

MICROFILMED
JUL 15 1982

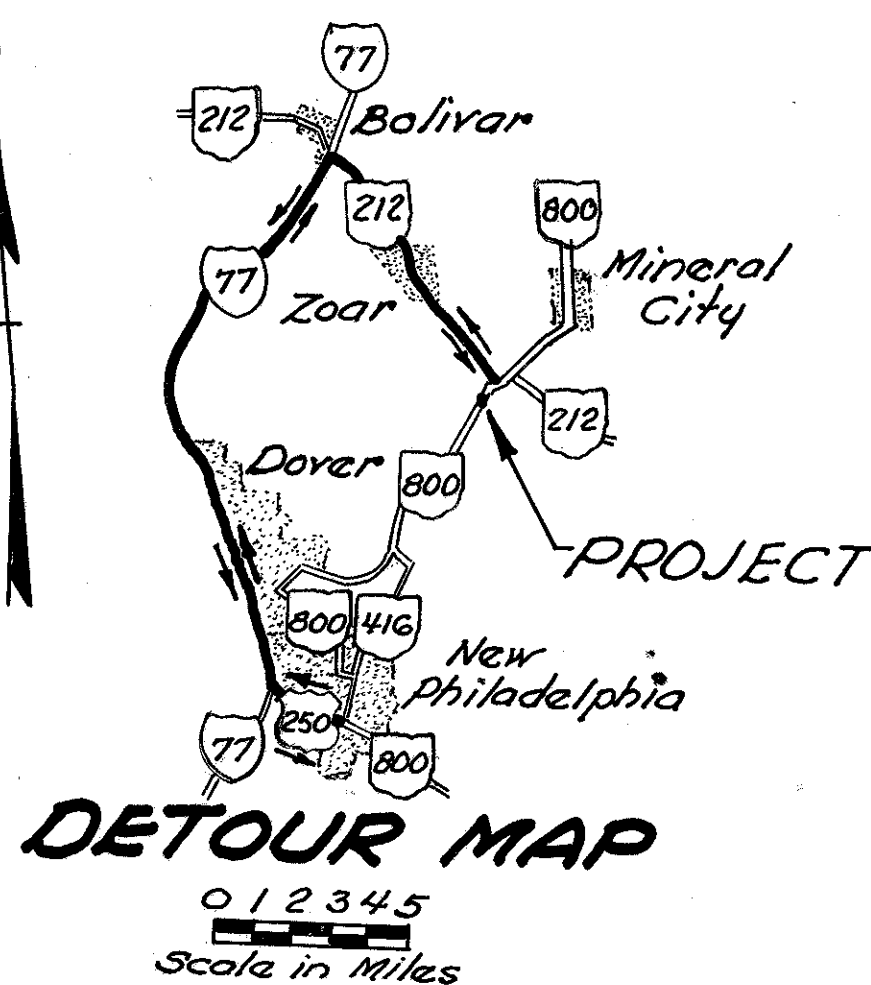
FHWA REGION	STATE	PROJECT	
5	OHIO	BR S-437(2)	1/22

TUS-800-28.38

STATE OF OHIO DEPARTMENT OF TRANSPORTATION TUS-800-28.38 TUSCARAWAS COUNTY FAIRFIELD TOWNSHIP

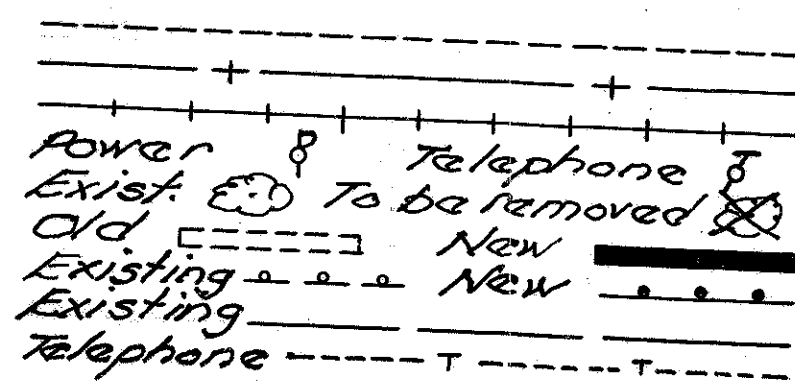
BR S-437(2)

MICROFILMED
MAY 4 1987



CONVENTIONAL SIGNS

- Township Line
- Center Line
- Railroad
- Pole Line
- Trees and Stumps
- Drain Pipe
- Guard Rail
- Right of Way
- Underground Cable



INDEX OF SHEETS

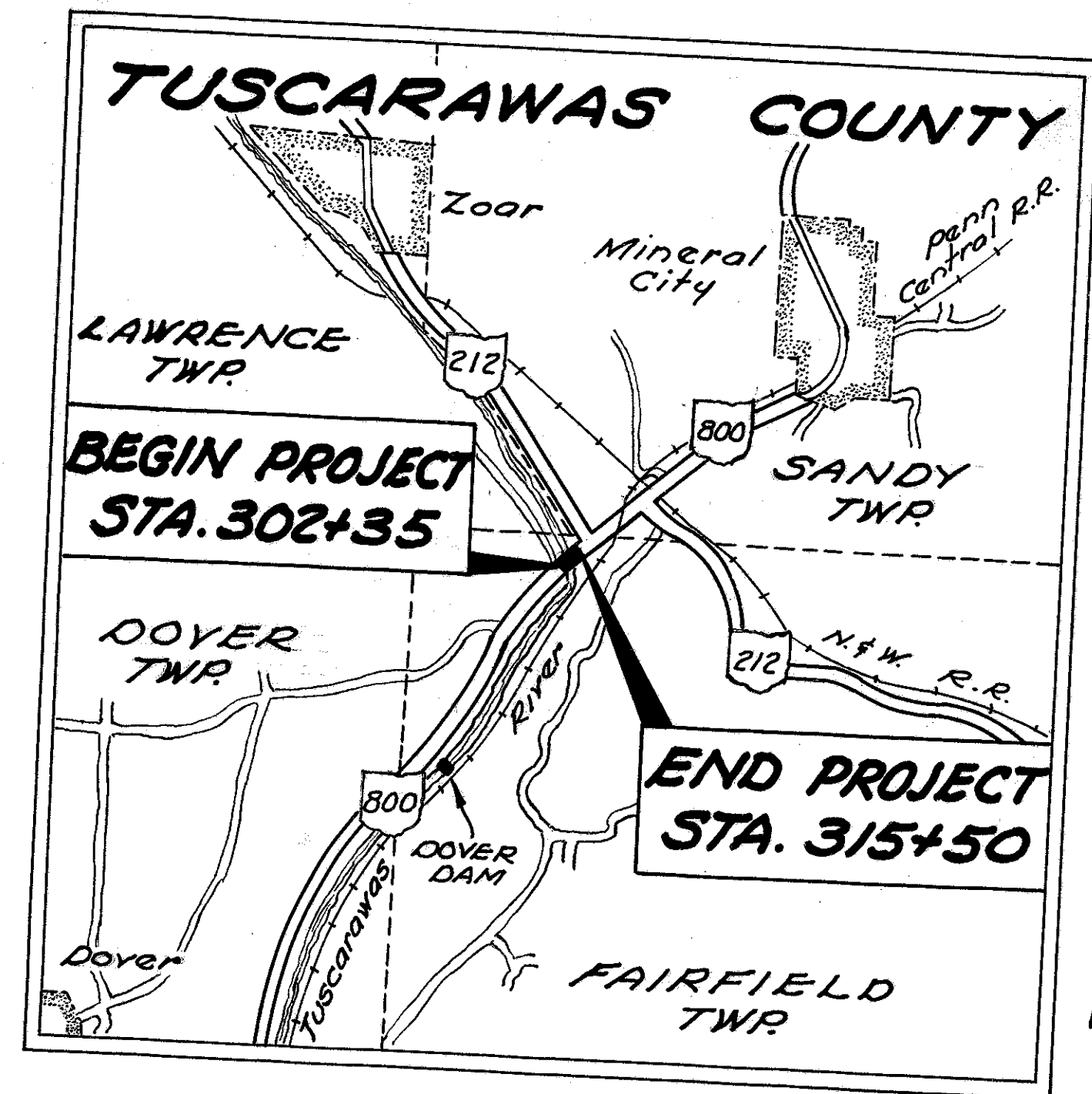
- Title Page
- Typical Section & Design Designation
- General Notes & General Summary
- Plan and Profile
- Cross Section
- Structure over 20' span

1-00
4-06
7-12
13-22

LINE DATA

Begin Project Sta. 302+35
End Project Sta. 315+50
No Additions or Deductions
Net Length of Project = 1315 Lin. Ft. or 0.249 Mile

Begin Work Sta. 298+35
End Work Sta. 318+68
No Additions or Deductions
Net Length of Work = 1983 Lin. Ft. or 0.375 Mile



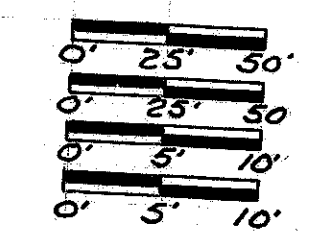
LOCATION PLAN

Scale: 0 Mi. 1 Mi. 2 Mi.

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHERS
DETOUR

SCALES

PLAN
PROFILE-HORIZONTAL
PROFILE-VERTICAL
CROSS SECTIONS



1977 SPECIFICATIONS

The Standard Specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement. I hereby approve these plans and declare that the making of this improvement will require the closing of the highway to traffic and that detours will be provided as indicated on the plans.

The Right of Way for this improvement will be provided by the State of Ohio.

- Approved: George S. Melms
Date 12-22-76 District Deputy Director of Transportation
- Approved: Robert B. Pfeifer
Date 2-22-77 Engineer, Bureau of Bridges
- Approved: N.J. Cunningham
Date 4-6-77 Engineer, Bureau of Roadway Design
- Approved: _____
Date _____ Assistant Deputy Director for Highway Design
- Approved: David E. Dostal
Date 4-6-77 Assistant Deputy Director for Real Estate
- Approved: R.E. Gault
Date 4-6-77 Chief Engineer, Design
- Approved: _____
Date _____ Chief Engineer, Construction
- Approved: _____
Date _____ Chief Engineer, Operations
- Approved: Annis R. Howard
Date 4-6-77 Assistant Director, Department of Transportation
- Approved: Nancy L. Wynn
Date 4-1-77 Director, Department of Transportation

STANDARD DRAWINGS					
MC-3	6-1-73	GR-4A	7-26-76	DBR-2-73	4-10-73
L-1	6-1-73			23-1-55	2-2-59
BP-5	8-11-75	AS-1-72	6-30-72	50-1-69 Sheet 1	6-12-69
BP-6	6-1-65				
GR-1	12-6-76				
GR-2B	12-6-76				
GR-3	12-6-76				
GR-4	12-6-76				

SUPPLEMENTAL SPECIFICATIONS	
1001	1-3-77
808	1-1-71
83G	3-12-75
83B	1-13-77

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____

DIVISION ADMINISTRATOR DATE

FILE NO.	TUS-800-28.38
DATE OF LETTING	197
CONTRACT NO.	

QUANTITIES	
Calc. Date	Chkd. Date
L.S.C. 5-4-76	R.E.M. 6/14/76

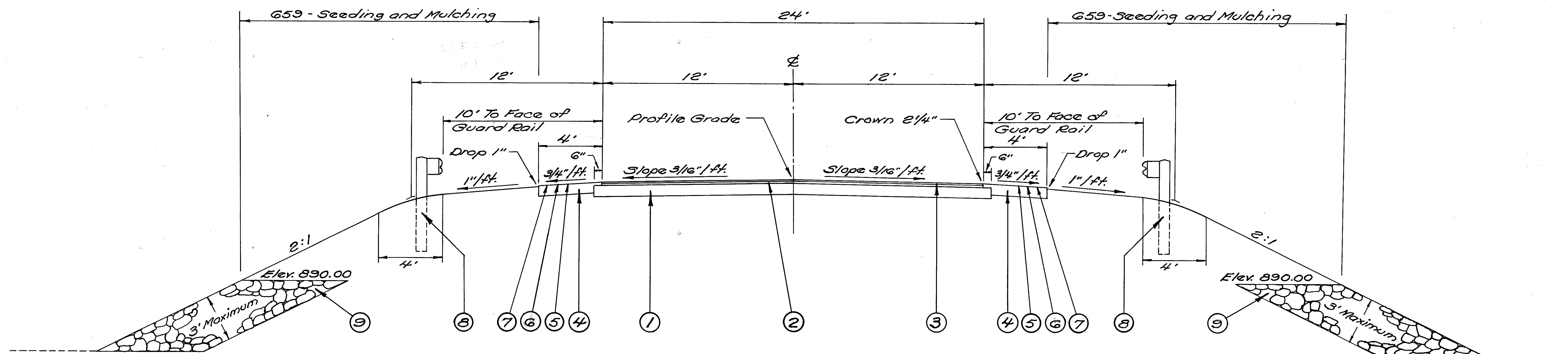
DESIGN DESIGNATION

1973 ADT = 3160
 1993 ADT = 6265
 K = .09
 D = .5G
 T = .11
 V = 60 MPH

TYPICAL SECTION

TYPE 404 ON 301

0 1 2 3 6
 Scale in Feet



STA. 302+35 TO STA. 307+00.40 = 465.40 LIN. FT. (BRIDGE APPROACH)
 (BRIDGE APPROACH) STA. 310+79.60 TO STA. 315+50 = 470.40 LIN. FT.
 TOTAL = 935.80 LIN. FT.

GENERAL NOTES CONTINUED FROM SHEET 3

CONSTRUCTION SEQUENCE: EARTHWORK

On this project, it will be necessary to coordinate the construction work with the relocation of the telephone cable and wires within the construction limits and the Contractor shall cooperate by performing his earthwork operations in accordance with the following schedule:

No work shall be performed which will interfere with the existing telephone installation until the following has been accomplished:
 The first phase of the Contractor's earthwork operations shall be to construct the slopes to plan lines from the beginning of the project to station 306+75 and from station 315+50 to the end of the project on the east or right side of centerline.

When this work has been completed, the Contractor shall notify the General Telephone Company, whose address is on the plans, and the telephone company shall have 10 working days from the date of notification to relocate their lines. The company shall relocate their lines on poles located a minimum of 8 feet beyond the line of the proposed guard rail and in the slope of the new embankment.

After the 10 working days have expired, the Contractor shall resume his normal earthwork operations and exercise the necessary caution not to damage the relocated telephone lines.

All of the above work shall be included in the unit price bid for Item 203 Excavation and Embankment.

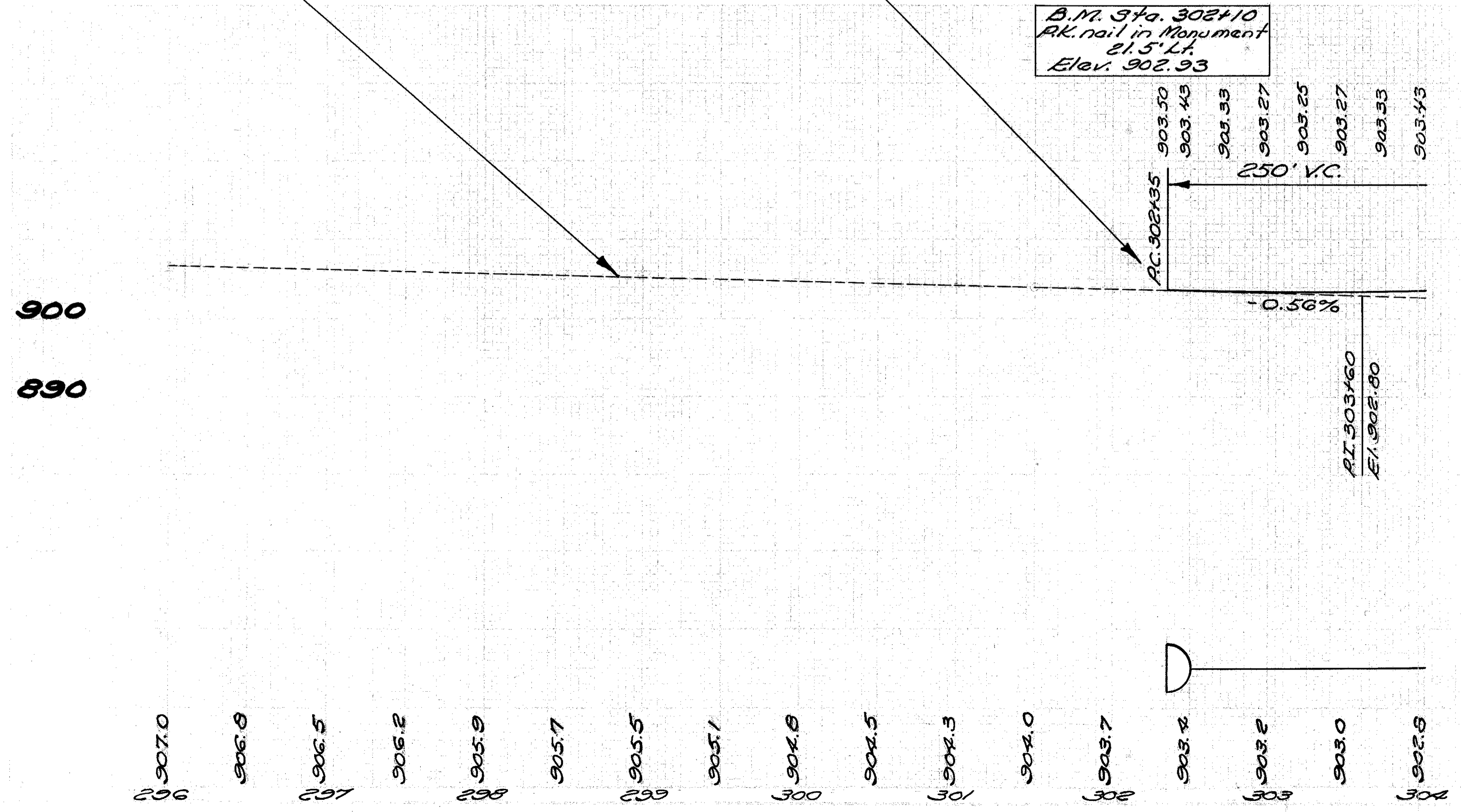
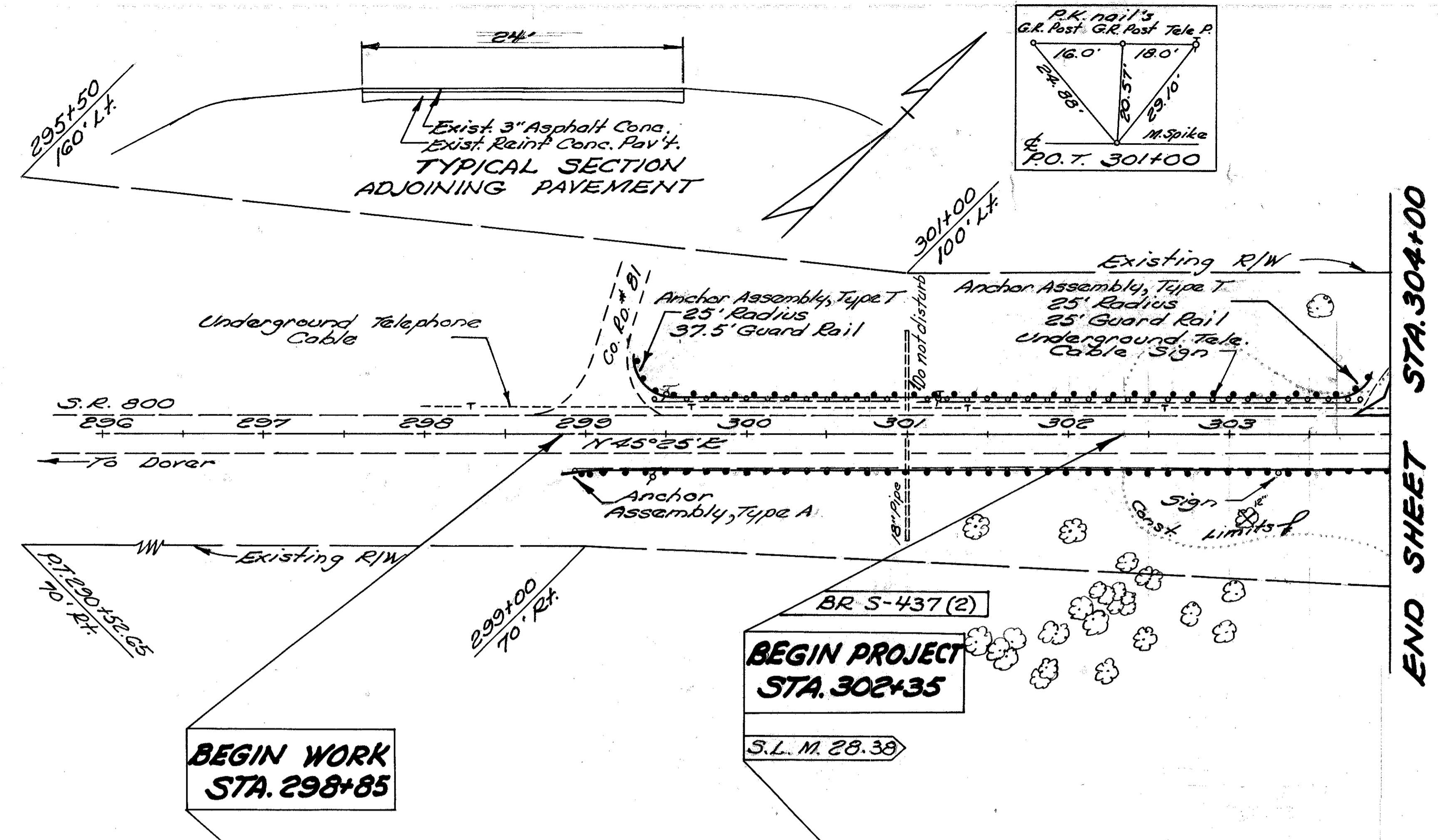
NOTE: For Limits of Guard Rail See Plan and Profile Sheets.

-KEY-

- ① — Item 301, 8" Bituminous Aggregate Base, 702.01 AC-20 or 702.09, RT-11 or RT-12.
- ② — Item 402, 1 3/4" Asphalt Concrete AC-20
- ③ — Item 404, 1 1/4" Asphalt Concrete AC-20
- ④ — Item 304, 8" Aggregate Base
- ⑤ — Item 409, Seal Coat Cover Aggregate No. 8 at 0.008 cu. yd. per sq. yd.
- ⑥ — Item 409, Seal Coat Bituminous Material: 702.09 RT-9 or RT-10; 702.02 MC-800 or MC-3000 702.04, RS-1, RS-2, CRS-1 or CRS-2; 702.03, CBAE-800, Using 0.30 Gal. per Sq. Yd.
- ⑦ — Item 408, Bituminous Prime Coat: 702.09, RT-2 or RT-3; 702.02, MC-30, or MC-70 or 702.03, Primer 20 at 0.40 Gal. per sq. yd.
- ⑧ — Item 606, Guard Rail, Type 5
- ⑨ — Item 601, Dumped Rock Fill, Type B

QUANTITIES

Calculated	CHECKED
BY DATE	BY DATE
L.J.C. 5-25-76	R.E.M. 6/21/76

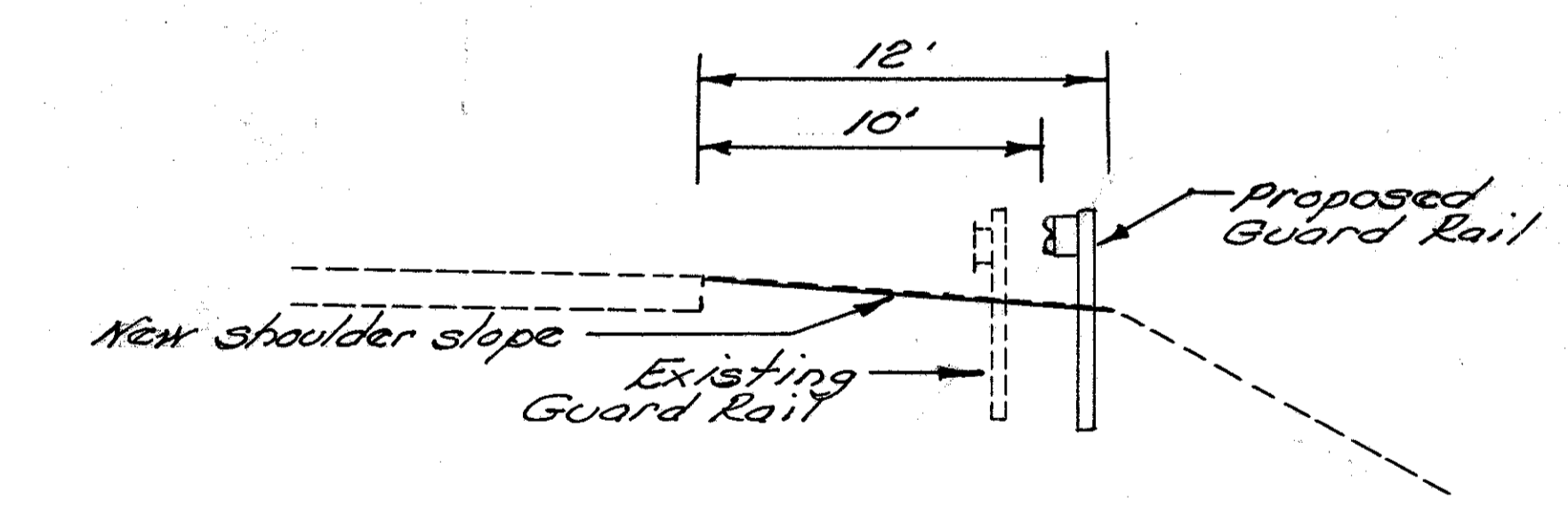


GUARD RAIL

STATION	SIDE	ITEM 606 GUARD RAIL TYPE 5 LIN. FT.	ITEM 606 ANCHOR ASSEM. BLY. TYPE A EACH	ITEM 202 GUARD RAIL REMOVED AS PER PLAN LIN. FT.	ITEM 606 ANCHOR ASSEMBLY TYPE T EACH
299+30	303+88	LT.	450.00		2
298+85	304+00	RT.	489.00		
298+85	299+10	RT.		1	
299+44	302+35	LT.			291.00
298+89	302+35	RT.			348.00
TOTALS		FEDERAL	317.50		1
		STATE	* 621.50	* 1	* 637.00

* All Quantities from Sta. 298+85 to Sta. 302+35 and from Sta. 315+50 to Sta. 318+68 are 100% State.

NEW GUARD RAIL LOCATION

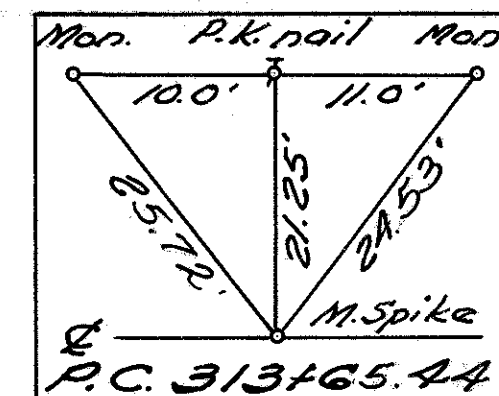
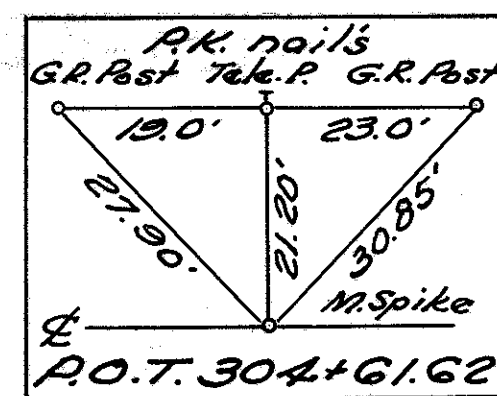


STA. 298+85 TO STA. 302+35 = 350 LIN. FT.
 STA. 315+50 TO STA. 318+68 = 318 LIN. FT.
 668 LIN. FT.

Quantities carried to Sheet 3

LEFT SIDE AND RIGHT SIDE = 668 x 2 = 1336 LIN. FT.

- * Item 659 - Seeding and Mulching
 $1336 \times 12' \div 9 = 1781.33$ USE 1782 Sp. Yds.
- * Item 659 - Commercial Fertilizer (12-12-12)
 $1782 \times 9 \div 1000 \times 20 \div 2000 = 0.160$ - USE 0.16 Tons.
- * Item 659 - Agricultural Liming
 $1782 \times 9 \div 1000 \times 100 \div 2000 = 0.802$ - USE 0.80 Tons.
- * **SHOULDER RENOVATION:** Within the station limits listed above and where the existing guard rail is being removed, the Contractor shall fill the old post holes and shape the shoulder to provide a uniform slope away from the pavement. Payment for the above described work shall be included in the unit price bid for Item 202 - Guard Rail Removed, as per plan.

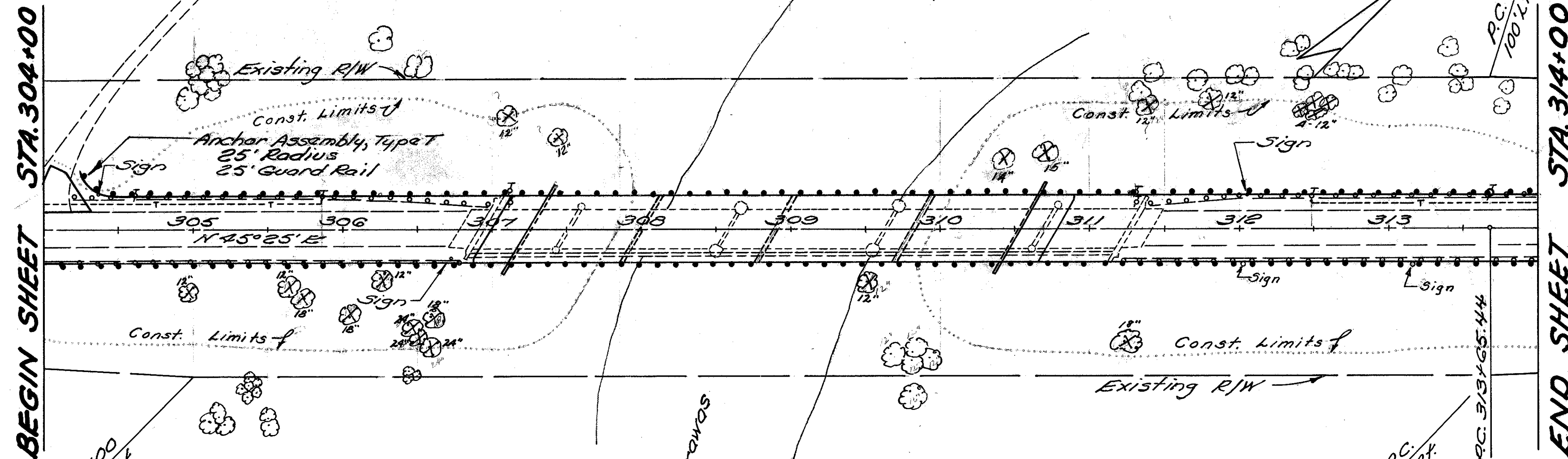


FHWA REGION 5
TUS-800-28.38

5
22

QUANTITIES

Calculated	CHECKED
BY DATE	BY DATE
L.J.C. 5-25-76	R.E.M. 5/21/76



EXISTING STRUCTURE
BR. NO. TUS-800-2846
Type: Steel Trusses with Steel Beam approach Spans.
Span: 3 Truss spans @ 105' 9/16 pins with 2 Steel Beam approach spans @ 54' 9/16 brgs.
Roadway: 26' with 3'6" sidewalk on truss spans, 5'11 1/2" sidewalk on approach spans
Loading: H-15-33
Skew: 30° 53' 29" L.F.
Condition: Fair (Legal Loading Reduced 15%)
To Be Removed

PROPOSED STRUCTURE
BR. NO. TUS-800-2846
Type: Continuous welded plate girders with reinforced concrete deck and substructure
SPANS: 72'-90'-90'-72' 9/16 brgs.
ROADWAY: 44'-0" 1/2 guard rails
LOADING: HS20-44' Interstate Alternate Case II
SKEW: 30° Left Fwd.
SURFACE COURSE: 2 1/2" Asphalt Concrete
ALIGNMENT: Tangent
APPROACH SLAB: AS-1-72 (25' Long)

APPROACHES

STATION	SIDE &	SEE SHEET	ITEM 304 AGGREGATE BASE CU. YDS.
303+91	LT.	8	12
TOTAL			12

GUARD RAIL

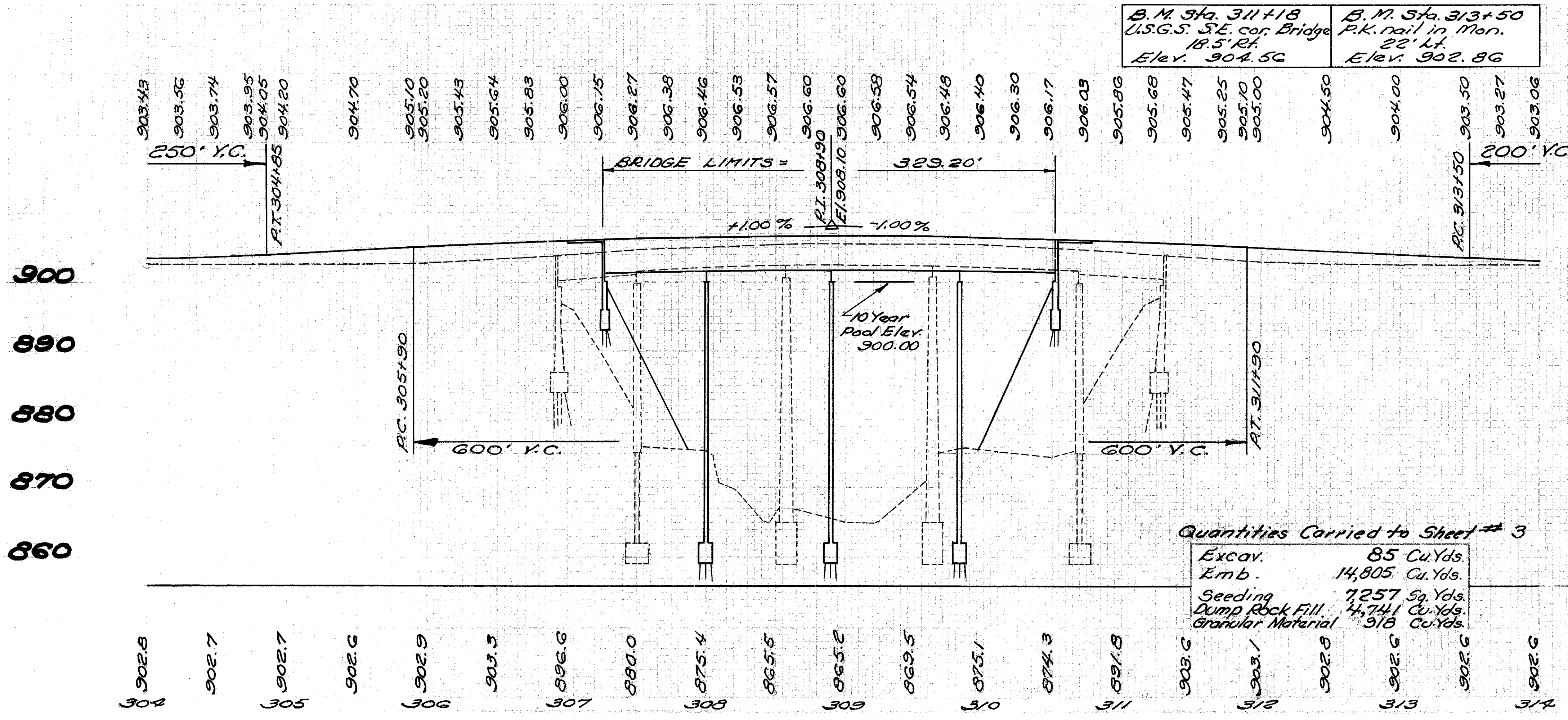
STATION	SIDE &	ITEM 606 GUARD RAIL TYPE 5 LIN. FT.	ITEM 606 TERMINAL ASSEMBLY TYPE B EACH	ITEM 606 ANCHOR ASSEMBLY TYPE T EACH
304+27	LT.	+ 962.50	2	1
304+00	RT.	+ 1000.00	2	
		+ - 658.4		
TOTAL		1304.10	4	1

+ Bridge Rail = 329.20'

APPROACH SLABS

STATION	FROM	TO	CALCULATION	Item 611 Rein. Conc. Appr. Slabs (7'-15") SQ. YDS.
	307+00.40	307+25.40	25' x 44' ÷ 9 =	122.22
	310+54.60	310+79.60	25' x 44' ÷ 9 =	122.22
TOTAL				244.44

USE 245'



B.M. Sta. 311+18 U.S.G.S. S.E. cor. Bridge 18.5' Rt. Elev. 904.56
B.M. Sta. 313+50 P.K. nail in Mon. 22' Lt. Elev. 902.86

Quantities Carried to Sheet # 3

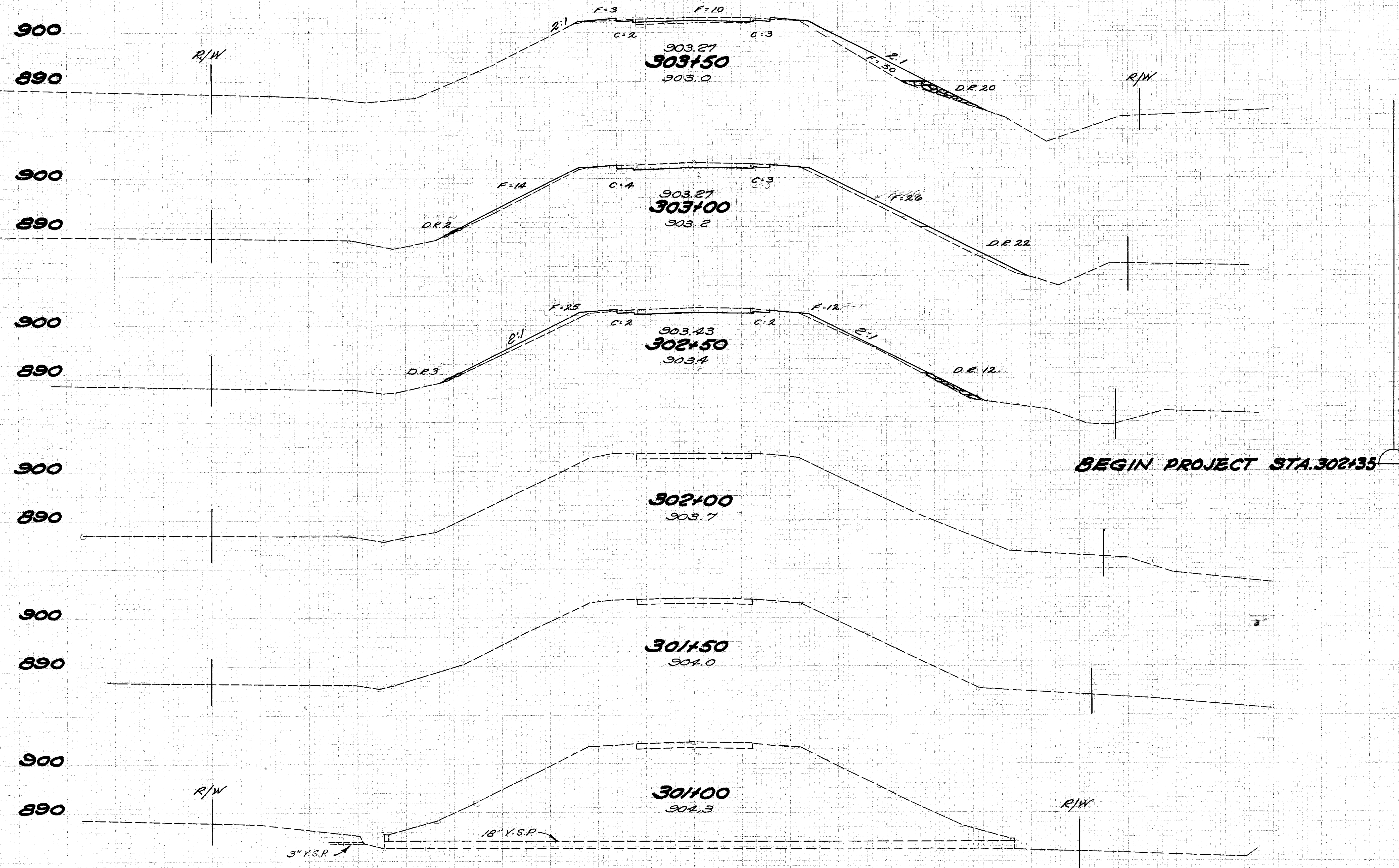
Excav. 85 Cu.Yds.
Emb. 14,805 Cu.Yds.
Seeding 7,257 Sq.Yds.
Dump Rock Fill 4,741 Cu.Yds.
Granular Material 918 Cu.Yds.

STA. 304+00 TO STA. 314+00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

TUS-800-28.38

QUANTITIES
 Calc. Date Chkd. Date
 R.E.M. 5/1/76 C.A.V. 5/7/76



Sta.	Seeding		End Area		Cu.Yds.	
	E.A. C.Y.	W. SY.	Cut	Fill	Exc.	Emb.
303+50	20	43	5	63		
303+00	41	314			11	95
302+50	24	70	7	40		
302+00	36	389			10	71
301+50	15	70	4	37		
301+00	4	58			1	10
BEGIN PROJECT STA. 302+35	0	0	0	0		

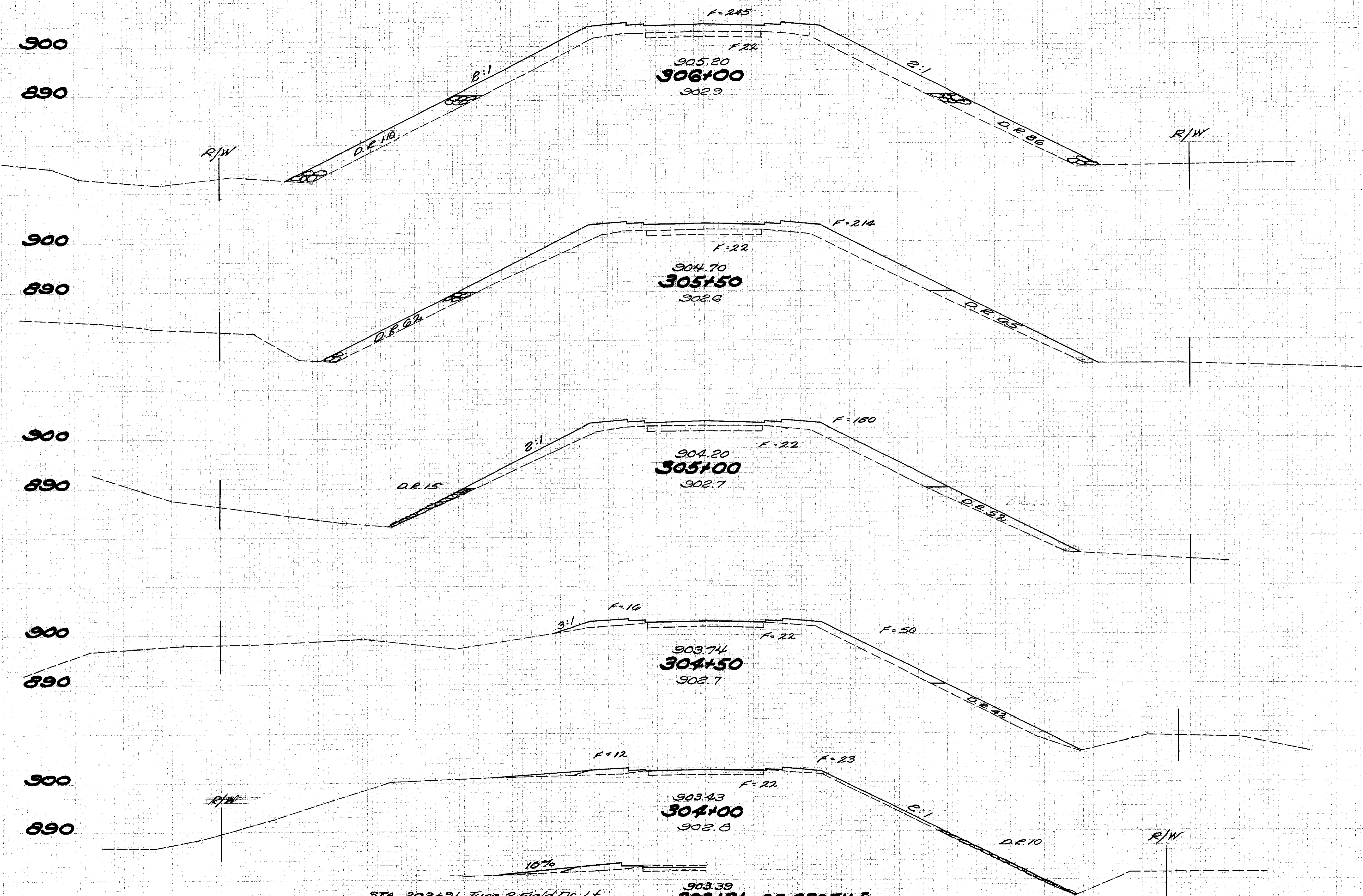
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

STA. 301+00 TO STA. 303+50

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

QUANTITIES

Calc.		Date Chkd.		Date	
E.E.M. 5/4/76		C.A.V. 5/7/76			
Dumped Rock Fill	Seeding	End Area	Cu. Yds.		
E.A. C.Y.	W. S.Y.	Cut	Fill	Exc.	Emb.
196	76	0	267		
	299	422		0	466
127	76	0	236		
	180	417		0	406
67	74	0	202		
	101	336		0	269
42	47	0	88		
	48	256		0	134
10	45	0	57		
	28	244		5	111



903.39
303+91 DR. PROFILE
 902.8

STA. 303+91 Type 2 Field Dr. Lt.
 31' Long - $\Delta = 65^\circ$
 Planimeter Area = 610 Sq. Ft.
 Item 304 - $610 \cdot (6'' \div 12) \div 27 = 11.30$ Cu.Yds.
 Use - 12 Cu.Yds.
 Quantity carried to Sheet 5
 Earthwork Calc. = Item 304 Calc.

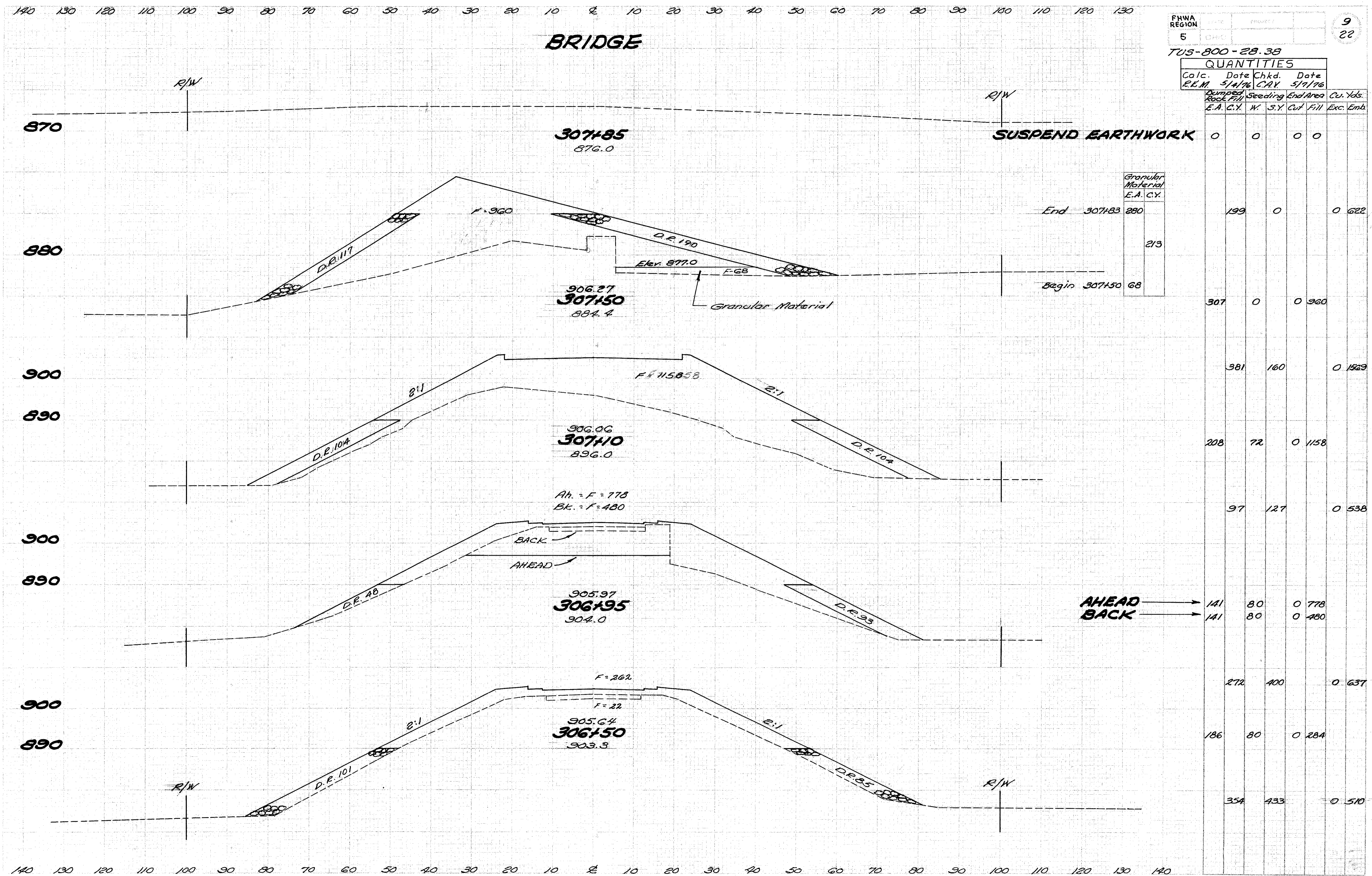
STA. 303+91 Dr. Lt. → 12 0

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

STA. 304+00 TO STA. 306+00

BRIDGE

FHWA REGION	DATE	PROJECT	9 22
5	CHK		
TUS-800-28.38			
QUANTITIES			
Calc.	Date	Chkd.	Date
R.E.M.	5/4/76	C.H.Y.	5/7/76



Sta.	Dumped Rock Fill E.A. C.Y.	Sealing W. S.Y.	End Area		Cu. Yds.	
			Cut	Fill	Exc.	Emb.
307+85	0	0	0	0	0	0
307+50	199	0	0	0	0	622
307+10	307	0	0	960	0	1569
306+95	208	72	0	1158	0	538
306+50	186	80	0	284	0	510

AHEAD →
BACK →

140 130 120 110 100 90 80 70 60 50 40 30 20 10 E 10 20 30 40 50 60 70 80 90 100 110 120 130

TUS-800-28.38

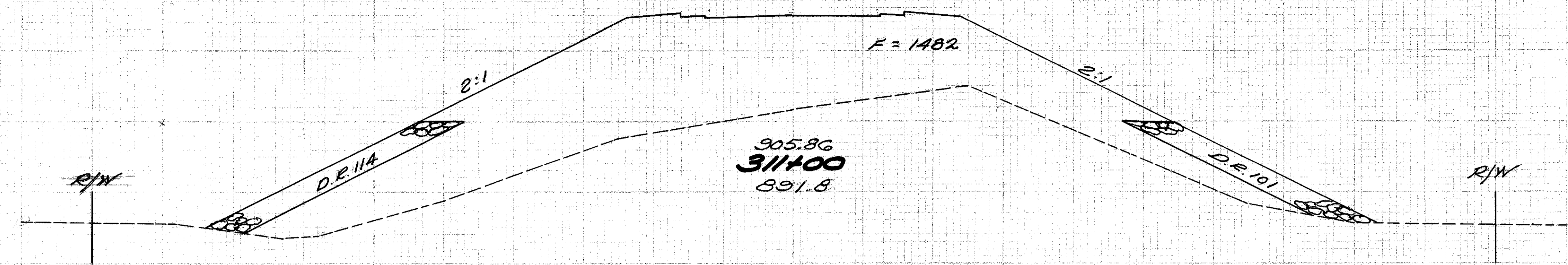
QUANTITIES

Calc.	Date Chkd.	Date
R.E.M.	5/1/76	C.A.V. 5/9/76

Quantity	Seeding	End Area	Cu. Yds.
E.A. C.Y.	W.	S.Y.	Cut Fill Exc. Emb.

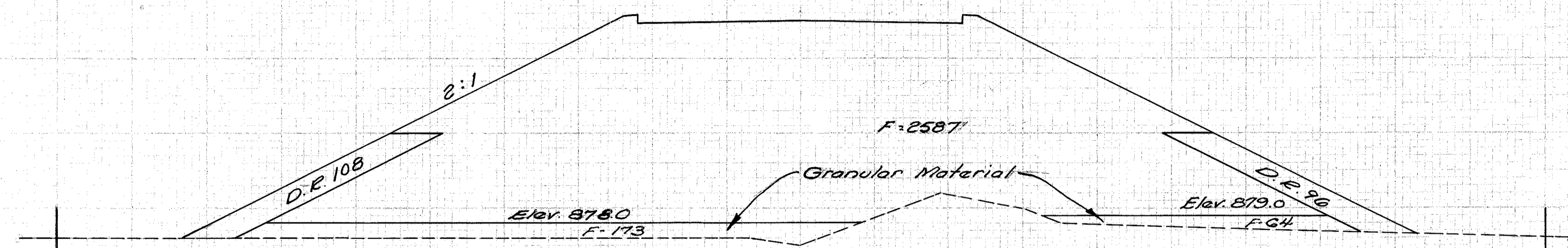
890

880



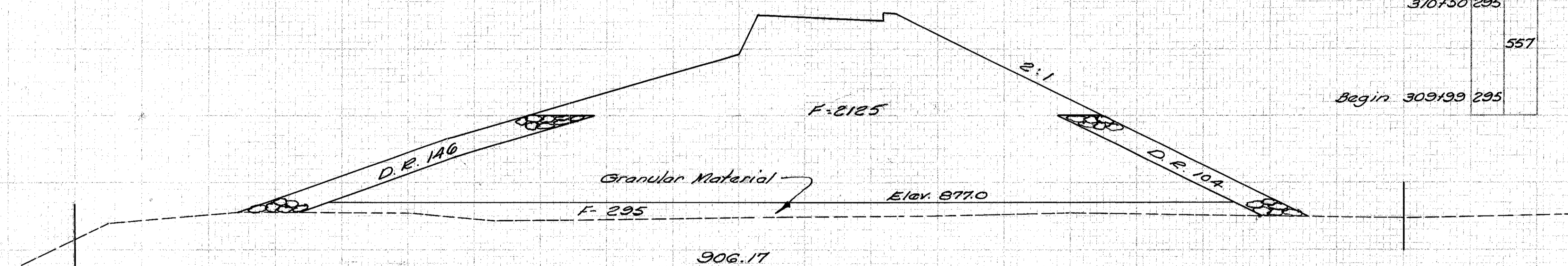
880

870

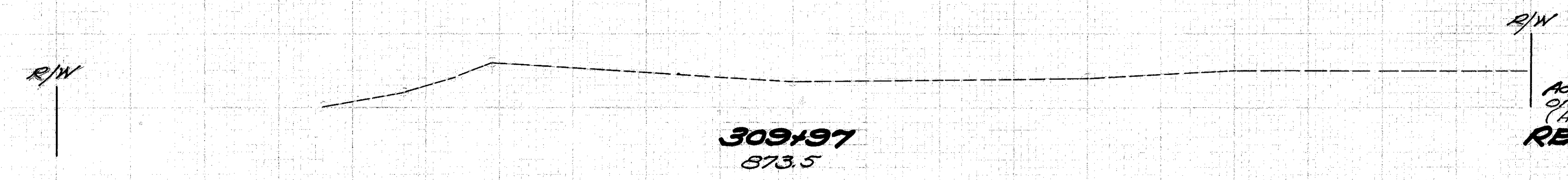


Granular Material	E.A. C.Y.
End	310+65 237
	148
	310+50 295
	557
Begin	309+99 295

870



870



Quantities Carried to SH #5

Excavation	85	Cu Yds
Embankment	14,805	Cu Yds
Seeding	7,257	Sq Yds
Dump Rock Fill	4,141	Cu Yds
Granular Material	318	Cu Yds

Additional Dumped Rock Fill on slope under Bridge (At both Abutments)
RESUME EARTHWORK

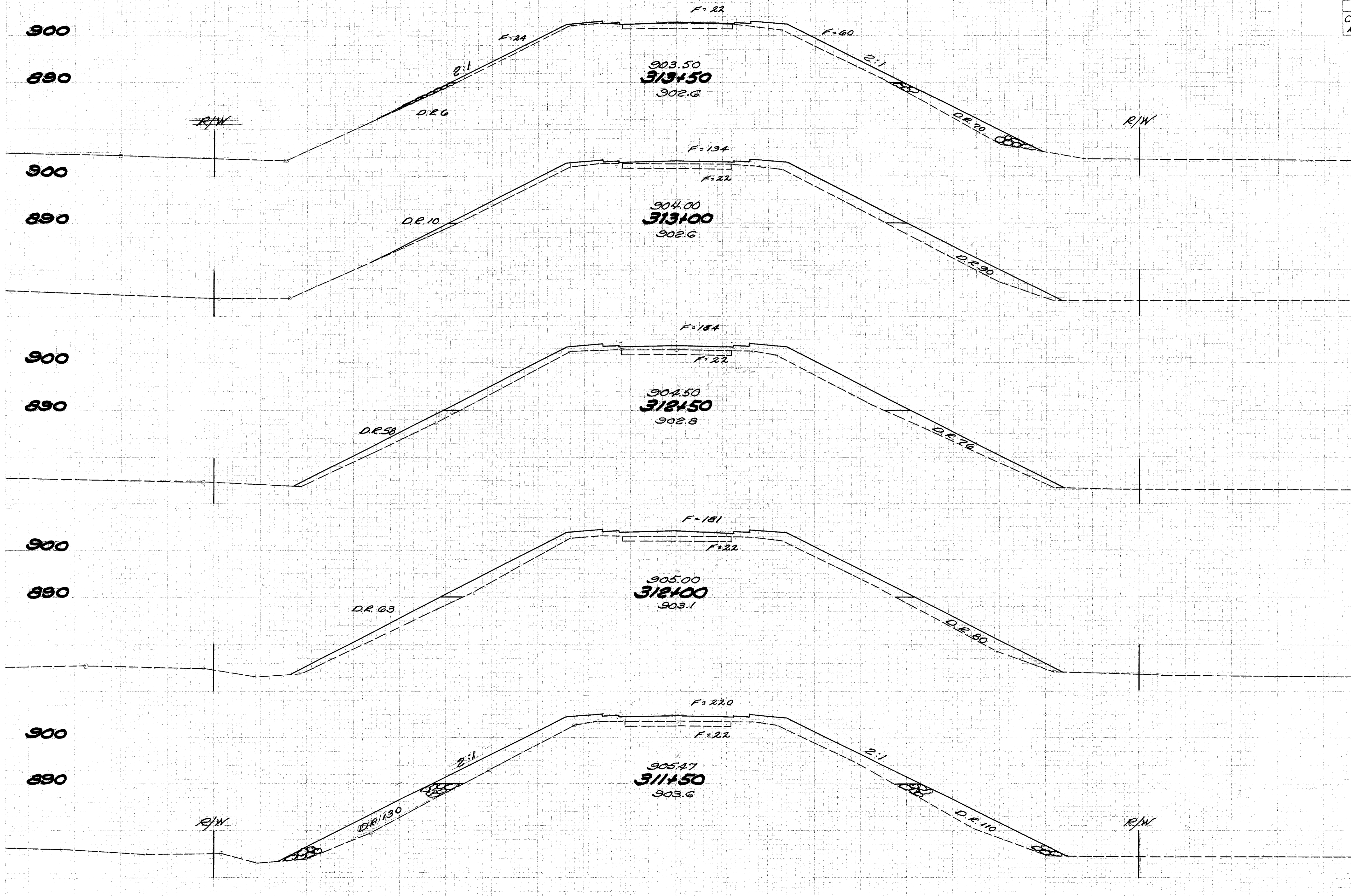
BRIDGE

140 130 120 110 100 90 80 70 60 50 40 30 20 10 E 10 20 30 40 50 60 70 80 90 100 110 120 130 140

STA. 309+97 TO STA. 311+00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

FHWA REGION	PROJECT	11
5		22
TUS-800-28.38		
QUANTITIES		
Calc.	Date Chkd.	Date
R.E.M.	5/17/76	C.A.V. 5/17/76



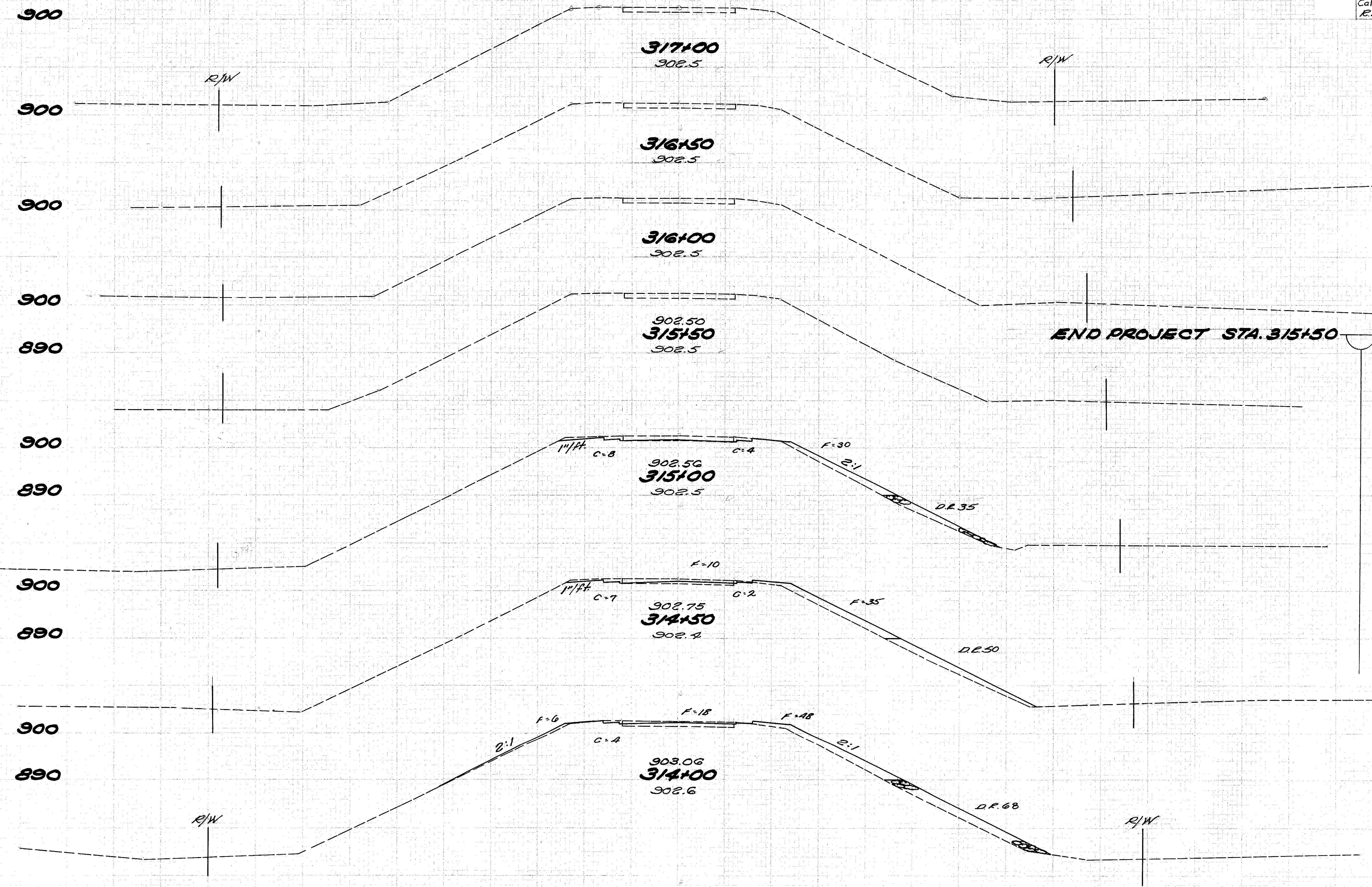
Dumped Rock Fill E.A. C.Y.	Seeding		End Area		Cu. Yds.	
	W.	S.Y.	Cut	Fill	Exc.	Emb.
76	70		0	106		
163	394				0	243
100	72		0	156		
217	411				0	335
134	76		0	206		
256	425				0	379
143	77		0	203		
355	436				0	412
240	80		0	242		
421	450				0	1596

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

STA. 311+50 TO STA. 313+50

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

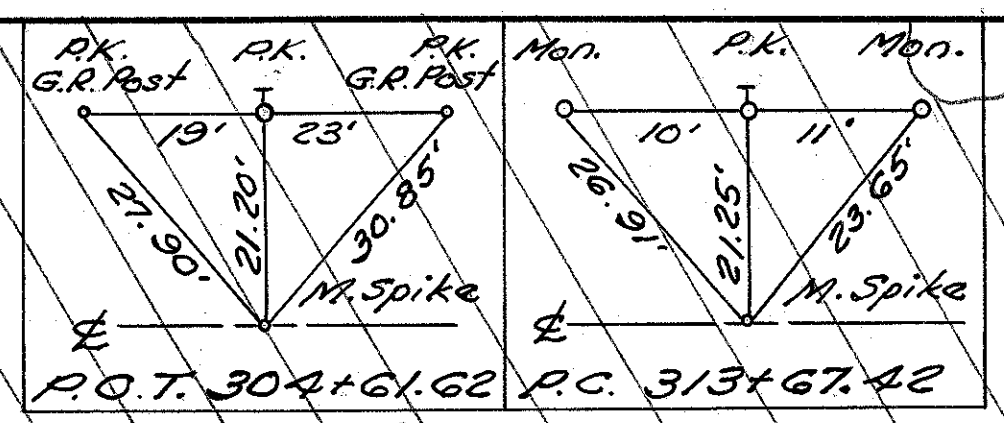
FHWA REGION	DATE	PROJECT	12
5	CHC		22
TUS-800-28.38			
QUANTITIES			
Calc.	Date Chkd.	Date	
R.E.M.	5/4/76	C.A.V.	5/7/76
Dumped Rock Pile	Seeding	End Area	Co. Yds.
E.A. C.Y.	W. S.Y.	Cut Fill	Exc. Emb.



Station	E.A. C.Y.	W. S.Y.	Cut	Fill	Exc.	Emb.
317+00						
316+50						
316+00						
315+50	0	0	0	0		
315+00	32	117			11	28
314+50	35	42	12	30		
314+00	79	239	19	69		
	50	44	9	15		
	109	328			12	108
	00	74	4	72		
	133	400			4	165

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

STA. 314+00 TO STA. 317+00



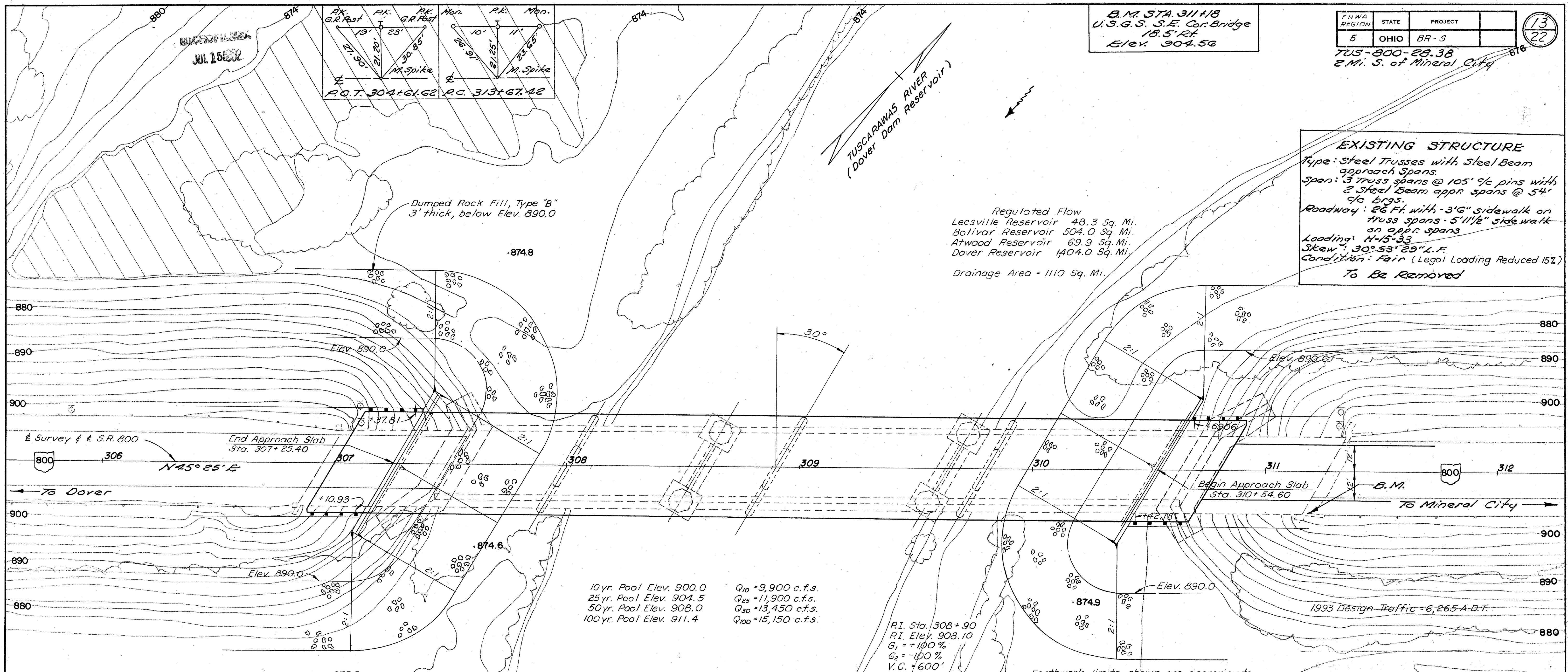
B.M. STA. 311+18
 U.S.G.S. S.E. Cor. Bridge
 18.5' Rt.
 Elev. 904.56

FHWA REGION	STATE	PROJECT	13 22
5	OHIO	BR-5	

TUS-800-28.38
 2 Mi. S. of Mineral City

EXISTING STRUCTURE
 Type: Steel Trusses with Steel Beam approach Spans
 Span: 3 Truss spans @ 105' c/c pins with 2 Steel Beam appr. spans @ 54' c/c brgs.
 Roadway: 26 Ft. with 3'6" sidewalk on truss spans - 5'11/2" sidewalk on appr. spans
 Loading: H-15-33
 Skew: 30° 53' 29" L.F.
 Condition: Fair (Legal Loading Reduced 15%)
To Be Removed

Regulated Flow
 Leesville Reservoir 48.3 Sq. Mi.
 Bolivar Reservoir 504.0 Sq. Mi.
 Atwood Reservoir 69.9 Sq. Mi.
 Dover Reservoir 1404.0 Sq. Mi.
 Drainage Area = 1110 Sq. Mi.



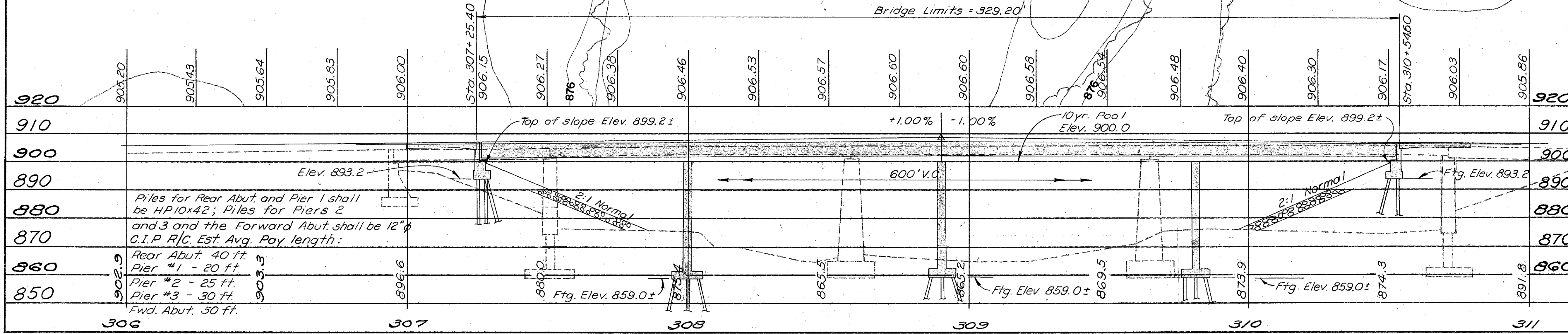
10 yr. Pool Elev. 900.0
 25 yr. Pool Elev. 904.5
 50 yr. Pool Elev. 908.0
 100 yr. Pool Elev. 911.4

$Q_{10} = 9,900$ c.f.s.
 $Q_{25} = 11,900$ c.f.s.
 $Q_{50} = 13,450$ c.f.s.
 $Q_{100} = 15,150$ c.f.s.

P.I. Sta. 308+90
 P.I. Elev. 908.10
 $G_1 = +1.00\%$
 $G_2 = -1.00\%$
 V.C. = 600'

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

PROPOSED STRUCTURE
 TYPE: Continuous welded plate girders with reinforced concrete deck and sub-structure.
 SPANS: 72'-90'-90'-72' c/c brgs.
 ROADWAY: 44'-0" f/f guard rails
 LOADING: HS 20-44 Case II & the Alternate Military Loading
 SKEW: 30° L.F.
 SURFACE COURSE: 2 1/2" Asphalt Concrete
 ALIGNMENT: Tangent
 APPROACH SLABS: AS-1-72 (25' long)



STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

SITE PLAN
 BRIDGE NO. TUS-800-2846
 OVER
 TUSCARAWAS RIVER
 TUSCARAWAS COUNTY

SR-800
 STA. 307+25.40
 310+54.60

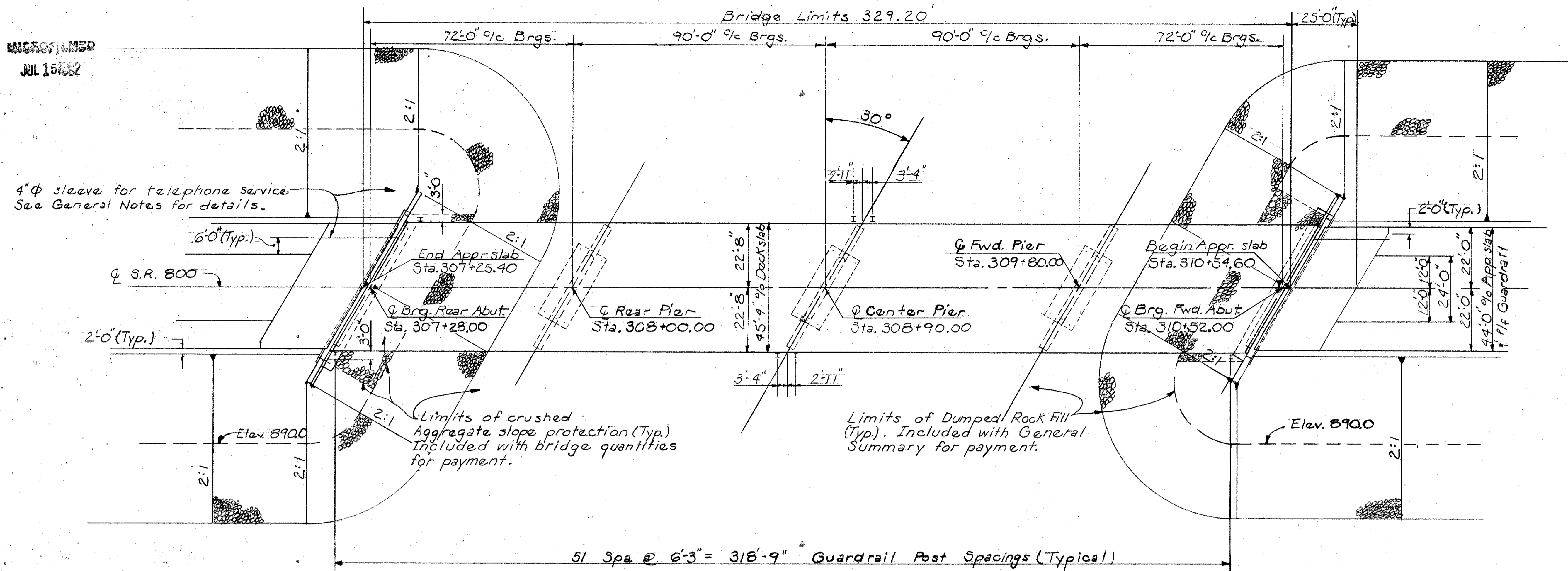
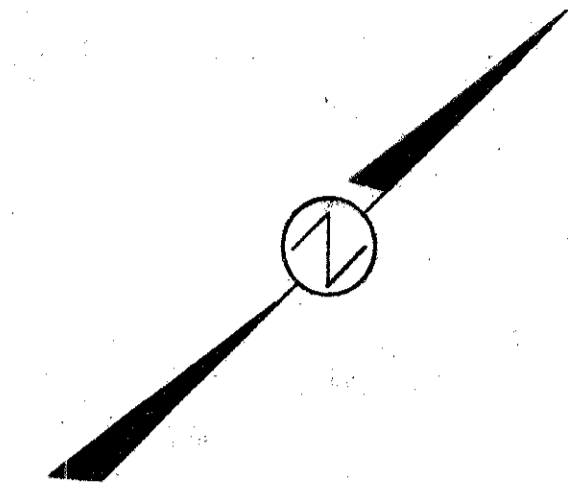
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED AERIAL SURVEY	DRAWN AERIAL SURVEY	DESIGNED N.J.B.	DRAWN N.J.B.	CHECKED FPK	REVIEWED D.H.S.

MICROFILMED
JUL 15 1982

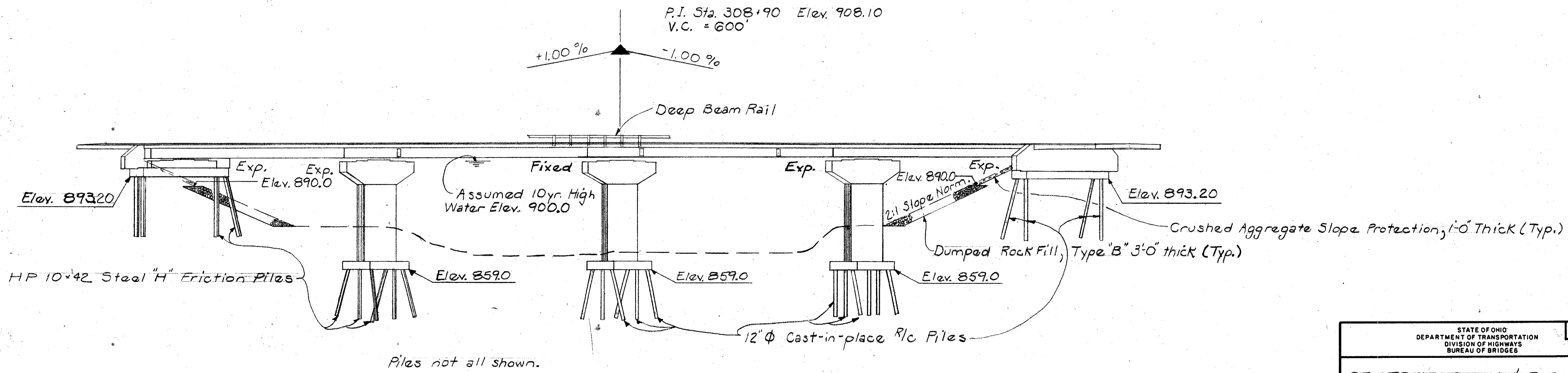
FHWA REGION	STATE	PROJECT
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GENERAL PLAN



ELEVATION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES						2/10
GENERAL PLAN & ELEVATION						
BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MJR	MJR		MRG	WJU	12-6-76	

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GENERAL NOTES

REFERENCE shall be made to Standard Drawings:

- DBR-2-73 dated 4-10-73
 - RB-1-55 revised 2-2-59
 - SD-1-69 sht. 1 dated 6-12-69
- and to Supplemental Specifications:
- 808 dated 1-1-71
 - 836 dated 3-12-75
 - 838 dated 1-13-77

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1973, including the 1974, 1975 and 1976 Interim Specifications and the Ohio Supplement to these specifications.

DESIGN DATA:

- Design Loading HS 20-44 Case II and the Alternate Military Loading.
- Concrete Class C - Compressive strength $f'_c = 4000$ p.s.i.
- Structural Steel - ASTM A588 unit stress 27,000 p.s.i.
- Reinforcing Steel - ASTM A615, A616, or A617 and shall be limited to Grade 60.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Suitable waste masonry may be incorporated in Dumped Rock Fill, Type "B".

PILES shall be driven to a minimum bearing capacity of 45 tons per pile for the abutments and the piers.

APPROACH SLABS: Pavement jacking holes as shown on Standard Drawing AS-1-72 shall not be provided and the cover of the top reinforcing steel shall be increased from 2" to 3".

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.

TELEPHONE CONDUIT: The General Telephone Company will provide 2-30' long conduits to the construction site upon a 10 day notice from the Contractor. All expense involved in installing the telephone conduit shall be borne by the owner. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ITEM SPECIAL - PROTECTION OF CONCRETE SURFACES

All surfaces of the piers above ground line and visible surfaces of the abutments which will be exposed to rust-laden water from corrosion resistant steel during initial weathering shall receive a protective coating of clear vinyl resin to protect against absorptive staining. The coating shall be applied after the concrete has received a final surface finish including any grout cleaning or rubbing and before the erection of the structural steel.

Waterproof membrane curing compound and concrete curing and protective membrane, Supplemental Specification 836, shall not be used on the surfaces to be coated. Such surfaces shall be water cured or, at the Contractor's option, two full coats of clear protective coating, each approximately 1-1/3 mils dry film thickness, may be applied to act as a combination curing compound and anti-staining agent. No further coating will be required.

The agent shall be applied by brush or roller, or by spraying, so that the surface of the concrete is completely and uniformly coated at the rate of one gallon per 200 square feet. This rate of application will provide a dry film thickness of 1-1/3 mils. If running or sagging occurs, the material shall be applied in two or more coats of approximately equal thickness. Not less than 10 minutes shall elapse between applications. When applied by spraying, the coating material may be thinned with not more than 10 percent toluene.

The composition of the clear protective coating shall be as follows:

	Percent by Weight
Vinyl Resin *	25.0 min.
Methyl Ethyl Ketone Solvent	37.0 min.
Toluene Solvent	37.0 min.

* The resin shall be a vinyl chloride-acetate copolymer containing 86 percent vinyl chloride and 14 percent vinyl acetate. The viscosity of a 22 percent by weight solution of resin in a solvent, consisting of equal parts of Methyl Isobutyl Ketone and Toluene, shall be 250-500 centipoises at 77°F. The resin shall be Union Carbide's VYHH grade or approved equal.

Coating Properties:	Weight per gallon at 77°F. lb.	7.6 min
	Consistency, Viscosity at 77°F, KU	60-70
	Color	Clear and Colorless
	Drying Time, hr.	1/2 max.

The cost of this application shall be in the unit price bid for item Special, Sq. ft., Protection of Concrete Surfaces.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BUREAU OF BRIDGES

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GENERAL NOTES
BRIDGE NO. TUS-800-2846
OVER TUSCARAWAS RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MJR	—	TGC	MKG	WJJ	12-6-76	

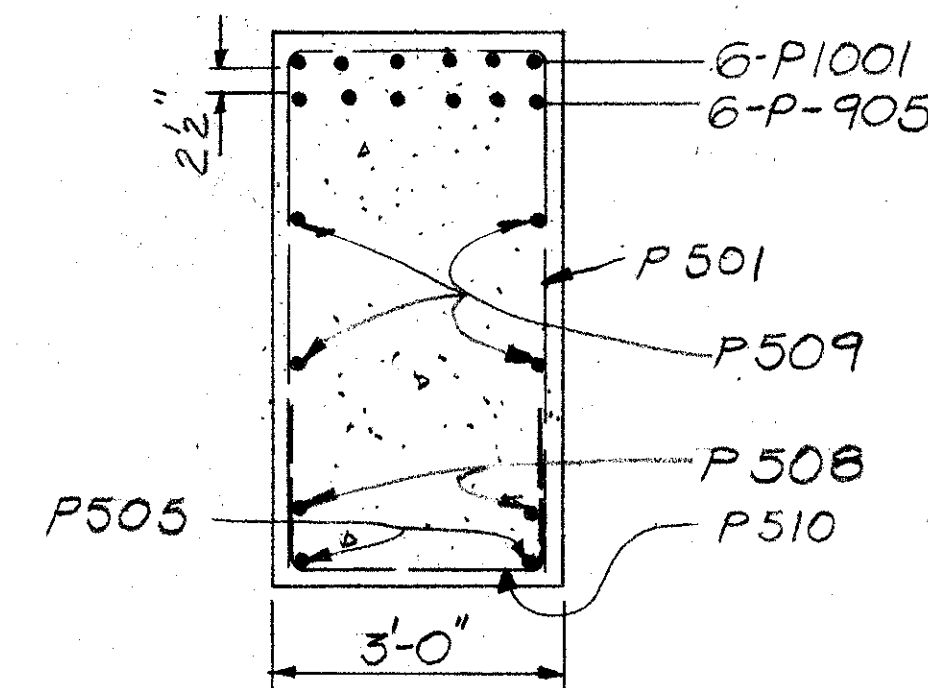
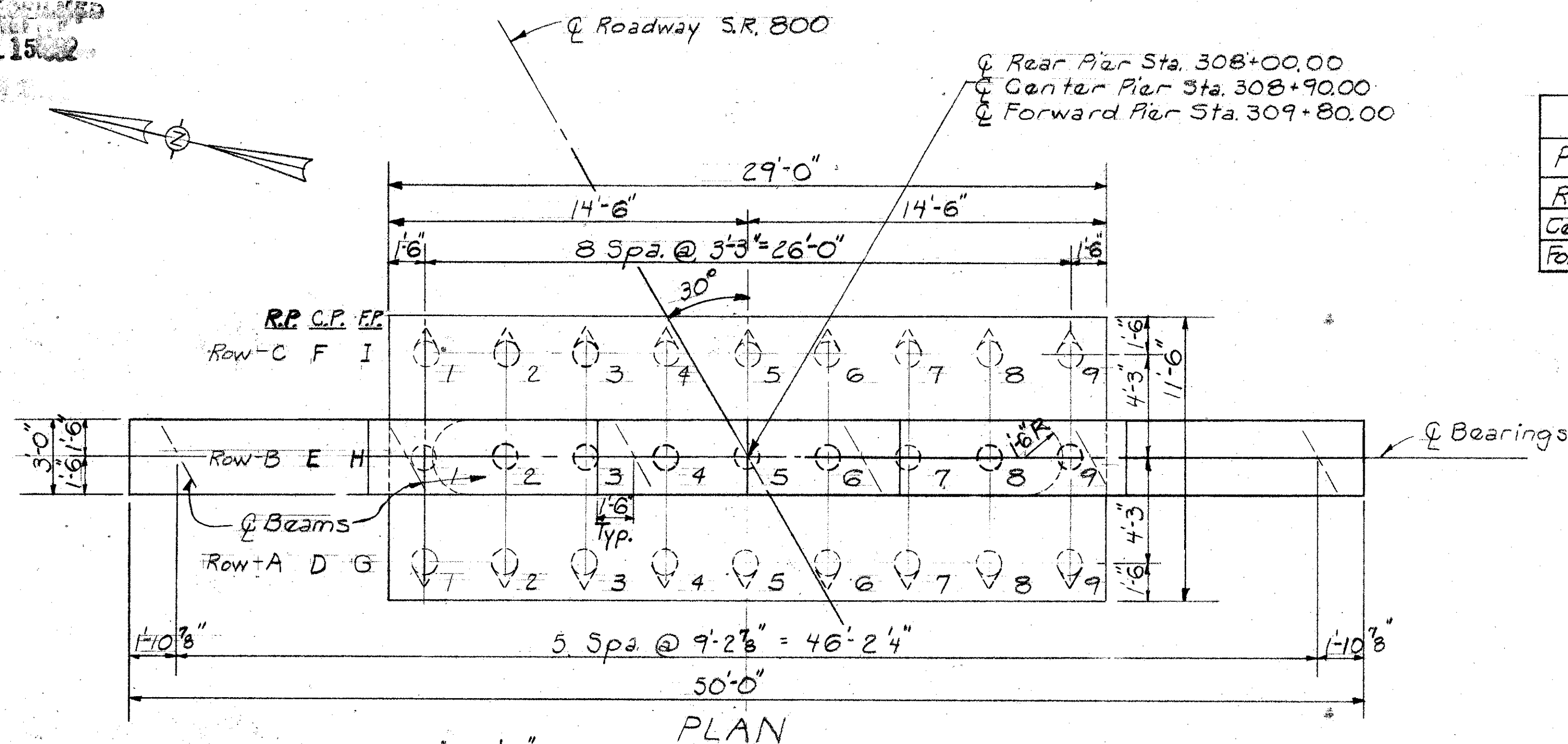
DATE PLOTTED
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Pier	Station	EI.A	EI.B	EI.C	EI.D	EI.E	EI.F	EI.G	Dim.H	Dim.J	Dim.K
Rear	308+00.00	900.07	900.18	900.29	900.28	900.14	900.00	859.0	30'-0"	4'-0 3/8"	41'-0"
Center	308+90.00	900.17	900.30	900.42	900.42	900.30	900.17	859.0	30'-2"	4'-0"	41'-2"
Forward	309+80.00	900.00	900.14	900.28	900.29	900.18	900.07	859.0	30'-0 3/8"	3'-11 1/8"	41'-0 3/8"



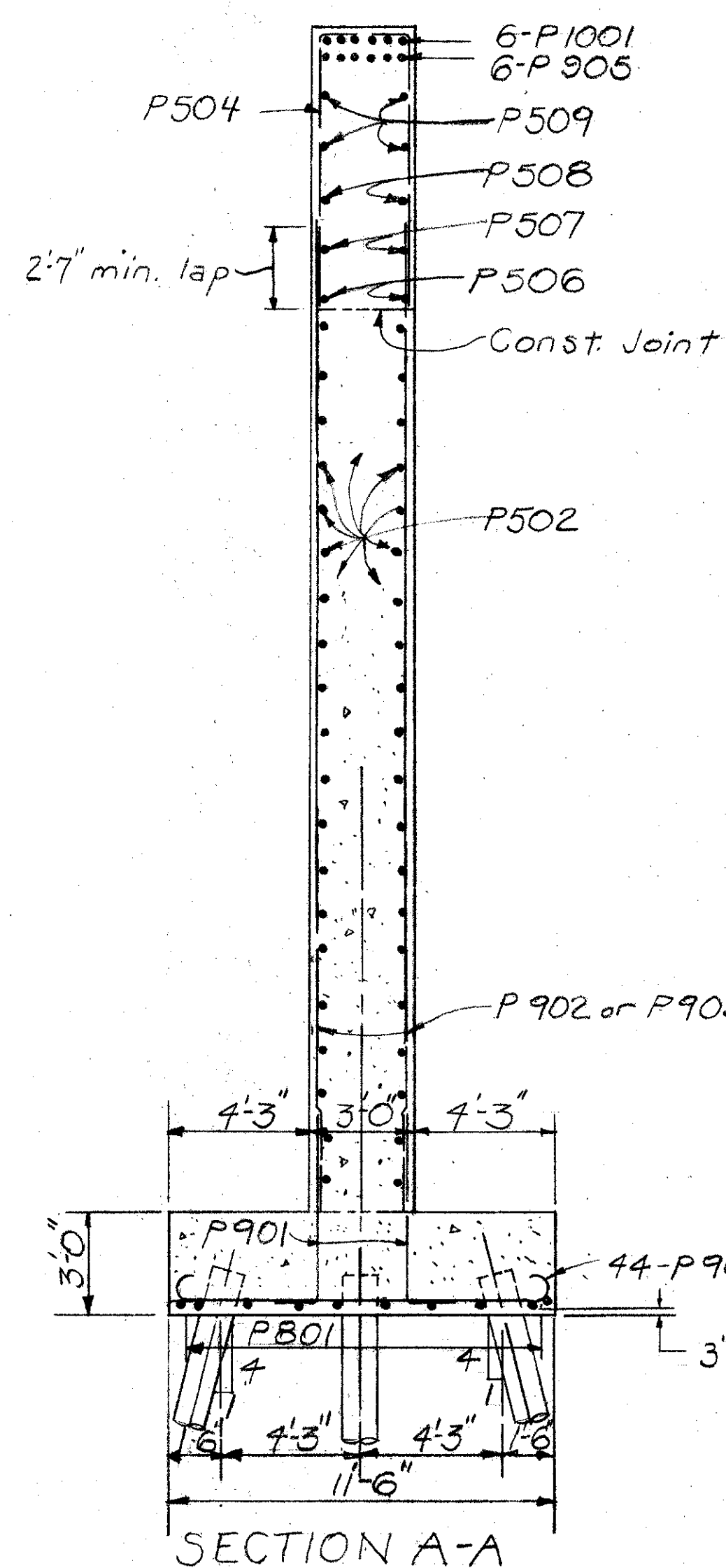
NOTES

Reinforcing steel in the vicinity of the bridge seat of the center pier shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors. At the option of the Contractor, bearing anchors or formed holes, located and supported by templates, may be cast in place.

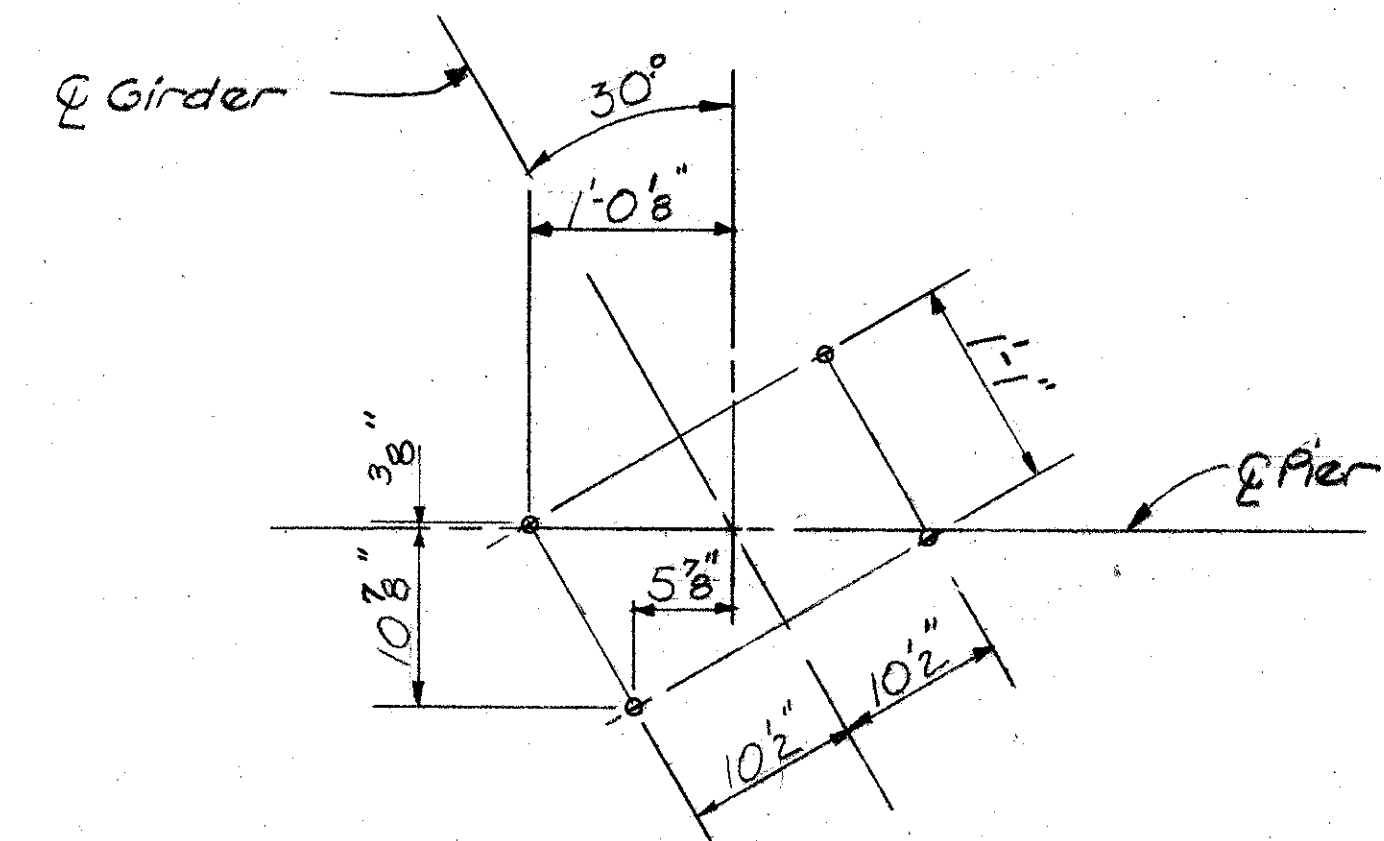
Designated piles for rear and center piers shall be battered 1:4 in direction shown. Piles in the outer row on the east side only at the Forward Pier shall be battered 1:4.

Both sides of the piers shall be backfilled simultaneously.

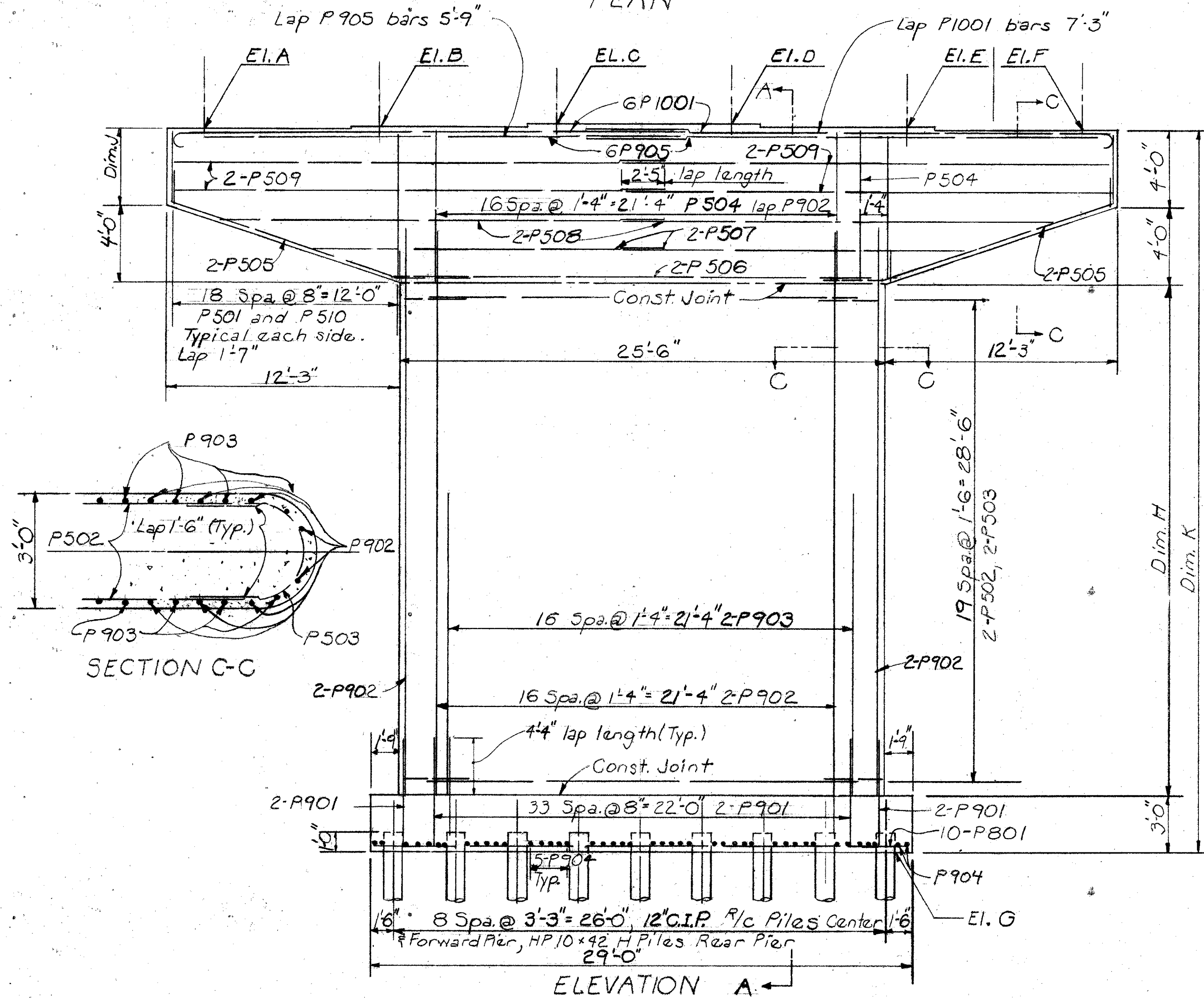
SECTION G-C



SECTION A-A



LAYOUT FOR ANCHOR BOLTS



ELEVATION A-A

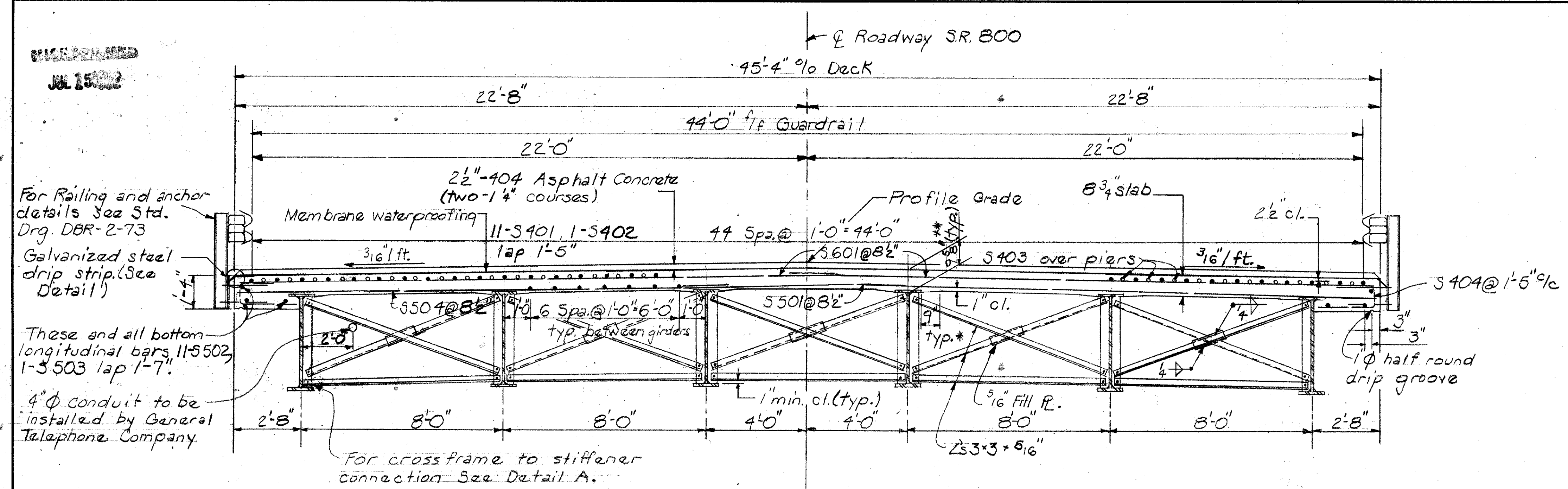
STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES						5/10
PIER DETAILS						
BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MJR	MJR		MRG	WJJ	12-6-76	

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JUL 15 1972

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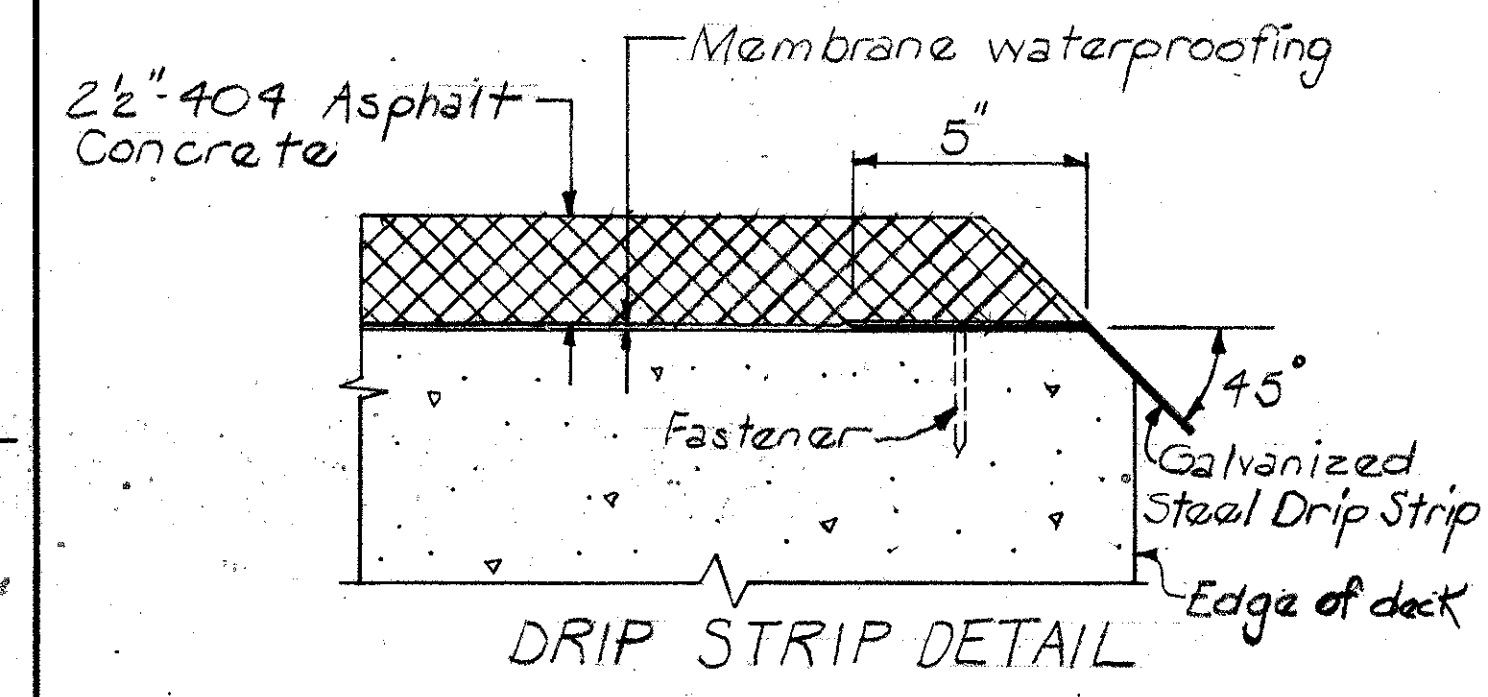


For Railing and anchor details See Std. Drg. DBR-2-73
Galvanized steel drip strip. (See Detail)
These and all bottom longitudinal bars, 11-S502, 1-S503 lap 1'-7".
4" ϕ conduit to be installed by General Telephone Company.

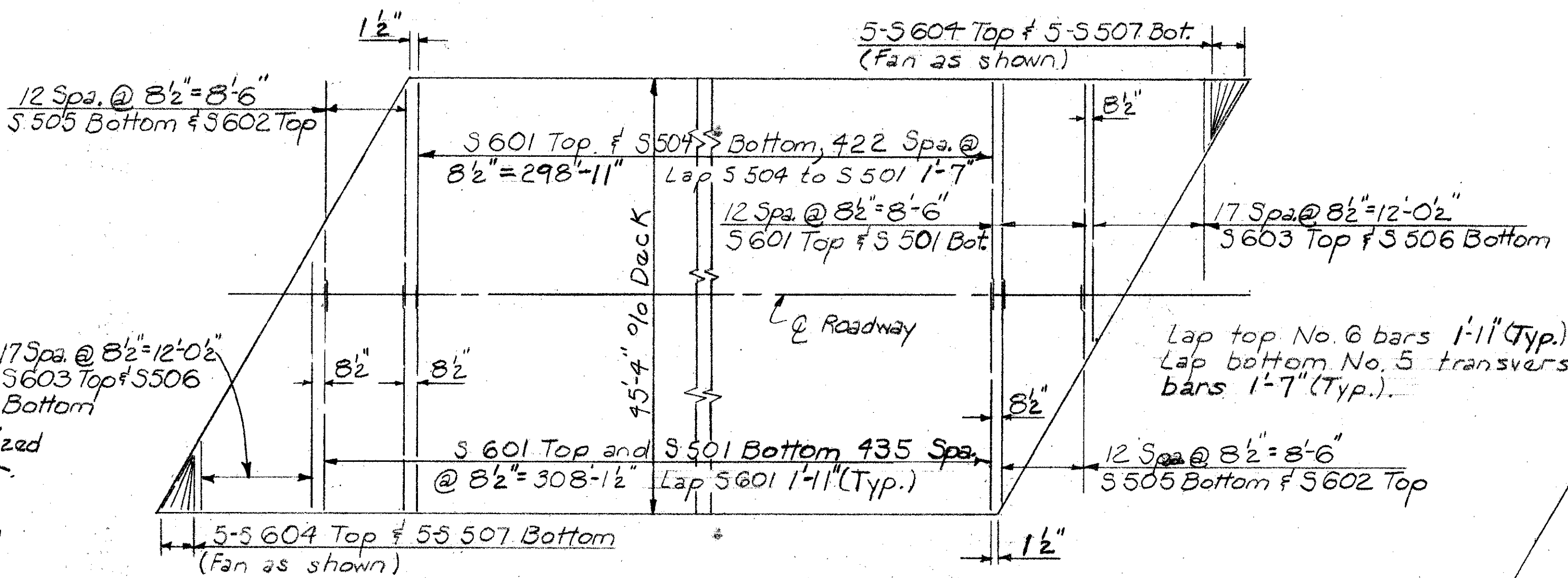
NOTES
* Haunch width of 9" shall be used for computing quantity of concrete. However the haunch width may vary between 6" and 12", provided that the slope shall not be more than 1:4 for a haunch less than 9" wide.
** This is the design dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for the volume of encased steel plates as per 511.13.

For details of end dams and end crossframes see Standard Drawing No. SD-1-69 sheet 1 and sht. 2110.
In lieu of A588 steel, A36 steel galvanized as per 711.02 may be used for bearings except for top bearing plate.
In lieu of A588 steel, A36 steel galvanized as per 711.02 shall be furnished for end dams.

TYPICAL TRANSVERSE SECTION



Galvanized Steel Drip Strip: Prior to applying deck membrane waterproofing a bent galvanized steel drip strip, 8" x 0.105 shall be installed along the edges of the deck as shown. The strips shall be fastened at 3'0" maximum with power driven pins or #10 galvanized expansion screws, subject to the approval of the Engineer. The strips shall be placed the full length of the deck. Where splices are required a 3" (min.) lap shall be used, with a fastener through the lap. Steel shall meet the requirements of ASTM A568 and galvanizing shall be in accordance with 711.02. Payment shall be at the contract price bid for Item Special, Sq. Ft., Galvanized steel drip strip which shall include all materials, labor, tools and incidentals necessary to complete the item.



PLAN OF TRANSVERSE DECK REINFORCING STEEL

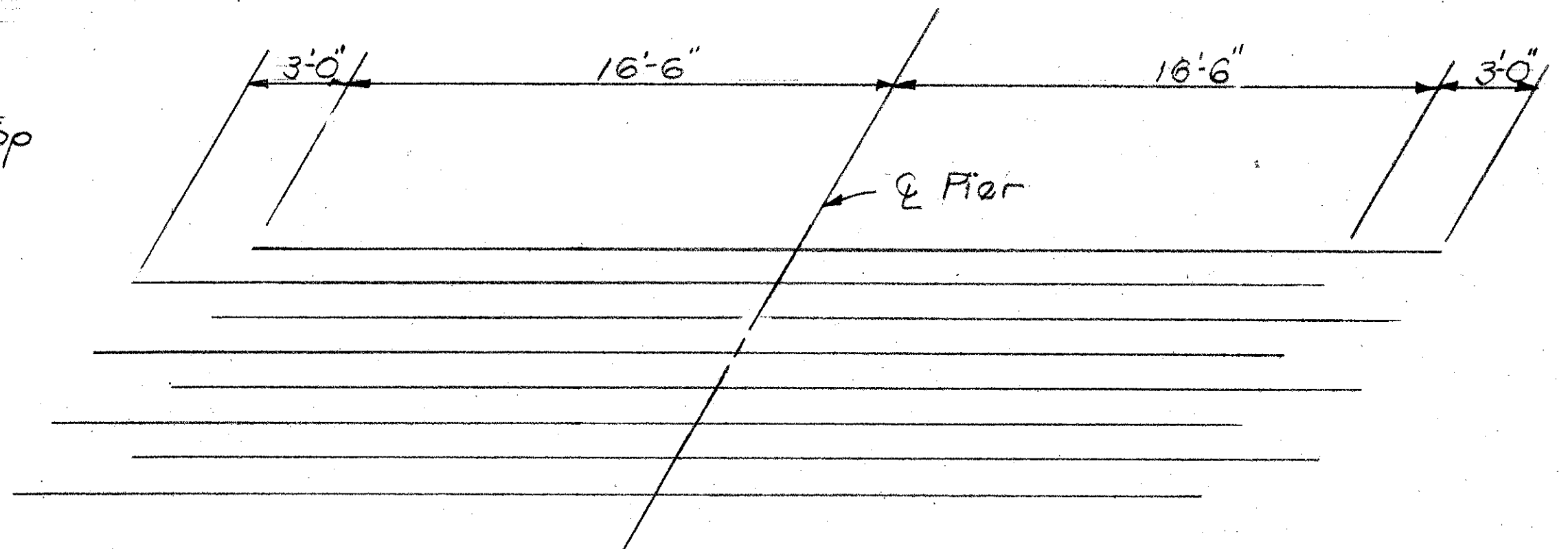
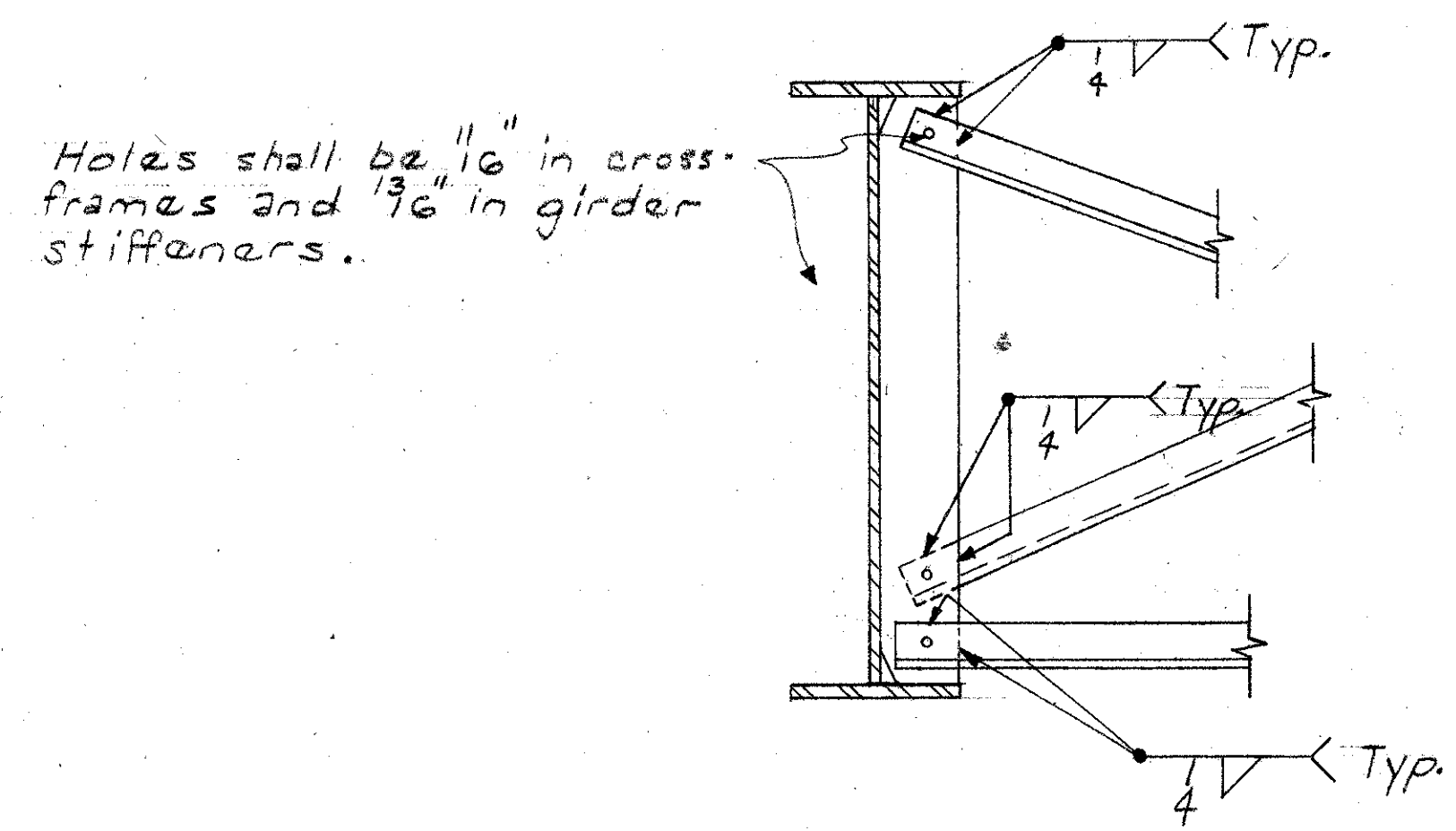


DIAGRAM SHOWING STAGGER OF S403 BARS OVER PIERS.

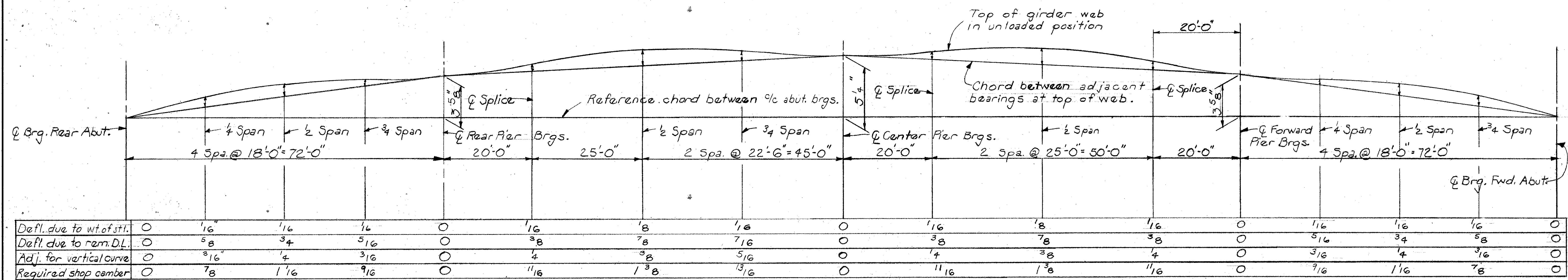
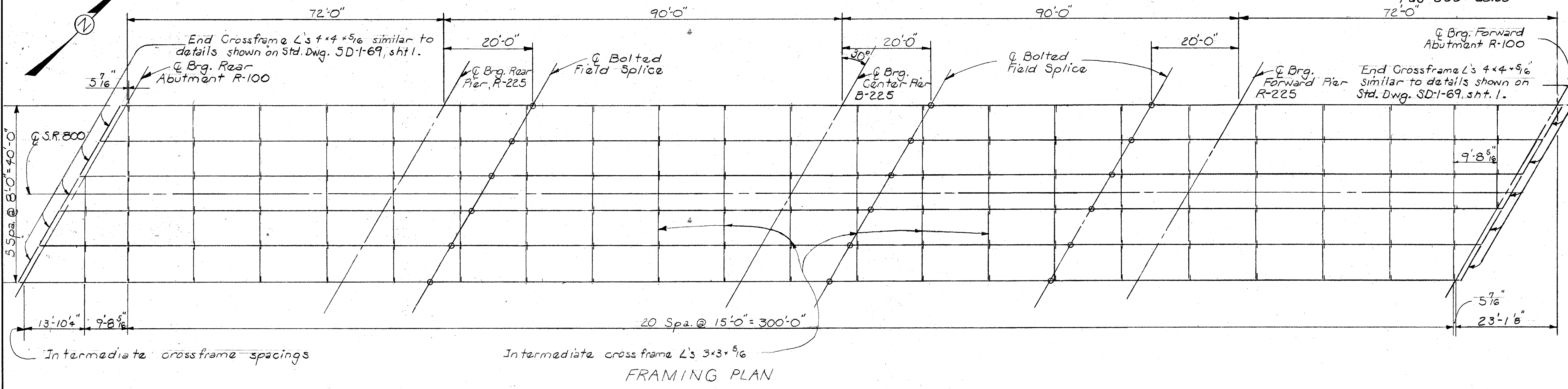


Holes shall be 1/16" in cross-frames and 1/8" in girder stiffeners.

DETAIL A

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES						6/10
SUPERSTRUCTURE DETAILS						
BRIDGE NO TUS-800-2846 OVER TUSCARAWAS RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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CAMBER DIAGRAM

SCREED ELEVATIONS											
Station	Elev. Lt.	Station	Elev. Lt.	Station	Elev. Lt.	Station	Elev. Rt.	Station	Elev. Rt.	Station	Elev. Rt.
307+41.08	905.67	308+58.08	906.07	309+93.08	905.86	307+44.91	905.53	308+31.91	906.05	309+66.91	905.94
307+59.08	905.80	308+80.58	906.07	310+11.08	905.82	307+32.91	905.68	308+54.41	906.05	309+84.91	905.91
307+77.08	905.89	309+03.08	906.03	310+29.08	905.78	307+50.91	905.78	308+76.91	906.03	310+02.91	905.89
307+95.08	905.91	309+25.58	906.05	310+47.08	905.68	307+68.91	905.82	308+99.41	906.07	310+80.91	905.79
308+13.08	905.94	309+48.08	906.05	310+65.08	905.53	307+86.91	905.86	309+21.91	906.09	310+38.91	905.67
308+35.58	906.03	309+70.58	905.97			308+09.41	905.97	309+44.41	906.02		

INTERMEDIATE STIFFENERS shall be a $\angle 5/16 \times 5 1/2 \times 43$ and shall be provided for the attachment of crossframes at the above locations only.

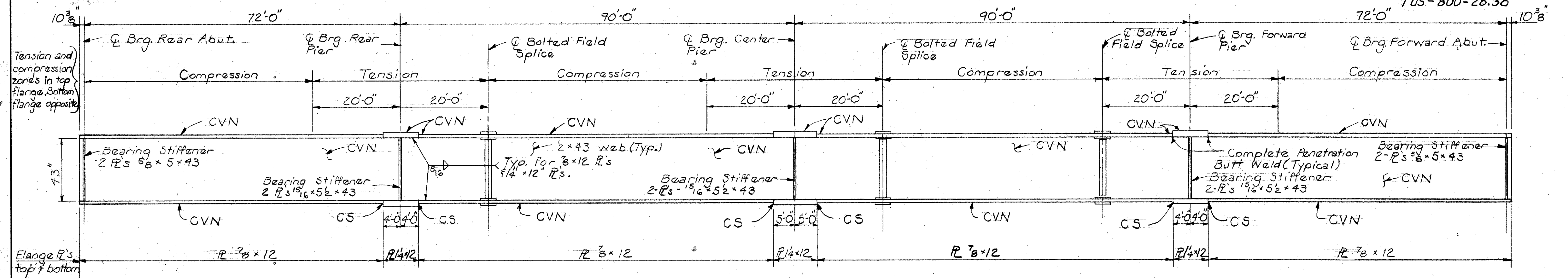
For details of bearing devices, See Std. Dwg RB-1-55.

Screed elevations are given at the top of the portland cement concrete at the edges of the deck. These elevations are required before the concrete is placed. Proper allowance has been made for the dead load deflection caused by the weight of concrete.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES		7/10
SUPERSTRUCTURE DETAILS		
BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER		
DESIGNED	DRAWN	TRACED
MJR	MJR	MRG
CHECKED	REVIEWED	DATE
	WJJ	12-6-76
REVISED		

APPROVED
JUL 15 1976

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TYPICAL GIRDER ELEVATION

NOTES

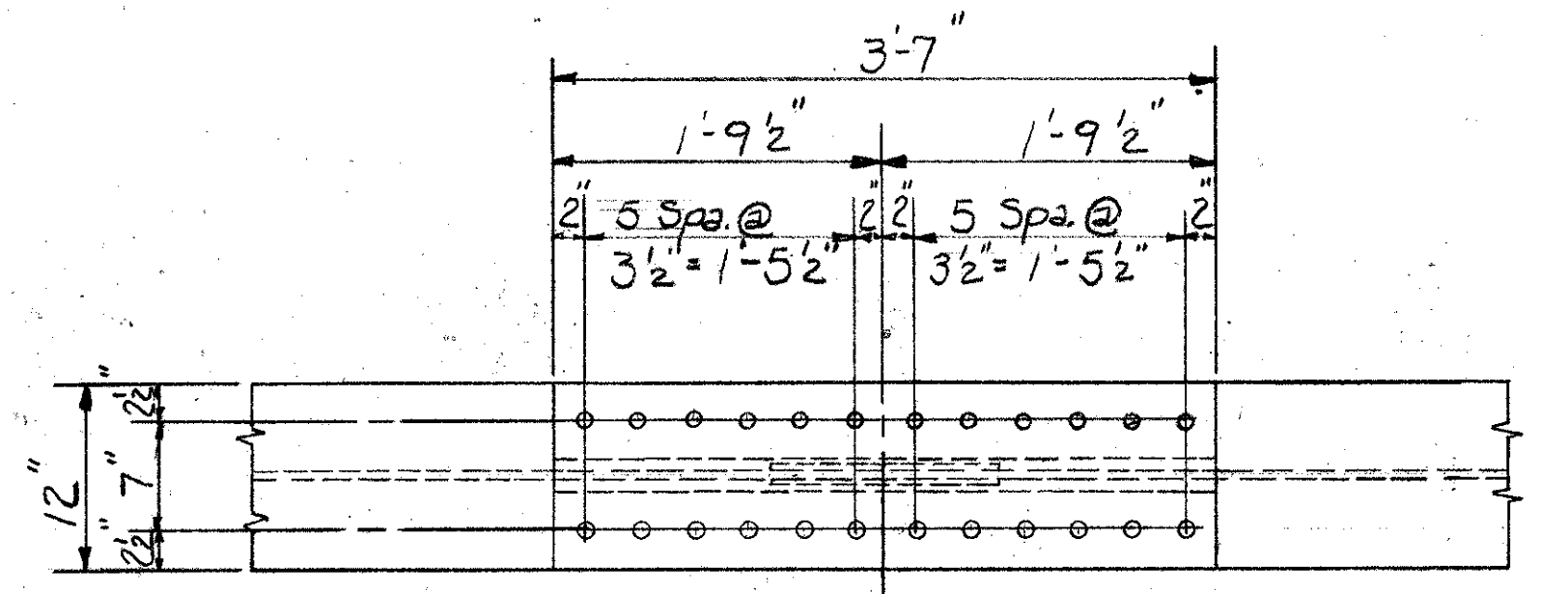
Welded attachments to the top flange of the fascia girders for construction purposes will be permitted provided that they consist of fillet welds less than 2" long and not closer than 1" to the edge of the flange.

GRINDING OF SHOP WELDS: Flange butt welds shall be ground flush in tension areas only. Web welds shall be ground flush from the neutral axis of the web to the flange which is in tension, except the webs of the fascia girders which shall be ground flush for their full depth. Grinding shall be done in the direction of stress.

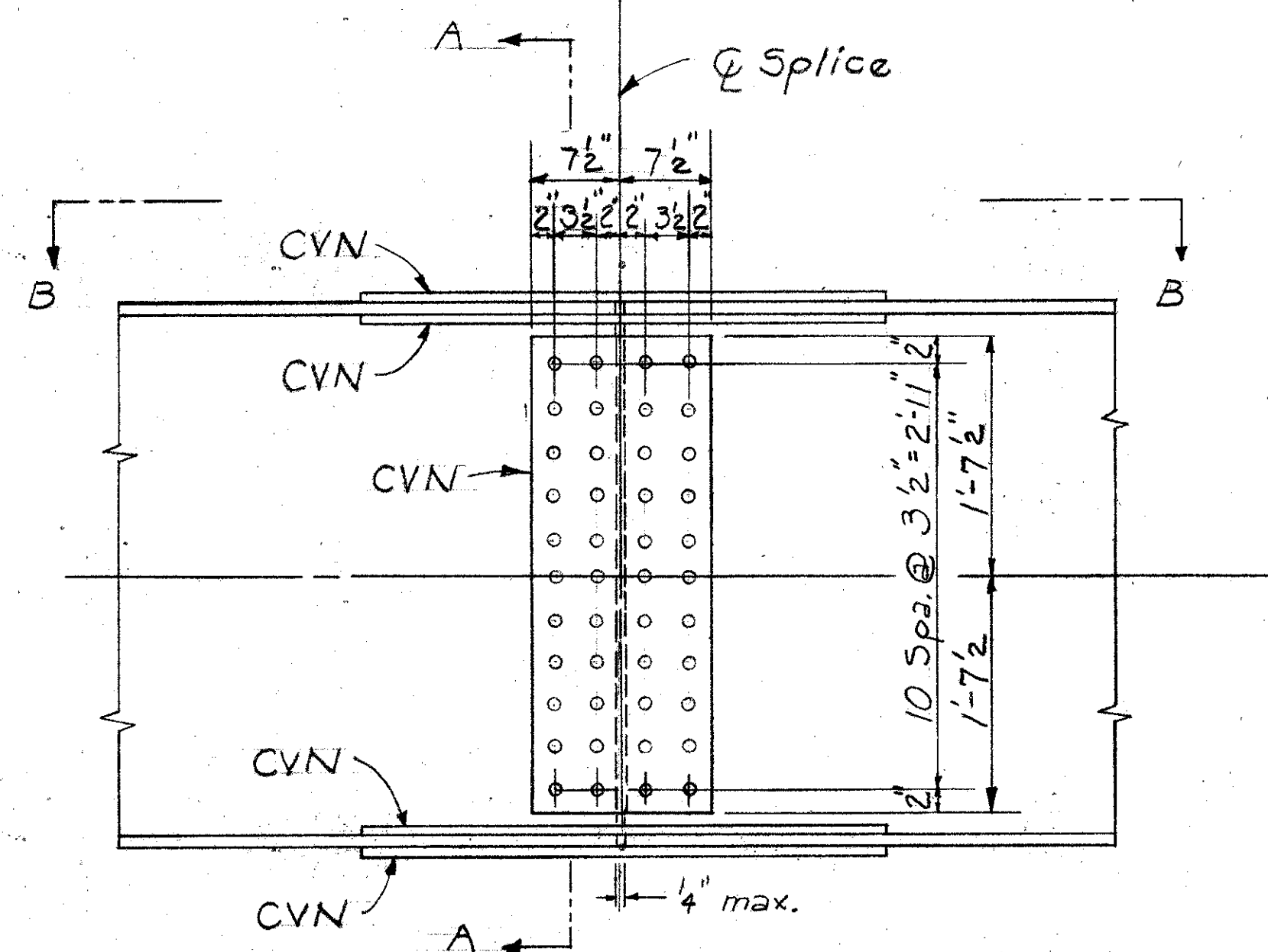
Intermediate stiffeners shall have a tight fit with the tension flange and shall be welded to the compression flange with 1/4" fillet welds.

Bolts for field splices shall be 1" diameter high-strength bolts ASTM A325 Type 3.

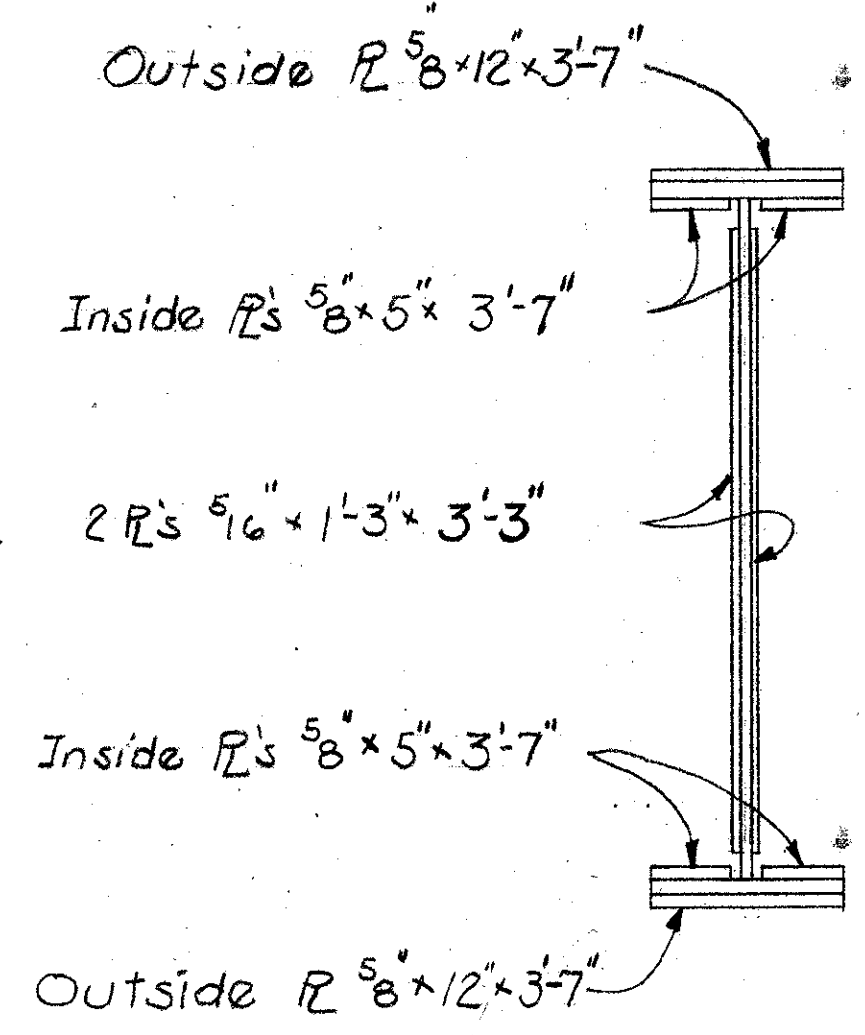
"CS" indicates a butt weld subject to compressive stress only.



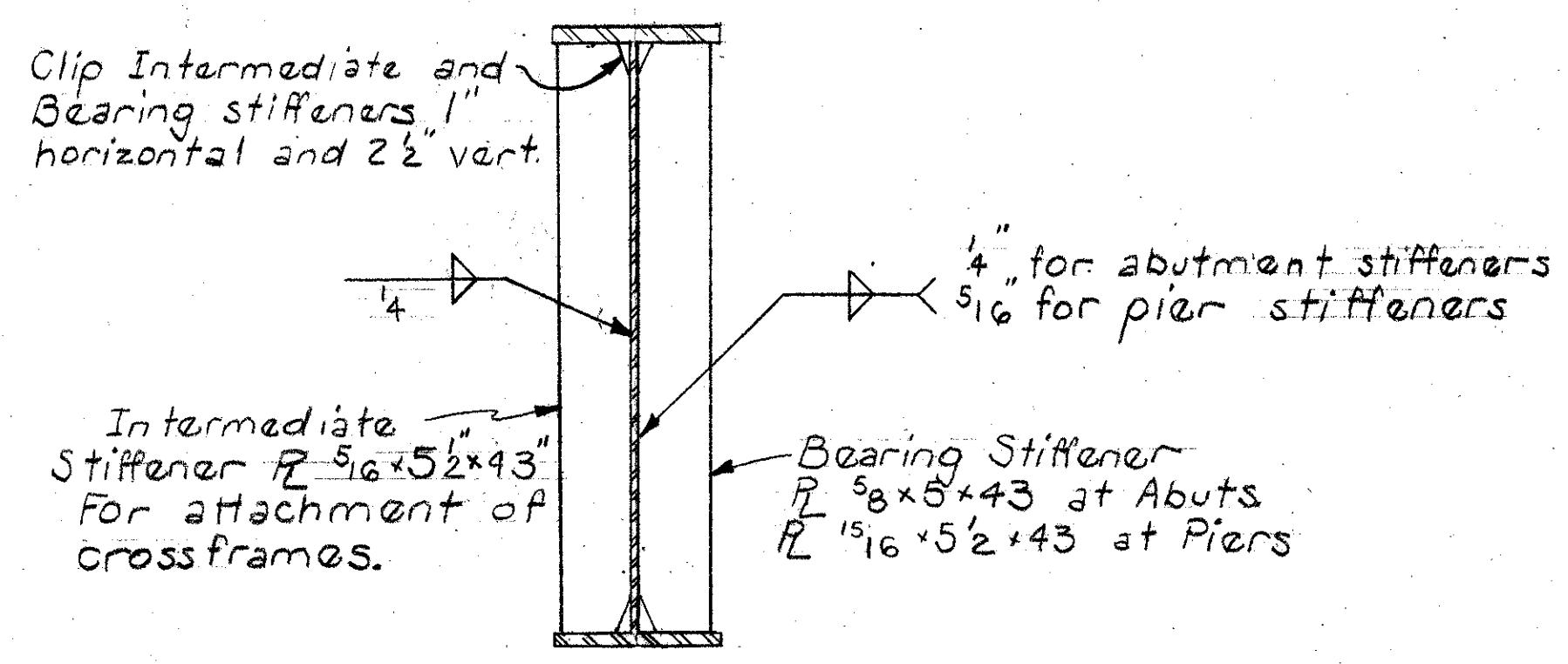
VIEW B-B



TYPICAL FIELD SPLICE DETAIL



SECTION A-A



STIFFENERS

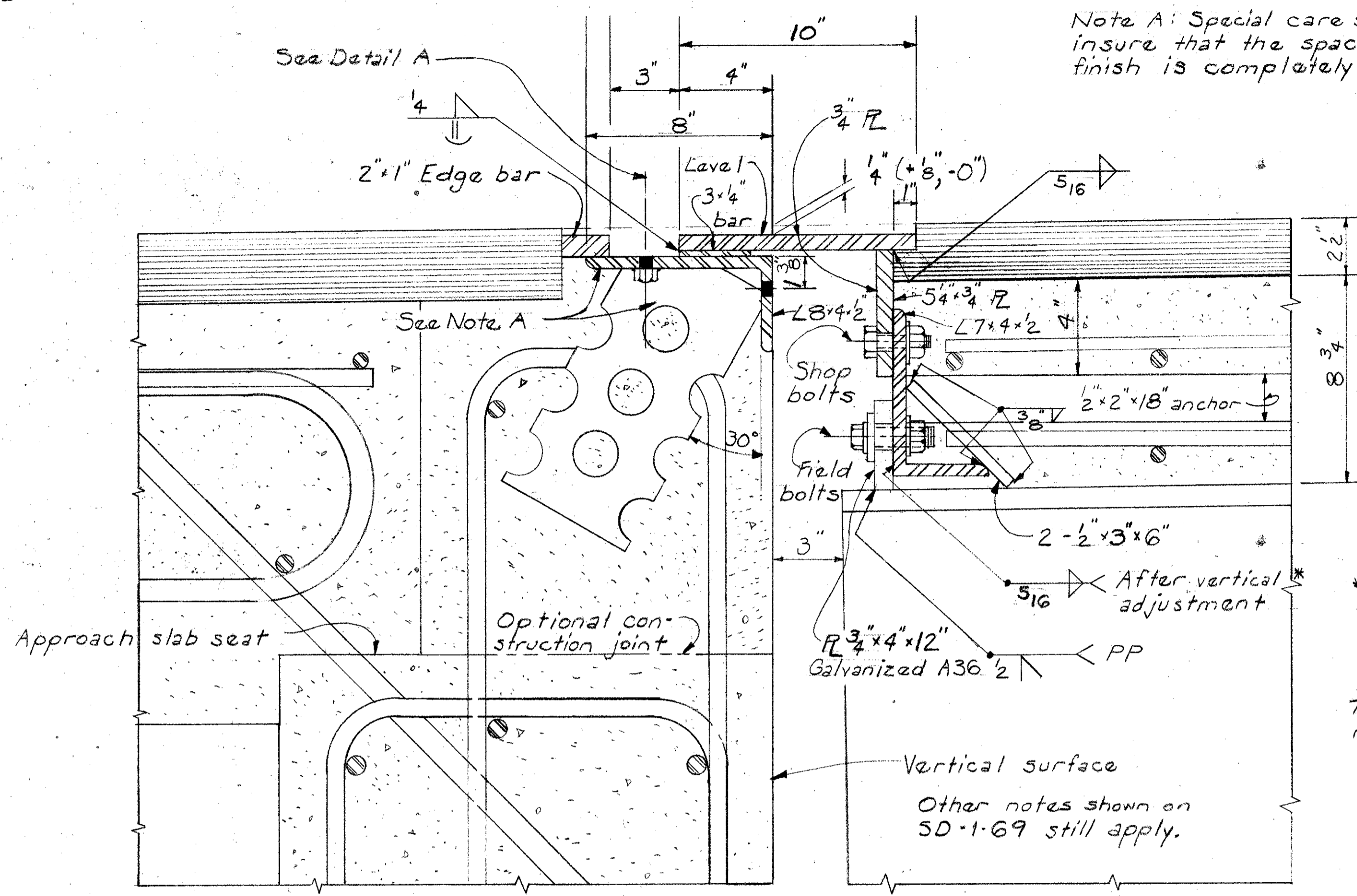
STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES						8/10
SUPERSTRUCTURE DETAILS						
BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MJR	MJR		MRG	WJW	12-6-76	

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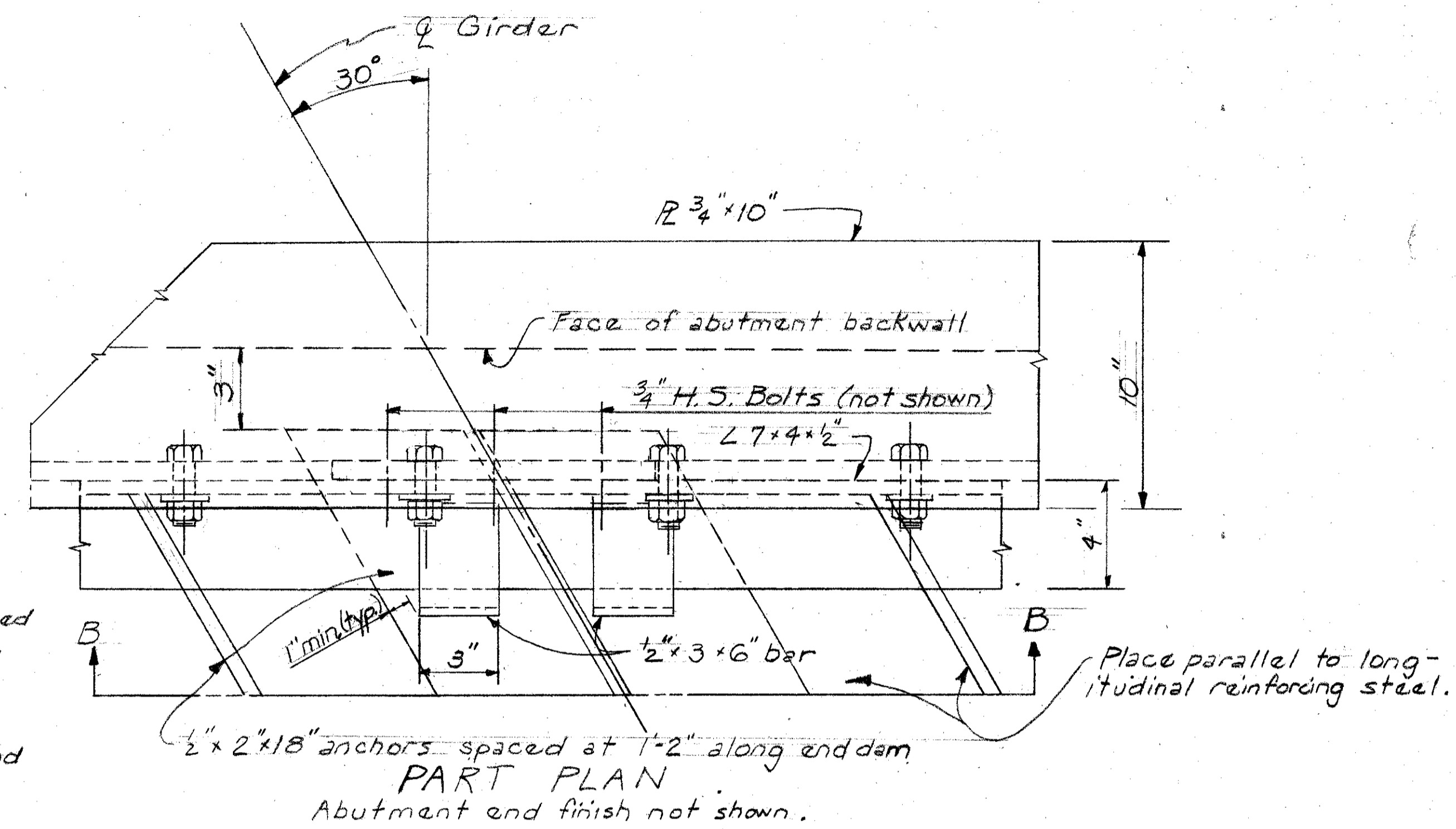
SECTION A-A (See SD-1-69)

Note A: Special care shall be taken to insure that the space beneath this and finish is completely filled with concrete.

* After welding repair galvanized surface according to 711.02.

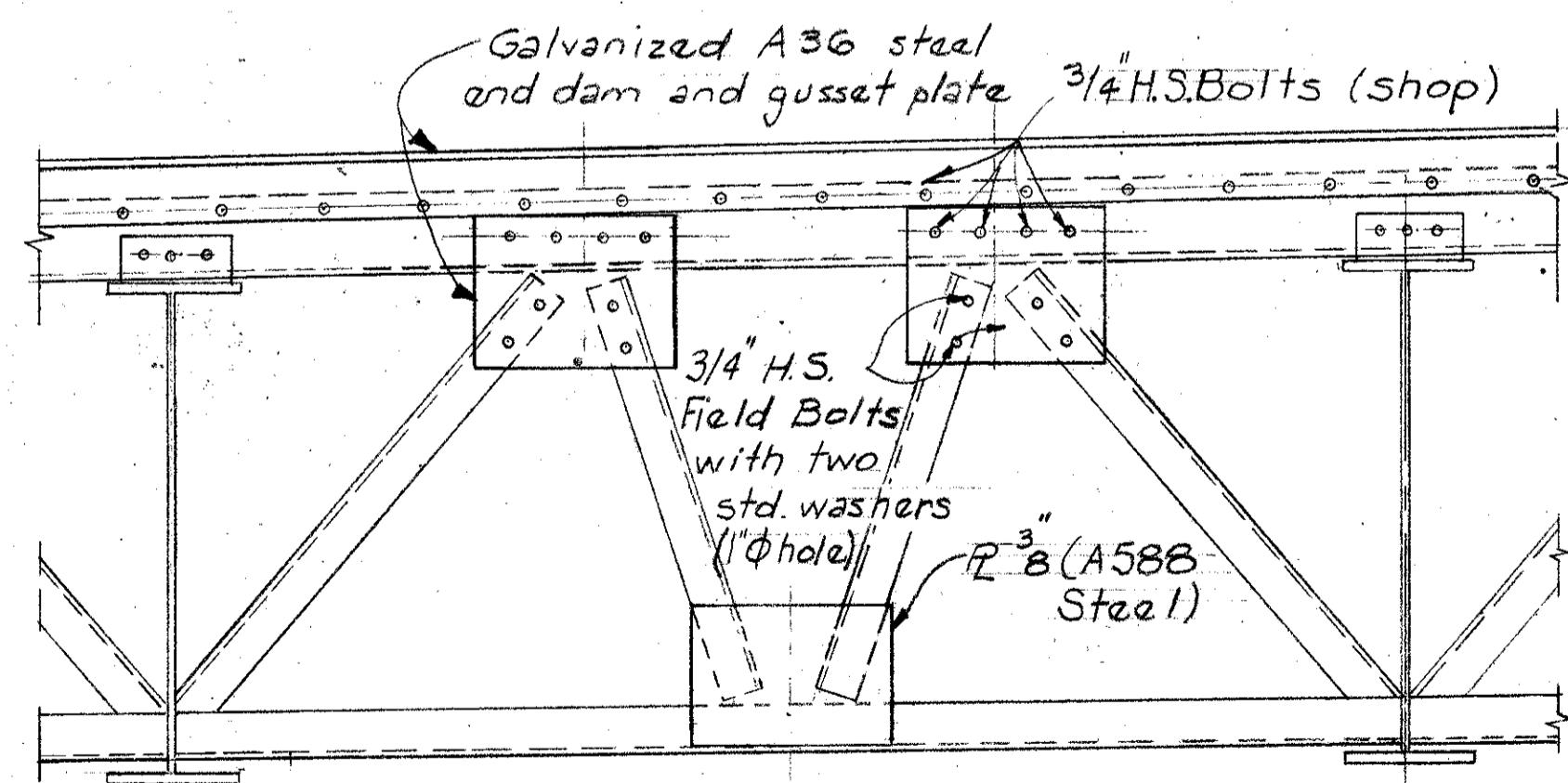
All bolts are H.S. A 325 - Type 1 Galvanized. Washers and nuts are galvanized.

Vertical surface
Other notes shown on SD-1-69 still apply.

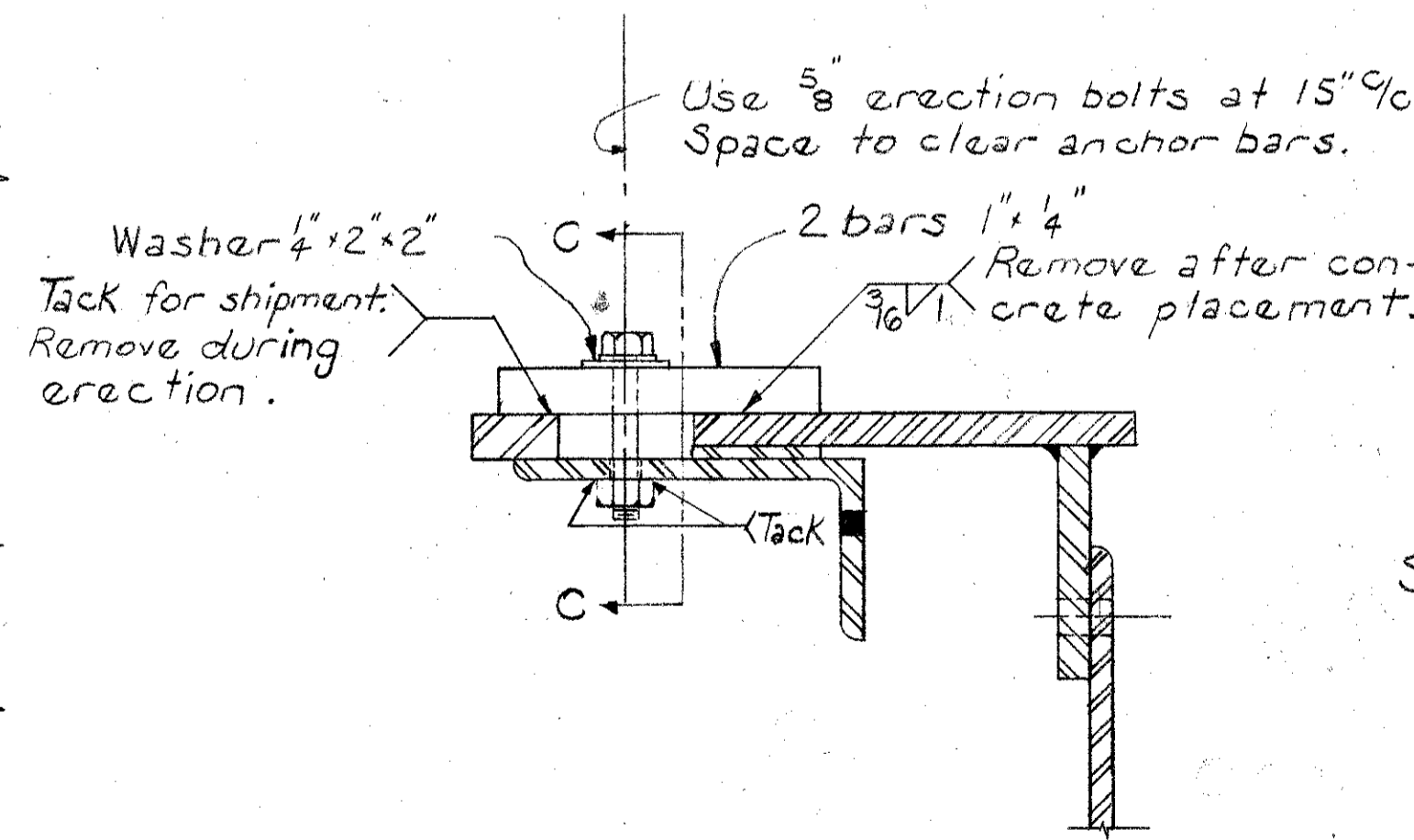


PART PLAN

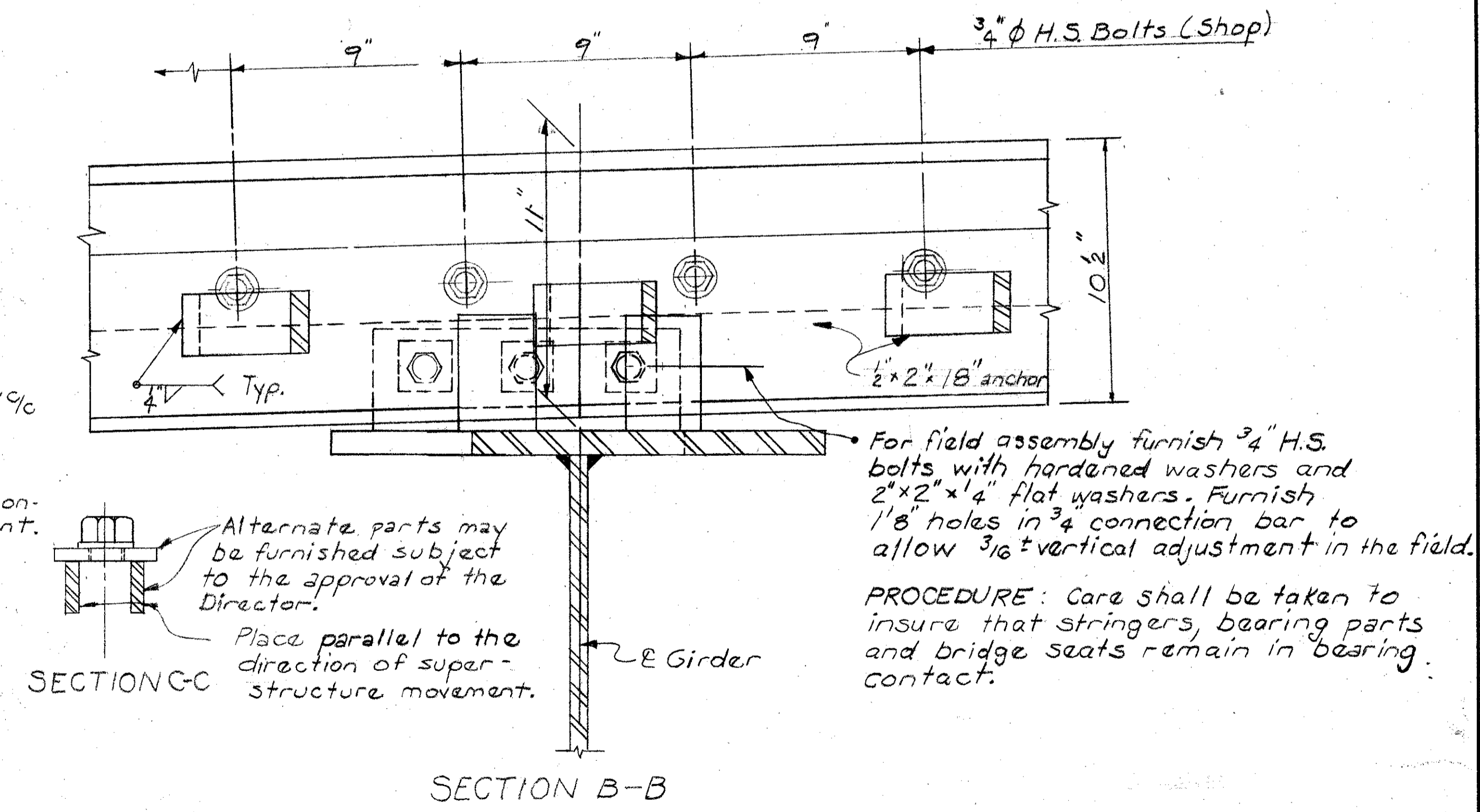
Abutment end finish not shown.



END CROSS FRAME CONNECTION PLATE



DETAIL A



SECTION B-B

For field assembly furnish 3/4 inch H.S. bolts with hardened washers and 2x2x4 inch flat washers. Furnish 1/8 inch holes in 3/4 inch connection bar to allow 3/16 inch vertical adjustment in the field.
PROCEDURE: Care shall be taken to insure that stringers, bearing parts and bridge seats remain in bearing contact.

Alternate parts may be furnished subject to the approval of the Director.
Place parallel to the direction of superstructure movement.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES						9/10
SUPERSTRUCTURE DETAILS						
BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MJR	MJR		MRG	WJW	12-6-76	

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FHWA REGION	STATE	PROJECT	
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ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abut.	Pier	Super.	Gen'l	As-Built
202	Lump	Sum	Structure removed				Lump	
404	114	Cu. Yd.	Asphalt Concrete AC-20			114		
503	Lump	Sum	Cofferdams, cribs & sheeting				Lump	
503	860	Cu. Yd.	Unclassified excavation	260	600			
505	Lump	Sum	Test Pile				Lump	
507	1100	Lin. Ft.	Steel Piles, HP 10x42	560	540			
507	2190	Lin. Ft.	12" Cast-in-place reinforced concrete piles	700	1490			
509	148,039	Lb.	Reinforcing Steel, Grade 60	14,274	49,772	83,993		
511	440	Cu. Yd.	Class C concrete, superstructure			440		
511	370	Cu. Yd.	Class C concrete, piers above footings		370			
511	206	Cu. Yd.	Class C concrete, abutments	206				
511	109	Cu. Yd.	Class C concrete, pier footings		109			
513	341000	Lb.	Structural Steel (A588)			341000		
513	11000	Lb.	Structural Steel (A36), galvanized as per plan			11000		
517	658,40	Lin. Ft.	Railing (deep beam rail with steel tubular backup, Type I post and bolts)			658.40		
518	94	Cu. Yd.	Porous Backfill	94				
518	154	Lin. Ft.	6" Perforated helical corrugated steel pipe 707.01	154				
518	72	Lin. Ft.	6" Non-perforated helical corrugated steel pipe including specials 707.01	72				
601	295	Sq. Yd.	Crushed aggregate slope protection				295	
808	440	Units	Chemical admixture for concrete, Type A, B or D			440		
838	3	Hours	Special pile tests				3	
Special	1639	Sq. Yd.	Membrane Waterproofing (See Proposal Note)			1639		
Special	434	Sq. Ft.	Galvanized steel drip strip			434		
Special	6300	Sq. Ft.	Protection of concrete surfaces	345	5955			

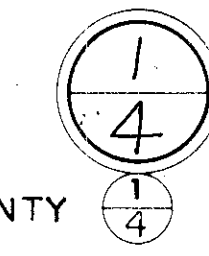
REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp	Bending Diagrams	Mark	No.	Length	Weight	Shp						
Abutments																
A501	90	8'-3"	774	B												
A502	90	7'-4"	688	B												
A503	70	7'-0"	511	B												
A504	14	15'-2"	221	B												
A505	36	25'-8"	964	S												
A506	4 Series of 6	11'-6" to 18'-2"	371	B												
A507	4	29'-11"	125	S												
A508	12	34'-3"	429	S												
A509	8	37'-2"	310	S												
A510	8	39'-5"	329	S												
A511	8	13'-2"	110	B												
A512	12	14'-9"	185	S												
A513	12	18'-0"	225	S												
Piers																
P902	114	32'-9"	12694	S												
P903	102	18'-0"	6242	S												
P904	132	13'-6"	6059	B												
P905	36	27'-8"	3386	S												
P1001	36	29'-10"	4621	B												
Superstructure																
S401	495	30'-0"	9920	S												
S402	45	10'-8"	321	S												
S403	132	36'-0"	3174	S												
S404	460	4'-5"	1357	B												
S501	449	27'-3"	12761	S												
S502	451	30'-0"	14,112	S												
S503	41	12'-3"	524	S												
S504	423	19'-3"	8493	S												
S505	2 Series of 13	3'-7" to 18'-4"	297	S												
S506	2 Series of 18	7'-2" to 28'-1"	662	S												
S507	10	6'-3"	65	S												
S601	872	23'-5"	30669	S												
S602	2 Series of 13	7'-9" to 22'-6"	591	S												
S603	2 Series of 18	7'-2" to 28'-1"	953	S												
S604	10	6'-3"	94	S												

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 structure by the additional steel in accordance with 509.08.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF BRIDGES					10/10
REINFORCING STEEL LIST & ESTIMATED QUANTITIES BRIDGE NO. TUS-800-2846 OVER TUSCARAWAS RIVER					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
MJR		TGC	MRG 10-4-76	WJJ	12-6-76

JUL 15 1974



GEOLOGY OF THE SITE

THE STRUCTURE SITE IS LOCATED ON THE FLOODPLAIN OF AND OVER THE TUSCARAWAS RIVER, IN AN AREA WHERE DEEP VALLEY FILL OVERLIES BEDROCK, OF PENNSYLVANIAN AGE.

EXPLORATION

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE BORINGS AND THREE DRIVE ROD PENETRATION TESTS, MADE BETWEEN DECEMBER 17 AND 19, 1974.

INVESTIGATIONAL FINDINGS

THE BORINGS ENCOUNTERED LOOSE TO VERY DENSE SILTS, SANDS, AND GRAVELS AND SCATTERED INTERVALS OF BOULDERS THAT INCREASE IN DENSITY WITH INCREASE IN DEPTH. THE BORINGS WERE TERMINATED AT 41 AND 51-FOOT DEPTHS, ELEVATIONS 833 AND 824 FEET, AFTER PENETRATING IN EXCESS OF 25 FEET OF MATERIAL REQUIRING IN EXCESS OF 25 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST.

THE ROD SOUNDINGS ENCOUNTERED GRADUAL INCREASE IN PENETRATION RESISTANCE WITH INCREASE IN DEPTH AND WERE TERMINATED UPON ENCOUNTER WITH MEDIUM-HIGH RESISTANCE TO PENETRATION, 27 AND 50-FOOT DEPTHS, ELEVATIONS 874 AND 826 FEET, CONSIDERED TO BE IN VERY DENSE MATERIAL AS REVEALED BY THE BORINGS.

NO FREE WATER OBSERVATIONS WERE MADE IN ANY OF THE ROD SOUNDING HOLES.

NO TEST PENETRATED TO BEDROCK SURFACE.

"Soil Information - All available soil and bedrock information which can be conveniently shown on the soil profile and/or structure foundation investigation sheets has been so reported. Additional subsurface investigations may have been made to study some special aspect of the project. Copies of this data, if any, may be inspected in the District Deputy Director's Office, the Bureau of Tests at 1600 West Broad Street, the Pavement and Soils Section of the Bureau of Roadway Design or in the Bridge Bureau at 25 South Front Street."

LEGEND

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.
Z = Number of Blows for Third 6 inches
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

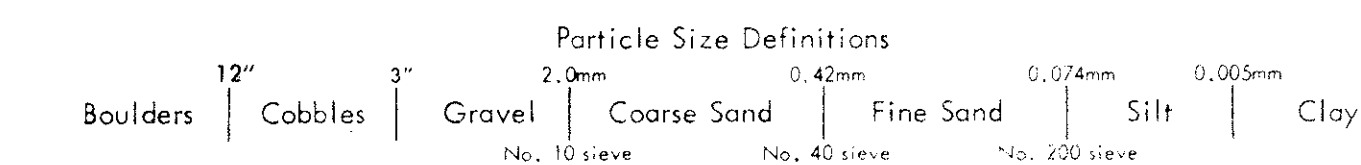
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and 5-foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

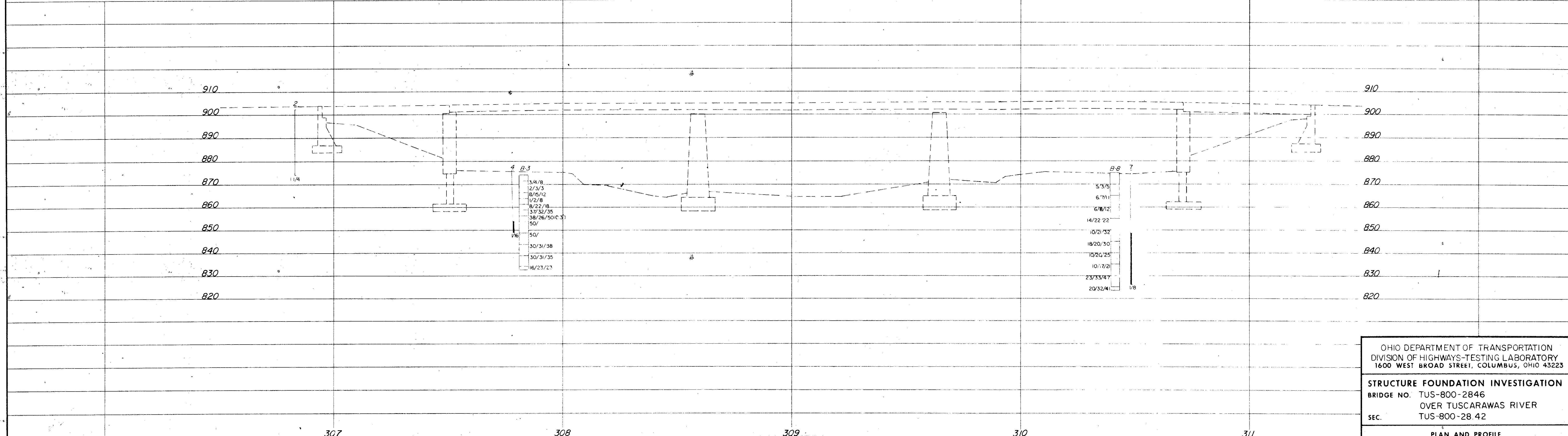
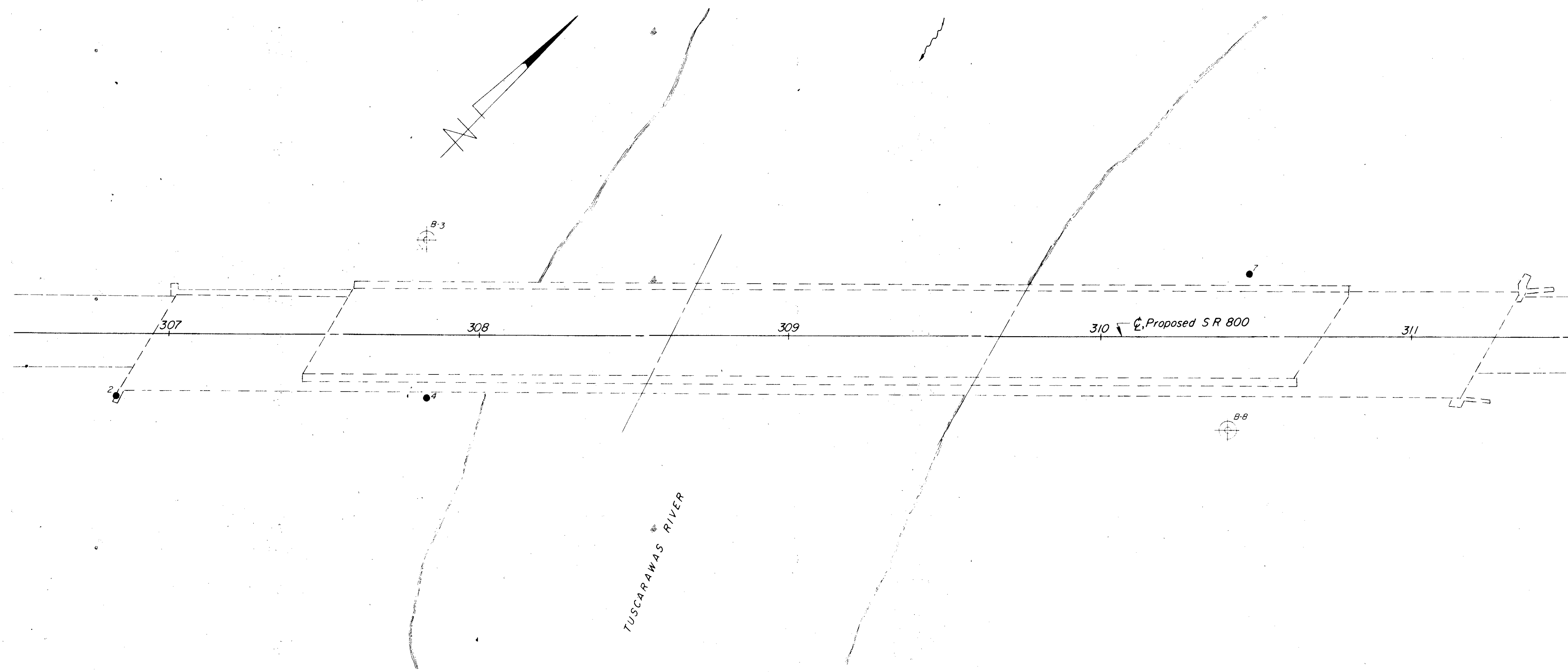
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS — TESTING LABORATORY
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-800-2846
OVER TUSCARAWAS RIVER
SEC. TUS-800-28 42

CHECKED BY R. D. R.	REVIEWED BY R. D. R.	DATE 1/20/75
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JUL 18 1972

TUS-800-28.38



OHIO DEPARTMENT OF TRANSPORTATION
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 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. TUS-800-2846
 OVER TUSCARAWAS RIVER
 SEC. TUS-800-28.42

PLAN AND PROFILE

DRAWN BY RC	CHECKED BY R.D.R.	REVIEWED BY R.D.R.	DATE 1/20/75
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SCALE: 1" = 20'

JUL 15 1974

LOG OF BORING
Date Started 12-17-74 Sampler Type SS Dia 1 3/8"
Date Completed 12-18-74 Casing Length Dia
Boring No. B-3 Station & Offset 307+83, 30' LT. (FIRST PIER) Surface Elev 874.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SMTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.						
874.0	0																			
871.5	2				NO SAMPLE RECOVERED - BROWN SILT (DRILLER'S DESCRIPTION)															
869.0	4	3/4/8																		
866.5	6	2/3/3			BROWN SANDY SILT	1	0	1	43	34	22	NP	NP	29						A-4a
864.0	8	8/15/12			BROWN SILTY GRAVELLY SAND	2	22	10	33	21	14	NP	NP	25						A-2-4
861.5	12	1/2/8			NO SAMPLE RECOVERED - SAND AND GRAVEL (DRILLER'S DESCRIPTION)															
859.0	14	8/22/18			BROWN SILTY SANDY GRAVEL	3	59	18	10	7	6	NP	NP	16						A-1-a
856.5	16	37/32/35			GRAY SILTY SAND	4	6	52	28	8	6	NP	NP	12						A-1-b
854.0	18	38/26/50 (0.3')			BROWN SAND AND GRAVEL (DRILLER'S DESCRIPTION)	5	43	21	21	11	4			13						Visual
849.0	22	50/			BROWN SAND	6	0	44	49	-	-	NP	NP	22						A-3
844.0	26	50/			GRAY SAND, GRAVEL AND BOULDERS (DRILLER'S DESCRIPTION)															
839.0	30	30/31/38			BROWN SILTY SAND	7	17	17	38	18	10	NP	NP	14						A-3a
834.0	34	30/31/35			BROWN SILT, SAND, AND GRAVEL (DRILLER'S DESCRIPTION)	8														Visual
823.5	40	16/23/23			GRAY GRAVELLY SANDY SILT	9	20	10	28	29	13	NP	NP	24						A-4a

BOTTOM OF BORING

LOG OF BORING
Date Started 12-18-74 Sampler Type SS Dia 1 3/8"
Date Completed 12-19-74 Casing Length Dia
Boring No. B-8 Station & Offset 310+41, 30' RT. (FORREAL PIER) Surface Elev 875.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SMTL Class.				
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	W.C.							
875.0	0																				
870.0	4				BROWN SILTY GRAVELLY SAND	1	19	16	35	19	11	NP	NP	26							A-3a
865.0	8	6/7/11			BROWN SANDY GRAVELLY SILT	2	39	12	12	19	18	NP	NP	32							A-4a
860.0	12				NO SAMPLE RECOVERED - WET SAND																
855.0	16	6/8/12																			
850.0	20	14/22/22			GRAY SILTY GRAVELLY SAND	3	22	14	29	22	13	NP	NP	16							A-2-4
845.0	24	10/21/32			GRAY SILTY GRAVELLY SAND	4	22	17	31	20	10	NP	NP	17							A-2-4
840.0	28	18/20/30			GRAY SANDY SILT	5	13	13	38	23	13	NP	NP	16							A-4a
835.0	32	10/20/25			GRAY SANDY SILT	6	11	15	29	24	21	NP	NP	17							A-4a
830.0	36	10/17/21			GRAY SILT AND CLAY	7	0	1	3	31	65	38	14	23							A-6a
825.0	40	23/33/47			GRAY SILTY SAND	8	14	13	35	20	18	NP	NP	14							A-4a
823.5	44	20/32/41			GRAY SILTY SAND	9	13	16	34	24	13	NP	NP	12							A-4a

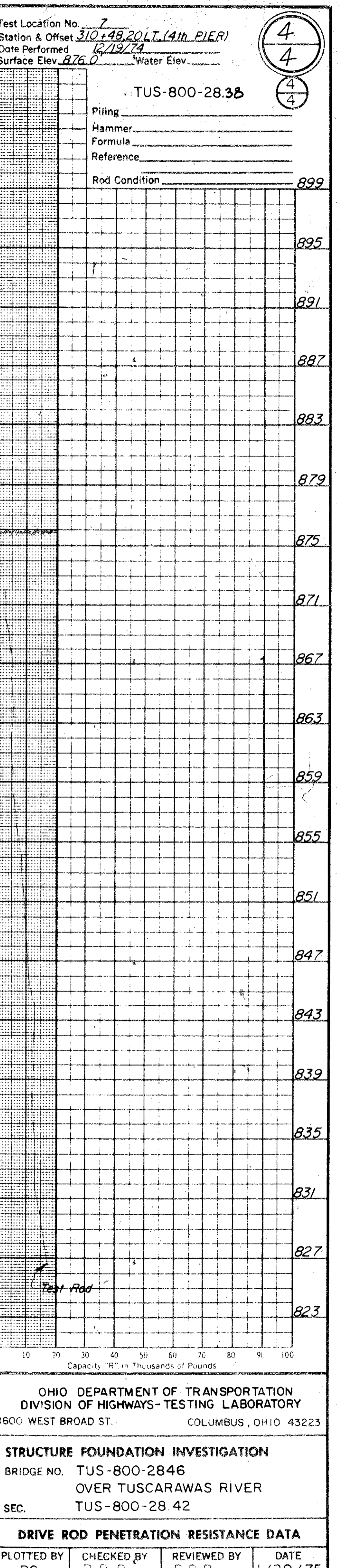
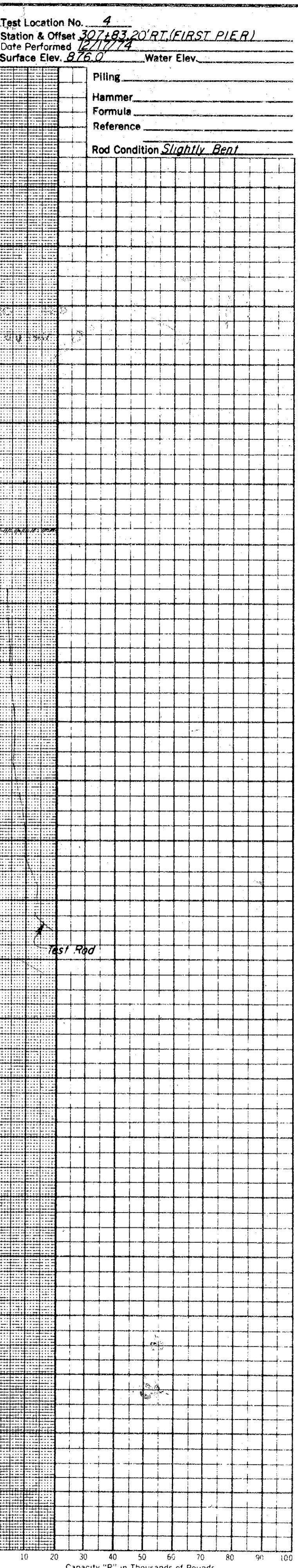
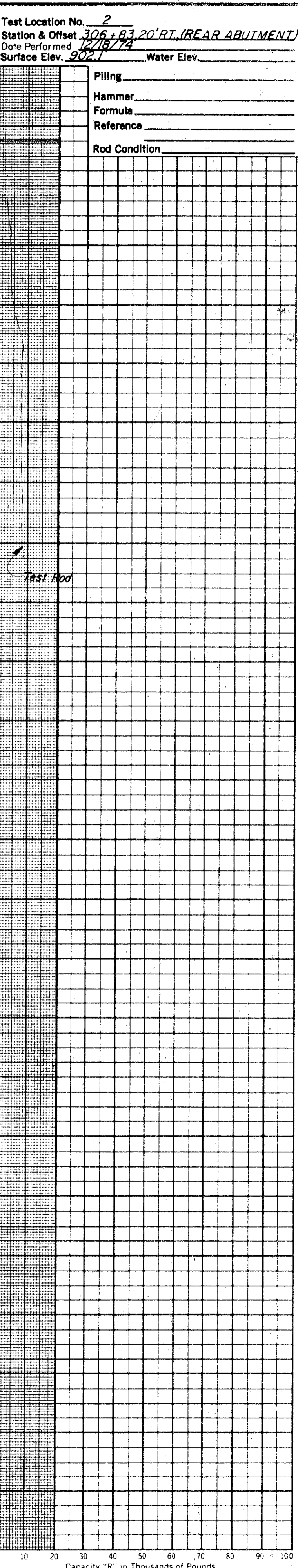
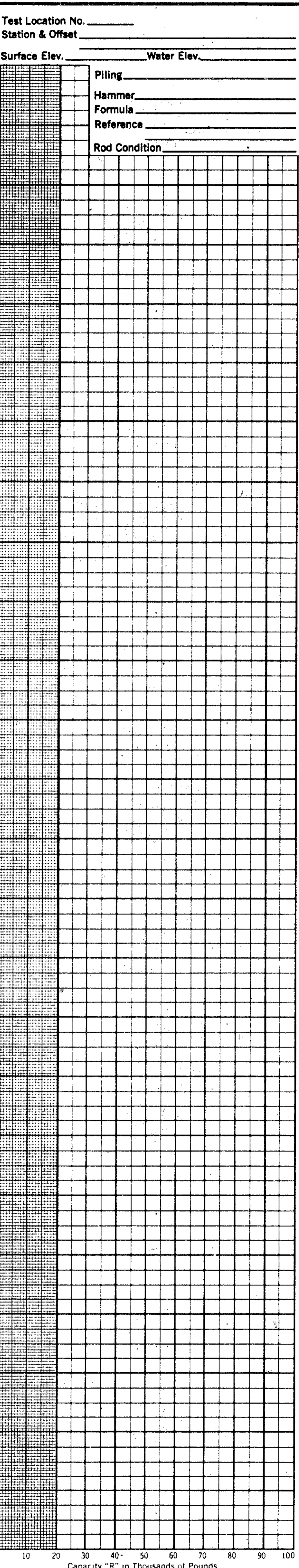
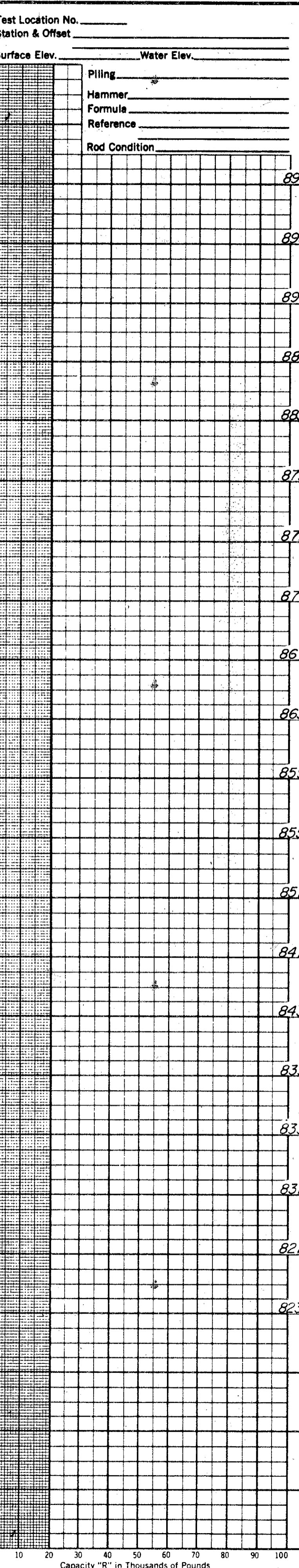
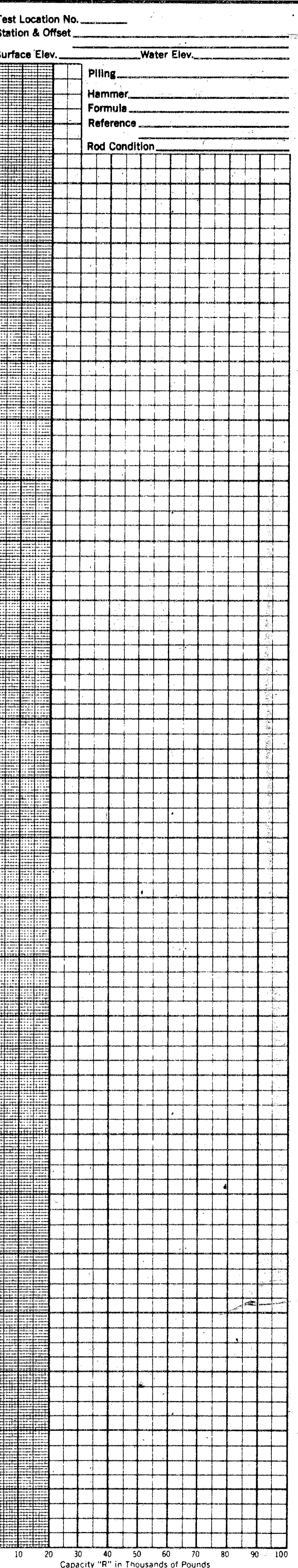
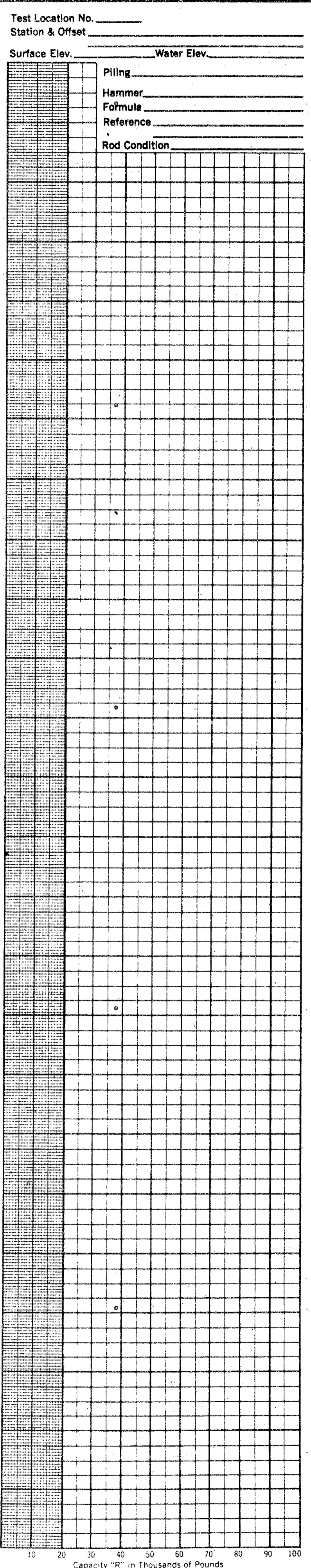
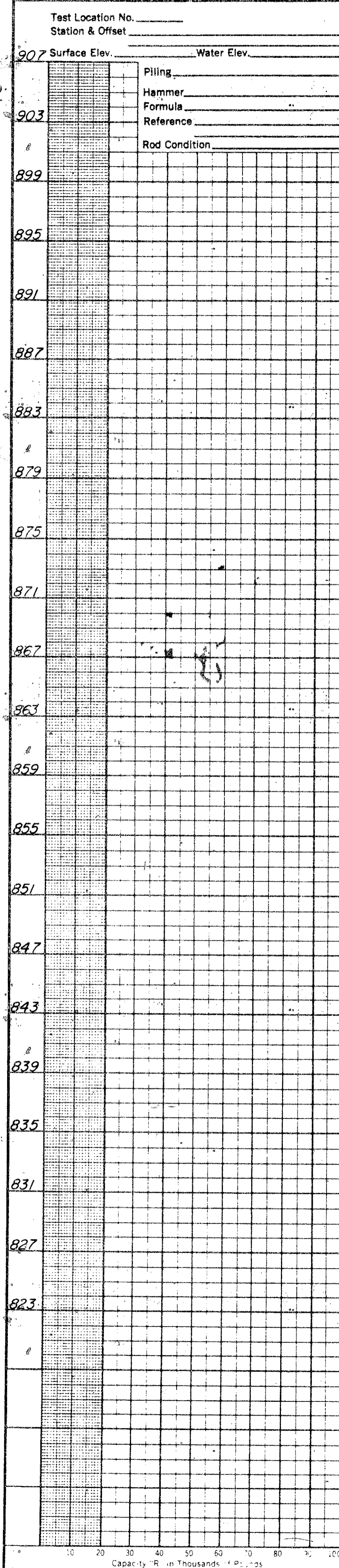
BOTTOM OF BORING

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STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. TUS-800-2846
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SEC. TUS-800-28.42

BORING DATA

TYPED BY S.A.M.	CHECKED BY R.D.R.	REVIEWED BY R.D.R.	DATE 1/20/75
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DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY RC	CHECKED BY RDR	REVIEWED BY RDR	DATE 1/20/75
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