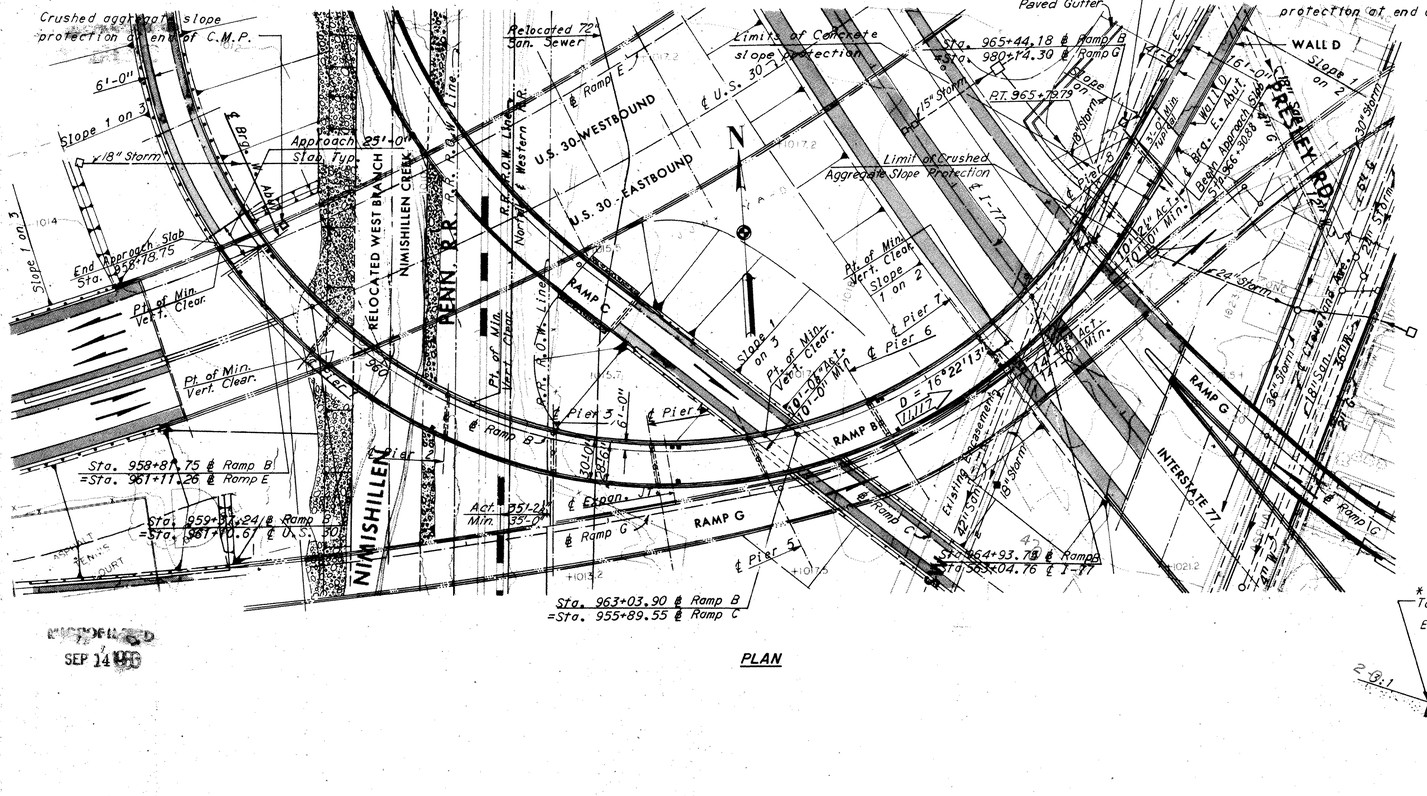
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

324
389

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

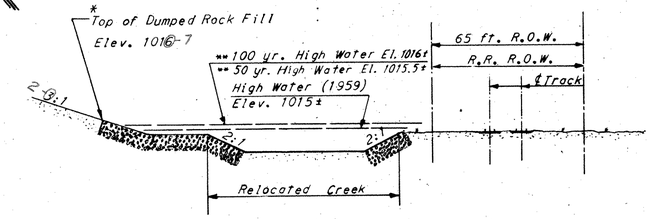


PLAN

MICROFILMED
SEP 14 1971

EXISTING UTILITY LEGEND

4"G	GAS
4"W	WATER
16" Storm	STORM SEWER
8" San	SANITARY SEWER
T	TELEPHONE
E	POWER LINES
4W-E 4KV	4 WIRE, PRIMARY 4 KILOVOLT
3W-E	3 WIRE, SECONDARY
☿	WATER HYDRANT
○	MANHOLE
◘	CATCH BASIN



*To be paid for under "Rock Channel Protection, Type A, with Bedding." See Roadway Plans. (without)

SECTION THRU W. BRANCH NIMISHILLEN CREEK

FLOOD DISCHARGE WEST BRANCH NIMISHILLEN CREEK AT NAVARRE ROAD BRIDGE					
Occurance Interval (years)	5	10	20	50	100
*Discharge Q (c.f.s.)	1360	1680	2010	2520	3000

* Taken from Table 5, "Flood Discharge-Frequency Relationship", page TA-23, "Flood Plain Study-Main Report", Corps of Engineers, Feb. 1967.
** Taken 2,000 ft. above mouth as shown on Exhibit No. 4 and Exhibit No. 12, "Flood Plain Study-Main Report", Corps of Engineers, Feb. 1967.

Notes:

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.**

11,117 **Denotes one way 1987 average daily traffic.**

Earth work limits shown are schematic. Actual slopes shall conform to plan cross-sections.

■ **Denotes standard scupper.**

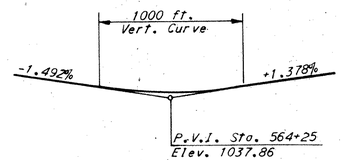
For details of Wall D see Sheets 368 and 369
For profile grade of Ramp B see Sheet 2|16
For information not shown on this sheet see General Plans Sheets 3|16 **and** 4|16.
For Estimated Quantities, see Sheet 365D.

NOTES:

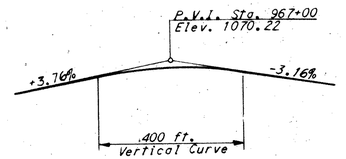
Embankment shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation may then be made for the abutments, Pier No. 8 and piles driven.

Other embankment in which piers are to be placed shall be constructed to the level of the sub-grade for a minimum distance of 200 feet, or to the limits of the embankment before excavation for the footings is made and piles driven.

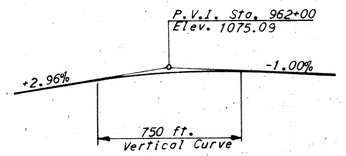
Piling for the West Abutment of Br. No. Sta. 30-1489 and the three northern most footings for Pier No. 1 of Br. No. Sta. 30-1487 shall be driven before placing any concrete for either substructure unit.



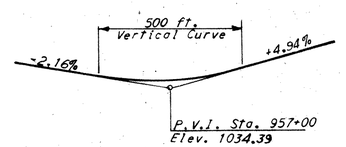
PROFILE GRADE - I-77



PROFILE GRADE - RAMP G



PROFILE GRADE - U.S. 30



PROFILE GRADE - RAMP C

PROPOSED STRUCTURE

Type: Continuous Welded Curved Girders with Reinforced Concrete Slab.
Spans: 74'-0", 97'-0", 81'-0", 61'-6", 71'-0", 90'-6", 90'-0", 110'-6", 72'-0" = 747'-6" Ctr. to Ctr.
End Bearings along ℄ Ramp B.
Roadway: 30'-0" Face to face of parapets.
Loading: HS 20-44.
Skews: Varies; see Plan.
Wearing Surface: 1½" Asphalt Concrete
Alignment: 350' Radius Left on ℄ Ramp B.
Approach Slab: AS-1-72 (25' Long) (Modified)

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.

H.N.T.B. BRIDGE NO. 14 — Revised 6-26-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF — 1/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

SITE PLAN

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1"=50'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
H.S.S.		D.W.B.	M.S.K.	
DATE 2-12-70	DATE	DATE 6-20-70	DATE 11-20-71	1668

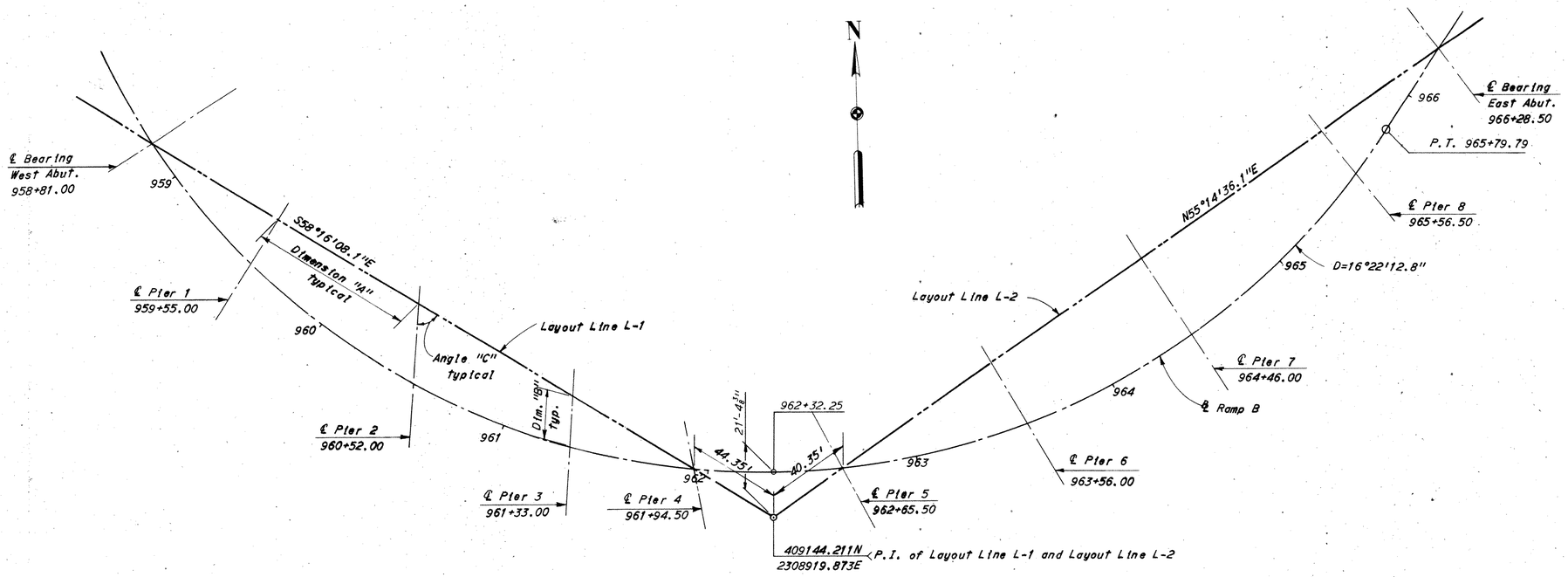
Revised 4-28-77

MICROFILMED
SEP 14 1983

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

325
389

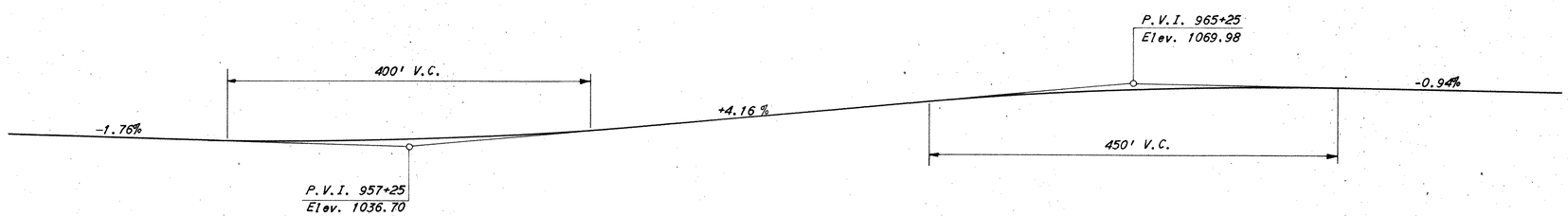
STARK COUNTY
STA-30-14.12
STA-77-9.22



LAYOUT DIMENSIONS			
	"A"	"B"	ANGLE "C"
W. Abut.	0	0	115°39'37.3"
Pier 1	69.82'	24.78'	90°32'47.0"
Pier 2	78.11'	38.62'	62°25'02.2"
Pier 3	86.41'	24.41'	62°25'02.2"
Pier 4	68.79	0	46°50'23.0"
Pier 5	-	0	97°12'16.5"
Pier 6	86.66'	33.63'	94°53'22.3"
Pier 7	87.89'	44.52'	92°09'22.8"
Pier 8	105.53'	26.57'	87°04'02.0"
E. Abut.	68.28'	0	87°04'02.0"

LAYOUT FROM WEST ABUTMENT TO EAST ABUTMENT

Note:
See General Plan Sheets for bearings of piers and footing locations.



PROFILE GRADE - RAMP B

HORIZONTAL CURVE DATA - RAMP B

P.I. Sta. 975+73.567
D = 16°22'12.8"
Δ = 159°51'14.5" Lt.
R = 350.000'
T = 1970.268
L = 976.493

H.N.T.B. BRIDGE NO. 14

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 2/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

LAYOUT DATA

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30.1489 STA. 958 + 78.75
SCALE: 1"=30'-0" STA. 966 + 30.88

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

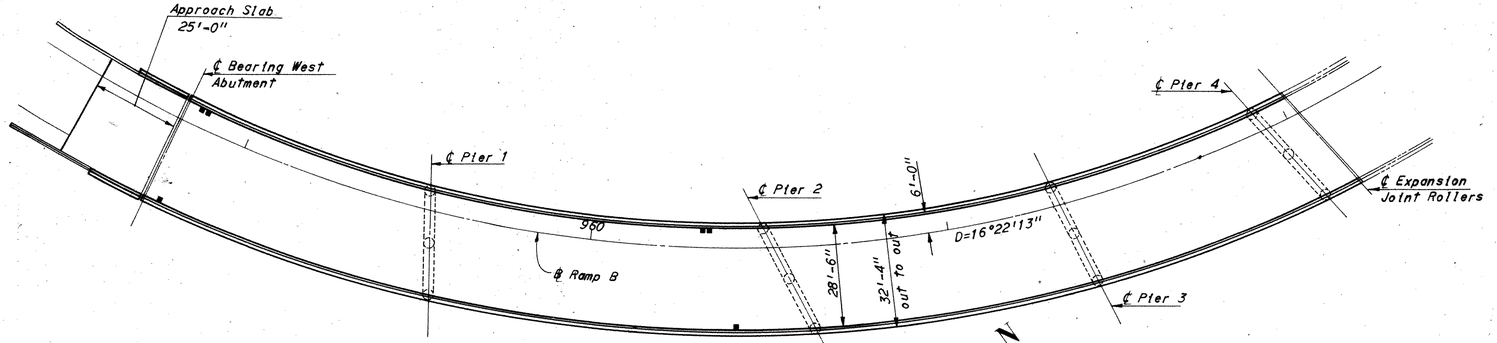
DRAWN RAP	TRACED	CHECKED DGS	REVIEWED MTK	REVISED
DATE 11-19-69	DATE	DATE 4-8-70	DATE 11-20-71	1668

RECEIVED
SEP 14 1970
H

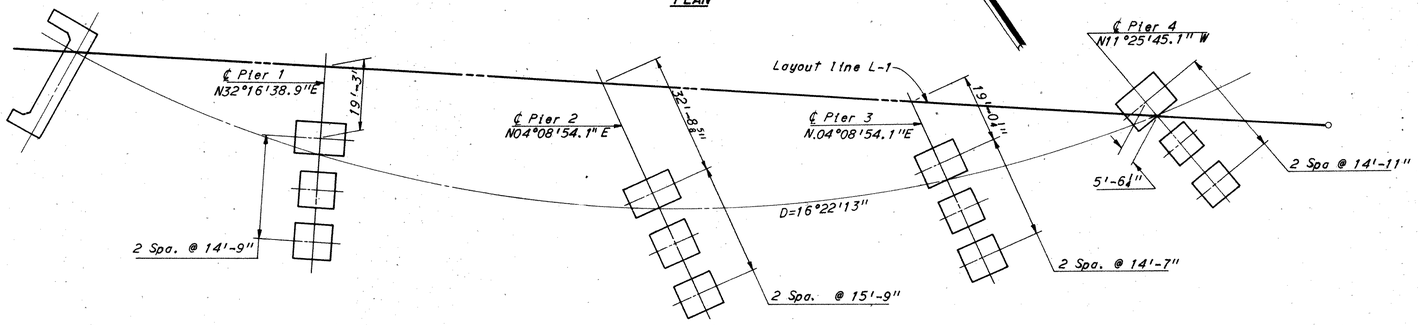
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

326
389

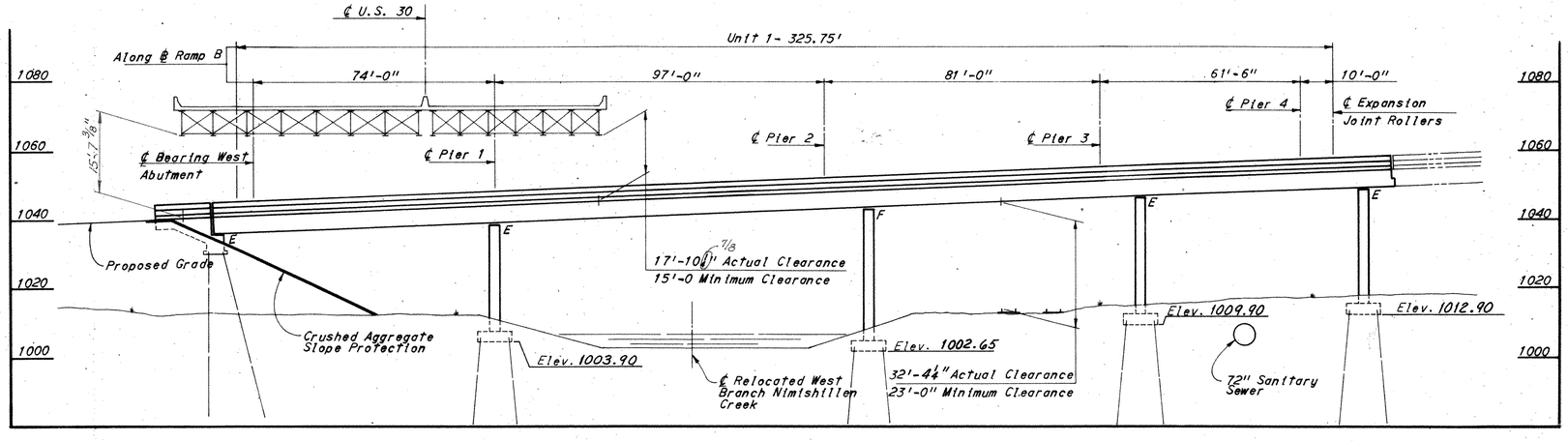
STARK COUNTY
STA-30-14.12
STA-77-9.22



PLAN



FOOTING LAYOUT



DEVELOPED ELEVATION

ESTIMATED AVERAGE PAY LENGTHS FOR PILING	
West Abutment	70'
Pier 1	70'
Pier 2	70'
Pier 3	70'
Pier 4	70'

Notes:
For Profile grades see Sheet 2/16
For details of Piers 1, 2, 3, and 4 see Sheet 7/16
For details of West Abutment see Sheet 5/16
For lighting details see Lighting Plans.

■ Denotes standard scupper.
For Layout data see Sheet 2/16

H.N.T.B. BRIDGE NO. 14 — Revied 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 3/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

GENERAL PLAN-UNIT 1

RAMP B OVER RAMPS C AND G, I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1"= 20'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

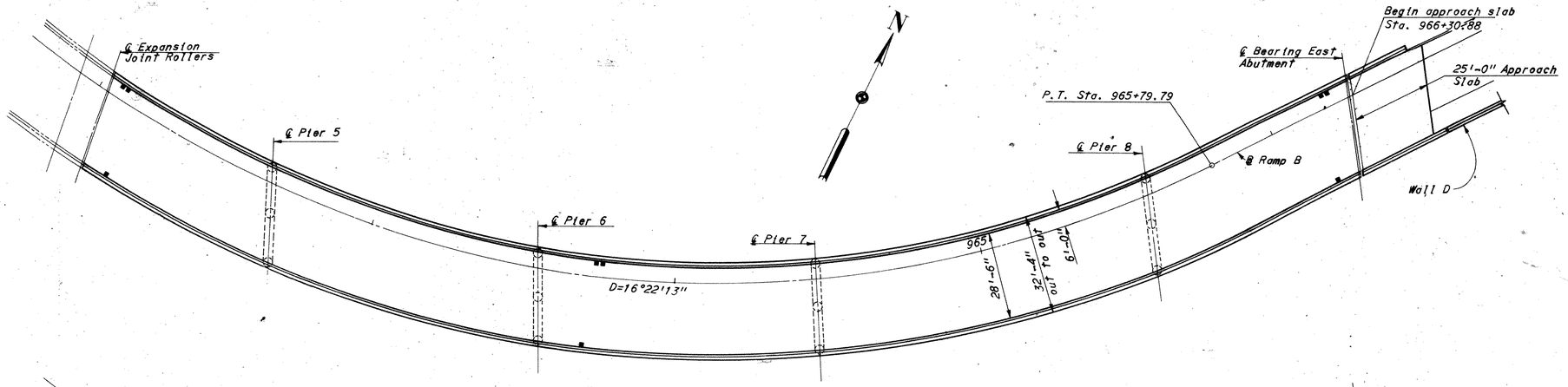
DRAWN LDE	TRACED	CHECKED DWG	REVIEWED MJK	REVISED
DATE 10-21-69	DATE	DATE 6-20-70	DATE 11-20-71	1668

SEP 14 1970

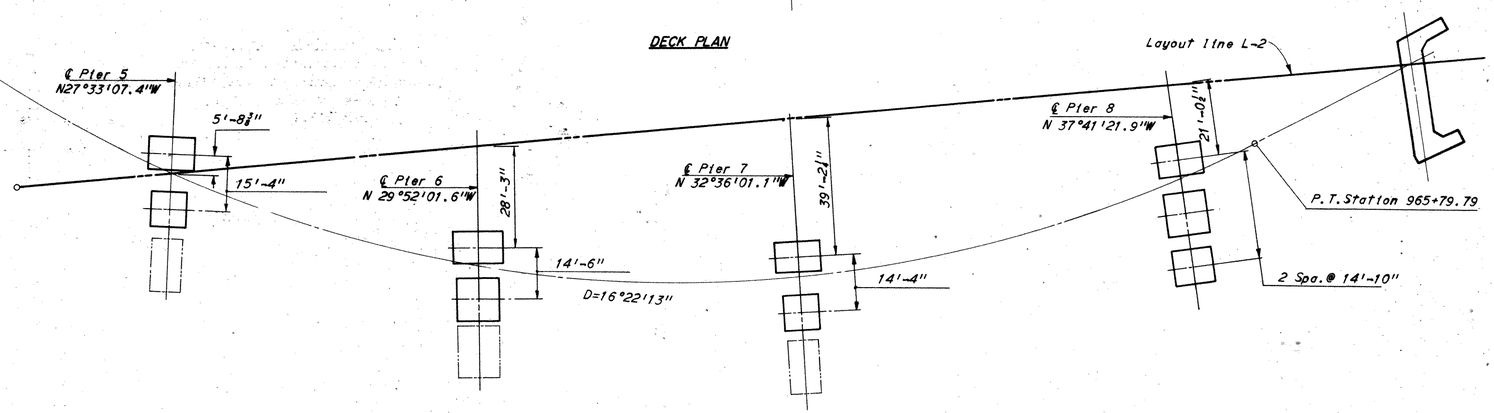
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

327
369

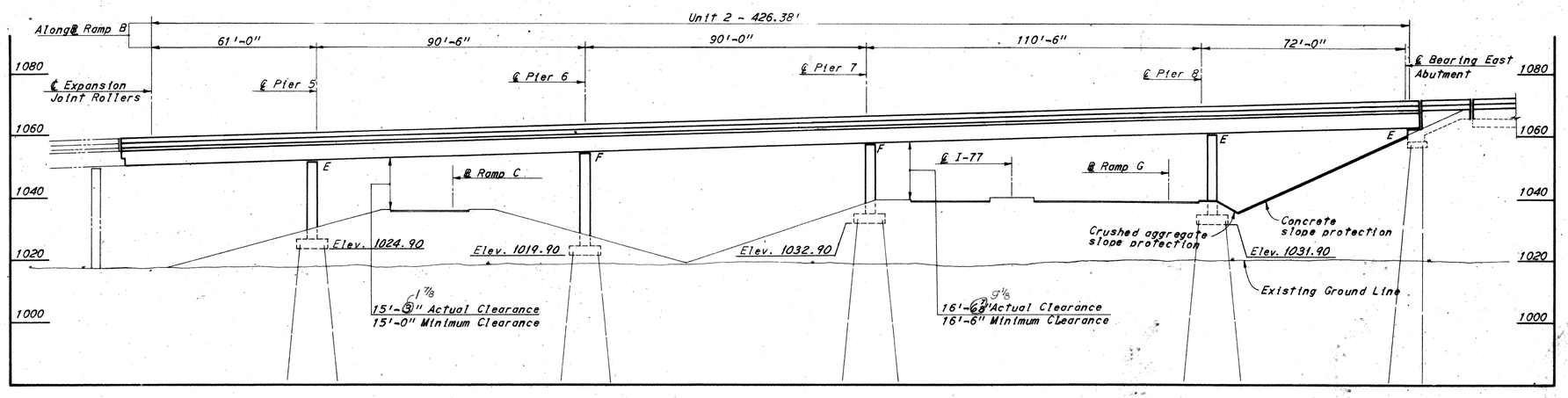
STARK COUNTY
STA-30-14.12
STA-77-9.22



DECK PLAN



FOOTING LAYOUT



DEVELOPED ELEVATION

ESTIMATED AVERAGE PAY LENGTHS FOR PILING	
Pier 5	70'
Pier 6	70'
Pier 7	70'
Pier 8	70'
East Abutment	80'

Notes:
For profile grades see Sheets 1/16 and 2/16
For details of Pier 5, 6, and 7 see Sheet 9/16
For details of Pier 8 see Sheet 8/16
For details of East Abutment see Sheet 6/16
For lighting details see Lighting Plans.
■ Denotes standard scupper
For layout data see Sheet 2/16

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 4/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

GENERAL PLAN-UNIT 2

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1"= 20'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

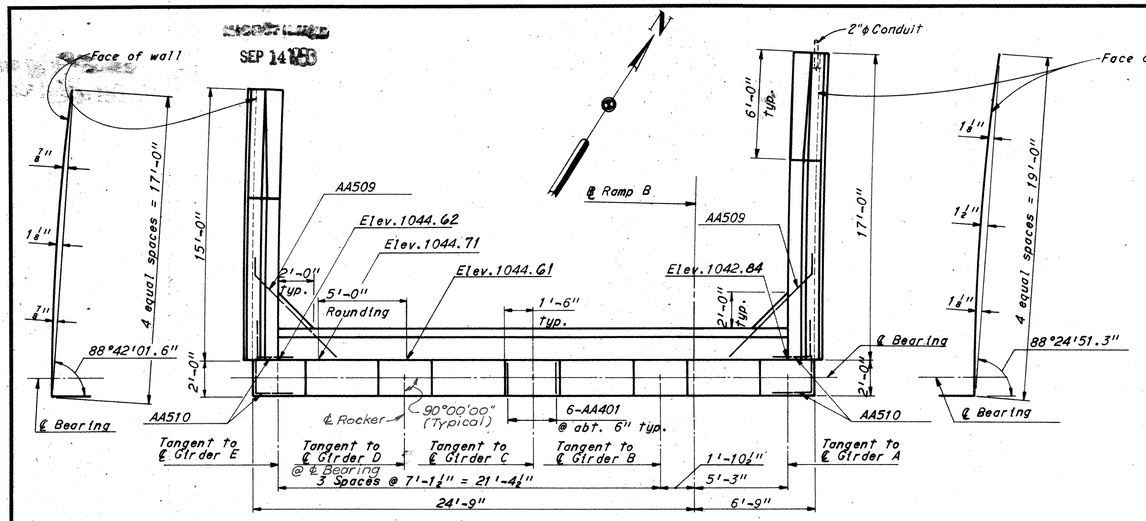
DRAWN LDE	TRACED	CHECKED DWB	REVIEWED MJK	REVISED
DATE 10-23-69	DATE	DATE 5-20-70	DATE 11-20-71	1668

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

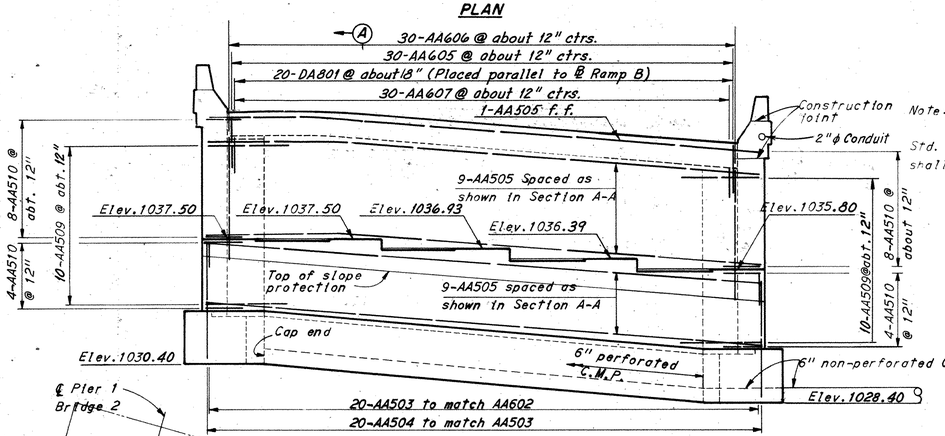
328
389

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

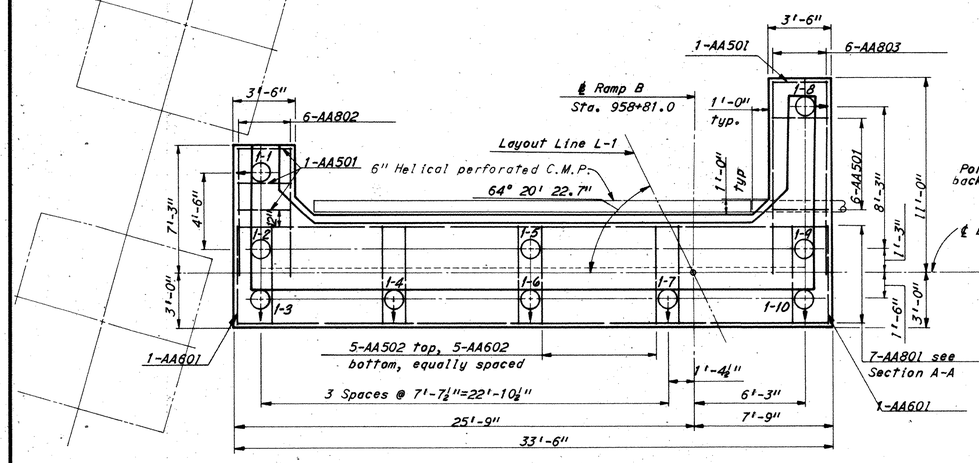
RECEIVED SEP 14 1971



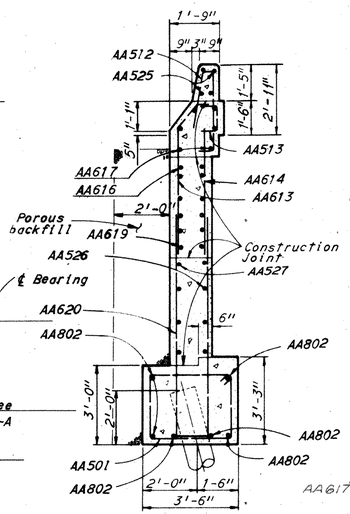
PLAN



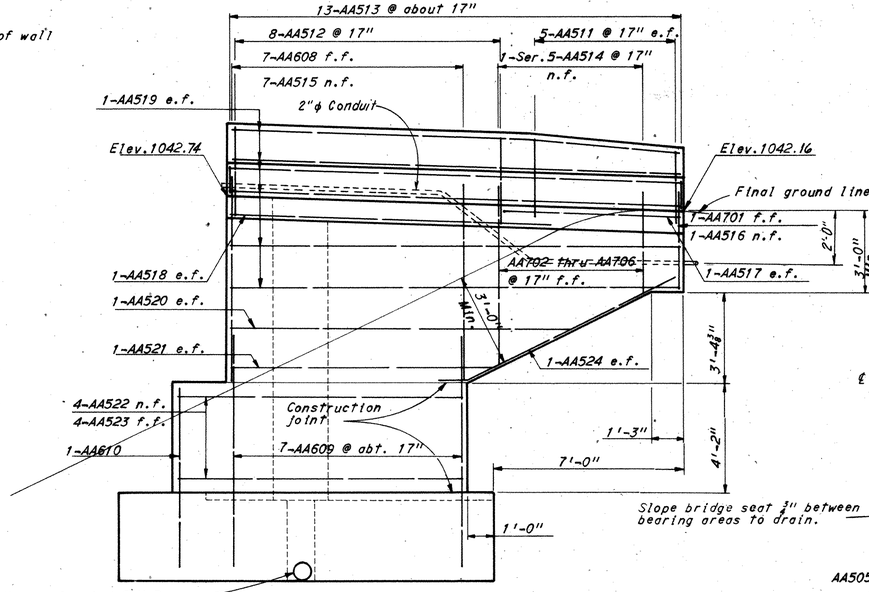
ELEVATION



FOOTING PLAN

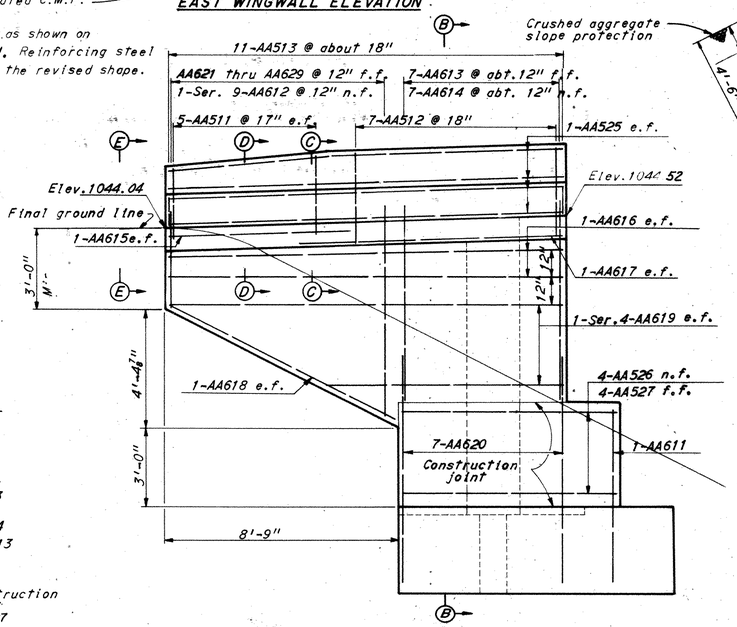


SECTION B-B

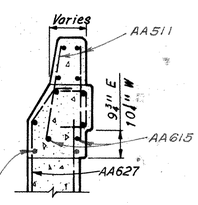


EAST WINGWALL ELEVATION

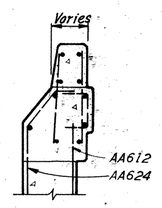
Note:
Parapet Transitions shall be as shown on Std. Drwg. BR-1-67 revised 10-15-71. Reinforcing steel shall be field bent or cut to fit the revised shape.



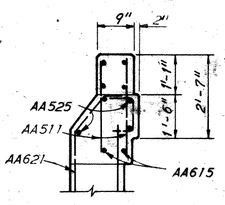
WEST WINGWALL ELEVATION



SECTION C-C

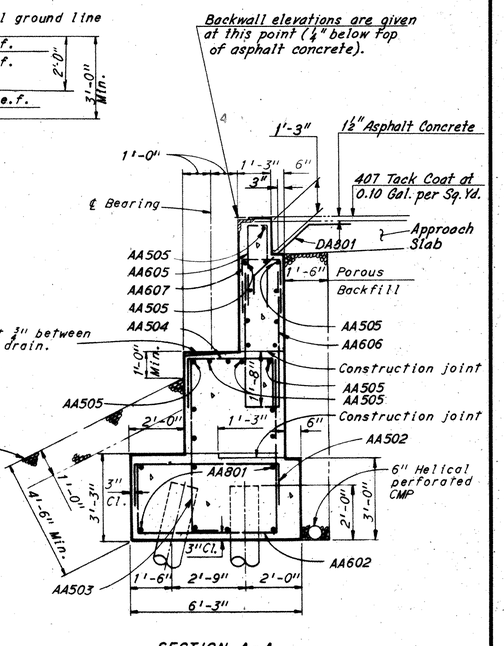


SECTION D-D



VIEW E-E

Backwall elevations are given at this point (¼" below top of asphalt concrete).



SECTION A-A

Notes:

For roadway end dam details see Ohio Standard Drawing SD-1-69, Sheets 1 and 2 of 4, and Sheet 359.

AA401 bars shall be placed 2½" ± below top of bridge seat.

n.f. denotes near face, f.f. denotes far face, and e.f. denotes each face.

For reinforcement schedule see Sheet 14/16

For details of C.M.P. outlet at side slopes see Sheet 359.

All battered piles are battered 3 in 12.

Pile dimensions are measured along bottom of footing.

All piles are 12" ϕ cast-in-place concrete.

E denotes East wingwall.

W denotes West wingwall.

○→ Denotes battered piles.

Piles not shown in elevations.

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 5/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

WEST ABUTMENT

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1/4" = 1'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN O.K.B	TRACED	CHECKED MAG	REVIEWED MTK	REVISED
DATE 4-10-70	DATE	DATE 6-23-70	DATE 11-20-71	1668

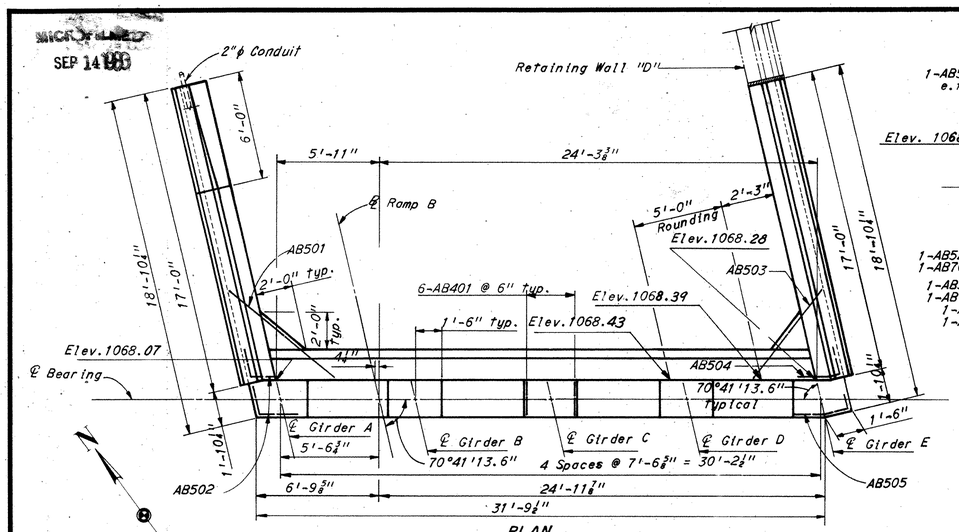
Revised 4-28-77

SEP 14 1970

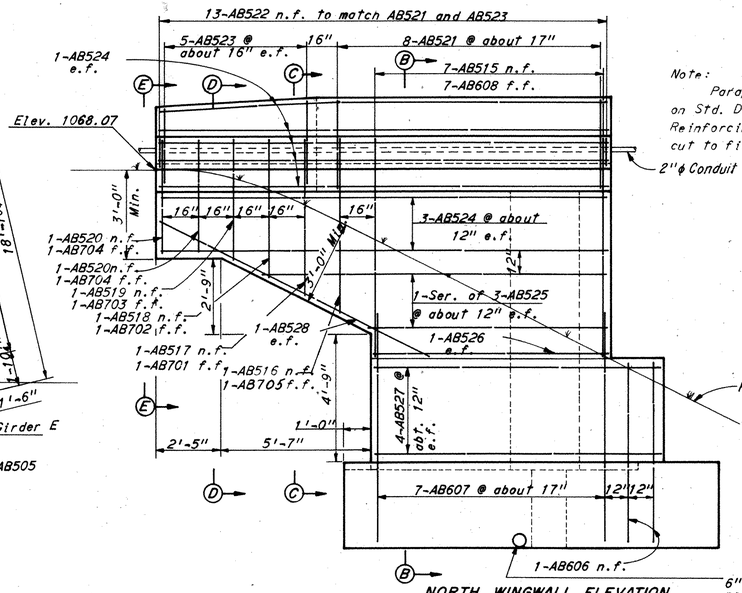
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

329
389

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

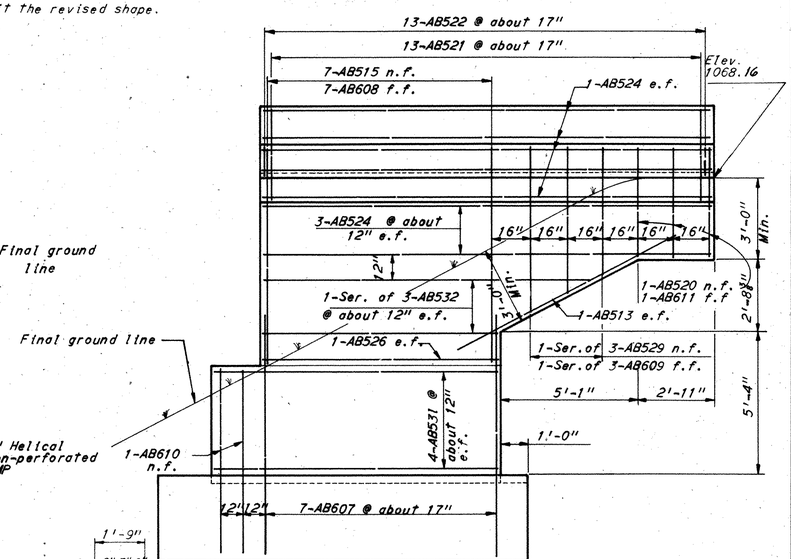


PLAN

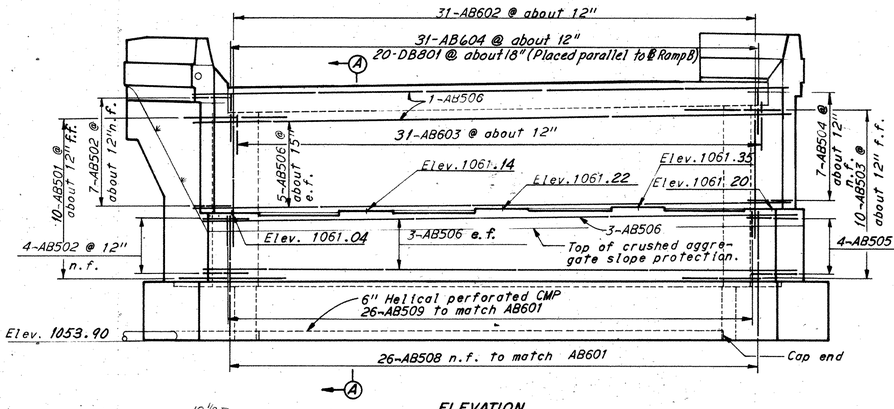


NORTH WINGWALL ELEVATION

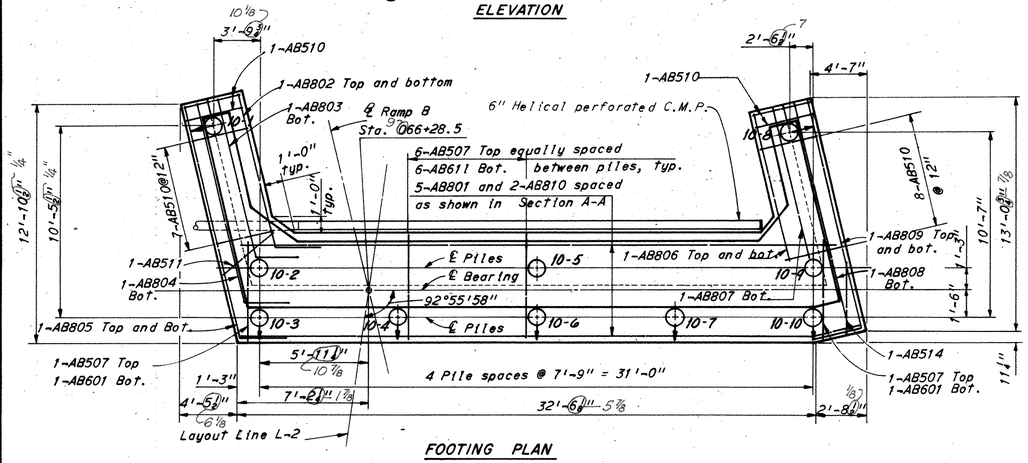
Note:
Parapet transitions shall be as shown on Std. Drwg. BR-1-67 revised 10-15-71.
Reinforcing Steel shall be field bent or cut to fit the revised shape.



SOUTH WINGWALL ELEVATION



ELEVATION



FOOTING PLAN

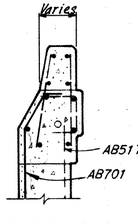
Backwall elevations are given at this point (¼" below top of asphalt concrete).

SECTION A-A

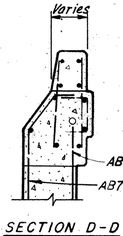
* Paid for with slope paving

SECTION B-B

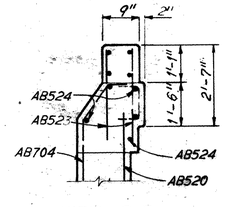
Notes:
For roadway end dam details see Ohio Standard Drawing **SD-1-69**, Sheets **1 and 2 of 4, and Sheet 359.**
AB401 bars shall be placed 2½" ± below top of bridge seat.
n.f. denotes near face, f.f. denotes far face, and e.f. denotes each face.
For reinforcement schedule see Sheet 14/16
For details of Retaining Wall "D" see Sheet 368.
All battered piles are battered **4 in 12.**
Pile dimensions are measured along bottom of footing.
All piles are 12" ϕ cast-in-place concrete.
○— Denotes battered piles.
Piles not shown in elevation **views.**
Only that portion of the CMP located in the porous backfill shall be perforated.
For details of C.M.P. outlet at side slope see Sheet 359.



SECTION C-C



SECTION D-D



VIEW E-E

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF — 6/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

EAST ABUTMENT

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1/4" = 1'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
KSS		DAS	RTK	
DATE 3-2-70	DATE	DATE 3-12-70	DATE 11-20-71	1668

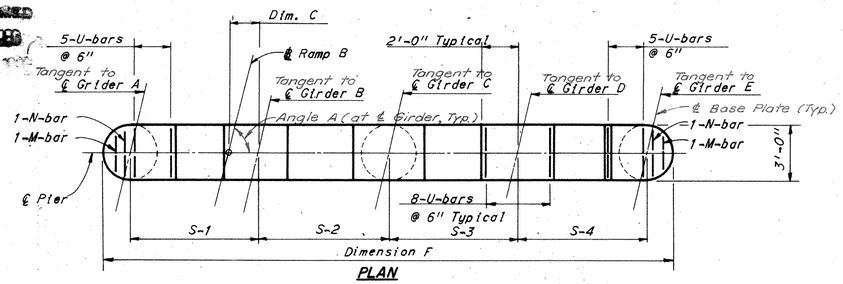
Revised 4-28-77

MICROFILMED SEP 14 1976

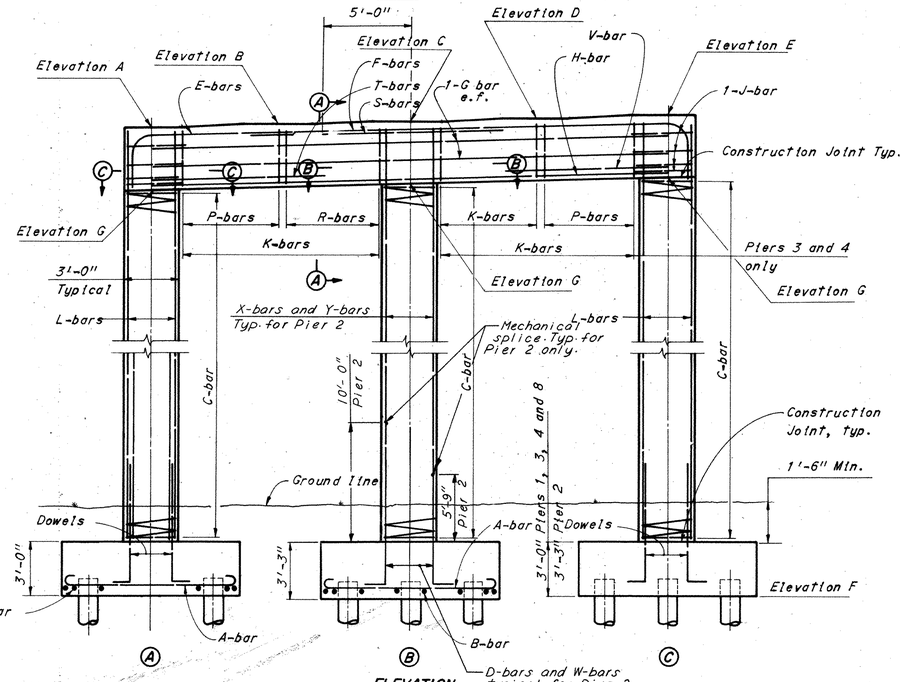
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

330
389

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

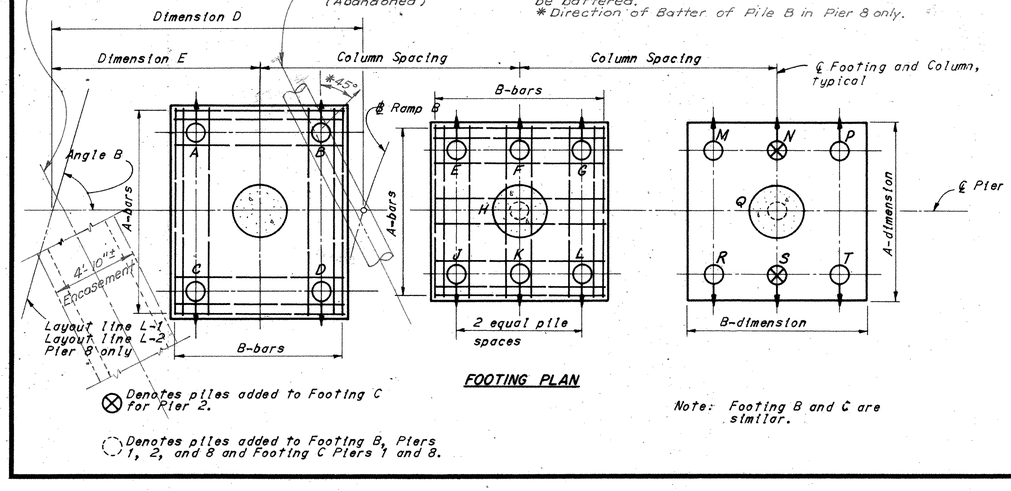


PLAN



ELEVATION

Note:
Piles A, C and D in Pier 8 shall not be battered.
* Direction of Batter of Pile B in Pier 8 only.

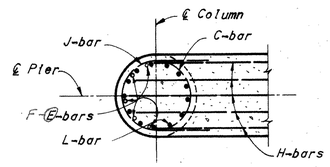


FOOTING PLAN

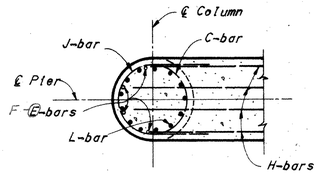
⊗ Denotes piles added to Footing C for Pier 2.

◌ Denotes piles added to Footing B, Piers 1, 2, and 8 and Footing C Piers 1 and 8.

Note: Footing B and C are similar.

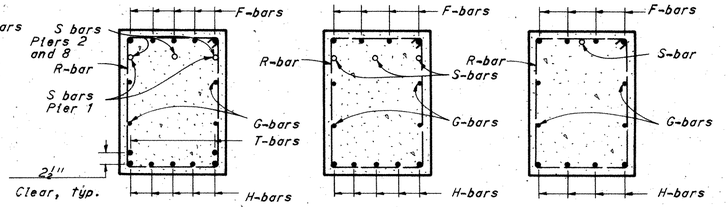


SECTION C-C
Pier 1, Column C
Pier 8, Column C



SECTION C-C
Pier 4, Column C

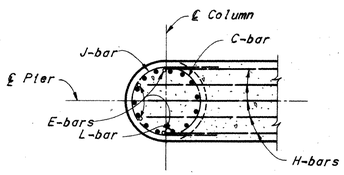
NOTE: The reinf. bars in the top of the cap, Pier 2, shown near ℄ Pier, shall be placed 4" off of the centerline.



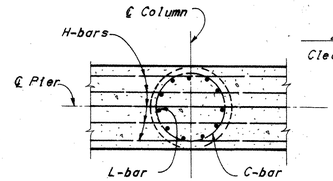
SECTION A-A
Pier 1, 2 and 8

SECTION A-A
Pier 3

SECTION A-A
Pier 4



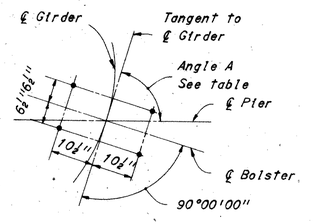
SECTION C-C
Pier 3, Column A



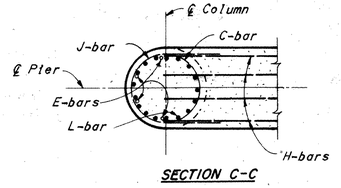
SECTION B-B
Pier 3, Column B

For Angle A See Sheet 8/16

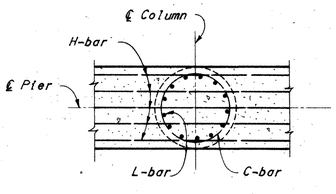
ANGLE A - PIER 2	
Girder	Angle A
A	64°20'16.0"
B	64°53'38.0"
C	65°25'32.1"
D	65°56'04.0"
E	66°25'19.1"



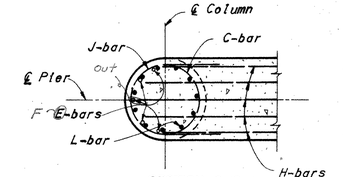
ANCHOR BOLT PLAN
Pier 2



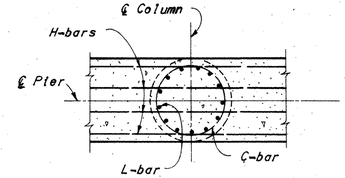
SECTION C-C
Pier 4, Column A



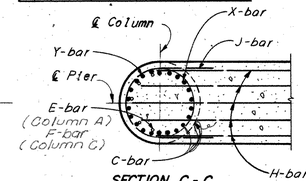
SECTION B-B
Pier 1, Column B
Pier 8, Column B



SECTION C-C
Pier 3, Column C



SECTION B-B
Pier 4, Column B



SECTION C-C
Pier 2, Column A shown. Columns B and C are similar except as noted.

PILE NUMBERING DESIGNATIONS						
FOOTING	PILE	PIER 1 (PREFIX 2)	PIER 2 (PREFIX 3)	PIER 3 (PREFIX 4)	PIER 4 (PREFIX 5)	PIER 8 (PREFIX 9)
A	A	1	1	1	1	1
	B	2	2	2	2	2
	C	3	3	3	3	3
	D	4	4	4	4	4
B	E	5	5	5	5	5
	F	6	6	6	6	6
	G	7	7	7	7	7
	H	8	8			8
	J	9	9	8	8	9
	K	10	10	9	9	10
	L	11	11	10	10	11
	M	12	12	11	11	12
	N	-	13	-	-	-
	P	13	14	12	12	13
C	Q	14		-	-	14
	R	15	15	13	13	15
	S	-	16	-	-	-
	T	16	17	14	14	16

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.

M, N, and U. bars shall be placed 2½" ± below top of cap beam.

For reinforcement schedule see Sheet 14/16

All battered piles shall be battered 3 in 12.

Piles dimensions are measured along bottom of footing.

All piles are 12" ϕ cast-in-place concrete.

For footing layout see Sheet 3/16 and 4/16

e.f. denotes each face.

All stirrups within 4 feet of ℄ of columns shall be placed with hooks in bottom of cap. All others shall be placed with hooks in the top.

For data not given, see Sheet 8/16

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 7/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIERS 1, 2, 3, 4 AND 8

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 STA. 958 + 78.75
SCALE: NONE STA. 966 + 30.88

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN L.D.E.	TRACED	CHECKED D.W.B.	REVIEWED M.V.K.	REVISED 3-2-76
DATE 2-11-70	DATE	DATE 5-15-70	DATE 11-24-71	1668

Revised 4-28-77

PICKERING FILMED
SEP 14 1970

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

331
389

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

CAP BEAM REINFORCING STEEL

Pier No.	E-bars	F-bars	G-bars	H-bars	J-bars	K-bars	M-bars	N-bars	P-bars	R-bars	S-bars	T-bars	U-bars	V-bars
1	5-PA1004	5-PA1003	PA602	5-PA1005	PA601	7-PA502 @ 9"	PA503	PA504	5-PA502 @ 18"	5-PA502 @ 15"	2-PA1007	2-PA1006	PA501	2-PA1006
2	5-PB1001	5-PB1002	PB602	5-PB1003	PB601	7-PB502 @ 12"	PB503	PB504	5-PB502 @ 18"	6-PB502 @ 15"	3-PB1005	2-PB1004	PB501	2-PB1006
3	4-PC1002	4-PC1003	PC602	5-PC1004	PC601	9-PC502 @ 18"	PC503	PC504	———	———	3-PC1005	———	PC501	———
4	4-PD1001	4-PD1002	PD602	4-PD1003	PD601	9-PD502 @ 18"	PD503	PD504	———	———	1-PD1004	———*	PD501	———
8	5-PH1004	5-PH1005	PH602	5-PH1006	PH601	8-PH502 @ 9"	PH503	PH504	5-PH502 @ 18"	6-PH502 @ 12"	3-PH1008	2-PH1009	PH501	2-PH1007

PIER CAP LAYOUT TABLE

Pier No.	1	2	3	4	8
℄ Pier Sta.	959+55.00	960+52.00	961+33.00	961+94.50	965+56.50
Dimension C	1'-11 1/16"	2'-0 7/8"	1'-11"	1'-11 3/16"	1'-11 5/16"
Girder	A	A	A	A	A
Elevation A	1038.05	1042.09	1045.74	1048.43	1059.67
S-1	7'-3 3/4"	7'-10 3/4"	7'-3 7/16"	7'-5 11/16"	7'-4 3/4"
Girder	B	B	B	B	B
Elevation B	1038.71	1042.82	1046.39	1049.11	1059.93
S-2	7'-3 11/16"	7'-10 3/4"	7'-3 3/8"	7'-5 1/8"	7'-4 5/8"
Girder	C	C	C	C	C
Elevation C	1039.29	1043.49	1047.00	1049.74	1060.15
S-3	7'-3 3/8"	7'-9 13/16"	7'-3 1/4"	7'-5 3/8"	7'-4 1/4"
Girder	D	D	D	D	D
Elevation D	1039.93	1044.19	1047.64	1050.42	1060.41
S-4	7'-3 1/4"	7'-9 7/8"	7'-3 1/4"	7'-5 3/8"	7'-4 3/8"
Girder	E	E	E	E	E
Elevation E	1039.98	1044.31	1047.70	1050.50	1060.30
Dimension F	32'-6"	34'-6"	32'-2"	32'-10"	32'-8"

FOOTING DATA

Pier No.	Column Spacing	Footing	Elev.F	Dim.A	Dim.B	Reinforcing Steel A-bars	Reinforcing Steel B-bars	Dim.D	Dim.E	Angle B
1	14'-9"	A	1003.90	14'-0"	9'-0"	15-PA801	12-PA1101			
		B	1003.65	10'-0"	10'-0"	10-PA901	12-PA1001	24'-9 3/8"	19'-3"	90°32' 47.0"
		C	1003.90	11'-0"	10'-0"	10-PA1001	10-PA1002			
2	15'-9"	A	1002.90	14'-0"	9'-0"	15-PB801	12-PB1101			
		B	1002.65	11'-0"	11'-0"	12-PB901	12-PB1102	38'-7 3/8"	32'-8 5/8"	62°35' 02.2"
		C	1002.65	11'-0"	10'-0"	10-PB902	12-PB1102			
3	14'-7"	A	1009.90	12'-0"	10'-0"	10-PC1001	10-PC1101			
		B	1009.65	10'-0"	10'-0"	9-PC901	12-PC1001	24'-5"	19'-0 1/4"	62°25' 02.2"
		C	1009.90	10'-0"	9'-0"	9-PC902	10-PC901			
4	14'-11"	A	1016.90	14'-0"	10'-0"	14-PD901	13-PD1101		**	
		B	1014.15	9'-0"	9'-0"	8-PD801	10-PD902	0'-0"	5'-6 1/4"	46°50' 23.0"
		C	1012.90	10'-0"	9'-0"	9-PD902	10-PD901			
8	14'-10"	A	1031.90	13'-0"	9'-0"	13-PH801	11-PH1101			
		B	1031.65	12'-0"	12'-0"	12-PH1002	16-PH1107	26'-6 7/8"	21'-0 1/2"	87°04' 02.0"
		C	1031.90	11'-0"	10'-0"	10-PH1001	10-PH1003			

**See Sheet 3/16

ANGLE A

Girder	Pier 1	Pier 2	Pier 3	Pier 4	Pier 8
A	76°47'54.5"	64°20'16.0"	77°49'28.2"	72°13'28.9"	105°44'31.6"
B	77°04'13.7"	64°53'38.0"	78°04'28.9"	72°35'46.5"	105°24'55.2"
C	77°19'53.0"	65°25'32.1"	78°18'53.1"	72°57'08.4"	105°06'07.3"
D	77°34'54.8"	65°56'04.0"	78°32'43.0"	73°17'38.2"	104°48'04.8"
E	77°49'21.4"	66°25'19.1"	78°46'00.5"	73°37'18.9"	104°30'45.1"

COLUMN DATA

Pier No.	Column	Elevation G	Reinforcing Steel Dowels	L-bars	C-bars
1	A	1034.09	16-PA1102	16-PA1103	1-SPA401
	B	1035.32	13-PA1106	13-PA1104	1-SPA402
	C	1036.56	13-PA1102	13-PA1105	1-SPA403
3	A	1041.77	14-PC1102	14-PC1103	1-SPC401
	B	1043.02	11-PC1106	11-PC1104	1-SPC402
	C	1044.27	11-PC1102	11-PC1105	1-SPC403
4	A	1044.45	17-PD1102	17-PD1103	1-SPD401
	B	1045.75	13-PD1106	13-PD1104	1-SPD402
	C	1047.05	13-PD1102	13-PD1105	1-SPD403
8	A	1055.99	16-PH1102	16-PH1103	1-SPH401
	B	1056.49	13-PH1106	13-PH1104	1-SPH402
	C	1056.96	13-PH1102	13-PH1105	1-SPH403

COLUMN DATA - PIER 2

Column	Elevation G	Reinforcing Steel D-bars	W-bars	X-bars	Y-bars	C-bars
A	1038.12	11-PB1401	11-PB1402	11-PB1403	11-PB1404	1-SPB401
B	1039.47	11-PB1405	11-PB1406	11-PB1407	11-PB1408	1-SPB402
C	1040.81	11-PB1405	11-PB1406	11-PB1409	11-PB1410	1-SPB403

Note:
D-bars shall be spliced to X-bars and W-bars spliced to Y-bars.

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 8/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIERS 1, 2, 3, 4 AND 8

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: NONE — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN LDE	TRACED	CHECKED DWB	REVIEWED MJK	REVISED
DATE 2-11-70	DATE	DATE 5-15-70	DATE 11-20-71	1668

Revised 4-28-77

SEP 14 1970

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

332
389

STARK COUNTY
STA-30-14.12
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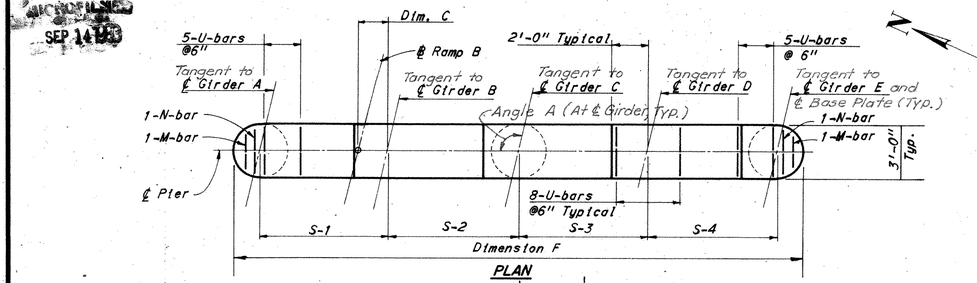
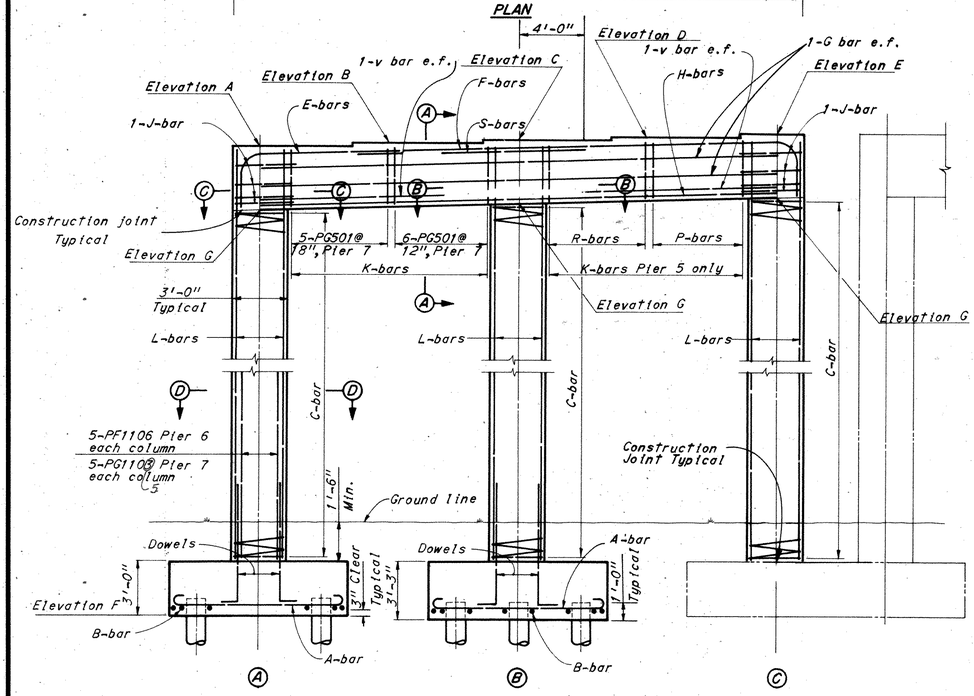


PLAN



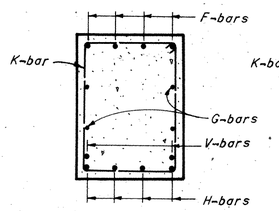
ELEVATION

Pier No.	CAP BEAM REINFORCING STEEL												
	E-bars	F-bars	G-bars	H-bars	J-bars	K-bars	M-bars	N-bars	P-bars	R-bars	S-bars	U-bars	V-bars
5	4-PE1003	4-PE1002	PE602	4-PE1004	PE601	9-PE501 @ 18"	PE502	PE503	———	———	2-PE1005	PE504	PE1011
6	5-PF1003	5-PF1002	PF602	4-PF1004	PF601	8-PF501 @ 18"	PF502	PF503	5-PF501 @ 18"	5-PF501 @ 15"	2-PF1005	PF504	PF1006
7	5-PG1003	5-PG1002	PG602	5-PG1004	PG601	———	PG502	PG503	5-PG501 @ 18"	7-PG501 @ 9"	2-PG1005	PG504	PG1006

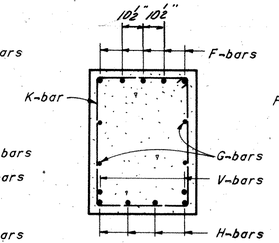
PIER CAP LAYOUT TABLE			
Pier No.	5	6	7
Dimension F	33'-8"	32'-0"	31'-8"
Dimension C	2'-0¼"	1'-10⅜"	1'-10¼"
Girder	A	A	A
Elevation A	1051.07	1054.68	1057.33
S-1	7'-8¼"	7'-2⅜"	7'-1⅜"
Girder	B	B	B
Elevation B	1051.78	1055.32	1057.86
S-2	7'-8"	7'-2⅝"	7'-1⅜"
Girder	C	C	C
Elevation C	1052.44	1055.91	1058.32
S-3	7'-7⅞"	7'-2⅝"	7'-1⅜"
Girder	D	D	D
Elevation D	1053.13	1056.53	1058.85
S-4	7'-7⅞"	7'-2⅝"	7'-1⅜"
Girder	E	E	E
Elevation E	1053.24	1056.57	1058.83

FOOTING DATA										
Pier No.	Column Spacing	Footing	Elev. F	Dim. A	Dim. B	Reinforcing Steel A-bars	Reinforcing Steel B-bars	Dim. D	Dim. E	Angle B
5	15'-4"	A	1028.90	13'-0"	9'-0"	11-PE1101	13-PE801			
		B	1027.65	10'-0"	10'-0"	12-PE1001	10-PE901	0'-0"	5'-8⅜"	97°12'16.5"
		C	———	———	———	———	———			
6	14'-6"	A	1016.90	14'-0"	9'-0"	12-PF1101	15-PF801			
		B	1018.65	12'-0"	12'-0"	16-PF1102	12-PF1001	33'-7⅝"	28'-3"	94°53'22.3"
		C								
7	14'-4"	A	1032.90	14'-0"	9'-0"	12-PG1101	15-PG801			
		B	1032.65	10'-0"	10'-0"	12-PG1001	10-PG901	44'-6¼"	39'-2¼"	92°09'22.8"
		C	———	———	———	———	———			

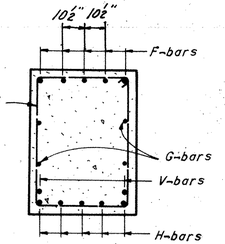
COLUMN DATA					
Pier No.	Column	Elevation G	Reinforcing Steel C-bars	Reinforcing Steel L-bars	Reinforcing Steel Dowels
5	A	1047.09	1-SPE401	17-PE1006	17-PE1009
	B	1048.42	1-SPE402	9-PE1007	9-PE1010
	C	1049.76	1-SPE403	11-PE1008	
6	A	1050.72	1-SPF401	15-PF1103	20-PF1107
	B	1051.94	1-SPF402	15-PF1104	20-PF1108
	C	1053.16	1-SPF403	15-PF1105	
7	A	1053.44	1-SPG401	15-PG1102	20-PG1106
	B	1054.44	1-SPG402	15-PG1103	20-PG1107
	C	1055.45	1-SPG403	15-PG1104	



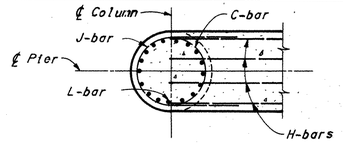
SECTION A-A
Pier 5



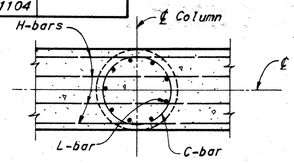
SECTION A-A
Pier 6



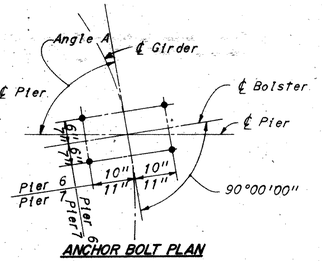
SECTION A-A
Pier 7



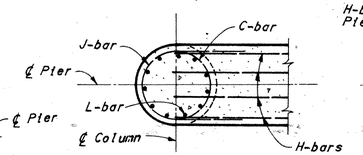
SECTION C-C
Pier 5, Column A



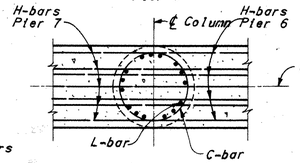
SECTION B-B
Pier 5



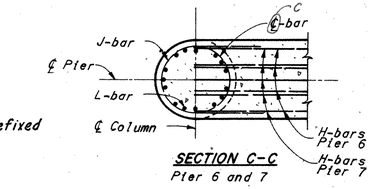
ANCHOR BOLT PLAN
Pier 6 and 7



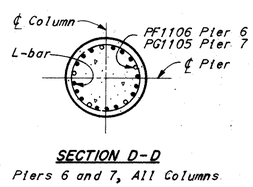
SECTION C-C
Pier 5, Column C



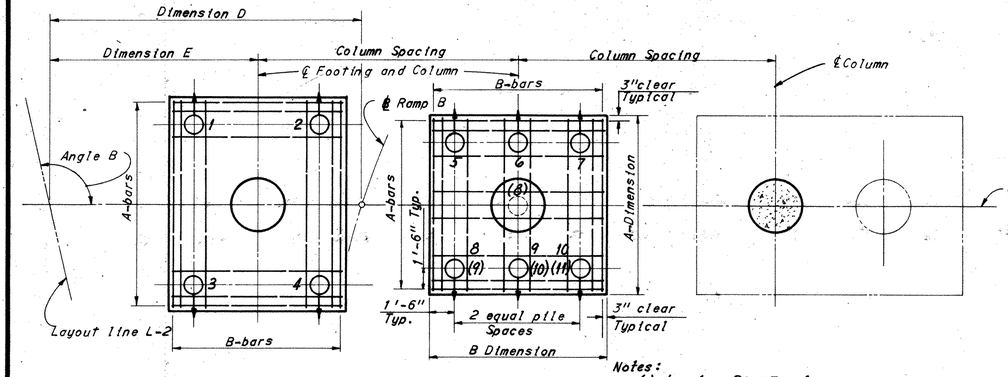
SECTION B-B
Pier 6 and 7



SECTION C-C
Pier 6 and 7



SECTION D-D
Piers 6 and 7, All Columns



Denotes pile added to Footing B, Pier 7.

FOOTING PLAN

Notes:
() denotes Pier 7 only.
Pile Numbering Designations shall be prefixed with subscripts:
Pier 5:6 ; Pier 6:7 ; Pier 7:8

ANGLE A			
Grd.	Pier 6	Pier 7	Pier 5
A	99° 38' 45.8"	87° 27' 42.8"	112° 21' 10.7"
B	99° 26' 56.1"	87° 30' 48.0"	111° 52' 36.1"
C	99° 15' 35.0"	87° 33' 45.8"	111° 25' 15.0"
D	99° 04' 40.7"	87° 36' 36.6"	110° 59' 02.6"
E	98° 54' 11.8"	87° 39' 20.9"	110° 33' 54.5"

Notes:
Special care shall be taken when placing reinforcing steel so as not to interfere with anchor bolt or anchor bolt setting. Piers 6,7 only. See Sheet 214.
M, N, and U bars shall be placed 2½" ± below top of cap beam.
For reinforcement schedule see Sheet 15/16
All battered piles shall be battered 3 in 12.
Piles dimensions are measured along bottom of footing.
All piles are 12" ϕ cast-in-place concrete.
For footing layout see Sheet 4/16
e.f. denotes each face.
For footing C data see Sheet 272.
All stirrups within 4 feet of ℄-column shall be placed with hooks in bottom of cap. All others shall be placed with hooks in the top.

H.N.T.B. BRIDGE NO. 14

Revised 6-25-75 By RAS
9/16

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIERS 5, 6, AND 7
RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.
BR. NO. STA. 30-1489 STA. 958 + 78.75
SCALE: NONE STA. 966 + 30.88
RELOCATED U.S. 30
CANTON STARK COUNTY OHIO

DRAWN LDE	TRACED	CHECKED DWB	REVIEWED MJK	REVISED 3-2-76
DATE 2-19-70	DATE	DATE 6-11-70	DATE 11-20-71	1668

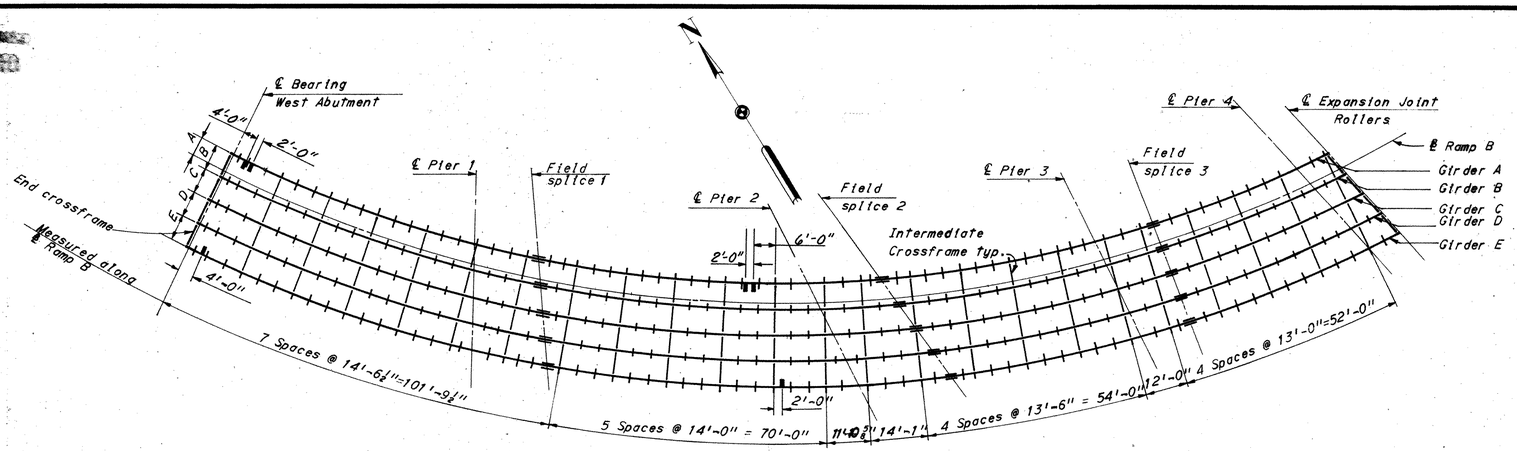
Revised 4-28-77

MICROFILMED
SEP 14 1980

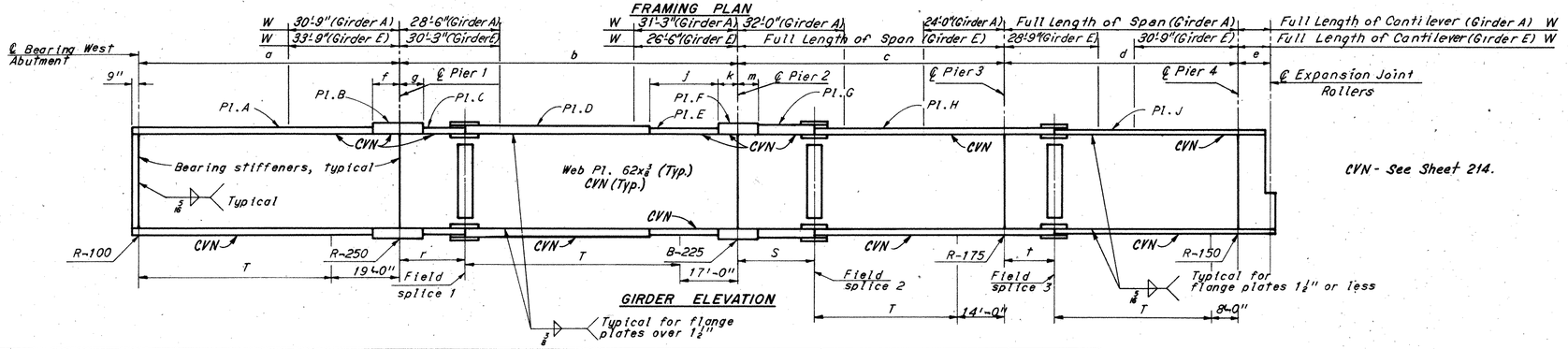
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

333
389

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



FRAMING PLAN



GIRDER ELEVATION

CVN - See Sheet 214.

TABLE OF DIMENSIONS

Girder	a	b	c	d	e	f	g	j	k	m	r	s	t
A	71'-8⅛"	94'-3⅜"	81'-1⅝"	60'-0⅞"	10'-0⅜"	8'-0"	7'-0"	20'-0"	6'-0"	6'-0"	18'-5¼"	20'-6⅛"	17'-0⅛"
B	74'-9⅝"	97'-1⅛"	80'-11⅜"	62'-0¼"	9'-11⅝"	6'-0"	8'-0"	18'-0"	8'-0"	5'-0"	19'-2⅜"	21'-10¼"	16'-3⅜"
C	77'-11¾"	101'-7⅛"	80'-9⅛"	64'-0⅛"	9'-11⅜"	8'-0"	10'-0"	19'-0"	7'-0"	5'-0"	19'-11⅜"	23'-2¼"	15'-7⅝"
D	81'-1⅜"	105'-3⅛"	80'-7"	65'-11⅛"	9'-11⅛"	7'-0"	7'-0"	25'-0"	5'-0"	6'-0"	20'-0⅛"	24'-5⅜"	14'-11⅝"
E	84'-3⅝"	108'-11¾"	80'-5⅛"	67'-11⅜"	9'-11⅜"	9'-0"	9'-0"	23'-0"	7'-0"	6'-0"	21'-5¾"	25'-9½"	14'-3⅜"

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

Girder	℄ Brg. W. Abut.	.25	.50	.75	℄ Pier 1	* .25	.50	.75	℄ Pier 2	* .25	.50	.75	℄ Pier 3	* .25	.50	.75	℄ Pier 4	℄ Exp. Jt. Rollers
A	1042.78	1043.44	1044.15	1044.90	1045.66	1046.44	1047.65	1048.65	1049.64	1050.51	1051.36	1052.21	1053.07	1053.79	1054.34	1054.97	1055.61	1056.03
B	1043.37	1044.05	1044.78	1045.55	1046.32	1047.12	1048.35	1049.36	1050.38	1051.28	1052.05	1052.89	1053.73	1054.40	1055.01	1055.65	1056.29	1056.71
C	1043.96	1044.65	1045.40	1046.19	1046.98	1047.79	1049.04	1050.07	1051.10	1052.04	1052.74	1053.56	1054.38	1055.01	1055.68	1056.32	1056.97	1057.38
D	1044.55	1045.26	1046.02	1046.83	1047.63	1048.46	1049.73	1050.78	1051.82	1052.80	1053.43	1054.23	1055.03	1055.62	1056.34	1057.00	1057.65	1058.05
E	1044.55	1045.27	1046.05	1046.87	1047.69	1048.53	1049.82	1050.88	1051.95	1052.95	1053.51	1054.30	1055.08	1055.64	1056.41	1057.07	1057.73	1058.12

* Elevations given are at field splice.

TOP OF PORTLAND CEMENT CONCRETE AT GUTTERLINE

	℄ Bearing W. Abut.	0.25	0.50	0.75	℄ Pier 1	0.25	0.50	0.75	℄ Pier 2	0.25	0.50	0.75	℄ Pier 3	0.25	0.50	0.75	℄ Pier 4	℄ Exp. Jt. Rollers
North Gutterline	1042.78	1043.45	1044.16	1044.90	1045.66	1046.67	1047.67	1048.66	1049.64	1050.51	1051.37	1052.22	1053.07	1053.70	1054.34	1054.97	1055.61	1056.03
South Gutterline	1044.55	1045.29	1046.07	1046.88	1047.69	1048.78	1049.86	1050.90	1051.95	1052.73	1053.51	1054.30	1055.08	1055.75	1056.42	1057.08	1057.73	1058.12

TABLE OF GIRDER SPACINGS

	℄ Brg. W Abutment	℄ Pier 1	Field Splice 1	℄ Pier 2	Field Splice 2	℄ Pier 3	Field Splice 3	℄ Pier 4	℄ Exp. Jt. Rollers
A	5'-3"	5'-4 11/16"	5'-5½"	5'-9¾"	6'-1⅛"	5'-4 7/16"	5'-3⅜"	5'-6¼"	5'-5⅜"
B	7'-1½"	7'-3¾"	7'-4 9/16"	7'-10⅜"	8'-3 13/16"	7'-3 7/16"	7'-1 11/16"	7'-5 11/16"	7'-4 9/16"
C	7'-1½"	7'-3 11/16"	7'-4¾"	7'-10⅜"	8'-3¼"	7'-3⅜"	7'-1 11/16"	7'-5½"	7'-4¾"
D	7'-1½"	7'-3⅜"	7'-4⅜"	7'-9 15/16"	8'-2⅝"	7'-3¼"	7'-1 11/16"	7'-5⅜"	7'-4⅜"
E	7'-1½"	7'-3½"	7'-4½"	7'-9 7/16"	8'-1⅞"	7'-3 3/16"	7'-1 11/16"	7'-5 3/16"	7'-4½"

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

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

BEARING STIFFENERS

Girder	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4
A	5½x¼	5½x⅜	5½x⅝	5½x¼	5½x¼
B	5½x½	5½x⅝	5½x¾	5½x⅜	5½x⅝
C	5½x½	5½x1	5½x1	5½x⅜	5½x⅝
D	5½x¼	5½x1⅛	5½x1	5½x¼	5½x¾
E	5½x½	5½x1⅛	5½x1	5½x¾	5½x⅝

TABLE OF PLATES

Girder	Pl. A	Pl. B	Pl. C	Pl. D	Pl. E	Pl. F	Pl. G	Pl. H	Pl. J
A	12x1¼	12x1⅞	12x1	12x1⅜	12x1	12x1⅜	12x1½	12x1	12x⅞
B	12x1¼	12x1⅜	12x1	12x1⅜	12x1	12x1¼	12x1½	12x1	12x⅝
C	12x1⅜	12x2¼	12x1⅛	12x1⅜	12x1⅛	12x2⅛	12x1⅜	12x1	12x1
D	12x1⅝	12x2½	12x1½	12x1⅛	12x1½	12x2⅜	12x1¾	12x1⅛	12x1
E	12x1⅝	12x2⅝	12x1½	12x2	12x1½	12x2⅜	12x1¾	12x1⅛	12x1

Note:
The gutterline elevations shown have been adjusted for the dead load deflections caused by the weight of concrete and wearing course 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 unit.

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 ¼" continuous fillets on both sides of stiffeners.
For detail of field splices see Sheet 355.
All intermediate stiffeners shall be Pls. 5x⅜.

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, and Sheet 359.
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.
For Expansion joint details see Sheet 356.
For details of expansion joint crossframe see Sheet 360.
For Camber and Deflection Table see Sheet 365.
For details at 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.
The allowance to be made in screed settings to compensate for dead load deflections due to concrete and 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.
For details of curb plates at concrete bridge railing see Ohio Standard Drawing SD-1-69, Sheet 2 of 4.
■ Denotes standard scupper.
Dimensions to scuppers are measured along centerline of girders.
For detail of intermediate stiffeners see Sheet 360.
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".
For underdeck lighting details see Lighting Plans.

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 10/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

FRAMING PLAN - UNIT 1

RAMP B OVER RAMPS C AND G, I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1" = 20'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

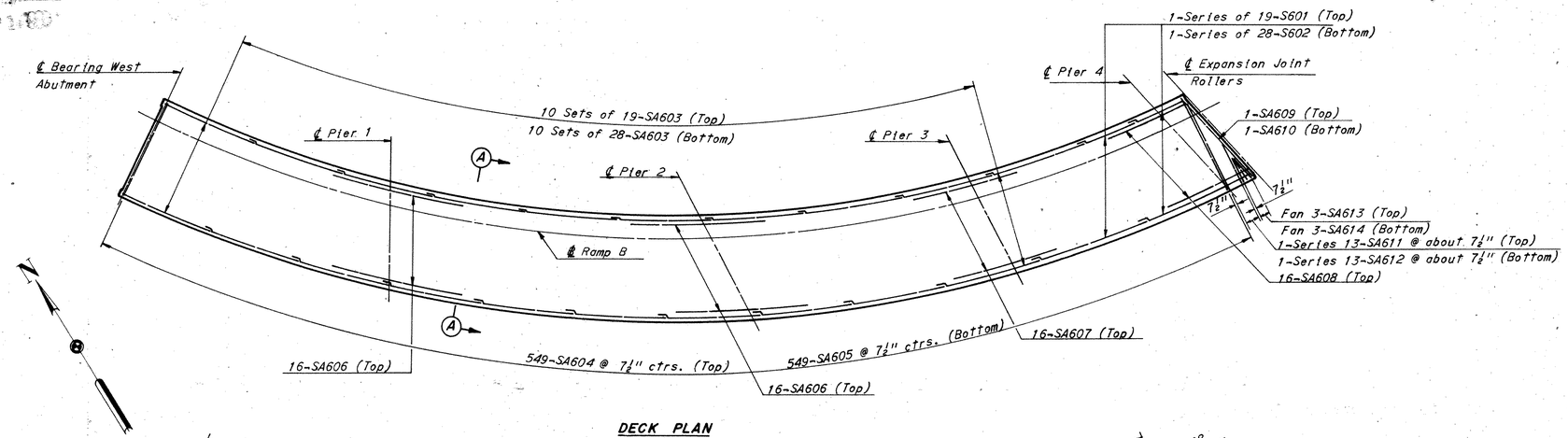
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
KSS		DWB	MTK	
DATE 10-24-69	DATE	DATE 5-12-70	DATE 11-22-71	1668

MICROFILMED
SEP 14 1988

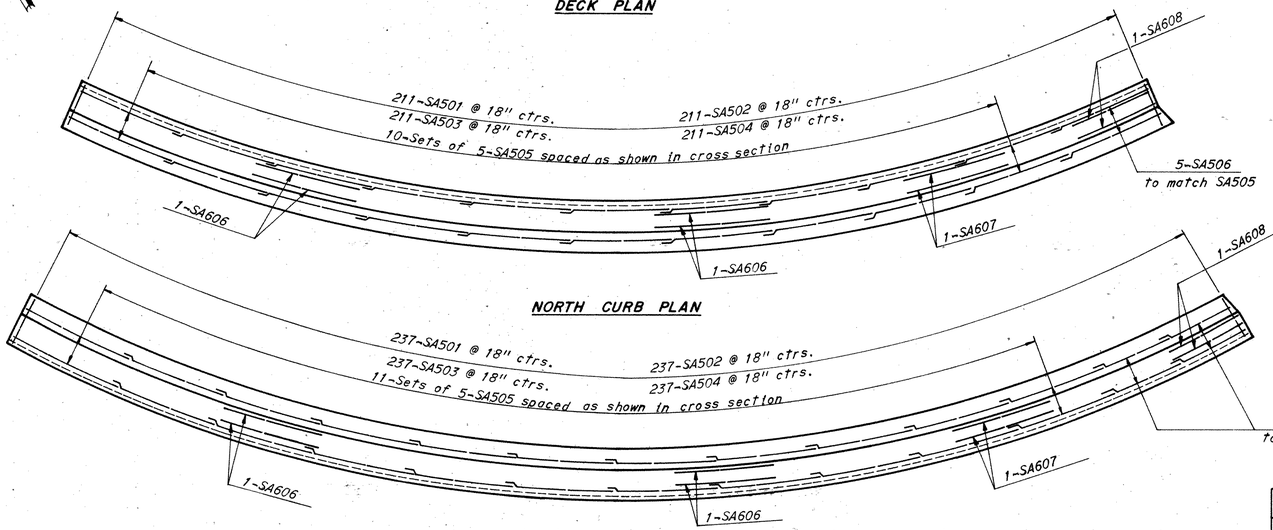
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

334
389

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

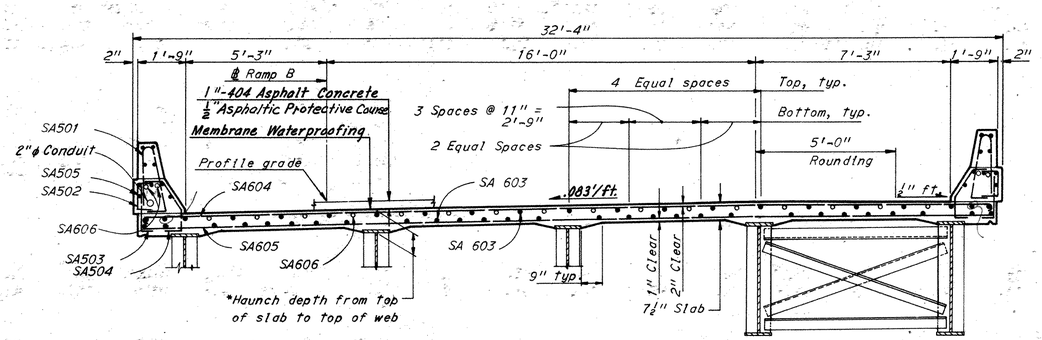


DECK PLAN

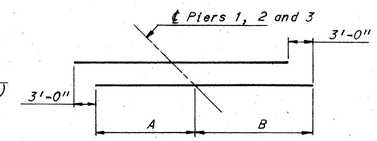


NORTH CURB PLAN

SOUTH CURB PLAN



SECTION A - A



DIAGRAMS SHOWING STAGGER OF NO. 6 BARS OVER PIERS

	A	B
Pier 1	20'-6"	21'-6"
Pier 2	16'-6"	25'-6"
Pier 3	14'-6"	17'-6"

HAUNCH DEPTHS	
Girder	Haunch Depth
A	9¾"
B	9¾"
C	10¼"
D	10¼"
E	10¼"

*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.

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 concrete railing details see Sheet 361
For deflection joint details see Sheet 361
For Superelevation Data see Sheet 13/16
For reinforcement schedule see Sheet 16/16

Transverse reinforcing steel shall be placed radially along South edge of slab.

Concrete shall be placed from the expansion joint to Pier 5 before any concrete is placed from the expansion joint to Pier 3.

For subdrainage details, see Sheet 365A.

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 11/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

DECK PLAN UNIT I

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1" = 20'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
KSS		DWB	MJK	3-2-76
DATE 2-10-70	DATE	DATE 6-11-70	DATE 11-20-71	1668

Revised 4-28-77

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

335
389

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

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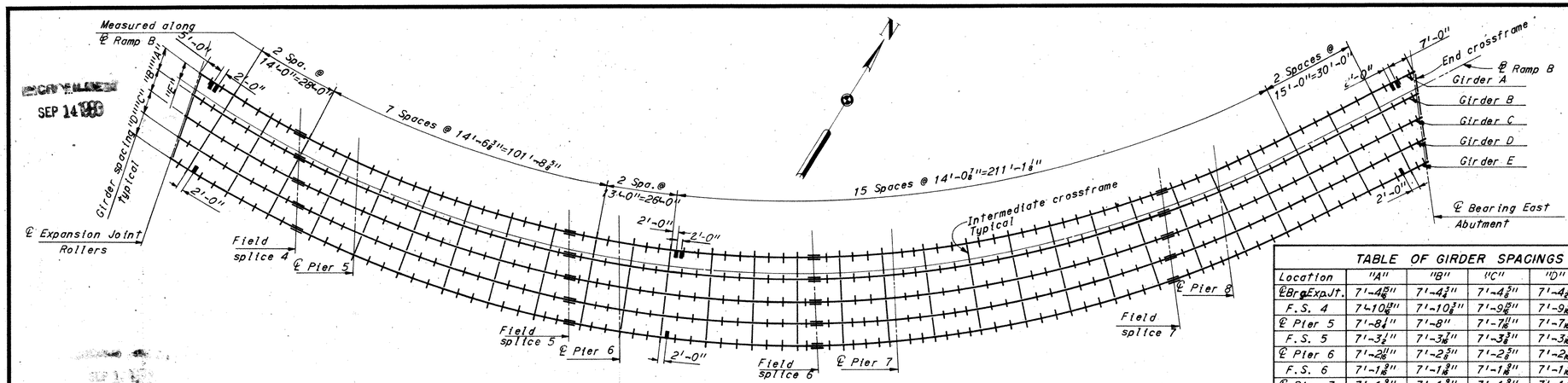
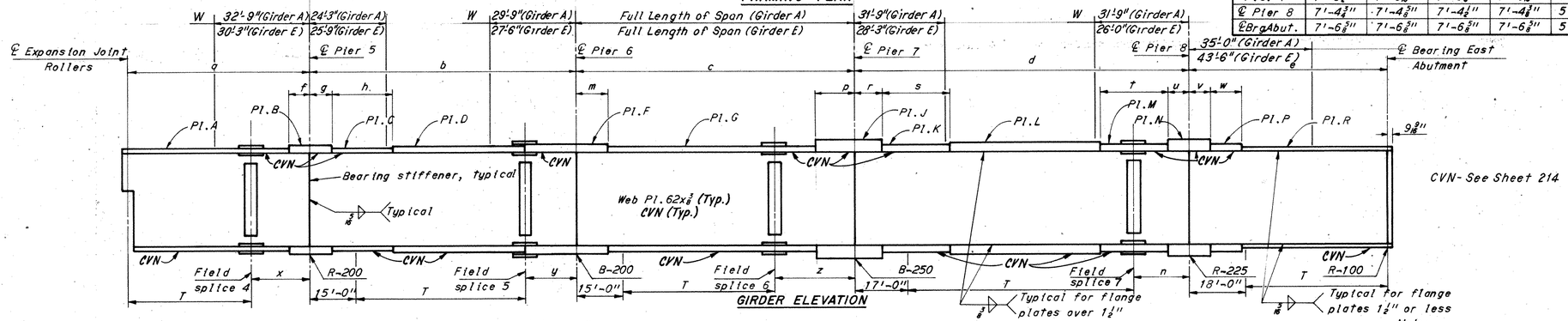


FRAMING PLAN



GIRDER ELEVATION

TABLE OF GIRDER SPACINGS

Location	"A"	"B"	"C"	"D"	"E"
℄ Brg. Exp. Jt.	7'-4 15/16"	7'-4 3/4"	7'-4 3/8"	7'-4 1/2"	5'-5 3/16"
F.S. 4	7'-10 11/16"	7'-10 3/8"	7'-9 15/16"	7'-9 7/8"	5'-9 7/16"
℄ Pier 5	7'-8 1/4"	7'-8"	7'-7 11/16"	7'-7 7/16"	5'-8"
F.S. 5	7'-3 1/2"	7'-3 1/8"	7'-3 3/8"	7'-3 5/8"	5'-4 1/2"
℄ Pier 6	7'-2 11/16"	7'-2 5/16"	7'-2 5/16"	7'-2 5/16"	5'-3 1/4"
F.S. 6	7'-1 3/16"	7'-1 3/16"	7'-1 3/16"	7'-1 3/16"	5'-3 1/16"
℄ Pier 7	7'-1 3/16"	7'-1 3/16"	7'-1 3/16"	7'-1 3/16"	5'-3 1/16"
F.S. 7	7'-3 1/2"	7'-3 7/16"	7'-3 3/8"	7'-3 5/8"	5'-4 1/2"
℄ Pier 8	7'-4 3/8"	7'-4 5/16"	7'-4 1/2"	7'-4 3/4"	5'-5 1/16"
℄ Brg. Abut.	7'-6 5/16"	7'-6 5/16"	7'-6 5/16"	7'-6 5/16"	5'-6 1/4"

TABLE OF DIMENSIONS

Girder	a	b	c	d	e	f	g	h	m	n	p	r	s	t	u	v	w	x	y	z
A	59'-5 3/16"	90'-4 5/16"	89'-9 1/4"	110'-0 15/16"	72'-0 7/16"	8'-0"	7'-0"	21'-0"	9'-0"	19'-6 3/16"	8'-6"	8'-0"	33'-0"	31'-0"	10'-0"	6'-0"	9'-0"	21'-0 3/8"	17'-0 1/4"	26'-0"
B	61'-6 5/16"	90'-6 1/16"	90'-1 1/16"	110'-7 1/8"	71'-11 7/16"	9'-0"	8'-0"	15'-0"	9'-0"	19'-5 15/16"	11'-6"	9'-0"	20'-0"	21'-0"	8'-0"	7'-0"	10'-0"	20'-11 3/16"	16'-11 15/16"	26'-0"
C	63'-7 1/16"	90'-8 7/16"	90'-5"	111'-2 1/16"	71'-11 1/4"	7'-0"	5'-0"	22'-0"	9'-0"	19'-5 3/8"	13'-0"	9'-0"	22'-0"	22'-0"	7'-0"	7'-0"	8'-0"	20'-10 15/16"	16'-11 5/8"	26'-0"
D	65'-8 3/16"	90'-10 1/16"	90'-8 5/8"	111'-9 5/8"	71'-10 3/16"	8'-0"	8'-0"	19'-0"	10'-0"	19'-5 3/8"	12'-6"	10'-0"	18'-0"	21'-0"	7'-0"	7'-0"	10'-0"	20'-9 5/8"	16'-11 1/16"	26'-0"
E	67'-9 1/16"	91'-0 5/16"	91'-0 5/8"	112'-5 1/16"	71'-10"	8'-0"	7'-0"	20'-0"	10'-0"	19'-5 1/8"	13'-0"	9'-0"	22'-0"	22'-0"	7'-0"	7'-0"	10'-0"	20'-9 1/4"	16'-11 3/8"	26'-0"

* Elevations given are at field splice.

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

Girder	℄ Exp. Jt. Rollers	.25	.50	*.75	℄ Pier 5	.25	.50	*.75	℄ Pier 6	.25	.50	*.75	℄ Pier 7	.1	.2	.3	.4	.5	.6
A	1056.03	1056.66	1057.28	1057.65	1058.54	1059.49	1060.44	1061.56	1062.19	1062.96	1063.68	1064.24	1064.97	1065.26	1065.54	1065.80	1066.05	1066.29	1066.51
B	1056.71	1057.34	1057.98	1058.38	1059.25	1060.19	1061.12	1062.21	1062.82	1063.58	1064.28	1064.83	1065.51	1065.77	1066.02	1066.25	1066.47	1066.68	1066.87
C	1057.38	1058.02	1058.67	1059.11	1059.96	1060.88	1061.79	1062.85	1063.45	1064.20	1064.89	1065.42	1065.04	1066.28	1066.50	1066.70	1066.90	1067.08	1067.25
D	1058.05	1058.70	1059.35	1059.83	1060.66	1061.57	1062.46	1063.50	1064.08	1064.81	1065.49	1065.01	1066.58	1066.79	1066.98	1067.16	1067.33	1067.48	1067.62
E	1058.12	1058.78	1059.44	1059.96	1060.77	1061.66	1062.53	1063.55	1064.12	1064.84	1065.50	1066.01	1066.56	1066.76	1066.94	1067.11	1067.27	1067.41	1067.54

Girder	.7	*.8	.9	℄ Pier 8	.25	.50	.75	℄ Brg. E. Abut.
A	1066.72	1066.95	1067.09	1067.25	1067.49	1067.69	1067.85	1067.97
B	1067.05	1067.26	1067.37	1067.51	1067.71	1067.87	1067.99	1068.08
C	1067.40	1067.57	1067.67	1067.78	1067.94	1068.06	1068.15	1068.20
D	1067.75	1067.90	1067.97	1068.06	1068.18	1068.26	1068.31	1068.33
E	1067.66	1067.80	1067.87	1067.95	1068.05	1068.13	1068.17	1068.18

BEARING STIFFENERS

Girder	Pier 5	Pier 6	Pier 7	Pier 8	E. Abut.
A	5/16 x ⅜	5/16 x ⅜	5/16 x ¼	5/16 x ¼	5/16 x ¼
B	5/16 x ⅜	5/16 x ⅜	5/16 x 1	5/16 x 1	5/16 x ¼
C	5/16 x ⅜	5/16 x 7/16	5/16 x 1	5/16 x 1	5/16 x ¼
D	5/16 x ⅜	5/16 x 1	5/16 x 1 1/8	5/16 x 1 1/8	5/16 x ⅜
E	5/16 x ⅜	5/16 x ⅜	5/16 x 1 1/8	5/16 x 1	5/16 x ⅜

TABLE OF PLATES

Girder	Pl.A	Pl.B	Pl.C	Pl.D	Pl.F	Pl.G	Pl.J	Pl.K	Pl.L	Pl.M	Pl.N	Pl.P	Pl.R
A	12x⅜	12x1 3/8	12x⅜	12x1 1/4	12x1 3/8	12x1	12x2 1/4	12x1 1/4	12x1 3/8	12x1 1/4	12x2 1/4	12x1 1/4	12x⅜
B	12x⅜	12x1 3/8	12x⅜	12x1 1/4	12x1 3/8	12x1	12x2 1/4	12x1 1/4	12x1 3/8	12x1 1/4	12x2 1/4	12x1 1/4	12x⅜
C	12x⅜	12x1 1/2	12x1	12x1 3/8	12x1 3/8	12x1	12x2 5/8	12x1 3/8	12x2 1/4	12x1 3/8	12x2 3/8	12x1 3/8	12x⅜
D	12x1	12x1 5/8	12x1	12x1 3/8	12x1 3/8	12x1 1/4	12x2 3/8	12x1 1/4	12x2 3/8	12x1 1/2	12x2 1/4	12x1 1/2	12x⅜
E	12x1	12x1 5/8	12x1	12x1 3/8	12x1 7/8	12x1 7/8	12x2 3/4	12x1 1/2	12x2 5/8	12x1 1/2	12x2 1/4	12x1 1/2	12x⅜

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS AT GUTTERLINE

	℄ Exp. Jt. Rollers	.25	.50	.75	℄ Pier 5	.25	.50	.75	℄ Pier 6	.25	.50	.75	℄ Pier 7	.1	.2	.3	.4	.5	.6	.7
North Gutterline	1056.03	1056.67	1057.29	1057.91	1058.54	1059.50	1060.46	1061.35	1062.19	1062.96	1063.69	1064.35	1064.97	1065.27	1065.55	1065.82	1066.08	1066.32	1066.54	1066.74
South Gutterline	1058.12	1058.79	1059.45	1060.11	1060.77	1061.67	1062.55	1063.36	1064.12	1064.84	1065.51	1066.08	1066.56	1066.77	1066.96	1067.14	1067.31	1067.46	1067.58	1067.70

	.8	.9	℄ Pier 8	.25	.50	.75	℄ Brg. E. Abut.
North Gutterline	1066.92	1067.10	1067.25	1067.49	1067.70	1067.86	1067.97
South Gutterline	1067.79	1067.88	1067.95	1068.05	1068.13	1068.18	1068.18

Note:
The gutterline elevations shown have been adjusted for the dead load deflections caused by the weight of concrete and wearing course, 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 unit.

Note:
Tension areas of bottom flange are denoted by "T". For Top flange, these areas are in compression.
"W" denotes the range where welded attachments cannot be made to the top flange of Girders A and E.

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 ¼" continuous fillets on both sides of stiffeners.
For detail of field splices see Sheet 355
All intermediate stiffeners shall be Pls. 5x⅝.

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

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 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.
The allowance to be made in screed settings to compensate for dead load deflections due to concrete and 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.
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 center-line of girders.
■ Denotes standard scupper
For details of expansion joint crossframe see Sheet 360
For Camber and Deflection Table see Sheet 365
For expansion joint details see Sheet 356
For detail of intermediate stiffeners see Sheet 360
Tension areas of bottom flange are denoted by "T". For the top flange, these areas are in compression.
For underdeck lighting details see Lighting Plans

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 12/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

FRAMING PLAN - UNIT 2

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 STA. 958 + 78.75
SCALE: 1" = 20'- 0" STA. 966 + 30.88

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

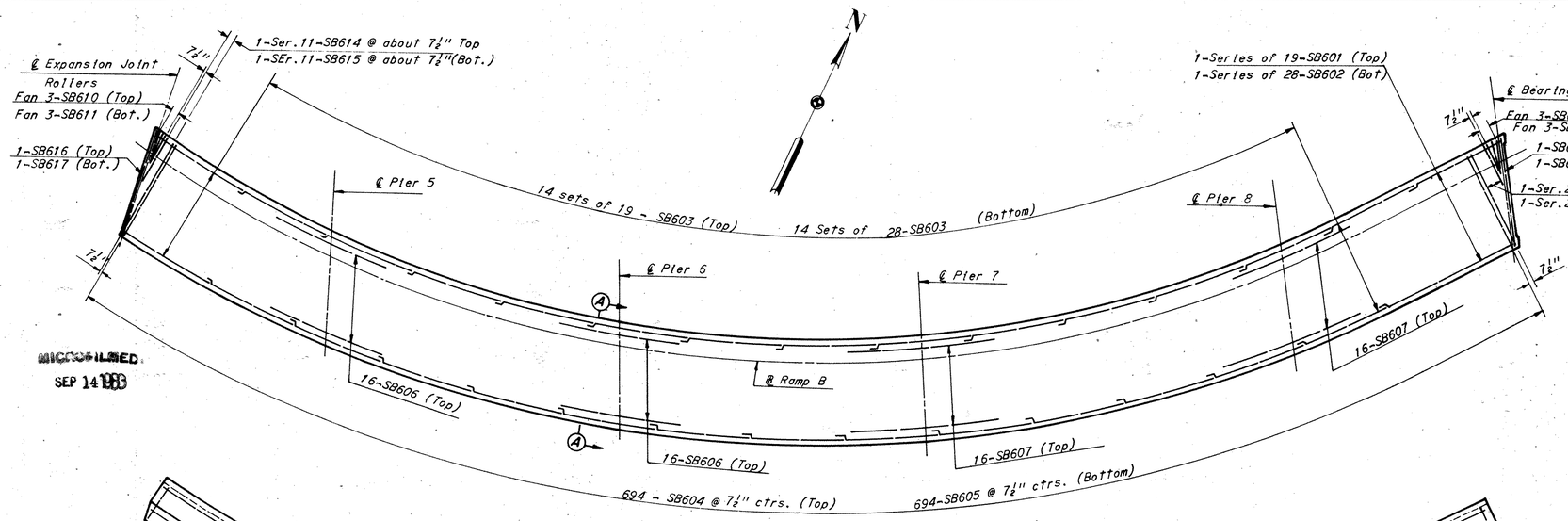
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 10-31-69 KSS	DATE	DATE 5-12-70 DWB	DATE 11-20-71 M.J.A.	1668

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

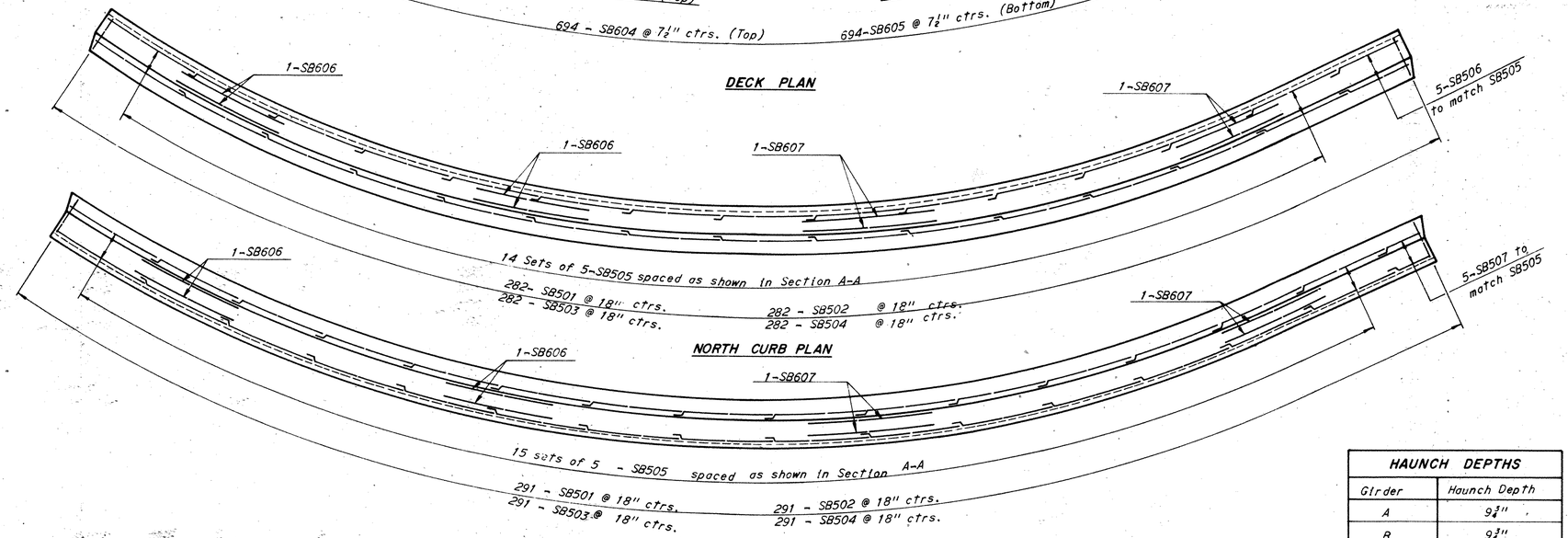
336
389

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

MICROFILMED
SEP 14 1983

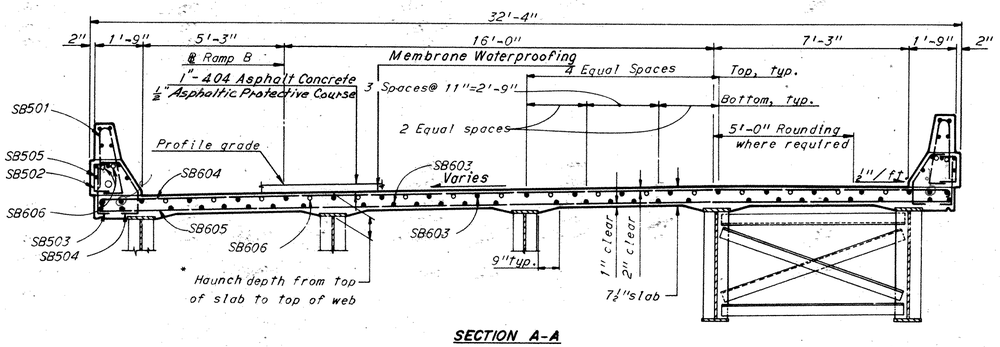


DECK PLAN

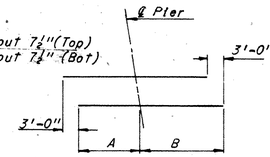


NORTH CURB PLAN

SOUTH CURB PLAN

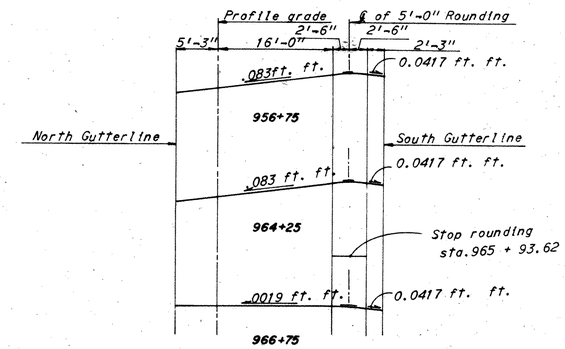


SECTION A-A



	A	B
Pier 5	17'-6"	18'-6"
Pier 6	14'-6"	21'-6"
Pier 7	25'-6"	19'-6"
Pier 8	17'-0"	28'-0"

DIAGRAM SHOWING STAGGER OF SB606 AND SB607 BARS OVER PIERS



SUPERELEVATION TRANSITION SCHEME

HAUNCH DEPTHS	
Girder	Haunch Depth
A	9¾"
B	9¾"
C	10¼"
D	10¼"
E	10¼"

*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 encosed steel plates as per Sec. 511.18 of the Construction and Materials Specifications.

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 concrete railing details see Sheet 361

For deflection joint details see Sheet 361

Transverse reinforcing steel shall be placed radially along South edge of slab.

For reinforcement schedule see Sheet 16/16.

For subdrainage details, see Sheet 365A.

H.N.T.B. BRIDGE NO. 14 — Revised 6-25-75 By RAS — 13/16

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

DECK PLAN UNIT 2

RAMP B OVER RAMPS C AND G
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: 1" = 20'-0" — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
KSS		DWB	MJK	3-2-76
DATE 2-10-70	DATE	DATE 6-11-70	DATE 11-20-71	1668

Revised 4-28-77

MARK	NUMBER		LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
			WEST ABUTMENT						
AA401	30		3'-5"	105	1'-0"	1'-8"			69
AA501	10		11'-6"	109	3'-0"	2'-6"			120
AA502	20		8'-4"	105	1'-7"	5'-5"			174
AA503	20		7'-8"	104	6'-9"	1'-0"			160
AA504	20		7'-2"	105	2'-0"	3'-5"			150
AA505	19		31'-2"	Str.					618
AA509	20		7'-0"	108	6'-0"	1'-0"	8½"		146
AA510	24		3'-11"	104	2'-0"	2'-0"			98
AA511	20		2'-9"	Str.					57
AA512	15		6'-7"	114	3'-2"				103
AA513	24		2'-2"	105	7½"	1'-2"			54
AA514	1 Ser. 5		6'-9"to3'-11"	Str.				8½"	28
AA515	7		7'-6"	Str.					55
AA516	1		3'-6"	Str.					4
AA517	2		7'-0"	Str.					15
AA518	2		11'-6"	Str.					24
AA519	12		16'-8"	Str.					208
AA520	2		12'-6"	Str.					26
AA521	2		9'-8"	Str.					20
AA522	4		10'-8"	Str.					44
AA523	4		6'-11"	Str.					29
AA524	2		10'-8"	108	1'-11"	8'-9"	4'-0"		22
AA525	8		14'-8"	Str.					122
AA526	4		7'-11"	Str.					33
AA527	4		4'-3"	Str.					18
AA601	2		16'-4"	109	5'-5"	2'-6"			49
AA602	20		14'-6"	106	5'-5"	6'-8"	2'-8"		440
AA605	30		5'-8"	105	2'-6"	11"			255
AA606	30		16'-4"	105	7'-7"	1'-5"			736
AA607	30		4'-2"	105	1'-6"	1'-5"			188
AA608	7		8'-8"	115	7'-0"	9"			91
AA609	7		19'-0"	105	9'-1"	1'-2"			200
AA610	1		7'-7"	104	6'-9"	1'-0"			11
AA611	1		7'-6"	104	6'-8"	1'-0"			11
AA612	1 Ser. 9		3'-8"to 8'-0"	Str.				6½"	79
AA613	7		8'-11"	115	7'-2"	9"			94
AA614	7		7'-6"	Str.					79
AA615	2		7'-0"	Str.					21
AA616	4		14'-8"	Str.					88
AA617	2		9'-6"	Str.					29
AA618	2		9'-4"	Str.					28
AA619	1 Ser. 4		14'-8"to8'-10"	Str				14½"	71
AA620	7		18'-4"	105	-8'-9"	1'-2"			193
AA621	1		4'-11"	115	3'-3"	9"			7
AA622	1		5'-6"	115	3'-9"	9"			8
AA623	1		5'-11"	115	4'-3"	9"			9
AA624	1		6'-6"	115	4'-9"	9"			10
AA625	1		7'-0"	115	5'-3"	9"			11
AA626	1		7'-6"	115	5'-9"	9"			11
AA627	1		8'-0"	115	6'-3"	9"			12
AA628	1		8'-6"	115	6'-9"	9"			13
AA629	1		9'-0"	115	7'-4"	9"			14
AA701	1		4'-8"	115	3'-0"	9"			10
AA702	1		8'-1"	115	6'-3"	9"			17
AA703	1		7'-2"	115	5'-6"	9"			15
AA704	1		6'-8"	115	4'-10"	9"			13
AA705	1		5'-10"	115	4'-2"	9"			12
AA706	1		5'-2"	115	3'-6"	9"			11
DA801	20		5'-2"	141	3'-1				276

MARK	NUMBER		LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
AA801	7		33'-0"	Str					618
AA802	6		7'-6"	Str.					120
AA803	6		11'-0"	Str.					177
					Total West Abutment		=		6424
			EAST ABUTMENT						
AB401	30		3'-5"	105	1'-0"	1'-8"			69
AB501	10		7'-6"	Str					78
AB502	11		3'-2"	108	1'-7"	1'-7"	1'-6"		36
AB503	10		6'-0"	Str					63
AB504	7		3'-7"	118	1'-7"	6"	1'-6"		26
AB505	4		4'-4"	118	1'-7"	1'-3"	1'-6"		18
AB506	21		32'-0"to9	Str					17 700
AB507	26		8'-4"	105	1'-7"	5'-5"			228
AB508	26		7'-8"	104	6'-9"	1'-0"			209
AB509	26		7'-0"	105	1'-11"	3'-5"			190
AB510	19		11'-6"	109	3'-0"	2'-6"			228
AB511	1		13'-0"	109	3'-9"	2'-6"			14
AB513	2		9'-0"	Str					19
AB514	1		13'-2"	109	3'-10"	2'-6"			14
AB515	14		7'-3"	Str					106
AB516	1		5'-6"	Str					6
AB517	1		5'-0"	Str					5
AB518	1		4'-6"	Str					5
AB519	1		4'-0"	Str					4
AB520	5		3'-9"	Str					20
AB521	21		6'-7"	114	3'-2"				144
AB522	26		2'-2"	105	7½"	1'-2"			59
AB523	10		3'-0"	Str					31
AB524	32		16'-6"	Str					551
AB525	2 Ser. 3		9'-0"to12'-9"	Str				1'40½"	68
AB526	4		8'-6"	Str					35
AB527	8		10'-6"	Str					88
AB528	2		11'-0"	Str					23
AB529	1 Ser. 3		3'-6"to5'-0"	Str				9"	13
AB531	8		10'-3"	Str					86
AB532	2 Ser. 3		8'-6"to12'-3"	Str				1'40½"	65
AB601	26		14'-2"	106	5'-3"	6'-9"	2'-6"		554
AB602	31		15'-7"	105	7'-3"	1'-5"			725
AB603	31		5'-1"	105	2'-0"	1'-5"			237
AB604	31		5'-7"	105	2'-6"	11"			260
AB606	2		7'-4"	104	6'-6"	1'-0"			22
AB607	14		19'-2"	105	9'-2"	1'-2"			402
AB608	14		8'-10"	115	7'-2"	9"			186
AB609	1 Ser. 3		5'-4"to6'-10"	115	3'-8"to5'-2"	9"		9"	27
AB610	2		7'-7"	104	6'-9"	1'-0"			24
AB611	3		4'-8"	115	3'-0"	9"			21
AB701	1		6'-4"	115	4'-8"	9"			13
AB702	1		5'-10"	115	4'-2"	9"			12
AB703	1		5'-1"	115	3'-5"	9"			10
AB704	2		5'-0"	115	3'-4"	9"			20
AB705	1		6'-10"	115	5'-2"	9"			14
DB801	20		5'-3"	141	3'-2"				280
AB801	5		34'-6"	Str.					460
AB802	2		11'-3"	108	8'-9"	2'-6"	2'-5"		60

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
AB803	1	11'-6"	108	9'-0"	2'-6"	2'-5"		31
AB804	1	14'-0"	108	11'-6"	2'-6"	2'-5"		37
AB805	2	15'-6"	108	13'-0"	2'-6"	2'-5"		83
AB806	2	7'-9"	Str					41
AB807	1	8'-6"	Str					23
AB808	1	13'-3"	Str					35
AB809	2	15'-4"	104	13'-3"	2'-3"			82
AB810	2	30'-6"	108	30'-3"	2'-3"	9"		179
		C4		C2				84
								61
				Total East Abut.		=		7039
				PIER 1				
SPA401	1	620'-0"	112	75.1	27'-2"	2'-8"		501
SPA402	1	647'-7"	112	78.4	28'-5"	2'-8"		524
SPA403	1	673'-8"	112	81.6	29'-7"	2'-8"		544
PA501	34	4'-5"	105	1'-0"	2'-8"			157
PA502	22	12'-2"	109	2'-8"	3'-2"			278
PA503	2	2'-11"	105	1'-0"	1'-2"			6
PA504	2	3'-11"	105	1'-0"	2'-2"			8
PA601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PA602	4	29'-6"	Str					178
PA801	15	10'-8"	100	8'-6"				428
PA901	10	12'-0"	100	9'-6"				408
PA1001	22	12'-4"	100	9'-6"				1171
PA1002	10	13'-4"	100	10'-6"				575
PA1003	5	28'-4"	111	24'-0"	2'-0"			610
PA1004	5	15'-6"	111	11'-2"	2'-0"			334
PA1005	5	29'-6"	Str					636
PA1006	4	9'-9"	Str					168
PA1007	2	10'-0"	Str					86
PA1101	12	16'-8"	100	13'-6"				1062
PA1102	29	8'-3"	104	6'-6"	2'-0"			1270
PA1103	16	30'-9"	Str					2623
PA1104	13	32'-0"	Str					2210
PA1105	13	32'-9"	Str					2260
PA1106	13	8'-6"	104	6'-9"	2'-0"			587
				Total Pier	1	=		16,720

RECEIVED SEP 14 1970

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

337
389

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

141

100 101 104 105

106 107 108 109

110 111 112

*No. of turns at 4½" pitch plus 1½ turns at each end.

113 114 115 116

117 118 119 122

125 129 143 144

145 147 148

BENDING DIAGRAMS

Notes:
All bar dimensions are given out to out.
All bars of a series shall vary in length by a constant increment.
For replacement reinforcement schedule see sheet 256
Four steel channels, tee or angle spacers, weighing approximately 0.80 pounds per linear foot shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. An allowance of 0.80 pounds per linear foot for spacers is included with the weight of the spiral bars and paid for as reinforcing steel.

H.N.T.B. BRIDGE NO. 14 — Revised 6-26-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 14/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DGS		RAP	RJH	
DATE 7-6-70	DATE	DATE 7-27-70	DATE 11-20-71	1668

Revised 4-28-77

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		PIER 2						
SPB401	1	730'-1"	112	88.4	32'-2"	2'-8"		589
SPB402	1	761'-4"	112	92.2	33'-7"	2'-8"		616
SPB403	1	790'-10"	112	95.8	34'-1"	2'-8"		640
PB501	34	4'-5"	105	1'-0"	2'-8"			157
PB502	23	12'-2"	109	2'-8"	3'-2"			292
PB503	2	2'-11"	105	1'-0"	1'-2"			6
PB504	2	3'-11"	105	1'-0"	2'-2"			8
PB601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PB602	4	31'-6"	Str.					190
PB801	15	10'-8"	100	8'-6"				428
PB901	12	13'-0"	100	10'-6"				528
PB902	10	12'-0"	100	9'-6"				408
PB1001	5	15'-7"	111	11'-3"	2'-0"			335
PB1002	5	31'-4" 1	111	27'-0"	2'-0"	1'-9"		674
PB1003	5	31'-7"	Str.					678
PB1004	2	10'-9"	Str.					93
PB1005	3	9'-0"	Str.					116
PB1006	2	11'-9"	Str.					102
PB1101	12	16'-8"	100	13'-6"				1062
PB1102	24	13'-8"	100	10'-6"				1742
PB1401	11	10'-0" 7	104	8'-5"	2'-0" 7			91 880
PB1402	11	14'-6" 10	104	12'-8"	2'-0"			1200
PB1403	11	30'-0"	Str.		7			2524
PB1404	11	25'-11"	Str.		7			2181
PB1405	22	10'-6" 10	104	8'-8"	2'-0"			1025 824
PB1406	22	5 10'-6" 1	104	12'-11"	2'-0"			2440 538
PB1407	11	31'-6"	Str.		7			2650
PB1408	11	27'-3"	Str.					2290
PB1409	11	32'-4"	Str.					2720
PB1410	11	28'-1"	Str.					2360
					Total	Pier	2 =	29,690 987
		PIER 3						
SPC401	1	656'-9"	112	79.5	28'-10"	2'-8"		531
SPC402	1	684'-4"	112	82.9	30'-1"	2'-8"		553
SPC403	1	711'-7"	112	86.2	31'-4"	2'-8"		576
PC501	34	4'-5"	105	1'-0"	2'-8"			157
PC502	18	12'-2"	109	2'-8"	3'-2"			228
PC503	2	2'-11"	105	1'-0"	1'-2"			6
PC504	2	3'-11"	105	1'-0"	2'-2"			8
PC601	6	8'-0"	113	1'-11"	4'-2"	2'-8"		72
PC602	4	29'-3"	Str.					176

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		2						16
PC901	19 20	13'-0"	100	9'-6"				600
PC902	9	11'-0"	100	8'-6"				336
PC1001	22	12'-4"	100	9'-6"				1171
PC1002	4	14'-11"	111	10'-7"	2'-0"			256
PC1003	4	28'-6" 3	111	24'-2"	2'-0"	1'-9"		490
PC1004	5	29'-3"	Str.					629
PC1005	3	8'-0"	Str.					103
PC1101	10	14'-8"	100	11'-6"				780
PC1102	25	8'-3"	104	6'-6"	2'-0"			1095
PC1103	14	32'-6"	Str.					2417
PC1104	11	33'-9"	Str.					1970
PC1105	11	34'-6"	Str.					2020
PC1106	11	8'-6"	104	6'-9"	2'-0"			496
					Total	Pier	3 =	14,010 886
		PIER 4						
SPD401	1	563'-0"	112	68.2	24'-7"	2'-8"		455
SPD402	1	645'-6"	112	78.2	28'-4"	2'-8"		522
SPD403	1	706'-7"	112	85.6	31'-1"	2'-8"		571
PD501	34	4'-5"	105	1'-0"	2'-8"			157
PD502	18	12'-2"	109	2'-8"	3'-2"			228
PD503	2	2'-11"	105	1'-0"	1'-2"			6
PD504	2	3'-11"	105	1'-0"	2'-2"			8
PD601	6	8'-0"	113	1'-11"	4'-2"	2'-8"		72 60
PD602	4	30'-0"	Str.					180
PD801	8	10'-8"	100	8'-6"				228
PD901	24	12'-0"	100	9'-6"				980
PD902	19	11'-0"	100	8'-6"				711
PD1001	4	15'-7"	111	11'-3"	2'-0"			268
PD1002	4	30'-6" 4	111	26'-3"	2'-0"	1'-9"		525
PD1003	4	30'-0"	Str.					516
PD1004	1	9'-0"	Str.					39
PD1101	13	16'-8"	100	13'-6"				1150
PD1102	30	8'-3"	104	6'-6"	2'-0"			1310
PD1103	17	28'-3"	Str.					2563
PD1104	13	32'-0"	Str.					2210
PD1105	13	34'-3"	Str.					2360
PD1106	13	8'-6"	104	6'-9"	2'-0"			587
					Total	Pier	4 =	15,600 46

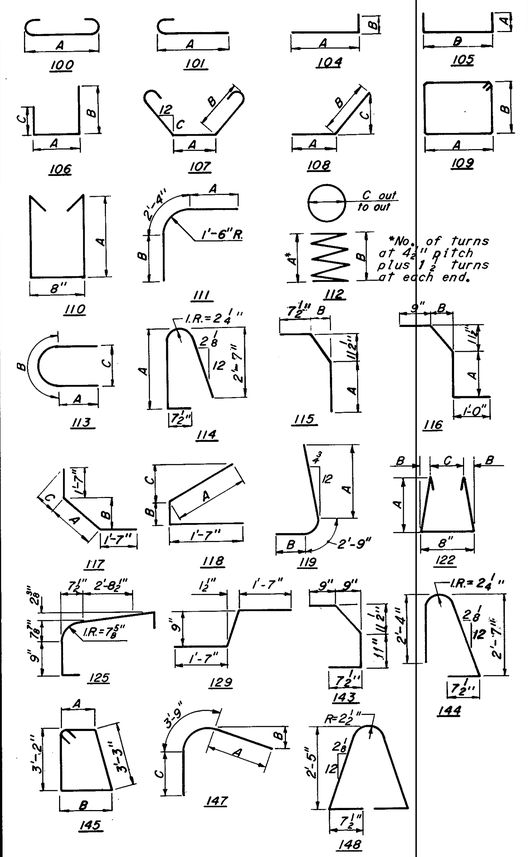
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		PIER 5						
SPE401	1	355'-9"	112	43.1	15'-2"	2'-8"		286
SPE402	1	407'-0"	112	49.3	17'-6"	2'-8"		328
SPE403	1	502'-9"	112	60.9	21'-10"	2'-8"		406
PE501	18	12'-2"	109	2'-8"	3'-2"			228
PE502	2	2'-11"	105	1'-0"	1'-2"			6
PE503	2	3'-11"	105	1'-0"	2'-2"			8
PE504	34	4'-5"	105	1'-0"	2'-8"			157
PE601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PE602	4	30'-10"	Str.					185
PE801	13	14'-8"	100	12'-6"				509
PE901	10	12'-0"	100	9'-6"				408
PE1001	12	12'-4"	100	9'-6"				637
PE1002	4	28'-7"	111	24'-9"	1'-6"			491
PE1003	4	13'-6" 7	111	9'-6"	1'-6" 9			230
PE1004	4	30'-10"	Str.					529
PE1005	2	9'-0"	Str.					78
PE1006	17	18'-9"	Str.					1370
PE1007	9	21'-3"	Str.					819
PE1008	11	25'-0"	Str.					1185
PE1009	17	8'-0"	104	6'-3"	2'-0"			582
PE1010	9	8'-3"	104	6'-6"	2'-0"			319
PE1011	4	17'-0"	Str.					291
PE1101	11	11'-8"	100	8'-6"				682
					Total	Pier	5 =	9830
		PIER 6						
SPF401	1	700'-10"	112	84.9	30'-10"	2'-8"		567
SPF402	1	682'-8"	112	82.7	30'-0"	2'-8"		552
SPF403	1	686'-0"	112	83.1	30'-2"	2'-8"		555
PF501	18	12'-2"	109	2'-8"	3'-2"			228
PF502	2	2'-11"	105	1'-0"	1'-2"			6
PF503	2	3'-11"	105	1'-0"	2'-2"			8
PF504	34	4'-5"	105	1'-0"	2'-8"			157
PF601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PF602	4	29'-0"	Str.					174
PF801	15	15'-8"	100	13'-6"				626

RECEIVED SEP 14 1970

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

338 / 389

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



BENDING DIAGRAMS

Notes:
All bar dimensions are given out to out.
All bars of a series shall vary in length by a constant increment.
For replacement reinforcement schedule see sheet 256
Four steel channels, Tee or angle spacers, weighing approximately 0.80 pounds per linear foot shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. An allowance of 0.80 pounds per linear foot for spacers is included with the weight of the spiral bars and paid for as reinforcing steel.
Splices in No. 14 or No. 18 size reinforcing bars shall be made by an approved positive mechanical method designed to develop 125% of the specified yield strength of the bar.

H.N.T.B. BRIDGE NO. 14 — Revised 6-26-75 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF — 15/16
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE

RAMP B OVER RAMPS C AND G,
I-77 AND PENN. R.R.

BR. NO. STA. 30-1489 — STA. 958 + 78.75
SCALE: — STA. 966 + 30.88

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DGS		RAP	MTK	
DATE 7-6-70	DATE	DATE 7-24-70	DATE 8-20-71	1668

Revised 4-28-77

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
PF1001	12	14'-4"	100	11'-6"				736
PF1002	5	27'-4"	111	23'-6"	1'-6"			588
PF1003	5	10'-0" & 4	111	9'-0"	(1'-6")	2'-0"	87	206
PF1004	4	3 29'-0"	Str					500
PF1005	2	9'-0"	Str					78
PF1006	4	16'-0"	Str					274
PF1101	12	11'-8"	100	8'-6"				743
PF1102	16	14'-8"	100	11'-6"				1245
PF1103	15	34'-6"	Str					2750
PF1104	15	33'-9"	Str					2685
PF1105	15	33'-3"	Str					2650
PF1106	15	20'-0"	Str					1592
PF1107	20	8'-3"	104	6'-6"	2'-0"			879
PF1108	20	8'-6"	104	6'-9"	2'-0"			905
								81
				Total	Pier	6	=	18,870

PIER 7

PG0401	1	407'-0"	112	49.3	17'-6"	2'-8"		328
PG0402	1	429'-3"	112	52.0	18'-6"	2'-8"		346
PG0403	1	451'-6"	112	54.7	19'-6"	2'-8"		364
PG0501	23	12'-2"	109	2'-8"	3'-2"			292
PG0502	2	2'-11"	105	1'-0"	1'-2"			6
PG0503	2	3'-11"	105	1'-0"	2'-2"			8
PG0504	34	4'-5"	105	1'-0"	2'-8"			157
PG0601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PG0602	4	28'-8"	Str					172
PG0801	15	15'-8"	100	13'-6"				626
PG0901	10	12'-0"	100	9'-6"				408
PG1001	12	12'-4"	100	9'-6"				637
PG1002	5	26'-2"	111	22'-4"	1'-6"			562
PG1003	5	14'-0" & 6	111	10'-2"	(1'-6")	2'-0"	12	300
PG1004	5	28'-6"	Str					614
PG1005	2	8'-0"	Str					68
PG1006	4	10'-6"	Str					181
PG1101	12	11'-8"	100	8'-6"				743
PG1102	15	21'-0"	Str					1673
PG1103	15	22'-0"	Str					1753
PG1104	15	22'-6"	Str					1797
PG1105	15	15'-0"	Str					1197
PG1106	20	8'-0"	104	6'-3"	2'-0"			852
PG1107	20	8'-3"	104	6'-6"	2'-0"			879
				Total	Pier	7	=	14,060
								71

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
PIER 8								
SPH401	1	486'-1"	112	58.9	21'-1"	2'-8"		392
SPH402	1	497'-2"	112	60.2	21'-7"	2'-8"		401
SPH403	1	504'-6"	112	61.1	21'-11"	2'-8"		407
PH501	34	4'-5"	105	1'-0"	2'-8"			157
PH502	24	12'-2"	109	2'-8"	3'-2"			304
PH503	2	2'-11"	105	1'-0"	1'-2"			6
PH504	2	3'-11"	105	1'-0"	2'-2"			8
PH601	8	8'-0"	113	1'-11"	4'-2"	2'-8"		96
PH602	4	29'-6"	Str					178
PH801	13	10'-8"	100	8'-6"				370
PH1001	10	12'-4"	100	9'-6"				534
PH1002	12	14'-4"	100	11'-6"				740
PH1003	10	13'-4"	100	10'-6"				573
PH1004	5	13'-10"	111	9'-6"	2'-0"			290
PH1005	5	(30'-2") 29'-8"	111	25'-10"	(2'-0")	1'-6"		406
PH1006	5	29'-6"	Str					635
PH1007	2	10 & 9'-9"	Str					93 (84)
PH1008	3	9'-0"	Str					116
PH1009	2	9 & 8'-9"	Str					84 (76)
PH1101	11	15'-8"	100	12'-6"				915
PH1102	29	8'-3"	104	6'-6"	2'-0"			1270
PH1103	16	24'-6"	Str					2095
PH1104	13	24'-9"	Str					1710
PH1105	13	25'-0"	Str					1730
PH1106	13	8'-6"	104	6'-9"	2'-0"			587
PH1107	16	14'-8"	100	11'-6"				1245
				Total	Pier	8	=	15,570

DECK-UNIT 1

SA501	448	5'-8"	144					2648
SA502	448	2'-1"	105	6¾"	1'-2"			973
SA503	448	2'-2"	104	1'-8"	7"			1012
SA504	448	3'-3"	143					1519
SA505	105	30'-0"	Str					3285
SA506	5	30'-10"	Str					161
SA507	10	20'-10"	Str					218
SA601	2 Ser.19	18'-0"to37'-6"	Str				1'-1"	1583
SA602	2 Ser.28	18'-0"to37'-6"	Str				8¾"	2340
SA603	470	30'-0"	Str					21,178
SA604	549	33'-0"	100	31'-8"				27,200
SA605	549	31'-8"	Str					26,104
SA606	40	42'-0"	Str					2520
SA607	20	32'-0"	Str					963
SA608	20	26'-0"	Str					781
SA609	1	34'-2"	100	32'-10"				51
SA610	1	32'-10"	Str					49
SA611	1 Ser.13	28'-8"to6'-8"	101	28'-0"to6'-0"			1'-10"	345
SA612	1 Ser.13	28'-0"to6'-0"	Str				1'-10"	333
SA613	3	4'-8"	101	4'-0"				21
SA614	3	4'-0"	Str					18
				Total	Deck	Unit 1		93,302

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
DECK-UNIT 2								
SB501	573	5'-8"	144					3387
SB502	573	2'-1"	105	6¾"	1'-2"			1245
SB503	573	2'-2"	104	1'-8"	7"			1295
SB504	573	3'-3"	143					1942
SB505	145	30'-0"	Str					4550
SB506	5	22'-10"	Str					118
SB507	5	7'-4"	Str					38
SB601	1 Ser.19	28'-0"to41'-6"	Str				9" (1'-1")	995
SB602	1 Ser.28	28'-0"to41'-6"	Str				6" (6¾")	1462
SB603	658	30'-0"	Str					29,700
SB604	694	33'-0"	100	31'-8"				34,401
SB605	694	31'-8"	Str					33,000
SB606	40	36'-0"	Str					2160
SB607	40	45'-0"	Str					2710
SB608	1	34'-10"	100	33'-6"				52
SB609	1	33'-6"	Str					50
SB610	6	4'-8"	101	4'-0"				42
SB611	6	4'-0"	Str					36
SB612	1 Ser.20	28'-8"to6'-8"	101	28'-0"to6'-0"			1'-1¾"	531
SB613	1 Ser.20	28'-0"to6'-0"	Str				1'-1¾"	511
SB614	1 Ser.11	28'-8"to6'-8"	101	28'-0"to6'-0"			2'-2½"	292
SB615	1 Ser.11	28'-0"to6'-0"	Str				2'-2½"	281
SB616	1	34'-2"	100	32'-10"				51
SB617	1	32'-10"	Str					48
				Total	Deck	Unit 2	=	118,887

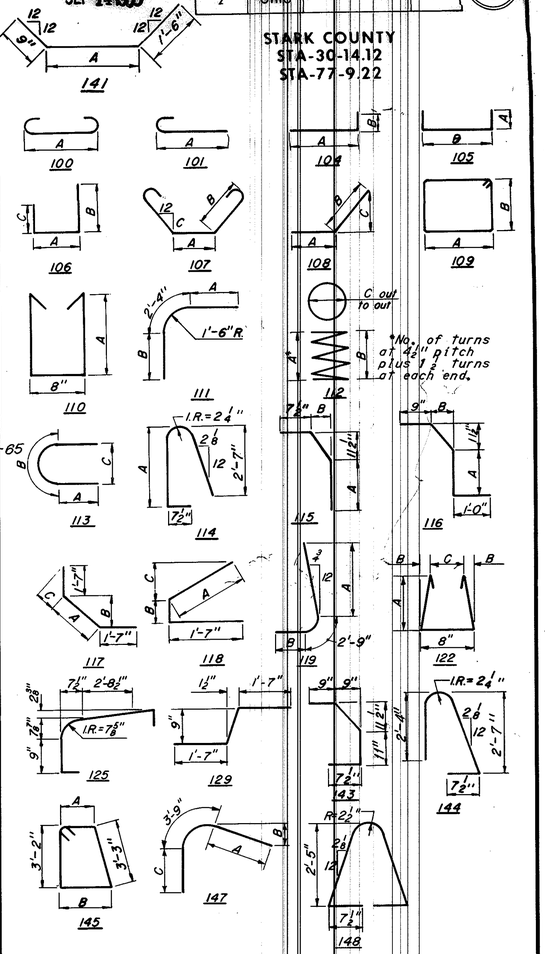
PARAPET

R501	84	13'-6"	Str					1185
R502	252	7'-0"	Str					1844
R503	96	15'-6"	Str					1558
R504	20	5'-6"	Str					115
R505	4	5'-9"	Str					24
R506	84	14'-6"	Str					1273
R507	4	9'-6"	Str					40
R508	4	6'-6"	Str					27
R509	4	8'-3"	Str					34
				Total	Parapet		=	6100

MICROFILMED SEP 14 1983

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		339 389

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



BENDING DIAGRAMS

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H.N.T.B. BRIDGE NO. 14 — Revised 6-26-75 By. RAS

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CONSULTING ENGINEERS
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REINFORCEMENT SCHEDULE

RAMP B OVER RAMPS C AND G,
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BR. NO. STA. 30.1489 STA. 958 + 78.75
SCALE: STA. 966 + 30.88

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DGS		RAP	MPK	
DATE 7-6-70	DATE	DATE 7-27-70	DATE 11-20-71	1668

Revised 4-28-77