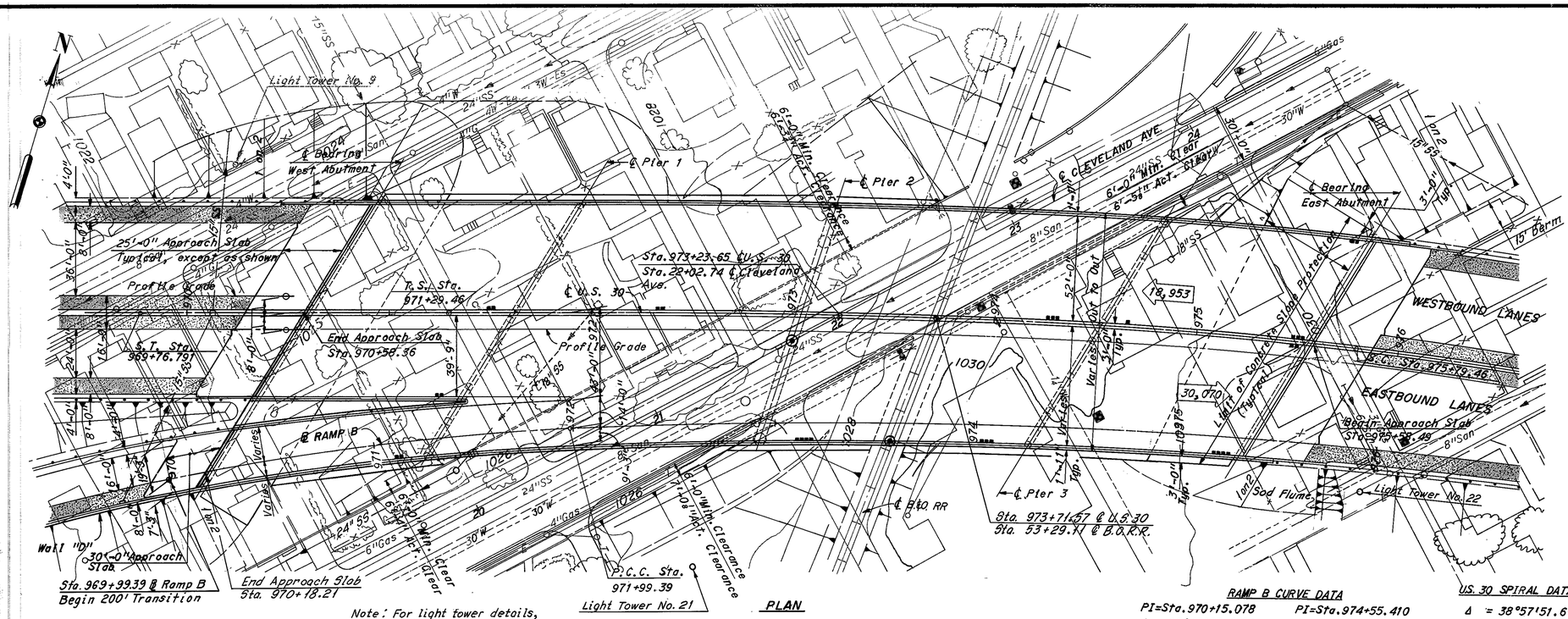
FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

205
299

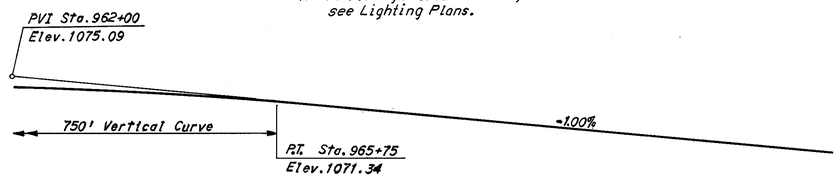
STARK COUNTY
STA-30-15.04
STA-77-9.22



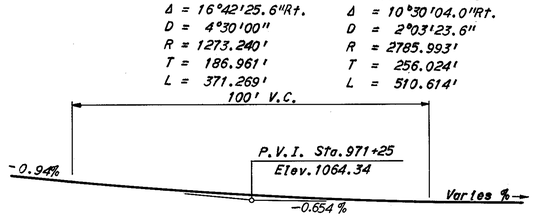
Note: For light tower details, see Lighting Plans.

PLAN

MICROFILMED APR 16 1985



PROFILE GRADE – U.S. 30



PROFILE GRADE – RAMP B

RAMP B CURVE DATA

PI=Sta. 970+15.078	PI=Sta. 974+55.410
Δ = 16°42'25.6"Rt.	Δ = 10°30'04.0"Rt.
D = 4°30'00"	D = 2°03'23.6"
R = 1273.240'	R = 2785.993'
T = 186.961'	T = 256.024'
L = 371.269'	L = 510.614'

U.S. 30 SPIRAL DATA

Δ = 38°57'51.6"Rt.
Θ_s = 6°45'00"
L_s = 450.00
T_s = 902.106'
Dc = 3°00'00"
Rc = 1909.859'
Lc = 848.811'

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, except barrier railing on bridge median.*

18,953 Denotes one way 1995 average daily traffic.

Earthwork limits shown are schematic, Actual slopes shall conform to plan cross-sections.

◉ *Denotes point of minimum vertical clearance.*

■ *Denotes Standard scupper*

All piles shall be 12" ϕ cast-in-place concrete with an estimated average pay length of 70'-0" for the East and West Abutments, 50'-0" for Piers 1, 2, and 3. These estimates are based on boring data and are approximate only. The contractor shall assume full responsibility for the length of pile selected for driving.

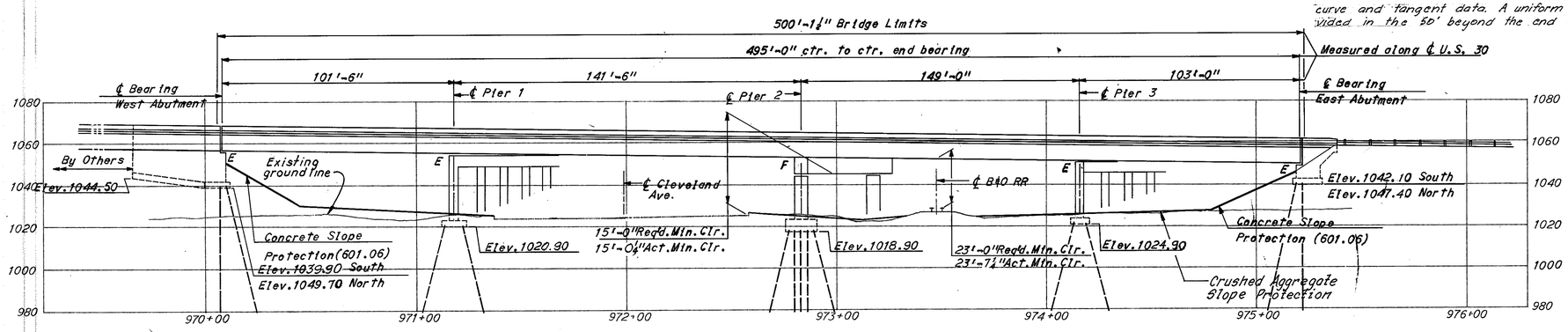
For additional information see Sheet 2 | 20

PROPOSED STRUCTURE

Type: Continuous Welded Girders with Reinforced Concrete Slab.
Spans: 101'-6", 141'-6", 149'-0", 103'-0" = 495'-0" Ctr. to Ctr. End Bearings along ℄ U.S. 30. ℄ West Abutment to ℄ Pier 1 along ℄ Ramp B is 112'-3⅜".
Roadway: Varies face to face of parapets including 3'-0" Median Barrier on U.S. 30.
Loading: HS20-44, Case I and the Alternate Military Load.
Skew: 62°01'21" ℄ Cleveland Avenue to a line tangent to U.S. 30 @ Sta. 971+29.46.
Wearing Surface: 2½" Asphalt Concrete
Alignment: From tangent to a 450' spiral to a 3°00'00" curve (Right)
Approach Slab: AS-1-72 (30 and 25'long) (Modified)
1995 ADT: Eastbound Lanes = 30,070; Westbound Lanes 18,953 (49,023)

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.

The Vertical Curve and Tangent Grade Data does not apply to elevations on the bridge or in the transition areas. Bridge elevations are 1" above the elevations obtained from the curve and tangent data. A uniform transition shall be provided in the 50' beyond the end of the bridge.



ELEVATION

UTILITY LEGEND

——G——	Gas
——W——	Water
—— SS ——	Storm Sewer
—San——	Sanitary Sewer
——T——	Telephone
——E——	Power Lines
4W-E4KW	4 Wire, Primary 4 Kilovolt
3W-Es	3 Wire, Secondary
○	Manhole
□	Catch Basin
⊕	Pole, Telephone

H.N.T.B. BRIDGE NO. 3 — Revised 12-5-75 — By E.P.S

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 7 | 20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

SITE PLAN

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.

BR. NO. STA-30-15.07 — STA. 970+58.36
SCALE: 1" = 30'-0" — STA. 975+58.49

RELOCATED U.S. 30

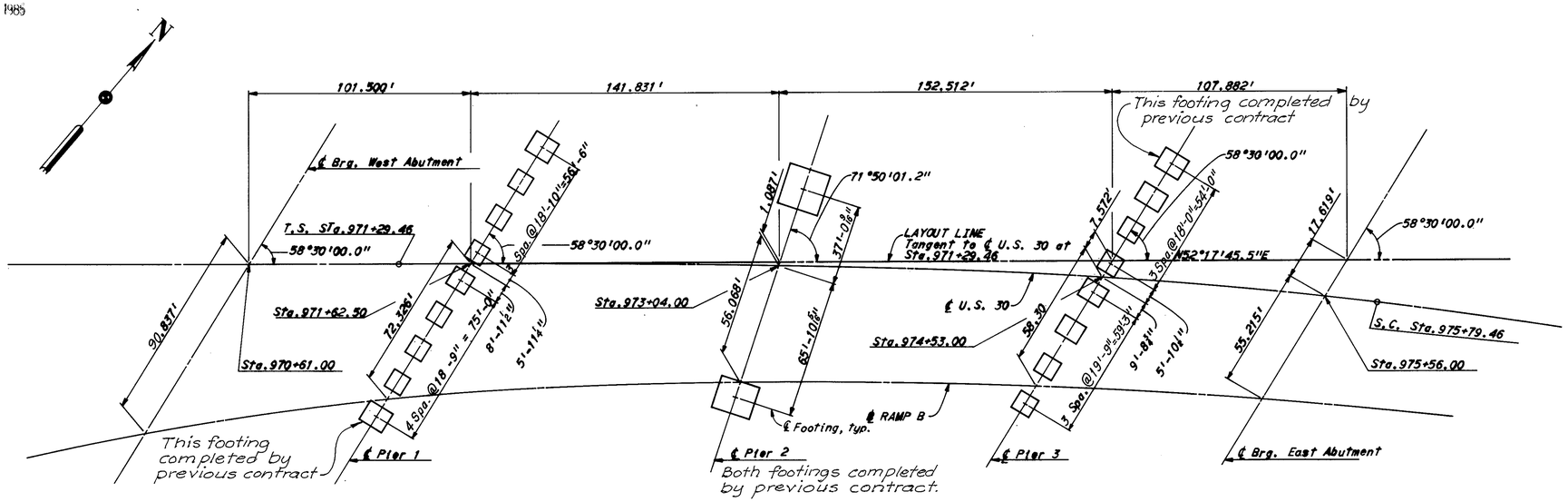
CANTON — STARK COUNTY — OHIO

DRAWN ELH	TRACED	CHECKED KSS	REVIEWED M.J.K.	REVISED 10-14-77
DATE 5-22-70	DATE	DATE 9-18-70	DATE 11-24-71	1668

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

206
299

STARK COUNTY
STA-30-15.04
STA-77-9.22



FOOTING LAYOUT

ESTIMATED QUANTITIES - BRIDGE STA 30-1507

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	RETAIN. WALL D	GENERAL		
404	427	Cu. Yd.	Asphalt Concrete, AC-20			427				
409	13	Cu. Yd.	Seal Coat Cover Aggregate, No. 9			13				
409	442	Gallon	Seal Coat Bituminous Material: 702.02, MC-800 or							
			MC-3000; 702.03, CBAE 800; 702.04, RS-1,							
			RS-2 or CRS-2; or 702.09, RT-9 or RT-10			442				
503	Lump Sum	Lump Sum	Cofferdams, Cribs and Sheeting					Lump Sum		
503	1,209	Cu. Yd.	Unclassified Excavation	817	288		104			
504	284	Sq. Ft.	Sheet Piling left in place (min. Sect. Mod. of 7.0 in.³ per ft. of wall)				284			
505	Lump Sum	Lump Sum	Test Pile					Lump Sum		
506	Lump Sum	Lump Sum	Pile Test Load					Lump Sum		
506	1	Each	Subsequent Pile Test Load					1		
507	15,730	Lin. Ft.	12" ϕ Cast-in-Place Reinforced Concrete Piles	8,190	6,000		1,540			
509	754,736	Lbs.	Reinforcing Steel	63,015	98,581	576,404	16,736			
511	1,875	Cu. Yd.	Class "C" Concrete, Superstructure			1,875				
511	307	Cu. Yd.	Class "C" Concrete, Pier caps and Columns		307					
511	504	Cu. Yd.	Class "C" Concrete, Abuts above footings	504						
511	56	Cu. Yd.	Class "C" Concrete, Retaining Wall above footing				56			
511	462	Cu. Yd.	Class "C" Concrete, Abut., Pier and Retaining							
			Wall Footings	280	144		38			
512	136	Lin. Ft.	Premolded Sealing Strip	99			37			
513	485,754	Lbs.	Structural Steel (ASTM A-36), primer per 846			485,754				
513	894,170	Lbs.	Structural Steel (ASTM A-572), primer per 846			894,170				
513	946,485	Lbs.	Structural Steel (ASTM A-588), primer per 846			946,485				
846	2326,409	Lbs.	Field Painting of Structural Steel			2326,409				
516	173	Sq. Ft.	½" Preformed Expansion Joint Filler	123			50			
518	2,105	Lin. Ft.	Subdrainage For Wearing Course, As Per Plan			2,105				
518	68	Lin. Ft.	6" Non-perforated Helical CSP Including							
			specials 707.01	68						
518	460	Cu. Yd.	Porous Backfill	421			39			
518	290	Lin. Ft.	6" Perforated Helical CSP							
			707.01	290						
518	30	Each	Scuppers (Includes supports)			30				
601	2,148	Sq. Yd.	Concrete Slope Protection (601.06)					2,148		
625			For Lighting Quantities see Lighting Details							
808	1,875	Units	Chemical Admixture for Concrete, Type A, B or D			1,875				
838	6	Hour	Special Piles Tests					6		
Spec.	6,172	Sq. Yd.	Membrane Waterproofing							
			(See Proposal Note)			6,172				

H.N.T.B. BRIDGE NO. 3 — Revised 12-5-75 By EPS

HOWARD, NEEBLES, TAMMEN & BERGENDOFF — CONSULTING ENGINEERS — KANSAS CITY CLEVELAND NEW YORK — 2/20

FOOTING LAYOUT AND ESTIMATED QUANTITIES
U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 — STA. 970+58.36
SCALE: 1" = 30' — STA. 975+58.49
RELOCATED U.S. 30
CANTON — STARK COUNTY — OHIO

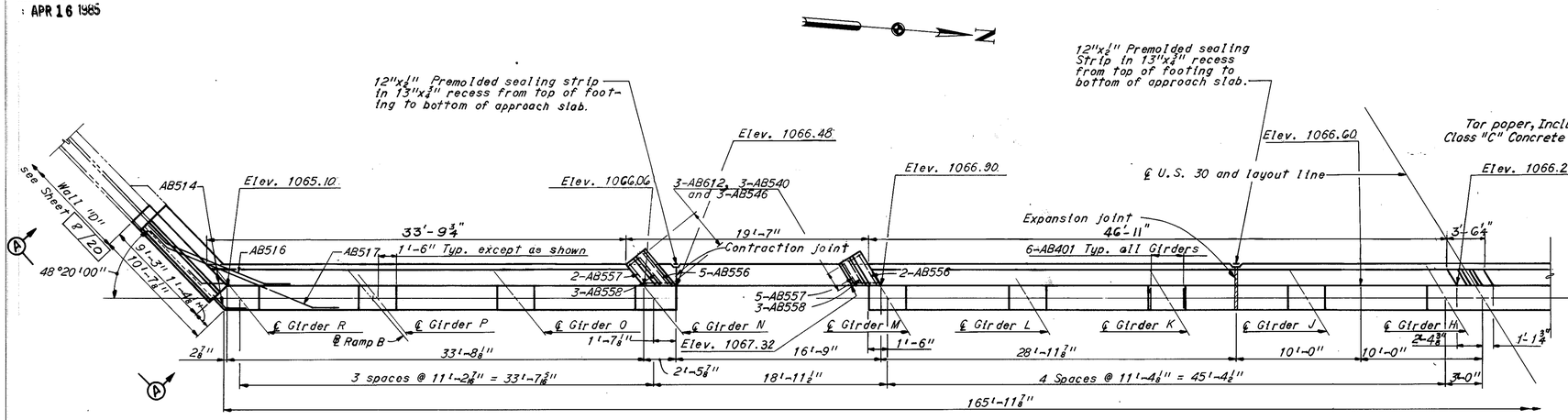
DRAWN ELL	TRACED	CHECKED	REVISIONS BY	REVISED 10-14-71
DATE 9-11-70	DATE	DATE 9-24-70	DATE 11-30-71	1668

Revised 9-28-77 - D.W.L.

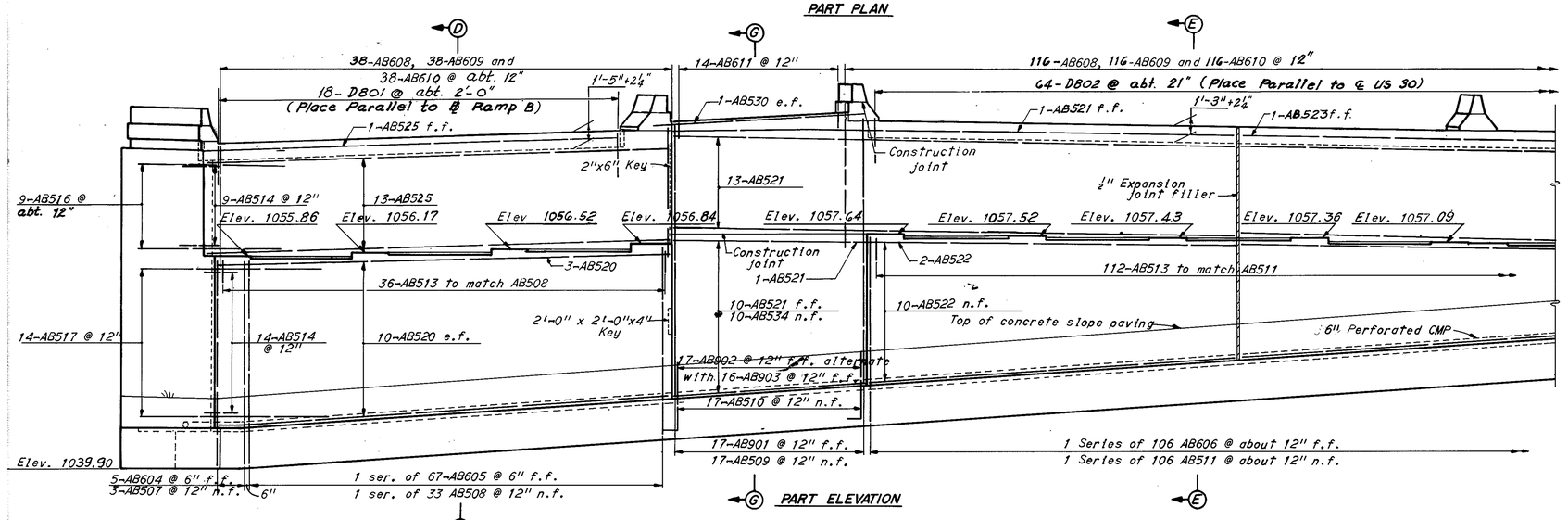
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

207
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

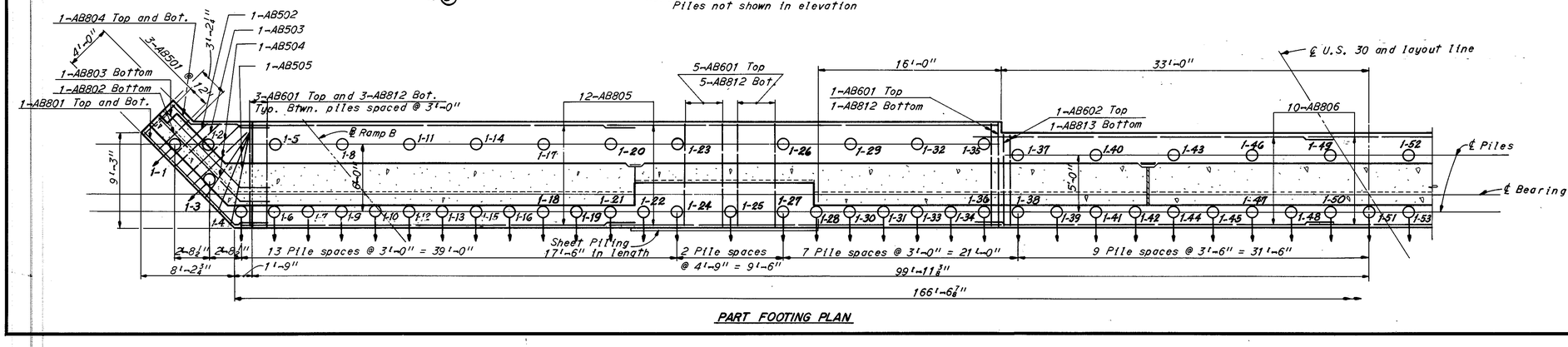


PART PLAN

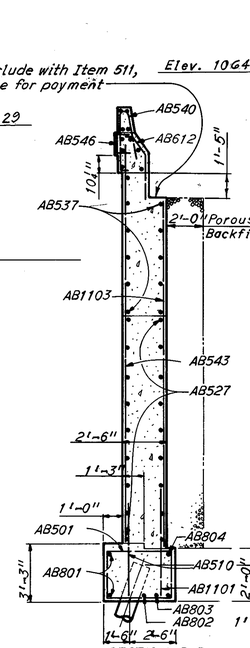


PART ELEVATION

Note:
Piles not shown in elevation

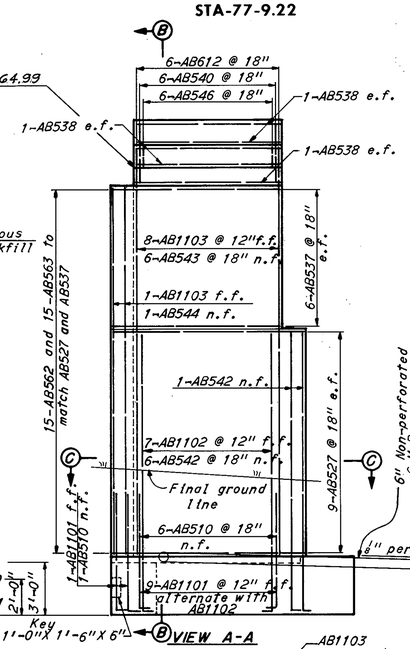


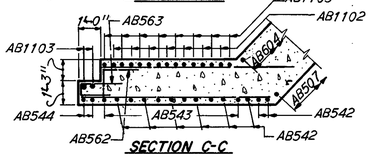
PART FOOTING PLAN



SECTION B-B

VIEW A-A





SECTION C-C

Notes:
For roadway end dam details see Ohio Standard Drawing SD-1-69, Sheets 1 and 2 of 4, and Sheet 203.
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 18/20
Shear keys at contraction joints shall be centered between front and back faces.
For placement of conduit in wingwalls see Sheet 6/20
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.
For additional notes see Sheet 4/20

H.N.T.B. BRIDGE NO. 3 — Revised 12-5-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 3/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

WEST ABUTMENT

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.

BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 3/16"=1'-0" STA. 975+58.49

RELOCATED U.S. 30

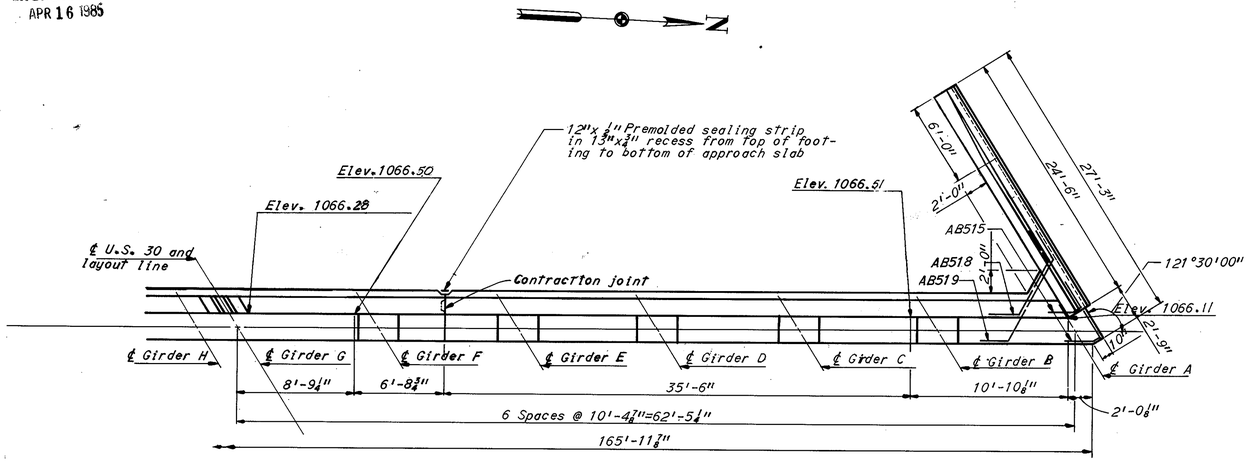
CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED KSS	REVIEWED MJK	REVISED 10-14-71
DATE 8-17-70	DATE	DATE 9-1-70	DATE 11-24-71	1668

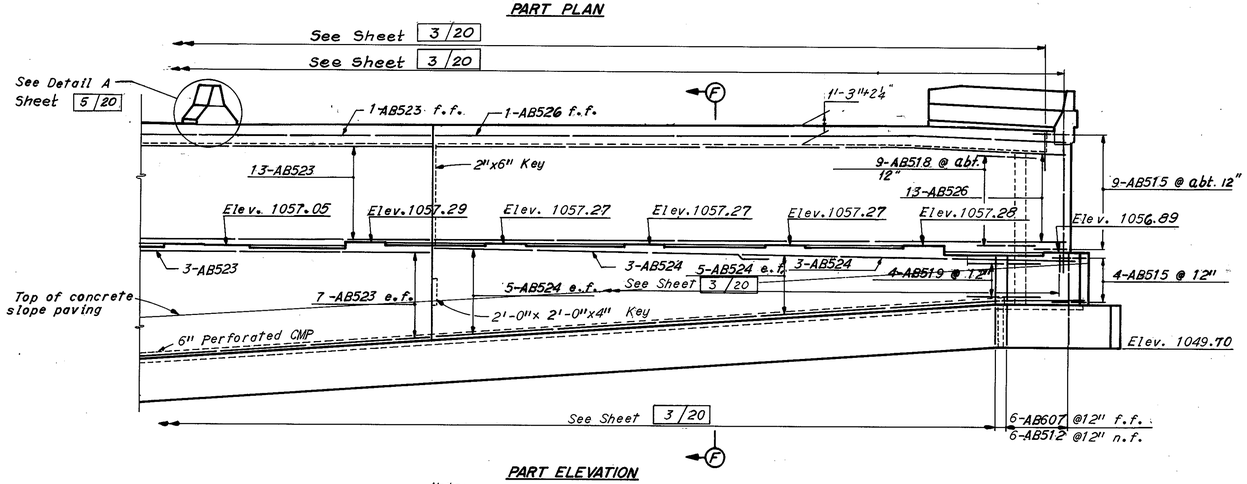
FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

208
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

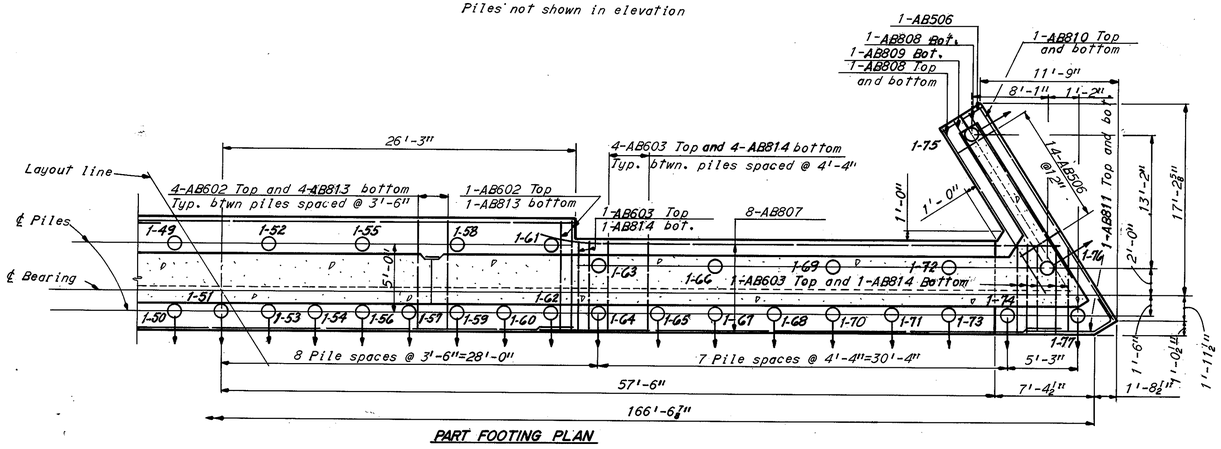


PART PLAN

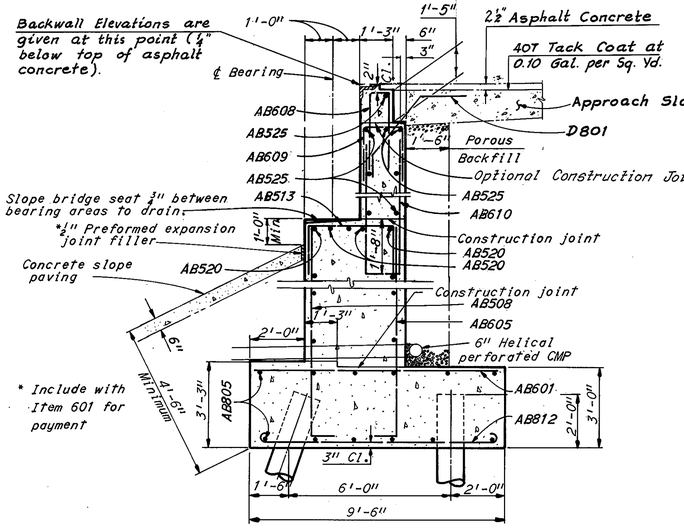


PART ELEVATION

Note:
Piles not shown in elevation

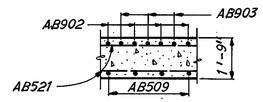


PART FOOTING PLAN

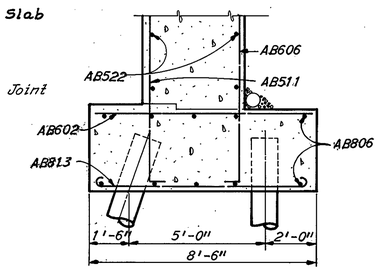


SECTION D-D

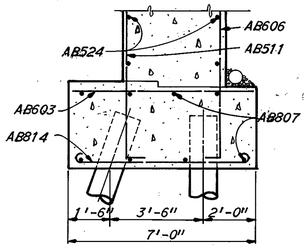
Note:
Details are typical for all sections unless otherwise shown.



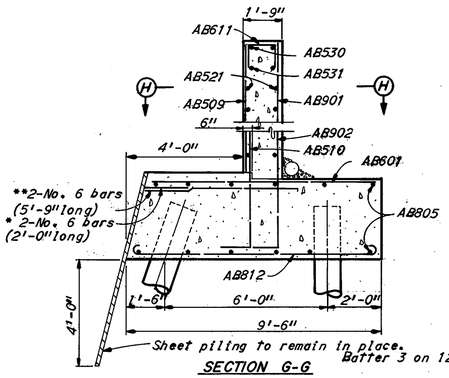
SECTION H-H



SECTION E-E



SECTION F-F



SECTION G-G

Notes:

* 2-No. 6 bars (2'-0" long) shall be welded to each sheet pile and 2-No. 6 bars shall be lapped with 2-No. 6 bars (2'-0" long) as shown. The No. 6 bars (2'-0" long) shall be included for payment with Sheet piling.

Sheet piling shall have a minimum section modulus of 7 inches cubed per foot. Used piling in good condition may be used.

** To be included with Item 511, Class "C" concrete above footings for payment.

For location of Sections D-D, E-E and G-G see Sheet 3/20

All battered piles shall be battered 4 in 12.

For Detail A see Sheet 5/20

Bearings shall be set in line with girders. See Sheet 12/20 for intersection angles between centerline of abutment and girders.

Backwall Concrete:

In addition to the provisions of 511.08, backwall concrete or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.

H.N.T.B. BRIDGE NO. 3 — Revised 12-8-75 — By E P S

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

4/20

WEST ABUTMENT

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 3/16"=1-0" STA. 975+58.49

RELOCATED U.S. 30

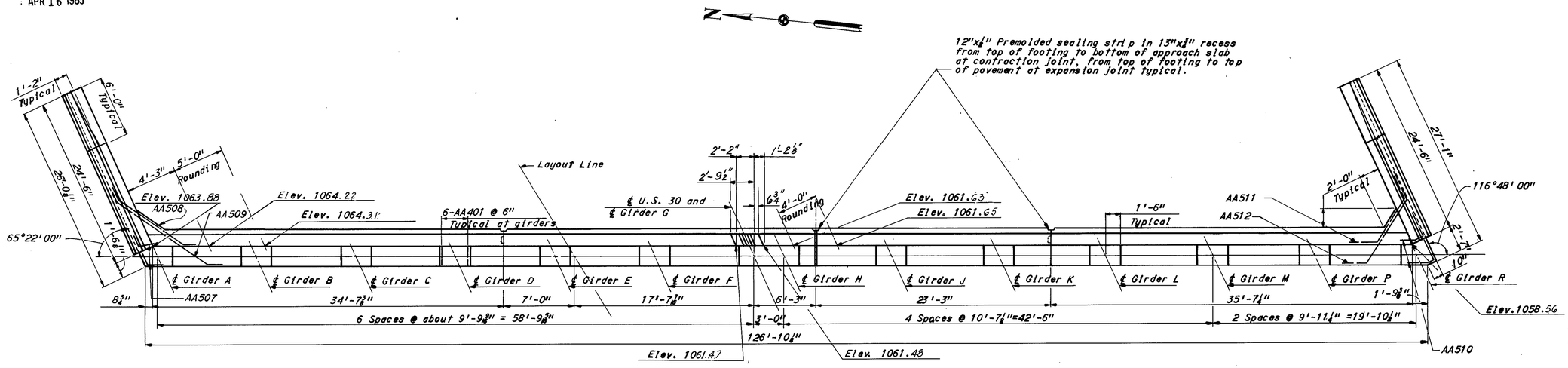
CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
BW		KSS	HJK	10-14-77
DATE 8-20-70	DATE	DATE 9-9-70	DATE 11-24-71	1668

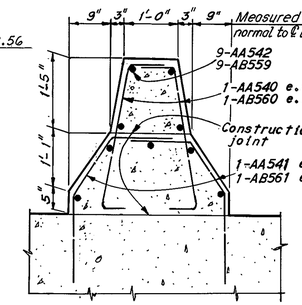
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

209
299

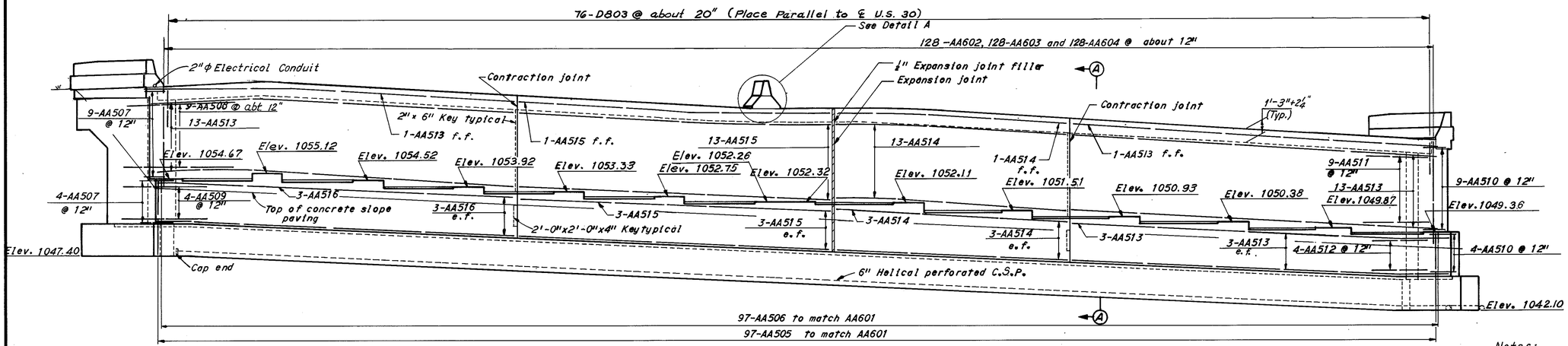
STARK COUNTY
STA-30-15.04
STA-77-9.22



PLAN

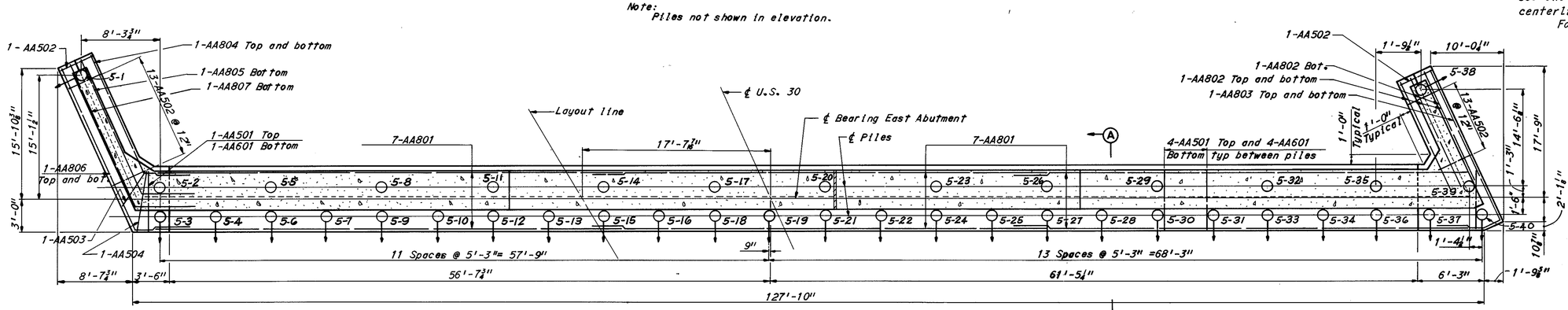


DETAIL A



ELEVATION

Note:
Piles not shown in elevation.



FOOTING PLAN

Notes:
Bearings shall be set in line with girders.
See Sheet 12/20 for intersection angles between centerline of abutment and girders.
For additional notes see Sheet 6/20.

H.N.T.B. BRIDGE NO. 3 — Revised 12-8-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 5/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

EAST ABUTMENT

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 3/16"= 1'-0" STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED KSS	REVIEWED MJK	REVISED 10-14-77
DATE 7-29-70	DATE	DATE 8-31-70	DATE 11-24-71	1668

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		DECK						
S501	4	6'-6"	113	2'-0"	2'-6"	1'-6"		27
S502	76	14'-3"	Str.					1,130
S503	364	7'-3"	Str.					2,755
S504	28	13'-6"	Str.					394
S505	40	12'-10"	Str.					535
S506	40	14'-6"	Str.					605
S507	44	13'-4"	Str.					613
S508	20	14'-9"	Str.					308
S510	20	12'-9"	Str.					267
S511	28	13'-9"	Str.					402
S512	3	8'-11"	113	2'-6"	3'-11"	2'-6"		28
S513	1	10'-10"	113	2'-11"	5'-0"	3'-3"		11
S514	210	30'-0"	Str.					6571
S515	5	11'-6"	Str.					60
S516	5	5'-0"	Str.					26
S517	5	17'-9"	Str.					92
S518	12	27'-0"	Str.					338
S519	2	42'-0"	Str.					88
S520	2	25'-9"	Str.					54
S521	1	5'-8"	113	2'-0"	1'-8"	1'-1"		6
S522	1	6'-4"	113	2'-0"	2'-4"	1'-6"		6
S523	2 Ser.35	3'-6"to2'-8"	158	9" to 2¾"			5/16"	225
S524	2	3'-5"	143					7
S525	1 Ser.35	3'-0"to1'-0"	Str.				11/16"	73
S526	3	2'-7"	158	2¾"				8
S527	827	5'-10"	144					5,031
S528	1,281	3'-6"	143					4,676
S529	821	2'-3"	105	7½"	1'-3"			1,927
S530	821	2'-3"	104	1'-9"	7½"			1,927
S531	427	3'-2"	147	2'-7"	9"			1,411
S532	427	2'-7"	Str.					1,150
S533	427	2'-10"	166	1'-10"	5"			1,260
S534	460	3'-2"	167					1,520
S535	460	4'-1"	162					1,958
S536	460	2'-10"	101	2'-3"				1,358
S601	1 Ser.20	5'-0"to28'-0"	Str.				1-2¼"	496
S602	817	29'-0"	Str.					35,600
S603	824	28'-9"	Str.					35,582
S604	1 Ser.29	3'-0"to29'-0"	Str.				11⅛"	700
S605	1 Ser.22	3'-0"to28'-6"	Str.				1'-2⅜"	520
S606	1 Ser.30	3'-9"to28'-6"	Str.				10¼"	727
S607	817	28'-8"	101	28'-0"				35,200
S608	1 Ser.20	5'-8"to28'-8"	101	5'-0"to28'-0"			1'-2¼"	516
S609	824	29'-11"	101	29'-3"				37,026
S610	1 Ser.22	4'-6"to30'-0"	Str.				1'-2⅜"	570
S611	1 Ser.29	3'-0"to28'-0"	Str.				10⅝"	676
S612	1 Ser.30	4'-2"to28'-11"	101	3'-6"to28'-3"			10⅛"	745
S613	1 Ser.22	3'-6"to21'-6"	Str.				10⅝"	414
S614	1 Ser.22	4'-0"to23'-0"	Str.				10⅞"	446
S615	168	22'-0"	Str.					5,550
S616	146	22'-0"	Str.					4,824
S617	1 Ser.32	4'-3"to28'-3"	Str.				9⅜"	780
S618	1 Ser209	26'-0"to28'-6"	Str.				⅛"	8,550
S619	1 Ser.119	31'-6"to32'-6"	Str.				¼"	5,720
S620	1 Ser.119	37'-0"to40'-0"	Str.				3/16"	6,890
S621	1 Ser.100	29'-6"to31'-6"	Str.				4/16"	4,581
S622	100	37'-0"	Str.					5,550
S623	138	30'-0"	Str.					6,218
S624	1 Ser.138	34'-9"to36'-9"	Str.				3/16"	7,400
S625	1 Ser.137	29'-9"to31'-8"	Str.				3/16"	6,328
S626	1 Ser.137	35'-0"to31'-6"	Str.				5/16"	6,850
S627	123	32'-0"	Str.					5,912
S628	1 Ser.123	30'-6"to31'-6"	Str.				4/16"	5,720
S629	105	32'-6"	Str.					5,126
S630	105	30'-3"	Str.					4,760
S631	1 Ser.24	5'-0"to30'-0"	Str.				1'-1¼"	630
S632	1 Ser.26	5'-6"to34'-0"	Str.				1'-1⅛"	771
S633	146	25'-8"	101	25'-0"				5,629
S634	168	19'-11"	101	19'-3"				5,025
S635	1 Ser.22	4'-8"to23'-8"	101	4'-0"to23'-0"			10⅞"	468
S636	1 Ser.22	6'-0"to23'-9"	Str.				10⅛"	493
S637	1 Ser.119	34'-2"to34'-11"	101	33'-6" to 34'-3"			4/16"	6,174
S638	1 Ser.119	35'-8"to38'-8"	101	35'-0"to38'-0"			3/16"	6,620
S639	100	35'-8"	101	35'-0"				5,350
S640	1 Ser.100	32'-5" to 34'-5"	101	31'-9"to33'-9"			4/16"	5,019
S641	138	32'-8"	101	32'-0"				6,771
S642	1 Ser.138	33'-8"to35'-8"	101	33'-0"to35'-0"			3/16"	7,180
S643	1 Ser.137	32'-5"to34'-11"	101	31'-9"to 34'-3"			4/16"	6,928
S644	1 Ser.137	30'-2"to33'-8"	101	29'-6"to33'-0"			3/16"	6,540
S645	123	35'-5"	101	34'-9"				6,543
S646	1 Ser.123	28'-8"to29'-8"	101	28'-0"to29'-0"			1/16"	5,380
S647	129	35'-2"	101	34'-6"				6,814
S648	105	28'-8"	101	28'-0"				4,525
S649	1 Ser.24	3'-0"to27'-0"	Str.				1'-0 2/16"	540
S650	3,575	30'-0"	Str.					161,090
S651	1 Ser.39	21'-0"to23'-0"	Str.				5/16"	1,285
S652	1 Ser.62	21'-0"to23'-0"	Str.				3/16"	2,045
S653	12	3'-2"	101	2'-6"				57
S654	4	39'-3"	Str.					239
S655	8	6'-5"	101	5'-9"				77
S656	2	24'-0"	Str.					72
S657	243	60'-0"	Str.					21,899
S658	12	2'-9"	Str.					50
S659	1 Ser.27	13'-6"to21'-6"	Str.				3 11/16"	708
S660	1 Ser.42	13'-6"to21'-6"	Str.				2 5/16"	1,100
S661	1 Ser.27	14'-0"to30'-0"	Str.				7 3/16"	890
S662	1 Ser.42	14'-0"to30'-0"	Str.				4 11/16"	1,385
S663	4	26'-6"	Str.					159
S664	2	37'-0"	Str.					111
S665	1 Ser.18	16'-0"to22'-0"	Str.				4¼"	513
S666	1 Ser.29	16'-0"to22'-0"	Str.				2 3/16"	824
S667	1 Ser.18	14'-0"to30'-0"	Str.				11 5/16"	593
S668	1 Ser.29	14'-0"to30'-0"	Str.				6 7/16"	956
S669	4	34'-0"	Str.					204
S670	1 Ser.39	9'-3"to25'-9"	Str.				5 3/16"	1,022
S671	1 Ser.62	9'-3"to25'-9"	Str.				3¼"	1,628
S672	1 Ser.39	14'-0"to29'-0"	Str.				4 3/16"	1,257
S673	1 Ser.62	14'-0"to29'-0"	Str.				2 15/16"	2,000
S674	8	5'-3"	Str.					63
S675	2	27'-6"	Str.					83
S676	24	31'-6"	Str.					1,136
S677	1 Ser.32	4'-11"to28'-11"	101	4'-3"to28'-3"			9 3/16"	815
S678	1 Ser209	27'-4"to29'-10"	100	26'-0"to28'-6"			⅛"	9,000
S679	1 Ser.26	6'-5"to34'-11"	101	5'-9"to 34'-3"			1'-1 1/16"	807
S680	2	6'-2"	113	2'-0"	2'-2"	1'-4"		19
S681	8	7'-9"	Str.					93
							Total	576,404

REINFORCEMENT REPLACEMENT SCHEDULE

Note:

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS

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

224
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

PILE NUMBERING DESIGNATION (Pier I)

PILE LETTER	FOOTING UNDER COLUMN 1	2	3	4	5	6	7	8	9
A	1								63
B	2								64
C	3								65
D	4								66
E	5								67
F	6								68
G		7		22		38	46		
H		8		23		39	47		
J		9		24		40	48		
K		10		25		41	49		
L		11		26		42	50		
M		12		27		43	51		
N		13		28		44	52		
O		14		29		45	53		
P			15					54	
R			16					55	
S			17					56	
T								57	
U			18					58	
V								59	
W			19					60	
X			20					61	
Y			21					62	
Z				30					
AA				31					
BB				32					
CC				33					
DD				34					
EE				35					
FF				36					
GG				37					

Note:
All pile numbers shall be prefixed 2- .

For bending diagrams see Sheet 18/20

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By E.P.S

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 20/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15 07 — STA. 970+58.36
SCALE: — STA. 975+58.49

RELOCATED U.S. 30

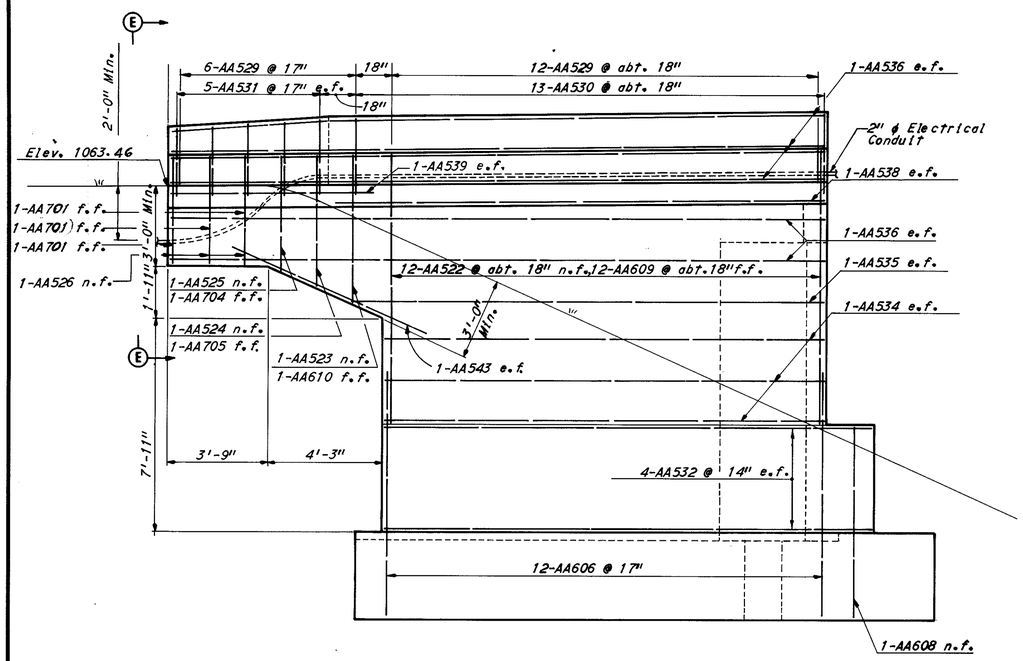
CANTON — STARK COUNTY — OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
BDB		CYK	MJK	
DATE 11-4-70	DATE	DATE 11-4-70	DATE 11-24-71	1668

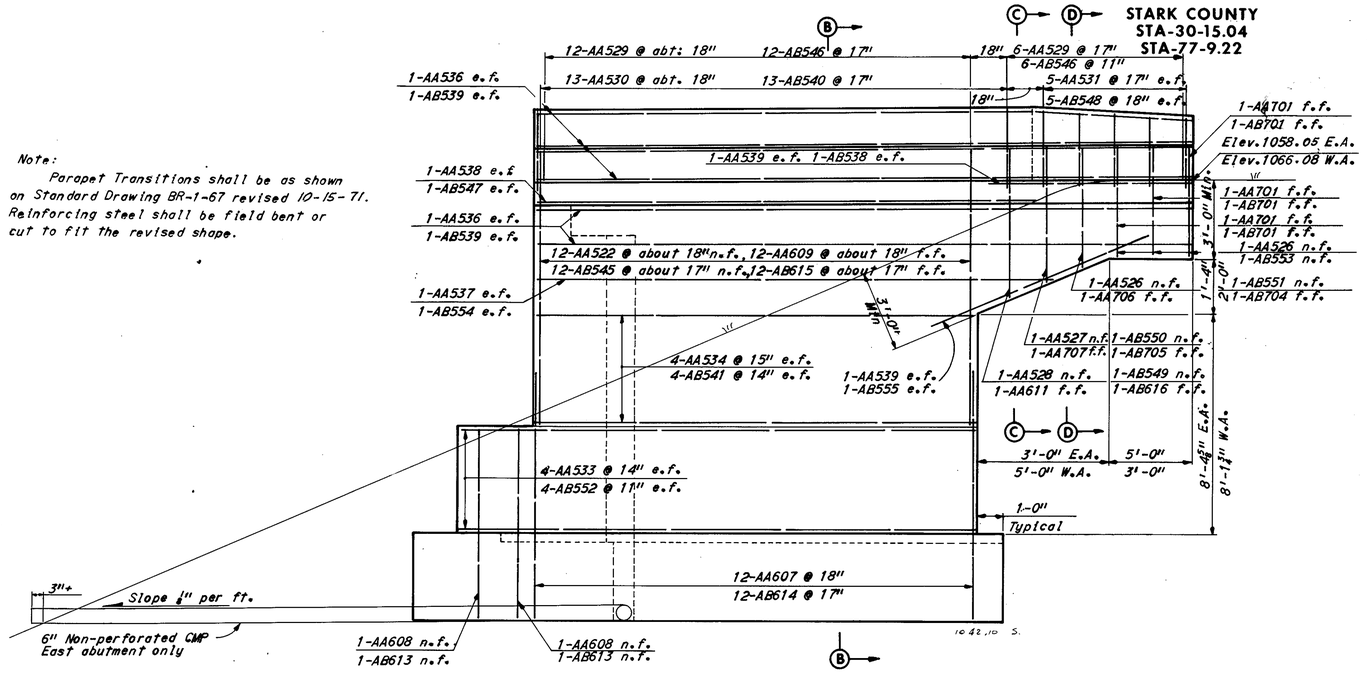
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

210
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

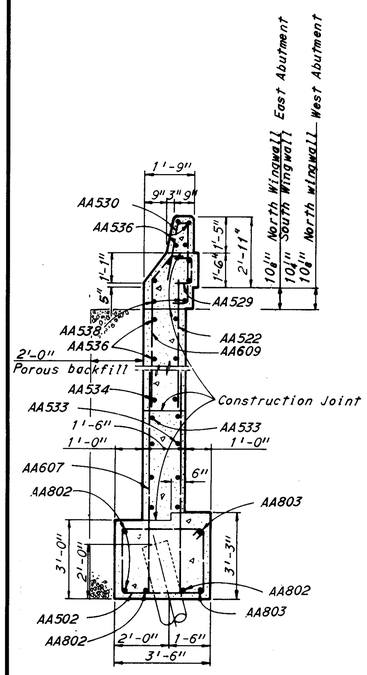


Note:
Parapet Transitions shall be as shown on Standard Drawing BR-1-67 revised 10-15-71. Reinforcing steel shall be field bent or cut to fit the revised shape.



10 42,10 5.

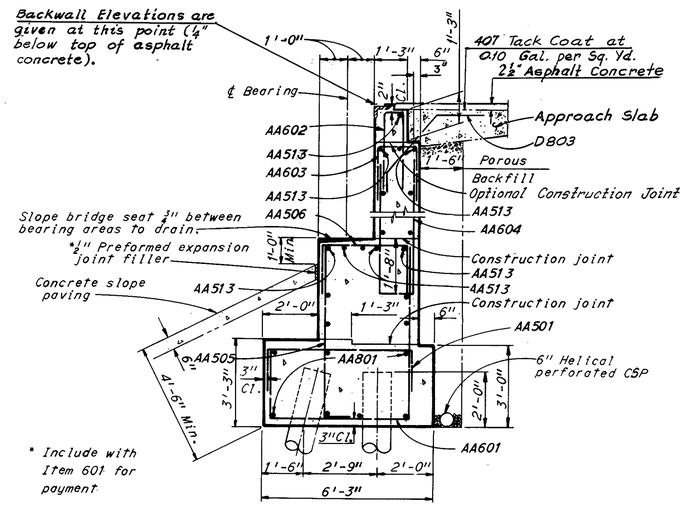
SOUTH WINGWALL EAST ABUTMENT
NORTH WINGWALL WEST ABUTMENT



SECTION B-B

NORTH WINGWALL EAST ABUTMENT

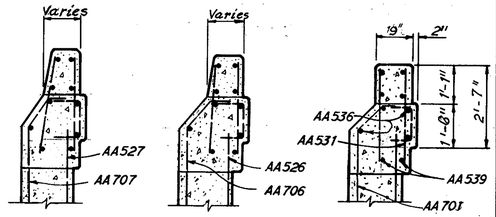
Backwall Concrete:
In addition to the provisions of 511.08, backwall concrete or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.



SECTION A-A

Notes:
For roadway end dam details see Ohio Standard Drawing SD-1-69, Sheets 1 and 2 of 4, and Sheet 203.
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 18/20
Shear keys at contraction joints shall be centered between front and back faces.
For details of median see Sheet 203.
O— denotes battered piles.
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.
For location of section A-A see Sheet 5/20
E.A. denotes east abutment.
W.A. denotes west abutment.
AA prefix on reinforcing steel denotes east abutment.
AB prefix in reinforcing steel denotes west abutment.

E WALL ELEVATION



SECTION C-C
SECTION D-D
VIEW E-E

H.N.T.B. BRIDGE NO. 3
Revised 12-8-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 6/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

ABUTMENT DETAILS

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 3/8"=1'-0" STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

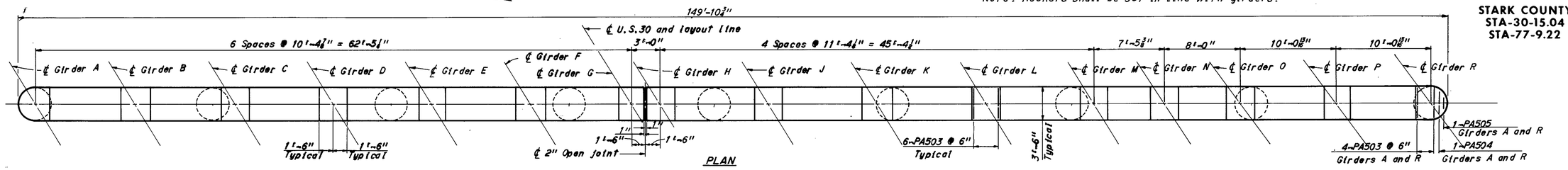
DRAWN BW	TRACED	CHECKED ASS	REVIEWED MJK	REVISED 10-14-77
DATE 8-11-70	DATE	DATE 8-31-70	DATE 11-24-71	1668

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

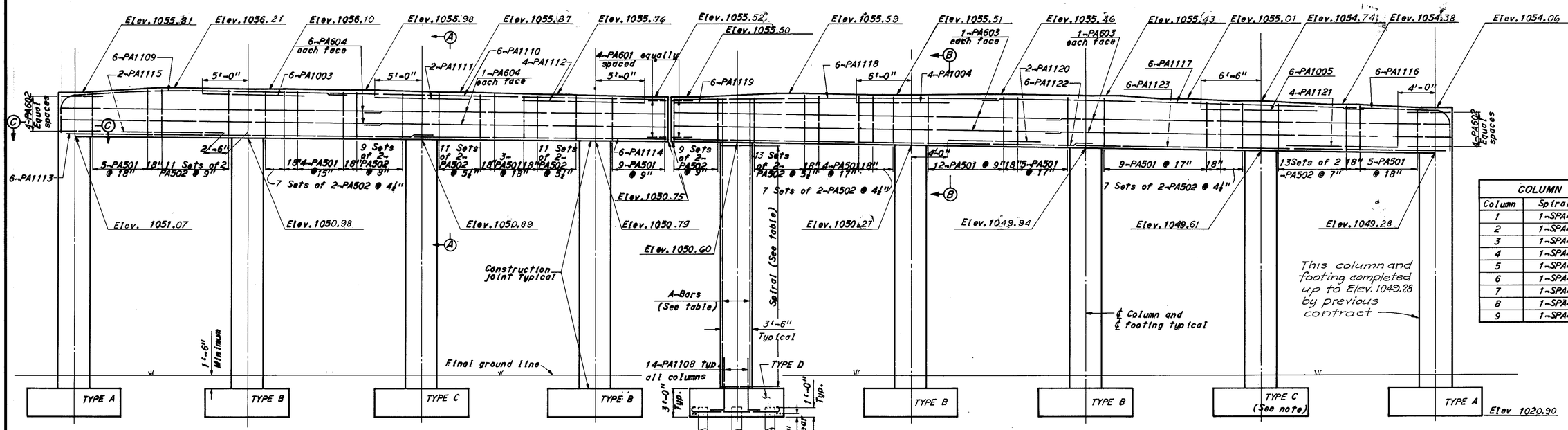
211
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

Note: Rockers shall be set in line with girders.



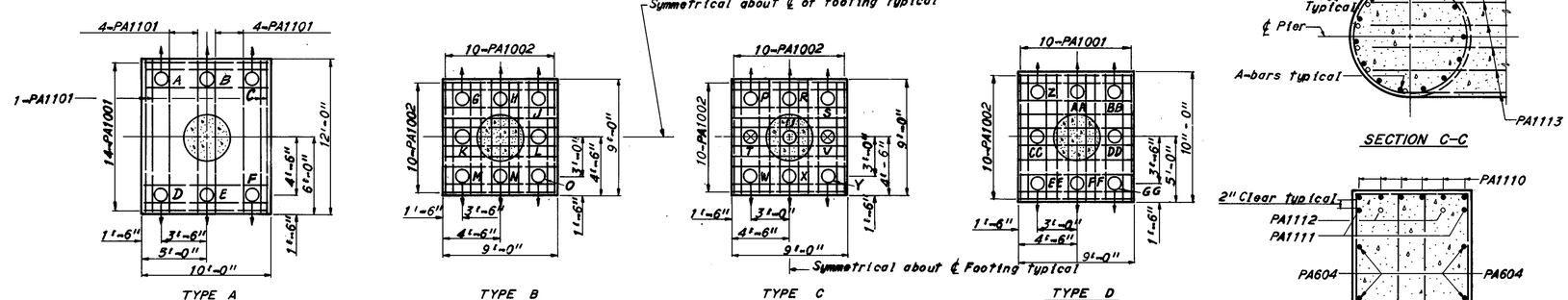
PLAN



COLUMN 1 | COLUMN 2 | COLUMN 3 | COLUMN 4 | COLUMN 5 | COLUMN 6 | COLUMN 7 | COLUMN 8 | COLUMN 9

ELEVATION

COLUMN STEEL		
Column	Spiral	A-Bars
1	1-SPA401	14-PA1102
2	1-SPA401	14-PA1103
3	1-SPA401	14-PA1102
4	1-SPA401	14-PA1104
5	1-SPA402	14-PA1104
6	1-SPA403	14-PA1104
7	1-SPA404	14-PA1105
8	1-SPA405	14-PA1106
9	1-SPA406	14-PA1107



FOOTINGS

Note: For pile numbering designation see Sheet 20/20

Note: ○ Denotes battered piles

⊗ Denotes these piles shall be added to footing 8 only.

Notes:

Bearings shall be set in line with girders. See Sheet 12/20 for intersection angles between centerline of pier and girders.

For reinforcement schedule see Sheet 19/20

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 2/20

The stirrups in all cantilevers and within 5 feet of the centerline of column shall be placed with the hooks at the bottom. All others shall be placed with the hook at the top.

PA503, PA504 and PA505 bars shall be placed 2½" ± below top of cap beam.

Revised 12-8-75 By EPS

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 7/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER 1

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 3/16"=1'-0" STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED CYK	REVIEWED MJK	REVISED
DATE 4-17-70	DATE	DATE 7-23-70	DATE 11-24-71	1668

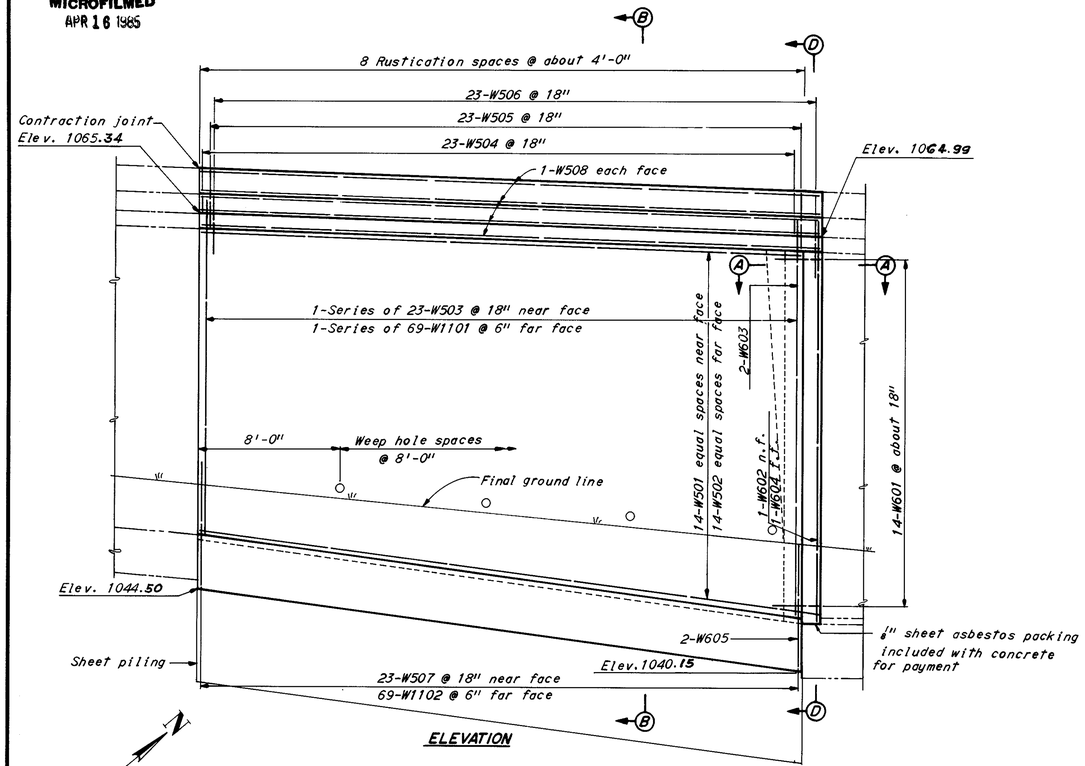
Revised 9-28-77 D.W.I.

MICROFILMED
APR 16 1985

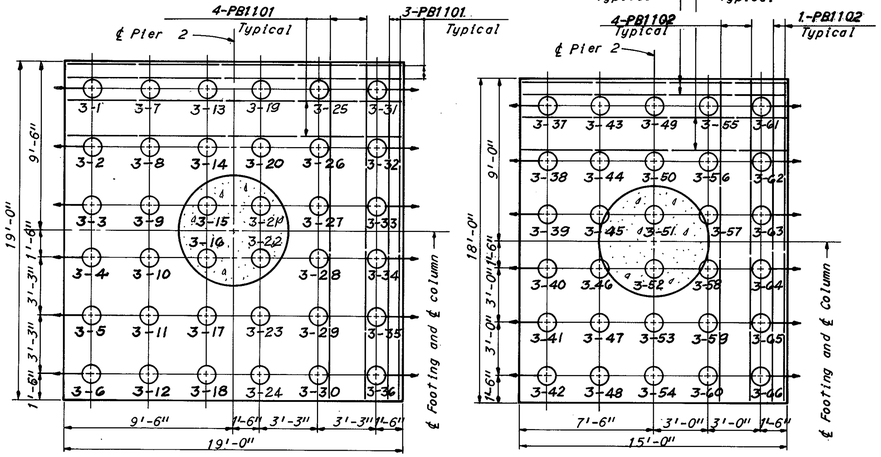
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

212
299

STARK COUNTY
STA-30-15.04
STA-77-9.22



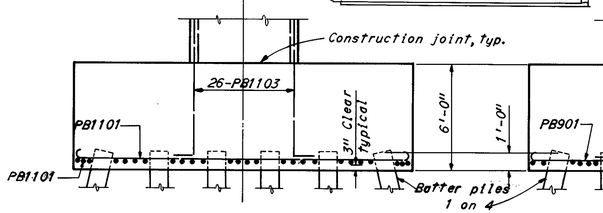
ELEVATION



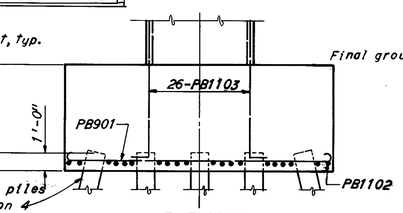
PLAN

PLAN

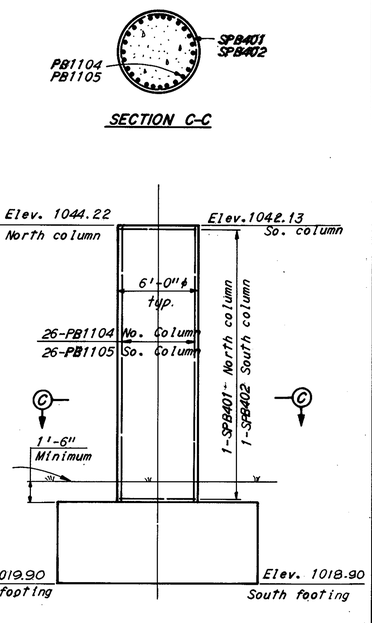
PIER 2 FOOTINGS AND COLUMNS COMPLETED BY PREVIOUS CONTRACT



ELEVATION
NORTH FOOTING

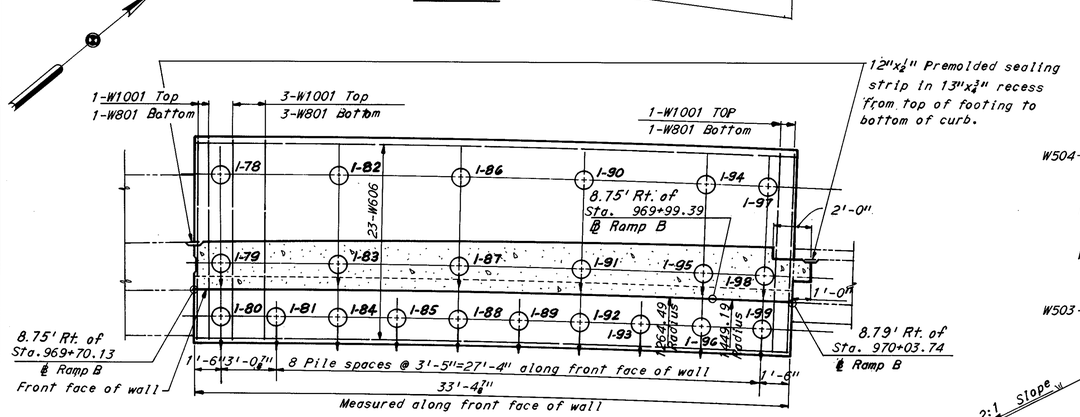


ELEVATION
SOUTH FOOTING

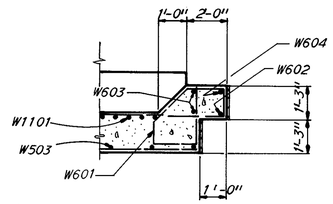


COLUMN ELEVATION

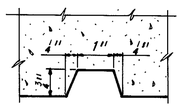
SECTION C-C



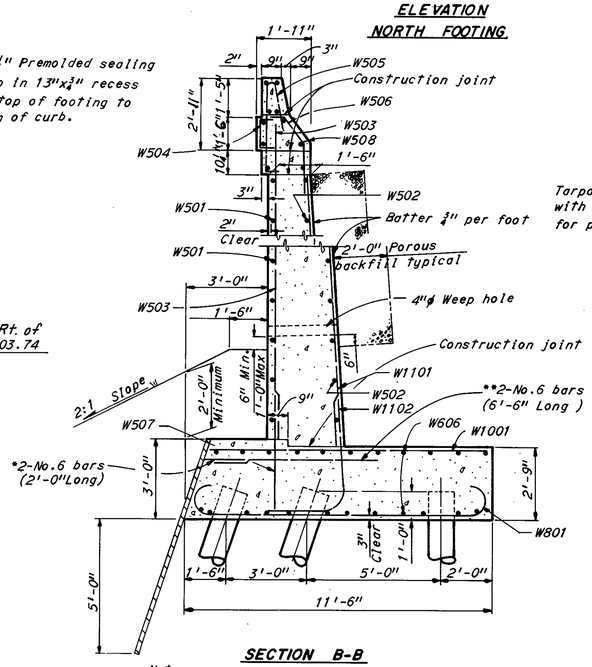
FOOTING PLAN



SECTION A-A

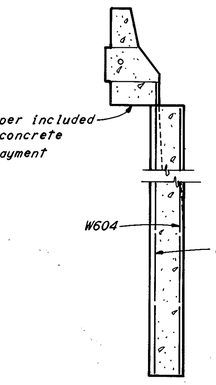


RUSTICATION DETAIL

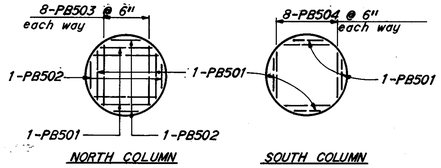


SECTION B-B

Note:
Batter piles and sheet piling 1 on 3.



SECTION D-D



NORTH COLUMN SOUTH COLUMN

TOP OF COLUMN REINFORCEMENT

Notes:

For pier 2 footing layout see Sheet 2/20

*2-No. 6 bars (2'-0" long) shall be welded to each sheet pile and 2-No. 6 bars shall be lapped with 2-No. 6 bars (2'-0" long) as shown. The No. 6 bars (2'-0" long) shall be included for payment with sheet piling.

Sheet piling shall have a minimum section modulus of 7 inches cubed per foot. Used piling in good condition may be used.

** To be included with Item 511, Class "C" concrete for payment.

Care shall be taken when placing PB501 thru PB504 bars so as not to interfere with anchor bolts but placed 2" clear to top of column.

○— Denotes battered piles

Weep holes shall be sloped ¼" per foot toward front face of wall.

n.f. denotes near face.

f.f. denotes far face.

For reinforcement schedule see Sheet 19/20

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 8/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

WALL D AND PIER 2

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 1/4"= 1'-0" STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

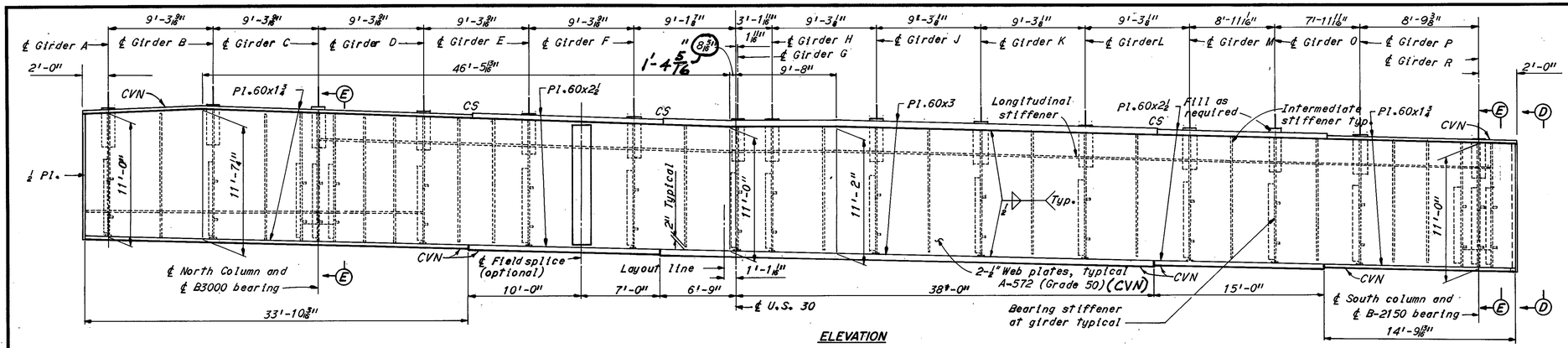
DRAWN BW	TRACED	CHECKED RSS	REVIEWED MJK	REVISED
DATE 10-9-70	DATE	DATE 10-15-70	DATE 11-24-71	1668

Revised 9-28-77 D.W.I.

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

213/299

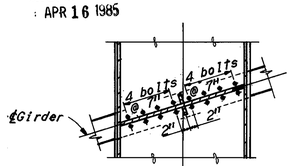
STARK COUNTY
STA-30-15.04
STA-77-9.22



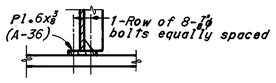
ELEVATION

All horizontal dimensions are measured along ℄ Bearing of pier 2.

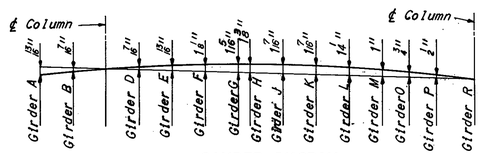
MICROFILMED
APR 16 1985



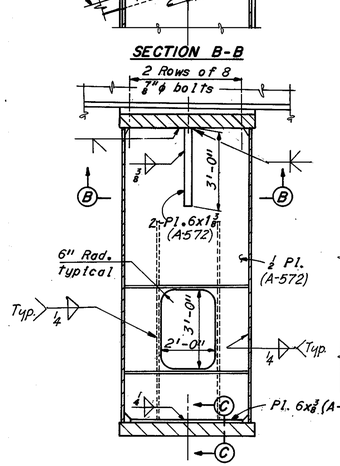
SECTION B-B



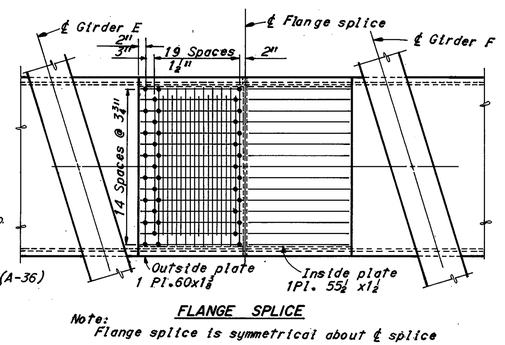
SECTION C-C



CAMBER DIAGRAM

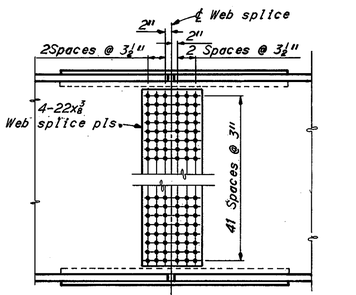


BEARING STIFFENER AT GIRDERS



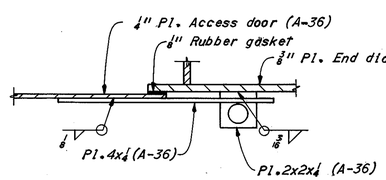
Note: Flange splice is symmetrical about ℄ splice

FLANGE SPLICE

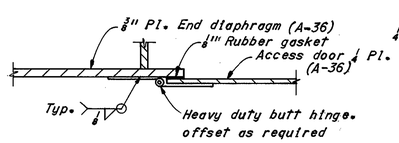


Caulk any spaces between spliced members to make cap beam air tight.

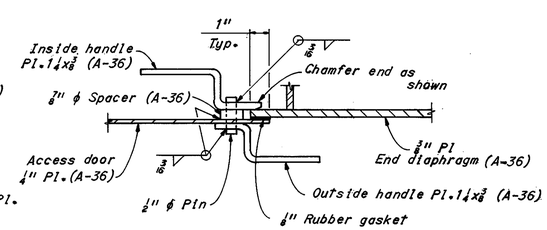
WEB SPLICE



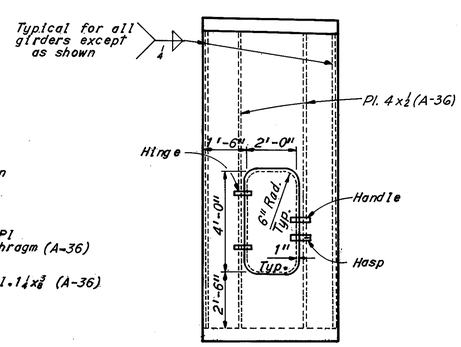
HASP DETAIL



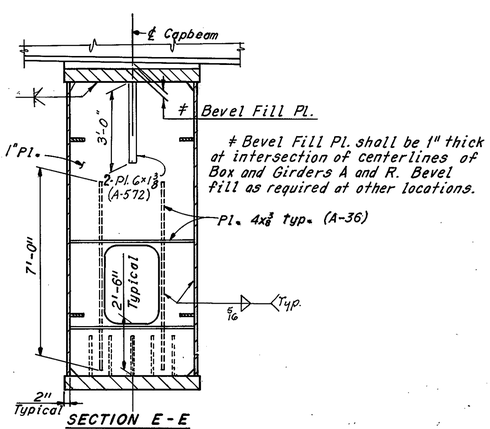
HINGE DETAIL



HANDLE DETAIL



VIEW D-D



≠ Bevel Fill Pl. shall be 1" thick at intersection of centerlines of Box and Girders A and R. Bevel fill as required at other locations.

SECTION E-E
BEARING STIFFENER AT COLUMNS

Notes:

For bearing details see Sheet 10/20
For column and footing details see Sheet 8/20
For longitudinal girder details see Sheet 13/20

Transverse intermediate stiffeners shall be plates 10x3/8 (A-36) welded on each web and spaced as shown in elevation. Use 1/4" fillet welds.

Longitudinal stiffeners shall be plates 6x1/4 (A-36) welded on inside face of webs only and placed a distance of 1/5 depth of web from top or bottom of web plate. Use 1/4" fillet welds. They shall terminate 4" from diaphragms and from transverse intermediate stiffiners, and do have clipped corners to clear welds.

Web depths as shown are given at the centerline of cap beam.

All bolts shall be A-325 bolts.

Bolts used in the flange and web field splices shall be 1" ϕ bolts.

All steel shall be A-588 unless shown otherwise.

Intermediate stiffeners shall be equally spaced between bearing stiffeners.

CVN See sheet 200.

CS-Indicates flange butt weld subject to compressive stress only.

Painting of Cap Beam: The interior of the cap beam shall receive one coat of primer. No field painting of the interior is required. Painting of the exterior shall be as per SS846.

All splice plates, except fill plates, shall be (CVN).

H.N.T.B. BRIDGE NO. 3 — Revised 3-4-76 By C.K.B.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 9/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER 2 CAP BEAM

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15 07 STA. 970+58.36
SCALE: NONE STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

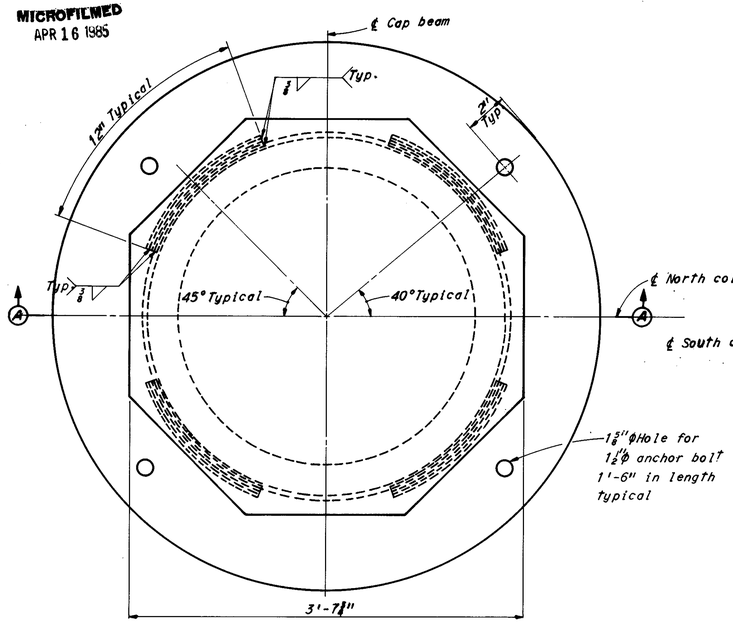
DRAWN BW	TRACED	CHECKED KSS	REVIEWED M.J.K	REVISED 10-14-77
DATE 7-8-70	DATE	DATE 9-15-70	DATE 11-24-71	1-9-78 1668

Revised 3-1-78

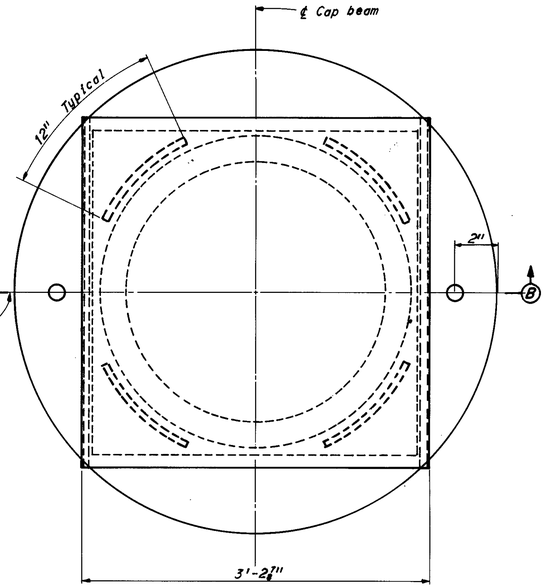
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

214
299

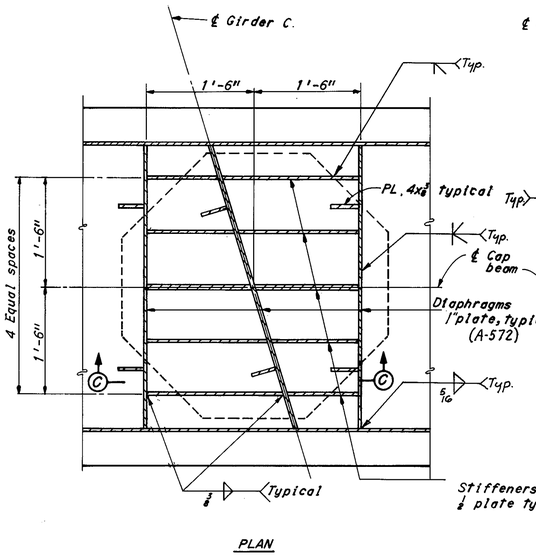
STARK COUNTY
STA-30-15.04
STA-77-9.22



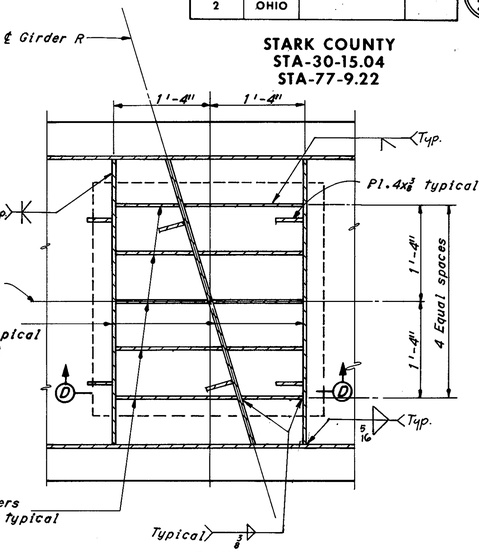
PLAN



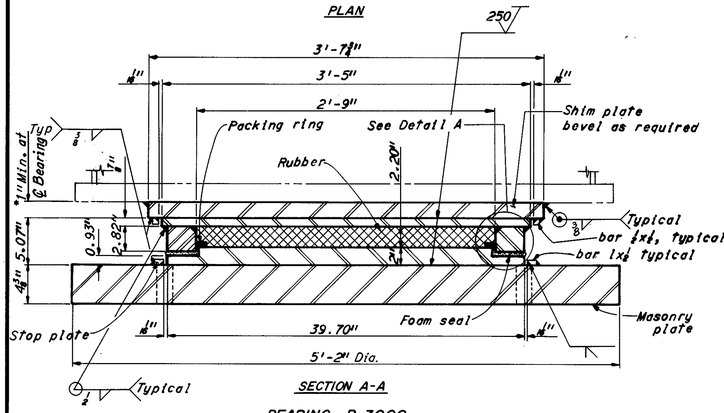
PLAN



PLAN

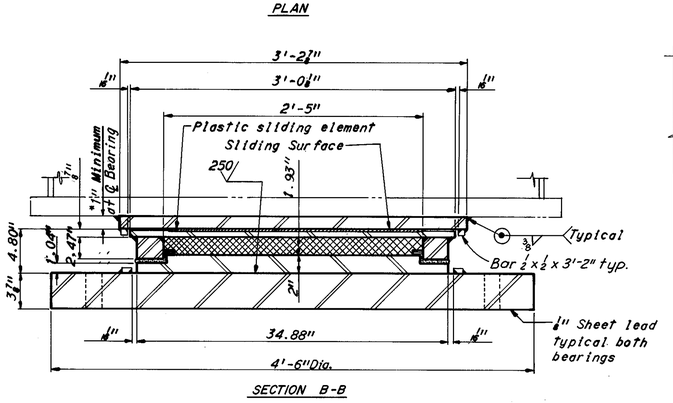


PLAN



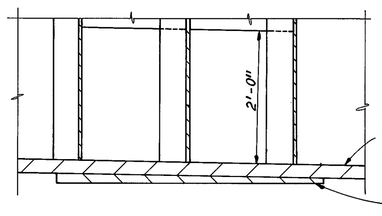
SECTION A-A

BEARING B-3000



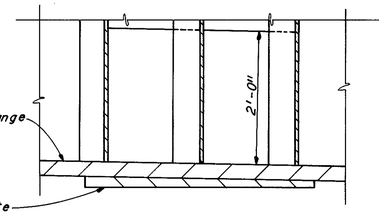
SECTION B-B

BEARING B-2150



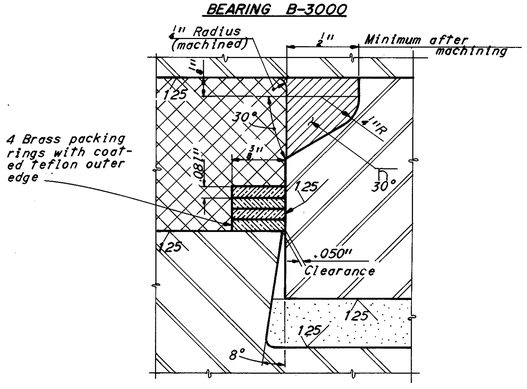
SECTION C-C

STIFFENERS B-3000

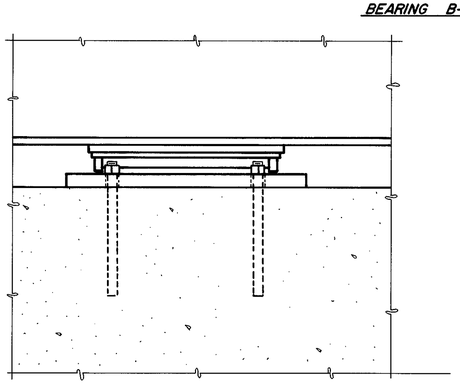


SECTION D-D

STIFFENERS B-2150



DETAIL A



ANCHOR BOLT DETAILS

Notes:

All steel between shim and masonry plates shall be ASTM A-36.

Shim plate , masonry plate and all stiffeners shall be ASTM A588.

All steel between shim plate and masonry plate shall be hot-dip galvanized, AASHO M-111.

Bearings are symmetrical about both axes.

Details not shown for B-2150 are similar to these shown for B-3000.

**Shim plate shall have a 1" minimum thickness at centerline of bearing.*

For diaphragm details see Sheet 9/20

For other notes see Sheet 13/20

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 10/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

BEARING DETAILS

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.

BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 1 1/2" = 1'-0" STA. 975+58.49

RELOCATED U.S. 30

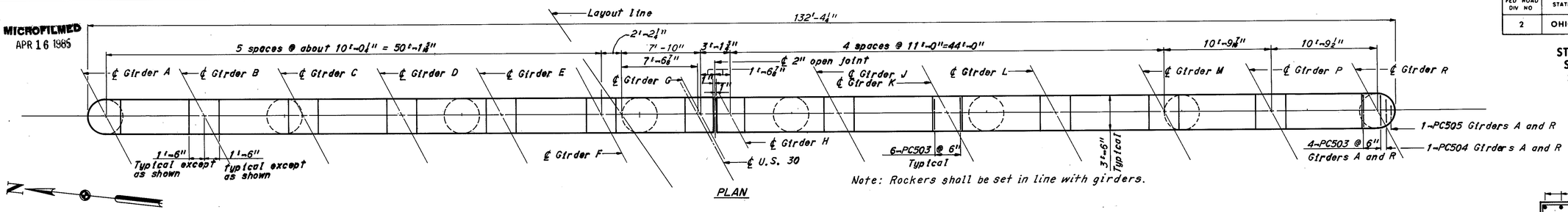
CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED CJK	REVIEWED MJK	REVISED 10-14-77
DATE 6-6-70	DATE	DATE 7-28-70	DATE 11-24-71	1668

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

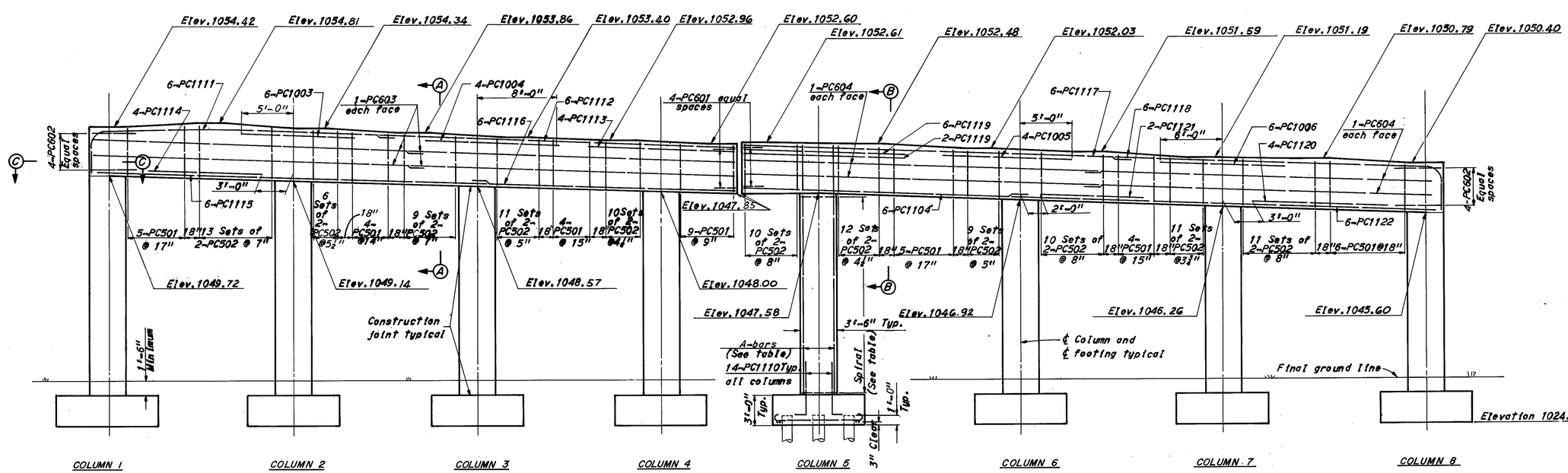
215
299

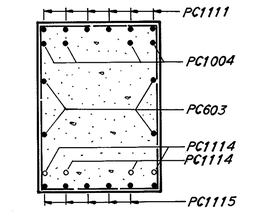
STARK COUNTY
STA-30-15.04
STA-77-9.22



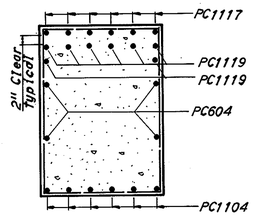
PLAN

Note: Rockers shall be set in line with girders.





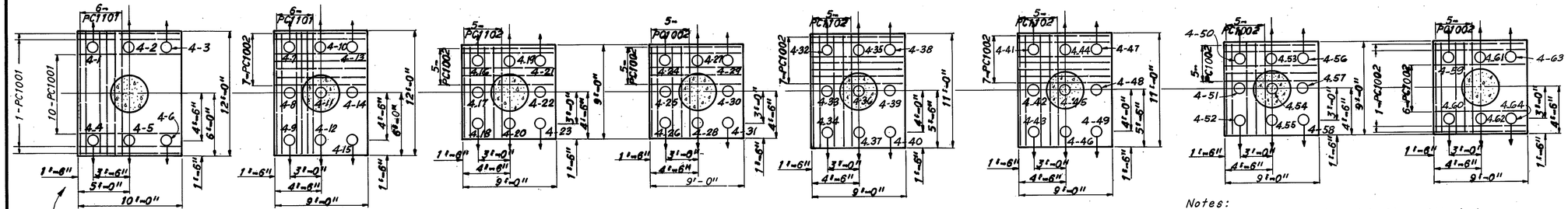
SECTION A-A



SECTION B-B

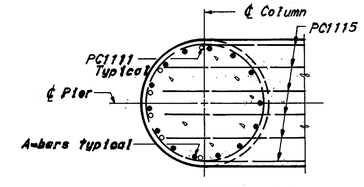
COLUMN 1 | COLUMN 2 | COLUMN 3 | COLUMN 4 | COLUMN 5 | COLUMN 6 | COLUMN 7 | COLUMN 8

ELEVATION



This footing and column 1 up to Elev. 1049.72 completed by previous contract.

FOOTING PLAN



SECTION C-C

Notes:
○ Denotes battered piles.
Reinforcing steel in footings is symmetrical in both directions unless shown otherwise.
PC503, PC504, and PC505 bars shall be placed 2½"± below top of cap beam.
For reinforcement schedule see Sheet 19/20
All battered piles shall be battered 3 in 12.

Notes:
Bearings shall be set in line with girders.
See Sheet 12/20 for intersection angles between centerline of pier and girders.
Piles dimensions are measured along bottom of footing.
All piles are 12" ϕ cast-in-place concrete.

For footing layout see Sheet 2/20
The stirrups in all cantilevers and within 5 feet of the centerline of column shall be placed with the hooks at the bottom. All others shall be placed with the hook at the top.

COLUMN STEEL		
Column	Spiral	A-Bars
1	1-SPC401	14-PC1103
2	1-SPC402	14-PC1103
3	1-SPC403	14-PC1105
4	1-SPC404	14-PC1106
5	1-SPC405	14-PC1106
6	1-SPC406	14-PC1107
7	1-SPC407	14-PC1108
8	1-SPC408	14-PC1109

H.N.T.B. BRIDGE NO. 3 | Revised 12-9-75 | By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 11/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER 3

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA. 30-15.07 STA. 970 • 58.36
SCALE: 3/16"=1'-0" STA. 975 • 58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

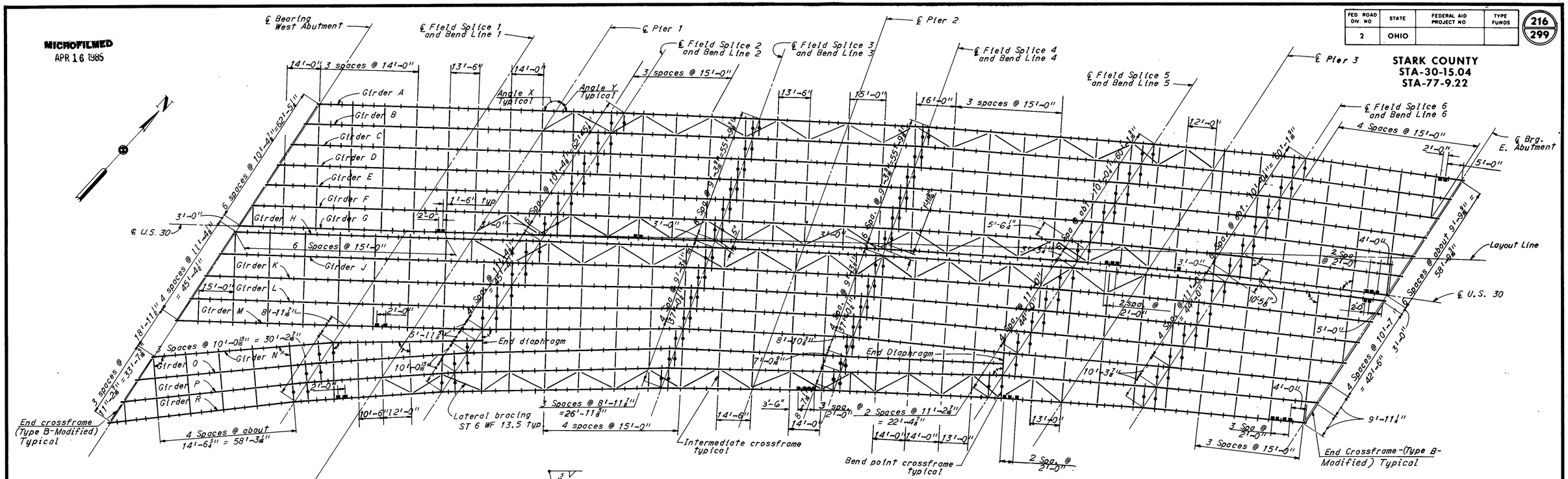
DRAWN BW	TRACED	CHECKED CVK	REVIEWED M.J.K	REVISED
DATE 5-5-70	DATE	DATE 7-24-70	DATE 11-24-71	1668

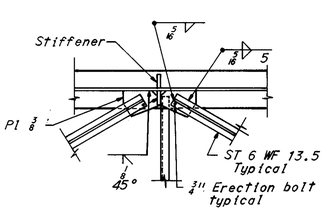
Revised 9-28-77 D.W.L.

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

216
299

STARK COUNTY
STA-30-15.04
STA-77-9.22





FRAMING PLAN

LATERAL BRACING AT PIER AND CROSSFRAME

GIRDER ANGLES

	℄ BRG W. ABUT. THRU B.L. 2	BEND LINE 2	BEND LINE 3	BEND LINE 3 AND ℄ PIER 2	BEND LINE 4	BEND LINE 4	BEND LINE 5	BEND LINE 5 AND ℄ PIER 3	BEND LINE 6	BEND LINE 6 AND ℄ BRG. E.A.
	ANGLE X	ANGLE Y	ANGLE X	ANGLE Y	ANGLE X	ANGLE Y	Angle X	Angle Y	Angle X	Angle Y
Girder A	121° 29' 59"	59° 07' 25"	107° 32' 34"	72° 58' 48"	107° 01' 12"	74° 31' 50"	118° 48' 11"	62° 10' 05"	117° 49' 55"	64° 39' 19"
Girder B	↑	59° 03' 37"	107° 36' 21"	↑	↑	74° 25' 23"	118° 54' 39"	↑	↑	64° 29' 01"
Girder C		59° 00' 08"	107° 39' 51"			74° 18' 35"	119° 01' 27"			64° 18' 45"
Girder D		58° 56' 55"	107° 43' 04"			74° 11' 26"	119° 08' 36"			64° 08' 30"
Girder E		58° 53' 56"	107° 46' 02"			74° 03' 54'	119° 16' 08"			63° 58' 17"
Girder F		58° 51' 10"	107° 48' 48"			73° 55' 57"	119° 24' 04"			63° 48' 06"
Girder G	121° 29' 59"	58° 48' 36"	107° 51' 23"	72° 58' 48"	107° 01' 12"	73° 47' 33"	119° 32' 28"	62° 10' 05"	117° 49' 55"	63° 37' 57"

GIRDER ANGLES

	℄ BRG W. ABUT AND B.L. 1	BEND LINE 1 AND ℄ PIER 1	BEND LINE 2	BEND LINE 2	BEND LINE 3	BEND LINE 3 AND ℄ PIER 2	BEND LINE 4	BEND LINE 4	BEND LINE 5	BEND LINE 5 AND ℄ PIER 3	BEND LINE 6	BEND LINE 6 AND ℄ BRG. E.A.
	Angle X	Angle Y	Angle X	Angle Y	Angle X	Angle Y	Angle X	Angle Y	Angle X	Angle Y	Angle X	Angle Y
Girder H	121° 29' 59"	58° 30' 01"	121° 29' 59"	59° 02' 00"	107° 37' 59"	72° 58' 48"	107° 01' 12"	73° 46' 07"	119° 33' 54"	61° 57' 28"	118° 02' 32"	63° 37' 57"
Girder J	↑	↑	↑	58° 21' 50"	108° 18' 09"	↑	↑	74° 15' 24"	119° 04' 37"	↑	↑	63° 21' 09"
Girder K				57° 44' 42"	108° 55' 17"			74° 46' 51"	118° 33' 10"			63° 04' 25"
Girder L				57° 10' 17"	109° 29' 42"			75° 20' 43"	117° 59' 18"			62° 47' 46"
Girder M	121° 29' 59"	58° 30' 01"	121° 29' 59"	56° 38' 18"	110° 01' 40"	72° 58' 48"	107° 01' 12"	75° 57' 16"	117° 22' 45"	61° 57' 28"	118° 02' 32"	62° 31' 13"
Girder N	127° 50' 33"	56° 06' 43"	123° 53' 17"	———	———	———	———	———	———	———	———	———
Girder O	128° 30' 07"	53° 02' 22"	126° 57' 38"	55° 40' 00"	110° 59' 59"	72° 53' 07"	107° 06' 53"	72° 53' 07"	———	———	———	———
Girder P	129° 08' 57"	53° 02' 19"	126° 57' 41"	55° 42' 58"	110° 57' 00"	71° 27' 06"	108° 32' 54"	71° 27' 06"	121° 52' 55"	61° 16' 57"	118° 43' 03"	62° 14' 16"
Girder R	129° 47' 06"	53° 02' 17"	126° 57' 43"	55° 45' 48"	110° 54' 11"	71° 09' 26"	108° 50' 34"	72° 37' 45"	120° 42' 16"	60° 36' 58"	119° 23' 02"	61° 57' 25"

Notes:
Intermediate stiffeners shall be placed as shown on framing plan, equally spaced between crossframes or crossframes and bearing stiffeners or crossframes and splices. See note on sheet 200
for crossframe details see Sheet 202.
For intermediate crossframe details see Sheet 202.
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 203.
For details of curb plates at concrete bridge railing see Ohio Standard Drawing SD-1-69, Sheet 2 of 4 and Sheet 203.
Scuppers shall be in accordance with Std. Dwg. SD-1-69 except that scupper pipes shall extend 8" below the bottom of the beams instead of 2", and top of scupper shall be 4" below asphalt concrete wearing course.

Notes:
Set bend point crossframes normal to girder near the bend point.
Dimensions to scuppers are measured along center-line of girders.
■ Denotes standard scuppers.
For underpass light support details see sheet 125.
For detail of girder end diaphragm see sheet 202.
B.L. denotes bend line.
—●— denotes bend point crossframe.
∠ denotes 90°
For bend point crossframe details see Sheet 202.
For Camber and Deflection Table see Sheet 15/20
For detail of intermediate stiffeners see Sheet 203.
For other notes see Sheet 13/20

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 12/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

FRAMING PLAN

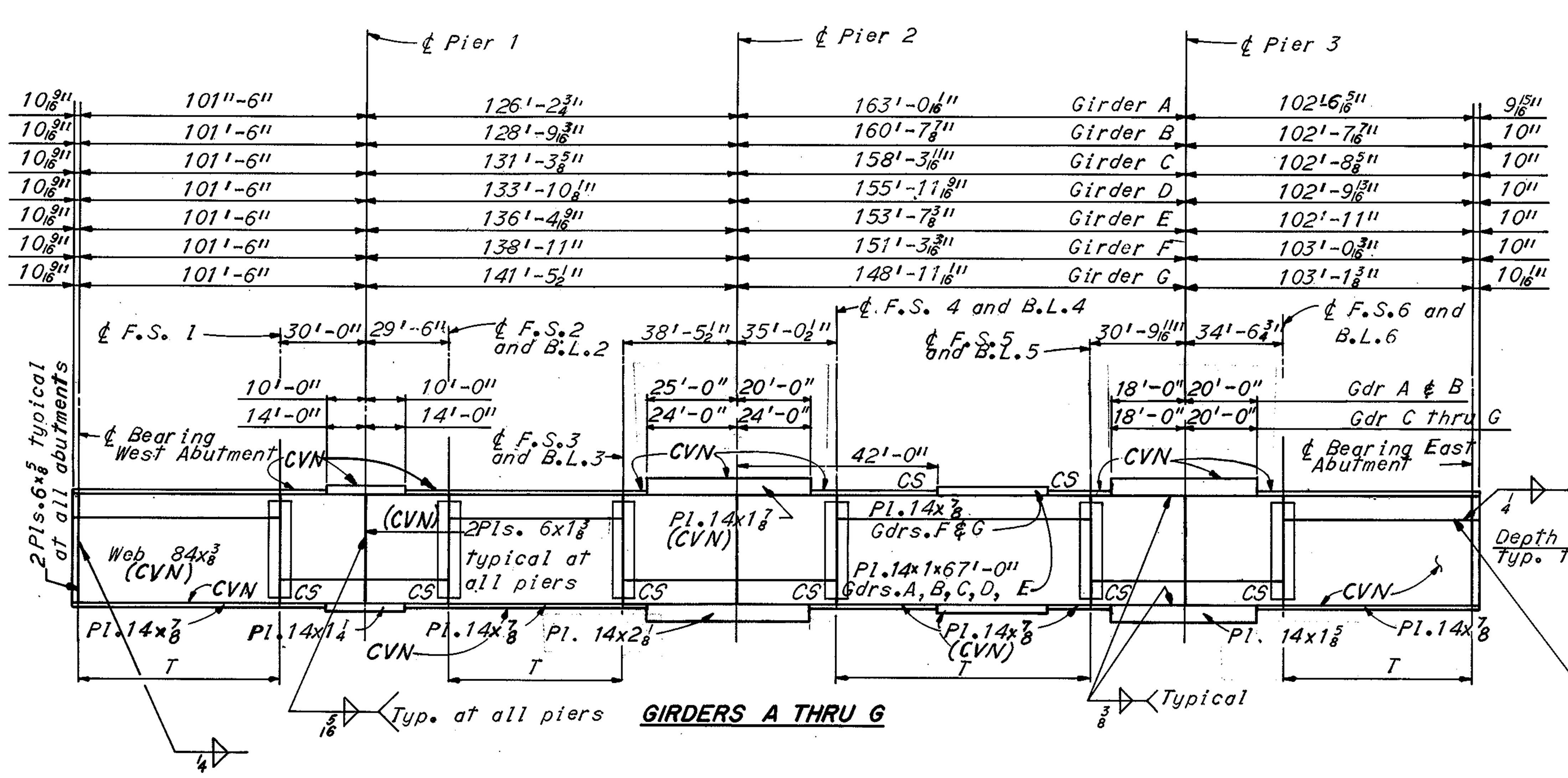
U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: 1"=20' STA. 975+58.49

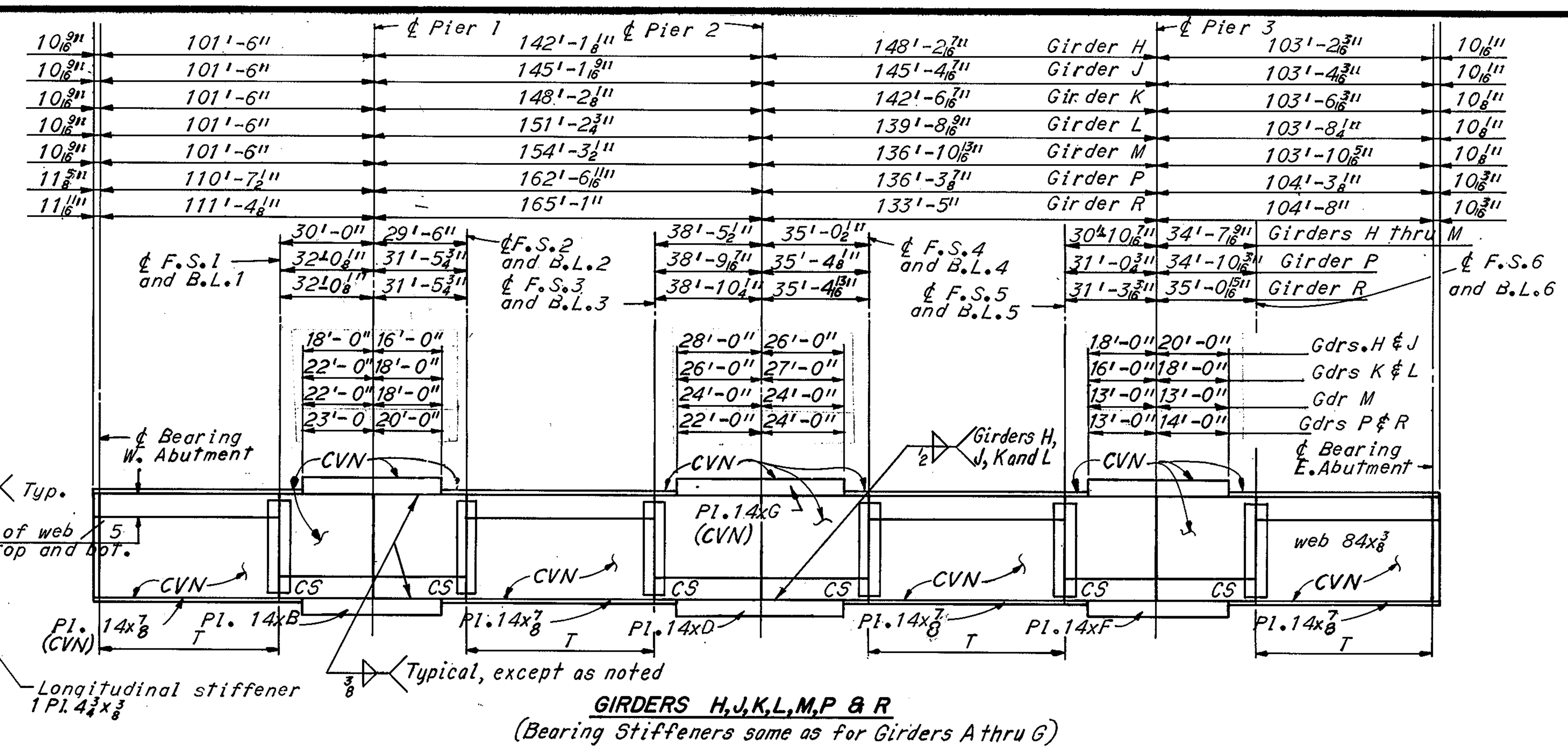
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED ZVK	REVIEWED MJR	REVISED
DATE 3-15-70	DATE	DATE 8-4-70	DATE 11-24-71	

1668





CS - Indicates flange butt weld subject to compressive stress only.
CVN - See Sheet 200

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

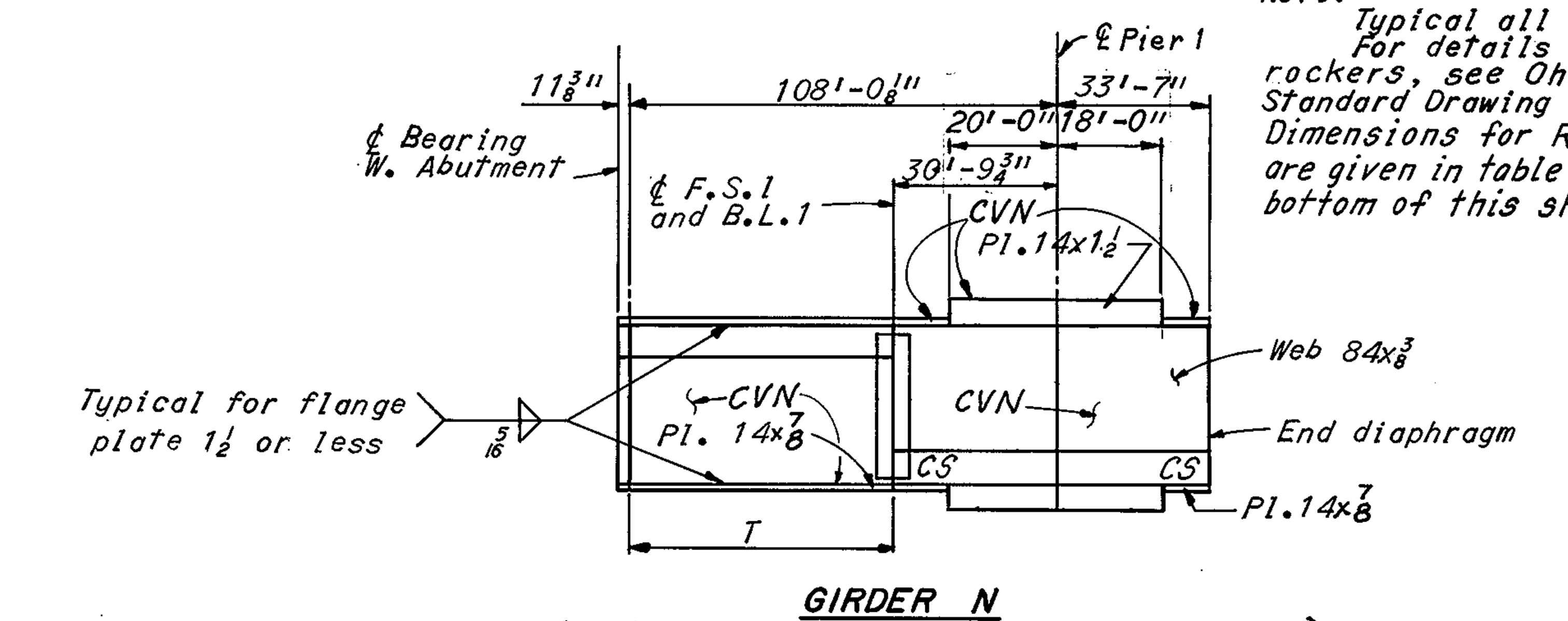
217/299

STARK COUNTY
STA-30-15.04
STA-77-9.22

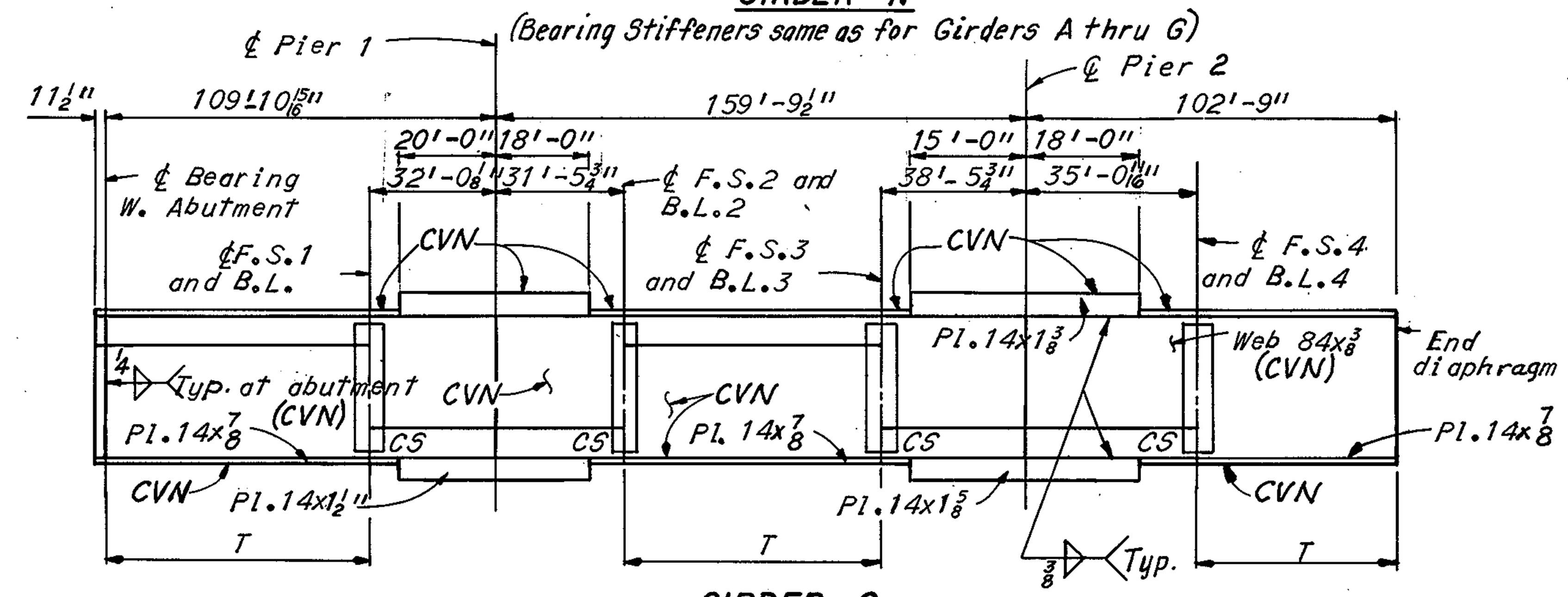
FLANGE PLATES							
Dimension		B		D		F	G
Girder H		1 1/2		2 3/8		1 1/2	2
Girder J		1 1/2		2 3/8		1 1/2	2
Girder K		1 5/8		2 3/8		1 1/2	2
Girder L		1 5/8		2 3/8		1 1/2	2
Girder M		1 5/8		2 1/8		1 1/2	2
Girder P		1 5/8		2		1 3/8	1 3/4
Girder R		1 5/8		2		1 3/8	1 3/4

SHOES				
W. Abut	Pier 1	Pier2	Pier 3	E. Abut
R-150	R-400	——	R-400	R-150

Note:
Typical all girders. For details of rockers, see Ohio Standard Drawing RB-1-55. Dimensions for R-400 are given in table at bottom of this sheet.



GIRDER N
(Bearing Stiffeners same as for Girders A thru G)



GIRDER O
(Bearing Stiffeners same as for Girders A thru G)

NOTES FOR B-3000 and B-2150 BEARINGS:

The rubber used in the bearings shall be manufactured to the highest standards from a compound based on natural rubber and free from fillers other than carbon black and zinc oxide in sufficient quantity to give the required hardness. An antiozonisant must be included in sufficient quantity and of such a type that a sample of the rubber tested in accordance with ASTM D 1149 will show no evidence of cracking when subjected to a concentration of one part per million ozone and a strain of 20 per cent.

The rubber shall have the following characteristics.

Hardness	50 - 55 Shore A durometer
Min. tensile strength	2700 lbs./sq. in.
Min. tear strength	285 lbs./sq. in.
Elongation at break	600%
Max. compression set	25% of original thickness (ASTM D 395 Method B)

Care shall be taken to avoid sufficient heat accumulation, when welding, to affect the rubber.

The bearings shall show no detectable increase in stiffening rate after 168 hours at - 30° C. (-22°F.) and shall be no more than twice as stiff at this temperature as compared with +20° C. (+68°F.)

The plastic sliding element shall consist of Tetrafluorethylene Fluorocarbon Resin .030" ± .003" thick, the resin being 25% to 30% ceramic-filled, and having a minimum specific gravity of 2.22 with a minimum tensile strength of 2000 psi and minimum elongation of 150%, when measured by the procedures of ASTM 1457-62T.

The plastic element is recessed .010" ± .002" into the top of the 7/8" plate, providing a minimum clearance of .020" ± .002" between 7/8" plate and 1/2" minimum plate.

All structural steel in these bearings shall conform to ASTM A-36. Shim and masonry plate shall conform to ASTM A-588.

The sliding surface of the top plate is stainless steel polished to a 20 micro inch finish. The stainless steel sliding surface shall be clad to the top plate in accordance with the requirements of ASTM designation A264.

When assembling, the rubber should be entirely coated with a suitable lubricant which will have no adverse effect on materials in the bearings. A minimum of four brass split sealing rings, coated with tetra-fluoro-ethylene fluorocarbon resin on their outer edges, shall be placed so as to prevent any possibility of extrusion between piston and cylinder. Split lines shall be offset 90° relative to each other.

The piston and cylinder assembly shall be sealed with a heavy polyurethane foam impregnated throughout with a special solution of petroleum resins, isobutylene and isoprene for the B-3000 bearing. This seal shall be held in compression by tap screws holding the assembly together for shipping and installation. These screws shall be designed to break away under load. For the B-2150 bearing the top plate with the sliding surface shall be held to the 3 7/8" bottom plate by 4 bolts during shipping and installation. These bolts shall be tagged and marked to the effect that they shall be removed after installation of the unit.

Welds shall be made and tested in accordance with the standard specifications. The welds shall be full fillet welds and the preparation for the internal weld of the cylinder shall be as shown.

Mating horizontal surfaces in the bearing plates shall have a finish not less than USASI #250. This same limit applies to the outer surfaces of the bearings and bearing of sole plates in direct contact with the bearings.

All external metal shall be hot-dip galvanized in conformance with AASHO M-111 or be painted by the manufacturer with a minimum of one prime coat and two finish coats of a high-grade enamel.

In addition to the requirements of the standard specifications, certified test reports from a recognized testing laboratory acceptable to the engineer, showing compliance with the above requirements, shall be furnished by the contractor at no extra cost to the State. Bearing devices shall be delivered to the job site at least 15 days prior to the date required for installation in order that tests may be conducted on the units to be used if required by the engineer.

No separate measurement and payment will be made for furnishing and placing the confined rubber, stainless steel, plastic sliding element etc., utilized in bearing devices, it being understood that the payment therefore is included in the payment made for Structural Steel, Item 513.

R-400 SHOE												
A	B	C	D	F	G	H	K	L	M	R	T	Y
3 1/2"	20"	3 1/2"	3 1/4"	1"	12"	21 1/8"	14 1/2"	28"	25"	14"	3 1/2"	1 1/16"

Notes:

Dimensions are measured along ¢ Girder.

All structural steel shall be ASTM A-36 except as follows:

Girder flanges and bearing stiffeners ASTM A-588. (including flange splice plates).

Girder webs ASTM A-572 (Grade 50). (including splice plates).

Top and bottom flange plates are identical in size except as shown.

All stiffeners shall be placed normal to girder flanges.

For detail of field splices see Sheet 202.

All intermediate stiffeners shall be Pls. 5x5/16 except at field splices Ls 6x4x3/8 shall be used.

All intermediate stiffener to web welds shall be 1/4" continuous fillets on both sides of stiffener.

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

All splice plates, except fill plates, shall be (CVN).

H.N.T.B. BRIDGE NO. 3 | Revised 12-9-75 | By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF | 13/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

GIRDER ELEVATIONS

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-1507 STA. 970+58.36
SCALE: NONE STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED CYK	REVIEWED MJK	REVISED 10-14-77
DATE 4-1-70	DATE	DATE 7-31-70	DATE 11-24-71	1-9-78 1668

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

218
299

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

Girder	℄ Brg. W. Abut.	.1	.2	.3	.4	.5	.6	F.S.1	.8	.9	Pier 1	.1	F.S.2	.3	.4	.5	.6	F.S.3	.8	.9	Pier 2
A	1065.93	1065.89	1065.86	1065.82	1065.78	1065.75	1065.71	1065.67	1065.62	1065.57	1065.52	1065.45	1065.37	1065.32	1065.26	1065.20	1065.13	1065.07	1065.01	1064.94	1064.88
B	1066.32	1066.28	1066.25	1066.21	1066.17	1066.14	1066.10	1066.06	1066.02	1065.97	1065.92	1065.85	1065.76	1065.72	1065.66	1065.59	1065.55	1065.48	1065.42	1065.35	1065.29
C	1066.32	1066.27	1066.22	1066.17	1066.12	1066.07	1066.03	1065.98	1065.93	1065.87	1065.80	1065.72	1065.62	1065.56	1065.47	1065.39	1065.31	1065.22	1065.15	1065.06	1064.98
D	1066.31	1066.25	1066.19	1066.13	1066.07	1066.01	1065.95	1065.88	1065.82	1065.76	1065.68	1065.58	1065.46	1065.38	1065.28	1065.18	1065.08	1064.97	1064.88	1064.78	1064.68
E	1066.31	1066.24	1066.17	1066.10	1066.02	1065.95	1065.88	1065.80	1065.73	1065.66	1065.58	1065.46	1065.32	1065.22	1065.10	1064.98	1064.86	1064.73	1064.63	1064.51	1064.39
F	1066.33	1066.25	1066.16	1066.08	1065.99	1065.91	1065.82	1065.74	1065.66	1065.57	1065.48	1065.34	1065.19	1065.07	1064.93	1064.79	1064.66	1064.49	1064.38	1064.24	1064.11
G	1066.10	1066.01	1065.92	1065.84	1065.75	1065.67	1065.58	1065.49	1065.41	1065.32	1065.24	1065.10	1064.94	1064.82	1064.67	1064.53	1064.39	1064.21	1064.11	1063.97	1063.82
H	1066.16	1066.07	1065.98	1065.89	1065.80	1065.72	1065.63	1065.53	1065.45	1065.36	1065.27	1065.13	1064.98	1064.85	1064.71	1064.57	1064.43	1064.24	1064.14	1064.00	1063.86
J	1066.43	1066.33	1066.22	1066.11	1066.00	1065.90	1065.79	1065.68	1065.57	1065.47	1065.36	1065.21	1065.05	1064.90	1064.75	1064.60	1064.45	1064.25	1064.14	1063.99	1063.84
K	1066.50	1066.38	1066.26	1066.14	1066.02	1065.90	1065.78	1065.65	1065.53	1065.41	1065.29	1065.12	1064.94	1064.77	1064.60	1064.43	1064.26	1064.02	1063.92	1063.74	1063.57
L	1066.59	1066.45	1066.31	1066.18	1066.04	1065.91	1065.78	1065.64	1065.51	1065.38	1065.24	1065.04	1064.85	1064.65	1064.46	1064.27	1064.08	1063.81	1063.70	1063.50	1063.31
M	1066.70	1066.54	1066.38	1066.24	1066.09	1065.94	1065.79	1065.64	1065.50	1065.35	1065.20	1064.98	1064.77	1064.42	1064.21	1064.04	1063.85	1063.57	1063.47	1063.26	1063.05
N	1065.87	1065.74	1065.62	1065.50	1065.38	1065.27	1065.17	1065.06	1064.96	1064.84	1064.74	1064.70	———	1064.64	1064.61	1064.58	1064.55	———	1064.50	1064.47	*1064.44
O	1065.55	1065.42	1065.29	1065.17	1065.06	1064.95	1064.84	1064.74	1064.65	1064.55	1064.47	1064.36	1064.27	1064.15	1063.98	1063.80	1063.61	1063.32	1063.24	1063.02	1062.80
P	1065.23	1065.10	1064.98	1064.86	1064.74	1064.63	1064.53	1064.42	1064.33	1064.23	1064.14	1064.02	1063.92	1063.79	1063.69	1063.56	1063.38	1063.08	1063.00	1062.79	1062.58
R	1064.91	1064.79	1064.68	1064.56	1064.45	1064.34	1064.22	1064.11	1064.01	1063.92	1063.82	1063.69	1063.58	1063.45	1063.39	1063.31	1063.15	1062.83	1062.76	1062.55	1062.34
N. G.	1065.93	1065.91	1065.89	1065.86	1065.82	1065.79	1065.75	1065.70	1065.64	1065.58	1065.52	1065.45	1065.40	1065.34	1065.28	1065.22	1065.14	1065.07	1065.00	1064.93	1064.88
N.M.G.	1066.09	1066.02	1065.95	1065.86	1065.77	1065.69	1065.60	1065.51	1065.41	1065.32	1065.23	1065.10	1064.98	1064.85	1064.72	1064.58	1064.43	1064.26	1064.12	1063.96	1063.82
S.M.G.	1066.10	1066.03	1065.95	1065.87	1065.79	1065.70	1065.61	1065.52	1065.42	1065.33	1065.24	1065.12	1064.99	1064.86	1064.73	1064.59	1064.45	1064.28	1064.13	1063.97	1063.83
N.N.G.	1066.70	1066.55	1066.40	1066.27	1066.12	1065.96	1065.81	1065.65	1065.50	1065.35	1065.20	———	1064.84	———	———	1064.90	———	———	———	———	*1064.47
S.N.G.	1065.87	1065.77	1065.67	1065.56	1065.45	1065.34	1065.23	1065.11	1065.00	1064.89	1064.78	———	1064.56	———	———	1064.58	———	———	———	———	*1064.26
S.G.	1064.91	1064.80	1064.70	1064.58	1064.48	1064.36	1064.24	1064.12	1064.01	1063.92	1063.82	1063.71	1063.60	1063.51	1063.47	1063.40	1063.23	1063.01	1062.79	1062.56	1062.34

TOP OF PORTLAND CEMENT CONCRETE ELEVATIONS

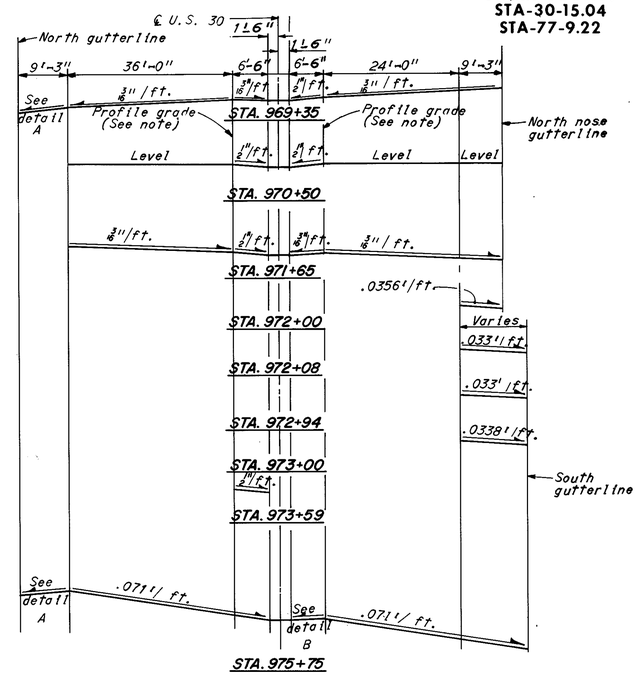
GIRDER	Pier 2	.1	F.S.4	.3	.4	.5	.6	.7	F.S.5	.9	Pier 3	.1	.2	F.S.6	.4	.5	.6	.7	.8	.9	℄ Brg. E. Abut.
A	1064.88	1064.79	1064.70	1064.64	1064.58	1064.51	1064.45	1064.38	1064.30	1064.24	1064.17	1064.13	1064.08	1064.02	1063.99	1063.95	1063.91	1063.87	1063.83	1063.79	1063.71
B	1065.29	1065.21	1065.12	1065.05	1064.98	1064.90	1064.83	1064.77	1064.70	1064.64	1064.56	1064.54	1064.50	1064.46	1064.43	1064.38	1064.33	1064.28	1064.24	1064.20	1064.16
C	1064.98	1064.88	1064.77	1064.69	1064.60	1064.51	1064.42	1064.34	1064.26	1064.17	1064.09	1064.04	1063.99	1063.93	1063.89	1063.82	1063.76	1063.71	1063.65	1063.60	1063.56
D	1064.68	1064.57	1064.43	1064.34	1064.23	1064.12	1064.02	1063.92	1063.82	1063.71	1063.61	1063.55	1063.48	1063.40	1063.36	1063.28	1063.21	1063.14	1063.08	1063.02	1062.96
E	1064.39	1064.26	1064.09	1064.00	1063.87	1063.75	1063.63	1063.51	1063.40	1063.27	1063.15	1063.07	1062.99	1062.90	1062.84	1062.75	1062.61	1062.59	1062.51	1062.44	1062.37
F	1064.11	1063.96	1063.77	1063.66	1063.52	1063.38	1063.24	1063.11	1062.99	1062.84	1062.70	1062.60	1062.51	1062.40	1062.33	1062.23	1062.14	1062.04	1061.96	1061.87	1061.79
G	1063.82	1063.68	1063.48	1063.38	1063.23	1063.08	1062.93	1062.78	1062.64	1062.48	1062.34	1062.23	1062.13	1061.99	1061.92	1061.82	1061.72	1061.61	1061.51	1061.41	1061.30
H	1063.86	1063.71	1063.51	1063.42	1063.27	1063.12	1062.97	1062.82	1062.68	1062.52	1062.38	1062.33	1062.22	1062.08	1062.01	1061.92	1061.82	1061.71	1061.61	1061.50	1061.39
J	1063.84	1063.68	1063.47	1063.38	1063.21	1063.05	1062.90	1062.74	1062.60	1062.42	1062.26	1062.14	1062.04	1061.89	1061.82	1061.70	1061.59	1061.48	1061.38	1061.28	1061.18
K	1063.57	1063.40	1063.16	1063.06	1062.88	1062.70	1062.52	1062.34	1062.19	1061.98	1061.80	1061.67	1061.55	1061.39	1061.30	1061.17	1061.05	1060.93	1060.81	1060.70	1060.58
L	1063.34	1063.12	1062.85	1062.76	1062.56	1062.35	1062.15	1061.95	1061.80	1061.56	1061.36	1061.22	1061.08	1060.89	1060.80	1060.66	1060.52	1060.39	1060.26	1060.13	1060.00
M	1063.05	1062.86	1062.56	1062.46	1062.24	1062.02	1061.80	1061.58	1061.41	1061.15	1060.93	1060.78	1060.62	1060.41	1060.31	1060.16	1060.00	1059.86	1059.71	1059.57	1059.44
N	———	.66	.30	.36	.20	.05	1061.89	1061.74	———	.42	.28	———	———	———	———	———	———	———	———	———	———
O	1062.80	1062.71	1062.28	1062.62	1062.42	1062.32	1062.22	1062.13	———	1061.93 ‡	1061.84	———	———	———	———	———	———	———	———	———	———
P	1062.58	1062.39	1062.06	1061.98	1061.77	1061.57	1061.37	1061.18	1061.04	1060.76	1060.53	1060.36	1060.20	1059.98	1059.87	1059.70	1059.54	1059.38	1059.22	1059.07	1058.92
R	1062.34	1062.16	1061.80	1061.72	1061.49	1061.27	1061.04	1060.82	1060.68	1060.37	1060.14	1059.96	1059.79	1059.56	1059.44	1059.26	1059.08	1058.91	1058.74	1058.58	1058.41
N. G.	1064.88	1064.81	1064.77	1064.73	1064.68	1064.62	1064.53	1064.45	1064.36	1064.25	1064.16	1064.12	1064.07	1064.04	1064.00	1063.96	1063.93	1063.89	1063.84	1063.79	1063.71
N.M.G.	1063.82	1063.68	1063.55	1063.42	1063.29	1063.14	1062.99	1062.83	1062.67	1062.50	1062.33	1062.22	1062.12	1062.03	1061.94	1061.83	1061.74	1061.64	1061.52	1061.41	1061.30
S.M.G.	1063.83	1063.69	1063.56	1063.43	1063.30	1063.16	1063.02	1062.85	1062.68	1062.51	1062.34	1062.24	1062.14	1062.04	1061.95	1061.86	1061.75	1061.65	1061.54	1061.42	1061.31
S.G.	1062.34	1062.16	1061.94	1061.73	1061.52	1061.30	1061.07	1060.85	1060.62	1060.37	1060.15	1059.97	1059.80	1059.63	1059.47	1059.29	1059.13	1058.94	1058.77	1058.59	1058.40

Notes:
N.G. denotes North Gutterline
N.M.G. denotes North Median Gutterline
S.M.G. denotes South Median Gutterline
N.N.G. denotes North Nose Gutterline
S.N.G. denotes South Nose Gutterline

Notes:
S.G. denotes South Gutterline
** denotes PC of North Nose Gutterline and PCC of South Nose Gutterline instead of Pier 2.*
‡ denotes end of girders N and O

Notes:
the gutterline elevations have been adjusted for the dead load deflections caused by the weight of the concrete and wearing course and are the elevations required before the concrete deck is placed.

STARK COUNTY
STA-30-15.04
STA-77-9.22

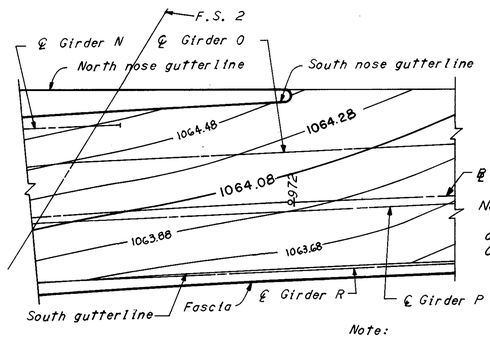


SUPERELEVATION TRANSITION SCHEME
(U.S. 30)

Note:
The roadway 1'-6" each side of ℄ US 30 shall be level
The profile grade shifts from 8' left to 8' right of ℄ U.S. 30 at Sta. 970+50

Notes:
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.

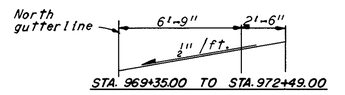
MICROFILMED
APR 16 1985



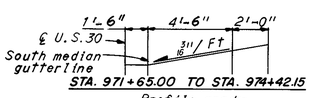
CONTOUR PLAN
Scale: 1"=10'

Note:
Contour plan covers area from Ramp B Sta. 971+75 to ℄ US 30 Sta. 972+08.

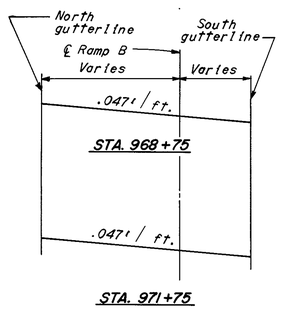
Note:
Contour elevations are for top of Asphalt Concrete.



DETAIL A



DETAIL B



SUPERELEVATION TRANSITION SCHEME
(Ramp B)

Revised 3-1-78

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By E.P.S

HOWARD, NEEDLES, TAMMEN & BERGENDOFF — 14/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PAVEMENT ELEVATIONS

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: NONE STA. 975+58.49

RELOCATED U.S. 30
CANTON STARK COUNTY OHIO

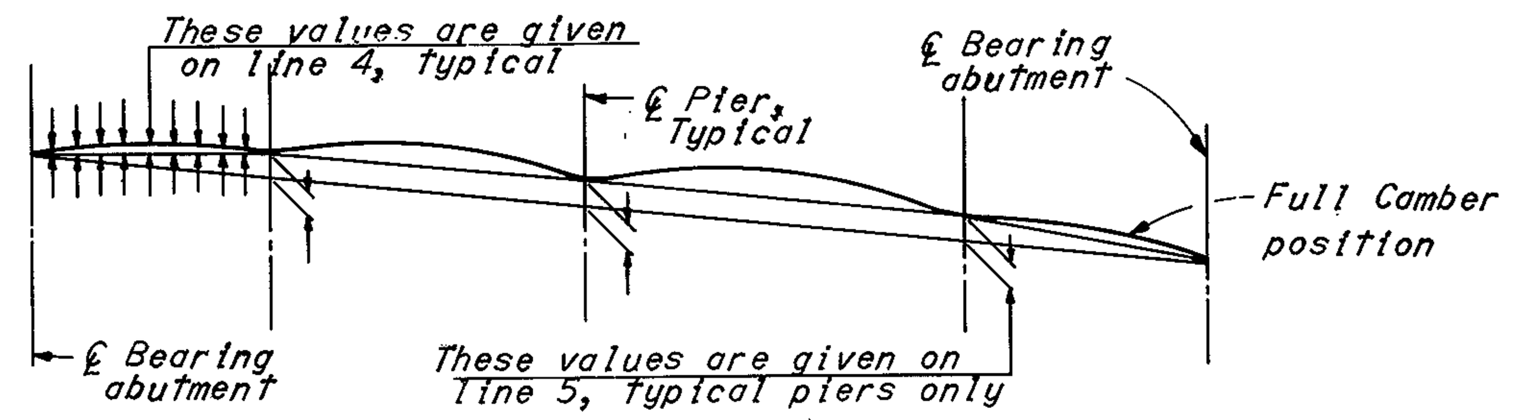
DRAWN GW	TRACED	CHECKED DJK	REVIEWED HJK	REVISED 10-14-77
DATE 10-26-70	DATE	DATE 7-31-70	DATE 11-14-71	1668

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

STARK COUNTY
STA-30-15.04
STA-77-9.22

DEFLECTION AND CAMBER

Girder	Line	W Abut.	.1	.2	.3	.4	.5	.6	*.7	.8	.9	Pier 1	.1	*.2	.3	.4	.5	.6	*.7	.8	.9	‡Pier 2	.1	*.2	.3	.4	.5	.6	.7	*.8	.9	‡Pier 3	.1	.2	*.3	.4	.5	.6	.7	.8	.9	E. Abut.
Girder A	1	0	1/16	1/8	3/16	3/16	3/16	3/16	1/8	1/16	0	0	0	0	1/16	1/16	1/16	1/16	0	0	0	0	1/8	1/4	7/16	9/16	5/8	9/16	7/16	1/4	1/8	0	-1/16	-1/16	0	0	1/16	1/16	1/16	1/16	1/16	0
	2	0	3/16	5/16	7/16	1/2	1/2	3/8	5/16	3/16	1/16	0	0	1/8	3/16	1/4	3/16	1/8	0	-1/8	-1/8	0	1/4	11/16	1 1/8	1 7/16	1 1/2	1 7/16	1 1/8	3/4	1/4	0	-1/16	-1/16	-1/16	1/16	1/16	3/16	3/16	3/16	1/16	0
	3	0	1/16	1/8	3/16	1/4	1/4	5/16	3/8	1/4	1/8	0	0	0	0	0	0	0	0	0	0	0	-1/8	-3/16	-3/8	-1/4	-1/8	-1/16	0	0	0	0	0	0	1/8	3/16	1/8	3/16	5/16	3/8	3/8	0
	4	0	5/16	9/16	13/16	15/16	15/16	7/8	13/16	1/2	3/16	0	0	1/8	1/4	5/16	1/4	3/16	0	-1/8	-1/8	0	1/4	3/4	1 3/16	1 3/4	2	1 15/16	1 9/16	1	3/8		-1/8	-1/8	1/16	1/4	1/4	7/16	9/16	5/8	1/2	0
	5	0										9/16"										-5/16"										1/16"										0
Girder B	1	0	1/16	1/8	3/16	3/16	3/16	3/16	1/8	1/16	0	0	0	1/16	1/8	1/8	1/8	1/16	0	0	0	0	1/8	3/8	7/16	9/16	5/8	9/16	1/2	5/16	1/8	0	0	0	0	1/16	1/16	1/8	1/8	1/16	1/16	0
	2	0	1/4	7/16	9/16	5/8	5/8	1/2	3/8	3/16	1/16	0	0	1/8	1/4	3/8	3/8	5/16	1/8	-1/16	-1/8	0	5/16	3/4	1 7/16	1 13/16	1 15/16	1 7/8	1 7/16	7/8	3/8	0	-1/8	-1/8	0	1/8	1/4	1/4	1/4	1/4	1/8	0
	3	0	1/16	1/8	1/8	3/16	1/4	1/4	5/16	5/16	1/8	0	0	0	0	0	0	0	0	0	0	0	-1/16	-3/8	-3/8	-1/4	-3/8	-3/8	-1/4	-1/4	0	0	1/8	1/8	1/8	1/4	1/8	0	0	0	0	0
	4	0	3/8	11/16	7/8	1	1 1/16	15/16	13/16	9/16	3/16	0	0	3/16	3/8	1/2	1/2	3/8	1/8	-1/16	-1/8	0	3/8	3/4	1 1/2	2 1/8	2 3/16	2 1/16	1 11/16	15/16	1/2	0	0	0	1/8	7/16	7/16	3/8	3/8	5/16	3/16	0
	5	0										1/2"										-1/4"										-1/2"										0
Girder C	1	0	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0	0	0	0	1/16	3/16	3/16	1/4	3/16	1/8	1/16	0	0	1/16	3/16	3/8	7/16	1/2	1/2	3/8	1/4	1/16	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/16	0
	2	0	1/4	3/8	1/2	9/16	1/2	7/16	5/16	1/8	0	0	1/8	5/16	1/2	11/16	11/16	9/16	3/8	1/8	0	0	1/4	5/8	1 1/16	1 7/16	1 5/8	1 1/2	1 3/16	11/16	5/16	0	-1/16	0	1/8	1/4	5/16	7/16	3/8	5/16	3/16	0
	3	0	1/16	1/16	1/8	1/8	3/16	3/16	1/4	5/16	1/8	0	0	0	0	0	0	0	0	0	0	0	-1/16	-1/8	-1/4	-5/16	-5/16	-1/4	-3/16	-1/16	-1/16	0	0	1/16	3/16	1/8	0	-1/16	-1/8	-1/8	-1/16	0
	4	0	3/8	9/16	13/16	7/8	7/8	3/4	5/8	7/16	1/8	0	1/8	3/8	11/16	7/8	15/16	3/4	1/2	3/16	0	0	1/4	11/16	1 3/16	1 9/16	1 13/16	1 3/4	1 3/8	7/8	5/16	0	-1/16	1/16	5/16	7/16	7/16	1/2	3/8	5/16	3/16	0
	5	0										11/16"										-7/16"										-9/16"										0
Girder D	1	0	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0	0	0	0	1/16	3/16	3/16	1/4	3/16	1/8	1/16	0	0	1/16	3/16	3/8	7/16	1/2	1/2	3/8	1/4	1/16	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/16	0
	2	0	1/4	3/8	1/2	9/16	1/2	7/16	5/16	1/8	0	0	1/8	5/16	1/2	11/16	11/16	9/16	3/8	1/8	0	0	1/4	5/8	1 1/16	1 7/16	1 5/8	1 1/2	1 3/16	11/16	5/16	0	-1/16	0	1/8	1/4	5/16	7/16	3/8	5/16	3/16	0
	3	0	0	1/16	1/16	1/8	1/8	1/8	3/16	3/16	3/16	0	0	0	0	0	0	0	0	0	0	0	-1/16	-1/8	-5/16	-5/16	-5/16	-1/4	-3/16	-1/16	-1/16	0	0	1/16	1/8	1/8	0	-1/16	-1/8	-1/8	-1/16	0
	4	0	5/16	9/16	3/4	7/8	13/16	11/16	9/16	5/16	3/16	0	1/8	3/8	11/16	7/8	15/16	3/4	1/2	3/16	0	0	1/4	11/16	1 1/8	1 9/16	1 13/16	1 3/4	1 3/8	7/8	5/16	0	-1/16	1/16	1/4	7/16	7/16	1/2	3/8	5/16	3/16	0
	5	0										3/4"										-3/8										-1/2"										0
Girder E	1	0	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0	0	0	0	1/16	3/16	3/16	1/4	3/16	1/8	1/16	0	0	1/16	3/16	3/8	7/16	1/2	1/2	3/8	1/4	1/16	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/16	0
	2	0	1/4	3/8	1/2	9/16	1/2	7/16	5/16	1/8	0	0	1/8	5/16	1/2	11/16	11/16	9/16	3/8	1/8	0	0	1/4	5/8	1 1/16	1 7/16	1 5/8	1 1/2	1 3/16	11/16	5/16	0	-1/16	0	1/8	1/4	5/16	7/16	3/8	5/16	3/16	0
	3	0	0	1/16	1/16	1/16	1/16	1/8	1/8	1/8	1/8	0	0	0	0	0	0	0	0	0	0	0	-1/16	-1/8	-1/4	-5/16	-1/4	-3/16	-1/8	0	0	0	0	0	1/16	1/16	-1/16	-1/8	-1/8	-1/8	-1/8	0
	4	0	5/16	9/16	3/4	13/16	3/4	11/16	1/2	1/4	1/8	0	1/8	3/8	11/16	7/8	15/16	3/4	1/2	3/16	0	0	1/4	11/16	1 3/16	1 9/16	1 7/8	1 13/16	1 7/16	15/16	3/8	0	-1/16	0	3/16	3/8	3/8	7/16	3/8	5/16	1/8	0
	5	0										13/16"										-5/16"										-1/2"										0
Girder F	1	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	1/16	0	0	0	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0	0	1/16	1/4	5/16	7/16	1/2	7/16	3/8	3/16	1/16	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/16	0
	2	0	3/16	3/8	7/16	1/2	7/16	3/8	1/4	1/8	0	0	1/16	1/4	7/16	9/16	5/8	1/2	1/4	1/8	0	0	3/16	11/16	15/16	1 1/4	1 3/8	1 5/16	1	5/8	1/4	0	-1/16	0	1/8	1/4	5/16	7/16	3/8	5/16	3/16	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	-1/8	-1/4	-5/16	-1/4	-3/16	-1/8	1/16	0	0	0	0	1/16	0	-1/8	-1/8	-3/16	-1/8	-1/8	0
	4	0	1/4	1/2	9/16	11/16	9/16	1/2	5/16	3/16	0	0	1/16	5/16	9/16	3/4	13/16	11/16	3/8	3/16	0	0	3/16	13/16	1	1 3/8	1 5/8	1 9/16	1 1/4	7/8	5/16	0	-1/16	0	3/16	5/16	5/16	7/16	5/16	5/16	1/8	0
	5	0										15/16"										-3/16"										-7/16"										0
Girder G	1	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	1/16	0	0	1/16	1/8	3/16	1/4	1/4	1/4	1/8	1/16	0	0	1/16	3/16	1/4	3/8	3/8	3/8	5/16	3/16	1/16	0	0	0	0	1/16	1/8	1/8	1/8	1/8	1/16	0
	2	0	1/8	1/4	5/16	3/8	5/16	1/4	3/16	1/16	0	0	1/16	1/4	7/16	9/16	9/16	1/2	1/4	1/8	0	0	1/8	7/16	9/16	13/16	7/8	13/16	5/8	7/16	1/8	0	-1/16	0	1/8	3/16	1/4	5/16	5/16	3/16	1/8	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	3/16	3/8	7/16	9/16	7/16	3/8	1/4	1/8	0	0	1/8	3/8	5/8	13/16	13/16	3/4	3/8	3/16	0	0	3/16	5/8	13/16	1 3/16	1 1/4	1 3/16	15/16	5/8	3/16	0	-1/16	0	1/8	1/4	3/8	7/16	7/16	5/16	3/16	0
	5	0										1 1/2"										1"										7/16"										0
Girder H	1	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	0	0	0	1/16	1/8	3/16	1/4	1/4	1/4	1/8	1/16	0	0	1/16	3/16	1/4	3/8	7/16	3/8	5/16	3/16	1/16	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/16	0
	2	0	1/8	1/4	3/8	3/8	3/8	1/4	3/16	1/8	0	0	1/16	1/4	7/16	9/16	9/16	1/2	5/16	3/16	1/16	0	1/8	7/16	5/8	13/16	15/16	7/8	11/16	7/16	3/16	0	0	1/16	1/8	3/16	5/16	3/8	5/16	1/4	1/8	0
	3	0	0	0	C	0	0	0	0	0	0	0	1/16	1/16	1/16	1/16	1/16	1/16	0	0	0		0	0	0	0	0	0	0	0	0	0	5/8	1/2	1/2	1/2	1/2	3/8	1/4	1/4	1/8	0
	4	0	3/16	3/8	1/2	9/16	1/2	3/8	1/4	1/8	0	0	3/16	7/16	11/16	7/8	7/8	13/16	7/16	1/4	1/16	0	3/16	5/8	7/8	1 3/16	1 3/8	1 1/4	1	5/8	1/4	0	5/8	9/16	11/16	13/16	15/16	7/8	11/16	5/8	5/16	0
	5	0										1 1/8"										5/8"										-1/8"										0
Girder J	1	0	1/16	1/8	1/8	1/8	1/8	1/8	1/16	0	0	0	1/16	1/8	1/4	5/16	5/16	1/4	3/16	1/8	0	0	1/16	3/16	1/4	5/16	3/8	5/16	1/4	3/16	1/16	0	0	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	0
	2	0	3/16	5/16	3/8	7/16	3/8	5/16	3/16	1/16	0	0	1/8	7/16	3/4	15/16	1	7/8	1/2	5/16	1/16	0	1/8	1/2	11/16	1	1 1/8	1 1/16	13/16	9/16	3/16	0	0	1/8	3/16	5/16	1/2	1/2	1/2	3/8	3/16	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	0	1/16	1/16	0	0	0	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/16	0	-1/16	-1/16	0	-1/16	-1/8	-3/16	-3/16	-3/16	-1/8	0
	4	0	1/4	7/16	1/2	9/16	1/2	7/16	1/4	1/16	0	0	3/16	9/16	1	1 3/16	1 5/16	1 3/16	3/4	7/16	1/16	0	1/4	13/16	1 1/16	1 7/16	1 5/8	1 1/2	1 3/16	7/8	5/16	0	-1/16	1/16	1/4	3/8	1/2	1/2	7/16	5/16	1/8	0
	5	1										1/16"										1/4"										-1/4"										0
Girder K	1	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	0	0	0	1/16	1/8	1/4	5/16	5/16	5/16	3/16	1/16	0	0	1/16	1/8	1/4	5/16	3/8	3/8	5/16	3/16	1/16	0	0	0	1/16	1/8	1/8	3/16	1/8	1/8	1/16	0
	2	0	3/16	3/8	1/2	1/2	1/2	5/16	3/16	1/8	0	0	3/16	1/2	13/16	1	1 1/16	15/16	11/16	5/16	1/8	0	1/8	7/16	3/4	1 1/8	1 1/4	1 1/8	13/16	9/16	3/16	0	0	1/8	3/16	5/16	1/2	1/2	1/2	3/8	3/16	0
	3	0	0	0	0	0	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	0	1/16	1/16	1/16	0	1/8	1/8	3/16	1/4	3/16	1/8	1/8	1/8	0	0	-1/16	-1/8	-1/8	-1/8	-1/4	-1/4	-1/4	-3/16	-1/8	0
	4	0	1/4	1/2	5/8	11/16	5/8	7/16	1/4	1/8	0	0	3/16	9/16	1	1 1/4	1 5/16	1 1/4	15/16	1/2	3/16	0	5/16	11/16	1 3/16	1 11/16	1 13/16	1 5/8	1 1/4	7/8	1/4	0	-1/16	0	1/8	5/16	3/8	7/16	3/8	5/16	1/8	0
	5	0										1/16"										9/16"										-1/4"										0
Girder L	1	0	1/16	1/8	1/8	1/8	1/8	1/16	1/16	0	0	0	1/16	3/16	5/16	3/8	3/8	3/8	3/16	1/8	1/16	0	0	1/8	1/8	3/16	1/4	1/4	3/16	1/8	0	0	0	0	1/16	1/8	1/8	3/16	3/16	1/8	1/16	0
	2	0	1/8	1/4	5/16	3/8	5/16	3/16	1/8	0	0	0	3/16	9/16	15/16	1 3/16	1 1/4	1 1/8	5/8	7/16	1/8	0	0	5/16	7/16	5/8	3/4	11/16	9/16	3/8	1/16	0	0	1/8	1/4	3/8	1/2	1/2	1/2	3/8	1/4	0
	3	0	-1/8	-1/8	-1/8	-1/8	-1/16	-1/16	-1/16	0	0	0	-1/16	-1/8	-1/8	-1/8	-1/16	0	1/8	1/8	1/16	0	3/16	5/16	3/8	5/16	1/4	3/16	1/8	1/16	0	0	-1/16	-1/8	-3/16	-1/4	-5/16	-5/16	-5/16	-1/4	-1/8	0
	4	0	1/16	1/4	5/16	3/8	3/8	3/16	1/8	0	0	0	3/16	5/8	1 1/8	1 7/16	1 9/16	1 1/2	15/16	11/16	1/4	0	3/16	3/4	15/16	1 1/8	1 1/4	1 1/8	7/8	9/16	1/16	0	-1/16	0	1/8	1/4	5/16	3/8	3/8	1/4	3/16	0
	5	0										0										13/16"										-1/4"										0
Girder M	1	0	1/16	1/8	1/8	1/8	1/8	1/16	1/16	0	0	0	1/8	5/16	7/16	9/16	9/16	1/2	5/16	1/4	1/16	0	0	1/16	1/8	3/16	1/4	1/4	3/16	1/8	1/16	0	0	1/16	1/8	3/16	3/16	3/16	3/16	1/8	1/16	0
	2	0	1/8	3/16	5/16	5/16	1/4	3/16	1/16	0	0	0	7/16	7/8	1 3/8	1 11/16	1 3/4	1 9/16	15/16	11/16	1/4	0	0	1/8	3/8	5/8	3/4	11/16	9/16	5/16	1/16	0	1/16	1/8	5/16	7/16	9/16	5/8	9/16	7/16	1/4	0
	3	0	-1/8	-3/16	-3/16	-1/8	-1/8	-1/8	-1/16	-1/16	0	0	-1/8	-5/16	-1	-1 5/8	-1 1/16	-3/4	-3/8	-3/16	-1/8	0	1/4	7/16	1/2	7/16	5/16	1/4	1/8	1/16	0	0	-1/8	-3/16	-1/4	-5/16	-3/8	-3/8	-3/8	-1/4	-1/8	0
	4	0	1/16	1/8	1/4	5/16	1/4	1/8	1/16	-1/16	0	0	7/16	7/8	13/16	5/8	1 1/4	1 5/16	7/8	3/4	3/16	0	1/4	5/8	1	1 1/4	1 5/16	1 3/16	7/8	1/2	1/8	0	-1/16	0	3/16	5/16	3/8	7/16	3/8	5/16	3/16	0
	5	0										-3/16"										1 1/16"										-1/4"										0
Girder N	1	0	1/8	1/4	5/16	5/16	5/16	5/16	1/4	1/8	1/16	0	0	0	0	0	0	0	0	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	0	1/4	1/2	5/8	3/4	3/4	11/16	1/2	3/8	3/16	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	0	-3/16	-5/16	-7/16	-7/16	-3/8	-1/4	-1/16	-1/16	-1/16	0	-1/16	-1/16	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/16	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	0	3/16	7/16	1/2	5/8	11/16	3/4	11/16	7/16	3/16	0	-1/16	-1/8	-3/16	-3/16	-3/16	-3/16	-3/16	-1/8	-1/16	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	0										-9/16"										0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Girder O	1	0	1/16	1/8	1/8	1/8	1/8	1/16	1/16	0	0	0	1/8	1/4	7/16	9/16	5/8	9/16	3/8	5/16	1/8	0	0	1/8	3/16	1/4	5/16	5/16	1/4	1/8	1/16	0	—	—	—	—	—	—	—	—	—	—
	2	0	3/16	5/16	3/8	7/16	3/8	1/4	1/8	0	-1/16	0	5/16	3/4	1 3/16	1 9/16	1 11/16	1 5/8	1	13/16	5/16	0	1/8	1/4	9/16	13/16	15/16	7/8	11/16	7/16	1/8	0	—	—	—	—	—	—	—	—	—	—
	3	0	-1/4	-7/16	-5/8	-3/4	-3/4	-11/16	-9/16	-7/16	-1/4	0	11/16	1 9/16	2 1/16	2	2	1 3/4	1 1/2	1 1/4	5/8	0	0	0	0	0	0	0	0	0	0	0	—	—	—	—	—	—	—	—	—	—
	4	0	0	0	-1/8	-3/16	-1/4	-3/8	-3/8	-7/16	-5/16	0	1 1/8	2 9/16	3 11/16	4 1/8	4 5/16	3 15/16	2 7/8	2 3/8	1 1/16	0	1/8	3/8	3/4	1 1/16	1 1/4	1 3/16	15/16	9/16	3/16	0	—	—	—	—	—	—	—	—	—	—
	5	0										3/16"										-11/16										0	—	—	—	—	—	—	—	—	—	—
Girder P	1	0	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0	0	0	1/16	1/4	3/8	1/2	9/16	1/2	5/16	1/4	1/16	0	0	1/8	3/16	1/4	5/16	5/16	1/4	1/8	1/16	0	0	1/16	1/16	1/8	3/16	3/16	3/16	1/8	1/16	0
	2	0	1/4	7/16	9/16	9/16	1/2	3/8	1/4	1/8	0	0	3/16	7/16	13/16	1 1/16	1 3/16	1 1/16	5/8	7/16	1/8	0	1/8	1/4	9/16	13/16	15/16	7/8	11/16	7/16	1/8	0	0	1/16	5/16	7/16	1/2	9/16	1/2	3/8	1/4	0
	3	0	-1/4	-7/16	-1/2	-5/8	-5/8	-9/16	-3/8	-5/16	-3/16	0	3/8	1 1/8	1 9/16	2	2 1/2	2 1/8	1 1/2	1 3/8	5/8	0	3/16	1/8	1/8	1/8	1/8	1/4	3/8	7/16	1/4	0	-1/8	-1/8	-3/16	-1/4	-5/16	-5/16	-5/16	-1/4	-1/8	0
	4	0	1/16	1/8	1/4	1/8	1/16	-1/16	-1/16	-3/16	-3/16	0	5/8	1 13/16	2 3/4	3 9/16	4 1/4	3 11/16	2 7/16	2 1/16	13/16	0	5/16	1/2	7/8	1 3/16	1 3/8	1 7/16	1 5/16	1	7/16	0	-1/8	0	3/16	5/16	3/8	7/16	3/8	1/4	3/16	0
	5	0										3 3/16"										9 3/16"										4"										0
Girder R	1	0	1/16	1/8	3/16	3/16	1/8	1/16	1/16	0	0	0	1/16	1/4	7/16	9/16	5/8	9/16	7/16	1/4	1/16	0	0	0	1/16	3/16	3/16	3/16	1/8	1/16	0	0	0	1/16	1/8	3/16	3/16	3/16	3/16	1/8	1/16	0
	2	0	1/8	1/4	1/4	5/16	1/4	3/16	1/16	0	-1/16	0	3/16	7/16	3/4	1	1 1/16	15/16	11/16	7/16	1/8	0	0	1/16	1/4	5/16	3/8	3/8	5/16	3/16	1/16	0	1/16	1/8	3/16	5/16	3/8	7/16	3/8	5/16	3/16	0
	3	0	-1/16	-1/8	-3/16	-1/4	-7/16	-3/8	-3/8	-3/16	-1/8	0	1/4	5/8	7/8	1 15/16	2 3/4	2 5/8	2 1/16	1 1/2	3/4	0	7/16	7/16	7/16	3/8	5/16	1/4	1/4	1/4	1/8	0	-1/16	-1/8	-1/8	-1/8	-1/4	-5/16	-1/4	-1/4	-1/8	0
	4	0	1/8	1/4	1/4	1/4	-1/16	-1/8	-1/4	-3/16	-3/16	0	1/2	1 5/16	2 1/16	3 1/2	4 7/16	4 1/8	3 3/16	2 3/16	15/16	0	7/16	1/2	3/4	7/8	7/8	13/16	11/16	1/2	3/16	0	0	1/16	3/16	3/8	5/16	5/16	5/16	3/16	1/8	0
	5	0										3 3/4"										11 1/16"										4 15/16"										0



SCHEMATIC DETAIL

Line 1. Deflection due to weight of steel.
Line 2. Deflection due to remaining deal load.
Line 3. Adjustment required for vertical curve and superelevation.
Line 4. Required shop camber.
Line 5. Vertical offsets

Notes:

‡ Denotes end of girder for girders N&O.

Negative deflection indicates an upward deflection.

Values given in the table are given to the nearest 1/16 of an inch.

* Denotes field splice.

For girders N and O, the values on line 5 are given to a baseline from West Abutment to end diaphragm.

H.N.T.B. BRIDGE NO. 3 — Revised 1-13-76 By EPS

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

DEFLECTION AND CAMBER

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15 07 STA. 970+58.36
SCALE: NONE STA. 975+58.49

RELOCATED U.S. 30

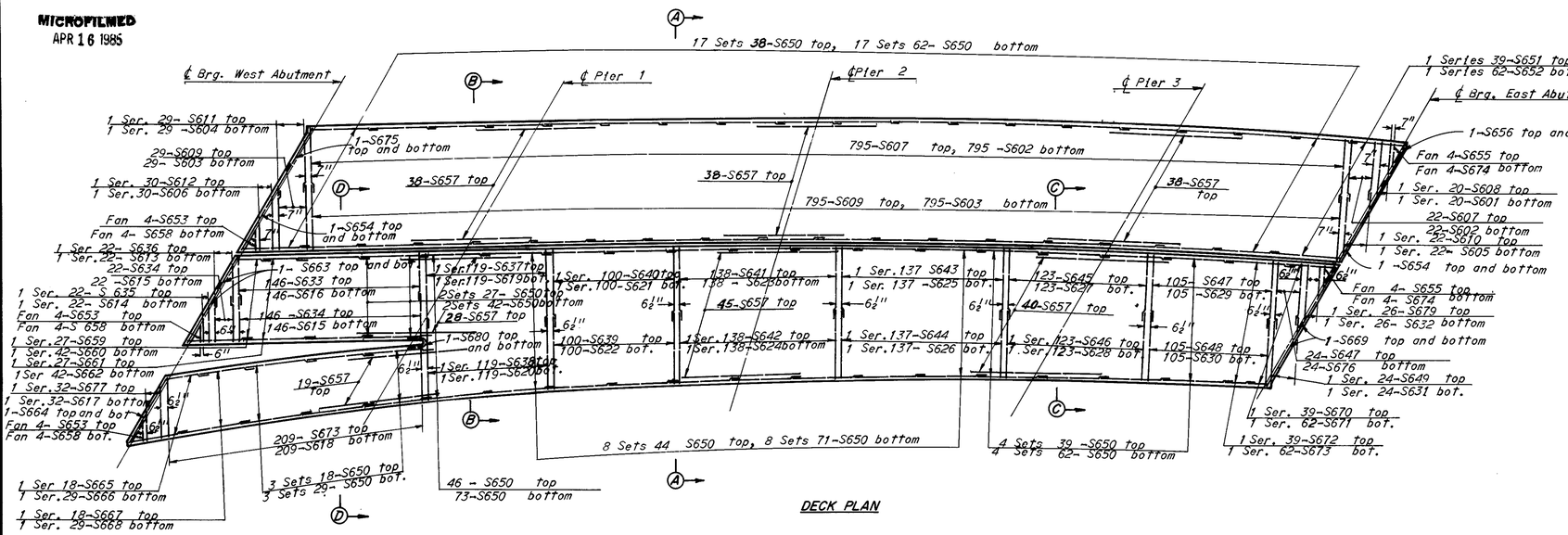
CANTON STARK COUNTY OHIO

DRAWN BW	TRACED	CHECKED CYK	REVIEWED MJK	REVISED
DATE 3-27-70	DATE	DATE 7-31-70	DATE 11-24-71	1668

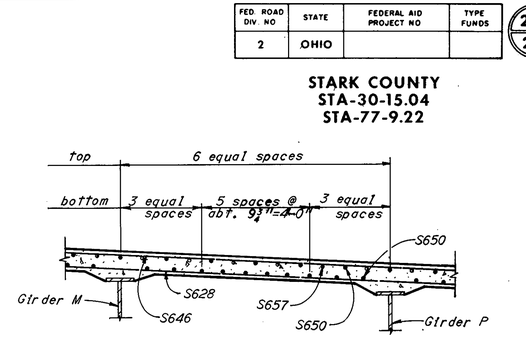
FED. ROAD DIV. NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

220
299

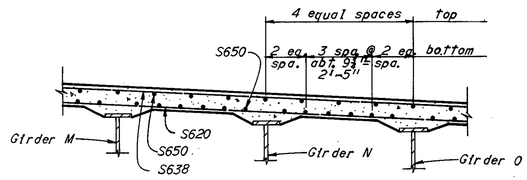
STARK COUNTY
STA-30-15.04
STA-77-9.22



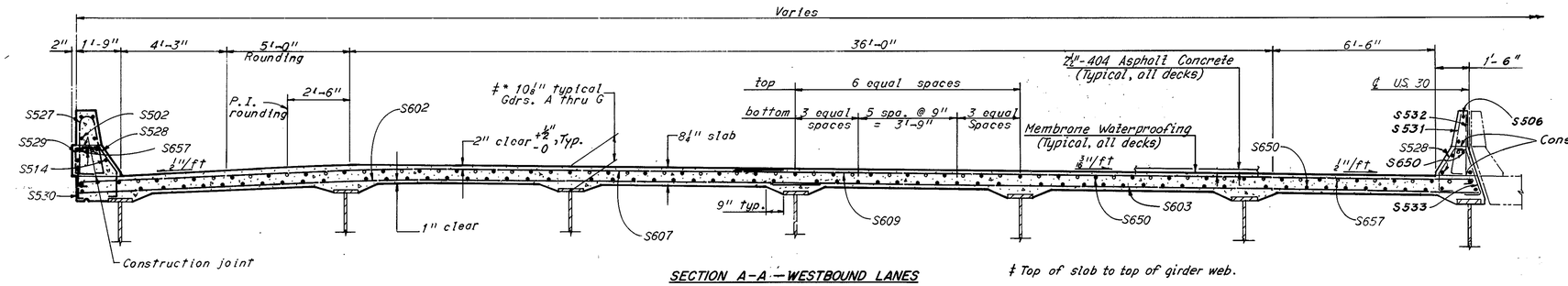
DECK PLAN



PART SECTION C-C

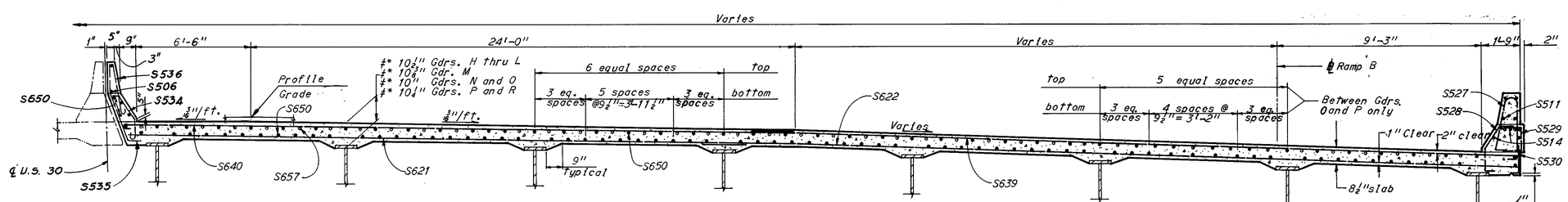


PART SECTION B-B

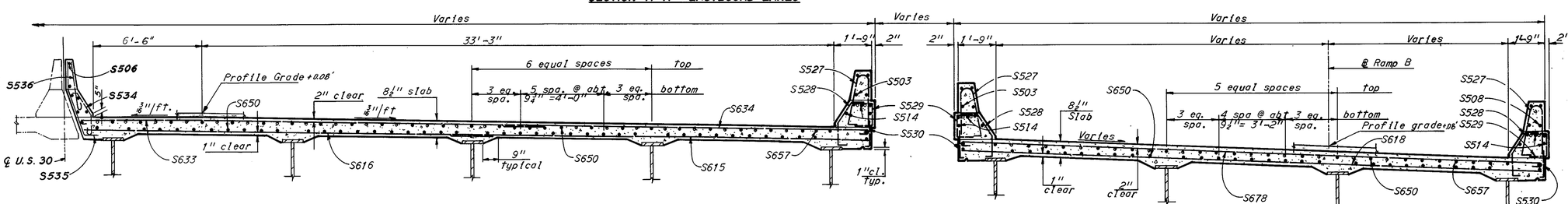


SECTION A-A — WESTBOUND LANES

‡ Top of slab to top of girder web.



SECTION A-A — EASTBOUND LANES



SECTION D-D

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 203.
For deflection joint details see Sheet 203.
For median and railing details see Sheet 203.
For curb and parapet dimensions see Sheet 203.

Transverse reinforcing steel shall be placed radially.

*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 beam 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.

For reinforcement schedule see Sheet 20|20
eq. denotes equal.

Transverse reinforcing bars are spaced at 7" ctrs. in the Westbound lanes and 6½" ctrs. in the Eastbound lanes, except as shown.

For Subdrainage details, See Sheet 204 A.

H.N.T.B. BRIDGE NO. 3 — Revised 12-20-75 By E P S

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

16/20

DECK PLAN

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 — STA. 970+58.36
SCALE: 1"= 30'-0" — STA. 975+58.49

RELOCATED U.S. 30

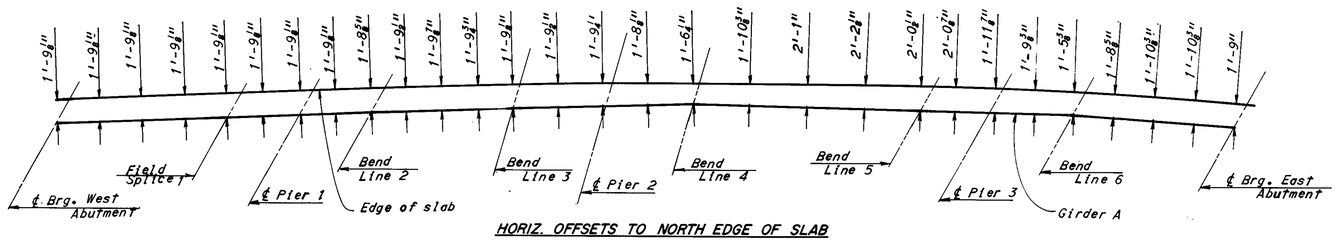
CANTON — STARK COUNTY — OHIO

DRAWN BM	TRACED	CHECKED KSS	REVIEWED MJK	REVISED 10-14-77
DATE 9/23/70	DATE	DATE 10/21/70	DATE 11-24-71	1668

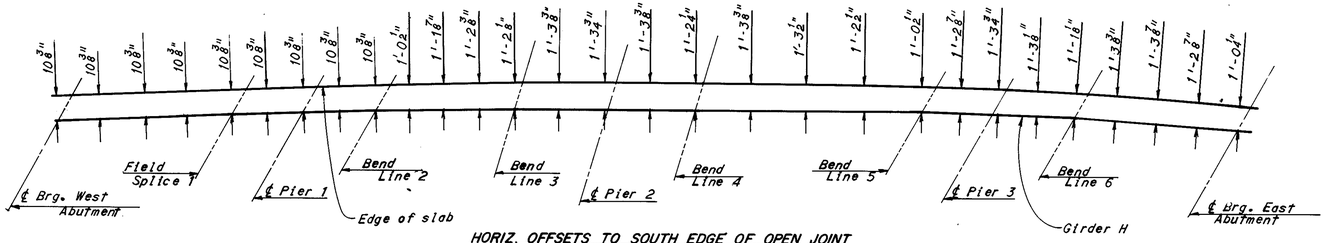
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	TYPE FUNDS
2	OHIO		

221
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

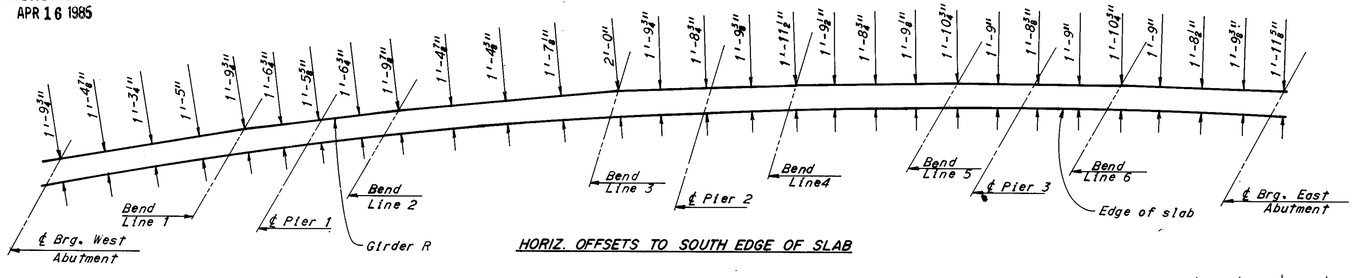


HORIZ. OFFSETS TO NORTH EDGE OF SLAB

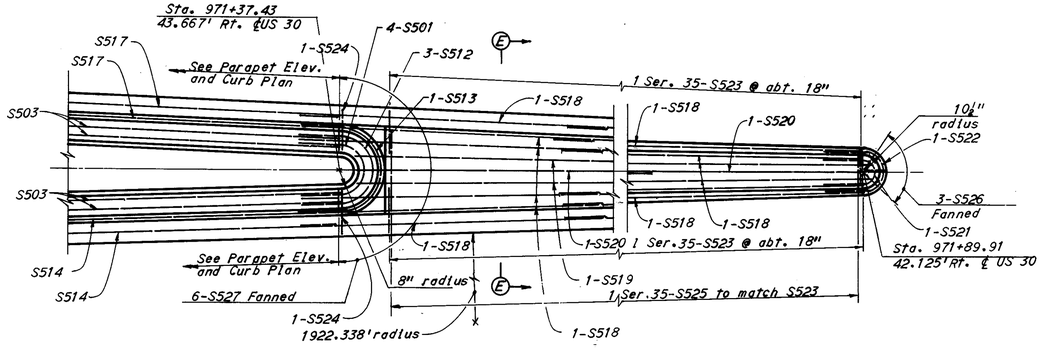


HORIZ. OFFSETS TO SOUTH EDGE OF OPEN JOINT

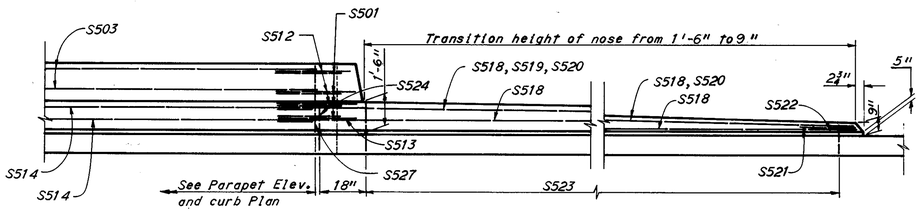
MICROFILMED
APR 16 1985



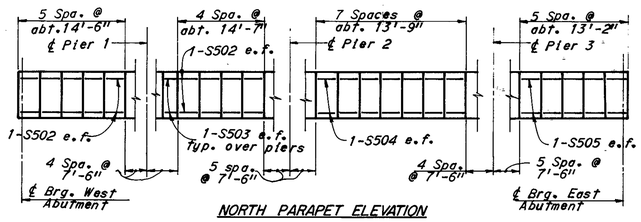
HORIZ. OFFSETS TO SOUTH EDGE OF SLAB



NOSE DETAIL - PLAN



NOSE DETAIL - ELEVATION



NORTH PARAPET ELEVATION

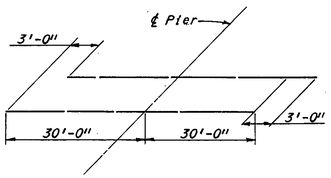
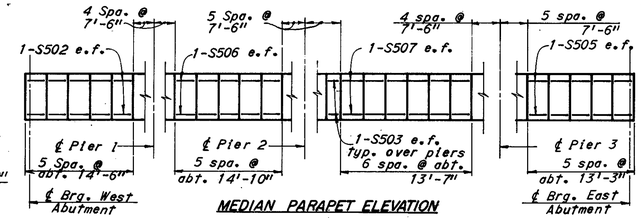
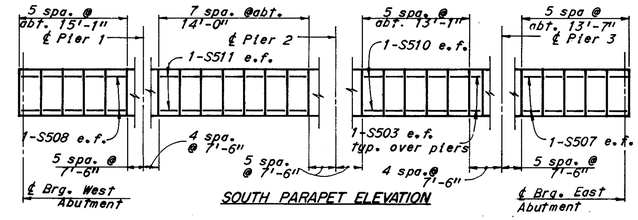


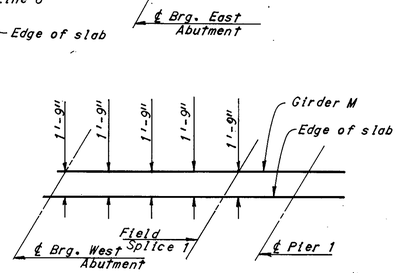
DIAGRAM SHOWING STAGGER OF S657 BARS OVER PIERS



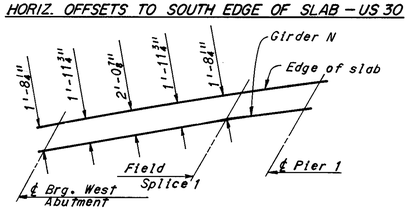
MEDIAN PARAPET ELEVATION



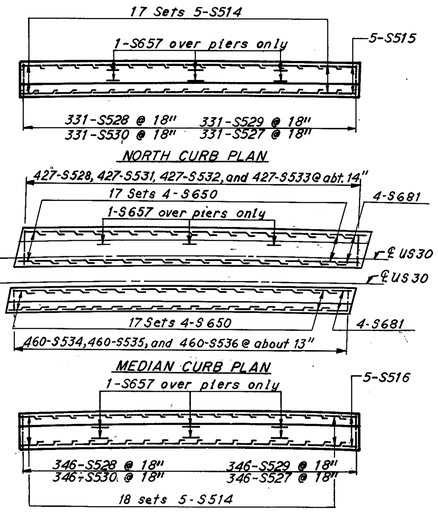
SOUTH PARAPET ELEVATION



HORIZ. OFFSETS TO SOUTH EDGE OF SLAB - US 30

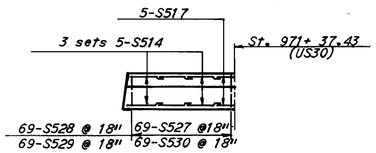


HORIZ. OFFSETS TO NORTH EDGE OF SLAB - RAMP B

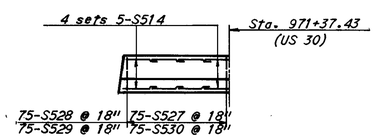


NORTH CURB PLAN

SOUTH CURB PLAN

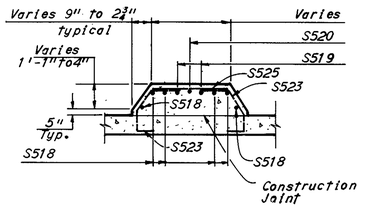


SOUTH CURB PLAN-US 30

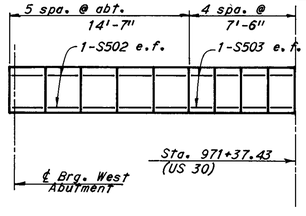


NORTH CURB PLAN-RAMP B

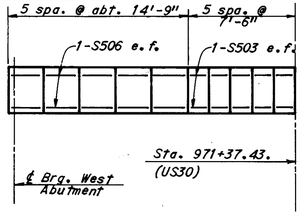
Note:
Horizontal offsets are given at quarter points normal to centerline of girder between bend lines, field splices, and ℄ bearing abutments.



SECTION E-E



SOUTH PARAPET ELEVATION - US 30



NORTH PARAPET ELEVATION - RAMP B

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF — 17/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

DECK DETAILS

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15.07 — STA. 970+58.36
SCALE: *NONE* — STA. 975+58.49

RELOCATED U.S. 30

CANTON — STARK COUNTY — OHIO

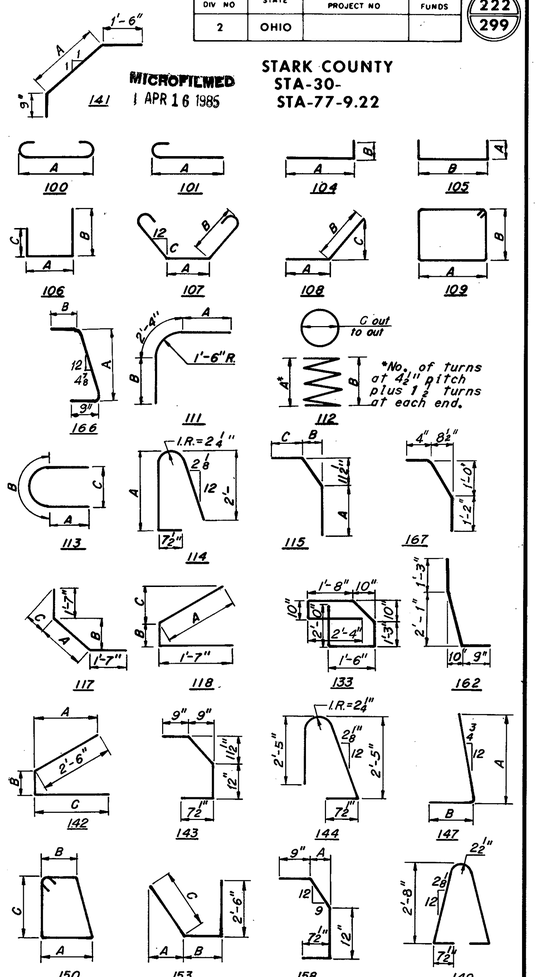
DRAWN BM	TRACED	CHECKED KSS	REVIEWED MJK	REVISED
DATE 10/1/70	DATE	DATE 10/20/70	DATE 11-24-71	

1668

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
EAST ABUTMENT								
AA401	84	3'-5"	105	1'-0"	1'-8"			192
AA501	97	8'-4"	105	1'-7"	5'-5"			845
AA502	28	11'-0"	109	3'-0"	2'-3"			311
AA503	1	13'-2"	109	3'-10"	2'-6"			14
AA504	1	14'-10"	109	4'-8"	2'-6"			15
AA505	97	7'-6"	104	6'-7"	1'-0"			760
AA506	97	9'-4"	105	3'-1"	3'-5"			945
AA507	13	3'-2"	108	1'-7"	1'-7"	1'-5"		43
AA508	9	10'-11"	117	7'-9"	4'-6"	1'-4"		102
AA509	4	14'-2"	117	11'-0"	6'-3"	1'-4"		59
AA510	13	3'-11"	118	1'-7"	10½"	1'-5"		53
AA511	9	8'-5"	117	5'-3"	4'-6"	9"		79
AA512	4	10'-5"	117	7'-3"	6'-3"	9"		44
AA513	37	36'-0"	Str.					1,389
AA514	23	22'-9"	Str.					545
AA515	23	30'-3"	Str.					726
AA516	9	35'-0"	Str.					330
AA517	1	26'-0"	Str.					27
AA522	24	10'-3"	Str.					257
AA523	1	5'-6"	Str.					6
AA524	1	5'-0"	Str.					5
AA525	1	4'-6"	Str.					5
AA526	7	4'-3"	Str.					31
AA527	1	4'-9"	Str.					5
AA528	1	5'-3"	Str.					5
AA529	36	2'-3"	105	7½"	1'-3"			84
AA530	26	6'-8"	114	3'-3"				181
AA531	20	2'-9"	Str.					57
AA532	8	17'-8"	Str.					147
AA533	8	18'-9"	Str.					157
AA534	14	16'-3"	Str.					237
AA535	2	17'-6"	Str.					37
AA536	24	24'-0"	Str.					600
AA537	2	17'-9"	Str.					37
AA538	4	18'-3"	Str.					76
AA539	6	7'-6"	Str.					47
AA540	4	3'-11"	166	2'-8"	9"			16
AA541	4	4'-0"	115	2'-0"	10"	11"		17
AA542	9	1'-7"	Str.					15
AA543	2	8'-0"	Str.					17
AA601	97	14'-4"	106	5'-5"	6'-7"	2'-8"		2,085
AA602	128	5'-9"	105	2'-7"	11"			1,105
AA603	128	4'-1"	105	1'-6"	1'-5"			785
AA604	128	20'-7"	105	9'-9"	1'-5"			3,950
AA606	12	20'-10"	105	10'-0"	1'-2"			375
AA607	12	21'-4"	105	10'-3"	1'-2"			385
AA608	3	7'-7"	104	6'-9"	1'-0"			35
AA609	24	11'-1"	115	9'-3"	9"	9"		400
AA610	1	6'-7"	115	4'-9"	9"	9"		10
AA611	1	6'-1"	115	4'-3"	9"	9"		9
AA701	6	5'-1"	115	3'-5"	9"	7½"		62
AA704	1	5'-6"	115	3'-9"	9"	7½"		11
AA705	1	6'-0"	115	4'-3"	9"	7½"		12
AA706	1	5'-1"	115	3'-5"	9"	7½"		10
AA707	1	5'-5"	115	3'-9"	9"	7½"		11

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
AA801	21	44'-0"	Str.					2,460
AA802	4	18'-0"	Str.					192
AA803	2	25'-10"	142	2'-0"	1'-3"	21'-6"		136
AA804	2	20'-6"	108	16'-0"	4'-6"	4'-0"		110
AA805	1	22'-6"	108	18'-0"	4'-6"	4'-0"		60
AA806	2	24'-6"	108	20'-0"	4'-6"	4'-0"		131
AA807	1	23'-0"	108	18'-6"	4'-6"	4'-0"		61
DB03	76	5'-2"	141	3'-1"				1,048
							Total	21,961
WEST ABUTMENT								
AB401	96	3'-5"	105	1'-0"	1'-8"			219
AB501	3	12'-6"	109	3'-6"	2'-6"			39
AB502	1	14'-6"	109	4'-6"	2'-6"			15
AB503	1	16'-0"	109	5'-3"	2'-6"			17
AB504	3	18'-6"	109	6'-6"	2'-6"			58
AB505	2	20'-0"	109	7'-3"	2'-6"			42
AB506	15	11'-6"	109	3'-0"	2'-6"			180
AB507	3	16'-4"	104	15'-6"	1'-0"			51
AB508	1 Ser. 33	14'-4"to16'-4"	104	13'-6"to15'-6"	1'-0"		¾"	527
AB509	17	20'-9"	Str.					367
AB510	25	5'-5"	104	4'-6"	1'-0"			141
AB511	1 Ser. 106	6'-11"to14'-5"	104	6'-0"to13'-6"	1'-0"		⅞"	1,190
AB512	6	7'-0"	104	6'-1"	1'-0"			44
AB513	148	6'-4"	105	1'-7"	3'-5"			975
AB514	23	3'-2"	108	1'-7"	1'-7"	1'-3"		76
AB515	13	3'-11"	118	1'-7"	10½"	1'-6"		53
AB516	9	11'-8"	117	8'-6"	3'-0"	1'-4"		110
AB517	14	16'-2"	117	13'-0"	4'-9"	1'-4"		236
AB518	9	8'-2"	117	5'-0"	4'-4"	9"		76
AB519	4	10'-2"	117	7'-0"	6'-1"	9"		43
AB520	24	36'-0"	Str.					901
AB521	25	45'-0"	Str.					1,173
AB522	12	29'-3"	Str.					365
AB523	31	35'-0"	Str.					1,132
AB524	26	25'-6"	Str.					690
AB525	14	37'-0"	Str.					540
AB526	14	46'-0"	Str.					672
AB527	18	10'-0"	Str.					188
AB530	2	17'-0"	Str.					35
AB534	10	18'-3"	Str.					190
AB537	12	9'-0"	Str.					113
AB538	12	7'-6"	Str.					94
AB539	12	24'-0"	Str.					301
AB540	25	6'-8"	114	3'-3"				174
AB541	8	16'-0"	Str.					134
AB542	8	15'-8"	104	14'-9"	1'-0"			131
AB543	6	22'-9"	Str.					142
AB544	2	20'-10"	Str.					44
AB545	12	9'-11"	Str.					124
AB546	30	2'-3"	105	7½"	1'-3"			70
AB547	2	18'-0"	Str.					38
AB548	10	2'-9"	Str.					29
AB549	1	5'-9"	Str.					6
AB550	1	5'-3"	Str.					5
AB551	1	4'-9"	Str.					5
AB552	8	18'-9"	Str.					157
AB553	3	4'-3"	Str.					13
AB554	2	19'-0"	Str.					40
AB555	2	8'-9"	Str.					18
AB556	7	2'-9"	Str.					20
AB557	7	1'-9"	Str.					12
AB558	6	2'-3"	Str.					14
AB559	9	1'-7"	Str.					15
AB560	4	3'-11"	166	2'-8"	9"			16
AB561	4	4'-0"	115	2'-0"	10"	11"		17
AB562	15	3'-8"	104	2'-2"	1'-7"			57

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
AB563	15	4'-11"	106	11"	2'-7"	1'-7"		77
AB601	69	8'-3"	Str.					855
AB602	68	8'-0"	Str.					819
AB603	35	6'-6"	Str.					341
AB604	5	16'-4"	104	15'-6"	1'-0"			123
AB605	1 Ser. 67	14'-4"to16'-4"	104	13'-6"to15'-6"	1'-0"		¾"	1,540
AB606	1 Ser. 106	6'-10"to14'-4"	104	6'-0"to13'-6"	1'-0"		⅞"	1,680
AB607	6	7'-0"	104	6'-2"	1'-0"			63
AB608	154	5'-9"	105	2'-7"	11"			1,330
AB609	154	4'-1"	105	1'-6"	1'-5"			945
AB610	154	20'-7"	105	9'-9"	1'-5"			4,750
AB611	14	7'-1"	105	3'-0"	1'-5"			149
AB612	12	5'-5"	115	3'-9"	9"	9"		98
AB613	2	7'-7"	104	6'-9"	1'-0"			23
AB614	12	21'-4"	105	10'-3"	1'-2"			384
AB615	12	11'-1"	115	9'-3"	9"	9"		200
AB616	1	6'-7"	115	4'-9"	9"	9"		10
AB701	3	5'-1"	115	3'-5"	9"	7½"		31
AB704	1	5'-4"	115	3'-6"	9"	7½"		11
AB705	1	6'-1"	115	4'-5"	9"	7½"		12
AB801	2	14'-9"	108	11'-9"	3'-0"	2'-3"		79
AB802	1	13'-3"	108	10'-6"	2'-9"	2'-0"		35
AB803	1	12'-3"	108	9'-6"	2'-9"	2'-0"		32
AB804	2	9'-0"	108	3'-0"	6'-0"	4'-6"		48
AB805	24	35'-3"	Str.					2,260
AB806	20	32'-6"	Str.					1,730
AB807	8	38'-6"	Str.					822
AB808	3	18'-0"	Str.					144
AB809	1	15'-6"	Str.					41
AB810	2	22'-0"	Str.					117
AB811	2	8'-10"	153	4'-3"	1'-6"	5'-0"		45
AB812	69	10'-10"	100	9'-0"				1,995
AB813	68	9'-10"	100	8'-0"				1,785
AB814	35	8'-4"	100	6'-6"				779
AB901	17	20'-9"	Str.					1,200
AB902	17	7'-0"	104	6'-3"	1'-0"			405
AB903	16	11'-6"	104	10'-9"	1'-0"			625
AB1101	11	7'-8"	104	6'-9"	1'-2"			446
AB1102	7	15'-8"	104	14'-9"	1'-2"			585
AB1103	10	21'-0"	Str.					1,115
DB01	18	5'-10"	141	3'-9"				280
DB02	64	5'-4"	141	3'-3"				911
							Total	41,054



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 20/20
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.

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

222
299

STARK COUNTY
STA-30-
STA-77-9.22

H.N.T.B. BRIDGE NO. 3

Revised 12-7-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 18/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.

BR. NO. STA-30-15.07 STA. 970+58.36
SCALE: STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
BDB		CYK	HJK	
DATE 11-4-70	DATE	DATE 11-4-70	DATE 11-24-71	

1668

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		RETAINING WALL D						
W501	14	33'-0"	Str.					482
W502	14	32'-0"	Str.					468
W503	1 Ser. 23	19'-0" to 23'-0"	Str.				2 3/16"	504
W504	23	2'-3"	105	7½"	1'-3"			54
W505	23	6'-9"	114	3'-3"				162
W506	23	4'-10"	115	2'-10"	9"			116
W507	23	4'-6"	Str.					108
W508	10	34'-0"	Str.					354
W601	14	10'-1"	133					212
W602	1	22'-3"	Str.					33
W603	2	21'-0"	Str.					63
W604	1	20'-9"	Str.					31
W605	2	5'-10"	104	5'-0"	1'-0"			18
W606	23	33'-0"	Str.					1,139
W801	31	12'-7"	100	10'-9"				1,042
W1001	31	10'-0"	Str.					1,330
W1101	1 Ser. 69	17'-0" to 21'-0"	Str.				11/16"	6,950
W1102	69	10'-0"	147	6'-6"	3'-6"			3,670
							Total	16,736
		PIER 1						
SPA401	4	733'-10"	112	74.7	27'-0"	3'-2"		2,310
SPA402	1	725'-0"	112	73.8	26'-8"	3'-2"		570
SPA403	1	716'-2"	112	72.9	26'-4"	3'-2"		562
SPA404	1	707'-4"	112	72.0	26'-0"	3'-2"		556
SPA405	1	698'-6"	112	71.1	25'-8"	3'-2"		549
SPA406	1	689'-8"	112	70.2	25'-4"	3'-2"		542
PA501	56	15'-8"	109	3'-2"	4'-5"			915
PA502	196	13'-6"	109	2'-1"	4'-5"			2,760
PA503	92	4'-11"	105	1'-0"	3'-2"			470
PA504	2	4'-3"	105	1'-0"	2'-6"			8
PA505	2	3'-3"	105	1'-0"	1'-6"			6
PA601	8	6'-6"	105	1'-11"	3'-0"			78
PA602	8	9'-0"	113	2'-0"	5'-0"	3'-2"		108
PA603	8	42'-0"	Str.					505
PA604	8	33'-0"	Str.					397

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
PA1001	38	12'-4"	100	9'-6"				2,025
PA1002	130	11'-4"	100	8'-6"				6,340
PA1003	6	11'-0"	Str.					284
PA1004	4	10'-0"	Str.					172
PA1005	6	12'-6"	Str.					323
PA1101	24	14'-8"	100	11'-6"				1,870
PA1102	28	31'-9"	Str.					4,720
PA1103	14	32'-0"	Str.					2,380
PA1104	42	31'-6"	Str.					7,050
PA1105	14	31'-3"	Str.					2,330
PA1106	14	30'-6"	Str.					2,270
PA1107	14	29'-9"	Str.					2,210
PA1108	126	7'-0"	104	6'-3"	1'-0"			4,690
PA1109	6	35'-10"	111	30'-6"	3'-0"			1,140
PA1110	6	38'-0"	Str.					1,210
PA1111	2	12'-6"	Str.					133
PA1112	4	13'-0"	Str.					276
PA1113	6	41'-6"	Str.					1,320
PA1114	6	30'-0"	Str.					955
PA1115	2	11'-0"	Str.					117
PA1116	6	18'-4"	111	13'-0"	3'-0"			584
PA1117	6	41'-0"	Str.					1,310
PA1118	6	37'-3"	Str.					1,190
PA1119	6	17'-0"	Str.					541
PA1120	2	10'-0"	Str.					106
PA1121	4	12'-0"	Str.					255
PA1122	6	47'-6"	Str.					1,510
PA1123	6	41'-0"	Str.					1,310
							Total	58,957
		PIER 2						
SPB401	1	912'-0"	112	51.6	18'-4"	5'-8"		668
SPB402	1	855'-5"	112	48.4	17'-2"	5'-8"		623
PB501	8	5'-6"	105	1'-0"	3'-9"			46
PB502	4	3'-9"	105	1'-0"	2'-0"			16
PB503	16	6'-9"	105	1'-0"	5'-0"			113
PB504	16	6'-3"	105	1'-0"	4'-6"			104
PB901	19	17'-0"	100	14'-6"				1,100
PB1101	52	21'-8"	100	18'-6"				6,050
PB1102	20	20'-8"	100	17'-6"				2,200
PB1103	52	10'-2"	104	9'-3"	1'-2"			2,810
PB1104	26	18'-0"	Str.					2,490
PB1105	26	16'-9"	Str.					2,320
							Total	18,540

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	SERIES INCRE.	WEIGHT POUNDS
		PIER 3						
SPC401	1	598'-3"	112	60.9	21'-10"	3'-2"		469
SPC402	1	582'-6"	112	59.3	21'-3"	3'-2"		457
SPC403	1	567'-10"	112	57.8	20'-8"	3'-2"		445
SPC404	1	554'-1"	112	56.4	20'-2"	3'-2"		435
SPC405	1	541'-4"	112	55.1	19'-8"	3'-2"		425
SPC406	1	523'-7"	112	53.3	19'-0"	3'-2"		411
SPC407	1	506'-11"	112	51.6	18'-4"	3'-2"		397
SPC408	1	491'-3"	112	50.0	17'-9"	3'-2"		385
PC501	37	15'-8"	109	3'-2"	4'-5"			605
PC502	224	13'-6"	109	2'-1"	4'-5"			3,150
PC503	80	4'-11"	105	1'-0"	3'-2"			410
PC504	2	4'-3"	105	1'-0"	2'-6"			8
PC505	2	3'-3"	105	1'-0"	1'-6"			6
PC601	8	6'-6"	105	1'-11"	3'-0"			78
PC602	8	9'-0"	113	2'-0"	5'-0"	3'-2"		108
PC603	8	32'-6"	Str.					390
PC604	8	35'-3"	Str.					426
PC1001	14	12'-4"	100	9'-6"				745
PC1002	122	11'-4"	100	8'-6"				5,950
PC1003	6	11'-0"	Str.					285
PC1004	4	13'-0"	Str.					224
PC1005	4	12'-6"	Str.					216
PC1006	6	12'-0"	Str.					310
PC1101	24	14'-8"	100	11'-6"				1,870
PC1102	20	13'-8"	100	10'-6"				1,450
PC1103	28	26'-3"	Str.					3,900
PC1104	6	29'-0"	Str.					925
PC1105	14	25'-0"	Str.					1,860
PC1106	28	24'-3"	Str.					3,610
PC1107	14	23'-6"	Str.					1,750
PC1108	14	23'-0"	Str.					1,710
PC1109	14	22'-3"	Str.					1,660
PC1110	112	7'-0"	104	6'-3"	1'-0"			4,160
PC1111	6	34'-4"	111	29'-0"	3'-0"			1,095
PC1112	6	36'-0"	Str.					1,150
PC1113	4	14'-9"	Str.					313
PC1114	4	11'-0"	Str.					234
PC1115	6	38'-9"	Str.					1,230
PC1116	6	27'-0"	Str.					860
PC1117	6	37'-9"	Str.					1,200
PC1118	6	37'-4"	111	32'-0"	3'-0"			1,190
PC1119	8	16'-3"	Str.					690
PC1120	4	13'-0"	Str.					276
PC1121	2	10'-0"	Str.					106
PC1122	6	42'-0"	Str.					1,340
							Total	48,914

MICROFILMED
APR 16 1985

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

223
299

STARK COUNTY
STA-30-15.04
STA-77-9.22

For bending diagrams see Sheet 18/20

H.N.T.B. BRIDGE NO. 3 — Revised 12-9-75 By EPS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF 19/20
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

REINFORCEMENT SCHEDULE

U.S. 30 AND RAMP B OVER
CLEVELAND AVE. AND B. & O. R.R.
BR. NO. STA-30-15 07 STA. 970+58.36
SCALE: STA. 975+58.49

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
B.D.B		AW	MJK	
DATE 10-29-76	DATE	DATE 10-29-76	DATE 11-24-77	1668