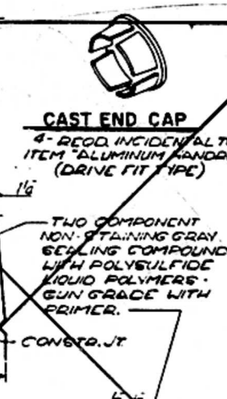
PLAN OF HANDRAIL AND PARAPET — EAST STRUCTURE



RAIL POST DETAILS



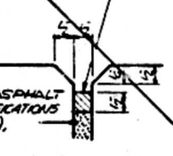
DETAIL OF PARAPET



DETAIL OF PARAPET

CAST END CAP

4 - REQ'D. INCIDENTAL TO ITEM "ALUMINUM HANDRAIL" (DRIVE FIT TYPE)



JOINT DETAIL

GENERAL NOTES.

ALL POSTS SHALL BE PLACED NORMAL TO PARAPET. ALL POSTS SHALL BE OF ALUMINUM CONFORMING TO A.S.T.M. SPECIFICATION B-108 ALLOY 56-T08-T6. ALL RAIL TUBING SHALL BE OF ALUM. CONFORMING TO A.S.T.M. SPECIFICATION B-235 ALLOY 6061 OR 6062-T6.

RAIL TUBING MAY EXTEND A MAX OF 3 PANEL LENGTHS FOR MATERIAL COMPOSITION OF PREFABRICATED PAD SEE ARTICLE 56.9(A) (BEARINGS & ANCHORAGE) OF THE STANDARD SPECIFICATIONS.

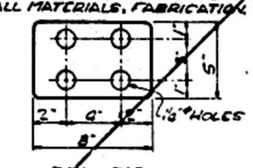
SET SCREWS SHALL BE OF ALUMINUM CONFORMING TO A.S.T.M. SPECIFICATION B-211 ALLOY 2024-T4.

ALUMINUM HANDRAIL SHALL BE MEASURED IN LIN. FT. THE LENGTH PAID FOR SHALL BE THE OVERALL LENGTH ALONG THE TOP LONGITUDINAL RAILING MEMBER THROUGH ALL POSTS AND CAPS.

ALUMINUM HANDRAIL WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LIN. FT. FOR ALUMINUM HANDRAIL, MEASURED AS SPECIFIED, WHICH PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIALS, FABRICATION, TRANSPORTATION & ERECTION.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
C_1	48	#5	8'-9"	—
C_3	12	#5	15'-0"	—
C_4	36	#5	8'-3"	—
C_5	48	#5	16'-4"	—
CLASS X CONCRETE CU YDS				25.1
REINFORCEMENT BARS LBS				2020
ALUMINUM HANDRAIL LIN. FT.				493



RAIL PAD
PROVIDE 1 PER POST

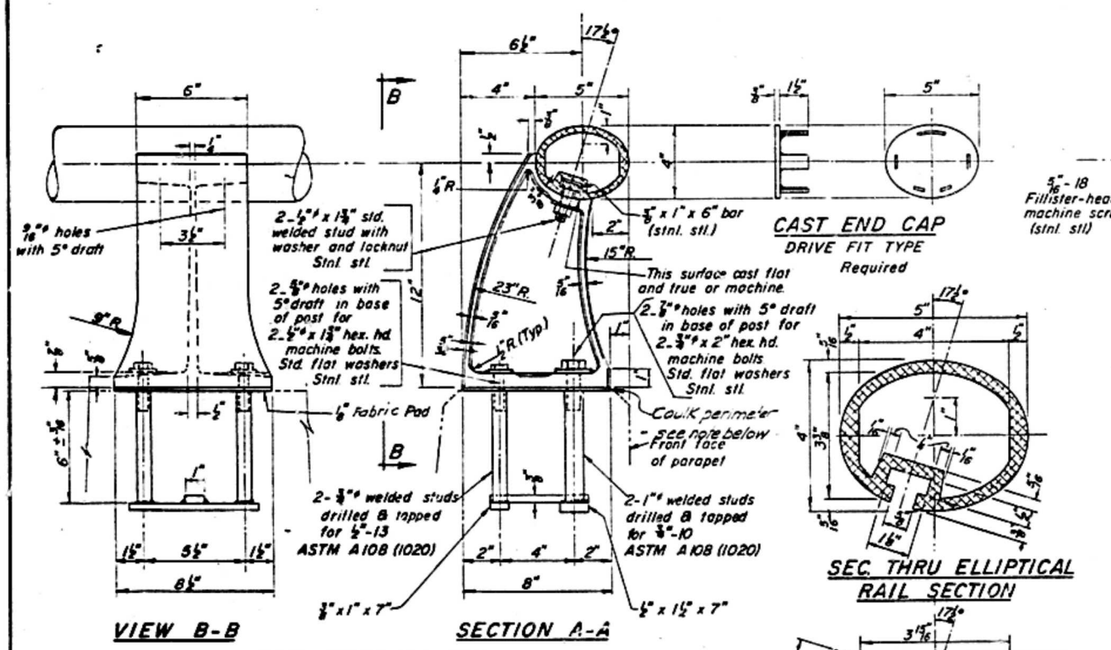
EAST STRUCTURE
HANDRAIL & PARAPET DETAILS
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.L. RT. 83
HENRY CO., ILLINOIS
STA. 22 + 64.70

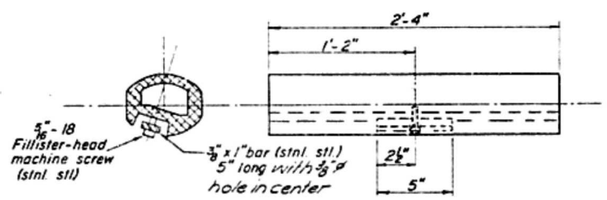
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	37-24 HVB	HENRY	37	21A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO.
SHEETS

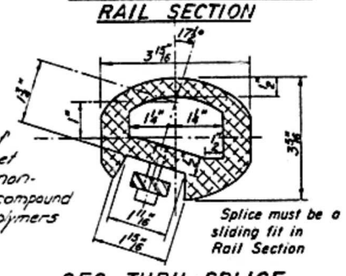
For Parapet Joint Spacing and Handrail Post Spacing See Sheet #21 of 37





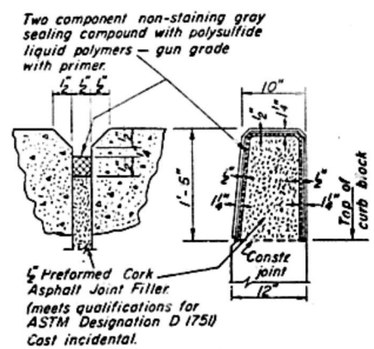
RAIL SPLICE

SEC. THRU ELLIPTICAL RAIL SECTION

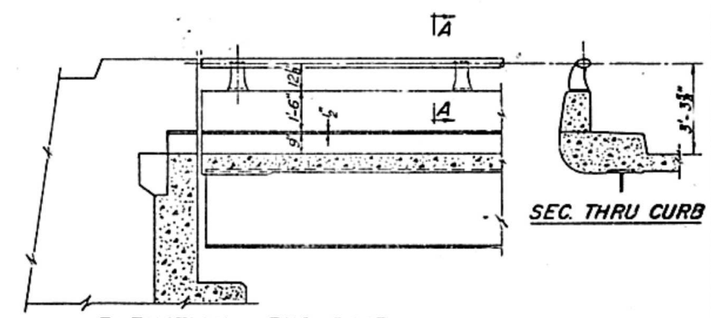


SEC. THRU SPLICE

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



PARAPET JOINT DETAIL



ELEVATION — END POST

SEC. THRU CURB

NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post— Alloy 344-T4.
Stainless Steel Welded Stud Bolts, Washers, and Locknuts.
Fabric Bearing Pad.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

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

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

Provide 1-⅛ and 2-⅛ Aluminum Shims for 25 % of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shall be shimmed.

BILL OF MATERIAL

Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	493

ALUMINUM HANDRAIL

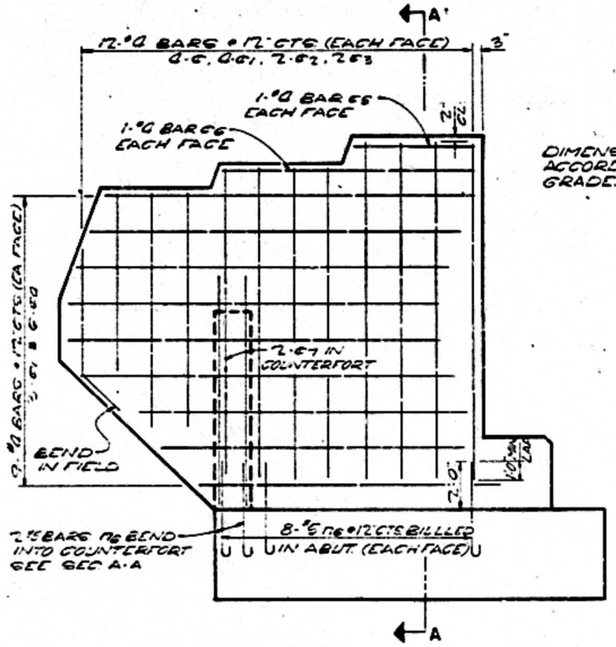
EAST STRUCTURE
F.A.I. 74 SEC 37-24-HVB
HENRY COUNTY
STA 22+64.70

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

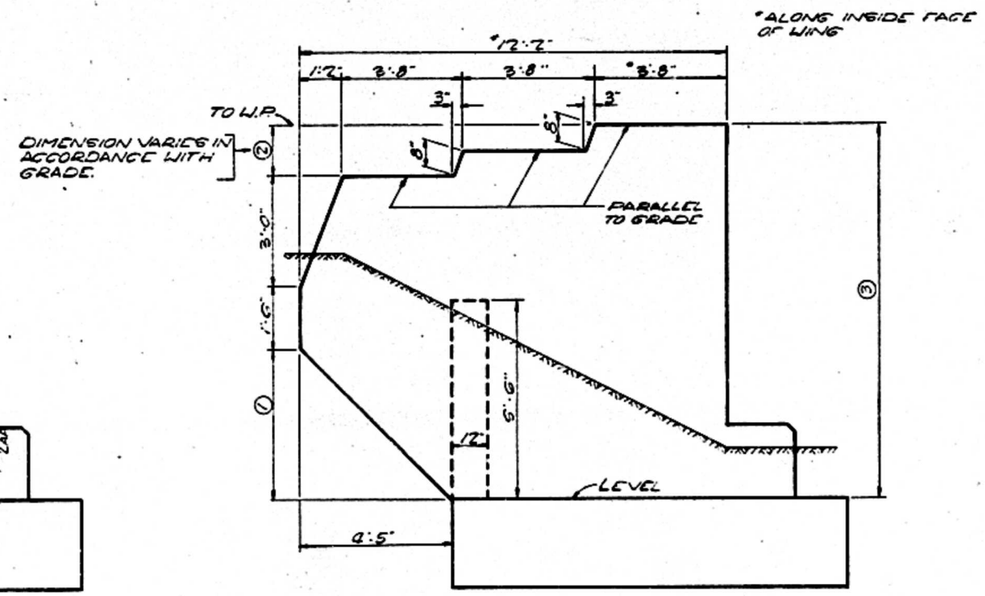
April 12 1965
EXAMINED Carl E. Thummel — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Alton — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

R-17 Dwn 5-28-64

74	37-24 HVB	HENRY	37	22



ELEVATION

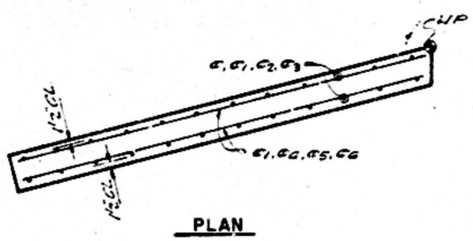


ELEVATION

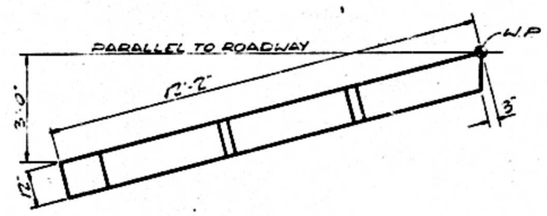
TABLE FOR END POST DIMENSIONS

END POST	DIM. ①	②	③	CLASS X CONC. CU. YDS.
E	3'-11⅝"	1'-7"	10'-0⅝"	3.94
F	4'-2½"	1'-7"	10'-3½"	3.94
G	3'-10⅝"	1'-7⅛"	9'-11⅝"	3.94
H	4'-2½"	1'-7⅛"	10'-4"	3.94

SEE ABUTMENT SHEETS FOR END POST DESIGNATION



PLAN



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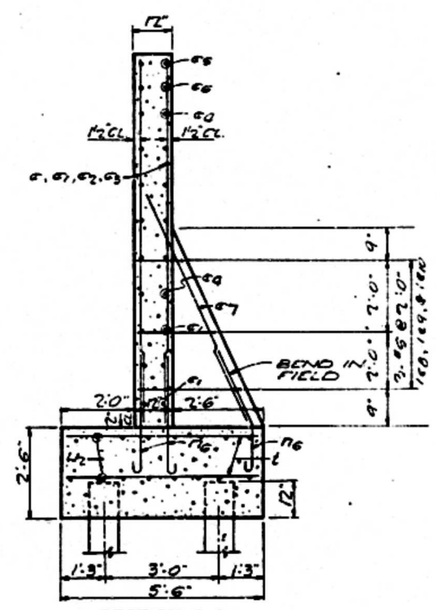
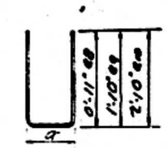


SECTION A-A



BARS #8, #9, #10

4 END POSTS

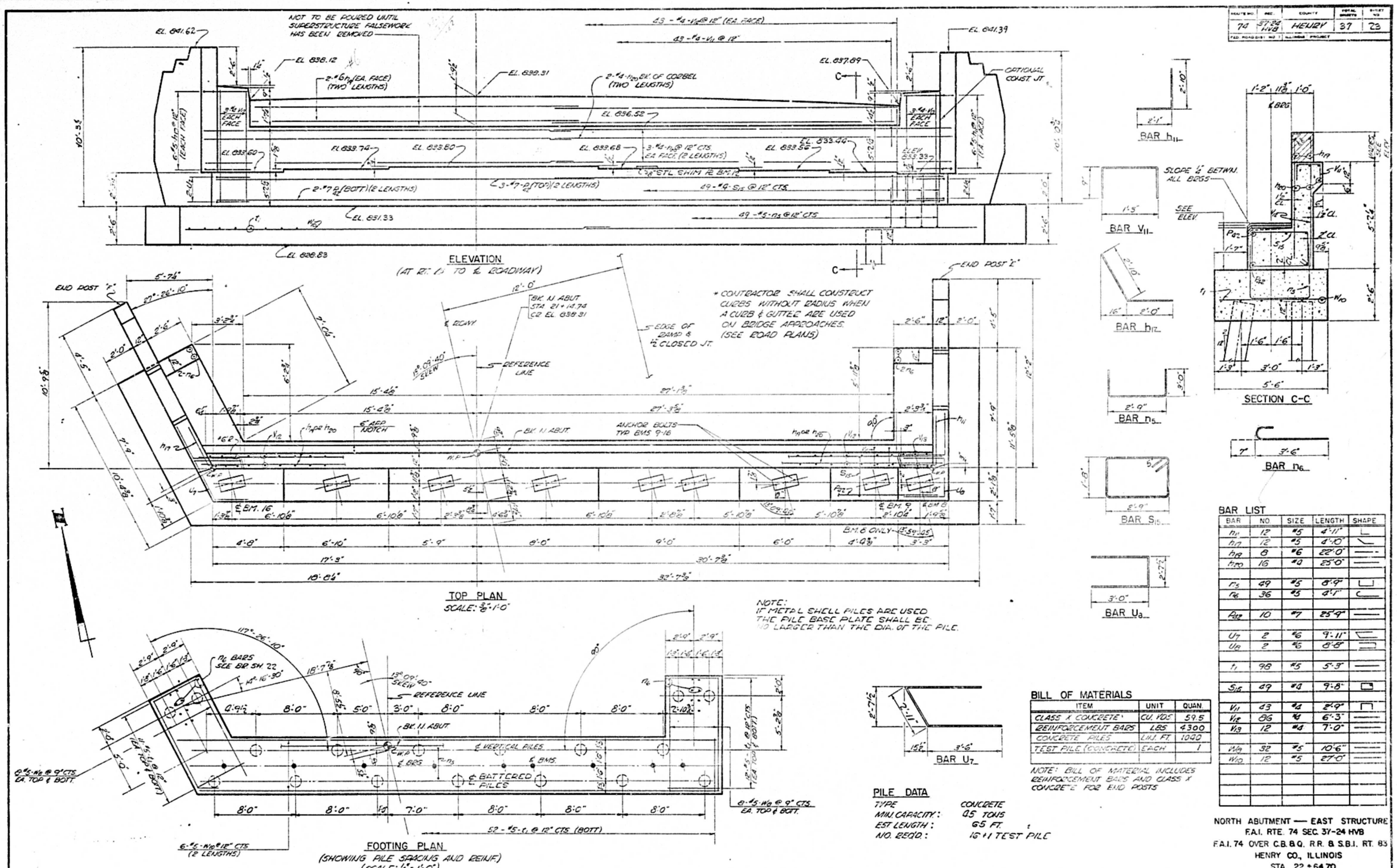
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
G	32	#6	9'-3"	—
G1	56	#6	8'-6"	—
G2	16	#6	6'-6"	—
G3	16	#6	6'-0"	—
G4	48	#6	10'-6"	—
G5	8	#6	3'-6"	—
G6	8	#6	7'-0"	—
G7	8	#6	7'-0"	—
G8	4	#6	7'-7"	U
G9	4	#5	6'-6"	U
G10	4	#5	6'-6"	U
CLASS X CONCRETE CU. YD.				15.8 *
REINFORCEMENT BARS LBS.				1150 *

* THESE QUANTITIES INCLUDED WITH TOTALS SHOWN ON ABUT. SHEETS

END POST DETAILS — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	23
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



NOTE:
IF METAL SHELL PILES ARE USED THE PILE BASE PLATE SHALL BE NO LARGER THAN THE DIA. OF THE PILE.

BILL OF MATERIALS

ITEM	UNIT	QUAN.
CLASS X CONCRETE	CU. YDS.	59.5
REINFORCEMENT BARS	LBS	4300
CONCRETE PILES	LIN. FT.	1040
TEST PILE (CONCRETE)	EACH	1

NOTE: BILL OF MATERIAL INCLUDES REINFORCEMENT BARS AND CLASS X CONCRETE FOR END POSTS

PILE DATA

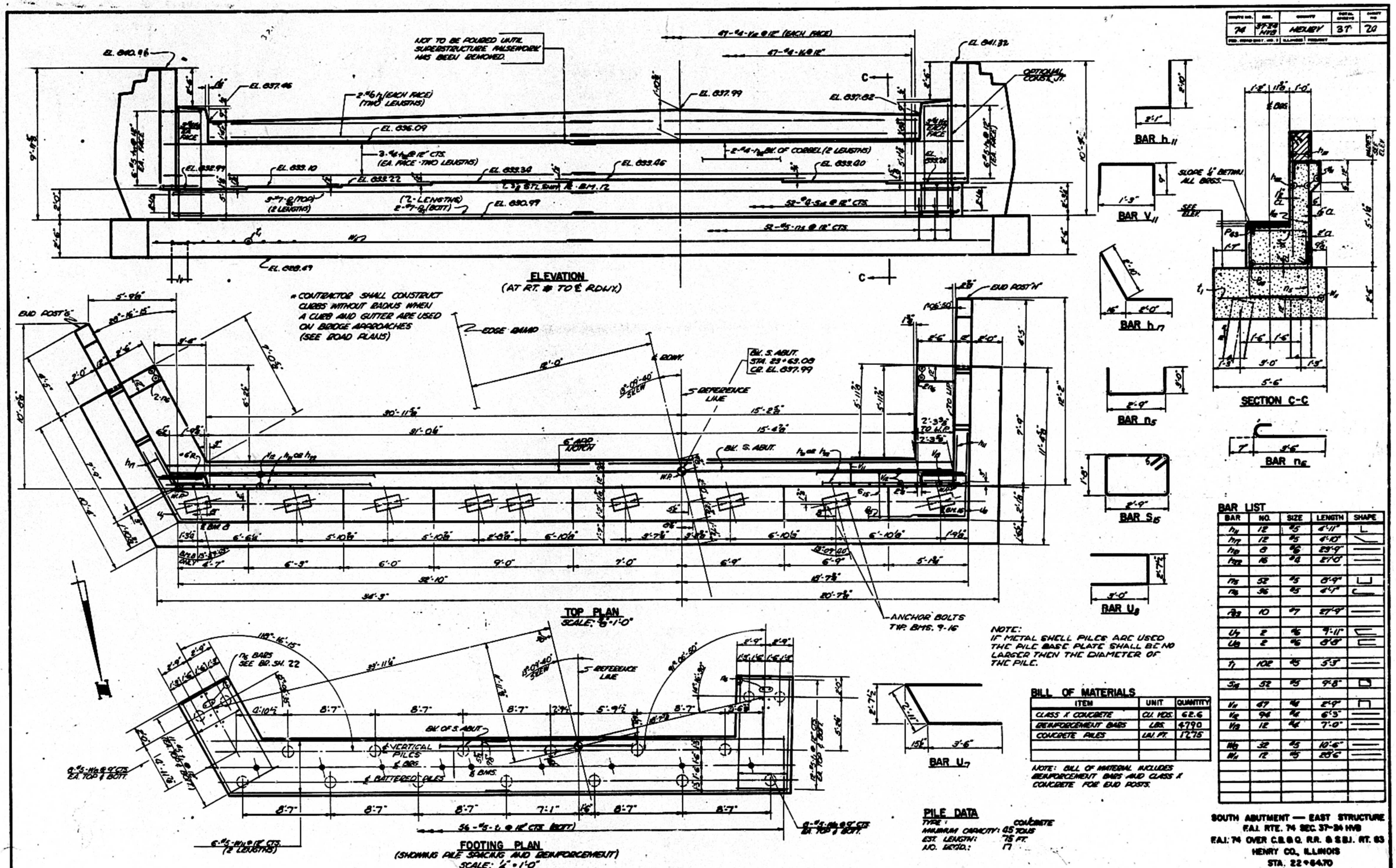
TYPE	CONCRETE
MIN. CAPACITY:	95 TONS
EST. LENGTH:	65 FT.
NO. REQ'D:	16 + 1 TEST PILE

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
h11	12	#5	4'-11"	
h12	12	#5	4'-10"	
h19	8	#6	22'-0"	
h20	16	#9	25'-0"	
n5	49	#5	8'-9"	
n6	36	#5	8'-1"	
P22	10	#7	25'-9"	
U7	2	#6	9'-11"	
U8	2	#6	8'-8"	
t1	98	#5	5'-3"	
S15	49	#4	9'-8"	
V11	43	#4	2'-9"	
V12	86	#4	6'-3"	
V13	12	#4	7'-0"	
W9	32	#5	10'-6"	
W10	12	#5	27'-0"	

NORTH ABUTMENT — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

SHEET NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	20
FED. ROAD DIST. NO. 3	ILLINOIS	PROJECT		



NOTE:
IF METAL SHELL PILES ARE USED THE PILE BASE PLATE SHALL BE NO LARGER THEN THE DIAMETER OF THE PILE.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU. YDS.	62.6
REINFORCEMENT BARS	LBS.	4790
CONCRETE PILES	LIN. FT.	1275

NOTE: BILL OF MATERIAL INCLUDES REINFORCEMENT BARS AND CLASS X CONCRETE FOR END POSTS.

PILE DATA

TYPE: CONCRETE
MAXIMUM CAPACITY: 65 TONS
EST. LENGTH: 75 FT.
NO. REQ'D.: 17

BAR LIST

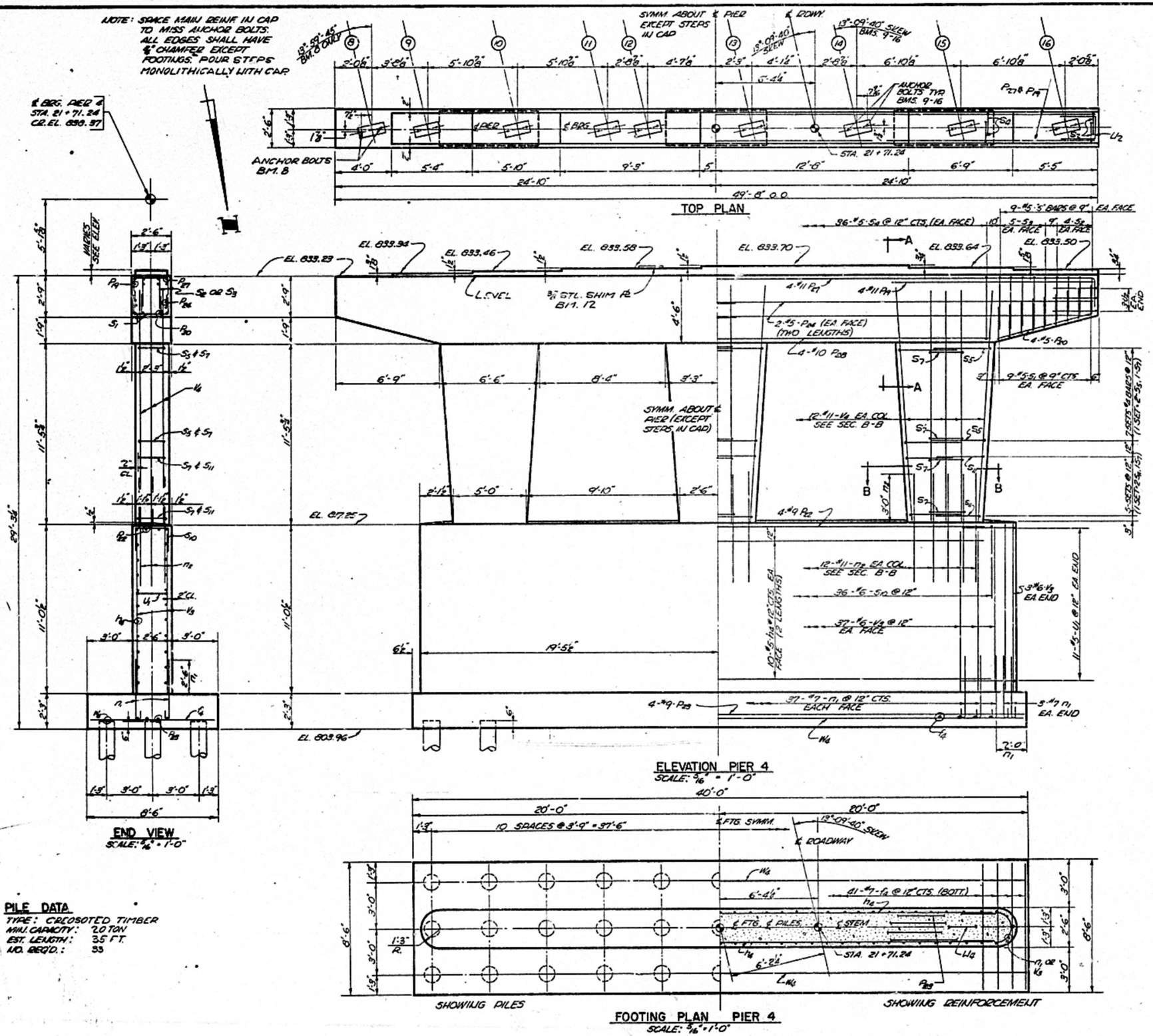
BAR	NO.	SIZE	LENGTH	SHAPE
h11	12	#5	4'-11"	L
h17	12	#5	4'-10"	
h19	8	#6	23'-9"	
h22	16	#8	27'-0"	
n5	52	#5	8'-9"	U
n6	36	#5	4'-7"	U
n23	10	#7	27'-9"	
U7	2	#6	9'-11"	
U8	2	#6	8'-8"	
t1	102	#5	5'-3"	
S15	52	#5	9'-8"	
V11	47	#4	2'-9"	
V12	94	#4	6'-3"	
V13	12	#4	7'-0"	
W9	32	#5	10'-6"	
W11	12	#5	23'-6"	

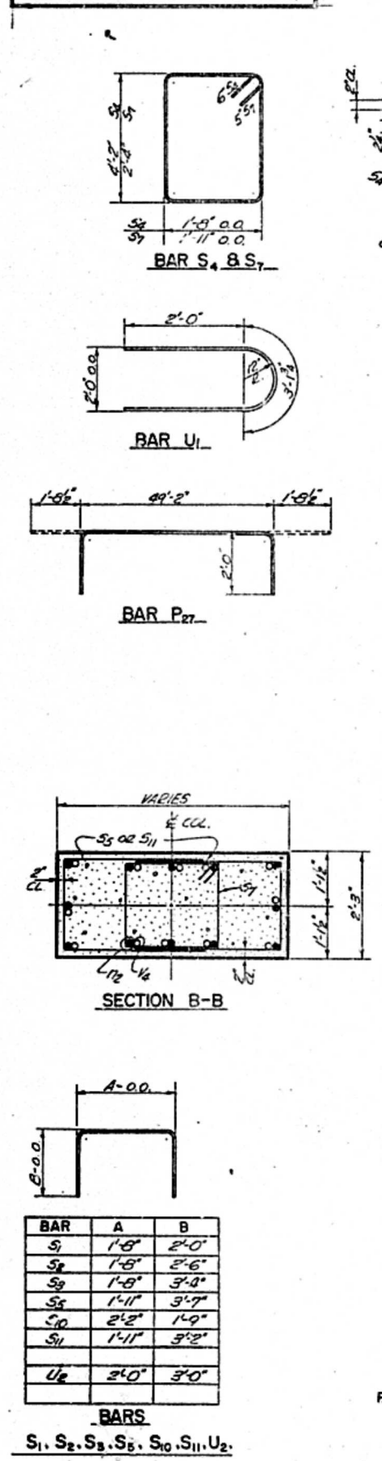
SOUTH ABUTMENT — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
74	37-24 HVB	HENRY	37	25
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

NOTE: SPACE MAIN REINF. IN CAP TO MISS ANCHOR BOLTS. ALL EDGES SHALL HAVE ¾" CHAMFER EXCEPT FOOTINGS. POUR STEPS MONOLITHICALLY WITH CAP.

NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER AND ℄ ROWY. DO NOT COINCIDE. SEE FOOTING PLAN AND TOP PLAN.





BAR	A	B
S_1	1'-8"	2'-0"
S_2	1'-8"	2'-6"
S_3	1'-8"	3'-4"
S_5	1'-11"	3'-7"
S_{10}	2'-2"	1'-9"
S_{11}	1'-11"	3'-2"
U_2	2'-0"	3'-0"

BARS
$S_1, S_2, S_3, S_5, S_{10}, S_{11}, U_2$.

PILE DATA

TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TON
EST. LENGTH: 35 FT.
NO. REQ'D.: 33

BILL OF MATERIALS

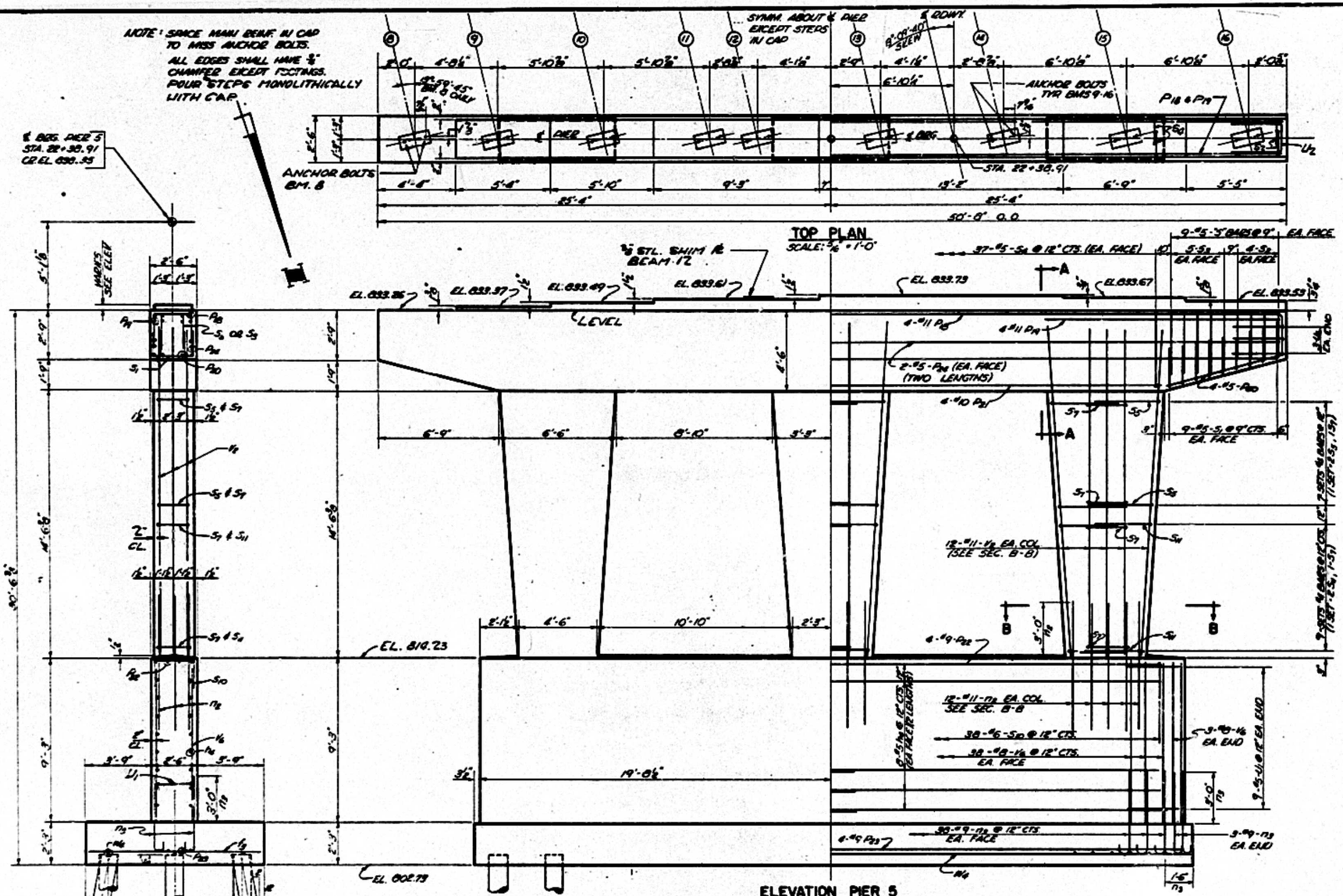
BAR	NO	SIZE	LENGTH	SHAPE
S_1	36	#5	5'-8"	
S_2	16	#5	6'-8"	
S_3	20	#5	8'-4"	
S_4	72	#5	12'-8"	
S_5	42	#4	9'-1"	
S_7	36	#4	9'-4"	
S_{10}	36	#6	5'-8"	
S_{11}	30	#4	8'-3"	
n_1	80	#7	5'-1"	
n_2	36	#11	7'-0"	
P_{27}	4	#11	52'-7"	
P_{19}	8	#11	18'-0"	
P_{20}	8	#5	6'-6"	
P_{28}	4	#10	36'-0"	
P_{24}	8	#5	36'-0"	
P_{22}	4	#9	36'-6"	
P_{23}	4	#9	39'-6"	
U_1	22	#5	7'-2"	
U_2	6	#6	8'-0"	
V_4	3	#6	39'-6"	
f_4	41	#7	8'-3"	
h_4	40	#5	19'-0"	
V_3	80	#6	10'-9"	
V_4	96	#11	15'-3"	
CLASS X CONCRETE CU. YDS.				104.5
REINFORCEMENT BARS LBS.				14270
CREOSOTED PILES LIN. FT.				1155
CLASS A EXCAV. FOR STR. C.Y.				96

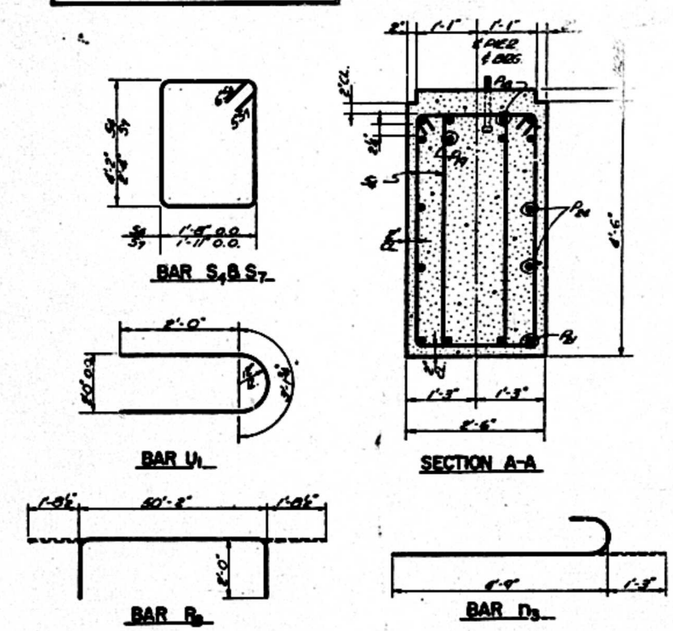
PIER 4 — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B. & Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22 + 64.70

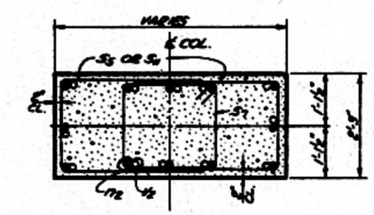
74	37-24 HVB	H.I.	12V	37	26

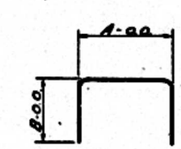
NOTE: SPACE MAIN REINF. IN CAP TO MISS ANCHOR BOLTS.
ALL EDGES SHALL HAVE ¾" CHAMFER EXCEPT FOOTINGS.
POUR STEPS MONOLITHICALLY WITH CAP.

NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER AND ℄ ROAD. DO NOT COINCIDE. SEE FOOTING PLAN AND TOP PLAN









BAR	A	B
S_1	1'-8"	2'-0"
S_2	1'-8"	2'-6"
S_3	1'-8"	3'-0"
S_8	1'-11"	3'-7"
S_{10}	2'-2"	1'-9"
S_{11}	1'-11"	3'-2"
U_2	2'-0"	3'-0"

BARS

$S_1, S_2, S_3, S_8, S_{10}, S_{11}, U_2$

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
S_1	36	#5	5'-0"	U
S_2	16	#5	6'-8"	U
S_3	20	#5	8'-8"	U
S_4	74	#5	12'-0"	D
S_5	42	#4	9'-1"	C
S_7	45	#4	9'-8"	C
S_{10}	38	#5	5'-8"	C
S_{11}	48	#4	8'-3"	C
n_3	82	#7	6'-0"	⊃
n_2	36	#11	7'-0"	—
P_{18}	4	#11	53'-7"	⊓
P_{19}	8	#11	13'-0"	—
P_{20}	8	#5	6'-6"	—
P_{21}	4	#10	37'-0"	—
P_{22}	4	#9	36'-6"	—
P_{23}	4	#9	39'-6"	—
P_{24}	8	#5	26'-0"	—
U_1	18	#5	7'-8"	U
U_2	6	#6	8'-0"	U
V_4	3	#6	39'-6"	—
V_3	40	#9	9'-9"	—
P_{25}	32	#5	19'-0"	—
V_2	36	#11	18'-6"	—
V_6	82	#8	9'-0"	—
CLASS X CONCRETE			CU. YDS.	107.4
REINFORCEMENT BARS			LBS.	17100
CREOSOTED PILES			LIN. FT.	1326
TEST PILE (TIMBER)			EA.	1
CLASS A EXCAV. FOR STR.			CU. YD.	160

PILE DATA

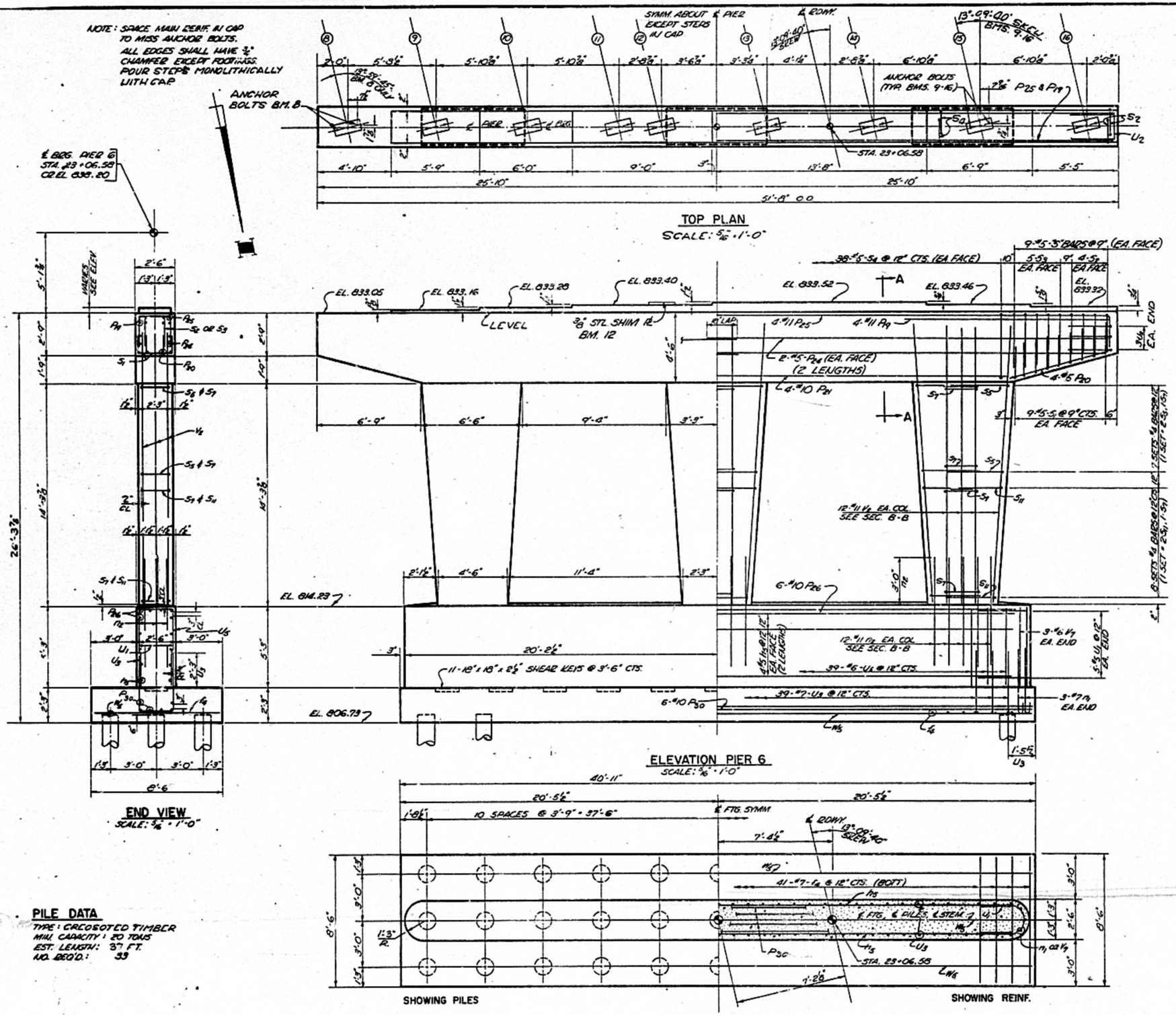
TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TONS
EST. LENGTH: 30'
I.D. REQ'D: 39
TEST PILE: DRIVE ONE TIMBER TEST PILE IN VICINITY OF PIER 5.

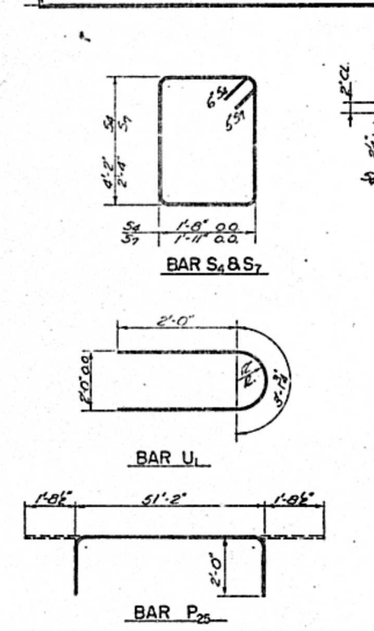
PIER 5 — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

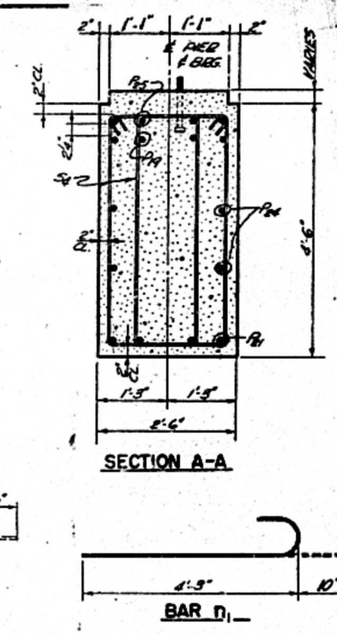
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HVB	HENRY	37	27
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

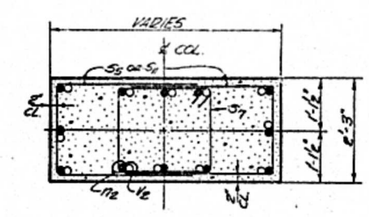
NOTE: SPACE MAIN REINF. IN CAP TO MISS ANCHOR BOLTS.
ALL EDGES SHALL HAVE ¾" CHAMFER EXCEPT FOOTINGS.
POUR STEPS MONOLITHICALLY WITH CAP.

NOTE: CARE SHOULD BE TAKEN IN LAYING OUT PIER IN FIELD AS ℄ PIER AND ℄ ROWY. DO NOT COINCIDE. SEE FOOTING PLAN AND TOP PLAN.

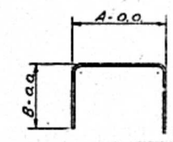








SECTION B-B
SCALE: 5/8" = 1'-0"



BAR	A	B
S1	1'-8"	2'-0"
S2	1'-8"	2'-6"
S3	1'-8"	3'-0"
S5	1'-11"	3'-7"
S11	1'-11"	5'-2"
U2	2'-0"	3'-0"
U3	2'-2"	4'-0"
U5	2'-2"	4'-9"

BARS
S1, S2, S3, S5, S11, U2, U3, U5

PILE DATA
TYPE: CREOSOTED TIMBER
MIN. CAPACITY: 20 TONS
EST. LENGTH: 37 FT.
NO. REQ'D.: 33

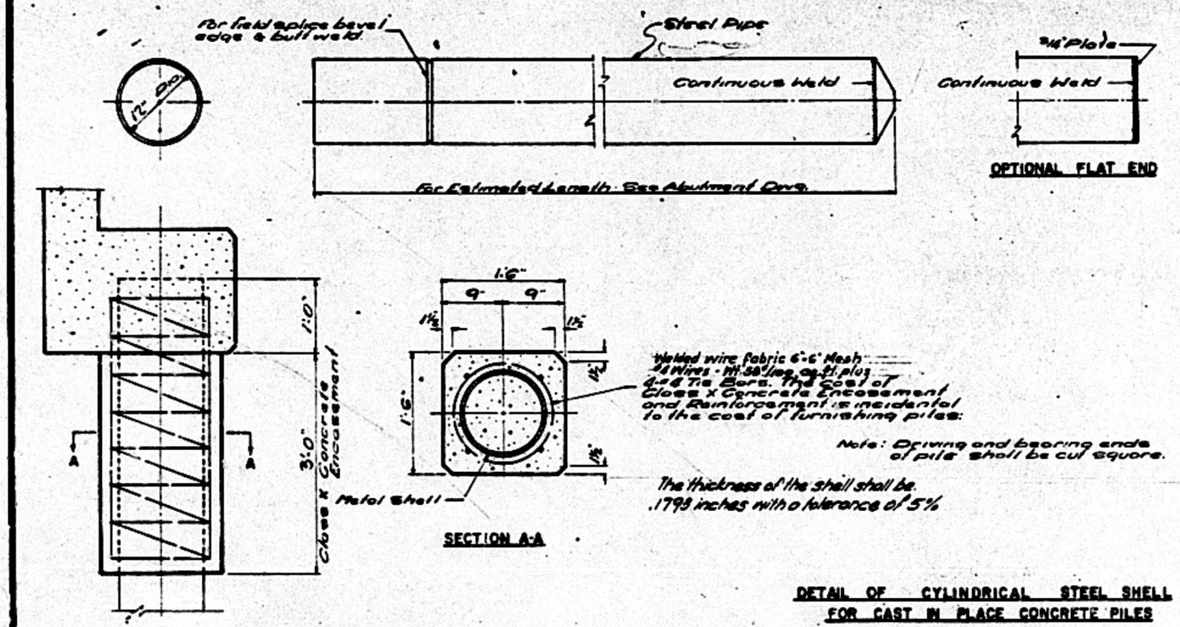
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
S1	36	#5	5'-8"	
S2	16	#5	6'-8"	
S3	20	#5	8'-0"	
S4	76	#5	12'-8"	
S5	42	#4	9'-1"	
S7	45	#4	9'-4"	
S11	48	#4	8'-3"	
n1	6	#7	5'-1"	
n2	36	#11	7'-0"	
P19	8	#11	13'-0"	
P20	8	#5	6'-6"	
P21	4	#10	38'-0"	
P24	8	#5	26'-0"	
P25	4	#11	38'-7"	
P26	6	#10	37'-9"	
P30	6	#10	40'-6"	
U1	10	#5	7'-2"	
U2	6	#6	8'-0"	
U3	39	#7	10'-8"	
U5	39	#6	11'-8"	
N5	3	#6	40'-5"	
f4	41	#7	8'-3"	
n5	16	#5	19'-9"	
V2	36	#11	18'-6"	
V3	6	#6	5'-0"	
CLASS I CONCRETE			CU. YDS.	89.3
REINFORCEMENT BARS			LBS.	14790
CREOSOTED PILES			LIN. FT.	1221
CLASS A EXCAV. FOR STR. CK.				73

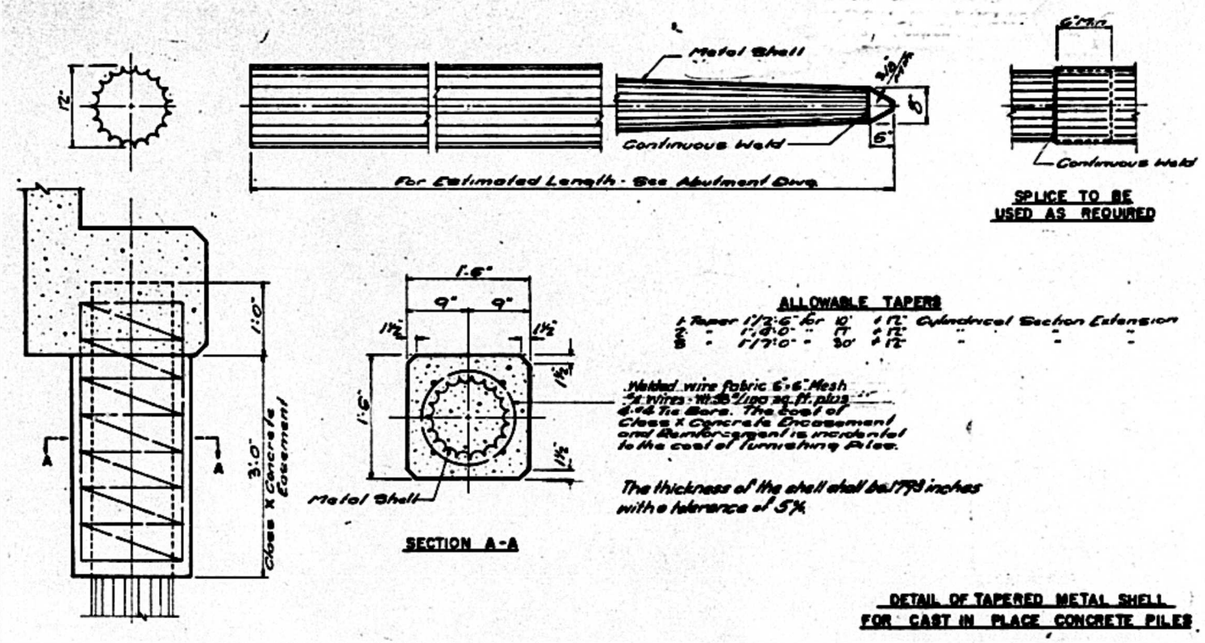
PIER 6 — EAST STRUCTURE
F.A.I. RTE. 74 SEC. 37-24 HVB
F.A.I. 74 OVER C.B.&Q. R.R. & S.B.I. RT. 83
HENRY CO., ILLINOIS
STA. 22+64.70

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
74	37-24 HVB	HENRY	37	28

Red Fork Dist No. 7 | Project



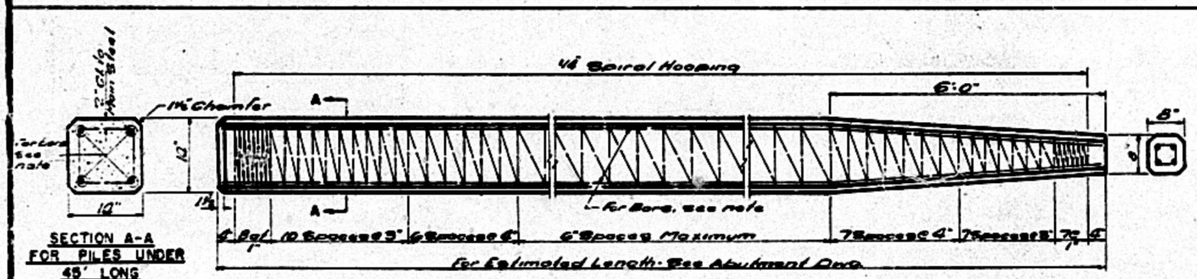
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



ALLOWABLE TAPERS

1 Taper	1 1/2:6" for	10'	1 12"	Cylindrical Section Extension	
2 "	1:8:0" "	17'	1 12"	"	"
3 "	1:7:10" "	30'	1 12"	"	"

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES

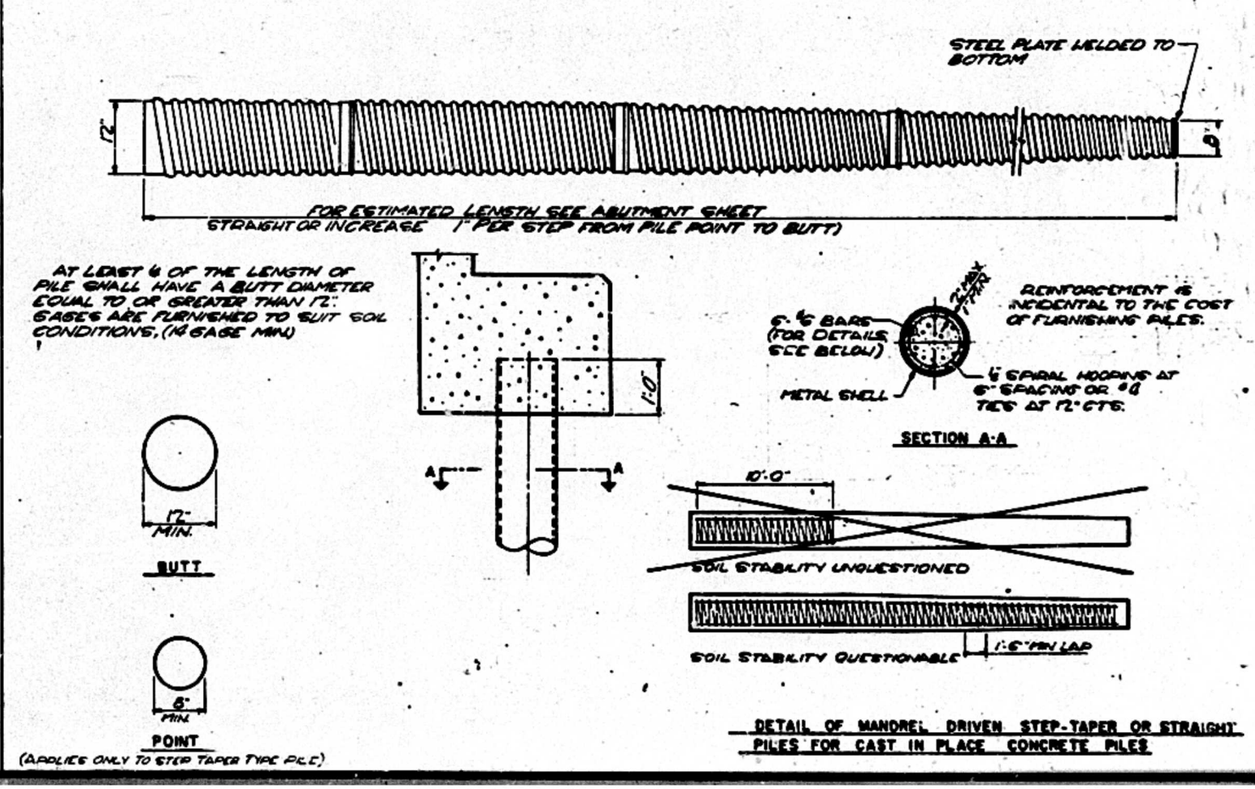


Note: For 12" Piles 45' long or more use 8-#9 bars. 4 for the full length and 4 to the point of bevel. For 12" Piles under 45'-0" long use 8-#9 bars the full length.

Handling: For Pile lengths up to 45 Ft. use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 45 Ft. use three slings placed at a distance of 0.21 L* from each end and at mid-point of pile.

*L = Over all length of pile to be handled.

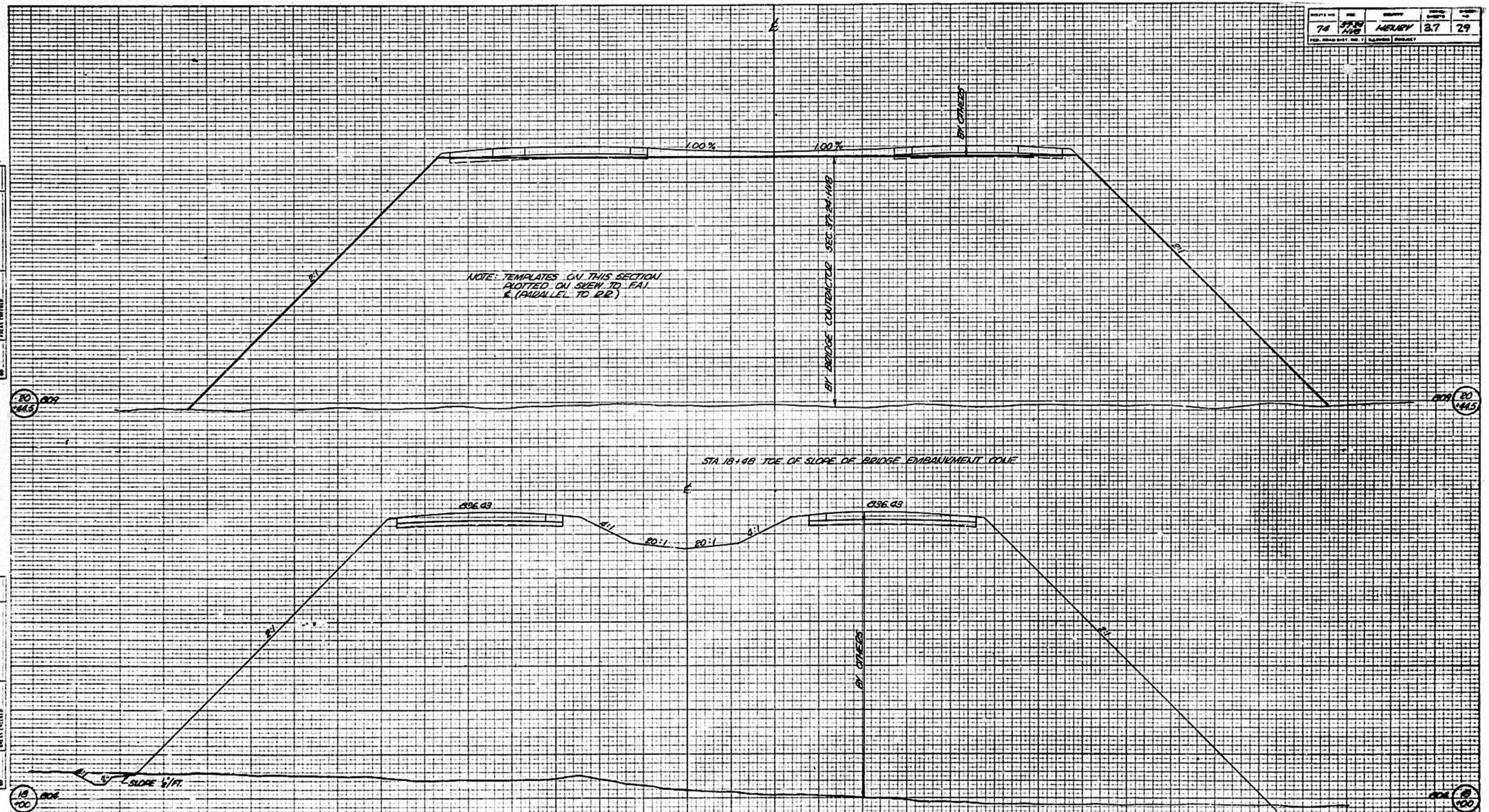
DETAIL OF PRECAST CONCRETE PILES



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

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	97-24 HVB	HENRY	37	29

FED. ROAD DIST. NO. 1 | ILLINOIS | PROJECT



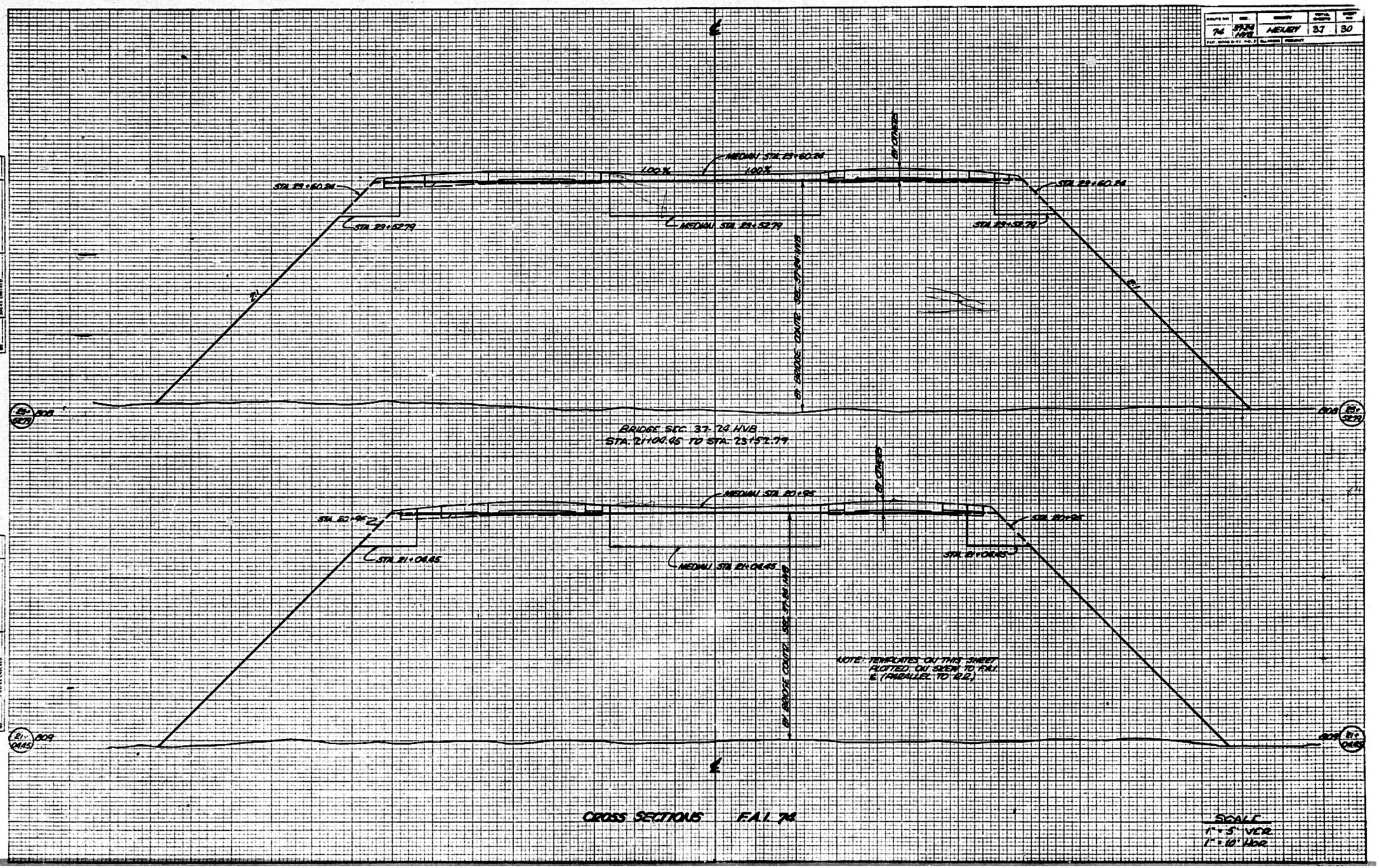
CROSS SECTION F.A.I. 74

SCALE
1" = 5' VER.
1" = 10' HOR.

FINAL SURVEY | SURVEYED | PLOTTED | TEMPLATES | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATES | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

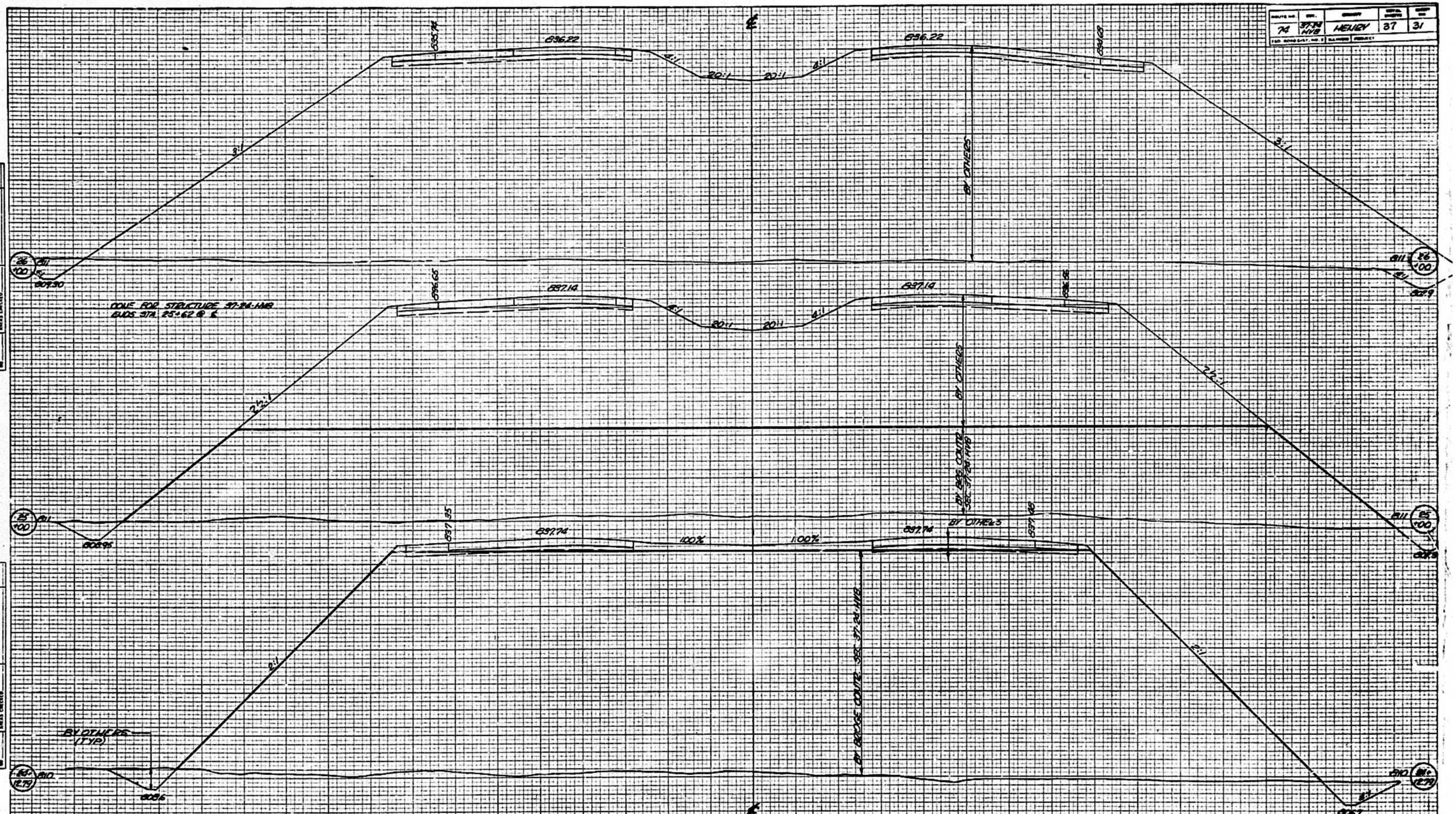
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-74 HVB	HENRY	37	30



CROSS SECTIONS F.A.I. 74

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	37-24 HNB	HENRY	37	31

FED. ROAD DIST. NO. 5 | ILLINOIS | FEDERAL AID PROJECT



CROSS SECTIONS FAI 74

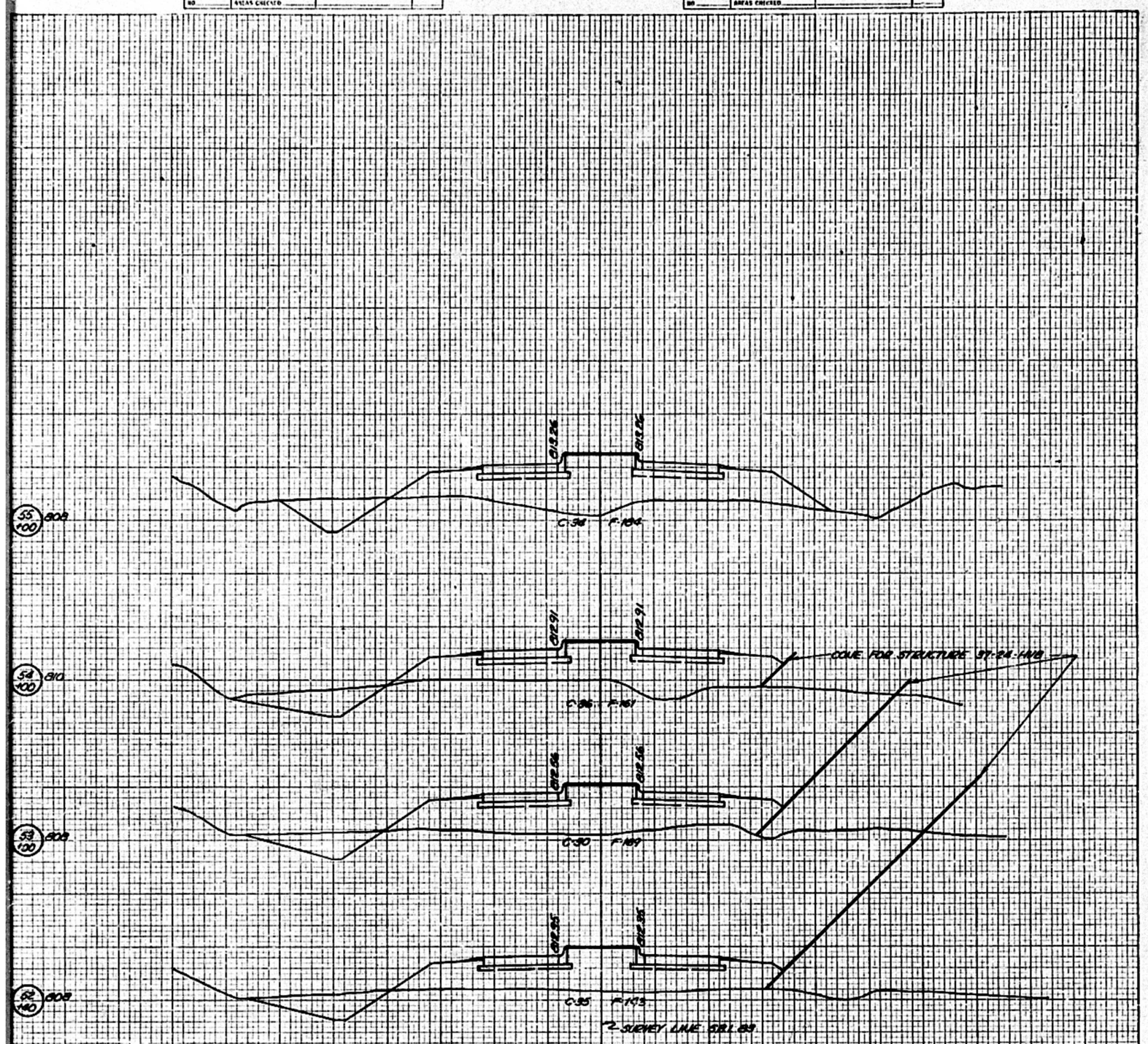
SCALE
1" = 5' VER.
1" = 10' HOR.

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		
NO.			

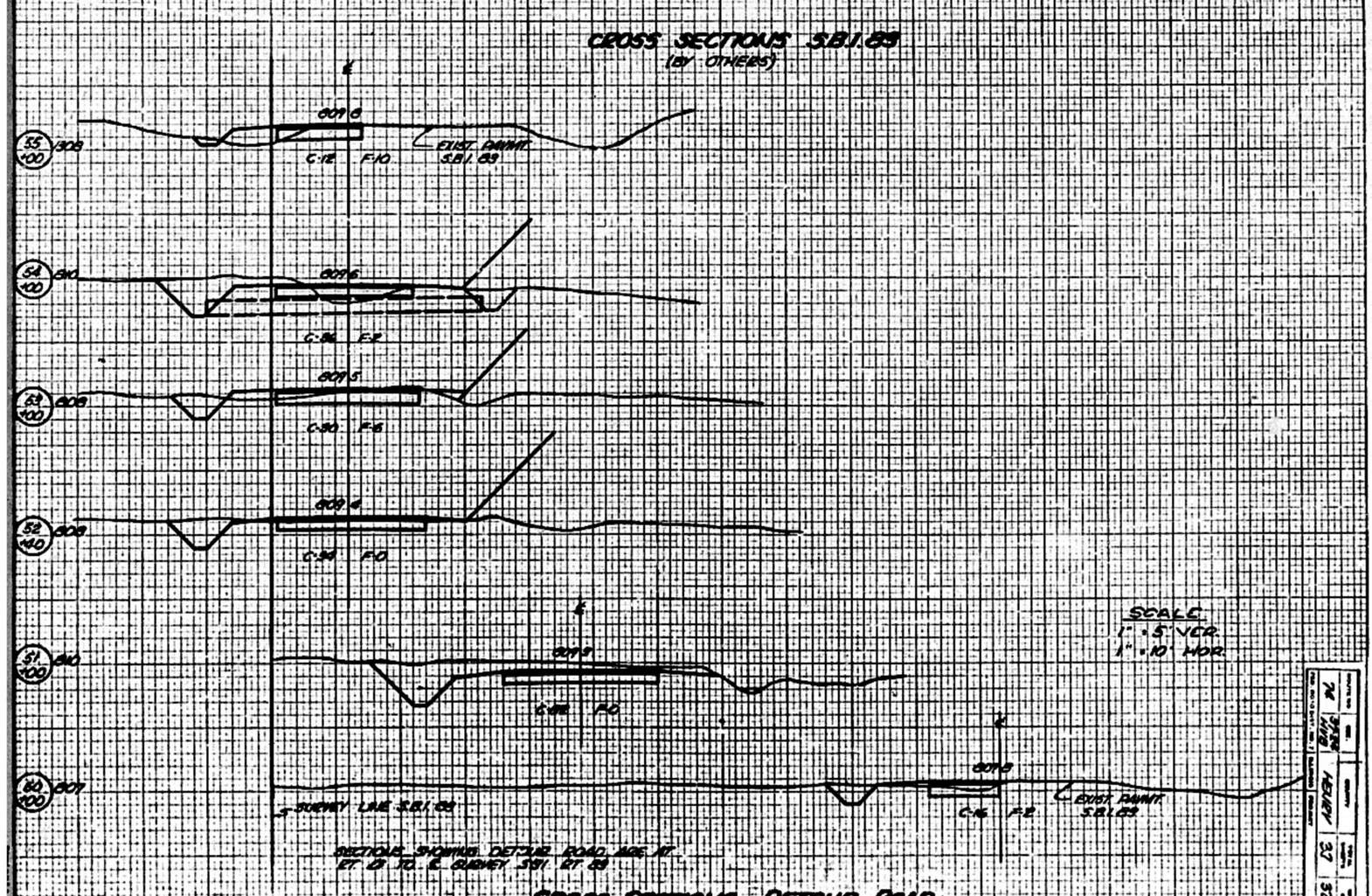
ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		
NO.			

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		



CROSS SECTIONS S.B.I. 89
(BY OTHERS)



SECTIONS SHOWING DETOUR ROAD AGE AT
ST. 13 TO ℄ SURVEY S.B.I. ST. 89

CROSS-SECTIONS DETOUR ROAD

74	378		
ALBANY		37	32