FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

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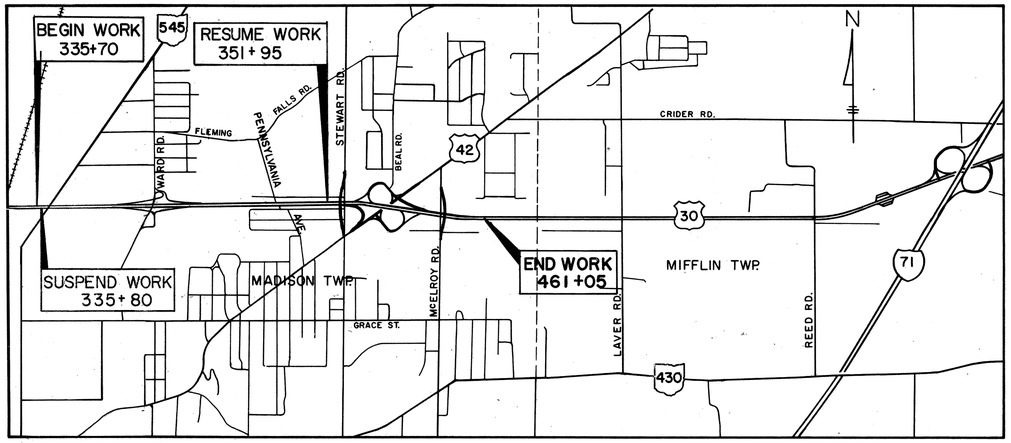
RIC-30-(5.78)(6.32)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
RIC-30-(5.78) (6.32)
MADISON TOWNSHIP, RICHLAND COUNTY
GRADE SEPARATIONS OF
STEWART AND McELROY RDS.
U.S. 42 INTERCHANGE

CONVENTIONAL SIGNS

TREES AND STUMPS (EXISTING)	
TREES (TO BE REMOVED IN NON-LA R/W)	
FENCE LINE	
POLE LINE	
COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CORPORATION LINE	
CENTER LINE	
GUARD RAIL	EXISTING / PROPOSED
EXISTING PIPE	G W S
RAILROAD	
PROPERTY LINE	PL
EXISTING RIGHT OF WAY	
PROPOSED RIGHT OF WAY	R/W
PROPOSED LIMITED ACCESS RIGHT OF WAY	LA
PROPOSED LIMITED ACCESS AND RIGHT OF WAY	LA R/W

INDEX OF SHEETS



Shts. No. 128 & 129 revised 6-30-71 A.W.G.

LOCATION MAP
0 2000 4000 6000
SCALE IN FEET

PORTIONS TO BE IMPROVED
STATE HIGHWAYS & OTHER ROADS

LINE DATA

PROJECT RIC-30-5.78, 6.32 LENGTH = 0

WORK	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT.	LENGTH MILES
US. 30	335+70	335+80			10	
			351+95	461+05	10910	
US. 42	24+45R			54+00L	2945	
WARD RD.	-2+05	-1+95			10	
WARD RD.			41+95	25+05	2010	
STEWART RD.	16+00.23			31+70	1569.77	
DUKE AVE.	0+24			3+75	351	
LEHIGH AVE.	0+12			4+00	388	
YALE AVE.	0+12			4+00	388	
McELROY RD.	7+65			23+35	1570	
McELROY RD. CUL-DE-SAC	0+12			3+65	353	
				TOTAL LENGTH	20504.77	3.883

FILE NO.	RICHLAND COUNTY RIC-30-5.78, 6.32
_____	DATE OF LETTING _____
	CONTRACT NO. _____

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 5'

SCALE IN FEET
1" = 50' 0 50 100 150

STANDARD DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-1	6-1-65	BP-5	6-1-65	MC-1	6-13-69	806	1-1-69
BP-2	12-1-68	F-2	3-10-69	MC-3	6-20-69	808	11-14-69
BP-3	12-1-68	F-3	3-10-69	MC-4	6-13-69	811	1-1-69
BP-4	12-1-68	GR-2A	1-1-67	MC-7	10-1-68	815	1-1-69
BP-6	6-1-65	GR-2B	2-15-68			816	1-1-69
BP-7	1-1-66	GR-6	7-15-68	MH-1	10-1-68	836	6-17-69
		HL-1	11-1-65	MH-1A	10-1-68	1001	1-1-69
CB-2-2-A&B	6-1-65	HL-3	11-1-65	AS-1-67	6-12-69	938	8-12-69
CB-5	9-1-69	F-6	10-1-66	RB-1-55	2-2-59		
CB-8	9-1-69	HW-E	6-1-65	SD-1-69 SH 1,2 3/4	6-12-69		
GR-1	1-1-67	L-1	6-1-65	BR-1-67 SH 1	2-1-68		

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02, REVISED CODE OF OHIO.

1969 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, , AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE 5-26-70 — H. H. Reader — DIVISION DEPUTY DIRECTOR
APPROVED DATE 8-18-70 — C. K. Albrecht — ENGINEER OF BRIDGES
APPROVED DATE 8-19-70 — R. E. Gathin — ENGINEER OF LOCATION & DESIGN
APPROVED DATE 8-19-70 — George J. Thomajer — DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION
APPROVED DATE 8-25-70 — T. H. Borland — DEPUTY DIRECTOR OF RIGHT OF WAY
APPROVED DATE 8-25-70 — Thomas M. Major — DEPUTY DIRECTOR OF PLANNING & PROGRAMMING
APPROVED DATE 8-25-70 — R. W. Williams — FIRST ASSISTANT DIRECTOR
APPROVED DATE 8-25-70 — P. E. Madden — DIRECTOR OF HIGHWAYS

NO RR ABV'S 8-14-70

STATE OF OHIO
THOMAS L. SEITZ
24757
REGISTERED
PROFESSIONAL ENGINEER

Prepared and Recommended By
SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2/134

RIC-30-(5.78) (6.32)

SCHEMATIC PLAN

FLEMING FALLS RD.

ROAD CLOSED

1600'±

STEWART RD.

3000'±

BEAL RD.

3700'±

RAFIELD RD

END WORK STA. 31+70

ROAD CLOSED

EXPRESSVIEW DR.

RAMP U

END WORK STA. 51+00 L

ROAD CLOSED

McELROY RD.

END WORK STA. 23+35

CURVE DATA RELOC. STEWART RD.

P.I. STA. 22+28.76	P.I. STA. 27+43.57	P.I. STA. 29+24.41
Δ = 10°-06-15" RT.	Δ = 8°-12'-40" RT.	Δ = 12°-07'-40" LT.
D = 4°-00'	D = 6°-00'	D = 6°-00'
R = 1432.39'	R = 954.93'	R = 954.93'
T = 126.63'	T = 68.54'	T = 101.44'
L = 252.60'	L = 136.85'	L = 202.13'
E = 5.59'	E = 2.46'	E = 5.37'

ROAD CLOSED

PENNSYLVANIA AVE.

YALE AVE.

RESUME WORK STA. 351+95

TO BE CLOSED

STA. 25+00 STEWART RD. = STA. 422+15 U.S.R. 30

STA. UR 428+16.13

TEMP. RAMP UR

STA. 434+40 U.S.R. 30 = STA. 0+00 U.S.R. 42

RAMP UR

UR420

UR425

400

410

420

430

440

85°-05'-35"

B420

LEHIGH AVE.

BRIDGE NO. RIC-30-5.78

RAMP B

RAMP A

A445

SUSPEND WORK STA. 335+80

ROAD CLOSED

RIC-30-300

RIC-30-5.79 STA. 425+10

B430

BEGIN WORK STA. 335+70

DUKE AVE.

TEMP. RAMP TR

RAMP TR

TR445

91°-54'-20"

450

460

END WORK STA. 461+05

BRIDGE NO. RIC-30-6.32

STA. TR 442+24.15 = STA. TR 14+25

OHIO EDISON HIGH TENSION TOWERS

OHIO EDISON HIGH TENSION TOWERS

OHIO EDISON HIGH TENSION TOWERS

STA. 14+99.56 McELROY RD. = STA. 450+43.66 U.S.R. 30

EVERGREEN AVE.(W)

EVERGREEN AVE.(E)

B436

10R

RAMP T

EXIST. U.S.R. 30 CURVE DATA

P.I. STA. 427+38.73
Δ = 9°-39'
D = 1°-20'
R = 4297.18'
T = 362.73'
L = 723.75'
E = 15.78'

EXIST. U.S.R. 30 CURVE DATA

P.I. STA. 454+43.89
Δ = 8°-45'-30" LT.
D = 1°-20'
R = 4297.18'
T = 329.08'
L = 656.88'
E = 12.59'

BEGIN WORK STA. 16+00.23

BEGIN WORK STA. 24+45 R

U.S.R. 42

10R

PENNSYLVANIA AVE.

STEWART RD.

2300'

BEGIN WORK STA. 7+65

McELROY RD.

2200'

ROAD CLOSED

GRACE ST.

CURVE DATA RELOC. McELROY RD.

P.I. STA. 9+95.00	P.I. STA. 17+86.53	P.I. STA. 21+19.48
Δ = 7°-05'-40" RT.	Δ = 22°-29'-00" LT.	Δ = 15°-50'-40" RT.
D = 2°-00'	D = 8°-00'	D = 6°-00'
R = 2864.79'	R = 716.20'	R = 954.93'
T = 177.59'	T = 142.35'	T = 132.88'
L = 354.72'	L = 281.04'	L = 264.07'
E = 5.50'	E = 14.01'	E = 9.20'

U.S. 30

DESIGN DESIGNATION (WEST OF US.42)

CURRENT ADT (1970) 14630
DESIGN YEAR ADT (1990) 23750
DESIGN HOURLY VOLUME 15%
DIRECTIONAL DISTRIBUTION 60-40
PERCENT B&C TRUCKS 9% DHV
DESIGN SPEED - 60 MPH

U.S. 30

DESIGN DESIGNATION (EAST OF US.42)

CURRENT ADT (1970) 9300
DESIGN YEAR ADT (1990) 15,100
DESIGN HOURLY VOLUME 15%
DIRECTIONAL DISTRIBUTION 60-40
PERCENT B&C TRUCKS 9% DHV
DESIGN SPEED - 60 MPH

0 100 200 300 400
SCALE

UTILITY OWNERS

UNITED TELEPHONE CO., 25 S. MULBERRY ST. MANSFIELD, OHIO
OHIO EDISON CO., 47 N. MAIN ST. AKRON, OHIO
COLUMBIA GAS OF OHIO, 99 N. FRONT ST. COLUMBUS, OHIO
LINCOLN FIELDS CO-OP ASSOCIATION, 1082 LEHIGH AVE. MANSFIELD, OHIO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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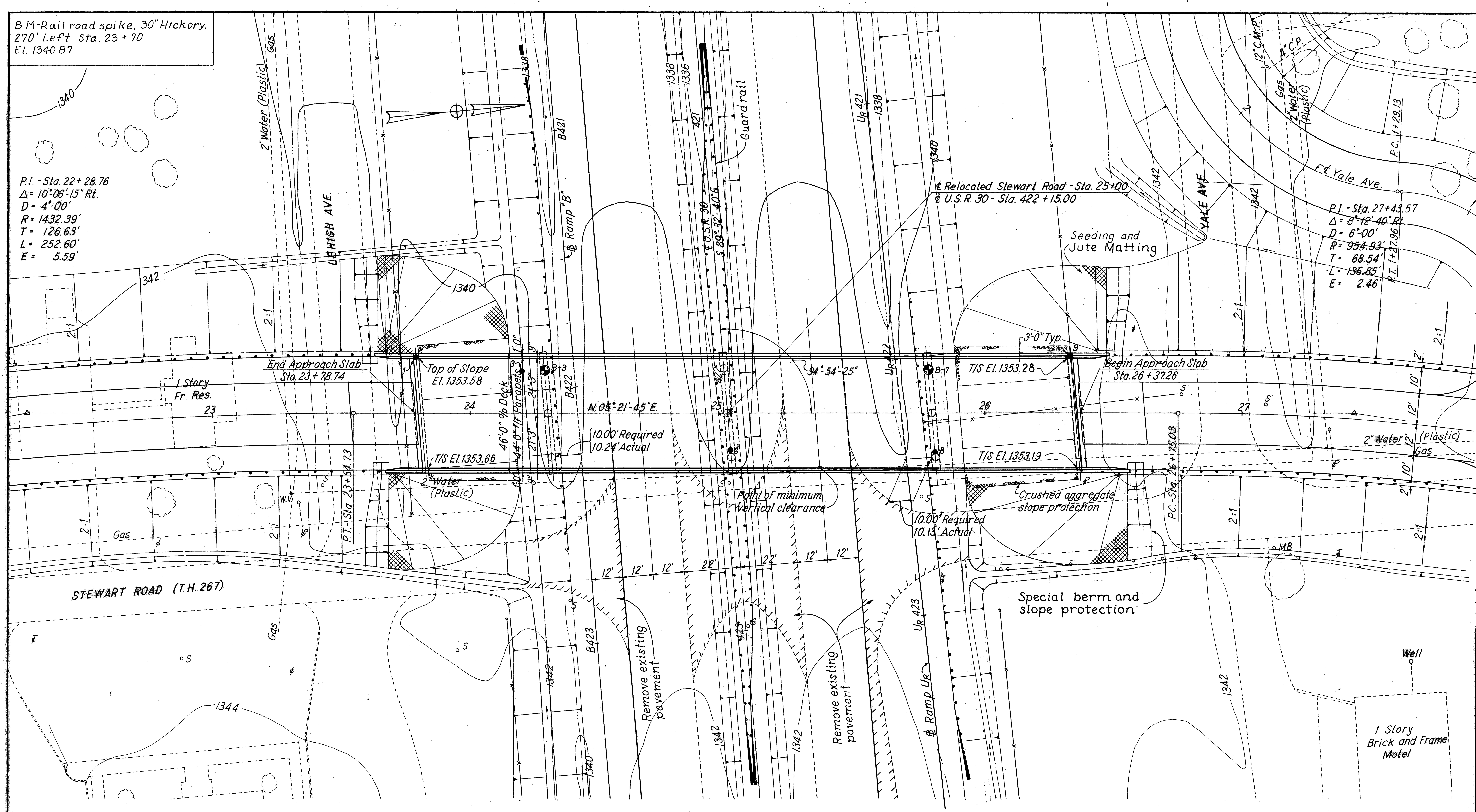
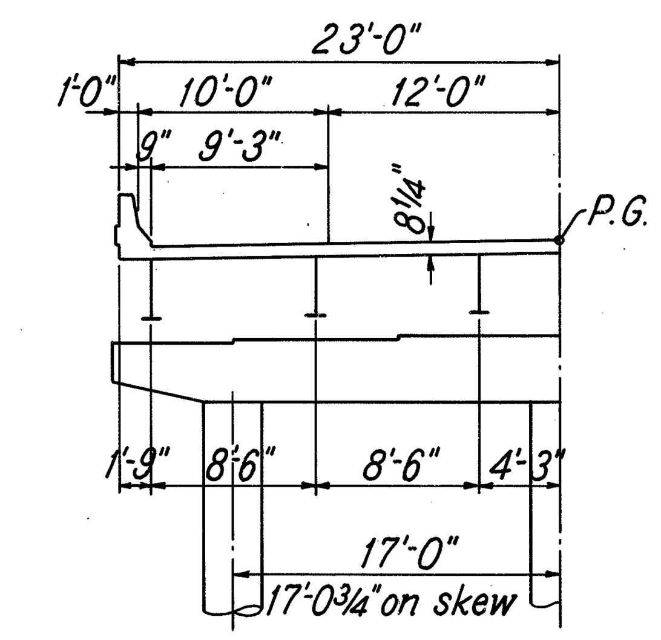
RIC-30-(5.78) (6.32)





HALF SECTION

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

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure.

SPANS: 49', 70', 79.5', 55.5' c/c Bearings

ROADWAY: 44'-0" f/f Parapets

LOADING: AASHO HS20-44

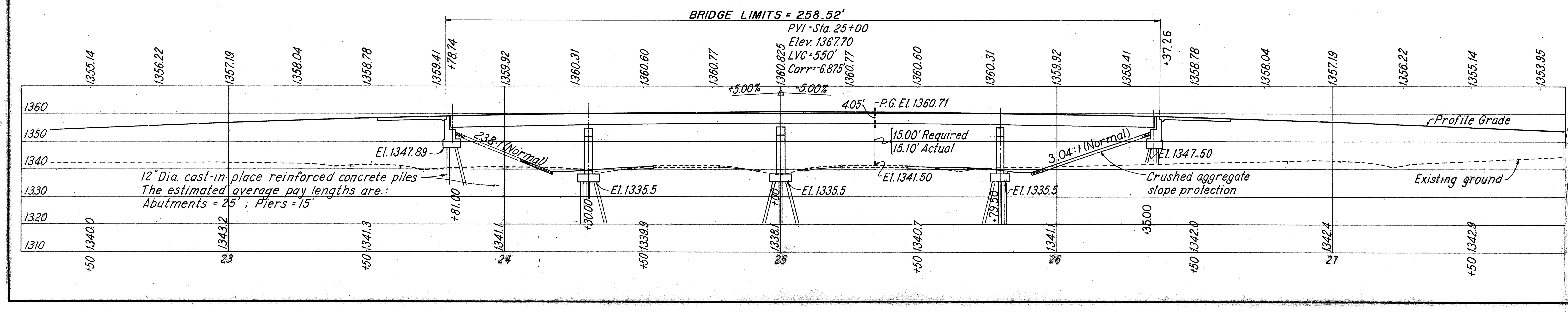
SKEW: 4°-54'-25" RF

WEARING SURFACE: 1" Monolithic concrete

APPROACH SLABS: AS-1-67 (25' long)

ALIGNMENT: Tangent

AVERAGE DAILY TRAFFIC: P+A=4670; B+C=160; Total=4830-Stewart Road. P+A=23,880; B+C=5170; Total=29,050-U.S.R. 30 (1988)



FOUNDATION INVESTIGATION LEGEND

- Indicates core boring location
- Indicates rod sounding location

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD — WOOSTER
OHIO

1/8

SITE PLAN
BRIDGE NO. RIC-30-0578 UNDER RELOCATED STEWART ROAD

RICHLAND COUNTY — U.S.R. 30

STA. 421 + [illegible].00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	UL		JM	1-15-70	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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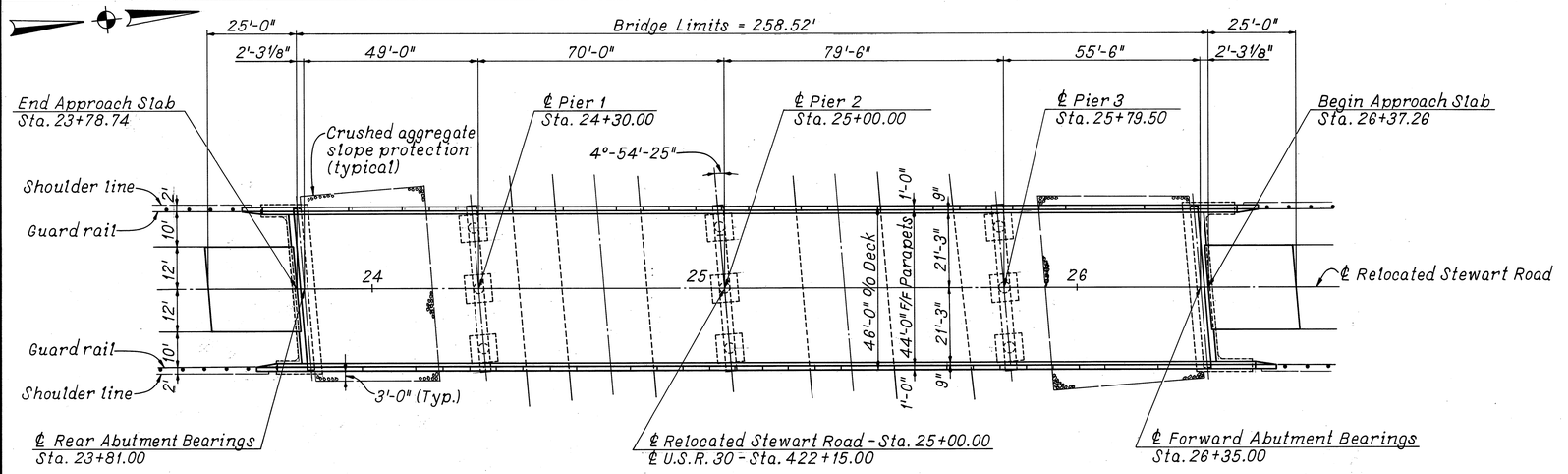
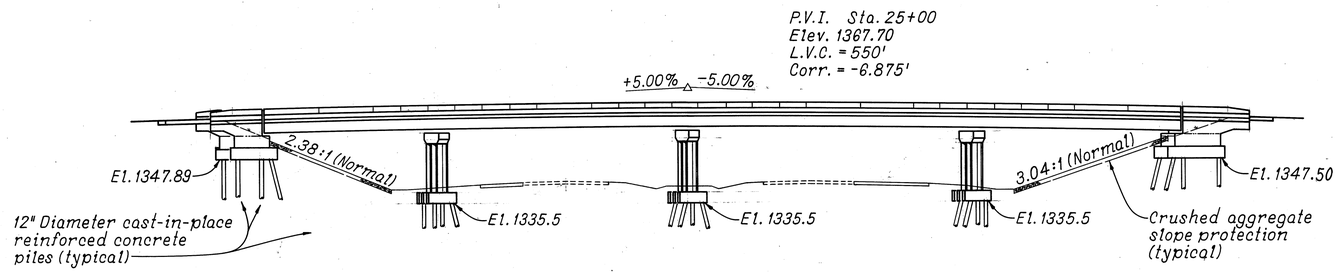
RIC - 30 - (5.78) (6.32)



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L		
503	351	Cu.yds.	Unclassified excavation		220	131			
505	Lump	Sum	First test pile				Lump		
507	1275	Lin.ft.	12" dia. cast-in-place reinforced concrete piles		600	675			
509	131,998	Lbs.	Reinforcing steel	98,462	13,199	20,337			
511	366	Cu.yds.	Class "C" concrete, superstructure	366					
511	80	Cu.yds.	Class "C" concrete, piers above footings			80			
511	106	Cu.yds.	Class "C" concrete, abutments above footings		106				
511	137	Cu.yds.	Class "C" concrete, footings		82	55			
513	297,778	Lbs.	Structural steel	297,778					
514	297,778	Lbs.	Field painting of structural steel	297,778					
518	12	Each	Scuppers, including supports	12					
518	60	Cu.yds.	Porous backfill		60				
518	77	Lin.ft.	6" Perforated helical CMP, including specials, 707.01		77				
518	96	Lin.ft.	6" Non-perforated helical CMP, 707.01		96				
601	505	Sq.yds.	Crushed aggregate slope protection		505				
808	366	Units	Chemical admixtures for concrete, Type A, B or D	366					

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-67 (revised 6-12-69); SD-1-69, sheets 1 thru 4 (dated 6-12-69); BR-1-67, sheet 1 of 3 (dated 2-1-68); RB-1-55 (revised 2-2-59); and to Supplemental Specifications 808 (dated 11-14-69); 811 (dated 1-1-69) and 836 (dated 6-17-69).

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1965, including the Ohio "Supplement" to these specifications.

DESIGN DATA:
Design Loading - AASHO HS20-44
Concrete Class C - unit stress 1200 p.s.i. for superstructure
unit stress 1333 p.s.i. for substructure
Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.
Reinforcing Steel - ASTM A615, A616 or A617 - unit stress 20,000 p.s.i.
Spiral reinforcement shall be plain bars ASTM A306 or A499.

EMBANKMENT CONSTRUCTION: The embankments shall be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments. Excavation shall then be made for the abutments.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments and 38 tons per pile for the piers.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either would be held to a minimum.

MAINTENANCE OF TRAFFIC: Four lanes of traffic with a minimum horizontal width extending 46' out both directions from ℄ USR 30 and a minimum vertical clearance of 12'-9" shall be maintained on USR 30 at all times.

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

2/8

GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. RIC-30-0578
UNDER RELOCATED STEWART ROAD
RICHLAND COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL		JM	1-22-70	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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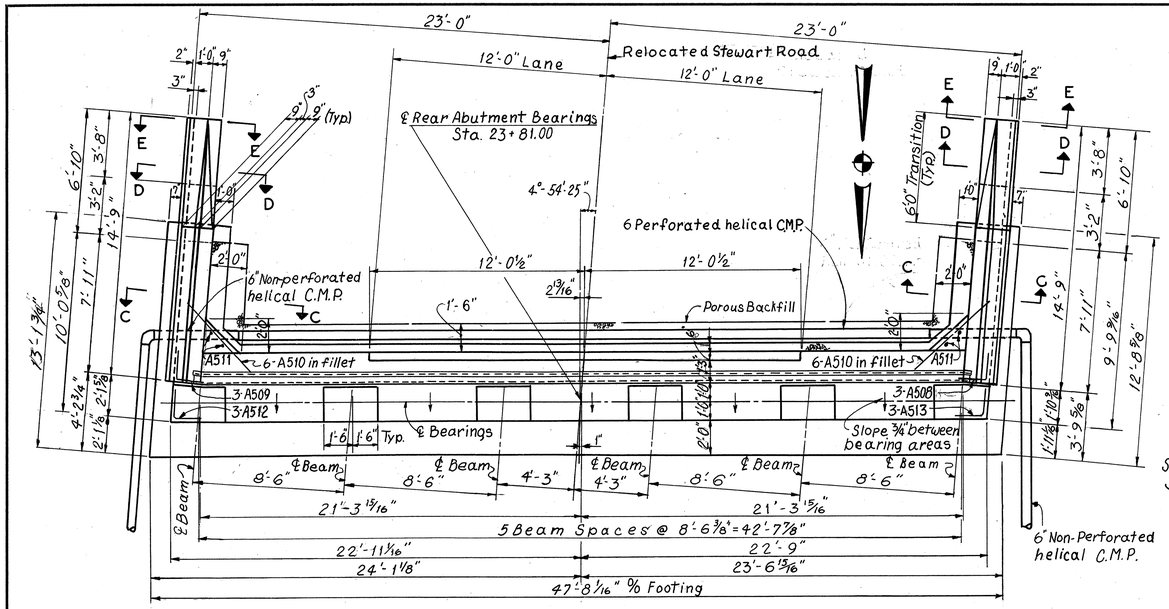
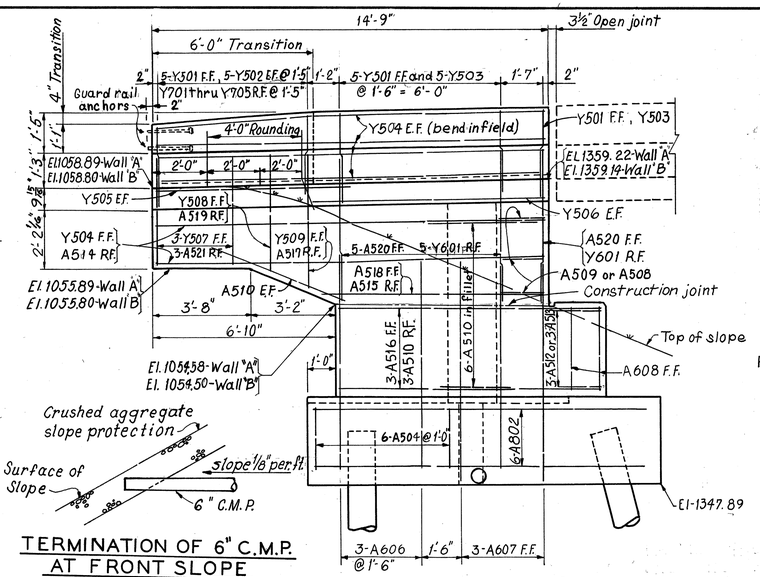
RIC-30-(5.78) (6.32)

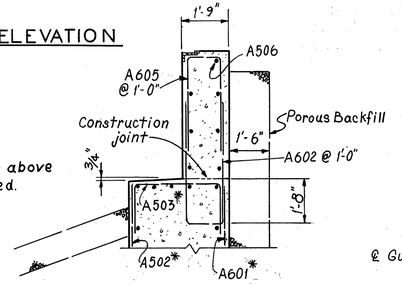


PLAN

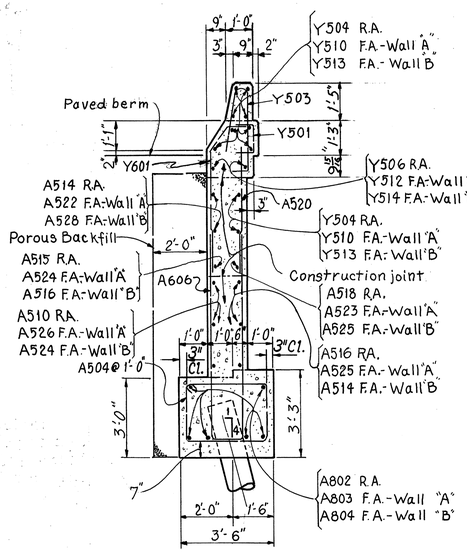


TERMINATION OF 6" C.M.P. AT FRONT SLOPE

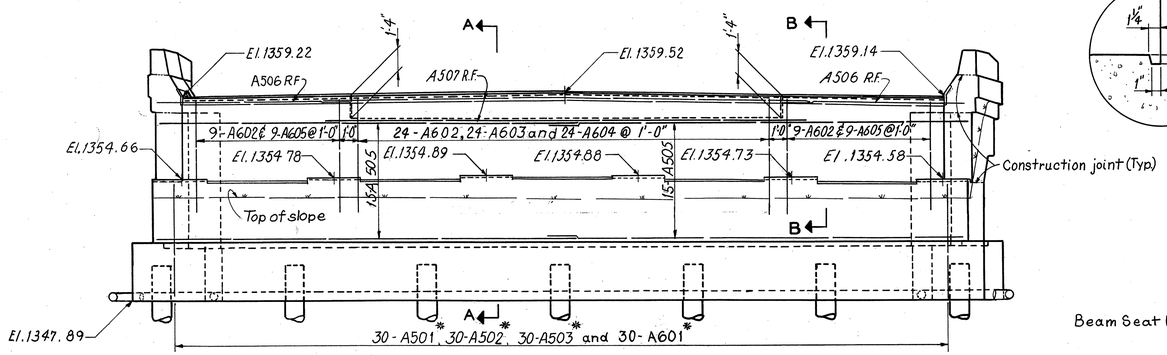
WINGWALL ELEVATION



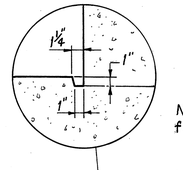
SECTION B-B



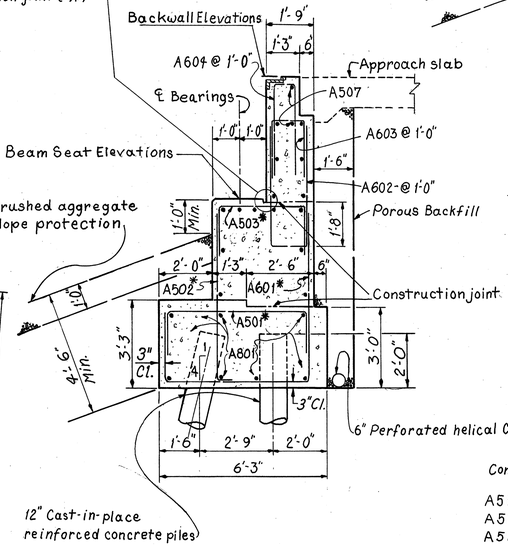
SECTION C-C



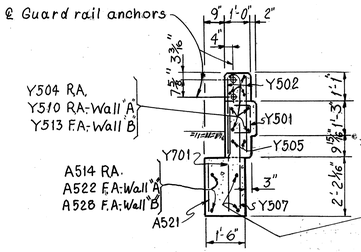
ELEVATION



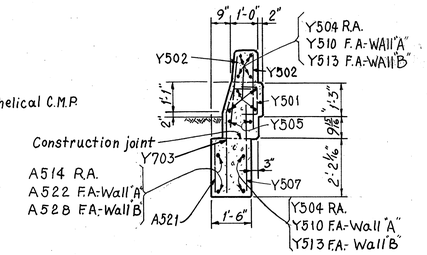
Note: All longitudinal bars above footing are A505 except as noted.



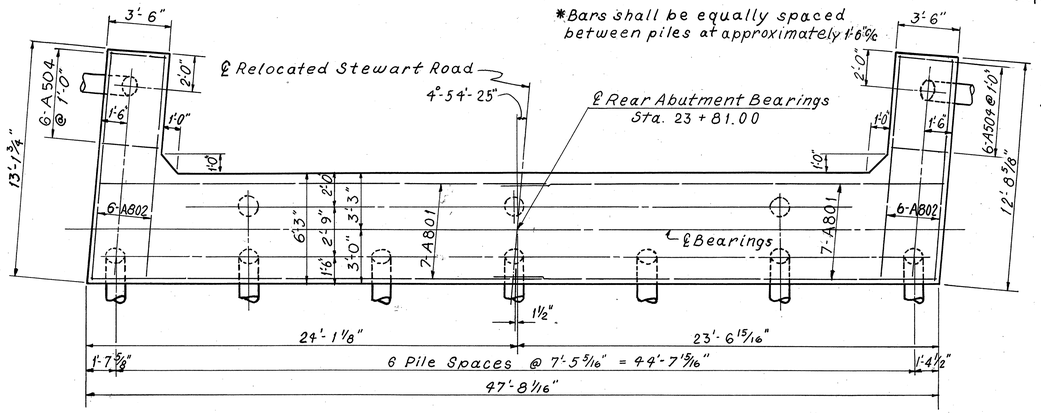
SECTION A-A



SECTION E-E



SECTION D-D



FOOTING PLAN

ABUTMENT NOTES: See Sheet 4/8

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES, INC. 3/8
Consulting Engineers
MANSFIELD WOOSTER OHIO

REAR ABUTMENT

BRIDGE NO. RIC-30-0578 UNDER RELOCATED STEWART ROAD

RICHLAND COUNTY U.S.R. 30

STA. 421+89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JM	JM	TJS		RAK	1-15-70	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-30-(5.78)(6.32)

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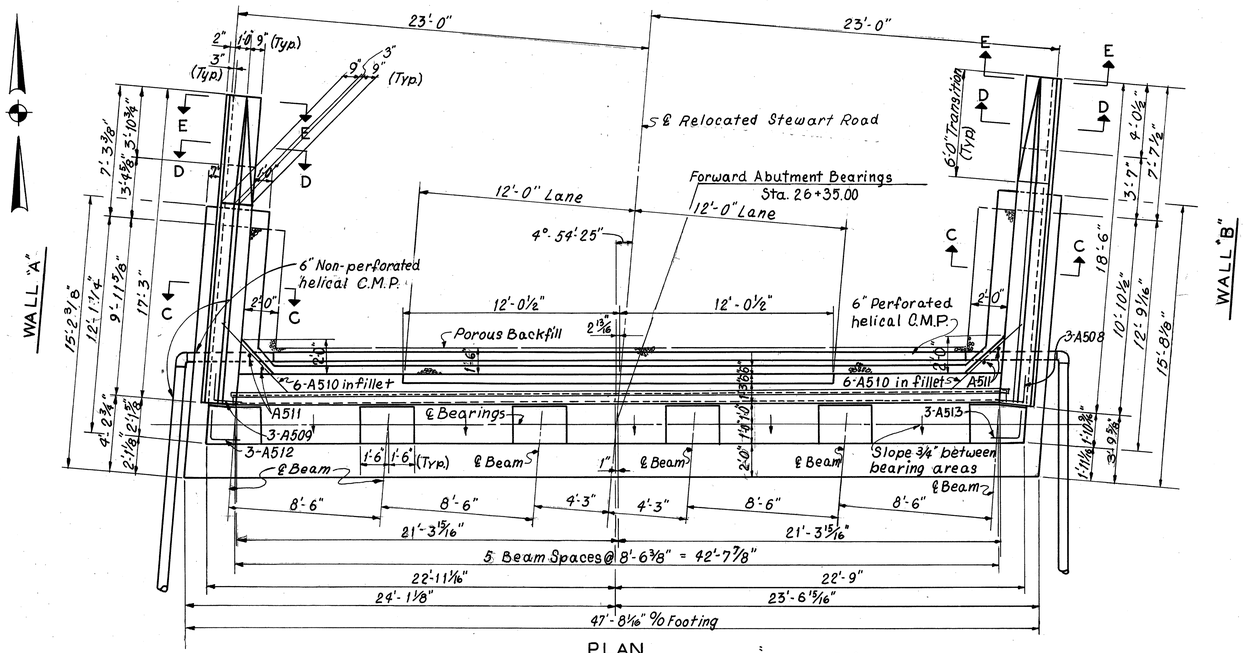

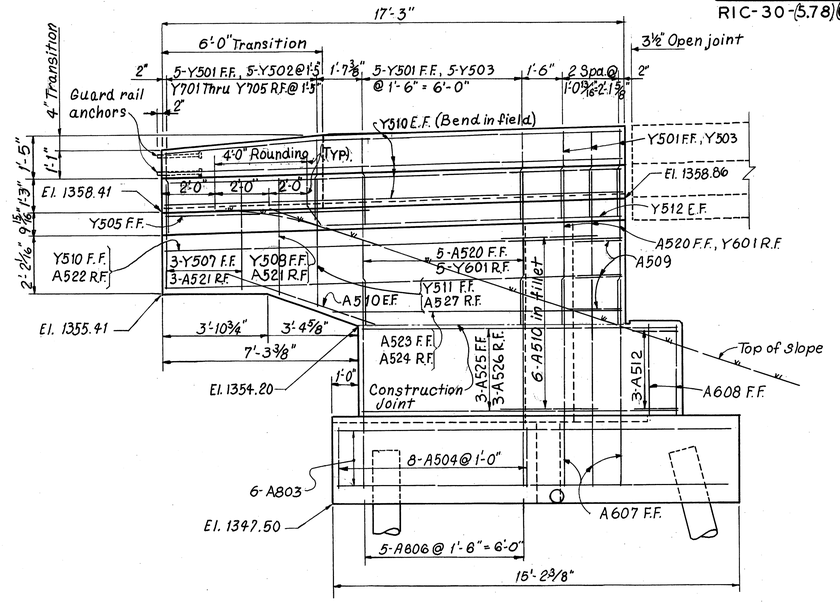

NOTES:

POROUS BACKFILL shall extend up to the subgrade or to the finished ground surface.
ADJUSTABLE TYPE ELBOWS meeting specification requirements for gage and coating are acceptable for making bends in non-perforated corrugated metal pipe. Elbows need not be perforated.
NOTATIONS: R.F.-Rear Face, F.F.-Front Face, E.F.-Each Face, RA-Rear Abutment
F.A.-Forward Abutments
SECTIONS: A-A, B-B, C-C, D-D and E-E See Sheet 3/8

SHAFFER, JOHNSTON, LICHTENWALTER AND ASSOCIATES INC.
Consulting Engineers
MANSFIELD OHIO WOOSTER

4/8

FORWARD ABUTMENT
BRIDGE NO. RIC-30-0578
UNDER RELOCATED STEWART ROAD

RICHLAND COUNTY U.S.R. 30
STA. 421+89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JM	JM	TJS		RAK	1-15-70	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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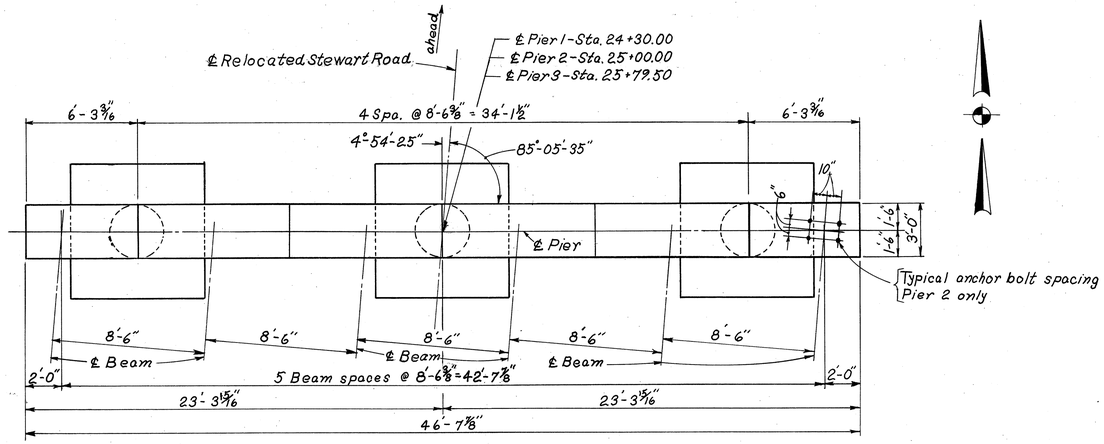
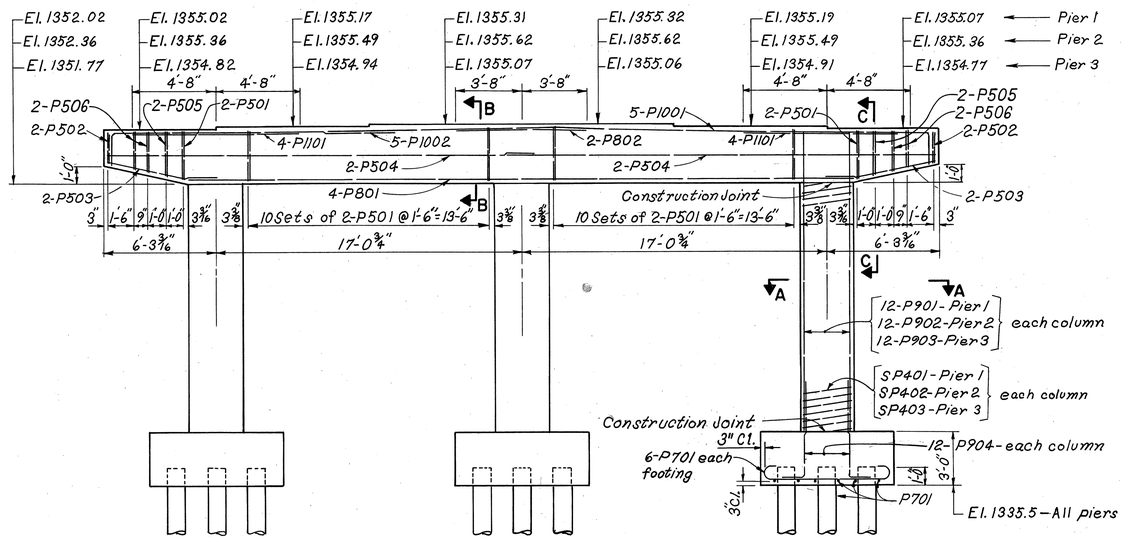
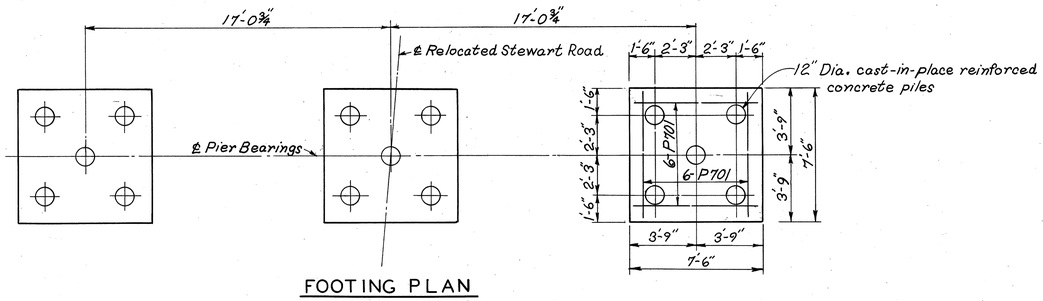
RIC-30-(5.78)(6.32)



PLAN

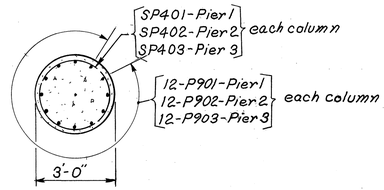


ELEVATION

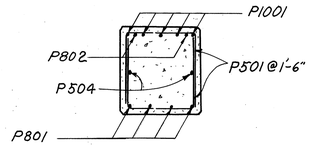


FOOTING PLAN

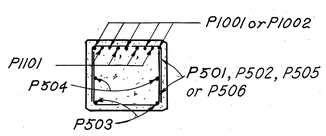
PLAN OF TYPICAL FOOTING



SECTION A-A



SECTION B-B



SECTION C-C

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat of Pier 2, so as to avoid interference with the drilling of anchor bolt holes.

BATTERED PILES: The following piles shall be battered 1:4 in the direction of the U.S.R. 30 pavements: Pier 1 - front row; Pier 2 - both outside rows; Pier 3 - rear row.

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PIERS

BRIDGE NO. RIC-30-0578
UNDER RELOCATED STEWART ROAD

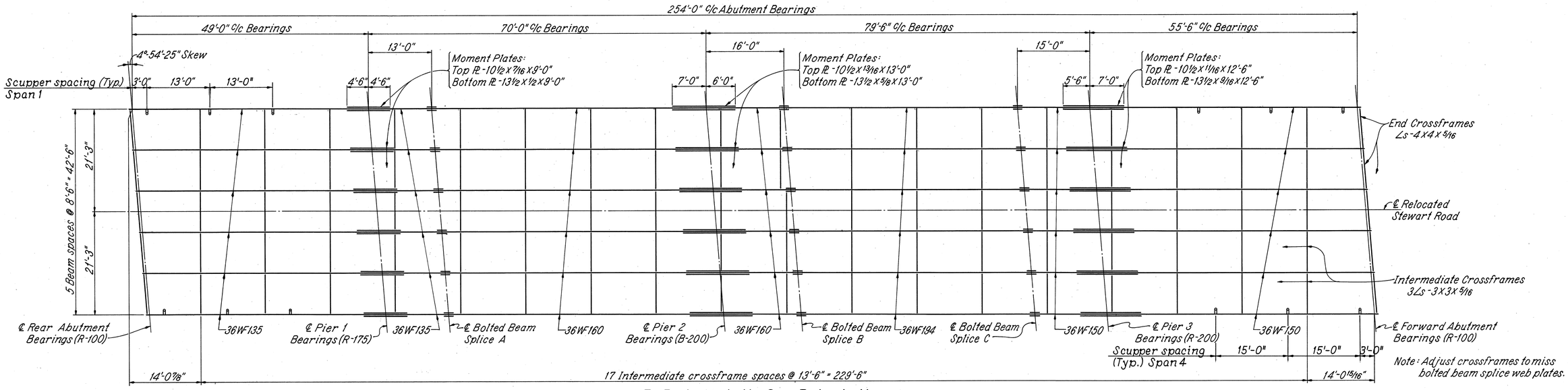
RICHLAND COUNTY U.S.R. 30
STA. 421 + 89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	DL		J.M.	12-15-69	

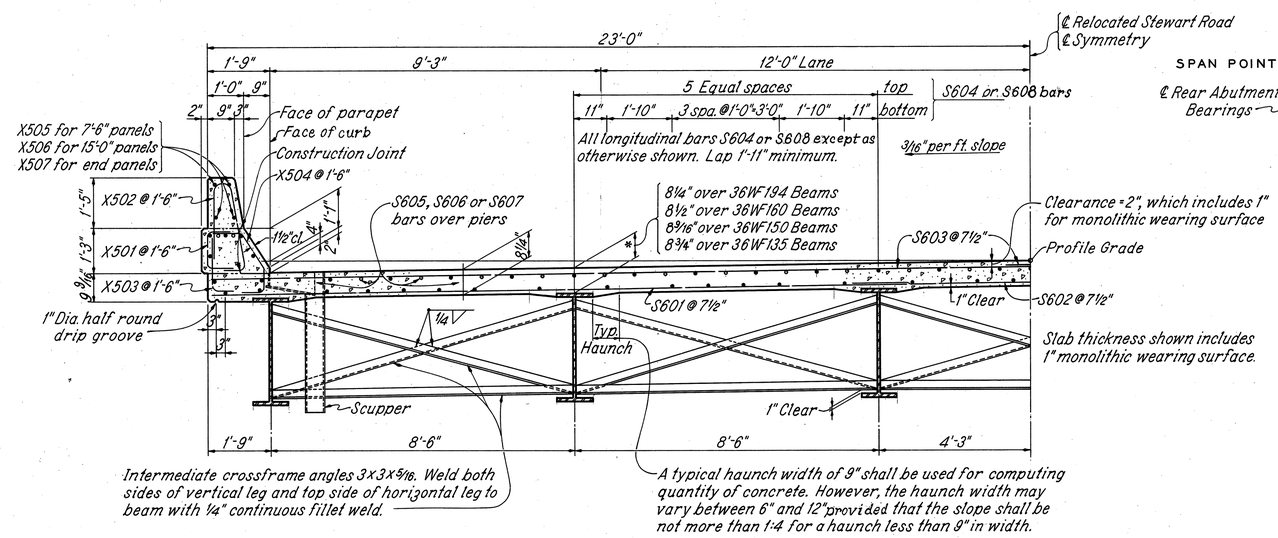
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

115
134

RIC-30-(5.78)(6.32)



FRAMING PLAN

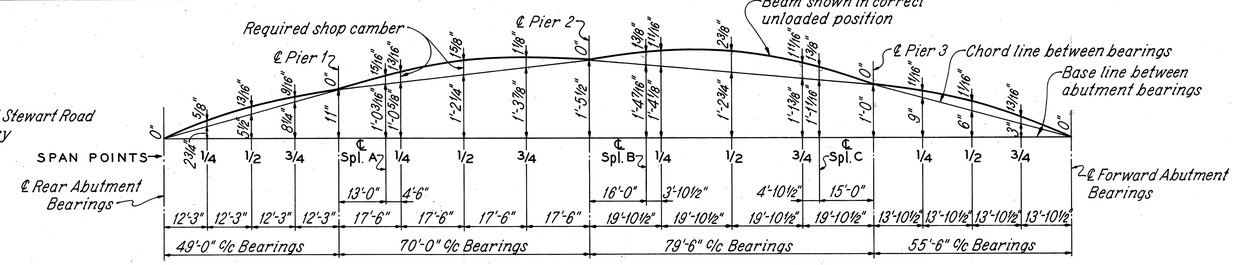


Intermediate crossframe angles 3"x3"x5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with ¼" continuous fillet weld.

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.

* These are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions, even though deviation from them 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 the volume of encased steel plates as per 511.19.

HALF TRANSVERSE SECTION



BEAM LAYOUT DIAGRAM

CAMBERING of beams is required in accordance with the following table:

DEFLECTION AND CAMBER - ALL BEAMS

	SPAN 1			SPAN 2				SPAN 3					SPAN 4		
SPAN POINTS →	¼	½	¾	Spl. A	¼	½	¾	Spl. B	¼	½	¾	Spl. C	¼	½	¾
Deflection due to weight of steel	0	0	0	0	0	1/16"	0	1/16"	1/16"	1/8"	1/16"	1/16"	0	0	0
Deflection due to remaining dead load	1/8"	3/16"	1/16"	1/8"	3/16"	1/4"	1/8"	3/16"	5/16"	1/2"	5/16"	3/16"	1/16"	3/16"	3/16"
Adjustment required for vertical curve	1/2"	5/8"	1/2"	13/16"	1"	1 5/16"	1"	1 1/8"	1 5/16"	1 3/4"	1 9/16"	1 1/8"	5/8"	7/8"	5/8"
Required shop camber	5/8"	13/16"	9/16"	15/16"	13/16"	1 5/8"	1 1/8"	1 3/8"	1 11/16"	2 3/8"	1 11/16"	1 3/8"	11/16"	1 1/16"	13/16"

NOTES

END CROSSFRAMES, END DAMS, SCUPPERS, CURB PLATES, MOMENT PLATE WELDING AND BOLTED BEAM SPLICE NOTES: See Standard Drawing SD-1-69, Sheets 1 thru 4 of 4.

PARAPET: See Standard Drawing BR-1-67, Sheet 1 of 3.

BEARINGS: See Standard Drawing RB-1-55 for the following: R-100 for Abutments, R-175 for Pier 1, B-200 for Pier 2 and R-200 for Pier 3.

GENERAL NOTES: See Sheet 2 / 8

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MANSFIELD OHIO WOOSTER

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SUPERSTRUCTURE - 1
BRIDGE NO. RIC - 30 - 0578
UNDER RELOCATED STEWART ROAD

RICHLAND COUNTY U.S.R. 30

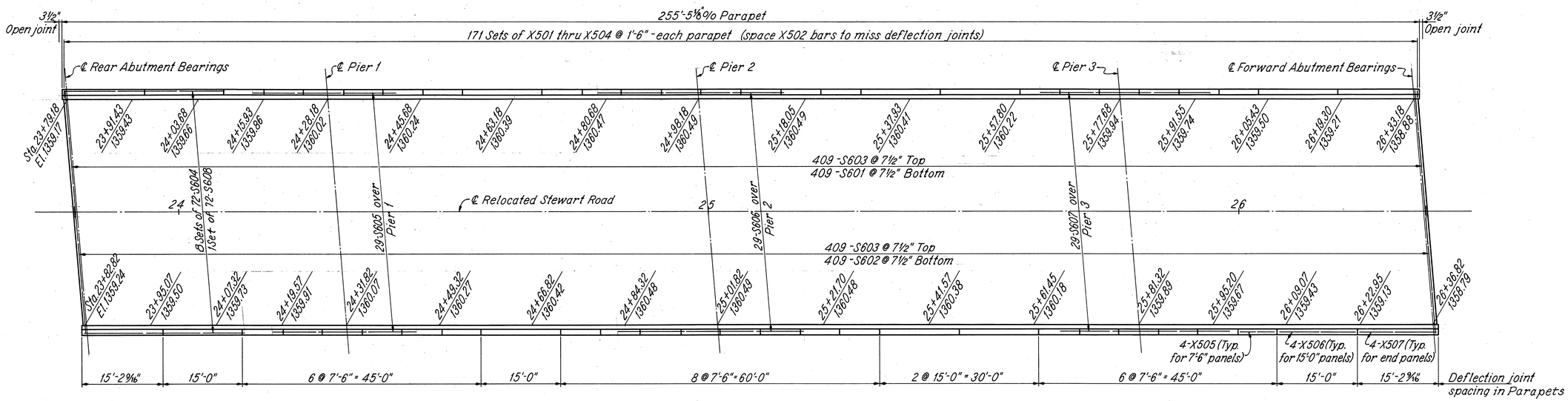
STA. 421 + 89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL		JM	12-15-69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

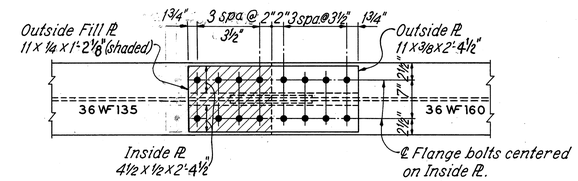
RIC-30-(5.78)(6.32)

116
134

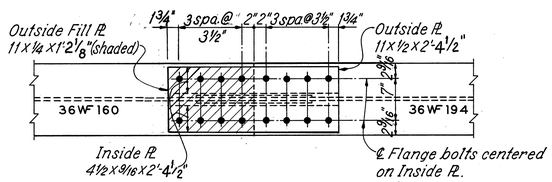


SLAB PLAN

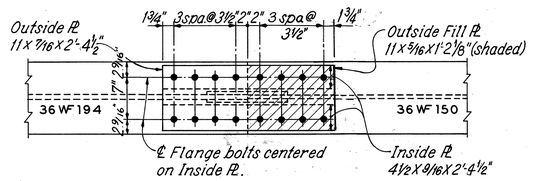
NOTE: Elevations shown are at quarter points of spans where top of deck meets face of curb and are those which are required before the deck concrete is placed to allow for dead load deflection.



BOLTED BEAM SPLICE "A"



BOLTED BEAM SPLICE "B"



BOLTED BEAM SPLICE "C"

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MANSFIELD WOOSTER
OHIO

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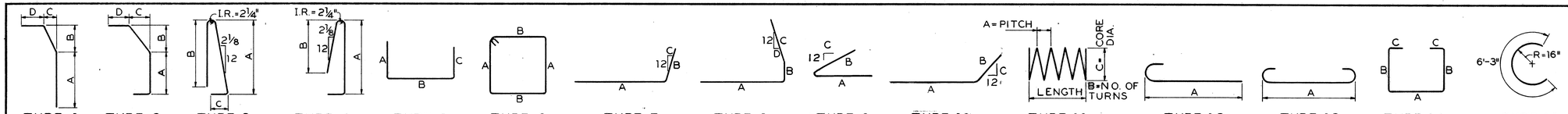
SUPERSTRUCTURE - 2

BRIDGE NO. RIC-30-0578
UNDER RELOCATED STEWART ROAD
RICHLAND COUNTY U.S.R. 30
STA. 421 + 89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL		JM	12-15-69	



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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134

RIC-30-(5.78)(6.32)

ABUTMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
Y501	49	2'-0"	5	7½"	1'-0"	7½"			102
Y502	40	2'-10"	Str.						118
Y503	29	6'-3"	4	3'-1"	2'-5"				189
Y504	20	14'-5"	Str.						301
Y505	8	7'-5"	Str.						62
Y506	4	8'-7"	Str.						36
Y507	12	3'-2"	Str.						40
Y508	4	3'-5"	Str.						14
Y509	3	4'-2"	Str.						13
Y510	10	16'-11"	Str.						176
Y511	2	3'-11"	Str.						8
Y512	2	11'-1"	Str.						23
Y513	10	18'-2"	Str.						189
Y514	2	12'-4"	Str.						26
Y601	28	7'-0"	1	4'-8"	11½"	9"	9"		294
Y701	4	3'-11"	Str.						32
Y702	4	4'-7"	1	3'-0"	11½"	2¼"	9"		37
Y703	4	4'-8"	1	3'-0"	11½"	4"	9"		38
Y704	4	4'-9"	1	3'-0"	11½"	6"	9"		39
Y705	4	4'-10"	1	3'-0"	11½"	9"	9"		40
A501	60	8'-3"	5	1'-7"	5'-4"	1'-7"			516
A502	60	6'-8"	5	7½"	6'-2"	0			417
A503	60	6'-10"	5	1'-10"	3'-5"	1'-10"			428
A504	29	10'-6"	6	2'-1"	3'-0"				318
A505	60	23'-6"	Str.						1471
A506	4	10'-5	Str.						43
A507	4	27'-3"	Str.						114
A508	6	3'-0"	5	1'-7"	1'-7"	0			19
A509	6	3'-0"	8	1'-7"	1'-9"	3"	1		19
A510	38	5'-7"	Str.						221
A511	8	7'-2"	Str.						60
A512	6	3'-0"	9	1'-7"	1'-7"	1			19
A513	6	3'-0"	7	1'-7"	1'-7"	1			19
A514	7	12'-5"	Str.						91
A515	2	6'-2"	Str.						13
A516	7	9'-8"	Str.						71
A517	2	2'-10"	Str.						6
A518	2	8'-2"	Str.						17
A519	3	2'-3"	Str.						7
A520	28	4'-11"	Str.						144
A521	14	1'-10"	Str.						27
A522	2	14'-11"	Str.						31
A523	1	10'-8"	Str.						11
A524	4	8'-8"	Str.						36
A525	4	11'-8"	Str.						49
A526	3	7'-7"	Str.						24
A527	2	2'-7"	Str.						5
A528	2	16'-2"	Str.						34
AG01	60	13'-10"	5	6'-2"	5'-4"	2'-7"			1247
AG02	84	10'-2"	5	4'-6"	1'-5"	4'-6"			1283
AG03	48	5'-6"	5	2'-2"	1'-5"	2'-2"			397
AG04	48	7'-6"	5	3'-5"	11"	3'-5"			541
AG05	36	8'-2"	5	3'-6"	1'-5"	3'-6"			442
AG06	16	16'-1"	5	7'-7"	1'-2"	7'-7"			387
AG07	12	7'-7"	Str.						137
AG08	8	3'-1"	Str.						37
A801	28	24'-10"	Str.						1857
A802	12	12'-2"	Str.						390
A803	6	14'-5"	Str.						231
A804	6	15'-2"	Str.						243
						TOTAL WEIGHT			13,199

PIERS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	132	7'-9"	5	2'-8"	2'-8"	2'-8"			1067
P502	12	5'-9"	5	1'-8"	2'-8"	1'-8"			72
P503	12	6'-4"	10	4'-9"	1'-7"	2½			79
P504	12	24'-1"	Str.						301
P505	12	7'-1"	5	2'-4"	2'-8"	2'-4"			89
P506	24	6'-3"	5	1'-11"	2'-8	1'-11"			156
P701	108	8'-8"	13	7'-0"					1913
P801	12	37'-2"	Str.						1191
P802	6	7'-4"	Str.						117
P901	36	16'-4"	Str.						1999
P902	36	16'-8"	Str.						2040
P903	36	16'-1"	Str.						1969
P904	108	6'-6"	5	5'-6"	1'-3"	0			2387
P1001	15	35'-4"	5	1'-8"	34'-0"	0			2281
P1002	15	17'-6"	5	1'-8"	16'-2"	0			1130
P1101	24	9'-4"	Str.						1190
SP401	3	13'-6"	11	4½"	39	2'-8"			785
SP402	3	13'-10"	11	4½"	40	2'-8"			805
SP403	3	13'-3"	11	4½"	38	2'-8"			766
						TOTAL WEIGHT			20,337

SUPERSTRUCTURE

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
X501	342	2'-0"	5	7½"	1'-0"	7½"			713
X502	342	5'-4"	3	2'-5"	2'-2"	7½"			1902
X503	342	2'-0"	5	7½"	1'-6"	0"			713
X504	342	2'-10"	2	8"	11½"	9"	9"		1011
X505	180	7'-2"	Str.						1196
X506	40	14'-8"	Str.						612
X507	16	14'-10"	Str.						248
S801	409	19'-9"	Str.						12,133
S802	409	28'-0"	Str.						17,201
S803	818	23'-11"	Str.						29,385
S804	576	30'-0"	Str.						25,955
S805	29	27'-0"	Str.						1176
S806	29	35'-0"	Str.						1525
S807	29	32'-0"	Str.						1394
S608	72	30'-6"	Str.						3298
								TOTAL WEIGHT	98,462

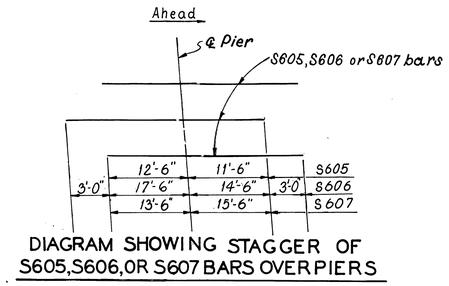

DIAGRAM SHOWING STAGGER OF S605, S606, OR S607 BARS OVER PIERS

NOTES

BAR SIZE *is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used indicate the bar size number. For example: A506 is a No. 5 size bar and P1002 is a No. 10 size bar.*

SPIRAL REINFORCING BARS*: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils) expressed as nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.80 lbs. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the pheriphery of the coil. The number of pounds of these spacers, based on 0.80 lbs. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.*

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE
RE400	1	6'-3"	15
RE500	1	6'-7"	Str.
RE600	5	6'-11"	Str.
RE700	1	7'-2"	Str.
RE800	1	7'-6"	Str.
RE900	1	7'-10"	Str.
RE1000	1	8'-2"	Str.
RE1100	1	8'-6"	Str.

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MANSFIELD WOOSTER OHIO

REINFORCING STEEL
BRIDGE NO. RIC-30-0578
UNDER RELOCATED ST EWART ROAD
RICHLAND COUNTY U.S.R. 30
STA. 421+89.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED · DATE	REVISED
	TJS	TJS		RAK 1-22-70	