

MICROFILMED
JUL 19 1968

STATE OF OHIO DEPARTMENT OF HIGHWAYS

I-70-2(13)65

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-70-2(13)65

1
227

CLARK COUNTY
CLA-70-25.14

CLA-70-25.14

CLARK COUNTY

HARMONY TOWNSHIP PLEASANT TOWNSHIP VILLAGE OF VIENNA

SOUTH

* 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 SEC. 5511.02 OF THE REVISED CODE OF OHIO.

1967 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 NECESSARY 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 OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE 6-19-67 Oliver M. Lewis DIVISION DEPUTY DIRECTOR

APPROVED DATE 4-19-68 C. H. Albrater ENGINEER OF BRIDGES

APPROVED DATE 4-22-68 R. E. Gathin ENGINEER OF LOCATION & DESIGN

APPROVED DATE 4-22-68 R. E. Shultz DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED DATE 5-1-68 T. H. Borard DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED DATE 5-1-68 Thomas M. Moxie DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED DATE 5-1-68 F. S. Wilson FIRST ASSISTANT DIRECTOR

APPROVED DATE 5-1-68 P. S. Masheter DIRECTOR OF HIGHWAYS

CONVENTIONAL SIGNS

COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
CORPORATION LINE	-----
PROPERTY LINE	-----
FENCE LINE	-x-x-
CENTER LINE	-----
POLE LINE	-----
RAILROAD	Power Telephone
HEDGE	-----
DRAIN PIPE (NEW)	-----
DRAIN PIPE (OLD)	-----
GUARD RAIL (NEW)	-----
GUARD RAIL (OLD)	-----
TREES & STUMPS TO BE REMOVED	-----
R/W LINE (Limited Access)	-----
R/W LINE (EXISTING)	-----
WORK LIMITS	-----
R/W LINE (Proposed)	R/W

LINE DATA

BEGIN WORK STATION	1330+60.00
BEGIN PROJECT STATION	1331+75.00
END PROJECT STATION	1541+50.00
END WORK STATION	1543+50.00

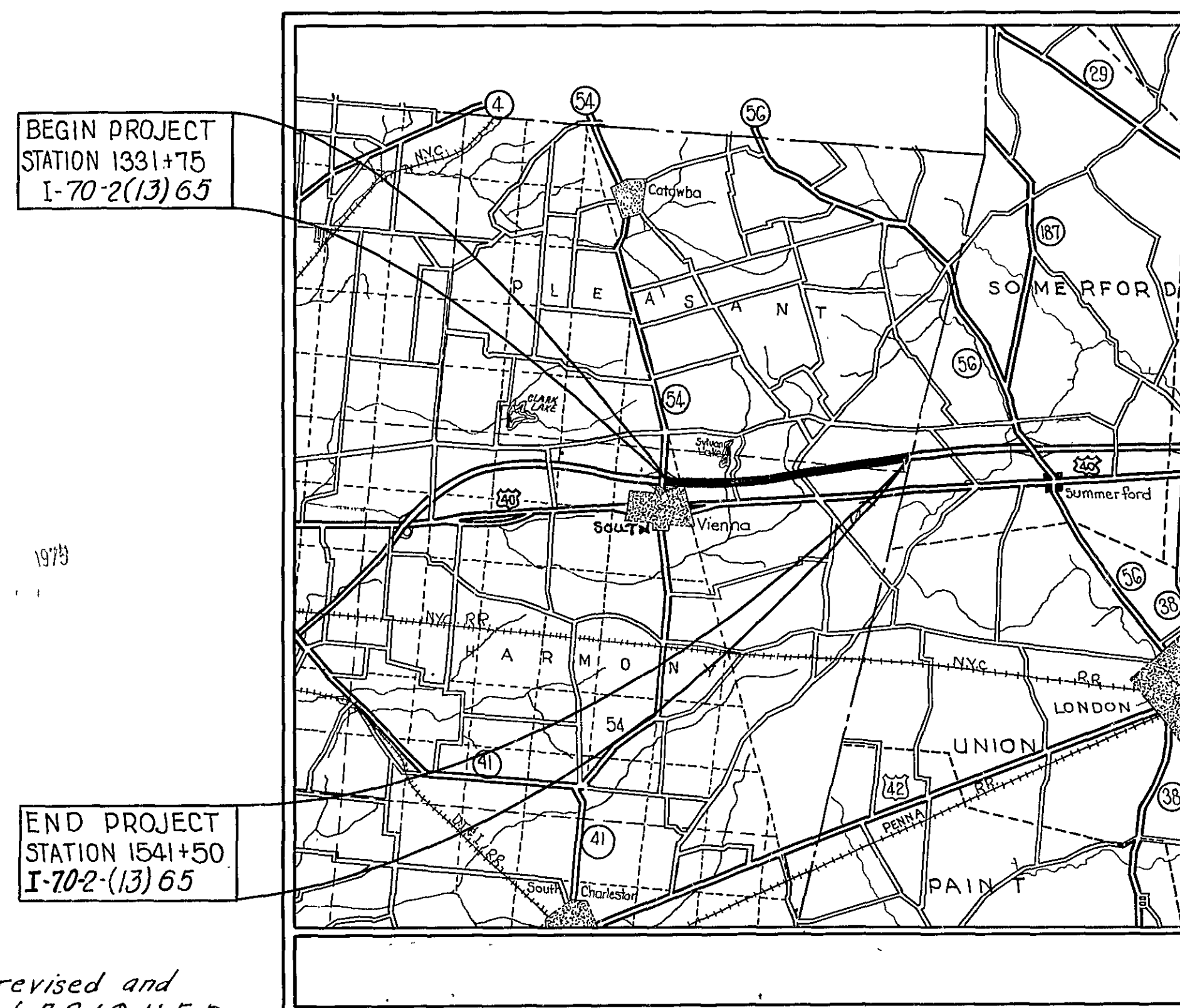
ADD FOR SYLVAN SHORES RD. (Sta. 20+00 To 41+10) = 2110.00 Lin. Ft.
ADD FOR HOUSTON PIKE (Sta. 19+10 To Sta. 42+15) = 2305.00 Lin. Ft.

NET LENGTH OF PROJECT 20,975.00 LIN. FT. or 3.972 MILES
NET LENGTH OF WORK 25,705.00 LIN. FT. or 4.868 MILES

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Sheets No. 216, 217 & 226 revised and 216A, 217A & 226A added 7-8-69 H.E.D.



MAP 0 1 2 4 MILES

LOCATION MAP

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS

SCALES

PLAN
PROFILE HORIZONTAL
PROFILE VERTICAL
CROSS SECTIONS

N°	DATE	N°	DATE
801	1-1-67	828	1-1-67
808	1-13-67	831	5-25-67
811	1-1-67	806	3-1-68
815	1-1-67		
816	8-6-65		
825	12-19-67		
1001	3-21-66		
832	5-25-67		

STANDARD DRAWINGS		STANDARD DRAWINGS		STANDARD DRAWINGS	
N°	DATE	N°	DATE	N°	DATE
HL-1	11-1-65	MC-7	3-1-66	AS-1-67	1-11-68
HL-2	11-1-65	GR-1	1-1-67	MC-8	12-1-67
HL-3	11-1-65	GR-2A	1-1-67	SP-53	6-30-61
HL-4	1-1-66	GR-5B	6-1-65	A-2-54	11-8-65
BP-1	6-1-65	GR-6	6-1-65	SD-1-65	11-8-65
BP-2	1-17-68	HW-E	6-1-65	P-1-54	11-8-65
BP-3	1-10-67	CB-2A#B	6-1-65	CS-2-65	6-1-65
BP-4	1-10-67	CB-4	6-1-65		
BP-5	6-1-65	CB-8	6-1-65		
BP-6	6-1-65	GR-2B	2-15-68		
BP-7	1-1-66	F-1	6-1-65		
FACI-1	9-15-67	F-2	6-1-65		
FACI-2	6-1-65	F-3	2-20-68		
MC-1	10-1-67	F-5	2-20-68		
MC-3	5-1-66	F-6	10-1-66		
MC-4	6-1-65	L-1	6-1-65		

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
APPROVED _____ DATE _____
DIVISION ENGINEER

FILE NUMBER	CLARK COUNTY - CLA-70-25.14
DATE OF LETTING	
CONTRACT N°	

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JUL 20 1998

P.T. Sta. 26+17.01(T) & Traverse
Elev. 1188.98

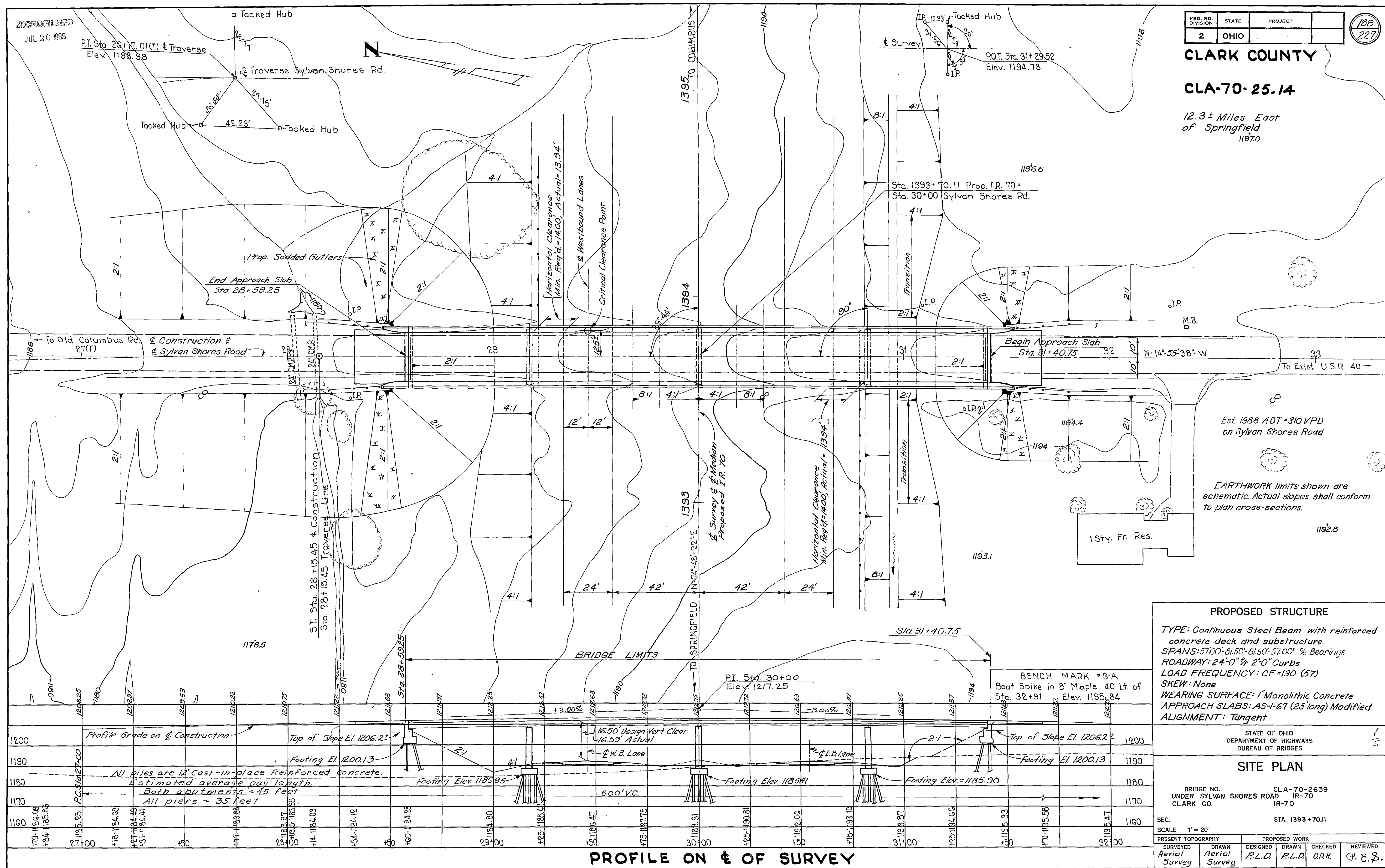
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

188
227

CLARK COUNTY

CLA-70-25.14

12.3 ± Miles East
of Springfield
1197.0



Est. 1988 ADT = 310 VPD
on Sylvan Shores Road

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: 57.00'-81.50'-81.50'-57.00' % Bearings
ROADWAY: 24'-0" & 2'-0" Curbs
LOAD FREQUENCY: CF=130 (57)
SKEW: None
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: AS-1-67 (25' long) Modified
ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. CLA-70-2639
UNDER SYLVAN SHORES ROAD IR-70
CLARK CO. IR-70

SEC. STA. 1393+70.11

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	R.L.D.	R.L.D.	B.D.H.	P. E. S.

B.F.G. 7/15/66

CLA-70-25.14

GENERAL NOTES

REFERENCE: shall be made to standard drawings SD-1-65, Sheets 1 Thru 3, dated 11-8-65, BR-1-65, sheet 1, revised 11-24-65; RB-1-55 revised 2-2-59; and to supplemental Specifications 808 dated 1-13-67 811 dated 1-1-67, 825 dated 12-19-67 and 828 dated 1-1-67, 832 and 931 dated 5-25-67

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=130 (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.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile.

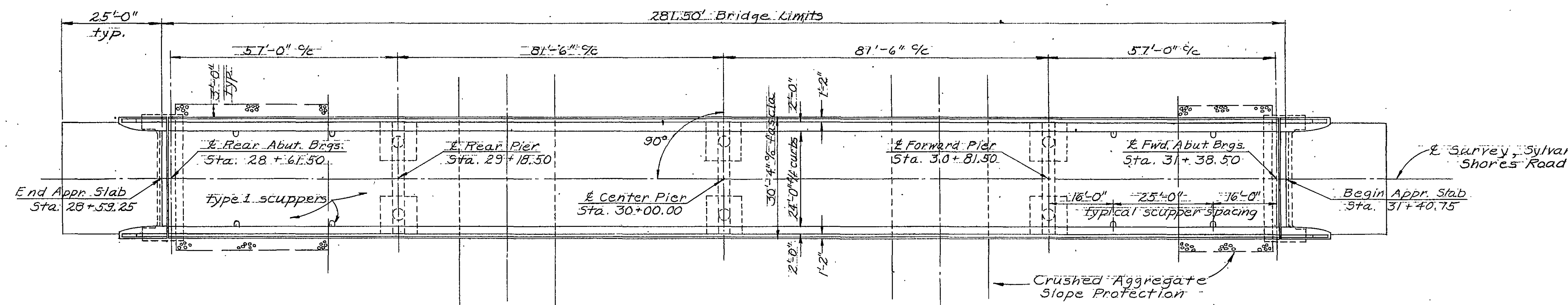
PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

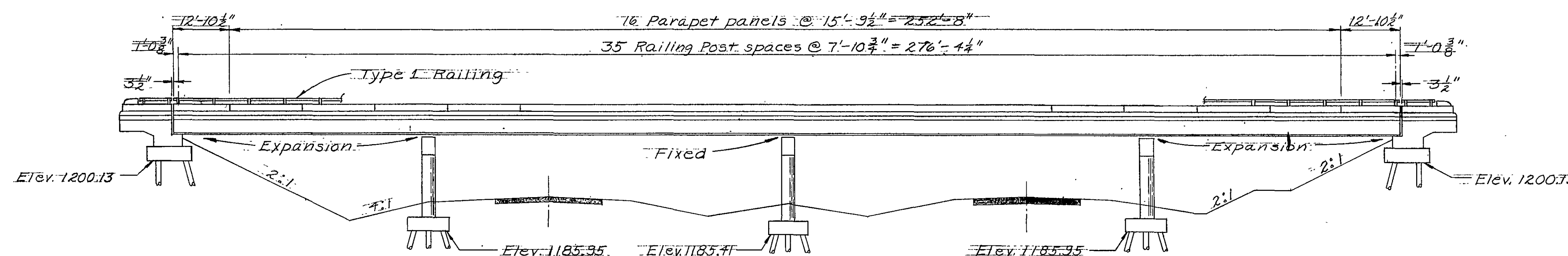
WELDS on secondary stress carrying members are shown thus:

WELDED ATTACHMENTS: No attachments shall be made by welding to the top flanges of the beams within a distance of 0.10 of the span length on either side of the interior supports. Welding for attachments to the top flanges at other parts of the spans shall be kept at least 2" from edge of flange.

PAINTING of structural steel shall be in accordance with Supplemental Specification 832.



PLAN



ELEVATION

ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Super.	Abuts.	Piers	Genl. As Built
503	319	Cu. Yd.	Unclassified excavation		175	144	
505	Lump	Sum	First test pile				Lump
507	2370	Lin. Ft.	12" Cast-in-place reinforced concrete piles		900	1470	
509	90,952	Lbs.	Reinforcing Steel	65,818	8,377	16,757	
511	261	Cu. Yd.	Class C concrete, superstructure	261			
511	61	Cu. Yd.	Class C concrete, pier caps and columns			61	
511	54	Cu. Yd.	Class E concrete, pier footings			54	
511	116	Cu. Yd.	Class E concrete, abutments		116		
513	206,400	Lbs.	Structural Steel	206,400			
832	206,400	Lbs.	Field Painting of Structural Steel	206,400			
517	608.00	Lin. Ft.	Railing, Type 1	558.00	50.00		
518	18	Cu. Yd.	Porous backfill		18		
518	48	Lin. Ft.	6" perforated helical C.M.P. (707.06) including specials		48		
518	48	Lin. Ft.	6" helical C.M.P. (707.06) non-perforated		48		
518	8	Each	Scuppers, including supports	8			
601	290	Sq. Yds.	Crushed aggregate slope protection				290
808	261	Units	water-reducing, set-retarding admixture	261			
825	1103	Sq. Yds.	Concrete surface treatment	1061	42		
828	48	Lin. Ft.	Joint sealer		48		

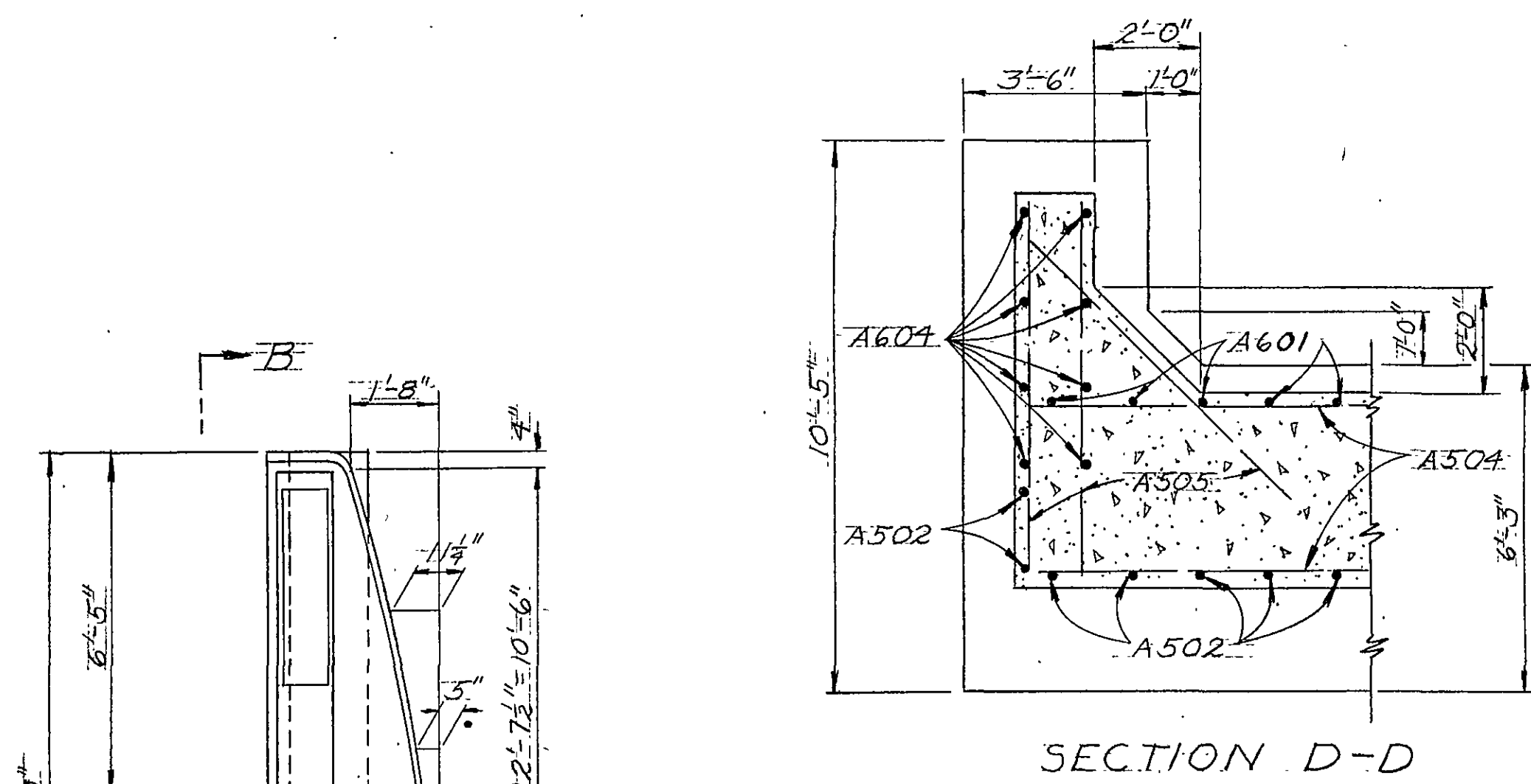
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN, ELEVATION,
ESTIMATED QUANTITIES & NOTES
BRIDGE NO. CLA-70-2639
UNDER SYLVAN SHORES ROAD

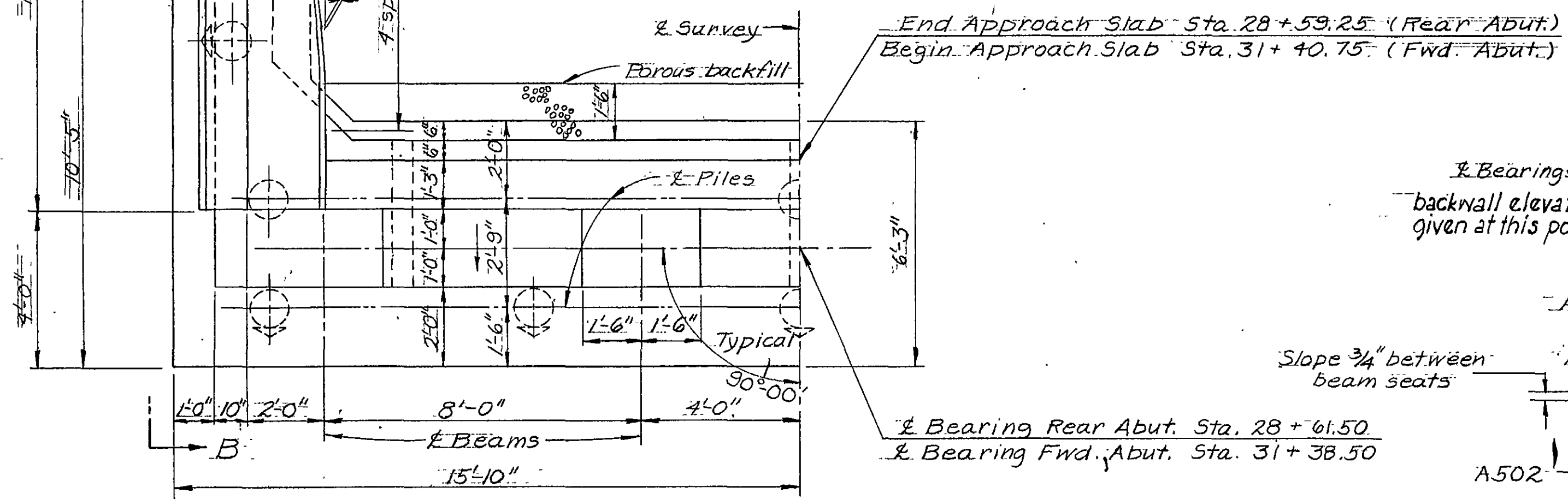
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WDW	WDW		J.D.R.	BFG	9/15/66	

JUL 30 1968

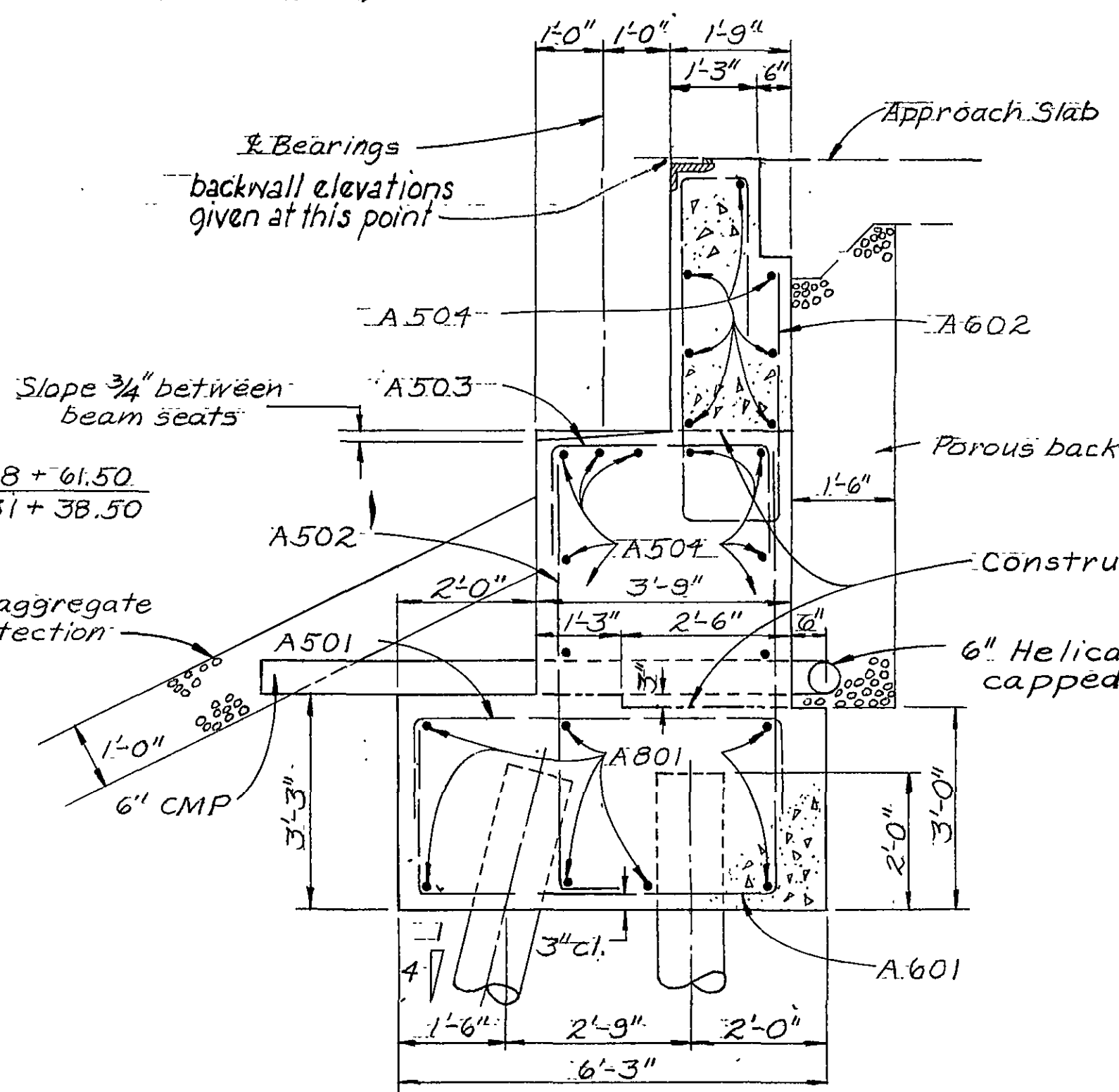
CLA-70-25.14



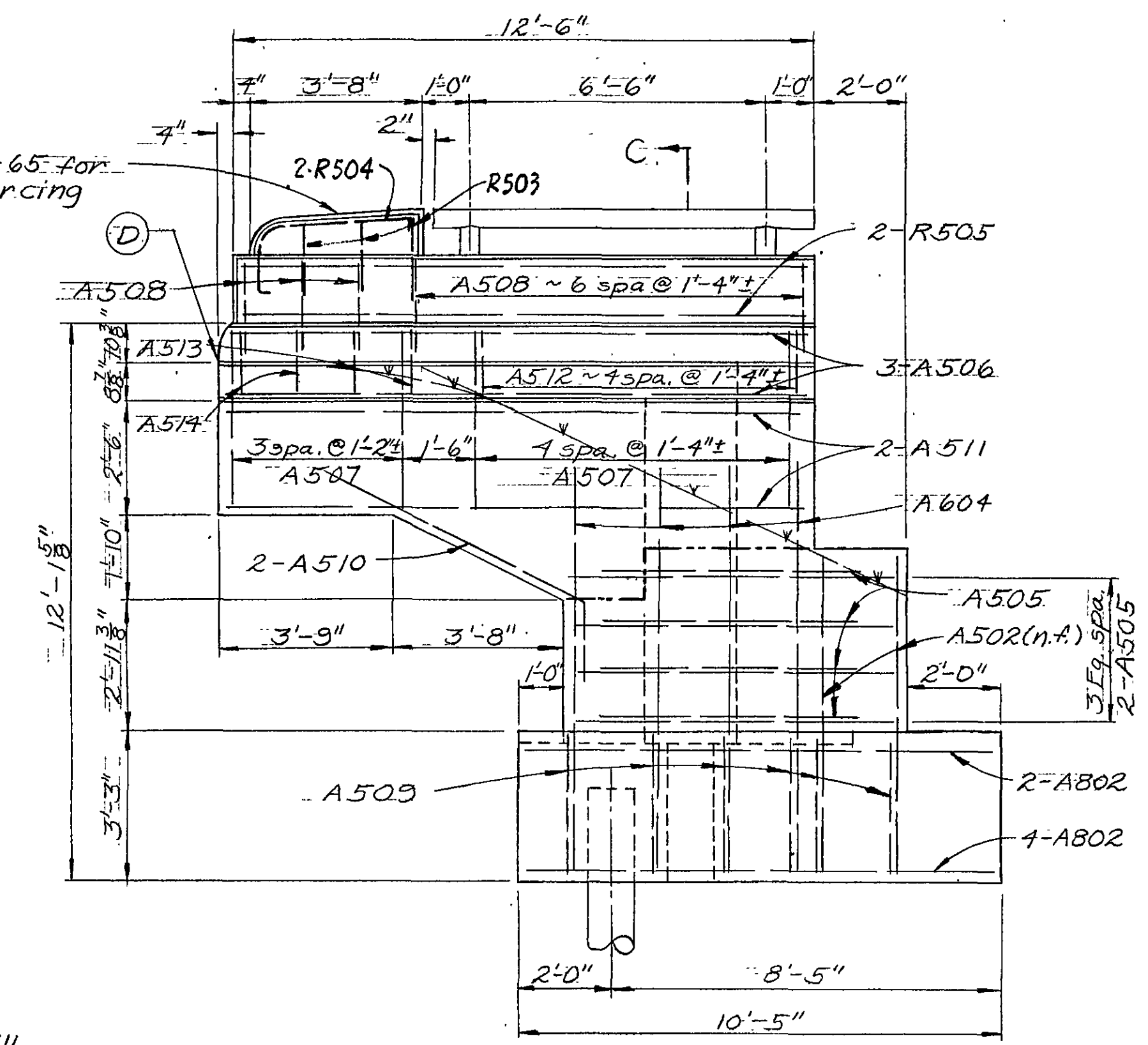
SECTION D-D



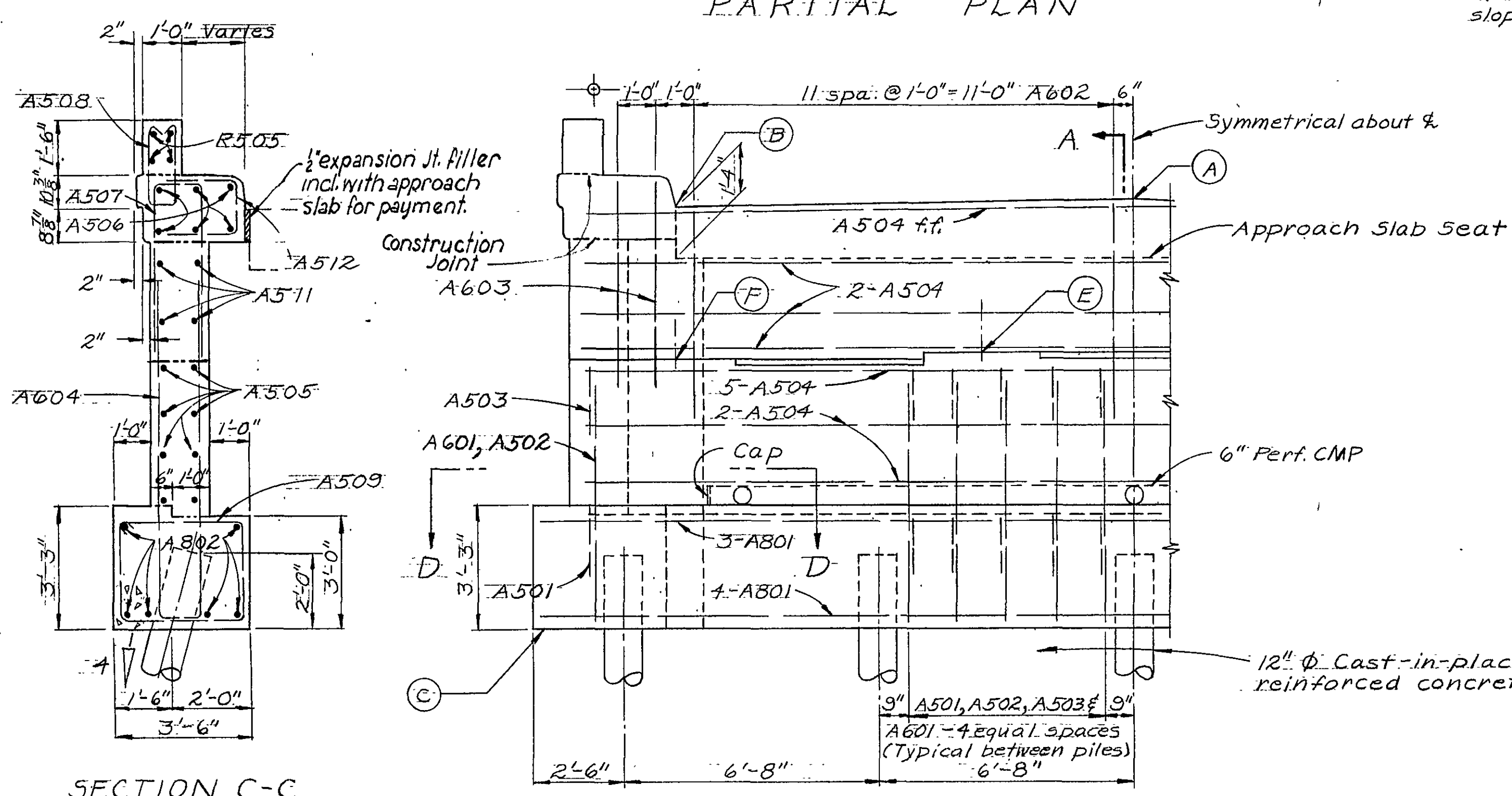
PARTIAL PLAN



SECTION A-A



VIEW B-B



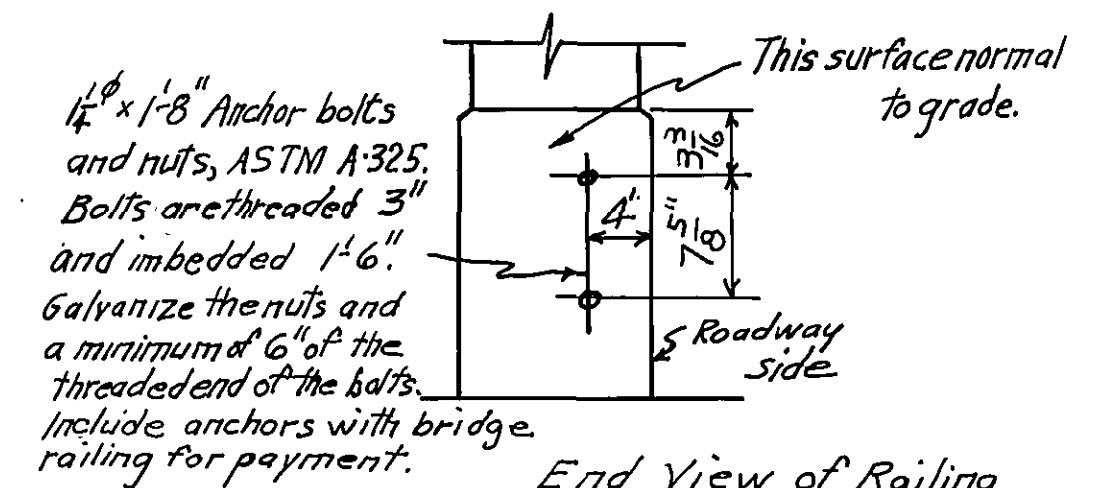
SECTION C-C

PARTIAL ELEVATION

TABLE OF ELEVATIONS

Location	A	B	C	D	E	F
Elevation	1211.78	1211.59	1200.13	1211.40	1207.28	1207.16

(Both Abutments)



End View of Railing
ANCHORS FOR ATTACHMENT OF APPROACH GUARD RAIL TO BRIDGE RAILING

Batter piles 1:4 in direction of arrow
n.f. denotes near face, f.f. denotes far face

3

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

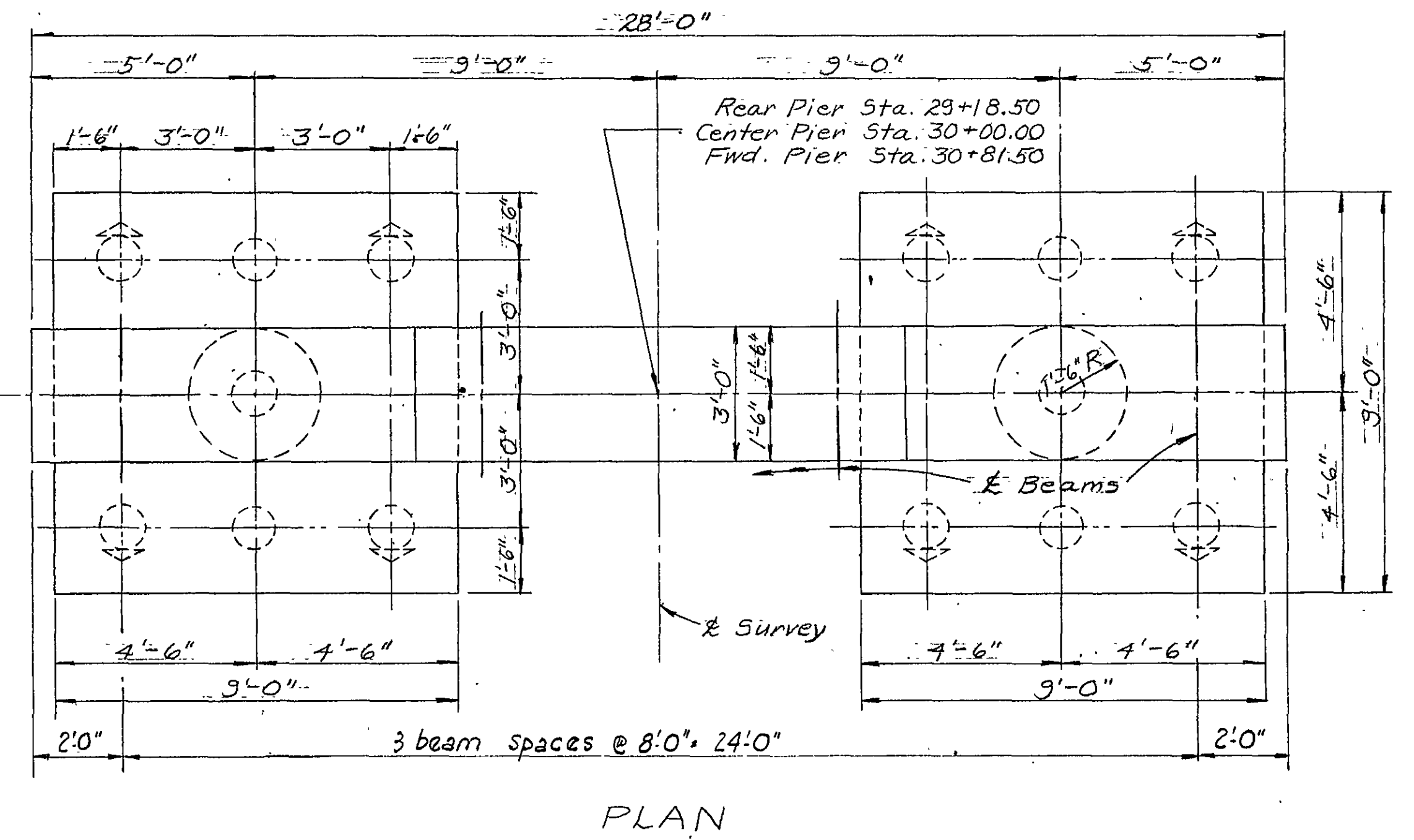
ABUTMENT DETAILS

BRIDGE NO. CLA-70-2639
UNDER SYLVAN SHORES ROAD

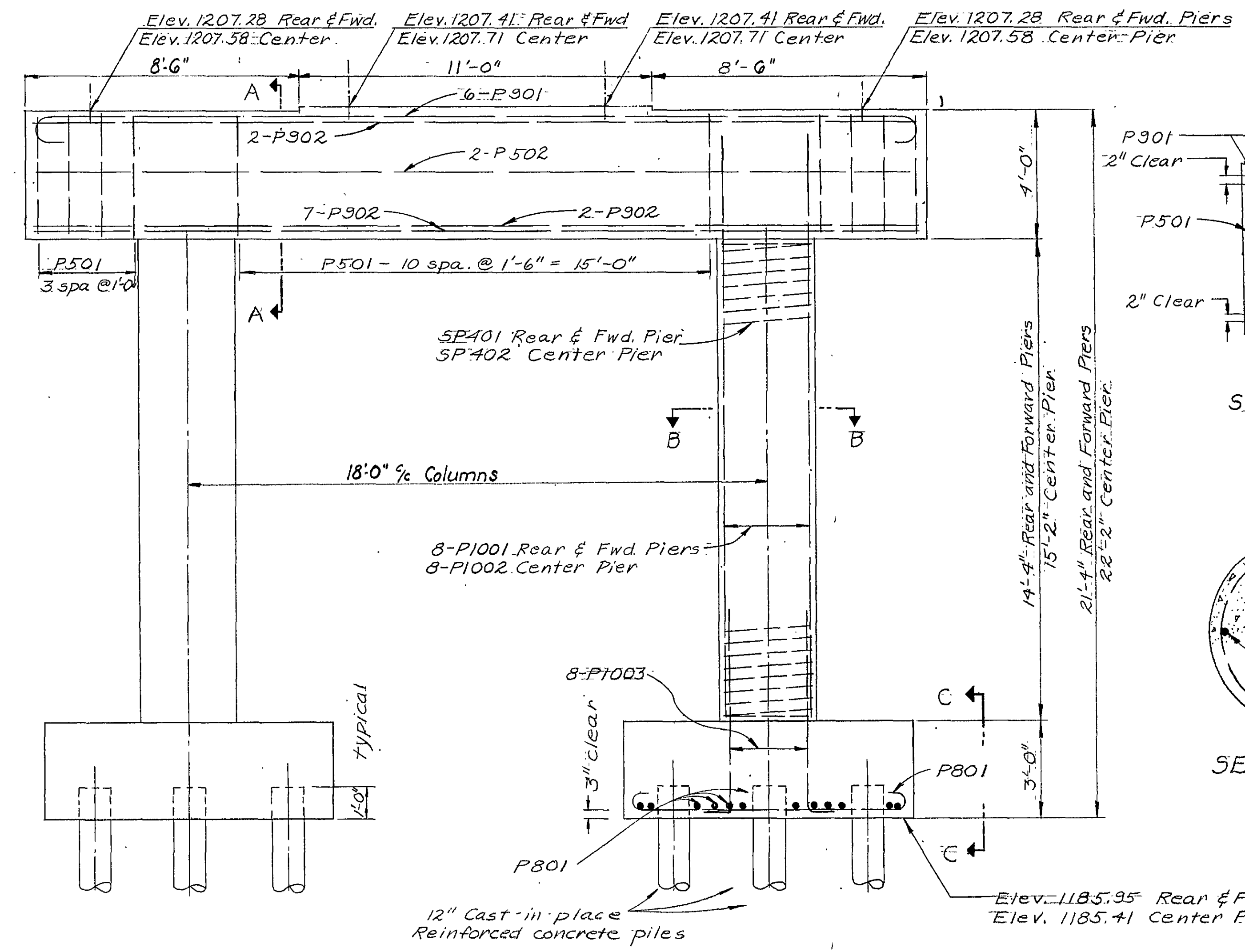
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WDW	WDW		J.D.R.	BFG	9/15/66	

PROFILED
JUL 20 1988

REINFORCING STEEL LIST CLA-70-25.14

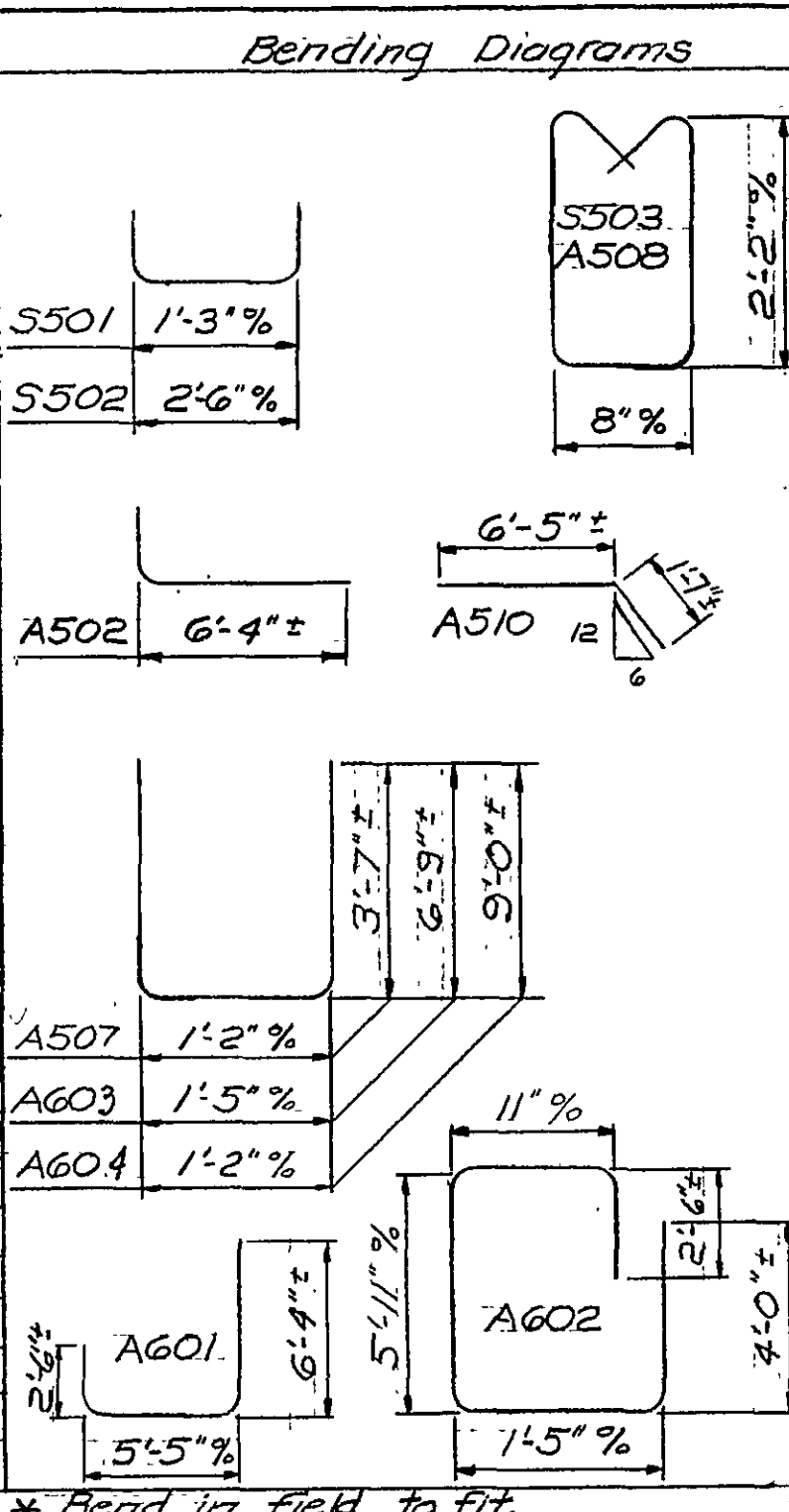


PLAN



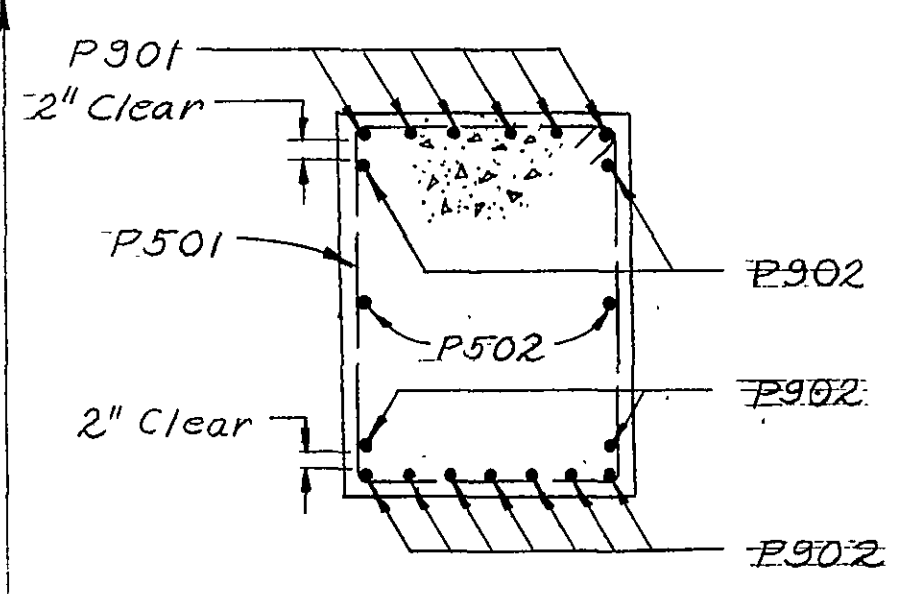
ELEVATION

Mark No.	Length	Weight	Shp
SUPERSTRUCTURE			
S701	334	29'-8"	20,253 S
S601	334	29'-8"	14,883 S
S602	459	30'-0"	20,683 S
S603	57	32'-6"	2,782 S
S604	51	25'-5"	1,947 S
S501	744	2'-3"	1,746 B
S502	372	3'-6"	1,358 B
S503	372	5'-7"	2,166 B
ABUTMENTS			
A801	14	31'-2"	1,165 S
A802	24	9'-11"	635 S
A601	44	13'-11"	920 B
A602	49	14'-1"	1,015 B
A603	8	14'-7"	175 B
A604	16	18'-10"	453 B
A501	44	8'-10"	405 B
A502	52	6'-10"	371 B
A503	44	7'-2"	329 B
A504	32	29'-4"	979 S
A505	48	7'-0"	350 S
A506	24	12'-4"	309 S
A507	36	8'-4"	304 B

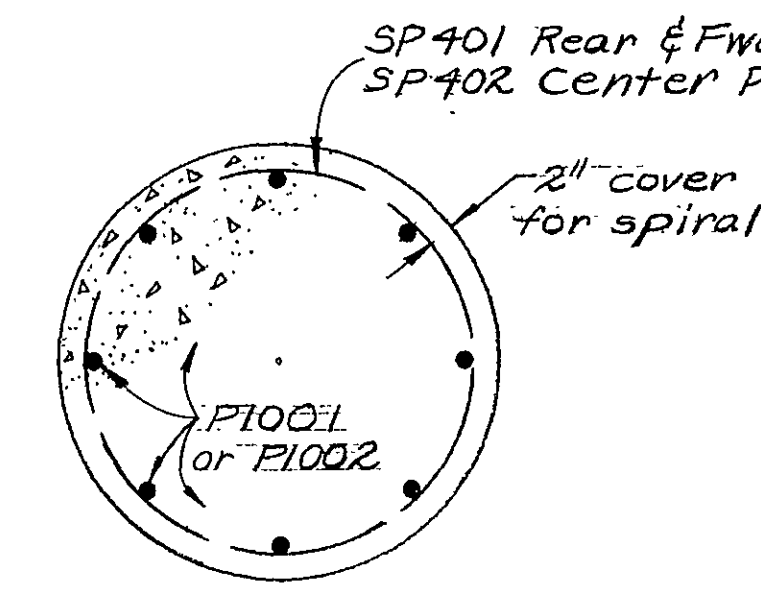


Mark No.	Length	Weight	Shp		
ABUTMENTS (Cont.)					
A508	40	5'-7"	233 B		
A509	24	11'-6"	288 B		
A510	8	8'-0"	67 B		
A511	10	12'-6"	209 S		
A512	20	5'-4"	111 B		
A513	8	4'-2"	35 B		
A514	8	2'-10"	24 B		
PIERS					
P1001	32	17'-6"	2,410 S		
P1002	16	18'-4"	1,262 S		
P1003	48	7'-1"	1,463 B		
P901	18	30'-2"	1,846 B		
P902	33	27'-8"	3,104 S		
P801	144	10'-8"	4,101 B		
P501	57	13'-2"	783 B		
P502	6	27'-8"	173 S		
RAILING BARS					
R501	128	15'-5"	Included with railing for payment S		
R502	16	12'-6"	S		
R503	12	4'-2"	B		
R504	8	5'-4"	B		
R505	16	12'-2"	S		
REPLACEMENT BARS					
RE1001	1	7'-2"	S		
RE301	1	6'-10"	S		
RE801	1	6'-6"	S		
RE701	2	6'-2"	S		
RE601	3	5'-11"	S		
RE501	1	5'-7"	S		
RE401	1	5'-3"	B		
SPIRAL REINFORCING					
Mark No.	Core Dia.	Length	Pitch	No. Turns	Weight
SP401	4	32"	14'-4"	4 1/2	1,058
SP402	2	32"	15'-2"	4 1/2	556

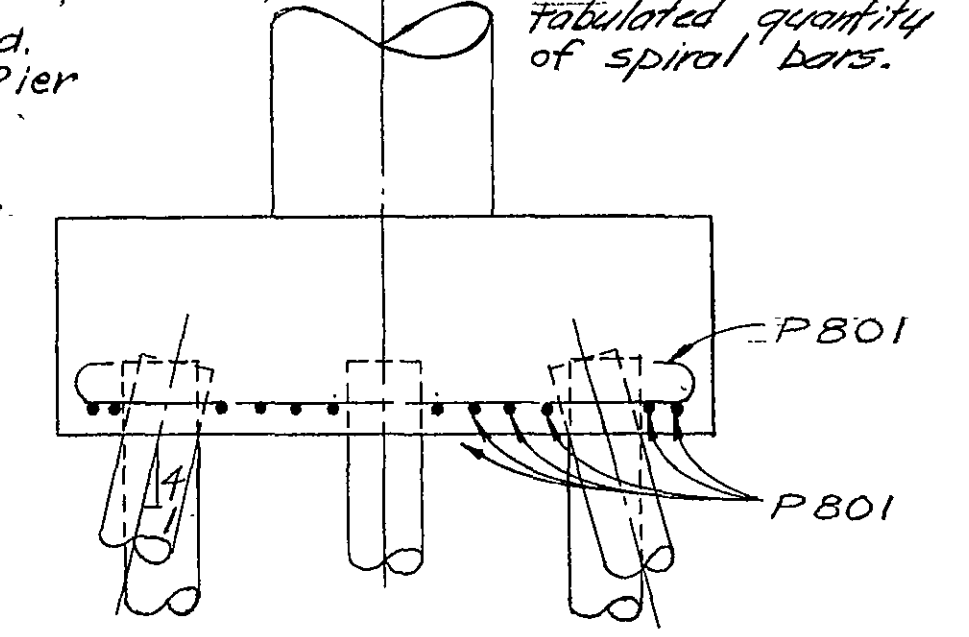
SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighting approximately 0.68 lbs. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.



SECTION A-A



SECTION B-B



VIEW C-C

All piles 12" ϕ Cast-in-place reinforced concrete

Batter piles 1:4 in direction of arrow

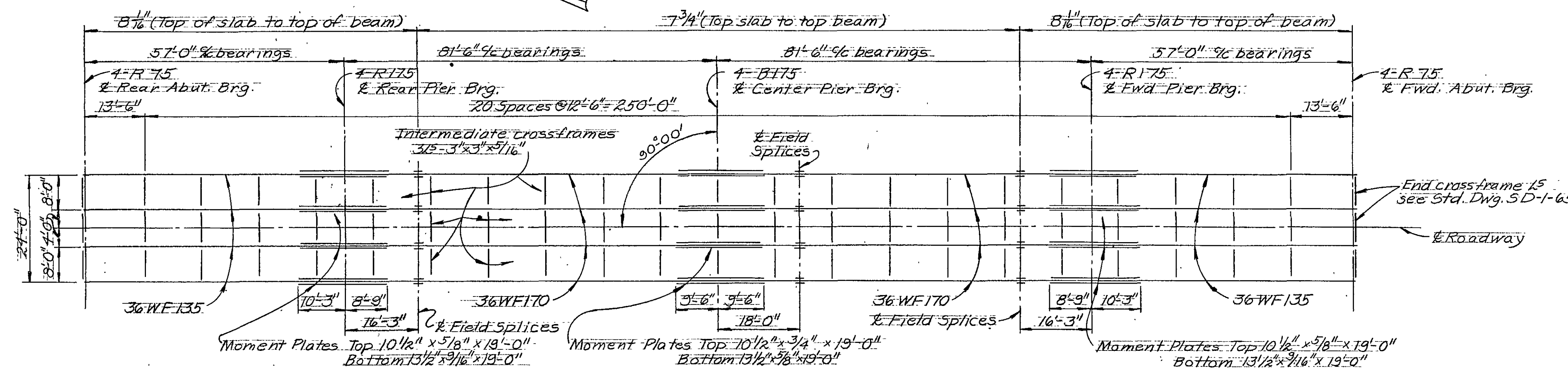
BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes. (Center Pier Only.)

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

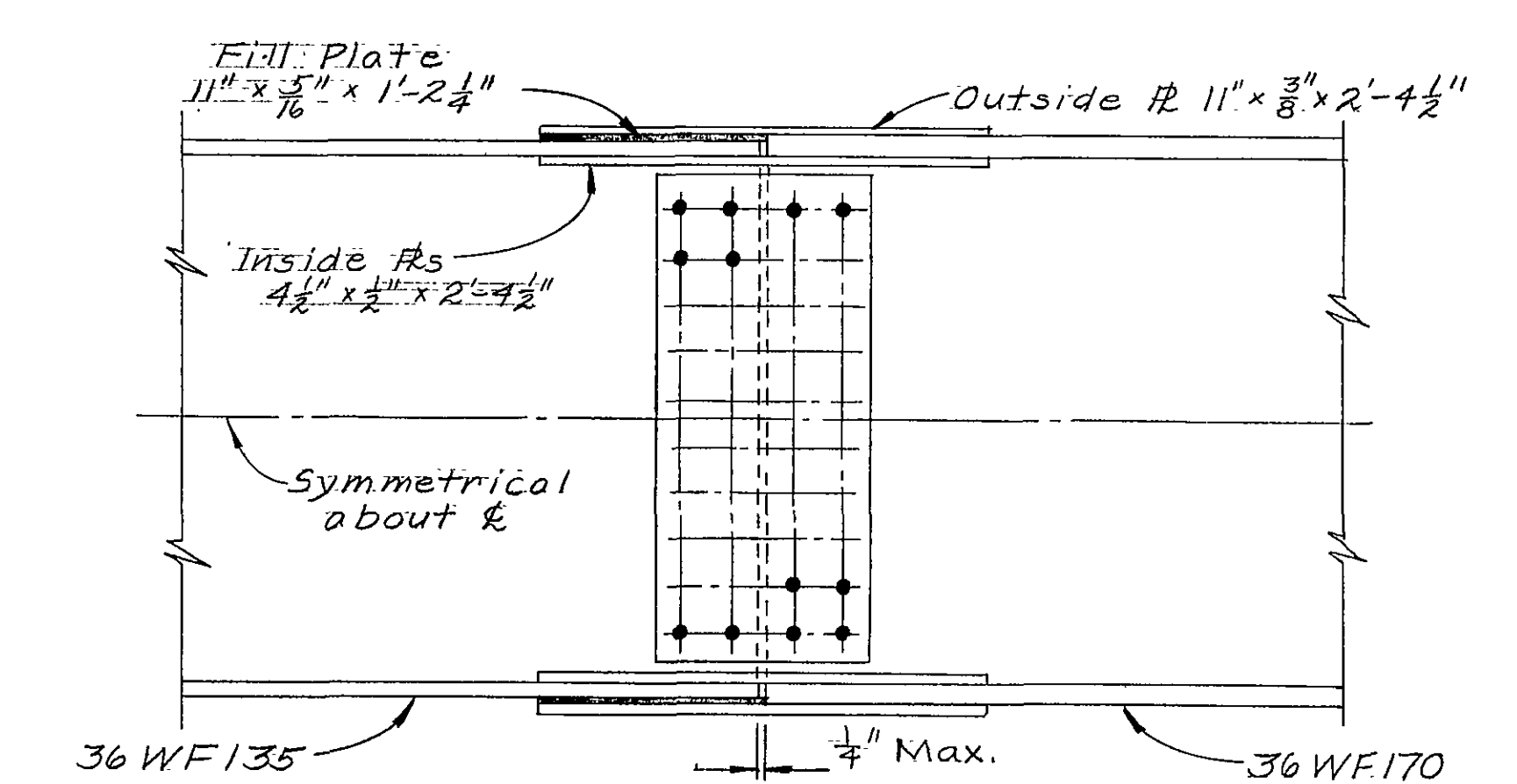
PIER DETAILS AND REINFORCING STEEL LIST
BRIDGE NO. CLA-70-2639
UNDER SYLVAN SHORES ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WDW	WDW		J.D.R.	BFG	9/15/64	

CLA-70-25.14

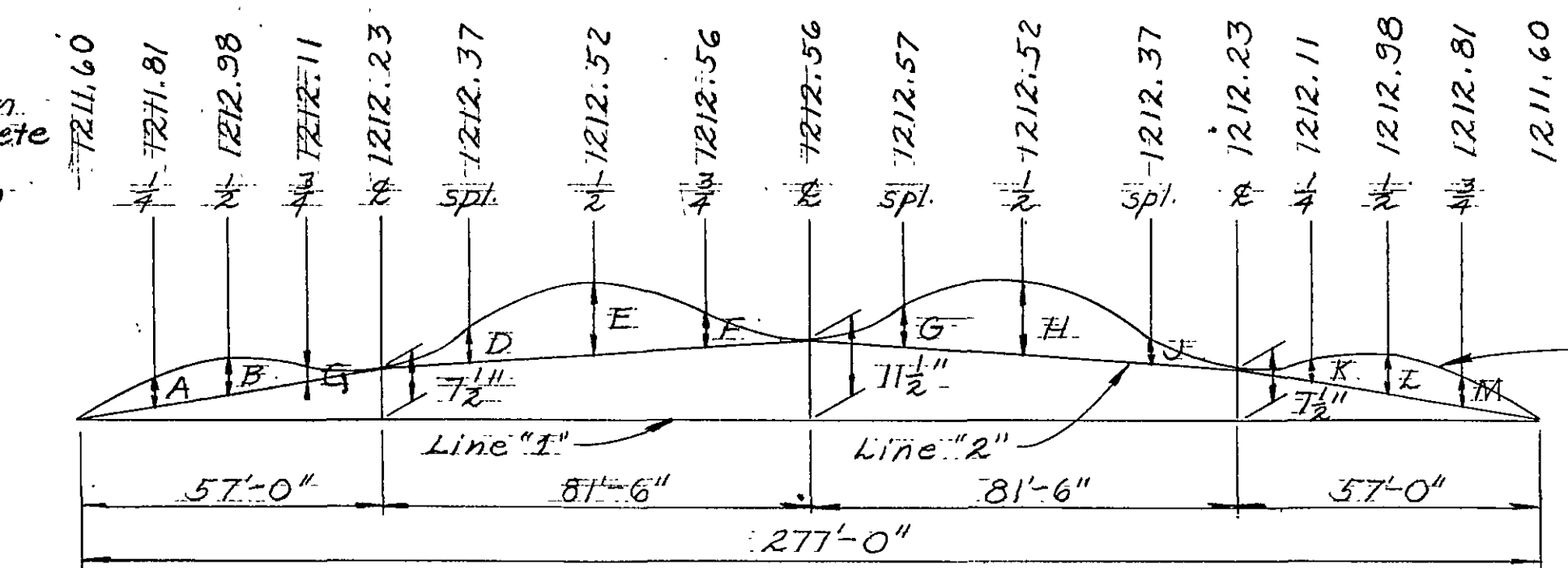


PLAN OF STEEL FRAMING



BEAM SPLICE DETAIL ~36WF135 to 36WF170

Gutter Elevation
Prior to placing of deck concrete
Point on Span



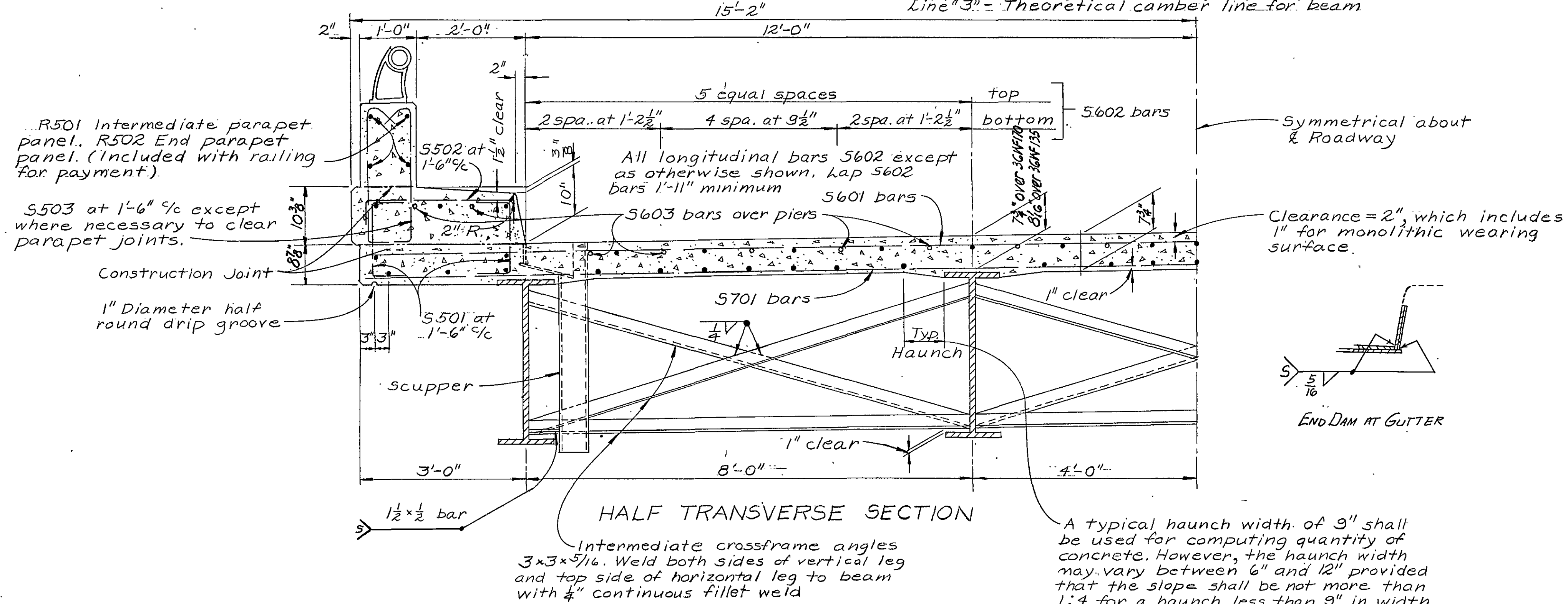
BEAM CAMBER

DEFLECTION AND CAMBER											
	A	B	C	D	E	F	G	H	J	K	M
Deflection due to DL steel	0"	1/16"	0"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	0"	0"
Defl. due to remaining DL	1/8"	1/4"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/8"	1/8"
Convexity due to V.C.	3/8"	1/2"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/8"
Sum of Δ and convex camber	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"

Slab thickness is 7 3/4" which includes 1" for monolithic wearing surface
See Std. Dwg. CSB-4-63 Sheets 1 & 2 for additional details, for distance from top of slab to top of steel see "Plan of Steel Framing" above.
Refer to Std. Dwg. SD-1-65 for the following.

1. Welding of Moment plates
2. Scuppers (Type I)
3. End dam and curb plate details
4. End crossframes

Bulb angle gutters and supports as shown on Standard Drawing CSB-4-63 shall be omitted.



HALF TRANSVERSE SECTION

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.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. CLA-70-2639 UNDER SYLVAN SHORES ROAD					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
WDW	WDW		J.D.R.	BFG	9/15/66