

STATE OF OHIO DEPARTMENT OF HIGHWAYS HIG-753-12.71 HIGHLAND COUNTY PAINT TOWNSHIP - MADISON TOWNSHIP

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

1
72

HIG-753-12.71

We, the Commissioners of Highland County in formal session hereby approve these plans.

HIGHLAND COUNTY, BOARD OF COMMISSIONERS

Date _____

Approved _____
Date APR 30 1966 County Engineer

1965 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 United States of America

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway, and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved _____
Date 4-8-66 Division Deputy Director

Approved _____
Date 4-22-66 Engineer of Bridges

Approved _____
Date 4-22-66 Engineer of Location & Design

Approved _____
Date 4-22-66 Deputy Director of Design & Construction

Approved _____
Date 4-28-66 Deputy Director of Right of Way

Approved _____
Date 4-22-66 Deputy Director of Planning & Programming

Approved _____
Date _____ First Assistant Director

Approved _____
Date 4/25/66 Director of Highways

CONTR. NO. DA-46-022-CIVENG-66-1373

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753	
TRACED BY:		RECOMMENDED BY: <u>Barrett, Cargo, Withers</u>	
CHECKED BY:		APPROVED: <u>William E. Johnson</u> DATE: APRIL 1966	
SUBMITTED BY:		L.T. COL. C.E. DISTRICT ENGINEER	
RECOMMENDED BY:		SPEC. NO.	
CHIEF ENG. DIST.		DRAWING NUMBER	
BARRETT, CARGO, WITHERS & ASSOC. LTD.		016 b - UPC 2-85/1	
CONSULTING ENGINEERS		SHEET 1 OF 9a	
CHILLICOTHE, OHIO		WORK AS CONSTRUCTED	

CONVENTIONAL SIGNS

Township Line	-----
Section Line	-----
Proposed Right-of-Way	----- R/W -----
Existing Right-of-Way	----- R/W -----
Center Line	-----
Fence Line	----- x -----
Guard Rail (existing)	----- o -----
Guard Rail (proposed)	----- o -----
Power Poles	o o o o
Telephone Poles	o o o o
Trees & Stumps (existing)	o o o o
Trees & Stumps (to be removed)	o o o o

INDEX OF SHEETS

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LINE DATA

Begin Project Sta. 671+00.00
End Project Sta. 711+00.00

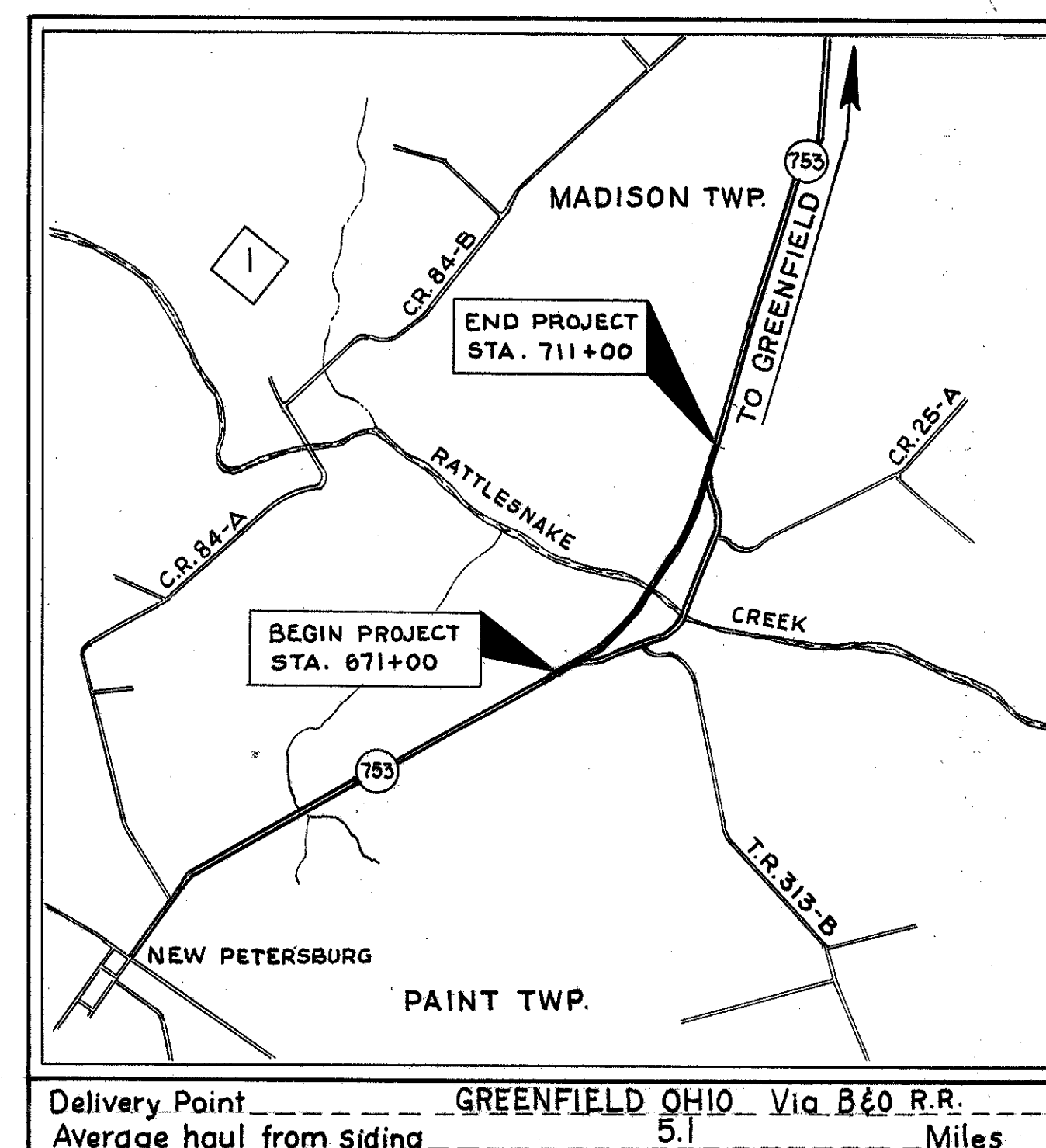
NET LENGTH OF PROJECT = 4,000.00 Lin.Ft. or 0.757 Miles

Add for Approaches

Sta. 670+00.00 to Sta. 671+00.00 = 100.00 Lin.Ft.
Sta. 711+00.00 to Sta. 712+00.00 = 100.00 Lin.Ft.
Sta. 0+11.71 to Sta. 14+00.00 = 1,388.29 Lin.Ft.
Sta. 0+11.00 to Sta. 6+00.00 = 589.00 Lin.Ft.

TOTAL LENGTH OF APPROACHES = 2,177.29 Lin.Ft. or 0.412 Miles

NET LENGTH OF WORK = 6,177.29 Lin.Ft. or 1.169 Miles



LOCATION MAP

SCALE OF MILES

Portion to be improved
State Roads
Other Roads

SCALE

Plan
Profile: Horizontal
Profile: Vertical
Cross Sections

SUPPLEMENTAL STANDARD CONSTRUCTION DRAWINGS

BP-5	6-1-65
GR-1	6-1-65
GR-2A	9-1-65
MC-1	6-1-65
MC-3	6-1-65

SUPPLEMENTAL SPECIFICATIONS

808	7-14-65
811	3-29-65
825	5-22-65
828	7-21-65

File No.	HIGHLAND COUNTY	HIG-753-12.71
Date of Letting	19	
Contract No.		

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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HIG-753-12.71

CURVE DATA S.R. 753 P.I. STA. 782+29.17

$\Delta = 27^{\circ}16'45''$ Lt. $\Delta_c = 19^{\circ}46'48''$
 $D_c = 3^{\circ}00'$ $R_c = 1,909.86'$
 $L_s = 250.00'$ $L_c = 659.31'$
 $\theta_s = 3^{\circ}45'$ $T_s = 588.75'$
 $X_c = 249.89'$ $E_s = 56.82'$
 $Y_c = 5.45'$

CURVE DATA S.R. 753 P.I. STA. 798+12.74

$\Delta = 15^{\circ}30'$ Lt. $\Delta_c = 11^{\circ}30'$
 $D_c = 2^{\circ}00'$ $R_c = 2,864.79'$
 $L_s = 200.00'$ $L_c = 575.00'$
 $\theta_s = 2^{\circ}00'$ $T_s = 489.96'$
 $X_c = 199.98'$ $E_s = 26.99'$
 $Y_c = 2.33'$

CURVE DATA TR 313-B P.I. STA. 1+20

$\Delta = 83^{\circ}14'30''$ Lt.
 $D = 88^{\circ}08'50''$
 $R = 65.00'$
 $L = 94.34'$
 $T = 57.75'$
 $E = 21.95'$

CURVE DATA C.R. 25-A P.I. STA. 9+50.18

$\Delta = 61^{\circ}35'30''$ Lt.
 $D = 9^{\circ}00'$
 $R = 636.62'$
 $L = 684.35'$
 $T = 379.44'$
 $E = 104.80'$

ESTIMATED QUANTITIES

(1-R)	606 Guard Rail, Type 4	25 L.F.
(2-R)	202 Existing Pavement Removed and disposed of	3,369 S.Y.
(3-R)	659 Seeding and Mulching	5,292 S.Y.
(3-R)	202 Existing Guard Rail Removed	2,091 L.F.

COLUMBUS & SOUTHERN OHIO ELECTRIC
 GENERAL TELEPHONE COMPANY

NOTE

PERMISSIVE BORROW PIT AREA IS OWNED IN FEE BY U.S. GOVERNMENT

REVISION	DATE	DESCRIPTION	BY
3	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
2	5-26-67	DELETED PAVEMENT REMOVAL WEST OF EXIST. BRIDGE	E.J.D.
1	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON
CORPS OF ENGINEERS
HUNTINGTON, W. VA.

DRAWN BY:	PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 SCHEMATIC PLAN	
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
RECOMMENDED BY:	APPROVED:	DATE:
CHIEF ENG. DIV.	 L.T. COL. C.E. DISTRICT ENGINEER	APRIL 1966
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 0 100 200 SPEC. NO. DRAWING NUMBER 016b-UPC 2-85/2 SHEET 2 OF 90

TYPICAL SECTIONS

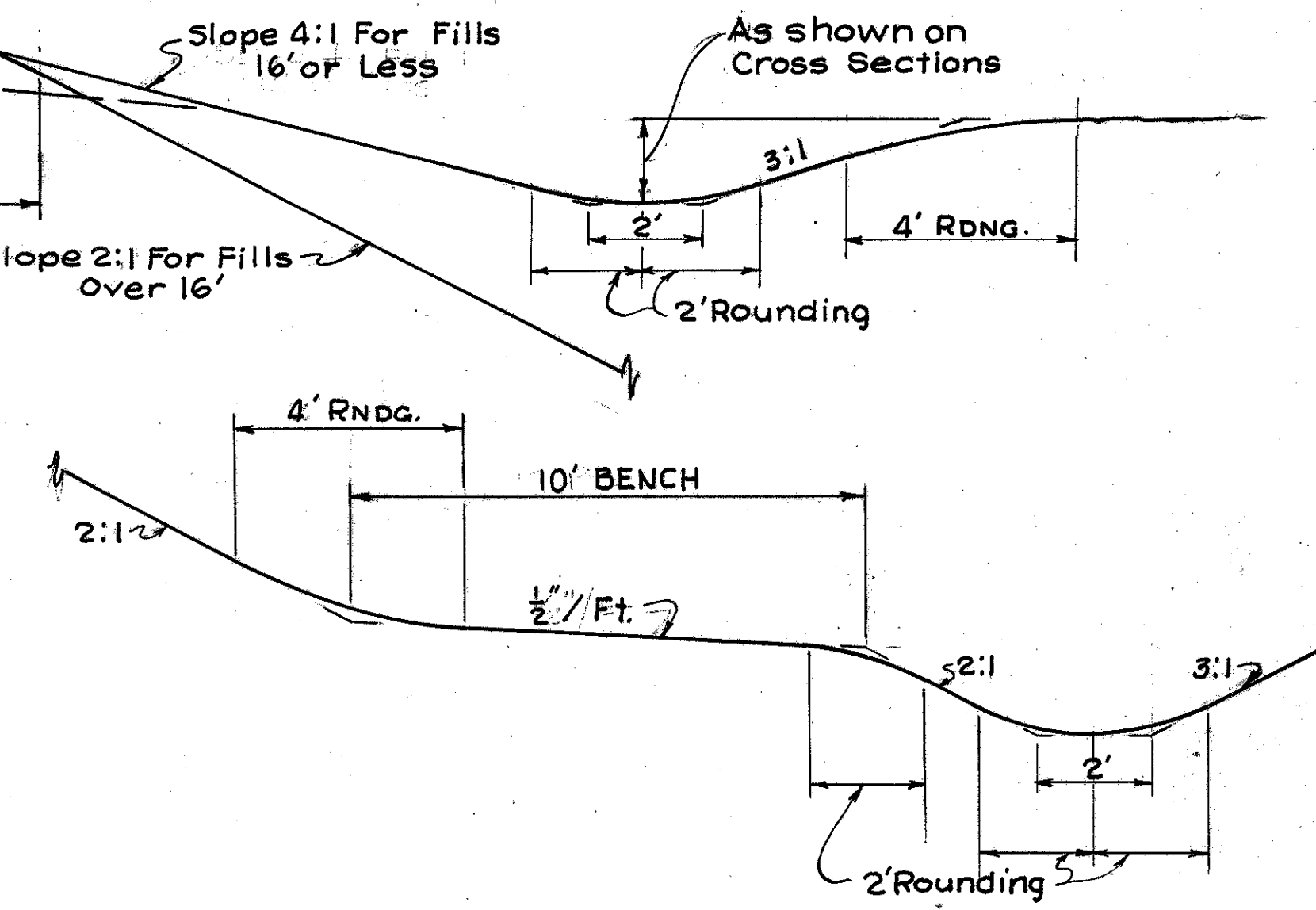
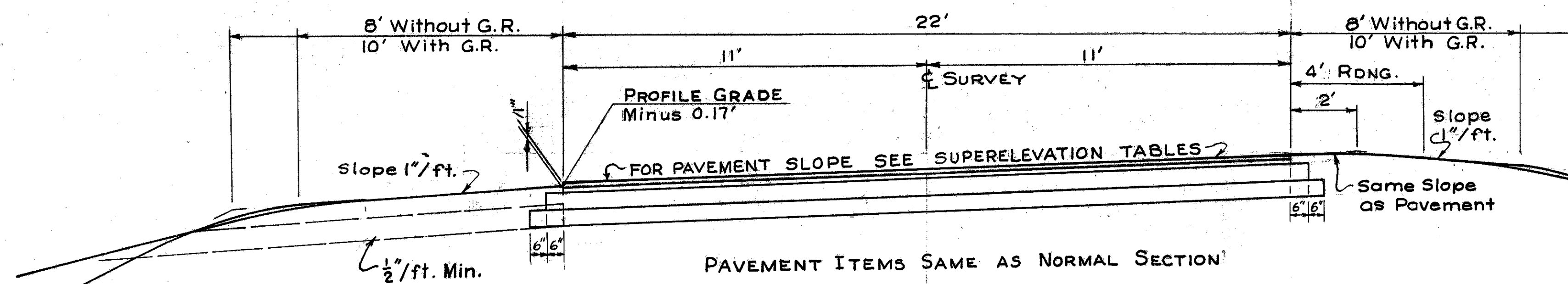
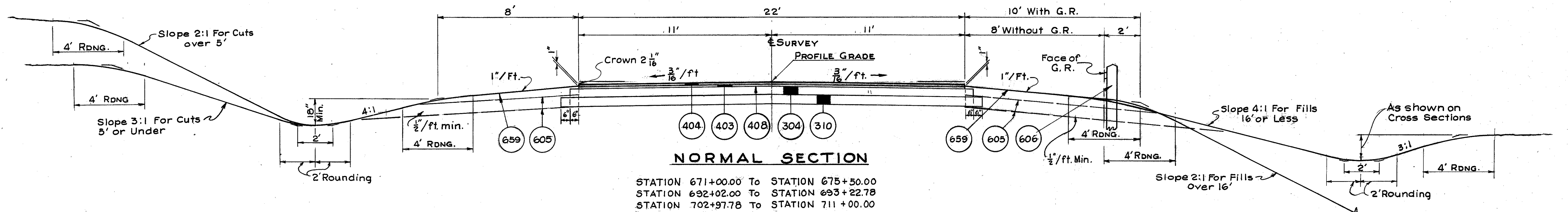
TYPE 404

S.R. 753

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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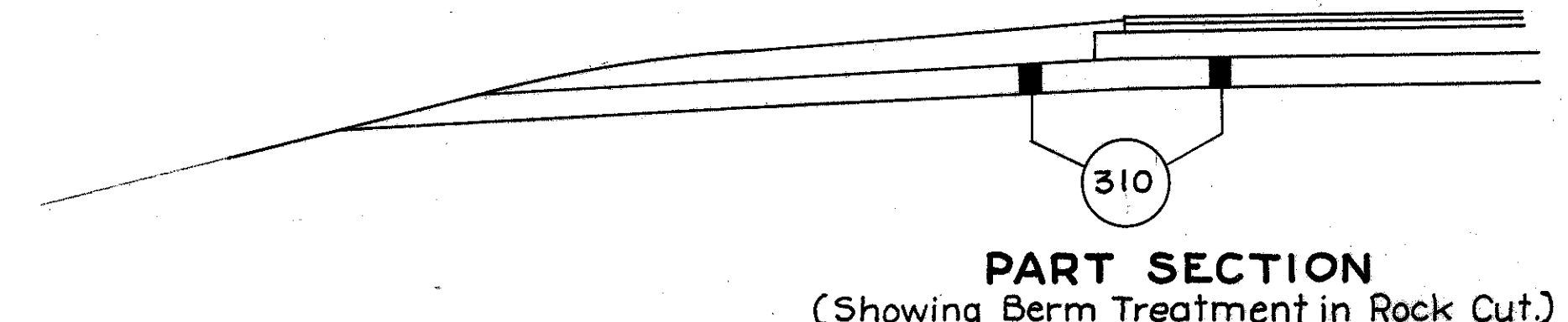


LEGEND

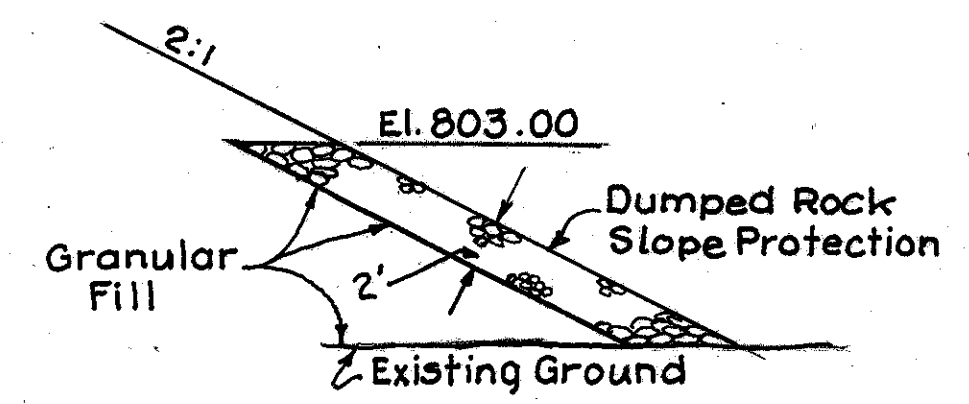
- 404 1/4" Asphalt Concrete, (70-85)
- 403 1 1/4" Asphalt Concrete (70-85)
- 408 Bituminous Prime Coat, 70209 RT-2 or RT-3 applied at the rate of 0.40 Gal. per Sq. Yd.
- 304 6" Aggregate Base
- 310 6" Subbase
- 605 Aggregate Drains
- 606 Guard Rail, Type 4
- 659 Seeding and Mulching

NOTE: ** Extension Of Subbase 310 in Rock Cut in lieu of Aggregate Drains. 605. Sta. 676+25 to Sta. 679+25. See Part Section below.

NOTE~ Details not Shown are same as Normal Section.



NOTE~ DETAILS NOT SHOWN ARE SAME AS NORMAL SECTION



APPROACH SLAB STATION 687+73.00 To STATION 687+98.00
BRIDGE HIG-753-1303 STATION 687+98.00 To STATION 691+77.00
APPROACH SLAB STATION 691+77.00 To STATION 692+02.00

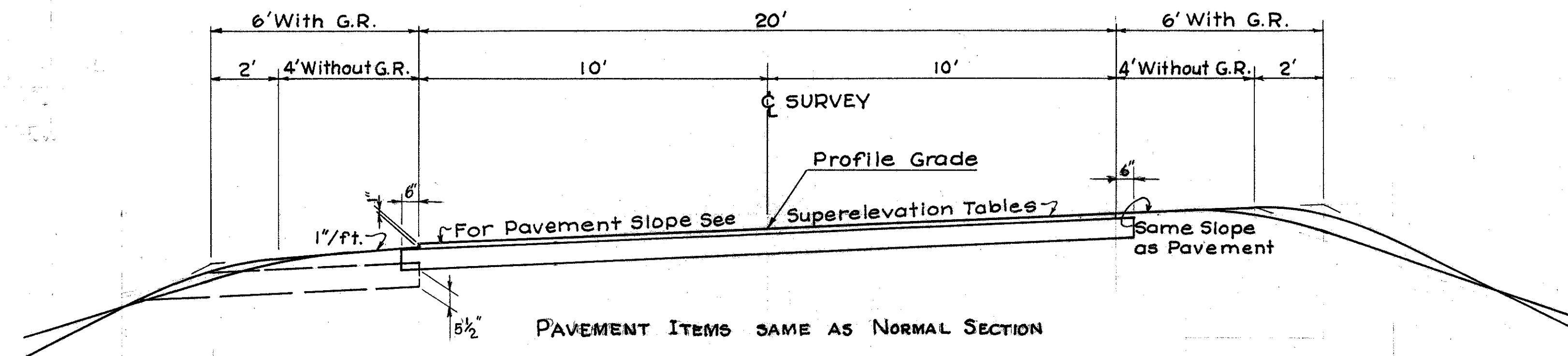
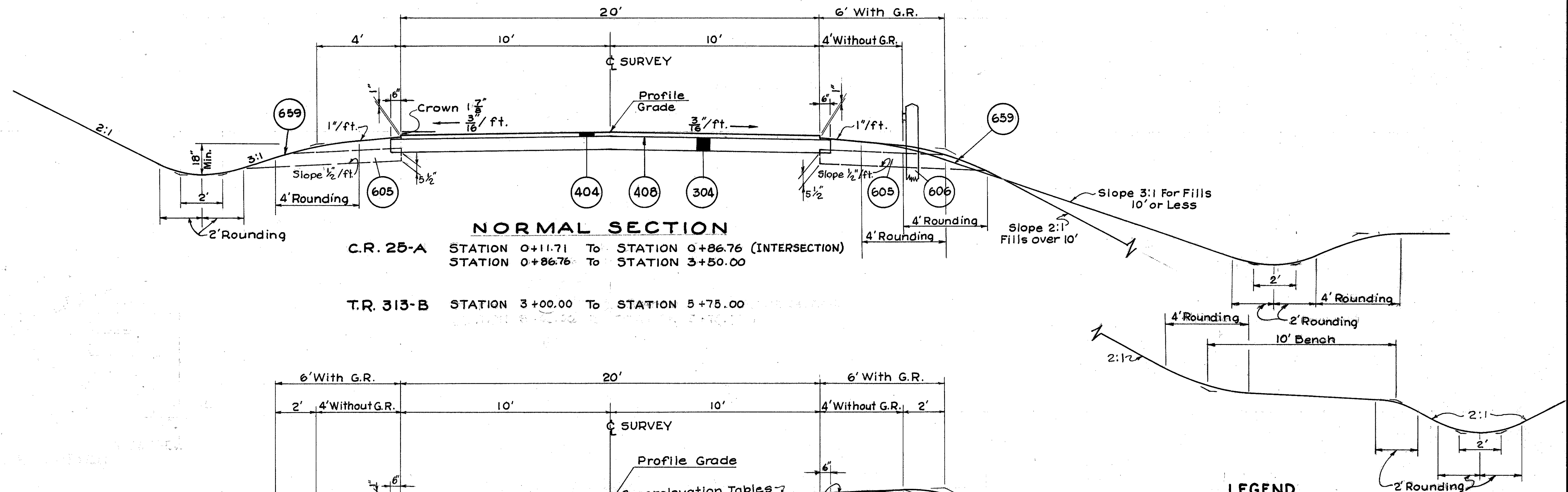
REVISION	DATE	DESCRIPTION	BY
	DEC 68	WORK AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 TYPICAL SECTIONS	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
RECOMMENDED BY:		APPROVED:	
BARRETT, CARGO, WITHERS		LT. COL. G. E. DISTRICT ENGINEER	
CHIEF ENG. DIV.		APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: N/A SPEC. NO. DRAWING NUMBER 016 b-UPC 2-85/3 SHEET 3 OF 90	

TYPICAL SECTIONS TYPE 404

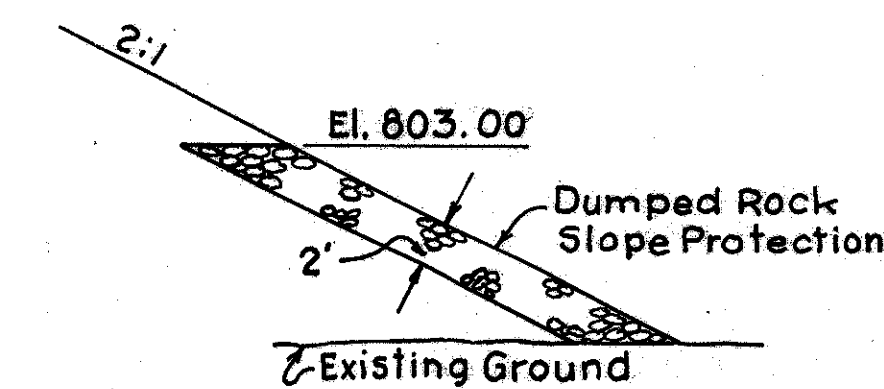
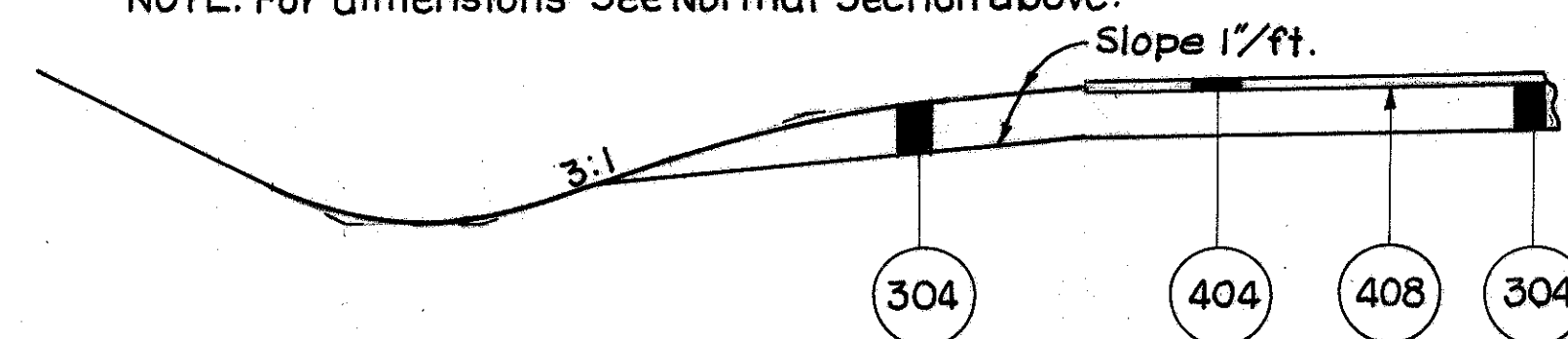
C.R. 25-A & T.R. 313-B

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		4 72

HIG-753-12.71



NOTE: For dimensions See Normal Section above.



DEC. 68	WORK AS CONSTRUCTED	V.L.O.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 TYPICAL SECTIONS FOR C.R. 25-A & T.R. 313-B		
DRAWN BY:	DATE:	APRIL 1966
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
RECOMMENDED BY:		
CHIEF ENG. DIV.		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO	SPEC. NO. DRAWING NUMBER 016b - UPC 2-85/4 SHEET 4 OF 90	

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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FIELD OFFICE

THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 200 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 60 MILES PER HOUR.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE GOVERNMENT DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

SUPERELEVATION

SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE CROWN.

CONTRACTOR'S MAINTENANCE RESPONSIBILITY

ON THIS PROJECT, THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF THE EXISTING PAVEMENT PER ITEM 614 SHALL BE LIMITED TO THOSE PORTIONS OF THE EXISTING PAVEMENT LYING WITHIN THE PROPOSED WORK LIMITS.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS
18"	91	0
30"	5	1
48"	12	0
60"	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE CONTRACTING OFFICER RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS.

ITEM SPECIAL, DRILLED WELL ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF. THE CASING SHALL BE CUT OFF AT LEAST TWO (2) FEET BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST TWO (2) FEET BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS AND CAPPED WITH CLASS E CONCRETE OR A STANDARD THREADED PIPE CAP.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ITEM 605 AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS.

AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

MAINTAINING TRAFFIC

THE FOLLOWING IS A SUGGESTED SEQUENCE OF CONSTRUCTION TO FACILITATE THE MAINTENANCE OF TRAFFIC.

1. CONSTRUCT TEMPORARY ROAD ALONG S.R. 753 FROM STATION 670 TO STATION 675, AND FROM STATION 706+40 TO STATION 712. MAINTAIN TRAFFIC ON TEMPORARY ROAD AND EXISTING PAVEMENT WHILE CONSTRUCTION OF S.R. 753 IS COMPLETED.

2. RE-ROUTE TRAFFIC FROM T.R. 313-B AND C.R. 25-A TO THE NORTH WHILE T.R. 313-B CONNECTION IS CONSTRUCTED. THE RE-ROUTING TO THE NORTH SHALL BE FOR A MAXIMUM OF 30 DAYS.

3. UPON COMPLETION OF THE T.R. 313-B CONNECTION RE-ROUTE TRAFFIC FROM C.R. 25-A AND T.R. 313-B TO THE SOUTH TO THIS CONNECTION AND CONSTRUCT THE EMBANKMENT AND PAVEMENT FOR C.R. 25-A. CONSTRUCT TEMPORARY ROAD FOR C.R. 25-A FROM STATION 11+20 TO STATION 14+0.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EITHER THE EXISTING PAVEMENT, OR TEMPORARY ROAD SURFACED WITH 410 AGGREGATE AND STABILIZED WITH ITEM 616 CALCIUM CHLORIDE.

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE CONTRACTING OFFICER.

EROSION CONTROL

ITEM 601, DUMPED ROCK CHANNEL PROTECTION AND 660, SODDING ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 NOTES	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
RECOMMENDED BY:			
CHIEF ENGINEER		APPROVED: DATE: APRIL 1966	
BARRETT, CARGO, WITHERS		L.T. COL. C. E., DISTRICT ENGINEER	
BARRETT, CARGO, WITHERS & ASSOC., LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: N/A DRAWING NUMBER 016b - UPC 2 - 85/5 SHEET 5 OF 90	

SUPERELEVATION TABLES

HIG-753-12.71

S.R. 753
P.I. Sta 682+29.17
Dc=3' 00" s=.071 ft/ft
Ls=250' =27'-16'-45" Lt.

S.R. 753
P.I. Sta 698+12.74
Dc=2' 00" s=.047
Ls=200' =15'-30" Lt.

C.R. 25A
P.I. Sta 9+50.18 s=.083 ft/ft
Dc=9' =61'-35'-30" Lt.

T.R. 313-B
P.I. Sta 1+20.00 s=.037 ft/ft
R= D=83' - 14' 30" Lt.

Super	Station	Profile Grade	Lt. Edge	Centerline	Rt. Edge
.00	675+50	866.56	866.39	866.56	866.39
.02	675+75	865.64	864.47	865.64	864.49
.07	676+00	864.72	864.55	864.72	864.62
.12	676+25	863.80	863.63	863.80	863.75
.17	676+40.42	863.23	863.06	863.23	863.23
0.29	+65.42	862.31	862.14	862.31	862.43
0.41	+90.42	861.39	861.22	861.43	861.63
0.53	677+15.42	860.47	860.30	860.57	860.83
0.67	+40.42	859.55	859.38	859.72	860.05
0.79	+65.42	858.63	858.46	858.86	859.25
0.91	+90.42	857.71	857.54	858.00	858.45
1.03	678+15.42	856.80	856.63	857.15	857.66
1.15	+40.42	855.95	855.78	856.36	856.93
1.27	+65.42	855.15	854.98	855.62	856.25
1.39	+90.42	854.41	854.24	854.94	855.63
1.44	679+00	854.14	853.97	854.69	855.41
1.56	+25	853.48	853.31	854.09	854.87
	+50	852.88	852.71	853.49	854.27
	+75	852.33	852.16	852.94	853.72
	680+00	851.67	851.67	852.45	853.23
	+25	851.41	851.24	852.02	852.80
	+50	851.04	850.87	851.65	852.43
	+75	850.72	850.55	851.33	852.11
	681+00	850.46	850.29	851.07	851.85
	+25	850.26	850.09	850.87	851.65
	+50	850.12	849.95	850.73	851.51
	+75	850.03	849.86	850.64	851.42
	682+00	850.00	849.83	850.61	851.39
	+25	850.00			
	+50	850.00			
	+75	850.00			
	683+00	850.00			
1.56	+25	850.00			
	683+50	850.01	849.84	850.62	851.40
	+75	850.04	849.87	850.65	851.43
	684+00	850.10	849.93	850.71	851.49
	+25	850.18	850.01	850.79	851.57
1.56	+50	850.29	850.12	850.89	851.65
1.53	+75	850.42	850.25	850.96	851.66
1.41	685+00	850.57	850.40	851.05	851.69
1.29	+25	850.74	850.57	851.16	851.74
1.17	+49.73	850.94	850.77	851.30	851.82
.93	+74.73	851.16	850.99	851.46	851.92
.81	+99.73	851.40	851.27	851.68	852.08
.69	686+24.73	851.66	851.49	851.84	852.28
.57	+49.73	851.95	851.78	852.07	852.35
.45	+74.73	852.26	852.09	852.32	852.54
.33	+99.73	852.60	852.43	852.60	852.76
.21	687+24.73	852.96	852.79	852.96	853.00
.12	+49.73	853.33	853.16	853.33	853.28
.06	+74.73	853.66	853.49	853.66	853.55
.00	+99.73	853.95	853.78	853.95	853.78
.00	688+00	853.95	853.78	853.95	853.78

Super	Station	Profile Grade	Lt. Edge	Centerline	Rt. Edge
.00	692+50	852.96	852.79	852.96	852.79
.06	+75	852.60	852.43	852.60	852.49
.12	693+00	852.26	852.09	852.26	852.21
.17	693+22.78	851.98	851.81	851.98	851.98
.26	+42.78	851.75	851.58	851.75	851.84
.34	+62.78	851.53	851.36	851.53	851.70
.43	+82.78	851.33	851.16	851.38	851.59
.52	694+02.78	851.13	850.96	851.22	851.48
.61	+22.78	850.95	850.78	851.09	851.39
.69	+42.78	850.80	850.63	850.98	851.32
.78	+62.78	850.65	850.48	850.87	851.26
.87	+82.78	850.52	850.35	850.79	851.22
.95	695+02.78	850.40	850.23	850.71	851.18
1.04	+22.78	850.30	850.13	850.65	851.17
	+25	850.29	850.12	850.64	851.16
	+50	850.18	850.01	850.53	851.05
	+75	850.10	849.93	850.45	850.97
	696+00	850.04	849.87	850.39	850.81
	+25	850.01	849.84	850.36	850.88
	+50	850.00	849.83	850.35	850.87
	+75	850.00			
	697+00	850.00			
	+25	850.00			
	+50	850.00			
	+75	850.00			
	698+00	850.00	849.83	850.35	850.87
	+25				
	+50				
	+75				
	699+00				
	+25				
	+50				
	+75				
	700+00				
	+25				
	+50				
	+75				
1.04	+97.78	850.00	849.83	850.35	850.87
.95	701+17.78			850.31	850.78
.87	+37.78			850.27	850.70
.78	+57.78			850.22	850.61
.69	+77.78			850.18	850.52
.61	+97.78			850.14	850.44
.52	702+17.78			850.09	850.35
.43	+37.78			850.05	850.26
.34	+57.78			850.00	850.17
.26	+77.78			850.00	850.09
.17	702+97.78			850.00	850.00
.16	703+00			850.00	849.99
.10	+25			850.00	849.93
.04	+50			850.00	849.87
.00	+75	850.00	849.83	850.00	849.83

Super	Station	Profile Grade	Lt. Edge	Centerline	Rt. Edge
0	3+50	840.42	840.26	840.42	840.26
.12	+75	839.21	839.05	839.21	839.17
.24	4+00	838.04	837.88	838.04	838.12
.36	+25	837.01	836.85	837.03	837.21
.48	+50	836.14	835.98	836.22	836.46
.60	+75	835.41	835.25	835.55	835.85
.72	5+00	834.84	834.68	835.04	835.40
.84	+25	834.42	834.26	834.68	835.10
.96	+50	834.15	833.99	834.47	834.95
1.08	+75	834.02	833.86	834.40	834.94
1.20	6+00	834.05	833.89	834.49	835.09
1.32	+25	834.23	834.07	834.73	835.39
1.44	+50	834.56	834.40	835.12	835.84
1.56	+75	835.04	834.88	835.66	836.44
1.66	7+00	835.67	836.51	836.34	837.17
	+25	836.45	838.29	837.12	837.95
	+50	837.38	837.22	838.05	838.88
	+75	838.46	838.30	839.13	839.96
	8+00	839.69	839.53	840.36	841.19
	+25	841.07	840.91	841.74	842.57
	+50	842.61	842.45	843.28	844.11
	+75	844.29	844.13	844.96	845.79
	9+00	846.12	845.96	846.79	847.62
	+25	848.10	847.94	848.77	849.60
	+50	850.24	850.08	850.91	851.74
1.66	+75	852.52	852.36	853.19	854.02
1.66	10+00	854.96	854.80	855.63	856.46
1.66	+25	857.54	857.38	858.21	859.04
1.56	+50	860.20	860.04	860.82	861.60
1.50	+75	862.86	862.70	863.45	864.20
1.34	11+00	865.52	865.36	866.03	866.70
1.18	+25	868.18	868.02	868.61	869.20
1.02	+50	870.84	870.68	871.19	871.70
.86	+75	873.50	873.34	873.77	874.20
.70	12+00	876.16	876.00	876.35	876.70
.54	+25	878.82	878.66	878.93	879.20
.48	+50	881.48	881.32	881.56	881.80
.32	+75	884.14	883.98	884.14	884.30
.16	13+00	886.80	886.64	886.80	886.80
.00	+25	889.46	889.28	889.46	889.28

Super	Station	Profile Grade	Dist. Lt.	Lt. Edge	Centerline	Rt. Edge
	0+25	867.28			867.28	
	+50	866.80			866.80	
0.89	+62.25	866.48	14.0	865.96	866.48	866.85
0.89	+75	866.14	14.0	865.62	866.14	866.51
0.89	1+00	865.31	14.0	864.79	865.31	865.68
0.89	+25	864.29	14.0	863.76	864.29	864.66
0.89	+50	863.10	14.0	862.58	863.10	863.47
0.84	1+56.68	862.74	13.73	862.25	862.74	863.09
0.71	+75	861.74	13.0	861.34	861.74	862.05
0.55	2+00	860.21	12.0	859.91	860.21	860.46
0.40	+25	858.49	11.0	858.28	858.49	858.68
0.26	+50	856.60	10.0	856.44	856.60	856.70
0.14	+75	854.53	10.0	854.37	854.53	854.51
0.07	3+00	850.21	10.0	850.05	850.21	850.05

DEC 68 WORK AS CONSTRUCTED V.L.O.

REVISION DATE DESCRIPTION BY

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON
CORPS OF ENGINEERS
HUNTINGTON, W. VA.

DRAWN BY:
TRACED BY:
CHECKED BY:
SUBMITTED BY:
RECOMMEND
CHIEF ENGINEER

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF
OHIO STATE ROUTE 753
SUPERELEVATION TABLES

APPROVED: DATE: APRIL 1966
LT. COL. C.E. DISTRICT ENGINEER

BARRETT, CARGO, WITHERS & ASSOC. LTD.
CONSULTING ENGINEERS
CHILLICOTHE, OHIO

SCALE: N/A SPEC. NO.
DRAWING NUMBER
016b - U P C 2 - 85/6
SHEET 6 OF 90

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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HIG-753-12.71

ROADWAY AND DRAINAGE

See Sheet No.	202	202	202	202	601	SPECIAL	602	603	603	604	606	660	SPECIAL	SPECIAL	SPECIAL	202
	Pipe Removed 15" and Under	Existing Guard Rail Removed & Disposed of	Portions of Existing Structure Removed	Existing Structure Removed	Dumped Rock Channel Protection Type "A"	6" Reinforced Concrete Channel Paving	Concrete Masonry	60" Conduit 10-10 Gage Class "B" Bedding 707.03	108" Conduit 7-5 Gage Class "B" Bedding 707.03	Monument Assemblies	Guard Rail Type 4	Sodding	Drilled Wells Abandoned	Septic Tanks Cleaned & Disposed of	Settlement Platform	Existing Pavement Removed & Disposed of
	L.F.	L.F.	Lump	Lump	C.Y.	S.Y.	C.Y.	L.F.	L.F.	Each	L.F.	S.Y.	Each	Each	Each	S.Y.
2											25					3,969
11	15				429						95.61	68				
12					474						1531.35				+	
13					80						1647.34				+	
2,14,38	5	2,091			297						1267.70	44				
15	55				34						300.00	156				
38												156				
42				Lump	135						975.00		+	+		
43	18				84							111				
52			Lump		10		6	154								
53					63	44	15		226							
68										10						
TOTALS	93	2,091	Lump	Lump	1606	44	21	154	226	10	5867.00	* 535	1	1	2	3,969

* Carried to Erosion Control Box Below

MAINTAINING TRAFFIC

See Sheet No.	LOCATION	LENGTH	WIDTH	410 Traffic Compacted Surface Type "A" or "B"	616 Calcium Chloride	615 Temporary Roads
	S.R. 753					
	670+00 To 675+00	500'	20'	375 Cu. Yds.	7.5 Tons	Lump
	706+40 To 712+00	560'	20'	420 Cu. Yds.	8.4 Tons	Lump
	E.R. 25-A					
	11+25 To 14+00	280'	20'	210 Cu. Yds.	4.2 Tons	Lump
	TOTALS			1,005 Cu. Yds.	20.1 Tons	Lump

201 CLEARING & GRUBBING - Lump Sum

605 AGGREGATE DRAINS - CO. RD. 25-A

LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH
0+40.0	A		2+39.0	A	4+40.0		A	11+74.0			B				
0+65.0	A		2+66.0	A	4+65.0		A	12+25.0			B				
0+89.0	A		2+90.0	A	4+91.0		A	12+74.0			B				
1+17.0	A		3+16.0	A	5+17.0		B	13+25.0			B				
1+40.0	A		3+40.0	A	5+43.0		B								
1+68.0	A		3+68.0	A	5+67.0		B								
1+90.0	A		3+90.0	A	5+93.0		B								
2+15.0	A		4+16.0	A	11+24.0		B								
TOTAL L.F. =												221.40			

* A = 8.1' B = 7.5'

EXCAVATION & EMBANKMENT

See Sheet No.	Station To Station Location Etc.	EROSION CONTROL									
		203			601	601	659	659	659	660	203
		Excavation Including Embankment Construction and water	Embankment	Granular Embankment	Dumped Rock Fill Type "B"	Dumped Rock Slope Protection	Seeding & Mulching	Commercial Fertilizer (12-12-12)	Agricultural Liming	Sodding	Borrow
2	Removal of Exist. S.R. 753	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	S.Y.	Tons	Tons	S.Y.	C.Y.
7	Roadway & Drainage S.R. 753						5,292			535	
11,16&24	670+00 To 689+10	6,851	11,128	4,430	15,972	240	21,314				
13&25	690+65 To 712+00	3,732	347,023	11,000	15,792	2,971	38,831				
	T.R. 313-B										
38&39	0+11 To 6+00	1,110	4,513				3,652				
	C.R. 25-A										
42&44	0+11.71 To 14+00	13,513	65,391			211	16,528				
	CHANNEL										
64	7+00 To 13+00	15,905			7,825						
	SUB-TOTAL	41,111	528,055	15,430							
	Compaction Factor = 1.15		543,485								
	less 203 Excavation		625,008								
	Borrow		41,111								583,897
	TOTALS	41,111			39,589	3,422	85,617	8	40	535	583,897

EROSION CONTROL

203 SUBGRADE PREPARATION

404 = 13,185 S.Y.
611 = 128 S.Y.
TOTAL = 13,308 S.Y.

605 AGGREGATE DRAINS TWP. RD. 313-B

LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH
0+11.0			7.5	3+60.0			7.5
0+38.0			7.5		3+85.0		7.5
0+62.0			7.5		4+09.0		7.5
0+94.0			7.5		4+34.0		7.5
1+25.0			7.5		4+55.5		7.5
1+63.0			7.5		4+82.0		7.5
1+88.0			7.5		5+05.5		7.5
2+13.0			7.5		5+34.0		7.5
2+37.0			7.5		5+54.0		7.5
2+62.5			7.5		5+82.0		7.5
2+87.0			7.5		6+06.0		7.5
3+11.0			7.5				
3+35.5			7.5				
TOTAL L.F. =							187.50

605 AGGREGATE DRAINS - S.R. 753

LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH	LOCATION	LT. SIDE	RT. SIDE	LENGTH
671+08.0		B		683+71.0		C		695+30.0		C		703+56.6		B	
				683+75.5		C		695+54.5		C		703+81.2		B	
671+44.5		B		684+22.0		C		695+79.6		C		704+06.5		B	
				684+46.5		C		696+04.5		C		704+33.0		C	
671+94.8		B		684+72.4		C		696+29.3		C		704+55.3		B	
				684+95.6		C		696+55.3		C		704+80.0		C	
672+44.0		B		685+22.3		C		696+80.0		C		705+07.0		B	
				685+47.0		C		696+05.3		C		705+31.6		C	
672+94.0		B		685+72.3		C		697+30.4		C		705+57.0		A	
				685+97.0		C		697+55.5		C		705+80.0		C	
673+44.6		B		686+22.0		C		697+80.5		C		706+07.0		C	
				686+46.2		C		698+05.9		C		706+31.0		C	
673+93.5		B		686+70.8		C		698+30.7		C		706+57.3		C	
				686+95.7		C		698+55.8		C		706+77.3		C	
674+43.0		B		687+20.0		C		698+80.6		C		707+07.6		C	
				687+42.3		C		699+06.0		C		707+24.0		C	
675+43.7		B		687+69.0		C		699+31.0		C		707+57.6		C	
675+93.7		B		687+69.2		C		699+56.0		C		707+73.0		B	
679+95.0		D		692+05.5		C		699+81.0		C		708+06.2		C	
680+19.5		D		692+05.8		C		700+06.2		C		708+25.0		B	
680+44.0		D		692+26.5		C		700+30.9		C		708+54.6		A	
680+68.3		C		692+54.5		C		700+56.0		C		708+75.5		B	
680+96.0		C		692+76.5		C		700+81.8		C		709+07.4		B	
681+24.2		C		692+80.2		C		701+06.0		C		709+25.0		B	
681+46.6		C		693+05.0		C		701+30.8		A		709+73.0		B	
681+72.4		C		693+29.5		C		701+56.3		A		709+80.7		B	
681+96.2		C		693+54.5		C		701+81.2		A		710+23.0		B	
682+21.5		C		693+79.2		C		702+06.3		B		710+37.0		B	
682+45.7		C		694+05.0		C		702+31.0		B		710+73.0		B	
682+71.2		C		694+30.0		C		702+54.5		B		710+87.0		B	
682+94.5		C		694+55.3		C		702+82.4		B					
683+22.4		C		694+80.1		C		703+08.0		B					
683+45.5		C		695+05.0		C		703+32.6		B					
TOTAL L.F. =												1,916.35			

* A = 18.83' B = 16.83' C = 13.75' D = 11.75'

DEC. 68	REVISED AS CONSTRUCTED.	V.L.O.
5-26-67	REVISED PAVEMENT REMOVAL AND SEEDING QUANTITIES	E.J.D.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY:		
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
RECOMMENDED BY:		
APPROVED BY:		
DATE:		
APRIL 1966		
BARRETT, CARGO, WITHERS & ASSOC. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: N/A		
SPEC. NO.		
DRAWING NUMBER		
016 b-UPC 2-85/7		
SHEET 7 OF 90		

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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SEE SHEET NO.	LOCATION STATIONS CALCULATIONS ETC.	304 8" Aggregate Base	304 6" Aggregate Base	310 6" Subbase	403 1 1/2" Asphalt Concrete (70-85)	403 Var. Depth Asphalt Concrete (70-85)	404 1 1/2" Asphalt Concrete (70-85)	404 1 1/2" Asphalt Concrete (70-85)	404 Var. Depth Asphalt Concrete (70-85)		407 Tack Coat 702.04 MS-2 or RS-1 or 702.02 RC-700 or RC-200 @ 0.10 Gal./S.Y.	408 Bituminous Prime Coat 702.09 RT-2 or RT-3 @ 0.40 Gal./S.Y.	605 Aggregate Drains	611 Reinforced Concrete Approach Slabs (t = 13")		
	S.R. 753	S.Y.	S.Y.	S.Y.	S.Y.	C.Y.	S.Y.	S.Y.	C.Y.		S.Y.	S.Y.	L.F.	S.Y.		
	671+00 to 687+73 = 1,673.00 L.F. 1,673.00 x 22 x 1/9 = 4,089.56 S.Y. 1,673.00 x 23 x 1/9 = 4,275.44 S.Y. 1,673.00 x 24 x 1/9 = 4,461.33 S.Y.		4,275.4	4,461.3	4,089.6		4,089.6					4,275.4				
	692+02 to 711+00 = 1,898.00 L.F. 1,898.00 x 22 x 1/9 = 4,639.56 S.Y. 1,898.00 x 23 x 1/9 = 4,850.44 S.Y. 1,898.00 x 24 x 1/9 = 5,061.33 S.Y.		4,850.4	5,061.3	4,639.6		4,639.6					4,850.4				
	Add for extension of Subbase 676+25 to 679+25 = 300.00 L.F. 300.00 x 10 x 1/9 = 333.33 S.Y.			333.3												
	T.R. 313-B															
	Intersection 0+11 to 2+50 2+50 to 5+75 = 325.00 L.F. 325.00 x 20 x 1/9 = 722.2 C.Y. 325.00 x 21 x 1/9 = 758.3 C.Y.	749.5					727.0					749.5				
		758.3					722.2					758.3				
	C.R. 25-A															
	0+11.71 to 13+25 = 1313.29 L.F. [1313.29 x 20 + (50' x 55755)] x 1/9 = 3,073.30 S.Y. [1313.29 x 21 + (49.5' x 55755) - (127.70 x .5)] x 1/9 = 3,205.99 S.Y.						3,073.3					3,206.0				
	Add for extension of Aggregate Base 6+25 to 11+00 = 475 L.F. 475.00 x 4.5 x 1/9 = 237.50 S.Y.	237.5														
	FEATHER AREAS															
	S.R. 753 670+75 to 671+00 711+00 to 711+25		8.89	11.66		0.62			1.24		50	8.89				
	T.R. 313-B 5+75 to 6+00	6.5	8.89	11.66		0.62			1.24		50	8.89				
	C.R. 25-A 13+25 to 13+50	6.5							0.71							
	AGGREGATE DRAINS															
	S.R. 753 1673-300 x 1/25 = 55 @ 12.5' = 687.5 L.F. 1898 x 1/25 = 76 @ 12.5' = 950 L.F.												688			
													950			
	T.R. 313-B 564 x 1/25 = 23 @ 8' = 184 L.F.												184			
	C.R. 25-A 1313.29 - 475 x 1/25 = 34 @ 8' = 272 L.F.												272			
	APPROACH SLABS															
	S.R. 753 687+73 to 687+98 691+77 to 692+02			62.6									61.1			
				62.6									61.1			
	Sub - Total	4,964.3	9,143.58	10,004.42	8,729.2	1.24	8,729.2	4,522.5	4.36		100	13,857.38	2,094	122.22		
	Conversion to Cu.Yds., Gals., etc.	1103 C.Y.	1,524 C.Y.	1,668 C.Y.	303 C.Y.	2 C.Y.	303 C.Y.	189 C.Y.	5 C.Y.		10 Gal.	5,543 Gal.		123 C.Y.		
	TOTALS	2,624 Cu.Yds.	1,664 Cu.Yds.	303.2 Cu.Yds.			495.8 Cu.Yds.				10 Gal.	5,363 Gal.	2,235 Lin.Ft.	122 Cu.Yds.		
		◇	◇	◇	◇	◇	◇	◇	◇			◇	◇	◇		

REVISION	DATE	DESCRIPTION	V.L.O.
1	DEC-68	REVISED AS CONSTRUCTED	
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: RECOMMENDED BY: CHIEF ENG. DIV.			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 PAVEMENT CALCULATIONS			
APPROVED: L.T. COL. C. E. DISTRICT ENGINEER		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: N/A SHEET 8 OF 90	

GENERAL SUMMARY

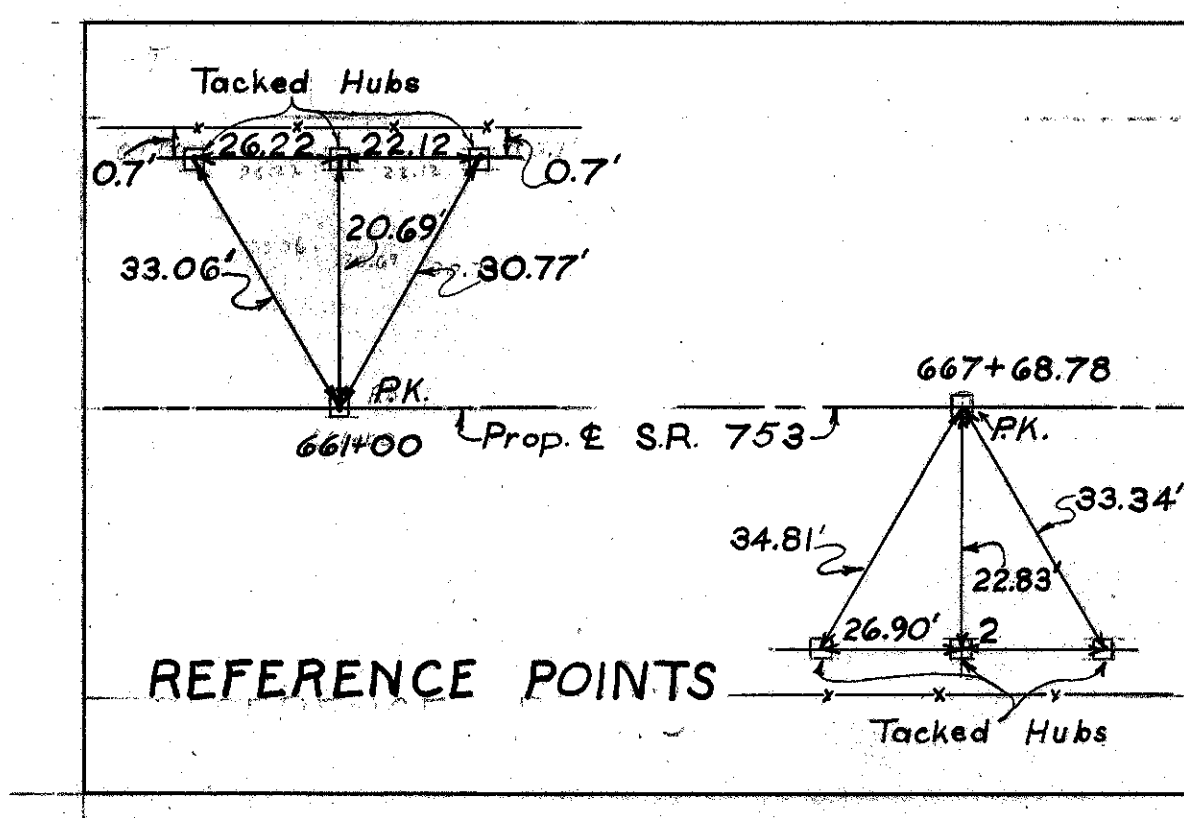
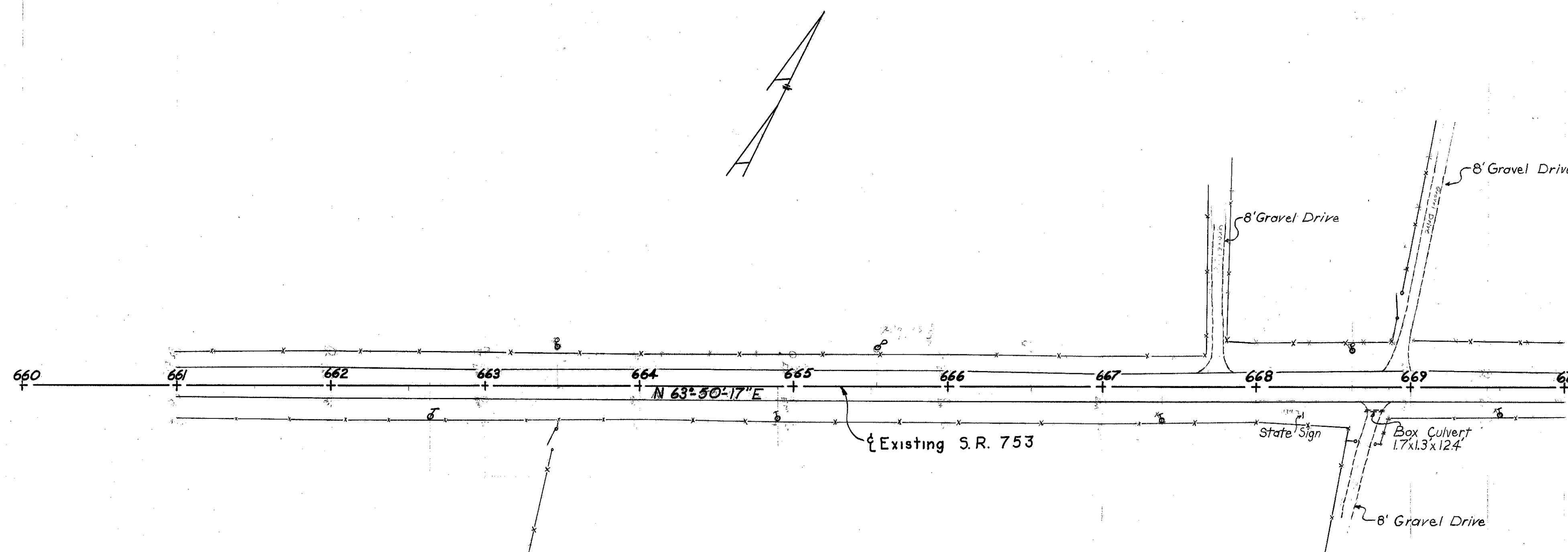
HIG-753-12.71

SEE SHEET NO.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION	SEE SHEET NO.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION
				ROADWAY					PAVEMENT
7	201	Lump	Lump	Clearing and Grubbing	8	304	2,627	Cu.Yds.	Aggregate Base Including Water
7	202	3,551	Sq. Yds.	Existing Pavement Removed and Disposed of	8	310	1,668	Cu.Yds.	Subbase Including Water
7	202	512	Lin. Ft.	Existing Guard Rail Removed and disposed of	8	403	305	Cu.Yds.	Asphalt Concrete (70-85)
7	202	93	Lin. Ft.	Pipe Removed 15" and Under	8	404	497	Cu.Yds.	Asphalt Concrete (70-85)
7	202	Lump	Lump	Removal of Existing Buildings					
7	202	Lump	Lump	Removal of Existing Bridge Structure on County Route 25-A					
7	202	Lump	Lump	Removal of Portions of Existing Bridge on State Route 753					
7	202	Lump	Lump	Portions Of Existing Structure Removed					
7	202	Lump	Lump	Removal of Existing Bridge over Rattlesnake Creek					
7	203	41,111	Cu.Yds.	Excavation Including Embankment Construction and Water					
7	203	583,897	Cu.Yds.	Borrow	8	407	10	Gals.	Tack Coat: 702.04 MS-2 or RS-1, or 702.02 RC-70 or RC-250
7	203	13,308	Sq.Yds.	Subgrade Preparation	8	408	5,543	Gals.	Bituminous Prime Coat 702.09 RT-2 or RT-3
7	601	39,589	Cu.Yds.	Dumped Rock Fill Type "B"	8	611	123	Sq.Yds.	Reinforced Concrete Approach Slabs (t=13")
7	601	3,422	Cu.Yds.	Dumped Rock Slope Protection					
7	410	1,005	Cu.Yds.	Traffic Compacted Surface, Type "A" or "B"					Structures Over 20 Ft. Span For Quantities See Sheet No. 55
7	604	10	Ea.	Monument Assemblies					
7	606	5,842	Lin. Ft.	Guard Rail, Type 4	614	Lump	Lump		Maintaining Traffic
7	616	20,1	Tons	Calcium Chloride					
7	615	Lump	Lump	Temporary Roads					
7	659	85,617	Sq.Yds.	Seeding and Mulching					
7	659	8	Tons	Commercial Fertilizer (12-12-12)					
7	659	40	Tons	Agricultural Liming					
7	660	535	Sq.Yds.	Sodding					
7	Special	1	Ea.	Drilled Wells Abandoned					
7	Special	1	Ea.	Septic Tanks Cleaned and Disposed of.					
7	Special	2	Ea.	Settlement Platform					
7	Special	2	Ea.	Project Sign					
7	Special	1	Lump	Field Office					
				DRAINAGE					
7	601	1,606	Cu.Yds.	Dumped Rock Channel Protection Type "A"					
7	Special	44	Sq.Yds.	6" Reinforced Concrete Slab Channel Paving					
7	602	21	Cu.Yds.	Concrete Masonry					
7	603	154	Lin.Ft.	60" Conduit, 10-10 Gage, Class "B" Bedding, 707.03.					
7	603	226	Lin.Ft.	108" Conduit, 7-5 Gage, Class "B" Bedding, 707.03.					
8	605	2,094	Lin.Ft.	Aggregate Drains					
5	605	12	Lin.Ft.	Aggregate Drains for Springs as per plan					
5	605	50	Lin.Ft.	6" Unclassified Pipe Underdrains, 707.06 or 707.12, as per plan.					

NOTES
1. For Bridge Quantities, See Sheet 55

1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
2	5-26-67	REVISED PAVEMENT REMOVAL & SEEDING QUANTITIES	E.J.D.
3	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 GENERAL SUMMARY	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
RECOMMENDED BY: Barrett, Cargo, Withers		APPROVED BY: [Signature] LT. COL. C.E. DISTRICT ENGINEER	
DATE:		APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: N/A SPEC. NO. DRAWING NUMBER 016 b - UPC 2 - 85/9 SHEET 9 OF 90	

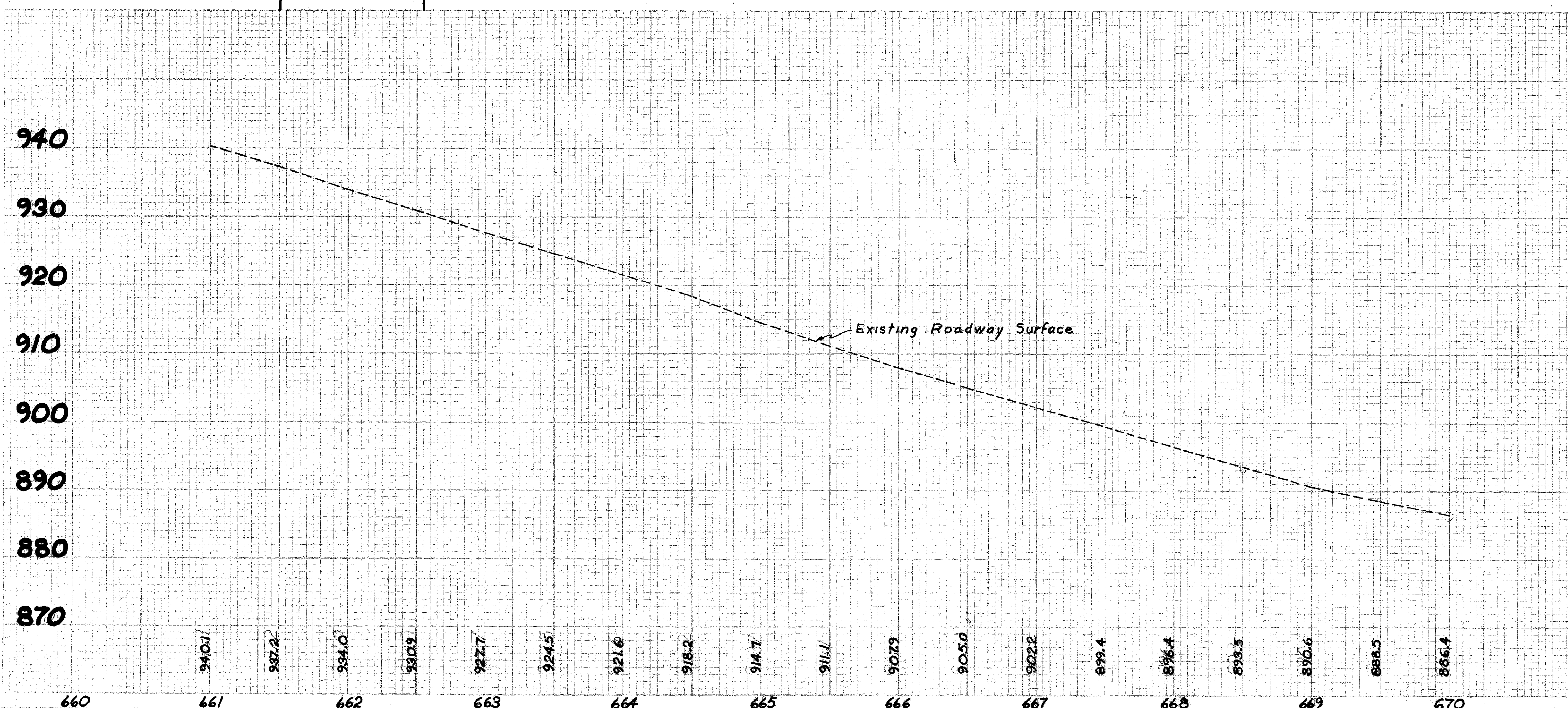
HIG-753-12.71



UTILITY OWNERS

- Columbus and Southern Ohio Electric Company
215 N. Front Street
Columbus, Ohio
- General Telephone Company of Ohio
197 S. Main Street
Marion, Ohio

BENCH MARK
Spike in
Sta. 663+50 ±
Elev. = 924.04

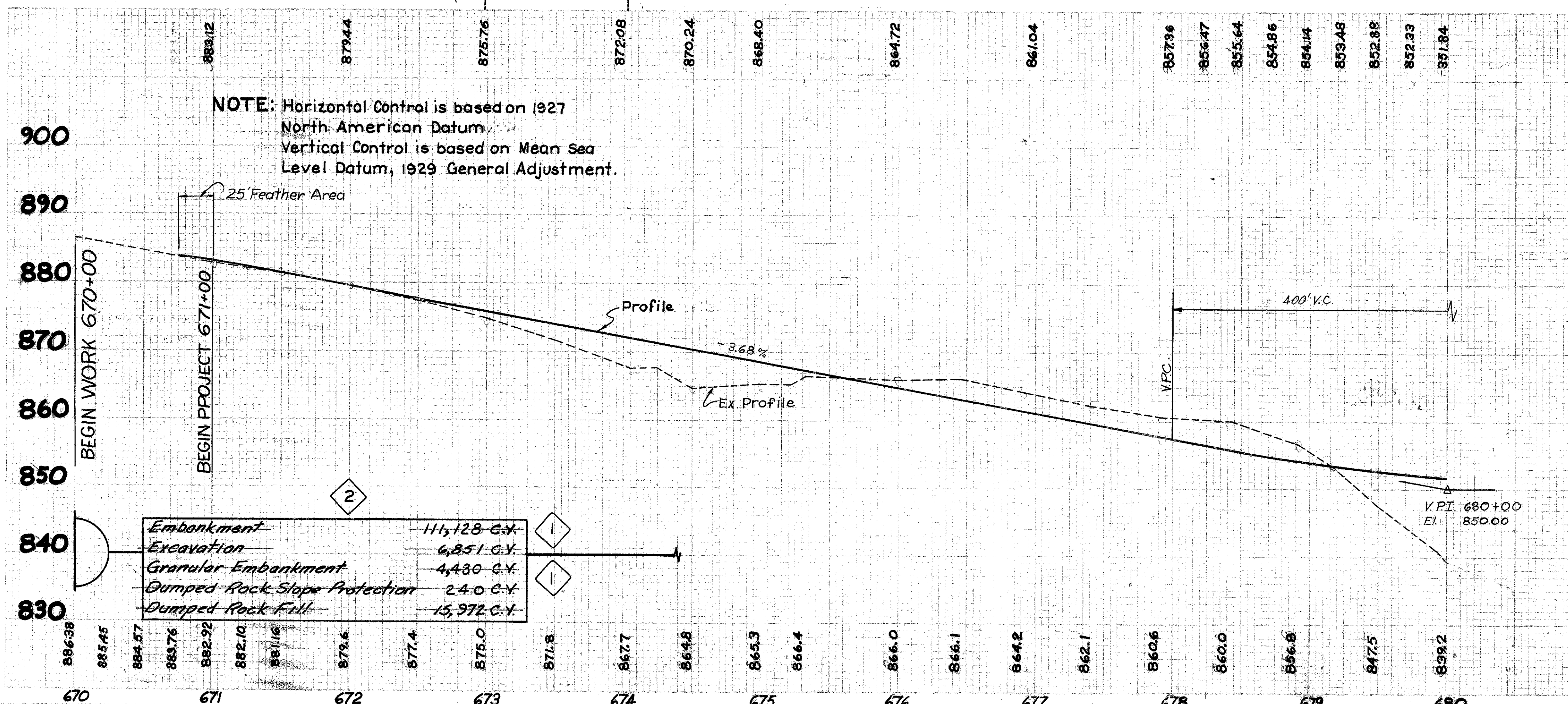
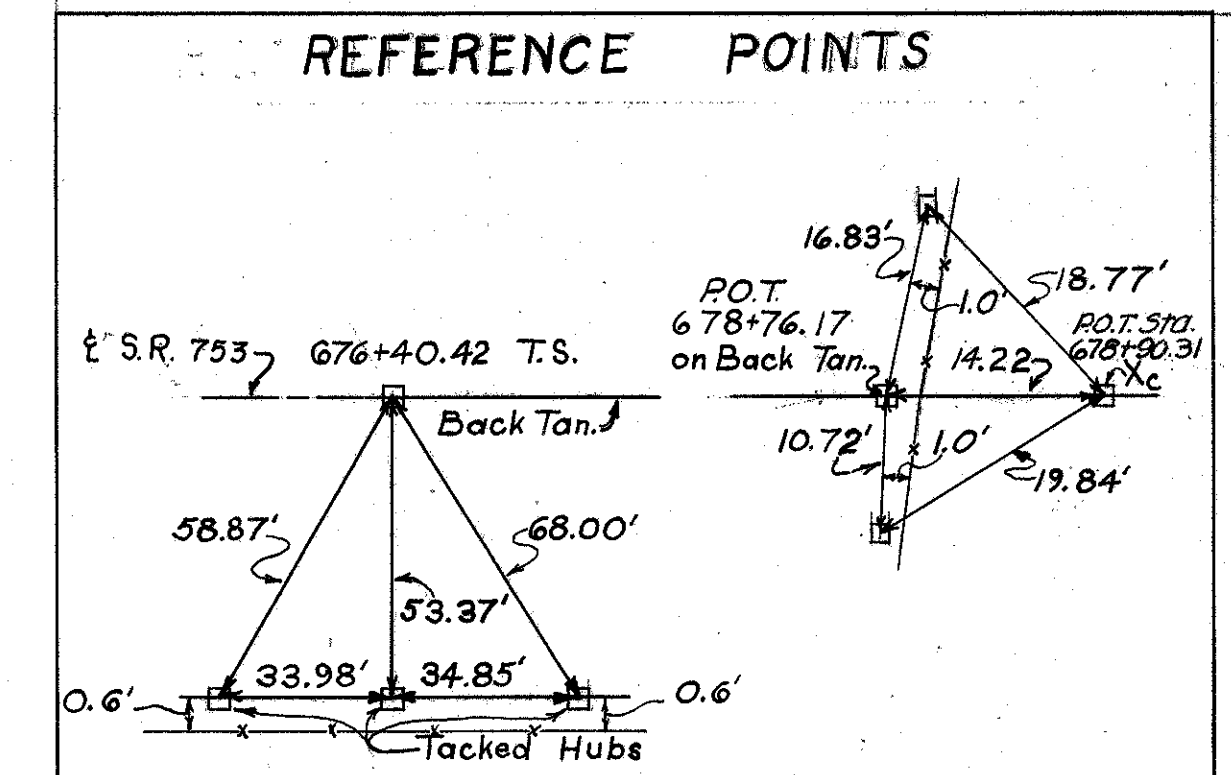
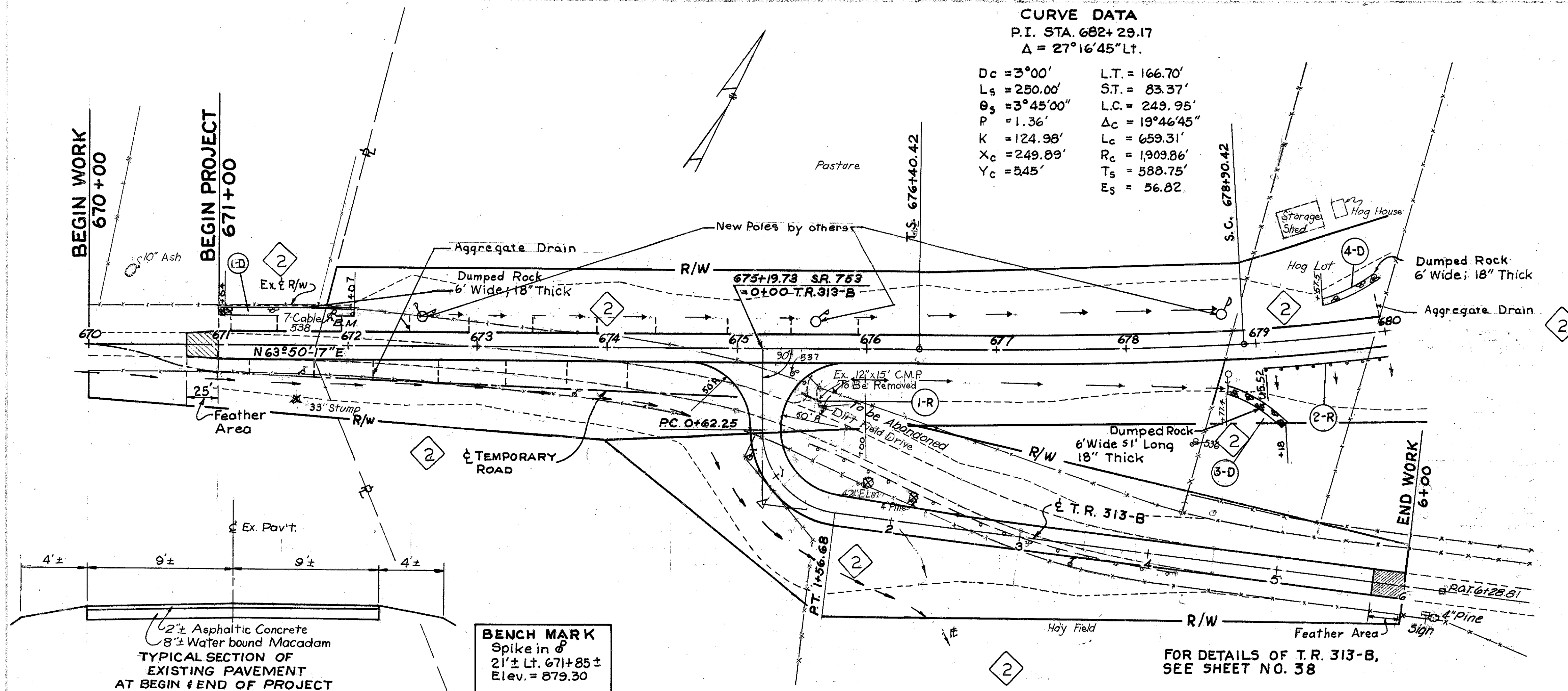


REVISION	DATE	DESCRIPTION	BY
	DEC. 68	WORK AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 STA. 660+00 TO STA. 670+00	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:		DATE: APRIL 1966	
RECOMMENDED BY:		APPROVED BY:	
CHIEF ENG. DIV.		LT. COL. C. E. DISTRICT ENGINEER	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SPEC. NO. DRAWING NUMBER 016 b - UPC 2-85/10 SHEET 10 OF 90	

CURVE DATA
P.I. STA. 682+29.17
 $\Delta = 27^\circ 16' 45''$ Lt.

$D_c = 3^\circ 00'$ L.T. = 166.70'
 $L_s = 250.00'$ S.T. = 83.37'
 $\theta_s = 3^\circ 45' 00''$ L.C. = 249.95'
 $P = 1.36'$ $\Delta_c = 19^\circ 46' 45''$
 $K = 124.98'$ $L_c = 659.31'$
 $X_c = 249.89'$ $R_c = 1,909.86'$
 $Y_c = 545'$ $T_s = 588.75'$
 $E_s = 56.82'$

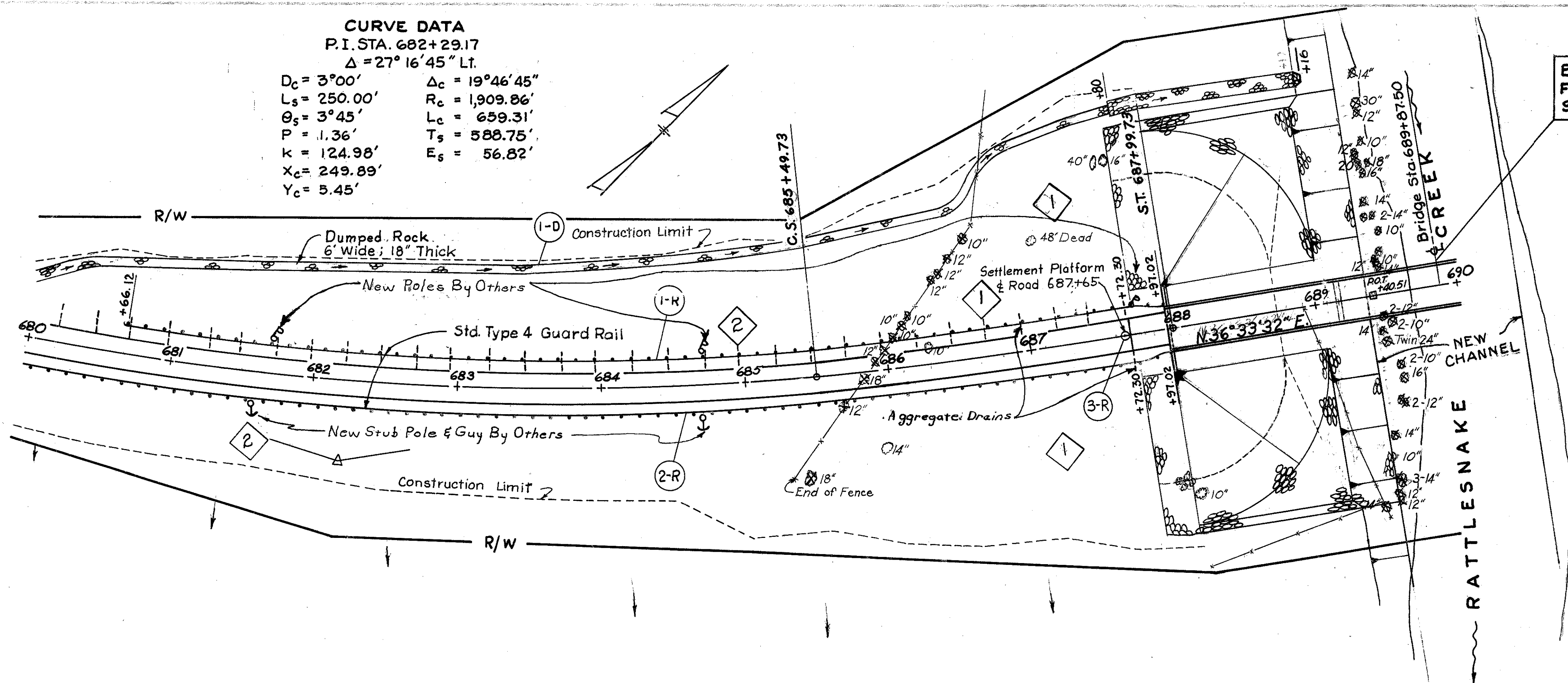
HIG-753-12.71



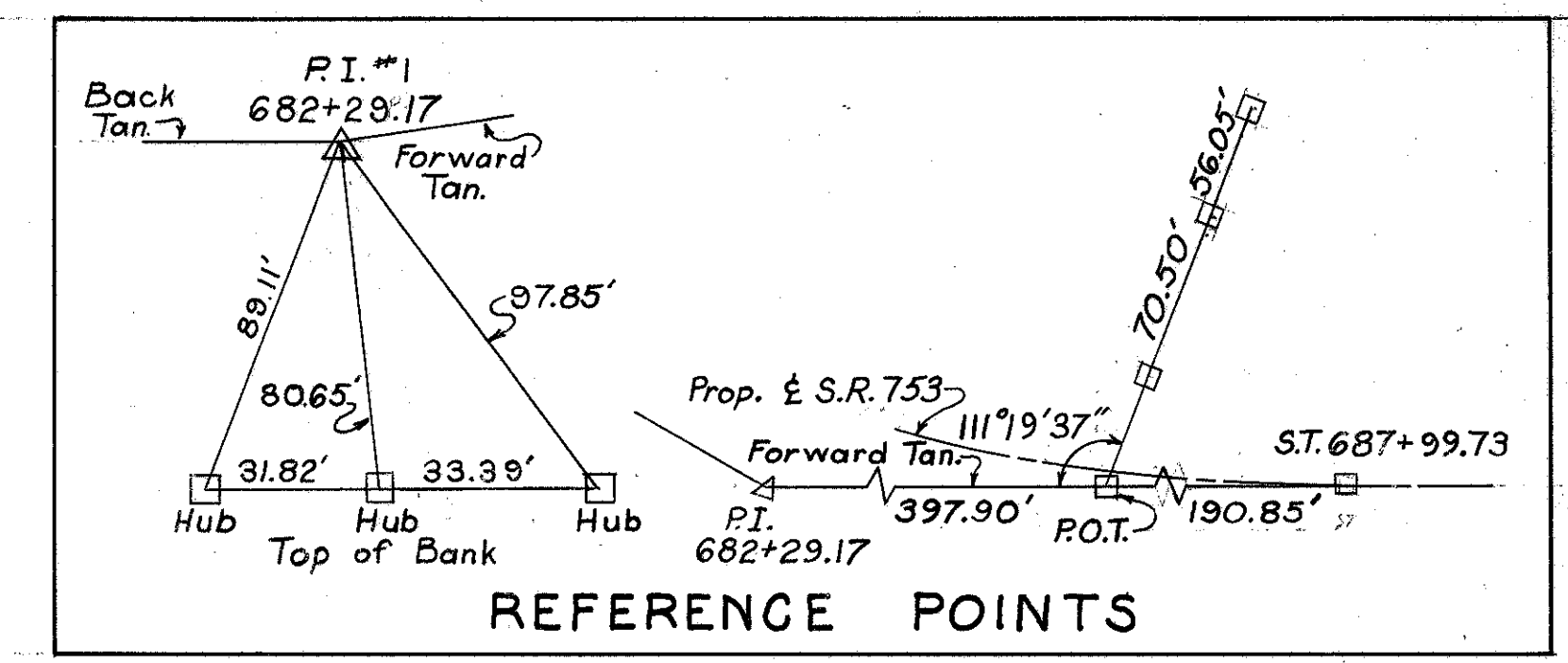
ESTIMATED QUANTITIES						
Reference No.	Station To Station	Side	202	606	601	660
			Pipe Removed 12"	Guard Rail Std. Type 4	Dumped Rock Channel Protection	Sodding
1-R	675+49 to 675+63	Rt.	15			
2-R	679+05.09 to 680+00			95.18		
1-D	670+50 to 676+25	Lt.			33	
2-D	670+50 to 2+50 TR 313-B	Rt.				
3-D	678+40 to 678+91	Rt.			17	
4-D	679+25 to 680+00	Lt.			15	
TOTAL			15	95.18	65	

DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 STA. 670+00 TO STA. 680+00		
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: BARRETT, CARGO, WITHERS CHIEF, ENG. DIV.		APPROVED: L.T. COL. C.E. DISTRICT ENGINEER DATE: APRIL 1966
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 0 25 50 SPEC. NO. DRAWING NUMBER 016 b - UPC 2-85/11 SHEET 11 OF 90

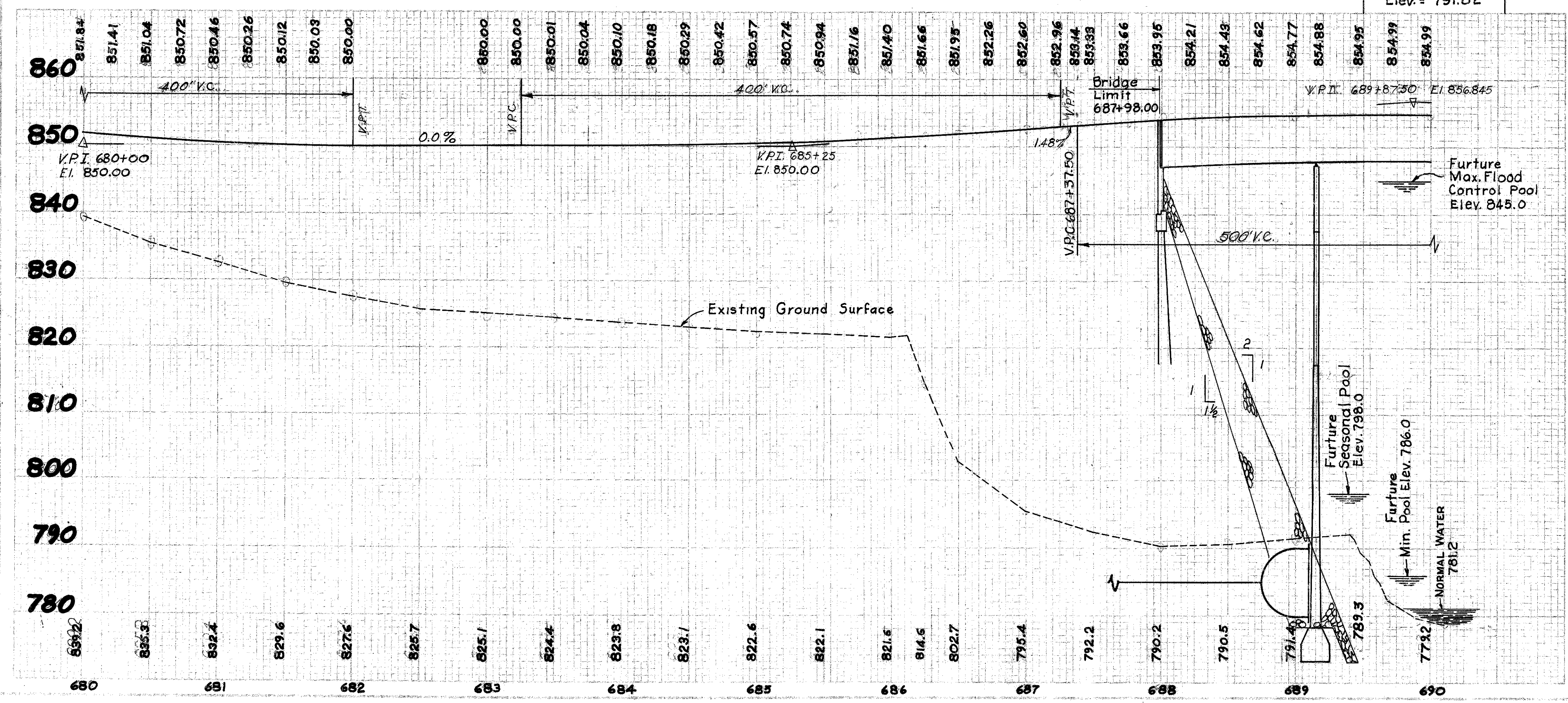
CURVE DATA
 P.I. STA. 682+29.17
 $\Delta = 27^\circ 16' 45''$ Lt.
 $D_c = 3^\circ 00'$ $\Delta_c = 19^\circ 46' 45''$
 $L_s = 250.00'$ $R_c = 1,909.86'$
 $\theta_s = 3^\circ 45'$ $L_c = 659.31'$
 $P = 1.36'$ $T_s = 588.75'$
 $K = 124.98'$ $E_s = 56.82'$
 $X_c = 249.89'$
 $Y_c = 5.45'$



BRIDGE NO. HIG-753-1303
 FOR BRIDGE DATA
 SEE SHEET NO. 54



BENCH MARK
 Spike in 14" syc.
 230' Rt. 689+0 ±
 Elev. = 791.82



ESTIMATED QUANTITIES					
Reference No.	Station To Station	Side	Guard Rail Std. Type 4 L.F.	Dumped Rock Channel Protection C.Y.	
1-R	680+66.12 to 687+98.00	Lt.	725.98		
2-R	680+00 to 687+98.00	Rt.	805.80		
1-D	680+00 to 689+16			354	
TOTAL			1531.78	354	

DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: RECOMMENDED BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 STA. 680+00 TO STA. 690+00
APPROVED: <i>[Signature]</i> LT. COL. C.E. DISTRICT ENGINEER		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 1" = 20' 50' SPEC. NO. DRAWING NUMBER 016 b - UPC 2-85/12 SHEET 12 OF 90

HIG-753-12.71

CURVE DATA

P.I. STA. 698+12.74

$\Delta = 15^{\circ}30' \text{ Lt.}$

$D_c = 2^{\circ}00'$

$L_s = 200.00'$

$\theta_s = 2^{\circ}00'$

$p = 0.58'$

$k = 100.00'$

$X_c = 199.98'$

$Y_c = 2.33'$

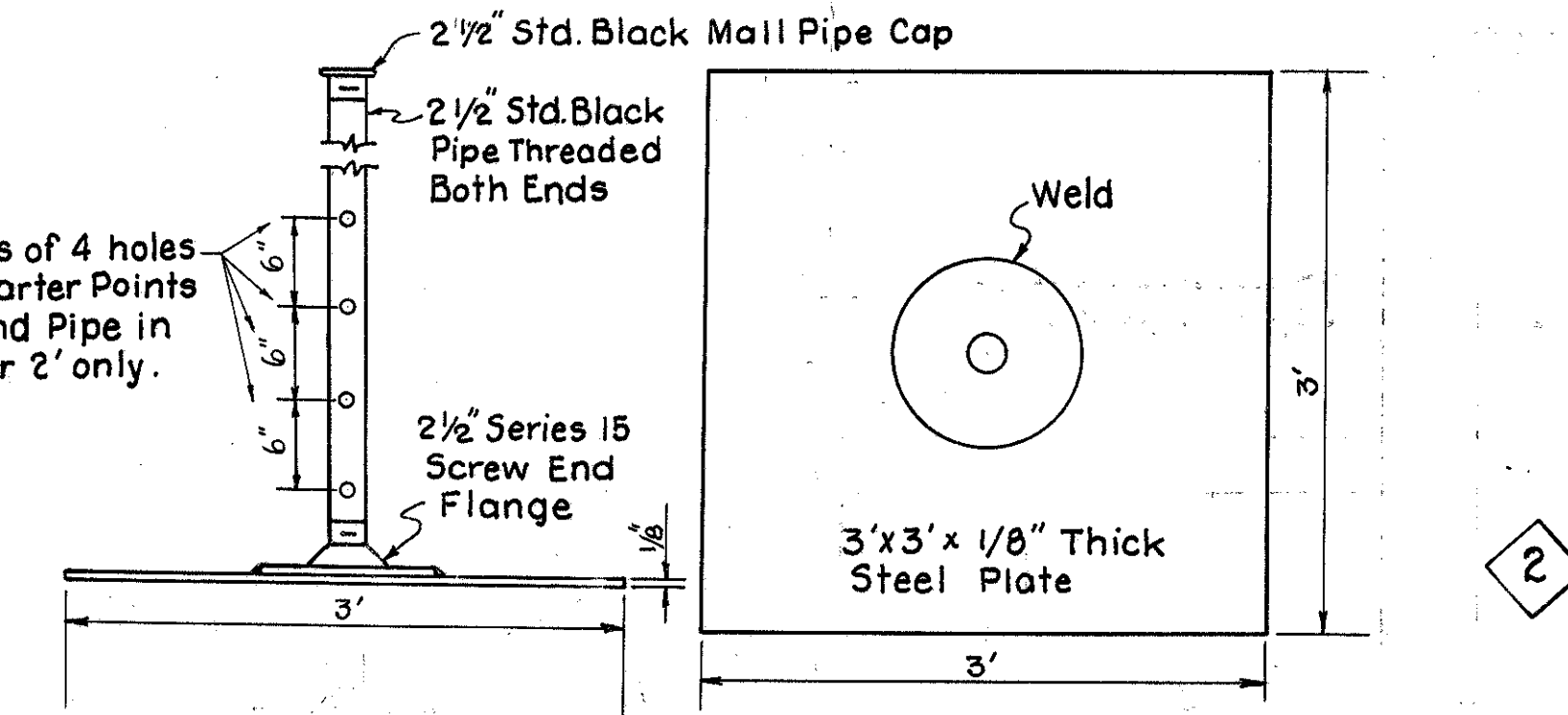
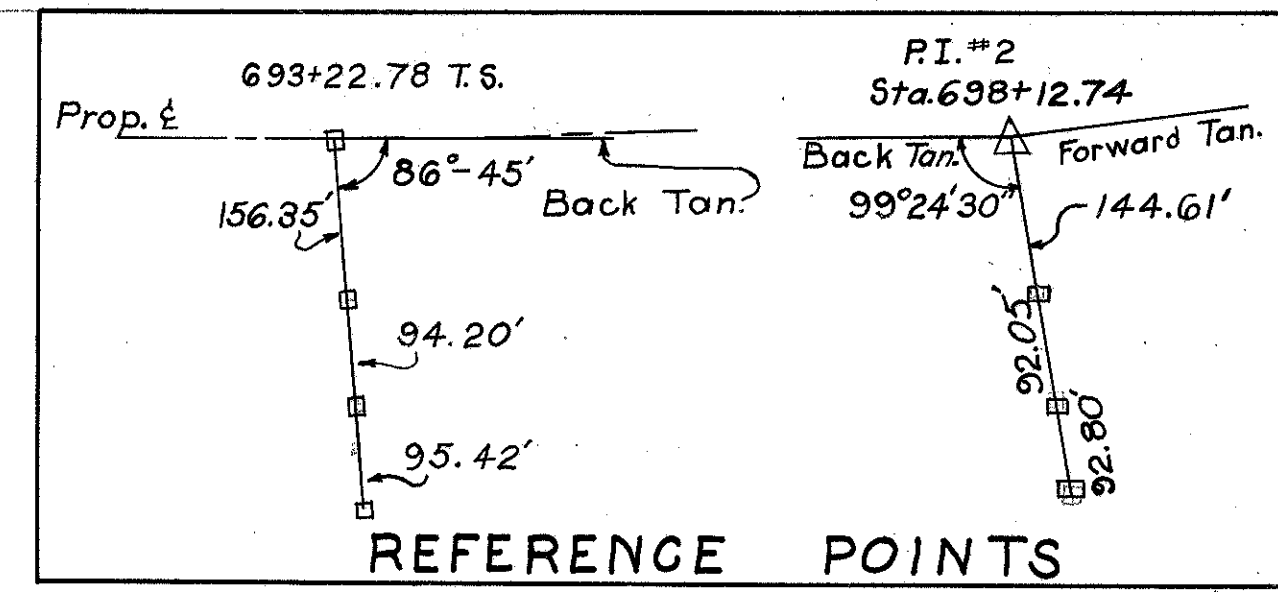
$\Delta_c = 11^{\circ}30'$

$R_c = 2,864.79'$

$L_c = 575.00'$

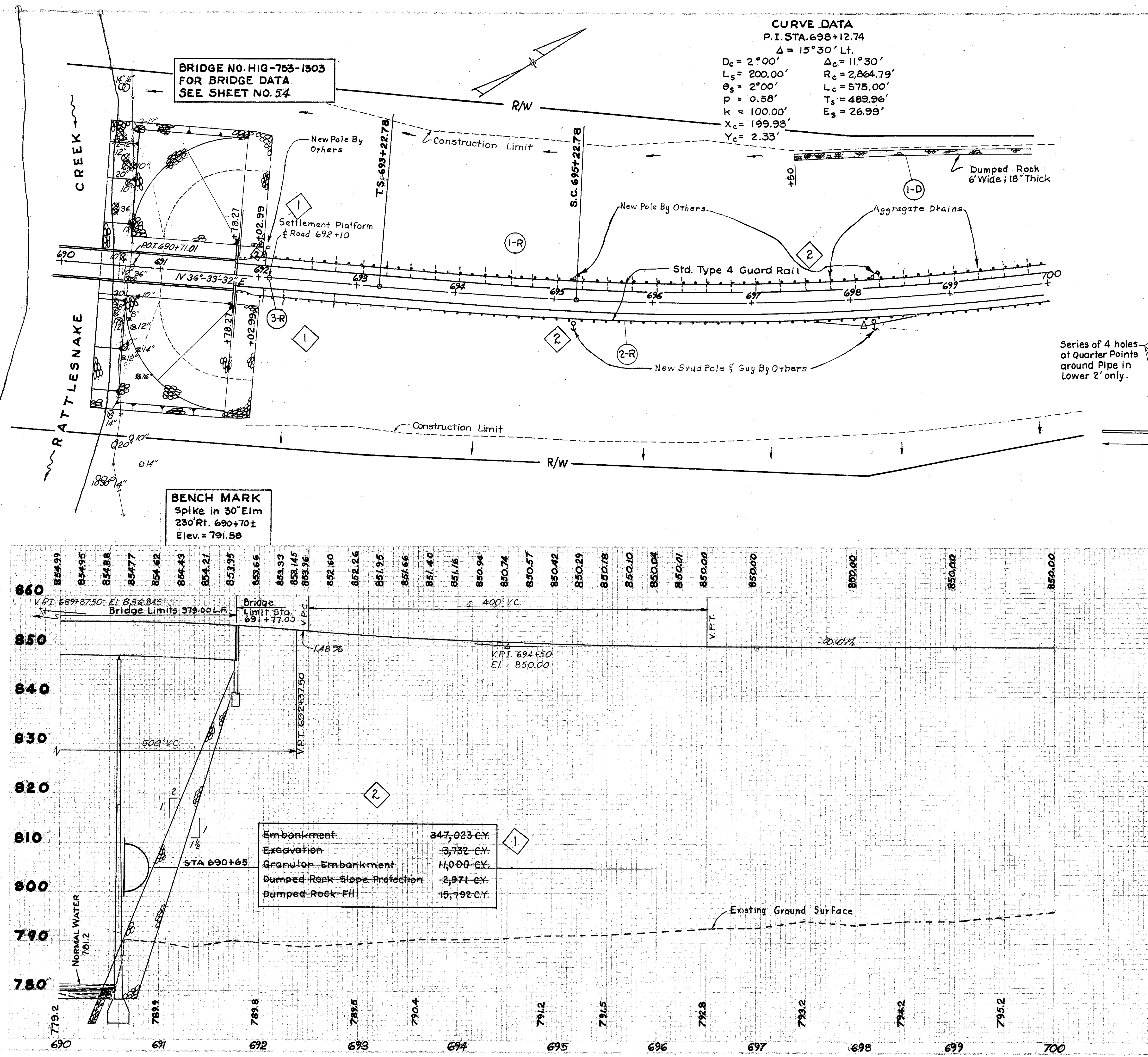
$T_s = 489.96'$

$E_s = 26.99'$



DETAIL OF SETTLEMENT PLATFORM

ESTIMATED QUANTITIES									
Reference No.	Station To Station	Side	606	Special	601				
			Guard Rail Std. Type 4	Settlement Platform	Dumped Rock Channel Protection				
			L.F.	Ea.	C.Y.				
1-R	691+77.00 to 700+00	Lt.	82.070						
2-R	691+77.00 to 700+00	Rt.	82.831						
3-R	692+10	Rt.		+					
1-D	697+50 to 700+00	Lt.			80				
	TOTAL		164.901	+	80				



BENCH MARK

Spike in 30" Elm

230' Rt. 690+70±

Elev. = 791.58

Embankment	347,023 CY
Excavation	3,732 CY
Granular Embankment	14,000 CY
Dumped Rock Slope Protection	2,971 CY
Dumped Rock FH	15,792 CY

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68.	REVISED AS CONSTRUCTED	V.L.O.
2	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON

CORPS OF ENGINEERS

HUNTINGTON, W. VA.

DRAWN BY:

TRACED BY:

CHECKED BY:

SUBMITTED BY:

RECOMMENDED BY:

CHIEF ENGINEER, DISTRICT

PAINT CREEK, OHIO

PAINT CREEK RESERVOIR

RELOCATION OF

OHIO STATE ROUTE 753

STA. 690+00 TO STA. 700+00

APPROVED:

DATE:

APRIL 1966

BARRETT, CARGO, WITHERS & ASSOC. LTD.

CONSULTING ENGINEERS

CHILLICOTHE, OHIO

SCALE: 0 25 50

SPEC. NO.

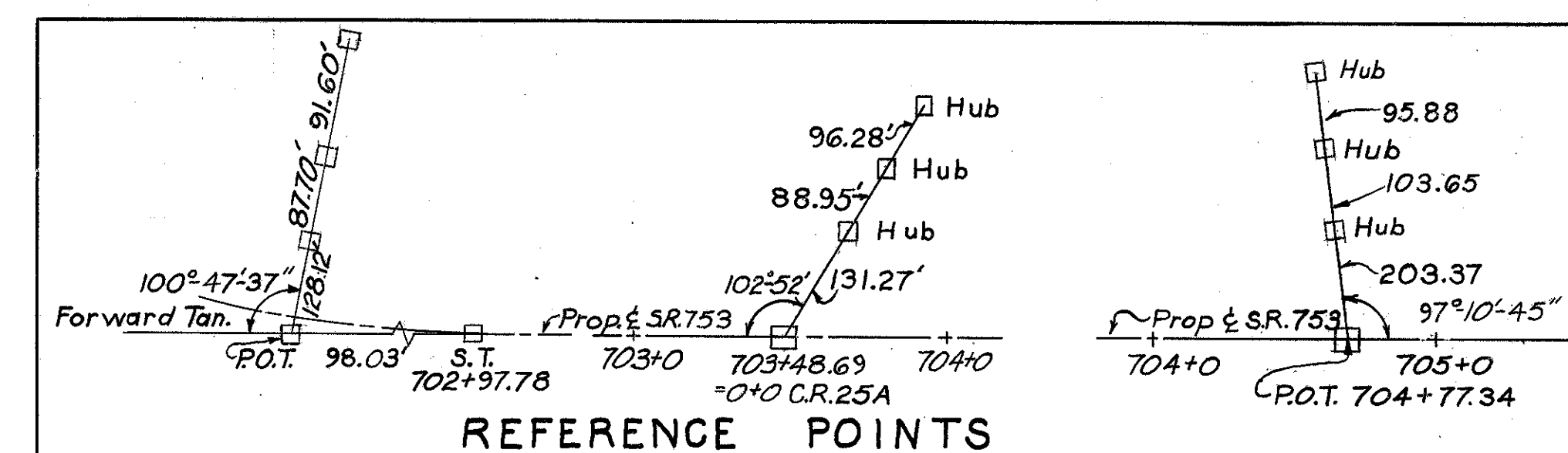
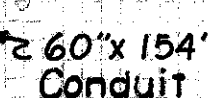
DRAWING NUMBER

016 b - UPC 2-85/13

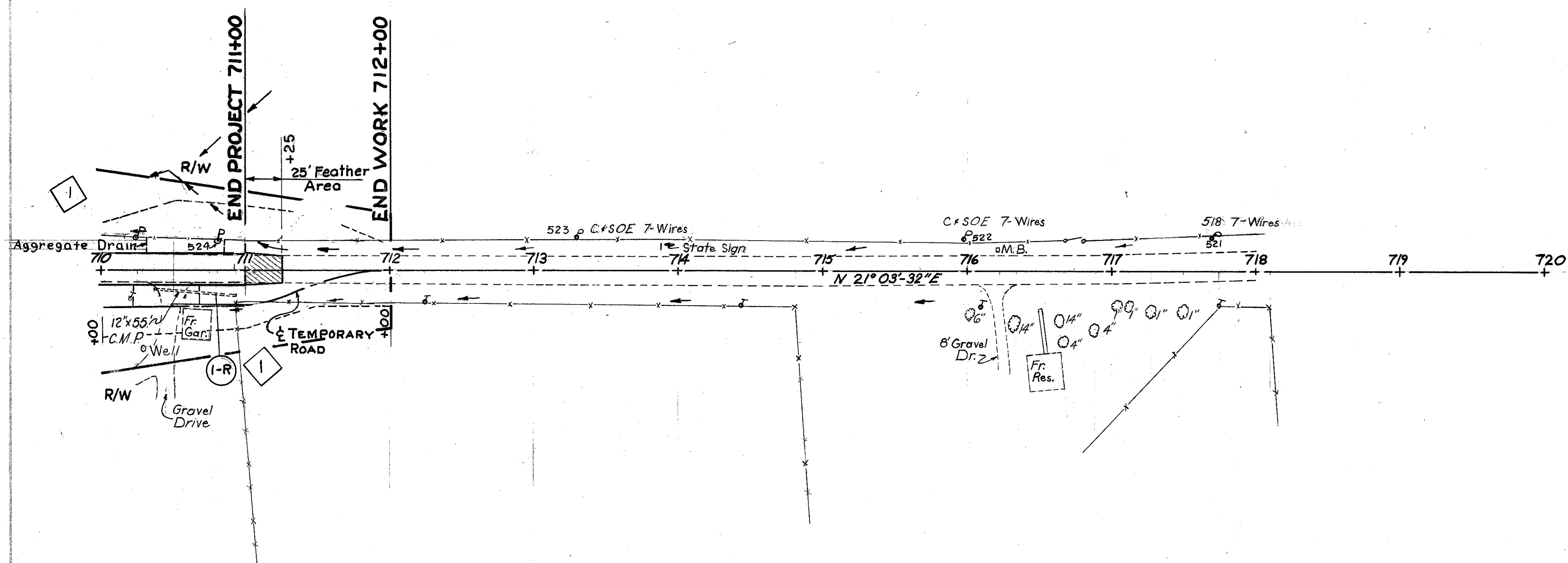
SHEET 13 OF 90

$$Y_c = 2.33'$$

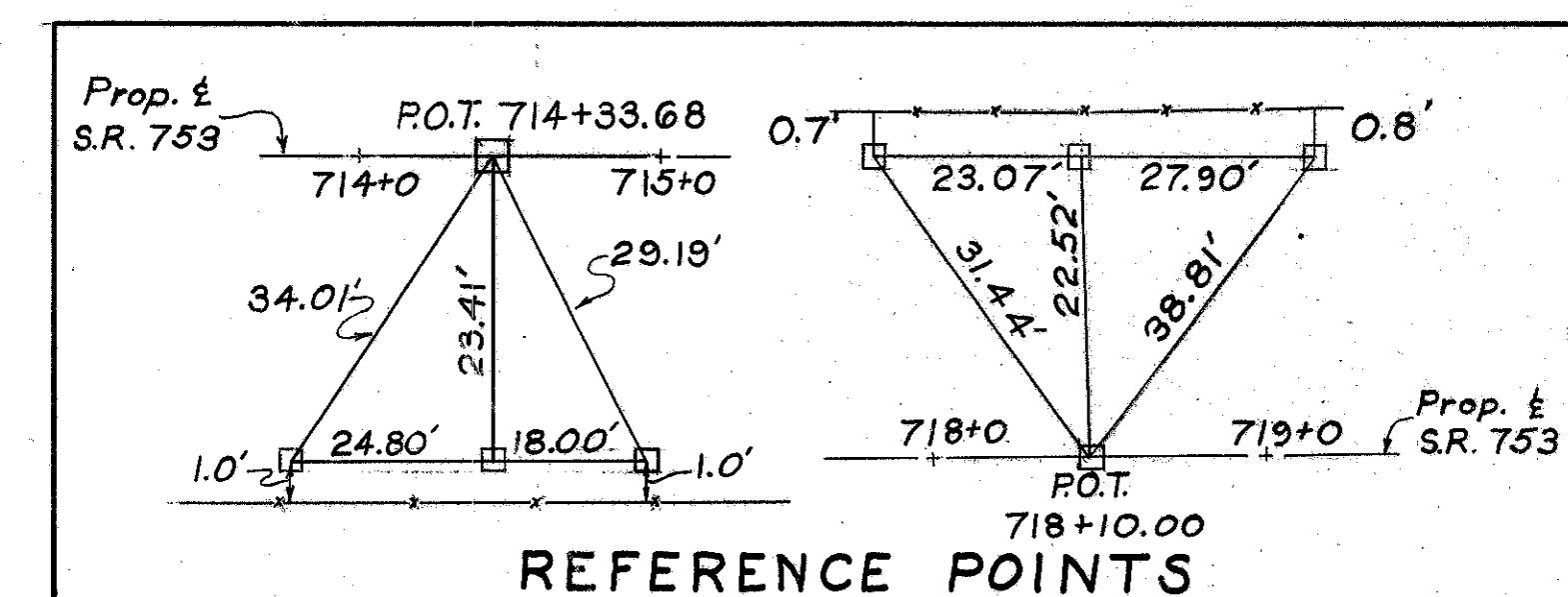
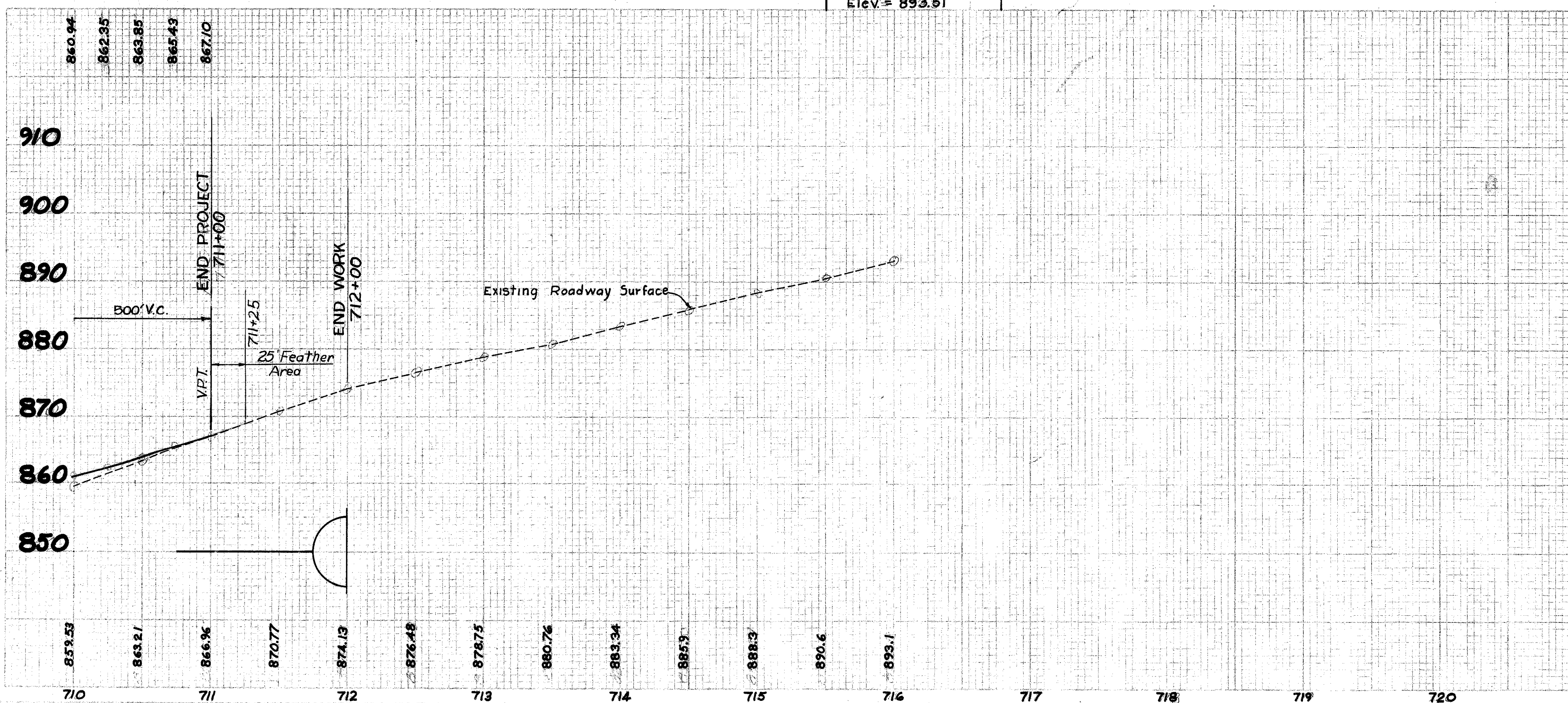

Remove Pavement



SCALE: 0 25 50 SPEC. NO.
 DRAWING NUMBER
 016 b - UPC 2-85/16
 SHEET 14 OF 90



BENCH MARK
20' ± Rt. STA. 716 + 10
□ On Large Rock
@ Drive Entrance
to Hillcrest Hobby Shop
Elev. = 893.51



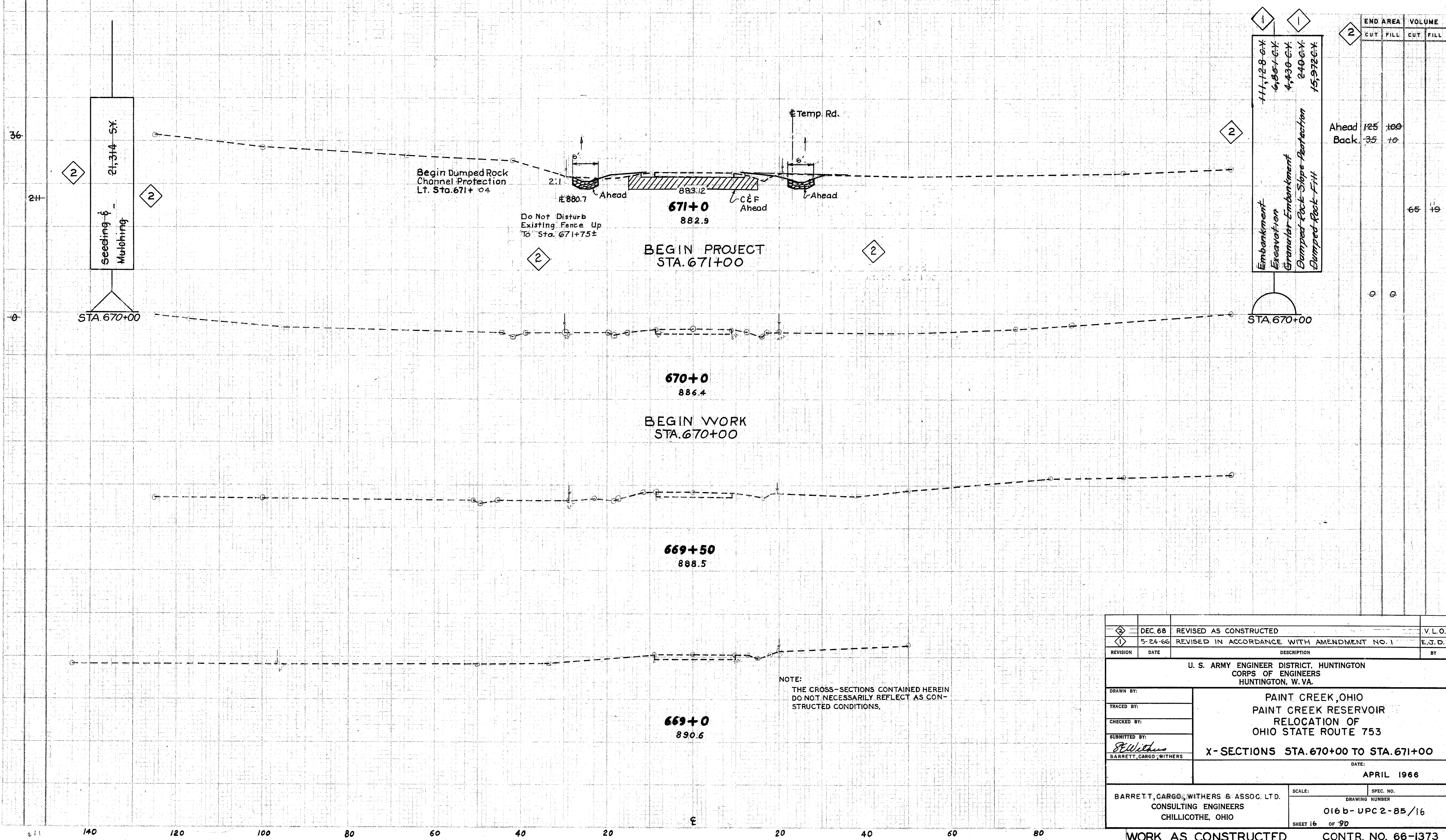
ESTIMATED QUANTITIES								
Reference No.	Station To Station	Side	Pipe Removed 12"	202				
1-R	710+37 to 710+92	Rt.	L.F. 55-					
TOTAL			55-					

◆	DEC. 68	REVISED AS CONSTRUCTED	V.L., O
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:	PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 STA. 710+00 TO STA. 720+00		
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
<i>Barrett, Cargo, Withers</i>			
BARRETT, CARGO, WITHERS	STA. 710+00 TO STA. 720+00		
RECOMMENDED:	APPROVED:	DATE:	
<i>Barrett, Cargo, Withers</i>	<i>William P. Feltch</i>	APRIL 1966	
CHIEF ENG. DIV.	L.T. COL. C.E. DISTRICT ENGINEER		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 0 25 50 DRAWING NUMBER 016 b-UPC 2-85/15 SHEET 15 OF 90	SPEC. NO.

SEEDING	
END WIDTH	SQ. YDS.

16	72
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HIG-753-12.71

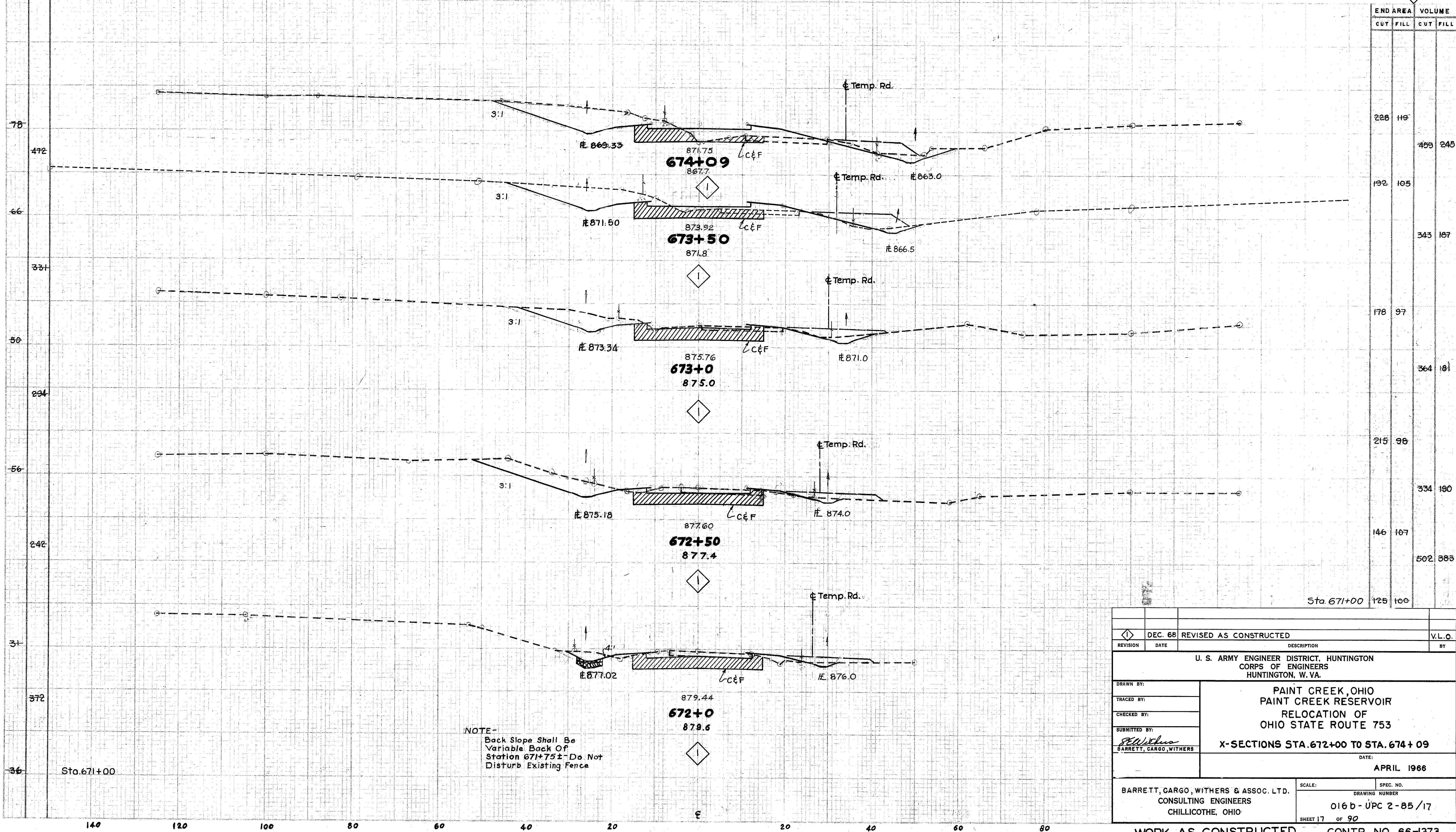


DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 670+00 TO STA. 671+00		
DATE: APRIL 1966		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: DRAWING NUMBER 016b-UPC 2-85/16 SHEET 16 OF 90		

WORK AS CONSTRUCTED CONTR. NO. 66-1373

SEEDING
END WIDTH
50.
YDS.PROJECT
CHIO
17
72

HIG-753-12.71



REVISION	DATE	DESCRIPTION	V.L.O.
1	DEC. 68	REVISED AS CONSTRUCTED	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 672+00 TO STA. 674+09	
TRACED BY:		DATE: APRIL 1966	
CHECKED BY:		SPEC. NO.	
SUBMITTED BY:		DRAWING NUMBER	
BARRETT, CARGO, WITHERS		016 b - UPC 2-85 / 17	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SHEET 17 OF 90	

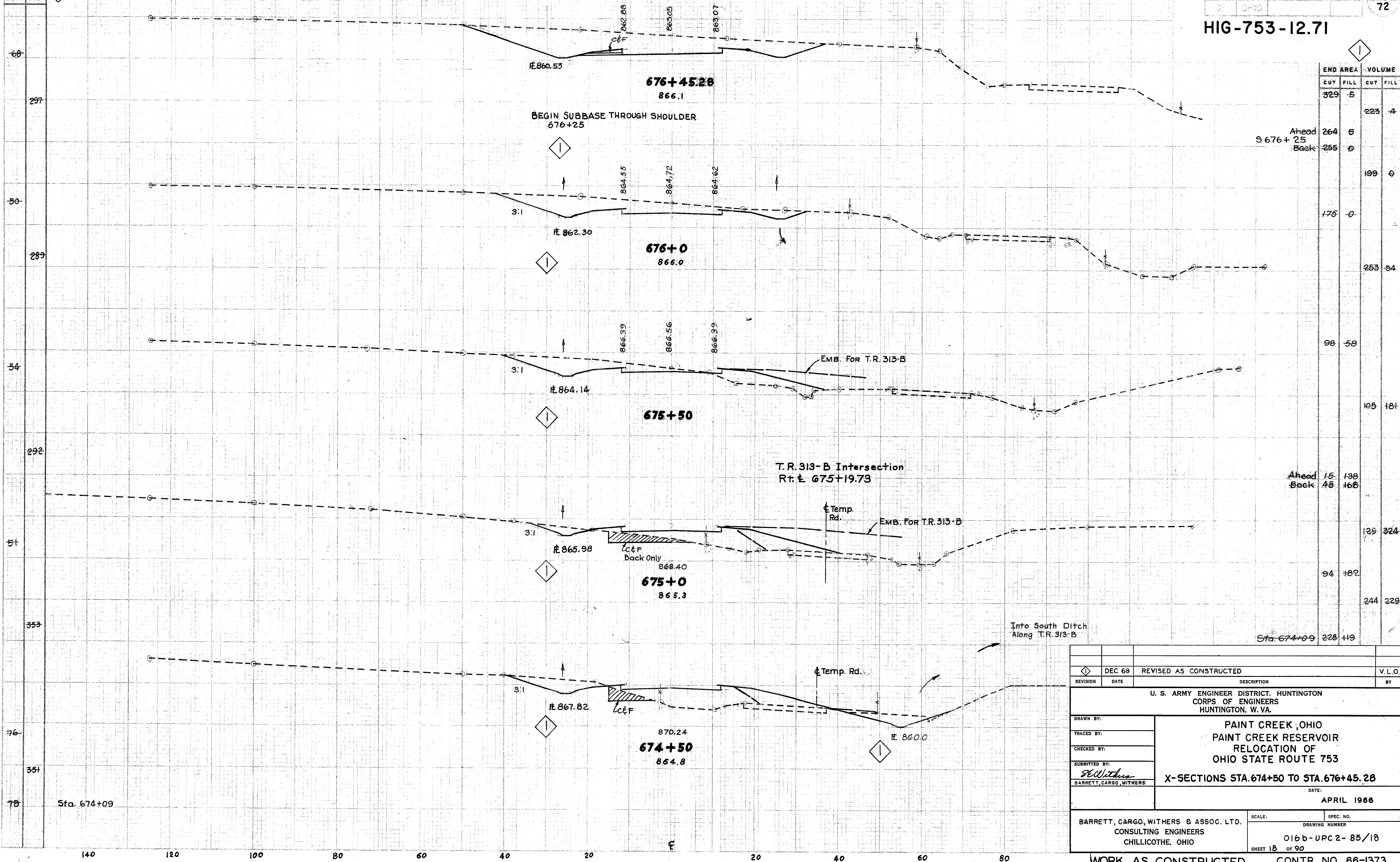
SEEDING
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WIDTH
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YDS.

1

18
72

HIG-753-12.71

1



REVISION	DATE	DESCRIPTION	BY
1	DEC 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 674+50 TO STA. 676+45.28	
TRACED BY:		DATE: APRIL 1968	
CHECKED BY:		SCALE: DRAWING NUMBER 016b-UPC 2- 85/18	
SUBMITTED BY: BARRETT, CARGO, WITHERS		SHEET 18 of 90	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		WORK AS CONSTRUCTED CONTR. NO. 66-1373	

SEEDING
END
WIDTH
SQ.
YDS.

1

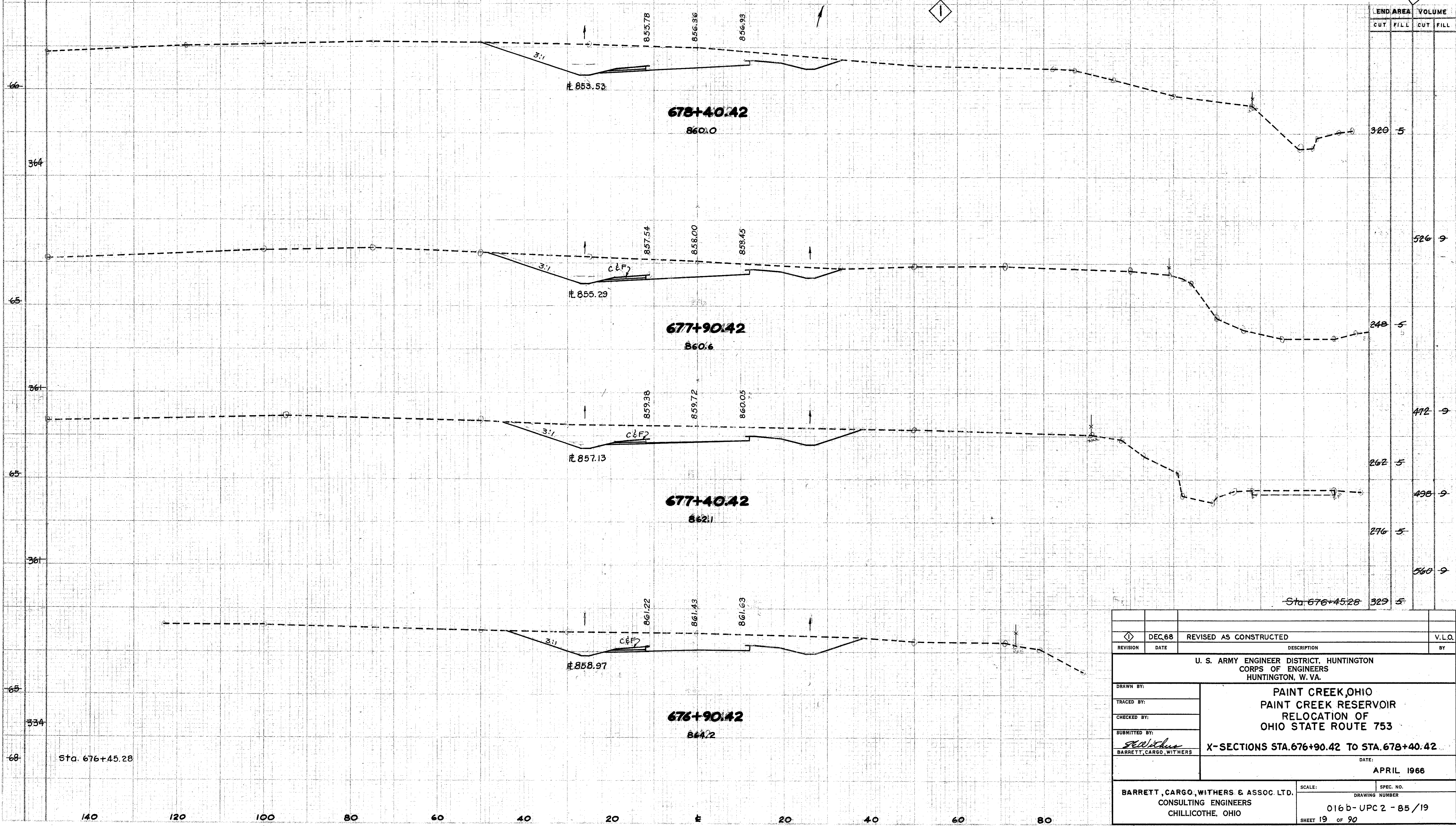
19
72

HIG-753-12.71

1

LEND AREA VOLUME
CUT FILL CUT FILL

OUTLET ON DUMPED ROCK
PAD STA 678+77.4-69+18



REVISION	DATE	DESCRIPTION	BY
1	DEC.68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753	
TRACED BY:		X-SECTIONS STA. 676+90.42 TO STA. 678+40.42	
CHECKED BY:		DATE: APRIL, 1966	
SUBMITTED BY:		SCALE:	
BARRETT, CARGO, WITHERS		SPEC. NO. DRAWING NUMBER 016 b-UPC 2 - 85 / 19 SHEET 19 of 90	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO			

SEEDING
END
WIDTH
SQ.
YDS.

1

NO. 80
DATE 1966
STATE OHIO
PERSON20
72

HIG-753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

10 1434

17 2480

8 1244

19 1984

12 904

17 1214

6 407

47 264

Ahead
679+25
Back

95 164

104 109

206 118

218 15

408 19

Sta 678+40.42 320 5

123

647

110

566

94

429

60

404

62

356

66

Sta. 678+40.42

BEGIN GUARD RAIL
Lt. 680+66.12681+0
832.4

850.87

851.07

851.65

852.43

851.85

839.0

680+50
835.3

851.67

852.45

853.23

844.8

680+0
839.2

852.71

853.49

854.27

850.46

679+50
847.5

854.24

854.94

855.63

END SUBBASE THROUGH SHOULDER
Lt. 679+25BEGIN GUARD RAIL
RT. 679+05.52

851.99

678+90.42
856.8

854.24

854.94

855.63

140

120

100

80

60

40

20

0

20

40

60

80

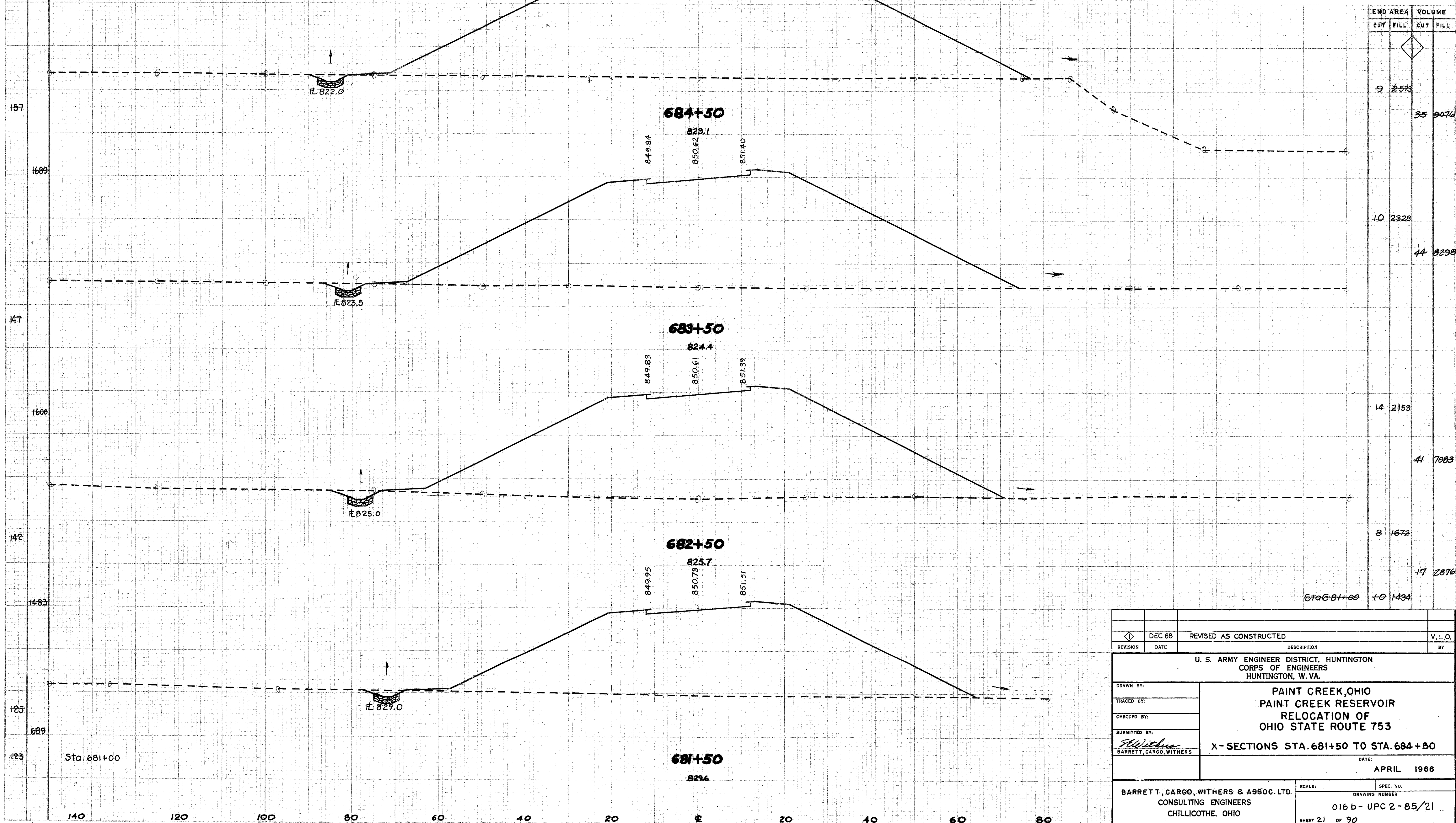
CONTR. NO. 66-1373

WORK AS CONSTRUCTED

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V. L. O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:			
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
BARRETT, CARGO, WITHERS			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 678+90.42 TO STA. 681+00			
DATE: APRIL 1966			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILlicothe, OHIO			
SCALE: SHEET 20 OF 90			

SEEDING
END
WIDTH
SQ.
YDS.REV. BY
DATE
PROJECT
2 OHIO2/1
72

HIG-753-12.71



REVISION	DATE	DESCRIPTION	V.L.O.
1	DEC 68	REVISED AS CONSTRUCTED	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 681+50 TO STA. 684+50	
TRACED BY:		DATE: APRIL 1966	
CHECKED BY:		SCALE: 016 b - UPC 2-85/21	
SUBMITTED BY:		SHEET 21 OF 90	
BARRETT, CARGO, WITHERS		SPEC. NO. DRAWING NUMBER	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		WORK AS CONSTRUCTED CONTR. NO. 66-1373	

SEEDING
END
WIDTH
SQ.
YDS.

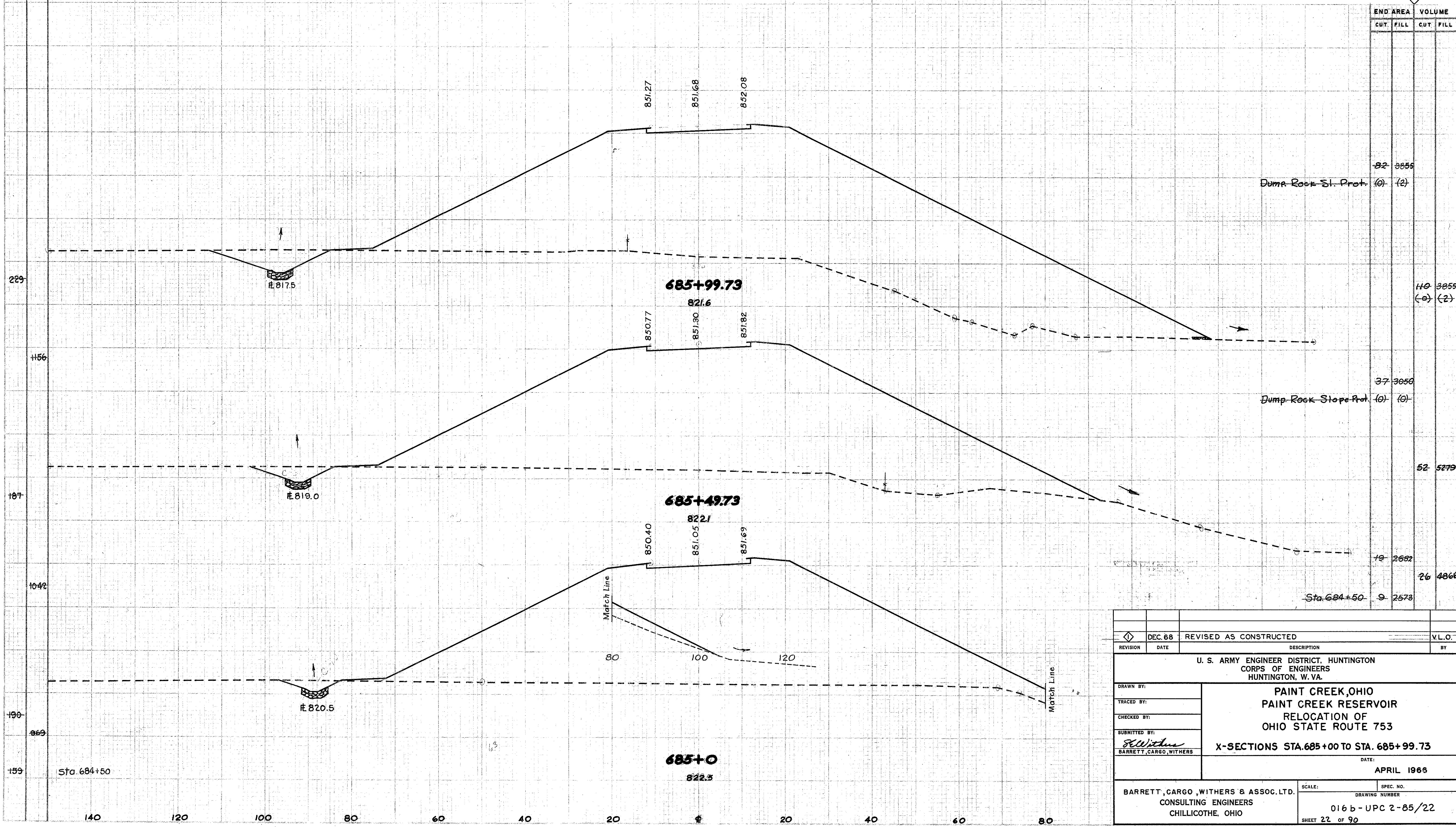


REV. BY	DATE	STATE	PROJECT
2		OHIO	

22
72

HIG-753-12.71

END AREA		VOLUME	
CUT	FILL	CUT	FILL



82	3855		
Dump Rock Sl. Prot.	(0)	(2)	
40	3855	(0)	(2)
37	3050		
Dump Rock Slope Prot.	(0)	(0)	
52	5279		
19	2682		
26	4866		
Sta. 684+50	9	2573	

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 685+00 TO STA. 685+99.73	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS		SPEC. NO. 016 b - UPC 2-85/22	
CONSULTING ENGINEERS CHILLICOTHE, OHIO		DRAWING NUMBER SHEET 22 of 90	

SEEDING
END
WIDTH
SO.
YDS.

2

23
72

HIG-753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

2

26 8986
804
(0) (90)

18 7029
738
(0) (26)

112 13700
(43)

110 5986
(0) (20)

178 9112
(20)

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

Gran. Emb.
D.R.S.P.

2	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
2	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 686+49.73 TO STA. 687+49.73			
DATE: APRIL 1966			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO			SCALE: SPEC. NO. DRAWING NUMBER 016 b - UPC 2 - 85 / 23 SHEET 23 OF 90

262

1447

259

1361

231

1278

229

Sta. 685+99.73

687+49.73
792.2

686+99.73
795.4

686+49.73
802.7

Match Line

Match Line

Match Line

Match Line

Match Line

3' Min. Gran. Emb.

3' Min. Gran. Emb.

Dumped Rock
Slope Protection

ft 798.0

803.0

ft 816.0

180

160

ft 792.0

140

852.43

852.60

852.76

90

100

120

140

140

160

180

200

803.0

803.0

803.0

SEEDING
END
WIDTH
SO.
YDS.

HIG-753-12.71

END AREA
CUT FILL

VOLUME
CUT FILL

End Dumped Rock
Channel Protection
689+16

STA 689+10

0:0 SECTION 689+10

STA. 689+10

688+77 0:0 Sect
Gran. Emb

688+65 0:0 Sect.

688+50 Gran. Emb.

687+97.50 Gran. Emb.

687+67.50 Gran. Emb.
D.R.S.P.

687+67.50 Gran. Emb.
D.R.S.P.

Sta 687+49.73 Gran. Emb.
D.R.S.P.

BRIDGE LIMIT 687+98.00

688+50

687+97.50

BEGIN ROCK FILL 687+67.50

At Sta. 687+80
Begin Dumped Rock Channel Protection (10' wide; 18" thick)
End Dumped Rock Channel Protection (6' wide; 18" thick)

DUMPED ROCK FILL
AROUND ABUTMENT - 15,372

REVISION	DATE	DESCRIPTION	BY
DEC. 68	5-24-66	REVISED AS CONSTRUCTED	V.L.O.
		REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:			
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 687+97.50 TO STA. 689+10 DATE: APRIL 1966			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO			SPEC. NO. DRAWING NUMBER 016 b-UPC 2- 85/24 SHEET 24 of 90

SEEDING
END
WIDTH
SQ.
YDS.

2

PROJECT
HIG-753-12.7126
72

HIG-753-12.71

END AREA
CUT FILL CUT FILL

2

1

1

32 9866
[825]
(114)Gran. Emb.
D.R.S.P.Dumped Rock
Slope Protection140 32384
[2569]
(391)

3' Min. Granular Emb.

693+0

789.5

END DUMPED ROCK FILL 692+07.50

692+07.50 Gran. Emb.
Ahead D.R.S.P.50 9639
[675]
(114)692+07.50
Back Gran. Emb.50 7632
[675]

692+00 Gran. Emb.

56 7632
[675]691+77.50
Gran. Emb.52 7588
[660]

DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY:		
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
BARRETT, CARGO, WITHERS		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 692+00 TO STA. 693+00		
DATE: APRIL 1966		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SPEC. NO. DRAWING NUMBER 016 b-UPC2-85/26 SHEET 26 OF 90

CONTR. NO. 66-1373

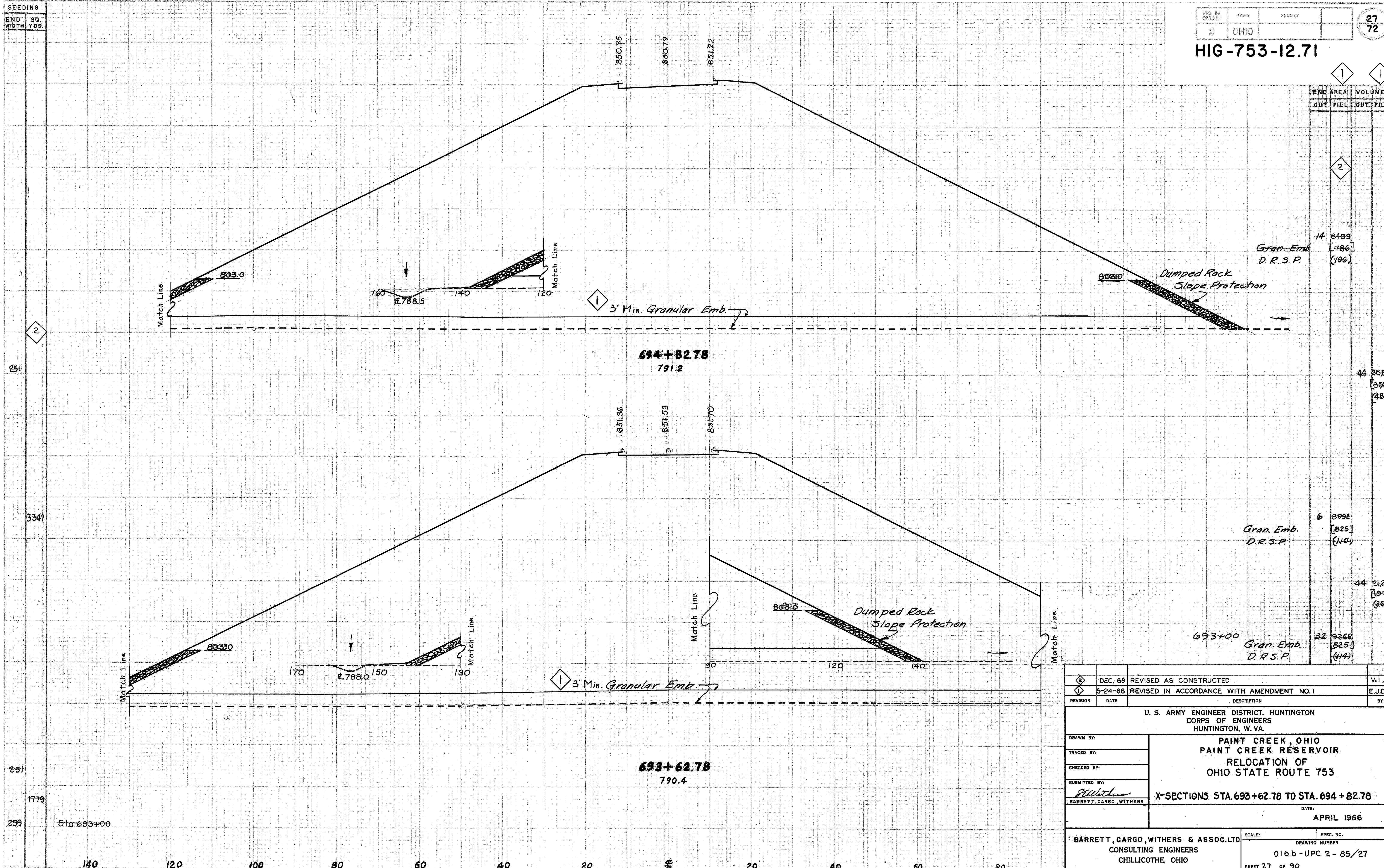
WORK AS CONSTRUCTED

SEEDING
END SQ.
WIDTH YDS.

FED. RD. DIST. NO. 2 STATE OHIO PROJECT
27
72

HIG-753-12.71

END AREA VOLUME
CUT FILL CUT FILL



REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
2	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON
CORPS OF ENGINEERS
HUNTINGTON, W. VA.

DRAWN BY: _____
TRACED BY: _____
CHECKED BY: _____
SUBMITTED BY: *Barrett, Cargo, Withers*
BARRETT, CARGO, WITHERS

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF
OHIO STATE ROUTE 753

X-SECTIONS STA. 693+62.78 TO STA. 694+82.78

DATE: APRIL 1966

BARRETT, CARGO, WITHERS & ASSOC. LTD.
CONSULTING ENGINEERS
CHILLICOTHE, OHIO

SCALE: _____ SPEC. NO. _____
DRAWING NUMBER 016b-UPC 2-85/27
SHEET 27 OF 90

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

SEEDING
END WIDTH SQ. YDS.

2

FED. RD.
DIST. NO.
2STATE
OHIO

PROJECT

30
72

HIG-753-12.71

END AREA
CUT FILLVOLUME
CUT FILL

2

700+25

D.R.S.P.

8

7437

(43)

803.0

Dumped Rock
Slope Protection

19

21,439

(154)

700+25
797.8

699+50

D.R.S.P.

6

8000

(68)

24

31,246

(276)

Sta. 698+50

D.R.S.P.

7

8884

(84)

2	DEC 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	DATE	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753	
TRACED BY:		X-SECTIONS STA. 699+50 TO STA. 700+25	
CHECKED BY:		DATE: APRIL 1966	
SUBMITTED BY:		SCALE: 016 b-UPC 2-85/30	
BARRETT, CARGO, WITHERS		SPEC. NO. DRAWING NUMBER	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SHEET 30 OF 90	

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

SEEDING
END
WIDTH
SQ.
YDS.

2

31
72

HIG-753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

2

223

811.0

849.83

850.35

850.87

700+97.78
807.4

Dumped Rock
Slope Protection

803.0

700+97.78

1

D.R.S.P.

5- 5976

(26)

12- 11,574

(50)

1213

700+50

1

D.R.S.P.

8- 7104

(30)

7- 6732

(34)

Sta. 700+25

1

D.R.S.P.

8- 7437

(43)

234

871

249

Sta. 700+25

804.0

849.83

850.35

850.87

700+50
799.2

803.0

Match Line

Match Line

DEC-68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY:		
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
BARRETT, CARGO, WITHERS		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753		
X- SECTIONS STA. 700+50 TO STA. 700+97.78		
DATE: APRIL 1966		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: SPEC. NO.		
DRAWING NUMBER		
016 b - UPC 2-85/31		
SHEET 31 OF 90		

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

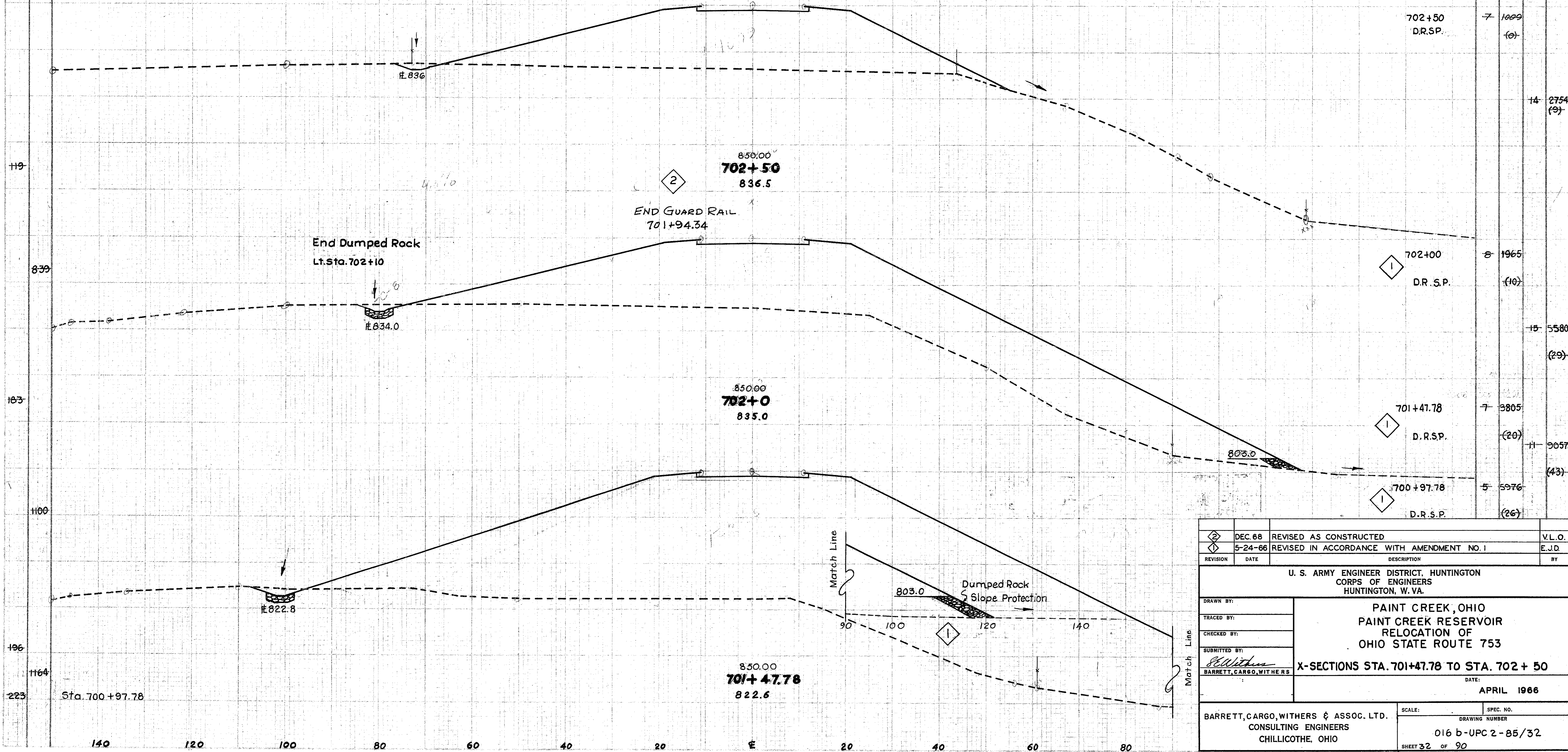
SEEDING
END WIDTH
50 YDS.

2

32
72

HIG-753-12.71

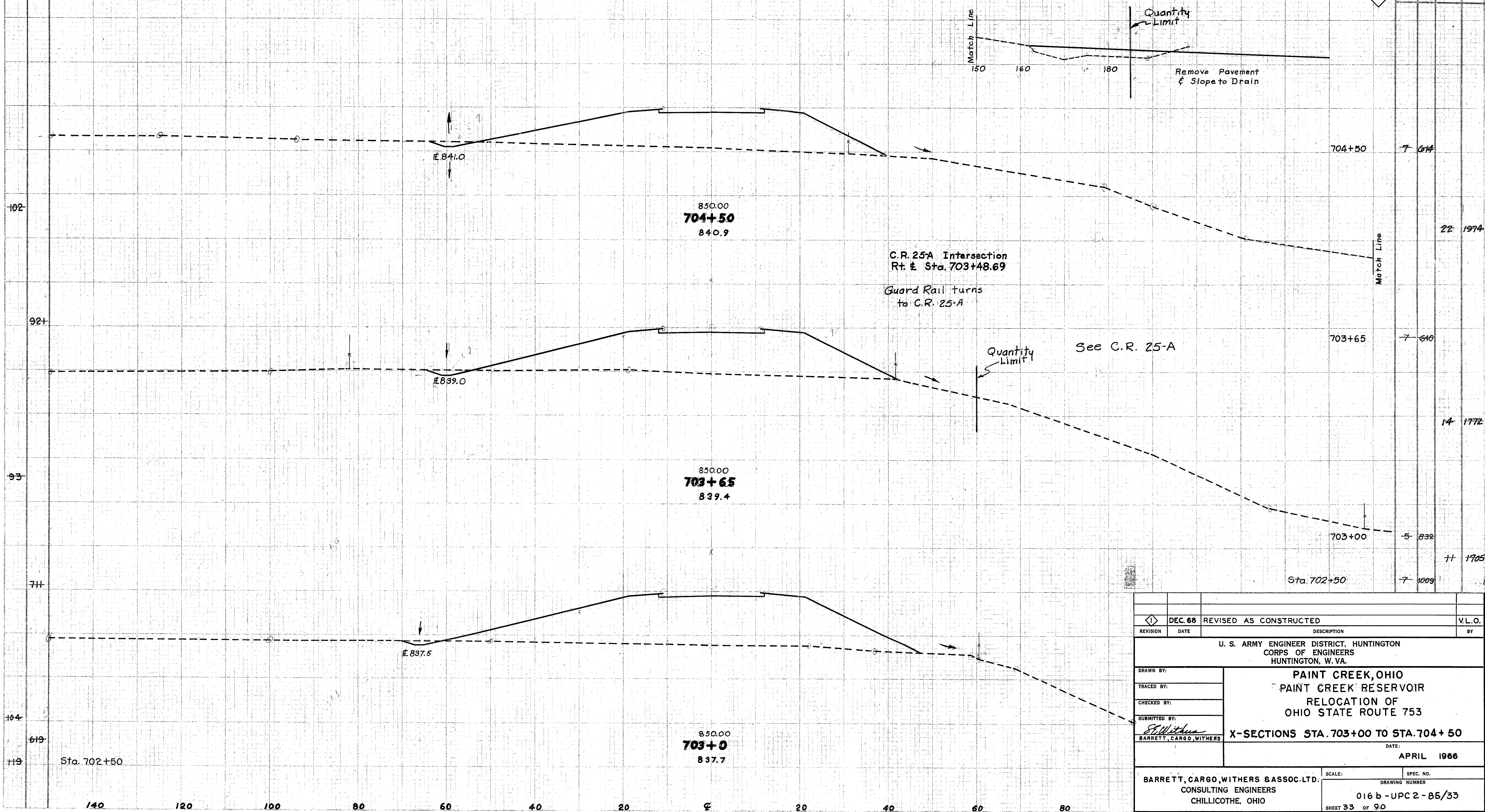
1
2
END AREA
CUT FILL CUT FILL
VOLUME



2	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
1	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 701+47.78 TO STA. 702 + 50 DATE: APRIL 1966			
DRAWN BY:		SPEC. NO.	
TRACED BY:		DRAWING NUMBER	
CHECKED BY:		016 b-UPC 2-85/32	
SUBMITTED BY:		SHEET 32 OF 90	
BARRETT, CARGO, WITHERS		CONTR. NO. 66-1373	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		WORK AS CONSTRUCTED	

SEEDING
END
WIDTH
SQ.
YDS.FED. RD.
DIVISION
STATE
PROJECT
OHIO33
72

HIG-753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

REVISION	DATE	DESCRIPTION	BY
DEC. 68	REVISED AS CONSTRUCTED		V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: BARRETT, CARGO, WITHERS			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 703+00 TO STA. 704+50 DATE: APRIL 1966			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO			
SCALE: DRAWING NUMBER 016 b - UPC 2-85/33 SHEET 33 OF 90			

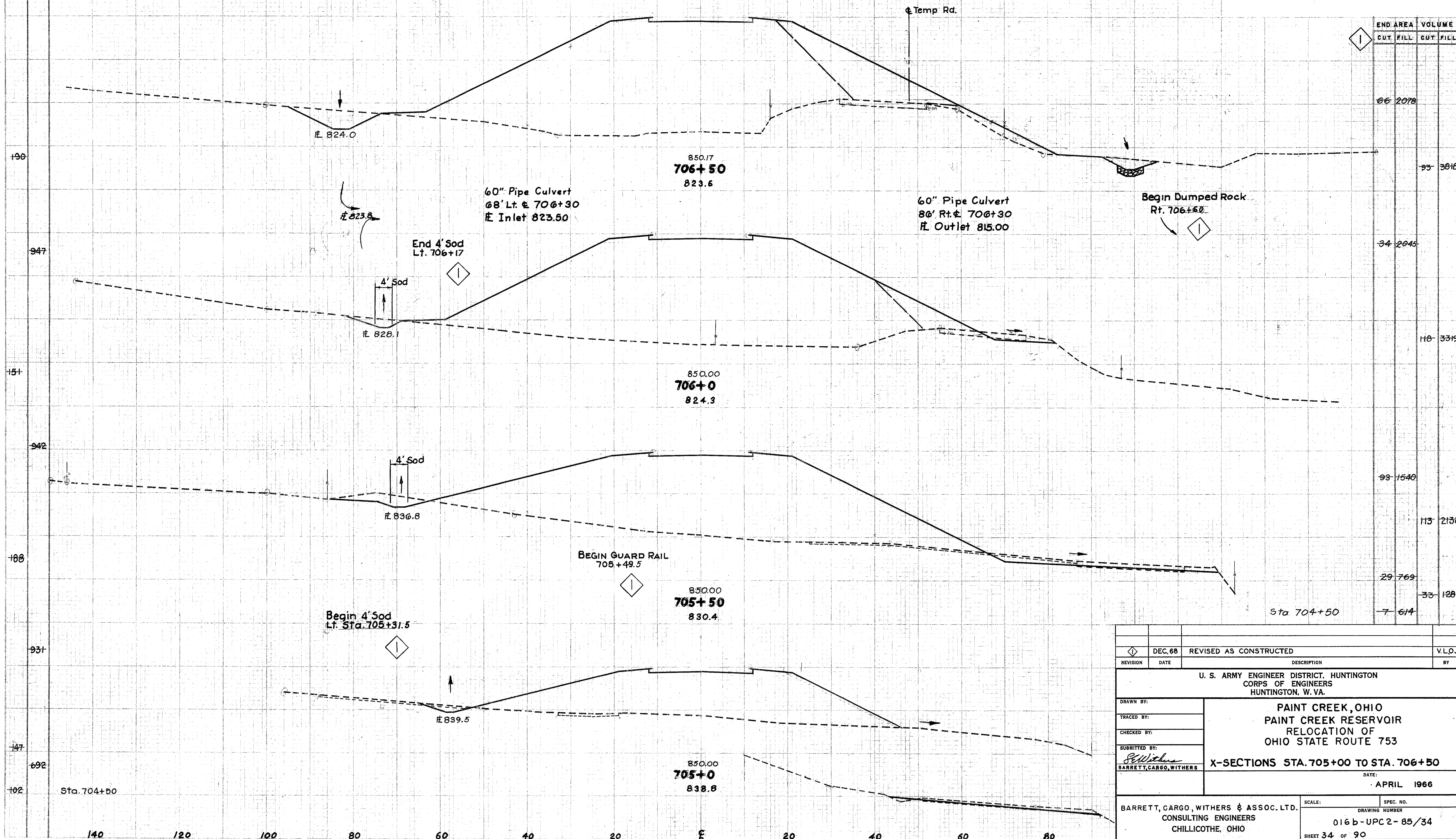
CONTR. NO. 66-1373

WORK AS CONSTRUCTED

SEEDING
END
WIDTH
SQ.
YDS.

REV. 66
DATE 12/68
STATE OHIO
PROJECT
34
72

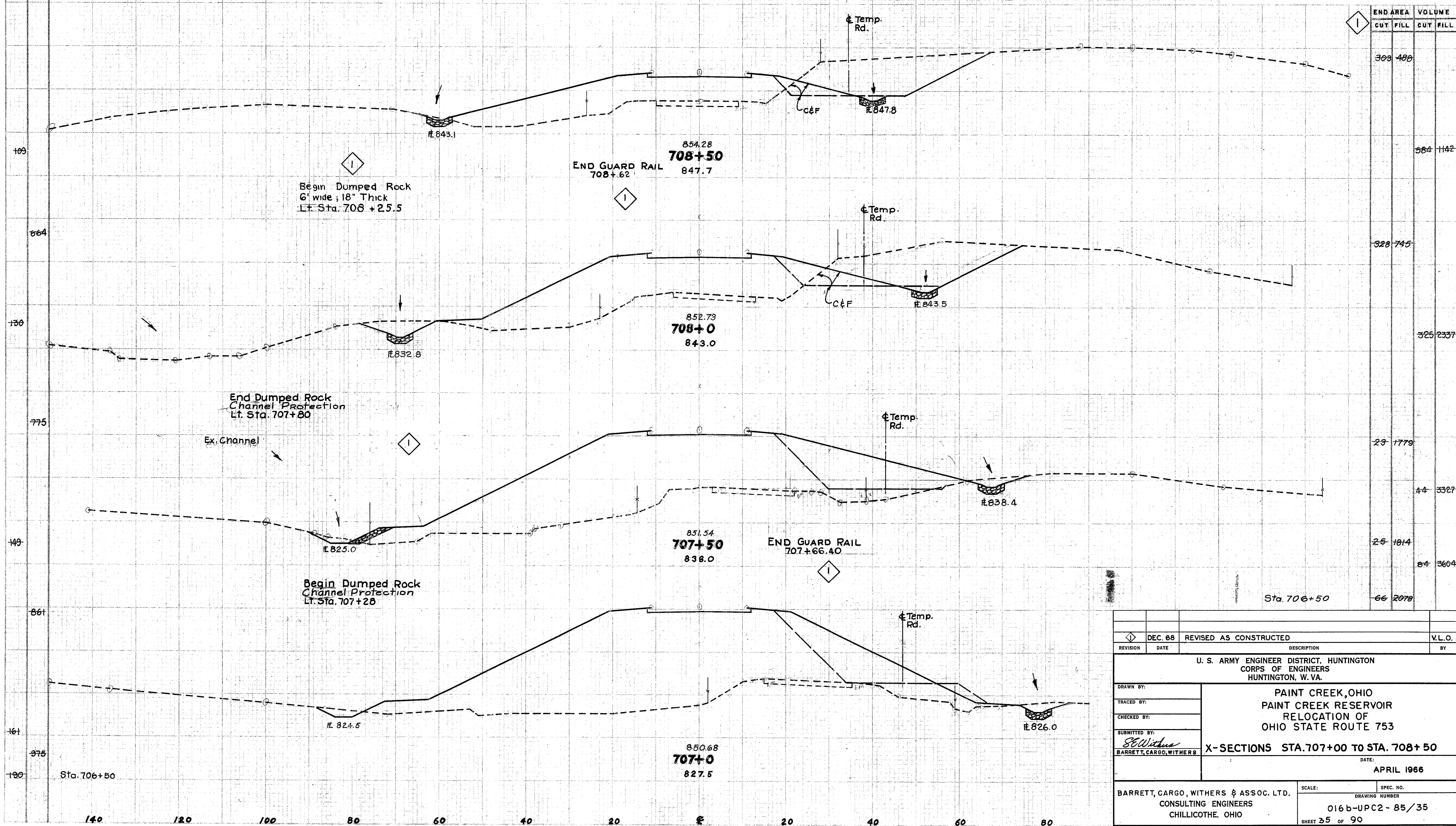
HIG-753-12.71



REVISION		DATE	DESCRIPTION	BY
1		DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.				
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753		
TRACED BY:		X-SECTIONS STA. 705+00 TO STA. 706+50		
CHECKED BY:		DATE: APRIL 1966		
SUBMITTED BY:		SPEC. NO.		
BARRETT, CARGO, WITHERS		DRAWING NUMBER 016 b-UPC 2-85/34		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SHEET 34 OF 90		

SEEDING
END
WIDTH
SQ.
YDS.SHEET NO.
2
STATE
OHIO
PROJECT35
72

HIG-753-12.71



END AREA		VOLUME	
CUT	FILL	CUT	FILL
303	480		
		584	1142
328	745		
		325	2337
23	1779		
44	3327		
25	1814		
		84	3604
66	2078		

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753	
CHECKED BY:		X-SECTIONS STA. 707+00 TO STA. 708+50	
SUBMITTED BY:		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS		SCALE: SHEET 35 OF 90	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SPEC. NO. DRAWING NUMBER 016b-UPC2-85/35	

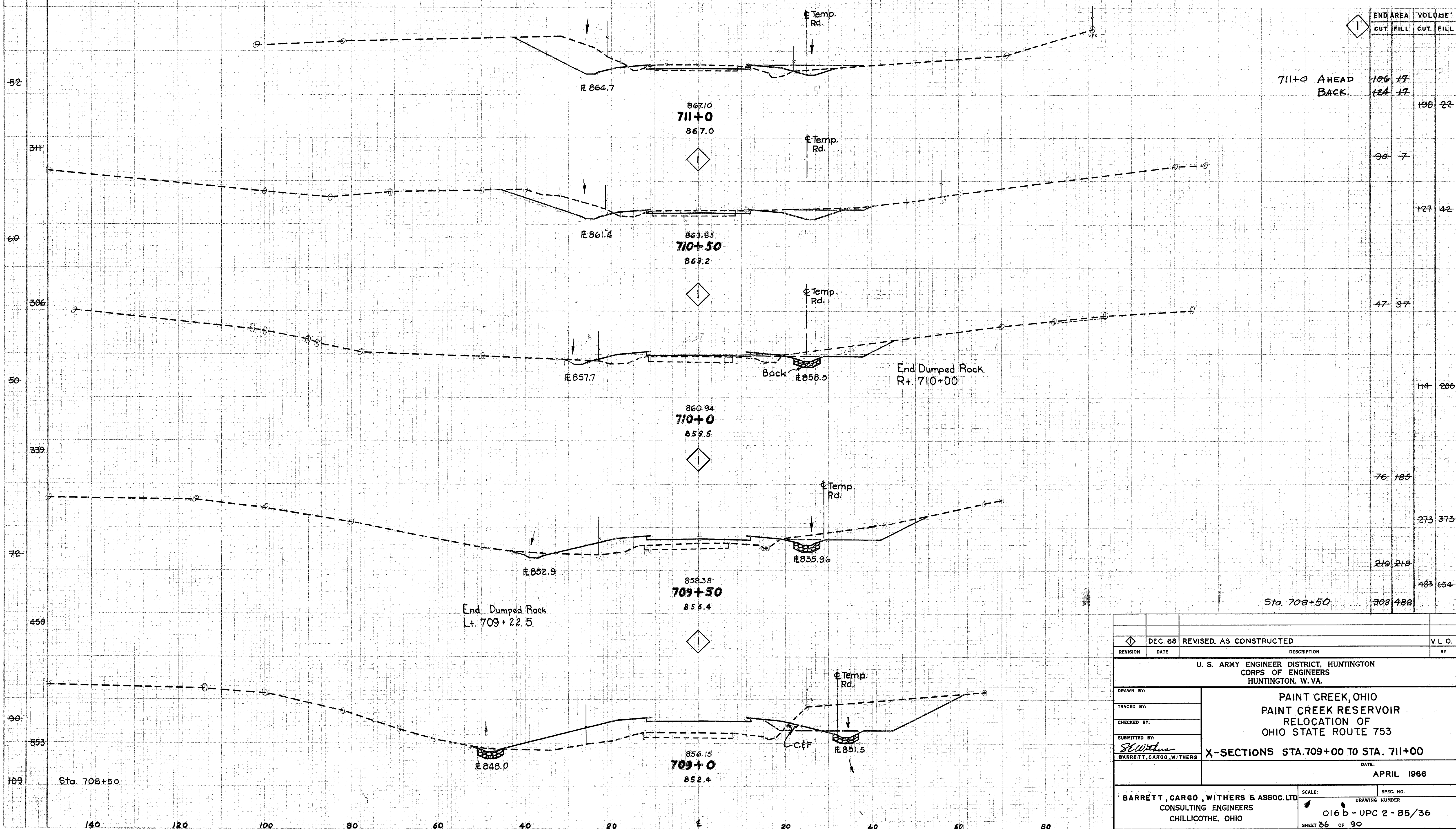
CONTR. NO. 66-1373

WORK AS CONSTRUCTED

SEEDING
END SQ.
WIDTH YDS.

HIG-753-12.71

END PROJECT 711+00



END AREA	VOLUME	CUT	FILL
106	17	124	17
90	7	127	42
47	37	114	206
76	185	273	373
219	218	483	654
303	488		

REVISION	DATE	DESCRIPTION	V.L.O.
1	DEC. 68	REVISED, AS CONSTRUCTED	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: BARRETT, CARGO, WITHERS			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 X-SECTIONS STA. 709+00 TO STA. 711+00 DATE: APRIL 1966			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 016 b - UPC 2 - 85/36 SHEET 36 OF 90	SPEC. NO.

SEEDING
END
WIDTH
80
YDS.

1

2 OHIO PROJECT

37
72

HIG-753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

1

0 0 STA. 712+00

END WORK 712+00

712+0
874.1

0 0 STA. 712+00

Sta. 711+0

0 0
88 2
95 2
187 18
106 17

97

35

242

52

Sta. 711+0

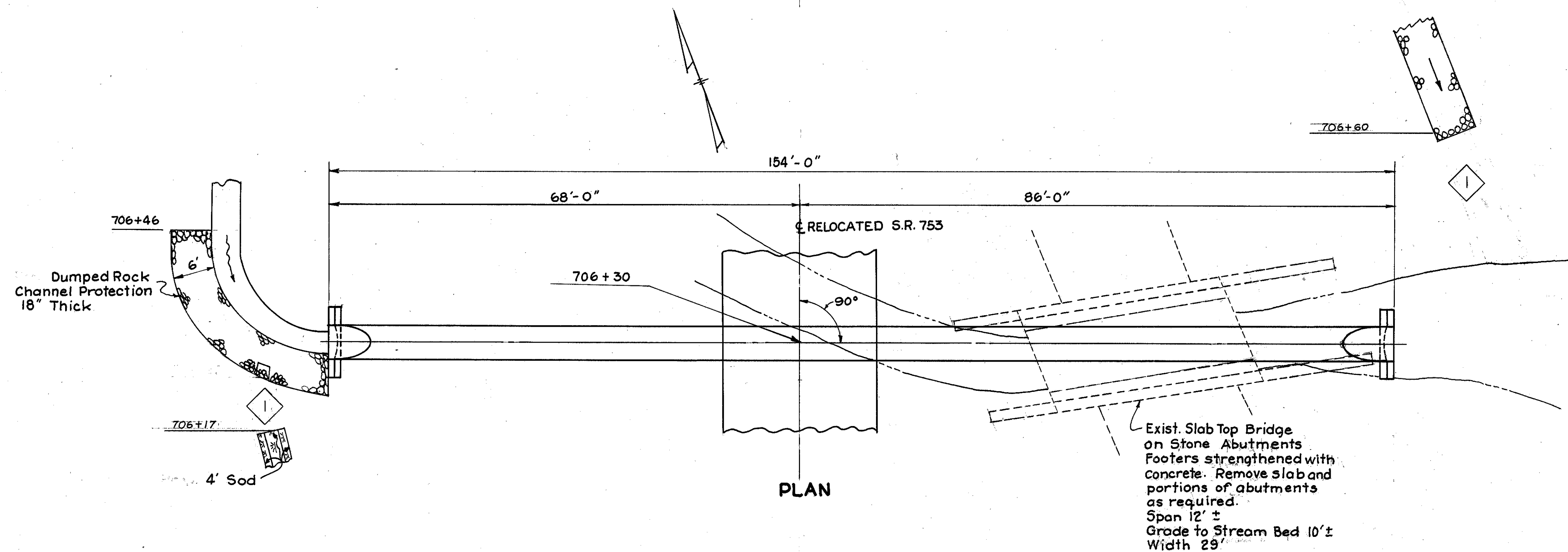
± 869.0

711+50
870.8

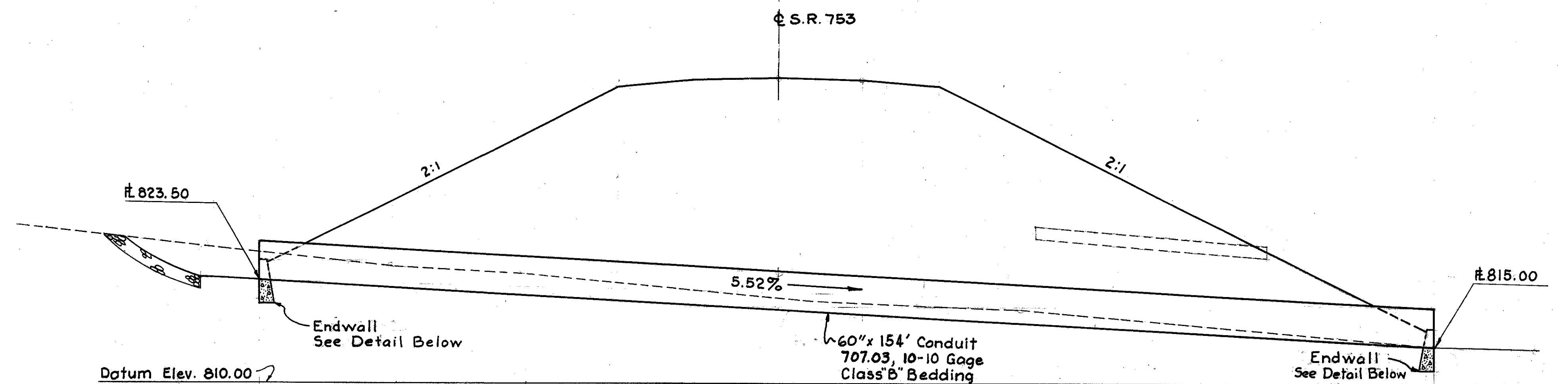
± Temp.
Rd.

REVISION	DATE	DESCRIPTION	V.L.O. BY
1	DEC. 68	REVISED AS CONSTRUCTED	
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753	
TRACED BY:		X-SECTIONS STA. 711+50 TO STA. 712+00	
CHECKED BY:		DATE: APRIL 1966	
SUBMITTED BY: BARRETT, CARGO, WITHERS		SCALE: DRAWING NUMBER 016b-UPC 2-85/37 SHEET 37 of 90	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		CONTR. NO. 66-1373 WORK AS CONSTRUCTED	

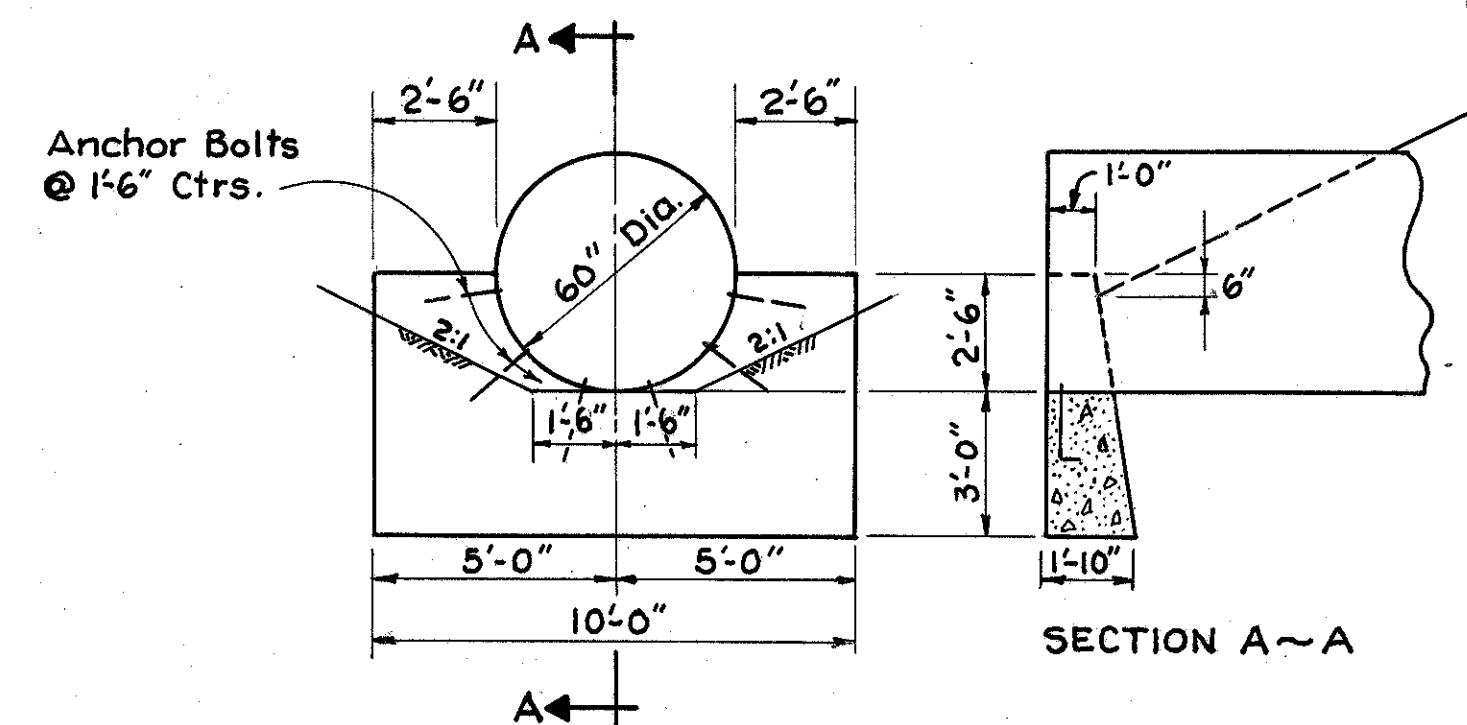
HIG - 753-12.71



DRAINAGE DATA
 DRAINAGE AREA = 101 AC.
 Q₂₅ = 160 cfs.



SECTION



ENDWALL DETAILS
 For Notes and Anchor
 bolt Detail, See Sheet N^o 53

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY
601	Dumped Rock Channel Protection	10 C.Y.
602	Concrete Masonry	6 C.Y.
603	60" Conduit, 707.03, 10-10 Gage, Class B Bedding	154 L.F.
202	Portions of Existing Structure Removed	Lump

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON
 CORPS OF ENGINEERS
 HUNTINGTON, W. VA.

**PAINT CREEK, OHIO
 PAINT CREEK RESERVOIR.
 RELOCATION OF
 OHIO STATE ROUTE 753
 CULVERT STA. 706+30**

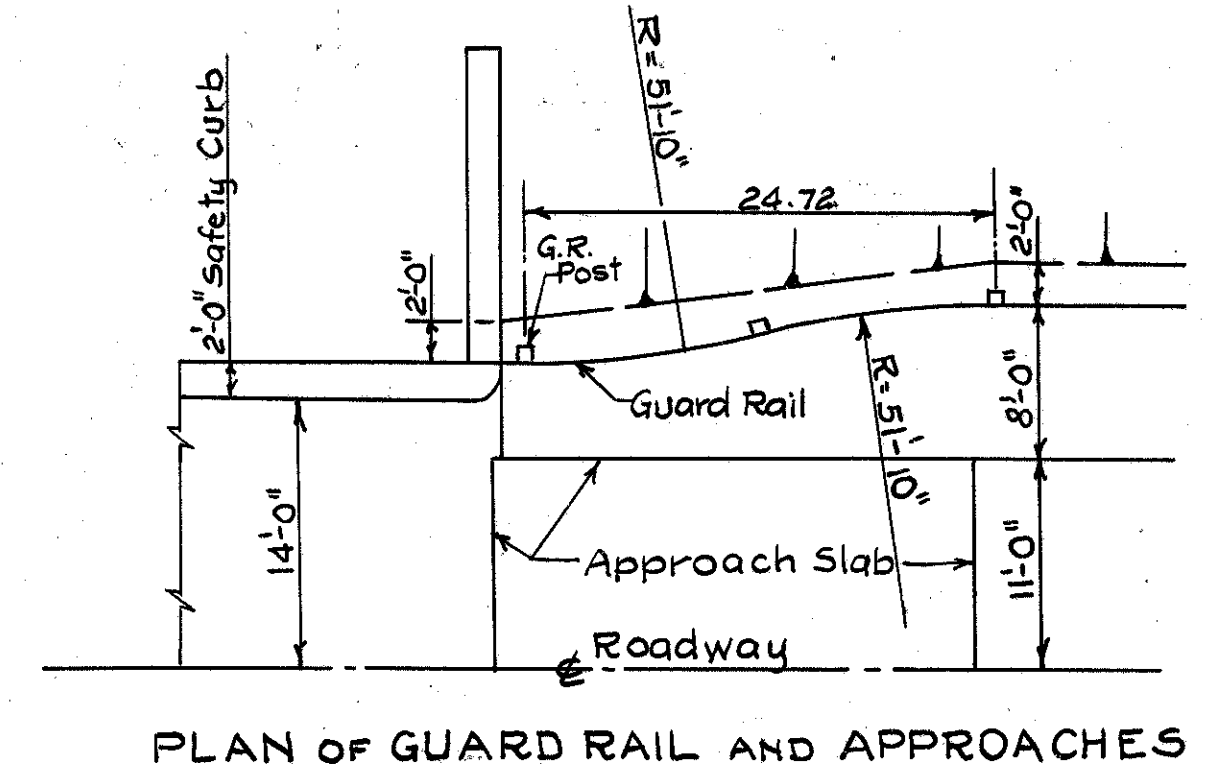
DRAWN BY: _____
 TRACED BY: _____
 CHECKED BY: _____
 SUBMITTED BY: *S. Withers*
 BARRETT, CARGO, WITHERS

DATE: **APRIL 1966**

BARRETT, CARGO, WITHERS & ASSOC. LTD.
 CONSULTING ENGINEERS
 CHILLICOTHE, OHIO

SCALE: SPEC. NO. _____
 DRAWING NUMBER
 016 b - UPC 2-85/52
 SHEET 52 OF 90

HIG - 753 - 12.71



PROPOSED CURVE DATA
 P.I. Sta. 682+29.17
 $\Delta = 27^{\circ}16'45''$ Lt. $L_s = 250.00'$
 $D_c = 3^{\circ}00'$ $\theta_s = 3^{\circ}45'$
 $\Delta_c = 19^{\circ}46'45''$ $P = 1.36'$
 $T_s = 588.75'$ $K = 124.98'$
 $L_c = 659.31'$ $X_c = 249.89'$
 $E_s = 56.82'$ $Y_c = 5.45'$

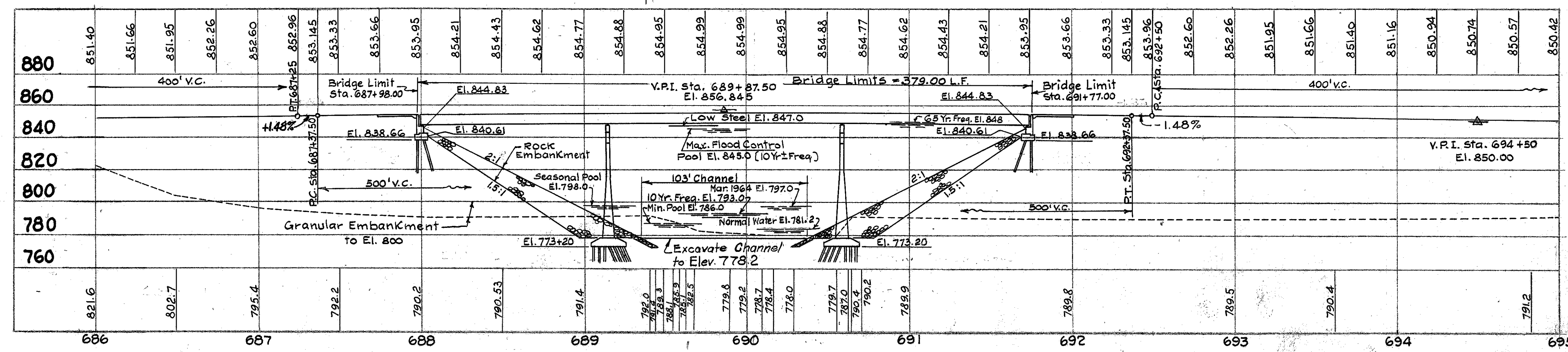
CURVE DATA
 P.I. Sta. 698+12.74
 $\Delta = 15^{\circ}30'$ Lt. $L_s = 200.00'$
 $D_c = 2^{\circ}00'$ $\theta_s = 2^{\circ}00'$
 $\Delta_c = 11^{\circ}30'$ $P = 0.58'$
 $T_s = 489.96'$ $K = 100.00'$
 $L_c = 575.00'$ $X_c = 199.98'$
 $E_s = 26.99'$ $Y_c = 2.33'$

NEW BRIDGE DATA
 TYPE : Continuous welded girder with concrete deck and substructure.
 SPANS : 115'-3" - 144'-0" - 115'-3"
 ROADWAY : 24'-0" f/f of 2'-0" Safety Curbs
 LOAD FREQUENCY : CF-130 [57]
 SKEW : 0°00'
 WEARING SURFACE : 1" Monolithic concrete
 APPROACH SLAB : 25' Long
 ALIGNMENT : Tangent
 RAILING : Type 710.06 with handrail and steel posts.

EXISTING BRIDGE DATA
 TYPE : Continuous steel beam with concrete deck and substructure.
 SPANS : 66'-0" - 83'-0" - 66'-0"
 ROADWAY : 24'-0" f/f of 1'-8" safety Curbs
 LOADING : S-15-46
 SKEW : 0°00'
 DATE BUILT : 1949
 CONDITION : Good
 DISPOSITION : To be removed

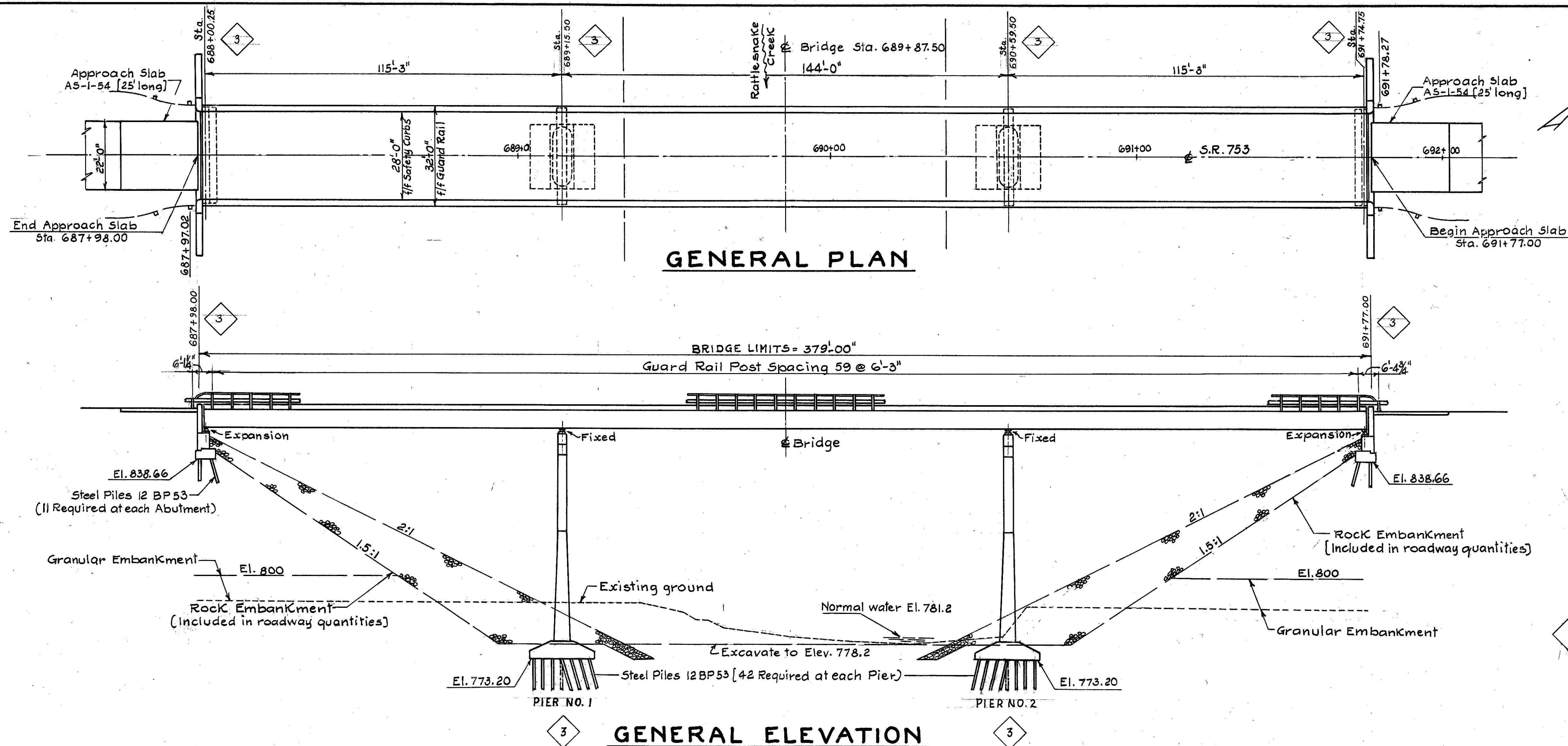
NOTE : The quantity of channel excavation is included in the estimated quantity of Item 203 "Excavation including embankment construction and water."

DRAINAGE AREA - 275.5 Sq. Mi. $Q_{10} = 15,700$ cfs.
 AT Elev. 793.0 - 10 Yr. Disc.
 $M > 1$; VEL. - 8 1/2; HEAD LOSS - 1"



DEC. 68	WORK AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.O.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY: L.P.		
TRACED BY: L.P.		
CHECKED BY:		
SUBMITTED BY: W.D. Camp		
RECOMMENDED: BARRETT, CARGO, WITHERS		
APPROVED: [Signature] DATE: APRIL 1966		
CHIEF ENGINEER: [Signature] LT. COL. C.E. DISTRICT ENGINEER		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: 1" = 40' DRAWING NUMBER: 016 b-UPC2-85/54 SHEET 54 OF 90		

HIG-753-12.71



GENERAL NOTES

REFERENCE shall be made to Supplemental Specifications 808 dated 7-14-65, 811 dated 3-29-65, 825 dated 5-22-65 and 828 dated 7-21-65.

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

DESIGN DATA: 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 A15-65, A16-65, A160-65, Deformed; Intermediate or Hard grade. Basic unit stress - 20,000 p.s.i.

PILE TEST LOADS shall be applied if and where directed by the contracting officer.

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

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed.

Unless otherwise indicated or specified, all metal items shall be structural steel ASTM A36-63T.

PROCEDURE: The embankment, rock, granular and earthen shall be placed and compacted up to the level of the subgrade for a distance of 200 feet back of the abutment, after which excavation shall be made for the abutments and piers and the piles driven.

ABUTMENT PILES shall be driven to a pile tip elevation of at least 775 and to a minimum bearing capacity of 50 tons per pile. The Contractor may pre-bore holes 14" in diameter to elevation 820 to facilitate pile driving. After piles have been driven to the specified tip elevation and to 50 tons bearing capacity, the pre-bored hole [if used] shall be filled with sand. The cost of pre-boring shall be considered as paid for in the Unit price bid per lineal foot of Item 507, Steel piles 12 BP 53.

PIER PILES shall be driven to a minimum bearing capacity of 47 tons per pile.

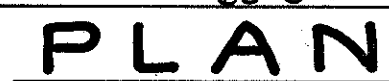
MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine. Type used shall be approved by the contracting officer.

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S	PIERS	SUPER	GENERAL	AS BUILT
202	Lump	Sum	Existing structure removed				Lump	
503	857	Cu. Yds	Excavation For Structure	272	585			
505	Lump	Sum	Test Pile				Lump	
507	4,280	Lin. Ft.	Steel piles, 12 BP 53	1,760	2,520			
509	136,800	Lbs.	Reinforcing steel	12,796	31,936	92,068		
511	360	Cu. Yds.	Class "C" Concrete, Superstructure			360		
511	381	Cu. Yds.	Class "C" Concrete, Pier caps and stems		381			
511	111	Cu. Yds.	Class "E" Concrete, Abutments above footing	111				
511	229	Cu. Yds.	Class "E" Concrete, Footings	75	154			
513	487,500	Lbs.	Structural Steel			487,500		
514	Lump	Lump	Field painting of structural steel			Lump		
517	758	Lin. Ft.	Railing Galv. [Deep beam rail with Galv. steel posts, bolts, handrail]			758		
518	52	Cu. Yds.	Porous backfill	52				
518	62	Lin. Ft.	6" Helical perforated C.M.R. Sec. 707.06, including specials	62				
518	60	Lin. Ft.	6" Helical C.M.R. Sec. 707.06, non-perforated	60				
518	12	Each	Scuppers, including supports			12		
808	360	Units	Water-reducing, set-retarding admixture			360		
828	56	Lin. Ft.	Joint sealer			56		
825	1420	Sq. Yds.	Concrete Surface Treatment	14		1406		

3	DEC. 68	REVISED AS CONSTRUCTED	N.L.O.
2	7-14-66	REVISED QUANTITY ESTIMATE ITEMS 503 & 511	E.J.D.
1	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY: L.P.		PAINT CREEK, OHIO	
TRACED BY: L.P.		PAINT CREEK RESERVOIR	
CHECKED BY: NK		GENERAL PLAN AND ELEVATION	
SUBMITTED BY: H. L. Capps		BRIDGE NO. HIG-753-1303	
BARRETT, CARGO, WITHERS		SR-753 over RATTLESNAKE CREEK	
RECOMMENDED: Dan B. Johnson		RELOCATION OF OHIO STATE ROUTE 753	
CHIEF ENG. DIST.		APPROVED: William E. Redd	
		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: N/A SPEC. NO. DRAWING NUMBER 016b-UPC 2-85/55 SHEET 55 of 90	

The diagram shows a horizontal line labeled 'H.W.L.' (High Water Line). Below this line, two diagonal lines represent the abutments. The upper diagonal line is labeled 'Rear Abutment' and the lower diagonal line is labeled 'Forward Abutment'. Both lines have a small cross-hatch mark near their base, indicating a specific point of interest.



ABUTMENT PILE LENGTHS—(EACH ABUTMENT IDENTICAL)					
ROW NO.	PILE NO.	LENGTH (FT)	ROW NO.	PILE NO.	LENGTH (FT)
A	1	67.0	A	7	67.0
A	2	67.0	B	1	65.0
A	3	67.0	B	3	65.0
A	4	67.0	B	5	65.0
A	5	67.0	B	7	65.0
A	6	67.0	—	—	—
For Pile Locations—See "Plan" Above			Total Length (Eg. Abut.) =		729.0

Total Length (Ea. Abut.) =



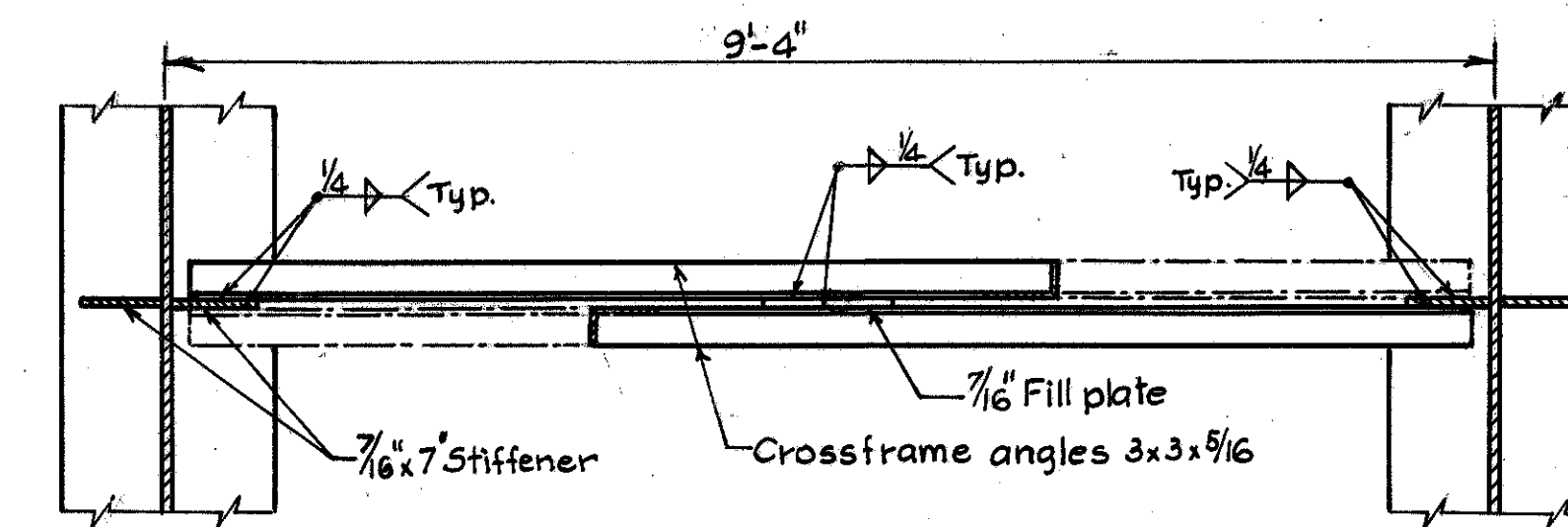
CONTR. NO. 66-1373

WORK AS CONSTRUCTED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

58

72

[illegible]

Face of Curb 2

1'-3"

3" 3" 3" 3" 3"

3/16" Ft. Slope top of Scupper to match roadway surface

7 1/2"

3/16" Typ.

4 1/2"

Inside Box

9"

1 1/2" Min.

1'-3"

Stiffeners

2'-10"

Typ. 3/16"

2"

bar 1 1/4" x 1/4"

6" ϕ Standard Pipe outlet Galv.

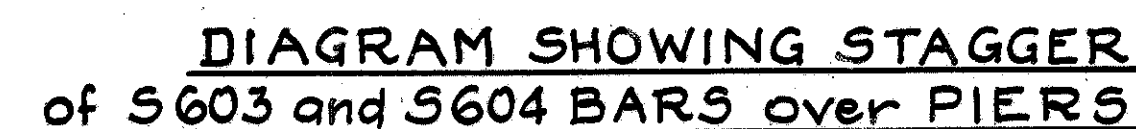
2 1/2" x 1/4" Scupper

5/8" bolts

1/4"

SUPPORT E

SUPPORT BOLT DETAILS



Deck Placing Was Continuous - From Forward Abut. to Rear Abut. (North to South)

NOTES:

CONCRETE is Class "C" for Superstructure

DECK SLAB HAUNCH : The haunch in the deck slab adjacent to the top of the steel girders which is shown as 11" wide, may vary from this dimension between the limits of 8" and 14" except that the maximum slope shall not exceed 3" inches per foot. Payment for deck slab concrete shall be based on the 11" width.

* This is the nominal 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 volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

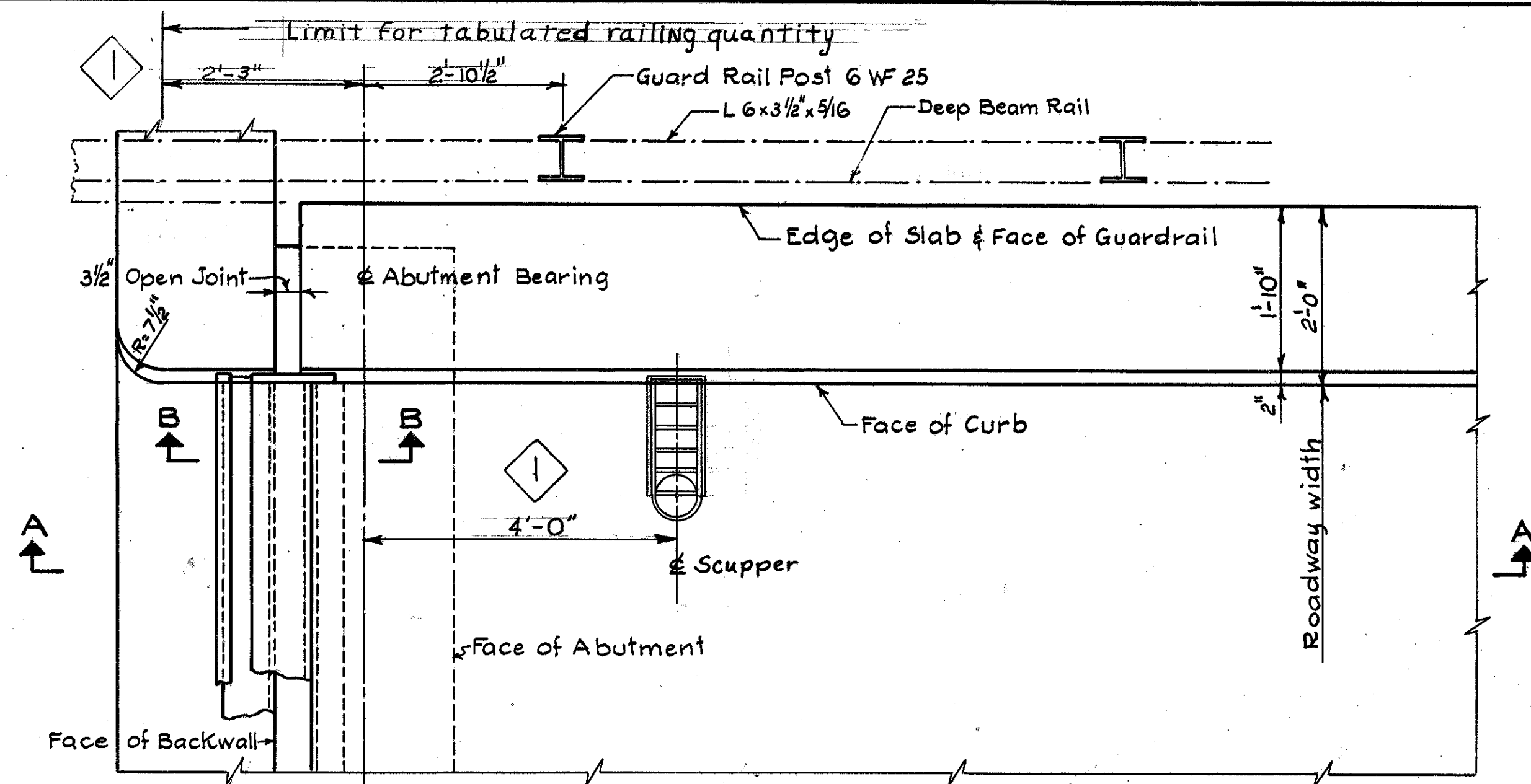
ADDITIONAL NOTES:

For additional notes see : GENERAL NOTES.

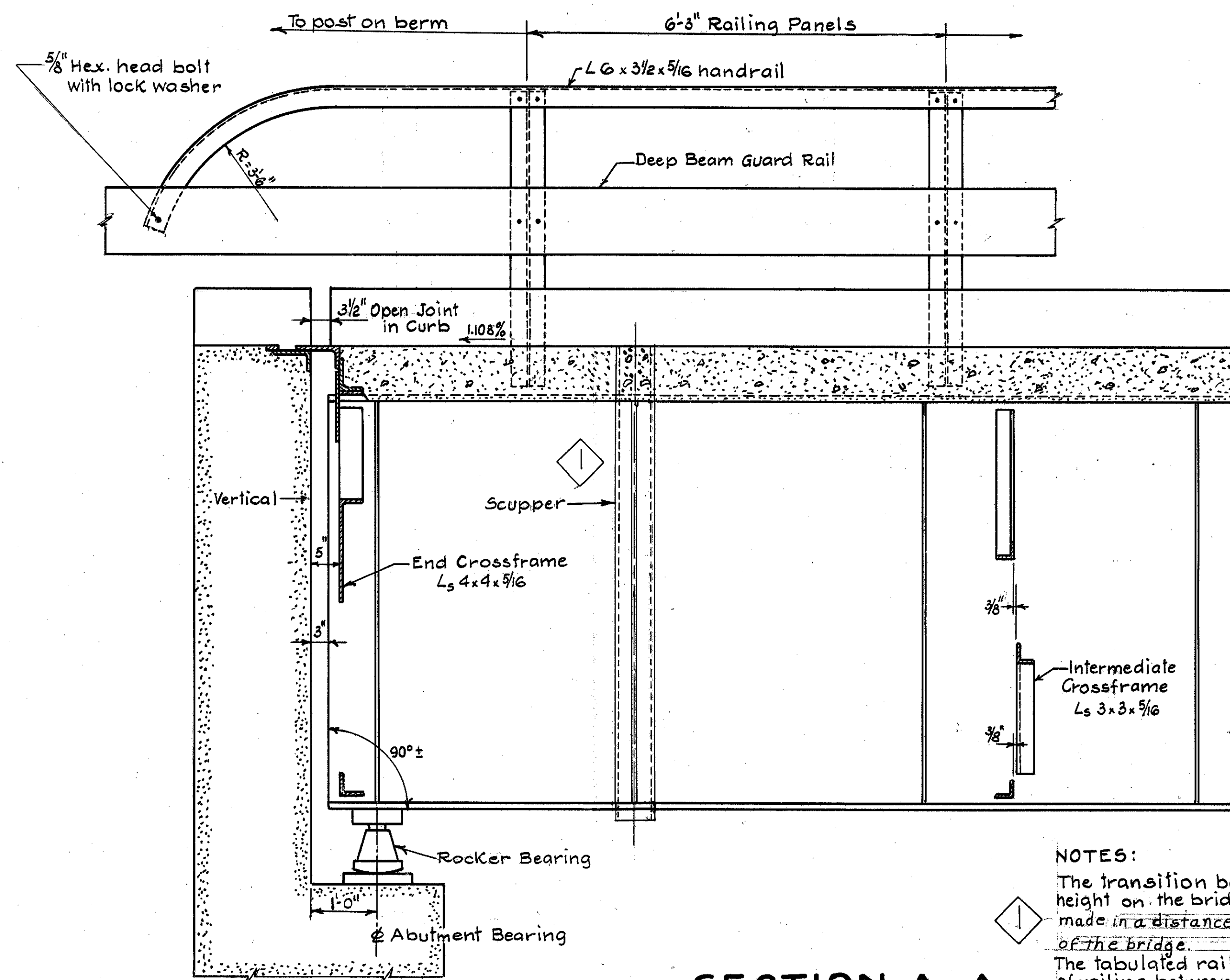
CONTR. NO. 66-1373

WORK AS CONSTRUCTED

HIG-753-12.71



PART PLAN AT ABUTMENT

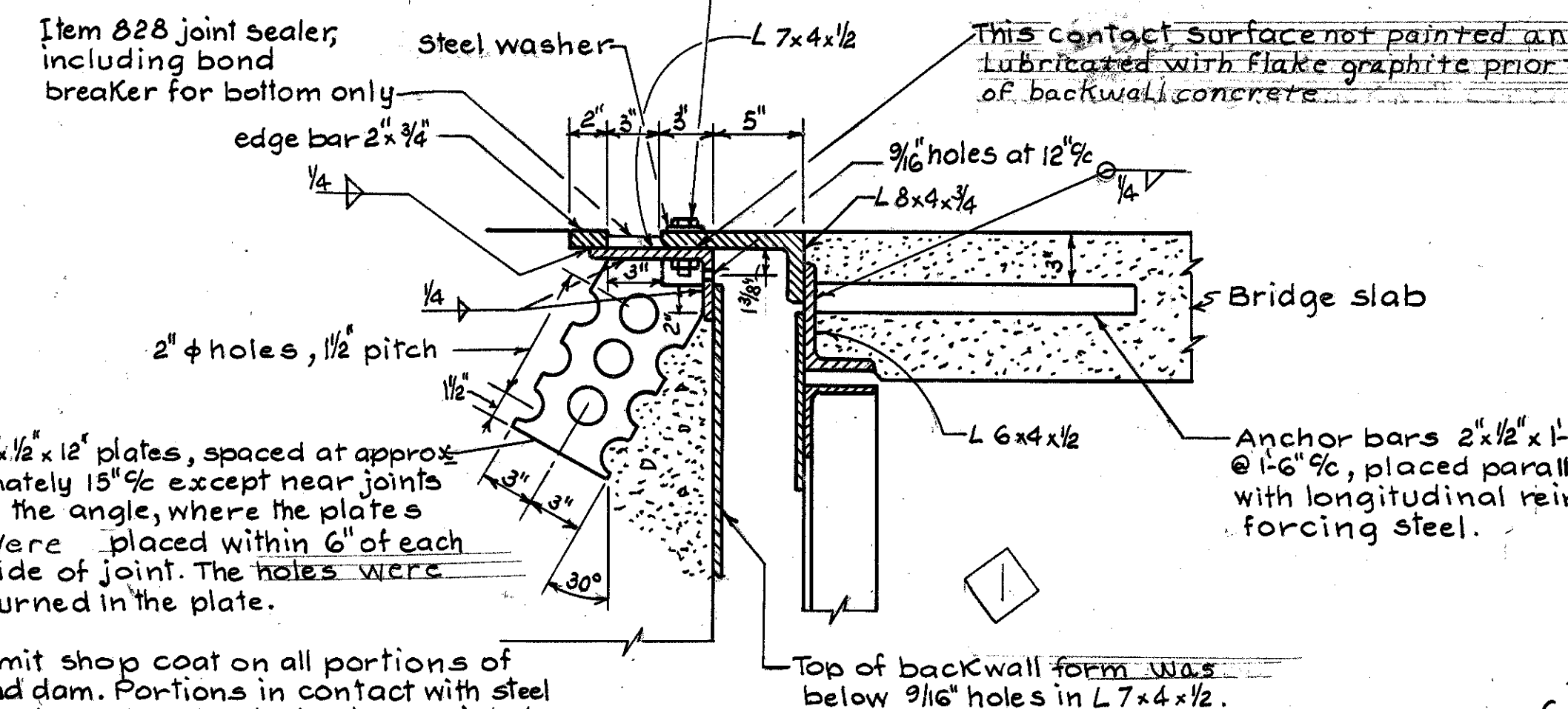


SECTION A-A

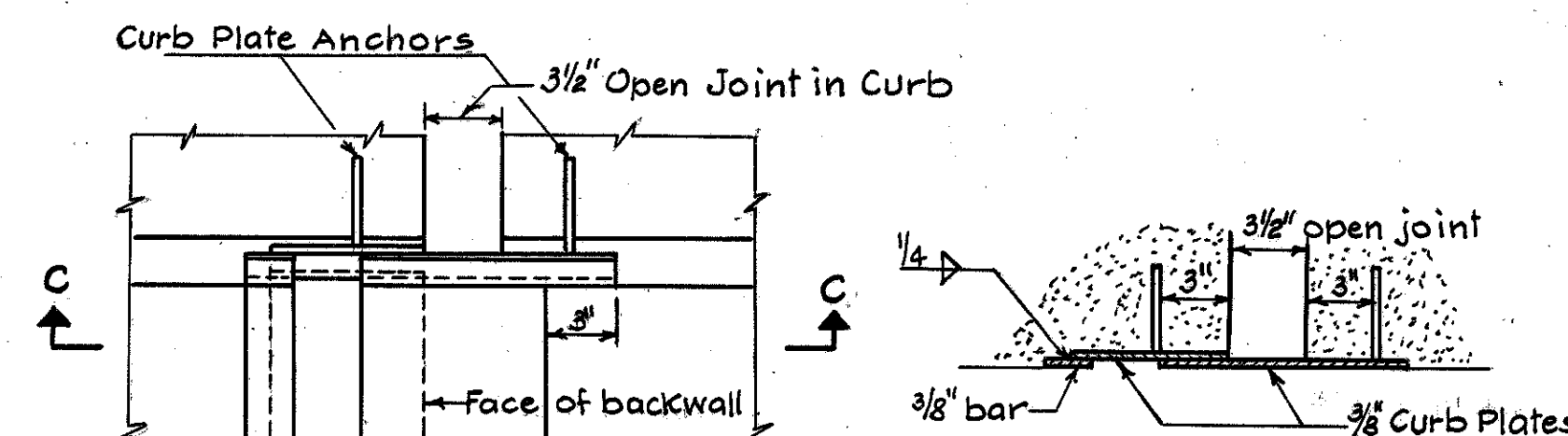
NOTES:
 The transition between the guard rail height on the bridge and on the approaches made in a distance of 100 feet from each end of the bridge.
 The tabulated railing quantity is for the length of railing between the bridge limits. This quantity includes deep beam rail, handrail, posts, anchors, connections and galvanizing. It also includes those curved portions of the handrail which project beyond the above stated limits.

A welded butt joint in the end dam, at or near the centerline of roadway, required for that portion of the end dam attached to the superstructure. The portion attached to the backwall placed in segments not less than 6'-0" in length, with a joint at each joint in the backwall and with one of the joints at or near the centerline of roadway. These were closely butted but not welded.

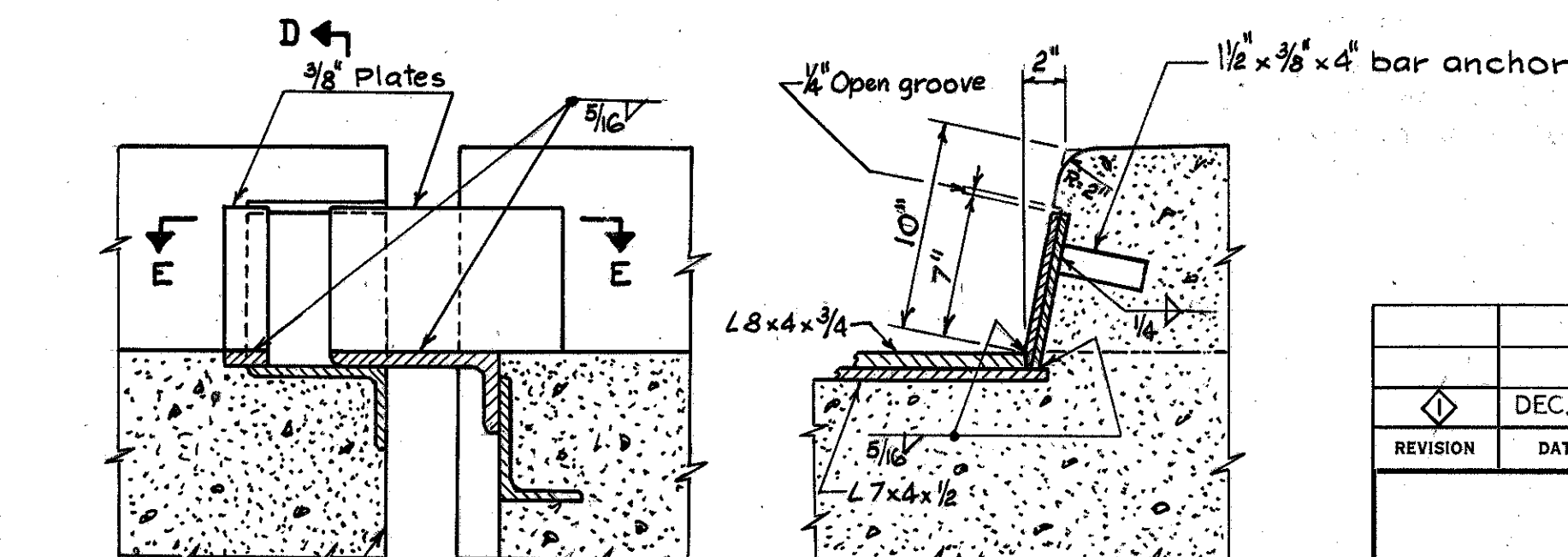
5/8 x 2 1/4 bolts at not more than 2'-0" c/c with nuts tack-welded to under side of lower angle. 1/16 holes in upper angle. Center 5/8 bolts in 1/16 holes. Applied Flake graphite between washers and angle. Turned belts tight and release one-half turn. Remove bolts as soon as concrete was set, within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Filled holes with bituminous material.



SECTION B-B



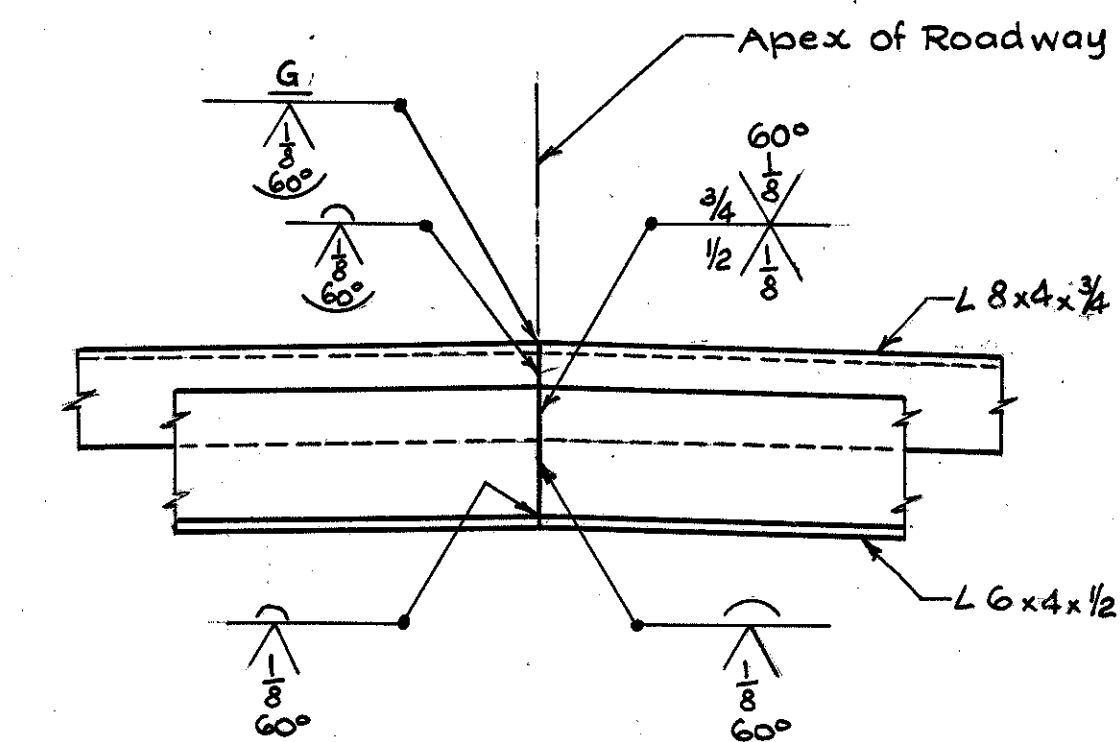
PART PLAN



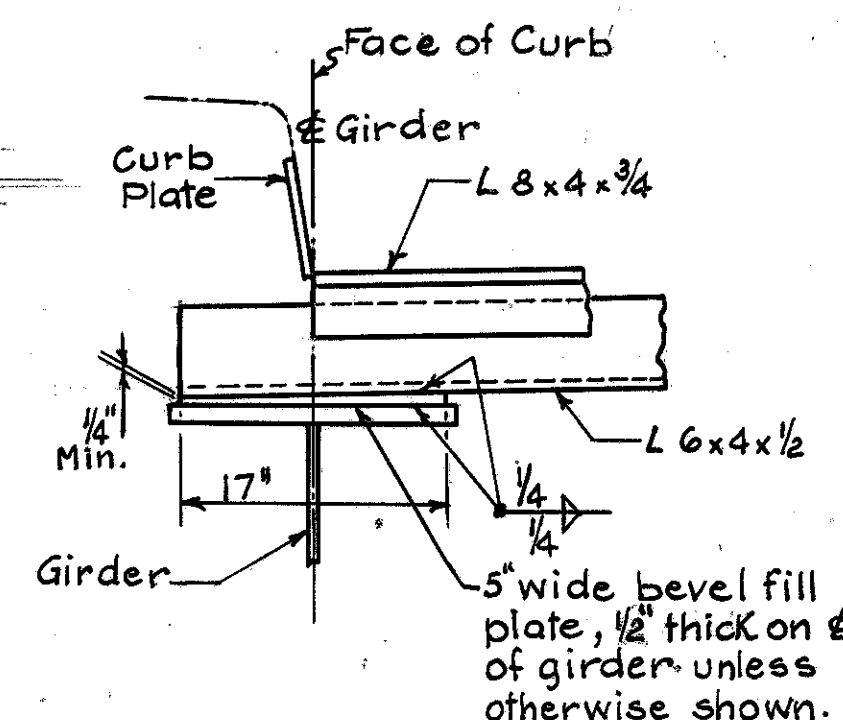
SECTION C-C

CURB PLATE DETAILS

SECTION E-E



**WELDED BUTT JOINT IN SUPERSTRUCTURE
END DAM ANGLES AT C/L OF ROADWAY**



BEVEL PLATE DETAILS

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.

U. S. ARMY ENGINEER DISTRICT, HUNTINGTON
CORPS OF ENGINEERS
HUNTINGTON, W. VA.

**PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
SUPERSTRUCTURE DETAILS
BRIDGE NO. HIG-753-1303
SR-753 over RATTLESNAKE CREEK
RELOCATION OF OHIO STATE ROUTE 753**

DRAWN BY: L.P.
 TRACED BY: L.P.
 CHECKED BY: *W.K.*
 SUBMITTED BY: *W.L. Carr*
 BARRETT, CARGO, WITHERS
 RECOMMENDED: *Don E. Johnson*
 CHIEF ENG. DIST.

APPROVED: *William E. Stoll*
 L.T. COL. C.E. DISTRICT ENGINEER

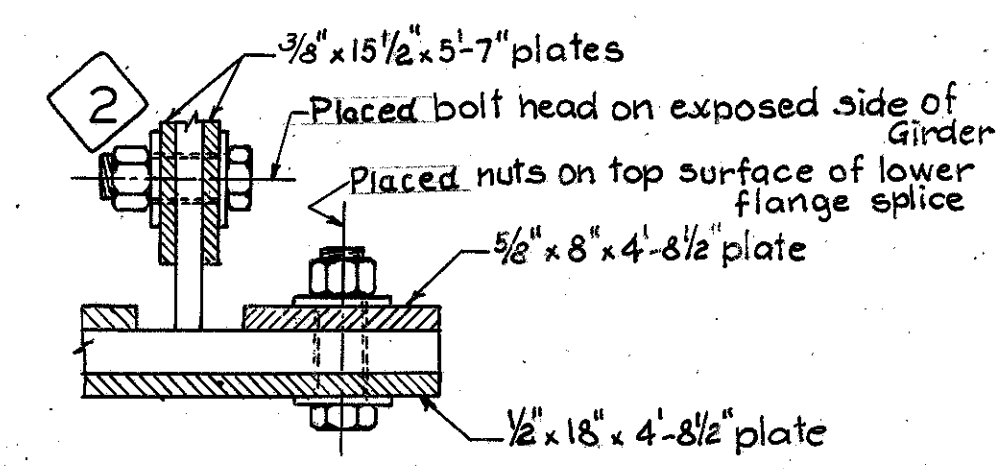
DATE: **APRIL 1966**

SCALE: N/A
 SPEC. NO.
 DRAWING NUMBER
 016 b - UPC2-85/59
 SHEET 59 OF 90

BARRETT, CARGO, WITHERS & ASSOC. LTD.
CONSULTING ENGINEERS
CHILLICOTHE, OHIO

HIG-753-12.71

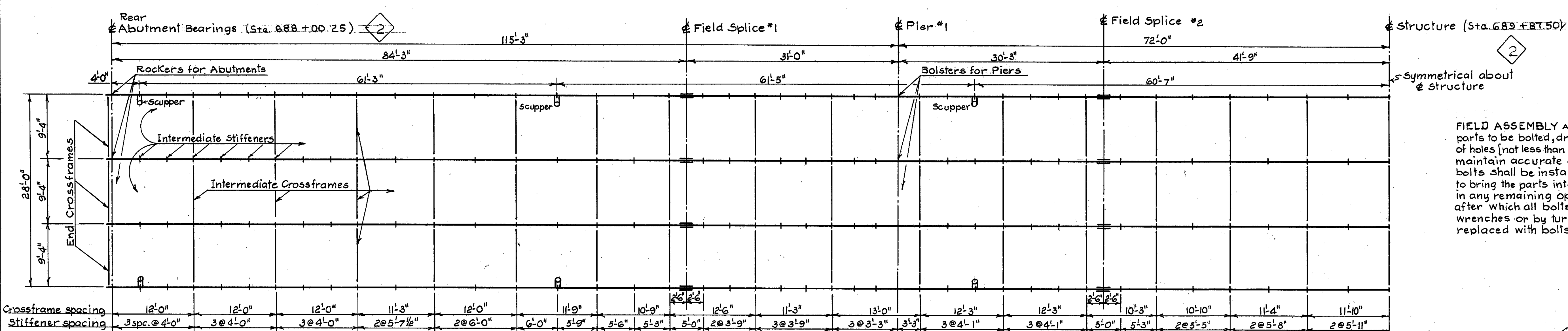
FIELD ASSEMBLY AND ERECTION : In final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner.



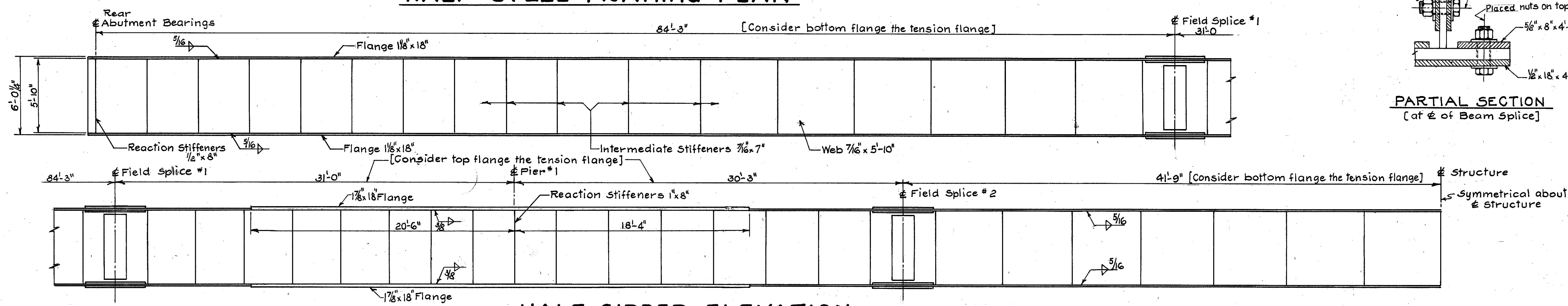
PARTIAL SECTION
[at & of Beam Splice]

NOTES:
All Flange butt-welds ground flush.
Optional shop splices will be permitted in the webs and flanges of girders but their location shall be submitted to the contracting officer for approval.
Radiographic examination made on all butt welds as required by the specifications.

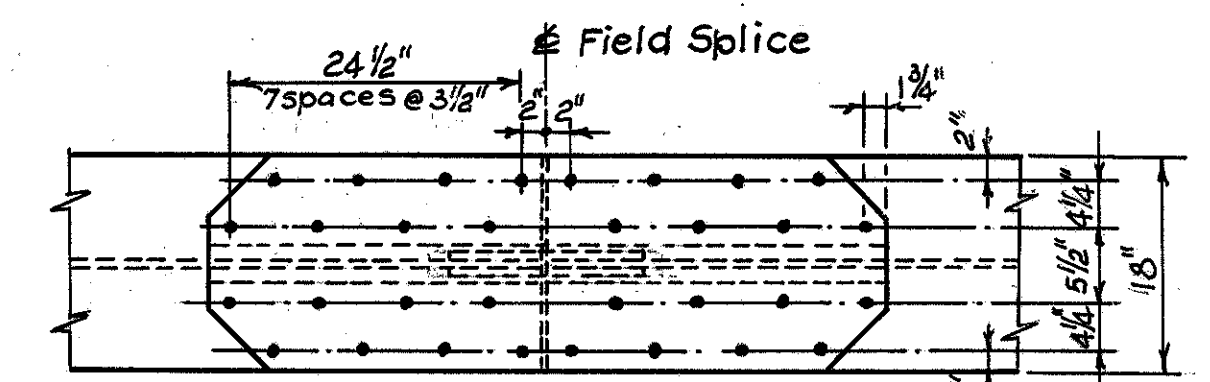
②	DEC.68	REVISED AS CONSTRUCTED			V.L.O.
①	5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO.1			E.J.D.
REVISION	DATE	DESCRIPTION			BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.					
DRAWN BY: L.P.		PAINT CREEK, OHIO			
TRACED BY: L.P.		PAINT CREEK RESERVOIR			
CHECKED BY: Wk		STEEL FRAMING PLAN & GIRDER DETAILS			
SUBMITTED BY: H. L. Camp		BRIDGE NO. HIG-753-1303			
BARRETT, CARGO, WITHERS		SR-753 over RATTLESNAKE CREEK			
RECOMMENDED: Brian L. Johnson		RELOCATION OF OHIO STATE ROUTE 753			
CHIEF ENG. DIV.		APPROVED: William R. Ford		DATE: APRIL 1966	
		LT. COL. C.E. DISTRICT ENGINEER			
BARRETT, CARGO, WITHERS & ASSOC. LTD.				SCALE: N/A	
CONSULTING ENGINEERS				SPEC. NO.	
CHILLICOTHE, OHIO				DRAWING NUMBER	
				016b-UPC 2-85/60	
				SHEET 60 OF 90	



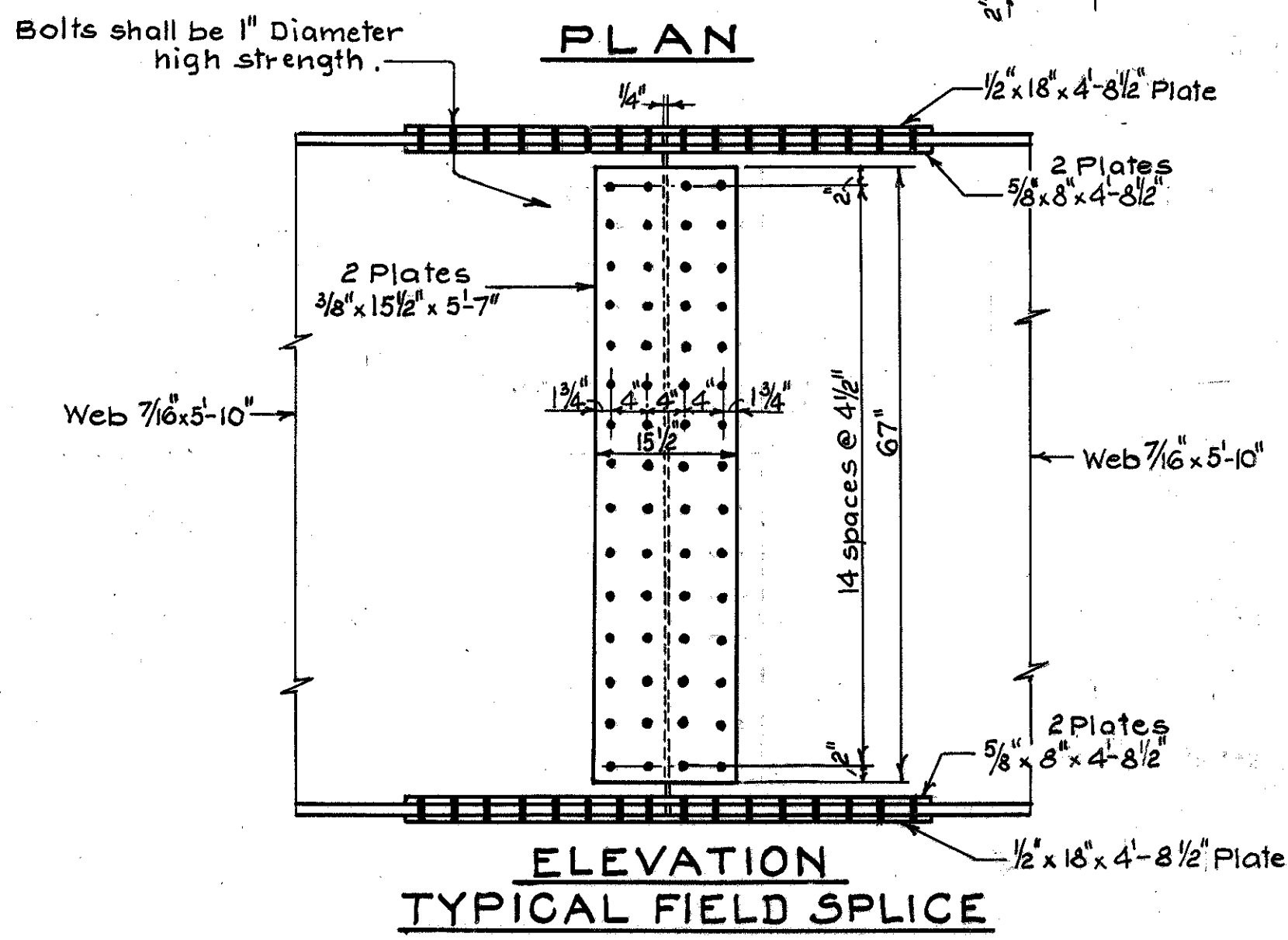
HALF STEEL FRAMING PLAN



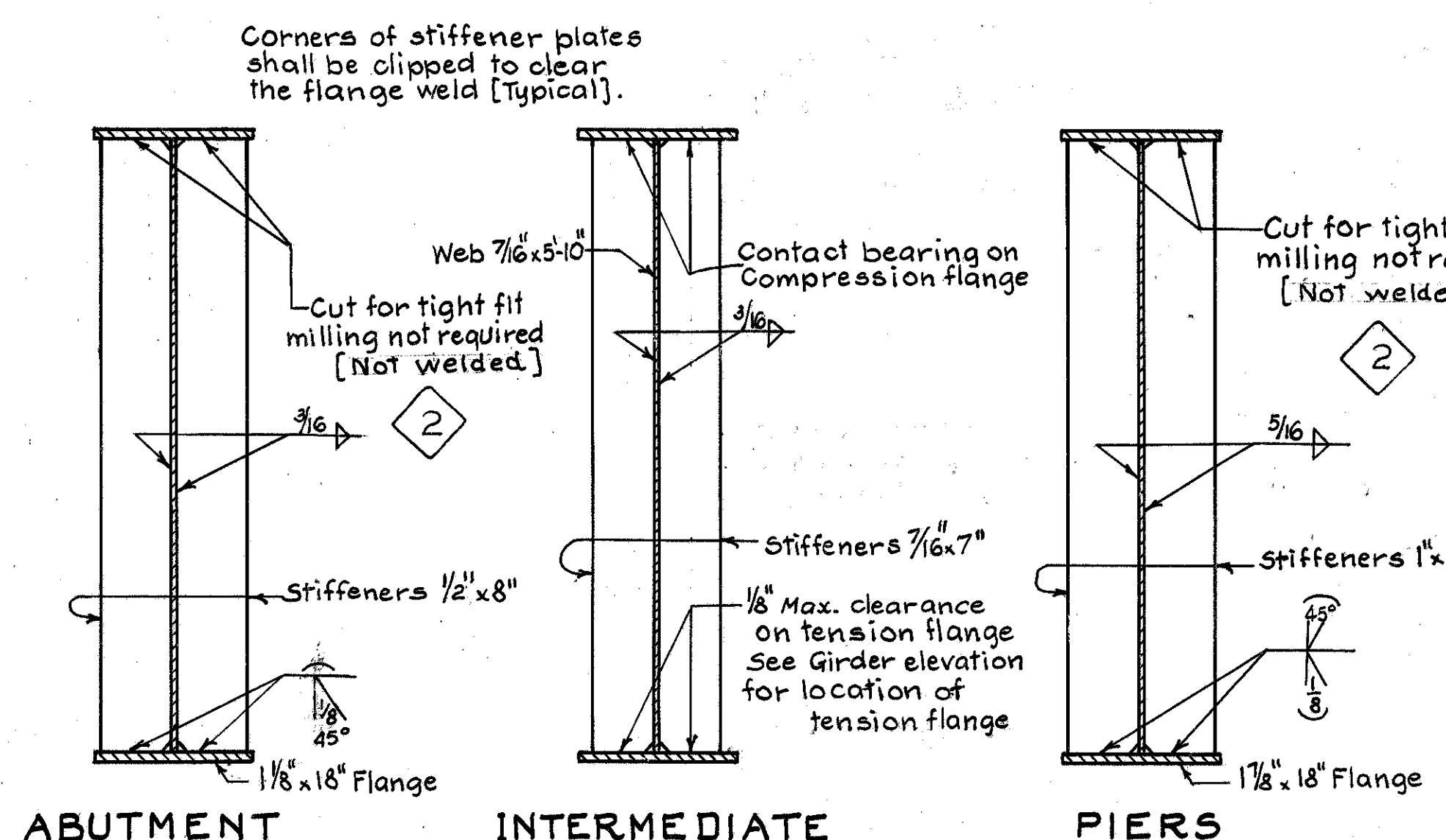
HALF GIRDER ELEVATION



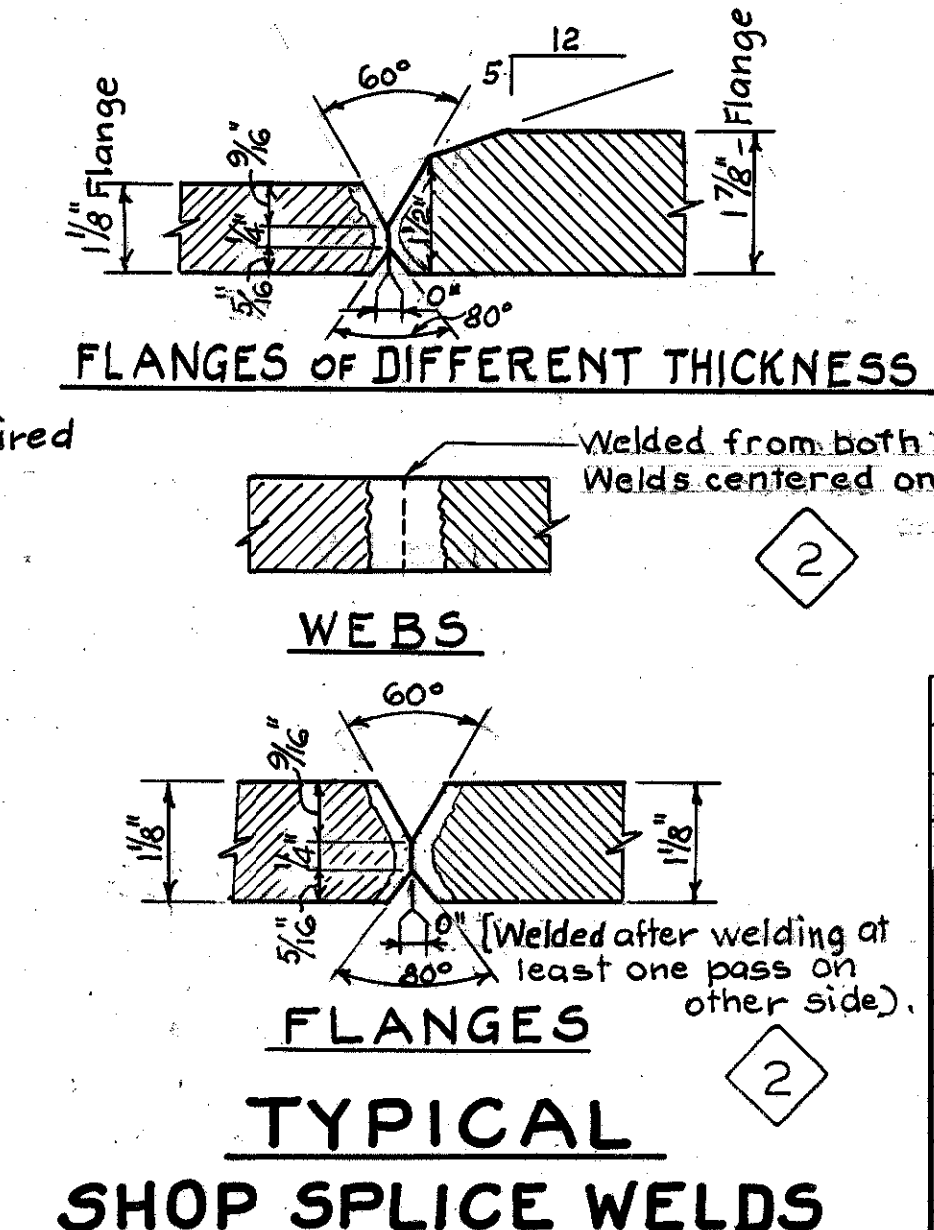
PLAN



ELEVATION
TYPICAL FIELD SPICE



STIFFENER DETAILS



TYPICAL
SHOP SPICE WELDS

HIG-753-12.71

REINFORCING STEEL LIST

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
ONE ABUTMENT					
A 901	18	9'-2"	U	561	
A 801	8	25'-7"	—	546	
A 802	3	29'-3"	—	234	
A 803	3	21'-11"	—	176	
A 804	6	16'-4"	J	261	
A 805	2 series of 3 bars	15'-0" to 16'-1"	J	250	
A 806	2 series of 3 bars	13'-4" to 14'-3"	J	220	
A 601	22	14'-4"	U	474	
A 602	23	23'-5"	U	804	
A 603	6	21'-1"	—	190	
A 604	2	22'-9"	U	68	
A 501	40	8'-7"	U	358	
A 502	22	7'-4"	U	168	
A 503	22	6'-4"	U	145	
A 504	6	15'-11"	L	100	
A 505	2 series of 3 bars	14'-7" to 15'-8"	L	95	
A 506	2 series of 3 bars	12'-11" to 13'-10"	L	84	
A 507	19	30'-8"	—	608	
A 508	4	7'-4"	—	31	
A 509	4	10'-5"	—	43	
A 510	4	13'-9"	—	57	
A 511	4	17'-1"	—	71	
A 512	16	18'-7"	—	310	
A 513	4	23'-6"	J	98	
A 514	4 series of 8 bars	5'-2" to 9'-0"	—	236	
A 515	24	4'-5"	U	111	
A 401	28	8'-11"	U	260	
TOTAL ONE ABUTMENT					6,559
TOTAL TWO ABUTMENTS					13,118
SUPERSTRUCTURE					
S 701	475	31'-7"	—	30,669	
S 601	475	31'-7"	—	22,533	
S 602	660	33'-1"	—	32,796	
S 603	40	29'-0"	—	1,742	
S 604	40	33'-7"	—	2,018	
S 401	502	2'-4"	U	782	
S 402	502	4'-7"	U	1537	
TOTAL SUPERSTRUCTURE					92,068

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
ONE PIER					
P 1101	6	36'-10"	U	1174	
P 1004A		31'-2"	—		
P 1001	24	10'-2"	J	1050	
P 1002	12	13'-8"	J	706	
P 1003	12	17'-8"	J	912	
P 1004	12	24'-6"	—	1265	
P 1005	12	21'-0"	—	1084	
P 1006	12	26'-2"	—	1351	
P 1007	12	26'-6"	—	1368	
P 601	4	11'-10"	U	71	
P 501	12	15'-7"	—	195	
P 502	24	7'-4"	U	184	
P 503	62	13'-4"	—	862	
P 504	2 series of 19 bars	7'-4" to 12'-1"	U	386	
P 505	2	31'-2"	—	65	
P 506	2	30'-4"	—	63	
P 507	2	23'-3"	—	48	
P 508	2	16'-5"	—	34	
P 509	9	16'-1"	U	151	
P 510	4 series of 5 bars	8'-7" to 10'-7"	U	200	
P 511	4 series of 6 bars	7'-3" to 8'-5"	U	196	
P 512	12	3'-8"	U	46	
P 513	12	19'-1"	—	239	
F 1101	29	23'-10"	U	3672	
F 601	20	21'-6"	U	646	
TOTAL ONE PIER					15,968
TOTAL TWO PIERS					31,936
REPLACEMENT STEEL					
RE 1101	1	7'-6"	—		
RE 1001	1	7'-2"	—		
RE 901	1	6'-9"	—		
RE 801	1	6'-6"	—		
RE 701	2	6'-2"	—		
RE 601	3	5'-10"	—		
RE 501	1	5'-6"	—		
RE 401	1	5'-3"	—		

NOTE:

BAR SIZE is indicated in 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. For example A 501 is a number 5 size bar and P 1001 is a number 10 size bar.

DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
5-24-66	REVISED IN ACCORDANCE WITH AMENDMENT NO. 1	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR REINFORCING STEEL LIST BRIDGE NO. HIG-753-1303 SR-753 over RATTLESNAKE CREEK RELOCATION OF OHIO STATE ROUTE 753		
DRAWN BY: L.P.	DATE: APRIL 1966	
TRACED BY: L.P.	SPEC. NO.	
CHECKED BY: MK	DRAWING NUMBER	
SUBMITTED BY: N.J. Camp	016 b - UPC 2-85/63	
RECOMMENDED: BARRETT, CARGO, WITHERS	APPROVED: [Signature]	SHEET 63 OF 90
CHIEF ENG. DIV.	LT. COL. C.E. DISTRICT ENGINEER	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		

REP. NO. DIVISION	STATE	PROJECT
2	OHIO	

6
7

329 0

427 0

132 0

122 0

EXCAVATION	15,905 GY
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740

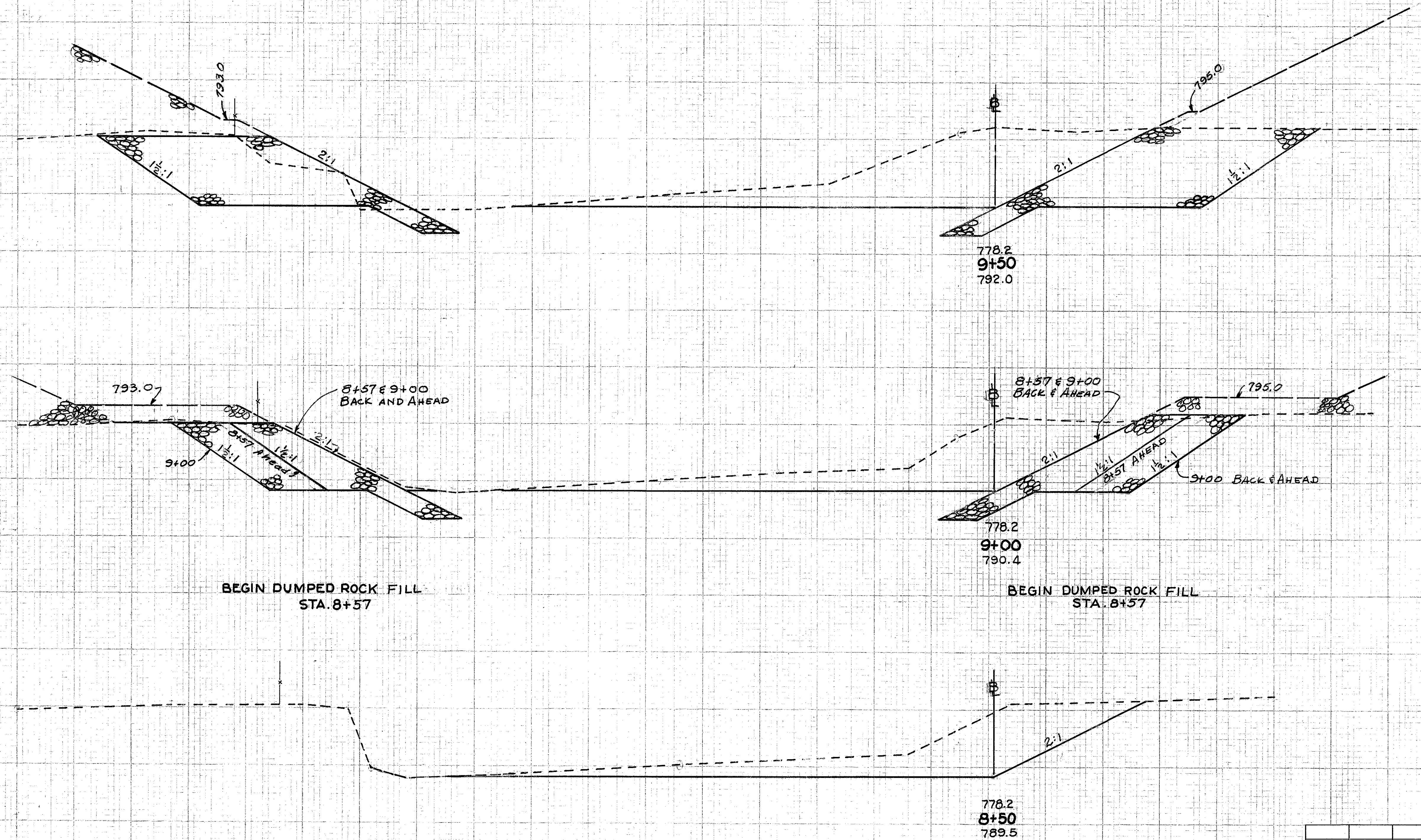
	DEC 68	REVISED AS CONSTRUCTED	V.L.
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:	PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 CHANNEL SECTIONS		
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
 BARRETT, CARGO, WITHERS			
		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE:	SPEC. NO. DRAWING NUMBER 016 b - UPC 2 - 85/64 SHEET 64 OF 90

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

SEEDING
END
WIDTH
S.O.
YDS.

HIG-753-12.71



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1333	926		
		2159	1304
		999	569
		1390	700
		8+57 Ahead	744 314
		Back	430 0
			114 0
		445	0
		777	0
		8+00	329 0

0 20 40 60 80 100 120 140 160 180 200 220

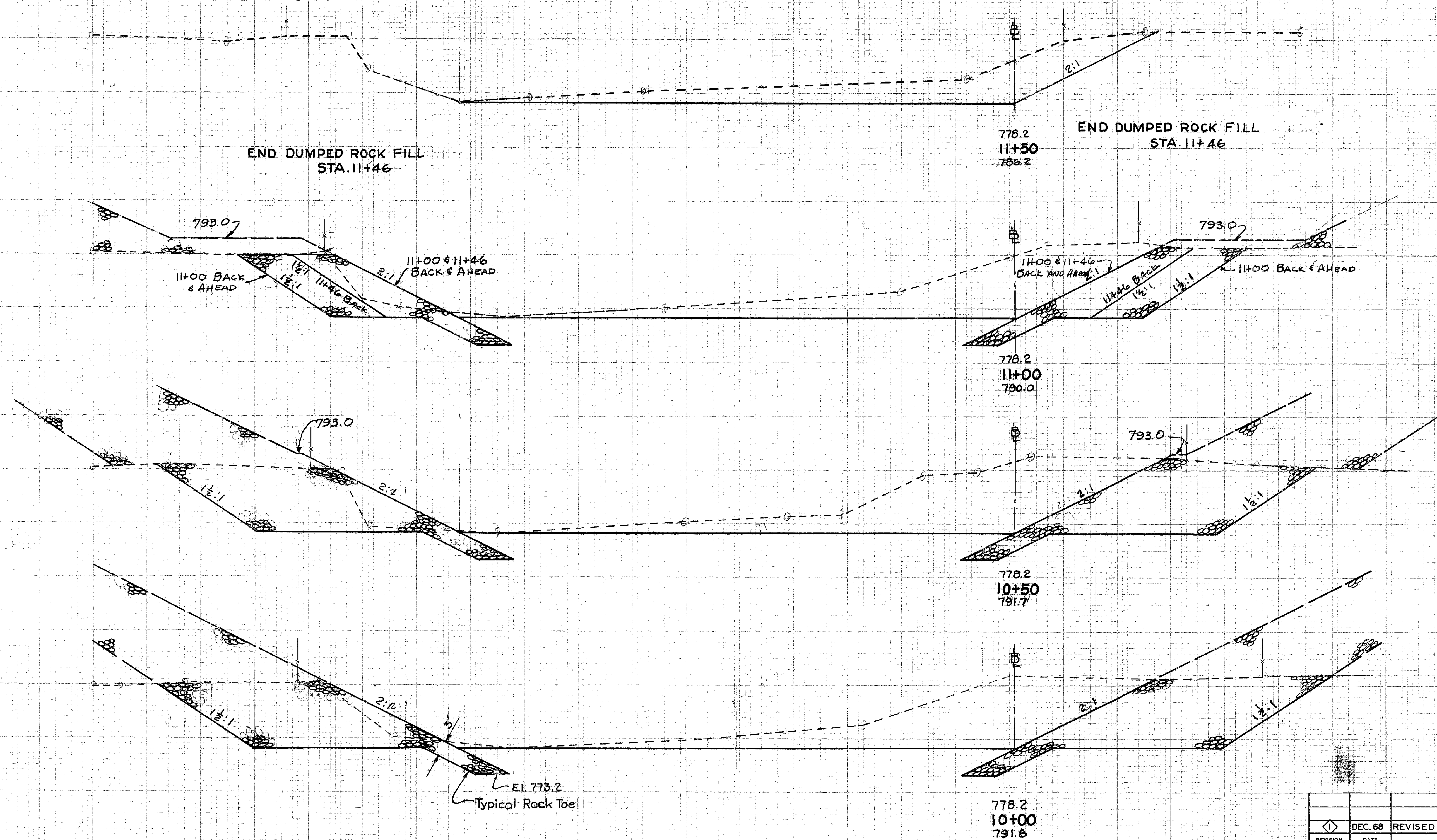
CONTR. NO. 66-1373

REVISION	DATE	DESCRIPTION	V.L.O.
1	DEC. 68	REVISED AS CONSTRUCTED	BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 CHANNEL SECTIONS	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
BARRETT, CARO, WITHERS		DATE: APRIL 1966	
BARRETT, CARO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: DRAWING NUMBER 016b-UPC 2-85/65 SHEET 65 OF 90	

WORK AS CONSTRUCTED

SEEDING
END WIDTH SQ. YDS.

HIG-753-12.71



1	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	411	0		
			77	0
	11+46 AHEAD	627	0	
	BACK	982	322	
			1801	765
	1132	574		
			2416	1420
	1477	960		
			2769	1794
	1513	977		
			2635	1762
	9+50	1333	924	

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 CHANNEL SECTIONS	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:			
BARRETT, CARGO, WITHERS CONSULTING ENGINEERS CHILLICOTHE, OHIO		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS, & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: DRAWING NUMBER 016b-UPC-2-85/66 SHEET 66 OF 90	

689+36
on S.R. 753

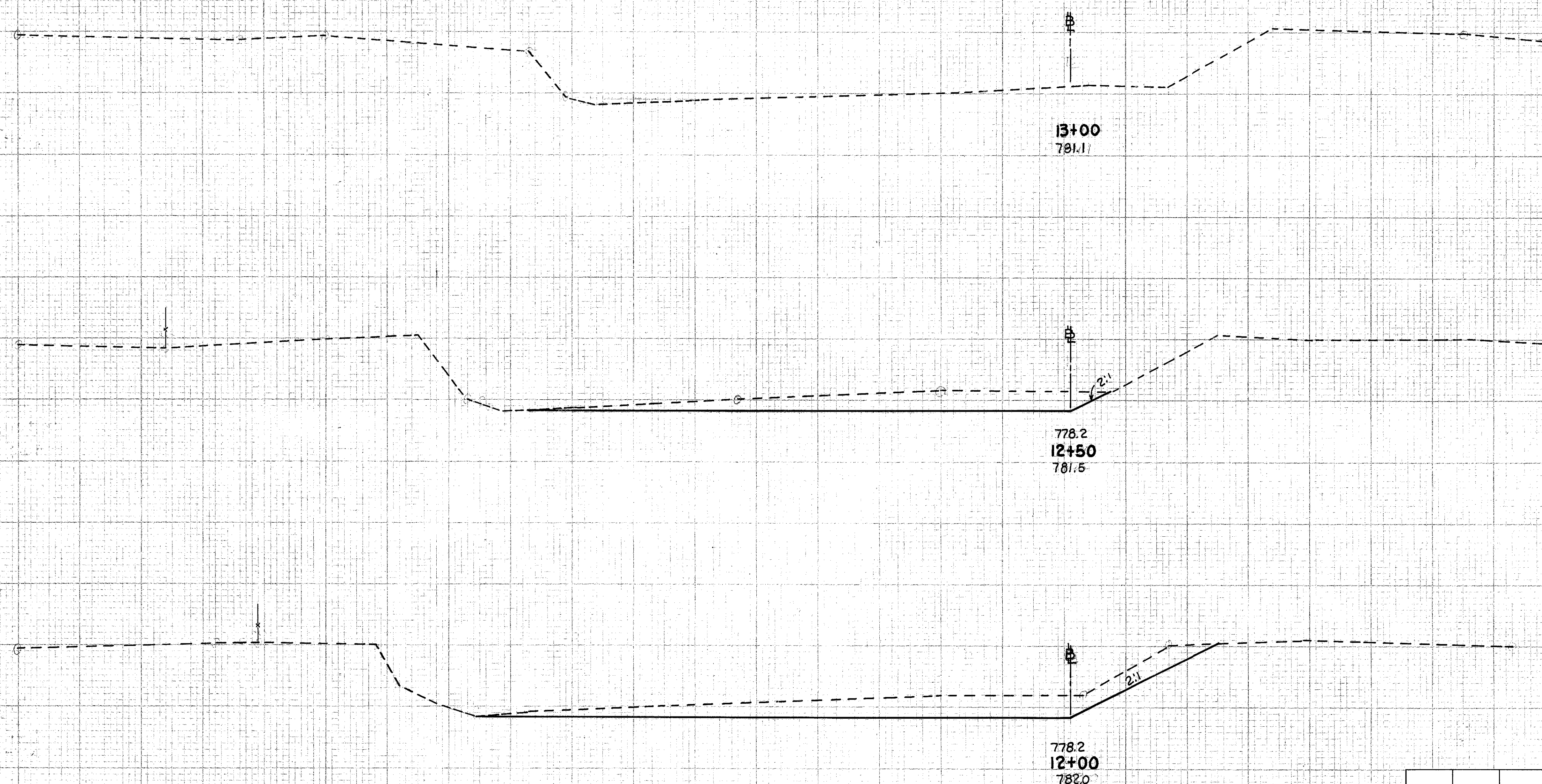
SEEDING
END SQ.
WIDTH YDS.

PER. NO. 2
STATE OHIO
PROJECT
67
72

HIG -753-12.71

END AREA
CUT FILL
VOLUME
CUT FILL

1



13+00

781.1
781.1

198 0

189 0

778.2
12+50
781.5

447 0

294 0

778.2
12+00
782.0

653 0

11+50

411 0

0 20 40 60 80 100 120 140 160 180 200 220

REVISION	DATE	DESCRIPTION	BY
1	DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 CHANNEL SECTIONS	
TRACED BY:			
CHECKED BY:			
SUBMITTED BY:		DATE: APRIL 1966	
BARRETT, CARGO, WITHERS			
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: SPEC. NO. DRAWING NUMBER 016b-UPC 2-85/67 SHEET 67 OF 90	

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

CENTER LINE SURVEY PLAT
HIGHLAND COUNTY
PAINT & MADISON TOWNSHIPS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

68
72

HIG-753-12.71

CURVE DATA S.R. 753
P.I. STA. 782+29.17

$\Delta = 27^{\circ}16'45''$ Lt. $\Delta_c = 19^{\circ}46'45''$
 $D_c = 3^{\circ}00'$ $R_c = 1,909.86'$
 $L_s = 250.00'$ $L_c = 659.31'$
 $\theta_s = 3^{\circ}45'$ $T_s = 588.75'$
 $X_c = 249.89'$ $E_s = 56.82'$
 $Y_c = 5.45'$



CURVE DATA S.R. 753
P.I. STA. 798+12.74

$\Delta = 15^{\circ}30'$ Lt. $\Delta_c = 11^{\circ}30'$
 $D_c = 2^{\circ}00'$ $R_c = 2,864.79'$
 $L_s = 200.00'$ $L_c = 575.00'$
 $\theta_s = 2^{\circ}00'$ $T_s = 489.96'$
 $X_c = 199.98'$ $E_s = 26.99'$
 $Y_c = 2.33'$

CURVE DATA T.R. 313-B

P.I. STA. 1+20
 $\Delta = 83^{\circ}14'30''$ Lt.
 $D = 88^{\circ}08'50''$
 $R = 65.00'$
 $L = 94.34'$
 $T = 57.75'$
 $E = 21.95'$

CURVE DATA C.R. 25-A

P.I. STA. 9+50.18
 $\Delta = 61^{\circ}35'30''$ Lt.
 $D = 9^{\circ}00'$
 $R = 636.62'$
 $L = 684.35'$
 $T = 379.44'$
 $E = 104.80'$

MONUMENT ASSEMBLIES			
PLACED BY THE CONTRACTOR AFTER CONSTRUCTION			
RD. NO.	C. STA.	LEFT OF C.	RIGHT OF C.
S.R. 753	671+00	17.90 FT.	17.84 FT.
S.R. 753	676+40.42	17.86 "	17.88 "
S.R. 753	678+90.42	17.95 "	17.88 "
S.R. 753	685+49.73	17.86 "	17.90 "
S.R. 753	687+99.73	18.14 "	17.92 "
S.R. 753	693+22.78	17.84 "	18.00 "
S.R. 753	695+22.78	18.07 "	18.00 "
S.R. 753	700+97.78	18.10 "	17.71 "
S.R. 753	702+97.78	18.10 "	18.00 "
S.R. 753	710+00	18.00 "	18.08 "

I hereby certify that this plan is a true delineation of a survey made in 1965 for the U.S. Army Corps of Engineers, Huntington District by Barrett, Cargo, Withers and Associates Ltd.

Elmer S. Barrett Date 4-2-66
Elmer S. Barrett P.E. No. 6937- Reg. Surv. No. 2980

This plan recorded in the Highland County Record of Plats, Book _____ Page _____ Date _____

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

DEC. 68	REVISED AS CONSTRUCTED	V.L.O.
12-1-67	REVISED PER OHIO DEPT. HWY. LETTER 10/3/67.	E.J.D.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 CENTER LINE SURVEY PLAT		
DRAWN BY:		
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
RECOMMENDED:	APPROVED:	DATE:
Barrett, Cargo, Withers	<i>William E. Fick</i>	APRIL 1966
CHIEF ENG. DIV.	LT. COL. C.E. DISTRICT ENGINEER	
BARRETT, CARGO, WITHERS & ASSOC., LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: See above SPEC. NO. DRAWING NUMBER 016b-UPC 2-85/68 SHEET 68 OF 90		

HIGHLAND COUNTY
PAINT TOWNSHIP
V.M.S. 2560

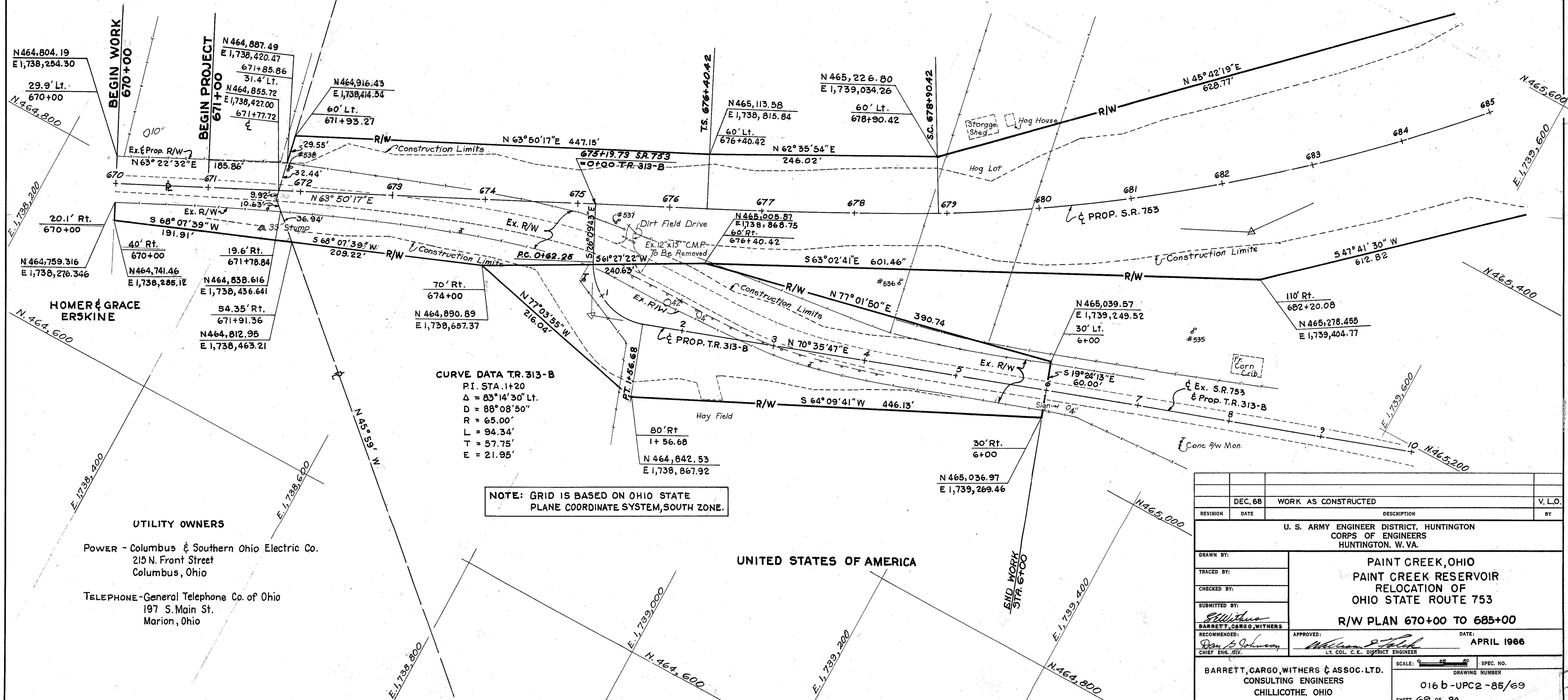
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HIG-753-12.71

CURVE DATA
P.I. STA. 682+29.17
 $\Delta = 27^\circ 16' 45''$ L.T.

$D_c = 3^\circ 00'$	L.T. = 166.70'
$L_s = 250.00'$	S.T. = 83.37'
$\theta_s = 3^\circ 45' 00''$	L.C. = 249.95'
$P = 1.36'$	$\Delta_c = 19^\circ 46' 45''$
$K = 124.98'$	$L_c = 659.31'$
$X_c = 249.89'$	$R_c = 1,909.86'$
$Y_c = 5.45'$	$T_s = 588.75'$
	$E_s = 56.82'$

UNITED STATES OF AMERICA



DEC. 68	WORK AS CONSTRUCTED	V.L.O.
REVISION	DATE	DESCRIPTION
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.		
DRAWN BY:		
TRACED BY:		
CHECKED BY:		
SUBMITTED BY:		
RECOMMENDED BY:		
APPROVED:		
DATE: APRIL 1968		
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		
SCALE: 1" = 40'		
DRAWING NUMBER: 016 b-UPC2-85/69		
SHEET 69 OF 90		

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

HIGHLAND COUNTY
PAINT TOWNSHIP
V.M.S. 2555 & 2560

HIGHLAND COUNTY
MADISON TOWNSHIP
V.M.S. 2555

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

70
72

HIG-753-12.71

CURVE DATA
P.I. STA. 698+12.74
 $\Delta = 15^\circ 30'$ Lt.

$D_c = 2^\circ 00'$
 $L_s = 200.00'$
 $\theta_s = 2^\circ 00'$
 $p = 58'$
 $k = 100.00'$
 $X_c = 199.98'$
 $Y_c = 2.33'$

$\Delta_c = 11^\circ 30'$
 $R_c = 2864.79'$
 $L_c = 575.00'$
 $T_s = 489.96'$
 $E_s = 26.99'$

N 466,697.47
E 1,740,158.33
163.01' Lt.
698+10.28

UNITED STATES OF AMERICA

Bridge No.
HIG-753-1303

UNITED STATES OF AMERICA

REVISION	DATE	DESCRIPTION	BY
	DEC. 68	WORK AS CONSTRUCTED	V.L.O.
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.			
PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 R/W PLAN 685+00 TO 700+00			
DRAWN BY: TRACED BY: CHECKED BY: SUBMITTED BY: RECOMMENDED BY: CHIEF ENGINEER		APPROVED: DATE: APRIL 1968	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO		SCALE: 1" = 40' SHEET 70 OF 90	

CONTR. NO. 66-1373

WORK AS CONSTRUCTED

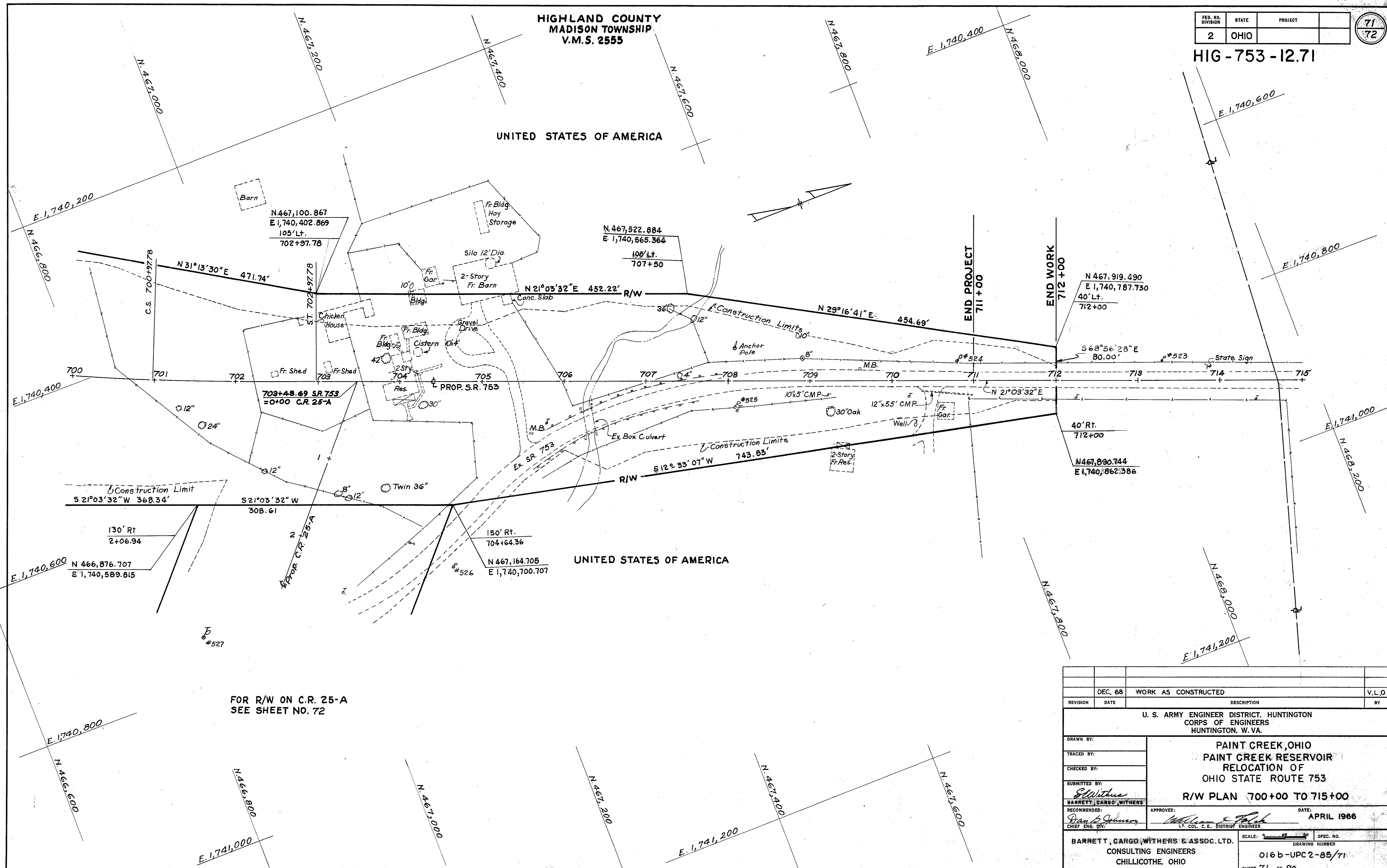
HIGHLAND COUNTY
MADISON TOWNSHIP
V.M.S. 2555

UNITED STATES OF AMERICA

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

71
72

HIG - 753 - 12.71



FOR R/W ON C.R. 25-A
SEE SHEET NO. 72

DEC. 68		WORK AS CONSTRUCTED		V.L.O.
REVISION	DATE	DESCRIPTION		BY
U. S. ARMY ENGINEER DISTRICT, HUNTINGTON CORPS OF ENGINEERS HUNTINGTON, W. VA.				
DRAWN BY:		PAINT CREEK, OHIO PAINT CREEK RESERVOIR RELOCATION OF OHIO STATE ROUTE 753 R/W PLAN 700+00 TO 715+00		
TRACED BY:				
CHECKED BY:				
SUBMITTED BY:				
RECOMMENDED BY:		APPROVED:	DATE:	
CHIEF ENG. DIV.		LT. COL. C.E. DISTRICT ENGINEER	APRIL 1966	
BARRETT, CARGO, WITHERS & ASSOC. LTD. CONSULTING ENGINEERS CHILLICOTHE, OHIO			SCALE: 1" = 40' SPEC. NO. DRAWING NUMBER 016b-UPC 2-85/71 SHEET 71 OF 90	

INTRODUCTION:

THE PROJECT CONSISTS OF 1.1 MILES OF RELOCATION OF OHIO STATE ROUTE 753, OVER RATTLESNAKE CREEK IN HIGHLAND COUNTY, OHIO. THE PROJECT SERVES PRIMARILY TO STRAIGHTEN AND ELEVATE THE ROAD OVER THE CREEK. ONE STRUCTURE IS PROPOSED OVER THE CREEK, DESIGNATED AS HIG-753-13.03.

GEOLOGY OF THE SITE:

THE PROPOSED RELOCATED ROADWAY WILL BE SITUATED ON THE HIGHER ORIGINAL GROUND AND ON PROPOSED EMBANKMENT. THE HIGHER GROUND ON EITHER SIDE OF THE CREEK IS COMPOSED OF GLACIAL GROUND MORAINE TILL OVERLYING LIMESTONE BED-ROCK OF THE PEBBLES - CEDARVILLE FORMATION. BEDROCK ENCOUNTERED IN THE VALLEY IS ALGER FORMATION SHALE. THE STRUCTURE WILL BE SITUATED ON WATER LAID DEPOSITS IN A BURIED VALLEY CARVED ORIGINALLY BY A GLACIAL STREAM AND FILLED IN WITH GLACIAL DEBRIS. THE GENERAL SITE IS ON THE EDGE OF THE SCIOTO LOBE OF THE WISCONSIN GLACIAL STAGE, PLEISTOCENE ERA. DEPOSITS IN THE VALLEY POSSIBLY ORIGINATE FROM THE ILLINOIAN GLACIAL STAGE.

AUGER BORINGS:

THE AUGER BORINGS WERE MADE WITH A MECHANICAL SOIL AUGER, SINGLE FLIGHT, SPIRAL TYPE. THE BORINGS WERE ADVANCED IN INCREMENTS OF SIX (6) INCHES TO OBTAIN SAMPLES FOR EACH SIX INCHES OF PENETRATION. THE SAMPLES WERE LAID-OUT IN SEQUENCE AND REPRESENTATIVE SOILS WERE SELECTED FOR TESTING FROM EACH STRATUM ENCOUNTERED.

DRIVE SAMPLE BORINGS:

DRIVE SAMPLE BORINGS WERE MADE BY MEANS OF HOLLOW-STEM-CONTINUOUS SPIRAL AUGERS, EMPLOYING A 2" O.D. 1-3/8" I.D. SPLIT SPOON SAMPLER, AT 2-1/2 AND/OR 5 FOOT DEPTH INTERVALS, DRIVEN BY MEANS OF A 140 POUND DROP HAMMER WITH A FREE FALL OF 30 INCHES. THE NUMBER OF BLOWS TO DRIVE THE SAMPLER 12 INCHES IS CONSIDERED THE STANDARD PENETRATION TEST.

ROCK CORES:

ROCK CORES WERE OBTAINED BY DRILLING WITH NX DIAMOND CORE BIT AND BARREL TO OBTAIN 2 1/8" DIAMETER CORES.

EXPLORATION:

THE EXPLORATION CONSISTED OF 21 PROFILE BORINGS AND 5 FOUNDATION BORINGS MADE FROM NOVEMBER 8, 1965 TO NOVEMBER 23, 1965.

INVESTIGATIONAL FINDINGS:

SURFACE SOIL CONSISTED OF TOPSOIL. THE MAIN ORIGINAL SURFACE SOIL CONSISTED OF GLACIAL TILL OF SILTS AND CLAYS TO VARYING DEPTHS. UNDERLYING THESE SURFACE SOILS IN THE BOTTOM OF THE VALLEY IN THE VICINITY OF RATTLESNAKE CREEK, SAND AND GRAVEL WAS FOUND STRATIFIED WITH SILTS AND CLAYS IN NO REGULAR PATTERN TO THE BOTTOM OF THE BORINGS.

GROUND WATER WAS OBSERVED IN MANY OF THE BORINGS AT VARYING DEPTHS. DEPTHS OF WATER ARE NOTED ON THE SOIL PROFILES.

BORING PROFILE NOTES:

SOIL CLASSIFIED IN ACCORDANCE WITH THE HIGHWAY RESEARCH BOARD SYSTEM AS MODIFIED BY THE OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY, FEBRUARY 1, 1955, AND THE UNIFIED SOILS CLASSIFICATION SYSTEM.

MODIFYING DESCRIPTION IN PER CENT OF DRY WEIGHT: TRACE 1-10%, LITTLE 11-20%, SOME 21-35%, AND 36-50%.

BORING LOCATIONS ARE REFERENCED TO PROPOSE RELOCATION CENTERLINE.

BORINGS AND LABORATORY TESTING WERE PERFORMED BY BOWSER-MORNER TESTING LABORATORIES, INC.

- BORING AND "NX" CORE - PLAN VIEW
○ DRIVE SAMPLE BORING - PLAN VIEW
⊙ AUGER BORING - SOIL PROFILE ROADWAY - PLAN VIEW
⊙ AUGER BORING - SOIL PROFILE BORROW AREA - PLAN VIEW
⊙ AUGER BORING - PLOTTED TO VERTICAL SCALE ONLY.
⊙ DRIVE SAMPLE BORING PLOTTED TO VERTICAL SCALE ONLY.
⊙ AUGER BORING ENDING ON PRESUMED ROCK.
● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.
○ NON-PLASTIC SOIL WITH HIGH WATER CONTENT
W FREE-WATER ELEVATION (INITIAL READING).

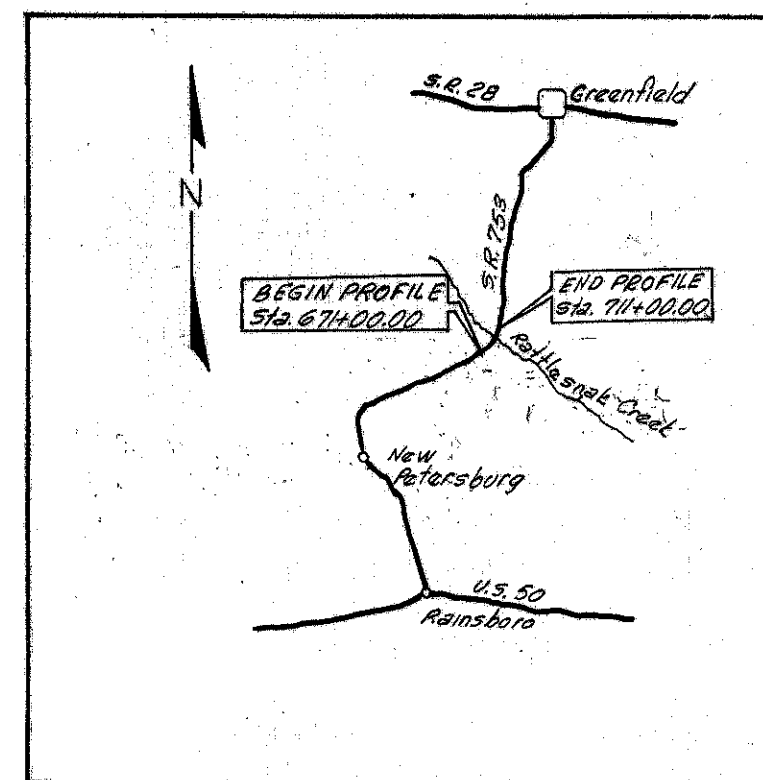
NOTE: FIGURES TO RIGHT OF BORINGS INDICATE WATER CONTENT IN PERCENT.
FIGURES TO LEFT OF BORINGS INDICATE NUMBER OF BLOWS FOR STANDARD PENETRATION RESISTANCE TESTS FOR EACH 6 INCHES OF PENETRATION.

BORINGS AND LABORATORY TESTING WERE PERFORMED BY BOWSER-MORNER TESTING LABORATORIES, INC.

Particle Size Definitions
8" 3" 2.0 mm 0.42 mm 0.074 mm 0.005 mm
BOULDERS COBBLES GRAVEL COARSE SAND FINE SAND SILT CLAY
No. 10 Sieve No. 40 Sieve No. 200 Sieve

NOTE

Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the Project. The Corps of Engineers and Barrett, Cargo, Withers, and Associates, Ltd. do 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.

LOCATION MAPSOIL PROFILE
HIGHLAND COUNTY
HIG-753-12.71

BARRETT, CARGO, WITHERS, & ASSOCIATES, Ltd.
PREPARED BY
BOWSER-MORNER TESTING LABORATORIES, INC.
DAYTON, OHIO

1
13

RECON. - R.L.D. OCTOBER, 1965
DRILLING
AUGER - L.G., D.W., 11-8-65 to 11-23-65
DRIVE SAMPLE - L.G., D.W., 11-8-65 to 11-23-65
DRAFTING - R.J.W. - B.J.N.

DESCRIPTION	LEGEND FOR PROJECT				AVERAGE RESULTS OF TEST					SAMPLES TESTED			160
	H.R.B. CLASS	S.H.T.L. CLASS	GROUP INDEX	% AGG.	C.S.	% F.S.	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED	
GRAVEL	A-1-a	A-1-a	0	61	18	10	- 11 -		TESTED	N.P.	10	12	
GRAVEL WITH SAND	A-1-b	A-1-b	0	37	28	18	14	3	TESTED	N.P.	13	41	
FINE SAND	A-3	A-3			SOIL TYPE NOT ENCOUNTERED								
COARSE AND FINE SAND		A-3a	0	14	13	47	21	5	TESTED	N.P.	16	12	
GRAVEL WITH SAND	A-2-4	A-2-4	0	34	16	26	14	10	25	8	16	8	
AND SILT	A-2-5	A-2-5			SOIL TYPE NOT ENCOUNTERED								
GRAVEL WITH SAND	A-2-6	A-2-6	0	59	13	10	11	7	32	15	10	1	
SILT AND CLAY	A-2-7	A-2-7			SOIL TYPE NOT ENCOUNTERED								
SANDY SILT	A-4	A-4a	4	9	7	28	38	18	22	6	17	29	
SILT	A-4	A-4b	7	2	2	13	63	20	20	6	18	23	
ELASTIC SILT AND CLAY	A-5	A-5			SOIL TYPE NOT ENCOUNTERED								
SILT AND CLAY	A-6	A-6a	8	4	5	20	43	28	31	13	20	16	
SILTY CLAY	A-6	A-6b	8	9	8	18	34	31	36	17	14	3	
ELASTIC CLAY	A-7-5	A-7-5	13	8	5	8	45	34	49	24	28	7	
CLAY	A-7-6	A-7-6	13	8	8	14	34	36	49	25	26	8	
VARIOUS OTHERS					VISUAL CLASSIFICATION								
TOPSOIL					VISUAL CLASSIFICATION								
LIMESTONE					VISUAL CLASSIFICATION								
SHALE					VISUAL CLASSIFICATION								

UNIFIED SOILS CLASSIFICATION												
GW	GW-GM	GP-GM	GM	GC	SW-SM	SM	SM-SC	SC	ML	CL-ML	CL	CH
A-1-a	A-1-a A-1-b	A-1-a	A-1-a A-1-b A-2-4	A-1-b A-2-6	A-1-b	A-1-a A-1-b A-3a A-2-4 A-4a	A-1-b A-4a	A-1-b A-2-4 A-4a A-6b	A-4a A-4b A-7-6	A-2-4 A-4a A-4b	A-4a A-4b A-6a A-6b A-7-5 A-7-6	A-7-5 A-7-6
OHIO S.H.T.L. CLASSIFICATION												

U.S. ARMY ENGINEER DISTRICT, HUNTINGTON
CORPS OF ENGINEERS
HUNTINGTON, W. VA.

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF OHIO STATE ROUTE 753

REVISION	DATE	DESCRIPTION	BY
DEC. 68		WORK AS CONSTRUCTED	V.L.O.

HIG-753-12.71

Bowser-Morner Testing Laboratories, Inc.
LOG OF BORING

Bridge No. HIG-753-1303

Project over Rattlesnake Creek

Date Started 11-10-65

Date Completed 11-16-65

Boring No. 22

Sampler Type Split Spoon Dia. 2" I.D.
Drilling Method Hollow Stem Auger Dia. 8 1/2" O.D.
Station and Offset 691+74.25 - 15' Lt.

Completion: Unknown

Ground Water Elev. Initial: 781.5'

Surface Elev. 790.5'

Drillers L.G., D.W. & O.B.

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	PHYSICAL CHARACTERISTICS										Ohio SHLT Class	UNIFIED CLASS
							% Ag.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
790.5'	0'						Driller's Description											
789.8'	1				Topsoil (9")		Driller's Description											
	2	3-3-5	6"		Brown SILT, some Sand, trace Clay, moist	1A	0	0	23	67	10	26	6	4	A-4b	ML		
	3																	
	4																	
786.0'	5				Brown Medium Sand, trace Fine Gravel, trace Silt, moist		Driller's Description											
784.5'	6						Driller's Description											
	7	3-4-4	5"		Brown SILT AND CLAY, little Gravel, little Sand, moist	2A	12	6	8	61	13	32	14	15	A-6a	CL		
	8																	
781.5'	9	7																
	10	4-4	7		Brown GRAVEL WITH SAND, trace Silt, wet	3A	43	15	33	9	0	Tested - NP -	18	A-1-b	SW-SM			
	11																	
	12																	
	13																	
	14	8-11-7	6"		Brown GRAVEL WITH SAND, trace Silt, moist	4A	52	15	25	8	0	Visual - NP -	15	A-1-b	SW-SM			
	15																	
	16																	
	17	13-9-8	6"		Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	5A	66	16	9	9	0	Visual - NP -	10	A-1-b	GW-SM			
	18																	
	772.0'	19	13-13-11	10"		Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	6A	50	18	10	19	3	20	1	11	A-1-b	GC	
20																		
21																		
22																		
23																		
767.0'	24	13-8-7	14"		Brown COARSE AND FINE SAND, some Gravel, some Clay, moist	7A	29	25	16	24	6	Tested - NP -	9	A-3a	SM			
25																		
26																		
27																		
28																		
	29	17-9-10	15"		Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	8A	32	33	13	19	3	Tested - NP -	13	A-1-b	SM			
	30																	
	31																	
	32																	
	33																	
	34																	
	35	20-22-26	13"		Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	9A	40	30	13	14	3	Tested - NP -	13	A-1-b	SM			
	36																	
	37																	
	38																	
	39																	
	40																	
750.5'	41	22-18-22	10"		Gray SANDY SILT, some Gravel, trace Clay, moist	11A	43	26	14	14	3	Tested - NP -	12	A-1-b	SM			
42																		
43																		
44																		
45																		
46																		
743.0'	47	20-30-40	6"		Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	12A	26	13	15	38	8	18	1	11	A-4a	SM		
48																		
49																		
50																		
51																		
52																		
	53	48-29-65	14"		Blue SILT AND CLAY, some Gravel, little Sand, moist	13A	26	13	7	32	22	29	12	10	A-6a	CL		
	54																	
	55																	
	56																	
	57																	
	58																	
	59																	
737.0'	60	18-30-35	10"		Blue SILTY CLAY, little Gravel, little Sand, moist	14A	15	7	5	39	34	36	17	12	A-6-b	CL		
61																		
62																		
63																		
64																		
65																		
66																		
	67	100+	5"			15A	Insufficient Sample							12	Visual			
68																		
69																		
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Bowser-Morner Testing Laboratories, Inc.
LOG OF BORING

Bridge No. HIG-753-1303

Project over Rattlesnake Creek

Date Started 11-10-65

Date Completed 11-16-65

Boring No. 22

Sampler Type Split Spoon Dia. 2" I.D.
Drilling Method Hollow Stem Auger Dia. 8 1/2" O.D.
Station and Offset 691+74.25 - 15' Lt.

Completion: Unknown

Ground Water Elev. Initial: 781.5'

Surface Elev. 790.5'

Drillers L.G., D.W. & O.B.

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	PHYSICAL CHARACTERISTICS										Ohio SHLT Class	UNIFIED CLASS
							% Ag.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
729.5'	61																	
	62				Gray COARSE AND FINE SAND, some Gravel, some Silt, trace Clay, wet													
	63																	
	64																	
	65	31-110-100	10"			16A	32	6	34	25	3	Tested - NP -	13	A-3-a	SM			
	66																	
	67																	
	68																	
	69				Gray COARSE AND FINE SAND, little Silt, trace Gravel, wet													
720.5'	70	47-79-101	12"		Gray GRAVEL, some Sand, little Silt, trace Clay, moist	17A	6	2	73	19	0	Tested - NP -	17	A-3-a	SM			
	71																	
	72																	
	73																	
	74																	
	75	72-99-142	10"			18A	59	18	9	11	3	Tested - NP -	7	A-1-a	GM			
	76																	
	77																	
	78																	
	79																	
	80																	
	81																	
	82																	
	83																	
	84				Gray GRAVEL, some Sand, little Silt/Clay, moist	19A	52	24	11	13	-	Visual - NP -	9	A-1-a	GM			
	85	108-139	5"															
	86																	
	87																	
	88																	
	89																	
	90	202+	0"			20A	No Recovery							Visual				
	91																	
	92																	
	93																	
	94				Gray GRAVEL, little Sand, trace Silt/Clay, moist													
	95	101-202	5"			21A	71	12	8	-	9	Visual - NP -	10	A-1-a	GW-GM			
694.5'	96																	
	97				Gray Silt, some Sand, trace Clay, moist													
	98																	
	99																	
	100	225-230+	1"			22A	Insufficient Sample							17	Visual			
	101																	
	102																	
	103																	
686.5'	104	200+	0"			23A	No Recovery							Visual				
					Bottom of Boring at 104.0'													

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF
OHIO STATE ROUTE 753BARRETT, CARGO, WITHERS & ASSOCIATES, Ltd.
CONSULTING ENGINEERS CHILLICOT

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	



HIG-753-12.71

Bowser-Morner Testing Laboratories, Inc. LOG OF BORING														
Project: Bridge No. HIG-753-1303 over Rattlesnake Creek														
Date Started: 11-17-65 Date Completed: 11-18-65 Boring No.: 23														
Sampler Type: Split Spoon Dia. 2" I.D. Drilling Method: Hollow Stem Auger Dia. 8 1/2" O.D. Station and Offset: 696+00														
Completion: Unknown Ground Water Elev. Initial: 781.1' Surface Elev. 792.1' Drillers: L.G. & W.L.														
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	PHYSICAL CHARACTERISTICS							
							% Asa.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.
792.1'	0				Topsoil (9")									
791.3'	1				Brown SILT AND CLAY, some Sand, trace Gravel, moist	1A	1	3	22	50	24	36	15	25
	2	3-6-13	7"											
	3													
	4													
787.1'	5	3-3-4	5"		Brown SANDY SILT, some Clay, moist	2A	Insufficient Sample							Visual
	6													
784.1'	7	5-5-6	15"			3A	0	7	19	47	27	27	8	22
	8													
	9				Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	4A	32	19	28	19	2	Tested NP	14	A-1-b
	10	5-7-23	9"											
	11													
	12	14-24-26	8"			5A	68	12	8	11	1	Tested NP	13	A-1-b
	13													
	14													
	15	5-6-9	10"			6A	20	42	21	16	1	Tested NP	17	A-1-b
	16				Brown GRAVEL WITH SAND, little Silt, moist									
	17	7-7-9	12"			7A	22	45	18	15	0	Tested NP	17	A-1-b
	18													
	19				Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	8A	36	30	19	14	1	Tested NP	14	A-1-b
	20	12-14-12	10"											
	21													
	22													
	23													
	24				Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	9A	41	30	12	15	2	Tested NP	13	A-1-b
	25	14-20-24	11"											
	26													
	27													
	28													
	29													
	30	24-35-43	0"			10A	No Recovery							Visual
	31													
760.6'	32				Gray SANDY SILT, some Clay, trace Gravel, moist									
	33													
	34													
	35	27-44-70	18"			11A	8	8	18	41	23	23	10	11
	36													
	37													
	38													
	39													
	40	17-41-69	16"			12A	7	8	18	40	27	23	8	14
	41													
	42													
	43													
	44													
	45	36-43-54	0"			13A	No Recovery							Visual
	46													
745.1'	47				Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	14A	43	16	20	16	5	Tested NP	14	A-1-b
	48													
	49	101	5"											
	50													
	51													
740.1'	52				Gray SANDY SILT, some Gravel, trace Clay, moist	15A	24	13	22	36	5	Tested NP	16	A-4a
	53													
	54	93-109	6"											
	55													
	56													
	57													
	58													
	59													
732.1'	60	129-109			Bottom of Boring at 60.0'	16A	26	15	23	29	7	16	3	15

Bowser-Morner Testing Laboratories, Inc. LOG OF BORING														
Project: HIG-753-12.71														
Date Started: 11-18-65 Date Completed: 11-19-65 Boring No.: 24														
Sampler Type: Split Spoon "D" Dia. 2" I.D. Drilling Method: Hollow Stem Auger Dia. 8 1/2" O.D. Station and Offset: 700+00														
Completion: Unknown Ground Water Elev. Initial: 784.9' (trace) Surface Elev. 796.9' Drillers: L.G. & W.L.														
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	PHYSICAL CHARACTERISTICS							
							% Asa.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.
796.9'	0				Topsoil (8")									
796.2'	1				Gray SILT, some Sand, trace Clay, moist									
794.9'	2	4-7	3"											
	3	7	1"		Brown SANDY SILT, little Gravel, little Clay, moist	1A	Insufficient Sample							Visual
	4													
	5	4-7-8	11"			2A	14	8	25	38	15	27	6	18
790.9'	6													
	7				Brown SILT AND CLAY, little Sand, moist	3A	0	2	15	50	23	32	12	23
	8	4-4-7	12"											
	9													
	10	5-6-6	12"			4A	0	3	15	55	27	33	14	23
785.9'	11													
	12				Brown GRAVEL WITH SAND, little Silt, trace Clay, moist	5A	57	13	10	17	3	Tested NP	8	A-1-b
784.4'	13	16-19-30	12"											
	14				Brown SILT, some Sand, trace Gravel, trace Clay, moist	6A	5	6	31	50	8	Tested NP	15	A-4b
	15	25-24-35	14"											
	16													
	17													
779.4'	18	16-24-36	4"			7A	Insufficient Sample							Visual
	19				Gray SILT AND CLAY, some Sand, trace Gravel, dry									
	20					8A	1	4	26	54	15	24	11	7
775.9'	21													
	22				Brown Clay and Rock									
	23													
	24	100+	0			9A	No Recovery							Visual
	25													
	26													
	27													
	28													
	29	100+	0			10A	No Recovery							Visual
	30													
	31													
764.9'	32													
	33				Alger Shale, medium soft calcareous, blueish gray to light gray to mottled, massive									
	34													
	35													
	36													
	37													
	38													
	39													
	40					1D	Visual							Lime-stone
	41													
	42													
	43													
752.9'	44					2D	Visual							Lime-stone
					Bottom of Boring at 44.0'									

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF
OHIO STATE ROUTE 753

BARRETT, CARGO, WITHERS & ASSOCIATES, Ltd.
CONSULTING ENGINEERS CHILlicothe, OHIO

BORINGS
SOIL PROFILE

HIGHLAND COUNTY STA.
STA.

REVISION	DATE	DESCRIPTION	BY
DEC. 68		WORK AS CONSTRUCTED	V.L.O.

SUMMARY OF SOIL TEST DATA

NOTE: "NP" SHOWN BELOW INDICATES
THAT THE MATERIAL IS NON-
PLASTIC BY VISUAL EXAMINATION
OR BY ACTUAL TESTING.

STATION	OFFSET	DEPTH FROM	TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	S.H.T.L. CLASS	UNIFIED CLASS
& BORING NO.													
As Staked		0.0 -	1.0	TOPSOIL								Visual	
1		1.0 -	6.0	0	1	29	54	16	21	6	19	A-4b	CL-ML
		6.0 -	8.5	55	13	13	17	2	Tested N.P.		10	A-1-b	GM
		8.5 -	10.0	60	18	8	-	14 -	Visual N.P.		20	A-1-a	GM
As Staked		0.0 -	5.0	0	10	45	35	10	19	3	14	A-4a	SM
2		0.0 -	5.0	0	1	17	62	20	27	8	26	A-4a	CL
		5.0 -	10.0	76	13	7	-	4 -	Tested N.P.		6	A-1a	GW
		5.0 -	10.0	64	21	9	-	6 -	Visual N.P.		11	A-1-a	GW-GM
As Staked		0.0 -	1.0	TOPSOIL								Visual	
3		1.0 -	4.0	1	2	10	64	23	29	9	23	A-4b	CL
		4.0 -	8.0	2	17	56	22	3	Tested N.P.		13	A-3a	SM
		8.0 -	9.5	GRAY SILT, SOME SAND, TRACE ORGANIC								Visual	
		9.5 -	10.0	21	49	16	-	14 -	Tested N.P.		22	A-1b	SM
As Staked		0.0 -	1.0	TOPSOIL								Visual	
4		1.0 -	3.0	0	1	19	58	22	23	10	23	A-4a	CL
		3.0 -	4.0	1	14	51	27	7	21	9	15	A-2-4	SC
		4.0 -	5.5	60	13	5	-	22 -	Visual N.P.		6	A-1-b	GM
		5.5 -	8.0	8	30	39	19	4	Tested N.P.		11	A-3a	SM
		8.0 -	10.0	45	22	18	13	2	Tested N.P.		10	A-1-b	SM
AS Staked		0.0 -	1.0	TOPSOIL								Visual	
5		1.0 -	4.0	3	5	17	50	25	33	10	22	A-4b	CL
		1.0 -	4.0	0	2	8	47	43	35	2	31	A-4b	CL
		4.0 -	6.0	1	3	9	47	40	48	21	25	A-7-5	CL
		6.0 -	10.0	0	1	9	50	40	46	17	28	A-7-6	ML
As Staked		0.0 -	1.0	TOPSOIL								Visual	
6		1.0 -	3.0	0	1	29	51	19	26	5	21	A-4b	ML-CL
		3.0 -	5.5	0	1	49	34	16	Visual N.P.		16	A-4a	SM-SC
		5.5 -	8.5	37	19	33	10	1	Tested N.P.		6	A-1b	SM-SC
		8.5 -	10.0	10	6	45	27	12	Tested N.P.		18	A-4a	SM
As Staked		0.0 -	1.0	TOPSOIL								Visual	
7		1.0 -	3.0	0	2	40	37	21	32	10	25	A-4a	CL
		3.0 -	6.0	0	1	38	38	23	32	12	25	A-6a	CL
		6.0 -	10.0	0	6	60	27	7	Tested N.P.		20	A-3a	SM
		6.0 -	10.0	12	10	53	18	7	Tested N.P.		27	A-3a	SM
As Staked		0.0 -	0.9	TOPSOIL								Visual	
8		0.9 -	9.0	1	2	34	40	24	34	10	22	A-4a	CL
		0.9 -	9.0	0	0	40	38	22	33	10	24	A-4a	CL
		0.9 -	9.0	5	6	33	39	17	25	7	23	A-4a	ML
		9.0 -	10.0	2	1	35	38	24	33	14	28	A-6a	CL
As Staked		0.0 -	0.1	TOPSOIL								Visual	
9		1.0 -	5.5	0	2	38	26	24	29	11	23	A-6a	CL
		5.5 -	7.0	34	37	11	11	7	30	10	14	A-2-4	SC
		7.0 -	10.0	32	49	9	-	10 -	Visual N.P.		13	A-1-b	SW-SM

STATION & BORING NO.	OFFSET	DEPTH FROM	TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	S.H.T.L. CLASS	UNIFIED CLASS
As Staked		0.0 -	1.0	TOPSOIL								Visual	
10		1.0 -	2.0	0	1	52	34	13	22	2	19	A-4a	SM
		2.0 -	3.0	0	8	72	11	9	Tested N.P.		10	A-3a	SM
		3.0 -	7.0	65	5	24	5	1	24	6	7	A-1-b	GP-GM
		7.0 -	7.5	55	12	5	-	28 -	Visual N.P.		7	A-2-4	GM
		7.5 -	10.0	70	14	7	-	9 -	Visual N.P.		10	A-1-a	GW-GM
3+00	☒	0.0 -	1.0	TOPSOIL								Visual	
11		1.0 -	3.0	3	8	37	30	22	30	13	19	A-6a	CL
		3.0 -	8.0	55	15	12	11	7	32	10	13	A-2-4	SC
		8.0 -	10.0	31	13	32	19	5	19	3	14	A-3a	SM
7+37	☒	0.0 -	2.5	4	4	18	44	30	47	18	28	A-7-6	ML
12		0.0 -	2.5	8	6	15	38	33	47	19	22	A-7-6	ML
		2.5 -	4.5	32	13	22	22	11	26	7	17	A-2-4	CL-ML
		4.5 -	12.5	PEEBLES CEDARVILLE LIMESTONE								Visual	
		12.5 -	20.0	WEST UNION LIMESTONE								Visual	
12+00	☒	0.0 -	1.5	9	8	22	41	20	26	11	15	A-6a	CL
13		1.5 -	2.0	24	9	24	37	6	Tested N.P.		10	A-4a	SM
671+00	☒	0.0 -	0.5	TOPSOIL								Visual	
14		0.5 -	3.0	5	5	7	47	36	50	24	27	A-7-5	CH
		0.5 -	3.0	8	11	16	48	17	48	31	23	A-7-5	CL
		3.0 -	4.0	0	1	3	58	38	39	15	30	A-6a	CL
		4.0 -	5.5	0	3	2	48	47	60	30	37	A-7-5	CH
		5.5 -	6.0	0	5	20	50	25	30	13	29	A-6a	CL
		6.0 -	9.0	18	11	18	22	31	44	30	31	A-7-6	CL
		9.0 -	10.0	25	20	18	25	12	23	6	13	A-4a	SM-SC
675+00	☒	0.0 -	0.5	TOPSOIL								Visual	
15		0.5 -	3.0	2	1	5	58	34	42	18	26	A-7-5	CL
		3.0 -	5.0	59	13	10	11	7	32	15	10	A-2-6	GC
678+60.42	☒	0.0 -	0.5	TOPSOIL								Visual	
16		0.5 -	1.3	0	1	5	53	41	48	26	22	A-7-6	CL
		1.3 -	4.5	26	15	17	28	14	30	14	9	A-4a	SC
682+00	☒	0.0 -	1.0	TOPSOIL								Visual	
17		1.0 -	3.0	5	8	12	44	31	35	14	20	A-6a	CL
		3.0 -	6.0	40	13	9	16	22	49	26	22	A-7-5	CL
		6.0 -	8.0	19	22	12	18	29	57	28	28	A-7-6	CH
		8.0 -	10.0	0	1	5	55	39	43	21	34	A-7-5	CL

STATION & BORING NO.	OFFSET	DEPTH FROM TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	S.H.T.L. CLASS	UNIFIED CLASS	
685+84	☒	0.0 - 1.5	TOPSOIL									Visual	
18		1.5 - 4.0	0	1	14	49	36	36	17	19	A-6b	CL	
		1.5 - 4.0	13	15	34	16	22	35	17	12	A-6b	SC	
		4.0 - 9.0	50	23	12	11	4	Tested N.P.		5	A-1-a	SM	
		9.0 - 10.0	39	48	7	-	6	Visual N.P.		4	A-1-b	SW-SM	
702+02	☒	0.0 - 0.5	TOPSOIL									Visual	
25		0.5 - 8.0	13	8	16	26	37	34	10	21	A-4a	CL	
		0.5 - 8.0	5	9	20	38	28	37	10	11	A-4a	CL	
		8.0 - 13.0	54	23	8	-	15	Visual N.P.		5	A-1-a	GM	
		13.0 - 14.0	33	39	14	-	14	Visual N.P.		6	A-1-b	SM	
705+00	☒	0.0 - 0.5	TOPSOIL									Visual	
26		0.5 - 2.5	11	14	20	18	37	57	32	23	A-7-6	CH	
		2.5 - 4.0	21	13	35	26	5	Tested N.P.		13	A-3a	SM	
		4.0 - 9.0	23	14	20	29	14	20	6	12	A-4a	CL-ML	
		9.0 - 10.0	8	8	19	37	28	28	11	13	A-6a	CL	
706+50	☒	0.0 - 0.5	TOPSOIL									Visual	
27		0.5 - 1.0	56	12	16	11	5	32	7	12	A-2-4	SM	
710+00	☒	0.0 - 0.5	TOPSOIL									Visual	
28		0.5 - 1.0	BROWN SAND AND GRAVEL									Visual	
		1.0 - 2.5	28	18	19	22	13	28	11	20	A-2-4	SC	
		2.5 - 4.0	4	5	17	31	43	46	26	24	A-7-6	CL	
		4.0 - 7.0	12	12	21	32	23	24	9	11	A-4a	CL	
677+70	L ☒ 290'	0.0 - 1.0	TOPSOIL									Visual	
29		1.0 - 3.0	BROWN SILT, SOME SAND, SOME CLAY									Visual	
		3.0 - 16.0	PEEBLES - CEDARVILLE LIMESTONE									Visual	
		3.0 - 16.0	PEEBLES - CEDARVILLE LIMESTONE									Visual	
		16.0 - 23.5	WEST UNION LIMESTONE									Visual	
		16.0 - 23.5	WEST UNION LIMESTONE									Visual	

REVISION	DATE	DESCRIPTION	BY
	DEC. 68	WORK AS CONSTRUCTED	V.L.Q.

STATION OFFSET DEPTH % % % % % L.L. P.I. W.C. S.H.T.L. UNIFIED
& BORING NO. FROM TO AGG. C.S. F.S. SILT CLAY CLASS CLASS

688+00.25	R @ 15'	0.0 - 0.9	TOPSOIL (11")	Visual
19		0.9 - 3.0	0 0 17 64 19 29 9 22	A-4b CL
		3.0 - 6.0	0 2 35 48 15 24 5 23	A-4a ML-CL
		6.0 - 8.5	0 1 72 9 18 29 8 32	A-2-4 SC
		8.5 - 13.0	64 15 12 8 1 Tested N.P.	16 A-1-a GW
		8.5 - 13.0	62 18 9 9 2 Tested N.P.	13 A-1-a GW
		13.0 - 17.5	25 21 36 16 2 Tested N.P.	16 A-1-b SM
		13.0 - 17.5	NO RECOVERY	Visual
		17.5 - 19.5	12 10 23 40 15 18 4 11	A-4a ML
		19.5 - 27.0	0 0 9 48 43 30 11 16	A-6a CL
		27.0 - 54.75	0 1 3 90 6 Tested N.P.	26 A-4b ML
		27.0 - 54.75	0 1 4 90 5 Tested N.P.	20 A-4b ML
		27.0 - 54.75	0 1 3 88 8 Tested N.P.	21 A-4b ML
		27.0 - 54.75	2 3 11 61 23 22 7 17	A-4b ML-CL
		27.0 - 54.75	2 2 20 59 17 20 5 15	A-4b ML-CL
		27.0 - 54.75	1 4 13 59 23 21 7 16	A-4b ML-CL
		54.75 - 55.0	4 10 52 30 4 Tested N.P.	18 A-3a SM
		55.0 - 60.0	3 5 13 58 21 22 8 17	A-4b ML-CL

689+15.50	L @ 15'	0.0 - 1.0	TOPSOIL	Visual
20		1.0 - 9.5	0 1 38 42 19 31 7 28	A-4a ML
		1.0 - 9.5	0 5 28 47 20 23 7 21	A-4a ML-CL
		9.5 - 13.5	60 17 12 9 2 Tested N.P.	10 A-1-a GM-GW
		13.5 - 30.0	38 26 22 11 3 Tested N.P.	11 A-1-b SM
		13.5 - 30.0	33 21 22 17 7 Tested N.P.	11 A-1-b SM
		13.5 - 30.0	NO RECOVERY	Visual
		13.5 - 30.0	BROWN GRAVEL WITH SAND, TRACE SILT, TRACE CLAY	4 Visual
		13.5 - 30.0	45 32 13 7 3 Tested N.P.	10 A-1-b SW-SM
		13.5 - 30.0	BROWN GRAVEL WITH SAND, TRACE SILT, TRACE CLAY	8 Visual
		30.0 - 43.5	0 1 2 66 31 26 8 14	A-4b CL
		30.0 - 43.5	2 2 5 64 27 25 9 15	A-4b CL
		30.0 - 43.5	5 6 11 56 22 24 8 12	A-4b CL
		30.0 - 43.5	1 2 17 64 16 22 7 20	A-4b CL-ML
		43.5 - 47.0	7 8 37 31 17 16 3 17	A-4a SM
		47.0 - 60.0	0 1 12 60 27 21 5 18	A-4b CL-ML
		47.0 - 60.0	0 1 6 58 35 24 10 17	A-4b CL
		47.0 - 60.0	0 0 4 69 27 23 5 17	A-4b CL-ML

690+79	R @ 10'	0.0 - 0.3	TOPSOIL (4")	Visual
21		0.3 - 9.0	BROWN MEDIUM SAND, SOME SILT, TRACE CLAY	16 Visual
		0.3 - 9.0	BROWN MEDIUM SAND, SOME SILT, TRACE CLAY	14 Visual
		9.0 - 21.0	48 23 13 16 0 Tested N.P.	12 A-1-b SM
		9.0 - 21.0	BROWN GRAVEL WITH SAND, LITTLE SILT	18 Visual
		9.0 - 21.0	32 28 19 16 5 21 3 20	A-1-b SM
		21.0 - 23.5	12 31 40 15 2 Tested N.P.	20 A-3a SM
		23.5 - 60.0	15 47 19 19 0 Tested N.P.	19 A-1-b SM
		23.5 - 60.0	37 31 11 18 3 Tested N.P.	15 A-1-b SM
		23.5 - 60.0	27 33 19 18 3 Tested N.P.	13 A-1-b SM
		23.5 - 60.0	29 34 21 14 2 Tested N.P.	16 A-1-b SM
		23.5 - 60.0	14 45 21 19 1 Tested N.P.	15 A-1-b SM
		23.5 - 60.0	25 39 18 16 2 Tested N.P.	14 A-1-b SM
		23.5 - 60.0	15 44 25 15 1 Tested N.P.	17 A-1-b SM
		23.5 - 60.0	27 29 29 13 2 Tested N.P.	16 A-1-b SM
		23.5 - 60.0	12 45 26 15 2 Tested N.P.	15 A-1-b SM
		23.5 - 60.0	51 18 12 16 3 Tested N.P.	12 A-1-b GM
		60.0 - 62.5	17 4 5 64 10 18 3 12	A-4b ML
		62.5 - 63.5	35 9 23 25 8 17 4 11	A-3a SM

STATION	OFFSET	DEPTH FROM	TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	W.C.	S.H.T.L. CLASS	UNIFIED CLASS
691+74.25	L @ 15'	0.0 -	0.75	TOPSOIL									Visual
22		0.75-	4.5	0	0	23	67	10	26	6	4	A-4b	ML
		4.5 -	6.0	BROWN MEDIUM SAND, TRACE FINE GRAVEL, TRACE SILT									Visual
		6.0 -	9.0	12	6	8	61	13	32	14	15	A-6a	CL
		9.0 -	18.5	43	15	33	9	0	Tested N.P.		18	A-1-b	SW-SM
		9.0 -	18.5	52	15	25	8	0	Visual N.P.		15	A-1-b	SW-SM
		9.0 -	18.5	66	16	9	9	0	Visual N.P.		10	A-1-b	GW-GM
		9.0 -	18.5	50	18	10	19	3	20	1	11	A-1-b	GC
		18.5 -	23.5	29	25	16	24	6	Tested N.P.		9	A-3a	SM
		23.5 -	40.0	32	33	13	19	3	Tested N.P.		13	A-1-b	SM
		23.5 -	40.0	40	30	13	14	3	Tested N.P.		13	A-1-b	SM
		23.5 -	40.0	46	28	11	12	3	Tested N.P.		12	A-1-b	SM
		23.5 -	40.0	43	26	14	14	3	Tested N.P.		12	A-1-b	SM
		40.0 -	47.5	26	13	15	38	8	18	1	11	A-4a	SM
		47.5 -	53.5	26	13	7	32	22	29	12	10	A-6a	CL
		53.5 -	61.0	15	7	5	39	34	36	17	12	A-6b	CL
		53.5 -	61.0	BLUE SILTY CLAY, LITTLE GRAVEL, LITTLE SAND									Visual
		61.0 -	70.0	32	6	34	25	3	Tested N.P.		13	A-3a	SM
		61.0 -	70.0	6	2	73	19	0	Tested N.P.		17	A-3a	SM
		70.0 -	96.0	59	18	9	11	3	Tested N.P.		7	A-1-a	GM
		70.0 -	96.0	52	24	11	- 13 -	-	Visual N.P.		9	A-1-a	GM
		70.0 -	96.0	NO RECOVERY									Visual
		70.0 -	96.0	71	12	8	- 9 -	-	Visual N.P.		10	A-1-a	GW-GM
		96.0 -	104.0	GRAY SILT, SOME SAND, TRACE CLAY									Visual
		96.0 -	104.0	NO RECOVERY									Visual
696+00	@	0.0 -	0.75	TOPSOIL									Visual
23		0.75-	5.0	1	3	22	50	24	36	15	25	A-6a	CL
		0.75-	5.0	BROWN SILT AND CLAY, SOME SAND, TRACE GRAVEL									Visual
		5.0 -	8.0	0	7	19	47	27	27	8	22	A-4a	CL
		8.0 -	31.5	32	19	28	19	2	Tested N.P.		14	A-1-b	SM
		8.0 -	31.5	68	12	8	11	1	Tested N.P.		13	A-1-b	GW-GM
		8.0 -	31.5	20	42	21	16	1	Tested N.P.		17	A-1-b	SC
		8.0 -	31.5	22	45	18	15	0	Tested N.P.		17	A-1-b	SC
		8.0 -	31.5	36	30	19	14	1	Tested N.P.		14	A-1-b	GC
		8.0 -	31.5	41	30	12	15	2	Tested N.P.		13	A-1-b	GC
		8.0 -	31.5	NO RECOVERY									Visual
		31.5 -	47.0	8	8	18	41	25	23	10	11	A-4a	CL
		31.5 -	47.0	7	8	18	40	27	23	8	14	A-4a	CL
		31.5 -	47.0	NO RECOVERY									Visual
		47.0 -	52.0	43	16	20	16	5	Tested N.P.		14	A-1-b	GC
		52.0 -	60.0	24	13	22	36	5	Tested N.P.		16	A-4a	ML
		52.0 -	60.0	26	15	23	29	7	16	3	15	A-4a	SM

SOIL PROFILE
HIGHLAND COUNTY
HIG-753-12.71
BARRETT, CARGO WITHERS & ASSOCIATES, Ltd.
PREPARED BY
BOWSER-MORNER TESTING LABORATORIES INC.
DAYTON, OHIO

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SUMMARY OF SOIL TEST DATA
NOTE: "NP" SHOWN BELOW INDICATES
THAT THE MATERIAL IS NON-
PLASTIC BY VISUAL EXAMINATION
OR BY ACTUAL TESTING.

REVISION	DATE	DESCRIPTION	BY
	DEC. 68	WORK AS CONSTRUCTED	VLO

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF OHIO STATE ROUTE 753
SUMMARY OF SOIL TEST DATA

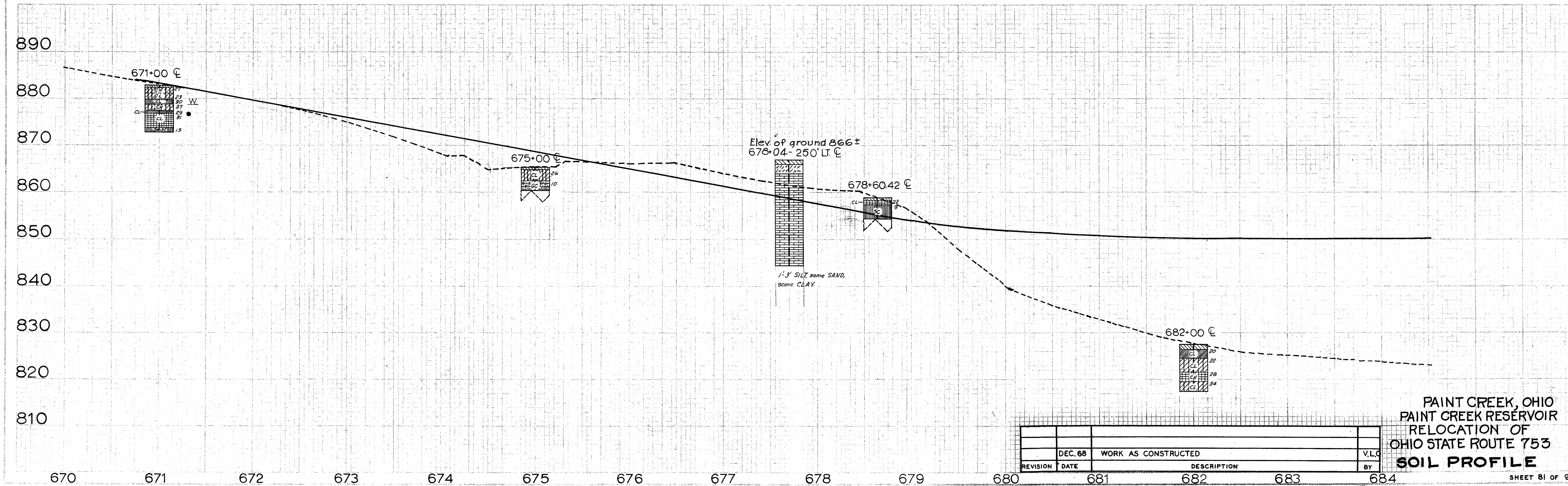
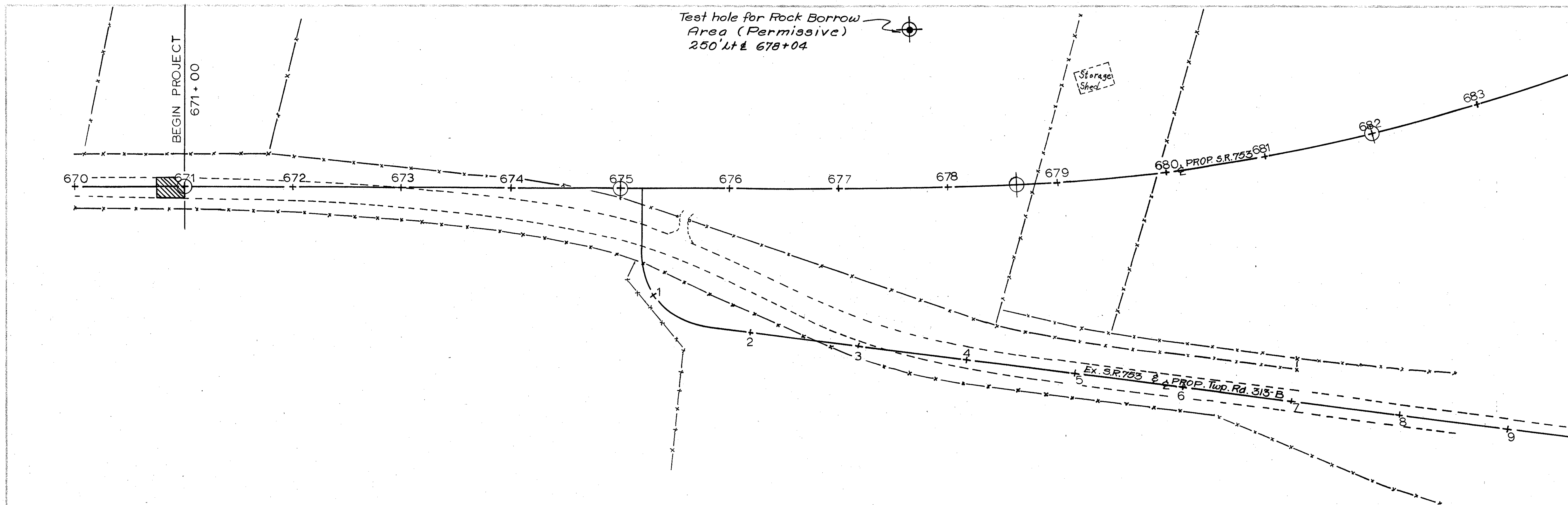
HIG-753-12.71

Test hole for Rock Borrow
Area (Permissive)
250' Lt ± 678+04

Storage
Shed

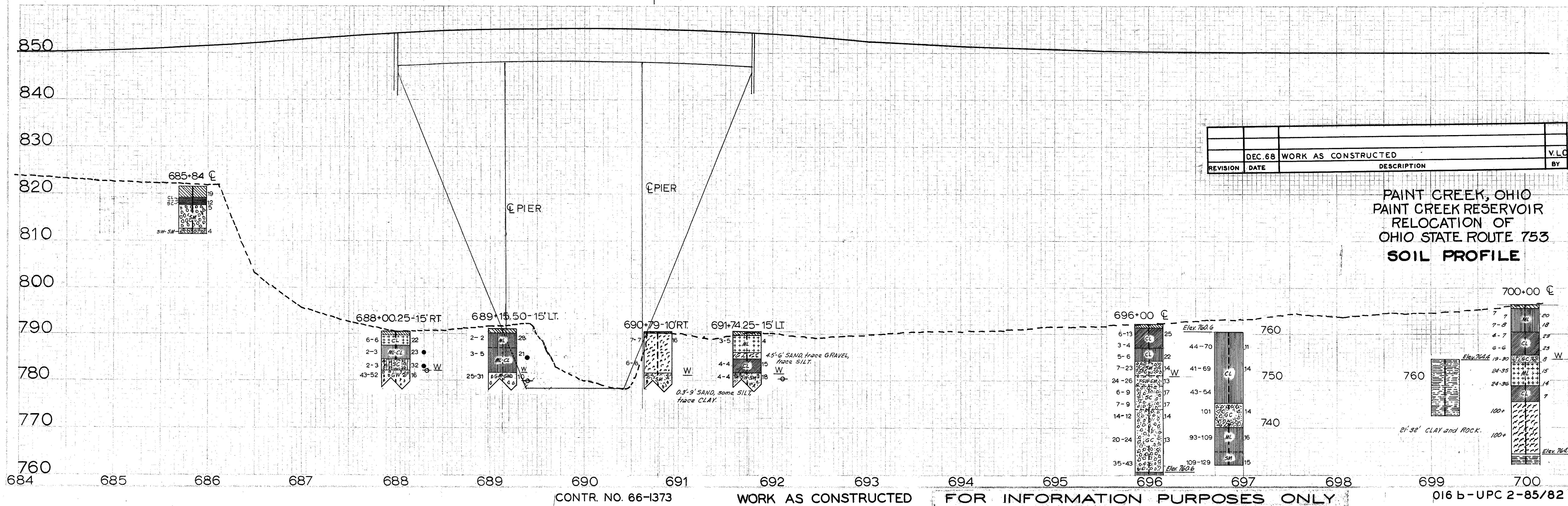
680, PROP. S.R. 753-681

EX. S.R. 753-2 PROP. Top. Rd. 315-B

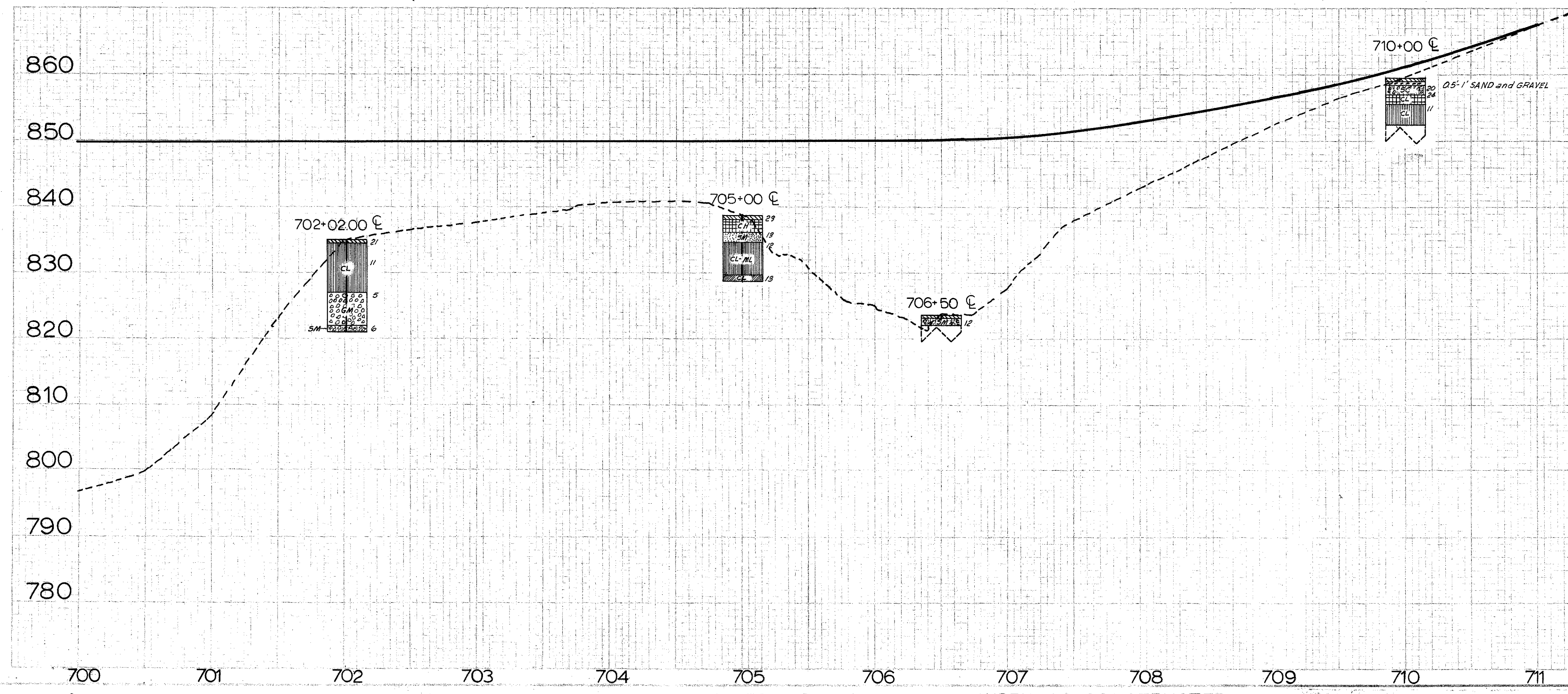
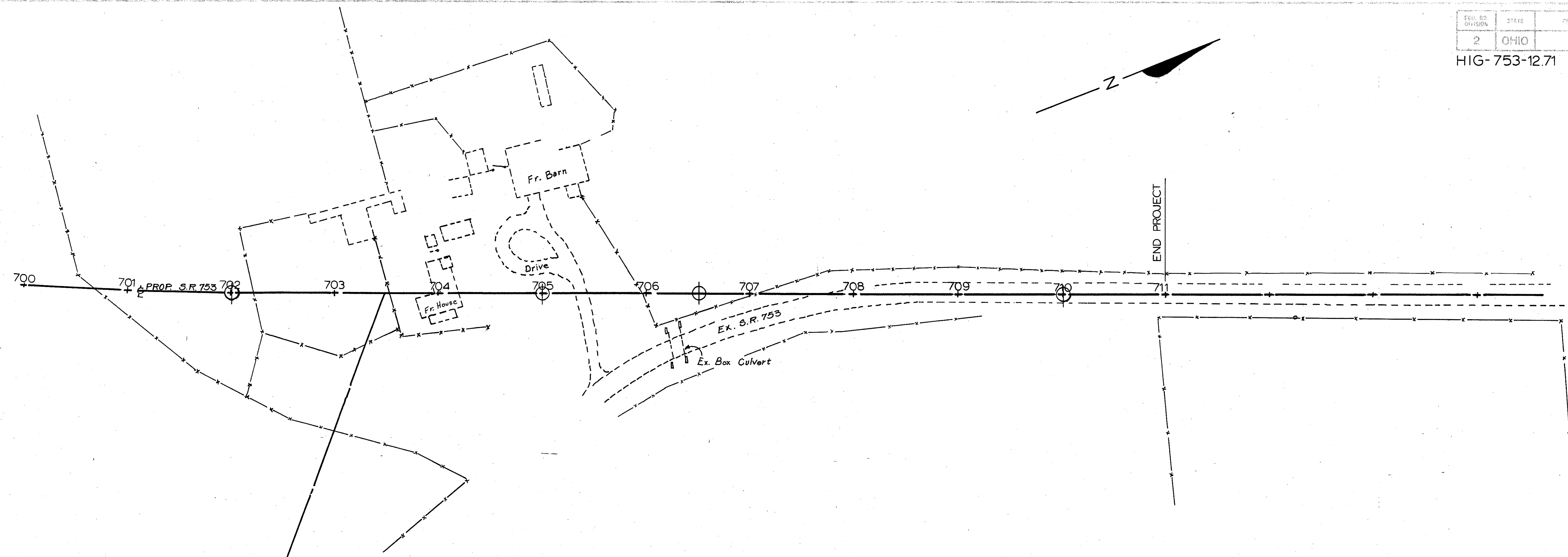


REVISION	DATE	DESCRIPTION	BY
DEC. 68		WORK AS CONSTRUCTED	V.L.G.

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
RELOCATION OF
OHIO STATE ROUTE 753
SOIL PROFILE

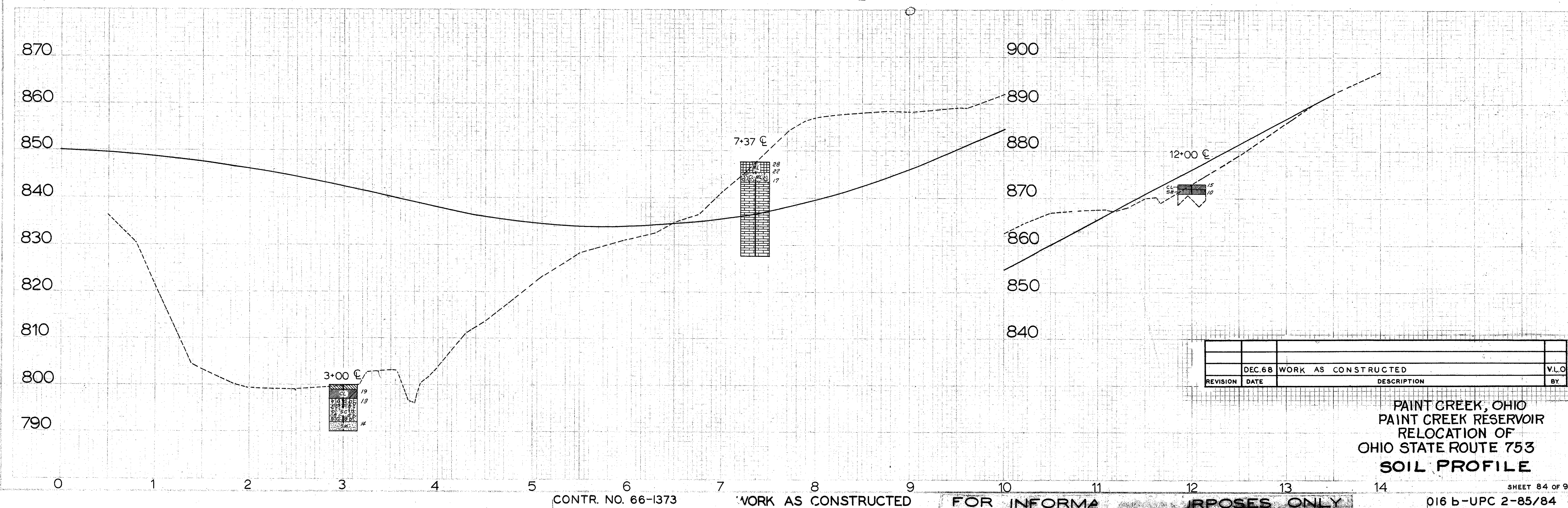
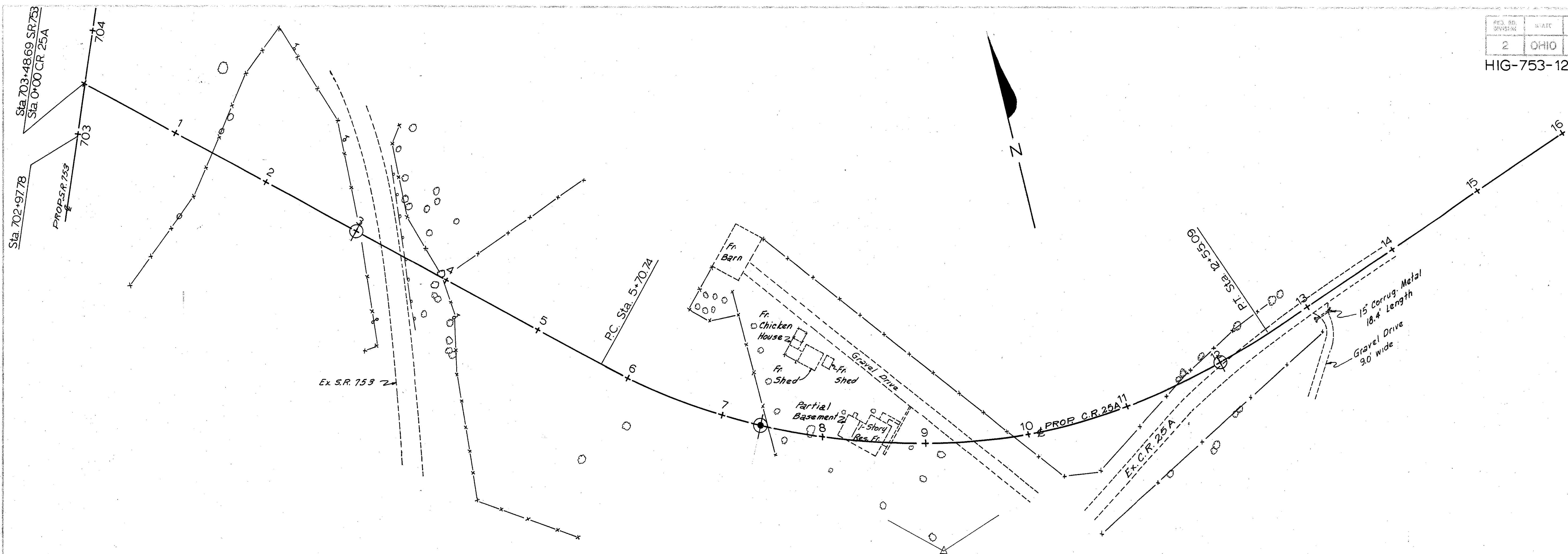


HIG-753-12.71

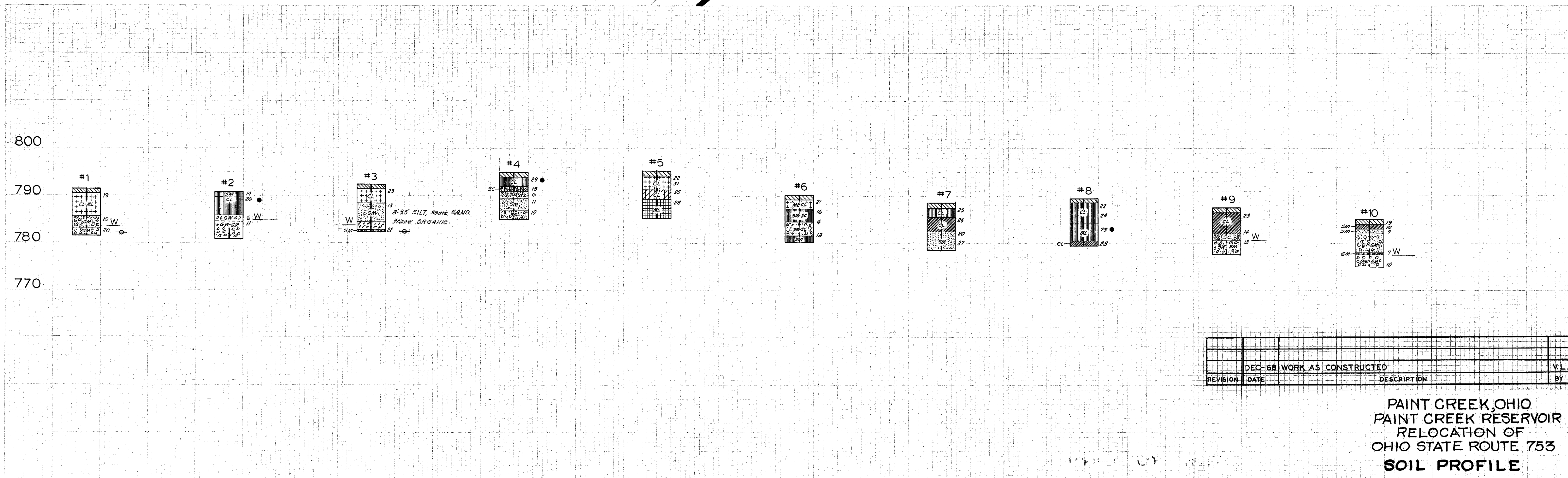
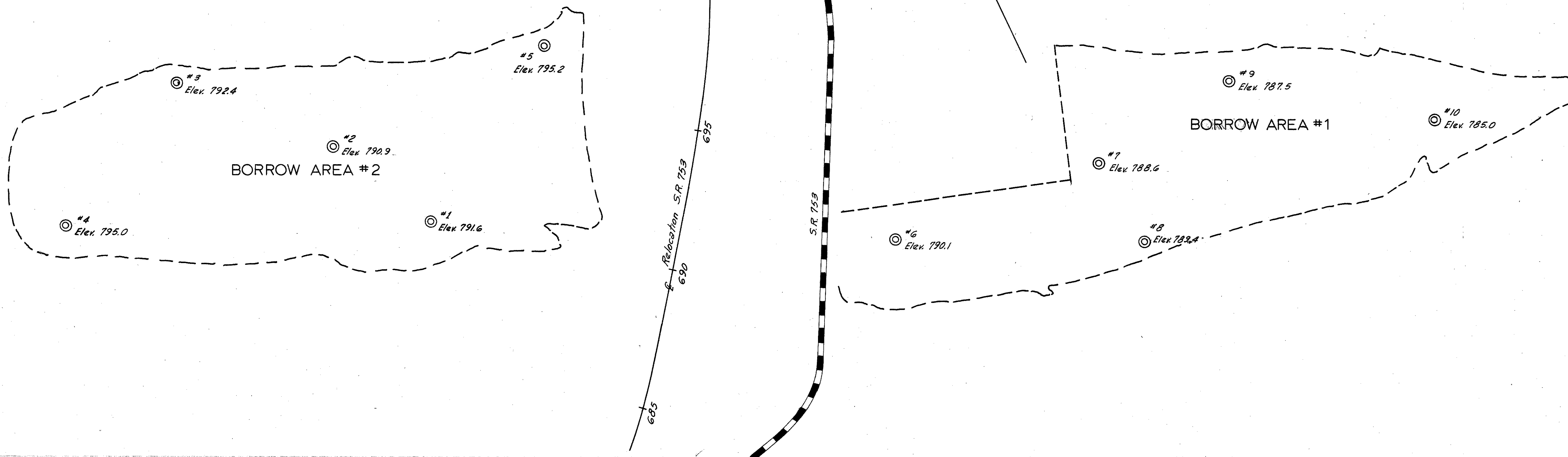


REVISION	DATE	DESCRIPTION	BY
	DEC. 68	WORK AS CONSTRUCTED	V.L.

PAINT CREEK, OHIO
PAINT CREEK RESERVOIR
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REVISION	DATE	DESCRIPTION	BY
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PAINT CREEK, OHIO
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