

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	STATE	

HEN-18-(0.00)(0.87)(2.85)

MICROFILMED
MAY 22 1968
GROUND PHOTO LAB

DESIGN DESIGNATION

Current A.D.T. (1961) 600
 Design Year A.D.T. (1984) 900
 D.H.V. 90
 D(directional distribution) 50%
 T(percent B&C Trucks) 5%
 V(design speed) 60 M.P.H.

MICROFILMED
MAY 22 1968
GROUND PHOTO LAB

MICROFILMED
APR 18 1966

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS

HEN-18-(0.00)(0.87)(2.85)

DEFIANCE COUNTY
 HIGHLAND AND RICHLAND TOWNSHIPS
 HENRY COUNTY
 PLEASANT AND FLATROCK TOWNSHIPS

CONVENTIONAL SIGNS

- County Line
- Township Line
- Center Line
- Railroad
- Fence
- Trees or Stumps
- Power Poles
- Telephone Poles
- Guard Rail (Proposed)
- Guard Rail (Existing)
- Property Line
- Existing Right of Way
- Proposed Right of Way

INDEX OF SHEETS

HEN-18-0.00, HEN-18-0.87, HEN-18-2.85	
Title Sheet	1
Typical Sections and Details	2-3
Calculations, General Notes and General Summary	4
HEN-18-0.00:	
Plan & Profile	5-6
Cross Sections	7
Structures over 20' Span (HEN 18-0000)(Right of Way)	8-12
HEN-18-0.87:	
Plan & Profile and Right of Way	13
Cross Sections	14
Structures over 20' Span (HEN 18-0090)	15-18
HEN-18-2.85:	
Plan & Profile and Right of Way	19-20
Cross Sections	21-22
Structures over 20' span	
HEN 18-0288	23-24
HEN 18-0290	25-26

LINE DATA

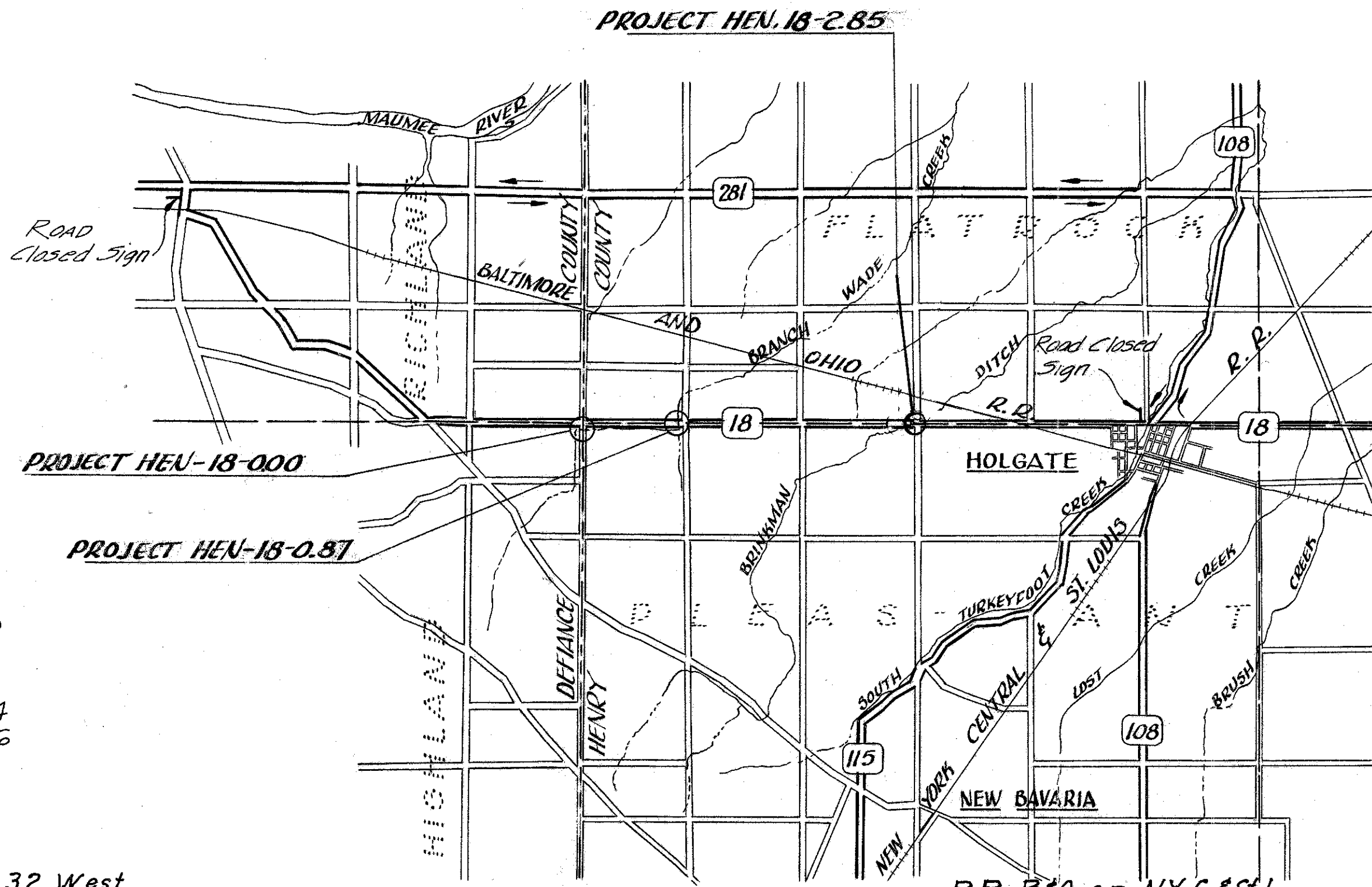
HEN-18-0.00:
 Length of Project 0.00 Lin. Ft. = 0.000 Mi. Begin Work Sta. 1+32 West
 Suspend Work Sta. 1+40 East
 Net Work Length = 272.00 Lin. Ft. = 0.051 Mi.

HEN-18-0.87:
 Begin Project Sta. 46+00 Resume Work Sta. 46+00
 Suspend Project Sta. 49+60 Suspend Work Sta. 49+60
 Net Project Length = 360.00 Lin. Ft. = 0.068 Mi. Net Work Length = 360.00 Lin. Ft. = 0.068 Mi.

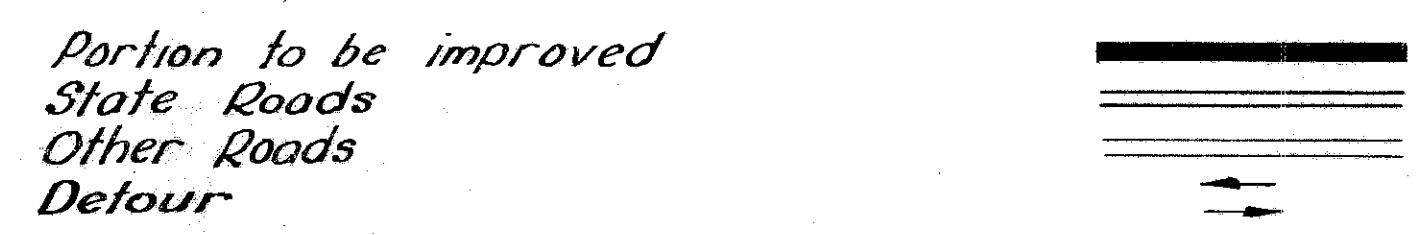
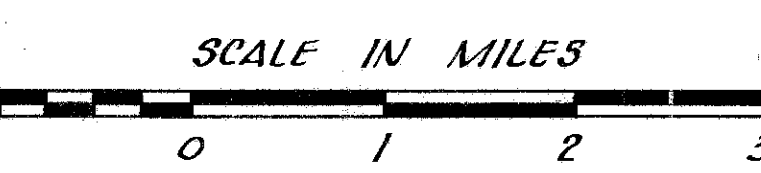
HEN-18-2.85:
 Resume Project Sta. 150+74 Resume Work Sta. 150+74
 End Project Sta. 154+68 End Work Sta. 155+27
 Net Project Length = 394.00 Lin. Ft. = 0.074 Mi. Net Work Length = 453.00 Lin. Ft. = 0.085 Mi.

Grand Total of Project Lengths = 754.00 Lin. Ft. = 0.142 Mi.
 Grand Total of Work Lengths = 1085.00 Lin. Ft. = 0.205 Mi.

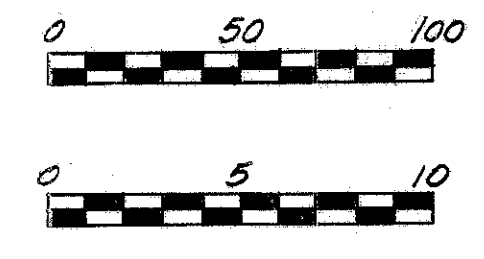
MICROFILMED
MAY 22 1968
GROUND PHOTO LAB



Delivery Point: Holgate
 R.R. B70 or N.Y.C. & St.L.
 Average Haul 3.6 Miles



Plan
 Profile (Horizontal)
 Profile (Vertical)
 Cross Sections



SURVEY AND PLANS BY
 SANZENBACHER, MILLER, BRIGHAM & SCOTT
 TOLEDO 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 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 require the closing to traffic of the highway and that detours will be provided as shown hereon.

- Approved Date 9-14-66 Thomas Miller Division Deputy Director
- Approved Date 11-22-66 C. H. Abate Engineer of Bridges
- Approved Date 11-22-66 R. D. Ricketts Engineer of Location and Design
- Approved Date 11-22-66 P. E. Smith Deputy Director of Design and Construction
- Approved Date 12-2-66 T. H. Board Deputy Director of Right of Way
- Approved Date 12-2-66 E. W. Wilson Deputy Director of Planning and Programming
- Approved Date _____ _____ First Assistant Director
- Approved Date 12/2/66 P. E. Masten Director of Highways

No. RR

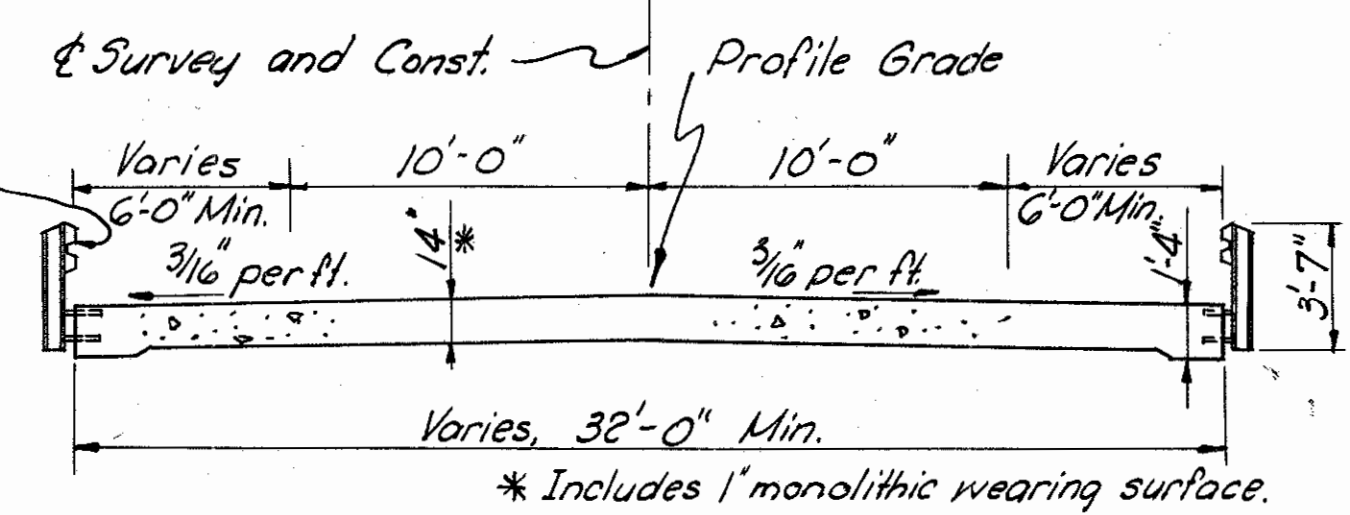
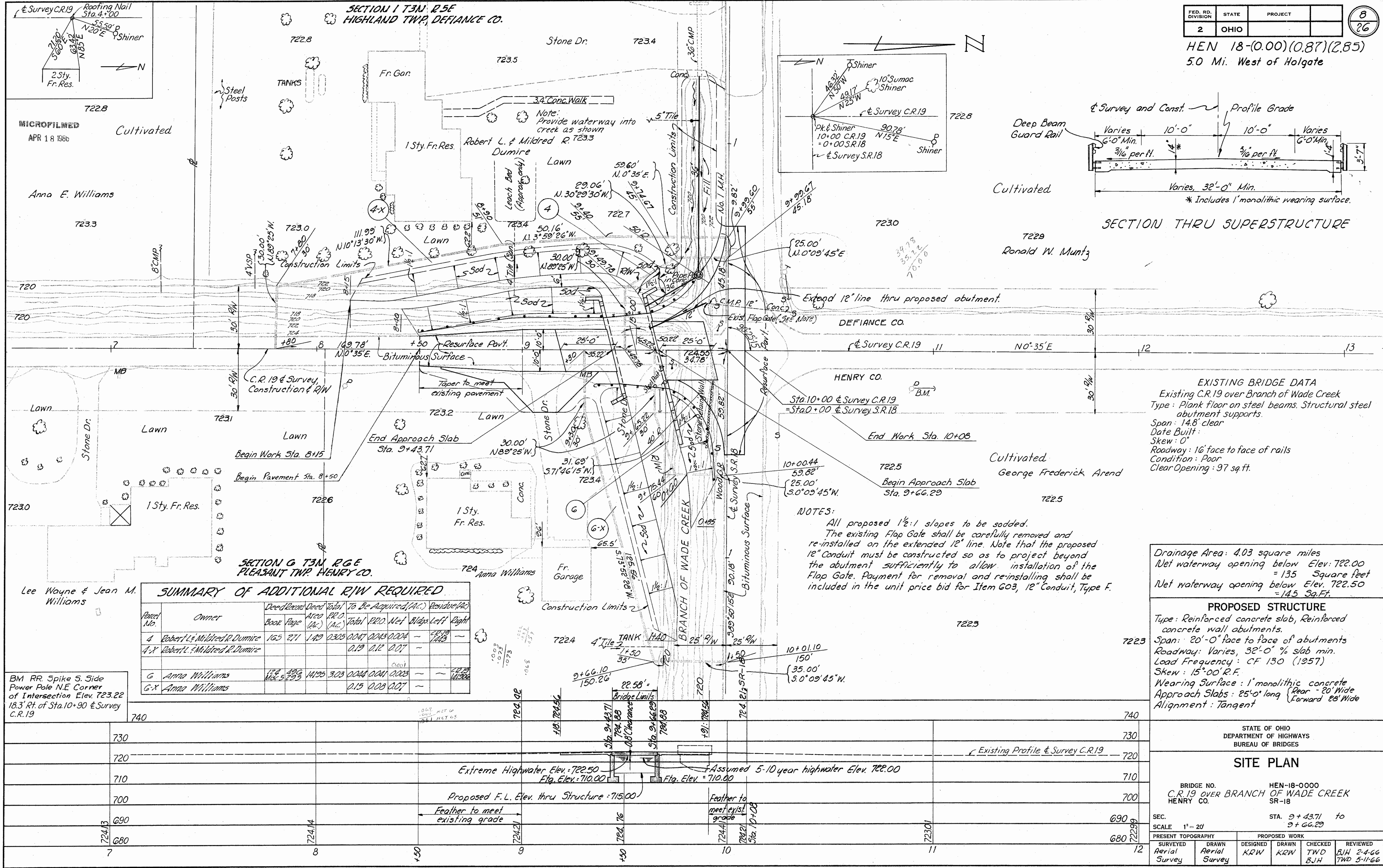
FILE No.	HEN-18-0.00, 0.87, 2.85,
Date of Letting	_____, 196__
Contract No.	_____

STANDARD DRAWINGS				SUPPLEMENTAL SPECIFICATIONS			
HW-E	6-1-65	GR-2A	9-1-65	A-1-54	11-8-65	808	2-7-66
BP-5	6-1-65	MC-1	6-1-65	P-1-54	11-8-65	825	4-22-65
BP-6	6-1-65	MC-3	5-1-66	SB-1-64 (Sheet 1 of 2)	11-8-65	1001	3-21-66
L-1	6-1-65	MC-4	6-1-65	CS-1-65 (Sheets 1 & 2)	6-1-65		
BP-3	6-1-65	MH-1	6-1-65	AS-1-54	8-10-65		
GR-1	6-1-65	MH-1A	8-1-66				

MICROFILMED
MAY 22 1968
GROUND PHOTO LAB

FED. RD. DIVISION	STATE	PROJECT	8
2	OHIO		26

HEN 18-(0.00)(0.87)(2.85)
5.0 Mi. West of Holgate



SECTION THRU SUPERSTRUCTURE

EXISTING BRIDGE DATA
 Existing C.R.19 over Branch of Wade Creek
 Type: Plank floor on steel beams. Structural steel abutment supports.
 Span: 14.8' clear
 Date Built: _____
 Skew: 0°
 Roadway: 16' face to face of rails
 Condition: Poor
 Clear Opening: 97 sq.ft.

NOTES:
 All proposed 1/2:1 slopes to be sodded.
 The existing Flap Gate shall be carefully removed and re-installed on the extended 12" line. Note that the proposed 12" Conduit must be constructed so as to project beyond the abutment sufficiently to allow installation of the Flap Gate. Payment for removal and re-installing shall be included in the unit price bid for Item 603, 12" Conduit, Type F.

SUMMARY OF ADDITIONAL R/W REQUIRED

Parcel No.	Owner	Deed/Record		Deed Total		To Be Acquired (A.C.)		Residue (A.C.)		
		Book	Page	Area (A.C.)	PR.O. (A.C.)	Total	PR.O.	Net	Blggs Left	Right
4	Robert L. & Mildred R. Dumire	165	271	1.49	0.305	0.047	0.043	0.004	-	-
4-X	Robert L. & Mildred R. Dumire					0.19	0.12	0.07	-	-
6	Anna Williams	174	296	14.95	3.03	0.044	0.041	0.003	-	-
6-X	Anna Williams					0.15	0.08	0.07	-	-

BM RR Spike S. Side Power Pole N.E. Corner of Intersection Elev. 723.22 18.3' Rt. of Sta. 10+90 & Survey C.R.19

Drainage Area: 4.03 square miles
 Net waterway opening below Elev. 722.00 = 135 Square feet
 Net waterway opening below Elev. 722.50 = 145 Sq.Ft.

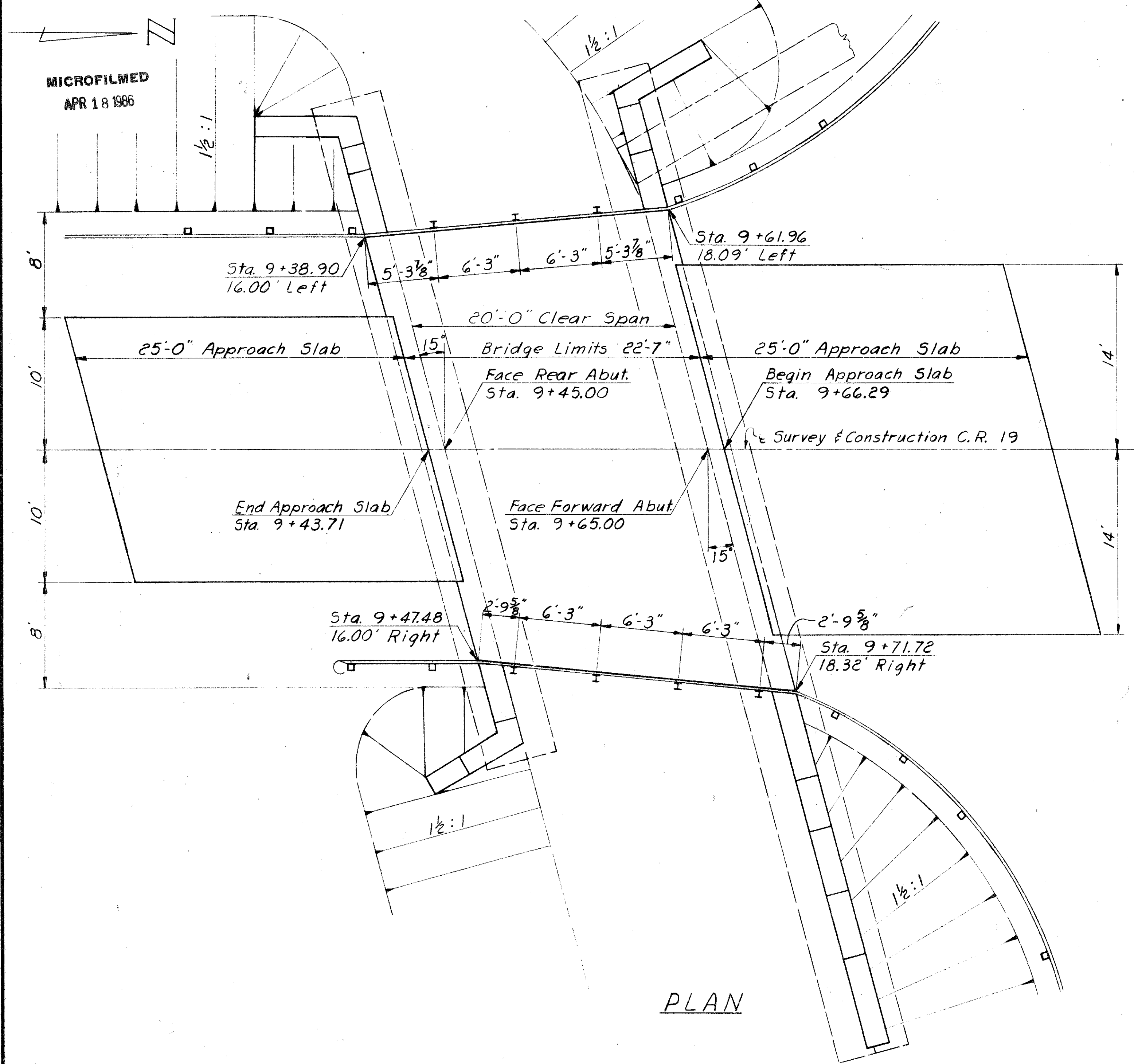
PROPOSED STRUCTURE
 Type: Reinforced concrete slab, Reinforced concrete wall abutments.
 Span: 20'-0" face to face of abutments
 Roadway: Varies, 32'-0" % slab min.
 Load Frequency: CF 130 (1957)
 Skew: 15° 00' R.F.
 Wearing Surface: 1" monolithic concrete
 Approach Slabs: 25'-0" long (Rear - 20' Wide Forward 28' Wide)
 Alignment: Tangent

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES	
SITE PLAN	
BRIDGE NO. C.R.19 OVER BRANCH OF WADE CREEK HENRY CO.	HEN-18-0000 SR-18
SEC. STA. 9+43.71 to 9+66.29	SCALE 1" = 20'
PRESENT TOPOGRAPHY	
SURVEYED Aerial Survey	DESIGNED KRW
DRAWN Aerial Survey	CHECKED TWD
	REVIEWED B.J.H. 2-4-66

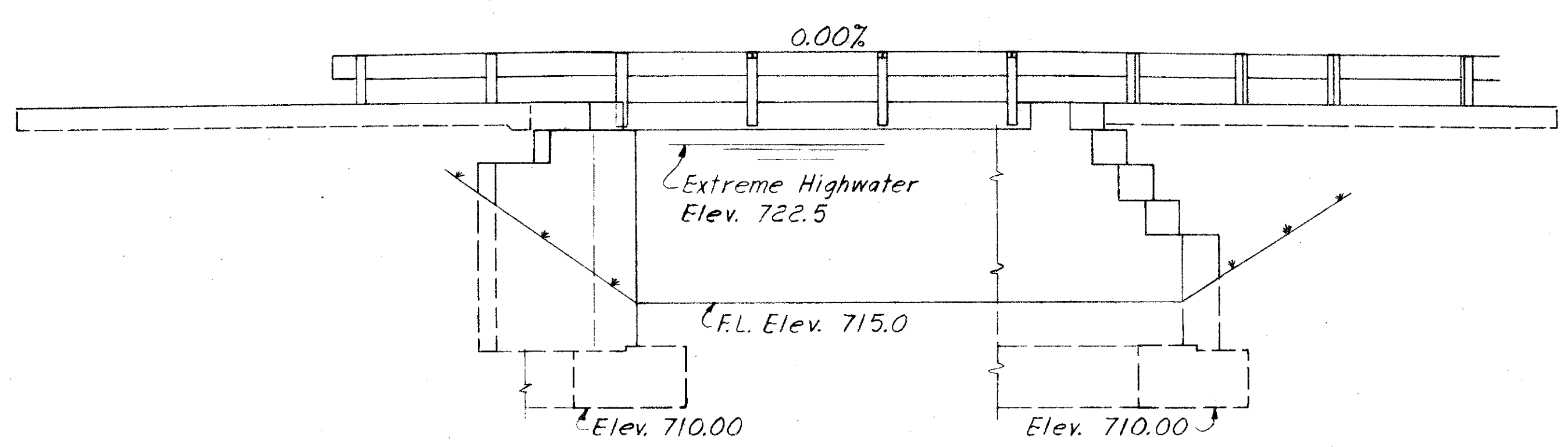
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

HEN 18-(0.00)(0.87)(2.85)

9
26



PLAN



ELEVATION

Item	Total	Unit	Description	Abutments		Super-struct.	Gen'l
				Rear	Fwd		
202	Lump	Sum	Existing structure removed				Lump
503	189	Cu.Yds	Unclassified excavation	78	111		
503	Lump	Sum	Cofferdams, cribs and sheeting				Lump
509	12475	Lbs.	Reinforcing steel	2174	2742	7559	
511	36	Cu.Yds.	Class C concrete, superstructure			36	
511	74	Cu.Yds.	Class E concrete, abutment footings	29	45		
511	91	Cu.Yds.	Class E Concrete, abutments above footings	41	50		
516	10	Sq.ft.	1/2 preformed expansion joint filler (AASHTO M-153)	5	5		
517	47.50	Lin.ft.	Railing (deep beam rail with steel posts & bolts)				47.50
518	50	Cu.Yds.	Porous backfill	22	28		
808	36	Units	Water-reducing, set-retarding admixture			36	
825	93	Sq.Yds.	Concrete surface treatment			93	

GENERAL NOTES

REFERENCE: shall be made to Standard Drawing AS-1-54 "Reinforced Concrete Approach Slabs" revised 8-10-65 and to Supplemental Specifications 808 "Water reducing, set retarding admixture" dated 2-7-66 and 825 "Concrete surface treatment" dated 4-22-65

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 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.
 Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade.
 Basic unit Stress 20,000 p.s.i.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.5 tons per square foot.

CAMBER: of 1/8" shall be provided to allow for dead load deflection. Additional camber shall be provided for deflection of falsework

MACHINE FINISH: At the Contractor's option the concrete deck may be finished by the use of finishing machine

UTILITY LINES: All expense involved in relocating the affected utility line shall be borne by the owner. The Contractor and the Owner are requested to cooperate by arranging there work in such a manner that inconvenience to either will be held to a minimum.

BACKFILL: Abutments shall be backfilled no higher than 4'-10" above bottom of footing prior to placing the deck slab

POROUS BACKFILL: 1'-6" thick, full length of abutment and wings shall extend up to the underside of the approach slab or to the finished ground surface. Excavation therefore, in excess of that required for construction of abutment, shall be considered as paid for in the bid price per cu.yd. paid for porous backfill.

SANZENBACHER, MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO, OHIO

GENERAL PLAN & ELEVATION, GENERAL NOTES, ESTIMATED QUANTITIES
 BRIDGE NO. HEN 18-0000
 C.R. 19 OVER BRANCH OF WADE CREEK
 HENRY COUNTY STA. 9+43.71 TO STA. 9+66.29

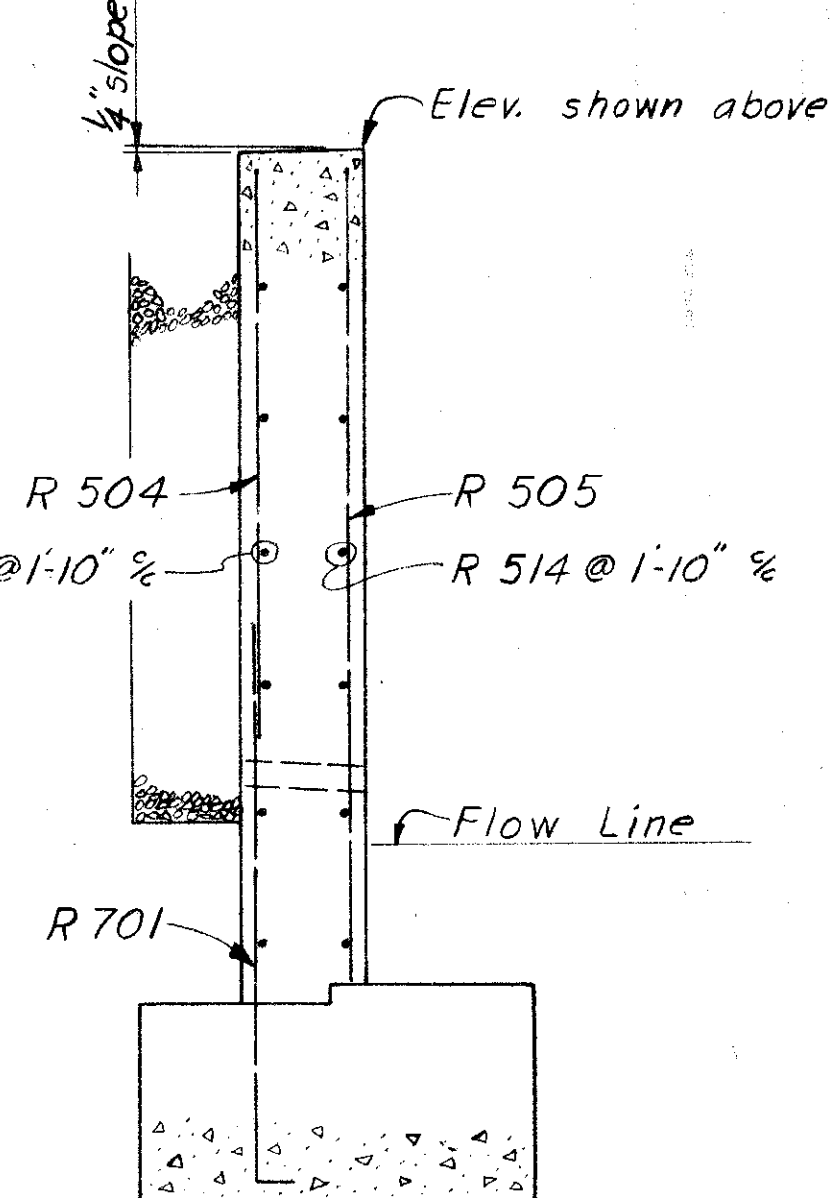
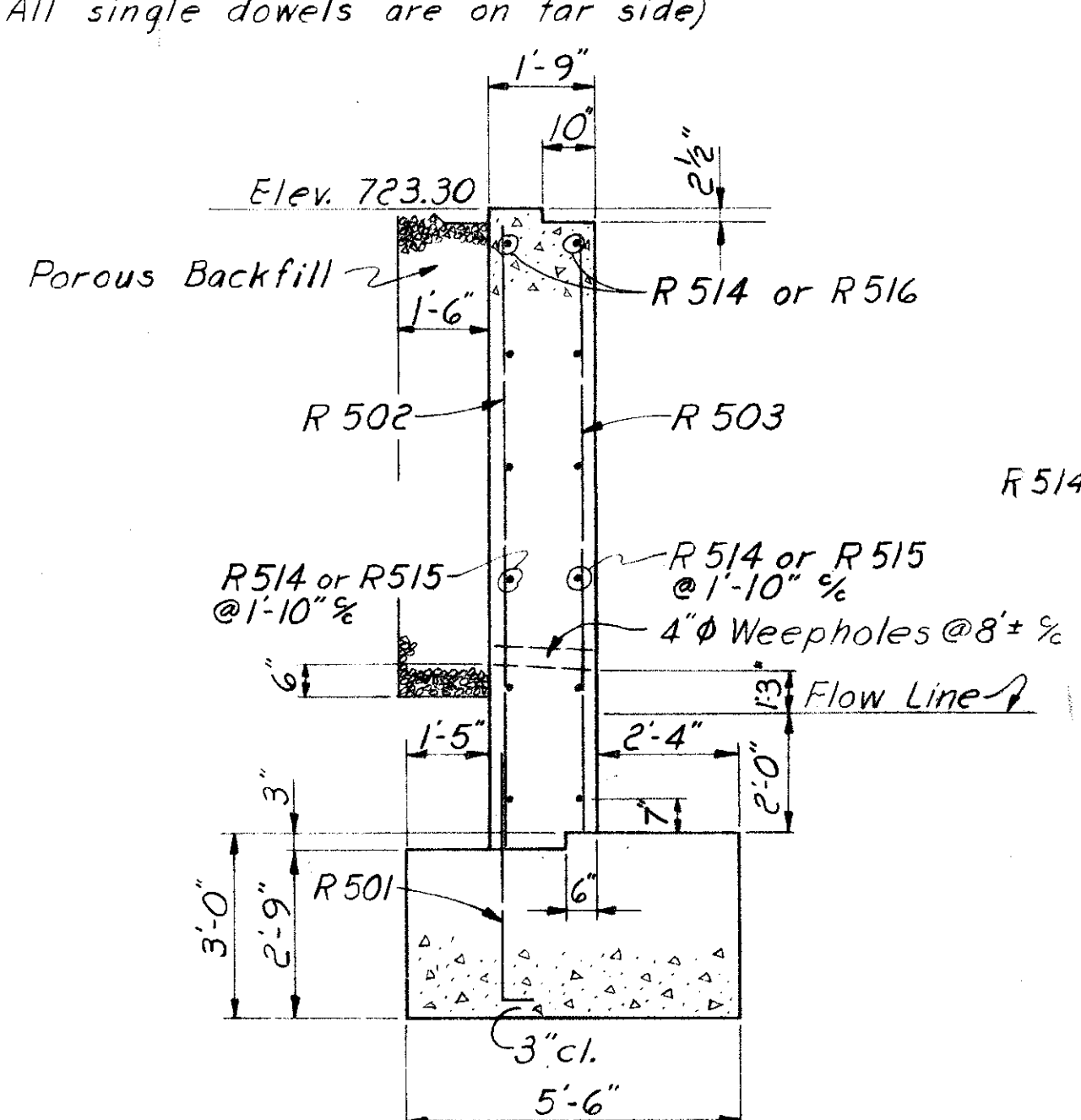
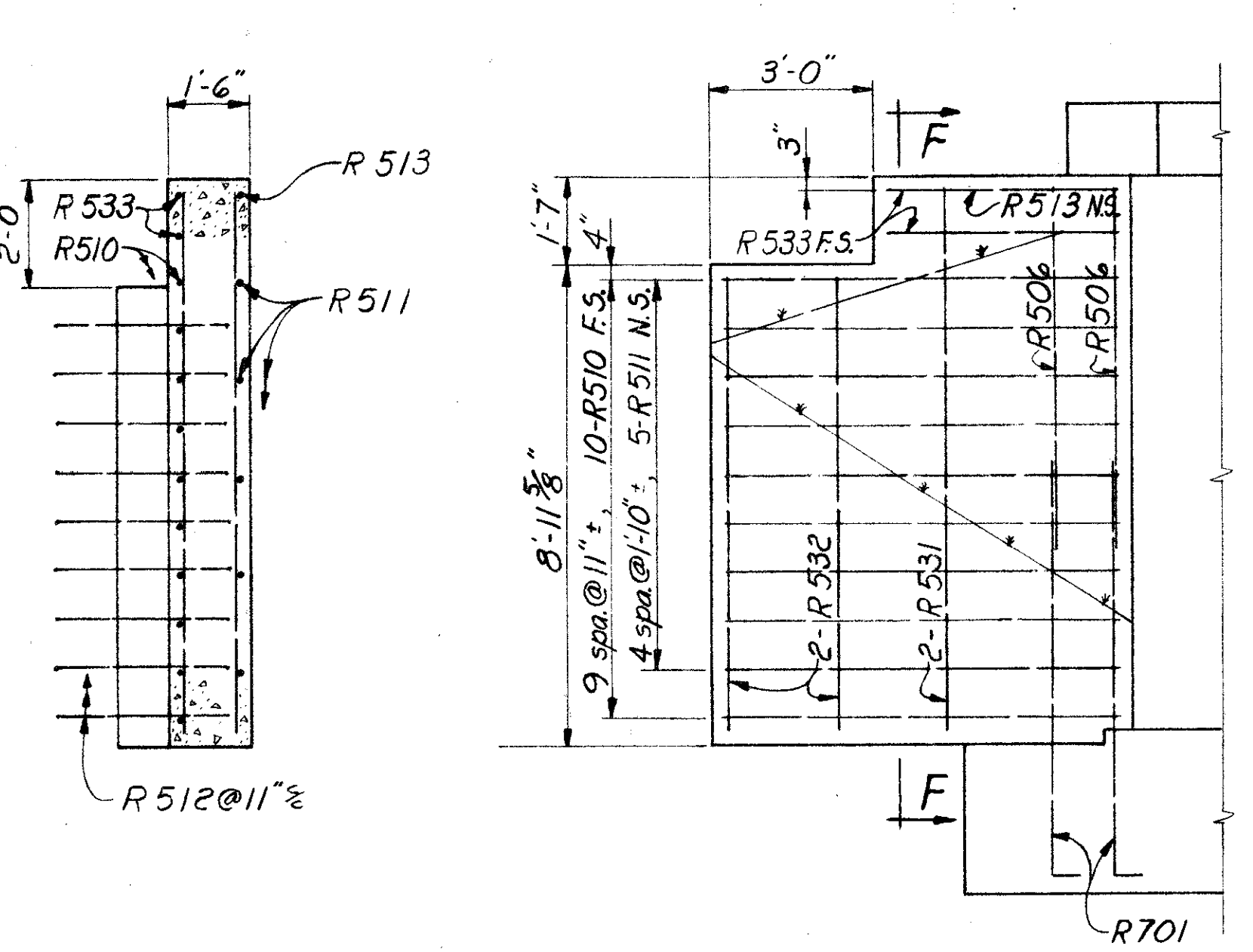
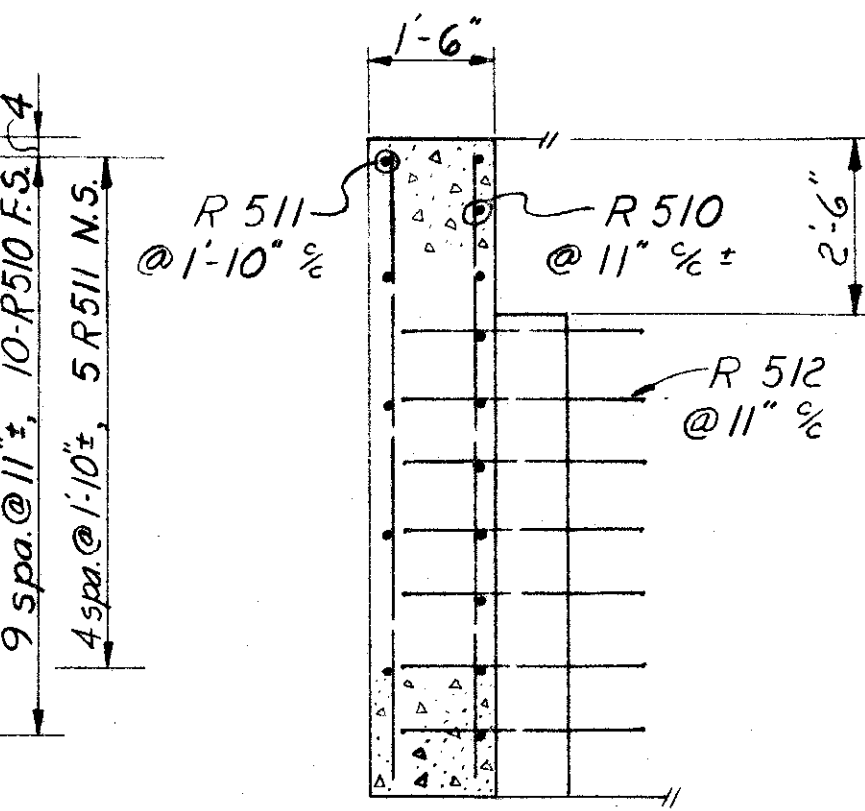
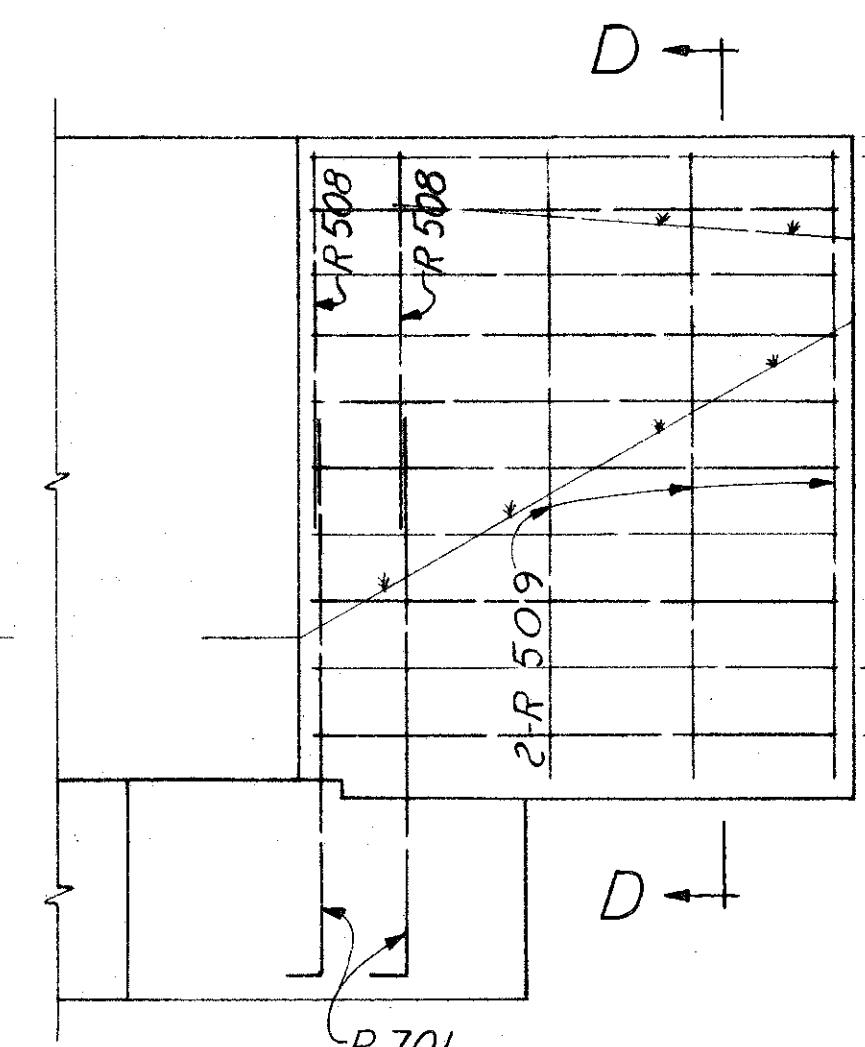
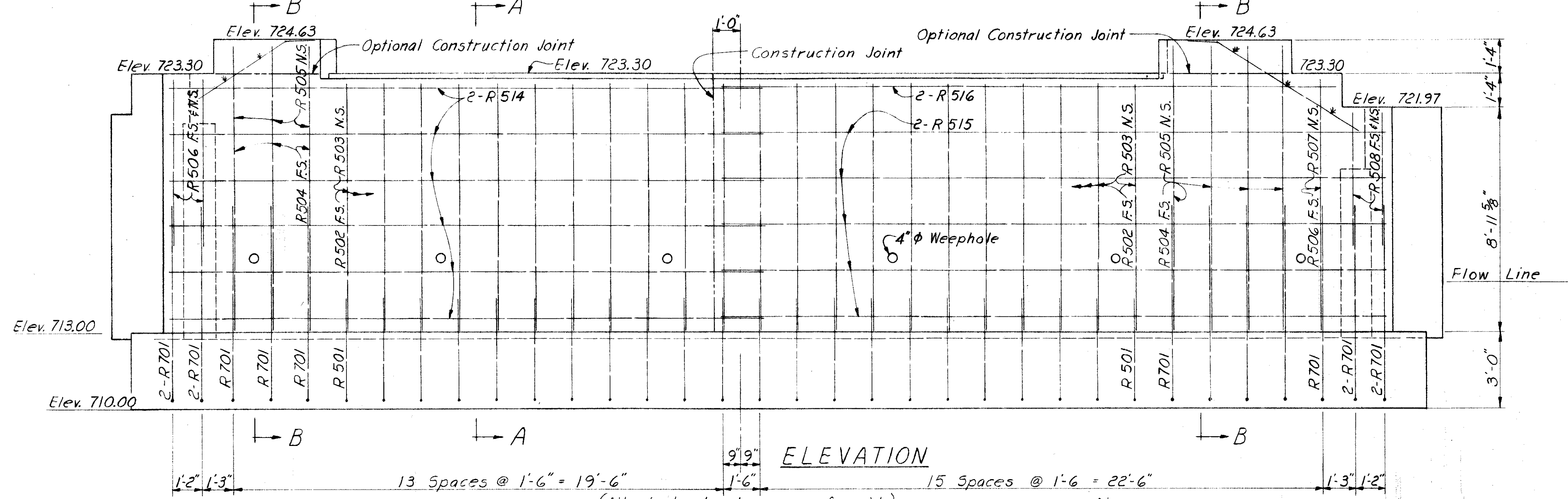
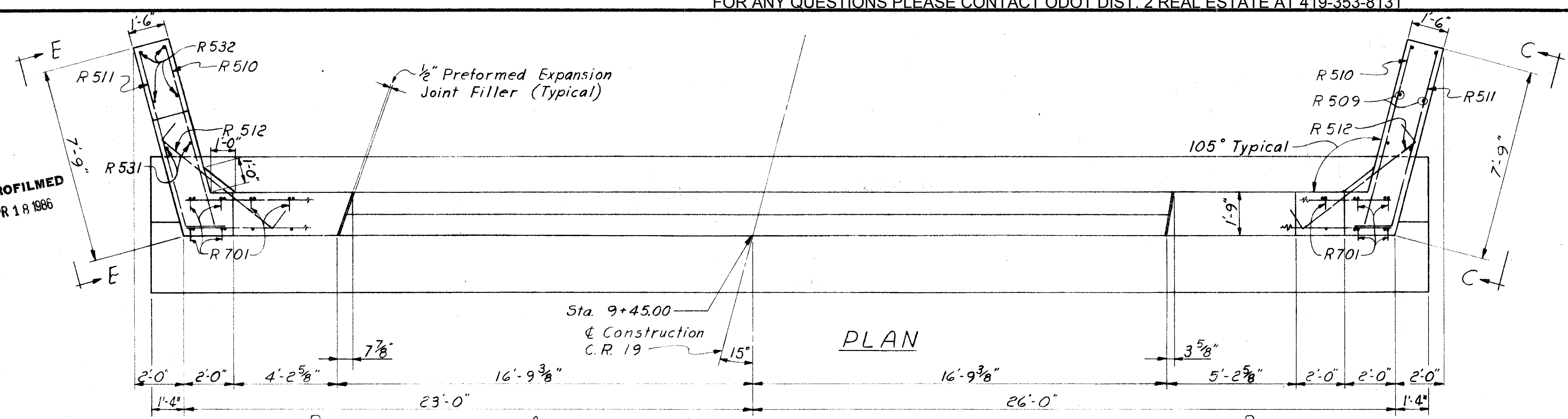
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DFS	DFS		TWD	FCM	5-12-66	
NVP	NVP		5-5-66			

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

10
26

HEN 18 - (0.00)(0.87)(2.85)

MICROFILMED
APR 18 1986



N.S. = Near Side
F.S. = Far Side

SECTION F-F

VIEW E-E

SECTION A-A

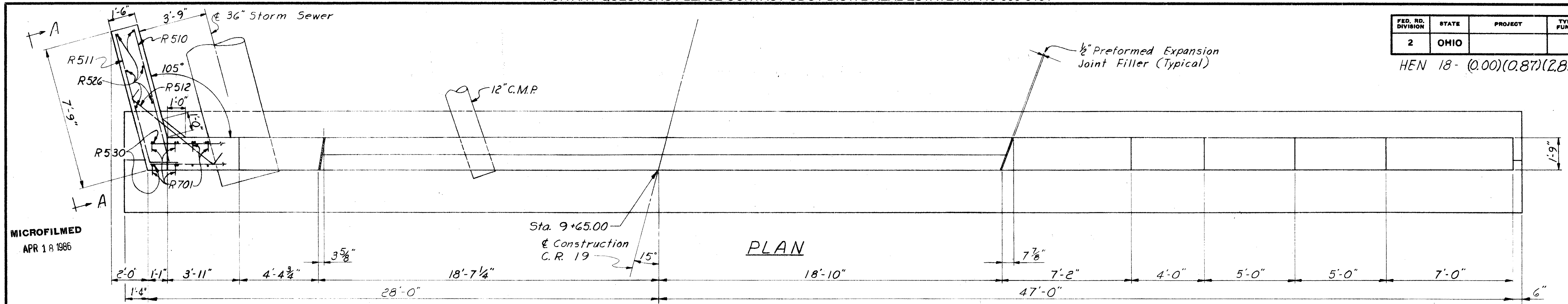
SECTION B-B

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO					
REAR ABUTMENT DETAILS					
BRIDGE NO. HEN 18-0000 C.R. 19 OVER BRANCH OF WADE CREEK HENRY COUNTY STA. 9+43.71 TO STA. 9+66.29					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
DFS	DFS		TWD	FCM	5-12-66

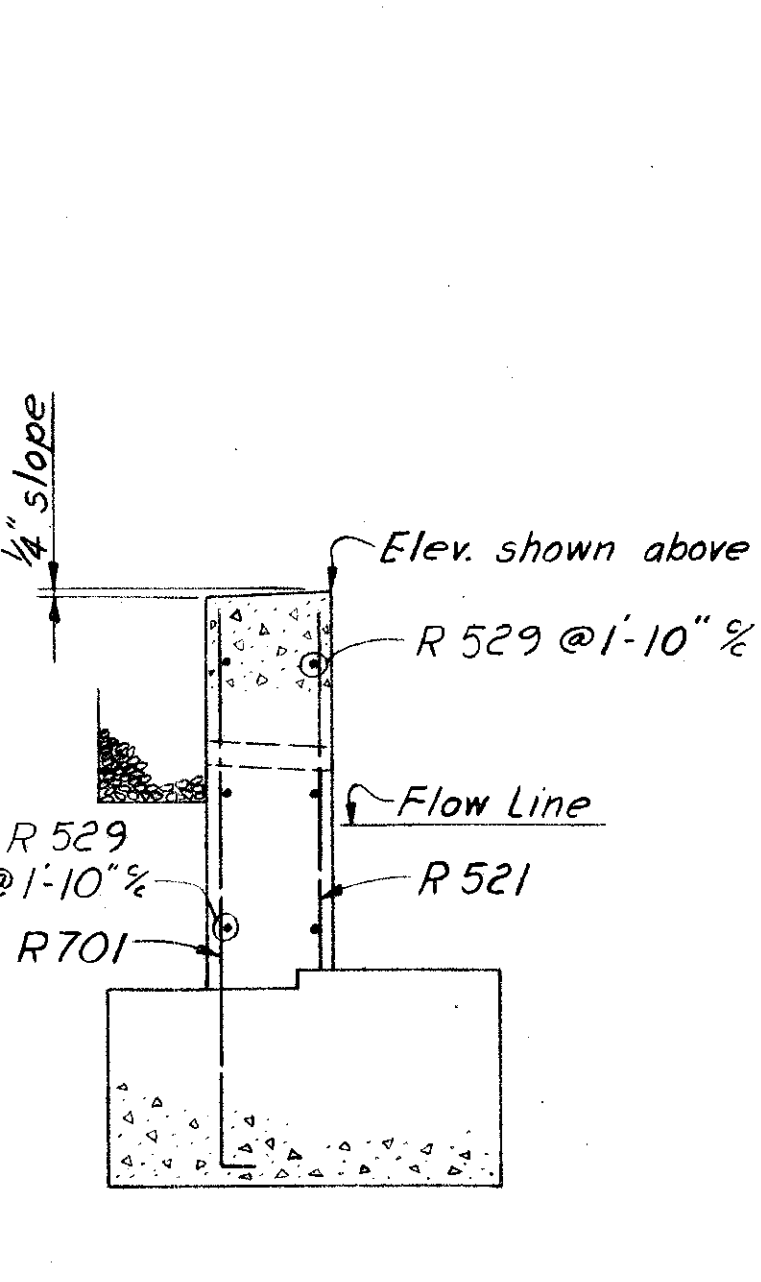
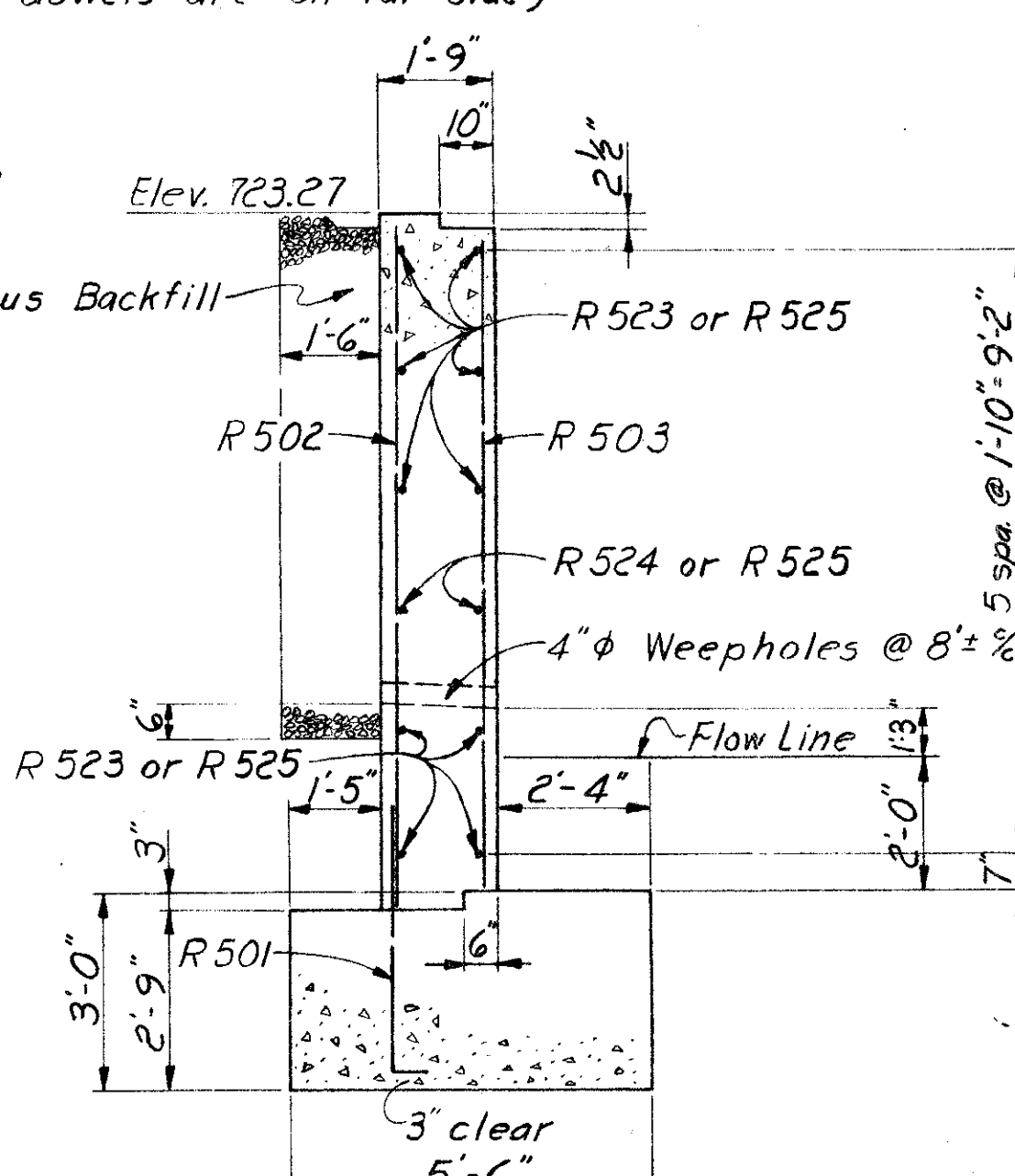
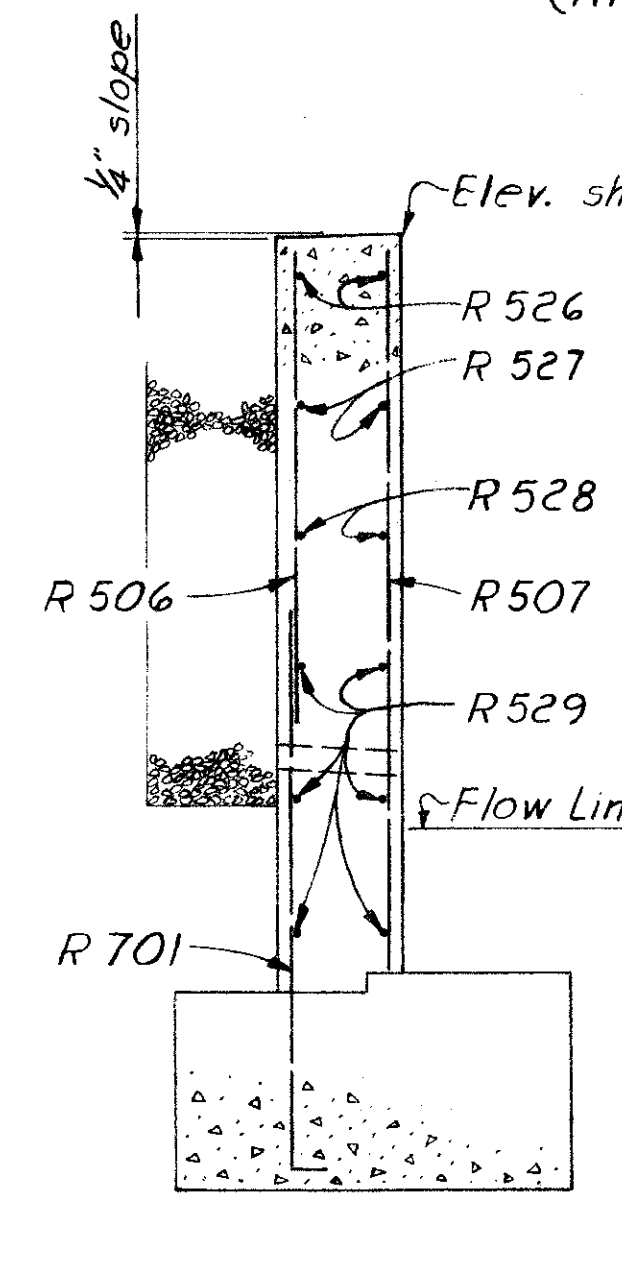
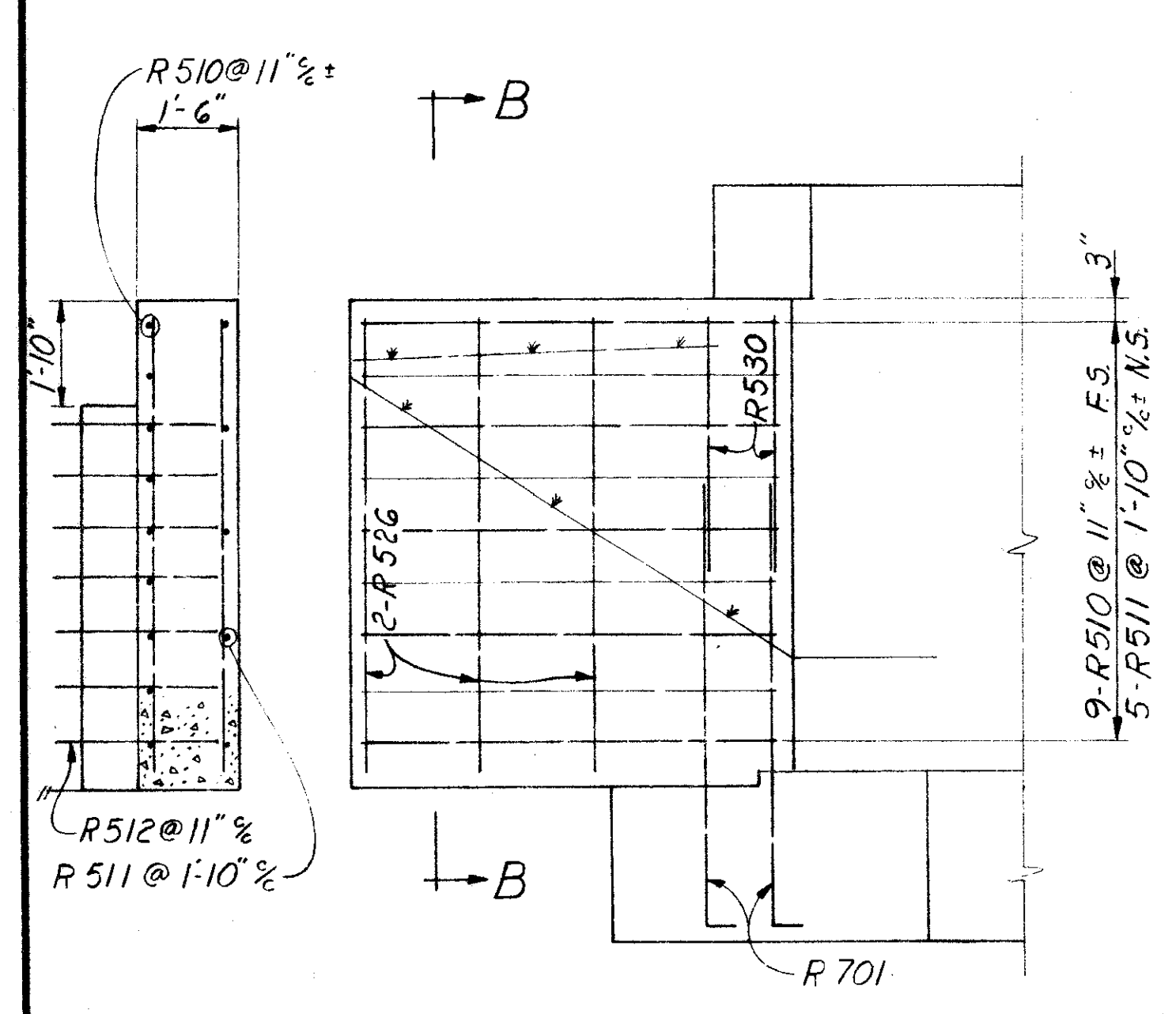
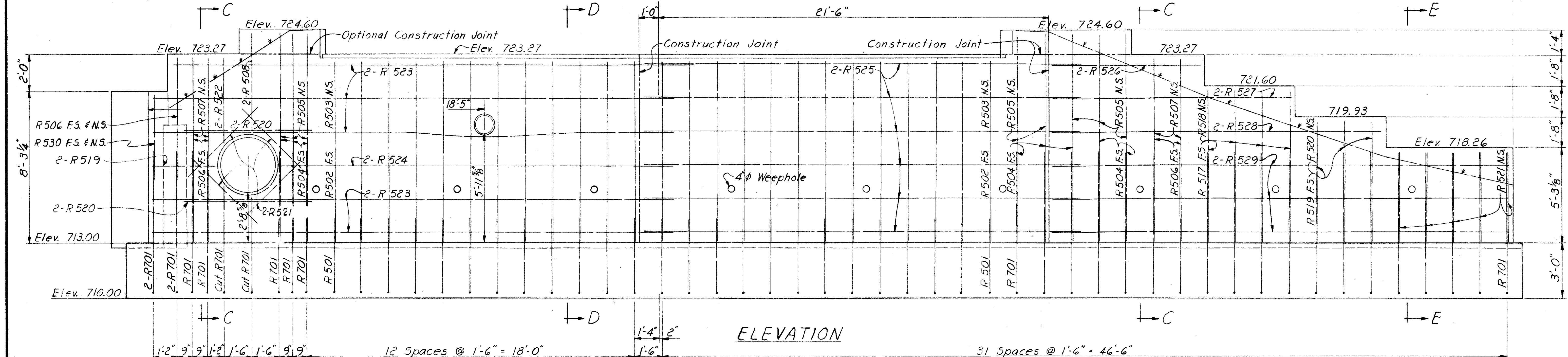
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

11
26

HEN 18- (0.00)(0.87)(2.85)



MICROFILMED
APR 18 1986



N.S. = Near Side
F.S. = Far Side

SECTION B-B

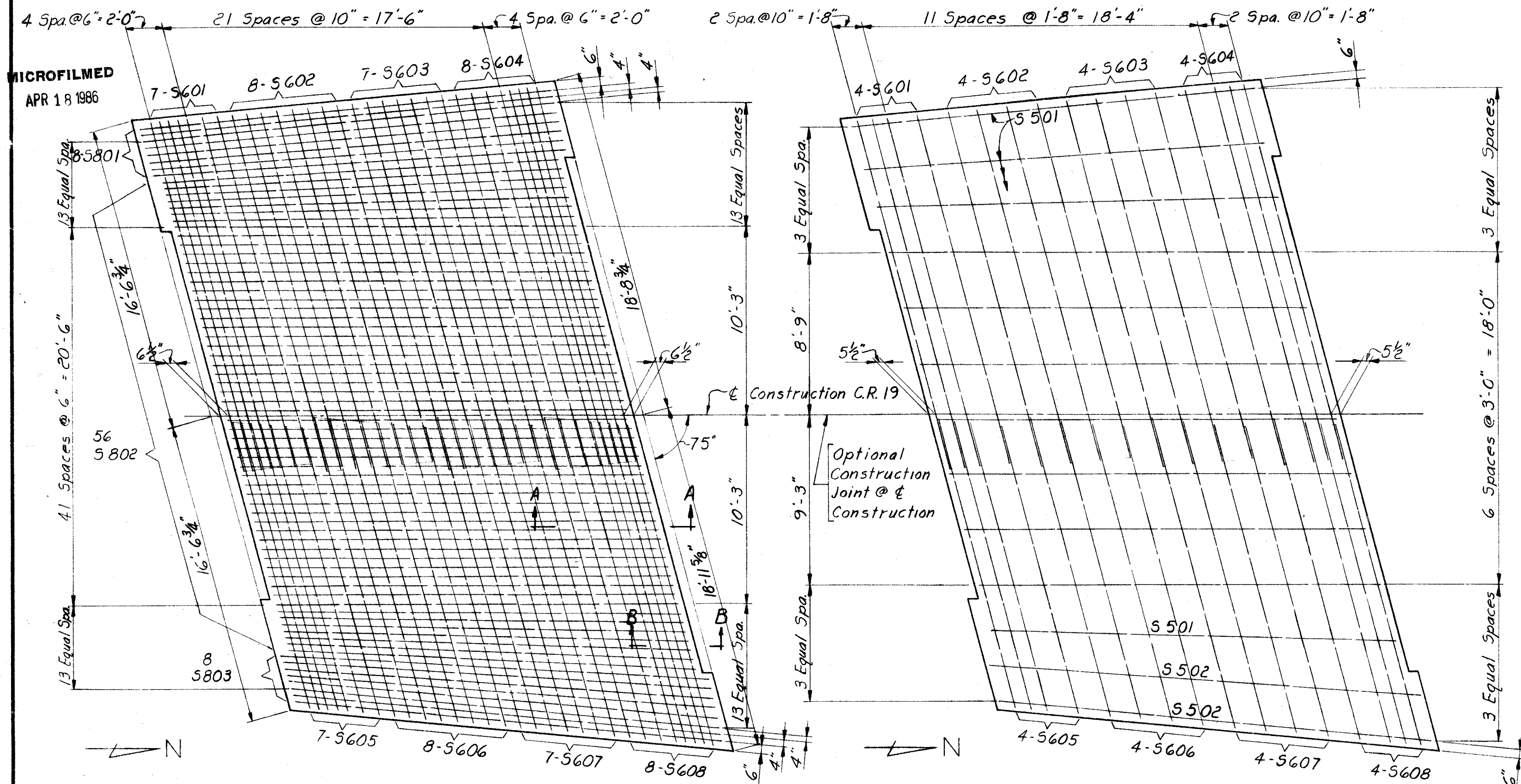
VIEW A-A

SECTION C-C

SECTION D-D

SECTION E-E

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO						
FORWARD ABUTMENT DETAILS						
BRIDGE NO. HEN 18-000 C.R. 19 OVER BRANCH OF WADE CREEK HENRY COUNTY STA. 9+43.71 TO STA. 9+66.29						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DFS	DFS		TWD	FCM	5-12-66	



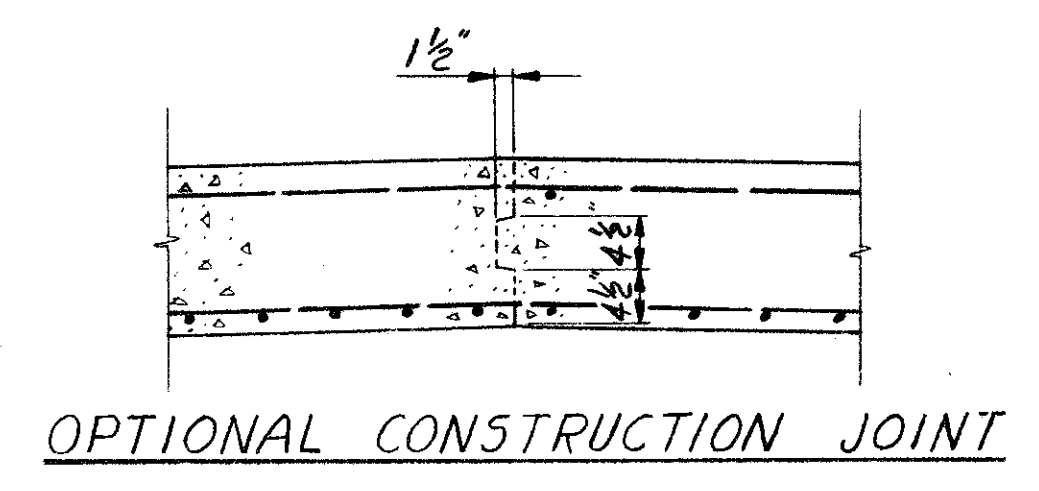
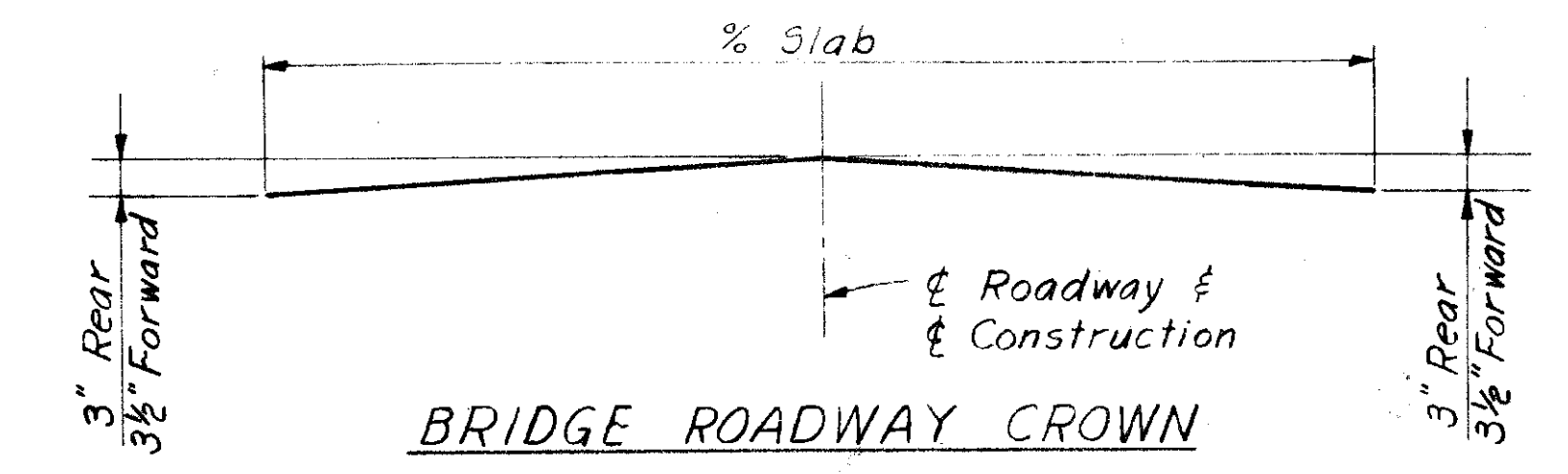
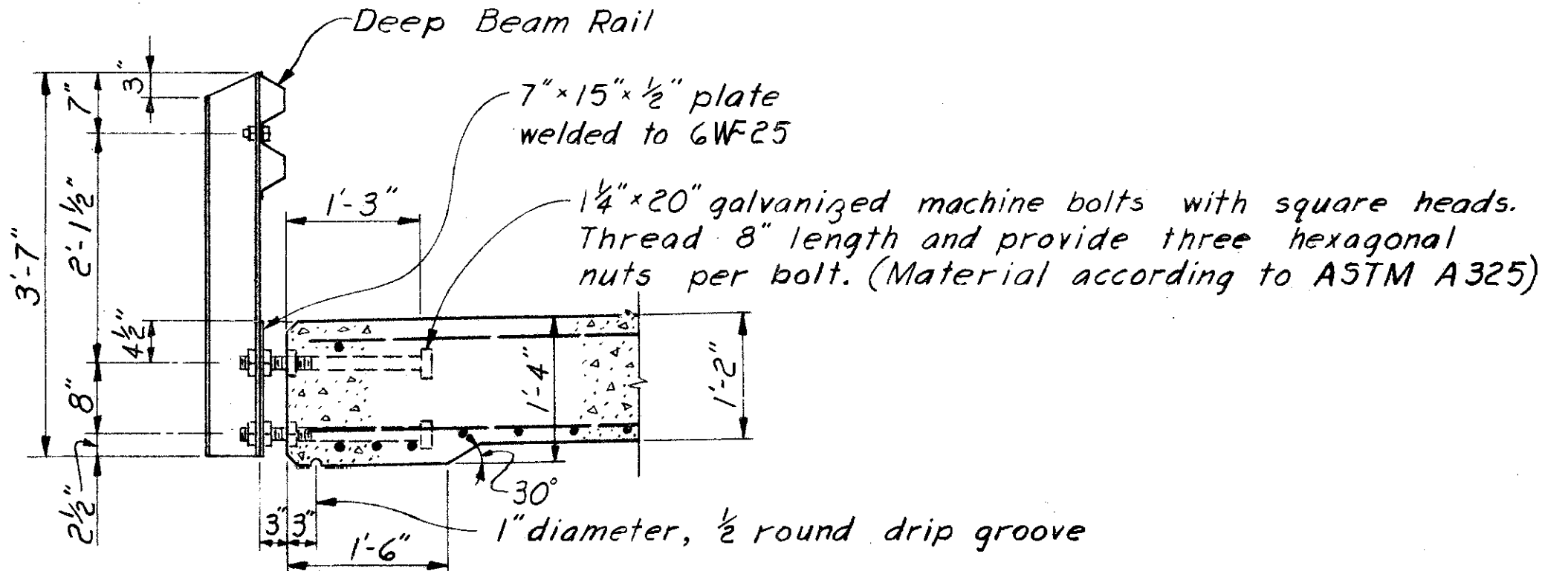
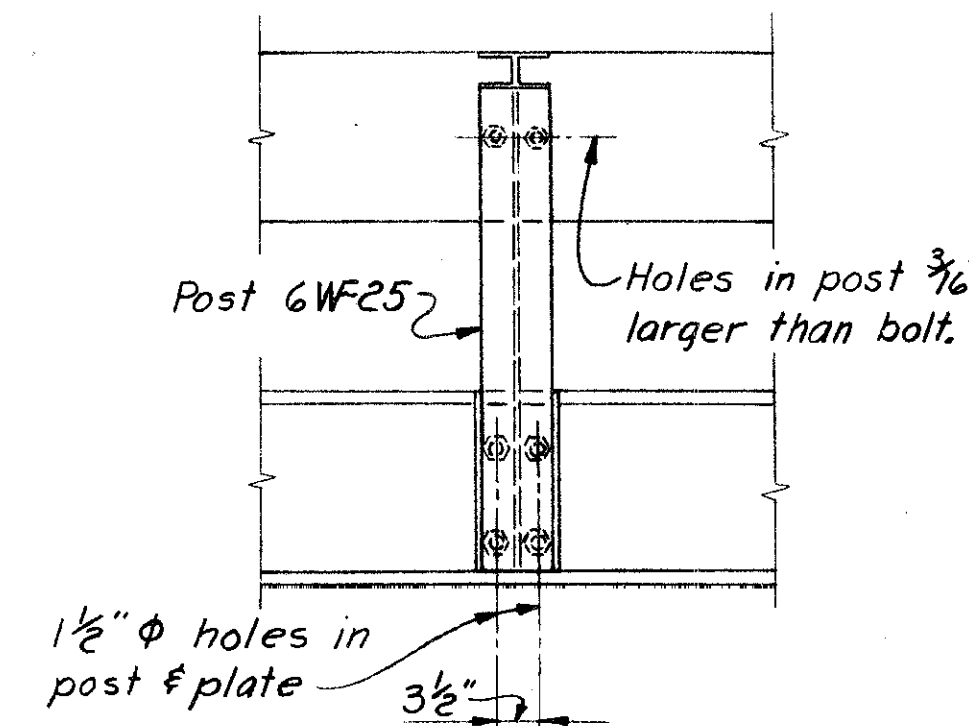
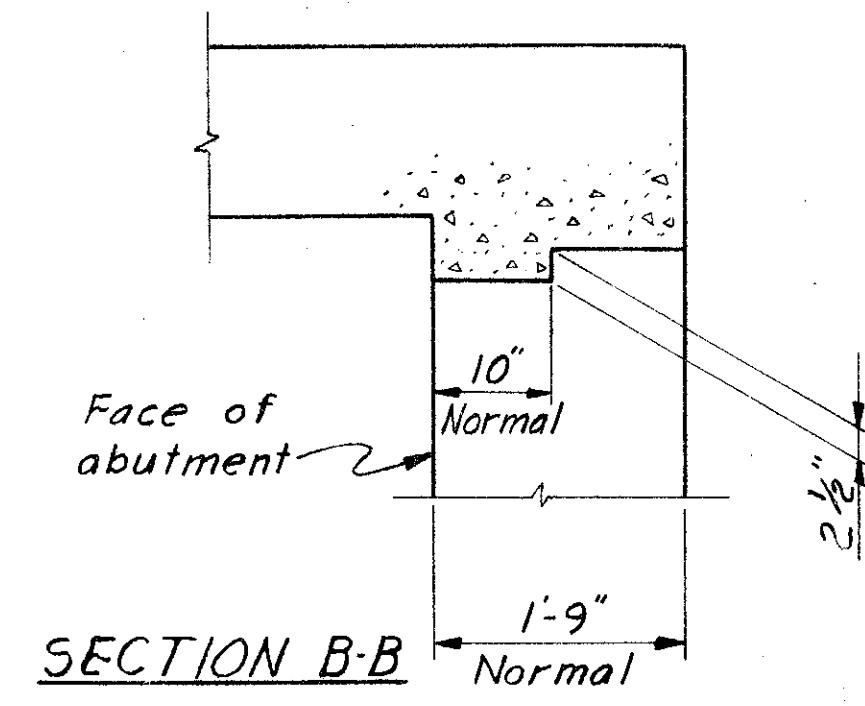
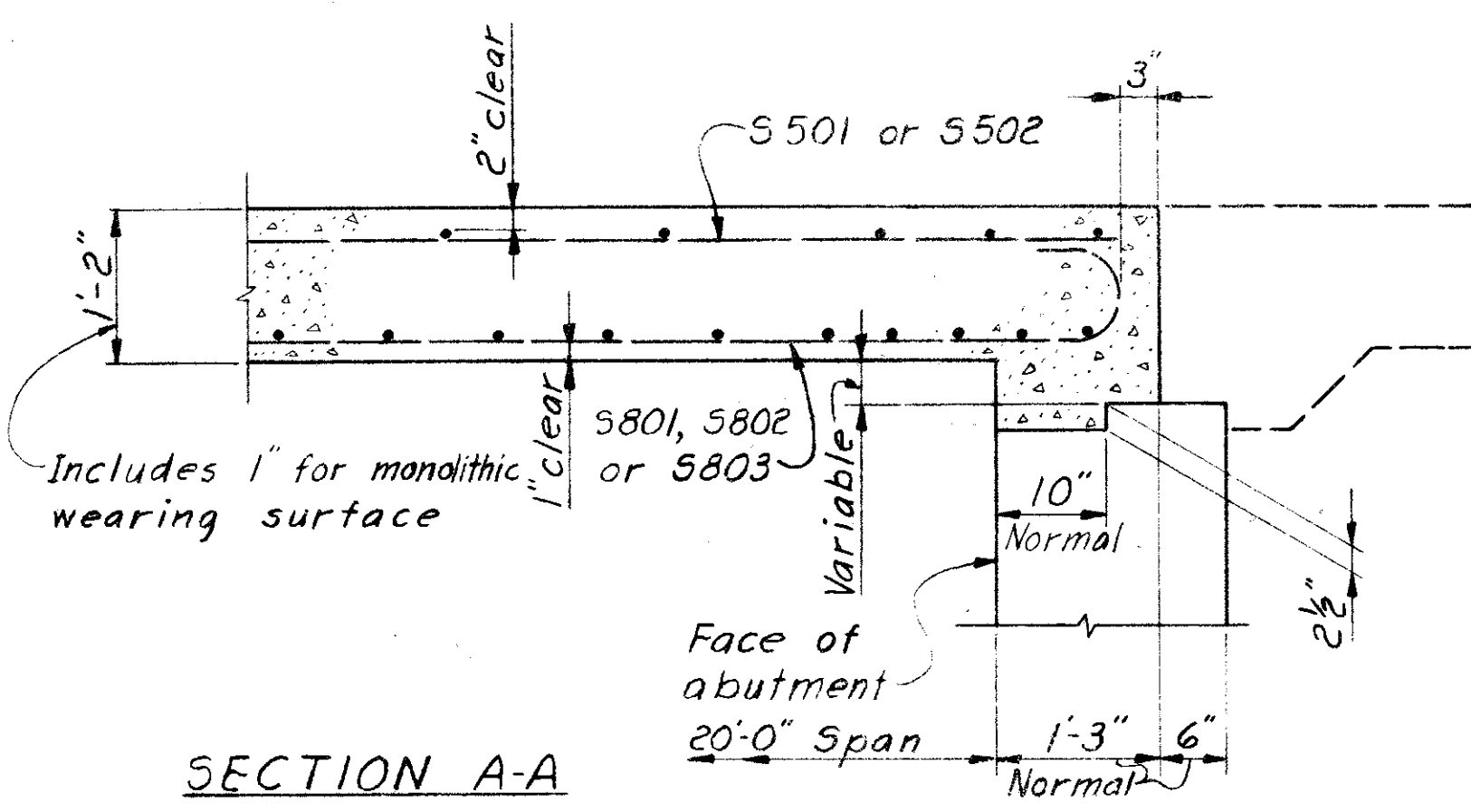
BRIDGE SLAB PLAN
SHOWING
STEEL IN BOTTOM OF SLAB

BRIDGE SLAB PLAN
SHOWING
STEEL IN TOP OF SLAB

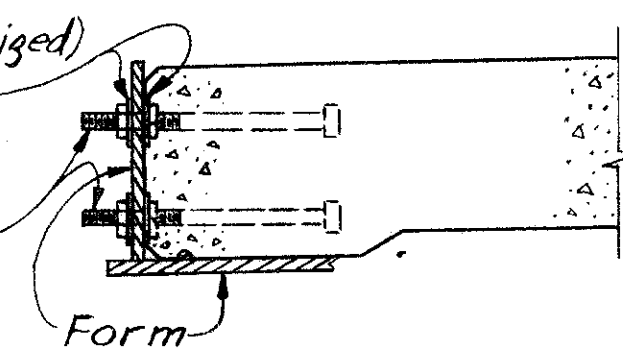
For slab plan dimensions not shown see General Plan, Sheet 8.

REINFORCING STEEL LIST (BRIDGE NO. HEN 18-0000)										
Mark*	No.	Length	Weight	Shape	Bending Diagram	Mark*	No.	Length	Weight	Shape
Abutments						Superstructure				
R 701	46	8'-8"	814	B		S 801	8	24'-8"	527	B
R 501	47	4'-7"	225	B		S 802	56	24'-2"	3613	B
R 502	47	10'-4"	506	S		S 803	8	25'-6"	545	B
R 503	47	9'-10"	482	S		S 601	11	19'-6"	322	S
R 504	15	7'-11"	124	S		S 602	12	20'-0"	360	S
R 505	15	11'-5"	178	S		S 603	11	20'-6"	338	S
R 506	11	6'-7"	75	S		S 604	12	21'-0"	379	S
R 507	5	10'-1"	53	S		S 605	11	16'-0"	264	S
R 508	6	5'-3"	33	S		S 606	12	16'-8"	300	S
R 509	6	8'-10"	55	S		S 607	11	17'-4"	286	S
R 510	29	7'-9"	235	S		S 608	12	18'-0"	324	S
R 511	15	8'-11"	140	B		S 501	11	22'-0"	252	S
R 512	23	6'-5"	154	B	S 502	2	23'-6"	49	S	
R 513	1	5'-11"	6	B						
R 514	12	23'-8"	296	S						
R 515	10	26'-8"	278	S						
R 516	2	24'-7"	51	S						
R 517	4	4'-11"	21	S						
R 518	4	8'-5"	36	S						
R 519	5	3'-1"	16	S						
R 520	7	6'-9"	49	S						
R 521	13	5'-1"	69	S						
R 522	2	4'-3"	9	S						
R 523	10	28'-8"	299	S						
R 524	2	21'-7"	45	S						
R 525	12	24'-0"	300	S						
R 526	8	8'-2"	68	S						
R 527	2	13'-2"	27	S						
R 528	2	18'-2"	38	S						
R 529	6	25'-2"	157	S						
R 530	2	4'-7"	10	S						
R 531	2	10'-2"	21	S						
R 532	4	8'-7"	36	S						
R 533	2	4'-9"	10	S						

*BAR SIZE is indicated by the bar mark. The first digit where three digits are used, and the first two digits where four digits are used indicate the bar size number. For example an R501 is a No. 5 size bar.



Steel washers (need not be galvanized) shall be removed with forms.
Fasten bolts rigidly to form before placing concrete.



SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

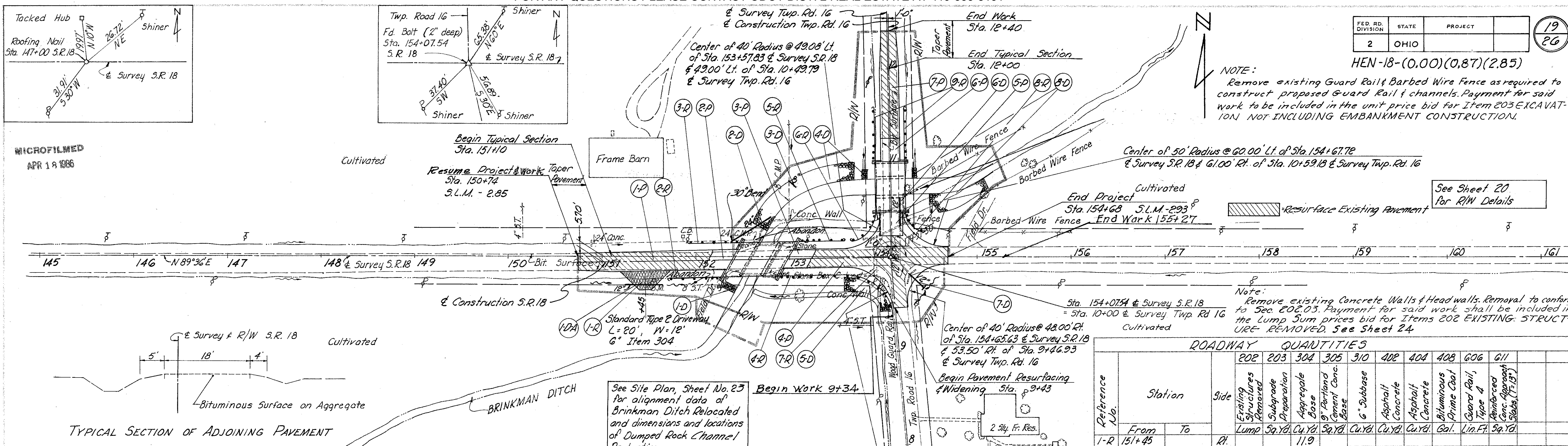
SUPERSTRUCTURE DETAILS

BRIDGE NO. HEN 18-0000
C.R. 19 OVER BRANCH OF WADE CREEK
HENRY COUNTY STA. 9+43.71 TO
STA. 9+66.29

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DFS	DFS		TWD	FCM	5-12-66	
			3-5-66			

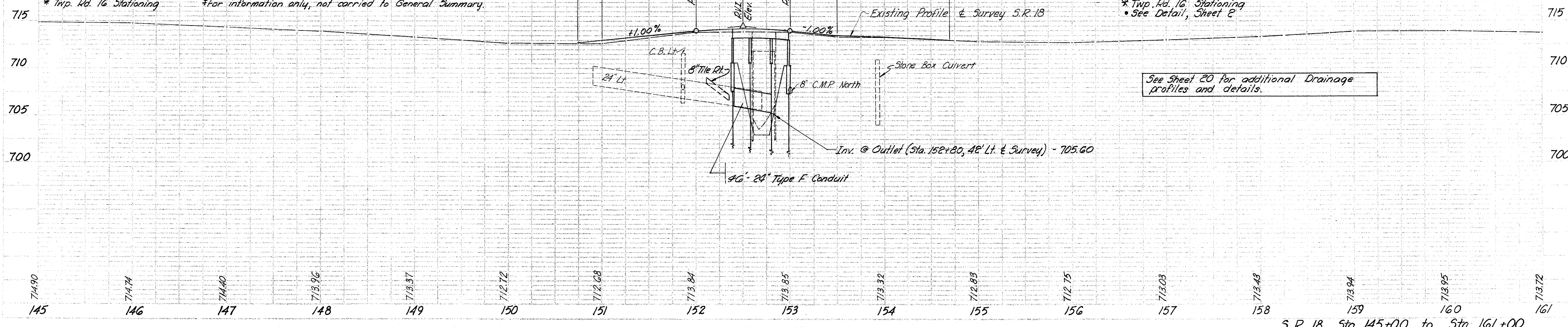
HEN-18-(0.00)(0.87)(2.85)

NOTE:
Remove existing Guard Rail & Barbed Wire Fence as required to construct proposed Guard Rail & channels. Payment for said work to be included in the unit price bid for Item 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION.



Reference No.	Station	Side	Item										
			202	203	304	305	310	402	404	408	606	611	
	From	To	Existing Structures Removed	Subgrade Preparation	Aggregate Base	9" Portland Cement Conc. Base	6" Subbase	Asphalt Concrete	Asphalt Concrete	Bituminous Prime Coat	Guard Rail, Type 4	Reinforced Conc. Approach Slabs (T.I.S.)	
			Lump	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Lin. Ft.	Sq. Yd.	
1-R	151+45	152+27.50	Rt.										
2-R	151+73.24	152+27.50	Rt.										
3-R	151+94.02	152+48.28	Lt.										
4-R	152+87.73	*9+34	Rt.										
5-R	153+08.51	153+56.52	Lt.										
6-R	153+68	*10+48.25	Lt.										
*7-R	153+93						27.8						
8-R	*10+25	*10+48.25	Rt.										
9-R	*11+01.75	*11+56.25	Lt.										
1-P	150+74	152+12.89						9.0		13.6	10.6	10	
2-P	152+12.89	152+37.89						54.4	9.5			55.7	
3-P	152+98.12	153+23.12						54.4	9.5			55.7	
4-P	153+23.12	154+68						46.6		22.6	21.6	76	
5-P	*10+23.25	*10+48.25						65.3	11.3			66.7	
6-P	*11+01.75	*11+26.75						54.4	9.5			55.6	
7-P	*11+26.75	*12+40						8.6		18.0	8.5	16	
Totals			Lump	228.5	76.1	27.8	39.8	54.2	40.7	102	485.04	233.7	

Reference No.	Station	Side	Item									
			Dumped Rock Channel Protection	Concrete Masonry	Conduit, Type C with Class B Bedding	12" Conduit, Type D	8" 12' 24" Conduit, Type F	24" 30' Bend for Type F Conduit	8" 45' Bend for Type F Conduit			
	From	To	Cu. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.					
1-D	151+45	152+44	Rt.									
2-D	152+29	152+81	Lt.									
3-D	153+00		Lt.									
4-D	152+60	153+64	Lt.									
5-D	152+59	154+04	Rt.									
6-D	*10+32	*10+64	Rt.									
7-D	154+26	154+44	Rt.									
8-D	154+48	155+11	Lt.									
Totals				253	0.23	22	40	10	32	46	*1	*1



See Sheet 20 for additional Drainage profiles and details.

Checked N.J.P. J.H.N. J.C.G. E.E.M. S.O.G.
 S.M.B. J.H.N. J.C.G. E.E.M. S.O.G.

