

APPROACH PAVEMENT: Type T-71, 2 @ 24" Wide, with 16' median, (6' Raised with barrier guardrail) and 10' 12' Berms

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

432

SCIOTO COUNTY
SCI-52-26.79

In Wheelersburg

PROP. CURVE
PC=1487+34.63
PT=1504+76.82
P.T.=1521+77.93
 $\Delta=21^{\circ}-31'-15''$ Rt.
D=0°-37.5'
T=1742.20'
L=3443.30'
E=164.08'
R=9167.33'

BENCH MARK
□ Cut on N.W. Cor. Conc.
Base Signal Box 250'
Rt. Sta. 1495+00
Elev. 540.81

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JUN 17 1986

Traffic Count

Type P+A = 7070 vpd.
B+C = 2450 vpd.
Est. Total 9520 1985 Design Traffic

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

PROPOSED STRUCTURE

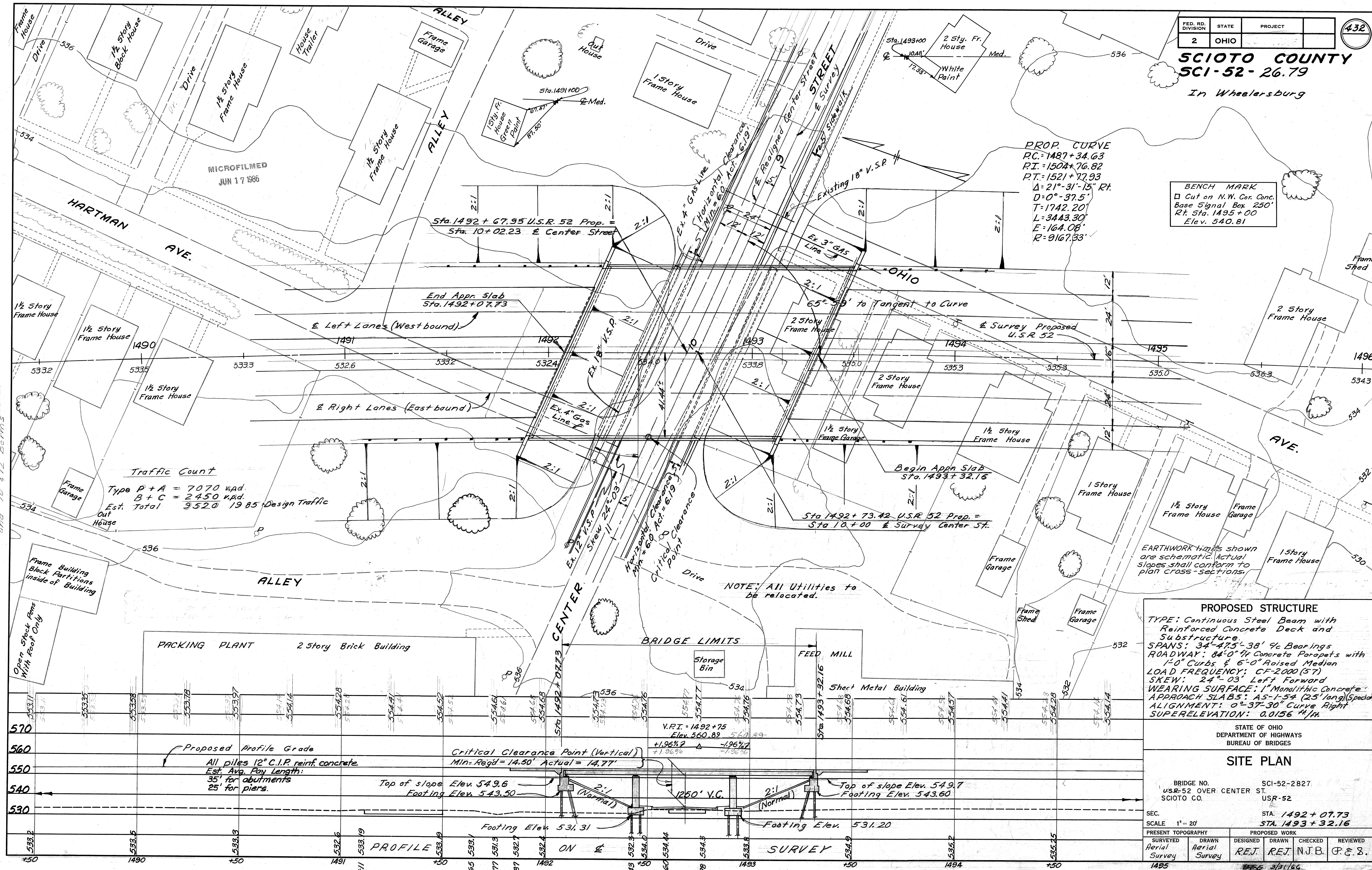
TYPE: Continuous Steel Beam with
Reinforced Concrete Deck and
Substructure.
SPANS: 34'-47.5'-38' 1/2" Bearings
ROADWAY: 84'-0" 1/4" Concrete Parapets with
1'-0" Curbs & 6'-0" Raised Median
LOAD FREQUENCY: CF-2000 (57)
SKEW: 24°-03' Left Forward
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: AS-1-54 (25' long) (Special)
ALIGNMENT: 0°-37'-30" Curve Right
SUPERELEVATION: 0.0156 1/ft.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

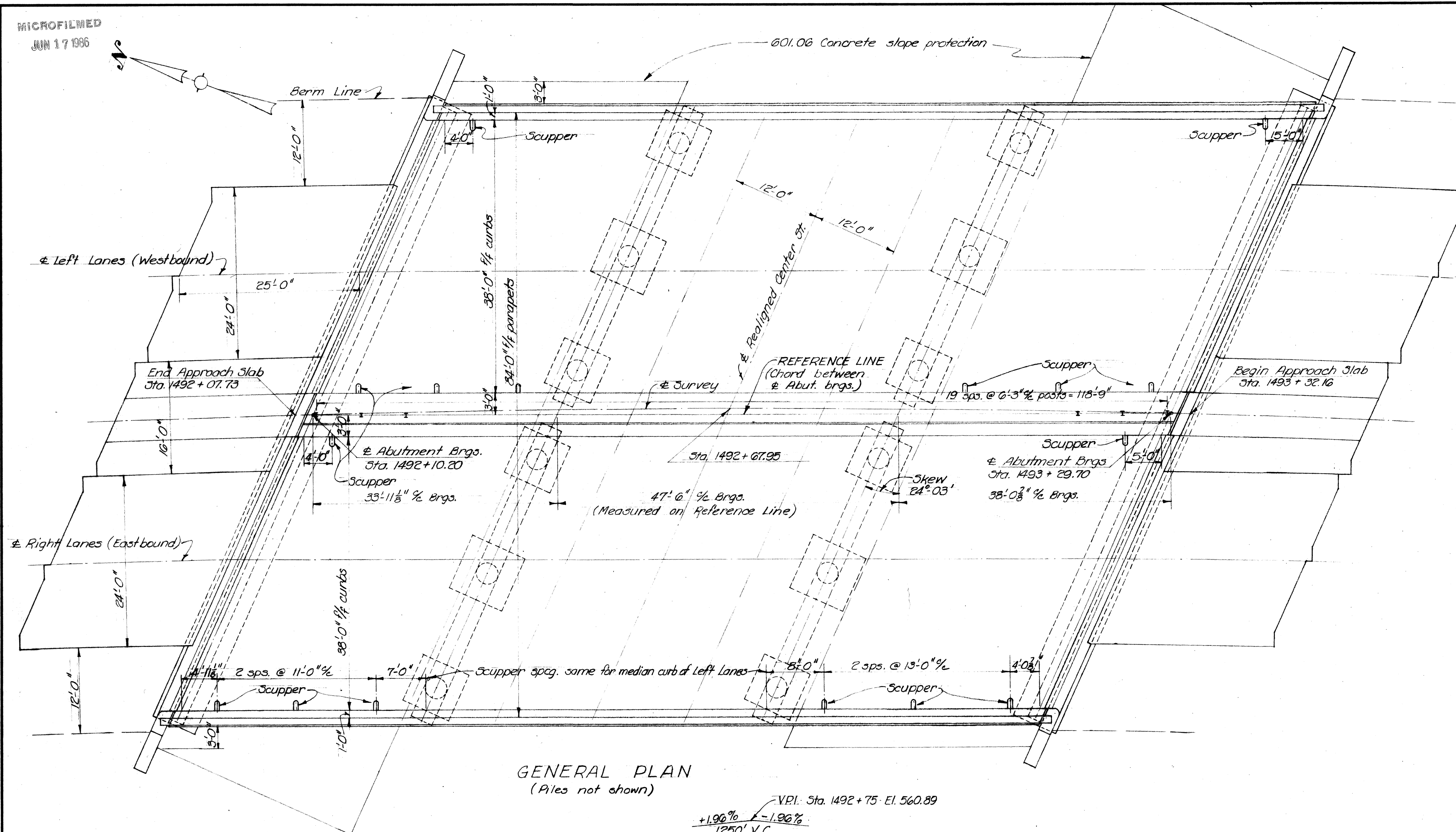
SITE PLAN

BRIDGE NO. SCI-52-2827
U.S.R-52 OVER CENTER ST.
SCIOTO CO. U.S.R-52

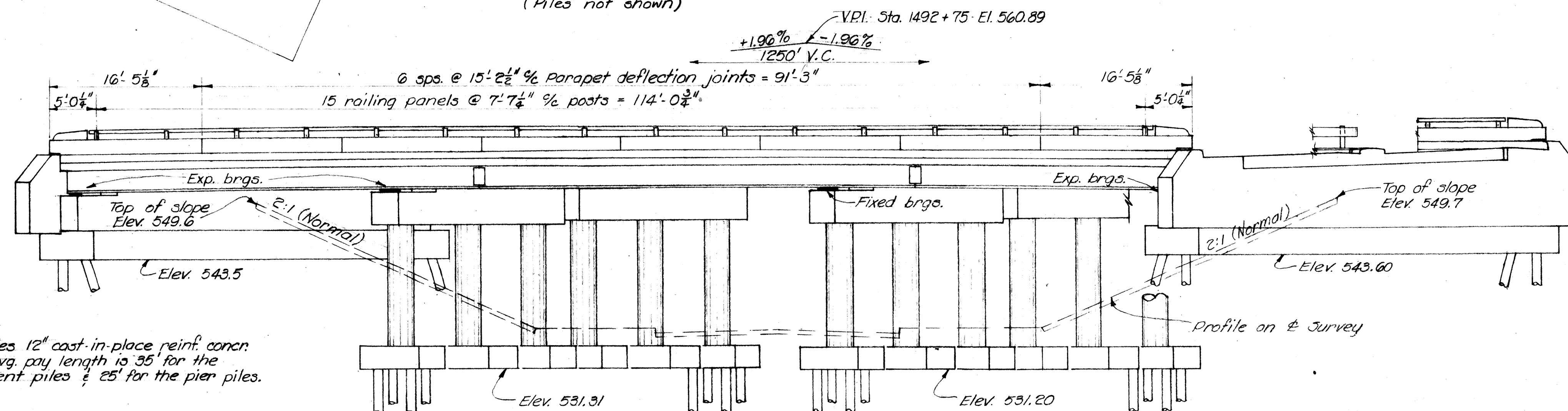
SEC. STA. 1492+07.73
SCALE 1"=20'
PRESENT TOPOGRAPHY
DESIGNED DRAWN CHECKED REVIEWED
REJ. REJ. N.J.B. G.E.S.



SCI-52-26.79



GENERAL PLAN
(Piles not shown)



ELEVATION
(Approach slabs not shown)

All piles 12" cast-in-place reinf. concn.
Est. avg. pile length is 35' for the
abutment piles & 25' for the pier piles.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-G5, Sheets No. 1, 2 & 3, dated 11-8-65; and BR-1-G5, Sh. No. 1, revised 11-24-65; and to Supplemental Specifications No. 808 dated 12-7-64; No. 811 dated 3-29-65; No. 825 dated 4-22-65; and No. 828 dated 7-21-65.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA:

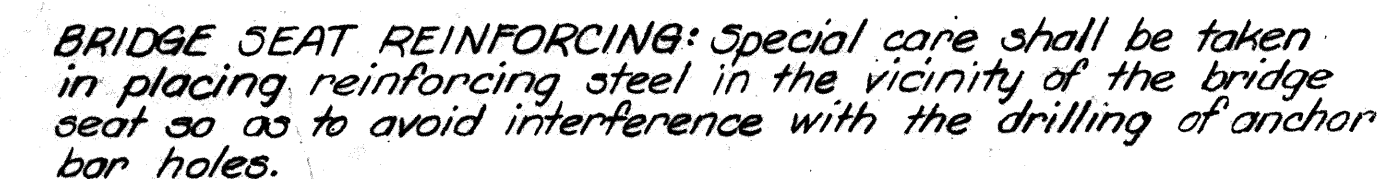
Design Loading - CF 2000 (57).
Concrete Class C - basic unit stress 1,333 p.s.i.
Concrete Class E - basic unit stress 1,133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. except spiral reinforcement may be plain structural grade with basic unit stress of 18,000 p.s.i.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and piers.

PILES shall be driven to a minimum bearing capacity of 28 tons per pile for the abutments and 35 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 will be held to a minimum.

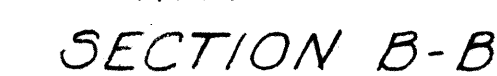
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN & ELEVATION GENERAL NOTES BRIDGE NO. SCI-52-2827 OVER CENTER ST. SCIOTO COUNTY STA. 1492 + 07.73 STA. 1493 + 32.16						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		WCK	BFG	3/31/66	



108'-9"

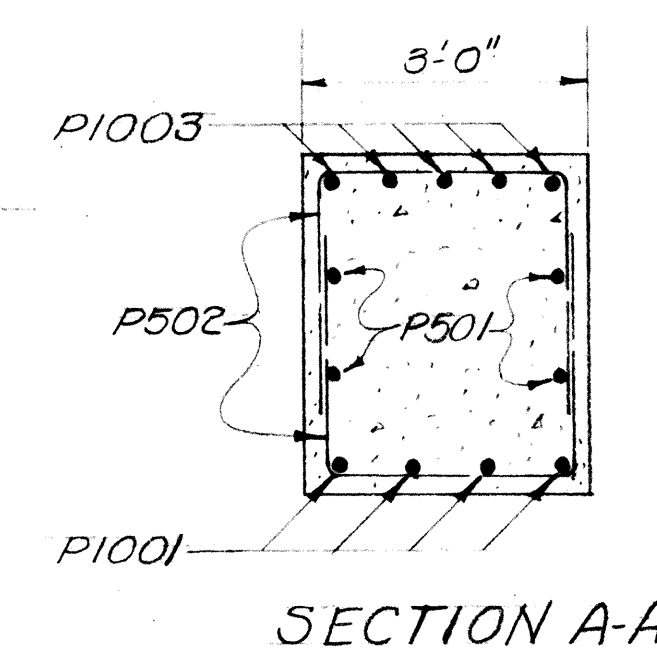
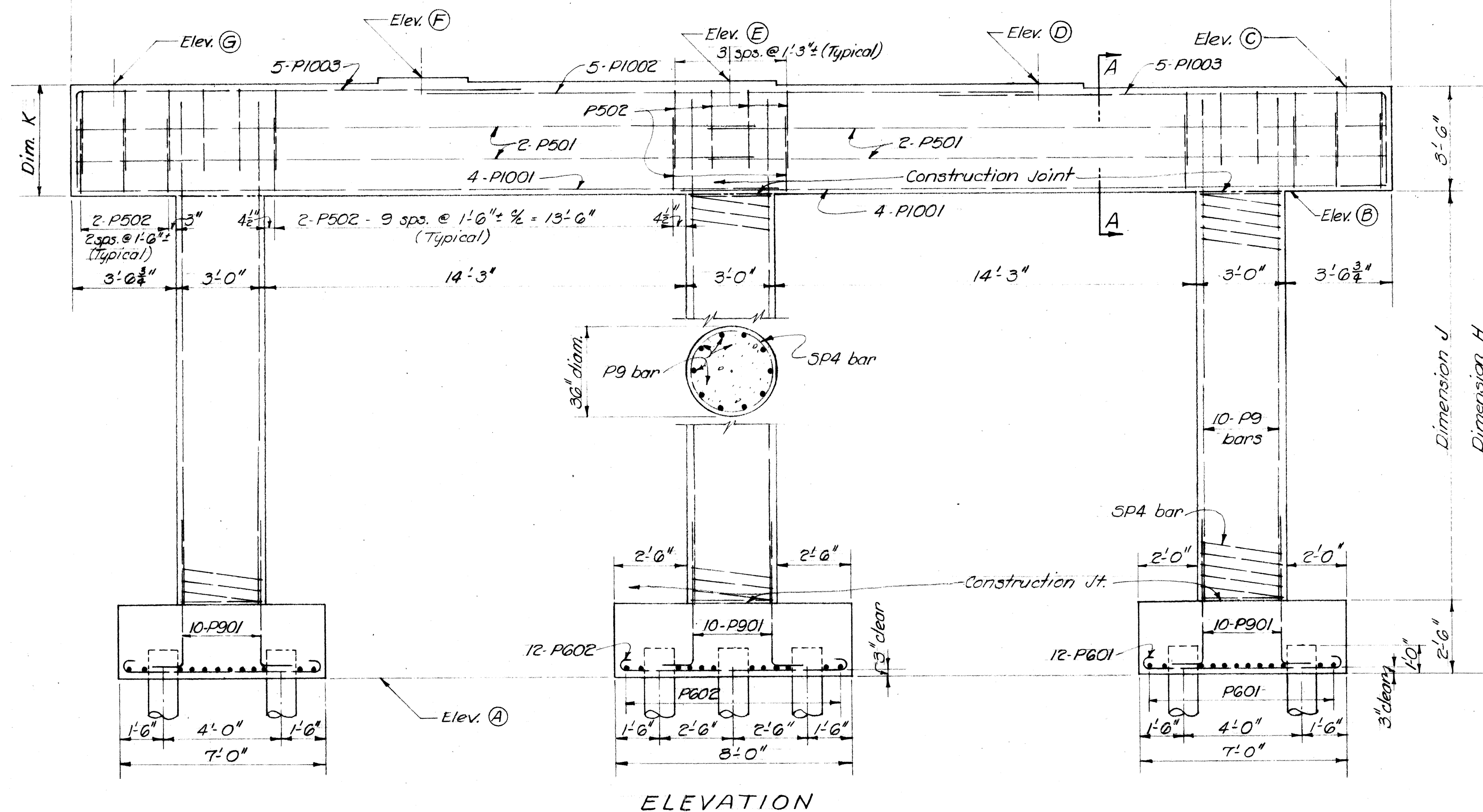
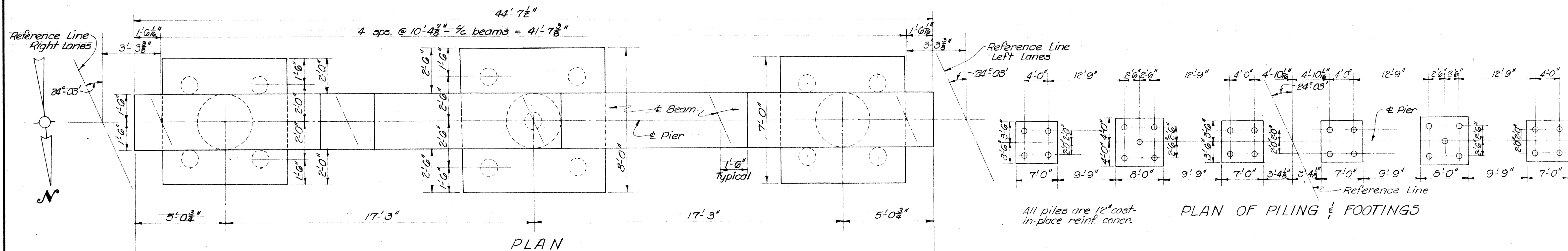


SECTION A-A



**STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		WCK	BFG	3/31/66	



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

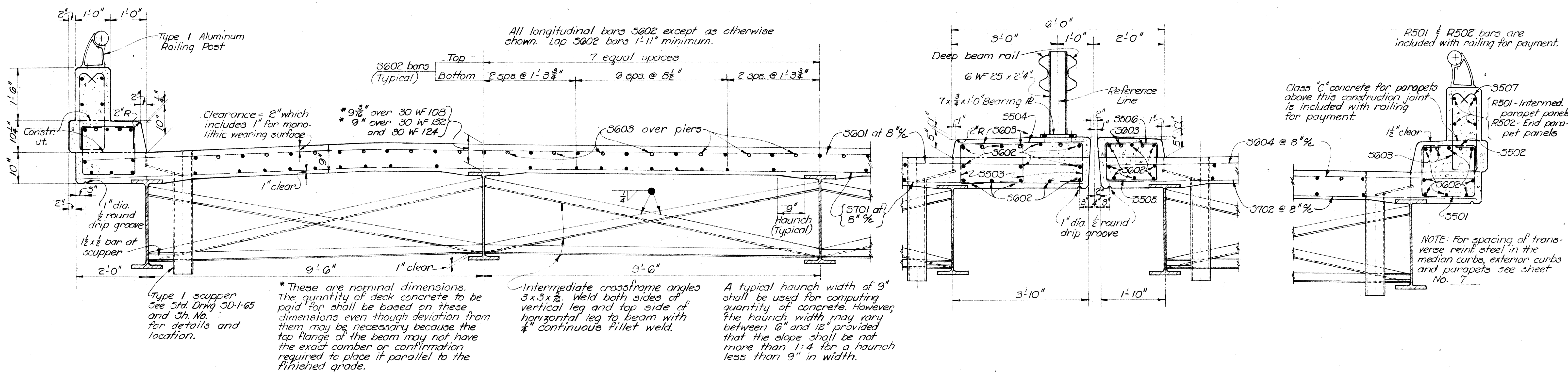
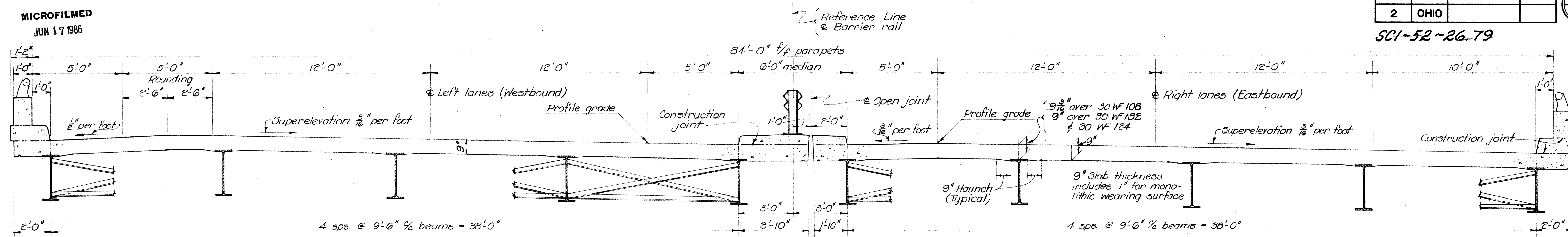
PROCEDURE: See note on Sh. No. 434

PIER	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Dim. H	Dim. J	Dim. K	Column reinf.
Rear Pier - Left Lanes	531.31	547.60	551.10	551.25	551.40	551.55	551.33	19'-9 1/2"	13'-9 1/2"	3'-8 3/4"	P902 3P401
Rear Pier - Right Lanes	531.31	547.14	550.64	550.79	550.95	551.10	551.10	19'-4"	13'-4"	3'-11 1/2"	P903 3P402
Forward Pier - Left Lanes	531.20	547.70	551.20	551.34	551.49	551.63	551.40	20'-0"	14'-0"	3'-8 3/4"	P904 3P403
Forward Pier - Right Lanes	531.20	547.27	550.77	550.91	551.06	551.21	551.20	19'-6 3/8"	13'-6 3/8"	3'-11 1/8"	P905 3P404

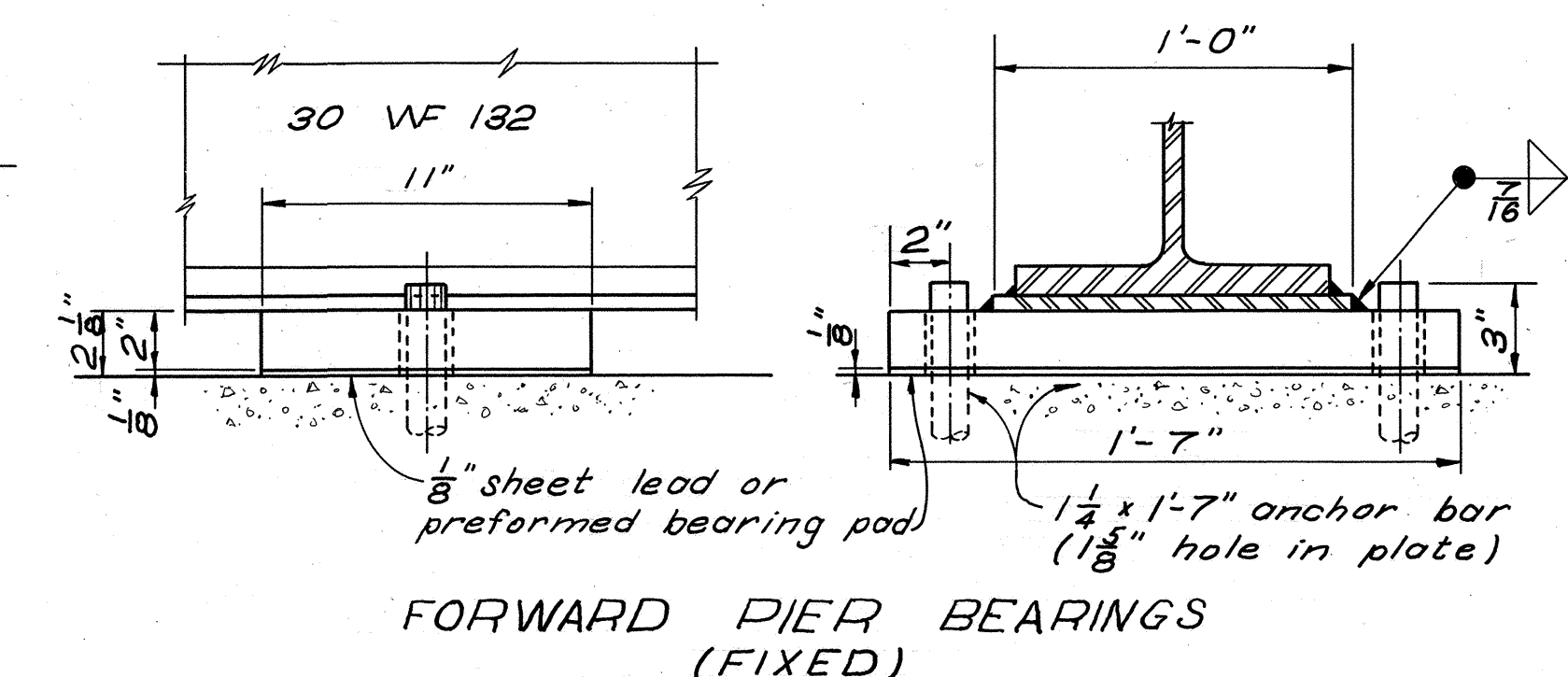
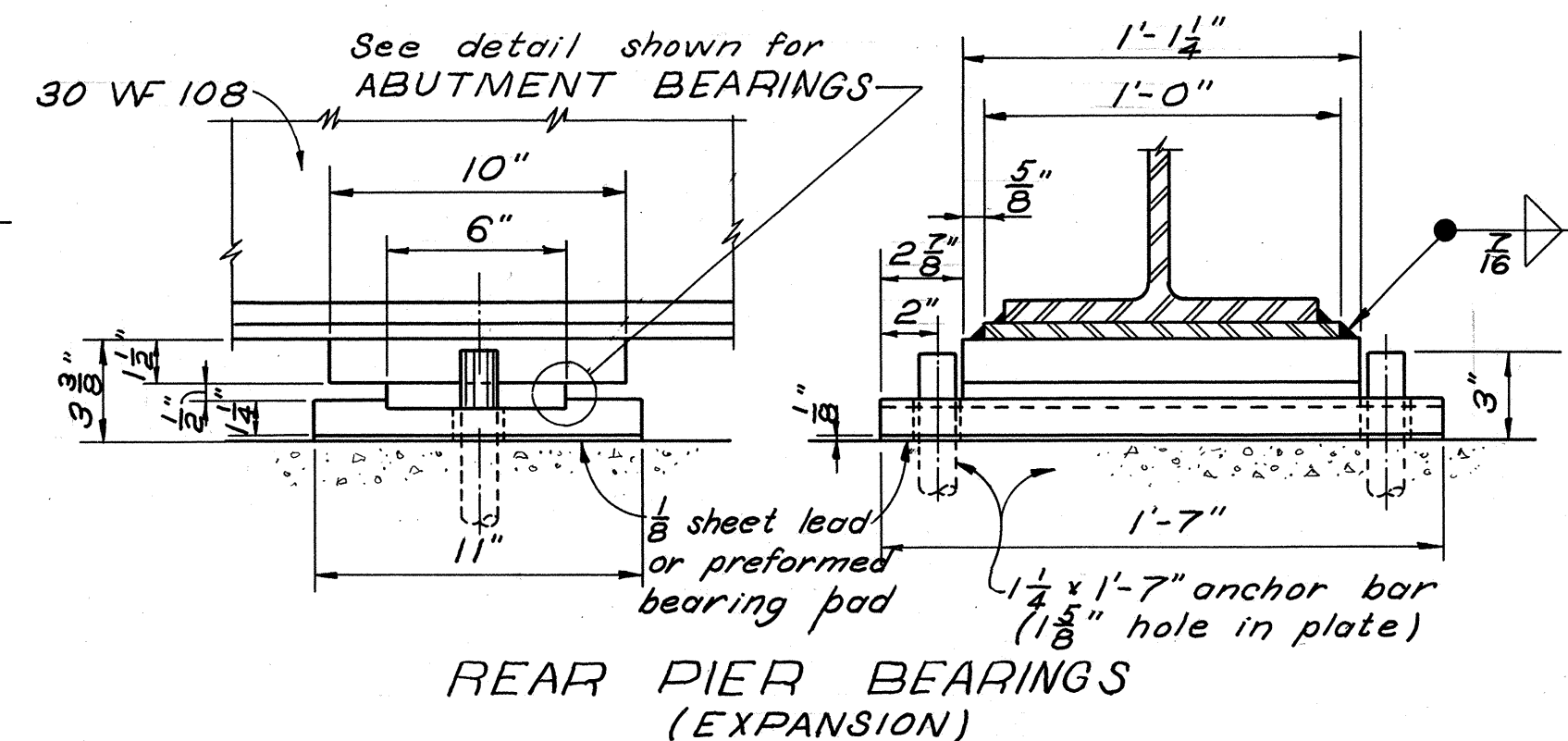
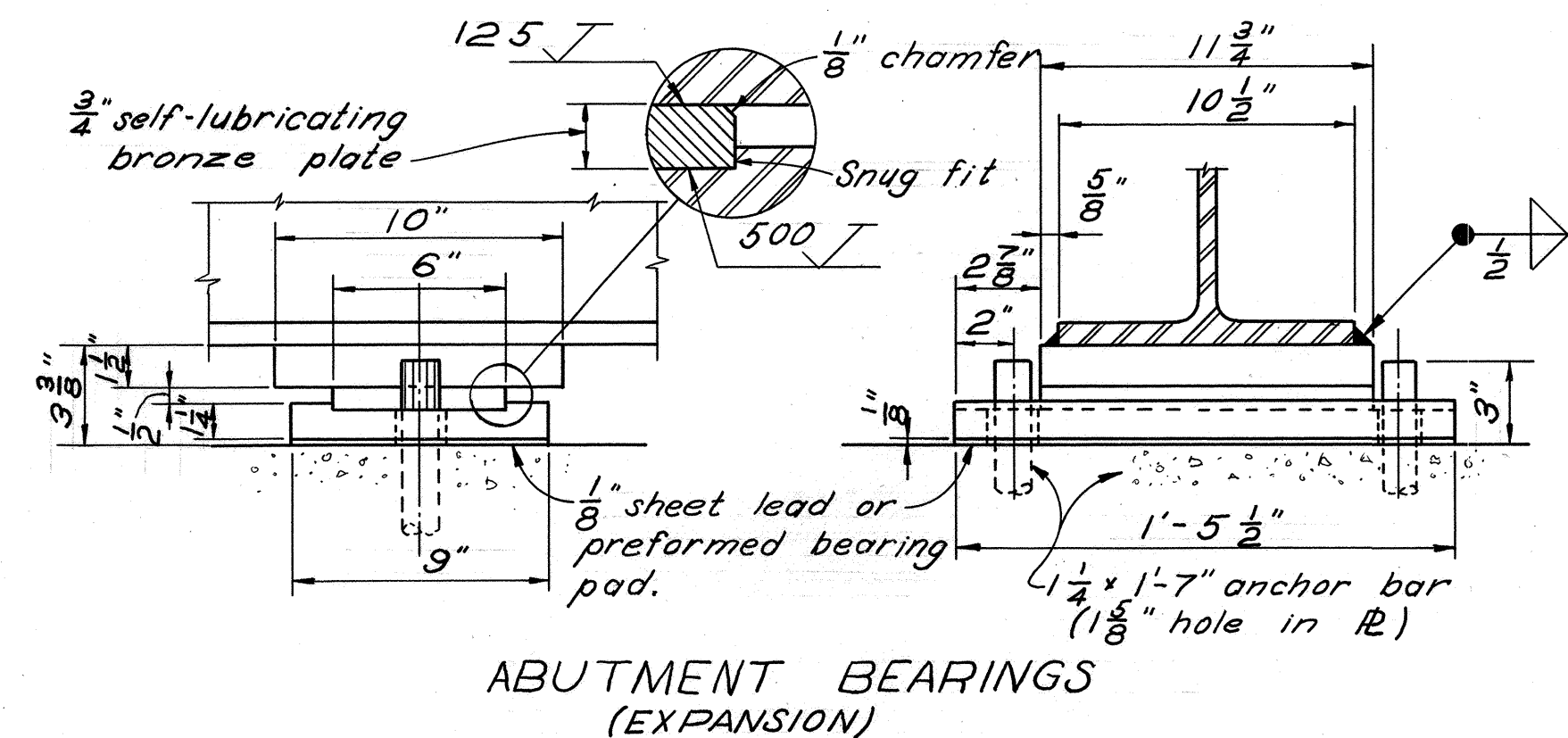
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
PIER DETAILS					
BRIDGE NO. SCI-52-2827 OVER CENTER ST.					
SCIOTO COUNTY			STA. 1492 + 07.73 STA. 1493 + 32.16		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
NAA	NAA		WCK	BFG	3/31/66
					REVISED

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JUN 17 1986

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BEARING NOTES

BEARING NOTES (CONT.)

MATERIAL SPECIFICATIONS

Structural steel	ASTM A-36
Cast bronze	ASTM B-22, Alloy B
Rolled bronze	ASTM B-100, Alloy 1
Sheet Lead	ASTM B-29

SELF-LUBRICATING BRONZE BEARING PLATES shall conform to the following requirements:

(g) Bronze plates shall be either cast or rolled.

(b) The lubricant shall be of the solid type and shall consist of graphite, metallic substances having lubricating properties and a lubricating binder. Materials which do not have lubricating qualities or which promote chemical or electrolytic reactions, will not be acceptable. The lubricant shall be compressed into the lubrication recesses with hydraulic pressure of at least five times the design unit loading to form a dense, non-plastic lubricant.

(c) The recesses for the lubricant shall consist either (1) of annular rings with or without central circular recess with a depth at least equal to the width of the ring or diameter of hole or (2) of circular recesses approximately $5/16$ " in diameter and $3/16$ " to $1/4$ " deep.

(d) The recesses shall be arranged in a geometric pattern such that successive rows shall overlap in the direction of motion and the distance between extremities of recesses shall be closer in the direction of motion than that perpendicular to motion. The entire bearing area of all surfaces which have provision for motion shall be lubricated by means of these lubricant filled recesses. The total area of these recesses shall comprise not less than 25 per cent nor more than 35 per cent of the total bearing area of the plate.

(c) Bearing surfaces of the bronze bearing plates and opposing steel plates shall be machine finished to the surface roughness shown on the

accompanying drawing. The lay of the tool marks shall be in the direction of motion. All machine surfaces shall be flat within 0.005 inch per inch of length and width.

(f) The coefficient of friction between the bronze self-lubricating plates and the steel plates in contact with them shall not exceed 0.10 when subjected to the design loading.

(g) The manufacturer of the bronze plates shall furnish lubricant in stick form similar to that used in the recesses. Before final assembly the surfaces of the bronze plates and of the opposing steel plates shall be coated with the stick lubricant. The three parts shall then be banded together for shipment.

ESTIMATED QUANTITIES

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super	Abuts	Piers	Gen'l.	As	Built
503	614	Cu. yds.	Unclassified excavation		410	204			
505	Lump	Sum	First test pile				Lump		
507	2840	Lin.ft.	12" Cast-in-place reinforced concrete piles		1540	1300			
509	137,171	Lbs.	Reinforcing steel	92,622	18,100	26,449			
511	320	Cu. Yds.	Class C concrete, superstructure	320					
511	117	Cu. Yds.	Class C concrete, pier caps and columns			117			
511	59	Cu. Yds.	Class E concrete, pier footings			59			
511	170	Cu. Yds.	Class E concrete, abutments above footings		170				
511	137	Cu. Yds.	Class E concrete, abutment footings		137				
513	198,500	Lbs.	Structural steel	198,500					
514	198,500	Lbs.	Field painting of structural steel	198,500					
517	24821	Lin.Ft.	Railing (Type I)	24821					
517	12125	Lin.Ft.	Railing (double-faced deep beam rail with steel posts & bolts)	12125					
518	90	Cu. Yds.	Porous backfill		90				
518	186	Lin.Ft.	6" perforated, helical CMP, including specials, 707.06		186				
518	160	Lin.Ft.	6" non-perforated, helical CMP, 707.06		160				
518	16	Each	Scuppers, including supports	16					
601	700	Sq. Yds.	Concrete slope protection				700		
808	320	Units	Water-reducing, set-retarding admixture	320					
825	1270	Sq. Yds.	Concrete surface treatment				1270		
828	167	Lin.Ft.	Joint sealer, (end dam)	167					

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF CONSTRUCTION BUREAU OF BRIDGES					
BEARING DETAILS AND ESTIMATED QUANTITIES BRIDGE NO. SC1-52-2827 OVER CENTER ST. SCIOTO COUNTY STA. 1492+07.73 STA. 1493+32.16					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
N.A.A.	N.A.A.	R _{EF}	WCK	BFG	3/31/66

SCI-52-26.79

REINFORCING STEEL LIST

BENDING DIAGRAMS

SUPERSTRUCTURE

MARK NO. LENGTH WEIGHT SHP

S701 153 43'-6" 13,604 S

S702 154 41'-6" 13,063 S

2 4'-6" 2471 S

S703 26 42'-0" 2471 S

2 4'-4" 2282 S

S704 25 40'-4" 2282 S

S601 153 43'-6" 9997 S

S602 648 31'-8" 30821 S

S603 122 19'-0" 3482 S

S604 154 41'-6" 9599 S

2 4'-6" 1816 S

S605 26 42'-0" 1816 S

2 4'-4" 1677 S

S606 25 40'-4" 1677 S

S607 24 4'-6" 162 S

S501 166 4'-11" 851 B

S502 166 2'-6" 433 B

S503 246 1'-11" 492 B

S504 82 3'-5" 292 S

S505 83 4'-0" 346 B

S506 83 2'-5" 209 B

S507 176 5'-7" 1025 B

P1001 32 23'-9" 3270 S

P1002 20 20'-6" 1764 S

P1003 40 17'-10" 3069 B

P901 120 5'-10" 2380 B

P902 30 16'-8" 1700 S

P903 30 16'-2" 1649 S

P904 30 16'-10" 1717 S

P905 30 16'-5" 1675 S

P601 192 8'-0" 2307 B

P602 96 9'-0" 1298 B

P501 32 22'-11" 765 S

P502 232 7'-5" 1795 B

NO. REAR FWD. ABUT. ABUT.

28 14 A801 42 24'-8" 2766 S

- 14 A802 14 25'-3" 944 S

64 63 AG01 127 14'-3" 2718 B

70 70 AG02 140 13'-7" 2856 B

21 21 AG03 42 11'-1" 699 B

64 65 A501 129 9'-2" 1233 B

64 63 A502 127 7'-2" 949 B

64 63 A503 127 8'-2" 1082 B

46 44 A504 90 23'-11" 2245 S

22 - A505 22 28'-1" 644 S

2 2 A506 4 37'-10" 158 S

ABUTMENTS

MARK NO. LENGTH WEIGHT SHP

A507 4 35'-4" 147 S

A508 16 3'-8" 61 B

A509 2 14'-9" 31 S

A510 2 15'-3" 32 S

A511 8 10'-0" 83 S

A512 8 9'-4" 78 S

A513 8 8'-1" 67 S

A514 4 8'-10" 37 S

2 5'-2" 2 S

A515 4 7'-6 1/2" 53 S

A516 2 9'-0" 19 B

2 5'-2" 2 S

A517 5 8'-6" 71 S

A518 2 10'-1" 21 B

A519 16 26'-11" 449 S

A520 8 28'-9" 240 S

A521 2 15'-0" 31 S

A522 2 14'-0" 29 S

A523 4 8'-8" 36 S

A524 8 11'-4" 95 S

2 5'-2" 2 S

A525 4 7'-9 7/8" 54 S

A526 2 8'-3" 17 B

2 5'-2" 2 S

A527 5 8'-2" 70 S

A528 2 10'-6" 22 B

A529 8 7'-6" 63 S

RAILING

R501 48 14'-10" S

R502 16 16'-1" S

R503 12 4'-2" B

R504 8 5'-4" B

R505 8 3'-5" B

R506 8 3'-0" S

SPIRAL REINFORCING STEEL

MARK NO. CORE DIA. LENGTH PITCH NO. TURNS WEIGHT

SP401 3 32" 13'-9" 4 1/2 40 775

SP402 3 32" 13'-4" 4 1/2 39 755

SP403 3 32" 14'-0" 4 1/2 40 775

SP404 3 32" 13'-7" 4 1/2 39 755

REPLACEMENT BARS

RE1000 1 7'-2" - S

RE900 1 6'-10" - S

RE800 1 6'-6" - S

RE700 2 6'-2" - S

RE600 4 5'-11" - S

RE500 1 5'-7" - S

RE400 1 5'-3" - B

