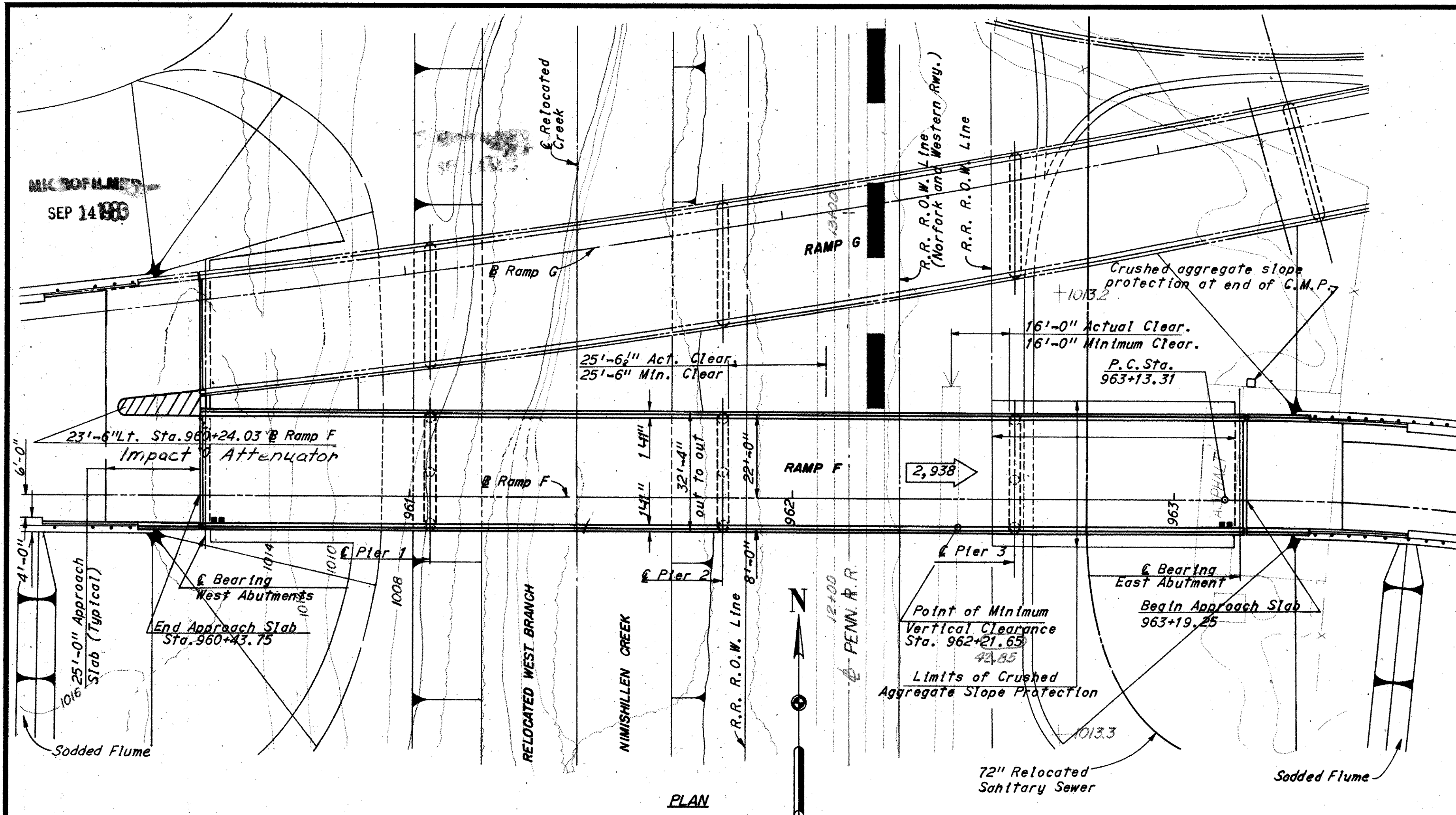
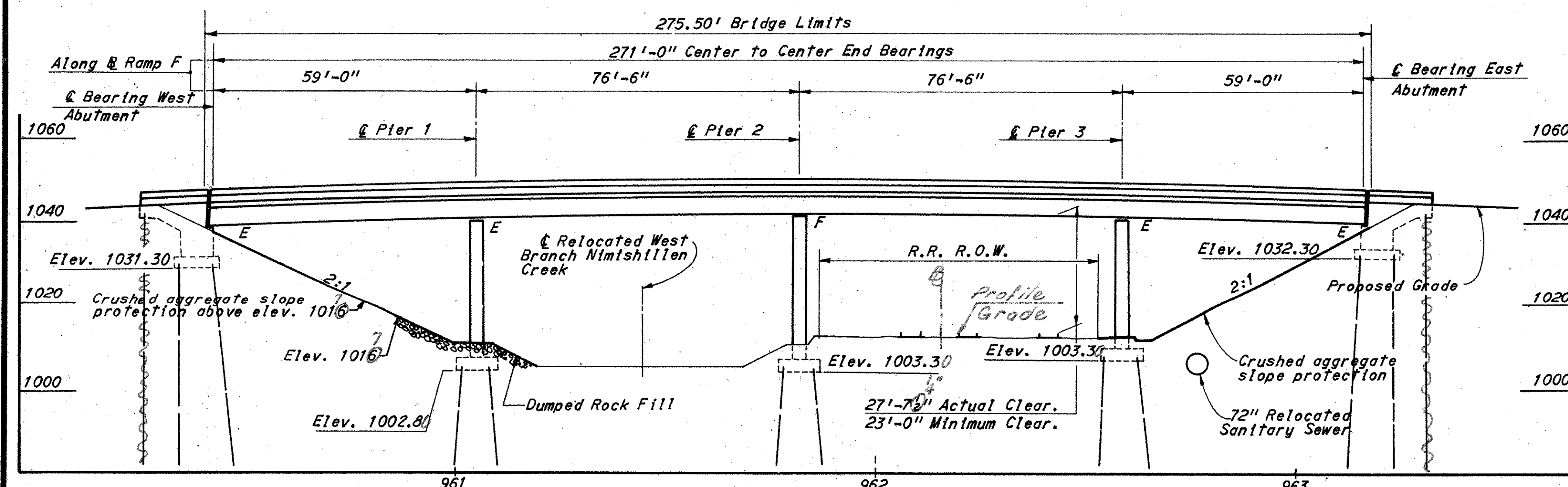


PROFILE GRADE-RAMP F



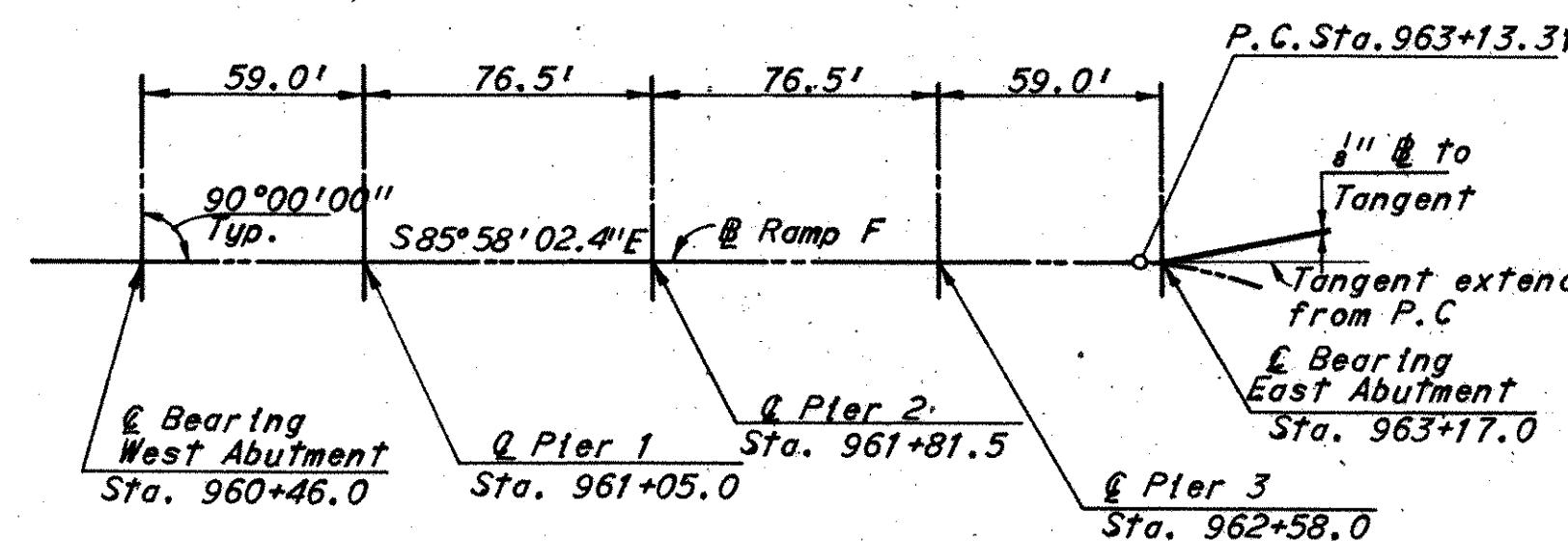
ELEVATION

Average Top of Rail Elev.			
Sta. 56+00	13+87.70	Sta. 59+00	58
Elev. 1011.99	Sta. 57+00	Elev. 1013.79	10+87.70
Sta. 55+00	Elev. 1012.17	Sta. 58+00	2
Elev. 1012.05	Elev. 1012.30	Elev. 1013.98	72

PROFILE GRADE-PENNSYLVANIA RAILROAD

HORIZONTAL CURVE DATA - RAMP F

P.I. Sta. 966+19.348
 $D = 8^{\circ}00'00.0''$
 $\Delta = 46^{\circ}16'32.0''$ Rt.
 $R = 716.197$
 $T = 306.042$
 $L = 578.444$



LAYOUT SKETCH

Note: Embankment construction should be completed to subgrade elev. before constructing the piers and abutments. Pre-boring through new or existing embankments before driving the piles will be allowed at the contractor's option and expense.

PROPOSED STRUCTURE	
Type:	Continuous Welded Girders with Reinforced Concrete Slab.
Spans:	59'-0", 76'-6", 76'-6", 59'-0" = 271'-0" ctr to ctr. end Bearings measured along RAMP F.
Roadway:	30'-0" face to face of parapets.
Loading:	HS 20-44
Skews:	None
Wearing Surface:	2" Asphalt Concrete
Approach Slab:	AS-1-72 (25'-0" long) (Modified)
Alignment:	Tangent

Modify Std. Drwg. AS-1-72 by providing 3" clear over the top rebars instead of the 2" shown on the Std. Drwg. The jacking holes as called for on Std. Drwg. AS-1-72 are not required.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS	257 389
2	OHIO			

STARK COUNTY
 STA-30-14.12
 STA-77-9.22

Notes:
 For Estimated Quantities, see Sheet 365B.
 For lighting details see Lighting Plans.
 The following items are not included in the bridge plans. See roadway plans for details.
 1. Relocation or removal of existing utilities.
 2. Approach grading, pavements and slabs.
 3. Guardrails.
 2,938 Denotes 1987 one way average daily traffic.
 Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections.
 For hydraulic data and cross-section thru West Branch Nimishillen Creek see Sheet 263.
 All piles shall be 12" cast-in-place concrete with an estimated average pay length of 80'-0" for the West Abutment and 70'-0" for Pier 1, Pier 2, Pier 3 and the East Abutment.
 ■ Denotes standard scupper.
 The embankments shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation shall then be made for the abutments and for piers 1 and 3.
 All earthwork in the area of the existing channel shall be completed before construction of piers 1 and 2.
 For details of West Abutment see Sheet 268.

H.N.T.B. BRIDGE NO. 6		Revised 5-23-75 By CKB	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF		1 / 6	
CONSULTING ENGINEERS			
KANSAS CITY CLEVELAND NEW YORK			
SITE PLAN			
RAMP F OVER PENN. R.R.			
BR. NO. STA 30-1486		STA. 960 + 43.75	
SCALE: 1"=20'-0"		STA. 963 + 19.25	
RELOCATED U.S. 30			
CANTON		STARK COUNTY OHIO	
DRAWN LDE	TRACED	CHECKED BM	REVIEWED MJK
DATE 10-3-68	DATE	DATE 1-20-70	DATE 11-22-71
			1668

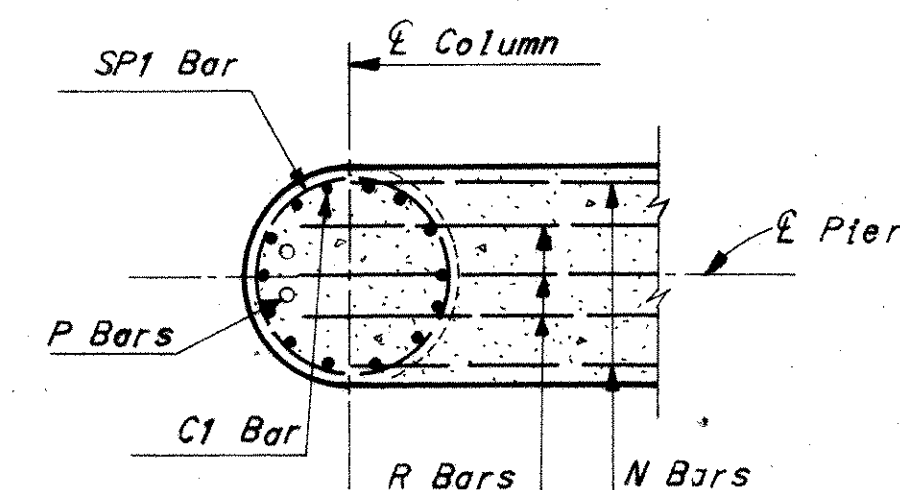
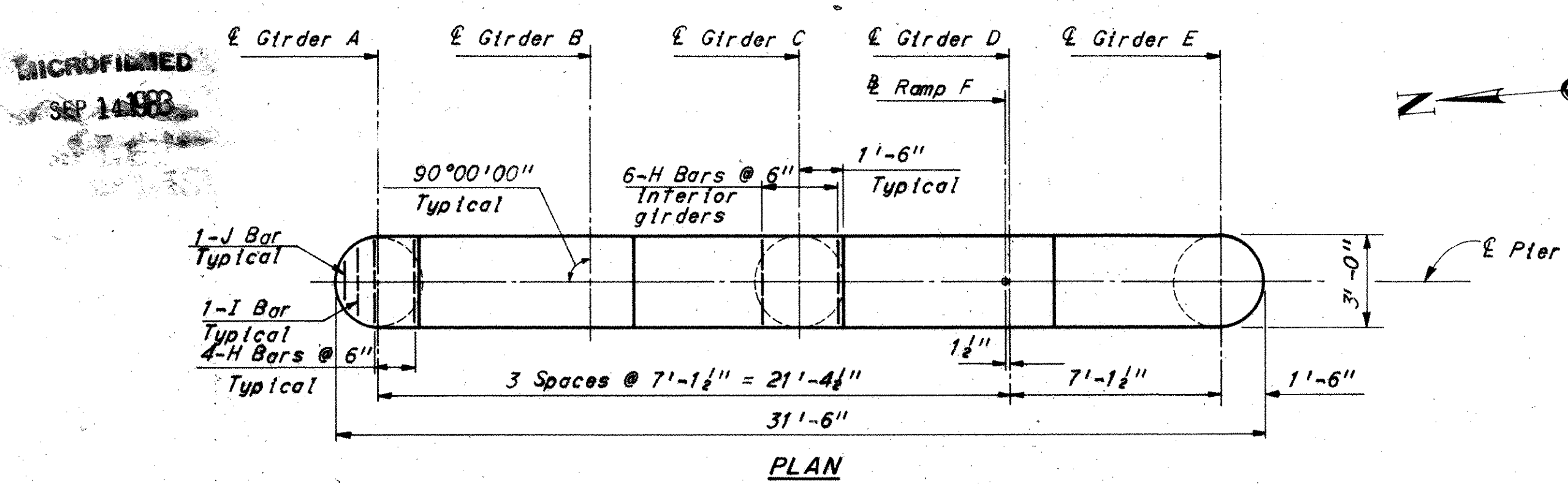
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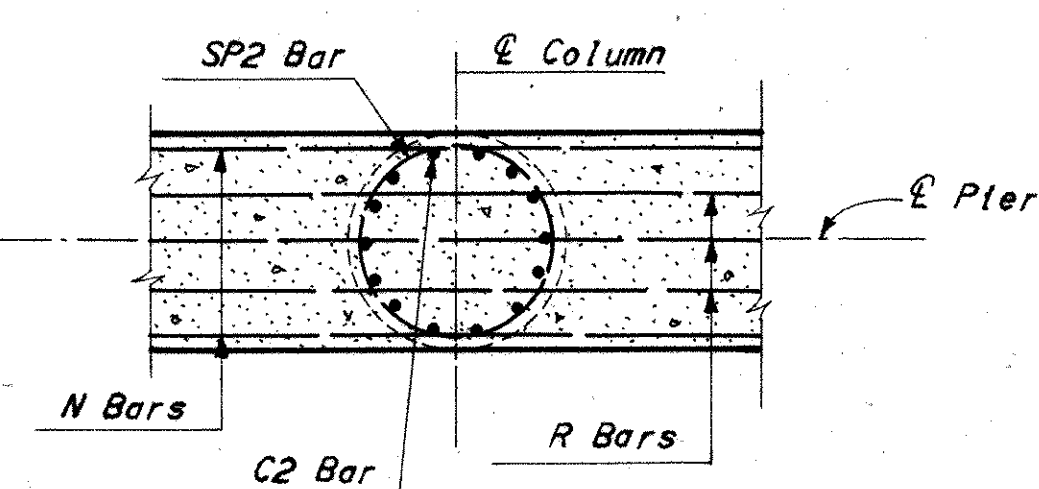
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2	OHIO		

259
389

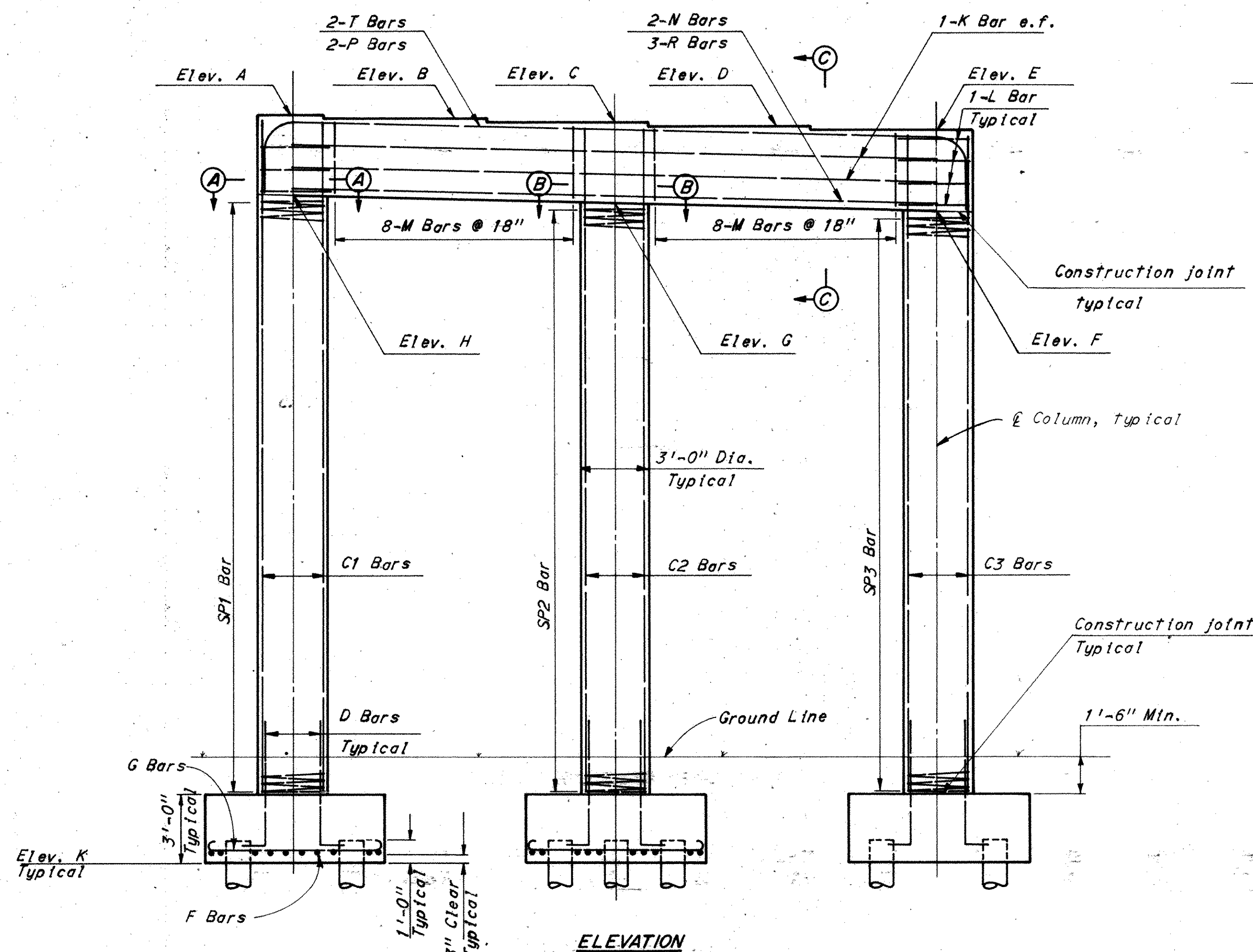
STARK COUNTY
STA-30-14T2
STA-77-9.22



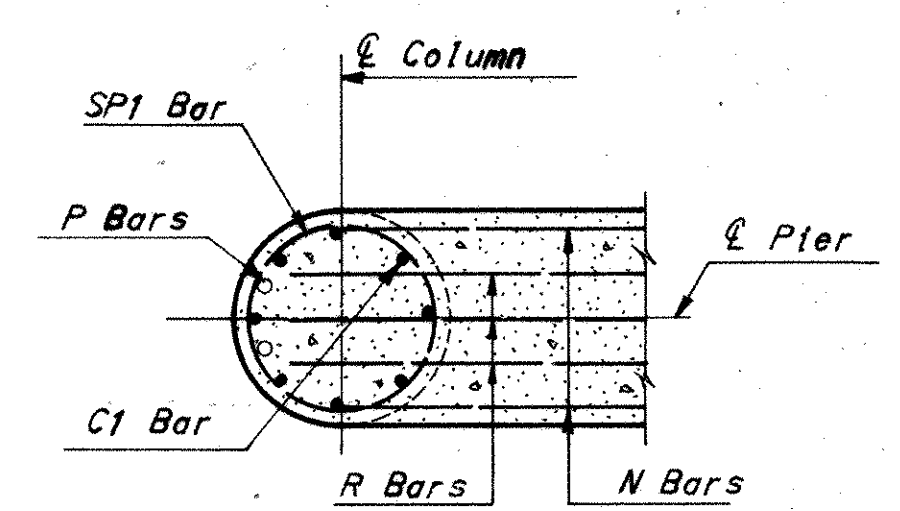
SECTION A-A
Pier 2



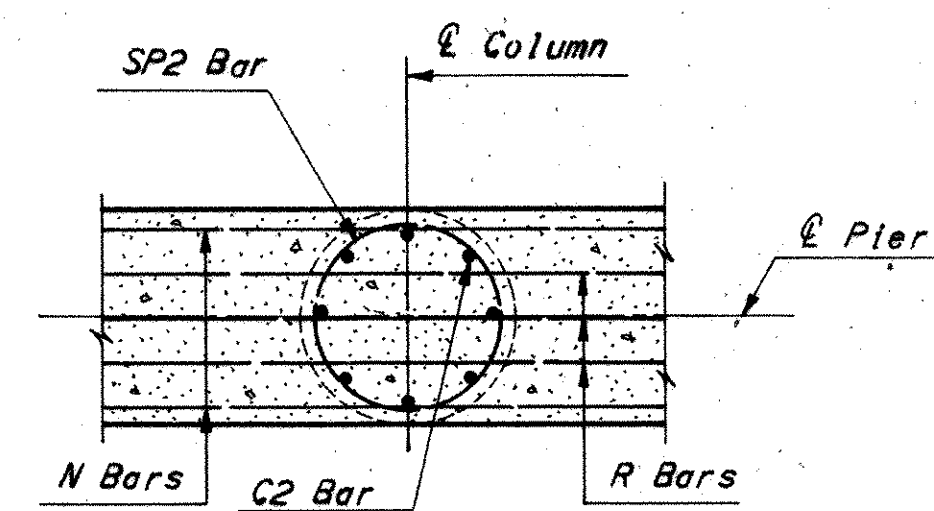
SECTION B-B
Pier 2



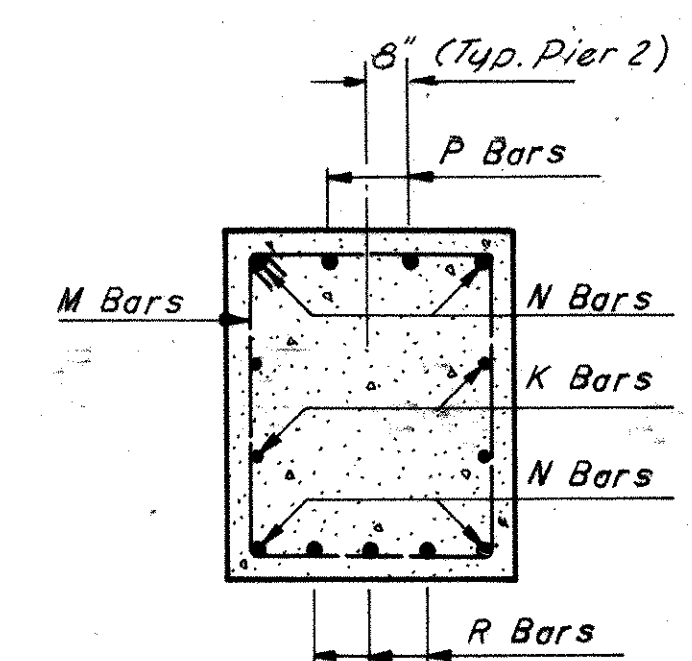
ELEVATION



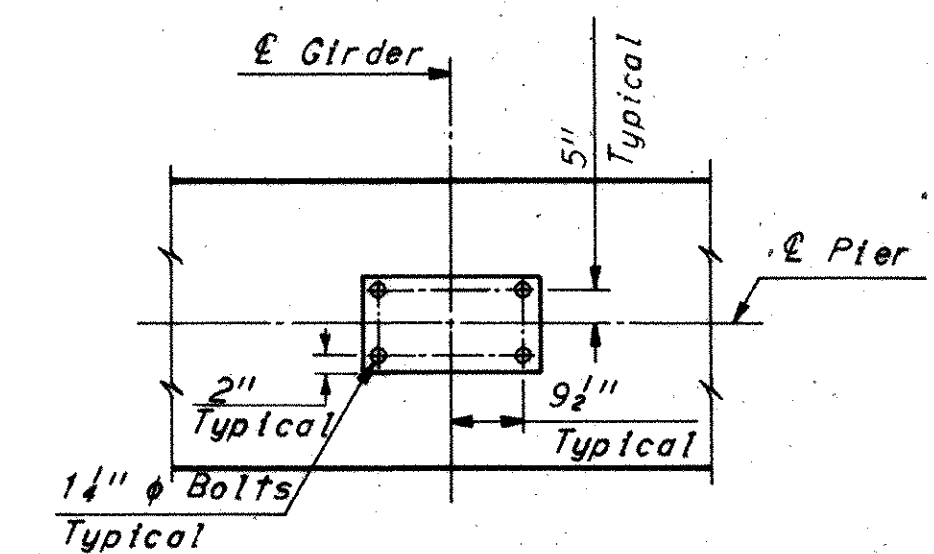
SECTION A-A
Piers 1 and 3



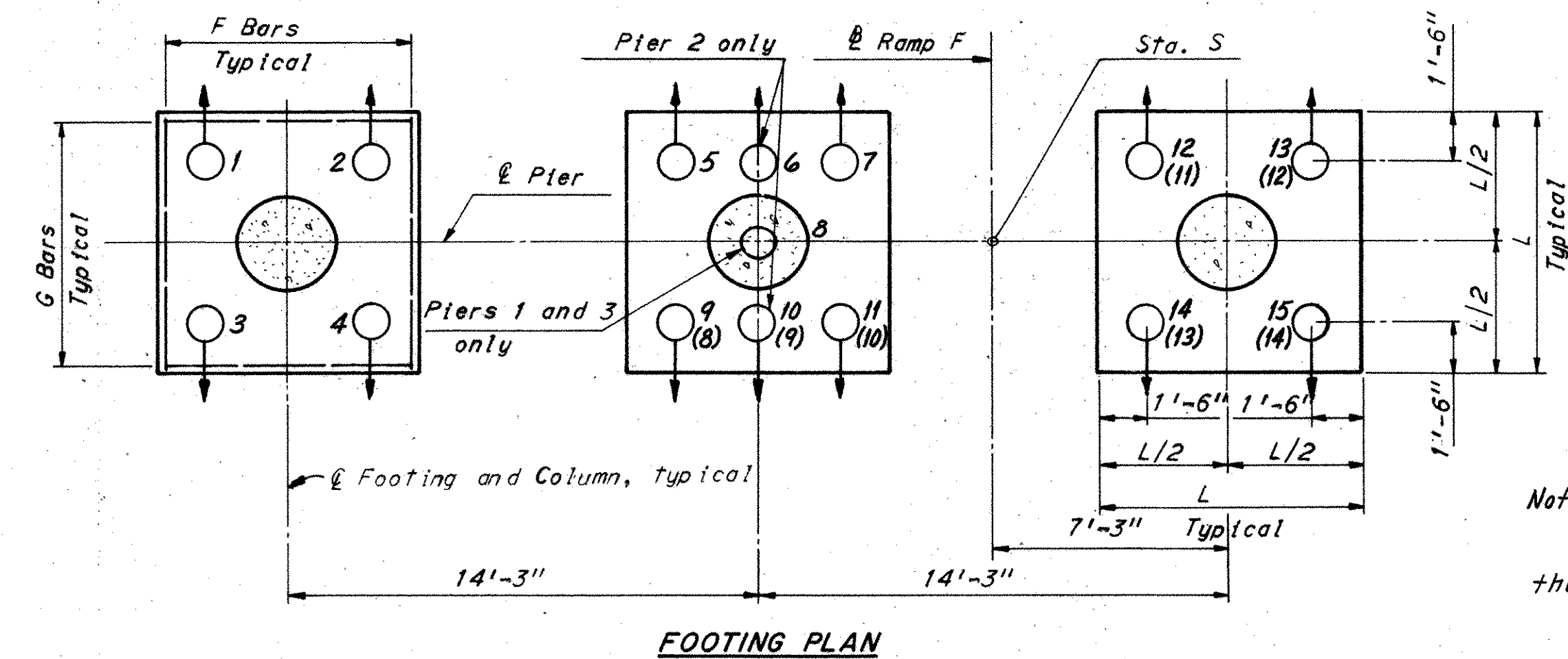
SECTION B-B
Piers 1 and 3



SECTION C-C



ANCHOR BOLT PLAN-PIER 2



FOOTING PLAN

FOOTING DATA				
Pier	Sta. S	Dim. L	F Bars	G Bars
1	961+05.00	9'-0"	10-PA701	10-PA701
2	961+81.50	11'-0"	10-PB901	10-PB801
3	962+58.00	9'-0"	10-PC701	10-PC701

ELEVATIONS										
Pier	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Elev. H	Elev. I	Elev. K
1	1040.52	1040.41	1040.29	1040.18	1040.07	1036.51	1036.69	1036.87	1002.80	
2	1040.95	1040.82	1040.69	1040.57	1040.44	1036.91	1037.09	1037.27	1003.30	
3	1041.13	1040.87	1040.62	1040.36	1040.10	1036.46	1036.89	1037.32	1003.30	

COLUMN REINFORCING STEEL							
Pier	C1 Bars	C2 Bars	C3 Bars	D Bars	SP1 Bar	SP2 Bar	SP3 Bar
1	8-PA1004	8-PA1005	8-PA1006	8-PA1007	1-SPA401	1-SPA402	1-SPA403
2	14-PB1004	14-PB1005	14-PB1006	14-PB1007	1-SPB401	1-SPB402	1-SPB403
3	8-PC1004	8-PC1005	8-PC1006	8-PC1007	1-SPC401	1-SPC402	1-SPC403

Notes:
Special care shall be taken when placing reinforcing steel so as not to interfere with anchor bolt setting. Pier 2 only. See Sheet 214.
H Bars, I Bars and J Bars shall be placed 2 1/2" below top of cap beam.
For reinforcement schedule see Sheet 6/6.
All battered piles shall be battered 3 in 12. Pile dimensions are measured along bottom of footing.
All piles are 12" cast-in-place concrete.
For girder angles see Sheet 4/6.
e.f. denotes each face.
All stirrups within 4 feet of E Column shall be placed with hooks in the bottom of cap. All others shall be placed with hooks in the top.

CAPBEAM REINFORCING STEEL										
Pier	H Bars	I Bars	J Bars	K Bars	L Bars	M Bars	N Bars	P Bars	R Bars	T Bars
1	PA501	PA502	PA503	PA601	PA602	PA504	PA1001	PA1002	PA1003	PA1008
2	PB501	PB502	PB503	PB601	PB602	PB504	PB1001	PB1002	PB1003	PB1008
3	PC501	PC502	PC503	PC601	PC602	PC504	PC1001	PC1002	PC1003	PC1008

Notes:
() denotes Pier 2 designation only.
Pile numbering designations shall be preceded with the following subscripts:
Pier 1:1, Pier 2:2, Pier 3:3; i.e. 1-1, 1-2, etc.

H.N.T.B. BRIDGE NO. 6

Revised 5-23-75 By CKB

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS

KANSAS CITY CLEVELAND NEW YORK

PIERS 1, 2, 3

RAMP F OVER PENN. R.R.

BR. NO. STA. 30-1486

SCALE: 1"=1'-0"

STA. 960 + 43.75

STA. 963 + 19.25

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN BY DATE 7-23-69

TRACED DATE

CHECKED BY DATE 1-26-70

REVIEWED BY DATE 11-21-71

REVISED 3-2-76

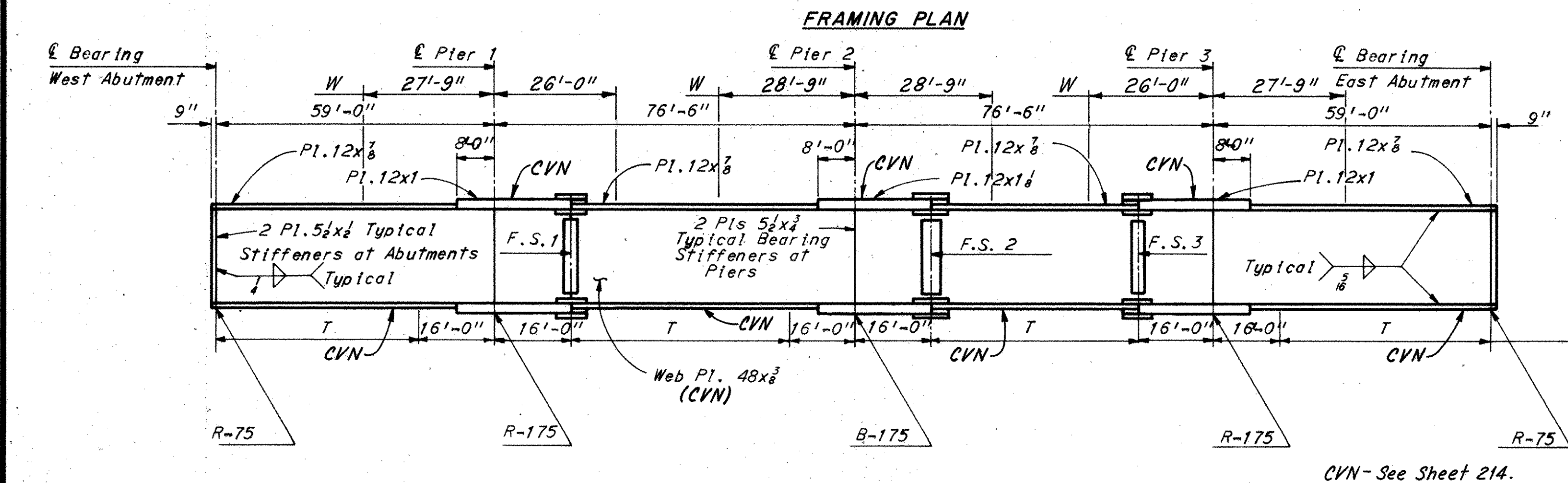
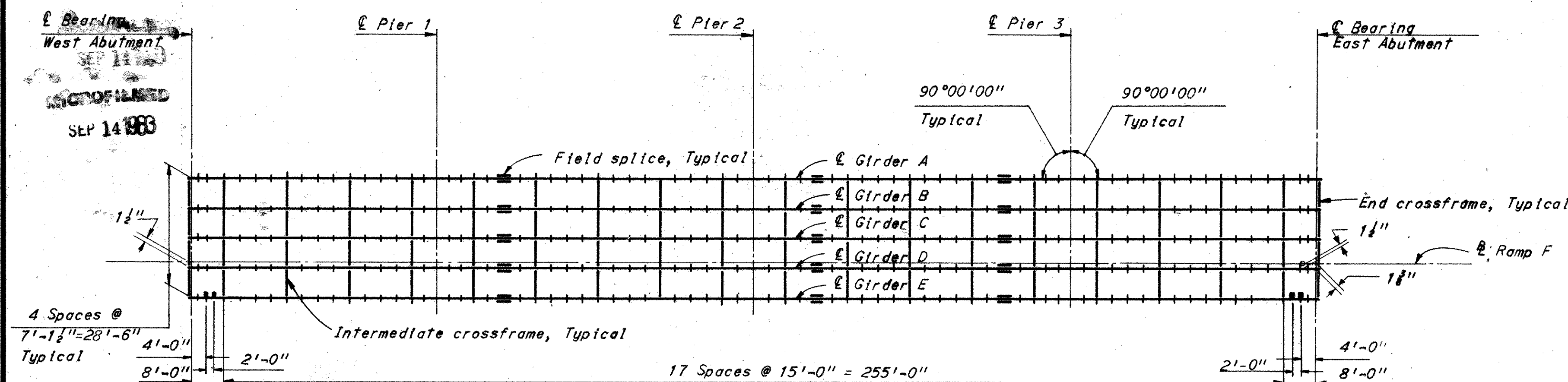
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Revised 4-29-77

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

260
389

STARK COUNTY
STA-30-14.12
STA-77-9.22



Note:
"W" denotes the range where welded attachments cannot be made to the top flange of Girders A and E.

Note:
Tension areas of bottom flange are denoted by "T". For the top flange, these areas are in compression.

CVN - See Sheet 214.

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE

	W. Abut.	.25	.50	.75	Pier 1	.25	.50	.75	Pier 2	.25	.50	.75	Pier 3	.25	.50	.75	E. Abut.
North Gutterline	1045.87	1046.09	1046.29	1046.45	1046.59	1046.74	1046.87	1046.95	1047.03	1047.12	1047.19	1047.21	1047.20	1047.17	1047.12	1047.04	1046.93
South Gutterline	1045.43	1045.65	1045.84	1046.00	1046.15	1046.30	1046.42	1046.49	1046.52	1046.49	1046.43	1046.32	1046.18	1046.04	1045.89	1045.71	1045.49

Note:
The gutterline elevations shown have been adjusted for dead load deflections caused by the weight of wearing course and concrete, and are the elevations required before the concrete deck is placed. No concrete shall be placed until the screed rails have been set for the entire bridge.

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

Girder	W. Abut.	.25	.50	.75	Pier 1	.25*	.50	.75	Pier 2	.25*	.50	.75*	Pier 3	.25	.50	.75	E. Abut.
A	1045.87	1046.09	1046.28	1046.44	1046.69	1046.72	1046.86	1046.95	1047.08	1047.12	1047.19	1047.21	1047.20	1047.17	1047.11	1047.03	1046.93
B	1045.76	1045.97	1046.17	1046.33	1046.48	1046.61	1046.75	1046.84	1046.91	1046.96	1047.00	1046.98	1046.95	1046.89	1046.80	1046.70	1046.57
C	1045.65	1045.86	1046.05	1046.22	1046.37	1046.50	1046.64	1046.72	1046.78	1046.81	1046.81	1046.76	1046.69	1046.60	1046.49	1046.36	1046.21
D	1045.54	1045.75	1045.94	1046.11	1046.26	1046.39	1046.53	1046.61	1046.65	1046.65	1046.62	1046.53	1046.43	1046.32	1046.19	1046.03	1045.85
E	1045.43	1045.64	1045.83	1046.00	1046.15	1046.28	1046.42	1046.49	1046.52	1046.50	1046.43	1046.30	1046.18	1046.04	1045.88	1045.70	1045.49

* At Location of Field Splice.

Notes:
Top and bottom flanges are identical in size.
All stiffeners shall be placed normal to girder flanges.
All intermediate stiffener to web welds shall be 4" continuous fillets on both sides of stiffeners.
For detail of field splices see Sheet 355.
All intermediate stiffeners shall be Pls. 4x $\frac{5}{8}$, except at field splices Ls 5x3 $\frac{1}{2}$ x $\frac{5}{8}$ shall be used.

Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices.

End crossframe details shall be same as shown on Ohio Standard Drawing SD-1-69, Sheet 1 of 4.

For intermediate crossframe details see Sheet 360.

All crossframes are intermediate crossframes unless shown otherwise.

For details of roadway end dam, see Ohio Standard Drawing SD-1-69, Sheet 1 of 4, and Sheet 359.

For details of intermediate stiffeners see Sheet 360.

For details of rockers and bolsters see Ohio Standard Drawing RB-1-55.

The girders shall be fabricated to lines parallel to profiles formed by top of pavement elevations directly over girders, plus the camber required to compensate for dead load deflection.

For details of curb plates at concrete bridge railing see Ohio Standard Drawing SD-1-69, Sheet 2 of 4.
Dimensions to scuppers are measured along centerline of girders.

F.S. Denotes Field Splice

For Camber and Deflection Table see Sheet 364.

■ Denotes Standard scupper

Scuppers shall be in accordance with Std. Dwg. SD-1-69 except that scupper pipes shall extend 8" below the bottom of girders instead of 2".

The allowance to be made in screed settings to compensate for dead load deflections due to concrete and asphalt wearing course are to be made above or below the top of the pavement elevations as required. Screeds may require further adjustment due to irregularities in fabricated steel.

H.N.T.B. BRIDGE NO. 6 Revised 5-23-75 By CKB

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KANSAS CITY CLEVELAND NEW YORK

FRAMING PLAN

RAMP F OVER PENN. R.R.

BR. NO. STA. 30-1486 STA. 960 + 43.75

SCALE: STA. 963 + 19.25

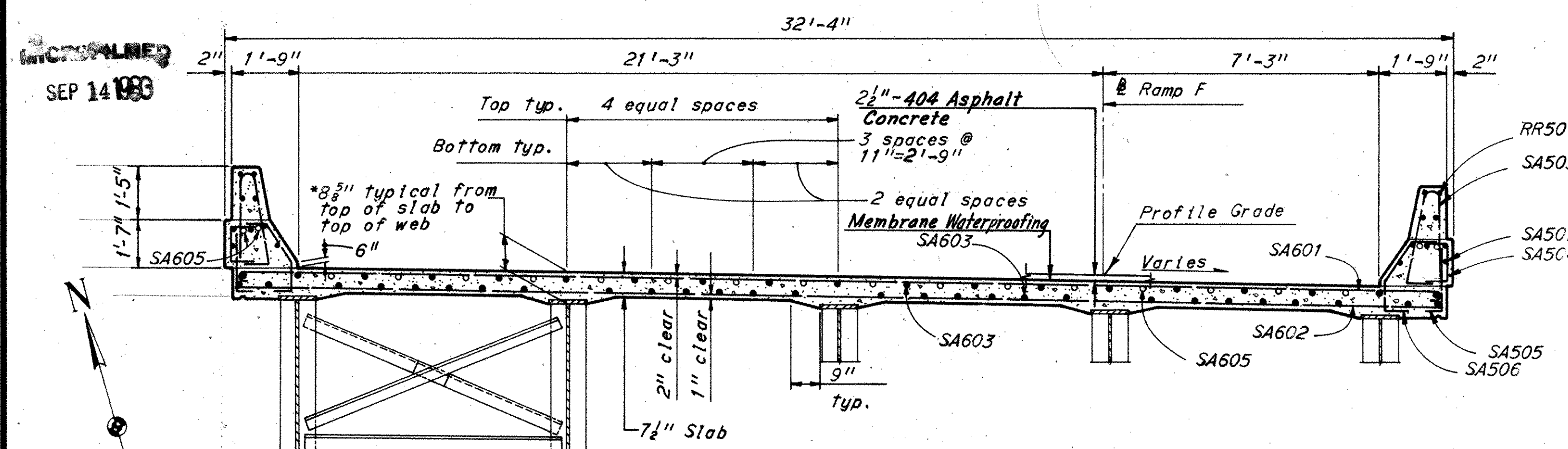
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

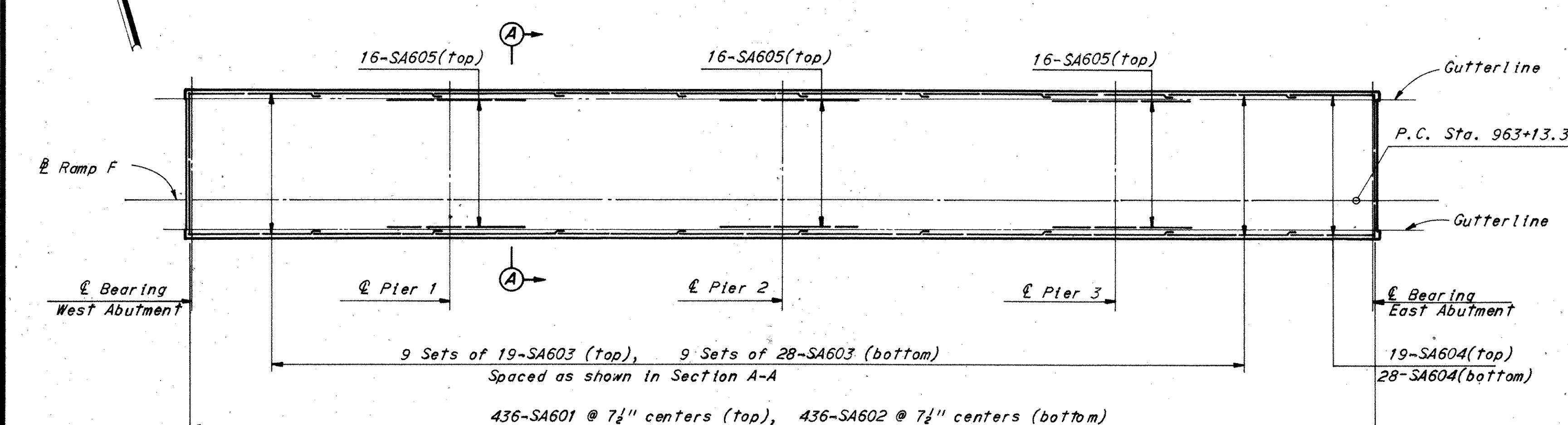
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DATE 7-14-69	DATE	DATE 1-21-70	DATE 11-22-71	

1668

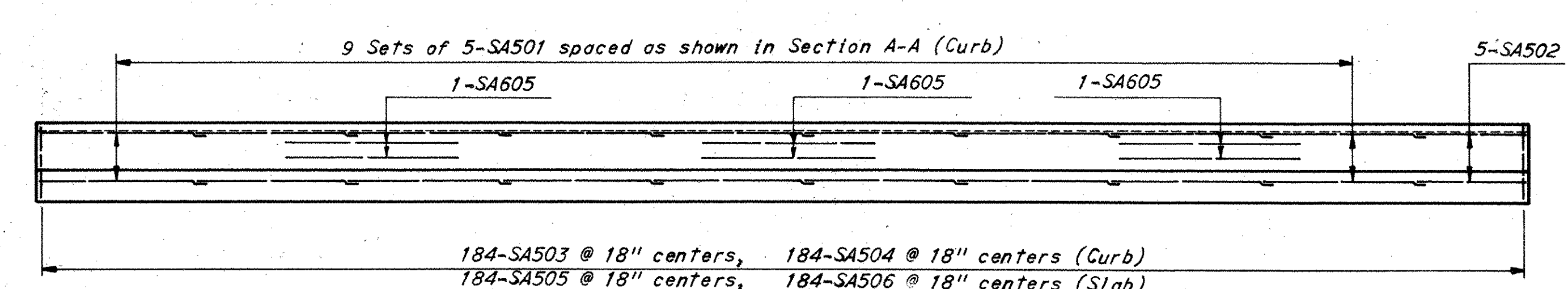
Revised 4-28-77



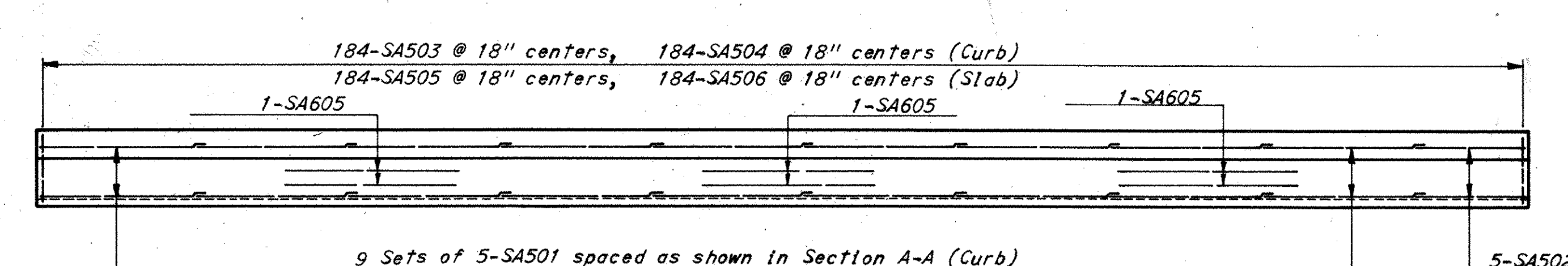
SECTION A-A



DECK PLAN

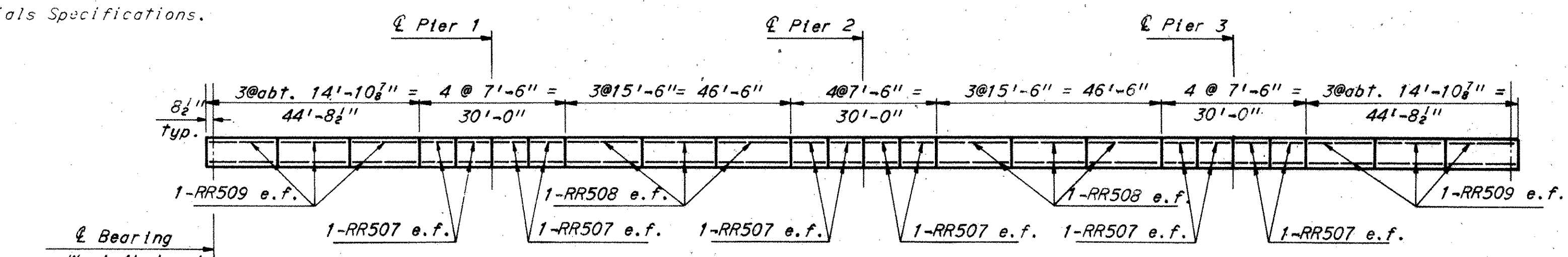


NORTH CURB PLAN

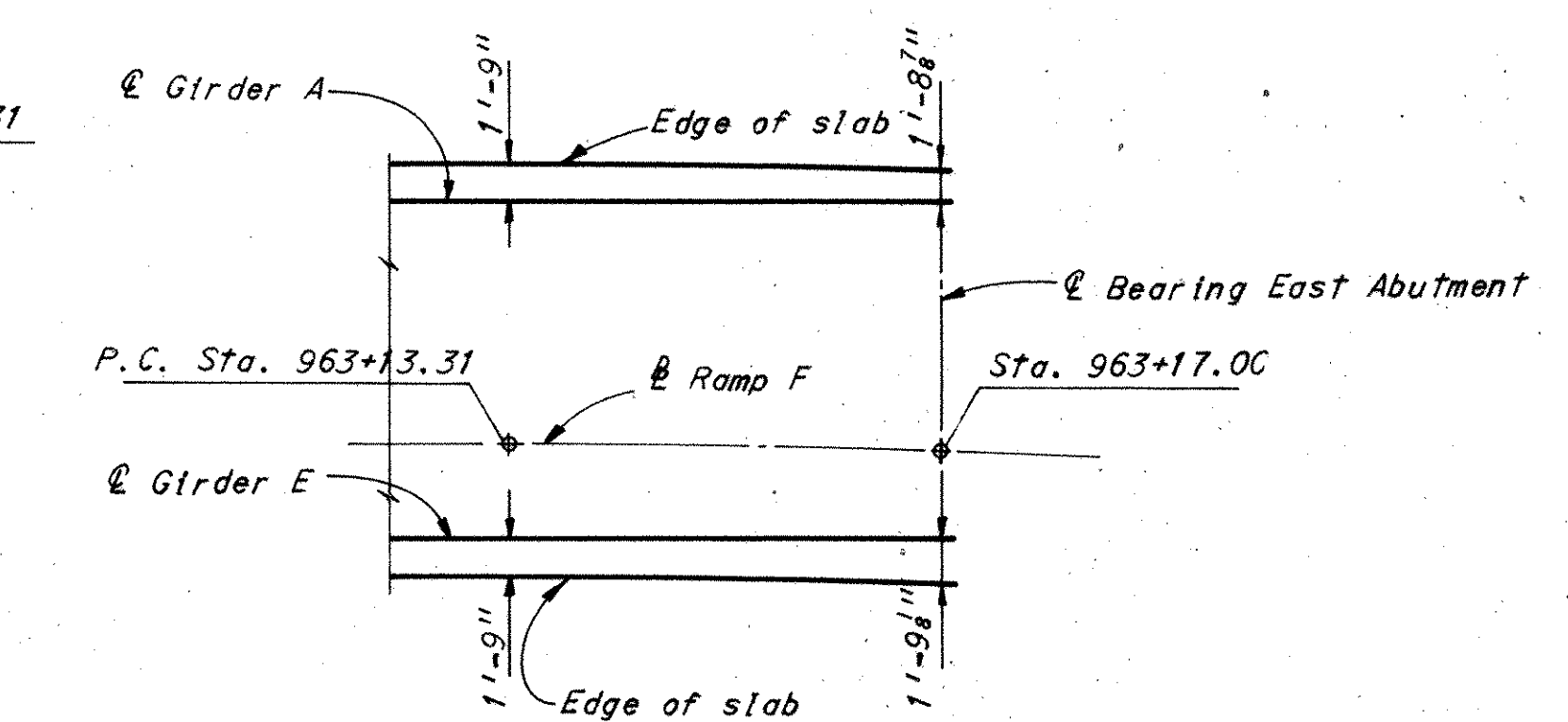


SOUTH CURB PLAN

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.18 of the Construction and Materials Specifications.



NORTH AND SOUTH PARAPET ELEVATION



HORIZONTAL OFFSETS TO EDGE OF SLAB

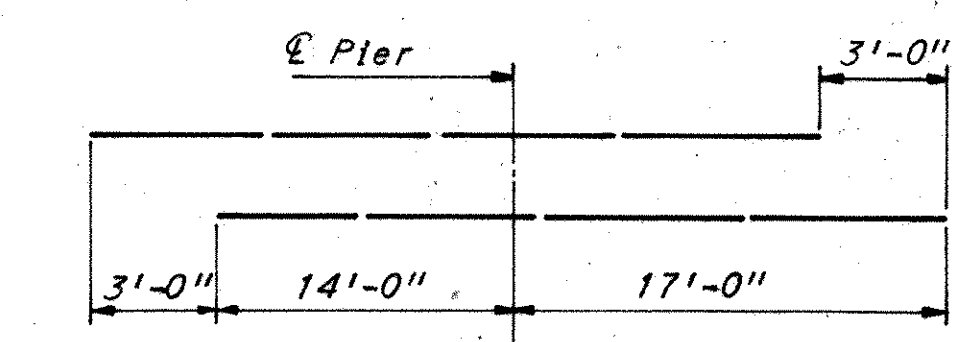
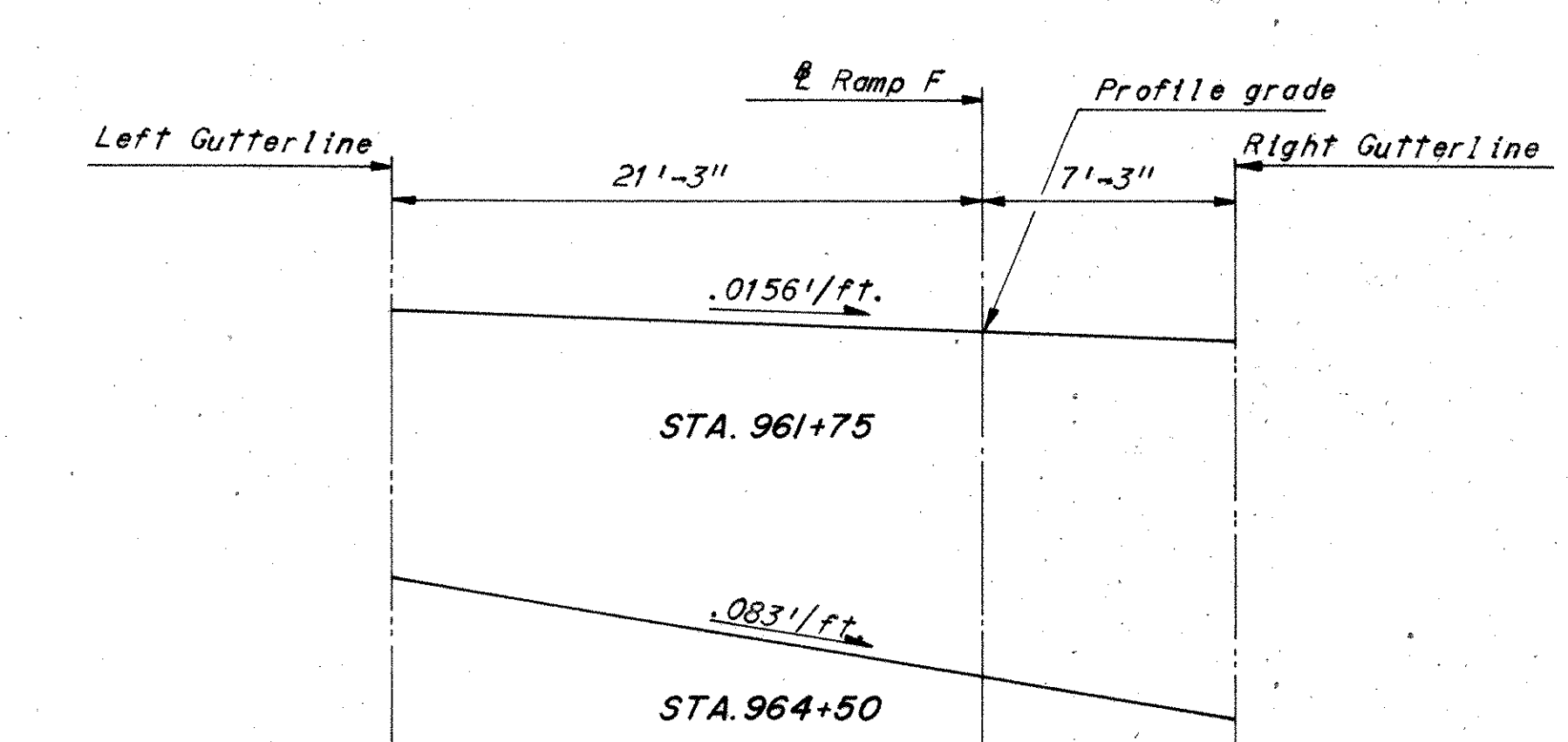


DIAGRAM SHOWING STAGGER OF SA605 BARS OVER PIERS



SUPERELEVATION TRANSITION SCHEME

Notes:
Reinforcing steel shall be adjusted as required to clear scuppers.
A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.
For curb and parapet dimensions see Sheet 359.
For deflection joint details see Sheet 361.
For reinforcement schedule see Sheet 365A.
For subdrainage details see Sheet 365A.

H.N.T.B. BRIDGE NO. 6		Revised 5-23-75 By CKB	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
DECK PLAN			
RAMP F OVER PENN. R.R.			
BR. NO. STA. 30-1486		STA. 960 + 43.75	
SCALE: NONE		STA. 963 + 19.25	
RELOCATED U.S. 30			
CANTON		STARK COUNTY OHIO	
DRAWN BY	TRACED	CHECKED BY	REVIEWED
DATE 7-14-69	DATE	DATE 3-20-70	DATE 1-22-71
			1668

