STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN INDEX

REEL 0-119

ROUTE	SECTION	COUNTY	NO. OF EXP.	REMARKS
	JULY 29, 1975 LETTING			
FA-23 & I11-68	631 W&RS-1	COOK & KANE	25	
FA-45 & US-45	462-X-B & R	COOK	226	
FA-45	464 HB-BR	COOK	40	
FA-45	1973-50-BR	COOK	37	
FA-58 & (SBI-58)	581-R.2	COOK	93	
FA-58	1975-017-RS	COOK	13	
FA-77	109RS	COOK	12	

INDEX OF DRAWINGS

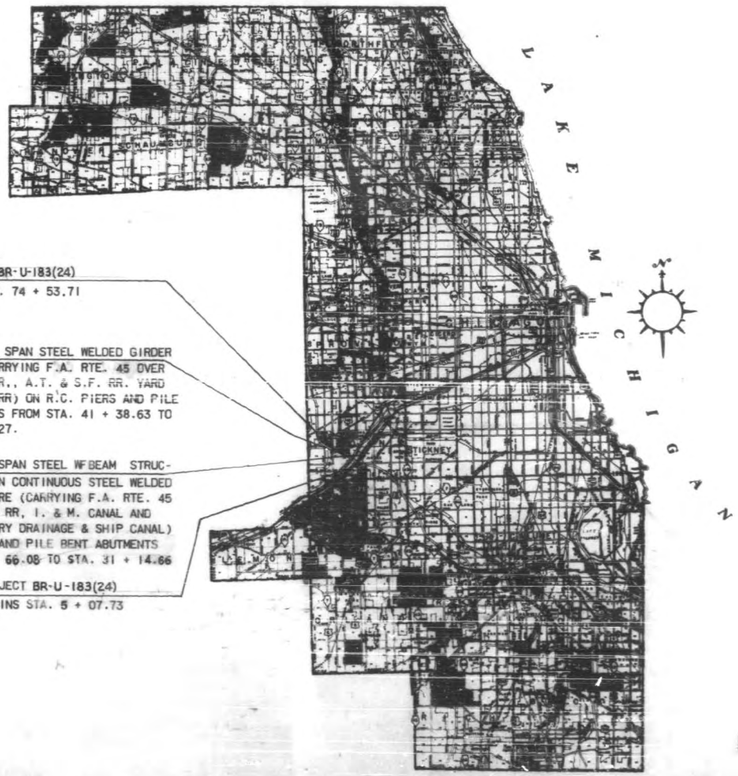
SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES
- PLAN 1 INCH = 50'
- PROFILE, HOR. 1 INCH = 50'
- PROFILE, VERT. 1 INCH = 5'
- CROSS-SECTIONS 1 INCH = 10' VERT. / 1 INCH = 10' HORIZ.

F.A. ROUTE 45
U.S. ROUTE 45-SECTION 462-X-B&R COOK COUNTY
LA GRANGE ROAD
ARCHER AVENUE TO STEVENSON EXPRESSWAY
PROJECT BR-U-183 (24)
C-91-178-75
COOK COUNTY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.45	462 X B&R	COOK	223	1
B. P. R. REG. NO. 4	ILLINOIS	PROJECT	BR-U-183(24)	

P - 90 - 052 - 69



LOCATION OF SECTION INDICATED THUS:-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 3, 19 75
PROJECT ENGINEER

EXAMINED June 25, 19 75
ENGINEER OF PLANS AND CONTRACTS

PASSED June 26, 19 75
DIRECTOR OF HIGHWAYS

APPROVED June 26, 19 75
SECRETARY OF HIGHWAYS

Harvey A. Hall

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ENGINEER | DATE

DESIGN DESIGNATION

2940 (95)-TS-2-6.50 (P.C.C.-20) CONTRACT NO. 30859

NET LENGTH OF PROJECT = 7055.88 FT. = 1.336 MI.

James A. Schneider

COOK COUNTY SECTION 462XB&R F. A. ROUTE 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. 45	162(B&R	COOK	223	2
FED. ROAD DIST. NO 1	ILLINOIS	PROJECT		

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	INDEX
3.-4.	SUMMARY OF QUANTITIES
5.	GENERAL NOTES
6.-7.	ALIGNMENT & TIES
8.-11,A.	TYPICAL SECTIONS; BRIDGE APPR. SHLD. PAVEMENT
12.-14.	SUGGESTED CONSTRUCTION PROCEDURE (SOUTH APPROACH)
15.-16.	SUGGESTED CONSTRUCTION PROCEDURE (NORTH APPROACH)
17.	GEOMETRY (SOUTH APPROACH)
18.	GEOMETRY (NORTH APPROACH)
19.	PAVEMENT ELEVATIONS (SOUTH APPROACH)
20.	PAVEMENT ELEVATIONS (NORTH APPROACH)
21.	RAMP PROFILES
22.	EXISTING AND PROPOSED UNDERDRAINS
23.-24.	PAVEMENT MARKING
25.-29.	PLAN & PROFILES
30.-45.	CROSS SECTIONS
46.-95.	SOUTH BRIDGE STRUCTURE PLANS
96.-197	NORTH BRIDGE STRUCTURE PLANS
198.	STANDARD DRAWING X-3 (PILE DETAILS)
199.-223	SIGNING PLANS

STANDARD DRAWINGS

STANDARD 1514-8
STANDARD 1527-7
STANDARD 1683-3
STANDARD 1686-3
STANDARD 1727-2
STANDARD 1744-4
STANDARD 1766-7
STANDARD 2212-2
STANDARD 2115-4
STANDARD 2122-6
STANDARD 2130-4
STANDARD 2135
STANDARD 2168-6
STANDARD 2176-1
STANDARD 2179-6
STANDARD 2213-4
STANDARD 2149-9
STANDARD 2230-9
STANDARD 2231-3
STANDARD 2250-1
STANDARD 2253-4
STANDARD 2258-2
STANDARD 2262-2
STANDARD 2350
STANDARD 2298-4
STANDARD 2299-5
STANDARD 2300-1
STANDARD 2302-3
STANDARD 2303-4
STANDARD 2306-4
STANDARD 2327-1
STANDARD 2323-2
STANDARD 2353

STANDARD 2147-5
STANDARD 2173-3
STANDARD 2256-6
STANDARD 2259-4
STANDARD 2319-3
STANDARD 2320-3
STANDARD 2113-1
STANDARD 2237-8
STANDARD 2228-2

STANDARD 2339
STANDARD 2340
STANDARD 2342
STANDARD 2343
STANDARD 2354-1

ON STANDARD 2237 ONLY
THE DETAILS FOR B.A.M.
STABILIZATION SHALL APPLY.

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS
U.S. ROUTE 45

SCALE NONE DRAWN BY H.S.
DATE 4/30/75 CHECKED BY J.G.

SECT NO.	SECTION	COUNTY		SHEET NO.
U.S. 45	4121(B)I	LEE	22	2A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2,2A	INDEX
3,3A-4.	SUMMARY OF QUANTITIES
5.	GENERAL NOTES
6.-7.	ALIGNMENT & TIES
8.-11,A.	TYPICAL SECTIONS; BRIDGE APPR. SHLD. PAVEMENT
12.-14.	SUGGESTED CONSTRUCTION PROCEDURE (SOUTH APPROACH)
15.-16.	SUGGESTED CONSTRUCTION PROCEDURE (NORTH APPROACH)
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18.	GEOMETRY (NORTH APPROACH)
19.	PAVEMENT ELEVATIONS (SOUTH APPROACH)
20.	PAVEMENT ELEVATIONS (NORTH APPROACH)
21.	RAMP PROFILES
22.	EXISTING AND PROPOSED UNDERDRAINS
23.-24.	PAVEMENT MARKING
25.-29.	PLAN & PROFILES
30.-45.	CROSS SECTIONS
46.-96.	SOUTH BRIDGE STRUCTURE PLANS
* 96.-197	NORTH BRIDGE STRUCTURE PLANS
198.	STANDARD DRAWING X-3 (PILE DETAILS)
199.-223	SIGNING PLANS

* Includes Sheets 103A, 158A, 159A & 188A, 118A, 122A, 142A, 145A, 146A, 147A, 151A, 153A, 155A & 194A

AS REVISED

STANDARD DRAWINGS

STANDARD 1514-8
STANDARD 1627-7
STANDARD 1683-3
STANDARD 1686-3
STANDARD 27-2
STANDARD 1744-4
STANDARD 1766-7
STANDARD 2212-2
STANDARD 2115-4
STANDARD 2122-6
STANDARD 2130-4
STANDARD 2135
STANDARD 2168-6
STANDARD 2176-1
STANDARD 2179-6
STANDARD 2213-4
STANDARD 2140-9
STANDARD 2230-9
STANDARD 2231-3
STANDARD 2250-1
STANDARD 2263-4
STANDARD 2256-2
STANDARD 2262-2
STANDARD 2350
STANDARD 2298-4
STANDARD 2299-6
STANDARD 2300-1
STANDARD 2302-3
STANDARD 2303-4
STANDARD 2306-4
STANDARD 2327-1
STANDARD 2323-2
STANDARD 2353

STANDARD 2339
STANDARD 2340
STANDARD 2342
STANDARD 2343
STANDARD 2354-1

STANDARD 2147-5
STANDARD 2173-3
STANDARD 2256-6
STANDARD 2259-4
STANDARD 2319-3
STANDARD 2320-3
STANDARD 2113-1
STANDARD 2237-8
STANDARD 2228-2

ON STANDARD 2237 ONLY THE DETAILS FOR S.A.M. STABILIZATION SHALL APPLY.

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS
U.S. ROUTE 45

SCALE NONE DRAWN BY H.S.
DATE 4/30/75 CHECKED BY J.G.

As Revised 10-28-75 L.W.

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2B 2,2A	INDEX
3,3A-4.	SUMMARY OF QUANTITIES
5.	GENERAL NOTES
6.-7.	ALIGNMENT & TIES
8.-11,A.	TYPICAL SECTIONS; BRIDGE APPR. SHLD. PAVEMENT
12.-14.	SUGGESTED CONSTRUCTION PROCEDURE (SOUTH APPROACH)
15.-16.	SUGGESTED CONSTRUCTION PROCEDURE (NORTH APPROACH)
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19.	PAVEMENT ELEVATIONS (SOUTH APPROACH)
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21.	RAMP PROFILES
22.	EXISTING AND PROPOSED UNDERDRAINS
23.-24.	PAVEMENT MARKING
25.-29.	PLAN & PROFILES
30.-45.	CROSS SECTIONS
46.-95.	SOUTH BRIDGE STRUCTURE PLANS
* 96.-107	NORTH BRIDGE STRUCTURE PLANS **
108.	STANDARD DRAWING X-3 (PILE DETAILS)
109.-223	SIGNING PLANS

* Includes sheets 103A, 158A, 159A & 188A, 118A, 122A, 142A, 144A, 146A, 147A, 151A, 153A, 155A & 174A

** Includes sheet 167A

AS REVISED

STANDARD DRAWINGS

STANDARD 1514-8
STANDARD 1627-7
STANDARD 1698-3
STANDARD 1698-3
STANDARD 1727-2
STANDARD 1744-4
STANDARD 1764-7
STANDARD 2212-2
STANDARD 2116-4
STANDARD 2122-5
STANDARD 2136-4
STANDARD 2136
STANDARD 2168-6
STANDARD 2176-1
STANDARD 2179-6
STANDARD 2215-4
STANDARD 2143-9
STANDARD 2220-9
STANDARD 2231-3
STANDARD 2290-1
STANDARD 2293-4
STANDARD 2296-2
STANDARD 2302-2
STANDARD 2350
STANDARD 2290-4
STANDARD 2290-5
STANDARD 2300-1
STANDARD 2302-3
STANDARD 2305-4
STANDARD 2306-4
STANDARD 2327-1
STANDARD 2323-2
STANDARD 2355

STANDARD 2147-5
STANDARD 2173-3
STANDARD 2256-6
STANDARD 2269-4
STANDARD 2319-3
STANDARD 2320-3
STANDARD 2113-1
STANDARD 2237-3
STANDARD 2226-2

STANDARD 2330
STANDARD 2340
STANDARD 2342
STANDARD 2343
STANDARD 2354-1

ALL STANDARDS SHOWN ONLY FOR DETAILS NOT SHOWN ON PLANS

ILLINOIS DEPARTMENT OF TRANSPORTATION
INDEX OF DRAWINGS
U.S. ROUTE 45
SCALE NONE DRAWN BY K.S.
DATE 4/20/76 CHECKED BY J.B.

As Revised 10-28-75 L.W. Rev. 2-25-76 D.D.

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2C, 2E, 2.2A	INDEX
3, 3A-6.	SUMMARY OF QUANTITIES
8.	GENERAL NOTES
6.-7.	ALIGNMENT & TIES
9.-11A.	TYPICAL SECTIONS; BRIDGE APPR. SHLD. PAVEMENT
12.-14.	SUGGESTED CONSTRUCTION PROCEDURE (SOUTH APPROACH)
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20.	PAVEMENT ELEVATIONS (NORTH APPROACH)
21.	RAMP PROFILES
22.	EXISTING AND PROPOSED UNDERDRAINS
23.-24.	PAVEMENT MARKING
25.-39.	PLAN & PROFILES
39.-43.	CROSS SECTIONS
45.-55.	SOUTH BRIDGE STRUCTURE PLANS
* 56.-107	NORTH BRIDGE STRUCTURE PLANS **
108.	STANDARD DRAWING X-3 (PILE DETAILS)
109.-125	SIGNING PLANS

* Includes sheets 103A, 158A, 159A & 188A, 118A, 122A, 142A, 144A, 146A, 147A, 151A, 153A, 155A & 194A

** Includes sheets 107A, 130A, 131A, 132A & 195A.

AS REVISED

STANDARD DRAWINGS

STANDARD 1614-8
STANDARD 1927-7
STANDARD 1628-3
STANDARD 1628-3
STANDARD 1727-2
STANDARD 1744-4
STANDARD 1760-7
STANDARD 2212-2
STANDARD 2118-4
STANDARD 2122-6
STANDARD 2130-4
STANDARD 2135
STANDARD 2160-5
STANDARD 2178-1
STANDARD 2179-6
STANDARD 2213-4
STANDARD 2140-9
STANDARD 2230-9
STANDARD 2231-3
STANDARD 2200-1
STANDARD 2203-4
STANDARD 2256-2
STANDARD 2262-2
STANDARD 2300
STANDARD 2236-4
STANDARD 2260-6
STANDARD 2302-1
STANDARD 2302-3
STANDARD 2302-4
STANDARD 2304-4
STANDARD 2227-1
STANDARD 2228-2
[illegible]

STANDARD 2147-5
STANDARD 2173-3
STANDARD 2234-6
STANDARD 2259-4
STANDARD 2319-3
STANDARD 2320-3
STANDARD 2113-1
STANDARD 2237-8
STANDARD 2226-2

STANDARD 2239
STANDARD 2240
STANDARD 2242
STANDARD 2243
STANDARD 2244-1

ON STANDARD 2237 ONLY
THE DETAILS FOR S.A.M.
STABILIZATION SHALL APPLY.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS
U.S. ROUTE 45

SCALE NONE | DRAWN BY H.B.
DATE 4/30/75 | CHECKED BY J.B.

As Revised 10-28-75 L.W. Rev. 2-25-76 D.D. As Rev. 6-2-76 L.W.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	462NSR	CODE	22.9	3
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SUMMARY OF QUANTITES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE CONSTRUCTION TYPE CODE X371	ROADWAY CONSTRUCTION TYPE CODE 7223	UTILITES CONSTRUCTION TYPE CODE Y005
201001	TREE REMOVAL (TO 15 INCH DIAMETER)	IN. DIA.	100		100	
201002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN. DIA.	100		100	
201005	TREE REMOVAL, ACRES	ACRE	4		4	
205001	SPECIAL EXCAVATION	CU.YDS.	13,853		13,853	
207001	EMBANKMENT	CU.YDS.	84500		84500	
210001	TRENCH BACKFILL	CU.YDS.	473		473	
X21601	TOP SOIL EXCAVATION	CU.YDS.	6090		6090	
X21604	TOP SOIL PLACEMENT 4"	SQ.YDS.	26382			26,382
213012	STABILIZED SUB-BASE 4"	SQ.YDS.	4150		4150	
213007	SUB-BASE --- GRANULAR MATERIAL, TYPE C	TON	409		409	
215001	AGGREGATE SHOULDERS, TYPE A	TON	647		647	
215012	STABILIZED SHOULDER 10"	SQ.YDS.	5938		5938	
215004	AGGREGATE SHOULDERS, TYPE B	TON	92		92	
402004	AGGREGATE SURFACE COURSE, TYPE B	TON	1294		1294	
X30108	BITUMINOUS BASE COURSE 10"	SQ.YDS.	8292		8292	
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	450		450	
406003	AGGREGATE (PRIME COAT)	TON	14		14	
408005	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ.YDS.	10132		10132	
408013	PAVEMENT FABRIC	SQ.YDS.	10132		10132	
408014	PROTECTIVE COAT	SQ.YDS.	17647	3147	14500	
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	410		410	
406008	BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	TON	1834	1424	410	
X50201	STRUCTURE EXCAVATION	CU.YDS.	3538.4	3538.4		
502004	ROCK EXCAVATION FOR STRUCTURES	CU.YDS.	49.2	49.2		
502003	COFFERDAM EXCAVATION	CU.YDS.	2665.9	2665.9		
X05553	PIER BEARINGS TYPE F850	EACH	18	18		
X05554	PIER BEARINGS TYPE F1000	EACH	2	2		
X05555	PIER BEARINGS TYPE E350	EACH	32	32		
X05556	PIER BEARINGS TYPE E400	EACH	4	4		
X05557	PIER BEARINGS TYPE E850	EACH	20	20		
X05558	PIER BEARINGS TYPE E1000	EACH	2	2		
502005	COFFERDAMS	EACH	7	7		
601001	STONE RIPRAP	SQ.YDS.	52	52		
504003	CLASS "X" CONCRETE	CU.YDS.	9787.4	9786.1		1.3
504004	SEAL COAT CONCRETE	CU.YDS.	631.9	631.9		
507025	STUD SHEAR CONNECTORS	EACH	42828	42828		
507030	FURN. & ERECTING STRUCTURAL STEEL	L.S.	1	1		
508005	ALUMINUM RAILING	L.F.	8286	8286		
512001	REINFORCEMENT BARS	LBS.	2,184,386	2,184,360		26
X04941	WATERPROOFING MEMBRANE SYSTEM	SQ.YDS.	17449.0	17449.0		

SUMMARY OF QUANTITES

CODE NO	ITEM	UNIT	TOTAL QUANTITY	BRIDGE CONSTRUCTION TYPE CODE X371	ROADWAY CONSTRUCTION TYPE CODE 7223	UTILITES CONSTRUCTION TYPE CODE Y005
XZ1010	P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT	SQ.YDS.	146		146	
X04953	BRIDGE APPROACH PAVEMENT	SQ.YDS.	1065		1065	
513026	DRIVING STEEL PILES	L.F.	6808.0	6808.0		
X51302	FURNISHING STEEL PILES HP 10x42	L.F.	6808.0	6808.0		
513021	FURNISHING CONCRETE PILES	L.F.	4290	4290		
513041	TEST PILE CONCRETE	EACH	10	10		
X51311	TEST PILES STEEL HP 10 X 42	EACH	19	19		
513027	DRIVING CONCRETE PILES	L.F.	4290	4290		
513052	*TEMPORARY SHEET PILING* (Added 7-15-75)	SQ.FT.	2670	2670		
514001	NAME PLATES	EACH	2	2		
639001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	3		3	
618001	SLOPEWALL (4")	SQ.YDS.	1117	1117		
X61601	COMBINATION CONCRETE CURB AND GUTTER TYPE SB - 9.12	L.F.	922		922	
XZ1090	NEOPRENE EXPANSION JT. 2"	L.F.	42	42		
XZ1091	NEOPRENE EXPANSION JT. 2 1/2"	L.F.	335.0	335.0		
XZ1093	NEOPRENE EXPANSION JT. 4"	L.F.	126	126		
XZ1092	NEOPRENE EXPANSION JT. 6 1/2"	L.F.	84	84		
L04947	NAVIGATION LIGHTING SYSTEM (SPECIALTY ITEM)	L.S.	1	1		
Z10286	PIER PROTECTION CELL	EACH	2	2		
629004	CHAIN LINK FENCE, 7 FT.	L.F.	140		140	
629104	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	L.F.	1228		1228	
629108	CHAIN LINK GATE TO BE REMOVED AND RE-ERECTED	EACH	2		2	
607152	PIPE UNDERDRAINS 6"	L.F.	6333		6333	
607153	PIPE UNDERDRAINS 8"	L.F.	182		182	
607154	PIPE UNDERDRAINS 10"	L.F.	700		700	
X61202	INLET - TYPE A WITH MEDIAN INLET (2250)	EACH	3		3	
511904	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	5		5	
511906	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1		1	
603005	STORM SEWERS, TYPE 1 12"	L.F.	398		398	
603007	STORM SEWERS, TYPE 1 18"	L.F.	50		50	
603030	STORM SEWERS, TYPE 2 12"	L.F.	484		484	
603032	STORM SEWERS, TYPE 2 18"	L.F.	86		86	
603038	STORM SEWERS, TYPE 2 36"	L.F.	160		160	
603057	STORM SEWERS, TYPE 3 18"	L.F.	170		170	
X61201	CATCH BASINS, TYPE A, 4' DIAMETER, WITH MEDIAN INLET (2250)	EACH	5		5	
612118	MANHOLES, TYPE A, 5' DIAMETER, TYPE I FRAME, CLOSED LID	EACH	2		2	
612190	CATCH BASINS TO BE ADJUSTED	EACH	5		5	
612316	CATCH BASINS, TYPE A, 4' DIAMETER, TYPE B-24 FRAME AND GRATE	EACH	3		3	
612413	INLETS, TYPE A, TYPE B-24 FRAME AND GRATE	EACH	2		2	
615002	FILLING EXISTING CATCH BASINS	EACH	2		2	
607020	PIPE DRAINS, CORRUGATED STEEL 12"	L.F.	176		176	
511784	METAL END SECTIONS 12"	EACH	3		3	
616041	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24	L.F.	2419		2419	
628001	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	L.F.	2800		2800	
633003	STEEL PLATE BEAM GUARD RAIL, REMOVAL	L.F.	3355		3355	
628002	STEEL PLATE BEAM GUARD RAIL DOUBLE RAIL	L.F.	75		75	
616117	PAVED DITCH - 6 FT.	L.F.	250			250
644003	NITROGEN FERTILIZER NUTRIENT	LBS.	492			492
644004	PHOSPHORUS FERTILIZER NUTRIENT	LBS.	293			293
644005	POTASSIUM FERTILIZER NUTRIENT	LBS.	196			196
644001	SODDING	SQ.YDS.	17174			17,174
601005	BROKEN CONCRETE RIPRAP	SQ.YDS.	14			14

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

U.S. ROUTE 45

SCALE NONE DRAWN BY H.S.

DATE 4/30/75 CHECKED BY J.G.

Revised 7-15-75

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	(61)1BR	COOK	223	3A
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SUMMARY OF QUANTITES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE CONSTRUCTION TYPE CODE X971	ROADWAY CONSTRUCTION TYPE CODE 7225	UTILITIES CONSTRUCTION TYPE CODE Y005
201001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN. DIA.	100		100	
201002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN. DIA.	100		100	
201005	TREE REMOVAL, ACRES	ACRE	4		4	
206001	SPECIAL EXCAVATION	CU.YDS.	13,853		13,853	
207001	EMBANKMENT	CU.YDS.	84500		84500	
210001	TRENCH BACKFILL	CU.YDS.	473		473	
X21601	TOP SOIL EXCAVATION	CU.YDS.	6090		6090	
X21604	TOP SOIL PLACEMENT 4"	SQ.YDS.	26382			26,382
213012	STABILIZED SUB-BASE 4"	SQ.YDS.	4150		4150	
213007	SUB-BASE --- GRANULAR MATERIAL, TYPE C	TON	409		409	
215001	AGGREGATE SHOULDERS, TYPE A	TON	647		647	
215012	STABILIZED SHOULDER 10"	SQ.YDS.	5938		5938	
215004	AGGREGATE SHOULDERS, TYPE B	TON	92		92	
402004	AGGREGATE SURFACE COURSE, TYPE B	TON	1294		1294	
X30938	BITUMINOUS BASE COURSE 10"	SQ.YDS.	8292		8292	
408001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	.450		450	
405003	AGGREGATE (PRIME COAT)	TON	14		14	
406005	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ.YDS.	10132		10132	
408013	PAVEMENT FABRIC	SQ.YDS.	10132		10132	
408014	PROTECTIVE COAT	SQ.YDS.	17647	3147	14500	
407007	BITUMINOUS CONCRETE BINDER COURSE	TON	410		410	
406009	BITUMINOUS CONCRETE SURFACE COURSE, CLASS I	TON	1834	1424	410	
X50201	STRUCTURE EXCAVATION	CU.YDS.	3442.8	3442.8		
502004	ROCK EXCAVATION FOR STRUCTURES	CU.YDS.	49.2	49.2		
502003	COFFERDAM EXCAVATION	CU.YDS.	2665.9	2665.9		
X502553	PIER BEARINGS TYPE F850	EACH	18	18		
X502554	PIER BEARINGS TYPE F1000	EACH	2	2		
X502555	PIER BEARINGS TYPE E350	EACH	32	32		
X502556	PIER BEARINGS TYPE E400	EACH	4	4		
X502557	PIER BEARINGS TYPE E850	EACH	20	20		
X502558	PIER BEARINGS TYPE E1000	EACH	2	2		
502005	COFFERDAMS	EACH	7	7		
601009	BROKEN RIPRAP	SQ.YDS.	52	52		
504005	CLASS "X" CONCRETE	CU.YDS.	9776.8	9776.8		1.3
504004	SEAL COAT CONCRETE	CU.YDS.	631.9	631.9		
507020	STUD SHEAR CONNECTORS	EACH	42828	42828		
507030	FURN. & ERECTING STRUCTURAL STEEL	L.S.	1	1		
508005	ALUMINUM RAILING	L.F.	8286	8286		
512001	REINFORCEMENT BARS	LBS.	2,184,386	2,184,360		26
X04941	WATERPROOFING MEMBRANE SYSTEM	SQ.YDS.	17449.0	17449.0		

SUMMARY OF QUANTITES

CODE NO	ITEM	UNIT	TOTAL QUANTITY	BRIDGE CONSTRUCTION TYPE CODE X971	ROADWAY CONSTRUCTION TYPE CODE 7225	UTILITIES CONSTRUCTION TYPE CODE Y005
X21010	P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT	SQ.YDS.	146		146	
X04693	BRIDGE APPROACH PAVEMENT	SQ.YDS.	1065		1065	
X50285	DRIVING STEEL PILES	L.F.	6808.0	6808.0		
X51302	FURNISHING STEEL PILES HP 10x42	L.F.	6808.0	6808.0		
513021	FURNISHING CONCRETE PILES	L.F.	4290	4290		
513041	TEST PILE CONCRETE	EACH	10	10		
X51311	TEST PILES STEEL-HP10X42	EACH	19	19		
513027	DRIVING CONCRETE PILES	L.F.	4290	4290		
513052	TEMPORARY SHEET PILING (Added 7-18-75)	SQ.FT.	2670	2670		
514001	NAME PLATES	EACH	2	2		
538001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	3		3	
815001	SLOPEWALL (4")	SQ.YDS.	1117	1117		
X66601	COMBINATION CONCRETE CURB AND GUTTER TYPE SB - 9.12	L.F.	922		922	
XZ1090	NEOPRENE EXPANSION JT. 2"	L.F.	42	42		
XZ1091	NEOPRENE EXPANSION JT. 2 1/2"	L.F.	335.0	335.0		
XZ1093	NEOPRENE EXPANSION JT. 4"	L.F.	126	126		
XZ1092	NEOPRENE EXPANSION JT. 6 1/2"	L.F.	84	84		
L04967	NAVIGATION LIGHTING SYSTEM (SPECIALTY ITEM)	L.S.	1	1		
Z10286	PIER PROTECTION CELL	EACH	2	2		
629004	CHAIN LINK FENCE, 7 FT.	L.F.	140		140	
629104	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	L.F.	1228		1228	
629108	CHAIN LINK GATE TO BE REMOVED AND RE-ERECTED	EACH	2		2	
607152	PIPE UNDERDRAINS 6"	L.F.	6333		6333	
607155	PIPE UNDERDRAINS 8"	L.F.	182		182	
607154	PIPE UNDERDRAINS 10"	L.F.	700		700	
X60202	INLET - TYPE A WITH MEDIAN INLET (2250)	EACH	3		3	
511903	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	5		5	
511906	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1		1	
603005	STORM SEWERS, TYPE 1 12"	L.F.	398		398	
603007	STORM SEWERS, TYPE 1 18"	L.F.	50		50	
603030	STORM SEWERS, TYPE 2 12"	L.F.	484		484	
603032	STORM SEWERS, TYPE 2 18"	L.F.	86		86	
603036	STORM SEWERS, TYPE 2 36"	L.F.	160		160	
603057	STORM SEWERS, TYPE 3 18"	L.F.	170		170	
X61201	CATCH BASINS, TYPE A, 4' DIAMETER, WITH MEDIAN INLET (2250)	EACH	5		5	
612118	MANHOLES, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2		2	
612190	CATCH BASINS TO BE ADJUSTED	EACH	5		5	
612316	CATCH BASINS, TYPE A, 4' DIAMETER, TYPE B-24 FRAME AND GRATE	EACH	3		3	
612413	INLETS, TYPE A, TYPE B-24 FRAME AND GRATE	EACH	2		2	
615002	FILLING EXISTING CATCH BASINS	EACH	2		2	
607020	PIPE DRAINS, CORRUGATED STEEL 12"	L.F.	176		176	
511784	METAL END SECTIONS 12"	EACH	3		3	
616041	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24	L.F.	2419		2419	
630001	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	L.F.	2800		2800	
633003	STEEL PLATE BEAM GUARD RAIL, REMOVAL	L.F.	3355		3355	
628002	STEEL PLATE BEAM GUARD RAIL DOUBLE RAIL	L.F.	75		75	
616117	PAVED DITCH - 6 FT.	L.F.	250			250
644003	NITROGEN FERTILIZER NUTRIENT	LBS.	492			492
644004	PHOSPHONUS FERTILIZER NUTRIENT	LBS.	293			293
644005	POTASSIUM FERTILIZER NUTRIENT	LBS.	196			196
644001	SODDING	SQ.YDS.	17174			17,174
601008	BROKEN CONCRETE RIPRAP	SQ.YDS.	14			14

AS REVISED

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

U.S. ROUTE 45

SCALE NONE DRAWN BY H.S.

DATE 4/30/75 CHECKED BY J.G.

Revised 7-15-75

As Revised 10-28-75 L.W.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4023HAR	COOK	223	4
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE CONSTRUCTION TYPE CODE X371	ROADWAY CONSTRUCTION TYPE CODE 7223	CONSTRUCTION TYPE CODE Y002	CONSTRUCTION TYPE CODE Y005	CONSTRUCTION TYPE CODE Y003	CONSTRUCTION TYPE CODE Y080
X62801	TERMINAL SECTION, SINGLE RAIL	EACH	11		11				
610142	CONCRETE MEDIAN, TYPE SB-9.12	S.F.	472		472				
E00343	CROWN VETCH 02 (CROWN VETCH, 1 YEAR, @ 1 B.B.)	EACH	24000					24,000	
644002	SUPPLEMENTAL WATERING	UNIT	223				223		
646001	ENGINEERS FIELD OFFICE, TYPE A	EACH	1		1				
646003	ENGINEERS FIELD LABORATORY	EACH	1		1				
633005	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	L.F.	530		530				
Z10382	SAWING P.C. CONCRETE PAVEMENT	L.F.	410		410				
XZ1100	*TRAINEES*	*HOUR*	*5,000*						*5,000*
632001	DELINEATOR	EACH	52	22	30				
T50103	THERMOPLASTIC PAVEMENT MARKING LINE 4"	L.F.	11511	8180	3331				
T50104	THERMOPLASTIC PAVEMENT MARKING LINE 5"	L.F.	3109	1534	1575				
T50108	THERMOPLASTIC PAVEMENT MARKING LINE 24"	L.F.	50		50				
L04300	TRENCH AND BACKFILL	L.F.	190			190			
L05093	ELECTRIC CABLE, UNITDUCT, 3-1/C NO. 6 AWG. 600 V 1 1/4" DUCT	L.F.	210			210			
T20101	SIGN PANEL- TYPE 1	SQ.FT.	41.50			41.50			
T20301	SIGN PANEL- TYPE 3	SQ.FT.	1966.00			1966.00			
T21301	REMOVE SIGN PANEL - TYPE 3	SQ.FT.	987.50			987.50			
X04206	TRAFFIC CONTROL AND PROTECTION	L.S.	1		1				
T30201	STRUCTURAL STEEL SIGN SUPPORT - BREAK-A-WAY	LBS.	2489.0			2489.0			
T30301	TUBULAR STEEL SIGN SUPPORT - BREAK-A-WAY	LBS.	252			252			
X64701	PAVEMENT MARKING TAPE	L.F.	12400		12400				
T30820	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6"x5'-3")	L.F.	70			70			
T30830	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0"x7'-0")	L.F.	124			124			
T30872	OVERHEAD SIGN STRUCTURE - CANTILEVER TYPE III-C-A (36"x7'-0")	L.F.	35			35			
T31101	OVERHEAD SIGN STRUCTURE WALKWAY	L.F.	199.75			199.75			
T31201	CONCRETE FOUNDATIONS	C.Y.	70.88			70.88			
T31202	DRILLED SHAFT CONCRETE FOUNDATIONS	C.Y.	5.78			5.78			
T31701	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1			1			
T31901	REMOVE GROUND - MOUNTED SIGN SUPPORTS	EACH	6			6			
T32001	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	6			6			
Z20302	SIGN LIGHTING UNIT, TYPE SC-2, WITH SELF-CONTAINED BALLAST AND TWO LAMPS	EACH	19			19			
Z20950	RESPACING OR REMOVAL OF EXISTING SIGN LIGHTING UNITS	EACH	12			12			
Z21055	INSTALL REMOVED SC-2 LIGHT FIXTURE	EACH	5			5			
612142	INLETS, TYPE A, TYPE 1 FRAME OPEN LID	EACH	6		6				

SPECIALTY ITEMS

SPECIALTY ITEMS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITES
U.S. ROUTE 45

SCALE NONE DRAWN BY
DATE 4/30/75 CHECKED BY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	162X048	COOK	093	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

GENERAL NOTES

SPECIAL EXCAVATION: FOLLOWING IS AN ESTIMATED LIST OF MAJOR ITEMS OF WORK FOR BIDDING INFORMATION PURPOSES ONLY, WHICH ARE INCLUDED IN THE ITEM OF SPECIAL EXCAVATION :

ITEM	UNIT	QUANTITY
PAVEMENT REMOVAL	SQ. YD.	7,654
C & G REMOVAL	LIN. FT.	2,004
EARTH EXCAVATION	CU. YD.	10,600
TEMPORARY PAVEMENT REMOVAL	SQ. YD.	3,529

IT SHALL BE UNDERSTOOD AND AGREED THAT THE ABOVE ITEMS OF WORK ARE APPROXIMATE AND DO NOT CONSTITUTE ALL OF THE WORK AS DEFINED UNDER SECTION 205 OF THE STANDARD SPECIFICATIONS. IT SHALL BE FURTHER UNDERSTOOD AND AGREED UPON THAT THE LISTING OF THESE ITEMS OF WORK ARE INTENDED TO DESCRIBE THE ESSENTIAL PARTS OF THE ITEM OF SPECIAL EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY VARIANCE IN EITHER THE ITEM OR QUANTITIES OF WORK SHOWN IN THE ABOVE MENTIONED LISTING. THE REMOVAL OF ALL PAVEMENT WHERE INDICATED ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER, INCLUDING THE TEMPORARY STABILIZED BASE COURSE WIDENING WILL BE PAID FOR AS SPECIAL EXCAVATION.

SPECIAL EXCAVATION SHALL ALSO INCLUDE THE REMOVAL OF BOULDERS, STRUCTURES, PIPE OR OTHER OBSTRUCTIONS, WHICH INTERFERE WITH THE PROPOSED ROADWAY CONSTRUCTION AND WHICH ARE NOT TO BE REMOVED AS SEPARATE PAY ITEMS. THE SAWING OF EXISTING FLEXIBLE BASE PAVEMENT SHALL BE CONSIDERED AS INCIDENTAL TO SPECIAL EXCAVATION AS SPECIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS. THE SAWING OF EXISTING CONCRETE PAVEMENT, WHERE DIRECTED BY THE ENGINEER, WILL BE PAID FOR SEPARATLEY.

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE DEPARTMENT AND IS CONSIDERED TO BE REASONABLY ACCURATE. IN ANY NECESSARY ADJUSTMENTS OR RECONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AS DETAILED IN ARTICLE 102.04 OF THE STANDARD SPECIFICATIONS, TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE DEPARTMENT, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS, DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLE 107.19 AND 107.23 OF THE STANDARD SPECIFICATIONS.

TRANSVERSE CONTRACTION JOINTS IN P.C.C. PAVEMENT SHALL BE LOCATED IN THE FIELD AT 100 FOOT INTERVALS.

WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNERS, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONTRACT.

THE REMOVAL OF TEMPORARY PAVEMENTS IN THIS CONTRACT SHALL BE PAID FOR PER CUBIC YARD AS SPECIAL EXCAVATION.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.

THE CONTRACTOR WILL BE REQUIRED, AT HIS EXPENSE, TO RELOCATE OR REMOVE AND REPLACE ALL ROAD SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET SUCH SIGNS IN ACCORDANCE WITH ARTICLE 107.22 AND AT THE DIRECTION OF THE ENGINEER. ALL WORK INVOLVED SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:

A. SIGNS SHALL NOT BE REMOVED UNTIL PROGRESS OF THE WORK NECESSITATES IT.

B. TRAFFIC CONTROL SIGNS REMOVED MUST BE RE-ERECTED AT TEMPORARY LOCATIONS IN A WORKMANLIKE MANNER AND VISIBLE TO TRAFFIC ON THE HIGHWAY. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND PLUMB DURING THE DURATION OF THE TEMPORARY SETTING.

C. ALL SIGNS SHALL BE RE-ERECTED IN THEIR PERMANENT LOCATIONS SO THAT THERE IS A HORIZONTAL CLEARANCE OF 12 FEET FROM THE PAVEMENT EDGE TO THE SIGN OR AS DESIGNATED BY THE ENGINEER. AS THE ROADWAY IS COMPLETED.

D. AT SOME TEMPORARY AND PERMANENT SIGN LOCATIONS, IT MAY BE NECESSARY TO USE LONGER POSTS TO MAINTAIN PROPER SIGN ELEVATION, IN WHICH CASE THEY WILL BE FURNISHED BY THE STATE IN EXCHANGE FOR THE EXISTING POSTS.

E. ALL UNUSED POSTS ARE TO BE STORED WITHIN THE STATE RIGHT-OF-WAY FOR PICK-UP BY THE DEPARTMENT OF TRANSPORTATION. A CHARGE OF THREE DOLLARS (3.00) PER POST WILL BE MADE AGAINST THE CONTRACTOR FOR ALL POSTS NOT ACCOUNTED FOR.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

TREE REMOVAL, INCH DIAMETER QUANTITIES ARE ESTIMATED FOR THE PURPOSE OF ESTABLISHING A UNIT PRICE. IT SHALL BE UNDERSTOOD AND AGREED THAT THE QUANTITITIES ARE APPROXIMATE AND DO NOT CONSTITUTE AN EXACT AMOUNT OF WORK AS DEFINED UNDER SECTION 201 OF THE STANDARD SPECIFICATIONS.

IT IS PARTICULARLY CALLED TO THE ATTENTION OF THE CONTRACTOR THAT UPON ALL ROADS WHICH REMAIN OPEN TO TRAFFIC AND ARE ADJACENT TO HIS CONSTRUCTION AREAS, THAT HE SHALL PROVIDE, ERECT AND MAINTAIN THEREON, SUCH BARRICADES, SIGNS, FLAGS, AND TORCHES OR LIGHTS AS MAY BE NECESSARY TO PROTECT THE WORK AND TO SAFEGUARD ALL TRAFFICIN CONFORMANCE TO SECTION 107.14 OF THE STATE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SPECIFIED ON THESE PLANS OR IN THE SPECIAL PROVISIONS, ALL WORK INSTALLED UNDER THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH ANY AND ALL APPLICABLE REQUIREMENTS OF THE "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS", ISSUED BY THE BUREAU OF TRAFFIC IN JANUARY, 1964, AND THE LATEST EDITION OF THE "NATIONAL ELECTRICAL CODE".

ALL MANHOLES SHALL BE 5'-0" IN DIAMETER UNLESS OTHERWISE NOTED IN THE PLANS.

FRAMES AND GRATES ON EXISTING STRUCTURES WHICH ARE TO BE ABANDONED AND WHICH ARE NOT INCORPORATED INTO THE IMPROVEMENT SHALL BECOME THE PROPERTY OF THE DEPARTMENT. THE CONTRACTOR SHALL STORE THE FRAMES AND GRATES WITHIN THE RIGHT-OF-WAY AT LOCATIONS DESIGNATED BY THE ENGINEER, FOR PICK UP BY THE DEPARTMENT.

THE ENDS OF EXISTING DRAINAGE LINES WHICH ARE NOT TO BE INCORPORATED INTO THE PROPOSED IMPROVEMENT ARE TO BE SEALED WITH AN 8" BULKHEAD OF CONCRETE OR BRICK AND MORTAR. COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CONTRACT.

SUMMARY OF LENGTH AND PAVING

LOCATION	BEGINNING STA.	ENDING STA.	TYPE OF PAVEMENT	SUMMARY OF SQ. YARDS		
				NET LENGTH IN FT.	WIDTH IN FT.	SQ. YARDS
RAMP B	18+04.47	25+33.64	P.C.C. PAVEMENT, 10"	729.17	14	378
RAMP G	146+78.52	149+33.51	P.C.C. PAVEMENT, 10"	274.99	15	153
	143+94.75	146+78.52	P.C.C. PAVEMENT, 10"	283.77	1-15	84
N.B. U.S.45	5+07.73	9+05.98	P.C.C. PAVEMENT, 10"	398.25	24	354
	9+05.98	16+66.58	P.C.C. PAVEMENT, 10"	860.9	30-24	772
	32+14.29	40+39.13	P.C.C. PAVEMENT, 10"	1016.63	24	733
	69+81.77	74+53.71	P.C.C. PAVEMENT, 10"	571.44	24	419
S.B. U.S.45	9+05.98	14+91.84	P.C.C. PAVEMENT, 10"	585.86	1-12	141
	14+91.84	17+66.08	P.C.C. PAVEMENT, 10"	274.24	12	122
	70+94.00	71+77.96	P.C.C. PAVEMENT, 10"	83.96	4-1	8
ACCESS RD.	28+60.00	44+35.00	1 1/2" BIT. CONCRETE BINDER & SURFACE COURSE	1575.00	24	1400
ACCESS ENTRANCE			1 1/2" BIT. CONCRETE BINDER & SURFACE COURSE	98.00	98-30-98	165
N.B. U.S.45	16+66.58	17+66.58	BRIDGE APPROACH SLAB	100.00	24	89
	31+14.29	32+14.29	BRIDGE APPROACH SLAB	100.00	24	89
	40+39.13	41+39.13	BRIDGE APPROACH SLAB	100.00	24	89
	68+81.77	69+81.77	BRIDGE APPROACH SLAB	100.00	24	89

PAVEMENT DESIGN DATA

STRUCTURAL DESIGN TRAFFIC (1985)
P.C. = 23,700, S.U. = 1,000, M.U. = 1600

CLASS I ROAD

MINIMUM CBR = 2.6

PER CENT OF S.D.T. IN DESIGN LANE
UP = 32%, US = 45%, UM = 45%

TRAFFIC FACTOR = 6.50

PAVEMENT: 4" STABILIZED SUBBASE
10" P.C. CONCRETE PAVEMENT

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

U.S. ROUTE 45

SCALE NONE DRAWN BY H.S.
DATE 4/30/75 CHECKED BY J.G.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	465X(R)M	COOK	23	6
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT		

CURVE NO. 1

P.I. STA. 6+31.95
Δ = 23°16'31.20"
D = 9°30'00"
T = 220.14'
L = 245.01'
R = 603.14'
E = 12.66'
SE = 0.06 FT/FT

CURVE NO. 2

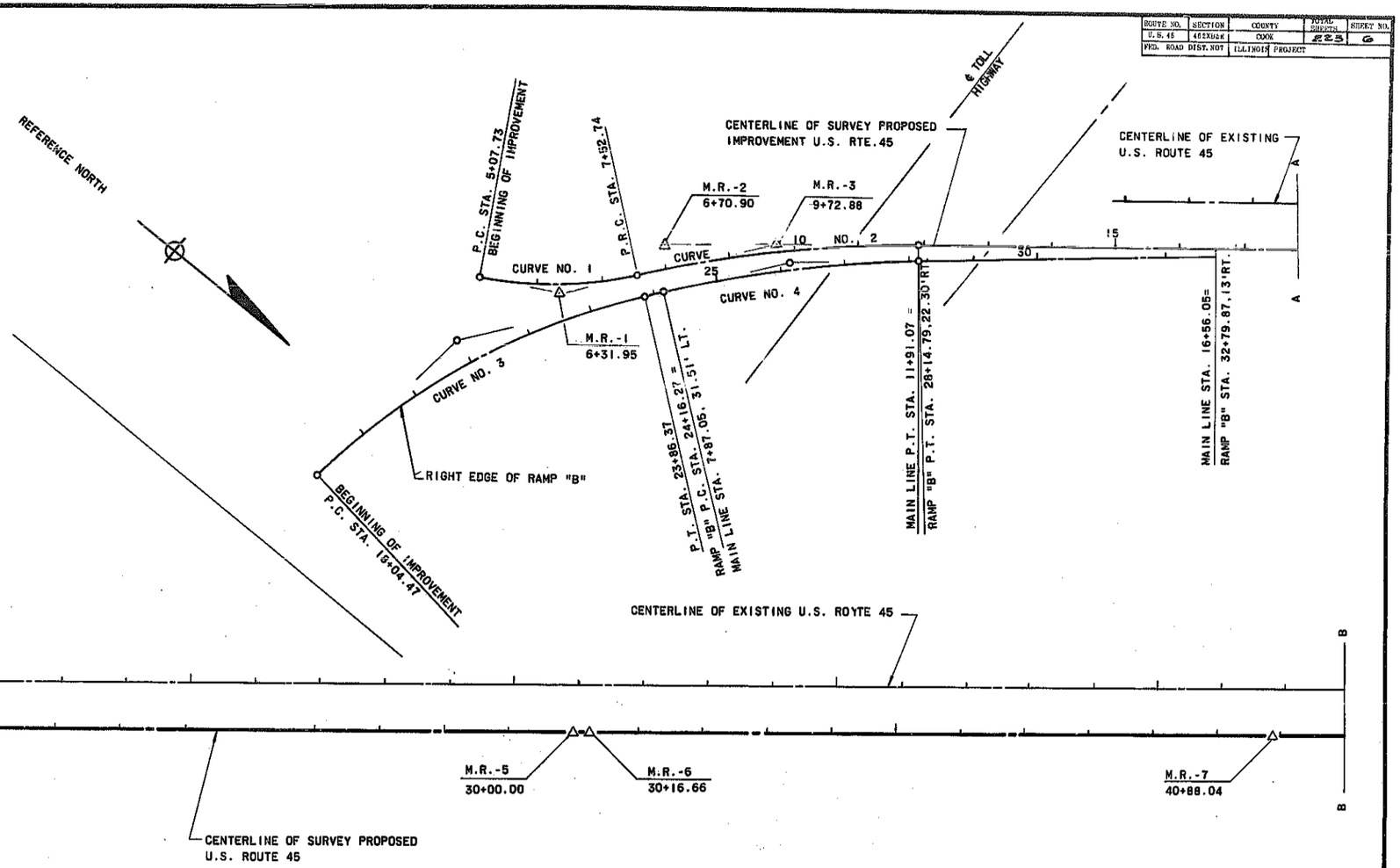
P.I. STA. 9+72.88
Δ = 13°13'09.50"
D = 3°00'57"
T = 220.14'
L = 438.33'
R = 1899.83'
E = 12.71'
SE = 0.045 FT/FT

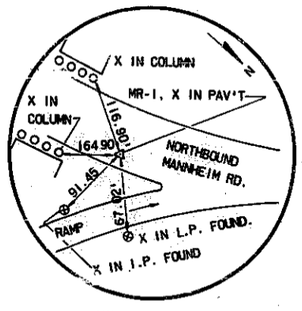
CURVE NO. 3

P.I. STA. 21+02.46
Δ = 30°26'06"
D = 5°13'49.06"
T = 297.99'
L = 581.90'
R = 1095.46'
E = 39.81'
SE = 0.056 FT/FT

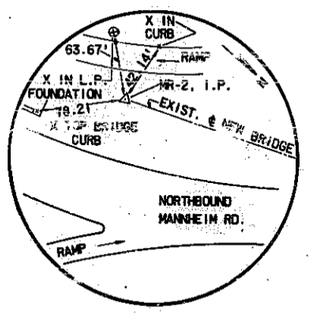
CURVE NO. 4

P.I. STA. 26+16.27
Δ = 12°00'28"
D = 3°00'47"
T = 200.00'
L = 398.52'
R = 1901.58'
E = 10.49'
SE = 0.045 FT/FT

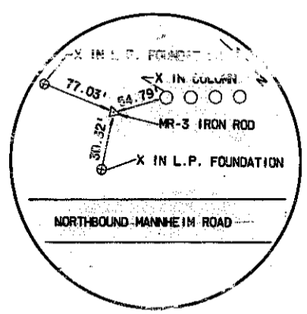




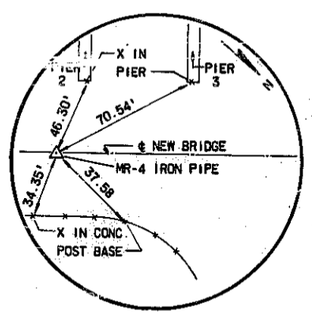
MANNHEIM RD 1.



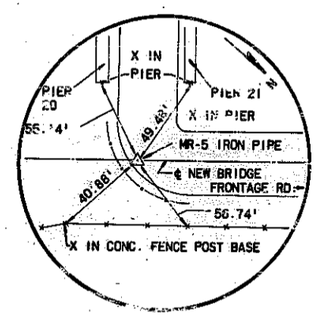
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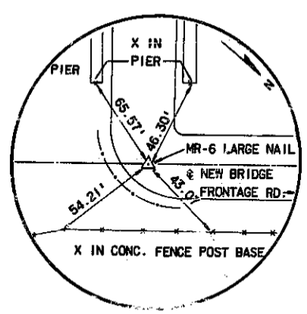
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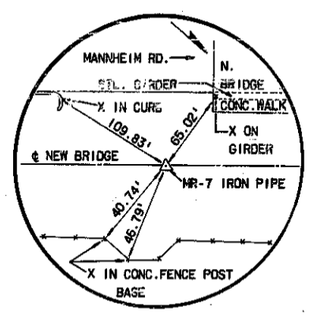
MANNHEIM RD. 4



MANNHEIM RD.5



MANNHEIM RD. 6



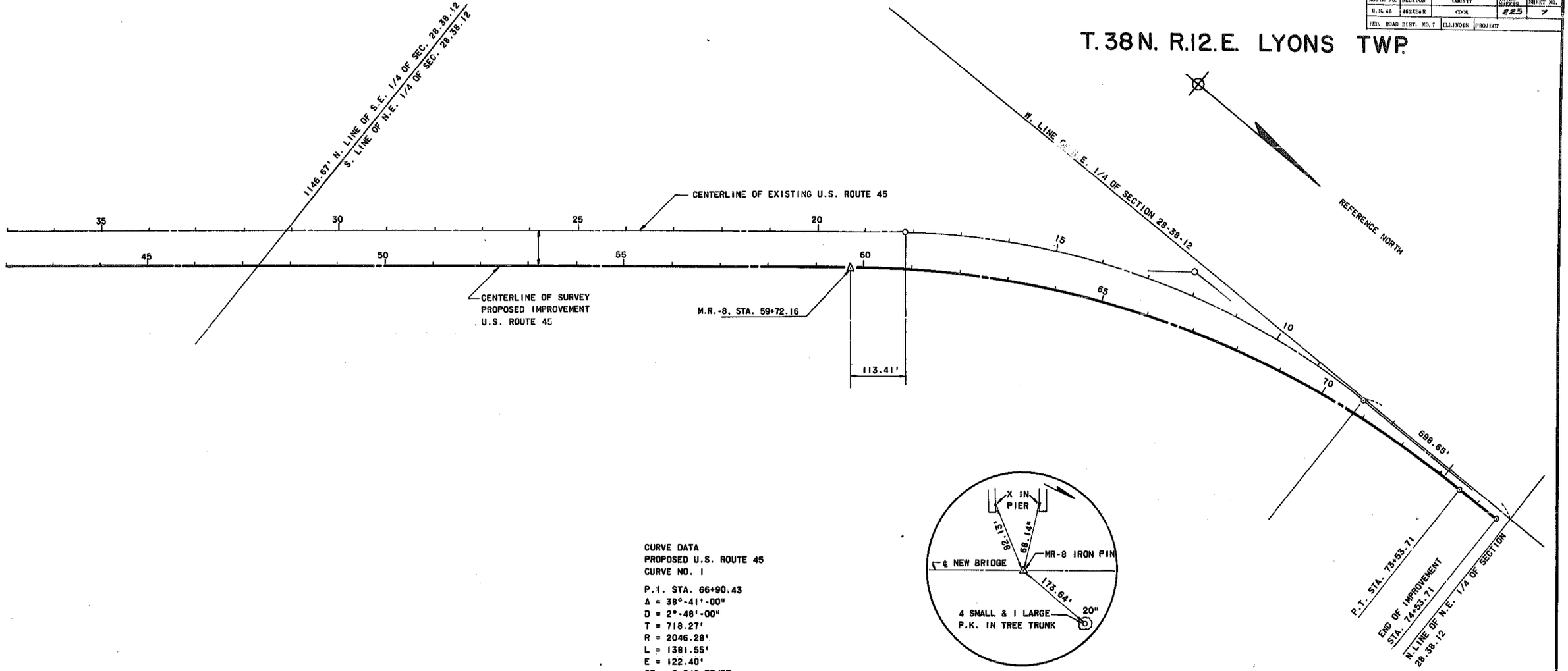
MANNHEIM RD. 7

ILLINOIS DEPARTMENT OF TRANSPORTATION

ALIGNMENT & TIES
U S ROUTE 45

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	45233 H R	COOK	23	7
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

T. 38 N. R. 12 E. LYONS TWP.



CURVE DATA
PROPOSED U.S. ROUTE 45
CURVE NO. 1

P.I. STA. 66+90.43
Δ = 38°-41'-00"
D = 2°-48'-00"
T = 718.27'
R = 2046.28'
L = 1381.55'
E = 122.40'
SE = 0.042 FT/FT

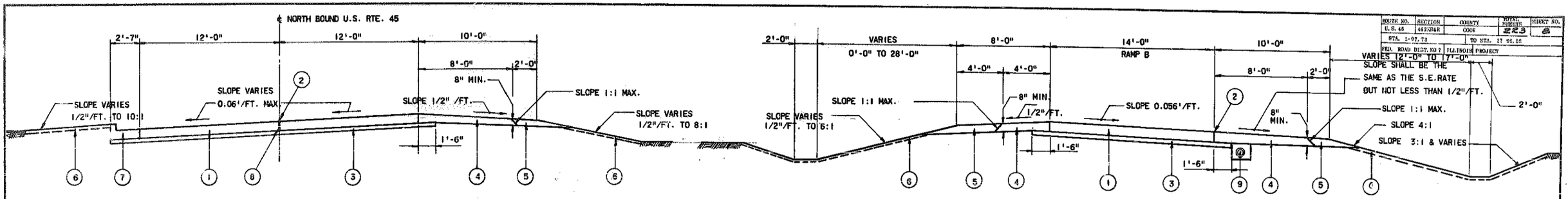
MANNHEIM RD. 8

ILLINOIS DEPARTMENT OF TRANSPORTATION

ALIGNMENT & TIES
U.S. ROUTE 45

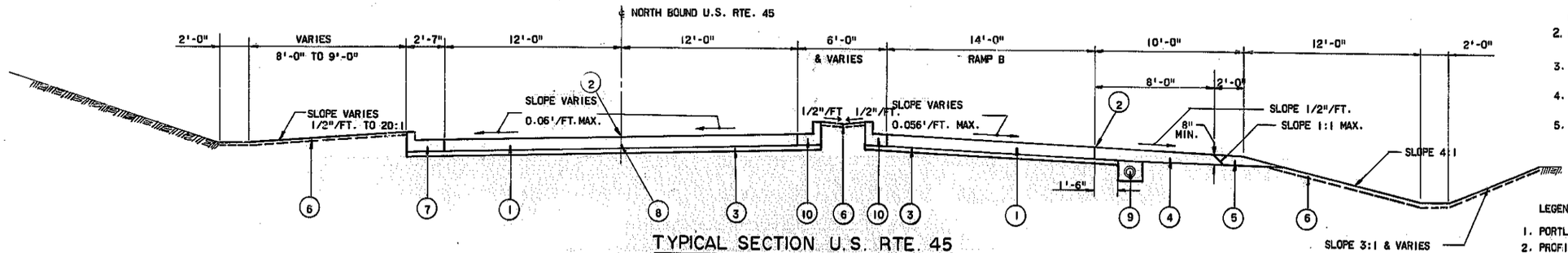
SCALE NONE
DATE

DRAWN BY
CHECKED BY



TYPICAL SECTION U.S. RTE.45
STA 5+07.73 TO STA 6+75.00

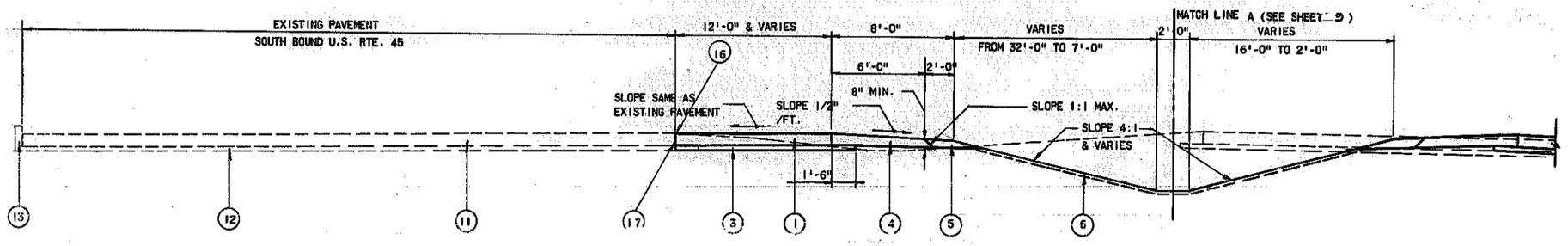
TYPICAL SECTION RAMP B
STA. 18+04.47 TO STA 23+00.00



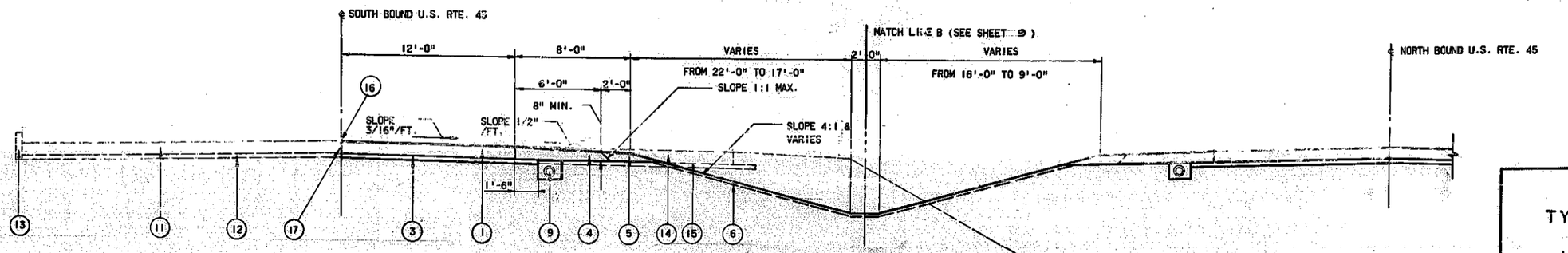
TYPICAL SECTION U.S. RTE. 45
STA 6+75.00 TO STA 7+14.48

NOTE

1. STABILIZED SHOULDERS SHALL BE AS SHOWN ON THESE PLANS & CONSTRUCTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF STANDARD 2237.
2. PIPE UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 2327.
3. FOR PAVEMENT SLOPES REFER TO SHEETS 19 & 20.
4. WHERE EARTH SLOPES VARY REFER TO CROSS SECTION SHEETS 30 THRU 45.
5. 2:1 SLOPES ARE TO BE CROWN VETCH.



TYPICAL SECTION U.S. RTE 45
STA. 9+05.98 TO STA. 14+91.84



TYPICAL SECTION U.S. RTE. 45
STA. 14+91.84 TO STA. 17+66.08

LEGEND

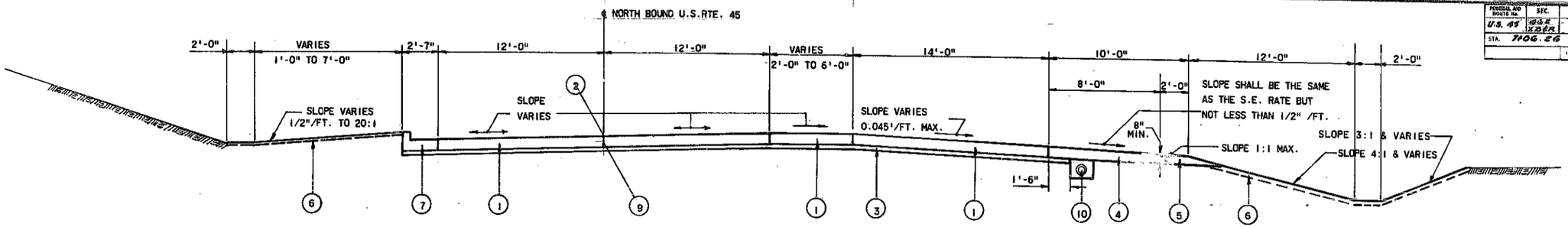
1. PORTLAND CEMENT CONCRETE PAVEMENT, 10"
2. PROFILE GRADE ELEV.
3. STABILIZED SUB-BASE, 4"
4. STABILIZED SHOULDER, 10"
5. AGGREGATE SHOULDER TYPE A
6. 4" TOP SOIL & SOD
7. COMBINATION CONCRETE CURB & GUTTER TYPE B-6.24
8. SAWED POLYETHELENE SHEET LONGITUDINAL JOINT
9. PIPE UNDERDRAINS
10. COMBINATION CONCRETE CURB & GUTTER TYPE SB-9.12
11. EXISTING PAVEMENT
12. EXISTING SUB-BASE
13. EXISTING CURB & GUTTER
14. REMOVE EXISTING PAVEMENT
15. REMOVE EXISTING SUB-BASE
16. MEET EXISTING PAVEMENT ELEV.
17. DRILL AND GROUT NO. 4 TIE BARS, (THIS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF PORTLAND CEMENT CONCRETE PAVEMENT)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4825R4R	COOK	225	8
STA. 5-07.73		TO STA. 17 66.08		
FED. ROAD DIST. NO 7	ILLINOIS PROJECT			

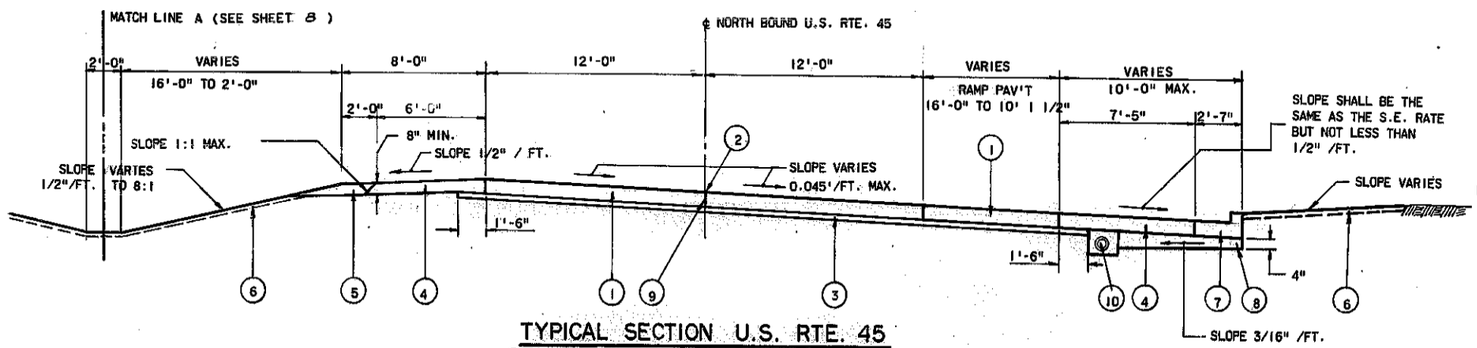
TYPICAL SECTIONS
U.S. ROUTE 45

SCALE NONE DRAWN BY F.M.
DATE 4/30/75 CHECKED BY J.G.

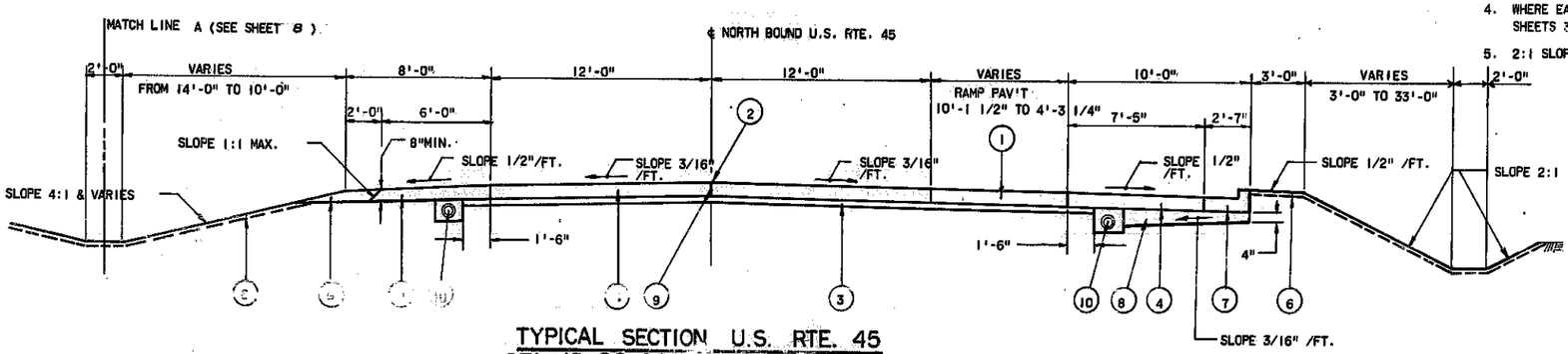
PROPOSAL AND ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	95E KBR	2004	223	9
STA. 7+06.26		TO STA. 17+66.08		
	SECTION	PROJECT		



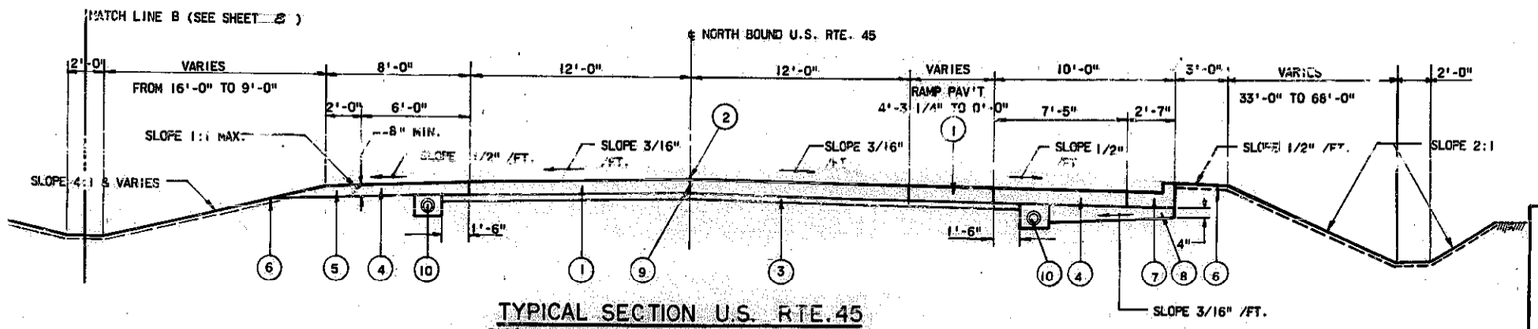
TYPICAL SECTION U.S. RTE. 45
STA 7+14.48 TO STA 9+05.98



TYPICAL SECTION U.S. RTE. 45
STA. 9+05.98 TO STA. 12+00.00



TYPICAL SECTION U.S. RTE. 45
STA. 12+00.00 TO STA. 14+91.84



TYPICAL SECTION U.S. RTE.45
STA. 14+91.84 TO STA. 17+66.08

LEGEND

1. PORTLAND CEMENT CONCRETE PAVEMENT, 10"
2. PROFILE GRADE ELEVATIONS
3. STABILIZED SUB-BASE, 4"
4. STABILIZED SHOULDER, 10"
5. AGGREGATE SHOULDER, TYPE A
6. 4" TOP SOIL & SOD
7. COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
8. SUB-BASE GRANULAR MATERIAL, TYPE C
9. SAWED OR POLYETHELENE SHEET LONGITUDINAL JOINT
10. PIPE UNDERDRAINS

NOTE:

1. STABILIZED SHOULDERS SHALL BE AS SHOWN ON THESE PLANS & CONSTRUCTED IN ACCORDANCE WITH PORTIONS OF STD.2237
2. PIPE UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 2327
3. FOR PAVEMENT SLOPES REFER TO SHEETS 19 & 20.
4. WHERE EARTH SLOPES VARY, REFER TO CROSS SECTION SHEETS 30 THRU 45.
5. 2:1 SLOPES ARE TO BE CROWN VETCH.

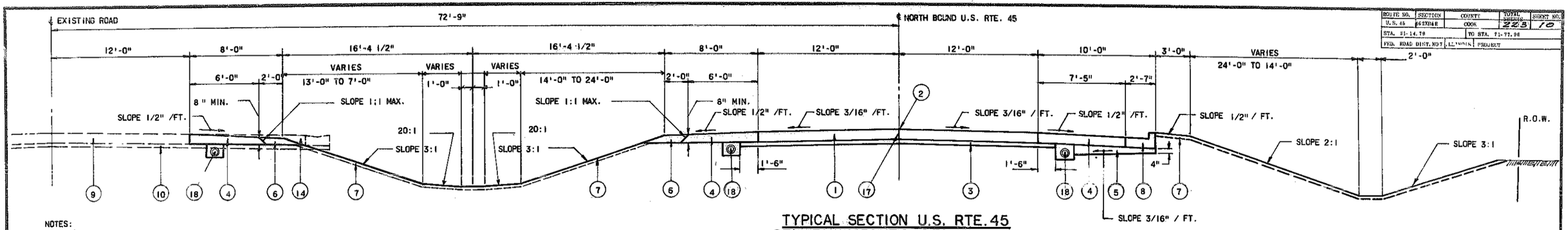
ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
U.S. ROUTE 45

SCALE NONE DRAWN BY R.M.

DATE 12/4/73 CHECKED BY J.G.

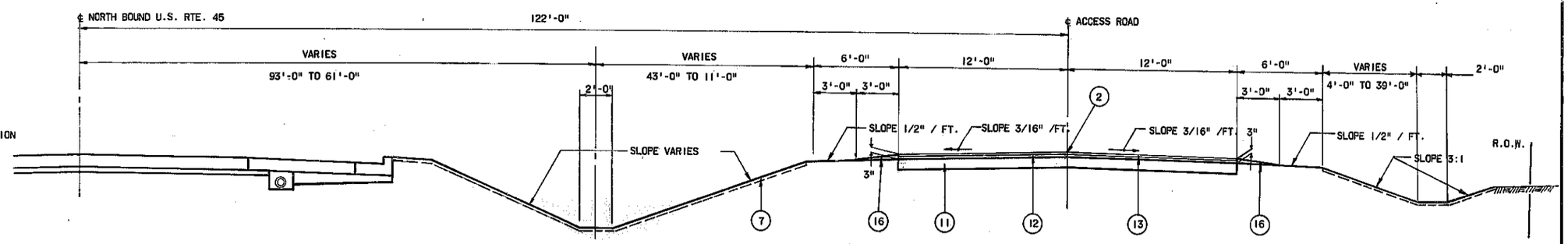
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	662XN4R	COOK	225	10
STA. 31-14.79		TO STA. 71-77.96		
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT		



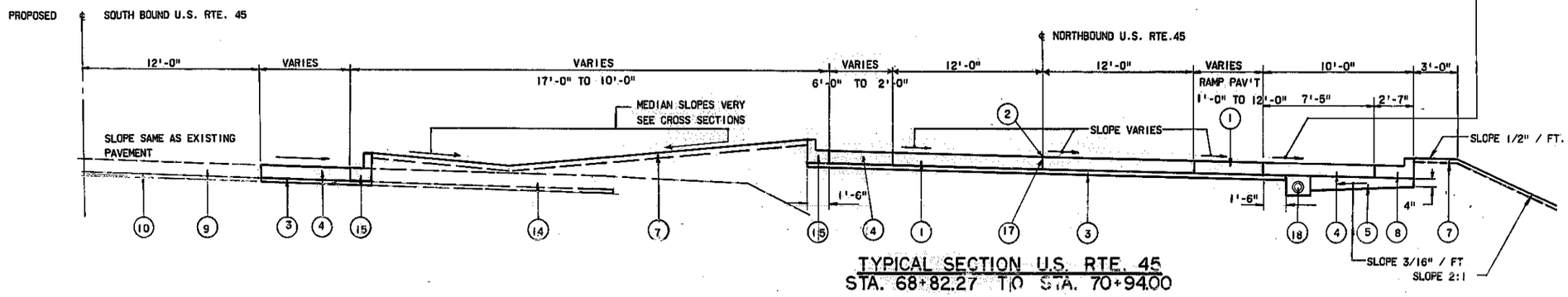
TYPICAL SECTION U.S. RTE. 45
STA. 31+14.79 TO STA. 41+38.63

NOTES:

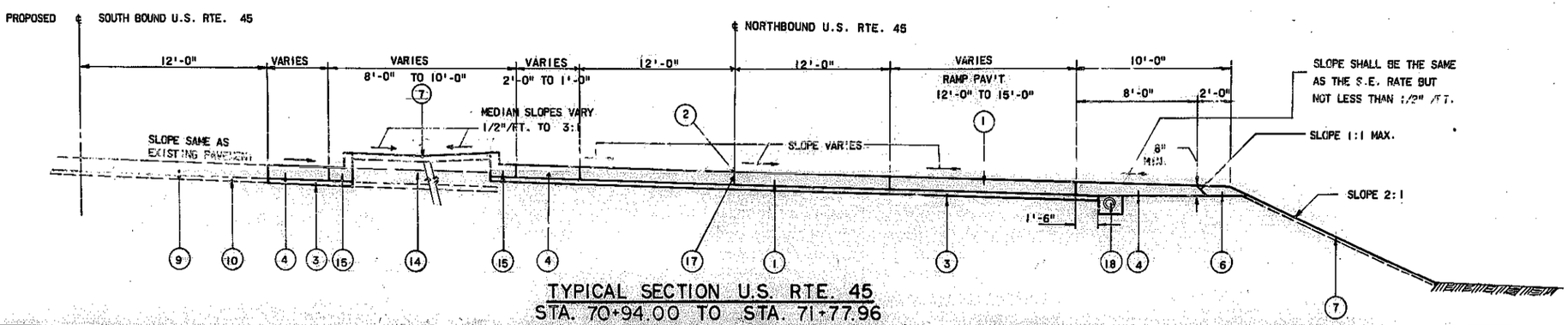
1. STABILIZED SHOULDERS SHALL BE AS SHOWN ON THESE PLANS & CONSTRUCTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF STANDARD 2237
2. PIPE UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 2327
3. FOR PAVEMENT SLOPES REFER TO SHEETS 19 & 20
4. WHERE EARTH SLOPES VERY, REFER TO CROSS SECTION SHEETS 30 THRU 45.
5. 2:1 SLOPES ARE TO BE CROWN VETCH.



TYPICAL SECTION ACCESS ROAD



TYPICAL SECTION U.S. RTE. 45
STA. 68+82.27 TO STA. 70+94.00



TYPICAL SECTION U.S. RTE. 45
STA. 70+94.00 TO STA. 71+77.96

LEGEND

1. PORTLAND CEMENT CONCRETE PAVEMENT, 10"
2. PROFILE GRADE ELEVATIONS
3. STABILIZED SUB-BASE 4"
4. STABILIZED SHOULDER, 10"
5. SUB-BASE GRANULAR MATERIAL TYPE C
6. AGGREGATE SHOULDER TYPE A
7. 4" TOPSOIL AND SOD
8. COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
9. EXISTING PAVEMENT
10. EXISTING SUB-BASE
11. BITUMINOUS BASE COURSE, 10"
12. 1 1/2" BITUMINOUS CONCRETE BINDER COURSE
13. 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
14. REMOVE EXISTING PAVEMENT
15. COMBINATION CONCRETE CURB & GUTTER, TYPE SB-9.12
16. AGGREGATE SHOULDER, TYPE B
17. SAWED OR POLYETHELENE SHEET LONGITUDINAL JOINT
18. PIPE UNDER DRAINS

ILLINOIS DEPARTMENT OF TRANSPORTATION

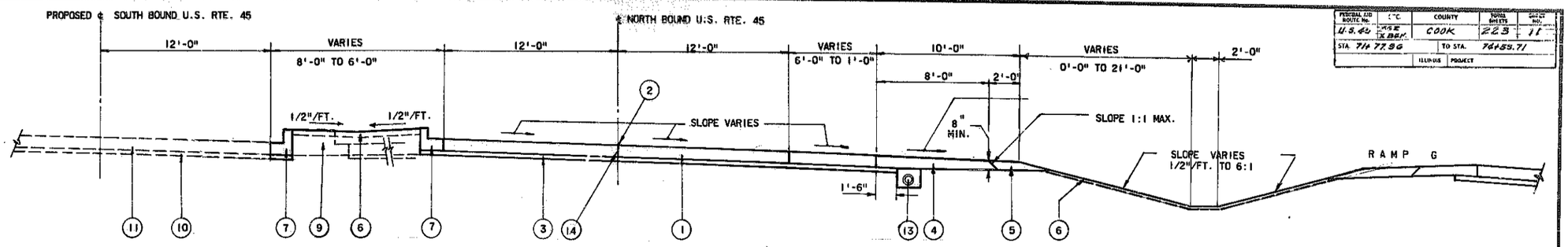
TYPICAL SECTIONS

U.S. ROUTE 45

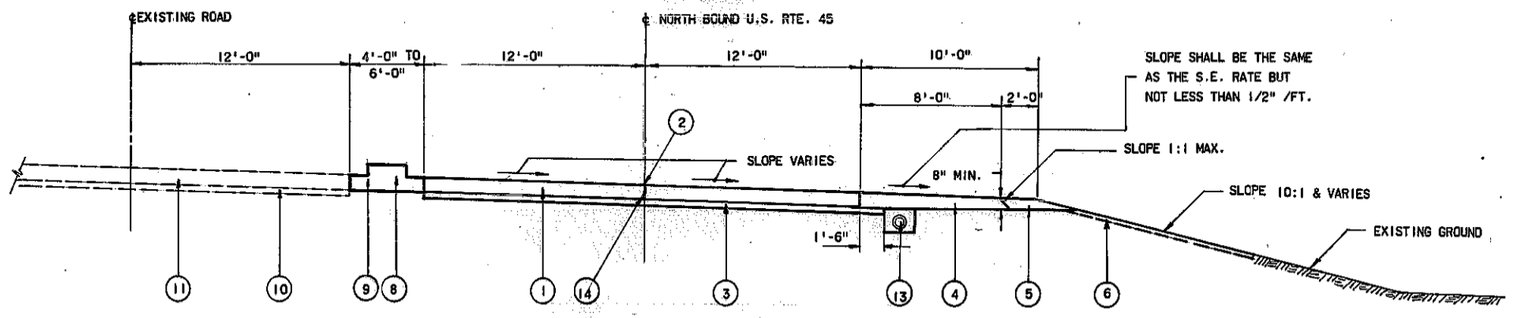
SCALE NONE DRAWN BY R.M.

DATE 4/30/75 CHECKED BY J.G.

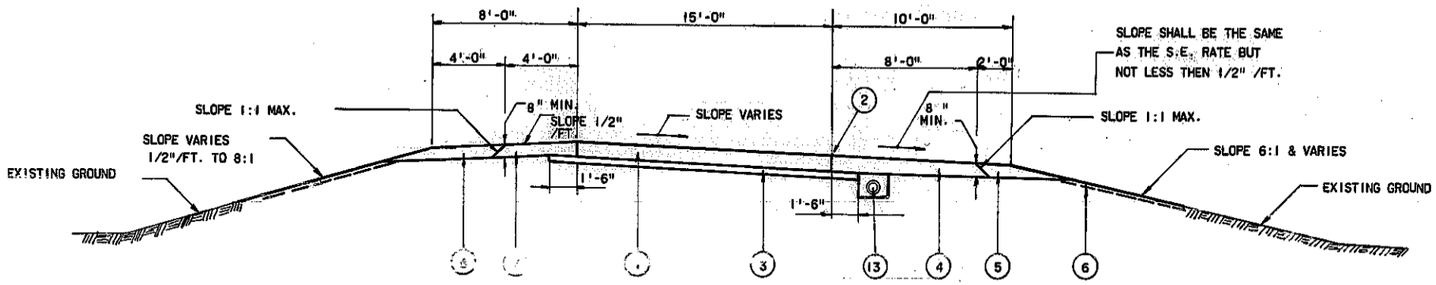
PRINCIPAL ROUTE No.	I.C.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	SEC. 13BR.	COOK	223	11
STA. 71+77.96		TO STA. 74+53.71		
	ILLINOIS	PROJECT		



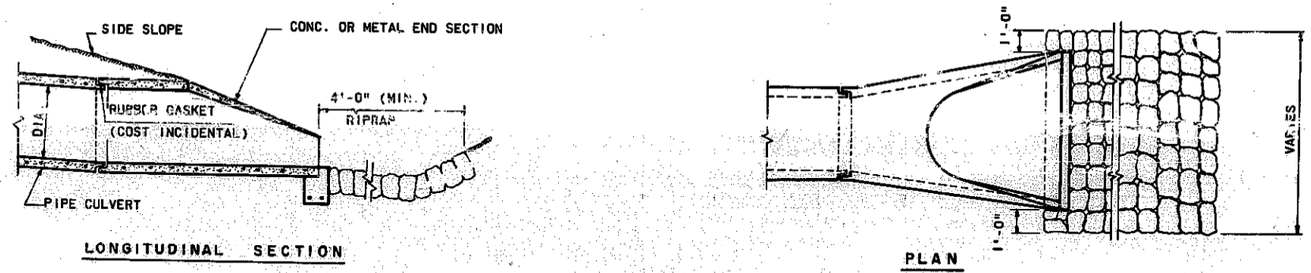
TYPICAL SECTION U.S. RTE. 45
STA. 71+77.96 TO STA. 72+59.28



TYPICAL SECTION U.S. RTE. 45
STA. 72+59.28 TO STA. 74+53.71



TYPICAL SECTION RAMP G
STA. 146+78.52 TO STA. 149+53.51



RIP RAP DETAIL
NO SCALE

LEGEND:

1 PORTLAND CEMENT CONCRETE PAVEMENT, 10"
2 PROFILE GRADE ELEVATIONS.
3 STABILIZED SUB-BASE, 4"
4 STABILIZED SHOULDER, 10"
5 AGGREGATE SHOULDER TYPE- A
6 4" TOP SOIL & SOD
7 COMBINATION CONCRETE CURB & GUTTER, TYPE SB 9.12
8 CONCRETE MEDIAN TYPE SB-9.12
9 EXISTING CONCRETE MEDIAN TO BE REMOVED
10 EXISTING SUB-BASE
11 EXISTING PAVEMENT
12 EXISTING MEDIAN SURFACE TO BE REMOVED
13 PIPE UNDERDRAIN
14 SAWED OR POLYETHELENE SHEET LONGITUDINAL JOINT

NOTE:

1. STABILIZED SHOULDERS SHALL BE AS SHOWN ON THESE PLANS & CONSTRUCTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF STANDARD 2237
2. PIPE UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD 2327
3. FOR PAVEMENT SLOPES REFER TO SHEETS 19 & 20
4. WHERE EARTH SLOPES VERY, REFER TO CROSS SECTION SHEETS 30 THRU 45.
5. 2:1 SLOPES ARE TO BE CROWN VETCH.

ILLINOIS DEPARTMENT OF TRANSPORTATION

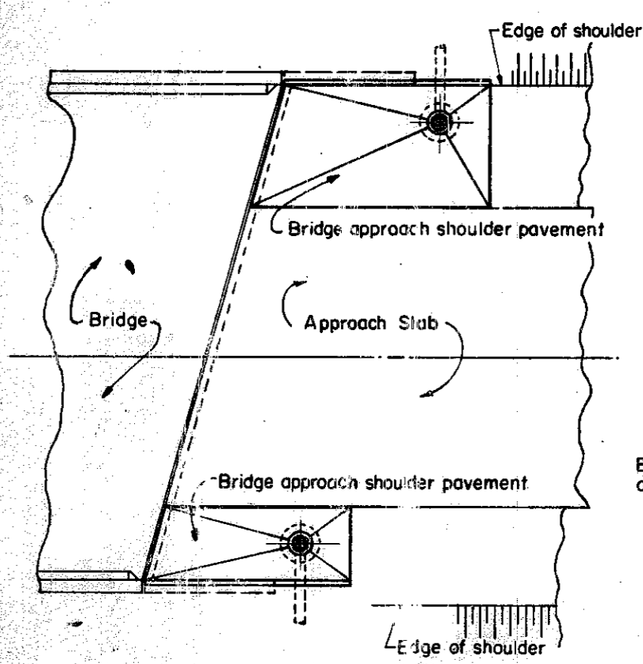
TYPICAL SECTIONS

U.S. ROUTE 45

SCALE NONE DRAWN BY R.M.
DATE 4/30/75 CHECKED BY J.G.

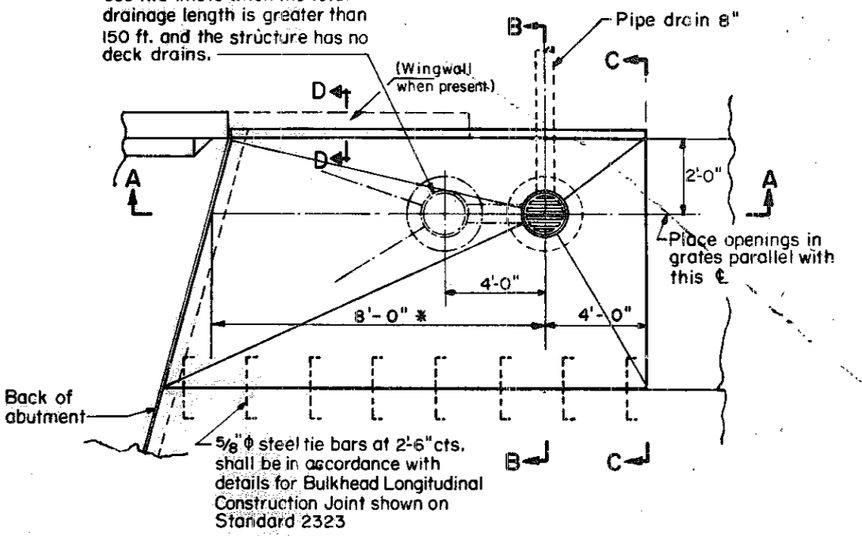
STANDARD DESIGN
BRIDGE APPROACH SHOULDER PAVEMENT

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.45	462.X 39R	Cook	225	11A

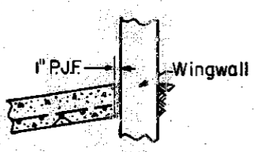


GENERAL PLAN

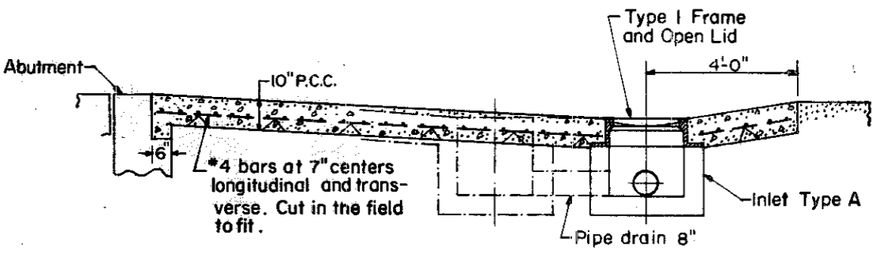
NOTE:
Use two inlets when the total drainage length is greater than 150 ft. and the structure has no deck drains.



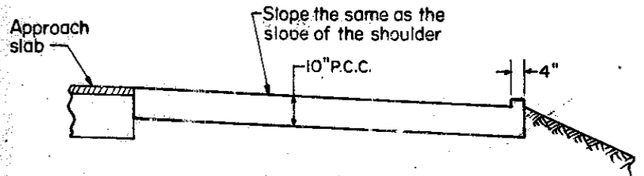
TYPICAL DETAIL PLAN



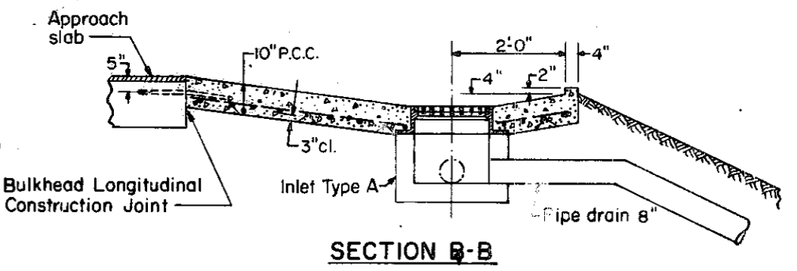
SECTION D-D
When wingwall is present



SECTION A-A



SECTION C-C



SECTION B-B

The material for Pipe Drains 8" shall be either corrugated steel or aluminum alloy pipe.

Inlets and pipe drains will be paid for in accordance with the Standard Specifications.

Bridge approach shoulder pavement will be measured in square yards and paid for as P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT which shall include the cost of tie bars, reinforcement, and joint fillers.

GENERAL NOTES

When inlets are not required, surface of the shoulder pavement shall be finished to provide a smooth transition from back of the abutment to normal approach roadway shoulder.

See bridge approach slab plans for location of bridge approach shoulder pavement.

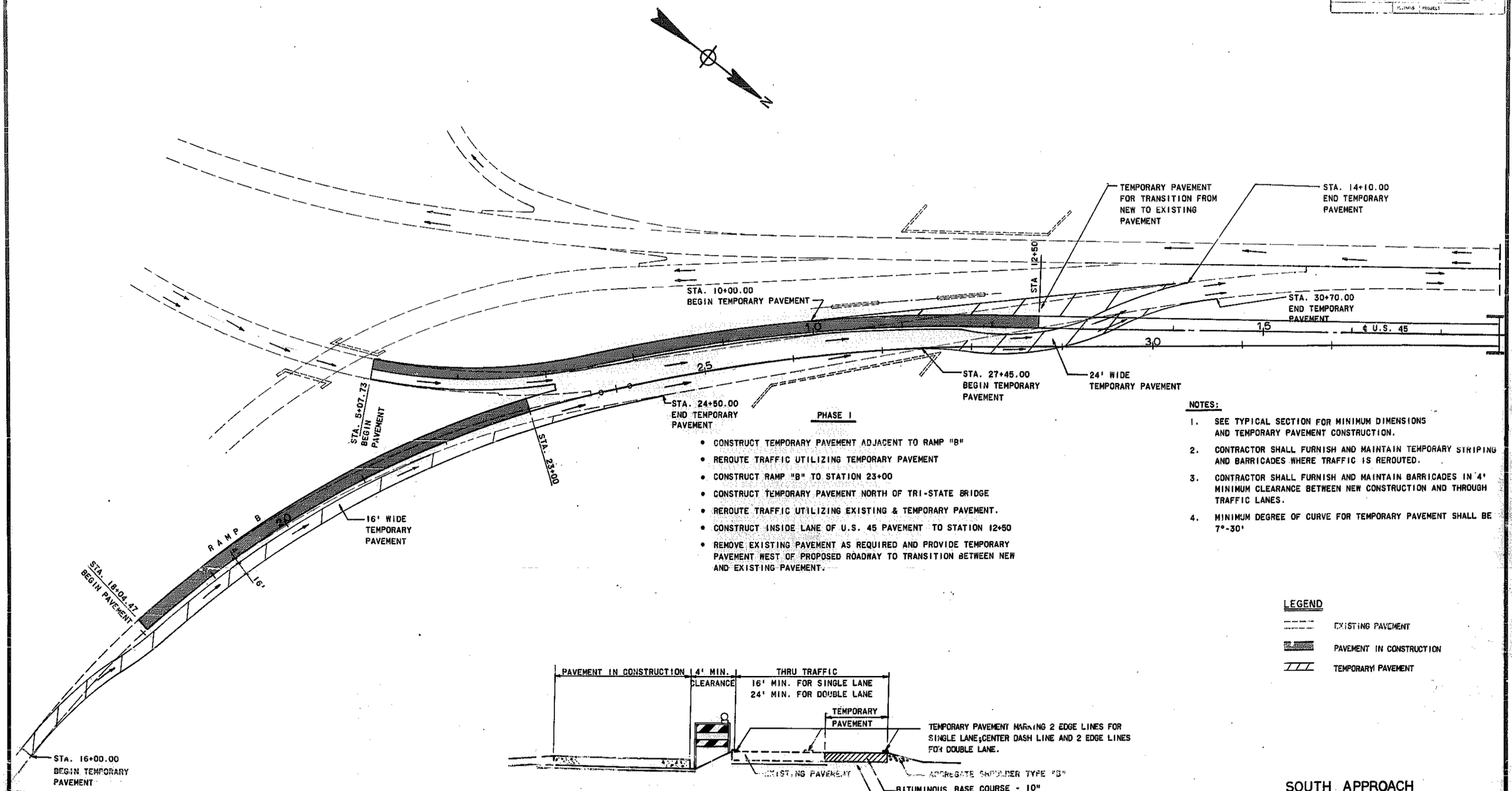
For placement of drainage elements on existing construction with existing rigid approach pavement, substitute expansion anchor bolts for tie bars. For non-rigid approaches, shoulder pavement will be as shown except omit tie bars.

* If a wingwall is present, change the 8 foot dimension so that the center line of the 8inch drain pipe will be located 3 foot past the end of the wall.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ISSUED 12-1-69	
	REVISIONS	
PASSED 197	W.F.	12-1-69
Engineer of Design Operations	W.F.	3-18-70
APPROVED 197	W.F.	8-1-72
Engineer of Design	D.W.	

(Half size) W.F.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	422 X84R	COOK	223	12
STA. 5+07.73		TO STA. 171+66.08		
		ILLINOIS PROJECT		



PHASE I

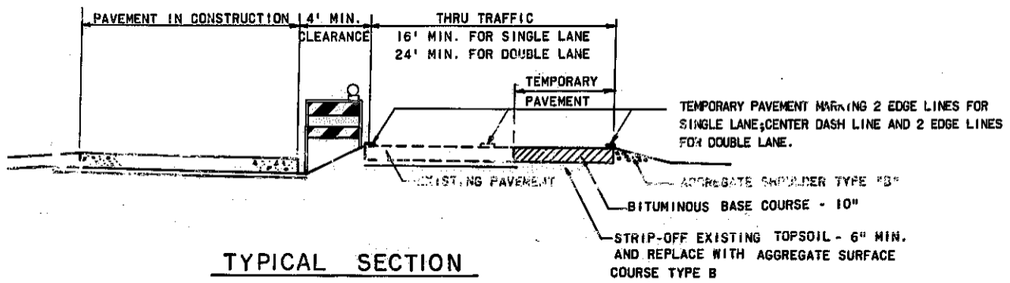
- CONSTRUCT TEMPORARY PAVEMENT ADJACENT TO RAMP "B"
- REROUTE TRAFFIC UTILIZING TEMPORARY PAVEMENT
- CONSTRUCT RAMP "B" TO STATION 23+00
- CONSTRUCT TEMPORARY PAVEMENT NORTH OF TRI-STATE BRIDGE
- REROUTE TRAFFIC UTILIZING EXISTING & TEMPORARY PAVEMENT.
- CONSTRUCT INSIDE LANE OF U.S. 45 PAVEMENT TO STATION 12+50
- REMOVE EXISTING PAVEMENT AS REQUIRED AND PROVIDE TEMPORARY PAVEMENT WEST OF PROPOSED ROADWAY TO TRANSITION BETWEEN NEW AND EXISTING PAVEMENT.

NOTES:

1. SEE TYPICAL SECTION FOR MINIMUM DIMENSIONS AND TEMPORARY PAVEMENT CONSTRUCTION.
2. CONTRACTOR SHALL FURNISH AND MAINTAIN TEMPORARY STRIPING AND BARRICADES WHERE TRAFFIC IS REROUTED.
3. CONTRACTOR SHALL FURNISH AND MAINTAIN BARRICADES IN 4' MINIMUM CLEARANCE BETWEEN NEW CONSTRUCTION AND THROUGH TRAFFIC LANES.
4. MINIMUM DEGREE OF CURVE FOR TEMPORARY PAVEMENT SHALL BE 7°-30'

LEGEND

- EXISTING PAVEMENT
- PAVEMENT IN CONSTRUCTION
- TEMPORARY PAVEMENT



TYPICAL SECTION

DIMENSIONS AND MATERIALS SHOWN ARE TYPICAL THROUGHOUT PROJECT

SOUTH APPROACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

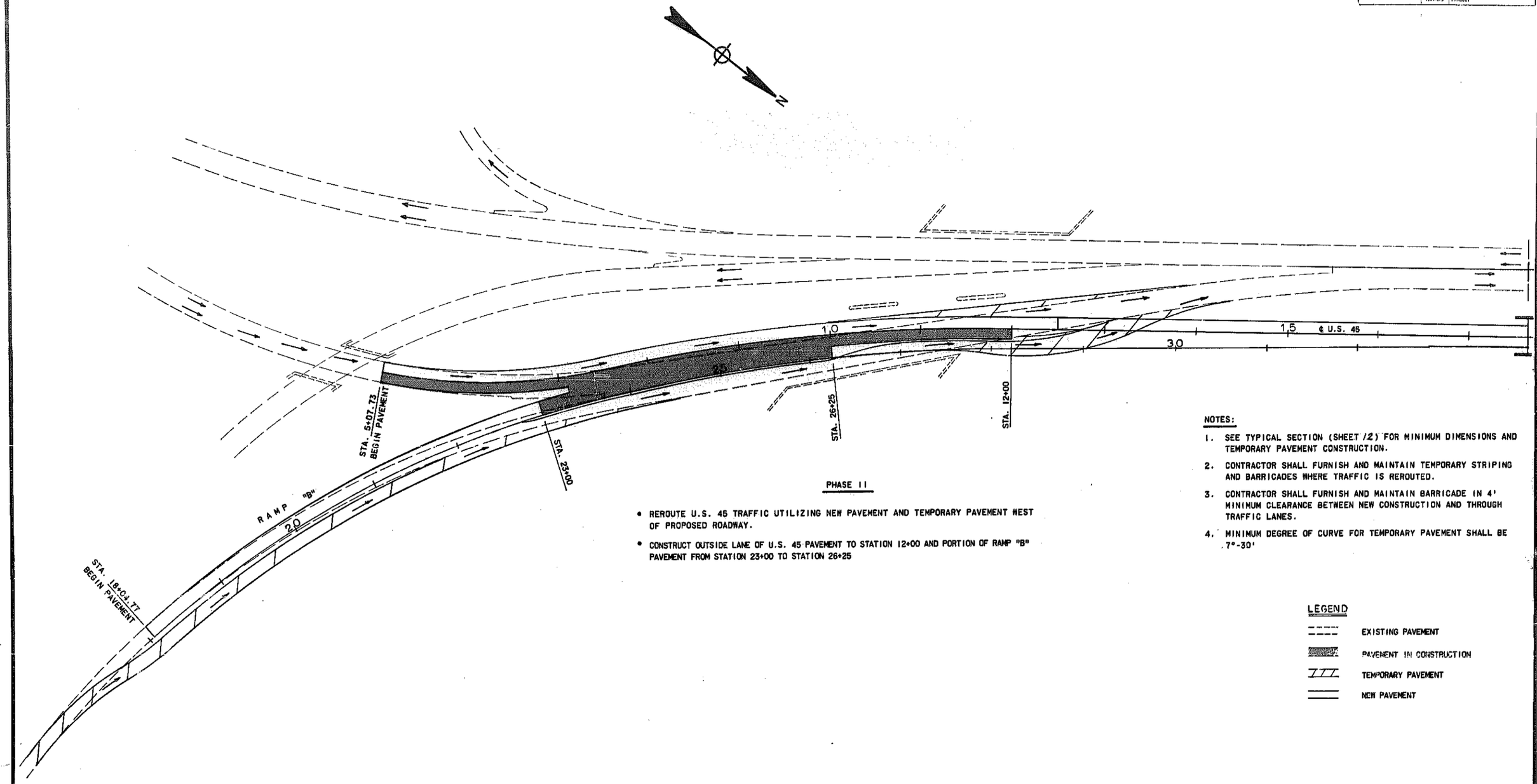
SUGGESTED CONSTRUCTION PROCEDURE & MAINTENANCE OF TRAFFIC

PHASE I

SCALE 1"=50' DRAWN BY B.K.

DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	262 1 & 8 & R	COOK	22 S	19
STA. 5+07.73		TO STA. 17+62.08		
	ILLINOIS	PROJECT		



PHASE II

- REROUTE U.S. 45 TRAFFIC UTILIZING NEW PAVEMENT AND TEMPORARY PAVEMENT WEST OF PROPOSED ROADWAY.
- CONSTRUCT OUTSIDE LANE OF U.S. 45 PAVEMENT TO STATION 12+00 AND PORTION OF RAMP "B" PAVEMENT FROM STATION 23+00 TO STATION 26+25

NOTES:

1. SEE TYPICAL SECTION (SHEET 12) FOR MINIMUM DIMENSIONS AND TEMPORARY PAVEMENT CONSTRUCTION.
2. CONTRACTOR SHALL FURNISH AND MAINTAIN TEMPORARY STRIPING AND BARRICADES WHERE TRAFFIC IS REROUTED.
3. CONTRACTOR SHALL FURNISH AND MAINTAIN BARRICADE IN 4' MINIMUM CLEARANCE BETWEEN NEW CONSTRUCTION AND THROUGH TRAFFIC LANES.
4. MINIMUM DEGREE OF CURVE FOR TEMPORARY PAVEMENT SHALL BE 7°-30'

LEGEND

- EXISTING PAVEMENT
- PAVEMENT IN CONSTRUCTION
- TEMPORARY PAVEMENT
- NEW PAVEMENT

SOUTH APPROACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

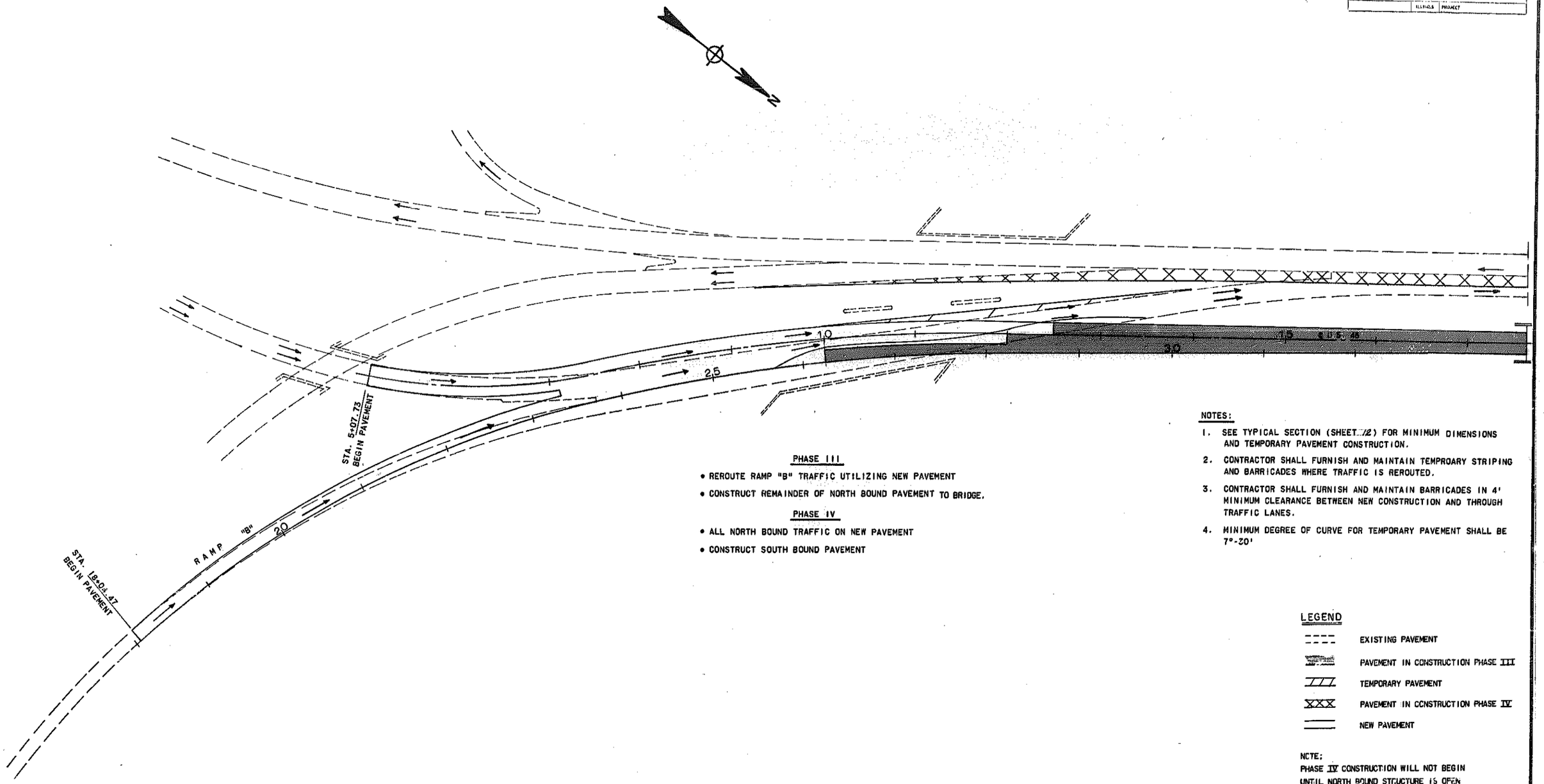
SUGGESTED CONSTRUCTION PROCEDURE
&
MAINTENANCE OF TRAFFIC

PHASE II

SCALE: 1"=50' DRAWN BY B.K.

DATE: 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
U.S. 45	48E 1 BRGE.	COOK	225	14
STA. 5+07.73		TO STA. 17+66.08		
	ILLINOIS	PROJECT		



PHASE III

- REROUTE RAMP "B" TRAFFIC UTILIZING NEW PAVEMENT
- CONSTRUCT REMAINDER OF NORTH BOUND PAVEMENT TO BRIDGE.

PHASE IV

- ALL NORTH BOUND TRAFFIC ON NEW PAVEMENT
- CONSTRUCT SOUTH BOUND PAVEMENT

NOTES:

1. SEE TYPICAL SECTION (SHEET 12) FOR MINIMUM DIMENSIONS AND TEMPORARY PAVEMENT CONSTRUCTION.
2. CONTRACTOR SHALL FURNISH AND MAINTAIN TEMPROARY STRIPING AND BARRICADES WHERE TRAFFIC IS REROUTED.
3. CONTRACTOR SHALL FURNISH AND MAINTAIN BARRICADES IN 4' MINIMUM CLEARANCE BETWEEN NEW CONSTRUCTION AND THROUGH TRAFFIC LANES.
4. MINIMUM DEGREE OF CURVE FOR TEMPORARY PAVEMENT SHALL BE 7°-30'

LEGEND

- EXISTING PAVEMENT
- PAVEMENT IN CONSTRUCTION PHASE III
- TEMPORARY PAVEMENT
- PAVEMENT IN CONSTRUCTION PHASE IV
- NEW PAVEMENT

NOTE:
PHASE IV CONSTRUCTION WILL NOT BEGIN UNTIL NORTH BOUND STRUCTURE IS OPEN FOR TRAFFIC.

SOUTH APPROACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

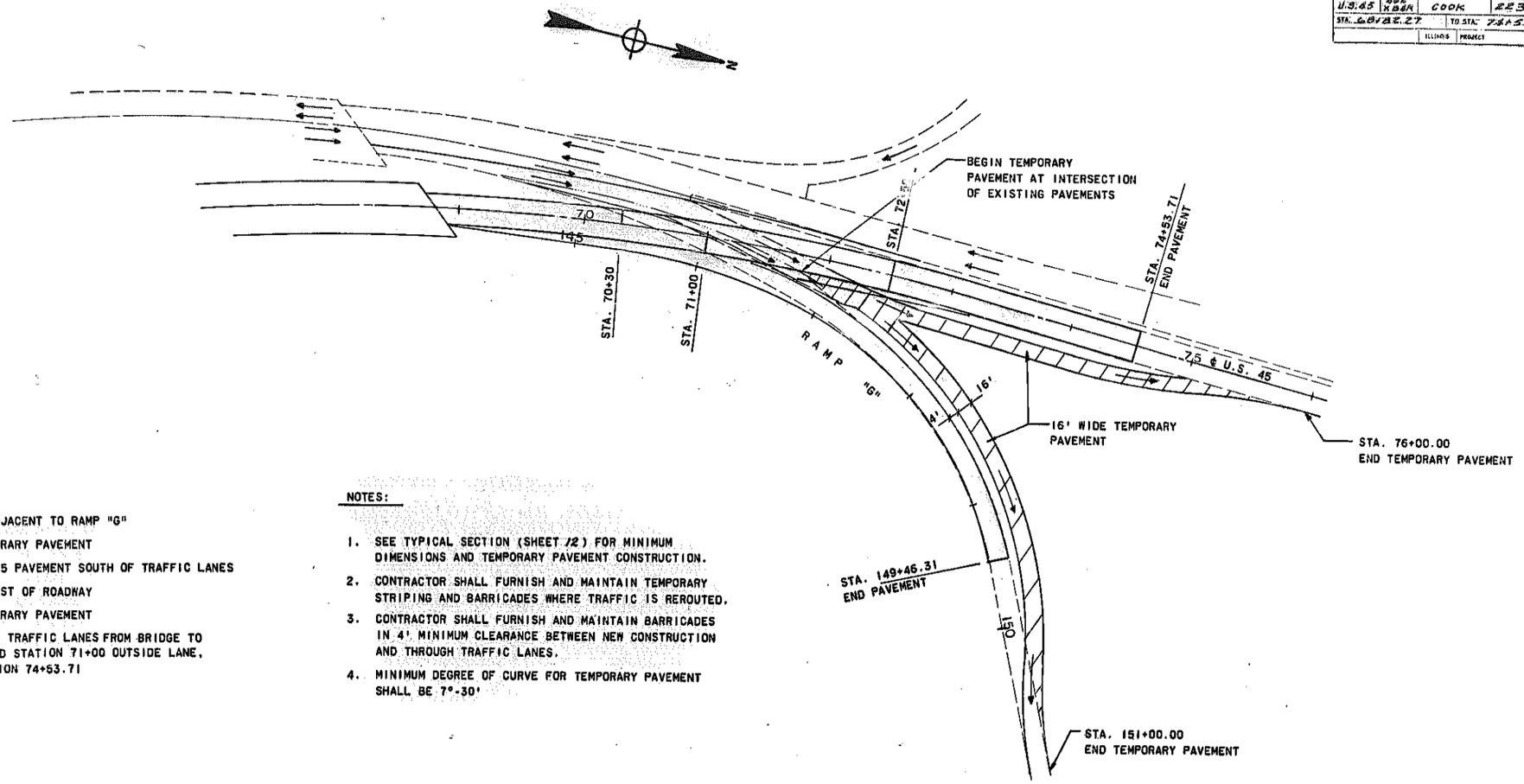
SUGGESTED CONSTRUCTION PROCEDURE
&
MAINTENANCE OF TRAFFIC

PHASE III & IV

SCALE 1"=50' DRAWN BY B.K.

DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE NUMBER	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	49E KBR	COOK	223	15
STA. 68+82.27		TO STA. 75+58.71		
	ILLINOIS	PROJECT		



PHASE 1

- CONSTRUCT TEMPORARY PAVEMENT ADJACENT TO RAMP "G"
- REROUTE TRAFFIC UTILIZING TEMPORARY PAVEMENT
- CONSTRUCT NEW RAMP "G" & U.S. 45 PAVEMENT SOUTH OF TRAFFIC LANES
- CONSTRUCT TEMPORARY PAVEMENT EAST OF ROADWAY
- REROUTE TRAFFIC UTILIZING TEMPORARY PAVEMENT
- CONSTRUCT NEW PAVEMENT NORTH OF TRAFFIC LANES FROM BRIDGE TO STATION 70+30 OF INSIDE LANE AND STATION 71+00 OUTSIDE LANE, AND FROM STATION 72+50 TO STATION 74+53.71

NOTES:

1. SEE TYPICAL SECTION (SHEET 12) FOR MINIMUM DIMENSIONS AND TEMPORARY PAVEMENT CONSTRUCTION.
2. CONTRACTOR SHALL FURNISH AND MAINTAIN TEMPORARY STRIPING AND BARRICADES WHERE TRAFFIC IS REROUTED.
3. CONTRACTOR SHALL FURNISH AND MAINTAIN BARRICADES IN 4' MINIMUM CLEARANCE BETWEEN NEW CONSTRUCTION AND THROUGH TRAFFIC LANES.
4. MINIMUM DEGREE OF CURVE FOR TEMPORARY PAVEMENT SHALL BE 7°-30'

LEGEND

- EXISTING PAVEMENT.
- PAVEMENT IN CONSTRUCTION
- TEMPORARY PAVEMENT

NORTH APPROACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

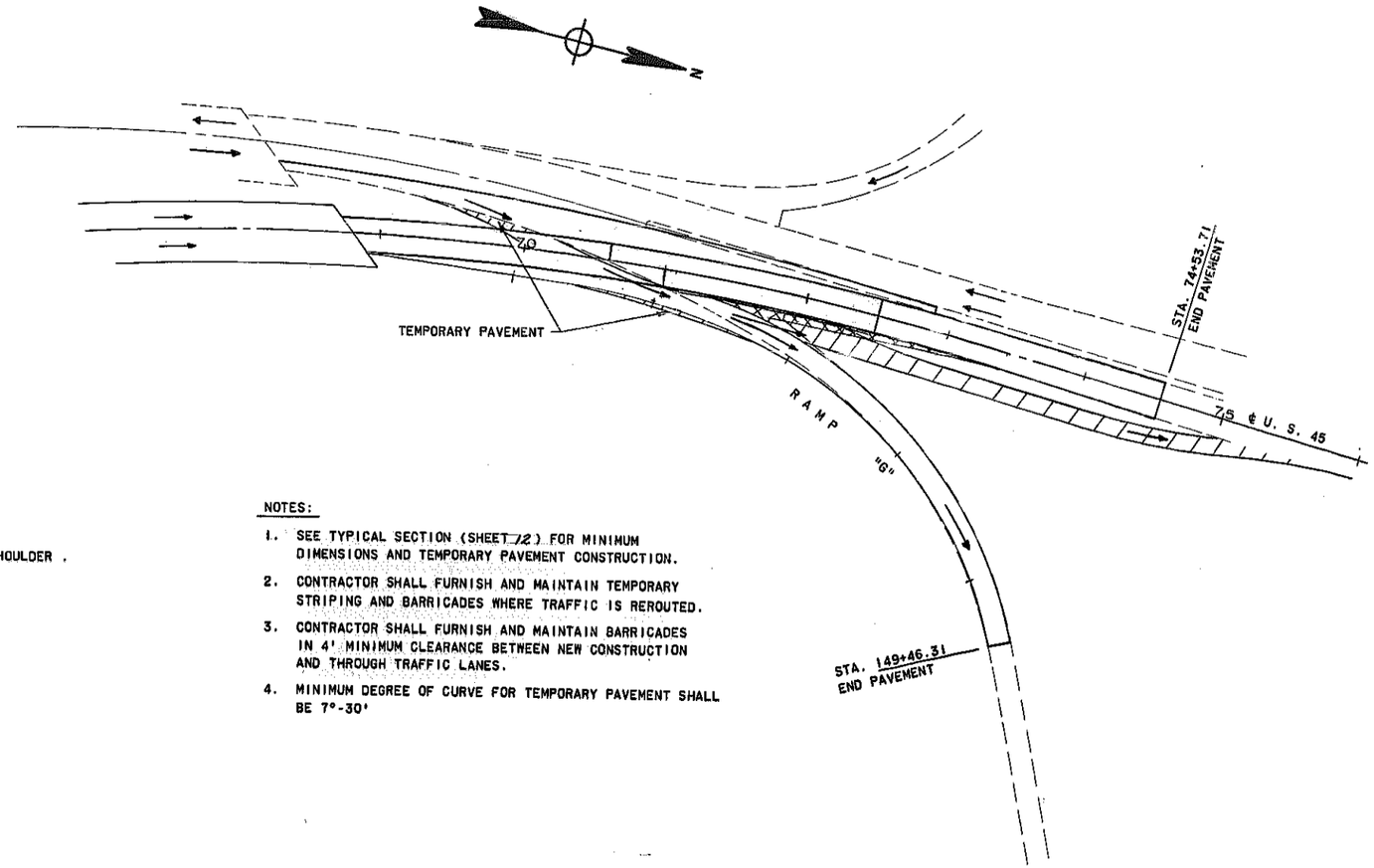
SUGGESTED CONSTRUCTION PROCEDURE
&
MAINTENANCE OF TRAFFIC

PHASE I

SCALE 1"=50' DRAWN BY B.K.

DATE 12/12/79 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.45	482 HRAA	COOK	223	16
STA. 68+82.27	TO STA. 74+53.71			
	ILLINOIS	PROJECT		



PHASE II

- CONSTRUCT TEMPORARY PAVEMENT EAST OF NORTH BOUND U.S. 45 PAVEMENT AT STATION 70+00 AND RAMP "G" SHOULDER .
- REROUTE TRAFFIC UTILIZING NEW PAVEMENT AT SOUTH END OF WORK AREA AND NEW RAMP "G" PAVEMENT
- CONSTRUCT REMAINDER OF PAVEMENT

PHASE III

- ALL NORTH BOUND TRAFFIC ON NEW PAVEMENT
- CONSTRUCT GORE AREA AT RAMP "G"

NOTES:

1. SEE TYPICAL SECTION (SHEET 12) FOR MINIMUM DIMENSIONS AND TEMPORARY PAVEMENT CONSTRUCTION.
2. CONTRACTOR SHALL FURNISH AND MAINTAIN TEMPORARY STRIPING AND BARRICADES WHERE TRAFFIC IS REROUTED.
3. CONTRACTOR SHALL FURNISH AND MAINTAIN BARRICADES IN 4' MINIMUM CLEARANCE BETWEEN NEW CONSTRUCTION AND THROUGH TRAFFIC LANES.
4. MINIMUM DEGREE OF CURVE FOR TEMPORARY PAVEMENT SHALL BE 7°-30'

LEGEND

- EXISTING PAVEMENT
- PAVEMENT IN CONSTRUCTION PHASE II
- TEMPORARY PAVEMENT
- PAVEMENT IN CONSTRUCTION PHASE III

NORTH APPROACH

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUGGESTED CONSTRUCTION PROCEDURE
&
MAINTENANCE OF TRAFFIC
PHASE II & III

SCALE 1"=50' DRAWN BY B.K.
DATE 12/12/79 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	262	COOK	223	17
STA. 5+07.73		TO STA.	17+66.08	
	ILLINOIS	PROJECT		

CURVE DATA:

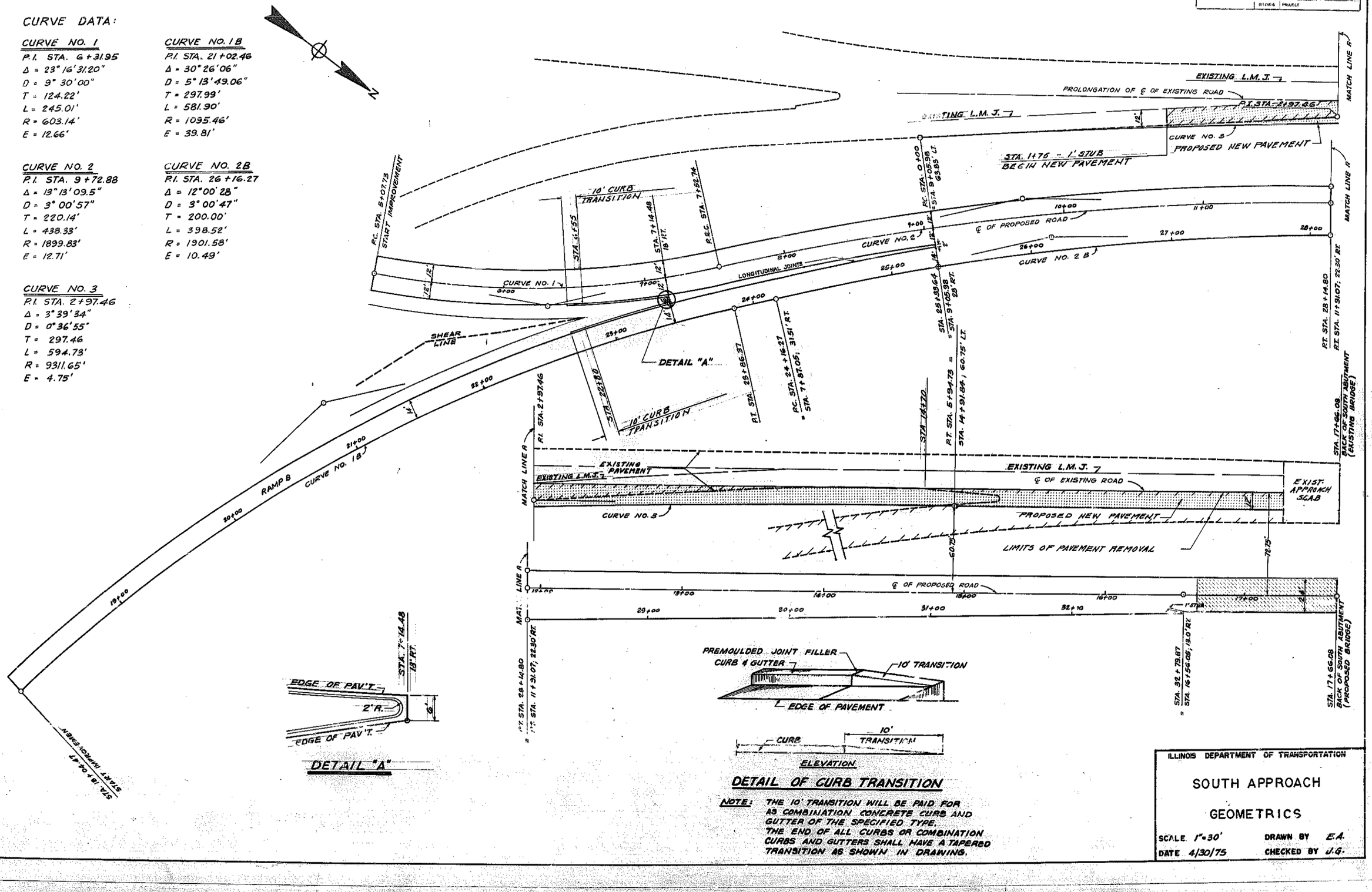
CURVE NO. 1
P.I. STA. 6+31.95
Δ = 23° 16' 31.20"
D = 9° 30' 00"
T = 124.22'
L = 245.01'
R = 603.14'
E = 12.66'

CURVE NO. 1B
P.I. STA. 21+02.46
Δ = 30° 26' 06"
D = 5° 13' 49.06"
T = 297.99'
L = 581.90'
R = 1095.46'
E = 39.81'

CURVE NO. 2
P.I. STA. 9+72.88
Δ = 13° 13' 09.5"
D = 3° 00' 57"
T = 220.14'
L = 438.33'
R = 1899.83'
E = 12.71'

CURVE NO. 2B
P.I. STA. 26+16.27
Δ = 12° 00' 28"
D = 3° 00' 47"
T = 200.00'
L = 398.52'
R = 1901.58'
E = 10.49'

CURVE NO. 3
P.I. STA. 2+97.46
Δ = 3° 39' 34"
D = 0° 36' 55"
T = 297.46
L = 594.73'
R = 9311.65'
E = 4.75'



DETAIL OF CURB TRANSITION

NOTE: THE 10' TRANSITION WILL BE PAID FOR AS COMBINATION CONCRETE CURB AND GUTTER OF THE SPECIFIED TYPE. THE END OF ALL CURBS OR COMBINATION CURBS AND GUTTERS SHALL HAVE A TAPERED TRANSITION AS SHOWN IN DRAWING.

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH

GEOMETRICS

SCALE 1"=30' DRAWN BY E.A.
DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	34E K88R	COOK	228	18
STA. 68+82.27	TO STA. 74+53.71			
	ILLINOIS			

P.C.C. STA. 70+59.18 BACK
EXISTING ABUTMENT = STA. 68+32.28 ; 61.5' LT.

EXIST. APPROACH SLAB

EXISTING PAVEMENT

PROPOSED NEW SHOULDER

℄ OF EXISTING CURVE NO. 4

℄ OF PROPOSED CURVE NO. 5

PROPOSED EDGE OF PAVEMENT TO BE CUT

CURVE NO. 5

LIMITS OF PAVEMENT REMOVAL

2' STUB

FACE OF CURB CURVE NO. 11

FACE OF CURB CURVE NO. 10

℄ OF PROPOSED CURVE NO. 7

STA. 71+15.02
EDGE PAV'T 12' LT.

STA. 72+59.28
EDGE PAV'T. 12' LT.

P.C.C. STA. 70+71.97
EXISTING ℄ = STA. 70+71.97
PROPOSED ℄ 32.99' LT.

2' STUB = 20.10' LT
STA. 71+36.40

GUTTER FLAG VARIES 1' TO 2'

P.C. STA. 61+17.12
= STA. 72+43.56
18.99' LT.

P.T. CURVE NO. 11

FROM STA. 72+59.28
BEGIN CONC. MEDIAN
TYPE S.B.-9.12

10' CONC. MEDIAN S.B.-9.12
TRANSITION

12' 12' 12' 12' 12' 12'

70+00 71+00 72+00 73+00 74+00

20' CURB & GUTTER TRANSITION

P.C. CURVE NO. 11
34.08' LT. STA. 68+77.04

49.44' 6.39'

69+00 144+00 145+00 146+00 147+00

RAMP CURVE NO. 8

15' 44.6'

1' STUB

SHEAR LINE

STA. 73+35.91; 18' RT.

P.T. STA. 73+53.71

STA. 74+53.71
END IMPROVEMENT

STA. 68+31.22

STA. 68+32.28

BRIDGE APPROACH PAVEMENT SHOULDER

BACK OF NORTH ABUTMENT
STA. 68+82.27
STA. 143+94.75 - 13' RT.
= STA. 68+93 - 13' RT.

20' CURB & GUTTER TRANSITION

P.C. STA. 145+36.25
STA. 70+35.50 - 20' RT.

STA. 71+29; 13' RT.

P.C.C. STA. 146+78.52
= STA. 71+77.96 - 39.4' RT.

STA. 147+35.30; 15' LT.

148+00

RAMP CURVE NO. 9

RAMP 8

149+00

P.T. STA. 149+46.31
= STA. 73+88.41 - 201.15' RT.
EXISTING P.T. STA. 149+59.51
END IMPROVEMENT

15'

GUTTER FLAG VARIES 1' TO 2'

STA. 71+15.02

1' STUB

STA. 72+59.28

BACK OF CURB

TYPE SB-9.12 CURB & GUTTER

EDGE OF PAVEMENT

STABILIZED SHOULDER

12'

℄ OF PROPOSED CURVE NO. 7

DETAIL "A"

CURVE DATA

EXISTING CURVE NO. 4
P.I. STA. 13+23.95
Δ = 38° 41' 00"
D = 3° 45' 00"
T = 536.40'
L = 1031.55'
R = 1528.16'
E = [illegible]

PROPOSED CURVE NO. 5
P.I. STA. 12+50.69
Δ = 9° 26' 04"
D = 2° 14' 07"
T = 211.51'
L = 422.06'
R = 2563.15
E = 8.71'

PROPOSED CURVE NO. 6
P.I. STA. 12+49.70
Δ = 9° 26' 04"
D = 2° 14' 45"
T = 210.52
L = 420.08
R = 2551.15
E = 8.67'

PROPOSED CURVE NO. 7
P.I. STA. 66+90.48
Δ = 38° 41' 00"
D = 3° 48' 00"
T = 718.27'
L = 1381.55'
R = 2046.28
E = 122.40

RAMP CURVE NO. 8
P.I. STA. 146+07.96
Δ = 17° 47' 02"
D = 12° 30' 00"
T = 71.71'
L = 142.27'
R = 458.37'
E = 5.58'

RAMP CURVE NO. 9
P.I. STA. 148+23.10
Δ = 55° 33' 30.46"
D = 20° 00' 00"
T = 144.56'
L = 267.79'
R = 286.48'
E = 34.42'

PROPOSED CURVE NO. 10
Δ = 12° 10' 09.26"
D = 2° 31' 58.32"
T = 241.13'
L = 480.45'
R = 2262.09'
E = 12.82'

PROPOSED CURVE NO. 11
Δ = 11° 00' 40.10"
D = 2° 50' 32.26"
T = 194.30'
L = 387.40'
R = 2015.83'
E = 9.34'

ILLINOIS DEPARTMENT OF TRANSPORTATION

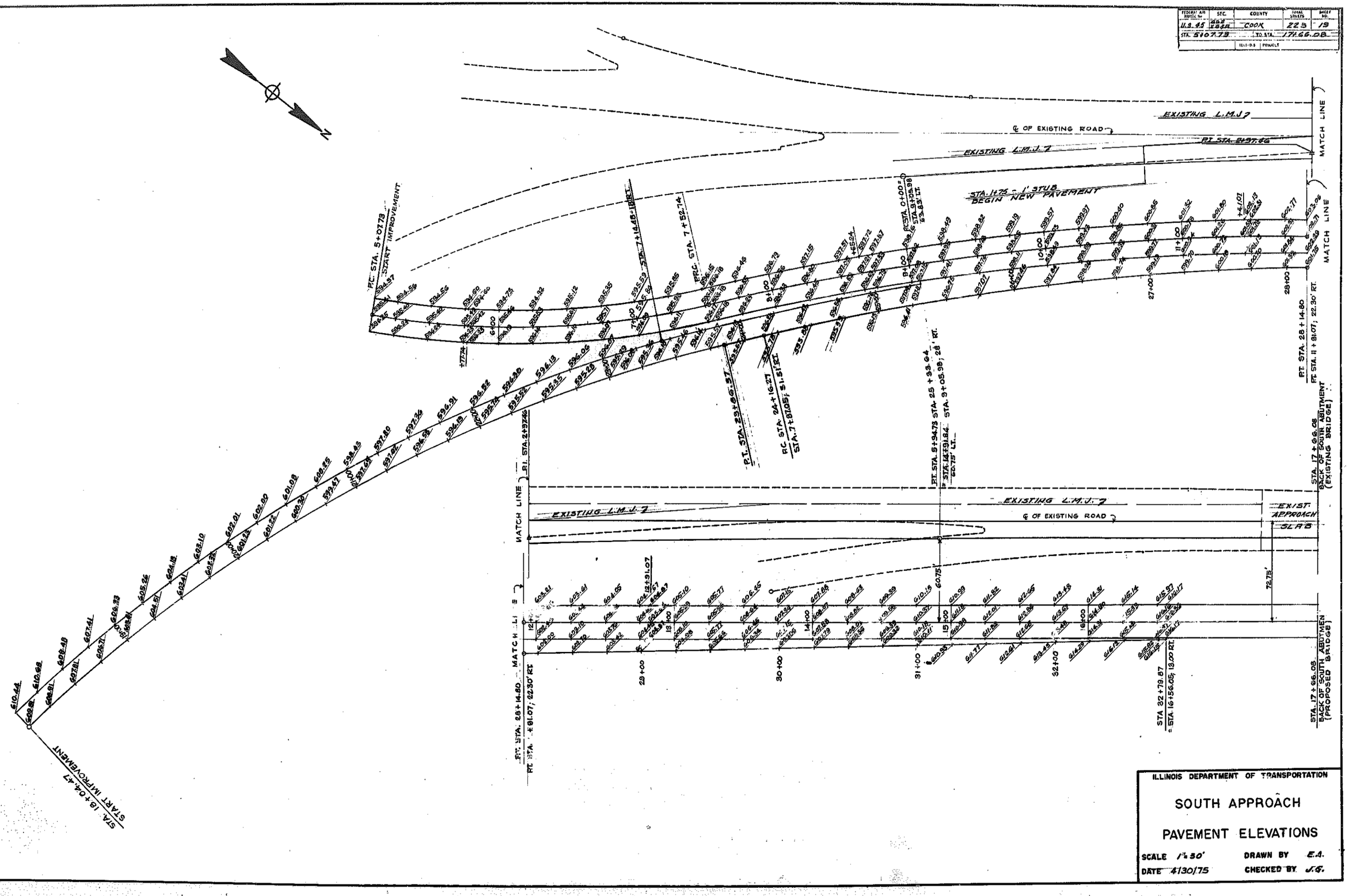
NORTH APPROACH

GEOMETRICS

SCALE 1"=20' DRAWN BY E.A.

DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	12B,R	COOK	223	19
STA. 5+07.73	TO STA. 171+66.08			
	ILLI-DOT	PROJECT		



ILLINOIS DEPARTMENT OF TRANSPORTATION

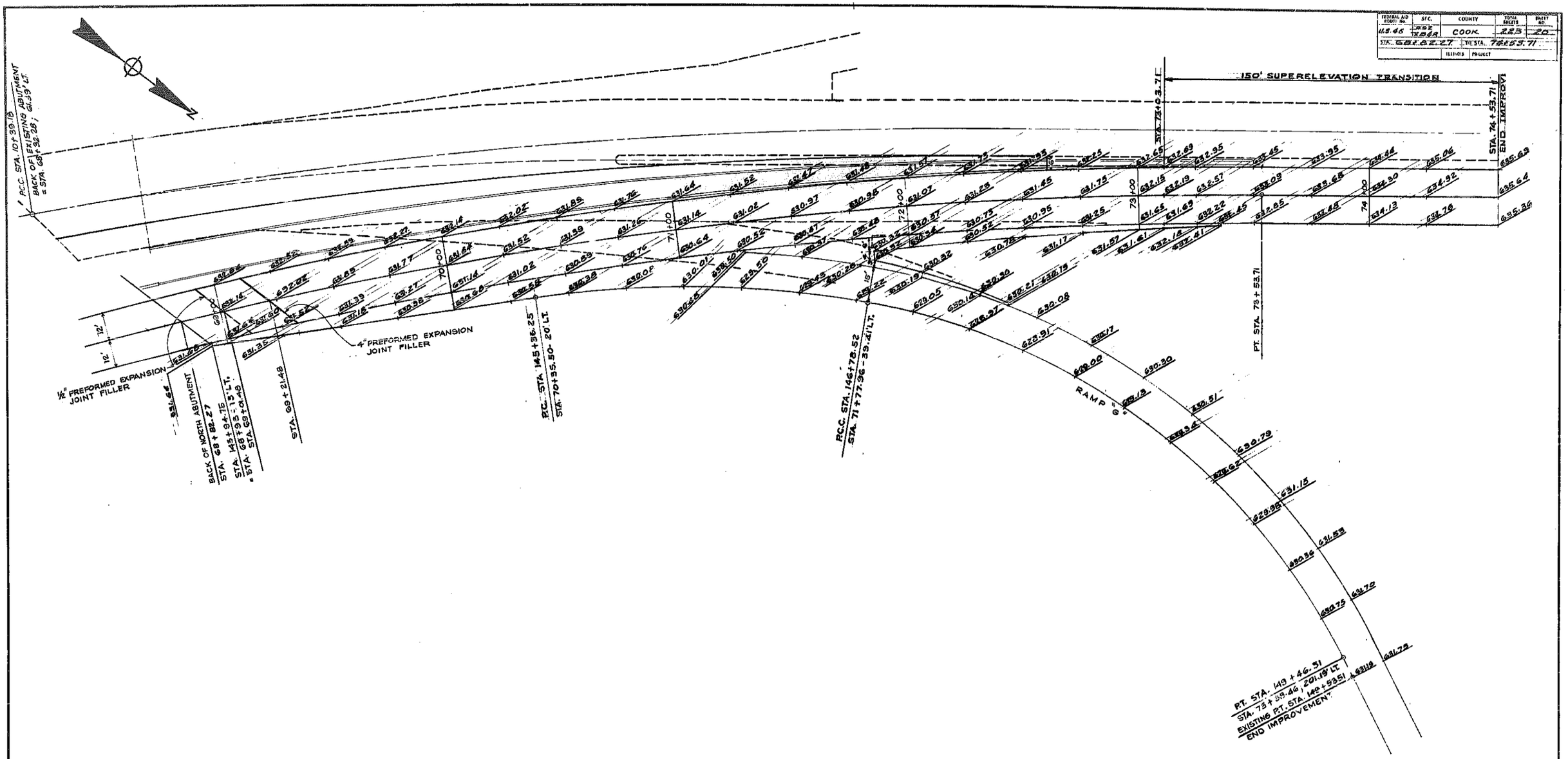
SOUTH APPROACH

PAVEMENT ELEVATIONS

SCALE 1"=50' DRAWN BY E.A.

DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
115.46	662 T&BA	COOK	223	20
STA. 682+27.27		TYP. STA. 76+53.71		
		ILLINOIS	PROJECT	



ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTH APPROACH

PAVEMENT ELEVATIONS

SCALE 1"=20' DRAWN BY E.A.

DATE 4/30/75 CHECKED BY J.G.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.45	46Z IHPGR	COOK	223	21
STA.	TO STA.	ILLINOIS PROJECT		

PROPOSED PROFILE LINE

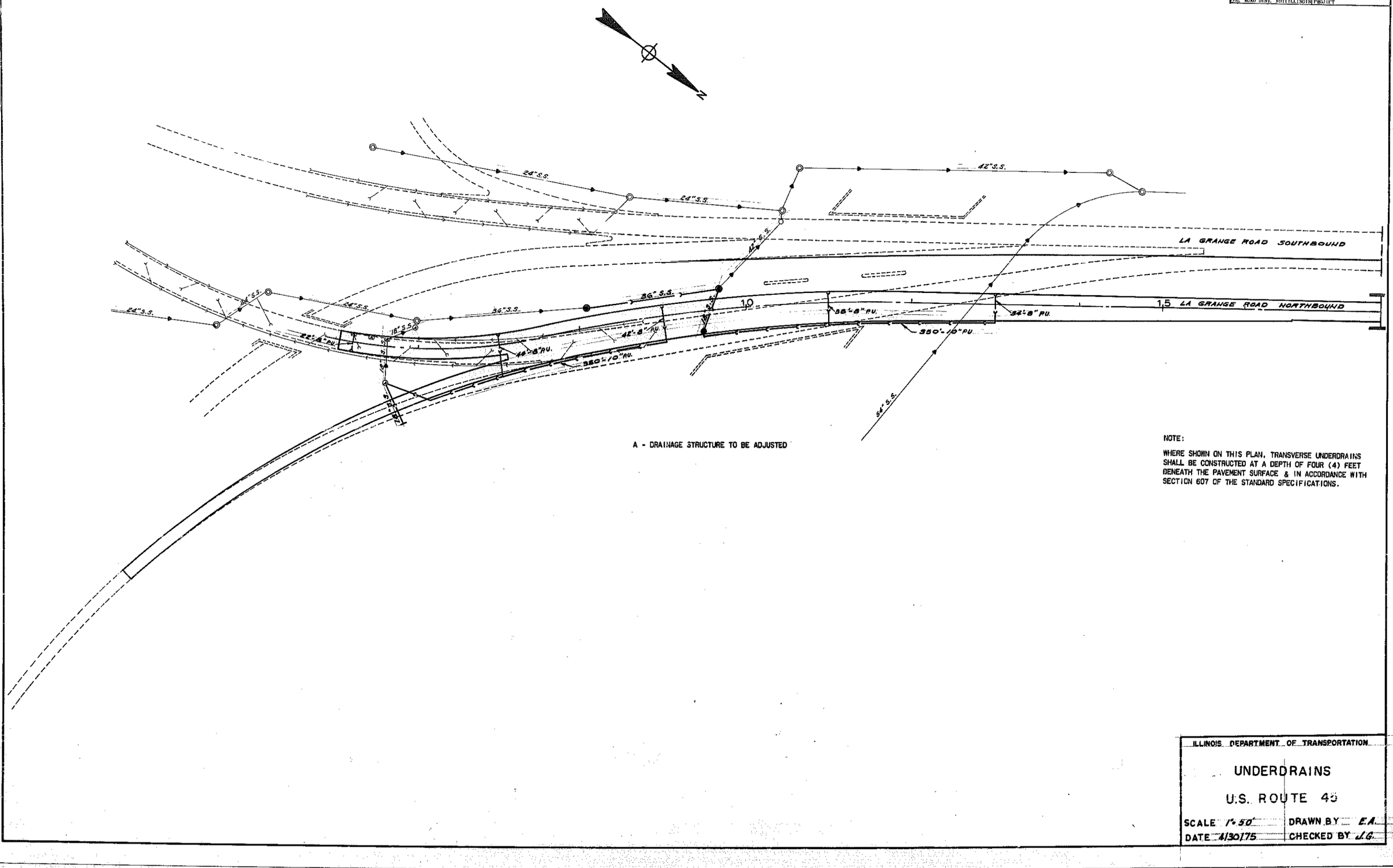
EXISTING GRADE LINE

+0.85% +3.00% 0.00% -4.24% 0.00%

P.V.C. STA. 33+99.62 ELEV. 595.89
P.V.I. STA. 34+99.62 ELEV. 596.24 200' V.C. E = +0.66
P.V.T. STA. 35+99.62 ELEV. 599.24
P.V.C. STA. 38+35 ELEV. 606.30
P.V.I. STA. 39+35 ELEV. 609.30 200' V.C. E = -0.75'
P.V.C.C. STA. 40+35 ELEV. 609.30
P.V.I. STA. 41+35 ELEV. 609.30 200' V.C. E = -1.06'
P.V.T. STA. 42+35 ELEV. 605.06
P.V.I. STA. 43+35 ELEV. 600.82 200' V.C. E = +1.06'
END IMPROVEMENT P.V.T. STA. 44+35

| | | |

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	482(HBR	COOK	225	22
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT		



A - DRAINAGE STRUCTURE TO BE ADJUSTED

NOTE:

WHERE SHOWN ON THIS PLAN, TRANSVERSE UNDERDRAINS SHALL BE CONSTRUCTED AT A DEPTH OF FOUR (4) FEET BENEATH THE PAVEMENT SURFACE & IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS.

ILLINOIS DEPARTMENT OF TRANSPORTATION

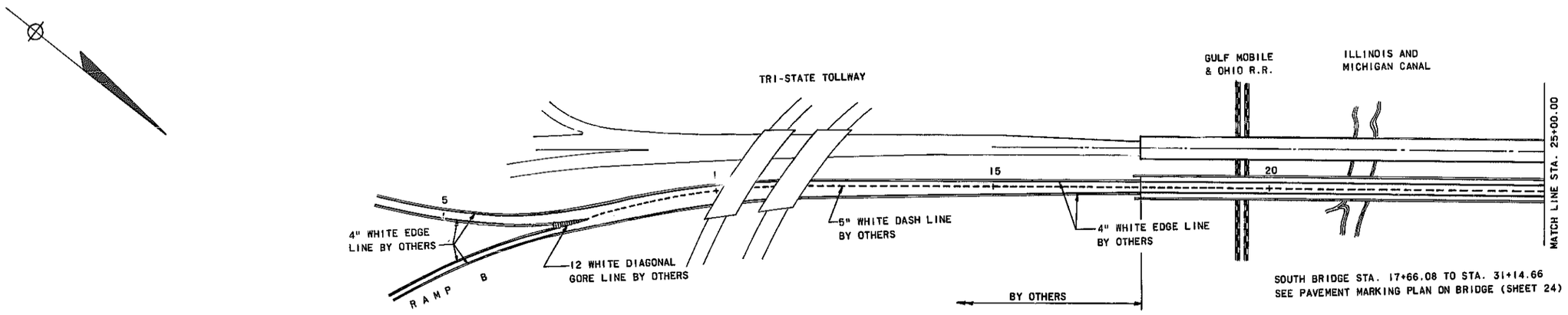
UNDERDRAINS

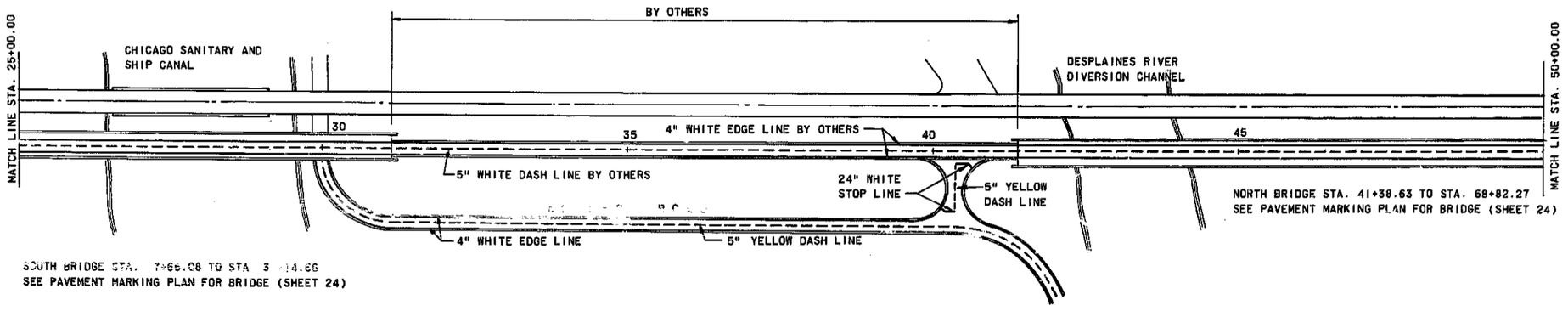
U.S. ROUTE 45

SCALE 1"=50' DRAWN BY E.A.

DATE 4/30/75 CHECKED BY J.G.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4R2M4H	COOK	225	25
STA. 5-07.93 TO STA. 56-00.00				
FED. ROAD DIST. NO.	ILLINOIS PROJECT.			





ILLINOIS DEPARTMENT OF TRANSPORTATION

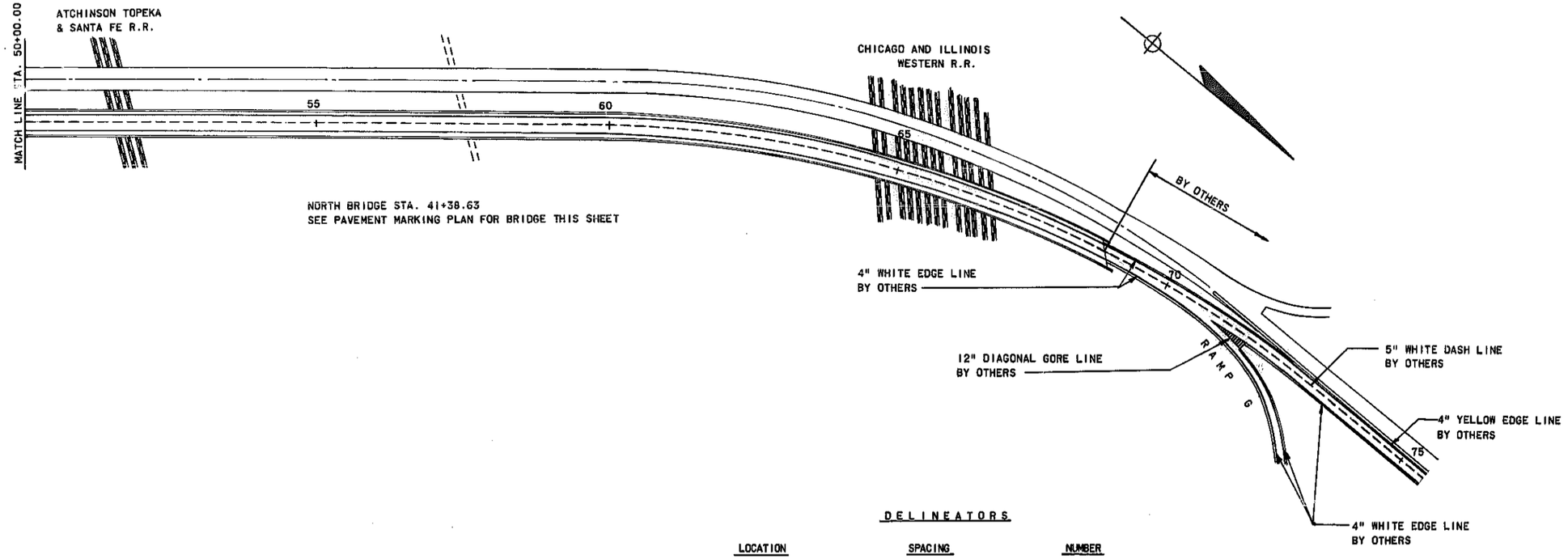
PAVEMENT MARKING

U.S. ROUTE 45

SCALE: 1"=100' DRAWN BY: GLZ

DATE: 4/30/75 CHECKED BY: H.O.W.

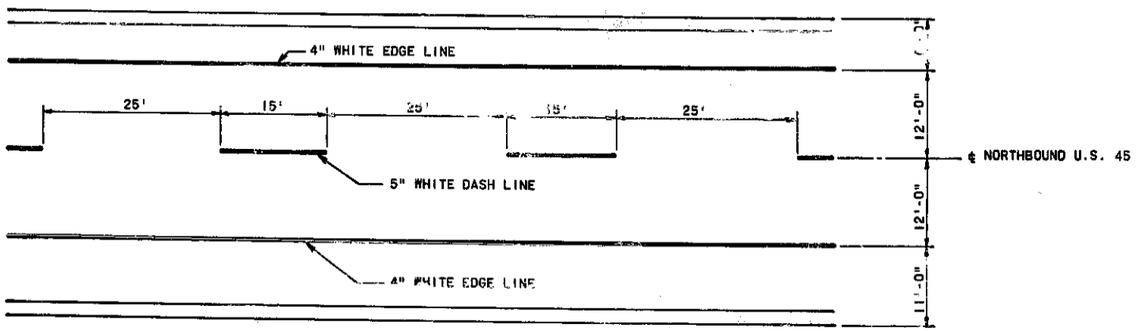
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	162X04R	COOK	223	24
STA. 50+00.00 TO STA. 74+69.71				
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



NORTH BRIDGE STA. 41+38.63
SEE PAVEMENT MARKING PLAN FOR BRIDGE THIS SHEET

DELINEATORS

LOCATION	SPACING	NUMBER
CURVE NO. 1 B	100 FT.	6
CURVE NO. 2 B	125 FT.	3
N.B. ENTRANCE RAMP	200 FT.	3
SOUTH BRIDGE	200 FT.	7
N.B. U.S. 45	200 FT.	5
NORTH BRIDGE	200 FT.	9
NORTH BRIDGE CURVE 7	150 FT.	6
CURVE NO. 1	65 FT.	8
CURVE NO. 2	50 FT.	5
	TOTAL =	52



PAVEMENT MARKING PLAN FOR BRIDGE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING

U.S. ROUTE 45

SCALE: 1" = 100' DRAWN BY: GLZ

DATE: 4/30/75 CHECKED BY: HOW

PROGRAM AND ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	AGE X86R	COOK	223	25
STA. 5+07.73	TO STA. 783+56.05			
	ILLINOIS	PROJECT		

EXISTING

CONDITIONS

EXISTING 24" ϕ S.S.
EXISTING 24" ϕ S.S.
EXISTING 18" ϕ S.S.
EXISTING 18" ϕ S.S.
EXISTING 36" ϕ S.S.
EXISTING 42" ϕ S.S.
EXISTING 42" ϕ S.S.
EXISTING 54" ϕ S.S.
EXIST. OVERHEAD SIGN TO BE REMOVED
260 LIN. FT. CURB REMOVAL
150 LIN. FT. GUARDRAIL REMOVAL
C.B. TO BE FILLED
C.B. TO BE FILLED
110 LIN. FT. CURB REMOVAL
92 LIN. FT. CURB REMOVAL
500 LIN. FT. GUARDRAIL REMOVAL
260 LIN. FT. CURB REMOVAL
550 LIN. FT. GUARDRAIL REMOVAL
240 LIN. FT. GUARDRAIL REMOVAL
510 LIN. FT. GUARDRAIL REMOVAL
855 LIN. FT. CURB REMOVAL
25 LIN. FT. TERMINAL SECTION
TRI-STATE TOLL WAY
PROPOSED ℄ OF NORTHBOUND U.S. RTE. 45
EXISTING R.O.W.
PLAYLAND AMUSEMENT PARK
PROPOSED R.O.W.
100 DIST.
5+07.73

MAIN LINE CURVE DATA.

CURVE DATA LA GRANGE ROAD NO. 1
P.I. STA. 6+31.95
Δ = 23°-18'-31.20"
D = 9°-30'-00"
T = 124.22'
L = 245.01'
R = 603.14'
E = 12.66'
S.E. = 0.06 ½
S.E. TRANSITION
STA. 5+07.73 TO STA. 7+52.74

CURVE DATA LA GRANGE ROAD NO 2
P.I. STA. 9+72.88
Δ = 13°-13'-09.50"
D = 3°-00'-57"
T = 220.14'
L = 438.33'
R = 1899.83'
E = 12.71'
S.E. 0.048 ½
S.E. ATTAINED
STA. 7+52.74 TO STA. 9+02.74
FULL S.E.
STA. 9+02.74 TO STA. 11+41.07
S.E. REMOVED
STA. 11+41.07 TO STA. 12+91.07

CURVE DATA LA GRANGE ROAD NO 3
P.I. STA. 21+97.46
Δ = 3°-33'-34"
D = 0°-36'-55"
T = 297.46'
L = 594.73'
R = 5311.65'
E = 4.75'

RAMP CURVE DATA NO. 1B
P.I. STA. 21+02.46
Δ = 30°-26'-06"
D = 5°-13'-49.06"
T = 297.93'
L = 581.90'
R = 1095.46'
E = 39.61'
S.E. = 0.056 ½

RAMP CURVE DATA NO. 2B
P.I. STA. 26+16.27
Δ = 12°-00'-26"
D = 3°-00'-42"
T = 200.00'
L = 398.62'
R = 1,901.58'
E = 10.49'
S.E. = 0.045 ½
FULL S.E. STA. 23+33.62 TO STA. 27+84.80
S.E. REMOVED STA. 27+64.80 TO STA. 29+14.80

FOR GEOMETRICS SEE SHEET NO. 17

FOR ELEVATIONS SEE SHEET NO. 19

FOR NOSE & CURB DETAILS SEE SHEET #17

FOR PAVEMENT REMOVAL AND NEW PAVEMENT ON SOUTH BOUND LANES SEE DRAWING NO. 17

10' CURB & GUTTER TRANSITION

588 LIN. FT. TYPE B-6.24 CURB & GUTTER

P.C. STA. 0+00 EDGE OF PAVT.

P.T. STA. 5+94.73 EDGE OF PAVT.

STA. 14+91.84 - 60.75' LT.

P.C. STA. 5+07.73

BEGINNING OF PROJECT
BR-U-183(24) STATION 5+07.73

STA. 8+10 - 24' LT.
M.H. T-A 5'DIA. W/T-1 F & C.L.
ELEV. 597.00
INV. 36" ϕ TO MEET EXIST. 36" PIPE

STA. 9+70 - 24' LT.
M.H. T-A 5'DIA. W/T-1 F & C.L.
ELEV. 599.00
INV. 36" ϕ TO MEET EXIST INV. 42" ϕ PIPE

1+75 1'-STUB

26'-18" T-2 S.S.

212.5 LIN. FT. STEEL PLATE BEAM GUARDRAIL WITH 25 LIN. FT. END SECTIONS EA. END

5'-0" ℄ PAVED DITCH TO FACE OF PIER

EXIST. BRIDGE PIERS

250 LIN. FT. ℄ PAVED DITCH

CURVE NO. 1

180'-12" T-2 S.S.

CURVE NO. 2

60'-18" T-2 S.S.

212.5 LIN. FT. STEEL PLATE BEAM GUARDRAIL WITH 25 LIN. FT. END SECTIONS EA. END

3.0

5'-0" EDGE PAVT. TO BK. CURB

7'-0" EDGE PAVT. TO BK. CURB

STA. 10+00 - 33'LT.
C.B. T-A 4'DIA. W/MEDIAN INLET STD. 2250
ELEV. 597.00
INV. 594.09
STA. 9+60
C.B. T-A 4'DIA W/T-B.24 F.&G.
ELEV. 597.07
INV. 594.07

4'-0" EDGE PAVT. TO BK. CURB

5'-0" EDGE PAVT. TO BK. CURB

C & G FACE ABOUT.

EXIST. 54" ϕ S.S.

80'-12" T-2 S.S.

CURVE NO. 3

190'-12" T-2 S.S.

602.25

604.50

612.50

DITCH CHECK STD. 1727

PROPOSED ℄ OF NORTHBOUND U.S. RTE. 45

500 LIN. FT. TYPE B-6.24 CURB & GUTTER

598.00

595.00

591.00

589.00

6'-0" EDGE PAVT. TO BK. CURB

PROPOSED R.O.W.

STA. 16+95.05 N.B. STA. 22+78.45 ℄

STA. 12+50
C.B. T-A 4'DIA. W/MEDIAN INLET STD. 2250
ELEV. 601.00
INV. 598.00

STA. 15+00 - 31'LT.
C.B. T-A 4'DIA. W/MEDIAN INLET STD. 2250
ELEV. 602.00
INV. 602.00

200 LIN. FT. STEEL PLATE BEAM GUARD RAIL WITH 25 LIN. FT. TERMINAL SECTION

EXIST. STA. 15+10.00 EL. EW. 611.57

STA. 16+00 MATCH LINE

50'-18" T-1 S.S. WITH P.R.C. FLARED END SECTION

STA. 5+88 - 40' RT.
C.B. TO BE ADJUST.
ELEV. 603.80
INV. 18" 591.80
INV. 18" 591.80

STA. 5+27 - 12' LT.
C.B. TO BE ADJUSTED
ELEV. 594.56

STA. 6+49 - 12' LT.
C.B. TO BE ADJUSTED
ELEV. 594.56

STA. 5+71 + 12' LT.
C.B. TO BE ADJUSTED
ELEV. 594.39

STA. 5+33.62 - 40' LT.
C.B. TO BE ADJUST.
ELEV. 603.80
INV. 18" 591.80
INV. 18" 591.80

STA. 5+88 - 40' RT.
C.B. TO BE ADJUST.
ELEV. 603.80
INV. 591.90

10' CURB & GUTTER TRANSITION L.T.
B-6.24 CURB & GUTTER OUTLET STD. 2212-1

RAMP B
EDGE NO. 183

STA. 18+04.47
326 LIN. FT. PROJECT

PROPOSED ℄ PROFILE

EXISTING GRADE LINE

+5.88%

-1.03%

BEGINNING OF PROJECT
STA. 5+07.73
ELEV. 595.41

EXISTING ELEV.
PROPOSED PROFILE ELEV.

TREE REMOVAL ACRES
0.28 ACRES

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

US ROUTE 45

SCALE
DRAWN BY M.M.
DATE 4/30/75
CHECKED BY J.G.

PLAN — SUBMITTED / LETTED / AS NEWEST CHECKED / ETC. OF PLAT CHECKED — BY — DATE

PROFILE — SUBMITTED / LETTED / GRADES CHECKED / E. & H. WATER / TOPOGRAPHY PLOTTED — BY — DATE

FEDERAL RTE. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S.45	465 KBRA	COOK	223	26
STA. 16+00.00		TO STA.	32+00.00	
		ILLINOIS PROJECT		

EXISTING CONDITIONS

90 LIN. FT. CURB REMOVAL

CHICAGO SANITARY & SHIP CANAL

℄ EXISTING US 45

EXISTING PERMANENT EASEMENT

165 LIN. FT. GUARDRAIL REMOVAL

35 LIN. FT. GUARDRAIL REMOVAL

EXISTING R.O.W.

PLAYLAND AMUSEMENT PARK

PROPOSED ℄ OF NORTHBOUND U.S. RTE. 45

ABANDONED TRAILER

PROPOSED EASEMENT

18"ϕ PIPE CULVERT WITH CONC. HDWLS.

ILLINOIS & MICHIGAN CANAL

I.C. & G. R.R.

ROCCO AMUSEMENT CO.

SANITARY DISTRICT OF CHICAGO

EASEMENT

8' GATE TO BE RELOCATED

40 LIN. FT. GUARDRAIL REMOVAL

7' HIGH CHAIN LINK FENCE TO BE RELOCATED

72" PIPE DRAIN CORRUGATED STEEL 12" WIDTH T-12" METAL END SECTION

STA. 31+30.29 - 20' RT.
1-INLET T-A WIT-1 F. OPEN LID
ELEV. 624.15
INV. 12" S. 620.50

STA. 31+30.29 - 16' LT.
1-INLET T-A WIT-1 F OPEN LID
ELEV. 623.39
INV. 12" S.S. 620.00

1350 LBS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

22.5 SQ. YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

EXISTING APPROACH SLAB

20' CURB TRANSITION

℄ EXISTING U.S. 45

150 LIN. FT. STEEL PLATE BEAM GUARDRAIL SINGLE RAIL

25 LIN. FT. STEEL PLATE BEAM GUARDRAIL DOUBLE RAIL

EXISTING PERMANENT EASEMENT

PROPOSED ℄ OF NORTHBOUND U.S. RTE. 45

BEGIN ACCESS ROAD STA. 28+60

72 LIN. FT. TYPE B-6.24 CURB & GUTTER

72 LIN. FT. STEEL PLATE BEAM GUARDRAIL

EXISTING R.O.W.

96 LIN. FT. TYPE B-6.24 CURB & GUTTER

STA. 19+55.00 ℄ TRACK

EXISTING R.O.W.

PROPOSED EASEMENT

TREE REMOVAL ACRES 1.01 ACRES

CURVE DATA ACCESS ROAD
P.T. STA. 30+22.86
Δ = 90°00'00"
D = 46°-57'-49.5"
T = 122.00'
L = 191.64'
R = 122.00'
E = 50.59'

PROPOSED ℄ OF ACCESS ROAD

162.5 LIN. FT. STEEL PLATE BEAM GUARD RAIL WITH 25 LIN. FT. TERMINAL SECTION 8A END

170 - 18" S.S. TYPE 9

PERMANENT EASEMENT

INVERT 583.48

R.T. STA. 31+22.00

PROPOSED EASEMENT

BACK OF NORTH ABUT. STA. 31+14.79

RELOCATED 8' GATE

RELOCATED 7' HIGH FENCE

20' CURB TRANSITION

STA. 31+30-96.5' RT.
1-INLET T-A
W/ MCDOT INLET STD. 2258
ELEV. 590.80
INV. 12" 584.76

STA. 31+30-156.5' RT.
CB. T-A 4' DIA. W/
1 MEDIAN INLET STD. 2250
ELEV. 587.08
INV. 12" W. 584.16
INV. 12" S. 584.16

150 LIN. FT. STEEL PLATE BEAM GUARD RAIL
25 LIN. FT. STEEL PLATE BEAM GUARDRAIL DOUBLE RAIL

STA. 17+66.08 BACK OF SOUTH ABUTMENT

P.V.C. STA. 19+01.50
ELEV. 624.51

STA. 19+03 - 112.25' RT.

STA. 17+46.58 - 16' LT.
1-INLET T-A W/FT-1 F. OPEN LID
ELEV. 615.02
INV. 12" S.S. 615.00

STA. 17+46.58 - 20' RT.
1-INLET T-A W/T-1 F. OPEN LID
ELEV. 618.86
INV. 12" S.S. 614.60

1350 YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

22.5 YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

PROPOSED PERMANENT EASEMENT

P.V.I. STA. 23+51.50
ELEV. 633.45
900 V.C.
E = 5.89

P.V.T. STA. 28+01.50
ELEV. 630.31

72" PIPE DRAIN CORRUGATED STEEL 72" W/ 1-72" END SECTION

PROPOSED ℄ PROFILE

T.R. ELEV. 607.85

H.W. ELEV. 595.29

CHICAGO SANITARY & SHIP CANAL

H.W. ELEV. 585.85 (U.S.G.S.)

L.W. ELEV. 578.10 (U.S.G.S.)

625 615 605 595 585 575 565

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

US ROUTE 45

SCALE DRAWN BY R.M.

DATE 8/30/75 CHECKED BY J.G.

PLAN
SURVEYED
PLOTTED
DRAWN BY
CHECKED
ST. OF HWY. CHECKED
NOTE BOOK
NO.

PROFILE
SURVEYED
PLOTTED
DRAWN BY
CHECKED
ST. OF HWY. CHECKED
NOTE BOOK
NO.

DATE
BY

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	44E X86R	COOK	223	27
STA. 32+00.00	TO STA. 47+00.00			
	ILLINOIS	PROJECT		

PROPOSED SHELL 14"

℄ EXISTING U.S. 45

765 LIN. FT. GUARDRAIL REMOVAL

857 LIN. FT. CURB REMOVAL

PROPOSED ℄ OF NORTHBOUND U.S. RTE. 45

EXISTING R.O.W.

7' HIGH CHAIN LINK FENCE TO BE RELOCATED (1228.1 LIN. FT.)

160 LIN. FT. GUARDRAIL REMOVAL

18' GATE TO BE RELOCATED

DES PLAINES RIVER DIVERSION CHANNEL

80 LIN. FT. GUARDRAIL REMOVAL

EXISTING R.O.W.

PROPOSED EASEMENT

SANITARY DISTRICT OF CHICAGO

SANITARY DISTRICT OF CHICAGO

STA. 39+00-40' LT.
P INLET T-A
WITH 1 MEDIAN INLET STD 2250 FOR GRATE
ELEV. 602.00
INV. 12" 600.00

STA. A1+22.50 -16' LT.
1-INLET T-A W/T-1 F. OPEN LID
ELEV. 613.25
INV. 12" S.S. 608.00

STA. A1+22.50 -20' RT.
1-INLET T-A W/T-1 F. OPEN LID
ELEV. 613.00
INV. 12" S.S. 607.60

36'-12" S.S. TYPE-1

73 SQ. YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

EXISTING CONDITIONS

STA. 35+00-43' LT.
1-INLET T-A
WITH 1-MEDIAN INLET STD 2250 FOR GRATE
ELEV. 610.00
INV. 12" 606.00

EXISTING U.S. RTE. 45

22 SQ. YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT

150 LIN. FT. STEEL PLATE BEAM GUARDRAIL, SINGLE RAIL

25 LIN. FT. STEEL PLATE BEAM GUARDRAIL, DOUBLE RAIL

STA. 41+36.83
BK. OF SOUTH ABUTMENT

59'-12" S.S. TYPE-2

55'-12" S.S. TYPE-2

785 LIN. FT. TYPE B-6.24 CURB & GUTTER

PROPOSED ℄ OF NORTHBOUND U.S. RTE 45

88 LIN. FT. TYPE B-6.24 CURB & GUTTER

273 LIN. FT. STEEL PLATE BEAM GUARDRAIL WITH 25 LIN. FT. TERMINAL SECTION

EXISTING R.O.W.

STA. 33+00
1-INLET T-A, WT. B, 24 F&G
ELEV. = 620.50
INV. 12" 617.00

STA. 35+00
1-INLET T-A, WT. B, 24 F&G
ELEV. = 617.06
INV. 12" W. 606.40
INV. 12" E. 606.00

STA. 37+00
1-INLET T-A, WT. B, 24 F&G
ELEV. = 613.82
INV. 12" 610.00

STA. 38+00
1-INLET T-A, WT. B, 24 F&G
ELEV. = 613.82
INV. 12" 610.00

20' CURB TRANSITION

EXISTING EASEMENT

74'-12" S.S. TYPE-1 WITH P.R.C. FLARED END SECTION

RIPRAP

END CURB

80 LIN. FT. RELOCATED 7' HIGH CHAIN LINK FENCE

98 LIN. FT. NEW CHAIN LINK FENCE

MATCH LINE STA. 40+50

CURVE DATA ACCESS ROAD
P.I. STA. 44+17.00
Δ = 80°-00'-00"
D = 31°-28'-52.5"
T = 182.00'
L = 288.88'
R = 182.00'
E = 75.89'

TREE REMOVAL ACRES
1.92 ACRES

RELOCATED 18' GATE

42 LIN. FT. NEW CHAIN LINK FENCE

MATCH LINE STA. 40+50

END ACCESS ROAD STA. 44+25

P.I. STA. 45+36.00
R = 182.42

STA. 47+00 MATCH LINE

312.5 LIN. FT. STEEL PLATE BEAM GUARDRAIL WITH 25 LIN. FT. TERMINAL SECTION

PROPOSED EASEMENT

56'-12" S.S. TYPE-1 WITH P.R.C. FLARED END SECTION

50'-12" S.S. TYPE-1 WITH P.R.C. FLARED END SECTION

PROPOSED ℄ OF ACCESS ROAD

STA. 40+88.00 ℄ ACCESS ROAD = STA. 40+38.00 ℄ U.S. ROUTE 45 -122' RT.

PROPOSED EASEMENT

1120 LIN. FT. RELOCATED 7' HIGH CHAIN LINK FENCE

B-6.24 CURB & GUTTER OUTLET STD. 2212-1

24" PIPE DRAIN, CORRUGATED STEEL 12" WITH 1-12" METAL END SECTION

-1.82%

PROPOSED PROFILE LINE +5.20%

DES PLAINES RIVER

EXISTING GROUND LINE

EXISTING CREEK PROFILE

32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47

630 620 610 600 590 580

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

US ROUTE 45

SCALE 1" = 50' DRAWN BY R.M.

DATE 4/30/75 CHECKED BY J.S.

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, TIE TO WAY CHECKED, NOTE BOOK, BY, DATE

PROFILE: REVISED, PLOTTED, CHECKED, G.E.'S INITIAL, STRUCTURE BOUNDS CHKD., NOTE BOOK, BY, DATE

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	462 1R&BR	COOK	22	2 B
STA. 47+00.00		TO STA. 62+00.00		
		PROJECT		

PROPOSED SHELL 14"

F.E. R.R.

℄ EXISTING US 45

72.75'

100.00'

38.25'

16.00'

EXISTING EASEMENT

PROPOSED EASEMENT

50+00

ATCHISON TOPEKA & SANTA

66+00 PROPOSED ℄ OF NORTHBOUND U.S. RT. 45

EXISTING EASEMENT

72.75'

38.25'

PROPOSED EASEMENT

24.00'

P.C. STA. 59+72.16

N

EXISTING CONDITIONS

ATCHISON TOPEKA & SANTA FE R.R.

TREE REMOVAL ACRES
0.62 ACRES

30 25 20

℄ EXISTING U.S. RT 45

PROPOSED ℄ OF NORTHBOUND U.S. RT 45

EXISTING EASEMENT

72.75'

100.00'

38.25'

50+00 55+00 60+00

EXISTING EASEMENT

PROPOSED EASEMENT

38.25'

STA. 47+00 MATCH LINE

P.T. STA. 49+56.38
ELEV. 636.22
400' V.C.
E = 2.35'

P.C. STA. 51+43.00
ELEV. 635.82

PROPOSED PROFILE LINE +0.30%

P.V.I. STA. 53+91.00
ELEV. 636.18

P.T. STA. 54+91.00
ELEV. 636.78
400' E.C.
E = 2.30'

P.V.I. STA. 57+39.00
ELEV. 636.78

-0.30%

P.C. STA. 59+72.16

STA. 62+00 MATCH LINE

630
620
610
600
590

EXISTING ℄ ELEV.
PROPOSED PROFILE ℄ ELEV.

EXISTING GRADE LINE

47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
US ROUTE 45

SCALE DRAWN BY R.M.

DATE 12/10/73 CHECKED BY J.G.

#20

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	44 E (N & S)	COOK	22	19
STA. 62+00.00		TO STA.	74+55.71	
	ILLINOIS	PROJECT		

BENCH MARK
□ CHISLED ON CONC. BRIDGE RAIL EAST SIDE LA GRANGE ROAD BRIDGE OVER I-55
ELEV. 644.42 (U.S.G.S.)

EXISTING CONDITIONS

PROPOSED SHELL 14"
N
CHICAGO & ILLINOIS WESTERN R.R.
EXISTING APPROACH SLAB
P.I.
C.B. TO BE FILLED
70+00
EXISTING EASEMENT
PROPOSED EASEMENT
℄ EXISTING I US 45
EXISTING EASEMENT
PROPOSED ℄ NORTHBOUND U.S. RT. 45
PROPOSED EASEMENT
550 LIN. FT. GUARDRAIL TO BE RELOCATED
P.T. STA. 73+52.71
STA. 74+39.71
STA. 145+46.31
FOR CURB DETAIL SEE SHEET NO. 18
FOR PAVEMENT REMOVAL & NEW PAVEMENT ON S.B. LANES SEE SHEET NO. 18
FOR GEOMETRICS SEE SHEET NO. 18
FOR ELEVATIONS SEE SHEET NO. 20

20' CURB & GUTTER TRANSITION
20' CURB & GUTTER TRANSITION
STA. 70+00
C.B. T-A-A DIA. W/MEDIAN INLET STD. 2250
ELEV. 650.00
INV. 624.00
110'-12" S.S. TYPE 1
W/P.C. FLARED END SECTION
388 LIN. FT. S.B. 6-12 CURB & GUTTER
CONC. MEDIAN TYPE S.B. 9-12
10' CONC. MEDIAN TRANSITION
390 LIN. FT. S.B. 6-12 CURB & GUTTER
CURVE NO. 1
RAMP G CURVE NO. 2
END PROJECT BR-U-183(24)E
END IMPROVEMENT STA. 74+69.71
P.T. STA. 75+39.71
75+00
B-6.12 CURB GUTTER OUTLET STD. 621201
P.T. STA. 149+46.31
+3.0%
-2.0%
-5.0%
END IMPROVEMENT STA. 74+69.71 ELEV. 635.89

EXISTING U.S. RT. 45
EXISTING EASEMENT
PROPOSED ℄ NORTHBOUND U.S. RT. 45
PROPOSED EASEMENT
65+00
TREE REMOVAL ACRES 0.17 ACRES

CURVE DATA
P.I. STA. 66+80.43
Δ = 38°-41'-00"
D = 3°-45'-00"
T = 718.37'
R = 1040.28'
L = 1,381.88'
E = 122.40'
S.E. = 0.042%
S.C. ATTAINED
STA. 58+72.16 TO STA. 60+22.16
FULL S.E.
STA. 60+22.16 TO STA. 73+08.71
S.E. REMOVED
STA. 73+08.71 TO STA. 74+58.71

RAMP G CURVE-1
P.I. STA. 146+07.96
Δ = 17°-47'-02"
D = 12°-30'-00"
T = 71.71
L = 142.27'
R = 458.37'
E = 8.56'
S.E. = 0.068%

RAMP G CURVE-2
P.I. STA. 148+28.10
Δ = 58°-33'-30.46"
D = 20°-00'-00"
T = 144.68'
L = 267.79'
R = 286.48'
E = 34.42'
S.E. = 0.078%

PLAN
SURVEYED
ALIGNMENT CHECKED
PLT. BY MAY CHECKED
DATE
BY

PROFILE
HORIZONTAL SCALE
VERTICAL SCALE
DATE
BY

MATCH LINE STA. 61+00
PVC STA. 63+33.00
PVI STA. 65+33.00
PVT STA. 67+33.00
VC = 400.00'
VC = 400.00'
-0.30%
16-50 YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVT.
ANCHOR GUARDRAIL TO WINGWALL SEE STANDARD DETAIL IN BRIDGE DRAWINGS
25-19 YDS. P.C. CONC. BRIDGE APPROACH SHOULDER PAVEMENT
EXISTING GRADE LINE
EXISTING BLEV. PROPOSED GRADE ELEV.
640
630
620
610
600
590
62
63
64
65
66
67
68
69
70
71
72
73
74

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAN & PROFILE
US ROUTE 45
SCALE
DRAWN BY R.M.
DATE 4/30/75
CHECKED BY J.G.

Rt. edge of proposed ramp "B"

FEDERAL AID ROUTE No.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	16&E INNER	COOK	22.3	30
STA. 18+04.47		TO STA. 21+00.00		
ILLINOIS PROJECT				

21+00	600.00	597.63	EL. 597.00 / EL. 595.34
20+50	600.00	600.50	EL. 598.00 / EL. 597.25
20+00	600.00	601.25	EL. 600.00 / EL. 599.16
19+50	600.00	603.41	EL. 602.00 / EL. 601.07
19+00	610.00	608.61	EL. 606.00 / EL. 606.88
18+50	610.00	607.81	EL. 607.00
18+04.47	610.00		

600.00 21+00
C=75 F=0
TR=26

600.00 20+50
C=37 F=0
TR=25

600.00 20+00
C=53 F=0
TR=18

600.00 19+50
C=59 F=0
TR=21

610.00 19+00
C=56 F=0
TR=15

610.00 18+50
C=24 F=0
TR=10

610.00 18+04.47
C=0 F=0
TR=0

EXISTING PAVEMENT TO BE REMOVED

NOTE:
C=EARTH EXCAVATION
F=FILL
TR=TOP SOIL REMOVAL

10
10

50 0 50

PLATE CROSS SECTION
KOEHRING & ESSER CO.

FINAL SURVEY

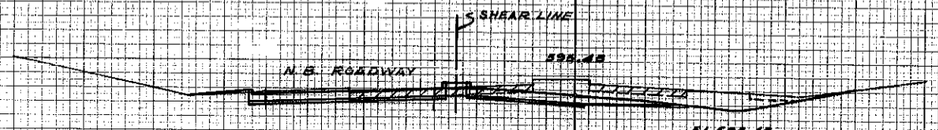
ORIGINAL SURVEY
NOTE BOOK
NO.

40-7072 HERCULENE

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	16Z X 88R	COOK	223	37
STA. 214+50.00		T.S.A. 29+45		
		Illinois Project		

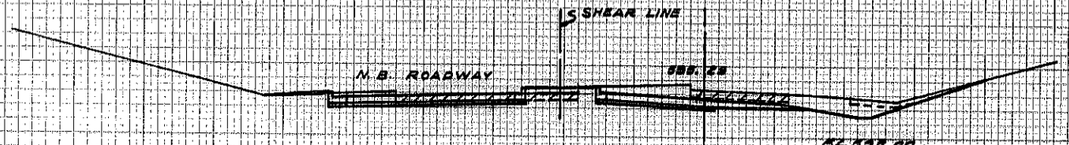
Rt. edge of proposed ramp "B"

23+43 600.00



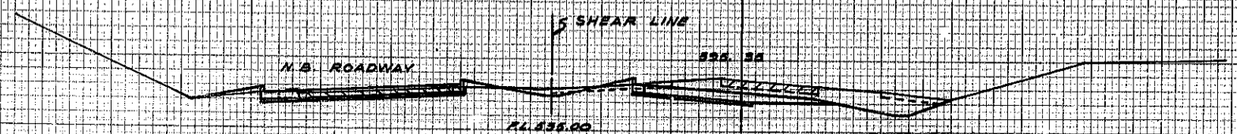
600.00 23+43
C-97 F-1
TR-8

23+00 600.00



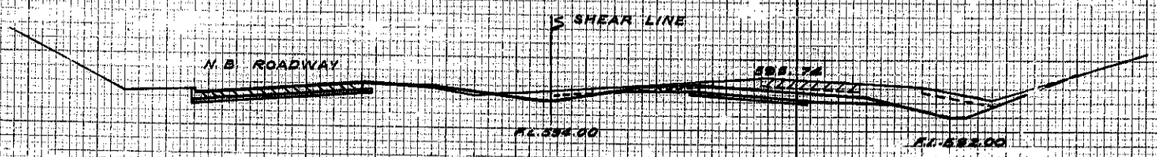
600.00 23+00
C-101 F-2
TR-10

22+50 600.00



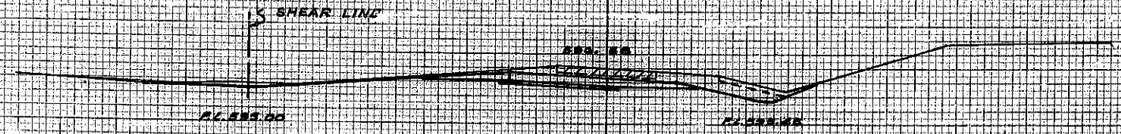
600.00 22+50
C-100 F-14
T.R-15

22+00 600.00



600.00 22+00
C-115 F-0
T.R-24

21+50 600.00



600.00 21+50
C-96 F-0
T.R-15

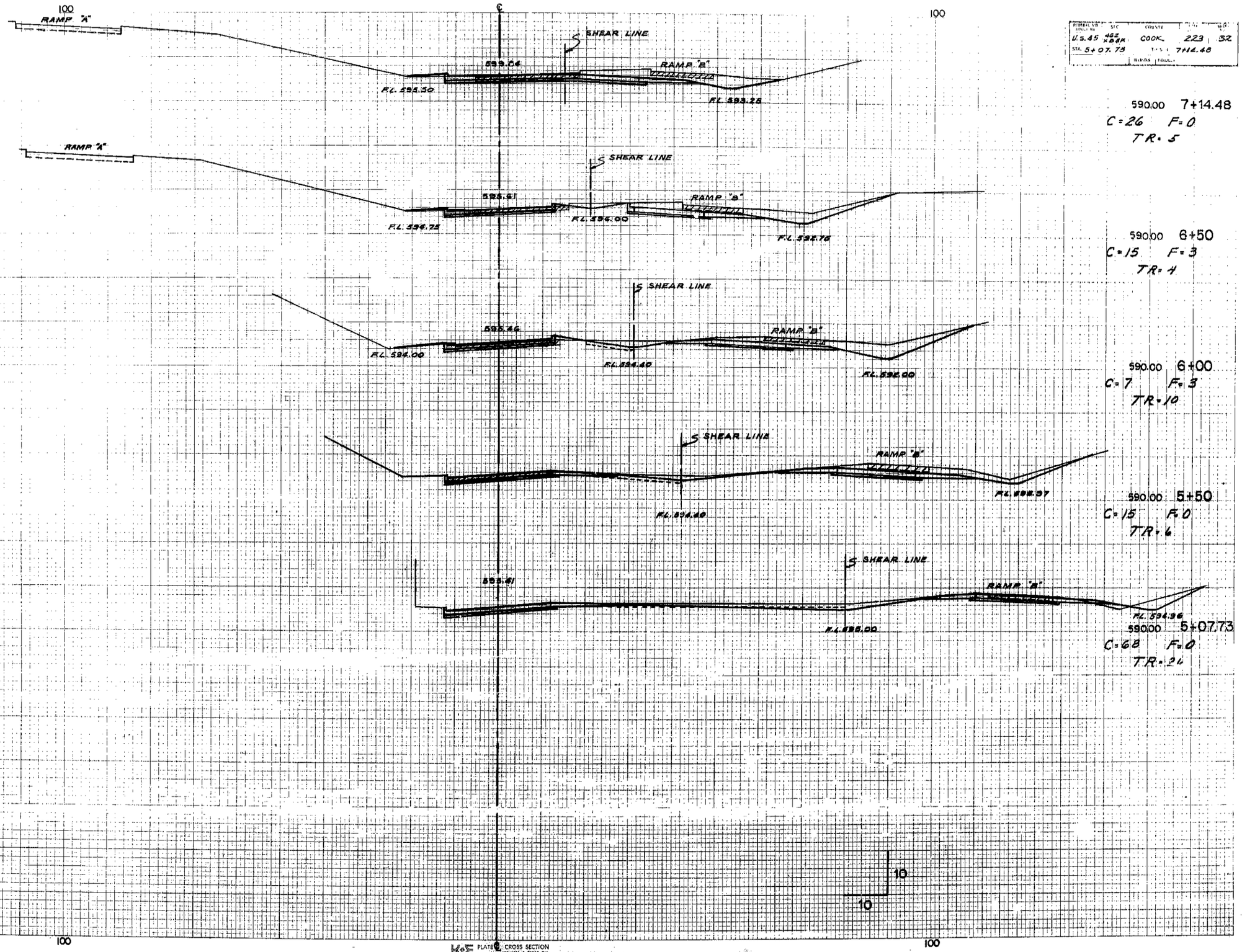
100 50 50 100

10 10

K+E PL. 9 CROSS SECTION
KEUFFEL & ESSER CO.
467072 HERCULENE

FINAL SURVEY
REVISION DATE
No.

ORIGINAL SURVEY
STARTED
COMPLETED
TEMPLATE
NOTE BOOK
PAGES
HQ



7+14.48	590.00
6+50	590.00
6+00	590.00
5+50	590.00
5+07.73	590.00

590.00 7+14.48
C=26 F=0
TR=5

590.00 6+50
C=15 F=3
TR=4

590.00 6+00
C=7 F=3
TR=10

590.00 5+50
C=15 F=0
TR=6

590.00 5+07.73
C=68 F=0
TR=21

FEDERAL AID PROJ. NO.	SEC	COUNTY	TOTAL SHTS.	SHT. NO.
U.S.45	462 X&R	COOK	223	32
STA. 5+07.73		STA. 7+14.48		
ILLINOIS				

ORIGINAL SURVEY
SCALED
PLOTTED
NOTE BOOK
NO.
DATE

K•E PLATE CROSS SECTION
KEUFFEL & ESSER CO.
NO. 7072 HERCULENE

100

FEDERAL AID ROUTE No.	SEC	COUNTY	TOTAL SHEETS	SHEET No.
U.S. 45	462 X 88R	COOK	223	32
STA. 5+07.73		TO STA. 7+14.48		
	ILLINOIS	PROJECT		

℄ SHEAR LINE

RAMP "B"

F.L. 593.28

590.00 7+14.48
C=26 F=0
TR=5

℄ SHEAR LINE

RAMP "B"

F.L. 596.00

F.L. 592.78

590.00 6+50
C=15 F=3
TR=4

℄ SHEAR LINE

RAMP "B"

F.L. 594.40

F.L. 595.00

590.00 6+00
C=7 F=3
TR=10

℄ SHEAR LINE

RAMP "B"

F.L. 594.40

F.L. 595.97

590.00 5+50
C=15 F=0
TR=6

℄ SHEAR LINE

RAMP "B"

F.L. 596.00

F.L. 594.96

590.00 5+07.73
C=68 F=0
TR=21

10

10

100

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	46E 46BR	COOK	223	35
STA. 1450.00		TH STA.	10+90.00	
		ILLINOIS	PROJECT	

100

℄

10+50 600.00

BRIDGE PIER

599.66

EXIST. BRIDGE ABUT.

F.L. 595.00

600.00 10+50
C=118 F=0

10+00 600.00

599.03

EXIST. BRIDGE ABUT.

F.L. 592.00

600.00 10+00
C=118 F=0
TR=27

9+50 600.00

598.28

EXIST. BRIDGE ABUT.

F.L. 591.50

600.00 9+50
C=128 F=0
TR=28

9+00 600.00

597.52

F.L. 588.00

600.00 9+00
C=135 F=6
TR=37

8+50 600.00

597.05

F.L. 587.50

F.L. 594.00

600.00 8+50
C=128 F=0
TR=30

8+00 590.00

596.06

F.L. 587.00

F.L. 594.26

590.00 8+00
C=113 F=5
TR=35

7+50 590.00

F.L. 586.25

F.L. 592.76

590.00 7+50
C=135 F=5
TR=32

10
10

100

100

PLATE & CROSS SECTION
KENNEL & ESSER CO.

FINAL SURVEY NOTE BOOK NO.

ORIGINAL SURVEY PLOTTED BY ... NOTE BOOK ... NOTES ... CHECKED ... NO.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	88E 128A	COOK	229	34
STA. 11400.00		TO STA. 13960.00		
	ILLINOIS	PROJECT		

100 ℄ of existing rd. ℄ 100

13+50 600.00

600.00 13+50
C=320 F=0
TR=42

13+00 600.00

600.00 13+00
C=366 F=0
TR=43

12+50 600.00

600.00 12+50
C=204 F=11
TR=38

EXIST. BRIDGE ABUT.

12+00 600.00

600.00 12+00
C=143 F=0
TR=28

EXIST. BRIDGE ABUT. EXIST. BRIDGE PIER

11+50 600.00

600.00 11+50
C=140 F=0
TR=27

EXIST. BRIDGE ABUT. EXIST. BRIDGE ABUT.

11+00 600.00

600.00 11+00
C=137 F=0
TR=24

10 10

100 100

K+E PLATE CROSS SECTION KEUFFEL & ESSER CO.

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FINAL SURVEY

ORIGINAL SURVEY PLOTTED TEMPLATE FIELD BOOK NOTES CHECKED

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	22Z & 22R	COOK	223	55
STA. 14+00.00		TO STA. 15+50.00		

ILLINOIS | PROJECT

FINAL SURVEY NOTE BOOK NO.

ORIGINAL SURVEY NOTE BOOK — SURVEYED, PLOTTED, TENT. ACC., REVISED, AREAS C-E-T-C — INV.

100 ℄ of existing rd. ℄ 100

15+50 60000

600.00 15+50
C-56 F-1248
TR-62

EXIST. GROUND LINE — 611.28 — Sli — Sli — F.L. 610.50 — Sli — F.L. 585.00 — TOP R.O.W.

15+00 60000

600.00 15+00
C-83 F-973
TR-56

DITCH CHECK — EXIST. GROUND LINE — 611.18 — Sli — Sli — F.L. 608.00 — Sli — F.L. 581.00 — PROP. R.O.W.

14+50 60000

600.00 14+50
C-123 F-727
TR-51

EXIST. GROUND LINE — 608.58 — Sli — Sli — F.L. 606.50 — Sli — F.L. 555.00 — PROP. R.O.W.

14+00 60000

600.00 14+00
C-120 F-540
TR-42

EXIST. GROUND LINE — 606.07 — Sli — Sli — F.L. 604.50 — Sli — F.L. 555.00 — PROP. R.O.W.

10 / 10

100 ℄ 100

K+E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO.

46 7072 HERCULENE

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	61X-1 X24R	COOK	223	36
STA. 16100.00		TO STA. 17466.08		
	ILLINOIS PROJECT			

FINAL SURVEY NOT FROM

ORIGINAL SURVEY — STATE-CO. / FED.-PROJ. / TYPE OF SURVEY / NOTE BOOK / NO.

100 ℄ of existing rd. 100

17+66.08 600.00

620.01 — 6:1 — 6:1 — F.L. 616.00 — 6:1 — F.L. 585.68 — PROP. R.O.W.

600.00 17+66.08
C=103 F=1975
TR-79

17+00 600.00

617.82 — 6:1 — 6:1 — F.L. 614.00 — 6:1 — F.L. 587.00 — PROP. R.O.W.

600.00 17+00
C=73 F=1874
TR-77

16+56 600.00

616.36 — 6:1 — 6:1 — F.L. 608.30 — 6:1 — F.L. 587.56 — PROP. R.O.W.

600.00 16+56
C=76 F=1587
TR-74

16+(X) 600.00

614.60 — 6:1 — 6:1 — F.L. 611.00 — 6:1 — F.L. 588.00 — PROP. R.O.W.

600.00 16+00
C=117 F=1287
TR-72

10 / 10

100 ℄ 100

K+E PLATE 3. CROSS SECTION KEUFFEL & ESSER CO.

46 7072 - HERCULENE - 2 PRINTING SIDES

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4GZ X58R	COOK	223	37
STA. 28+60.00		TO STA. 31+00.00		
		ILLINOIS	PROJECT	

150 100 50 ℄ 50 100

31+00 590

SHEAR LINE

PROP. R.O.W.

594.84

3:1

FL. 590.50

3:1

FL. 588.59

590 31+00

C=0 F=337

TR=34

30+00 590

PROP. R.O.W.

594.43

3:1

3:1

FL. 592.00

590 30+00

C=15 F=61

TR=27

29+00 590

595.14

3:1

FL. 593.00

590 29+00

C=15 F=12

TR=8

28+60 590

594.00

3:1

FL. 593.00

590 28+60

C=16 F=14

TR=6

10

10

ACCESS ROAD

150 100 50 50 100

PLATE 3, CROSS SECTION

KEUFFEL & ESSER CO.

ORIGINAL SURVEY

SCALES:

PLOTTED

CHECKED

NOTE BOOK

PAGES

NO.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET
11645	44E 44BR	COOK	223	38
STA. 30+68.27	TO STA. 35+00.00			
ILLINOIS PROJECT				

50 ℄ 50 100 150

23+00 610

EXISTING

F.L. 613.60

3:1

GEO. 26

3:1

2:1

3:1

595.04

3:1

F.L. 591.00

F.L. 587.50

610 33+00
C=44 F=2430
TR=85
PROP. R.O.W.

32+00 610

EXISTING

F.L. 614.75

3:1

GEO. 16

3:1

2:1

3:1

595.18

3:1

F.L. 590.60

F.L. 587.25

610 32+00
C=38 F=2755
TR=89
PROP. R.O.W.

31+14.79 610

EXISTING

F.L. 614.00

3:1

624.80

3:1

BACK OF ABUTMENT

2:1

3:1

594.88

3:1

F.L. 590.32

F.L. 588.32

31+14.79
C=31 F=2676
PROP. R.O.W. TR=93

℄ ACCESS ROAD

EXISTING
BACK OF ABUTMENT

30+68.27

30+68.27
C=0 F=0
TR=0

10

10

℄ EXISTING RTE. 45

℄ PROPOSED N. BOUND RTE. 45

50 50 100 150

K&E PLAT AND CROSS SECTION
KEUFFEL & ESSER CO.

ORIGINAL SURVEY
REVISED
REVISED
REVISED
NOTE BOOK
NO.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	462 X88R	COOK	223	39
STA. 34+00.00	TO STA. 37+00.00			
	ILLINOIS	PROJECT		

℄ 50 ℄ 50 100 150

37+00 610

610 **37+00**
C=81 F=1851
PROP. R.O.W. TR=82

G/S. 5C
F.L. 607.00
F.L. 592.60
602.25
F.L. 588.50

36+00 610

610 **36+00**
C=70 F=2028
PROP. R.O.W. TR=90

G/S. 4B
F.L. 608.50
F.L. 597.20
599.25
F.L. 592.25

35+00 610

610 **35+00**
C=75 F=2023
PROP. R.O.W. TR=90

G/S. 3C
F.L. 610.00
F.L. 597.35
596.20
F.L. 588.00

34+00 610

610 **34+00**
C=44 F=2216
PROP. R.O.W. TR=86

G/S. 2B
F.L. 611.60
F.L. 597.60
596.20
F.L. 587.75

10
10

℄ EXISTING RTE. 45 ℄ PROPOSED N. BOUND RTE. 45 ℄ ACCESS ROAD

50 50 100 150

K-E PLATE CROSS SECTION KEUFFEL & ESSER CO.

ORIGINAL SURVEY
SURVEYED
COMPUTED
TEMPLATE
AREAS
NOTE BOOK
INDEX CHECKED
NO.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4GR K-6611	COOK	223	40
STA. 38+00.00		TO STA. 40+35.00		
ILLINOIS PROJECT				

50 ℄ 50 100 150

40+35 600

G11.05

FL. 606.03

606.30

PROP. R.O.W.
600 40+35
C=100 F=1797
TR=72

FL. 585.54

40+00 600

G10.40

FL. 606.80

606.38

600 40+00
PROP. R.O.W.
C=68 F=1777
TR=75

FL. 588.50

39+00 600

610.22

FL. 604.00

607.88

600 39+00
PROP. R.O.W.
C=61 F=1720
TR=81

FL. 595.60

10

10

38+00 600

611.64

FL. 605.60

605.25

600 38+00
PROP. R.O.W.
C=63 F=1840
TR=81

FL. 595.00

FL. 598.72

℄ EXISTING RTE. 45 ℄ PROPOSED N. BOUND RTE. 45 ℄ ACCESS ROAD

50 100 150

K-Σ PLAT 50 CROSS-SECTION KEUFFEL & ESSER CO.

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

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	4G2 X 5GA	COOK	229	41
STA. 41+00.00	TO STA. 44+35.00			

100 50 ℄ 50 100 150

44+35 600

PROP. R.O.W. PROP. R.O.W. 600.62

600 44+35
C=0 F=0
TR=0

44+00 600

PROP. R.O.W. PROP. R.O.W. 600.27

600 44+00
C=0 F=0
TR=0

43+00 600

PROP. R.O.W. PROP. R.O.W. 599.78

600 43+00
C=27 F=39
TR=28

42+00 600

PROP. R.O.W. PROP. R.O.W. 599.08 5% 5%

600 42+00
C=113 F=126
TR=44

10
10

41+00 600

PROP. R.O.W. PROP. R.O.W. 598.89 5% 5%

600 41+00
C=0 F=693
TR=41

℄ ACCESS ROAD

FINAL SURVEY

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

K&E PLATE 3. CROSS SECTION
KEUFFEL & ESSER CO.
49 7072 HERCULENE
MADE IN U.S.A.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	45E K&M	COOK	223	42
STA. 41+00.00		TO STA. 41+85.68		
	ILLINOIS	PROJECT		

FINAL SURVEY
NOTE BOOK
NO.

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

41+38.63 610

BACK OF ABUTMENT

610 41+38.63
C-0 F-491
TR-39

41+00 610

PVI 611.89

PVI 607.00

610 41+00
C-100 F-89
TR-10

10
10

℄ EXISTING RTE. 45

℄ PROPOSED N. BOUND RTE. 45

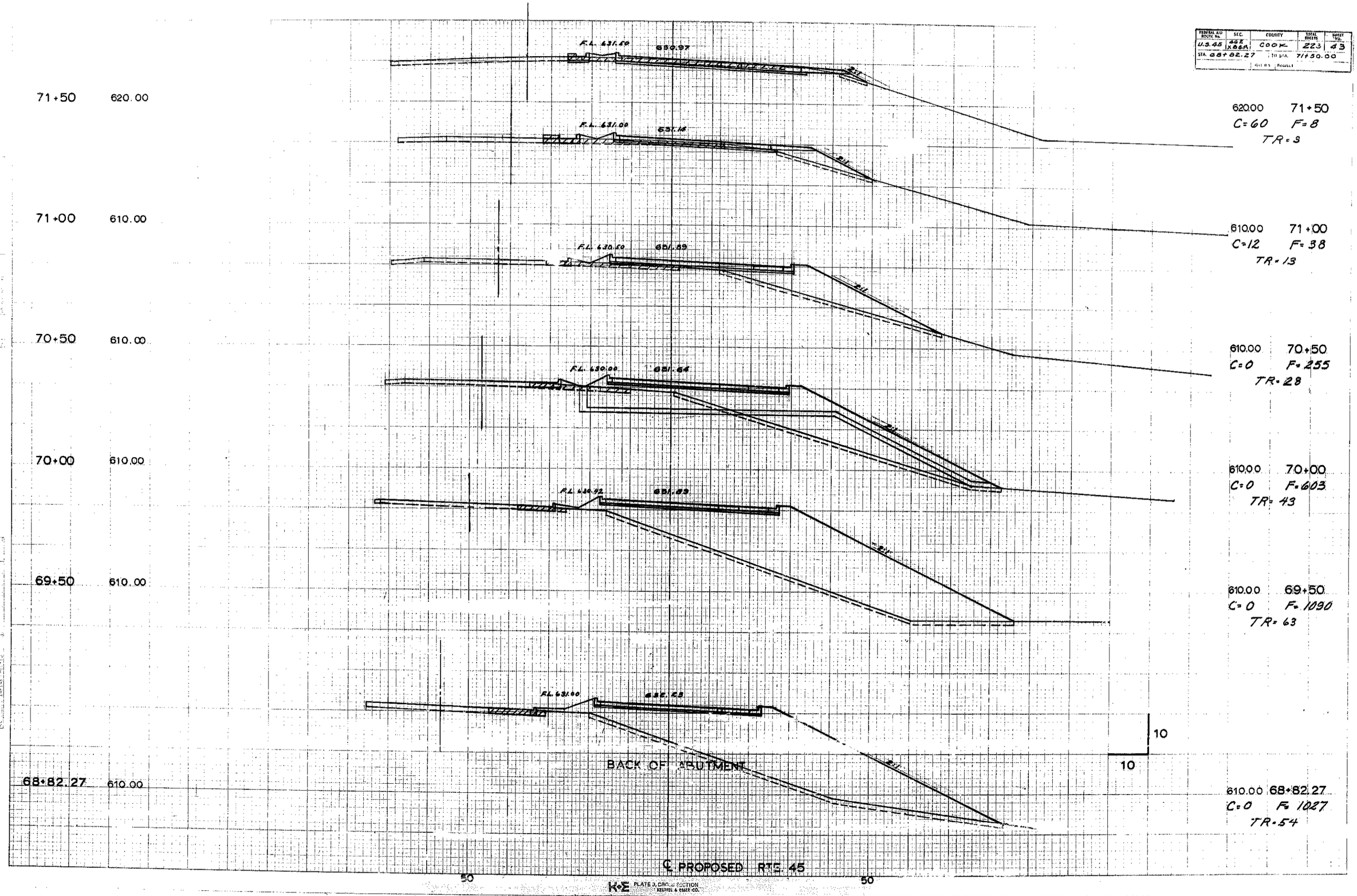
50

100

K&E FILE 50 CROSS SECTION
KEUFFEL & ESSER CO.

48 7072 HERCULENE® GRAPHING PLAN 10X10

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
U.S. 45	42Z X 66A	COOK	223	43
STA. 68+82.27	TO STA.	71+50.00		



71+50 620.00

620.00 71+50
C=60 F=8
TR=9

71+00 610.00

610.00 71+00
C=12 F=38
TR=13

70+50 610.00

610.00 70+50
C=0 F=255
TR=28

70+00 610.00

610.00 70+00
C=0 F=603
TR=43

69+50 610.00

610.00 69+50
C=0 F=1090
TR=63

68+82.27 610.00

610.00 68+82.27
C=0 F=1027
TR=54

ORIGINAL SURVEY

K&E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO. 48 7072 MADE IN U.S.A.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	482 x B&R	COOK	223	44
STA. 71+77.96		TO STA. 74+53.71		
	ILLINOIS	PROJECT		

74+53.71 630.00

74+00 630.00

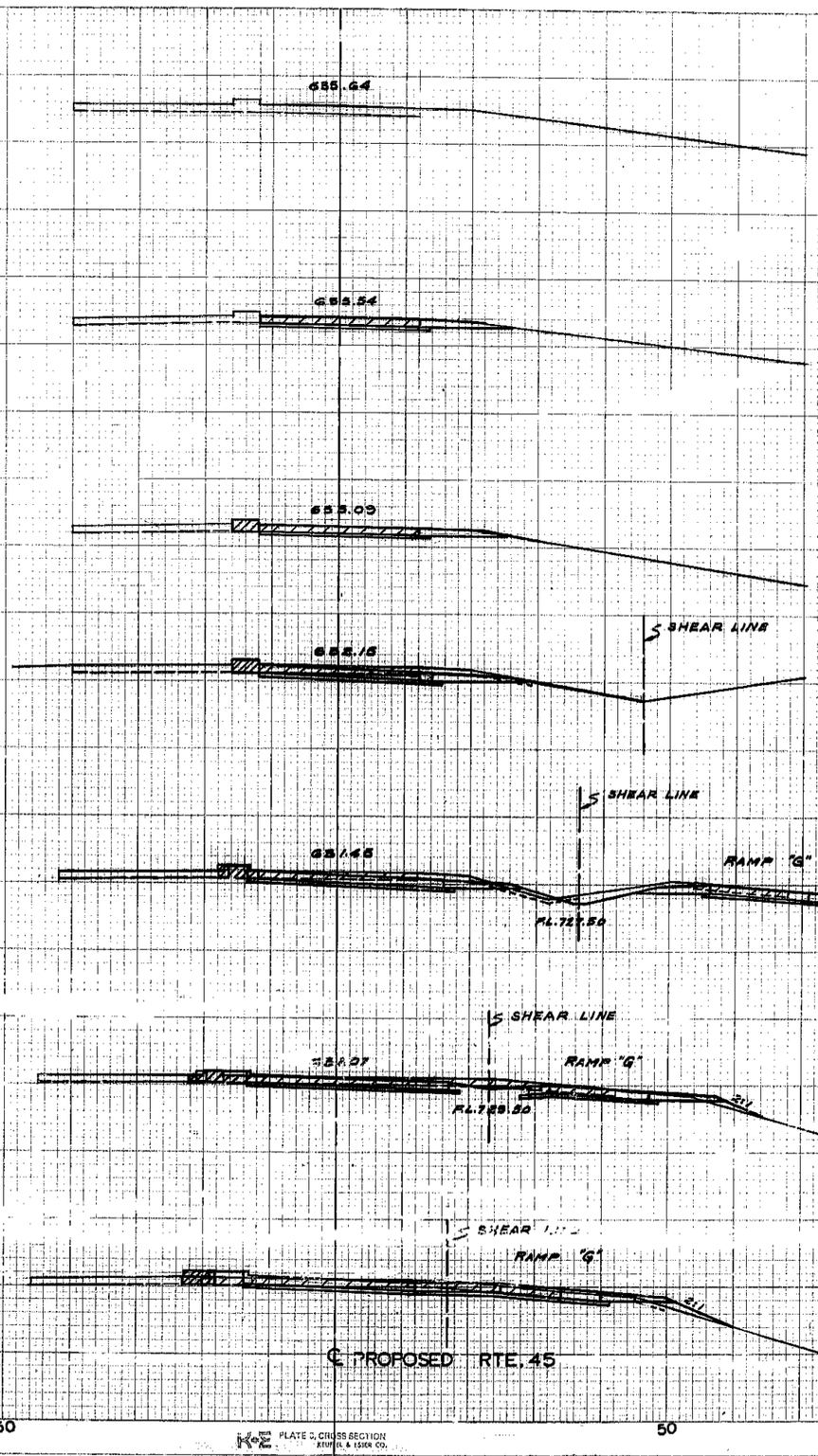
73+50 630.00

73+00 620.00

72+50 620.00

72+00 620.00

71+77.96 620.00



630.00 74+53.71
C=0 F=0
TR=0

630.00 74+00
C=22 F=0
TR=2

630.00 73+50
C=21 F=0
TR=3

620.00 73+00
C=48 F=0
TR=4

620.00 72+50
C=42 F=5
TR=12

620.00 72+00
C=31 F=0
TR=0

620.00 71+77.96
C=28 F=0
TR=0

ORIGINAL SURVEY DATED
NOTE BOOK PAGE
DRG. NUMBER

PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.
48 7072 MADE IN U.S.A.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 45	46E X 46R	COOK	229	45
STA. 146+78.52		TO STA. 148+56.81		
	ILLINOIS	PROJECT		

Rt. edge of proposed ramp "G"

149+53.51	620.00	620.00 149+53.51 C=0 F=0 TR=0
149+00	610.00	610.00 149+00 C=24 F=0 TR=6
148+50	610.00	610.00 148+50 C=42 F=0 TR=5
148+00	610.00	610.00 148+00 C=51 F=0 TR=7
147+50	610.00	610.00 147+50 C=37 F=1 TR=10
147+00	610.00	610.00 147+00 C=33 F=7 TR=7
146+78.52	610.00	610.00 146+78.52 C=30 F=7 TR=8

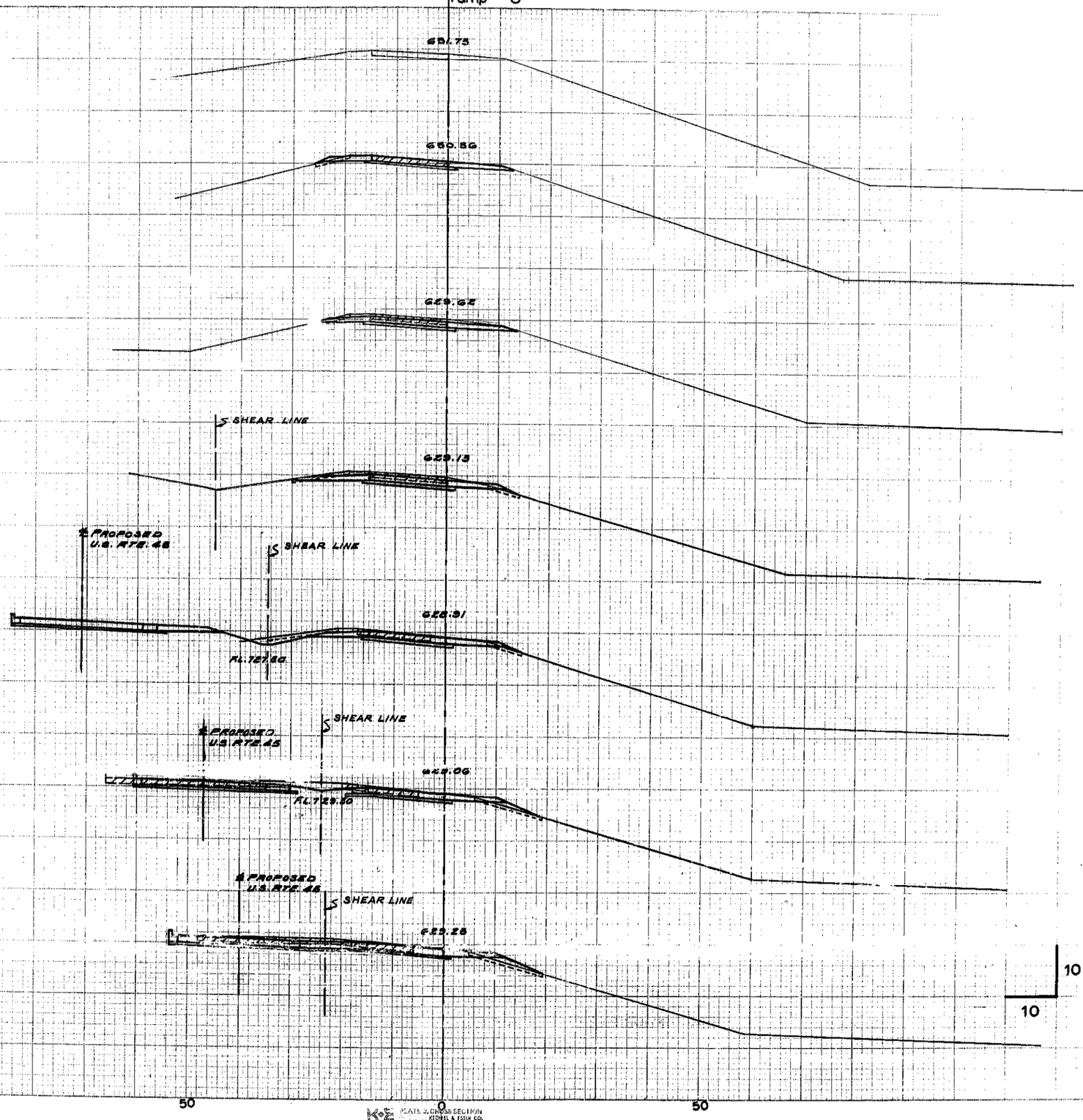
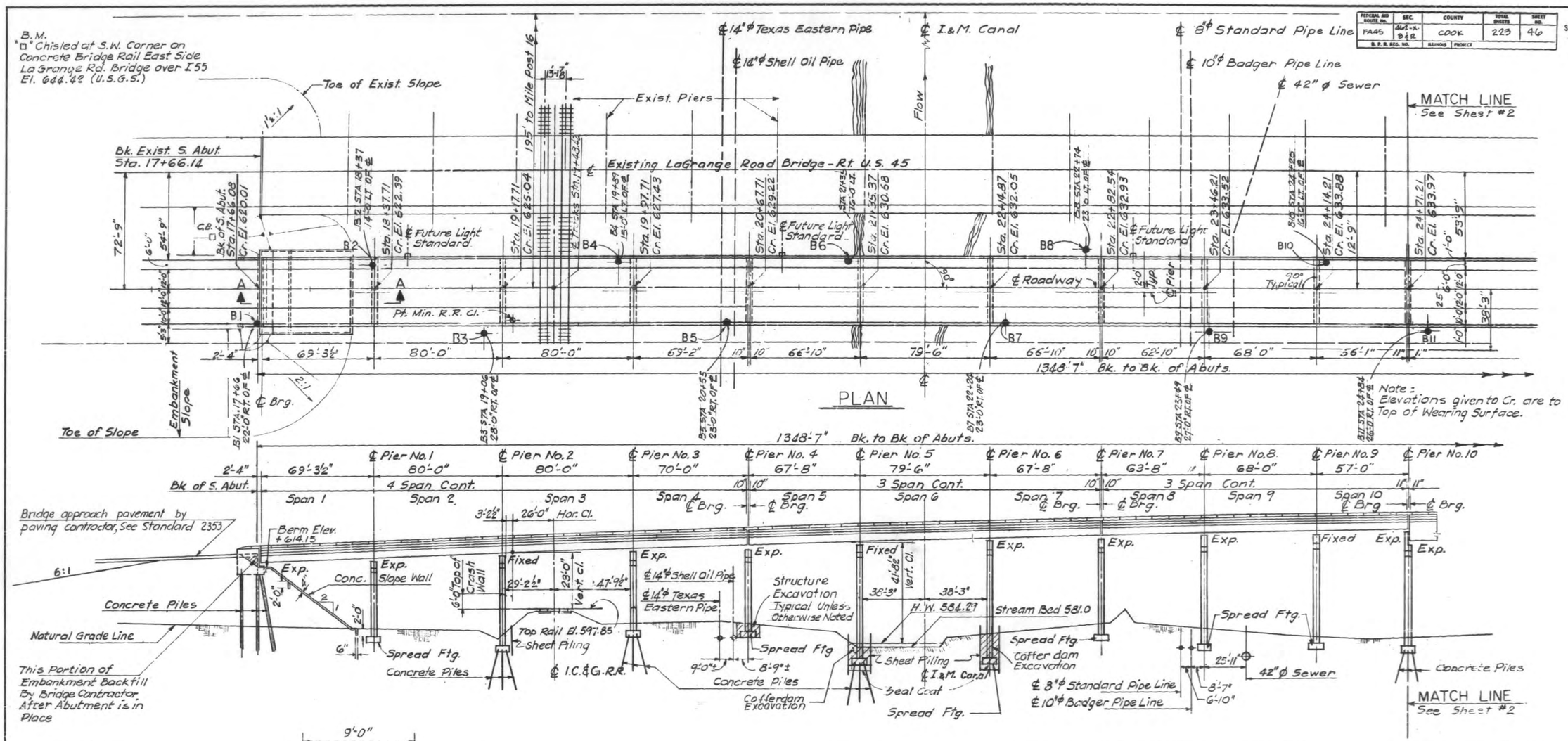


PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO.
48 7072 MADE IN U.S.A.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	46
B. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 1
50 SHEETS

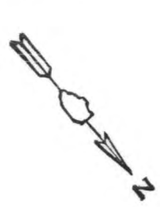
B.M.
"□" Chisled at S.W. Corner on Concrete Bridge Rail East Side La Grange Rd. Bridge over I55
El. 644.42 (U.S.G.S.)

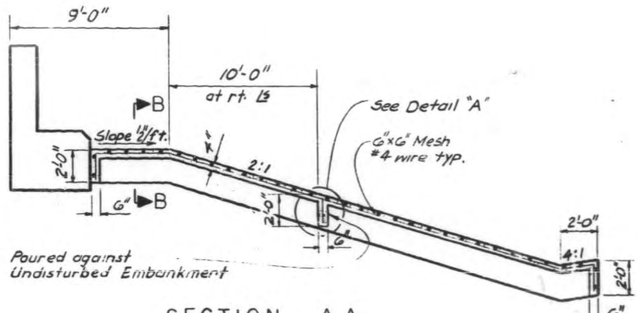


PLAN

1348'-7" Bk. to Bk. of Abuts.

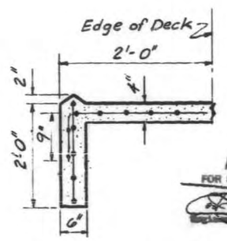
2'-4"	69'-3½"	℄ Pier No.1	80'-0"	℄ Pier No.2	80'-0"	℄ Pier No.3	70'-0"	℄ Pier No.4	67'-8"	℄ Pier No.5	79'-6"	℄ Pier No.6	67'-8"	℄ Pier No.7	63'-8"	℄ Pier No.8	68'-0"	℄ Pier No.9	57'-0"	℄ Pier No.10
Bk. of S. Abut.		4 Span Cont.						10"	10"	3 Span Cont.				10"	10"	3 Span Cont.				11"
	Span 1		Span 2		Span 3		Span 4	℄ Brg.	℄ Brg.		Span 6	Span 7 ℄ Brg.	℄ Brg.		Span 8		Span 9		Span 10 ℄ Brg.	℄ Brg.





SECTION A-A

ELEVATION

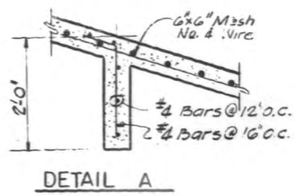


SECTION B-B

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridge & Traffic Structures

STATION 17+66.04
BUILT 19 BY
STATE OF ILLINOIS
F. A. ROUTE 45 SEC 462-X-B&R
F. A. PROJ. BRU-183(24)
LOADING HS20

NAME PLATE
See Standard 2113



DETAIL A

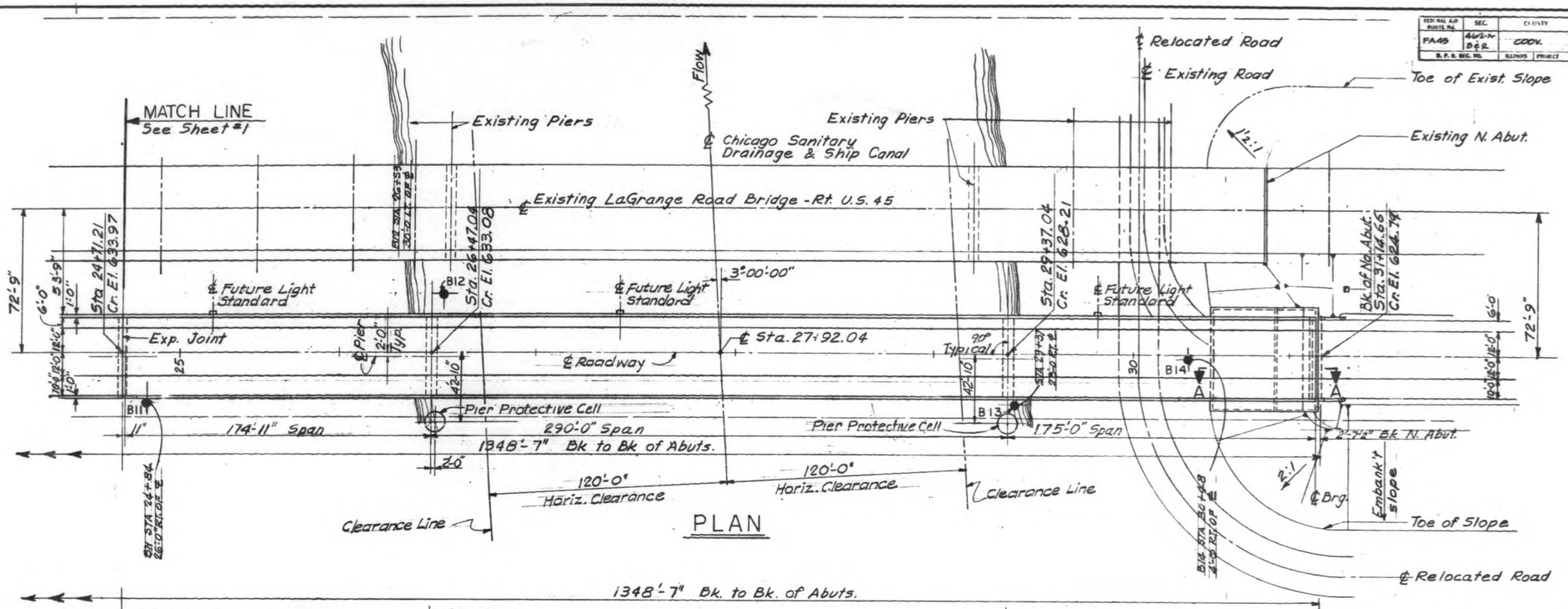
DESIGNED	A.S. & N.C.K.
CHECKED	A.S. & E.D.
DRAWN	N.C.K.
CHECKED	E.D.

PLAN & ELEVATION

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 45	462-X-B & R	COOK	223	47
F.A.P. RTE. NO.	ILLINOIS	PROJECT		

SHEET NO. 2
50 SHEETS



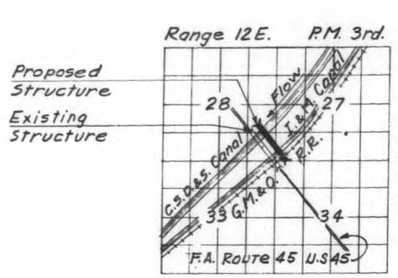
DESIGNED	A.S. & W.C.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

PLAN & ELEVATION

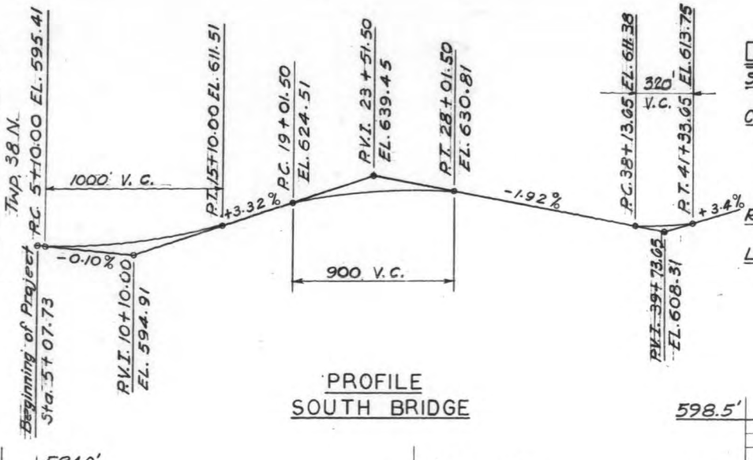
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X B&R	COOK	223	48
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 3
50 SHEETS



LOCATION PLAN



PROFILE
SOUTH BRIDGE

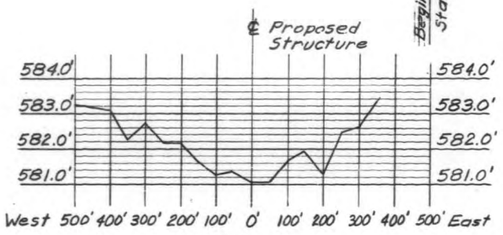
DESIGN STRESSES

STRUCTURAL STEEL:
f_s = 20,000 P.S.I.

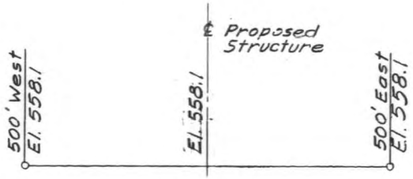
CONCRETE:
f_c = 1200 P.S.I. Deck Slab
f_c = 1400 P.S.I. Curb, Parapet & Substructure
V_c = 75 P.S.I. Footing
n = 10
Allowable L+I Deflection = $\frac{L}{1200}$ Composite

REINFORCEMENT:
f_s = 20,000 P.S.I.

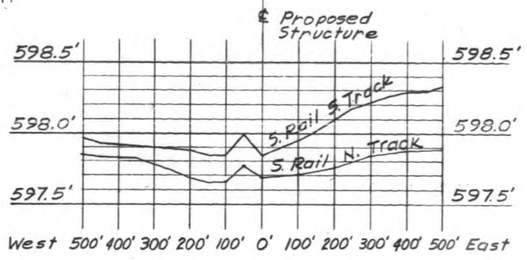
LOADING:
H S20-44
Future Wearing Suface: 25#/□'



PROFILE
I. & M. CANAL



PROFILE
CHICAGO SANITARY
DRAINAGE & SHIP CANAL



PROFILE
G.M. & O. R.R.

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.

CALCULATED WEIGHT OF STRUCTURAL STEEL. = 3,299,980.0 LBS.

FIELD CONNECTIONS SHALL BE BOLTED USING HIGH STRENGTH BOLTS. BOLTS 3/4" ϕ. OPEN HOLES 13/16" ϕ, UNLESS OTHERWISE NOTED.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED IN THE BOTTOM OF FLANGE OF BEAMS OR GIRDERS NOR ON THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" x 6" MESH. WEIGHING 58# PER 100 SQ.FT.

THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATE SHALL CONFORM TO THE REQUIREMENT OF HANDRAIL CONCRETE.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

THE CONTRACTOR SHALL DRIVE A TOTAL OF 6 CONCRETE TEST PILES IN PERMANENT LOCATIONS AT SOUTH & NORTH ABUTMENTS, PIERS 2, 3, 5 & 10.
THE LOCATION OF TEST PILES AS DIRECTED BY THE ENGINEER SHALL BE DRIVEN BEFORE ORDERING THE REMAINDER OF PILES.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACE TO WHICH WATERPROOF MEMBRANE SYSTEM IS APPLIED.

CONCRETE PILES AT ABUTMENTS SHALL BE DRIVEN IN HOLES PREDRILLED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.03(c) OF THE STANDARD SPECIFICATIONS.

CAST STEEL SHALL BE CLASS 90 AASHTO M192 FULLY ANNEALED STRUCTURAL STEEL WELDMENTS OF EQUAL SECTIONS AND MEETING AASHTO M222 MAY BE SUBSTITUTED FOR CASTINGS AT THE OPTION OF THE CONTRACTOR SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO FABRICATION. NO ADDITIONAL COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR THIS SUBSTITUTION.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
Structure Excavation	Cu. Yds.	—	990.4	990.4
Cofferdam Excavation	Cu. Yds.	—	2265.7	2265.7
Cofferdam	Each	—	4	4
Test Piles Concrete	Each	—	6	6
Precast Concrete Piles	Lin. Ft.	—	3115.0	3115.0
Stone Riprap	Sq. Yds.	—	52	52
Class "X" Concrete	Cu. Yds.	1766.1	1810.4	3576.5
Furn. & Erecting Structural Steel	Lump Sum	1	—	1
Reinforcement Bars	Lbs.	412160.	239560.	651720
Aluminum Handrail	Lin. Ft.	2751.0	—	2751.0
Protective Coat	Sq. Yds.	1037	—	1037.0
Waterproofing Membrane System	Sq. Yds.	5756.0	—	5756.0
Bituminous Conc. Surf. Course, Class I	Tons	469	—	469
Stud Shear Connectors	Each	13584	—	13584
Name Plates	Each	—	1	1
Slope Wall (4")	Sq. Yds.	—	540.1	540.1
Pier Protection Cell	Each	—	2	2
Navigation Lighting System	Lump Sum	1	—	1
Seal Coat Concrete	Cu. Yds.	—	464.3	464.3
Neoprene Exp. Joint (2")	Lin. Ft.	42.	—	42.
Neoprene Exp. Joint (4")	Lin. Ft.	84.	—	84.
Neoprene Exp. Joint (6½")	Lin. Ft.	42.	—	42.
Temp. Sheet Piling	Sq. Ft.		560	560

HYDRAULIC DATA
Drainage Area - Not Available
Flood Freq - 50 Year
High Water El. - 584.29

HYDRAULIC DATA
Drainage Area - 300 Sq. Mi., Level
Flood Freq - 50 Yr.
High Water El. - 581.38
Design Disch. - 28,600 C.f.s.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

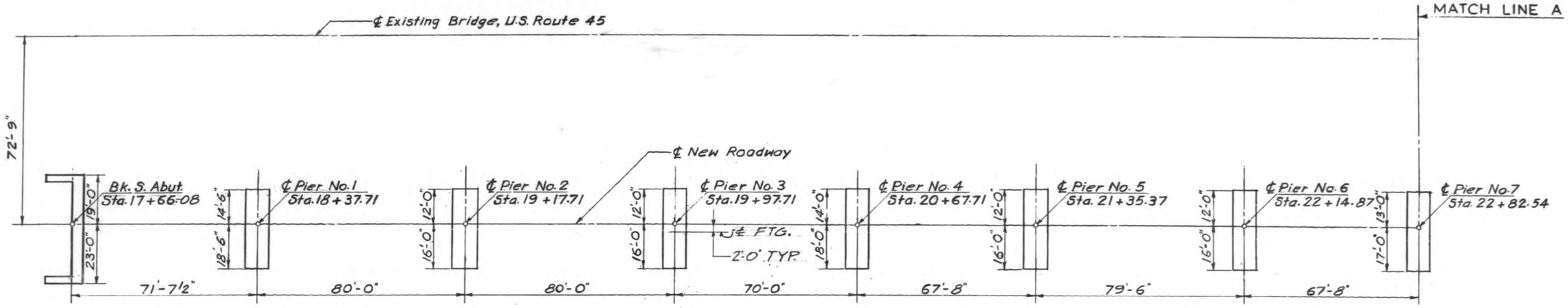
PROFILE GRADE & MISC. DATA

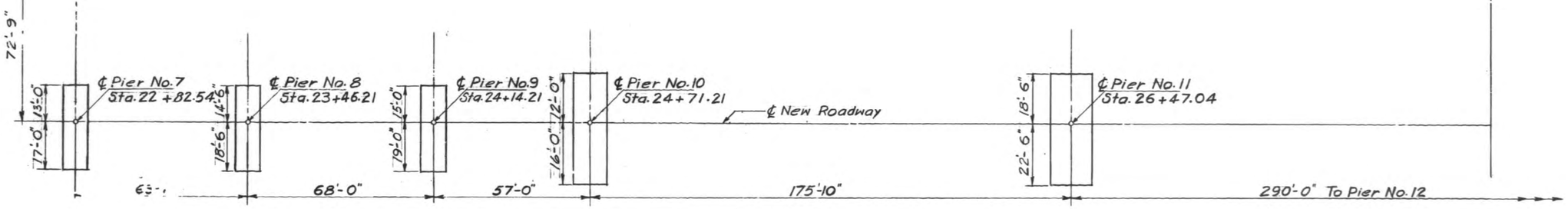
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

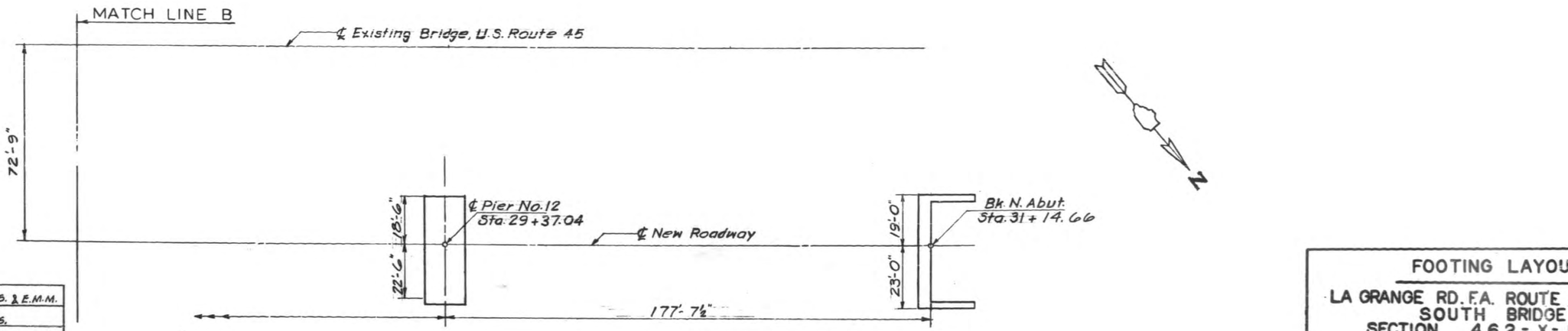
Revised 7-15-75

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B & R	COOK	223	49
S. P. R. REC. NO.	ILLINOIS	PROJECT		

SHEET NO. 4
50 SHEETS







FOOTING LAYOUT
Scale 1"=20'

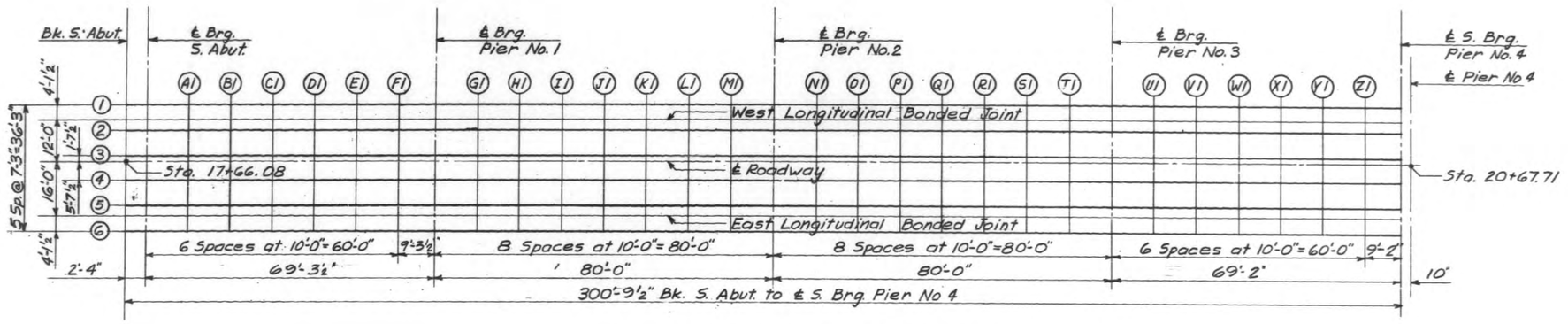
DESIGNED	A.S. & E.M.M.
CHECKED	A.S.
DRAWN	R. PATEL
CHECKED	E.M.M.

FOOTING LAYOUT

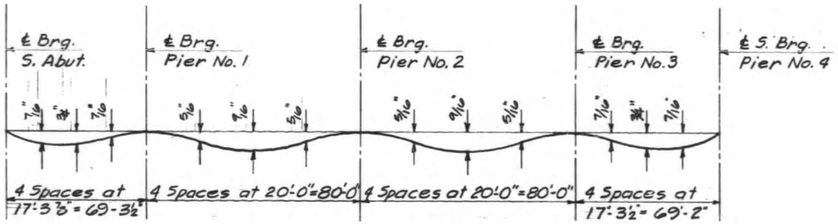
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B & R	COOK	223	50
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 5
50 SHEETS



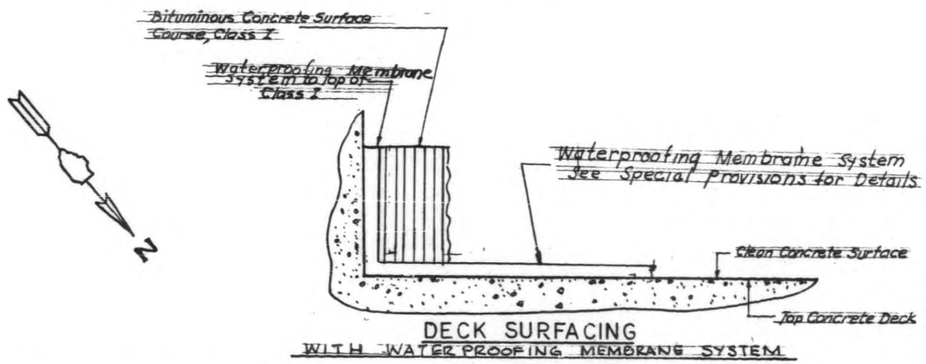
BEAM LAYOUT



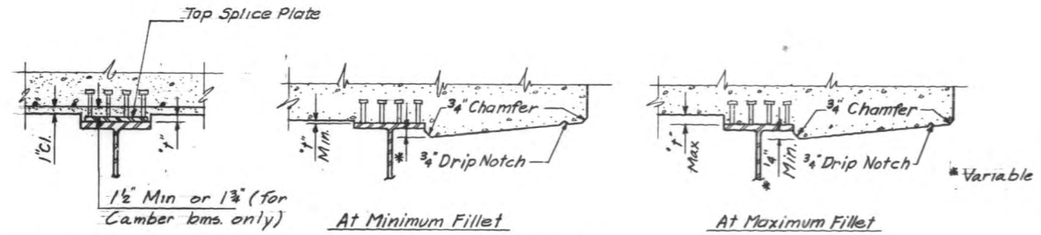
DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" wearing surface)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.



DECK SURFACING WITH WATER PROOFING MEMBRANE SYSTEM



INTERIOR BEAMS — EXTERIOR BEAMS

NOTE:
To determine "t": After all structural steel has been erected, elevation of the top flanges of the beams shall be taken at intervals shown on the beam layout drawings. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as indicated in the "Top of Slab Elevation Tables," minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DESIGNED	R.L.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

TOP OF SLAB ELEVATION LAYOUT
SPANS 1 TO 4

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B&R	COOK	223	51
S. P. S. ROUTE NO.		REMARKS | PROJECT		

SHEET NO. 6
50 SHEETS

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	Bk. So. Abut.	1766.080	16.125	619.615	619.615
	℄ Brg. So. Abut.	1768.413	16.125	619.693	619.693
	A1	1778.413	16.125	620.025	620.059
	B1	1788.413	16.125	620.357	620.414
	C1	1798.413	16.125	620.689	620.756
	D1	1808.413	16.125	621.021	621.077
	E1	1818.413	16.125	621.353	621.388
	F1	1828.413	16.125	621.685	621.698
	℄ Brg. Pier 1	1837.710	16.125	621.993	621.993
	G1	1847.710	16.125	622.325	622.332
	H1	1857.710	16.125	622.657	622.681
	I1	1867.710	16.125	622.989	623.029
	J1	1877.710	16.125	623.321	623.369
	K1	1887.710	16.125	623.653	623.659
	L1	1897.710	16.125	623.985	624.012
	M1	1907.710	16.125	624.316	624.326
Beam 1	℄ Brg. Pier 2	1917.710	16.125	624.642	624.642
	N1	1927.710	16.125	624.961	624.971
	O1	1937.710	16.125	625.275	625.302
	P1	1947.710	16.125	625.583	625.625
	Q1	1957.710	16.125	625.885	625.933
	R1	1967.710	16.125	626.182	626.222
	S1	1977.710	16.125	626.472	626.496
	T1	1987.710	16.125	626.757	626.764
	℄ Brg. Pier 3	1997.710	16.125	627.036	627.036
	U1	2007.710	16.125	627.309	627.323
	V1	2017.710	16.125	627.576	627.613
	W1	2027.710	16.125	627.838	627.895
	X1	2037.710	16.125	628.093	628.158
	Y1	2047.710	16.125	628.343	628.399
	Z1	2057.710	16.125	628.587	628.619
	℄ So. Brg. Pier 4	2066.876	16.125	628.805	628.805
	℄ Pier 4	2067.710	16.125	628.825	628.825
	Bk. So. Abut.	1766.080	12.000	619.701	619.701
	℄ Brg. So. Abut.	1768.413	12.000	619.779	619.779
	A1	1778.413	12.000	620.111	620.145
	B1	1788.413	12.000	620.443	620.500
	C1	1798.413	12.000	620.775	620.840
	D1	1808.413	12.000	621.107	621.163
	E1	1818.413	12.000	621.439	621.474
	F1	1828.413	12.000	621.771	621.784
	℄ Brg. Pier 1	1837.710	12.000	622.079	622.079
	G1	1847.710	12.000	622.411	622.418
	H1	1857.710	12.000	622.743	622.767
	I1	1867.710	12.000	623.075	623.115
	J1	1877.710	12.000	623.407	623.455
	K1	1887.710	12.000	623.739	623.781
	L1	1897.710	12.000	624.071	624.098
	M1	1907.710	12.000	624.402	624.412
West Long. Bonded Jt.	℄ Brg. Pier 2	1917.710	12.000	624.728	624.728
	N1	1927.710	12.000	625.047	625.057
	O1	1937.710	12.000	625.361	625.388
	P1	1947.710	12.000	625.669	625.711
	Q1	1957.710	12.000	625.971	626.019
	R1	1967.710	12.000	626.268	626.308
	S1	1977.710	12.000	626.558	626.582
	T1	1987.710	12.000	626.843	626.850
	℄ Brg. Pier 3	1997.710	12.000	627.122	627.122
	U1	2007.710	12.000	627.395	627.409
	V1	2017.710	12.000	627.662	627.699
	W1	2027.710	12.000	627.923	627.980
	X1	2037.710	12.000	628.179	628.244
	Y1	2047.710	12.000	628.429	628.485
	Z1	2057.710	12.000	628.673	628.705
	℄ So. Brg. Pier 4	2066.876	12.000	628.891	628.891
	℄ Pier 4	2067.710	12.000	628.911	628.911

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	Bk. So. Abut.	1766.080	8.875	619.750	619.750
	℄ Brg. So. Abut.	1768.413	8.875	619.827	619.827
	A1	1778.413	8.875	620.159	620.193
	B1	1788.413	8.875	620.491	620.548
	C1	1798.413	8.875	620.823	620.888
	D1	1808.413	8.875	621.155	621.211
	E1	1818.413	8.875	621.487	621.522
	F1	1828.413	8.875	621.819	621.832
	℄ Brg. Pier 1	1837.710	8.875	622.128	622.128
	G1	1847.710	8.875	622.460	622.467
	H1	1857.710	8.875	622.792	622.816
	I1	1867.710	8.875	623.124	623.164
	J1	1877.710	8.875	623.456	623.504
	K1	1887.710	8.875	623.788	623.830
	L1	1897.710	8.875	624.120	624.147
	M1	1907.710	8.875	624.451	624.461
Beam 2	℄ Brg. Pier 2	1917.710	8.875	624.776	624.776
	N1	1927.710	8.875	625.096	625.106
	O1	1937.710	8.875	625.410	625.437
	P1	1947.710	8.875	625.718	625.760
	Q1	1957.710	8.875	626.020	626.068
	R1	1967.710	8.875	626.316	626.356
	S1	1977.710	8.875	626.607	626.631
	T1	1987.710	8.875	626.892	626.899
	℄ Brg. Pier 3	1997.710	8.875	627.171	627.171
	U1	2007.710	8.875	627.444	627.458
	V1	2017.710	8.875	627.711	627.748
	W1	2027.710	8.875	627.972	628.029
	X1	2037.710	8.875	628.228	628.293
	Y1	2047.710	8.875	628.478	628.534
	Z1	2057.710	8.875	628.722	628.754
	℄ So. Brg. Pier 4	2066.876	8.875	628.940	628.940
	℄ Pier 4	2067.710	8.875	628.960	628.960
	Bk. So. Abut.	1766.080	1.625	619.863	619.863
	℄ Brg. So. Abut.	1768.413	1.625	619.941	619.941
	A1	1778.413	1.625	620.273	620.307
	B1	1788.413	1.625	620.605	620.662
	C1	1798.413	1.625	620.937	621.002
	D1	1808.413	1.625	621.269	621.325
	E1	1818.413	1.625	621.601	621.636
	F1	1828.413	1.625	621.933	621.946
	℄ Brg. Pier 1	1837.710	1.625	622.241	622.241
	G1	1847.710	1.625	622.573	622.580
	H1	1857.710	1.625	622.905	622.929
	I1	1867.710	1.625	623.237	623.277
	J1	1877.710	1.625	623.569	623.617
	K1	1887.710	1.625	623.901	623.943
	L1	1897.710	1.625	624.233	624.260
	M1	1907.710	1.625	624.564	624.574
Beam 3	℄ Brg. Pier 2	1917.710	1.625	624.890	624.890
	N1	1927.710	1.625	625.209	625.219
	O1	1937.710	1.625	625.523	625.550
	P1	1947.710	1.625	625.831	625.873
	Q1	1957.710	1.625	626.133	626.181
	R1	1967.710	1.625	626.430	626.470
	S1	1977.710	1.625	626.720	626.744
	T1	1987.710	1.625	627.005	627.012
	℄ Brg. Pier 3	1997.710	1.625	627.284	627.284
	U1	2007.710	1.625	627.557	627.571
	V1	2017.710	1.625	627.824	627.861
	W1	2027.710	1.625	628.086	628.163
	X1	2037.710	1.625	628.341	628.406
	Y1	2047.710	1.625	628.591	628.647
	Z1	2057.710	1.625	628.835	628.867
	℄ So. Brg. Pier 4	2066.876	1.625	629.053	629.053
	℄ Pier 4	2067.710	1.625	629.073	629.073
	Bk. So. Abut.	1766.080	0.000	619.889	619.889
	℄ Brg. So. Abut.	1768.413	0.000	619.966	619.966
	A1	1778.413	0.000	620.298	620.332
	B1	1788.413	0.000	620.630	620.687
	C1	1798.413	0.000	620.962	621.027
	D1	1808.413	0.000	621.294	621.350
	E1	1818.413	0.000	621.626	621.661
	F1	1828.413	0.000	621.958	621.971
℄ Roadway	℄ Brg. Pier 1	1837.710	0.000	622.267	622.267
	G1	1847.710	0.000	622.599	622.606
	H1	1857.710	0.000	622.931	622.955
	I1	1867.710	0.000	623.263	623.303
	J1	1877.710	0.000	623.595	623.643
	K1	1887.710	0.000	623.927	623.969
	L1	1897.710	0.000	624.259	624.286
	M1	1907.710	0.000	624.590	624.600

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 2	1917.710	0.000	624.915	624.915
	N1	1927.710	0.000	625.235	625.245
	O1	1937.710	0.000	625.549	625.576
	P1	1947.710	0.000	625.857	625.899
	Q1	1957.710	0.000	626.159	626.207
	R1	1967.710	0.000	626.455	626.495
	S1	1977.710	0.000	626.746	626.770
	T1	1987.710	0.000	627.030	627.037
℄ Roadway	℄ Brg. Pier 3	1997.710	0.000	627.309	627.309
	U1	2007.710	0.000	627.582	627.596
	V1	2017.710	0.000	627.850	627.887
	W1	2027.710	0.000	628.111	628.168
	X1	2037.710	0.000	628.367	628.432
	Y1	2047.710	0.000	628.616	628.672
	Z1	2057.710	0.000	628.860	628.892
	℄ So. Brg. Pier 4	2066.876	0.000	629.079	629.079
	℄ Pier 4	2067.710	0.000	629.098	629.098
	Bk. So. Abut.	1766.080	-5.625	619.801	619.801
	℄ Brg. So. Abut.	1768.413	-5.625	619.878	619.878
	A1	1778.413	-5.625	620.210	620.244
	B1	1788.413	-5.625	620.542	620.599
	C1	1798.413	-5.625	620.874	620.939
	D1	1808.413	-5.625	621.206	621.262
	E1	1818.413	-5.625	621.538	621.573
	F1	1828.413	-5.625	621.870	621.883
	℄ Brg. Pier 1	1837.710	-5.625	622.179	622.179
	G1	1847.710	-5.625	622.511	622.518
	H1	1857.710	-5.625	622.843	622.867
	I1	1867.710	-5.625	623.175	623.277
	J1	1877.710	-5.625	623.507	623.555
	K1	1887.710	-5.625	623.839	623.881
	L1	1897.710	-5.625	624.171	624.198
	M1	1907.710	-5.625	624.502	624.512
Beam 4	℄ Brg. Pier 2	1917.710	-9.625	624.827	624.827
	N1	1927.710	-5.625	625.147	625.157
	O1	1937.710	-5.625	625.461	625.488
	P1	1947.710	-5.625	625.769	625.811
	Q1	1957.710	-5.625	626.071	626.119
	R1	1967.710	-5.625	626.367	626.407
	S1	1977.710	-5.625	626.658	626.682
	T1	1987.710	-5.625	626.942	626.949
	℄ Brg. Pier 3	1997.710	-5.625	627.221	627.221
	U1	2007.710	-5.625	627.494	627.508
	V1	2017.710	-5.625	627.762	627.799
	W1	2027.710	-5.625	628.023	628.080
	X1	2037.710	-5.625	628.279	628.344
	Y1	2047.710	-5.625	628.528	628.584
	Z1	2057.710	-5.625	628.772	628.804
	℄ So. Brg. Pier 4	2066.876	-5.625	628.991	628.991
	℄ Pier 4	2067.710	-5.625	629.011	629.011
	Bk. So. Abut.	1766.080	-12.875	619.683	619.683
	℄ Brg. So. Abut.	1768.413	-12.875	619.760	619.760
	A1	1778.413	-12.875	620.092	620.126
	B1	1788.413	-12.875	620.424	620.481
	C1	1798.413	-12.875	620.756	620.821
	D1	1808.413	-12.875	621.088	621.144
	E1	1818.413	-12.875	621.420	621.455
	F1	1828.413	-12.875	621.752	621.765
	℄ Brg. Pier 1	1837.710	-12.875	622.061	622.061
	G1	1847.710	-12.875	622.393	622.340
	H1	1857.710	-12.875	622.725	622.749
	I1	1867.710	-12.875	623.057	623.097
	J1	1877.710	-12.875	623.389	623.437
	K1	1887.710	-12.875	623.721	623.768
	L1	1897.710	-12.875	624.053	624.080
	M1	1907.710	-12.875	624.384	624.394
Beam 5	℄ Brg. Pier 2	1917.710	-12.875	624.709	624.709
	N1	1927.710	-12.875	625.029	625.039
	O1	1937.710	-12.875	625.343	625.370
	P1	1947.710	-12.875	625.651	625.693
	Q1	1957.710	-12.875	625.953	626.001
	R1	1967.710	-12.875	626.249	626.288
	S1	1977.710	-12.875	626.540	626.564
	T1	1987.710	-12.875	626.825	626.832
	℄ Brg. Pier 3	1997.710	-12.875	627.103	627.103
	U1	2007.710	-12.875	627.377	627.391
	V1	2017.710	-12.875	627.644	627.681
	W1	2027.710	-12.875	627.905	627.962
	X1	2037.710	-12.875	628.161	628.226
	Y1	2047.710	-12.875	628.411	628.467
	Z1	2057.710	-12.875	628.655	628.687
	℄ So. Brg. Pier 4	2066.876	-12.875	628.873	628.873
	℄ Pier 4	2067.710	-12.875	628.893	628.893

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	Bk. So. Abut.	1766.080	-16.000	619.618	619.618
	℄ Brg. So. Abut.	1768.413	-16.000	619.695	619.695
	A1	1778.413	-16.000	620.027	620.061
	B1	1788.413	-16.000	620.359	620.416
	C1	1798.413	-16.000	620.691	620.756
	D1	1808.413	-16.000	621.023	621.079
	E1	1818.413	-16.000	621.355	621.390
	F1	1828.413	-16.000	621.687	621.700
	℄ Brg. Pier 1	1837.710	-16.000	621.996	621.996
	G1	1847.710	-16.000	622.328	622.335
	H1	1857.710	-16.000	622.660	622.684
	I1	1867.710	-16.000	622.992	623.132
	J1	1877.710	-16.000	623.324	623.372
	K1	1887.710	-16.000	623.656	623.698
	L1	1897.710	-16.000	623.988	624.015
	M1	1907.710	-16.000	624.319	624.329
East Long. Bonded Jt.	℄ Brg. Pier 2	1917.710	-16.000	624.644	624.644
	N1	1927.710	-16.000	624.964	624.974
	O1	1937.710	-16.000	625.278	625.305
	P1	1947.710	-16.000	625.586	625.628
	Q1	1957.710	-16.000	625.888	625.936
	R1	1967.710	-16.000	626.184	626.224
	S1	1977.710	-16.000	626.475	626.499
	T1	1987.710	-16.000	626.759	626.766
	℄ Brg. Pier 3	1997.710	-16.000	627.038	627.038
	U1	2007.710	-16.000	627.311	627.325
	V1	2017.710	-16.000	627.579	627.616
	W1	2027.710	-16.000	627.840	627.897
	X1	2037.710	-16.000	628.096	628.161
	Y1	2047.710	-16.000	628.346	628.402
	Z1	2057.710	-16.000	628.589	628.621
	℄ So. Brg. Pier 4	2066.876	-16.000	628.808	628.808
	℄ Pier 4	2067.710	-16.000	628.828	628.828
	Bk. So. Abut.	1766.080	-20.125	619.532	619.532
	℄ Brg. So. Abut.	1768.413	-20.125	619.609	619.609
	A1	1778.413	-20.125	619.941	619.975
	B1	1788.413	-20.125	620.273	620.330
	C1	1798.413	-20.125	620.605	620.670
	D1	1808.413	-20.125	620.937	620.993
	E1	1818.413	-20.125	621.269	621.304
	F1	1828.413	-20.125	621.601	621.614
	℄ Brg. Pier 1	1837.710	-20.125	621.910	621.910
	G1	1847.710	-20.125	622.242	622.249
	H1	1857.710	-20.125	622.574	622.598
	I1	1867.710	-20.125	622.906	622.946
	J1	1877.710	-20.125	623.238	623.286
	K1	1887.710	-20.125	623.570	623.612
	L1	1897.710	-20.125	623.902	623.929
	M1	1907.710	-20.125	624.233	624.243
Beam 6	℄ Brg. Pier 2	1917.710	-20.125	624.558	624.558
	N1	1927.710	-20.125	624.878	624.888
	O1	1937.710	-20.125	625.192	625.219
	P1	1947.710	-20.125	625.500	625.542
	Q1	1957.710	-20.125	625.802	625.850
	R1	1967.710	-20.125	626.098	626.158
	S1	1977.710	-20.125	626.389	626.413
	T1	1987.710	-20.125	626.674	626.681
	℄ Brg. Pier 3	1997.710	-20.125	626.952	626.952
	U1	2007.710	-20.125	627.226	627.240
	V1	2017.710	-20.125	627.493	627.530
	W1	2027.710	-20.125	627.754	627.811
	X1	2037.710	-20.125	628.010	628.075
	Y1	2047.710	-20.125	628.260	628.316
	Z1	2057.710	-20.125	628.504	628.536
	℄ So. Brg. Pier 4	2066.876	-20.125	628.722	628.722
	℄ Pier 4	2067.710	-20.125	628.742	628.742

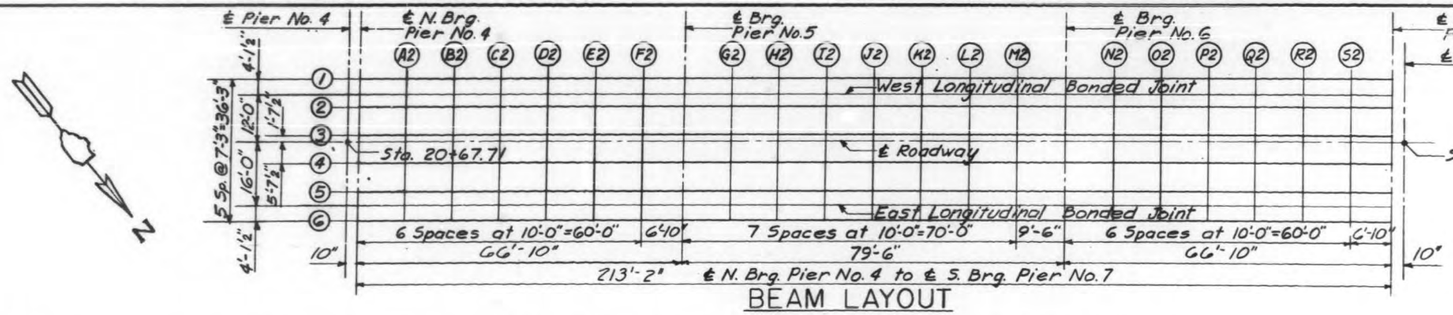
DESIGNED	R.L & E.D.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

TOP OF SLAB ELEVATIONS
SPANS 1 TO 4

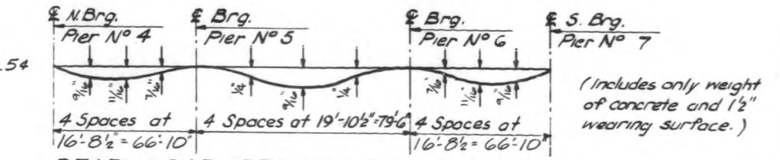
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	225	52
S. P. S. STRL. NO.	ILLINOIS	PROJECT		

SHEET NO. 7
50SHEETS



BEAM LAYOUT



(Includes only weight of concrete and 1½" wearing surface.)

DEAD LOAD DEFLECTION DIAGRAM

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflection as shown

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Beam 1	℄ Pier 4	2067.710	16.125	628.825	628.825
	℄ No. Brg. Pier 4	2068.543	16.125	628.845	628.845
	A2	2078.543	16.125	629.076	629.109
	B2	2088.543	16.125	629.302	629.356
	C2	2098.543	16.125	629.523	629.583
	D2	2108.543	16.125	629.737	629.786
	E2	2118.543	16.125	629.946	629.974
	F2	2128.543	16.125	630.148	630.155
	℄ Brg. Pier 5	2135.370	16.125	630.283	630.283
	G2	2145.370	16.125	630.476	630.482
	H2	2155.370	16.125	630.663	630.686
	I2	2165.370	16.125	630.845	630.883
	J2	2175.370	16.125	631.020	631.064
	K2	2185.370	16.125	631.190	631.228
	L2	2195.370	16.125	631.354	631.376
	M2	2205.370	16.125	631.512	631.518
	℄ Brg. Pier 6	2214.870	16.125	631.656	631.656
	N2	2224.870	16.125	631.803	631.816
	O2	2234.870	16.125	631.944	631.980
	P2	2244.870	16.125	632.079	632.133
	Q2	2254.870	16.125	632.208	632.268
	R2	2264.870	16.125	632.331	632.380
	S2	2274.870	16.125	632.449	632.471
	℄ So. Brg. Pier 7	2281.703	16.125	632.526	632.526
	℄ Pier 7	2282.540	16.125	632.535	632.535
West Long. Bonded Jt.	℄ Pier 4	2067.710	12.000	628.911	628.911
	℄ No. Brg. Pier 4	2068.543	12.000	628.931	628.931
	A2	2078.543	12.000	629.162	629.195
	B2	2088.543	12.000	629.388	629.442
	C2	2098.543	12.000	629.609	629.669
	D2	2108.543	12.000	629.823	629.872
	E2	2118.543	12.000	630.031	630.059
	F2	2128.543	12.000	630.234	630.241
	℄ Brg. Pier 5	2135.370	12.000	630.369	630.369
	G2	2145.370	12.000	630.562	630.568
	H2	2155.370	12.000	630.749	630.772
	I2	2165.370	12.000	630.931	630.969
	J2	2175.370	12.000	631.106	631.150
	K2	2185.370	12.000	631.276	631.314
	L2	2195.370	12.000	631.439	631.461
	M2	2205.370	12.000	631.597	631.603
	℄ Brg. Pier 6	2214.870	12.000	631.742	631.742
	N2	2224.870	12.000	631.889	631.902
	O2	2234.870	12.000	632.030	632.066
	P2	2244.870	12.000	632.165	632.219
	Q2	2254.870	12.000	632.294	632.354
	R2	2264.870	12.000	632.417	632.466
	S2	2274.870	12.000	632.535	632.557
	℄ So. Brg. Pier 7	2281.703	12.000	632.612	632.612
	℄ Pier 7	2282.540	12.000	632.621	632.621

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Beam 2	℄ Pier 4	2067.710	8.875	628.960	628.960
	℄ No. Brg. Pier 4	2068.543	8.875	628.979	628.976
	A2	2078.543	8.875	629.211	629.244
	B2	2088.543	8.875	629.437	629.491
	C2	2098.543	8.875	629.657	629.717
	D2	2108.543	8.875	629.872	629.621
	E2	2118.543	8.875	630.080	630.108
	F2	2128.543	8.875	630.283	630.290
	℄ Brg. Pier 5	2135.370	8.875	630.418	630.418
	G2	2145.370	8.875	630.611	630.617
	H2	2155.370	8.875	630.798	630.821
	I2	2165.370	8.875	630.979	631.017
	J2	2175.370	8.875	631.155	631.199
	K2	2185.370	8.875	631.324	631.362
	L2	2195.370	8.875	631.488	631.510
	M2	2205.370	8.875	631.646	631.652
	℄ Brg. Pier 6	2214.870	8.875	631.791	631.791
	N2	2224.870	8.875	631.938	631.951
	O2	2234.870	8.875	632.078	632.114
	P2	2244.870	8.875	632.213	632.267
	Q2	2254.870	8.875	632.343	632.408
	R2	2264.870	8.875	632.466	632.515
	S2	2274.870	8.875	632.583	632.605
	℄ So. Brg. Pier 7	2281.703	8.875	632.660	632.660
	℄ Pier 7	2282.540	8.875	632.670	632.670
Beam 3	℄ Pier 4	2067.710	1.625	629.073	629.073
	℄ No. Brg. Pier 4	2068.543	1.625	629.093	629.093
	A2	2078.543	1.625	629.324	629.357
	B2	2088.543	1.625	629.550	629.604
	C2	2098.543	1.625	629.771	629.831
	D2	2108.543	1.625	629.985	630.034
	E2	2118.543	1.625	630.194	630.222
	F2	2128.543	1.625	630.396	630.401
	℄ Brg. Pier 5	2135.370	1.625	630.531	630.531
	G2	2145.370	1.625	630.724	630.730
	H2	2155.370	1.625	630.911	630.934
	I2	2165.370	1.625	631.093	631.131
	J2	2175.370	1.625	631.268	631.312
	K2	2185.370	1.625	631.438	631.476
	L2	2195.370	1.625	631.602	631.624
	M2	2205.370	1.625	631.760	631.766
	℄ Brg. Pier 6	2214.870	1.625	631.904	631.904
	N2	2224.870	1.625	632.051	632.064
	O2	2234.870	1.625	632.192	632.203
	P2	2244.870	1.625	632.327	632.381
	Q2	2254.870	1.625	632.456	632.516
	R2	2264.870	1.625	632.579	632.628
	S2	2274.870	1.625	632.697	632.719
	℄ So. Brg. Pier 7	2281.703	1.625	632.774	632.774
	℄ Pier 7	2282.540	1.625	632.783	632.783
℄ Roadway	℄ Pier 4	2067.710	0.000	629.098	629.098
	℄ No. Brg. Pier 4	2068.543	0.000	629.118	629.118
	A2	2078.543	0.000	629.350	629.383
	B2	2088.543	0.000	629.576	629.630
	C2	2098.543	0.000	629.796	629.856
	D2	2108.543	0.000	630.010	630.059
	E2	2118.543	0.000	630.219	630.247
	F2	2128.543	0.000	630.422	630.449
	℄ Brg. Pier 5	2135.370	0.000	630.557	630.557

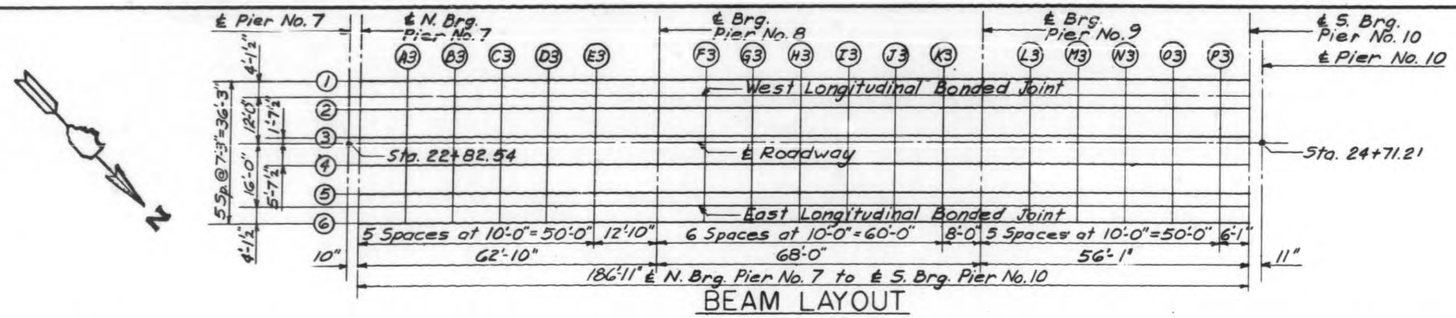
Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	G2	2145.370	0.000	630.750	630.756
	H2	2155.370	0.000	630.937	630.960
	I2	2165.370	0.000	631.118	631.156
	J2	2175.370	0.000	631.294	631.358
	K2	2185.370	0.000	631.463	631.501
	L2	2195.370	0.000	631.623	631.649
	M2	2205.370	0.000	631.785	631.791
	℄ Brg. Pier 6	2214.870	0.000	631.930	631.930
	N2	2224.870	0.000	632.076	632.089
	O2	2234.870	0.000	632.217	632.253
	P2	2244.870	0.000	632.352	632.406
	Q2	2254.870	0.000	632.481	632.541
	R2	2264.870	0.000	632.605	632.654
	S2	2274.870	0.000	632.722	632.794
	℄ So. Brg. Pier 7	2281.703	0.000	632.799	632.779
	℄ Pier 7	2282.540	0.000	632.808	632.808
Beam 4	℄ Pier 4	2067.710	-5.625	629.011	629.011
	℄ No. Brg. Pier 4	2068.543	-5.625	629.030	629.030
	A2	2078.543	-5.625	629.262	629.295
	B2	2088.543	-5.625	629.488	629.542
	C2	2098.543	-5.625	629.708	629.768
	D2	2108.543	-5.625	629.923	629.971
	E2	2118.543	-5.625	630.131	630.159
	F2	2128.543	-5.625	630.334	630.341
	℄ Brg. Pier 5	2135.370	-5.625	630.469	630.469
	G2	2145.370	-5.625	630.662	630.668
	H2	2155.370	-5.625	630.849	630.871
	I2	2165.370	-5.625	631.030	631.068
	J2	2175.370	-5.625	631.206	631.250
	K2	2185.370	-5.625	631.375	631.413
	L2	2195.370	-5.625	631.539	631.561
	M2	2205.370	-5.625	631.697	631.703
	℄ Brg. Pier 6	2214.870	-5.625	631.842	631.842
	N2	2224.870	-5.625	631.988	632.001
	O2	2234.870	-5.625	632.129	632.165
	P2	2244.870	-5.625	632.264	632.318
	Q2	2254.870	-5.625	632.393	632.453
	R2	2264.870	-5.625	632.517	632.566
	S2	2274.870	-5.625	632.634	632.656
	℄ So. Brg. Pier 7	2281.703	-5.625	632.711	632.711
	℄ Pier 7	2282.540	-5.625	632.720	632.720
Beam 5	℄ Pier 4	2067.710	-12.875	628.893	628.893
	℄ No. Brg. Pier 4	2068.543	-12.875	628.912	628.912
	A2	2078.543	-12.875	629.144	629.177
	B2	2088.543	-12.875	629.370	629.424
	C2	2098.543	-12.875	629.590	629.650
	D2	2108.543	-12.875	629.805	629.854
	E2	2118.543	-12.875	630.013	630.041
	F2	2128.543	-12.875	630.216	630.223
	℄ Brg. Pier 5	2135.370	-12.875	630.351	630.351
	G2	2145.370	-12.875	630.544	630.550
	H2	2155.370	-12.875	630.731	630.754
	I2	2165.370	-12.875	630.912	630.950
	J2	2175.370	-12.875	631.088	631.132
	K2	2185.370	-12.875	631.257	631.295
	L2	2195.370	-12.875	631.421	631.443
	M2	2205.370	-12.875	631.579	631.585
	℄ Brg. Pier 6	2214.870	-12.875	631.724	631.724
	N2	2224.870	-12.875	631.871	631.884
	O2	2234.870	-12.875	632.011	632.047
	P2	2244.870	-12.875	632.146	632.200
	Q2	2254.870	-12.875	632.276	632.336
	R2	2264.870	-12.875	632.399	632.464
	S2	2274.870	-12.875	632.516	632.538
	℄ So. Brg. Pier 7	2281.703	-12.875	632.593	632.593
	℄ Pier 7	2282.540	-12.875	632.603	632.603

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 4	2067.710	+16.000	628.828	628.828
	℄ No. Brg. Pier 4	2068.543	+16.000	628.847	628.847
	A2	2078.543	+16.000	629.079	629.112
	B2	2088.543	+16.000	629.305	629.359
	C2	2098.543	+16.000	629.525	629.645
	D2	2108.543	+16.000	629.740	629.789
	E2	2118.543	+16.000	629.948	629.976
	F2	2128.543	+16.000	630.151	630.158
	℄ Brg. Pier 5	2135.370	+16.000	630.286	630.286
	G2	2145.370	+16.000	630.479	630.485
	H2	2155.370	+16.000	630.666	630.689
	I2	2165.370	+16.000	630.847	630.885
	J2	2175.370	+16.000	631.023	631.067
	K2	2185.370	+16.000	631.192	631.230
	L2	2195.370	+16.000	631.356	631.378
	M2	2205.370	+16.000	631.514	631.520
	℄ Brg. Pier 6	2214.870	+16.000	631.659	631.659
	N2	2224.870	+16.000	631.805	631.816
	O2	2234.870	+16.000	631.946	631.982
	P2	2244.870	+16.000	632.081	632.135
	Q2	2254.870	+16.000	632.210	632.270
	R2	2264.870	+16.000	632.334	632.383
	S2	2274.870	+16.000	632.451	632.473
	℄ So. Brg. Pier 7	2281.703	+16.000	632.528	632.528
	℄ Pier 7	2282.540	+16.000	632.537	632.537
Beam 6	℄ Pier 4	2067.710	-20.125	628.742	628.742
	℄ No. Brg. Pier 4	2068.543	-20.125	628.761	628.761
	A2	2078.543	-20.125	628.993	629.026
	B2	2088.543	-20.125	629.219	629.273
	C2	2098.543	-20.125	629.439	629.499
	D2	2108.543	-20.125	629.654	629.703
	E2	2118.543	-20.125	629.862	629.890
	F2	2128.543	-20.125	630.065	630.072
	℄ Brg. Pier 5	2135.370	-20.125	630.200	630.200
	G2	2145.370	-20.125	630.393	630.399
	H2	2155.370	-20.125	630.580	630.603
	I2	2165.370	-20.125	630.761	630.799
	J2	2175.370	-20.125	630.937	630.981
	K2	2185.370	-20.125	631.106	631.146
	L2	2195.370	-20.125	631.270	631.292
	M2	2205.370	-20.125	631.428	631.434
	℄ Brg. Pier 6	2214.870	-20.125	631.573	631.573
	N2	2224.870	-20.125	631.720	631.733
	O2	2234.870	-20.125	631.860	631.896
	P2	2244.870	-20.125	631.995	632.049
	Q2	2254.870	-20.125	632.124	632.184
	R2	2264.870	-20.125	632.248	632.297
	S2	2274.870	-20.125	632.365	632.387
	℄ So. Brg. Pier 7	2281.703	-20.125	632.442	632.442
	℄ Pier 7	2282.540	-20.125	632.452	632.452

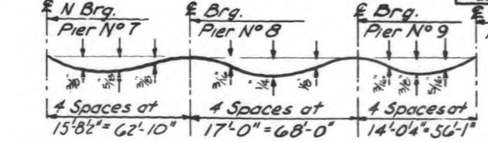
DESIGNED	R.L. & E.D.
CHECKED	E.D.
DRAWN	HJS
CHECKED	E.D.

TOP OF SLAB LAYOUT & ELEVATIONS
SPANS 5 TO 7

LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" wearing surface.)

Note:

These deflection are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 5	462-X-B & R	COOK	223	55
A.P.P. NO.	ILLINOIS	PROJECT		

SHEET NO. 8
50 SHEETS

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Beam 1	℄ Pier 7	2282.540	16.125	632.535	632.535
	℄ No. Brg. Pier 7	2283.373	16.125	632.544	632.544
	A3	2293.373	16.125	632.651	632.680
	B3	2303.373	16.125	632.752	632.800
	C3	2313.373	16.125	632.847	632.899
	D3	2323.373	16.125	632.936	632.977
	E3	2333.373	16.125	633.020	633.041
	℄ Brg. Pier 8	2346.210	16.125	633.116	633.118
	F3	2356.210	16.125	633.188	633.190
	G3	2366.210	16.125	633.253	633.265
	H3	2376.210	16.125	633.311	633.331
	I3	2386.210	16.125	633.364	633.384
	J3	2396.210	16.125	633.411	633.423
	K3	2406.210	16.125	633.452	633.455
	℄ Brg. Pier 9	2414.210	16.125	633.481	633.481
	L3	2424.210	16.125	633.511	633.520
	M3	2434.210	16.125	633.536	633.559
	N3	2444.210	16.125	633.555	633.586
	O3	2454.210	16.125	633.568	633.595
	P3	2464.210	16.125	633.575	633.588
	℄ So. Brg. Pier 10	2470.293	16.125	633.577	633.577
	℄ Pier 10	2471.210	16.125	633.577	633.577
West Long. Bonded Jt.	℄ Pier 7	2282.540	12.000	632.621	632.621
	℄ No. Brg. Pier 7	2283.373	12.000	632.630	632.630
	A3	2293.373	12.000	632.737	632.766
	B3	2303.373	12.000	632.838	632.886
	C3	2313.373	12.000	632.933	632.985
	D3	2323.373	12.000	633.022	633.063
	E3	2333.373	12.000	633.106	633.127
	℄ Brg. Pier 8	2346.210	12.000	633.204	633.204
	F3	2356.210	12.000	633.274	633.276
	G3	2366.210	12.000	633.339	633.351
	H3	2376.210	12.000	633.397	633.417
	I3	2386.210	12.000	633.450	633.470
	J3	2396.210	12.000	633.497	633.509
	K3	2406.210	12.000	633.538	633.541
	℄ Brg. Pier 9	2414.210	12.000	633.566	633.566
	L3	2424.210	12.000	633.597	633.606
	M3	2434.210	12.000	633.622	633.645
	N3	2444.210	12.000	633.641	633.672
	O3	2454.210	12.000	633.654	633.681
	P3	2464.210	12.000	633.661	633.674
	℄ So. Brg. Pier 10	2470.293	12.000	633.663	633.663
	℄ Pier 10	2471.210	12.000	633.668	633.663

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Beam 2	℄ Pier 7	2282.540	8.875	632.670	632.670
	℄ No. Brg. Pier 7	2283.373	8.875	632.679	632.679
	A3	2293.373	8.875	632.786	632.815
	B3	2303.373	8.875	632.887	632.935
	C3	2313.373	8.875	632.982	633.034
	D3	2323.373	8.875	633.071	633.112
	E3	2333.373	8.875	633.154	633.175
	℄ Brg. Pier 8	2346.210	8.875	633.253	633.253
	F3	2356.210	8.875	633.323	633.325
	G3	2366.210	8.875	633.387	633.399
	H3	2376.210	8.875	633.446	633.466
	I3	2386.210	8.875	633.499	633.519
	J3	2396.210	8.875	633.546	633.558
	K3	2406.210	8.875	633.587	633.590
	℄ Brg. Pier 9	2414.210	8.875	633.615	633.615
	L3	2424.210	8.875	633.646	633.655
	M3	2434.210	8.875	633.671	633.694
	N3	2444.210	8.875	633.690	633.721
	O3	2454.210	8.875	633.703	633.730
	P3	2464.210	8.875	633.710	633.723
	℄ So. Brg. Pier 10	2470.293	8.875	633.712	633.712
	℄ Pier 10	2471.210	8.875	633.712	633.712
Beam 3	℄ Pier 7	2282.540	1.625	632.783	632.783
	℄ No. Brg. Pier 7	2283.373	1.625	632.792	632.792
	A3	2293.373	1.625	632.899	632.908
	B3	2303.373	1.625	633.000	633.048
	C3	2313.373	1.625	633.095	633.147
	D3	2323.373	1.625	633.184	633.225
	E3	2333.373	1.625	633.268	633.289
	℄ Brg. Pier 8	2346.210	1.625	633.366	633.366
	F3	2356.210	1.625	633.436	633.438
	G3	2366.210	1.625	633.501	633.513
	H3	2376.210	1.625	633.559	633.579
	I3	2386.210	1.625	633.612	633.632
	J3	2396.210	1.625	633.659	633.671
	K3	2406.210	1.625	633.700	633.703
	℄ Brg. Pier 9	2414.210	1.625	633.729	633.729
	L3	2424.210	1.625	633.759	633.768
	M3	2434.210	1.625	633.784	633.807
	N3	2444.210	1.625	633.803	633.835
	O3	2454.210	1.625	633.816	633.843
	P3	2464.210	1.625	633.823	633.836
	℄ So. Brg. Pier 10	2470.293	1.625	633.825	633.825
	℄ Pier 10	2471.210	1.625	633.825	633.825
℄ Roadway	℄ Pier 7	2282.540	0.000	632.808	632.808
	℄ No. Brg. Pier 7	2283.373	0.000	632.818	632.818
	A3	2293.373	0.000	632.924	632.953
	B3	2303.373	0.000	633.025	633.073
	C3	2313.373	0.000	633.120	633.172
	D3	2323.373	0.000	633.210	633.251
	E3	2333.373	0.000	633.293	633.314
	℄ Brg. Pier 8	2346.210	0.000	633.392	633.392

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	F3	2356.210	0.000	633.462	633.464
	G3	2366.210	0.000	633.526	633.538
	H3	2376.210	0.000	633.585	633.605
	I3	2386.210	0.000	633.637	633.657
	J3	2396.210	0.000	633.684	633.696
	K3	2406.210	0.000	633.725	633.728
	℄ Brg. Pier 9	2414.210	0.000	633.754	633.754
	L3	2424.210	0.000	633.785	633.794
	M3	2434.210	0.000	633.809	633.832
	N3	2444.210	0.000	633.826	633.859
	O3	2454.210	0.000	633.841	633.868
	P3	2464.210	0.000	633.849	633.862
	℄ So. Brg. Pier 10	2470.293	0.000	633.850	633.850
	℄ Pier 10	2471.210	0.000	633.850	633.850
Beam 4	℄ Pier 7	2282.540	-5.625	632.720	632.720
	℄ No. Brg. Pier 7	2283.373	-5.625	632.730	632.730
	A3	2293.373	-5.625	632.836	632.865
	B3	2303.373	-5.625	632.937	632.985
	C3	2313.373	-5.625	633.032	633.084
	D3	2323.373	-5.625	633.122	633.163
	E3	2333.373	-5.625	633.205	633.226
	℄ Brg. Pier 8	2346.210	-5.625	633.304	633.304
	F3	2356.210	-5.625	633.374	633.376
	G3	2366.210	-5.625	633.438	633.450
	H3	2376.210	-5.625	633.497	633.517
	I3	2386.210	-5.625	633.550	633.570
	J3	2396.210	-5.625	633.596	633.608
	K3	2406.210	-5.625	633.637	633.640
	℄ Brg. Pier 9	2414.210	-5.625	633.666	633.666
	L3	2424.210	-5.625	633.697	633.706
	M3	2434.210	-5.625	633.721	633.744
	N3	2444.210	-5.625	633.740	633.771
	O3	2454.210	-5.625	633.753	633.780
	P3	2464.210	-5.625	633.761	633.774
	℄ So. Brg. Pier 10	2470.293	-5.625	633.762	633.762
	℄ Pier 10	2471.210	-5.625	633.762	633.762
Beam 5	℄ Pier 7	2282.540	-12.875	632.603	632.603
	℄ No. Brg. Pier 7	2283.373	-12.875	632.612	632.612
	A3	2293.373	-12.875	632.715	632.748
	B3	2303.373	-12.875	632.819	632.867
	C3	2313.373	-12.875	632.915	632.967
	D3	2323.373	-12.875	633.004	633.045
	E3	2333.373	-12.875	633.087	633.108
	℄ Brg. Pier 8	2346.210	-12.875	633.186	633.186
	F3	2356.210	-12.875	633.256	633.258
	G3	2366.210	-12.875	633.320	633.332
	H3	2376.210	-12.875	633.379	633.399
	I3	2386.210	-12.875	633.432	633.452
	J3	2396.210	-12.875	633.475	633.491
	K3	2406.210	-12.875	633.520	633.523
	℄ Brg. Pier 9	2414.210	-12.875	633.546	633.548
	L3	2424.210	-12.875	633.579	633.588
	M3	2434.210	-12.875	633.604	633.627
	N3	2444.210	-12.875	633.623	633.654
	O3	2454.210	-12.875	633.636	633.663
	P3	2464.210	-12.875	633.643	633.656
	℄ So. Brg. Pier 10	2470.293	-12.875	633.645	633.645
	℄ Pier 10	2471.210	-12.875	633.645	633.645

Beam or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 7	2282.540	-16.000	632.538	632.538
	℄ No. Brg. Pier 7	2283.373	-16.000	632.547	632.547
	A3	2293.373	-16.000	632.653	632.682
	B3	2303.373	-16.000	632.754	632.802
	C3	2313.373	-16.000	632.849	632.901
	D3	2323.373	-16.000	632.939	632.980
	E3	2333.373	-16.000	633.022	633.043
	℄ Brg. Pier 8	2346.210	-16.000	633.121	633.121
	F3	2356.210	-16.000	633.191	633.193
	G3	2366.210	-16.000	633.255	633.267
	H3	2376.210	-16.000	633.314	633.334
	I3	2386.210	-16.000	633.367	633.387
	J3	2396.210	-16.000	633.413	633.425
	K3	2406.210	-16.000	633.455	633.458
	℄ Brg. Pier 9	2414.210	-16.000	633.483	633.483
	L3	2424.210	-16.000	633.514	633.523
	M3	2434.210	-16.000	633.538	633.561
	N3	2444.210	-16.000	633.557	633.588
	O3	2454.210	-16.000	633.571	633.598
	P3	2464.210	-16.000	633.578	633.591
	℄ So. Brg. Pier 10	2470.293	-16.000	633.579	633.579
	℄ Pier 10	2471.210	-16.000	633.579	633.579
Beam 6	℄ Pier 7	2282.540	-20.125	632.452	632.452
	℄ No. Brg. Pier 7	2283.373	-20.125	632.461	632.461
	A3	2293.373	-20.125	632.567	632.596
	B3	2303.373	-20.125	632.668	632.716
	C3	2313.373	-20.125	632.764	632.816
	D3	2323.373	-20.125	632.853	632.894
	E3	2333.373	-20.125	632.936	632.957
	℄ Brg. Pier 8	2346.210	-20.125	633.035	633.035
	F3	2356.210	-20.125	633.105	633.107
	G3	2366.210	-20.125	633.169	633.181
	H3	2376.210	-20.125	633.228	633.248
	I3	2386.210	-20.125	633.281	633.301
	J3	2396.210	-20.125	633.328	633.340
	K3	2406.210	-20.125	633.369	633.372
	℄ Brg. Pier 9	2414.210	-20.125	633.397	633.397
	L3	2424.210	-20.125	633.428	633.437
	M3	2434.210	-20.125	633.453	633.476
	N3	2444.210	-20.125	633.471	633.502
	O3	2454.210	-20.125	633.485	633.512
	P3	2464.210	-20.125	633.492	633.505
	℄ So. Brg. Pier 10	2470.293	-20.125	633.493	633.493
	℄ Pier 10	2471.210	-20.125	633.494	633.494

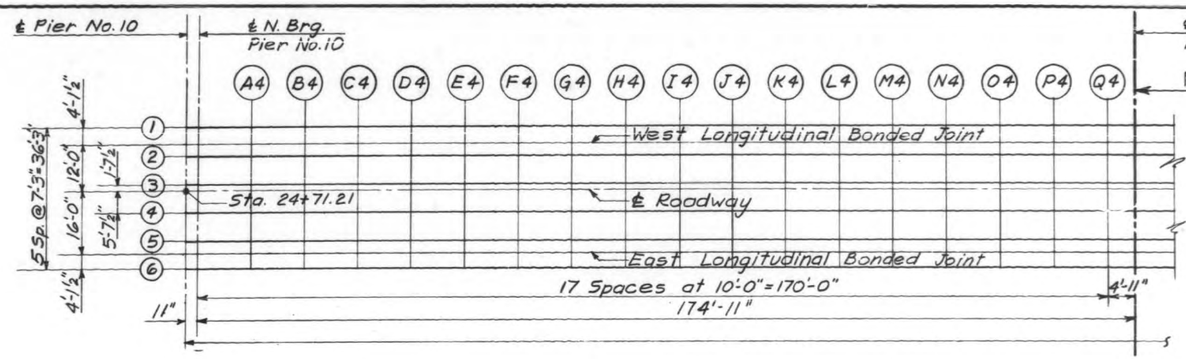
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CHECKED	E.D.
DRAWN	HJS
CHECKED	E.D.

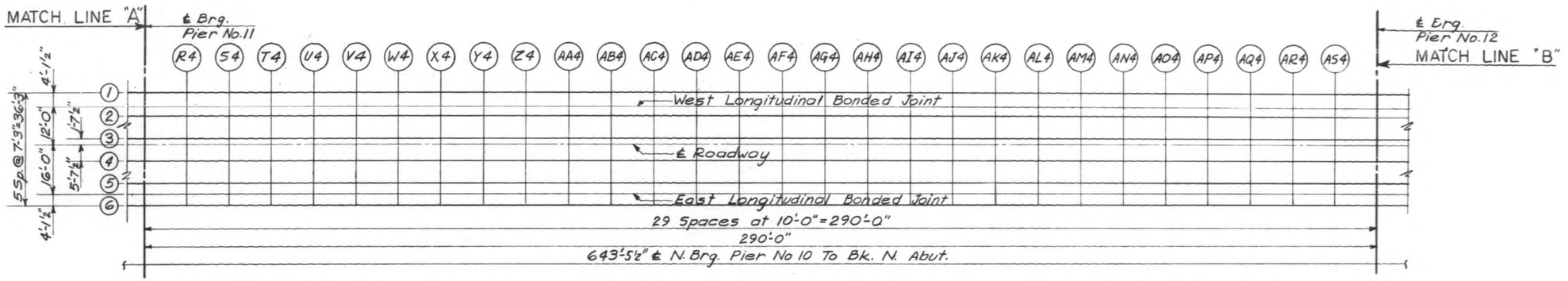
TOP OF SLAB LAYOUT & ELEVATIONS
SPANS 8 TO 10

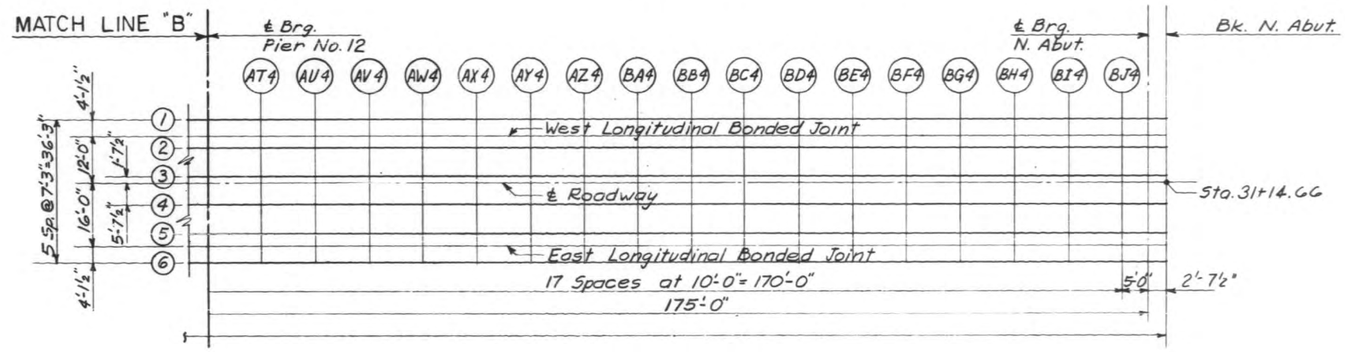
LA GRANGE RD F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-D&R	COOK	223	24
S. P. R. SEC. NO.	ILLINOIS PROJECT			

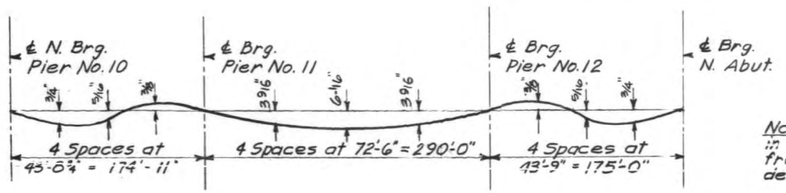
SHEET NO. 9
50 SHEETS







BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" wearing surface)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

DESIGNED	R.L.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

TOP OF SLAB ELEVATION LAYOUT
SPANS 11 TO 13

LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.		TOTAL SHEETS	SHEET NO.
FAS	462-X B&R	COOK	223	55
S. P. R. ROUTE NO.	ILLINOIS	PROJECT		

SHEET NO. 10
50 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	16.125	633.577	633.577
	℄ No. Brg. Pier 10	2472.126	16.125	633.577	633.577
	A8	2482.126	16.125	633.574	633.593
	B8	2492.126	16.125	633.565	633.602
	C8	2502.126	16.125	633.550	633.600
	D8	2512.126	16.125	633.529	633.588
	E8	2522.126	16.125	633.503	633.565
	F8	2532.126	16.125	633.471	633.530
	G8	2542.126	16.125	633.433	633.484
	H8	2552.126	16.125	633.389	633.419
	I8	2562.126	16.125	633.339	633.367
	J8	2572.126	16.125	633.283	633.289
	K8	2582.126	16.125	633.222	633.212
	L8	2592.126	16.125	633.155	633.132
	M8	2602.126	16.125	633.082	633.050
	N8	2612.126	16.125	633.003	632.968
	O8	2622.126	16.125	632.918	632.885
	P8	2632.126	16.125	632.828	632.803
	Q8	2642.126	16.125	632.732	632.723
	℄ Brg. Pier 11	2647.040	16.125	632.682	632.682
	R8	2657.040	16.125	632.577	632.605
	S8	2667.040	16.125	632.466	632.527
	T8	2677.040	16.125	632.350	632.449
	U8	2687.040	16.125	632.227	632.371
	V8	2697.040	16.125	632.099	632.291
	W8	2707.040	16.125	631.965	632.206
	X8	2717.040	16.125	631.825	632.117
	Y8	2727.040	16.125	631.679	632.019
	Z8	2737.040	16.125	631.528	631.914
	AA8	2747.040	16.125	631.370	631.797
	AB8	2757.040	16.125	631.207	631.666
	AC8	2767.040	16.125	631.038	631.524
	AD8	2777.040	16.125	630.863	631.368
Girder 1	AE8	2787.040	16.125	630.683	631.196
	AF8	2797.040	16.125	630.496	631.009
	AG8	2807.040	16.125	630.305	630.810
	AH8	2817.040	16.125	630.113	630.598
	AI8	2827.040	16.125	629.921	630.380
	AJ8	2837.040	16.125	629.729	630.156
	AK8	2847.040	16.125	629.537	629.923
	AL8	2857.040	16.125	629.345	629.685
	AM8	2867.040	16.125	629.153	629.445
	AN8	2877.040	16.125	628.961	629.202
	AO8	2887.040	16.125	628.769	628.961
	AP8	2897.040	16.125	628.577	628.721
	AQ8	2907.040	16.125	628.385	628.484
	AR8	2917.040	16.125	628.193	628.254
	AS8	2927.040	16.125	628.001	628.029
	℄ Brg. Pier 12	2937.040	16.125	627.809	627.809
	AT8	2947.040	16.125	627.617	627.608
	AU8	2957.040	16.125	627.425	627.400
	AV8	2967.040	16.125	627.233	627.200
	AW8	2977.040	16.125	627.041	627.006
	AX8	2987.040	16.125	626.849	626.817
	AY8	2997.040	16.125	626.657	626.634
	AZ8	3007.040	16.125	626.465	626.455
	BA8	3017.040	16.125	626.273	626.279
	BB8	3027.040	16.125	626.081	626.104
	BC8	3037.040	16.125	625.889	625.915
	BD8	3047.040	16.125	625.697	625.748
	BE8	3057.040	16.125	625.505	625.564
	BF8	3067.040	16.125	625.313	625.375
	BG8	3077.040	16.125	625.121	625.180
	BH8	3087.040	16.125	624.929	624.979
	BI8	3097.040	16.125	624.737	624.774
	BJ8	3107.040	16.125	624.545	624.564
	℄ Brg. No. Abut.	3112.040	16.125	624.449	624.449
	Bk. No. Abut.	3114.660	16.125	624.395	624.396
	℄ Pier 10	2471.210	12.000	633.663	633.663
	℄ No. Brg. Pier 10	2472.126	12.000	633.663	633.663
	A8	2482.126	12.000	633.660	633.679
	B8	2492.126	12.000	633.651	633.688
	C8	2502.126	12.000	633.636	633.686
	D8	2512.126	12.000	633.615	633.674
	E8	2522.126	12.000	633.589	633.651
	F8	2532.126	12.000	633.557	633.616
	G8	2542.126	12.000	633.519	633.570
	H8	2552.126	12.000	633.475	633.505
	I8	2562.126	12.000	633.425	633.448
	J8	2572.126	12.000	633.369	633.375
	K8	2582.126	12.000	633.308	633.298
	L8	2592.126	12.000	633.241	633.218
	M8	2602.126	12.000	633.168	633.136
	N8	2612.126	12.000	633.089	633.054
	O8	2622.126	12.000	633.004	632.971
	P8	2632.126	12.000	632.914	632.889
	Q8	2642.126	12.000	632.818	632.809

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 11	2647.040	12.000	632.768	632.768
	R8	2657.040	12.000	632.663	632.691
	S8	2667.040	12.000	632.552	632.613
	T8	2677.040	12.000	632.436	632.535
	U8	2687.040	12.000	632.313	632.457
	V8	2697.040	12.000	632.185	632.377
	W8	2707.040	12.000	632.051	632.292
	X8	2717.040	12.000	631.911	632.203
	Y8	2727.040	12.000	631.765	632.105
	Z8	2737.040	12.000	631.614	632.000
	AA8	2747.040	12.000	631.456	631.883
	AB8	2757.040	12.000	631.293	631.752
	AC8	2767.040	12.000	631.124	631.610
	AD8	2777.040	12.000	630.949	631.454
	AE8	2787.040	12.000	630.769	631.282
	AF8	2797.040	12.000	630.582	631.095
	AG8	2807.040	12.000	630.391	630.896
	AH8	2817.040	12.000	630.199	630.685
	AI8	2827.040	12.000	630.007	630.466
	AJ8	2837.040	12.000	629.815	630.242
	AK8	2847.040	12.000	629.623	630.009
	AL8	2857.040	12.000	629.431	629.771
	AM8	2867.040	12.000	629.239	629.531
	AN8	2877.040	12.000	629.047	629.288
	AO8	2887.040	12.000	628.855	629.047
West Long. Bonded Jt.	AP8	2897.040	12.000	628.663	628.807
	AQ8	2907.040	12.000	628.471	628.570
	AR8	2917.040	12.000	628.279	628.340
	AS8	2927.040	12.000	628.087	628.115
	℄ Brg. Pier 12	2937.040	12.000	627.895	627.895
	AT8	2947.040	12.000	627.703	627.694
	AU8	2957.040	12.000	627.511	627.486
	AV8	2967.040	12.000	627.319	627.286
	AW8	2977.040	12.000	627.127	627.092
	AX8	2987.040	12.000	626.935	626.903
	AY8	2997.040	12.000	626.743	626.720
	AZ8	3007.040	12.000	626.551	626.541
	BA8	3017.040	12.000	626.359	626.365
	BB8	3027.040	12.000	626.167	626.190
	BC8	3037.040	12.000	625.975	626.005
	BD8	3047.040	12.000	625.783	625.834
	BE8	3057.040	12.000	625.591	625.650
	BF8	3067.040	12.000	625.399	625.461
	BG8	3077.040	12.000	625.207	625.266
	BH8	3087.040	12.000	625.015	625.065
	BI8	3097.040	12.000	624.823	624.860
	BJ8	3107.040	12.000	624.631	624.650
	℄ Brg. No. Abut.	3112.040	12.000	624.535	624.535
	Bk. No. Abut.	3114.660	12.000	624.482	624.482
	℄ Pier 10	2471.210	8.875	633.712	633.712
	℄ No. Brg. Pier 10	2472.126	8.875	633.712	633.712
	A8	2482.126	8.875	633.708	633.727
	B8	2492.126	8.875	633.700	633.737
	C8	2502.126	8.875	633.685	633.735
	D8	2512.126	8.875	633.664	633.723
	E8	2522.126	8.875	633.638	633.700
	F8	2532.126	8.875	633.605	633.664
	G8	2542.126	8.875	633.567	633.618
	H8	2552.126	8.875	633.523	633.553
	I8	2562.126	8.875	633.474	633.497
	J8	2572.126	8.875	633.418	633.424
	K8	2582.126	8.875	633.357	633.347
	L8	2592.126	8.875	633.290	633.267
	M8	2602.126	8.875	633.217	633.185
	N8	2612.126	8.875	633.138	633.103
	O8	2622.126	8.875	633.053	633.020
	P8	2632.126	8.875	632.963	632.938
	Q8	2642.126	8.875	632.866	632.857
	℄ Brg. Pier 11	2647.040	8.875	632.817	632.817
	R8	2657.040	8.875	632.712	632.740
	S8	2667.040	8.875	632.601	632.662
	T8	2677.040	8.875	632.485	632.584
	U8	2687.040	8.875	632.362	632.506
	V8	2697.040	8.875	632.234	632.426
	W8	2707.040	8.875	632.100	632.341
	X8	2717.040	8.875	631.960	632.252
	Y8	2727.040	8.875	631.814	632.154
	Z8	2737.040	8.875	631.663	632.049
	AA8	2747.040	8.875	631.505	631.932
	AB8	2757.040	8.875	631.342	631.801
	AC8	2767.040	8.875	631.173	631.659
	AD8	2777.040	8.875	630.998	631.503
	AE8	2787.040	8.875	630.817	631.330
	AF8	2797.040	8.875	630.631	631.144
	AG8	2807.040	8.875	630.439	630.944
	AH8	2817.040	8.875	630.247	630.733
	AI8	2827.040	8.875	630.055	630.514
	AJ8	2837.040	8.875	629.863	630.280
	AK8	2847.040	8.875	629.671	630.057
	AL8	2857.040	8.875	629.479	629.818
	AM8	2867.040	8.875	629.287	629.579
	AN8	2877.040	8.875	629.095	629.336
	AO8	2887.040	8.875	628.903	629.095
	AP8	2897.040	8.875	628.711	628.854
	AQ8	2907.040	8.875	628.519	628.618
	AR8	2917.040	8.875	628.327	628.388
	AS8	2927.040	8.875	628.135	628.163

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 12	2937.040	8.875	627.943	627.943
	AT8	2947.040	8.875	627.751	627.742
	AU8	2957.040	8.875	627.559	627.534
	AV8	2967.040	8.875	627.367	627.334
	AW8	2977.040	8.875	627.175	627.140
	AX8	2987.040	8.875	626.983	627.951
	AY8	2997.040	8.875	626.791	626.768
	AZ8	3007.040	8.875	626.599	626.589
	BA8	3017.040	8.875	626.407	626.413
	BB8	3027.040	8.875	626.215	626.238
Girder 2	BC8	3037.040	8.875	626.023	626.053
	BD8	3047.040	8.875	625.831	625.882
	BE8	3057.040	8.875	625.639	625.698
	BF8	3067.040	8.875	625.447	625.509
	BG8	3077.040	8.875	625.255	625.314
	BH8	3087.040	8.875	625.063	625.113
	BI8	3097.040	8.875	624.871	624.908
	BJ8	3107.040	8.875	624.679	624.698
	℄ Brg. No. Abut.	3112.040	8.875	624.583	624.583
	Bk. No. Abut.	3114.660	8.875	624.531	624.531
	℄ Pier 10	2471.210	1.625	633.825	633.825
	℄ No. Brg. Pier 10	2472.126	1.625	633.825	633.825
	A8	2482.126	1.625	633.822	633.841
	B8	2492.126	1.625	633.813	633.850
	C8	2502.126	1.625	633.798	633.848
	D8	2512.126	1.625	633.777	633.836
	E8	2522.126	1.625	633.751	633.813
	F8	2532.126	1.625	633.719	633.778
	G8	2542.126	1.625	633.681	633.732
	H8	2552.126	1.625	633.637	633.667
	I8	2562.126	1.625	633.587	633.610
	J8	2572.126	1.625	633.531	633.537
	K8	2582.126	1.625	633.470	633.460
	L8	2592.126	1.625	633.403	633.380
	M8	2602.126	1.625	633.330	633.298
	N8	2612.126	1.625	633.251	633.216
	O8	2622.126	1.625	633.166	633.133
	P8	2632.126	1.625	633.076	633.051
	Q8	2642.126	1.625	632.980	632.971
	℄ Brg. Pier 11	2647.040	1.625	632.930	632.930
	R8	2657.040	1.625	632.825	632.853
	S8	2667.040	1.625	632.714	632.775
	T8	2677.040	1.625	632.598	632.697
	U8	2687.040	1.625	632.475	632.619
	V8	2697.040	1.625	632.347	632.539
	W8	2707.040	1.625	632.213	632.454
	X8	2717.040	1.625	632.073	632.365
	Y8	2727.040	1.625	631.927	632.267
	Z8	2737.040	1.625	631.776	632.162
	AA8	2747.040	1.625	631.618	632.045
	AB8	2757.040	1.625	631.455	631.914
	AC8	2767.040	1.625	631.286	631.772
	AD8	2777.040	1.625	631.111	631.616
Girder 3	AE8	2787.040	1.625	630.931	631.444
	AF8	2797.040	1.625	630.744	631.257
	AG8	2807.040	1.625	630.553	631.058
	AH8	2817.040	1.625	630.361	630.847
	AI8	2827.040	1.625	630.169	630.628
	AJ8	2837.040	1.625	629.977	630.404
	AK8	2847.040	1.625	629.785	630.171
	AL8	2857.040	1.625	629.593	629.933
	AM8	2867.040	1.625	629.401	629.693
	AN8	2877.040	1.625	629.209	629.450
	AO8	2887.040	1.625	629.017	629.209
	AP8	2897.040	1.625	628.825	628.969
	AQ8	2907.040	1.625	628.633	628.732
	AR8	2917.040	1.625	628.441	628.502
	AS8	2927.040	1.625	628.249	628.277
	℄ Brg. Pier 12	2937.040	1.625	628.057	628.057
	AT8	2947.040	1.625	627.865	627.856
	AU8	2957.040	1.625	627.673	627.648
	AV8	2967.040	1.625	627.481	627.448
	AW8	2977.040	1.625	627.289	627.254
	AX8	2987.040	1.625	627.097	627.065
	AY8	2997.040	1.625	626.905	626.822
	AZ8	3007.040	1.625	626.713	626.703
	BA8	3017.040	1.625	626.521	626.527
	BB8	3027.040	1.625	626.329	626.352
	BC8	3037.040	1.625	626.137	626.167
	BD8	3047.040	1.625	625.945	625.996
	BE8	3057.040	1.625	625.753	625.812
	BF8	3067.040	1.625	625.561	625.623
	BG8	3077.040	1.625	625.369	625.428
	BH8	3087.040	1.625	625.177	625.227
	BI8	3097.040	1.625	624.985	625.022
	BJ8	3107.040	1.625	624.793	624.812
	℄ Brg. No. Abut.	3112.040	1.625	624.697	624.697
	Bk. No. Abut.	3114.660	1.625	624.644	624.644

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	0.000	633.850	633.850
	℄ No. Brg. Pier 10	2472.126	0.000	633.850	633.850
	A8	2482.126	0.000	633.847	633.866
	B8	2492.126	0.000	633.838	633.875
	C8	2502.126	0.000	633.823	633.875
	D8	2512.126	0.000	633.803	633.862
	E8	2522.126	0.000	633.776	633.838
	F8	2532.126	0.000	633.744	633.803
	G8	2542.126	0.000	633.706	633.757
	H8	2552.126	0.000	633.662	633.692
	I8	2562.126	0.000	633.612	633.635
	J8	2572.126	0.000	633.557	633.563
	K8	2582.126	0.000	633.496	633.486
	L8	2592.126	0.000	633.428	633.405
	M8	2602.126	0.000	633.355	633.323
	N8	2612.126	0.000	633.276	633.241
	O8	2622.126	0.000	633.192	633.159
	P8	2632.126	0.000	633.101	633.076
	Q8	2642.126	0.000	633.005	632.996
	℄ Brg. Pier 11	2647.040	0.000	632.956	632.956
	R8	2657.040	0.000	632.851	632.879
	S8	2667.040	0.000	632.740	632.801
	T8	2677.040	0.000	632.623	632.722
	U8	2687.040	0.000	632.501	632.645
	V8	2697.040	0.000	632.372	632.564
	W8	2707.040	0.000	632.238	632.479
	X8	2717.040	0.000	632.098	632.390
	Y8	2727.040	0.000	631.953	632.293
	Z8	2737.040	0.000	631.801	632.187
	AA8	2747.040	0.000	631.644	632.071
	AB8	2757.040	0.000	631.481	631.940
	AC8	2767.040	0.000	631.312	631.798
	AD8	2777.040	0.000	631.137	631.642
	AE8	2787.040	0.000	630.956	631.469
	AF8	2797.040	0.000	630.770	631.283
	AG8	2807.040	0.000	630.578	631.083
	AH8	2817.040	0.000	630.386	630.872
	AI8	2827.040	0.000	630.194	630.653
	AJ8	2837.040	0.000	630.002	630.429
	AK8	2847.040	0.000	629.810	630.196
	AL8	2857.040	0.000	629.618	629.958
	AM8	2867.040	0.000	629.426	629.718
	AN8	2877.040	0.000	629.234	629.475
	AO8	2887.040	0.000	629.042	629.234
	AP8	2897.040	0.000	628.850	628.994
	AQ8	2907.040	0.000	628.658	628.757
	AR8	2917.040	0.000	628.466	628.527
	AS8	2927.040	0.000	628.274	628.302
	℄ Brg. Pier 12	2937.040	0.000	628.082	628.082
	AT8	2947.040	0.000	627.890	627.881
	AU8	2957.040	0.000	627.698	627.673
	AV8	2967.040	0.000	627.506	627.473
	AW8	2977.040	0.000	627.314	627.279
	AX8	2987.040	0.000	627.122	627.090
	AY8	2997.040	0.000	626.930	626.907
	AZ8	3007.040	0.000	626.738	626.728
	BA8	3017.040	0.000	626.546	626.552
	BB8	3027.040	0.000	626.354	626.377
	BC8	3037.040	0.000	626.162	626.192
	BD8	3047.040	0.000	625.970	626.021
	BE8	3057.040	0.000	625.778	625.837
	BF8	3067.040	0.000	625.586	625.648
	BG8	3077.040	0.000	625.394	625.453
	BH8	3087.040	0.000	625.202	625.252
	BI8	3097.040	0.000	625.010	625.047
	BJ8	3107.040	0.000	624.818	624.837
	℄ Brg. No. Abut.	3112.040	0.000	624.722	624.722
	Bk. No. Abut.	3114.660	0.000	624.669	624.669

DESIGNED	R. L.
CHECKED	E. D.
DRAWN	R. L.
CHECKED	E. D.

TOP OF SLAB ELEVATIONS
SPANS 11 TO 13
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

F.A.S. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X B&R	COOK	223	56
S. P. R. REG. NO.	ILLINOIS PROJECT			

SHEET NO. 11
50 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	-5.625	633.762	633.782
	℄ No. Brg. Pier 10	2472.126	-5.625	633.762	633.762
	A4	2482.126	-5.625	633.759	633.778
	B4	2492.126	-5.625	633.750	633.787
	C4	2502.126	-5.625	633.736	633.786
	D4	2512.126	-5.625	633.715	633.774
	E4	2522.126	-5.625	633.688	633.750
	F4	2532.126	-5.625	633.656	633.715
	G4	2542.126	-5.625	633.618	633.669
	H4	2552.126	-5.625	633.574	633.604
	I4	2562.126	-5.625	633.525	633.548
	J4	2572.126	-5.625	633.469	633.475
	K4	2582.126	-5.625	633.408	633.398
	L4	2592.126	-5.625	633.340	633.317
	M4	2602.126	-5.625	633.267	633.235
	N4	2612.126	-5.625	633.189	633.154
	O4	2622.126	-5.625	633.104	633.071
	P4	2632.126	-5.625	633.013	632.988
	Q4	2642.126	-5.625	632.917	632.908
	℄ Brg. Pier 11	2647.040	-5.625	632.868	632.868
	R4	2657.040	-5.625	632.763	632.791
	S4	2667.040	-5.625	632.652	632.713
	T4	2677.040	-5.625	632.535	632.634
	U4	2687.040	-5.625	632.413	632.557
	V4	2697.040	-5.625	632.285	632.477
	W4	2707.040	-5.625	632.150	632.391
	X4	2717.040	-5.625	632.011	632.303
	Y4	2727.040	-5.625	631.865	632.205
	Z4	2737.040	-5.625	631.713	632.099
	AA4	2747.040	-5.625	631.556	631.983
	AB4	2757.040	-5.625	631.393	631.852
	AC4	2767.040	-5.625	631.224	631.710
	AD4	2777.040	-5.625	631.049	631.554
Girder 4	AE4	2787.040	-5.625	630.868	631.381
	AF4	2797.040	-5.625	630.682	631.195
	AG4	2807.040	-5.625	630.490	630.995
	AH4	2817.040	-5.625	630.298	630.784
	AI4	2827.040	-5.625	630.106	630.585
	AJ4	2837.040	-5.625	629.914	630.341
	AK4	2847.040	-5.625	629.722	630.108
	AL4	2857.040	-5.625	629.530	629.870
	AM4	2867.040	-5.625	629.338	629.630
	AN4	2877.040	-5.625	629.146	629.387
	AO4	2887.040	-5.625	628.954	629.146
	AP4	2897.040	-5.625	628.762	628.906
	AQ4	2907.040	-5.625	628.570	628.669
	AR4	2917.040	-5.625	628.378	628.439
	AS4	2927.040	-5.625	628.186	628.214
	℄ Brg. Pier 12	2937.040	-5.625	627.994	627.994
	AT4	2947.040	-5.625	627.802	627.793
	AU4	2957.040	-5.625	627.610	627.585
	AV4	2967.040	-5.625	627.418	627.385
	AW4	2977.040	-5.625	627.226	627.191
	AX4	2987.040	-5.625	627.034	627.002
	AY4	2997.040	-5.625	626.842	626.819
	AZ4	3007.040	-5.625	626.650	626.660
	BA4	3017.040	-5.625	626.458	626.464
	BB4	3027.040	-5.625	626.266	626.289
	BC4	3037.040	-5.625	626.074	626.104
	BD4	3047.040	-5.625	625.882	625.933
	BE4	3057.040	-5.625	625.690	625.749
	BF4	3067.040	-5.625	625.498	625.560
	BG4	3077.040	-5.625	625.306	625.367
	BH4	3087.040	-5.625	625.114	625.164
	BI4	3097.040	-5.625	624.922	624.959
	BJ4	3107.040	-5.625	624.730	624.749
	℄ Brg. No. Abut.	3112.040	-5.625	624.634	624.634
	Bk. No. Abut.	3114.660	-5.625	624.581	624.581

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	-12.875	633.645	633.665
	℄ No. Brg. Pier 10	2472.126	-12.875	633.645	633.665
	A4	2482.126	-12.875	633.641	633.660
	B4	2492.126	-12.875	633.632	633.669
	C4	2502.126	-12.875	633.618	633.668
	D4	2512.126	-12.875	633.597	633.656
	E4	2522.126	-12.875	633.571	633.633
	F4	2532.126	-12.875	633.538	633.597
	G4	2542.126	-12.875	633.500	633.551
	H4	2552.126	-12.875	633.456	633.486
	I4	2562.126	-12.875	633.407	633.430
	J4	2572.126	-12.875	633.351	633.357
	K4	2582.126	-12.875	633.290	633.280
	L4	2592.126	-12.875	633.223	633.200
	M4	2602.126	-12.875	633.150	633.118
	N4	2612.126	-12.875	633.071	633.036
	O4	2622.126	-12.875	632.986	632.953
	P4	2632.126	-12.875	632.896	632.871
	Q4	2642.126	-12.875	632.799	632.780
	℄ Brg. Pier 11	2647.040	-12.875	632.750	632.750
	R4	2657.040	-12.875	632.645	632.673
	S4	2667.040	-12.875	632.534	632.595
	T4	2677.040	-12.875	632.417	632.516
	U4	2687.040	-12.875	632.295	632.439
	V4	2697.040	-12.875	632.167	632.359
	W4	2707.040	-12.875	632.033	632.274
	X4	2717.040	-12.875	631.893	632.185
	Y4	2727.040	-12.875	631.747	632.087
	Z4	2737.040	-12.875	631.595	631.981
	AA4	2747.040	-12.875	631.438	631.865
	AB4	2757.040	-12.875	631.275	631.734
	AC4	2767.040	-12.875	631.106	631.592
	AD4	2777.040	-12.875	630.931	631.436
Girder 5	AE4	2787.040	-12.875	630.750	631.263
	AF4	2797.040	-12.875	630.564	631.077
	AG4	2807.040	-12.875	630.372	630.877
	AH4	2817.040	-12.875	630.180	630.666
	AI4	2827.040	-12.875	629.988	630.447
	AJ4	2837.040	-12.875	629.796	630.223
	AK4	2847.040	-12.875	629.604	629.990
	AL4	2857.040	-12.875	629.412	629.752
	AM4	2867.040	-12.875	629.220	629.512
	AN4	2877.040	-12.875	629.028	629.269
	AO4	2887.040	-12.875	628.836	629.028
	AP4	2897.040	-12.875	628.644	628.788
	AQ4	2907.040	-12.875	628.452	628.551
	AR4	2917.040	-12.875	628.260	628.321
	AS4	2927.040	-12.875	628.068	628.096
	℄ Brg. Pier 12	2937.040	-12.875	627.876	627.876
	AT4	2947.040	-12.875	627.684	627.675
	AU4	2957.040	-12.875	627.492	627.467
	AV4	2967.040	-12.875	627.300	627.267
	AW4	2977.040	-12.875	627.108	627.073
	AX4	2987.040	-12.875	626.916	626.884
	AY4	2997.040	-12.875	626.724	626.701
	AZ4	3007.040	-12.875	626.532	626.522
	BA4	3017.040	-12.875	626.340	626.346
	BB4	3027.040	-12.875	626.148	626.171
	BC4	3037.040	-12.875	625.956	625.986
	BD4	3047.040	-12.875	625.764	625.815
	BE4	3057.040	-12.875	625.572	625.631
	BF4	3067.040	-12.875	625.380	625.442
	BG4	3077.040	-12.875	625.188	625.247
	BH4	3087.040	-12.875	624.996	625.046
	BI4	3097.040	-12.875	624.804	624.841
	BJ4	3107.040	-12.875	624.612	624.631
	℄ Brg. No. Abut.	3112.040	-12.875	624.516	624.516
	Bk. No. Abut.	3114.660	-12.875	624.464	624.464

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	-16.000	633.579	633.579
	℄ No. Brg. Pier 10	2472.126	-16.000	633.579	633.579
	A4	2482.126	-16.000	633.576	633.595
	B4	2492.126	-16.000	633.567	633.604
	C4	2502.126	-16.000	633.553	633.603
	D4	2512.126	-16.000	633.532	633.591
	E4	2522.126	-16.000	633.506	633.568
	F4	2532.126	-16.000	633.473	633.532
	G4	2542.126	-16.000	633.435	633.486
	H4	2552.126	-16.000	633.391	633.421
	I4	2562.126	-16.000	633.342	633.365
	J4	2572.126	-16.000	633.286	633.292
	K4	2582.126	-16.000	633.225	633.215
	L4	2592.126	-16.000	633.157	633.134
	M4	2602.126	-16.000	633.084	633.052
	N4	2612.126	-16.000	633.006	632.971
	O4	2622.126	-16.000	632.921	632.888
	P4	2632.126	-16.000	632.831	632.806
	Q4	2642.126	-16.000	632.734	632.725
	℄ Brg. Pier 11	2647.040	-16.000	632.685	632.685
	R4	2657.040	-16.000	632.580	632.608
	S4	2667.040	-16.000	632.469	632.530
	T4	2677.040	-16.000	632.352	632.451
	U4	2687.040	-16.000	632.230	632.374
	V4	2697.040	-16.000	632.102	632.294
	W4	2707.040	-16.000	631.968	632.209
	X4	2717.040	-16.000	631.828	632.120
	Y4	2727.040	-16.000	631.682	632.022
	Z4	2737.040	-16.000	631.530	631.916
	AA4	2747.040	-16.000	631.373	631.800
	AB4	2757.040	-16.000	631.210	631.669
	AC4	2767.040	-16.000	631.041	631.527
	AD4	2777.040	-16.000	630.866	631.371
East Long Bonded Jt.	AE4	2787.040	-16.000	630.685	631.198
	AF4	2797.040	-16.000	630.499	631.012
	AG4	2807.040	-16.000	630.307	630.812
	AH4	2817.040	-16.000	630.115	630.601
	AI4	2827.040	-16.000	629.923	630.382
	AJ4	2837.040	-16.000	629.731	630.158
	AK4	2847.040	-16.000	629.539	629.925
	AL4	2857.040	-16.000	629.347	629.687
	AM4	2867.040	-16.000	629.155	629.447
	AN4	2877.040	-16.000	628.963	629.204
	AO4	2887.040	-16.000	628.771	628.963
	AP4	2897.040	-16.000	628.579	628.723
	AQ4	2907.040	-16.000	628.387	628.486
	AR4	2917.040	-16.000	628.195	628.256
	AS4	2927.040	-16.000	628.003	628.031
	℄ Brg. Pier 12	2937.040	-16.000	627.811	627.811
	AT4	2947.040	-16.000	627.619	627.600
	AU4	2957.040	-16.000	627.427	627.402
	AV4	2967.040	-16.000	627.235	627.202
	AW4	2977.040	-16.000	627.043	627.008
	AX4	2987.040	-16.000	626.851	626.819
	AY4	2997.040	-16.000	626.659	626.636
	AZ4	3007.040	-16.000	626.467	626.457
	BA4	3017.040	-16.000	626.275	626.281
	BB4	3027.040	-16.000	626.083	626.116
	BC4	3037.040	-16.000	625.891	625.921
	BD4	3047.040	-16.000	625.699	625.750
	BE4	3057.040	-16.000	625.507	625.566
	BF4	3067.040	-16.000	625.315	625.377
	BG4	3077.040	-16.000	625.123	625.182
	BH4	3087.040	-16.000	624.931	624.981
	BI4	3097.040	-16.000	624.739	624.776
	BJ4	3107.040	-16.000	624.547	624.566
	℄ Brg. No. Abut	3112.040	-16.000	624.451	624.451
	Bk. No. Abut.	3114.660	-16.000	624.398	624.398

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 10	2471.210	-20.125	633.494	633.494
	℄ No. Brg. Pier 10	2472.126	-20.125	633.494	633.494
	A4	2482.126	-20.125	633.490	633.509
	B4	2492.126	-20.125	633.481	633.518
	C4	2502.126	-20.125	633.467	633.517
	D4	2512.126	-20.125	633.446	633.505
	E4	2522.126	-20.125	633.420	633.482
	F4	2532.126	-20.125	633.387	633.446
	G4	2542.126	-20.125	633.349	633.400
	H4	2552.126	-20.125	633.305	633.335
	I4	2562.126	-20.125	633.256	633.279
	J4	2572.126	-20.125	633.200	633.206
	K4	2582.126	-20.125	633.139	633.129
	L4	2592.126	-20.125	633.072	633.049
	M4	2602.126	-20.125	632.999	632.967
	N4	2612.126	-20.125	632.920	632.885
	O4	2622.126	-20.125	632.835	632.802
	P4	2632.126	-20.125	632.745	632.720
	Q4	2642.126	-20.125	632.648	632.639
	℄ Brg. Pier 11	2647.040	-20.125	632.599	632.599
	R4	2657.040	-20.125	632.494	632.522
	S4	2667.040	-20.125	632.383	632.444
	T4	2677.040	-20.125	632.266	632.365
	U4	2687.040	-20.125	632.144	632.288
	V4	2697.040	-20.125	632.016	632.208
	W4	2707.040	-20.125	631.882	632.123
	X4	2717.040	-20.125	631.742	632.034
	Y4	2727.040	-20.125	631.596	631.936
	Z4	2737.040	-20.125	631.444	631.830
	AA4	2747.040	-20.125	631.287	631.715
	AB4	2757.040	-20.125	631.124	631.588
	AC4	2767.040	-20.125	630.955	631.481
	AD4	2777.040	-20.125	630.780	631.285
Girder 6	AE4	2787.040	-20.125	630.599	631.112
	AF4	2797.040	-20.125	630.413	630.926
	AG4	2807.040	-20.125	630.221	630.726
	AH4	2817.040	-20.125	630.029	630.515
	AI4	2827.040	-20.125	629.837	630.296
	AJ4	2837.040	-20.125	629.645	630.072
	AK4	2847.040	-20.125	629.453	629.838
	AL4	2857.040	-20.125	629.261	629.601
	AM4	2867.040	-20.125	629.069	629.361
	AN4	2877.040	-20.125	628.877	629.118
	AO4	2887.040	-20.125	628.685	628.877
	AP4	2897.040	-20.125	628.493	628.637
	AQ4	2907.040	-20.125	628.301	628.400
	AR4	2917.040	-20.125	628.109	628.170
	AS4	2927.040	-20.125	627.917	627.945
	℄ Brg. Pier 12	2937.040	-20.125	627.725	627.725
	AT4	2947.040	-20.125	627.533	627.528
	AU4	2957.040	-20.125	627.341	627.316
	AV4	2967.040	-20.125	627.149	627.116
	AW4	2977.040	-20.125	626.957	626.922
	AX4	2987.040	-20.125	626.765	626.733
	AY4	2997.040	-20.125	626.573	626.550
	AZ4	3007.040	-20.125	626.381	626.371
	BA4	3017.040	-20.125	626.189	626.195
	BB4	3027.040	-20.125	625.997	626.020
	BC4	3037.040	-20.125	625.805	625.835
	BD4	3047.040	-20.125	625.613	625.664
	BE4	3057.040	-20.125	625.421	625.480
	BF4	3067.040	-20.125	625.229	625.291
	BG4	3077.040	-20.125	625.037	625.096
	BH4	3087.040	-20.125	624.845	624.895
	BI4	3097.040	-20.125	624.653	624.690
	BJ4	3107.040	-20.125	624.461	624.480
	℄ Brg. No. Abut.	3112.040	-20.125	624.365	624.365
	Bk. No. Abut.	3114.660	-20.125	624.313	624.313

DESIGNED	R.L.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

TOP OF SLAB ELEVATIONS
SPANS 11 TO 13

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B&R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X B & R	COOK	223	57
-	-	-	-	-

SHEET NO. 12 50 SHEETS

301 - #4d bars at 12" cts. Outside Face - each curb
301 - #5 d_1 bars at 12" cts. Inside Face - each curb
2 - #8 b_6 bars at Piers #1 & #3
℄ of Light Support, see Sht. 14 & 50 for Details
20'-0"
1'-3" 1'-3"
2x2 #8 b_5 bars
2x2 - #8 b_6 bars
2 - #8 b_8 bars
2x2 - #8 b_5 bars
#8 bars (Typical) Top of each Curb
2x2 - #5 b_3 bars
2 - #5 b_4 bars at Piers #1 & #3
2x2 - #5 b_3 bars
2 - #5 b_7 bars
Scupper each curb typ. see sheet 44 & 45
Scupper each curb typ. see sheets 44 & 45
2'-9½" Typ.
Tranverse Construction Joint
2x2 - #5 b_3 bars
#5 bars (Typical) Bot. of each Curb
A A
4'-8½"
225 - #6 a_1 bars at 16" cts. alternate with a_1 bars
℄ Pier No. 1
℄ Roadway
℄ Pier No. 2
℄ Piers Typical
℄ Pier No. 3
MATCH LINE
42'-0" Out to Out of Deck
38'-6"
1'-9"
12"
Back So. Abut. Sta. 17+66.08
6" 3'-0"
225 - #6 a_1 bars at 16" cts. top
225 - #6 a_1 bars at 16" cts. bottom
38 - #6 b_1 bars at ± 12" cts. Top of Slab spaced between b bars over Piers #1 & #3
51 x 11 #5 b bars spaced as shown in cross section E-E Bottom of slab - see sheet 17
38 - #6 b_2 bars at ± 12" cts. Top of Slab spaced between b bars over Pier #2
39 x 11 - #5 b bars equally spaced at ± 12" cts. Top of Slab
14'-3" 14'-3" 12'-8" 12'-8" 14'-3"
9" 5" 10" 2" 5"
226 - #6 a_2 bars at 16" cts Top of Slab - each curb
2 - #6 b_1 bars Top of Slab over Pier #1 & #3
11'-3" 11'-3" 10'-0" 10'-0" 11'-3"
2 - #6 b_2 bars Top of Slab
3 x 11 - #5 b bars Top of Slab
2" at 50°F.
69'-11½"
299'-9¾" End to End of parapet for 4 Span
80'-0"
17'-0"
SPAN 1
SPAN 2
SPAN 3
PLAN

Joints in curb to top of Slab at Piers #1 #2 & #3 (Alum. Shts.)
Provide 12"Ø drain holes thru conc. 80'-0" deck, only at Joints (Typ.)

Note:
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bors with 3 lengths per line.
Min. bar laps = 24 dia.

N

2x2 #8 b_5 bars
2x2 - #5 b_3 bars
B B
LINE
℄ Pier No 3
℄ Roadway
℄ Pier No 4
MATCH LINE
14'-3"
9" 10" 2"
11'-3"
59'-10¼"
1¾" at 50° F.
SPAN 4
PLAN

Note
1. For Section B-B see sheet 13
2. For Reinforcing Detail and Bill of Materials see sheet 17
3. For Floor Drain Detail see sheets 44 and 45

$10\frac{3}{8}$"
$8\frac{5}{8}$"
1 9/16"
Top of 1½" Class I Surface course
4" Bent Plate
Std. Anchor Bolts Cast in place
1¼" 1½" 1¾" ¼"
1⅛" $3\frac{5}{16}$" 2" @ 50°F. $3\frac{5}{16}$" 1⅛"
CROSS SECTION
2" Neoprene Expansion Joints

Neoprene Expansion Joint (See Special Provisions)
½"x 6" Std. Anchor Bolts @ 12" cts. Cast in place
6" 5 spaces @ 12" = 5'-0" 6"
6'-0"
Typical Unit
PLAN

DETAILS OF 2" NEOPRENE EXPANSION JOINT

Note
1. Anchor Bolts require a clipped washer, lockwasher and hex nut.
2. Anchor Bolts to be ½"ϕ x 6"

Approach Pavement
1½" Class I Surface Course
2" Neoprene Expansion Joint
3" Min.
6" 12" 2" at 50°F.
Back of Abutment
4½" 5½" Measured Along ℄ of Beam
10"
2'-4"
℄ Bearing
SECTION A-A

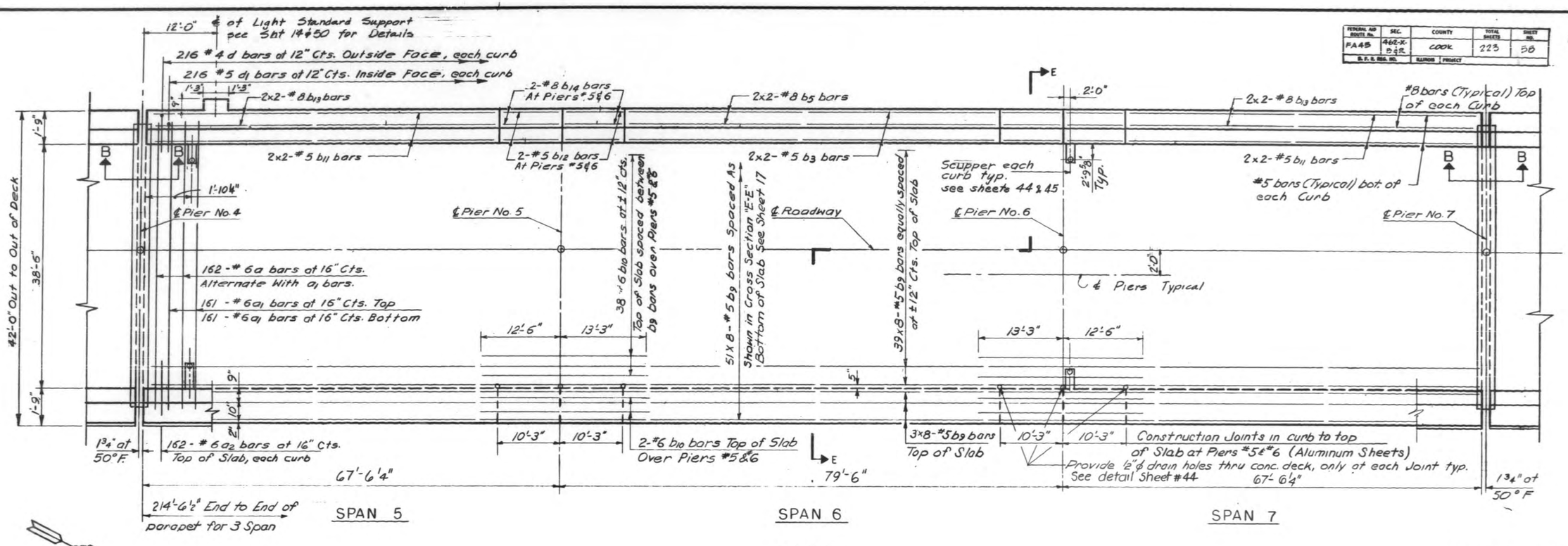
DESIGNED	SCN
CHECKED	
DRAWN	HJS
CHECKED	

SUPERSTRUCTURE SPANS 1 TO 4

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462 - X - B & R
COOK COUNTY
STATION 17+66.04

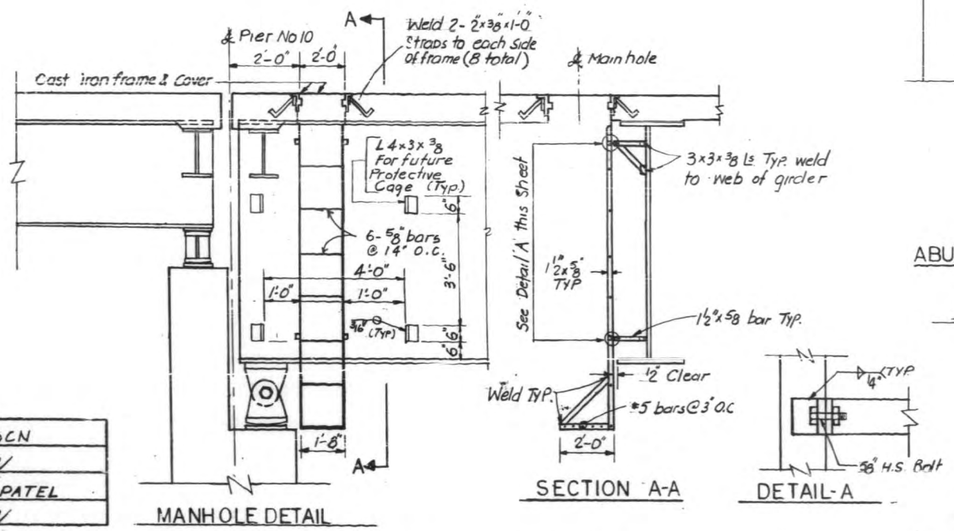
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B & R	COOK	223	58
B. F. E. RTE. NO.		ILLINOIS PROJECT		

SHEET NO. 13
50 SHEETS

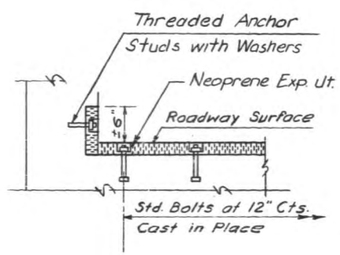


Note

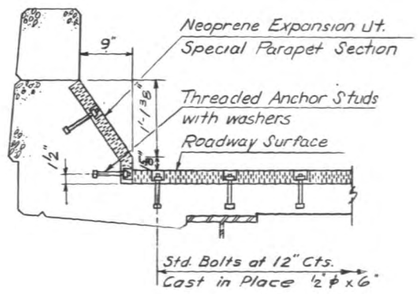
1. For Reinforcing Detail and Bill of Materials, see sheet 17
2. For Floor Drain Detail see sheet 44 & 45
3. For Expansion Joint Detail see sheet 16



DESIGNED	S.C.N
CHECKED	
DRAWN	K. PATEL
CHECKED	

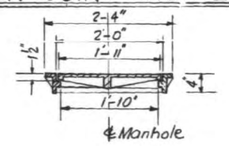


ABUTMENT INSTALLATION



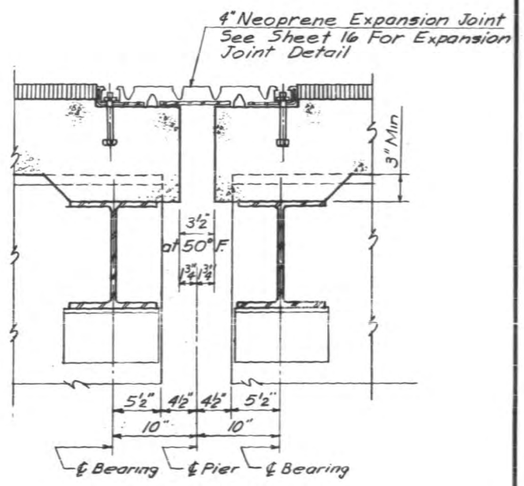
CURB INSTALLATION

EXPANSION JOINT INSTALLATION DETAILS



2-0x2-0 C.I. MANHOLE FRAME & COVER

Furnishing and Installation shall be included in the pay Item of Structural Steel



SECTION B-B

SUPERSTRUCTURE SPANS 5 TO 7

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	59
S. P. & SEC. NO.		ILLINOIS PROJECT		

SHEET NO. 14
50 SHEETS

189 #4d bars at 12" cts. Outside Face, each curb
189 #5d1 bars at 12" cts Inside Face, each curb
17'-0"
℄ of Light Standard Support see this Sheet & Sheet 50 for details
1'-3" 1'-3"
2x2 #8 b20 bars
2-#8 b21 bars
2x2 #8 b22 bars
2-#8 b23 bars
2x2 #8 b24 bars
#8 bars (Typical) Top of each Curb
2x2-#5 b15 bars
2-#5 b16 Bars
2x2-#5 b17 bars
2-#5 b18 bars
2x2-#5 b19 bars
Scupper each curb typ. see sheets 44 & 45
2'-0"
2'-9½" Typ.
B B
C C
142 - #6a bars at 16" cts. alternate with a1 bars
℄ Pier No 7
℄ Pier No 8
℄ Roadway
℄ Pier No 9
℄ Pier No 10
#5 bars (Typical) Bot. of each Curb
141 - #6a1 bars at 16" cts. top
141 - #6a1 bars at 16" cts. bottom
42'-0" Out to Out of Deck
38'-6"
1'-9"
1'-9"
1'-10¼"
10'-0" 10'-3"
38-#6 b25 bars at 12" cts. Top of Slab spaced between b9 bars over Pier #8
51x7-#5 b9 bars spaced as shown in cross section 12-2 Bottom of Slab see sheet 17
10'-3" 8'-6"
38-#6 b26 bars at 12" cts. Top of Slab spaced between b9 bars over Pier #9
39x7 #5 b9 bars equally spaced at 12" cts. Top of Slab
5"
142 - #6a2 bars at 16" cts. Top of Slab, each curb
2-#6 b25 bars Top of Slab Over Pier No. 8
8'-0" 8'-0"
Construction Joints in curb to top of Slab at Pier #8 and #9 (Aluminum Sheets) Provide ½"ϕ drain holes thru conc. deck, only at each Joint
7'-6" 7'-6"
2-#6 b26 bars top of Slab over Pier
3x7-#5 b9 bars Top of Slab
1¾" at 50°F
63'-6¼"
68'-0"
56'-10¼"
1¾" at 50°F
188'-4½" End to End of parapet for 3 Spans
SPAN 8
SPAN 9
SPAN 10

N

PLAN

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 24 dia.

15'ϕ Bolt Circle
Inside face of parapet & rail
1¼" Conduit
A A
1'-9"
10"
2"
9"
1½ Cl.
10⅝"
11"
10"
1¼ Cl.
10⅝"
Future 16"x16" Base Plate
d5
d4
1'-3" 1'-3"
2'-6"

PLAN

Note: Cost of anchor bolts & conduit is incidental to Contract.

Thread and cap end of conduit. When ready for wiring cap with bushing
2" Grout for future installation
3-#6 d5 bars
10" 11"
Handrail
Future Light Standard - 10'ϕ Aluminum Pole By others
1¼"ϕ x 4'-3" Anchor Bolts Provide 2 flat washers, 1 regular nut & 1 locknut for each bolt. All nuts and washers must be galvanized. See Anchor bolt Detail this sheet
5½"
1'-0"
1'-3½"
4-#6 d4 bars
1¼" Standard weight galvanized steel conduit
2" 9" 12"
Coupling

SECTION A-A

LIGHT STANDARD SUPPORT DETAILS

DESIGNED	SCN
CHECKED	RV
DRAWN	HLS
CHECKED	RV

4" Neoprene Expansion Joint See sheet 16 For Details
3" Min
3½" at 50°F
3¾" 3¾"
Cross Frame
5'½" 5'½" 4" 7"
11" 11"
℄ Bearing ℄ Pier ℄ Bearing

SECTION C-C

Note
1. For Reinforcing Detail and Bill of Material see sheet 17
2. For Section B-B see sheet 13
3. For Drain Detail see sheet 44 & 45
4. For Expansion Joint Detail see sheet 16

Locknut & Washer
Nut & Washer
3'-0"
Thread
Galvanize
1'-3"

1¼" ANCHOR BOLT DETAIL FOR LIGHT STANDARD SUPPORT

SUPERSTRUCTURE SPANS 8 TO 10

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B & R	COOK	223	60
F. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 15
50 SHEETS

641 - #4 d_2 bars at 12" cts. Outside Face, each curb
641 - #5 d_1 bars at 12" cts. Inside Face, each curb
46'-0"
℄ of Light Standard Support, see sheets 14 & 50 for Details
1'-3" 1'-3"
9"
2 x 5 - #8 b_{31} bars
2 x 5 - #5 b_{28} bars
4'-0" 47-Floor drains at ± 6'-0" each curb
2 - #8 b_{30} bars
2 x 8 - #8 b_{32} bars
2 - #5 b_{27} bars
Scupper each curb, see sheets 44 & 45
2 x 8 - #5 b_{29} bars
2'-9"
3'-9"
23⅜" x 23⅜" Manhole with Cover and frame
Note:- See Sheet #13 for details of Manhole and ladder
483 - #6 a_3 bars @ 16" cts.
Alternate with a_1 bars
5'-0"
4'-0"
42'-0" Out to Out of Deck
38'-6"
1'-9"
℄ Pier No 10
℄ Roadway
℄ Pier No 11
℄ Pier Typical
2'-0"
482 - #6 a_1 bars @ 16" cts. Top
482 - #6 a_1 bars @ 16" cts. Bottom
Cut bars in field to fit
2 #6 Top & bottom Typ.
Manhole Cover & Frame
2 #6 bars Top & bottom Typ
51 x 23 - #5 b_{33} bars spaced as shown in cross section "F-F" sheet 17 Bottom of Slab
39 x 23 - #5 b_{33} bars equally spaced at 12" cts. Top of Slab
38 x 3 - #6 b_{34} bars at ± 12" cts.
Top of Slab spaced between b_{33} bars over Piers #11 & #12
64'-7"
45'-0"
2'-3"
2'-3" Typ.
1'-9"
10'-9"
2"
483 - #6 a_2 bars @ 16" cts. Top of Slab, each Curb
3 x 23 - #5 b_{33} bars Top of Slab
2 x 3 - #6 b_{34} bars Top of Slab over Piers #11 & #12
21'-9" 21'-9" 21'-9" 21'-9"
13/4" at 50° F
175'-8¼"
290'-0" Cont.
641'-5¼" End to End of parapet for 3 Span
SPAN 11
SPAN 12
MATCH LINE

PLAN

95'-0" to ℄ Pier N° 11
℄ of Light Standard Support, See sheet 14 for Details
1'-3" 1'-3"
47-Floor drains at ± 6'-0" each curb - See Sheet #44
4'-0"
F
#8 b_{32} bars
#5 b_{29} bars
2 - #8 b_{30} bars
2 - #5 b_{27} bars
b_{31} bars Bottom bars Shown in Cross Section "F-F"
b_{33} bars Top of Slab
b_{34} bars Top of Slab
℄ Roadway
℄ Pier No 12
℄ Pier Typical
2'-0"
45'-0"
MATCH LINE
Construction Joints in Curb to Top of Slab at Piers #11 & #12 (Aluminum Sheets) Provide ½"ϕ drain holes thru conc. deck, only at each Joint
290'-0"
21'-9" 21'-9"
175'-9"

PLAN

Transverse Const. Jt. Typ.
F
℄ Pier # 10
℄ Pier # 11
℄ Pier # 12
℄ Brg. N. Abut
A C B D A
100'-0" 135'-0" 170'-0" 135'-0" 100'-0"
Note: A - 1st Pour B - 2nd Pour, etc.
SPAN 12
DECK POURING SEQUENCE

DESIGNED	SCN
CHECKED	RV
DRAWN	MJS
CHECKED	RV

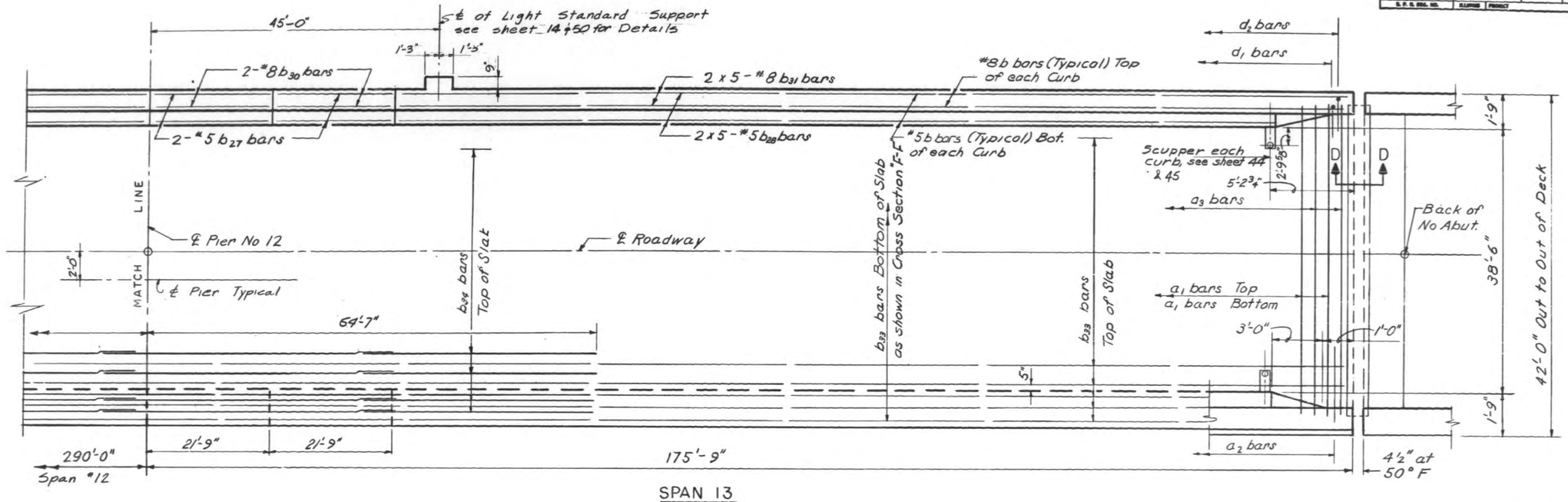
Note:
1. For Channel Marker Lighting Layout, see sheets 47 & 49
2. For Reinforcing Details and Bill of Materials and section FF, See Sheet #17.
3. For Drain Detail see sheets 44 & 45
4. For Section C-C see sheet 14
5. For Expansion Joint Detail see sheet 16

SUPERSTRUCTURE SPANS 11 TO 12

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462 - X - B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	46A-X-B&R	COOK	223	61
S. P. & BRG. NO.		ILLINOIS	PROJECT	

SHEET NO. 16
50 SHEETS

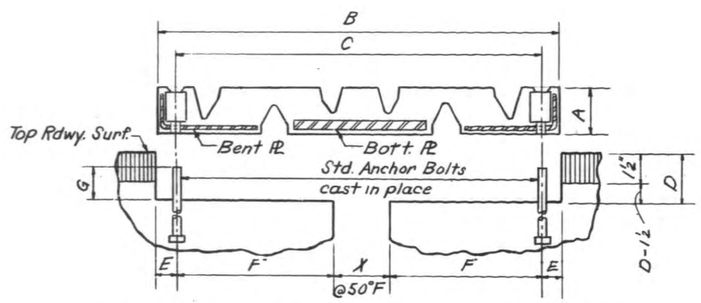


SPAN 13

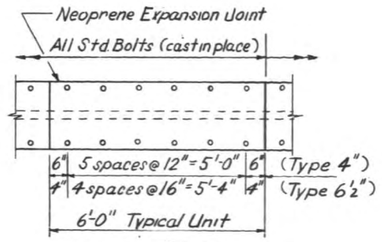
PLAN

Note: For Reinforcing Details and Bill of Materials see sheet 17

Note: Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line Min. bar laps = 24 diam



TYPICAL CROSS SECTION THRU EXPANSION JOINT

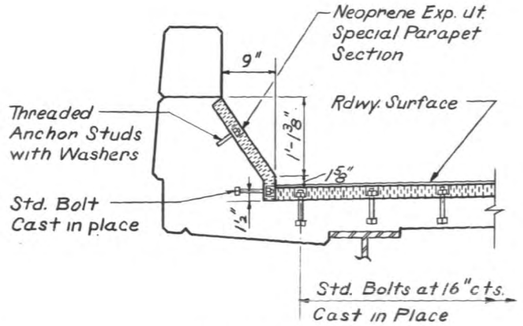


PLAN

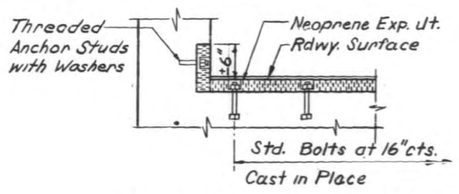
Note Anchor bolts require a clipped washer, lockwasher and hex nut

TYPE	DIMENSIONS								MATERIALS			
	A	B	C	D	E	F	G	X @ 50°F	ANCHOR BOLT	THICK BENT PL	THICK BOTT. PL	THICK TOP PL
4"	2⅜"	22¾"	19⅝"	2 5/16"	1 13/16"	8 1/16"	1½"	3½"	¾"Φ x 6"	5/16"	⅝"	5/16"
6½"	3"	28"	24¼"	3 3/16"	2⅜"	9⅞"	2"	4½"	⅞"Φ x 6"	⅜"	1"	⅜"

TABLE OF DIMENSIONS AND MATERIALS

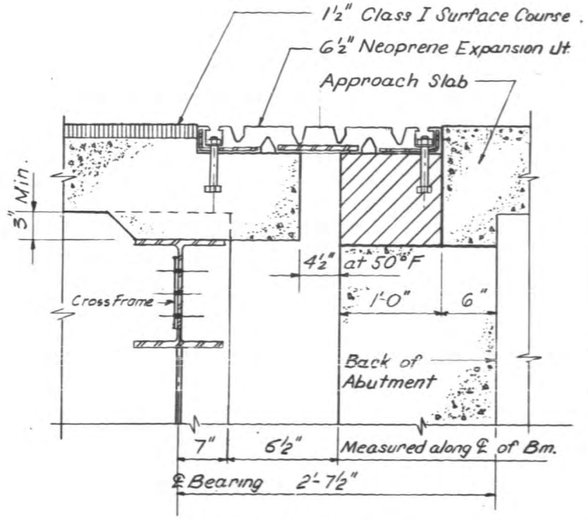


CURB INSTALLATION



ABUTMENT INSTALLATION

EXPANSION JOINT INSTALLATION DETAILS AT 6½ TYPE



SECTION D-D

DESIGNED	SCN
CHECKED	RV
DRAWN	HJS
CHECKED	RV

DETAILS OF 4" AND 6½" NEOPRENE EXPANSION JOINT

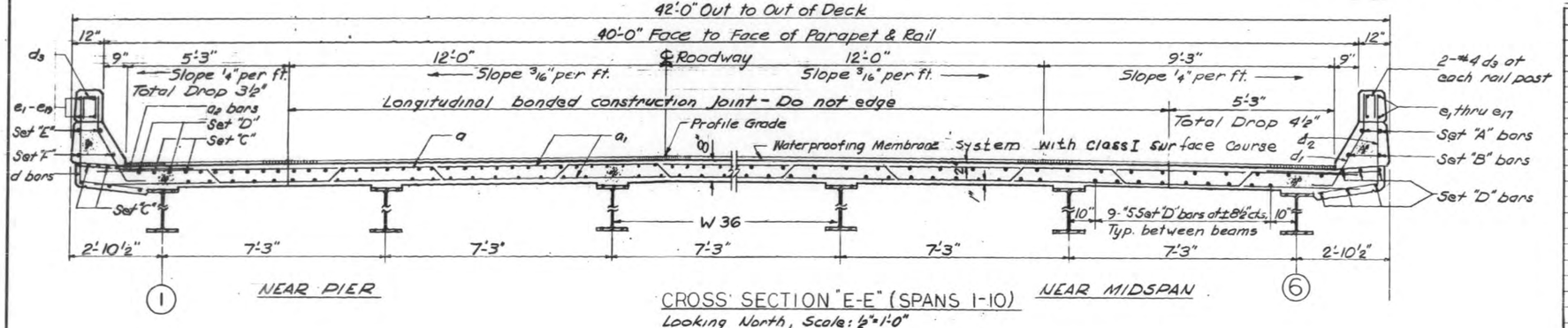
SUPERSTRUCTURE SPAN 13
& DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 46-2-X-B & R
COOK COUNTY
STATION 17 + 66.04

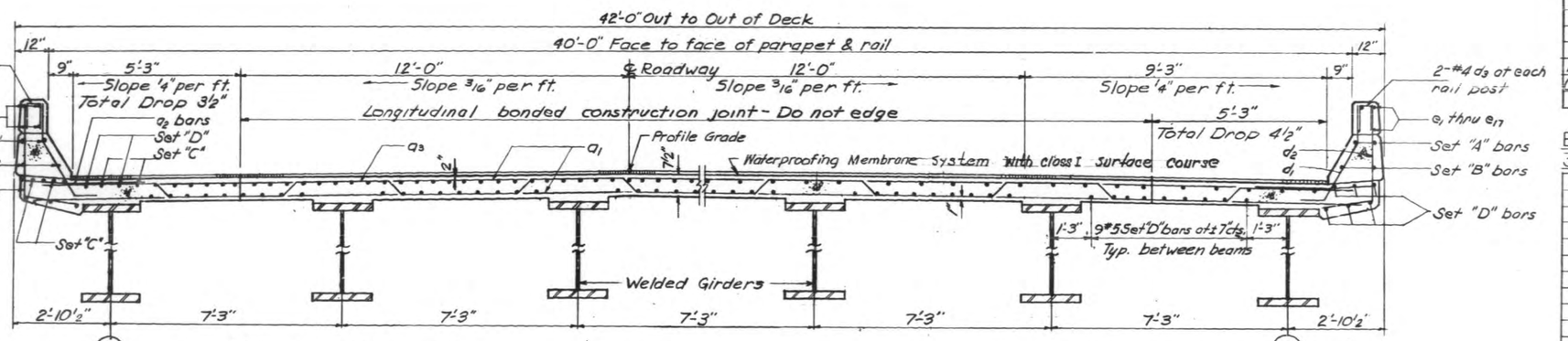
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAP	462-X-B&R	COOK	223	62
U.S.F.A. REG. NO.	ILLINOIS	PROJECT		

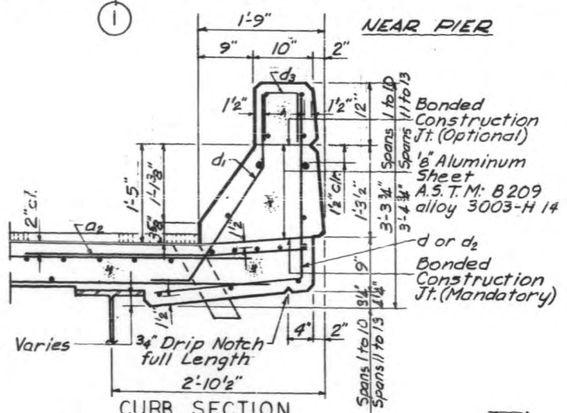
SHEET NO. 17
50 SHEETS

Note: For placement of bars d_3 & e_1 thru e_{13} See sheets #18 to #21



CROSS SECTION "E-E" (SPANS 1-10)
Looking North, Scale: 1/2"=1'-0"

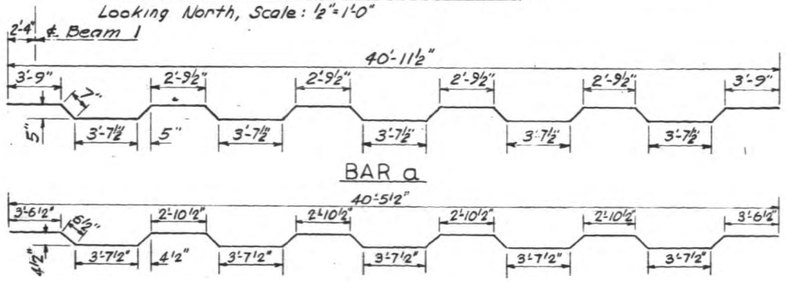


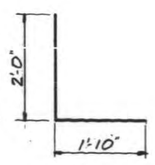


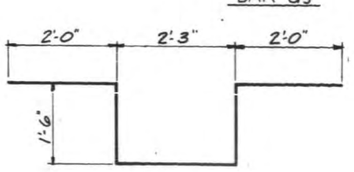
CURB SECTION

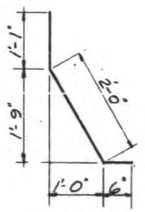
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

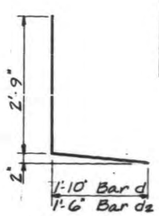
CROSS SECTION "F-F" (SPANS 11-13) NEAR MIDSPAN
Looking North, Scale: 1/2"=1'-0"

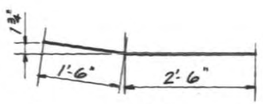












BILL OF MATERIAL FOR 4 SPAN-S. ABUT. TO PIER #4

Bar	No	Size	Length	Shape
a	226	#6	42'-7"	
a_1	450	#6	40'-6"	
a_2	452	#6	4'-0"	
b	1056	#5	28'5"	
b_1	84	#6	28'-6"	
b_2	42	#6	25'-4"	
b_3	32	#5	30'-0"	
b_4	16	#5	11'-0"	
b_5	32	#8	30'-4"	
b_6	16	#8	11'-0"	
b_7	8	#5	9'-9"	
b_8	8	#8	9'-9"	
d	602	#4	4'-7"	L
d_1	602	#5	3'-7"	L
d_4	4	#6	9'-3"	
d_5	3	#6	3'-10"	L

Item	Unit	Quant.
Reinforcement	Lbs.	89,150.
Class X Concrete	Cu Yds	377.9

BILL OF MATERIAL FOR 3 SPAN PIER #4 TO #7

Bar	No	Size	Length	Shape
a	162	#6	42'-7"	
a_1	322	#6	40'-6"	
a_2	324	#6	4'-0"	
b_3	8	#5	30'-0"	
b_5	8	#8	30'-4"	
b_9	768	#5	28'-0"	
b_{10}	84	#6	25'-9"	
b_{11}	16	#5	29'-0"	
b_{12}	16	#5	10'-0"	
b_{13}	16	#8	29'-6"	
b_{14}	16	#8	10'-0"	
d	432	#4	4'-7"	L
d_1	432	#5	3'-7"	L
d_4	4	#6	9'-3"	
d_5	3	#6	3'-10"	L

Item	Unit	Quant.
Reinforcement	Lbs.	63,830.
Class X Concrete	Cu Yds	269.8

BILL OF MATERIAL FOR 3 SPAN PIER #7 TO #10

Bar	No	Size	Length	Shape
a	142	#6	42'-7"	
a_1	282	#6	40'-6"	
a_2	284	#6	4'-0"	
b_9	672	#5	28'-0"	
b_{15}	8	#5	28'-3"	
b_{16}	8	#5	7'-8"	
b_{17}	8	#5	26'-9"	
b_{18}	8	#5	7'-2"	
b_{19}	8	#5	25'-3"	
b_{20}	8	#8	28'-7"	
b_{21}	8	#8	7'-8"	
b_{22}	8	#8	27'-1"	
b_{23}	8	#8	7'-2"	
b_{24}	8	#8	25'-7"	
b_{25}	42	#6	20'-3"	
b_{26}	42	#6	18'-9"	
d	378	#4	4'-7"	L
d_1	378	#5	3'-7"	L
d_4	4	#6	9'-3"	
d_5	3	#6	3'-10"	L

Item	Unit	Quant.
Reinforcement	Lbs.	55,520.
Class X Concrete	Cu Yds.	236.0

BILL OF MATERIAL FOR 3 SPAN PIER #10 TO N. ABUT

Bar	No	Size	Length	Shape
a_3	483	#6	42'-2"	
a_1	964	#6	40'-6"	
a_2	966	#6	4'-0"	
b_{27}	32	#5	21'-5"	
b_{28}	40	#5	27'-4"	
b_{29}	32	#5	26'-4"	
b_{30}	32	#8	21'-5"	
b_{31}	40	#8	27'-11"	
b_{32}	32	#8	27'-0"	
b_{33}	2208	#5	23'-2"	
b_{34}	252	#6	38'-0"	
d_1	1282	#5	3'-7"	
d_2	1282	#4	4'-3"	
d_4	12	#6	9'-3"	
d_6	9	#6	3'-10"	L

Item	Unit	Quant.
Reinforcement	Lbs.	135,260
Class X Concrete	Cu Yds.	590.8

BAR KEY

Set A	b_5, b_{13}, b_{20}, b_{22}, b_{24}, b_{31} & b_{32}
Set B	b_3, b_{11}, b_{15}, b_{17}, b_{19}, b_{28} & b_{29}
Set C	b_1, b_2, b_{10}, b_{25}, b_{26} & b_{34}
Set D	b, b_9 & b_{33}
Set E	b_6, b_8, b_{14}, b_{21}, b_{23} & b_{30}
Set F	b_4, b_7, b_{12}, b_{16}, b_{18} & b_{27}

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet 21

DESIGNED	SCN
CHECKED	
DRAWN	W. C. K.
CHECKED	

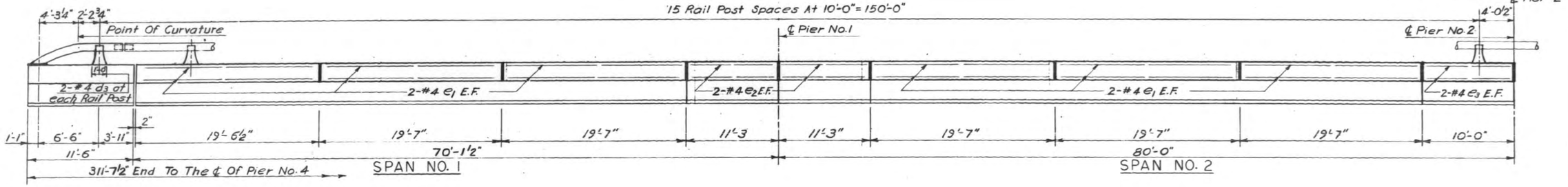
SUPERSTRUCTURE CROSS SECTIONS, DETAILS, AND BILL OF MATERIALS

LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B&R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TP. No. Bridge 1	SHEET NO.
FA 45	462-X-B&R	COOK	223	03
S. F. A. PROJ. NO.	ILLINOIS	PROJECT		

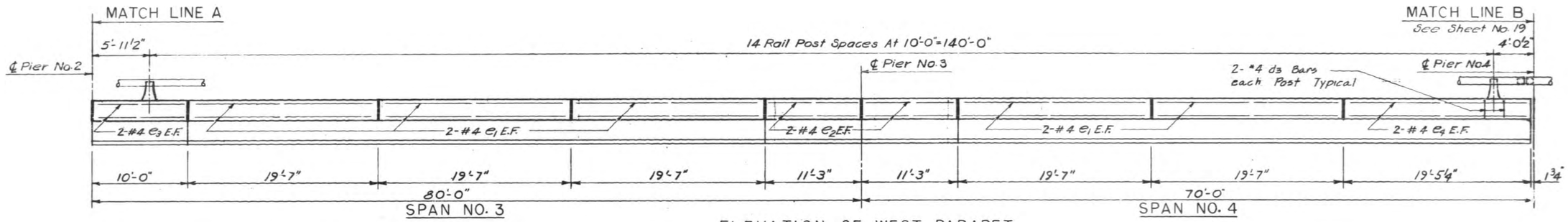
SHEET NO. 18
50 SHEETS

MATCH LINE A

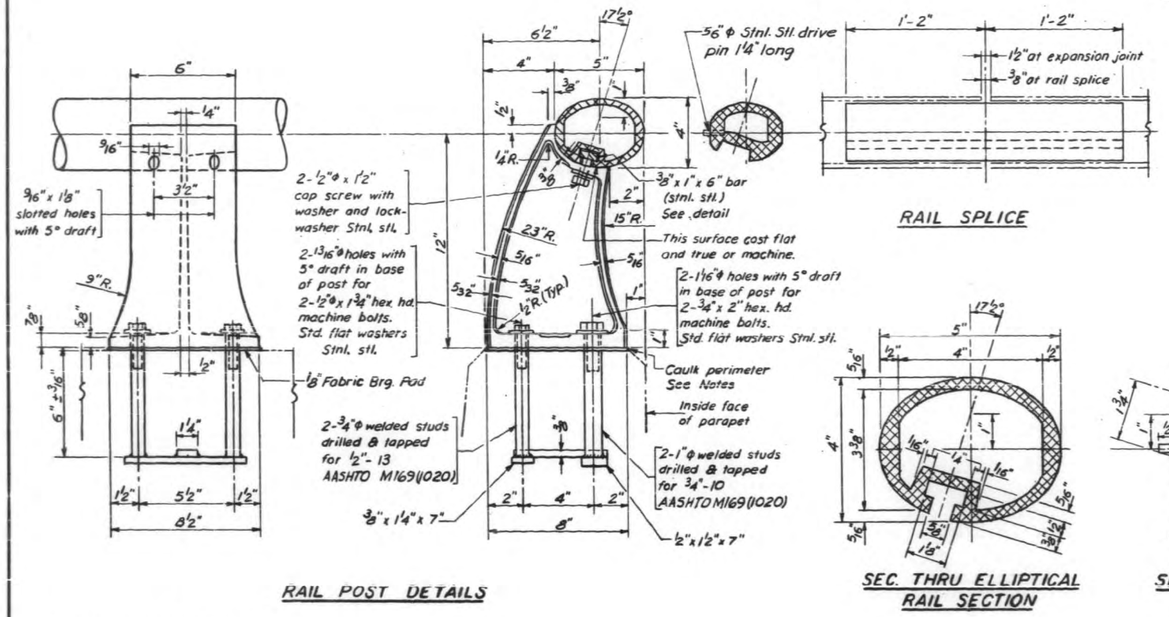


MATCH LINE A

MATCH LINE B
See Sheet No. 19



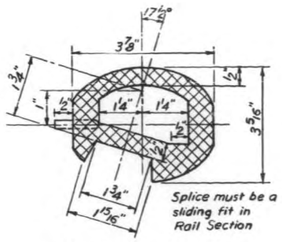
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR



RAIL POST DETAILS

RAIL SPLICE

SEC. THRU ELLIPTICAL RAIL SECTION

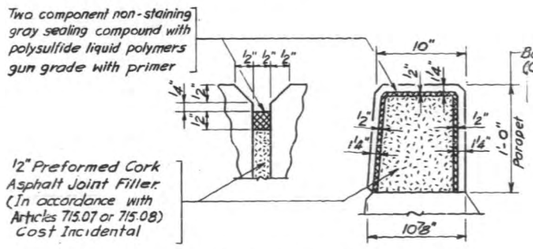


Splice must be a sliding fit in Rail Section

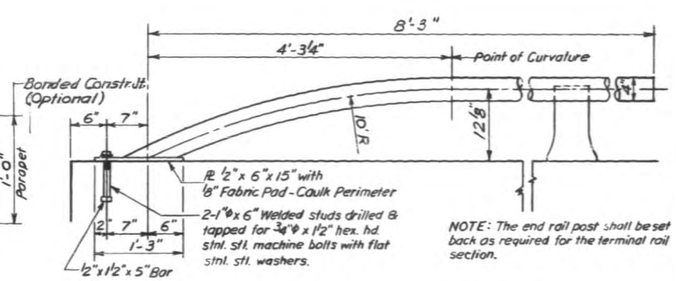
SEC. THRU SPLICE

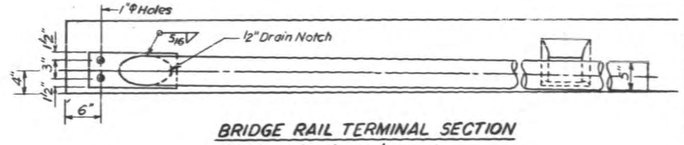


CLAMP BAR



PARAPET JOINT DETAIL





BRIDGE RAIL TERMINAL SECTION
South Abutment only

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1 - ⅛" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers. gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to AASHTO T94 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

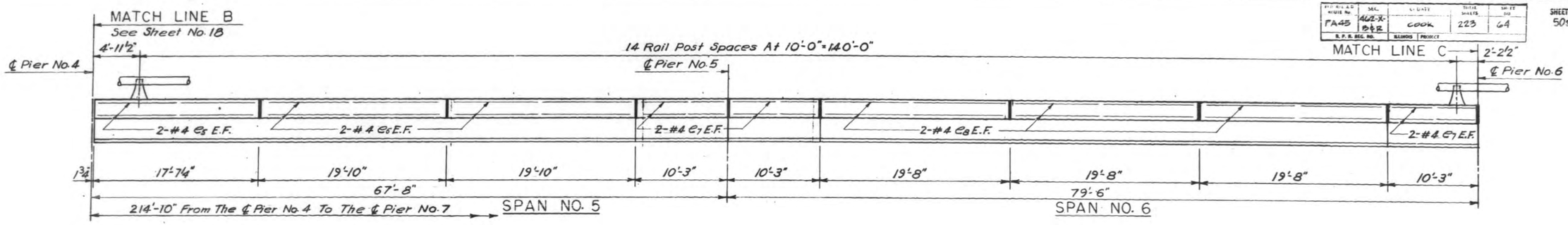
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CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

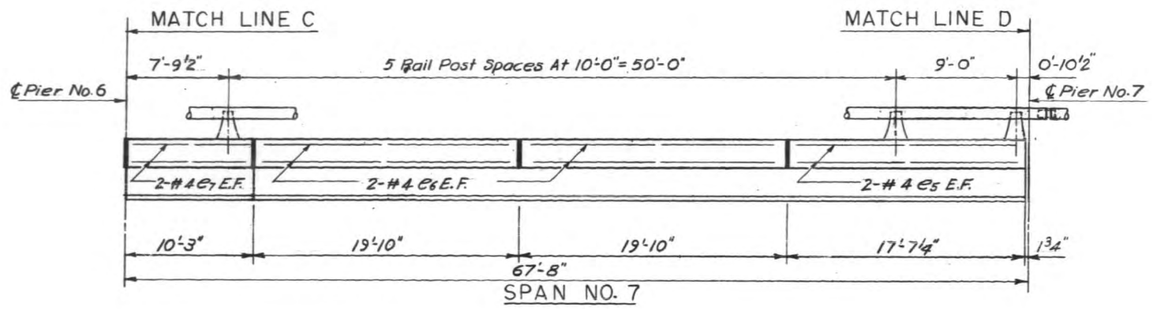
ALUMINIUM RAILING

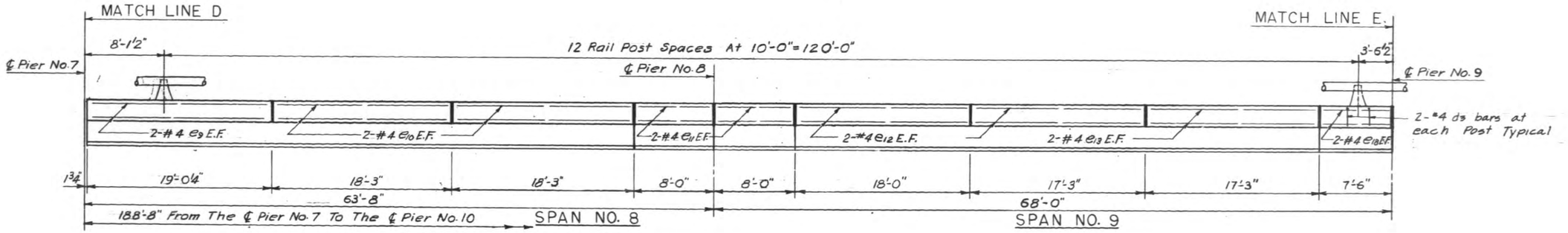
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

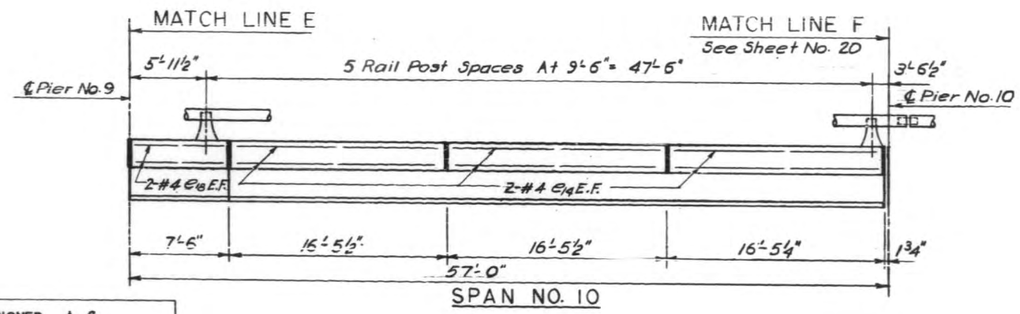
F.A.S. RTE. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	64
S. F. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 19
50 SHEETS









DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

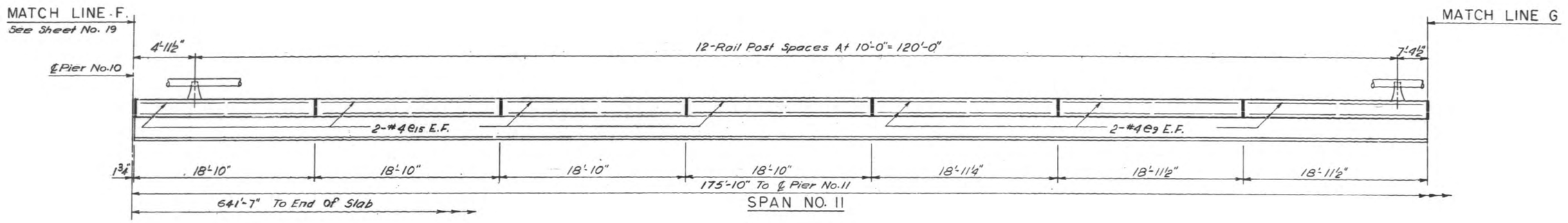
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

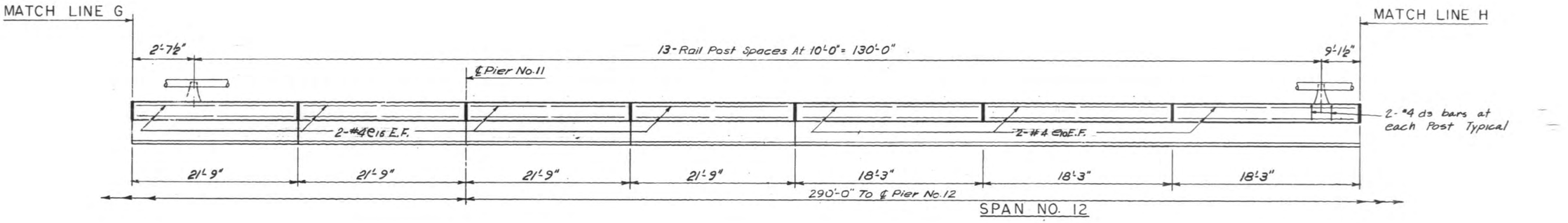
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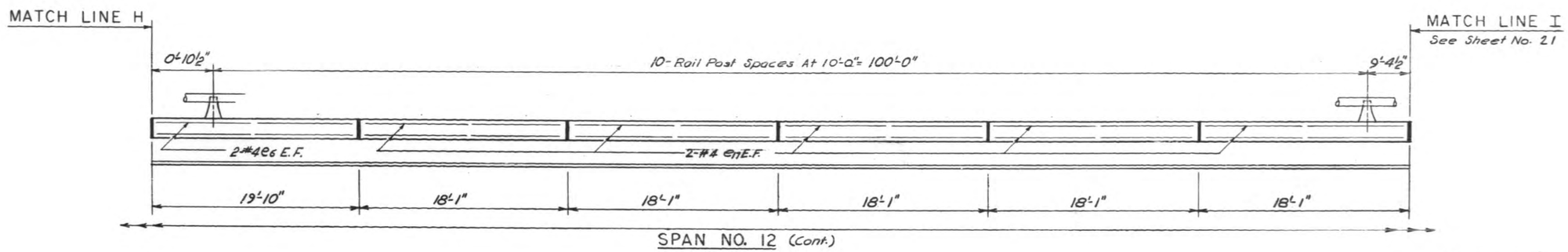
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	65
D. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 20
50 SHEETS







ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

Note:
For Channel Marker Lighting Layout, see sheets 47-49

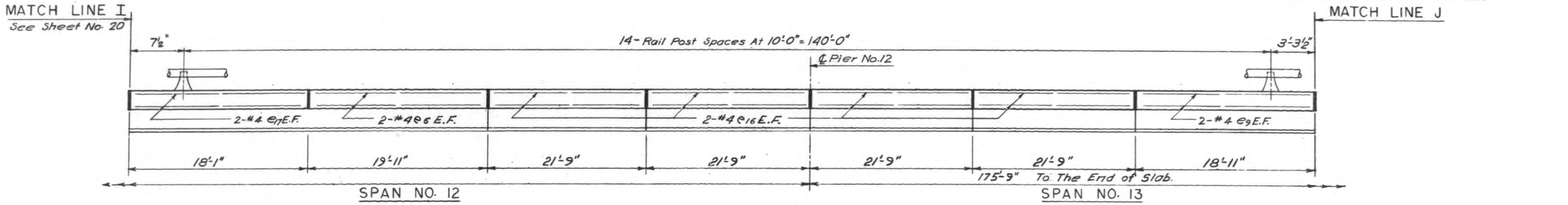
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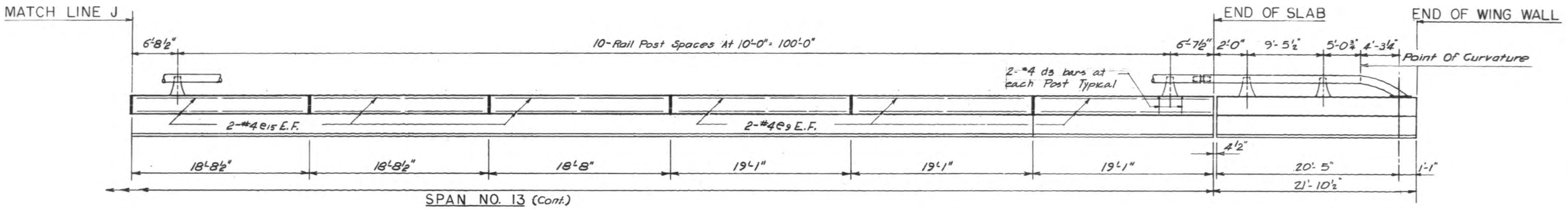
ALUMINIUM RAILING

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

F.A.R.S. or Project No.	Sec.	County	Total Sheets	Sheet No.
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R.F.P. Reg. No.	ILLINOIS	PROJECT		

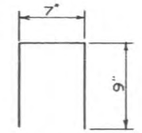
SHEET NO. 21
50 SHEETS





ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

Note:
For Channel Marker Lighting Layout, see sheets 47-49



BAR d_3

PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_3	560	#4	2'-1"	⊓
e_1	88	#4	19'-3"	——
e_2	32	#4	10'-11"	——
e_3	16	#4	9'-8"	——
e_4	8	#4	19'-1"	——
e_5	16	#4	17'-3"	——
e_6	48	#4	19'-7"	——
e_7	24	#4	9'-11"	——
e_8	24	#4	19'-5"	——
e_9	64	#4	18'-8"	——
e_{10}	40	#4	17'-11"	——
e_{11}	16	#4	7'-8"	——
e_{12}	8	#4	17'-6"	——
e_{13}	16	#4	16'-11"	——
e_{14}	24	#4	16'-1"	——
e_{15}	56	#4	18'-5"	——
e_{16}	64	#4	21'-5"	——
e_{17}	48	#4	17'-8"	——
e_{18}	16	#4	7'-2"	

Item	Units	Total
Reinforcement Bars	Lbs.	7800.
Class X Concrete	Cu. Yds.	91.6
Aluminum Railing	Lin. Ft.	2751.

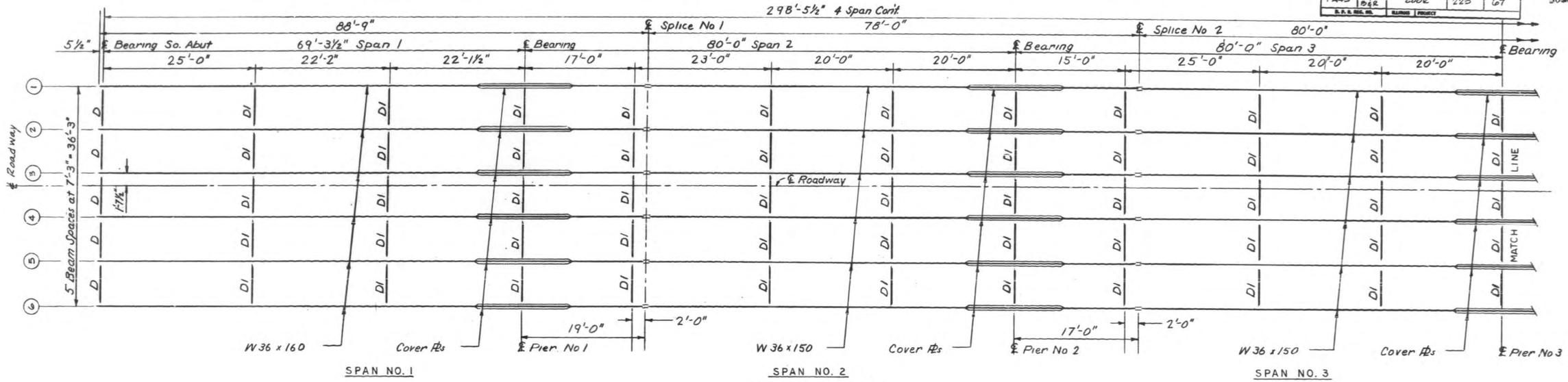
DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

ALUMINUM RAILING

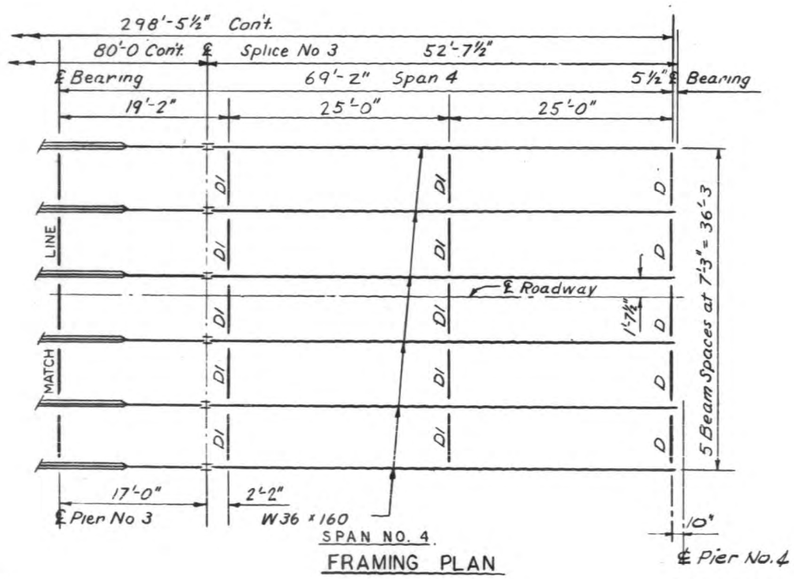
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 45	462-X-B&R	COOK	223	67
B.P.R. PROJ. NO.	RAILROAD	PROJECT		

SHEET NO. 22
50 SHEETS



FRAMING PLAN



FRAMING PLAN

SHEAR CONNECTOR SPACING

Note:
See Sheet 25 for Diaphragm Details.
"The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams"

BEAM PROPERTIES

	Steel Section					Composite Section	
	0.4 Span 1&4	Pier #1	0.5 Span 2&3	Pier #2	Pier #3	0.4 Span 1&4	0.5 Span 2&3
I(in⁴)	9760	14370	9030	13600	14553	25019	23626
St(in³)	542	772	504	733	780	5912	6130
Sb(in³)	542	772	504	733	780	788	735

TABLE OF MOMENTS AND REACTIONS (INT. BEAMS)

Load	Moments (ft.k)				Reactions (k)		
	0.4 Span 1&4	Piers #1&#3	0.5 Span 2&3	Pier #2	South Abut & Pier #4	Piers #1&#3	Pier #2
Inital ℄	306	564	205	486	23.8	78.4	71.5
Comp ℄	173	250	142	231	12.6	38.2	36.5
℄	535	380	514	392	44.6	61.5	62.1
Impact	136	95	126	97	11.5	11.2	10.9
Total	1150	1289	987	1206	92.5	189.3	181.0
fs (ksi)	19.6	19.9	17.6	19.8	VR = Maximum ℄ + Impact		
VR (k)	52.5		49.0		Shear Range in Span		

* ELEVATION TOP OF W

Beam No.	℄ Brg. South Abut	℄ Brg. Pier #1	℄ Splice #1	℄ Brg. Pier #2	℄ Splice #2	℄ Brg. Pier #3	℄ Splice #3	℄ South Brg. Pier #4
1	618.984	621.228	621.843	623.843	624.401	626.225	626.716	628.091
2	619.119	621.363	621.978	623.978	624.535	626.359	626.850	628.232
3	619.232	621.476	622.091	624.091	624.649	626.473	626.964	628.345
4	619.170	621.414	622.029	624.029	624.586	626.410	626.901	628.283
5	619.052	621.296	621.911	623.911	624.468	626.292	626.783	628.165
6	618.901	621.145	621.760	623.760	624.317	626.141	626.632	628.014

* For Fabrication only

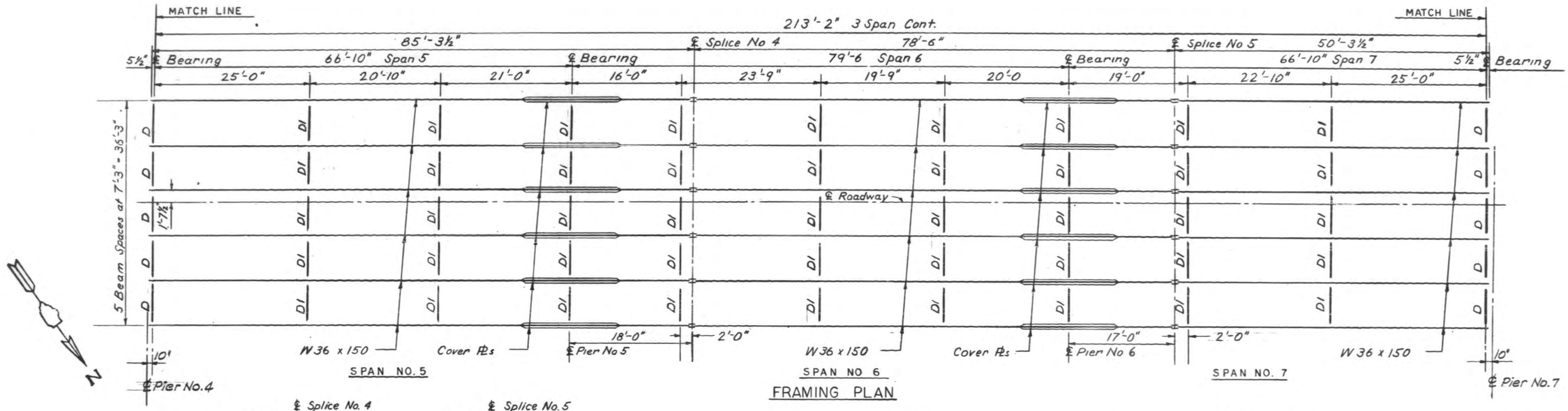
DESIGNED	R.L.Kanthan
CHECKED	E.M.M.
DRAWN	HJS
CHECKED	E.M.M.

FRAMING PLAN SPANS 1 TO 4

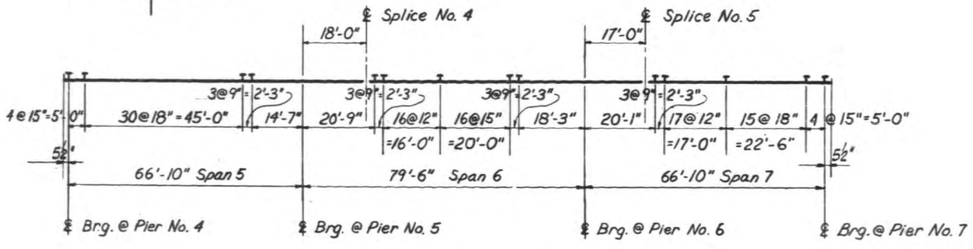
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
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S. F. A. SEC. NO.	ILLINOIS	PROJECT		

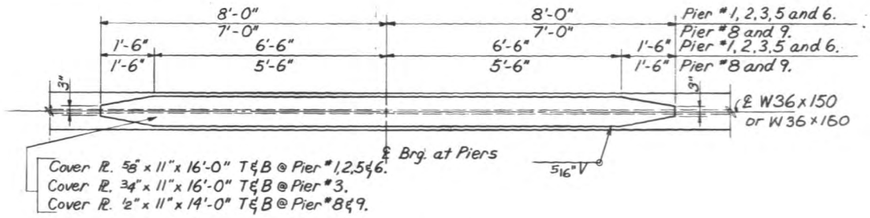
SHEET NO. 23
50 SHEETS



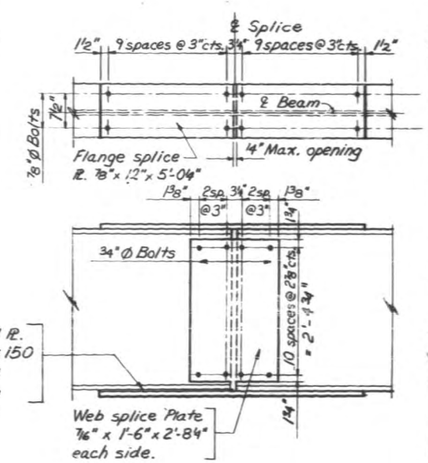
FRAMING PLAN



SHEAR CONNECTOR SPACING



DETAIL OF COVER PLATE



DETAIL OF SPLICE
SPLICES 1 to 7

TABLE OF MOMENTS AND REACTIONS (INT. BEAMS)

Load	Moments (Ft. k)			Reaction (k)	
	0.4 Span 5 & 7	Piers ℄ "5 & "6	0.5 Span 6	Piers ℄ "4 & "7	Piers ℄ "5 & "6
Initial Ⓘ	281	525	197	22.7	75.4
Comp Ⓘ	160	286	144	12.1	37.2
4	510	358	513	44.4	60.2
Impact	134	91	126	11.6	11.1
Total	1085	1210	980	90.8	183.9
fs (ksi)	19.8	19.8	17.4	VR = Maximum 4 + Imp.	
VR (k)	52.2		48.4	Shear Range in Span.	

BEAM PROPERTIES

	Steel Section		Comp. Sec.
	0.45span 5&7 0.55span 6	Pier #5&6	0.45span 5&7 0.55span 6
I (in⁴)	9030	13600	23626
St (in³)	504	733	6130
Sb (in³)	504	733	735

* ELEVATION TOP OF W

Beam No.	℄ North Brg. Pier #4	℄ Brg. Pier #5	℄ Splice #4	℄ Brg. Pier #6	℄ Splice #5	℄ South Brg. Pier #7
1	628.136	629.482	629.845	630.845	631.121	631.818
2	628.271	629.617	629.980	630.980	631.256	631.953
3	628.384	629.730	630.096	631.093	631.369	632.066
4	628.322	629.668	630.031	631.030	631.307	632.003
5	628.204	629.550	629.913	630.913	631.189	631.885
6	628.053	629.399	629.762	630.762	631.038	631.734

* For fabrication only

Note:
"The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams."

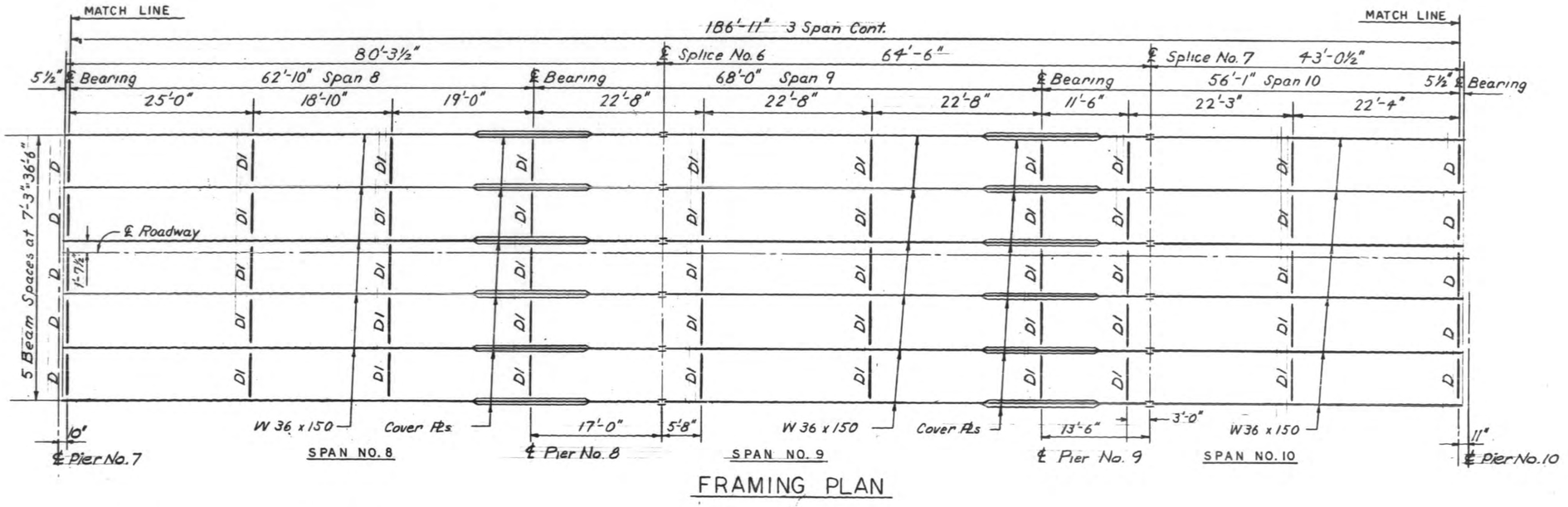
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CHECKED	E.M.M.
DRAWN	N.J.S
CHECKED	E.M.M.

FRAMING PLAN SPANS 5 TO 7

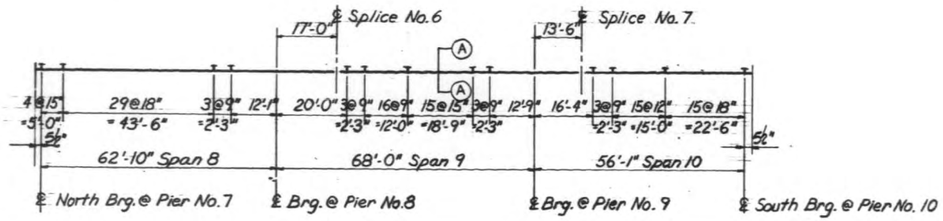
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X B&R	COOK	228	69
S. F. A. SEC. NO.	ILLINOIS	PROJECT		

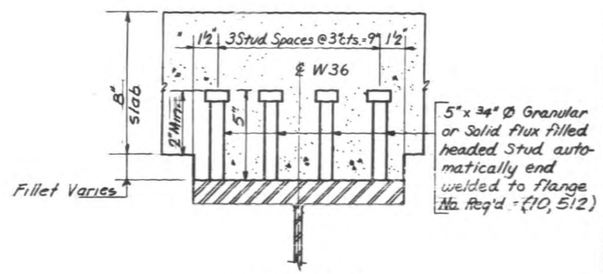
SHEET NO. 24
50 SHEETS



FRAMING PLAN



SHEAR CONNECTOR SPACING



SECTION A-A
(TYPICAL UNLESS NOTED)

TABLE OF MOMENTS AND REACTIONS (INT. BEAMS)

Load	Moments (ft. k)					Reactions (k)				
	0.4 Span 8	Pier "8	0.5 Span 9	Pier "9	0.4 Span 10	Pier "7	Pier "8	Pier "9	Pier "10
Initial ℄	264	425	135	359	202	21.9	67.9	62.5	19.2
Comp ℄	148	191	102	162	114	11.7	33.6	31.0	10.2
℄	469	296	423	285	407	43.8	56.0	54.1	42.9
Impact	125	78	110	57	112	11.7	11.0	10.9	11.8
Total	1006	990	770	863	835	89.1	168.5	158.5	84.1
fs (ksi)	18.3	17.3	13.5	15.1	15.1	VR = Maximum ℄ + Impact Shear Range in Span.			
VR (k)	51.1		47.7		50.7				

BEAM PROPEPTIES

	Steel Section		Comp. Section
	0.4 Span 8 & 10 0.5 Span 9	Pier "8 & 9	0.4 Span 8 & 10 0.5 Span 9
I (in⁴)	9030	12660	23626
St (in³)	504	687	6130
Sb (in³)	504	687	735

* ELEVATION TOP OF W

Beam No.	℄ North Brg. Pier "7	℄ Brg. Pier "8	℄ Splice "6	℄ Brg. Pier "9	℄ Splice "7	℄ South Brg. Pier "10
1	631.836	632.322	632.453	632.680	632.740	632.869
2	631.970	632.456	632.585	632.814	632.874	633.004
3	632.084	632.569	632.701	632.928	632.988	633.117
4	632.022	632.507	632.639	632.865	632.925	633.054
5	631.904	632.389	632.521	632.747	632.807	632.936
6	631.753	632.238	632.370	632.596	632.656	632.785

* For Fabrication only

Note:
"The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams."

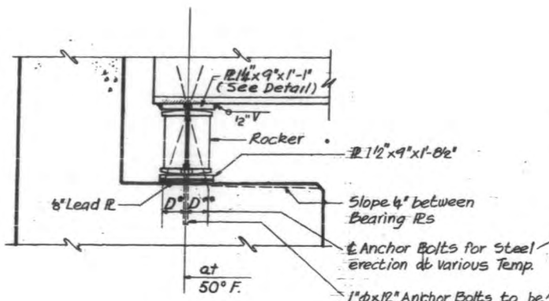
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CHECKED	E.M.M.
DRAWN	H.J.S.
CHECKED	E.M.M.

FRAMING PLAN SPANS 8 TO 10

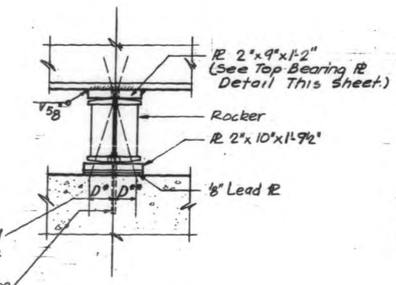
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X B&R	COOK	223	70
F. A. R. RTE. NO.	ILLINOIS	PROJECT		

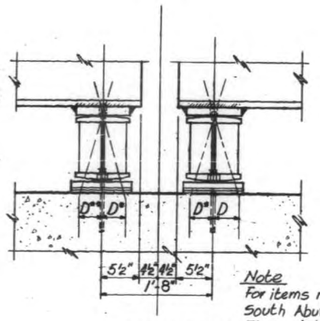
SHEET NO. 25
50SHEETS



SECTION

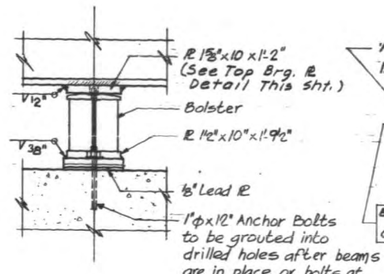


ELEVATION

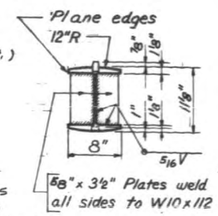


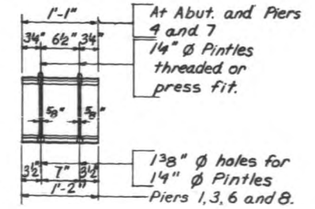
ELEVATION

Note
For items not noted see South Abut. this sheet. For Shim plate, See table

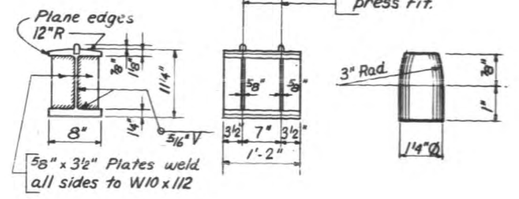


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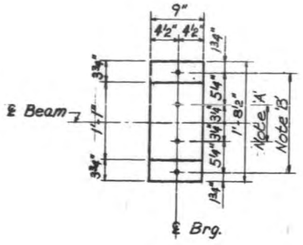


ROCKER
AT ABUT. & PIERS 1, 3, 4, 6, 7, 8.



BOLSTER
AT PIERS 2, 5 AND 9

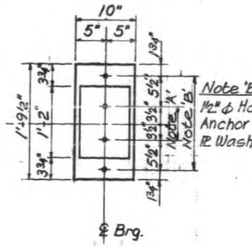
PINTLE DETAIL



PLAN

SOUTH ABUTMENT

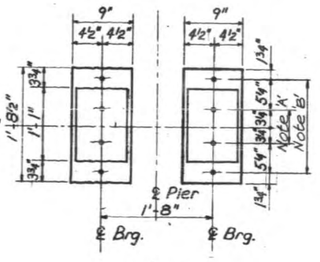
Note 'A'
1 3/8"ϕ Holes 1" deep in Top PL for Pintles. Thread or press fit pintles into bottom PL



PLAN

PIERS 1, 3, 6 & 8.

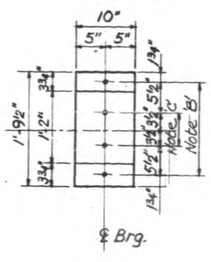
Note 'B'
1 1/2" ϕ Holes for 1"ϕx12" Anchor Bolts 5/16"x2 1/2"x2 1/4" PL Washers under nut.



PLAN

PIERS 4 & 7.

Note 'C'
1 3/8"ϕ Holes 1" deep in Top PL only for 1 1/4"ϕ Pintles



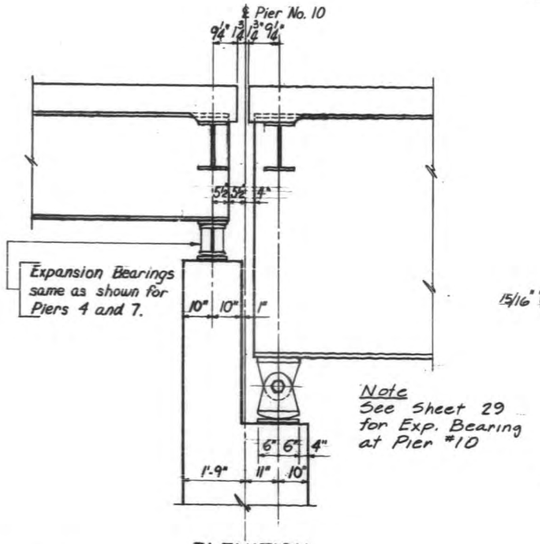
PLAN

PIERS 2, 5 & 9.

Note:
D* = 1/8" per each 100 feet of expansion for every 15° below the normal temp. of 50°F. (Side of Brg. away from Fixed Brg.)
D** = 1/8" per each 100 feet of expansion for every 15° above the normal temp. of 50°F. (Side of Brg toward Fixed Brg.)

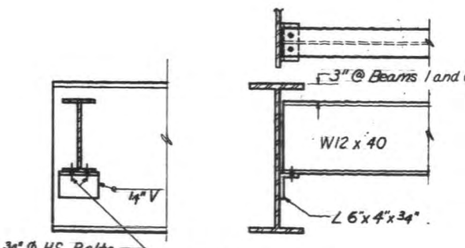
NOTE

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the concrete surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

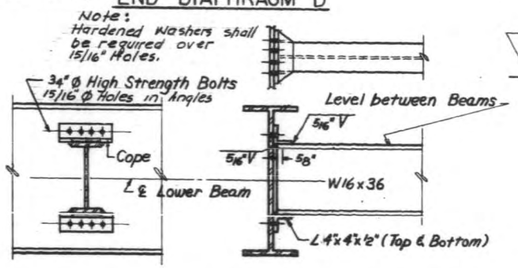


ELEVATION

PIER 10

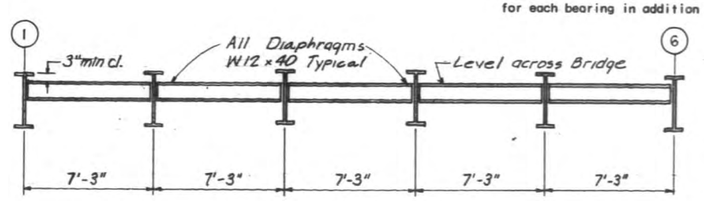


END DIAPHRAGM D

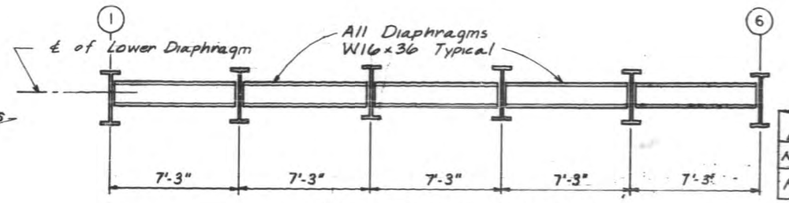


INTERIOR DIAPHRAGM D1

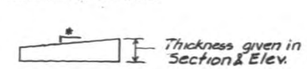
Note:
Hardened Washers shall be required over 15/16" ϕ Holes.



END DIAPHRAGM D



INTERIOR DIAPHRAGM D1



Top Bearing Plate Detail

Note:
* Bevel 3/8" in 12" at South Abutment, Pier 1 & Pier 2.
* Bevel 5/16" in 12" at Pier 3
* Bevel 1/4" in 12" at Piers 4 & 5.

Shim Plate Thickness "t"

BEAM NO. / LOCATION	1	2	3	4	5	6
N. Brg. of Pier #4	1/2"	1/16"	5/8"	9/16"	9/16"	9/16"
N. Brg. of Pier #7	1/4"	9/16"	1/4"	3/16"	1/4"	3/16"

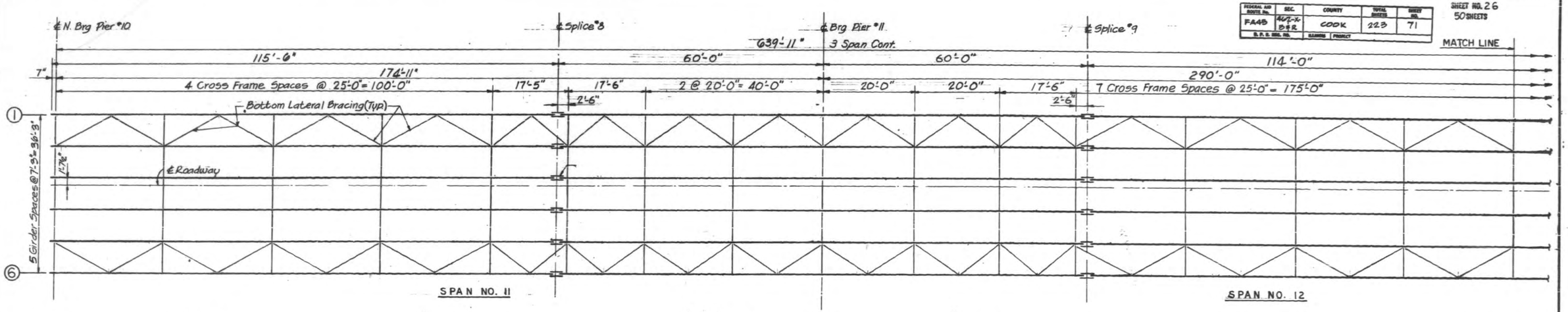
DESIGNED	E.L. Kanthan
CHECKED	A.S. & E.M.M.
DRAWN	G. Roberts
CHECKED	A.S. & E.M.M.

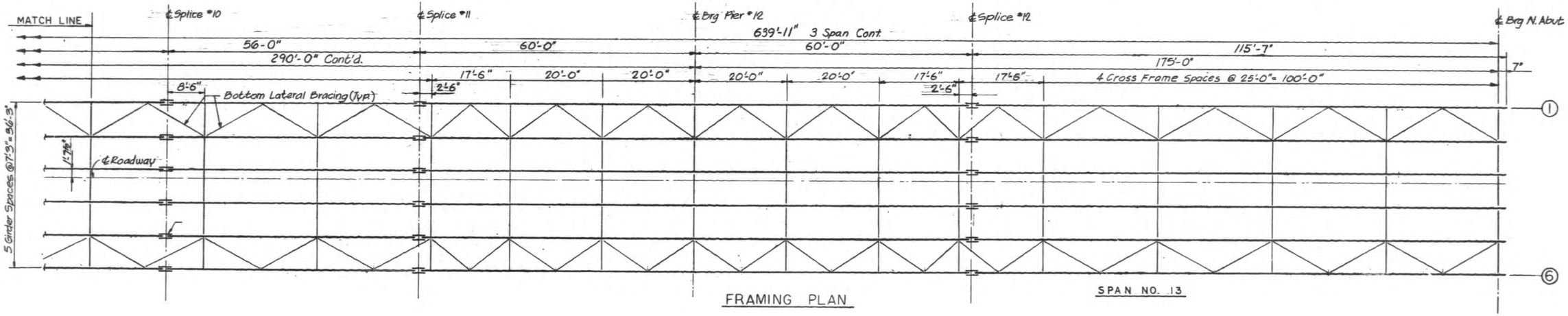
BEARING & FRAMING DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAB	462-X-B&R	COOK	223	71
S.P.S. SEQ. NO.	ILLINOIS	PROJECT		

SHEET NO. 26
50 SHEETS





FRAMING PLAN

N

TABLE OF MOMENTS & REACTIONS (INT. BEAMS)

	Moments (Ft.K)			Reaction (K)	
	*0.3 Span 11 & 13	Pier #11 & 12	0.5 Span 12	Pier #10 & N. Abut	Pier #11 & 12
Initial ℄	867	9145	4815	42.6	362.1
Comp. ℄	629	3495	2021	25.3	138.5
℄	1493	3691	3037	53.5	149.0
Impact	248	518	368	8.8	12.7
Total	3237	16849	10241	130.2	676.4
fs (KSi)	14.95	19.47	20.0		
VR (K)	70.8		76.7		

VR = Maximum ℄ + Imp Shear Range in Span

*Maximum Positive Moment occurs at 0.3 Span

GIRDER PROPERTIES

	Steel Section			Composite Sect.	
	0.3 Span 11 & 13	Pier #11 & 12	0.5 Span 12	0.3 Span 11 & 13	0.5 Span 12
I (in⁴)	93508	659361	229794	171680	349538
St (in³)	2281	10384	4587	8299	10574
Sb (in³)	2281	10384	6468	2800	6649

Note:

"The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams."

†ELEVATION TOP OF WEB

Beam No.	℄ N. Brg Pier #10	℄ Splice #8	℄ Brg Pier #11	℄ Splice #9	℄ Splice #10	℄ Splice #11	℄ Brg Pier #12	℄ Splice #12	℄ Brg N. Abut.
1	632.829	632.137	631.725	631.428	629.715	628.423	626.850	625.626	623.699
2	632.963	632.271	631.859	631.562	629.849	628.557	626.984	625.760	623.833
3	633.077	632.385	631.973	631.676	629.963	628.671	627.098	625.874	623.947
4	633.014	632.322	631.910	631.613	629.900	628.608	627.035	625.811	623.884
5	632.896	632.204	631.792	631.495	629.783	628.490	626.917	625.692	623.766
6	632.745	632.053	631.641	631.344	629.631	628.339	626.766	625.542	623.615

†For Fabrication only

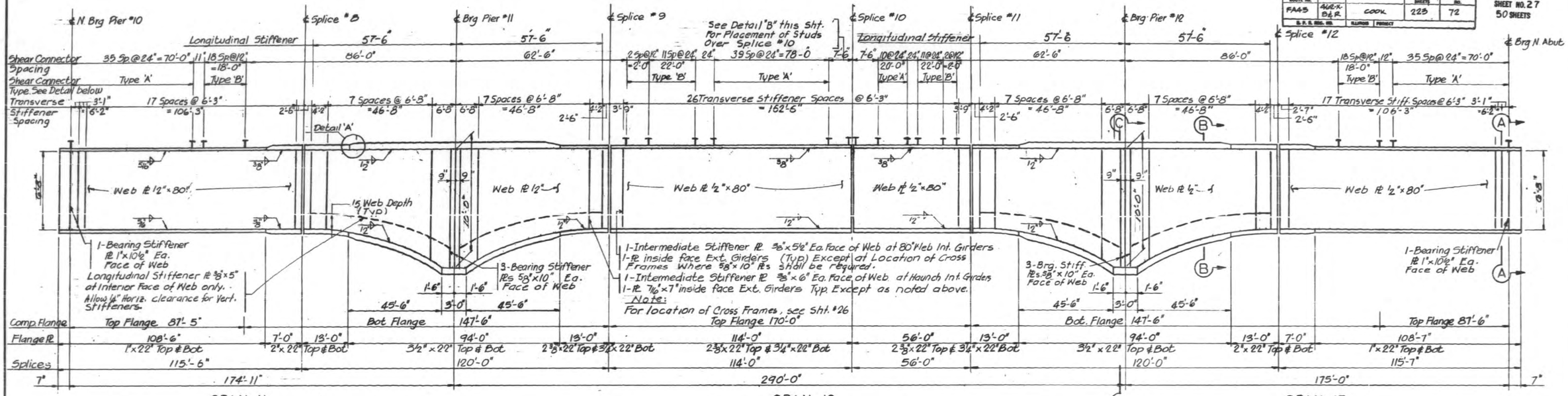
DESIGNED	P. L. Kanthan
CHECKED	E.M.M.
DRAWN	R. L. Kanthan
CHECKED	E.MM

FRAMING PLAN SPANS 11 TO 13

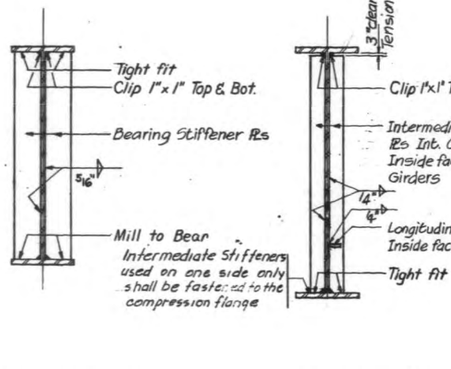
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	225	72
S. P. O. REG. NO.	ILLINOIS PROJECT			

SHEET NO. 27
50 SHEETS



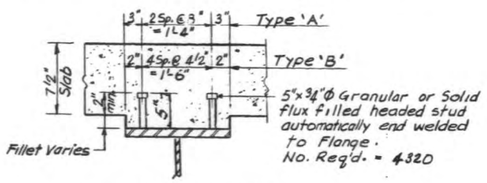
GIRDER ELEVATION



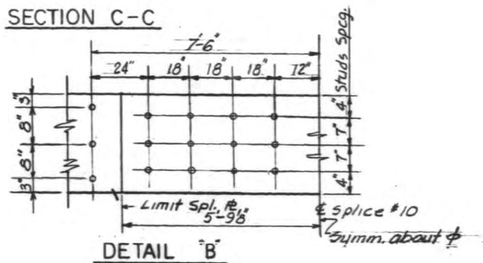
SECTION A-A

SECTION B-B

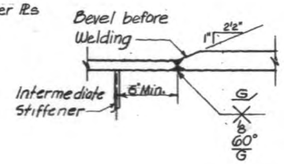
SECTION C-C



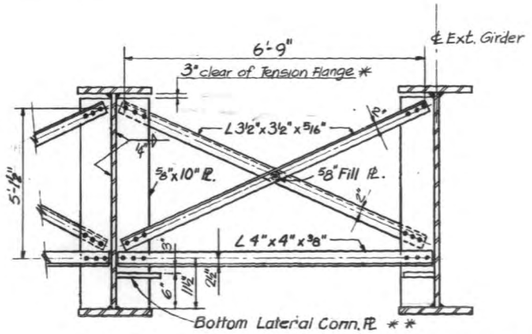
SHEAR STUDS



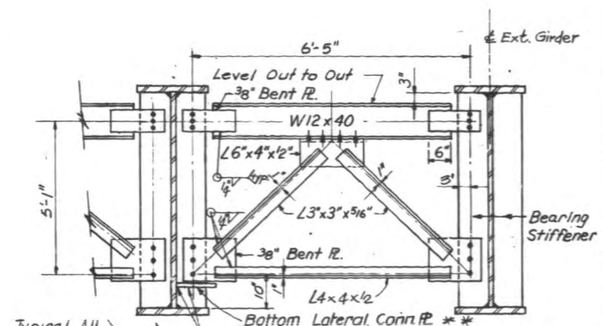
DETAIL "B"



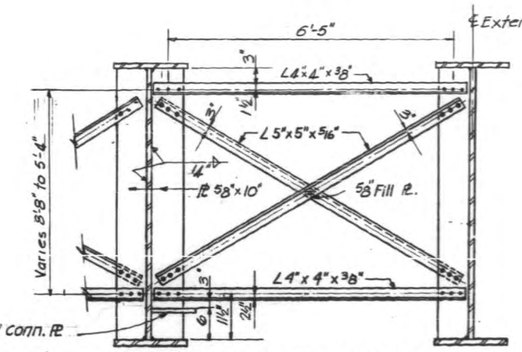
DETAIL "A"



TYPICAL INTERMEDIATE CROSS FRAME



TYPICAL END CROSS FRAME



CROSS FRAME AT PIERS 11&12
& ADJACENT CROSS FRAMES

Note:
15/16" Φ Holes in gusset plates for ⅞" Φ Bolts. Hardened washers shall be required over holes in gusset plates. (Typ.)

* Intermediate stiffeners over piers between splices shall be tight fit at the bottom and 3" undercut at the top. All other intermediate stiffeners shall be tight fit at the top and 3" undercut at the bottom.

** For weld details see Detail 'B' see # 28.

** Bottom Lateral conn. Pl.

DESIGNED	R.L. Kanthan
CHECKED	E.M.M.
DRAWN	R.L. Kanthan
CHECKED	E.M.M.

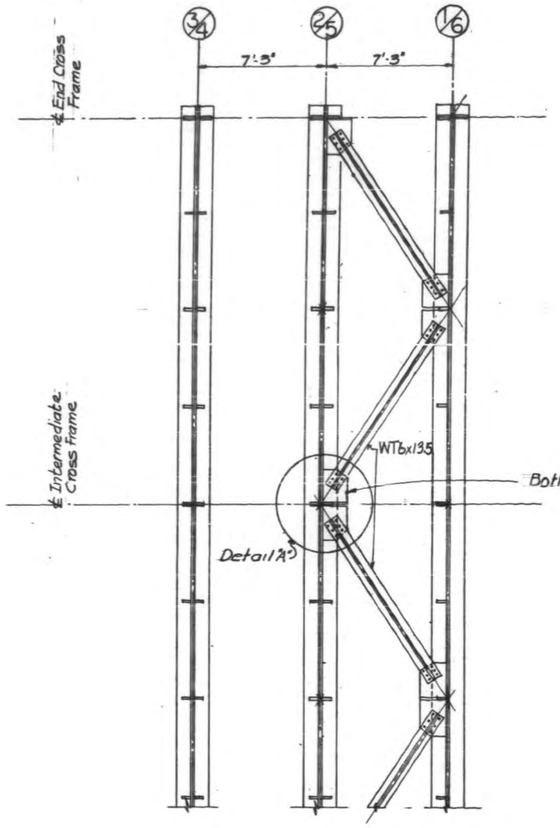
PLATE GIRDER DETAILS SPANS 11 TO 13

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

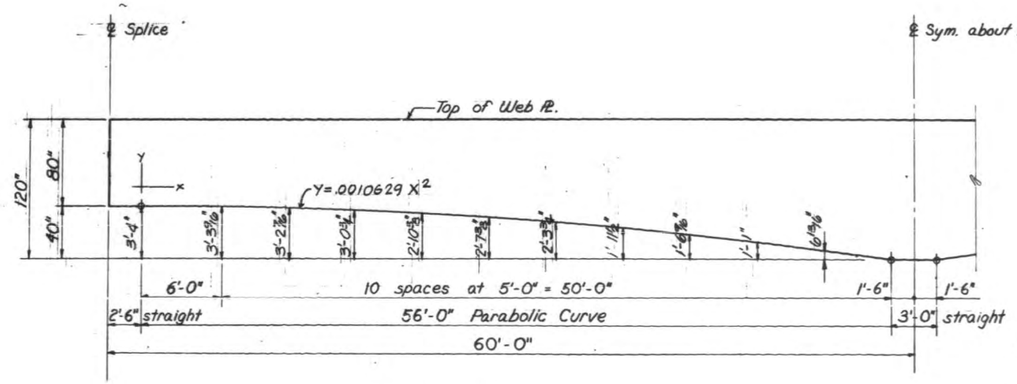
Revised 7-16-75

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B&R	COOK	223	73
S. P. R. ROUTE NO.	ILLINOIS	PROJECT		

SHEET NO. 28
50 SHEETS

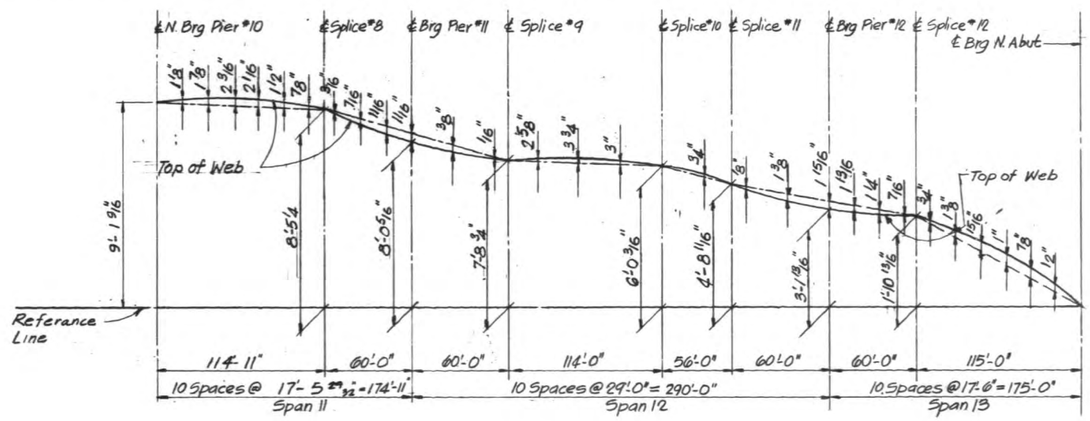


LATERAL BRACING



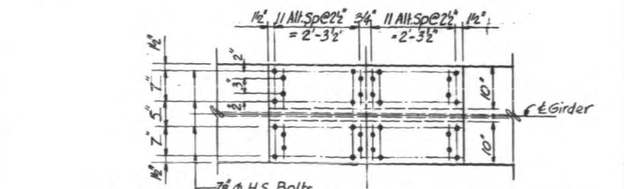
WEB PLATE HAUNCH

The dimensions shown do not include the Vertical Curve & Pl. Deflection

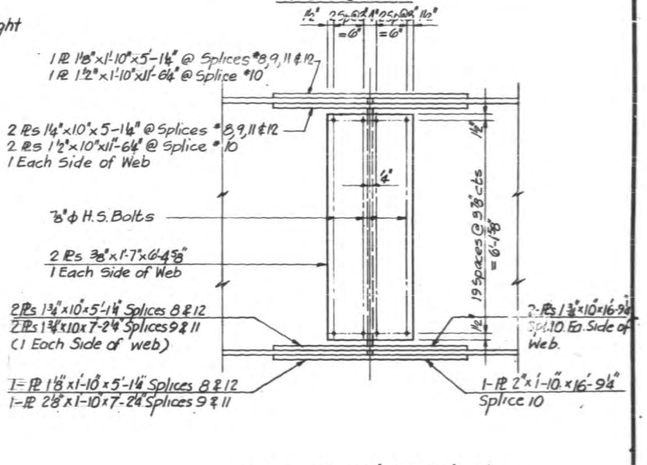


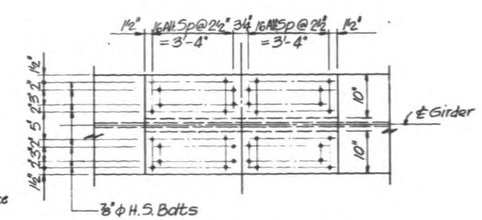
CAMBER DIAGRAM

(Includes Allowance For Vertical Curve + D.L. Deflection)



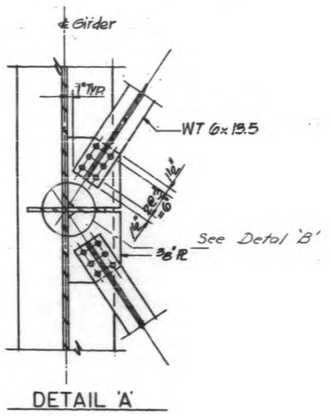
TOP & BOT. FLANGE SPLICE #8, 12 & TOP FL. SPL. FOR 9 & 11



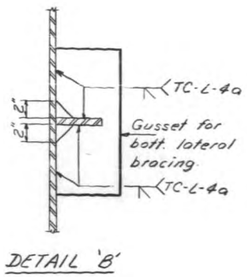


BOT. FLANGE SPLICE #9 & 11

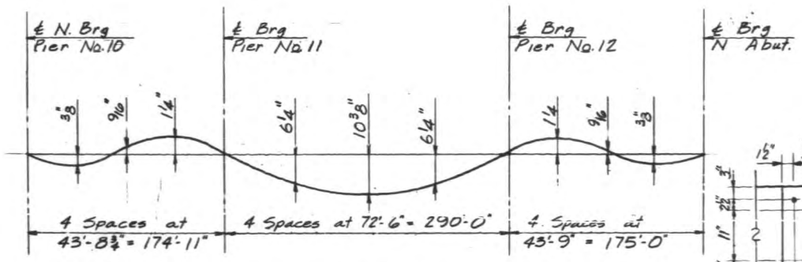
FIELD SPLICE DETAILS



DETAIL 'A'

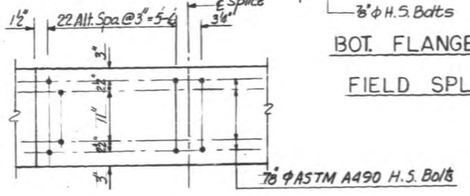


DETAIL 'B'

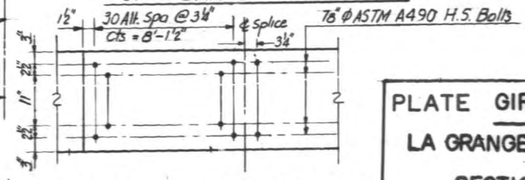


TOTAL DEAD LOAD DEFLECTION DIAGRAM

Note: Deflection Diagram includes all weight of concrete, initial wearing surface and structural steel.



TOP FLANGE SPLICE 10



BOTTOM FLANGE SPLICE 10

DESIGNED	R.L. Kanthan
CHECKED	A.S. & E.M.M.
DRAWN	R.L. Kanthan
CHECKED	E.M.M.

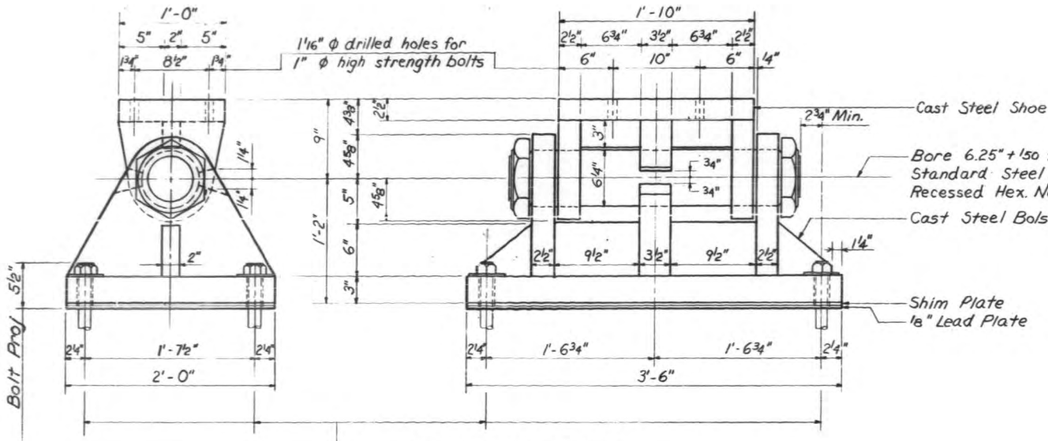
PLATE GIRDER DETAILS SPANS 11 TO 13

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462 - X - B & R
COOK COUNTY
STATION 17+66.04

Revised 7-16-75

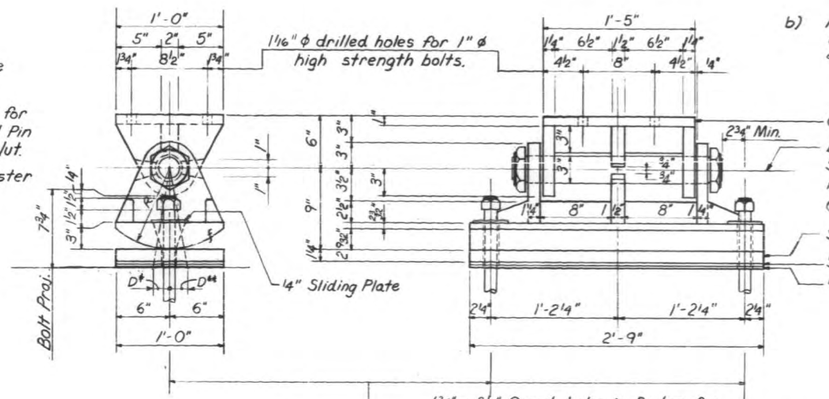
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X B & R	COOK	223	74
B. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 29
50 SHEETS



FIXED PLATE GIRDER BEARING
PIER NO. 11

Note: For all Bearings Structural steel weldments of equal sections and strength may be substituted for the castings.



EXPANSION PLATE GIRDER BEARING NO. 1
PIER NO. 10 AND NORTH ABUTMENT

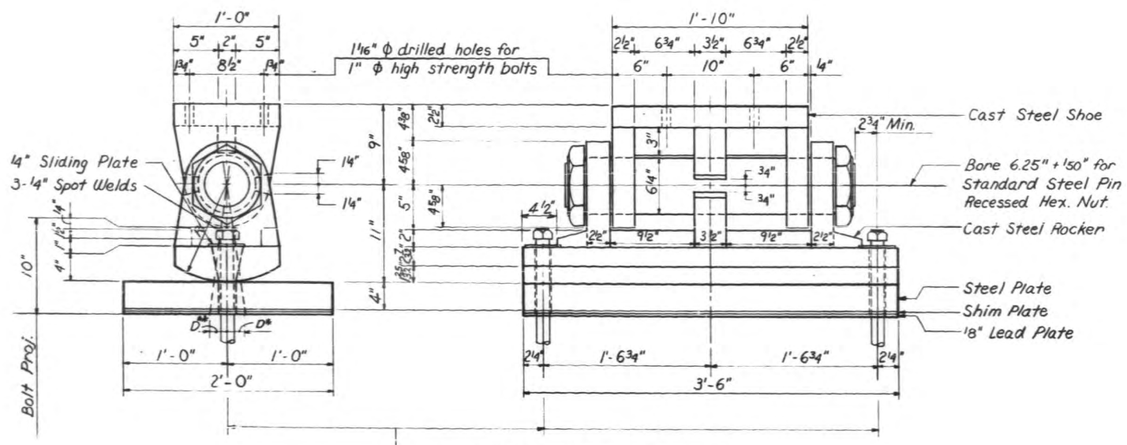
NOTES ON SETTING ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100° of expansion for every 15° fall below the normal temperature of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100° of expansion for every 15° rise above the normal temperature of 50°F.

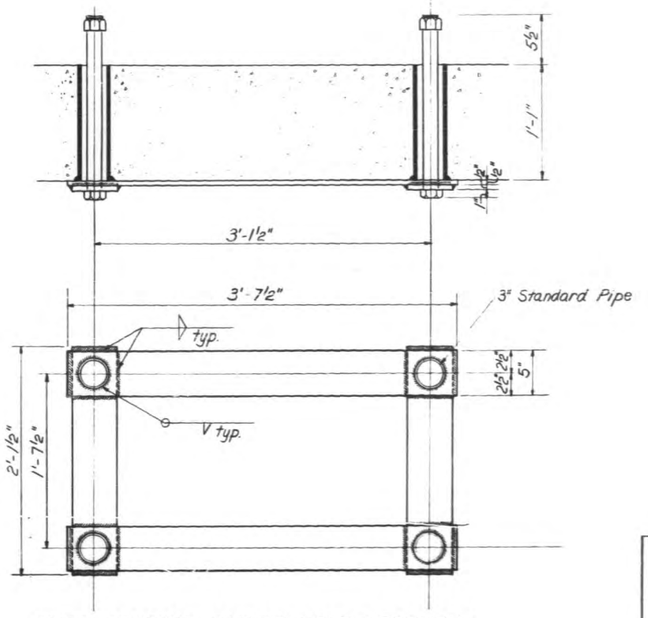
b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place.

Note

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.



EXPANSION PLATE GIRDER BEARING NO. 2
PIER NO. 12



FIXED BEARING ANCHOR BOLT ASSEMBLY

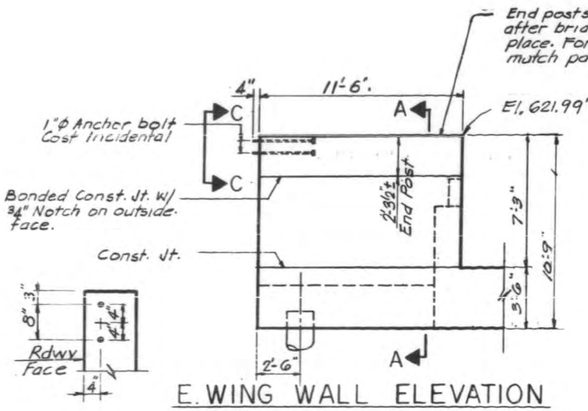
Note:
Fixed bearing Anchor Bolts shall be preset.

DESIGNED	A.S.
CHECKED	E.M.M.
DRAWN	G.A.F.
CHECKED	A.S. & E.M.M.

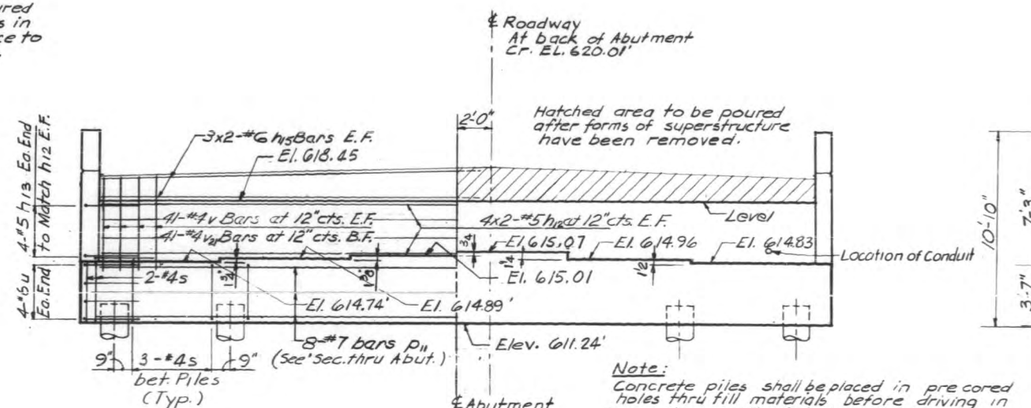
PLATE GIRDER BEARING DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	75
S.P.S. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 30
50 SHEETS

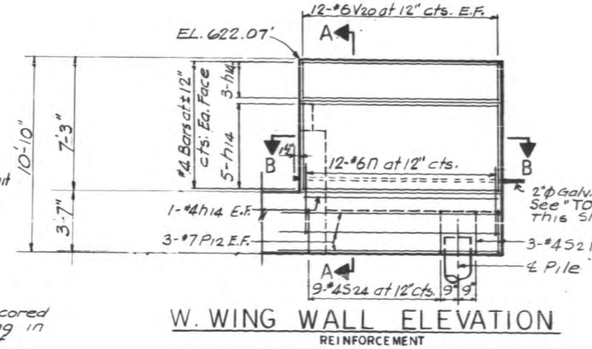


E. WING WALL ELEVATION



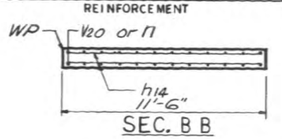
ELEVATION

Note:
Concrete piles shall be placed in pre cored holes thru till materials before driving in accordance with Article 513.09C of Standard Specifications.



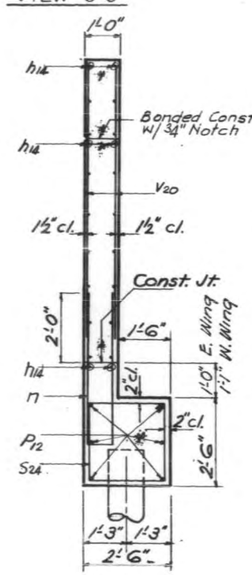
W. WING WALL ELEVATION

REINFORCEMENT

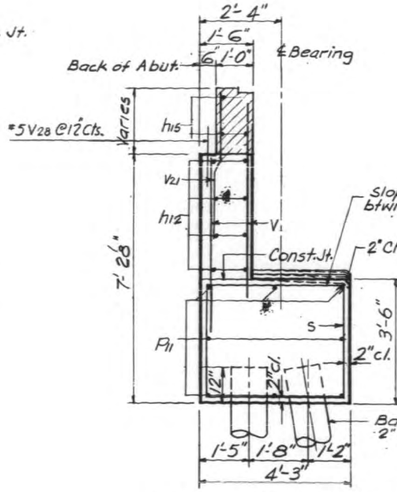


SEC. B B

VIEW C-C



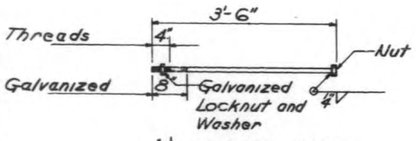
SEC. A-A



SEC. THRU ABUT.

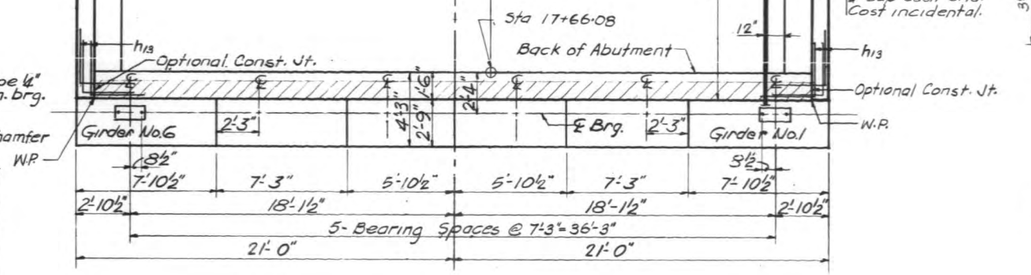
PILE DATA

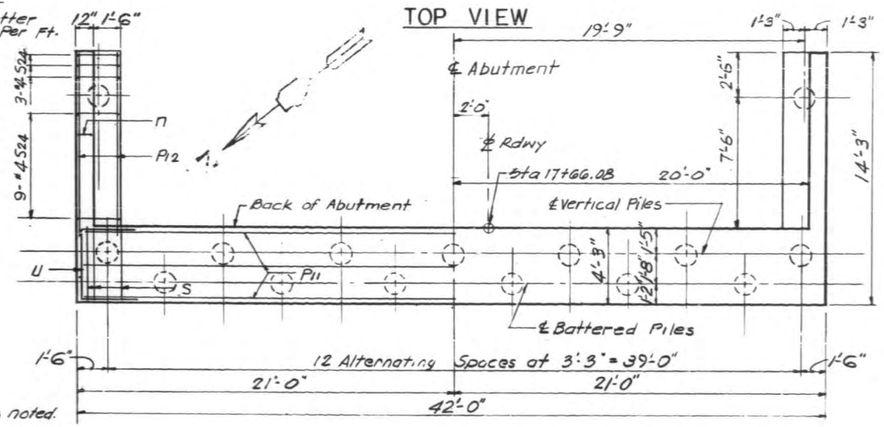
Type ——— Concrete
Capacity ——— 35 Ton
Est. Length ——— 40'-0"
No. Required ——— 14 + 1 Test Pile Placed in a Permanent Location.



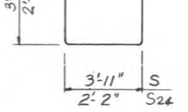
1"ϕ ANCHOR BOLT

Note:
- Space reinforcement in cap to miss piles and anchor bolts.
- Pour steps monolithically with cap.
- Minimum bar lap = 24 diam. unless noted.
- Use 2" clear cover on all reinforcing except as noted.

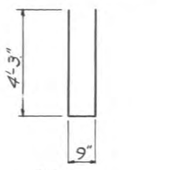




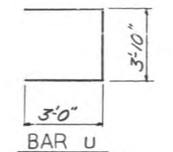
PLAN - PILE CAP



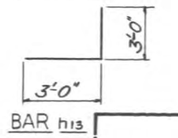
BAR S & S24



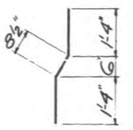
BAR n



BAR U



BAR h13



BAR V21

ONE ABUTMENT BILL OF MATERIAL

BAR	No	SIZE	LENGTH	SHAPE
h12	16	#5	2'-6"	
h13	16	#5	6'-0"	
h14	36	#4	11'-3"	
h15	12	#6	20'-9"	
n	24	#6	9'-3"	
P11	8	#7	41'-8"	
P12	12	#7	11'-6"	
S	40	#4	14'-11"	
S24	24	#4	9'-5"	
U	8	#6	9'-10"	
V	82	#4	6'-0"	
V20	48	#6	6'-8"	
V21	41	#4	3'-2"	
V28	40	#5	2'-0"	
Class X Concrete			Cu. Yds.	46.7
Reinforcement Bars			Lbs.	4050
Concrete Piles			Lin. Ft.	560.0
Test Piles (Concrete)			Ea.	1

DESIGNED	R.J.W & A.S.
CHECKED	AS
DRAWN	R.J.W & E.M.M.
CHECKED	RJW

SOUTH ABUTMENT

LA GRANGE RD. FA. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B & R	COOK	223	76
F. A. RTE. NO.	ILLINOIS PROJECT			

SHEET NO. 51
50 SHEETS

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.

1"Φ Anchor Bolts cost to be incidental to Bridge Structure

Bonded Const. Joint with ¾" Notch on outside face

Construction Jt.

W. WING WALL ELEVATION

Bonded Const. Jt. with ¾" Notch

Back of Abut

Vories

℄ Brg.

#5 V28 @ 12" Cts.

Slope 14" btwn. brgs.

2" Chamfer

2"x4" Key

Const. Jt.

Optional Const. Jt.

Batter 3" Per Ft.

SEC. THRU ABUT.

1½" cl.

Const Jt

1'-6" Weep Hole

2'-0" x 2'-0" Gravel Deposit Full Length of Wall

SECTION A-A

Threads

Galvanized

Nut

Galvanized Locknut and Washer

1"Φ ANCHOR BOLT

DESIGNED	R.J.W.
CHECKED	A.S. & E.D.
DRAWN	R.J.W. & E.M.M.
CHECKED	A.S. & E.D.

℄ Roadway at back of Abutment
Cr El. 624.79

Hatched area to be poured after forms of superstructure have been removed

℄ Roadway

3x2-#6 h15 bars
2-B.F., 1-F.F.

61-#4 V28 bars at 8" cts. E.F.
61-#4 V28 bars at 8" cts B.F.

12x2-#5 h12 Bars at 8" cts. F.F.
12x2-#5 h12 Bars at 8" cts. B.F.

Level

2-#4 bars S25

1-#4 bars S25

5-#7 Bars P11
See Sect thru Abut.

5-#7 w

1-#7 bar t

5-#6 U6

Elev. 611.0

℄ Abutment

ELEVATON

Space reinforcement in cap to miss anchor bolts

Pour steps monolithically with cap

11-#4 V26 bars at 12 cts. Back Face

22-#5 V28 bars at 12" cts. Front Face

11-#5 V28, V27 bars at 12 cts. Back Face

11x2-#6 m at 12 cts.

11-#5 V28 bars at 12" cts. Back Face

11-#6 m at 12" cts.

Weep Hole

Construction Jt.

1-#9 h19 (Back Face)
1-#4 h20 (Front Face)

3-#7 P13 (Ea Face)

1-#4 h20 (Back Face)

3-#4 S26

℄ Pile

E. WING WALL ELEVATION (Reinforcement)

SECTION B-B

18'-6"

Roadway ℄ 2'-0"

Sta. 31+19.66

Optional Const. Jt.

Back of Abutment

℄ Brg.

Cir. No. 1

Cir. No. 6

1-1¼" ø

WP

7'-10½"
7'-3"
11'-9"
7'-3"
7'-10½"

3'-4½"
18'-1½"
18'-1½"
3'-4½"

5 Bearing Spaces at 7'-3" = 36'-3"

21'-6"
21'-6"

TOP VIEW

Abutment ℄

PILE DATA

Type Conc. Piles
Capacity 45 Ton
Est. Length 36'-0"
No. Required 19+1 Test
Pile in a Permanent Location

Edge of Footing

BK. of Abutment

℄ Vertical Piles

℄ Battered Piles

6 Pile Spaces at 6'-6" = 39'-0"

2'-0"
21'-6"
21'-6"
2'-0"
43'-0"

PLAN-PILE CAP

BAR S25 & S26

BAR h16

BAR m

BAR V25

BAR h18

BAR U6

BAR h16

BAR h17

BAR t

ONE ABUTMENT BILL OF MATERIAL

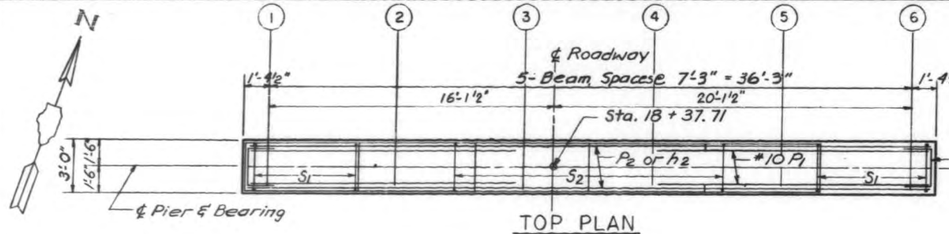
BAR	No	SIZE	LENGTH	SHAPE
h12	48	#5	21'-6"	
h15	6	#6	20'-9"	
h16	24	#9	9'-6"	
h17	24	#9	9'-6"	
h18	24	#5	7'-0"	
h19	24	#9	13'-0"	
h20	48	#4	21'-3"	
h21	24	#7	13'-0"	
m	44	#6	5'-7"	
n16	22	#6	10'-3"	
P11	5	#7	42'-8"	
P13	12	#7	21'-6"	
S25	40	#4	17'-1"	
S26	36	#4	11'-5"	
t	38	#7	8'-4"	
U6	10	#6	10'-4"	
V22	122	#4	9'-6"	
V23	66	#5	11'-2"	
V24	61	#4	3'-4½"	
V25	22	#5	4'-1"	
V26	22	#4	5'-2"	
V27	22	#5	7'-4"	
V28	40	#5	2'-0"	
W	5	#7	42'-8"	
Class X Concrete			Cu. Yds.	93.8
Reinforcement Bars			Lbs.	11030.0
Concrete Piles			Lin. Ft.	684.0
Test Piles (Concrete)			Ea.	1.0

NORTH ABUTMENT

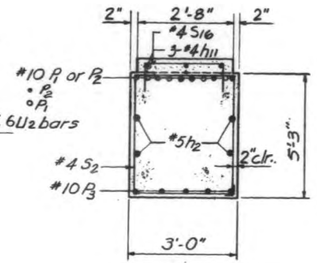
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X B&R	COOK	223	77
		RAILROAD	PROJECT	

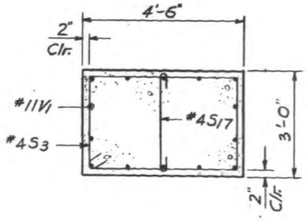
SHEET NO. 32
50 SHEETS



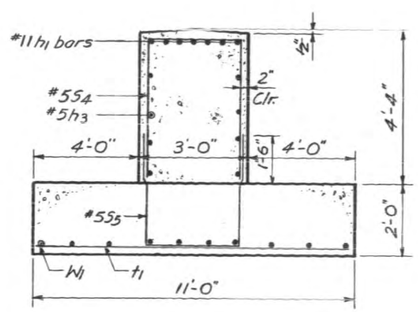
TOP PLAN



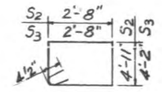
SECTION A-A



SECTION B-B



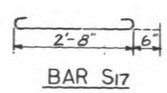
SECTION C-C



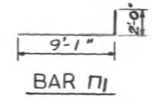
BAR S2, S3



BAR P4



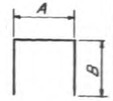
BAR S17

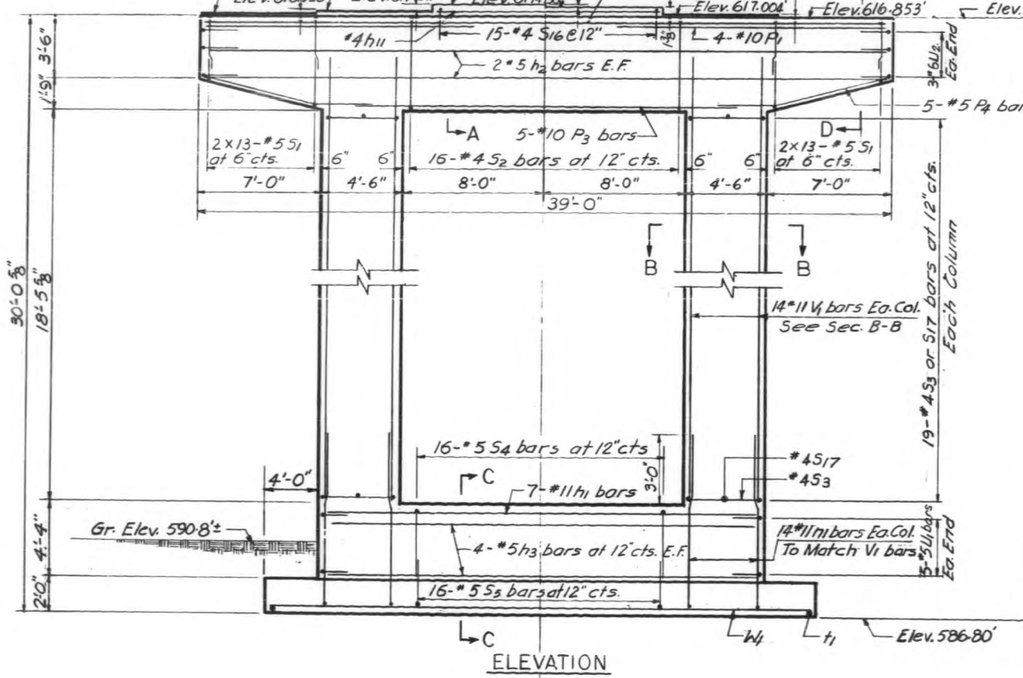


BAR n1

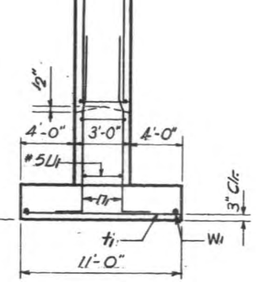
TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S4	2'-8"	4'-0"
S5	2'-8"	3'-3"
U1	2'-6"	1'-6"
S16	2'-4"	1'-3"
U2	2'-6"	2'-6"

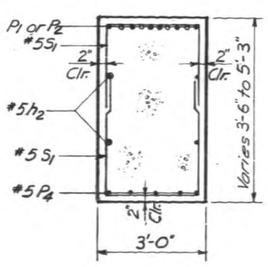




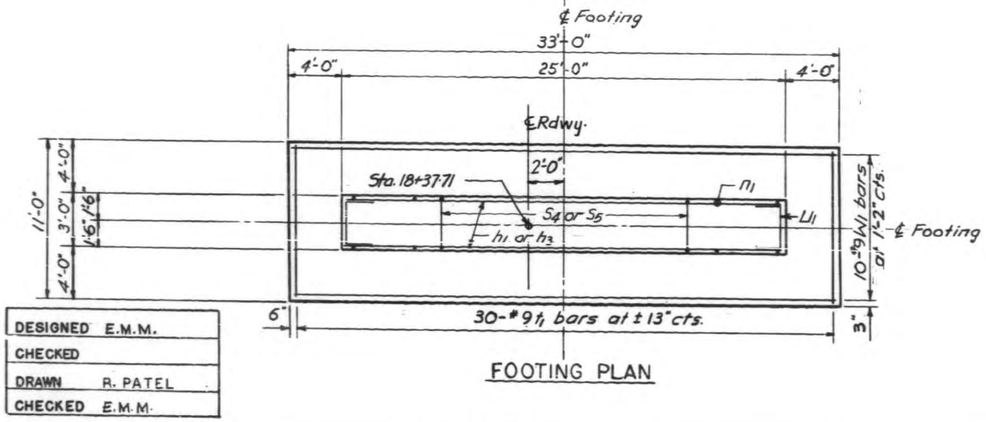
ELEVATION



END VIEW



SECTION D-D



FOOTING PLAN

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	5	#10	21'-6"	
P4	10	#5	9'-9"	
S1	52	#5	9'-4"	
S2	16	#4	16'-0"	
S16	15	#4	4'-10"	
h2	4	#5	38'-6"	
h11	3	#4	14'-0"	
U2	6	#6	7'-6"	
Columns				
V1	28	#11	21'-6"	
S3	38	#4	14'-5"	
S17	38	#4	3'-8"	
Wall				
S4	16	#5	10'-8"	
S5	16	#5	9'-2"	
U1	10	#5	2'-6"	
h1	7	#11	24'-6"	
h3	8	#5	24'-6"	
Footing				
n1	28	#11	11'-1"	
W1	10	#9	32'-6"	
t1	30	#9	10'-6"	

Item	Units	Total
Reinforcement Bars	Lbs.	12220
Class X Concrete	c.u. yds	79.6
Structure Excavation	c.u. yds	82.2

Note:

Space Reinforcement in Pier Cap to Miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters Unless Otherwise Noted.
All Edges Shall Have Standard ¾" Chamfers Except as Noted.
Use 2" Clear Cover on all Reinforcing Unless Otherwise Noted.
Pour Steps Monolithically With Pier Cap.
Max. Soil Pressure = 4.0 K.S.F.

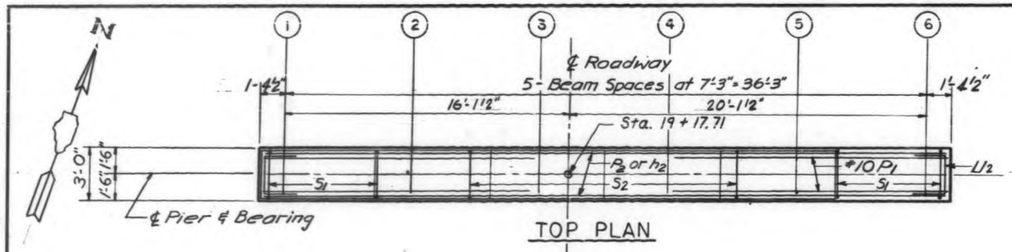
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

PIER NO. 1

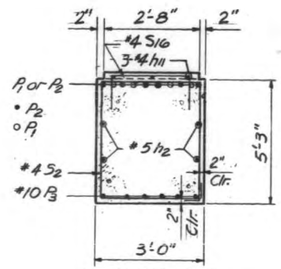
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

HIGHWAY AND ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAS	462-X-B&R	COOK	223	78
B.R.S. ROAD DIST.	ILLINOIS	PROJECT		

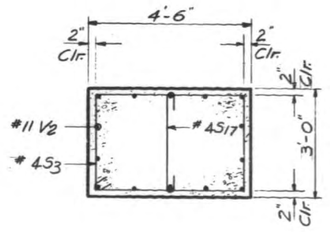
SHEET NO. 33
50 SHEETS



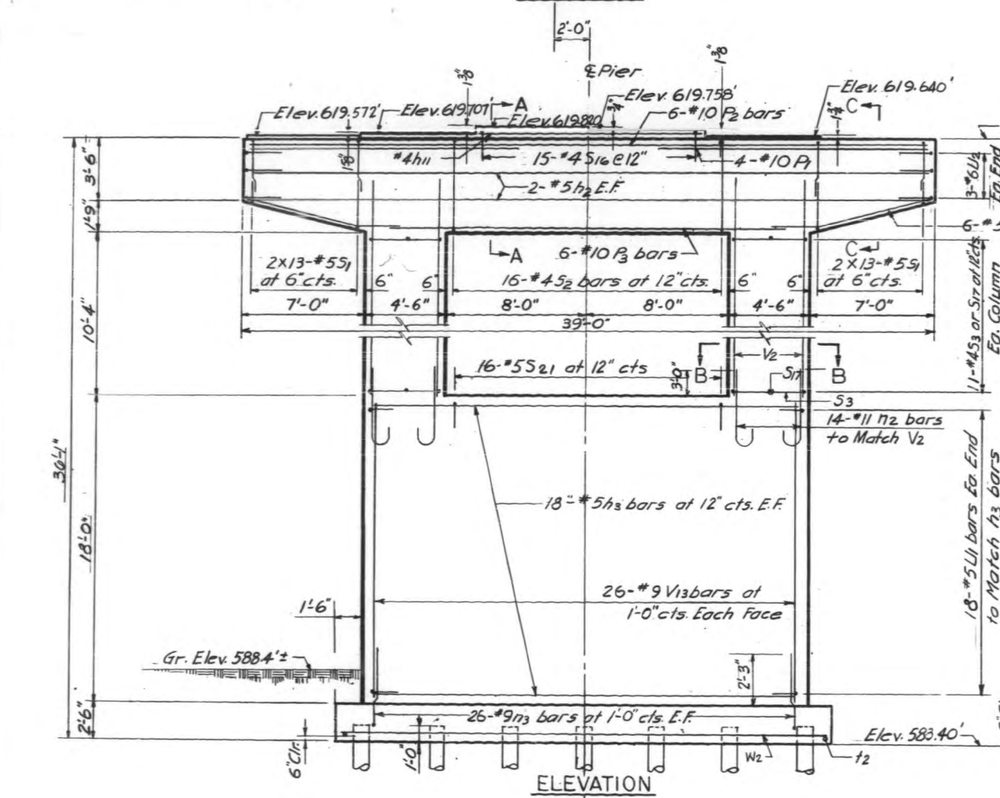
TOP PLAN



SECTION A-A

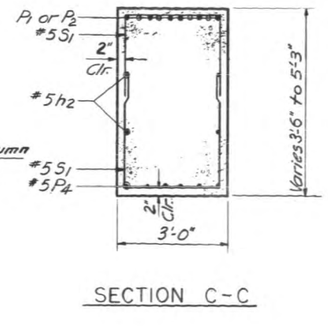


SECTION B-B

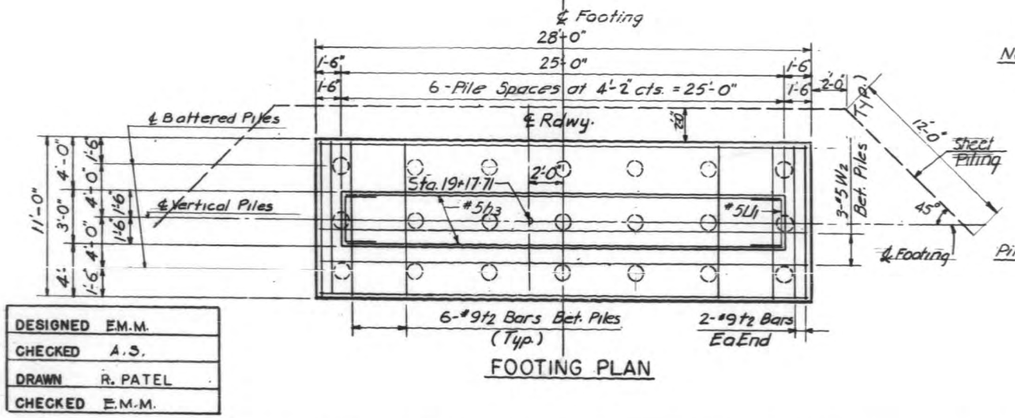


ELEVATION

END VIEW



SECTION C-C



FOOTING PLAN

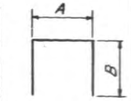
Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum bar lap = 24 diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Space bars in Pile cap to Miss Piles.
For Location of Deck Drain Pipe, see Sheet #45.

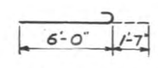
Pile Data:
Type - Concrete Piles
Capacity - 45 T
Est. Length - 20'-0"
No. Req'd - 20 + 1 Test Pile in a Permanent Location.

DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	R. PATEL
CHECKED	E.M.M.

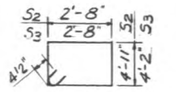
TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S 16	2'-4"	1'-3"
S 21	2'-8	2'-3"
U2	2'-6"	2'-6"

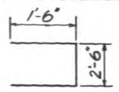




BAR n2



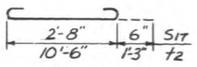
BAR S2, S3



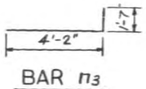
BAR U1



BAR P4



BAR S17, t2



BAR n3

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	6	#10	21'-6"	
P4	12	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
U2	6	# 6	7'-6"	
h11	3	# 4	14'-0"	
		Columns		
V2	28	#11	13'-6"	
S3	22	#4	14'-5"	
S17	22	#4	3'-8"	
		Wall		
h3	39	# 5	24'-6"	
U1	36	# 5	5'-6"	
V3	52	# 9	17'-9"	
h2	28	#11	7'-7"	
S21	16	# 5	7'-2"	
		Pile Cap		
W2	8	# 5	27'-6"	
t2	40	# 9	13'-0"	
n3	52	# 9	5'-9"	

Item	Unit	Total
Sheet Piling	Sq. Ft.	560
Reinforcement Bars	Lbs	14690
Class X Concrete	Cu. Yds.	111.0
Structure Excavation	Cu. Yds.	71.1
Concrete Piles	L.F.	400
Conc. Test Pile	Ea.	1

PIER NO. 2

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

PROPOSAL AND ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
FA45	462-X-B&R	COOK	223	79
F. A. P. & SEC. No.	CLASS	PROJECT		

SHEET NO. 34
50 SHEETS

TOP PLAN

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

ELEVATION

END VIEW

FOOTING PLAN

BAR S_2, S_3

BAR U_1

BAR P_4

BAR S_{17}, t_3

BAR n_4

TIES
A AND B DIMENSIONS

Bar	A	B
S_1	2'-8"	3'-4"
S_5	2'-8"	3'-0"
S_{18}	2'-8"	3'-10"
S_{16}	2'-4"	1'-3"
U_2	2'-6"	2'-6"

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P_1	8	#10	15'-3"	
P_2	6	#10	38'-6"	
P_3	5	#10	21'-6"	
P_4	10	# 5	9'-9"	
S_1	52	# 5	9'-4"	
S_2	16	# 4	16'-0"	
S_{16}	15	# 4	4'-10"	
h_2	4	# 5	38'-6"	
U_2	6	# 6	7'-6"	
h_{11}	3	# 4	14'-0"	
Columns				
V_3	28	#11	24'-6"	
S_3	44	# 4	14'-5"	
S_{17}	44	# 4	3'-8"	
Wall				
h_1	7	# 11	24'-6"	
h_3	8	# 5	24'-6"	
U_1	10	# 5	5'-6"	
S_{18}	16	# 5	10'-4"	
S_5	16	# 5	8'-8"	
Pile Cap				
W_2	8	# 5	27'-6"	
t_3	44	# 9	12'-0"	
n_4	28	# 11	10'-10"	

Item	Unit	Total
Reinforcement Bars	lbs	12540
Class X Concrete	Cu. Yds.	78.4
Structure Excavation	Cu. Yds.	66.4
Concrete Piles	L.F.	416
Conc. Test Piles	Ea.	1

Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Space bars in Pile Cap to Miss Piles.

Pile Data:
Type - Concrete Piles
Capacity - 45 T
Est. Length - 26'-0"
No. Reqd. = 16 + 1 Test Pile in a Permanent Location

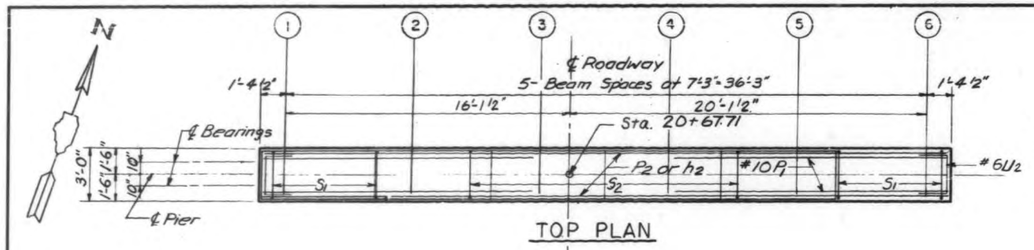
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

PIER NO. 3

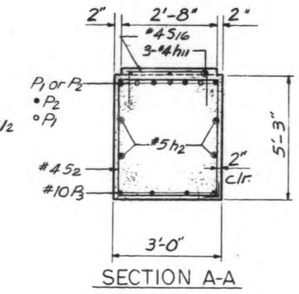
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 45	462-X-B&R	COOK	228	80
S. P. R. SECT. NO.	ILLINOIS	PROJECT		

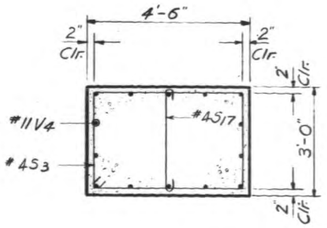
SHEET NO. 35
50 SHEETS



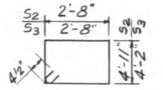
TOP PLAN



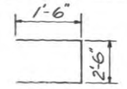
SECTION A-A



SECTION B-B



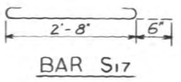
BAR S_2, S_3



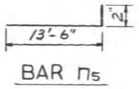
BAR U1



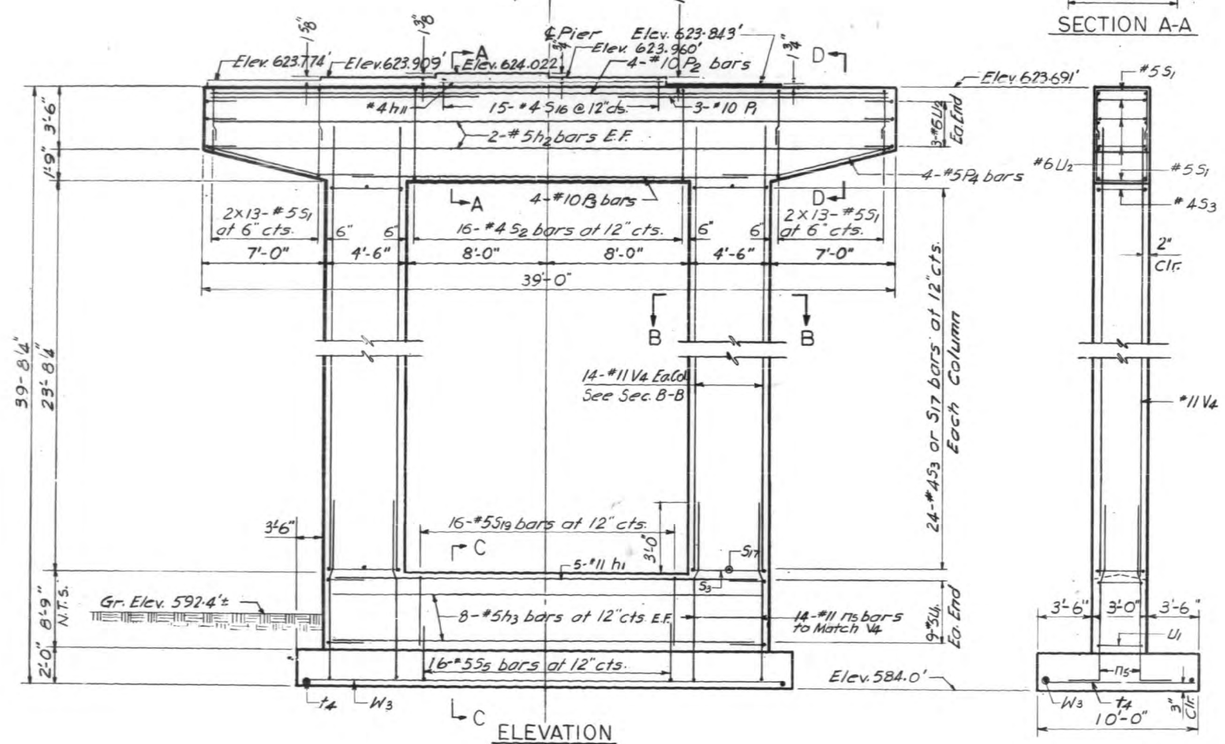
BAR P_4



BAR S17

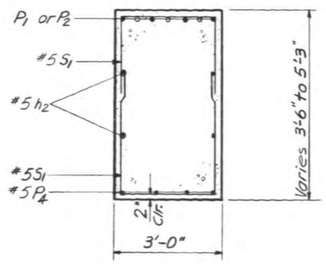


BAR n_5

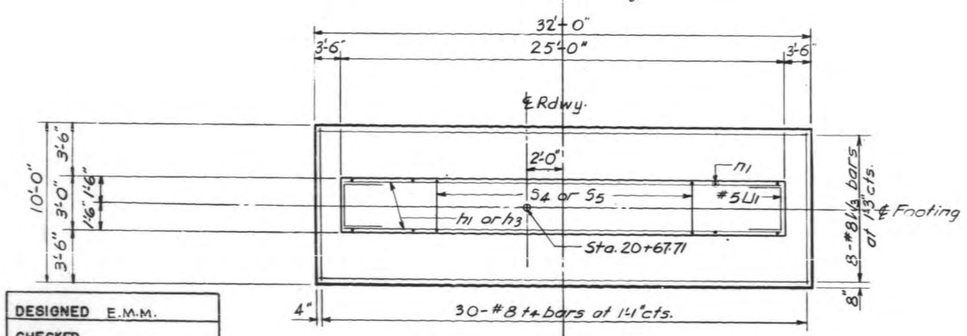


ELEVATION

END VIEW



SECTION D-D



FOOTING PLAN

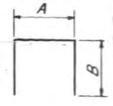
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

Note:

Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Maximum Soil Pressure = 4.0 K.S.F.
For location of Deck Drain Pipe , see sheet # 45

TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S19	2'-8"	8'-5"
S5	2'-8"	3'-3"
S16	2'-4"	1'-3"
U2	2'-6"	2'-6"



BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P1	6	#10	15'-3"	
P2	4	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
h11	3	# 4	14'-0"	
U2	6	# 6	7'-6"	
Columns				
V4	28	#11	26'-9"	
S3	48	# 4	14'-5"	
S17	48	# 4	3'-8"	
Wall				
S19	16	# 5	19'-6"	
S5	16	# 5	9'-2"	
U1	18	# 5	5'-6"	
h1	5	#11	24'-6"	
h3	16	# 5	24'-6"	
Footing				
n5	28	# 11	15'-6"	
W3	8	# 8	31'-6"	
t4	30	# 8	9'-6"	

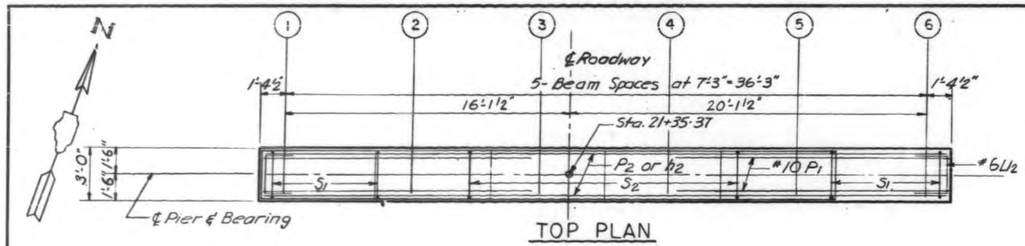
Item	Unit	Total
Reinforcement Bars	Lbs.	11910
Class X Concrete	Cu. Yds.	94.0
Structure Excavation	Cu. Yds.	156.8

PIER NO. 4

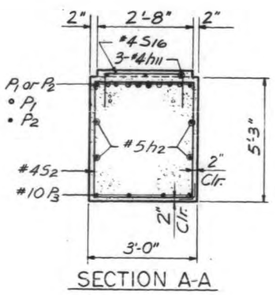
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAR	462-X-B&R	COOK	223	81
B. F. S. REG. NO.	ILLINOIS	PROJECT		

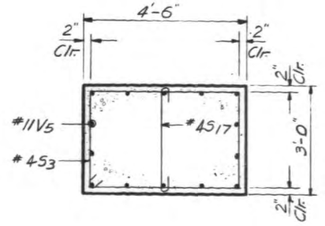
SHEET NO. 36
50 SHEETS



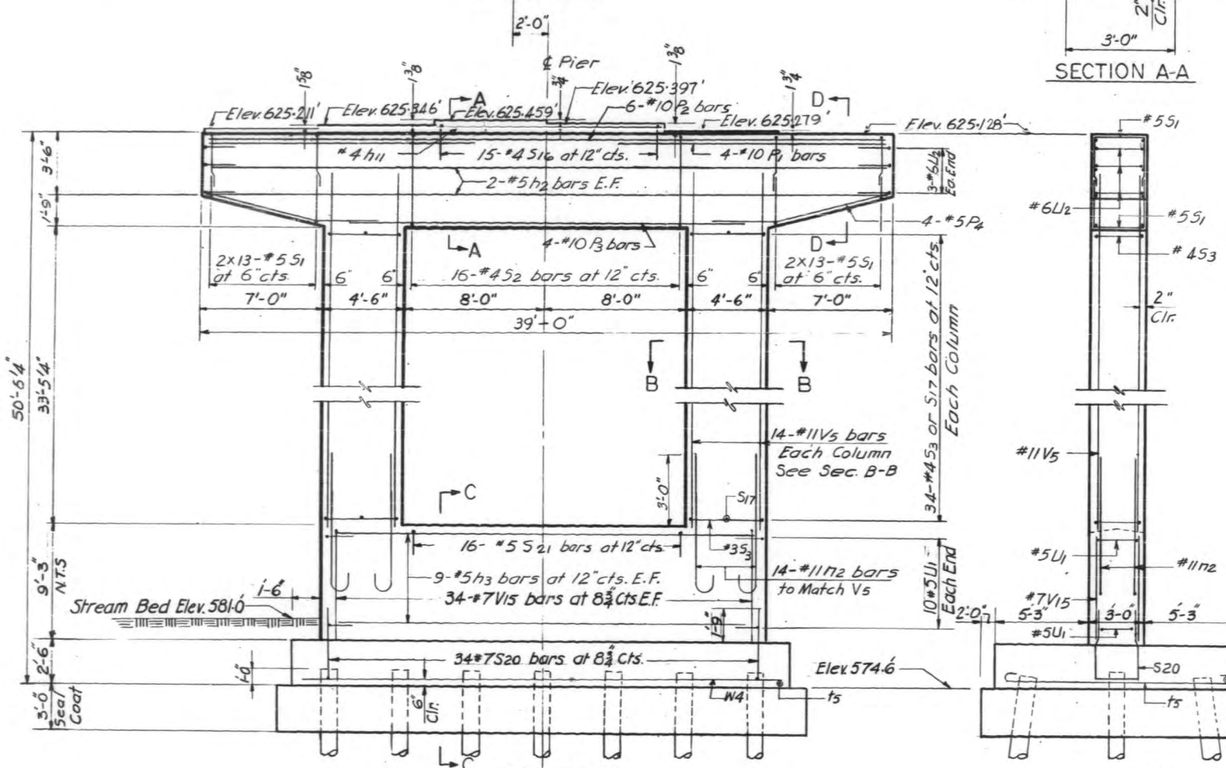
TOP PLAN



SECTION A-A

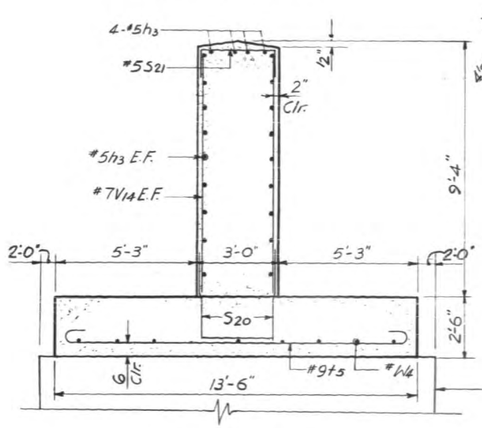


SECTION B-B

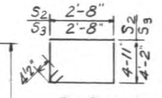


ELEVATION

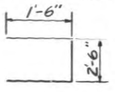
END VIEW



SECTION C-C



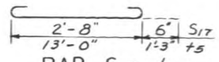
BAR S_2, S_3



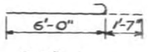
BAR U_1



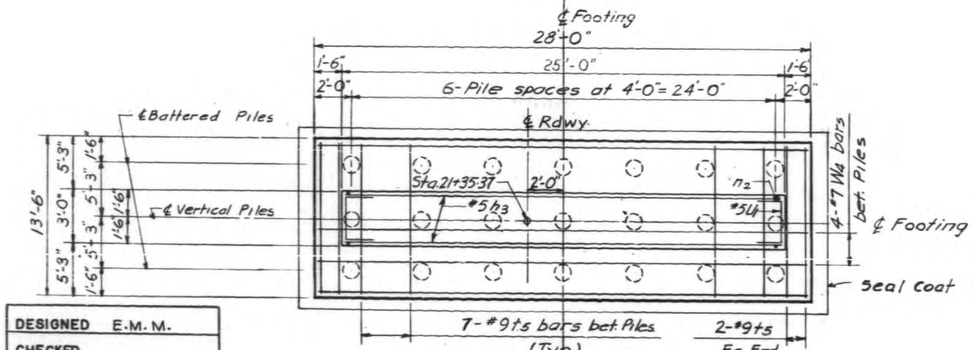
BAR P_4



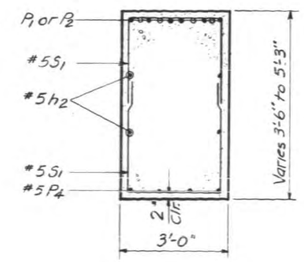
BAR S_{17}, t_5



BAR n_2



FOOTING PLAN



SECTION D-D

Note:

Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum bar lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Space bars in Pile Cap to miss Piles.

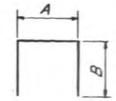
Pile Data:

Type - Concrete Piles.
Capacity - 45 T.
Est. Length - 31'-0"
No. Req'd - 20 + 1 Test Pile in a Permanent Location.

DESIGNED	E.M.M.
CHECKED	
DRAWN	R.PATEL
CHECKED	EMM

TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S16	2'-4"	1'-3"
S21	2'-8"	2'-3"
S20	2'-8"	3'-9"
U2	2'-6"	2'-6"



BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
h11	3	# 4	14'-0"	
U2	6	# 6	7'-6"	
		Columns		
V5	28	#11	36'-6"	
S3	68	# 4	14'-5"	
S17	68	# 4	3'-8"	
		Wall		
U1	20	# 5	5'-6"	
V15	68	# 7	9'-3"	
S21	16	# 5	7'-2"	
n2	28	#11	7'-7"	
h3	22	# 5	24'-6"	
		Pile Cap		
t5	46	# 9	13'-0"	
S20	34	# 7	10'-2"	
W2	10	# 7	27'-6"	

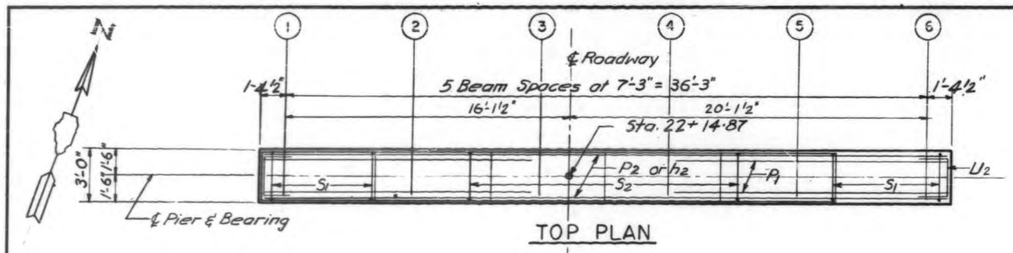
Item	Unit	Total
Seal Coat Conc.	Cu Yds	62.2
Cofferdam	Ea	1
Reinforcement Bars	Lbs.	16110.
Class X Concrete	Cu. Yds.	116.3
Cofferdam Excavation	Cu. Yds.	194.9
Concrete Piles	L.f.	620
Conc. Test Piles	Ea.	1

PIER NO. 5

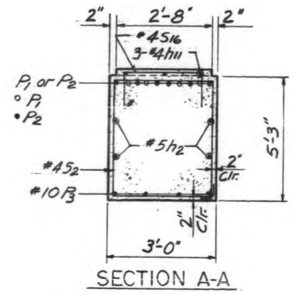
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAR	462-X-B&R	COOK	223	B2
S.P.S. ENGR. NO.	ILLINOIS	FISCAL		

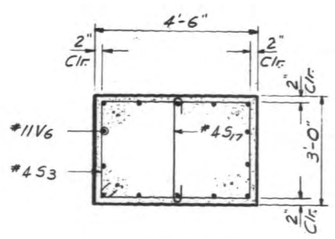
SHEET NO. 37
50 SHEETS



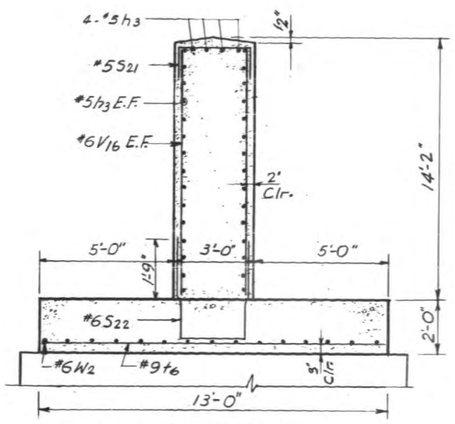
TOP PLAN



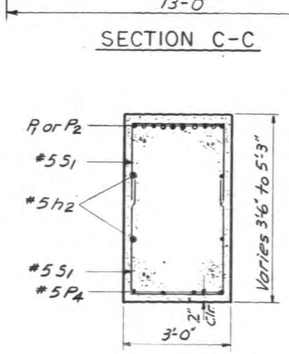
SECTION A-A



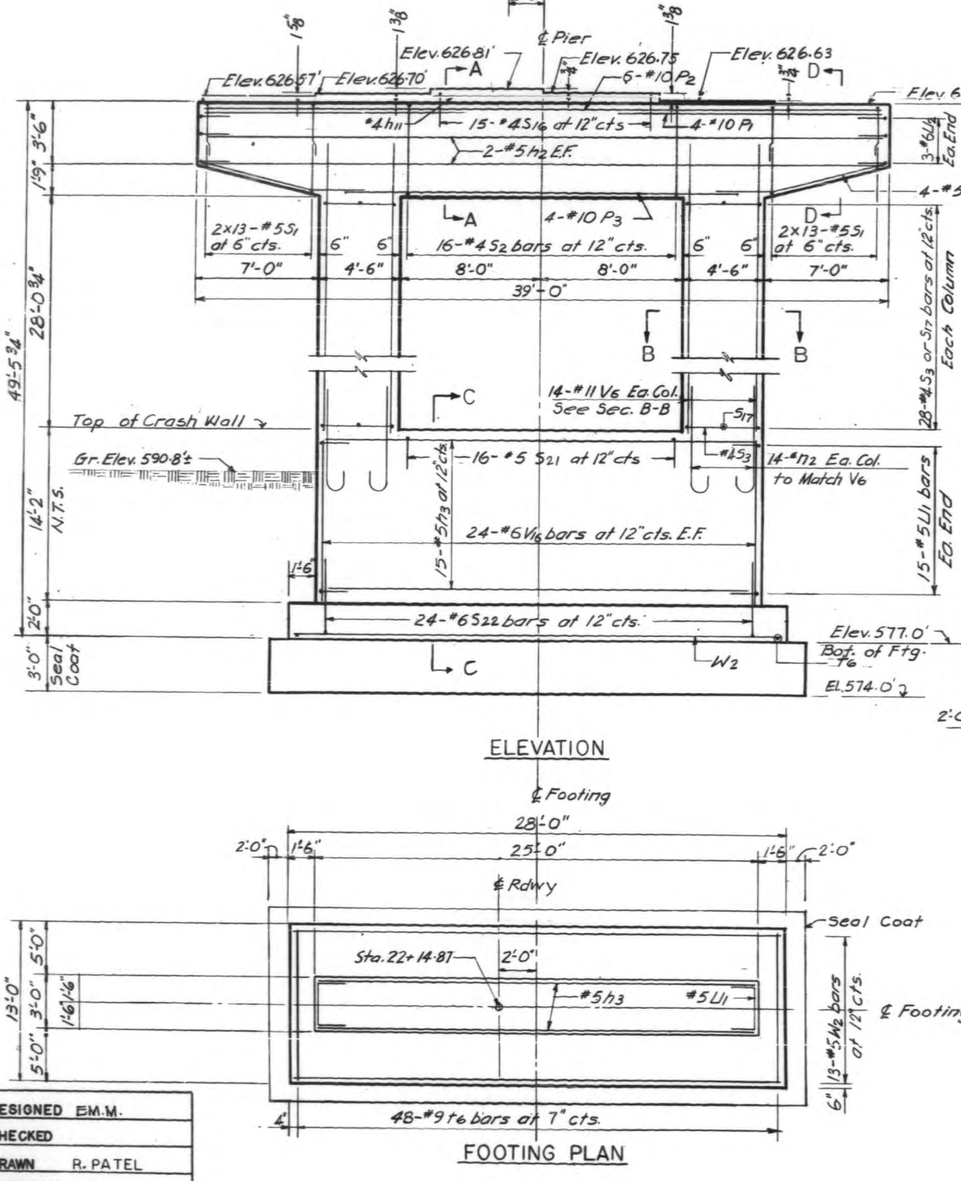
SECTION B-B



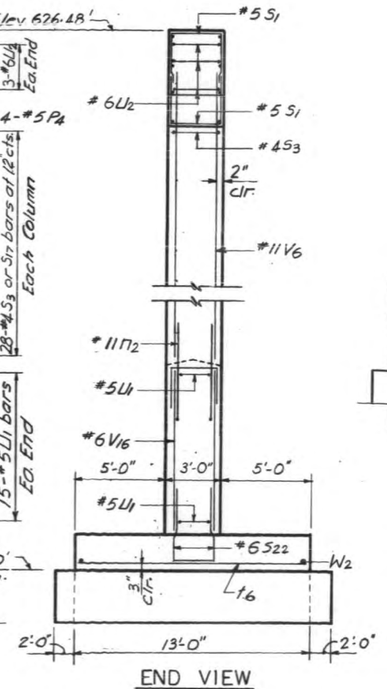
SECTION C-C



SECTION D-D



ELEVATION



END VIEW

FOOTING PLAN

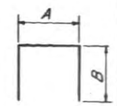
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

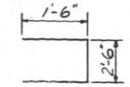
Note:

Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 5.92 K.S.F.
For location of Deck Drain Pipe , see Sheet # 45.

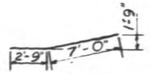
TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S 16	2'-4"	1'-3"
S 21	2'-8"	2'-3"
S 22	2'-8"	3'-6"
U2	2'-6"	2'-6"

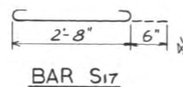




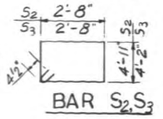
BAR U1



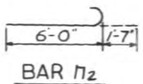
BAR P4



BAR S17



BAR S2, S3



BAR n2

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
h11	3	# 4	14'-0"	
U2	6	# 6	7'-6"	
		Columns		
V6	28	#11	31'-0"	
S3	56	# 4	14'-5"	
S17	56	# 4	3'-8"	
		Wall		
V16	48	# 6	14'-0"	
S21	16	# 5	7'-7"	
n2	28	#11	7'-7"	
h3	34	# 5	24'-6"	
U1	30	# 5	5'-6"	
		Footing		
W2	13	# 5	27'-6"	
t6	48	# 9	12'-6"	
S22	24	# 6	9'-8"	

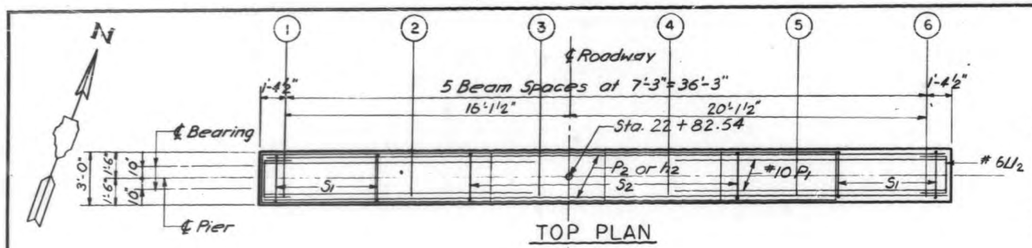
Item	Unit	Total
Reinforcement Bars	Lbs.	14310.
Class X Concrete	Cu. Yds.	116.5
Cofferdam Excavation	Cu. Yds.	3385
Seal Coat Concrete	Cu. Yds.	60.4
Cofferdam	Ea	1

PIER NO. 6

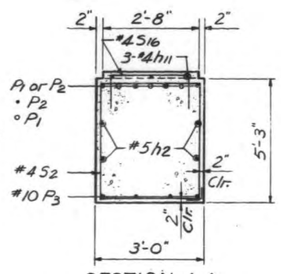
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

PERMANENT MAP ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X B&R	COOK	223	83
F.A.S. ROU. NO.	ILLINOIS	PROJECT		

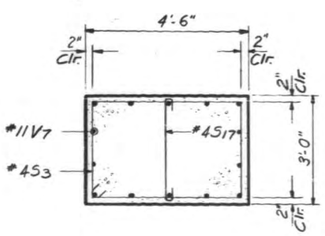
SHEET NO. 38
50 SHEETS



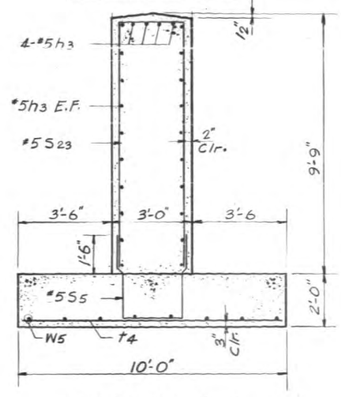
TOP PLAN



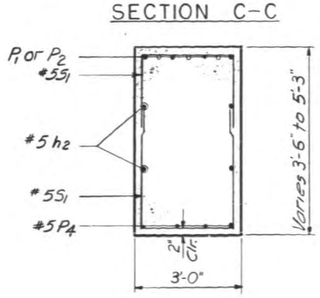
SECTION A-A



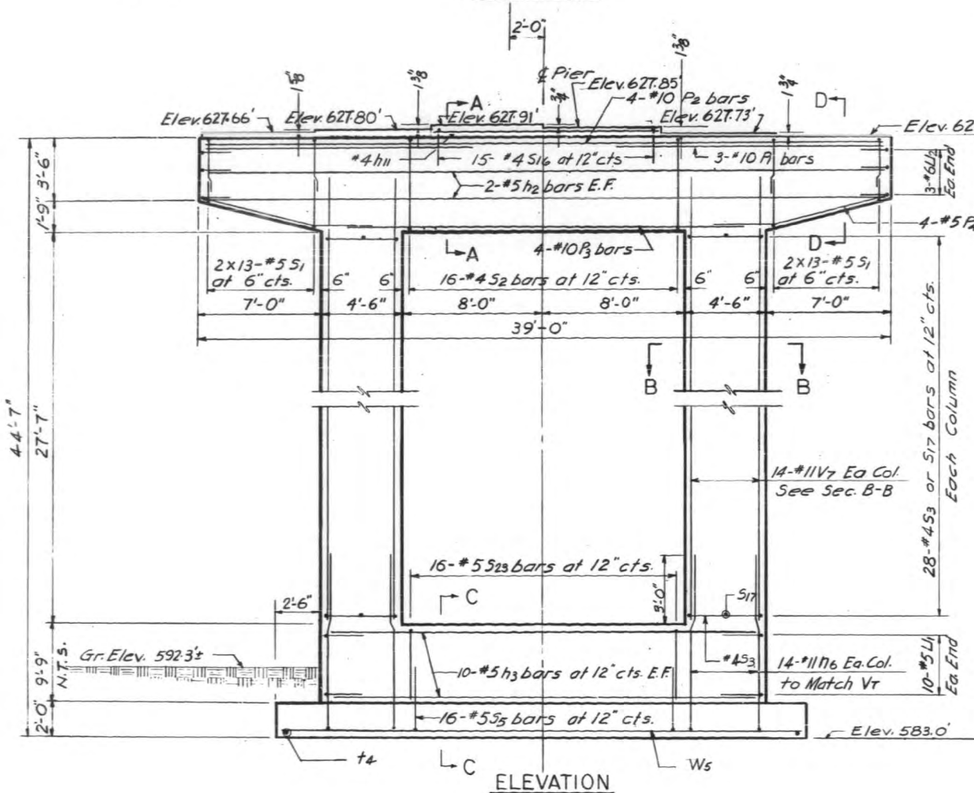
SECTION B-B



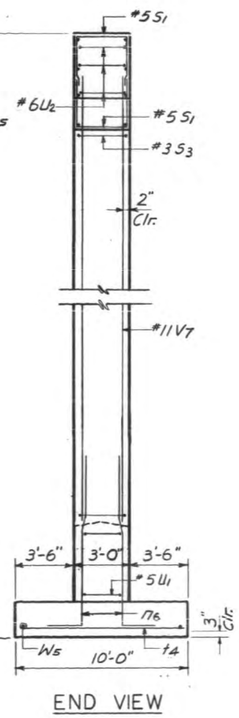
SECTION C-C



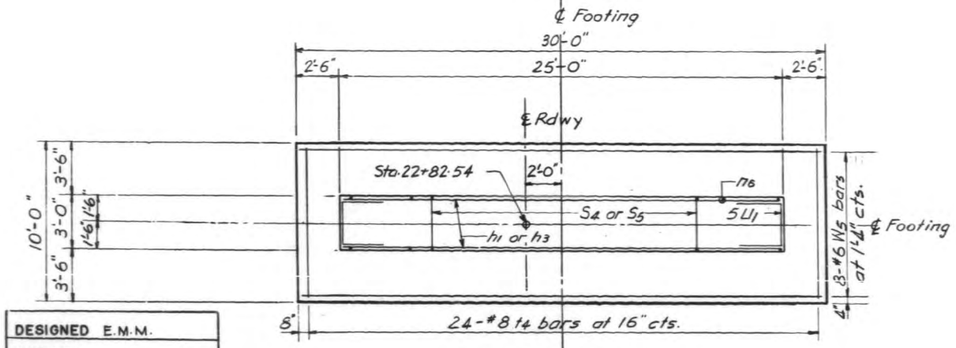
SECTION D-D



ELEVATION



END VIEW



FOOTING PLAN

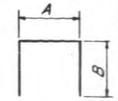
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

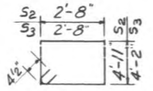
Note:

Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 4.0 K.S.F.
For location of Deck Drain Pipe, see sheet #45

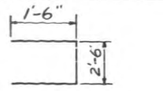
TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S23	2'-8"	9'-5"
S5	2'-8"	3'-3"
S16	2'-4"	1'-3"
U2	2'-6"	2'-6"





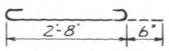
BAR S2, S3



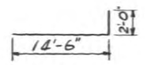
BAR U1



BAR P4



BAR S17



BAR n6

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P1	6	#10	15'-3"	
P2	4	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
h11	3	# 4	14'-0"	
U2	6	# 6	7'-6"	
Columns				
V7	28	#11	30'-7"	
S3	56	# 4	14'-5"	
S17	56	# 4	3'-8"	
Wall				
S23	16	# 5	21'-6"	
S5	16	# 5	9'-2"	
U1	20	# 5	5'-6"	
h3	24	# 5	24'-6"	
Footing				
n6	28	#11	16'-6"	
W5	8	# 6	29'-6"	
t4	24	# 8	9'-6"	

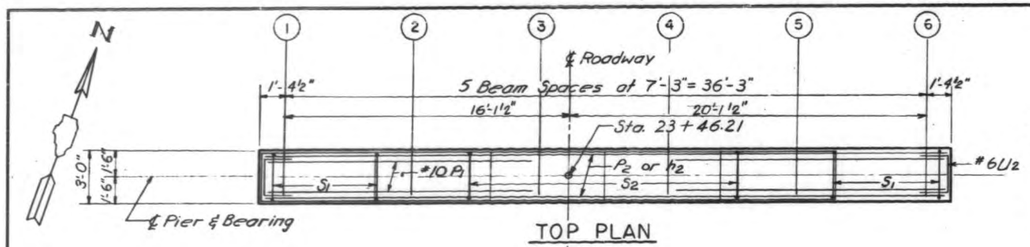
Item	Unit	Total
Reinforcement Bars	Lbs.	12370.
Class X Concrete	Cu. Yds.	99.0
Structure Excavation	Cu. Yds.	164.0

PIER NO. 7

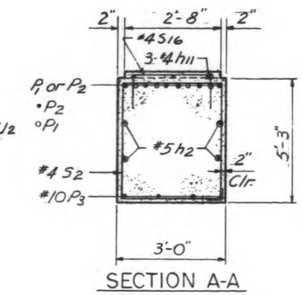
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X B & R	COOK	223	84
S.P. & SEC. NO.		ILLINOIS FED. PROJECT		

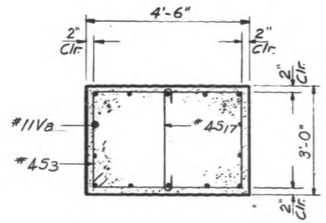
SHEET NO. 39
50 SHEETS



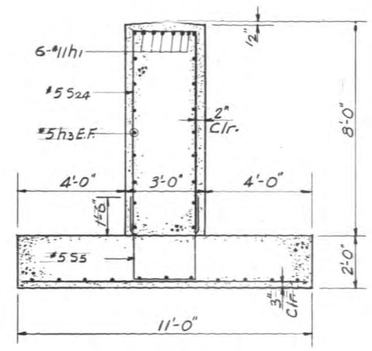
TOP PLAN



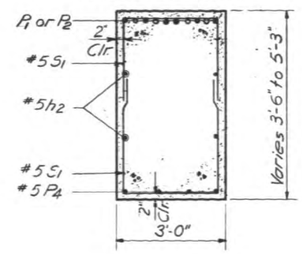
SECTION A-A



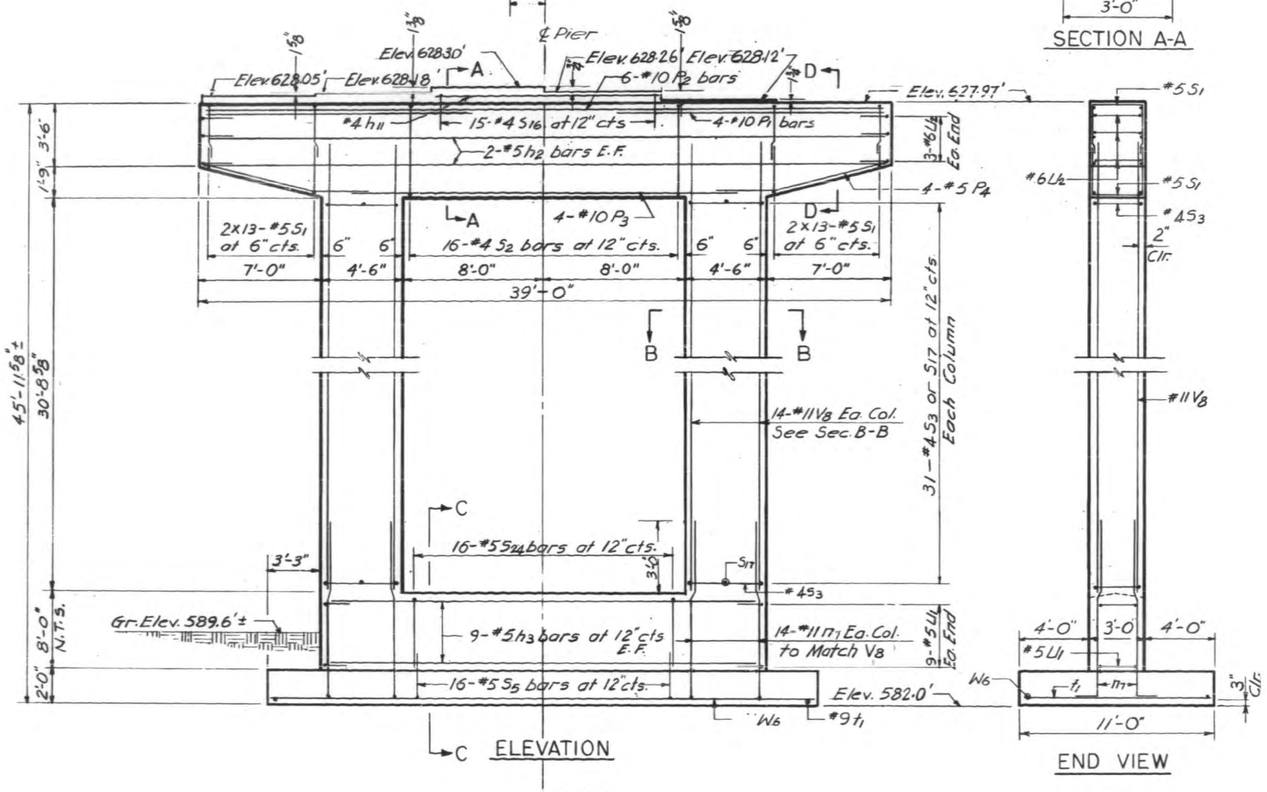
SECTION B-B

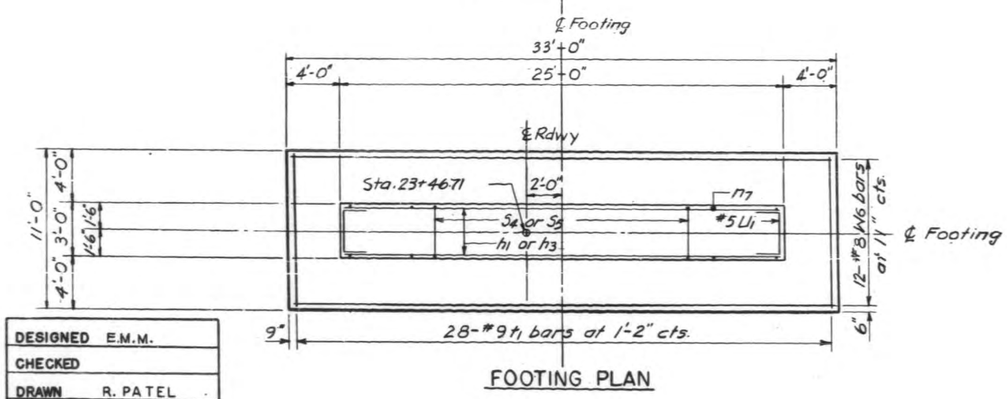


SECTION C-C



SECTION D-D





FOOTING PLAN

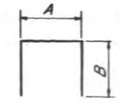
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

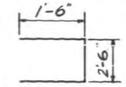
Note:

Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 4.0 K.S.F.
For location of Deck Drain Pipe, see sheet # 45

TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S24	2'-8"	7'-8"
S5	2'-8"	3'-3"
S16	2'-4"	1'-3"
U2	2'-6"	2'-6"

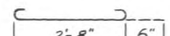




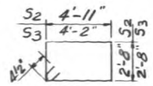
BAR U1



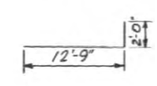
BAR P4



BAR S17



BAR S2, S3



BAR n7

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
U2	6	# 6	7'-6"	
h11	3	# 4	14'-0"	
		Columns		
V8	28	#11	33'-9"	
S3	62	#4	14'-5"	
S17	62	#4	3'-8"	
		Wall		
S24	16	# 5	18'-0"	
S5	16	# 5	9'-2"	
h1	6	#11	24'-6"	
h3	18	# 5	27'-6"	
U1	18	# 5	5'-6"	
		Footing		
n7	28	#11	14'-9"	
W6	12	# 8	32'-6"	
t1	28	# 9	10'-6"	

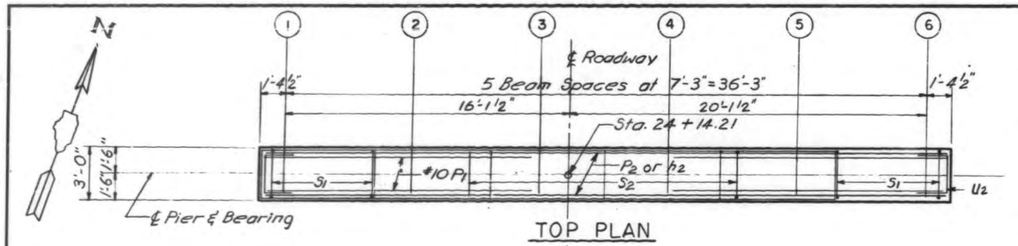
Item	Unit	Total
Reinforcement Bars	Lbs.	14750.
Class X Concrete	Cu. Yds.	102.0
Structure Excavation	Cu. Yds.	156.2

PIER NO. 8

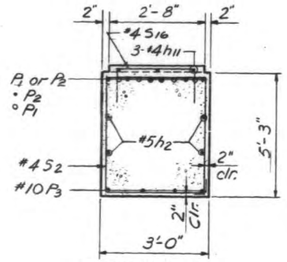
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	88
S.P.S. PROJ. NO.	SIGNING	PROJECT		

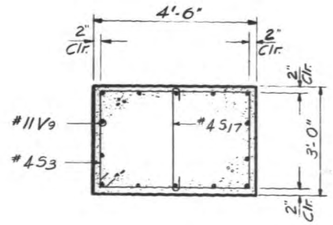
SHEET NO. 40
50 SHEETS



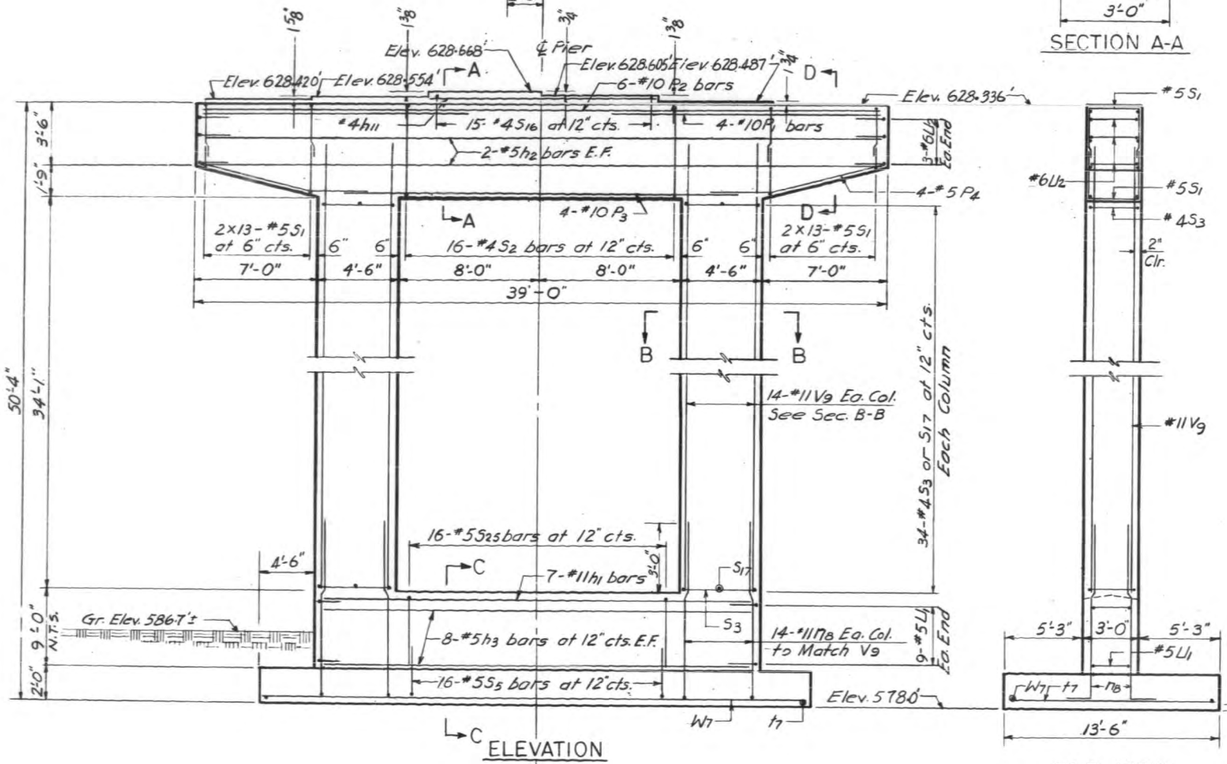
TOP PLAN



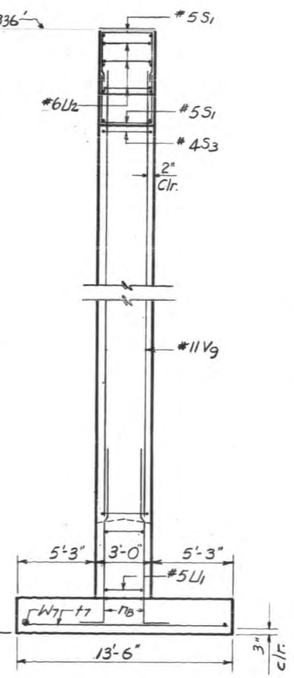
SECTION A-A



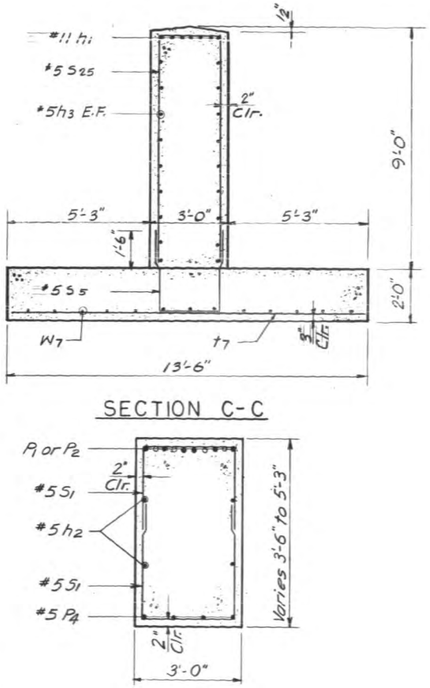
SECTION B-B



ELEVATION

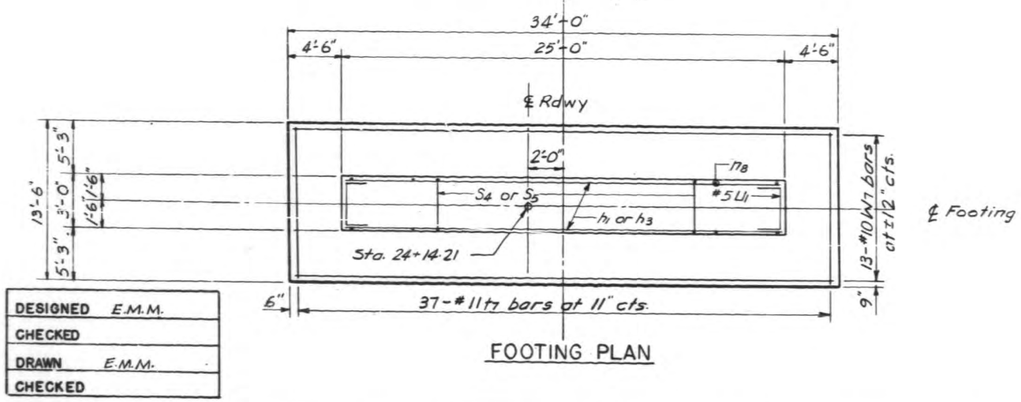


END VIEW



SECTION C-C

SECTION D-D



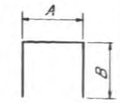
FOOTING PLAN

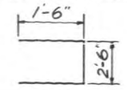
DESIGNED	E.M.M.
CHECKED	
DRAWN	E.M.M.
CHECKED	

Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 4.2 K.S.F.
For location Deck Drain Pipe, see sheet # 45

TIES
A AND B DIMENSIONS

Bar	A	B
S1	2'-8"	3'-4"
S25	2'-8"	8'-8"
S5	2'-8"	3'-3"
S16	2'-4"	1'-3"
U2	2'-6"	2'-6"

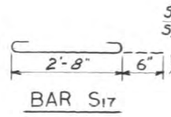




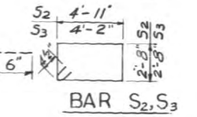
BAR U1



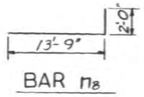
BAR P4



BAR S17



BAR S2, S3



BAR h8

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P1	8	#10	15'-3"	
P2	6	#10	38'-6"	
P3	4	#10	21'-6"	
P4	8	# 5	9'-9"	
S1	52	# 5	9'-4"	
S2	16	# 4	16'-0"	
S16	15	# 4	4'-10"	
h2	4	# 5	38'-6"	
U2	6	# 6	7'-6"	
h11	3	# 4	14'-0"	
		Columns		
V9	28	#11	37'-2"	
S3	68	# 4	14'-5"	
S17	68	# 4	3'-8"	
		Wall		
S25	16	# 5	20'-0"	
S5	16	# 5	9'-2"	
h1	7	#11	24'-6"	
h3	16	# 5	2'-5"-6"	
U1	18	# 5	5'-6"	
		Footing		
h8	28	#11	15'-9"	
W7	13	#10	33'-6"	
t7	37	#11	13'-0"	

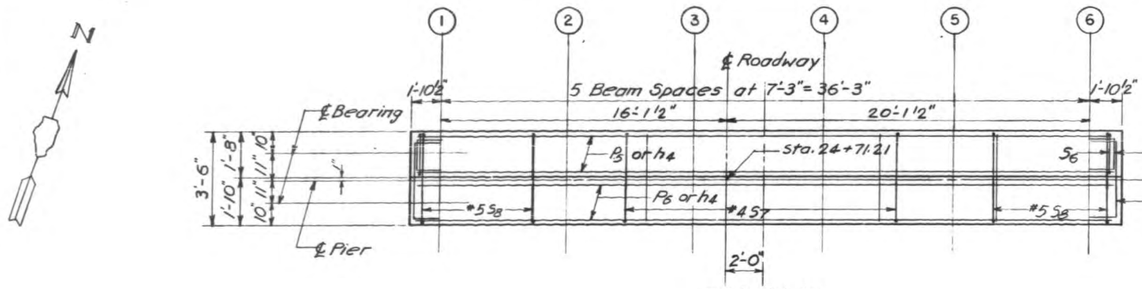
Item	Unit	Total
Reinforcement Bars	Lbs.	17990.
Class X Concrete	Cu. Yds.	115.3
Structure Excavation	Cu. Yds.	214.3

PIER NO. 9

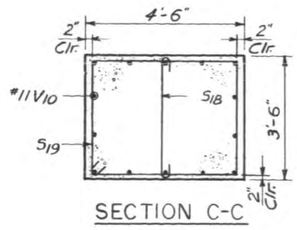
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

F.A.P. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	86
S. P. R. REG. NO.	ILLINOIS	PROJECT		

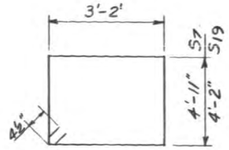
SHEET NO. 41
50 SHEETS



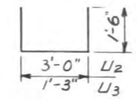
TOP PLAN



SECTION C-C



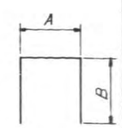
BAR S_7, S_{19}

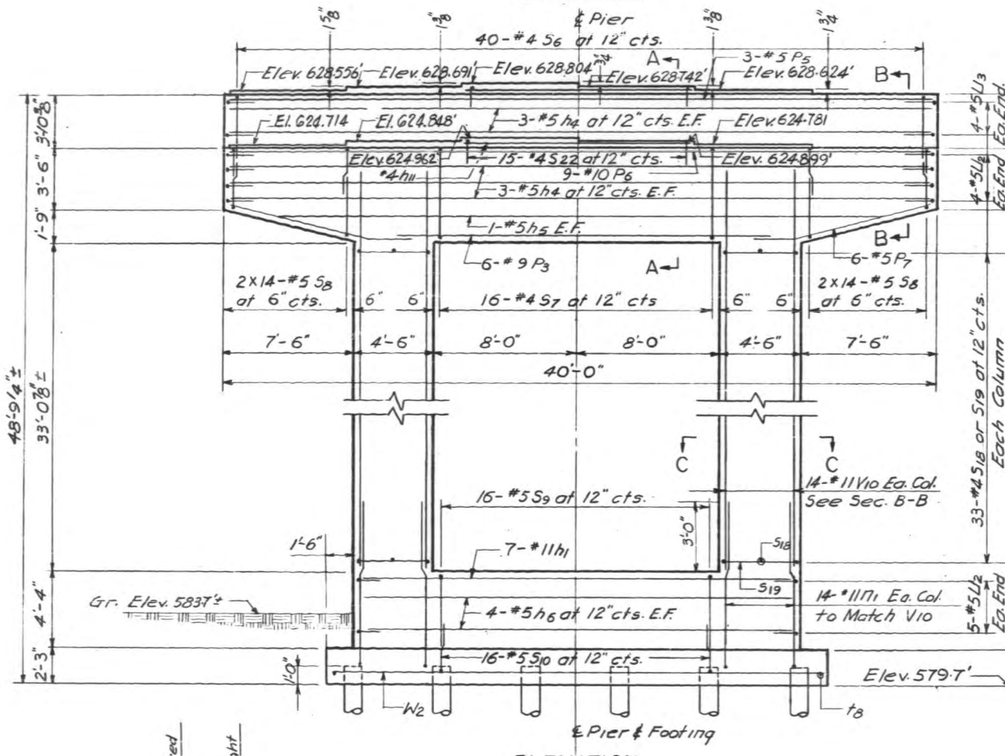


BAR U_2, U_3

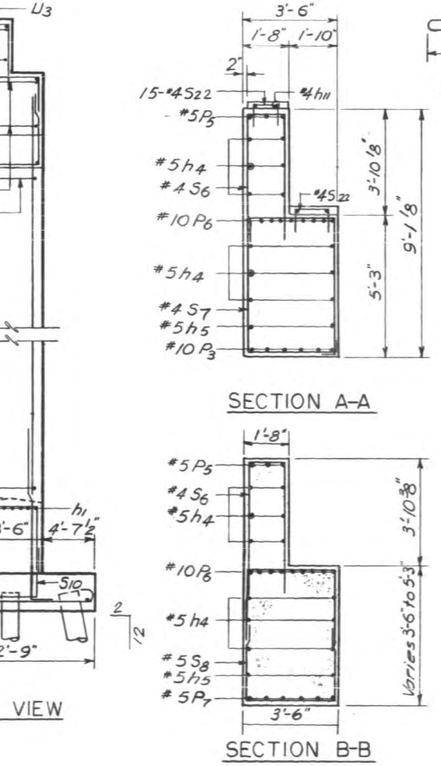
TIES
A AND B DIMENSIONS

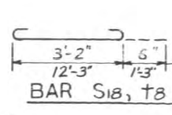
Bar	A	B
S6	1'-4"	4'-10"
S8	3'-2"	3'-4"
S9	3'-2"	4'-2"
S10	3'-2"	3'-0"
S22	1'-2"	1'-3"





ELEVATION

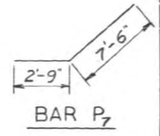




BAR S_{18}, t_8



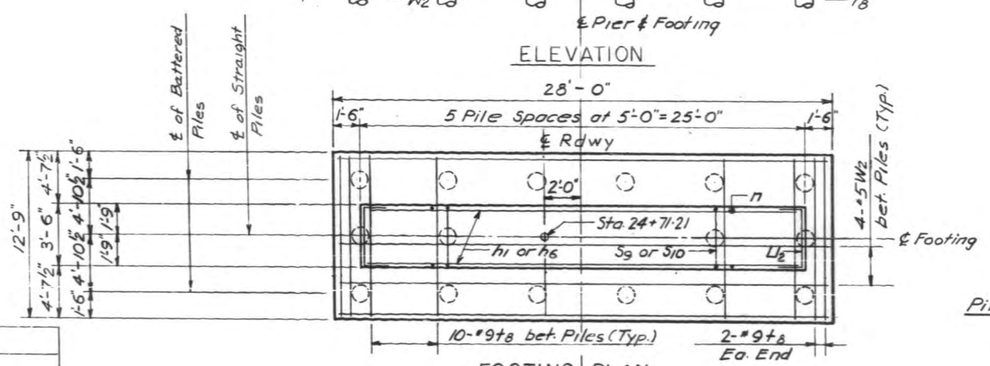
BAR n_1



BAR P_7

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P3	6	#9	21'-6"	
P5	3	#5	39'-6"	
P6	9	#10	39'-6"	
P7	12	#5	10'-3"	
S8	56	#5	9'-10"	
S6	40	#4	11'-0"	
S7	16	#4	16'-11"	
S22	30	#4	3'-8"	
h4	12	#5	39'-6"	
h5	2	#5	36'-0"	
U2	8	#5	6'-0"	
U3	8	#5	4'-3"	
h11	4	#4	14'-0"	
Columns				
V10	28	#11	36'-0"	
S18	66	#4	4'-2"	
S19	66	#4	15'-5"	
Wall				
h1	7	#11	24'-6"	
h6	8	#5	24'-6"	
U2	10	#5	6'-0"	
S9	16	#5	11'-6"	
S10	16	#5	9'-2"	
Pile Cap				
W2	9	#5	27'-6"	
t8	54	#9	14'-9"	
n1	28	#11	11'-1"	



FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

Item	Unit	Total
Reinforcement Bars	Lbs.	15670.
Class X Concrete	Cu.Yds.	118.4
Structure Excavation	Cu.Yds.	79.4
Concrete Piles	L.F.	435
Conc. Test Pile	Ea.	1

Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.

Pile Data:
Type - Concrete Pile
Capacity - 45 Ton
Est. Length - 22
No. Req'd. - 15+1 Test Pile in a Permanent Position.

PIER NO. 10

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	87
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 42
50 SHEETS

N

TOP PLAN

SECTION C-C

BAR S13

BAR S20, S21

BAR U4

BAR d1

TIES
A AND B DIMENSIONS

Bar	A	B
S14	4'-0"	4'-3"
S11	6'-8"	1'-6"
S12	6'-8"	5'-3"
S23	4'-10"	1'-3"

BAR h19

BAR P10

BAR h10

ELEVATION

SECTION A-A

SECTION B-B

END VIEW

DETAIL A

FOOTING PLAN

Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum bar lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 6.8 K.S.F.
For location of pier fender bolts, see Sheet # 46.
Seal Coat Concrete is designed for water level 579.5'

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
P8	23	#11	40'-6"	
P9	6	#8	21'-6"	
P10	12	#5	10'-9"	
h11	5	#4	14'-0"	
h10	8	#5	40'-6"	
h7	2	#5	35'-0"	
U4	10	#6	10'-0"	
S13	54	#5	22'-4"	
S14	128	#5	12'-6"	
S23	15	#4	7'-4"	
Columns				
V11	80	#11	30'-0"	
S20	108	#5	15'-9"	
S21	54	#5	14'-11"	
Wall				
h8	7	#9	26'-0"	
h9	34	#5	26'-0"	
d1	36	#5	12'-0"	
S11	15	#9	9'-8"	
S12	26	#9	17'-2"	
V17	62	#9	17'-8"	
n10	10	#9	6'-10"	
Footing				
W8	34	#11	40'-6"	
t9	62	#11	16'-6"	
n9	80	#11	7'-9"	

Item	Unit	Total
Reinforcement Bars	Lbs.	43120.
Class X Concrete	Cu. Yds.	318.8
Seal Coat Concrete	Cu. Yds.	175.0
Cofferdam Excavation	Cu. Yds.	839.3
Stone Riprap	Sq. Yds.	52.0

DESIGNED	E.M.M.
CHECKED	E.D.
DRAWN	R. PATEL
CHECKED	E.M.M.

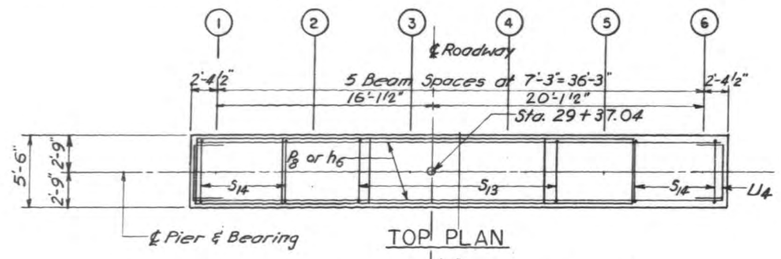
PIER NO. 11

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

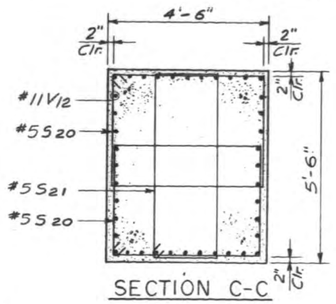
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B&R	COOK	223	88
U. S. ROUTE No.	ILLINOIS	PROJECT		

SHEET NO. 43
50 SHEETS

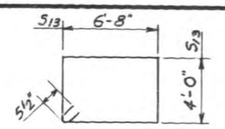




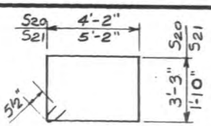
TOP PLAN



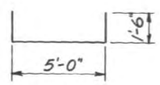
SECTION C-C



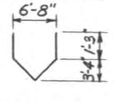
BAR S13



BAR S20, S21



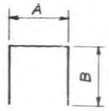
BAR U4.

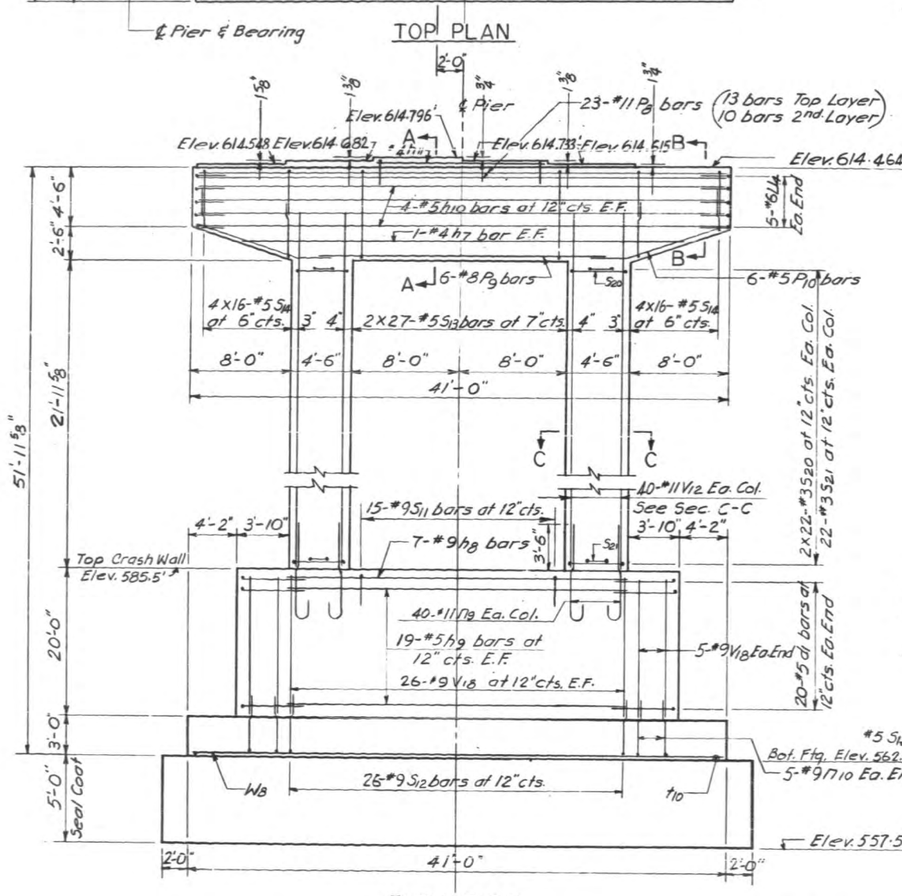


BAR d1

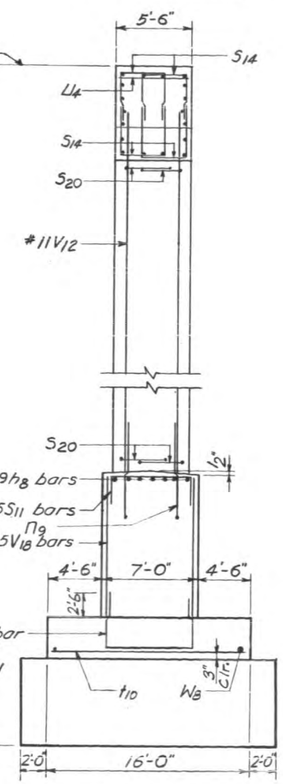
TIES
A AND B DIMENSIONS

Bar	A	B
S14	4'-0"	4'-3"
S11	6'-8"	1'-6"
S12	6'-8"	5'-3"
S 23	4'-10"	1'-3"

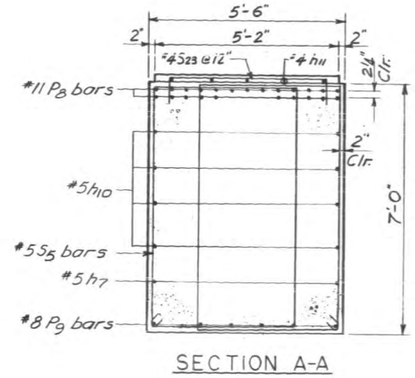




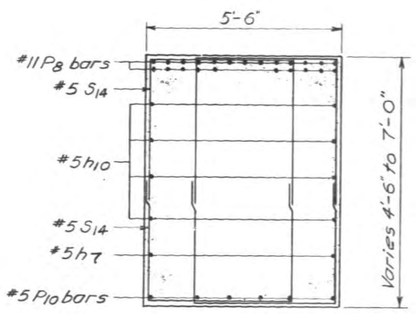
ELEVATION



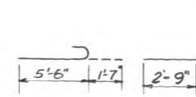
END VIEW



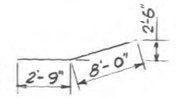
SECTION A-A



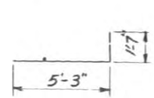
SECTION B-B



BAR n9



BAR P10

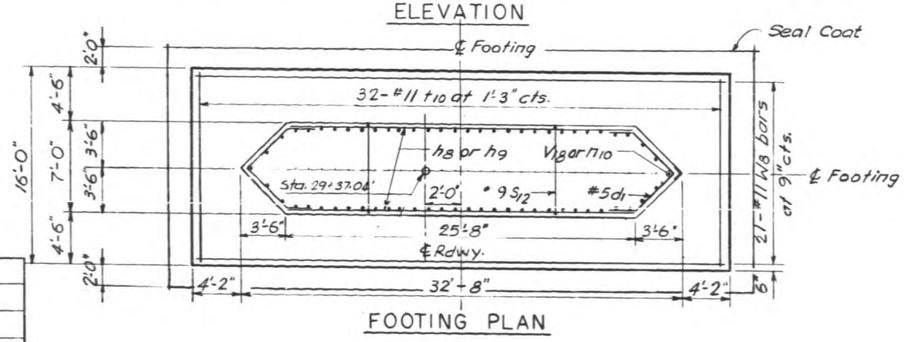


BAR n10

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
P8	23	#11	40-6"	
P9	6	# 8	21-6"	
P10	12	# 5	10-9"	
h11	5	# 4	14'-0"	
h10	8	# 5	40-6"	
h7	2	# 5	35'-0"	
U4	10	# 6	8'-0"	
S13	54	# 5	22'-4"	
S14	128	# 5	12'-6"	
S23	15	# 4	7'-4"	
		Columns		
V12	80	#11	25'-0"	
S20	88	# 5	15'-9"	
S21	44	# 5	14'-11"	
		Wall		
h8	7	# 9	26'-0"	
h9	38	# 5	26'-0"	
d1	40	# 5	12'-0"	
S11	15	# 5	9'-8"	
S12	26	# 5	17'-2"	
V18	62	# 9	15'-9"	
n9	80	# 11	6-10"	
		Footing		
W8	21	#11	40-6"	
t10	32	#11	15'-6"	
n10	10	# 9	6'-10"	

Item	Unit	Total
Reinforcement Bars	Lbs.	38780.
Class X Concrete	Cu. Yds.	320.6
Seal Coat Concrete	Cu. Yds.	166.7
Cofferdam Excavation	Cu. Yds.	892.9



FOOTING PLAN

Note:
Space Reinforcement in Pier Cap to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges Shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier Cap.
Max. Soil Pressure = 6.8 K.S.F.
For Location of Pier Fender Bolts, See Sheet # 46.
Seal Coat Concrete is designed for Water elevation 579.5'
For Pier Protection L, See 'Detail A' Sheet # 42.

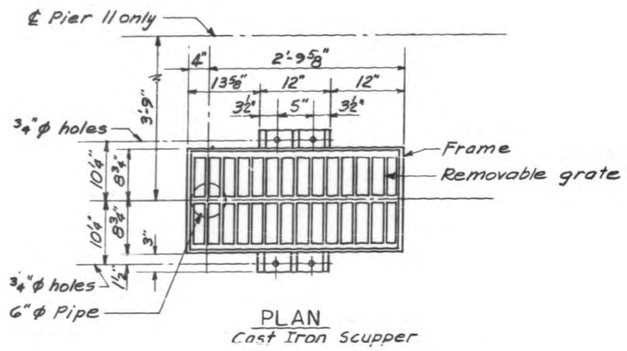
DESIGNED	E.M.M.
CHECKED	
DRAWN	R. PATEL
CHECKED	E.M.M.

PIER NO 12

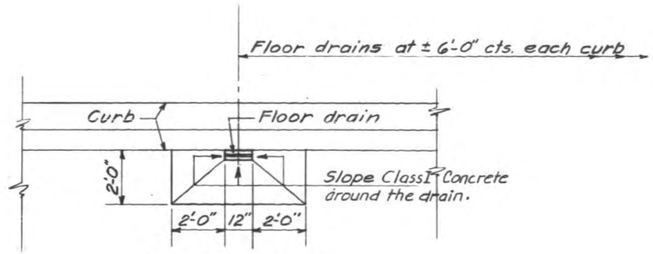
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 45	462-X-B&R	COOK	223	89
S. P. R. SEC. NO.	ILLINOIS | PROJECT			

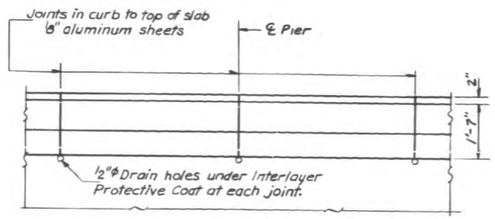
SHEET NO. 44
50 SHEETS



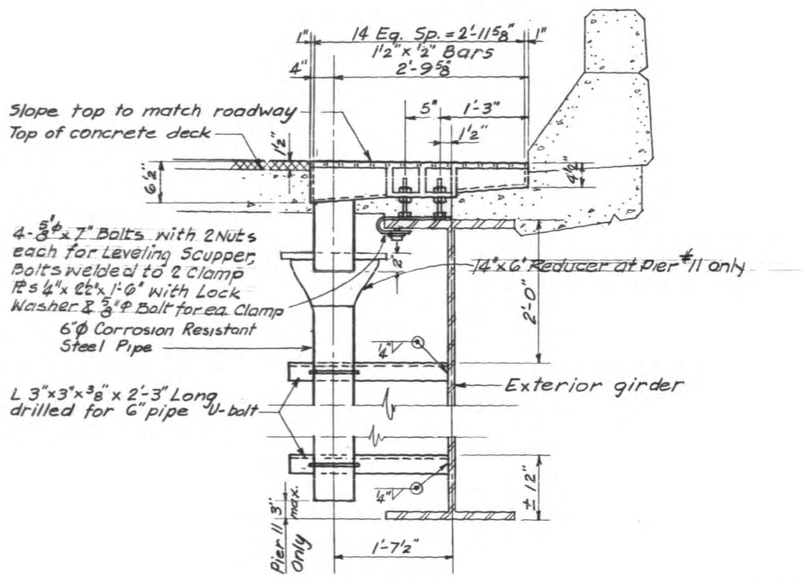
PLAN
Cast Iron Scupper



FLOOR DRAIN
TYPICAL PLAN

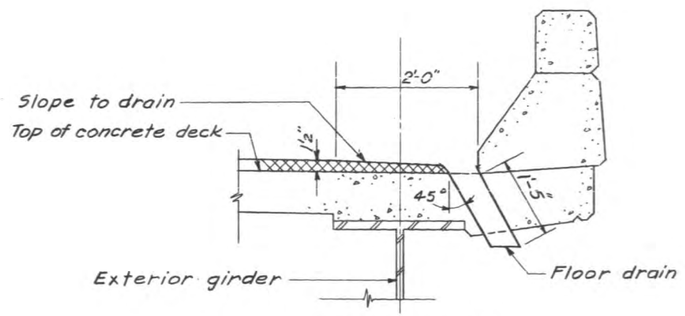


PLAN

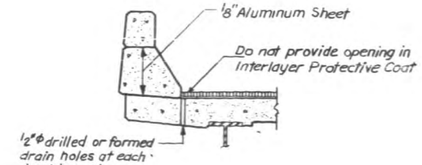


TYPICAL DETAIL
SCUPPER AND DOWNSPOUT

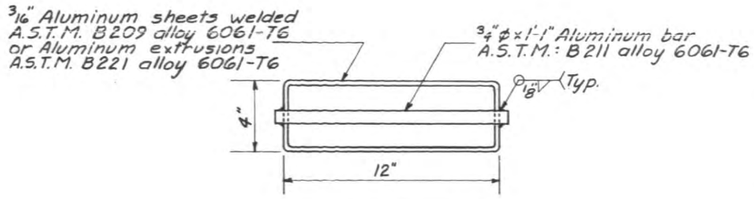
Note
See Superstructure Drawings sheets #12 to #16 for location of Scuppers and Floor Drains



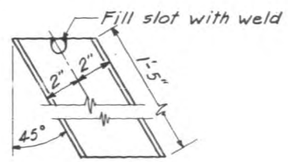
FLOOR DRAIN
TYPICAL SECTION
BETWEEN PIERS 11 & 12



SECTION AT CURB JOINTS



TOP VIEW



END VIEW

FLOOR DRAIN

NOTE.

Aluminum Floor Drains shall be fabricated and also installed in accordance with the plans; payment shall be incidental to the price bid for Class X Concrete. Scuppers are to be cast iron as shown in the plan.

Six inch diameter pipe downspouts, including specials and accessories shall be corrosion resistant steel. Joints shall be made by welding.

The furnishing and installing of scuppers and deck drainage will not be paid for separately but is included in the pay item "Furnishing and Erecting Structural Steel".

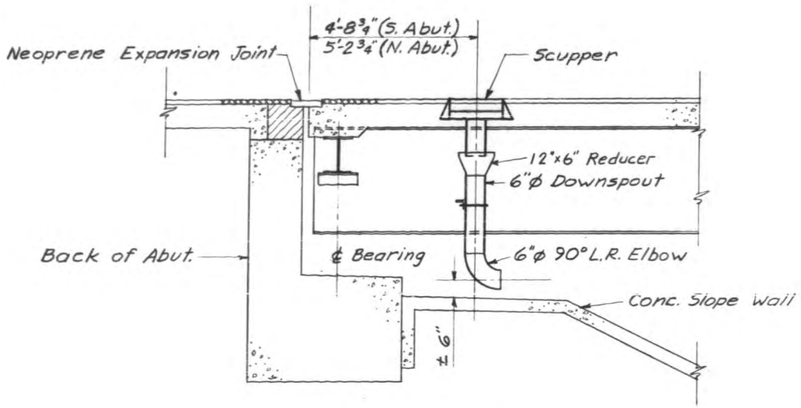
Weight of 6"ϕ pipe + connection etc. = 13,267 lbs.
Weight of scuppers = 6,750 lbs.

DESIGNED	W.C.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

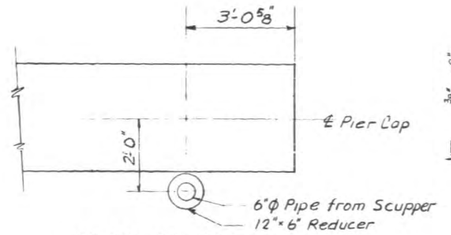
DECK DRAINAGE & DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
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R. F. & REG. NO.		ILLINOIS PROJECT		

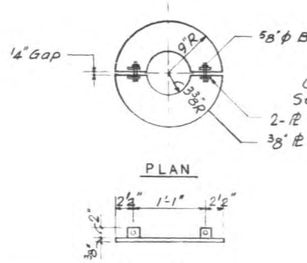
SHEET NO. 45
50 SHEETS



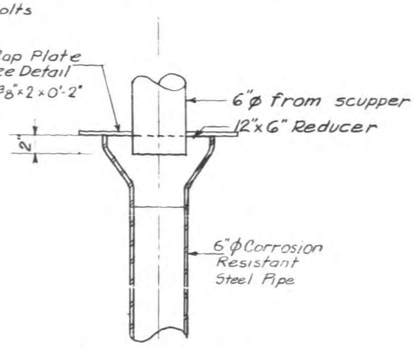
DECK DRAINAGE
AT ABUTMENTS



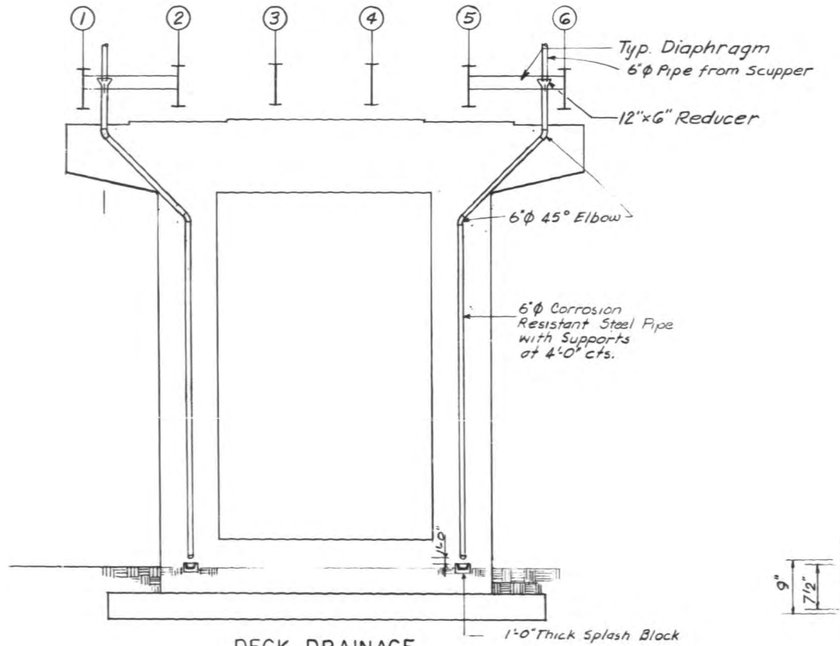
PLAN OF CAP



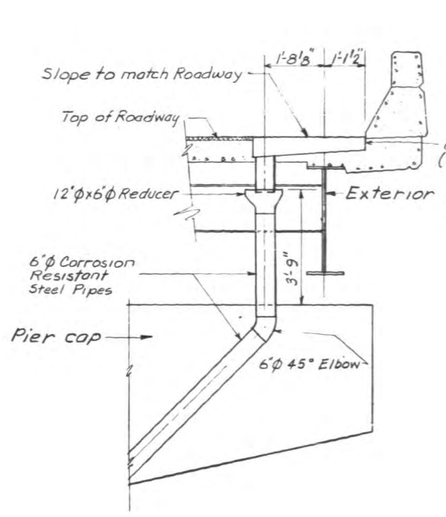
DETAIL CAP PLATE



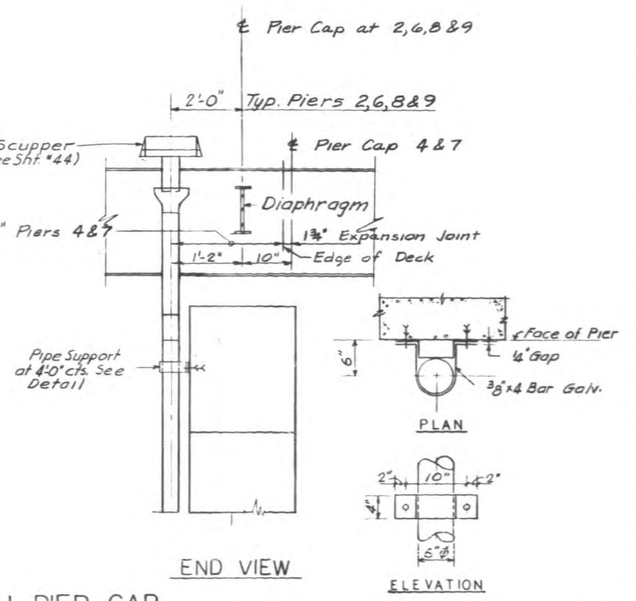
INLET DETAIL



DECK DRAINAGE
TYPICAL ELEVATION
PIERS NO. 2,4,6,7,8 & 9

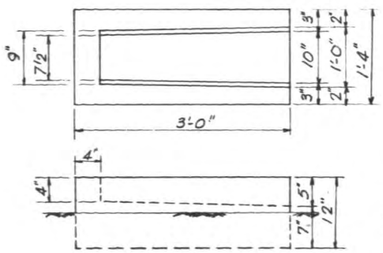


SIDE VIEW

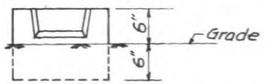


DRAINAGE THRU PIER CAP
PIERS NO. 2,4,6,7,8,9

DETAIL PIPE SUPPORT



DETAIL SPLASH BLOCK



Note: Cost shall be incidental to Class "X" Concrete

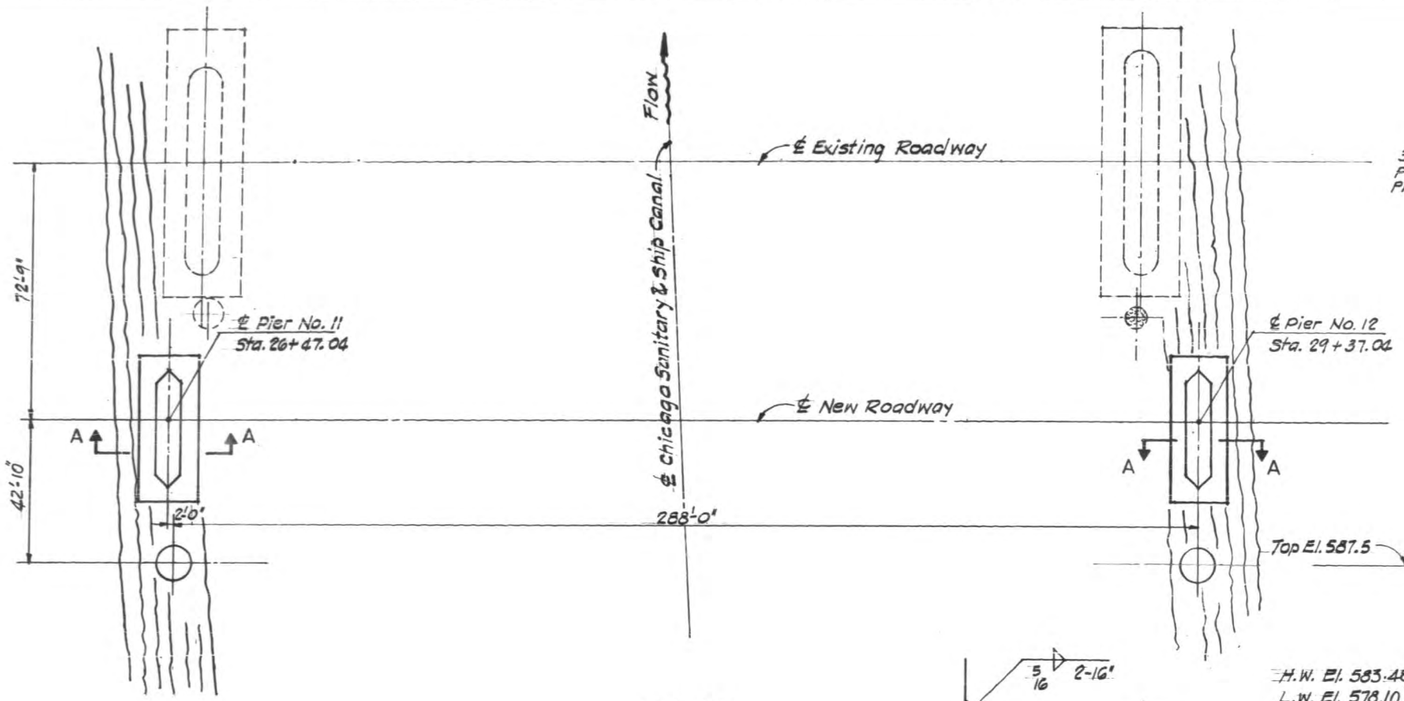
DESIGNED	W.C.K.
CHECKED	E.D.
DRAWN	W. C. K.
CHEKED	E.D.

Note:
See Superstructure Drawings sheets #12 to #16 for location of Scuppers and Floor Drains

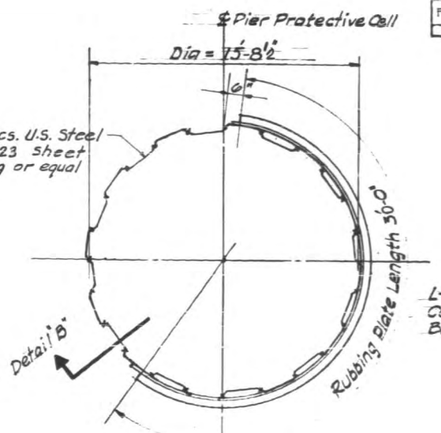
DECK DRAINAGE & DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X B&R	COOK	223	91
S. P. R. REG. NO.	ILLINOIS	PROJECT		

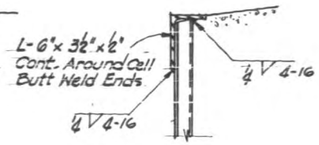
SHEET NO. 46
50 SHEETS



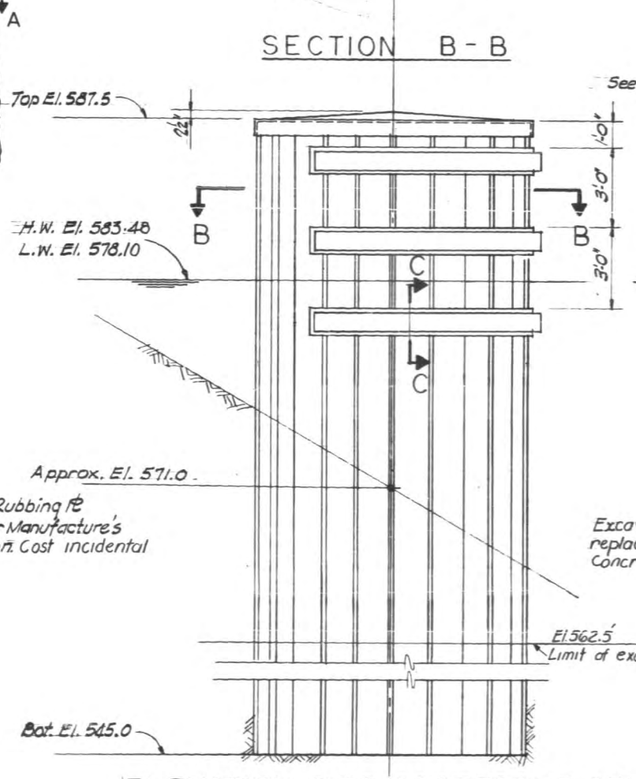
PLAN



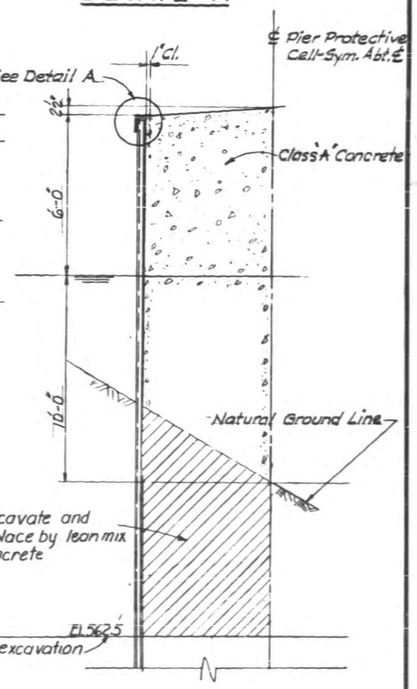
SECTION B-B



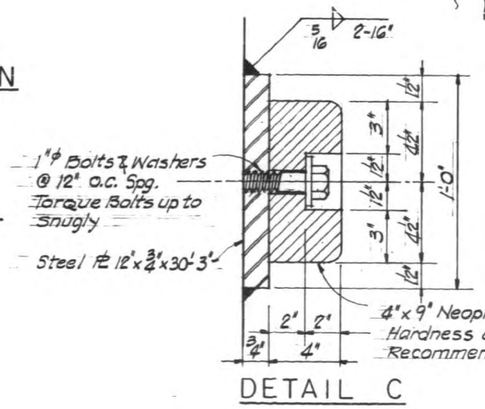
DETAIL "A"



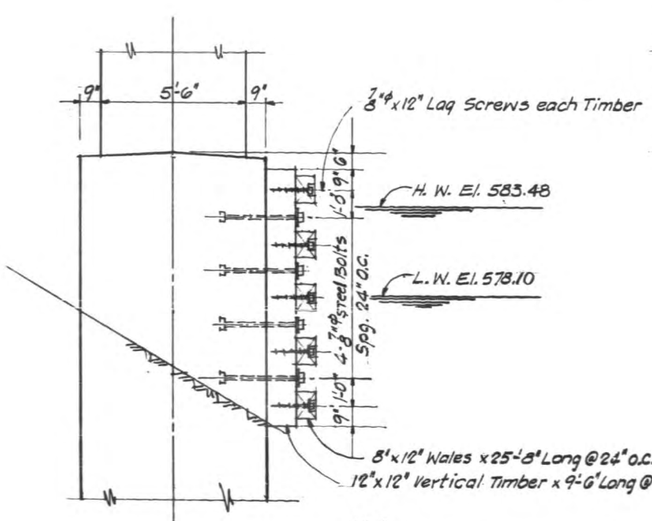
ELEVATION PIER PROTECTIVE CELL



DETAIL B



DETAIL C



SECTION A-A

Note:
All Timber shall be Creosoted Yellow Pine.
All Bolts shall be corrosion resistant steel with washer under Heads & Nuts.
Creosoted Timber Fenders to be included in the Contract Unit Price for Pier Protective cell.
For Pier Details see Sheets 42 & 43

NOTE
Sheet piling for pier protective cells shall be driven to refusal.
Cells are to be filled with a lean mix concrete to within 6' of the top and placed by tremie methods. The top 6' is to be plain concrete poured in dry.

BILL OF MATERIALS

Item	Unit	Total
Structural Steel	Lbs	3495.0
Sheet Piles	Lbs	46049.0
Class 'A' concrete	Cu. Yds.	179.2

Note: Quantities are incidental to Lump Sum Cost of Pier Protective Cell

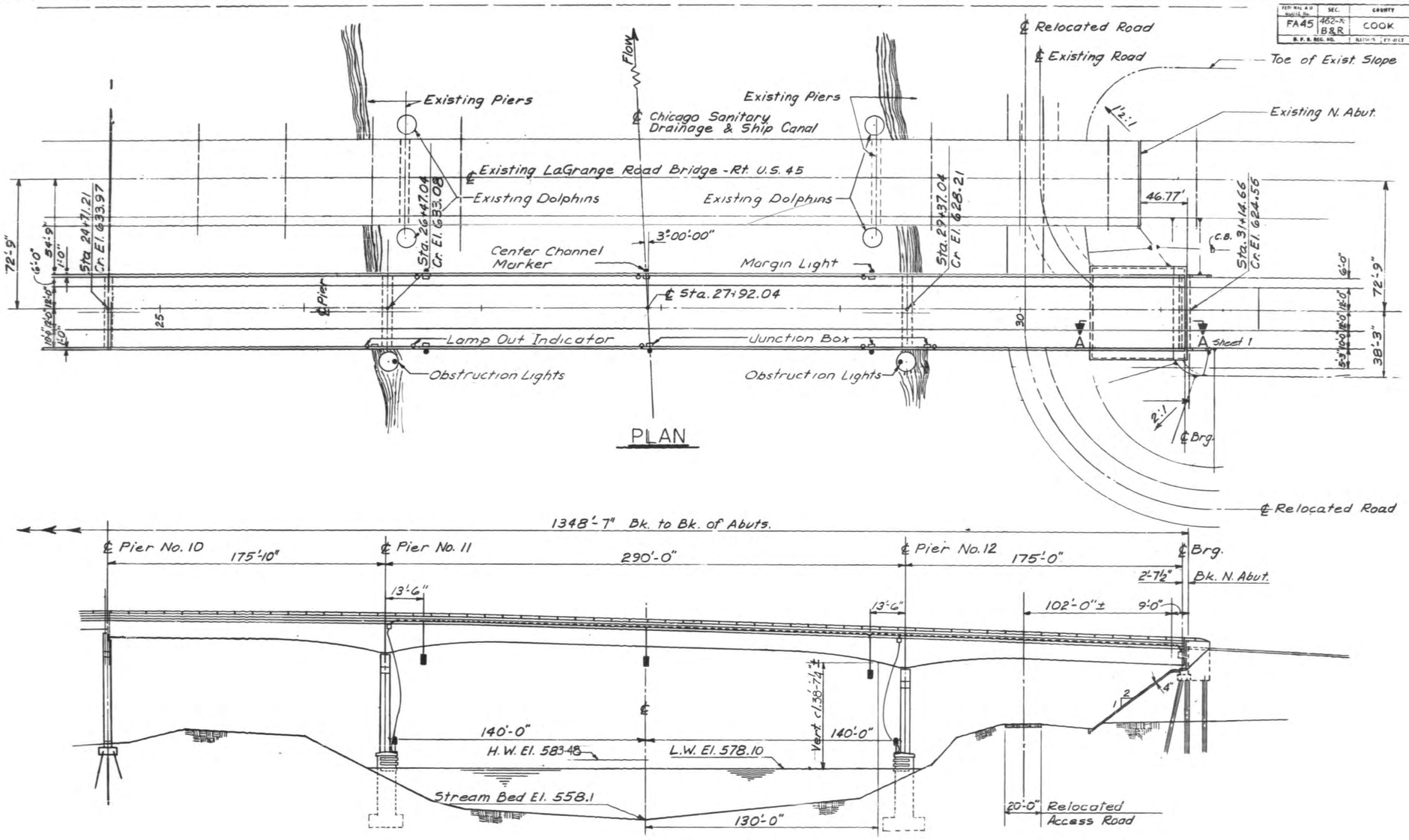
DESIGNED	AS
CHECKED	ED
DRAWN	AS
CHECKED	ED

PIER PROTECTIVE CELL DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FED. RD. & D. SHEET NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
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B. F. R. REG. NO.		ELECTION DISTRICT		

SHEET NO. 47
50 SHEETS

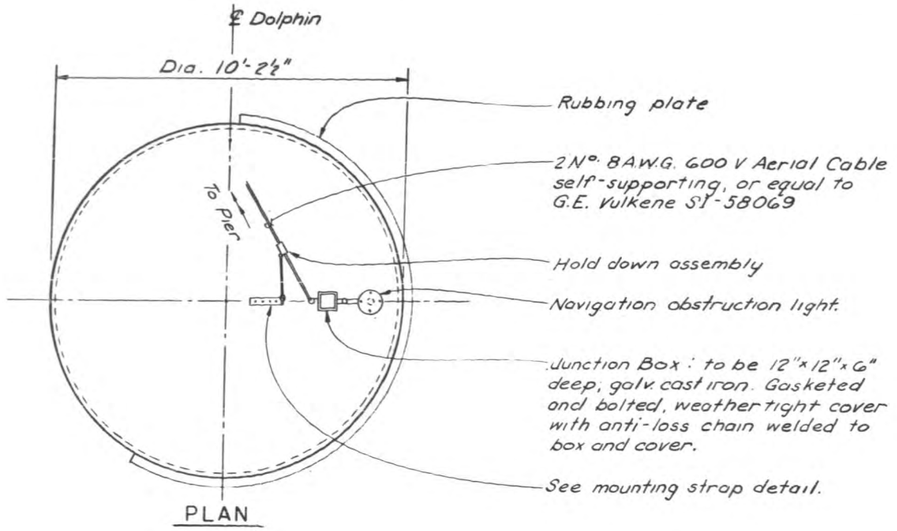


DESIGNED	AS
CHECKED	ED
DRAWN	H.J.S.
CHECKED	AS

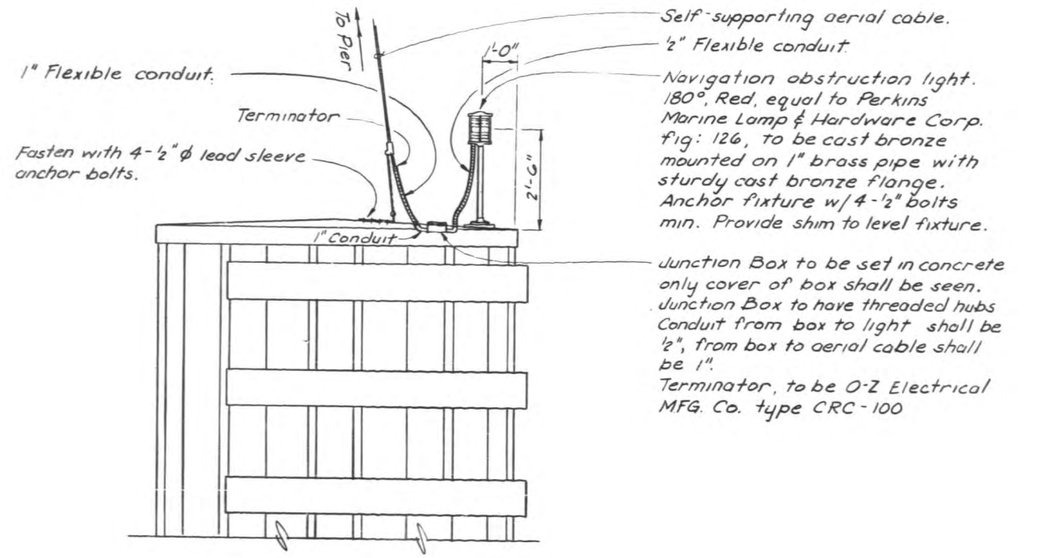
CHANNEL LIGHTING LAYOUT
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462-X-B&R	COOK	223	93
S. P. S. ROUTE NO.	ILLINOIS	PROJECT		

SHEET No. 48
50 SHEETS

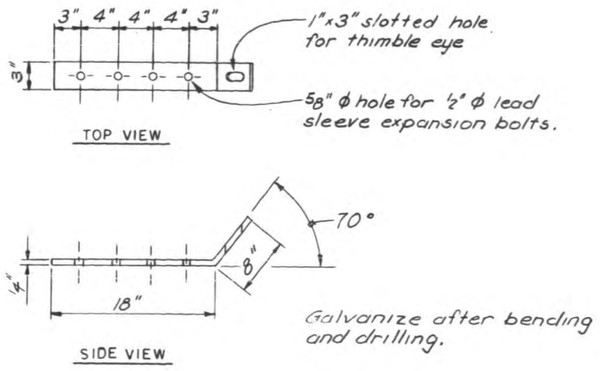


PLAN

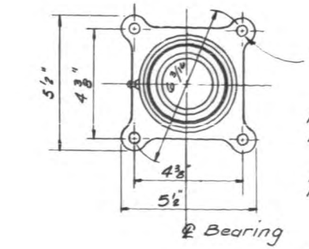


ELEVATION

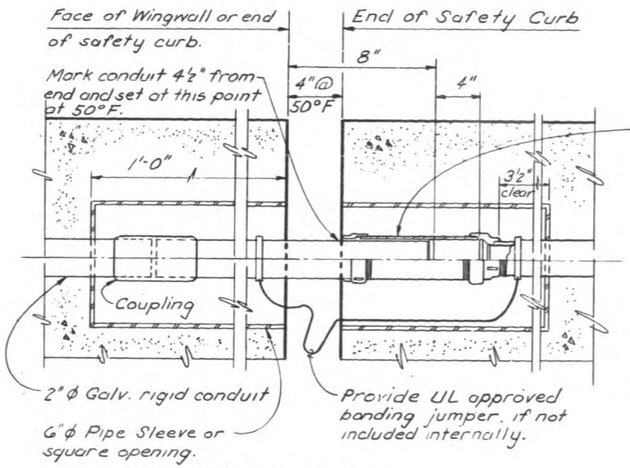
OBSTRUCTION LIGHT MOUNTING



MOUNTING STRAP DETAIL
NO SCALE

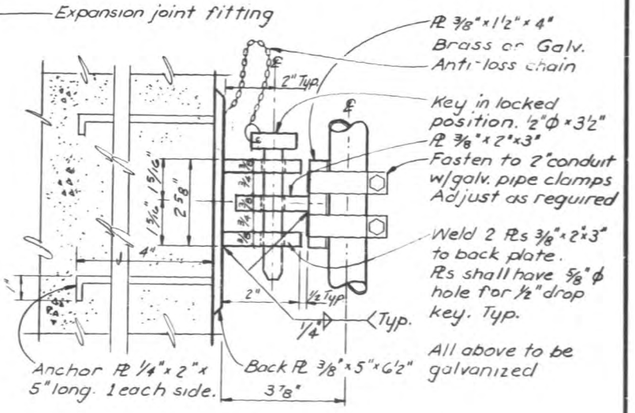


BEARING BLOCK DETAIL
NO SCALE

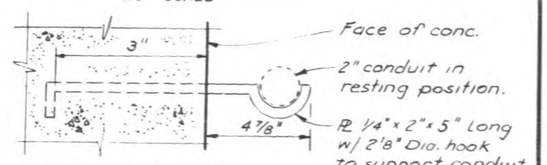


EXPANSION JOINT DETAIL
NO SCALE

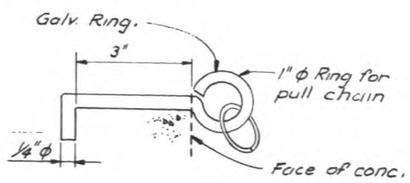
Note:
Expansion joint fitting shall be equal to Hope Spring City or O.Z. Cat. No. AX 200



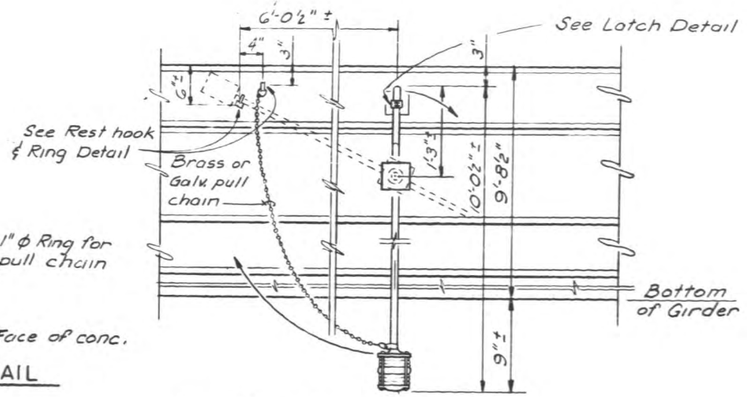
LATCH DETAIL
NO SCALE



REST HOOK DETAIL
NO SCALE



RING ANCHOR DETAIL
NO SCALE



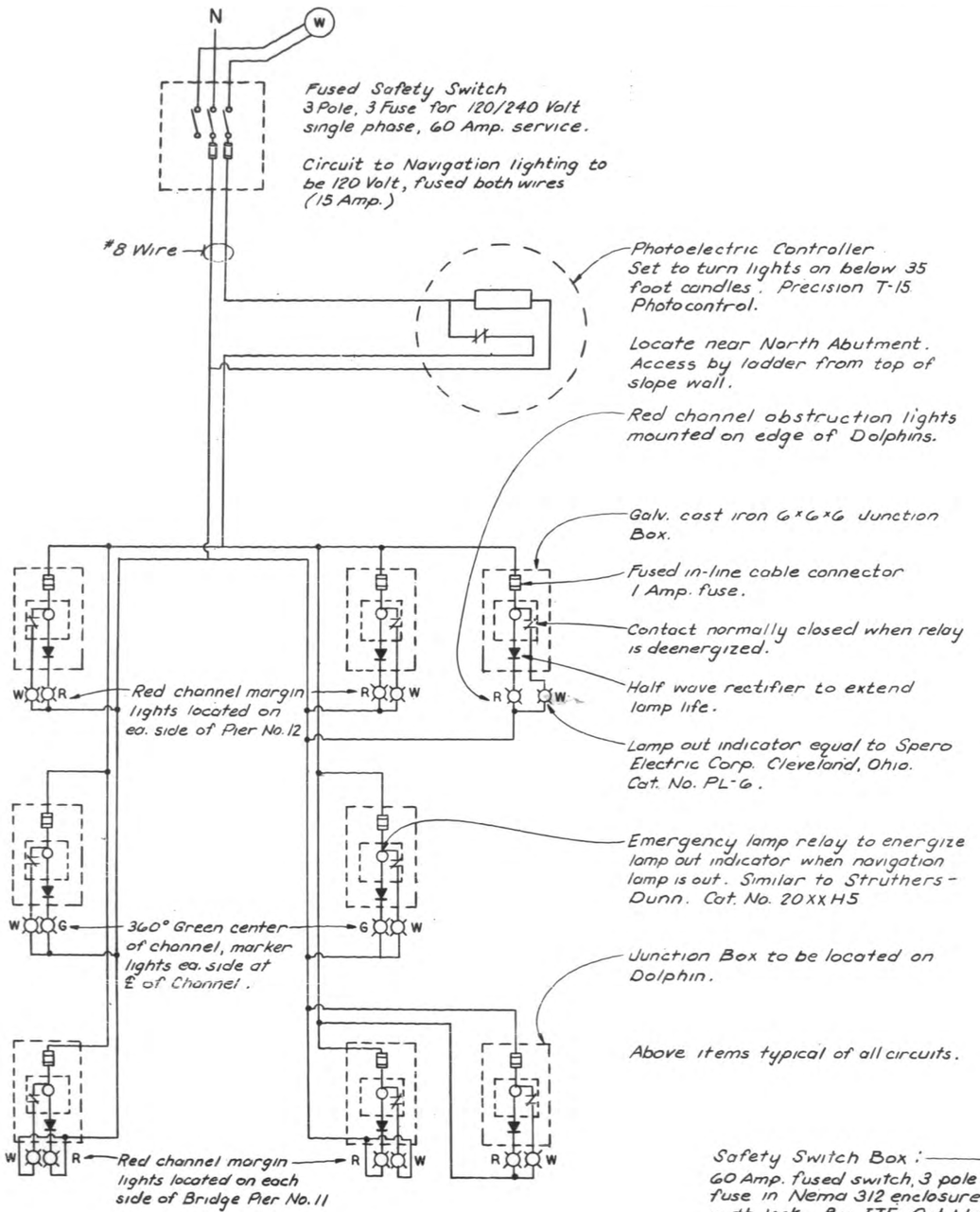
MARKER LIGHT ELEVATION
NO SCALE

DESIGNED	LJK
CHECKED	ED
DRAWN	HJS
CHECKED	LJK

ELECTRICAL DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B&R
COOK COUNTY
STATION 17+66.04

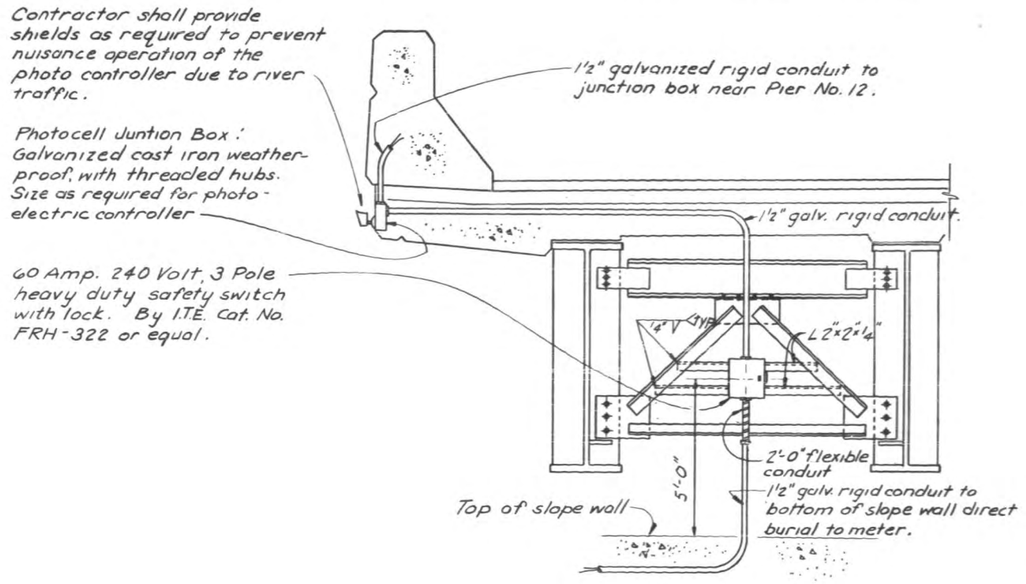
FED. ROAD DIST. No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	94
S. F. A. SEC. NO.	ILLINOIS	PROJECT		

SHEET No. 49
50 SHEETS

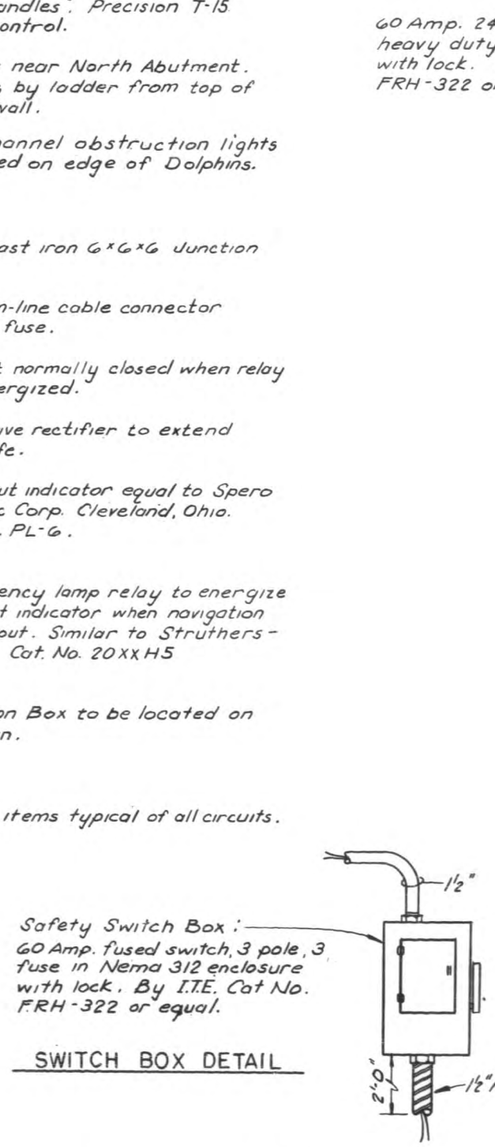


CHANNEL WIRING DIAGRAM
NO SCALE

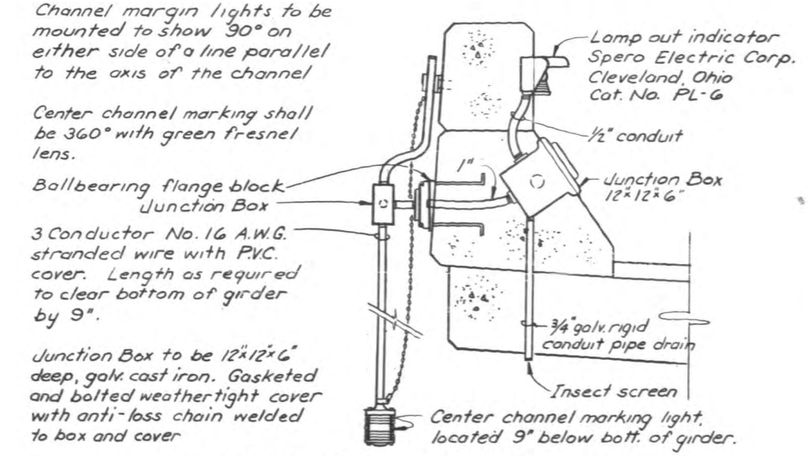
DESIGNED	LJK
CHECKED	H.J.S.
DRAWN	LJK
CHECKED	HJS



ELECTRIC PANEL LOCATION NORTH ABUTMENT
NO SCALE



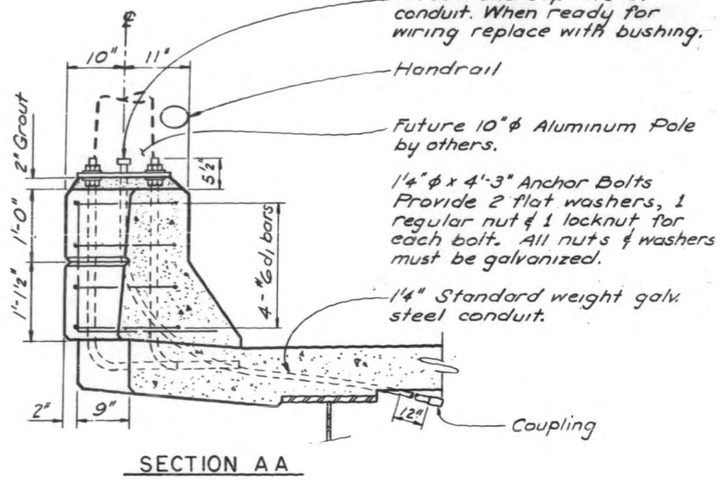
SWITCH BOX DETAIL



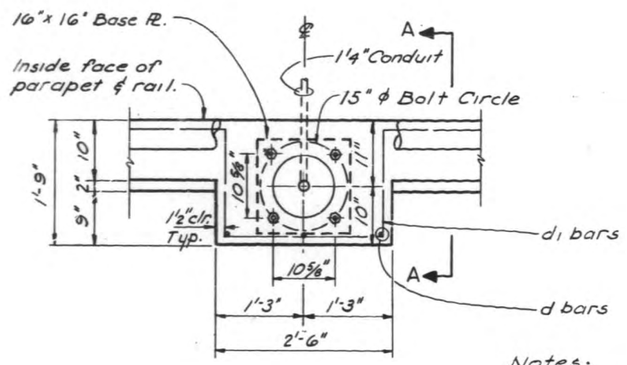
JUNCTION BOX INSTALLATION DETAIL

CHANNEL WIRING DIAGRAM AND DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04



SECTION A A



PLAN

LIGHT POLE MOUNTING DETAIL
NO SCALE

Notes:
1) Grout mixture shall consist of 1 part sand, 1 part cement & 1 part chips (pea gravel). The grout shall contain water for a 1" slump.
2) See Deck Plans for location.

DESIGNED	LJK
CHECKED	ED
DRAWN	HJS
CHECKED	LJK

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462-X-B&R	COOK	223	95
D. P. S. DIST. NO.	ILLINOIS	PROJECT		

SHEET NO 50
50 SHEETS

ESTIMATED ELECTRICAL QUANTITIES

DESCRIPTION	UNIT	TOTAL
360° Green fresnel lens, Center Channel Marker	Each	2
180° Red fresnel lens, Obstruction Marker pedestal mounted on Dolphins.	Each	4
Rough service lamp, 100 Watts	Each	10
"Lamp Out" indicator light (Complete)	Each	8
Enclosure with safety switch	Each	1
Junction Box 16"x12"x6" (Complete)	Each	8
Trench 30" Deep	Lin. Ft.	150
Conduit, 1" ϕ Galv. rigid	Lin. Ft	55
Conduit, Extra flexible rubber 3 No. 16 AWG, 600V	Lin. Ft.	12
Conduit, flexible ½" ϕ	Lin. Ft.	3
Anchor, Concrete 5/16" ϕ. lead expansion sleeve	Each	72
Anchor, Concrete ½" ϕ. lead expansion sleeve	Each	24
Cable, Circuit ½c No. 10 AWG, 600 V.	Lin. Ft.	2000
Cable, Circuit ½c No. 12 AWG. 600 V.	Lin. Ft.	400
Cable, Aerial self-supporting 3 No. 8 AWG, 600V.	Lin. Ft	80
Mounting Strap for aerial cable	Each	4
* Item above required for navigation lighting		
(Following items required for future Rdwy. lighting		
Conduit 1½" ϕ Galv. rigid	Lin. Ft.	65
Conduit 2" ϕ Galv. rigid	Lin. Ft.	6500
Junction Box 16"x12"x6"	Each	37
Expansion Joint Fitting	Each	14
Structure Ground System	Each	9

APPROVED

LIGHT POLE MOUNTING DET. & ELEC. QUANTITIES
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SOUTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 17+66.04

ILLINOIS FED. AID ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	96
B.R.A. PROJ. NO.	ILLINOIS PROJECT			

SHEET NO. 1
102 SHEETS

B.M.
"D" Chisled at S.W. corner on conc. bridge rail east side LaGrange Rd. Bridge over I-55
El. 644.42 (U.S.G.S.)

Exist R.O.W.

Exist. S. Abut.

Toe of Exist. Slope

Exist. Piers

FLOW

℄ DesPlaines River

Approximate Location of A.T. & S.F. R.R. Property Line

Existing Piers

MATCH LINE See Sheet #2

℄ Existing LaGrange Road Bridge - Rt. U.S. 45

Bk. S. Abut Sta 41+38.63 Cr. El. 643.91

Sta. 42+20.92 Cr. El. 626.11

Future Light Standard

Sta. 43+40.92 Cr. El. 617.17

Sta. 44+00.92 Cr. El. 622.89

Future Lt. Standard

Sta. 44+61.76 Cr. El. 625.58

Sta. 45+64.38 Cr. El. 629.35

TYP. 13°52'00"

Sta. 46+11.00 Cr. El. 630.72

Future Light Standard

℄ New Crash Wall (Typ.)

Sta. 47+32.34 Cr. El. 632.71

Sta. 48+29.67 Cr. El. 634.06

Sta. 49+21.00 Cr. El. 634.77

Future Lt. Std.

72'-9"

54'-9"

6'-0"

B15 B16 B17 B18 B19 B20 B21 B22 B23 B24

Exp. Jt.

℄ New Roadway

Exist. R.O.W.

Toe of Slope

Bk. of S. Abut.

Embankment Slope

2'-3½" ℄ Brg.

80'-0" Span | 90'-0" Span | 90'-0" Span | 79'-7" Span | 1'-3" | 81'-4½" Span | 81'-4½" Span | 1'-3" | 90'-1" Span | 91'-4" Span | 90'-1" Span | 1'-3" | 1'-3"

2743-7⅝ Bk. To Bk. of Abuts.

Permanent Easement Line

Exist. R.O.W.

PLAN

2743'-7⅝ Bk. To Bk. Of Abuts.

	℄ Brg.	Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Pier No. 5	Pier Cap No. 6	Pier Cap No. 7	Pier Cap No. 8	Pier Cap No. 9
	2'-3½"	80'-0"	90'-0"	80'-10	82'-7½"	82'-7½"	91'-4"	91'-4"	91'-4"	
Bk. S. Abut.		4 Span Cont.			1'-3" 1'-3"	2 Span Cont.	1'-3" 1'-3"	3 Span Cont.		1'-3" 1'-3"
	Span 1	Span 2	Span 3	Span 4	℄ Brg. ℄ Brg.	Span 5 Span 6	℄ Brg. ℄ Brg.	Span 7 Span 8	Span 9	℄ Brg. ℄ Brg.

This portion of Embankment By Bridge Contractor

Approach Pavement by Paving Contractor See Std. 2353

Berm Elev. 607.23

6:1

Natural Grade Line

4" Exp. Conc. Slope Wall

Exp.

H.W. 596.61

24'-3⅜" V.Cl.

Fixed

Exp. Exp. Exp. Fixed Exp. Exp. Exp. Fixed Exp. Exp.

44" Welded Girder

Natural Grade Line

2'-0" 6"

Steel Piles

Seal Coat

Conc. Piles

Cofferdam Excavation

Norm. El. 586.85 ±

Min. 6'-0"

Seal Coat

Cofferdam Excavation

Sheet Piling (Typical) Conc. Piles

Conc. Piles

Spread Footings

Steel Piles

Steel Piles

Steel Piles

MATCH LINE See Sheet #2

Top of Rock

Stream Bed El. 584.35 ±

Conc. Piles

℄ DesPlaines River

ELEVATION

NOTE:
Elevation To Cr. Are To The Top Of Wearing Surface

6"x6" Mesh #4 wire

2'-0"

#4 Bars @ 16" O.C.
#4 Bars @ 12" O.C.

6"

DETAIL A

9'-0"

12'-0" at rt. ℄s

B

Slope ½"/Ft.

2'-0"

2:1

See Detail "A"

2'-0"

6"

Poured against Undisturbed Embankment

SECTION A-A

Edge of Deck

2'-0"

2"

2'-0"

6"

SECTION B-B

APPROVED

STATION 41+38.63
BUILT 19 BY
STATE OF ILLINOIS
F.A. ROUTE 45 SEC 462-X-B&R
F.A. PROJ. BR-U-183(24)
LOADING HS20

NAME PLATE
See Standard 2113

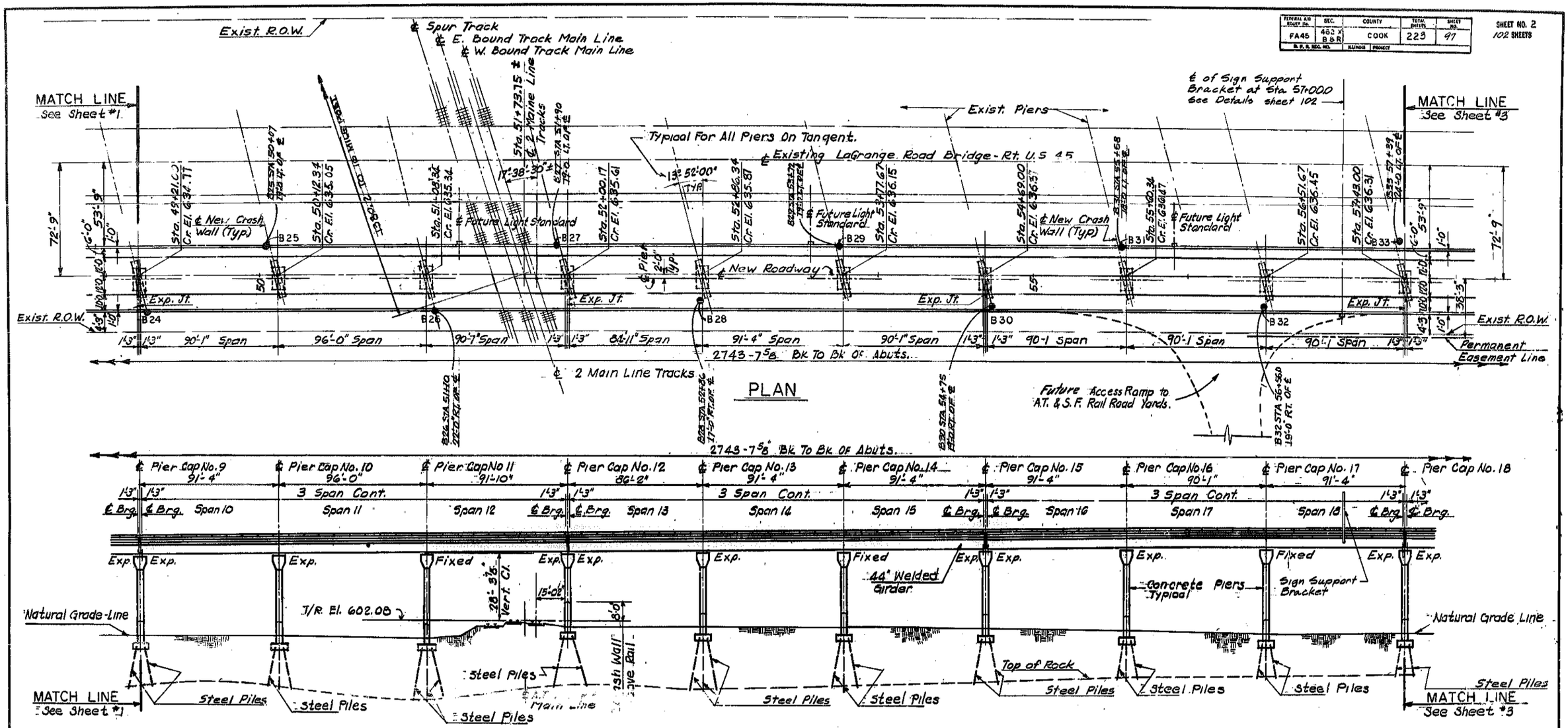
DESIGNED	A.S. & W.C.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

PLAN & ELEVATION

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B&R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	97
B.P.R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 2
102 SHEETS



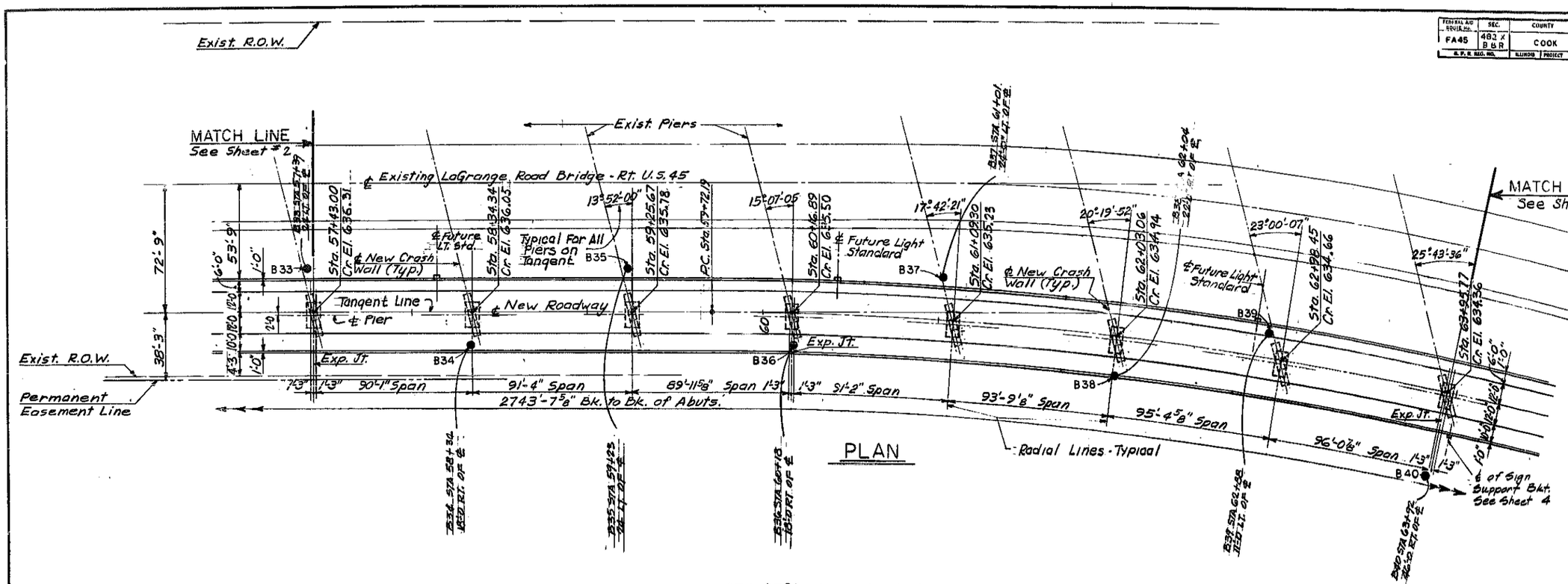
DESIGNED	A.S. & W.C.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

PLAN & ELEVATION

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-0 & R
COOK COUNTY
STATION 41+38.63

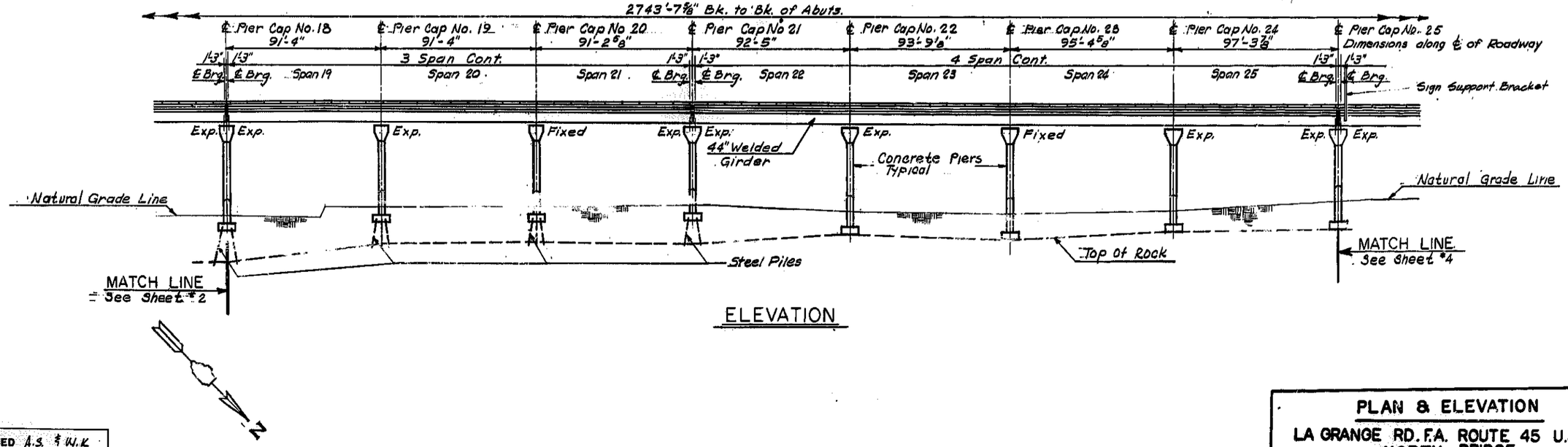
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	98
E.P.E. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 3
102 SHEETS



CURVE DATA

P.I. = STA. 66+90.43
P.C. = STA. 59+72.19
D = 2°-48'-00"
Δ = 38°-41'-00"
R = 2046.28'
T = 718.27
L = 1381.55
E = 122.40
S.E. = 0.042 ft
Transition for S.E. starts at STA. 58+72.16 continues to STA. 60+22.16 where full S.E. is obtained.



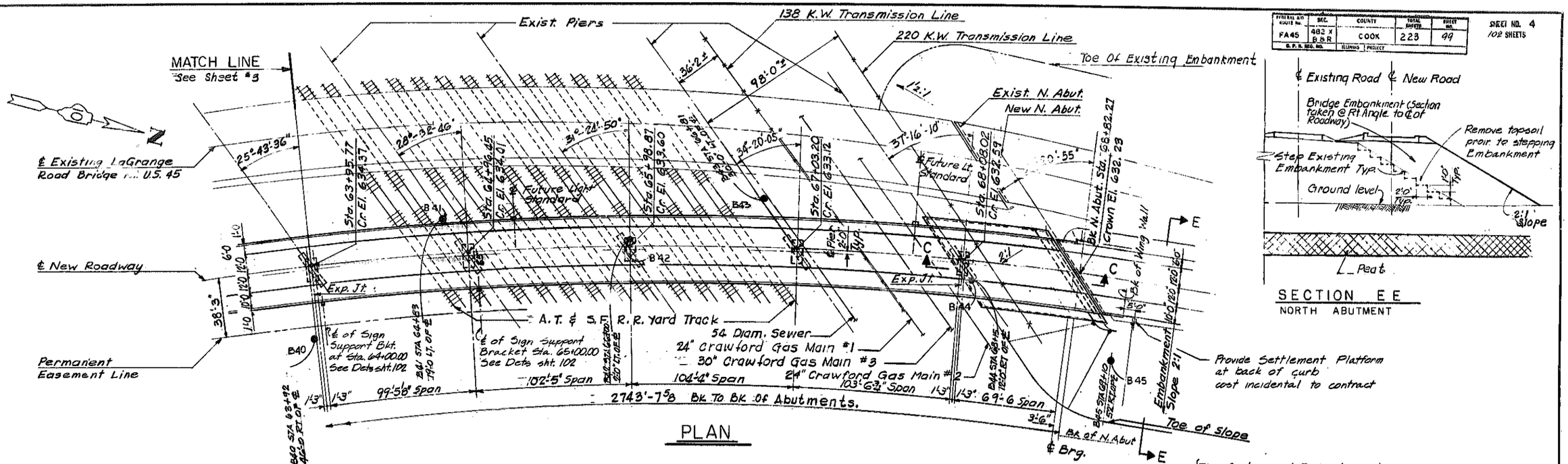
DESIGNED	A.S. & W.K.
CHECKED	E.D.
DRAWN	W.C. K.
CHECKED	E.D.

PLAN & ELEVATION

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	99
U. S. F. A. PROJ. NO.	ILLINOIS	PROJECT		

SHEET NO. 4
102 SHEETS



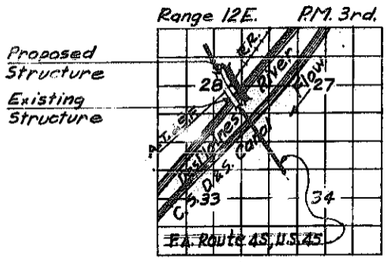
DESIGNED	W.K. & A.S.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

PLAN & ELEVATION

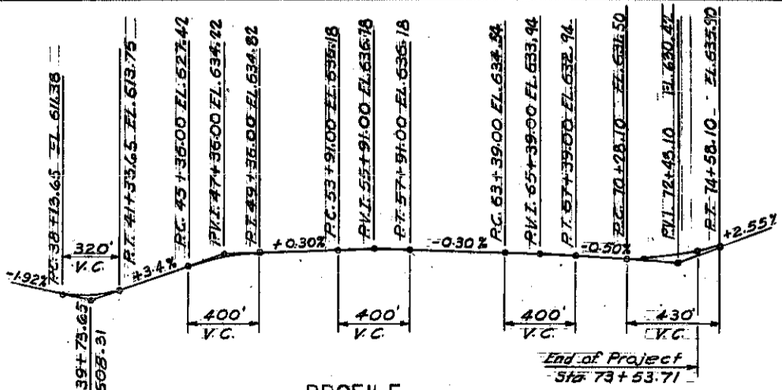
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	100
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 5
102 SHEETS



LOCATION PLAN



PROFILE
NORTH BRIDGE

DESIGN STRESSES

STRUCTURAL STEEL:
f_s = 20,000 P.S.I.

CONCRETE:
f_c = 1200 P.S.I. Deck Slab
f_c = 1400 P.S.I. Curb, Parapet & Substr.
V_c = 75 P.S.I. Footing
n = 10
Allowable L.L.+I Deflection 1/ Comp.

REINFORCEMENT.
f_s = 20,000 P.S.I.

LOADING:
H520 = 44
Future Wearing Surface : 25#/s.f.

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 4,510 STD. LBS. (WEIGHT INCLUDES SCUPPERS = 20140 LBS., SUPR. DRAINAGE = 39720 LBS., SIGN BRACKET = 640 LBS.)

FIELD CONNECTIONS SHALL BE BOLTED USING HIGH STRENGTH BOLTS.. BOLTS 3/4" DIA. OPEN HOLES 13/16" DIA. UNLESS OTHERWISE NOTED.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAMS OVER SUPPORTS

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED IN THE BOTTOM OF FLANGE OF BEAMS OR GIRDERS NOR ON THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER. FIELD WELDING OF ACCESSORIES TO CROSS GIRDERS WILL NOT BE PERMITTED.

SLOPE WALLS SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH. WEIGHING 58# / 100 SQ. FT.

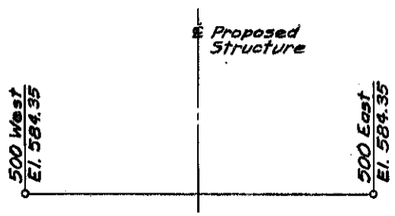
EXCAVATION FOR STRUCTURES CLASSIFICATION SHALL BE USED FOR ALL EXCAVATION UNLESS OTHERWISE NOTED.

THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATE SHALL CONFORM TO THE REQUIREMENT OF HANDRAIL CONCRETE.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

THE CONTRACTOR SHALL DRIVE A TOTAL OF 4 CONCRETE TEST PILES IN PERMANENT LOCATIONS AT PIERS 1, 2, 3, & 4. THE CONTRACTOR SHALL ALSO DRIVE A TOTAL OF 19 STEEL TEST PILES (HP 10x42) IN PERMANENT LOCATIONS AT SOUTH & NORTH ABUTMENT, PIERS 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27 AND 29. THE LOCATION OF TEST PILES AS DIRECTED BY THE ENGINEER SHALL BE DRIVEN BEFORE ORDERING THE REMAINDER OF PILES.

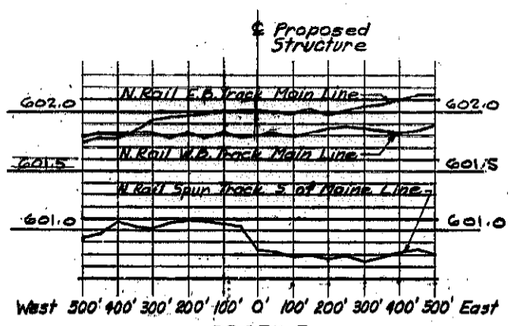
PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACE TO WHICH WATERPROOF MEMBRANE SYSTEM IS APPLIED.



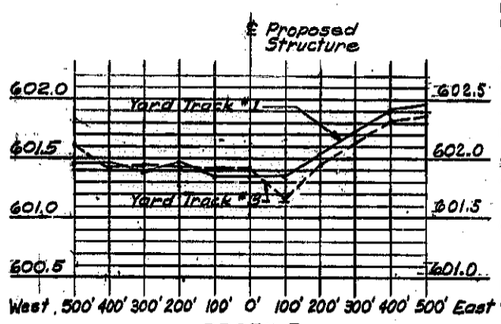
PROFILE
DESPLAINES RIVER

HYDRAULIC DATA

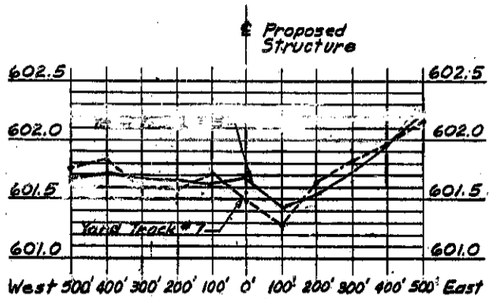
Drainage Area - 700 Sq. Mi., Level
Flood Freq. - 50 Years
High Water El. - 596.61
Design Discharge - 8200 CFS



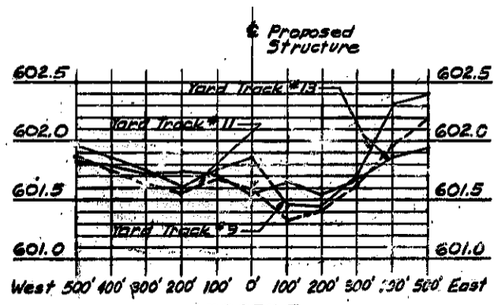
PROFILE
A.T. & S.F. R.R.
MAIN LINE



PROFILE
A.T. & S.F. R.R.
YARD TRACK "1 & 3



PROFILE
A.T. & S.F. R.R.
YARD TRACK "5 & 7



PROFILE
A.T. & S.F. R.R.
YARD TRACK "9 & 13

DESIGNED	A.S. & W.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

PROFILE GRADES & MISC. DATA
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.P. RTE. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X	COOK	223	101
S.P.R. REG. NO.	ILLINOIS PROJECT			

SHEET NO. 6
102 SHEETS

MATCH LINE A

℄ Existing Bridge, U.S. Route 45

℄ New Roadway

Bk. S. Abut. Sta. 41+38.63

℄ Pier No. 1 Sta. 42+20.92

℄ Pier No. 2 Sta. 43+10.92

℄ Pier No. 3 Sta. 44+00.92

℄ Pier No. 4 Sta. 44+81.75

℄ Pier No. 5 Sta. 45+64.38

℄ Pier No. 6 Cap Above Sta. 46+47.00

℄ Roadway

℄ Footings

82'-3½" | 90'-0" | 90'-0" | 80'-10" | 82'-7½" | 82'-7½"

MATCH LINE A

MATCH LINE B

℄ Existing Bridge, U.S. Route 45

℄ 2 Main Line Tracks

℄ Pier No. 6 Cap Above Sta. 46+47.00

℄ Pier No. 7 Cap Above Sta. 47+38.34

℄ Pier No. 8 Cap Above Sta. 48+29.67

℄ Pier No. 9 Cap Above Sta. 49+21.00

℄ Pier No. 10 Cap Above Sta. 50+12.34

℄ Pier No. 11 Cap Above Sta. 51+03.34

Sta. 51+79.75

℄ Roadway

℄ Footings

91'-4" | 91'-4" | 91'-4" | 91'-4" | 96'-0" | 91'-10" To Pier No. 12

N

MATCH LINE B

MATCH LINE C
See Sheet No. 7

℄ Existing Bridge, U.S. Route 45

℄ 2 Main Line Tracks

℄ New Roadway

℄ Pier No. 12 Cap Above Sta. 52+00.17

℄ Pier No. 13 Cap Above Sta. 52+84.51

℄ Pier No. 14 Cap Above Sta. 53+77.67

℄ Pier No. 15 Cap Above Sta. 54+69.00

℄ Pier No. 16 Cap Above Sta. 55+60.34

℄ Roadway

℄ Footings

86'-2" | 91'-4" | 91'-4" | 91'-4"

DESIGNED	A.S.
CHECKED	S.C.N.
DRAWN	R. PATEL
CHECKED	A.S.

FOOTING LAYOUT

FOOTING LAYOUT

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-S & R
COOK COUNTY
STATION 41+38.63

F.A.S. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	102
S. P. R. REG. NO.	ILLINOIS PROJECT			

SHEET NO. 7
102 SHEETS

MATCH LINE C
See Sheet No. 6

℄ Existing Bridge, U.S. Route 45

MATCH LINE D

P.T.

44'-8¼" 92'-3⅞" To Pier No. 22

72'-9"

13°-52'-00" Typ.

6" ℄ Pier No. 16 Cap Above Sta. 55+60.34

6" ℄ Pier No. 17 Cap Above Sta. 56+51.67

6" ℄ Pier No. 18 Cap Above Sta. 57+43.00

℄ New Roadway

6" ℄ Pier No. 19 Cap Above Sta. 58+34.34

15°-52'-00" Typ.

6" ℄ Pier No. 20 Cap Above Sta. 59+25.67

P.C. Sta. 59+72.19

15°-07'-05"

88° 44' 54"

6" ℄ Pier No. 21 Cap Above Sta. 60+16.89

℄ Roadway

℄ Footings

Tangent Line at P.C.

℄ Roadway

℄ Footing

24'-0"

12'-0" 12'-0"

℄ Ftg.

91'-4" 91'-4" 91'-4" 91'-4" 46'-0½" 44'-8⅜" 92'-5" To Pier No. 22

℄ of Pier Cap

Rad. Dim. 24'-0"

Radius to ℄ Rdwy = 2046.28'

MATCH LINE D

P.T.

℄ Existing Bridge, U.S. Route 45

All Dim are along Tangent Line Referenced to P.C.

93'-4½" 94'-6" 95'-5⅛" 97'-11⅛"

Tangent Line at P.C.

17°-42'-21"

86° 09' 39"

6" ℄ Pier No. 22 Cap Above Sta. 01+09.30

20°-19'-52"

83° 32' 00"

6" ℄ Pier No. 23 Cap Above Sta. 02+03.30

℄ New Roadway

23°-00'-47"

80° 51' 53"

6" ℄ Pier No. 24 Cap Above Sta. 02+98.45

78°08'-24"

25°-43'-34"

MATCH LINE E
See Sheet No. 8

75° 19' 15"

Tangent Line at P.C.

℄ Roadway

℄ Footings

Rad. Dim. 24'-0"

All Dim. Are A.-c. Lengths on ℄ Rdwy.

93'-9⅛" 95'-4⅝" 97'-3⅝" 100'-5⅛"

℄ of Pier Cap Typ.

Note: All Dimensions are given to Radial Line thru ℄ Cap Above

43'-8¼"

66'-9½"

28°-32'-46"

℄ Pier No. 25 Cap Above Sta 63+93.76

℄ Pier No. 26 Cap Above Sta. 64+90.45

℄ Ftg.

N

FOOTING LAYOUT

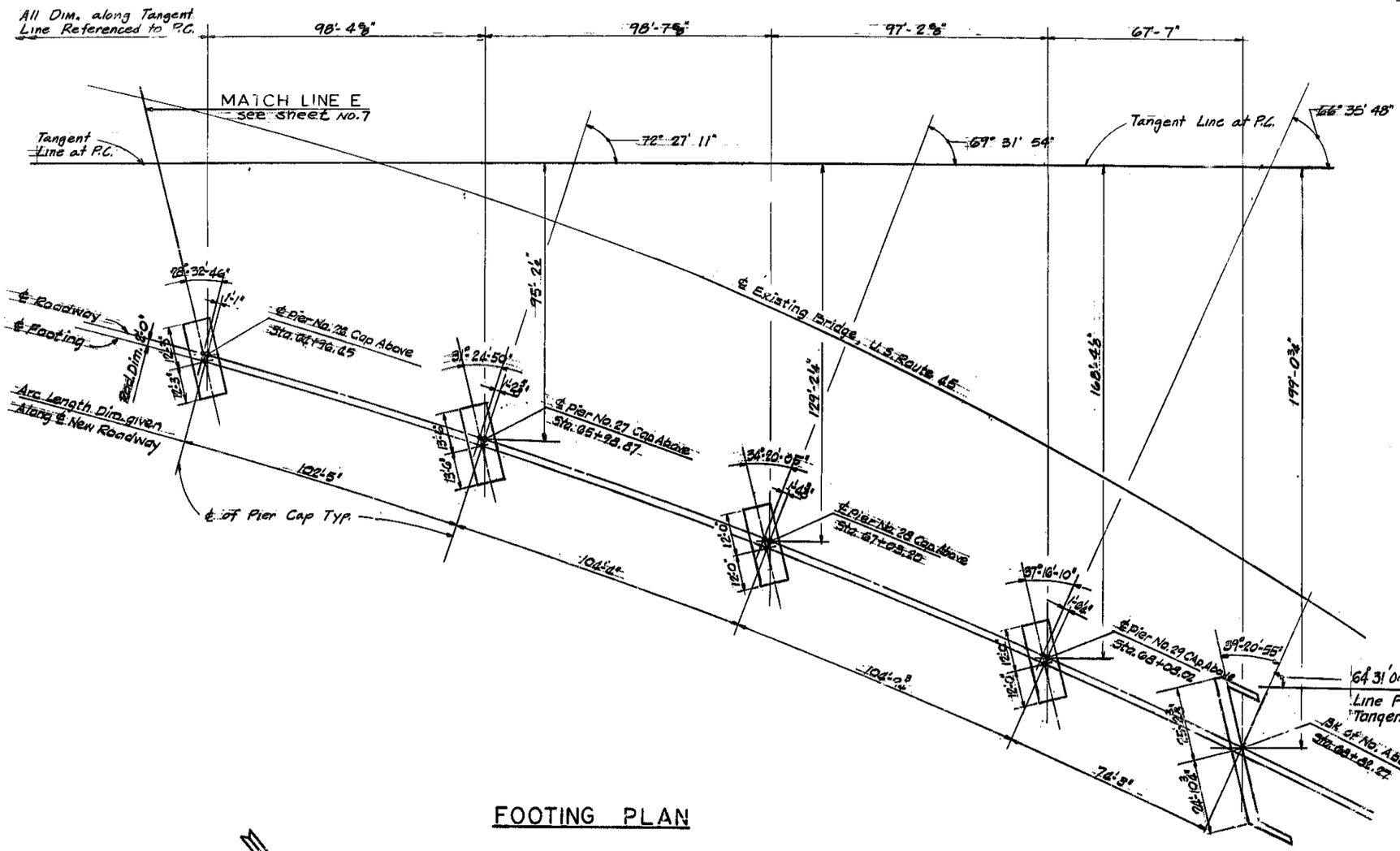
DESIGNED	A.S.
CHECKED	S.C.N.
DRAWN	R. PATEL
CHECKED	S.C.N.

FOOTING LAYOUT

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.I. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	103
R. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 61
102 SHEETS



FOOTING PLAN

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
Protective Coat	Sq.Yds.	2110	—	2110
Test Piles Concrete	Each		4	4
Precast Concrete Piles	Lin.Ft.		1175.0	1175.0
Test Piles - HP10x42	Each		19	19
Steel Piles - HP10x42	Lin.Ft.		6808.	6808.
Seal Coat Concrete	Cu.Yds.	—	167.6	167.6
Class "X" Concrete	Cu.Yds.	3640.	2566	6206
Furn.& Erecting Structural Steel	L.S.	1		1
Reinforcement Bars	Lbs.	1005200	537440	1542640
Aluminum Handrail	Lin.Ft.	5535.0		5535.0
Structure Excavation	Cu.Yds.	—	2548.0	2548.0
Waterproofing Membrane System	Sq.Yds.	11693		11693
Bituminous Conc. Surf. Course, Class I	Tons	955		955
Stud Shear Connectors	Each	29244		29244
Name Plates	Each		1	1
Slopewall (4")	Sq.Yds.		576.8	576.8
Rock Excavation	Cu.Yds.		49.2	49.2
Neoprene Expansion Jt 2½"	Lin.Ft.	335.0		335.0
Neoprene Expansion Jt 4"	Lin.Ft.	42.0		42.0
Neoprene Expansion Jt 6"	Lin.Ft.	42.0		42.0
Cofferdam	Each		3	3
Cofferdam Excavation	Cu Yds.		400.2	400.2
Pier Bearings Type F 850	Each	18	—	18
Pier Bearings Type F1000	Each	2		2
Pier Bearings Type E 350	Each	32		32
Pier Bearings Type E 400	Each	4		4
Pier Bearings Type E 850	Each	20		20
Pier Bearings Type E1000	Each	2		2
Temp. Sheet Piling	Sq.Ft.		2110	2110

DESIGNED	A.S.
CHECKED	S.C.N.
DRAWN	A.S.
CHECKED	S.C.N.

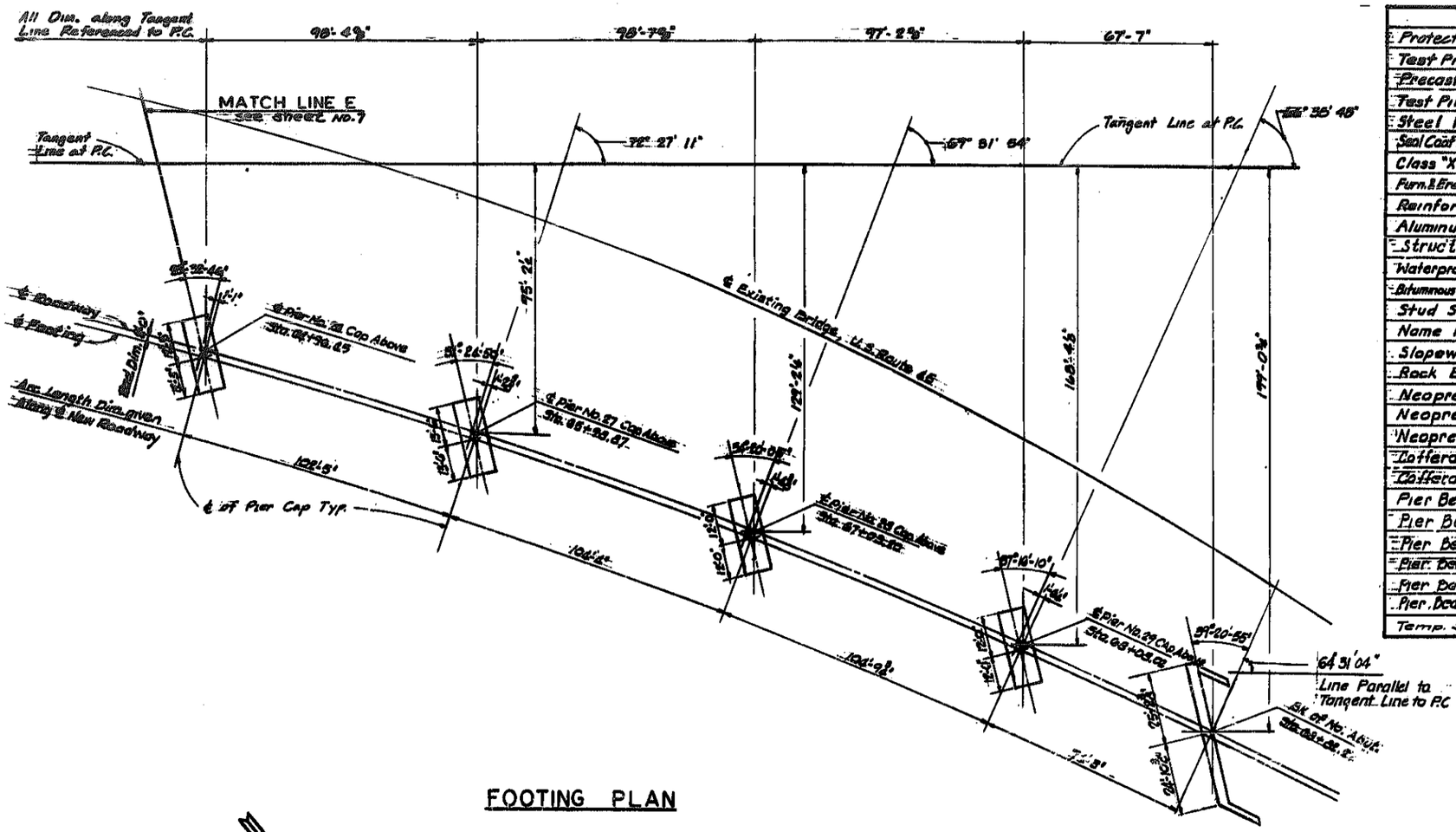
FOOTING LAYOUT

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

Revised 7-15-75

F.A.Rte. No.	Sec.	County	Sheet No.	Total Sheets No.
FAR 45		COOK	223	1091

Sheet No. 6A
102 Sheets



FOOTING PLAN

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
Protective Coat	Sq. Yds.	2110	—	2110
Test Piles Concrete	Each		4	4
Precast Concrete Piles	Lin. Ft.		1175.0	1175.0
Test Piles - HP10x42	Each		19	19
Steel Piles - HP10x42	Lin. Ft.		6808.	6808.
Seal Coat Concrete	Cu. Yds.	—	767.6	767.6
Class "X" Concrete	Cu. Yds.	3640.	2660.3	6300.3
Furn. & Erecting Structural Steel	L. S.	1		1
Reinforcement Bars	Lbs.	1005200	537440	1542640
Aluminum Handrail	Lin. Ft.	5335.0		5335.0
Structure Excavation	Cu. Yds.	—	2452.4	2452.4
Waterproofing Membrane System	Sq. Yds.	11693		11693
Bituminous Conc. Surf. Course, Class I	Tons	955		955
Stud Shear Connectors	Each	29244		29244
Name Plates	Each		1	1
Slopewall (4")	Sq. Yds.		576.8	576.8
Rock Excavation	Cu. Yds.		49.2	49.2
Neoprene Expansion Jt. 2½"	Lin. Ft.	335.0		335.0
Neoprene Expansion Jt 4"	Lin. Ft.	42.0		42.0
Neoprene Expansion Jt 6½"	Lin. Ft.	42.0		42.0
Cofferdam	Each		5	5
Cofferdam Excavation	Cu Yds		400.2	400.2
Pier Bearings Type E 850	Each	18	—	18
Pier Bearings Type E1000	Each	2	—	2
Pier Bearings Type E 550	Each	32		32
Pier Bearings Type E 400	Each	4		4
Pier Bearings Type E 850	Each	20		20
Pier Bearings Type E1000	Each	2		2
Temp. Sheet Piling	Sq. Ft.		2110	2110

DESIGNED	A.S.
CHECKED	S.C.N.
DRAWN	A.S.
CHECKED	S.C.N.

AS REVISED

FOOTING LAYOUT

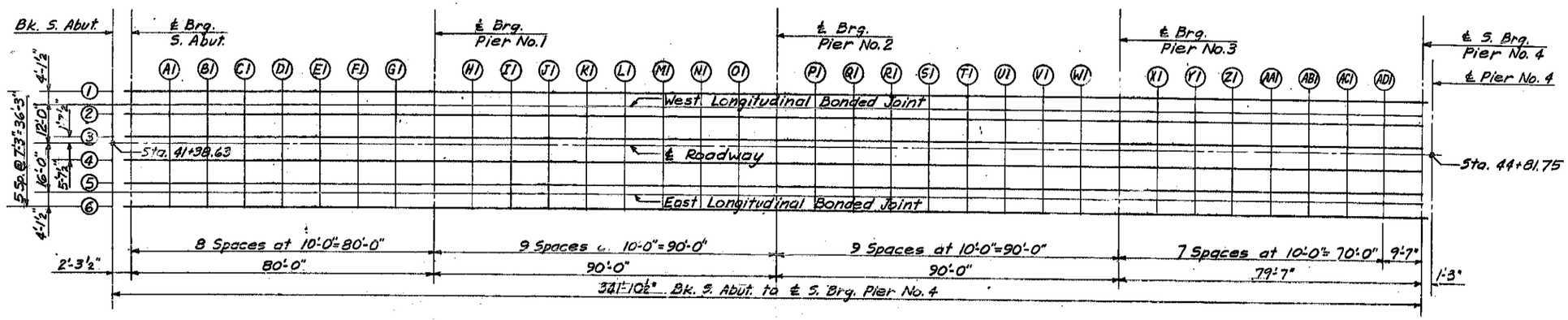
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

As Revised 10-28-75 L.W.

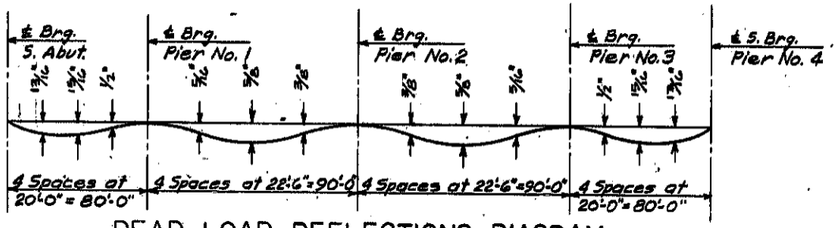
Revised 7-15-75

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BR	COOK	223	104
S. F. P. ROG. NO.	PLANNING	PROJECT		

SHEET NO. 9
102 SHEETS



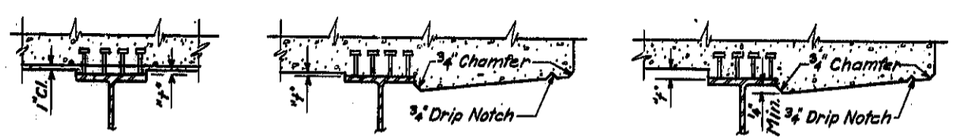
BEAM LAYOUT



DEAD LOAD DEFLECTIONS DIAGRAM

(Use these deflections in conjunction with cross girder deflections)

NOTE:
These deflections are not to be used in the event if the engineer is working from the grade elevations adjusted for dead load deflections as shown.



At Minimum Fillet

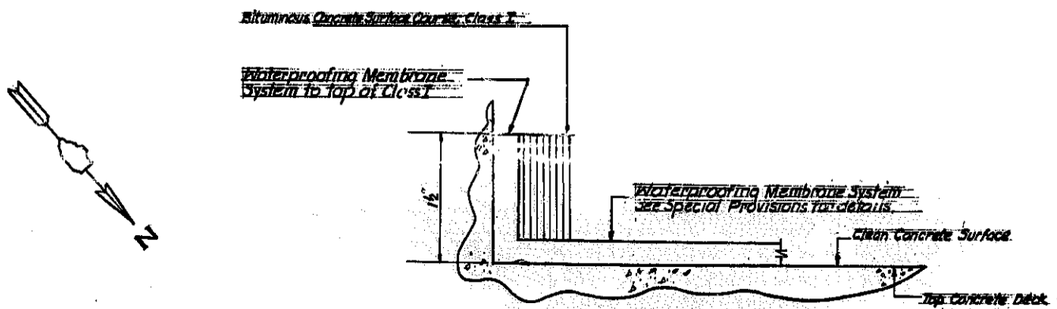
At Maximum Fillet

INTERIOR BEAMS

EXTERIOR BEAMS

NOTE:
To determine "t": After all structural steel has been erected, elevation of the top flanges of the beams shall be taken at intervals shown on the beam layout drawings. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as indicated in the "Top of Slab Elevation" tables, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



DECK SURFACING
WITH WATERPROOFING MEMBRANE SYSTEM

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	E.D.

TOP OF SLAB ELEVATION LAYOUT
SPANS 1 TO 4
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	Bk. So. Abut.	4138.630	16.125	613.515	613.515
	℄ Brg. So. Abut.	4140.922	16.125	613.593	613.593
	A1	4150.922	16.125	613.933	613.974
	B1	4160.922	16.125	614.273	614.346
	C1	4170.922	16.125	614.613	614.703
	D1	4180.922	16.125	614.953	615.052
	E1	4190.922	16.125	615.293	615.378
	F1	4200.922	16.125	615.633	615.686
	G1	4210.922	16.125	615.973	616.016
	℄ Brg. Pier	4220.921	16.125	616.313	616.339
	H1	4230.920	16.125	616.653	616.688
	I1	4240.920	16.125	616.993	617.043
	J1	4250.920	16.125	617.333	617.396
	K1	4260.920	16.125	617.673	617.750
	L1	4270.92	16.125	618.013	618.072
	M1	4280.920	16.125	618.353	618.422
	N1	4290.920	16.125	618.693	618.745
	O1	4300.920	16.125	619.033	619.066
	℄ Brg. Pier 2	4310.919	16.125	619.373	619.398
	P1	4320.920	16.125	619.713	619.746
	Q1	4330.920	16.125	620.053	620.105
	R1	4340.920	16.125	620.393	620.462
	S1	4350.920	16.125	620.733	620.812
	T1	4360.920	16.125	621.073	621.150
	U1	4370.920	16.125	621.413	621.476
	V1	4380.920	16.125	621.753	621.798
	W1	4390.920	16.125	622.093	622.123
	℄ Brg. Pier 3	4400.919	16.125	622.433	622.459
	X1	4410.920	16.125	622.773	622.814
	Y1	4420.920	16.125	623.113	623.179
	Z1	4430.920	16.125	623.453	623.544
	AA1	4440.920	16.125	623.793	623.918
	AB1	4450.920	16.125	624.133	624.236
	AC1	4460.920	16.125	624.473	624.562
	AD1	4470.920	16.125	624.813	624.873
	℄ S. Brg. Pier 4	4480.503	16.125	625.139	625.159
	℄ Pier 4	4481.753	16.125	625.182	625.201
West Long Bonded Jt.	Bk. So. Abut.	4138.630	12.000	613.601	613.601
	℄ Brg. So. Abut.	4140.922	12.000	613.679	613.679
	A1	4150.922	12.000	614.019	614.058
	B1	4160.922	12.000	614.359	614.429
	C1	4170.922	12.000	614.699	614.786
	D1	4180.922	12.000	615.039	615.135
	E1	4190.922	12.000	615.379	615.457
	F1	4200.922	12.000	615.719	615.775
	G1	4210.922	12.000	616.059	616.094
	℄ Brg. Pier 1	4220.921	12.000	616.399	616.416
	H1	4230.920	12.000	616.739	616.760
	I1	4240.920	12.000	617.079	617.119
	J1	4250.920	12.000	617.419	617.471
	K1	4260.920	12.000	617.759	617.827
	L1	4270.920	12.000	618.099	618.169
	M1	4280.920	12.000	618.439	618.499
	N1	4290.920	12.000	618.779	618.822
	O1	4300.920	12.000	619.119	619.143
	℄ Brg. Pier 2	4310.919	12.000	619.459	619.475
	P1	4320.920	12.0000	619.799	619.823
	Q1	4330.920	12.0000	620.139	620.182
	R1	4340.920	12.0000	620.479	620.538
	S1	4350.920	12.0000	620.819	620.889
	T1	4360.920	12.0000	621.159	621.227
	U1	4370.920	12.0000	621.499	621.553
	V1	4380.920	12.0000	621.839	621.879
	W1	4390.920	12.0000	622.179	622.200
	℄ Brg. Pier 3	4400.919	12.0000	622.519	622.535
	X1	4410.920	12.000	622.859	622.892
	Y1	4420.920	12.000	623.199	623.257
	Z1	4430.920	12.000	623.539	623.622
	AA1	4440.920	12.000	623.879	623.978
	AB1	4450.920	12.000	624.219	624.333
	AC1	4460.920	12.000	624.559	624.690
	AD1	4470.920	12.000	624.899	624.940
	℄ S. Brg. Pier 4	4480.503	12.000	625.225	625.248
	℄ Pier 4	4481.753	12.000	625.268	625.281

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	Bk. So. Abut.	4138.630	8.875	613.650	613.650
	℄ Brg. So. Abut.	4140.922	8.875	613.728	613.728
	A1	4150.922	8.875	614.068	614.106
	B1	4160.922	8.875	614.408	614.476
	C1	4170.922	8.875	614.748	614.832
	D1	4180.922	8.875	615.088	615.178
	E1	4190.922	8.875	615.428	615.502
	F1	4200.922	8.875	615.768	615.818
	G1	4210.922	8.875	616.108	616.135
	℄ Brg. Pier 1	4220.921	8.875	616.448	616.457
	H1	4230.920	8.875	616.788	616.801
	I1	4240.920	8.875	617.128	617.160
	J1	4250.920	8.875	617.468	617.514
	K1	4260.920	8.875	617.808	617.868
	L1	4270.920	8.875	618.148	618.210
	M1	4280.920	8.875	618.488	618.540
	N1	4290.920	8.875	618.828	618.863
	O1	4300.920	8.875	619.168	619.184
	℄ Brg. Pier 2	4310.919	8.875	619.508	619.516
	P1	4320.920	8.875	619.848	619.864
	Q1	4330.920	8.875	620.188	620.223
	R1	4340.920	8.875	620.528	620.580
	S1	4350.920	8.875	620.868	620.930
	T1	4360.920	8.8	621.208	621.268
	U1	4370.920	8.875	621.548	621.594
	V1	4380.920	8.875	621.888	621.920
	W1	4390.920	8.875	622.228	622.241
	℄ Brg. Pier 3	4400.919	8.875	622.568	622.577
	X1	4410.920	8.875	622.908	622.933
	Y1	4420.920	8.875	623.248	623.298
	Z1	4430.920	8.875	623.588	623.663
	AA1	4440.920	8.875	623.928	624.020
	AB1	4450.920	8.875	624.268	624.357
	AC1	4460.920	8.875	624.608	624.681
	AD1	4470.920	8.875	624.948	624.992
	℄ S. Brg. Pier 4	4480.503	8.875	625.274	625.280
	℄ Pier 4	4481.753	8.875	625.316	625.322
	Bk. So. Abut.	4138.630	1.625	613.764	613.764
	℄ Brg. So. Abut.	4140.922	1.625	613.841	613.841
	A1	4150.922	1.625	614.181	614.218
	B1	4160.922	1.625	614.521	614.587
	C1	4170.923	1.625	614.861	614.941
	D1	4180.923	1.625	615.201	615.286
	E1	4190.922	1.625	615.541	615.609
	F1	4200.922	1.625	615.881	615.924
	G1	4210.922	1.625	616.221	616.240
	℄ Brg. Pier 1	4220.921	1.625	616.561	616.561
	H1	4230.920	1.625	616.901	616.906
	I1	4240.920	1.625	617.241	617.265
	J1	4250.920	1.625	617.581	617.619
	K1	4260.920	1.625	617.921	617.973
	L1	4270.920	1.625	618.261	618.315
	M1	4280.920	1.625	618.601	618.645
	N1	4290.920	1.625	618.941	618.988
	O1	4300.920	1.625	619.281	619.289
Girder 3	℄ Brg. Pier 2	4310.919	1.625	619.621	619.621
	P1	4320.920	1.625	619.961	619.969
	Q1	4330.920	1.625	620.301	620.328
	R1	4340.920	1.625	620.641	620.695
	S1	4350.920	1.625	620.981	621.035
	T1	4360.920	1.625	621.321	621.373
	U1	4370.920	1.625	621.661	621.699
	V1	4380.920	1.625	622.001	622.025
	W1	4390.920	1.625	622.341	622.348
	[illegible]	[illegible]	[illegible]	[illegible]	622.661
	X1	4410.920	1.625	623.021	623.039
	Y1	4420.920	1.625	623.361	623.404
	Z1	4430.920	1.625	623.701	623.[illegible]
	AA1	4440.920	1.625	624.041	624.[illegible]
	AB1	4450.920	1.625	624.381	624.461
	AC1	4460.920	1.625	624.721	624.767
	AD1	4470.920	1.625	625.061	625.095
	℄ S. Brg. Pier 4	4480.503	1.625	625.387	625.387
	℄ Pier 4	4481.753	1.625	625.430	625.430
	Bk. So. Abut.	4138.630	0.000	613.789	613.789
	℄ Brg. So. Abut.	4140.922	0.000	613.867	613.867
	A1	4150.922	0.000	614.207	614.244
	B1	4160.922	0.000	614.547	614.613
	C1	4170.922	0.000	614.887	614.967
	D1	4180.922	0.000	615.227	615.312
	E1	4190.922	0.000	615.567	615.635
	F1	4200.922	0.000	615.907	615.950
	G1	4210.922	0.000	616.247	616.266
℄ Roadway	℄ Brg. Pier 1	4220.921	0.000	616.587	616.587
	H1	4230.920	0.000	616.927	616.932
	I1	4240.920	0.000	617.267	617.291
	J1	4250.920	0.000	617.607	617.645
	K1	4260.920	0.000	617.947	617.999
	L1	4270.920	0.000	618.287	618.341
	M1	4280.920	0.000	618.627	618.671
	N1	4290.920	0.000	618.967	618.996
	O1	4300.920	0.000	619.307	619.316
	℄ Brg. Pier 2	4310.919	0.000	619.647	619.657

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	P1	4320.920	0.000	619.987	619.995
	Q1	4330.920	0.000	620.327	620.354
	R1	4340.920	0.000	620.667	620.711
	S1	4350.920	0.000	621.007	621.081
	T1	4360.920	0.000	621.347	621.399
	U1	4370.920	0.000	621.687	621.725
	V1	4380.920	0.000	622.027	622.051
	W1	4390.920	0.000	622.367	622.372
	℄ Brg. Pier 3	4400.919	0.000	622.707	622.707
	X1	4410.920	0.000	[illegible]	623.065
	Y1	4420.920	0.000	[illegible]	623.430
	Z1	4430.920	0.000	623.727	623.795
	AA1	4440.920	0.000	624.067	624.152
	AB1	4450.920	0.000	624.407	624.487
	AC1	4460.920	0.000	624.747	624.813
	AD1	4470.920	0.000	625.087	625.124
	℄ S. Brg. Pier 4	4480.503	0.000	625.413	625.413
	℄ Pier 4	4481.753	0.000	625.455	625.455
Girder 4	Bk. So. Abut.	4138.630	-5.625	613.701	613.701
	℄ Brg. So. Abut.	4140.922	-5.625	613.779	613.779
	A1	4150.922	-5.625	614.119	614.156
	B1	4160.922	-5.625	614.459	614.525
	C1	4170.922	-5.625	614.799	614.878
	D1	4180.922	-5.625	615.139	615.224
	E1	4190.922	-5.625	615.479	615.547
	F1	4200.922	-5.625	615.819	615.862
	G1	4210.922	-5.625	616.159	616.178
	℄ Brg. Pier 1	4220.921	-5.625	616.499	616.499
	H1	4230.920	-5.625	616.839	616.844
	I1	4240.920	-5.625	617.179	617.203
	J1	4250.920	-5.625	617.519	617.567
	K1	4260.920	-5.625	617.859	617.911
	L1	4270.920	-5.625	618.199	618.253
	M1	4280.920	-5.625	618.539	618.588
	N1	4290.920	-5.625	618.879	618.906
	O1	4300.920	-5.625	619.219	619.227
	℄ Brg. Pier 2	4310.919	-5.625	619.559	619.559
	P1	4320.920	-5.625	619.899	619.907
	Q1	4330.920	-5.625	620.239	620.266
	R1	4340.920	-5.625	620.579	620.628
	S1	4350.920	-5.625	620.919	620.979
	T1	4360.920	-5.625	621.259	621.311
	U1	4370.920	-5.625	621.599	621.637
	V1	4380.920	-5.625	621.939	621.963
	W1	4390.920	-5.625	622.279	622.284
	℄ Brg. Pier 3	4400.919	-5.625	622.619	622.619
	X1	4410.920	-5.625	622.959	622.977
	Y1	4420.920	-5.625	623.299	623.342
	Z1	4430.920	-5.625	623.639	623.707
	AA1	4440.920	-5.625	623.979	624.064
	AB1	4450.920	-5.625	624.319	624.399
	AC1	4460.920	-5.625	624.659	624.725
	AD1	4470.920	-5.625	624.999	625.036
	℄ S. Brg. Pier 4	4480.503	-5.625	625.325	625.325
	℄ Pier 4	4481.753	-5.625	625.367	625.367
Girder 5	Bk. So. Abut.	4138.630	-12.875	613.583	613.583
	℄ Brg. So. Abut.	4140.922	-12.875	613.661	613.661
	A1	4150.922	-12.875	614.001	614.039
	B1	4160.922	-12.875	614.341	614.409
	C1	4170.922	-12.875	614.681	614.765
	D1	4180.922	-12.875	615.021	615.111
	E1	4190.922	-12.875	615.361	615.436
	F1	4200.922	-12.875	615.701	615.761
	G1	4210.922	-12.875	616.041	616.068
	℄ Brg. Pier 1	4220.921	-12.875	616.381	616.380
	H1	4230.920	-12.875	616.721	616.734
	I1	4240.920	-12.875	617.061	617.092
	J1	4250.920	-12.875	617.401	617.447
	K1	4260.920	-12.875	617.741	617.801
	L1	4270.920	-12.875	618.081	618.169
	M1	4280.920	-12.875	618.421	618.473
	N1	4290.920	-12.875	618.761	618.796
	O1	4300.920	-12.875	619.101	619.117
	℄ Brg. Pier 2	4310.919	-12.875	[illegible]	619.449
	P1	4320.920	-12.875	619.781	619.797
	Q1	4330.920	-12.875	620.121	620.156
	R1	4340.920	-12.875	620.461	620.518
	S1	4350.920	-12.875	620.801	620.909
	T1	4360.920	-12.875	621.141	621.[illegible]
	U1	4370.920	-12.875	621.481	621.627
	V1	4380.920	-12.875	621.821	621.863
	W1	4390.920	-12.875	622.161	622.174
	℄ Brg. Pier 3	4400.919	-12.875	622.501	622.510
	X1	4410.920	-12.875	622.841	622.866
	Y1	4420.920	-12.875	623.181	623.221
	Z1	4430.920	-12.875	623.521	623.586
	AA1	4440.920	-12.875	623.861	623.953
	AB1	4450.920	-12.875	624.201	624.288
	AC1	4460.920	-12.875	624.541	624.616
	AD1	4470.920	-12.875	624.881	624.925
	℄ S. Brg. Pier 4	4480.503	-12.875	625.207	625.213
	℄ Pier 4	4481.753	-12.875	625.249	625.255

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	105
S.P.N. SEC. NO.	ILLINOIS	PROJECT		10 OF SHEETS

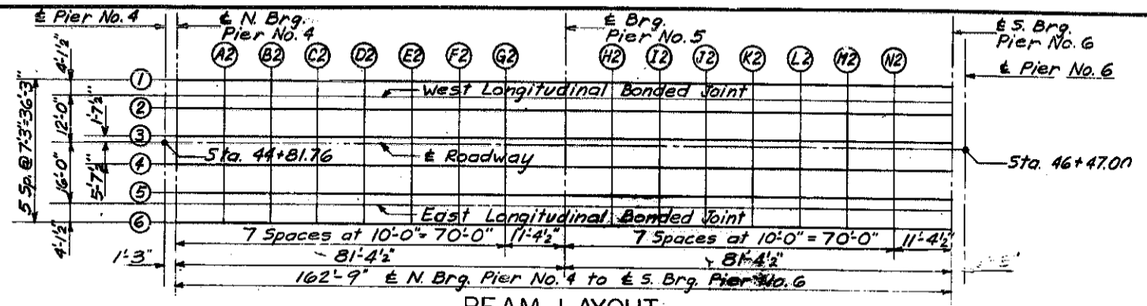
Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	Bk. So. Abut.	4138.630	-16.000	613.518	613.518
	℄ Brg. So. Abut.	4140.922	-16.000	613.596	613.596
	A1	4150.922	-16.000	613.936	613.976
	B1	4160.922	-16.000	614.276	614.346
	C1	4170.922	-16.000	614.616	614.703
	D1	4180.922	-16.000	614.956	615.050
	E1	4190.922	-16.000	615.296	615.374
	F1	4200.922	-16.000	615.636	615.692
	G1	4210.922	-16.000	615.976	616.011
	℄ Brg. Pier 1	4220.921	-16.000	616.316	616.333
	H1	4230.920	-16.000	616.656	616.677
	I1	4240.920	-16.000	616.996	617.036
	J1	4250.920	-16.000	617.336	617.390
	K1	4260.920	-16.000	617.676	617.738
	L1	4270.920	-16.000	618.016	618.086
	M1	4280.920	-16.000	618.356	618.416
	N1	4290.920	-16.000	618.696	618.739
	O1	4300.920	-16.000	619.036	619.060
	℄ Brg. Pier 2	4310.919	-16.000	619.376	619.392
	P1	4320.920	-16.000	619.716	619.740
	Q1	4330.920	-16.000	620.056	620.098
	R1	4340.920	-16.000	620.396	620.456
	S1	4350.920	-16.000	620.736	620.806
	T1	4360.920	-16.000	621.076	621.144
	U1	4370.920	-16.000	621.416	621.470
	V1	4380.920	-16.000	621.756	621.796
	W1	4390.920	-16.000	622.096	622.177
	℄ Brg. Pier 3	4400.919	-16.000	622.436	622.454
	X1	4410.920	-16.000	622.776	622.809
	Y1	4420.920	-16.000	623.116	623.168
	Z1	4430.920	-16.000	623.456	623.538
	AA1	4440.920	-16.000	623.796	623.898
	AB1	4450.920	-16.000	624.136	624.231
	AC1	4460.920	-16.000	624.476	624.557
	AD1	4470.920	-16.000	624.816	624.869
	℄ S. Brg. Pier 4	4480.503	-16.000	625.142	625.155
	℄ Pier 4	4481.753	-16.000	625.184	625.197
Girder 6	Bk. So. Abut.	4138.630	-20.125	613.432	613.432
	℄ Brg. So. Abut.	4140.922	-20.125	613.510	613.510
	A1	4150.922	-20.125	613.850	613.891
	B1	4160.922	-20.125	614.190	614.263
	C1	4170.922	-20.125	614.530	614.620
	D1	4180.922	-20.125	614.870	614.969
	E1	4190.922	-20.125	615.210	615.295
	F1	4200.922	-20.125	615.550	615.613
	G1	4210.922	-20.125	615.890	615.933
	℄ Brg. Pier 1	4220.921	-20.125	616.230	616.256
	H1	4230.920	-20.125	616.570	616.600
	I1	4240.920	-20.125	616.910	616.969
	J1	4250.920	-20.125	617.250	617.313
	K1	4260.920	-20.125	617.590	617.667
	L1	4270.920	-20.125	617.930	618.009
	M1	4280.920	-20.125	618.270	618.339
	N1	4290.920	-20.125	618.610	618.662
	O1	4300.920	-20.125	618.950	618.983
	℄ Brg. Pier 2	4310.919	-20.125	619.290	619.314
	P1	4320.920	-20.125	619.630	619.663
	Q1	4330.920	-20.125	619.970	620.022
	R1	4340.920	-20.125	620.310	620.359
	S1	4350.920	-20.125	620.650	620.729
	T1	4360.920	-20.125	620.990	621.087
	U1	4370.920	-20.125	621.330	621.384
	V1	4380.920	-20.125	621.670	621.719
	W1	4390.920	-20.125	622.010	622.044
	℄ Brg. Pier 3	4400.919	-20.125	622.350	622.376
	X1	4410.920	-20.125	622.690	622.731
	Y1	4420.920	-20.125	623.030	623.096
	Z1	4430.920	-20.125	623.370	623.451
	AA1	4440.920	-20.125	623.710	623.818
	AB1	4450.920	-20.125	624.050	624.153
	AC1	4460.920	-20.125	624.390	624.479
	AD1	4470.920	-20.125	624.730	624.790
	℄ S. Brg. Pier 4	4480.503	-20.125	625.056	625.078
	℄ Pier 4	4481.753	-20.125	625.098	625.117

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDER.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

TOP OF SLAB ELEVATIONS SPANS 1 TO 4

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B B R
COOK COUNTY
STATION 41+38.63



BEAM LAYOUT

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	106
D. P. R. REG. NO.		ILLINOIS PROJECT		

SHEET NO. 11
102 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 4	4481.760	16.125	625.182	625.201
	℄ Brg. Pier 4	4483.010	16.125	625.224	625.242
	A2	4493.010	16.125	625.564	625.617
	B2	4503.010	16.125	625.904	625.983
	C2	4513.010	16.125	626.244	626.335
	D2	4523.010	16.125	626.584	626.673
	E2	4533.010	16.125	626.924	626.999
	F2	4543.010	16.125	627.262	627.315
	G2	4553.010	16.125	627.593	627.627
	℄ Brg. Pier 5	4564.380	16.125	627.960	627.986
	H2	4574.380	16.125	628.274	628.304
	I2	4584.380	16.125	628.580	628.631
	J2	4594.380	16.125	628.879	628.951
	K2	4604.380	16.125	629.170	629.259
	L2	4614.380	16.125	629.453	629.544
	M2	4624.380	16.125	629.728	629.809
	N2	4634.380	16.125	629.996	630.056
	℄ Brg. Pier 6	4645.754	16.125	630.291	630.309
	℄ Pier 6	4647.004	16.125	630.323	630.643
West Long. Bonded Jt.	℄ Pier 4	4481.760	12.000	625.268	625.281
	℄ Brg. Pier 4	4483.010	12.000	625.310	625.322
	A2	4493.010	12.000	625.650	625.697
	B2	4503.010	12.000	625.990	626.068
	C2	4513.010	12.000	626.330	626.416
	D2	4523.010	12.000	626.670	626.763
	E2	4533.010	12.000	627.010	627.075
	F2	4543.010	12.000	627.348	627.395
	G2	4553.010	12.000	627.679	627.717
	℄ Brg. Pier 5	4564.380	12.000	628.046	628.062
	N2	4574.380	12.000	628.360	628.384
	I2	4584.380	12.000	628.666	628.711
	J2	4594.380	12.000	628.965	629.031
	K2	4604.380	12.000	629.256	629.339
	L2	4614.380	12.000	629.539	629.624
	M2	4624.380	12.000	629.814	629.899
	N2	4634.380	12.000	630.082	630.136
	℄ Brg. Pier 6	4645.754	12.000	630.377	630.389
	℄ Pier 6	4647.004	12.000	630.409	630.422
Girder 2	℄ Pier 4	4481.760	8.875	625.317	625.322
	℄ Brg. Pier 4	4483.010	8.875	625.359	625.364
	A2	4493.010	8.875	625.699	625.740
	B2	4503.010	8.875	626.039	626.106
	C2	4513.010	8.875	626.379	626.456
	D2	4523.010	8.875	626.719	626.786
	E2	4533.010	8.875	627.059	627.122
	F2	4543.010	8.875	627.397	627.438
	G2	4553.010	8.875	627.728	627.760
	℄ Brg. Pier 5	4564.380	8.875	628.095	628.109
	H2	4574.380	8.875	628.409	628.427
	I2	4584.380	8.875	628.715	628.754
	J2	4594.380	8.875	629.014	629.074
	K2	4604.380	8.875	629.305	629.362
	L2	4614.380	8.875	629.589	629.647
	M2	4624.380	8.875	629.863	629.932
	N2	4634.380	8.875	630.131	630.179
	℄ Brg. Pier 6	4645.754	8.875	630.426	630.432
	℄ Pier 6	4647.004	8.875	630.458	630.464

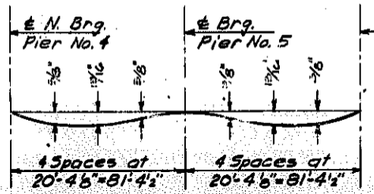
Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 3	℄ Pier 4	4481.760	1.625	625.430	625.490
	℄ Brg. Pier 4	4483.010	1.625	625.472	625.472
	A2	4493.010	1.625	625.812	625.844
	B2	4503.010	1.625	626.152	626.210
	C2	4513.010	1.625	626.492	626.562
	D2	4523.010	1.625	626.832	626.900
	E2	4533.010	1.625	627.172	627.226
	F2	4543.010	1.625	627.511	627.543
	G2	4553.010	1.625	627.841	627.854
	℄ Brg. Pier 5	4564.380	1.625	628.208	628.208
	H2	4574.380	1.625	628.522	628.531
	I2	4584.380	1.625	628.828	628.858
	J2	4594.380	1.625	629.127	629.178
	K2	4604.380	1.625	629.418	629.486
	L2	4614.380	1.625	629.701	629.771
	M2	4624.380	1.625	629.976	630.036
	N2	4634.380	1.625	630.244	630.269
	℄ Brg. Pier 6	4645.754	1.625	630.539	630.539
	℄ Pier 6	4647.004	1.625	630.571	630.571
℄ Roadway	℄ Pier 4	4481.760	0.000	625.455	625.455
	℄ Brg. Pier 4	4483.010	0.000	625.498	625.498
	A2	4493.010	0.000	625.838	625.870
	B2	4503.010	0.000	626.178	626.236
	C2	4513.010	0.000	626.518	626.588
	D2	4523.010	0.000	626.859	626.926
	E2	4533.010	0.000	627.196	627.252
	F2	4543.010	0.000	627.536	627.566
	G2	4553.010	0.000	627.867	627.880
	℄ Brg. Pier 5	4564.380	0.000	628.233	628.233
	H2	4574.380	0.000	628.547	628.556
	I2	4584.380	0.000	628.854	628.884
	J2	4594.380	0.000	629.152	629.203
	K2	4604.380	0.000	629.443	629.511
	L2	4614.380	0.000	629.726	629.798
	M2	4624.380	0.000	630.002	630.062
	N2	4634.380	0.000	630.269	630.308
	℄ Brg. Pier 6	4645.754	0.000	630.564	630.564
	℄ Pier 6	4647.004	0.000	630.596	630.596

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 4	℄ Pier 4	4481.760	-5.625	625.367	625.367
	℄ Brg. Pier 4	4483.010	-5.625	625.410	625.410
	A2	4493.010	-5.625	625.750	625.782
	B2	4503.010	-5.625	626.090	626.148
	C2	4513.010	-5.625	626.430	626.500
	D2	4523.010	-5.625	626.770	626.838
	E2	4533.010	-5.625	627.110	627.168
	F2	4543.010	-5.625	627.448	627.480
	G2	4553.010	-5.625	627.779	627.792
	℄ Brg. Pier 5	4564.380	-5.625	628.145	628.145
	H2	4574.380	-5.625	628.459	628.468
	I2	4584.380	-5.625	628.766	628.796
	J2	4594.380	-5.625	629.064	629.115
	K2	4604.380	-5.625	629.355	629.423
	L2	4614.380	-5.625	629.638	629.708
	M2	4624.380	-5.625	629.914	629.974
	N2	4634.380	-5.625	630.181	630.220
	℄ Brg. Pier 6	4645.754	-5.625	630.476	630.476
	℄ Pier 6	4647.004	-5.625	630.508	630.508
Girder 5	℄ Pier 4	4481.760	-12.875	625.250	625.256
	℄ Brg. Pier 4	4483.010	-12.875	625.292	625.298
	A2	4493.010	-12.875	625.632	625.673
	B2	4503.010	-12.875	625.972	626.039
	C2	4513.010	-12.875	626.312	626.391
	D2	4523.010	-12.875	626.652	626.729
	E2	4533.010	-12.875	626.992	627.055
	F2	4543.010	-12.875	627.330	627.371
	G2	4553.010	-12.875	627.661	627.683
	℄ Brg. Pier 5	4564.380	-12.875	628.028	628.036
	H2	4574.380	-12.875	628.342	628.360
	I2	4584.380	-12.875	628.648	628.687
	J2	4594.380	-12.875	628.947	629.007
	K2	4604.380	-12.875	629.238	629.315
	L2	4614.380	-12.875	629.521	629.600
	M2	4624.380	-12.875	629.796	629.865
	N2	4634.380	-12.875	630.064	630.112
	℄ Brg. Pier 6	4645.754	-12.875	630.359	630.364
	℄ Pier 6	4647.004	-12.875	630.390	630.396

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 4	4481.760	-16.000	625.185	625.198
	℄ Brg. Pier 4	4483.010	-16.000	625.227	625.239
	A2	4493.010	-16.000	625.567	625.614
	B2	4503.010	-16.000	625.907	625.980
	C2	4513.010	-16.000	626.247	626.332
	D2	4523.010	-16.000	626.587	626.670
	E2	4533.010	-16.000	626.927	626.996
	F2	4543.010	-16.000	627.265	627.310
	G2	4553.010	-16.000	627.596	627.624
	℄ Brg. Pier 5	4564.380	-16.000	627.953	627.979
	H2	4574.380	-16.000	628.277	628.301
	I2	4584.380	-16.000	628.593	628.628
	J2	4594.380	-16.000	628.862	628.948
	K2	4604.380	-16.000	629.172	629.255
	L2	4614.380	-16.000	629.456	629.541
	M2	4624.380	-16.000	629.731	629.816
	N2	4634.380	-16.000	629.999	630.059
	℄ Brg. Pier 6	4645.754	-16.000	630.294	630.308
	℄ Pier 6	4647.004	-16.000	630.325	630.338
Girder 6	℄ Pier 4	4481.760	-20.125	625.099	625.118
	℄ Brg. Pier 4	4483.010	-20.125	625.141	625.159
	A2	4493.010	-20.125	625.481	625.534
	B2	4503.010	-20.125	625.821	625.900
	C2	4513.010	-20.125	626.161	626.252
	D2	4523.010	-20.125	626.501	626.590
	E2	4533.010	-20.125	626.841	626.916
	F2	4543.010	-20.125	627.179	627.232
	G2	4553.010	-20.125	627.510	627.544
	℄ Brg. Pier 5	4564.380	-20.125	627.877	627.903
	H2	4574.380	-20.125	628.191	628.221
	I2	4584.380	-20.125	628.497	628.548
	J2	4594.380	-20.125	628.796	628.868
	K2	4604 380	-20.125	629.086	629.175
	L2	4614.380	-20.125	629.370	629.461
	M2	4624.380	-20.125	629.645	629.726
	N2	4634.380	-20.125	629.913	629.973
	℄ Brg. Pier 6	4645.754	-20.125	630.208	630.226
	℄ Pier 6	4647.004	-20.125	630.239	630.259

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

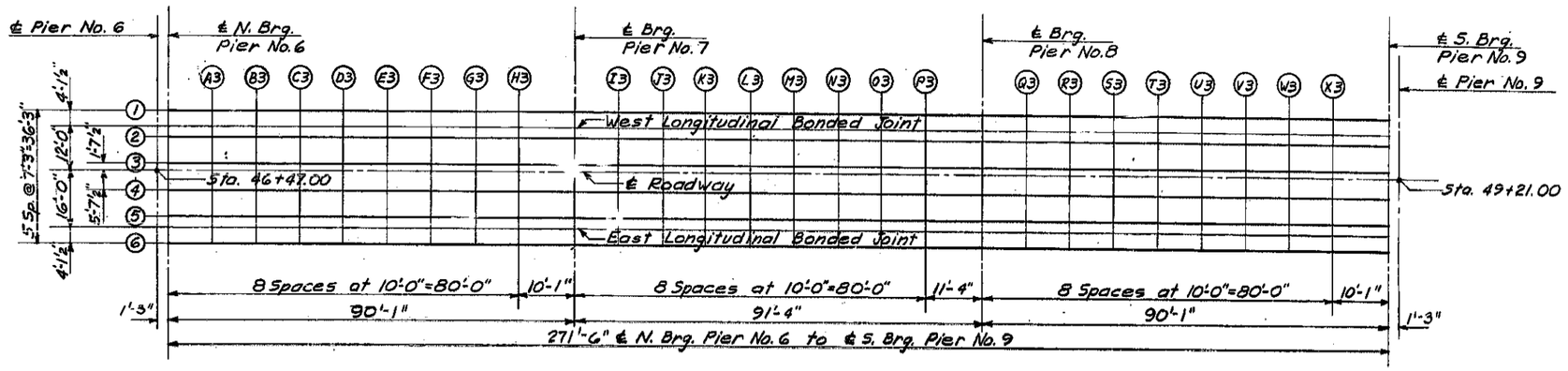
DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB LAYOUT & ELEVATIONS
SPANS 5 TO 6

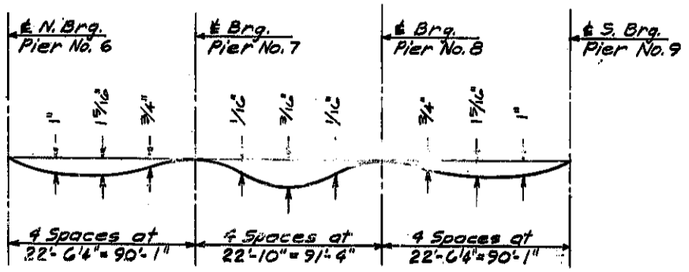
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FAP Rte.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K B&R	COOK	223	107
I. D. P. R. ENG. DIV.		ILLINOIS PROJECT		

SHEET NO. 12
102 SHEETS



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders.)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

N

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 7 TO 9

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.P. Rte. No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K 462R	COOK	223	108
S. P. R. PTG. NO.	ILLINOIS	PROJECT		

SHEET NO.13
102 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 6	4647.000	16.125	630.323	630.643
	℄ Brg. Pier 6	4648.250	16.125	630.354	630.375
	A3	4658.250	16.125	630.603	630.670
	B3	4668.250	16.125	630.845	630.948
	C3	4678.250	16.125	631.078	631.204
	D3	4688.250	16.125	631.304	631.439
	E3	4698.250	16.125	631.522	631.649
	F3	4708.250	16.125	631.733	631.838
	G3	4718.250	16.125	631.935	632.012
	H3	4728.250	16.125	632.130	632.176
	℄ Brg. Pier 7	4738.340	16.125	632.319	632.384
	J3	4748.340	16.125	632.498	632.516
	K3	4758.340	16.125	632.670	632.694
	L3	4768.340	16.125	632.834	632.868
	M3	4778.340	16.125	632.990	633.028
	N3	4788.340	16.125	633.138	633.179
	P3	4798.340	16.125	633.279	633.315
	Q3	4808.340	16.125	633.412	633.436
	R3	4818.340	16.125	633.537	633.555
	℄ Brg. Pier 8	4829.670	16.125	633.669	633.694
	Q3	4839.670	16.125	633.777	633.823
	R3	4849.670	16.125	633.878	633.955
	S3	4859.670	16.125	633.971	634.077
	T3	4869.670	16.125	634.057	634.195
	U3	4879.670	16.125	634.136	634.289
	V3	4889.670	16.125	634.206	634.330
	W3	4899.670	16.125	634.268	634.369
	X3	4909.670	16.125	634.320	634.387
	℄ Brg. Pier 9	4919.752	16.125	634.367	634.388
	℄ Pier 9	4921.002	16.125	634.372	634.393
West Long. Bonded Jt.	℄ Pier 6	4647.000	12.000	630.409	630.422
	℄ Brg. Pier 6	4648.250	12.000	630.440	630.454
	A3	4658.250	12.000	630.689	630.788
	B3	4668.250	12.000	630.931	631.026
	C3	4678.250	12.000	631.164	631.262
	D3	4688.250	12.000	631.390	631.517
	E3	4698.250	12.000	631.608	631.727
	F3	4708.250	12.000	631.819	631.917
	G3	4718.250	12.000	632.021	632.090
	H3	4728.250	12.000	632.216	632.244
	℄ Brg. Pier 7	4738.340	12.000	632.405	632.421
	J3	4748.340	12.000	632.584	632.598
	K3	4758.340	12.000	632.756	632.771
	L3	4768.340	12.000	632.920	632.945
	M3	4778.340	12.000	633.076	633.107
	N3	4788.340	12.000	633.224	633.256
	P3	4798.340	12.000	633.365	633.391
	Q3	4808.340	12.000	633.498	633.518
	R3	4818.340	12.000	633.623	633.632
	℄ Brg. Pier 8	4829.670	12.000	633.755	633.771
	Q3	4839.670	12.000	633.863	633.901
	R3	4849.670	12.000	633.964	634.038
	S3	4859.670	12.000	634.057	634.155
	T3	4869.670	12.000	634.143	634.273
	U3	4879.670	12.000	634.220	634.347
	V3	4889.670	12.000	634.290	634.408
	W3	4899.670	12.000	634.352	634.447
	X3	4909.670	12.000	634.406	634.465
	℄ Brg. Pier 9	4919.752	12.000	634.453	634.467
	℄ Pier 9	4921.002	12.000	634.458	634.472

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 6	4647.000	8.875	630.457	630.463
	℄ Brg. Pier 6	4648.250	8.875	630.489	630.496
	A3	4658.250	8.875	630.738	630.790
	B3	4668.250	8.875	630.980	631.068
	C3	4678.250	8.875	631.213	631.324
	D3	4688.250	8.875	631.439	631.559
	E3	4698.250	8.875	631.657	631.769
	F3	4708.250	8.875	631.868	631.959
	G3	4718.250	8.875	632.070	632.132
	H3	4728.250	8.875	632.265	632.286
	℄ Brg. Pier 7	4738.340	8.875	632.454	632.462
	J3	4748.340	8.875	632.633	632.634
	K3	4758.340	8.875	632.805	632.812
	L3	4768.340	8.875	632.969	632.986
	M3	4778.340	8.875	633.125	633.148
	N3	4788.340	8.875	13.275	633.297
	P3	4798.340	8.875	3.414	633.432
	Q3	4808.340	8.875	633.546	633.553
	R3	4818.340	8.875	633.671	633.672
	℄ Brg. Pier 8	4829.670	8.875	633.804	633.812
	Q3	4839.670	8.875	633.912	633.943
	R3	4849.670	8.875	634.013	634.075
	S3	4859.670	8.875	634.106	634.197
	T3	4869.670	8.875	634.191	634.304
	U3	4879.670	8.875	634.269	634.388
	V3	4889.670	8.875	634.339	634.450
	W3	4899.670	8.875	634.401	634.489
	X3	4909.670	8.875	634.455	634.507
	℄ Brg. Pier 9	4919.752	8.875	634.502	634.509
	℄ Pier 9	4921.002	8.875	634.507	634.514
Girder 3	℄ Pier 6	4647.000	1.625	630.571	630.571
	℄ Brg. Pier 6	4648.250	1.625	630.602	630.602
	A3	4658.250	1.625	630.851	630.895
	B3	4668.250	1.625	631.093	631.173
	C3	4678.250	1.625	631.327	631.430
	D3	4688.250	1.625	631.553	631.664
	E3	4698.250	1.625	631.771	631.876
	F3	4708.250	1.625	631.981	632.064
	G3	4718.250	1.625	632.184	632.238
	H3	4728.250	1.625	632.378	632.401
	℄ Brg. Pier 7	4738.340	1.625	632.567	632.567
	J3	4748.340	1.625	632.746	632.739
	K3	4758.340	1.625	632.918	632.917
	L3	4768.340	1.625	633.082	633.081
	M3	4778.340	1.625	633.238	633.253
	N3	4788.340	1.625	633.386	633.402
	P3	4798.340	1.625	633.527	633.537
	Q3	4808.340	1.625	633.660	633.659
	R3	4818.340	1.625	633.785	633.778
	℄ Brg. Pier 8	4829.670	1.625	633.917	633.917
	Q3	4839.670	1.625	634.026	634.049
	R3	4849.670	1.625	634.126	634.180
	S3	4859.670	1.625	634.219	634.302
	T3	4869.670	1.625	634.305	634.410
	U3	[illegible]	1.625	[illegible]	[illegible]
	V3	[illegible]	1.625	634.452	634.555
	W3	4899.670	1.625	634.514	634.594
	X3	4909.670	1.625	634.568	634.612
	℄ Brg. Pier 9	4919.752	1.625	634.615	634.615
	℄ Pier 9	4921.002	1.625	634.620	634.620
℄ Roadway	℄ Pier 6	4647.000	0.000	630.546	630.546
	℄ Brg. Pier 6	4648.250	0.000	630.628	630.628
	A3	4658.250	0.000	630.877	630.921
	B3	4668.250	0.000	631.118	631.188
	C3	4678.250	0.000	631.352	631.455
	D3	4688.250	0.000	631.578	631.680
	E3	4698.250	0.000	631.796	631.900
	F3	4708.250	0.000	632.000	632.089
	G3	4718.250	0.000	632.209	632.266
	H3	4728.250	0.000	632.404	632.427
	℄ Brg. Pier 7	4738.340	0.000	632.592	632.592

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	J3	4748.340	0.000	632.772	632.765
	K3	4758.340	0.000	632.943	632.942
	L3	4768.340	0.000	633.107	633.116
	M3	4778.340	0.000	633.263	633.278
	N3	4788.340	0.000	633.412	633.428
	P3	4798.340	0.000	633.552	633.562
	Q3	4808.340	0.000	633.685	633.684
	R3	4818.340	0.000	633.810	633.803
	℄ Brg. Pier 8	4829.670	0.000	633.942	633.942
	Q3	4839.670	0.000	634.051	634.074
	R3	4849.670	0.000	634.152	634.206
	S3	4859.670	0.000	634.245	634.326
	T3	4869.670	0.000	634.330	634.435
	U3	4879.670	0.000	634.408	634.520
	V3	4889.670	0.000	634.477	634.580
	W3	4899.670	0.000	634.539	634.619
	X3	4909.670	0.000	634.594	634.638
	℄ Brg. Pier 9	4919.752	0.000	634.641	634.641
	℄ Pier 9	4921.002	0.000	634.646	634.646
Beam 4	℄ Pier 6	4647.000	-5.625	630.508	630.508
	℄ Brg. Pier 6	4648.250	-5.625	630.540	630.540
	A3	4658.250	-5.625	630.789	630.833
	B3	4668.250	-5.625	631.030	631.110
	C3	4678.250	-5.625	631.264	631.367
	D3	4688.250	-5.625	631.490	631.602
	E3	4698.250	-5.625	631.708	631.812
	F3	4708.250	-5.625	631.918	632.001
	G3	4718.250	-5.625	632.121	632.175
	H3	4728.250	-5.625	632.316	632.339
	℄ Brg. Pier 7	4738.340	-5.625	632.505	632.505
	J3	4748.340	-5.625	632.684	632.677
	K3	4758.340	-5.625	632.856	632.855
	L3	4768.340	-5.625	633.019	633.028
	M3	4778.340	-5.625	633.175	633.190
	N3	4788.340	-5.625	633.324	633.340
	P3	4798.340	-5.625	633.464	633.474
	Q3	4808.340	-5.625	633.597	633.596
	R3	4818.340	-5.625	633.722	633.715
	℄ Brg. Pier 8	4829.670	-5.625	633.855	633.855
	Q3	4839.670	-5.625	633.965	633.986
	R3	4849.670	-5.625	634.066	634.118
	S3	4859.670	-5.625	634.157	634.240
	T3	4869.670	-5.625	634.242	634.347
	U3	4879.670	-5.625	634.320	634.432
	V3	4889.670	-5.625	634.389	634.492
	W3	4899.670	-5.625	634.451	634.531
	X3	4909.670	-5.625	634.506	634.550
	℄ Brg. Pier 9	4919.752	-5.625	634.553	634.553
	℄ Pier 9	4921.002	-5.625	634.558	634.558
Girder 5	℄ Pier 6	4647.000	-12.875	630.590	630.595
	℄ Brg. Pier 6	4648.250	-12.875	630.422	630.429
	A3	4658.250	-12.875	630.671	630.723
	B3	4668.250	-12.875	630.913	631.001
	C3	4678.250	-12.875	631.146	631.257
	D3	4688.250	-12.875	631.372	631.492
	E3	4698.250	-12.875	631.590	631.702
	F3	4708.250	-12.875	631.801	631.892
	G3	4718.250	-12.875	632.003	632.065
	H3	4728.250	-12.875	632.198	632.229
	℄ Brg. Pier 7	4738.340	-12.875	632.387	632.396
	J3	4748.340	-12.875	632.566	632.567
	K3	4758.340	-12.875	632.738	632.798
	L3	4768.340	-12.875	632.902	632.919
	M3	4778.340	-12.875	633.058	633.081
	N3	[illegible]	-12.875	633.206	633.230
	P3	4798.340	-12.875	633.348	633.364
	Q3	4808.340	-12.875	633.479	633.488
	R3	[illegible]	-12.875	633.606	[illegible]
	℄ Brg. Pier 8	4829.670	-12.875	633.737	633.745
	Q3	4839.670	-12.875	633.845	633.876
	R3	4849.670	-12.875	633.946	634.008
	S3	4859.670	-12.875	634.039	634.130
	T3	4869.670	-12.875	634.124	634.237
	U3	4879.670	-12.875	634.202	634.322
	V3	4889.670	-12.875	634.272	634.385
	W3	4899.670	-12.875	634.334	634.422
	X3	4909.670	-12.875	634.388	634.440
	℄ Brg. Pier 9	4919.752	-12.875	634.435	634.442
	℄ Pier 9	492 .002	-12.875	634.440	634.447

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 6	4647.000	-16.000	630.325	630.338
	℄ Brg. Pier 6	4648.250	-16.000	630.357	630.371
	A3	4658.250	-16.000	630.606	630.665
	B3	4668.250	-16.000	630.847	630.942
	C3	4678.250	-16.000	631.081	631.199
	D3	4688.250	-16.000	631.307	631.434
	E3	4698.250	-16.000	631.525	631.644
	F3	4708.250	-16.000	631.735	631.833
	G3	4718.250	-16.000	631.938	632.007
	H3	4728.250	-16.000	632.133	632.171
	℄ Brg. Pier 7	4738.340	-16.000	632.322	632.338
	J3	4748.340	-16.000	632.501	632.510
	K3	4758.340	-16.000	632.673	632.688
	L3	4768.340	-16.000	632.836	632.861
	M3	4778.340	-16.000	632.992	633.023
	N3	4788.340	-16.000	633.141	633.173
	P3	4798.340	-16.000	633.281	633.307
	Q3	4808.340	-16.000	633.414	633.429
	R3	4818.340	-16.000	633.539	633.548
	℄ Brg. Pier 8	4829.670	-16.000	633.672	633.688
	Q3	4839.670	-16.000	633.780	633.818
	R3	4849.670	-16.000	633.881	633.950
	S3	4859.670	-16.000	633.974	634.072
	T3	4869.670	-16.000	634.059	634.179
	U3	4879.670	-16.000	634.137	634.264
	V3	4889.670	-16.000	634.207	634.325
	W3	4899.670	-16.000	634.269	634.363
	X3	4909.670	-16.000	634.323	634.382
	℄ Brg. Pier 9	4919.752	-16.000	634.370	634.389
	℄ Pier 9	4921.002	-16.000	634.375	634.389
Girder 6	℄ Pier 6	4647.000	-20.125	630.239	630.258
	℄ Brg. Pier 6	4648.250	-20.125	630.271	630.292
	A3	4658.250	-20.125	630.520	630.587
	B3	4668.250	-20.125	630.761	630.864
	C3	4678.250	-20.125	630.995	631.111
	D3	4688.250	-20.125	631.221	631.356
	E3	4698.250	-20.125	631.439	631.546
	F3	4708.250	-20.125	631.650	631.756
	G3	4718.250	-20.125	631.852	631.929
	H3	4728.250	-20.125	632.047	632.093
	℄ Brg. Pier 7	4738.340	-20.125	632.236	632.261
	J3	4748.340	-20.125	632.415	632.433
	K3	4758.340	-20.125	632.587	632.611
	L3	4768.340	-20.125	632.750	632.784
	M3	4778.340	-20.125	632.907	632.947
	N3	4788.340	-20.125	633.055	633.096
	P3	4798.340	-20.125	633.195	633.230
	Q3	4808.340	-20.125	633.326	633.352
	R3	4818.340	-20.125	633.453	633.471
	℄ Brg. Pier 8	4829.670	-20.125	633.586	633.611
	Q3	4839.670	-20.125	633.694	633.740
	R3	4849.670	-20.125	633.795	633.872
	S3	4859.670	-20.125	633.888	633.984
	T3	4869.670	-20.125	633.973	634.101
	U3	4879.670	-20.125	634.051	634.186
	V3	4889.670	-20.125	634.121	634.247
	W3	4899.670	-20.125	634.183	634.287
	X3	4909.670	-20.125	634.237	634.304
	℄ Brg. Pier 9	4919.752	-20.125	634.284	634.305
	℄ Pier 9	4921.002	-20.125	634.289	634.310

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

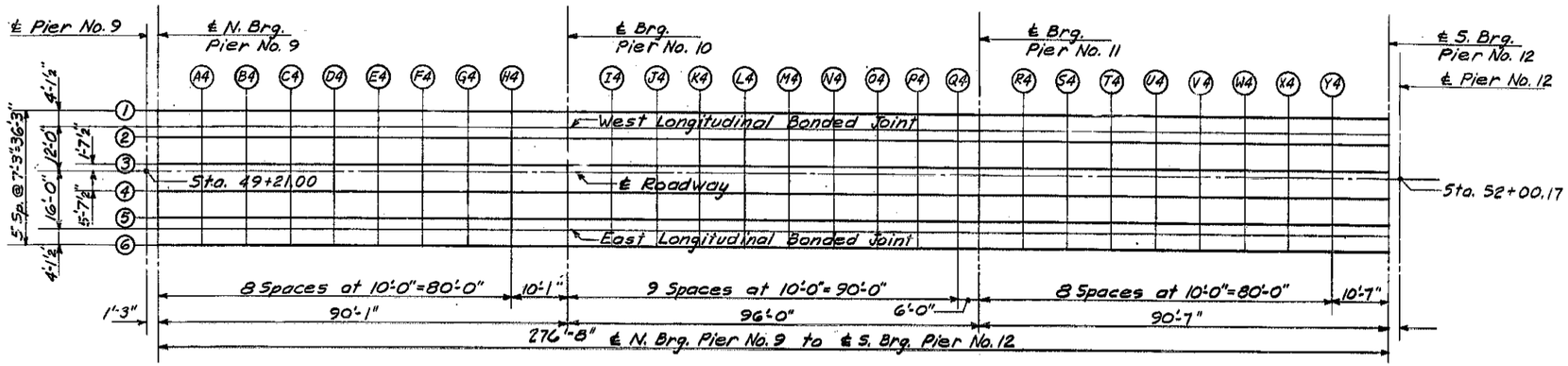
DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATIONS
SPANS 7 TO 9

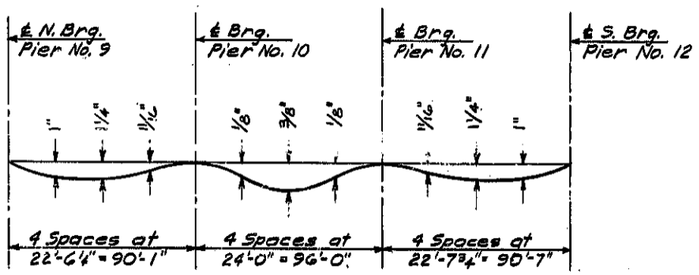
LA GRANGE RD F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.I. Rte. No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	109
E. P. & R. Sec. No.	ILLINOIS	PROJECT		

SHEET NO. 14
102 SHEETS



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of Cross girders).

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

N

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 10 TO 12

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.S. RTE. AND SEC. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X 88R	COOK	229	110
S. F. A. P. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 15
108 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 9	4921.000	16.125	634.372	634.393
	℄ Brg. Pier 9	4922.250	16.125	634.377	634.398
	A4	4932.250	16.125	634.414	634.379
	B4	4942.250	16.125	634.445	634.544
	C4	4952.250	16.125	634.475	634.596
	D4	4962.250	16.125	634.505	634.634
	E4	4972.250	16.125	634.535	634.655
	F4	4982.250	16.125	634.565	634.665
	G4	4992.250	16.125	634.595	634.667
	H4	5002.250	16.125	634.625	634.668
	℄ Brg. Pier 10	5012.340	16.125	634.655	634.680
	J4	5022.340	16.125	634.685	634.705
	J4	5032.340	16.125	634.715	634.745
	K4	5042.340	16.125	634.745	634.791
	L4	5052.340	16.125	634.775	634.831
	M4	5062.340	16.125	634.805	634.883
	N4	5072.340	16.125	634.835	634.887
	P4	5082.340	16.125	634.865	634.905
	R4	5092.340	16.125	634.895	634.922
	Q4	5102.340	16.125	634.925	634.946
	℄ Brg. Pier 11	5108.340	16.125	634.943	634.968
	R4	5118.340	16.125	634.973	635.015
	S4	5128.340	16.125	635.003	635.074
	T4	5138.340	16.125	635.033	635.133
	U4	5148.340	16.125	635.063	635.183
	V4	5158.340	16.125	635.093	635.222
	W4	5168.340	16.125	635.123	635.245
	X4	5178.340	16.125	635.153	635.254
	Y4	5188.340	16.125	635.183	635.250
	℄ Brg. Pier 12	5198.923	16.125	635.216	635.237
	℄ Pier 12	5200.173	16.125	635.219	635.240
West Long. Bonded Jt.	℄ Pier 9	4921.000	12.000	634.458	634.472
	℄ Brg. Pier 9	4922.250	12.000	634.483	634.477
	A4	4932.250	12.000	634.500	634.557
	B4	4942.250	12.000	634.531	634.622
	C4	4952.250	12.000	634.561	634.674
	D4	4962.250	12.000	634.591	634.713
	E4	4972.250	12.000	634.621	634.736
	F4	4982.250	12.000	634.651	634.743
	G4	4992.250	12.000	634.681	634.745
	H4	5002.250	12.000	634.711	634.746
	℄ Brg. Pier 10	5012.340	12.000	634.741	634.756
	J4	5022.340	12.000	634.771	634.788
	J4	5032.340	12.000	634.801	634.823
	K4	5042.340	12.000	634.831	634.867
	L4	5052.340	12.000	634.861	634.907
	M4	5062.340	12.000	634.891	634.939
	N4	5072.340	12.000	634.921	634.963
	P4	5082.340	12.000	634.951	634.981
	R4	5092.340	12.000	634.981	634.998
	Q4	5102.340	12.000	635.011	635.022
	℄ Brg. Pier 11	5108.340	12.000	635.029	635.044
	R4	5118.340	12.000	635.059	635.093
	S4	5128.340	12.000	635.089	635.152
	T4	5138.340	12.000	635.119	635.211
	U4	5148.340	12.000	635.149	635.261
	V4	5158.340	12.000	635.179	635.300
	W4	5168.340	12.000	635.209	635.323
	X4	5178.340	12.000	635.239	635.333
	Y4	5188.340	12.000	635.268	635.328
	℄ Brg. Pier 12	5198.923	12.000	635.302	635.316
	℄ Pier 12	5200.173	12.000	635.305	635.316

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 9	4921.000	8.875	634.507	634.514
	℄ Brg. Pier 9	4922.250	8.875	634.512	634.519
	A4	4932.250	8.875	634.549	634.599
	B4	4942.250	8.875	634.580	634.664
	C4	4952.250	8.875	634.610	634.716
	D4	4962.250	8.875	634.640	634.754
	E4	4972.250	8.875	634.670	634.777
	F4	4982.250	8.875	634.700	634.785
	G4	4992.250	8.875	634.730	634.787
	H4	5002.250	8.875	634.760	634.788
	℄ Brg. Pier 10	5012.340	8.875	634.790	634.798
	J4	5022.340	8.875	634.820	634.825
	J4	5032.340	8.875	634.850	634.865
	K4	5042.340	8.875	634.880	634.909
	L4	5052.340	8.875	634.910	634.949
	M4	5062.340	8.875	634.940	634.981
	N4	5072.340	8.875	634.970	635.025
	P4	5082.340	8.875	635.000	635.023
	R4	5092.340	8.875	635.030	635.040
	Q4	5102.340	8.875	635.060	635.064
	℄ Brg. Pier 11	5108.340	8.875	635.078	635.086
	R4	5118.340	8.875	635.108	635.135
	S4	5128.340	8.875	635.138	635.194
	T4	5138.340	8.875	635.168	635.253
	U4	5148.340	8.875	635.198	635.303
	V4	5158.340	8.875	635.228	635.342
	W4	5168.340	8.875	635.258	635.365
	X4	5178.340	8.875	635.288	635.374
	Y4	5188.340	8.875	635.318	635.370
	℄ Brg. Pier 12	5198.923	8.875	635.350	635.358
	℄ Pier 12	5200.173	8.875	635.354	635.360
Girder 3	℄ Pier 9	4921.000	1.625	634.620	634.620
	℄ Brg. Pier 9	4922.250	1.625	634.626	634.626
	A4	4932.250	1.625	634.662	634.704
	B4	4942.250	1.625	634.699	634.769
	C4	4952.250	1.625	634.723	634.821
	D4	4962.250	1.625	634.753	634.859
	E4	4972.250	1.625	634.783	634.882
	F4	4982.250	1.625	634.813	634.890
	G4	4992.250	1.625	634.843	634.892
	H4	5002.250	1.625	634.873	634.893
	℄ Brg. Pier 10	5012.340	1.625	634.903	634.909
	J4	5022.340	1.625	634.933	634.930
	J4	5032.340	1.625	634.963	634.970
	K4	5042.340	1.625	634.993	635.014
	L4	5052.340	1.625	635.023	635.054
	M4	5062.340	1.625	635.053	635.086
	N4	5072.340	1.625	635.083	635.110
	P4	5082.340	1.625	635.113	635.128
	R4	5092.340	1.625	635.143	635.145
	Q4	5102.340	1.625	635.173	635.169
	℄ Brg. Pier 11	5108.340	1.625	635.191	635.191
	R4	5118.340	1.625	635.221	635.240
	S4	[illegible]	[illegible]	[illegible]	[illegible]
	T4	[illegible]	[illegible]	[illegible]	[illegible]
	U4	5148.340	1.625	635.311	635.408
	V4	5158.340	1.625	635.341	635.447
	W4	5168.340	1.625	635.371	635.470
	X4	5178.340	1.625	635.401	635.470
	Y4	5188.340	1.625	635.431	635.476
	℄ Brg. Pier 12	5198.923	1.625	635.463	635.468
	℄ Pier 12	5200.173	1.625	635.467	635.467
℄ Roadway	℄ Pier 9	4921.000	0.000	634.646	634.646
	℄ Brg. Pier 9	4922.250	0.000	634.651	634.651
	A4	4932.250	0.000	634.688	634.730
	B4	4942.250	0.000	634.718	634.794
	C4	4952.250	0.000	634.748	634.846
	D4	4962.250	0.000	634.778	634.876
	E4	4972.250	0.000	634.808	634.907
	F4	4982.250	0.000	634.838	634.915
	G4	4992.250	0.000	634.868	634.917
	H4	5002.250	0.000	634.898	634.918
	℄ Brg. Pier 10	5012.340	0.000	634.929	634.929

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	J4	5022.340	0.000	634.959	634.956
	J4	5032.340	0.000	634.989	634.996
	K4	5042.340	0.000	635.019	635.040
	L4	5052.340	0.000	635.049	635.080
	M4	5062.340	0.000	635.079	635.112
	N4	5072.340	0.000	635.109	635.136
	P4	5082.340	0.000	635.139	635.154
	R4	5092.340	0.000	635.169	635.171
	Q4	5102.340	0.000	635.199	635.195
	℄ Brg. Pier 11	5108.340	0.000	635.217	635.217
	R4	5118.340	0.000	635.247	635.266
	S4	5128.340	0.000	635.277	635.326
	T4	5138.340	0.000	635.307	635.384
	U4	5148.340	0.000	635.337	635.434
	V4	5158.340	0.000	635.367	635.473
	W4	5168.340	0.000	635.397	635.496
	X4	5178.340	0.000	635.427	635.505
	Y4	5188.340	0.000	635.457	635.501
	℄ Brg. Pier 12	5198.923	0.000	635.489	635.489
	℄ Pier 12	5200.173	0.000	635.492	635.492
Girder 4	℄ Pier 9	4921.000	-9.625	634.558	634.558
	℄ Brg. Pier 9	4922.250	-9.625	634.563	634.563
	A4	4932.250	-9.625	634.600	634.642
	B4	4942.250	-9.625	634.630	634.706
	C4	4952.250	-9.625	634.660	634.758
	D4	4962.250	-9.625	634.690	634.798
	E4	4972.250	-9.625	634.720	634.819
	F4	4982.250	-9.625	634.750	634.827
	G4	4992.250	-9.625	634.780	634.829
	H4	5002.250	-9.625	634.810	634.830
	℄ Brg. Pier 10	5012.340	-9.625	634.841	634.841
	J4	5022.340	-9.625	634.871	634.868
	J4	5032.340	-9.625	634.901	634.908
	K4	5042.340	-9.625	634.931	634.952
	L4	5052.340	-9.625	634.961	634.992
	M4	5062.340	-9.625	634.991	635.024
	N4	5072.340	-9.625	635.021	635.048
	P4	5082.340	-9.625	635.051	635.066
	R4	5092.340	-9.625	635.081	635.083
	Q4	5102.340	-9.625	635.111	635.107
	℄ Brg. Pier 11	5108.340	-9.625	635.129	635.129
	R4	5118.340	-9.625	635.159	635.178
	S4	5128.340	-9.625	635.189	635.237
	T4	5138.340	-9.625	635.219	635.296
	U4	5148.340	-9.625	635.249	635.346
	V4	5158.340	-9.625	635.279	635.385
	W4	5168.340	-9.625	635.309	635.408
	X4	5178.340	-9.625	635.339	635.417
	Y4	5188.340	-9.625	635.369	635.413
	℄ Brg. Pier 12	5198.923	-9.625	635.401	635.401
	℄ Pier 12	5200.173	-9.625	635.405	635.405
Girder 5	℄ Pier 9	4921.000	-12.875	634.440	634.447
	℄ Brg. Pier 9	4922.250	-12.875	634.445	634.452
	A4	4932.250	-12.875	634.482	634.532
	B4	4942.250	-12.875	634.513	634.607
	C4	4952.250	-12.875	634.543	634.698
	D4	4962.250	-12.875	634.573	634.667
	E4	4972.250	-12.875	634.603	634.710
	F4	4982.250	-12.875	634.633	634.718
	G4	4992.250	-12.875	634.663	634.720
	H4	5002.250	-12.875	634.693	634.721
	℄ Brg. Pier 10	5012.340	-12.875	634.723	634.731
	J4	5022.340	-12.875	634.754	634.758
	J4	5032.340	-12.875	634.788	634.798
	K4	5042.340	-12.875	634.8[illegible]	634.[illegible]
	L4	5052.340	-12.875	634.[illegible]	634.882
	M4	5062.340	-12.875	634.873	634.916
	N4	5072.340	-12.875	634.903	634.938
	P4	5082.340	-12.875	634.933	634.956
	R4	5092.340	-12.875	634.963	634.973
	Q4	5102.340	-12.875	634 993	634.987
	℄ Brg. Pier 11	5108.340	-12.875	635.011	635.011
	R4	5118.340	-12.875	635.041	635.068
	S4	5128.340	-12.875	635.071	635.127
	T4	5138.340	-12.875	635.101	635.186
	U4	5148.340	-12.875	635.131	635.236
	V4	5158.340	-12.875	635.161	635.275
	W4	5168.340	-12.875	635.191	635.298
	X4	5178.340	-12.875	635.221	635.307
	Y4	5188.340	-12.875	635.251	635.303
	℄ Brg. Pier 12	5198.923	-12.875	635.283	635.286
	℄ Pier 12	5200.173	-12.875	635.287	635.286

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 9	4921.000	-16.000	634.375	634.399
	℄ Brg. Pier 9	4922.250	-16.000	634.380	634.394
	A4	4932.250	-16.000	634.417	634.474
	B4	4942.250	-16.000	634.447	634.538
	C4	4952.250	-16.000	634.477	634.590
	D4	4962.250	-16.000	634.507	634.628
	E4	4972.250	-16.000	634.537	634.651
	F4	4982.250	-16.000	634.567	634.659
	G4	4992.250	-16.000	634.597	634.661
	H4	5002.250	-16.000	634.627	634.662
	℄ Brg. Pier 10	5012.340	-16.000	634.658	634.673
	J4	5022.340	-16.000	634.688	634.700
	J4	5032.340	-16.000	634.718	634.[illegible]0
	K4	5042.340	-16.000	634.748	634.784
	L4	5052.340	-16.000	634.778	634.824
	M4	5062.340	-16.000	634.809	634.866
	N4	5072.340	-16.000	634.838	634.880
	P4	5082.340	-16.000	634.868	634.898
	R4	5092.340	-16.000	634.898	634.915
	Q4	5102.340	-16.000	634.928	634.939
	℄ Brg. Pier 11	5108.340	-16.000	634.946	634.961
	R4	5118.340	-16.000	634.976	635.010
	S4	5128.340	-16.000	635.006	635.069
	T4	5138.340	-16.000	635.036	635.128
	U4	5148.340	-16.000	635.066	635.178
	V4	5158.340	-16.000	635.096	635.217
	W4	5168.340	-16.000	635.126	635.240
	X4	5178.340	-16.000	635.156	635.248
	Y4	5188.340	-16.000	635.186	635.245
	℄ Brg. Pier 12	5198.923	-16.000	635.218	635.232
	℄ Pier 12	5200.173	-16.000	635.222	635.235
Girder 6	℄ Pier 9	4921.000	-20.125	634.289	634.310
	℄ Brg. Pier 9	4922.250	-20.125	634.294	634.315
	A4	4932.250	-20.125	634.331	634.396
	B4	4942.250	-20.125	634.361	634.460
	C4	4952.250	-20.125	634.391	634.512
	D4	4962.250	-20.125	634.421	634.550
	E4	4972.250	-20.125	634.451	634.578
	F4	4982.250	-20.125	634.481	634.581
	G4	4992.250	-20.125	634.511	634.583
	H4	5002.250	-20.125	634.541	634.584
	℄ Brg. Pier 10	5012.340	-20.125	634.572	634.589
	J4	5022.340	-20.125	634.602	634.624
	J4	5032.340	-20.125	634.632	634.664
	K4	5042.340	-20.125	634.662	634.708
	L4	5052.340	-20.125	634.692	634.748
	M4	5062.340	-20.125	634.722	634.780
	N4	5072.340	-20.125	634.752	634.804
	P4	5082.340	-20.125	634.782	634.822
	R4	5092.340	-20.125	634.812	634.839
	Q4	5102.340	-20.125	634.842	634.863
	℄ Brg. Pier 11	5108.340	-20.125	634.860	634.885
	R4	5118.340	-20.125	634.890	634.932
	S4	5128.340	-20.125	634.920	634.991
	T4	5138.340	-20.125	634.950	635.060
	U4	5148.340	-20.125	634.980	635.100
	V4	5158.340	-20.125	635.010	635.139
	W4	5168.340	-20.125	635.040	635.102
	X4	5178.340	-20.125	635.070	635.171
	Y4	5188.340	-20.125	635.100	635.177
	℄ Brg. Pier 12	5198.923	-20.125	635.132	635.153
	℄ Pier 12	5200.173	-20.125	635.136	635.157

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

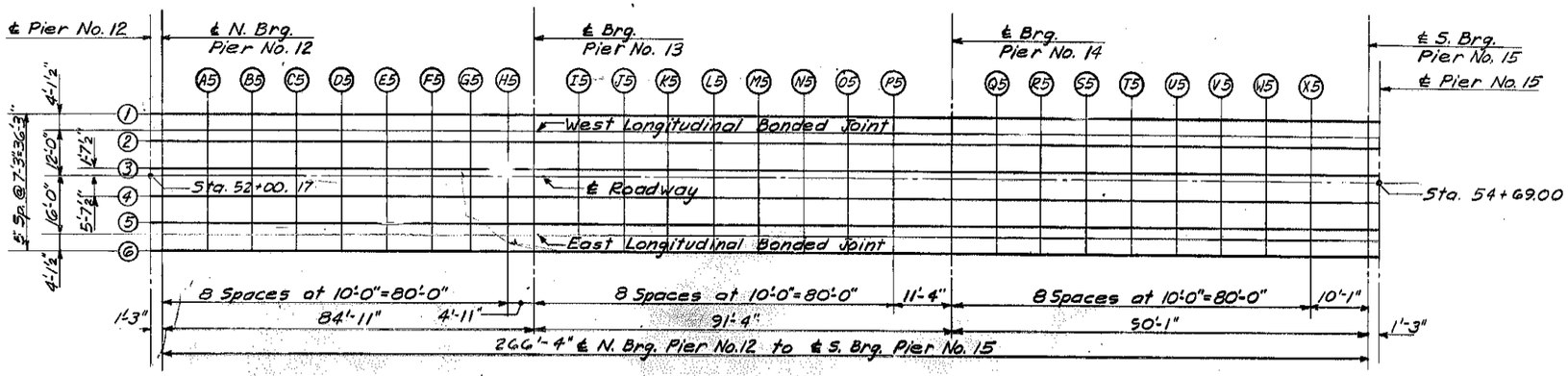
DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATIONS
SPANS 10 TO 12

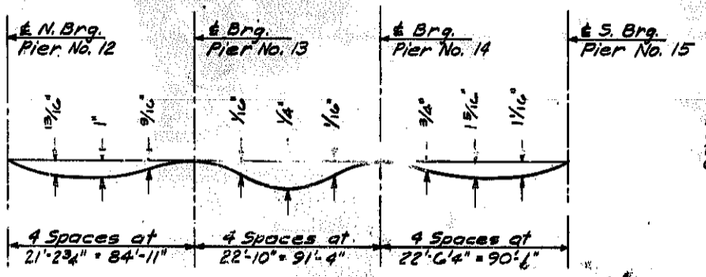
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

STATE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K B&R	COOK	229	111
F. A. & SEC. NO.	RAILROAD / PROJECT			

SHEET NO. 16
102 SHEETS



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of Stress girders)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

N

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 13 TO 15

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	118
S.F.P. PROJ. NO.		ILLINOIS PROJECT		

SHEET NO. 17
108 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 12	5200.170	16.125	635.214	635.235
	℄ Brg. Pier 12	5201.420	16.125	635.217	635.237
	A5	5211.420	16.125	635.247	635.306
	B5	5221.420	16.125	635.277	635.365
	C5	5231.420	16.125	635.307	635.413
	D5	5241.420	16.125	635.337	635.446
	E5	5251.420	16.125	635.367	635.467
	F5	5261.420	16.125	635.397	635.476
	G5	5271.420	16.125	635.427	635.482
	H5	5281.420	16.125	635.457	635.489
	℄ Brg. Pier 13	5286.340	16.125	635.472	635.497
	J5	5296.340	16.125	635.502	635.524
	K5	5306.340	16.125	635.532	635.561
	L5	5316.340	16.125	635.562	635.601
	M5	5326.340	16.125	635.592	635.638
	N5	5336.340	16.125	635.622	635.667
	O5	5346.340	16.125	635.652	635.691
	P5	5356.340	16.125	635.682	635.710
	R5	5366.340	16.125	635.712	635.732
	℄ Brg. Pier 14	5377.670	16.125	635.746	635.771
	Q5	5387.670	16.125	635.776	635.821
	R5	5397.670	16.125	635.806	635.881
	S5	5407.670	16.125	635.836	635.938
	T5	5417.670	16.125	635.861	635.987
	U5	5427.670	16.125	635.886	636.019
	V5	5437.670	16.125	635.910	636.035
	W5	5447.670	16.125	635.932	636.034
	X5	5457.670	16.125	635.953	636.019
	℄ Brg. Pier 15	5467.752	16.125	635.972	635.993
	℄ Pier 15	5469.002	16.125	635.974	635.995
West Long. Bonded Jt.	℄ Pier 12	5200.170	12.000	635.308	635.319
	℄ Brg. Pier 12	5201.420	12.000	635.303	635.316
	A5	5211.420	12.000	635.333	635.384
	B5	5221.420	12.000	635.363	635.443
	C5	5231.420	12.000	635.393	635.491
	D5	5241.420	12.000	635.423	635.524
	E5	5251.420	12.000	635.453	635.565
	F5	5261.420	12.000	635.483	635.554
	G5	5271.420	12.000	635.513	635.560
	H5	5281.420	12.000	635.543	635.567
	℄ Brg. Pier 13	5286.340	12.000	635.558	635.575
	J5	5296.340	12.000	635.588	635.602
	K5	5306.340	12.000	635.618	635.639
	L5	5316.340	12.000	635.648	635.679
	M5	5326.340	12.000	635.678	635.716
	N5	5336.340	12.000	635.708	635.745
	O5	5346.340	12.000	635.738	635.769
	P5	5356.340	12.000	635.768	635.788
	R5	5366.340	12.000	635.798	635.810
	℄ Brg. Pier 14	5377.670	12.000	635.832	635.848
	Q5	5387.670	12.000	635.862	635.899
	R5	5397.670	12.000	635.892	635.959
	S5	5407.670	12.000	635.920	636.016
	T5	5417.670	12.000	635.947	636.065
	U5	5427.670	12.000	635.972	636.097
	V5	5437.670	12.000	635.996	636.113
	W5	5447.670	12.000	636.018	636.112
	X5	5457.670	12.000	636.039	636.097
	℄ Brg. Pier 15	5467.752	12.000	636.058	636.071
	℄ Pier 15	5469.002	12.000	636.060	636.073

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 12	5200.170	8.875	635.348	635.352
	℄ Brg. Pier 12	5201.420	8.875	635.352	635.358
	A5	5211.420	8.875	635.382	635.426
	B5	5221.420	8.875	635.412	635.485
	C5	5231.420	8.875	635.442	635.533
	D5	5241.420	8.875	635.472	635.568
	E5	5251.420	8.875	635.502	635.587
	F5	5261.420	8.875	635.532	635.596
	G5	5271.420	8.875	635.562	635.602
	H5	5281.420	8.875	635.592	635.609
	℄ Brg. Pier 13	5286.340	8.875	635.607	635.616
	J5	5296.340	8.875	635.637	635.643
	K5	5306.340	8.875	635.667	635.680
	L5	5316.340	8.875	635.697	635.720
	M5	5326.340	8.875	635.727	635.757
	N5	5336.340	8.875	635.757	635.786
	O5	5346.340	8.875	635.787	635.810
	P5	5356.340	8.875	635.817	635.829
	R5	5366.340	8.875	635.847	635.851
	℄ Brg. Pier 14	5377.670	8.875	635.881	635.890
	Q5	5387.670	8.875	635.911	635.941
	R5	5397.670	8.875	635.941	636.011
	S5	5407.670	8.875	635.969	636.058
	T5	5417.670	8.875	635.996	636.107
	U5	5427.670	8.875	636.021	636.139
	V5	5437.670	8.875	636.045	636.155
	W5	5447.670	8.875	636.067	636.154
	X5	5457.670	8.875	636.088	636.139
	℄ Brg. Pier 15	5467.752	8.875	636.107	636.113
	℄ Pier 15	5469.002	8.875	636.109	636.115
Girder 3	℄ Pier 12	5200.170	1.625	635.462	635.462
	℄ Brg. Pier 12	5201.420	1.625	635.465	635.465
	A5	5211.420	1.625	635.495	635.531
	B5	5221.420	1.625	635.525	635.590
	C5	5231.420	1.625	635.555	635.638
	D5	5241.420	1.625	635.585	635.671
	E5	5251.420	1.625	635.615	635.692
	F5	5261.420	1.625	635.645	635.701
	G5	5271.420	1.625	635.675	635.707
	H5	5281.420	1.625	635.705	635.714
	℄ Brg. Pier 13	5286.340	1.625	635.720	635.720
	J5	5296.340	1.625	635.750	635.747
	K5	5306.340	1.625	635.780	635.784
	L5	5316.340	1.625	635.810	635.824
	M5	5326.340	1.625	635.840	635.861
	N5	5336.340	1.625	635.870	635.890
	O5	5346.340	1.625	635.900	635.914
	P5	5356.340	1.625	635.930	635.933
	R5	5366.340	1.625	635.960	635.955
	℄ Brg. Pier 14	5377.670	1.625	635.994	635.994
	Q5	5387.670	1.625	636.024	636.046
	R5	5397.670	1.625	636.054	636.106
	S5	5407.670	1.625	636.082	636.163
	T5	5417.670	1.625	636.109	636.212
	U5	5427.670	1.625	636.134	636.244
	V5	5437.670	1.625	636.158	636.260
	W5	[illegible]	[illegible]	[illegible]	636.259
	X5	[illegible]	[illegible]	[illegible]	636.244
	℄ Brg. Pier 15	5467.752	1.625	636.220	636.220
	℄ Pier 15	5469.002	1.625	636.222	636.222
℄ Roadway	℄ Pier 12	5200.170	0.000	635.487	635.487
	℄ Brg. Pier 12	5201.420	0.000	635.491	635.491
	A5	5211.420	0.000	635.521	635.557
	B5	5221.420	0.000	635.551	635.616
	C5	5231.420	0.000	635.581	635.664
	D5	5241.420	0.000	635.611	635.697
	E5	5251.420	0.000	635.641	635.718
	F5	5261.420	0.000	635.671	635.727
	G5	5271.420	0.000	635.701	635.733
	H5	5281.420	0.000	635.731	635.740
	℄ Brg. Pier 13	5286.340	0.000	635.746	635.746
	J5	5296.340	0.000	635.776	635.773
	K5	5306.340	0.000	635.806	635.810
	L5	5316.340	0.000	635.836	635.850
	M5	5326.340	0.000	635.866	635.887
	N5	5336.340	0.000	635.896	635.916
	O5	5346.340	0.000	635.926	635.940
	P5	5356.340	0.000	635.956	635.959
	R5	5366.340	0.000	635.986	635.981
	℄ Brg. Pier 14	5377.670	0.000	636.020	636.020

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	Q5	5387.670	0.000	636.050	636.072
	R5	5397.670	0.000	636.079	636.131
	S5	5407.670	0.000	636.107	636.188
	T5	5417.670	0.000	636.134	636.237
	U5	5427.670	0.000	636.159	636.269
	V5	5437.670	0.000	636.183	636.285
	W5	5447.670	0.000	636.205	636.284
	X5	5457.670	0.000	636.226	636.269
	℄ Brg. Pier 15	5467.752	0.000	636.246	636.246
	℄ Pier 15	5469.002	0.000	636.248	636.248
Girder 4	℄ Pier 12	5200.170	-5.625	635.399	635.399
	℄ Brg. Pier 12	5201.420	-5.625	635.403	635.403
	A5	5211.420	-5.625	635.433	635.489
	B5	5221.420	-5.625	635.463	635.528
	C5	5231.420	-5.625	635.493	635.576
	D5	5241.420	-5.625	635.523	635.609
	E5	5251.420	-5.625	635.553	635.630
	F5	5261.420	-5.625	635.583	635.639
	G5	5271.420	-5.625	635.613	635.645
	H5	5281.420	-5.625	635.643	635.652
	℄ Brg. Pier 13	5286.340	-5.625	635.658	635.658
	J5	5296.340	-5.625	635.688	635.685
	K5	5306.340	-5.625	635.718	635.722
	L5	5316.340	-5.625	635.748	635.762
	M5	5326.340	-5.625	635.778	635.799
	N5	5336.340	-5.625	635.808	635.828
	O5	5346.340	-5.625	635.838	635.852
	P5	5356.340	-5.625	635.868	635.871
	R5	5366.340	-5.625	635.898	635.893
	℄ Brg. Pier 14	5377.670	-5.625	635.932	635.932
	Q5	5387.670	-5.625	635.962	635.984
	R5	5397.670	-5.625	635.991	636.043
	S5	5407.670	-5.625	636.020	636.101
	T5	5417.670	-5.625	636.046	636.149
	U5	5427.670	-5.625	636.072	636.182
	V5	5437.670	-5.625	636.095	636.197
	W5	5447.670	-5.625	636.118	636.197
	X5	5457.670	-5.625	636.138	636.181
	℄ Brg. Pier 15	5467.752	-5.625	636.158	636.158
	℄ Pier 15	5469.002	-5.625	636.160	636.160
Girder 5	℄ Pier 12	5200.170	-12.875	635.281	635.287
	℄ Brg. Pier 12	5201.420	-12.875	635.285	635.291
	A5	5211.420	-12.875	635.315	635.359
	B5	5221.420	-12.875	635.345	635.418
	C5	5231.420	-12.875	635.375	635.464
	D5	5241.420	-12.875	635.405	635.494
	E5	5251.420	-12.875	635.435	635.520
	F5	5261.420	-12.875	635.465	635.529
	G5	5271.420	-12.875	635.495	635.535
	H5	5281.420	-12.875	635.525	635.542
	℄ Brg. Pier 13	5286.340	-12.875	635.540	635.549
	J5	5296.340	-12.875	635.570	635.576
	K5	5306.340	-12.875	635.600	635.613
	L5	5316.340	-12.875	635.630	635.653
	M5	5326.340	-12.875	635.660	635.688
	N5	5336.340	-12.875	635.690	635.719
	O5	5346.340	-12.875	635.720	635.748
	P5	5356.340	-12.875	635.750	635.762
	R5	5366.340	-12.875	635.780	635.769
	℄ Brg. Pier 14	5377.670	-12.875	635.814	635.823
	Q5	5387.670	-12.875	635.844	635.874
	R5	5397.670	-12.875	635.872	635.933
	S5	5407.670	-12.875	635.902	635.991
	T5	5417.670	-12.875	635.926	636.039
	U5	5427.670	-12.875	635.954	636.072
	V5	5437.670	-12.875	635.977	636.087
	W5	5447.670	-12.875	635.998	636.087
	X5	5457.670	-12.875	636.020	636.071
	℄ Brg. Pier 15	5467.752	-12.875	636.040	636.046
	℄ Pier 15	5469.002	-12.875	636.042	636.046

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 12	5200.170	-16.000	635.216	635.229
	℄ Brg. Pier 12	5201.420	-16.000	635.220	635.233
	A5	5211.420	-16.000	635.250	635.301
	B5	5221.420	-16.000	635.280	635.360
	C5	5231.420	-16.000	635.310	635.408
	D5	5241.420	-16.000	635.340	635.441
	E5	5251.420	-16.000	635.370	635.462
	F5	5261.420	-16.000	635.400	635.471
	G5	5271.420	-16.000	635.430	635.477
	H5	5281.420	-16.000	635.460	635.474
	℄ Brg. Pier 13	5286.340	-16.000	635.475	635.492
	J5	5296.340	-16.000	635.509	635.518
	K5	5306.340	-16.000	635.535	635.556
	L5	5316.340	-16.000	635.565	635.594
	M5	5326.340	-16.000	635.595	635.633
	N5	5336.340	-16.000	635.625	635.662
	O5	5346.340	-16.000	635.655	635.686
	P5	5356.340	-16.000	635.685	635.706
	R5	5366.340	-16.000	635.715	635.727
	℄ Brg. Pier 14	5377.670	-16.000	635.749	635.766
	Q5	5387.670	-16.000	635.779	635.816
	R5	5397.670	-16.000	635.808	635.875
	S5	5407.670	-16.000	635.837	635.933
	T5	5417.670	-16.000	635.863	635.981
	U5	5427.670	-16.000	635.889	636.014
	V5	5437.670	-16.000	635.912	636.027
	W5	5447.670	-16.000	635.935	636.029
	X5	5457.670	-16.000	635.959	636.013
	℄ Brg. Pier 15	5467.752	-16.000	635.979	635.988
	℄ Pier 15	5469.002	-16.000	635.977	635.990
Girder 6	℄ Pier 12	5200.170	-20.125	635.130	635.151
	℄ Brg. Pier 12	5202.420	-20.125	635.134	635.154
	A5	5211.420	-20.125	635.164	635.223
	B5	5221.420	-20.125	635.194	635.282
	C5	5231.420	-20.125	635.224	635.330
	D5	5241.420	-20.125	635.254	635.363
	E5	5251.420	-20.125	635.284	635.384
	F5	5261.420	-20.125	635.314	635.393
	G5	5271.420	-20.125	635.344	635.399
	H5	5281.420	-20.125	635.374	635.406
	℄ Brg. Pier 13	5286.340	-20.125	635.389	635.414
	J5	5296.340	-20.125	635.419	635.431
	K5	5306.340	-20.125	635.449	635.478
	L5	5316.340	-20.125	635.479	635.518
	M5	5326.340	-20.125	635.509	635.555
	N5	5336.340	-20.125	635.539	635.584
	O5	5346.340	-20.125	635.569	635.608
	P5	5356.340	-20.125	635.594	635.627
	R5	5366.340	-20.125	635.629	635.649
	℄ Brg. Pier 14	5377.670	-20.125	635.663	635.688
	Q5	5387.670	-20.125	635.693	635.738
	R5	5397.670	-20.125	635.722	635.797
	S5	5407.670	-20.125	635.751	635.856
	T5	5417.670	-20.125	635.777	635.903
	U5	5427.670	-20.125	635.803	635.936
	V5	5437.670	-20.125	635.826	635.951
	W5	5447.670	-20.125	635.849	635.951
	X5	5457.670	-20.125	635.869	635.935
	℄ Brg. Pier 15	5467.752	-20.125	635.889	635.910
	℄ Pier 15	5469.002	-20.125	635.891	635.912

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

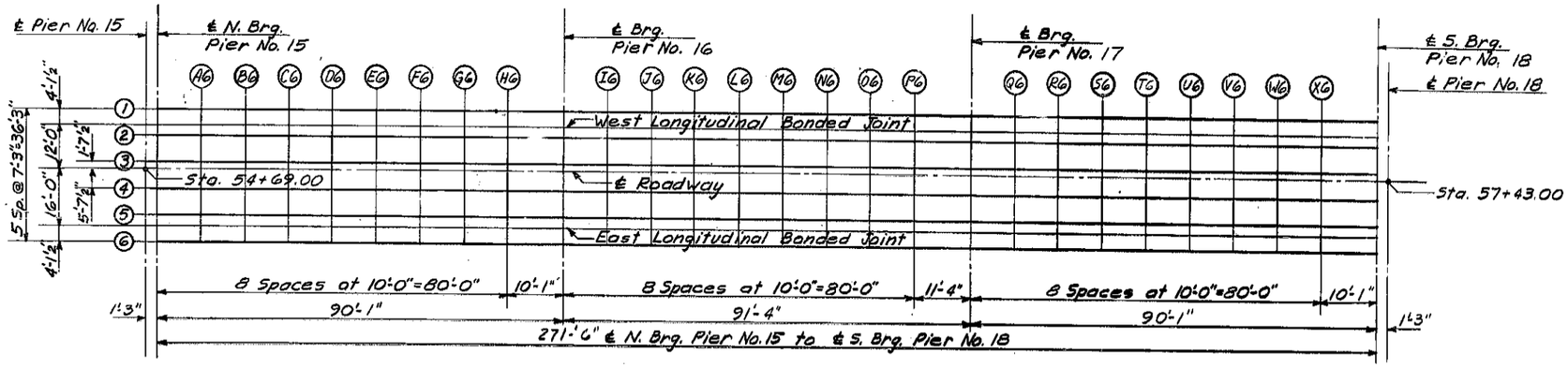
TOP OF SLAB ELEVATIONS
SPANS 13 TO 15

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

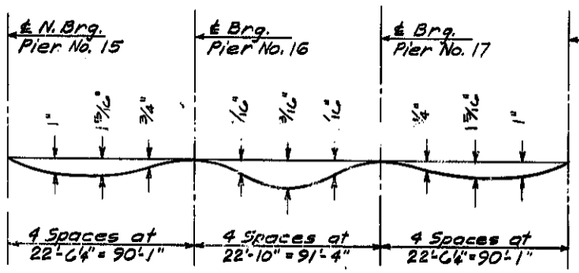
462-X-B & R Cook
PT II

FED. P. A. & S. P. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	113
S. P. S. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 18
102 SHEETS



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders)

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATION LAYOUT SPANS 16 TO 18

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	114
D. P. O. Sec. No.	ILLINOIS	PROJECT		

SHEET NO. 19
10Ø SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 15	5469.000	16.125	635.974	635.995
	℄ Brg. Pier 15	5470.250	16.125	635.977	635.998
	A6	5480.250	16.125	635.994	636.061
	B6	5490.250	16.125	636.010	636.113
	C6	5500.250	16.125	636.024	636.150
	D6	5510.250	16.125	636.037	636.172
	E6	5520.250	16.125	636.049	636.175
	F6	5530.250	16.125	636.058	636.154
	G6	5540.250	16.125	636.067	636.144
	H6	5550.250	16.125	636.074	636.120
	℄ Brg. Pier 16	5560.340	16.125	636.079	636.104
	I6	5570.340	16.125	636.083	636.101
	J6	5580.340	16.125	636.085	636.109
	K6	5590.340	16.125	636.086	636.120
	L6	5600.340	16.125	636.085	636.125
	M6	5610.340	16.125	636.083	636.124
	N6	5620.340	16.125	636.080	636.115
	O6	5630.340	16.125	636.074	636.098
	P6	5640.340	16.125	636.068	636.086
	℄ Brg. Pier 17	5651.670	16.125	636.058	636.083
	Q6	5661.670	16.125	636.049	636.095
	R6	5671.670	16.125	636.037	636.114
	S6	5681.670	16.125	636.024	636.130
	T6	5691.670	16.125	636.010	636.138
	U6	5701.670	16.125	635.994	636.129
	V6	5711.670	16.125	635.977	636.103
	W6	5721.670	16.125	635.958	636.061
	X6	5731.670	16.125	635.938	636.005
	℄ Brg. Pier 18	5741.752	16.125	635.916	635.937
	℄ Pier 18	5743.002	16.125	635.913	635.934
	℄ Pier 15	5469.000	12.000	636.060	636.073
	℄ Brg. Pier 15	5470.250	12.000	636.063	636.077
	A6	5480.250	12.000	636.080	636.140
	B6	5490.250	12.000	636.096	636.192
	C6	5500.250	12.000	636.110	636.229
	D6	5510.250	12.000	636.123	636.251
	E6	5520.250	12.000	636.134	636.254
	F6	5530.250	12.000	636.144	636.243
	G6	5540.250	12.000	636.153	636.233
	H6	5550.250	12.000	636.160	636.199
	℄ Brg. Pier 16	5560.340	12.000	636.165	636.181
	I6	5570.340	12.000	636.169	636.178
	J6	5580.340	12.000	636.171	636.186
	K6	5590.340	12.000	636.172	636.197
	L6	5600.340	12.000	636.171	636.202
	M6	5610.340	12.000	636.169	636.201
	N6	5620.340	12.000	636.166	636.192
	O6	5630.340	12.000	636.160	636.165
	P6	5640.340	12.000	636.154	636.163
	℄ Brg. Pier 17	5651.670	12.000	636.144	636.160
	Q6	5661.670	12.000	636.135	636.174
	R6	5671.670	12.000	636.123	636.193
	S6	5681.670	12.000	636.110	636.209
	T6	5691.670	12.000	636.096	636.217
	U6	5701.670	12.000	636.080	636.209
	V6	5711.670	12.000	636.063	636.192
	W6	5721.670	12.000	636.044	636.140
	X6	5731.670	12.000	636.024	636.064
	℄ Brg. Pier 18	5741.752	12.000	636.002	636.016
	℄ Pier 18	5743.002	12.000	635.999	636.013

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 15	5469.000	8.875	636.109	636.115
	℄ Brg. Pier 15	5470.250	8.875	636.111	636.118
	A6	5480.250	8.875	636.129	636.181
	B6	5490.250	8.875	636.145	636.233
	C6	5500.250	8.875	636.159	636.270
	D6	5510.250	8.875	636.172	636.292
	E6	5520.250	8.875	636.183	636.295
	F6	5530.250	8.875	636.193	636.286
	G6	5540.250	8.875	636.202	636.264
	H6	5550.250	8.879	636.208	636.239
	℄ Brg. Pier 16	5560.340	8.875	636.214	636.222
	I6	5570.340	8.875	636.218	636.219
	J6	5580.340	8.875	636.220	636.227
	K6	5590.340	8.875	636.221	636.238
	L6	5600.340	8.875	636.220	636.243
	M6	5610.340	8.875	636.218	636.242
	N6	5620.340	8.875	636.214	636.232
	O6	5630.340	8.875	636.209	636.216
	P6	5640.340	8.875	636.203	636.204
	℄ Brg. Pier 17	5651.670	8.875	636.193	636.211
	Q6	5661.670	8.875	636.183	636.214
	R6	5671.670	8.875	636.172	636.224
	S6	5681.670	8.875	636.159	636.250
	T6	5691.670	8.875	636.145	636.259
	U6	5701.670	8.875	636.129	636.249
	V6	5711.670	8.875	636.112	636.223
	W6	5721.670	8.875	636.093	636.181
	X6	5731.670	8.875	636.072	636.124
	℄ Brg. Pier 18	5741.752	8.875	636.050	636.058
	℄ Pier 18	5743.002	8.875	636.048	636.056
	℄ Pier 15	5469.000	1.625	636.222	636.222
	℄ Brg. Pier 15	5470.250	1.625	636.225	636.225
	A6	5480.250	1.625	636.242	636.286
	B6	5490.250	1.625	636.258	636.338
	C6	5500.250	1.625	636.272	636.375
	D6	5510.250	1.625	636.285	636.397
	E6	5520.250	1.625	636.297	636.401
	F6	5530.250	1.625	636.306	636.389
	G6	5540.250	1.625	636.315	636.369
	H6	5550.250	1.625	636.322	636.345
	℄ Brg. Pier 16	5560.340	1.625	636.327	636.327
	I6	5570.340	1.625	636.331	636.324
	J6	5580.340	1.625	636.333	636.332
	K6	5590.340	1.625	636.334	636.343
	L6	5600.340	1.625	636.333	636.348
	M6	5610.340	1.625	636.331	636.347
	N6	5620.340	1.625	636.328	636.338
	O6	5630.340	1.625	636.323	636.322
	P6	5640.340	1.625	636.316	636.309
	℄ Brg. Pier 17	5651.670	1.625	636.307	636.307
	Q6	5661.670	1.625	636.297	636.320
	R6	5671.670	1.625	636.285	636.339
	S6	5681.670	1.625	636.272	636.355
	T6	5691.670	1.625	636.258	636.363
	U6	5701.670	1.625	636.242	636.354
	V6	5711.670	1.625	636.225	636.328
	W6	5721.670	1.625	636.206	636.286
	X6	5731.670	1.625	636.186	636.230
	℄ Brg. Pier 18	5741.752	1.625	636.164	636.164
	℄ Pier 18	5743.002	1.625	636.161	636.161
℄ Roadway	℄ Pier 15	5469.000	0.000	636.268	636.268
	℄ Brg. Pier 15	5470.250	0.000	636.250	636.250
	A6	5480.250	0.000	636.268	636.312
	B6	5490.250	0.000	636.283	636.369
	C6	5500.250	0.000	636.298	636.401
	D6	5510.250	0.000	636.311	636.423
	E6	5520.250	0.000	636.322	636.426
	F6	5530.250	0.000	636.332	636.416
	G6	5540.250	0.000	636.340	636.394
	H6	5550.250	0.000	636.347	636.370
	℄ Brg. Pier 16	5560.340	0.000	636.352	636.352

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	I6	5570.340	0.000	636.356	636.349
	J6	5580.340	0.000	636.358	636.358
	K6	5590.340	0.000	636.358	636.368
	L6	5600.340	0.000	636.357	636.374
	M6	5610.340	0.000	636.357	636.373
	N6	5620.340	0.000	636.353	636.363
	O6	5630.340	0.000	636.348	636.347
	P6	5640.340	0.000	636.341	636.334
	℄ Brg. Pier 17	5651.670	0.000	636.332	636.332
℄ Roadway	Q6	5661.670	0.000	636.322	636.345
	R6	5671.670	0.000	636.311	636.365
	S6	5681.670	0.000	636.298	636.381
	T6	5691.670	0.000	636.283	636.388
	U6	5701.670	0.000	636.268	636.380
	V6	5711.670	0.000	636.250	636.353
	W6	5721.670	0.000	636.231	636.311
	X6	5731.670	0.000	636.211	636.255
	℄ Brg. Pier 18	5741.752	0.000	636.189	636.189
	℄ Pier 18	5743.002	0.000	636.186	636.186
	℄ Pier 15	5469.000	5.625	636.160	636.160
	℄ Brg. Pier 15	5470.250	-5.625	636.162	636.162
	A6	5480.250	-5.625	636.180	636.224
	B6	5490.250	-5.625	636.195	636.275
	C6	5500.250	-5.625	636.210	636.318
	D6	5510.250	-5.625	636.223	636.335
	E6	5520.250	-5.625	636.234	636.338
	F6	5530.250	-5.625	636.244	636.327
	G6	5540.250	-5.625	636.252	636.306
	H6	5550.250	-5.625	636.259	636.282
	℄ Brg. Pier 16	5560.340	-5.625	636.265	636.265
	I6	5570.340	-5.625	636.268	636.261
	J6	5580.340	-5.625	636.271	636.270
	K6	5590.340	-5.625	636.272	636.281
	L6	5600.340	-5.625	636.271	636.286
	M6	5610.340	-5.625	636.269	636.285
	N6	5620.340	-5.625	636.265	636.275
	O6	5630.340	-5.625	636.260	636.259
	P6	5640.340	-5.625	636.253	636.246
	℄ Brg. Pier 17	5651.670	-5.625	636.244	636.244
	Q6	5661.670	-5.625	636.234	636.257
	R6	5671.670	-5.625	636.223	636.277
	S6	5681.670	-5.625	636.210	636.299
	T6	5691.670	-5.625	636.196	636.301
	U6	5701.670	-5.625	636.180	636.292
	V6	5711.670	-5.625	636.162	636.265
	W6	5721.670	-5.625	636.144	636.224
	X6	5731.670	-5.625	636.123	636.167
	℄ Brg. Pier 18	5741.752	-5.625	636.101	636.101
	℄ Pier 18	5743.002	-5.625	636.098	636.098
	℄ Pier 15	5469.000	-12.875	636.042	636.048
	℄ Brg. Pier 15	5470.250	-12.875	636.044	636.051
	A6	5480.250	-12.875	636.062	636.114
	B6	5490.250	-12.875	636.078	636.164
	C6	5500.250	-12.875	636.092	636.209
	D6	5510.250	-12.875	636.105	636.225
	E6	5520.250	-12.875	636.116	636.228
	F6	5530.250	-12.875	636.126	636.217
	G6	5540.250	-12.875	636.134	636.198
	H6	5550.250	-12.875	636.141	636.172
	℄ Brg. Pier 16	5560.340	-12.875	636.147	636.155
	I6	5570.340	-12.875	636.151	636.154
	J6	5580.340	-12.875	636.153	636.155
	K6	5590.340	-12.875	636.154	636.163
	L6	5600.340	-12.875	636.153	636.172
	M6	5610.340	-12.875	636.151	636.170
	N6	5620.340	-12.875	636.147	636.162
	O6	5630.340	-12.875	636.142	636.152
	P6	5640.340	-12.875	636.136	636.141
	℄ Brg. Pier 17	5651.670	-12.875	636.126	636.126
	Q6	5661.670	-12.875	636.116	636.147
	R6	5671.670	-12.875	636.105	636.167
	S6	5681.670	-12.875	636.092	636.183
	T6	5691.670	-12.875	636.078	636.191
	U6	5701.670	-12.875	636.062	636.182
	V6	5711.670	-12.875	636.045	636.156
	W6	5721.670	-12.875	636.026	636.114
	X6	5731.670	-12.875	636.005	636.057
	℄ Brg. Pier 18	5741.752	-12.875	635.983	635.990
	℄ Pier 18	5743.002	-12.875	635.980	635.987

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 15	5469.000	-16.000	635.977	635.900
	℄ Brg. Pier 15	5470.250	-16.000	635.979	635.893
	A6	5480.250	-16.000	635.997	636.057
	B6	5490.250	-16.000	636.013	636.113
	C6	5500.250	-16.000	636.027	636.146
	D6	5510.250	-16.000	636.040	636.168
	E6	5520.250	-16.000	636.051	636.171
	F6	5530.250	-16.000	636.061	636.160
	G6	5540.250	-16.000	636.069	636.139
	H6	5550.250	-16.000	636.076	636.115
	℄ Brg. Pier 16	5560.340	-16.000	636.082	636.088
	I6	5570.340	-16.000	636.085	636.087
	J6	5580.340	-16.000	636.088	636.106
	K6	5590.340	-16.000	636.089	636.112
	L6	5600.340	-16.000	636.088	636.116
	M6	5610.340	-16.000	636.086	636.114
	N6	5620.340	-16.000	636.082	636.108
	O6	5630.340	-16.000	636.077	636.098
	P6	5640.340	-16.000	636.070	636.083
	℄ Brg. Pier 17	5651.670	-16.000	636.061	636.077
	Q6	5661.670	-16.000	636.051	636.090
	R6	5671.670	-16.000	636.040	636.110
	S6	5681.670	-16.000	636.027	636.126
	T6	5691.670	-16.000	636.013	636.134
	U6	5701.670	-16.000	635.997	636.125
	V6	5711.670	-16.000	635.979	636.098
	W6	5721.670	-16.000	635.961	636.057
	X6	5731.670	-16.000	635.940	636.000
	℄ Brg. Pier 18	5741.752	-16.000	635.916	635.932
	℄ Pier 18	5743.002	-16.000	635.915	635.930
Girder 6	℄ Pier 15	5469.000	-20.125	635.891	635.912
	℄ Brg. Pier 15	5470.250	-20.125	635.893	635.914
	A6	5480.250	-20.125	635.911	635.978
	B6	5490.250	-20.125	635.927	636.030
	C6	5500.250	-20.125	635.941	636.067
	D6	5510.250	-20.125	635.954	636.089
	E6	5520.250	-20.125	635.965	636.092
	F6	5530.250	-20.125	635.975	636.068
	G6	5540.250	-20.125	635.983	636.060
	H6	5550.250	-20.125	635.990	636.036
	℄ Brg. Pier 16	5560.340	-20.125	635.996	636.021
	I6	5570.340	-20.125	636.000	636.022
	J6	5580.340	-20.125	636.002	636.026
	K6	5590.340	-20.125	636.003	636.035
	L6	5600.340	-20.125	636.002	636.036
	M6	5610.340	-20.125	636.000	636.037
	N6	5620.340	-20.125	635.996	636.029
	O6	5630.340	-20.125	635.991	636.018
	P6	5640.340	-20.125	635.984	636.005
	℄ Brg. Pier 17	5651.670	-20.125	635.975	636.000
	Q6	5661.670	-20.125	635.965	636.011
	R6	5671.670	-20.125	635.954	636.031
	S6	5681.670	-20.125	635.941	636.047
	T6	5691.670	-20.125	635.927	636.057
	U6	5701.670	-20.125	635.911	636.060
	V6	5711.670	-20.125	635.894	636.050
	W6	5721.670	-20.125	635.875	635.970
	X6	5731.670	-20.125	635.854	635.921
	℄ Brg. Pier 18	5741.752	-20.125	635.832	635.853
	℄ Pier 18	5743.002	-20.125	635.829	635.851

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

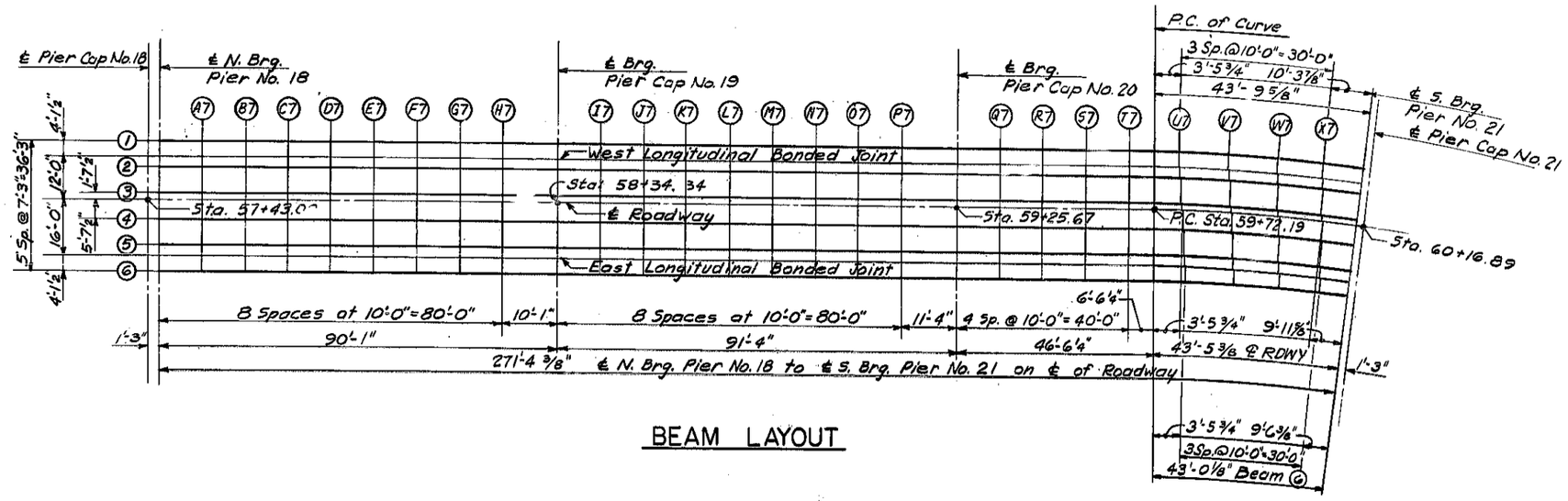
DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

TOP OF SLAB ELEVATIONS
SPANS 16 TO 18

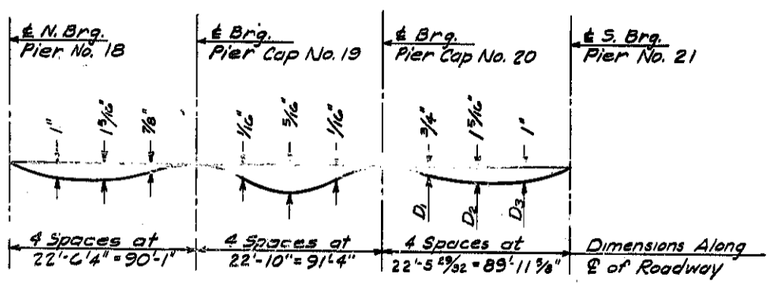
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.I. Route No.	Sec.	County	Total Sheets	Sheet No.
FA45	462X B&R	COOK	229	115
S. P. R. Sec. No.		Illinois Project		

SHEET NO. 20
108 SHEETS



BEAM LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders)

Note:
These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

Note:
All points given are taken at 10'-0" intervals along the members or joints indicated. Station is given from ℄ of Roadway for all prints.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	HJS
CHECKED	A.S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 19 TO 21

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

PROPOSAL AND ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K B&R	COOK	223	116
S.F.A.S. ROUTE NO.	ILLINOIS PROJECT			

SHEET NO. 21
102 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 18	5743.000	16.125	635.913	635.934
	℄ Brg. Pier 18	5744.250	16.125	635.910	635.931
	A7	5754.250	16.125	635.886	635.953
	B7	5764.250	16.125	635.861	635.968
	C7	5774.250	16.125	635.834	635.960
	D7	5784.250	16.125	635.806	635.941
	E7	5794.250	16.125	635.776	635.903
	F7	5804.250	16.125	635.746	635.852
	G7	5814.250	16.125	635.716	635.793
	H7	5824.250	16.125	635.686	635.732
	℄ Brg. Pier 19	5834.340	16.125	635.656	635.681
	I7	5844.340	16.125	635.626	635.644
	J7	5854.340	16.125	635.596	635.620
	K7	5864.340	16.125	635.566	635.600
	L7	5874.340	16.125	635.550	635.590
	M7	5884.340	16.125	635.583	635.624
	N7	5894.340	16.125	635.616	635.651
	O7	5904.340	16.125	635.649	635.678
	P7	5914.340	16.125	635.682	635.700
	℄ Brg. Pier 20	5925.669	16.125	635.720	635.745
	Q7	5935.669	16.125	635.753	635.799
	R7	5945.669	16.125	635.786	635.863
	S7	5955.669	16.125	635.819	635.925
	T7	5965.669	16.125	635.852	635.980
	U7	5975.642	16.125	635.885	636.020
	V7	5985.564	16.125	635.918	636.044
	W7	5995.486	16.125	635.950	636.053
	X7	6005.408	16.125	635.983	636.050
	℄ Brg. Pier 21	6015.669	16.125	636.017	636.038
	℄ Pier 21	6016.890	16.125	636.021	636.042
West Long. Bonded Jt.	℄ Pier 18	5743.000	12.000	635.999	636.019
	℄ Brg. Pier 18	5744.250	12.000	635.996	636.710
	A7	5754.250	12.000	635.972	636.032
	B7	5764.250	12.000	635.947	636.043
	C7	5774.250	12.000	635.920	636.039
	D7	5784.250	12.000	635.892	636.020
	E7	5794.250	12.000	635.862	635.922
	F7	5804.250	12.000	635.832	635.831
	G7	5814.250	12.000	635.802	635.872
	H7	5824.250	12.000	635.772	635.811
	℄ Brg. Pier 19	5834.340	12.000	635.742	635.758
	I7	5844.340	12.000	635.712	635.721
	J7	5854.340	12.000	635.682	635.707
	K7	5864.340	12.000	635.652	635.777
	L7	5874.340	12.000	635.632	635.768
	M7	5884.340	12.000	635.648	635.680
	N7	5894.340	12.000	635.664	635.690
	O7	5904.340	12.000	635.680	635.685
	P7	5914.340	12.000	635.696	635.695
	℄ Brg. Pier 20	5925.669	12.000	635.714	635.730
	Q7	5935.669	12.000	635.729	635.768
	R7	5945.669	12.000	635.745	635.815
	S7	5955.669	12.000	635.761	635.880
	T7	5965.669	12.000	635.777	635.886
	U7	5975.669	12.000	635.793	635.921
	V7	5985.591	12.000	635.808	635.927
	W7	5995.533	12.000	635.824	635.920
	X7	6005.474	12.000	635.840	635.990
	℄ Brg. Pier 21	6015.647	12.000	635.856	635.870
	℄ Pier 21	6016.890	12.000	635.858	635.872

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 18	5743.000	8.875	636.048	636.054
	℄ Brg. Pier 18	5744.250	8.875	636.045	636.051
	A7	5754.250	8.875	636.021	636.073
	B7	5764.250	8.875	635.996	636.084
	C7	5774.250	8.875	635.969	636.080
	D7	5784.250	8.875	635.941	636.061
	E7	5794.250	8.875	635.911	636.023
	F7	5804.250	8.875	635.881	635.972
	G7	5814.250	8.875	635.851	635.913
	H7	5824.250	8.875	635.821	635.852
	℄ Brg. Pier 19	5834.340	8.875	635.791	635.799
	I7	5844.340	8.875	635.761	635.762
	J7	5854.340	8.875	635.731	635.738
	K7	5864.340	8.875	635.701	635.718
	L7	5874.340	8.875	635.678	635.701
	M7	5884.340	8.875	635.682	635.706
	N7	5894.340	8.875	35.686	635.706
	O7	5904.340	8.875	5.690	635.697
	P7	5914.340	8.875	635.694	635.695
	℄ Brg. Pier 20	5925.669	8.875	635.698	635.706
	Q7	5935.669	8.875	635.702	635.733
	R7	5945.669	8.875	635.706	635.768
	S7	5955.669	8.875	635.711	635.811
	T7	5965.669	8.875	635.714	635.827
	U7	5975.654	8.875	635.718	635.838
	V7	5985.611	8.875	635.722	635.833
	W7	5995.568	8.875	635.726	635.814
	X7	6005.525	8.875	635.730	635.782
	℄ Brg. Pier 21	6015.645	8.875	635.734	635.740
	℄ Pier 21	6016.890	8.875	635.734	635.741
Girder 3	℄ Pier 18	5743.000	1.625	636.161	636.161
	℄ Brg. Pier 18	5744.250	1.625	636.158	636.158
	A7	5754.250	1.625	636.134	636.178
	B7	5764.250	1.625	636.109	636.189
	C7	5774.250	1.625	636.082	636.185
	D7	5784.250	1.625	636.054	636.166
	E7	5794.250	1.625	636.024	636.128
	F7	5804.250	1.625	635.994	636.077
	G7	5814.250	1.625	635.964	636.018
	H7	5824.250	1.625	635.934	635.957
	℄ Brg. Pier 19	5834.340	1.625	635.904	635.904
	I7	5844.340	1.625	635.874	635.867
	J7	5854.340	1.625	635.844	635.843
	K7	5864.340	1.625	635.814	635.823
	L7	5874.340	1.625	635.785	635.800
	M7	5884.340	1.625	635.762	635.778
	N7	5894.340	1.625	635.738	635.746
	O7	5904.340	1.625	635.714	635.718
	P7	5914.340	1.625	635.690	635.683
	℄ Brg. Pier 20	5925.669	1.625	635.663	635.663
	Q7	5935.669	1.625	635.640	635.668
	R7	5945.669	1.625	635.616	635.670
	S7	5955.669	1.625	635.592	635.675
	T7	5965.669	1.625	635.568	635.673
	U7	5975.667	1.625	635.544	635.658
	V7	5985.659	1.625	635.521	635.624
	W7	5995.651	1.625	635.497	635.577
	X7	6005.643	1.625	635.473	635.517
	℄ Brg. Pier 21	6015.640	1.625	635.449	635.449
	℄ Pier 21	6016.890	1.625	635.446	635.446
℄ Roadway	℄ Pier 18	5743.000	0.000	636.186	636.186
	℄ Brg. Pier 18	5744.250	0.000	636.183	636.183
	A7	5754.250	0.000	636.160	636.204
	B7	5764.250	0.000	636.134	636.214
	C7	5774.250	0.000	636.108	636.211
	D7	5784.250	0.000	636.079	636.191
	E7	5794.250	0.000	636.050	636.154
	F7	5804.250	0.000	636.020	636.103
	G7	5814.250	0.000	635.990	636.044
	H7	5824.250	0.000	635.960	635.983
	℄ Brg. Pier 19	5834.340	0.000	635.929	635.929
	I7	5844.340	0.000	635.899	635.872
	J7	5854.340	0.000	635.869	635.868
	K7	5864.340	0.000	635.839	635.848
	L7	5874.340	0.000	635.809	635.824
	M7	5884.340	0.000	635.779	635.795
	N7	5894.340	0.000	635.749	635.759
	O7	5904.340	0.000	635.719	635.718
	P7	5914.340	0.000	635.689	635.682

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
℄ Roadway	℄ Brg. Pier 20	5925.669	0.000	635.655	635.655
	Q7	5935.669	0.000	635.627	635.648
	R7	5945.669	0.000	635.599	635.649
	S7	5955.669	0.000	635.571	635.648
	T7	5965.669	0.000	635.535	635.640
	U7	5975.669	0.000	635.505	635.578
	V7	5985.669	0.000	635.475	635.525
	W7	5995.669	0.000	635.445	635.459
	X7	6005.669	0.000	635.415	
	℄ Brg. Pier 21	6015.639	0.000	635.386	635.389
	℄ Pier 21	6016.890	0.000	635.382	635.382
Girder 4	℄ Pier 18	5743.000	-5.625	636.098	636.098
	℄ Brg. Pier 18	5744.250	-5.625	636.095	636.095
	A7	5754.250	-5.625	636.072	636.116
	B7	5764.250	-5.625	636.046	636.126
	C7	5774.250	-5.625	636.020	636.123
	D7	5784.250	-5.625	635.992	636.104
	E7	5794.250	-5.625	635.962	636.066
	F7	5804.250	-5.625	635.932	636.015
	G7	5814.250	-5.625	635.902	635.956
	H7	5824.250	-5.625	635.872	635.895
	℄ Brg. Pier 19	5834.340	-5.625	635.842	635.842
	I7	5844.340	-5.625	635.812	635.805
	J7	5854.340	-5.625	635.782	635.781
	K7	5864.340	-5.625	635.752	635.761
	L7	5874.340	-5.625	635.720	635.735
	M7	5884.340	-5.625	635.680	635.698
	N7	5894.340	-5.625	635.640	635.650
	O7	5904.340	-5.625	635.600	635.599
	P7	5914.340	-5.625	635.560	635.553
	℄ Brg. Pier 20	5925.669	-5.625	635.515	635.515
	Q7	5935.669	-5.625	635.476	635.499
	R7	5945.669	-5.625	635.436	635.490
	S7	5955.669	-5.625	635.396	635.479
	T7	5965.669	-5.625	635.356	635.481
	U7	5975.679	-5.625	635.316	635.428
	V7	5985.707	-5.625	635.277	635.380
	W7	5995.734	-5.625	635.237	635.317
	X7	6005.762	-5.625	635.197	635.241
	℄ Brg. Pier 21	6015.636	-5.625	635.157	635.157
	℄ Pier 21	6016.890	-5.625	635.157	635.157
Girder 5	℄ Pier 18	5743.000	-12.875	635.980	635.987
	℄ Brg. Pier 18	5744.250	-12.875	635.978	635.984
	A7	5754.250	-12.875	635.954	636.006
	B7	5764.250	-12.875	635.929	636.017
	C7	5774.250	-12.875	635.902	636.014
	D7	5784.250	-12.875	635.874	635.994
	E7	5794.250	-12.875	635.844	635.956
	F7	5804.250	-12.875	635.814	635.905
	G7	5814.250	-12.875	635.784	635.842
	H7	5824.250	-12.875	635.754	635.805
	℄ Brg. Pier 19	5834.340	-12.875	635.724	635.732
	I7	5844.340	-12.875	635.694	635.695
	J7	5854.340	-12.875	635.664	635.671
	K7	5864.340	-12.875	635.634	635.651
	L7	5874.340	-12.875	635.599	635.632
	M7	5884.340	-12.875	635.547	635.571
	N7	5894.340	-12.875	635.495	635.513
	O7	5904.340	-12.875	635.443	635.450
	P7	5914.340	-12.875	635.391	635.382
	℄ Brg. Pier 20	5925.669	-12.875	635.332	635.340
	Q7	5935.669	-12.875	635.260	635.311
	R7	5945.669	-12.875	635.228	635.290
	S7	5955.669	-12.875	635.176	635.267
	T7	5965.669	-12.875	635.153	635.226
	U7	5975.692	-12.875	635.071	635.201
	V7	5985.755	-12.875	635.022	635.126
	W7	5995.818	-12.875	634.926	635.064
	X7	6005.881	-12.875	634.914	634.968
	℄ Brg. Pier 21	6015.682	-12.875	634.863	634.869
	℄ Pier 21	6016.890	-12.875	634.857	634.864

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
East Long. Bonded Jt.	℄ Pier 18	5743.000	-16.000	635.915	635.930
	℄ Brg. Pier 18	5744.250	-16.000	635.913	635.927
	A7	5754.250	-16.000	635.889	635.940
	B7	5764.250	-16.000	635.864	635.950
	C7	5774.250	-16.000	635.837	635.956
	D7	5784.250	-16.000	635.809	635.937
	E7	5794.250	-16.000	635.779	635.899
	F7	5804.250	-16.000	635.749	635.848
	G7	5814.250	-16.000	635.719	635.789
	H7	5824.250	-16.000	635.689	635.728
	℄ Brg. Pier 19	5834.340	-16.000	635.659	635.676
	I7	5844.340	-16.000	635.629	635.638
	J7	5854.340	-16.000	635.599	635.614
	K7	5864.340	-16.000	635.569	635.594
	L7	5874.340	-16.000	635.533	635.564
	M7	5884.340	-16.000	635.477	635.507
	N7	5894.340	-16.000	635.420	635.448
	O7	5904.340	-16.000	635.364	635.379
	P7	5914.340	-16.000	635.308	635.317
	℄ Brg. Pier 20	5925.669	-16.000	635.244	635.260
	Q7	5935.669	-16.000	635.187	635.226
	R7	5945.669	-16.000	635.131	635.201
	S7	5955.669	-16.000	635.074	635.178
	T7	5965.669	-16.000	635.018	635.159
	U7	5975.697	-16.000	634.961	635.089
	V7	5985.776	-16.000	634.904	635.029
	W7	5995.855	-16.000	634.847	634.943
	X7	6005.933	-16.000	634.790	634.850
	℄ Brg. Pier 21	6015.630	-16.000	634.736	634.750
	℄ Pier 21	6016.890	-16.000	634.730	634.744
Girder 6	℄ Pier 18	5743.000	-20.125	635.829	635.851
	℄ Brg. Pier 18	5744.250	-20.125	635.827	635.848
	A7	5754.250	-20.125	635.803	635.891
	B7	5764.250	-20.125	635.778	635.898
	C7	5774.250	-20.125	635.751	635.877
	D7	5784.250	-20.125	635.723	635.858
	E7	5794.250	-20.125	635.693	635.820
	F7	5804.250	-20.125	635.663	635.769
	G7	5814.250	-20.125	635.631	635.710
	H7	5824.250	-20.125	635.603	635.649
	℄ Brg. Pier 19	5834.340	-20.125	635.573	635.578
	I7	5844.340	-20.125	635.543	635.561
	J7	5854.340	-20.125	635.513	635.537
	K7	5864.340	-20.125	635.483	635.517
	L7	5874.340	-20.125	635.444	635.486
	M7	5884.340	-20.125	635.384	635.425
	N7	5894.340	-20.125	635.322	635.357
	O7	5904.340	-20.125	635.260	635.284
	P7	5914.340	-20.125	635.197	635.216
	℄ Brg. Pier 20	5925.669	-20.125	635.127	635.152
	Q7	5935.669	-20.125	635.069	635.111
	R7	5945.669	-20.125	635.003	635.080
	S7	5955.669	-20.125	634.940	635.046
	T7	5965.669	-20.125	634.878	635.006
	U7	5975.704	-20.125	634.816	634.951
	V7	5985.803	-20.125	634.753	634.881
	W7	5995.903	-20.125	634.690	634.798
	X7	6006.002	-20.125	634.627	634.700
	℄ Brg. Pier 21	6015.967	-20.125	634.567	634.560
	℄ Pier 21	6016.890	-20.125	634.560	634.561

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

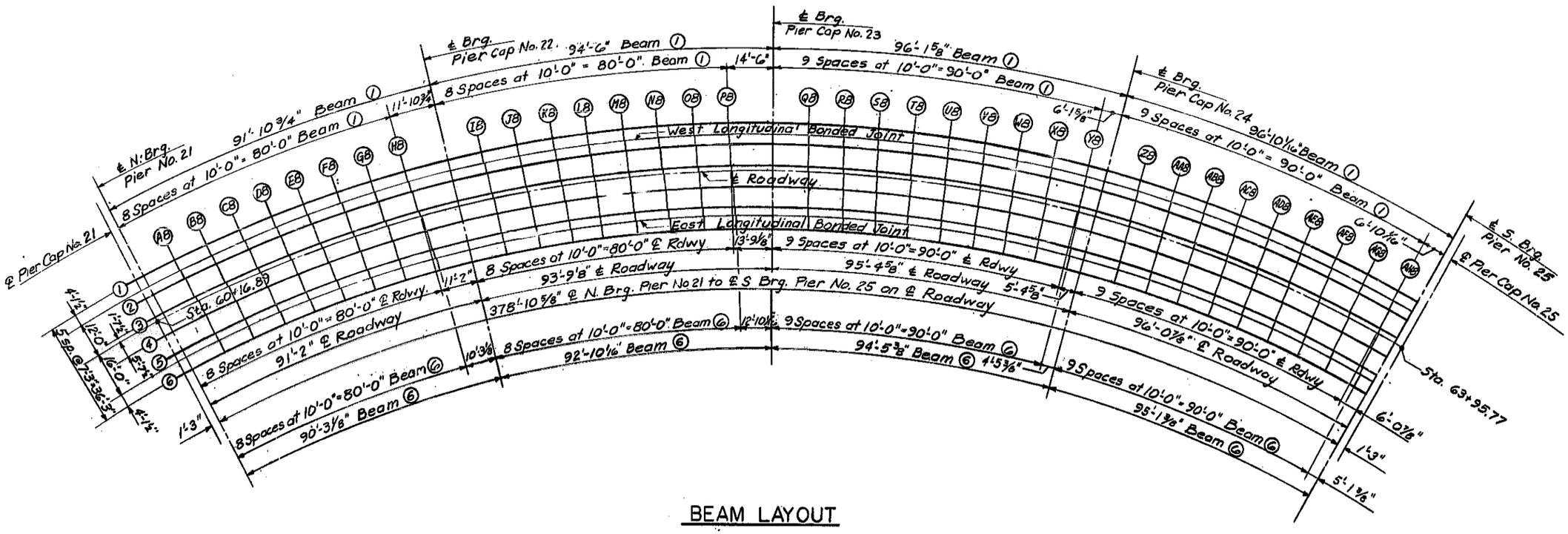
DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

TOP OF SLAB ELEVATIONS
SPANS 19 TO 21

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

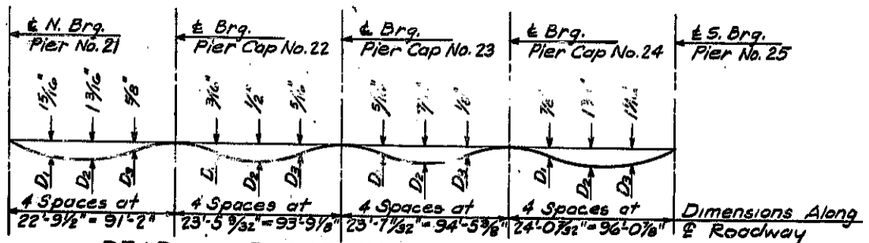
FEDERAL AID PROJECT No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	229	117
S. P. R. SEC. NO.	ILLINOIS PROJECT			

SHEET NO. 22
10.2 SHEETS



BEAM LAYOUT

Note:
All points given are taken at 10 foot intervals along the members or joints indicated. Station is given from ℄ Roadway for all points.



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders.)

Note:
- *These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.*

N

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	A.S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 22 TO 25

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	118
S. F. A. ROUTE NO.	ILLINOIS PROJECT			

SHEET NO 2 3
10 ST SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 21	6016.890	16.125	636.021	636.092
	℄ Brg. Pier 21	6018.130	16.125	636.022	636.093
	A8	6028.052	16.125	636.030	636.098
	B8	6037.973	16.125	636.000	636.087
	C8	6047.895	16.125	635.970	636.063
	D8	6057.817	16.125	635.940	636.025
	E8	6067.739	16.125	635.911	635.976
	F8	6077.661	16.125	635.881	635.920
	G8	6087.582	16.125	635.851	635.867
	H8	6097.504	16.125	635.821	
	℄ Brg. Pier 22	6109.300	16.125	635.786	635.893
	I8	6119.221	16.125	635.756	635.780
	J8	6129.141	16.125	635.726	635.760
	K8	6139.065	16.125	635.697	635.745
	L8	6148.987	16.125	635.667	635.727
	M8	6158.909	16.125	635.637	635.703
	N8	6168.830	16.125	635.607	635.669
	O8	6178.752	16.125	635.577	635.628
	P8	6188.674	16.125	635.548	635.585
	℄ Brg. Pier 23	6203.060	16.125	635.505	635.529
	Q8	6212.981	16.125	635.475	635.509
	R8	6222.903	16.125	635.445	635.493
	S8	6232.825	16.125	635.415	635.475
	T8	6242.747	16.125	635.386	635.443
	U8	6252.669	16.125	635.356	635.421
	V8	6262.590	16.125	635.326	635.381
	W8	6272.512	16.125	635.296	635.337
	X8	6282.434	16.125	635.266	635.293
	Y8	6292.356	16.125	635.237	635.260
	℄ Brg. Pier 24	6298.450	16.125	635.218	635.236
	Z8	6308.371	16.125	635.189	635.232
	AA8	6318.293	16.125	635.159	635.232
	AB8	6328.215	16.125	635.129	635.233
	AC8	6338.137	16.125	635.099	635.227
	AD8	6348.059	16.125	635.069	635.209
	AE8	6357.980	16.125	635.039	635.178
	AF8	6367.902	16.125	635.008	635.130
	AG8	6377.824	16.125	634.977	635.069
	AH8	6387.746	16.125	634.945	634.996
	℄ Brg. Pier 25	6394.529	16.125	634.922	634.944
	℄ Pier 25	6395.770	16.125	634.918	634.940
West Long. Bonded Jt.	℄ Pier 21	6016.890	12.000	635.858	635.872
	℄ Brg. Pier 21	6018.132	12.000	635.858	635.872
	A8	6028.074	12.000	635.856	635.912
	B8	6038.016	12.000	635.826	635.915
	C8	6047.957	12.000	635.797	635.907
	D8	6057.899	12.000	635.767	635.883
	E8	6067.841	12.000	635.737	635.845
	F8	6077.782	12.000	635.707	635.795
	G8	6087.724	12.000	635.677	635.735
	H8	6097.666	12.000	635.648	635.684
	℄ Brg. Pier 22	6109.300	12.000	635.613	635.631
	I8	6119.241	12.000	635.583	635.589
	J8	6129.183	12.000	635.553	635.581
	K8	6139.125	12.000	635.523	635.563
	L8	6149.066	12.000	635.493	635.545
	M8	6159.008	12.000	635.463	635.521
	N8	6168.950	12.000	635.434	635.488
	O8	6178.891	12.000	635.404	635.447
	P8	6188.833	12.000	635.374	635.403

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
West Long. Bonded Jt.	℄ Brg. Pier 23	6203.060	12.000	635.331	635.346
	Q8	6213.001	12.000	635.301	635.326
	R8	6222.943	12.000	635.272	635.311
	S8	6232.885	12.000	635.242	635.293
	T8	6242.826	12.000	635.212	635.270
	U8	6252.768	12.000	635.182	635.238
	V8	6262.710	12.000	635.152	635.198
	W8	6272.651	12.000	635.123	635.155
	X8	6282.593	12.000	635.093	635.111
	Y8	6292.535	12.000	635.063	635.085
	℄ Brg. Pier 24	6298.450	12.000	635.045	635.054
	Z8	6308.391	12.000	635.015	635.050
	AA8	6318.333	12.000	634.985	635.040
	AB8	6328.275	12.000	634.956	635.052
	AC8	6338.216	12.000	634.926	635.046
	AD8	6348.158	12.000	634.896	635.028
	AE8	6358.100	12.000	634.865	634.996
	AF8	6368.041	12.000	634.834	634.948
	AG8	6377.983	12.000	634.803	634.887
	AH8	6387.925	12.000	634.771	634.814
	℄ Brg. Pier 25	6394.527	12.000	634.749	634.763
	℄ Pier 25	6395.770	12.000	634.745	634.759
Girder 2	℄ Pier 21	6016.890	8.875	635.734	635.741
	℄ Brg. Pier 21	6018.134	8.875	635.733	635.740
	A8	6028.091	8.875	635.725	635.773
	B8	6038.048	8.875	635.695	635.776
	C8	6048.005	8.875	635.665	635.777
	D8	6057.961	8.875	635.635	635.742
	E8	6067.918	8.875	635.605	635.705
	F8	6077.875	8.875	635.576	635.657
	G8	6087.832	8.875	635.546	635.600
	H8	6097.789	8.875	635.516	635.544
	℄ Brg. Pier 22	6109.300	8.875	635.481	635.490
	I8	6119.256	8.875	635.451	635.458
	J8	6129.213	8.875	635.422	635.439
	K8	6139.170	8.875	635.392	635.423
	L8	6149.127	8.875	635.362	635.405
	M8	6159.084	8.875	635.332	635.381
	N8	6169.040	8.875	635.302	635.347
	O8	6178.997	8.875	635.272	635.306
	P8	6188.954	8.875	635.242	635.262
	℄ Brg. Pier 23	6203.060	8.875	635.200	635.208
	Q8	6213.016	8.875	635.170	635.186
	R8	6222.973	8.875	635.140	635.170
	S8	6232.930	8.875	635.110	635.152
	T8	6242.887	8.875	635.081	635.130
	U8	6252.844	8.875	635.051	635.100
	V8	6262.800	8.875	635.021	635.058
	W8	6272.757	8.875	634.991	635.014
	X8	6282.714	8.875	634.961	634.970
	Y8	6292.671	8.875	634.931	634.944
	℄ Brg. Pier 24	6298.450	8.875	634.914	634.924
	Z8	6308.406	8.875	634.884	634.911
	AA8	6318.363	8.875	634.854	634.911
	AB8	6328.320	8.875	634.824	634.912
	AC8	6338.277	8.875	634.794	634.906
	AD8	6348.234	8.875	634.764	634.888
	AE8	6358.190	8.875	634.734	634.857
	AF8	6368.147	8.875	634.703	634.809
	AG8	6378.104	8.875	634.671	634.747
	AH8	6388.061	8.875	634.639	634.684
	℄ Brg. Pier 25	6394.525	8.875	634.618	634.625
	℄ Pier 25	6395.770	8.875	634.614	634.621

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 3	℄ Pier 21	6016.890	1.625	635.446	635.446
	℄ Brg. Pier 21	6018.139	1.625	635.443	635.443
	A8	6028.131	1.625	635.420	635.460
	B8	6038.123	1.625	635.390	635.463
	C8	6048.115	1.625	635.360	635.454
	D8	6058.107	1.625	635.330	635.430
	E8	6068.099	1.625	635.300	635.392
	F8	6078.091	1.625	635.270	635.343
	G8	6088.083	1.625	635.241	635.288
	H8	6098.075	1.625	635.211	635.231
	℄ Brg. Pier 22	6109.300	1.625	635.177	635.177
	I8	6119.292	1.625	635.147	635.146
	J8	6129.284	1.625	635.117	635.126
	K8	6139.276	1.625	635.087	635.110
	L8	6149.268	1.625	635.057	635.112
	M8	6159.260	1.625	635.027	635.068
	N8	6169.252	1.625	634.997	635.034
	O8	6179.244	1.625	634.967	634.993
	P8	6189.236	1.625	634.937	634.949
	℄ Brg. Pier 23	6203.060	1.625	634.896	634.896
	Q8	6213.052	1.625	634.866	634.873
	R8	6223.044	1.625	634.836	634.857
	S8	6233.036	1.625	634.806	634.839
	T8	6243.028	1.625	634.776	634.816
	U8	6253.020	1.625	634.746	634.784
	V8	6263.012	1.625	634.716	634.744
	W8	6273.004	1.625	634.686	634.700
	X8	6282.996	1.625	634.656	634.656
	Y8	6292.988	1.625	634.626	634.630
	℄ Brg. Pier 24	6298.450	1.625	634.609	634.609
	Z8	6308.442	1.625	634.579	634.598
	AA8	6318.434	1.625	634.549	634.598
	AB8	6328.426	1.625	634.519	634.599
	AC8	6338.418	1.625	634.489	634.593
	AD8	6348.410	1.625	634.459	634.575
	AE8	6358.402	1.625	634.429	634.544
	AF8	6368.394	1.625	634.397	634.495
	AG8	6378.386	1.625	634.366	634.434
	AH8	6388.378	1.625	634.334	634.361
	℄ Brg. Pier 25	6394.520	1.625	634.313	634.313
	℄ Pier 25	6395.770	1.625	634.309	634.309
℄ Roadway	℄ Pier 21	6016.890	0.000	635.382	635.382
	℄ Brg. Pier 21	6018.139	0.000	635.378	635.378
	A8	6028.139	0.000	635.352	635.392
	B8	6038.139	0.000	635.322	635.395
	C8	6048.139	0.000	635.292	635.386
	D8	6058.139	0.000	635.262	635.362
	E8	6068.139	0.000	635.232	635.324
	F8	6078.139	0.000	635.202	635.275
	G8	6088.139	0.000	635.172	635.218
	H8	6098.139	0.000	635.142	635.167
	℄ Brg. Pier 22	6109.300	0.000	635.109	635.109
	I8	6119.300	0.000	635.079	635.078
	J8	6129.300	0.000	635.049	635.058
	K8	6139.300	0.000	635.019	635.042
	L8	6149.300	0.000	634.989	635.024
	M8	6159.300	0.000	634.959	635.000
	N8	6169.300	0.000	634.929	634.968
	O8	6179.300	0.000	634.899	634.925
	P8	6189.300	0.000	634.869	634.881

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

TOP OF SLAB ELEVATIONS
SPANS 22 TO 25

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 21	6016.890	16.125	636.021	636.042
	℄ Brg. Pier 21	6018.136	16.125	636.022	636.043
	A8	6028.052	16.125	636.030	636.093
	B8	6037.973	16.125	636.000	636.087
	C8	6047.895	16.125	635.970	636.088
	D8	6057.817	16.125	635.940	636.025
	E8	6067.739	16.125	635.911	635.976
	F8	6077.661	16.125	635.881	635.929
	G8	6087.582	16.125	635.851	635.867
	H8	6097.504	16.125	635.821	635.807
	℄ Brg. Pier 22	6109.300	16.125	635.786	635.780
	I8	6119.221	16.125	635.756	635.760
	J8	6129.143	16.125	635.726	635.745
	K8	6139.065	16.125	635.697	635.727
	L8	6148.987	16.125	635.667	635.709
	M8	6158.909	16.125	635.637	635.689
	N8	6168.830	16.125	635.607	635.669
	O8	6178.752	16.125	635.577	635.628
	P8	6188.674	16.125	635.548	635.585
	℄ Brg. Pier 23	6203.060	16.125	635.509	635.529
	Q8	6212.981	16.125	635.479	635.509
	R8	6222.903	16.125	635.449	635.498
	S8	6232.829	16.125	635.415	635.476
	T8	6242.747	16.125	635.386	635.449
	U8	6252.669	16.125	635.356	635.421
	V8	6262.590	16.125	635.326	635.391
	W8	6272.512	16.125	635.296	635.387
	X8	6282.434	16.125	635.266	635.299
	Y8	6292.356	16.125	635.237	635.260
	℄ Brg. Pier 24	6298.450	16.125	635.218	635.236
	Z8	6308.371	16.125	635.189	635.232
	AA8	6318.293	16.125	635.159	635.232
	AB8	6328.215	16.125	635.129	635.233
	AC8	6338.137	16.125	635.099	635.227
	AD8	6348.059	16.125	635.069	635.208
	AE8	6357.980	16.125	635.039	635.176
	AF8	6367.902	16.125	635.008	635.130
	AG8	6377.824	16.125	634.977	635.068
	AH8	6387.746	16.125	634.948	634.994
	℄ Brg. Pier 25	6394.529	16.125	634.922	634.944
	℄ Pier 25	6395.770	16.125	634.918	634.940
West Long. Bonded Jt.	℄ Pier 21	6016.890	12.000	635.858	635.872
	℄ Brg. Pier 21	6018.132	12.000	635.856	635.872
	A8	6028.076	12.000	635.856	635.912
	B8	6038.016	12.000	635.826	635.915
	C8	6047.957	12.000	635.797	635.897
	D8	6057.899	12.000	635.767	635.858
	E8	6067.841	12.000	635.737	635.798
	F8	6077.782	12.000	635.708	635.738
	G8	6087.726	12.000	635.678	635.705
	H8	6097.666	12.000	635.648	635.659
	℄ Brg. Pier 22	6109.300	12.000	635.613	635.591
	I8	6119.241	12.000	635.583	635.569
	J8	6129.183	12.000	635.553	635.551
	K8	6139.125	12.000	635.523	635.533
	L8	6149.066	12.000	635.493	635.515
	M8	6159.008	12.000	635.463	635.497
	N8	6168.950	12.000	635.434	635.479
	O8	6178.891	12.000	635.404	635.447
	P8	6188.833	12.000	635.374	635.429

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 2	℄ Pier 23	6203.060	12.000	635.331	635.349
	V8	6213.001	12.000	635.301	635.326
	W8	6222.943	12.000	635.272	635.311
	X8	6232.885	12.000	635.242	635.289
	Y8	6242.826	12.000	635.212	635.270
	Z8	6252.768	12.000	635.182	635.252
	AA8	6262.710	12.000	635.152	635.198
	AB8	6272.651	12.000	635.123	635.155
	AC8	6282.593	12.000	635.093	635.111
	AD8	6292.535	12.000	635.063	635.066
	℄ Brg. Pier 24	6298.450	12.000	635.045	635.054
	Z8	6308.391	12.000	635.015	635.050
	AA8	6318.333	12.000	634.985	635.040
	AB8	6328.275	12.000	634.956	635.052
	AC8	6338.216	12.000	634.926	635.046
	AD8	6348.158	12.000	634.896	635.028
	AE8	6358.100	12.000	634.865	635.000
	AF8	6368.041	12.000	634.836	634.958
	AG8	6377.983	12.000	634.803	634.897
	AH8	6387.925	12.000	634.771	634.819
	℄ Brg. Pier 25	6394.527	12.000	634.749	634.783
	℄ Pier 25	6395.770	12.000	634.745	634.780
East Long. Bonded Jt.	℄ Pier 21	6016.890	8.875	635.734	635.761
	℄ Brg. Pier 21	6018.134	8.875	635.730	635.760
	A8	6028.091	8.875	635.725	635.772
	B8	6038.049	8.875	635.695	635.728
	C8	6048.008	8.875	635.665	635.727
	D8	6057.961	8.875	635.635	635.702
	E8	6067.918	8.875	635.605	635.708
	F8	6077.875	8.875	635.576	635.657
	G8	6087.832	8.875	635.546	635.600
	H8	6097.789	8.875	635.516	635.588
	℄ Brg. Pier 22	6109.300	8.875	635.481	635.469
	I8	6119.256	8.875	635.451	635.468
	J8	6129.213	8.875	635.422	635.438
	K8	6139.170	8.875	635.392	635.409
	L8	6149.127	8.875	635.362	635.380
	M8	6159.084	8.875	635.332	635.350
	N8	6169.040	8.875	635.302	635.320
	O8	6178.997	8.875	635.272	635.290
	P8	6188.954	8.875	635.243	635.260
	℄ Brg. Pier 23	6203.060	8.875	635.200	635.220
	Q8	6212.918	8.875	635.170	635.190
	R8	6222.875	8.875	635.140	635.160
	S8	6232.832	8.875	635.110	635.130
	T8	6242.789	8.875	635.080	635.100
	U8	6252.746	8.875	635.051	635.071
	V8	6262.703	8.875	635.021	635.041
	W8	6272.660	8.875	634.991	635.011
	X8	6282.617	8.875	634.961	634.981
	Y8	6292.574	8.875	634.932	634.952
	℄ Brg. Pier 24	6298.450	8.875	634.914	634.934
	Z8	6308.408	8.875	634.884	634.904
	AA8	6318.365	8.875	634.854	634.874
	AB8	6328.322	8.875	634.824	634.844
	AC8	6338.279	8.875	634.795	634.815
	AD8	6348.236	8.875	634.765	634.785
	AE8	6358.193	8.875	634.735	634.755
	AF8	6368.150	8.875	634.705	634.725
	AG8	6378.107	8.875	634.676	634.696
	AH8	6388.064	8.875	634.646	634.666
	℄ Brg. Pier 25	6394.527	8.875	634.626	634.646
	℄ Pier 25	6395.770	8.875	634.622	634.642

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 3	℄ Pier 21	6016.890	1.625	635.486	635.504
	℄ Brg. Pier 21	6018.139	1.625	635.490	635.502
	A8	6028.134	1.625	635.460	635.500
	B8	6038.129	1.625	635.430	635.498
	C8	6048.125	1.625	635.400	635.500
	D8	6058.087	1.625	635.370	635.502
	E8	6068.079	1.625	635.340	635.502
	F8	6078.091	1.625	635.310	635.502
	G8	6088.083	1.625	635.280	635.502
	H8	6098.075	1.625	635.251	635.501
	℄ Brg. Pier 22	6109.300	1.625	635.218	635.477
	I8	6119.292	1.625	635.188	635.453
	J8	6129.283	1.625	635.158	635.429
	K8	6139.275	1.625	635.128	635.405
	L8	6149.268	1.625	635.097	635.381
	M8	6159.260	1.625	635.067	635.357
	N8	6169.252	1.625	635.037	635.333
	O8	6179.244	1.625	635.007	635.309
	P8	6189.236	1.625	634.977	635.286
	℄ Brg. Pier 23	6203.060	1.625	634.936	634.954
	Q8	6213.052	1.625	634.906	634.930
	R8	6223.044	1.625	634.876	634.906
	S8	6233.036	1.625	634.846	634.882
	T8	6243.028	1.625	634.816	634.858
	U8	6253.020	1.625	634.786	634.834
	V8	6263.012	1.625	634.756	634.810
	W8	6273.004	1.625	634.726	634.786
	X8	6282.996	1.625	634.696	634.762
	Y8	6292.988	1.625	634.666	634.738
	℄ Brg. Pier 24	6298.450	1.625	634.649	634.724
	Z8	6308.442	1.625	634.619	634.700
	AA8	6318.434	1.625	634.589	634.676
	AB8	6328.426	1.625	634.559	634.652
	AC8	6338.418	1.625	634.529	634.628
	AD8	6348.410	1.625	634.499	634.604
	AE8	6358.402	1.625	634.469	634.580
	AF8	6368.394	1.625	634.439	634.556
	AG8	6378.386	1.625	634.409	634.532
	AH8	6388.378	1.625	634.379	634.508
	℄ Brg. Pier 25	6394.527	1.625	634.361	634.493
	℄ Pier 25	6395.770	1.625	634.357	634.489
℄ Roadway	℄ Pier 21	6016.890	0.000	635.486	635.504
	℄ Brg. Pier 21	6018.139	0.000	635.490	635.502
	A8	6028.134	0.000	635.460	635.500
	B8	6038.129	0.000	635.430	635.498
	C8	6048.125	0.000	635.400	635.500
	D8	6058.087	0.000	635.370	635.502
	E8	6068.079	0.000	635.340	635.502
	F8	6078.091	0.000	635.310	635.502
	G8	6088.083	0.000	635.280	635.502
	H8	6098.075	0.000	635.251	635.501
	℄ Brg. Pier 22	6109.300	0.000	635.218	635.477
	I8	6119.292	0.000	635.188	635.453
	J8	6129.283	0.000	635.158	635.429
	K8	6139.275	0.000	635.128	635.405
	L8	6149.268	0.000	635.097	635.381
	M8	6159.260	0.000	635.067	635.357
	N8	6169.252	0.000	635.037	635.333
	O8	6179.244	0.000	635.007	635.309
	P8	6189.236	0.000	634.977	635.286
	℄ Brg. Pier 23	6203.060	0.000	634.936	634.954
	Q8	6213.052	0.000	634.906	634.930
	R8	6223.044	0.000	634.876	634.906
	S8	6233.036	0.000	634.846	634.882
	T8	6243.028	0.000	634.816	634.858
	U8	6253.020	0.000	634.786	634.834
	V8	6263.012	0.000	634.756	634.810
	W8	6273.004	0.000	634.726	634.786
	X8	6282.996	0.000	634.696	634.762
	Y8	6292.988	0.000	634.666	634.738
	℄ Brg. Pier 24	6298.450	0.000	634.649	634.724
	Z8	6308.442	0.000	634.619	634.700
	AA8	6318.434	0.000	634.589	634.676
	AB8	6328.426	0.000	634.559	634.652
	AC8	6338.418	0.000	634.529	634.628
	AD8	6348.410	0.000	634.499	634.604
	AE8	6358.402	0.000	634.469	634.580
	AF8	6368.394	0.000	634.439	634.556
	AG8	6378.386	0.000	634.409	634.532
	AH8	6388.378	0.000	634.379	634.508
	℄ Brg. Pier 25	6394.527	0.000	634.361	634.493
	℄ Pier 25	6395.770	0.000	634.357	634.489

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

TOP OF SLAB ELEVATIONS
Grade [illegible]
LA GRANGE RD. (RTE. 45 U.S.45)
NORTH [illegible]
SECTION 41B-X-B & R
COOK COUNTY
STATION 41+38.63

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W C K
CHECKED	A.S.

Rev. [ ] 12-30-75 D.D.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K BBR	COOK	223	119
R. P. E. REG. NO.	ILLINOIS PROJECT			

SHEET NO 24
102 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 23	6203.060	0.000	634.827	634.827
	Q8	6213.060	0.000	634.797	634.814
	R8	6223.060	0.000	634.767	634.788
	S8	6233.060	0.000	634.737	634.770
	T8	6243.060	0.000	634.707	634.747
	U8	6253.060	0.000	634.677	634.715
	V8	6263.060	0.000	634.647	634.675
	W8	6273.060	0.000	634.617	634.631
	X8	6283.060	0.000	634.587	634.587
	Y8	6293.060	0.000	634.557	634.561
℄ Roadway	℄ Brg. Pier 24	6298.450	0.000	634.541	634.541
	Z8	6308.450	0.000	634.511	634.530
	AA8	6318.450	0.000	634.481	634.530
	AB8	6328.450	0.000	634.451	634.531
	AC8	6338.450	0.000	634.421	634.525
	AD8	6348.450	0.000	634.391	634.507
	AE8	6358.450	0.000	634.360	634.475
	AF8	6368.450	0.000	634.329	634.427
	AG8	6378.450	0.000	634.297	634.365
	AH8	6388.450	0.000	634.265	634.292
	℄ Brg. Pier 25	6394.520	0.000	634.245	634.245
	℄ Pier 25	6395.770	0.000	634.241	634.241
	℄ Pier 21	6016.890	-5.625	635.167	635.167
	℄ Brg. Pier 21	6018.143	-5.625	635.152	635.152
	A8	6028.171	-5.625	635.116	635.158
	B8	6038.198	-5.625	635.086	635.159
	C8	6048.226	-5.625	635.056	635.150
	D8	6058.253	-5.625	635.025	635.125
	E8	6068.281	-5.625	634.995	635.087
	F8	6078.308	-5.625	634.965	635.038
	G8	6088.336	-5.625	634.935	634.991
	H8	6098.363	-5.625	634.905	634.925
	℄ Brg. Pier 22	6109.300	-5.625	634.872	634.872
	I8	6119.327	-5.625	634.842	634.841
	J8	6129.355	-5.625	634.812	634.821
	K8	6139.382	-5.625	634.782	634.805
	L8	6149.410	-5.625	634.752	634.787
	M8	6159.437	-5.625	634.722	634.763
	N8	6169.465	-5.625	634.692	634.729
	O8	6179.492	-5.625	634.662	634.688
	P8	6189.520	-5.625	634.632	634.644
Girder 4	℄ Brg. Pier 23	6203.060	-5.625	634.591	634.591
	Q8	6213.087	-5.625	634.561	634.568
	R8	6223.115	-5.625	634.531	634.552
	S8	6233.142	-5.625	634.501	634.534
	T8	6243.170	-5.625	634.471	634.511
	U8	6253.197	-5.625	634.441	634.479
	V8	6263.225	-5.625	634.411	634.439
	W8	6273.252	-5.625	634.380	634.394
	X8	6283.280	-5.625	634.350	634.350
	Y8	6293.308	-5.625	634.320	634.324
	℄ Brg. Pier 24	6298.450	-5.625	634.305	634.305
	Z8	6308.477	-5.625	634.275	634.284
	AA8	6318.505	-5.625	634.245	634.284
	AB8	6328.532	-5.625	634.215	634.285
	AC8	6338.560	-5.625	634.185	634.289
	AD8	6348.587	-5.625	634.154	634.270
	AE8	6358.615	-5.625	634.123	634.238
	AF8	6368.642	-5.625	634.092	634.190
	AG8	6378.670	-5.625	634.060	634.128
	AH8	6388.698	-5.625	634.028	634.055
	℄ Brg. Pier 25	6394.516	-5.625	634.009	634.008
	℄ Pier 25	6395.770	-5.625	634.005	634.005

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 21	6016.890	-12.875	634.857	634.864
	℄ Brg. Pier 21	6018.147	-12.875	634.851	634.848
	A8	6028.211	-12.875	634.811	634.859
	B8	6038.274	-12.875	634.781	634.862
	C8	6048.337	-12.875	634.751	634.863
	D8	6058.401	-12.875	634.721	634.829
	E8	6068.464	-12.875	634.690	634.790
	F8	6078.527	-12.875	634.660	634.741
	G8	6088.591	-12.875	634.630	634.694
	H8	6098.654	-12.875	634.600	634.628
	℄ Brg. Pier 22	6109.300	-12.875	634.568	634.575
	I8	6119.363	-12.875	634.538	634.545
	J8	6129.426	-12.875	634.507	634.524
	K8	6139.489	-12.875	634.477	634.508
	L8	6149.553	-12.875	634.447	634.490
	M8	6159.616	-12.875	634.417	634.466
	N8	6169.679	-12.875	634.387	634.432
	O8	6179.743	-12.875	634.357	634.391
	P8	6189.806	-12.875	634.326	634.346
Girder 5	℄ Brg. Pier 23	6203.060	-12.875	634.287	634.295
	Q8	6213.123	-12.875	634.256	634.272
	R8	6223.186	-12.875	634.226	634.256
	S8	6233.249	-12.875	634.196	634.238
	T8	6243.313	-12.875	634.166	634.215
	U8	6253.376	-12.875	634.136	634.183
	V8	6263.439	-12.875	634.105	634.142
	W8	6273.503	-12.875	634.075	634.098
	X8	6283.566	-12.875	634.045	634.054
	Y8	6293.629	-12.875	634.015	634.028
	℄ Brg. Pier 24	6298.450	-12.875	634.000	634.010
	Z8	6308.513	-12.875	633.970	633.997
	AA8	6318.576	-12.875	633.940	633.997
	AB8	6328.639	-12.875	633.910	633.998
	AC8	6338.703	-12.875	633.880	633.992
	AD8	6348.766	-12.875	633.849	633.978
	AE8	6358.829	-12.875	633.818	633.941
	AF8	6368.893	-12.875	633.787	633.893
	AG8	6378.956	-12.875	633.755	633.831
	AH8	6389.019	-12.875	633.722	633.767
	℄ Brg. Pier 25	6394.512	-12.875	633.705	633.712
	℄ Pier 25	6395.770	-12.875	633.700	633.707
	℄ Pier 21	6016.890	-16.000	634.730	634.744
	℄ Brg. Pier 21	6018.149	-16.000	634.722	634.736
	A8	6028.228	-16.000	634.680	634.736
	B8	6038.307	-16.000	634.650	634.739
	C8	6048.386	-16.000	634.619	634.729
	D8	6058.465	-16.000	634.589	634.705
	E8	6068.543	-16.000	634.559	634.667
	F8	6078.622	-16.000	634.529	634.618
	G8	6088.701	-16.000	634.498	634.560
East Long. Bonded Jt.	H8	6098.780	-16.000	634.468	634.504
	℄ Brg. Pier 22	6109.300	-16.000	634.437	634.466
	I8	6119.378	-16.000	634.406	634.422
	J8	6129.457	-16.000	634.376	634.404
	K8	6139.536	-16.000	634.346	634.386
	L8	6149.615	-16.000	634.316	634.368
	M8	6159.694	-16.000	634.285	634.349
	N8	6169.772	-16.000	634.255	634.309
	O8	6179.851	-16.000	634.225	634.278
	P8	6189.930	-16.000	634.195	634.224

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 23	6203.060	-16.000	634.155	634.171
	Q8	6213.138	-16.000	634.125	634.150
	R8	6223.217	-16.000	634.095	634.134
	S8	6233.296	-16.000	634.065	634.116
	T8	6243.375	-16.000	634.034	634.092
	U8	6253.454	-16.000	634.004	634.060
	V8	6263.532	-16.000	633.974	634.012
	W8	6273.611	-16.000	633.944	633.975
	X8	6283.690	-16.000	633.913	633.931
	Y8	6293.769	-16.000	633.883	633.905
East Long. Bonded Jt.	℄ Brg. Pier 24	6298.450	-16.000	633.869	633.886
	Z8	6308.528	-16.000	633.839	633.874
	AA8	6318.607	-16.000	633.809	633.864
	AB8	6328.686	-16.000	633.778	633.874
	AC8	6338.765	-16.000	633.748	633.868
	AD8	6348.844	-16.000	633.718	633.840
	AE8	6358.922	-16.000	633.687	633.818
	AF8	6369.001	-16.000	633.655	633.769
	AG8	6379.080	-16.000	633.623	633.707
	AH8	6389.159	-16.000	633.591	633.634
	℄ Brg. Pier 25	6394.510	-16.000	633.575	633.587
	℄ Pier 25	6395.770	-16.000	633.569	633.583
	℄ Pier 21	6016.890	-20.125	634.560	634.581
	℄ Brg. Pier 21	6018.152	-20.125	634.553	634.574
	A8	6028.251	-20.125	634.506	634.569
	B8	6038.351	-20.125	634.476	634.572
	C8	6048.450	-20.125	634.446	634.563
	D8	6058.549	-20.125	634.416	634.539
	E8	6068.649	-20.125	634.385	634.500
	F8	6078.748	-20.125	634.355	634.450
	G8	6088.847	-20.125	634.325	634.394
	H8	6098.947	-20.125	634.294	634.340
	℄ Brg. Pier 22	6109.300	-20.125	634.263	634.290
	I8	6119.399	-20.125	634.233	634.267
	J8	6129.498	-20.125	634.203	634.237
	K8	6139.597	-20.125	634.172	634.220
	L8	6149.697	-20.125	634.142	634.202
	M8	6159.796	-20.125	634.112	634.178
	N8	6169.895	-20.125	634.082	634.144
	O8	6179.995	-20.125	634.051	634.102
	P8	6190.094	-20.125	634.021	634.058
Girder 6	℄ Brg. Pier 23	6203.060	-20.125	633.982	634.006
	Q8	6213.159	-20.125	633.952	633.986
	R8	6223.258	-20.125	633.921	633.969
	S8	6233.357	-20.125	633.891	633.951
	T8	6243.457	-20.125	633.861	633.928
	U8	6253.556	-20.125	633.831	633.898
	V8	6263.655	-20.125	633.800	633.855
	W8	6273.755	-20.125	633.770	633.811
	X8	6283.854	-20.125	633.740	633.767
	Y8	6293.953	-20.125	633.709	633.732
	℄ Brg. Pier 24	6298.450	-20.125	633.696	633.724
	Z8	6308.549	-20.125	633.666	633.709
	AA8	6318.648	-20.125	633.635	633.698
	AB8	6328.747	-20.125	633.605	633.702
	AC8	6338.847	-20.125	633.575	633.703
	AD8	6348.946	-20.125	633.545	633.699
	AE8	6359.045	-20.125	633.513	633.652
	AF8	6369.145	-20.125	633.482	633.602
	AG8	6379.244	-20.125	633.449	633.541
	AH8	6389.343	-20.125	633.417	633.468
	℄ Brg. Pier 25	6394.507	-20.125	633.400	633.422
	℄ Pier 25	6395.770	-20.125	633.396	633.418

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

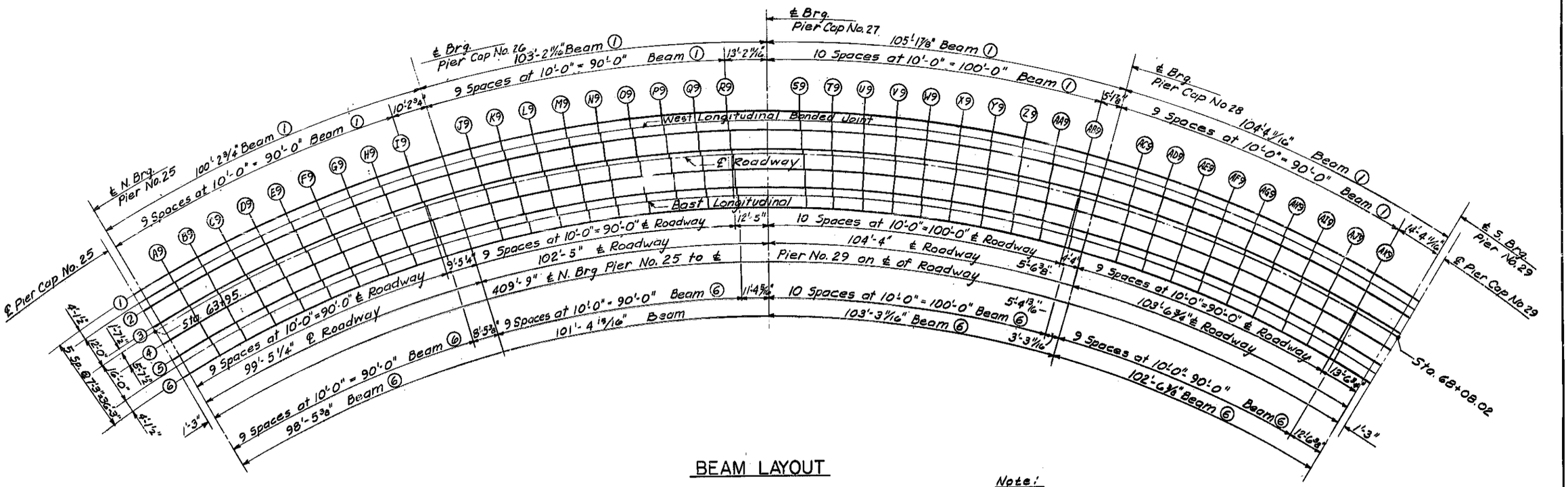
DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

TOP OF SLAB ELEVATIONS
SPANS 22 TO 25

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

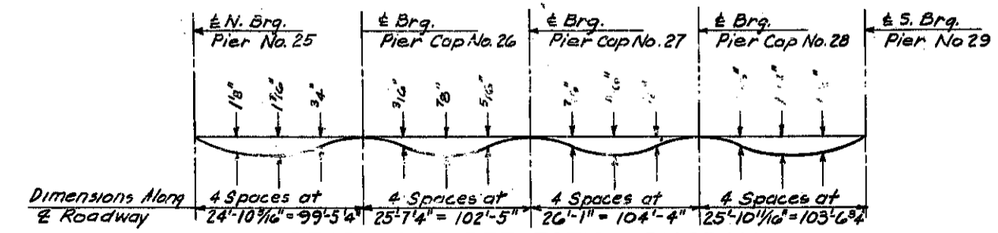
F.A.I. RTE. AND SECT. No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462V B&R	COOK	229	120
S. F. A. R. REG. NO.		ILLINOIS PROJECT		

SHEET NO. 25
108 SHEETS



BEAM LAYOUT

Note:
All points given are taken at 10 foot intervals along the members or joints indicated. Station is given from ℄ of Roadway for all points.

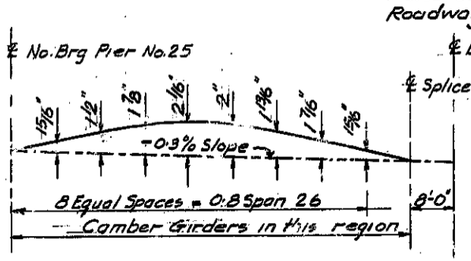


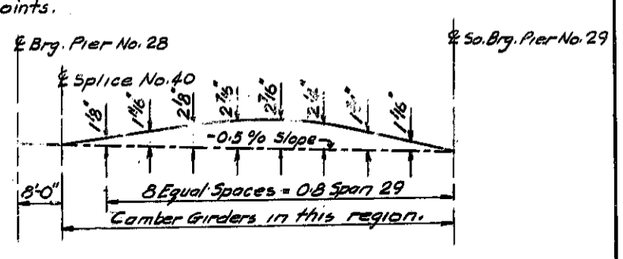
DEAD LOAD DEFLECTION DIAGRAM

Includes only weight of concrete and 1½" W. Surface. Use these deflections in conjunction with deflection of cross girders.

Note: These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.

Camber Spans No. 26 and No. 29 for dead load deflection only. See Camber Diagrams this Sht.





CAMBER DIAGRAMS

Note: Values given include ¼" for Fabrication Tolerance.

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	HJS
CHECKED	A. S.

TOP OF SLAB ELEVATION LAYOUT
SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	181
F. A. R. SEC. NO.	ILLINOIS PROJECT			

SHEET NO. 26
102 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 25	6395.770	16.125	634.918	634.940
	℄ Brg. Pier 25	6397.010	16.125	634.914	634.936
	A9	6406.932	16.125	634.881	634.951
	B9	6416.853	16.125	634.848	634.956
	C9	6426.775	16.125	634.814	634.949
	D9	6436.697	16.125	634.780	634.927
	E9	6446.619	16.125	634.745	634.890
	F9	6456.541	16.125	634.710	634.838
	G9	6466.462	16.125	634.674	634.776
	H9	6476.384	16.125	634.637	634.708
	I9	6486.306	16.125	634.601	634.644
	℄ Brg. Pier 26	6496.450	16.125	634.562	634.580
	J9	6506.371	16.125	634.525	634.547
	K9	6516.293	16.125	634.486	634.518
	L9	6526.215	16.125	634.447	634.495
	M9	6536.137	16.125	634.408	634.471
	N9	6546.059	16.125	634.368	634.440
	O9	6555.980	16.125	634.328	634.400
	P9	6565.902	16.125	634.287	634.350
	Q9	6575.824	16.125	634.246	634.295
	R9	6585.746	16.125	634.204	634.238
Girder 1	℄ Brg. Pier 27	6598.870	16.125	634.148	634.173
	S9	6608.791	16.125	634.105	634.140
	T9	6618.713	16.125	634.062	634.114
	U9	6628.635	16.125	634.018	634.088
	V9	6638.557	16.125	633.974	634.055
	W9	6648.479	16.125	633.929	634.013
	X9	6658.400	16.125	633.884	633.960
	Y9	6668.322	16.125	633.838	633.899
	Z9	6678.244	16.125	633.791	633.833
	AA9	6688.166	16.125	633.744	633.771
	AB9	6698.088	16.125	633.697	633.719
	℄ Brg. Pier 28	6703.200	16.125	633.673	633.701
	AC9	6713.121	16.125	633.624	633.671
	AD9	6723.043	16.125	633.576	633.655
	AE9	6732.965	16.125	633.527	633.693
	AF9	6742.887	16.125	633.477	633.624
	AG9	6752.809	16.125	633.428	633.595
	AH9	6762.730	16.125	633.378	633.551
	AI9	6772.652	16.125	633.328	633.490
	AJ9	6782.574	16.125	633.279	633.404
	AK9	6792.496	16.125	633.229	633.323
	℄ Brg. Pier 29	6806.779	16.125	633.158	633.181
	℄ Pier 29	6808.020	16.125	633.152	633.172
	℄ Pier 25	6395.770	12.000	634.745	634.759
	℄ Brg. Pier 25	6397.012	12.000	634.741	634.756
	A9	6406.954	12.000	634.708	634.769
	B9	6416.896	12.000	634.675	634.773
	C9	6426.837	12.000	634.641	634.767
	D9	6436.779	12.000	634.606	634.732
	E9	6446.721	12.000	634.571	634.707
	F9	6456.662	12.000	634.536	634.654
	G9	6466.604	12.000	634.500	634.593
	H9	6476.546	12.000	634.464	634.526
	I9	6486.487	12.000	634.427	634.461
West Long. Bonded Jt.	℄ Brg. Pier 28	6496.490	12.000	634.389	634.407
	J9	6506.391	12.000	634.351	634.364
	K9	6516.333	12.000	634.313	634.336
	L9	6526.275	12.000	634.274	634.312
	M9	6536.216	12.000	634.235	634.289
	N9	6546.158	12.000	634.195	634.258
	O9	6556.100	12.000	634.154	634.217
	P9	6566.041	12.000	634.114	634.168
	Q9	6575.983	12.000	634.072	634.112
	R9	6585.925	12.000	634.030	634.055

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 27	6598.870	12.000	633.975	633.991
	S9	6608.811	12.000	633.932	633.959
	T9	6618.753	12.000	633.889	633.932
	U9	6628.695	12.000	633.845	633.906
	V9	6638.636	12.000	633.800	633.872
	W9	6648.578	12.000	633.755	633.830
	X9	6658.520	12.000	633.710	633.777
	Y9	6668.461	12.000	633.664	633.716
	Z9	6678.403	12.000	633.617	633.650
	AA9	6688.345	12.000	633.570	633.586
	AB9	6698.286	12.000	633.523	633.536
West Long. Bonded Jt.	℄ Brg. Pier 28	6703.200	12.000	633.499	633.516
	AC9	6713.141	12.000	633.451	633.469
	AD9	6723.083	12.000	633.402	633.462
	AE9	6733.025	12.000	633.353	633.460
	AF9	6742.966	12.000	633.304	633.442
	AG9	6752.908	12.000	633.254	633.412
	AH9	6762.850	12.000	633.204	633.366
	AI9	6772.791	12.000	633.155	633.308
	AJ9	6782.733	12.000	633.105	633.231
	AK9	6792.675	12.000	633.055	633.140
	℄ Brg. Pier 29	6806.777	12.000	632.985	633.000
	℄ Pier 29	6808.020	12.000	632.978	632.992
	℄ Pier 25	6395.770	8.875	634.614	634.621
	℄ Brg. Pier 25	6397.014	8.875	634.610	634.617
	A9	6406.971	8.875	634.577	634.630
	B9	6416.928	8.875	634.543	634.634
	C9	6426.885	8.875	634.509	634.627
	D9	6436.841	8.875	634.475	634.605
	E9	6446.798	8.875	634.440	634.568
	F9	6456.755	8.875	634.404	634.515
	G9	6466.712	8.875	634.368	634.453
	H9	6476.669	8.875	634.332	634.386
	I9	6486.625	8.875	634.295	634.321
	℄ Brg. Pier 26	6496.450	8.875	634.258	634.267
	J9	6506.406	8.875	634.220	634.225
	K9	6516.363	8.875	634.182	634.197
	L9	6526.320	8.875	634.143	634.174
	M9	6536.277	8.875	634.103	634.149
	N9	6546.234	8.875	634.063	634.118
	O9	6556.190	8.875	634.023	634.078
	P9	6566.147	8.875	633.982	634.028
	Q9	6576.104	8.875	633.940	633.972
	R9	6586.061	8.875	633.898	633.915
Girder 2	℄ Brg. Pier 27	6598.870	8.875	633.844	633.852
	S9	6608.826	8.875	633.801	633.819
	T9	6618.783	8.875	633.757	633.788
	U9	6628.740	8.875	633.713	633.766
	V9	6638.697	8.875	633.669	633.723
	W9	6648.654	8.875	633.624	633.691
	X9	6658.610	8.875	633.578	633.638
	Y9	6668.567	8.875	633.532	633.676
	Z9	6678.524	8.875	633.485	633.510
	AA9	6688.481	8.875	633.438	633.446
	AB9	6698.438	8.875	633.391	633.396
	℄ Brg. Pier 28	6703.200	8.875	633.368	633.377
	AC9	6713.156	8.875	633.320	633.350
	AD9	6723.113	8.875	633.271	633.333
	AE9	6733.070	8.875	633.222	633.321
	AF9	6743.027	8.875	633.172	633.302
	AG9	6752.984	8.875	633.122	633.272
	AH9	6762.940	8.875	633.073	633.229
	AI9	6772.897	8.875	633.023	633.169
	AJ9	6782.854	8.875	632.973	633.091
	AK9	6792.811	8.875	632.923	633.009
	℄ Brg. Pier 29	6806.775	8.875	632.853	632.860
	℄ Pier 29	6808.020	8.875	632.847	632.858

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 25	6395.770	1.625	634.309	634.309
	℄ Brg. Pier 25	6397.019	1.625	634.305	634.305
	A9	6407.011	1.625	634.272	634.317
	B9	6417.003	1.625	634.239	634.322
	C9	6426.995	1.625	634.204	634.316
	D9	6436.987	1.625	634.170	634.292
	E9	6446.979	1.625	634.135	634.255
	F9	6456.971	1.625	634.099	634.202
	G9	6466.963	1.625	634.063	634.140
	H9	6476.955	1.625	634.026	634.072
	I9	6486.947	1.625	633.989	634.007
	℄ Brg. Pier 26	6496.450	1.625	633.953	633.953
	J9	6506.442	1.625	633.915	633.911
	K9	6516.434	1.625	633.877	633.883
	L9	6526.426	1.625	633.839	633.860
	M9	6536.418	1.625	633.798	633.835
	N9	6546.410	1.625	633.758	633.804
	O9	6556.402	1.625	633.717	633.763
	P9	6566.394	1.625	633.676	633.717
	Q9	6576.386	1.625	633.635	633.658
	R9	6586.378	1.625	633.593	633.611
Girder 3	℄ Brg. Pier 27	6598.870	1.625	633.539	633.539
	S9	6608.862	1.625	633.496	633.505
	T9	6618.854	1.625	633.452	633.478
	U9	6628.846	1.625	633.408	633.452
	V9	6638.838	1.625	633.363	633.416
	W9	6648.830	1.625	633.318	633.376
	X9	6658.822	1.625	633.273	633.323
	Y9	6668.814	1.625	633.228	633.261
	Z9	6678.806	1.625	633.180	633.196
	AA9	6688.798	1.625	633.132	633.131
	AB9	6698.790	1.625	633.085	633.081
	℄ Brg. Pier 28	6703.200	1.625	633.064	633.064
	AC9	6713.192	1.625	633.015	633.037
	AD9	6723.184	1.625	632.966	633.020
	AE9	6733.176	1.625	632.917	633.008
	AF9	6743.168	1.625	632.867	632.989
	AG9	6753.160	1.625	632.817	632.959
	AH9	6763.152	1.625	632.767	632.915
	AI9	6773.144	1.625	632.717	632.859
	AJ9	6783.136	1.625	632.667	632.777
	AK9	6793.128	1.625	632.617	632.686
	℄ Brg. Pier 29	6806.770	1.625	632.549	632.549
	℄ Pier 29	6808.020	1.625	632.543	632.543
	℄ Pier 25	6395.770	0.000	634.241	634.241
	℄ Brg. Pier 25	6397.019	0.000	634.237	634.237
	A9	6407.019	0.000	634.204	634.249
	B9	6417.019	0.000	634.170	634.253
	C9	6427.019	0.000	634.136	634.246
	D9	6437.019	0.000	634.101	634.233
	E9	6447.019	0.000	634.066	634.186
	F9	6457.019	0.000	634.031	634.134
	G9	6467.019	0.000	633.996	634.071
	H9	6477.019	0.000	633.958	634.004
	I9	6487.019	0.000	633.921	633.930
℄ Roadway	℄ Brg. Pier 26	6496.450	0.000	633.885	633.885
	J9	6506.450	0.000	633.847	633.843
	K9	6516.450	0.000	633.808	633.814
	L9	6526.450	0.000	633.769	633.791
	M9	6536.450	0.000	633.730	633.767
	N9	6546.450	0.000	633.690	633.736
	O9	6556.450	0.000	633.649	633.695
	P9	6566.450	0.000	633.608	633.645
	Q9	6576.450	0.000	633.566	633.589
	R9	6586.450	0.000	633.524	633.532

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	W. C. K.
CHECKED	A. S.

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

TOP OF SLAB ELEVATIONS
SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	229	108
S. F. A. PROJ. NO.		DRAWING	PROJECT	

SHEET NO. 27
108 SHEETS

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 27	6598.870	0.000	633.471	633.471
	S9	6608.870	0.000	633.428	633.437
	T9	6618.870	0.000	633.384	633.410
	U9	6628.870	0.000	633.340	633.384
	V9	6638.870	0.000	633.295	633.350
	W9	6648.870	0.000	633.250	633.308
	X9	6658.870	0.000	633.204	633.254
	Y9	6668.870	0.000	633.158	633.198
	Z9	6678.870	0.000	633.111	633.127
	AA9	6688.870	0.000	633.064	633.068
	AB9	6698.870	0.000	633.016	633.012
℄ Roadway	℄ Brg. Pier 28	6703.200	0.000	632.995	632.995
	AC9	6713.200	0.000	632.947	632.969
	AD9	6723.200	0.000	632.898	632.952
	AE9	6733.200	0.000	632.848	632.939
	AF9	6743.200	0.000	632.799	632.921
	AG9	6753.200	0.000	632.749	632.891
	AH9	6763.200	0.000	632.699	632.847
	AI9	6773.200	0.000	632.649	632.786
	AJ9	6783.200	0.000	632.599	632.709
	AK9	6793.200	0.000	632.548	632.618
	℄ Brg. Pier 29	6806.770	0.000	632.481	632.481
	℄ Pier 29	6808.020	0.000	632.474	632.474
	℄ Pier 25	6395.770	-5.625	634.005	634.005
	℄ Brg. Pier 25	6397.023	-5.625	634.001	634.001
	A9	6407.051	-5.625	633.968	634.013
	B9	6417.078	-5.625	633.934	634.017
	C9	6427.106	-5.625	633.900	634.010
	D9	6437.133	-5.625	633.865	633.987
	E9	6447.161	-5.625	633.830	633.950
	F9	6457.188	-5.625	633.794	633.897
	G9	6467.216	-5.625	633.758	633.835
	H9	6477.243	-5.625	633.721	633.767
	I9	6487.271	-5.625	633.683	633.711
	℄ Brg. Pier 26	6496.450	-5.625	633.649	633.649
	J9	6506.477	-5.625	633.611	633.607
	K9	6516.505	-5.625	633.572	633.578
	L9	6526.532	-5.625	633.533	633.555
	M9	6536.560	-5.625	633.493	633.530
	N9	6546.587	-5.625	633.453	633.499
	O9	6556.615	-5.625	633.412	633.456
	P9	6566.642	-5.625	633.371	633.408
	Q9	6576.670	-5.625	633.329	633.352
	R9	6586.698	-5.625	633.287	633.295
Girder 4	℄ Brg. Pier 27	6598.870	-5.625	633.235	633.235
	S9	6608.897	-5.625	633.191	633.200
	T9	6618.925	-5.625	633.148	633.174
	U9	6628.952	-5.625	633.103	633.147
	V9	6638.980	-5.625	633.058	633.108
	W9	6649.007	-5.625	633.013	633.071
	X9	6659.035	-5.625	632.967	633.017
	Y9	6669.062	-5.625	632.921	632.956
	Z9	6679.090	-5.625	632.874	632.890
	AA9	6689.118	-5.625	632.826	632.825
	AB9	6699.145	-5.625	632.779	632.775
	℄ Brg. Pier 28	6703.200	-5.625	632.759	632.759
	AC9	6713.227	-5.625	632.710	632.732
	AD9	6723.255	-5.625	632.661	632.715
	AE9	6733.282	-5.625	632.612	632.708
	AF9	6743.309	-5.625	632.563	632.654
	AG9	6753.337	-5.625	632.514	632.654
	AH9	6763.365	-5.625	632.461	632.609
	AI9	6773.392	-5.625	632.411	632.548
	AJ9	6783.420	-5.625	632.361	632.471
	AK9	6793.448	-5.625	632.311	632.380
	℄ Brg. Pier 29	6806.766	-5.625	632.244	632.244
	℄ Pier 29	6808.020	-5.625	632.238	632.238

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 25	6395.770	-12.875	633.700	633.707
	℄ Brg. Pier 25	6397.027	-12.875	633.696	633.703
	A9	6407.091	-12.875	633.663	633.716
	B9	6417.154	-12.875	633.629	633.710
	C9	6427.217	-12.875	633.595	633.713
	D9	6437.281	-12.875	633.560	633.690
	E9	6447.344	-12.875	633.524	633.652
	F9	6457.407	-12.875	633.488	633.599
	G9	6467.471	-12.875	633.452	633.537
	H9	6477.534	-12.875	633.415	633.468
	I9	6487.597	-12.875	633.378	633.404
	℄ Brg. Pier 26	6496.450	-12.875	633.344	633.353
	J9	6506.513	-12.875	633.306	633.311
	K9	6516.576	-12.875	633.267	633.282
	L9	6526.639	-12.875	633.228	633.259
	M9	6536.703	-12.875	633.188	633.234
	N9	6546.766	-12.875	633.148	633.198
	O9	6556.829	-12.875	633.107	633.162
	P9	6566.893	-12.875	633.065	633.111
	Q9	6576.956	-12.875	633.023	633.055
	R9	6587.019	-12.875	632.981	633.998
Girder 5	℄ Brg. Pier 27	6598.870	-12.875	632.930	632.938
	S9	6608.933	-12.875	632.887	632.905
	T9	6618.996	-12.875	632.843	632.878
	U9	6629.059	-12.875	632.798	632.851
	V9	6639.123	-12.875	632.753	632.817
	W9	6649.186	-12.875	632.708	632.775
	X9	6659.249	-12.875	672.662	632.721
	Y9	6669.313	-12.875	632.615	632.659
	Z9	6679.376	-12.875	632.568	632.593
	AA9	6689.439	-12.875	632.520	632.528
	AB9	6699.503	-12.875	632.472	632.477
	℄ Brg. Pier 28	6703.200	-12.875	632.455	632.464
	AC9	6713.263	-12.875	632.406	632.436
	AD9	6723.326	-12.875	632.357	632.410
	AE9	6733.389	-12.875	632.307	632.406
	AF9	6743.453	-12.875	632.256	632.386
	AG9	6753.516	-12.875	632.206	632.356
	AH9	6763.579	-12.875	632.156	632.312
	AI9	6773.643	-12.875	632.106	632.251
	AJ9	6783.706	-12.875	632.055	632.173
	AK9	6793.769	-12.875	632.005	632.082
	℄ Brg. Pier 29	6806.762	-12.875	631.940	631.947
	℄ Pier 29	6808.020	-12.875	631.934	631.941
	℄ Pier 25	6395.770	-16.000	633.569	633.589
	℄ Brg. Pier 25	6397.029	-16.000	633.565	633.580
	A9	6407.108	-16.000	633.532	633.583
	B9	6417.187	-16.000	633.498	633.596
	C9	6427.266	-16.000	633.463	633.589
	D9	6437.345	-16.000	633.428	633.564
	E9	6447.423	-16.000	633.393	633.529
	F9	6457.502	-16.000	633.357	633.476
	G9	6467.581	-16.000	633.320	633.413
	H9	6477.660	-16.000	633.283	633.345
	I9	6487.739	-16.000	633.246	633.280
East Long. Bonded Jt.	℄ Brg. Pier 26	6496.450	-16.000	633.213	633.231
	J9	6506.528	-16.000	633.175	633.188
	K9	6516.607	-16.000	633.136	633.159
	L9	6526.686	-16.000	633.096	633.134
	M9	6536.765	-16.000	633.056	633.110
	N9	6546.844	-16.000	633.016	633.079
	O9	6556.922	-16.000	632.975	633.038
	P9	6567.001	-16.000	632.934	632.988
	Q9	6577.080	-16.000	632.892	632.932
	R9	6587.159	-16.000	632.849	632.874

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 27	6598.870	-16.000	632.799	632.815
	S9	6608.968	-16.000	632.755	632.782
	T9	6619.027	-16.000	632.711	632.754
	U9	6629.106	-16.000	632.667	632.728
	V9	6639.185	-16.000	632.622	632.684
	W9	6649.264	-16.000	632.576	632.651
	X9	6659.342	-16.000	632.530	632.597
	Y9	6669.421	-16.000	632.483	632.535
	Z9	6679.500	-16.000	632.436	632.469
	AA9	6689.579	-16.000	632.388	632.404
	AB9	6699.658	-16.000	632.340	632.353
East Long. Bonded Jt.	℄ Brg. Pier 28	6703.200	-16.000	632.323	632.330
	AC9	6713.278	-16.000	632.274	632.312
	AD9	6723.357	-16.000	632.225	632.305
	AE9	6733.436	-16.000	632.175	632.282
	AF9	6743.515	-16.000	632.125	632.263
	AG9	6753.594	-16.000	632.075	632.233
	AH9	6763.672	-16.000	632.024	632.186
	AI9	6773.751	-16.000	631.974	632.127
	AJ9	6783.830	-16.000	631.923	632.069
	AK9	6793.909	-16.000	631.873	631.953
	℄ Brg. Pier 29	6806.760	-16.000	631.809	631.824
	℄ Pier 29	6808.020	-16.000	631.802	631.817
	℄ Pier 25	6395.770	-20.125	633.396	633.418
	℄ Brg. Pier 25	6397.032	-20.125	633.392	633.414
	A9	6407.131	-20.125	633.358	633.406
	B9	6417.231	-20.125	633.324	633.402
	C9	6427.330	-20.125	633.290	633.425
	D9	6437.429	-20.125	633.255	633.402
	E9	6447.529	-20.125	633.219	633.364
	F9	6457.628	-20.125	633.183	633.311
	G9	6467.727	-20.125	633.147	633.249
	H9	6477.826	-20.125	633.110	633.181
	I9	6487.926	-20.125	633.072	633.115
	℄ Brg. Pier 26	6496.450	-20.125	633.040	633.066
	J9	6506.549	-20.125	633.001	633.023
	K9	6516.648	-20.125	632.962	632.994
	L9	6526.747	-20.125	632.923	632.971
	M9	6536.847	-20.125	632.883	632.946
	N9	6546.946	-20.125	632.842	632.914
	O9	6557.045	-20.125	632.801	632.873
	P9	6567.145	-20.125	632.760	632.823
	Q9	6577.244	-20.125	632.718	632.767
	R9	6587.343	-20.125	632.675	632.709
Girder 6	℄ Brg. Pier 27	6598.870	-20.125	632.626	632.651
	S9	6608.969	-20.125	632.582	632.617
	T9	6619.068	-20.125	632.538	632.590
	U9	6629.167	-20.125	632.493	632.563
	V9	6639.267	-20.125	632.448	632.529
	W9	6649.366	-20.125	632.402	632.486
	X9	6659.465	-20.125	632.356	632.432
	Y9	6669.565	-20.125	632.309	632.370
	Z9	6679.664	-20.125	632.262	632.284
	AA9	6689.763	-20.125	632.214	632.239
	AB9	6699.863	-20.125	632.166	632.185
	℄ Brg. Pier 28	6703.200	-20.125	632.150	632.178
	AC9	6713.239	-20.125	632.101	632.148
	AD9	6723.398	-20.125	632.052	632.131
	AE9	6733.497	-20.125	632.002	632.118
	AF9	6743.597	-20.125	631.951	632.098
	AG9	6753.696	-20.125	631.901	632.068
	AH9	6763.795	-20.125	631.850	632.023
	AI9	6773.895	-20.125	631.800	631.962
	AJ9	6783.994	-20.125	631.749	631.884
	AK9	6794.093	-20.125	631.699	631.783
	℄ Brg. Pier 29	6806.757	-20.125	631.635	631.658
	℄ Pier 29	6808.020	-20.125	631.629	631.652

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

TOP OF SLAB ELEVATIONS SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A.R.	45	COOK	3	122A

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 27	6598.870	0.000	633.471	633.471
	S9	6608.870	0.000	633.428	633.437
	T9	6618.870	0.000	633.384	633.410
	U9	6628.870	0.000	633.340	633.384
	V9	6638.870	0.000	633.295	633.350
	W9	6648.870	0.000	633.250	633.308
	Y9	6658.870	0.000	633.204	633.266
	Z9	6668.870	0.000	633.158	633.193
	AA9	6678.870	0.000	633.111	633.127
	AB9	6688.870	0.000	633.064	633.013
	AB9	6698.870	0.000	633.016	633.012
℄ Roadway	℄ Brg. Pier 28	6703.200	0.000	632.995	632.995
	AC9	6713.200	0.000	632.947	632.969
	AD9	6723.200	0.000	632.898	632.952
	AE9	6733.200	0.000	632.848	632.929
	AF9	6743.200	0.000	632.799	632.921
	AG9	6753.200	0.000	632.749	632.901
	AH9	6763.200	0.000	632.699	632.867
	AI9	6773.200	0.000	632.649	632.788
	AJ9	6783.200	0.000	632.599	632.708
	AK9	6793.200	0.000	632.549	632.618
	℄ Brg. Pier 29	6806.770	0.000	632.481	632.481
	℄ Pier 29	6808.020	0.000	632.474	632.474
	℄ Pier 25	6395.770	-5.625	634.009	634.006
	℄ Brg. Pier 25	6397.023	-5.625	634.001	634.001
	A9	6407.051	-5.625	633.968	634.012
	B9	6417.078	-5.625	633.934	634.017
	C9	6427.106	-5.625	633.900	634.010
	D9	6437.133	-5.625	633.865	633.987
	E9	6447.161	-5.625	633.830	633.960
	F9	6457.188	-5.625	633.796	633.897
	G9	6467.216	-5.625	633.759	633.805
	H9	6477.243	-5.625	633.721	633.767
	I9	6487.271	-5.625	633.683	633.711
	℄ Brg. Pier 26	6496.450	-5.625	633.649	633.648
	J9	6506.477	-5.625	633.611	633.607
	K9	6516.504	-5.625	633.572	633.578
	L9	6526.532	-5.625	633.533	633.536
	M9	6536.560	-5.625	633.493	633.500
	N9	6546.587	-5.625	633.453	633.480
	O9	6556.615	-5.625	633.412	633.458
	P9	6566.642	-5.625	633.371	633.408
	Q9	6576.670	-5.625	633.329	633.382
	R9	6586.698	-5.625	633.287	633.303
Girder 4	℄ Brg. Pier 27	6598.870	-5.625	633.235	633.235
	S9	6608.897	-5.625	633.191	633.200
	T9	6618.923	-5.625	633.148	633.179
	U9	6628.950	-5.625	633.103	633.157
	V9	6638.980	-5.625	633.058	633.108
	W9	6649.007	-5.625	633.013	633.071
	Y9	6659.035	-5.625	632.967	633.017
	Z9	6669.062	-5.625	632.921	632.966
	AA9	6679.090	-5.625	632.874	632.922
	AB9	6689.118	-5.625	632.826	632.878
	AB9	6699.145	-5.625	632.779	632.775
	℄ Brg. Pier 28	6703.200	-5.625	632.759	632.759
	AC9	6713.227	-5.625	632.710	[illegible]
	AD9	6723.255	-5.625	[illegible]	[illegible]
	AE9	6733.282	-5.625	632.612	632.708
	AF9	6743.310	-5.625	632.563	632.660
	AG9	6753.337	-5.625	632.512	632.609
	AH9	6763.365	-5.625	632.461	632.558
	AI9	6773.392	-5.625	632.411	632.508
	AJ9	6783.420	-5.625	632.361	632.458
	AK9	6793.447	-5.625	632.310	632.408
	℄ Brg. Pier 29	6806.768	-5.625	632.244	632.244
	℄ Pier 29	6808.020	-5.625	632.238	632.238

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Pier 25	[illegible]	[illegible]	[illegible]	[illegible]
	℄ Brg. Pier 25	[illegible]	[illegible]	[illegible]	[illegible]
	A9	6407.051	[illegible]	[illegible]	[illegible]
	B9	6417.078	[illegible]	[illegible]	[illegible]
	C9	6427.106	[illegible]	[illegible]	[illegible]
	D9	6437.133	[illegible]	[illegible]	[illegible]
	E9	6447.161	[illegible]	[illegible]	[illegible]
	F9	6457.188	[illegible]	[illegible]	[illegible]
	G9	6467.216	[illegible]	[illegible]	[illegible]
	H9	6477.243	[illegible]	[illegible]	[illegible]
	I9	6487.271	-12.875	[illegible]	[illegible]
	℄ Brg. Pier 28	6496.450	-12.875	633.369	633.369
	J9	6506.513	-12.875	633.306	633.311
	K9	6516.576	-12.875	633.242	633.281
	L9	6526.639	-12.875	633.178	633.259
	M9	6536.703	-12.875	633.114	633.238
	N9	6546.766	-12.875	633.049	633.192
	O9	6556.829	-12.875	632.985	633.147
	P9	6566.893	-12.875	632.921	633.111
	Q9	6576.956	-12.875	632.857	633.055
	R9	6587.019	-12.875	632.793	632.998
Girder 5	℄ Brg. Pier 27	6598.870	-12.875	632.720	632.720
	S9	6608.933	-12.875	632.657	632.705
	T9	6618.996	-12.875	632.593	632.678
	U9	6629.059	-12.875	632.529	632.651
	V9	6639.123	-12.875	632.465	632.617
	W9	6649.186	-12.875	632.400	632.575
	Y9	6659.249	-12.875	632.336	632.532
	Z9	6669.313	-12.875	632.272	632.489
	AA9	6679.376	-12.875	632.208	632.446
	AB9	6689.439	-12.875	632.144	632.403
	AB9	6699.503	-12.875	632.079	632.360
	℄ Brg. Pier 28	6703.200	-12.875	632.055	632.055
	AC9	6713.263	-12.875	632.006	632.056
	AD9	6723.326	-12.875	631.957	632.019
	AE9	6733.389	-12.875	631.907	631.976
	AF9	6743.453	-12.875	631.858	631.926
	AG9	6753.516	-12.875	631.808	631.876
	AH9	6763.579	-12.875	631.758	631.826
	AI9	6773.643	-12.875	631.708	631.776
	AJ9	6783.706	-12.875	631.659	631.727
	AK9	6793.769	-12.875	631.609	631.677
	℄ Brg. Pier 29	6806.762	-12.875	631.540	631.547
	℄ Pier 29	6808.020	-12.875	631.534	631.541
	℄ Pier 25	6395.770	-16.000	633.569	633.562
	℄ Brg. Pier 25	6397.029	-16.000	633.562	633.562
	A9	6407.109	-16.000	633.512	633.562
	B9	6417.187	-16.000	633.462	633.562
	C9	6427.266	-16.000	633.413	633.562
	D9	6437.345	-16.000	633.363	633.562
	E9	6447.423	-16.000	633.313	633.562
	F9	6457.502	-16.000	633.263	633.562
	G9	6467.581	-16.000	633.213	633.562
	H9	6477.660	-16.000	633.163	633.562
	I9	6487.739	-16.000	633.113	633.562
East Long. Bonded Jt.	℄ Brg. Pier 26	6496.930	-16.000	633.213	633.281
	J9	6506.928	-16.000	633.175	633.188
	K9	6516.927	-16.000	633.136	633.150
	L9	6526.926	-16.000	633.096	633.113
	M9	6536.925	-16.000	633.057	633.075
	N9	6546.924	-16.000	633.018	633.037
	O9	6556.923	-16.000	632.978	633.000
	P9	6566.922	-16.000	632.939	632.962
	Q9	6576.921	-16.000	632.899	632.924
	R9	6586.920	-16.000	632.860	632.886

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
	℄ Brg. Pier 27	6598.870	-16.000	632.799	632.818
	S9	6608.933	-16.000	632.760	632.787
	T9	6618.997	-16.000	632.721	632.756
	U9	6629.060	-16.000	632.682	632.726
	V9	6639.123	-16.000	632.642	632.695
	W9	6649.187	-16.000	632.603	632.664
	Y9	6659.250	-16.000	632.564	632.633
	Z9	6669.313	-16.000	632.525	632.602
	AA9	6679.377	-16.000	632.486	632.571
	AB9	6689.440	-16.000	632.446	632.540
	AB9	6699.503	-16.000	632.407	632.509
East Long. Bonded Jt.	℄ Brg. Pier 28	6703.200	-16.000	632.323	632.390
	AC9	6713.278	-16.000	632.274	632.312
	AD9	6723.357	-16.000	632.225	632.305
	AE9	6733.436	-16.000	632.175	632.281
	AF9	6743.515	-16.000	632.126	632.258
	AG9	6753.594	-16.000	632.077	632.235
	AH9	6763.672	-16.000	632.028	632.213
	AI9	6773.751	-16.000	631.978	632.191
	AJ9	6783.830	-16.000	631.929	632.169
	AK9	6793.909	-16.000	631.879	631.953
	℄ Brg. Pier 29	6806.760	-16.000	631.809	631.829
	℄ Pier 29	6808.020	-16.000	631.802	631.817
	℄ Pier 25	6395.770	-20.125	633.396	633.418
	℄ Brg. Pier 25	6397.032	-20.125	633.392	633.414
	A9	6407.131	-20.125	633.358	633.426
	B9	6417.231	-20.125	633.324	633.422
	C9	6427.330	-20.125	633.290	633.419
	D9	6437.429	-20.125	633.255	633.402
	E9	6447.529	-20.125	633.219	633.366
	F9	6457.628	-20.125	633.185	633.311
	G9	6467.727	-20.125	633.147	633.290
	H9	6477.826	-20.125	633.110	633.161
	I9	6487.926	-20.125	633.072	633.115
	℄ Brg. Pier 26	6496.950	-20.125	633.040	633.068
	J9	6506.949	-20.125	633.001	633.023
	K9	6516.948	-20.125	632.962	632.994
	L9	6526.947	-20.125	632.923	632.971
	M9	6536.947	-20.125	632.883	632.946
	N9	6546.946	-20.125	632.842	632.918
	O9	6556.945	-20.125	632.801	632.873
	P9	6566.945	-20.125	632.760	632.829
	Q9	6576.944	-20.125	632.718	632.787
	R9	6586.943	-20.125	632.679	632.700
Girder 6	℄ Brg. Pier 27	6598.870	-20.125	632.626	632.651
	S9	6608.969	-20.125	632.582	632.617
	T9	6619.068	-20.125	632.538	632.580
	U9	6629.167	-20.125	632.493	632.543
	V9	6639.267	-20.125	632.448	632.505
	W9	6649.366	-20.125	632.402	632.466
	Y9	6659.465	-20.125	632.356	632.432
	Z9	6669.565	-20.125	632.309	632.370
	AA9	6679.664	-20.125	632.262	632.324
	AB9	6689.763	-20.125	632.216	632.280
	AB9	6699.863	-20.125	632.168	632.188
	℄ Brg. Pier 28	6703.200	-20.125	632.150	632.170
	AC9	6713.298	-20.125	632.101	632.140
	AD9	6723.398	-20.125	632.054	632.131
	AE9	6733.497	-20.125	632.002	632.118
	AF9	6743.597	-20.125	631.951	632.090
	AG9	6753.696	-20.125	631.901	632.068
	AH9	6763.795	-20.125	631.850	632.029
	AI9	6773.895	-20.125	631.800	631.993
	AJ9	6783.994	-20.125	631.749	631.989
	AK9	6794.093	-20.125	631.699	631.788
	℄ Brg. Pier 29	6806.757	-20.125	631.635	631.656
	℄ Pier 29	6808.020	-20.125	631.629	631.652

NOTE:
THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

DESIGNED	S.V.D.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.S.

Rev. [illegible] 12-30-75 D.D.

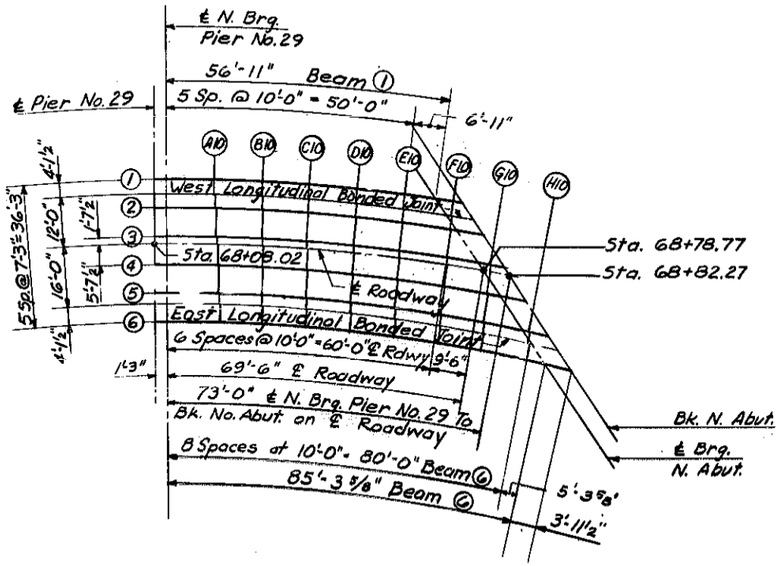
TOP OF SLAB ELEVATIONS
SPANS 26 TO 29
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-8 & R
COOK COUNTY
STATION 41+38.63

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 1	℄ Pier 29	6808.020	16.125	633.152	633.172
	℄ Brg. Pier 29	6809.260	16.125	633.145	633.164
	A10	6819.182	16.125	633.096	633.134
	B10	6829.103	16.125	633.046	633.095
	C10	6839.025	16.125	632.997	633.047
	D10	6848.947	16.125	632.947	632.987
	E10	6858.869	16.125	632.897	632.915
	℄ Brg. No. Abut.	℄ 734	16.125	632.863	632.863
	Bk. No. Abut.	6869.186	16.125	632.846	632.846
West Long. Bonded Jt.	℄ Pier 29	6808.020	12.000	632.978	632.992
	℄ Brg. Pier 29	6809.262	12.000	632.972	632.985
	A10	6819.204	12.000	632.922	632.958
	B10	6829.146	12.000	632.873	632.925
	C10	6839.087	12.000	632.823	632.879
	D10	6849.029	12.000	632.773	632.831
	E10	6858.971	12.000	632.724	632.766
	℄ Brg. No. Abut.	6869.043	12.000	632.673	632.673
	Bk. No. Abut.	6872.507	12.000	632.656	632.656
Girder 2	℄ Pier 29	6808.020	8.875	632.847	632.859
	℄ Brg. Pier 29	6809.264	8.875	632.841	632.847
	A10	6819.221	8.875	632.791	632.825
	B10	6829.178	8.875	632.741	632.795
	C10	6839.135	8.875	632.692	632.754
	D10	6849.091	8.875	632.642	632.698
	E10	6859.048	8.875	632.592	632.626
	℄ Brg. No. Abut.	6871.562	8.875	632.529	632.529
	Bk. No. Abut.	6875.035	8.875	632.512	632.512
Girder 3	℄ Pier 29	6808.020	1.625	632.543	632.543
	℄ Brg. Pier 29	6809.269	1.625	632.536	632.536
	A10	6819.261	1.625	632.486	632.516
	B10	6829.253	1.625	632.436	632.490
	C10	6839.245	1.625	632.387	632.463
	D10	6849.237	1.625	632.337	632.412
	E10	6859.229	1.625	632.287	632.337
	F10	6869.221	1.625	632.237	632.263
	℄ Brg. No. Abut.	6877.446	1.625	632.196	632.196
	Bk. No. Abut.	6880.939	1.625	632.178	632.178
℄ Roadway	℄ Pier 29	6808.020	0.000	632.474	632.474
	℄ Brg. Pier 29	6809.269	0.000	632.468	632.468
	A10	6819.269	0.000	632.418	632.456
	B10	6829.269	0.000	632.368	632.426
	C10	6839.269	0.000	632.318	632.389
	D10	6849.269	0.000	632.268	632.338
	E10	6859.269	0.000	632.218	632.275
	F10	6869.269	0.000	632.168	632.199
	℄ Brg. No. Abut.	6876.772	0.000	632.121	632.121
	Bk. No. Abut.	6882.270	0.000	632.103	632.103
Girder 4	℄ Pier 29	6808.020	-5.625	632.238	632.238
	℄ Brg. Pier 29	6809.273	-5.625	632.232	632.232
	A10	6819.301	-5.625	632.182	632.221
	B10	6829.328	-5.625	632.132	632.202
	C10	6839.356	-5.625	632.081	632.160
	D10	6849.383	-5.625	632.031	632.123
	E10	6859.411	-5.625	631.981	632.050
	F10	6869.438	-5.625	631.931	631.977
	℄ Brg. No. Abut.	6883.389	-5.625	631.861	631.861
	Bk. No. Abut	6886.898	-5.625	631.844	631.844

NOTE:

THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION INCLUDES DEAD LOAD DEFLECTION FOR LONGITUDINAL GIRDERS AND CROSS GIRDERS.

DESIGNED	E.D.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	A.S.

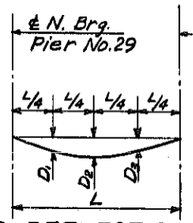


BEAM LAYOUT

Girder or Joint	Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Girder 5	℄ Pier 29	6808.020	-12.875	631.934	631.941
	℄ Brg. Pier 29	6809.277	-12.875	631.927	631.934
	A10	6819.341	-12.875	631.877	631.929
	B10	6829.404	-12.875	631.827	631.897
	C10	6839.467	-12.875	631.776	631.851
	D10	6849.531	-12.875	631.726	631.849
	E10	6859.594	-12.875	631.676	631.788
	F10	6869.657	-12.875	631.625	631.710
	G10	6879.721	-12.875	631.575	631.621
	℄ Brg. No. Abut.	6889.381	-12.875	631.527	631.527
	Bk. No. Abut.	[illegible]	[illegible]	[illegible]	[illegible]
East Long. Bonded Jt.	℄ Pier 29	6808.020	-16.000	631.802	631.817
	℄ Brg. Pier 29	6809.279	-16.000	631.796	631.811
	A10	6819.358	-16.000	631.746	631.802
	B10	6829.437	-16.000	631.695	631.784
	C10	6839.516	-16.000	631.645	631.756
	D10	6849.595	-16.000	631.595	631.719
	E10	6859.673	-16.000	631.544	631.655
	F10	6869.752	-16.000	631.494	631.582
	G10	6879.831	-16.000	631.443	631.486
	℄ Brg. No. Abut.	6891.983	-16.000	631.383	631.383
	Bk. No. Abut.	6895.527	-16.000	631.365	631.365
Girder 6	℄ Pier 29	6808.020	-20.125	631.629	631.652
	℄ Brg. Pier 29	6809.289	-20.125	631.623	631.646
	A10	6819.381	-20.125	631.572	631.631
	B10	6829.481	-20.125	631.522	631.610
	C10	6839.580	-20.125	631.471	631.579
	D10	6849.679	-20.125	631.421	631.536
	E10	6859.779	-20.125	631.370	631.480
	F10	6869.878	-20.125	631.320	631.410
	G10	6879.977	-20.125	631.269	631.328
	H10	6890.076	-20.125	631.219	631.240
	℄ Brg. No. Abut.	6895.434	-20.125	631.192	631.192
	Bk. No. Abut.	6898.990	-20.125	631.174	631.174

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462A B&R	COOK	229	189
F.A.P. RTE. NO.	ILLINOIS PROJECT			

SHEET NO. 28
10& SHEETS



DEAD LOAD DEFLECTION DIAGRAM

(Includes only weight of concrete and 1½ W. Surface. Use these deflections in conjunction with deflection of cross girders)

Note:

These deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections shown.

D. L. DEFL. TABLE				
Beam	L	D_1	D_2	D_3
①	56'-11"	5/16"	1/2"	5/16"
②	62'-6 1/16"	1/2"	11/16"	1/2"
③	68'-2 3/4"	9/16"	13/16"	9/16"
④	73'-10 7/8"	13/16"	1 1/8"	13/16"
⑤	79'-7 3/16"	1"	1 7/16"	1"
⑥	85'-3 5/8"	7/8"	1 1/4"	7/8"

Note:

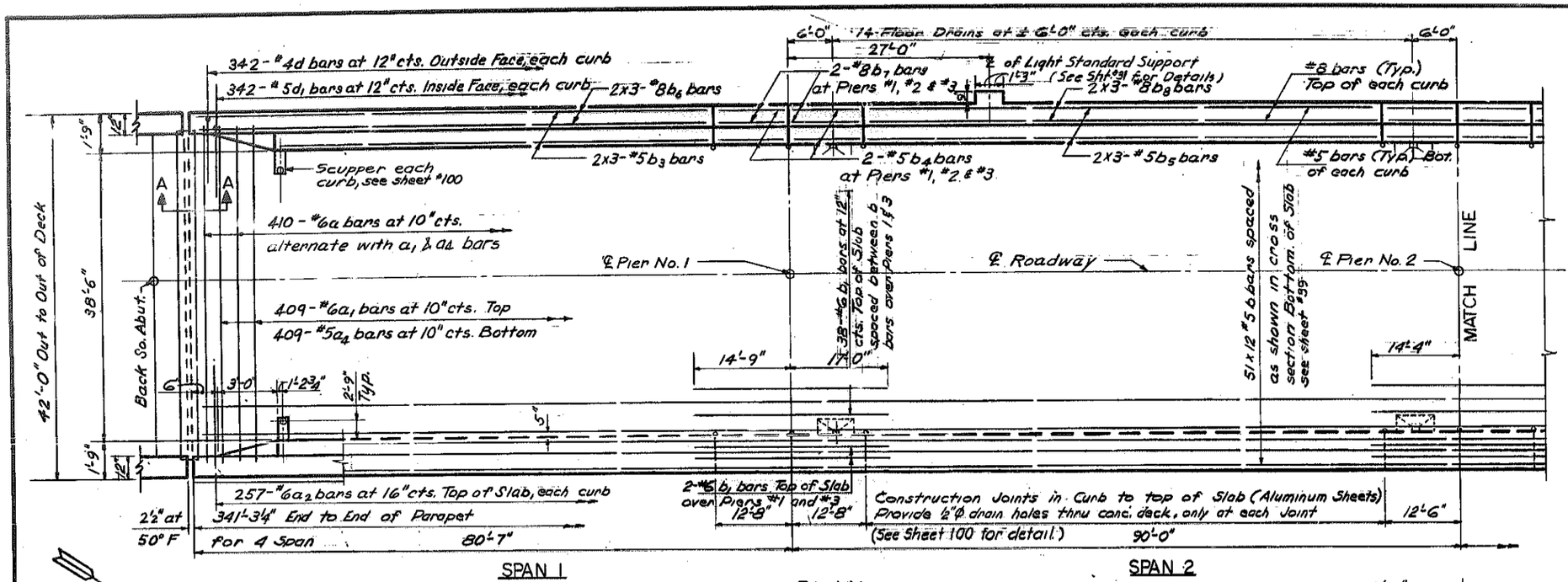
All points given are taken at 10 foot intervals along the members or joints indicated. Station is given from ℄ Roadway for all points.

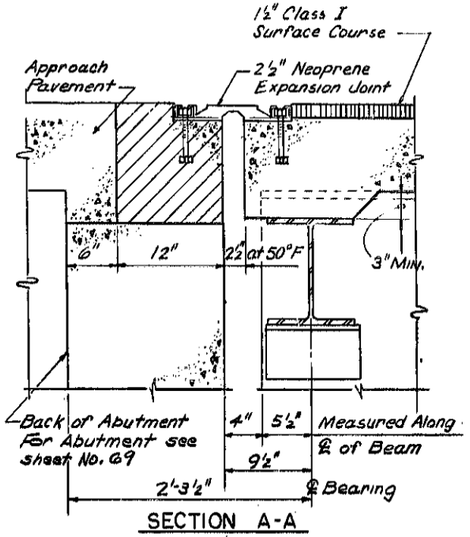
TOP OF SLAB LAYOUT & ELEVATIONS
SPAN 30

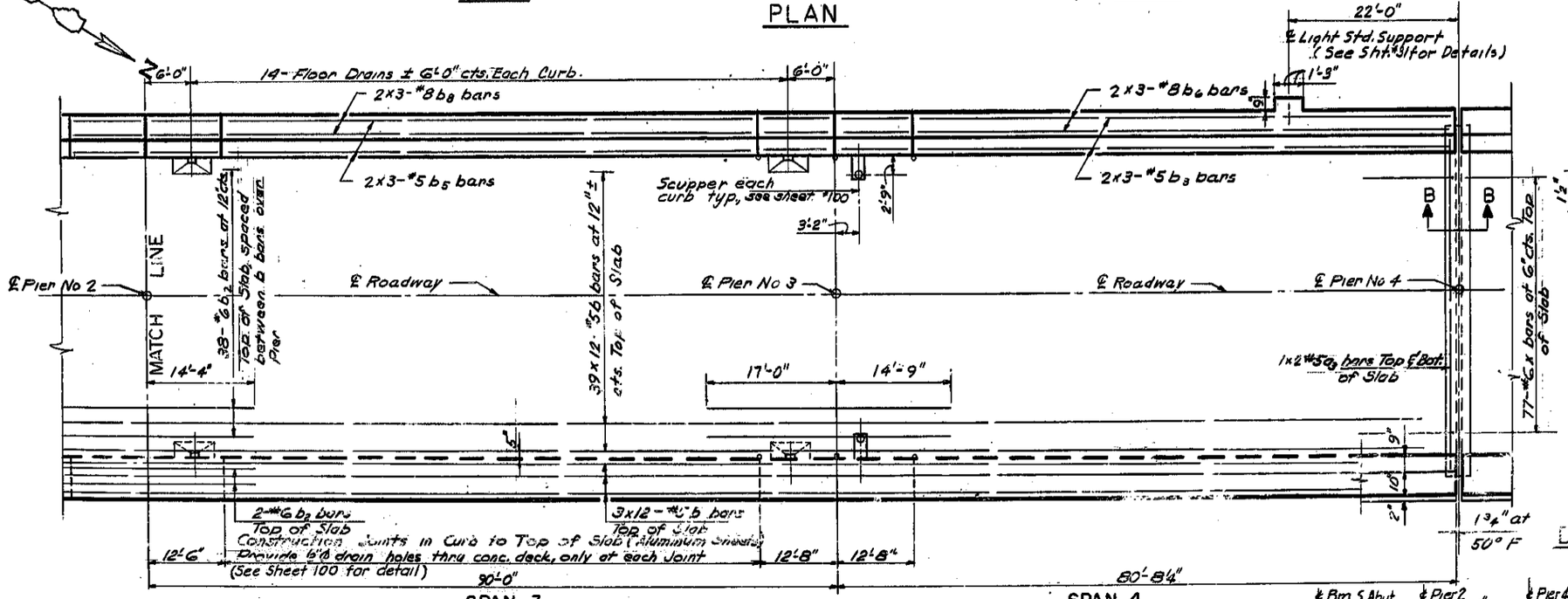
LA GRANGE RD. FA. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

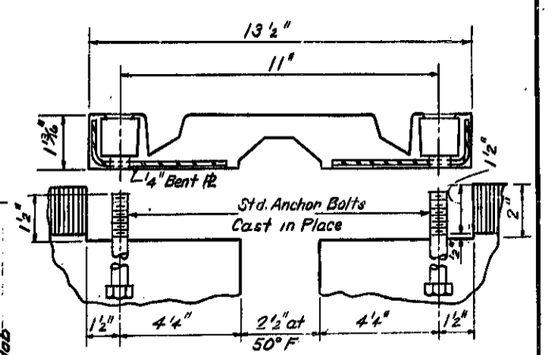
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 45	462X B&R	COOK	223	124
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

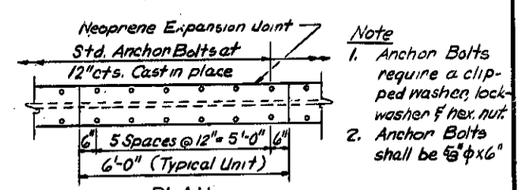
SHEET NO. 29
10% SHEETS











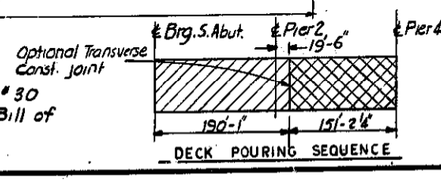
Note
1. Anchor Bolts require a clipped washer, lock washer & hex. nut.
2. Anchor Bolts shall be ⅝"ø x 6"

DETAILS OF 2½" NEOPRENE EXP. JOINT

DESIGNED	S.C.N.
CHECKED	RV
DRAWN	HJS
CHECKED	RV

Note:
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line. Min. bar lap = 24 dia.

Note
1. For Section B-B see sheet #30
2. For Reinforcing Details and Bill of Materials see sheet #99

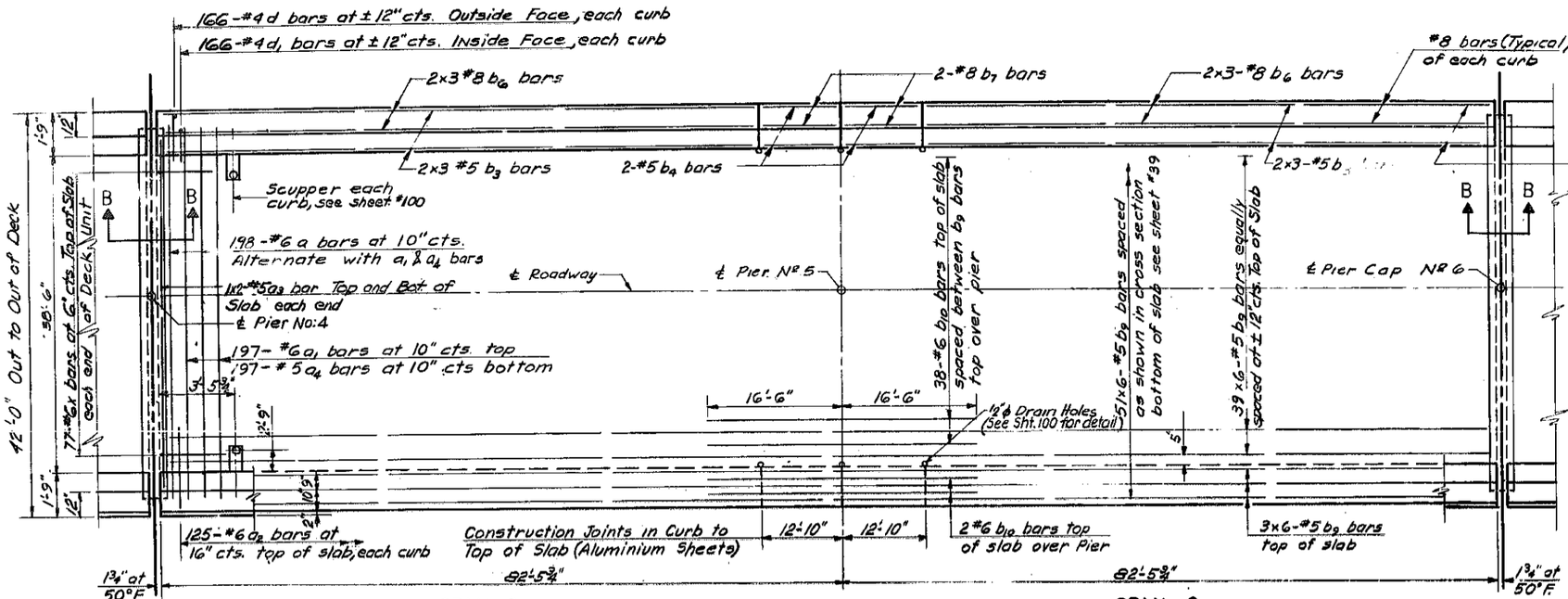


SUPERSTRUCTURE SPANS 1 TO 4.

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462X B&R	COOK	223	125
F. P. & REG. NO.		ILLINOIS PROJECT		

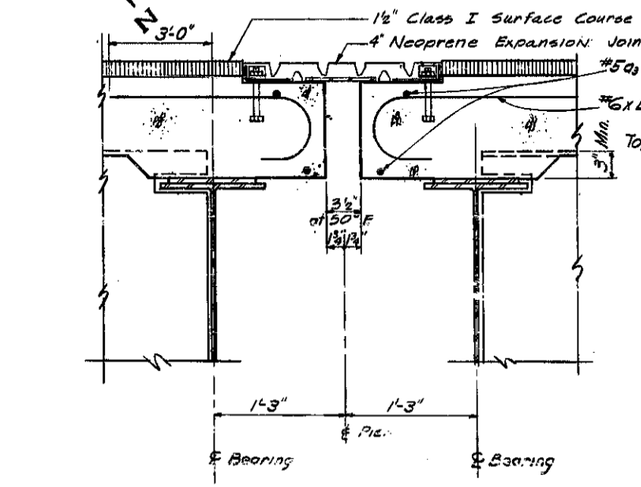
SHEET NO. 30
102 SHEETS



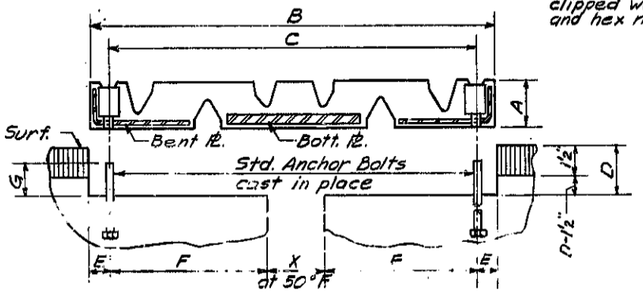
PLAN

Note:
For Reinforcing Detail and Bill of Material see sheet #39

Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Min. bar lap = 24 dia.

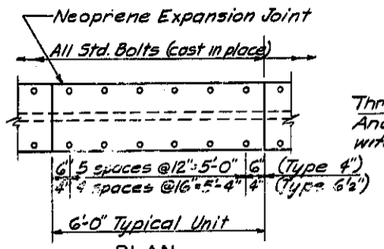


SECTION B B

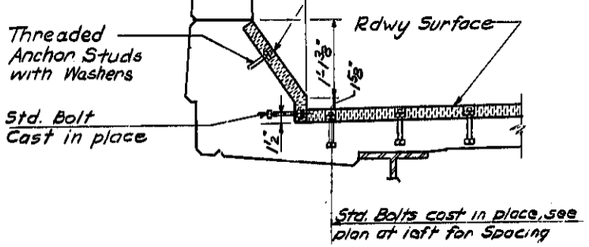


TYPICAL CROSS SECTION THRU EXPANSION JOINT

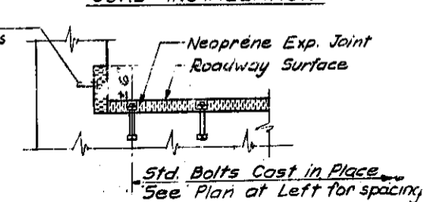
NOTE: Anchor bolts require clipped washer, lockwasher and hex nut.



PLAN



CURB INSTALLATION



ABUTMENT INSTALLATION

TYPE	DIMENSIONS								MATERIALS			
	A	B	C	D	E	F	G	X@50°F	ANCHOR BOLT	THICK BENT Rt.	THICK BOTT Rt.	THICK TOP Rt.
4"	2⅛"	22¾"	19⅝"	2⅝"	1 13/16"	8 1/16"	1½"	3'2"	⅜"ϕ x 6"	5/16"	⅝"	5/16"
6½"	3"	28"	24¼"	3 3/16"	2'-⅛"	9⅞"	2"	4½"	⅞"ϕ x 6"	⅜"	1"	⅜"

TABLE OF DIMENSIONS AND MATERIALS

DETAILS OF 4" AND 6½" NEOPRENE EXPANSION JOINTS

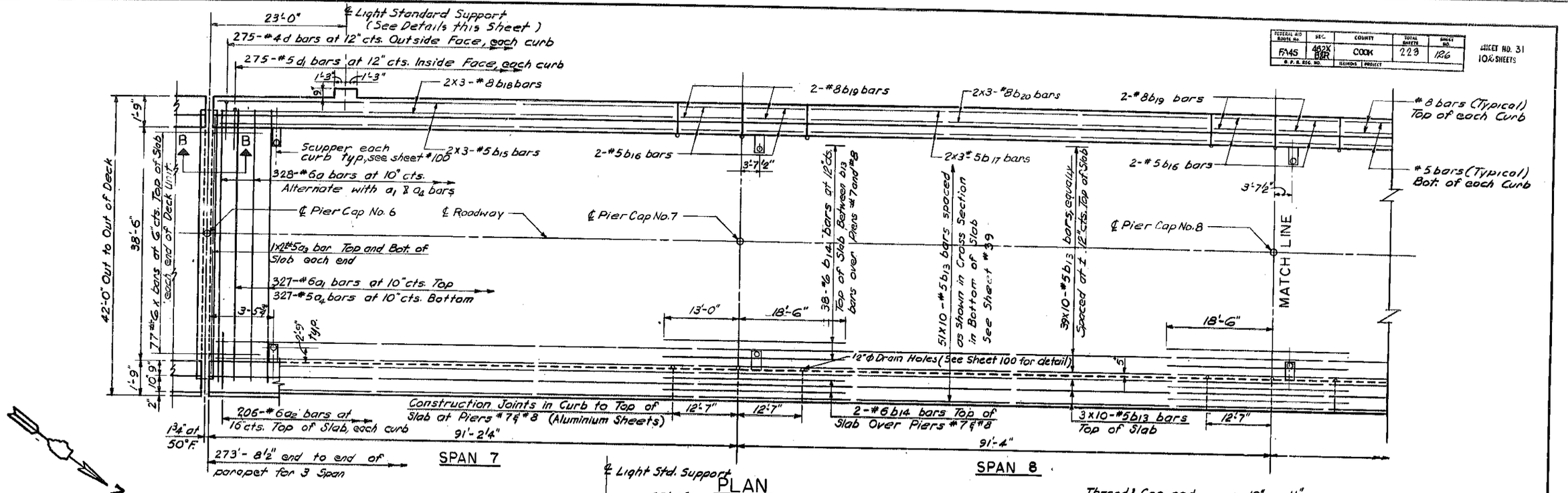
EXPANSION JOINT INSTALLATION DETAILS FOR 4" AND 6½" TYPE

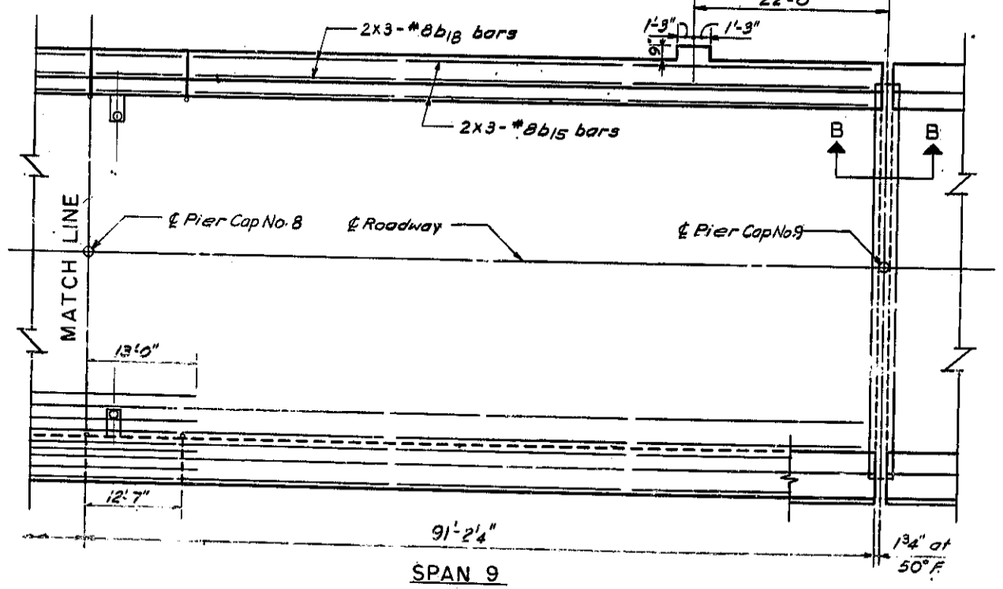
DESIGNED	S.C.N.
CHECKED	RBV
DRAWN	HJS
CHECKED	RBV

SUPERSTRUCTURE SPANS 5 & 6
LA GRANGE RD. F.A. ROUTE 45 U.S.45
SECTION NORTH BRIDGE 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	126
B. P. R. REG. NO.	ILLINOIS	PROJECT		

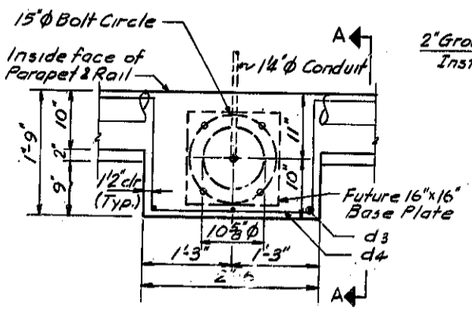
SHEET NO. 31
10& SHEETS





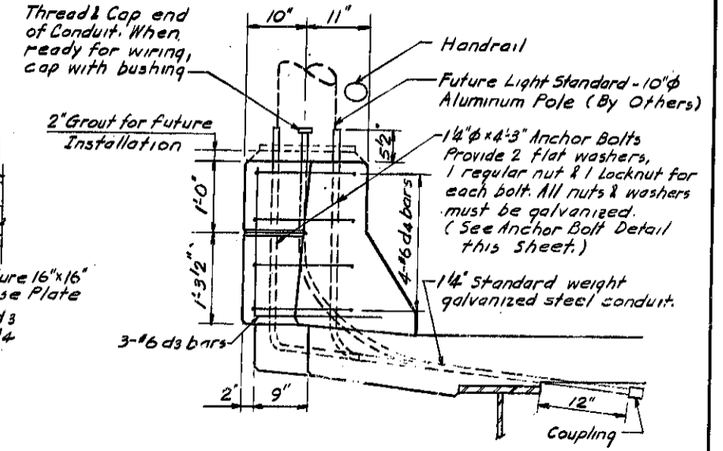
SPAN 9

PLAN



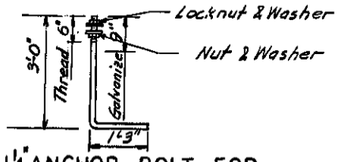
PLAN

Note: Cost of Anchor Bolts & Conduits is Incidental



SECTION A-A

LIGHT STANDARD SUPPORT DETAILS



1¼" ANCHOR BOLT FOR LIGHT STANDARD SUPPORT

DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

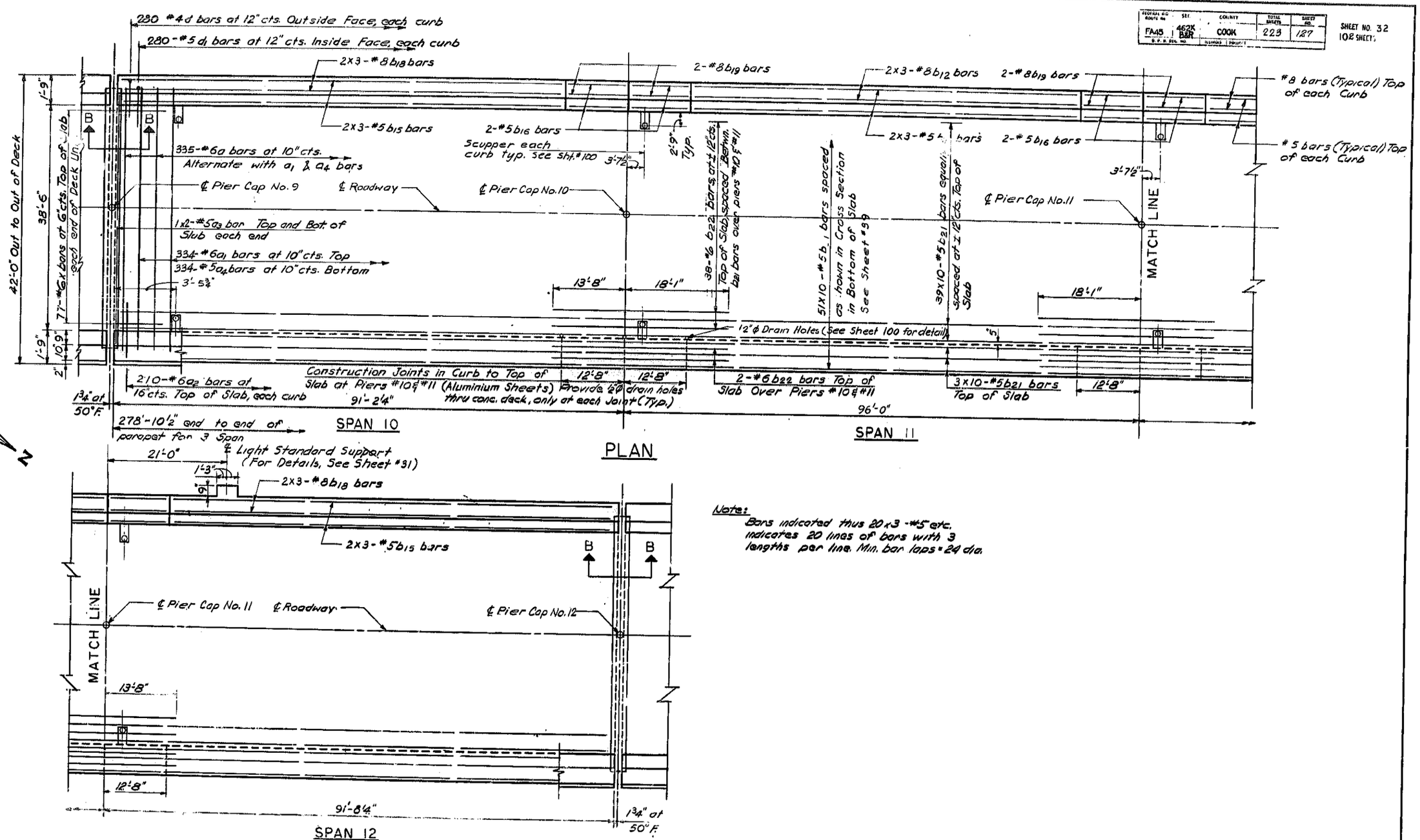
Note:
1. For Section B-B See Sheet #30
2. For Reinforcing Details and Bill of Materials see sheet #39

SUPERSTRUCTURE SPANS 7 TO 9

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K B&R	COOK	229	127
S.F.P. ROUTE NO.	ILLINOIS	PROJECT		

SHEET NO. 32
102 SHEETS



Note:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line. Min. bar laps = 24 dia.

Note:
1. For Section B-B See Sheet #30
2. For Reinforcing Details & Bill of Materials See sheet #39

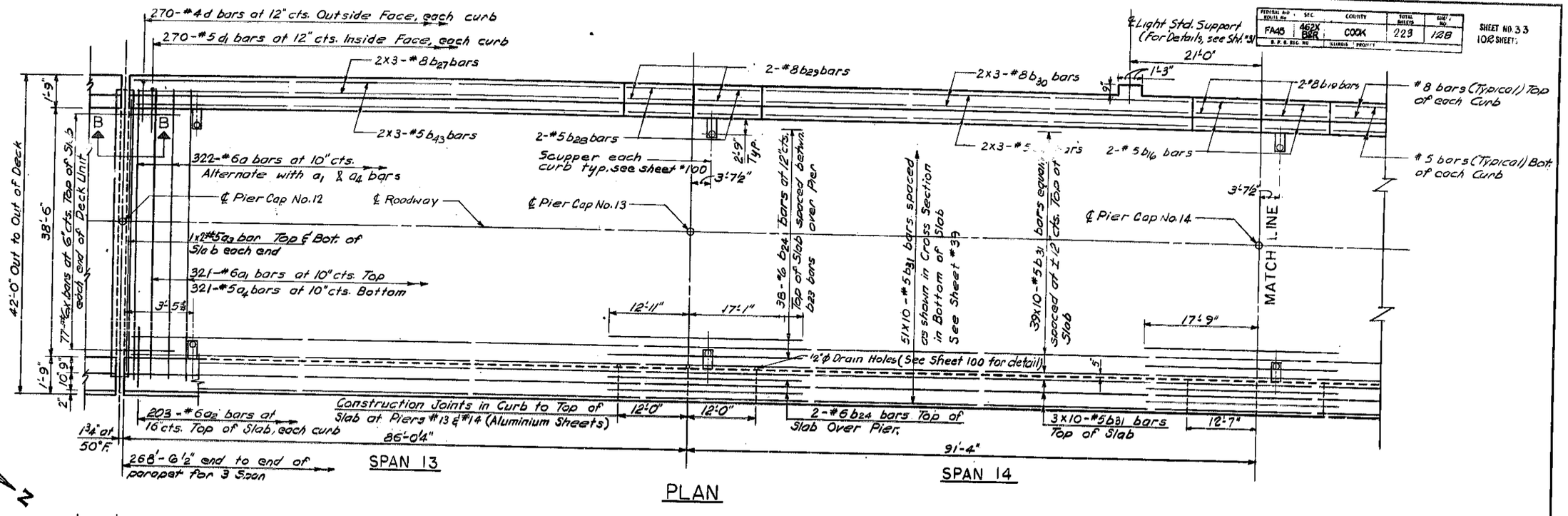
DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

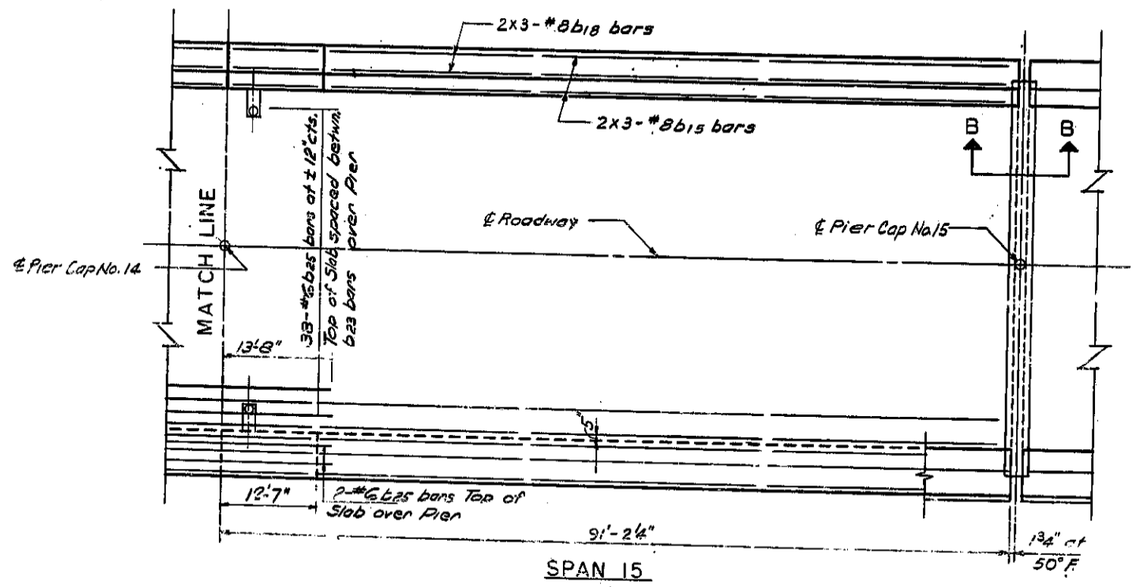
SUPERSTRUCTURE SPANS 10 TO 12

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	128
B. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 33 IOR SHEETS





DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

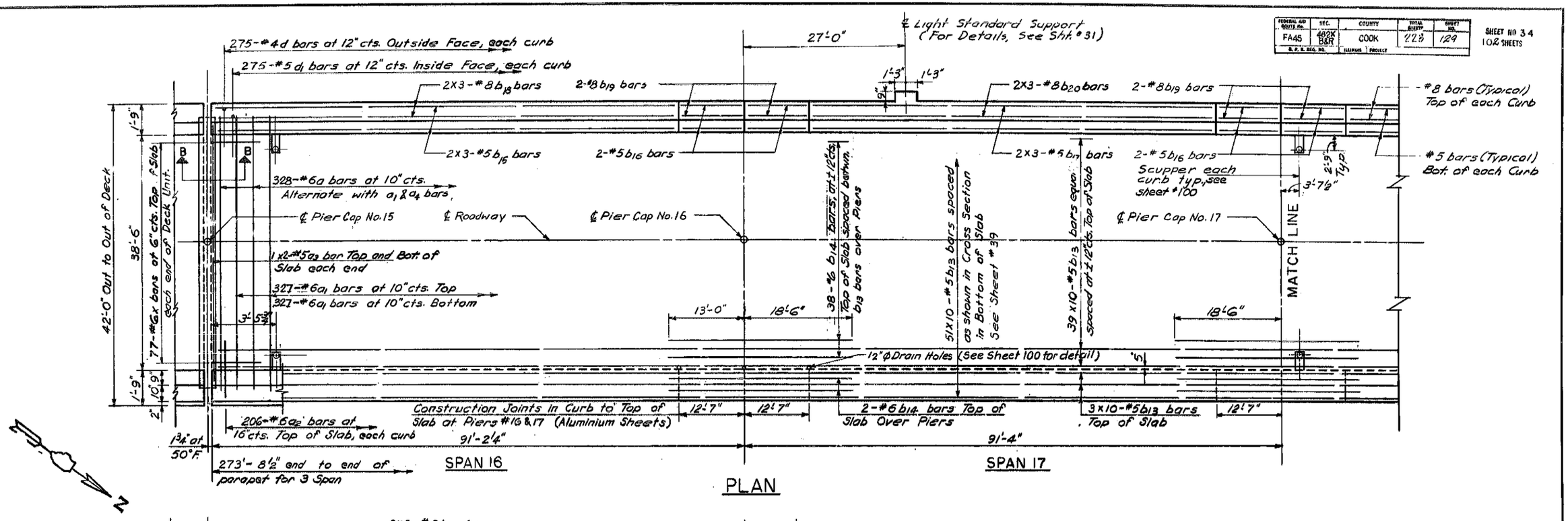
Note:
1. For Section B-B see sheet #30
For Reinforcing Details and Bill of Materials see sheet #39

SUPERSTRUCTURE SPANS 13 TO 15

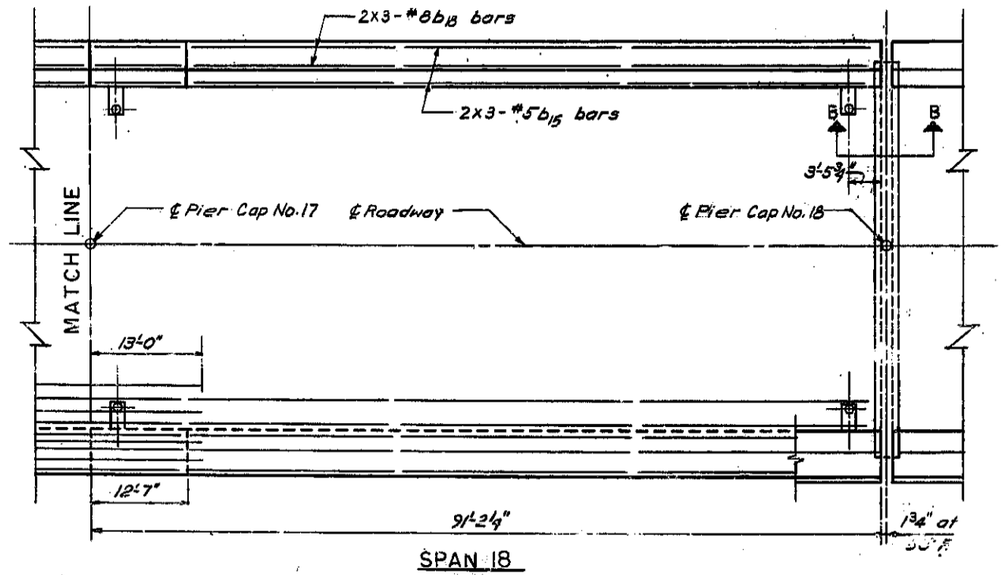
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	129	129
S. P. S. ECG. NO.	ILLINOIS PROJECT			

SHEET NO 34
10& SHEETS



PLAN



SPAN 18

PLAN

Note:
- For Section B-B See Sheet #30
- For Reinforcing Details and Bill of Materials see sheet #39

Notes:
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line, Min. bar lops = 24 dia.

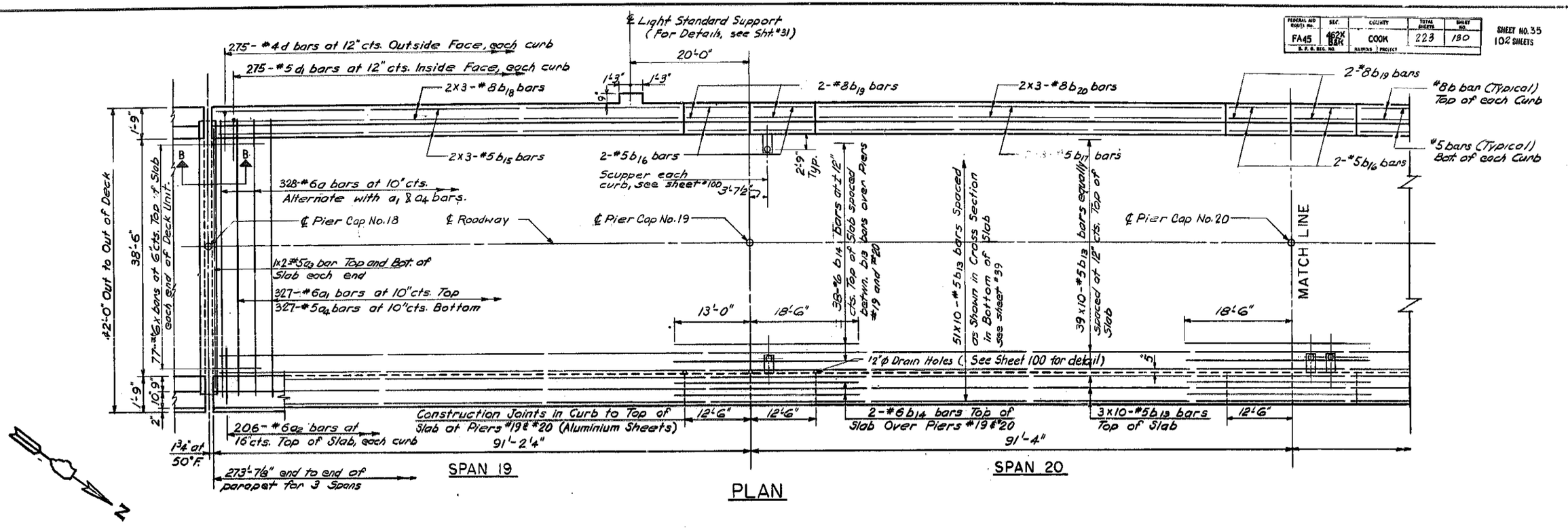
DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

SUPERSTRUCTURE SPANS 16 TO 18

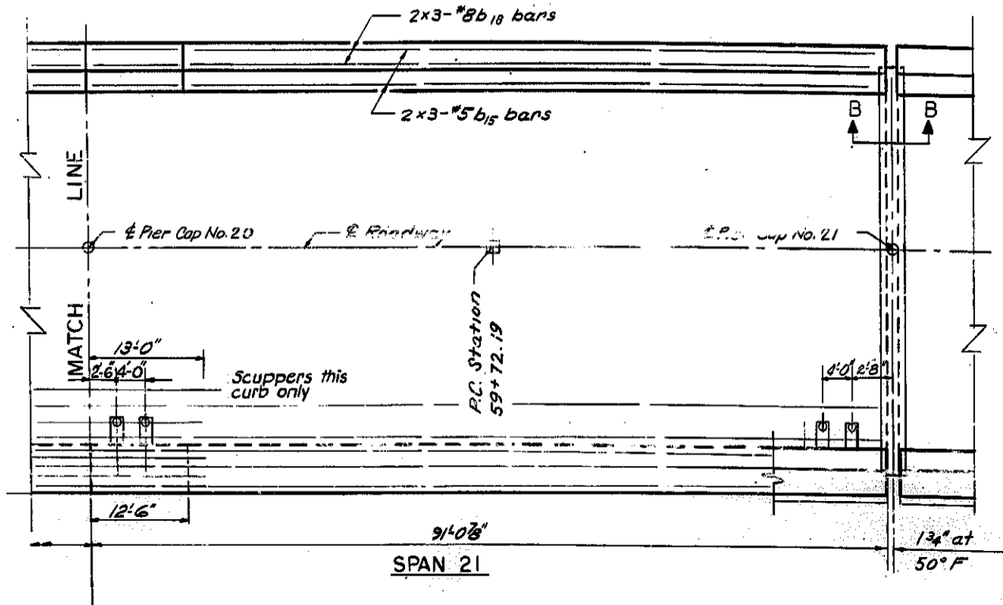
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	130
B. P. R. SEC. NO.		ILLINOIS PROJECT		

SHEET NO. 35
102 SHEETS



PLAN



PLAN

Note

- For Section B-B, see sheet #30
- For Detail of radially placed bars see Detail "A" sheet #37
- For Detail of Reinforcing and Bill of Materials see sheet #39

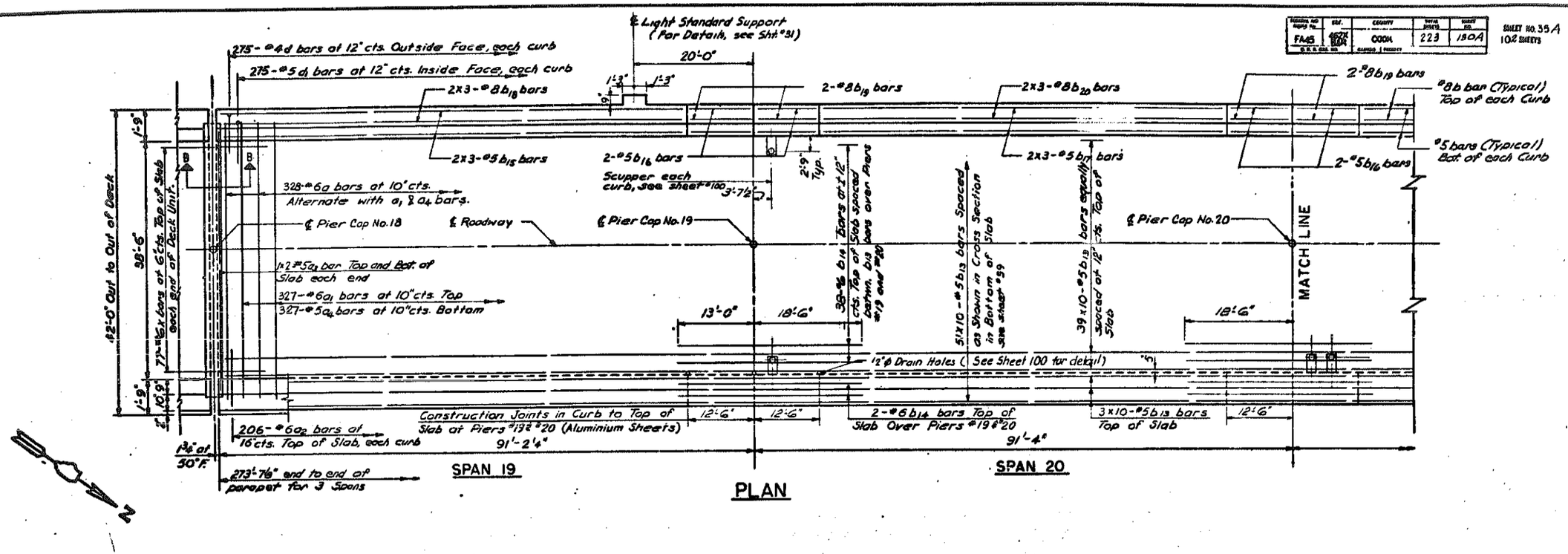
DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

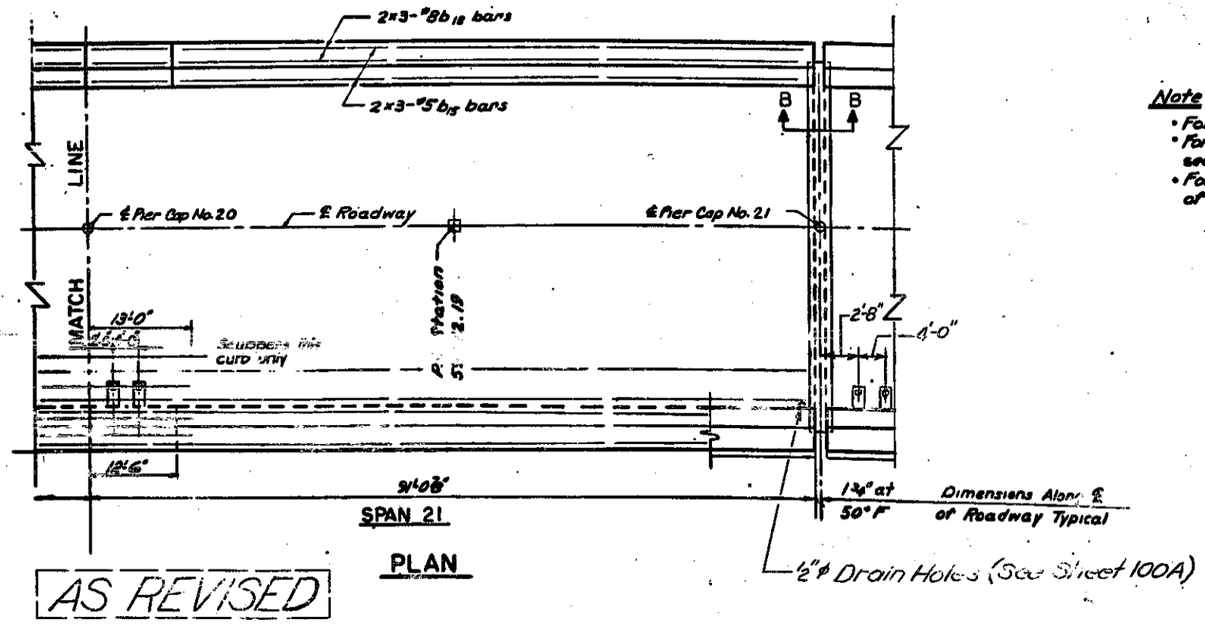
SUPERSTRUCTURE SPANS 19 TO 21

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462 - X - B & R
COOK COUNTY
STATION 41 + 38.63

FAS	1672 (104)	COOK	223	130A

SHEET NO. 35A
102 SHEETS





Note

- For Section B-B, see sheet #30
- For Detail of radially placed bars see Detail 'A' sheet #37
- For Detail of Reinforcing and Bill of Materials see sheet #39

DESIGNED	S.C.N.
CHECKED	
DRAWN	R PATEL
CHECKED	

AS REVISED

SUPERSTRUCTURE SPANS 19 TO 21

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

As Revised 6-2-76 L.W.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	191
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 36
102 SHEETS

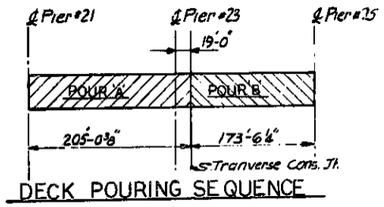
382 - #4d bars at 12" cts. Out side Face
382 - #5d1 bars at 12" cts. Inside Face
26'-0"
℄ Light Std. Support (For Details, see Sht. #31)
2x3 - #8b40 bars
2 - #8b36 bars at Piers #22 and #24
2x3 - #8b6 bars
2 - #8b46 bars
#8 bars (Typical) Top of each Curb
#5 bars (Typical) Bot. of each Curb
2x3 - #5b26 bars
2 - #5b34 bars at Piers #22 and 24
2x3 - #5b9 bars
2 - #5b45 bars
454 - #6a bars at 10" cts. Alternate With a1 & a4 bars. (See Note "B")
℄ Pier Cap No. 21
℄ Roadway
℄ Pier Cap No. 22
℄ Pier Cap No. 23
1x2 - #5a3 bar Top and Bot. of Slab each end
453 - #6a1 bars at 10" cts. Top (See Note Below)
453 - #5a4 bars at 10" cts Bottom (See Note "B")
Scuppers this curb only Typ.
38 - #6b37 bars at ±12" cts. Top of Slab Spaced Between b23 bars over Piers
51 x 14 - #5b23 bars spaced as shown in Cross Section in Bottom of Slab
R = 2046.28 For Data See Note "A"
39 x 14 - #5b23 bars equally Spaced at ±12" cts. Top of Slab
MATCH LINE
12" ℄ Drain Holes Typical (See Sheet 100 for detail)
Construction Joints in Curb to Top of Slab at Piers #22, #23, & #24 (Aluminium Sheets) Provide 6" ℄ drain holes thru conc. deck, only at each Joint (Typ.)
287 - #6a2 bars at 16" ± cts. Top of Slab
2 - #6b37 bars Top of Slab over Piers #22
3 x 14 - #5b23 bars Top of Slab
1¾" at 50°F
378'-6⅝" end to end of Deck for 4 Spans Along ℄ of Roadway
SPAN 22
92'-3¼"
93'-9⅛"
SPAN 23
Dimensions Along ℄ of Roadway Typ.
PLAN

Note: "A" Curve Data
P.C. = Sta. 59+72.19
D = 2°-48'-00"
Δ = 38°-41'-00"
R = 2046.28'
T = 718.27
L = 1381.55
E = 122.40

Notes:
Bars indicated thus 20x3 - #5 etc. indicates 20 lines of bars with 3 lengths per line. Min. bar laps = 24 dia.

℄ Light Std. Support (For Details, See Sht. #31)
2x3 - #8b12 bars
2x3 - #8b11 bars
2x3 - #8b42 bars
287 - #6a2 bars at 16" cts. Top of Slab
2x3 - #5b39 bars
MATCH LINE
℄ Pier Cap No. 23
℄ Roadway
℄ Pier Cap No. 24
℄ Pier Cap No. 25
38 - #6b38 bars at ±12" cts. Top of Slab Spaced Between b23 bars over Pier No. 24
Scuppers this curb only
2 - #6b44 bars Top of Slab over Pier No. 24
375 - #5d1 bars at 12" cts. Inside Face
375 - #4d bars at 12" cts. Outside Face
2¼" at 50°F
95'-4⅝"
SPAN 24
97'-1⅝"
SPAN 25
PLAN

Note: "B"
1. For Section B-B See Sheet # 30
2. For Section C-C See Sheet # 38
3. For Reinforcing Details and Bill of Materials See Sheet # 39
4. For Floor Drain Details See Sheet # 100
5. For Detail of radially placed bars Str. at Detail "A" Sheet # 37



DECK POURING SEQUENCE

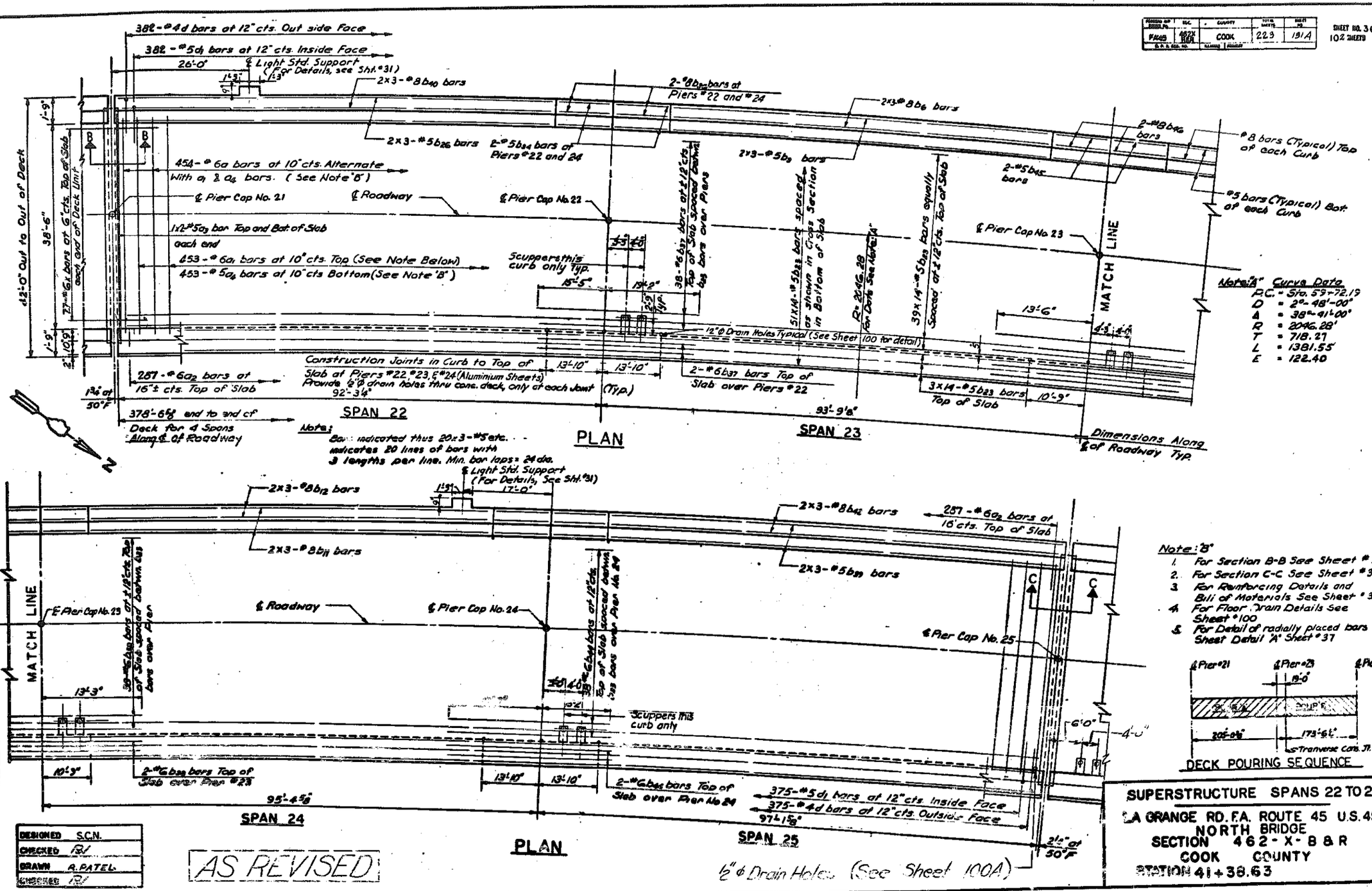
DESIGNED	S.C.N.
CHECKED	R.V.
DRAWN	R. PATEL
CHECKED	R.V.

SUPERSTRUCTURE SPANS 22 TO 25

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BOR	COOK	223	191A
B & B SEC. NO.	PLANNING	RELIABILITY		

SHEET NO. 36A
102 SHEETS



DESIGNED	S.C.N.
CHECKED	R.V.
DRAWN	A. PATEL
CHECKED	R.V.

AS REVISED

As Revised 6-2-76 L.W.

SUPERSTRUCTURE SPANS 22 TO 25

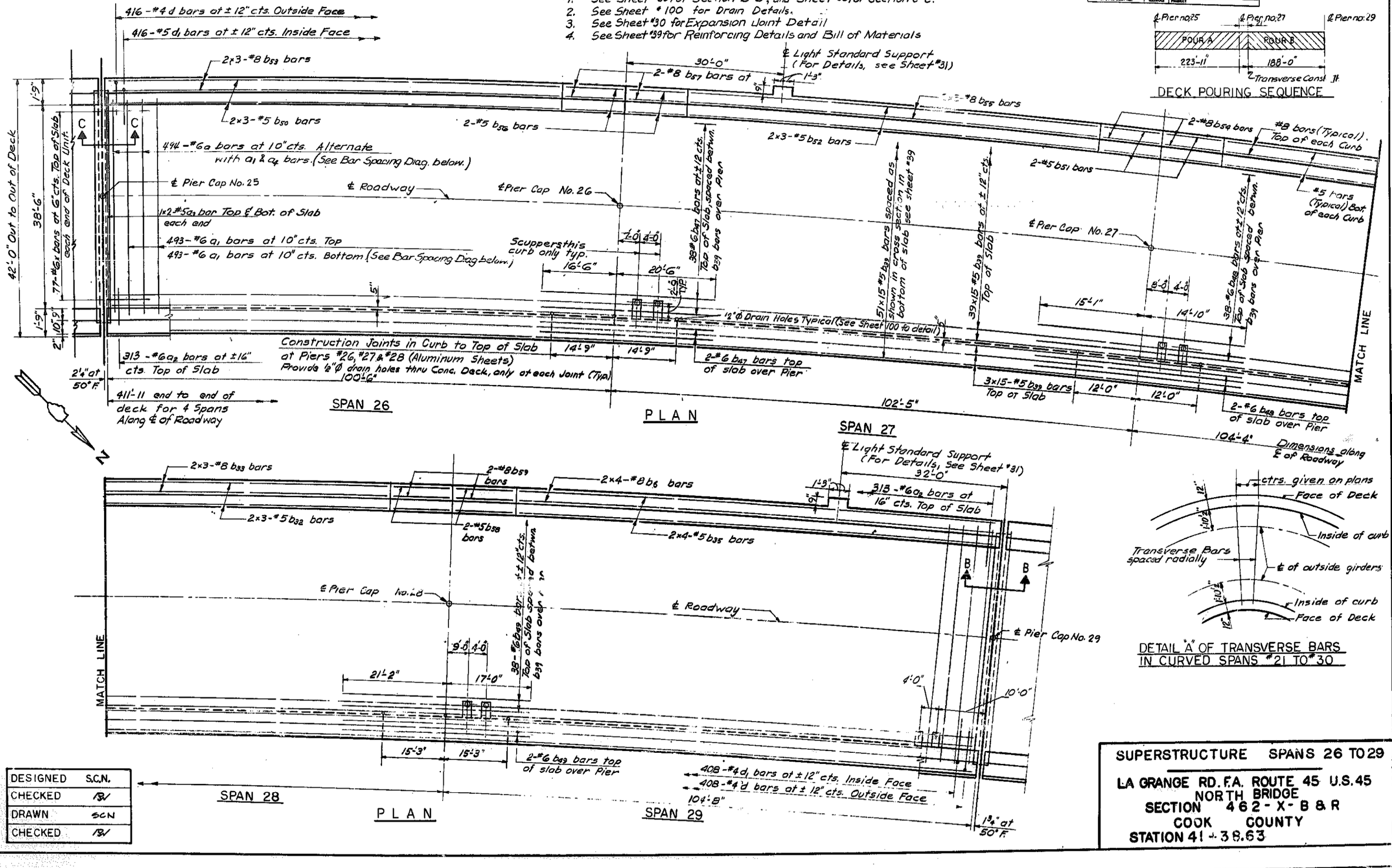
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	138
U. S. R. ROUTE NO.		HIGHWAY PROJECT		

SHEET NO. 37
102 SHEETS

Note:

1. See Sheet #30 for Section B-B, and Sheet #98 for Section C-C.
2. See Sheet #100 for Drain Details.
3. See Sheet #30 for Expansion Joint Detail
4. See Sheet #39 for Reinforcing Details and Bill of Materials



DETAIL "A" OF TRANSVERSE BARS IN CURVED SPANS #21 TO #30

DESIGNED	S.C.N.
CHECKED	RV
DRAWN	SCN
CHECKED	RV

SUPERSTRUCTURE SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 45	462-X-BR	COOK	223	198A

SHEET NO. 37A
102 SHEETS

Note:

1. See Sheet #30 for Section B-B, and Sheet #38 for Section C-C.
2. See Sheet #100 for Drain Details.
3. See Sheet #30 for Expansion Joint Detail
4. See Sheet #39 for Reinforcing Details and Bill of Materials

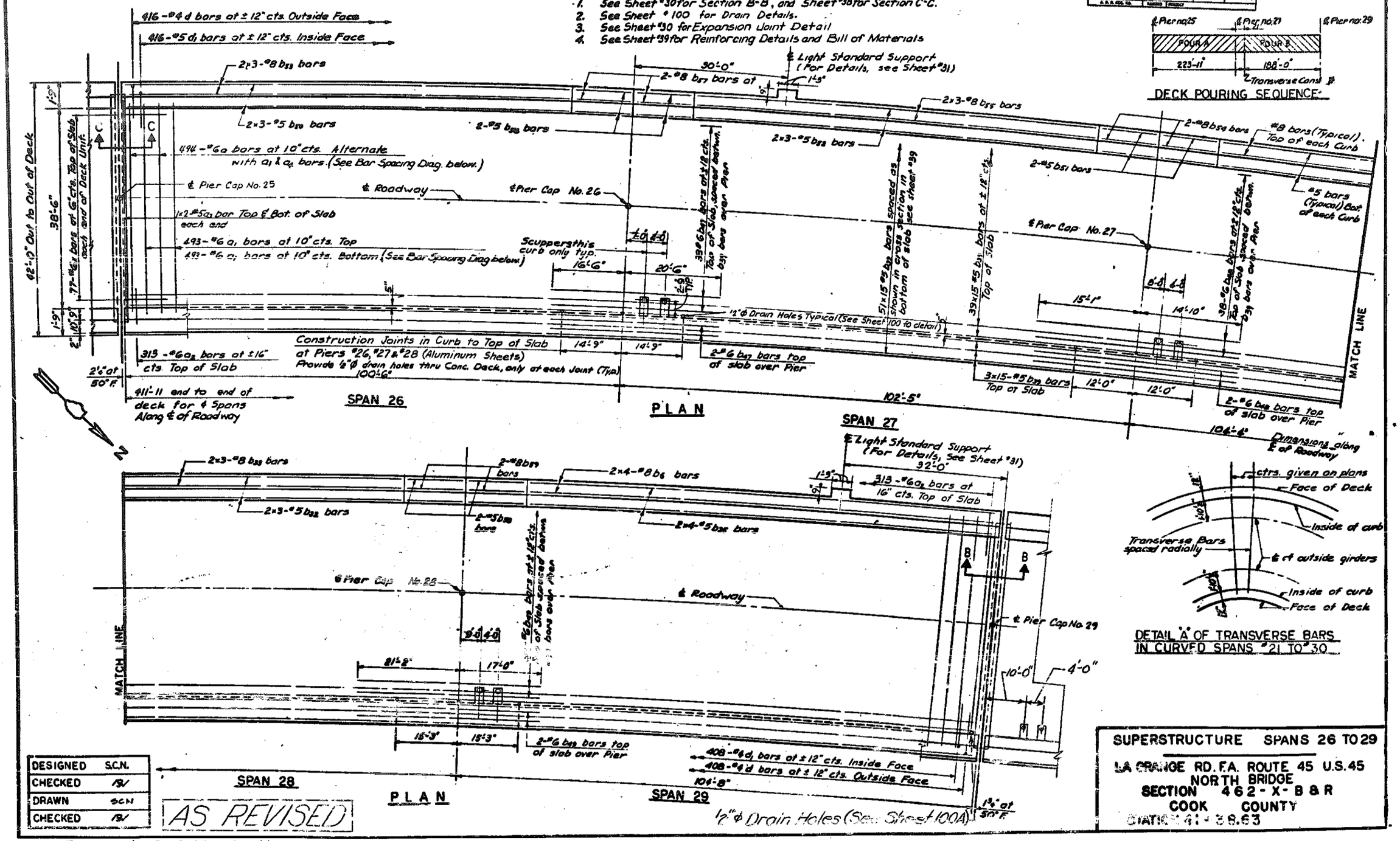
℄ Pier no. 25 ℄ Pier no. 27 ℄ Pier no. 29

POUR A POUR B

223'-11" 188'-0"

℄ Transverse Const. Jt.

DECK POURING SEQUENCE



DETAIL 'A' OF TRANSVERSE BARS IN CURVED SPANS #21 TO #30

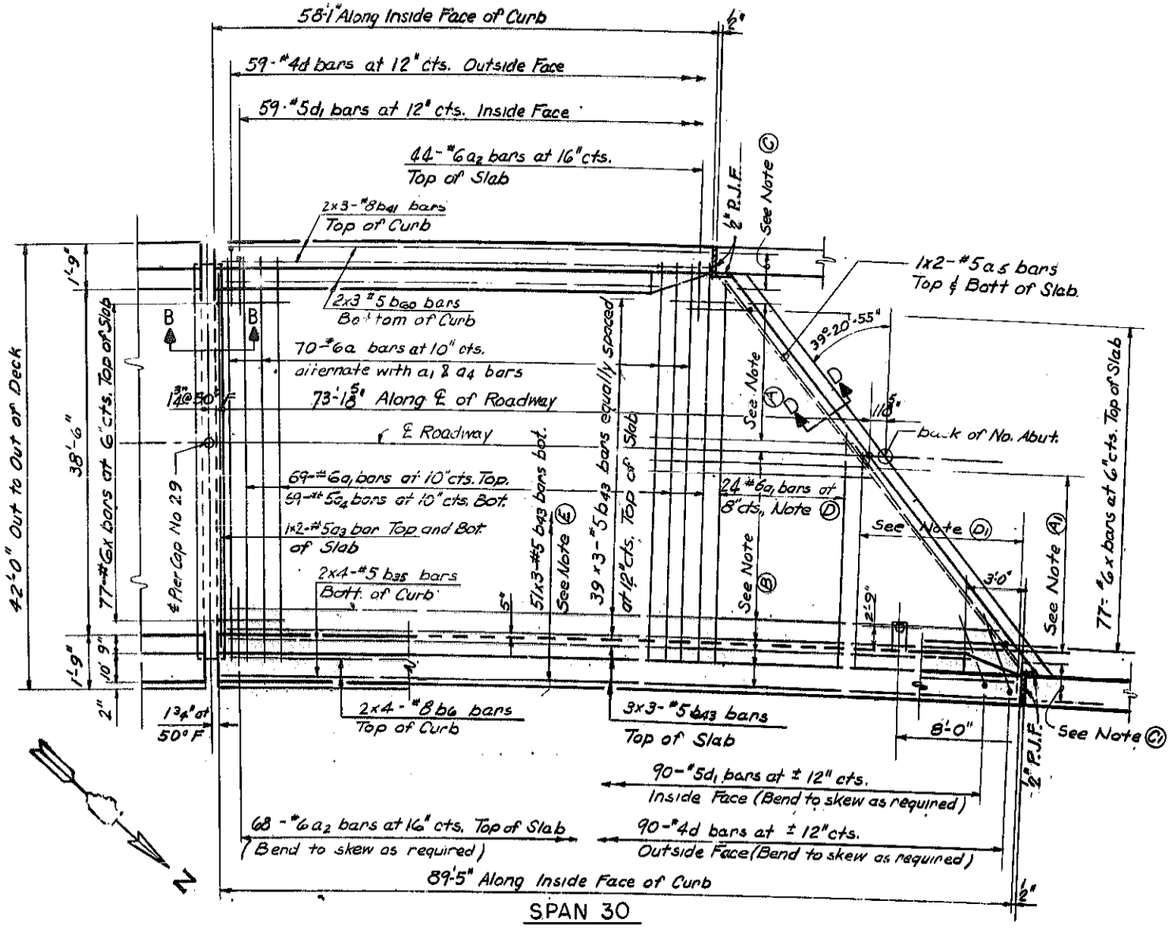
DESIGNED	S.C.N.
CHECKED	RJV
DRAWN	SCN
CHECKED	RJV

AS REVISED

SUPERSTRUCTURE SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

As Revised 6-2-76 L.W.



SPAN 30

PLAN

NOTES Ⓐ TO Ⓔ

Ⓐ 1. #5 b_{43} bars Bottom of Slab spaced as shown in Cross Section, Sheet No. 39
2. #5 b_{43} bars Top of Slab at 12" cts.
3. Cut top and bott. bars to fit skew, use remainder at Ⓐ1

Ⓐ1 1. Use remainder of b_{43} bars located same as above in Ⓐ #1 & #2
2. Use 1'-3" Min lap

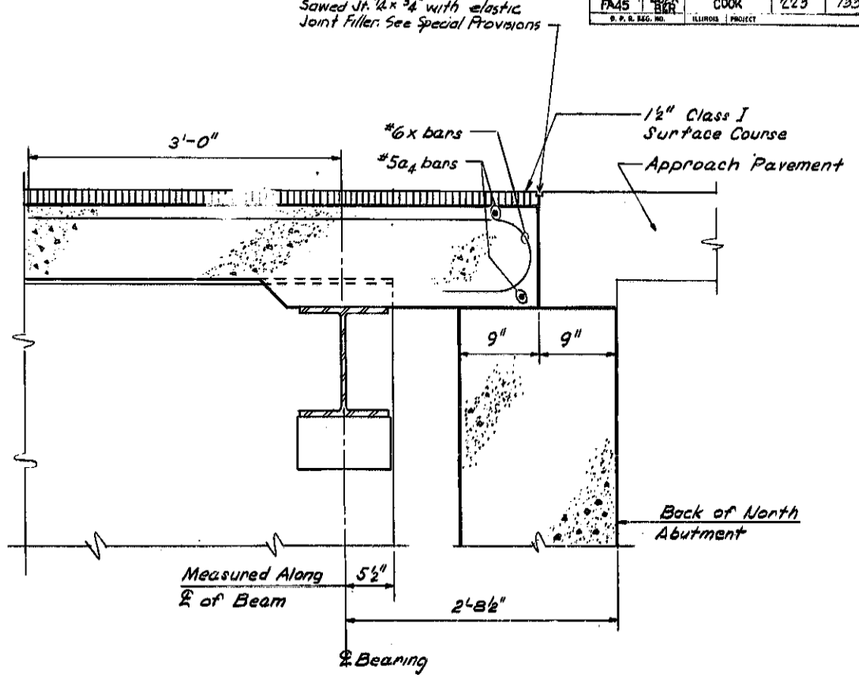
Ⓑ 1. #5 b_{43} bars Bottom of Slab spaced as shown in Cross Section, Sheet No. 39
2. #5 b_{43} bars Top of Slab at 12" cts.
3. No Cutting is required

Ⓒ 1. #5 b_{43} bars Bottom and Top of Slab placed as shown in Cross Section, Sheet No. 39
2. Cut Top and Bottom of Bars to fit skew, use remainder at Ⓒ1

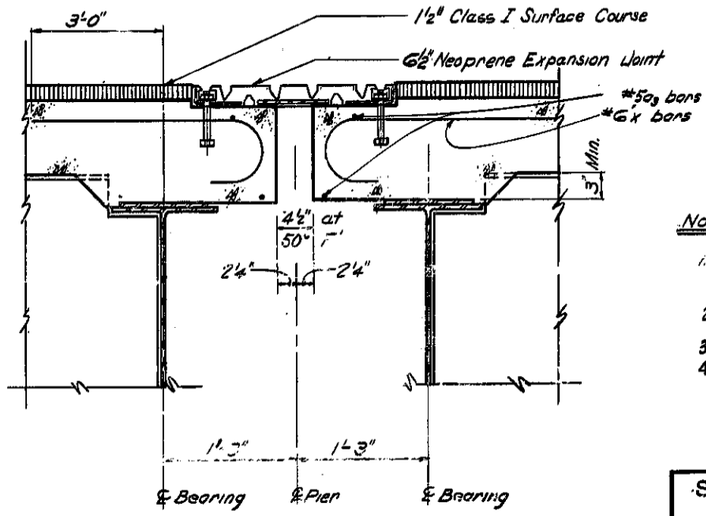
Ⓓ 1. #6 a_1 bars at 8" cts., Top and Bottom of Slab
2. Cut Top and Bottom of Bars to fit skew, use remainder at Ⓓ1

Ⓔ 1. #5 b_{43} bars spaced as shown in Cross Section Bottom of Slab.

DESIGNED	S.C.N.
CHECKED	
DRAWN	H.J.S
CHECKED	



SECTION D-D



SECTION C-C

Note

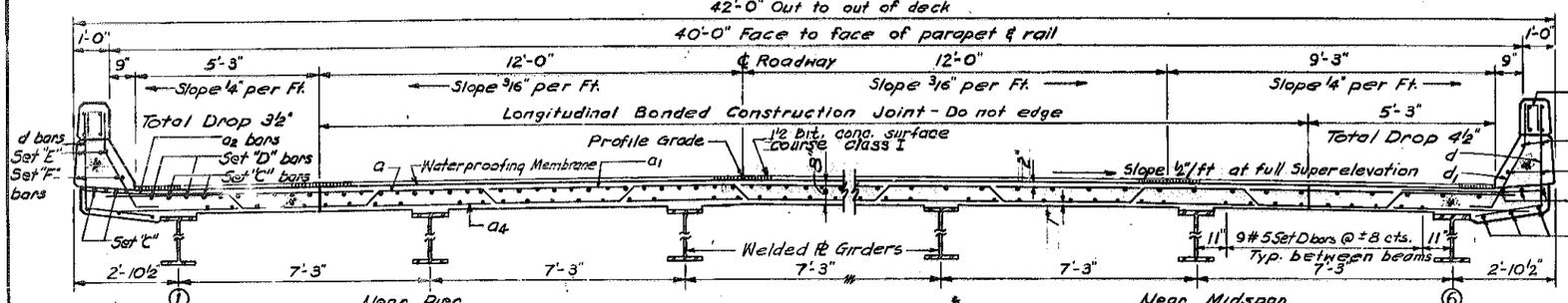
1. For Reinforcing Details and Bill of Materials see sheet #39
2. For Plan and Details of Expansion Joint see sheet #30
3. For Section B-B see Sheet #30
4. For Deck Drain Details see Sheet #100

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BR	COOK	229	139
F. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 38
102 SHEETS

SUPERSTRUCTURE SPAN 30 AND DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

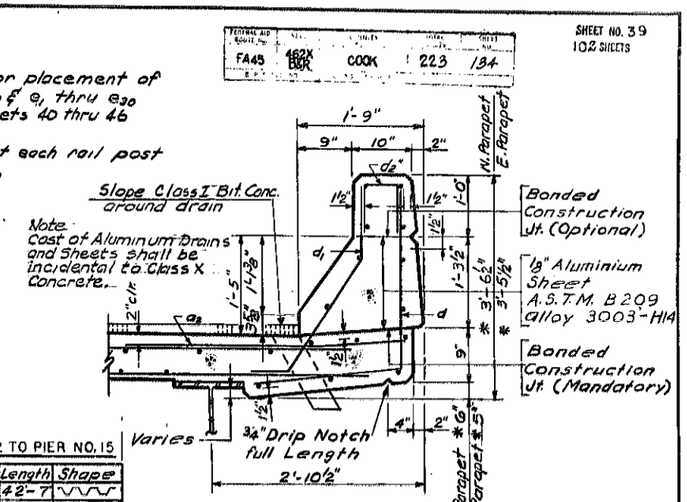


CROSS SECTION*
Scale: ½"=1'-0"
looking North

* Dimensions are measured along radial line for Spans 21 to 30.

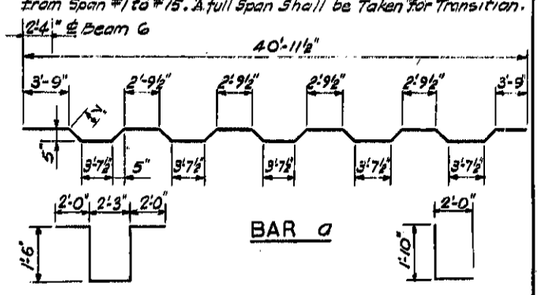
Note: For placement of bars d_2 & e_1 thru e_{30} see sheets 40 thru 46

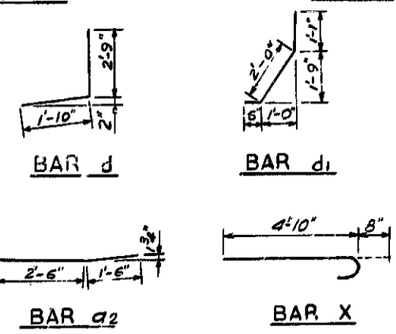
2-#4 d_2 at each rail post
e_1 thru e_{30}



CURB SECTION
Scale: 1"=1'-0"

Note
Asterisk Dimensions are at Super-Elevated Portion. For Normal Crown Portion these Dimension may be decreased by 2" At W. Parapet from Span #1 to #18 and 1" at E. Parapet from Span #1 to #15. A full Span Shall be Taken for Transition.





BAR KEY

Set A	b6, b8, b12, b18, b20, b27, b33 b40, b41, b42, b53, b55
Set B	b3, b5, b11, b15, b17, b26, b32, b35, b39, b43, b50, b52, b60
Set C	b1, b2, b10, b14, b22, b24, b37, b38, b44, b47, b48, b49, b25
Set D	b, b9, b13, b21, b23, b39, b43
Set E	b7, b19, b29, b31, b36, b46 b54, b57, b59
Set F	b4, b16, b28, b30, b34, b45, b51, b56, b58

BILL OF MATERIALS

FOR 4 SPAN S. ABUT. TO PIER NO. 4

Bar	No.	Size	Length	Shape
a	410	#6	42'-7"	
a1	409	#6	40'-6"	
a2	514	#6	4'-0"	
a3	4	#5	21'-0"	
a4	409	#5	40'-6"	
b	1152	#5	29'-7"	
b1	84	#6	31'-9"	
b2	42	#6	28'-8"	
b3	24	#5	23'-11"	
b4	24	#5	12'-4"	
b5	24	#5	22'-4"	
b6	24	#8	24'-5"	
b7	24	#8	12'-4"	
b8	24	#8	22'-10"	
d3	6	#6	3'-10"	
d	684	#4	4'-7"	
d1	684	#5	3'-7"	
d4	8	#6	9'-3"	
X	77	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	11981O.
Class X Concrete	Cu. Yds.	431.0

FOR 2 SPAN PIER NO. 4 TO PIER NO. 6

Bar	No.	Size	Length	Shape
a	198	#6	42'-7"	
a1	197	#6	40'-6"	
a2	250	#6	4'-0"	
a3	8	#5	21'-0"	
a4	197	#5	40'-6"	
b3	24	#5	23'-11"	
b9	8	#5	12'-4"	
b6	24	#8	24'-5"	
b7	8	#8	12'-4"	
b9	576	#5	28'-6"	
b10	42	#6	33'-0"	
d	332	#4	4'-7"	
d1	332	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	59910.
Class X Concrete	Cu. Yds.	207.5

FOR 3 SPAN PIER NO. 6 TO PIER NO. 9

Bar	No.	Size	Length	Shape
a	328	#6	42'-7"	
a1	327	#6	40'-6"	
a2	420	#6	4'-0"	
a3	8	#5	21'-0"	
a4	327	#5	40'-6"	
b13	960	#5	28'-6"	
b14	84	#6	31'-6"	
b19	24	#5	27'-0"	
b16	16	#5	12'-3"	
b17	12	#5	22'-9"	
b18	24	#8	27'-6"	
b19	16	#8	12'-3"	
b20	12	#8	23'-4"	
d3	6	#6	3'-10"	
d4	8	#6	9'-8"	
d	550	#4	4'-7"	
d1	550	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement Bars	Lbs.	197660
Class X Concrete	Cu. Yds.	478.1

FOR 3 SPAN PIER NO. 9 TO PIER NO. 12

Bar	No.	Size	Length	Shape
a	335	#6	42'-7"	
a1	334	#6	40'-6"	
a2	420	#6	4'-0"	
a3	8	#5	21'-0"	
a4	334	#5	40'-6"	
b11	12	#5	25'-0"	
b12	12	#8	25'-9"	
b15	24	#5	27'-0"	
b16	16	#5	12'-3"	
b18	24	#8	27'-6"	
b19	16	#8	12'-3"	
b21	960	#5	28'-11"	
b22	84	#6	31'-9"	
d3	3	#6	3'-10"	
d4	4	#6	9'-3"	
d	560	#4	4'-7"	
d1	560	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	100970.
Class X Concrete	Cu. Yds.	352.3

FOR 3 SPAN PIER NO. 12 TO PIER NO. 15

Bar	No.	Size	Length	Shape
a	322	#6	42'-7"	
a1	321	#6	40'-6"	
a2	406	#6	4'-0"	
a3	8	#5	21'-0"	
a4	321	#5	40'-6"	
b11	12	#5	24'-3"	
b15	12	#5	27'-0"	
b16	8	#5	12'-3"	
b18	12	#8	27'-6"	
b19	8	#8	12'-3"	
b24	42	#6	30'-0"	
b25	42	#6	31'-5"	
b27	12	#8	26'-1"	
b28	8	#5	11'-8"	
b29	8	#8	11'-8"	
b30	12	#8	28'-9"	
b31	960	#5	28'-0"	
b32	12	#5	25'-6"	
d	540	#4	4'-7"	
d1	540	#5	3'-7"	
d3	3	#6	3'-10"	
d4	4	#6	9'-3"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Class X Concrete	Cu. Yds.	339.8
Reinforcement	Lbs.	97370.

FOR 4 SPAN PIER NO. 21 TO PIER NO. 25

Bar	No.	Size	Length	Shape
a4	453	#5	40'-6"	
a3	8	#5	21'-0"	
a	454	#6	42'-7"	
a1	453	#6	40'-6"	
a2	214	#6	4'-0"	
b46	8	#8	10'-5"	
b3	12	#5	23'-11"	
b4	12	#8	24'-5"	
b11	12	#5	24'-3"	
b12	12	#8	25'-9"	
b28	1344	#5	28'-6"	
b24	12	#5	27'-2"	
b34	16	#5	13'-0"	
b36	16	#8	13'-6"	
b37	42	#6	34'-7"	
b38	42	#6	26'-9"	
b39	12	#5	28'-9"	
b40	12	#8	27'-9"	
b42	12	#8	29'-3"	
b43	42	#6	34'-9"	
b45	8	#5	10'-5"	
d3	6	#6	3'-10"	
d	757	#4	4'-7"	
d1	757	#5	3'-7"	
d4	8	#6	9'-3"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement Bars	Lbs.	197660
Class X Concrete	Cu. Yds.	478.1

FOR 4 SPAN PIER NO. 25 TO PIER NO. 29

Bar	No.	Size	Length	Shape
a4	493	#5	40'-6"	
a3	8	#5	21'-0"	
a	494	#6	42'-7"	
a1	493	#6	40'-6"	
a2	626	#6	4'-0"	
b39	8	#8	12'-11"	
b6	16	#8	24'-5"	
b32	12	#5	26'-9"	
b33	12	#8	27'-3"	
b35	16	#5	23'-9"	
b39	1940	#5	28'-9"	
b47	42	#6	37'-0"	
b48	42	#6	23'-11"	
b49	42	#6	35'-2"	
b50	12	#5	29'-7"	
b51	8	#5	11'-8"	
b52	12	#5	26'-5"	
b53	12	#8	30'-1"	
b54	8	#8	11'-8"	
b55	12	#8	26'-9"	
b56	8	#5	14'-5"	
b57	8	#8	14'-5"	
b58	8	#5	14'-11"	
d3	6	#6	3'-10"	
d	824	#4	4'-7"	
d1	824	#5	3'-7"	
d4	8	#6	9'-3"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs	149550
Class X Concrete	Cu. Yds.	523.4

FOR 1 SPAN PIER NO. 29 TO N. ABUT.

Bar	No.	Size	Length	Shape
a	70	#6	42'-7"	
a1	117	#6	40'-6"	
a2	112	#6	4'-0"	
a3	4	#5	21'-0"	
a4	69	#5	40'-6"	
a6	4	#5	26'-0"	
b6	8	#8	24'-5"	
b35	8	#5	23'-9"	
b41	6	#8	21'-0"	
b43	255	#5	25'-8"	
b60	6	#5	20'-7"	
d	129	#4	4'-7"	
d1	129	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	26560.
Class X Concrete	Cu. Yds.	91.7

Notes:
The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in quantities. See sheet #46.

FOR 3 SPAN PIER NO. 15 TO PIER NO. 18

Bar	No.	Size	Length	Shape
a	328	#6	42'-7"	
a1	327	#6	40'-6"	
a2	412	#6	4'-0"	
a3	8	#5	21'-0"	
a4	327	#5	40'-6"	
b13	960	#5	28'-6"	
b14	84	#6	31'-6"	
b15	24	#5	27'-0"	
b16	16	#5	12'-3"	
b17	12	#5	22'-9"	
b18	24	#8	27'-6"	
b19	16	#8	12'-3"	
b20	12	#8	23'-4"	
d3	3	#6	3'-10"	
d4	4	#6	9'-3"	
d	550	#4	4'-7"	
d1	550	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	99120.
Class X Concrete	Cu. Yds.	346.4

FOR 3 SPAN PIER NO. 18 TO PIER NO. 21

Bar	No.	Size	Length	Shape
a	328	#6	42'-7"	
a1	327	#6	40'-6"	
a2	412	#6	4'-0"	
a3	8	#5	21'-0"	
a4	327	#5	40'-6"	
b13	960	#5	28'-6"	
b14	84	#6	31'-6"	
b15	24	#5	27'-0"	
b16	16	#5	12'-3"	
b17	12	#5	22'-9"	
b18	24	#8	27'-6"	
b19	16	#8	12'-3"	
b20	12	#8	23'-4"	
d3	3	#6	3'-10"	
d4	4	#6	9'-3"	
d	550	#4	4'-7"	
d1	550	#5	3'-7"	
X	154	#6	5'-6"	

Item	Unit	Quant.
Reinforcement	Lbs.	99120.
Class X Concrete	Cu. Yds.	346.2

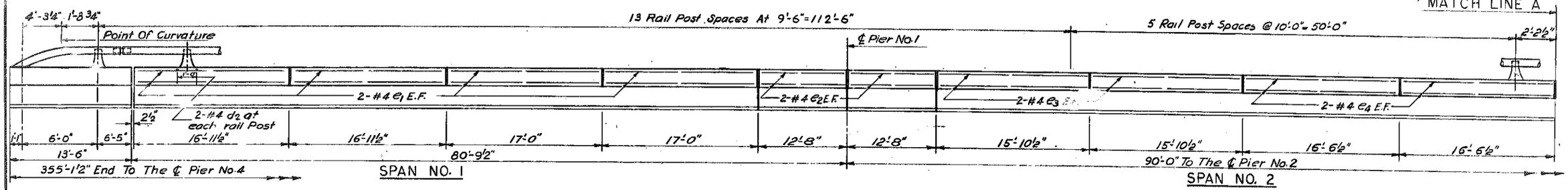
DESIGNED	S.C.N.
CHECKED	
DRAWN	R. PATEL
CHECKED	

SUPERSTRUCTURE, CROSS SECTION, DETAILS, AND BILL OF MATERIALS
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 45	462X B&R	COOK	223	195
S. F. A. RTE. NO.	ILLINOIS	PROJECT		

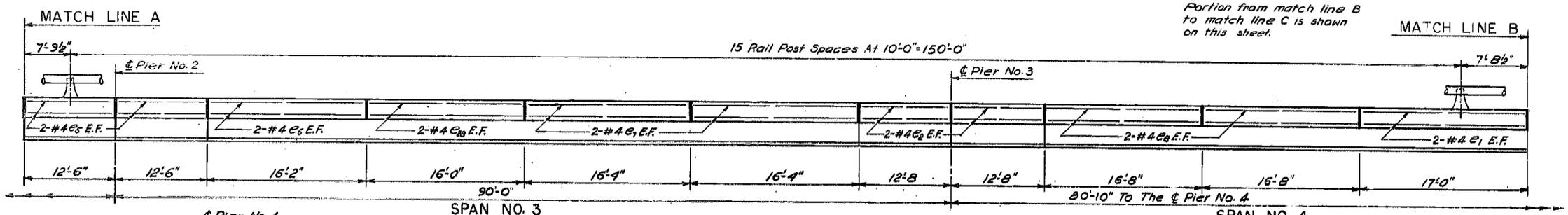
SHEET NO 40 OF 223 SHEETS

MATCH LINE A

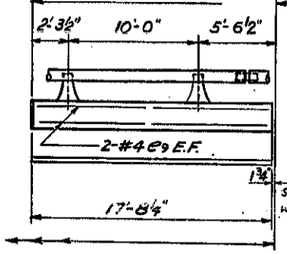


Note:
Portion from match line B to match line C is shown on this sheet.

MATCH LINE A

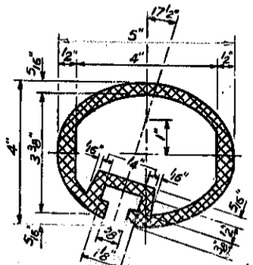


MATCH LINE B

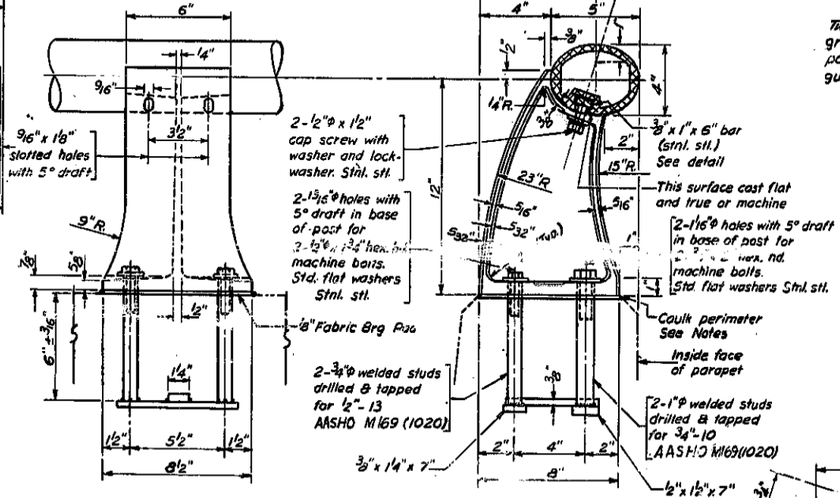


℄ Pier No.4

MATCH LINE C
See Sheet No.41

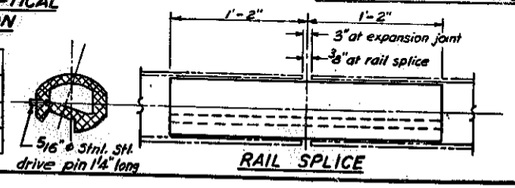


SEC. THRU ELLIPTICAL RAIL SECTION



RAIL POST DETAILS

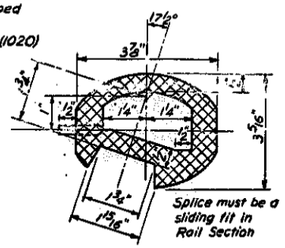
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR



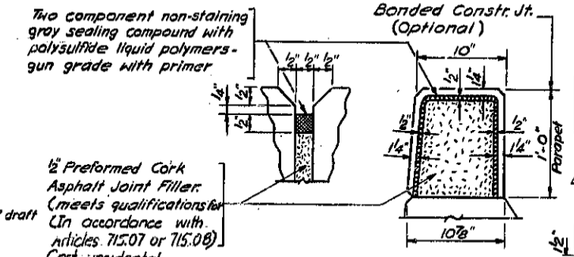
RAIL SPLICE



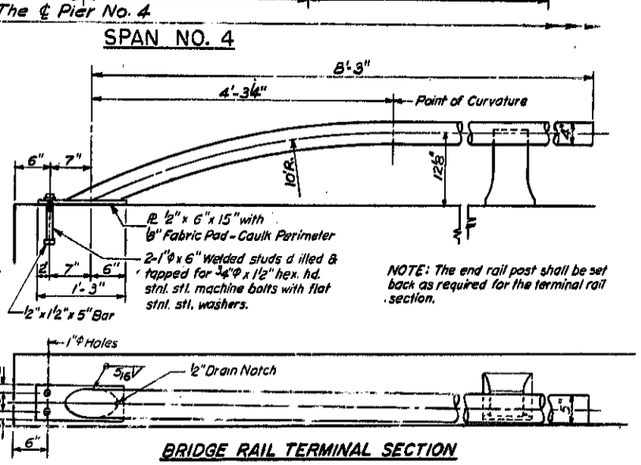
CLAMP BAR



SEC. THRU SPLICE



PARAPET JOINT DETAIL



BRIDGE RAIL TERMINAL SECTION

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge, where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular length may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1 - ⅛" and 2 - 1/16" Aluminum shims for 25% of the Posts. Rail element shall be parallel to Grade-high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to AASHO T94 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

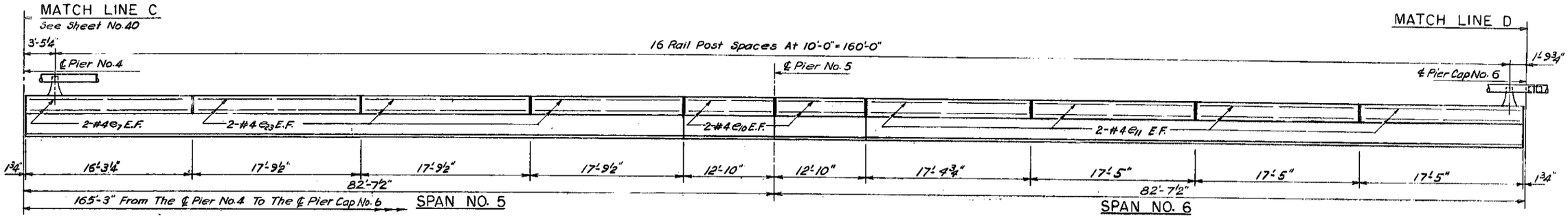
DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

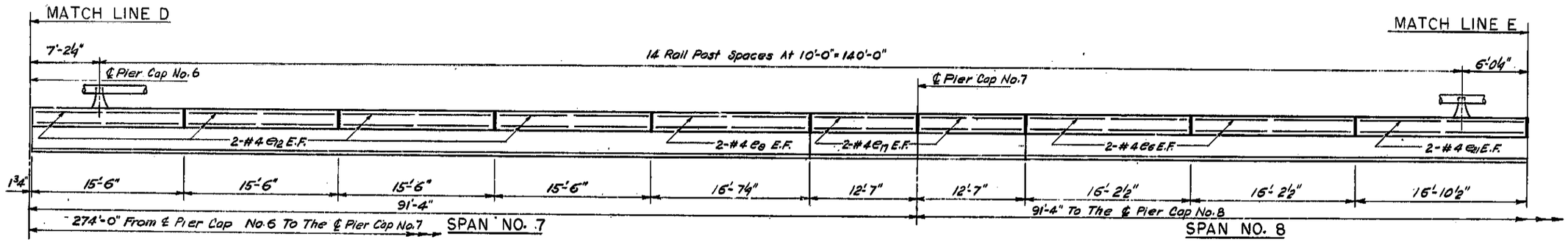
ALUMINIUM RAILING

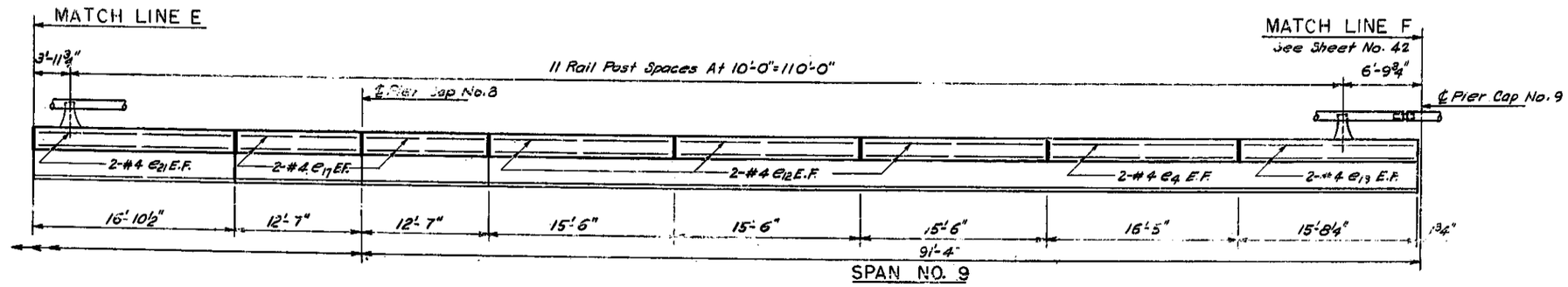
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID PROJECT No.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X 13BR	COOK	223	136
S. F. A. PROJ. NO.	ILLINOIS	PROJECT		

SHEET NO. 41
102 SHEETS







ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

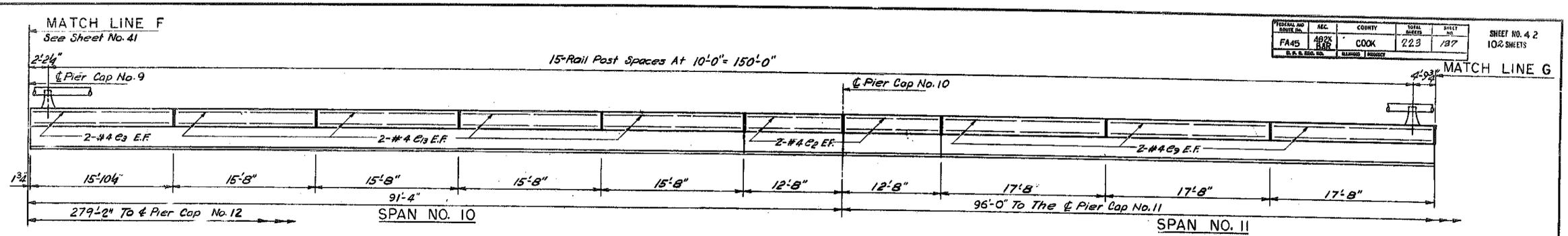
DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

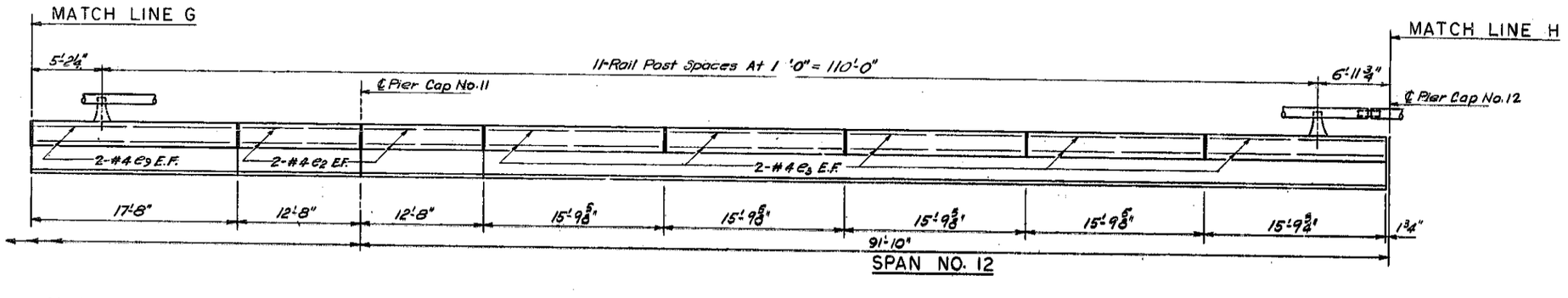
ALUMINIUM RAILING

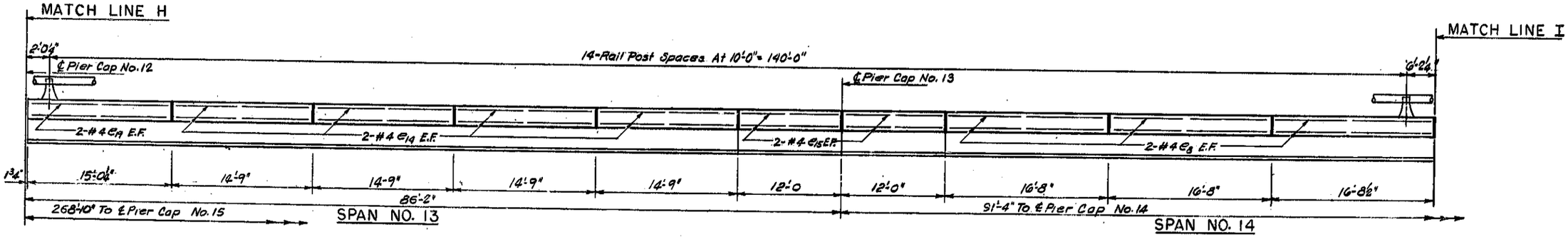
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

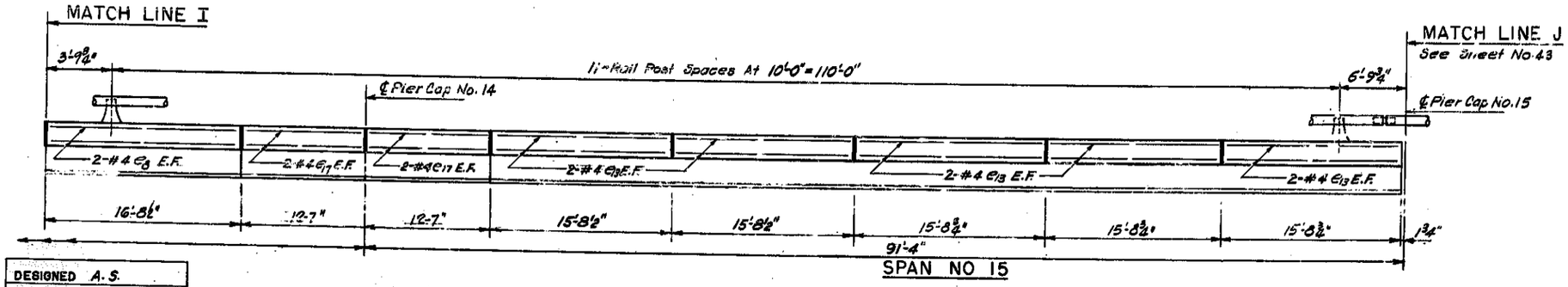
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	137
D. P. O. ENG. DIV.	ILLINOIS	PROJECT		

SHEET NO. 42
102 SHEETS









DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

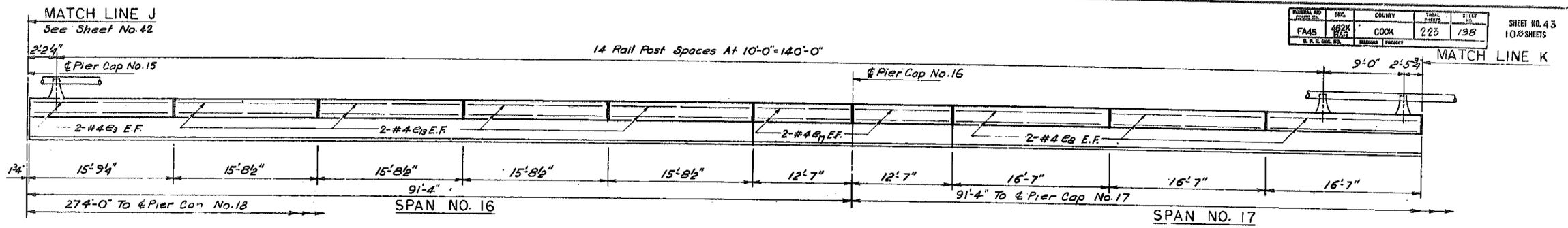
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

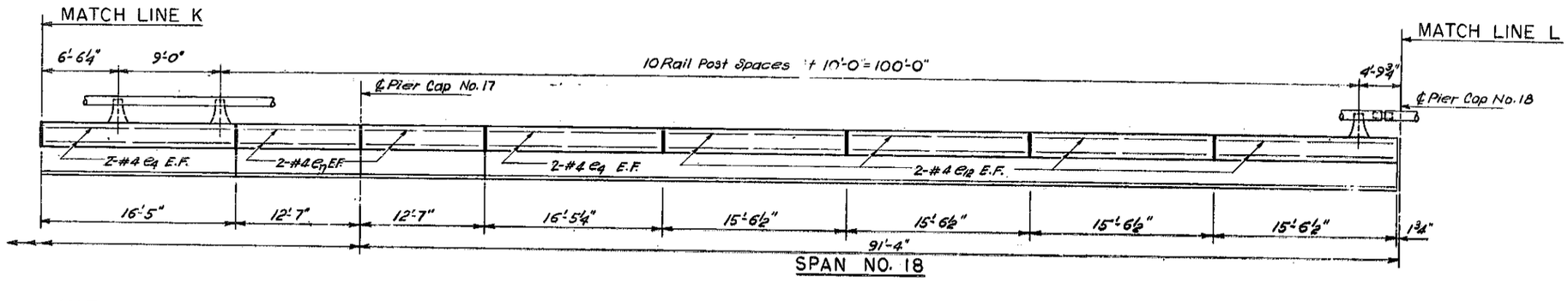
ALUMINIUM RAILING

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

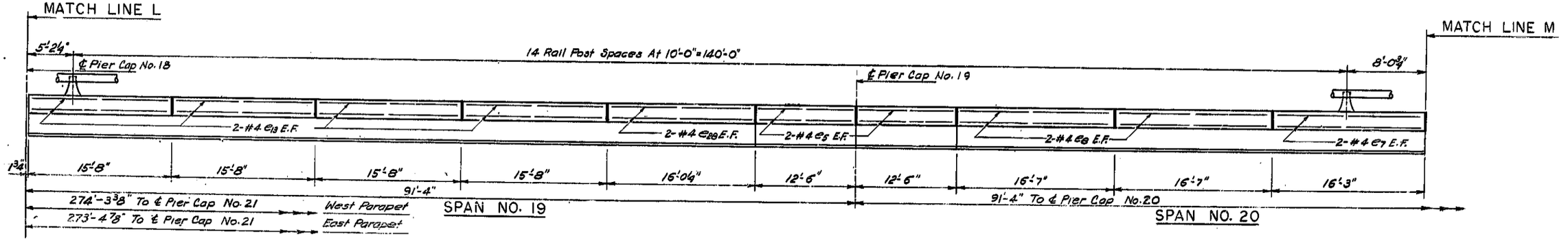
FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K R&B	COOK	223	138
S. P. S. SEC. NO.	ILLINOIS	PROJECT		

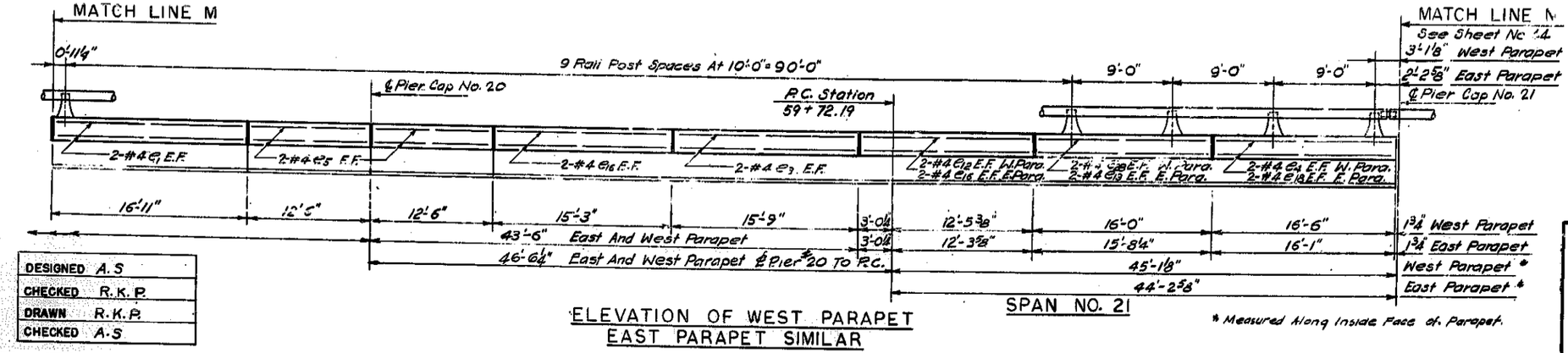
SHEET NO. 43
10 SHEETS





Note
Sign Support Bracket is Located in Span 18, See sheet #2 for location and sheet 102 for Details





* Measured Along Inside Face of Parapet.

DESIGNED	A. S
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S

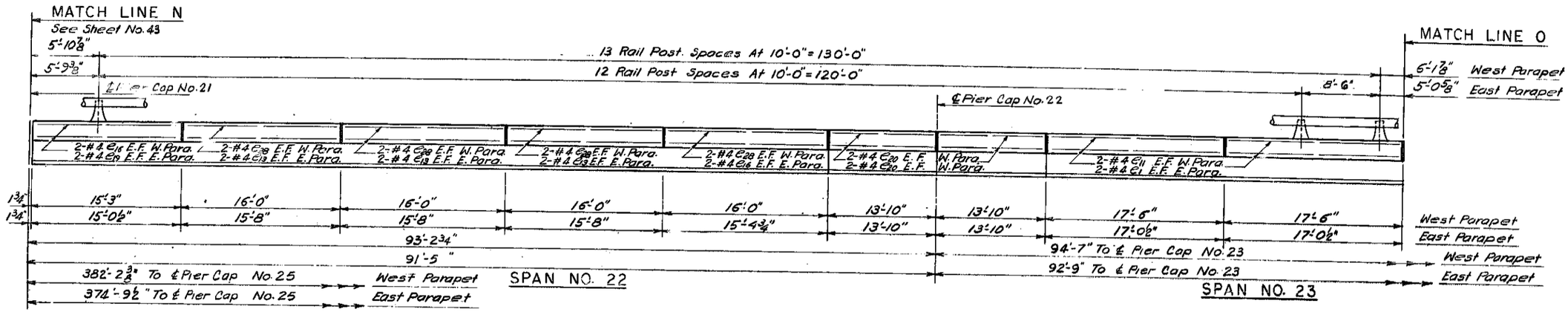
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

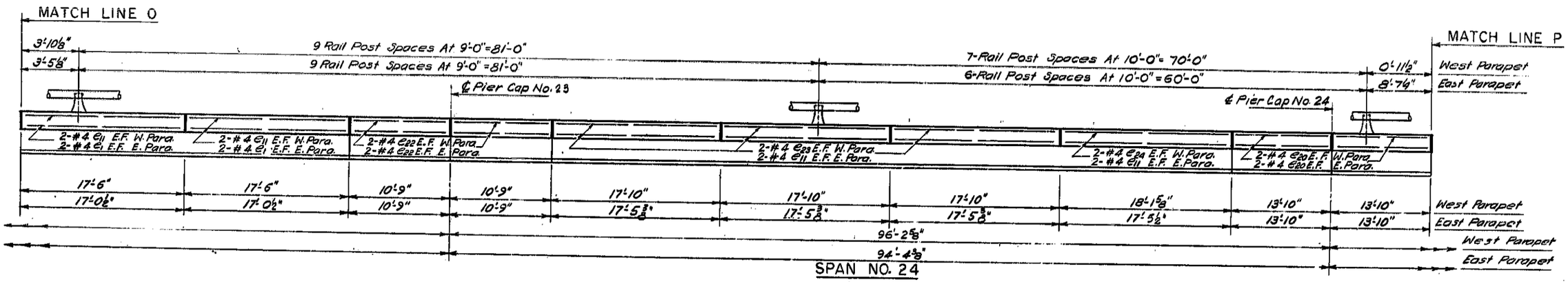
ALUMINIUM RAILING

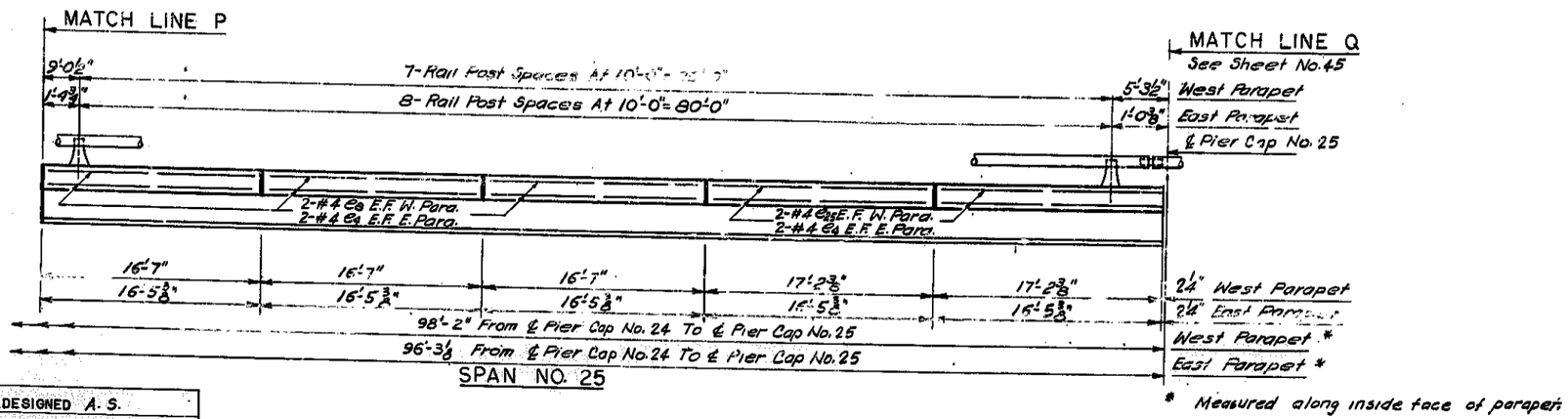
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	139
S. P. R. SEC. NO.	MARKING	PROJECT		

SHEET NO. 44
102 SHEETS







* Measured along inside face of parapet

ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

ALUMINIUM RAILING

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	402K HBR	COOK	223	140
U. S. R. ROUTE NO.		RAILROAD | HIGHWAY		

SHEET NO. 45
10.2 SHEETS

MATCH LINE Q
See Sheet No. 44

3'-8½"
8'-11⅝"
℄ Pier Cap No. 25

14-Rail Post Spaces At 10'-0" = 140'-0"
13-Rail Post Spaces At 10'-0" = 130'-0"

2-#4 C29 E.F. W. Para. 2-#4 C21 E.F. E. Para.
2-#4 C29 E.F. W. Para. 2-#4 C21 E.F. E. Para.
2-#4 C29 E.F. W. Para. 2-#4 C21 E.F. E. Para.
2-#4 C29 E.F. W. Para. 2-#4 C21 E.F. E. Para.
2-#4 C29 E.F. W. Para. 2-#4 C29 E.F. E. Para.
2-#4 C14 E.F. W. Para. 2-#4 C14 E.F. E. Para.
2-#4 C12 E.F. W. Para. 2-#4 C12 E.F. E. Para.
2-#4 C9 E.F. W. Para. 2-#4 C9 E.F. E. Para.

17'-3⅜"	17'-4"	17'-4"	17'-4"	17'-4"	14'-9"	14'-9"	15'-5¾"	15'-0⅜"	West Parapet
16'-10"	16'-10"	16'-10"	16'-10"	17'-4"	14'-9"	14'-9"	15'-5⅜"	15'-0⅜"	East Parapet

101'-6⅞"
99'-7¼"
103'-3⅜" To ℄ Pier Cap No. 27
101'-3¾" To ℄ Pier Cap No. 27

415'-10½" To ℄ Pier Cap No. 29 — West Parapet
407'-9⅞" To ℄ Pier Cap No. 29 — East Parapet

SPAN NO. 26

SPAN NO. 27

3'-1½"
5'-10¾"

MATCH LINE R
West Parapet
East Parapet

MATCH LINE R

6'-10½"
4'-1¼"

6-Rail Post Spaces At 9'-0" = 54'-0"
7-Rail Post Spaces At 9'-0" = 63'-0"
7-Rail Post Spaces At 10'-0" = 70'-0
6-Rail Post Spaces At 10'-0" = 60'-0"
℄ Pier Cap No. 27

1'-10¼"
1'-11½"

MATCH LINE S
West Parapet
East Parapet

2-#4 C16 E.F. W. Para. 2-#4 C14 E.F. E. Para.
2-#4 C16 E.F. W. Para. 2-#4 C16 E.F. E. Para.
2-#4 C15 E.F. W. Para. 2-#4 C16 E.F. E. Para.
2-#4 C15 E.F. W. Para. 2-#4 C16 E.F. E. Para.

15'-4¼"	15'-4¼"	15'-4¼"	12'-0"	12'-0"	15'-8"	15'-8"	15'-8"	15'-8"	West Parapet
14'-8¼"	14'-8¼"	14'-8¼"	12'-0"	12'-0"	15'-3"	15'-3"	15'-3"	15'-3"	East Parapet

105'-3" To ℄ Pier Cap No. 28 — West Parapet
103'-2½" To ℄ Pier Cap No. 28 — East Parapet

SPAN NO. 28

MATCH LINE S

8'-1¾"
7'-0½"

9-Rail Post Spaces At 10'-0" = 90'-0"
8 Rail Post Spaces At 10'-0" = 80'-0"
℄ Pier Cap No. 28

MATCH LINE T
See Sheet No. 46
West Parapet
East Parapet

2-#4 C16 E.F. W. Para. 2-#4 C14 E.F. E. Para.
2-#4 C16 E.F. W. Para. 2-#4 C16 E.F. E. Para.
2-#4 C20 E.F. W. Para. 2-#4 C9 E.F. E. Para.

15'-4"	15'-3"	15'-3"	18'-0"	18'-0"	18'-0"	18'-0"	West Parapet
14'-1½"	15'-3"	15'-3"	17'-7"	17'-7"	17'-7"	17'-7"	East Parapet

105'-8¾" To ℄ Pier Cap No. 29 — West Parapet
103'-8¼" To ℄ Pier Cap No. 29 — East Parapet

SPAN NO. 29

DESIGNED	A. S.
CHECKED	R. K. P.
DRAWN	R. K. P.
CHECKED	A. S.

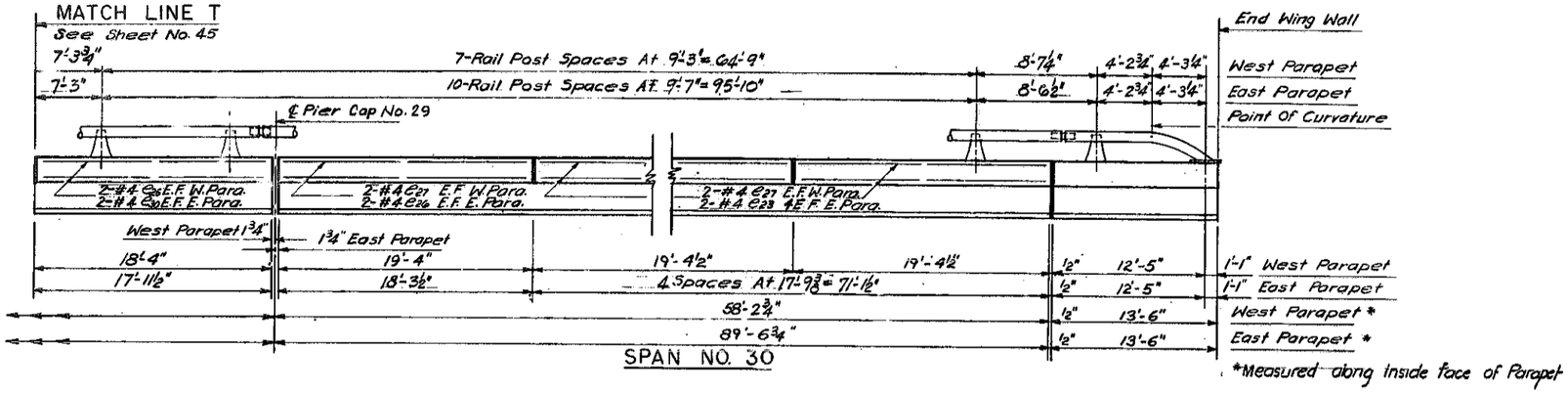
ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR

Note
Sign Support Brackets are located in Spans 26 & 27, See sheet 4 for location and sheet 102 for Details

ALUMINIUM RAILING
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-5 & R
COOK COUNTY
STATION 41+38.63

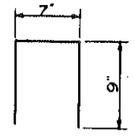
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	141
C. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 46
102 SHEETS



*Measured along inside face of Parapet

ELEVATION OF WEST PARAPET
EAST PARAPET SIMILAR



Bar d_2

PARAPETS & RAILS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_2	1154	#4	2'-1"	
e_1	64	#4	16'-8"	
e_2	64	#4	12'-4"	
e_3	80	#4	15'-6"	
e_4	64	#4	16'-2"	
e_5	48	#4	12'-2"	
e_6	24	#4	15'-10"	
e_7	32	#4	16'-0"	
e_8	108	#4	16'-4"	
e_9	56	#4	17'-4"	
e_{10}	16	#4	12'-6"	
e_{11}	64	#4	17'-1"	
e_{12}	100	#4	15'-2"	
e_{13}	176	#4	15'-4"	
e_{14}	60	#4	14'-5"	
e_{15}	32	#4	11'-8"	
e_{16}	68	#4	15'-0"	
e_{17}	80	#4	12'-3"	
e_{18}	4	#4	15'-9"	
e_{19}	24	#4	14'-8"	
e_{20}	32	#4	13'-6"	
e_{21}	32	#4	16'-6"	
e_{22}	16	#4	10'-5"	
e_{23}	52	#4	17'-6"	
e_{24}	4	#4	17'-10"	
e_{25}	8	#4	16'-10"	
e_{26}	8	#4	18'-0"	
e_{27}	12	#4	19'-0"	
e_{28}	36	#4	15'-8"	
e_{29}	24	#4	17'-0"	
e_{30}	20	#4	17'-8"	

Item	Units	
Reinforcement Bars	Lbs.	15925
Class X Concrete	Cu. Yds.	177
Aluminium Railing	L. Ft.	5535

DESIGNED	A.S.
CHECKED	R.K.P.
DRAWN	R.K.P.
CHECKED	A.S.

ALUMINIUM RAILING

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	142
D. P. U. ECC. NO.		ILLINOIS PROJECT		

SHEET NO. 47
102 SHEETS

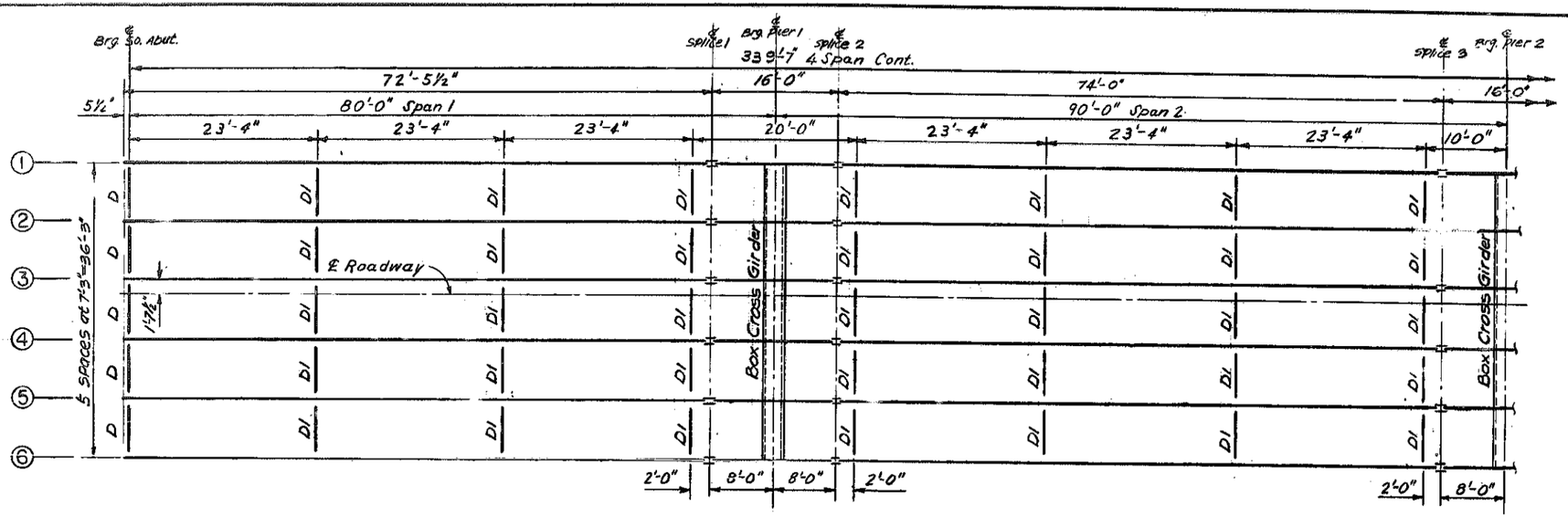


TABLE OF MOMENTS AND REACTIONS (INT. GIRDERS)

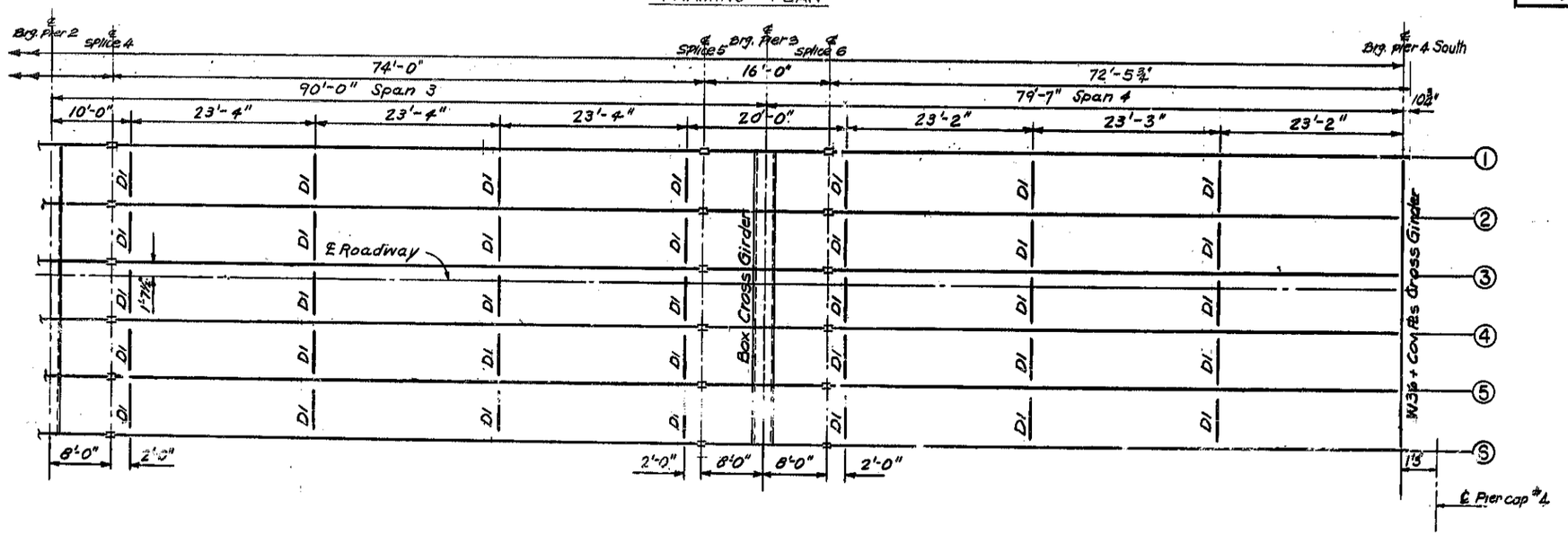
Load	Moments (ft.k)				Reactions (k)		
	0.4 Span 1 & 4	Piers 1 & 3	0.5 Span 2 & 3	Pier 2	So. Abut & Pier 4	Piers 1 & 3	Pier 2
Initial ℄	501	-881	298	-702	34.1	106.8	93.7
Comp ℄	235	-334	174	-297	15.0	44.4	41.5
℄	651	-483	584	-492	45.7	67.3	67.1
Impact	158	-116	134	-115	11.2	11.4	11.0
Total	1545	-1814	1190	-1606	106.0	229.4	213.3
fs (ksi)	20.4	20.2	18.3	19.3			
VR (K)	54.7		56.2				

VR = Maximum ℄ + Impact Shear Range in Span

SECTION PROPERTIES

	Steel Section				Composite Sec.	
	0.4 Spans 1 & 4	Pier No 1 & 3	0.5 Spans 2 & 3	Pier No 2	0.4 Span 1 & 4	0.5 Span 2 & 3
I (in⁴)	15758	25294	14066	23374	40204	34770
St (in³)	644	1076	618	1000	5910	6197
Sb (in³)	741	1076	618	1000	1032	871

FRAMING PLAN



Note:-
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams
For Plate Girder Layout See Sheet No. 48
For details of diaphragms see sheet no 65

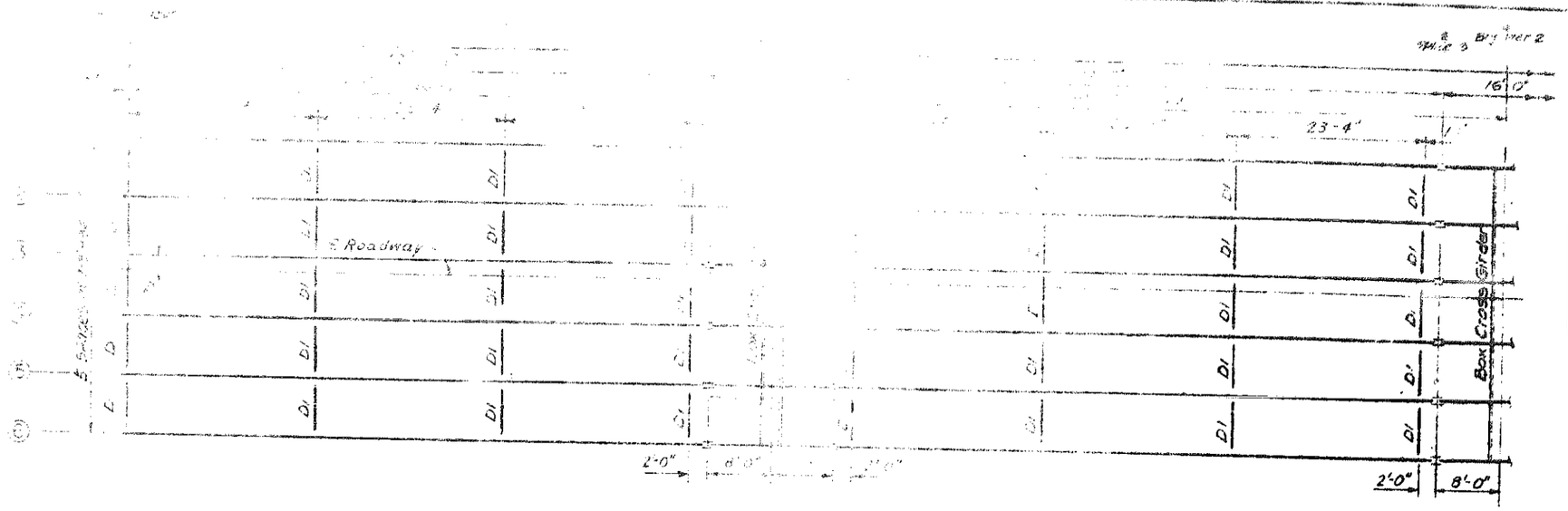
TOP OF WEB ELEVATION (For fabrication only)

Girder No.	℄ Brg. So. Abut.	Splice 1	℄ Brg. Pier 1	Splice 2	Splice 3	℄ Brg. Pier 2	Splice 4	Splice 5	℄ Brg. Pier 3	Splice 6	℄ Brg. Pier 4
1.	612.697	615.185	615.302	615.713	618.257	618.529	618.401	621.294	621.371	621.[illegible]	624.[illegible]
2.	612.832	615.303	615.571	615.836	618.375	618.647	618.919	621.412	621.689	621.966	624.509
3.	613.945	615.408	615.675	615.941	618.480	618.752	619.024	621.517	621.794	622.071	624.616
4.	613.883	615.346	615.613	615.879	618.418	618.690	618.962	621.455	621.732	622.009	624.554
5.	612.765	615.236	615.503	615.769	618.308	618.580	618.852	621.345	621.617	621.889	624.442
6.	612.614	615.102	615.369	615.635	618.174	618.446	618.718	621.211	621.488	621.764	624.305

DESIGNED	T.C.
CHECKED	E.M.M.
DRAWN	HJS
CHECKED	E.M.M.

FRAMING PLAN SPANS 1 TO 4
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FED. AID PROJ.	STATE	COUNTY	TOTAL SHEETS
FA 45	462-X-8&R	COOK	142A
U.S. ROUTE NO.			



FRAMING PLAN

TABLE OF MOMENTS AND REACTIONS (LIVE LOAD)

Load	Moments (Ft-K) 0.4 Span	Piers	0.5 Span	Pier	Range (Ft-K) Sp. Abut & Pier 4	Piers	Pier
Int. @	161	-861	298	-102	38.1	106.8	32.7
Comp @	235	-334	174	-297	15.0	44.4	41.5
&	651	-493	584	-492	45.7	67.3	67.1
Impact	156	-116	134	-115	11.2	11.4	11.0
Total	1545	-1814	1130	-1006	106.0	229.4	152.5
Vs (K/I)	20.4	20.2	13.3	19.3			
VR (K)	54.7		32.2				

VR = Maximum & + Impact Shear Range in Span

SECTION PROPERTIES

	Steel Section 0.4 Spans 1&4	Pier No 1&3	0.5 Spans 2&3	Pier No 2	Composite Sec. 0.4 Span 1&4	0.5 Span 2&3
I (in⁴)	15758	25294	14066	23374	40208	34770
S+(in³)	644	1076	618	1000	5910	6197
S-(in³)	741	1076	618	1000	1032	871

Note:-

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams

For Plate Girder Layout See Sheet No 48

For details of diaphragms see sheet no 65

TOP OF WEB ELEVATION (For fabrication only)

Girder No.	℄ Brg. So. Abut.	Splice 1	℄ Brg. Pier 1	Splice 2	Splice 3	℄ Brg. Pier 2	Splice 4	Splice 5	℄ Brg. Pier 3	℄ Brg. Pier 4
1.	612.823	615.185	615.502	615.718	618.257	618.529	612.401	621.246	621.571	621.367
2	612.758	615.303	615.571	615.376	618.225	615.847	615.919	621.412	621.601	621.500
3.	613.071	615.408	615.675	615.941	618.400	618.752	619.024	621.517	621.744	622.071
4.	613.009	615.346	615.613	615.879	618.418	618.690	618.962	621.485	621.732	622.004
5.	612.891	615.236	615.503	615.769	618.308	618.580	618.852	621.345	621.617	621.889
6.	612.740	615.102	615.369	615.635	618.174	618.446	618.718	621.211	621.488	621.764

N

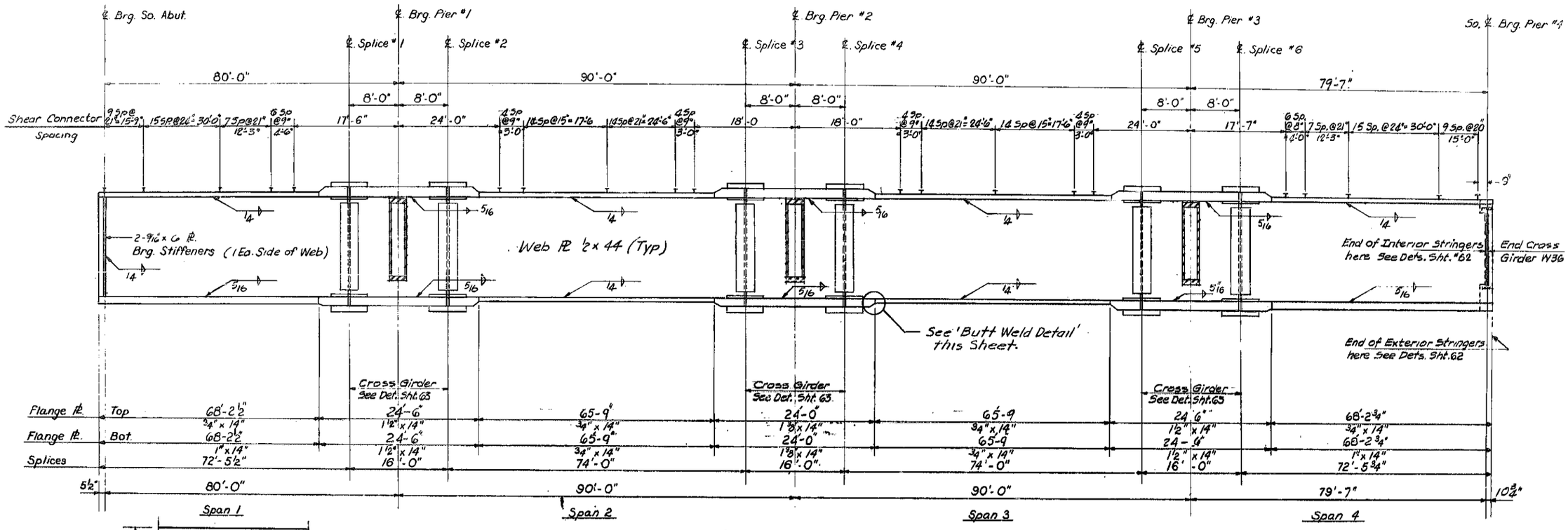
DESIGNED	T.C.
CHECKED	E.M.M.
DRAWN	H.J.S.
CHECKED	E.M.M.

Rev. [ ] 12-30-75 D.D.

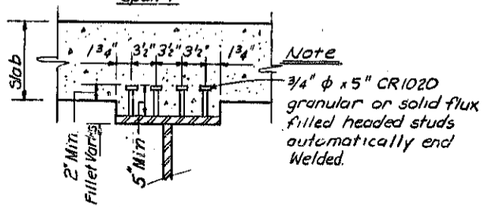
FRAMING PLAN SPANS 1 TO 4
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-8&R
COOK COUNTY
STATION 41+38.63

PROJECT AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
FA45	462X B&R	COOK	223	143
E.P.R. REG. NO.		ILLINOIS FED. AID PROJ.		

SHEET NO 4 A
10% SHEETS



GIRDER ELEVATION

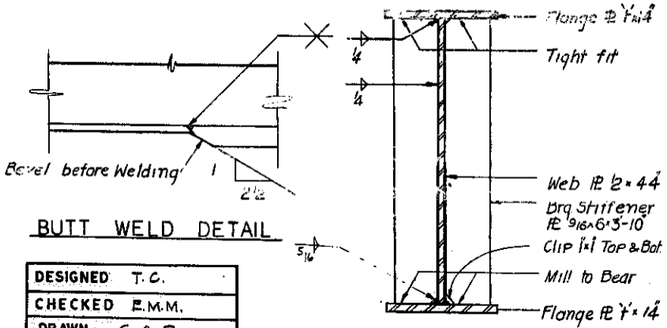


DETAIL OF SHEAR CONNECTORS

SCHEDULE OF SPLICES

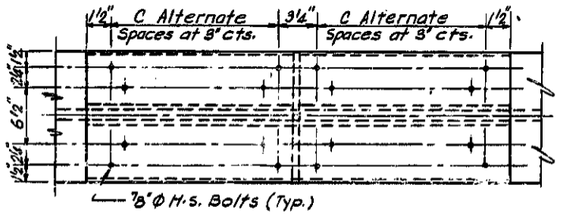
Splice Number	Web Splice Plates	Flange Splice Plates Outside Fl. Pls.	Inside Fl. Pls.	7/8ϕ Bolt Spcg. A	B	C	D
1, 2, 5, 6, 7, 8, 31 & 32	5/16 x 19 x 3'-4 1/2"	3/4 x 14 x 5'-0 1/4"	3/4 x 6 1/2 x 5'-0 1/4"	10	3 3/4"	9	2
3 & 4	5/16 x 19 x 3'-4"	5/8 x 14 x 4'-6 1/2"	5/8 x 6 1/2 x 4'-6 1/4"	8	4 5/8"	8	2
37 & 38	5/16 x 19 x 3'-4"	7/8 x 14 x 5'-4"	7/8 x 6 1/2 x 5'-6 1/4"	10	3 3/4"	10	2
29, 30 & 34	do	1 x 14 x 6'-6 1/4"	1 x 6 1/2 x 6'-6 1/4"	10	3 3/4"	12	2
35 & 35	do	1 x 14 x 7'-0 1/4"	1 x 6 1/2 x 7'-0 1/4"	10	3 3/4"	13	2
36	do	1 x 14 x 7'-6 1/4"	1 x 6 1/2 x 7'-6 1/4"	10	3 3/4"	14	2
39 & 40	5/16 x 19 x 3'-4 1/2"	1 1/8 x 14 x 8'-0 1/4"	1 1/8 x 6 1/2 x 8'-0 1/4"	10	3 3/4"	15	2
Splice "X" ①	5/16 x 25 x 3'-3"	1 x 14 x 6'-6 1/4"	1 x 6 1/2 x 6'-6 1/4"	9	4"	12	3
Splice "Y" ②	1/2 x 25 x 3'-3"	1 x 14 x 8'-0 1/4"	1 1/8 x 6 1/2 x 8'-0 1/4"	*8	4 1/2"	15	3
		* 1" ϕ H.S. Bolts					

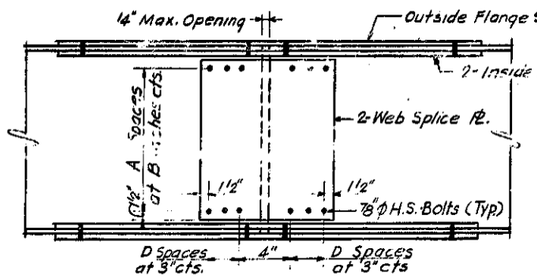
①Spl. "X" applies to splices "21-5, "22-5, "23-5 & "24-5
②Spl. "Y" applies to splices " 21-6, "22-6, " 23-6 & "24-6
See Framing Plan of Spans 16 to 18 Girders 5 & 6 Sht. "53



BUTT WELD DETAIL

BEARING STIFFENER DETAIL



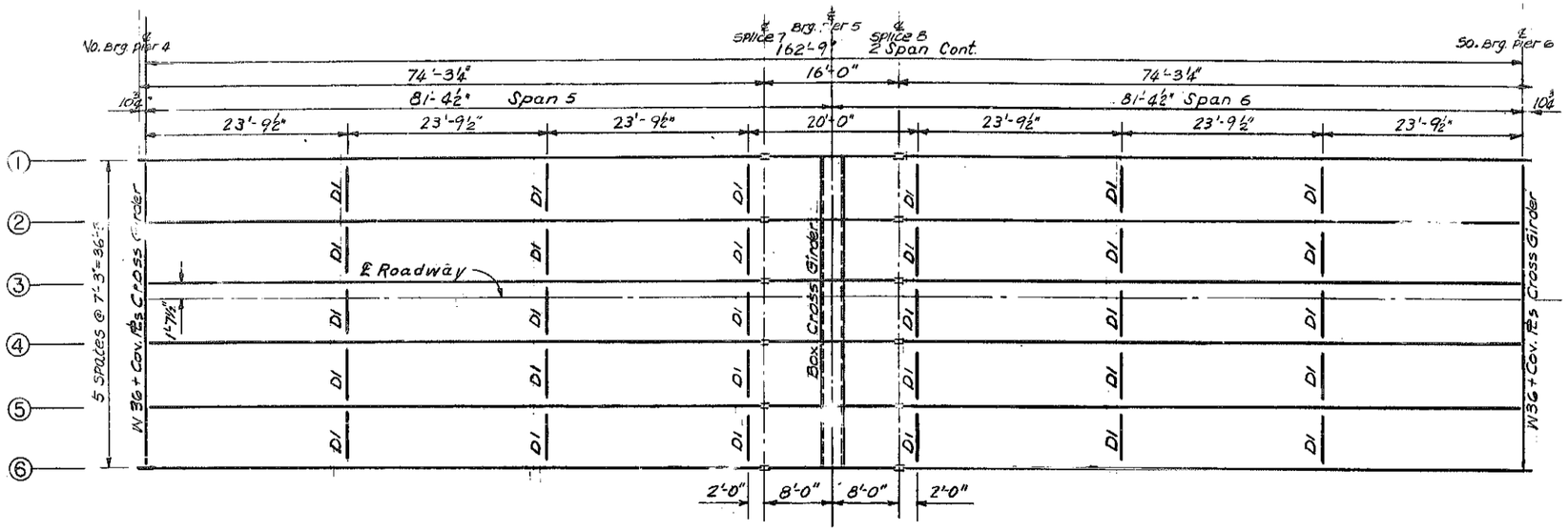


TYPICAL SPLICE DETAIL

DESIGNED	T.C.
CHECKED	E.M.M.
DRAWN	G.A.R.
CHECKED	E.M.M.

PLATE GIRDER LAYOUT SPANS 1 TO 4
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

F.A. RTE. NO.	SEC.	C. L. CITY	TOTAL SHEETS	SHEET NO. 49
FA 45	462X B&R	COOK	223	144
B. P. R. SEC. NO.	ILLINOIS	PROJECT		102 SHEETS



FRAMING PLAN

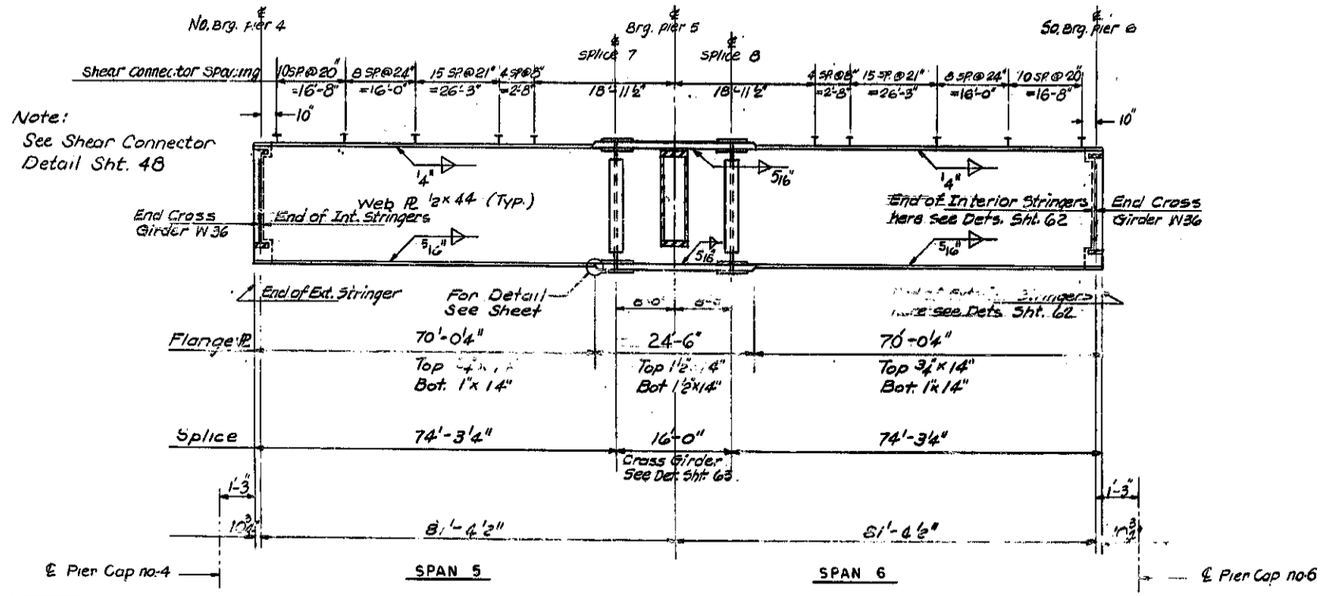
TABLE OF MOMENTS AND REACTIONS (INT GIRDERS)

Load	Moments (Ft.k)		Reactions (K)	
	0.4 Span 5 & 6	Pier 5	Pier 4 & 6	Pier 5
Initial ℄	402	-844	27.3	96.9
Comp ℄	241	-369	15.0	47.2
℄	656	-462	45.7	66.7
Impact	159	-112	11.1	11.5
Total	1458	-1787	99.1	222.3
fs (ksi)	18.8	19.9		
VR (K)	54.2			

VR = Max. ℄ + Impact Shear Range in Span

SECTION PROPERTIES

	Steel Section		Comp. Sec.
	0.4 Span 5 & 6	Pier 5	0.4 Span 5 & 6
I (in⁴)	15757	25294	40204
St (in³)	644	1076	5910
Sb (in³)	741	1076	1032



GIRDER ELEVATION

TOP OF WEB ELEVATION (For fabrication only)

Girder No.	℄ Brg. Pier 4	Splice 7	℄ Brg. Pier 5	Splice 8	℄ Brg. Pier 6
1.	624.471	626.767	627.055	627.344	629.538
2.	624.593	626.925	627.196	627.466	629.661
3.	624.659	627.029	627.300	627.570	629.768
4.	624.639	626.967	627.237	627.507	629.705
5.	624.527	626.858	627.129	627.399	629.593
6.	624.338	626.720	626.991	627.261	629.455

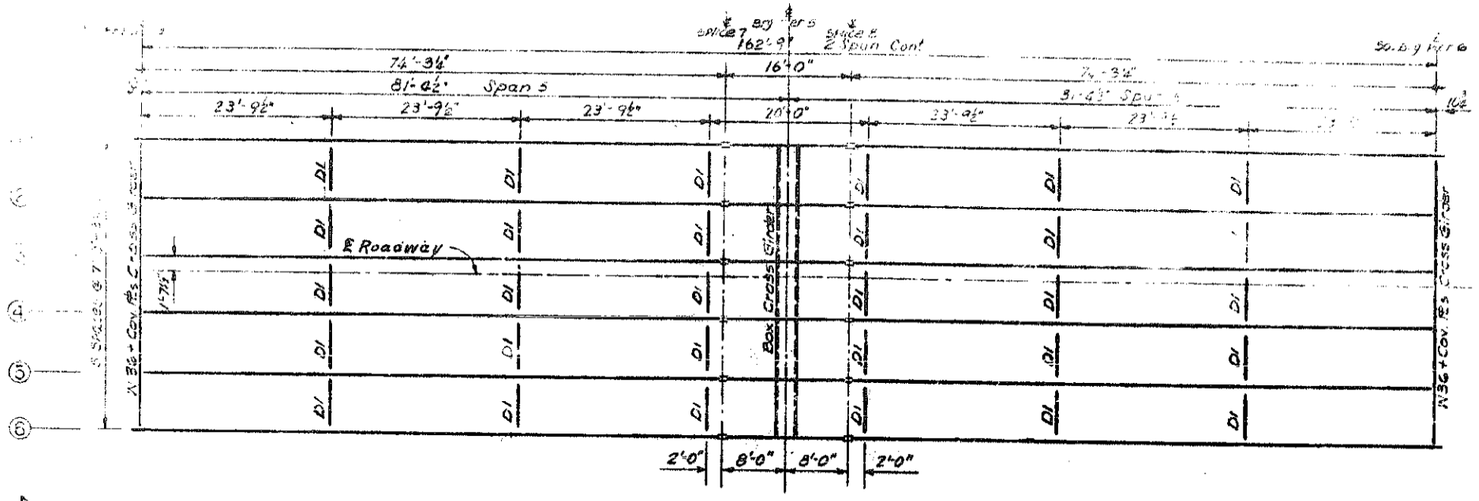
DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	H.J.S
CHECKED	E.M.M.

Note:

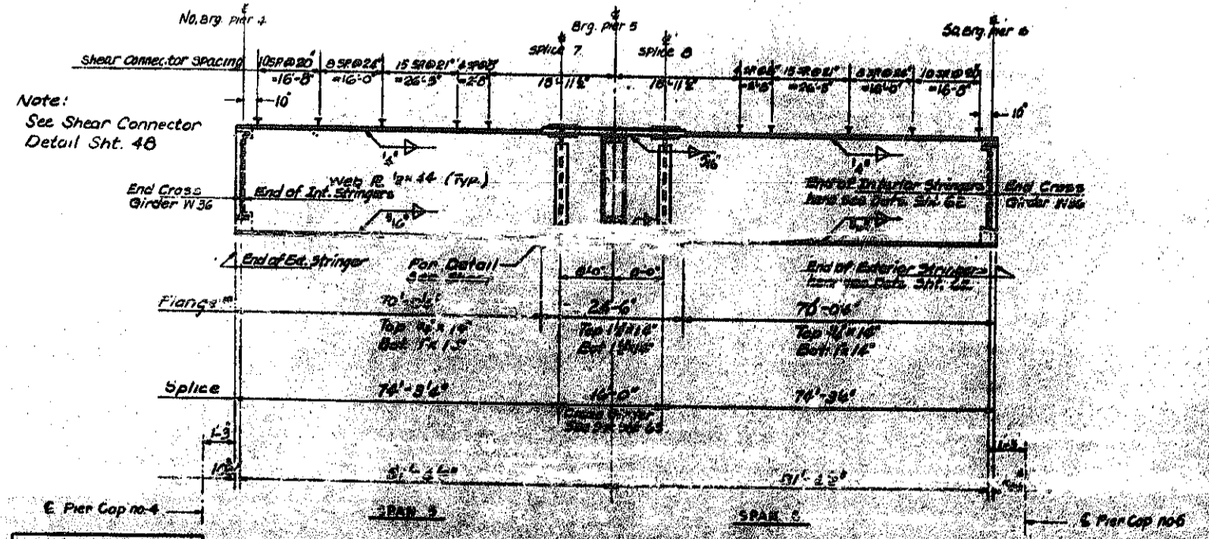
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

FRAMING PLAN SPANS 5 TO 6
LA GRANGE RD. F.A. ROUTE 45 U.S. 45 NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

DIST.	SEC.	COUNTY	SHEET NO.	CONTRACT NO.
1A48	1822-1-S&R	COOK	225	144A



FRAMING PLAN



GIRDER ELEVATION

DESIGNED	T.E. & A.S.
CHECKED	E.M.M.
DRAWN	H.J.S.
CHECKED	E.M.M.

Rev. [illegible] 12-30-75 D.D.

TABLE OF MOMENTS AND REACTIONS (NT GIRDERS)

Load	Moments (ft-k)		Reactions (k)	
	0.4 Span 5&6	Pier 5	Pier 4 & 6	Pier 5
Total ℙ	402	-844	27.3	96.9
Comp ℙ	241	-369	15.0	41.2
℄	656	-462	45.1	66.7
Impact	159	-112	11.1	11.5
Total	1458	-1787	991	228.3
fs (ksi)	18.8	19.9	VR = Max. ℄ + Impact Shear Range in Span	
VR (k)	54.2			

SECTION PROPERTIES

	Steel Section		Comp. Sec.
	0.4 Span 5&6	Pier 5	0.4 Span 5&6
I (in⁴)	15757	25298	40204
St (in³)	644	1076	5910
Sb (in³)	741	1076	10.32

TOP OF WEB ELEVATION (For fabrication only)

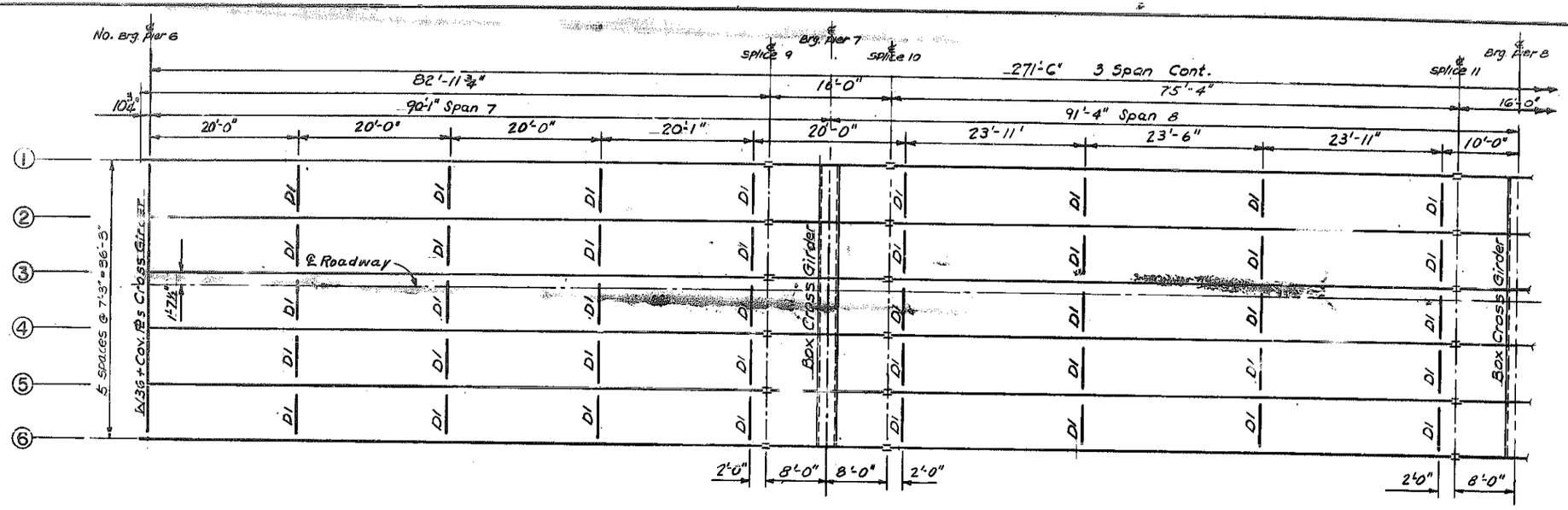
Girder No.	℄ Brg. Pier 4	Splice 7	℄ Brg. Pier 5	Splice 8	℄ Brg. Pier 6
1.	624.671	626.838	627.091	627.344	627.536
2.	624.595	626.959	627.213	627.466	627.661
3.	624.701	627.063	627.317	627.570	627.768
4.	624.639	627.001	627.254	627.507	627.705
5.	624.527	626.889	627.146	627.399	627.595
6.	624.388	626.755	627.008	627.261	627.455

Note:
The most load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flange splice and fascia plates of the steel girders or web splice plates.

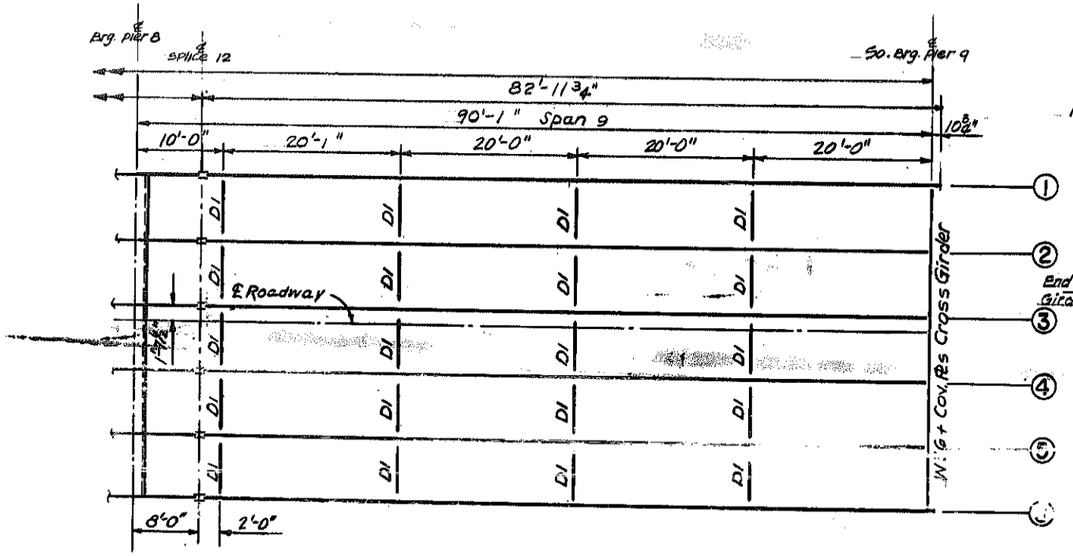
FRAMING PLAN SPANS 5 TO 6
I-3 SERVICE RD. FA. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 1822-1-S&R
COOK COUNTY
STA. 104+41.48 B.K.

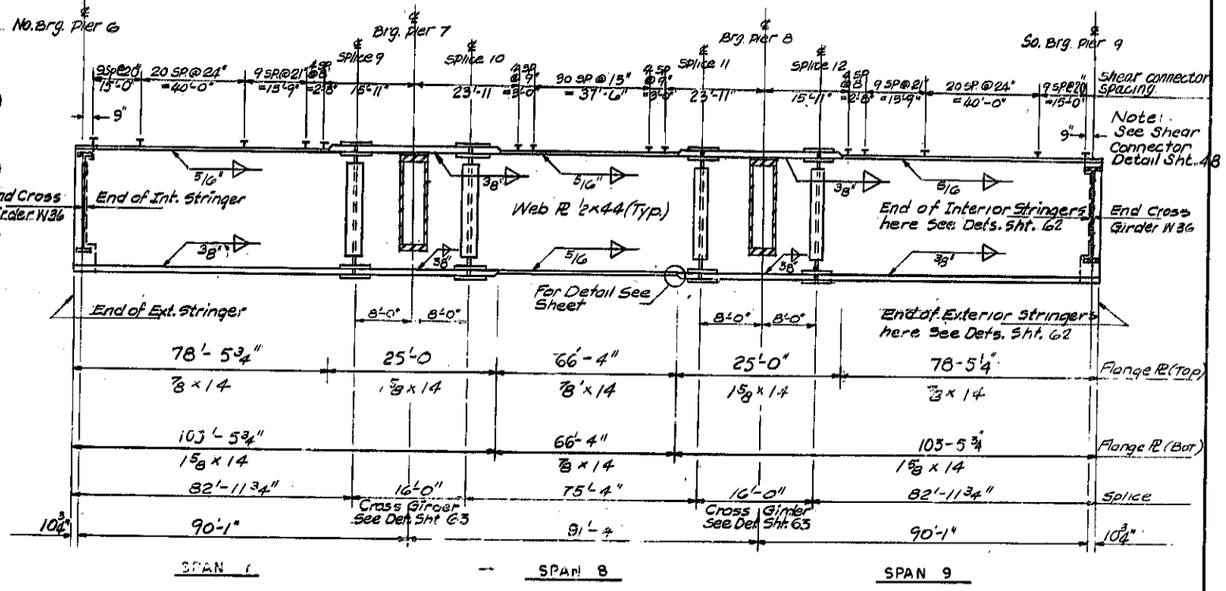
FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FAA5	462X BRR	COOK	223	145
I. D. P. H. REG. NO.	HIGHWAY	PROJECT		

SHEET NO 50
102 SHEETS



FRAMING PLAN





SECTION PROPERTIES

	Steel Section			Comp. Sec.	
	0.4 Span 7 & 9	Piers 7 & 8	0.5 Span 8	0.4 Span 7 & 9	0.5 Span 8
I (in⁴)	20517	27240	15886	52902	37580
Sₜ (in³)	755	1153	694	5548	6008
S_b (in³)	1060	1153	694	1431	951

TABLE OF MOMENTS & REACTIONS (INT GIRDERS)

Load	Moment (ft-K)			Reaction (K)	
	0.4 Span 7 & 9	Piers 7 & 8	0.5 Span 8	Piers 6 & 9	Piers 7 & 8
Initial ℄	625	-795	166	34.6	95.0
Comp. ℄	331	-346	167	17.6	46.3
℄	766	-483	610	46.6	69.0
Imp.	178	-113	142	10.9	11.2
Total	1900	-1737	1085	109.7	221.5
fs (ksi)	18.0	18.1	14.7		
VR (K)	54.7		56.3		

VR = Max ℄ + I Shear Range in Span

TOP OF WEB ELEVATION (For Fabrication Only)

Girder No.	℄ Brg. Pier 6	Splice 9	℄ Brg. Pier 7	Splice 10	Splice 11	℄ Brg. Pier 8	Splice 12	℄ Brg. Pier 9
1.	629.594	631.298	631.434	631.570	632.671	632.778	632.885	633.607
2.	629.715	631.417	631.553	631.688	632.788	632.897	633.005	633.726
3.	629.821	631.522	631.658	631.793	632.894	633.003	633.111	633.834
4.	629.759	631.460	631.596	631.731	632.831	632.940	633.048	633.772
5.	629.648	631.350	631.486	631.621	632.721	632.830	632.938	633.661
6.	629.511	631.215	631.351	631.487	632.587	632.694	632.802	633.524

DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	H.U.S.
CHECKED	E.M.M.

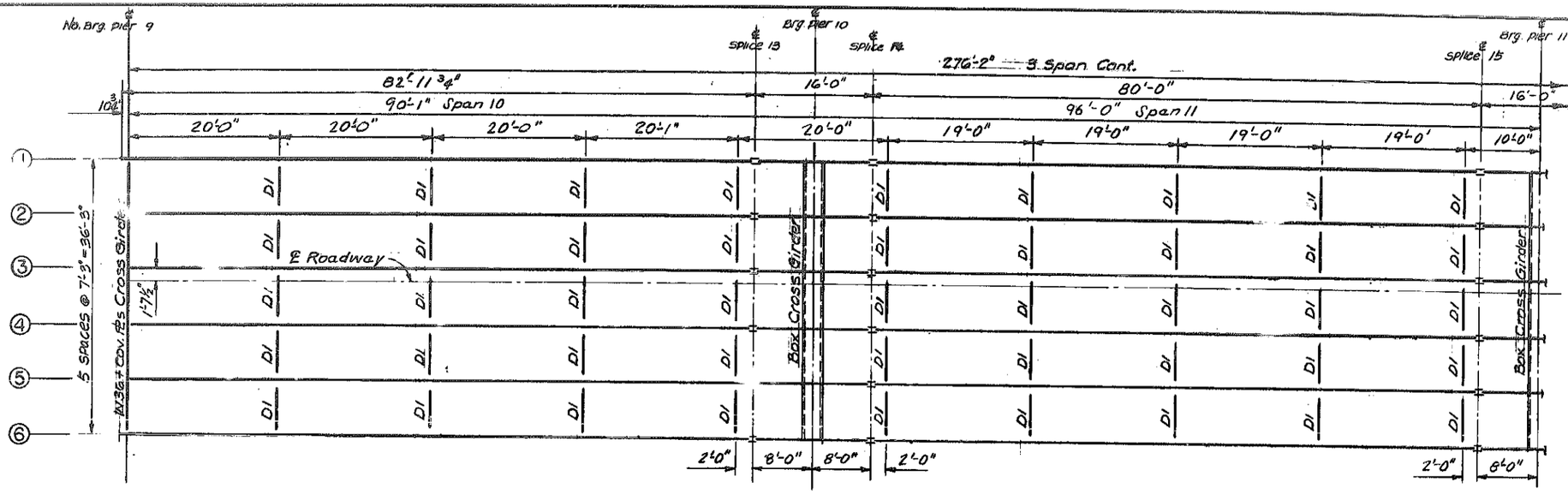
Note: GIRDER ELEVATION

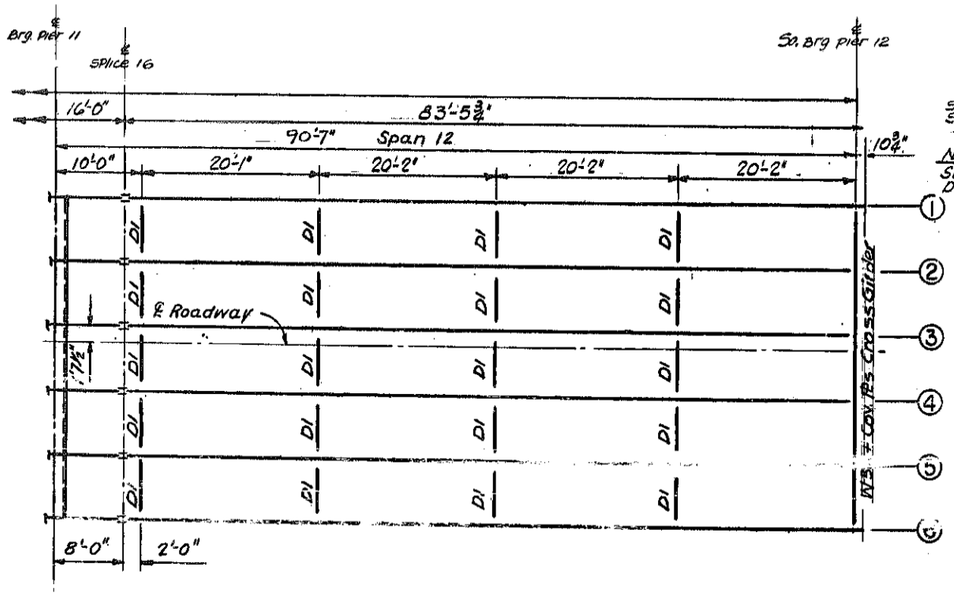
The main load carrying components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

FRAMING PLAN SPANS 7 TO 9
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

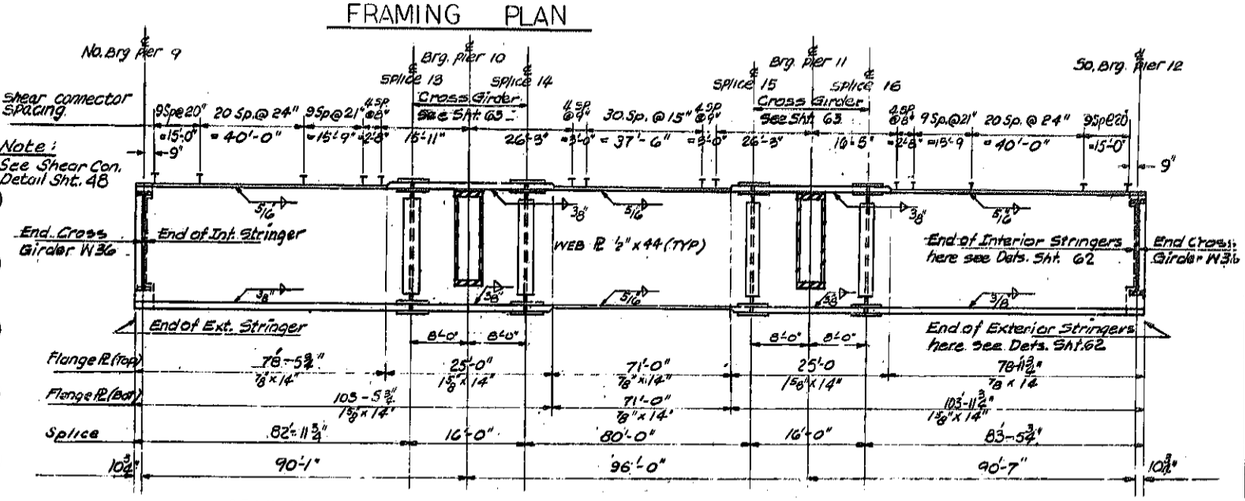
PRINCIPAL AND ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
FA45	462X B&R	COOK	223	146
F. P. R. RTE. NO.		ILLINOIS PROJECT		

SHEET NO. 51
102 SHEETS





FRAMING PLAN



GIRDER ELEVATION

TABLE OF MOMENTS AND REACTIONS (INT GIRDERS)

Load	Moment (ft-k) 0.4 Span 10 & 12	Piers 10 & 11	0.5 Span 11	Reaction (k) Piers 9 & 12	Piers 10 & 11
Initial DL	608	-838	224	34.1	97.6
Comp. DL	323	-366	199	17.4	47.6
LL	769	-504	642	46.6	70.0
Impact	179	-117	149	10.9	11.4
Total	1879	-1825	1214	104.0	226.6
fs (ksi)	17.8	19.0	16.6		
VR (k)	54.6		56.2		

VR = Max. LL + I Shear Range in Span

TOP OF WEB ELEVATIONS (For Fabrication only)

Girder No	℄ Brg. Pier 9	Splice 13	℄ Brg. Pier 10	Splice 14	Splice 15	℄ Brg. Pier 11	Splice 16	℄ Brg. Pier 12
1.	633.617	633.758	633.773	633.788	634.074	634.079	634.084	634.456
2.	633.738	633.878	633.893	633.908	634.156	634.185	634.213	634.577
3.	633.845	633.983	633.998	634.013	634.261	634.289	634.318	634.682
4.	633.782	633.921	633.936	633.951	634.199	634.227	634.256	634.620
5.	633.664	633.811	633.826	633.841	634.089	634.111	634.146	634.509
6.	633.534	633.675	633.691	633.707	633.955	633.983	634.011	634.372

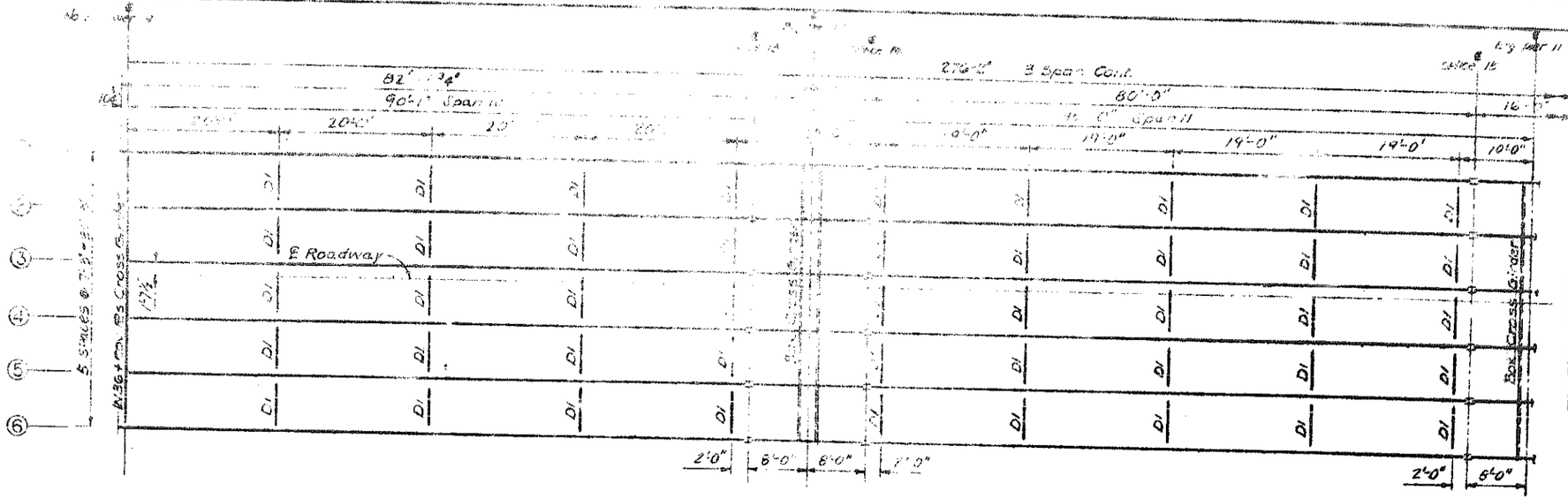
SECTION PROPERTIES

	Steel Section 0.4 Spans 10 & 12	Piers 10 & 11	0.5 Span 11	Composite Sec. 0.4 Spans 10 & 12	0.5 Span 11
I (in⁴)	20517	27240	15886	52902	37580
St (in³)	755	1153	694	5548	6008
Sb (in³)	1060	1153	694	1431	951

Note: The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and Splice plates of the steel girders or wide flange beams.

DESIGNED	T. C. & A. S.
CHECKED	E. M. M.
DRAWN	H. J. S.
CHECKED	E. M. M.

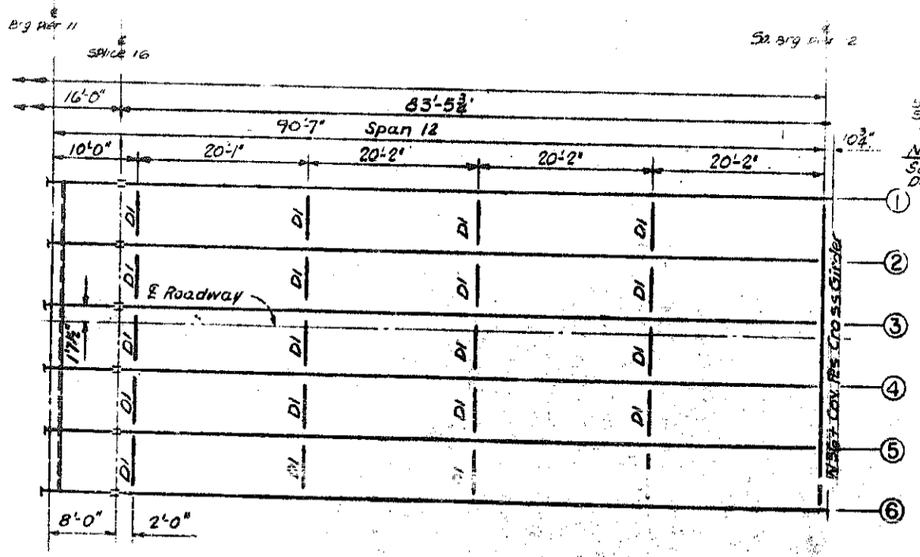
FRAMING PLAN SPANS 10 TO 12
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63



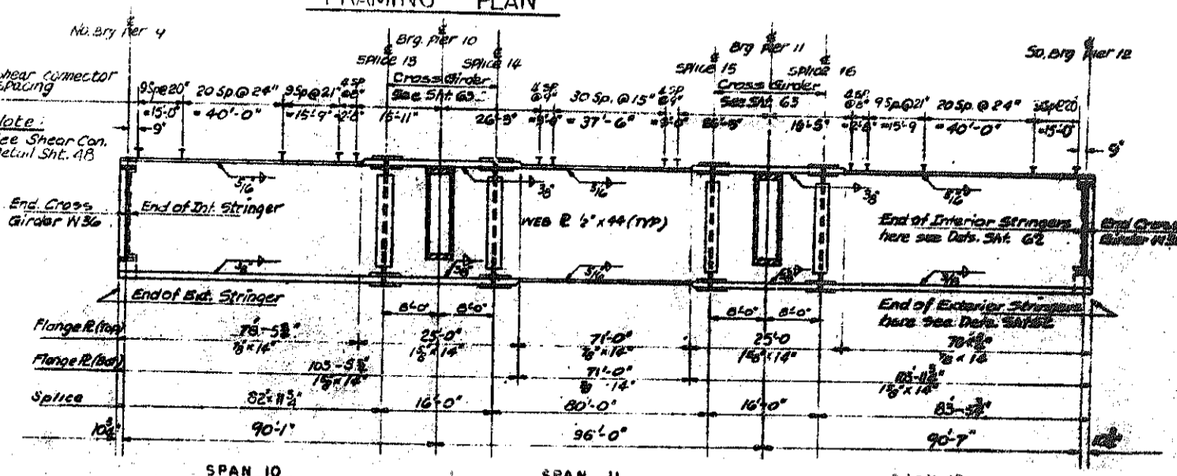
Load	Moment (Ft-K)			Reaction (K)	
	C.L. Span 10 & 12	Piers 10 & 11	C.L. Span 11	Piers 10 & 12	Piers 11
Initial @	608	-838	224	341	576
Comp. @	323	-366	199	174	470
@	769	-804	642	466	700
Impact	179	-117	149	109	114
Total	1879	-1825	1214	1090	2260
FS (ksi)	17.8	19.0	16.6		
VR (k)	54.6		56.2		

TABLE OF MOMENTS AND REACTIONS (INT GIRDERS)

VR = Max. @ + I Shear Range in Span



FRAMING PLAN



GIRDER ELEVATION

TOP OF WEB ELEVATIONS (For Fabrication only)

Girder No.	℄ Brg. Pier 10	Splice 13	℄ Brg. Pier 11	Splice 14	℄ Brg. Pier 11	Splice 15	Splice 16	℄ Brg. Pier 12
1	699.617	699.548	699.479	699.411	699.457	699.480	699.504	699.527
2	699.736	699.667	699.598	699.530	699.576	699.599	699.623	699.646
3	699.856	699.787	699.718	699.650	699.696	699.719	699.743	699.766
4	699.976	699.907	699.838	699.770	699.816	699.839	699.863	699.886
5	700.096	700.027	699.958	699.890	699.936	699.959	699.983	700.006
6	700.216	700.147	700.078	700.010	700.056	700.079	700.103	700.126

SECTION PROPERTIES

	Non Composite Sec.			Composite Sec.	
	At Piers 10 & 12	At Piers 11	At Span 11	At Piers 10 & 12	At Span 11
I (in⁴)	140017	170000	170000	314902	315843
Sy (in³)	1188	1438	1438	5348	6000
Sb (in³)	1293	1567	1567	1419	1477

Note: The main load carrying member for each superstructure unit is the steel girder and the composite concrete deck slab as indicated in the above section properties. The top flange width, and splice plates of the steel girders or main members vary.

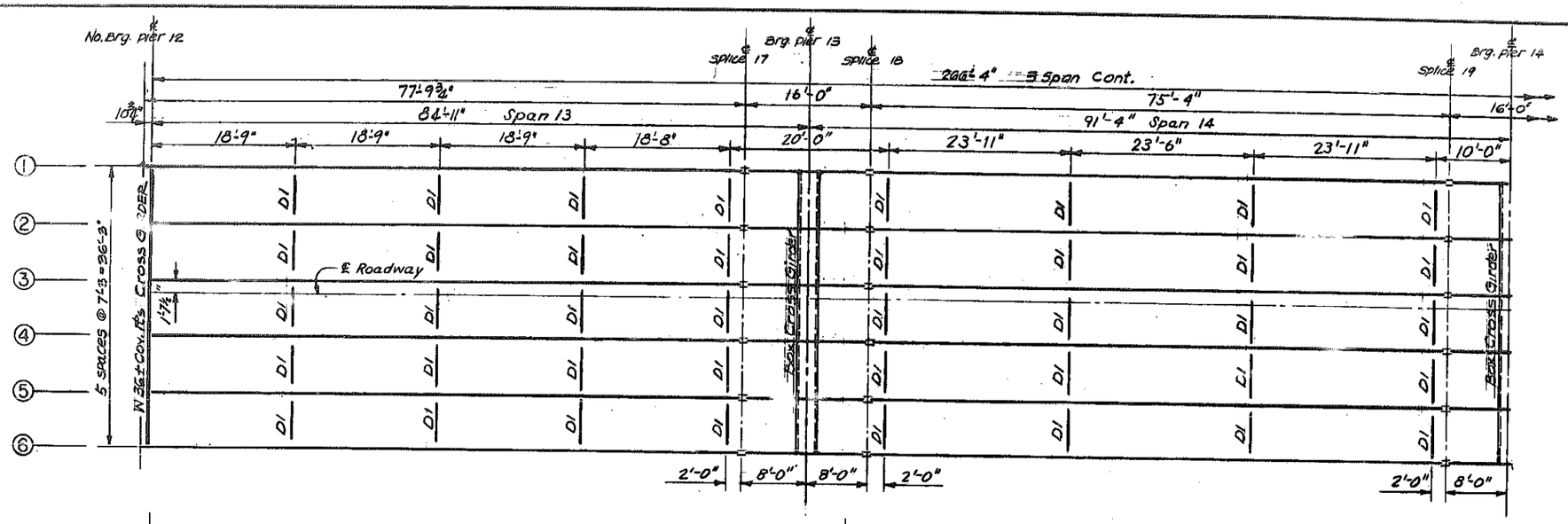
DESIGNED	T. C. & A.S.
CHECKED	E.M.M.
DRAWN	HJS
CHECKED	E.M.M.

Rev. 12-30-75 D.D.

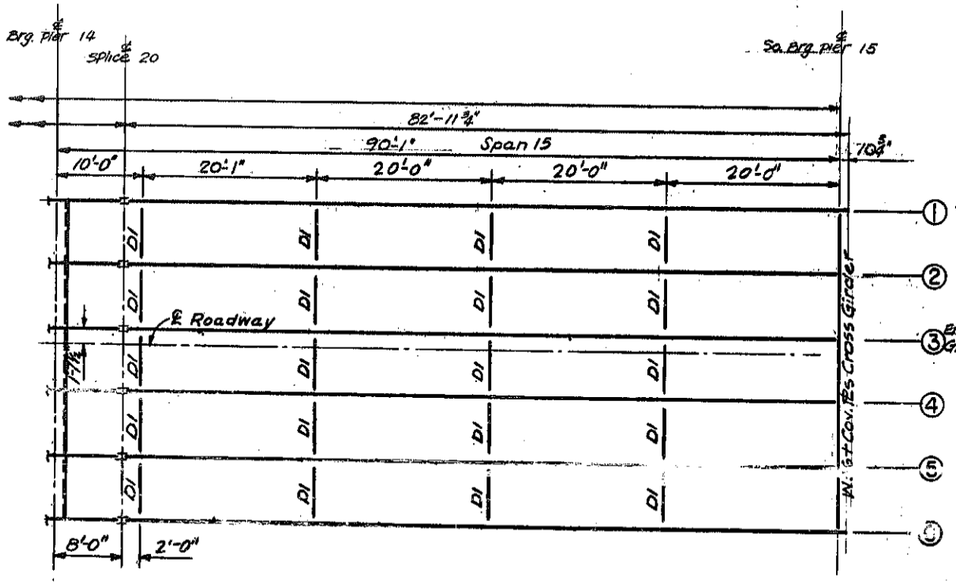
FRAMING PLAN SPANS 10 TO 12
LA GRANGE RD. FA. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 162-X-B & R
COOK COUNTY
STATION 41+38.63

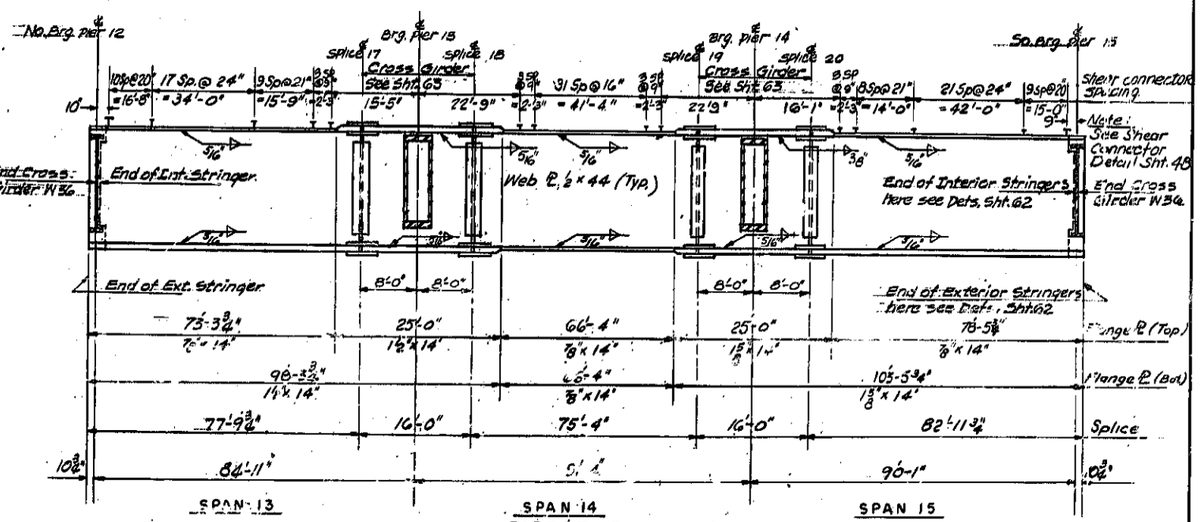
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
FA45	462X B&R	COOK	223	147
D. P. A. SEC. NO.	RAILROAD	PROJECT		

SHEET NO. 52 OF 102 SHEETS



FRAMING PLAN





TOP OF WEB ELEVATION (For Fabrication only) GIRDER ELEVATION

Girder no.	℄ Brg. Pier 12	Splice 17	℄ Brg. Pier 13	Splice 18	Splice 19	℄ Brg. Pier 14	Splice 20	℄ Brg. Pier 15
1.	634.456	634.579	634.593	634.607	634.878	634.888	634.899	635.212
2.	634.577	634.698	634.712	634.726	634.947	634.903	635.019	635.332
3.	634.684	634.803	634.817	634.830	635.051	635.087	635.123	635.439
4.	634.632	634.741	634.754	634.768	634.989	635.026	635.062	635.377
5.	634.510	634.031	634.631	634.659	634.880	634.916	634.952	635.265
6.	634.373	634.496	634.506	634.516	634.745	634.781	634.816	635.129

SECTION PROPERTIES

	Steel Section			Comp. Sec.	
	0.4 Span 13 & 15	Piers 13 & 14	0.5 Span 14	0.4 Span 13 & 15	0.5 Span 14
I (in⁴)	19846	25294	15886	50484	37580
St (in³)	747	1076	694	5595	6008
Sb (in³)	1000	1076	694	1951	951

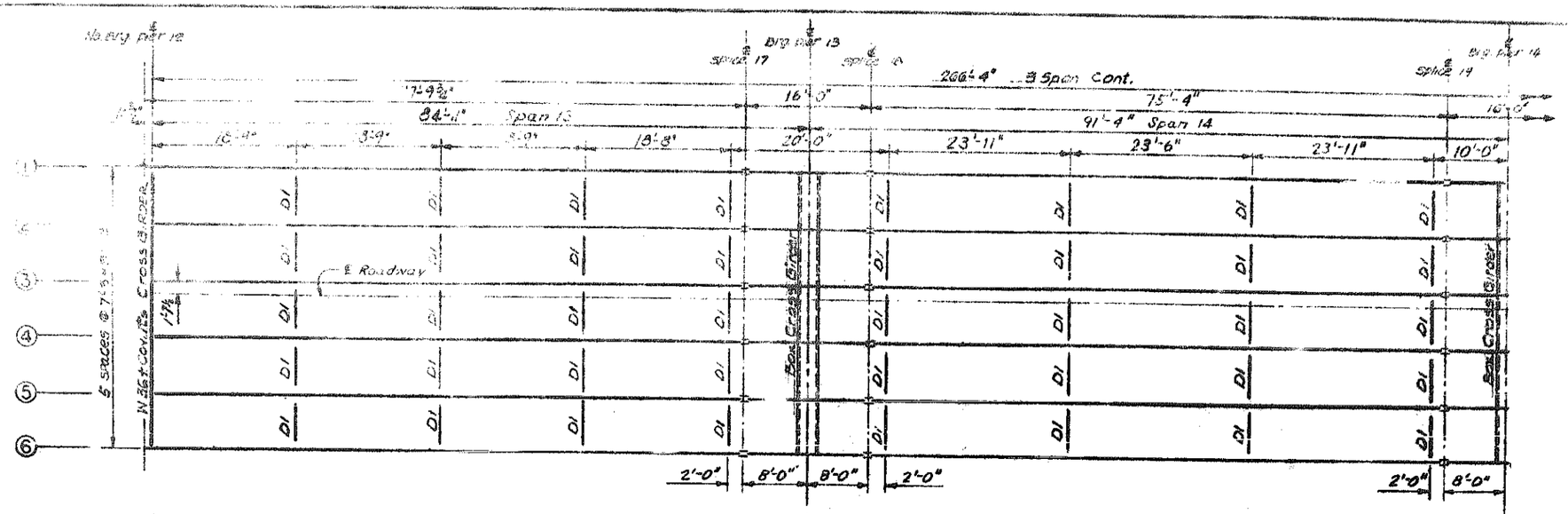
Note
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

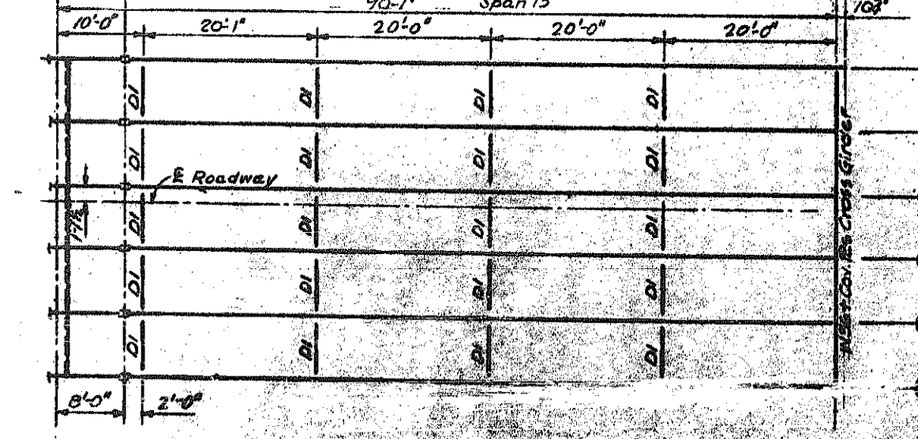
TABLE OF MOMENTS AND REACTIONS (INT. GIRDERS)

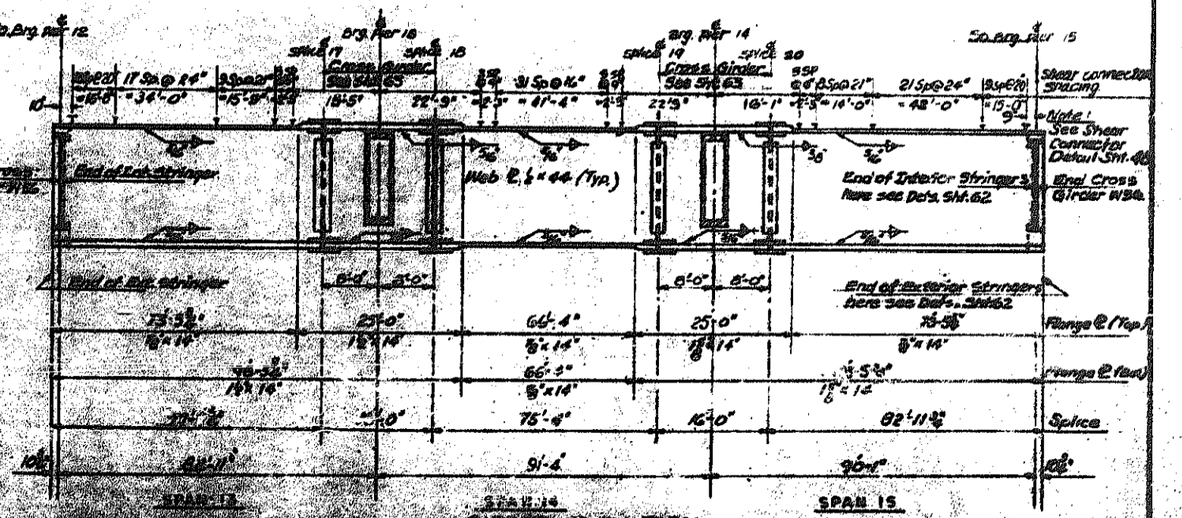
	Moment (ft-k)					Reaction (k)			
	0.4 Span 13	Pier 13	0.5 Span 14	Pier 14	0.4 Span 15	Pier 13	Pier 13	Pier 14	Pier 15
Initial ℄	551	-746	183	-810	619	82.5	92.1	95.6	34.5
Comp ℄	291	-328	173	-351	329	16.5	45.0	46.6	17.6
℄	724	-470	606	-482	766	46.5	67.9	68.9	46.5
Impact	169	-109	141	-112	178	10.8	11.1	11.2	10.8
Total	1735	-1653	1103	-1755	1892	106.3	216.1	222.5	109.4
Ps (ksi)	17.4	18.4	15.0	19.6	19.0				
VR (k)	54.5		56.4		54.6	VR = Max (L+I) Shear Range in Span			

DESIGNED	T.C.
CHECKED	E.M.M.
DRAWN	H.J.S
CHECKED	E.M.M.

FRAMING PLAN SPANS 13 TO 15
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63







FRAMING PLAN

Note
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

TABLE OF MOMENTS AND REACTIONS (UNIT GIRDERS)

	Dead Load	Live Load	Impact	Total	Dead Load	Live Load	Impact	Total
Int. Girder								
Ext. Girder								
R								
Int. Girder								
Ext. Girder								
R (Col.)								
V at (℄)								

TOP OF WEB ELEVATIONS (for Form of Conc.) — CAMBER DIAGRAM

Station								
1								
2								
3								
4								
5								
6								

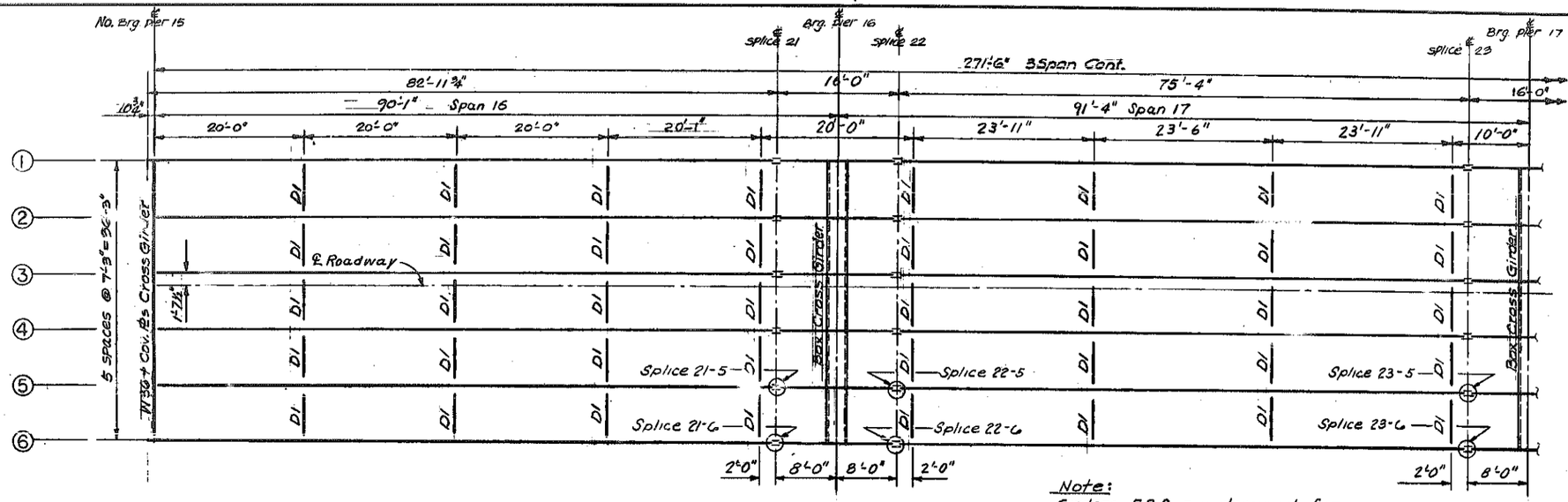
DESIGNED	T.C.
CHECKED	E.M.M.
DRAWN	H.J.S.
CHECKED	E.M.M.

Rev. [ ] 12-30-75 D.D.

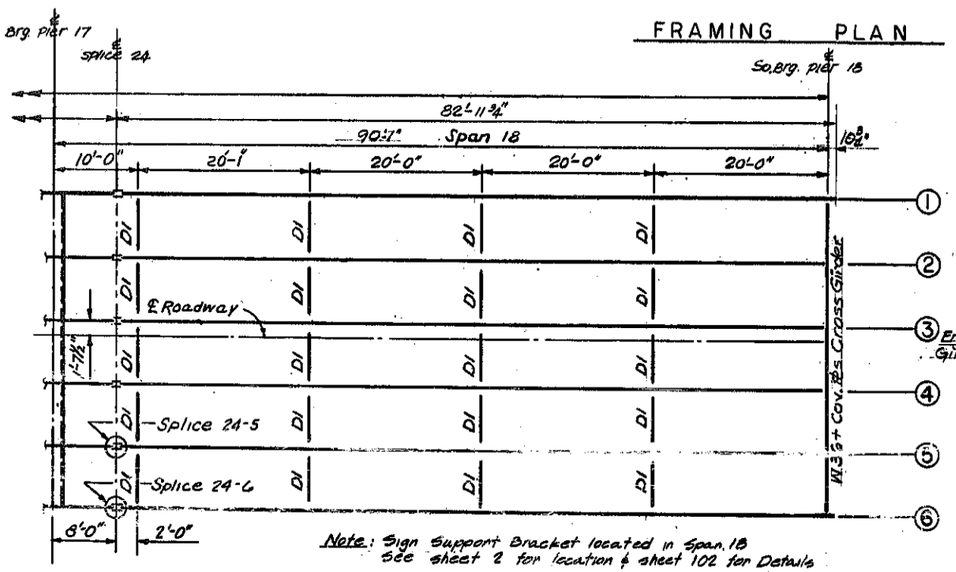
FRAMING PLAN SPANS 13 TO 15
U.S. ORANGE NO. CA. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-S & R
COOK COUNTY
STATION 91+58.65

FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K BRR	COOK	223	148
S. P. R. NO.	ILLINOIS	PROJECT		

SHEET NO. 53
102 SHEETS



FRAMING PLAN



Note: Sign Support Bracket located in Span 18 See sheet 2 for location & sheet 102 for Details

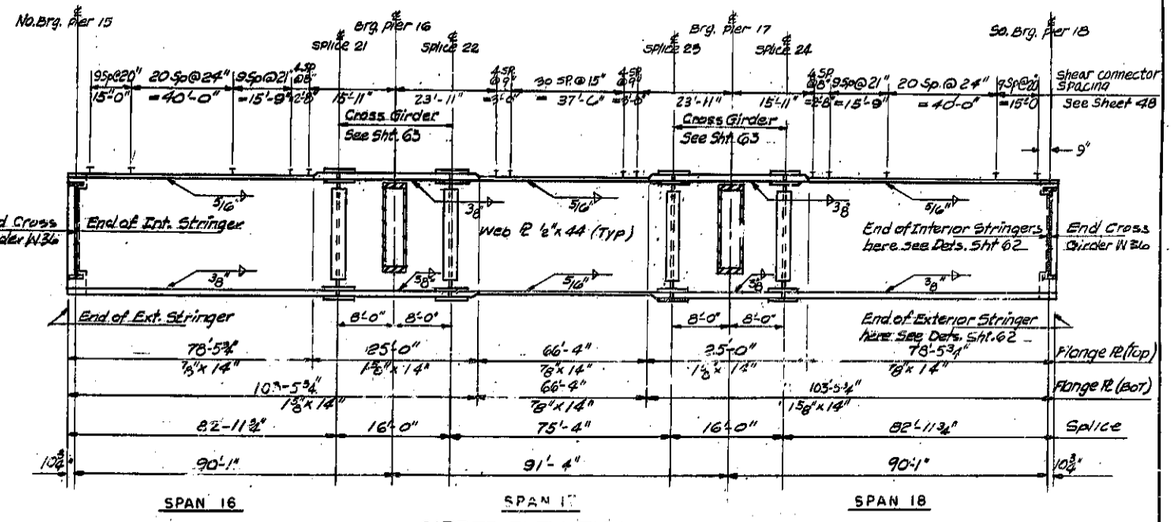
Note:
Girders 5 & 6 are designed for a future ramp in Span 17.

SECTION PROPERTIES

	Steel Section			Comp. Sec.	
	0.4 Span 16 & 18	Piers 16 & 17	0.5 Span 17	0.4 Span 16 & 18	0.5 Span 17
I (in⁴)	20517	27240	15886	52902	37580
Sr (in³)	755	1153	694	3548	6008
Sb (in³)	1060	1153	694	1431	951

Note:
Section Properties Tabulated are for Girders 1 to 4. For Section Properties of Girders 5 and 6, See Sht. No. 54

Note:
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.



GIRDER ELEVATION (Girders 1 to 4 only)

TOP OF WEB ELEVATION (For Fabrication Only)

Girder No.	℄ Brg. Pier 15	Splice 21	℄ Brg. Pier 16	Splice 22	Splice 23	℄ Brg. Pier 17	Splice 24	℄ Brg. Pier 18
1.	635.217	635.205	635.198	635.190	635.173	635.177	635.181	635.156
2.	635.337	635.324	635.316	635.308	635.293	635.297	635.301	635.277
3.	635.444	635.429	635.421	635.413	635.397	635.401	635.405	635.383
4.	635.381	635.367	635.359	635.351	635.334	635.338	635.342	635.320
5.	635.270	635.211	635.203	635.196	635.182	635.184	635.186	635.209
6.	635.133	635.044	635.038	635.033	635.015	635.018	635.020	635.072

TABLE OF MOMENTS AND REACTIONS (INT. GIRDERS)

Load	Moment (ft.-k.)			Reactions (k.)	
	0.4 Span 16 & 18	Piers 16 & 17	0.5 Span 17	Piers 15 & 18	Piers 16 & 17
Initial ℄	625	-795	166	34.6	95.0
Comp ℄	331	-346	167	17.6	463
℄	766	-483	610	46.6	69.0
Imp	178	-113	142	10.9	11.2
Total	1900	-1737	1085	109.7	221.5
f's (ksi)	18.0	18.1	14.7		
VR. (k)	54.7		563		

Note:
See note below Section Properties Tabulation

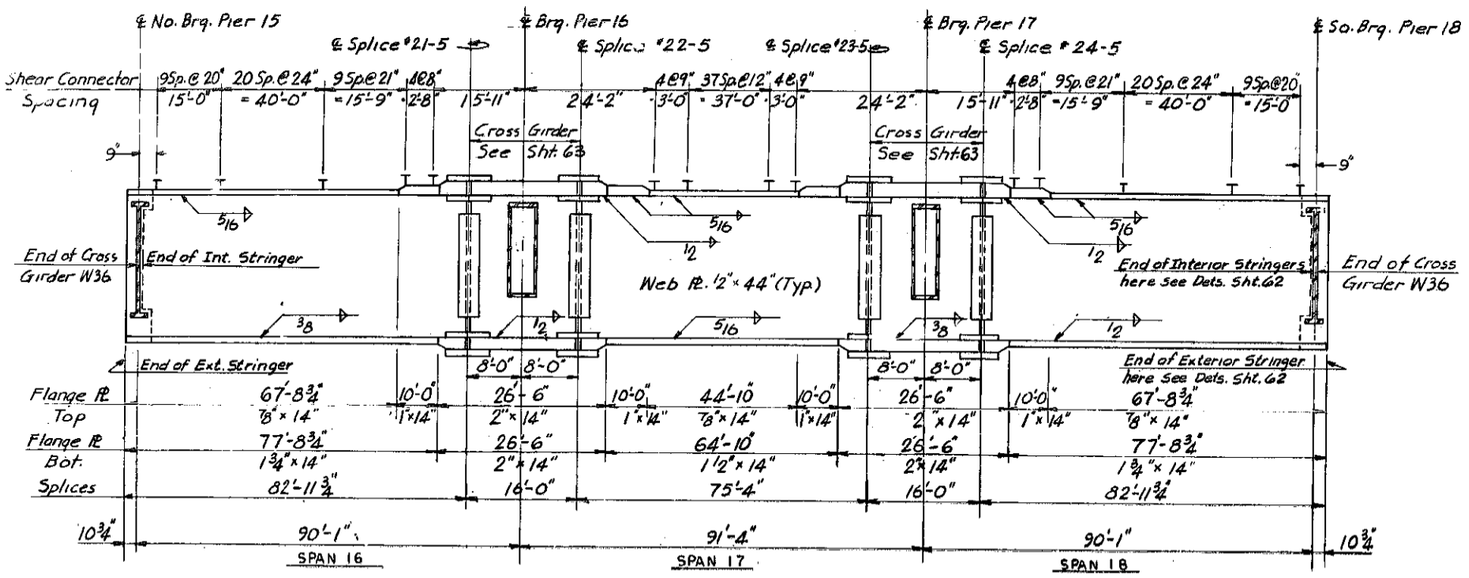
VR = Max ℄ + I Shear Range in Span

DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	HJS
CHECKED	E.M.M.

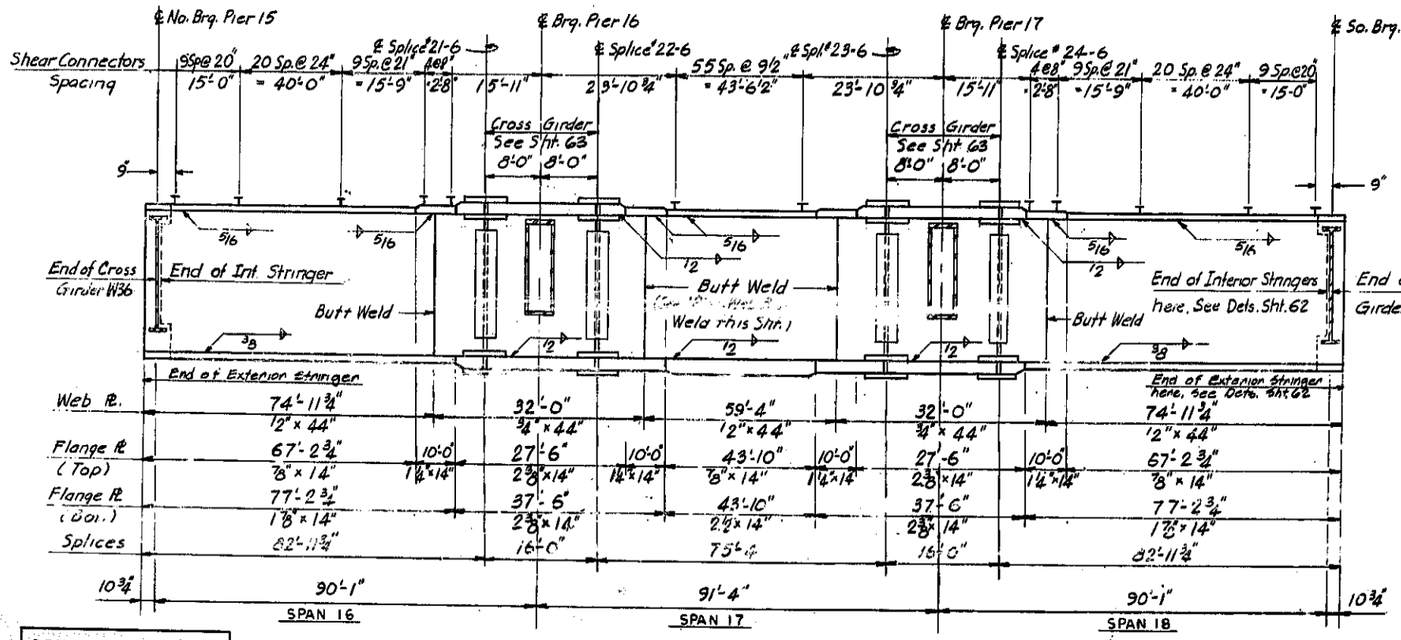
FRAMING PLAN SPANS 16 TO 18
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
462X B&R	COOK	223	149
FA45	ILLINOIS PROJECT		

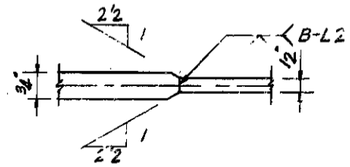
SHEET NO. 54 10% SHEETS



GIRDER 5 ELEVATION



GIRDER 6 ELEVATION



PLAN—WEB BUTT WELD

Note:
For Framing Plan & Top of Web Elevation, See Sht #53

GIRDER 5 SECTION PROPERTIES

	Steel Section			Comp. Sec.	
	0.4 Spans 16 & 18	Piers 16 & 17	0.5 Span 17	0.4 Spans 16 & 18	0.5 Span 17
I (in⁴)	21157	33192	19846	54993	50484
St (in³)	763	1393	747	5435	5595
Sb (in³)	1120	1383	1001	1506	1351

GIRDER 6 SECTION PROPERTIES

	Steel Section			Comp. Sec.	
	0.4 Spans 16 & 18	Piers 16 & 17	0.5 Span 17	0.4 Spans 16 & 18	0.5 Span 17
I (in⁴)	21767	41066	24461	57300	68538
St (in³)	770	1685	798	5402	5350
Sb (in³)	1179	1685	1463	1585	1983

TABLE OF MOMENTS & REACTIONS (GIRDER 5)

Load	Moment (Kft-kips) 0.4 Spans 16 & 18	Piers 16 & 17	0.5 Span 17	Reaction (Kips) Piers 15 & 18	Piers 16 & 17
Initial DL	625	-795	166	34.6	95.0
Comp. DL	331	-346	167	17.6	46.3
L	766	-489	610	46.6	69.0
Impact	178	-113	142	10.9	11.2
Present Total	1900	-1737	1085	109.7	221.5
Fut. Ramp DL+L+I	156	-349	645	4.7	32.3
Total (Max)	2056	-2086	1730	114.4	253.8
Present f_s (Ksi)	17.1	12.90	10.3		
Max f_s (Ksi)	18.33	18.1	16.02		
Present Vr (K)	54.7		56.3		
Total Vr (Kips)	65.1		79.4		

Vr = Max. L+Imp. Shear Range in Span

TABLE OF MOMENTS & REACTIONS (GIRDER 6)

Load	Moment (ft-K) 0.4 Spans 16 & 18	Piers 16 & 17	0.5 Span 17	Reactions (Kips) Piers 15 & 18	Piers 16 & 17
Initial DL	625	-795	166	34.6	95.0
Comp. DL	331	-346	167	17.6	46.3
L	766	-489	610	46.6	69.0
Impact	178	-113	142	10.9	11.2
Present Total	1900	-1737	1085	109.7	221.5
Fut. Ramp DL+L+I	383	-855	1580	11.5	79.1
Total (Max)	2283	-2592	2665	121.2	300.6
Present f_s (Ksi)	16.2	12.46	7.0		
Max f_s (Ksi)	19.13	18.46	16.58		
Present Vr (K)	54.7		56.3		
Total Vr (Kips)	75.5		102.5		

Vr = Max. L+I Shear Range in Span

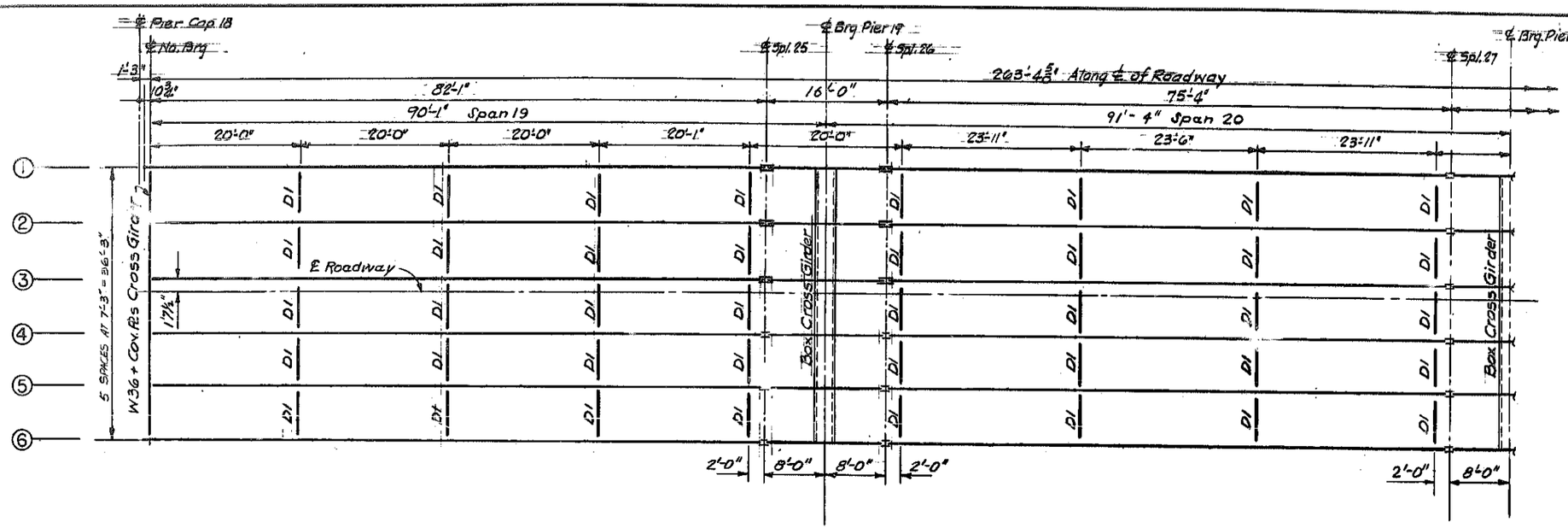
DESIGNED	T C
CHECKED	E M M
DRAWN	E M M
CHECKED	T.C.

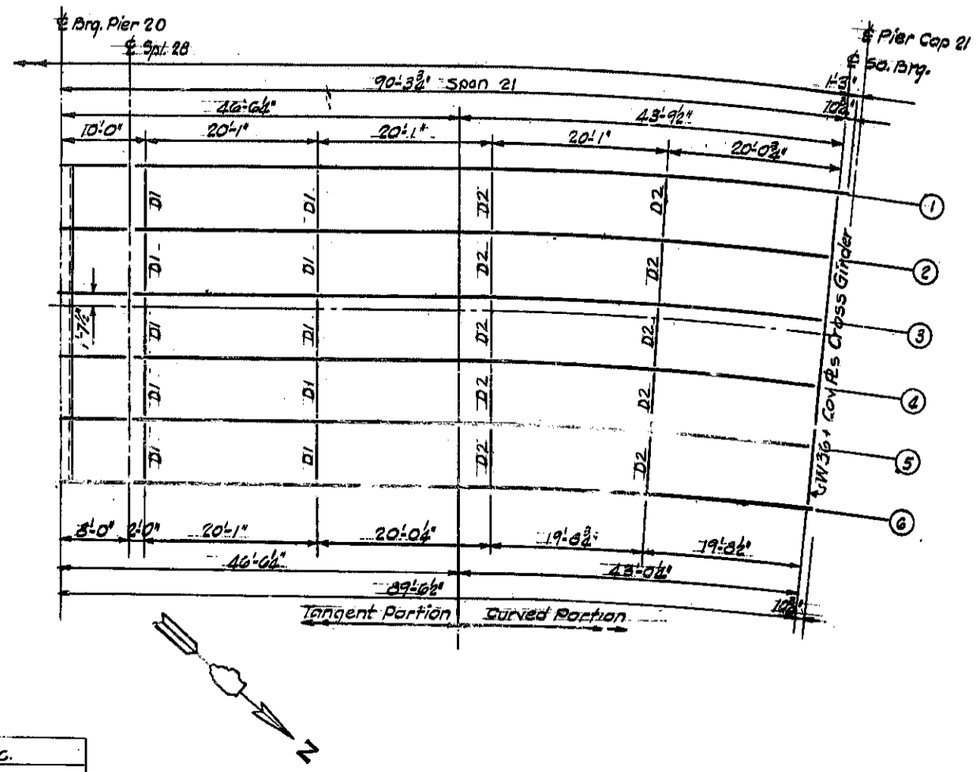
GIRDERS 5 & 6 LAYOUT SPANS 16 TO 18

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION **41+38.63**

FED. ROAD DIST. No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K BAR	COOK	223	150
S. P. R. SEC. NO.	MARKING	PROJECT		

SHEET NO. 55 IOZ SHEETS





DESIGNED	T.C.
CHECKED	A.S.
DRAWN	HJS
CHECKED	A.S.

Note

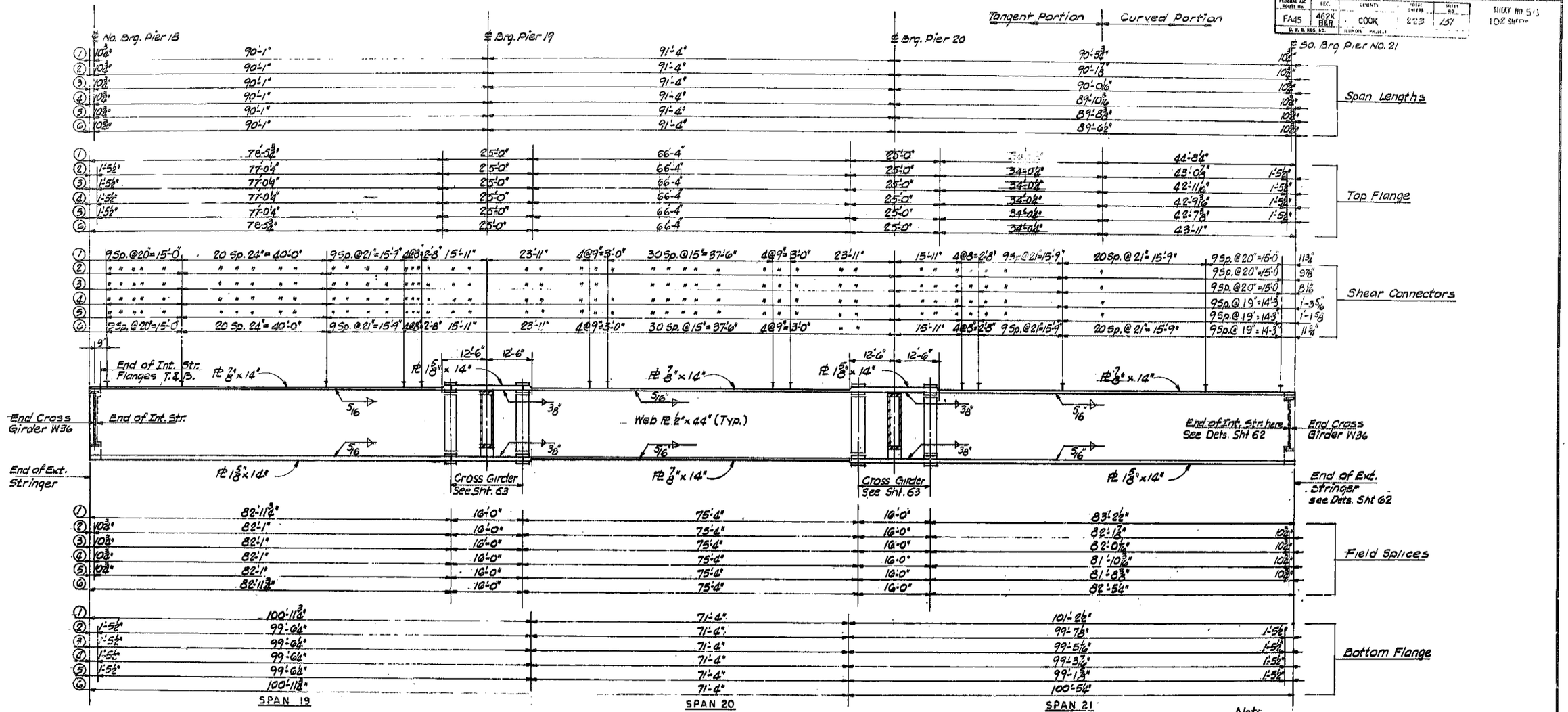
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams.

FRAMING PLAN SPANS 19 TO 21

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	137
U. P. R. REG. NO.	ILLINOIS PROJECT			

SHEET NO. 5 OF 10 SHEETS



GIRDER ELEVATION

Note

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams

TABLE OF MOMENTS AND REACTIONS (INT. GIRDER)

LOAD	MOMENT (FT.K) 0.4 Span 19 & 21	MOMENT (FT.K) Piers 19 & 20	MOMENT (FT.K) 0.5 Span 21	REACTION (K) Piers 19 & 21	REACTION (K) Piers 19 & 20
Intial ℄	625	-795	166	34.6	95.0
Comp ℄	331	-346	167	17.6	46.3
℄	706	-483	610	46.6	69.0
Impact	178	-113	142	10.9	11.2
Total	1900	-1737	1085	109.7	221.5
f_s (K.S.I.)	18.0	18.1	14.7	V_R = Max. ℄ + I Shear Range in Span	
V_r (K)	54.7		50.3		

TOP OF WEB ELEVATION *

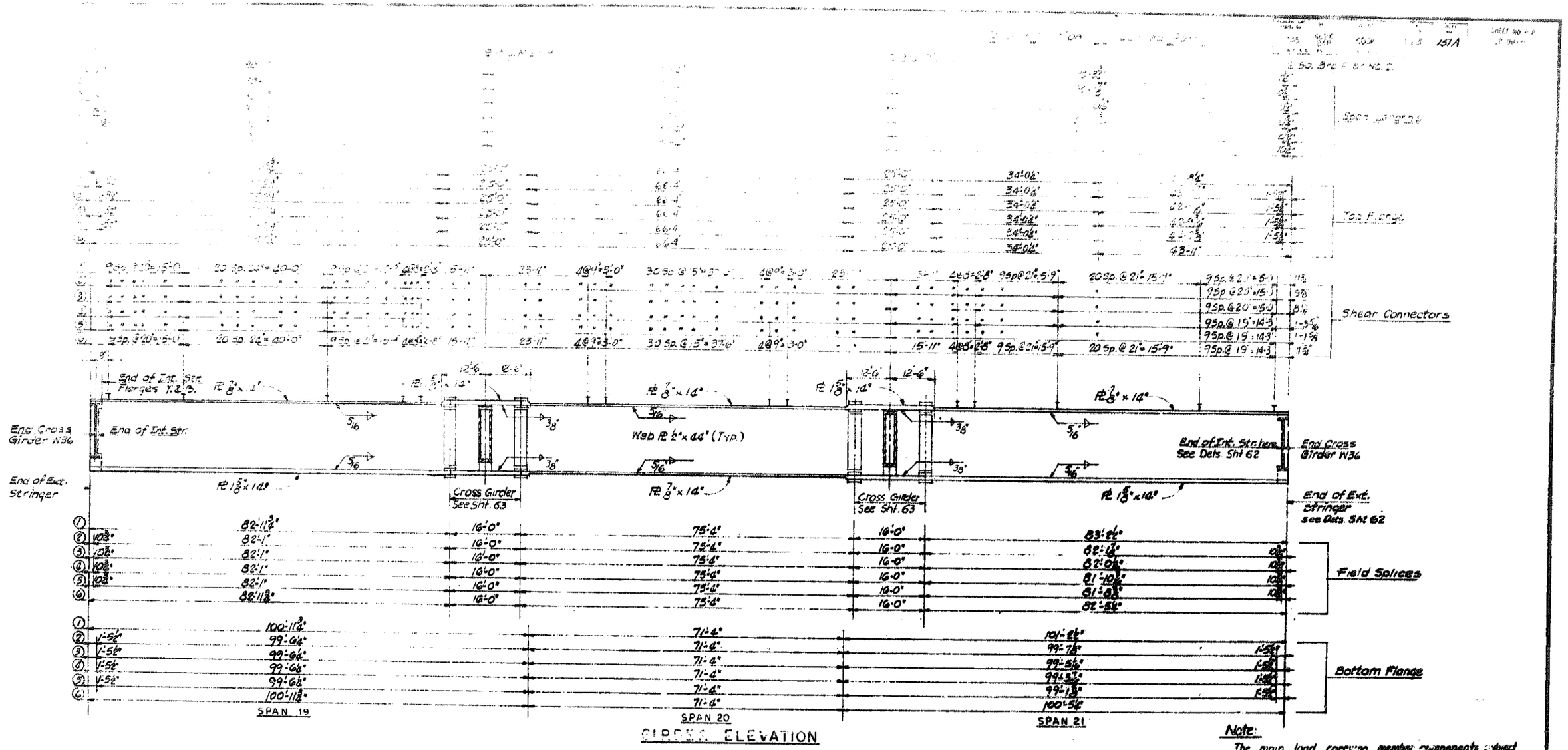
Girder No.	℄ No. Brg. Pier 18	Splice 25	℄ Brg Pier 19	Splice 26	Splice 27	℄ Brg Pier 20	Splice 28	℄ So. Brg. Pier 21
1	635.150	634.810	634.804	634.799	634.747	634.817	634.876	635.257
2	635.270	634.929	634.893	634.857	634.785	634.810	634.816	634.955
3	635.377	635.034	634.998	634.962	634.767	634.759	634.751	634.668
4	635.314	634.972	634.936	634.900	634.633	634.612	634.590	634.376
5	635.203	634.876	634.834	634.790	634.470	634.437	634.405	634.088
6	635.067	634.723	634.688	634.652	634.290	634.248	634.207	633.799

* For Fabrication only

DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	A.S. & R.H.M.
CHECKED	E.M.M.

PLATE GIRDER LAYOUT SPANS 19 TO 21

LA GRANGE RD. FA. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63



GIRDER ELEVATION

Note:

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams

TABLE OF MOMENTS AND REACTIONS (INT. GIRDER)

LOAD	MOMENT (FT. K) 0.4 Span 19 & 21	MOMENT (FT. K) Piers 19 & 20	MOMENT (FT. K) 0.5 Span 21	REACTION (K) Piers 18 & 21	REACTION (K) Piers 19 & 20
Intial ℄	625	-795	165	34.3	98.0
Comp ℄	331	-425	169	17.6	46.3
℄	706	-483	610	46.6	69.0
Impact	178	-113	142	10.9	11.2
Total	1900	-1737	1085	109.7	221.5
f_s (k.s.i.)	18.0	18.1	16.7	V_R = Max. ℄ + I Shear Range in Span	
V_r (K)	54.7		50.3		

TOP OF WEB ELEVATION *

Girder No.	℄ No. Brg Pier 18	Splice 25	℄ Brg Pier 19	Splice 26	Splice 27	℄ Brg Pier 20	Splice 28	℄ So. Brg Pier 21
1	635.150	634.810	634.774	634.739	634.797	634.817	634.876	635.257
2	635.270	634.929	634.893	634.847	634.785	634.810	634.816	634.959
3	635.377	635.039	634.[illegible]	[illegible]	[illegible]	[illegible]	634.751	635.[illegible]
4	635.314	634.972	634.936	634.900	634.833	634.612	634.590	634.376
5	635.203	634.870	634.834	634.790	634.670	634.457	634.405	634.080
6	635.067	634.723	634.688	634.652	634.590	634.248	634.207	634.799

* For Fabrication only

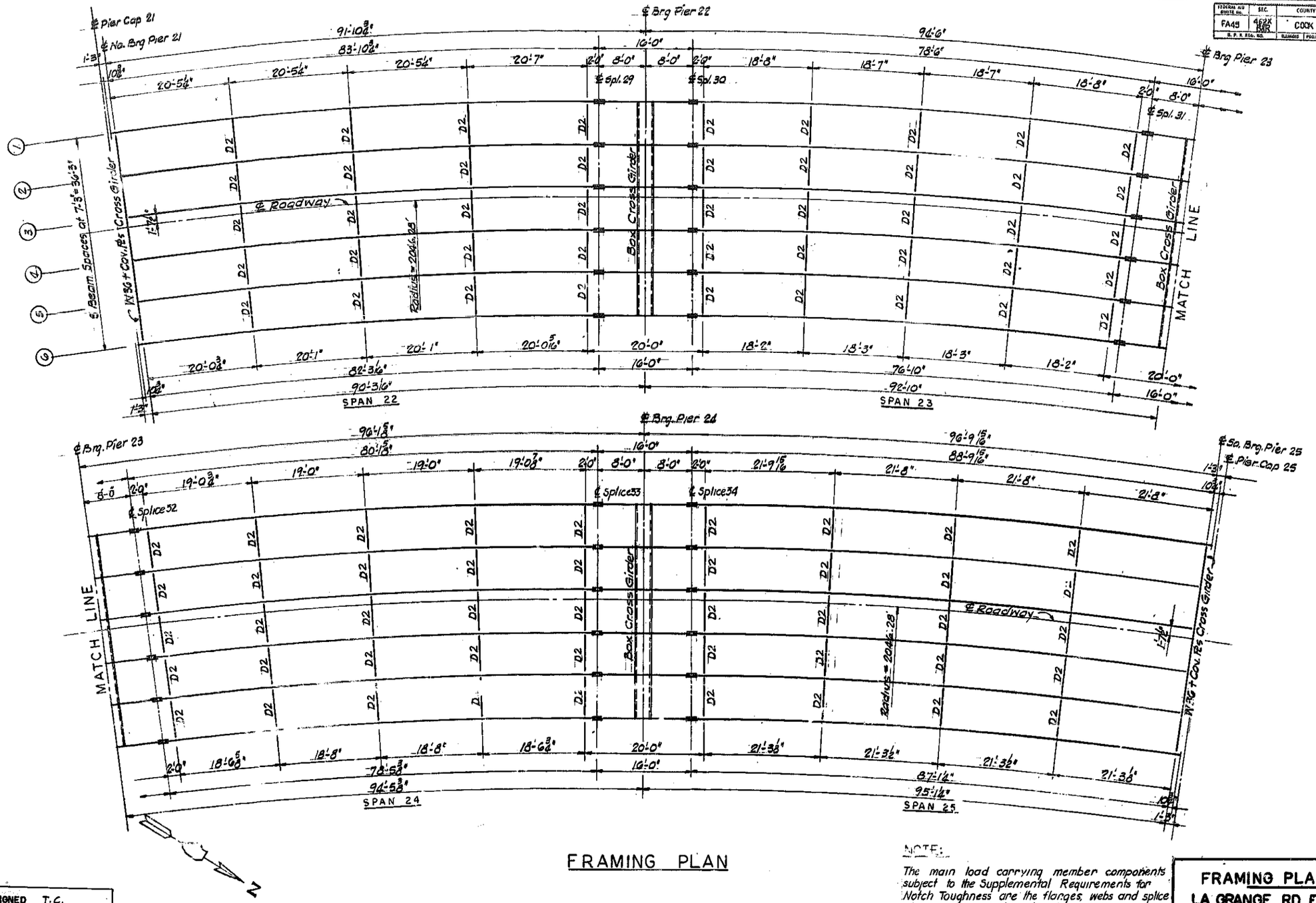
DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	A.S. & E.M.M.
CHECKED	E.M.M.

Rev. [---] 12-30-75 D.D.

PLATE GIRDER LAYOUT SPANS 19 TO 21
LA GRANGE RD. FA ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	152
B. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO 57
10.8 SHEETS



FRAMING PLAN

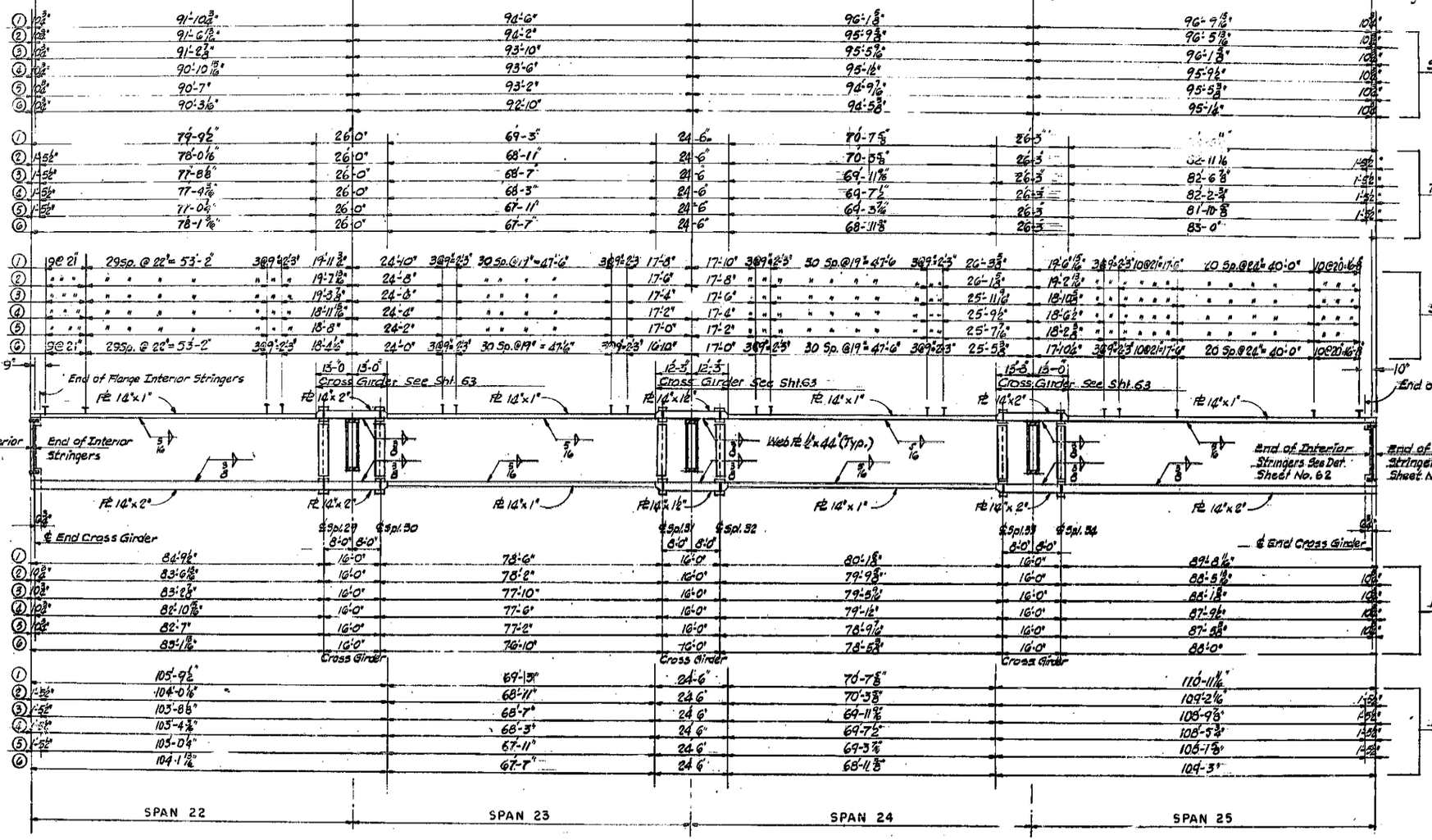
NOTE:
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beam

DESIGNED	T.C.
CHECKED	A.S.
DRAWN	H.J.S
CHECKED	A.S. & E.M.M.

FRAMING PLAN SPANS 22 TO 25
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	228	153
S. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 58
104 SHEETS



GIRDER ELEVATION

NOTE:
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders on wide flange beams.

SECTION PROPERTIES

	STEEL SECTION				COMP. SECT.	
	0.4 Span 22 & 25	Pier 22 & 24	0.5 Span 23 & 24	Pier 23	0.4 Span 22 & 25	0.5 Span 23 & 24
I_s (in^4)	23769	33192	17727	25295	60052	40351
S_t (in^3)	844.6	1383	770.7	1076.4	5460.3	5871.6
S_b (in^3)	1240.3	1383	770.7	1076.4	1668.0	1031.3

TABLE OF MOMENTS AND REACTIONS (INTERIOR GIRDERS)

	MOMENT (FT-K)							REACTION (K)				
	0.4 Span 22	Pier 22	0.5 Span 23	Pier 23	0.5 Span 24	Pier 24	0.4 Span 25	Pier 21	Pier 22	Pier 23	Pier 24	Pier 25
Intial $\mathcal{D}$	599	977	260	596	280	1033	705	34.0	105.1	61.6	115.7	37.2
Comp $\mathcal{D}$	326	413	191	290	202	431	372	17.4	49.4	42.3	45.0	18.7
$\mathcal{L}$	772	561	640	492	664	571	828	51.5	65.3	65.0	69.1	52.1
Impact	178	128	145	112	150	129	186	11.9	15.0	14.8	15.6	11.8
Total	1875	2079	1236	1490	1296	2164	2091	114.8	234.8	203.7	245.4	119.8
f_b (ksi.)	15.1	18.0	15.6	16.6	16.4	18.8	16.9	V_r = Max. $\mathcal{L}+I$ Shear Range in Span				
V_r (K)	54.3		56.9		57.0		54.8					

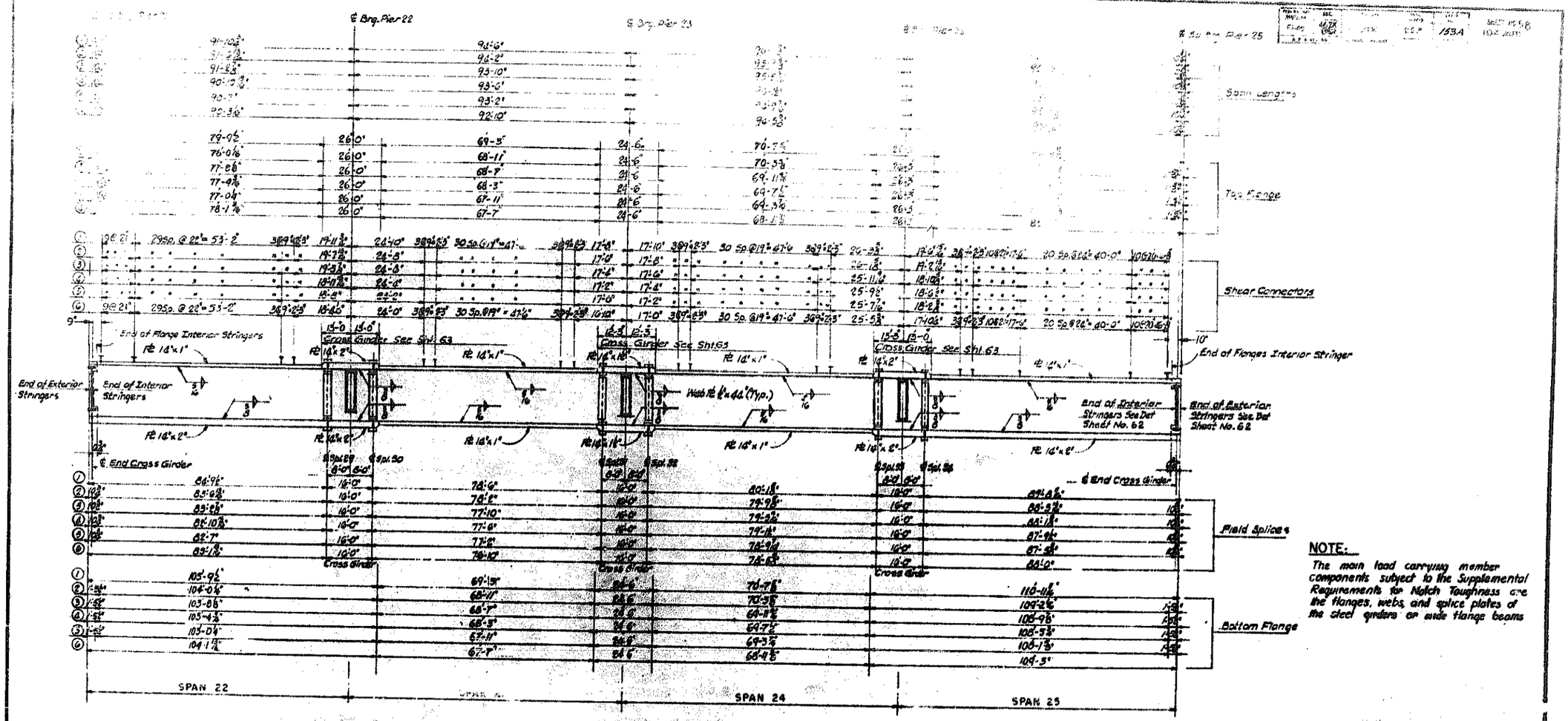
TOP OF WEB ELEVATION (For fabrication only)

Girder No.	℄ N. Brg. Pier 21	Splice 29	℄ Brg. Pier 22	Splice 30	Splice 31	℄ Brg. Pier 23	Splice 32	Splice 33	℄ Brg. Pier 24	Splice 34	℄ S. Brg. Pier 25
1.	635.251	634.914	634.879	634.845	634.678	634.647	634.617	634.297	634.286	634.275	633.152
2.	634.948	634.575	634.540	634.506	634.355	634.324	634.294	633.982	633.969	633.956	633.833
3.	634.651	634.262	634.228	634.194	634.042	634.012	633.982	633.668	633.655	633.642	633.521
4.	634.360	633.956	633.922	633.889	633.737	633.707	633.677	633.362	633.350	633.338	633.217
5.	633.056	633.651	633.626	633.595	633.437	633.410	633.381	633.066	633.054	633.042	632.920
6.	633.786	633.374	633.339	633.306	633.152	633.123	633.044	632.772	632.763	632.754	632.630

DESIGNED	T.C. & A.S.
CHECKED	E.M.M.
DRAWN	A.S. & R.H.M.
CHECKED	E.M.M.

GIRDER LAY OUT SPANS 22 TO 25

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63



GIRDER ELEVATION

NOTE:
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams

SECTION PROPERTIES

	STEEL SECTION				COMP. SECT.	
I (in⁴)	267647	258196	179727	0	1127126	1129261
S (in³)	4448.6	1589	736.7	1079.4	6186.8	5977.8
S (in³)	12260.3	1588	736.7	1079.4	1468.9	1891.3

TABLE OF MOMENTS AND REACTIONS (INTERIOR GIRDERS)

MOMENT (K-Ft.) | REACTION (K)

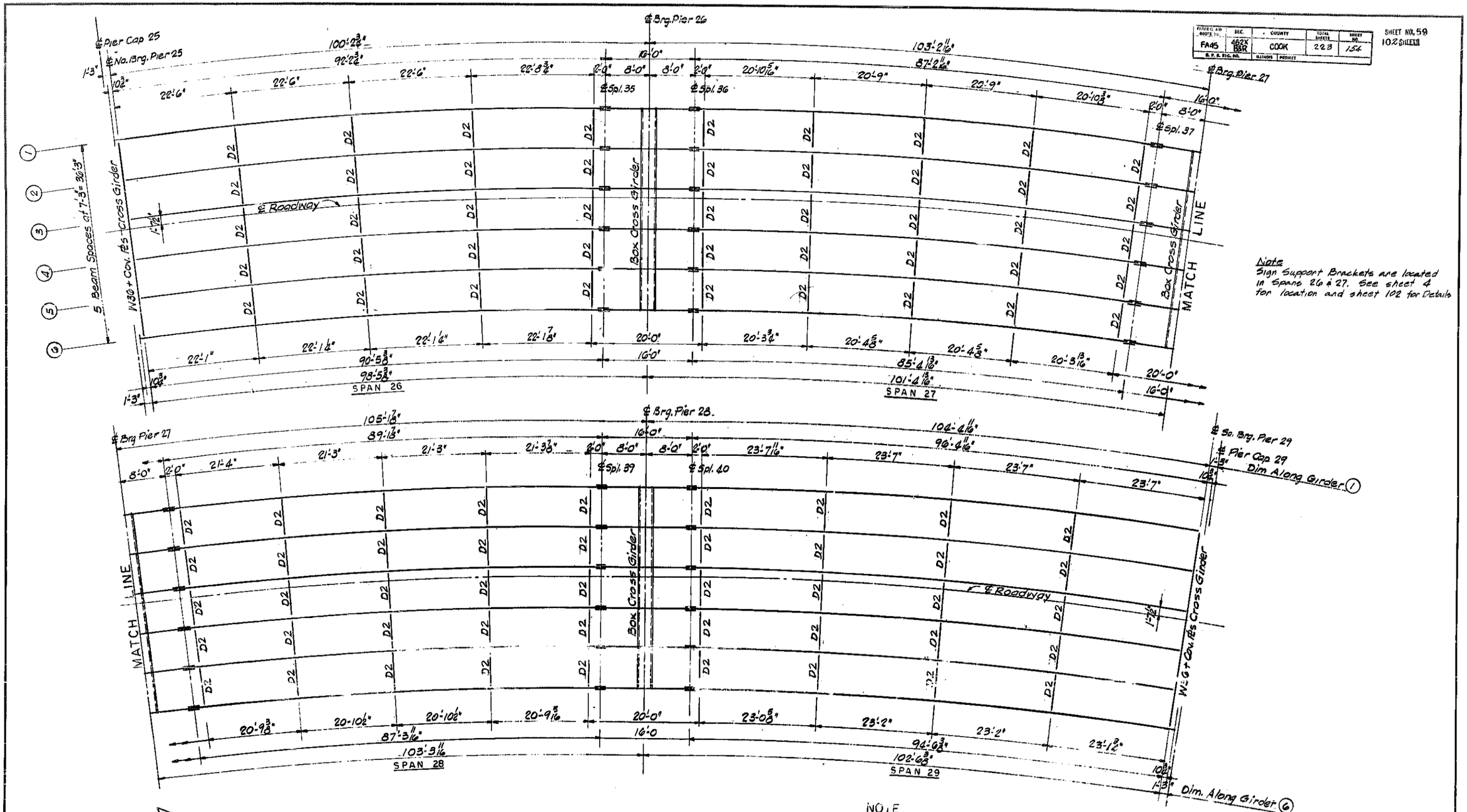
D+L+I													
Comp.													
S.I.													
Dead													
Total													
S (in³)													
f (K)													

TOP OF WEB ELEVATION (For fabrication only)

| | | | | | | | | | | | | |

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BR	COOK	223	154
B. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 59
10.2 SHEETS



Note
Sign Support Brackets are located in Spans 26 & 27. See sheet 4 for location and sheet 102 for Details

NOTE
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

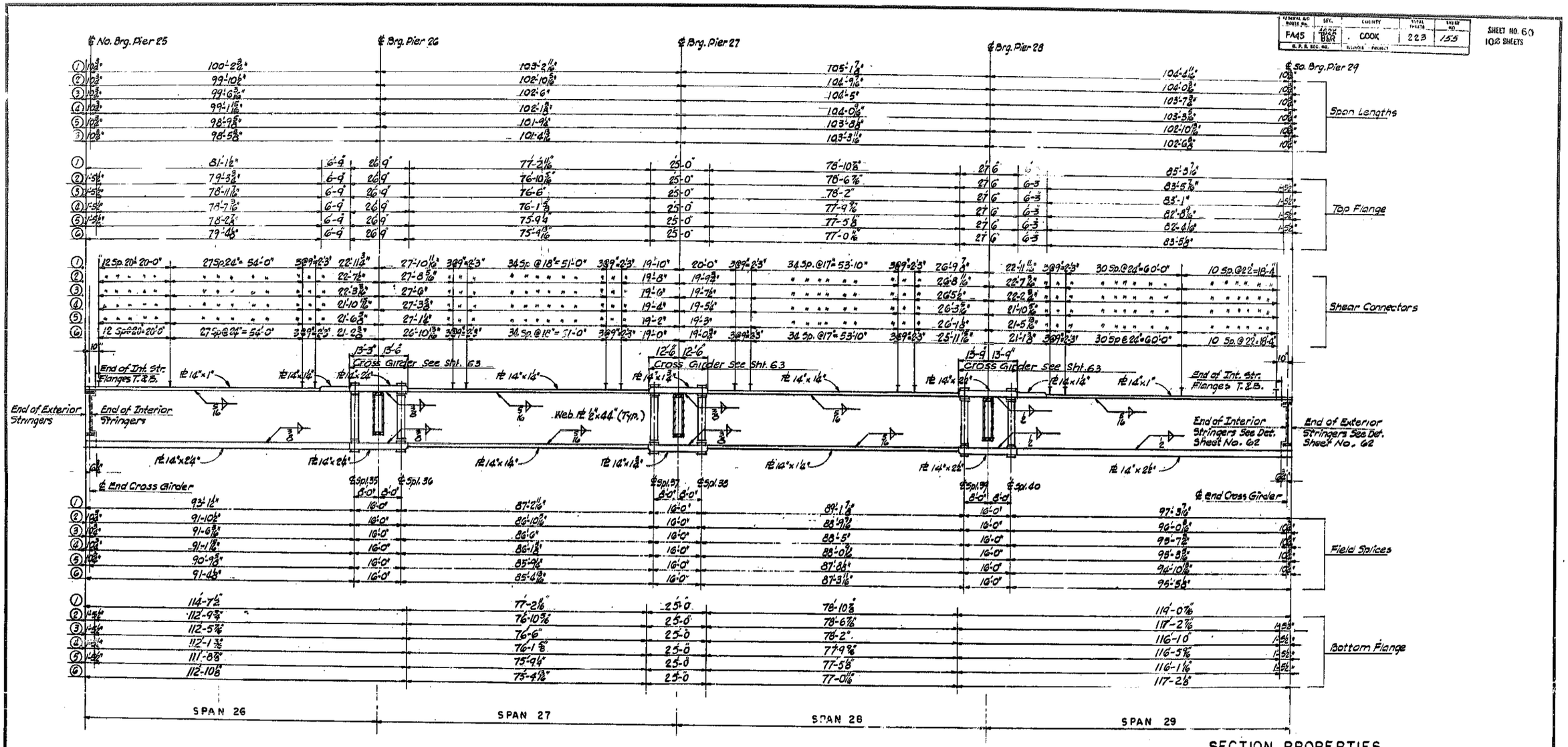
FRAMING PLAN

DESIGNED	T.C.
CHECKED	A.S.
DRAWN	H.J.S & A.S.
CHECKED	E.M.M.

FRAMING PLAN SPANS 26 TO 29
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-BR
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	155
S. P. R. SEC. NO.	ILLINOIS PROJECT			

SHEET NO. 60
102 SHEETS



GIRDER ELEVATION

SECTION PROPERTIES

	STEEL SECTION						COMP. SECTION			
	0.4 Span 26	Pier 26	0.5 Span 27	Pier 27	0.5 Span 28	Pier 28	0.4 Span 29	0.4 Span 26	0.5 Span 27	0.5 Span 28	0.5 Span 29
I (in^4)	249427	372270	214173	292.05	214173	414125	260773	645033	457988	457988	687793
S_T (in^3)	857.2	1536.9	923.5	1229.7	923.5	1690.8	868.4	5414.1	5703.3	5703.3	5378.3
S_B (in^3)	1377.5	1536.9	923.5	1229.7	923.5	1690.8	1492.0	1825.4	1190.4	1190.4	1982.0

TABLE OF MOMENTS AND REACTION (INTERIOR GIRDERS)

	MOMENT (FT K)							REACTION (K)				
	0.4 Span 26	Pier 26	0.5 Span 27	Pier 27	0.5 Span 28	Pier 28	0.4 Span 29	Pier 25	Pier 26	Pier 27	Pier 28	Pier 29
Intial ℄	716	1147	326	757	358	1246	811	37.6	115.7	92.8	120.9	40.1
Comp. ℄	378	481	225	360	247	520	424	18.8	53.3	46.8	55.8	19.9
℄	845	944	716	590	743	673	900	52.4	71.8	69.5	73.5	52.9
Impact	188	142	157	129	161	146	196	11.6	15.8	15.2	16.0	11.5
Total	2127	2414	1424	1836	1509	2585	2331	120.4	256.6	224.3	266.2	124.4
f_t (K.s.i.)	15.73	18.84	15.49	17.91	16.46	18.34	15.95	V_r = Max. 4+I Shear Range in Span				
V_r (k)	54.9		57.3		57.4		56.8					

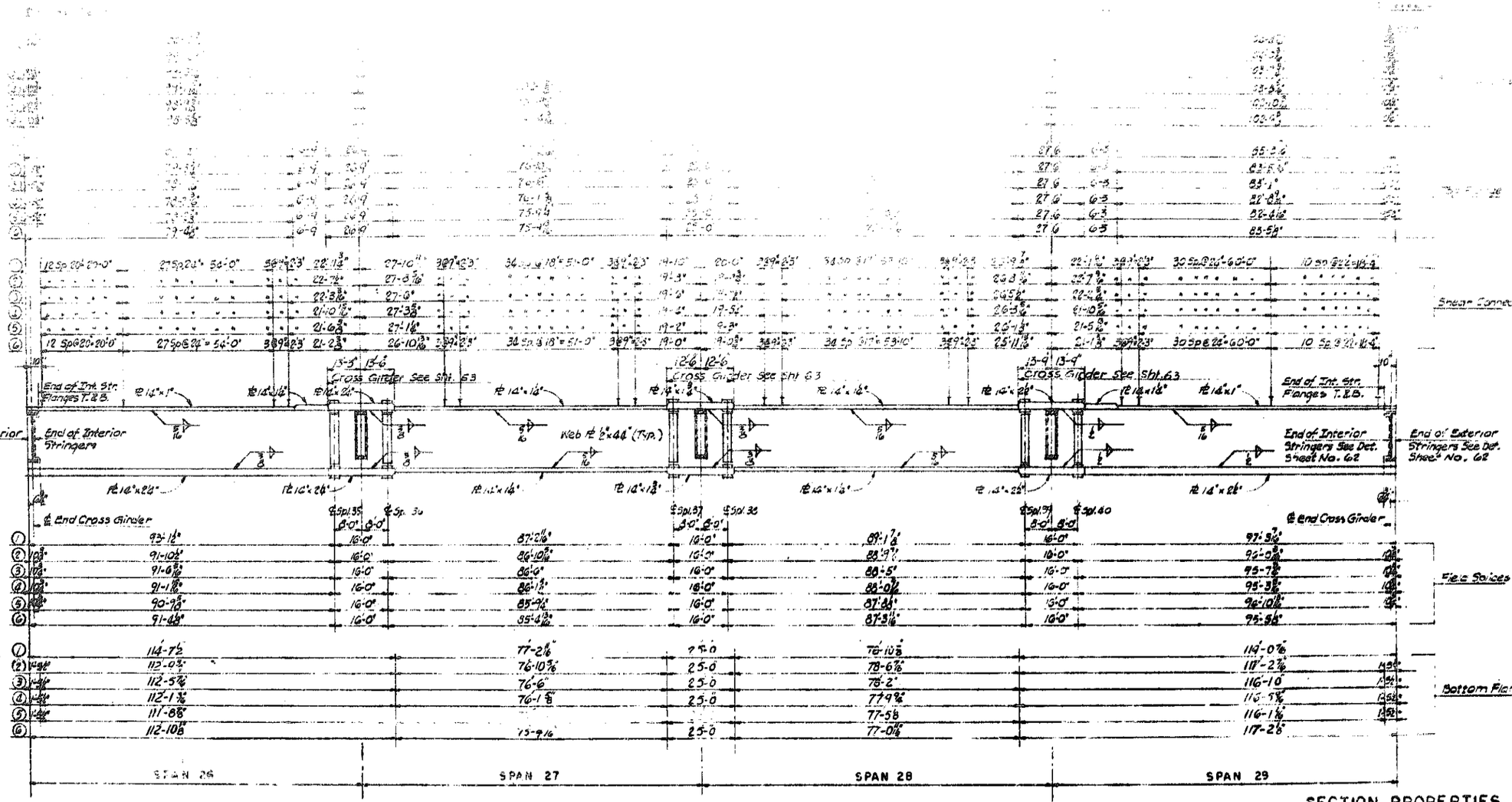
TOP OF WEB ELEVATION (For Fabrication only)

Girder No.	℄ N. Brg Pier 25	Splice No. 35	℄ Brg. Pier 26	Splice No. 36	Splice No. 37	℄ Brg. Pier 27	Splice No. 38	Splice No. 39	℄ Brg. Pier 28	Splice No. 40	℄ S. Brg. Pier 29
1.	634.145	633.652	633.614	633.575	633.220	633.181	633.142	632.705	632.666	632.667	632.390
2.	633.826	633.331	633.293	633.225	632.897	632.859	632.821	632.383	632.344	632.345	632.069
3.	635.514	633.017	632.979	632.941	632.592	632.550	632.507	632.067	632.050	632.032	631.788
4.	633.210	632.720	632.680	632.640	632.360	632.281	632.202	631.762	631.745	631.727	631.453
5.	632.912	632.415	632.377	632.340	631.981	631.944	631.907	631.464	631.448	631.432	631.156
6.	632.623	632.127	632.900	632.033	631.672	631.605	631.619	631.176	631.160	631.144	630.867

DESIGNED	T.C.&A.S.
CHECKED	E.M.M.
DRAWN	A.S.
CHECKED	E.M.M.

GIRDER LAYOUT SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63



GIRDER ELEVATION

SECTION PROPERTIES

	STEEL SECTION							COMP. SECTION			
	℄ Span 26	Pier 26	℄ Span 27	Pier 27	0.4 Span 28	Pier 28	0.4 Span 29	0.4 Span 26	0.4 Span 27	0.4 Span 28	0.4 Span 29
I (in⁴)	22967	37270	21473	37805	21473	41425	26075	64503	45798	45798	68793
S_t (in³)	857.2	1594.9	923.5	1639.7	923.5	1690.8	868.4	5411.1	5703.9	5703.9	5376.5
S_b (in³)	1377.3	1477.6	1328.7	1477.6	1328.7	1690.8	1692.0	1895.4	1190.4	1190.4	1982.0

TABLE OF MOMENTS AND REACTION (INTERIOR GIRDERS)

	MOMENT (FT K)							REACTION (K)				
	0.4 Span 26	Pier 26	℄ Span 27	Pier 27	0.4 Span 28	Pier 28	0.4 Span 29	Pier 25	Pier 26	Pier 27	Pier 28	Pier 29
Initial @	716	1147	326	751	358	1246	811	57.6	115.7	92.8	120.9	40.1
Comp. @	378	481	225	360	247	520	426	18.8	53.3	46.8	55.8	19.9
℄	845	624	716	590	743	673	900	52.4	71.8	69.5	73.5	52.9
Impact	168	142	157	129	161	146	196	11.6	15.8	15.2	16.0	11.5
Total	2127	2414	1424	1836	1509	2585	2331	120.4	256.6	224.3	266.2	124.4
f_b (K.S.I.)	15.73	18.84	15.49	17.91	16.46	18.34	15.95	V_r = Max. 4+I Shear Range in Span				
V_r (K)	54.9		57.3		57.4		58.8					

TOP OF WEB ELEVATION (For Fabrication only)

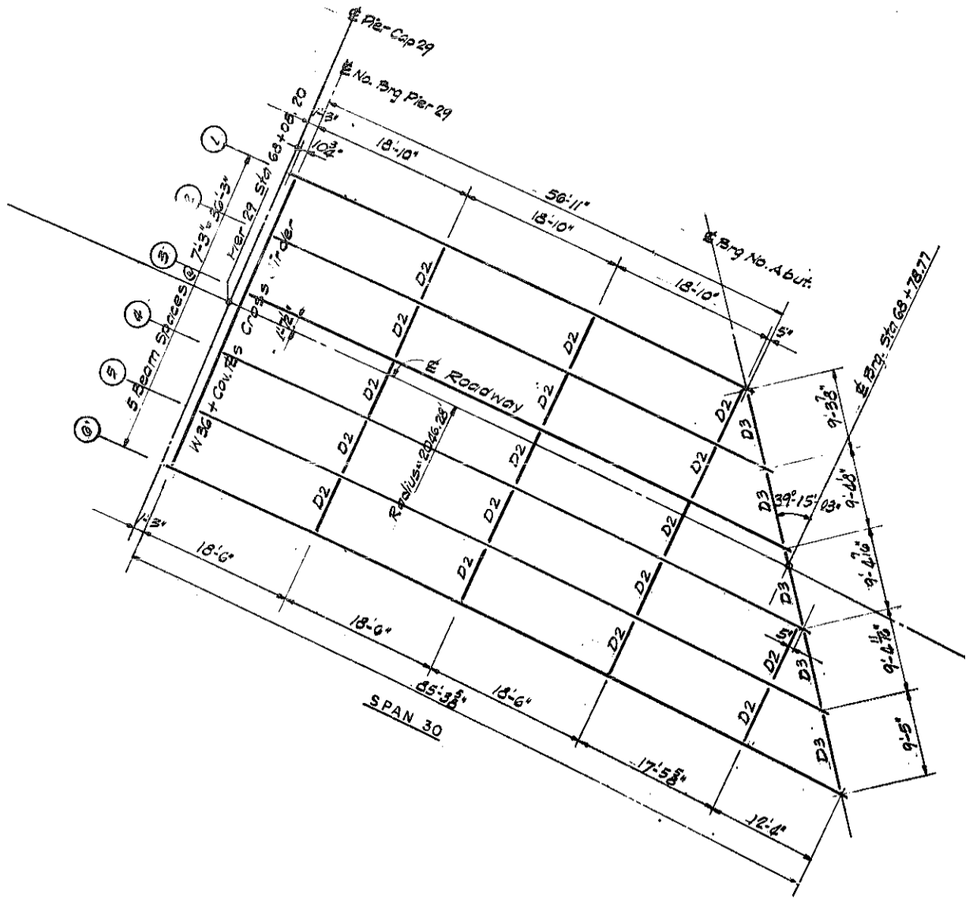
Girder No.	℄ Brg. Pier 25	Splice No. 35	℄ Brg. Pier 26	Splice No. 36	Splice No. 37	℄ Brg. Pier 27	Splice No. 38	Splice No. 39	℄ Brg. Pier 28	Splice No. 40	℄ Brg. Pier 29
1.	634.145	633.672	633.634	633.595	633.291	633.248	633.225	633.025	632.682	632.637	632.596
2.	633.426	633.350	633.312	633.275	632.967	632.927	632.904	632.705	632.375	632.335	632.089
3.	635.544	633.038	632.999	632.960	632.643	632.602	632.590	632.089	632.060	632.020	631.780
4.	633.210	632.742	632.698	632.655	632.353	632.309	632.284	631.784	631.756	631.727	631.453
5.	632.912	632.437	632.396	632.359	632.057	632.023	631.990	631.489	631.460	631.432	631.136
6.	632.123	632.150	632.201	632.252	631.590	631.646	631.701	631.205	631.174	631.144	630.857

DESIGNED	T.C.&A.S.
CHECKED	E.M.M.
DRAWN	A.S.
CHECKED	E.M.M.

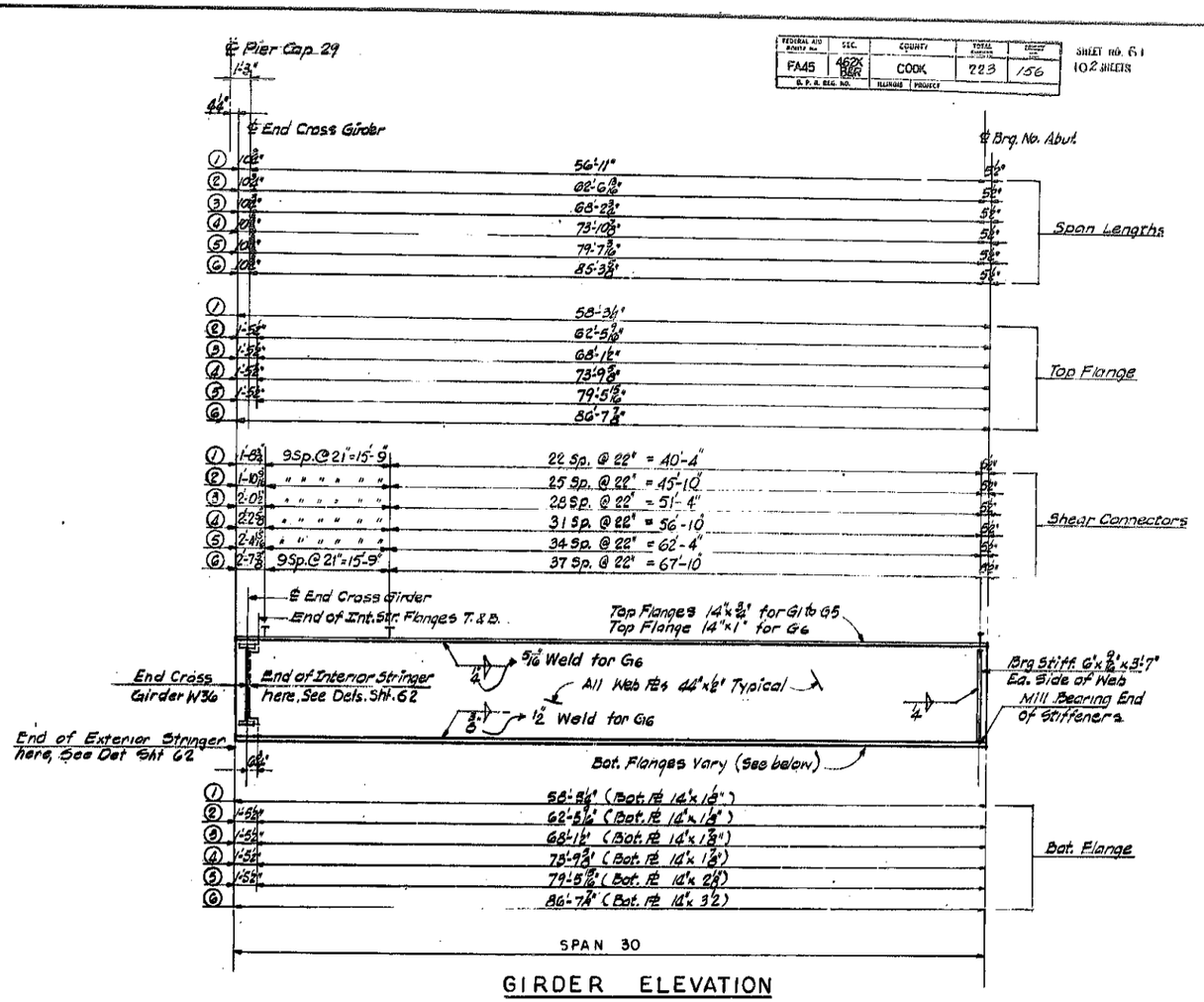
Rev. [ ] 12-30-75 D.D.

GIRDER LAYOUT SPANS 26 TO 29

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462 X-B & R
COOK COUNTY
STATION 41+38.63



FRAMING PLAN



GIRDER ELEVATION

TABLE OF MOMENTS & REACTIONS

	Moment at 0.5 Span 30 (Ft-Kips)						Reaction (Kips) at Pier 29 & No. Abutment					
	G1	G2	G3	G4	G5	G6	G1	G2	G3	G4	G5	G6
Initial DL.	396	457	549	656	774	857	26.9	29.1	32.1	35.5	38.9	44.7
Comp. DL.	200	231	273	320	370	382	13.4	14.7	16.0	17.3	18.6	19.9
LL	513	567	631	696	762	754	39.8	40.4	41.0	41.4	41.8	42.2
Impact	140	149	163	176	187	177	10.8	10.8	10.6	10.5	10.3	10.1
Total	1249	1404	1616	1848	2093	2170	90.9	95.0	99.7	104.7	109.6	116.9
fs (Ksi)	15.3	17.3	14.0	16.0	16.6	15.5						
Vr (Kips)	50.6	51.2	51.6	51.9	52.1	52.3						

Vr = Max LL+Imp. Shear Range in Span.

TOP OF WEB ELEVATION *

Girder No.	℄ Brg. Pier 29	℄ Brg. No. Abut	* For Fabrication Only
G1	632.393	632.092	
G2	632.076	631.758	
G3	631.765	631.425	
G4	631.461	631.090	
G5	631.163	630.756	
G6	630.854	630.400	

SECTION PROPERTIES

Girder	Steel Section			Composite Section		
	I (in⁴)	St (in³)	Sb (in³)	I (in⁴)	St (in³)	Sb (in³)
G1 & G2	16526	654.6	801.1	42826	5806.1	1112.4
G3 & G4	20331	701.1	1153.5	57413	5453.9	1590.5
G5	21372	712.4	1266.3	61968	5382.0	1752.5
G6	29857	905.3	1923.7	85443	5377.2	2620.2

NOTE

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs and splice plates of the steel girders or wide flange beams.

DESIGNED	TC
CHECKED	EMM
DRAWN	HJS & A.S.
CHECKED	EMM

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	156
B. P. R. REG. NO.	ILLINOIS	PROJECT		

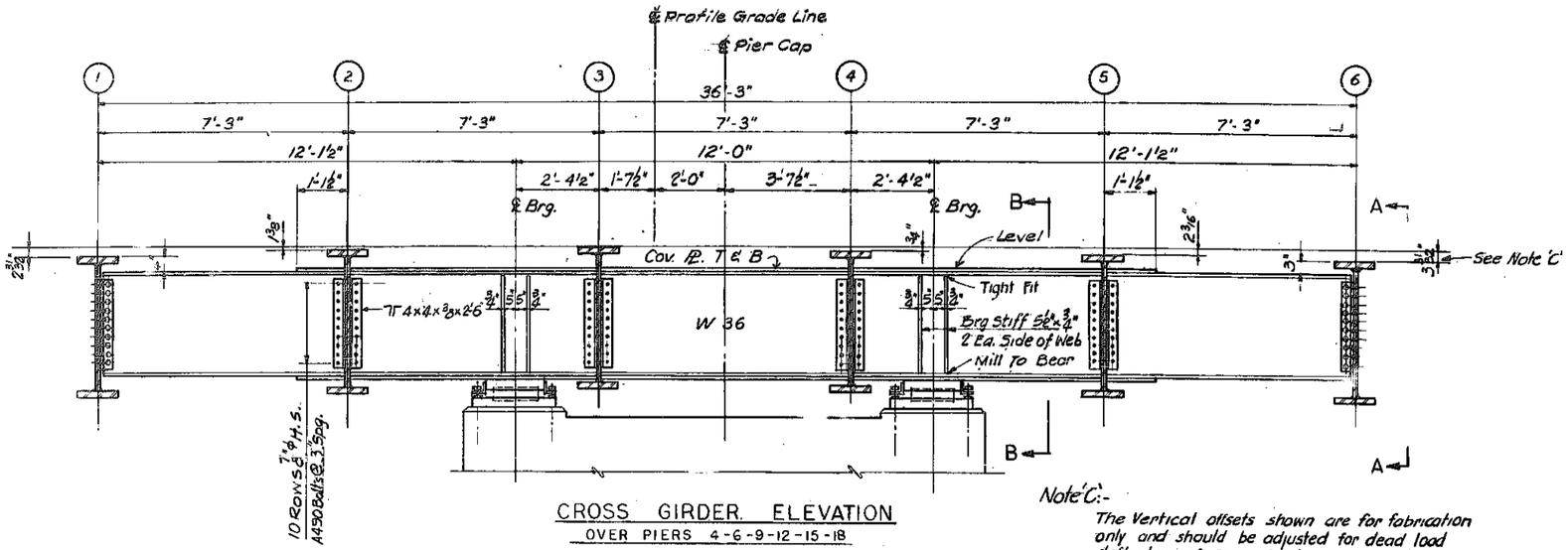
SHEET NO. 61
102 SHEETS

FRAMING PLAN SPAN 30

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

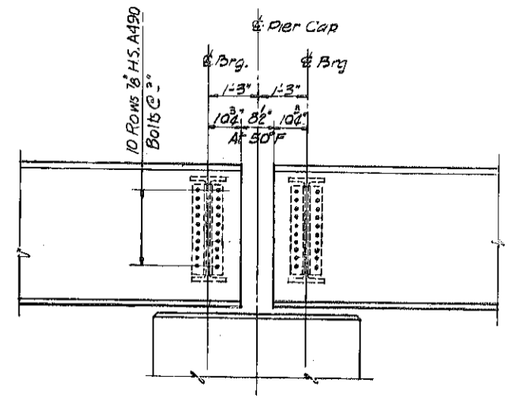
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FA45	462X BLR	COOK	223	157
B. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 62
102 SHEETS

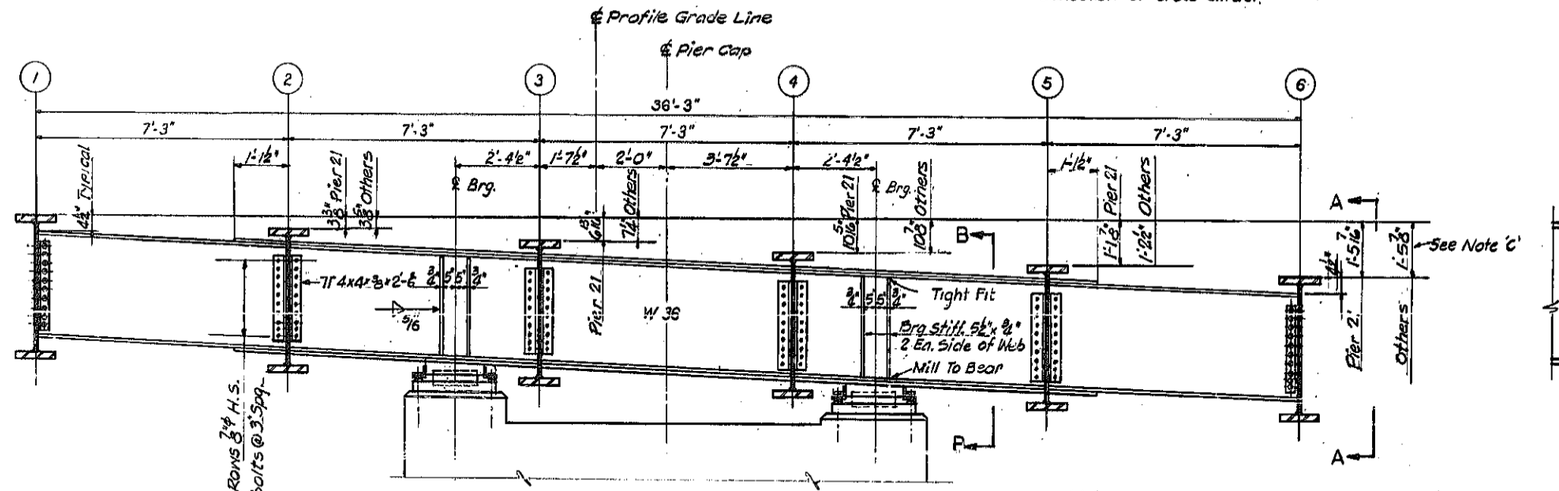


CROSS GIRDER ELEVATION
OVER PIERS 4-6-9-12-15-18

Note 'C':-
The Vertical offsets shown are for fabrication only and should be adjusted for dead load deflection of Cross Girder.

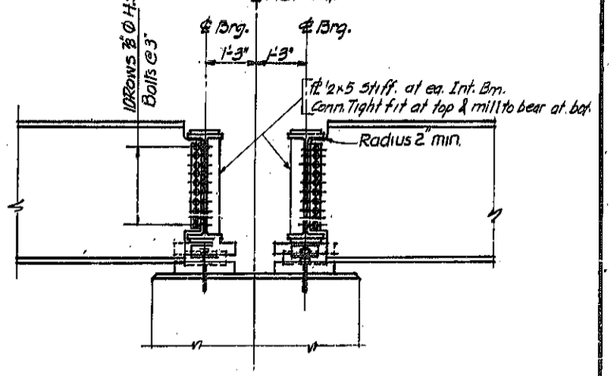


END VIEW A-A

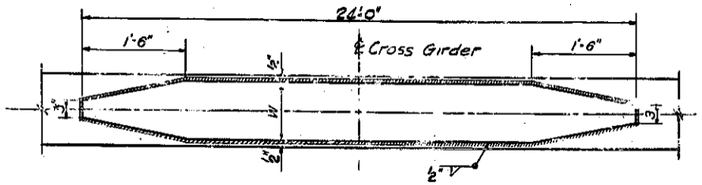


CROSS GIRDER ELEVATION
OVER PIERS 21 25 & 29

Note:- The sequence of field erection should be such that symmetry with respect to ℄ is maintained always.



SECTION B-B



DETAIL OF COVER PLATE

CROSS GIRDER SCHEDULE

LOCATION	GIRDER SIZE	COVER PLATE TOP & BOT.
No. 2 So. Brgs. At Pier 4, Pier 6, [illegible] & Pier 21; No. Brg Pier 18	W 36 x 182	11" x 1⅜" x 24'-0"
No. Brg. Pier 21	W36 x 182	11" x 1⅜" x 24'-0"
No. Brg. Pier 15, So. Brg. Pier 18	W36 x 194	11" x 1⅝" x 24'-0"
No. 2 So. Brgs. Pier 25 and At Pier 29	W 36 x 194	11" x 1½" x 24'-0"

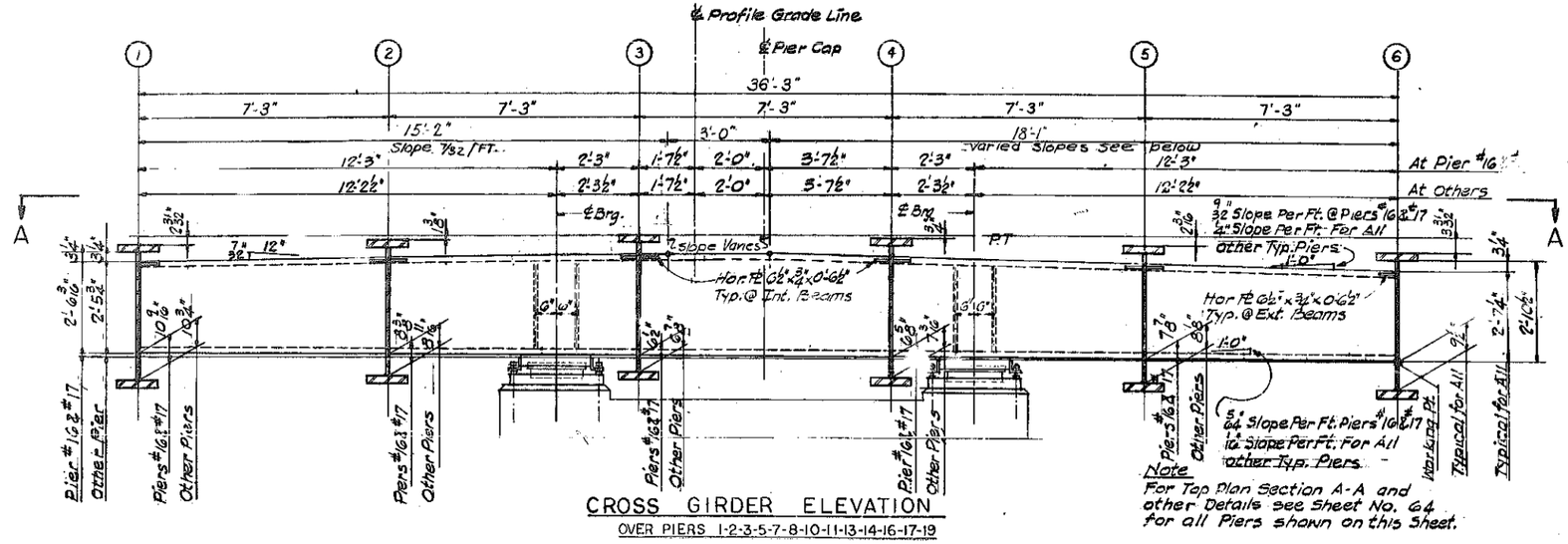
DESIGNED	A.S. & T.C.
CHECKED	E.M.M.
DRAWN	G.A.R.
CHECKED	E.M.M.

CROSS GIRDERS AT END SPANS

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-5 B R
COOK COUNTY
STATION 41+38.63

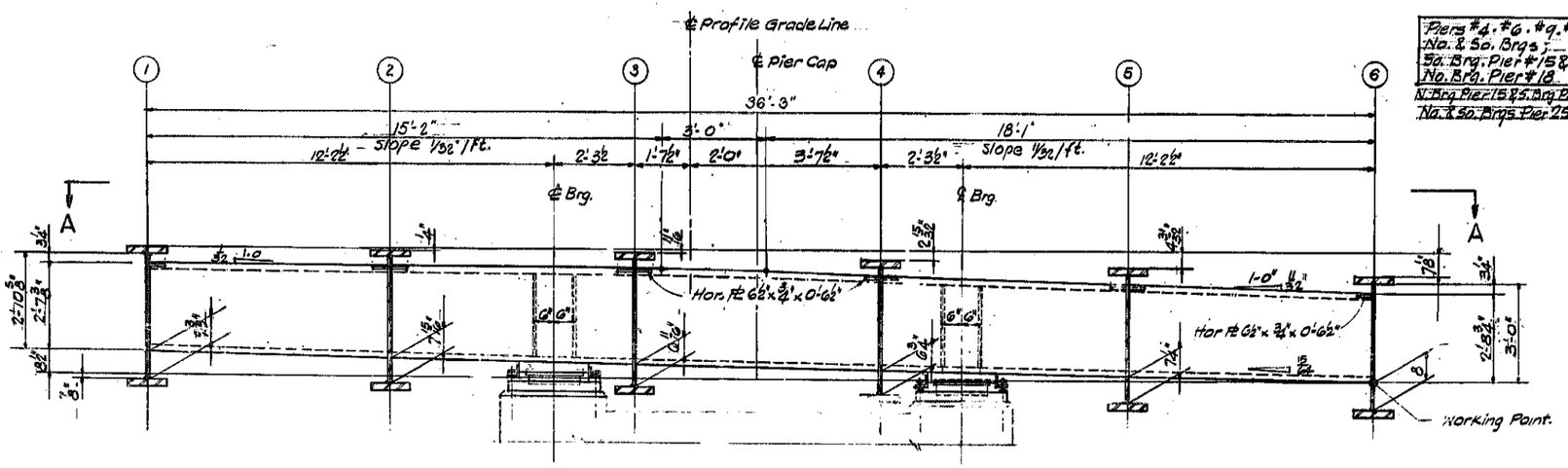
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	158
D. F. S. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 63
102 SHEETS



CROSS GIRDER ELEVATION
OVER PIERS 1-2-3-5-7-8-10-11-13-14-16-17-19

Note
For Top Plan Section A-A and other Details see Sheet No. 64 for all Piers shown on this Sheet.



CROSS GIRDER ELEVATION
OVER PIER 20

STEEL CROSS GIRDER SCHEDULE

PIER NUMBER	T. & B. Pls	WEB Pls	REMARKS
#1-#2-#3-#5-#7-#8 #10-#11-#13-#14-#19	32"x 2 3/8"x 36'-2½"	30"x 5/16"x 36'-2 3/4"	See Tabulation below for stresses
#16-#17	32"x 3¼"x 36'-2½"	28"x 7/8"x 36'-2 3/4"	do
#20	32"x 2¼"x 36'-2½"	30"x ¾"x 36'-3¼"	do
#22	32"x 2 3/8"x 36'-2½"	30"x ¾"x 36'-4"	do
#23	32"x 2"x 36'-2½"	30"x ¾"x 36'-4"	do
#24	32"x 2½"x 36'-2½"	30"x ¾"x 36'-4"	do
#26	32"x 2 3/8"x 36'-2½"	30"x ¾"x 36'-4"	do
#27	32"x 2¼"x 36'-2½"	30"x ¾"x 36'-4"	do
#28	32"x 2¾"x 36'-2½"	30"x ⅞"x 36'-4"	do

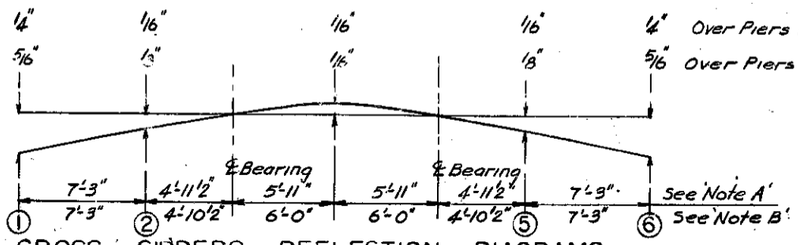
*TABLE OF MOMENTS, REACTIONS & PROPERTIES

X-GIRDER / LOAD	Moment (Ft-Kips) D.L.	Moment (Ft-Kips) LL+Imp	Moment (Ft-Kips) Total	fs (Ksi)	Reaction (Kips) D.L.	Reaction (Kips) L.L.+Imp	Reaction (Kips) Total	I (in⁴)
at Pier #1	2450.	883.	3333.	16.85	448.2	253.1	701.3	39666
" Pier #16	2309.	2038.	4347.	16.82	422.4	454.4	876.8	53021
" Pier #20	2309.	908.	3217.	17.39	422.4	248.8	671.2	37987
" Pier #22	2284.	981.	3265	16.16	417.8	267.3	685.1	41521
" Pier #23	2093.	908.	2941	16.69	372.3	248.7	621.0	36207
" Pier #26	2753.	1008.	3761	17.12	502.9	276.1	779.0	45151
" Pier #24	2702	1114	3816	18.08	465.5	295.4	760.9	43376
→	853.	619.	1472.	16.32	155.7	170.0	325.7	20939
N. Brg. Pier #21	866.	704	1570.	16.72	155.7	190.0	345.7	22031
→	853.	756	1609.	15.30	178.3	182.2	337.9	25088
→	978	695	1673	16.51	173.8	190.4	363.4	24010

Piers #4, #6, #9, #12 No. & So. Brgs;
So. Brg. Pier #15 & #21
No. Brg. Pier #18
N. Brg Pier 15 & S. Brg Pier 18
No. & So. Brgs Pier 25 & 29

Note:
Pier No. 1 is a Typical Pier and design loads are Max. at Pier No. 1 and No. 3, Piers No. 2 to No. 14 and No. 19 are slightly less.
*Moments & Reactions taken at ℄ of Brgs.

1/4" 1/16" 1/16" 1/16" 1/4" Over Piers 1, 2, 3, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23, 24, 26, 27 & 28 (Note A)
5/16" 1/8" 1/16" 1/8" 5/16" Over Piers 4, 6, 9, 12, 15, 18, 21, 25 & 29 (Note B)



CROSS GIRDERS DEFLECTION DIAGRAMS
Note: Deflection (inches) is for Dead Load only.

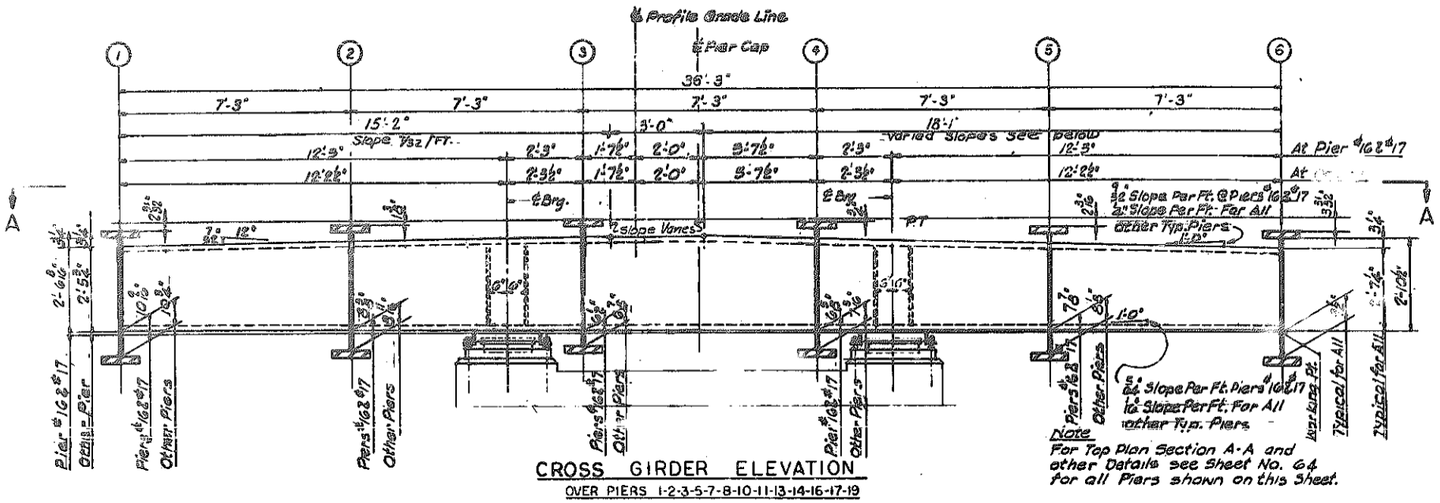
DESIGNED	A. S.
CHECKED	E M M
DRAWN	G. A. R.
CHECKED	A. S.

CROSS GIRDERS AT INTERIOR SPANS.

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION

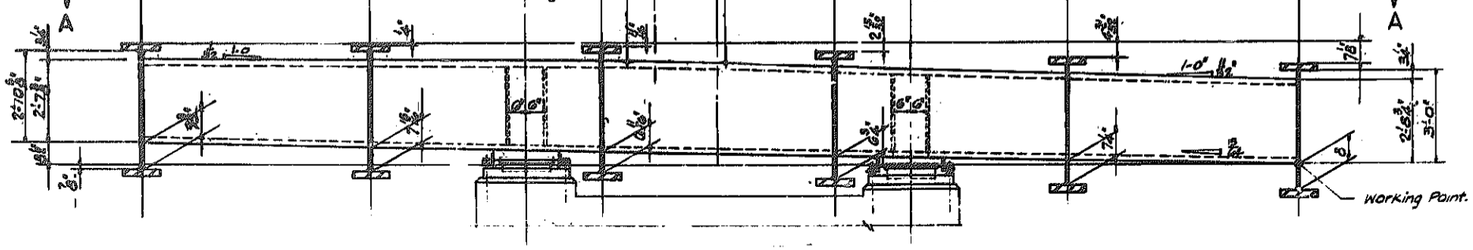
FED. ROAD DIST. NO.	STATE	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 45	ILLINOIS	COOK	223	158-1
F.A.P. RTE. NO.	SECTION NO.			

SHEET NO 63 OF 102 SHEETS



CROSS GIRDER ELEVATION
OVER PIERS 1-2-3-5-7-8-10-11-13-14-16-17-19

Note
For Top Plan Section A-A and other Details see Sheet No. 64 for all Piers shown on this Sheet.



CROSS GIRDER ELEVATION
OVER PIER 20

STEEL CROSS GIRDER SCHEDULE

PIER NUMBER	T. & B. Pls	WEB Pls	REMARKS
#1-#2-#3-#5-#7-#8 #10-#11-#13-#14-#19	32"x 2⅜"x 36'-2½"	30"x ¾"x 36'-2¾"	See Tabulation below for stresses
#6-#17	32"x 3½"x 36'-2½"	28"x ⅞"x 36'-2¾"	do
#20	32"x 2½"x 36'-2½"	30"x ¾"x 36'-3¼"	do
#22	32"x 2⅝"x 36'-2½"	30"x ¾"x 36'-4"	do
#23	32"x 2" x 36'-2½"	30"x ⅜"x 36'-4"	do
#24	32"x 2½"x 36'-2½"	30"x ¾"x 36'-4"	do
#26	32"x 2⅜"x 36'-...	30"x ¾"x 36'-4"	do
#27	32"x 2½"x 36'-2½"	30"x ¾"x 36'-4"	do
#28	32"x 2½"x 36'-2½"	30"x ⅞"x 36'-4"	do

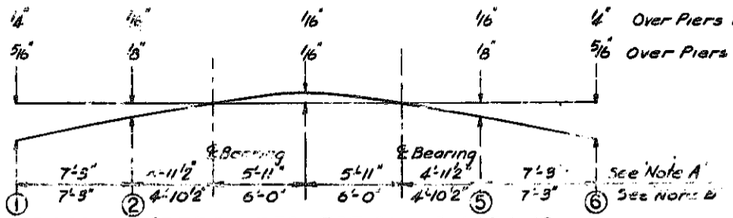
*TABLE OF MOMENTS, REACTIONS & PROPERTIES

X-X LOAD / GIRDER	Moment (Ft-Kips) D.L.	L.L.+Imp	Total	fs (Ksi)	Reaction (Kips) D.L.	L.L.+Imp	Total	I (in⁴)
at Pier #1	2450.	883.	3333.	16.88	448.2	253.1	701.3	39666
" Pier #16	2309.	2038.	4347.	16.82	422.4	454.2	876.6	53021
" Pier #20	2309.	908.	3217.	17.39	422.4	248.8	671.2	37987
" Pier #22	2284.	981.	3265.	16.16	417.8	267.3	685.1	41521
" Pier #23	2033.	908.	2941	16.69	372.3	248.7	621.0	36207
" Pier #26	2753.	1008.	3761	17.12	502.9	276.1	779.0	45151
" Pier #24	2702	1114	3816	18.08	465.5	295.4	760.9	43516
→	853.	619.	1472.	16.32	155.7	170.0	325.7	20989
N. Brg. Pier #21	866.	704	1570.	16.72	155.7	190.0	345.7	22051
→	853.	756	1609.	15.30	178.3	182.2	337.9	25088
→	978	695	1673	16.51	173.8	190.4	363.4	24010

Piers #4-#6-#9-#12 No. E. So. Brgs.
So. Brg. Pier #15 & #21
No. Brg. Pier #18
N. Brg. Pier 15 & S. Brg. Pier 18
No. & So. Brgs. Pier 25 & 29

Note:
Pier No.1 is a Typical Pier and design loads are Max. at Pier No.1 and No.3, Piers No.2 to No.14 and No.19 are slightly less.
*Moments & Reactions taken at ℄ of Brgs.

1/4" 1/16" 1/16" 1/16" 1/4" Over Piers 1,2,3,5,7,8,10,11,13,14,16,17,19,20,22,23,24,26,27 & 28 (Note A)
5/16" 1/8" 1/16" 1/8" 5/16" Over Piers 4,6,9,12,15,18,21,25 & 29 (Note B)



CROSS GIRDERS DEFLECTION DIAGRAMS
Note: Deflection (inches) is for Dead Load only.

AS REVISED

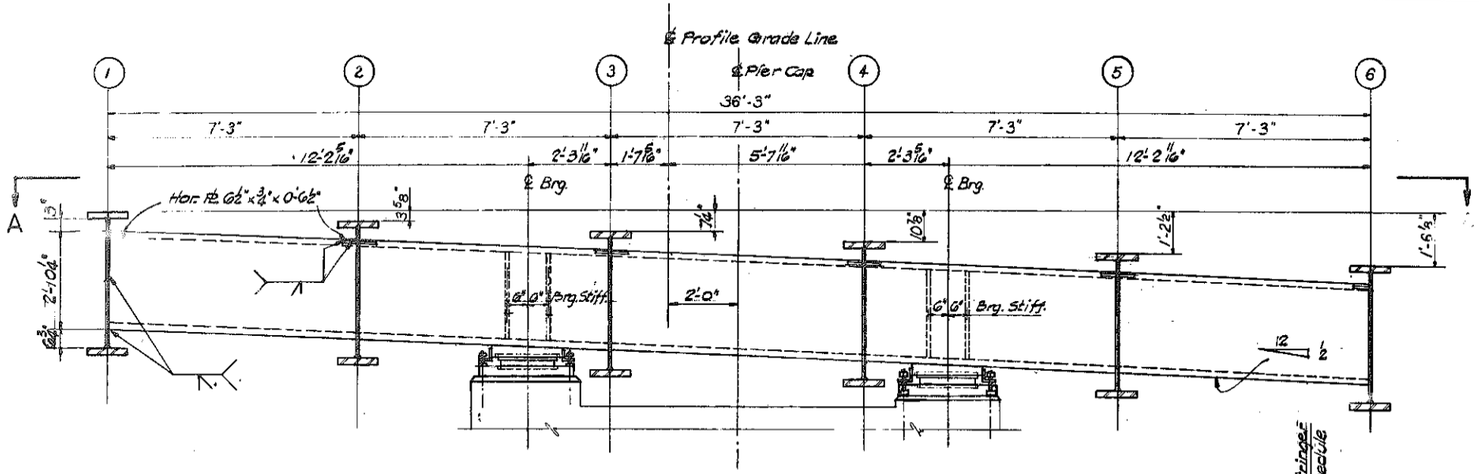
DESIGNED	A.S.
CHECKED	EMM
DRAWN	G.A.R.
CHECKED	A.S.

As Revised 11-14-75 L.W.

CROSS GIRDERS AT INTERIOR SPANS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION

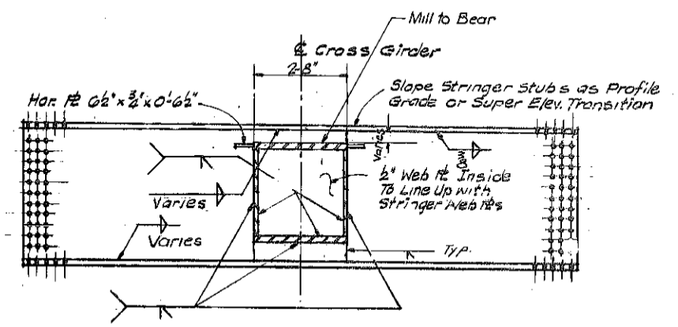
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	154
B. F. P. R. REG. NO.		ILLINOIS	PROJECT	

SHEET NO. 64
10% SHEETS

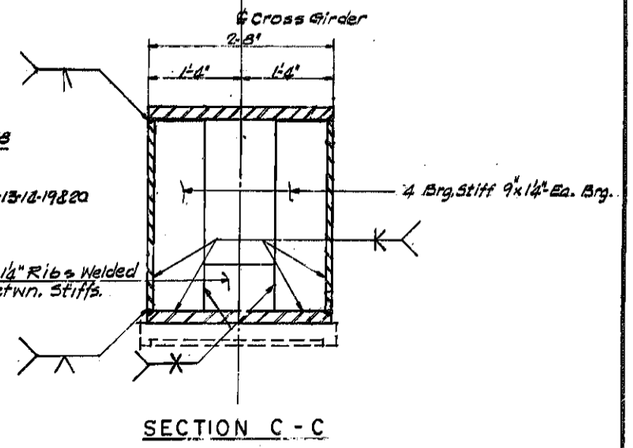


CROSS GIRDER ELEVATION

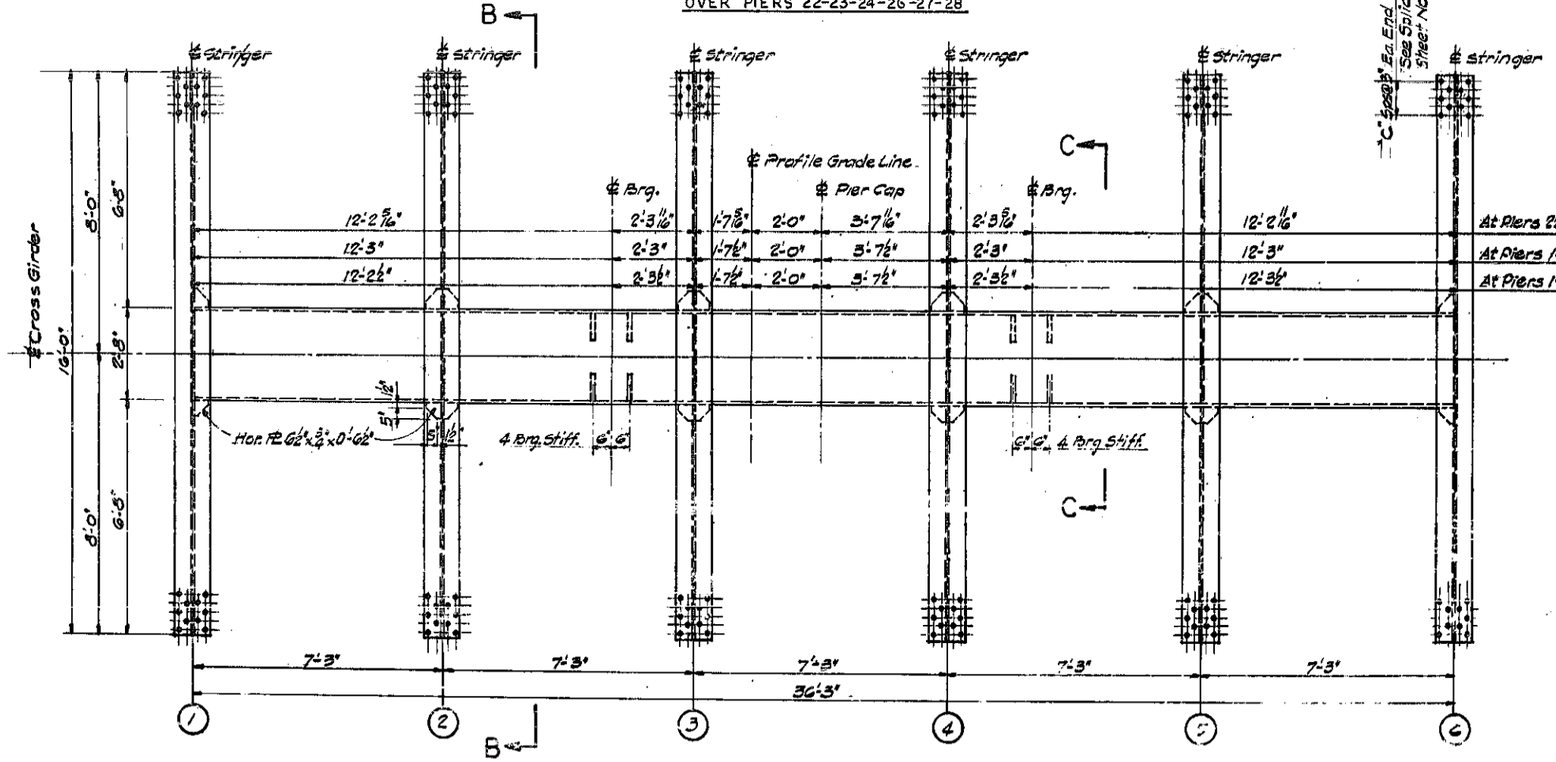
OVER PIERS 22-23-24-26-27-28



SECTION B-B



SECTION C - C



SECTIONAL TOP PLAN A - A

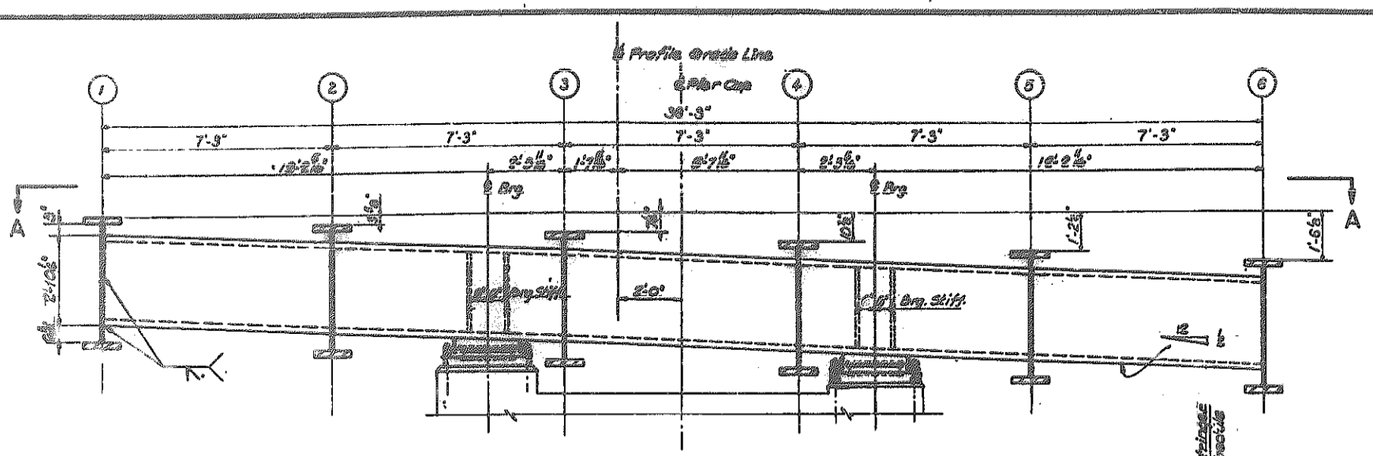
DESIGNED	A.S.
CHECKED	E.M.M.
DRAWN	G.A.R.
CHECKED	A.S.

CROSS GIRDERS AT INTERIOR SPANS & DETAILS

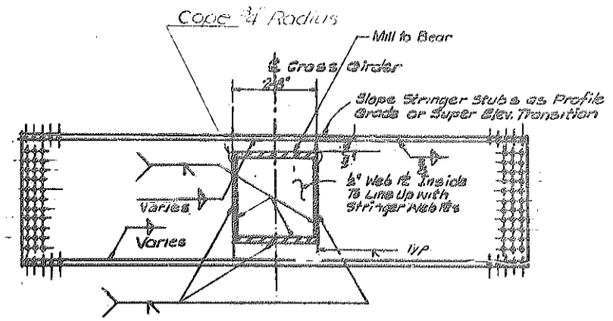
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FAS	SEC.	COUNTY	SHEET NO.	SHEET NO.
		COOK	225	1891

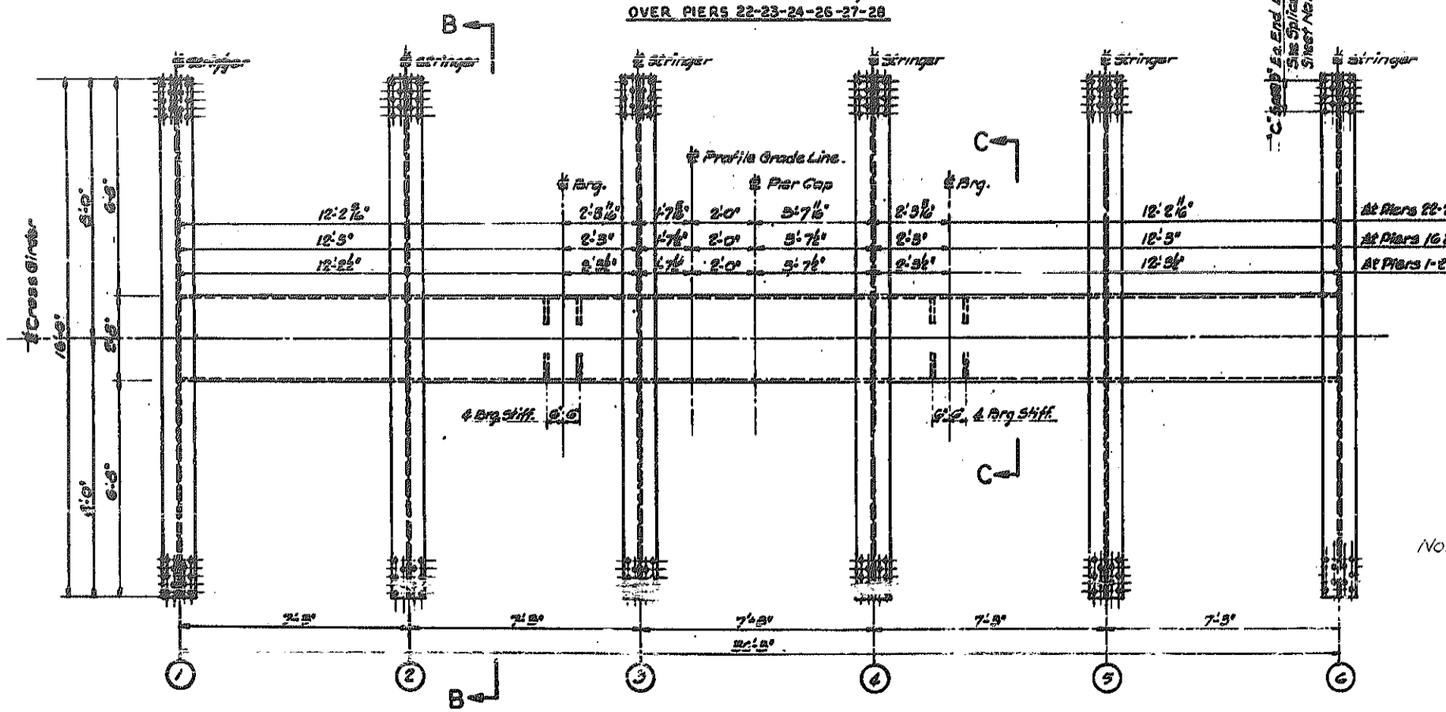
SHEET NO. 64 A
102 SHEETS



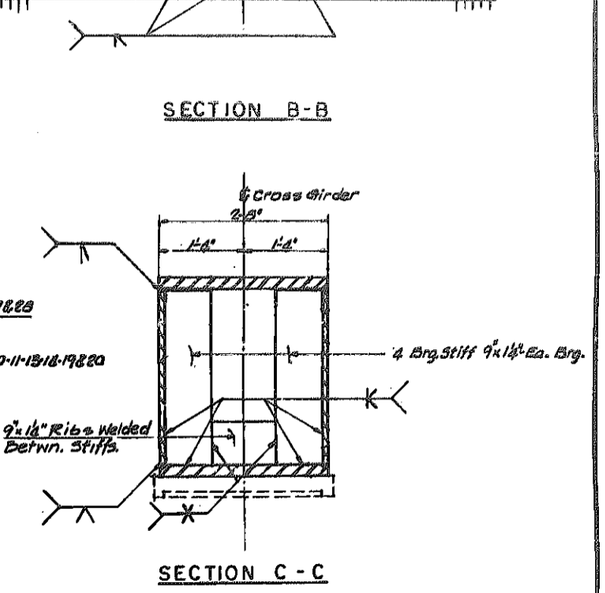
CROSS GIRDER ELEVATION
OVER PIERS 22-23-24-26-27-28



SECTION B-B



SECTIONAL TOP PLAN A-A



SECTION C-C

Note: Contract calculated weight of Structural Steel is reduced by 3,660 pounds.

DESIGNED	A.S.
CHECKED	F.MM.
DRAWN	A.K.
CHECKED	A.S.

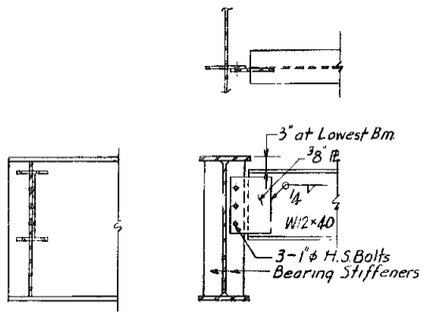
AS REVISED

CROSS GIRDERS AT INTERIOR SPANS & DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

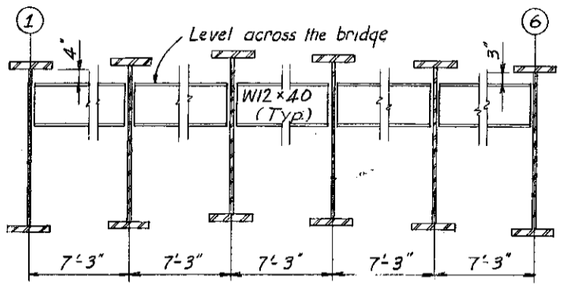
As Revised 11-14-75 L.W.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	160
U. S. R. REG. NO.	ILLINOIS	PROJECT		

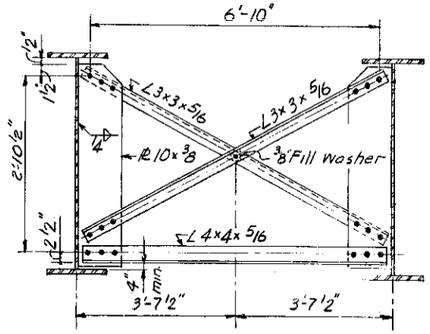
SHEET NO. 65
102 SHEETS



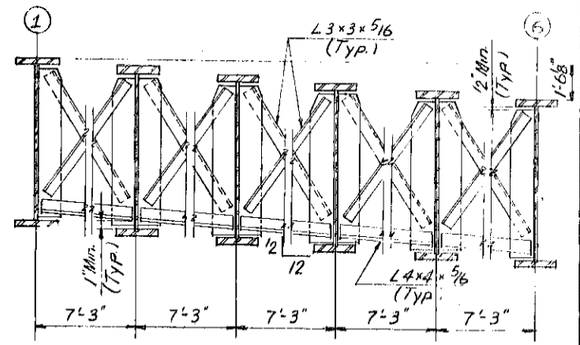
END DIAPHRAGM 'D'
(At South Abutment)



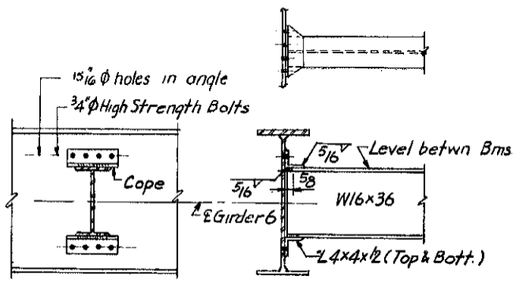
ELEV. END DIAPHRAGM 'D'



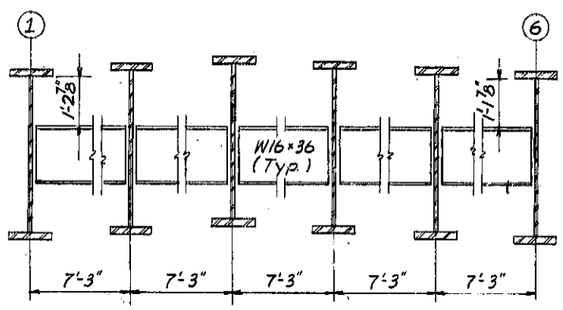
TYP. INT. CROSS FRAME 'D2'



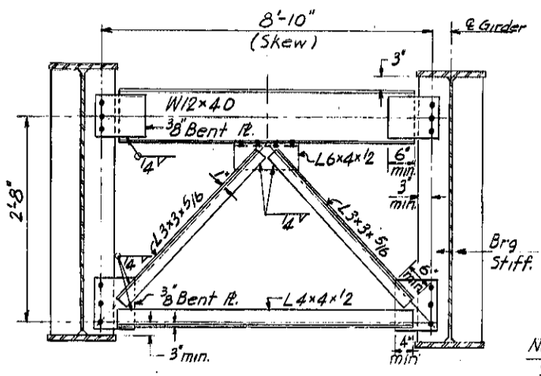
ELEV. INT. CROSS FRAME 'D2'



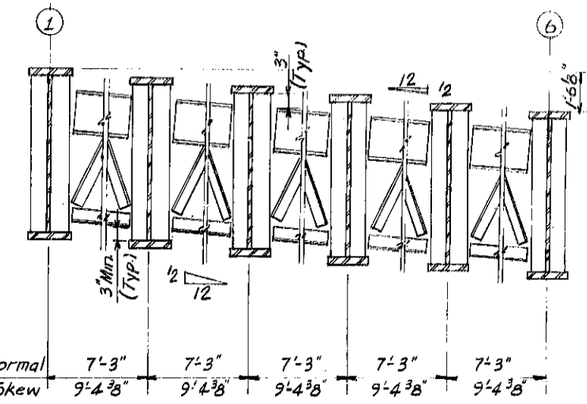
INTERIOR DIAPHRAGM 'D1'



ELEV. INT. DIAPHRAGM 'D1'



TYP. END CROSS FRAME 'D3'
(At North Abutment)



ELEV. END CROSS FRAME 'D3'

NOTE.

5/16" ø holes in angles for 3/4" ø bolts. Hardened washers shall be required over holes in angles and gusset plates.

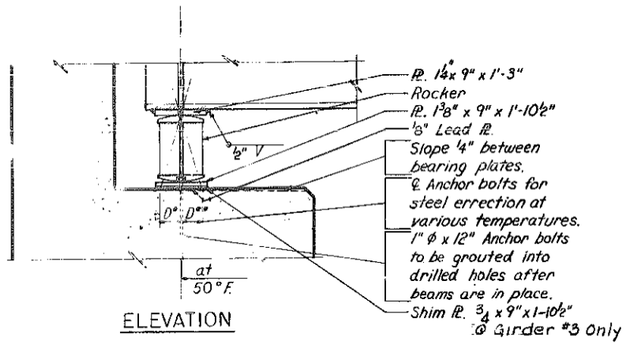
DESIGNED	TC
CHECKED	EMM
DRAWN	EMM
CHECKED	A.S.

DIAPHRAGMS & CROSS FRAMES DETAILS
LA GRANGE RD. FA. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION **41+38.63**

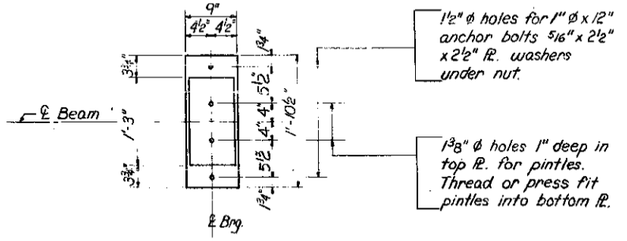
REVISED 7-15-75

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	161
B. P. R. SEC. NO.	ILLINOIS	F. PROJECTS		

SHEET NO. 66
102 SHEETS

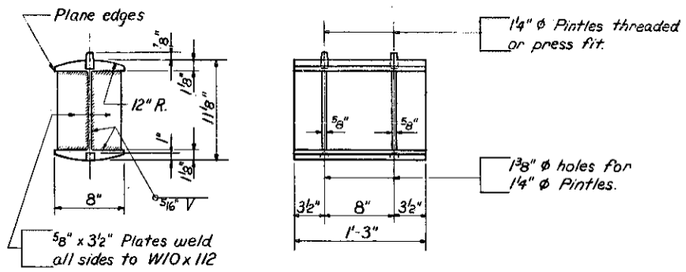


ELEVATION

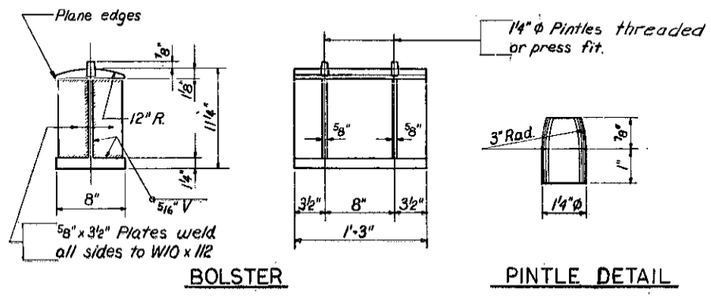


PLAN

BEARING DETAILS AT S. ABUTMENT

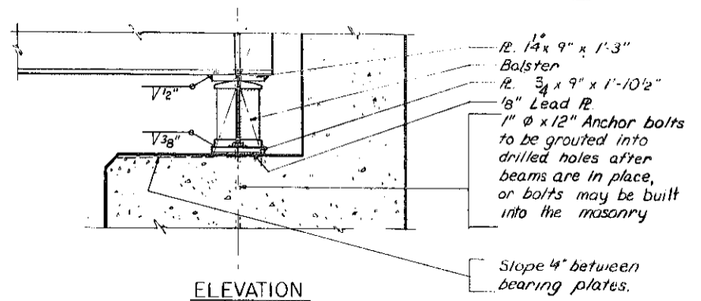


ROCKER

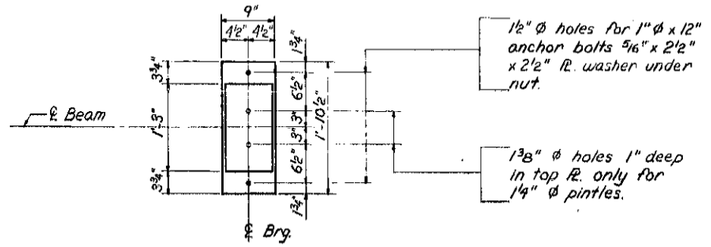


BOLSTER

PINTLE DETAIL



ELEVATION

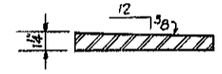


PLAN

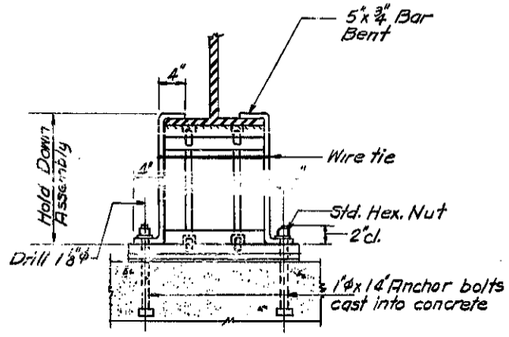
BEARING DETAILS AT N. ABUTMENT

D° = 1⅛" per 100' of exp. for every 15° below the normal temperature of 50° F.

D° = 1⅛" per 100' of exp. for every 15° above the normal temperature of 50° F



TOP BEARING PLATE DETAIL



BEAM HOLD DOWN DETAIL

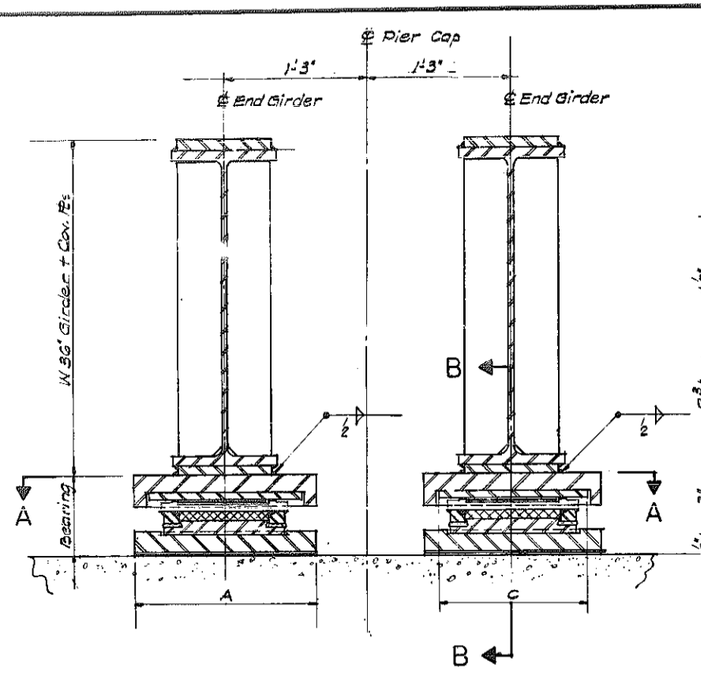
Note:
Beams at South Abutment shall be held down with device as shown if pouring of concrete is started at Span No. 4. If the pour starts at the South Abutment, no hold down device will be required.
Hold down device if used shall be removed after pouring is completed. Nuts shall be placed on Anchor Bolts.
Cost of Hold Down Assembly incidental to Class X Concrete.

DESIGNED	A.S.
CHECKED	E.M.M.
DRAWN	A. S.
CHECKED	E.M.M.

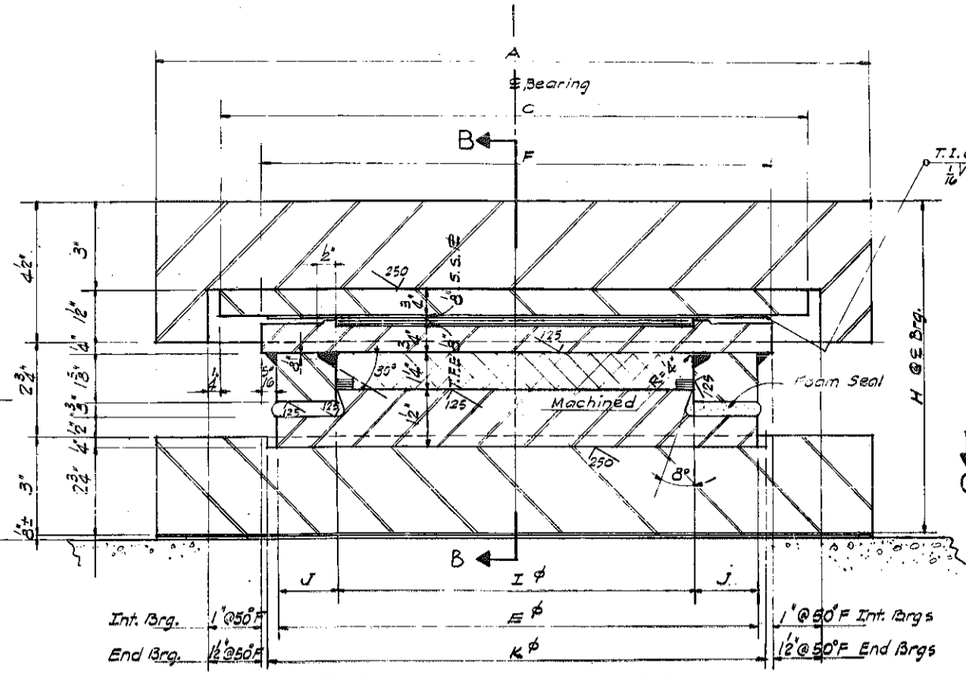
BEARING DETAILS AT NORTH & SOUTH ABUTMENTS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	162
B. P. R. REG. NO.	REVISIONS	PROJECT		

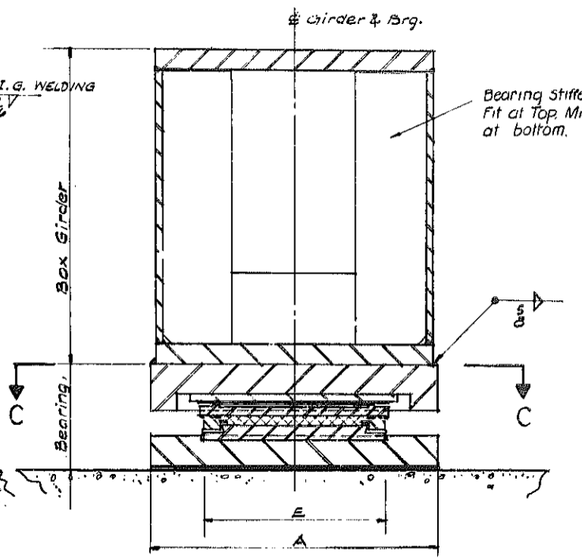
Sheets 167 to 182 Inclusive



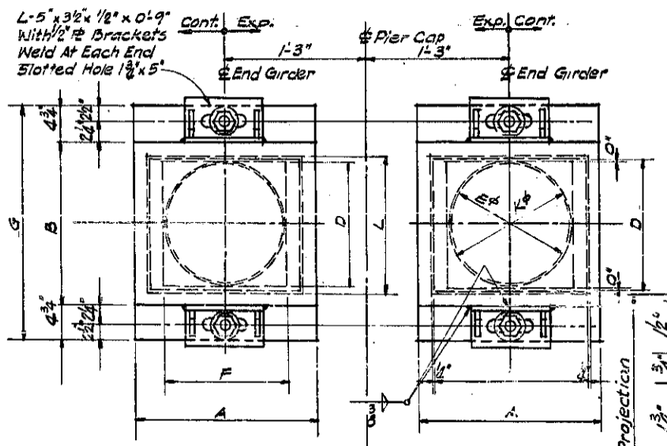
SECTION THRU END EXPANSION BEARINGS



TYPICAL EXPANSION BEARING DETAILS & DIMS.



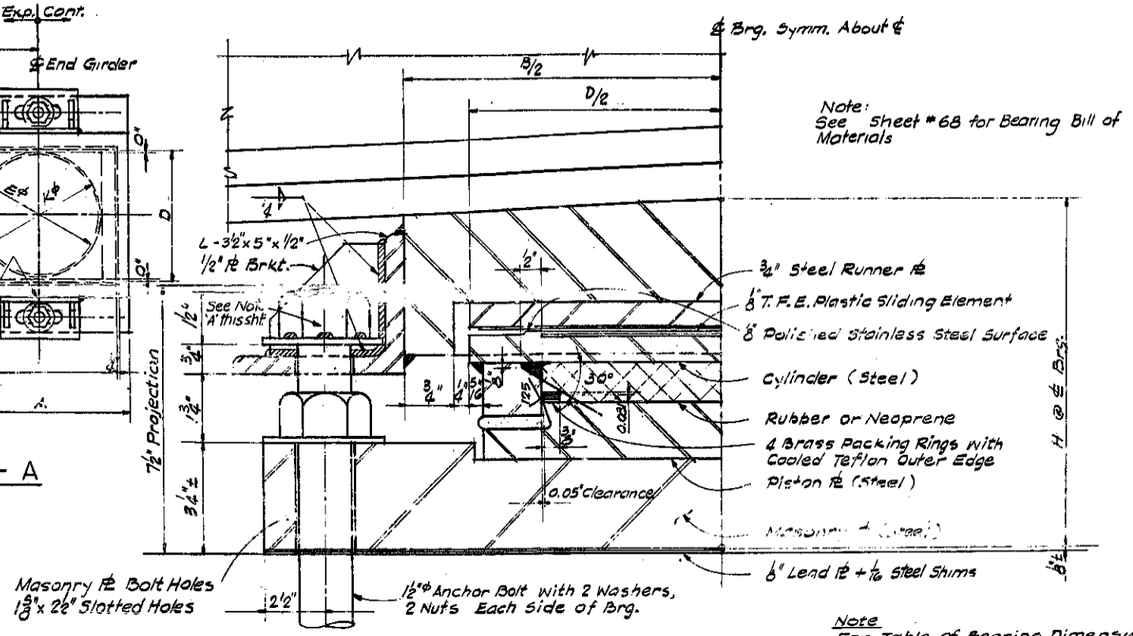
SECTION THRU BOX GIRDER EXP. BRG.



SECTIONAL PLAN A - A

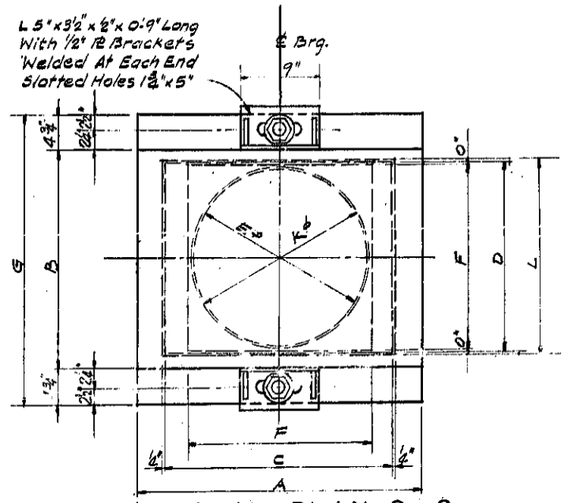
Note: A
Before the conc. deck is poured, turn down and snug fit the nut against the top of the 15..3½. After the conc. deck is in place loosen the nut to dimensions as shown on section B-B.

DESIGNED	A.S.
CHECKED	E.M.M.
DRAWN	A.S.
CHECKED	E.M.M.



SHOWING HALF OF SECTION B - B

Note
For Table of Bearing Dimensions for Expansion Bearings See Sheet No. 68

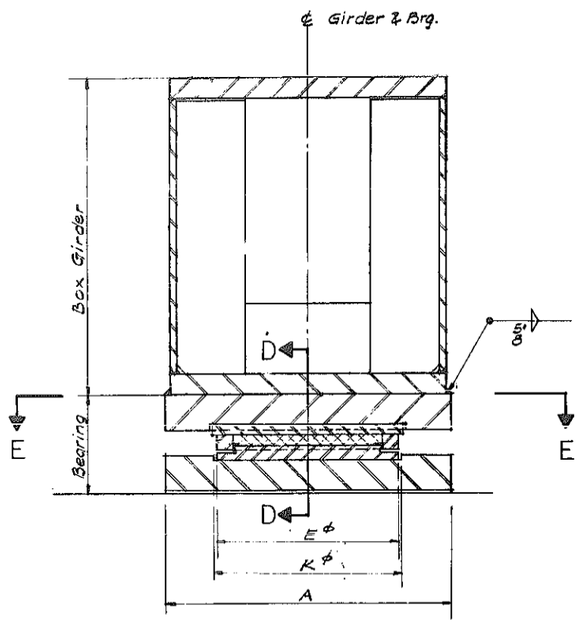


SECTIONAL PLAN C - C

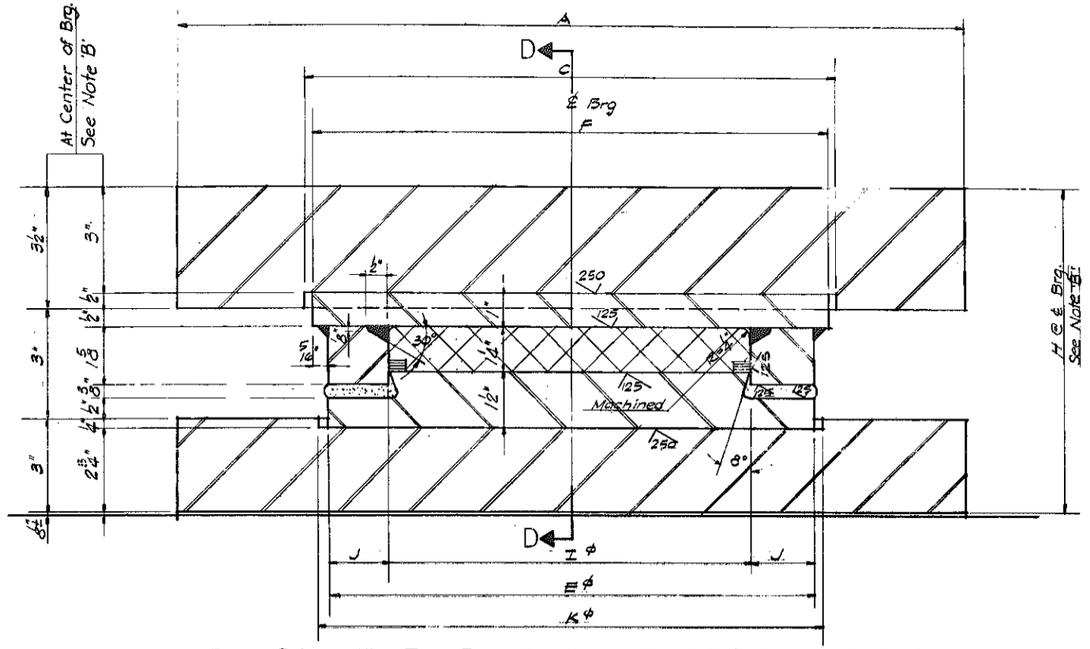
EXPANSION BEARINGS AT CROSS GIRDERS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462 - X - B & R
COOK COUNTY
STATION 41 + 38.63

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	169
S. P. R. REQ. NO.	ILLINOIS	PROJECT		

SHEET NO. G8 FOR SHEETS



FIXED BEARING AT BOX GIRDER



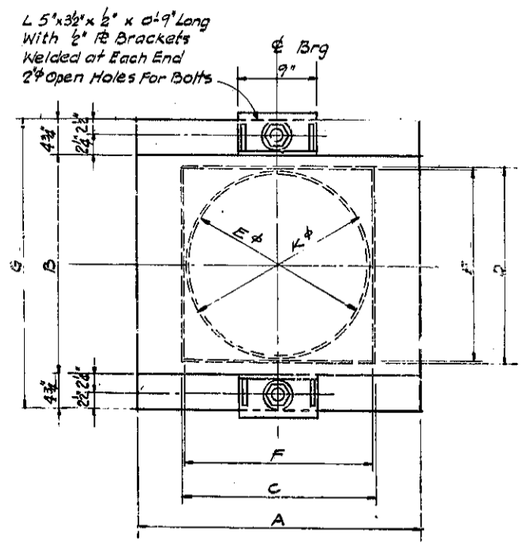
TYPICAL FIXED BEARING DETAILS & DIMENSIONS

BEARING LOCATION SCHEDULE

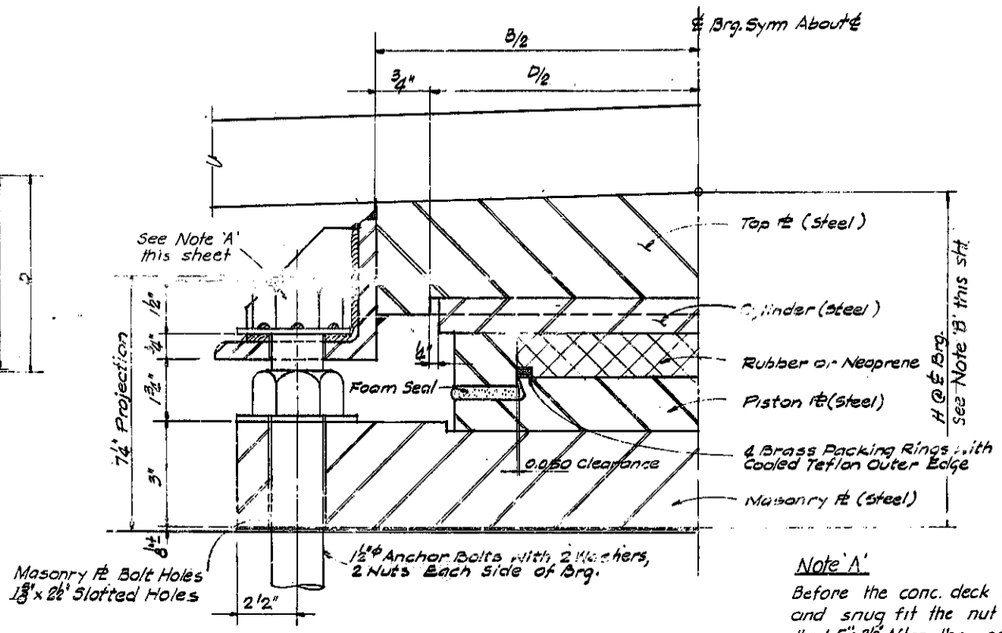
PIER NO.	EXP.	FIXED	WTS.
#1-#3-#7 #10-#13-#19-#22 #24-#26-#28	850 kip 2 Ea. Pier		
#2-#5-#8 #11-#14-#20 #23-#24-#27		850 kip 2 Ea. Pier	
#4-#6-#9-#12 #15-#18-#21 #25	350 kip 4 Ea. Pier		
#17		1000 kip 2 Ea. Pier	
#16	1000 kip 2 Ea. Pier		
#29	400 kip 4 Ea Pier		

BILL OF MATERIAL

Item	Unit	Quant
Pier Bearing Type F850	Each	18
Pier Bearing Type F1000	Each	2
Pier Bearing Type E350	Each	32
Pier Bearing Type E400	Each	4
Pier Bearing Type E850	Each	20
Pier Bearing Type E1000	Each	2



SECTIONAL PLAN E–E



SHOWING HALF OF SECTION D-D

TABLE OF BEARING DIMENSIONS

EXP. BEARING	A	B	C	D	E	F	G	H	I	J	K	L
350 Kips	20.50"	16.50"	17.00"	14.50"	13.87"	14.50"	26.00"	10.25"	11.87"	1.00"	14.37"	15.00"
400 "	21.37"	17.37"	17.87"	15.37"	14.75"	15.37"	26.88"	10.25"	12.75"	1.00"	15.25"	15.87"
850 "	34.00"	24.00"	23.50"	22.00"	21.37"	22.00"	33.50"	10.25"	18.37"	1.50"	21.87"	22.50
1000 "	34.00"	25.00"	24.50"	23.00"	22.37"	23.00"	34.50"	10.25"	19.37"	1.50"	22.87"	23.50

FIXED BRG	A	B	C	D	E	F	G	H	I	J	K
850 Kips	34.00"	24.00"	22.50"	22.50"	21.37"	22.00"	33.50"	9.50"	18.37"	1.50"	21.87"
1000 "	34.00"	25.00"	23.50"	23.50"	22.37"	23.00"	34.50"	9.50"	19.37"	1.50"	22.87"

Note 'B'
Bevel top of top Pl as required for grade slope along long axis of Bridge and for superelevation along axis of cross girders

Note 'A'
Before the conc. deck is poured, turn down and snug fit the nut against the top of the L 5"x3½". After the conc. deck is in place, loosen the nut to the dimensions as shown On Section D-D.

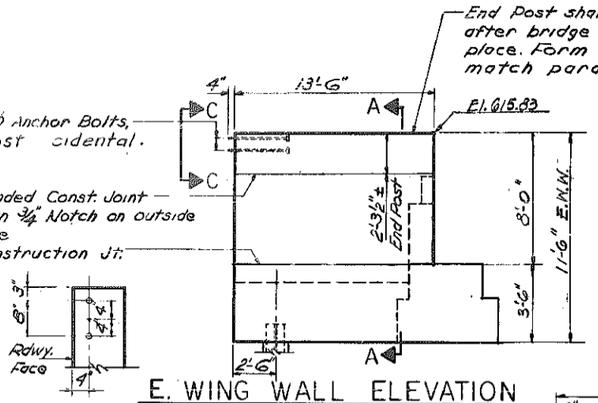
DESIGNED	A. S.
CHECKED	E.M.M.
DRAWN	A. S.
CHECKED	E.M.M.

FIXED BEARINGS AT CROSS GIRDERS
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

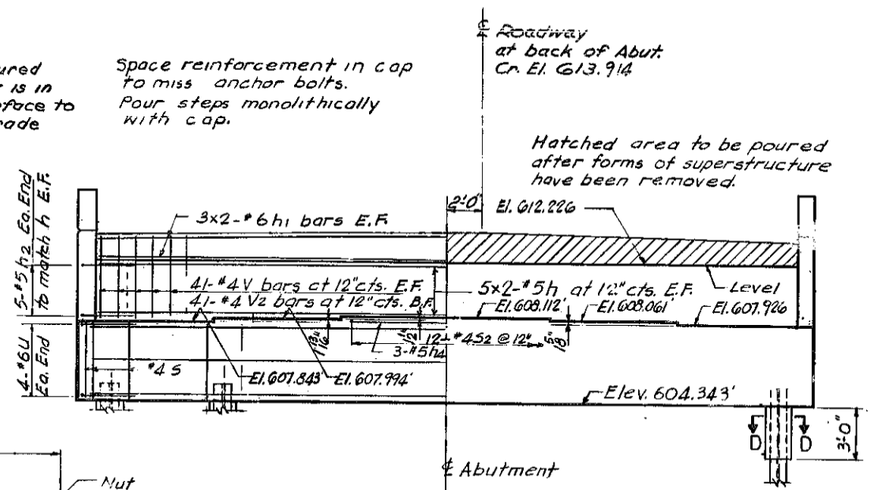
DISTRICT AND HIGHWAY NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	164

B. P. R. SEC. NO. | ILLINOIS | PROJECT

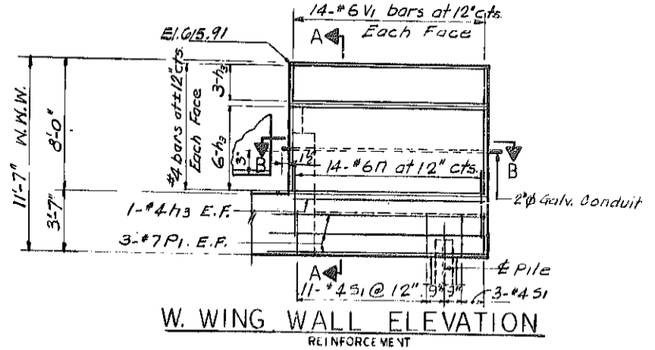
SHEET NO. 69 I.D.O. SHEETS



E. WING WALL ELEVATION

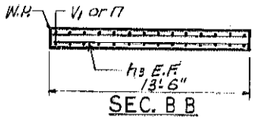


ELEVATION



W. WING WALL ELEVATION

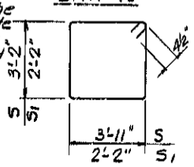
REINFORCEMENT



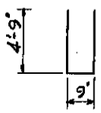
SEC. B B



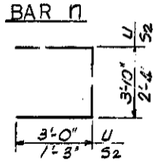
BAR V2



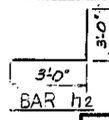
BAR S & S1



BAR n



BARS U & S2

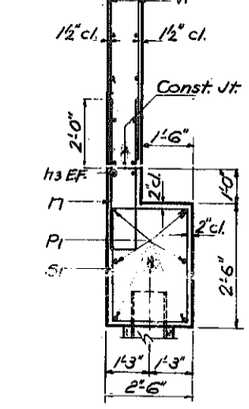


BAR h2

BILL OF MATERIALS

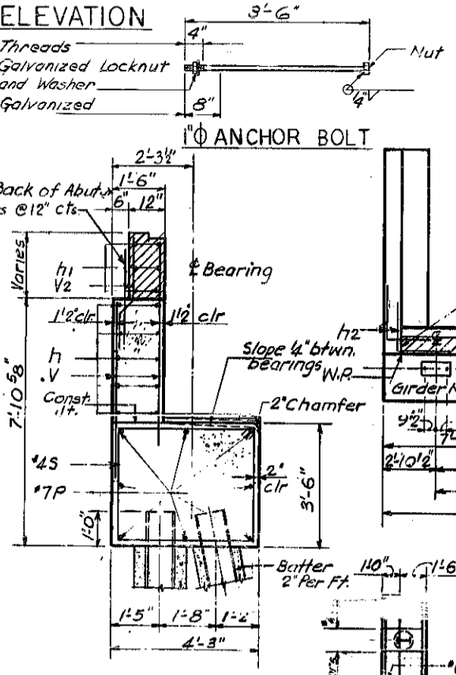
Bar	No.	Size	Length	Shape
h	20	#5	21'-8"	
h1	12	#6	21'-8"	
h2	20	#5	6'-0"	
h3	40	#4	13'-3"	
h4	3	#5	11'-5"	
n	28	#6	10'-3"	
P	8	#7	41'-8"	
P1	12	#7	13'-6"	
S	40	#4	14'-11"	
S1	28	#4	9'-5"	
S2	12	#4	11'-10"	
U	8	#6	9'-10"	
V	82	#4	6'-3"	
V1	56	#6	7'-4"	
V2	41	#4	3'-5"	
V30	40	#5	2'-0"	

Item	Unit	Total
Class X Concrete	Cu. Yds.	51.2
Reinforcement Bars	Lbs.	4675
Steel Piles (HP10x42)	L.F.	570.
Test Pile (HP10x42)	Ea.	1.



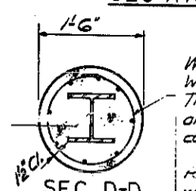
VIEW C-C

SEC A-A



SEC. THRU ABUT

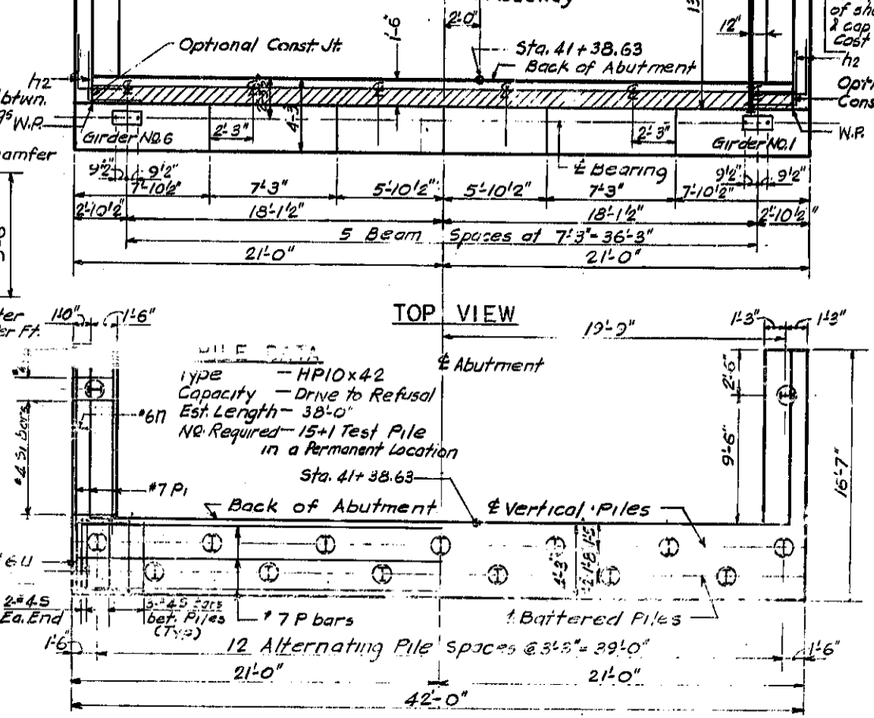
1"ϕ ANCHOR BOLT



SEC D-D

Welded wire fabric 6"x6" mesh #4 wires - Wt. 58 #/100 sq ft.
The cost of Class X Concrete Encasement and reinforcement is incidental to the cost of furnishing piles

Forms for encasement may be omitted when soil conditions will permit



TOP VIEW

PLAN - PILE CAP

DESIGNED	E. D.
CHECKED	A. S.
DRAWN	R.J.W. & E.M.M.
CHECKED	A. S.

SOUTH ABUTMENT

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 45	462H (BR)	COOK	223	165
S.F.P. SEC. NO.				

SHEET NO. 70
102 SHEETS

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.

1"Ø Anchor Bolts cast to be incidental to Bridge Structure

Bonded Const. Joint with ¾" Notch on outside face

2"Ø Conduit

Construction Jt.

W. WING WALL ELEVATION

VIEW C-C

Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.

℄ Roadway at Bk. Abut. Sta. 68+82.27
Cr. Elev. 632.228

El. 635.248
El. 631.866
El. 630.179
El. 633.578

5x2-#5h Bars at 12"cts. E.F.
53-#4v Bars at 12"cts. E.F.
Elev. 627.212
Elev. 626.884
Elev. 626.489
Elev. 626.154
Elev. 625.778
Elev. 625.328
3-#5h4
3-#5h5
8-#7P bars see Sec. thru Abut.
Elev. 622.988
Elev. 621.828

ELEVATION

Threads
Galv. Locknut and Washer
Galvanized
Nut

1Ø ANCHOR BOLT

14-#6 v. bars at 12"cts. Each Face
14-#6 h bars at 12"cts. Each Face
14-#6 h at 12"cts.
1-#4 h3 (Ea. Face)
3-#7p (Ea. Face)
3-#4s1
11-#4s1 at 12"cts.
℄ Pile

E. WING WALL ELEVATION (Reinforcement)

SEC. B-B

BAR S2

Bonded Const. Jt. With ¾" Notch
Const. Jt.
#5 V30 @ 12"cts
Slope ¼" between bearings
2" Chamfer
Batter 2" per Ft
Back of Abut.
℄ Brg.
Dim Varies See Elev.

SEC. A-A

SEC. THRU ABUT.

TOP VIEW

Sta. 68+82.27
℄ Roadway
2"Ø Galv. Conduit (Sch. 40) Extend to clear wing wall & terminate outside of shoulder. Cost incidental to Back of Abutment
Optional Const. Jt.
Gasket
W.P.

PLAN-PILE CAP

℄ Vertical Piles
℄ Battered Piles
Back of Abutment
#7P
#4S

BAR S & S1

BAR M & U

BAR U1

BAR h1

BAR h2

BAR U

ABUTMENT BILL OF MATERIAL

BAR	No	SIZE	LENGTH	SHAPE
h	20	#5	26'-9"	
h1	12	#5	6'-0"	
h2	12	#5	6'-0"	
h3	44	#4	13'-2"	
h4	3	#5	6'-2"	
h5	9	#5	10'6"	
M	28	#6	10'-3"	
P	16	#7	29'-6"	
P1	6	#7	13'-2"	
P2	6	#7	15'-0"	
S	46	#4	16'-11"	
S1	28	#4	11'-5"	
S2	54	#4	5'-10"	
U	4	#6	11'7"	
U1	5	#6	9'5"	
V30	40	#5	8'-0"	
V	106	#4	6'-0"	
V1	56	#6	8'-0"	

Item	Unit	Total
Class X Concrete	Cu. Yds	62.5
Reinforcement Bars	Lbs.	6200
Steel Piles - HP10x42	L.F.	624.
Test Pile - HP10x42	Ea.	1

SEC. D-D

3'-0" Concrete Encasement

Welded wire fabric 6"x6" mesh #4 wires - Wt. 58 #/100 sq. ft.
The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.

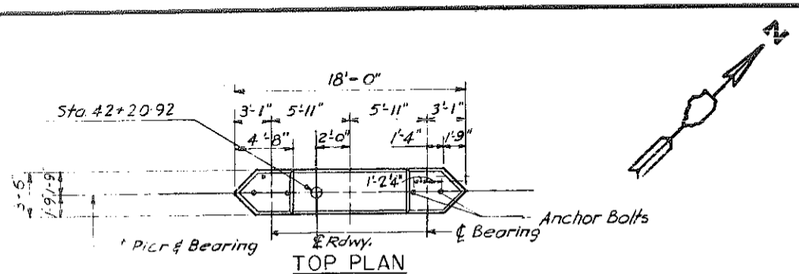
Forms for encasement may be omitted when soil conditions will permit.

DESIGNED	R.W.
CHECKED	A.S.
DRAWN	W.C.K.
CHECKED	A.W.

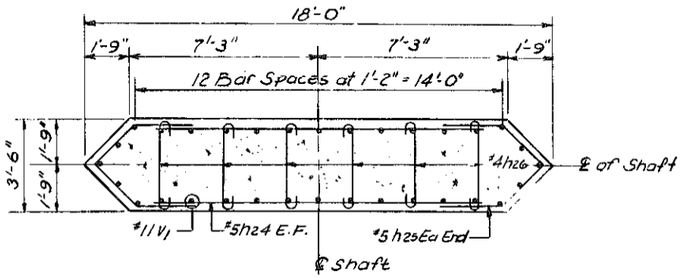
Pile Data
Type — HP10x42 Steel Piles
Capacity — Drive to refusal
Est. Length — 39'-0"
No. Required — 16+1 Test Pile in Permanent Location

NORTH ABUTMENT
LA GRANGE RD. F.A. ROUTE 45 U.S.45 NORTH BRIDGE
SECTION 462-X-B S & R
COOK COUNTY
STATION 41+38.63

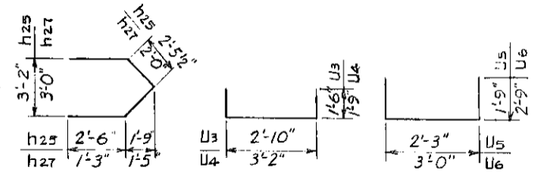
				TOTAL SHEETS	SHEET NO.
FAI 45	462X B&R	COOK	223	166	SHEET 71



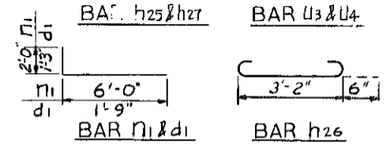
TOP PLAN



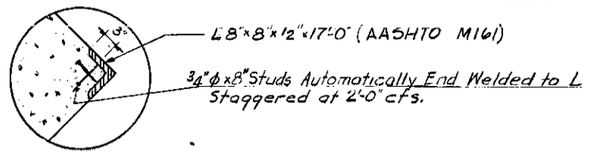
SECTION A-A



BAR h25 & h27 BAR U3 & U4 BAR U5 & U6

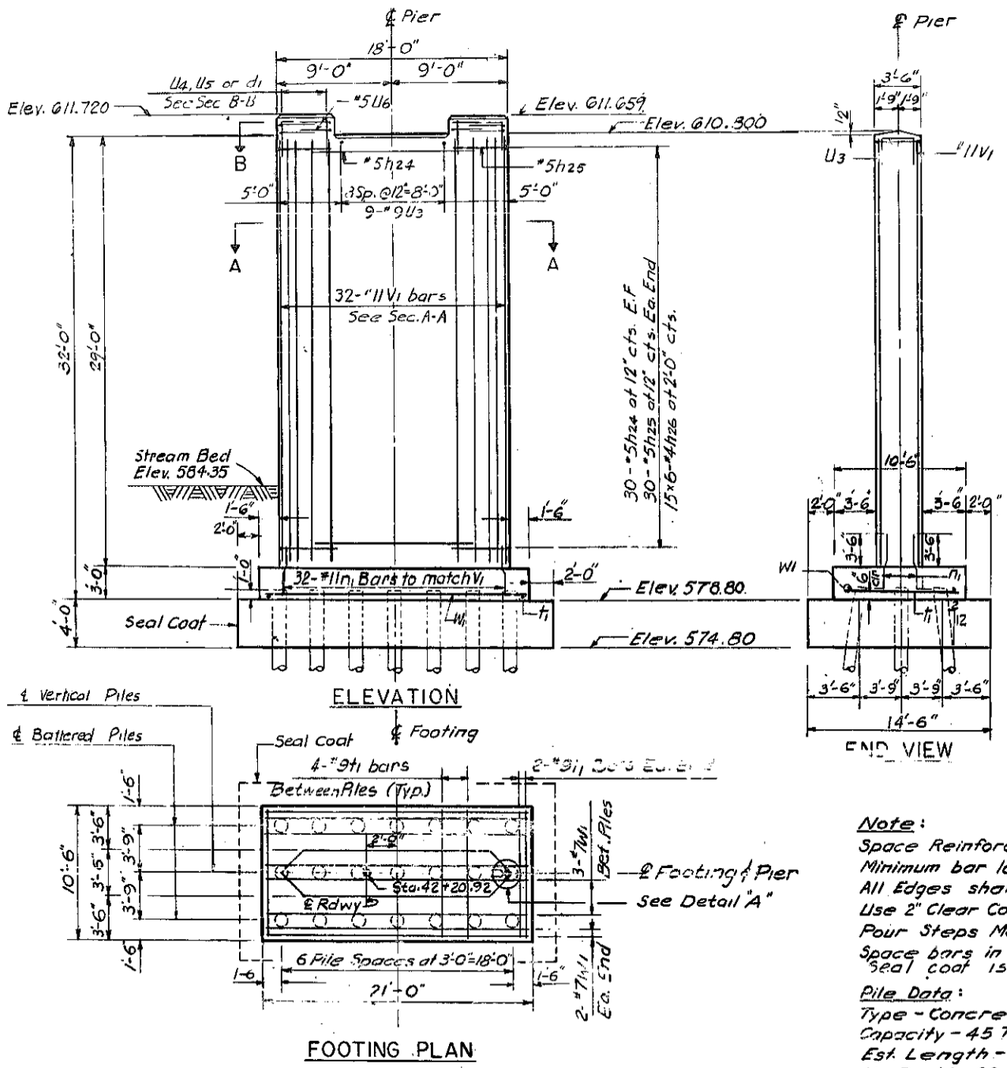


BAR n1 & d1 BAR h26



DETAIL A

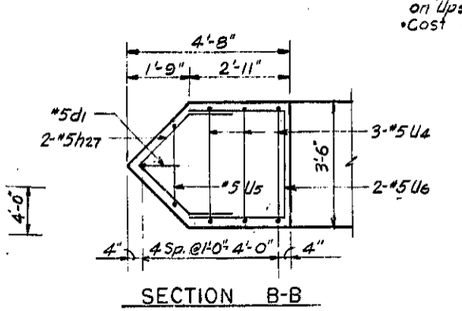
Notes:
- Angle Protection shall be placed on Upstream face of Shaft only.
- Cost incidental to class 'X' concrete.



ELEVATION

END VIEW

FOOTING PLAN



SECTION B-B

Note:
Space Reinforcement in Pier to miss Anchor Bolts.
Minimum bar lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier.
Space bars in Pile Cap to miss Piles.
"Seal coat is designed for water elevation 586.85'

Pile Data:
Type - Concrete Piles
Capacity - 45 T
Est. Length - 15'-0"
No. Req'd - 20 + 1 Test Pile in a Permanent Location

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on sheet #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Shaft				
V1	32	#11	28'-9"	
h24	60	#5	12'-0"	
h25	60	#5	6'-11"	
h26	90	#4	4'-2"	
h27	4	#5	6'-6	
d1	2	#5	3'-0"	
U3	9	#9	5'-10"	
U4	6	#5	6'-8"	
U5	2	#5	5'-9"	
U6	4	#5	8'-6	
Footing				
W1	10	#7	20'-6"	
t1	28	#9	10'-3"	
n1	32	#11	8'-0"	

Item	Units	Total
Reinforcement Bars	Lbs.	9460
Class X Concrete	Cu. Yds.	86.6
Cofferdam Excavation	Cu. Yds.	1283
Concrete Piles	L.F.	300
Conc. Test Piles	Ea.	1
Seal Coat Concrete	Cu. Yds	55.7

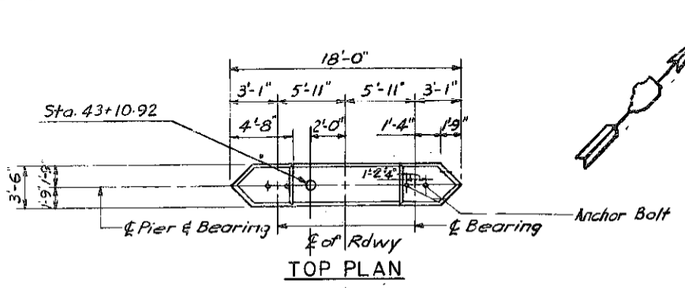
DESIGNED	E.M.M.
CHECKED	A S.
DRAWN	R.K.P.
CHECKED	A S.

PIER NO. 1

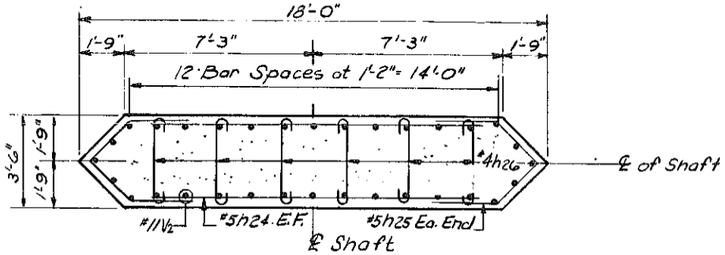
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BAR	COOK	225	167
F.A.P. RTE. NO.	ILLINOIS	PROJECT		

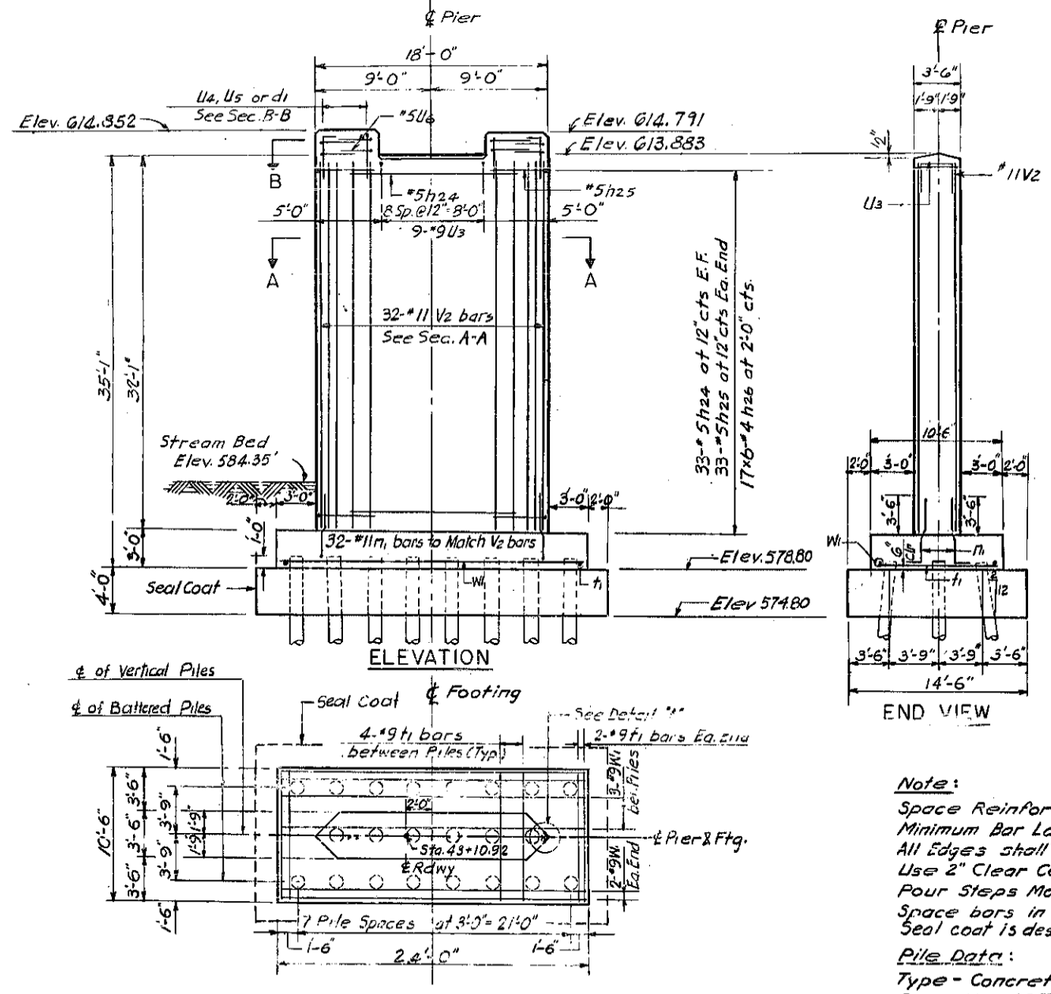
SHEET NO. 7 OF 102 SHEETS



TOP PLAN



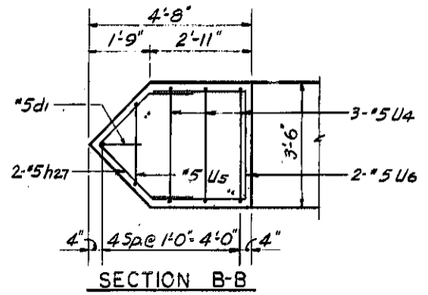
SECTION A-A



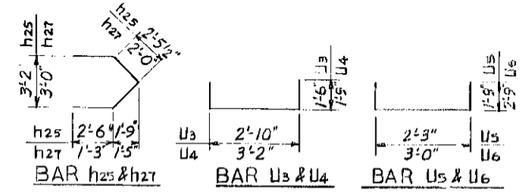
ELEVATION

END VIEW

FOOTING PLAN



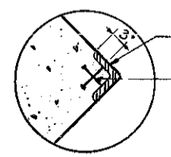
SECTION B-B



BAR h25 & h27 BAR U3 & U4 BAR U5 & U6



BAR n1 & d1 BAR h26



DETAIL "A"

L 8"×8"×½"×1'-0" (AASHTO M 161)

¾"ϕ × 8" Studs Automatically End Welded to Angle & Staggered at 2'-0" cts.

Notes
- Angle Protection shall be placed on Upstream face of Shaft only.
- Cost incidental to class 'X' concrete

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Shaft		
V2	32	#11	31'-10"	
h24	66	#5	12'-0"	
h25	66	#5	9'-11"	
h26	102	#4	4'-2"	
h27	4	#5	6'-6"	
d1	2	#5	3'-0"	
U3	9	#9	5'-10"	
U4	6	#5	6'-8"	
U5	2	#5	3'-9"	
U6	4	#5	8'-6"	
		Footing		
W1	10	#9	25'-6"	
t1	32	#9	10'-3"	
n1	32	#11	8'-0"	

Item	Unit	Total
Reinforcement Bars	Lbs.	10,640
Class X Concrete	Cu. Yds.	96.7
Cofferdam Excavation	Cu. Yds.	143.6
Concrete Piles	L.F.	315
Conc. Test Piles	Ea.	1
Seal Coat Concrete	Cu. Yds.	60.2

Note:
Space Reinforcement in Pier to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier.
Space bars in Pile Cap to miss Piles.
Seal coat is designed for water elevation 586.85'

Pile Data:
Type - Concrete Piles.
Capacity - 45 T
Est. Length - 15'-0"
No. Req'd - 21 + 1 Test Pile in a Permanent Position.

Note:
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on sheet #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

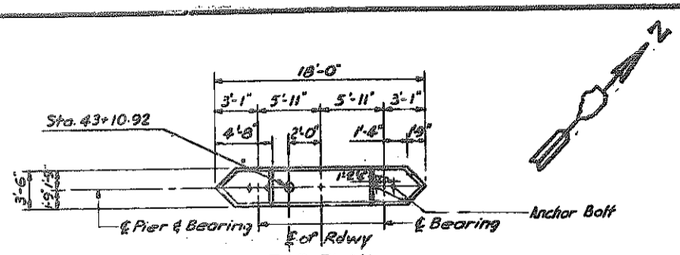
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CHECKED	A. S.
DRAWN	H.J.S.
CHECKED	A. S.

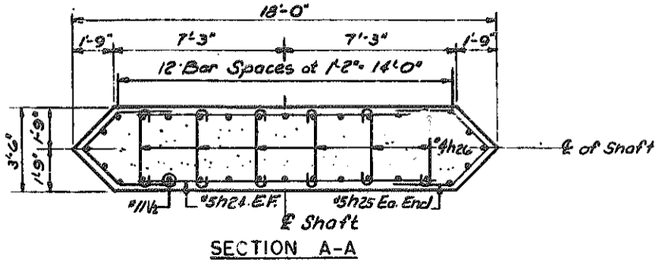
PIER NO. 2

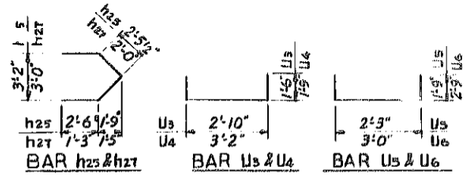
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

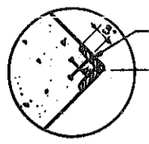
FAS	462X	COOK	228	1674

SHEET NO. 7 2 (12 SHEETS)

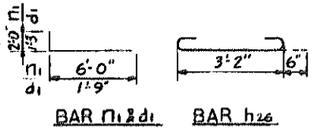




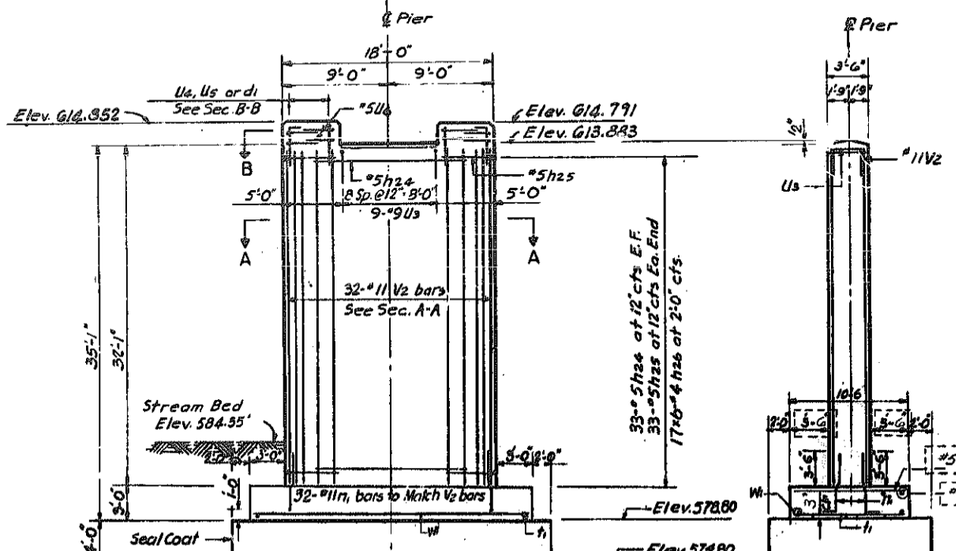


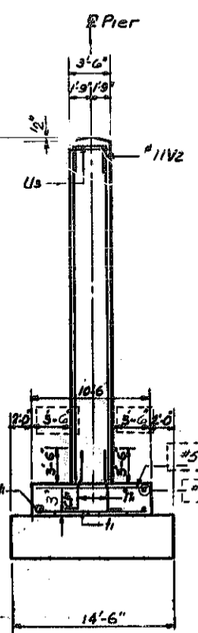

DETAIL 'A'

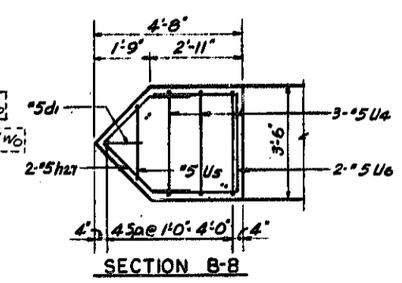
L 8"×8"×12"×17'-0" (AASHTO M161)
¾"ϕ×8" Studs Automatically End Welded to Angle & Staggered at 2'-0" cts.

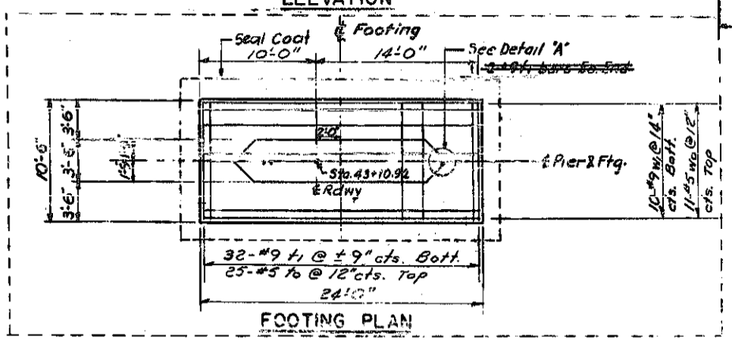


Notes
- Angle Protection shall be placed on Upstream face of Shaft only.
- Cost incidental to class 'X' concrete









BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Shaft		
V2	32	#11	31'-10"	
h24	66	#5	12'-0"	
h25	66	#5	9'-11"	
h26	102	#4	4'-2"	
h27	4	#5	6'-6"	
d1	2	#5	3'-0"	
U3	9	#9	3'-10"	
U4	6	#5	6'-8"	
U5	2	#5	5'-9"	
U6	4	#5	8'-6"	
t0	25	#5	10'-3"	
W0	11	#5	23'-6"	
		Footing		
W1	10	#9	23'-6"	
T1	32	#9	10'-3"	
n1	32	#11	8'-0"	

Item	Unit	Total
Reinforcement Bars	Lbs.	10,690
Class X Concrete	Cu. Yds.	96.7
Cofferdam Excavation	Cu. Yds.	143.6
[illegible]	[illegible]	[illegible]
Seal Coat Concrete	Cu. Yds.	60.2

Note:
Space Reinforcement in Pier to miss Anchor Bolts.
Minimum Bar Lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard ¾" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier.

Seal coat is designed for water elevation 586.85'

Max. Sfg. pressure = 5.6 T/sf

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on sheet #6B. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	H.U.S.
CHECKED	A. S.

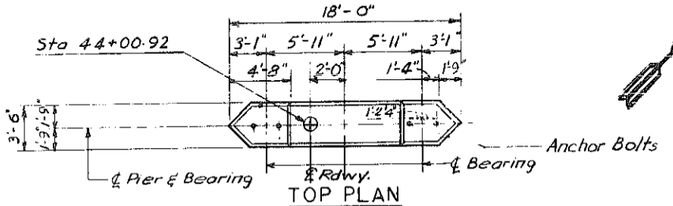
Rev. [ ] 2-25-76 G.K.R.

PIER NO. 2

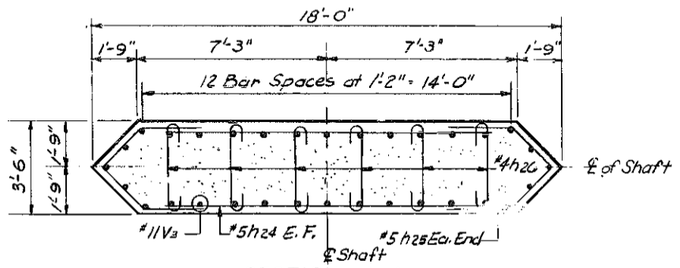
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FA RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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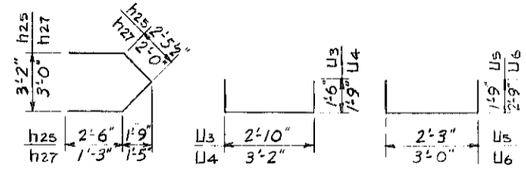
SHEET NO. 73 OF 102 SHEETS



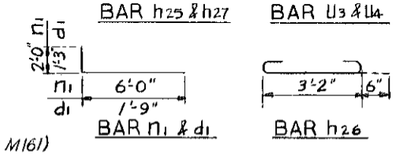
TOP PLAN



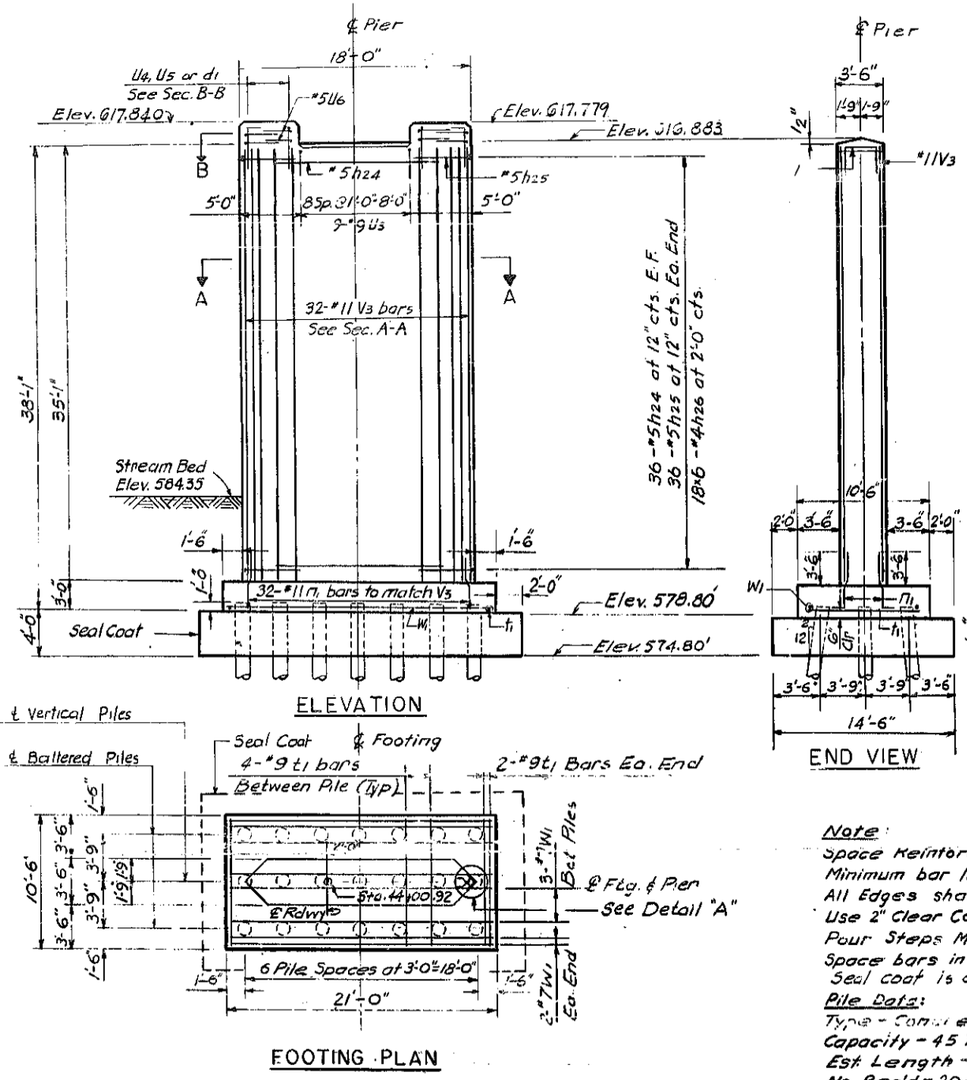
SECTION A-A



BAR h25 & h27 BAR U3 & U4 BAR U5 & U6

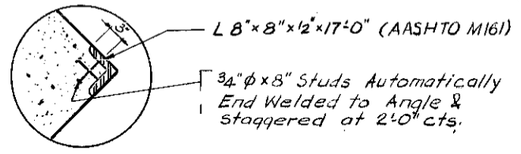


BAR n1 & d1 BAR h26



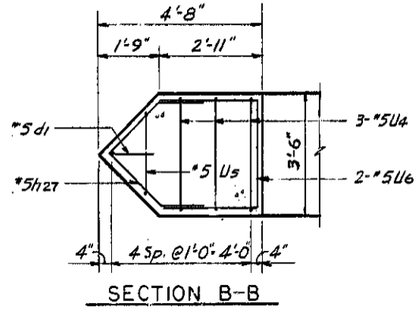
ELEVATION END VIEW

FOOTING PLAN



DETAIL A

Notes:
- Angle Protection shall be placed on Upstream face of Shaft only.
- Cost incidental to class 'X' concrete



SECTION B-B

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Shaft		
V3	32	#11	34'-10"	
h24	72	#5	12'-0"	
h25	72	#5	9'-11"	
h26	108	#4	4'-2"	
h27	4	#5	6'-6"	
d1	2	#5	3'-0"	
U3	9	#9	5'-10"	
U4	6	#5	6'-8"	
U5	2	#5	5'-9"	
U6	4	#5	8'-6"	
		Footing		
W1	10	#7	20'-6"	
t1	28	#9	10'-3"	
n1	32	#11	8'-0"	

Item	Unit	Total
Reinforcement Bars	Lbs.	10,920
Class X Concrete	Cu Yds.	99.6
Cofferdam Excavation	Cu Yds.	128.3
Concrete Piles	L.F.	300
Conc. Test Pile	Ea	1
Seal Coat Concrete	Cu. Yds	53.7

Note:
Space Reinforcement in Pier to miss Anchor Bolts.
Minimum bar lap = 24 Diameters unless otherwise noted.
All Edges shall have Standard 3/4" Chamfers except as noted.
Use 2" Clear Cover on all Reinforcing unless otherwise noted.
Pour Steps Monolithically with Pier.
Space bars in Pile Cap to miss Piles.
Seal coat is designed for water elevation 596.85'

Pile Data:
Type - Concrete Piles
Capacity - 45 T
Est Length - 15'-0"
No. Req'd. - 20+1 Test Pile in a Permanent Location.

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sheet #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials

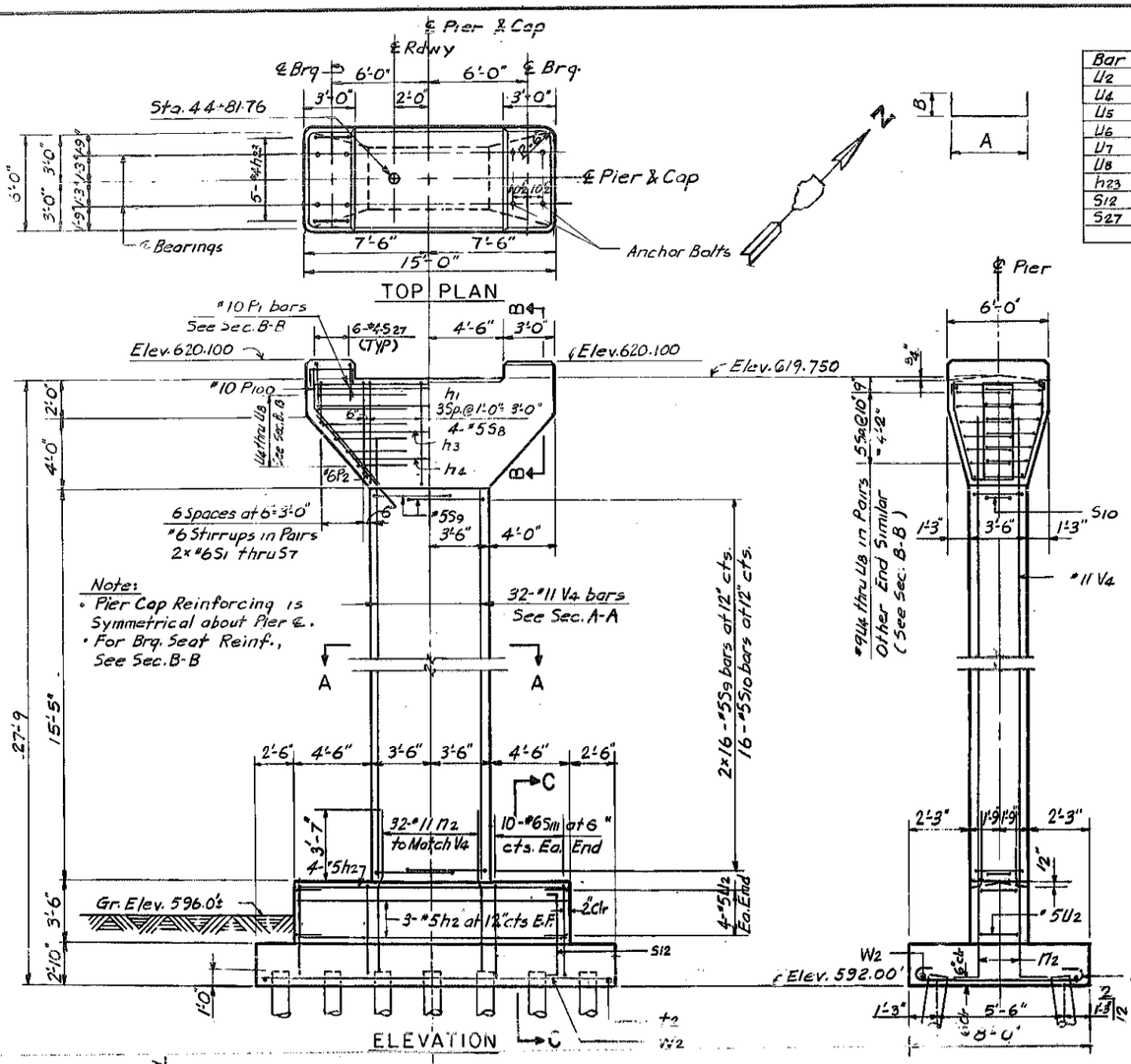
DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	H.J.S.
CHECKED	A. S.

PIER NO. 3

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

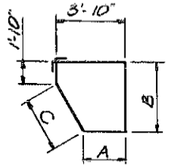
FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462R 462M	COOK	223	164
B. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 74
102 SHEETS

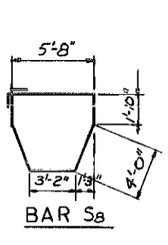


Bar	A	B
U2	3'-0"	1'-3"
U4	3'-6"	6'-0"
U5	3'-4"	5'-6"
U6	3'-1"	4'-7"
U7	2'-10"	3'-10"
U8	2'-6"	3'-0"
h23	2'-6"	2'-3"
S12	5'-7"	2'-0"
S27	5'-4"	1'-3"

Bar	A	B	C
S1	3'-8½"	2'-2½"	0'-5"
S2	3'-6½"	2'-8½"	0'-11½"
S3	3'-5"	3'-2½"	1'-5½"
S4	3'-3"	3'-8½"	2'-0"
S5	3'-1"	4'-2½"	2'-6"
S6	2'-11"	4'-8½"	3'-0½"
S7	2'-9½"	5'-2½"	3'-7"



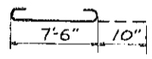
RAR S1 thru S7



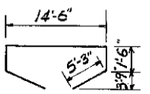
BAR S8



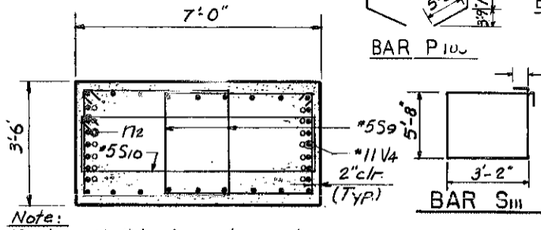
BAR M2



BAR t2

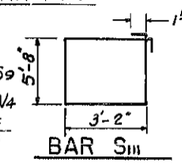


BAR P100

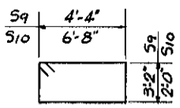


Note:
M2 bars shall be lapped inside rather than on the side for end bars.

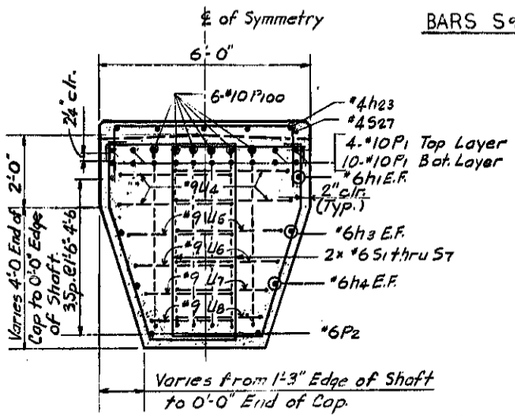
SECTION A-A



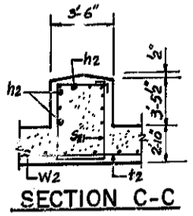
BAR S11



BARS S9 & S10



SECTION B-B



SECTION C-C

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U4	8	#9	15'-6"	
U5	4	#9	14'-4"	
U6	4	#9	12'-3"	
U7	4	#9	10'-6"	
U8	4	#9	8'-6"	
P100	6	#10	28'-0"	
P1	14	#10	14'-6"	
P2	2	#6	8'-0"	
h1	2	#6	14'-6"	
h3	2	#6	11'-6"	
h4	2	#6	8'-6"	
S1	4	#6	13'-1"	
S2	4	#6	14'-0"	
S3	4	#6	14'-10"	
S4	4	#6	15'-9"	
S5	4	#6	16'-7"	
S6	4	#6	17'-5"	
S7	4	#6	18'-4"	
S8	8	#5	21'-6"	
h23	10	#4	7'-0"	
S27	12	#4	9'-10"	
Column				
V4	32	#11	19'-5"	
S9	32	#5	15'-11"	
S10	16	#5	18'-3"	
Crash Wall				
S11	20	#6	19'-8"	
S12	8	#9	9'-7"	
h2	6	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
W2	12	#10	20'-6"	
t2	22	#7	9'-2"	
M2	32	#11	11'-8"	

See Bar Diagram

Item	Unit	Total
Reinforcement Bars	Lbs	12090
Class X Concrete	Cu. Yds.	54.5
Structure Excavation	Cu. Yds.	44.4
Concrete Piles	L.F.	260.0
Conc. Test Piles	Ea.	1

Pile Data
Type——Concrete Piles
Capacity——45 Tons
Est. Length—20'-0"
No: Required-13+1 Test Pile in a permanent location

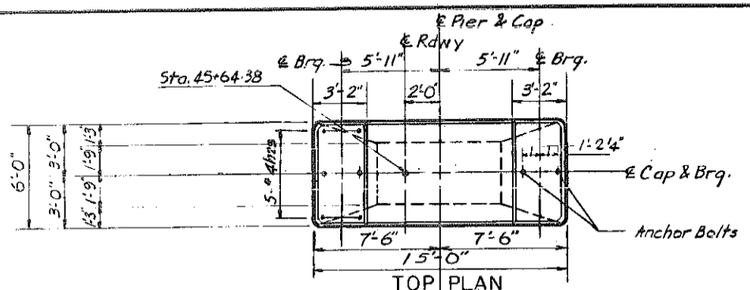
Notes:
- For Deck Drainage Details at Pier, see sheet 101
- Space Reinforcement in PierCap to miss Anchor Bolts.
- Minimum Bar Lap = 24 Diameters unless otherwise noted.
- All edges shall have standard ¾ chamfers except as noted.
- Use 2" clear cover on all Reinforcing unless otherwise noted.
- Pour Steps monolithically with Pier Cap.
- Space bars in Pile Cap to miss Piles.
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in 'H' dimension shown on sheet 68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A.S.

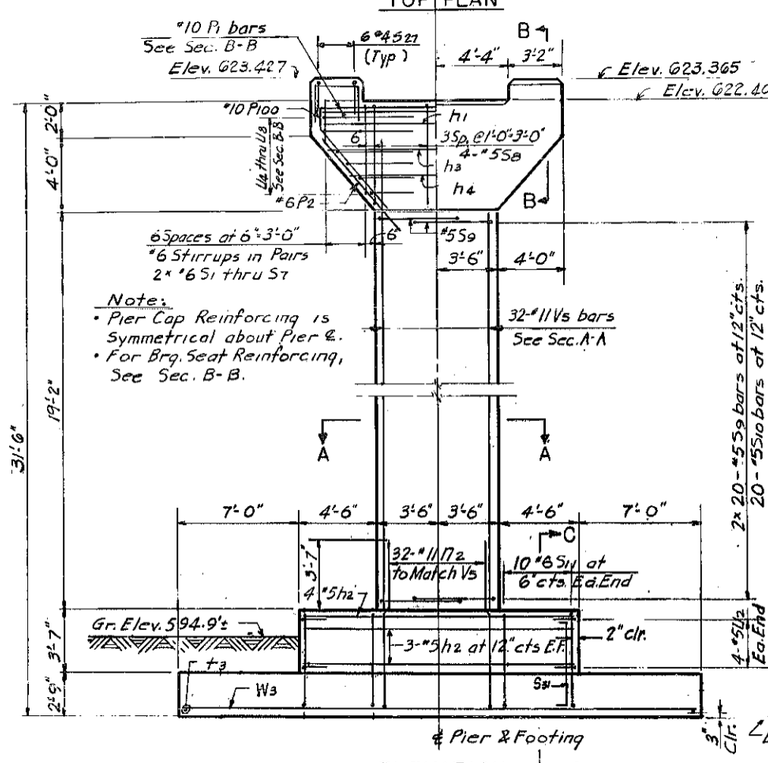
PIER 4
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAS	462X B&R	COOK	223	170
D. P. R. ENG. NO.	ILLINOIS	PROJECT		

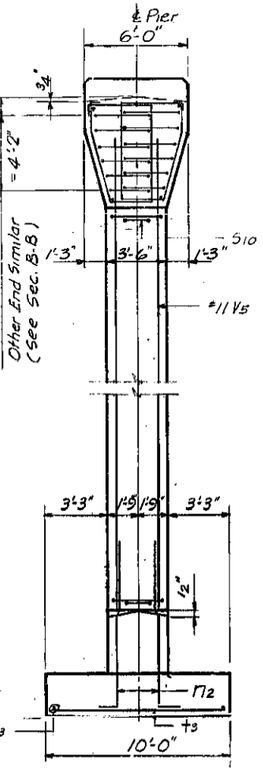
SHEET NO. 7 S
102 SHEETS



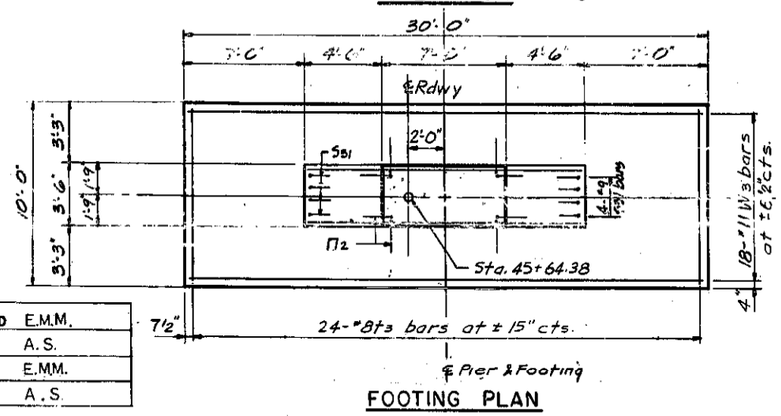
TOP PLAN



ELEVATION



END VIEW

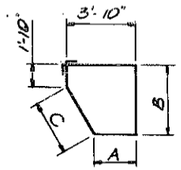


FOOTING PLAN

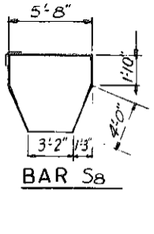
DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A. S.

Bar	A	B
U2	3'-0"	1'-3"
U4	3'-6"	6'-0"
U5	3'-4"	5'-6"
U6	3'-1"	4'-7"
U7	2'-10"	3'-10"
U8	2'-6"	3'-0"
n23	2'-6"	2'-3"
S31	5'-10"	2'-0"
S27	5'-4"	2'-3"

Bar	A	B	C
S1	3'-8½"	2'-2⅝"	0'-5"
S2	3'-6⅝"	2'-8⅜"	0'-11⅞"
S3	3'-5"	3'-2½"	1'-5½"
S4	3'-3"	3'-8½"	2'-0"
S5	3'-1"	4'-2½"	2'-6"
S6	2'-11"	4'-8⅜"	3'-0½"
S7	2'-9⅜"	5'-2⅞"	3'-7"



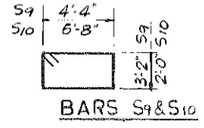
BARS S1 thru S7



BAR S8

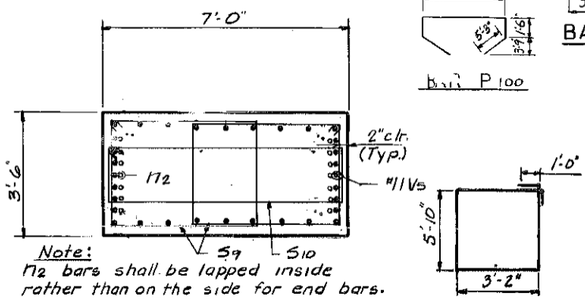


BAR n2



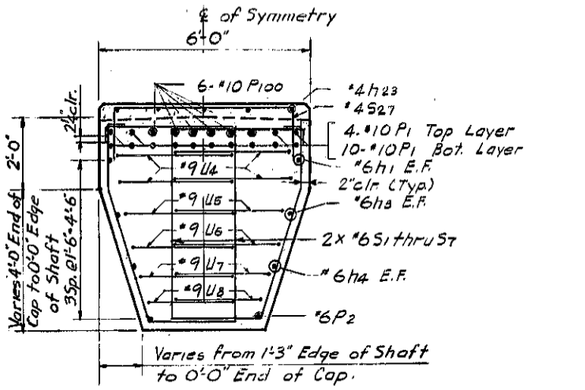
BARS S9 & S10

Bars P100

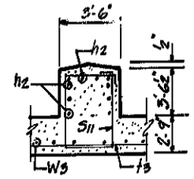


SECTION A-A

BAR S11



SECTION B-B



SECTION C-C

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U4	8	#9	15'-6"	
U5	4	#9	14'-4"	
U6	4	#9	12'-3"	
U7	4	#9	10'-6"	
U8	4	#9	8'-6"	
P100	6	#10	28'-0"	
P1	14	#10	14'-6"	
P2	2	#6	8'-0"	
h1	2	#6	14'-6"	
h3	2	#6	11'-6"	
h4	2	#6	8'-6"	
S1	4	#6	13'-1"	
S2	4	#6	14'-0"	
S3	4	#6	14'-10"	
S4	4	#6	15'-9"	
S5	4	#6	16'-7"	
S6	4	#6	17'-5"	
S7	4	#6	18'-4"	
S8	8	#5	21'-6"	
h23	10	#4	7'-0"	
S27	12	#4	9'-10"	
Column				
V5	32	#11	23'-2"	
S9	40	#5	15'-11"	
S10	20	#5	18'-3"	
Crash Wall				
S11	20	#6	20'-0"	
S31	8	#9	9'-10"	
h2	10	#5	15'-6"	
U2	8	#5	5'-5"	
Footing				
W3	18	#11	29'-6"	
t3	24	#8	9'-6"	
n2	32	#11	11'-8"	

See Bar Diagram

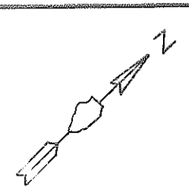
Item	Unit	Total
Reinforcement Bars	Lbs.	15,210
Class X Concrete	Cu. Yds.	76.7
Structure Excavation	Cu. Yds.	70.5

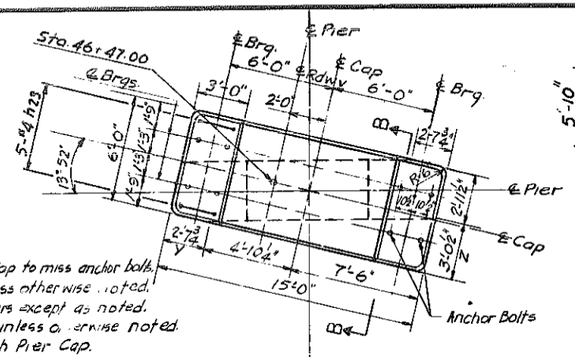
Note:
- Space Reinforcement in Pier Cap to miss Anchor Bolts.
- Minimum Bar Lap = 24 Diameters unless otherwise noted.
- All edges shall have Standard ¾ Chamfers except as noted.
- Use 2" clear cover on all reinforcing unless otherwise noted.
- Pour steps Monolithically with Pier Cap.
- Maximum Soil Pressure = 5.9 K.S.F.
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sheet #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

PIER NO. 3
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K HBR	COOK	223	171
I. D. P. B. REG. NO.	ILLINOIS	PROJECT		

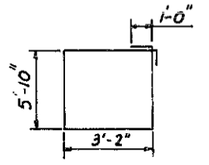
SHEET NO 7 OF 10 SHEETS



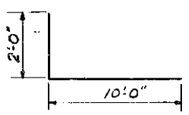


Note:
Space reinforcement in Pier Cap to miss anchor bolts.
Min bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Max. soil pressure = 4.0 KSF
For Deck Drainage Details at Pier, see sheet 101

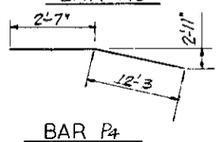
TOP PLAN



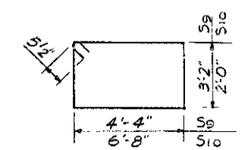
BAR S11



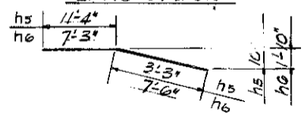
BAR h3



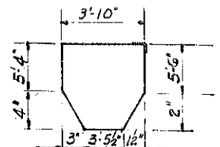
BAR P4



BARS S9 & S10



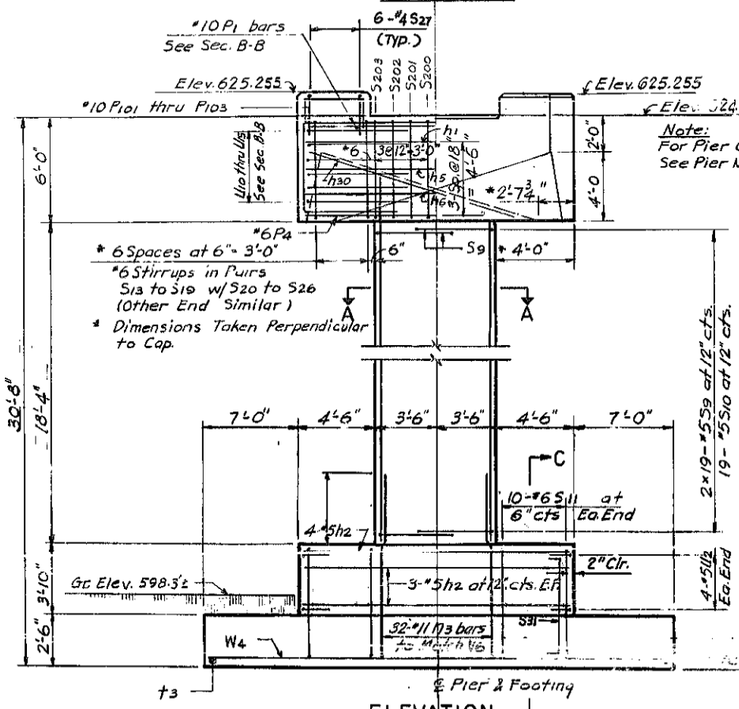
BARS h5 & h6



BAR S19

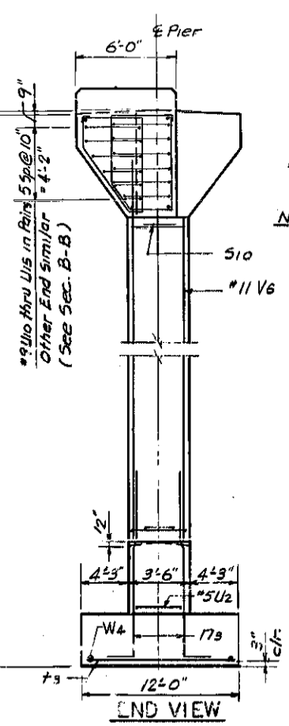


Bar	A	B
U10	3'-6"	6'-6"
U2	3'-0"	1'-3"
S27	5'-4"	2'-3"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"

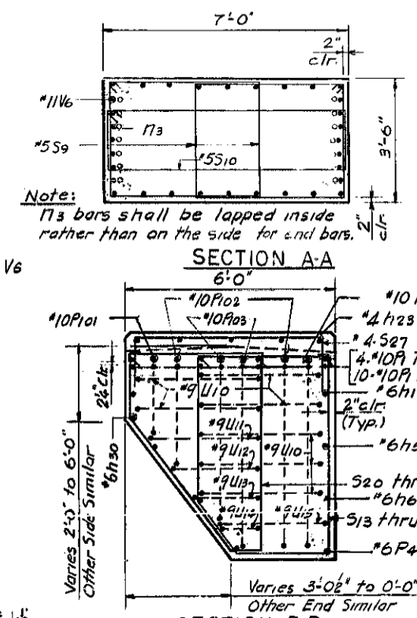


ELEVATION

Note:
For Pier Cap Isometric, See Pier No. 7



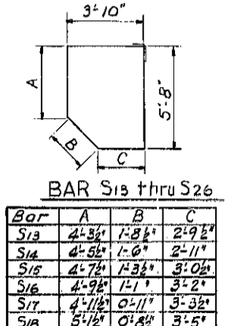
END VIEW



Note:
h3 bars shall be lapped inside rather than on the side for end bars.

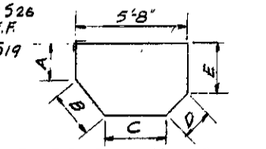
SECTION A-A

SECTION B-B



BAR S18 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"



BARS S200 thru S203

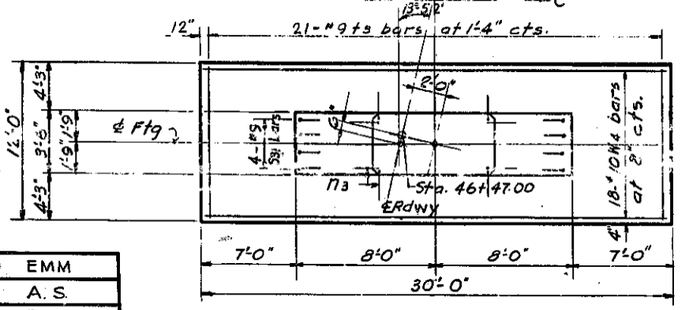
Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"

BILL OF MATERIALS

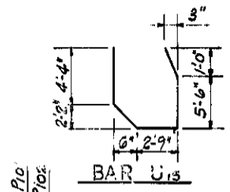
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	13'-7"	
P101	2	#10	30'-0"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-0"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V6	32	#11	22'-4"	
S9	38	#5	15'-11"	
S10	19	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
h2	10	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
W4	18	#10	29'-6"	
t3	21	#9	11'-6"	
h3	32	#11	12'-0"	

Bar Diagrams

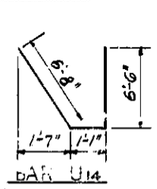
Item	Unit	Total
Reinforcement Bars	lbs.	15360
Class X Concrete	Cu. Yds.	76.5
Structure Excavation	Cu. Yds.	80.6



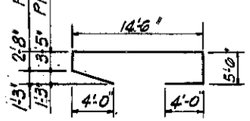
FOOTING PLAN



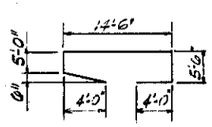
BAR U13



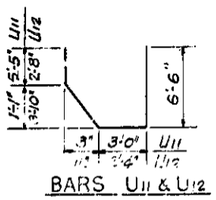
BAR U14



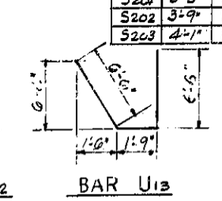
BARS P101&P102



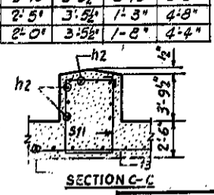
BAR P103



BARS U11 & U12



BAR U15



SECTION C-C

DESIGNED	EMM
CHECKED	A. S.
DRAWN	EMM.
CHECKED	A. S.

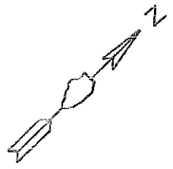
Notes:
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in 'H' dimension shown on sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

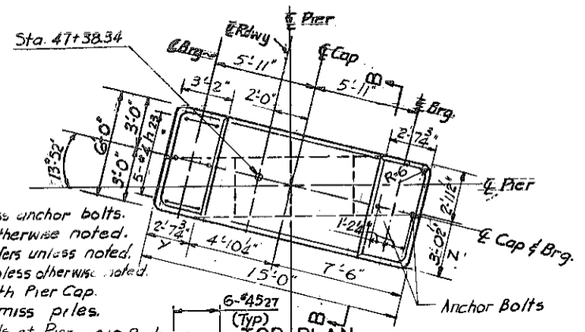
PIER NO. 6

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
SECTION NORTH BRIDGE 462-X-S & R
COOK COUNTY
STATION 41+38.63

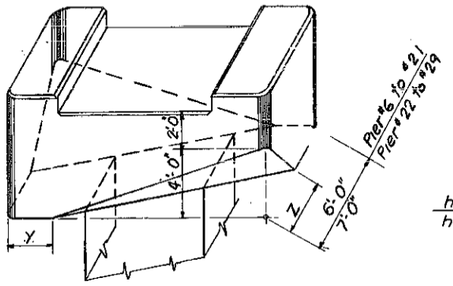
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	1 1/2
D. P. R. SEC. NO.	BEARINGS	PROJECTS		

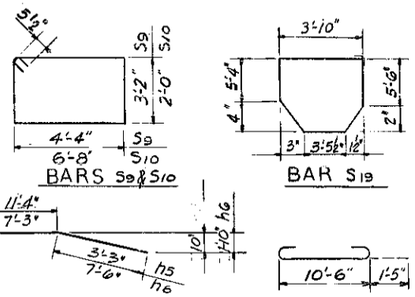
SHEET NO 77 OF SHEETS

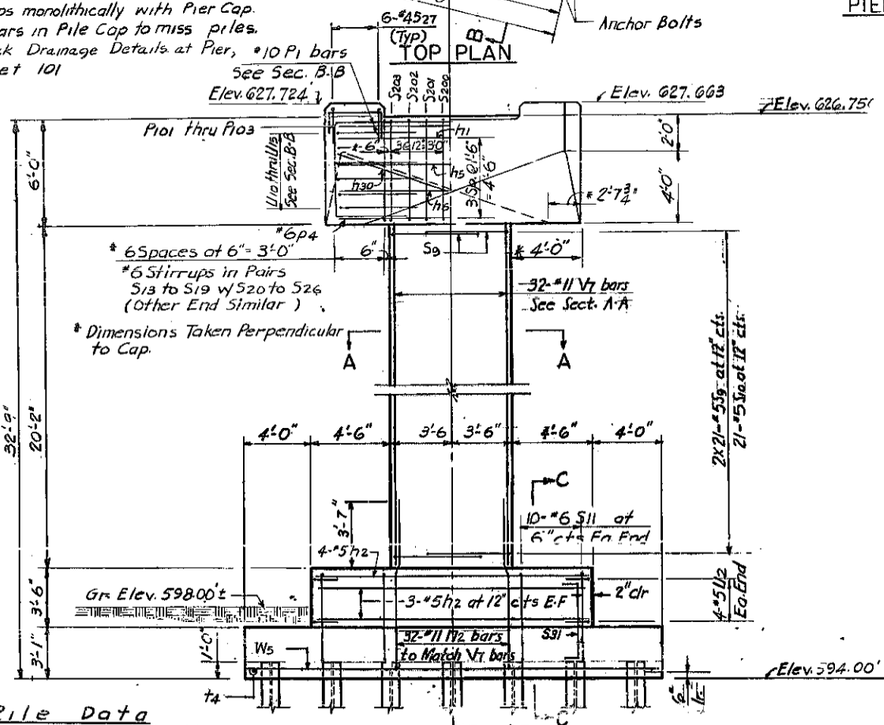


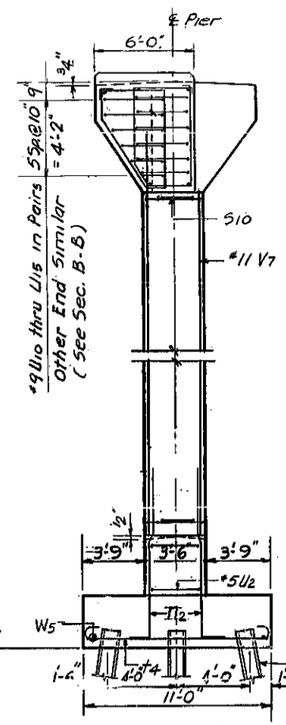


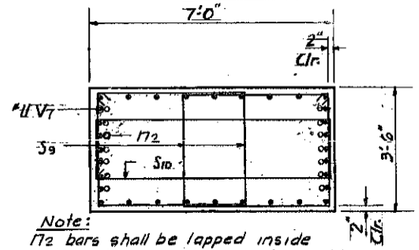
Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers unless noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, #10 P1 bars see sheet 101

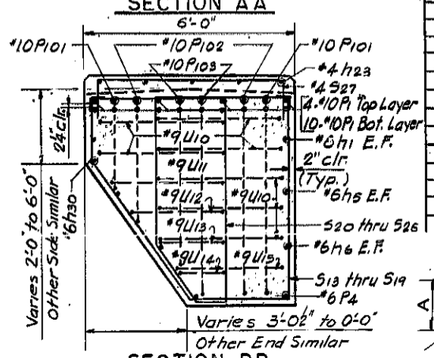


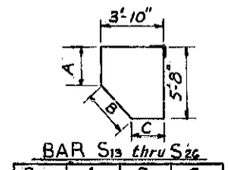




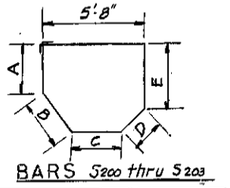




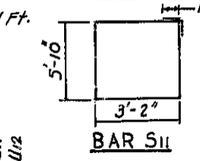


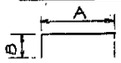


Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S19	1'-11"	4'-8"	1'-0"
S20	2'-1"	4'-5½"	1'-1½"
S21	2'-3"	4'-3"	1'-3"
S22	2'-5"	4'-0½"	1'-4½"
S23	2'-7"	3'-10"	1'-6"
S24	2'-9"	3'-7½"	1'-7½"
S25	2'-11"	3'-5"	1'-9"
S26			

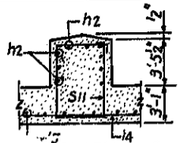


Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	4'-1"
S201	3'-3"	1'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S208	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"





Bar	A	B
U10	5'-6"	1'-6"
U11	2'-0"	1'-4"
U12	5'-4"	2'-0"
S31	3'-10"	2'-0"
h23	2'-6"	2'-3"



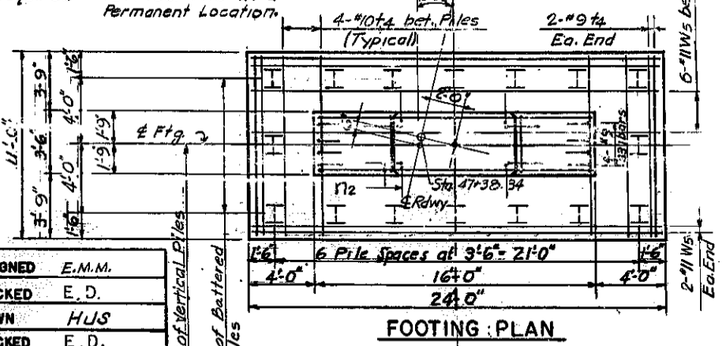
BILL OF MATERIALS

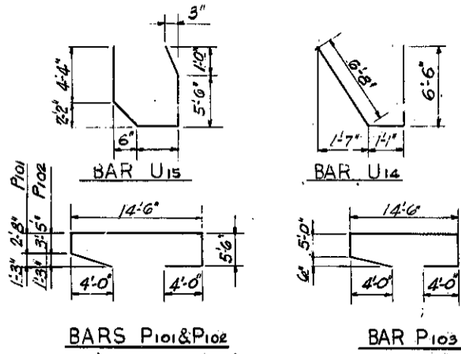
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-2"	
S201	2	#5	22'-2"	
S202	2	#5	22'-4"	
S208	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V7	32	#11	24'-2"	
S9	42	#5	15'-11"	
S10	21	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
h2	10	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
n2	32	#11	11'-8"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	16400
Class X Concrete	Cu. Yds.	74.9
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	330
Test Piles (HP10x42)	Ea.	1

Pile Data
Type —— HP10 x 42
Capacity —— Drive to Refusal
Est. Length — 22'-0"
No. Required — 15+1 Test Pile in a Permanent Location.





Note:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Std. 606.68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

DESIGNED	E.M.M.
CHECKED	E. D.
DRAWN	HJS
CHECKED	E. D.

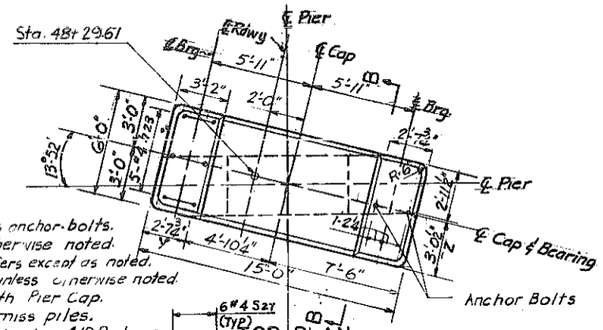
PIER NO. 7

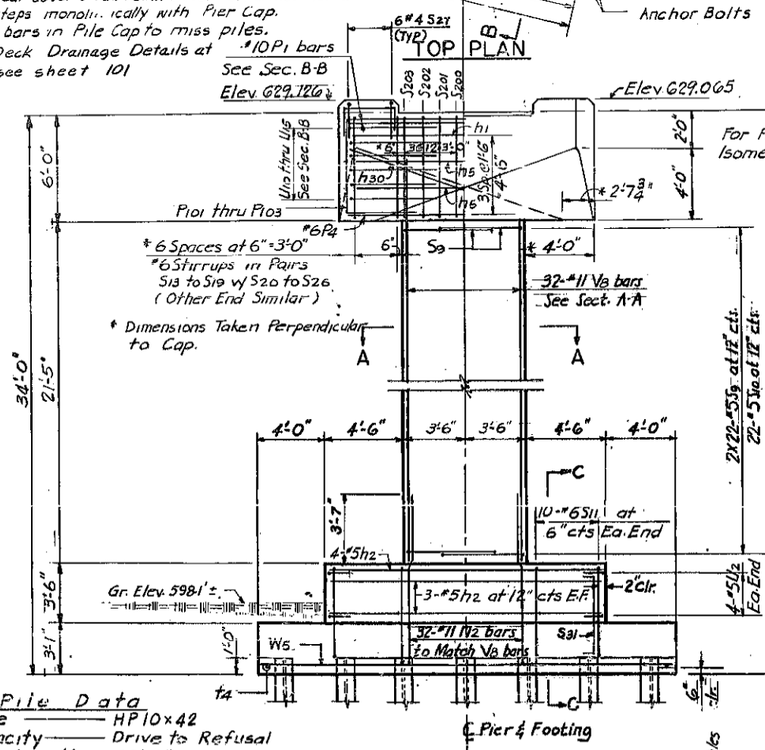
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
FA45	462X B&R	COOK	223	179
D. F. S. SEC. NO.	ILLINOIS	PROJECT		

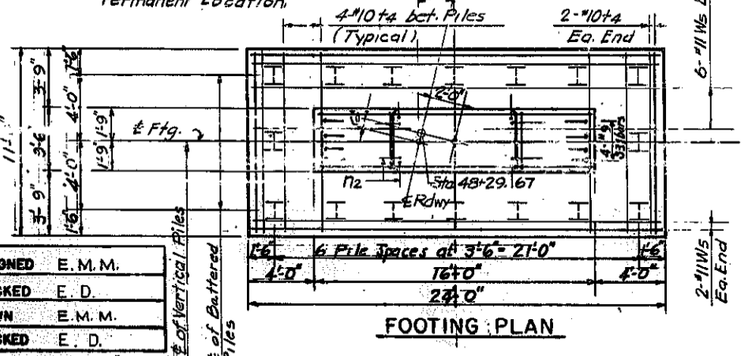
SHEET NO. 78
102 SHEETS

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap-24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

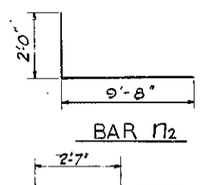


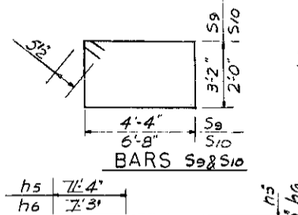


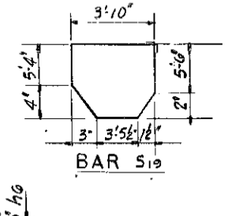
Pile Data
Type ——— HP10×42
Capacity ——— Drive to Refusal
Est. Length — 30'-0"
No. Required — 15+1 Test Pile in a Permanent Location

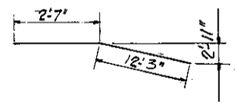


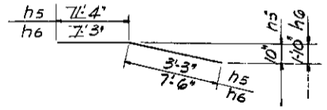
DESIGNED	E. M. M.
CHECKED	E. D.
DRAWN	E. M. M.
CHECKED	E. D.

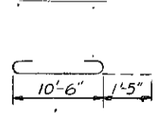


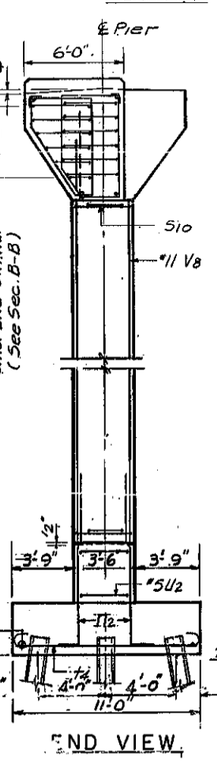


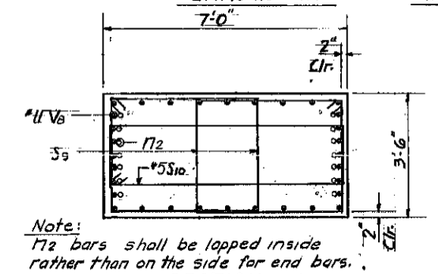


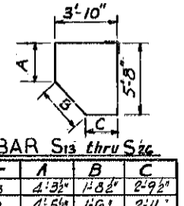




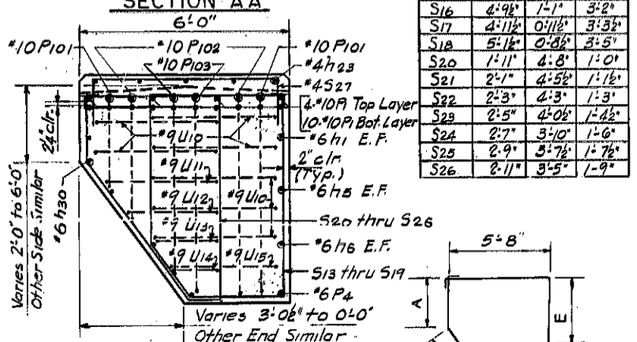


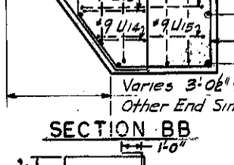


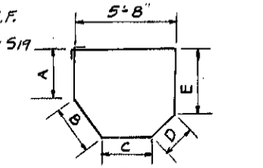




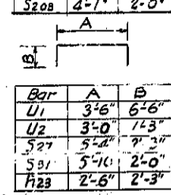
Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-0"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11½"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

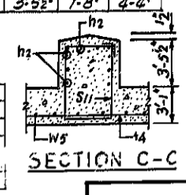


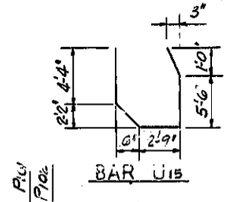


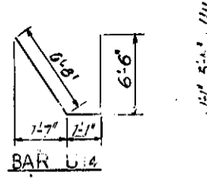


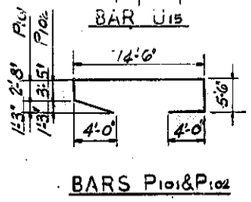
Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S208	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"

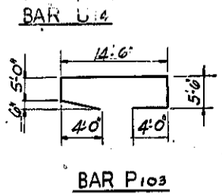


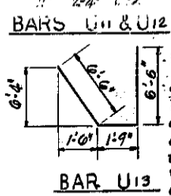












Notes:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht. #68. It shall be the responsibility of the Contractor to verify these dimensions prior to construction and ordering of Materials.

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	10'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-3"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S208	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V8	32	#11	25'-5"	
S9	44	#5	15'-11"	
S10	22	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
N2	10	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
N2	32	#11	11'-8"	

See Bar Diagrams

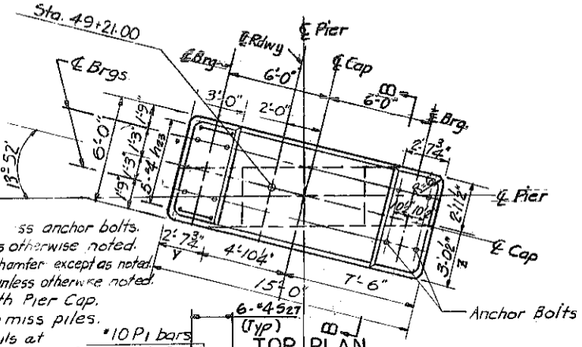
Item	Units	Total
Reinforcement Bars	Lbs.	16460
Class X Concrete	Cu. Yds.	76.1
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10×42)	L. F.	450
Test Piles (HP10×42)	Ea.	1

PIER NO. 8

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

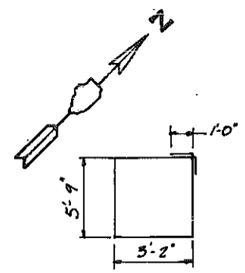
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	174
B. P. R. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 79 10# SHEETS

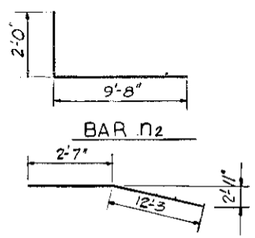


Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfer except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

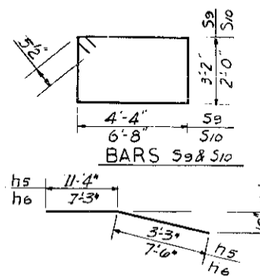
TOP PLAN



BAR S321

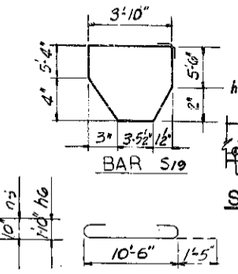


BAR n2



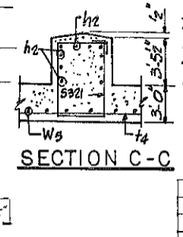
BARS S9 & S10

BARS h5 & h6



BAR S19

BAR t4



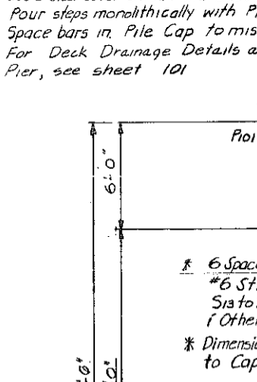
SECTION C-C

Notes:
- The pedestal and the footing shall be cast in a single pour
- The seat elevations shown could vary depending upon variation in 'H' dimension shown on Sht "68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

BILL OF MATERIALS

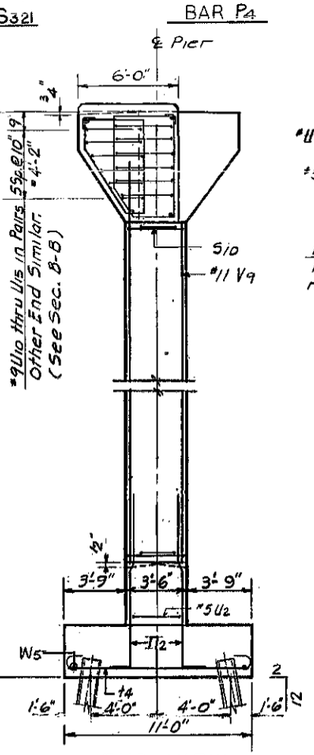
Bar	No.	Size	Length	Shape
		Pier Cap		
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-1"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	4	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V9	32	#11	26'-0"	
S9	44	#5	15'-11"	
S10	22	#5	18'-3"	
Crash Wall				
S311	8	#9	9'-9"	
S321	20	#6	19'-10"	
h2	10	#5	15'-5"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	11	#11	23'-6"	
n2	32	#11	11'-8"	

Item	Units	Total
Reinforcement Bars	Lbs.	15900
Class X Concrete	Cu. Yds.	75.1
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	299
Test Pile (HP10x42)	Ea.	1

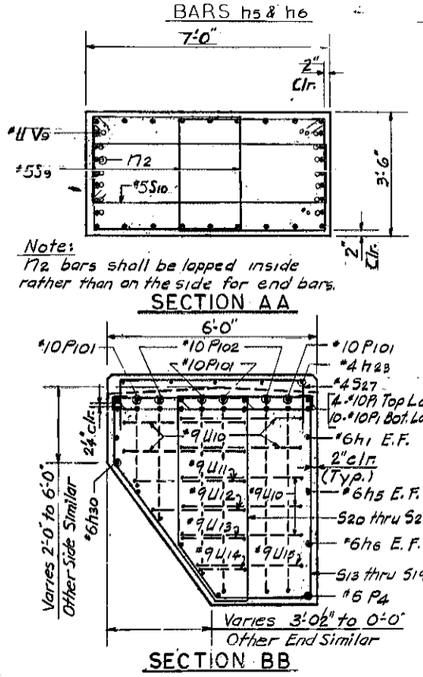


ELEVATION

Pile Data
Type — HP10x42
Capacity — Drive to Refusal
Est. Length — 23'-0"
No. Required — 13+1 Test Pile in a permanent location



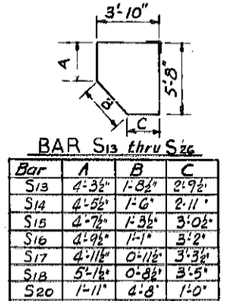
END VIEW



Note:
n2 bars shall be lapped inside rather than on the side for end bars.

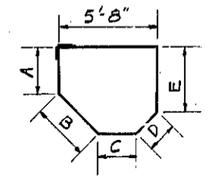
SECTION AA

SECTION BB



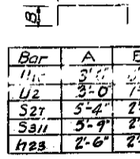
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11½"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

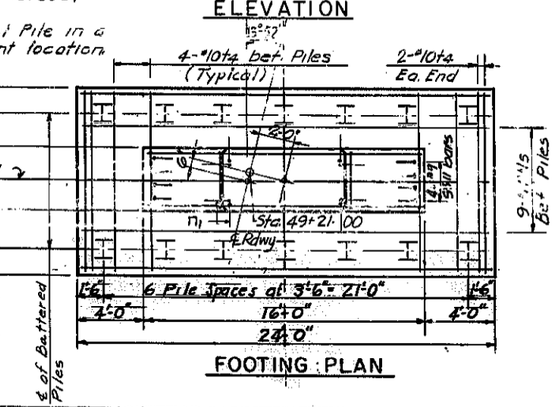


BARS S200 thru S203

Bars	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"

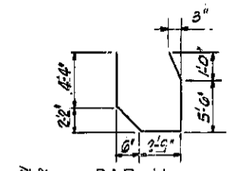


Bar	A	B
U1	3'-0"	2'-0"
U2	3'-0"	1'-3"
S27	5'-4"	2'-3"
S311	5'-9"	2'-0"
h23	2'-6"	2'-3"

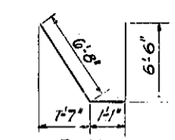


FOOTING PLAN

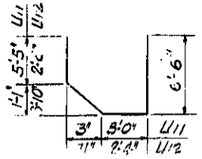
DESIGNED	E.M.M.
CHECKED	E.D.
DRAWN	E.M.M.
CHECKED	E. D.



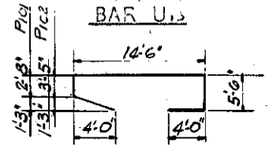
BAR U13



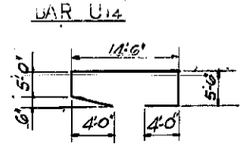
BAR U14



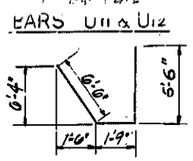
BARS U11 & U12



BARS P101 & P102



BAR P103



BAR U13

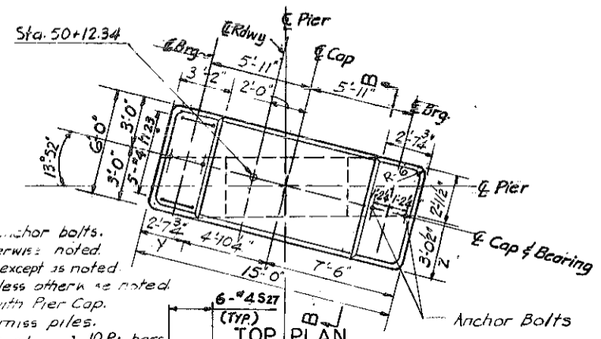
PIER NO. 9

LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K B&R	COOK	223	175
D. P. H. REG. NO.	ILLINOIS	PROJECT		

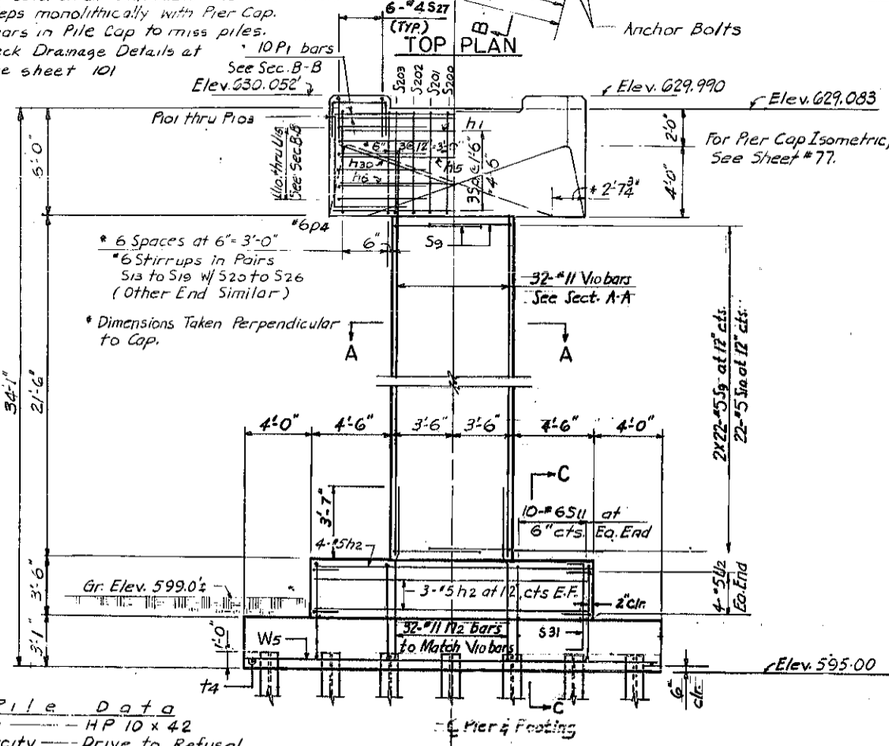
SHEET NO 80 10¼ SHEETS

Sta. 50+12.34



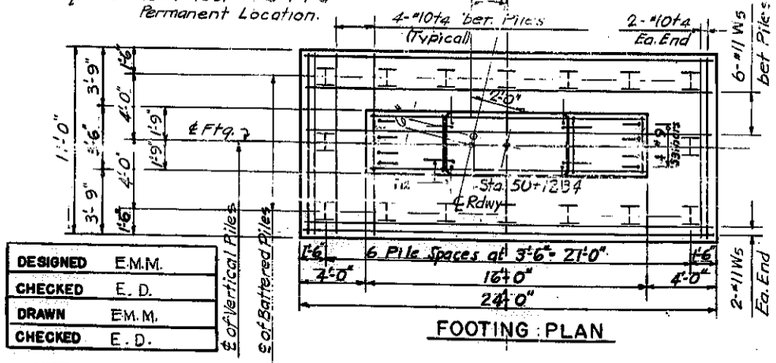
TOP PLAN

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap: 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101



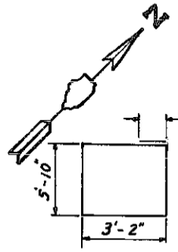
ELEVATION

Pile Data
Type —— HP 10 x 42
Capacity —— Drive to Refusal
Est. Length — 24'-0"
No. Required — 15+1 Test Pile in a Permanent Location.

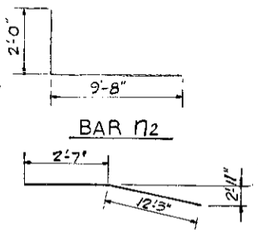


FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	E. D.
DRAWN	E.M.M.
CHECKED	E. D.



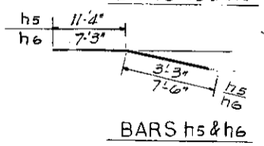
BAR S11



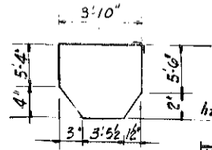
BAR P4



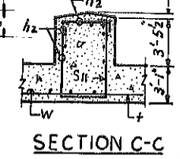
BARS S9 & S10



BARS h5 & h6

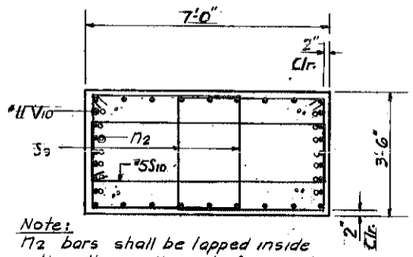


BAR S19 BAR t4



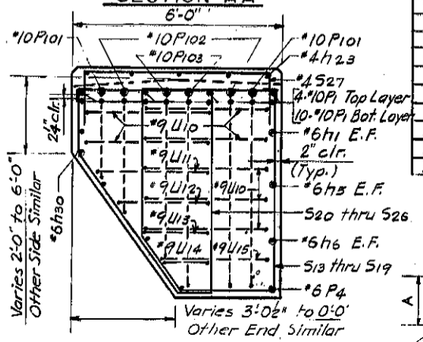
SECTION C-C

Note:
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

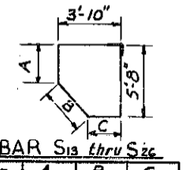


Note:
M2 bars shall be lapped inside rather than on the side for end bars.

SECTION AA

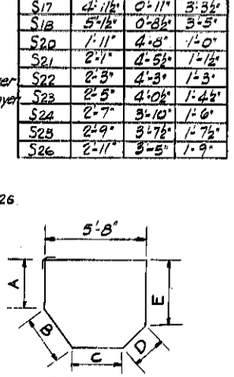


SECTION BB



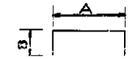
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

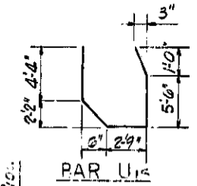


BARS S200 thru S203

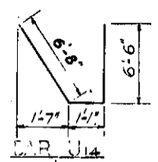
Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	3'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



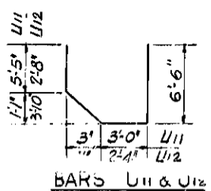
Bar	A	B
U10	3'-6"	6'-6"
U12	3'-7"	7'-2"
S27	5'-4	2'-3"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"



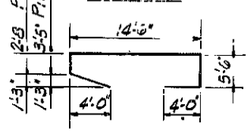
BAR U15



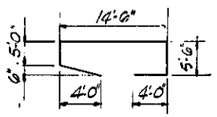
BAR U14



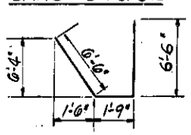
BARS U11 & U12



BARS P101 & P102



BAR P103



BAR U13

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	# 9	16'-6"	
U11	2	# 9	16'-0"	
U12	2	# 9	15'-5"	
U13	2	# 9	14'-9"	
U14	2	# 9	14'-3"	
U15	2	# 9	15'-10"	
P101	2	# 10	30'-10"	
P102	2	# 10	31'-7"	
P103	2	# 10	33'-0"	
P1	14	# 10	14'-6"	
P4	2	# 6	14'-10"	
h1	2	# 6	14'-6"	
h5	2	# 6	14'-7"	
h6	2	# 6	14'-9"	
h23	10	# 4	7'-0"	
S13	2	# 6	19'-5"	
S14	2	# 6	19'-6"	
S15	2	# 6	19'-7"	
S16	2	# 6	19'-8"	
S17	2	# 6	19'-9"	
S18	2	# 6	19'-10"	
S19	2	# 6	19'-11	
S20	2	# 6	18'-2"	
S21	2	# 6	18'-3	
S22	2	# 6	18'-4"	
S23	2	# 6	18'-5'	
S24	2	# 6	18'-6"	
S25	2	# 6	18'-7"	
S26	2	# 6	18'-8"	
S200	2	# 5	22'-4"	
S201	2	# 5	22'-4"	
S202	2	# 5	22'-4"	
S203	2	# 5	22'-4"	
S27	12	# 4	9'-10"	
h30	2	# 6	12'-0"	
Column				
V10	32	# 11	25'-6"	
S9	44	# 5	15'-11"	
S10	22	# 5	18'-3	
Crash Wall				
S31	8	# 9	9'-10"	
S11	20	# 6	20'-0"	
h2	10	# 5	15'-6"	
½	8	# 5	5'-6"	
Footing				
t4	28	# 10	13'-4"	
W5	16	# 11	23'-6"	
M2	32	# 11	11'-8"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	16490
Class X Concrete	Cu. Yds.	76.1
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	360
Test Piles (HP10x42)	Ea.	1

PIER NO. 10

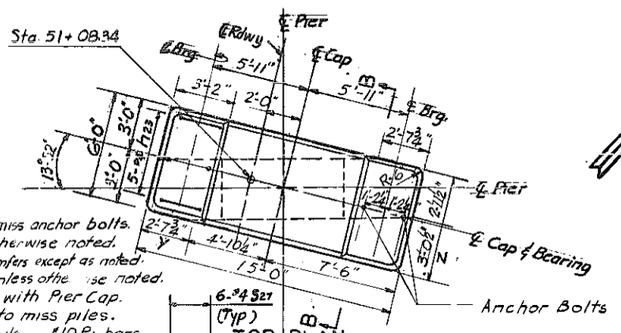
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41.38.63

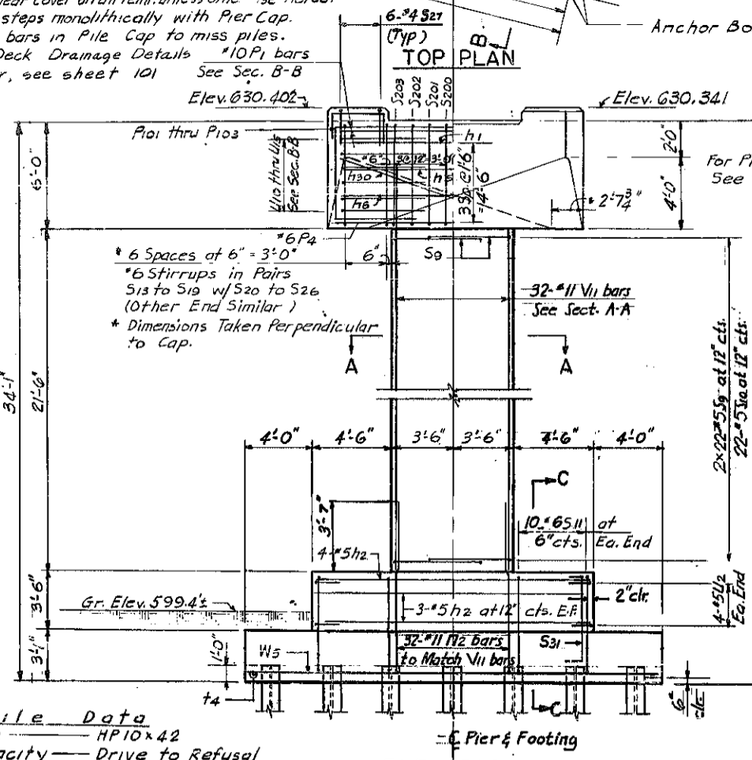
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K BRR	COOK	223	175
B. P. R. REG. NO.	ILLINOIS	PROJECT		

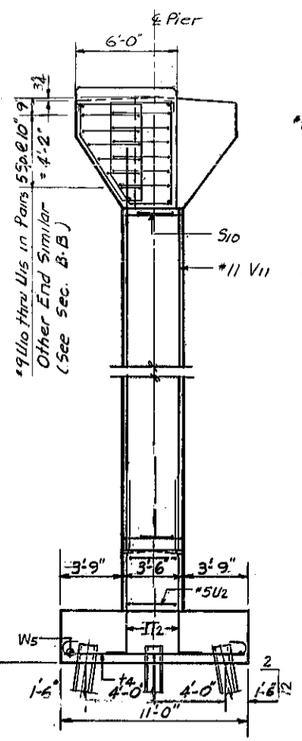
SHEET NO 81
102 SHEETS

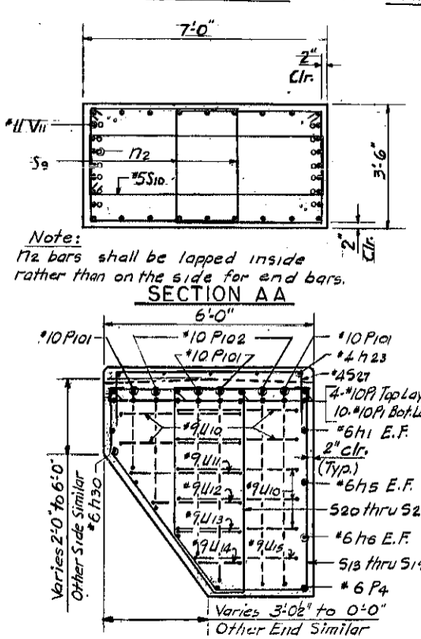
Notes:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

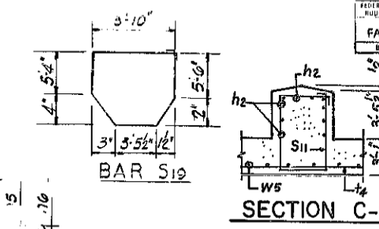
Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Four steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details "10 P1 bars at Pier, see sheet 101 See Sec. B-B











BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-1"	
S201	2	#5	22'-1"	
S202	2	#5	22'-1"	
S203	2	#5	22'-1"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V11	32	#11	25'-6"	
S9	44	#5	15'-11	
S10	22	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
h2	10	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
M2	32	#11	11'-8"	

See Bar Diagrams

BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

BARS S200 thru S203

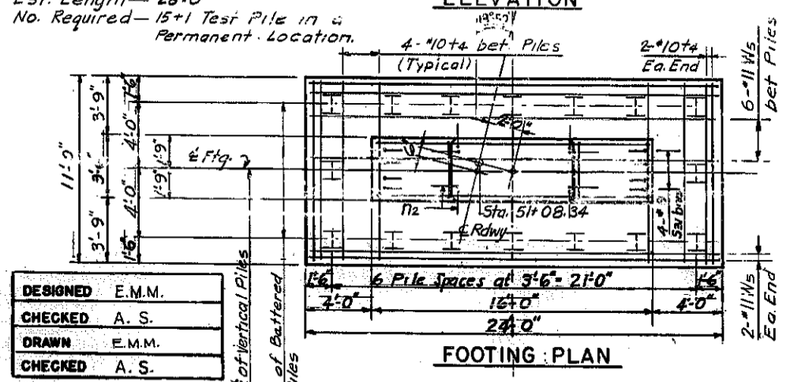
Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5"	0'-5"	5'-4"
S201	3'-5	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-0"

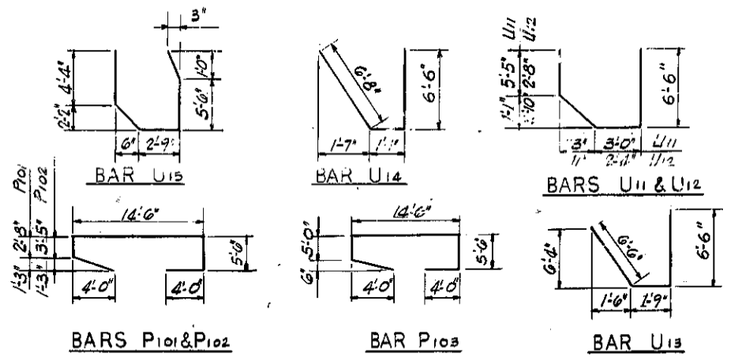
BARS U11 & U12

Bar	A	B
U1	3'-6"	6'-6"
U12	2'-0"	11'-3"
S27	5'-4"	2'-3"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"

Item	Units	Total
Reinforcement Bars	Lbs.	16490
Class X Concrete	Cu. Yds.	76.1
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	420
Test Pile (HP10x42)	Ea.	1

Pile Data
Type —— HP10x42
Capacity —— Drive to Refusal
Est. Length — 28'-0"
No. Required — 15+1 Test Pile in ℄ Permanent Location.





DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A. S.

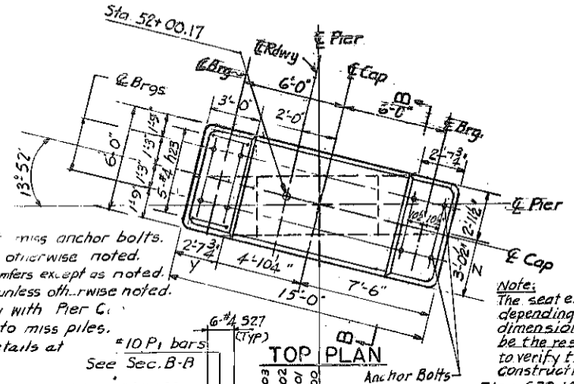
PIER NO. 11

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BRR	COOK	223	177
D. P. R. REG. NO.	HIGHWAY	PROJECT		

SHEET NO. 82
102 SHEETS

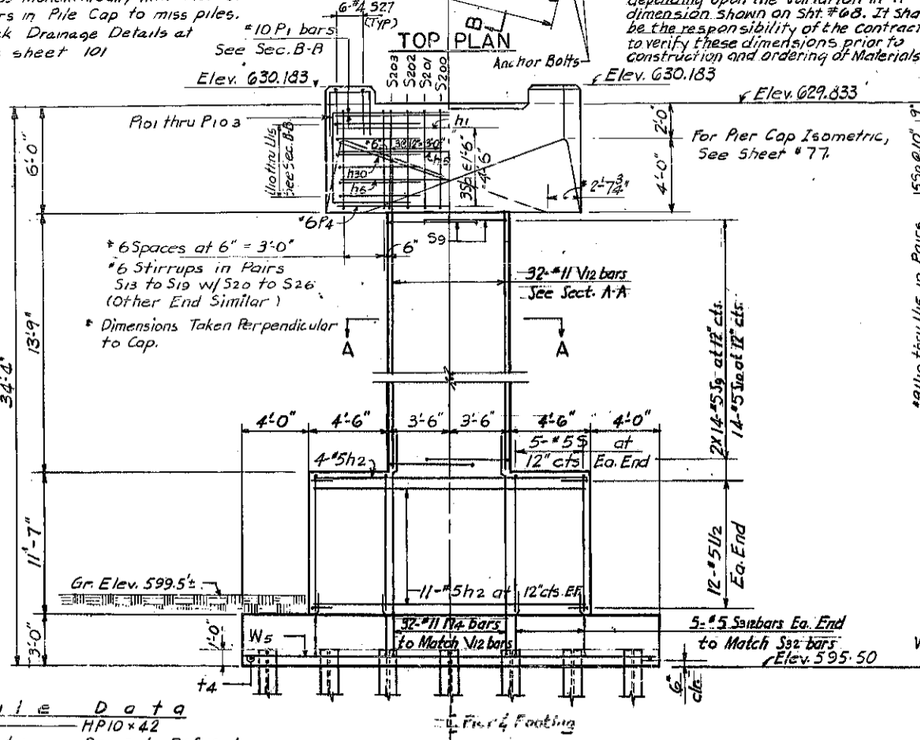
Sta. 52+00.17



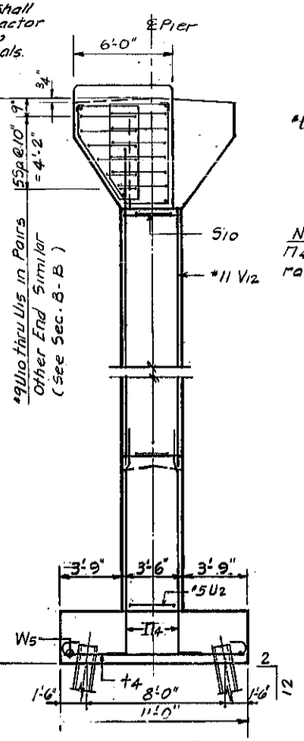
TOP PLAN

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht. #68. It shall be the responsibility of the Contractor to verify these dimensions prior to construction and ordering of Materials.

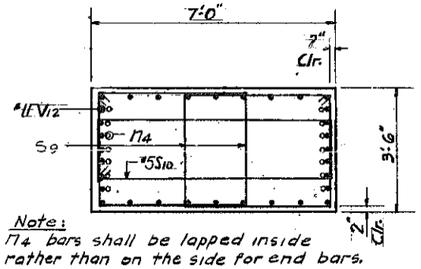


ELEVATION



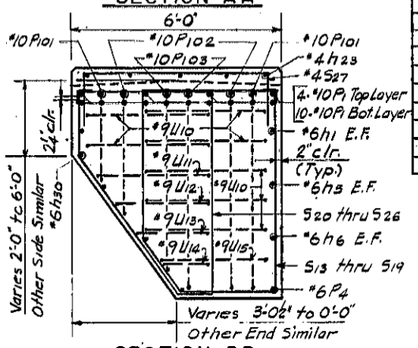
END VIEW

For Pier Cap Isometric, See Sheet #77.

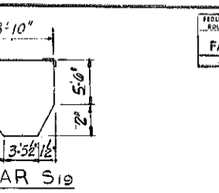


Note:
N4 bars shall be lapped inside rather than on the side for end bars.

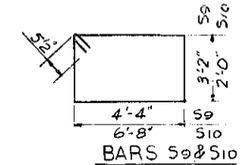
SECTION AA



SECTION BB

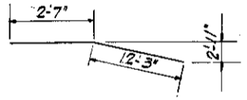


BAR S19

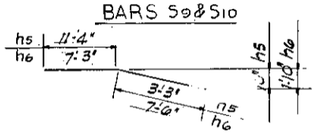


BAR N4

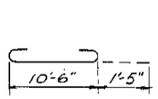
BARS S9 & S10



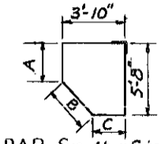
BAR P4



BARS h5 & h6

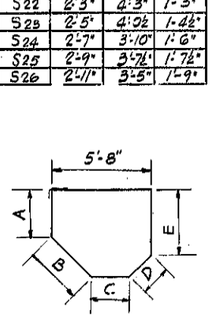


BAR T4



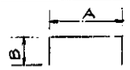
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"



BARS S200 thru S203

Bar	A	B	C	D	E
S200	5'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-10"	3'-5½"	1'-8"	4'-4"



Bar	A	B
U10	5'-6"	1'-0"
U12	3'-0"	1'-3"
S27	5'-4"	2'-3"
S312	3'-2"	3'-6"
S	3'-2"	11'-4"
h23	2'-6"	2'-3"

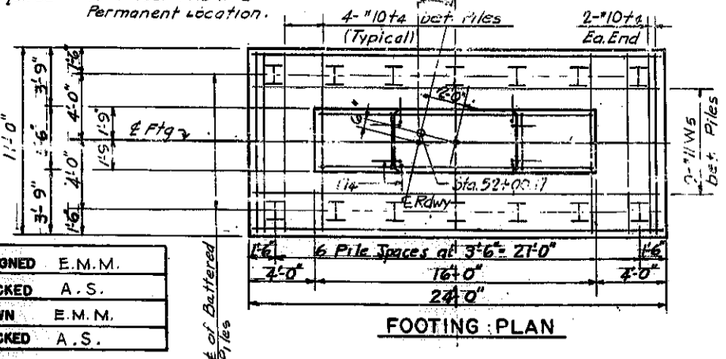
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
		Pier Cap		
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-0"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
		Column		
V12	32	#11	17'-9"	
S9	28	#5	15'-11"	
S10	14	#5	18'-5"	
		Crash Wall		
S312	10	#5	10'-2"	
S	10	#5	25'-10"	
h2	26	#5	15'-6"	
U12	24	#5	5'-6"	
		Footing		
t4	28	#10	13'-4"	
W5	11	#11	23'-6"	
N4	32	#11	20'-0"	

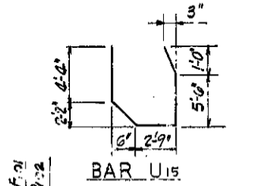
See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	15360
Class X Concrete	Cu. Yds.	21.3
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	312
Test Pile (HP10x42)	Ea.	1

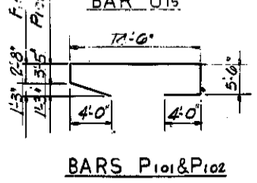
Pile Data
Type — HP10 x 42
Capacity — Drive to Refusal
Est. Length — 24'-0"
No. Required — 13+1 Test Pile in a Permanent Location.



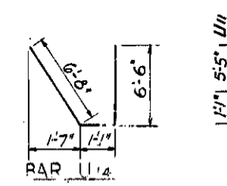
FOOTING PLAN



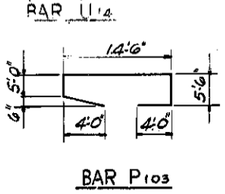
BAR U15



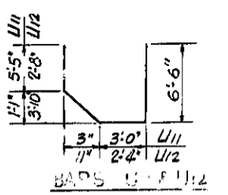
BARS P101 & P102



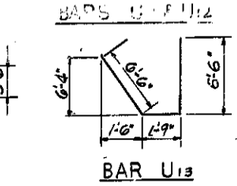
BAR U14



BAR P103



BARS U11 & U12



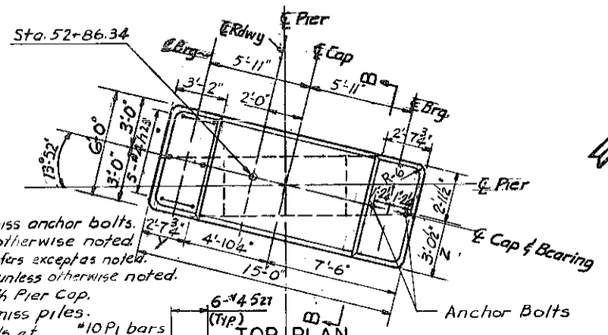
BAR U13

PIER NO. 12

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

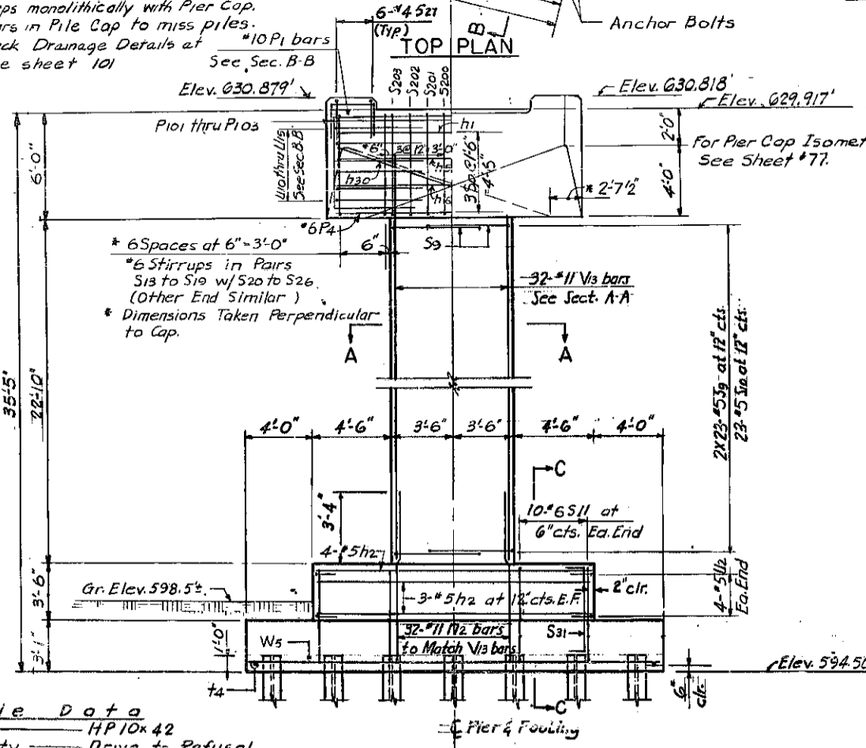
FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	178
ILL. F. H. SECT. NO.	RAILROAD	PROJECT		

SHEET NO 83
102 SHEETS

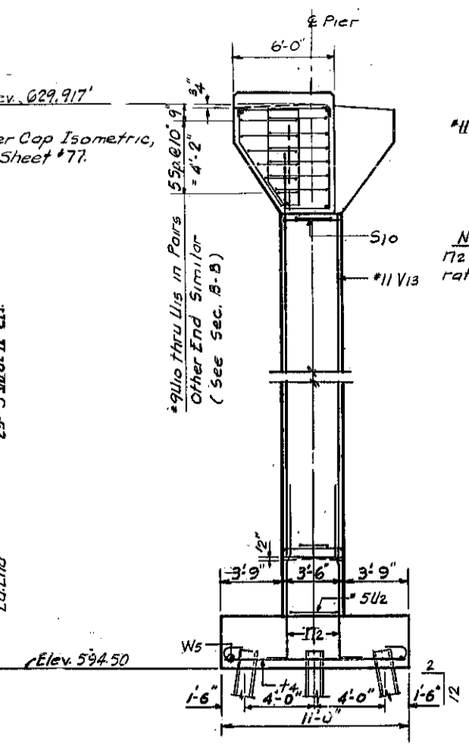


TOP PLAN

Note:
Space reinf. in Pier Cap at miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

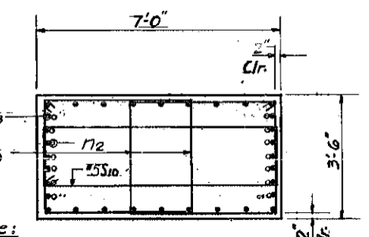


ELEVATION



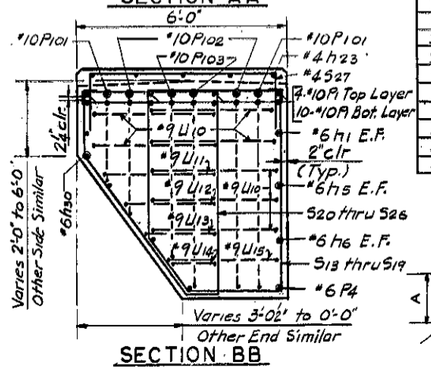
END VIEW

For Pier Cap Isometric, See Sheet #77.

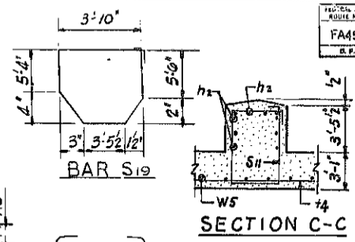


Note:
N2 bars shall be lapped inside rather than on the side for end bars.

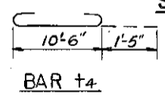
SECTION AA



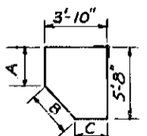
SECTION BB



SECTION C-C

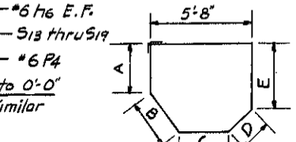


BAR t4



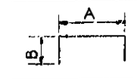
BAR S13 thru S26

Bar	A	B	C
S18	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S19	1'-11"	4'-8"	1'-0"
S20	2'-1"	4'-5½"	1'-1½"
S21	2'-3"	4'-3"	1'-3"
S22	2'-5"	4'-0½"	1'-4½"
S23	2'-7"	3'-10"	1'-6"
S24	2'-9"	3'-7½"	1'-7½"
S25	2'-11"	3'-5"	1'-9"
S26	3'-1"	3'-2½"	1'-11"



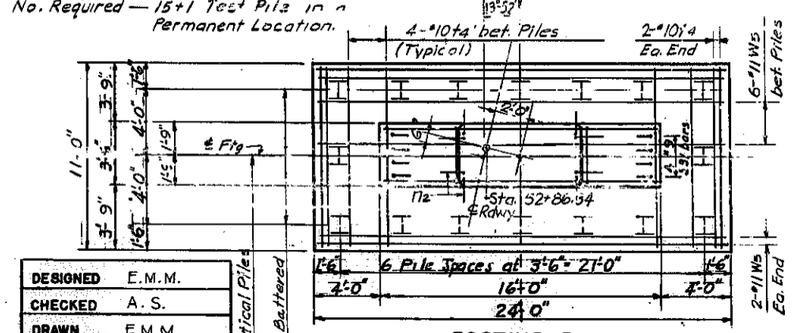
BARS S200 thru S203

Bar	A	B	C	D	E
S200	3'-1"	3'-6"	3'-5½"	0'-5"	5'-½"
S201	3'-5"	3'-1"	3'-5½"	0'-11"	5'-0"
S202	3'-7"	2'-8"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-3"	3'-5½"	1'-8"	4'-4"



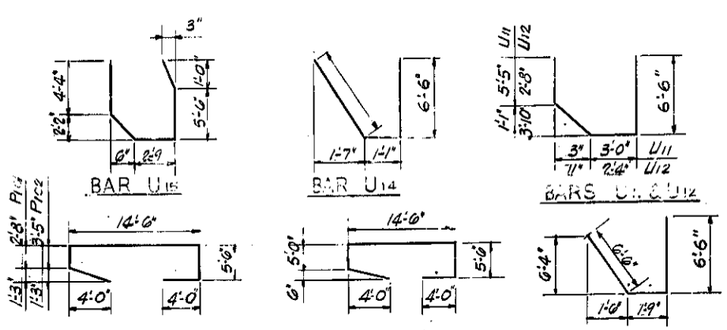
Bar	A	B
U10	2'-6"	6'-6"
U12	3'-0"	1'-3"
S27	5'-1"	0'-5"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"

Pile Data
Type ——— HP10x42
Capacity ——— Drive to Refusal
Est. Length ——— 28'-0"
No. Required — 15+1 Test Pile in a Permanent Location.



FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A. S.



BAR U15 BAR U14 BARS U11 & U12

BARS P101&P102 BAR P103 BAR U13

Notes:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimensions shown on Sht 168. It shall be responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-1"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	4	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V13	32	#11	26'-10"	
S9	46	#5	15'-11"	
S10	23	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
h2	10	#5	15'-6"	
U2	8	#5	5'-8"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
N2	32	#11	11'-8"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	16770
Class X Concrete	Cu. Yds.	77.7
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	420
Test Piles (HP10 x42)	Ea.	1

PIER NO. 13

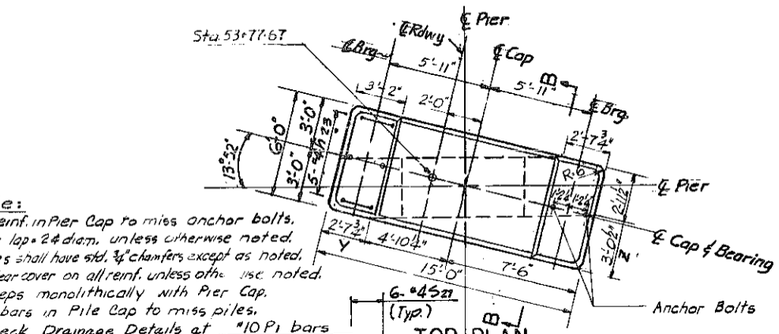
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

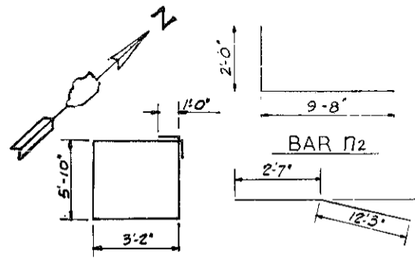
FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	179
D. P. R. REG. NO.	ILLINOIS	PROJECT		

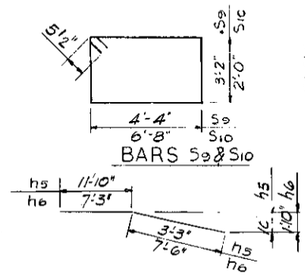
SHEET NO 84
109 SHEETS

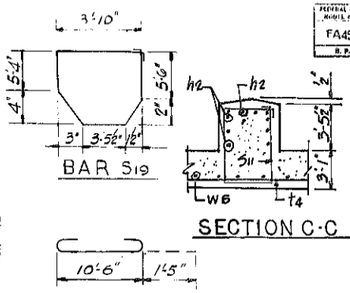
Notes:
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht#68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

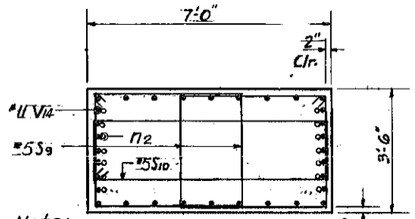
Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101



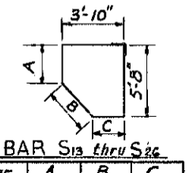






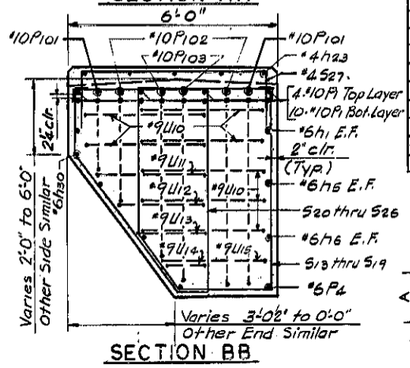


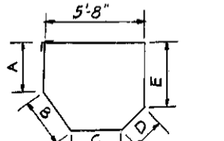
Note:
N2 bars shall be lapped inside rather than on the side for end bars.



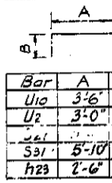
Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

SECTION AA





Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-6"	5'-4"
S201	3'-1"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



Bar	A	B
U10	3'-6"	6'-6"
U12	3'-0"	1'-3"
U11	1'-1"	2'-3"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"

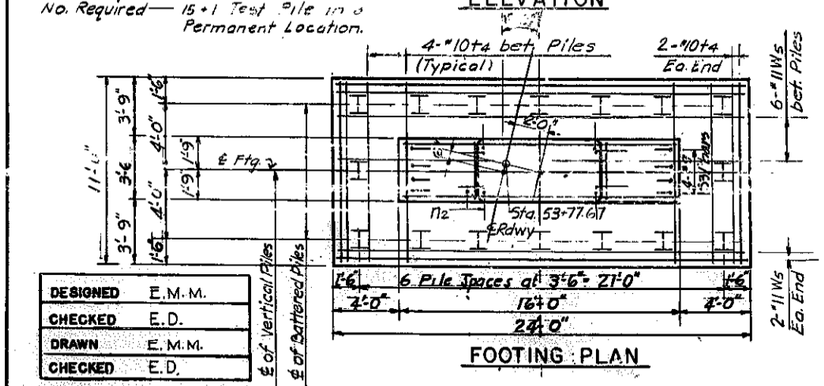
BILL OF MATERIALS

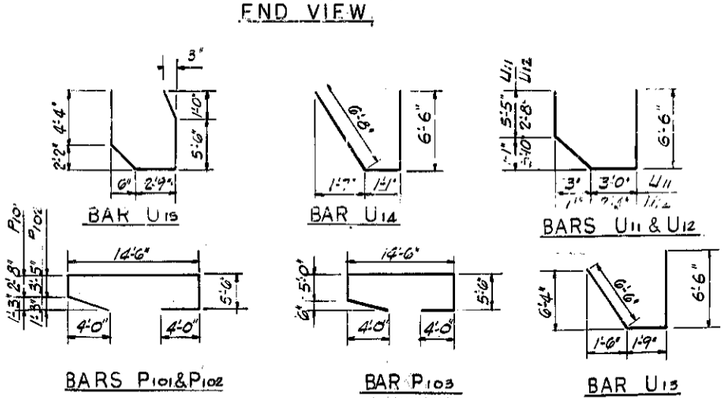
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V14	32	#11	28'-0"	
S9	50	#5	15'-11"	
S10	25	#5	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
h1	10	#5	12'-6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
N2	32	#11	11'-8"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	17060
Class X Concrete	Cu. Yds.	78.4
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	375
Test Piles (HP10x42)	Ea.	1

File Data
Type — HP 10x42
Capacity — Drive to Refusal
Est. Length — 25'-0"
No. Required — 15 + 1 Test Pile in a Permanent Location.





PIER NO. 14

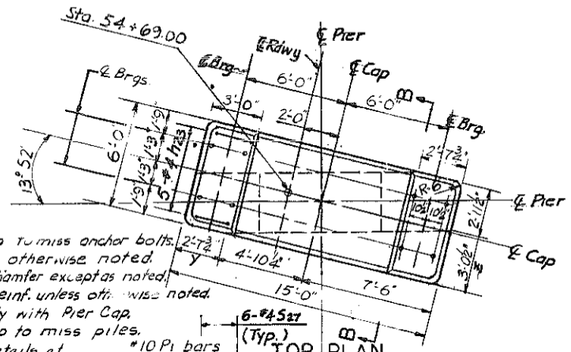
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462K b&R	COOK	223	180
U. S. P. H. STA. NO.	ILLINOIS	PROJECT		

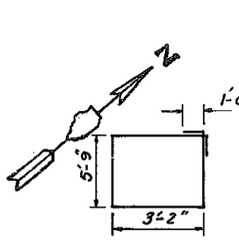
SHEET NO 85
102 SHEETS

Notes:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht. 68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfer except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

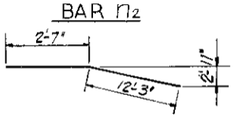


TOP PLAN

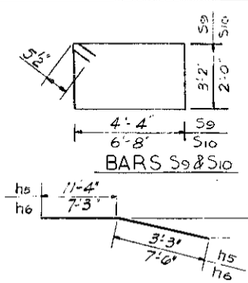


BAR S321

BAR n2

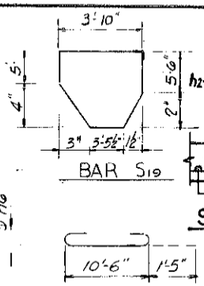


BAR P4



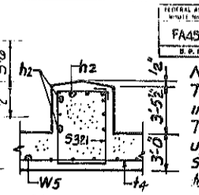
BARS S9 & S10

BARS h5 & h6



BAR S19

BAR t4



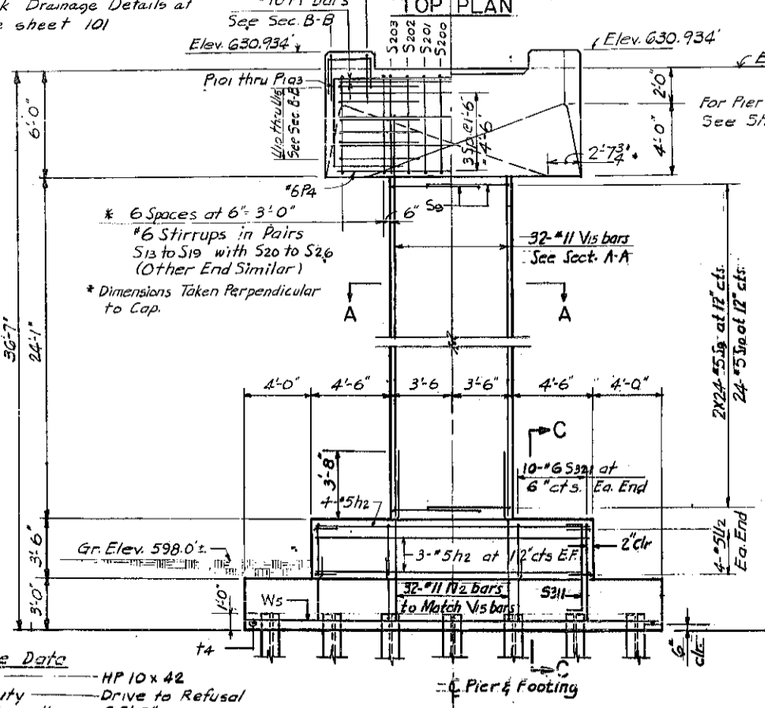
SECTION C-C

BILL OF MATERIALS

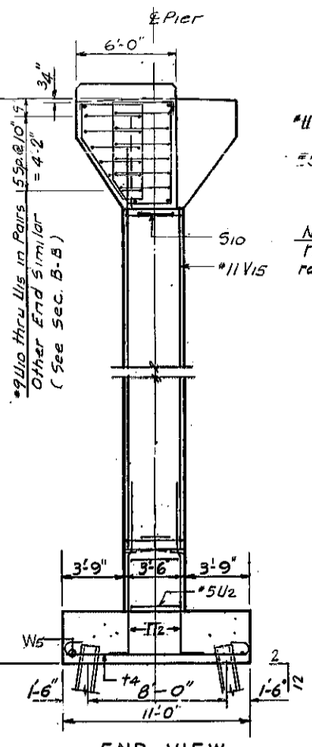
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	# 9	16'-6"	
U11	2	# 9	16'-0"	
U12	2	# 9	15'-5"	
U13	2	# 9	14'-11"	
U14	2	# 9	14'-3"	
U15	2	# 9	15'-10"	
P101	2	# 10	30'-10"	
P102	2	# 10	31'-7"	
P103	2	# 10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-10"	
Column				
V15	32	#11	28'-1"	
S9	48	#5	15'-11"	
S10	24	#5	18'-3"	
Crash Wall				
S311	8	#9	9'-9"	
S321	20	#6	19'-10"	
h2	10	#5	15'-6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	11	#11	23'-6"	
n2	32	#11	11'-8"	

See Bar Diagrams

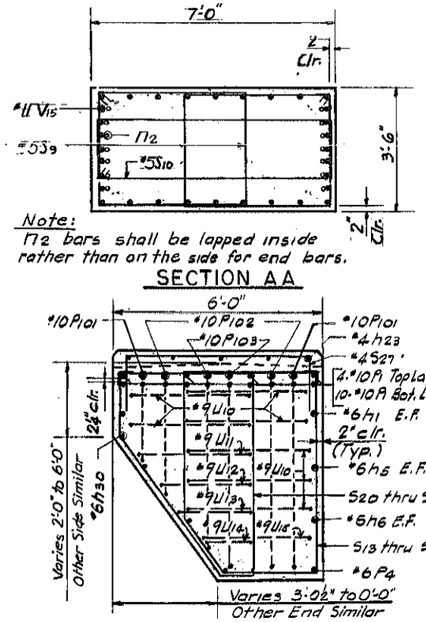
Item	Units	Total
Reinforcement Bars	Lbs.	16420
Class X Concrete	Cu. Yds.	77.0
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	325
Test Pile (HP10x42)	Ea.	1



ELEVATION



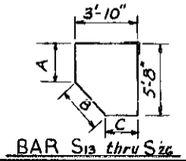
END VIEW



SECTION AA

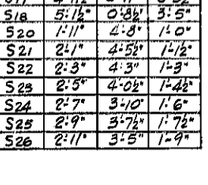
Note:
n2 bars shall be lapped inside rather than on the side for end bars.

SECTION BB



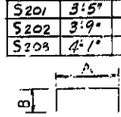
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-9½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

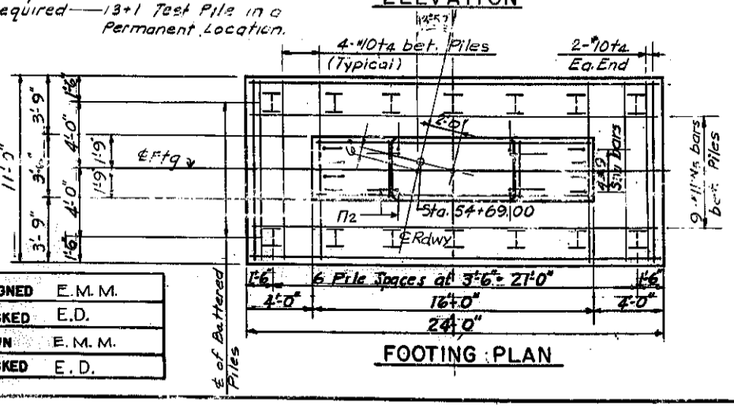


BARS S200 thru S203

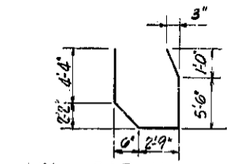
Bars	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



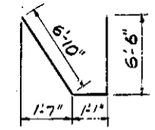
Bar	A	B
U2	3'-0"	1'-3"
S27	5'-4"	2'-5"
S311	5'-9"	2'-0"
h23	2'-6"	2'-3"



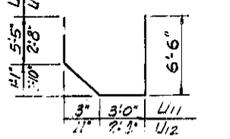
FOOTING PLAN



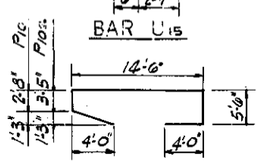
BAR U15



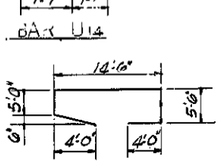
BAR U14



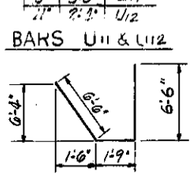
BARS U11 & U12



BARS P101 & P102



BAR P103



BAR U13

Pile Data
Type ——— HP 10 x 42
Capacity ——— Drive to Refusal
Est. Length ——— 25'-0"
No. Required ——— 13+1 Test Pile in a Permanent Location.

DESIGNED	E. M. M.
CHECKED	E. D.
DRAWN	E. M. M.
CHECKED	E. D.

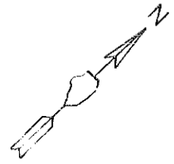
PIER NO. 15

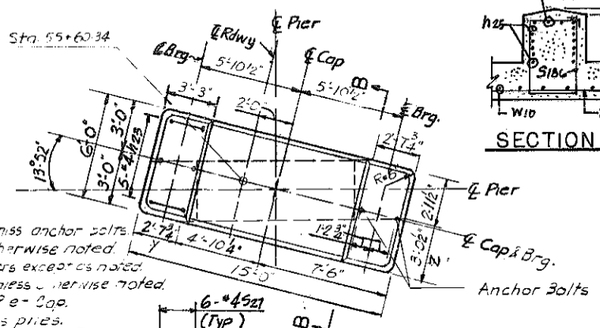
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

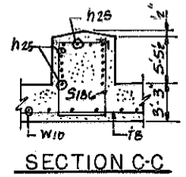
FEDERAL AID PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAA5	462X B&R	COOK	223	181
S. P. R. REG. NO.	ILLINOIS PROJECT			

SHEET NO 86
102 SHEETS

Notes:
The pedestal and the footing shall be cast in a single pour. The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

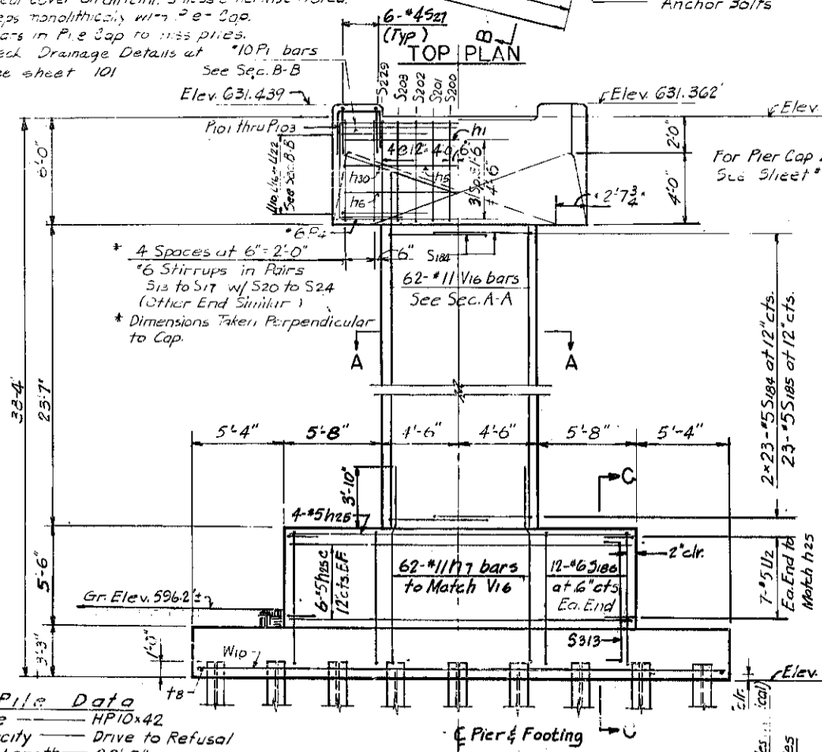


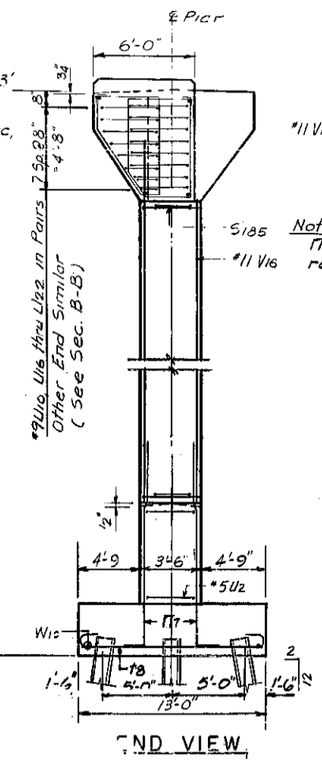


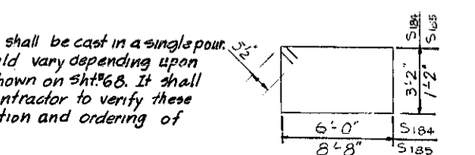


SECTION C-C

Note:
Space reinf. in Pier Cap to miss anchor bolts. Min. bar lap = 24 diam. unless otherwise noted. All edges shall have std ¾" chamfers except as noted. Use 2" clear cover on all reinf. unless otherwise noted. Four steps monolithically with Pier Cap. Space bars in Pier Cap to miss piles. For Deck Drainage Details at Pier, see sheet 101







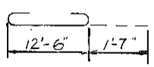
BARS S184 & S185



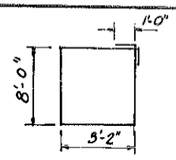
BAR P4



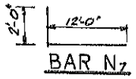
BARS h5 & h16



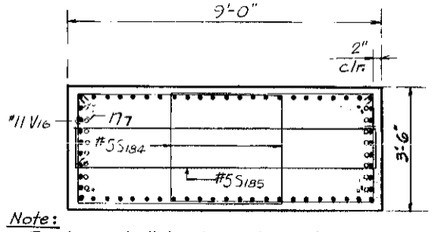
BAR T8



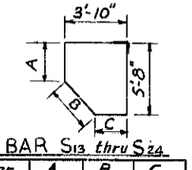
BAR S186



BAR N7

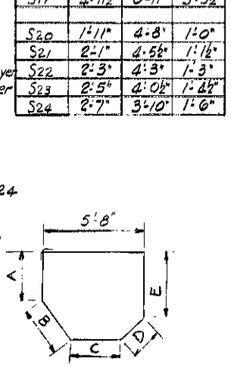


Note:
n7 bars shall be lapped inside rather than on the side for end bars.



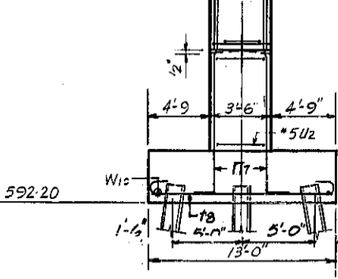
BAR S13 thru S24

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"



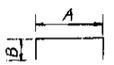
BARS S200 thru S208

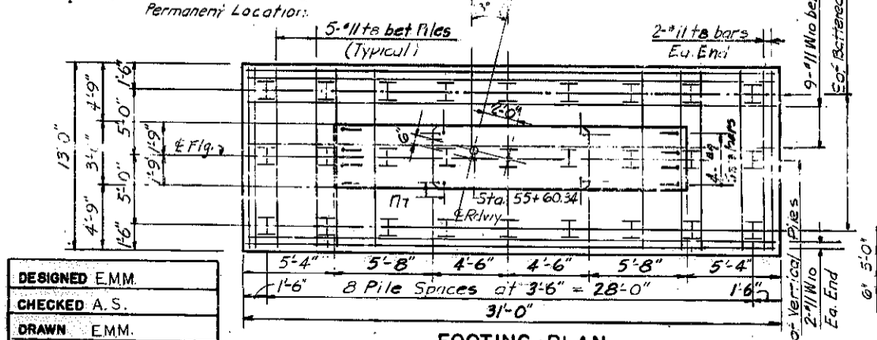
Bar	A	B	C	D	E
S200	3'-1"	3'-3"	2'-5½"	0'-5"	5'-4"
S201	2'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"
S228	4'-5"	1'-7"	3'-5½"	2'-1"	4'-0"

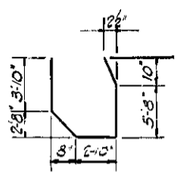


BAR U22 | BARS U19 & U20 | BARS U17, U18 & U21

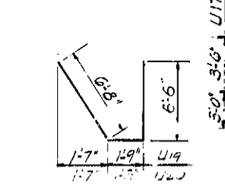
Bar	A	B
U10	3'-6"	6'-6"
U16	5'-4"	2'-5"
S313	6'-0"	2'-0"
h25	2'-6"	2'-3"

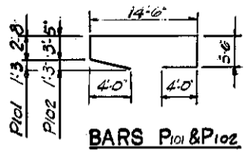




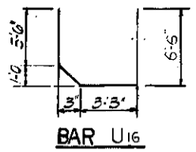


BAR P108





BARS P101 & P102



BAR U16

BILL OF MATERIALS

Bar	No	Size	Length	Shape
Pier Cap				
U10	18	# 9	16'-6"	
U16	2	# 9	16'-3"	
U17	2	# 9	15'-10"	
U18	2	# 9	15'-5"	
U19	2	# 9	14'-11"	
U20	2	# 9	14'-5"	
U21	2	# 9	16'-6"	
U22	2	# 9	15'-1"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	3	#10	33'-0"	
P1	19	#10	14'-6"	
P4	2	# 6	14'-10"	
h1	2	# 6	14'-6"	
h5	2	# 6	14'-7"	
h16	2	# 6	14'-9"	
h23	10	# 4	7'-0"	
S13	2	# 6	19'-5"	
S14	2	# 6	19'-6"	
S15	2	# 6	19'-7"	
S16	2	# 6	19'-8"	
S17	2	# 6	19'-9"	
S20	2	# 6	18'-2"	
S21	2	# 6	18'-3"	
S22	2	# 6	18'-4"	
S23	2	# 6	18'-5"	
S24	2	# 6	18'-6"	
S229	2	# 5	22'-4"	
S200	2	# 5	22'-4"	
S201	2	# 5	22'-4"	
S202	2	# 5	22'-4"	
S203	2	# 5	22'-4"	
S27	12	# 4	9'-10"	
h30	2	# 6	12'-0"	
Column				
V16	62	#11	27'-7"	
S184	48	# 5	19'-3"	
S186	24	# 5	20'-7"	
Crash Wall				
S313	8	# 9	12'-0"	
S186	24	# 6	24'-4"	
n23	16	# 5	19'-10"	
U2	14	# 5	5'-6"	
Footing				
T8	44	#11	15'-8"	
W10	22	#11	30'-6"	
n7	62	#11	14'-0"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	29030
Class X Concrete	Cu. Yds.	108.9
Structure Excavation	Cu. Yds.	68.2
Steel Piles (HP10x42)	L.F.	520
Test Pile (HP10x42)	Ea.	1

Pile Data
Type ——— HP10x42
Capacity ——— Drive to Refusal
Est. Length ——— 20'-0"
No. Required ——— 26+1 Test Pile in a Permanent Location

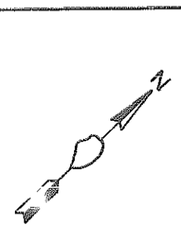
DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A. S.

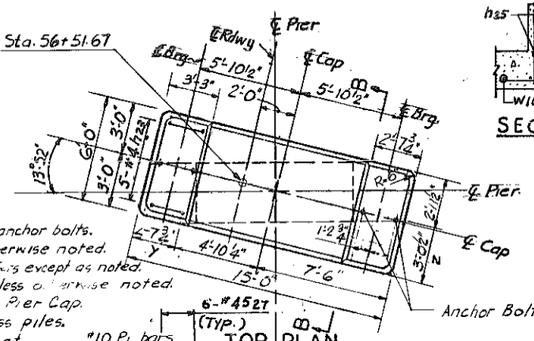
PIER NO. 16

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

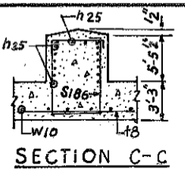
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462A 462R	COOK	223	182
R. P. & REG. NO.	ILLINOIS	PROJECT		

SHEET NO. B 7
102 SHEETS



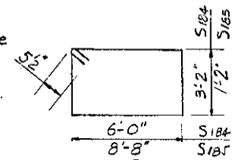


Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier see sheet 101

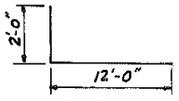


SECTION C-C

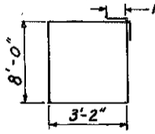
Notes:
- The pedestal and the footing shall be cast in a single pour.
- The seat elevations shown could vary depending upon the variation in 'H' dimension shown on Sht. 68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.



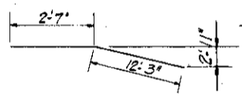
BAR S184 & S185



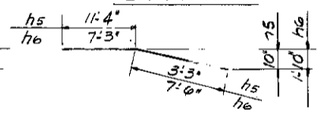
BAR N7



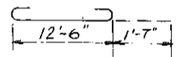
BAR S186



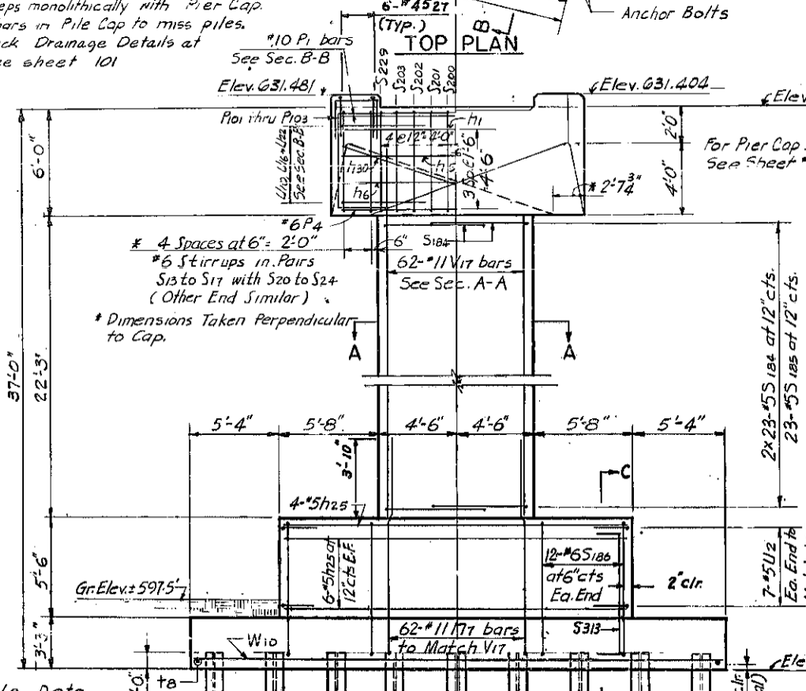
BAR P4

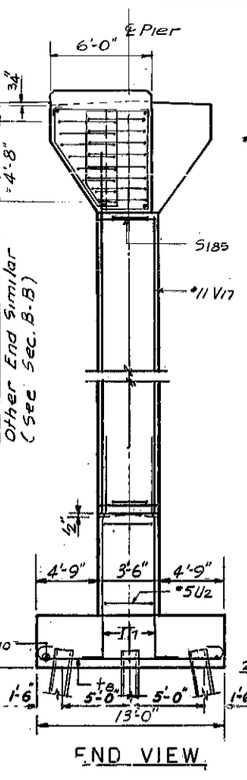


BARS h5 & h6

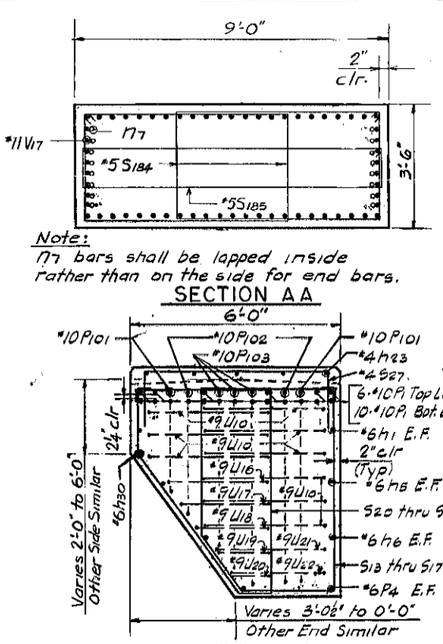


BAR t8





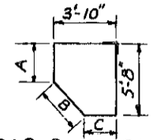
END VIEW



Note:
N7 bars shall be lapped inside rather than on the side for end bars.

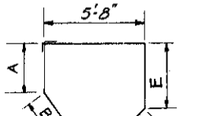
SECTION AA

SECTION BB



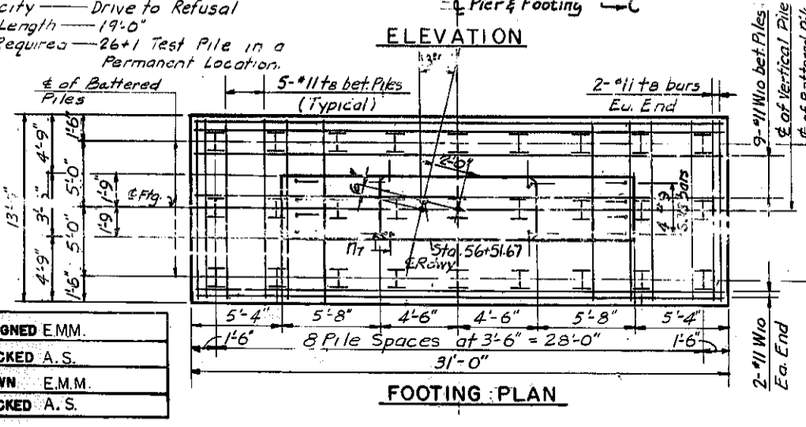
BAR S13 thru S24

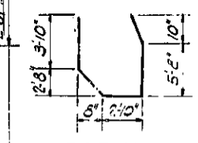
Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-0"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11⅛"	0'-11"	3'-3½"
S20	1'-11"	4'-8	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"



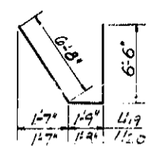
BARS S200 thru S203

Bar	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-3"
S201	3'-1"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"
S229	4'-5"	1'-7"	3'-5½"	2'-1"	4'-0"

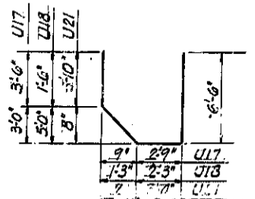




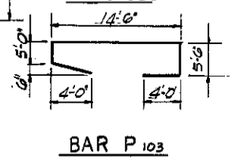
BAR U22



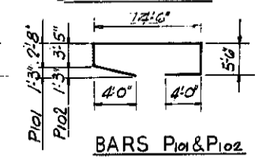
BARS U19 & U20



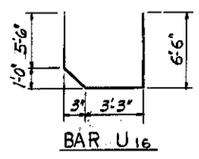
BARS U17 U18 & U21



BAR P103



BARS P101 & P102



BAR U16

Bar	A	B
U16	3'-6"	6'-6"
U2	3'-0	1'-3"
S27	2'-4	2'-4
S313	8'-0	2'-0"
h23	2'-6"	2'-3"



BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U16	18	#9	16'-6"	
U16	2	#9	16'-3	
U17	2	#9	15'-10"	
U18	2	#9	15'-5"	
U19	2	#9	14'-11"	
U20	2	#9	14'-5"	
U21	2	#9	16'-	
U22	2	#9	15'-11"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	3	#10	33'-0"	
P1	19	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S229	2	#5	22'-4"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S203	2	#5	22'-4"	
S27	12	#4	9'-18	
h30	2	#6	12'-0"	
Column				
V17	62	#11	26'-3"	
S184	46	#5	19'-3"	
S185	23	#5	20'-7"	
Crash Wall				
S313	12	#9	12'-0	
S186	24	#6	24'-4"	
h25	16	#5	19'-10	
U2	14	#5	5'-6"	
Footing				
te	44	#11	15'-8"	
W10	22	#11	30'-6"	
N7	62	#11	14'-0"	

Item	Units	Total
Reinforcement Bars	Lbs.	28530
Class X Concrete	Cu. Yds.	107.3
Structure Excavation	Cu. Yds.	88.1
Steel Piles (HP10x42)	L.F.	494
Test Pile HP10x42)	Ea.	1

See Bar Diagrams

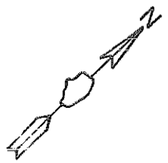
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	E.M.M.
CHECKED	A.S.

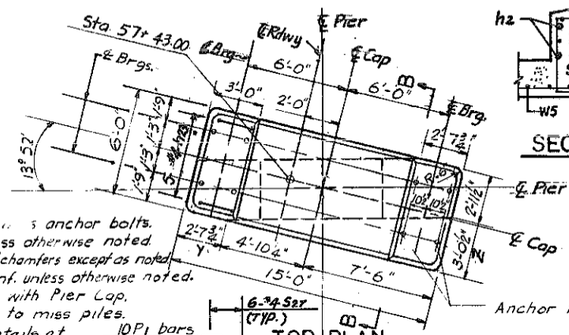
PIER NO. 17

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID Route No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	188
U. S. R. REC. NO.	ILLINOIS	PROJECT		

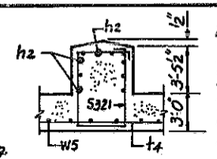
SHEET NO. 88
102 SHEETS





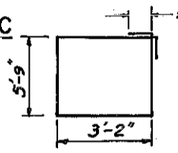
Note:
Space reinf. in Pier Cap to ... s anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier see sheet 101

TOP PLAN

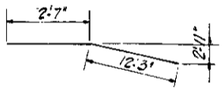


SECTION C-C

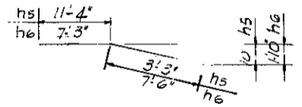
Notes:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in 'H' dimension shown on sht. 68.
It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.



BAR S321

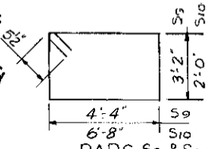


BAR P4

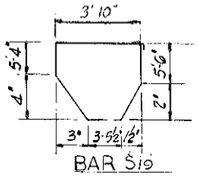


BARS h5 & h6

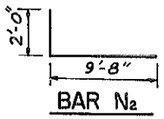
BAR t4



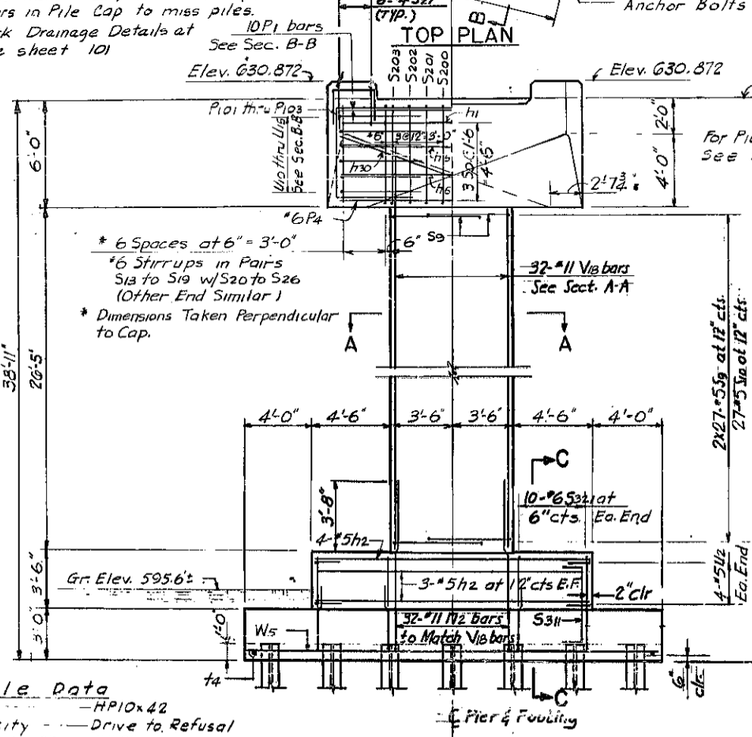
BARS S9 & S10



BAR S19

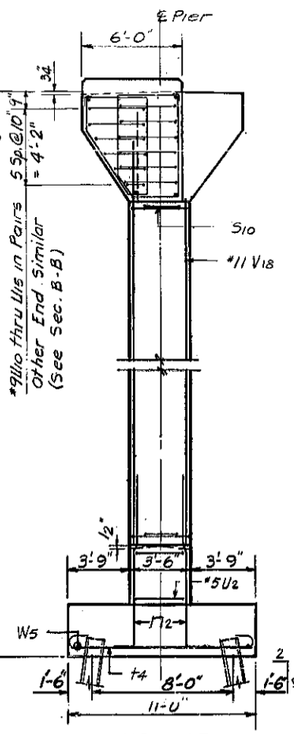


BAR N2

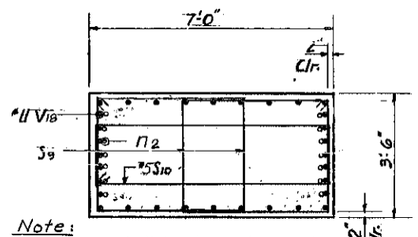


ELEVATION

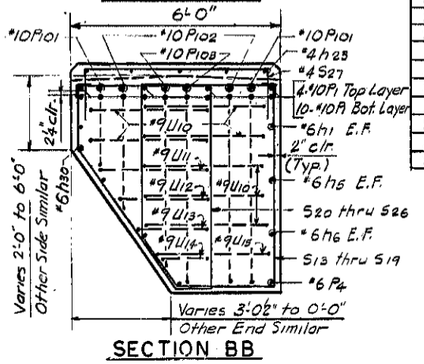
For Pier Cap Isometric, See Sheet # 77.



END VIEW

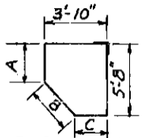


Note:
N2 bars shall be lapped inside rather than on the side for end bars.



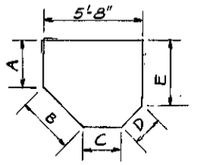
SECTION AA

SECTION BB



BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-0"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-11½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"



BARS S200 thru S203

Bars	A	B	C	D	E
S200	3'-1"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



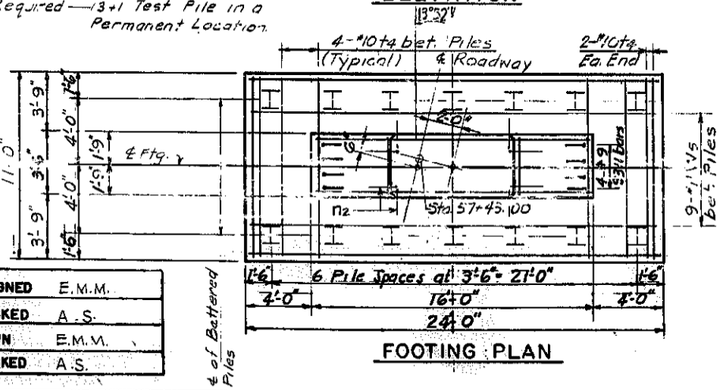
Bars	A	B
U1c	3'-6"	6'-6"
U2	3'-0"	1'-3"
S27	5'-4"	2'-3"
S311	5'-9"	2'-0"
h23	2'-6"	2'-3"

BILL OF MATERIALS

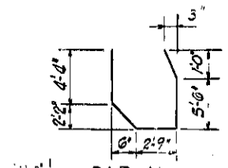
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-7"	
U14	2	#9	14'-3"	
U15	2	#9	5'-0"	
P101	2	#10	30'-1"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'10"	
h1	2	#6	14'6"	
h5	2	#6	14'7"	
h6	2	#6	14'9"	
h23	10	#4	7'-0"	
S13	2	#6	19'5"	
S14	2	#6	19'6"	
S15	2	#6	19'7"	
S16	2	#6	19'8"	
S17	2	#6	19'9"	
S18	2	#6	19'10"	
S19	2	#6	19'11"	
S20	2	#6	18'2"	
S21	2	#6	18'3"	
S22	2	#6	18'4"	
S23	2	#6	18'5"	
S24	2	#6	18'6"	
S25	2	#6	18'7"	
S26	2	#6	18'8	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'4"	
S203	2	#5	22'4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V18	32	#11	30'5"	
S9	54	#5	15'11"	
S10	27	#5	18'3"	
Crash Wall				
S311	8	#9	9'-9"	
S321	20	#6	9'-10"	
h2	10	#5	15'6"	
U2	8	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	11	#11	23'-6"	
N2	32	#11	11'-8"	

See Bar Diagrams

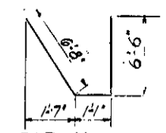
Item	Units	Total
Reinforcement Bars	Lbs.	16960
Class X Concrete	Cu. Yds.	79.2
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	221
Test Pile HP10x42	Ea.	1



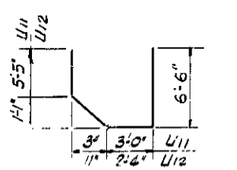
FOOTING PLAN



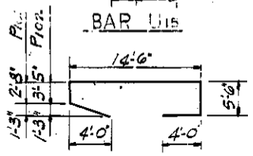
BAR U15



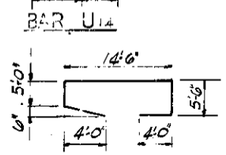
BAR U14



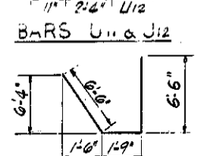
BARS U11 & U12



BARS P101 & P102



BAR P103



BAR U13

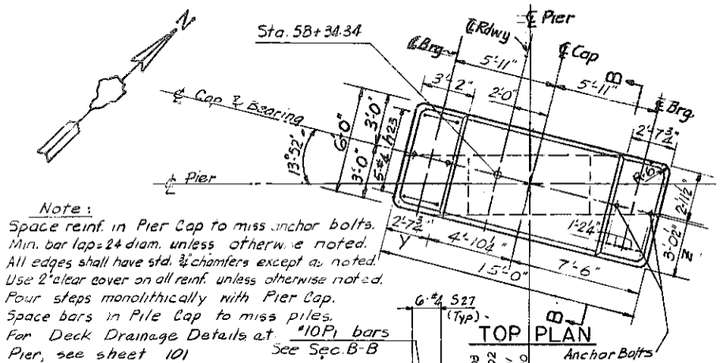
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	E.M.M.
CHECKED	A.S.

PIER NO. 18

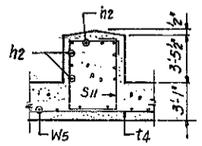
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BSR	COOK	223	184
I.D.P.R. DIST. NO.	ILLINOIS	PROJECT		

SHEET NO 69
102 SHEETS

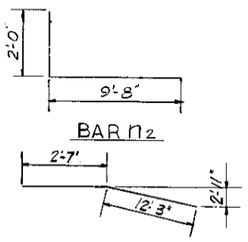


Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101



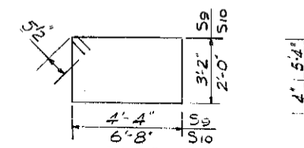
SECTION C-C

Note:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.

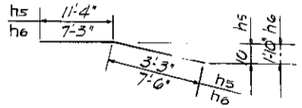


BAR n2

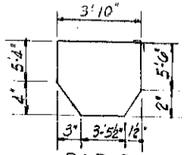
BAR P4



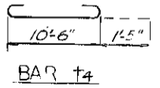
BARS S9 & S10



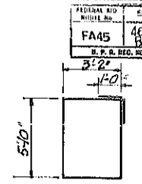
BARS h5 & h6



BAR S19



BAR t4



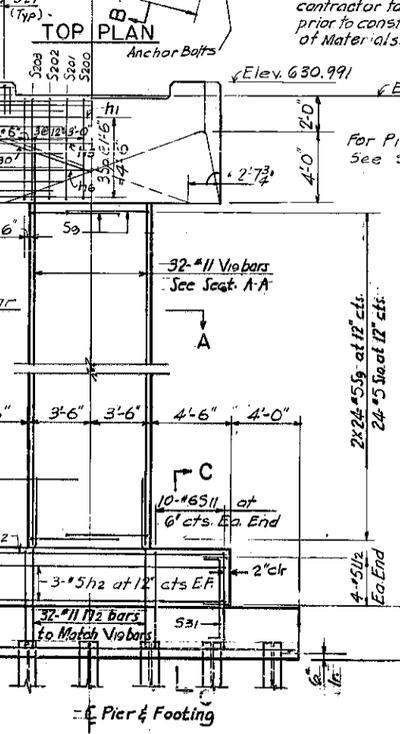
BAR S11

BILL OF MATERIALS

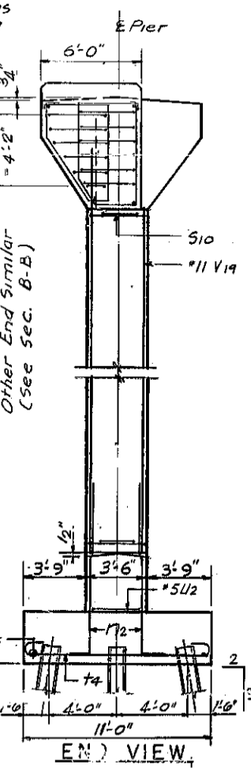
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16'-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	30'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P4	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'-5"	
S14	2	#6	19'-6"	
S15	2	#6	19'-7"	
S16	2	#6	19'-8"	
S17	2	#6	19'-9"	
S18	2	#6	19'-10"	
S19	2	#6	19'-11"	
S20	2	#6	18'-2"	
S21	2	#6	18'-3"	
S22	2	#6	18'-4"	
S23	2	#6	18'-5"	
S24	2	#6	18'-6"	
S25	2	#6	18'-7"	
S26	2	#6	18'-8"	
S200	2	#5	22'-4"	
S201	2	#5	22'-4"	
S202	2	#5	22'-4"	
S208	2	#5	22'-4"	
S27	12	#4	9'-10"	
h30	2	#6	12'-0"	
Column				
V19	32	#11	27'-5"	
S9	48	#3	15'-11"	
S10	24	#3	18'-3"	
Crash Wall				
S31	8	#9	9'-10"	
S11	20	#6	20'-0"	
n2	10	#5	15'-6"	
U2	6	#5	5'-6"	
Footing				
t4	28	#10	13'-4"	
W5	16	#11	23'-6"	
n2	32	#11	11'-8"	

See 3 or 4 bar diagrams

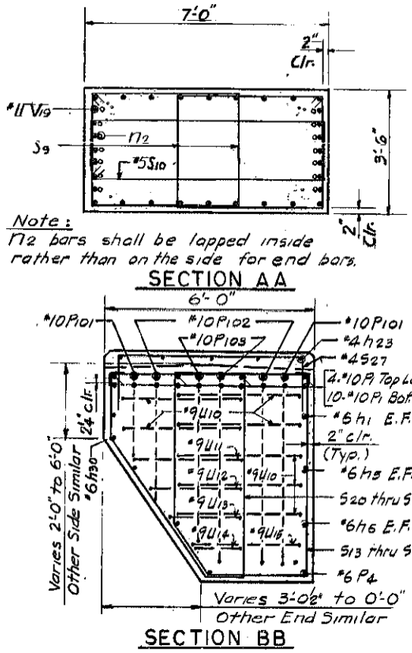
Item	Units	Total
Reinforcement Bars	Lbs.	16930
Class X Concrete	Cu. Yds.	77.8
Structure Excavation	Cu. Yds	62.2
Steel Piles (HP10x42)	L.F.	195
Test Pile (HP10x42)	Ea.	1



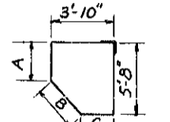
ELEVATION



END VIEW

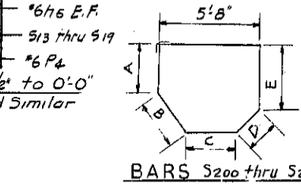


SECTION BB



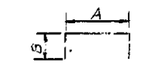
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-3½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-7½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-3½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

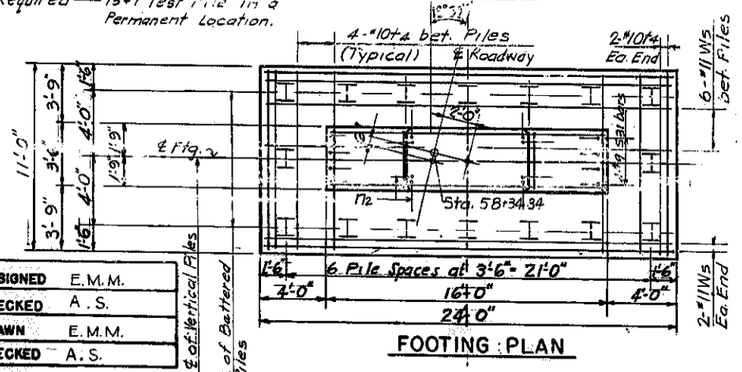


BARS S200 thru S208

Bar	A	B	C	D	E
S200	3'-1"	2'-3"	3'-5"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S208	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"

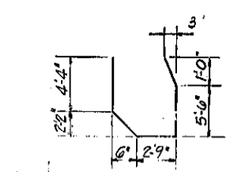


Bar	A	B
U10	3'-6"	6'-5"
S27	5'-4"	2'-3"
S31	5'-10"	2'-0"
h23	2'-6"	2'-3"

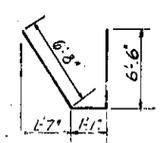


FOOTING PLAN

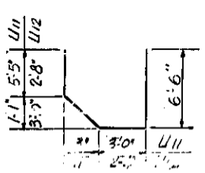
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CHECKED	A.S.
DRAWN	E.M.M.
CHECKED	A.S.



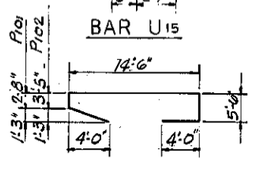
BAR U15



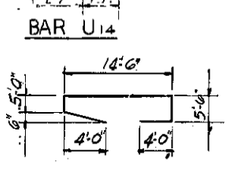
BAR U14



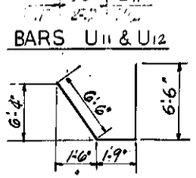
BARS U11 & U12



BARS P101&P102



BAR P103



BAR U13

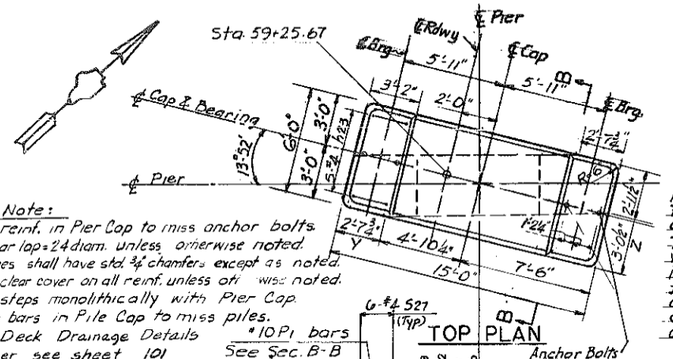
PIER NO. 19

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

File Data
Type —— HP10x42
Capacity —— Drive to Refusal
Est. Length —— 13'-0"
No. Required —— 15+1 Test Pile in a Permanent Location.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X BR.	COOK	223	185
U. S. R. ROUTE NO.	RAILROAD	PROJECT		

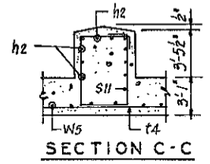
SHEET NO 90
10% SHEETS



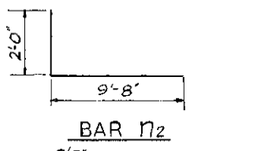
TOP PLAN

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier see sheet 101

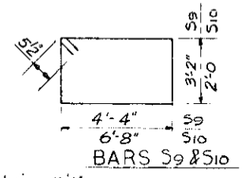
Note:
The pedestal and the footing shall be cast in a single pour.
The seat elevations shown could vary depending upon the variation in "h" dimension shown on Sht. #68.
It shall be the responsibility of the Contractor to verify these dimensions prior to Construction and ordering of Materials.



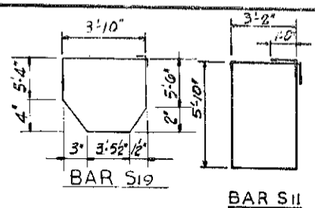
SECTION C-C



BAR n2



BARS S9 & S10

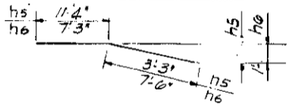


BAR S19

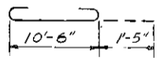
BAR S11



BAR P4



BARS h5 & h6



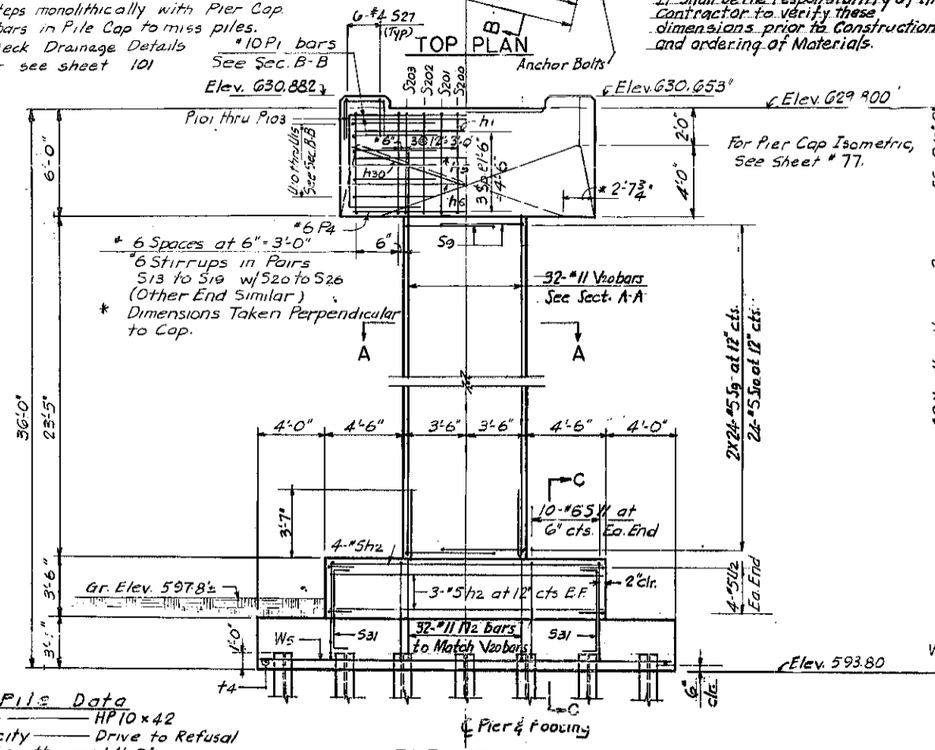
BAR t4

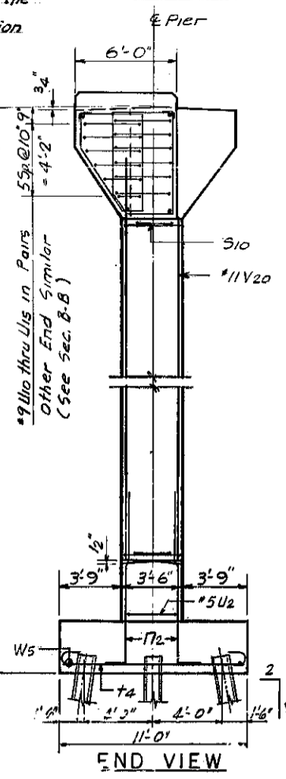
BILL OF MATERIALS

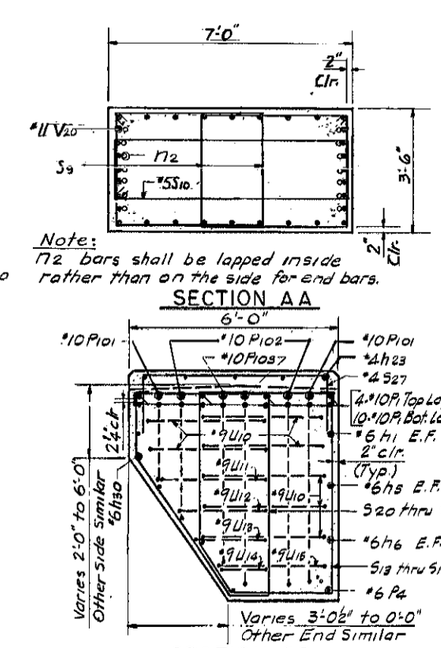
Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	#9	16-6"	
U11	2	#9	16'-0"	
U12	2	#9	15'-5"	
U13	2	#9	14'-9"	
U14	2	#9	14'-3"	
U15	2	#9	15'-10"	
P101	2	#10	31'-10"	
P102	2	#10	31'-7"	
P103	2	#10	33'-0"	
P1	14	#10	14'-6"	
P11	2	#6	14'-10"	
h1	2	#6	14'-6"	
h5	2	#6	14'-7"	
h6	2	#6	14'-9"	
h23	10	#4	7'-0"	
S13	2	#6	19'5"	
S14	2	#6	19'6"	
S15	2	#6	19'7"	
S16	2	#6	19'8"	
S17	2	#6	19'9"	
S18	2	#6	19'10"	
S19	2	#6	19'10"	
S20	2	#6	18'2"	
S21	2	#6	18'3"	
S22	2	#6	18'4"	
S23	2	#6	18'5"	
S24	2	#6	18'6"	
S25	2	#6	18'7"	
S26	2	#6	18'8"	
S200	2	#5	22'4"	
S201	2	#5	22'4"	
S202	2	#5	22'4"	
S203	2	#5	22'4"	
S27	12	#4	9'10"	
h30	2	#6	12'0"	
Column				
V20	32	#11	27'5"	
S9	48	#5	15'11"	
S10	24	#5	18'3"	
Crash Wall				
S31	8	#9	9'10"	
S11	20	#6	20'0"	
n2	10	#5	13'6"	
U2	8	#5	5'6"	
Footing				
t4	28	#10	13'4"	
W5	16	#11	23'6"	
n2	32	#11	11'8"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	16910.
Class X Concrete	Cu. Yds.	77.9
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L.F.	210
Test Pile (HP10x42)	Ea.	1



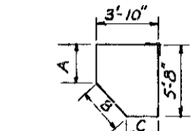




Note:
n2 bars shall be lapped inside rather than on the side for end bars.

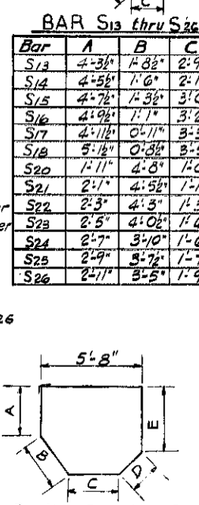
SECTION AA

SECTION B-B



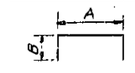
BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-8"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"

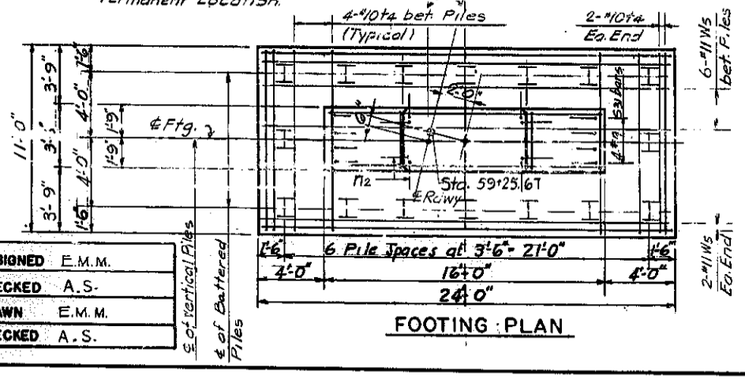


BARS S200 thru S203

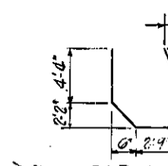
Bar	A	B	C	D	E
S200	3'-1"	5'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-3"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S203	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



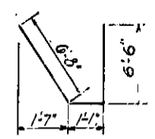
Bar	A	B
U10	3'-6	6'-6"
U2	3'-0"	1'-3"
U27	3'-4	2'-3
S31	5'-10"	2'-0"
h23	2'-6"	2'-3



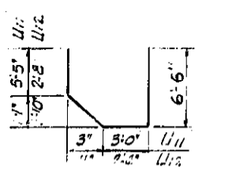
FOOTING PLAN



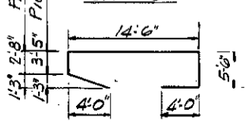
BAR U15



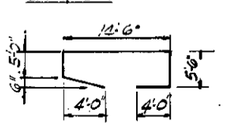
BAR U14



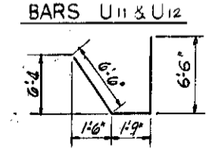
BARS U11 & U12



BARS P101 & P102



BAR P103



BAR U13

Pile Data
Type —— HP10 x 42
Capacity —— Drive to Refusal
Est. Length —— 14'-0"
No. Required —— 15+1 Test Pile in ℄ Permanent Location.

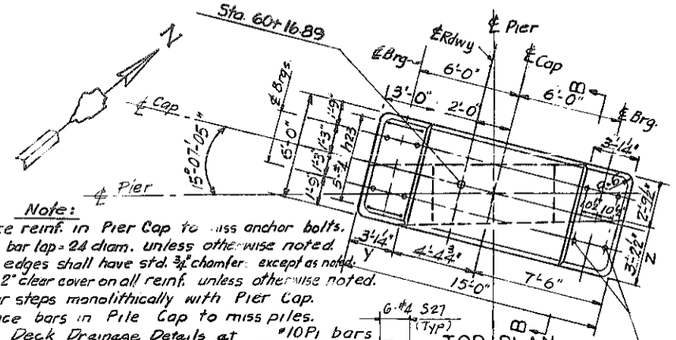
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	E.M.M.
CHECKED	A.S.

PIER NO. 20

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

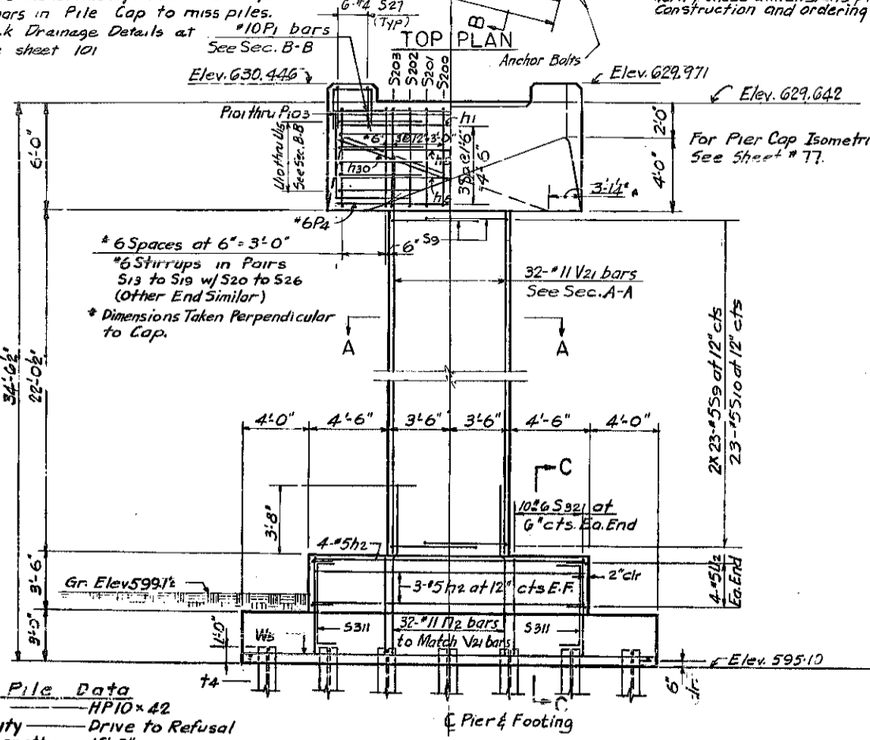
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS	462X (BRS)	COOK	223	186
I. D. H. ROUTE NO.		ILLINOIS	PROJECT	

SHEET NO. 91
102 SHEETS

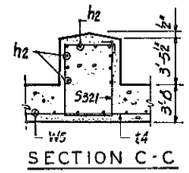


TOP PLAN

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfer except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier see sheet 101

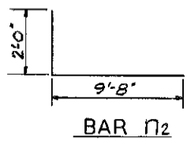


ELEVATION

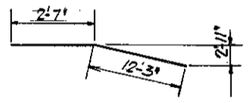


SECTION C-C

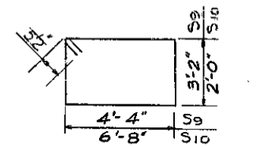
Note:
The pedestal and the footing shall be Cast in a single pour.
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.



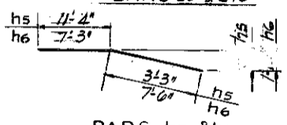
BAR n2



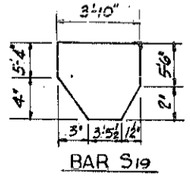
BAR P4



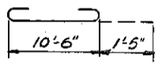
BARS S9 & S10



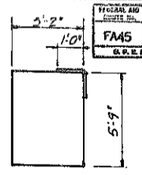
BARS h5 & h6



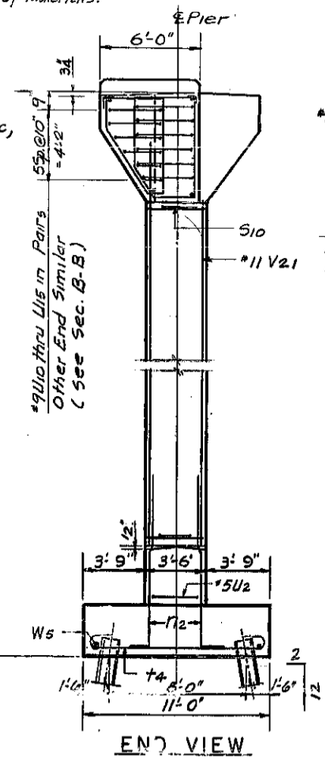
BAR S19



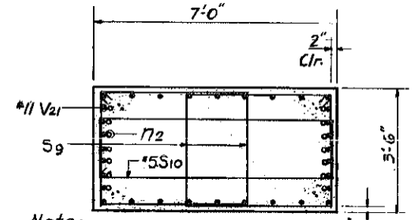
BAR t4



BAR S321

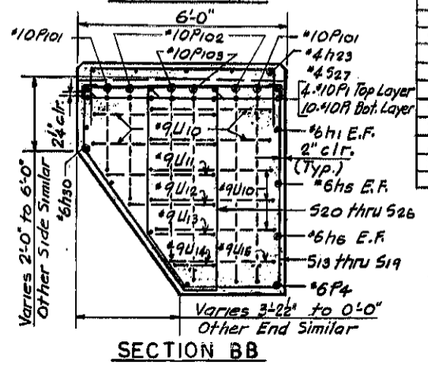


END VIEW

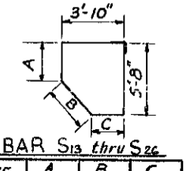


Note:
n2 bars shall be lapped inside rather than on the side for end bars.

SECTION AA

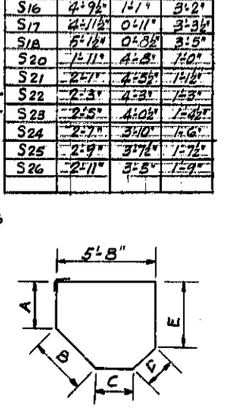


SECTION BB



BAR S13 thru S26

Bar	A	B	C
S13	4'-3½"	1'-8½"	2'-9½"
S14	4'-5½"	1'-6"	2'-11"
S15	4'-7½"	1'-3½"	3'-0½"
S16	4'-9½"	1'-1"	3'-2"
S17	4'-11½"	0'-11"	3'-3½"
S18	5'-1½"	0'-8½"	3'-5"
S20	1'-11"	4'-5"	1'-0"
S21	2'-1"	4'-5½"	1'-1½"
S22	2'-3"	4'-3"	1'-3"
S23	2'-5"	4'-0½"	1'-4½"
S24	2'-7"	3'-10"	1'-6"
S25	2'-9"	3'-7½"	1'-7½"
S26	2'-11"	3'-5"	1'-9"



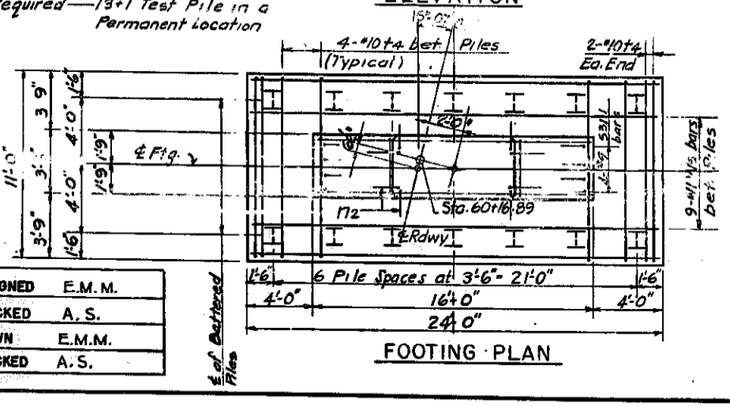
BARS S200 thru S208

Bars	A	B	C	D	E
S200	3'-2"	3'-3"	3'-5½"	0'-5"	5'-4"
S201	3'-5"	2'-10"	3'-5½"	0'-10"	5'-0"
S202	3'-9"	2'-5"	3'-5½"	1'-3"	4'-8"
S208	4'-1"	2'-0"	3'-5½"	1'-8"	4'-4"



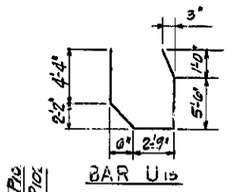
Bar	A	B
U10	3'-6"	6'-6"
U12	3'-0"	1'-3"
S27	5'-4"	2'-3"
S311	5'-9"	2'-0"
h23	2'-6"	2'-3"

Pile Data
Type ——— HP10 x 42
Capacity ——— Drive to Refusal
Est. Length ——— 15'-0"
No. Required ——— 13+1 Test Pile in a Permanent Location

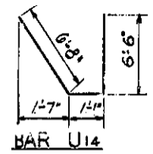


FOOTING PLAN

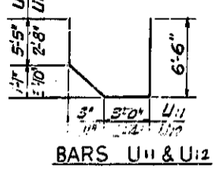
DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	E.M.M.
CHECKED	A. S.



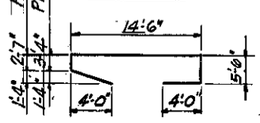
BAR U13



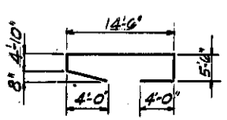
BAR U14



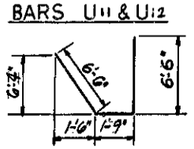
BARS U11 & U12



BARS P101&P102



BAR P103



BAR U18

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U10	14	# 9	16'-6"	
U11	2	# 9	16'-0"	
U12	2	# 9	15'-5"	
U13	2	# 9	14'-9"	
U14	2	# 9	14'-3"	
U15	2	# 9	15'-10"	
P101	2	# 10	30'-9"	
P102	2	# 10	31'-6"	
P103	2	# 10	33'-1"	
P1	14	# 10	14'-6"	
P4	2	# 6	14'-10"	
h1	2	# 6	14'-6"	
h5	2	# 6	14'-7"	
h6	2	# 6	14'-9"	
h23	10	# 4	7'-0"	
S13	2	# 6	19'-5"	
S14	2	# 6	19'-6"	
S15	2	# 6	19'-7"	
S16	2	# 6	19'-8"	
S17	2	# 6	19'-9"	
S18	2	# 6	19'-10"	
S19	2	# 6	19'-11"	
S20	2	# 6	18'-2"	
S21	2	# 6	18'-3"	
S22	2	# 6	18'-4"	
S23	2	# 6	18'-5"	
S24	2	# 6	18'-6"	
S25	2	# 6	18'-7"	
S26	2	# 6	18'-8"	
S200	2	# 5	22'-4"	
S201	2	# 5	22'-4"	
S202	2	# 5	22'-4"	
S208	2	# 5	22'-4"	
S27	12	# 4	9'-10"	
h30	2	# 6	12'-0"	
Column				
V21	32	# 11	26'-0"	
S9	46	# 5	15'-11"	
S10	23	# 5	18'-9"	
Crash Wall				
S311	8	# 9	9'-9"	
S321	20	# 6	19'-10"	
U4	10	# 5	15'-6"	
U2	2	# 5	5'-6"	
Footing				
t4	28	# 10	13'-4"	
W5	11	# 11	23'-6"	
n2	32	# 11	11'-8"	

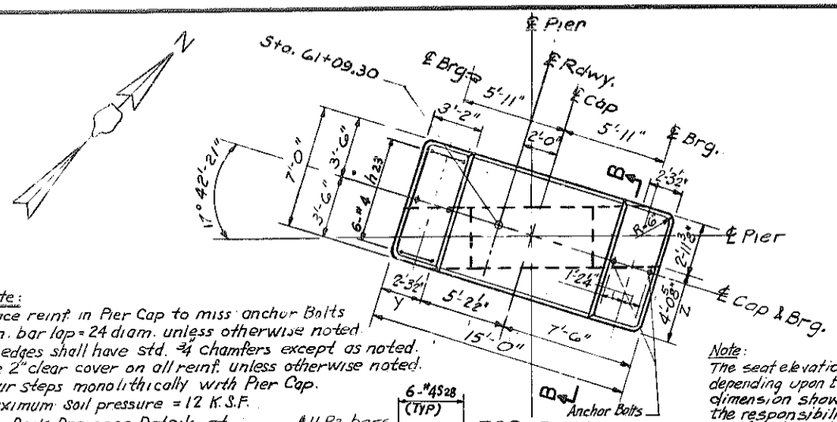
Item	Unit	Total
Reinforcement Bars	Lbs.	16000.
Class X Concrete	Cu. Yds.	75.5
Structure Excavation	Cu. Yds.	62.2
Steel Piles (HP10x42)	L. F.	195
Test Pile (HP10x42)	Ea.	1

PIER NO. 21

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

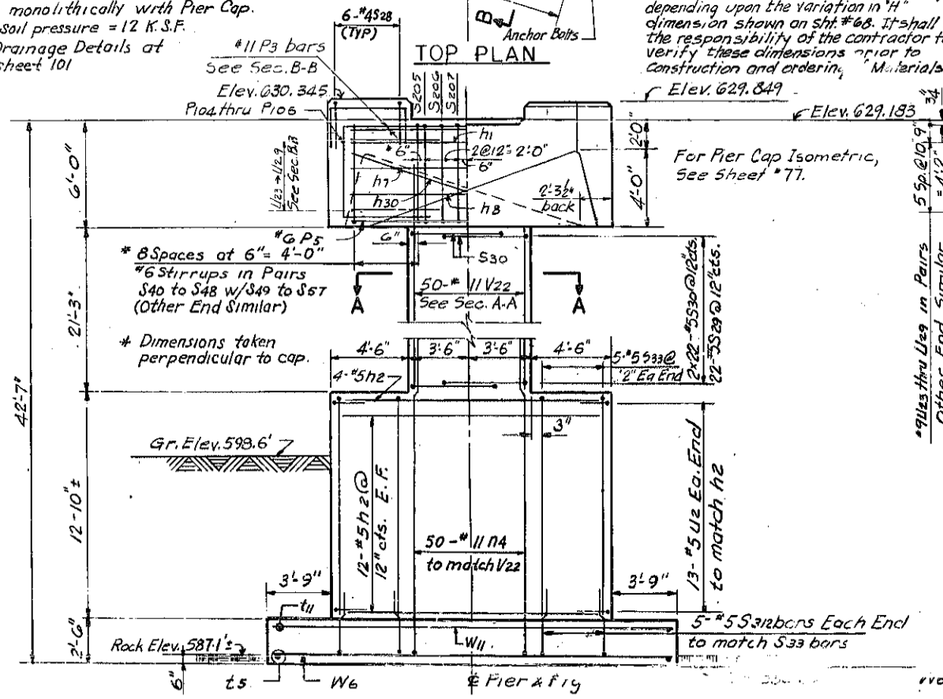
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS NO.	SHEET NO.
FA45	462X B&R	COOK	223	187
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 92
102 SHEETS



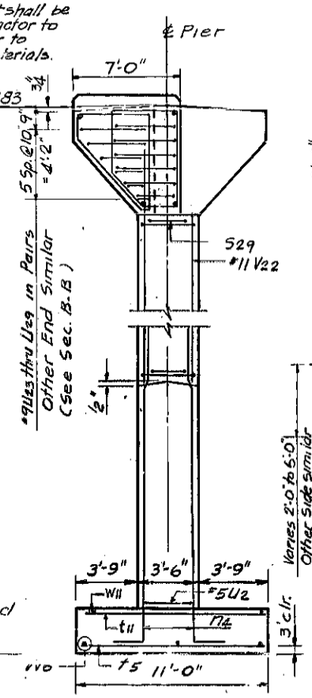
Note:
Space reinf in Pier Cap to miss anchor Bolts
Min. bar lap = 24 diam. unless otherwise noted
All edges shall have std. ¾ chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 12 K.S.F.
For Deck Drainage Details at Pier see sheet 101

TOP PLAN

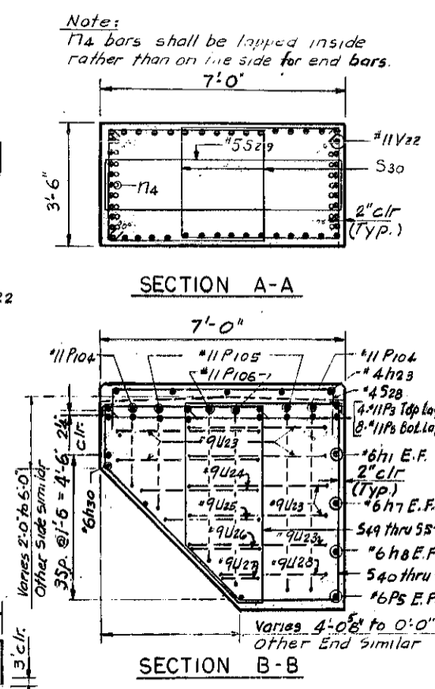


ELEVATION

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering Materials.



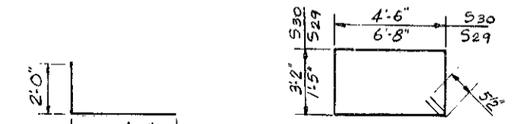
END VIEW



SECTION B-B

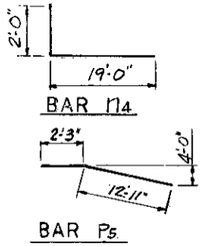
Note:
N4 bars shall be lapped inside rather than on the side for end bars.

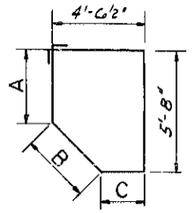
SECTION A-A



BARS S29 & S30

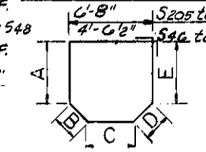
Bar	A	B
U23	4'-3"	6'-9"
S33	3'-2"	12'-7"
S312	3'-2"	3'-6"
S28	6'-4"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"





BARS S40 to S45, S49 to S57

Bar	A	B	C
S40	4'-0"	2'-5"	2'-10"
S41	4'-2"	2'-2"	3'-0"
S42	4'-4"	1'-11"	3'-2"
S43	4'-6"	1'-8½"	3'-4"
S44	4'-8"	1'-6"	3'-6"
S45	4'-10"	1'-3"	3'-8"
S49	1'-10"	5'-0"	0'-8"
S50	2'-0"	5'-3"	0'-10"
S51	2'-2"	5'-0"	1'-0"
S52	2'-4"	4'-9"	1'-2"
S53	2'-6"	4'-6"	1'-4"
S54	2'-8"	4'-3"	1'-6"
S55	2'-10"	4'-0"	1'-8"
S56	3'-0"	3'-9"	1'-10"
S57	3'-2"	3'-6"	2'-0"



BARS S205 to S207, S46 to S48

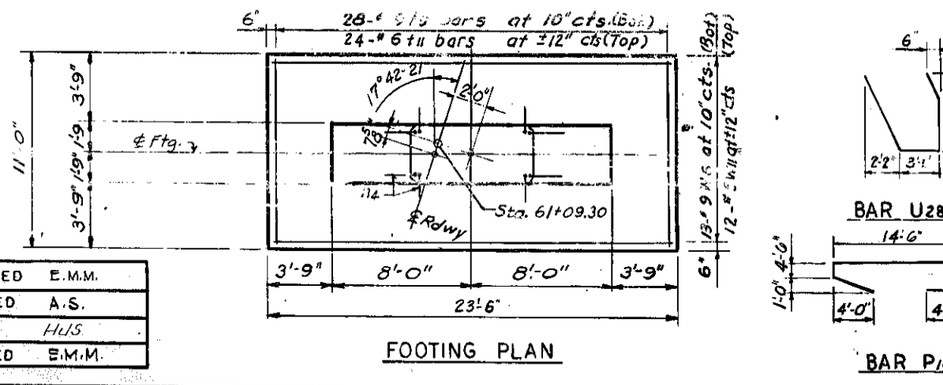
Bar	A	B	C	D	E
S205	3'-3"	3'-5"	3'-6½"	0'-11"	5'-0"
S206	3'-7"	2'-11½"	3'-6½"	1'-5"	4'-8"
S207	3'-11"	2'-6"	3'-6½"	1'-10½"	4'-4"
S46	4'-11½"	1'-0"	3'-6½"	0'-8"	5'-4½"
S47	5'-1¾"	0'-9"	3'-6½"	0'-8"	5'-2½"
S48	5'-3½"	0'-5"	3'-6½"	0'-11"	5'-0½"

BILL OF MATERIALS

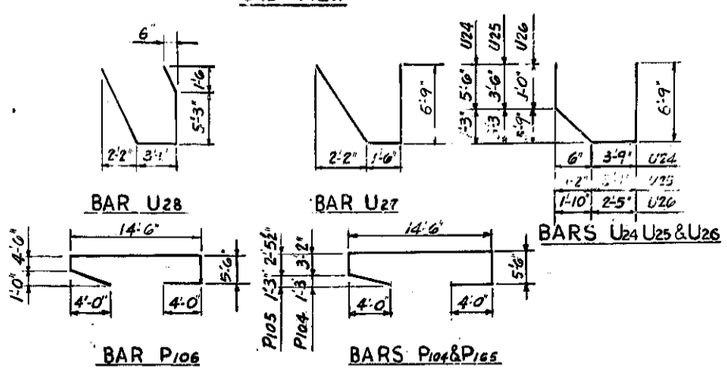
Bar	No	Size	Length	Shape
Pier Cap				
U23	14	# 9	17'-9"	
U24	2	# 9	17'-4"	
U25	2	# 9	16'-10"	
U26	2	# 9	16'-5"	
U27	2	# 9	15'-4"	
U28	2	# 9	17'0"	
P104	2	# 11	30'-7"	
P105	2	# 11	31'-4"	
P106	2	# 11	32'-8"	
P3	12	#11	14'-6"	
P5	2	#6	15'-2"	
h7	2	#6	14'-8"	
h8	2	#6	14'-11"	
h23	12	# 4	7'-0"	
h1	2	#6	14'-6"	
h30	2	#6	12'-0"	
S28	12	# 4	10'-10"	
S40	2	#6	20'-7"	
S41	2	#6	20'-8"	
S42	2	#6	20'-9"	
S43	2	#6	20'-10"	
S44	2	#6	20'-11"	
S45	2	#6	21'-0"	
S46	2	#6	21'-0"	
S47	2	#6	21'-0"	
S48	2	#6	21'-0"	
S49	2	#6	19'-4"	
S50	2	#6	19'-4"	
S51	2	#6	19'-6"	
S52	2	#6	19'-7"	
S53	2	#6	19'-8"	
S54	2	#6	19'-9"	
S55	2	#6	19'-10"	
S56	2	#6	19'-11"	
S57	2	#6	20'-1"	
S205	2	#5	23'-11"	
S206	2	#5	23'-11"	
S207	2	#5	23'-11"	
Column				
V22	50	#11	25'-3"	
S30	44	# 5	16'-3"	
S29	22	# 5	17'-1"	
Crash Wall				
h2	28	# 5	15'-6"	
S33	10	# 5	28'-4"	
S312	10	# 5	10'-2"	
U2	26	# 5	5'-6"	
Footing				
t11	13	# 5	10'-6"	
W11	12	# 5	23'-0"	
W6	13	# 9	23'-0"	
t5	28	# 9	10'-6"	
N4	50	#11	21'-0"	

See Bar Diagrams

Item	Units	Total
Reinforcement Bars	Lbs.	22070
Class X Concrete	Cu. Yds.	92.0
Structure Excavation	Cu. Yds.	174.9
Rock Excavation	Cu. Yds.	7.7



FOOTING PLAN

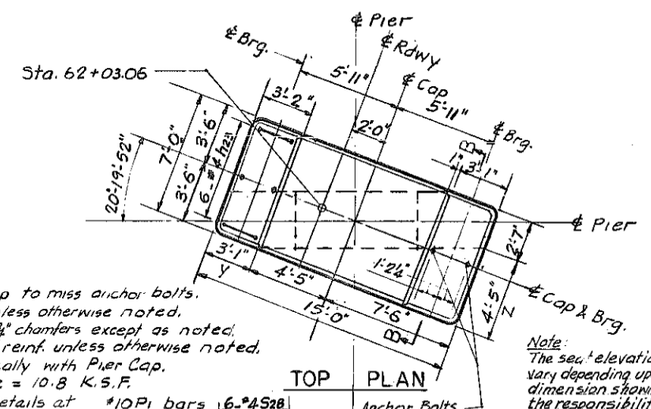


DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	E.M.M.

PIER NO 22
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

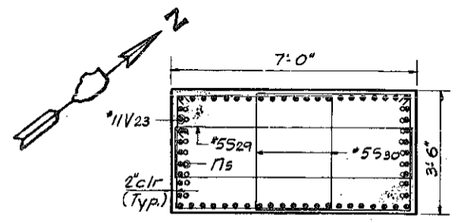
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI45	462X B&R	COOK	223	188
R. F. P. REG. NO.	ILLINOIS	PROJECT		

SHEET NO. 93
102 SHEETS



TOP PLAN

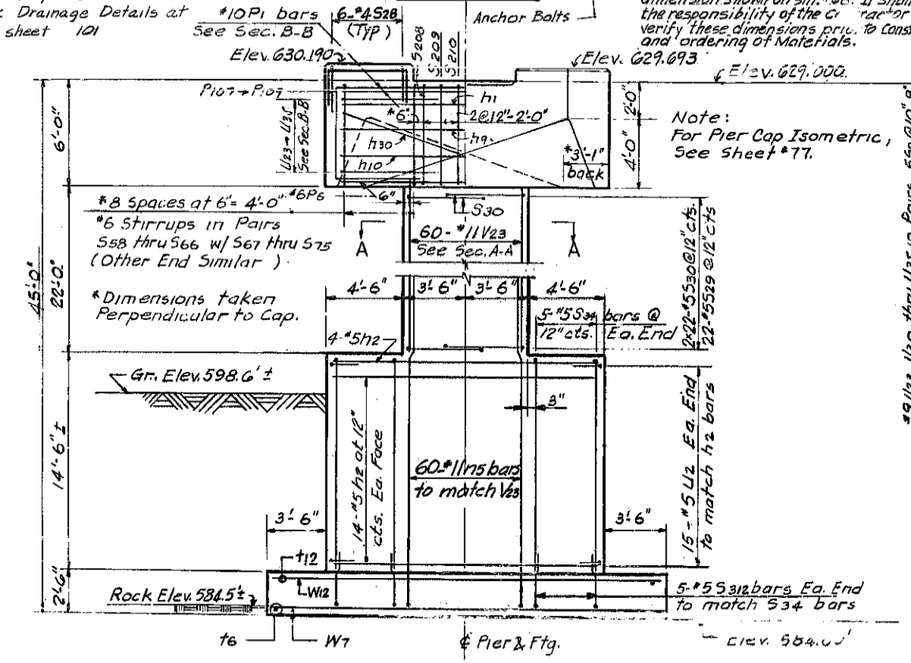
Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 10.8 K.S.F.
For Deck Drainage Details at #10P1 bars See Sec. B-B
Pier see sheet 101



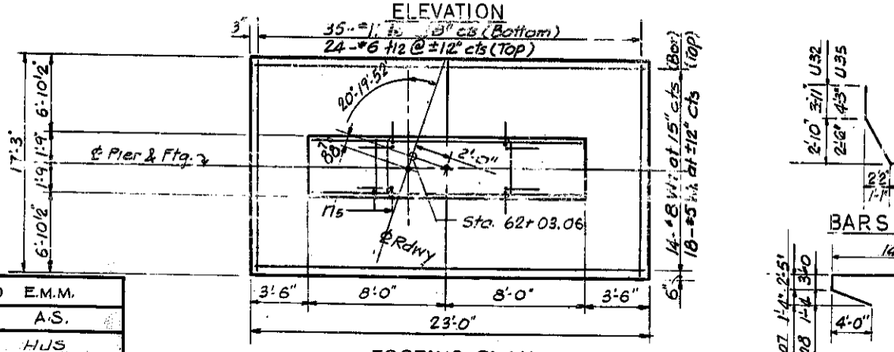
SECTION A-A

Note:
n5 bars shall be lapped inside rather than on the side for end bars.

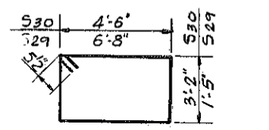
Note:
The section elevations shown could vary depending upon the variation in "H" dimension shown on sht. #68. It shall be the responsibility of the Contractor to verify these dimensions prior to construction and ordering of Materials.



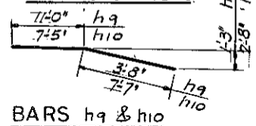
ELEVATION



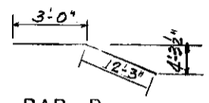
FOOTING PLAN



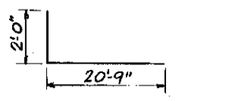
BARS S30 & S29



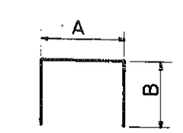
BARS h9 & h10



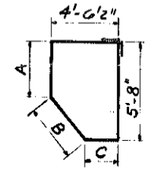
BAR P6



BAR n5

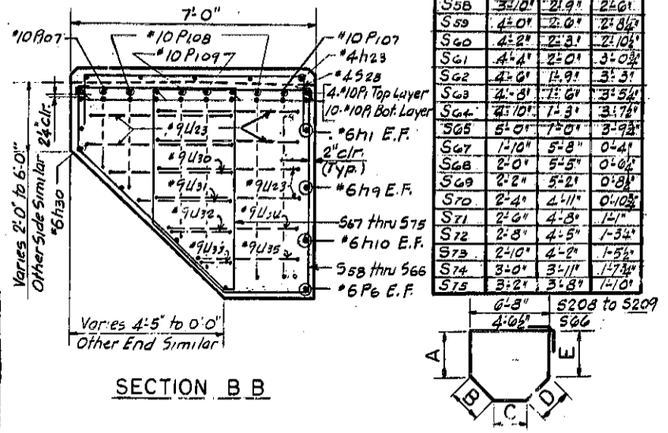


Bar	A	B
U23	4'-3"	6'-9"
S34	3'-2"	14'-3"
S312	3'-2"	3'-6"
S28	6'-4"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"



BARS S58 thru S75

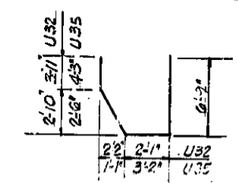
Bar	A	B	C
S58	3'-10"	2'-9"	2'-6"
S59	4'-0"	2'-0"	2'-8½"
S60	4'-2"	2'-3"	2'-10½"
S61	4'-4"	2'-0"	3'-0½"
S62	4'-6"	1'-9"	3'-3"
S63	4'-8"	1'-6"	3'-5½"
S64	4'-10"	1'-3"	3'-7½"
S65	5'-0"	1'-0"	3'-9½"
S66	1'-10"	5'-8"	0'-4½"
S68	2'-0"	5'-5"	0'-6½"
S69	2'-2"	5'-2½"	0'-8½"
S70	2'-4"	4'-11"	0'-10½"
S71	2'-6"	4'-8"	1'-0"
S72	2'-8"	4'-5"	1'-3½"
S73	2'-10"	4'-2"	1'-5½"
S74	3'-0"	3'-11"	1'-7½"
S75	3'-2"	3'-8"	1'-10"



SECTION B B

BARS S208 thru S210

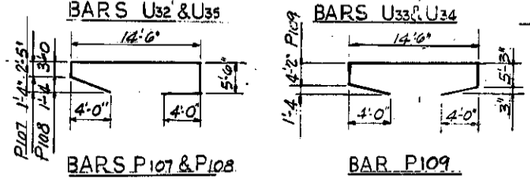
Bar	A	B	C	D	E
S208	3'-2½"	3'-7"	3'-7"	0'-6"	5'-4"
S209	4'-6½"	3'-2½"	3'-7"	1'-0"	5'-0"
S210	3'-10½"	2'-8"	3'-7"	1'-4"	4'-8"
S66	5'-2"	0'-9"	3'-7"	0'-7"	5'-3½"



BARS U32 & U35

BARS U33 & U34

BARS U30 & U31



BARS P107 & P108

BAR P109

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U23	12	#9	17'7"	
U30	2	#9	17'5"	
U31	2	#9	16'8"	
U32	2	#9	15'9"	
U33	2	#9	16'1"	
U34	2	#9	17'8"	
U35	2	#9	15'11"	
P107	2	#10	31'7"	
P108	2	#10	31'2"	
P109	2	#10	32'4"	
P1	14	#10	14'6"	
P6	2	#6	15'3"	
h1	2	#6	14'6"	
h9	2	#6	14'8"	
h10	2	#6	15'0"	
h23	10	#4	7'-0"	
h30	2	#6	12'0"	
S28	6	#6	16'10"	
S58	2	#6	20'5"	
S59	2	#6	20'6"	
S60	2	#6	20'7"	
S61	2	#6	20'8"	
S62	2	#6	20'9"	
S63	2	#6	20'10"	
S64	2	#6	21'0"	
S65	2	#6	21'1"	
S66	2	#6	21'0"	
S67	2	#6	19'2"	
S68	2	#6	19'3"	
S69	2	#6	19'6"	
S70	2	#6	19'6"	
S71	2	#6	19'7"	
S72	2	#6	19'9"	
S73	2	#6	19'10"	
S74	2	#6	19'11"	
S75	2	#6	19'11"	
S208	2	#5	24'0"	
S209	2	#5	24'0"	
S210	2	#5	24'0"	
Column				
V23	60	#11	26'0"	
S30	44	#5	16'3"	
S29	22	#5	17'1"	
Crash Wall				
h2	34	#5	15'6"	
S34	10	#5	31'8"	
S312	10	#5	10'2"	
U2	30	#5	5'6"	
Footing				
W12	16	#5	22'6"	
t12	24	#6	16'9"	
W7	14	#8	22'0"	
t6	35	#11	16'9"	
n5	60	#11	22'9"	

Bar Diagram See

Item	Unit	Total
Reinforcement Bars	Lbs	25780
Class X Concrete	Cu. Yds.	108.8
Structure Excavation	Cu. Yds.	299.6
Rock Excavation	Cu. Yds.	10.6

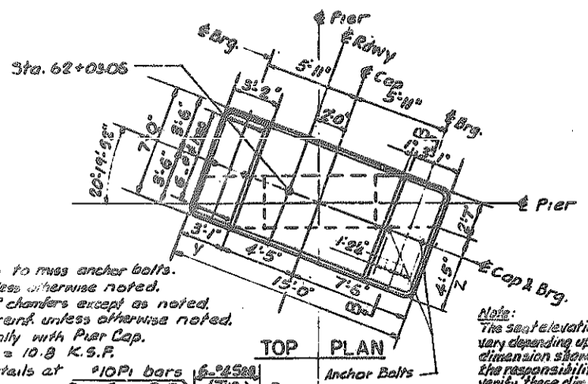
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	E.M.M.

PIER NO. 23

LA GRANGE RD. F.A. ROUTE 43 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

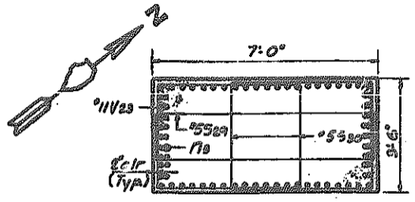
PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAAS	462-X-B&R	COOK	223	189-1
F.A.P. RTE. NO.		COUNTY TOWNSHIP		

SHEET NO. 93-1
102 SHEETS



Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. 3/4" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 10.8 K.S.P.
For Deck Drainage Details at Pier see sheet 101

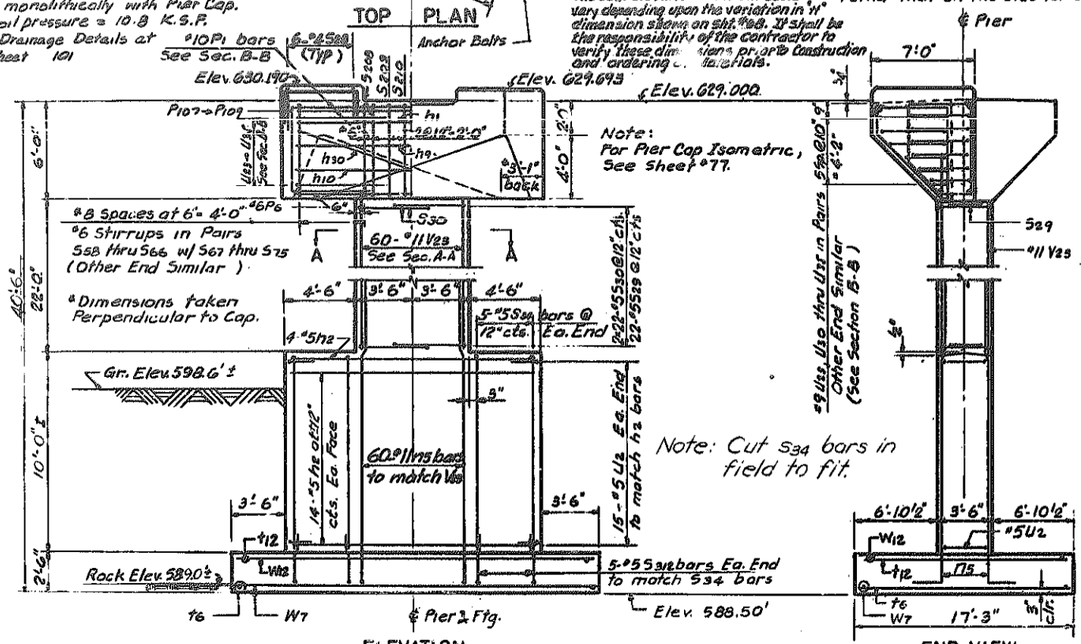
TOP PLAN



SECTION A-A

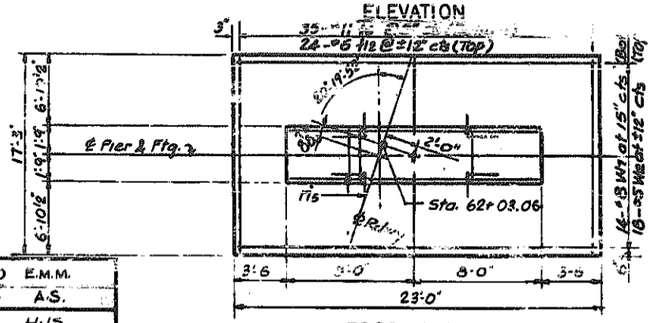
Note:
The seat elevations shown could vary depending upon the variation in "N" dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of materials.

Note:
h5 bars shall be lapped inside rather than on the side for end bars.



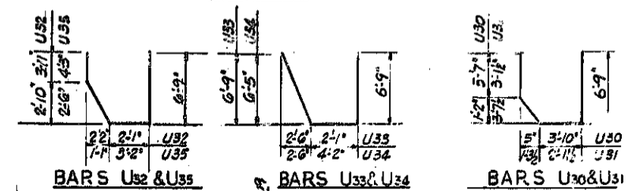
Note: Cut S34 bars in field to fit.

ELEVATION



FOOTING PLAN

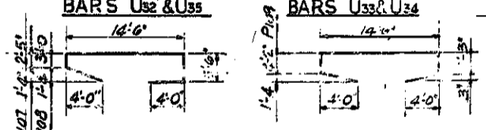
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	HJS
CHECKED	E.M.M.



BARS U32 & U35

BARS U33 & U34

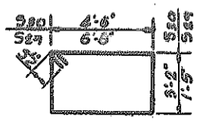
BARS U30 & U31

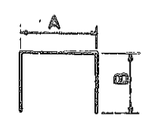


BARS P107 & P108

BAR P109

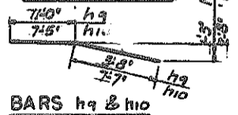
AS REVISED





BARS S30 & S29

Bar	A	B
U23	4'-3"	6'-9"
S34	3'-2"	14'-3"
S312	3'-2"	3'-6"
S28	6'-8"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"

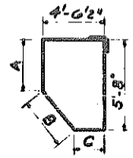


BARS h9 & h10

BAR P6

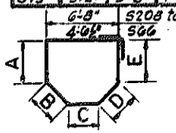


BAR h5



BARS S58 thru S75

Bar	A	B	C
S58	3'-10"	21'-9"	2'-6"
S59	4'-0"	21'-0"	2'-8½"
S60	4'-2"	20'-3"	2'-10½"
S61	4'-4"	2'-0"	3'-0½"
S62	4'-6"	19'-9"	3'-3"
S63	4'-8"	1'-6"	3'-5½"
S64	4'-10"	1'-3"	3'-7½"
S65	5'-0"	1'-0"	3'-9½"
S67	1'-10"	5'-8"	0'-4"
S68	2'-0"	5'-5"	0'-6½"
S69	2'-2"	5'-2"	0'-8½"
S70	2'-4"	4'-11"	0'-10½"
S71	2'-6"	4'-8"	1'-"
S72	2'-8"	4'-5"	1'-3½"
S73	2'-10"	4'-2"	1'-5½"
S74	3'-0"	3'-11"	1'-7½"
S75	3'-2"	3'-8"	1'-10"



BARS S208 thru S210

Bar	A	B	C	D	E
S208	3'-2½"	3'-7"	2'-7"	0'-6"	5'-4"
S209	2'-6"	3'-2½"	2'-7"	1'-0"	5'-0"
S210	3'-10½"	2'-8"	3'-7"	1'-3"	4'-8"
S66	5'-2"	0'-9"	3'-7"	0'-7"	5'-8½"

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U23	12	#9	11'-7"	
U30	2	#9	17'-5"	
U31	2	#9	16'-8"	
U32	2	#9	15'-9"	
U33	2	#9	16'-1"	
U34	2	#9	17'-8"	
U35	2	#9	19'-11"	
P107	2	#10	30'-7"	
P108	2	#10	31'-2"	
P109	2	#10	32'-4"	
P1	14	#10	14'-6"	
P6	2	#6	15'-3"	
h1	2	#6	18'-6"	
h9	2	#6	14'-8"	
h10	2	#6	15'-0"	
h23	10	#4	7'-0"	
h30	2	#6	12'-0"	
S28	6	#4	16'-10"	
S58	2	#6	20'-5"	
S59	2	#6	20'-0"	
S60	2	#6	20'-7"	
S61	2	#6	20'-8"	
S62	2	#6	20'-9"	
S63	2	#6	20'-10"	
S64	2	#6	21'-0"	
S65	2	#6	21'-1"	
S66	2	#6	21'-0"	
S67	2	#6	19'-2"	
S68	2	#6	19'-3"	
S69	2	#6	19'-6"	
S70	2	#6	19'-6"	
S71	2	#6	19'-7"	
S72	2	#6	19'-9"	
S73	2	#6	19'-10"	
S74	2	#6	19'-11"	
S75	2	#6	19'-11"	
S208	2	#5	24'-0"	
S209	2	#5	24'-0"	
S210	2	#5	24'-0"	
Column				
V23	60	#11	26'-0"	
S30	44	#5	18'-3"	
S29	22	#5	17'-1"	
Crash Wall				
h2	34	#5	15'-6"	
S26	10	#5	31'-8"	
S312	10	#5	10'-0"	
U2	30	#5	5'-8"	
Footing				
W12	18	#5	22'-6"	
t12	24	#6	16'-9"	
W7	14	#8	22'-6"	
Ftg.	38	#11	16'-9"	
t6	60	#11	22'-9"	

See Bar Diagram

Item	Unit	Total
Reinforcement Bars	Lbs.	25780
Class X Concrete	Cu. Yds.	94.5
Structure Excavation	Cu. Yds.	204.0
Rock Excavation	Cu. Yds.	10.6

PIER NO. 23

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

As Revised 10-28-75 L.W.

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	189
D. P. R. SEC. NO.	ILLINOIS	PROJECT		

SHEET NO. 94
102 SHEETS

N

Sta. 62+98.45

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Min. bar lap = 24 diam. unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap
Maximum soil pressure = 13.1 K.S.F.
For Deck Drainage Details at Pier, see sheet 101

TOP PLAN

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of material.

Elev. 629.777'
Elev. 629.283
Elev. 628.050

For Pier Cap Isometric, See Sheet # 77.

*8 Spaces at 6"= 4'-0"
#6 Stirrups in Pairs
S76 thru S84 w/ S85 thru S93
(Other End Similar)

*Dimensions Taken Perpendicular to Cap.

50-#11V24 See Sec. AA

Gr. Elev. 599.1'

Rock Elev. 587.9±

20-#11 h6 bars to match V24

5-#5 S312 Ea. End to match #5 S335

5-#5 S335 @12" Ea. End

12-#5 U2 @12" to match h2 bars Ea End

11-#5 h2 @12" Each Face

ELEVATION

END VIEW

FOOTING PLAN

BAR S85

BAR N6

BAR P7

BARS S29 & S30

BARS h11 & h12

Bar	A	B
U36	4'-3"	7'-0"
S35	3'-2"	11'-3"
S312	3'-2"	3'-6"
S28	6'-4"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"

Note:
N6 bars shall be lapped inside rather than on the side for end bars.

SECTION A-A

SECTION B-B

BARS S76 to S84, S86 to S93

Bar	A	B	C
S76	3'-7"	3'-2½"	2'-1"
S77	3'-9½"	2'-11"	2'-3½"
S78	3'-11½"	2'-8"	2'-6"
S79	4'-1½"	2'-4½"	2'-8½"
S80	4'-3½"	2'-1½"	2'-11"
S81	4'-6"	1'-9½"	3'-1"
S82	4'-8½"	1'-6"	3'-4½"
S83	4'-10½"	1'-3"	3'-7"
S84	5'-0½"	1'-0"	3'-9½"
S86	2'-0½"	5'-8"	0'-2½"
S87	2'-3"	5'-4"	0'-5"
S88	2'-5"	5'-1"	0'-7½"
S89	2'-7"	4'-10"	0'-10"
S90	2'-9"	4'-6"	1'-1"
S91	2'-11½"	4'-3"	1'-3½"
S92	3'-1½"	3'-11"	1'-6"
S93	3'-3½"	3'-8"	1'-8½"

BARS S211 thru S213

Bar	A	B	C	D	E
S211	3'-5"	3'-6"	3'-8"	0'-5"	5'-5"
S212	3'-6½"	2'-11"	3'-8"	1'-0"	5'-0½"
S213	4'-2"	2'-2"	3'-8"	1'-7"	4'-8"

BARS U41 & U42

BARS U39 & U40

BARS U37 & U38

BAR P112

BARS P110 & P111

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U36	12	#9	18'-3"	
U37	2	#9	17'-9"	
U38	2	#9	16'-11"	
U39	2	#9	15'-6"	
U40	2	#9	15'-2"	
U41	2	#9	17'-9"	
U42	2	#9	16'-2"	
P110	2	#11	30'-7"	
P111	2	#11	31'-2"	
P112	2	#11	32'-1"	
P3	14	#11	14'-6"	
P7	2	#6	15'-6"	
h1	2	#6	14'-6"	
h11	2	#6	14'-10"	
h12	2	#6	15'-1"	
h23	12	#4	7'-0"	
h30	2	#6	12'-0"	
S28	6	#4	10'-10"	
S76	2	#6	20'-3"	
S77	2	#6	20'-4"	
S78	2	#6	20'-5"	
S79	2	#6	20'-6"	
S80	2	#6	20'-8"	
S81	2	#6	20'-10"	
S82	2	#6	20'-11"	
S83	2	#6	21'-0"	
S84	2	#6	21'-2"	
S85	2	#6	19'-2"	
S86	2	#6	20'-10"	
S87	2	#6	20'-7"	
S88	2	#6	20'-4"	
S89	2	#6	20'-1"	
S90	2	#6	19'-10"	
S91	2	#6	19'-8"	
S92	2	#6	19'-4"	
S93	2	#6	19'-2"	
S211	2	#5	24'-2"	
S212	2	#5	24'-2"	
S213	2	#5	24'-2"	
Column				
V24	50	#11	25'-2"	
S30	44	#5	16'-3"	
S29	22	#5	17'-1"	
Crash Wall				
h2	26	#5	15'-6"	
S335	10	#5	25'-8"	
S312	10	#5	10'-2"	
U2	24	#5	5'-6"	
Footing				
W6	13	#9	23'-0"	
t7	35	#9	11'-6"	
N6	50	#11	19'-9"	
t13	24	#6	11'-6"	
W11	13	#5	23'-0"	

Item	Unit	Total
Structure Excavation	Cu. Yds.	182.5
Rock Excavation	Cu. Yds.	8.1
Reinforcement Bars	Lbs.	22210
Class X Concrete	Cu. Yds.	91.3

See Bar Diagrams

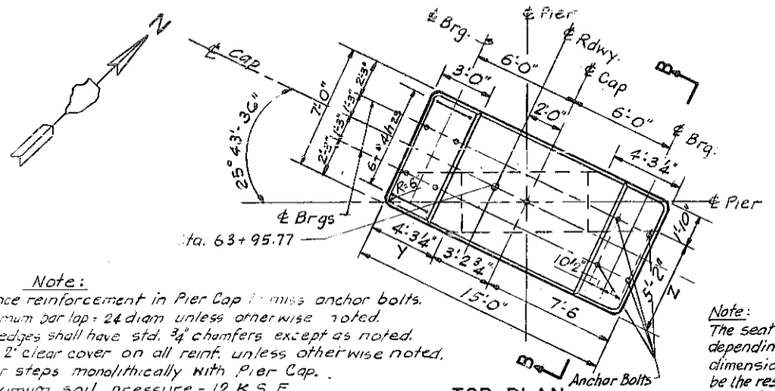
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	E.M.M.

PIER NO 24

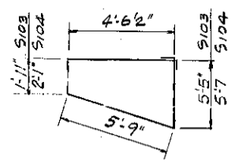
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

STATE	DIST.	COUNTY	SHEET NO.	TOTAL SHEETS NO.
ILLINOIS				
FAP ROUTE No. FA45	462X BRR	COOK	223	190
F.A.P. SEC. NO.	RESURVEY	PROJECT		

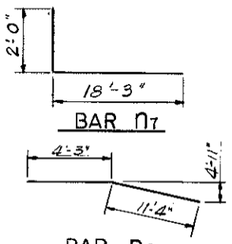
SHEET NO. 95
102 SHEETS



Note:
Space reinforcement in Pier Cap to miss anchor bolts.
Minimum bar lap = 24 diam unless otherwise noted.
All edges shall have std. 3/4" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 12 K.S.F.
For Deck Drainage Details at Pier, see sheet 101



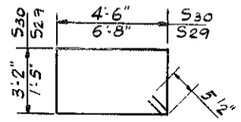
BARS S103 & S104

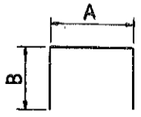


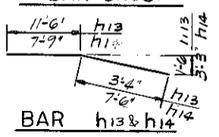
BAR N7

BAR P8

Note:
The seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.



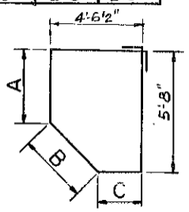




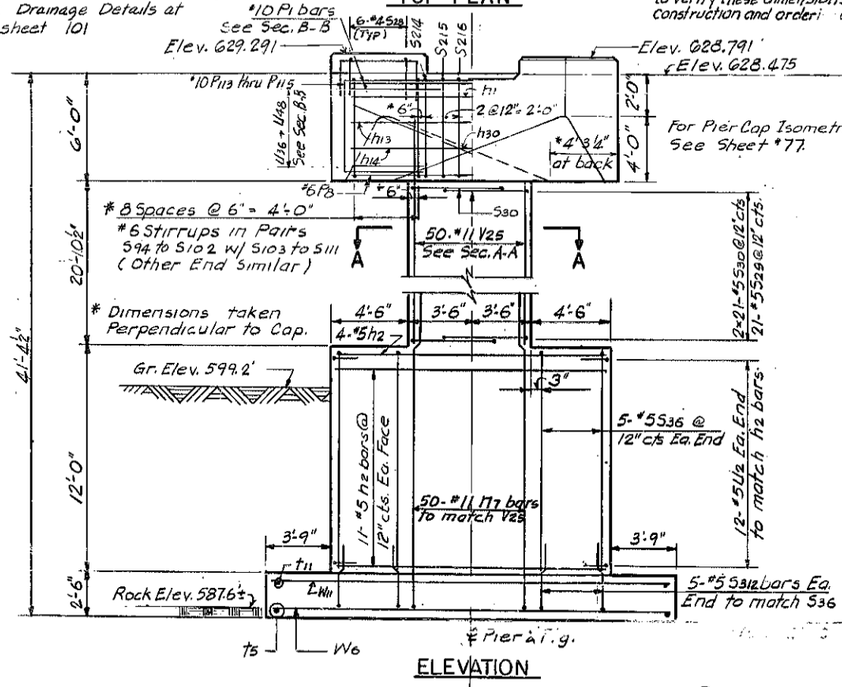
BAR S29&S30

BAR h13 & h14

Bar	A	B
U36	4'3"	7'0"
S36	3'-2"	11'6"
S312	3'-2"	3'-6"
S28	6'-4"	2'3"
U2	3'0"	1'-3"
h23	2'-6"	2'-3"



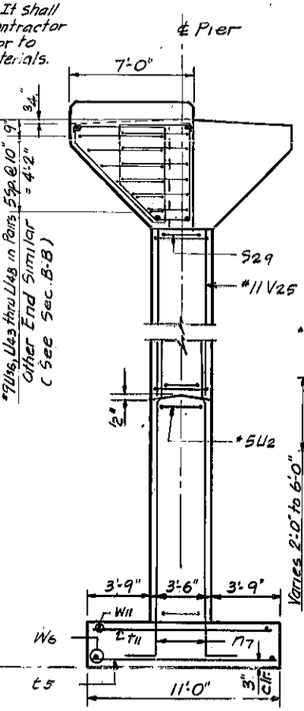
TOP PLAN



ELEVATION

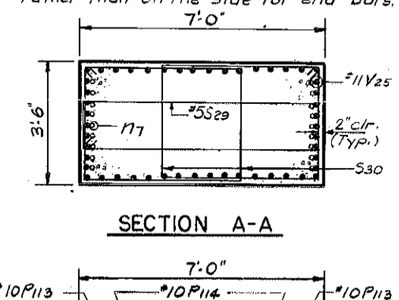
For Pier Cap Isometric, See Sheet #77.

FOOTING PLAN

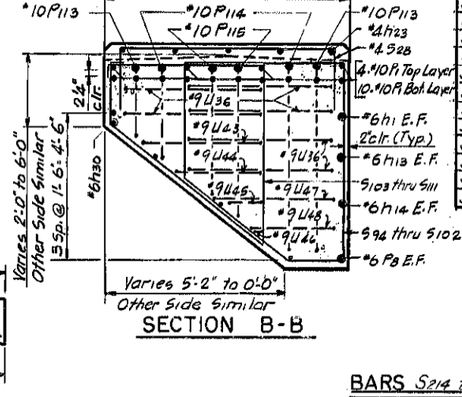


END VIEW

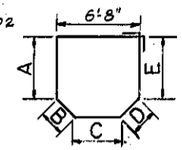
Note:
N7 bars shall be lapped inside rather than on the side for end bars.



SECTION A-A



SECTION B-B

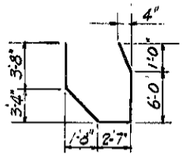


BARS S214 thru S216

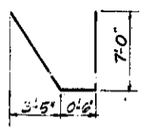
Bar	A	B	C	D	E
S214	3'6"	3'0½"	3'9"	0'1½"	5'7"
S215	3'4½"	2'11"	3'9"	0'9"	5'2½"
S216	4'3"	2'3½"	3'9"	1'4½"	4'10"

BARS S94 to S102, S105 to S111

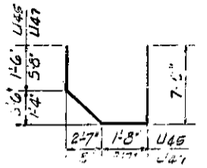
Bar	A	B	C
S94	3'6"	3'0½"	1'9"
S95	3'8½"	3'2½"	2'0"
S96	3'10½"	2'10½"	2'3"
S97	4'0½"	2'6"	2'6½"
S98	4'3"	2'2½"	2'9½"
S99	4'5½"	1'10½"	3'0½"
S100	4'7½"	1'6½"	3'4"
S101	4'9½"	1'3"	3'7"
S102	5'0"	0'11"	3'10"
S105	2'3½"	5'0½"	0'2"
S106	2'6"	5'2½"	0'5"
S107	2'8"	4'10½"	0'8"
S108	2'10½"	4'6½"	0'11½"
S109	3'1"	4'2½"	1'2½"
S110	3'3"	3'11½"	1'4½"
S111	3'5½"	3'7"	1'6½"



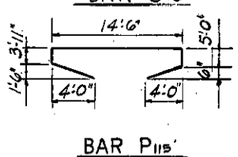
BAR U48



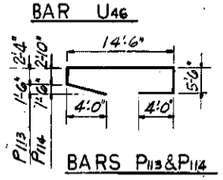
BAR U46



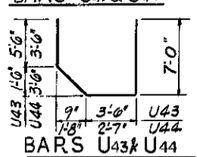
BARS U45 & U47



BAR P115



BARS P113 & P114



BARS U43 & U44

BILL OF MATERIALS

Bar	No	Size	Length	Shape
Pier Cap				
U36	12	#9	18'3"	
U43	2	#9	17'7"	
U44	2	#9	17'2"	
U45	2	#9	16'3"	
U46	2	#9	15'4"	
U47	2	#9	17'8"	
U48	2	#9	17'0"	
P113	2	#10	30'7"	
P114	2	#10	31'1"	
P115	2	#10	31'8"	
P1	14	#10	14'6"	
P8	2	#6	15'2"	
h1	2	#6	14'6"	
h13	2	#6	14'10"	
h14	2	#6	15'3"	
h23	12	#4	7'0"	
h30	2	#6	12'0"	
S28	12	#4	10'10"	
S94	2	#6	20'2"	
S95	2	#6	20'3"	
S96	2	#6	20'4"	
S97	2	#6	20'6"	
S98	2	#6	20'8"	
S99	2	#6	20'9"	
S100	2	#6	20'10"	
S101	2	#6	21'0"	
S102	2	#6	21'1"	
S103	2	#6	18'9"	
S104	2	#6	19'1"	
S105	2	#6	19'4"	
S106	2	#6	19'5"	
S107	2	#6	19'7"	
S108	2	#6	19'9"	
S109	2	#6	19'10"	
S110	2	#6	20'0"	
S111	2	#6	20'1"	
S214	2	#5	24'3"	
S215	2	#5	24'3"	
S216	2	#5	24'3"	
Column				
V25	50	#11	24'10"	
S30	42	#5	16'3"	
S29	21	#5	17'1"	
Crash Wall				
h2	26	#5	15'6"	
S36	10	#5	25'8"	
S312	10	#5	10'2"	
U2	24	#5	5'6"	
Footing				
W6	13	#9	23'0	
t5	28	#9	10'6"	
N7	50	#11	20'3"	
T11	24	#6	10'6"	
W11	12	#5	23'0"	

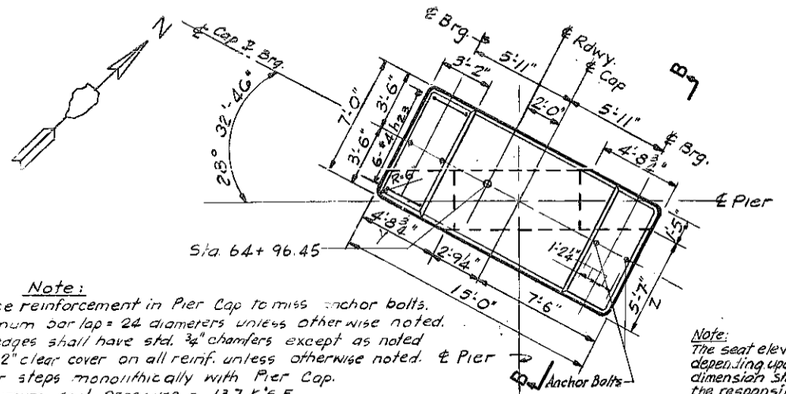
See Bar Diagrams

Item	Unit	Total
Reinforcement Bars	Lbs	21420.
Class X Concrete	Cu. Yds.	89.4
Structure Excavation	Cu. Yds.	177.2
Rock Excavation	Cu. Yds	7.6

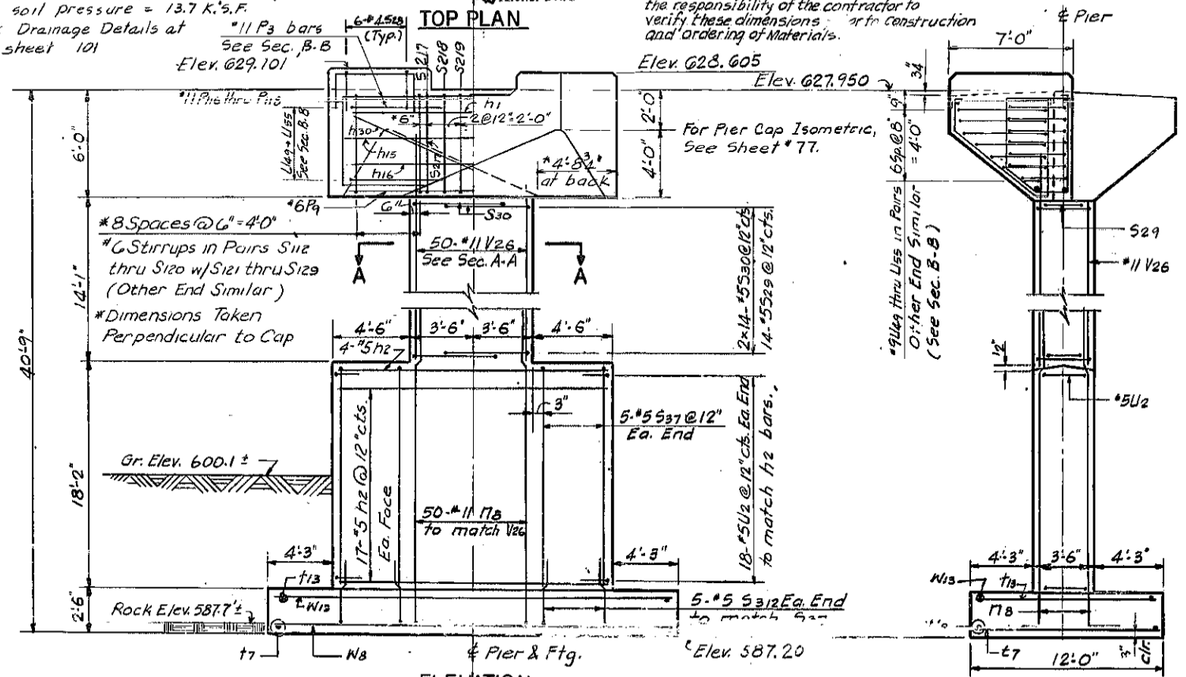
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.J.S.
CHECKED	E.M.M.

PIER NO 25
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

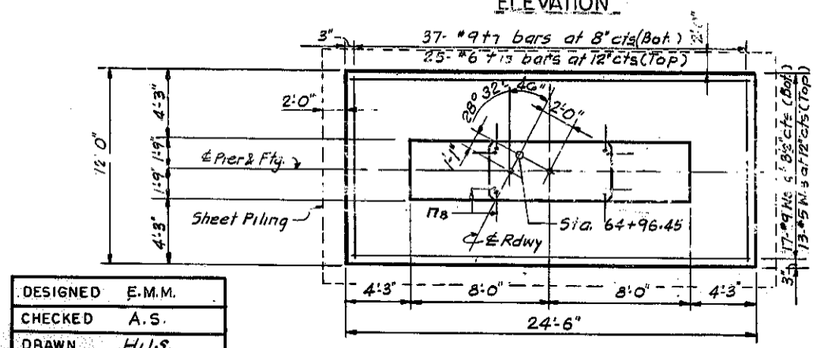
FEDERAL AID ROUTE NO.	SEC.	COUNTIES	STATES PROJECTS	SHEET NO.
FA45	462X B&R	COOK	223	191
D. P. W. & B. DIV. NO.	DRAWING	PROJECT		102 SHEETS



Note:
Space reinforcement in Pier Cap to miss anchor bolts.
Minimum bar lap = 24 diameters unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted
Use 2" clear cover on all reinf. unless otherwise noted. ℄ Pier
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 13.7 K.S.F.
For Deck Drainage Details at Pier, see sheet 101

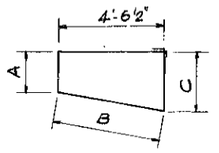


ELEVATION



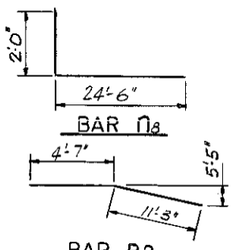
FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.U.S.
CHECKED	E.M.M.

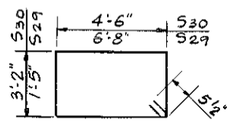


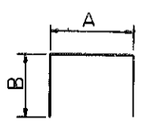
BARS S121-S122-S123

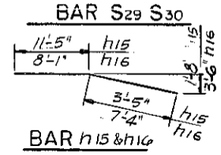
Bar	A	B	C
S121	1'-11"	5'-7"	5'-2"
S122	2'-1¼"	5'-7"	5'-4⅞"
S123	2'-3½"	5'-7"	5'-6½"



BAR P9

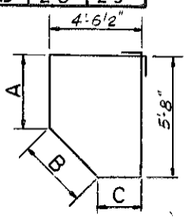




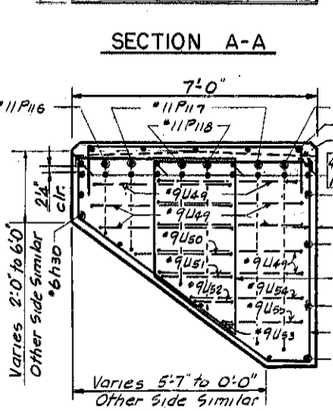


BAR h15 & h16

Bar	A	B
U49	4'-3"	7'-3"
S37	3'-2"	17'-11"
S312	3'-2"	3'-6"
S28	6'-4"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"



Note:
N8 bars shall be lapped inside rather than on the side for end bars.

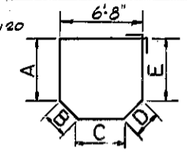


SECTION A-A

SECTION B-B

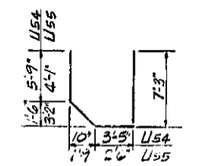
BARS S112 to S120, S124 to S129

Bar	A	B	C
S112	3'-4¾"	3'-10¾"	1'-4¼"
S113	3'-7"	3'-6¾"	1'-7⅝"
S114	3'-9⅝"	3'-2¾"	1'-11"
S115	3'-11½"	2'-10¾"	2'-2¾"
S116	4'-2"	2'-6¾"	2'-5½"
S117	4'-4⅝"	2'-2¾"	2'-8¾"
S118	4'-6¾"	1'-10¾"	3'-0"
S119	4'-9"	1'-6¾"	3'-3½"
S120	4'-11⅛"	1'-2¾"	3'-6¾"
S124	2'-0"	5'-6¾"	0'-1½"
S125	2'-2⅝"	5'-2¾"	0'-4¾"
S126	2'-10⅝"	4'-10¾"	0'-8"
S127	3'-0¾"	4'-6¾"	0'-11½"
S128	3'-3"	4'-2¾"	1'-2¼"
S129	3'-5⅜"	3'-10¾"	1'-5¼"

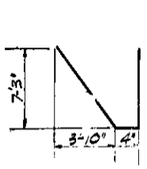


BARS S217 to S219

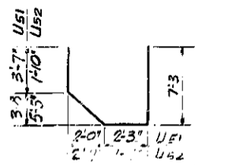
Bar	A	B	C	D	E
S217	3'-7¾"	3'-7¾"	3'-10¼"	0'-0"	5'-8"
S218	4'-0¾"	2'-9¼"	3'-10¼"	0'-8¾"	5'-3¼"
S219	4'-5¾"	2'-1"	3'-10¼"	1'-4⅝"	4'-10⅛"



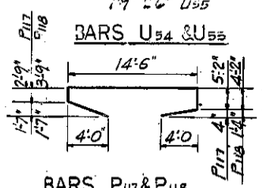
BARS U54 & U55



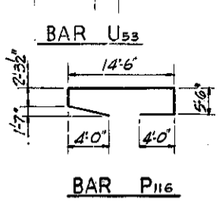
BAR U53



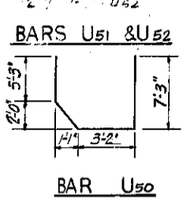
BARS U51 & U52



BARS P117 & P118



BAR P116



BAR U50

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U49	16	#9	18'-9"	
U50	2	#9	17'-11"	
U51	2	#9	17'-3"	
U52	2	#9	16'-7"	
U53	2	#9	15'-9"	
U54	2	#9	18'-2"	
U55	2	#9	17'-5"	
P116	2	#11	30'-7"	
P117	2	#11	30'-9"	
P118	2	#11	30'-11"	
P3	14	#11	14'-6"	
P9	2	#6	15'-10"	
h1	2	#6	14'-6"	
h15	2	#6	14'-10"	
h16	2	#6	15'-5"	
h23	12	#4	7'-0"	
h30	2	#6	12'-0"	
S28	12	#4	10'-10"	
S112	2	#6	20'-0"	
S113	2	#6	20'-1"	
S114	2	#6	20'-3"	
S115	2	#6	20'-4"	
S116	2	#6	20'-6"	
S117	2	#6	20'-8"	
S118	2	#6	20'-9"	
S119	2	#6	20'-11"	
S120	2	#6	21'-0"	
S121	2	#6	18'-4"	
S122	2	#6	18'-8"	
S123	2	#6	19'-1"	
S124	2	#6	19'-6"	
S125	2	#6	19'-7"	
S126	2	#6	19'-9"	
S127	2	#6	19'-10"	
S128	2	#6	20'-0"	
S129	2	#6	20'-1"	
S217	2	#5	24'-7"	
S218	2	#5	24'-5"	
S219	2	#5	24'-5"	
Column				
V26	50	#11	18'-1"	
S30	28	#5	16'-3"	
S29	14	#5	17'-1"	
Crash Wall				
h2	38	#5	15'-6"	
S37	10	#5	39'-0"	
S312	10	#5	10'-2"	
U2	36	#5	5'-6"	
Footing				
W8	17	#9	24'-0"	
t7	37	#9	11'-6"	
N8	50	#11	26'-6"	
t13	25	#6	11'-6"	
W13	13	#5	24'-0"	

See Bar Diagrams

Item	Unit	Total
Reinforcement Bars	Lbs.	22870
Class X Concrete	Cu. Yds.	99.3
Structure Excavation	Cu. Yds.	209.4
Rock Excavation	Cu. Yds.	8.5
Sheet Piling	Sq. Ft.	1282.0

PIER NO 26
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID PROJECT No.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
FA45	462X B&R	COOK	223	198
ILL. F. AID RTE.	DIVISION	PROJECT		

SHEET NO. 97
102 SHEETS

N

Sta. 65+93.87
℄ Pier
℄ Brg.
℄ Rdwy.
℄ Cap & Brg.
℄ Cap
℄ Brg.
℄ Pier
31°24'-50"

Note:
Space reinf. in Pier Cap to miss anchor bolts.
Minimum bar lap= 24 diameters unless otherwise noted.
All edges shall have standard ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

TOP PLAN

*11P3 bars See Sec. B-B
6 *4528 (Typ.)
Anchor Bolts
Elev. 628.807
Elev. 628.319
Elev. 627.650
For Pier Cap Isometric, See Sheet *77.
*11P119 to P121
*6h19
2 @ 12'-2'-0"
*6h17
*6h18
*5'-1½" at Back
*6P10
6" clr.
S30
60-*11V27 See Sec. A-A
* 8 Spaces @ 6" = 4'-0"
*6 Stirrups in Pairs S130 thru S138 w/S139 to S147 (Other End Similar)
* Dimensions taken Perpendicular to Cap.
4'-6" 3'-6" 3'-6" 4'-6"
5-*5 S38 @ 12" Each End
4-*5h2
3"
7-*5h2 @ 12" cts. Ea. Face
60-*11 N9 to match V27
5'-6"
5'-6"
Gr. Elev. 600.4'±
t11
W9
L W14
5-*5 S312 Ea. End to match S38
t4
℄ Pier & Ftg.
6'-0"
13'-3"
8'-5"
3'-2"
4'-0"
2'-0"
3'-3"

Pile Data
Type —— HP10×42
Capacity —— Drive to Refusal
Est. Length —— 12'-0"
No. Required — 18+1 Test Pile in a Permanent Location.

Bar	A	B	C	D	E
S221	4'-2"	2'-8½"	4'-0¼"	0'-5½"	5'-5"
S222	4'-7"	1'-11½"	4'-0¼"	1'-2½"	5'-0"

6'-8"
BARS S221 & S222

10'-6" 1'-5"
BAR t4

2'-0"
14'-9"
BAR N9

5'-0"
11'-1"
5'-9½"
BAR P10

Note:
The Seat elevations shown could vary depending upon the variation in "H" dimension shown on Sht #68. It shall be the responsibility of the Contractor to verify these dimensions prior to Construction and ordering of Materials.

5½"
3'-2"
1'-5"
4'-6" 6'-8"
S30 S29
BARS S29 & S30

11'-8 8'-7 h17 h18 h17 h18
3'-5" 7'-0"
BARS h17 & h18

Note:
N9 bars shall be lapped inside rather than on the side for end bars.

7'-0"
*11V27
N9 S30
*5S29
2" clr. (Typ.)
3'-6"
SECTION A-A

7'-0"
*11P119
*11P120
*11P121
*4h23
*4528
4-*11P3 1st Layer
10-*11P3 2nd Layer
4-*11P3 3rd Layer
*6h1 E.F.
2" clr. (Typ.)
*6h17 E.F.
S139 thru S147
S130 thru S138
*6h18 E.F.
*9U49
*9U56
*9U57
*9U58
*9U59
*9U60
*6h30
Varies 2'0" to 6'0" Other Side Similar
3Sp. @ 1'-6" = 4'-6"
*6P10
Varies 6'-0½" to 0'-0" Other End Similar
SECTION B B

Bar	A	B
U49	4'-3"	7'-3"
S38	3'-2"	8'-3"
S312	3'-2"	3'-6"
S28	6'-4"	2'-3"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"

A B
4'-6½" * 6'-8" for S220
A B C 5'-8"
BARS S130-S138 & S143-S147

Bar	A	B	C
S130	3'-3¾"	4'-3"	1'-0"
S131	3'-6¼"	3'-10½"	1'-3¾"
S132	3'-8¾"	3'-6"	1'-7½"
S133	3'-11¼"	3'-1½"	1'-11¼"
S134	4'-1¾"	2'-9"	2'-3"
S135	4'-4¼"	2'-4½"	2'-6¾"
S136	4'-6¾"	2'-0"	2'-10½"
S137	4'-9¼"	1'-7½"	3'-2¼"
S138	4'-11¾"	1'-3"	3'-6"
S143	2'-9"	5'-3½"	0'-1¾"
S144	2'-11½"	4'-10½"	0'-5½"
S145	3'-2"	4'-6¼"	0'-9¼"
S146	3'-4½"	4'-1¾"	1'-1"
S147	3'-7"	3'-9¼"	1'-4¾"
S220	2'-9½"	3'-6¾"	3'-10"

A B C
4'-6½"
BARS S139 to S142

Bar	A	B	C
S139	1'-11"	5'-5½"	4'-11"
S140	2'-1½"	5'-5½"	5'-1½"
S141	2'-4"	5'-5½"	5'-4"
S142	2'-6½"	5'-5½"	5'-6½"

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
Pier Cap				
U49	14	#9	18'-9"	
U56	2	#9	17'-11"	
U57	2	#9	17'-2"	
U58	2	#9	16'-4"	
U59	2	#9	18'-8"	
U60	2	#9	17'-11"	
P119	2	#11	30'-6"	
P120	2	#11	30'-5"	
P121	2	#11	30'-3"	
P3	18	#11	13'-6"	
P10	2	#6	16'-1"	
h1	2	#6	14'-6"	
h17	2	#6	15'-1"	
h18	2	#6	15'-7"	
h23	10	#4	7'-0"	
h30	2	#6	12'-0"	
S28	12	#4	10'-10"	
S130	2	#6	19'-10"	
S131	2	#6	20'-0"	
S132	2	#6	20'-2"	
S133	2	#6	20'-4"	
S134	2	#6	20'-5"	
S135	2	#6	20'-7"	
S136	2	#6	20'-9"	
S137	2	#6	20'-11"	
S138	2	#6	21'-0"	
S139	2	#6	17'-11	
S140	2	#6	18'-4"	
S141	2	#6	18'-9"	
S142	2	#6	19'-2"	
S143	2	#6	19'-6"	
S144	2	#6	19'-7"	
S145	2	#6	19'-9"	
S146	2	#6	19'-11"	
S147	2	#6	20'-1"	
S220	2	#5	24'-6"	
S221	2	#5	24'-6"	
S222	2	#5	24'-5"	
Column				
S29	14	#5	17'-1"	
S30	28	#5	16'-3"	
V27	60	#11	17'-8"	
Crash Wall				
U2	16	#5	5'-6"	
S312	10	#5	10'-2"	
h2	18	#5	15'-6"	
S38	10	#5	19'-8"	
Footing				
Ft.	8	#5	10'-6"	
t14	12	#5	26'-6"	
W9	16	#11	26'-6"	
t4	36	#10	13'-4"	
N9	60	#11	16'-5"	

See Bar Diagrams

Item	Unit	Total
Reinforcement Bars	Lbs.	22970
Class X Concrete	Cu. Yds.	86.4
Structural Excavation	Cu. Yds.	68.9
Steel Piles (HP10×42)	L.F.	216
Test Piles (HP10×42)	Ea.	1
Sheet Piling	Sq. Ft.	828

ELEVATION
4-*10t4 Bet. Piles Bot. (Typ)
28-*6 T11 @ 12" cts (Top)
2-*10t4 Ea. End (Bot.)
Sheet Piling
3°24'-50"
℄ Ftg.
℄ Rdwy
Sta. 65+93.87
6-*11 N9 Bet. Piles (Bot.)
12-*5 N4 @ 12" (Top)
2-*11 N9 Ea. End (Bot.)
℄ of Vertical Piles
℄ of Battered Piles
11'-0"
3'-9" 3'-6" 4'-0" 1'-6" 1'-3" 2'-0"
5'-6" 8'-0" 8'-0" 5'-6"
8 Pile Spaces at 3'-0" = 24'-0"
27'-0"
FOOTING PLAN

END VIEW

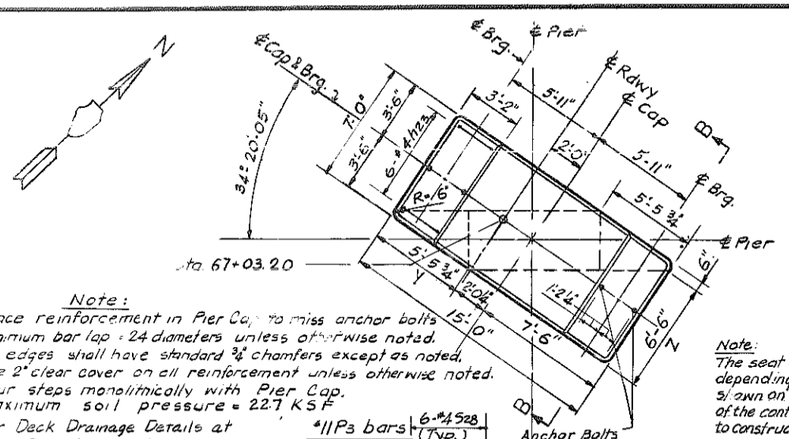
BARS U56 & U57
BARS U58 & U59
BAR U60
BAR P119
BAR P120
BAR P121

DESIGNED	E.M.M.
CHECKED	A. S.
DRAWN	H.U.S
CHECKED	A. S.

PIER NO. 27
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

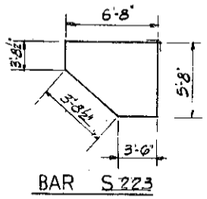
DISTRICT NO.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
FA45	462X B&R	COOK	223	193

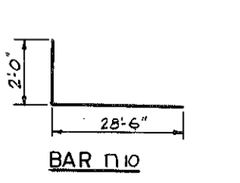
SHEET NO. 98
102 SHEETS

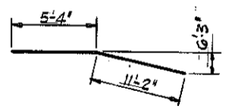


Note:
Space reinforcement in Pier Cap to miss anchor bolts
Minimum bar lap = 24 diameters unless otherwise noted.
All edges shall have standard ¾" chamfers except as noted.
Use 2" clear cover on all reinforcement unless otherwise noted.
Pour steps monolithically with Pier Cap.
Maximum soil pressure = 22.7 KSF
For Deck Drainage Details at Pier, See sheet 101

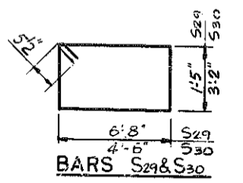
TOP PLAN

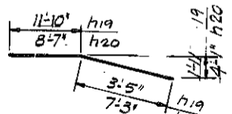


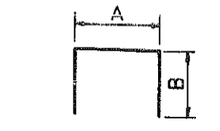




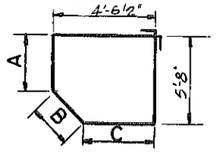
Note:
The seat elevations shown could vary depending upon the variation in "h" dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Materials.







Bar	A	B
U61	4'-3"	7'-6
S	3'-2"	1'-6'
S28	6'-4"	3'-3"
S30	3'-2"	3'-10"
U2	3'-0"	1'-3
h23	2'-6"	2'-3"

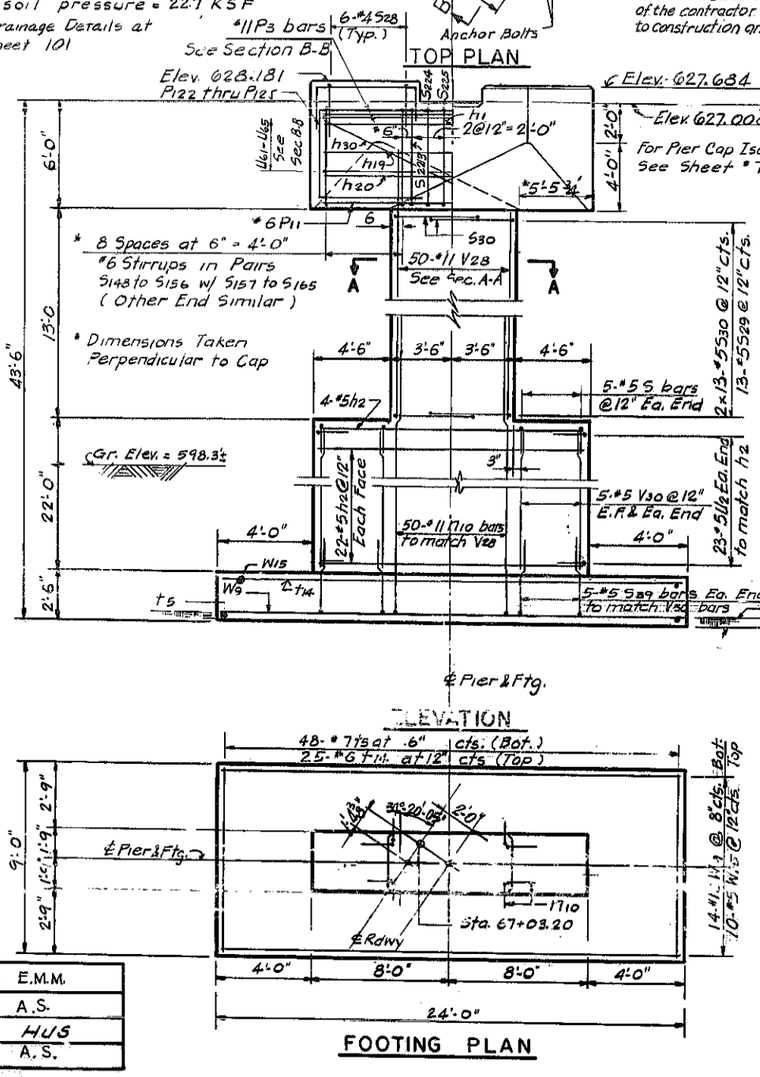


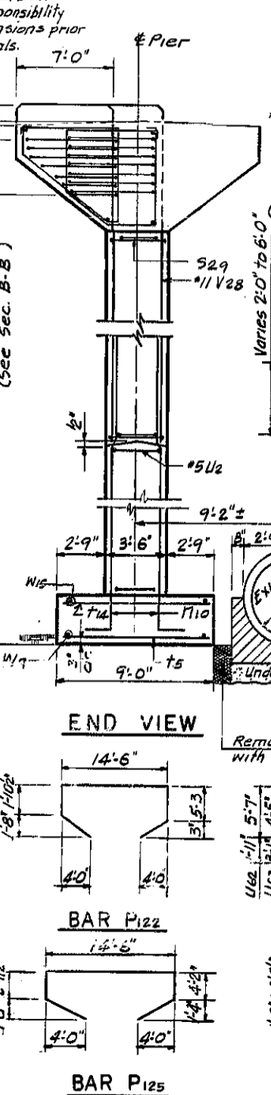
BARS S148-S156 & S162-S165

Bar	A	B	C
S148	3'-2"	4'-9"	0'-6"
S149	3'-4½"	4'-4½"	0'-10"
S150	3'-7"	3'-11½"	1'-2½"
S151	3'-9½"	3'-6½"	1'-6½"
S152	4'-0"	3'-2"	1'-10½"
S153	4'-2½"	2'-9½"	2'-2½"
S154	4'-5"	2'-6½"	2'-6½"
S155	4'-7½"	2'-0"	2'-10½"
S156	4'-10"	1'-7½"	3'-2½"
S162	2'-11½"	5'-2"	0'-2"
S163	3'-2"	4'-9½"	0'-6"
S164	3'-4½"	4'-4½"	0'-10"
S165	3'-7"	3'-11½"	1'-2"

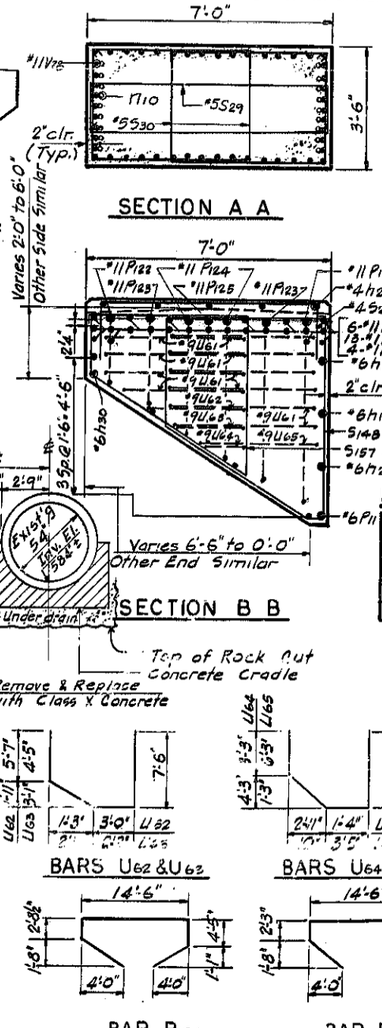
BILL OF MATERIALS

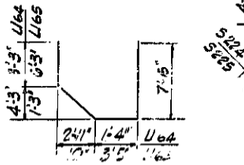
Bar	No.	Size	Length	Shape
Pier Cap				
U61	20	#9	19'-3"	
U62	2	#9	18'-4"	
U63	2	#9	17'-10"	
U64	2	#9	17'-3	
U65	2	#9	18'-8"	
P122	2	#11	29'-11"	
P123	2	#11	29'-11"	
P124	2	#11	30'-1"	
P125	1	#11	30'-2"	
P3	23	#11	14'-6"	
P11	2	#6	16'-3"	
h1	2	#6	14'-6"	
h19	2	#6	15'-3"	
h20	2	#6	15'-10"	
h23	12	#4	7'-0"	
h30	2	#6	12'-0"	
See	12	#4	10'-10"	
S148	2	#6	19'-9"	
S149	2	#6	19'-10"	
S150	2	#6	20'-0"	
S151	2	#6	20'-2"	
S152	2	#6	20'-4"	
S153	2	#6	20'-6"	
S154	2	#6	20'-8"	
S155	2	#6	20'-10"	
S156	2	#6	21'-0"	
S157	2	#6	17'-7"	
S158	2	#6	18'-0"	
S159	2	#6	18'-6"	
S160	2	#6	18'-11"	
S161	2	#6	19'-4"	
S162	2	#6	19'-7"	
S163	2	#6	19'-9"	
S164	2	#6	19'-11"	
S165	2	#6	20'-0"	
S223	2	#5	24'-4"	
S224	2	#5	24'-7"	
S225	2	#5	24'-7"	
Column				
S29	13	#5	17'-1"	
S30	26	#5	16'-3"	
Vee	50	#11	17'-4"	
Crash Wall				
V30	20	#5	21'-9"	
h2	46	#5	15'-6"	
S	10	#5	6'-2"	
S39	10	#5	10'-10"	
U2	46	#5	5'-6"	
Footing				
W9	14	#10	23'-6"	
t6	48	#7	8'-6"	
n10	30	#11	30'-6"	
t14	25	#6	8'-6"	
W15	10	#5	23'-6"	

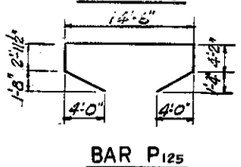


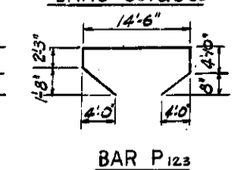


Note:
n10 bars shall be lapped inside rather than on the side for end bars.



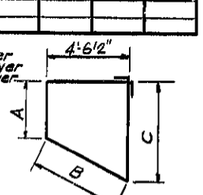


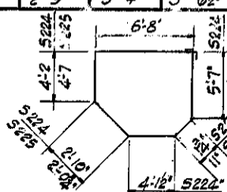




BARS S157 to S161

Bar	A	B	C
S157	11'-11"	5'-4"	4'-8½"
S158	2'-1½"	5'-4"	4'-11"
S159	2'-4"	5'-4"	5'-1½"
S160	2'-6½"	5'-4"	5'-4"
S161	2'-9"	5'-4"	5'-6½"





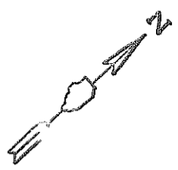
Item	Unit	Total
Structure Excavation	Cu. Yds.	192.8
Rock Excavation	Cu. Yds.	6.7
Reinforcement Bars	Lbs	23950
Class X Concrete	Cu. Yds.	99.9

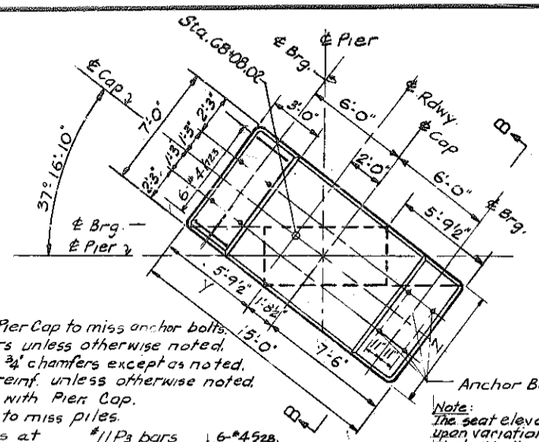
DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	H.J.S
CHECKED	A.S.

PIER NO 28
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FEDERAL AID PROJECT NO.	REF.	COUNTY	TOTAL SHEETS	SHEET NO.
FAA 45	462X B&R	COOK	223	194
S. P. O. ENGR.	DESIGNED	CHECKED		

SHEET NO. 99 IOZ SHEETS



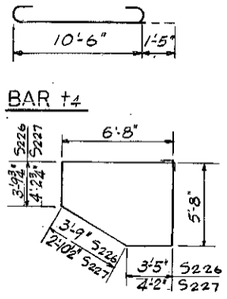


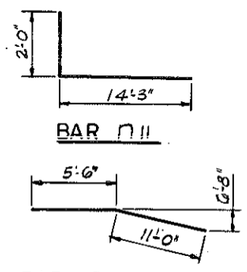
Note:
Space reinforcement in Pier Cap to miss anchor bolts.
Minimum bar lap= 24 diameters unless otherwise noted.
All edges shall have std. ¾" chamfers except as noted.
Use 2" clear cover on all reinf. unless otherwise noted.
Pour steps monolithically with Pier Cap.
Space bars in Pile Cap to miss piles.
For Deck Drainage Details at Pier, see sheet 101

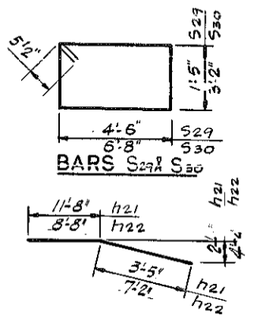
#11 P3 bars See Sec. B-B

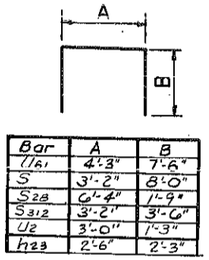
TOP PLAN

Elev. 627.654'

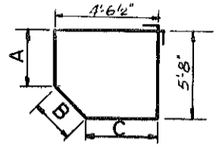








Bar	A	B
M1	4'-3"	7'-6"
S	3'-2"	8'-0"
S28	6'-4"	1'-9"
S312	3'-2"	3'-6"
U2	3'-0"	1'-3"
h23	2'-6"	2'-3"



BARS S166-S174 & S181-S183

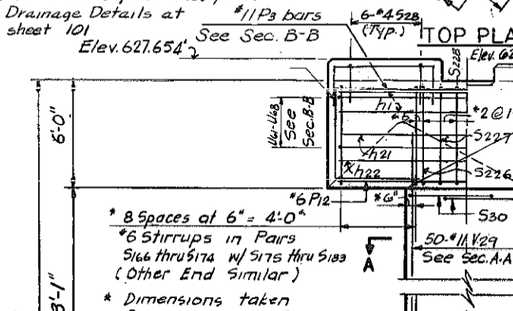
Bar	A	B	C
S166	3'-1¼"	5'-2½"	0'-0¾"
S167	3'-3⅜"	4'-9"	0'-1⅝"
S168	3'-6¼"	4'-3⅞"	0'-2⅝"
S169	3'-9"	3'-10⅝"	1'-2"
S170	3'-11⅝"	3'-5¼"	1'-6⅝"
S171	4'-2"	3'-0⅛"	1'-11"
S172	4'-4⅝"	2'-7"	2'-3⅝"
S173	4'-7¼"	2'-1⅞"	2'-8"
S174	4'-9⅝"	1'-8½"	3'-0⅝"
S181	3'-1⅝"	5'-2⅝"	0'-0"
S182	3'-4⅛"	4'-7⅞"	0'-0⅝"
S183	3'-7"	4'-3"	0'-0"

BILL OF MATERIALS

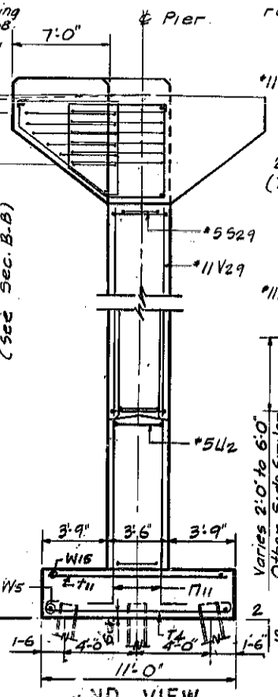
Bar	No.	Size	Length	Shape
Pier Cap				
U61	16	#9	19'-3"	
U66	2	#9	17'-5"	
U67	2	#9	18'-0"	
U68	4	#9	18'-9"	
P126	2	#11	29'-10"	
P127	2	#11	29'-10"	
P128	2	#11	30'-2"	
P3	18	#11	14'-5"	
P12	2	#6	16'-10"	
h1	2	#6	14'-2"	
h21	2	#6	15'-1"	
h22	2	#6	15'-10"	
h23	12	#4	7'-10"	
h30	2	#6	12'-5"	
S28	12	#4	10'-10"	
S166	2	#6	19'-0"	
S167	2	#6	19'-3"	
S168	2	#6	19'-1"	
S169	2	#6	20'-1"	
S170	2	#6	20'-3"	
S171	2	#6	20'-5"	
S172	2	#6	20'-7"	
S173	2	#6	20'-9"	
S174	2	#6	20'-11"	
S175	2	#6	17'-3"	
S176	2	#6	17'-8"	
S177	2	#6	18'-1"	
S178	2	#6	18'-6"	
S179	2	#6	18'-11"	
S180	2	#6	19'-4"	
S181	2	#6	19'-8"	
S182	2	#6	19'-8"	
S183	2	#6	19'-11"	
S226	2	#5	24'-5"	
S227	2	#5	24'-8"	
S228	2	#5	22'-9"	
Column				
929	13	#5	17'-1"	
930	26	#5	16'-3"	
V29	50	#11	17'-1"	
Crash Wall				
U2	16	#5	5'-5"	
S312	10	#5	10'-2"	
h2	18	#5	15'-6"	
S	10	#5	19'-2"	
Footing				
#11	25	#6	10'-6"	
W16	12	#5	23'-6"	
W5	16	#11	23'-6"	
t4	28	#10	13'-4"	
M11	50	#11	16'-3"	

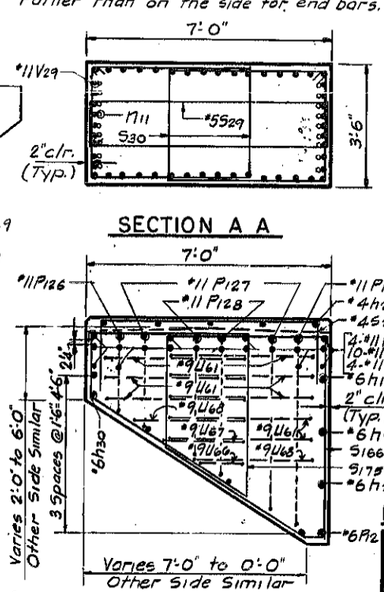
See Sht. 88 for Drainage

Item	Unit	Total
Reinforcement Bars	Lbs	19910
Class X Concrete	Cu. Yds.	76.7
Structure Excavation	Cu. Yds	62.2
Steel Piles (HP10x42)	L.F.	27½
Test Pile (HP10x42)	Ea	1



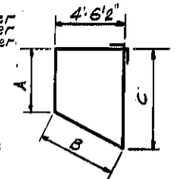
Pile Data
Type —— HP 10x42
Capacity —— Drive to Refusal
Est. Length —— 16'-0"
No. Required — 17+1 Test Pile in a Permanent Location





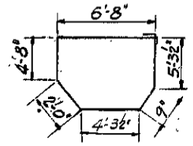
SECTION A A

SECTION B B



BARS S175 to S180

Bar	A	B	C
S175	1'-10⅞"	5'-2⅜"	4'-6"
S176	2'-1¼"	5'-2⅜"	4'-8½"
S177	2'-3⅝"	5'-2⅜"	4'-11"
S178	2'-6¼"	5'-2⅜"	5'-1½"
S179	2'-8⅞"	5'-2⅜"	5'-4⅛"
S180	2'-11¼"	5'-2⅜"	5'-6¾"

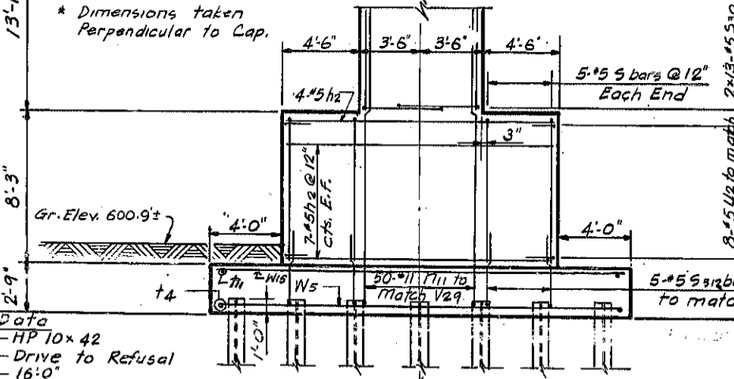


BAR S228

Note:
All bars shall be lapped inside rather than on the side for end bars.

BARS h21 & h22

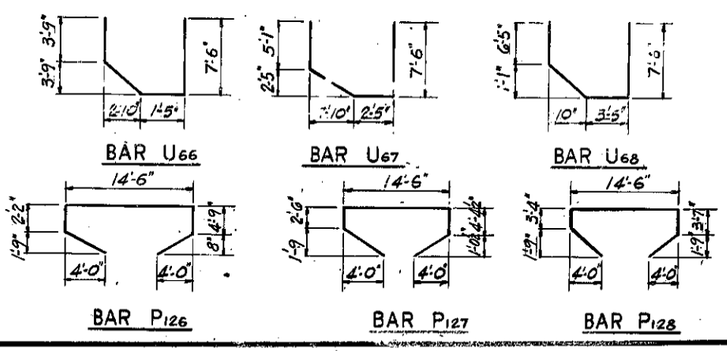
Note:
The seat elevations shown could vary depending upon variation in 'H' dimension shown on Sht. #68. It shall be the responsibility of the contractor to verify these dimensions prior to construction and ordering of Material.



ELEVATION

FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	HJS
CHECKED	A.S.



PIER NO 29
LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

STATE	DIST.	COUNTY	SECT.	SHEET NO.
ILL.	1ST	COOK	82B	194A

NOTES:
1. Dimensions at Pier Cap to miss anchor bolts.
2. All bars are 3" clear unless otherwise noted.
3. All corners are to have 3/4" chamfers except as noted.
4. Use 2" cover on all reinf. unless otherwise noted.
5. Anchor bars to be placed vertically with Pier Cap.
6. Adjust bars in Pile Cap to miss piles.
7. For Drainage Details at Pier, see sheet 101.

Anchor Bolts

BARS S166 & S167

Bar	A	B
S166	3'-3"	7'-6"
S167	3'-3"	6'-0"
S168	3'-6"	4'-9"
S169	3'-9"	3'-0"
S170	3'-11"	1'-3"
S171	4'-2"	0'-6"
S172	4'-5"	0'-0"
S173	4'-8"	0'-6"
S174	4'-11"	1'-3"
S175	5'-2"	3'-0"
S176	5'-5"	4'-9"
S177	5'-8"	6'-0"
S178	5'-11"	7'-6"
S179	6'-2"	9'-0"
S180	6'-5"	10'-6"

BARS S166 & S167

Bar	A	B
S166	3'-3"	7'-6"
S167	3'-3"	6'-0"
H23	2'-6"	7'-3"

BARS S168 - S174 & S181 - S185

Bar	A	B	C
S166	3'-3 1/2"	5'-2 1/2"	0'-0 1/2"
S167	3'-3 1/2"	4'-9"	0'-5"
S168	3'-6"	4'-5 1/2"	0'-6"
S169	3'-9"	3'-10"	1'-2"
S170	3'-11"	3'-5 1/2"	1'-7 1/2"
S171	4'-2"	3'-0 1/2"	1'-11"
S172	4'-5"	2'-7"	2'-3"
S173	4'-8"	2'-1 1/2"	2'-8"
S174	4'-11"	1'-8"	3'-0"
S184	5'-2"	1'-2"	3'-6"
S185	5'-5"	0'-7"	3'-11"
S183	5'-7"	0'-3"	4'-1"

BARS S175 to S180

Bar	A	B	C
S175	1'-10 1/2"	5'-2 1/2"	3'-0"
S176	2'-1 1/2"	5'-2 1/2"	3'-3"
S177	2'-4 1/2"	5'-2 1/2"	3'-6"
S178	2'-6 1/2"	5'-2 1/2"	3'-9"
S179	2'-8 1/2"	5'-2 1/2"	3'-11"
S180	2'-11 1/2"	5'-2 1/2"	4'-0"

BILL OF MATERIALS

Bar	No.	Size	Length	Type
U66	2	#9	8'-9"	
U67	2	#9	8'-3"	
U68	2	#9	5'-6"	
P126	2	#11	29'-10"	
P127	2	#11	29'-10"	
P128	2	#11	30'-2"	
P3	18	#11	12'-6"	
P16	2	#6	16'-6"	
P21	2	#6	14'-6"	
H121	2	#6	15'-4"	
H122	2	#6	15'-0"	
H123	12	#4	7'-0"	
H130	2	#6	12'-0"	
S28	12	#4	10'-10"	
S166	2	#6	19'-8"	
S167	2	#6	18'-9"	
S168	2	#6	19'-11"	
S169	2	#6	20'-1"	
S170	2	#6	20'-3"	
S171	2	#6	20'-5"	
S172	2	#6	20'-7"	
S173	2	#6	20'-9"	
S174	2	#6	21'-0"	
S185	2	#6	11'-3"	
S182	2	#6	11'-5"	
S177	2	#6	11'-7"	
S178	2	#6	11'-9"	
S179	2	#6	11'-11"	
S180	2	#6	12'-1"	
Concrete				
Superstructure	17	C.Y.	[illegible]	
Substructure	26	C.Y.	[illegible]	
Pile Cap	18	C.Y.	[illegible]	
Footing	16	C.Y.	5.5	
Pipe	18	L.F.	5.5	
Steel	10	C.Y.	5.5	
Concrete				
Fill	25	C.Y.	10.6	
Wing	12	C.Y.	5.5	
Wall	14	C.Y.	5.5	
Pipe	3/4	C.Y.	5.5	
Pile	3/4	C.Y.	5.5	

Items	Unit	Total
Reinforcement Bars	Lbs.	10,110
Class 1 Concrete	C.Y.	107
Structural Excavation	C.Y.	5.5
Steel Piling Furnished	L.F.	373
Steel Piling Driven	L.F.	373

PLAN

Elev. 627.538

See Sec. B-B

6-#4 S28 (Typ.)

#11 P3 bars

TOP PLAN

Elev. 627.038

S28

See Sec. B-B

#2 @ 12" 2'-0"

S227

H121

H122

S226

#5 2'-0 1/2" at Back

Elev. 626.733

For Pier Cap Isometric, See Sheet #77.

#6 P12

#6 S30

50-#11 V29 See Sec. A-A

A A

* 8 Spaces at 6" = 4'-0"
#6 Stirrups in Pairs S166 thru S174 w/ S175 thru S180 (Other End Similar)

* Dimensions taken Perpendicular to Cap.

29'-10" 12'-10"

6'-0"

4'-6" 3'-6" 3'-6" 4'-6"

5-#5 S bars @ 12" Each End

4-#5 H2

3"

8'-3"

Gr. Elev. 600.9±

4'-0"

2'-9"

2-#9 H2 @ 12" cts. E.F.

4'-0"

1'-0"

t4

L-H1 L-W5 W5

30-#11 H11 to match V29

5-#5 S bars Ea. End to match S bars

Elev. 596.90±

8-#5 U2 to match H2 Ea. End

2 in 3-#5 S30 @ 12" crs.

13-#5 S29 @ 12" crs.

#9 U61, U66 thru U68 in Pairs 3'-6" Apart (Other End Similar - See Sec. B-B)

Pile Data
Type ——— HP 10 x 42
Capacity ——— Drive to Refusal
Est Length — 16'-0"
No. Required — 17+1 Test Pile in a Permanent Location

ELEVATION

℄ Battered Piles

4-#10 t2 between Piles (Typ.) (Each)

25-#6 H11 @ 12" cts. (Top)

2-#10 t4 Ea End

℄ Pier & Ftg.

11'-0" 1'-9" 3'-9" 4'-0" 4'-0" 3'-6"

6" H11 Min. (Bottom)

12-#5 W5 @ 12" (Top)

℄ Railroad Sta. 68+08.02

1'-6" 4'-0" 5'-0" 5'-0" 1'-6"

6 Pile Spaces @ 3'-6" = 21'-0"

24'-0"

2-#11 W5 Ea. End (Each Face)

℄ of Battered Piles

℄ of Vertical Piles

FOOTING PLAN

DESIGNED	E.M.M.
CHECKED	A.S.
DRAWN	HJS
CHECKED	A.S.

Rev. [ ] 12-30-75 D.D.

7'-0"

#5 S29

#11 V29

#5 U2

3'-9" 3'-6" 3'-9"

W5 L-H1 H11 Ws

Varies 2'-0" to 6'-0" Other Side Similar

3 Spaces @ 1'-6" = 4'-6"

2 in 12

1'-6" 4'-0" 1'-6"

11'-0"

END VIEW

7'-0"

H11 #5 S29 S30

3'-6"

SECTION A A

7'-0"

#11 P126 #11 P127 #11 P128

#4 H23

#4 S28

4-#11 P3 1st Layer
10-#11 P3 2nd Layer
4-#11 P3 3rd Layer

#6 H1 E.F.

2" clr. (Typ.)

#6 H121 E.F. S166 thru S174 S178 thru S185

#6 H122 E.F.

#9 U61 #9 U66 #9 U67 #9 U68 #9 U66

#6 H130

Varies 2'-0" to 6'-0" Other Side Similar

3 Spaces @ 1'-6" = 4'-6"

Varies 7'-0" to 0'-0" Other Side Similar

SECTION B B

4'-6 1/2"

A B C

5'-6"

BAR S28

6'-8"

4'-6" 4'-3 1/4" 2" 2"

BAR U66

3'-9" 3'-9" 7'-6" 2'-10" 1'-9"

BAR U67

2'-5" 5'-1" 7'-6" 1'-10" 2'-5"

BAR U68

1'-1" 6'-5" 7'-6" 10" 3'-5"

BAR P126

14'-6" 2'-2" 4'-0" 4'-0" 4'-0"

BAR P127

14'-6" 1'-2" 2'-0" 4'-0" 4'-0"

BAR P128

14'-6" 1'-2" 4'-0" 4'-0" 1'-9"

PIER NO. 29
LA GRANGE RD. EB ROUTE 45 U.S. 45 NORTH
SECTION 82B-1-BGR
COOK COUNTY
STATION 41+38.53

FEDERAL AID ROUTE No.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	223	195
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

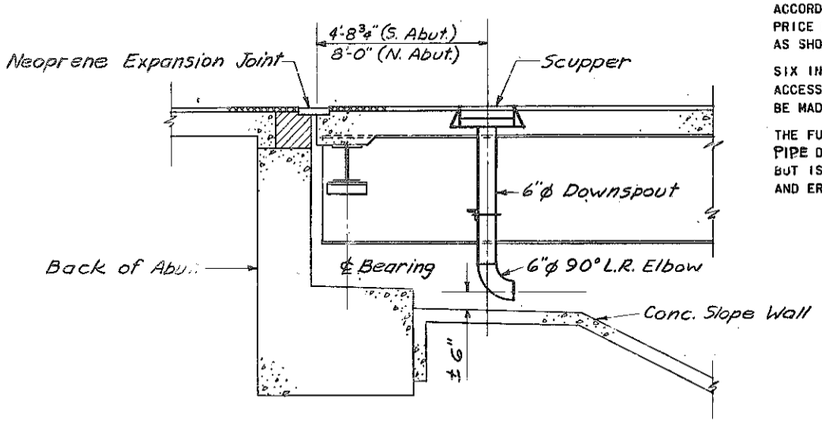
SHEET NO. 100
102 SHEETS

NOTE:

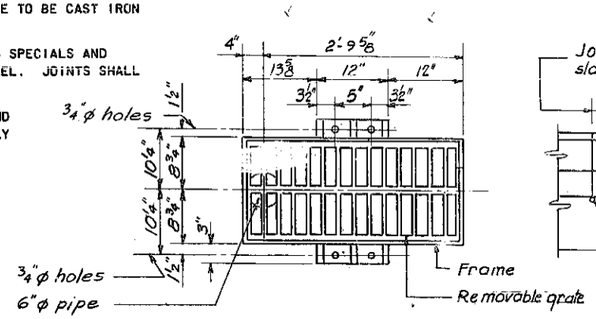
ALUMINUM FLOOR DRAINS SHALL BE FABRICATED AND ALSO INSTALLED IN ACCORDANCE WITH THE PLANS; PAYMENT SHALL BE INCIDENTAL TO THE PRICE BID FOR CLASS X CONCRETE. SCUPPERS ARE TO BE CAST IRON AS SHOWN IN THE PLAN.

SIX INCH DIAMETER PIPE DOWNSPOUTS, INCLUDING SPECIALS AND ACCESSORIES SHALL BE CORROSION RESISTANT STEEL. JOINTS SHALL BE MADE BY WELDING.

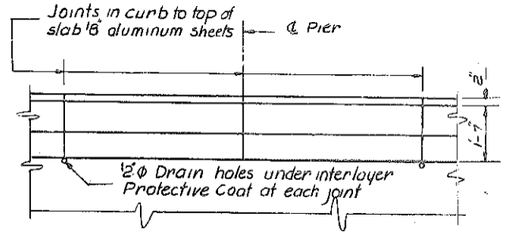
THE FURNISHING AND INSTALLING OF SCUPPERS AND PIPE DRAINAGE WILL NOT BE PAID FOR SEPARATELY BUT IS INCLUDED IN THE PAY ITEM "FURNISHING AND ERECTING STRUCTURAL STEEL".



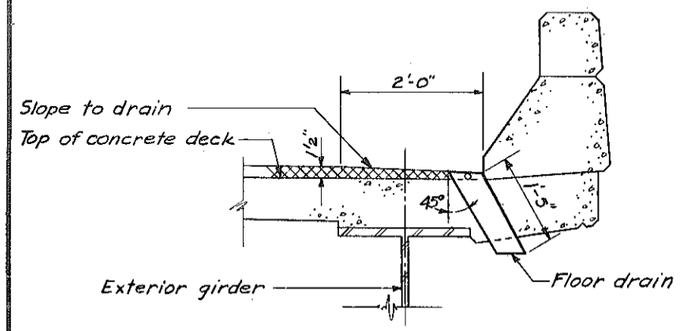
DECK DRAINAGE AT ABUTMENTS



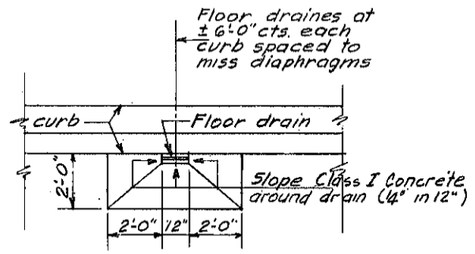
PLAN
Cast Iron Scupper



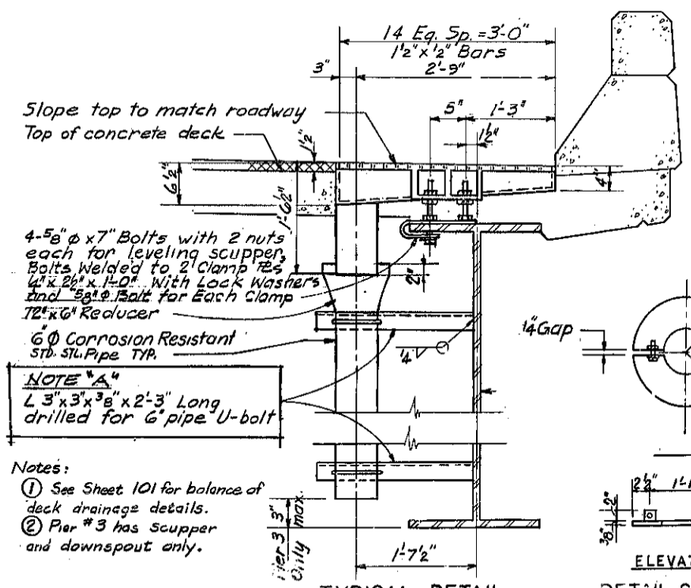
PLAN



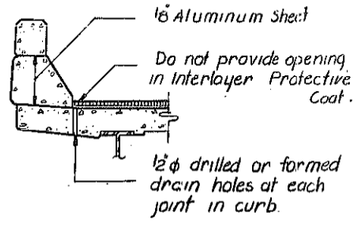
TYPICAL SECTION BETWEEN PIERS 1,2 & 3



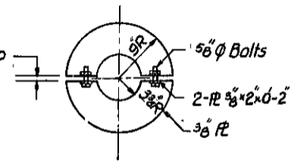
TYPICAL PLAN



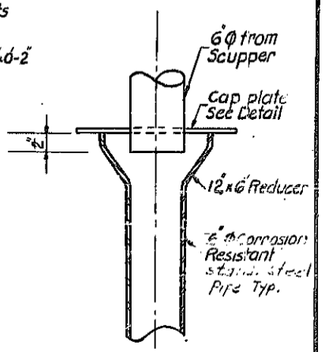
TYPICAL DETAIL



SECTION AT CURB JOINTS



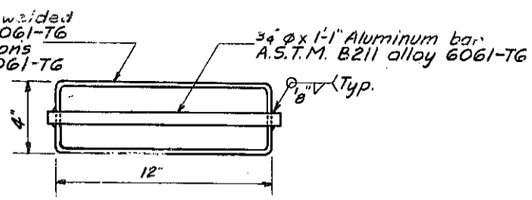
ELEVATION



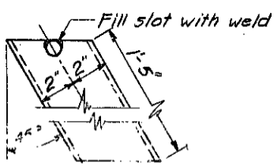
INLET DETAIL

DETAIL CAP PLATE

SCUPPER AND DOWNSPOUT

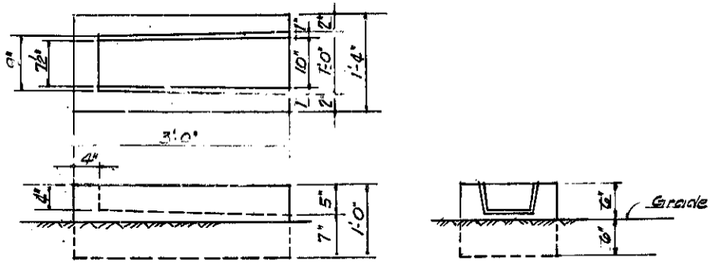


TOP VIEW



END VIEW

FLOOR DRAIN



SPLASH BLOCK DETAIL

NOTE: COST SHALL BE INCIDENTAL TO CLASS X CONCRETE

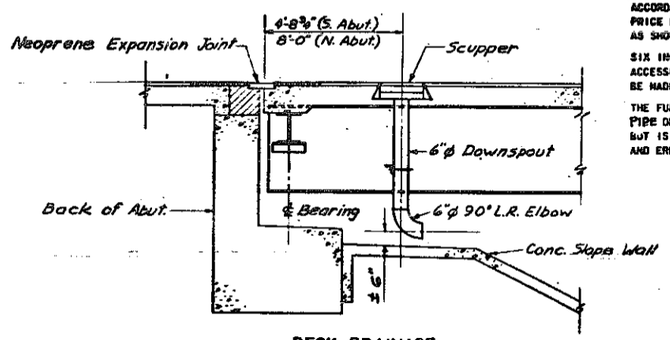
DESIGNED	W.C.K.
CHECKED	E.D.
DRAWN	W.C.K.
CHECKED	E.D.

DECK DRAINAGE & DETAILS

LA GRANGE RD. F.A. ROUTE 45 U.S. 45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 5	462X BAR	COOK	223	195A
STATE				

SHEET NO. 100A
102 SHEETS



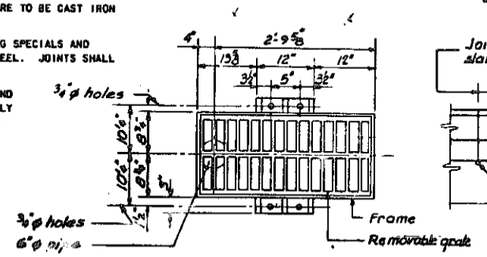
DECK DRAINAGE AT ABUTMENTS

NOTE:

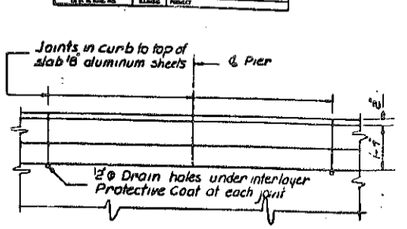
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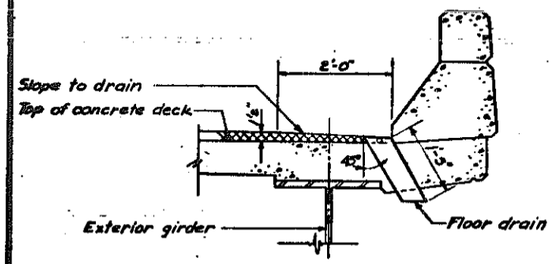
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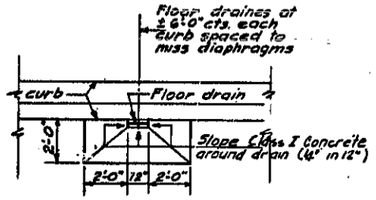
PLAN
Cast Iron Scupper



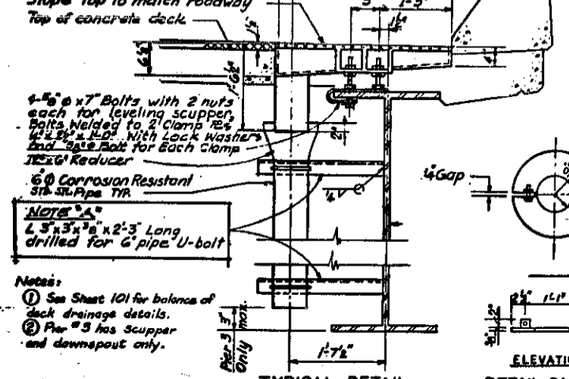
PLAN



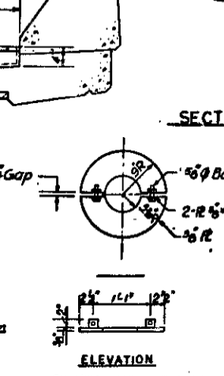
TYPICAL SECTION BETWEEN PIERS 1,2 & 3



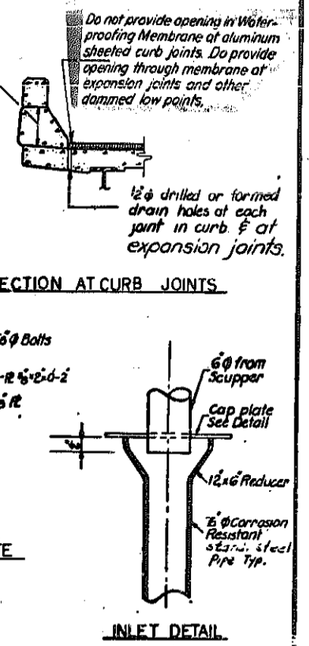
TYPICAL PLAN



TYPICAL DETAIL



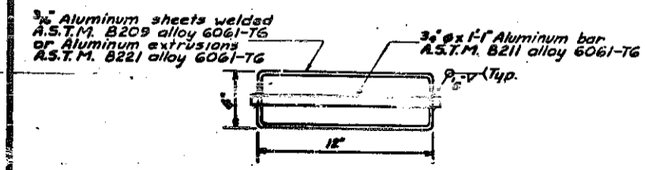
DETAIL CAP PLATE



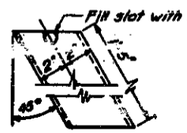
SECTION AT CURB JOINTS

INLET DETAIL

SCUPPER AND DOWNSPOUT

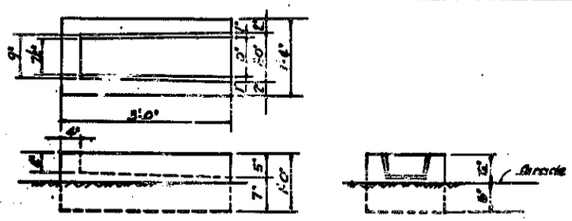


TOP VIEW



END VIEW

FLOOR DRAIN



SPLASH BLOCK DETAIL

NOTE: COST SHALL BE INCIDENTAL TO CLASS X CONCRETE

DESIGNED W.C.K.
CHECKED E.D.
DRAWN W.C.K.
CHECKED E.D.

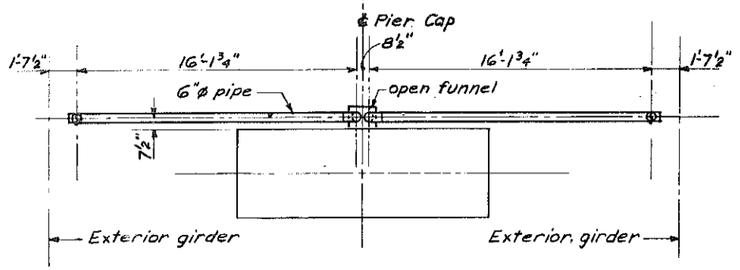
AS REVISED

DECK DRAINAGE & DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

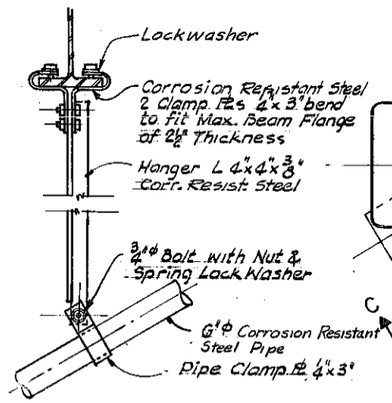
As Revised 6-2-76 L.W.

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462X B&R	COOK	123	196
S. P. R. SEC. NO.	ILLINOIS	PROJECT		

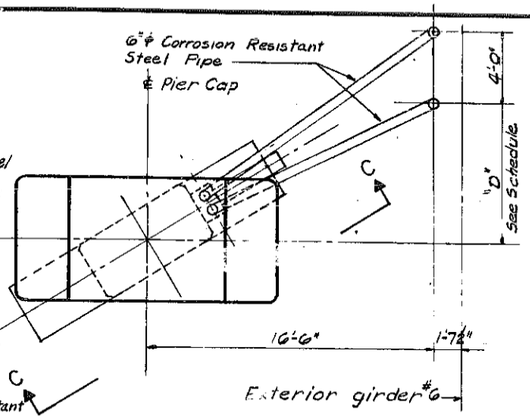
SHEET NO. 101
102 SHEETS



PLAN AT CAP



PIPE HANGER DETAIL "A"

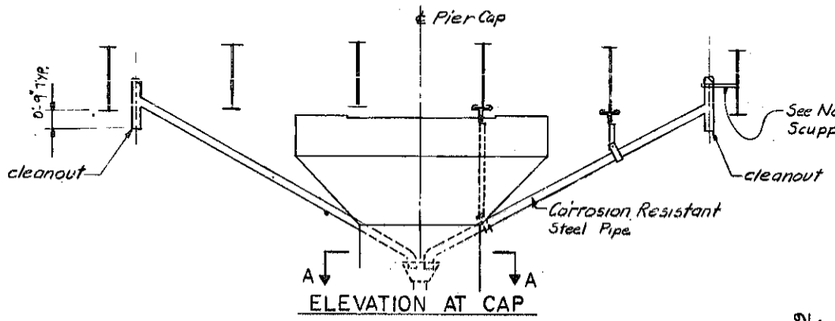


Pier No.	Dim. "D"
20	2'-6"
21	2'-8"
22	3'-5"
23	4'-3"
24	5'-0"
25	6'-0"
26	7'-0"
27	8'-0"
28	9'-0"
29	10'-0"

BILL OF MATERIALS

Item	Unit	Total
Drain Pipes & Details	lbs	39720
Scuppers	lbs	20,140

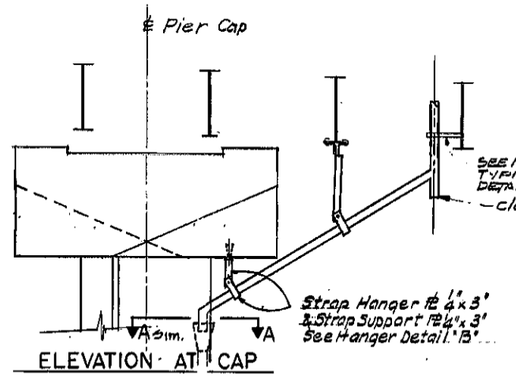
Note
Quantities included in structural Steel



ELEVATION AT CAP

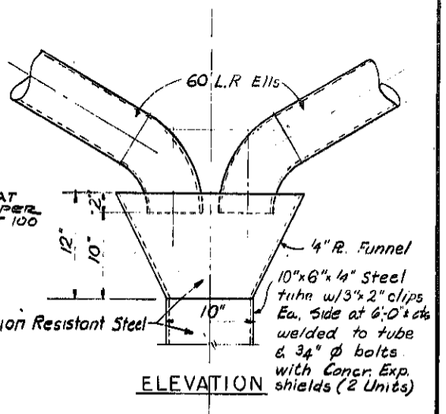
DECK DRAINAGE—PIER NO. 4

PLAN AT CAP

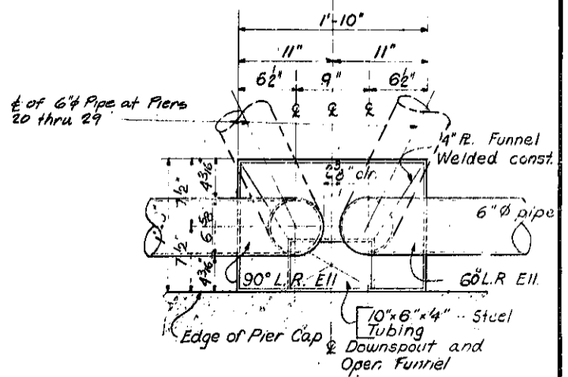


ELEVATION AT CAP

DECK DRAINAGE TYP PIERS 20 THRU 29

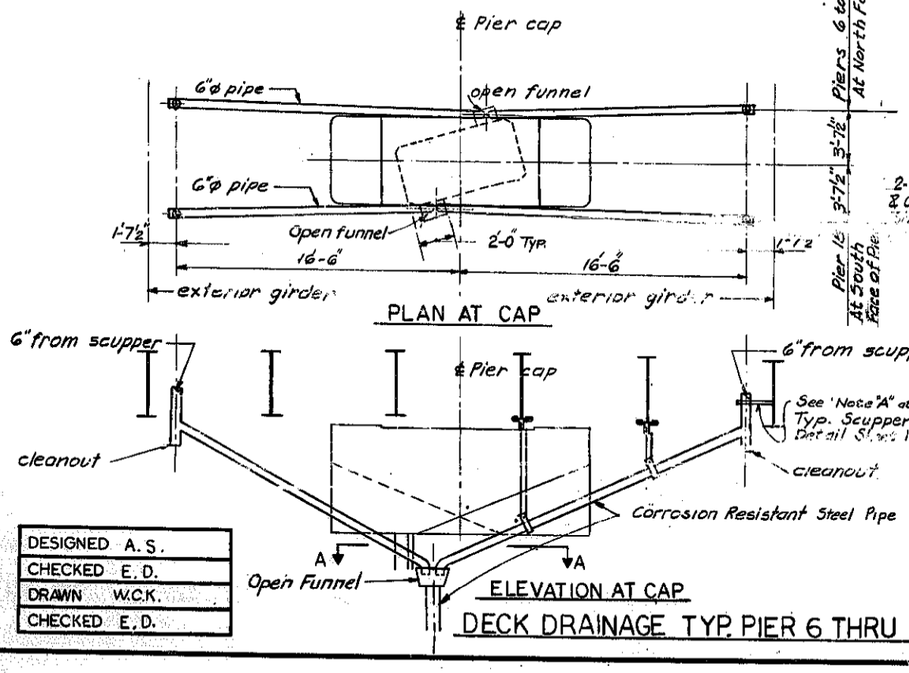


ELEVATION



SECTION A-A

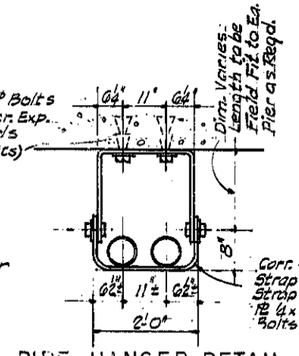
PLAN



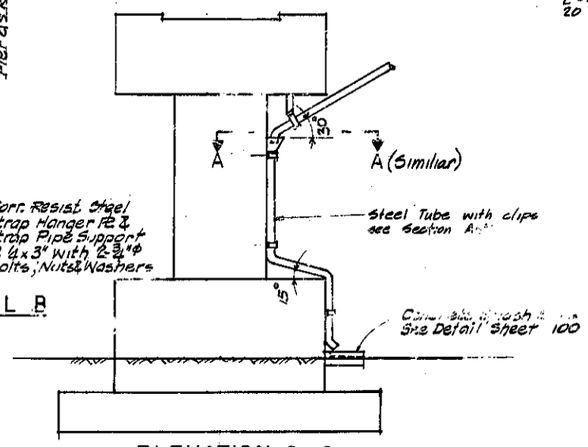
PLAN AT CAP

ELEVATION AT CAP

DECK DRAINAGE TYP. PIER 6 THRU 19



PIPE HANGER DETAIL B



ELEVATION C-C

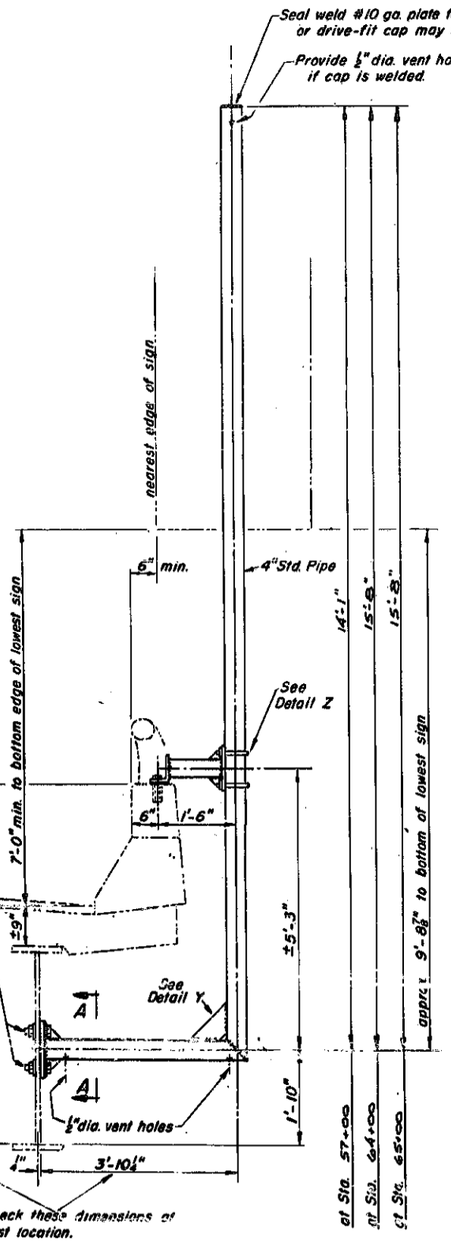
DESIGNED	A. S.
CHECKED	E. D.
DRAWN	W.C.K.
CHECKED	E. D.

DECK DRAINAGE & DETAILS
LA GRANGE RD. F.A. ROUTE 45 U.S. 45 NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

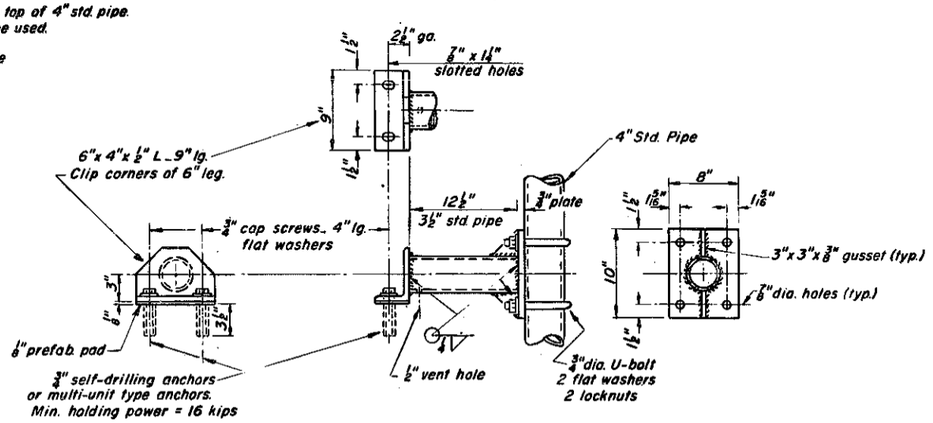
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA45	462 X B&R	COOK	223	197
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

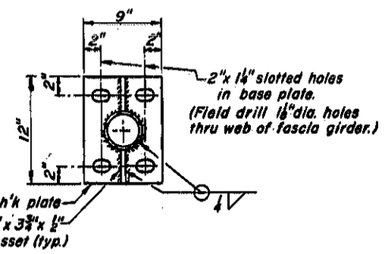
SHEET NO. 102
102 SHEETS



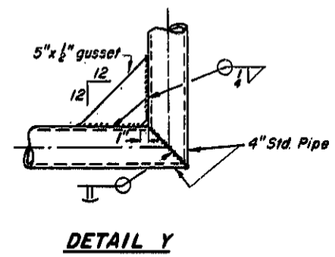
Contractor: Field check these dimensions at each sign post location.



DETAIL Z



SECTION A-A



DETAIL Y

Notes:
1. Sign support brackets are located in spans 18, 26 & 27, see sheets 2 & 4 respectively for location on plan and elevation.
2. Furnishing & Erection of Sign Support Bracket is included in Structural Steel Quantities

GENERAL NOTES

SPECIFICATIONS:

CONSTRUCTION: Standard Specifications for Road and Bridge Construction, State of Illinois, dated January 2, 1971, Supplemental Specifications for Road and Bridge Construction, Supplemental Specifications for Highway Signing date Mar. 1, 1963 and Special Provisions.

MATERIALS: Structural steel pipe shall be ASTM A-53, Grade B, with a minimum yield of 35,000 psi.
Structural steel plates and shapes shall be ASTM A-36.
The post, base plate, bracket, bolts, nuts and washers shall be galvanized in accordance with ASTM designations A-123 and A-385 after fabrication.
No punching, drilling, cutting nor welding shall be permitted after galvanizing.

WELDING: All welding to be continuous unless otherwise noted. All welding to be done in accordance with current AWS specifications. Welding on ASTM A-36 plates and shapes or ASTM A-53, Grade B, pipe shall be done with electrodes E 7016, 18 or 28 ASTM A233 or A316.

Contractor shall field check all bridge dimensions shown on these plans before submitting shop drawings.

PRE-FAB BEARING PADS: Fabric Bearing Pads shall consist of a fabric and rubber body made with new, unvulcanized rubber and unused fabric fibers.
The cost of furnishing and installing the bearing pads as herein specified shall be incidental to the contract and no additional compensation will be allowed.

All holes drilled in the bridge girder shall be limited within the middle half of the girder web.

DESIGNED	SN
CHECKED	ED
DRAWN	SCN
CHECKED	ED

19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED

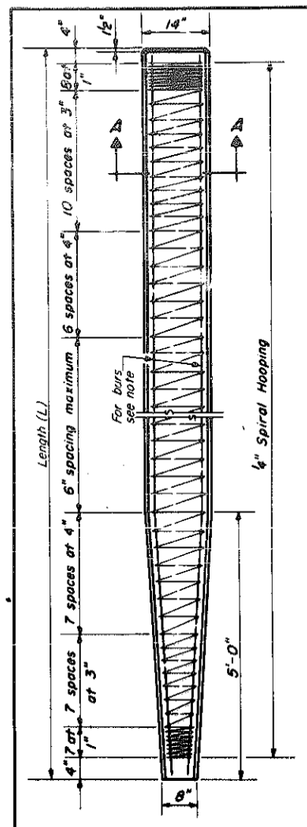
SIGN SUPPORT BRACKET

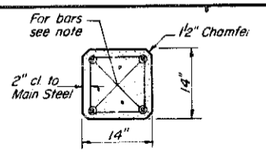
LA GRANGE RD. F.A. ROUTE 45 U.S.45
NORTH BRIDGE
SECTION 462-X-B & R
COOK COUNTY
STATION 41+38.63

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

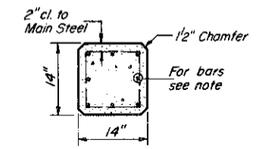
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. + I. 45	462.K 8rf.B.P.	Cook	22.3	198
FED. ROAD PROJECT NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. GHS/LYG





SECTION A-A
FOR PILES UNDER 45' LONG



SECTION A-A
FOR PILES 45' OR MORE

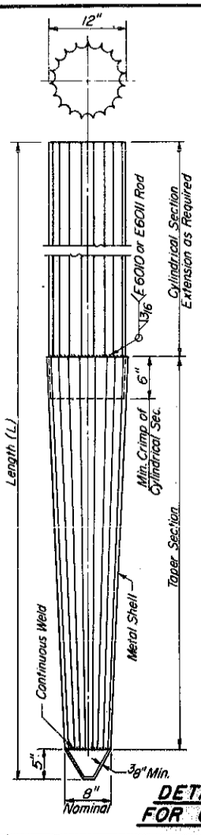


TIP

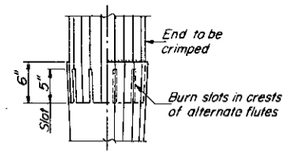
Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45' use three slings placed at a distance of 0.12 L from each end and at mid point of pile.

DETAIL OF PRECAST CONCRETE PILES

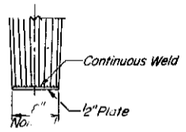


DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



FIELD CRIMP DETAIL

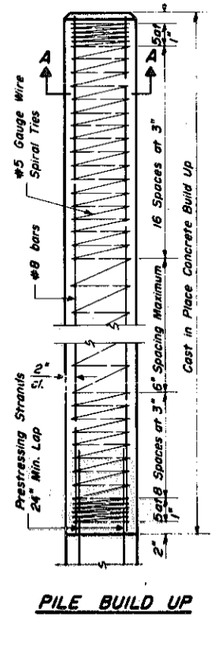
Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



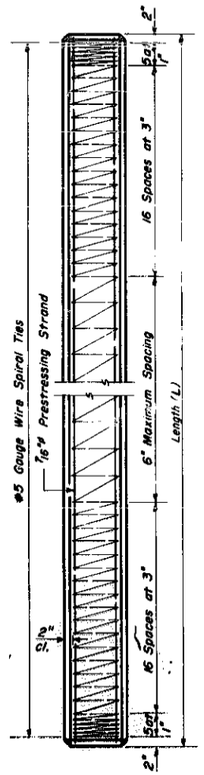
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS
10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 7'-0"
30' Length - Taper 1" in 7'-0"

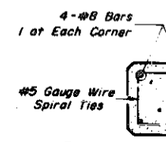
NOTE:
The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.



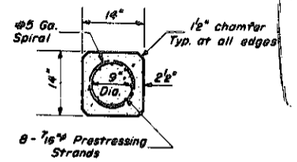
PILE BUILD UP



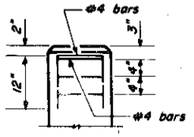
PILE PLAN



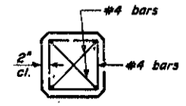
SECTION A-A



SECTION THRU PILE



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)

DESIGN STRESSES
fc' = 5,000 psi.
fci' = 4,000 psi.
fs' = 268,000 psi. (31,000 lbs.)
fsi' = 188,000 psi. (21,700 lbs.)

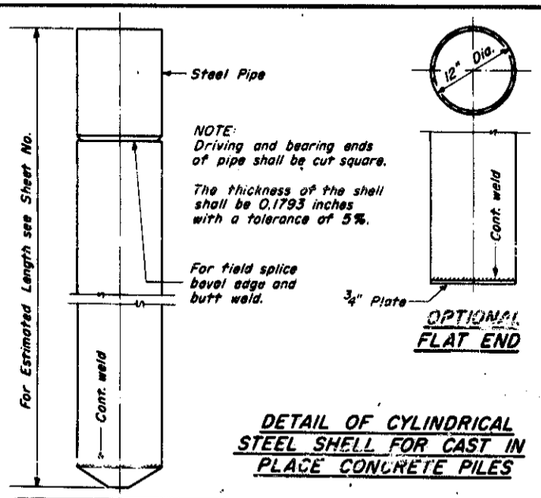
NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L * from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L * from each end and at mid-point of pile. * L = Over all length of pile to be handled.

PILE PLAN

PRECAST PRESTRESSED CONCRETE PILE



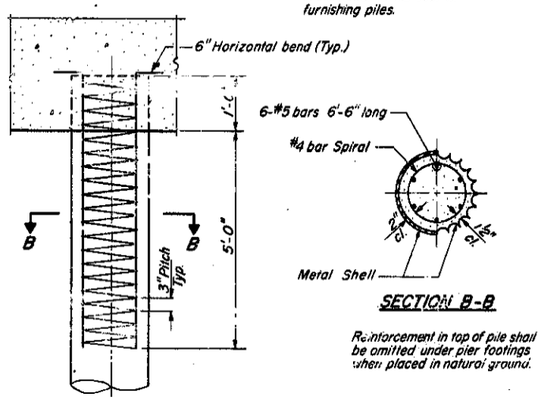
OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
DIRECTOR OF HIGHWAYS

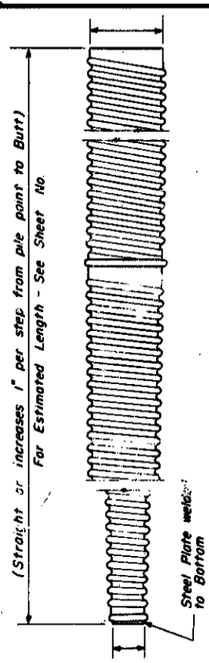
X-3 4-15-74

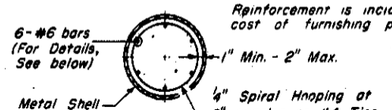


SECTION B-B

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground.

DETAIL OF REINFORCEMENT FOR METAL SHELLS





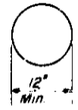
SECTION A-A

Reinforcement is incidental to the cost of furnishing piles.



PILE REINFORCEMENT

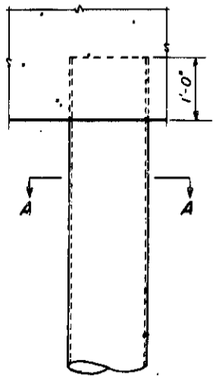
At least 10% of the length of pile shall have a Butt diameter equal to or greater than 12". Gauges are furnished to suit soil conditions (16 Gauge avg. min.)



BUTT



POINT
(Applies only to Step Taper type pile)



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