FED. RD. DIVISION	STATE	PROJECT
2	OHIO	STATE

1
240

ROSS COUNTY
ROS - 35 - 21.23

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
ROS - 35 - 21.23
ROSS COUNTY
CITY OF CHILLICOTHE
SCIOTO TOWNSHIP
GRADE SEPARATION WITH NORFOLK & WESTERN RAILWAY CO.

NOTE: All references to Federal Project No. F-FG-674(10) throughout this plan shall be disregarded.

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway on U.S.R. 35 by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the revised Code of Ohio.

1963 SPECIFICATIONS

Plans Prepared by ELMER S. BARRETT ASSOCIATES
Elmer S. Barrett
249 S. Paint St. Chillicothe, Ohio

The standard specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will 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 W. Forest R. Rusch
Date 10-2-64 Division Deputy Director

Approved C. H. Altvater
Date 11-27-64 Engineer of Bridges

Approved R. D. Ricketts
Date 12-3-64 Engineer of Location & Design

Approved R. E. Shultz
Date 12-3-64 Deputy Director of Design & Construction

Approved T. H. Bovard
Date 12-8-64 Deputy Director of Right of Way

Approved J. W. Wilson
Date 12-9-64 Deputy Director of Planning & Programming

Approved
Date First Assistant Director

Approved P. E. Masheter
Date 12/10/64 Director of Highways

PART - II

For Part - I See ROS-35-19.93 Project

CONVENTIONAL SIGNS

County Line
Township Line
Proposed Limited Access and Right of Way — LA-R/W
Proposed Right of Way — R/W —, Existing Right of Way — R/W —, Limited Access — L.A. —
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Trees & Stumps (existing)
Trees & Stumps (to be removed)

INDEX OF SHEETS

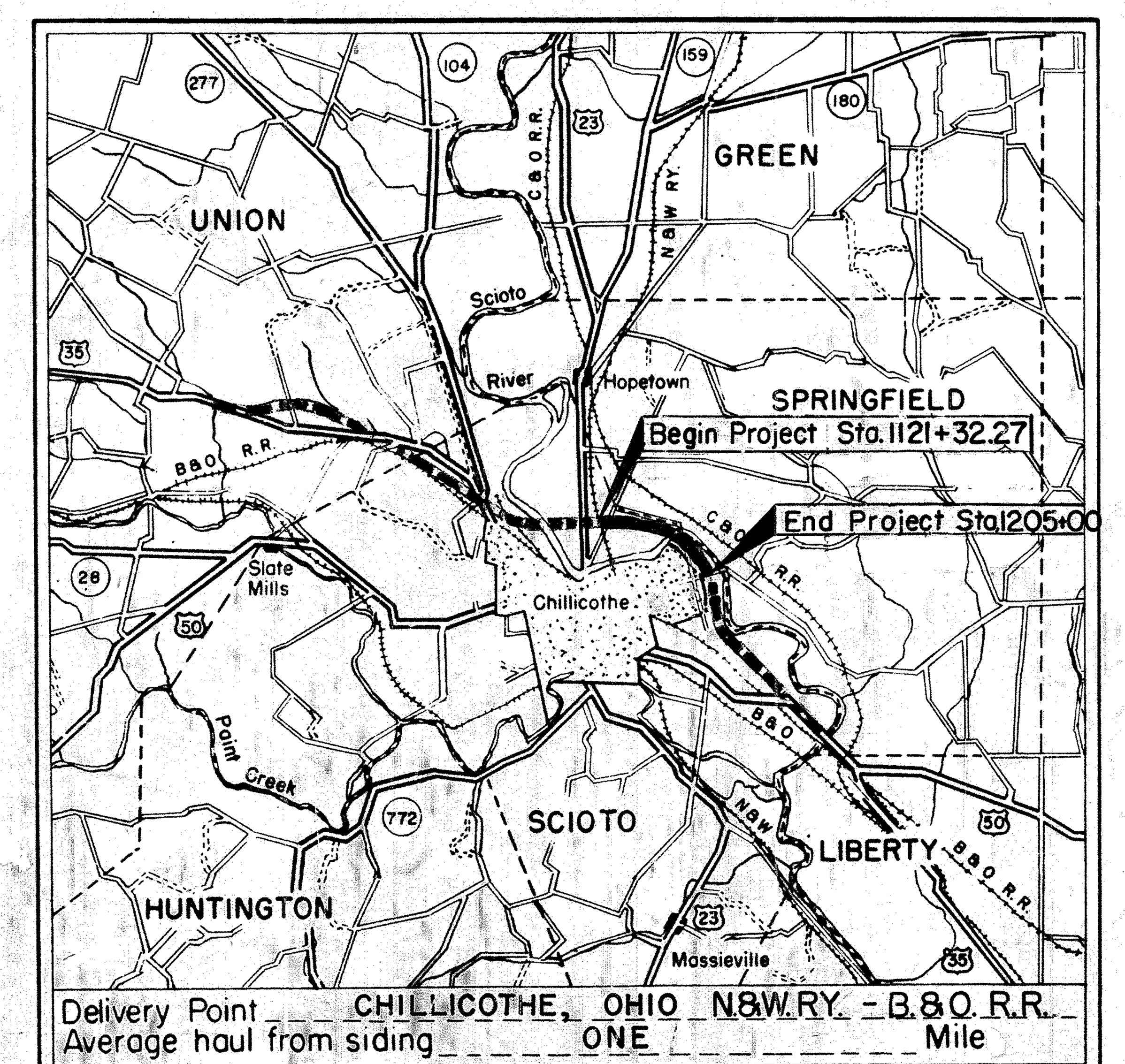
LINE DATA

Begin Work & Project
Sta. 1121+32.27

End Project & Work
Sta. 1205+00.00

Total Length of Project 8,367.73 Lin. Ft. or 1.584 Miles

N&W Service Road
Sta. 44+50 To Sta. 56+25 1175.00 Lin. Ft.
North Channel Excavation 8116.00 Lin. Ft.
Total Length of Work 17,658.73 Lin. Ft. or 3.344 Miles



LOCATION MAP

SCALE OF MILES
0 1 2 4 6 8

Portion to be improved
Federal Roads
State Roads
Other Roads

SCALE

Plan	0 25 50
Profile: Horizontal	0 25 50
Profile: Vertical	0 5 10
Cross Sections (Roadway)	0 5 10
Cross Sections (Channel)	0 10 20

Supplemental Specifications		
S-101		7-12-62
S-307	Rev	10-1-64
T-335		10-28-63

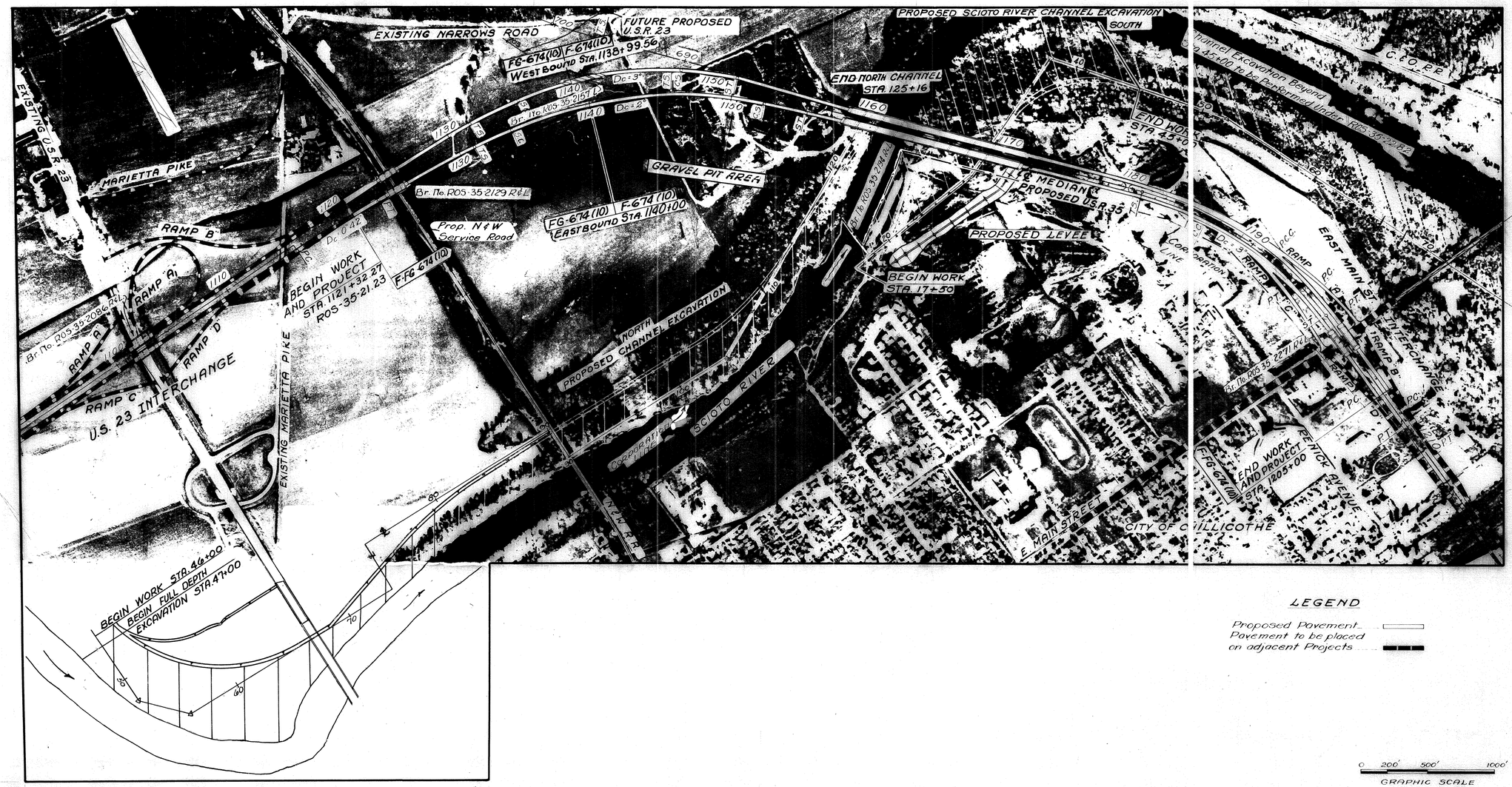
Supplemental Prints of Standard Construction Drawings

B-T-70-71	11-15-60	I-12	2-1-63					L-3-A	4-1-50			
B-T-71R	3-2-53	HW-E	2-1-63	I-8 C.B.No.8	2-1-63	L-1	4-1-50	L.J. No.1	7-1-55	CE-101.04		5-22-56
		I-1	11-15-60	I-8 C.B.No.2-2A&B	2-1-63	I-15 No.1	11-15-60	RI-1	9-1-64	I-127	Rev.	1-15-62
		I-8 C.B. No.6	2-1-63			I-15 No.5-8	2-1-63			I-212	Rev	6-23-61
						I-15 No.2A	8-17-60	T-J	9-12-60			
G-7.07	4-1-64			R.B-1-55	2-2-59	I-21-23	8-1-56	AR-1-57	4-2-62	M-107.18	Rev.	4-3-61
				FSB-1-62	1-15-63	L-3	4-1-50	AS-1-54	7-5-62			

File No. | ROSS COUNTY ROS - 35 - 21.23
Date of Letting 19
Contract No.

Rev. 7-1-65 C.E.H.

ROSS COUNTY
ROS-35-21.23



LEGEND

Proposed Pavement
Pavement to be placed on adjacent Projects

0 200' 500' 1000'
GRAPHIC SCALE

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-6744(0	

3
240

ROSS COUNTY
ROS-35-21.23

TYPICAL SECTION SCHEDULE

Station to Station	Sheet Number	Description
U.S.R. 35 EASTBOUND		
1121+32.27 to 1123+15.92	4	Typical Section "A"
1123+15.92 to 1123+62.69	4	Typical Section "B"
1123+62.69 to 1123+87.69	11	Approach Slab
1123+87.69 to 1125+32.19	163-171	Bridge over N&W R.R.
1125+32.19 to 1125+57.19	11	Approach Slab
1125+57.19 to 1131.+14.94	4	Typical Section "B"
1131+14.94 to 1148+19.47	5	Typical Section "C"
1148+19.47 to 1155+48.83	5	Typical Section "D"
U.S.R. 35 WESTBOUND		
1121+32.27 to 1123+63.22	6	Typical Section "E"
1123+63.22 to 1123+88.22	11	Approach Slab
1123+88.22 to 1125+32.72	163 - 171	Bridge over N&W R.R.
1125+32.72 to 1125+57.72	11	Approach Slab
1125+57.72 to 1131+82.16	6	Typical Section "E"
1131+82.16 to 1138+74.57	6	Typical Section "F"
1138+74.57 to 1138+99.57	11	Approach Slab
1138+99.5 to 1141+36.33	172-190	Bridge over Future Prop U.S. 23 Southbound
1141+36.33 to 1141+61.33	11	Approach Slab
1141+61.33 to 1148+50.00	6	Typical Section "F"
1148+50.00 to 1151+71.57	7	Typical Section "G"
1151+71.57 to 1156+99.38	7	Typical Section "H"
U.S.R. 35 & MEDIAN		
1155+48.83 to 1158+19.77	8	Typical Section "I"
1158+19.77 to 1158+44.77	11	Approach Slab
1158+44.77 to 1171+55.23	191 - 213	Bridge over Scioto River
1171+55.23 to 1171+80.23	11	Approach Slab
1171+80.23 to 1180+75.89	9	Typical Section "J"
1180+75.89 to 1197+69.22	9	Typical Section "K"
1197+69.22 to 1198+76.26	9	Typical Section "J"
1198+76.26 to 1199+01.26	11	Approach Slab
1199+01.26 to 1200+79.76	214-225	Bridge over East Main Street
1200+79.76 to 1201+04.76	11	Approach Slab
1201+04.76 to 1205+00.00	9	Typical Section "J"

Station to Station	Sheet Number	Description
E. MAIN ST. INTERCHANGE		
Ramp "A"		
U.S.R 35 Sta. 1182+00 to 14+50.00 Ramp "A" Sta.	103	Ramp "A" Pavement Details
14+50.00 to 19+04.66	100	Typical Ramp Section "L"
19+04.66 to 19+75.	105	E. Main St. Pavement Details
Ramp "C"		
U.S.R. 35 Sta 1184+00 to 6+45.07	104	Ramp "C" Pavement Details
6+45.07 to 8+17.78	101	Typical Ramp Section "M"
8+17.78 to 12+78.28	101	Typical Ramp Section "N"
12+78.28 to 13+24.9	105	E. Main St. Pavement Details

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

TYPICAL SECTION SCHEDULE

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	L.K.M.		D.S.			

TYPICAL SECTIONS

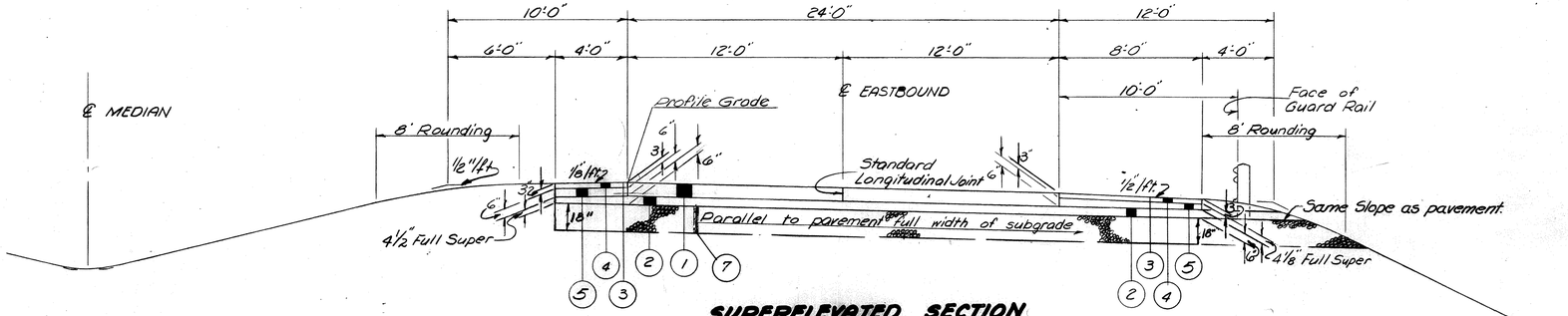
TYPE T-71

TYPE CODE 7221

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG 674(10)	

4 / 240

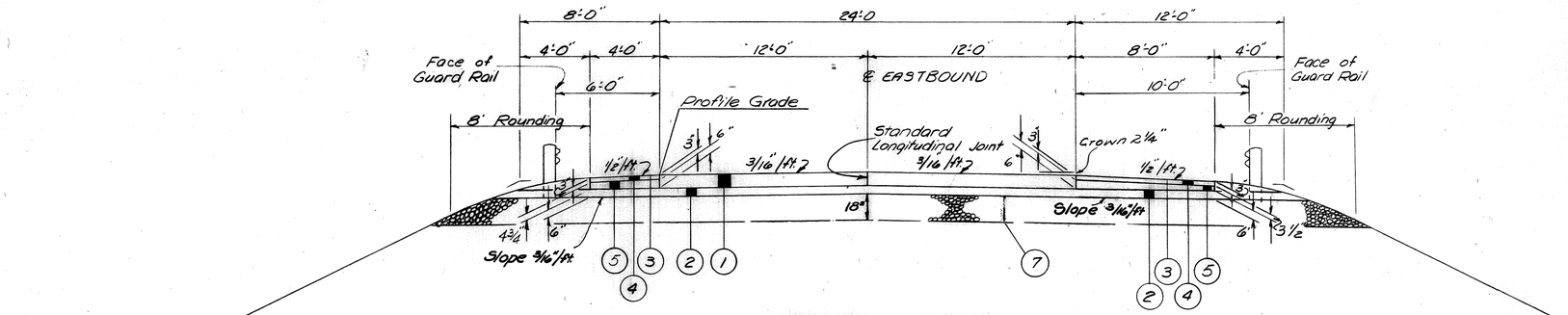
ROSS COUNTY
ROS - 35 - 21.23



SUPERELEVATED SECTION

TYPICAL SECTION "A"

The above typical section applies between the following stations:
Sta. 1121+32.27 To Sta. 1123+15.92 = 183.65 Lin. Ft.



NORMAL SECTION

TYPICAL SECTION "B"

The above typical section applies between the following stations:

Sta. 1123+15.92	To	Sta. 1123+62.69	= 46.77 Lin. Ft.
Sta. 1125+57.19	To	Sta. 1131+14.94	= 557.75 Lin. Ft.
		Total	= 604.52 Lin. Ft.

LEGEND

(1) T-71 9" Reinforced Portland Cement Concrete Pavement
(2) I-22 Subbase (thickness as shown) Grading A or B as per plan
(3) T-31 Bituminous Surface Treatment using 0.008 Cu. Yd. of No. 6 Aggregate and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
(4) B-21 *3 Waterproofed Aggregate Base Course
(5) I-18 Stabilized Crushed Aggregate Shoulders and Approaches (thickness as shown)
(6) L-9 Seeding and Protecting
(7) Granular Embankment, as per plan

* T-35 or T-335 Type A material may be used in the construction of this course (see note in proposal). The thickness shown is designed thickness as described in Sec. B-21.01.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TYPICAL SECTIONS

U.S.R. 35 EASTBOUND

SCALE		DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
R.W.G.	L.L.F.						

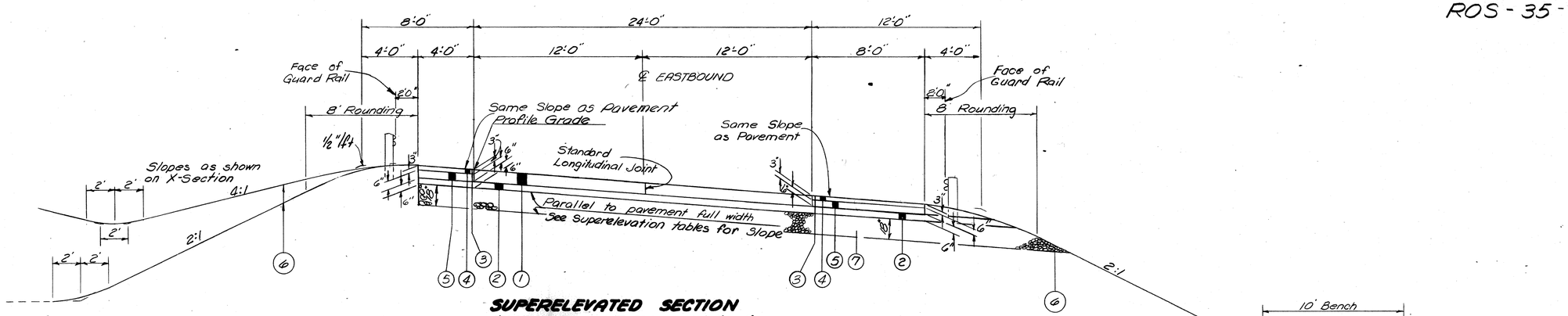
TYPICAL SECTIONS

TYPE T-71 TYPE CODE 7221

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG 674(4)	

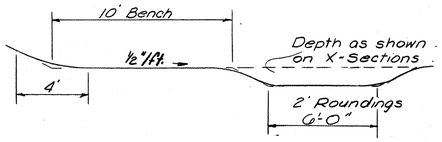
5 / 240

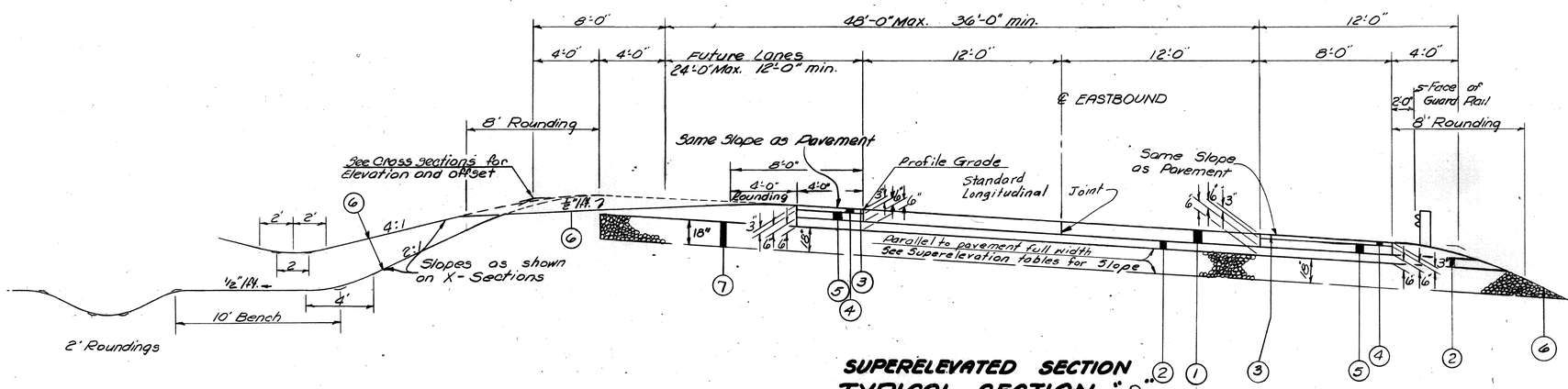
ROSS COUNTY
ROS-35-21.23



SUPERELEVATED SECTION
TYPICAL SECTION "C"

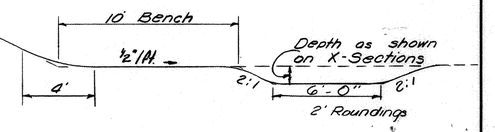
The above typical section applies between the following stations:
Sta 1131+14.94 To Sta. 1148+19.47 = 1704.53 Lin. Ft.





SUPERELEVATED SECTION
TYPICAL SECTION "D"

The above typical section applies between the following stations:
Sta. 1148+19.47 To Sta. 1155+48.83 = 729.36 Lin. Ft.



LEGEND

1. T-71 9" Reinforced Portland Cement Concrete Pavement.
2. I-22 Subbase (thickness as shown) Grading "A" or "B" as per plan
3. T-31 Bituminous Surface Treatment using 0.008 Cu.Yd. of No. 6 Aggregate and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
4. B-21 3" Waterproofed Aggregate Base Course T-35 Type "A" or T-335 material may be used in the construction of this course (see note in proposal). The thickness shown is "designed" thickness as described in Sec. B-21.01.
5. I-18 Stabilized Crushed Aggregate Shoulders and Approaches (thickness as shown)
6. L-9 Seeding and Protecting
7. Granular Embankment as per plan

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TYPICAL SECTIONS

U.S.R. 35 EASTBOUND

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G	L.L.F.		1/73			

TYPICAL SECTIONS

TYPE T-71

TYPE CODE 7221

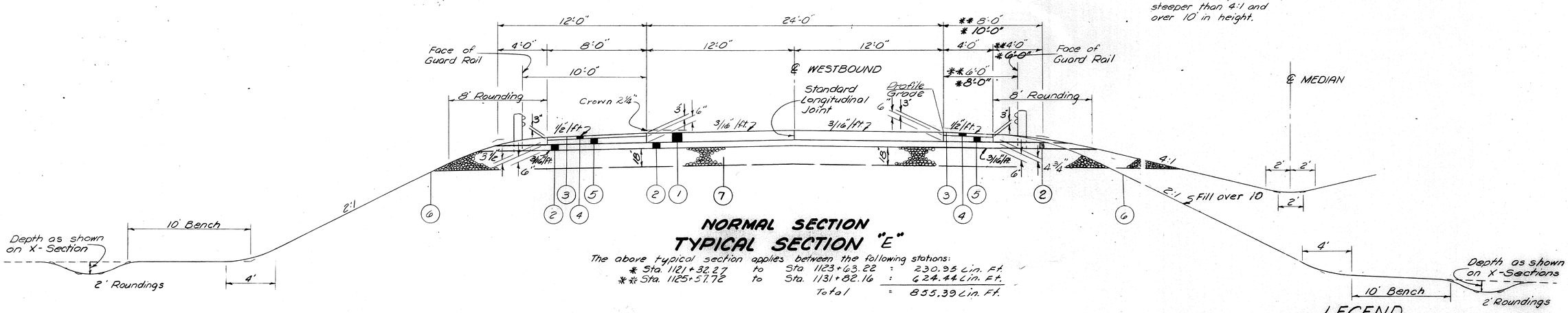
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG 674(10)	

6 / 240

ROSS COUNTY

ROS - 35 - 21.23

Guard Rail to be used where fill slopes are steeper than 4:1 and over 10' in height.



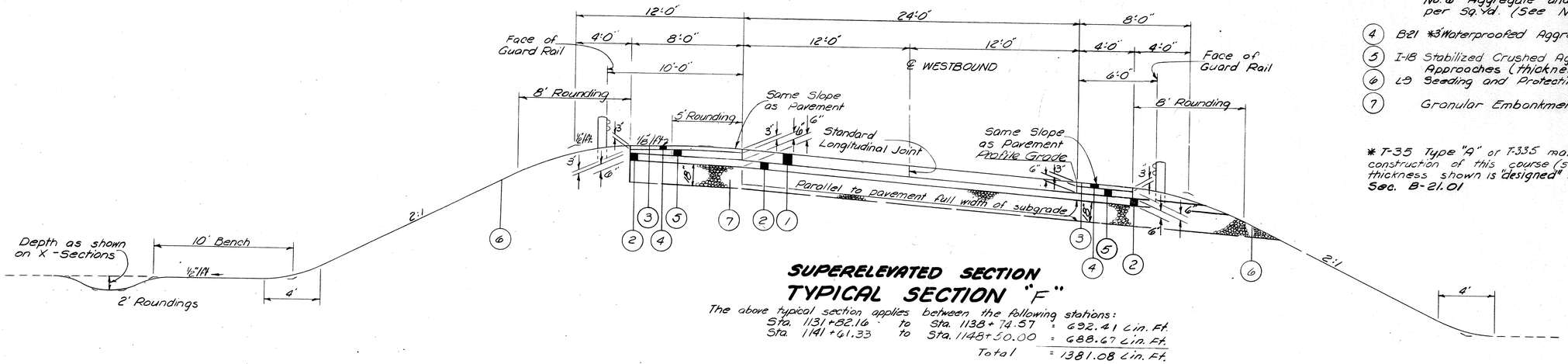
NORMAL SECTION

TYPICAL SECTION "E"

The above typical section applies between the following stations:

* Sta. 1121+32.27	to	Sta 1123+63.22	:	230.95 Lin. Ft.
** Sta. 1125+57.72	to	Sta. 1131+82.16	:	624.44 Lin. Ft.
		Total	=	855.39 Lin. Ft.

Guard Rail to be used where fill slopes are steeper than 4:1 and over 10' in height.



SUPERELEVATED SECTION

TYPICAL SECTION "F"

The above typical section applies between the following stations:

Sta. 1131+82.16	to	Sta. 1138+74.57	=	692.41 Lin. Ft.
Sta. 1141+61.33	to	Sta. 1148+50.00	=	688.67 Lin. Ft.
		Total	=	1381.08 Lin. Ft.

LEGEND

1. T71 9" Reinforced Portland Cement Concrete Pavement
2. I22 Subbase (thickness as shown) Grading "A" or "B" as per plan.
3. T31 Bituminous Surface Treatment using 0.008 Cu. Yd. of No. 6 Aggregate and 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
4. B21 *3" Waterproofed Aggregate Base Course
5. I-18 Stabilized Crushed Aggregate Shoulders and Approaches (thickness as shown)
6. L9 Seeding and Protecting
7. Granular Embankment as per plan

* T-35 Type "A" or T-335 material may be used in the construction of this course (see note in proposal). The thickness shown is "designed" thickness as described in Sec. B-21.01

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

TYPICIAL SECTIONS

U.S.R. 35 WESTBOUND

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	L.L.F.					

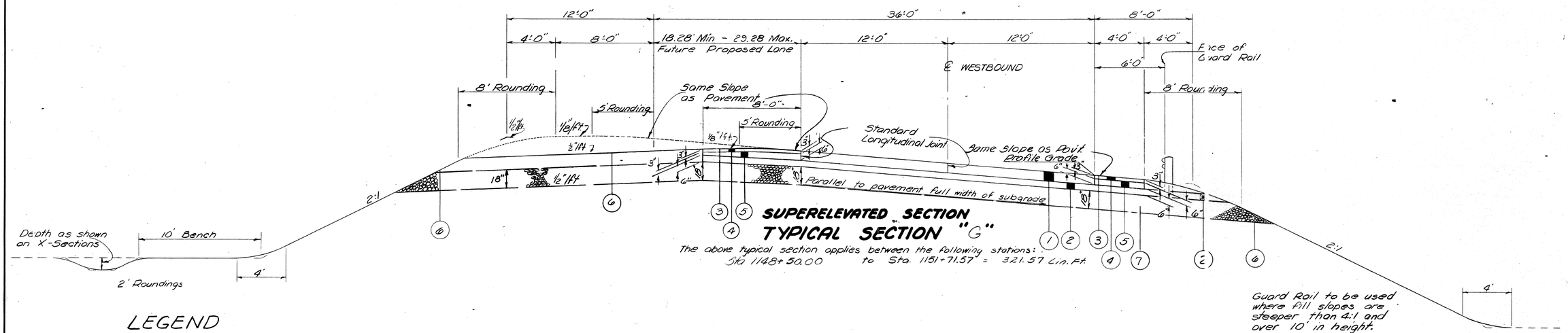
TYPICAL SECTIONS

TYPE T-71
TYPE CODE 7221

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG 674(10)	

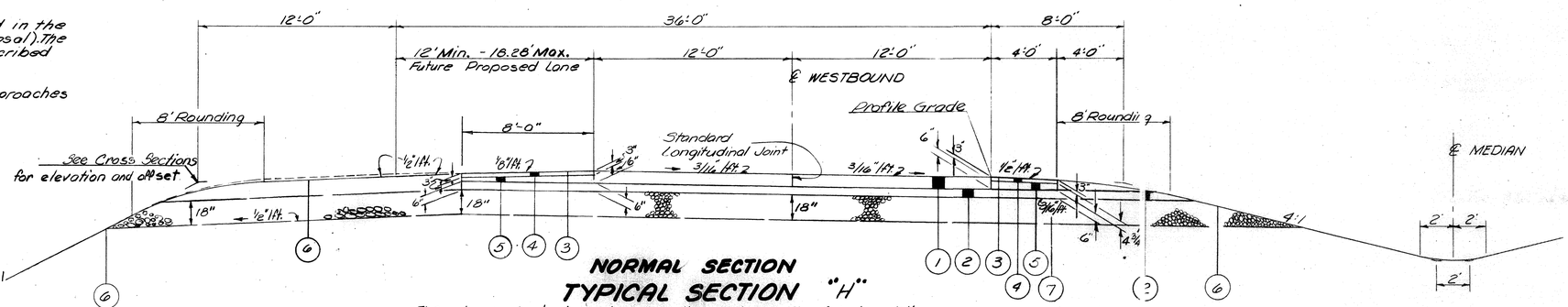
7/240

ROSS COUNTY
ROS -35 - 21.23



LEGEND

1. T-71 9" Reinforced Portland Cement Concrete Pavement
2. T-22 Subbase, Grading "A" or "B", as per plan (thickness as shown)
3. T-31 Bituminous Surface Treatment using 0.008 Cu. Yds. of No. 6 Aggregate and 0.25 gal. Bituminous material per Sq. Yd. (See note in proposal)
4. B-21.3 Waterproofed Aggregate Base Course T-35 Type "A" or T-335 material may be used in the construction of this course (see note in proposal). The thickness shown is "designed" thickness as described in Sec. B-21.01.
5. I-18 Stabilized Crushed Aggregate Shoulders and Approaches (thickness as shown)
6. I.-9 Seeding and Protecting
7. Granular Embankment as per plan



ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

TYPICAL SECTIONS

U.S.R. 35 WESTBOUND

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	L.L.F.		T.W.G.			

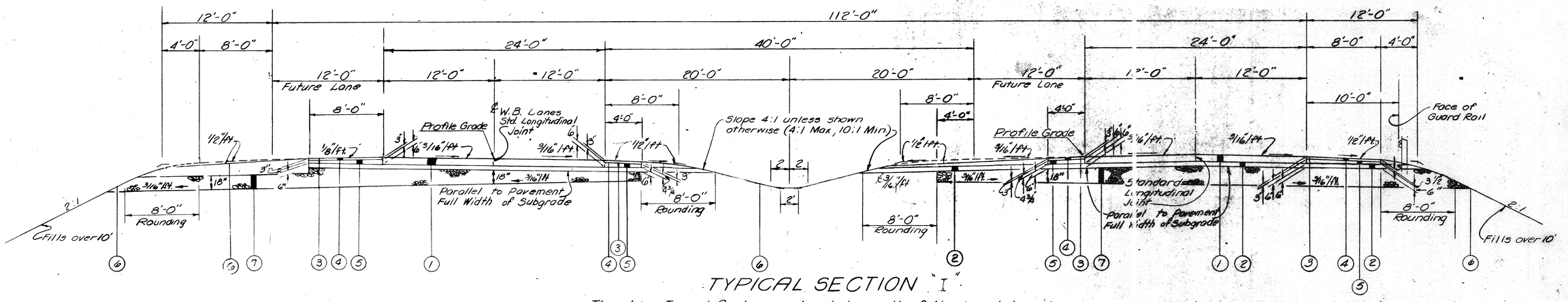
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FS 674(10)	

8
240

ROSS COUNTY
ROS - 55 - 21.23

TYPICAL SECTIONS

TYPE-T-71 TYPE CODE 7221



TYPICAL SECTION "I"

The above Typical Section applies between the following stations:
Station 1155+48.83 to Station 1158+19.77 = 270.94 Lin. Ft.

LEGEND

① T-71 9" Reinforced Portland Cement Concrete Pavement

② I22 Subbase, Grading "A" or "B", as per plan (thickness as shown)

③ T-31 Bituminous Surface Treatment using 0.008 Cu.Yds. of No.6 Aggregate and 0.25 gal. Bituminous material per Sq.Yd. (see note in proposal)

④ B-213 Waterproofed Aggregate Base Course T-35 Type "A" or T-33.5 material may be used in the construction of this course (see note in proposal). The thickness shown is "designed" thickness as described in Sec. B-21.01.

⑤ I-18 Stabilized Crushed Aggregate Shoulders and Approaches (thickness as shown)

⑥ L-9 Seeding and Protection

⑦ Granular Embankment as per plan

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TYPICAL SECTIONS
U.S.R 35

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N-R	N-R					

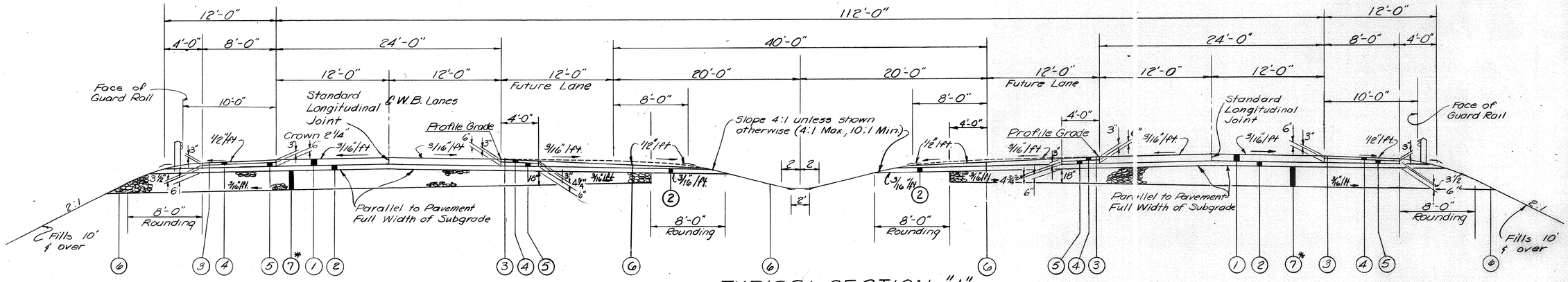
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG 674(10)	

9 / 240

ROSS COUNTY
ROS-35-21.23

TYPICAL SECTIONS

TYPE-T-71 TYPE CODE 7221



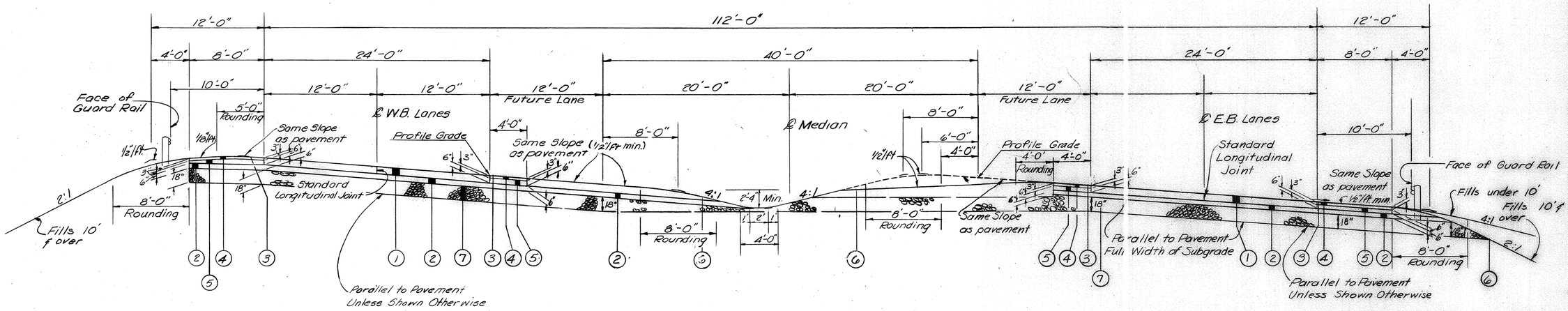
TYPICAL SECTION "J"

The above Typical Section applies between the following stations:

Station 1171+80.23 to Station 1180+75.89	=	895.66 Lin. Ft.
Station 1197+69.22 to Station 1198+76.26	=	107.04 Lin. Ft.
Station 1201+04.76 to Station 1205+00.00	=	395.24 Lin. Ft.
Total	=	1397.94 Lin. Ft.

* Granular Embankment placed as part of R05-35-22.82 from Station 1201+04.76 to Station 1205+00.

NOTE: For Legend See Typical Section "A"



TYPICAL SECTION "K"

The above typical Section applies between the following Stations
Station 1180+75.89 to Station 1197+69.22 = 1693.33 Lin. Ft.

NOTE:
Guard Rail to be used where fill slopes are steeper than 4:1 and 10' in height

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

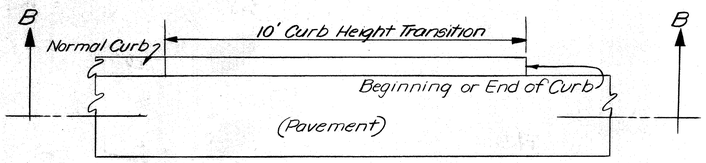
TYPICAL SECTIONS
U.S.R. 35

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWG	LKM		JLG			

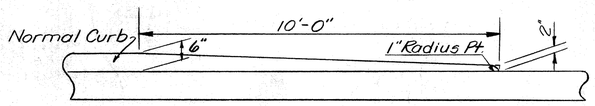
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

10/240

ROSS COUNTY
ROS-35-21.23



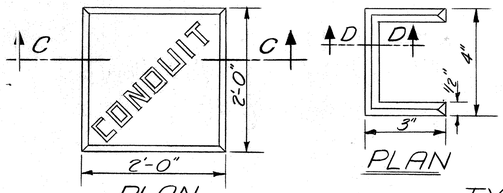
PLAN



SECTION B-B

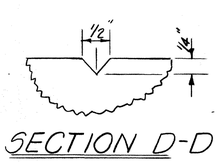
CURB HEIGHT TRANSITION

This Detail applies at the beginning and end of all curbs unless otherwise shown.

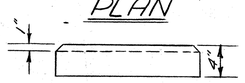


PLAN

PLAN



SECTION D-D



SECTION C-C

CONCRETE MARKER

TYPICAL SYMBOL

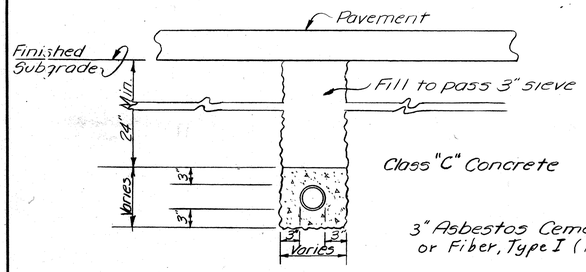
Dimensions shown are for all symbols impressed in Concrete Marker.

NOTE: Impress the word Conduit in the top of Concrete Marker using letters of the type and dimensions per details.

NOTE: Concrete Markers shall be placed over each end of each underground conduit. Cost of furnishing and installing markers shall be included in the unit price bid for Item S-25, 3" Asbestos Cement Conduit.

MARKER DETAILS

NOTE: For Electrical Conduit Location See Sheet No 36 & 109



ONE WAY CONDUIT SECTION

For Location See Sheet No. 36

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TYPICAL DETAILS

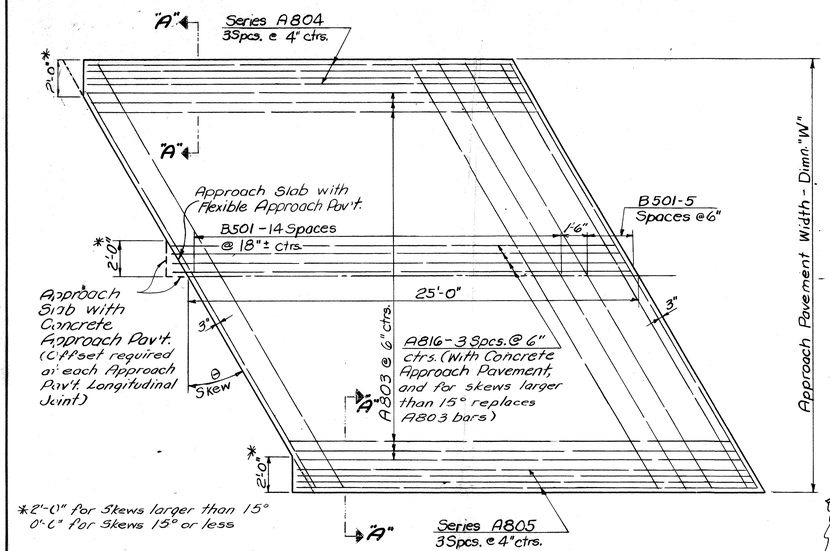
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	LKM	LKM	NR			

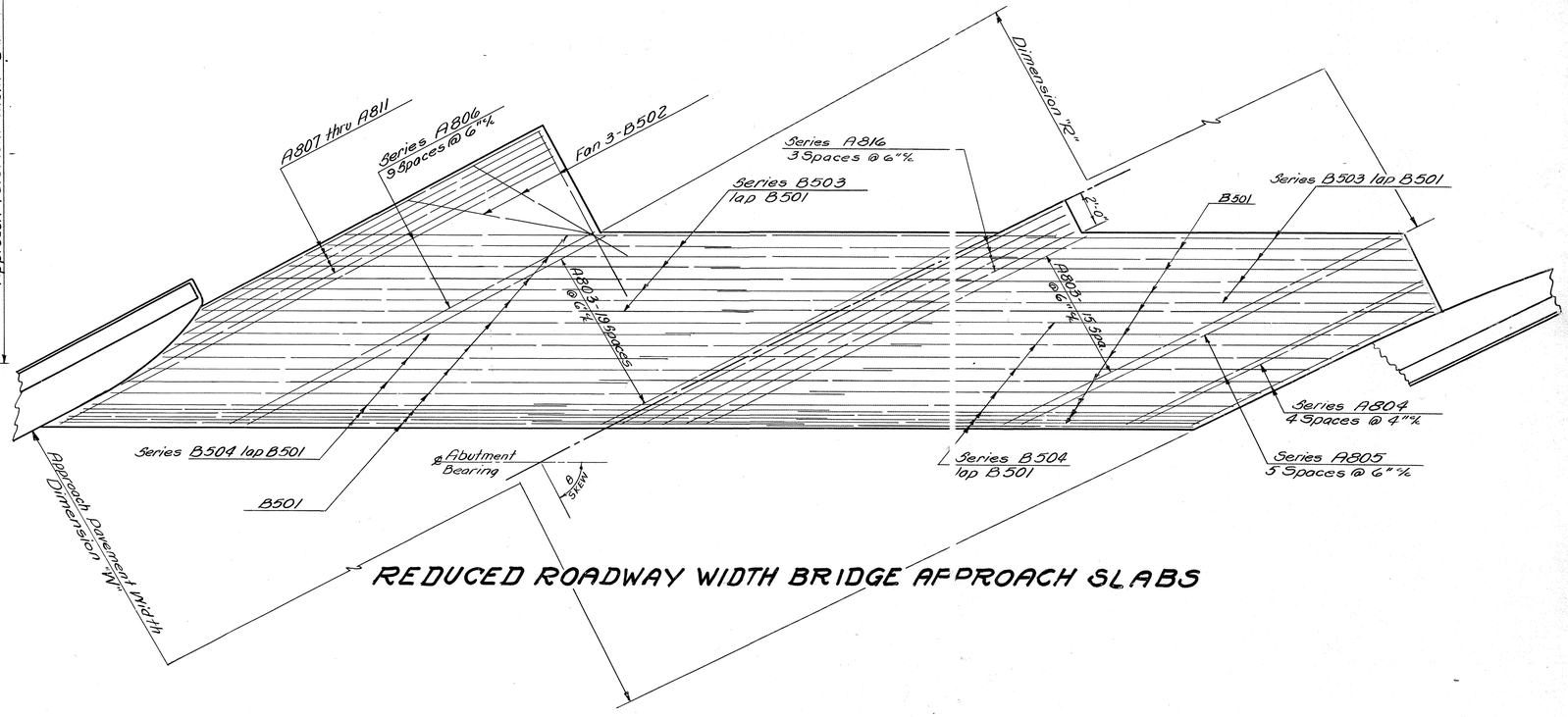
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

11
240

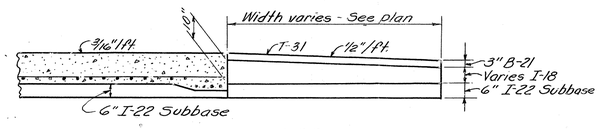
ROSS COUNTY
ROS-35-21.23



SKEWED - FULL ROADWAY WIDTH APPROACH SLABS



REDUCED ROADWAY WIDTH BRIDGE APPROACH SLABS



SECTION "A"-"A"

FG-674(10) ~ F-674(10)

APPROACH SLABS - FULL ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	NUMBER APPROACH SLABS REQUIRED	SKEW	APP SLAB WIDTH DIMN."W"	ESTIMATED QUANTITIES I-7 Sq Yds	I-22 Cu. Yds.	B-21 Sq. Yds.	T-31 Sq. Yds.	I-18 Cu Yds.
ROS-35-2129 L.	2	1°	24'	133.3	43.1	65.4	65.4	16.3
ROS-35-2129 R.	2	4°	24'	133.3	43.1	65.4	65.4	16.3
TOTAL FG-674(10)	4			266.6	86.2	130.8	130.8	32.6
ROS-35-2194 L & R.	4	20°	36'	400.0	76.8	94.0	94.0	24.3
ROS-35-2271 L & R.	4	2°	36'	400.0	83.3	133.2	133.2	33.2
TOTAL F-674(10)	8			800.0	160.1	227.2	227.2	57.5

REINFORCING STEEL (ONE APPROACH SLAB) SKEWED, FULL ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	A803 No. Req'd.	A803 Length	Series A804 No. Req'd.	Series A804 Increment	Series A804 Length	Series A805 No. Req'd.	Series A805 Increment	Series A805 Length	B501 No. Req'd.	B501 Length	Series A816 No. Req'd.	Series A816 Increment	Series A816 Length	BENDING DIAGRAM
ROS-35-2194 L. & R.	58	25'-7"	1-Ser. of 4 bars	2"	24'-11" to 25'-5	1-Ser. of 4 bars	2"	25'-10" to 26'-4"	21	38'-0"	2 Ser. of 4 bars	2"	25'-8" to 26'-2"	24'-6"± A803 Varies A804, A805 & A816

REINFORCING STEEL (ONE APPROACH SLAB) REDUCED ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	A803 No. Req'd.	A803 Lgth.	Series A804 No. Req'd.	Series A804 Increment	Series A804 Lgth.	Series A805 No. Req'd.	Series A805 Increment	Series A805 Lgth.	Series A806 No. Req'd.	Series A806 Increment	Series A806 Lgth.	*A807 No. Req'd.	*A807 Lgth.	*A808 No. Req'd.	*A808 Lgth.	*A809 No. Req'd.	*A809 Lgth.	*A810 No. Req'd.	*A810 Lgth.	*A811 No. Req'd.	*A811 Lgth.	*Series B503 No. Req'd.	*Series B503 Increment	*Series B503 Lgth.	*Series B504 No. Req'd.	*Series B504 Increment	*Series B504 Lgth.	*B501 No. Req'd.	*B501 Lgth.	*B502 No. Req'd.	*B502 Lgth.	Series A816 No. Req'd.	Series A816 Increment	Series A816 Lgth.	BENDING DIAGRAM
ROS-35-2157L REAR	36	25'-6"	15er. of 5bars	6"	18'-7" to 20'-7"	15er. of 6bars	8"	21'-6" to 24'-10"	15er. of 10bars	8"	26'-0" To 32'-0"	1	24'-6"	1	25'-2"	1	26'-0"	1	27'-0"	1	28'-0"	15er. of 6bars	1'-7"	17'-6" To 23'-5"	15er. of 15bars	3"	23'-9" To 27'-3"	21	30'-0"	3	9'-0"	4	8"	25'-11" To 27'-11"	24'-5"± A803 Varies A804, A805, A806, and A816
ROS-35-2157L FORWARD	36	25'-6"	15er. of 5bars	7½"	16'-6" To 19'-0"	15er. of 6bars	11"	20'-4" To 25'-1"	15er. of 10bars	11"	26'-0" To 34'-3"	1	21'-10"	1	22'-6"	1	23'-6"	1	25'-0"	1	27'-0"	15er. of 8bars	1'-6"	21'-6" To 32'-0"	15er. of 13bars	3½"	27'-9" To 30'-6"	21	40'-0"	3	10'-6"	4	11"	26'-0" To 28'-9"	

* Straight bars

APPROACH SLABS - REDUCED ROADWAY WIDTH BRIDGES

BRIDGE NUMBER	NUMBER APPROACH SLABS REQUIRED	SKEW	APPROACH SLAB WIDTHS DIMN."W"	APPROACH SLAB WIDTHS DIMN."R"	ESTIMATED QUANTITIES I-7	I-22		
ROS-35-2157L (REAR)	1	55°-34'-48"	30'	20'	88.8 S.Y.	13.4 C.Y.	(FG-674(10) Rear Abutment)	
ROS-35-2157L (FORWARD)	1	62°-25'-12"	30'	20'	89.4 S.Y.	13.5 C.Y.	(F-674(10) Forward Abutment)	

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPPLEMENTAL APPROACH SLAB DETAILS
(USE WITH STANDARD DRAWING AS-1-54)

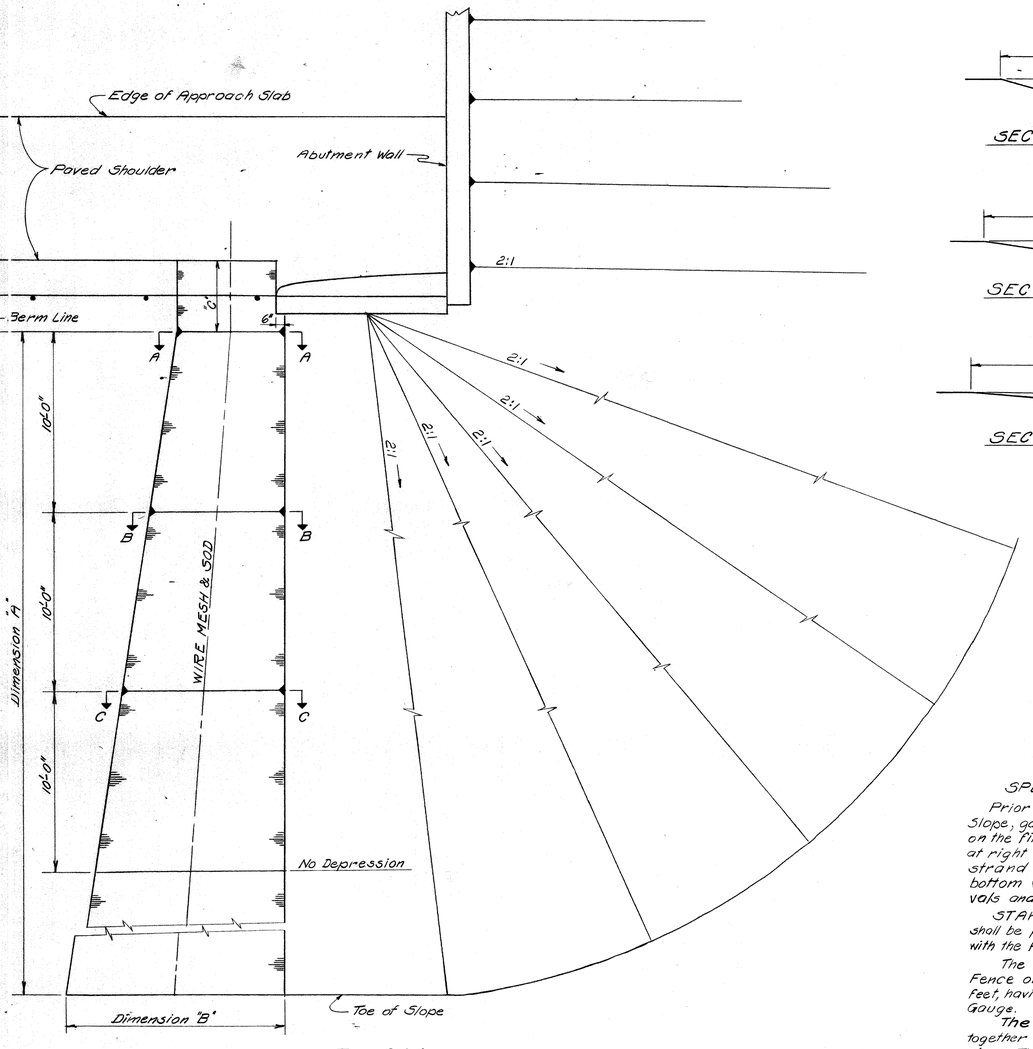
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	W.D.J. L.P.		R.M.S.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

12
240

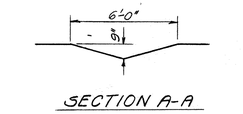
ROSS COUNTY
ROS-35-21.23



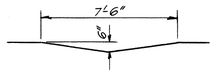
PLAN
FULL ROADWAY WIDTH STRUCTURES

F-674(10)

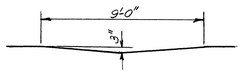
SPECIAL BERM AND SLOPE PROTECTION						
BRIDGE NUMBER	STATION	SIDE	SOD DIMNENSIONS			ESTIMATED QUANTITY ITEM L-10 SQ. YD.
			DIMN. "A"	DIMN "B"	DIMN "C"	
ROS-35-2271	1198+85.67	Left	34'	11'-3"	4'-0"	39
ROS-35-2271	1198+90.19	Right	34'	11'-3"	4'-0"	39
ROS-35-2271	1200+90.83	Left	34'	11'-3"	4'-0"	39
ROS-35-2271	1200+95.35	Right	34'	11'-3"	4'-0"	39
				Sub-Total	=	156
		Carried from table on right =				47
			F-674(10)	Total	=	203 Sq. Yds.



SECTION A-A



SECTION B-B



SECTION C-C

NOTES.

SPECIAL BERM & SLOPE PROTECTION:

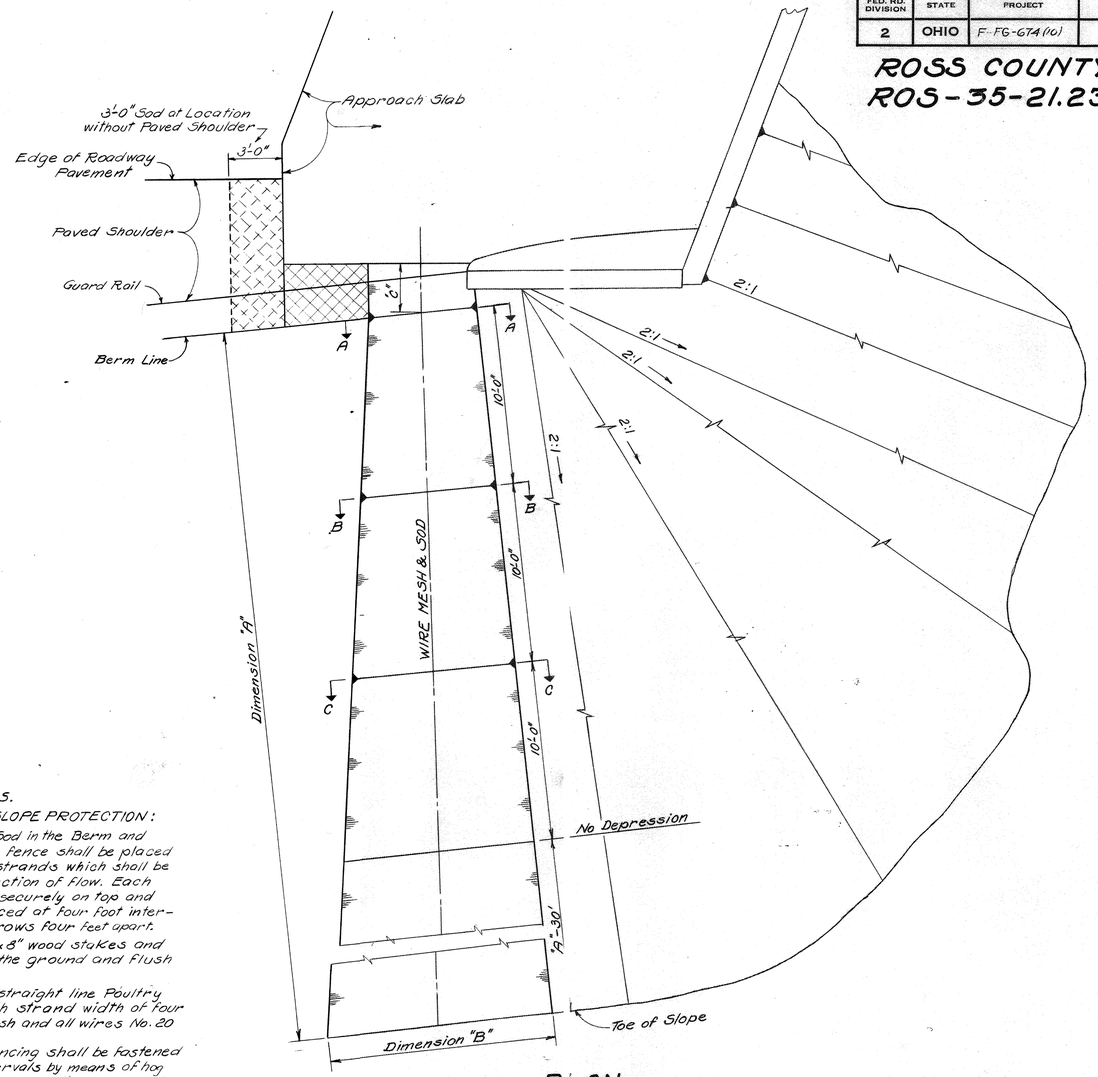
Prior to placement of Sod in the Berm and Slope, galvanized poultry fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes spaced at four foot intervals and alternated in rows four feet apart.

STAKES shall be 1"x1"x8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

The FENCE shall be straight line Poultry Fence or equivalent with strand width of four feet, having a two inch Mesh and all wires No. 20 Gauge.

The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings. The Fence shall be secured to the wood stakes by metal staples.

SOD shall be laid in accordance with Construction and Materials Specifications Section L-10.07. Payment for all the above is to be included in the Unit price bid for Item L-10 Sodding, **for Special Berm and Slope Protection.**



PLAN
REDUCED ROADWAY WIDTH STRUCTURES

F-674(10)

SPECIAL BERM AND SLOPE PROTECTION					
BRIDGE NUMBER	STATION	SOD DIMENSIONS			ESTIMATED QUANTITY ITEM L-10 SQ. Yds.
		DIM. "A"	DIM. "B"	DIM. "C"	
ROS-35-2157 L.	1141+98.03	40'	12'-0"	2'-9"	47
	Sub-Total (carried	to table	on left =		47 Sq. Yds.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SPECIAL BERM AND SLOPE PROTECTION

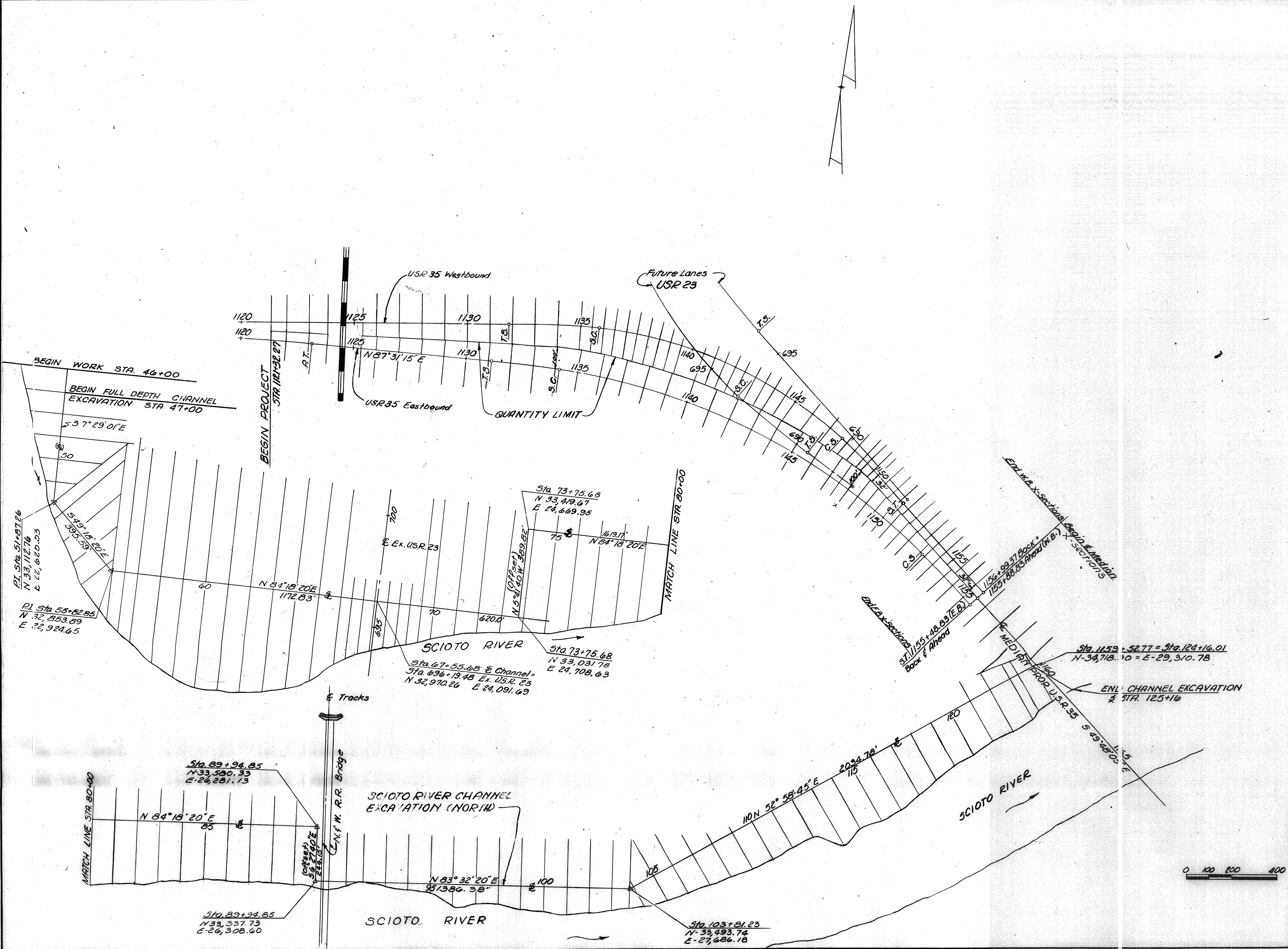
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	L.P.		R.M.S.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

13/240

ROSS COUNTY
ROS-35-21.23



BEGIN WORK STA. 46+00
BEGIN FULL DEPTH CHANNEL EXCAVATION STA. 47+00
S 37°29'01"E
P.I. Sta. 51+87.26
S 49°18'20"E
393.59'
P.I. Sta. 55+82.85
N 32,853.89
E 22,924.65
BEGIN PROJECT STA. 1121+32.27
P.T.
USR 35 Westbound
USR 35 Eastbound
N 87°31'15"E
QUANTITY LIMIT
Future Lanes USR 23
℄ Ex. U.S.R. 23
N 84°18'20"E
1172.83'
620.0'
Sta. 73+75.68
N 33,419.67
E 24,669.95
1619.17'
MATCH LINE STA. 80+00
SCIOTO RIVER
Sta. 67+55.68 ℄ Channel = Sta. 696+19.48 Ex. U.S.R. 23
N 32,970.26 E 24,091.69
Sta. 73+75.68
N 33,031.78
E 24,708.63
End W.B. X-Sections
Begin ℄ Median X-Sections
1156+99.37 Back = 1155+88.53 Ahead (W.B.)
End EA Sections
S.T. 1155+48.89 (E.B.) Back & Ahead
℄ MEDIAN
PROP. U.S.R. 35
Sta. 1159+52.77 = Sta. 124+16.01
END CHANNEL EXCAVATION ℄ STA. 125+16
S 49°48'02"E
℄ Tracks
N. & W. R.R. Bridge
Sta. 89+94.85
N-33,590.33
E-26,281.13
N 84°18'20"E
MATCH LINE STA. 80+00
SCIOTO RIVER CHANNEL EXCAVATION (NORTH)
N 83°32'20"E
951386.38'
Sta. 89+94.85
N 33,337.73
E-26,308.60
SCIOTO RIVER
N 52°58'45"E
2034.78'
Sta. 103+81.23
N-33,493.74
E-27,686.18
SCIOTO RIVER
0 100 200 400

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

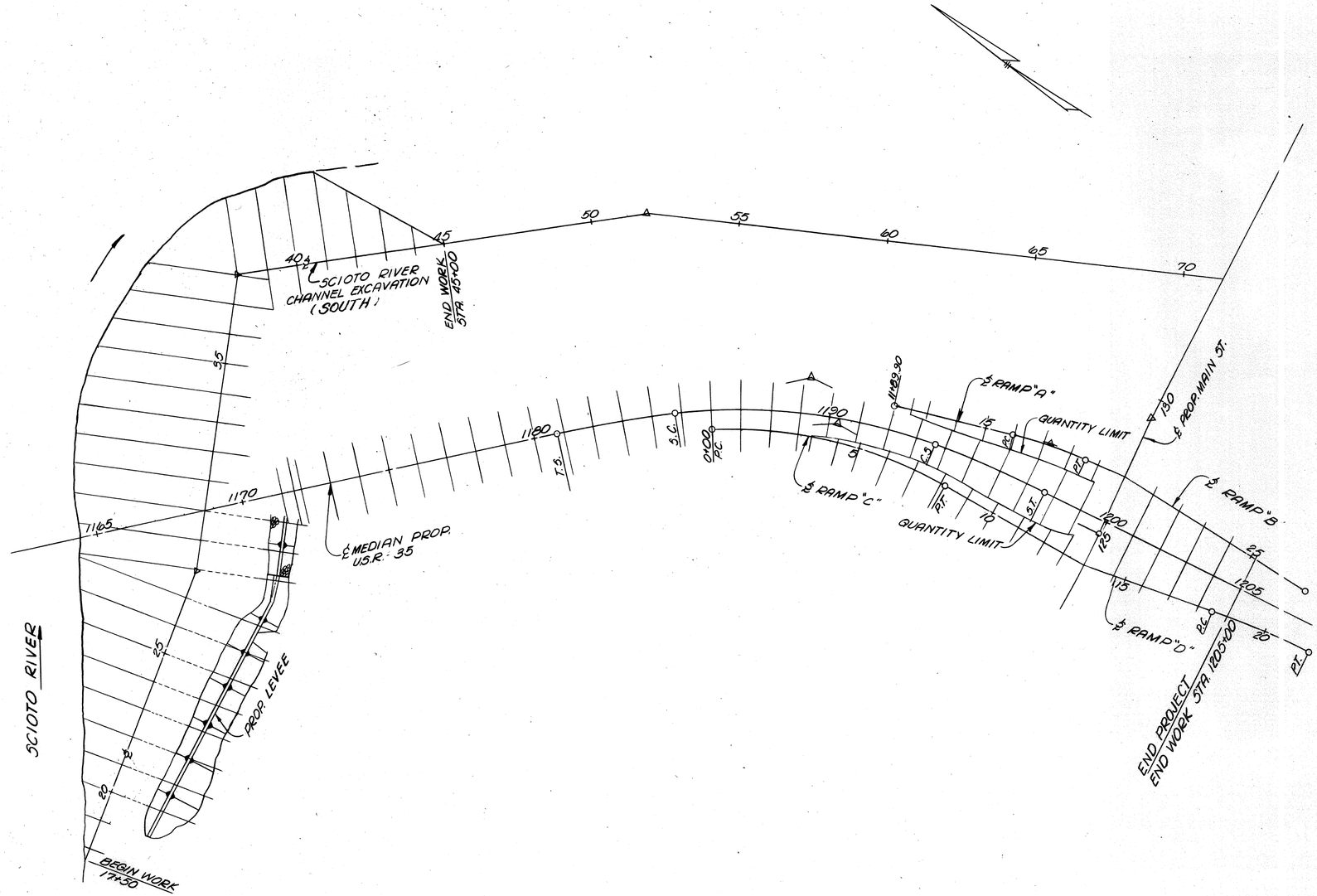
CROSS SECTION LAYOUT

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWG	RWG		NR			12-31-64

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-G74(10)	

14
240

ROSS COUNTY
ROS-35-21.23



ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CROSS SECTION LAYOUT

SCALE DATE

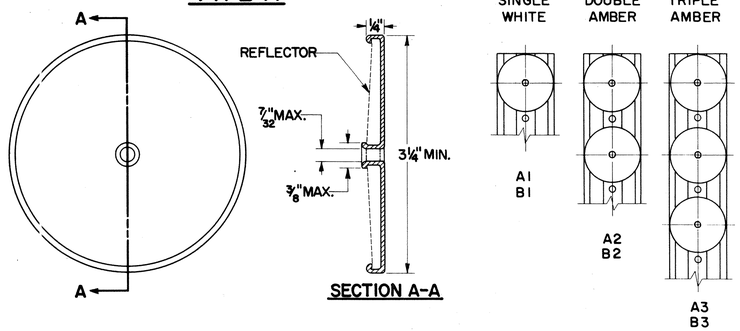
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS.	LKM		NHR			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

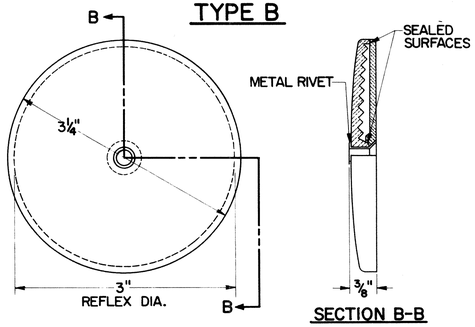
14A 240

R05-35-21.23

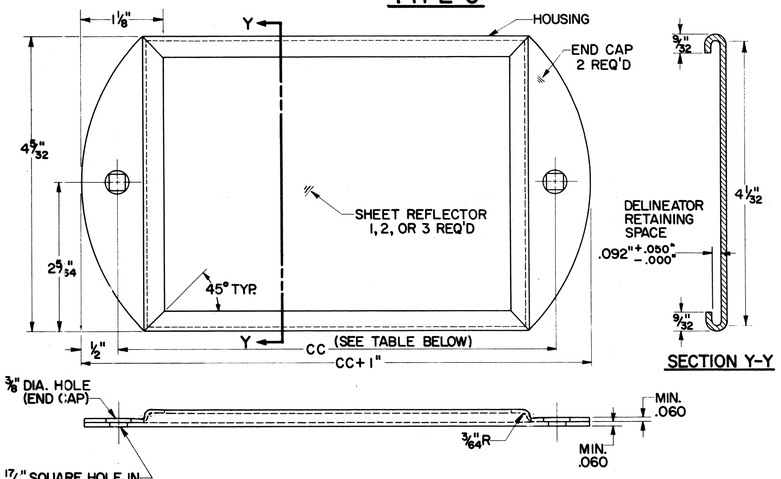
TYPE A



TYPE B

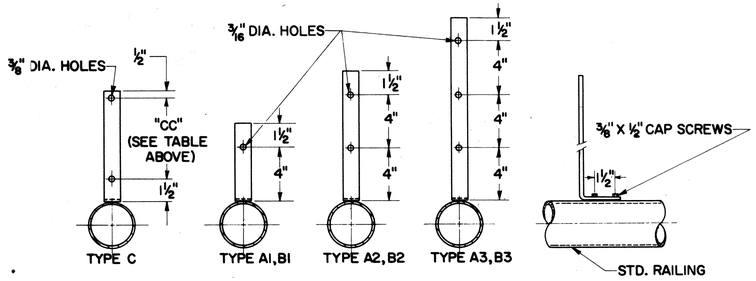


TYPE C

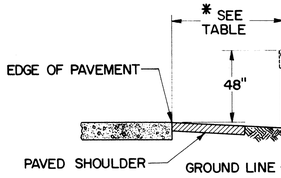


TYPE	DIM. CC
C1- SINGLE WHITE	6"
C2- DOUBLE AMBER	11"
C3- TRIPLE AMBER	16"

ALL BRACKETS 1/4" X 1 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET

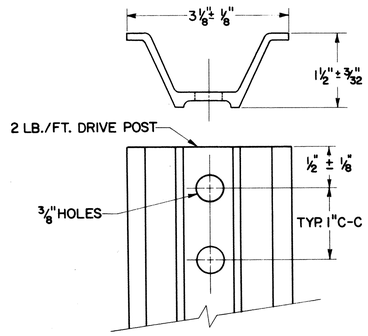


LATERAL PLACEMENT OF DELINEATORS

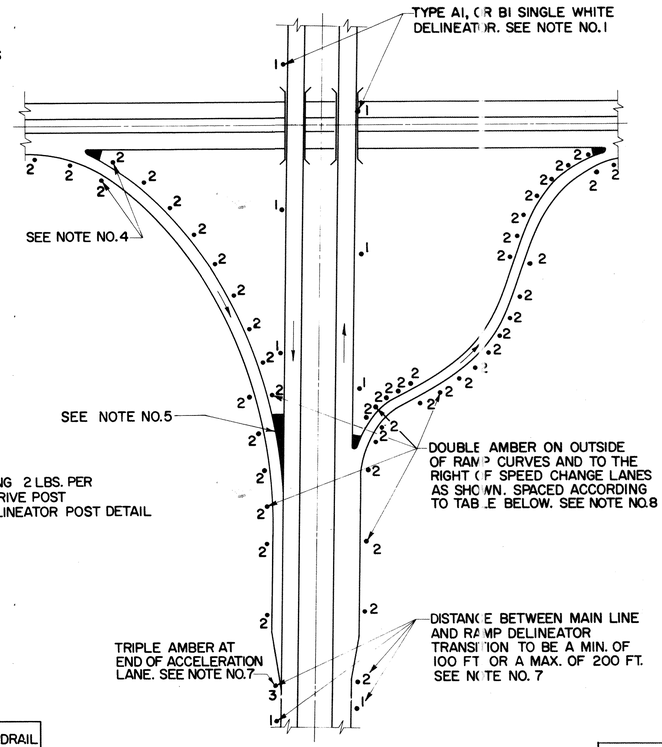
* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	——	30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. I-127, (1-15-62).
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM I-127 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM.
6. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15. +20 AND SO ON.

I-127 DELINEATORS							
	SIDE	STATION FROM	STATION TO	SPACING (FT.)	C2	C3	A1
Ramp A	Rt.	19+30	18+30	100	2		
	Rt.	17+50	15+90	80	3		
	Rt.	14+90	12+90	100	3		
	Lt.	1192+00	1182+00	100	10	1	
Ramp C	Rt.	1184+00	1186+00	100	3		
	Rt.	0+80	6+40	80	8		
	Lt.	6+40	8+00	80	3		
	Rt.	8+00	13+00	100	6		
S.R. 35	Rt.	1192+00					1
S.R. 35	Rt. & Lt.	1194+00	1204+00	200			12
S.R. 35	Lt.	1122+20	1123+20	100	2		
					40	1	13

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

I-127

DATE 9-25-62 10-2-63

APPROVED Robert C. Lamer
ENGINEER OF TRAFFIC

ROSS COUNTY
ROS-35-21.23

GENERAL NOTES

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE FOR THE EXCLUSIVE USE OF THE STATE EMPLOYEES, IN ACCORDANCE WITH SECTION S-0.01, (b), HAVING A MINIMUM OF 500 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 INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING THE ELECTRICAL OFFICE EQUIPMENT. AND SHALL PROVIDE 110 VOLT ALTERNATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION OF THIS PROJECT.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

MAINTAINING TRAFFIC, ITEM I-3

AN ESTIMATED AMOUNT OF ITEM I-4 CALCIUM CHLORIDE HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR DUST CONTROL.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO AS TO KEEP TRAFFIC INCONVENIENCE TO A MINIMUM.

TRAFFIC ON U.S.R. 35 SHALL REMAIN ON THE PRESENT ROUTE UNTIL THE COMPLETION OF THIS PROJECT.

TWO WAY TRAFFIC SHALL BE MAINTAINED ON EAST MAIN STREET AT ALL TIMES.

THIS NOTE SHALL NOT BE CONSTRUED TO WAIVE ANY PORTION OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

ITEM I-22 SUBBASE, GRADING "A" OR "B", AS PER PLAN

THE MATERIAL FURNISHED FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING "A" OR "B" OF SEC. I-22.02 EXCEPT THAT, FOR EITHER GRADING, NO MORE THAN 10 PERCENT OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

T-71 PAVEMENT JOINTS

IN ADDITION TO JOINTS SPECIFICALLY CALLED FOR ON THE VARIOUS DETAIL SHEETS, STANDARD LONGITUDINAL JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL SECTIONS, AND THE MAXIMUM DISTANCE BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH THE STANDARD DRAWING T.J.

EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED AND EXPANSION JOINTS SHALL BE PROVIDED AT ALL MAJOR STRUCTURES AS REQUIRED BY STANDARD CONSTRUCTION DRAWING T-J.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

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

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS.

CONNECTIONS TO EXISTING PIPE

At places where the plans provide for proposed drainage pipe to be connected to existing pipes, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed pipe.

The cost of this operation shall be included in the unit price bid for the pertinent pipe item.

UTILITIES

THE CONTRACTOR SHALL NOTIFY AT LEAST TWO WORKING DAYS BEFORE BREAKING GROUND ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE CONDUITS, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

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 STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

CHANNEL CROSS SECTIONS

THE CROSS SECTIONS FOR CHANNEL EXCAVATION ALONG THE SCIOTO RIVER WILL BE RE-PERFORMED BY STATE FORCES PRIOR TO CONSTRUCTION. NEW CROSS SECTIONS WILL BE REQUIRED DUE TO RECENT EXCAVATIONS OR FLOOD ACTION IN THIS AREA.

CLEANING PRIVY VAULTS

PRIVY VAULTS SHALL BE CLEANED AND FILLED WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. MATERIAL REMOVED FROM THESE VAULTS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE LIMITS OF RIGHT-OF-WAY OR EASEMENT LINES. THE CLEANING OF PRIVY VAULTS SHALL BE PAID FOR UNDER ITEM SPECIAL, CLEANING OF PRIVY VAULTS.

THE BACKFILLING OF PRIVY VAULTS SHALL BE PAID FOR UNDER ITEM E-1, EMBANKMENT. THE PRICE BID FOR THIS ITEM SHALL CONSTITUTE FULL COMPENSATION FOR PERFORMING ALL THE REQUIREMENTS OF THE ITEM AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

AN ESTIMATED AMOUNT OF EMBANKMENT FOR BACKFILLING PRIVY VAULTS HAS BEEN CARRIED TO CROSS SECTIONS.

ITEM SPECIAL - CLEANING AND DISPOSAL OF SEPTIC TANKS

THIS ITEM SHALL INCLUDE CLEANING, BACKFILLING AND REMOVAL OF ALL OR ANY PORTION OF EXISTING SEPTIC TANKS.

ALL SEPTIC TANKS LYING WITHIN THE PROPOSED RIGHT-OF-WAY LIMITS SHALL BE CLEANED AND EMPTIED. MATERIAL REMOVED FROM THESE TANKS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY OR EASEMENT LINES.

WHEN THE SEPTIC TANKS ARE LOCATED ABOVE THE FINISHED PAVEMENT OR GROUND LINES, THEY SHALL BE ENTIRELY REMOVED AND DISPOSED OF IN ACCORDANCE WITH SEC. S-24.03.

WHEN THE TANKS ARE LOCATED BELOW THE FINISHED PAVEMENT OR GROUND LINES, THE TOPS OF THE TANKS SHALL BE REMOVED, AND THE WALLS SHALL BE REMOVED TO A DEPTH OF 3 FEET BELOW THE FINISHED SUBGRADE OR GROUND LINES. THE REMOVED MATERIAL SHALL BE DISPOSED OF AS EXPLAINED ABOVE. THE TANKS SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL IN ACCORDANCE WITH SEC. E-1.08.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR "ITEM SPECIAL - CLEANING AND DISPOSAL OF SEPTIC TANKS, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CLEANING, REMOVING AND DISPOSING OF UNSUITABLE MATERIALS, BACKFILLING AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM INCLUDING INCIDENTAL EXCAVATION.

SPECIAL COMPACTION – STA. 1122+70 TO STA. 1126+40

The Embankment Soil Compaction between Sta. 1122+70 and Sta. 1126+40 shall meet the requirements of Table 1 of Section E-1.08 increased by a minimum of four per cent [4%].

The Cost of Performing this operation shall be included in the unit price bid for Item E-1 Embankment.

Work shall not be started on constructing the abutments for Bridge No. ROS-35-2129 L&R until the embankment between the above stations has been in place for at least 90 days. Work on piers may begin when the above embankment is in place.

EROSION CONTROL AT BRIDGES

SODDED CHANNELS SHALL BE PROVIDED AT ENDS OF BRIDGES WHERE REQUIRED BY THE PLANS. COST OF ALL WORK NECESSARY TO COMPLETE THE ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM L-10, SODDING FOR SPECIAL BERM AND SLOPE PROTECTION.

EROSION CONTROL AT CULVERTS

EROSION CONTROL AT PIPE CULVERTS SUCH AS PAVED GUTTER AND DUMPED ROCK CHANNEL PROTECTION, WHEN PROVIDED FOR BY THE PLAN, SHALL BE PLACED IMMEDIATELY AFTER INSTALLATION OF THE PIPE CULVERT.

PROPOSED LEVEE (RIGHT OF CHANNEL EXCAVATION STATION 19+07 TO STATION 30+12.27)

THIS PROPOSED LEVEE IS BEING CONSTRUCTED TO REPLACE THE EXISTING LEVEE THAT WILL BE REMOVED BY THE SCIOTO RIVER CHANNEL EXCAVATION.

THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE PROJECT ENGINEER BEFORE EXCAVATING THE EXISTING LEVEE.

THE SUITABLE MATERIAL REMOVED FROM THE EXISTING LEVEE SHALL BE USED AS EMBANKMENT FOR THE PROPOSED LEVEE.

MATERIAL OBTAINED FROM ITEM E-3 ..... MAY BE USED FOR EMBANKMENT, PROVIDING ADDITIONAL MATERIAL IS REQUIRED. THE PROPOSED LEVEE SHALL BE COMPACTED AS DESCRIBED IN ITEM E-1 SECTION E-1.08.

DRAINAGE OF BASE MATERIAL

WHERE THE BASE MATERIAL IS DRAINED BY ..... EXTENSIONS OF THE SUBBASE THROUGH THE SHOULDERS TO THE FILL SLOPE OR THE DITCH LINE, THE CONTRACTOR SHALL FINISH, SEED, AND MULCH THE SLOPES SO AS NOT TO IMPEDE DRAINAGE OF THE BASE MATERIAL.

PROTECTION OF TRAFFIC

THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC ON EAST MAIN STREET AND ON THE N & W RAILROAD BY PROVIDING PLATFORMS, NETS, OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES. PAYMENT FOR THIS PROTECTION SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM I-3, MAINTAINING TRAFFIC.

GRANULAR EMBANKMENT

THE UPPER PORTION OF THE EMBANKMENT SHALL BE GRANULAR MATERIAL FROM THE CHANNEL EXCAVATION & ROADWAY EXCAVATION ..... AND SHALL BE PLACED AS SHOWN ON THE TYPICAL SECTIONS AND CROSS SECTIONS.

MATERIAL FURNISHED FOR THIS ITEM SHALL BE AS DEFINED IN SEC. E-1.02 EXCEPT THAT AT LEAST 75 PERCENT BY WEIGHT OF THE GRAINS OR PARTICLES SHALL BE RETAINED ON A NO. 200 SIEVE

THE COST OF SELECTING, CLASSIFYING, TESTING, STOCKPILING, IF NECESSARY, AND PLACING THIS MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1 EMBANKMENT.

COMPACTION OF THIS MATERIAL SHALL BE IN ACCORDANCE WITH ITEM E-1.

GRANULAR EMBANKMENT FOR GRAVEL PIT AREAS

GRANULAR MATERIAL SHALL ALSO BE PLACED IN THE GRAVEL PIT AREAS AS SHOWN ON THE CROSS SECTIONS. THIS MATERIAL MAY BE PLACED BY THE METHOD OF END DUMPING IF SURFACE WATER IS PRESENT AT THE TIME OF CONSTRUCTION. END DUMPING METHODS MAY BE USED UP TO AN ELEVATION TWO FEET ABOVE THE WATER LEVEL. ABOVE THIS ELEVATION, EMBANKMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH SEC. E-1.08.

WHERE END DUMPING IS PERMITTED, NORMAL CLEARING AND GRUBBING SHALL BE PERFORMED BUT THE REQUIREMENTS OF SEC. E-1.04 FOR SCALPING AND COMPACTION OF THE FOUNDATION SHALL BE WAIVED.

MATERIAL FURNISHED FOR THIS ITEM SHALL BE AS DEFINED IN SEC. E-1.02 EXCEPT THAT AT LEAST 75 PERCENT BY WEIGHT OF THE GRAINS OR PARTICLES SHALL BE RETAINED ON A NO. 200 SIEVE

THE COST OF SELECTING, CLASSIFYING, TESTING, STOCKPILING, IF NECESSARY, AND PLACING THIS MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1 EMBANKMENT.

COMPACTION OF THIS MATERIAL SHALL BE IN ACCORDANCE WITH ITEM E-1.

~~EARTHWORK~~ –

~~Suitable Material from E-3 Channel Excavation shall be used for Embankment on this Project~~

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL NOTES

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ray Casey	NR	NR				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
ROS-35-21.23

GENERAL NOTES

FIELD DRAINS

ALL FARM TILES WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY ITEM I-1 PIPE CLASS B-1. EXISTING COLLECTORS AND ISOLATED FARM TILES WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM I-1 PIPE CLASS H-2 AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

I-1	8" PIPE CLASS B-1	100 LIN. FT.
I-1	8" PIPE CLASS H-2	100 LIN. FT.
I-1	8" PIPE CLASS F-4	40 LIN. FT.
I-5	8" PIPE SPECIALS CLASS B-1	5 EACH

SEALING OF PIPE JOINTS

WHERE CONNECTIONS ARE MADE BETWEEN RIGID AND FLEXIBLE PIPE SECTIONS OR BETWEEN PIPE SECTIONS OF DIFFERENT KIND OR TYPE OF END FABRICATION, WHETHER REQUIRED BY THE PLANS, ARISING FROM PERMISSIBLE USE OF OPTIONAL MATERIALS, OR ENCOUNTERED IN CONNECTION TO EXISTING FACILITIES, THE JOINT SHALL BE SEALED, IF SEALING IS REQUIRED BY THE SPECIFICATIONS, AS PER STANDARD DRAWING I-1. PAYMENT FOR SEALING AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEM, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

REMOVALS

ALL ITEMS MARKED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF BY HIM, UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

PIPE CULVERT

WHEN BELL AND SPIGOT PIPE IS USED, ANY NECESSARY PIPE CUT-OFFS WILL BE MADE AT THE SPIGOT END OF THE LENGTH OF PIPE ADJACENT TO THE END LENGTH. WHEN TONGUE AND GROOVE PIPE IS USED, THE LENGTH OF PIPE NEXT TO THE END LENGTH SHALL BE CUT AND BUTT JOINT FORMED WITH A COLLAR AS SHOWN. THE COST OF THE JOINT AND COLLAR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

PLUGGING PIPE

THE UPSTREAM ENDS OF ALL PIPE OR TILE LINES INTERCEPTED BY EARTHWORK OPERATIONS AND, WHERE INDICATED, THE ENDS OF PIPE LINES TO BE ABANDONED IN PLACE SHALL BE EFFECTIVELY BLOCKED AND COVERED. BROKEN PIECES AND PORTIONS OF PIPE OR TILE SHALL BE REMOVED UNTIL A WHOLE LENGTH IS ENCOUNTERED WHICH SHALL BE BLOCKED WITH CONCRETE, FLAT STONE OR BRICK LAID IN MORTAR, OR A PRECAST CLAY OR CONCRETE STOPPER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM E-1, ROADWAY EXCAVATION

CONTRACTOR'S MAINTENANCE RESPONSIBILITY

ON THIS PROJECT, THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF THE EXISTING PAVEMENT PER ITEM I-3 SHALL BE LIMITED TO THOSE PORTIONS OF THE EXISTING PAVEMENT LYING WITHIN THE PROPOSED WORK LIMITS.

SEEDING AND PROTECTING

Quantities for Seeding, ITEM L-9, are calculated for the soil areas between lines ten (10) feet outside the work limits as shown on the cross sections or to the right of way line if such line is less than ten (10) feet from the work limits, and for all areas surrounded by ramps or proposed pavement

Recently cultivated areas or areas with no vegetation located within the right of way but beyond the limits prescribed for Item L-9, Seeding and Protecting shall, at the direction of the Engineer, be seeded in accordance with Item L-9, Seeding and Protecting.

Estimated Quantities- To Sheet 19

F-G- 674(10) 2025 Sq. Yds.

F- 674(10) 3247 Sq. Yds.

REMOVAL OF TREES

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT (INCLUDING CHANNEL) SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM E-9, REMOVAL OF TREES AND STUMPS, 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 TO BE REMOVED:

SIZES	NO. TREES
12"-18"	1790
18"-24"	524
24"-30"	206
30"-36"	164
36"-42"	34
42"-48"	13
OVER 48"	32
	2763

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO 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 E-9, REMOVAL OF TREES AND STUMPS.

REPLACEMENT

THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE, ANY ITEM NOT SPECIFICALLY LISTED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY HIS OPERATIONS.

R/W MONUMENTS, FEDERAL PROJECT MARKERS AND SECTION MARKERS

EXISTING R/W MONUMENTS, BENCH MARKS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AS PER SECTION G-7.09 UNTIL THEY CAN BE WITNESSED, REFERENCED, AND RESET BY THE CONSTRUCTION CREW.

ITEM 5.5, CE-101.04 Compaction Using Heavy Pneumatic Tired Roller

An estimated quantity for this item has been provided in the General Summary for use in proof rolling of subgrade on the mainline and ramp pavements as directed by the engineer. In lieu of the requirements of CE-101.04, a minimum of one coverage will be required to check the subgrade. Moisture content of the top 12" of subgrade shall not exceed optimum at the time of proof rolling. Tire pressure and total load shall be varied as directed by the engineer within the limits provided in Supplemental Specification No. CE-101.04.

APPROACH SLAB LONGITUDINAL JOINTS

Longitudinal impressed or sawed joints shall be provided between lane elements, on all approach slabs, in accordance with Standard Construction Drawing L.J. No. 1. Payment

CONSTRUCTION LAYOUT STAKES

See note in proposal describing the work included in this Lump sum pay item.

AGRICULTURAL LIMING MATERIAL

The location and need for agricultural liming material will be determined by laboratory tests after the rough grading operations have been performed. Quantities of agricultural liming as shown on the plans are sufficient for the entire project, but will be non-performed for the areas where tests show that the liming material is not needed

Where used this material shall be applied at the rate of 100 lbs. per 1000 square feet

REINFORCED PIPE ENDS

Reinforced ends will be required on all corrugated metal pipe Class F-4 (except helical) if the exposed ends are unprotected by headwalls, catch basins, or manholes.

Payment for reinforced ends shall be included in the unit price bid for the pertinent pipe item

GUARD RAIL FLARES

Where proposed guard rail flares are constructed of rail elements which have not been fabricated exactly to fit the curvature shown on the plans, the two end posts of each flared section shall be encased in a minimum 4 inch thickness of Class "E" concrete for the full depth of the post below the ground line.

Payment for encasement, if required, shall be included in the unit price bid for the guard rail.

GUARD RAIL ADJACENT TO BRIDGE

One (1) additional guard rail post shall be provided in the center of each panel of guard rail adjacent to the bridge, payment for which shall be included in the unit price bid for Item I-15 Guard Rail

COOPERATION & SCHEDULE OF OPERATIONS

The Contractor is hereby notified that the improvement immediately west of this project designated as ROS-35-19.93 will be performed concurrently with this contract.

The Contractor for this project shall be responsible for informing himself of all available facets of overlapping work and for coordinating and scheduling his operations, under the direction of the Engineer, in a manner that will result in a minimum of interference and inconvenience to the other Contractor. He shall permit necessary access to the other Contractor for overlapping work.

[illegible] shall be given to the scheduling of operations [illegible] before work on the project begins.

Any additional costs incurred in complying with the above requirements shall be included in the pertinent bid items for this project and no additional compensation will be allowed.

LONGITUDINAL JOINTS

To provide for future lane construction Standard Longitudinal Key Joints shall be provided, with the female end of the standard hook bolt cast into the T-71 pavement as called for on Standard Drawing L.J. No. 1 and at the locations listed below, or as directed by the Engineer.

After the forms have been removed the 5/8" top bolt shall be reinserted into the hook bolt to protect the threads and left in place in lieu of the male end of the hook bolt.

The exposed metal shall then be painted with two coats of bituminous material meeting the requirements of Sec. M-5.2 or Sec. M-5.5.

Approximate locations:

Proposed Eastbound Lanes - East side - from Sta. 1143+65± to 1158+19.77 = 1,454.77 L.F.
East side - from Sta. 1171+80.23 to 1198+76.26 = 2,696.03 L.F.
East side - from Sta. 1201+04.76 to 1205+00.00 = 395.24 L.F.

Proposed Westbound Lanes - East side - from Sta. 1145+95± to 1158+19.77 = 1,224.77 L.F.
West side - from Sta. 1171+80.23 to 1198+76.26 = 2,696.03 L.F.
West side - from Sta. 1201+04.76 to 1205+00.00 = 395.24 L.F.
Total Estimated Length ———— 8,862.08 L.F.

Payment for Longitudinal Joints shall be included in the unit price bid for Item T-71, Reinforced Portland Cement Concrete Pavement.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL NOTES

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	MD	NP	[illegible]			

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
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Stations Locations Calculations Etc. FG-674 (10)	Sheet Number	B-19 Aggregate Base Course Cu. Yds.	B-21 Waterproofed 3" Aggregate Base Course Sq. Yds.	I-7 Reinforced Concrete Approach Slabs Sq. Yds.	I-18 Crushed Aggregate Shoulders & Approaches Cu. Yds.	I-22 Subbase Grading A or B Cu. Yds.	I-22 6" Subbase Grading A or B Sq. Yds.	T-31 Bituminous Surface Treatment No. 6 Aggregate Applied @ rate of 0.009 C.Y./S.Y. Sq. Yds.	T-31 Bituminous Surface Treatment Material Applied @ rate of 0.25 gal./S.Y. Sq. Yds.	T-71 9" Reinforced Portland Cement Concrete Pavement Sq. Yds.
U.S.R. 35 EASTBOUND										
STA. 1121+32.27 TO STA. 1140+00										
TYPICAL SECTION "A" = 183.65 Lin. Ft.	4									
183.65 x 24 x 1/9 = 489.73										489.7
183.65 (32 X.5 + 4 X.4375+6.0 x.5)= 141.14						141.1				
183.65 x 12 x 1/9 = 244.87			244.9					244.9	244.9	
183.65 (4 X .5 + 8 X .4219) x 1/27 = 36.56					36.6					
TYPICAL SECTION "B" = 604.52 Lin. Ft.	4									
604.52 x 24 x 1/9 = 1612.05										1612.1
604.52 x(36 +5.875+6)= 3215.71							3215.7			
604.52 x 12 x 1/9 = 806.03			806.0					806.0	806.0	
604.52 x (4 X .4479 + 8 X .3959) x 1/27 = 111.03					111.0					
TYPICAL SECTION "C" = 885.06 Lin. Ft.	5									
885.06 x 24 x 1/9 = 2360.16										2360.2
885.06 x(36 + 6.8333) x 1/9 = 4212.23							4212.2			
885.06 x 12 x 1/9 = 1180.08			1180.1					1180.1	1180.1	
885.06 x 12 x 9/12 1/27 = 196.68					196.7					
U.S.R. 35 WESTBOUND										
STA. 1121+32.27 TO STA. 1138+99.57										
TYPICAL SECTION "E" = 855.39 Lin. Ft.	6									
TYPICAL SECTION "F" = 692.41 Lin. Ft.	6									
TOTAL = 1547.80 Lin. Ft.										
1547.80 X 24 X 1/9 = 4,127.47										4,127.5
154?.80x(36+5.875+6)x1/9-230.95x(8+5.875)x1/9= 7,877.39							7,877.4			
1547.80 X 12 X 1/9 -230.95X8X1/9 = 1,858.44			1858.4					1,858.4	1,858.4	
[624.44 X.3958 X8 +855.39 X .4479X 4 + 692.41 x.5000x4+692.41x.3750x8] 1/27 = 258.21					258.2					
APPROACH SLAB DETAILS - ROS-35-21.29 Rt & Lt.	11		130.8	266.6	32.6	86.2		130.8	130.8	
APPROACH SLAB DETAILS - ROS-35-21.57 Lt (Recon)	11			88.8		13.4				
U-Turn median opening Sta. 1129+67.40(E.B.)	94		605.0		101.0	101.0		605.0	605.0	
N&W. SERVICE ROAD										
Sta. 44+50 to Sta. 56+25 = 1,175.00 L.F.										
(75 x 11 + 1100 x 12) 8/12 x 1/27 = 346.30		346.30								
TOTAL		346.30	4,825.2	355.4	736.1	341.7	15,305.3	4,825.2	4,825.2	8,589.5
CONVERSION			402 I.C.Y.				2550.9	38.6 C.Y.	1,206 Gal.	
FG-674 (10) TOTAL		346.30	402 I.C.Y.	355.4 S.Y.	736.1 C.Y.	341.7	2,892.6 C.Y. ✓	38.6 C.Y.	1,206 Gal.	8,589.5 S.Y.

PAVEMENT CALCULATIONS

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

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ROSS COUNTY
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Stations Locations Calculations Etc. F-674 (10)	Sheet Number	B-21 Waterproofed Aggregate 3" Base Course Sq. Yds.	B-21 Waterproofed Aggregate 6" Base Course Sq. Yds.	B-21 Waterproofed Aggregate Base Course Cu. Yds.	I-7 Reinforced Concrete Approach Slabs Sq. Yds.	I-12 Special Portland Cement Concrete Curb Type A Lin. Ft.	I-12 Special Portland Cement Concrete Curb Type B Lin. Ft.	I-12 Standard Type 2-A Concrete Curb Lin. Ft.	I-12 Standard Type 6 Concrete Curb Lin. Ft.	I-18 Crushed Aggregate Shoulders & Aprroaches Cu. Yds.	I-21 4" Portland Cement Concrete Median Type 1 Sq. Yds.	I-22 Subbase Grading A or B Cu. Yds.	I-22 6" Subbase Grading A or B Sq. Yds.	I-13 4" Concrete Sidewalk Sq. Ft.	T-3 Bituminous Surface Treatment No. 6 Aggregate Applied @ rate of 0.0026 CY/SY Sq. Yds.	T-31 Bituminous Surface Treatment Material Applied @ rate of 0.25 gal/S.Y. Sq. Yds.	T-71 9" Reinforced Portland Cement Concrete Pavement Sq. Yds.
U.S.R. 35 EASTBOUND & WESTBOUND																	
TYPICAL SECTION "C" = 819.47 Lin. Ft.																	
TYPICAL SECTION "D" = 729.36 Lin. Ft.	5																
TYPICAL SECTION "F" = 688.67 Lin. Ft.																	
TYPICAL SECTION "G" = 321.57 Lin. Ft.																	
TYPICAL SECTION "H" = 527.81 Lin. Ft.	7																
TOTAL 3,086.88 Lin. Ft.																	
3,086.88 x 24 x 1/9 = 8,231.68																	8231.7
3,086.88 x 36 x 1/9 + [819.47 + 729.36 + 688.67 + 321.57] x 6.8333 ÷ 9 + 527.81 x 7.0417 ÷ 9 = 14,703.47													14,703.5				
3,086.88 x 12 x 1/9 = 4,115.84		4,115.8													4115.8	4,115.8	
[(819.47 + 729.36) x (12 x 0.5000) + (688.67 + 321.57) (8 x .3750 + 4 x 0.5000) + (527.83) (8 x 37.50 + 4 x .4479)] 1/27 = 624.94										624.9							
U.S.R. 35																	
TYPICAL SECTION "I" 270.94 Lin. Ft.	8																
TYPICAL SECTION "J" 1,397.94 Lin. Ft.	9																
TOTAL 1,668.88 Lin. Ft.																	
1668.88 x 48 x 1/9 = 8,900.69																	8900.7
1668.88 x 72 x 1/9 + 270.94 [7.0417 + 19.0417 + 5.875] 1/9 + 1397.94 (2 x 5.875 + 2 x 19.0417] 1/9 = 22,053.59													22,053.6				
1668.88 x 24 x 1/9 = 4,450.35		4,450.4													4,450.4	4,450.4	
270.94 (8 x .3750 + 8 x .4479 + 8 x .3958) 1/27 + 1397.94 (16 x .3958 + 8 x .4479) 1/27 = 611.26										611.3							
TYPICAL SECTION "K" = 1693.33 Lin. Ft.	9																
1693.33 x 48 x 1/9 = 9031.09																	9031.1
1693.33 x 56 + 1357.79 x 8) 1/9 + [1693.33 x 21.00] x 1/9 + [1,357.79 x 6.8333) x 1/9 = 16,725.21													16,725.2				
[(1693.33 x .4 x 2 + 1357.79 x 8) 1/9 = 2712.11		2,712.1													2,712.1	2,712.1	
[(1693.33 x .5000 x 4 + 800 x .4740 x 4 + 893.33 x .5000 x 4) + (633.68 x .5000 + 724.11 x .4480) 8] 1/27 = 437.78										437.8							
RAMP "A" TYPICAL SECTION 454.66 Lin. Ft.	100																
RAMP "C" TYPICAL SECTION 633.21 Lin. Ft.	101																
TOTAL 1087.87 Lin. Ft.																	
1087.87 x 16 x 1/9 = 1933.99																	1,934.0
[22 x 172.71 x 0.5 + 10.75 x 172.71 x 0.5 + 3 x 172.71 x 2 x 0.25 + 16 x 460.50 x 0.50 + 10.0833 x 460.50 x 0.50 + 3 x 460.50 x 2 x 0.25 + 19 x 0.5 x 454.66 + 10.25 x 454.66 x 0.5 + 3 x 454.66 x 0.25 + 3 x 454.66 x 0.22 + 125 x ($\frac{2''+6''}{2}$) x 3.00 + 335.50 x ($\frac{4\frac{5}{8}''+6''}{2}$) + 125 x 0.50 x 3 + 335.50 x ($\frac{6''+5''}{2}$) x 3 + 150 x ($\frac{4\frac{5}{8}''+6''}{2}$) x 3.00 + 304.66 x $\frac{4\frac{5}{8}''+6''}{2}$ x 3.0] x 1/27 = 700.66												700.7				
1087.87 x 6 x 1/9 = 725.25			725.3												725.3	725.3	
APPROACH SLAB DETAILS R05-35-2194 Rt & Lt.	11	94			400					24.3		76.8			94	94	
APPROACH SLAB DETAILS R05-35-2271 Rt & Lt.	11	133.2			400					33.2		83.3			133.2	133.2	
APPROACH SLAB DETAILS R05-35-2157 Forward	11				89.4							13.5					
PAVEMENT DETAILS																	
Drive - Rt & Lt. ℄ Sta. 1159+01										94.8							
RAMP "B" DECELERATION LANE	93			33.8								105.1			203.1	203.1	237.0
RAMP "A" ENTRANCE DETAIL	103			207.3		94	167			43.0		599			1,372.6	1,372.6	1,878.8
RAMP "C" EXIT DETAIL	104			100.9				106	100		37	541.7			605.4	605.4	1,679.4
RAMP "A" & "C" & EAST MAIN ST. INTERSECTION	105			57.9				73				209.1	600		331	331	387.7
U-Turn Median Opening Sta. 1179+50	94	377.0								63.0		63.0			377.0	377.0	
TOTAL		11,882.5	725.3	399.9	889.4	94	167	179	100	1,932.3	37	2,393.1	53,482.3 *600		15,119.9	15,119.9	32,280.4
CONVERSION		990.2 C.Y.	120.9 C.Y.	399.9 C.Y.								2,393.1 C.Y.	8,913.7 C.Y.		120.9 C.Y.	3,779.9 Gal.	
F-674 (10) TOTAL		1,571.0 Cu. Yds.			889.4 S.Y.	94	167	179	100	1,932.3	37	11,306.8 Cu. Yds.	*600		120.9 C.Y.	3,779.9 Gals.	32,280.4

*To Sh. 21

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

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ROSS COUNTY
ROS-35-21.23

SUMMARY OF QUANTITIES

EXCAVATION AND EMBANKMENT

Sht. Sheet Number	Station to Station Location, Etc.	E-1 Roadway Excavation Method "A" Cu. Yds.	E-1 Embankment Method "A" Cu. Yds.		E-3 Channel Excavation Cu. Yds.		
	FG-674 (10)						
16							
	EASTBOUND						
39	Sta. 1121+32.27 to Sta. 1140+00	1417	257,467				
	WESTBOUND						
53	Sta. 1121+32.27 to Sta. 1138+99.57	3,884	271,611				
20	Drainage Summary						
36	N&W Service Road (Sta. 44+50 to Sta. 56+25	144	5,337				
	TOTAL FG-674 (10)	5,445	534,415		0		
	E-674 (10)						
	EASTBOUND						
45	Sta. 1140+00 to Sta. 1155+48.83	3,083	156,315				
	WESTBOUND						
60	Sta. 1138+99.57 to Sta. 1156+99.38 (back)	5,540	198,271				
	& MEDIAN						
73	Sta. 1155+48.83 to Sta. 1161+75	5,786	67,701				
	ROCK LEVEE RT. STA. 1158+46.10						
148	Sta. 0+00 to Sta. 2+56.5	0	4,181				
	SCIOTO RIVER CHANNEL EXCAVATION (NORTH)						
124	Sta. 46+00 to Sta. 125+16				858,629		
	& MEDIAN						
17	Sta. 1170+80 to Sta. 1205+00	167	339,931				
107	RAMP "A" East Main St. Interchange	289	10,466				
110	RAMP "C" East Main St. Interchange	5,228	22,886				
	SCIOTO RIVER CHANNEL EXCAVATION (SOUTH)						
150	Sta. 17+50 to Sta. 45+00				475,482		
	PROPOSED LEVEE (SOUTH)						
160	Sta. 19+07 to Sta. 30+12.27	4,946	37,573				
20	Drainage Summary						
16							
	TOTAL F-674 (10)	25,039	832,324		1,334,111		
	PROJECT TOTAL	30,484	1,366,739		*1,334,111		
					*To Drainage Sheet 22		

EROSION CONTROL

L-10 Sodding Sq. Yds.	L-10 Sodding for Special Berm & Slope Protection Sq. Yds.	L-9 Seeding & Protecting Sq. Yds.	L-9 Commercial Fertilizer 12-12-12 Tons	L-9 Agricultural Liming Material Tons
		2,025		
		35,080		
		36,494		
359				
359	0	73,599	6.62	33.12
		26,855		
		37,392		
		12,294		
		405		
		48,550		
		5,489		
		11,334		
		10,920		
	203	3,247		
720	203	156,486	14.08	70.42
1079	203	230,085	20.70	103.54

E-1 COMPACTED SUBGRADE

SURFACE ITEMS	F-674 (10) E-1 Compacted Subgrade Sq. Yds.	F-674 (10) 553.CE101.04 Compaction Using Heavy Roller Hours	FG-674 (10) E-1 Compacted Subgrade Sq. Yds.	FG-674 (10) 553.CE101.04 Compaction Using Heavy Roller Hours
T-71 Surface	32,280.4	16	8,589.5	4
T-31 Surface (Paved Berm)	14,742.9	7	4,220.2	2
I-7 Approach Slabs	889.4	1	355.4	1
I-21 Median Pavement	37		—	
I-12 Standard Type 6 Curb	5.6		—	
I-12 Type 7 Curb	7.0		—	
I-12 Type 8 Curb	18.6		—	
I-12 Standard Type 2-A Curb	9.9			
TOTALS	47,990.8	24	13,165.1	7

E-11 WATER

EMBANKMENT	F-674 (10) M-Gals	FG-674 (10) M-Gals
EMBANKMENT		
832,324 x 5 ÷ 1000	4.162	
534,415 x 5 ÷ 1000		2.672
B-19		
347 x 5 ÷ 1000		2
I-22		
11,244 x 5 ÷ 1000 - 56.2	56	
2.792 x 5 ÷ 1000 - 14		14
I-18		
1775 x 5 ÷ 1000 - 8.9	9	
635 x 5 ÷ 1000 - 3.2		3
TOTALS	4,227	2,691

E-9 REMOVAL OF TREES & STUMPS

See General Notes	F-674 (10)	FG-674 (10)
	Lump	Lump

ROADWAY-
SUMMARY OF QUANTITIES

SCALE				DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

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SEE SHEET NUMBER(S)	STRUCTURE NUMBER	I-1 PIPE: Class B-1 12" 15" Lin. Ft.	I-1 PIPE: Class B-1 8" Lin. Ft.	I-1 PIPE: Class A-1 Sec M-6.6(c) 15" 18" Lin. Ft.	I-1 PIPE: Class A-1 Sec M-6.6(d) 24" 36" Lin. Ft.	I-1 PIPE: Class A-1 Sec M-6.4(d) 8 Gage 42" 72" Lin. Ft.	I-1 PIPE: Class E-1 12" Lin. Ft.	I-1 PIPE: Class F-4 8" 12" Lin. Ft.	I-1 PIPE: H-2 8" L.F.	I-2 MASONRY: Headwalls Standard Type C Cu. Yds.	I-2 MASONRY: Headwalls Standard Type II-W2 Cu. Yds.	I-5 PIPE SPECIALS: Class B-1 8" Each	I-5 PIPE SPECIALS: Class F-4 12"x25° Elbow Each	I-8 CATCH BASINS: Standard No. 2-2-8 Each	I-8 CATCH BASINS: Standard No. 6 Each	I-8 CATCH BASINS: Standard No. 8 Each	I-10 Dumped Rock Fill Cu. Yds.	I-10 Dumped Rock Channel Protection Cu. Yds.	L-10 Sodding Sq. Yds.	L-10 Sodding for Special Berm Slope Protection Sq. Yds.	I-10 Riprap Using 6" Reinforced Concrete as per plan Sq. Yds.
	FG-674 (10)																				
	U.S.R. 35																				
26				112							0.32								200		
27																		80	159		
	TOTAL FG-674 (10)			112							0.32							80	*359		
	F-674 (10)																				
	APPROACH SLABS																				
12																				203	
	U.S.R. 35																				
28																		7	142		
29						86	7									1		1,692			
32																			349		
33		72						56			0.23		2			1		44.2	67		
34																		42			
35		109					7				0.23					2		1141			
36		104 111									0.49					2		8			
37		236 63						38			0.49		2		1	3	1	10			
	NOTES																				
16			100					40	100			5									
	RAMPS																				
106	(C)																		67		
109																			95		
	CULVERT DETAILS																				
114	1				134						0.82							10			
115	2			162							0.60										
116	4				170						1.18										
122																		4,274			
119	11					386				22								36			81
	TOTAL F-674(10)	521 174	100	162	134 170	386 86	14	40 94	100	22	4.04 26.04	5	4	1	3	7		4,274	2,990.2	*720	*203	81

* Carried to Sheet No. 19

DRAINAGE - SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	0410	F-FG-674(10)	

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See Sheet Number		I-8	I-13	I-15	I-15	I-15	SPECIAL		S-24	S-25	I-127	I-127	I-127	See Sheet Number
		Centerline Reference Monuments	4" Concrete Sidewalk	Guard Rail Steel Beam Standard Type (deep)	Guard Rail Steel Beam Barrier Type (deep)	Guard Rail Temporary as per plan	Cleaning Privy Vault	Septic Tank Cleaned and Disposed of	Removal of Existing Structures	3" Conduit	Delineators Type A-1	Delineators Type C-2	Delineators Type C-3	
		Each	Sq. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Lump	Lin. Ft.	Each	Each	Each	
	FG-674(10)													
	U.S.R. 35													
26				1,403.69	100									26
27				1,982.36										27
30				1166.82										30
31				1,845.68										31
	RIGHT-OF-WAY													
211		10												211
	TOTAL FG-674(10)	10		6,398.55	100									
	F-674(10)													
14A											13	40	1	
28				1143.71										28
29				1181.24	62.5				Lump					29
32				1698.29										32
33				753.21										33
34						800								34
35				1623.31	62.5									35
36				1021.70						128				36
37				1145.78	62.5		1	1						37
38				850.00	62.5									38
19			600											
	RAMPS													
106				484.21										106
109										27				
	RIGHT-OF-WAY													
228		17												228
	TOTAL F-674(10)	17	600	9,901.45	250	800	1	1	Lump	150	13	40	1	
	100% STATE PARTICIPATION													
26														26
29														29
35														35
37														37
38														38
	TOTAL 100% STATE PARTICIPATION													

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
ROS-35-21.23

GENERAL SUMMARY

TYPE CODE 7221

ITEM	ROS-35-21.23 FG-674(10)	ROS-35-21.23 F-674(10)	TOTAL PROJECT	UNIT	DESCRIPTION
					ROADWAY
E-1	5,445	25,039	30,484	Cu.Yds.	Roadway Excavation Method "A", as per plan
E-1	13,165	47,991	61,156	Sq.Yds.	Compacted Subgrade
E-1	534,415	832,324	1,366,739	Cu.Yds.	Embankment Method "A", as per plan
E-9	Lump	Lump	Lump	Lump	Removal of Trees and Stumps
E-11	912	4,227	5,139	M-Gals.	Water
I-4		4	4	Tons	Calcium Chloride for Dust Control
I-8	10	17	27	Each	Centerline Reference Monuments, as per plan
I-13		600	600	Sq.Ft.	4" Concrete Sidewalk
I-15	6,398.55	9,901.45	16,300	Lin.Ft.	Guard Rail Steel Beam Standard Type (deep)
I-15	100	250	350	Lin.Ft.	Guard Rail Steel Beam Barrier Type (deep)
I-15		800.00	800.	Lin.Ft.	Guard Rail Temporary as per plan
L-9	73,599	156,486	230,085	Sq.Yds.	Seeding and Protecting
L-9	6.62	14.08	20.70	Tons	Commercial Fertilizer (12-12-12)
L-9	33.12	70.42	103.54	Tons	Agricultural Liming Material
L-10	359	720	1,079	Sq.Yds.	Sodding
L-10		203	203	Sq.Yds.	Sodding for Special Berm and Slope Protection, as per plan
S-24		Lump	Lump	Lump	Removal of Existing Structure
S-25		150	150	Lin.Ft.	3" Conduit, Asbestos Cement or Fiber Type I, Concrete Encased
SS:CE-101.04	7	24	31	Hours	Compaction using heavy pneumatic tired roller
Special		1	1	Each	Cleaning Privy Vault
Special		1	1	Each	Cleaning and disposal of septic tank
I-127		13	13	Each	Delineators, Type A-1
I-127		40	40	Each	Delineators, Type C-2
I-127		1	1	Each	Delineators, Type C-3
					PAVEMENT
B-21	402	1,511	1,913	Cu.Yds.	Waterproofed Aggregate Base Course, as per plan
B-19	347		347	Cu.Yds.	Aggregate Base Course
I-7	355	890	1,245	Sq.Yds.	Reinforced Concrete Approach Slab (T=18)
I-12		94	94	Lin.Ft.	Standard Type 7 Concrete Curb
I-12		167	167	Lin.Ft.	Standard Type 8 Concrete Curb
I-12		179	179	Lin.Ft.	Standard Type 2-A Concrete Curb
I-12		100	100	Lin.Ft.	Standard Type 6 Concrete Curb
I-18	736	1932	2668	Cu.Yds.	Stabilized Crushed Aggregate Shoulders and Approaches
I-21		37	37	Sq.Yds.	4" Portland Cement Concrete Median Pavement, Standard Type 1
I-22	2,893	11,307	14,200	Cu.Yds.	Subbase, Grading "A" or "B" as per plan
T-31	1,206	3,780	4,986	Gals.	Bituminous Surface Treatment - Bituminous Material, as per plan
T-31	39	121	160	Cu.Yds.	Bituminous Surface Treatment - No. 6 Aggregate
T-71	8,590	32,280	40,870	Sq.Yds.	9" Reinforced Portland Cement Concrete Pavement

ITEM	ROS-35-21.23 FG-674(10)	ROS-35-21.23 F-674(10)	TOTAL PROJECT	UNIT	DESCRIPTION
					DRAINAGE
E-3		1,334,111	1,334,111	Cu.Yds.	Channel Excavation, as per plan
I-1		100	100	Lin.Ft.	8" Pipe Class A-1
I-1		40	40	Lin.Ft.	8" Pipe Class A-4, Sec. M-6.4(c)
I-1		100	100	Lin.Ft.	8" Pipe Class A-2
I-1		521	521	Lin.Ft.	12" Pipe Class A-1
I-1		14	14	Lin.Ft.	12" Pipe Class A-4
I-1		94	94	Lin.Ft.	12" Pipe Class A-4
I-1		174	174	Lin.Ft.	15" Pipe Class B-1
I-1	112		112	Lin.Ft.	15" Pipe Class A-1 Sec. M-6.6(c)
I-1		162	162	Lin.Ft.	18" Pipe Class A-1 Sec. M-6.6 (c)
I-1		134	134	Lin.Ft.	24" Pipe Class A-1 Sec. M-6.6(d)
I-1		386	386	Lin.Ft.	42" Pipe Class A-1 Sec. M-64(d) 8 gage Elongated as per plan
I-1		170	170	Lin.Ft.	36" Pipe Class A-1 Sec. M-6.6(d)
I-1		86	86	Lin.Ft.	72" Pipe Class A-1
I-2	1	26	27	Cu.Yds.	Masonry
I-5		5	5	Each	8" Pipe Specials Class B-1
I-5		4	4	Each	12" Pipe Specials Class F-4
I-8		1	1	Each	Standard No. 712-B Catch Basin
I-8		3	3	Each	Standard No. 613 Catch Basins
I-8		7	7	Each	Standard No. 613 Catch Basins
I-10	80	2,990	3070	Cu.Yds.	Dumped Rock Channel Protection
I-10		4,274	4,274	Cu.Yds.	Dumped Rock Fill Type A
I-10		81	81	Sq.Yds.	Riprap, Using 6" Reinforced Concrete Slab, as per plan
					REMOVAL OF BUILDINGS
	PARCEL No.				
E-10	123 ALA	Lump	Lump	Lump	Removal of one 2 story brick residence, one 2 story frame barn, one frame building, one brick building, one frame toilet, one frame chicken house
E-10	11 AWL	Lump	Lump	Lump	Removal of one frame shed
E-10	21 WD	Lump	Lump	Lump	Removal of one 1 story frame cottage
					STRUCTURES OVER 20 FOOT SPAN ESTIMATED QUANTITIES
					ROS-35-2129 L&R See Sheet No. 164
					ROS-35-2194 L&R See Sheet No. 192
					ROS-35-2157 L See Sheet No. 173
					ROS-35-2271 L&R See Sheet No. 215
I-3	Lump	Lump	Lump	Lump	Construction Layout Stakes
			Lump	Lump	Maintaining Traffic

SUPERELEVATION TABLES

℄ EASTBOUND

SUPER ELEVATION Outside Edge	STATION	PROFILE & LEFT EDGE 12' Lt. ℄	CENTERLINE EASTBOUND	RIGHT EDGE 12' Rt. ℄
0.00	1114+75	648.42	648.61	648.42
0.05	1115+00	649.16	649.30	649.11
0.10	+25	649.90	649.99	649.80
0.16	+50	650.64	650.67	650.48
0.21	+75	651.38	651.36	651.17
0.26	1116+00	652.12	652.05	651.86
0.27	1116+01 P.C.	652.15	652.07	651.88
0.36	+25	652.86	652.69	652.50
0.45	+50	653.60	653.38	653.15
0.54	+75	654.34	654.07	653.80
	1117+00	655.08	654.81	654.54
	+25	655.82	655.55	655.28
	+50	656.55	656.28	656.01
	+75	657.25	656.98	656.71
	1118+00	657.93	657.66	657.39
	+25	658.58	658.31	658.04
	+50	659.21	658.94	658.67
	+75	659.82	659.55	659.28
	1119+00	660.40	660.13	659.86
	+25	660.96	660.69	660.42
	+50	661.49	661.22	660.95
	+75	662.00	661.73	661.46
	1120+00	662.48	662.21	661.94
	+25	662.94	662.67	662.40
	+50	663.37	663.10	662.83
	+75	663.78	663.51	663.24
	1121+00	664.17	663.90	663.63
	+25	664.53	664.26	663.99
	+50	664.86	664.59	664.32
	+75	665.17	664.90	664.63
	1122+00	665.46	665.19	664.92
0.54	+25	665.72	665.45	665.18
0.52	+50	665.96	665.70	665.44
0.42	+75	666.18	665.97	665.76
0.28	1123+00	666.36	666.27	666.08
0.22	1123+15.92 P. T.	666.47	666.44	666.25
0.17	+25	666.53	666.55	666.36
0.10	+50	666.67	666.76	666.57
0.03	+75	666.79	666.95	666.76
0.00	+87.69	666.84	667.03	666.84
0.00	1130+25	661.20	661.39	661.20
0.05	+50	660.65	660.79	660.60
0.11	+75	660.08	660.16	659.97
0.16	1131+00	659.49	659.52	659.33
0.21	+14.94 T. S.	659.12	659.10	658.91
0.32	+44.94	658.36	658.23	658.04
0.46	+74.94	657.56	657.33	657.10
0.60	1132+04.94	656.75	656.45	656.15
0.73	+34.94	655.94	655.58	655.21
0.86	+64.94	655.12	654.69	654.26
1.00	+94.94	654.30	653.80	653.30
1.14	1133+24.94	653.49	652.92	652.35
1.27	+54.94	652.68	652.05	651.41
1.40	+84.94	651.86	651.16	650.46
1.51	1134+14.94 S. C.	651.04	650.29	649.53
1.54	+25	650.76	649.99	649.22
	+50	650.08	649.31	648.54
	+75	649.40	648.63	647.86
	1135+00	648.72	647.95	647.18
	+25	648.04	647.27	646.50
	+50	647.36	646.59	645.82
	+75	646.68	645.91	645.14
	1136+00	646.00	645.23	644.46
	+25	645.32	644.55	643.78
	+50	644.64	643.87	643.10
	+75	643.96	643.19	642.42
	1137+00	643.28	642.51	641.74
	+25	642.60	641.83	641.06
	+50	641.92	641.15	640.38
	+75	641.24	640.47	639.70
	1138+00	640.56	639.79	639.02
	+25	639.88	639.11	638.34
	+50	639.20	638.43	637.66
1.54	+75	638.52	637.75	636.98

SUPER ELEVATION Outside Edge	STATION	PROFILE & LEFT EDGE 12' Lt. ℄	CENTERLINE EASTBOUND	RIGHT EDGE 12' Rt. ℄
1.54	1139+00	637.84	637.07	636.30
	+25	637.16	636.39	635.62
	+50	636.48	635.71	634.94
	+75	635.80	635.03	634.26
	1140+00	635.12	634.35	633.58
	+25	634.44	633.67	632.90
	+50	633.80	633.03	632.26
	+75	633.18	632.41	631.64
	1141+00	632.60	631.83	631.06
	+25	632.06	631.29	630.52
	+50	631.54	630.77	630.00
	+75	631.06	630.29	629.52
	1142+00	630.62	629.85	629.08
	+25	630.20	629.43	628.66
	+50	629.82	629.05	628.28
	+75	629.48	628.71	627.94
	1143+00	629.17	628.40	627.63
	+25	628.89	628.12	627.35
	+50	628.65	627.88	627.11
	+75	628.44	627.67	626.90
	1144+00	628.26	627.49	626.72
	+25	628.11	627.34	626.57
	+50	628.00	627.23	626.46
	+75	627.93	627.16	626.39
	1145+00	627.88	627.11	626.34
	+25	627.87	627.10	626.33
	+50	627.90	627.13	626.36
	+75	627.95	627.18	626.41
	1146+00	628.05	627.28	626.51
	+25	628.16	627.39	626.62
	+50	628.29	627.52	626.75
	+75	628.41	627.64	626.87
	1147+00	628.54	627.77	627.00
	+25	628.66	627.89	627.12
	+50	628.79	628.02	627.25
	+75	628.91	628.14	627.37
	1148+00	629.04	628.27	627.50
	+25	629.16	628.39	627.62
	+50	629.29	628.52	627.75
	+75	629.41	628.64	627.87
	1149+00	629.54	628.77	628.00
	+25	629.66	628.89	628.12
	+50	629.79	629.02	628.25
	+75	629.91	629.14	628.37
	1150+00	630.04	629.27	628.50
	+25	630.16	629.39	628.62
	+50	630.29	629.52	628.75
	+75	630.41	629.64	628.87
	1151+00	630.54	629.77	629.00
	+25	630.66	629.89	629.12
	+50	630.79	630.02	629.25
	+75	630.91	630.14	629.37
	1152+00	631.04	630.27	629.50
1.54	+25	631.16	630.39	629.62
1.51	+48.83 C. S.	631.28	630.53	629.77
1.41	+78.83	631.43	630.73	630.02
1.27	1153+08.83	631.58	630.95	630.31
1.14	+38.83	631.73	631.16	630.59
1.00	+68.83	631.88	631.38	630.88
.87	+98.83	632.03	631.60	631.16
	1154+			
0.73	+28.83	632.18	631.82	631.45
0.60	+58.83	632.33	632.03	631.73
0.46	+88.83	632.48	632.25	632.02
0.33	1155+18.83	632.63	632.49	632.30
0.19	+48.83 S. T.	632.78	632.78	632.59
0.19	+50	632.79	632.79	632.60
0.12	+75	632.91	632.98	632.79
0.06	1156+00	633.04	633.17	632.98
0.00	+25	633.16	633.35	633.16

℄ WESTBOUND

LEFT EDGE 12' Lt. ℄	CENTERLINE WESTBOUND	PROFILE & RIGHT EDGE 12' Rt. ℄	STATION	SUPER ELEVATION Outside Edge
661.09	661.28	661.09	1131+00	0.00
660.79	660.92	660.73	+25	0.06
660.49	660.56	660.37	+50	0.12
660.18	660.20	660.01	+75	0.17
660.10	660.10	659.91	+82.16 T.S.	0.19
659.90	659.81	659.62	1132+02.16	0.28
659.70	659.52	659.33	+22.16	0.37
659.50	659.27	659.04	+42.16	0.46
659.30	659.03	658.75	+62.16	0.55
659.11	658.79	658.47	+82.16	0.64
658.91	658.55	658.18	1133+02.16	0.73
658.71	658.30	657.89	+22.16	0.82
658.51	658.06	657.60	+42.16	0.91
658.31	657.81	657.31	+62.16	1.00
658.12	657.58	657.03	+82.16	1.09
657.92	657.33	656.74	1134+02.16	1.18
657.72	657.09	656.45	+22.16	1.27
657.52	656.84	656.16	+42.16	1.36
657.32	656.60	655.87	+62.16	1.45
657.14	656.37	655.59	+82.16	1.55
656.94	656.12	655.30	1135+02.16	1.64
656.74	655.88	655.01	+22.16	1.73
656.54	655.63	654.72	+42.16	1.82
656.34	655.39	654.43	+62.16	1.91
656.12	655.14	654.15	+82.16 S. C.	1.97
655.89	654.89	653.89	1136+00	2.00
655.53	654.53	653.53	+25	
655.17	654.17	653.17	+50	
654.81	653.81	652.81	+75	
654.45	653.45	652.45	1137+00	
654.09	653.09	652.09	+25	
653.73	652.73	651.73	+50	
653.37	652.37	651.37	+75	
653.01	652.01	651.01	1138+00	
652.65	651.65	650.65	+25	
652.29	651.29	650.29	+50	
651.93	650.93	649.93	+75	
651.57	650.57	649.57	1139+00	
651.21	650.21	649.21	+25	
650.85	649.85	648.85	+50	
650.49	649.49	648.49	+75	
650.13	649.13	648.13	1140+00	
649.77	648.77	647.77	+25	
649.41	648.41	647.41	+50	
649.05	648.05	647.05	+75	
648.69	647.69	646.69	1141+00	
648.33	647.33	646.33	+25	
647.97	646.97	645.97	+50	
647.61	646.61	645.61	+75	
647.25	646.25	645.25	1142+00	
646.89	645.89	644.89	+25	
646.53	645.53	644.53	+50	
646.17	645.17	644.17	+75	
645.81	644.81	643.81	1143+00	
645.45	644.45	643.45	+25	
645.09	644.09	643.09	+50	
644.73	643.73	642.73	+75	
644.37	643.37	642.37	1144+00	
644.01	643.01	642.01	+25	
643.65	642.65	641.65	+50	
643.29	642.29	641.29	+75	
642.93	641.93	640.93	1145+00	
642.57	641.57	640.57	+25	
642.21	641.21	640.21	+50	
641.85	640.85	639.85	+75	
641.49	640.49	639.49	1146+00	
641.13	640.13	639.13	+25	
640.77	639.77	638.77	+50	
640.41	639.41	638.41	+75	2.00
640.05	639.05	638.05	1147+00	2.00
639.69	638.69	637.69	+25	2.00
639.33	638.33	637.33	+50	2.00
639.02	638.02	637.02	+71.57 C. S.	2.00
638.64	637.69	636.73	+91.57	1.91
638.26	637.35	636.44	1148+11.57	1.82
637.89	637.03	636.16	+31.57	1.73
637.51	636.69	635.87	+51.57	1.64
637.13	636.36	635.58	+71.57	1.55
636.74	636.02	635.29	+91.57	1.45

LEFT EDGE 12' Lt. ℄	CENTERLINE WESTBOUND	PROFILE & RIGHT EDGE 12' Rt. ℄	STATION	SUPER ELEVATION Outside Edge
636.36	635.68	635.00	1149+11.57	1.36
635.99	635.36	634.72	+31.57	1.27
635.61	635.02	634.43	+51.57	1.18
635.23	634.69	634.14	+71.57	1.09
634.85	634.35	633.85	+91.57	1.00
634.47	634.02	633.56	1150+11.57	0.91
634.10	633.69	633.28	+31.57	0.82
633.72	633.36	632.99	+51.57	0.73
633.36	633.04	632.72	+71.57	0.64
633.03	632.76	632.48	+91.57	0.55
632.71	632.48	632.25	1151+11.57	0.46
632.45	632.25	632.04	+31.57	0.41
632.23	632.04	631.85	+51.57	0.38
632.06	631.87	631.68	+71.57 S.T.	0.38

FED. RD. DIVISION 2 | STATE OHIO | PROJECT F-FG-674(10)

23/240

ROSS COUNTY
ROS-35-21.23

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERELEVATION TABLES
U.S.R. 35
EASTBOUND & WESTBOUND

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EWG	EWG	C.S.R.	R.M.S.			

SUPERELEVATION TABLES

LEFT EDGE 56' Lt ℄	WESTBOUND 44' Lt ℄	RIGHT EDGE 32' Lt ℄	FUTURE LANE 20' Lt ℄	SUPER ELEVATION
630.54	630.73	630.54	630.35	0
630.42	630.61	630.42	630.23	0
630.29	630.48	630.29	630.10	0
630.16	630.35	630.16	629.97	0
630.07	630.23	630.04	629.85	.03
629.99	630.11	629.92	629.73	.07
629.92	629.98	629.79	629.60	.13
629.87	629.85	629.66	629.47	.21
629.87	629.85	629.66	629.47	.21
629.84	629.75	629.56	629.37	.28
629.83	629.65	629.46	629.25	.37
629.82	629.59	629.36	629.13	.46
629.81	629.54	629.26	628.98	.55
629.80	629.48	629.16	628.84	.64
629.79	629.43	629.06	628.69	.73
629.78	629.37	628.96	628.55	.82
629.77	629.32	628.86	628.40	.91
629.76	629.26	628.76	628.26	1.00
629.75	629.21	628.66	628.11	1.09
629.74	629.15	628.56	627.97	1.18
629.73	629.10	628.46	627.82	1.27
629.72	629.04	628.36	267.68	1.36
629.71	628.99	628.26	627.53	1.45
629.70	628.93	628.16	627.39	1.54
629.69	628.88	628.06	627.24	1.63
629.68	628.82	627.96	627.10	1.72
629.67	628.77	627.86	626.95	1.81
629.65	628.71	627.76	626.81	1.89
629.61	628.64	627.66	626.68	1.95
629.53	628.54	627.54	626.54	1.99
629.42	628.42	627.42	626.42	2.00
629.29	268.29	627.29	626.29	
629.17	628.17	627.17	626.17	
629.04	628.04	627.04	626.04	
628.92	627.92	626.92	625.92	
628.79	627.79	626.79	625.79	
628.67	627.67	626.67	625.67	
628.54	627.54	626.54	625.54	
628.42	627.42	626.42	625.42	
628.29	627.29	626.29	625.29	
628.17	627.17	626.17	625.17	
628.04	627.04	626.04	625.04	
627.92	626.92	625.92	624.92	
627.79	626.79	625.79	624.79	
627.69	626.69	625.69	624.69	
627.62	626.62	625.62	624.62	
627.59	626.59	625.59	624.59	
627.60	626.60	625.60	624.60	
627.65	626.65	625.65	624.65	
627.74	626.74	625.74	624.74	
627.87	626.87	625.87	624.87	
628.04	627.04	626.04	625.04	
628.25	627.25	626.25	625.25	
628.49	627.49	626.49	625.49	
628.78	627.78	626.78	625.78	
629.10	628.10	627.10	626.10	
629.47	628.47	627.47	626.47	
629.87	628.87	627.87	626.87	
630.31	629.31	628.31	627.31	
630.79	629.79	628.79	627.79	
631.29	630.29	629.29	628.29	2.00

STATION	FUTURE LANE 20' Rt ℄	LEFT EDGE 32' Rt ℄	EASTBOUND 44' Rt ℄	RIGHT EDGE 56' Rt ℄	SUPER ELEVATION
1177+00	631.35	631.54	631.73	631.54	0.00
+25	631.22	631.41	631.60	631.41	0.00
+50	631.10	631.26	631.43	631.24	0.02
+75	630.98	631.11	631.25	631.06	0.05
1178+00	630.85	630.96	631.07	630.88	0.08
+25	630.72	630.80	630.88	630.69	0.11
+50	630.60	630.65	630.71	630.52	0.13
+75	630.48	630.51	630.54	630.35	0.16
1179+00	630.35	630.35	630.35	630.16	0.19
+25	630.23	630.20	630.18	629.99	0.21
+50	630.10	630.05	629.99	629.80	0.25
+75	629.97	629.89	629.81	629.62	0.27
1180+00	629.85	629.74	629.64	629.45	0.29
+25	629.73	629.60	629.46	629.27	0.33
+50	629.60	629.44	629.28	629.09	0.35
+75	629.47	629.28	629.08	628.88	0.40
T.S.+75.89	629.47	629.28	629.08	628.88	0.40
+95.89	629.37	629.14	628.91	628.68	0.46
1181+15.89	629.27	629.00	628.73	628.46	0.54
+35.89	629.17	628.86	628.55	628.24	0.62
+55.89	629.07	628.72	628.37	628.02	0.70
+75.89	628.97	628.58	628.18	627.79	0.79
+95.89	628.87	628.44	628.00	627.57	0.87
1182+15.89	628.77	628.30	627.82	627.35	0.95
+35.89	628.67	628.16	627.64	627.13	1.03
+55.89	628.57	628.02	627.46	626.91	1.11
+75.89	628.47	627.88	627.28	626.69	1.19
+95.89	628.37	627.74	627.10	626.47	1.27
1183+15.89	628.27	627.60	626.92	626.25	1.35
+35.89	628.17	627.46	626.74	626.03	1.43
+55.89	628.07	627.32	626.56	625.81	1.51
+75.89	627.97	627.18	626.38	625.59	1.59
+95.89	627.87	627.03	626.20	625.36	1.67
1184+15.89	627.77	626.89	626.02	625.14	1.75
+35.89	627.67	626.75	625.84	624.92	1.83
+55.89	627.57	626.61	625.66	624.70	1.91
S.C.+75.89	627.47	626.48	625.50	624.52	1.96
1185+00	627.35	626.35	625.35	624.35	2.00
+25	627.23	626.23	625.23	624.23	
+50	627.10	626.10	625.10	624.10	
+75	626.98	625.98	624.98	623.98	
1186+00	626.85	625.85	624.85	623.85	
+25	626.73	625.73	624.73	623.73	
+50	626.60	625.60	624.60	623.60	
+75	626.48	625.48	624.48	623.48	
1187+00	626.35	625.35	624.35	623.35	
+25	626.23	625.23	624.23	623.23	
+50	626.10	625.10	624.10	623.10	
+75	625.98	624.98	623.98	622.98	
1188+00	625.85	624.85	623.85	622.85	
+25	625.73	624.73	623.73	622.73	
+50	625.60	624.60	623.60	622.60	
+75	625.50	624.50	623.50	622.50	
1189+00	625.43	624.43	623.43	622.43	
+25	625.40	624.40	623.40	622.40	
+50	625.41	624.41	623.41	622.41	
+75	625.46	624.46	623.46	622.46	
1190+00	625.55	624.55	623.55	622.55	
+25	625.68	624.68	623.68	622.68	
+50	625.85	624.85	623.85	622.85	
+75	626.06	625.06	624.06	623.06	
1191+00	626.30	625.30	624.30	623.30	
+25	626.59	625.59	624.59	623.59	
+50	626.91	625.91	624.91	623.91	
+75	627.28	626.28	625.28	624.28	
1192+00	627.68	626.68	625.68	624.68	
+25	628.12	627.12	626.12	625.12	
+50	628.60	627.60	626.60	625.60	
+75	629.10	628.10	627.10	626.10	2.00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

24/240

ROSS COUNTY
ROS-35-21.23

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERELEVATION TABLES
U.S.R. 35
& MEDIAN

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	C.S.R.	R.M.S.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

25
240

ROSS COUNTY
ROS-35-21.23

SUPERELEVATION TABLES

LEFT EDGE 56' Lt ℄	WESTBOUND 44' Lt ℄	RIGHT EDGE 32' Lt ℄	FUTURE LANE 20' Lt ℄	SUPER ELEVATION
631.79	630.79	629.79	628.79	2.00
632.29	631.29	630.29	629.29	2.00
632.79	631.79	630.79	629.79	2.00
633.14	632.16	631.17	630.18	1.97
633.47	632.52	631.57	630.62	1.90
633.78	632.88	631.97	631.06	1.81
634.09	633.23	632.37	631.51	1.72
634.40	633.59	632.77	631.95	1.63
634.71	633.94	633.17	632.40	1.54
635.02	634.30	633.57	632.84	1.45
635.33	634.65	633.97	633.29	1.36
635.63	635.00	634.36	633.72	1.27
635.91	635.32	634.73	634.14	1.18
636.17	635.63	635.08	634.53	1.09
636.42	635.92	635.42	634.92	1.00
636.65	636.20	635.74	635.28	.91
636.86	636.45	636.04	635.63	.82
637.06	636.70	636.33	635.96	.73
637.24	636.92	636.60	636.28	.64
637.41	637.14	636.86	636.58	.55
637.56	637.33	637.10	636.87	.46
637.69	637.51	637.32	637.13	.37
637.81	637.72	637.53	637.34	.28
637.91	637.91	637.72	637.53	.19
638.96	637.97	637.78	637.59	.18
638.11	638.18	637.99	637.80	.12
638.24	638.37	638.18	637.99	.06
638.34	638.53	638.34	638.15	0
638.48	638.67	638.48	638.29	0

STATION	FUTURE LANE 20' Rt ℄	LEFT EDGE 32' Rt ℄	EASTBOUND 44' Rt ℄	RIGHT EDGE 56' Rt ℄	SUPER ELEVATION
1193+00	629.60	628.60	627.60	626.60	2.00
+25	630.10	629.10	628.10	627.10	2.00
+50	630.60	629.60	628.60	627.60	2.00
C.S. +69.22	630.98	630.00	629.02	628.03	1.97
+89.22	631.38	630.42	629.47	628.51	1.91
1194+09.22	631.78	630.87	629.96	629.05	1.82
+29.22	632.18	631.31	630.45	629.58	1.73
+49.22	632.58	631.76	630.94	630.1	1.64
+69.22	632.98	632.20	631.43	630.65	1.55
+89.22	633.38	632.65	631.91	631.18	1.47
1195+09.22	633.78	633.09	632.40	631.71	1.38
+29.22	634.17	633.53	632.88	632.24	1.29
+49.22	634.54	633.94	633.34	632.74	1.20
+69.22	634.89	634.33	633.78	633.22	1.11
+89.22	635.23	634.72	634.21	633.70	1.02
1196+09.22	635.55	635.08	634.62	634.15	0.93
+29.22	635.85	635.43	635.01	634.59	0.84
+49.22	636.14	635.76	635.39	635.01	0.75
+69.22	636.41	636.08	635.75	635.42	0.66
+89.22	636.67	636.38	636.10	635.81	0.57
1197+09.22	636.91	636.67	636.42	636.18	0.49
+29.22	637.13	636.93	636.73	636.53	0.40
+49.22	637.34	637.21	637.07	636.88	0.33
S.T. +69.22	637.53	637.46	637.39	637.20	0.26
+75	637.59	637.53	637.47	637.28	0.25
1198+00	637.80	637.79	637.78	637.59	0.20
+25	637.99	638.03	638.07	637.88	0.15
+50	638.15	638.24	638.33	638.14	0.10
+75	638.29	638.43	638.57	638.38	0.05
1199+00	638.40	638.59	638.78	638.59	0.00

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERELEVATION TABLES U.S.R. 35 ℄ MEDIAN

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	C.S.R.	R.M.S.			

FED. AID DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
2	OHIO	F-FG-674(10)		26	240

ROSS COUNTY
ROS-35-21.23

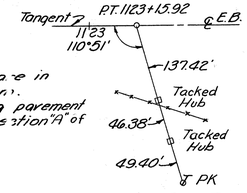
PROPOSED BRIDGE DATA

Type: Continuous Concrete Slab with Concrete Substructure - Separate Structures
Spans: 44'-0" - 55'-0" - 44'-0"
Roadway: 40'-0" f/f Parapet Walls
Load Frequency: CF-400(57)
Skew: 1°-00' L.F. Westbound
4°00' R.F. Eastbound
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 (25' Long)
Railing: Aluminum Rail and Supports and Concrete Parapet
Alignment: Tangent
Bridge No. ROS-35-2129 R&L

UTILITY OWNERS

COLUMBUS & SOUTHERN OHIO ELECTRIC CO.
20 East Main St., Chillicothe, Ohio
OHIO FUEL GAS CO.
26 West Main St., Chillicothe, Ohio
NORFOLK & WESTERN RAILWAY COMPANY
ROANOKE, VIRGINIA
CHILLICOTHE TELEPHONE CO.
58 E. Main St., Chillicothe, Ohio

NOTE: All elevations shown are in reference with U.S.G.S. Datum. Typical Section of adjoining pavement is similiar to the typical Section "A" of this Project.



REFERENCE POINT

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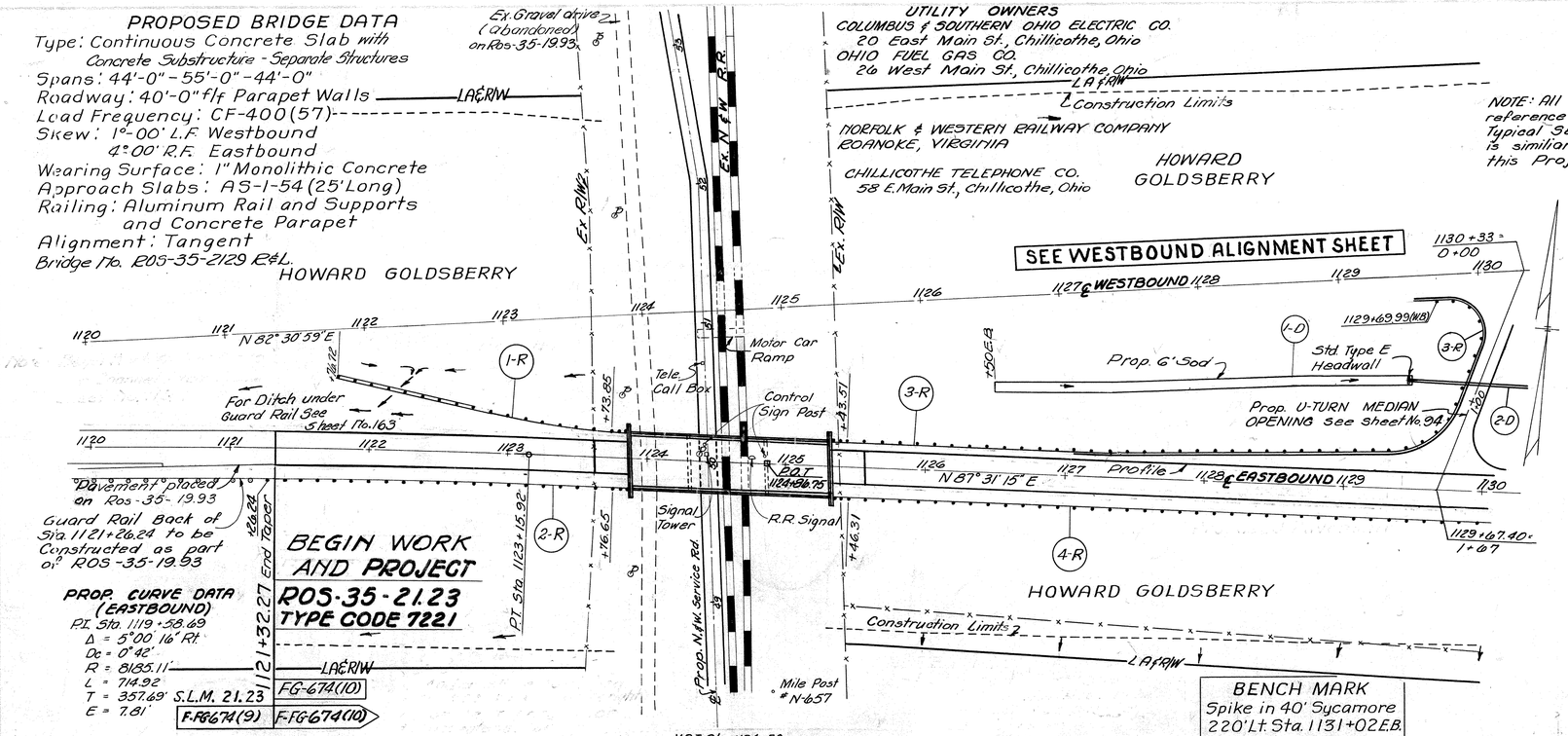
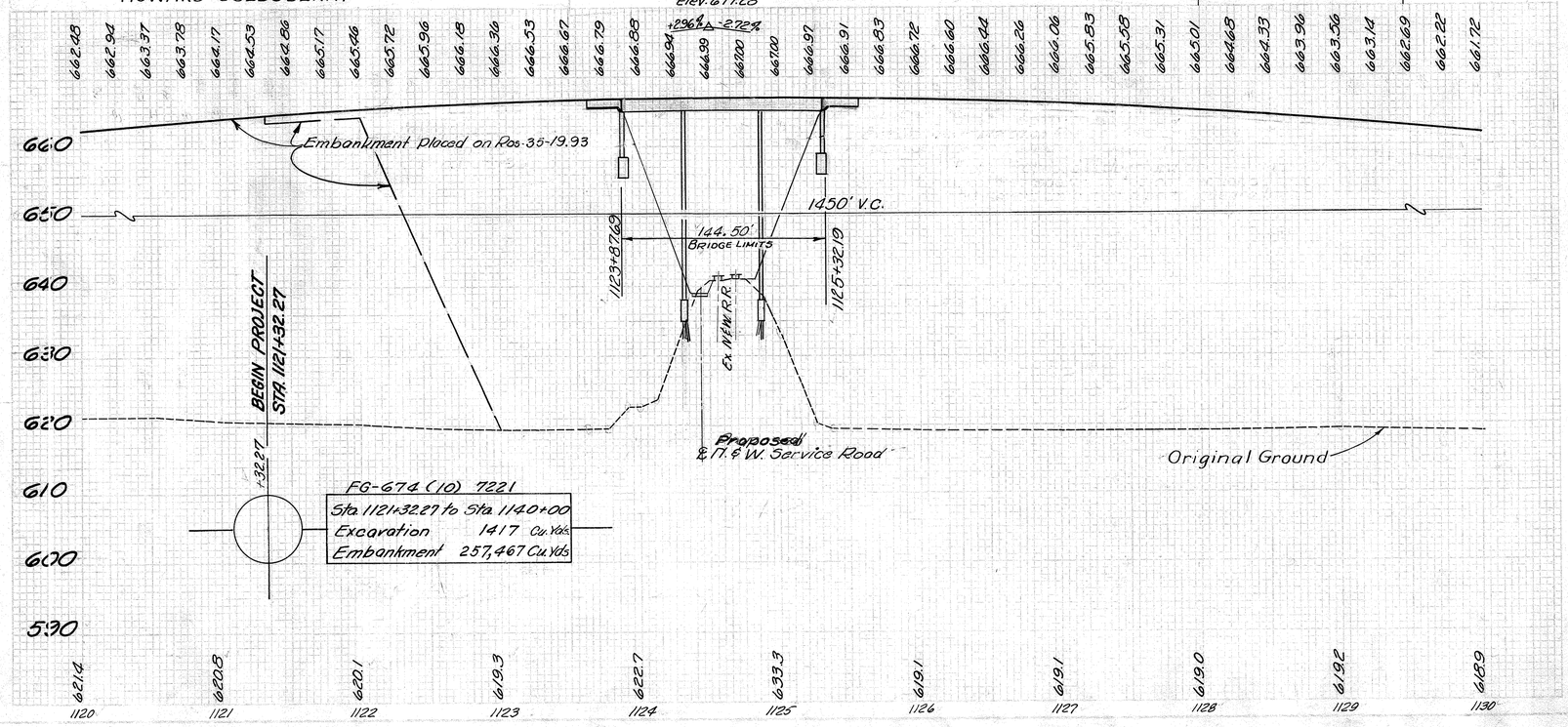


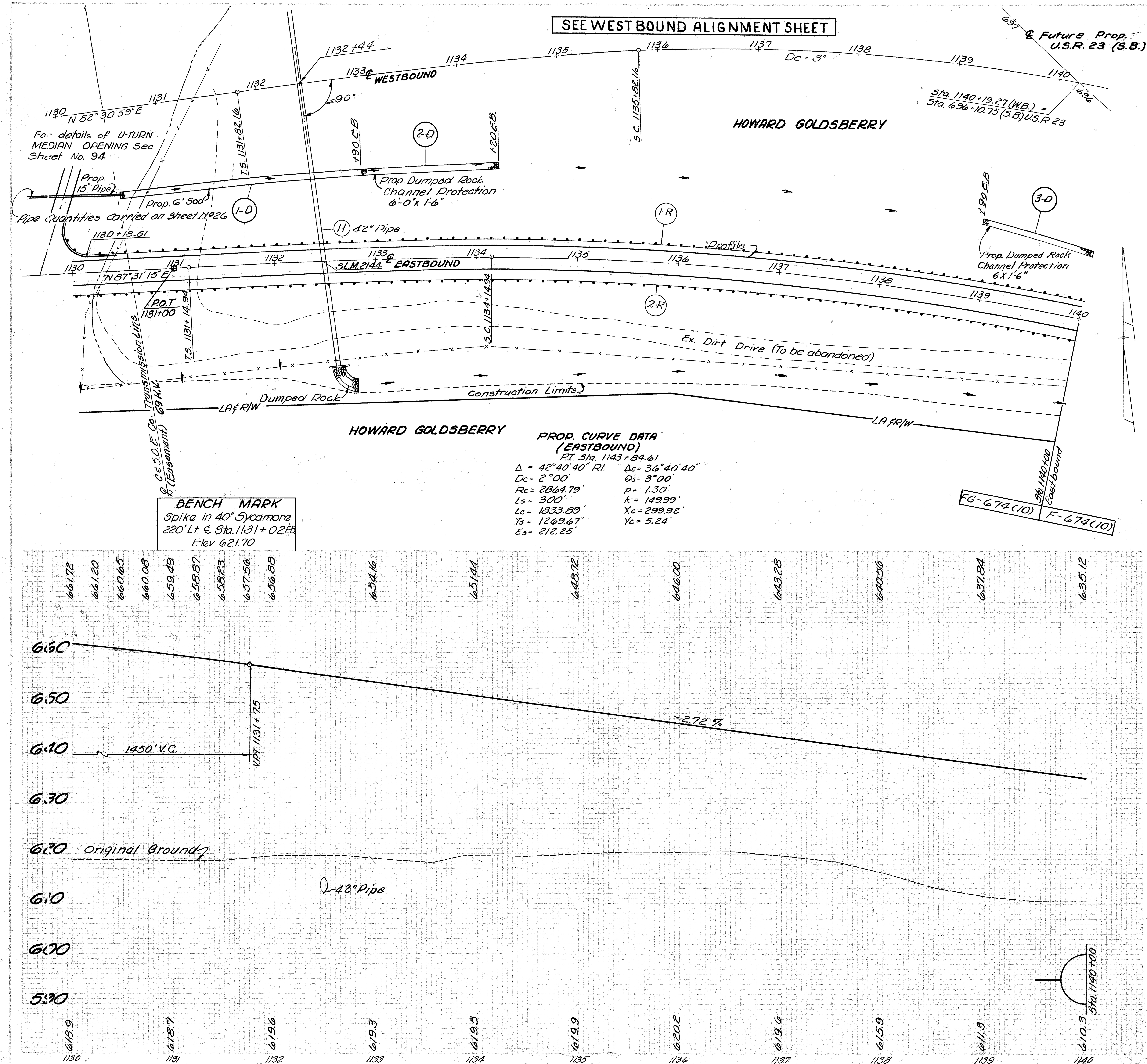


FG-674 (10) 100% STATE PARTICIPATION — ROADWAY ~ QUANTITIES ~ DRAINAGE

Item		Description	Side	Station to Station	Sheet No.	Reference or Structure No.	Quantity
I-2		Masonry Std Type E Headwall					2 Ea.
I-10		Sodding					200 0.32
I-1		Pipe Class A-1 Sec. M-6.4(c)					112 200 0.32
I-15		Guard Rail Steel Beam Type Deep					100
	1-R		Lt.	1121+76.72 to 1123+36.35			112.50
	2-R		Rt.	1121+26.24 to 1123+89.15			262.50
	3-R		Lt.	1123+31.01 to 1129+69.99 (WB)			566.50
	4-R		Rt.	1125+33.81 to 1130+00			466.19
I-15		Guard Rail Steel Beam Type Deep	L.F.				100
	1-D		Lt.	1126+50 to 1129+52 E.B.			1423.68
	2-D		Lt.	1129+41 to 1130+53 E.B.	94		
				Totals 100% State Participation			
				FG-674 (10) TOTALS			

STA. 1120 TO STA. 1130 (EASTBOUND)

ROSS COUNTY
ROS-35-21.23



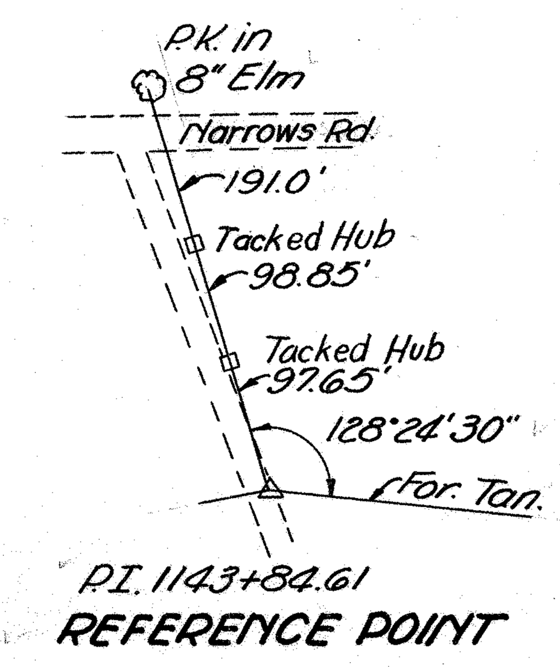
ROADWAY ~ QUANTITIES ~ DRAINAGE

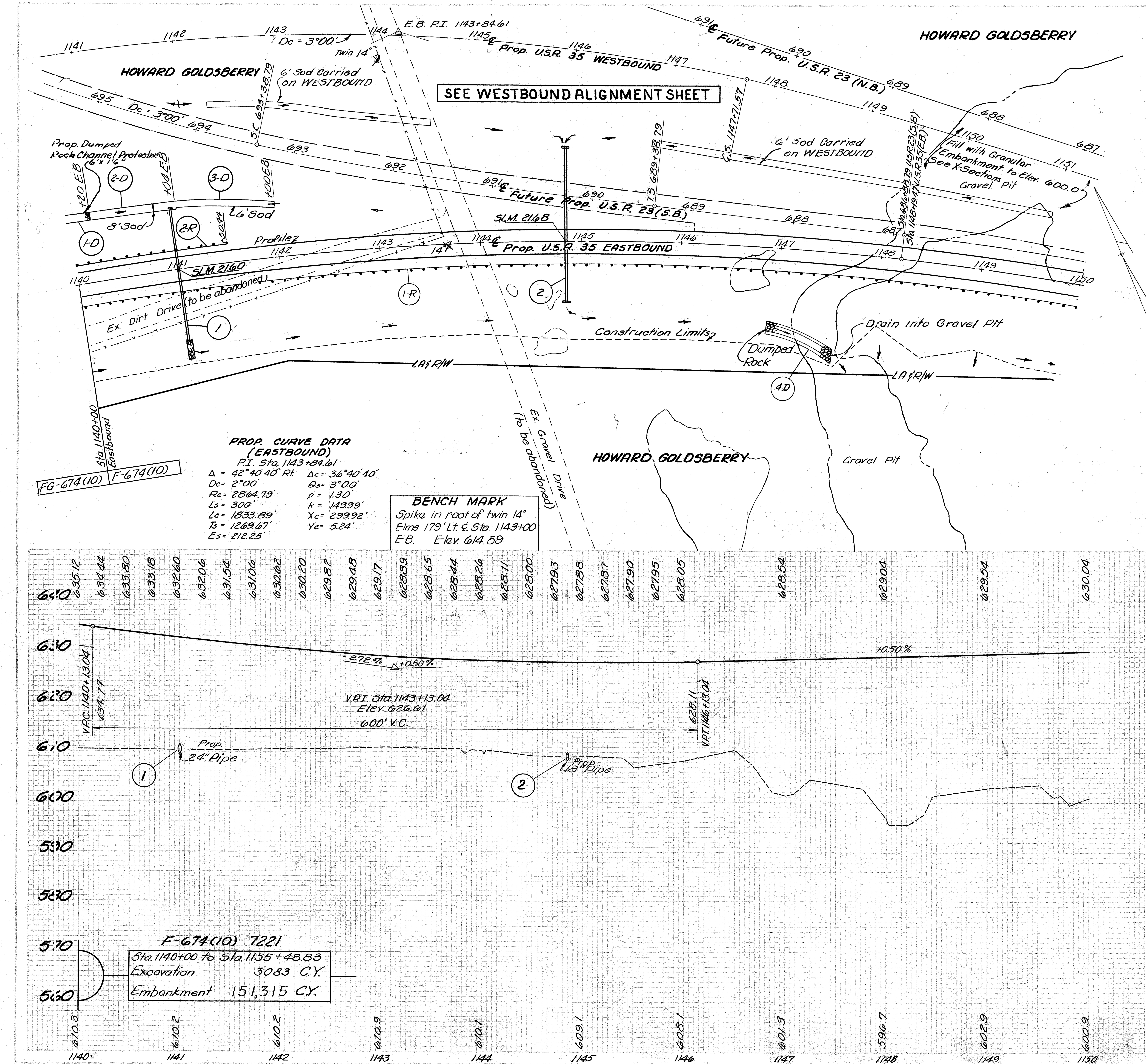
FG-674(10)

Reference or Structure No.	Sheet No.	Station to Station	Side	I-15 Guard Rail Steel Beam Type Deep (L.F.)	L-10 Sodding (S.Y.)	I-10 Dumped Rock Channel Protection (C.Y.)
1-R		1130+18.51 to 1140+00	Lt.	986.11		
2-R		1130+00 to 1140+00	Rt.	996.25		
1-D		1130+51 to 1132+90 E.B.	Lt.		159	
2-D		1132+90 to 1134+20 E.B.	Lt.			43
3-D		1138+90 to 1140+00 E.B.	Lt.			37
11	119	1132+44 W.B.				
		FG-674(10) TOTALS		1,982.36	159	80

STA. 1130 TO STA. 1140 (EASTBOUND)

ROSS COUNTY
ROS-35-21.23





F-674(10) ~ ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	Sheet No.	Station to Station	Side	I-15 Guard Rail Steel Beam Type Deep (L.F.)	L-10 Sodding (S.Y.)	I-10 Dumped Rock Channel Protection (C.Y.)
1-R		Sta. 1140+00 to 1150+00	Rt.	992.32		
2-R		Sta. 1140+00 to 1141+50.44	Lt.	151.39		
1-D		1140+00 to 1140+20 E.B.	Lt.			7
2-D		1140+20 to 1141+04 E.B.	Lt.		75	
3-D		1141+04 to 1142+00 E.B.	Lt.		67	
4-D		1146+90 to 1147+60 E.B.	Rt.			80
1	114	1141+00	Lt.&Rt.			
2	115	1144+85	Lt.&Rt.			
F-674(10) TOTALS				1143.71	142	87

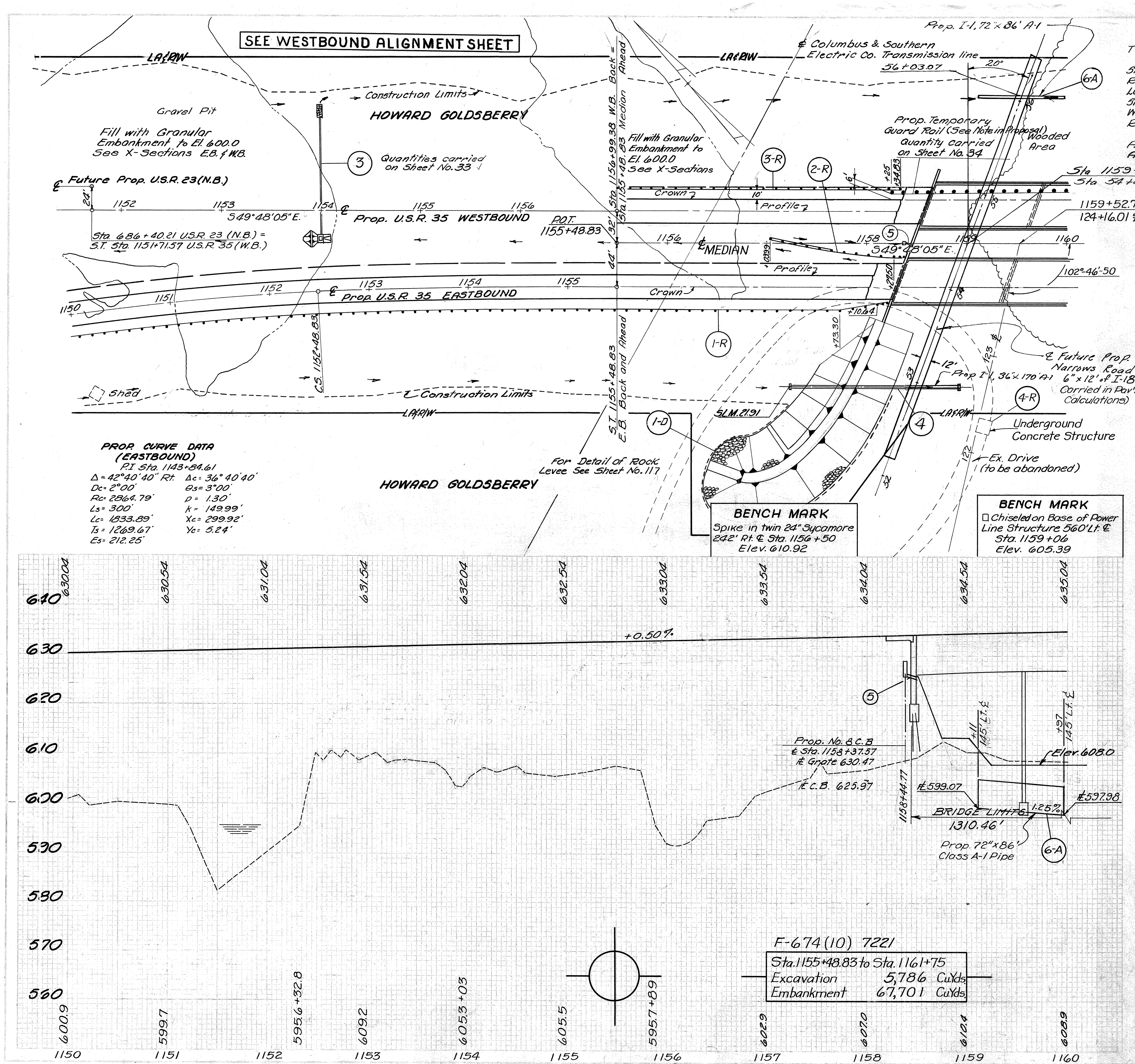
STA. 1140 TO STA. 1150 (EASTBOUND)

ROSS COUNTY
ROS-35-21.23

PROPOSED BRIDGE DATA

ROS-35-2194 R.&L.

TYPE: Welded Hinged Girder with concrete deck and substructure. Two Separate Structures
SPANS: 108'-10"~8@116'-0"~108'-10" c/c Bearings
ROADWAY: 42' f/f 2'-3" Safety Curbs
LOAD FREQUENCY: C.F. 2000 (57)
SKEW: 20°-0' L.F.
Wearing Surface: 1" Monolithic Concrete
RAILING: Aluminum rail and supports and concrete parapet.
ALIGNMENT: Tangent
APPROACH SLABS AS-1-54 (25' long)



SEE WESTBOUND ALIGNMENT SHEET
LA&R/W
℄ Columbus & Southern Electric Co. Transmission line
56+03.07
Prop. I-1, 72"x86' A-1
Construction Limits
HOWARD GOLDSBERRY
Gravel Pit
Fill with Granular Embankment to El. 600.0 See X-Sections E.B. & W.B.
Quantities carried on Sheet No. 33
Prop. Temporary Guard Rail (See Note in Proposal) Quantity carried on Sheet No. 34
Wooded Area
Sta. 1159+01 = Sta. 54+48.76
1159+52.77 U.S.R. 35 = 124+16.01 ℄ Channel Excavation
Future Prop. U.S.R. 23 (N.B.)
S49°48'05"E.
℄ Prop. U.S.R. 35 WESTBOUND
P.O.T. 1155+48.83
Sta. 686+40.21 U.S.R. 23 (N.B.) = S.T. Sta. 1151+71.57 U.S.R. 35 (W.B.)
Sta. 1156+99.38 W.B. Back = Sta. 1155+48.83 Median Ahead
S.T. 1155+48.83 E.B. Back and Ahead
℄ MEDIAN
Crown
Profile
℄ Prop. U.S.R. 35 EASTBOUND
C.S. 1152+48.83
102°46'50
℄ Future Prop. Narrows Road 6"x12" of I-18 Carried in Pav't. Calculations)
Prop. I-1, 36"x170' A-1
Shed
Construction Limits
S.L.M. 21.91
Underground Concrete Structure
Ex. Drive (to be abandoned)
For Detail of Rock Levee See Sheet No. 117
HOWARD GOLDSBERRY
PROP. CURVE DATA (EASTBOUND)
P.I. Sta. 1143+84.61
Δ=42°40'40" Rt. Δc=36°40'40'
Dc=2°00' θs=3°00'
Rc=2864.79' p=1.30'
Ls=300' k=149.99'
Lc=1833.89' Xc=299.92'
Ts=1269.67' Yc=5.24'
Es=212.25'
BENCH MARK
Spike in twin 24" Sycamore 242' Rt. ℄ Sta. 1156+50 Elev. 610.92
BENCH MARK
Chiseled on Base of Power Line Structure 560' Lt. ℄ Sta. 1159+06 Elev. 605.39
630.04
630.54
631.04
631.54
632.04
632.54
633.04
633.54
634.04
634.54
635.04
+0.50%
Prop. No. 8 C.B. ℄ Sta. 1158+37.57 ℄ Grate 630.47
℄ C.B. 625.97
℄ 599.07
℄ 597.98
Elev. 608.0
BRIDGE LIMITS 1310.46'
1.25%
Prop. 72"x86' Class A-1 Pipe
640
630
620
610
600
590
580
570
560
600.9
599.7
595.6+32.8
609.2
605.3+03
605.5
595.7+89
602.9
607.0
610.4
608.9
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160

F-674(10) 7221

Sta. 1155+48.83 to Sta. 1161+75		
Excavation	5,786	Cu.Yds.
Embankment	67,701	Cu.Yds.

F-674(10) 100% STATE PARTICIPATION ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	Sheet No.	Station to Station	Side	I-15 Guard Rail Steel Beam Type Deep (Lin.Ft.)	I-15 Guard Rail Steel Beam Type Deep. Barrier (Lin.Ft.)	S-24 Removal of Existing Structure (Lump)	I-1 Pipe 12" Class A-1 (Lin.Ft.)	I-1 Pipe 12" Class E-1 (Lin.Ft.)	I-8 Catch Basin Std. No. 8 (Each)	I-10 Dumped Rock Channel Protection (Cu.Yds.)
1-R		1150+00 to 1158+23.07	Rt.	820.24						
2-R		1157+03.99 to 1158+40	Lt.&Rt.	75.00	62.5					
3-R		1155+48.83 to 1158+34.83	Lt.	286.00						
4-R		1159+20	Rt.			Lump				
1-D	117	1158+46.10	Rt.							1692
3	70	1154+00 WB	Rt.&Lt.							
4	116	1158+46.10	Rt.							
5	117	1158+37.57	℄					7	1	
6-A		56+03 Future Prop. Narrows Rd.	℄				86			
Totals 100% State Participation					62.5					
F-674(10) TOTALS				1181.24	62.5	Lump	86	7	1	1692

EASTBOUND STA. 1150 TO STA. 1160 (MEDIAN)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

30
240

ROSS COUNTY
ROS-35-21.23

F-FG-674(10)
FG-674 (10)
SLM-21.23

BEGIN WORK AND PROJECT
ROS-35-21.23
STA. 1121+32.27

NOTE:
Guard Rail Back of Sta.1121+26.52 to be Constructed as part of ROS-35-19.93

HOWARD GOLDSBERRY

LA&RIW

1-R

Begin Taper Sta.1122+60 +64.02

End Taper Sta.1123+60 +63.52 +76.02

+26.52

Ex. N & W. R.R.

Ex. R/W

Note:
FOR PROPOSED BRIDGE DATA SEE EASTBOUND ALIGNMENT SHEET. No. 26

HOWARD GOLDSBERRY

LA&RIW

Construction Limits

2-R

+45.68

1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130

℄ WESTBOUND N82°30'59"E

Profile

1129+69.99

+50 E.B.

3-R

Pipe Quantities carried on Sheet No. 26

15"

Prop. 6'30d Carried on E.B. Alignment Sheet

Prop. U-TURN MEDIAN OPENING See Sheet No. 94

+44.99

Motor Car Ramp

Tele Call Box

Control Sign Post

1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130

Dc = 0°-42'

HOWARD GOLDSBERRY

Typical Section Adjacent Pavement similar to Typical Section "E" this Project

PT. 1123+15.92

Ex. R/W

LA&RIW

Signal Tower

R.R. Signal

N 87° 31' 15" E

℄ EASTBOUND

50 + 00 Bk = Sta. 1124+55.84 U.S.R. 35 E.B.

Proposed N & W. R.Y. Service Road

HOWARD GOLDSBERRY

SEE EASTBOUND ALIGNMENT SHEET

Construction Limits

LA&RIW

670 660 650 640 630 620 610 600

663.22 663.68 664.12 664.53 664.91 665.27 665.60 665.90 666.18 666.43 666.66 666.86 667.04 667.18 667.31 667.40 667.47 667.52 667.54 667.53 667.49 667.43 667.35 667.23 667.10 666.93 666.74 666.52 666.28 666.01 665.72 665.40 665.05 663.97 662.53

+2.94% V.P.I. Sta. 1123+00 Elev. 672.61 -1.44%

-1.44%

Embankment placed on Ros-35-19.93

1123+88.22

BRIDGE LIMITS - 144.50'

1126+32.72

1050' V.C.

V.P.T. 1128+25

EX. N & W R.R.

BEGIN PROJECT STA. 1121+32.27

Proposed N & W R.Y. Service Road

Original Ground

FG-674(10) 7221
Sta. 1121+32.27 to Sta. 1138+99.57

Excavation	3884	Cu. Yds.
Embankment	271,611	Cu. Yds.

+32.27

619.7 619.2 619.2 619.0 622.4 623.0 619.1 619.3 619.3 619.5 619.7

1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130

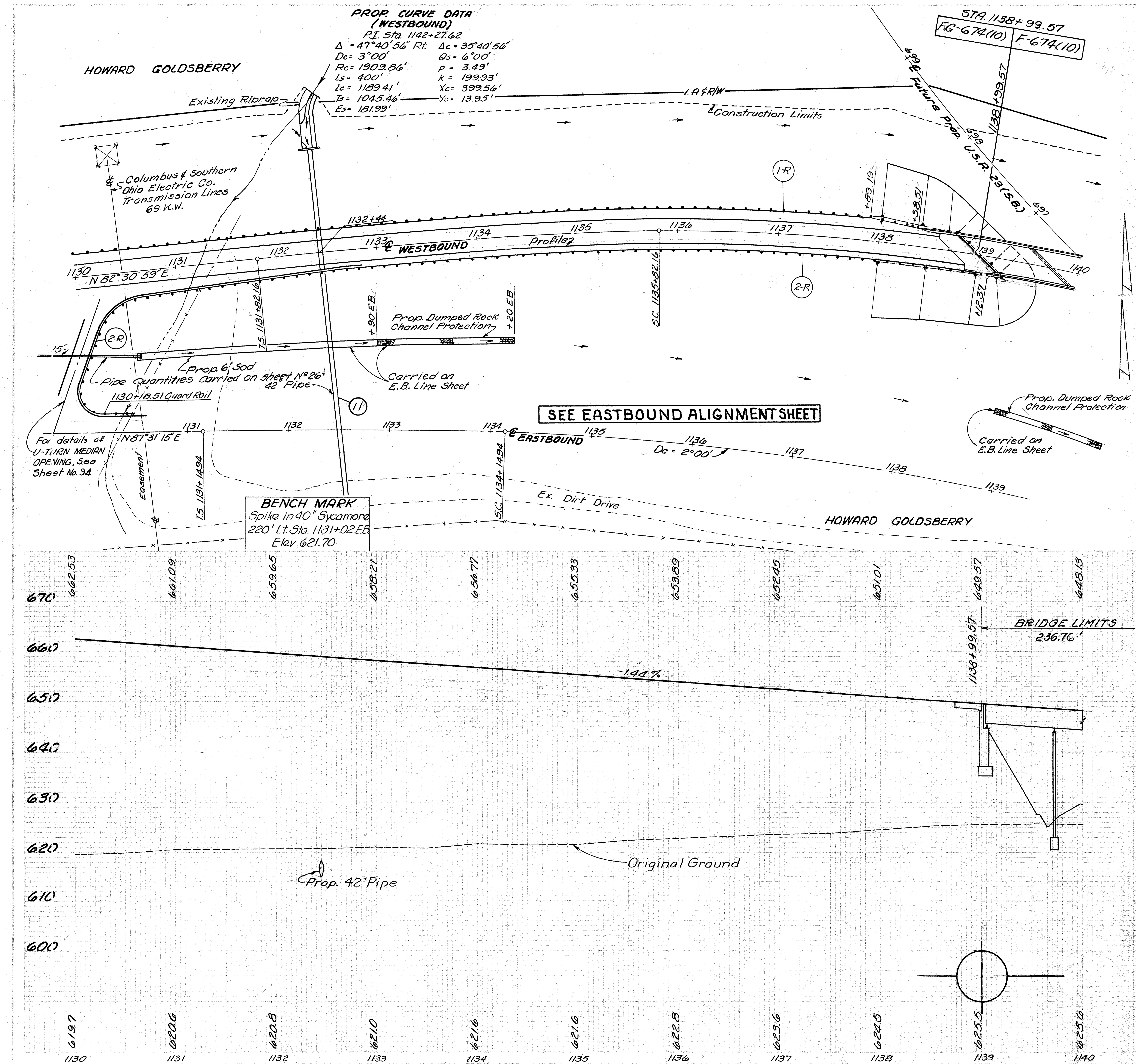
ROADWAY ~ QUANTITIES ~ DRAINAGE

FG-674(10)

Reference or Structure No.	Sheet No.	Station to Station	Side		F.15 Guard Rail Steel Beam Type Deep L.F.
1R		1121+26.52 to 1123+88.22	Lt.		262.5
2R		1125+33.18 to 1130+00	Lt.		466.82
3R		1125+32.49 to 1129+69.99	Rt.		437.30
FG-674(10) TOTALS					1166.82

STA. 1120 TO STA. 1130 (WESTBOUND)

ROSS COUNTY
ROS-35-21.23



FG-674(10) ROADWAY ~ QUANTITIES ~ DRAINAGE

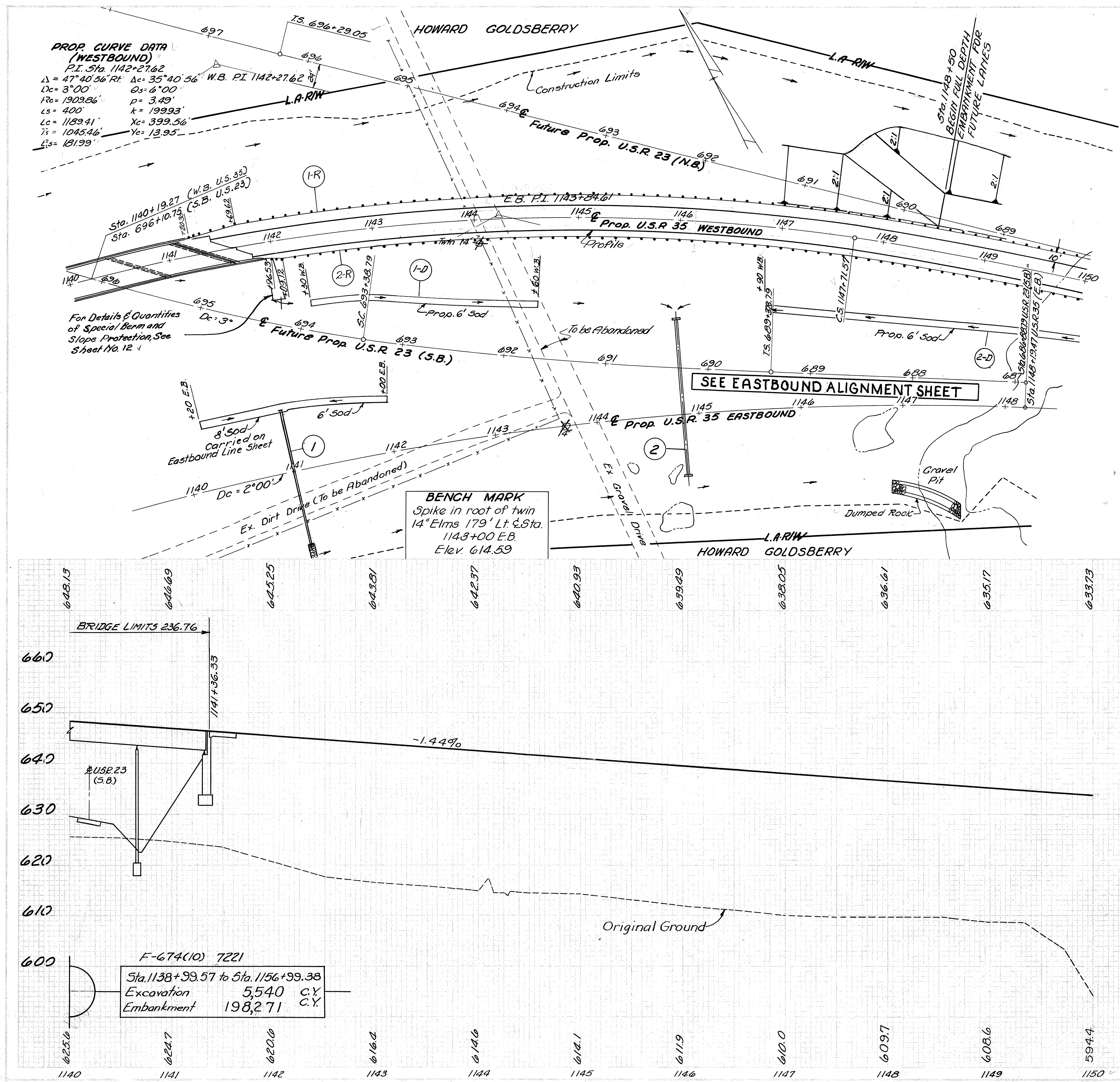
Reference or Structure No.	Sheet No.	Station To Station	Side	I-15 Guard Rail Steel Beam Type Deep (Lin. Ft.)
1-R		1130+00 to 1138+38.51	Lt.	843.68
2-R		1130+18.51 (E.B.) to 1139+12.37	Rt.	1,000.00
	11	1132+44 W.B.		
		FG-674(10) TOTALS		1843.68

STA. 1130 TO STA. 1140 (WESTBOUND)

ROSS COUNTY
ROS-35-21.23

PROP. BRIDGE DATA

Type: Continuous Welded Girder with Concrete Deck and Substructure.
Spans: 66'-6" - 95'-0" - 66'-6"
Roadway: 30'-0" f/f of 2'-3" Safety Curbs.
Load Frequency: C.F. 400 (57)
Skew: 59° 00' R.F.
Approach Slab: AS-1-54 (25' Long)
Railing: Aluminum Rail and Supports and Concrete Parapet
Alignment: 3° 00' Curve.
Superelevation: 0.083 Ft. per Ft.
Bridge No. ROS-35-2157L
Wearing Surface: 1" Monolithic Concrete



F-674(10) ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	Sheet No.	Station to Station	Side	I-15 Guard Rail Steel Beam Type Deep (Lin. Ft.)	L-10 Sodding (Sq. Y.)
1-R		1141+20.30 to 1150+00	Lt.	889.62	
2-R		1141+96.53 to 1150+00	Rt.	808.67	
1-D		1142+30 to 1144+60 WB	Rt.		147
2-D		1146+90 to 1150+00 WB	Rt.		202
1	114	1141+00 E.B.	Lt.&Rt.		
2	115	1144+85 E.B.	Lt.&Rt.		
F-674(10) TOTALS				1698.29	349

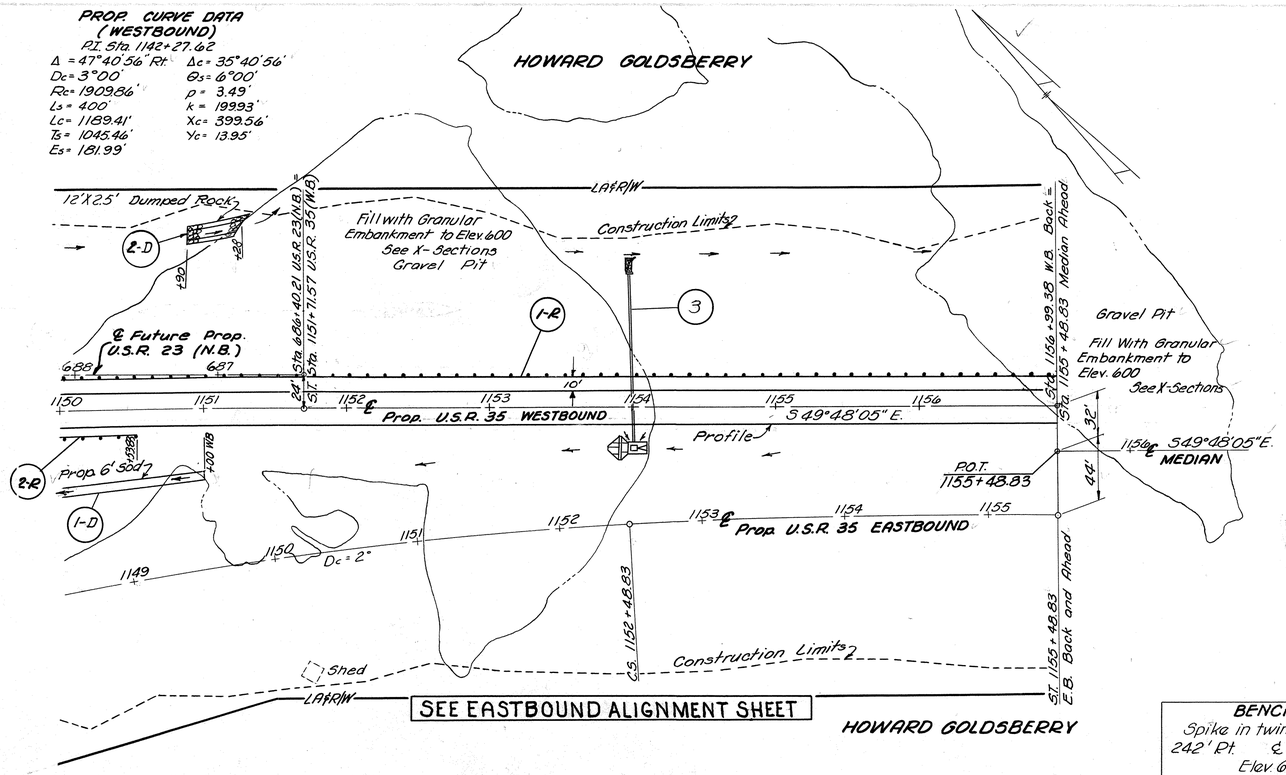
STA. 1140 TO STA. 1150 (WESTBOUND)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

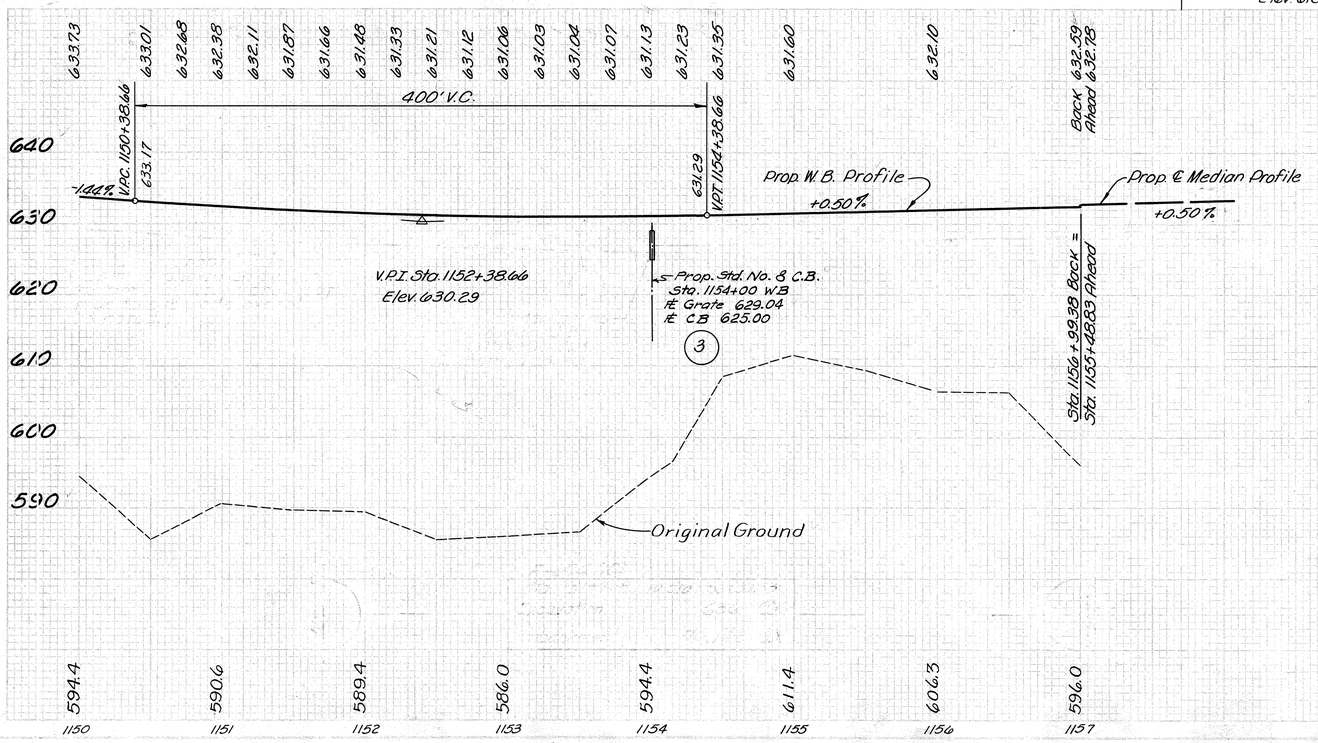
33
240

ROSS COUNTY
ROS-35-21.23

PROP. CURVE DATA (WESTBOUND)
P.I. Sta. 1142+27.62
Δ = 47°40'56" Rt Δc = 35°40'56"
Dc = 3°00' θs = 6°00'
Rc = 1909.86' p = 3.49'
Ls = 400' k = 199.93'
Lc = 1189.41' Xc = 399.56'
Ts = 1045.46' Yc = 13.95'
Es = 181.99'



BENCH MARK
Spike in twin 24" Sycamore
242' Pt ℄ Sta. 1156+50
Elev. 610.92



F-674(10) ~ ROADWAY ~ QUANTITIES

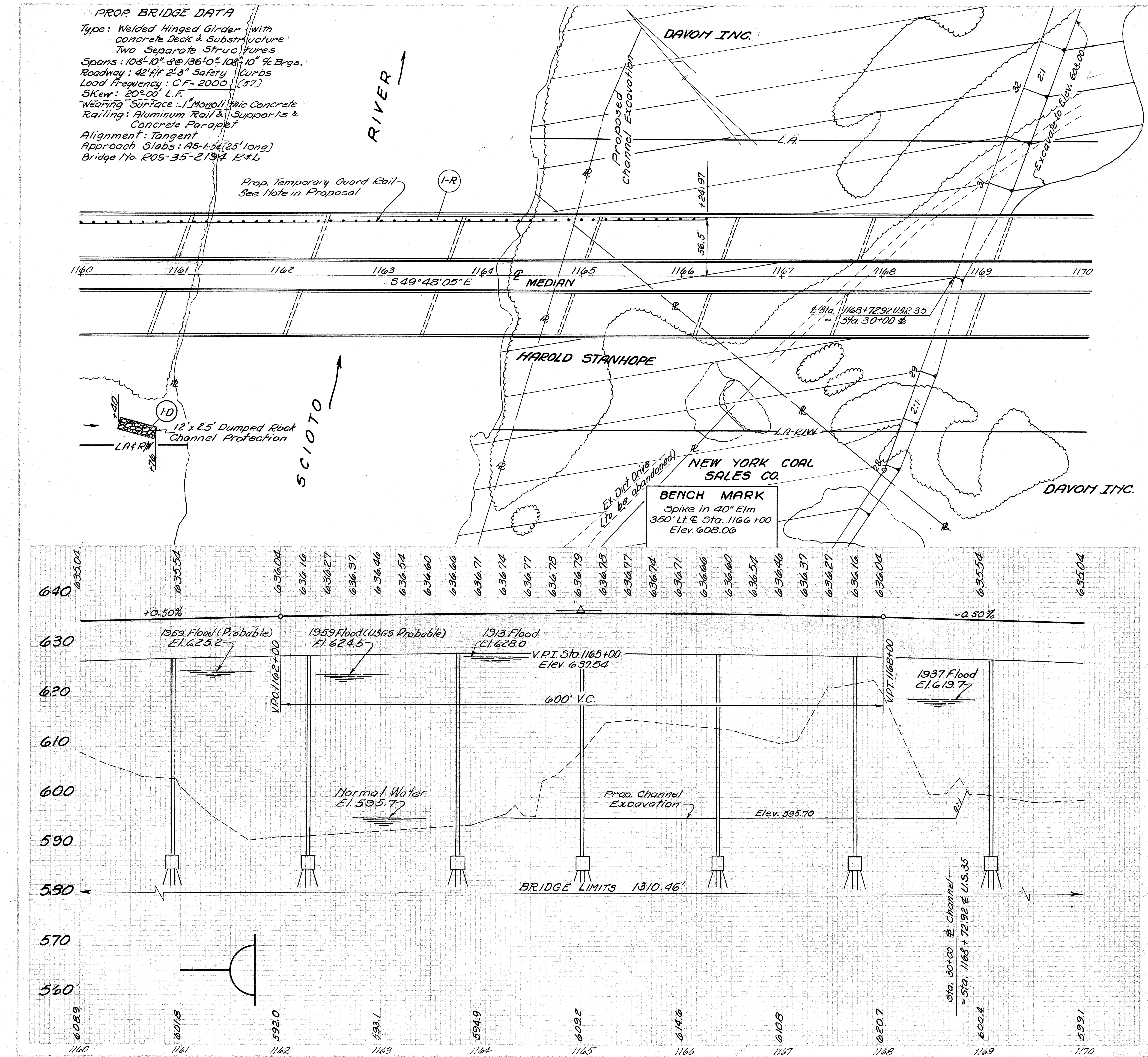
Reference or Structure No.	Sheet No.	Station to Station	Side	Item		Unit	Quantity
1-R		1150+00 to 1156+99.38	Lt.	T-15	Guard Rail Steel Beam Type Deep	Lin.Ft.	699.38
2-R		1150+00 to 1150+53.83	Rt.	T-15	Guard Rail Steel Beam Type Deep	Lin.Ft.	53.83
1-D		1150+00 to 1154+00 W.B.	Rt.				
2-D		1150+90 to 1151+28 W.B.	Lt.				
3	70	1154+00 W.B.	Lt. & Rt.				
				F-674(10) TOTALS			753.21

F-674(10) ~ DRAINAGE ~ QUANTITIES

T-0	Sodding	Sq. Y.			67
T-10	Dumped Rock Channel Protection	Cu. Y.		42	
T-2	Headwall Standard Type HW-E	Cu. Y.		0.23 2.22	0.23 44.22 67
T-5	25° Bend for Class F-4 Pipe	12" Each	2	2	2
T-1	Class B-1	12" Lin.Ft.	72		72
T-1	Class F-4 Pipe	12" Lin.Ft.	56		56
T-8	Catch Basin Std. No. 8	Each	1		1

STA. 1150 TO STA. 1156+99.38 (WESTBOUND)

ROSS COUNTY
ROS-35-21.23



PROP. BRIDGE DATA
Type: Welded Hinged Girder with concrete Deck & Substructure Two Separate Structures
Spans: 108'-10"-3@136'-10"-108'-10" c/c Brgs.
Roadway: 42' f/f 2'-3" Safety Curbs
Load Frequency: CF-2000 (57)
Skew: 20°00' L.F.
Wearing Surface: 1" Monolithic Concrete
Railing: Aluminum Rail & Supports & Concrete Parapet
Alignment: Tangent
Approach Slabs: AS-1-54 (25' long)
Bridge No. ROS-35-2194 R&L
RIVER
SCIOTO
DAVON INC.
Proposed Channel Excavation
L.A.
Excavate to Elev. 603.00
Prop. Temporary Guard Rail See Note in Proposal
1-R
+24.97
56.5
S49°48'05"E
MEDIAN
℄ Sta. 1168+72.92 U.S.R. 35 = Sta. 30+00 ℄
HAROLD STANHOPE
L.A.-R/W
1-D
12' x 2.5' Dumped Rock Channel Protection
L.A. & R/W
NEW YORK COAL SALES CO.
Ex. Dirt Drive (to be abandoned)
BENCH MARK Spike in 40" Elm 350' Lt. ℄ Sta. 1166+00 Elev. 608.06
DAVON INC.
+0.50%
-0.50%
1959 Flood (Probable) El. 625.2
1959 Flood (USGS Probable) El. 624.5
1913 Flood El. 628.0
V.P.I. Sta. 1165+00 Elev. 637.54
V.P.C. 1162+00
V.P.T. 1168+00
600' V.C.
1937 Flood El. 619.7
Normal Water El. 595.7
Prop. Channel Excavation
Elev. 595.70
BRIDGE LIMITS 1310.46'
Sta. 30+00 ℄ Channel = Sta. 1168+72.92 ℄ U.S. 35

ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	Sheet No.	Station to Station	Side	I-15 Temporary Guard Rail As per Plan (Lin.Ft.)	I-10 Dumped Rock Channel Protection (Cu.Yds)
1-R		1158+25 to 1166+24.97	Lt.	800	
1-D		1160+40 to 1160+76	Rt.		42
F-674(10) TOTALS				800	42

F-674(10)

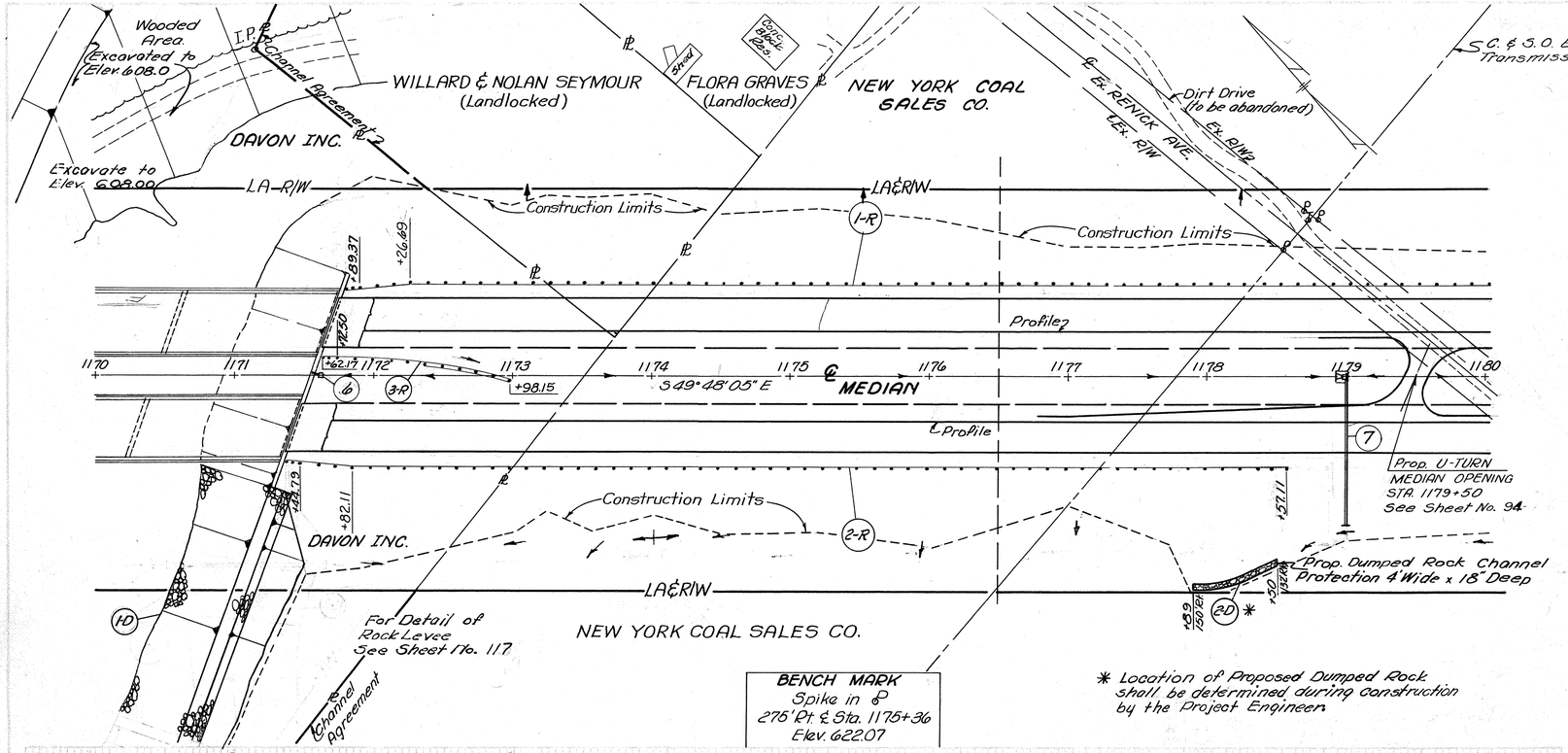
STA. 1160 TO STA. 1170 (MEDIAN)

FED. ROAD DISTRICT	STATE	PROJECT	
2	OHIO	F-FB-674(10)	

35
240

RECEIVED
AUG 30 1965

ROSS COUNTY
ROS-35-21.23



F-674(10) Sta. 1170+80 to Sta. 1205+00
Excavation 167 Cu.Yds.
Embankment 339,931 Cu.Yds.

F-674(10)-100% State ROADWAY - QUANTITIES - DRAINAGE

Reference or Structure No.	See Sheet Number	Station To Station	Side		Guard Rail Steel Beam Type Deep I-15 L.F.	Guard Rail Steel Beam Type Deep Barrier I-15 L.F.
1-R		1171+76.93 to 1180+00	Lt.		823.51	
2-R		1171+82.35 to 1178+57.11	Rt.		725.0	
3-R		1171+60.00 to 1172+98.15	℄		75.0	62.5
1-D	117	1171+53.90	Rt.			
2-D		1177+89 to 1178+50	Rt.			
6	117	1171+62.43	℄			
7	81	1179+00	℄			
Totals 100% State Participation						62.5
F-674(10) TOTALS					1623.51	

Reference or Structure No.	See Sheet Number	Station To Station	Side		I-10 Dumped Rock Channel Protection C.Y.	I-8 Catch Basin Std No. 8 Each	I-2 Headwalls Std. Type H.W.-E C.Y.	I-1 Pipe Class B-1 L.F.	I-1 Pipe Class E-1 L.F.
1-R		1171+76.93 to 1180+00	Lt.						
2-R		1171+82.35 to 1178+57.11	Rt.						
3-R		1171+60.00 to 1172+98.15	℄						
1-D	117	1171+53.90	Rt.						
2-D		1177+89 to 1178+50	Rt.						
6	117	1171+62.43	℄			1	0.23	109	7
7	81	1179+00	℄		1127 14	1	0.23	109	7
Totals 100% State Participation						2	0.23	109	7
F-674(10) TOTALS						2	0.23	109	7

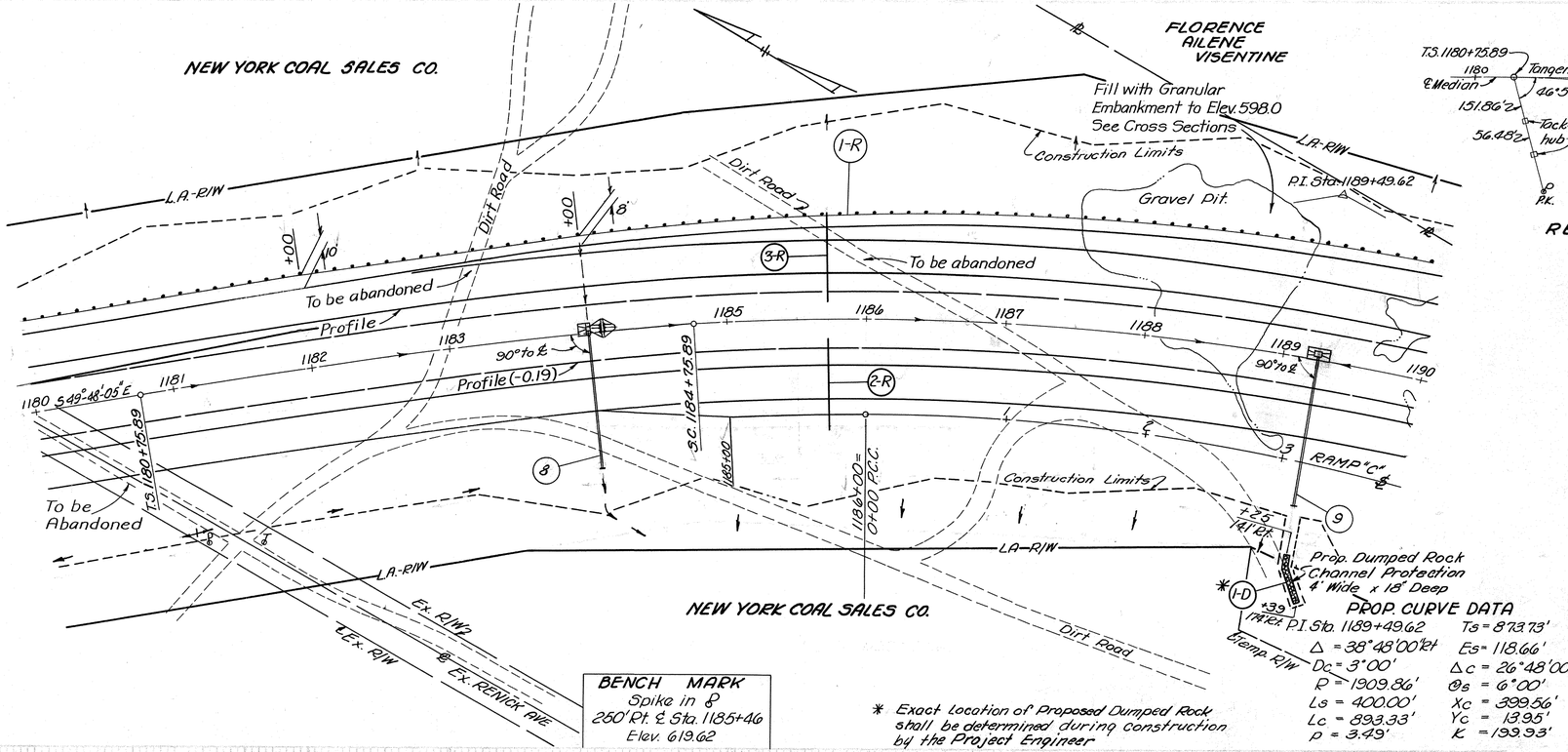
STA. 1170 TO STA. 1180 (MEDIAN)

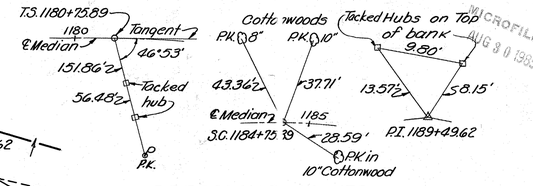
FED. ROAD DIV. | STATE | PROJECT | 2 | OHIO | F-FB-674(10)

36
240

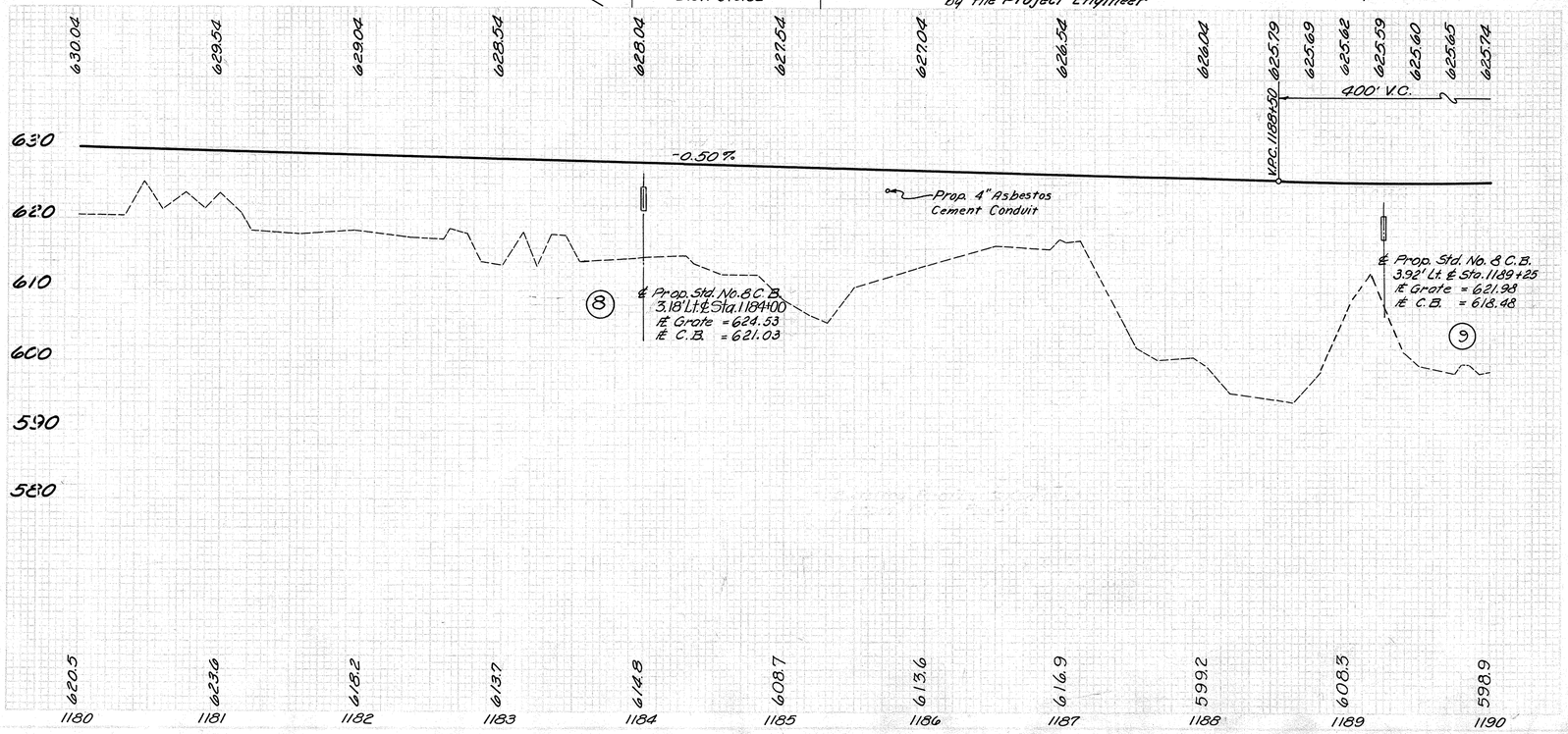
MICROFILMED AUG 30 1985

ROSS COUNTY
ROS-35-21.23





REFERENCE POINTS



PROP. CURVE DATA

Ts = 873.73'	
Δ = 38°48'00"Rt	Es = 118.66'
Dc = 3°00'	Δc = 26°48'00"
P = 1909.86'	Θs = 6°00'
Ls = 400.00'	Xc = 399.56'
Lc = 893.33'	Yc = 133.95'
p = 3.49'	K = 199.93'

ROADWAY - QUANTITIES

F-674(10)

See Sheet Number	Reference or Structure No.	Station to Station	Side		
	1-R	1180+00 to 1190+00	L.t.		
	2-R	1185+72	L.t.		
	3-R	1185+72	Rt.		
	1-D	1189+25 to 1189+39	Rt.		
8 82		1184+00	Rt.		
9 84		1189+25	Rt.		

1-10	Dumped Rock Channel Protection	Cu. Y.					8
1-8	Catch Basin Sta. No. 8	Each			1	1	2
1-1	Class B-1 12"	Lin. Ft.			104	104	208
1-2	Headwall Sta. Type HW-E	Cu. Y.			0.23	0.26	0.49
1-1	Class B-1 18"	Lin. Ft.			111		111
1-15	Guard Rail Steel Beam Type Deep	Lin. Ft.	102.70				102.70
5-25	3" Asbestos Cement Fiber Conduit	Lin. Ft.		64			128
				64			

F-674(10) TOTALS

STA. 1180 TO STA. 1190 (MEDIAN)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

ROSS COUNTY
ROS-35-21.23

BRIDGE NO. ROS-35-2271 R&L
PROPOSED BRIDGE DATA
TYPE: Continuous Steel Beam with Concrete Deck and Concrete Substructure Two Separate Structures
SPANS: 50'-9"-72'-6"-50'-9"
ROADWAY: 2@ 52'-0" f/f Parapet
LOAD FREQUENCY CF-2000(57)
SKEW: 2°-00' R.F.
WEARING SURFACE:
1" Monolithic Concrete
APPROACH SLABS: AS-1-54 (25' Long)
RAILING: Aluminum Rail and Supports with Concrete Parapets.
ALIGNMENT: Tangent.

REFERENCE POINT

F-674(10) 100% STATE ROADWAY - QUANTITIES - DRAINAGE

Reference or Structure No.	See Sheet Number	Station To Station	Side	I-15 Guard Rail Steel Beam Type Deep Barrier (L.F.)	I-15 Guard Rail Steel Beam Type Deep (L.F.)	I-5 12" x 25° Elbow for Class F-4 Pipe (Each)	I-1 Class B-1 15" (Lin. Ft.)	SPECIAL Septic Tank Cleaned and Disposed of (Each)	SPECIAL Cleaning Privy Vault (Each)	I-1 Class B-1 12" (L.F.)	I-1 Pipe Class F-4 12" (L.F.)	I-8 Catch Basin Std. No. 2-2-3 (Each)	I-2 Headwalls Std. Type HW-E (Cu.Y.)	I-8 Catch Basin Std. No. 6 (Each)	I-8 Catch Basin Std. No. 8 (Each)	I-10 Dumped Rock Channel Protection (Cu.Y.)
1-R		1190+00 to 1192+00	Lt.		208.28											
2-R		1195+40.34 to 1198+89.34	Lt.		350.0											
3-R		1197+53.98 to 1198+92.13	℄	62.5	75.0											
4-R		1193+74.64 to 1198+93.86	Rt.		512.5											
1-S		1197+40	Lt.						1							
2-S		1198+50±	Rt.					1								
10	118	1191+88.91	Lt. & Rt.				63			160			0.26	3	1	8
12	88	1198+50	Rt.			2				76	38	1	0.23			2
TOTALS 100% State Participation				62.5												
F-674(10) TOTALS					1145.78	2	63	1	1	236	38	1	0.49	3	1	10

STA. 1190 TO STA. 1200 (MEDIAN)

NOTE: All Right of Way shown on this sheet was purchased on ROS-35-22.82

S.L.M. 22.82
F-FG-674(10)

END PROJECT AND WORK STA. 1205+00

RAMP "B"

*For Details of Quantities of Special Berm & Slope Protection, See Sheet No 12

Ex. Guard Rail

Existing Temp. Guard Rail

Future 12' Lane

Profile

Ex. 2-2B C.B.

S=1°-00'-05" E.

Existing Storm Sewer

Future 12' Lane

Existing Temp. Guard Rail

EAST MAIN STR.

Ex. C.B. & Ex. Paved Gutter

℄ Existing 12" Pipe

RAMP "D"

Ex. Pipes

Ex. 48" Storm Sewer

NEW YORK COAL SALES CO.

DORTHY B. METZGER

RAY O. DUFFY

WALTER KUNZELMAN

Typical Section Adjacent Pavement Similar To Typical Section "U" This Project

Prop. Profile West Bound	638.79	638.78	638.74	638.68	638.59	638.48	638.34	638.18	637.99	637.78	637.54	637.28	636.99	636.68	636.34	635.98	635.59	635.18	634.74	634.28	633.79	633.30	632.85	632.41	632.01	631.63	631.29	630.96	630.67	630.40	630.17	629.95	629.77	629.61	629.49	629.38	629.31				
Prop. Profile East Bound	638.79	638.78	638.74	638.68	638.59	638.48	638.34	638.18	637.99	637.78	637.54	637.28	636.99	636.68	636.34	635.98	635.59	635.18	634.74	634.28	633.79				631.79		630.79	630.30	629.85	629.41	629.01	628.63	628.29	627.96	627.67	627.40	627.17	626.95	626.77	626.61	626.49

BRIDGE LIMITS = 178.50'

Sta. 1200+79.18

+2.00% -2.00%

640
630
620
610
600
590

Prop. E.B. and W.B. Profile

END PROJECT AND WORK STA. 1205+00

Embankment to Subgrade Elevation Placed on ROS-35-22.82

Ex. 2-2B Catch Basin

Prop. W.B. Profile

Prop. E.B. Profile

Ex. Storm Sewer System

1959 Flood

1000' V.C.

V.P.T. 1205+00

	620.2	620.4	618.9	618.3	617.3	618.4	618.7	619.1	618.0	617.0	616.7
	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210

PROPOSED BRIDGE DATA

TYPE: Continuous Steel Beam with concrete Deck and Concrete Substructure, Two Separate Structures.
SPANS: 50'-5" ~ 72'-6" ~ 50'-9".
ROADWAY: 2 @ 52'-0" f/f Parapet.
LOAD FREQUENCY: CF-2000 (57).
SKEW: 2°00' R.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLABS: AS-1-54 (25' long)
RAILING: Aluminum Rail and Supports with concrete Parapets.
ALIGNMENT: Tangent.
STRUCTURE NO. 205-35-2271 P.&L.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
ROS-35-21.23

F-674(10) 100% STATE PARTICIPATION ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No	Sheet No	Station to Station	Side			
1-R	I-15	Guard Rail Steel Beam Barrier Type Deep	Lt.	L.F.		
2-R	I-15	Guard Rail Steel Beam Type Deep	Rt.	L.F.	387.5	62.5
3-R		1200+79.18 to 1204+79.18	Rt.		75	62.5
		1200+58.89 to 1202+27.04	Rt.		387.5	
		1200+87.16 to 1204+74.66	Lt.			
		Totals-100% State Participation				62.5
		F-674(10) Totals				850.0

STA. 1200 to STA. 1210 (MEDIAN

SEEDING

END WIDTH	SY. YDS.
173	
1900	
169 0	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

39
240

ROSS COUNTY
ROS-35- 21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	5407		
		35	10,031
		0	10
		0	24
		0	9
		0	0

8:1
℄ 664.17
Quantity Limit
See Site Plan for ditch location
℄ 618.39
LA-R/W
666.36
1123+00
619.3
5:1
℄ 663.50
Embankment placed on ROS-35-19.93 Project
Quantity Limit
LA-R/W
665.46
1122+00
620.1
Begin Guard Rail Lt. Sta. 1121+76.72
4:1
℄ 660.4
Embankment placed on ROS-35-19.93
℄ 617.63
FG-674(10)
Sta. 1122+00 to Sta. 1140+00
Seeding & Protecting 35,080 Sq.Yds.
FG-674(10)
Sta. 1121+32.27 to Sta. 1140+00
Excavation = 1,417 Cu.Yds.
Embankment = 257,467 Cu.Yds.
Quantity Limit
LA-R/W
℄ 617.12
664.63
1121+32.27
620.6
Begin Guard Rail Rt. Sta. 1121+26.24
STA. 1122+00
STA. 1121+32.27
BEGIN PROJECT & BEGIN WORK
STA. 1121+32.27
1121+32.27 Ahead / Back
EAST BOUND STA. 1121+32.27 TO STA. 1123+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

40
240

ROSS COUNTY
ROS-35-21.23

STATIONING				END AREA		VOLUME	
FROM WESTING	TO EAST.			CUT	FILL	CUT	FILL
		Begin Guard Rail Lt. Sta. 1125+31.01	Begin Guard Rail Rt. Sta. 1125+33.81				
		℄ 653.9					
		℄ Quantity Limit					
160							
		666.95					
		1125+32.19					
	588	620.0					
		BRIDGE LIMIT STA. 1125+32.19					
			1124+82	0	5584		
						0	5190
51		Ahead 1124+82 Back		0	0		
0						0	0
0		Ahead 1124+40 Back					
39		End Guard Rail Lt. Sta. 1123+86.35	**BRIDGE LIMIT STA. 1123+87.69**	End Guard Rail Rt. Sta. 1123+89.15	1124+40	0	0
	607	℄ Quantity Limit					0 5841
		666.83					
151		**1123+82.5**				0	5485
	1485	621.5					29 16,641
173		Sta. 1123+00			Sta. 1123+00	19	5407

EAST BOUND STA. 1123+82.5 TO STA. 1125+32.19

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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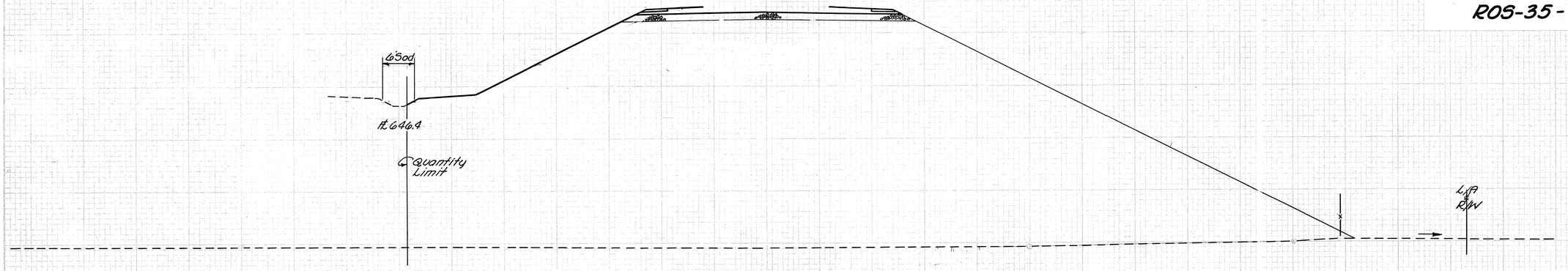
ROSS COUNTY
ROS-35-21.23

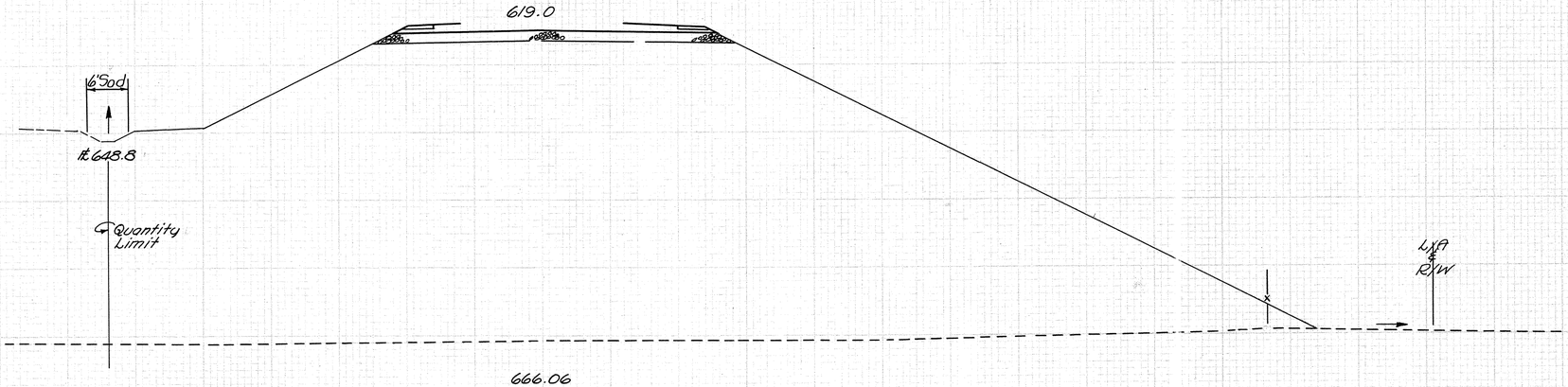
SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL



665.01
1128+00
619.0

170 — 0 5684

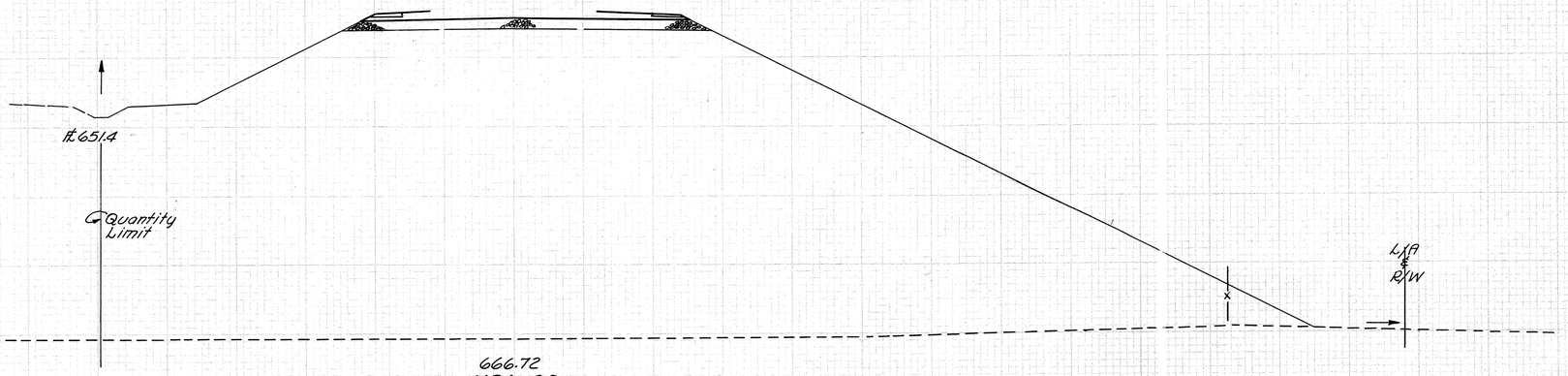


18'12 — 0 21,202

666.06
1127+00
619.1

167 — 0 5765

Begin 6' Sod
Sta. 1126+50



1833 — 0 21,296

666.72
1126+00
619.1

163 — 0 5735 — 0 14,214

12'17 — Sta. 1125+32.19 — 0 5584

160 — Sta. 1125+32.19

EAST BOUND STA. 1126+00 TO STA. 1128+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
ROS-35-21.23

SEEDING

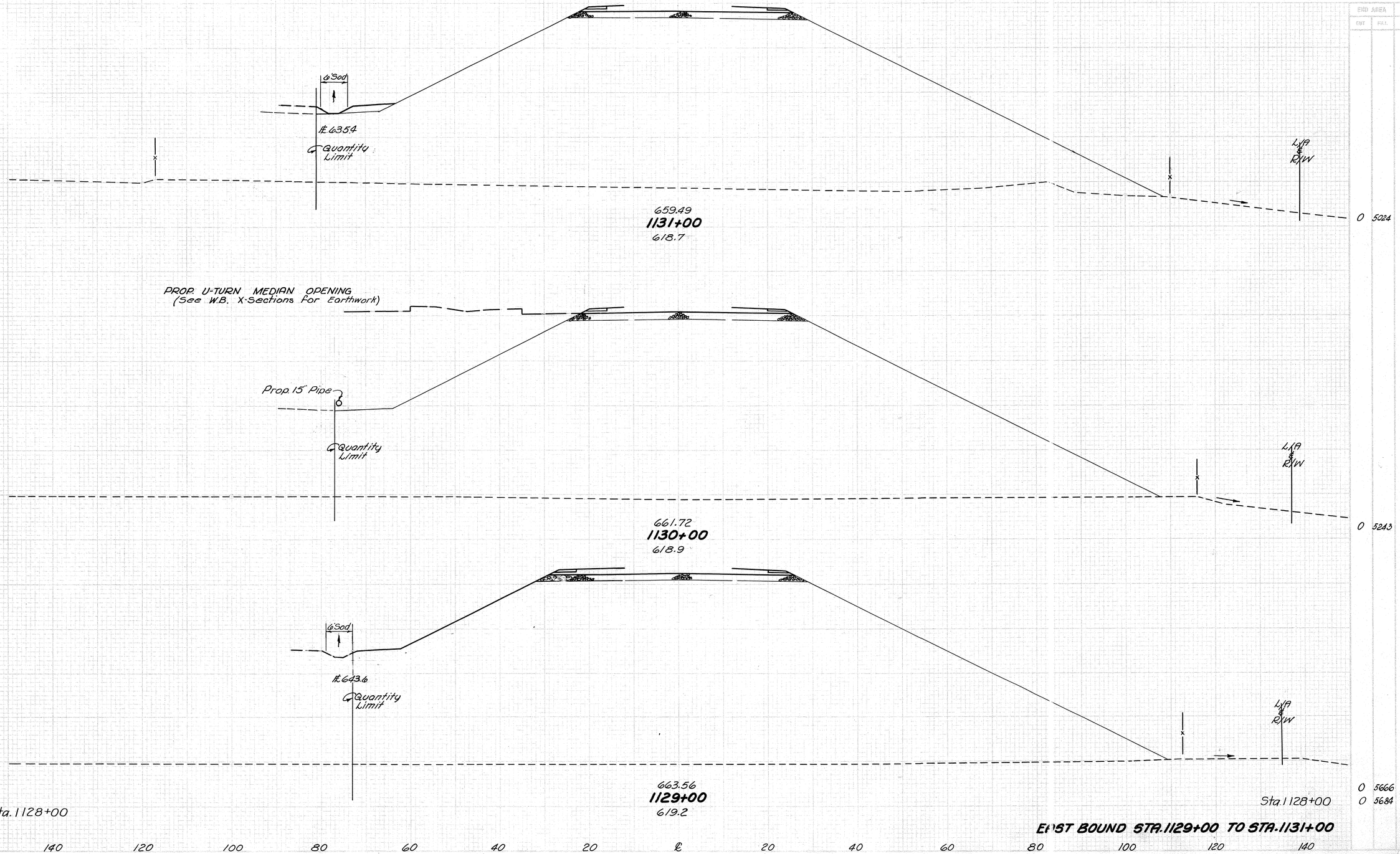
END WIDTH	SQ. YD.
178	1961
175	1922
171	1894
170	

END AREA

CUT	FILL
0	5024
0	5243
0	5666
0	5684

VOLUME

CUT	FILL
0	19,013
0	20,202
0	21,019



Seeding End Sq. Width	Yds.
211	
2328	
208	
2163	
185	
2017	
178	

End 6'x1.5' Dumped Rock Channel Protection Sta. 1134+20 (E.B.)

Quantity Limit

℄ 619.5

651.44
1134+00
619.5

℄ 608.8

L.A.-R/W

℄ 625.6

Quantity Limit

654.16
1133+00
619.3

Begin 6'x1.5' Dumped Rock Channel Protection Sta. 1132+90 (E.B.)
End 6' Sod

℄ 609.1

L.A.-R/W

6' Sod

℄ 629.7

Quantity Limit

656.88
1132+00
619.6

Prop. 42" X 186' PIPE CULVERT W.B. ℄ STA. 1132+44

L.A.-R/W

Sta. 1131+00

Sta. 1131+00

EASTBOUND STA. 1132+00 TO STA. 1134+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

End Area Cut	End Area Fill	Volume Cut	Volume Fill
27	3425		
		87	13889
20	4075		
		37	15,870
0	4495		
		0	17,628
0	5024		

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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ROSS COUNTY
ROS-35-21.23

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

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240

ROSS COUNTY
ROS-35-21.23

Seeding.	
End Width	Sq. Yds.
195	
	2206
202	
	2272
207	
	2333
213	
	2356
211	

End Area		Volume	
Cut	Fill	Cut	Fill
70	2151		
		263	8174
72	2263		
		263	8937
70	2563		
		193	10257
34	2976		
		113	11854
27	3425		

EASTBOUND STA.1135+00 TO STA.1138+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

45
240

ROSS COUNTY
ROS-35-21.23

Seeding.
End Sq.
Width Yo's.

End Guard Rail
Lt. Sta. 1141+50.44

℄ Future Lanes
Quantity Limit
Embankment for Future Lanes
See Sheet No. 98

℄ 622.4

End 6' Sod
Sta. 1142+00 E.B.

L.A.-R/W

℄ 606.4

630.62
1142+00
610.2

173

End Area Volume
Cut Fill Cut Fill

33 2371

℄ Future Lanes
Quantity Limit

Begin 6' Sod
Sta. 1141+04 E.B.
End 8' Sod

8' Sod

1961

128 8031

L.A.-R/W

℄ 611.8

632.60
1141+00
610.2

PROP. 24"X134' PIPE CULVERT
Eastbound Sta. 1141+00
See Sheet No. 114

(1)

℄ 606.70

180

36 1966

Sta. 1140+00 to Sta. 1155+48.83
Seeding & Protecting 2 @ 855 Sq Yds.

Begin 8' Sod
Sta. 1140+20 E.B.
End 6'x18" Dumped Rock
Channel Protection

Quantity Limit

1978

133 7487

L.A.-R/W

F-674 (10)
Sta. 1140+00 to Sta. 1155+48.83
Excavation 3,083 Cu. Yds.
Embankment 151,315 Cu. Yds.

℄ 612.3

635.12
1140+00
610.3

℄ 607.9

176

36 2077

Quantity Limit

2000

167 8024

L.A.-R/W

℄ 618.0

Begin 6'x18" Dumped Rock
Channel Protection
Sta. 1138+90 E.B.

637.84
1139+00
611.3

℄ 607.3

184

54 2256

2106

230 8161

195 Sta. 1138+00

Sta. 1138+00 70 2151

EASTBOUND STA. 1139+00 TO STA. 1142+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

REG. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

46.
240

ROSS COUNTY
ROS-35-21.23

Seeding			End Area		Volume	
End	Sq.					
Width	Yd's.		Cut	Fill	Cut	Fill
		℄ Future Lanes				
		Quantity Limit				
		6' Sod				
		℄ 612.9				
		L.A.-R/W				
179		628.05 **1146+00** 608.1				
		℄ 605.2			73	2267
		Begin 6' Sod Rt. Sta. 1146+90 W.B.				
		℄ Future Lanes				
2011		Quantity Limit			496	7961
		L.A.-R/W				
183		627.88 **1145+00** 609.1				
		℄ 605.5			195	2032
		℄ Future Lanes				
1967		Quantity Limit			467	7613
		PROP. 18"X162' I-1 PIPE Sta. 1144+85 See Sheet No 115 (2)				
		L.A.-R/W				
171		628.26 **1144+00** 610.1				
		℄ 605.8			57	2079
		℄ Future Lanes				
		Quantity Limit				
		Embankment for Future Lanes See Sheet No 94				
1883		℄ 625.1			181	8017
		L.A.-R/W				
168		629.17 **1143+00** 610.9				
		℄ 606.1			41	2250
1894					137	8557
173		Sta. 1142+00			Sta. 1142+00	33 2371

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

EASTBOUND STA. 1143+00 TO STA. 1146+00

FED. HIG. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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240

ROSS COUNTY
ROS-35-21.23

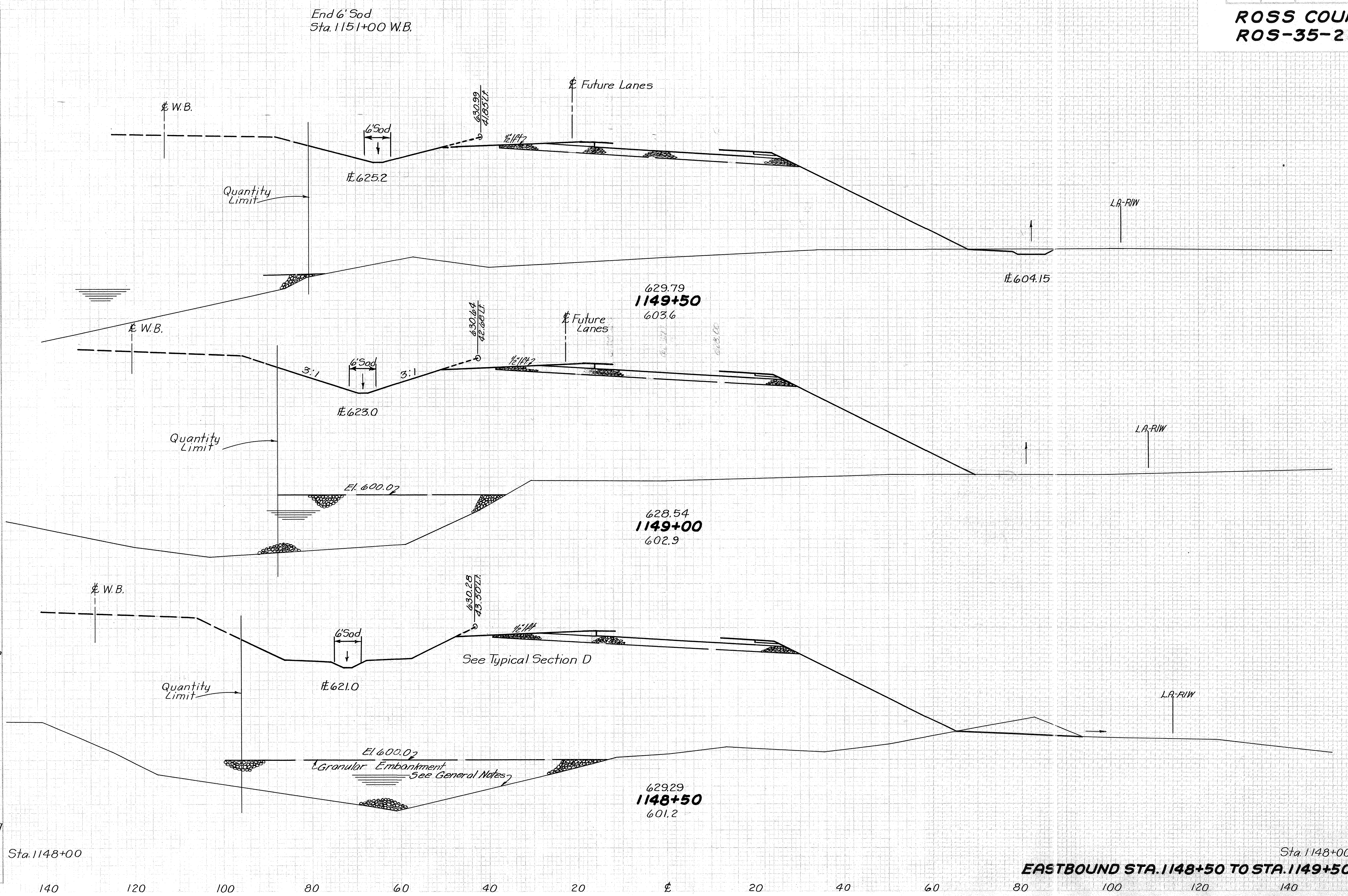
Seeding End Sq. Width Yds.			EndArea Volume Cut	Fill	Cut	Fill
	℄ W.B. Quantity Limit 6'Sod ℄ 618.4 ℄ Future Lanes El. 600? LA-R/W	629.04 **1148+00** 596.7				
151					0	3174
	℄ W.B. Quantity Limit 6'Sod ℄ 616.7 ℄ Future Lanes Prop. Dumped Rock Channel Protection Sta. 1147+60 El. 600? Granular Embankment See General Notes Drain into Gravel Pit LA-R/W	628.79 **1147+50** 603.9				
908					10	5332
176	℄ 597.0				11	2585
	℄ Future Lanes Embankment for Future Lanes See Sheet Nº 98 Quantity Limit 6'Sod ℄ 615.1 LA-R/W ℄ 604.9	628.54 **1147+00** 601.3			10	4516
936					104	
161					101	2292
					322	8443
1889						
179	Sta. 1146+00				Sta. 1146+00 73	2267

EASTBOUND STA. 1147+00 TO STA. 1148+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

ROSS COUNTY
ROS-35-21.23


End 6' Sod
Sta. 1151+00 W.B.
℄ W.B.
630.99
41.85 Lt.
6' Sod
℄ Future Lanes
½":1'
Quantity Limit
℄ 625.2
LA-R/W
℄ 604.15
629.79
1149+50
603.6
℄ W.B.
630.64
42.69 Lt.
℄ Future Lanes
6' Sod
3:1
3:1
½":1'
℄ 623.0
Quantity Limit
LA-R/W
El. 600.02
628.54
1149+00
602.9
℄ W.B.
630.28
43.50 Lt.
6' Sod
½":1'
See Typical Section D
℄ 621.0
Quantity Limit
LA-R/W
El. 600.02
Granular Embankment
See General Notes
629.29
1148+50
601.2
Sta. 1148+00
Sta. 1148+00
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

Seeding	
End Width	Sq. Yd's.
150	
	825
147	
	886
172	
	897
151	

End Area		Volume	
Cut	Fill	Cut	Fill
12	3155		
		11	6589
0	3961		
		59	7597
64	4244		
		59	6869
0	3174		

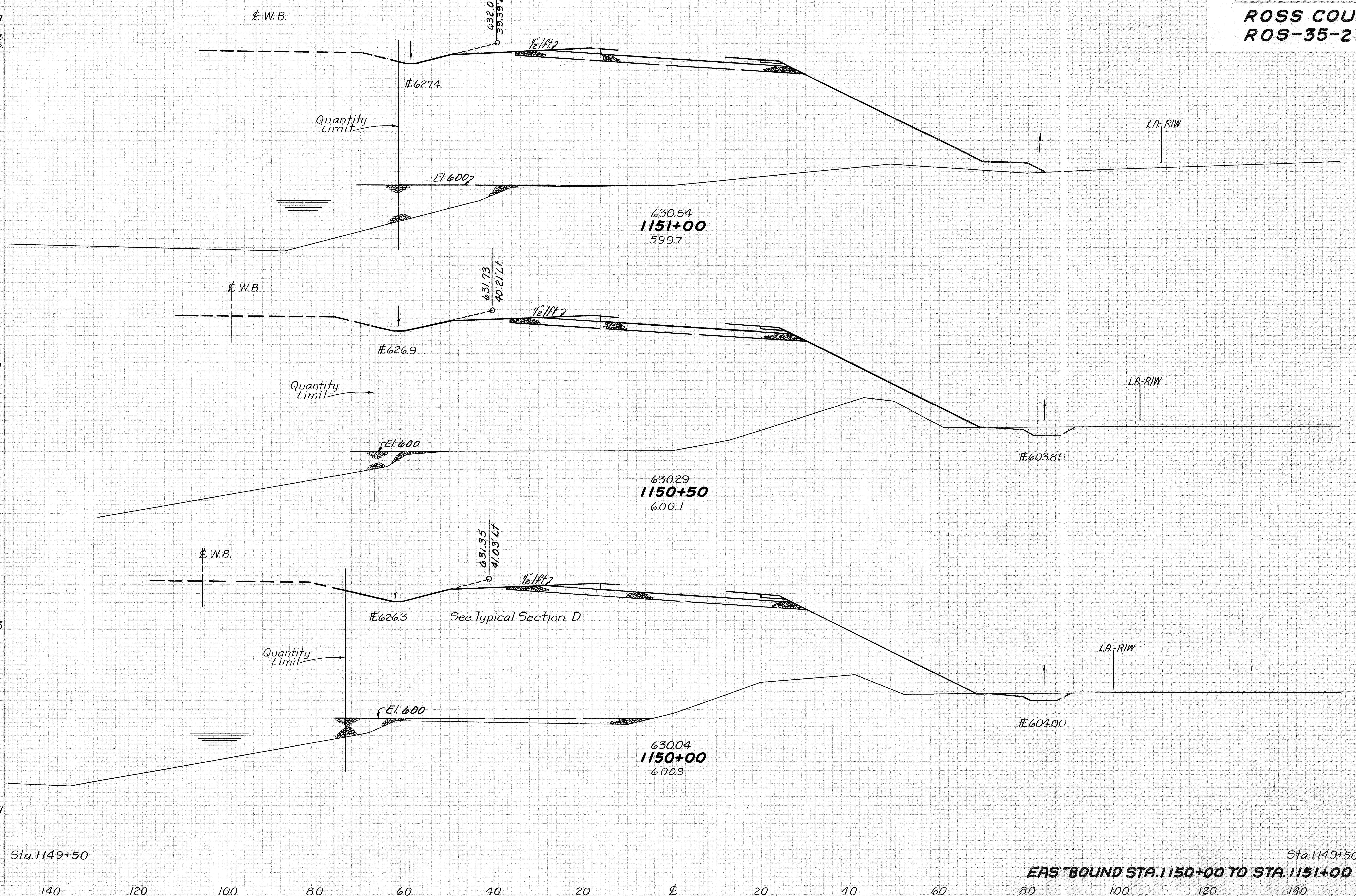
EASTBOUND STA. 1148+50 TO STA. 1149+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

ROSS COUNTY
ROS-35-21.23

Seeding

End Width	Sq. Yds.
125	
	731
138	
	783
144	
	817
150	



End Area Cut	End Area Fill	Volume Cut	Volume Fill
0	3232		
		19	5130
20	2956		
		35	5666
18	3163		
		28	5850
12	3155		

EASTBOUND STA. 1150+00 TO STA. 1151+00

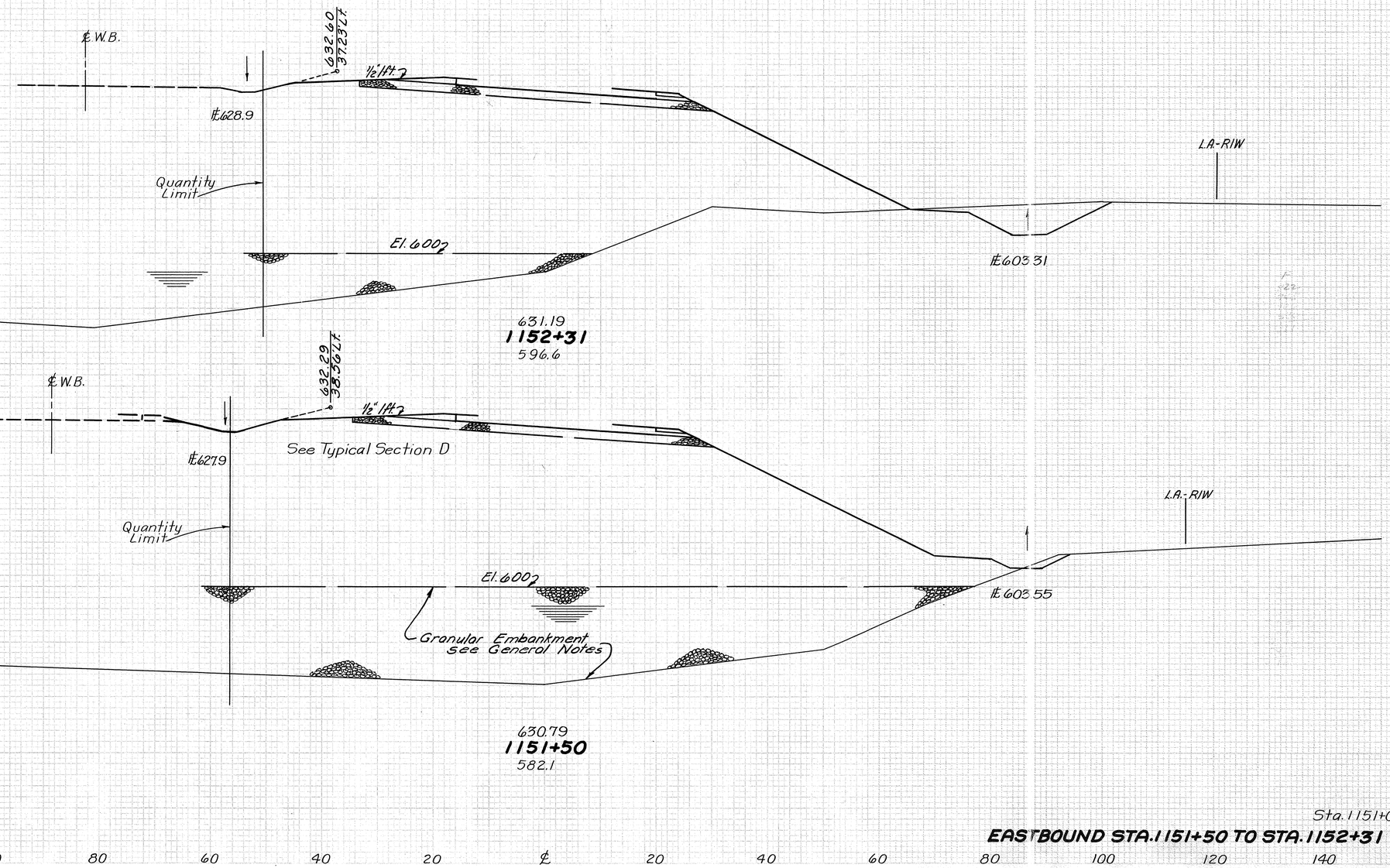
NO. H.D. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

50
240

ROSS COUNTY
ROS-35-21.23

Seeding.	
End Width	Sq. Yds.

End Area		Volume	
Cut	Fill	Cut	Fill



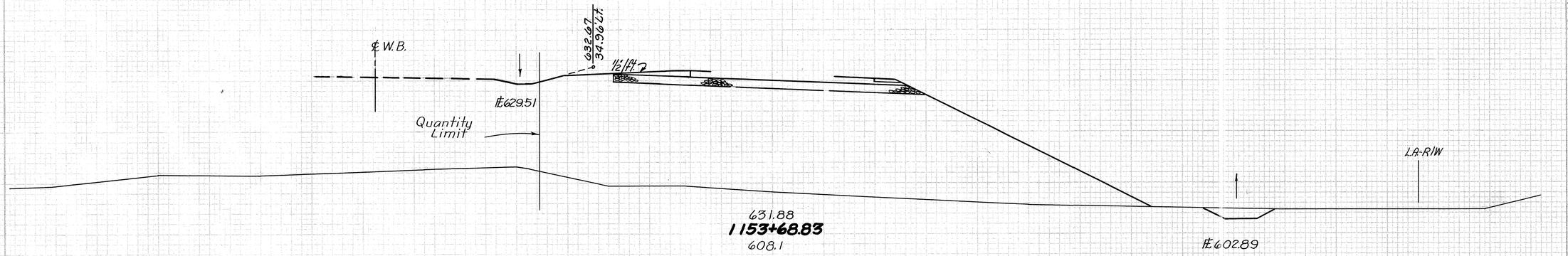
135		105	3011
1202		168	12188
132		7	5114
714		6	7728
125		0	3232

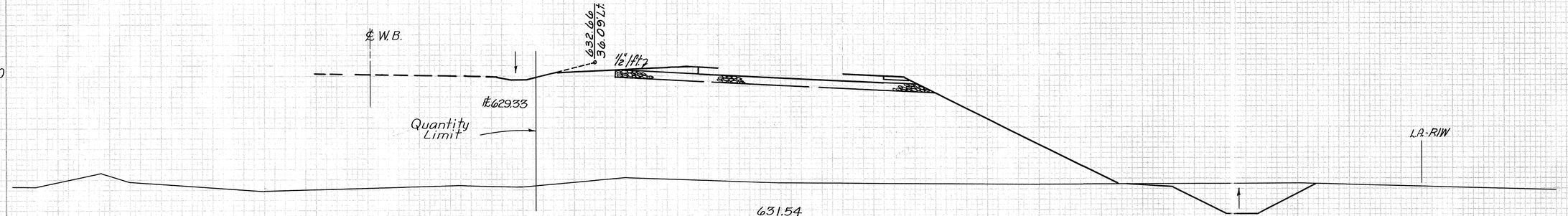
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

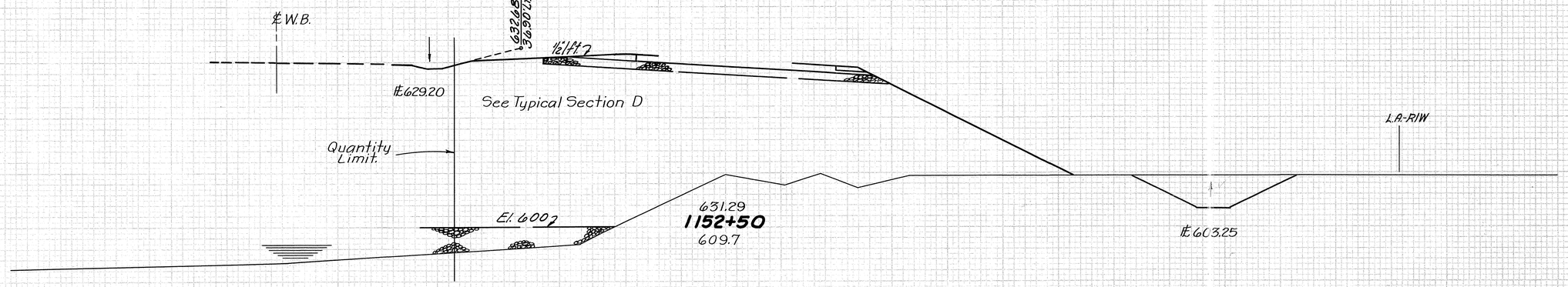
51
240

ROSS COUNTY
ROS-35-21.23

Seeding. End Sq. Width Yd's.			EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
125			21	2123		
990					168	5175
134					111	1937
744					216	4016
134					122	2400
284					80	1904
135	Sta. 1152+31		Sta. 1152+31		105	3011







Sta. 1152+31

EASTBOUND STA. 1152+50 TO STA. 1153+68.83

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

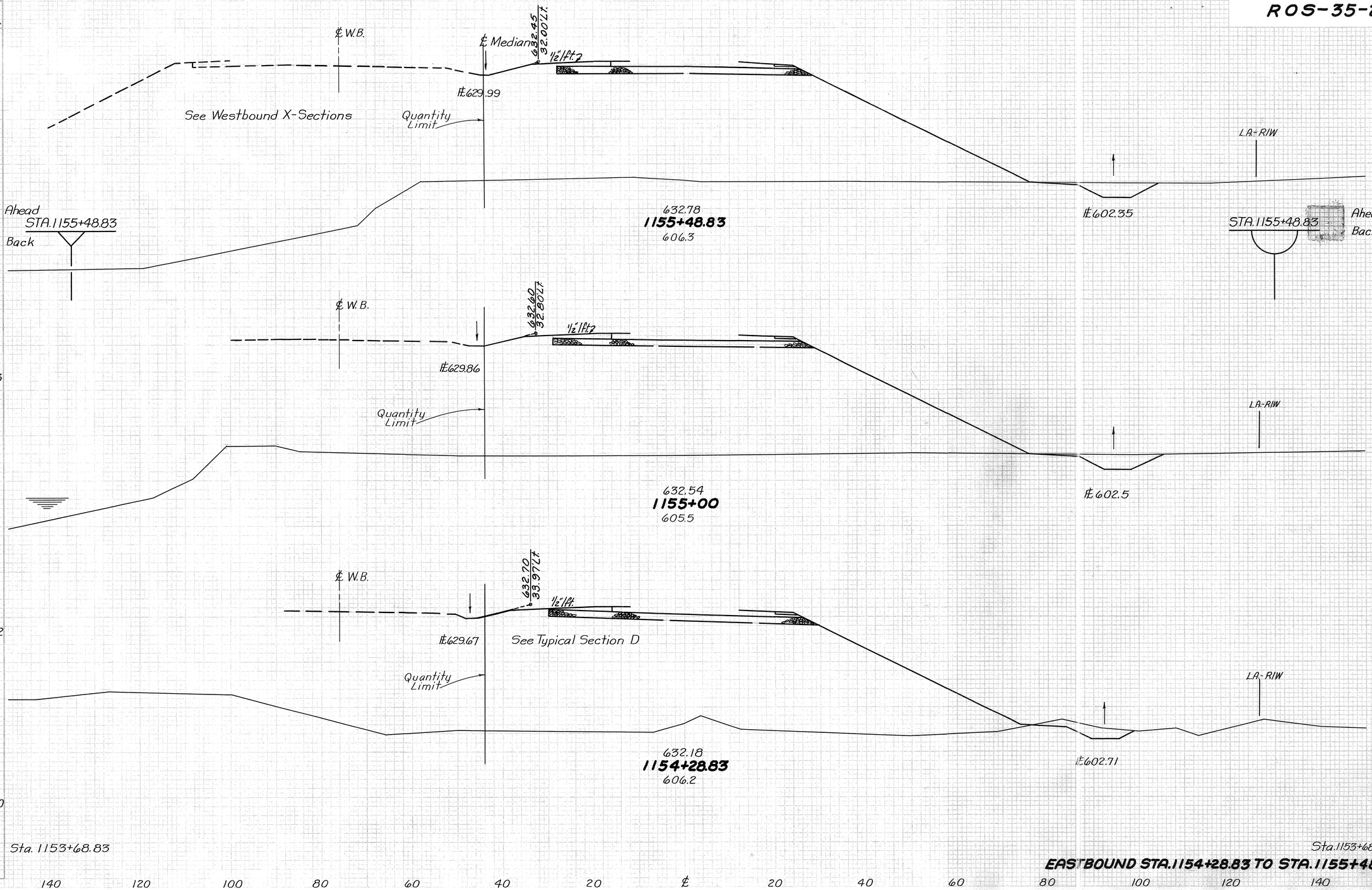
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

52
240

ROSS COUNTY
ROS-35-21.23

END EASTBOUND CROSS SECTIONS
STA. 1155+48.83

Seeding. End Area Width	Sq. Yds.
0	Ahead STA. 1155+48.83
131	Back
713	
132	
1012	
124	
830	
125	Sta. 1153+68.83



End Area Cut	End Area Fill	Volume Cut	Volume Fill
		Ahead 0	0
STA. 1155+48.83		Back 45	2388
			81 4369
			45 2444
			109 6529
			38 2510
			66 5148
		Sta. 1153+68.83 21	2123

EASTBOUND STA. 1154+28.83 TO STA. 1155+48.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

53
240

ROSS COUNTY
ROS-35-21.23

SECTION		END AREA		VOLUME	
END SOUTH	SQ. YDS.	CUT	FILL	CUT	FILL
145		0	57.11		
1572				0	10,585
138				0	5
0				0	13
				Ahead	0 5
				Back	0 0

L.A.-R/W

8:1

℄-664.17

Quantity Limit

For ditch location
See Site plan.

666.86
1123+00
619.0

3:1 4:1

℄-664.2

Quantity Limit

L.A.-R/W
164.5'

Ahead
Back

665.90
1122+00
619.2

℄660.4

Quantity Limit

FG-674(10)
Sta. 1122+00 to Sta. 1138+99.57
Seeding & Protecting 36,494 Sq.Yds.

L.A.-R/W
167'

Begin Guard Rail
Lt. Sta. 1121+26.52

665.01
1121+32.27
619.2

BEGIN PROJECT & BEGIN WORK
STA. 1121+32.27

FG-674(10)
Sta. 1121+32.27 to Sta. 1138+99.57
Excavation 3884 Cu.Yds.
Embankment 27,611 Cu.Yds.

STA. 1122+00

STA. 1121+32.27

WESTBOUND STA. 1121+32.27 To STA. 1123+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

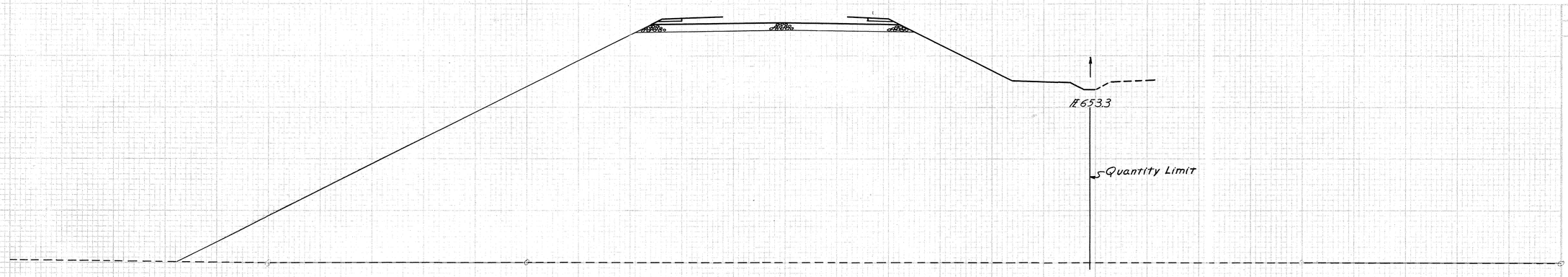
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

54
240

ROSS COUNTY
ROS-35-21.23

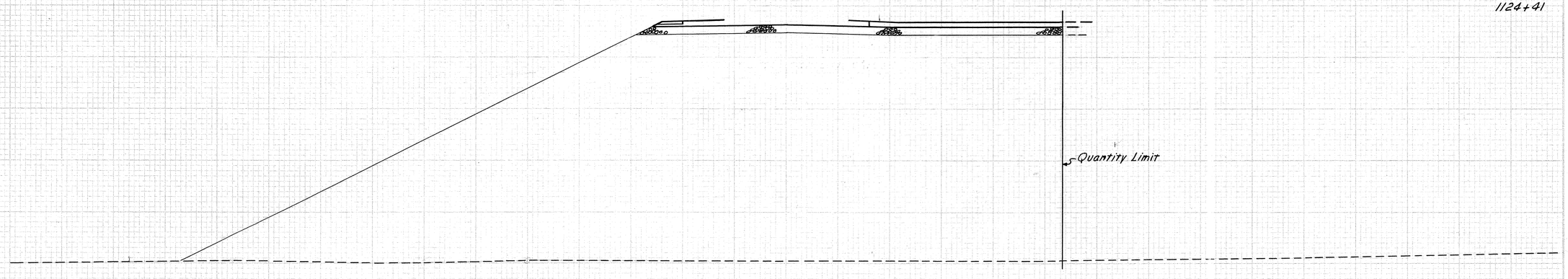
Begin Guard Rail
Lt Sta. 1125+33.18

Begin Guard Rail
Rt Sta. 1125+32.49



667.47
1125+32.72
620.0

			END AREA		VOLUME	
			CUT	FILL	CUT	FILL
165			0	5761		
	645					
64		Ahead 1124+82			0	5411
0		Back				
		BRIDGE LIMIT STA. 1125+32.72				
		1124+82	0	0		
	0				0	0
0		Ahead 1124+41				
43		Back				
		End Guard Rail Lt Sta. 1123+88.52				
		BRIDGE LIMIT STA. 1123+88.22				
		1124+41	0	0		
	638				0	6258



667.35
1123+83
620.3

155			0	5780		
	1383				0	17,662
145		Sta. 1123+00	0	5711		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

WESTBOUND STA. 1123+83 To STA. 1125+32.72

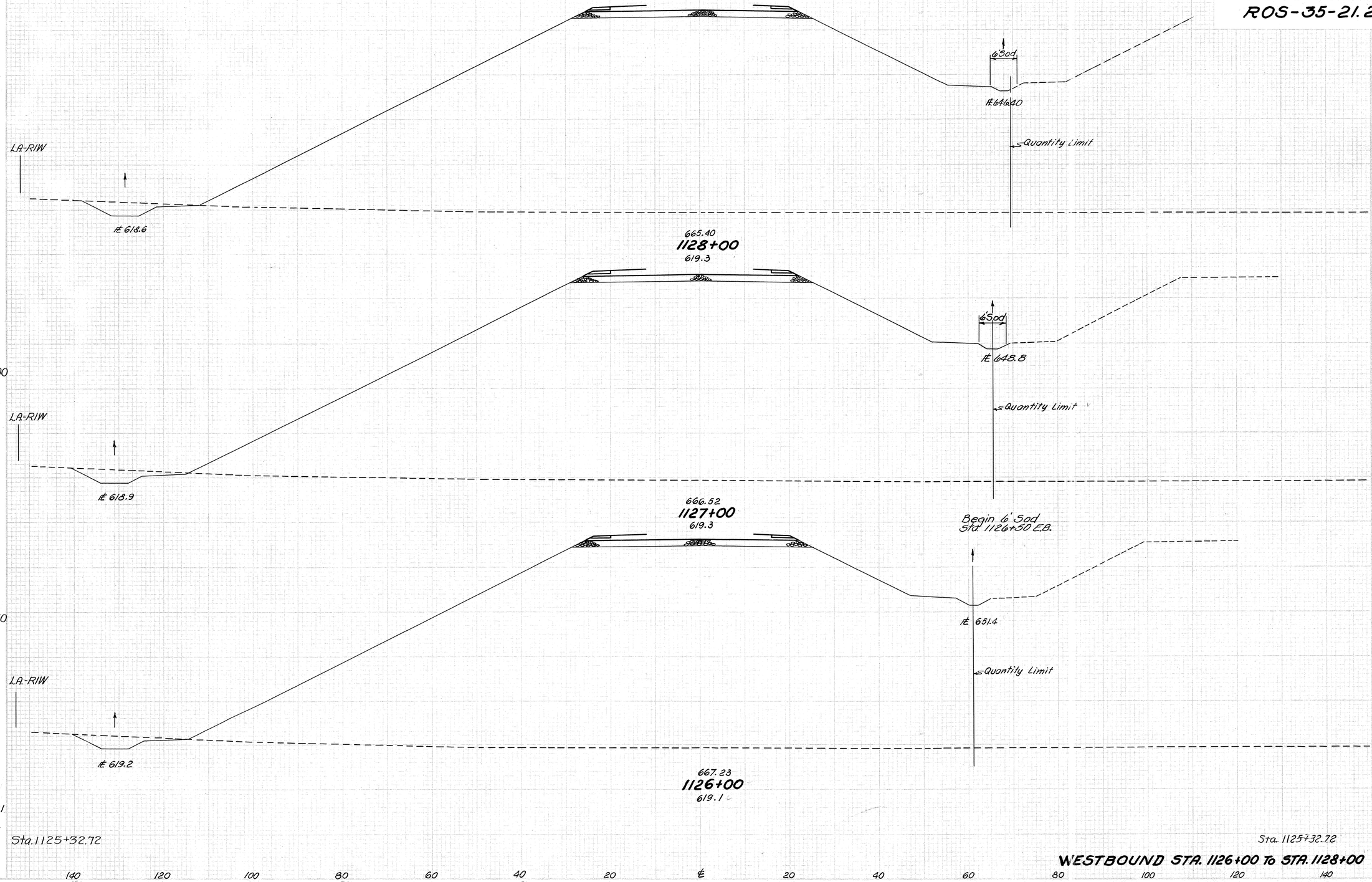
SEEDING	
END WIDTH	SQ. YD. L.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

55
240

ROSS COUNTY
ROS-35-21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL



WESTBOUND STA. 1126+00 To STA. 1128+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

56
240

ROSS COUNTY
ROS-35-21.23

END AREA
VOLUME
CUT
FILL
CUT
FILL
LA-R/W
6' Sod
FL 635.40
Quantity Limit
FL 616.9
661.09
1131+00
620.6
67 5170
212
PROP. U-TURN MEDIAN OPENING
2317
Add for U-Turn median opening
3450
194 19,450
Prop. 15" Pipe
Quantity Limit
FL 617.6
662.53
1130+00
619.7
38 5333
205
2250
6' Sod
FL 643.60
139 20,098
Quantity Limit
FL 618.3
663.97
1129+00
619.5
200
37 5520
2222
144 20,891
200
Sta. 1128+00
Sta. 1128+00
41 5761
WESTBOUND STA. 1129+00 To STA. 1131+00
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

Fed. Rd. Division	State	Project	
2	OHIO	F-FG-674(10)	57 240

ROSS COUNTY
ROS-35-21.23

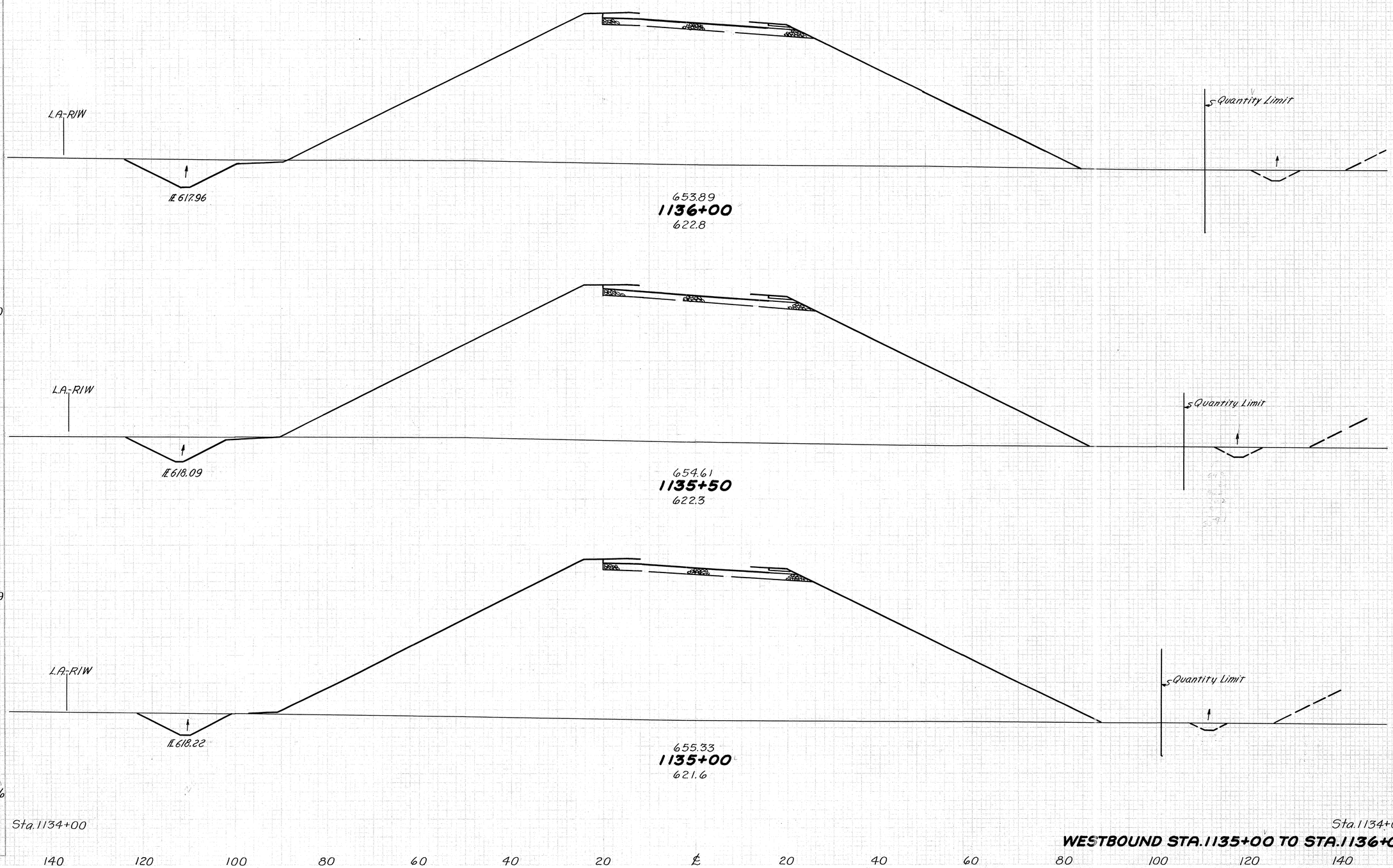
Seeding
End Width
Sq. Yds.
208
2322
210
2389
220
2400
212
LA-RIW
IE 618.48
656.77
1134+00
621.6
End 6'X1.5' Dumped Rock
Channel Protection
Sta. 1134+20 E.B.
Quantity Limit
EndArea
Volume
Cut
Fill
Cut
Fill
42 4099
157 15946
LA-RIW
IE 618.74
IE 625.6
Quantity Limit
658.21
1133+00
621.0
43 4512
Begin Overflow Ditch
Sta. 1132+52
IE El. 619.0
PROP. 42"X386' PIPE CULVERT Westbound Sta. 1132+44
Begin 6'X1.5' Dumped Rock
Channel Protection
Sta. 1132+90 E.B.
End 6' Sod
263 17,154
6' Sod
IE 630.2
Quantity Limit
LA-RIW
150.5'
IE 616.3
659.65
1132+00
620.8
99 4751
307 18,372
Sta. 1131+00
Sta. 1131+00
67 5170
WESTBOUND STA. 1132+00 TO STA. 1134+00
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(110)	

58
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
227	1250	90	3397	152	6470
223	1219	74	3591	119	6844
216	2356	55	3800	180	14628
208		42	4099		



WESTBOUND STA. 1135+00 TO STA. 1136+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

ROSS COUNTY
ROS -35 -21.23

WESTBOUND STA. 1136+50 TO STA. 1137+50

SEEDING	
SHO WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

60
240

ROSS COUNTY
ROS-35-21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL

F-674(10)
Sta. 1138+99.57 to Sta. 1156+99.38
Seeding & Protecting 37,392 Sq. Yds.

LA & R/W

End Guard Rail
Rt. Sta. 1139+12.37

Slope Protection

1 : 1

℄ 617.18

649.58
1138+99.57
625.5

BRIDGE LIMIT STA. 1138+99.57

F-674(10)
Sta. 1138+99.57 to Sta. 1156+99.38
Excavation 5,540 Cu. Yds.
Embankment 198,271 Cu. Yds.

Quantity Limit

255 247 1409

1360 441 3385

LA & R/W
155.5'

℄ 617.31

650.29
1138+50
625.2

Quantity Limit

239 233 2279

End Guard Rail
Lt. Sta 1138+38.51

1347 435 4592

LA & R/W

℄ 617.44

651.01
1138+00
624.5

Quantity Limit

246 237 2680

1342 364 5132

237 Sta 1137+50 Sta. 1137+50 156 2863

WESTBOUND STA. 1138+00 TO STA. 1138+99.57

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

F-FG-674(10)

ROSS COUNTY
ROS-35-21.23

Seeding. End Width	Sq. Yds.
261	1447
260	1308
211	1306
255	

649.41

647.41

L.A.-R/W

℄ Future Lanes

Quantity Limit

647.41
1140+50
625.3

℄ E 616.79

L.A.-R/W

℄ Future Lanes

Quantity Limit

648.13
1140+00
625.6

℄ E 616.92

L.A.-R/W

℄ Future Lanes

END FILL
Sta. 1139+62

Slope Protection

Quantity Limit

648.85
1139+50
625.7

℄ E 617.05

Sta. 1138+99.57

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

End Area Cut	End Area Fill	Volume Cut	Volume Fill
Sta. 1140+67.5 247	0		
		160	0
247	0		
		471	0
262	0		
		359	0
Sta. 1139+62 248	0		
		109	29
244	130		
		458	1437
Sta. 1138+99.57 247	1409		

WESTBOUND STA. 1139+50 TO STA. 1140+50

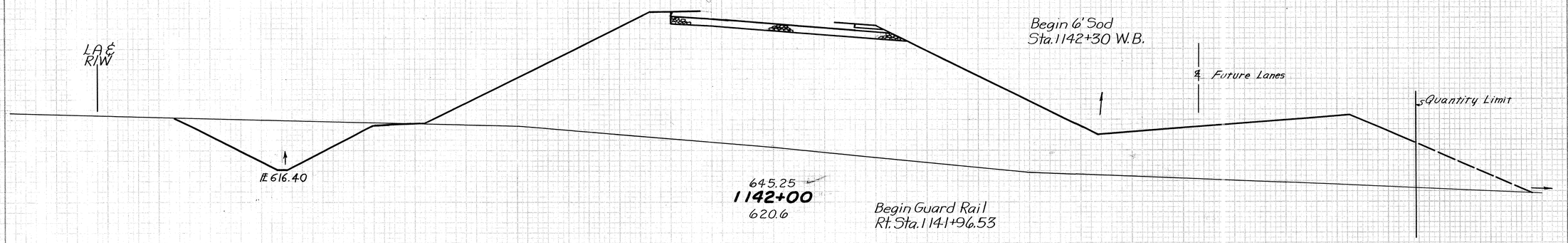
FED. REG. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

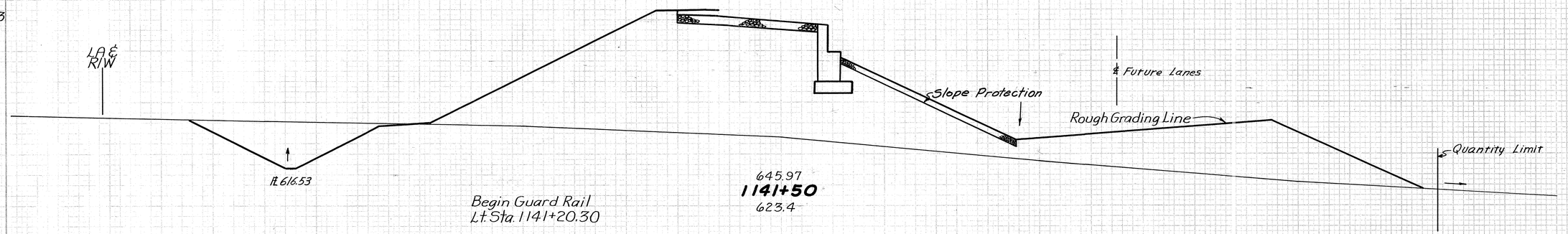
62
240

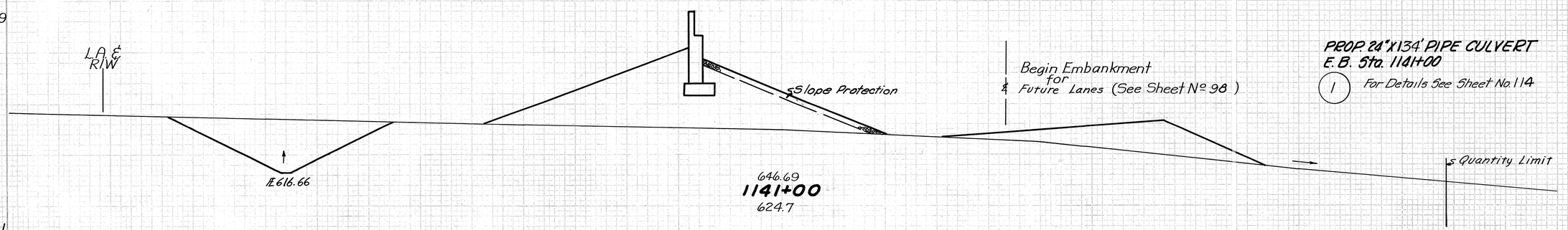
ROSS COUNTY
ROS-35-21.23

Seeding. End Area Width	Sq. Yds.
234	
1203	
199	
1189	
229	
1361	
261	

End Area Cut	End Area Fill	Volume Cut	Volume Fill
210	3055		
		3634	891
182	2227		
		3872	806
236	803		
		291	483
247	0		







Sta. 1140+50

Sta. 1140+67.5

WESTBOUND STA. 1141+00 TO STA. 1142+00

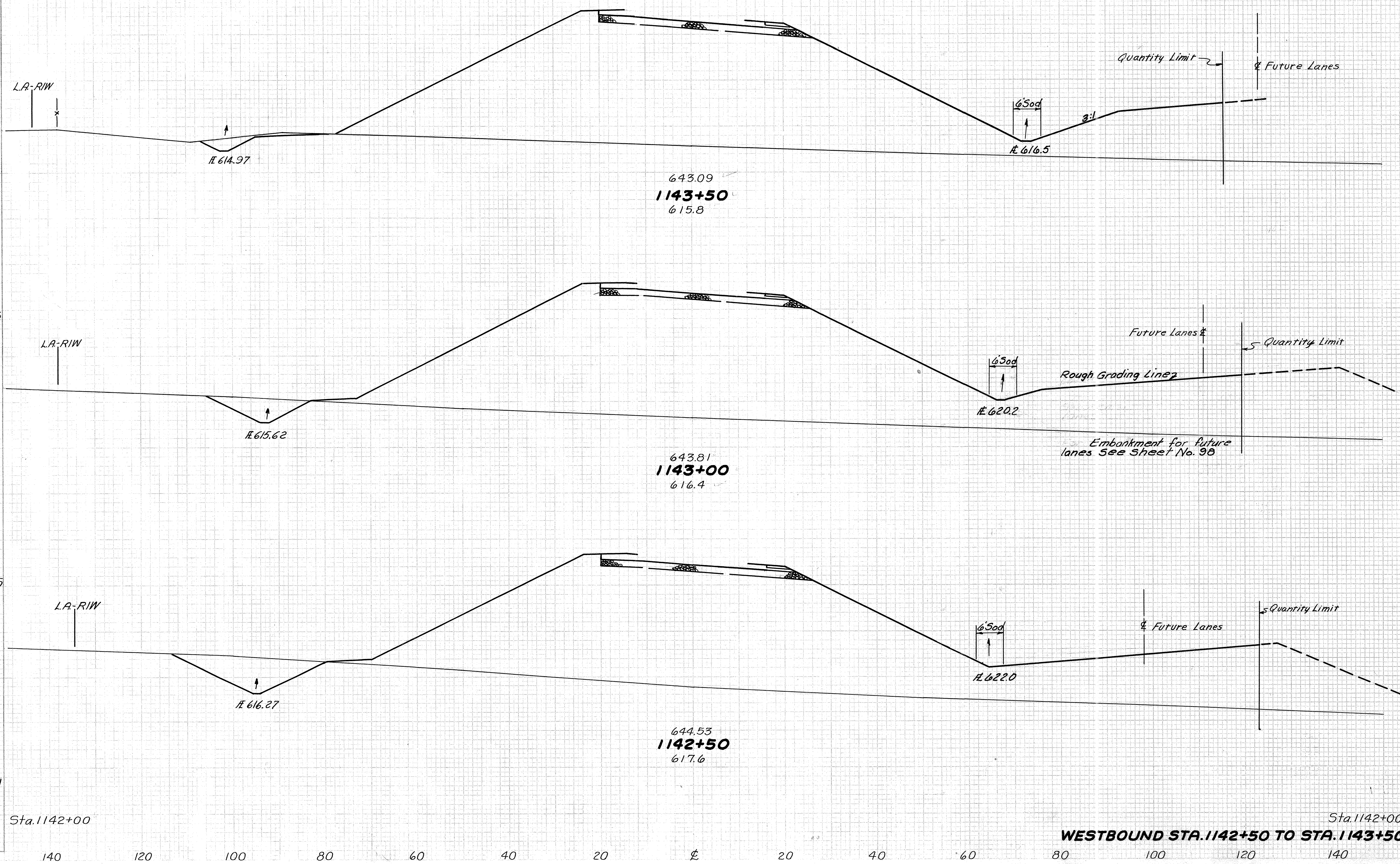
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

63
240

ROSS COUNTY
ROS-35-21.23

Seeding	
End Width	Sq. Yds.
212	
	1183
214	
	1225
227	
	1281
234	



End Area		Volume	
Cut	Fill	Cut	Fill
26	3162		
		87	5962
68	3277		
		196	6060
144	3268		
		328	5855
210	3055		

WESTBOUND STA.1142+50 TO STA.1143+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

64
240

ROSS COUNTY
ROS-35-21.23

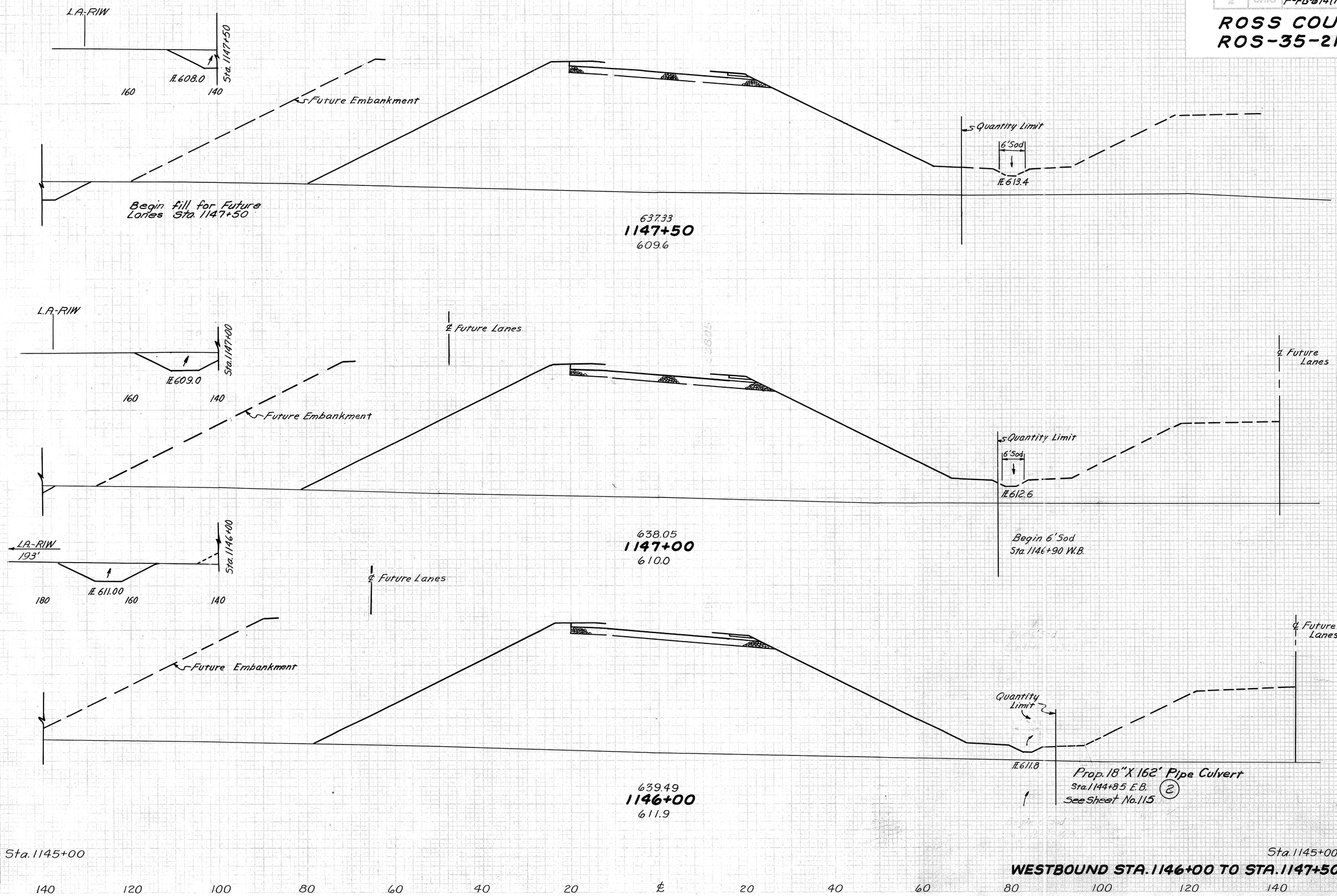
Seeding.
End Width
Sq. Yds.
241
1331
238
1286
225
1214
212
End Area
Cut
Fill
Volume
Cut
Fill
42 2851
81 5389
46 2969
69 5586
29 3064
51 5765
26 3162
L.A-R/W 169'
℄ 613.0
℄ 612.35
Quantity Limit
℄ Future Lanes
640.93
1145+00
614.1
L.A-R/W 158.5'
℄ 613.67
End 6' Sod
Sta. 1144+60 W.B.
6' Sod
℄ 612.60
Quantity Limit
℄ Future Lanes
Rough Grading Line
Embankment for future lanes See Sheet No. 98
641.65
1144+50
614.4
L.A-R/W 150'
℄ 614.32
6' Sod
℄ 614.55
Quantity Limit
℄ Future Lanes
642.37
1144+00
614.6
Sta. 1143+50
Sta. 1143+50
WESTBOUND STA. 1144+00 TO STA. 1145+00
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

65
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
208		58	2812		
1203				109	5338
225				60	2953
2678				228	10730
257		63	2841		
2767				194	10541
241		42	2851		



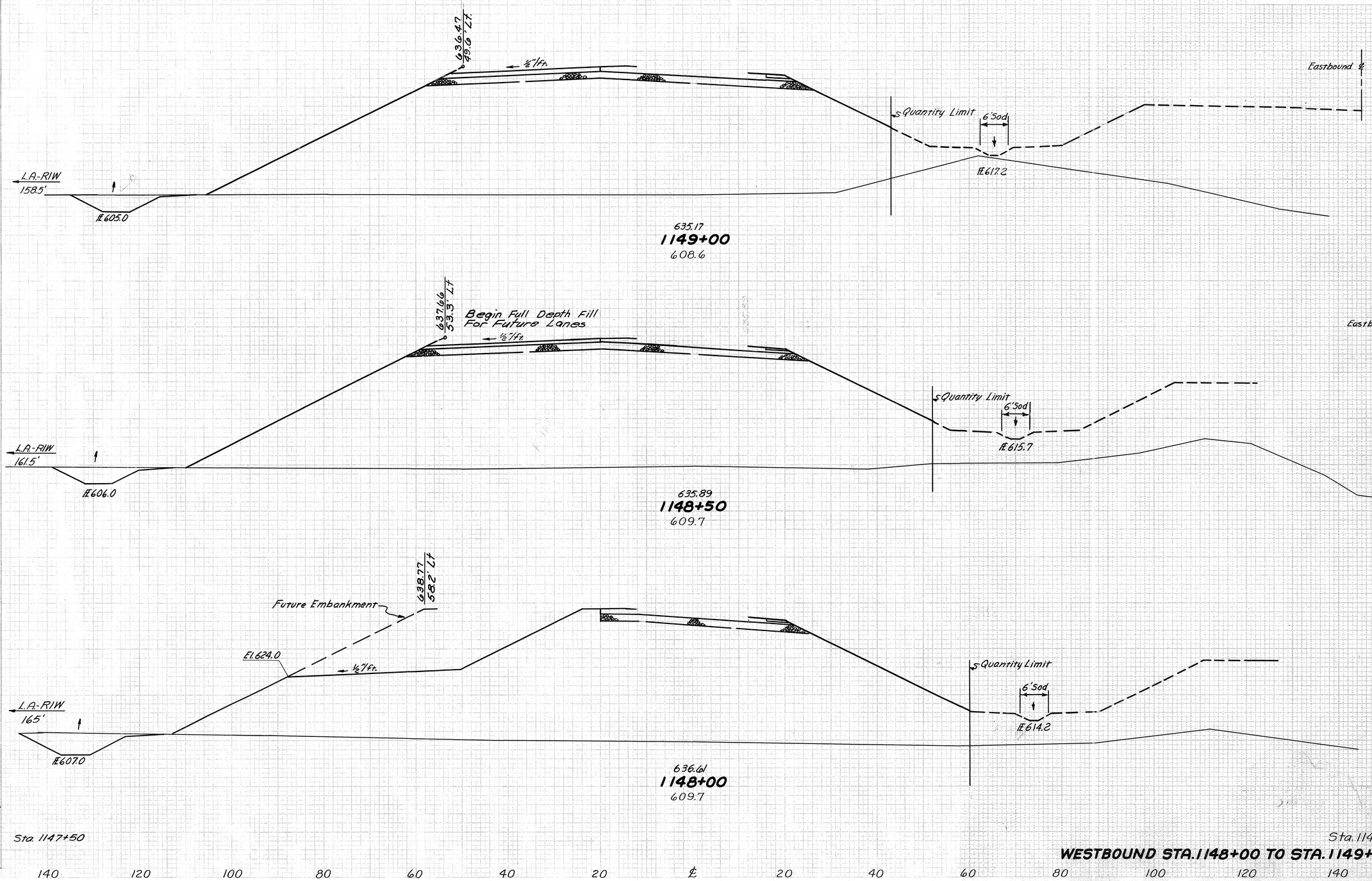
WESTBOUND STA. 1146+00 TO STA. 1147+50

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

66
240

ROSS COUNTY
ROS-35-21.23

Seeding. End Area Width	Sq. Yds.	End Area Cut	Volume Fill	Cut	Fill
163				48	3075
944				86	5955
177				45	3356
1031				107	6058
194				71	3187
1117				119	5555
208				58	2812

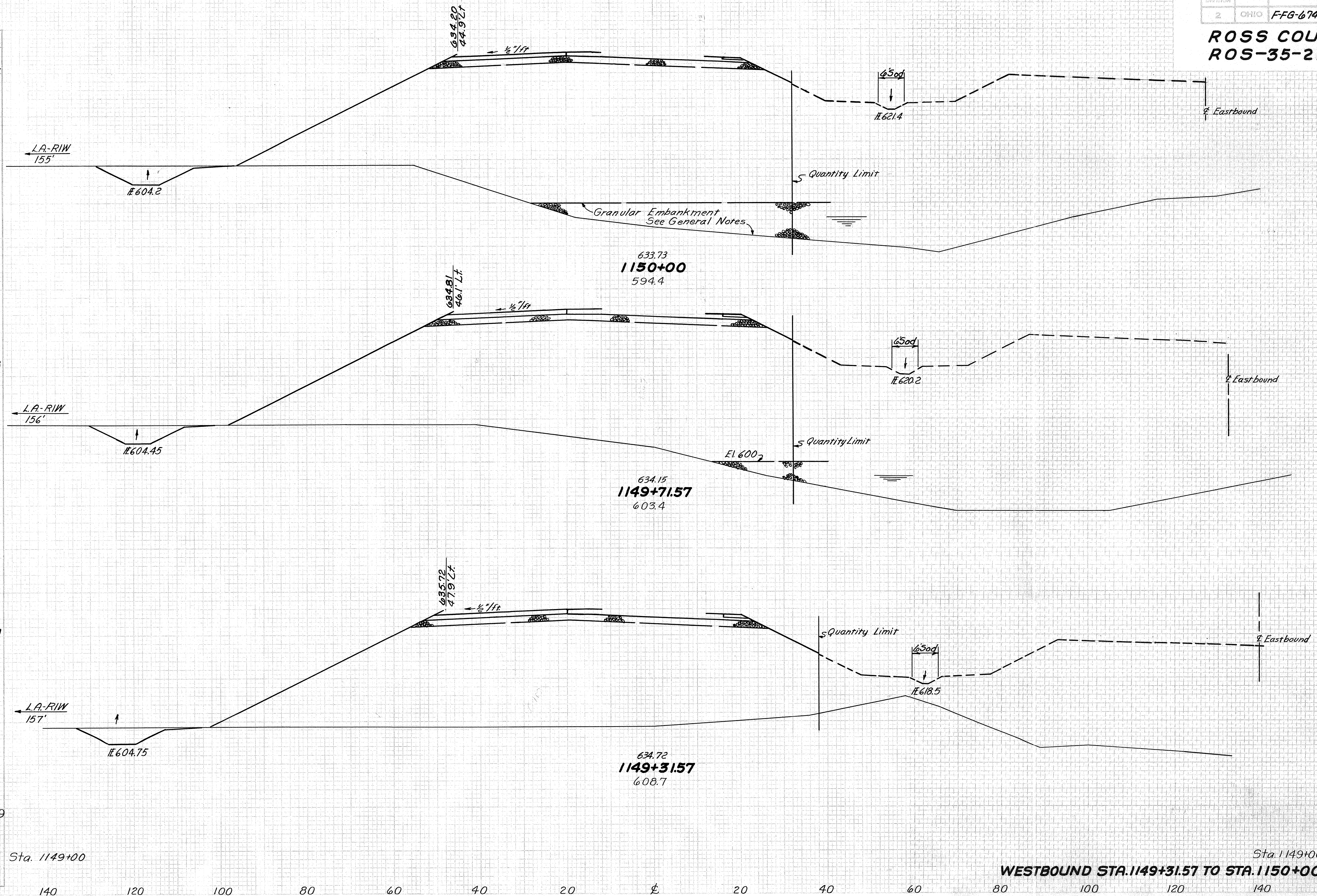


Sta. 1147+50

Sta. 1147+50

WESTBOUND STA. 1148+00 TO STA. 1149+00

ROSS COUNTY
ROS-35-21.23



Seeding

End Width	Sq. Yds.
144	
	458
146	
	671
156	
	559
163	

End Area Cut	End Area Fill	Volume Cut	Volume Fill
65	3501		
		66	3446
61	3045		
		89	4370
59	2854		
		63	3466
48	3075		

WESTBOUND STA. 1149+31.57 TO STA. 1150+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

68
240

ROSS COUNTY
ROS-35-21.23

Seeding. End Sq. Width Yds.			End Area Volume Cut	Fill	Cut	Fill
		631.57 42.32 Ft. ½"/Ft.				
		℄ Eastbound				
		Rt. 626.5				
		℄ Quantity Limit				
	L.A.-R/W 152.5'					
	4:1	El. 600 ℄				
147		631.87 **1151+50** 589.8			0	5091
		End 6' Sod Sta. 1151+00				
	Drain Into Gravel Pit End Dumped Rock Channel Protection Sta. 1151+28	632.28 42.82 Ft. ½"/Ft.				
		6' Sod				
		℄ Eastbound				
		Rt. 625.6				
808	L.A.-R/W 153'	℄ Quantity Limit				119 9190
		El. 600 ℄				
		Rt. 600.0				
		Granular Embankment See General Notes				
	Begin 12'X2.5' Dumped Rock Channel Protection Sta. 1150+90	632.38 **1151+00** 590.6				
144		633.19 43.87 Ft. ½"/Ft.				128 4834
		End Guard Rail Rt. Sta. 1150+53.83				
		6' Sod				
		℄ Eastbound				
		Rt. 623.5				
792	L.A.-R/W 154'					183 8479
		℄ Quantity Limit				
		Rt. 604.05				
		El. 600 ℄				
		633.01 **1150+50** 585.5				70 4323
141	792					125 7244
144	Sta. 1150+00				Sta. 1150+00	65 3501

WESTBOUND STA. 1150+50 TO STA. 1151+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FWD. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

69
240

ROSS COUNTY
ROS-35-21.23

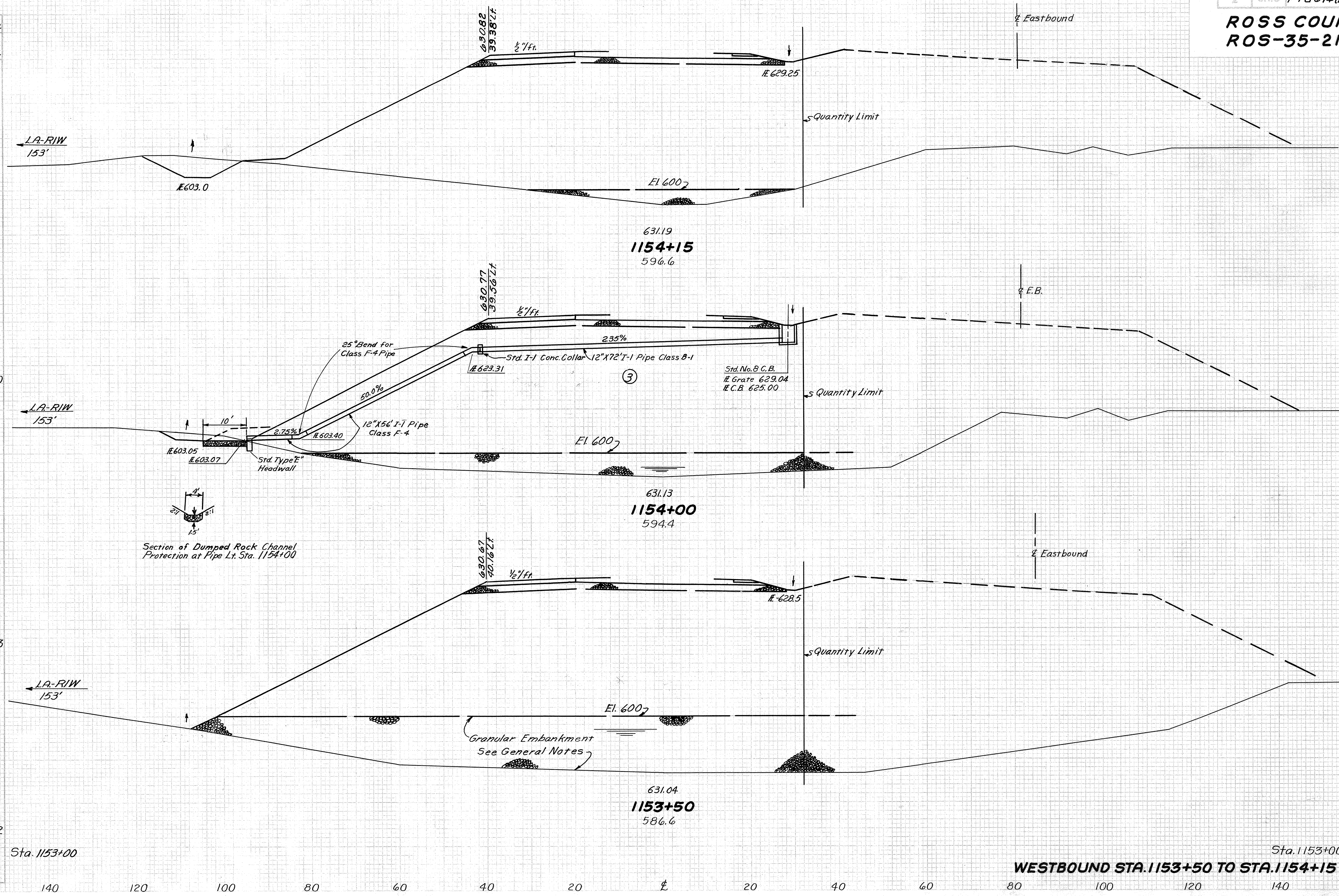
Seeding. End Sq. Width Yds.			End Area Volume Cut Fill Cut Fill
	630.68 40.76 C.Y. ½"/ft.	℄ Eastbound	
		℄ E. 628.0	
		℄ Quantity Limit	
	LA-RIW 153'	El. 600	
138	631.06 **1153+00** 586.0		0 5071
	630.82 41.35 C.Y. ½"/ft.	℄ Eastbound	
		℄ E. 627.5	
		℄ Quantity Limit	
786	LA-RIW 153'	El. 600 Granular Embankment See General Notes	0 9390
145	631.21 **1152+50** 585.2		0 5070
	630.08 41.94 C.Y. ½"/ft.	℄ Eastbound	
		℄ E. 627.0	
800		℄ Quantity Limit	0 9390
	LA-RIW 153'	El. 600	
143	631.48 **1152+00** 589.4		0 5071
806			0 9409
147	Sta. 1151+50		Sta. 1151+50 0 5091

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

WESTBOUND STA. 1152+00 TO STA. 1153+00

ROSS COUNTY
ROS-35-21.23

Seeding	End Sq. Width Yd's.
	133
220	
	131
703	
	122
722	
	138

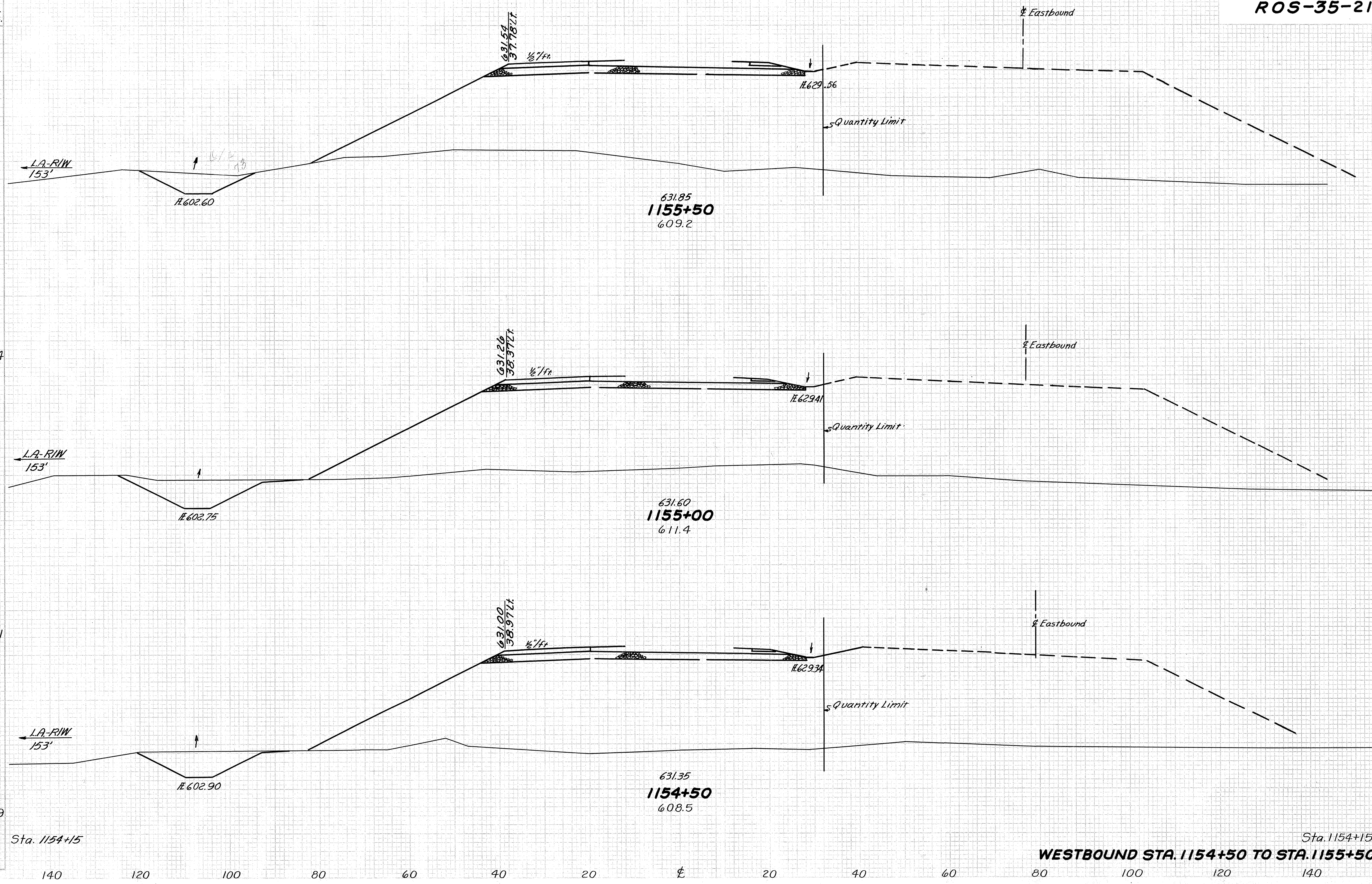


630.82
39.38' Lt.
½"/ft.
℄ Eastbound
Æ 629.25
Quantity Limit
LA-R/W
153'
Æ 603.0
El. 600
631.19
1154+15
596.6
630.77
39.56' Lt.
½"/ft.
℄ E.B.
2.35%
25° Bend for Class F-4 Pipe
Std. I-1 Conc. Collar
12"X72' I-1 Pipe Class B-1
Æ 623.31
Std. No. 8 C.B.
Æ Grate 629.04
Æ C.B. 625.00
③
Quantity Limit
50.0%
LA-R/W
153'
10'
2.75%
Æ 603.40
12"X56' I-1 Pipe Class F-4
El. 600
Æ 603.05
Æ 603.07
Std. Type "E" Headwall
631.13
1154+00
594.4
4'
2:1
2:1
1.5'
Section of Dumped Rock Channel Protection at Pipe Lt. Sta. 1154+00
630.67
40.16' Lt.
½"/ft.
℄ Eastbound
Æ 628.5
Quantity Limit
LA-R/W
153'
El. 600
Granular Embankment
See General Notes
631.04
1153+50
586.6
Sta. 1153+00
Sta. 1153+00
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

End Area Cut	End Area Fill	Volume Cut	Volume Fill
74	3032		
		27	1828
23	3549		
		21	7582
0	4640		
		0	8992
0	5071		

WESTBOUND STA. 1153+50 TO STA. 1154+15

ROSS COUNTY
ROS-35-21.23



Seeding.

End Width	Sq. Yd's.
135	
	764
140	
	761
134	
	519
133	

End Area Cut	End Area Fill	Volume Cut	Volume Fill
74	1877		
		189	3422
130	1819		
		219	3566
107	2032		
		117	3282
74	3032		

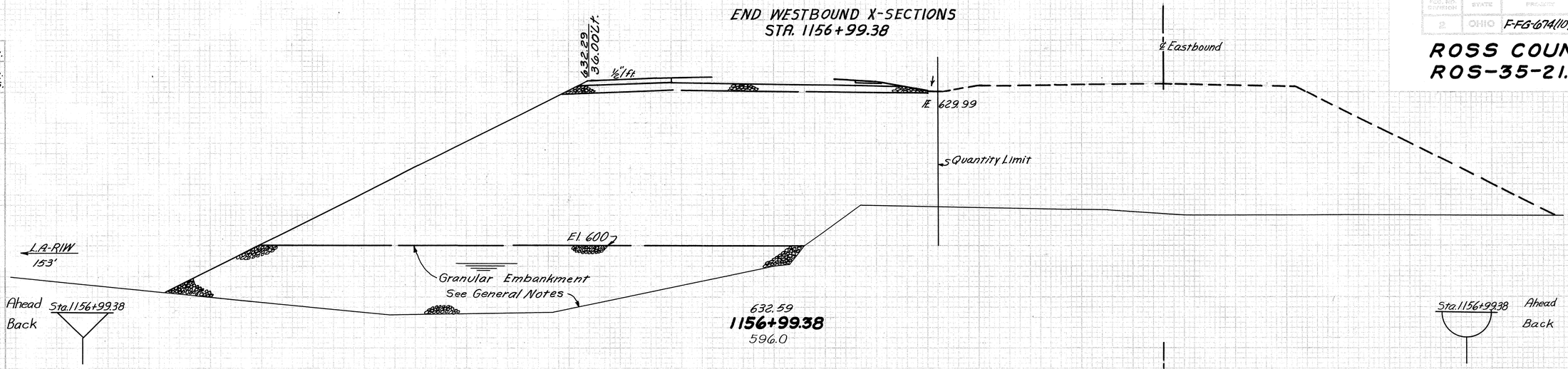
WESTBOUND STA. 1154+50 TO STA. 1155+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

72
240

ROSS COUNTY
ROS-35-21.23

END WESTBOUND X-SECTIONS
STA. 1156+99.38



Seeding. End Sq. Width	Yds.		Sta. 1156+99.38	EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
0		Ahead		0	0		
135		Back		0	432.7		
	74.1					0	710.9
135			L.A.-R/W 153'				
						0	344.7
	70.8						
						0	556.0
120			L.A.-R/W 153'				
						0	255.8
	70.8					69	410.6
135			Sta. 1155+50			74	187.7

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

WESTBOUND STA. 1156+00 TO STA. 1156+99.38

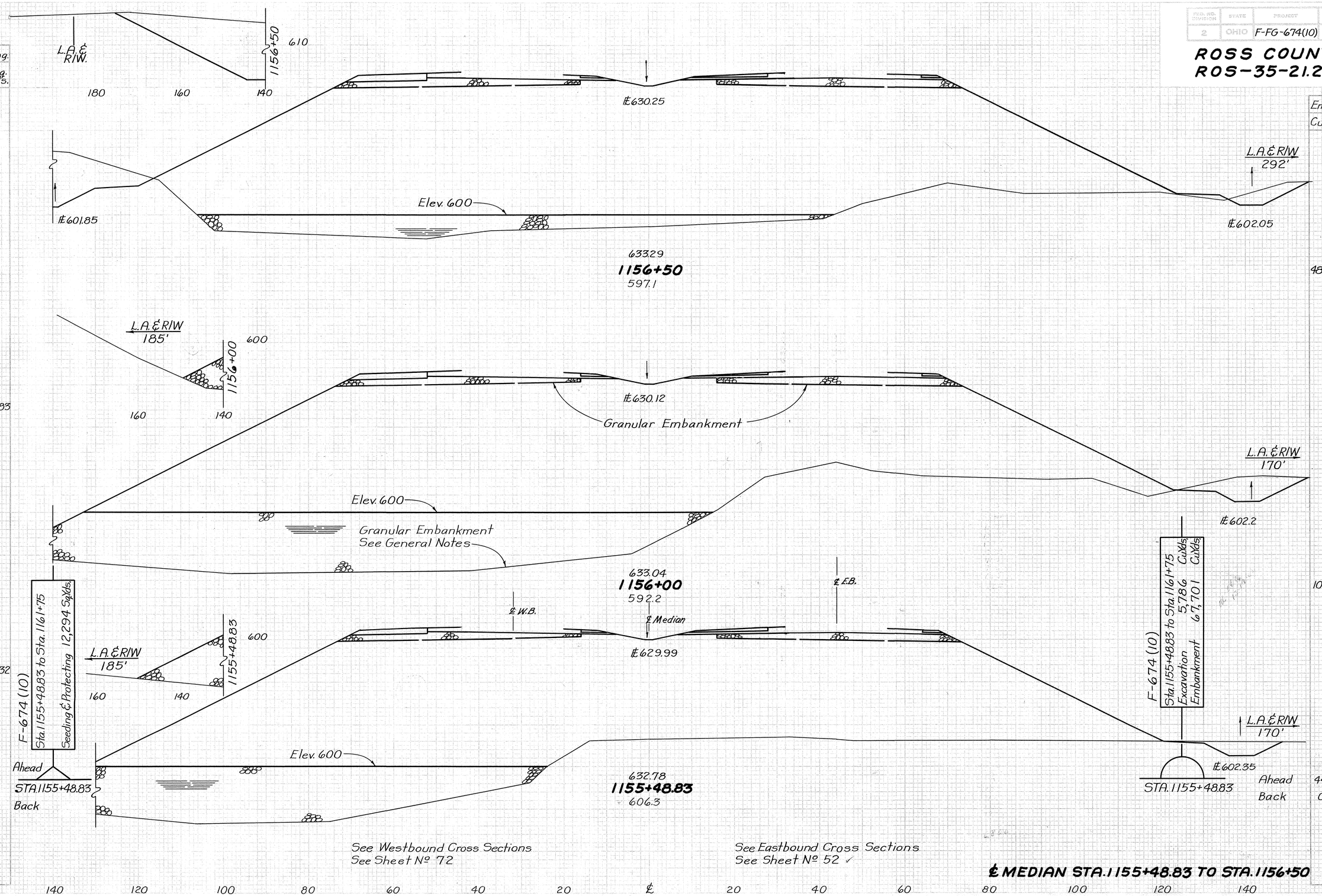
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

73
240

ROSS COUNTY
ROS-35-21.23

Seeding. End Sq. Width	Yds.
298	
1583	
272	
1532	
267	
0	

EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
		4886	592
		5441	3143
		1007	602
		136	13653
		44	6806
		0	0



See Westbound Cross Sections
See Sheet No. 72

See Eastbound Cross Sections
See Sheet No. 52 ✓

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

℄ MEDIAN STA. 1155+48.83 TO STA. 1156+50

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

74
240

ROSS COUNTY
ROS-35-21.23

Begin Temporary Guard Rail
Lt. ℄ Sta. 1158+25

End Guard Rail
Lt. ℄ Sta. 1158+34.83

BRIDGE LIMIT
STA. 1158+44.77

(5) Prop. Std. No. 8 C.B.
℄ Sta. 1158+37.57
See Sheet No. 117

End Guard Rail
Rt. ℄ Sta. 1158+40

End Guard Rail
Rt. ℄ Sta. 1158+23.07

Face Guard Rail

Quantity Limit

Dumped Rock Levee

L.A. & R/W
208'

Prop. 36" Pipe
℄ 601.54

Seeding End Sq. Width Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
179			50	4453
412			27	3466
192			23	4906
2628			381	19678
281			183	5720
1608			621	11400
298			488	6592

L.A. & R/W — 1158+20 — ℄ 600.35 — 180 160 140

℄ 631.1

634.14
1158+20
607.5

L.A. & R/W — 1158+00 — ℄ 600.45 — 180 160 140

Face Guard Rail

℄ 631.4

Quantity Limit

Dumped Rock Levee

L.A. & R/W
236'

Prop. 36" Pipe
℄ 601.6

634.04
1158+00
607.0

Begin Guard Rail
Lt. ℄ Sta. 1157+03.99

Face Guard Rail

L.A. & R/W — 1157+00 — ℄ 601.70 — 180 160 140

℄ 632.7 ℄ 631.8

For Details of Rock Levee
See Sheet No. 117

L.A. & R/W
292'

℄ 601.9

633.54
1157+00
602.9

Sta. 1156+50

Sta. 1156+50

℄ MEDIAN STA. 1157+00 TO STA. 1158+20

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

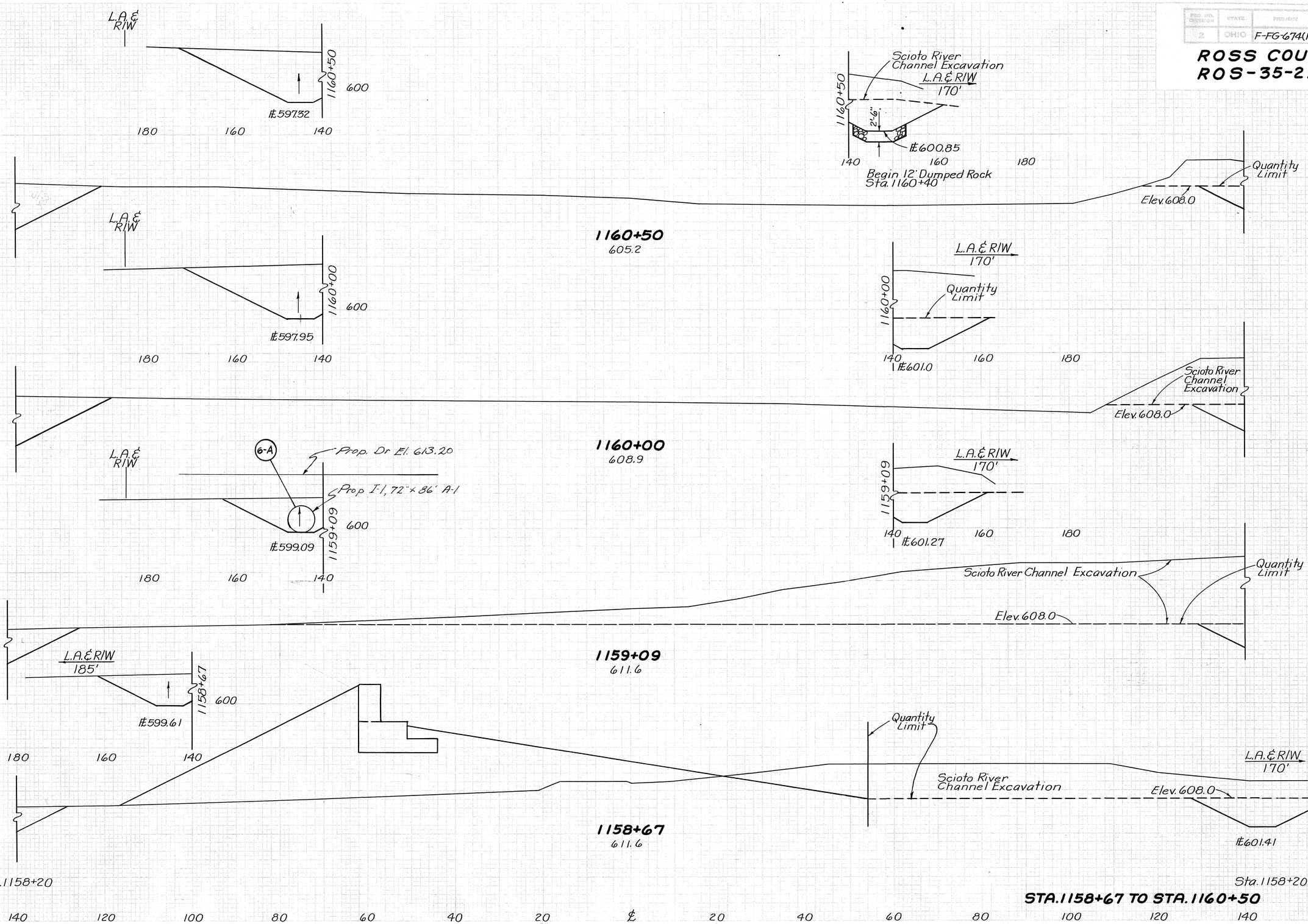
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

75
240

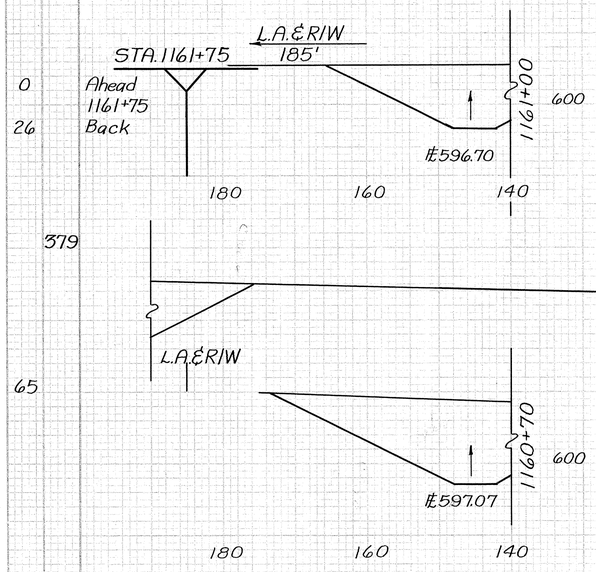
ROSS COUNTY
ROS-35-21.23

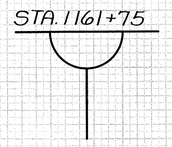
Seeding End Sq. Width	Yds.
121	
719	
138	
1304	
120	
688	
175	
924	
179	

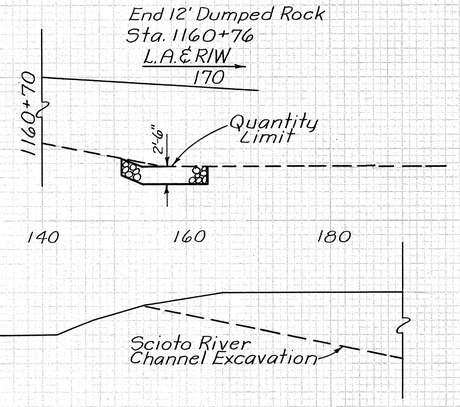
	End Area		Volume	
	Cut	Fill	Cut	Fill
1160+50				
605.2	487	0		
1160+00			944	0
608.9	533	0		
1159+09			1441	0
611.6	322	0		
1158+67			481	1173
611.6	297	1508		
Sta. 1158+20	50	4453	302	5188



STA. 1158+67 TO STA. 1160+50







FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

76
240

ROSS COUNTY
ROS-35-21.23

Seeding	
End Width	Sq. Yds.
0	
26	
	379
65	
	273
99	
	244
121	

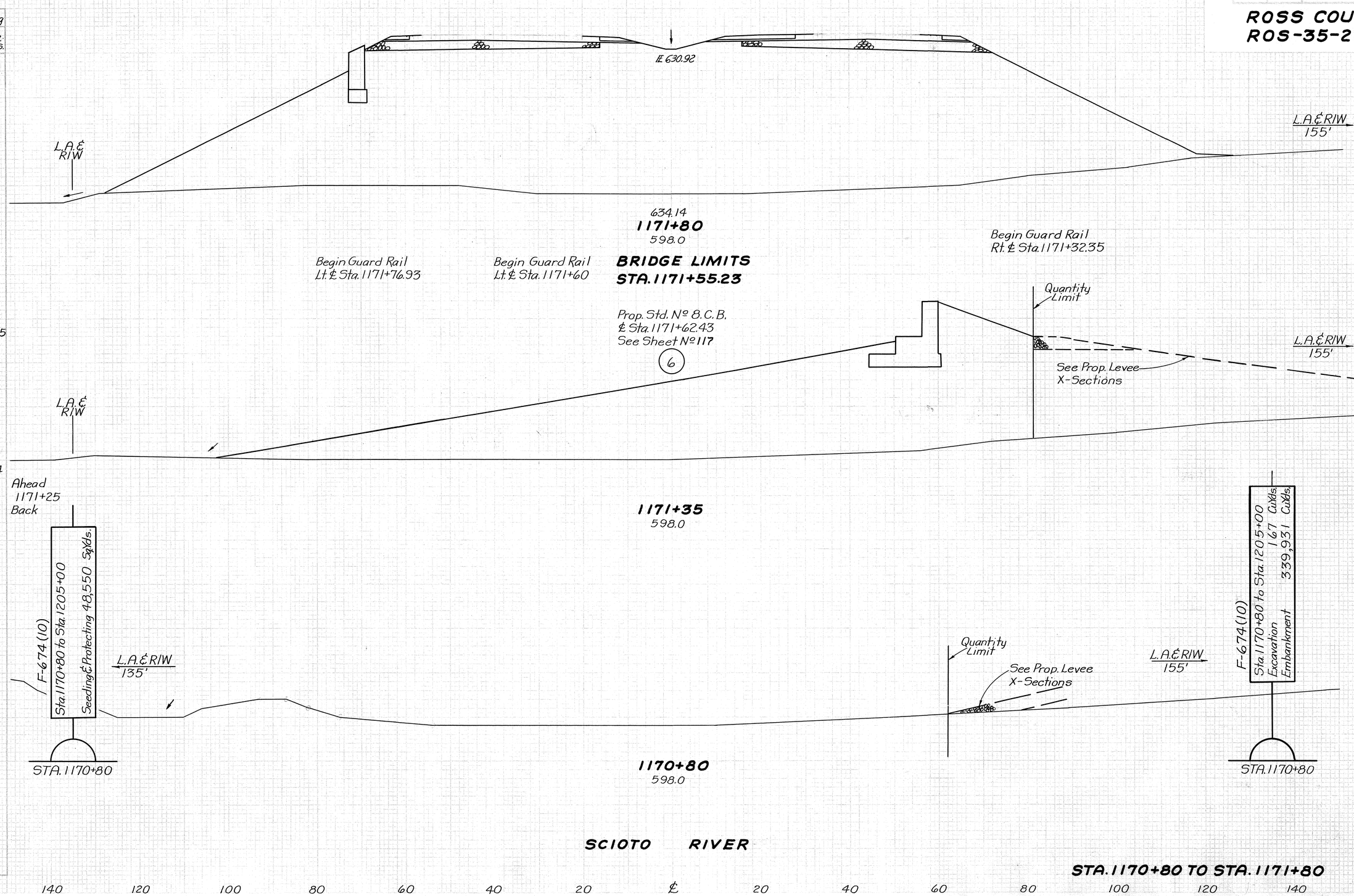
End Area		Volume	
Cut	Fill	Cut	Fill
0	0		
		294	0
212	0		
		308	0
343	0		
		307	0
487	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

77
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.
205	
595	
33	24
10	
0	
0	
0	



End Area Cut	End Area Fill	Volume Cut	Volume Fill
0	6340		
0	7695		
0	2894		
0	2948		
0	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

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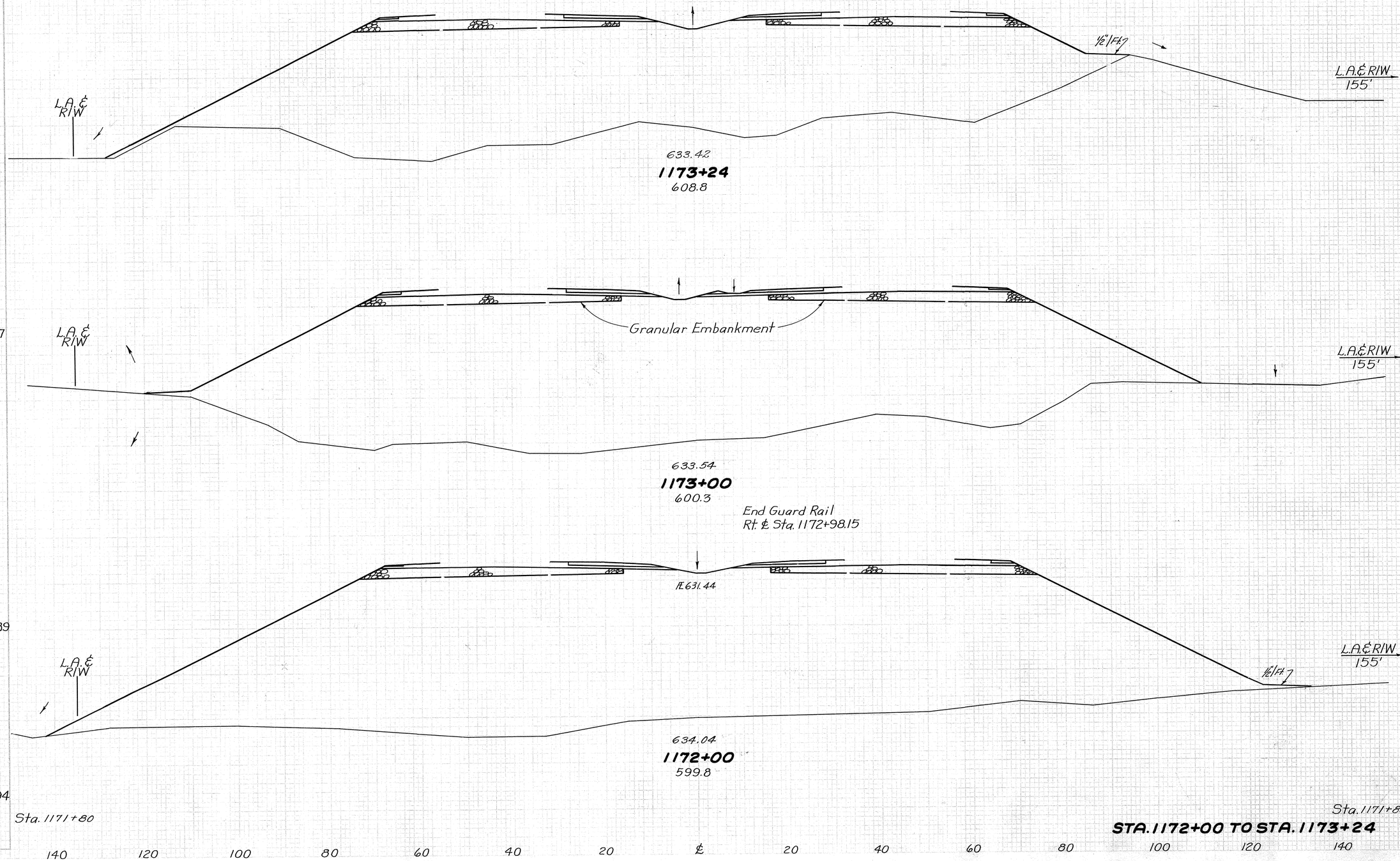
240

ROSS COUNTY
ROS-35-21.23

Seeding		
End Width	Sq. Yds.	
183		
497		
190		
2389		
240		
494		
205		Sta. 1171+80



End Area Cut	End Area Fill	Volume Cut	Volume Fill
0	4308		
0	4428		
0	5656		
0	25267		
0	6908		
0	4907		
Sta. 1171+80	0	6340	

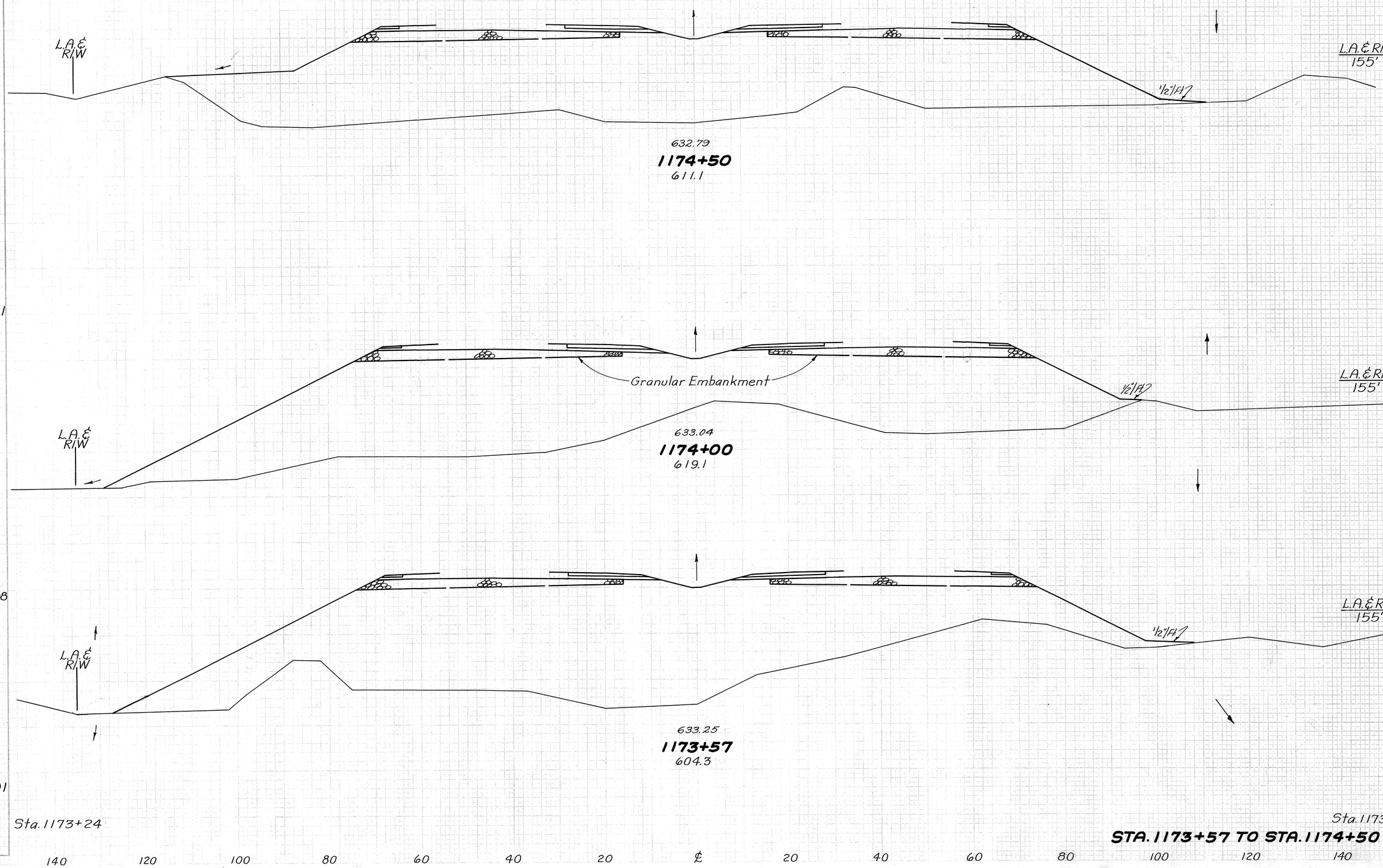
STA. 1172+00 TO STA. 1173+24

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

79
240

ROSS COUNTY
ROS-35-21.23

Seeding		End Area		Volume	
End Width	Sq. Yds.	Cut	Fill	Cut	Fill
182		0	3350		
	1011			0	6356
182					
	898			0	5787
194				0	3752
	691			0	4926
183					



STA. 1173+57 TO STA. 1174+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

80
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
161		L.A. & R/W				
				1958	0	
	918					
						3707
124		L.A. & R/W				
				1493	0	
	1739					6789
189		L.A. & R/W		2173	0	
	1635					7732
186		L.A. & R/W		3146	0	
	1462					8601
182'		Sta. 1174+50		3350	0	

631.25
1177+58
620.8

631.54
1177+00
621.3

Granular Embankment

632.04
1176+00
619.5

632.43
1175+21.5
614.3

STA. 1175+21.5 TO STA. 1177+58

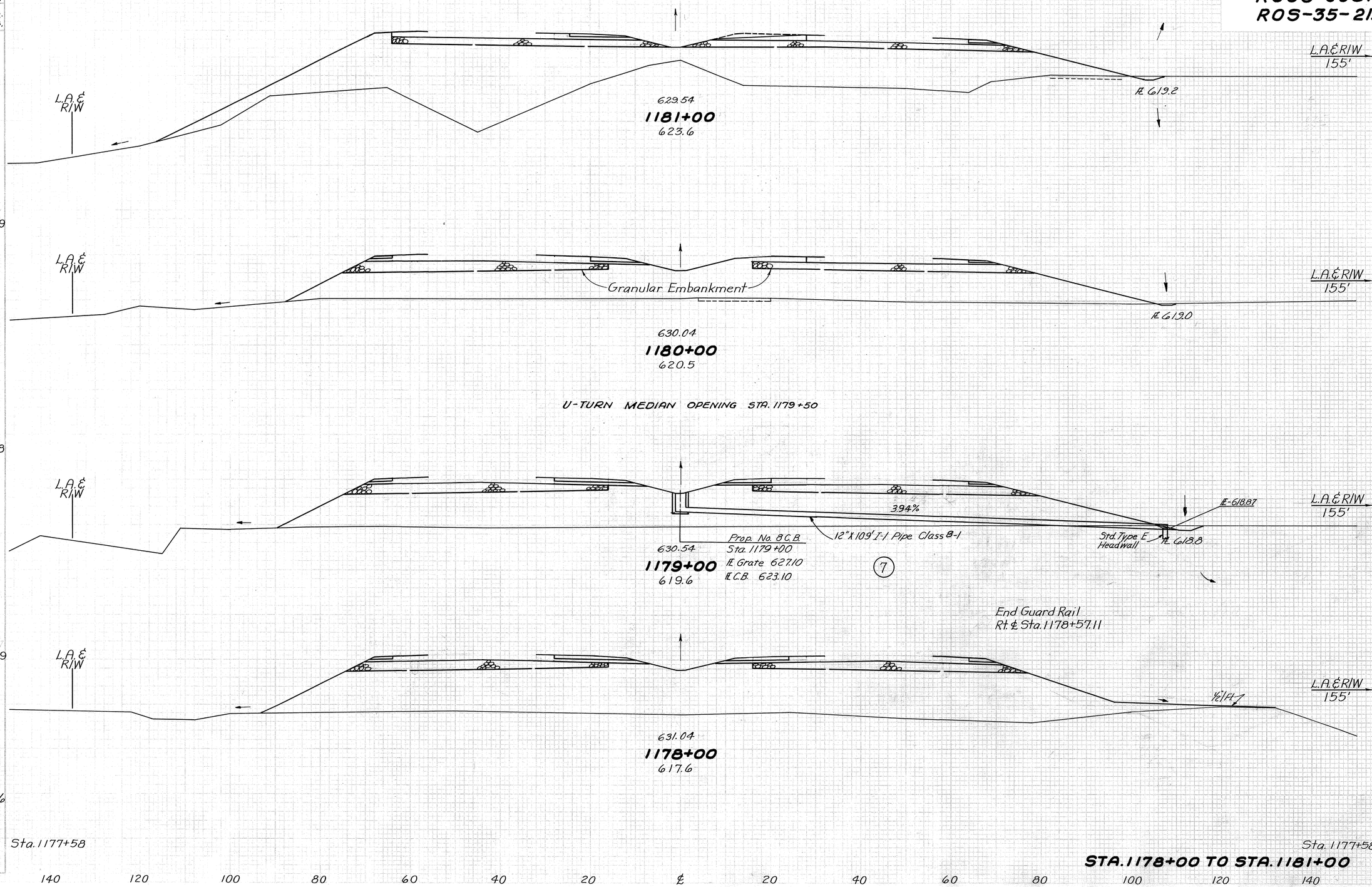
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

8.1
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.
180	1839
151	1728
160	1889
180	796
161	



End Area Volume			
Cut	Fill	Cut	Fill
4	1928		
		9	6198
1	1419		
15	5613		
7	1612		
13	6904		
0	2116		
0	3169		
Sta. 1177+58	0	1958	

STA. 1178+00 TO STA. 1181+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

82
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sta.	Width Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
155		L.A.& R/W 151'				
		627.66 **1184+75.89** 612.3	0	2892		
1438		L.A.& R/W				
		Prop. Std. No. 8 C.B. 3.18' Lt. Sta. 1184+00 ℄ Grate - 624.53 ℄ C.B. - 621.03				
		12"X104' Class B-1			0	7770
		4.8%				
		℄ - 616.04				
		Std. Type E Headwall				
		Flowline Ditch				
		Add for Ditch Rt. Sta. 1184+00				12
		BEGIN TAPER STA. 1184+00				
186		628.04 **1184+00** 614.8	0	2637		
2067		L.A.& R/W				
		Granular Embankment				
		℄ 617.2				
		628.54 **1183+00** 613.7	9	9754		
186		L.A.& R/W				
1972		BEGIN TAPER STA. 1182+00				
		℄ 618.6				
		629.04 **1182+00** 618.2	17	8926		
169		L.A.& R/W				
1939			4	2190		
					15	7626
180	Sta. 1181+00		4	1928		

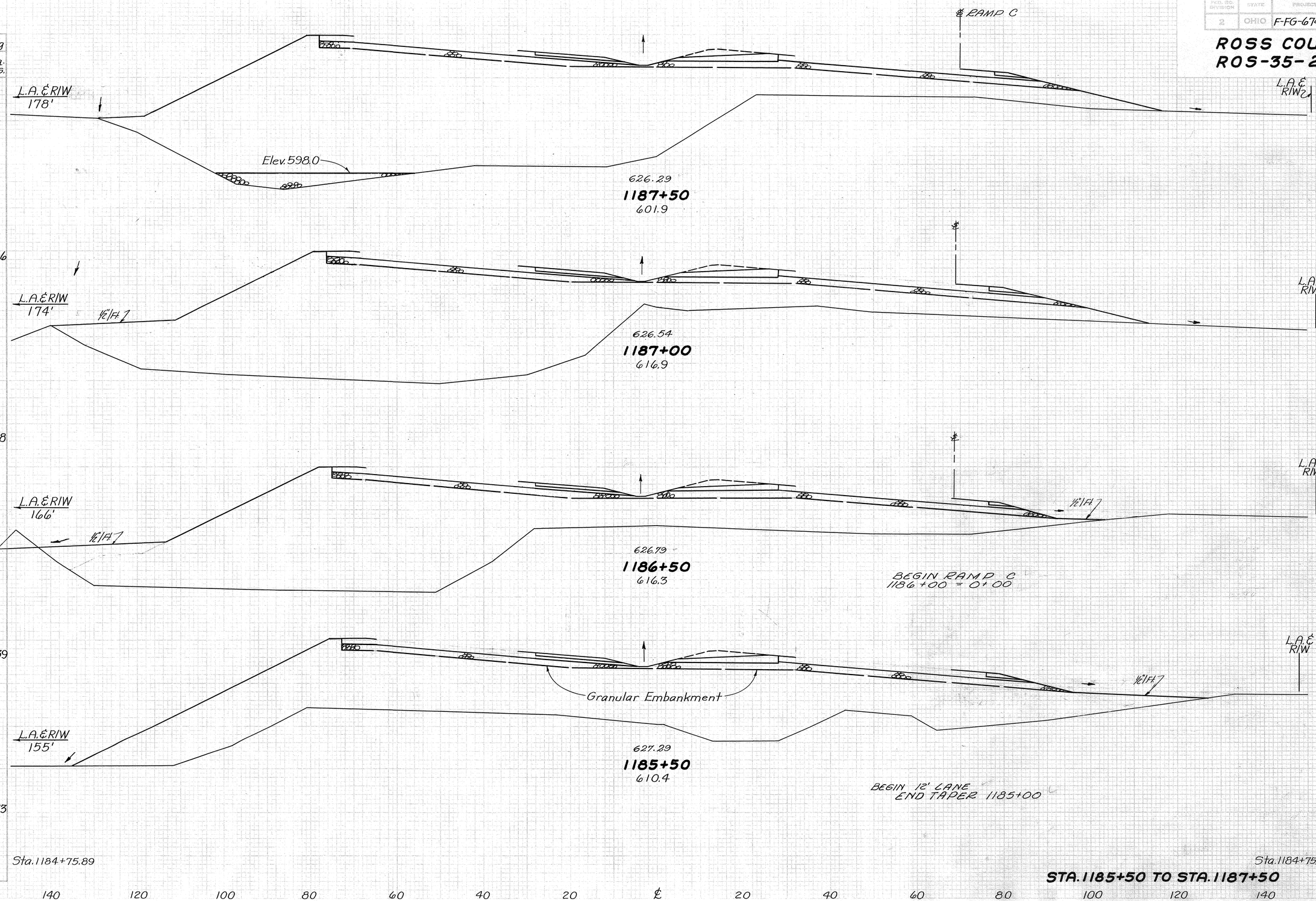
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

STA. 1182+00 TO STA. 1184+75.89

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

83
240

ROSS COUNTY
ROS-35-21.23



End Area		Volume	
Cut	Fill	Cut	Fill
0	3996		
		0	6867
0	3420		
22	6028		
24	3090		
44	11448		
0	3092		
		0	8212
Sta. 1184+75.89		0	2892

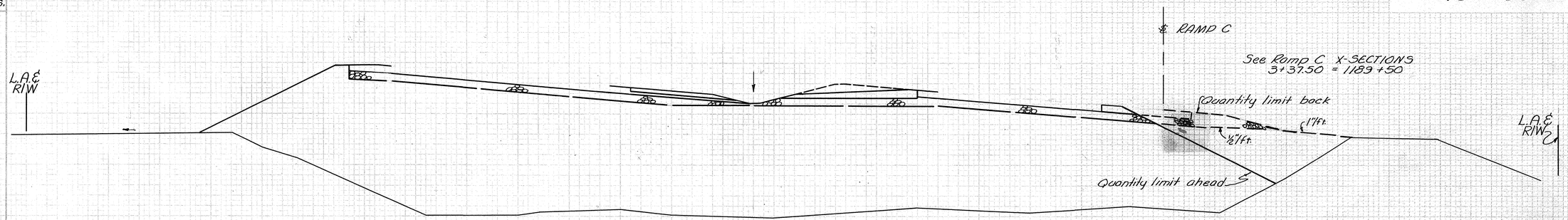
STA. 1185+50 TO STA. 1187+50

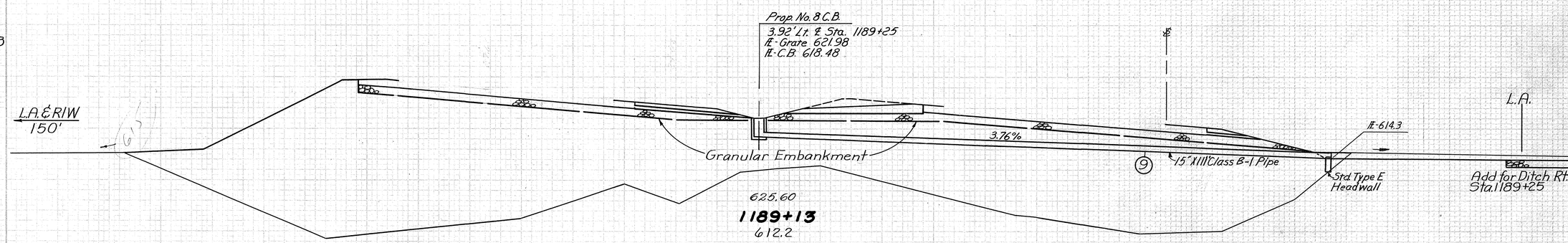
FED. ROAD DIV. NO.	STATE	PROJECT	
5	OHIO	F-FG-674(10)	

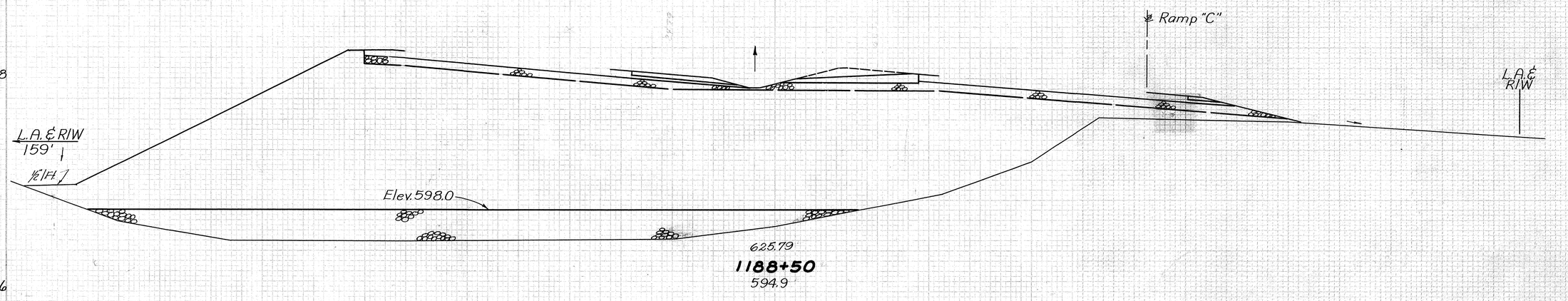
84
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.
100	Ahead Sta. 1189+50
142	Back
608	
154	
1138	
171	
1906	
172	Sta. 1187+50







End Area Cut	End Area Fill	Volume Cut	Volume Fill
Ahead Sta. 1189+50			
Back	0	4223	
	0	4464	
			0 5837
Prop. No. 8 C.B.			
Add for Ditch Rf. Sta. 1189+25			11
	0	4055	
			0 11139
		0	5493
			0 17572
Sta. 1187+50	0	3996	

STA. 1188+50 TO STA. 1189+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

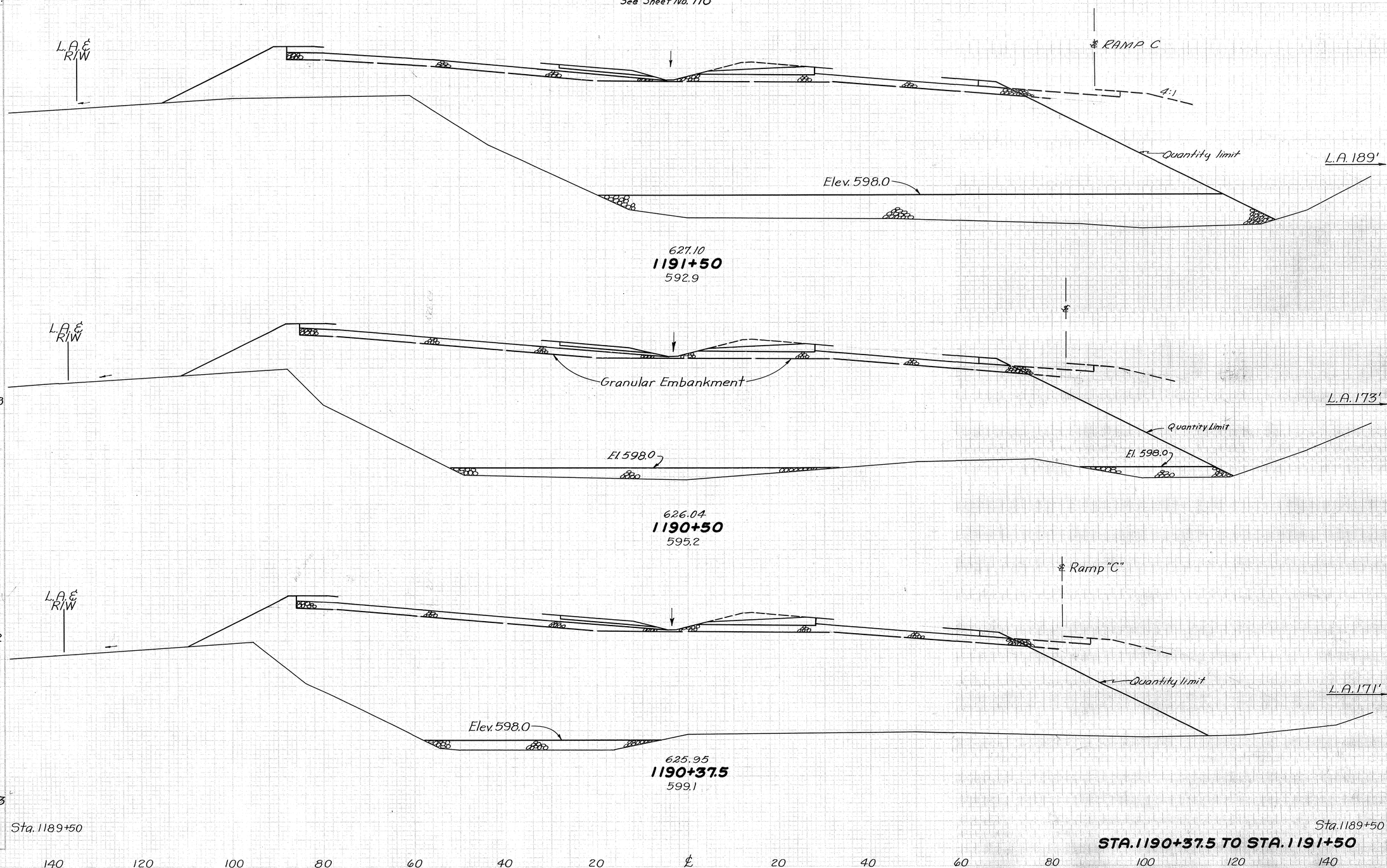
FED. ROAD DIVISION	STATE	PROJECT	
5	OHIO	F-FG-674(10)	

85
240

ROSS COUNTY
ROS-35-21.23

Prop. Storm Sewer Sta. 9+97.77 ℄ (10)
See Sheet No. 118

Seeding End Width	Sq. Yd's.
98	
1078	
96	
132	
94	
943	
100	



End Area Cut	End Area Fill	Volume Cut	Volume Fill
		0	5005
		0	18128
		0	4784
		0	2197
		0	4705
		0	14467
		0	4223

STA. 1190+37.5 TO STA. 1191+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

86
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			End Area Cut	End Area Fill	Volume Cut	Volume Fill
		℄ Ramp A; L.A. & R/W 161'; Quantity Limit; ℄ RAMP C; 4:1; Quantity Limit; L.A. 207'				
84	84	632.79 **1194+50** 610.8	0	3960		
		℄ Ramp A; Begin Guard Rail Rt. ℄ Sta. 1193+74.64; L.A. & R/W; Quantity Limit; Granular Embankment; Quantity Limit; L.A. 206				
	806				0	13691
		See Ramp "A" Cross Sections 12+42 = 1192+50				
	61	630.79 **1193+50** 607.0	0	3433		
		℄ Ramp A; L.A. & R/W; Quantity Limit Back; Quantity Limit Ahead; ℄ Ramp "C"; 1½/16"/ft; 4:1; Quantity Limit; Elev. 598.0; L.A. 200				
	656				0	15183
		Begin Ramp A 11+89.90 = 1192+00				
	57	Ahead				
	100	Back				
		628.79 **1192+50** 597.8	Ahead 0	4766		
			Back 0	5103		
	1100				0	18719
	98	Sta. 1191+50	Sta. 1191+50 0	5005		

STA. 1192+50 TO STA. 1194+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

87
240

ROSS COUNTY
ROS-35-21.23

End Guard Rail
Lt. ℄ Sta. 16+73.68

℄ Ramp A

L.A.℄ R/W 201'

Quantity Limit

L.A.℄ R/W 210'

Quantity Limit

℄ RAMP C

636.34
1196+50
619.5

Seeding End Sa. Width Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
123			0	2639
658			0	4751
114			0	2492
567			0	4445
90			0	2309
486			0	4304
85			0	2339
469			0	5832
84			0	3960

℄

L.A.℄ R/W 190'

Quantity Limit

Granular Embankment

L.A.℄ R/W 209'

Quantity Limit

635.59
1196+00
619.4

℄

L.A.℄ R/W 179'

Quantity Limit

L.A.℄ R/W 208'

Quantity Limit

634.74
1195+50
619.5

Begin Guard Rail
Lt. ℄ Sta. 1195+40.34

℄ Ramp A

L.A.℄ R/W 169'

Quantity Limit

℄ Ramp "C"

L.A.℄ R/W 206'

Quantity Limit

633.79
1195+00
617.0

Sta. 1194+50

Sta. 1194+50

STA. 1195+00 TO STA. 1196+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

88
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
153	End Guard Rail Lt. ℄ Sta. 1198+89.34					
	L.A.℄R/W 211'	E 618.25				
		638.26				
		1198+37				
		619.5	0	2986		
	End Guard Rail Rt. ℄ Sta. 1198+92.13					
	2.73%					
	(12) Prop. No. 2-2 B C.B. 0.75' Lt. Sta. 1198+50 E Grate ~ 635.28 E C.B. ~ 631.48					
	12"X76' I-1 Pipe Class B-1					
	I-1 Conc. Collar E 629.41					
	30°					
	12"X25° Elbow Class F-4					
	12"X38' I-1 Pipe Class F-4					
	E 616.89					
	10'					
	3:1					
	2.70%					
	E 617.16					
	L.A.℄R/W 211'					
	4' 2'-0" 1'-6" Section at Outlet 12" Pipe Rt. Sta. 1198+50					
608						
	L.A.℄R/W 210'	E 618.36				
		E 636.39				
		E 637.10				
		637.99				
		1198+00				
		619.4			0	4067
	Quantity Limit					
	L.A.℄R/W 211'					
143	Begin Guard Rail Sta 1097+53.98				0	2950
786						
	L.A.℄R/W 208'					
	E 636.4					
	E 635.3					
	Granular Embankment					
	Quantity Limit					
	L.A.℄R/W 212'					
		637.54				
		1197+50				
		619.3			0	5412
140					0	2895
761	L.A.℄R/W 207'					
	℄ Ramp A					
	℄ RAMP "C"					
	Quantity Limit					
	L.A.℄R/W 211'					
		636.99				
		1197+00				
		619.3			0	5277
134					0	2804
714						
123	Sta. 1196+50				Sta. 1196+50 0	2639
						5040

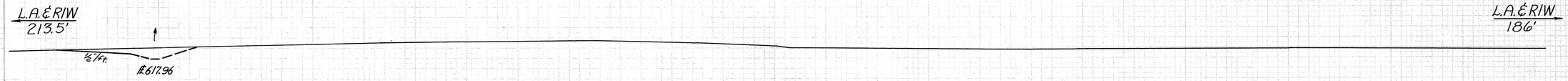
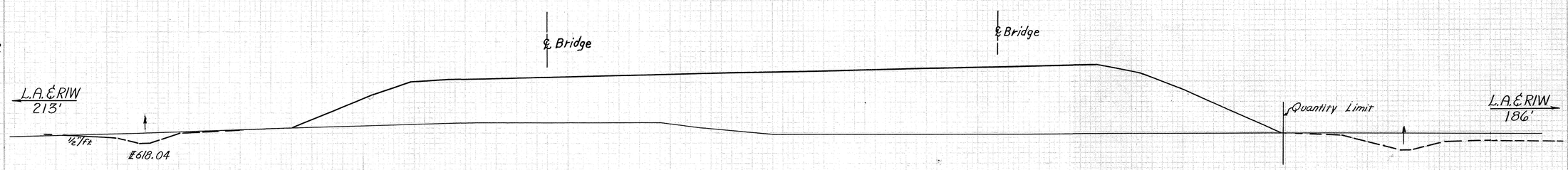
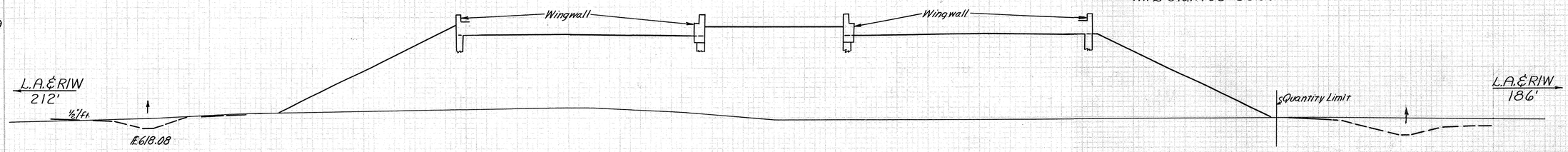
STA. 1197+00 TO STA. 1198+37

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

89
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
						
0	Ahead 1199+31	**1199+31** 620.4				
60	Back					
152					0	849
54		**1199+07** 619.8			0	1911
		BRIDGE LIMITS Sta. 1199+01.26				
129					0	1232
106		**1198+92.5** 619.6			0	2677
799					0	5820
153	Sta. 1198+37			Sta. 1198+37	0	2986

STA. 1198+92.5 TO STA. 1199+31

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

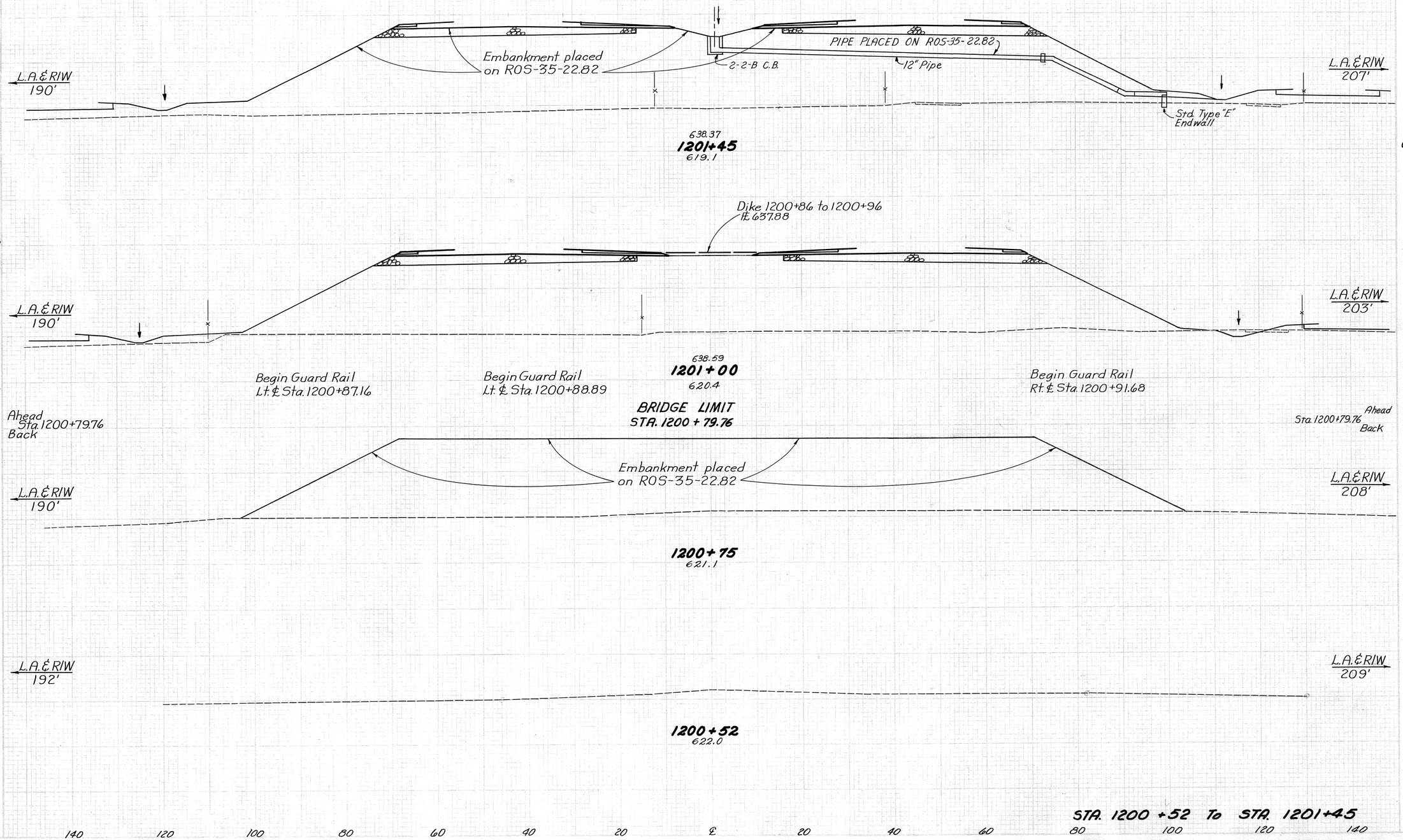
90
240

ROSS COUNTY
ROS-35-21.23

SEEDING

EXC. WIDTH	SQ. YDS.
51	
255	
51	
115	
51	
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	20		
		0	33
0	20		
		0	15
0	20		
0	0		
		0	0
0	0		
		0	0
0	0		



SEEDING

ENG. WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

91
240

ROSS COUNTY
ROS-35-21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL

L.A.&R/W 190'

Embankment placed on ROS-35-22.82

L.A.&R/W 195'

52

636.34
1203+50
618.0

0 20

289

L.A.&R/W 190'

L.A.&R/W 200'

0 37

636.99
1203+00
618.3

52

0 20

289

L.A.&R/W 190'

L.A.&R/W 204'

0 37

637.54
1202+50
618.8

52

0 20

End Guard Rail
Rt. ℄ Sta. 1202+27.04

286

℄ 636.72 ℄ 636.64

L.A.&R/W 190'

Embankment placed on ROS-35-22.82

L.A.&R/W 205'

0 37

637.99
1202+00
618.9

51

0 20

312

0 41

51

Sta. 1201+45

Sta. 1201+45

0 20

STA. 1202+00 TO STA. 1203+50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

SEEDING

END STATION	SQ. YDS.

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

92
240

ROSS COUNTY
ROS-35-21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL

END WORK
STA. 1205+00

END PROJECT
STA. 1205+00

Sta. 1205+00
L.A.&R/W
230'

Embankment placed
on ROS-35-22.82

Sta. 1205+00
L.A.&R/W
170'

55

633.79
1205+00
618.4

0 20

End Guard Rail
Lt. ℄ Sta. 1204+74.66

End Guard Rail
Rt. ℄ Sta. 1204+79.18

300

0 37

L.A.&R/W
230'

L.A.&R/W
180'

53

634.74
1204+50
617.3

0 20

292

0 37

L.A.&R/W
230'

Embankment placed
on ROS-35-22.82

L.A.&R/W
186'

52

635.59
1204+00
617.3

0 20

289

0 37

52

Sta. 1203+50

Sta. 1203+50

0 20

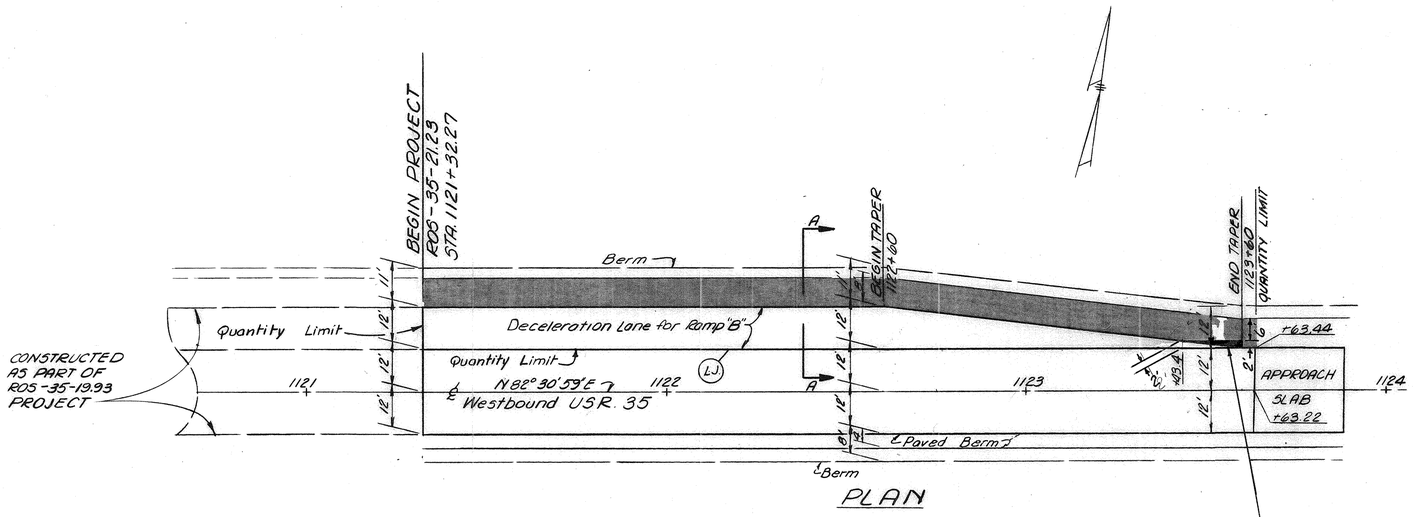
STA. 1204+00 TO STA. 1205+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

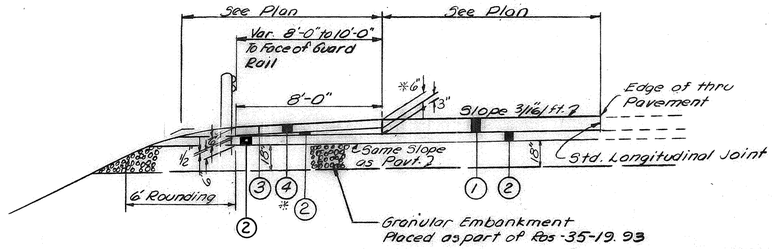
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

93/240

ROSS COUNTY
ROS-35-21.23



PLAN



SECTION A-Ā

NOTE * 2-3" Layers of B-21

Station	Distance Lt ℄	Elevation
1121+32.27	24.00'	664.83
1121+50		665.08
1121+75		665.41
1122+00		665.71
1122+25		665.99
1122+60	24.00'	666.33
1122+75	22.20	666.50
1123+00	19.20	666.75
1123+25	16.20	666.97
1123+60	12.00'	667.24

LEGEND

(LJ) Standard Longitudinal Joint

Paved Berm

Note:
The shaded area shall be constructed of concrete pavement to an elevation one half inch lower than the adjacent pavement and surfaced with T-31 using No. 6 aggregate as the maximum size. The shaded area shall be paid for as full depth T-71 and the surface treatment shall be paid for as T-31.

ESTIMATED PAVEMENT QUANTITIES

№	ITEM	DESCRIPTION	QUANTITY	UNIT
(1)	T-71	9" Reinforced Portland Cement Concrete Pavement	2370	Sq. Yds
(2)	I-22	Subbase Grading A or B, As Per Plan (Thickness as Shown)	105.1	Cu. Yds
(3)	T-31	Bituminous Surface Treatment - No. 6 Aggregate @ 0.008 Cu Yd per Sq. Yd.	203.1	Sq. Yds
(3)	T-31	Bituminous Surface Treatment - Bituminous Treatment @ 0.25 gal. per Sq Yd.	203.1	Sq. Yds.
(4)	B-21	Waterproofed Aggregate Base Course (As per Plan)	33.8	Cu Yds.

0 10 20 30
PLAN SCALE

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

DECELERATION LANE
FOR RAMP "B"
U.S.R. 23 INTERCHANGE
U.S.R. 35 Sta. 1121+32.27 to 1123+60

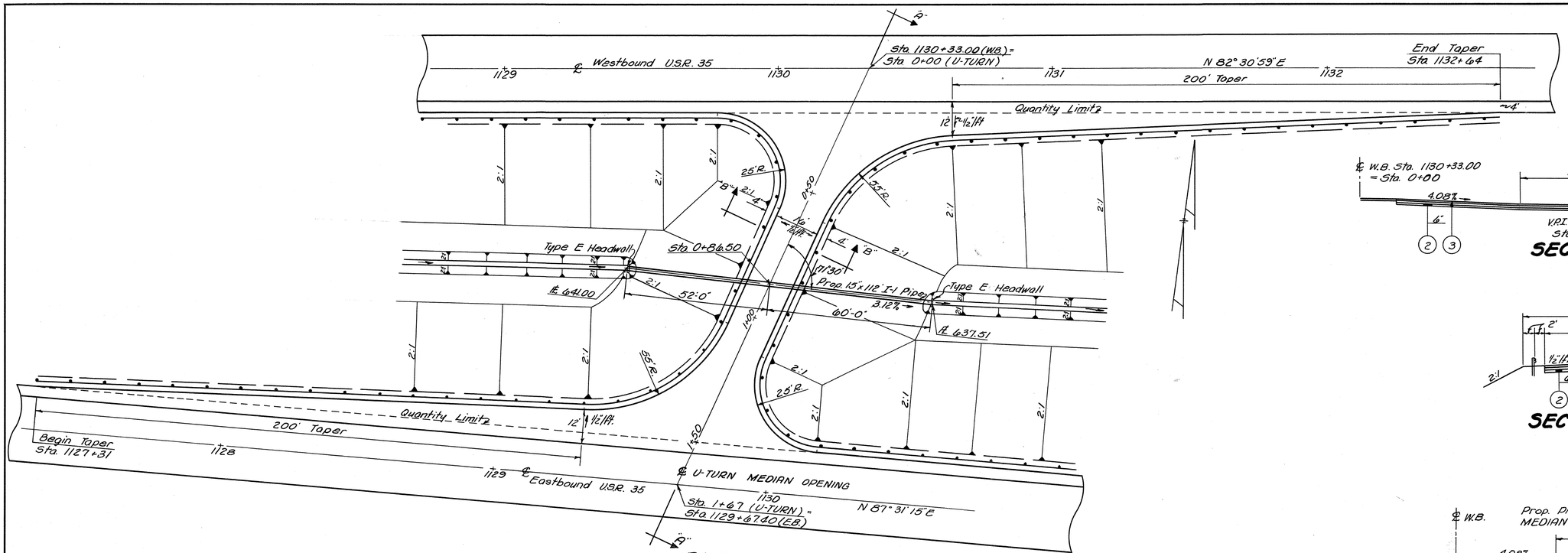
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RVV.G.	LKM	LKM				

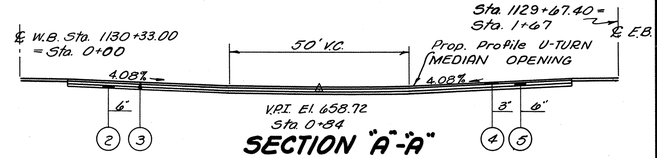
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

94/240

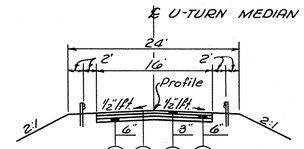
ROSS COUNTY
ROS - 35 - 21.23



PLAN
U-TURN MEDIAN OPENING AT STA. 1129+67.40 (E.B.)



SECTION "A"-"A"



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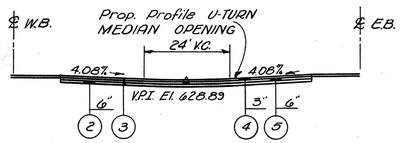
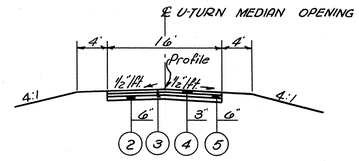
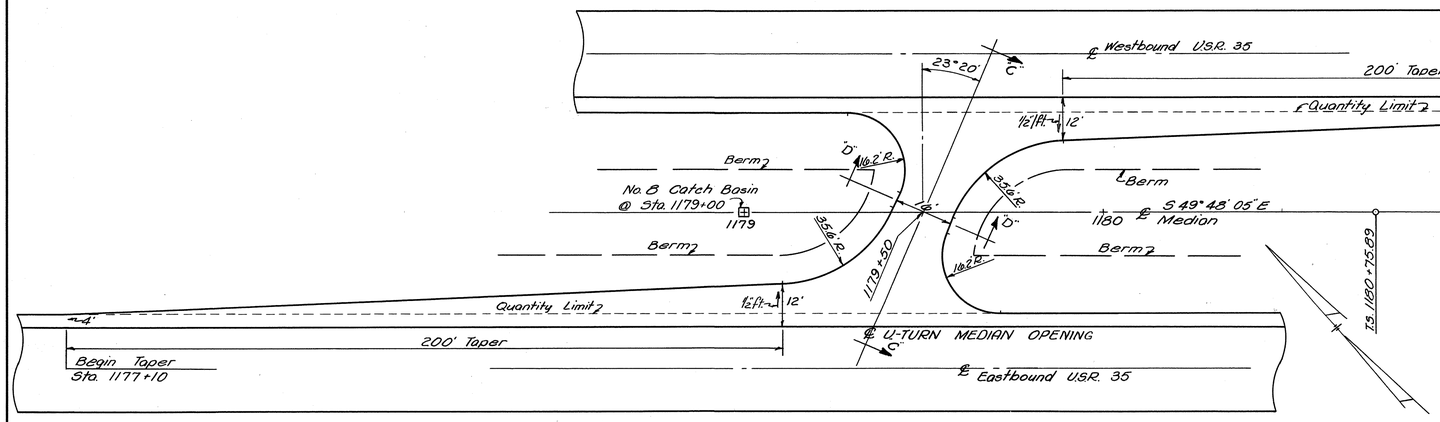


SECTION "C"-"C"



SECTION "D"-"D"



PLAN
U-TURN MEDIAN OPENING AT STA. 1179+50

ESTIMATED QUANTITIES

Legend	Item	Description	FG 674.(10) U-TURN at 1129+67.40 (EB) Quantity	Unit	FG 674.(10) U-TURN at 1179+50 Quantity	Unit
2	I-22	Subbase, Grading A or B, As per plan (Thickness as shown)	101	Cu.Yds.	63	Cu.Yds.
3	T-31	Bituminous Surface Treatment (See note in proposal)	605	Sq.Yds.	377	Sq.Yds.
4	B-21	3" Waterproofed Aggregate Base Course, As per plan	605	Sq.Yds.	377	Sq.Yds.
5	I-18	Stabilized Crushed Aggregate Shoulders and Approaches (Thickness as shown)	101	Cu.Yds.	63	Cu.Yds.

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

U-TURN MEDIAN OPENINGS AT STA. 1129+67.40 (EB) AND STA. 1179+50

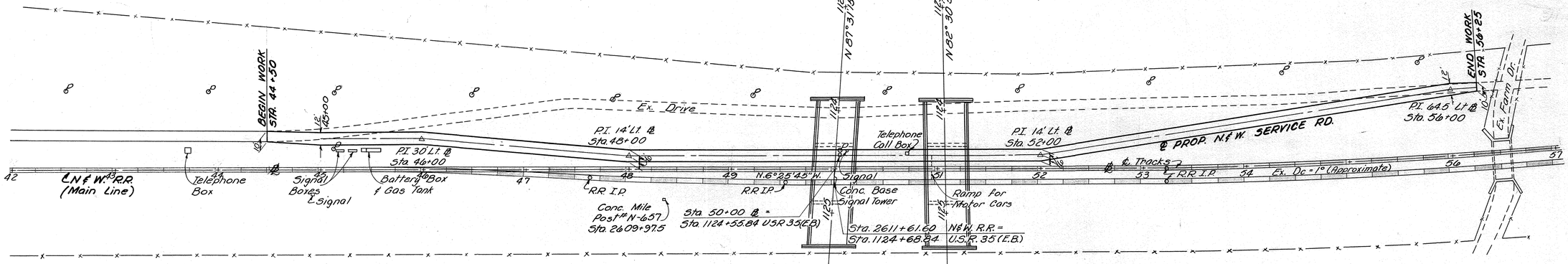
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.	L.L.F.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F.FG-674(9)	

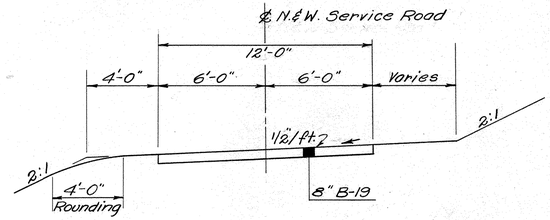
95
240

ROSS COUNTY
ROS-35-21.23

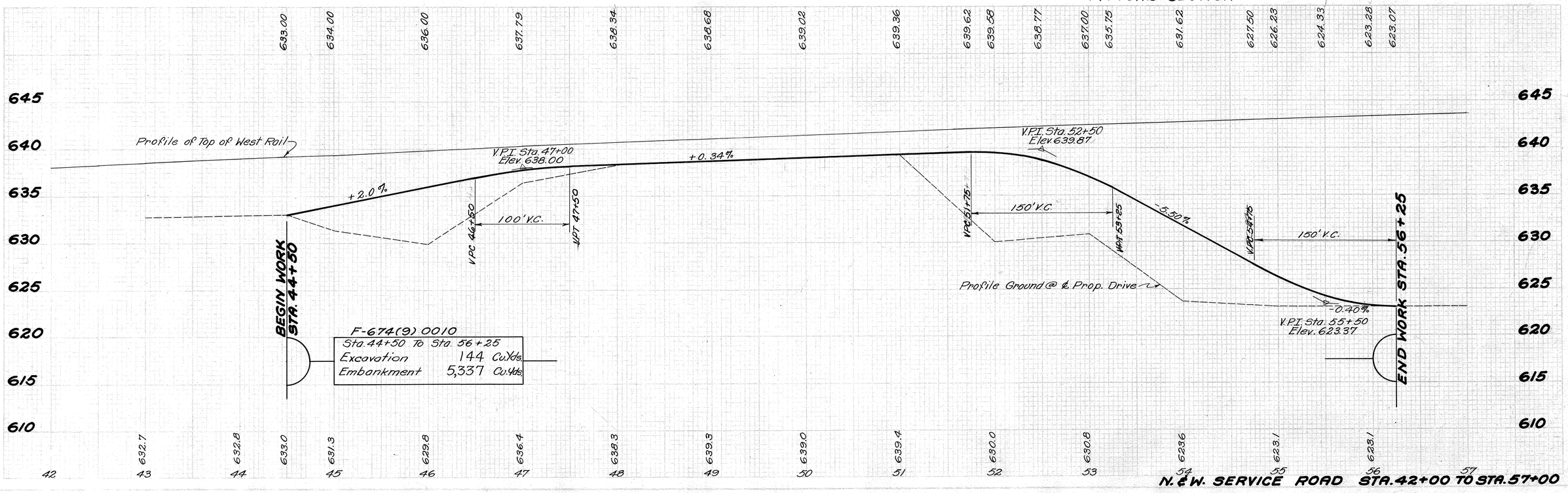


PROPOSED BRIDGE DATA

Bridge No. R05-35-2129 L & R
Type: Continuous Concrete Slab with Concrete Substructure. Separate Structures
Spans: 44'-0" ~ 55'-0" ~ 44'-0"
Roadway: 40'-0" f/f Parapet Walls
Load Frequency: C.F-400 (57)
Skew: 1°-00' L.F. ~ Left Bridge
4°-00 R.F. ~ Right Bridge
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 ~ 25' long
Railing: Aluminum Rail and Supports and Concrete Parapet
Alignment: Tangent



TYPICAL SECTION



F-674(9) 0010
Sta. 44+50 To Sta. 56+25

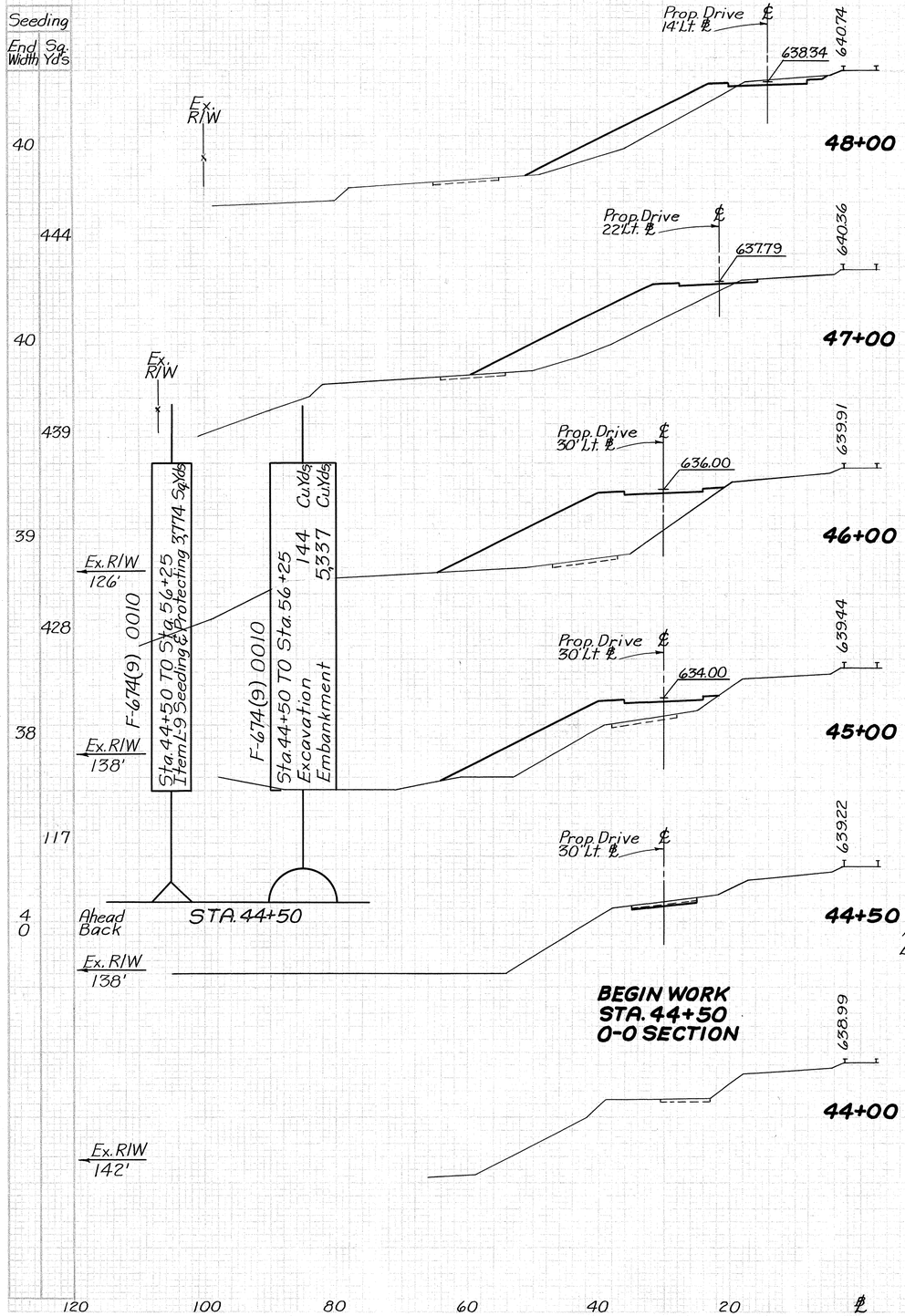
Excavation	144 Cu. Yds.
Embankment	5,337 Cu. Yds.

N. & W. SERVICE ROAD STA. 42+00 TO STA. 57+00

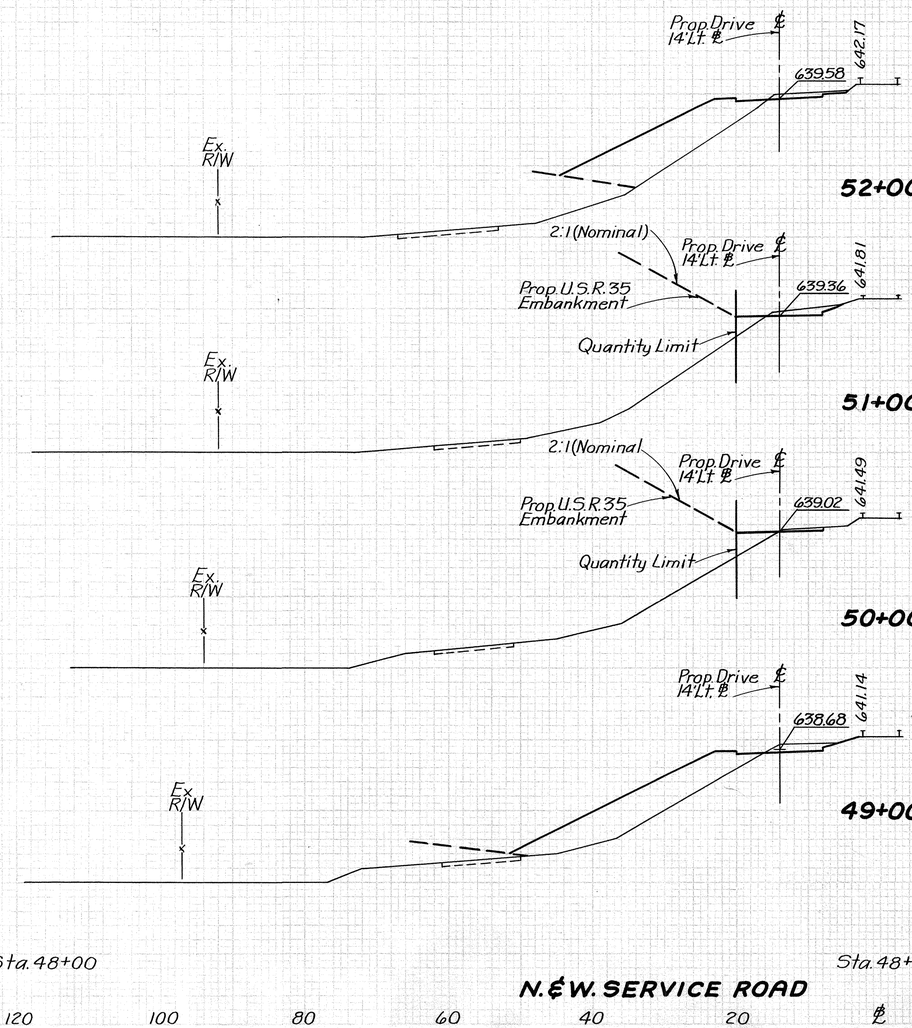
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

96
240

ROSS COUNTY
ROS-35-21.23



EndArea Cut	EndArea Fill	Volume Cut	Volume Fill	Seeding End Width	Seeding Sq. Yds.
10	79				
		20	439		
1	158				
		2	739		
0	241				30
		0	696		
0	135				3
		7	125		
8	0				
0	0				2



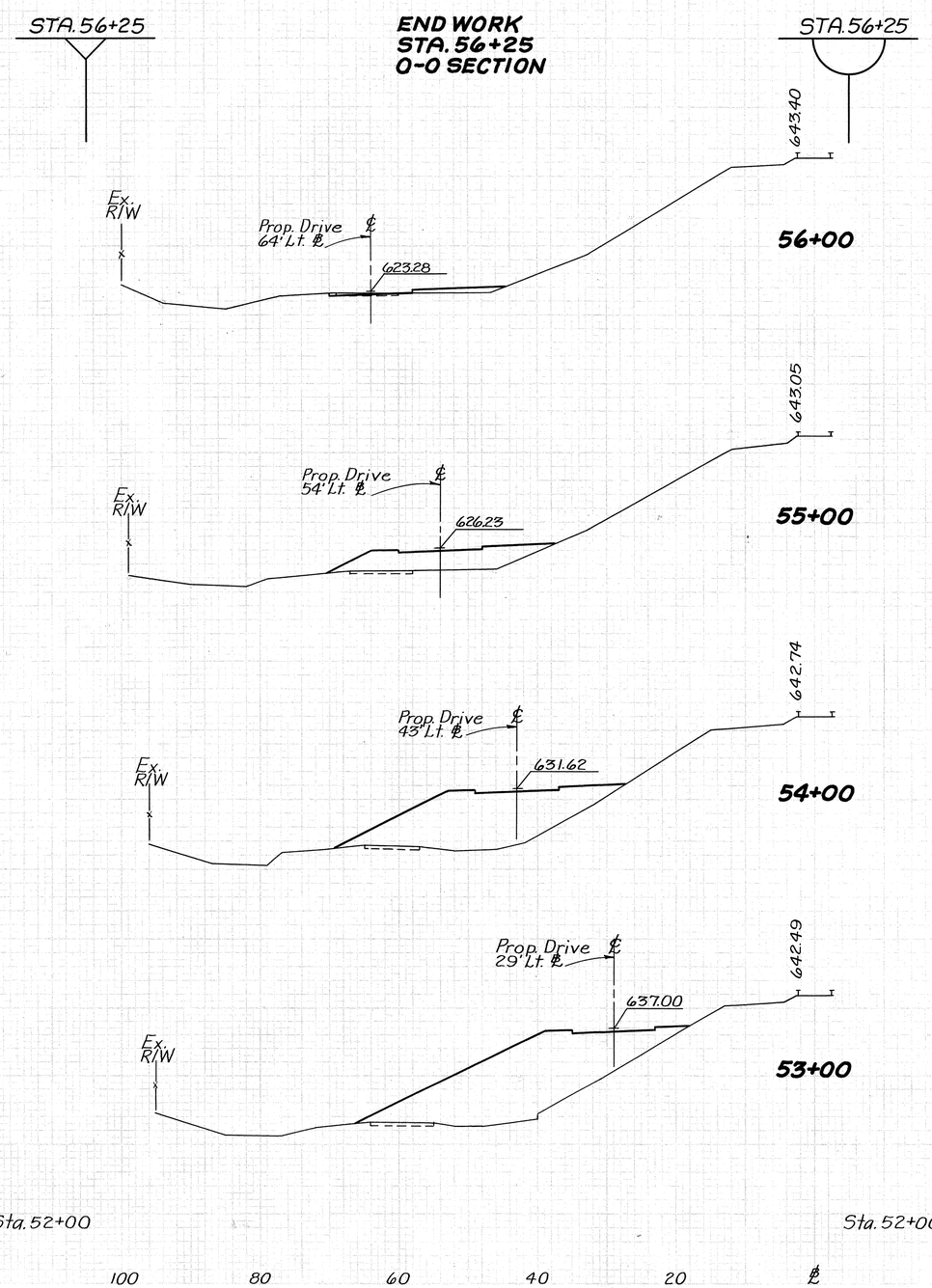
EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
6	130		
		26	252
8	6		
		20	30
3	10		
		20	261
8	131		
		33	389
10	79		

DIST. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

97
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width	Yd's.		EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
0		STA. 56+25	0	0		
	25				1	4
18		56+00	2	9		
	244				4	154
26		55+00	0	74		
	350				0	526
37		54+00	0	210		
	450				0	935
44		53+00	0	295		
	411				11	787
30		Sta. 52+00	6	130		



N. & W. SERVICE ROAD

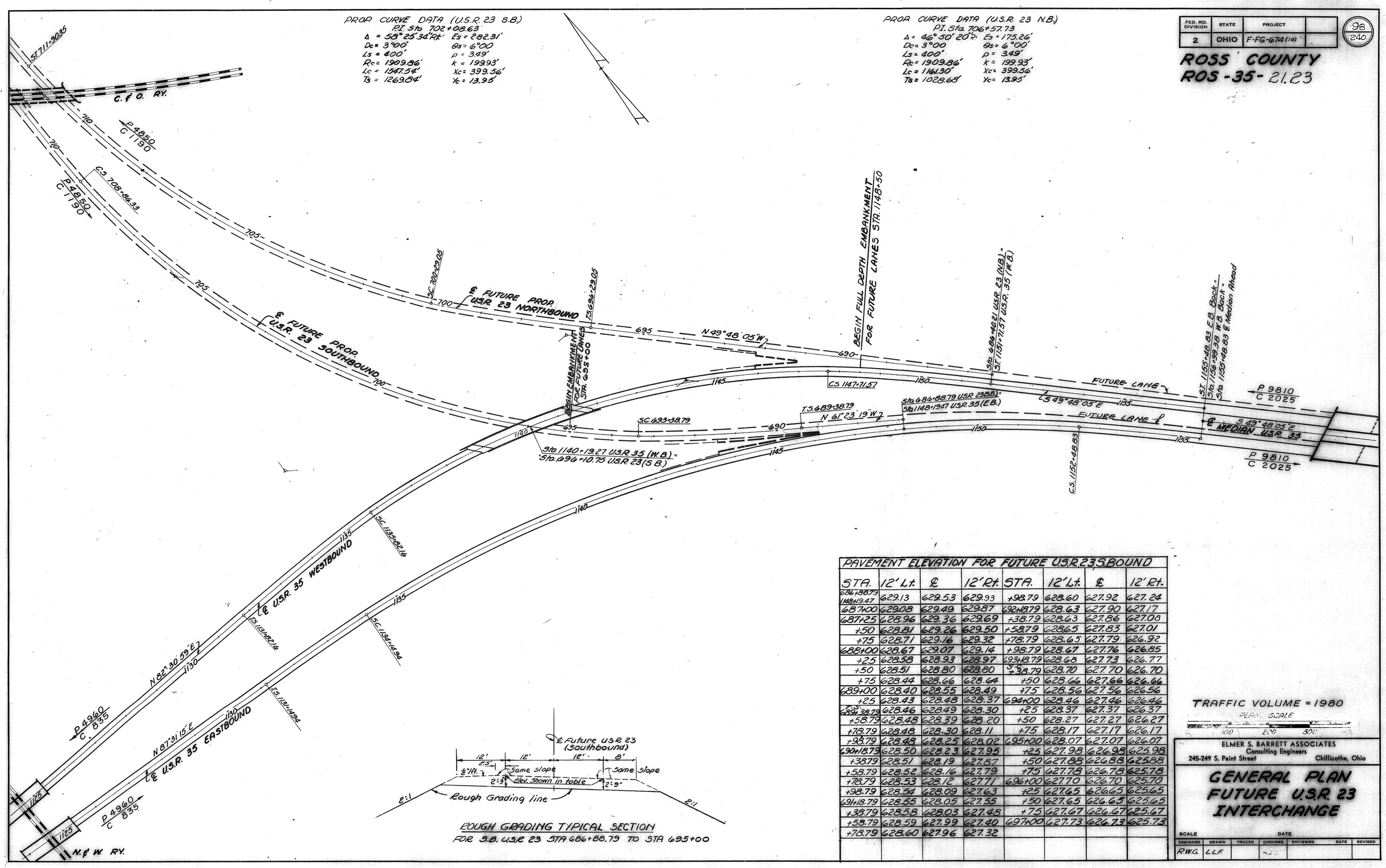
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

98
240

ROSS COUNTY
ROS-35-21.23

PROP CURVE DATA (U.S.R. 23 S.B.)
P.I. Sta. 702+08.63
Δ = 58°25'34"Rt Es = 282.31'
Dc = 3°00' Gs = 6°00'
Ls = 400' p = 3.49'
Rc = 1909.86' k = 199.93'
Lc = 1547.54' Xc = 399.56'
Ts = 1269.84' Yc = 13.95'

PROP CURVE DATA (U.S.R. 23 N.B.)
P.I. Sta. 706+57.73
Δ = 46°50'20"Rt Es = 175.26'
Dc = 3°00' Gs = 6°00'
Ls = 400' p = 3.49'
Rc = 1909.86' k = 199.93'
Lc = 1161.30' Xc = 399.56'
Ts = 1028.68' Yc = 13.95'



ROUGH GRADING TYPICAL SECTION
FOR S.B. U.S.R. 23 STA 686+88.79 TO STA 695+00

PAVEMENT ELEVATION FOR FUTURE U.S.R. 23 S.BOUND

STA.	12' Lt.	℄	12' Rt.	STA.	12' Lt.	℄	12' Rt.
686+88.79							
1148+19.47	629.13	629.53	629.93	+98.79	628.60	627.92	627.24
687+00	629.08	629.49	629.87	692+88.79	628.63	627.90	627.17
687+25	628.96	629.36	629.69	+38.79	628.63	627.86	627.08
+50	628.81	629.26	629.50	+58.79	628.65	627.83	627.01
+75	628.71	629.16	629.32	+78.79	628.65	627.79	626.92
688+00	628.67	629.07	629.14	+98.79	628.67	627.76	626.85
+25	628.58	628.93	628.97	693+88.79	628.68	627.73	626.77
+50	628.51	628.80	628.80	S-S +38.79	628.70	627.70	626.70
+75	628.44	628.66	628.64	+50	628.66	627.66	626.66
689+00	628.40	628.55	628.49	+75	628.56	627.56	626.56
+25	628.43	628.48	628.37	694+00	628.46	627.46	626.46
689+38.79	628.46	628.49	628.30	+25	628.37	627.37	626.37
+58.79	628.48	628.39	628.20	+50	628.27	627.27	626.27
+78.79	628.48	628.30	628.11	+75	628.17	627.17	626.17
+98.79	628.48	628.25	628.02	695+00	628.07	627.07	626.07
690+18.79	628.50	628.23	627.95	+25	627.98	626.98	625.98
+38.79	628.51	628.19	627.87	+50	627.88	626.88	625.88
+58.79	628.52	628.16	627.79	+75	627.78	626.78	625.78
+78.79	628.53	628.12	627.71	696+00	627.70	626.70	625.70
+98.79	628.54	628.09	627.63	+25	627.65	626.65	625.65
691+18.79	628.55	628.05	627.55	+50	627.65	626.65	625.65
+38.79	628.58	628.03	627.48	+75	627.67	626.67	625.67
+58.79	628.59	627.99	627.40	697+00	627.73	626.73	625.73
+78.79	628.60	627.96	627.32				

TRAFFIC VOLUME = 1980

PLAN SCALE
0 100 200 300

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL PLAN
FUTURE U.S.R. 23 INTERCHANGE

SCALE				DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
R.W.G.	L.L.F.						

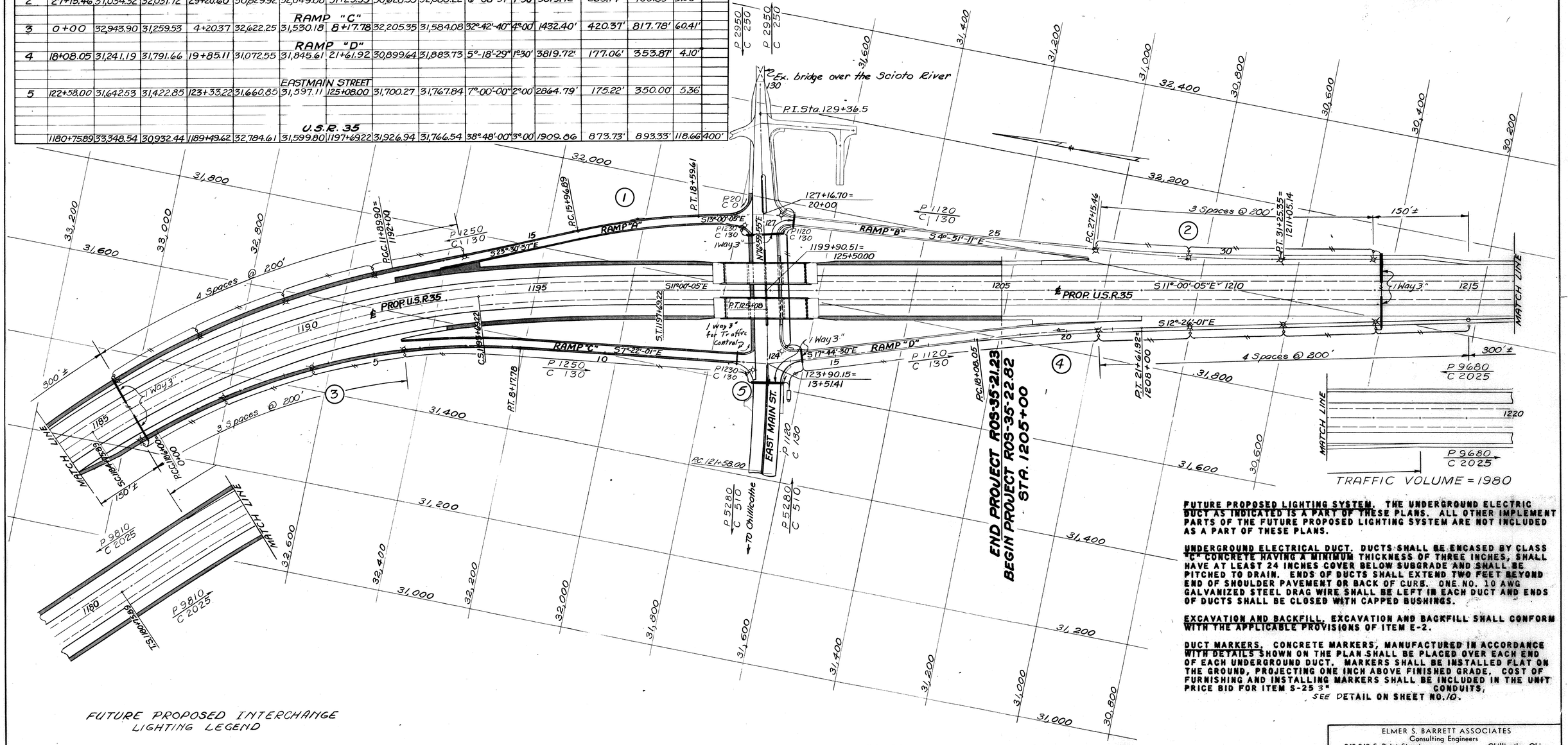
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

99
240

ROSS COUNTY
ROS-35-21.23

INTERCHANGE CURVE DATA & COORDINATES

Curve Number	Beginning of Curve Station	N.	E.	P.I. of Curve Station	N.	E.	End of Curve Station	N.	E.	Δ	D_c	R	T or T_s	L_c	E	L_s
						RAMP "A"										
1	15+96.89	32,133.16	31,857.43	17+28.62	32,012.36	31,909.98	18+59.61	31,884.01	31,939.61	10°-30'-32"	4°-00'	1432.40'	131.73'	262.72'	6.04'	
						RAMP "B"										
2	27+15.46	31,034.32	32,031.72	29+20.60	30,829.92	32,049.08	31+25.35	30,628.55	32,088.22	6°-08'-54"	1°-30'	3819.72	205.14'	409.89'	5.50'	
						RAMP "C"										
3	0+00	32,943.90	31,259.53	4+20.37	32,622.25	31,530.18	8+17.78	32,205.35	31,584.08	32°-42'-40"	4°-00'	1432.40'	420.31'	817.78'	60.41'	
						RAMP "D"										
4	18+08.05	31,241.19	31,791.66	19+85.11	31,072.55	31,845.61	21+61.92	30,899.64	31,883.73	5°-18'-29"	1°-30'	3819.72'	177.06'	353.87'	4.10'	
						EAST MAIN STREET										
5	122+58.00	31,642.53	31,422.85	123+33.22	31,660.85	31,597.11	125+08.00	31,700.27	31,767.84	7°-00'-00"	2°-00'	2864.79'	175.22'	350.00'	5.36'	
						U.S.R. 35										
	1180+75.89	33,348.54	30,932.44	1189+49.62	32,784.61	31,599.80	1197+69.22	31,926.94	31,766.54	38°-48'-00"	3°-00'	1909.86	873.73'	893.33'	118.66'	400'



FUTURE PROPOSED LIGHTING SYSTEM. THE UNDERGROUND ELECTRIC DUCT AS INDICATED IS A PART OF THESE PLANS. ALL OTHER IMPLEMENT PARTS OF THE FUTURE PROPOSED LIGHTING SYSTEM ARE NOT INCLUDED AS A PART OF THESE PLANS.

UNDERGROUND ELECTRICAL DUCT. DUCTS SHALL BE ENCASED BY CLASS "C" CONCRETE HAVING A MINIMUM THICKNESS OF THREE INCHES, SHALL HAVE AT LEAST 24 INCHES COVER BELOW SUBGRADE AND SHALL BE PITCHED TO DRAIN. ENDS OF DUCTS SHALL EXTEND TWO FEET BEYOND END OF SHOULDER PAVEMENT OR BACK OF CURB. ONE NO. 10 AWG GALVANIZED STEEL DRAG WIRE SHALL BE LEFT IN EACH DUCT AND ENDS OF DUCTS SHALL BE CLOSED WITH CAPPED BUSHINGS.

EXCAVATION AND BACKFILL. EXCAVATION AND BACKFILL SHALL CONFORM WITH THE APPLICABLE PROVISIONS OF ITEM E-2.

DUCT MARKERS. CONCRETE MARKERS, MANUFACTURED IN ACCORDANCE WITH DETAILS SHOWN ON THE PLAN SHALL BE PLACED OVER EACH END OF EACH UNDERGROUND DUCT. MARKERS SHALL BE INSTALLED FLAT ON THE GROUND, PROJECTING ONE INCH ABOVE FINISHED GRADE. COST OF FURNISHING AND INSTALLING MARKERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM S-25 3" CONDUITS,
SEE DETAIL ON SHEET NO. 10.

FUTURE PROPOSED INTERCHANGE LIGHTING LEGEND

- ☆ Light Standard
- Underground Electric Cable No. 6 AWG except as otherwise noted. Slant lines indicate number of conductors.
- Proposed Underground Electric Duct, No. and Size of duct shown. To be included as part of this Contract – 1185+72 and Ramp C 12+85
- Service Pole and Control Equipment

NOTE: Ramps "A" & "C" and U.S.R. 35 to Sta. 1205+00 to be constructed on this Project.
Ramps "B" & "D", Main Street and U.S.R. 35 beyond Sta. 1205+00 are to be constructed on ROS-35-22.82

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GENERAL PLAN
EAST MAIN STREET INTERCHANGE

SCALE 0 100 — DATE November 13, 1962

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	R.W.G.		N.R.			

TYPICAL SECTIONS

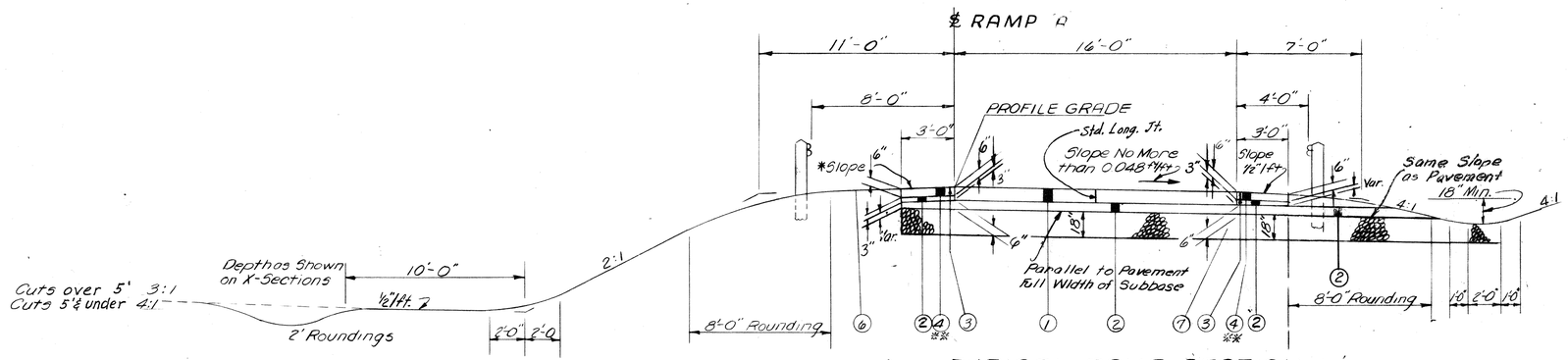
TYPE-T-71

TYPE CODE 7221

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674-30	

100/240

ROSS COUNTY
ROS-35-21.23



TYPICAL RAMP SECTION ℄

The above typical section applies between the following stations:
Sta 14+50.00 to Sta 19+04.66 = 454.66 Lin. Ft.

Note: Guard Rail to be used where fill slopes are steeper than 4:1 and over 10' in height.

Note:
For Pavement Legend See USR 35 Typical Sections Sheet N° 5
** 2-3 Layers of B-21

* Slope 1/8"/Ft. if Pavement Slope is no more than 0.048'/Ft. away from shoulder but more than 0.016 Ft/Ft, 1/2"/Ft. if Pavement Slope is no more than 0.016 Ft/Ft away from shoulder.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

TYPICAL SECTIONS EAST MAIN STREET INTERCHANGE RAMP A

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.						

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

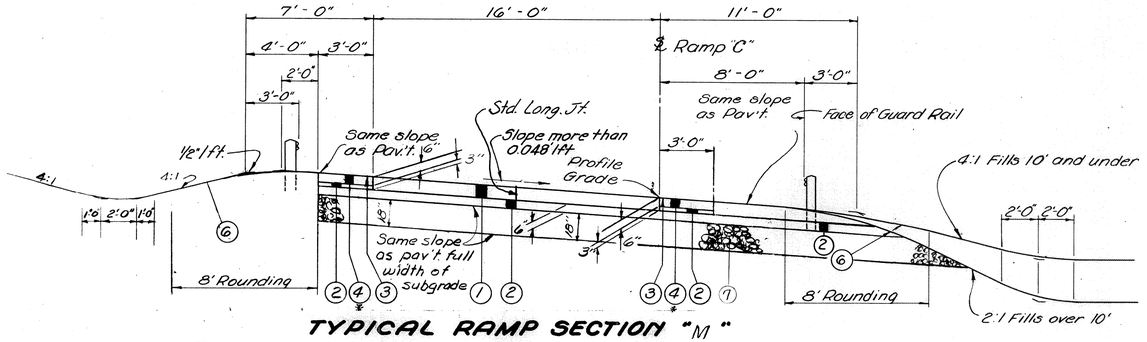
101
240

ROSS COUNTY
ROS-35-21.23

TYPICAL SECTIONS

TYPE - T-71

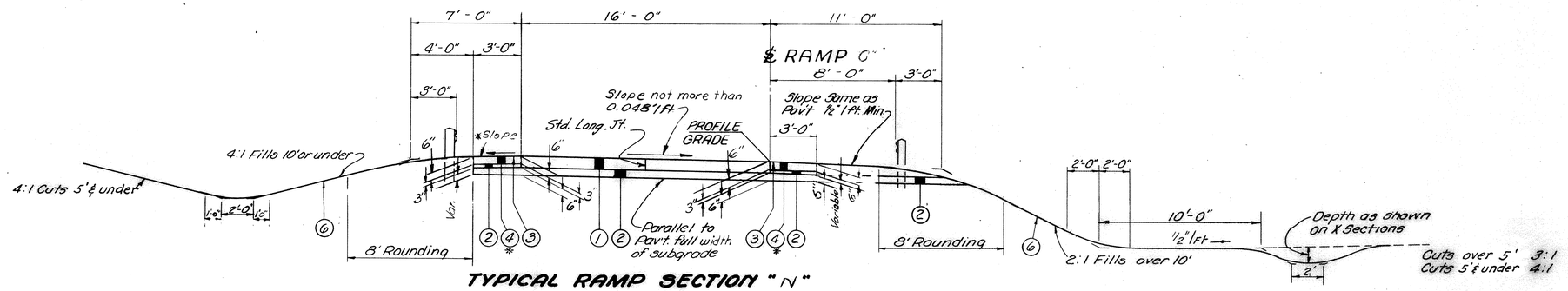
TYPE CODE 7221



TYPICAL RAMP SECTION "M"

The above typical section applies between the following stations:

RAMP "C" Sta. 6+45.07 to Sta. 8+17.78 = 172.71



TYPICAL RAMP SECTION "N"

The above typical section applies between the following stations:

RAMP "C" Sta. 8+17.78 to Sta. 12+78.28 = 460.50

Note:-
For Pavement Legend See USR 35 Typical Sections

* Slope is 1"/ft. if Pavement Slope is no more than 0.048'/ft. away from shoulder but more than 0.016 ft/ft, 1/2"/ft. if Pavement Slope is no more than 0.016 ft/ft away from shoulder.

Note
No granular embankment required for Typical Section "N".

* 2-3" Layers of B-21

ELMER S. BARRETT ASSOCIATES
CONSULTING ENGINEERS
249 S. PAINT ST. CHILLICOTHE, OHIO

TYPICAL SECTIONS EAST MAIN STREET INTERCHANGE RAMP C

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWB	LKM	LKM	7/12			

Ramp C

SUPERELEVATION TABLES

RAMP "A"

STATION	LEFT EDGE PAVEMENT	DISTANCE TO LEFT EDGE	DISTANCE TO *KEY* JOINT	ELEVATION *KEY* JOINT	SUPER ELEVATION
1182+00	629.79	56.00			
+15.89	629.79	56.40			.01
+35.89	629.80	56.90			.03
+55.89	629.82	57.40			.06
+75.89	629.84	57.90			.09
+95.89	629.86	58.40			.12
1183+15.89	629.88	58.90			.15
+35.89	629.91	59.40			.19
+55.89	629.94	59.90			.23
+75.89	629.98	60.40			.28
+95.89	630.02	60.90			.33
1184+15.89	630.07	61.40			.39
+35.89	630.11	61.90			.44
+55.89	630.15	62.40			.50
+75.89	630.17	62.90			.56
1185+00	630.15	63.50			.62
+25	630.10	64.13			.68
+50	630.02	64.75			.73
+75	629.95	65.38			.78
1186+00	629.87	66.00			.83
+25	629.80	66.63			.88
+50	629.73	67.25			.94
+75	629.66	67.88			.99
1187+00	629.58	68.50			1.04
+25	629.51	69.13			1.09
+50	629.44	69.75			1.15
+75	629.37	70.38	58.38	628.37	1.20
1188+00	629.29	71.00	59.00	628.29	1.25
+25	629.22	71.63	59.63	628.22	1.30
+50	629.14	72.25	60.25	628.14	1.35
+75	629.10	72.88	60.88	628.10	1.41
1189+00	629.08	73.50	61.50	628.08	1.46
+25	629.10	74.13	62.13	628.10	1.51
+50	629.16	74.75	62.75	628.16	1.56
+75	629.26	75.38	63.38	628.26	1.61
1190+00	629.41	76.00	64.00	628.41	1.67
+25	629.57	76.63	64.63	628.58	1.70
+50	629.73	77.25	65.25	628.78	1.69
+75	629.91	77.88	65.88	629.00	1.66
1191+00	630.12	78.50	66.50	629.25	1.63
+25	630.35	79.13	67.13	629.54	1.57
+50	630.61	79.75	67.75	629.85	1.51
+75	630.89	80.38	68.38	630.19	1.42
1192+00 =11+89.90	631.17	81.00	69.00	630.54	1.30

RAMP "A"

STATION	SURVEY LINE LEFT EDGE PAVEMENT	8' RIGHT @ LONG JOINT	DISTANCE TO RIGHT EDGE	RIGHT EDGE PAVEMENT	SUPER ELEVATION
1192+00 = 11+89.90	631.17	630.75	14.00	630.44	.73
12+00	631.28	630.89	14.20	630.59	.69
+25	631.56	631.23	14.70	630.96	.60
+50	631.84	631.58	15.20	631.35	.49
+75	632.12	631.92	15.70	631.73	.39
+89.90	632.29	632.12	16.00	631.95	.34
+89.90	632.29	632.12	14.00	632.00	.29
13+00	632.40	632.26	14.20	632.15	.25
+25	632.68	632.56	14.70	632.45	.23
+50	632.92	632.80	15.20	632.68	.24
+75	633.08	632.96	15.70	632.83	.25
+89.90	633.14	633.02	16.00	632.89	.25
14+00	633.16	633.04	16.00	632.91	.25
+25	633.16	633.04		632.91	.25
+50	633.08	632.96		632.83	.25
+75	632.92	632.80		632.67	.25
15+00	632.68	632.56		632.43	.25
+25	632.36	632.24		632.11	.25
+50	631.96	631.82		631.68	.28
+75	631.48	631.32		631.15	.33
16+00	630.92	630.73		630.54	.38
+25	630.28	630.06		629.83	.45
+50	629.56	629.31		629.05	.51
+75	628.76	628.52		628.28	.48
17+00	627.88	627.66		627.43	.45
+25	626.92	626.71		626.50	.42
+50	625.92	625.73		625.54	.38
+75	624.92	624.75		624.57	.35
18+00	623.92	623.76		623.60	.32
+25	622.92	622.78		622.63	.29
+50	622.01	621.88		621.75	.26
+75	621.28	621.16		621.03	.25
19+00	620.73	620.61	16.00	620.48	.25
+25	620.36	620.24	19.05	620.06	.30
+50	620.18	620.09	22.80	619.92	.26

RAMP "C"

STATION	DISTANCE RT. ℄ MEDIAN	ELEVATION RT. EDGE
1184+00	56.00	625.20
+25	59.00	624.84
+50	62.00	624.28
+75	65.00	623.73
1185+00	68.00	623.35
+25		623.23
+50		623.10
+75		622.98
1186+00 USR 35 =0+00 Ramp "C"	68.00	622.85

STATION	DISTANCE LT. EDGE PAVEMENT	ELEVATION LEFT EDGE PAVEMENT	DISTANCE JOINT	ELEVATION JOINT	℄ & PROFILE ELEVATION	SUPER ELEVATION
1186+00 USR 35 =0+00 Ramp "C"					622.85	
+25					622.70	
+50					622.55	
+75					622.41	
1+00					622.26	
+25					622.08	
+50					621.90	
+75			12.00	622.71	621.71	1.00
2+00				622.53	621.53	
+25				622.35	621.35	
+50				622.17	621.17	
+75				622.00	621.00	
3+00				621.87	620.87	
+25				621.77	620.77	
+50				621.70	620.70	
+75				621.67	620.67	
4+00				621.67	620.67	
+25				621.71	620.71	
+50				621.78	620.78	
+75			12.00	621.88	620.88	1.00
5+00			12.00	622.02	621.02	1.00
+25			12.00	622.19	621.19	1.00
+45.07			12.00	622.35	621.35	1.00
+45.07	18.00	622.85	8.00	622.02	621.35	1.50
+50	17.90	622.88	8.00	622.06	621.39	1.49
+75	17.40	623.06		622.28	621.61	1.45
6+00	16.90	623.24		622.50	621.83	1.41
+25	16.40	623.39		622.69	622.02	1.37
+45.07	16.00	623.46		622.80	622.13	1.33
+50	16.00	623.48		622.82	622.15	1.33
+75		623.48		622.86	622.23	1.25
7+00		623.41		622.83	622.24	1.17
+25		623.29		622.75	622.20	1.09
+50		623.11		622.60	622.09	1.02
+75		622.87		622.40	621.93	0.94
8+00		622.57		622.14	621.71	0.86
+25		622.24		621.85	621.46	0.78
+50		621.88		621.55	621.21	0.67
+75		621.53		621.25	620.96	0.57
9+00		621.17		620.94	620.71	0.46
+25		620.82		620.64	620.46	0.36
+50		620.46		620.34	620.21	0.25
+75		620.21		620.09	619.96	0.25
10+00		619.96		619.84	619.71	
+25		619.71		619.59	619.46	
+50		619.46		619.34	619.21	
+75		619.21		619.09	618.96	
11+00		618.96		618.84	618.71	
+25		618.73		618.61	618.48	
+50		618.53		618.41	618.28	
+75		618.37		618.25	618.12	
12+00		618.25		618.13	618.00	
+25		618.16		618.04	617.91	
+50		618.11		617.99	617.86	
+75	16.00	618.09	8.00	617.97	617.84	0.25

SEE APPROACH DETAIL

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

102
240

ROSS COUNTY
ROS-35-21.23

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPERELEVATION TABLES
RAMP "A" & RAMP "C"
EAST MAIN ST. INTERCHANGE

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Roy Bas.	C.S.R.	C.S.P.	[illegible]			

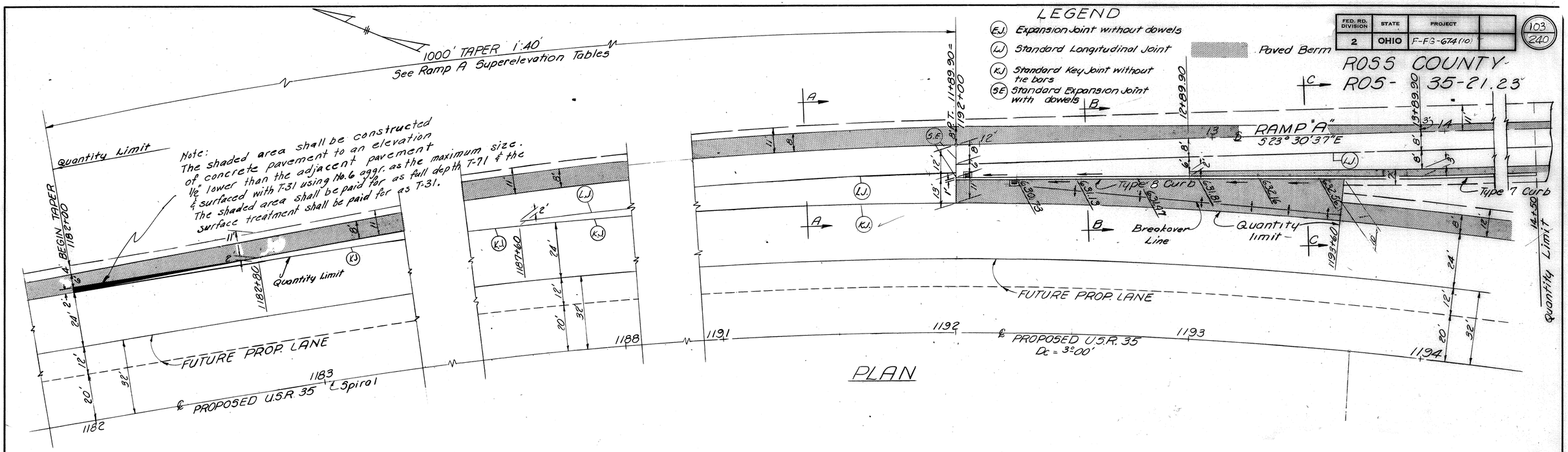
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FS-674(10)	

103
240

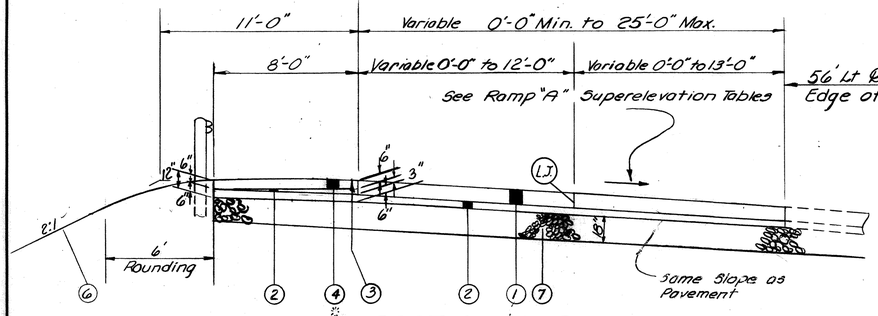
ROSS COUNTY-
ROS- 35-21.23

LEGEND

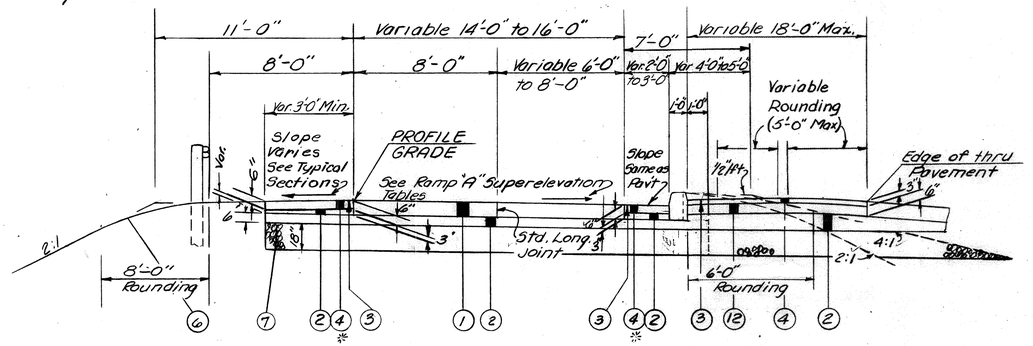
- (E.J.) Expansion Joint without dowels
- (L.J.) Standard Longitudinal Joint
- (K.J.) Standard Key Joint without tie bars
- (S.E.) Standard Expansion Joint with dowels
- Paved Berm



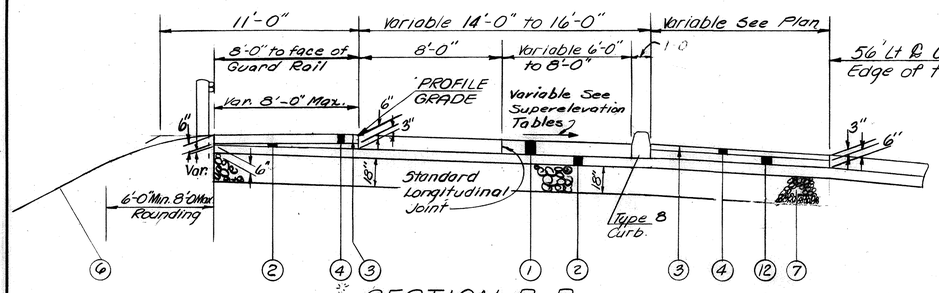
PLAN



SECTION A-A



SECTION C-C



SECTION B-B

Note:-
For Pavement Legend See U.S.R 35 Typical Sections

F-674(10)

ESTIMATED PAVEMENT QUANTITIES

Item	DESCRIPTION	Quantity	Unit
B-21	Waterproofed Aggregate Base Course (Thickness as Shown)	207.3	Cu. Yds.
I-18	Stabilized Crushed Aggregate Shoulders & Approaches (Thickness as Shown)	43.0	Cu. Yds
I-22	Subbase Grading 'A' or B	599.9	Cu. Yds
T-31	Bituminous Surface Treatment - No. 6 Aggregate @ 0.008 Cu. Yd per S.Y.	1372.6	Sq. Yds.
T-31	Bituminous Surface Treatment - Bituminous Treatment @ 0.25 gal per S.Y.	1372.6	Sq. Yds.
T-71	9" Reinforced Portland Cement Concrete Pavement	1878.8	Sq. Yds.
I-12	Standard Portland Cement Concrete Curb Type 7	94	Lin. Ft.
I-12	Standard Portland Cement Concrete Curb Type 8	167	Lin. Ft.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

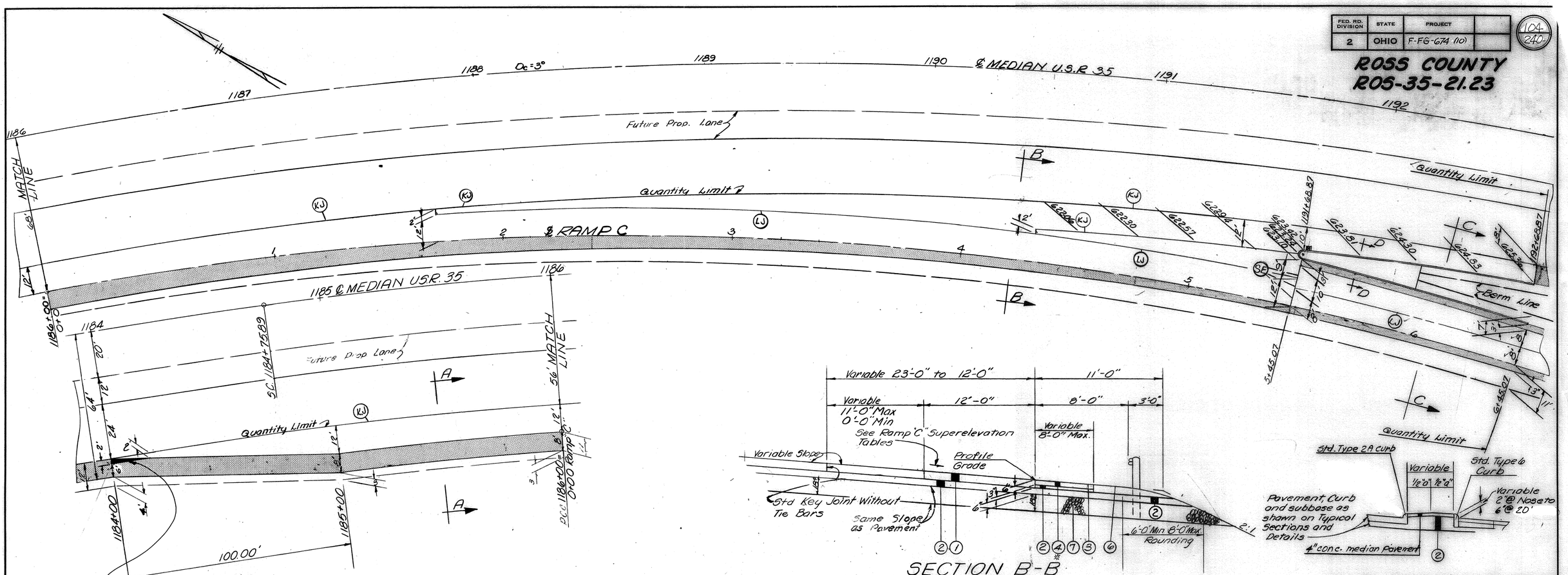
PAVEMENT DETAILS
ENTRANCE RAMP "A" EAST MAIN STREET INTERCHANGE

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	L.K.M.	L.L.F.				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

104-240

ROSS COUNTY
ROS-35-21.23



(EJ) Expansion Joint without dowels
(LJ) Standard Longitudinal Joint
(KJ) Standard Key Joint without tie bars
(SE) Standard Expansion Joint with dowels
Paved Berm
* 2-3" Layers of B-21

ESTIMATED PAVEMENT QUANTITIES

Item	DESCRIPTION	Quantity	Unit
B-21	Waterproofed Aggregate Base Course (Thickness as Shown)	100.9	Cu. Yds
I-21	4" Portland Cement Concrete Median Pavement	37	Sq Yds.
I-22	Subbase Grading A or B	541.7	Cu. Yds.
T-31	Bituminous Surface Treatment - No. 6 Aggregate @ 0.008 Cu. Yd/Sq. Yd.	605.4	Sq. Yds.
T-31	Bituminous Surface Treatment - Bituminous Treatment @ 0.25 gal/Sq. Yd.	605.4	Sq. Yds.
T-71	9" Reinforced Portland Cement Concrete Pavement	1679.4	Sq. Yds.
I-12	Standard Portland Cement Concrete Curb Type 2A	106	Lin. Ft.
I-12	Standard Portland Cement Concrete Curb Type 6	100	Lin. Ft.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

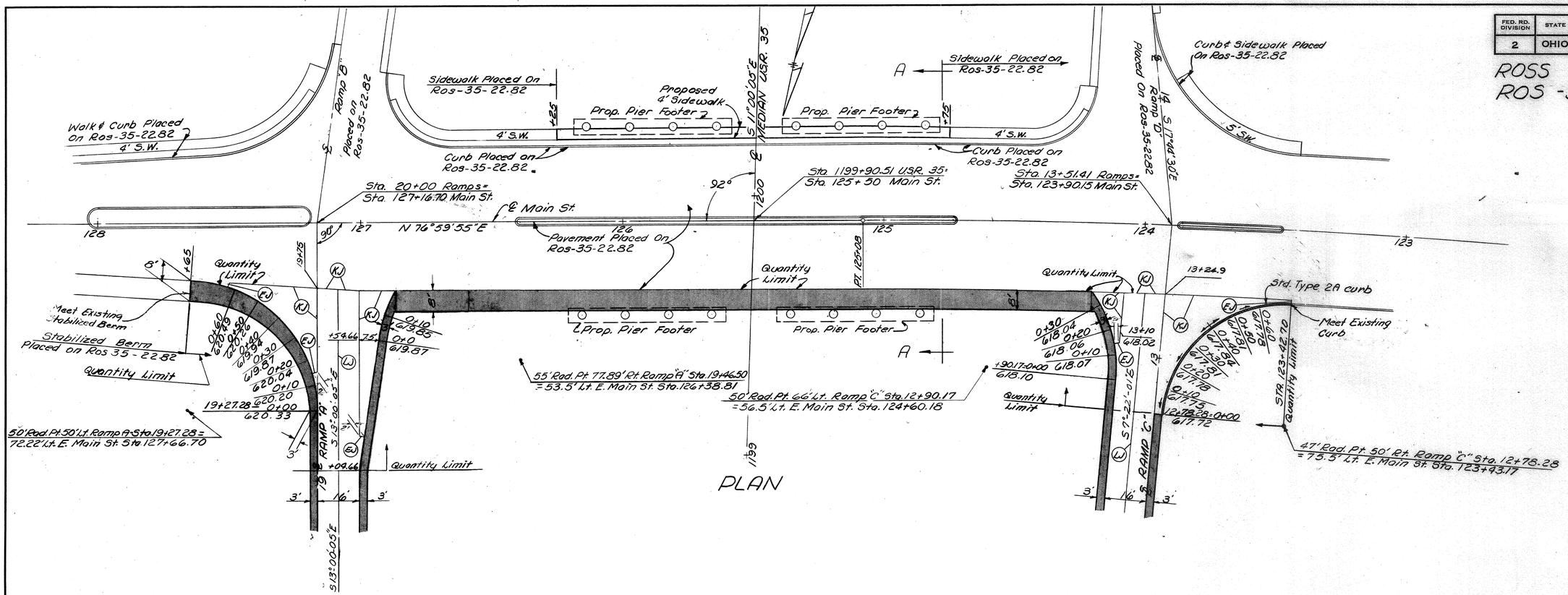
PAVEMENT DETAILS
EXIT - RAMP "C"
EAST MAIN STREET INTERCHANGE

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	LKM.	LKM				

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

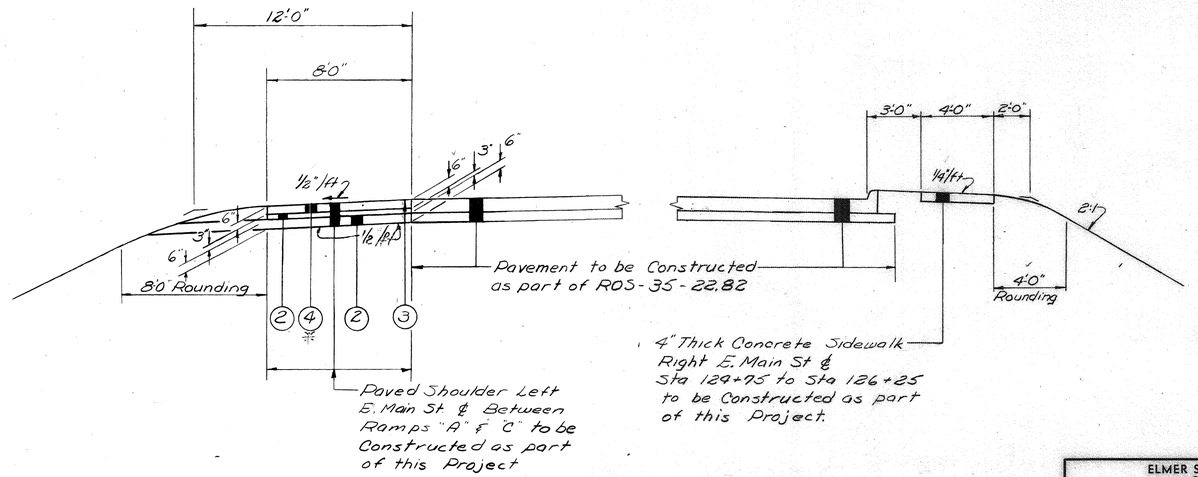
105/240

ROSS COUNTY
ROS-35-21.23



LEGEND

- (E-J) Expansion Joint Without Dowels
- (L-J) Standard Longitudinal Joint
- (K-J) Standard Key Joint Without Tie Bars
- Paved Berm



SECTION A-A

ESTIMATED PAVEMENT QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
④ B-21	Waterproofed Aggregate Base Course (Thickness as Shown)	57.9	Cu.Yds.
② I-22	Subbase Grading "A" or "B"	209.1	Cu. Yds.
③ T-31	Bituminous Surface Treatment-No 6 Aggregate @ 0.008 Cu.Yd./Sq.Yd.	331	Sq. Yds.
③ T-31	Bituminous Surface Treatment-Bituminous Treatment @ 0.25 gal. Per SY	331	Sq. Yds.
T-71	9" Reinforced Portland Cement Concrete Pavement	387.7	Sq. Yds.
I-12	Standard Portland Cement Concrete Curb Type 2-A	73	Lin Ft.
I-13	4" Concrete Sidewalk	600	Sq. Ft.

NOTE: * 2-3" Layers of B-21

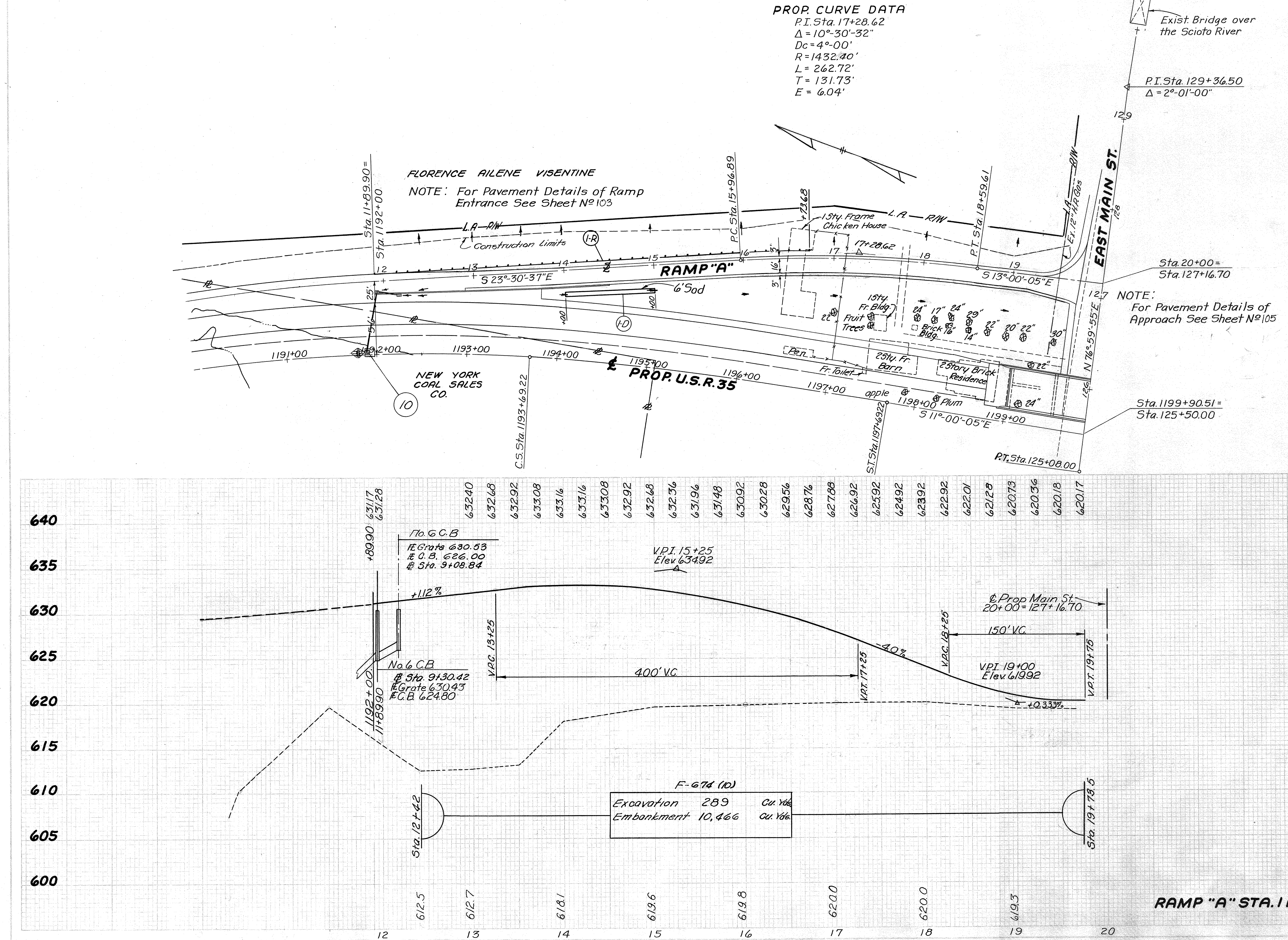
ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PAVEMENT DETAILS
INTERSECTION
RAMP "A" & RAMP "C"
With East Main Street

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWG	LLF	LLF	11-72			

ROSS COUNTY
ROS-35- 21.23



PROP. CURVE DATA
P.I. Sta. 17+28.62
Δ = 10°-30'-32"
Dc = 4°-00'
R = 1432.40'
L = 262.72'
T = 131.73'
E = 6.04'
Exist. Bridge over the Scioto River
P.I. Sta. 129+36.50
Δ = 2°-01'-00"
FLORENCE AILENE VISENTINE
NOTE: For Pavement Details of Ramp Entrance See Sheet No 103
Sta. 11+89.90 = Sta. 1192+00
P.C. Sta. 15+96.89
P.T. Sta. 18+59.61
L.A. — R/W
Construction Limits
RAMP "A"
S 23°-30'-37"E
S 13°-00'-05"E
1 Sty. Frame Chicken House
17+28.62
6' Sod
EAST MAIN ST.
Sta. 20+00 = Sta. 127+16.70
NOTE: For Pavement Details of Approach See Sheet No 105
N 76°-59'-55"E
1 Sty. Fr. Bldg.
Fruit Trees
Brick Bldg.
Pen
Fr. Toilet
2 Sty. Fr. Barn
2 Story Brick Residence
apple
Plum
NEW YORK COAL SALES CO.
℄ PROP. U.S.R. 35
1191+00
1193+00
1194+00
1195+00
1196+00
1197+00
1198+00
1199+00
S 11°-00'-05"E
C.S. Sta. 1193+69.22
S.T. Sta. 1197+69.22
Sta. 1199+90.51 = Sta. 125+50.00
P.T. Sta. 125+08.00
No. 6 C.B.
℄ Grate 630.53
℄ C.B. 626.00
℄ Sta. 9+08.84
V.P.I. 15+25
Elev. 634.92
+1.12%
V.P.C. 13+25
400' V.C.
V.P.T. 17+25
-4.0%
℄ Prop. Main St. 20+00 = 127+16.70
V.P.C. 18+25
150' V.C.
V.P.I. 19+00
Elev. 619.92
V.P.T. 19+75
+0.33%
No. 6 C.B.
℄ Sta. 9+30.42
℄ Grate 630.43
℄ C.B. 624.80
1192+00
11+89.90
F-674 (10)
Excavation 289 Cu. Yds.
Embankment 10,466 Cu. Yds.
Sta. 12+42
Sta. 19+73.5
640
635
630
625
620
615
610
605
600
612.5
612.7
618.1
619.6
619.8
620.0
620.0
619.3
12
13
14
15
16
17
18
19
20

ROADWAY - QUANTITIES - DRAINAGE

F-674 (10)

Reference or Structure No	See Sheet Number	Station To Station	Side	I-15 Guard Rail Steel Beam Type Deep (Lin. Ft.)	L-10 Sodding (Sq. Yds.)
1-R		11+89.90 to 16+73.68	Lt.	484.21	
1-D		14+00 to 15+00	Rt.		67
10	118	1191+88.91	℄		
F-674 (10)		Totals		484.21	67

RAMP "A" STA. 11+89.90 TO STA. 20+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

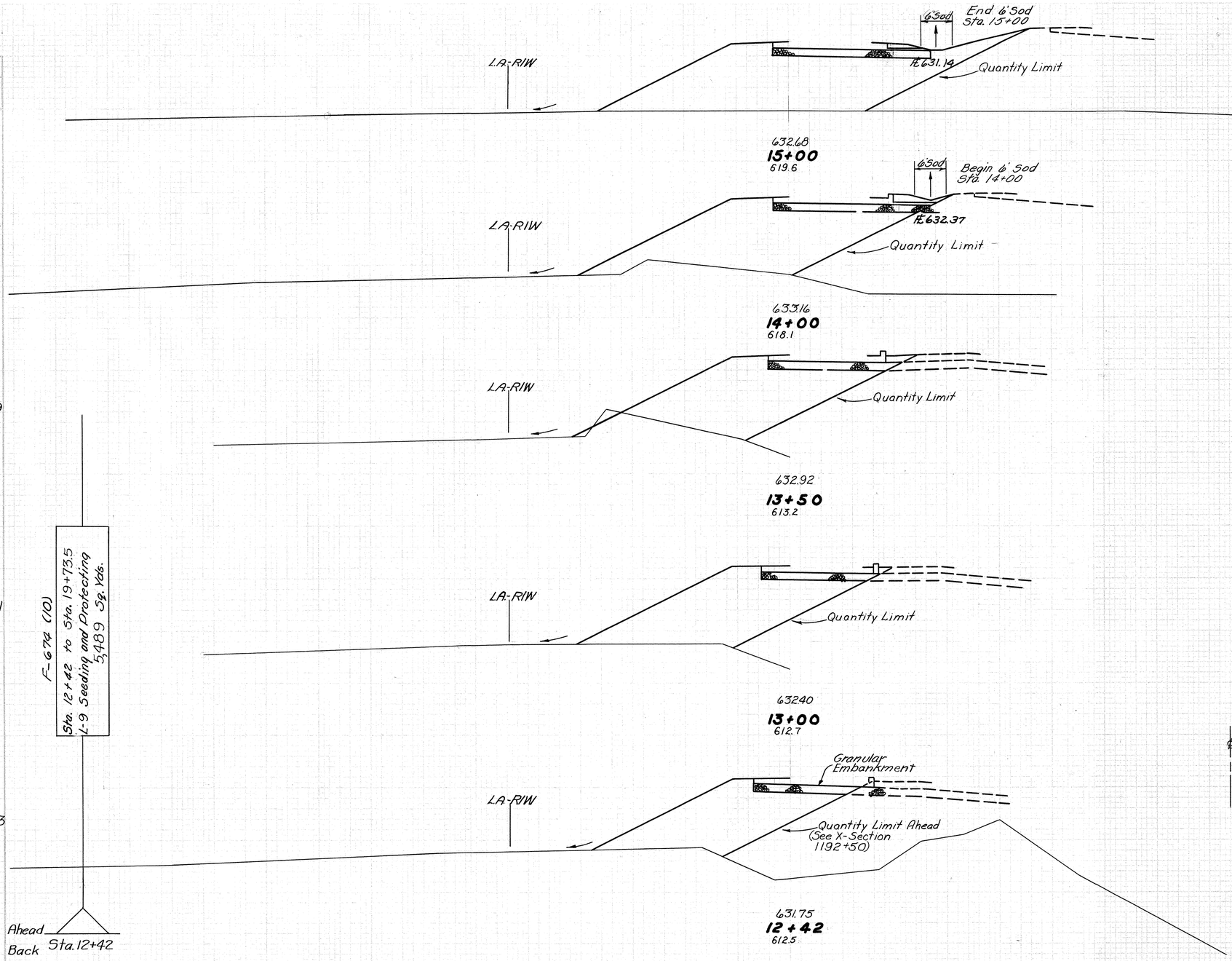
107
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.	
75	
	767
63	
	319
52	
	281
49	
	303
45	
0	

F-674 (10)
Sta. 12+42 to Sta. 19+73.5
L-9 Seeding and Protecting
5,489 Sq. Yds.

Ahead
Back
Sta. 12+42



End Area Cut	End Area Fill	Volume Cut	Volume Fill
0	628		
		0	2135
0	525		
		6	891
6	437		
		6	804
0	431		
		0	836
Ahead	0	347	
Back	0	0	

F-674 (10)
Sta. 12+42 to Sta. 19+73.5
Excavation 289 Cu. Yds.
Embankment 10,466 Cu. Yds.

12+42

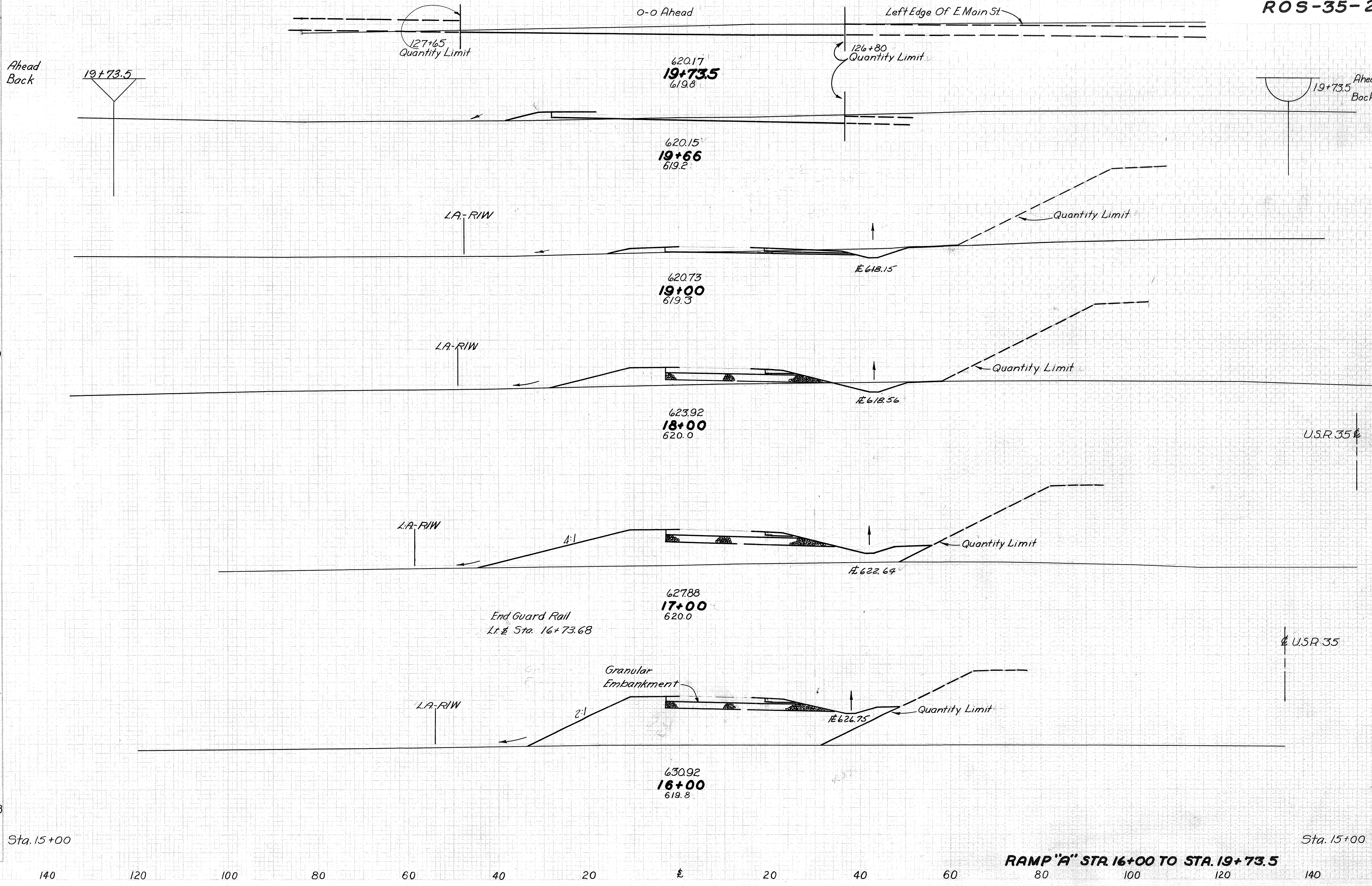
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

RAMP "A" STA. 12+42 TO STA. 15+00

ROSS COUNTY
ROS-35-21.23

Seeding

Station	End Width	Sq. Yds.
19+73.5 Ahead	0	
19+73.5 Back	21	
		18
19+66	21	
		323
19+00	67	
		800
18+00	77	
		933
17+00	91	
		917
16+00	74	
		828
Sta. 15+00	75	



End Area / Volume

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
19+73.5 Ahead	0	0		
19+73.5 Back	154	0		
			28	2
19+66	46	15		
			105	35
19+00	40	14		
			109	302
18+00	19	149		
			35	1159
17+00	0	477		
			0	2011
16+00	0	609		
			0	2291
Sta. 15+00	0	628		

RAMP "A" STA. 16+00 TO STA. 19+73.5

FED. AID DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

ROSS COUNTY
ROS-35- 21.23

NOTE:
For Pavement Details of Approach See Sheet Nº 105

NOTE: For Pavement Details of Ramp Exit See Sheet Nº 104

F-674 (10)
Sta. 3+37.50 to Sta. 13+25
Excavation 5,228 Cu. Yds.
Embankment 22,886 Cu. Yds.

F-674 (10) ROADWAY ~ QUANTITIES ~ DRAINAGE

Reference or Structure No.	See Sheet Number	Station To Station	Side	S-25 3" Conduit Lin. Ft.	L-10 Sodding Sq. Yds.
1-R	10	12+85	℄	27	
1-D		12+74 to 12+80	Rt.		8
2D	20	6+20 to 7+50	Lt.		87
9	84	1189+25	℄		
10	118	1191+88.91	℄		
11	88	1198+50	℄		
F-674 (10)		TOTAL		27	95

RAMP "C" STA. 0+00 TO STA. 13+51.41

SEQUENCE NUMBER	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

110
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
83	℄ U.S.R. 35 4:1 1/2'/Ft. L.A. R/W 158' Quantity Limit El. 598.0 621.02 **5+00** 593.1	0	993		
883	℄ U.S.R. 35 4:1 1'/Ft. L.A. R/W 4:1 Quantity Limit 620.71 **4+25** 598.5	0	2890		
129	F-674 (10) Sta. 3+37.50 to Sta. 13+25 L-9 Seeding and Protecting 11,334 Sq. Yds	0	1088		
831	℄ U.S.R. 35 4:1 Granular Embankment 1/2'/Ft. 1'/Ft. L.A. R/W Quantity Limit Ahead See X-Section 1189+50 620.73 **3+37.50** 601.0	0	2152		
42	Ahead 3+37.50	Ahead	0	240	
0	Back	Back	0	0	

F-674 (10)
Sta. 3+37.50 to Sta. 13+25
Excavation 5,228 Cu. Yds.
Embankment 22,986 Cu. Yds.

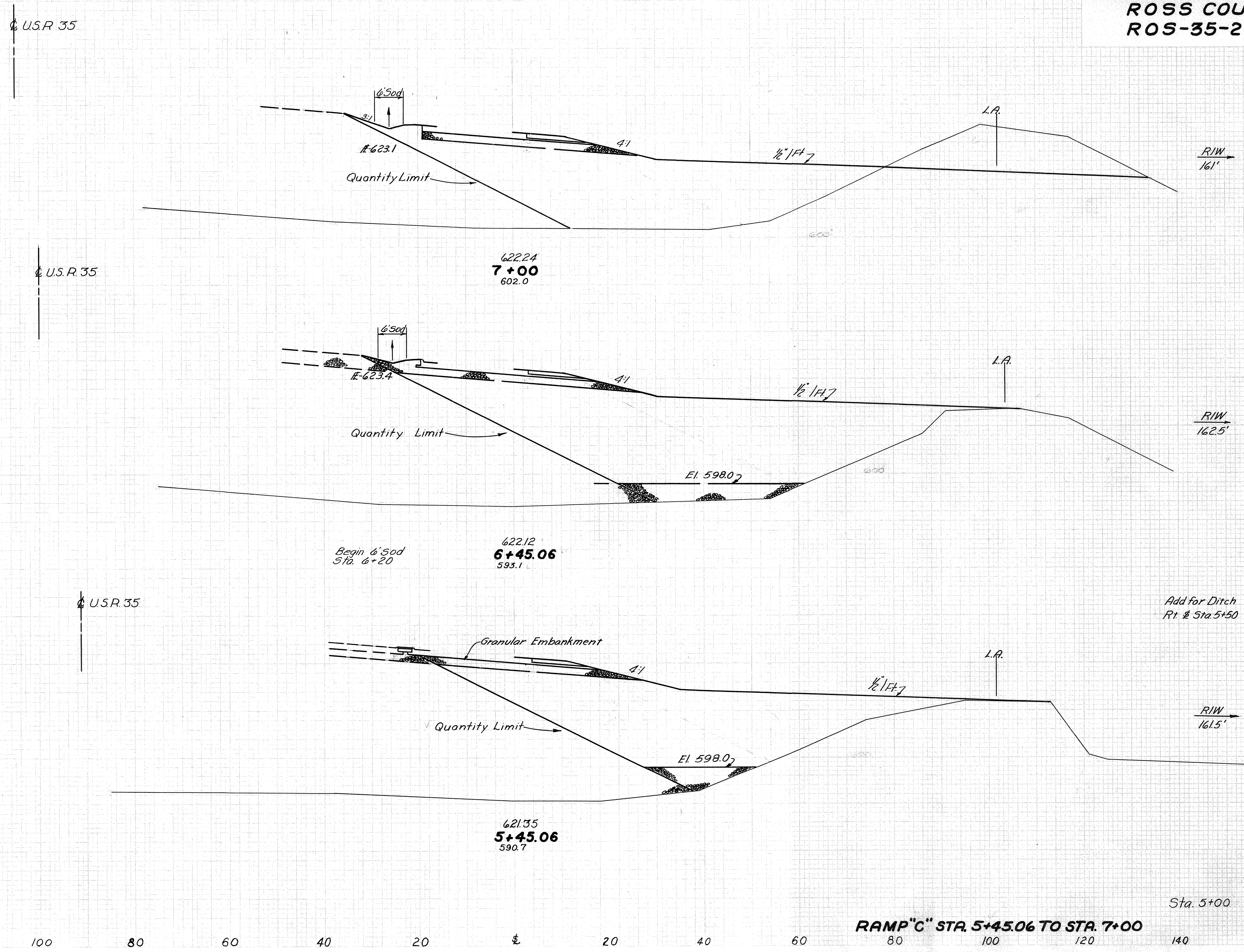
3+37.50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

RAMP "C" STA. 3+37.50 TO STA. 5+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

ROSS COUNTY
ROS-35-21.23



Seeding End Width	Seeding Sq. Yd's.
159	
	876
128	
	1378
120	
	508
83	

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
7+00	349	1232		
			355	3019
6+45.06	0	1735		
Add for Ditch Rt. ℄ Sta. 5+50			12	
			0	5569
5+45.06	0	1272		
			0	1890
Sta. 5+00	0	993		

RAMP "C" STA. 5+45.06 TO STA. 7+00

FED. ROD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

112
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
87	℄ U.S.R. 35	℄ 619.6 620.71 **9+00** 619.8 1½"/Ft. L.A.-R/W	126	23		
355	℄ U.S.R 35	℄ 620.15 1½/1 Ft. L.A.			130	35
77	℄ U.S.R. 35	621.10 **8+61** 620.0 END GRANULAR EMBANKMENT STA. 8+11.78 R/W	54	26		
565		℄ 621.0 Quantity Limit 4:1 1½/1 Ft. L.A. 4:1 R/W El. 598.7	50	1712		
128	℄ U.S.R. 35	621.60 **8+11.4** 593.1	0	1838		
1047		End 6' Sod Sta. 7+50 6' Sod 3:1 ℄ 622.55 Granular Embankment 4:1 Quantity Limit L.A. R/W 158' 1½/1 Ft.			684	3326
179		622.09 **7+50** 603.7	602	1087		
939					881	2147
159	Sta. 7+00	Sta. 7+00	349	1232		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

RAMP "C" STA. 7+50 TO STA. 9+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

113
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		
0		Ahead	Sta. 13+25
75'		Back	
	417		
75			
	663		
84			
	972		
91			
	961		
82			
	939		
87		Sta. 9+00	

Lt. Edge Of E. Main St.

Quantity limit — Quantity Limit

13+25
619.3

Sta. 13+25

LA-RIW

℄ 616.37

℄ 616.8

617.84
12+75
619.7

℄ 616.52

½"/Ft.

618.00
12+00
619.0

℄ U.S.R. 35

℄ 617.2

618.71
11+00
619.4

℄ U.S.R. 35

℄ 618.2

619.71
10+00
619.5

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
13+25 Ahead	0	0		
Back	335	0		
			483	7
	187	8		
			582	22
	232	8		
			848	30
	226	8		
			694	30
	149	8		
			509	57
Sta. 9+00	126	23		

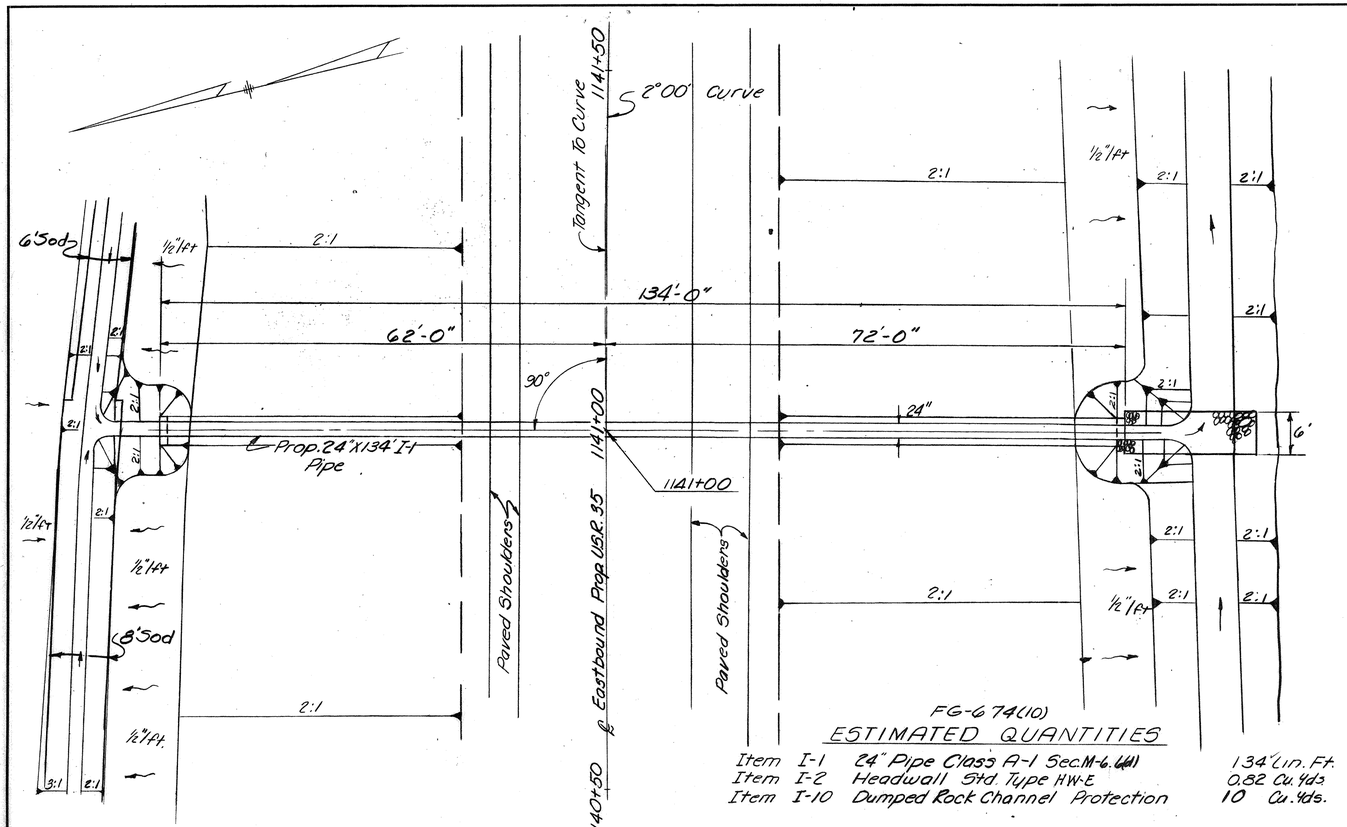
RAMP "C" STA. 10+00 TO STA 13+25

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

114
240

ROSS COUNTY
ROS-35-21.23



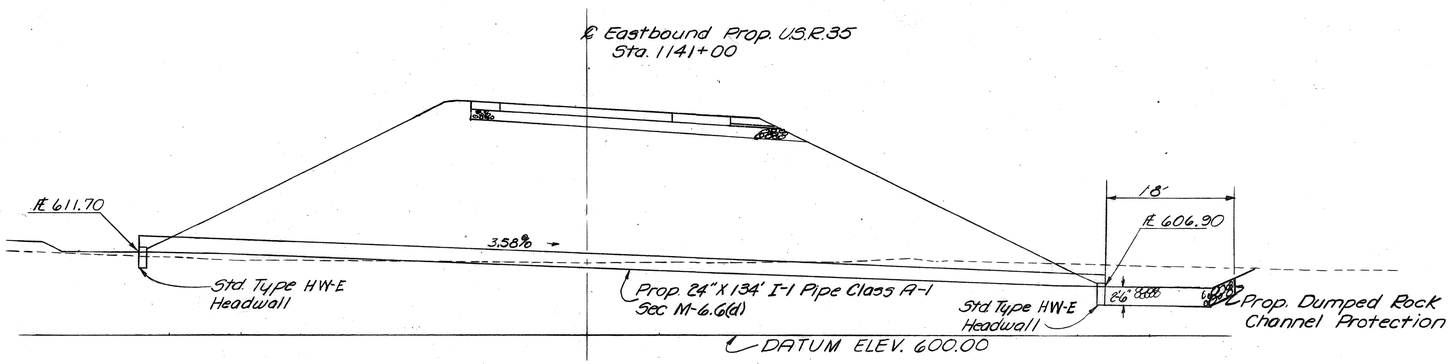
FG-674(10)

ESTIMATED QUANTITIES

Item	I-1	24" Pipe Class A-1 Sec M-6.6(1)	134 Lin. Ft.
Item	I-2	Headwall Std. Type HW-E	0.82 Cu. Yds.
Item	I-10	Dumped Rock Channel Protection	10 Cu. Yds.

PLAN (1)

Drainage Area	7.3 Ac.
Q 25	21.4 cfs.



SECTION

0 10 20

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

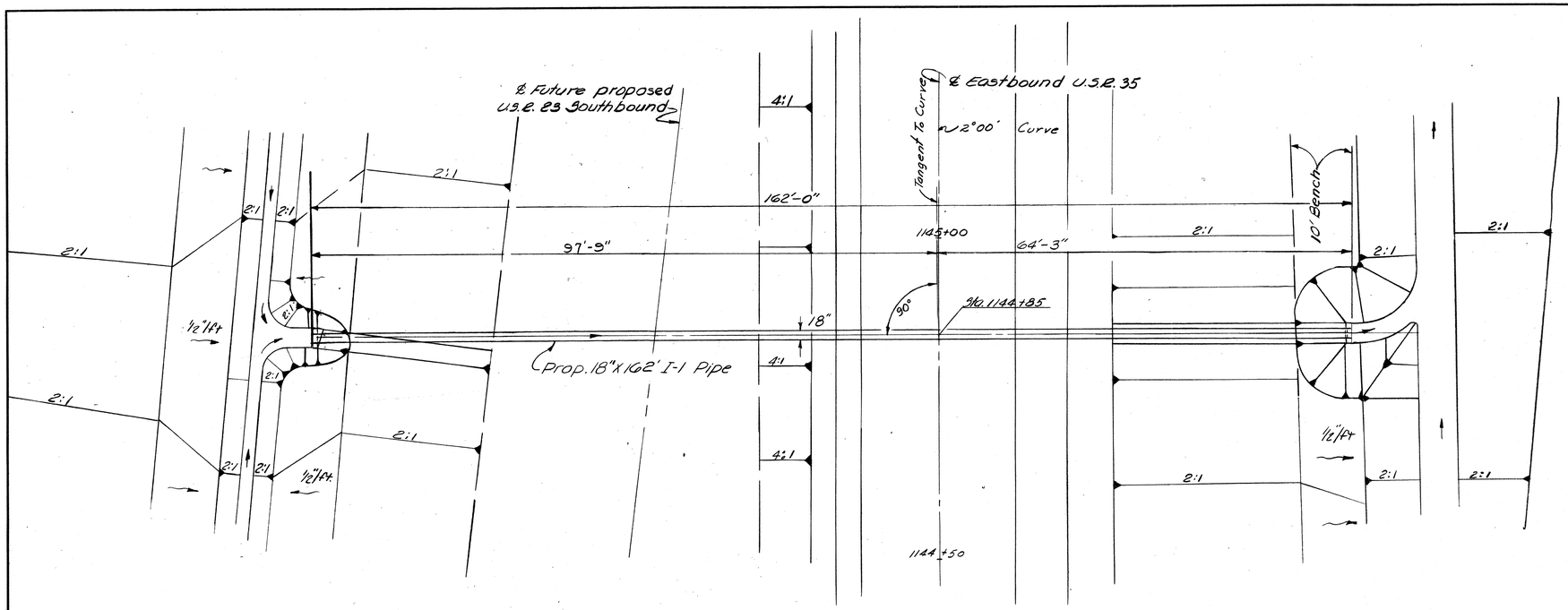
CULVERT DETAILS
U.S.R. 35 Eastbound
Sta 1141+00 (1)

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWG	LKM		H.I.E.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

115
240

ROSS COUNTY
ROS-35-21.23



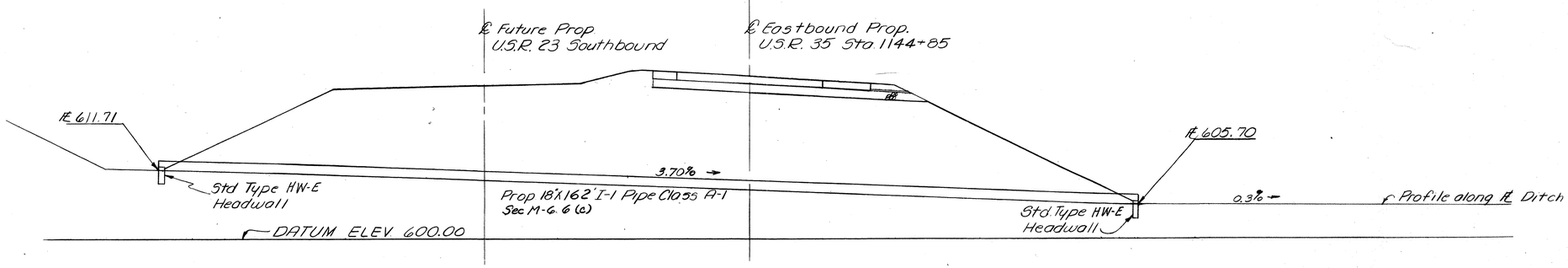
PLAN (2)

Drainage Area	3.4 Ac.
Q25	11.3cfs.

FG-674(10)

ESTIMATED QUANTITIES

Item I-1	18"Pipe Class A-1 Sec M 6.6(c)	162' Lin.ft.
Item I-2	Headwalls Std. Type HW-E	0.60 Cu. Yds.



SECTION

0 10 20

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAILS
Eastbound U.S.R. 35
Sta. 1144+85 (2)

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.G.	L.K.M.		H.I.E.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

116/240

ROSS COUNTY
ROS-35-21.23

℄ USR.35 S49°48'-05"E

1158+00

Forward Face Right Rear Abutment

70°

1158+46.10

84.55'

0+00

10'

170'

71'-0"

99'-0"

143.82' Rt. 1157+22.75

1158+92.75

143.82' Rt.

For Detail of Rock Levee See Sheet No. 117

PROP. Std Type E Headwall

2:1

36"

0+50

68'-6"

70°

1+00

Elev. 625.85

℄ Rock Levee

℄ Prop. & Future Prop. Narrows Road

SCIOTO RIVER

Drainage Area 70Ac.
Q.10 59cfs.

ESTIMATED QUANTITIES

Item I-1	Prop. 36"X 170' Class A-1 Pipe Sec. M-6.6(d)	170	Lin. Ft.
Item I-2	Headwalls Std. Type HW-E	1.18	Cu. Yds.

PLAN

4

℄ Prop. Dr.

℄ ROCK LEVEE

Elev. 625.85

℄ 601.83

Existing Ground

℄ 601.32

0.3%

Std. Type HW-E Headwall

PROP. 36"X 170'-0" I-1 PIPE Class A-1 Sec. M-6.6(d)

Std. Type HW-E Headwall

Datum Elev. 590.00

SECTION

0 10 20

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAILS

Rt. ℄ U.S.R. 35 Sta. 1158 ± (4)

SCALE DATE

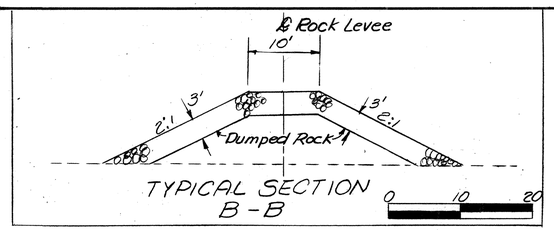
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	L.K.M.	H.I.Z.			

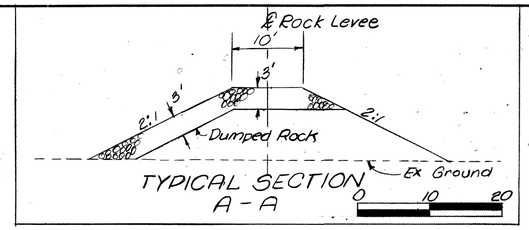
F-674(10)

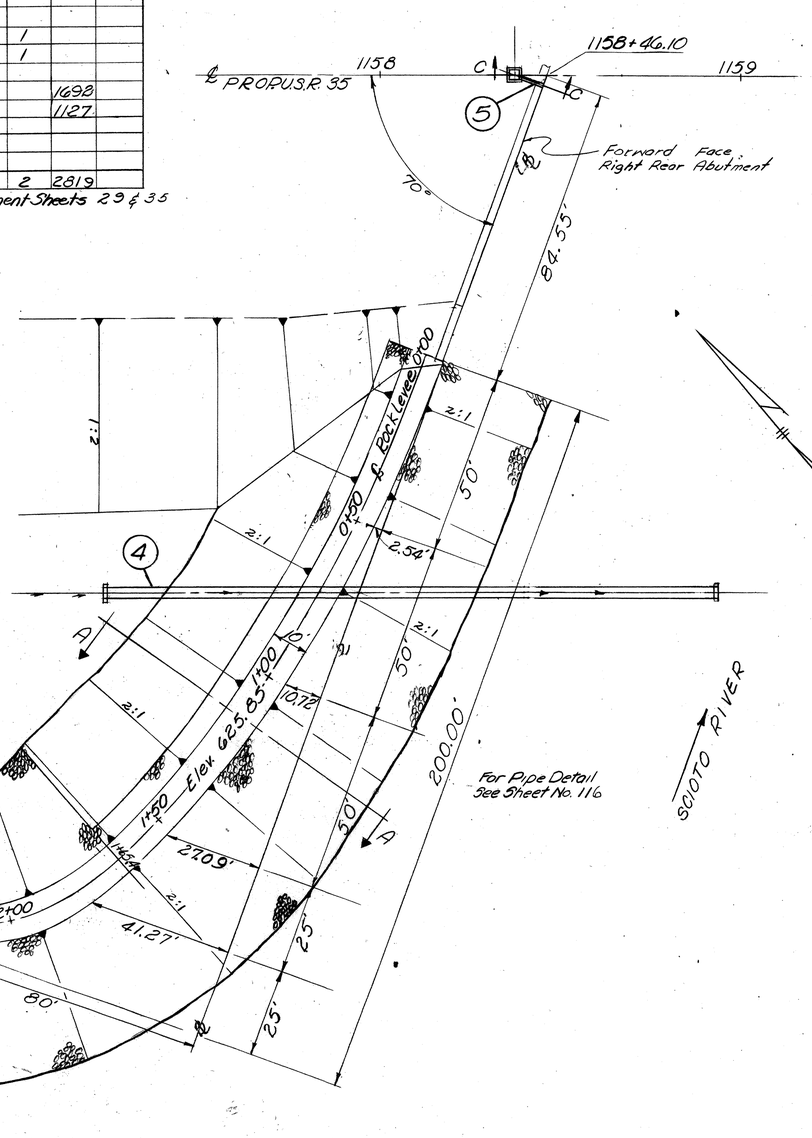
ESTIMATED QUANTITIES

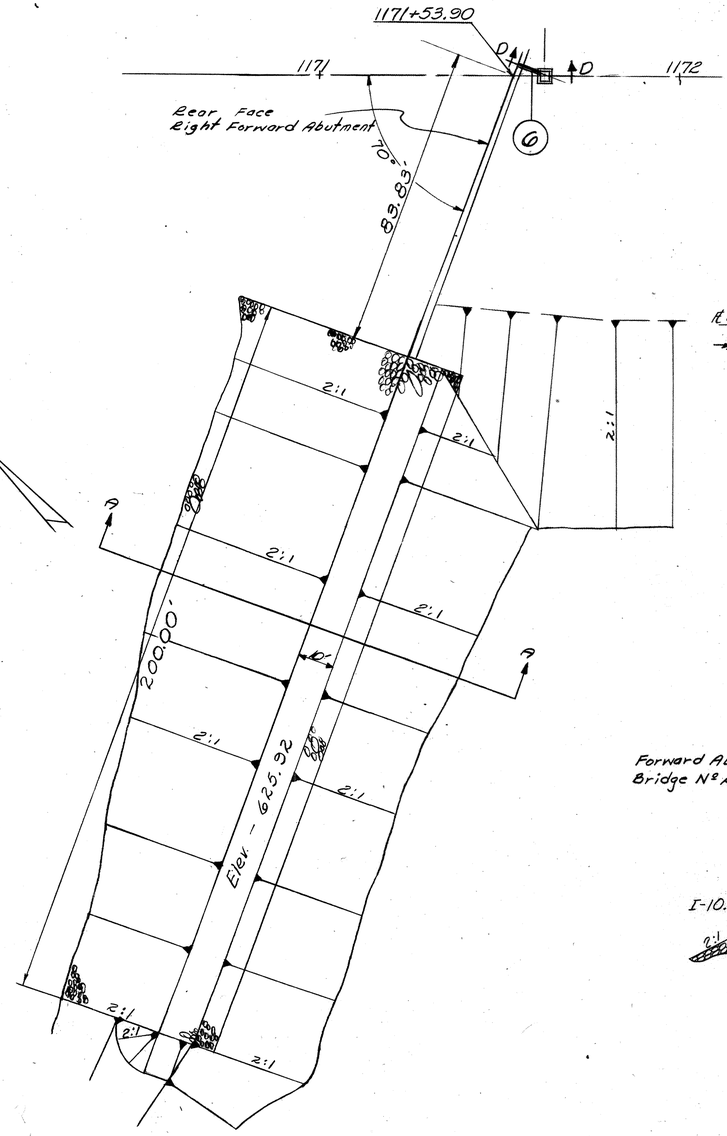
Structure number	Station	Side	I-1 Pipe Class E-1 12" Lin.Ft.		I-8 Catch Basin Std. No 8 Each	I-10 Dumped Rock Cu.Yd.	
	1158+37.57	℄	7		1		
	1171+62.43	℄	7		1		
	1158+46.10	Rt				1692	
	1171+55.76	Rt				1127	
	Totals		14	2	2	2819	

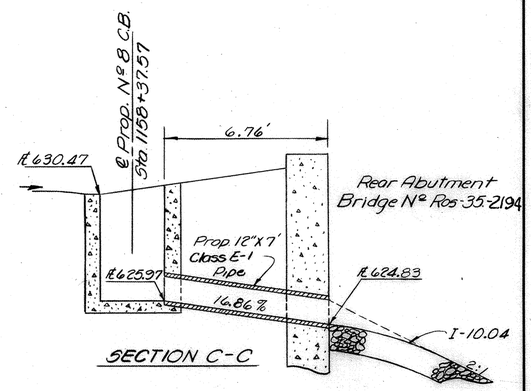
Quantities Carried To Alignment Sheets 29 & 35

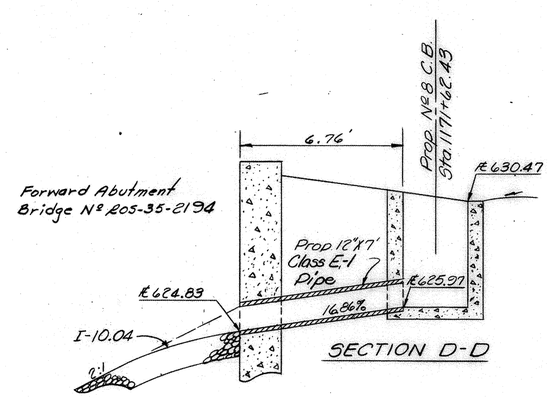












0 20 40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

117 / 240

ROSS COUNTY
ROS -35-21.23

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ROCK LEVEE

PIPE DETAILS

(5) (6)

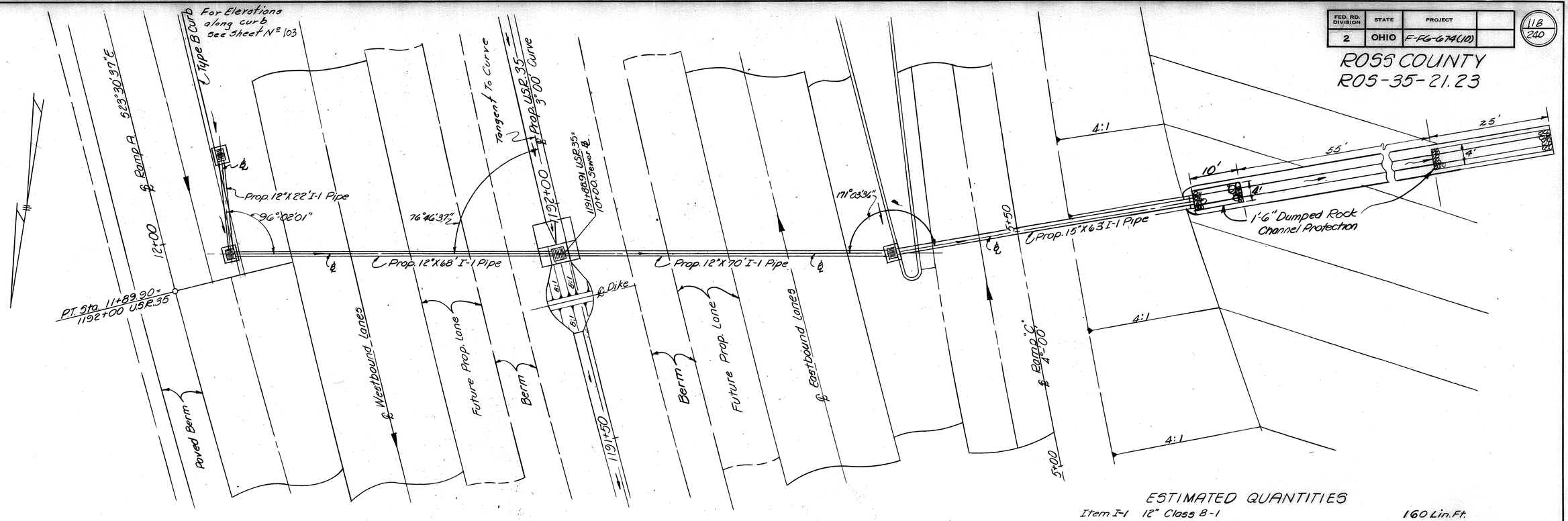
SCALE As Shown DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	B.L.	H.I.Z.			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

118
240

ROSS COUNTY
ROS-35-21.23



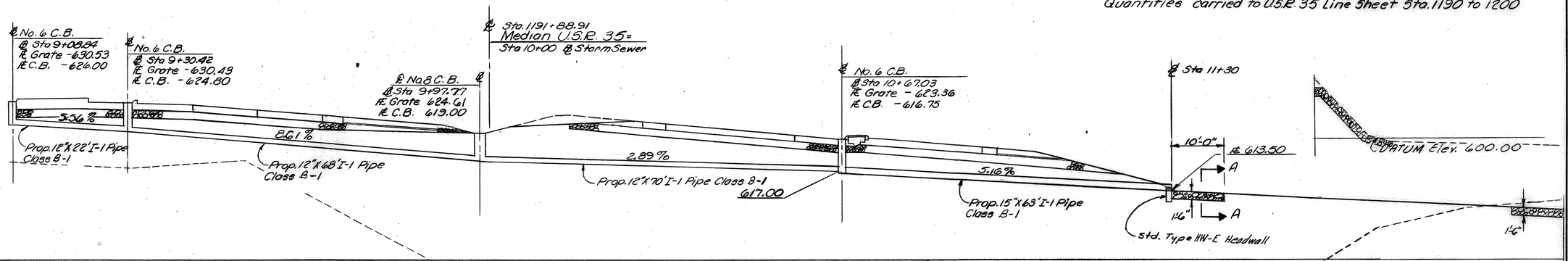
PLAN

(10)

ESTIMATED QUANTITIES

Item I-1	12" Class B-1	160 Lin. Ft.
Item I-1	15" Class B-1	63 Lin. Ft.
Item I-2	Headwalls Std. Type HW-E	0.26 Cu. Yds.
Item I-8	Catch Basins Std. No. 6	3 Each
Item I-8	Catch Basin Std. No. 8	1 Each
Item I-10	Dumped Rock Channel Protection	7.7 Cu. Yds.

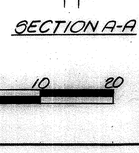
Quantities carried to U.S.R. 35 Line Sheet Sta. 1190 to 1200



SECTION

DATUM Elev. 600.00

℄ Existing Ground



SECTION A-A

0 10 20

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAILS

U.S.R. 35 Sta. 1191+88.91

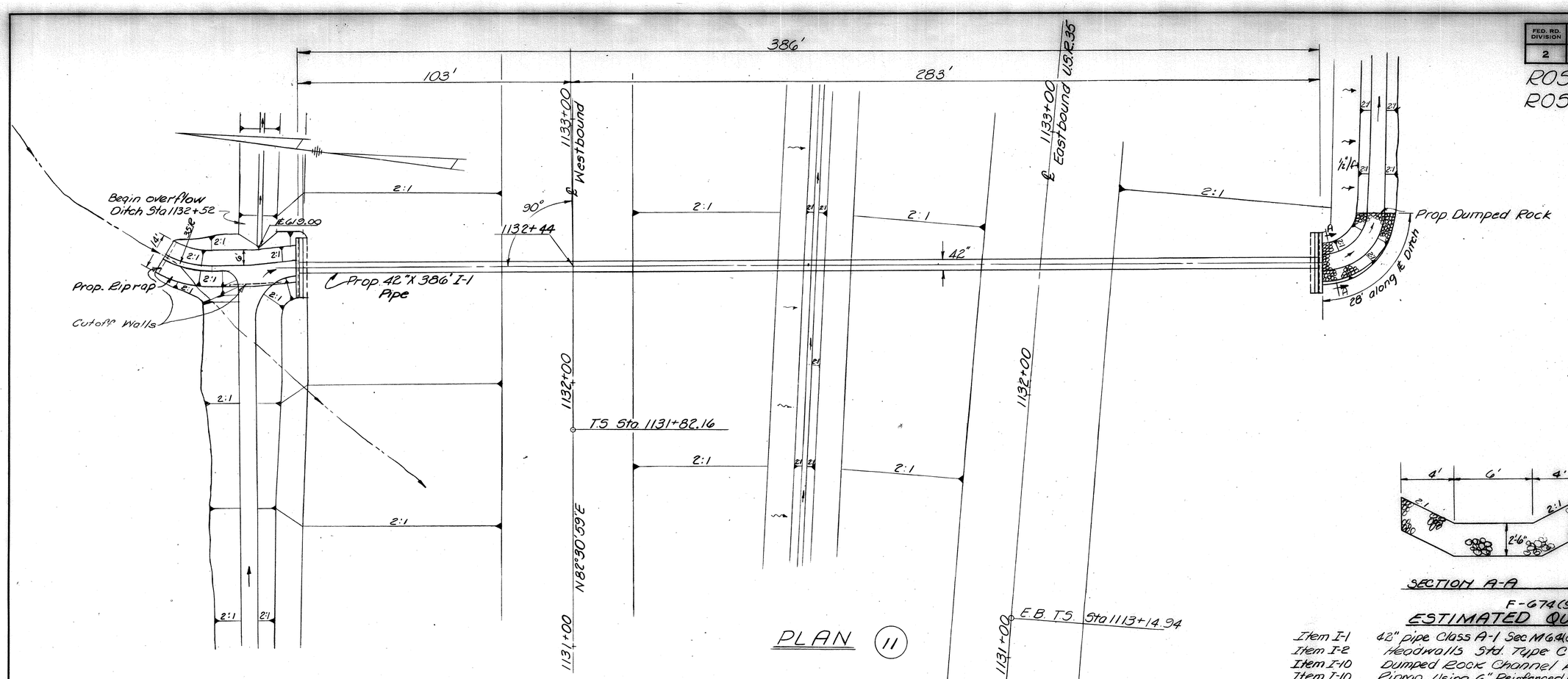
(10)

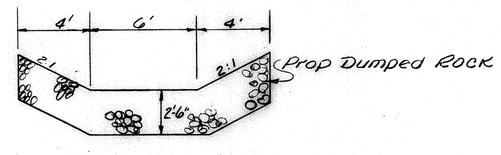
SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.R.	N.R.	L.K.M.	H.I.Z.			

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(9)

240

ROSS COUNTY
ROS-35-21.23





SECTION A-A

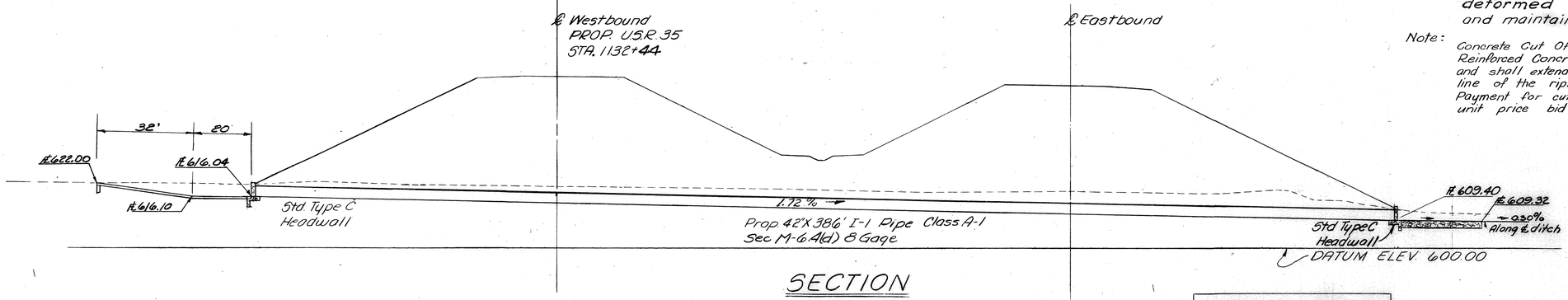
F-674(9) 0011

ESTIMATED QUANTITIES

Item I-1	42" pipe Class A-1 Sec M-6.4(d) 8 Gage (Along as per plan	386 Lin. Ft.
Item I-2	Headwalls Std. Type C	22 Cu. Yds
Item I-10	Dumped Rock Channel Protection	36 Cu. Yds
Item I-10	Riprap, Using 6" Reinforced Concrete, as per plan	81. 34. Yds

Note: The 42" Corrugated Metal Pipe shall be shop deformed to produce and maintain a 5% vertical elongation.

Note: Concrete Cut Off Walls For Item I-10 Riprap Using 6" Reinforced Concrete Slab. Cut off walls shall be 12" thick and shall extend a minimum of 2 feet below the flow line of the riprap.
Payment for cut off walls shall be included in the unit price bid for the I-10 item.



SECTION

Drainage Area - 38 Ac.
Q25 - 63 Cfs

0 20 40

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CULVERT DETAILS U.S.R 35 Westbound Sta 1132+44

(11)

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
RWG	LKM		TLS.			

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

240

ROSS COUNTY
ROS-35-21.23

PROP. CURVE DATA
P.I. 205.40' Lt. ℄ Sta. 50+04.85
Δ = 81°-21'-26"
Dc = 9°-45'
R = 587.65'
L = 834.43'
T = 505.06'

EDWARD L. SMITH

Cultivated Field

CITY OF CHILLICOTHE

℄ Channel Agreement Line

Survey Line

Toe of Slope

2:1

S 14° 20' 14" E

S 7° 29' 0" E

Channel Excavation
R205-35-19.93

To be Removed

52 Levee

SCIOTO RIVER

℄ Edge of Water

Excavate to Elev. 596.9

BEGIN WORK STA 46+00

BEGIN FULL DEPTH EXCAVATION STA 47+00

461+50
218' Lt. ℄

57+65
557' Lt. ℄

Excavate to Elev. 607.3

476.00'

60' L

Excavate to Elev. 596.3

Brush and Small Trees

N 69° 18' 20" E

N 34° 13' 20" E

481.47'

S 14° 20' 14" E

P.I. Sta. 55+82.85
Δ = 46° 34' 15"

S 49° 07' 31" E

Edge of Water ℄ Corporation Line

Corporation Line

P.I. Sta. 51+87.26
Δ = 41° 38' 30" Lt.

PROP. CURVE DATA
P.I. Sta. 55+82.85
Δ = 81°-21'-26"
Dc = 5°-00'
R = 1,145.92'
L = 1,627.14'
T = 984.87'

Sta. 46+00 to Sta. 125+16
Item E-3
Channel Excavation 858,629 Cu Yds

Excavation
R205-35-19.93

Prop. Profile along ℄

0.04%

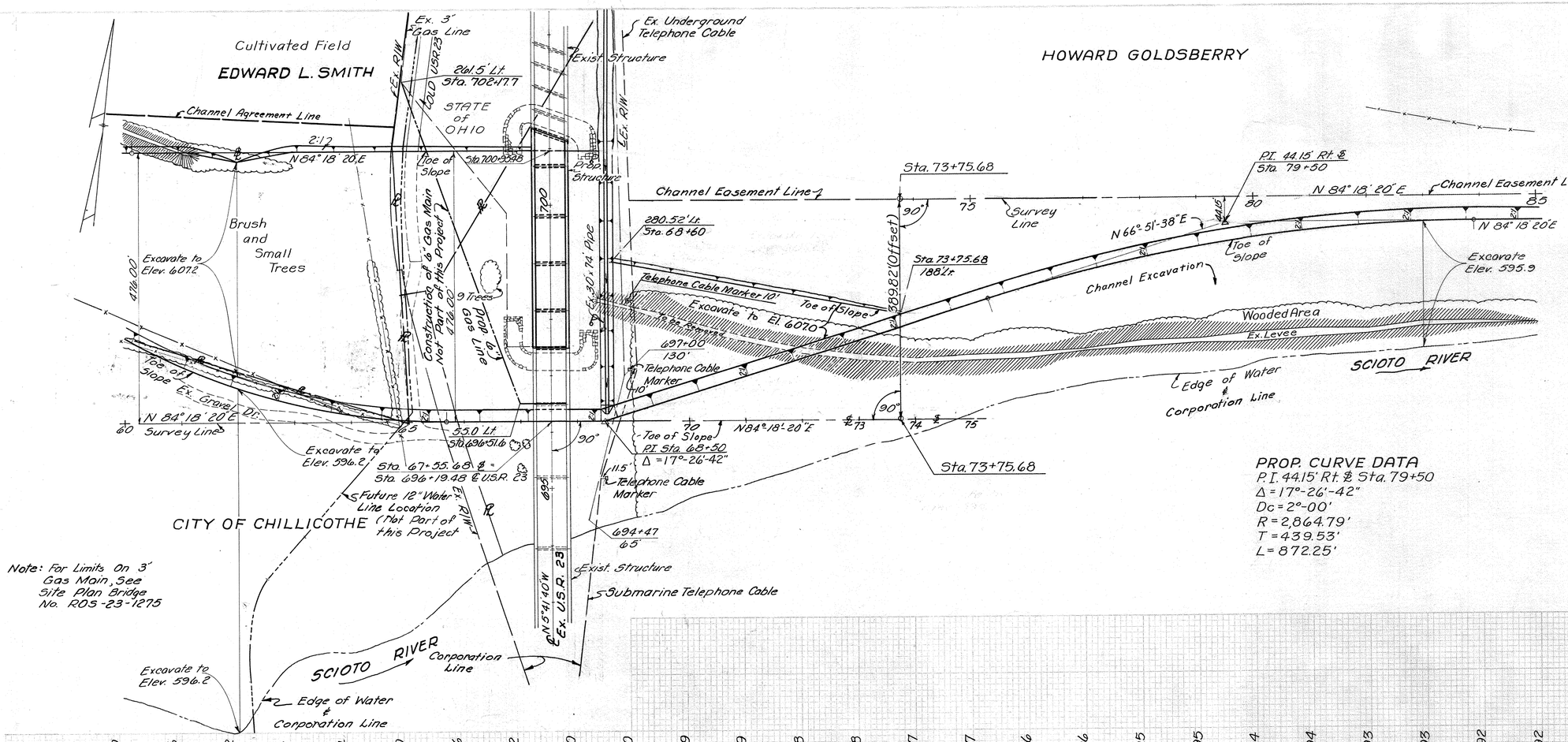
(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 46+00 TO STA. 60+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(3)	

121
240

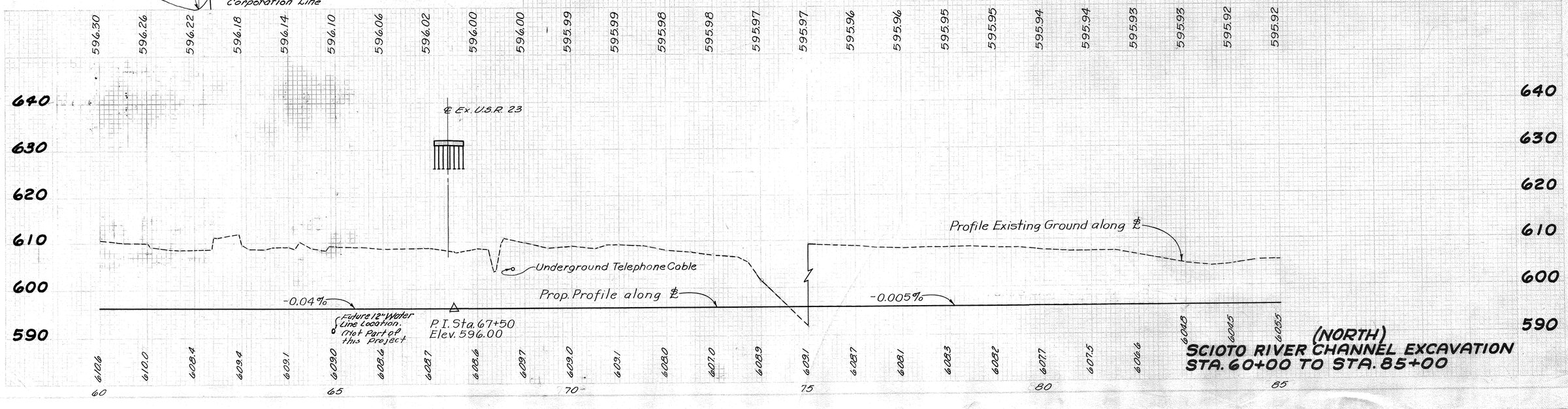
ROSS COUNTY
ROS-35-21.23



Note: For Limits On 3" Gas Main, See Site Plan Bridge No. ROS-23-1275

PROP. CURVE DATA

P.I. 44.15' Rt. ℄ Sta. 79+50
Δ = 17°-26'-42"
Dc = 2°-00'
R = 2,864.79'
T = 439.53'
L = 872.25'

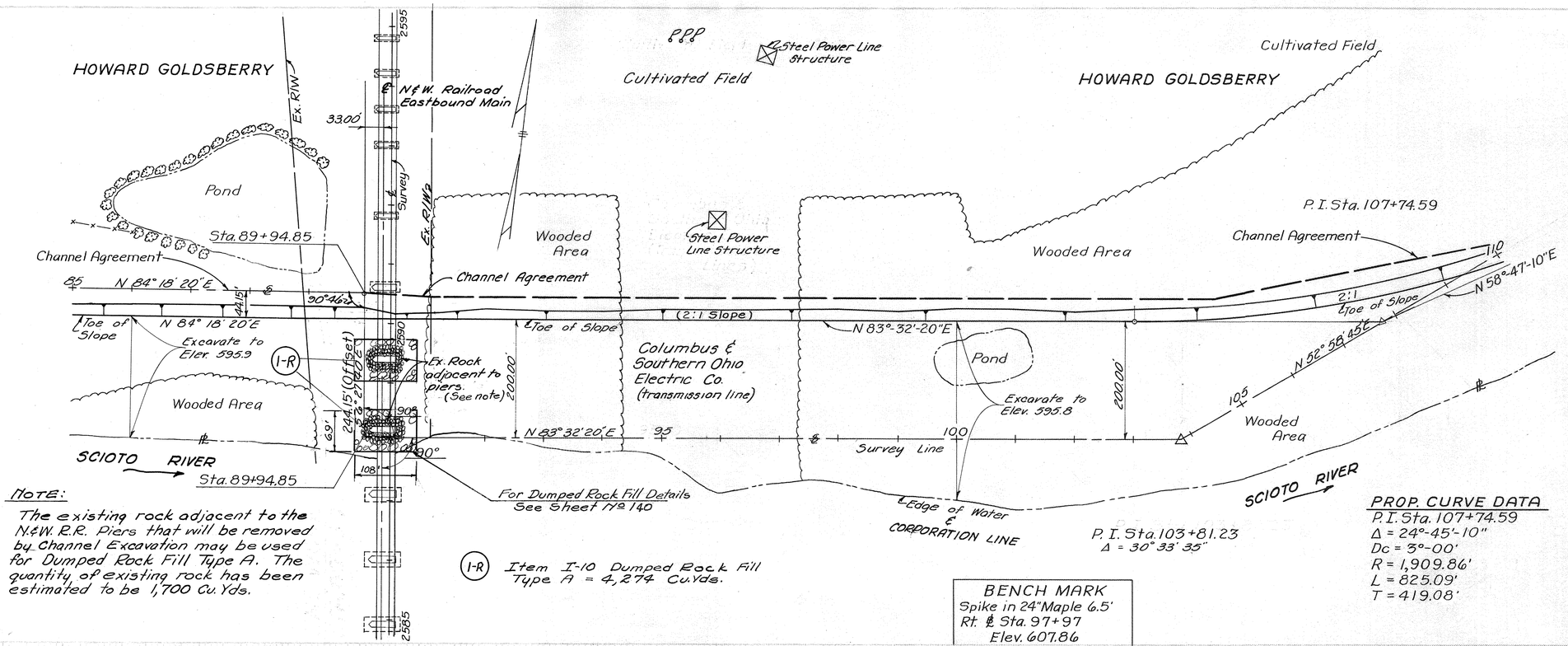


(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 60+00 TO STA. 85+00

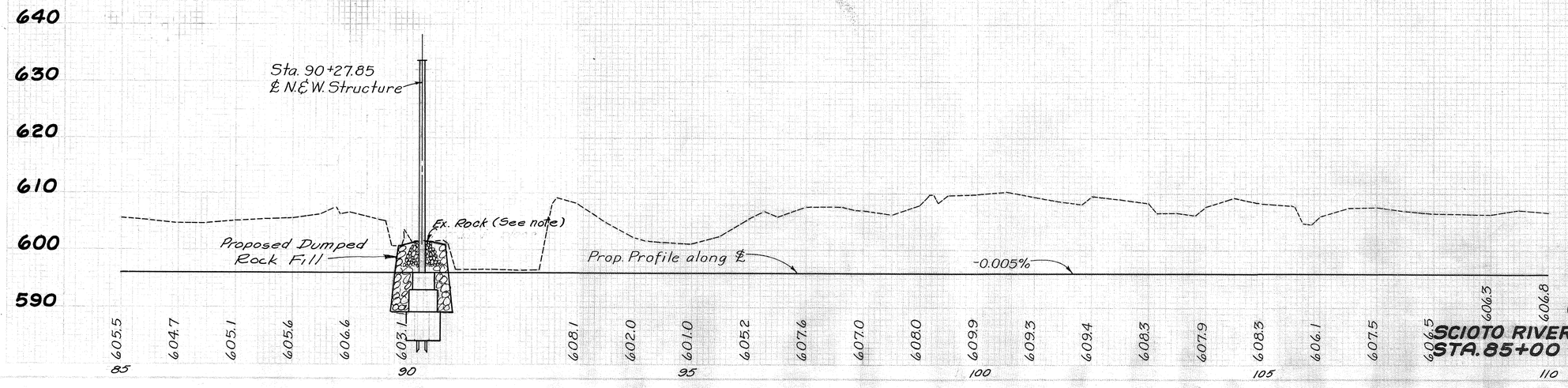
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

122
240

ROSS COUNTY
ROS-35-21.23



595.92 595.91 595.91 595.90 595.90 595.89 595.89 595.88 595.88 595.87 595.87 595.86 595.85 595.85 595.84 595.84 595.83 595.83 595.82 595.82 595.81 595.81 595.80 595.80 595.79 595.79

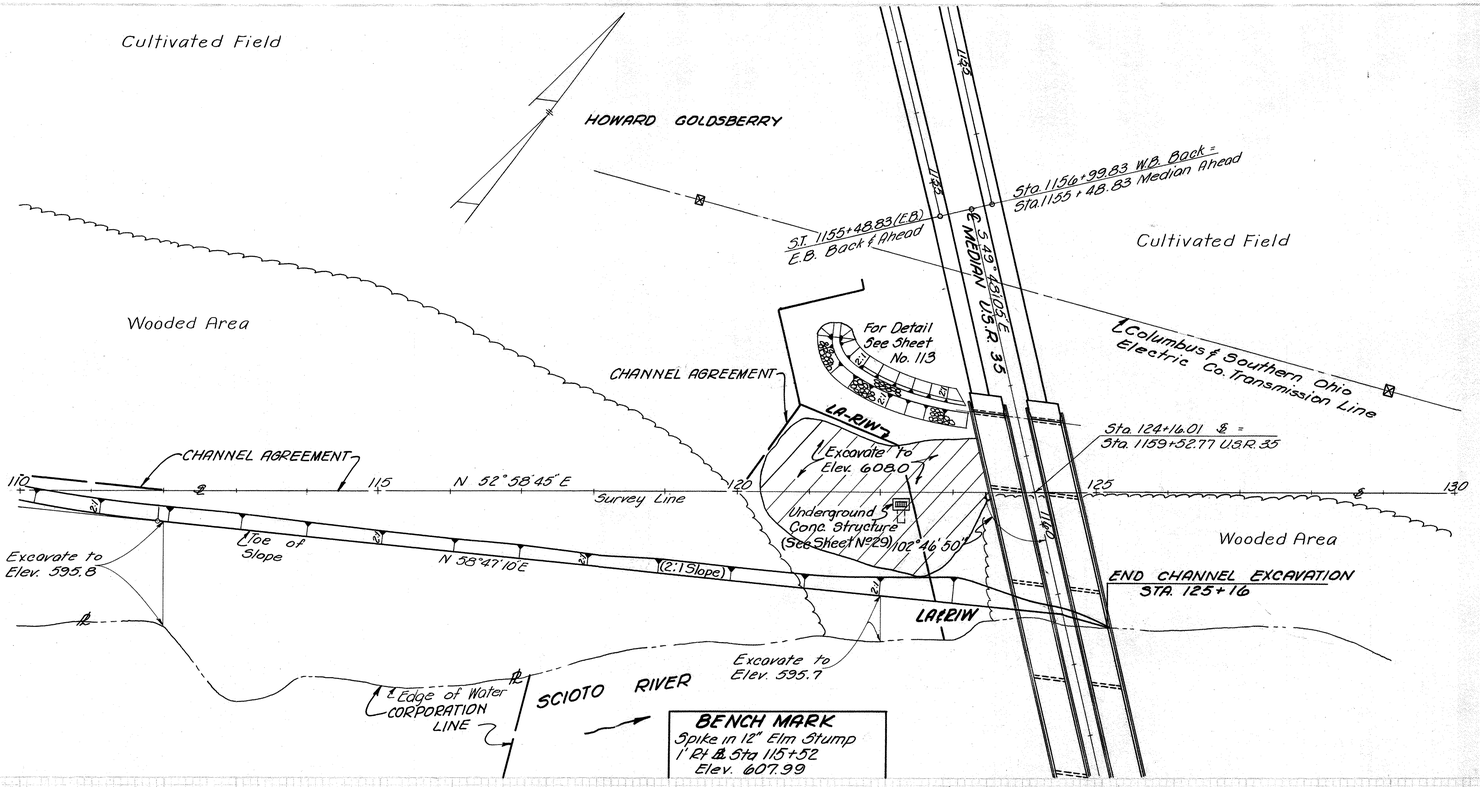


SCIOTO RIVER CHANNEL EXCAVATION STA. 85+00 TO STA. 110+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

123
240

ROSS COUNTY
ROS-35-21.23



(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 110+00 TO STA. 130+00

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO		

124
240

ROSS COUNTY
ROS-35-21.23

SEEDING

END WIDTH	NO. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Channel Agreement

EL. 607.8

596.82
47+00
611.1

BEGIN FULL DEPTH CHANNEL EXCAVATION
STA. 47+00

Channel Agreement

596.86
46+00
617.3

Excavation - ROS-35-19.93

BEGIN WORK STA. 46+00

STA. 46+00 TO STA. 1251+16
Item E-3
Channel Excavation 858,629 C.Y.

47+00 5948 0

11,015 0

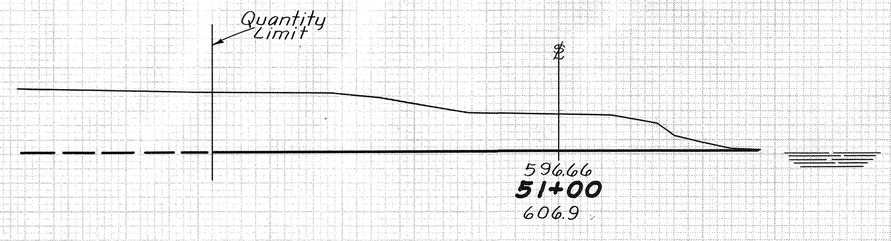
46+00 0 0

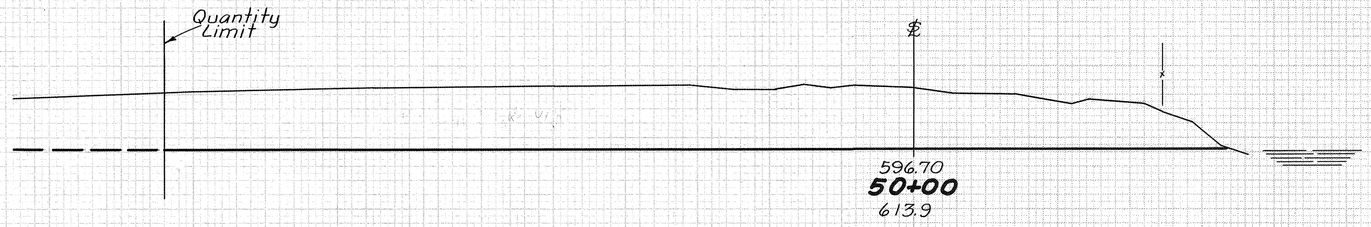
(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 46+00 TO STA. 47+00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240

FED. RD. DIVISION	STATE	PROJECT		125 240
2	OHIO	F-FG-674(9)		

ROSS COUNTY
ROS-35-21.23





	End Area Cut	End Area Fill	Volume Cut	Volume Fill
	1684	0		
			11933	0
	4760	0		
			21193	0
Ahead	6684	0		
Back	6800	0		
			24541	0
	6452	0		
			22963	0
	5948	0		

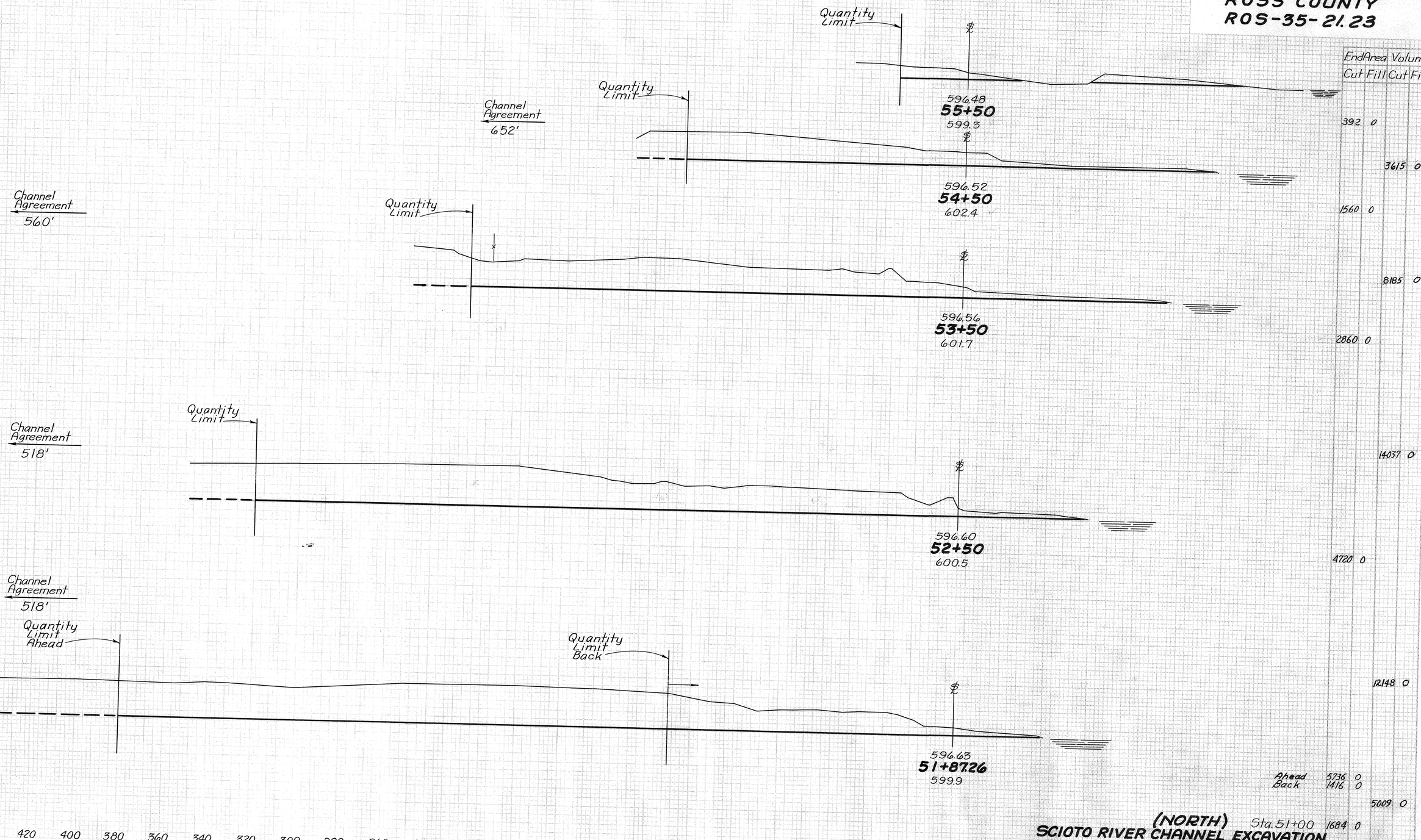
(NORTH) SCIOTO RIVER CHANNEL EXCAVATION
STA. 48+00 TO STA. 51+00

Sta. 47+00

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

126
240

ROSS COUNTY
ROS-35-21.23



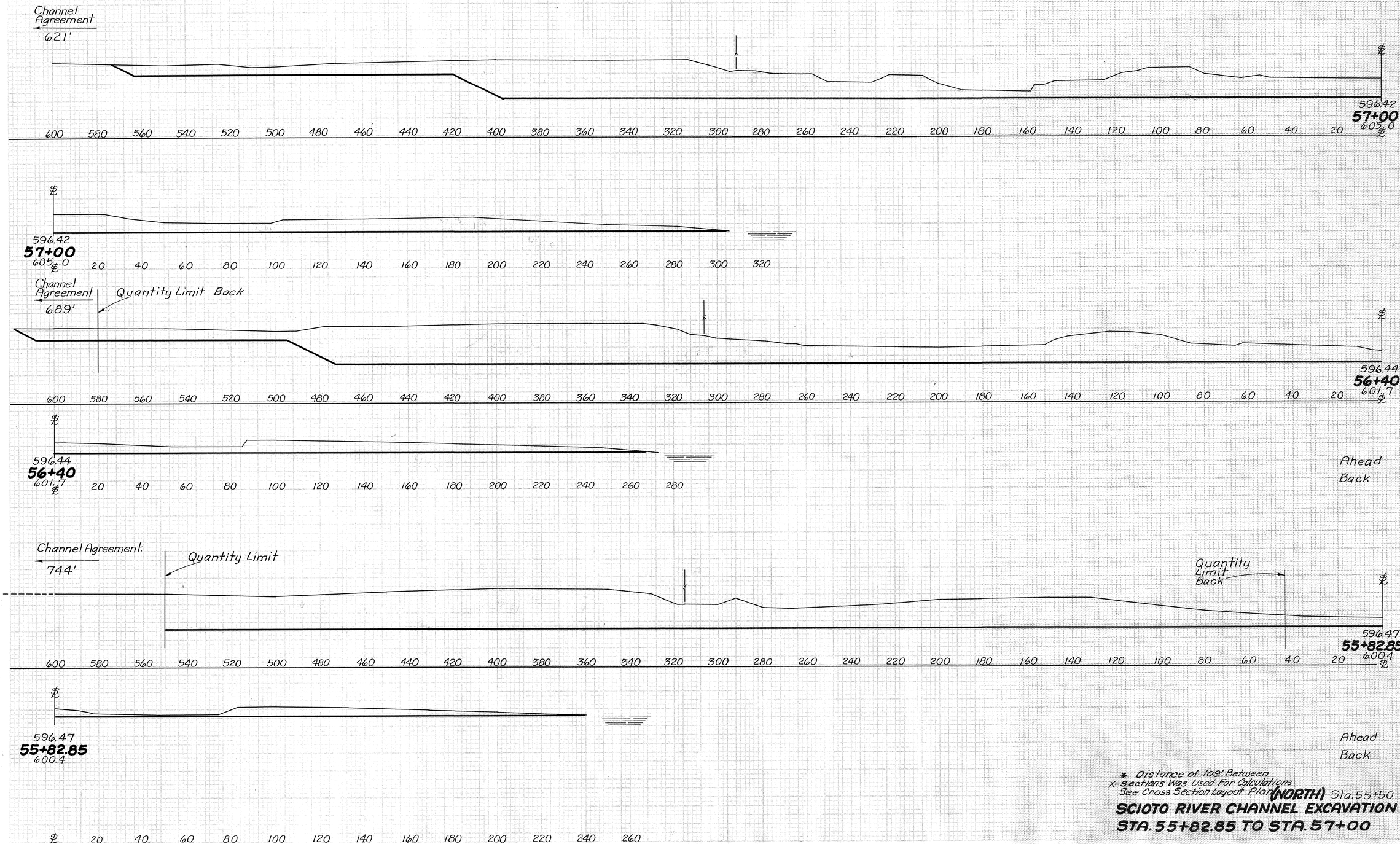
	End Area Cut	End Area Fill	Volume Cut	Volume Fill
	392	0		
				3615 0
	1560	0		
				8185 0
	2860	0		
				14037 0
	4720	0		
				12148 0
Ahead	5736	0		
Back	1416	0		
				5009 0
(NORTH) Sta. 51+00	1684	0		

SCIOTO RIVER CHANNEL EXCAVATION
STA. 51+87.26 TO STA. 55+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

127
240

ROSS COUNTY
ROS-35-21.23



	EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
			7052	0
			16369	0
Ahead	7680	0		
Back	7492	0		
			15934	0
Ahead	7564	0		
Back	820	0		
			*2446	0
			392	0

* Distance of 109' Between X-Sections Was Used For Calculations

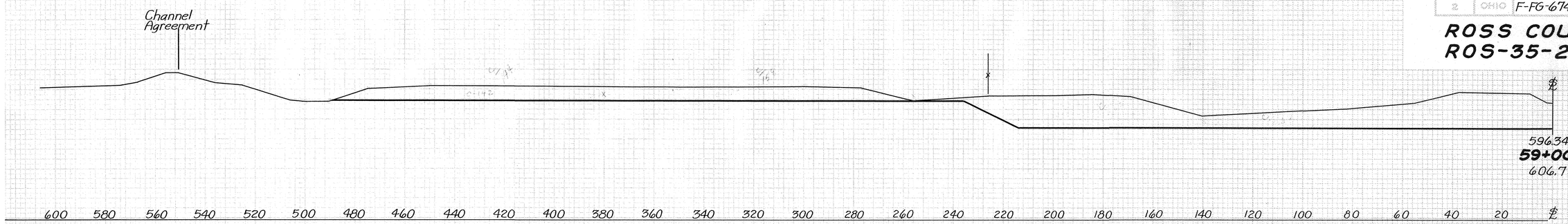
See Cross Section Layout Plan (NORTH)

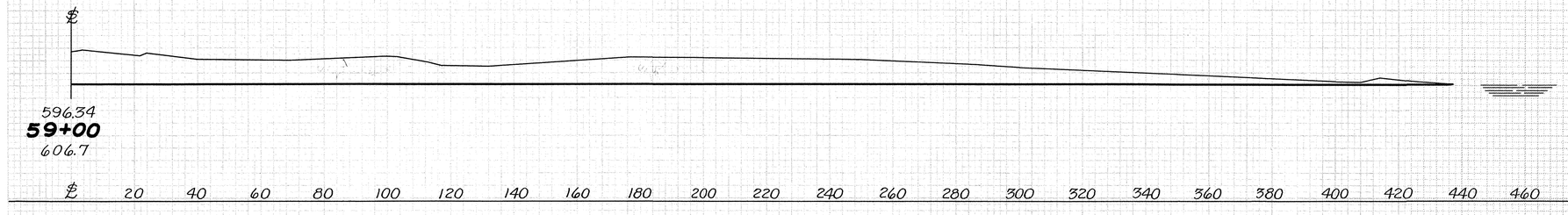
SCIOTO RIVER CHANNEL EXCAVATION
STA. 55+82.85 TO STA. 57+00

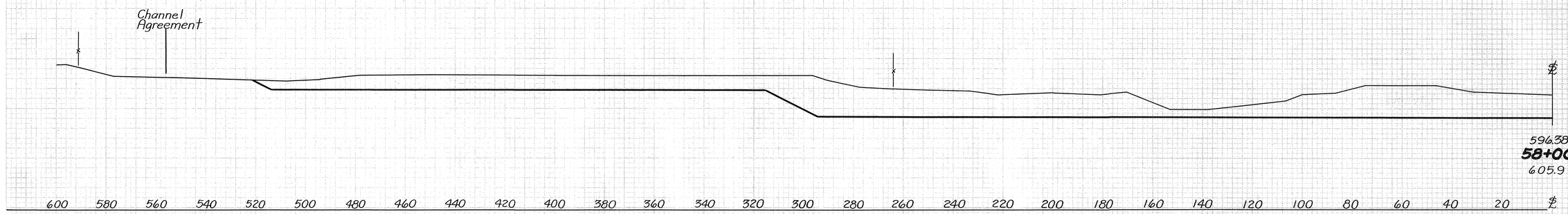
FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

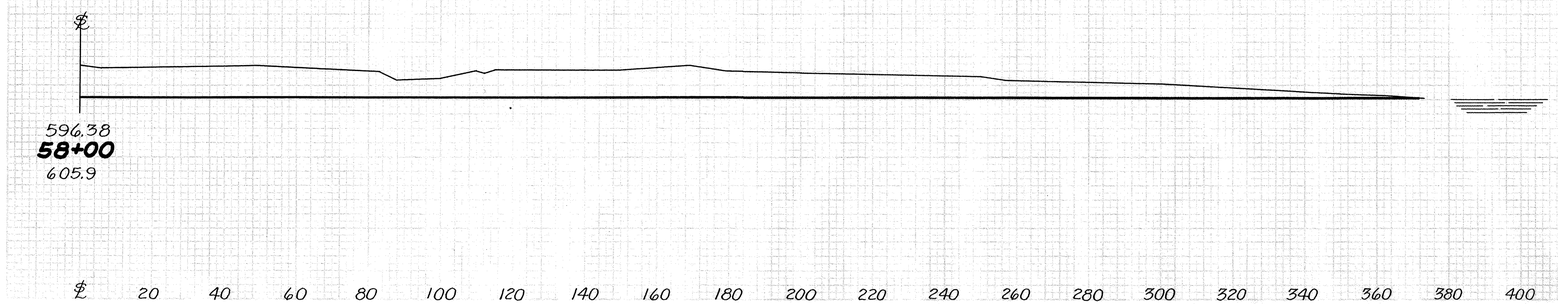
128
240

ROSS COUNTY
ROS-35-21.23









	EndArea Volume	
	Cut	Fill
Cut		Fill
	6324	0
	23704	0
	6476	0
	25052	0
	7052	0

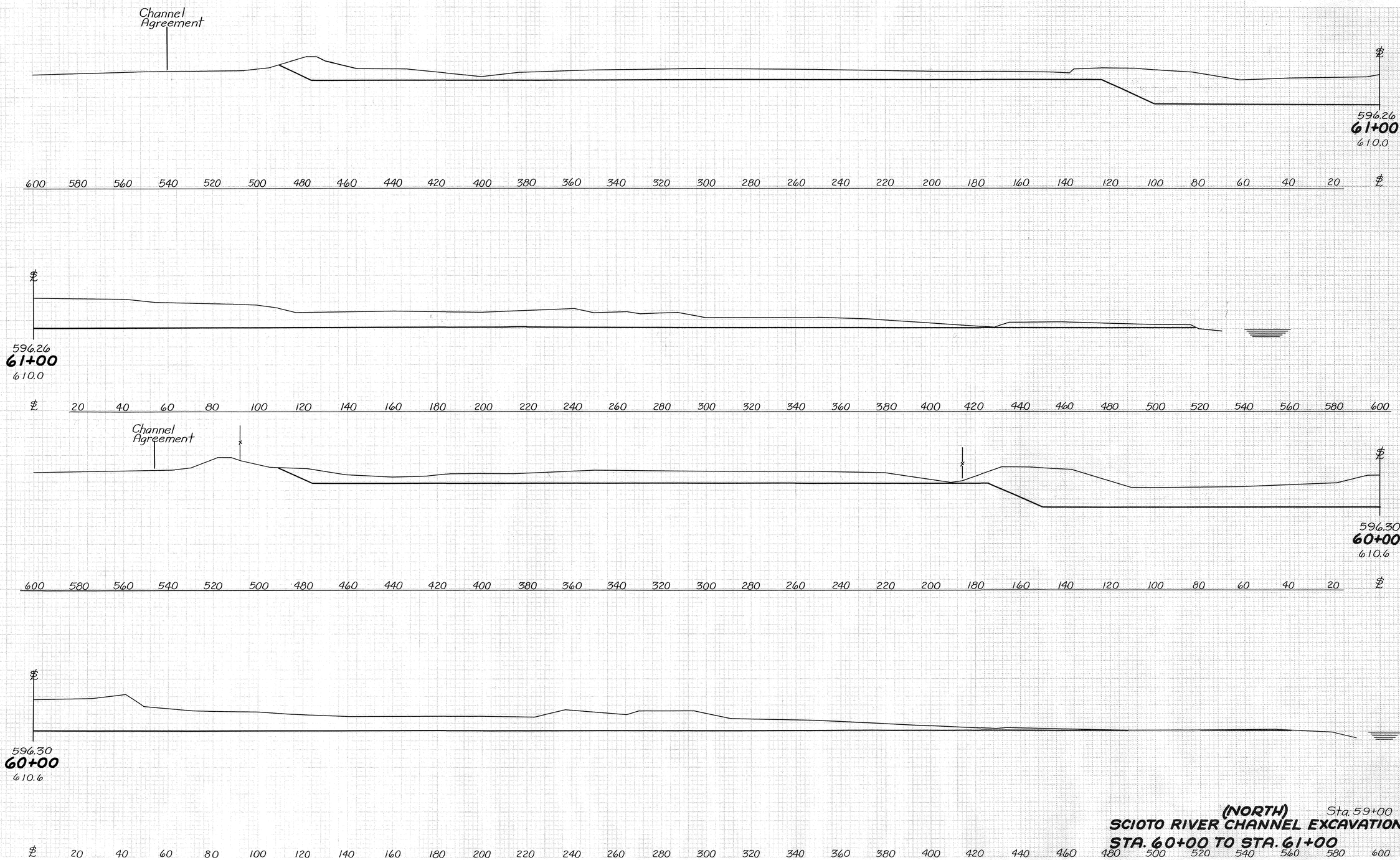
(NORTH) Sta. 57+00

SCIOTO RIVER CHANNEL EXCAVATION
STA. 58+00 TO STA. 59+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

129
240

ROSS COUNTY
ROS-35-21.23



	EndArea		Volume	
	Cut	Fill	Cut	Fill
Sta. 59+00				
			6324	0
			6644	0
			6576	0
			24015	0
			24481	0

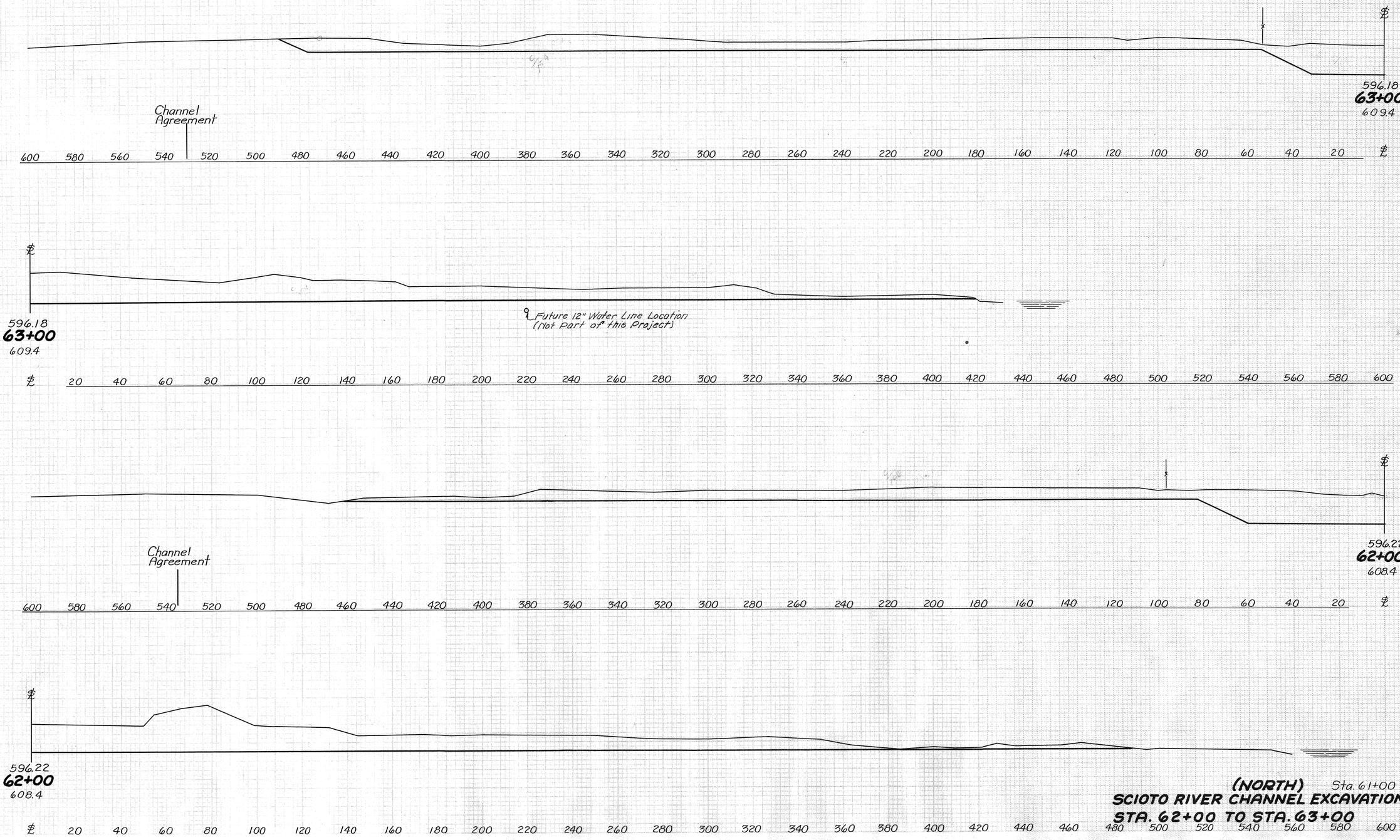
(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 60+00 TO STA. 61+00

Start

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

ROSS COUNTY
ROS-35-21.23



End Area Cut	End Area Fill	Volume Cut	Volume Fill
55.16	0		
		21,437	
60.60	0		
		23,400	
65.76	0		

Sta. 61+00

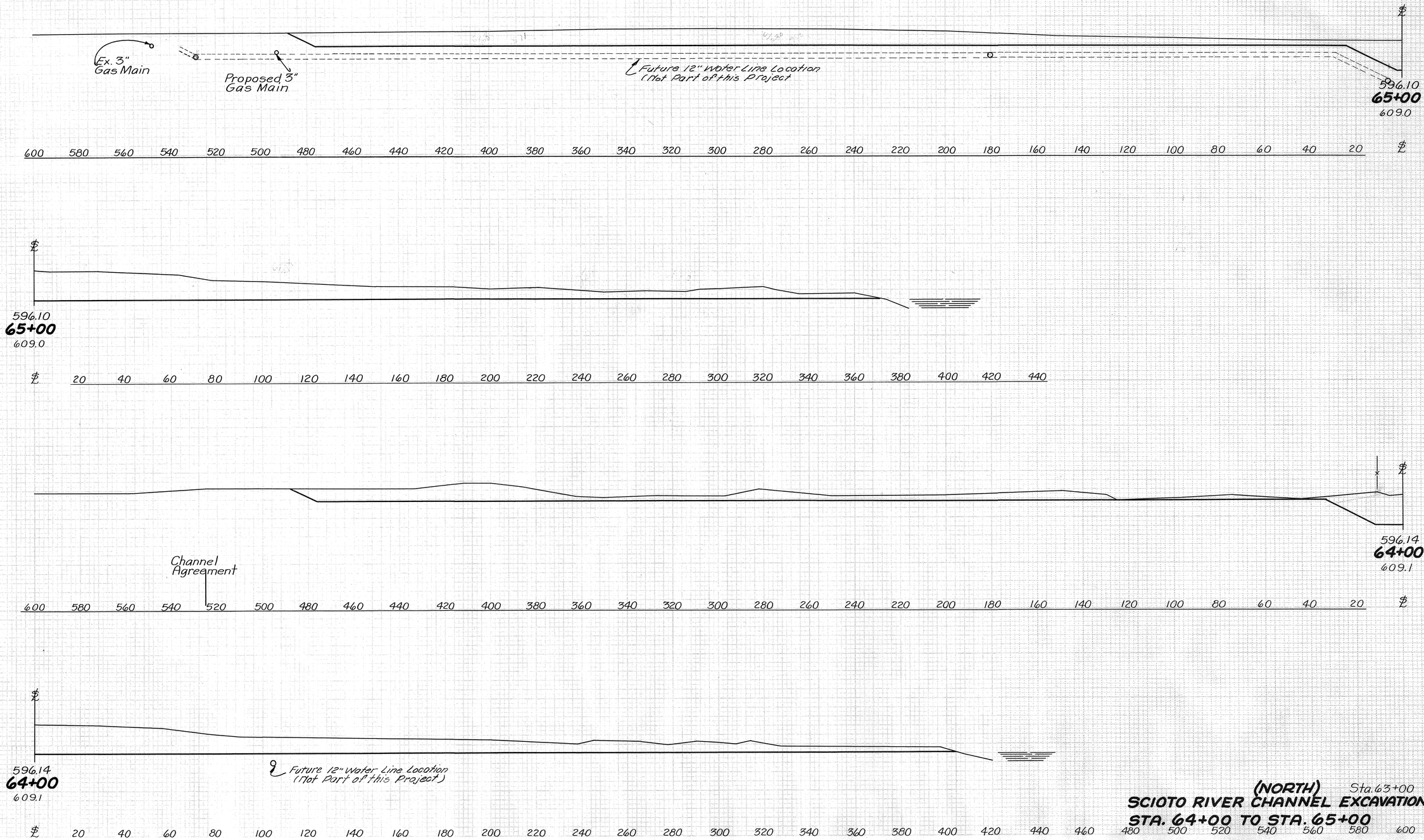
(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 62+00 TO STA. 63+00

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

131
240

ROSS COUNTY
ROS-35-21.23

End Area		Volume	
Cut	Fill	Cut	Fill
		5256	0
		17526	0
		4208	0
		18007	0
		5516	0

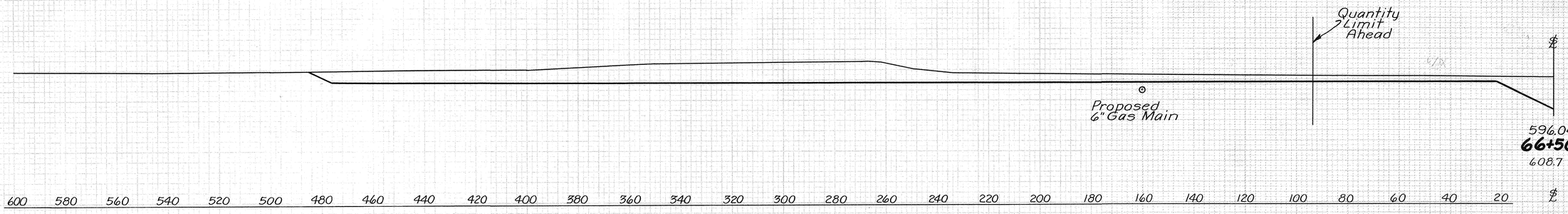


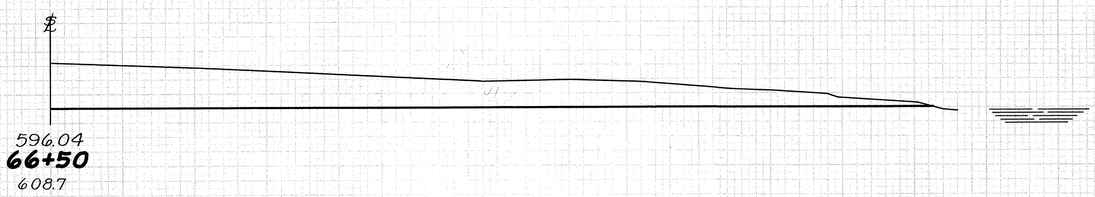
(NORTH) Sta. 63+00
SCIOTO RIVER CHANNEL EXCAVATION
STA. 64+00 TO STA. 65+00

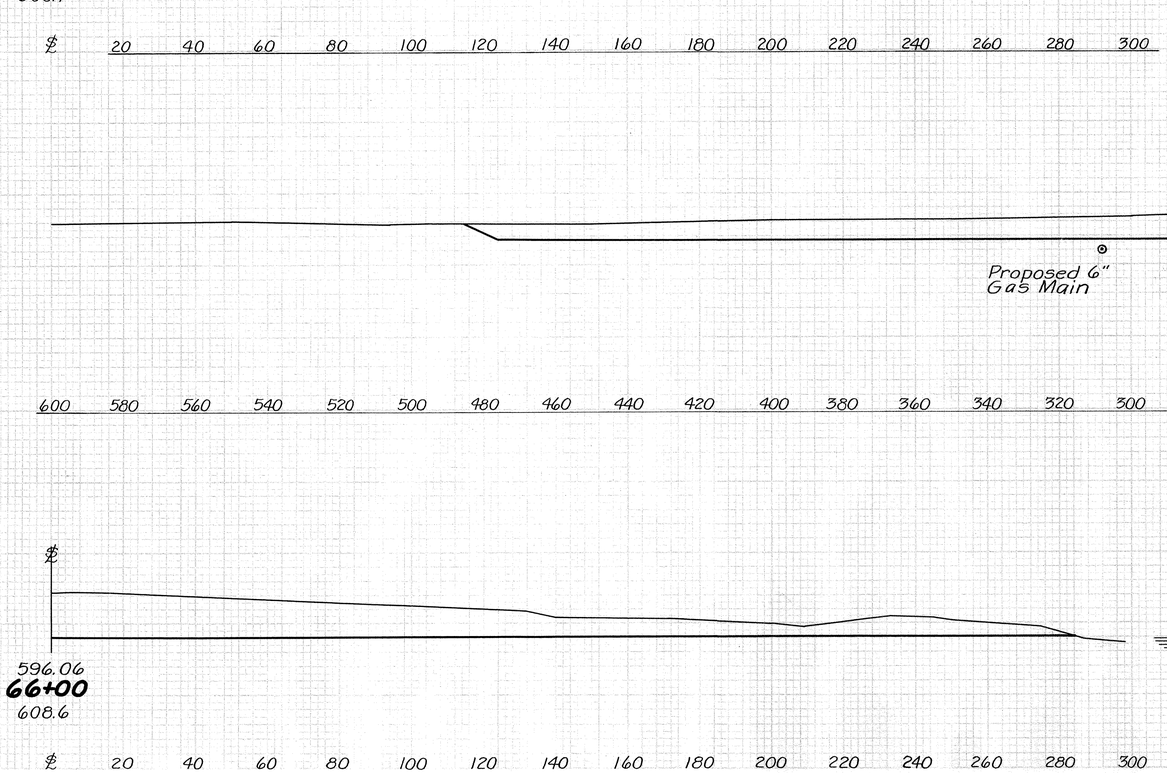
FED. ROAD DIST. NO.	STATE	PROJECT	
2	OHIO	F-FG-674(9)	

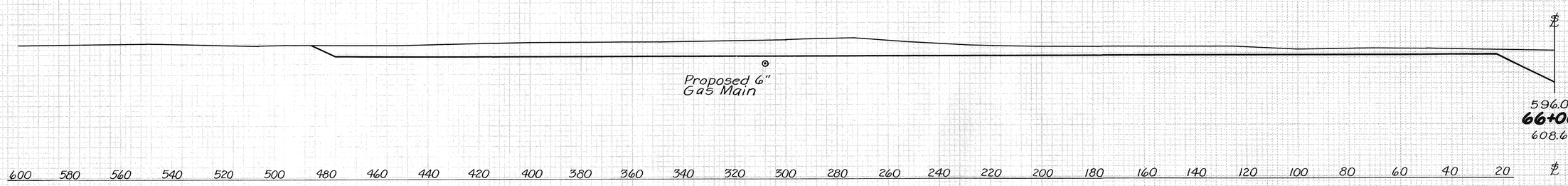
132
240

ROSS COUNTY
ROS-35-21.23









	EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
Ahead	2232	0		
Back	4152	0		
			7781	0
	4252	0		
			17607	0
	5256	0		

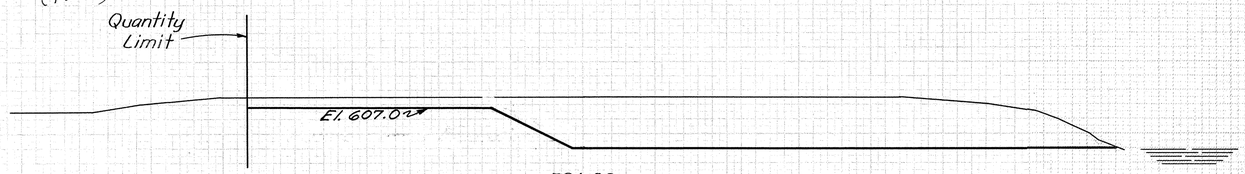
(NORTH) Sta. 65+00

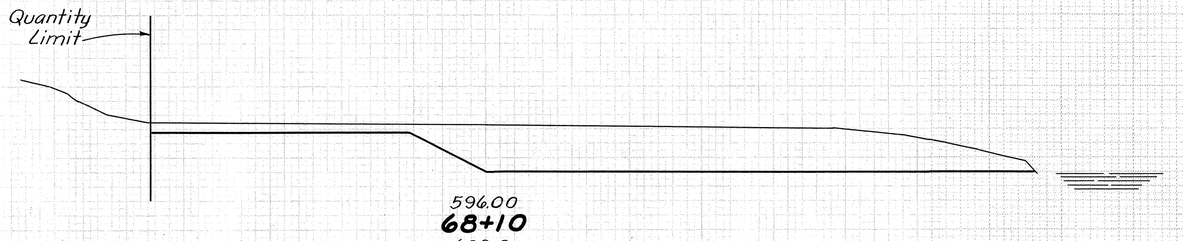
SCIOTO RIVER CHANNEL EXCAVATION
STA. 66+00 TO STA. 66+50

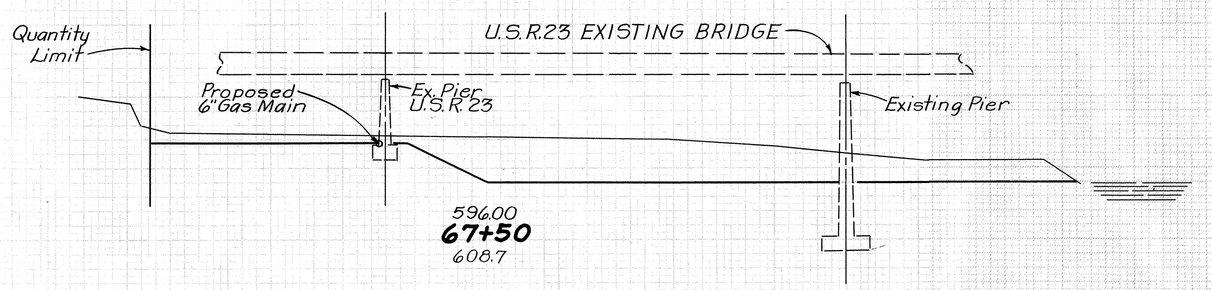
ROSS COUNTY
ROS-35-21.23

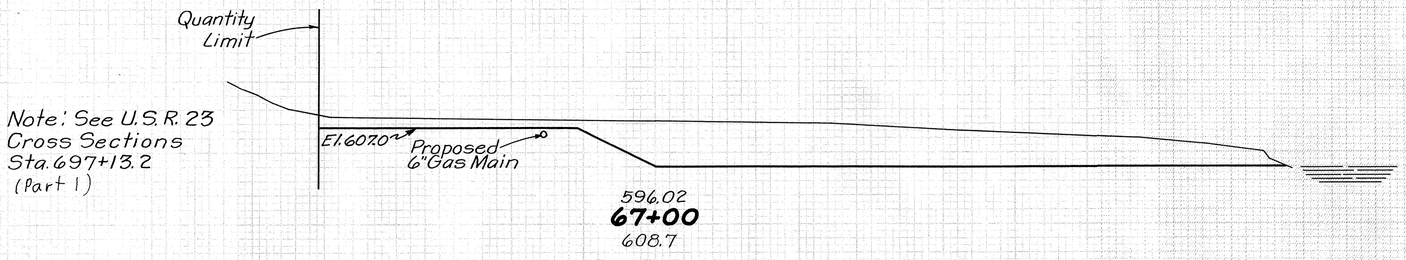
BURIED TELEPHONE CABLE
℄ STA. 68+76

Note: See U.S.R.23 Cross Sections Sta. 697+13.2 (Part 1)









End Area Cut	End Area Fill	Volume Cut	Volume Fill
2,312	0		
		4,033	0
2044	0		
		4347	0
1868	0		
		3633	0
2056	0		
2232	0	3970	0

Ahead Sta. 66+50

(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 67+00 TO STA. 68+60

200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

134
240

ROSS COUNTY
ROS-35-21.23

SEEDING

SEED WIDTH	SQ. YDS.
26	
294	
27	
150	
27	
147	
26	
116	
26	
29	
26	

Channel Agreement 389.82'

℄ Elev. 607.0

595.99
71+00
609.1

Channel Agreement 389.82'

℄ Elev. 607.0

595.99
70+00
609.0

Channel Agreement 389.82'

Sta. 68+50 to Sta. 125+16
Item L-9
Seeding & Protecting 152.08 Sq Yds

THIS SEEDING SHALL BE NON-PERFORMED
Seeding for 2:1 Slopes Only

℄ Elev. 607.0

596.00
69+50
608.5

Quantity Limit Back

596.00
69+00
609.7

STA. 68+50

	ROAD AREA CUT	ROAD AREA FILL	VOLUME CUT	VOLUME FILL
	2872	0		
			11,000	0
	3068	0		
			6093	0
	3512	0		
			6452	0
Ahead	3456	0		
Back	2608	0		
			3644	0
Sta. 68+60	2312	0		

(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 69+00 To STA. 71+00

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

135
240

ROSS COUNTY
ROS-35-21.23

SEEDING

END WIDTH	SQ. YDS.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			2500	0
				9519 0
			2640	0
				10,207 0
			2872	0

Channel Agreement
389.82

℄ Elev. 607.0

595.98
73+00
607.0

27

Channel Agreement
389.82

294

℄ Elev. 607.0

595.98
72+00
608.0

26

289

26

Sta. 7.1+00

Sta. 7.1+00

(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION

STA. 72+00 TO STA. 73+00

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220

FED. AID PROJECT	STATE	PROJECT		136 240
	OHIO	F-FG-674 (10)		

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			End Area Cut	End Area Fill	Volume Cut	Volume Fill
27		595.96 **77+00** 608.1	2748	0		
	317	C.A.			10200	0
30		595.96 **76+00** 608.7	2760	0		
	350	C.A.			10119	0
33		595.97 **75+00** 609.1	2704	0		
	372	Channel Agreement			10319	0
34		595.97 **74+00** 608.9	2868	0		
	339				9941	0
27	Sta. 73+00		Sta. 73+00	2500	0	

200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400

(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 74+00 TO STA. 77+00

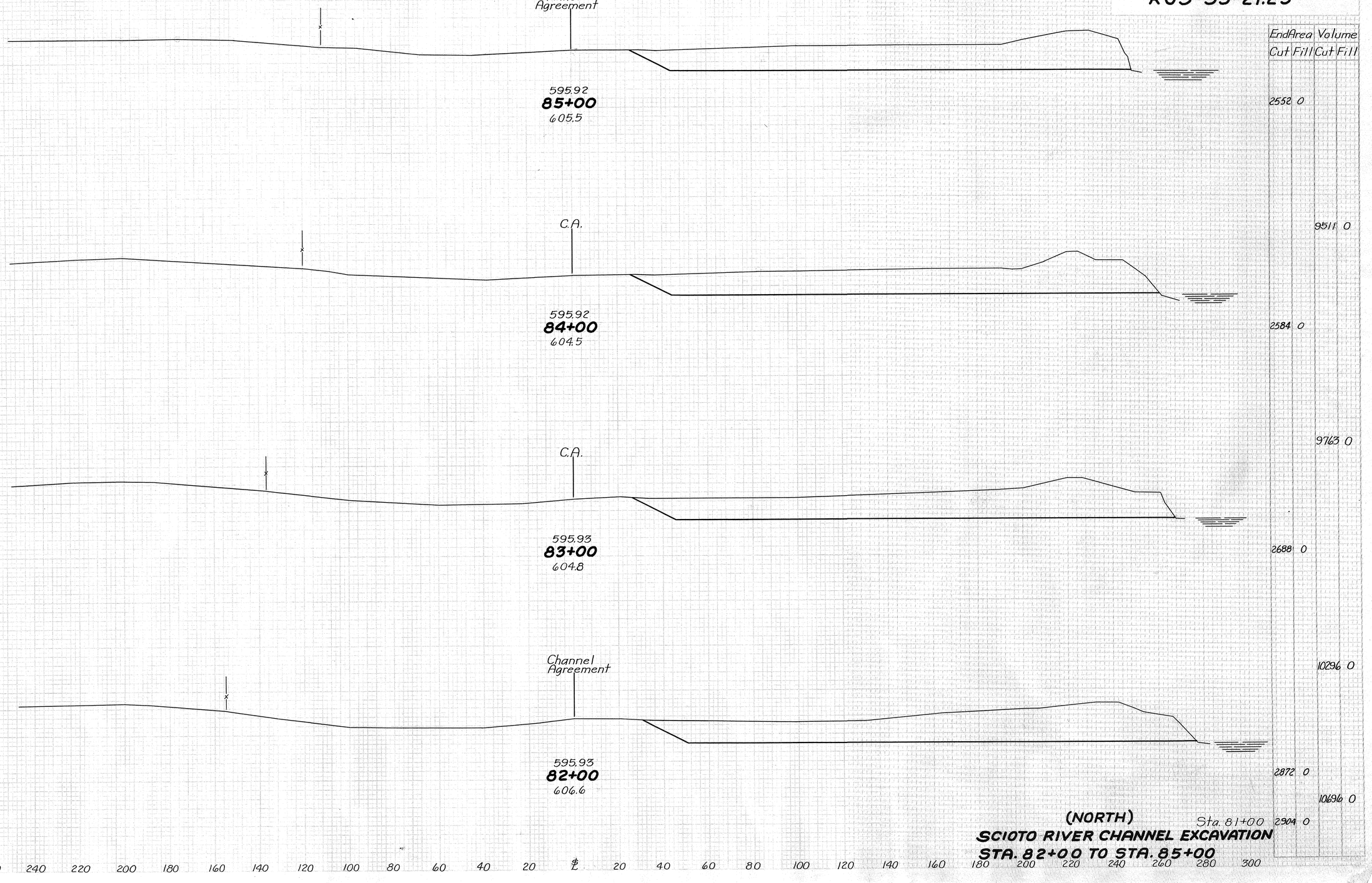
ROSS COUNTY
ROS-35-21.23

(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 78+00 TO STA. 81+00

FED. AID PROJECT	STATE	PROJECT		138
2	OHIO	F-FG-674 (10)		240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
23		595.92 **85+00** 605.5	2552	0		
256					9511	0
23		595.92 **84+00** 604.5	2584	0		
261					9763	0
24		595.93 **83+00** 604.8	2688	0		
272					10296	0
25		595.93 **82+00** 606.6	2872	0		
278					10696	0
25	Sta. 81+00		2904	0		



(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 82+00 TO STA. 85+00

FED. ROAD DIV. NO.	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

139
240

ROSS COUNTY
ROS-35-21.23

Channel Agreement

595.90
89+00
606.6

C.A.

595.90
88+00
605.6

C.A.

595.91
87+00
605.1

Channel Agreement

595.91
86+00
604.7

Seeding End Sa. Width Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
27	2880	0		
289			10430	0
25	2752	0		
267			9911	0
23	2600	0		
244			9585	0
21	2576	0		
244			9496	0
23 Sta. 85+00	2552	0		

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

(NORTH) Sta. 85+00

SCIOTO RIVER CHANNEL EXCAVATION
STA. 86+00 TO STA. 89+00

SHEET NO.	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

140
240

ROSS COUNTY
ROS-35-21.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1804	0
		4392	0
		1584	0
		4156	0
		1056	0
		3325	0
		2524	0
		9492	0
		2880	0

21

Channel Agreement

595.88
92+00
594.5

144

Channel Agreement

595.89
91+30
592.7

16

179

22

Existing N.&W. R.R. Piers

El. 625.46

El. 622.91

See note on Sheet No. 122

Existing Rock

Existing Rock

El. 590.98

Proposed Dumped Rock Fill

El. 590.98

595.89
90+45
600.8

125

Channel Agreement

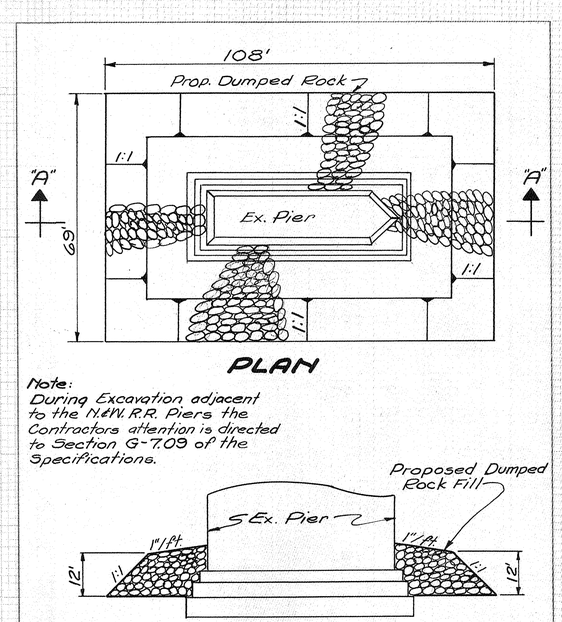
595.89
89+94.85
601.9

23

263

27

Sta. 89+00



PLAN

Note:
During Excavation adjacent to the N.&W. R.R. Piers the Contractors attention is directed to Section G-7.09 of the Specifications.

SECTION "A"-"A"
DETAIL OF PROPOSED DUMPED ROCK FILL ADJACENT TO THE EXISTING N.&W. STRUCTURE - SEE SHEET NO. 122

260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

(NORTH)

Sta. 89+00

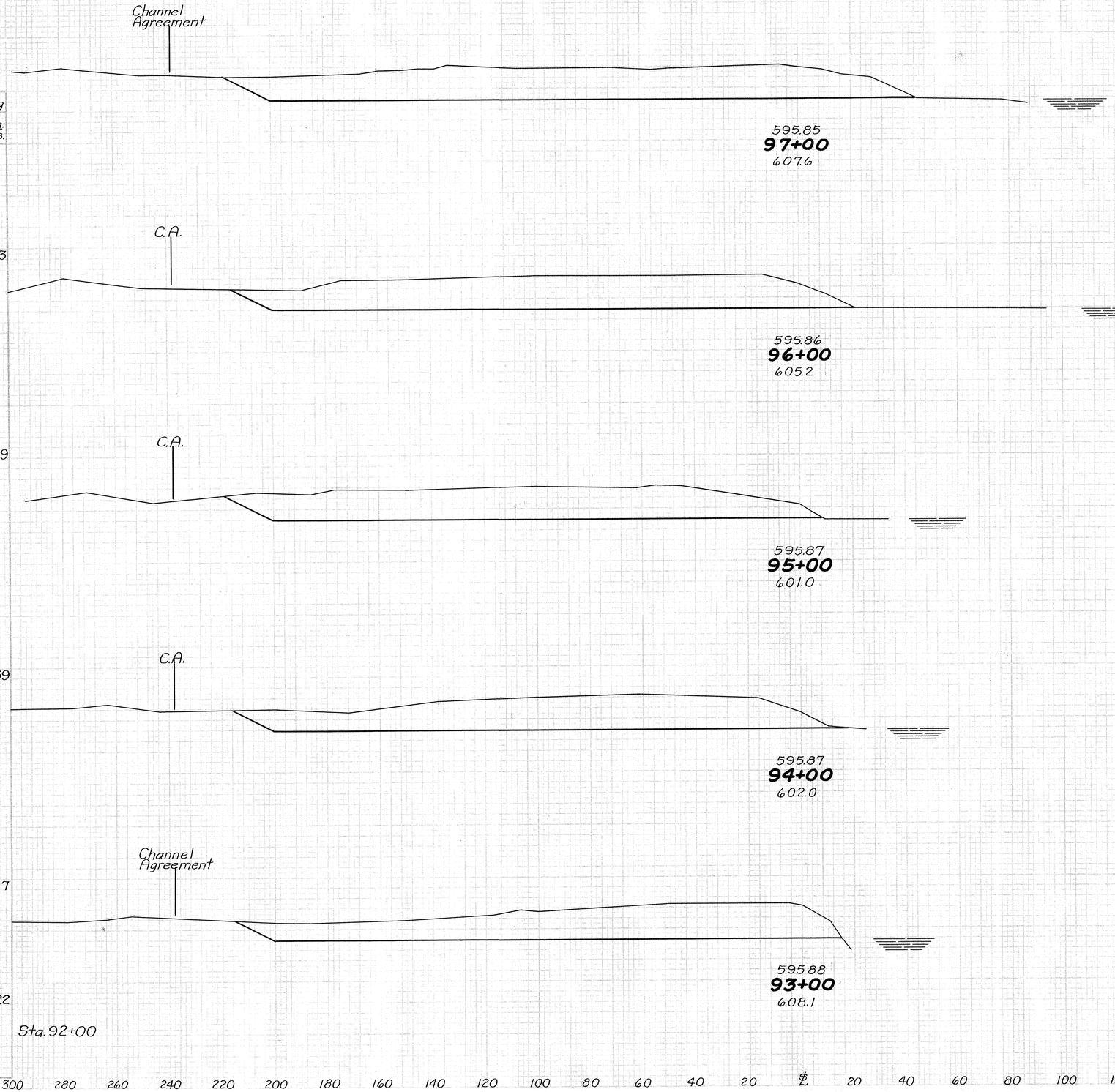
SCIOTO RIVER CHANNEL EXCAVATION
STA. 89+94.85 TO STA. 92+00

Revised 11-21-68

FED.ROD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674 (10)	

141
240

ROSS COUNTY
ROS-35-21.23



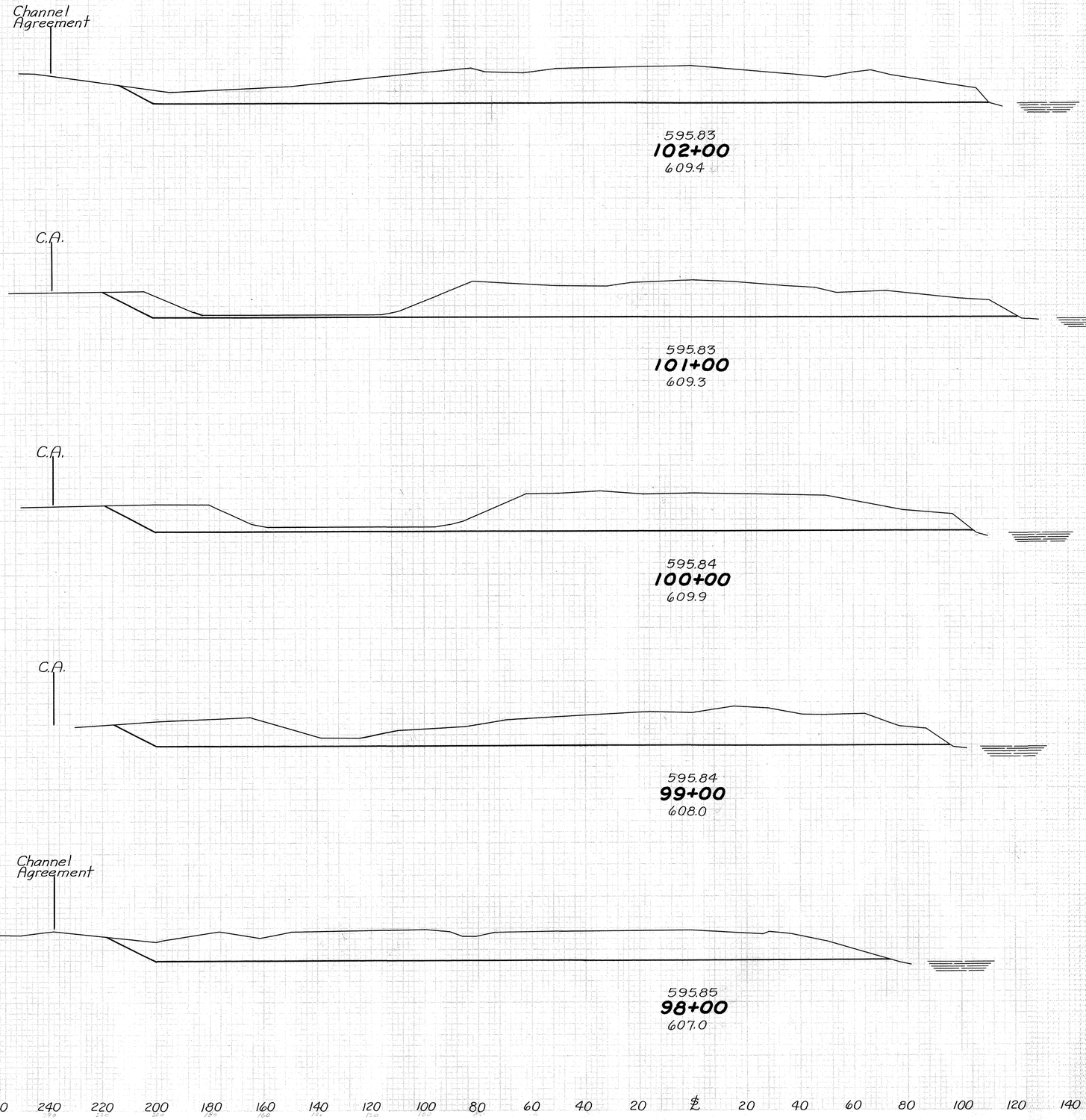
Seeding End Width	Seeding Sq. Yds.
22	
	233
20	
	239
23	
	239
20	
	217
19	
	222
21	

	End Area Cut	End Area Fill	Volume Cut	Volume Fill
	2764	0		
			9919	0
	2592	0		
			9215	0
	2384	0		
			8719	0
	2324	0		
			8652	0
	2348	0		
			7689	0
	1804	0		

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

142
240

ROSS COUNTY
ROS-35-21.23



Seeding End Width	Sq. Yds.
17	
	222
23	
	256
23	
	239
20	
	239
23	
	250
22	

End Area Cut	End Area Fill	Volume Cut	Volume Fill
3152	0		
		10733	0
2644	0		
		10141	0
2832	0		
		10770	0
2984	0		
		10807	0
2852	0		
		10400	0
2764	0		

(NORTH)

Sta. 97+00

SCIOTO RIVER CHANNEL EXCAVATION
STA. 98+00 TO STA. 102+00

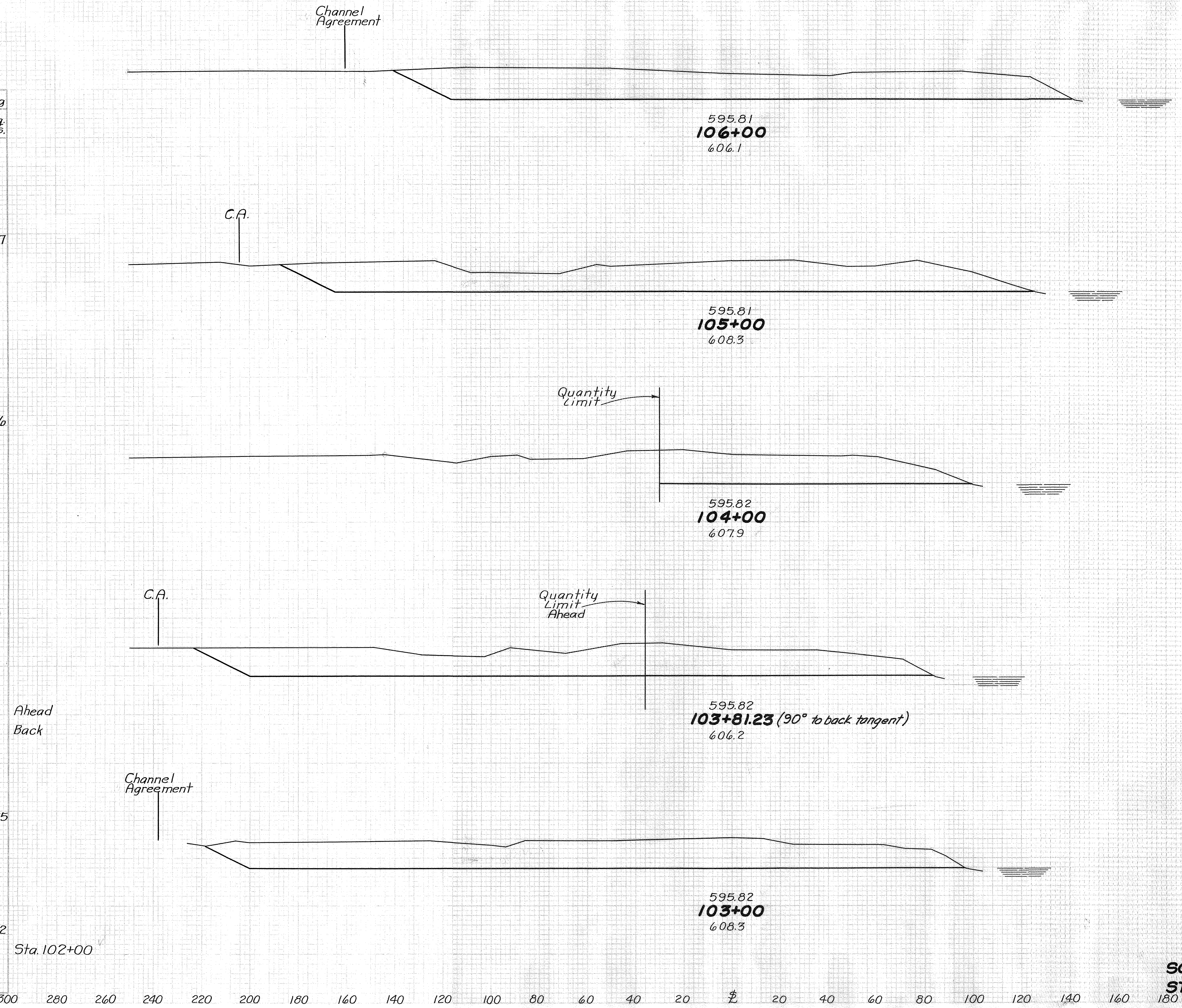
Fed. Rd. Division	State	Project	
2	OHIO	F-FG-674(10)	

143
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
29			3036	0		
	317				11615	0
28			3236	0		
	156				8548	0
0			1380	0		
	0				907	0
0		Ahead	1228	0		
29		Back	3164	0		
	235				9892	0
23			3412	0		
	222				12156	0
17		Sta. 102+00	3152	0		

See X-Section Layout Sheet No 13

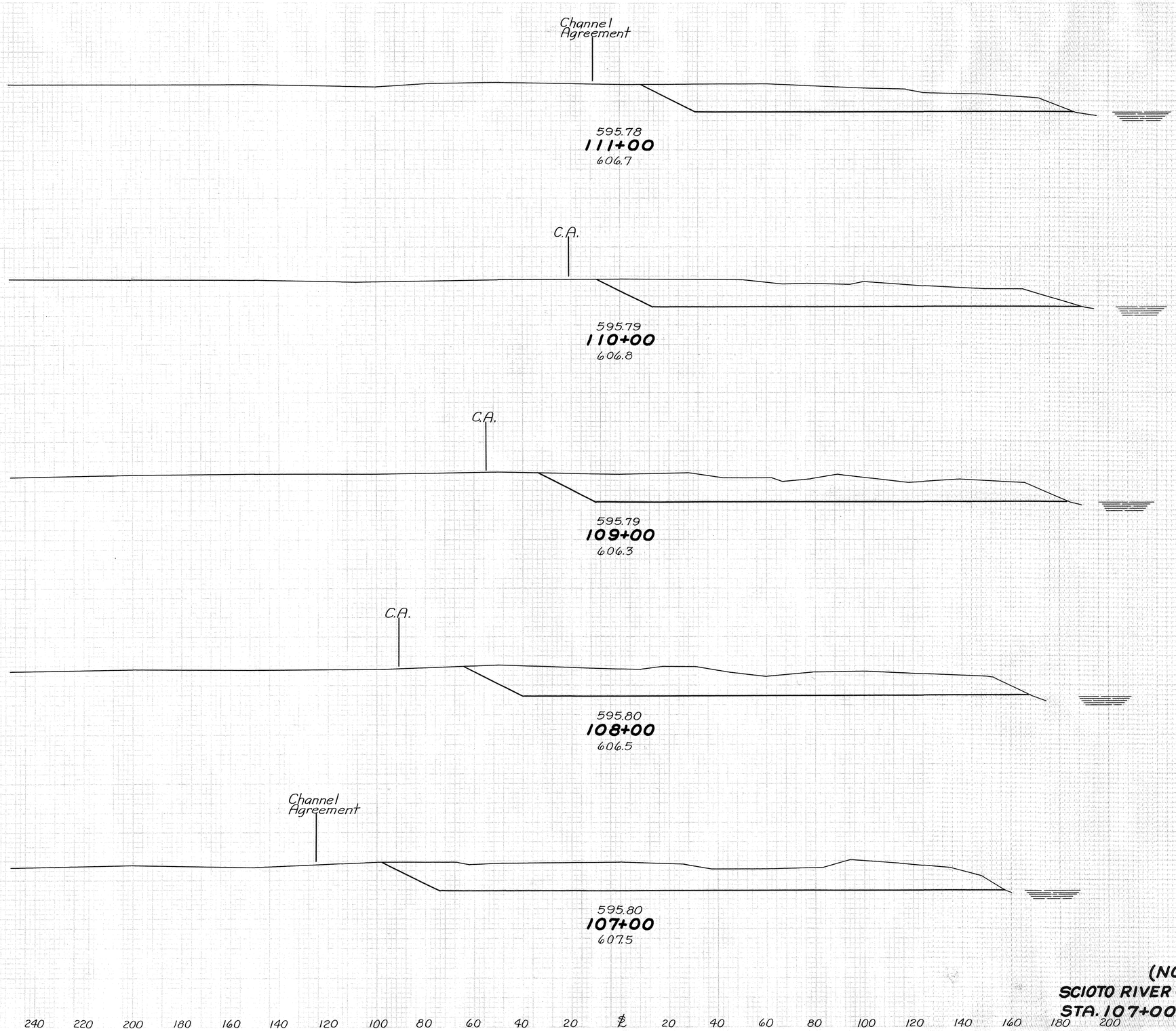


(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 103+00 TO STA. 106+00

FED. ROAD DIVISION	STATE	PROJECT	
5	OHIO	F-FG-674 (10)	

144
240

ROSS COUNTY
ROS-35-21.23



Seeding End Width	Sq. Yds.	End Area Cut	End Area Fill	Volume Cut	Volume Fill
27		1460	0		
	306			5719	0
28		1628	0		
	317			6600	0
29		1936	0		
	322			7689	0
29		2216	0		
	322			8874	0
29		2576	0		
	322			10393	0
29		3036	0		

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200

HIGHWAY DIVISION	STATE	PROJECT
9	OHIO	F-FG-674(10)

145
240

ROSS COUNTY
ROS-35-21.23

Channel Agreement

595.75
116+00
606.8

C.A.

595.76
115+00
605.9

C.A.

595.76
114+00
605.6

C.A.

595.77
113+00
606.7

Channel Agreement

595.77
112+00
607.5

Seeding End Width	Seeding Sq. Yds.	EndArea Cut	EndArea Fill	Volume Cut	Volume Fill
22		1040	0		
	250			4007	0
23		1124	0		
	261			4052	0
24		1064	0		
	272			4185	0
25		1196	0		
	289			4741	0
27		1364	0		
	300			5230	0
27	Sta. 111+00	Sta. 111+00		1460	0

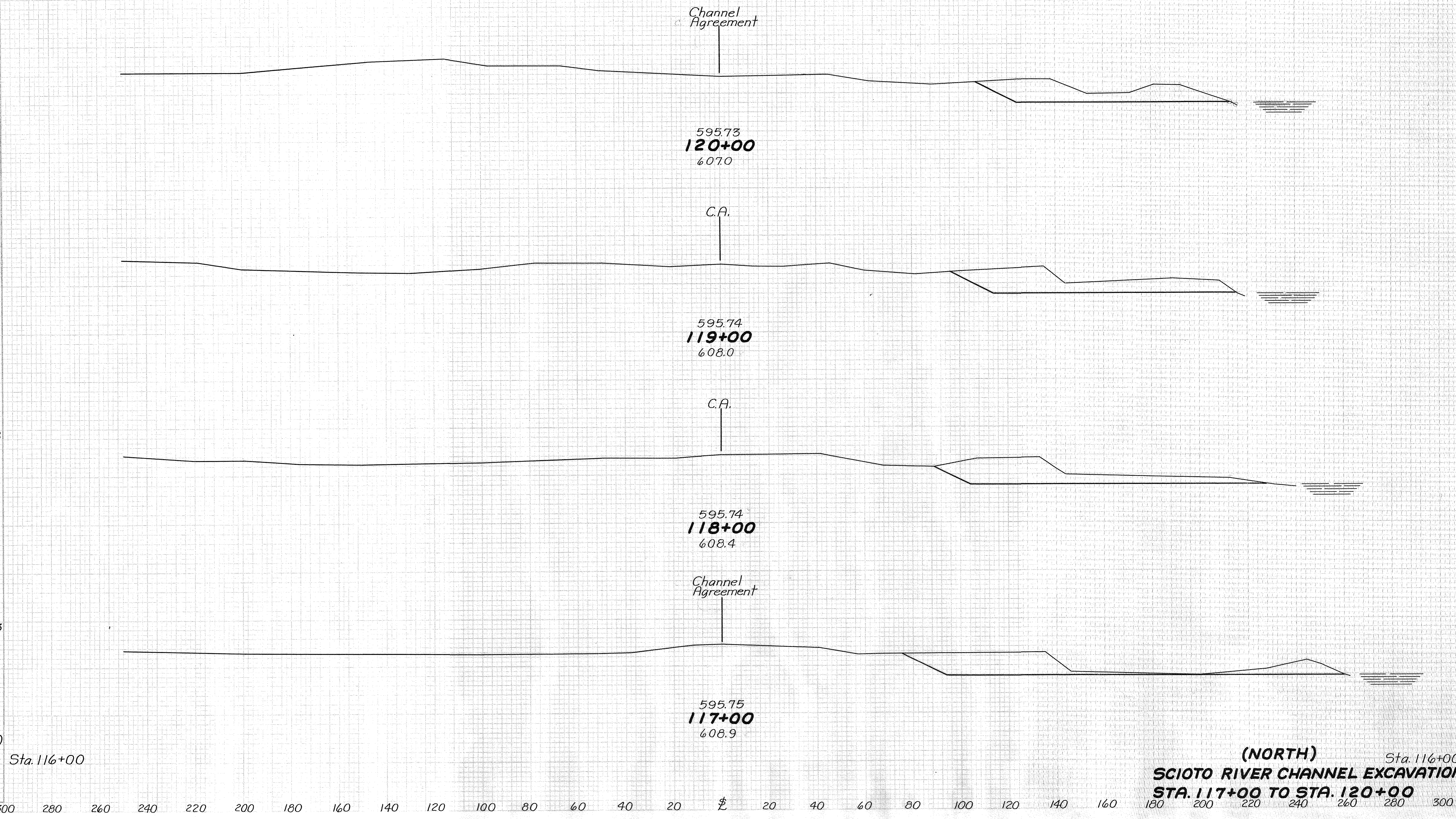
300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

(NORTH)

SCIOTO RIVER CHANNEL EXCAVATION
STA. 112+00 TO STA. 116+00

ROSS COUNTY
ROS-35-21.23

(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 117+00 TO STA. 120+00



Seeding

Station	End Width	Sq. Yds.
120+00	22	
		244
119+00	22	
		228
118+00	19	
		233
117+00	23	
		250
116+00	22	

Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
120+00	628	0		
			2578	0
119+00	764	0		
			2793	0
118+00	744	0		
			2778	0
117+00	756	0		
			3326	0
116+00	1040	0		

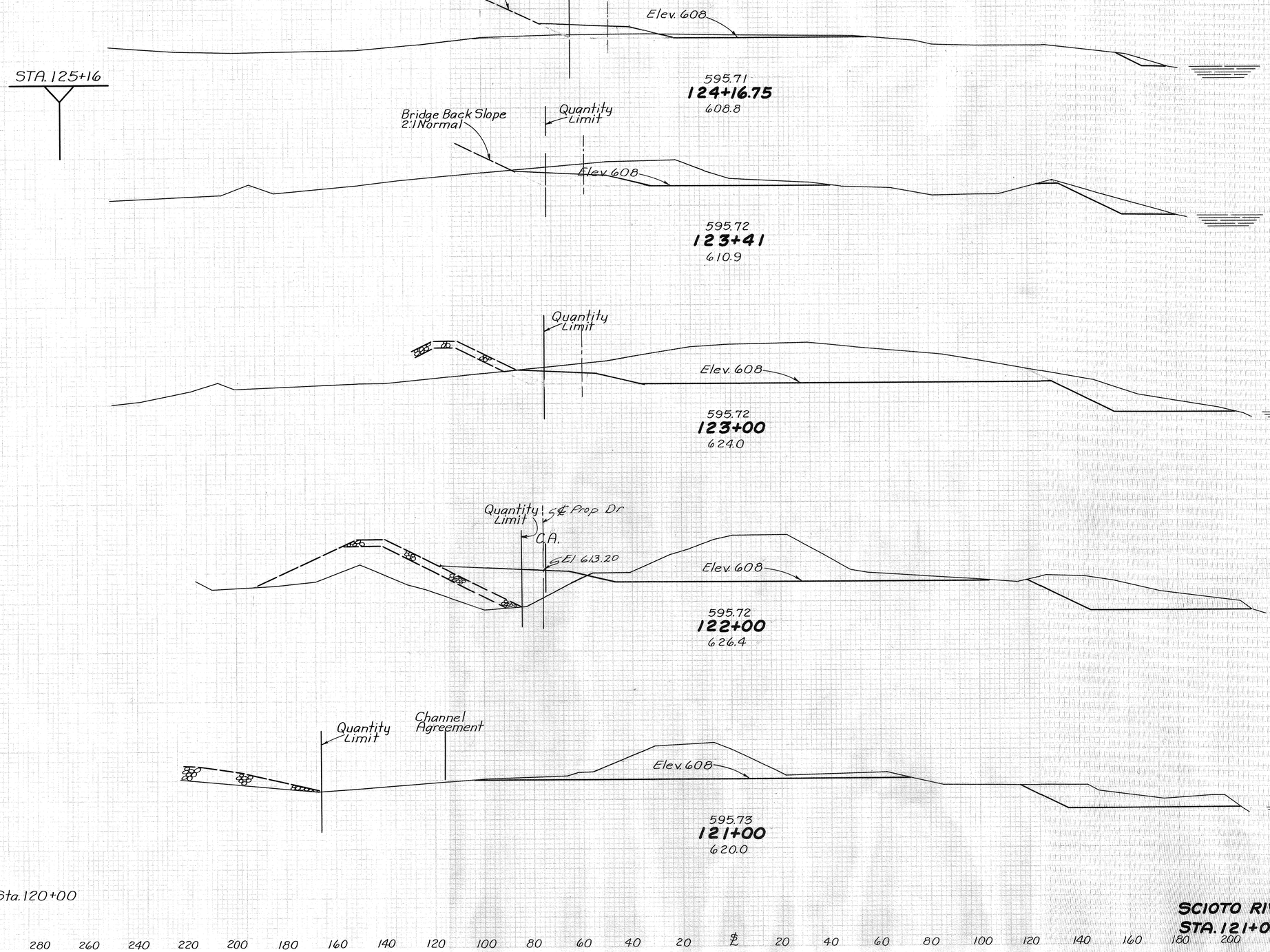
REGION DIVISION	DISTRICT	PROJECT	
12	09	F-FG-674 (10)	

147
240

ROSS COUNTY
ROS-35-21.23

END WORK
STA. 125+16

Seeding End Width	Seeding Sq. Yds.
0	
	77
14	
	189
31	
	141
31	
	344
31	
	300
23	
	250
22	



	End Area Cut	End Area Fill	Volume Cut	Volume Fill
STA. 125+16	0	0		
			353	0
	192	0		
			1543	0
	908	0		
			2870	0
	2872	0		
			9341	0
	2172	0		
			6741	0
	1468	0		
			3881	0
Sta. 120+00	628	0		

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

(NORTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 121+00 TO STA. 124+16.75

ROSS COUNTY
ROS-35-21.23

625.85
1+65.4
608.0

PROP. 36"x118' Class A-1 Pipe
For Details See Sheet Nº116 ④

625.85
0+66
614.0

625.85
0+12.5
610.0

0+0
611.0

Sta. 0+00 to Sta. 2+56.5
Seeding & Protecting 405 Sq. Yds.

Sta. 0+00 to Sta. 2+56.5
Excavation 0 Cu. Yds.
Embankment 4,181 Cu. Yds.

Section	Seeding End Width	Seeding Sq. Yds.
1+65.4 Ahead	0	
1+65.4 Back	35	
		331
0+66	25	
		74
0+12.5	0	
		0
0+0	0	

Section	End Area Cut	End Area Fill	Volume Cut	Volume Fill	Seeding End Width	Seeding Sq. Yds.
1+65.4 Ahead	0	590				
1+65.4 Back	0	684				
			0	1905		
0+66	0	351				
			0	643		
					0	
0+12.5	0	298				
						0
			0	85		
0+0 Ahead	0	69				
0+0 Back	0	0				
					0	
						0
					0	

Sta. 1+65.4

FOR PLAN VIEW OF PROPOSED
DUMPED ROCK LEVEE
SEE SHEET NO. 117

0.0 SECTION
2+56.5
609.0

625.85
2+20.5
608.0

Section	End Area Cut	End Area Fill	Volume Cut	Volume Fill
2+56.5	0	0		
			0	374
2+20.5	0	561		
			0	1174
Sta. 1+65.4	0	590		

ROCK LEVEE RT. STA. 1158+46.10
STA. 0+00 TO STA. 2+56.5

FED. RD. DIVISION 2
STATE OHIO
PROJECT F-FG-674(10)
149
240
ROSS COUNTY
ROS-35-21.23
P.K. in Tree
P.K. in Tree
P.I. Sta. 38+00.40
SCIOTO RIVER
CORPORATION LINE
Normal edge of Water
BEGIN WORK STA. 17+50
Harold R. Stanhope
Ex. Levee (To be removed)
℄ SCIOTO RIVER CHANNEL EXCAVATION
N.73° 31' 55" E.
Underbrush
City of Chillicothe
Channel Agreement Line
166.93' Rt. 19+07
NEW YORK COAL SALES CO.
PROPOSED LEVEE
Channel Agreement Line
Note: Material Removed from Existing Levee Shall be Used in the Proposed Levee. (See General Notes)
Proposed Channel Excavation
DAVON INC.
Wooded Area
Mae S. Roy
Carl Seymour
Conc. S.W. 2
J.L. Moriarty 1 Sty. Fr. Res.
Gravel Dr.
J. E. MORIARTY
P.I. Sta. 38+00.40
Δ=73° 33' 30" Rt.
N. 60° 11' 55" E.
Sta. 1168+72.92 U.S.R. 35 = Sta. 30+00 ℄ Channel Excavation
P.I. Sta. 27+95.00
Δ=13° 20' Lt.
Excavate to El. 608
Dc=8°
Wooded Area
Channel Agreement Line
Toe of Slope
1171+53.90
283.83
264.03
254.48
200
Proposed Dumped Rock
FOR DETAIL SEE SHEET No. 117
Ex. Levee to Remain in Place
Median U.S.R. 35
Underbrush
Willard and Nolan Seymour
Ex. Dirt Rd
BENCH MARK
110' Rt. Sta. 38+65
Spike in 18" Sycamore
Elev. 610.41
NEW YORK COAL SALES CO.
41+00
Channel Excavation ROS-35-22.82
END WORK STA. 45+00
El. 620.0
10'
2.5:1
2.5:1
Ex. Ground
SECTION A-A
El. 625.92
10'
2:1
2:1
3'
3'
Ex. Ground
SECTION B-B
F-674 (10)
Sta. 19+07 to 30+12.27
Excavation 4,946 C.Y.
Embankment 37,573 C.Y.
PROPOSED LEVEE
19+07
30+12.27
F-674 (10)
Sta. 17+50 to Sta. 45+00
Item E-3
Channel Excavation 475,482 Cu. Yds.
℄ U.S.R. 35
BEGIN WORK STA. 17+50
Profile of existing ground along ℄ for Channel Excavation
Profile of Proposed Channel Excavation
0.0%
-.025%
640
630
620
610
600
590
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.70
595.67
595.65
595.62
595.60
595.57
595.55
595.52
595.50
595.47
595.45
595.42
595.40
595.37
595.35
595.32
607.6
603.7
609.9
619.0
608.8
610.7
596.3
597.4
619.9
600.6
601.4
611.2
603.0
621.9
609.8
611.8
603.6
608.1
608.3
610.2
611.8
611.4
612.5
612.00
610.6
609.1
608.7
595.32
(SOUTH)
SCIOTO RIVER CHANNEL EXCAVATION
STA. 17+00 TO STA. 45+00
20
25
30
35
40
45

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

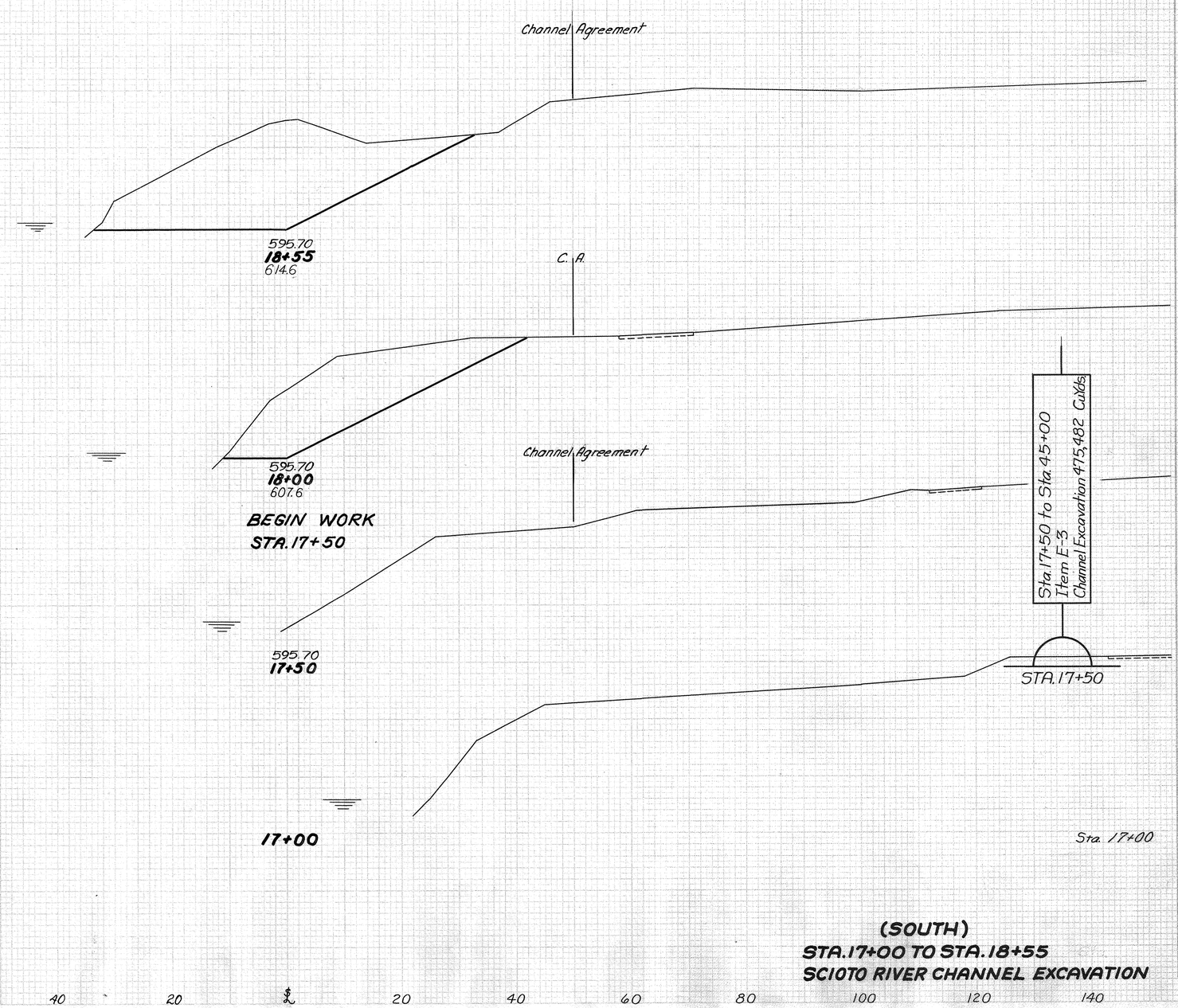
150
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width	Yds.
39	
269	
49	
136	
0	

Sta. 17+50 to Sta. 45+00
Item L-9
Seeding & Protecting 7,559 Sq Yds
Seeding 2:1 Slopes Only
THIS SEEDING SHALL BE NON-PERFORMED

STA. 17+50



End Area Cut	End Area Fill	Volume Cut	Volume Fill
650	0		
		1091	0
421	0		
		390	0
0	0		
Sta. 17+00	0	0	

(SOUTH)
STA. 17+00 TO STA. 18+55
SCIOTO RIVER CHANNEL EXCAVATION

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

PRO. NO. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

151
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
29		595.70 **22+50** 610.4	3405	0		
	286				10594	0
27		595.70 **21+58** 609.1	2813	0		
	200				5462	0
35		595.70 **21+00** 619.0	2272	0		
	500				6257	0
55		595.70 **20+00** 609.9 Channel Agreement ℄	1107	0		
	483				2900	0
32		595.70 **19+00** 603.7	459	0		
	178				924	0
39	Sta. 18+55		650	0		

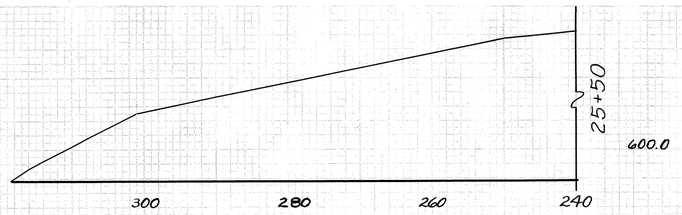
240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40

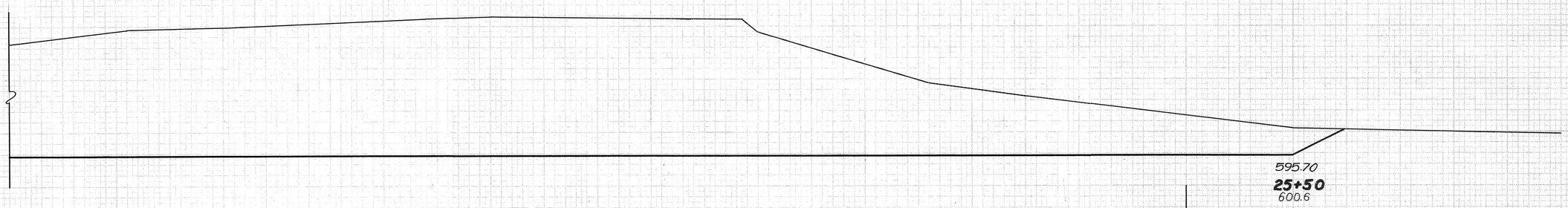
(SOUTH)
STA. 19+00 TO STA. 22+50 Sta. 18+55
SCIOTO RIVER CHANNEL EXCAVATION

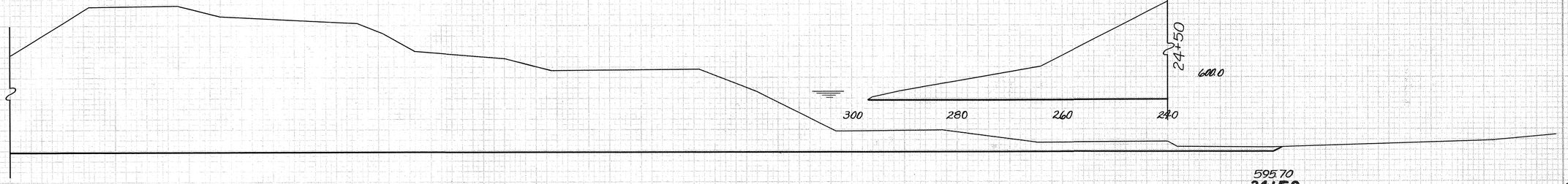
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

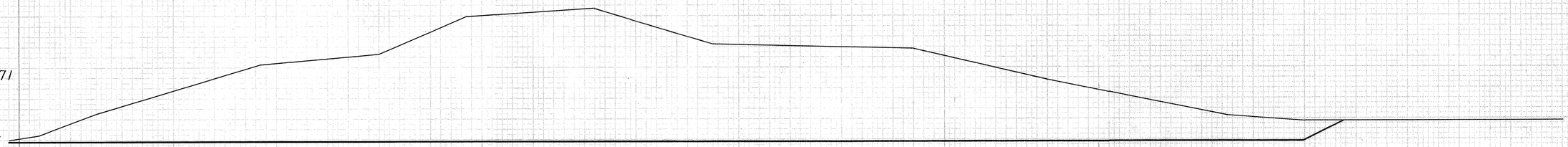
152
240

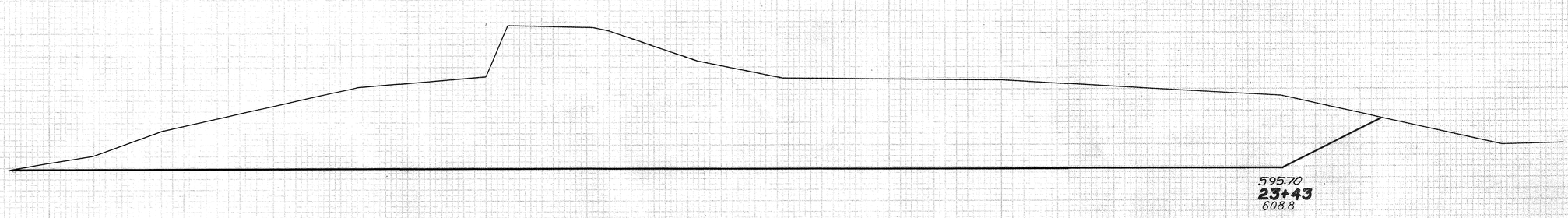
ROSS COUNTY
ROS-35-21.23











Seeding End Width	Seeding Sq. Yds.	Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
		25+50				
13	94	25+00	5782	0	17,707	0
4	71	24+50	3780	0	11,826	0
11	40	24+00	3733	0	2932	0
22	264	23+50	3464	0	11830	0
29		23+43	3405	0		
		Sta. 22+50				

240 220 200 180 160 140 120 100 80 60 40 20 ℄ 20 40

(SOUTH)

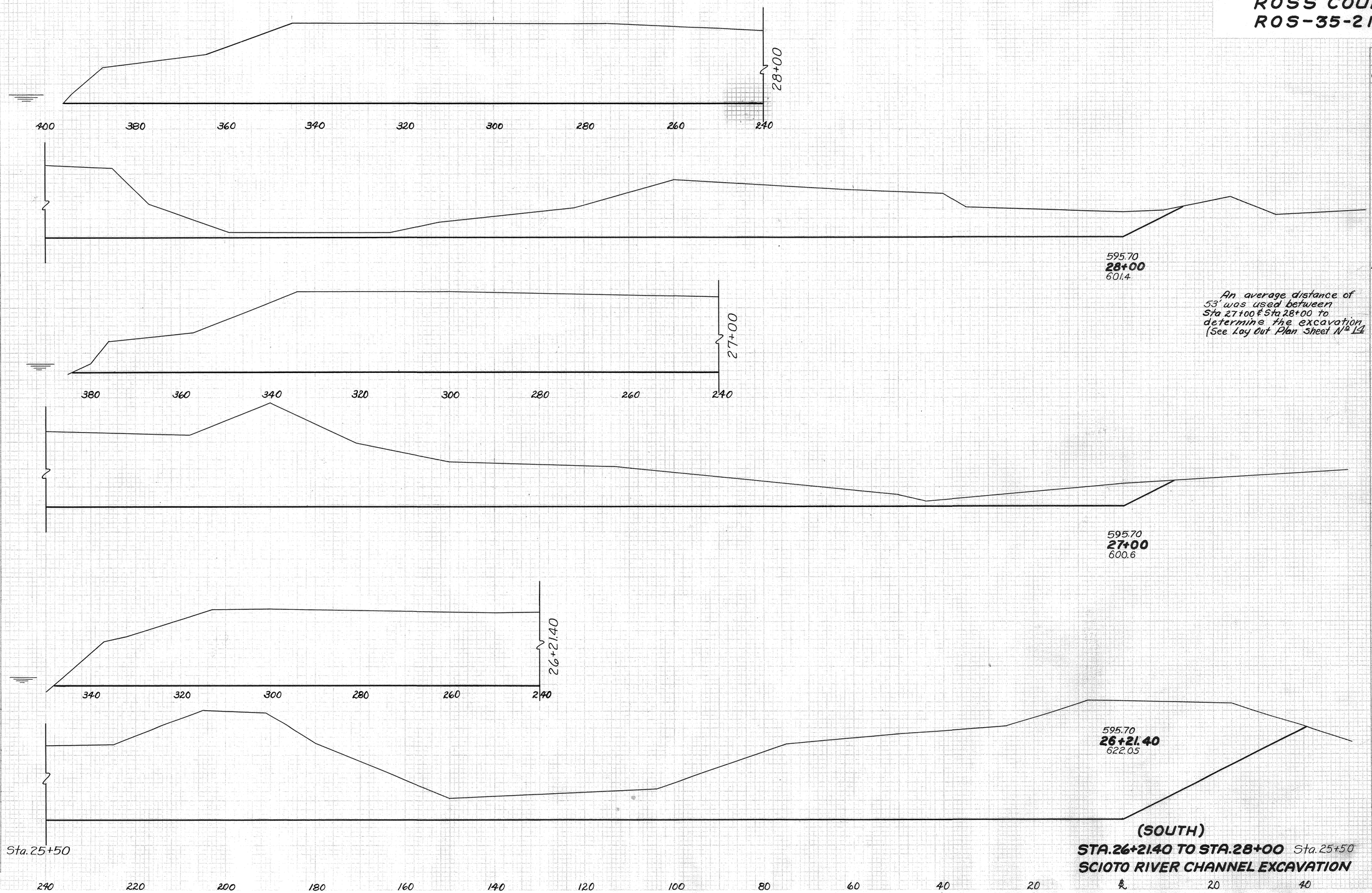
STA. 23+43 TO STA. 25+50 Sta. 22+50

SCIOTO RIVER CHANNEL EXCAVATION

FED. HWY. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

153
240

ROSS COUNTY
ROS-35-21.23



End Area		Volume	
Cut	Fill	Cut	Fill
4220	0		
		8523	0
4969	0		
		15024	0
5858	0		
		15391	0
5782	0		

An average distance of 53' was used between Sta 27+00 & Sta 28+00 to determine the excavation (See Lay Out Plan Sheet N° 14

(SOUTH)
STA. 26+21.40 TO STA. 28+00 Sta. 25+50
SCIOTO RIVER CHANNEL EXCAVATION

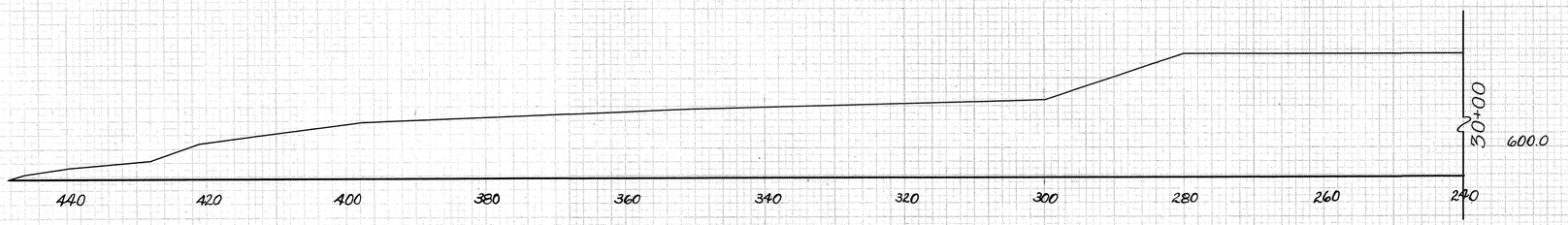
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

154
240

ROSS COUNTY
ROS-35-21.23

Seeding	
End Width	Sq. Yds.

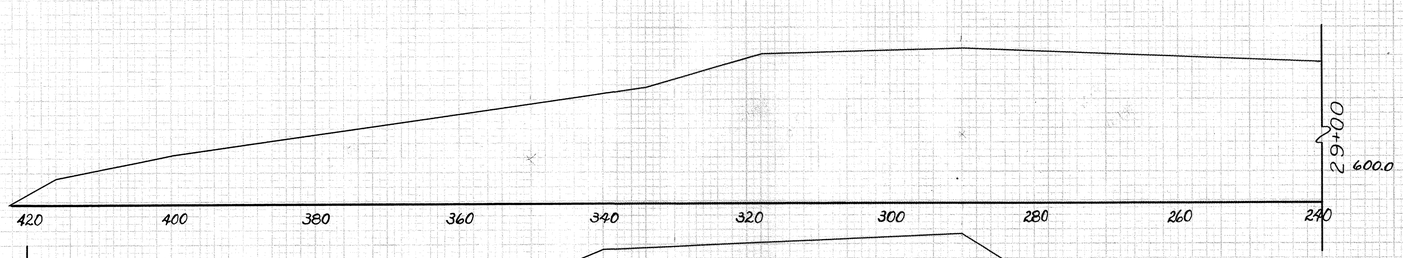
End Area		Volume	
Cut	Fill	Cut	Fill



13

595.70
30+00
603.0

6315 0



189

24274 0

21

595.70
29+00
611.2

6793 0

211

29394 0

17 Sta. 28+00

4220 0

(SOUTH)
STA. 29+00 TO STA. 30+00 Sta. 28+00
SCIOTO RIVER CHANNEL EXCAVATION

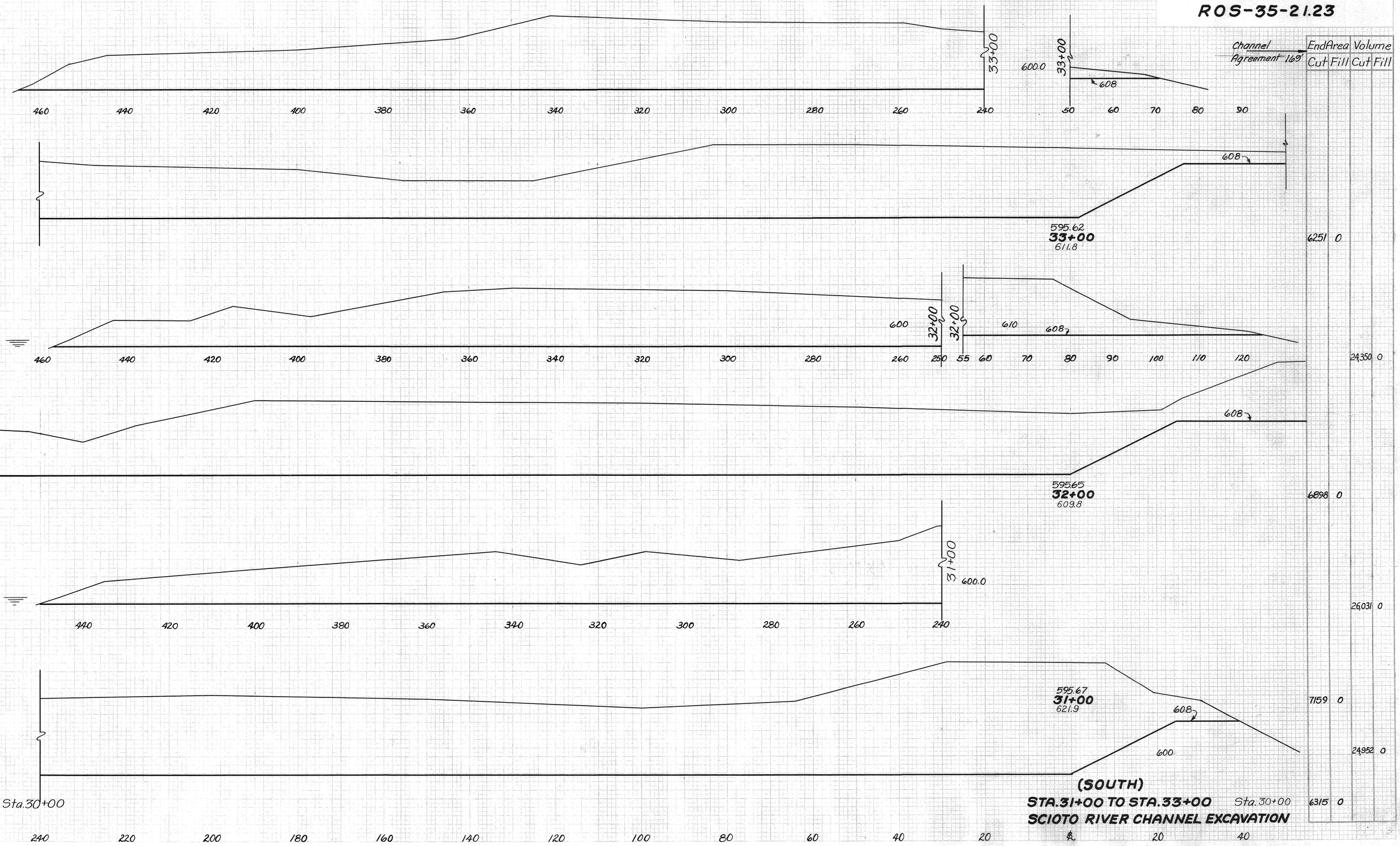
240 220 200 180 160 190 120 100 80 60 40 20 ℄ 20 40

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

155
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width	Yds.
30	333
30	328
29	233
13	



Channel Agreement 169'	End Area Cut	End Area Fill	Volume Cut	Volume Fill
	6251	0		
			24350	0
	6898	0		
			26031	0
	7159	0		
			24952	0
	6315	0		

(SOUTH)
STA.31+00 TO STA.33+00
SCIOTO RIVER CHANNEL EXCAVATION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

156
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width Yds.			End Area Cut	End Area Fill	Volume Cut	Volume Fill
	36+00	600.0				
25	595.55 36+00 608.3	Channel Agreement 173'			6165	0
256	35+00	600.0			21,065	0
21	595.57 35+00 608.1	Channel Agreement 165'			5210	0
283	34+00	600.0			20,465	0
30	595.60 34+00 603.6	608 Channel Agreement 608 600			5841	0
333					22,333	0
30					6251	0

Sta. 33+00 — 180 160 140 120 100 80 60 90 20 ℄ 20 40 60 80 100 110 120 130 140 (SOUTH) 160 170 180 190 — Sta. 33+00

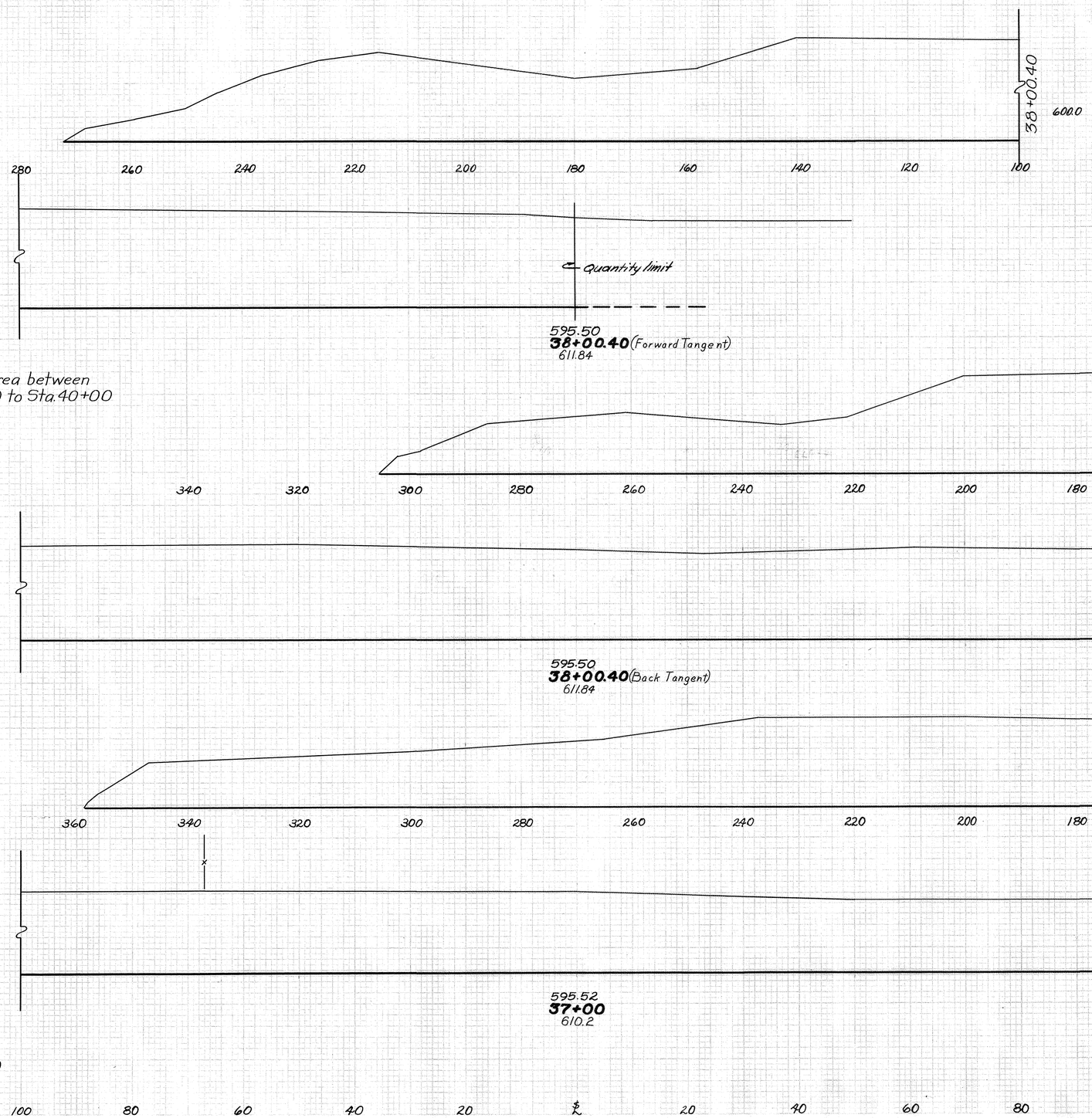
STA. 34+00 TO STA. 36+00
SCIOTO RIVER CHANNEL EXCAVATION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

157
240

ROSS COUNTY
ROS-35-21.23

Seeding End Sq. Width	Yds.
0	
222	Add for Area between Sta. 37+00 to Sta. 40+00
0	
0	
0	Ahead
29	Back
300	
25	Sta. 36+00



an average distance of 169' was used between Sta. 38+00.40 (back-tangent) & Sta. 38+00.40 (Forward tangent) to determine the excavation (See Layout Plan Sheet N° 14

End Area Cut	End Area Fill	Volume Cut	Volume Fill
		4013	0
		31700	0
		6116	0
		23746	0
Sta 37+00 Ahead		6656	0
Back		7021	0
		24419	0
Sta. 36+00		6165	0

(SOUTH)
STA. 37+00 TO STA. 38+00.40 SCIOTO RIVER CHANNEL EXCAVATION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

158
240

ROSS COUNTY
ROS-35-21.23

Seeding End Width	Seeding Sq. Yds.		End Area Cut	End Area Fill	Volume Cut	Volume Fill
		41+00 600.0				
		595.42 41+00 612.0				
29					5549	0
		40+00 600.0				
344						
		C. A.			21,635	0
		595.45 40+00 612.5				
33					6134	0
0	Ahead					
	Back	39+00 600.0				
					23244	0
0		Quantity Limit				
		Channel Agreement 262'				
		595.47 39+00 611.4				
0					6418	0
0	0					
					19239	0
0	Sta. 38+00.40				Sta. 38+00.40	4013 0

300 280 260 240 220 200 180 160 140 — Channel Agreement — 140 160 180 200 220 240 260 280 300

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

(SOUTH)
STA. 39+00 TO STA. 41+00
SCIOTO RIVER CHANNEL EXCAVATION

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-FG-674(10)

159
240

ROSS COUNTY
ROS-35-21.23

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
0		0	0		
23					
	289			2022	0
29		1092	0		
	339			6115	0
32		2210	0		
	350			11202	0
31		3839	0		
	333			17385	0
29		5549	0		

STA. 45+00

Excavated under ROS-35-22.82

END WORK 45+00

45+00
595.32

STA. 45+00

Channel Agreement

Excavated under ROS-35-22.82

595.35
44+00
608.7

C. A.

Excavated under ROS-35-22.82

595.37
43+00
609.1

Channel Agreement 70'

Excavated under ROS-35-22.82

595.4
42+00
610.60

Sta. 41+00

(SOUTH)

Sta. 41+00

STA. 42+00 TO STA. 45+00
SCIOTO RIVER CHANNEL EXCAVATION

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

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

160
240

ROSS COUNTY
ROS-35-21.23

SEEDING

END WIDTH	SQ. YDS.
116	
1250	
109	
636	
14	
0	

Elev. 620.0

El. 608.0

21+00
619.0

Channel Agreement

Elev. 620.0

El. 608.0

Sta. 19+07 to Sta. 30+12.27 Sq.Yd.
1.9 Seeding & Protecting = 10,920

20+00
609.9

Sta. 19+07 to Sta. 30+12.27
Excavation = 4,946 Cu.Yds.
Embankment = 37,573 Cu.Yds.

Channel Agreement

BEGIN LEVEE
STA. 19+07

Sta. 19+07

Sta. 19+07

19+00
603.7

18+55
614.6

18+00 (℄ of Scioto River Channel Excavation)
607.6

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	906		
		0	3141
0	790		
		0	1361
0	0		

PROPOSED LEVEE
STA. 18+00 TO STA. 21+00

℄ 20 40 60 80 100 120 140 160 180 200 220 240 260 280

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-FG-674(10)	

161
240

ROSS COUNTY
ROS-35-21.23

SEEDING

END WIDTH	SQ. YDS.
125	1294
108	1266
105	1064
101	1124
119	757
116	

25+50
600.6

24+50
596.5

23+43
608.8

22+50
610.4

21+58 (℄ of Scioto River Channel Excavation)
609.1

Sta. 21+00

El. 620.0

Channel Agreement 302'

Channel Agreement 300'

Channel Agreement 299'

Channel Agreement 292'

Channel Agreement 290'

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	1296		
		0	4474
0	1120		
		0	4268
0	1034		
		0	3746
0	1141		
		0	3980
0	1195		
		0	2257
0	906		

Sta. 21+00

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

PROPOSED LEVEE
STA. 21+58 TO STA. 25+50

FED. RD. DIVISION 2
STATE OHIO
PROJECT F-FG-674(10)
162
240
ROSS COUNTY
ROS-35-21.23
END AREA CUT FILL
VOLUME CUT FILL
Sta. 30+12.27
STA. 30+12.27 0.0 Ahead
Sta. 30+12.27
30+00
El. 610.0
El. 625.92
Ahead 30+12.27 Back
0 0
0 951
0 432
Prop. Dumped Rock Channel Protection
30+00
603.0
0 951
El. 625.92
Channel Agreement 365'
29+00
El. 610.0
2:1
0 2939
29+00
611.2
Channel Agreement 330'
28+00
El. 610.0
El. 620.0
0 636
Ahead Sta. 28+12.27
Back
6 2098
28+00
601.4
3 497
El. 620.0
Channel Agreement 308'
2.5:1
Excavate to Elev. 608.0
3316 3206
An Average Distance of 160' was used between Sta 27+00 and 28+00 to determine Earthwork.
27+00
600.6
1116 585
El. 620.0
Channel Agreement 305'
1624 2479
El. 608.0
0 1118
0 3192
26+21.40 (℄ Scioto River Channel Excavation)
622.05
Sta. 25+50
0 1296
Sta. 25+50
PROPOSED LEVEE
STA. 26+21.40 TO STA. 30+00
0 40 55 40 383 29 283 29 78 106 78 894 83 860 114 948 125
280 300 320
20 40 60 80 100 120 140 160 180 200 220 240 260 280

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

163/240

ROSS COUNTY
ROS-35-21.23

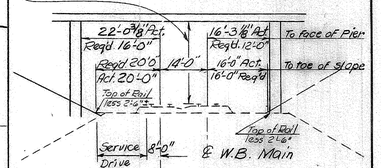
PROPOSED BRIDGE DATA

TYPE: Continuous Concrete Slab with Concrete Substructure Separate Structures.
SPANS: 44'-0" – 55'-0" – 44'-0"
ROADWAY: 40'-0" f/f Parapet Walls.
LOAD FREQUENCY: CF-400 (57)
SKEW: 1°-00' L.F. Left Bridge
4°-00' R.F. Right Bridge
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLABS: AS-1-54, 25'-0" Long.
RAILING: Aluminum Rail and Supports and Concrete Parapets.
ALIGNMENT: Tangent.

FOUNDATION SOUNDINGS

Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at this site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State does not guarantee the accuracy thereof.

Required Clearance = 23'-0"
Actual Critical Clearance-Point (1) = 23'-1⅛"
Actual Critical Clearance-Point (2) = 23'-1½"



CLEARANCE DIAGRAM
Normal to N. & W. Railway

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SITE PLAN

BRIDGE NO. ROS-35-2129 L & R
U.S. 35 OVER N. & W. RAILWAY
ROSS COUNTY U.S.R. 35
STA 1123+87.69 2 To STA. 1125+32.19 E
Sta. 1123+88.22 L To STA. 1125+32.72 L

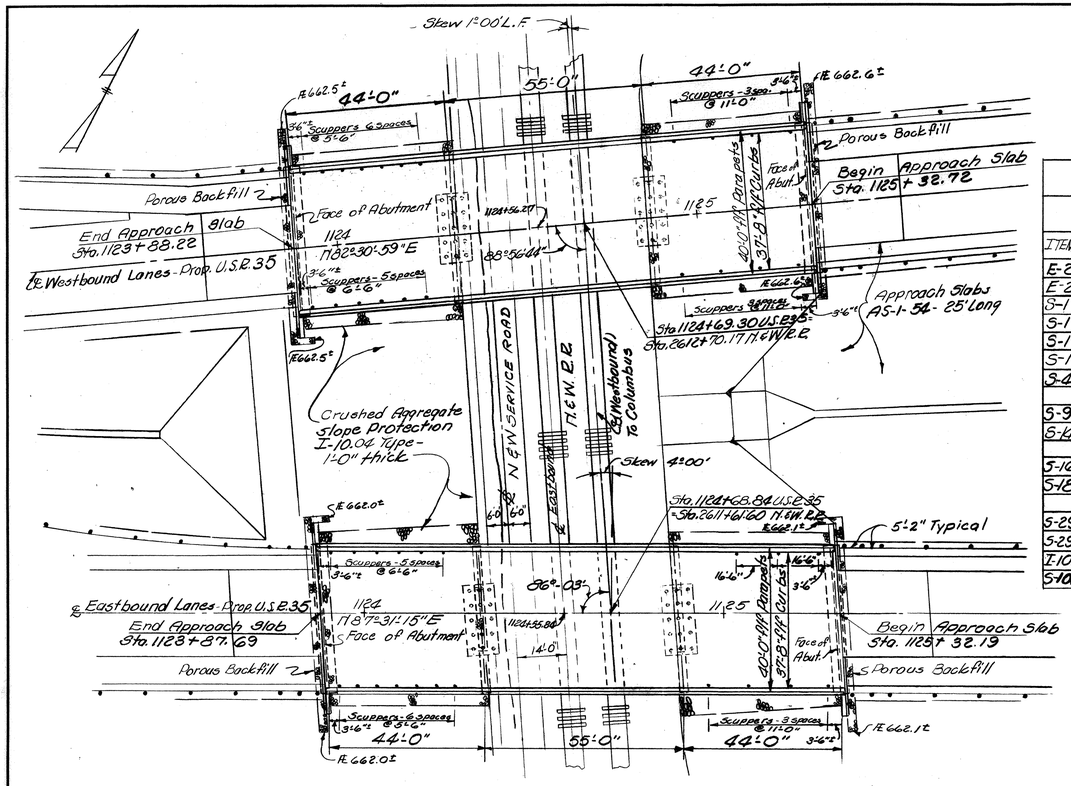
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FHS		LLF	D.S.	WC	3/18/63	

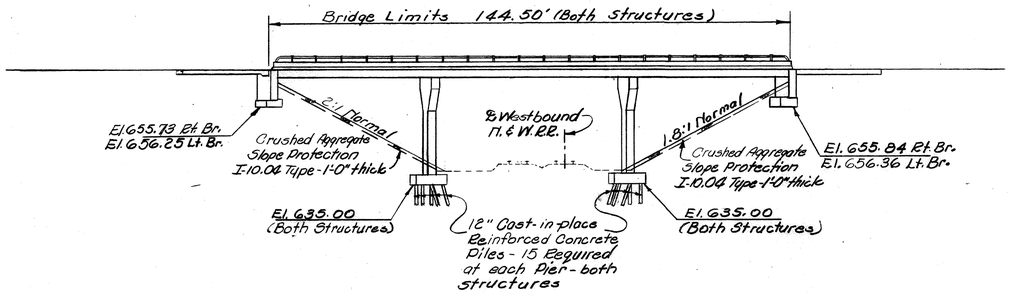
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

104
240

ROSS COUNTY
ROS-35-21.23



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	RIGHT BRIDGE ABUTS.	RIGHT BRIDGE PIERS	RIGHT BRIDGE SUPER.	RIGHT BRIDGE GENERAL	RIGHT BRIDGE AS BUILT	LEFT BRIDGE ABUTS.	LEFT BRIDGE PIERS	LEFT BRIDGE SUPER.	LEFT BRIDGE GENERAL	LEFT BRIDGE AS BUILT
E-2	567	Cu. Yds.	Unclassified Excavation	180	104				179	104			
E-2	Lump Sum	Lump	Cofferdams, cribs and sheeting		Lump					Lump			
S-1	224	Cu. Yds.	Class "C" Concrete, Piers above Footings		111					113			
S-1	110	Cu. Yds.	Class "E" Concrete, Abutments above Footings	55					55				
S-1	138	Cu. Yds.	Class "E" Concrete, Footings	31	38				31	38			
S-1	964	Cu. Yds.	Class "C" Concrete, Superstructure			482					482		
S-4	267,970	Pounds	Reinforcing Steel	3506	13,586	106,893			3506	13,586	106,893		
S-9	22	Sq. Ft.	1/2" Preformed Expansion Joint Filler	11					11				
S-11	575.34	Lin. Ft.	Railing, Aluminum Rail and Supports and Concrete Parapet			287.67					287.67		
S-16	Lump Sum	Lump	First Test Pile *		Lump								
S-18	3,000	Lin. Ft.	12" Cast-in-place, Reinforced Concrete Piles		1,500					1,500			
S-29	41	Each	Scuppers, 4" ø cast or wrought iron pipe			20					21		
S-29	36	Cu. Yds.	Porous Backfill	18					18				
I-10	1122	Sq. Yds.	Crushed Aggregate Slope Protection	561					561				
S-101	964	Each	Water Reducing, Set Retarding Admixture			482					482		

* FIRST TEST PILE: Payment will be made for only one First Test Pile. It may be driven for either Right Bridge or Left Bridge.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 revised 7-5-62 and AR-1-57 revised 4-2-62, and Supplemental Specification 5101 dated 7-12-62.

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

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 2 tons per sq. ft.

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

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

EMBANKMENT PROCEDURE: See Note on Sheet 15.

CONSTRUCTION CLEARANCE of 20 ft. vertically above the top of the railroad rails and 8 ft. horizontally from the center of tracks shall be maintained at all times.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

RAILROAD AERIAL LINES will be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

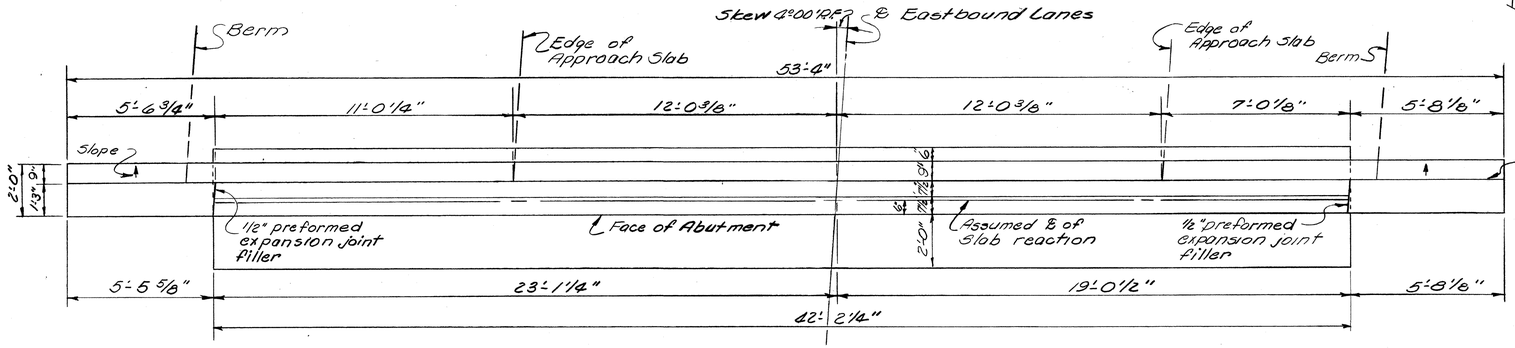
GENERAL PLAN AND ELEVATION
EST. QUANTITIES AND GEN. NOTES
BRIDGE NO ROS-35-2129 L & R.
U.S.R. 35 over N. & W. RAILWAY
ROSS COUNTY U.S.R. 35
STA. 1123+87.69 R TO STA. 1125+32.19 R
STA. 1123+87.69 L TO STA. 1125+32.72 L

SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	EER	PJM		D.S.	WK	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

165/240

ROSS COUNTY
ROS-35-21.23

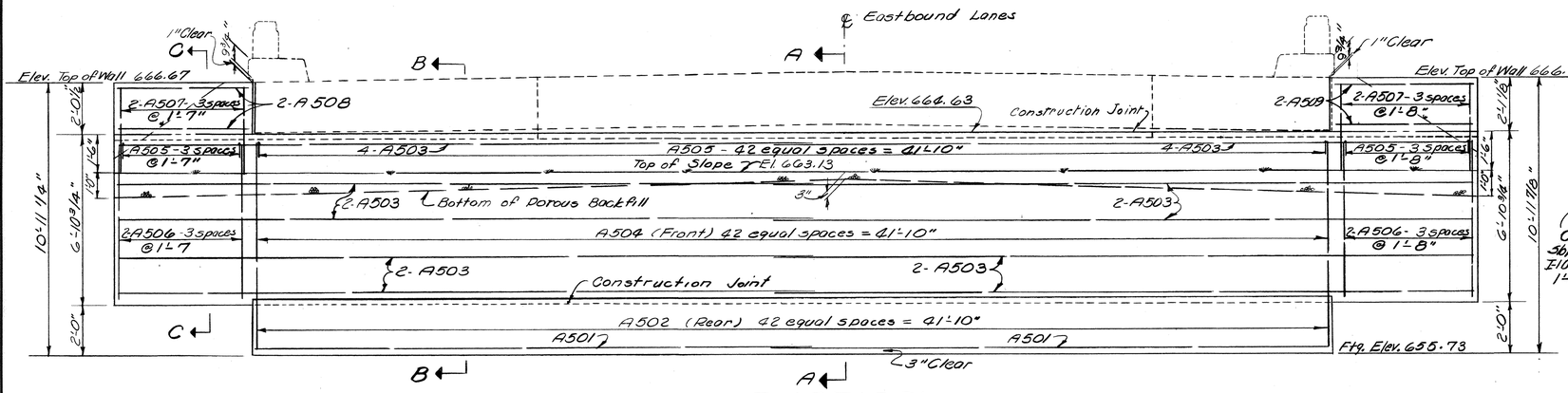


PLAN
REAR ABUTMENT - RIGHT BRIDGE

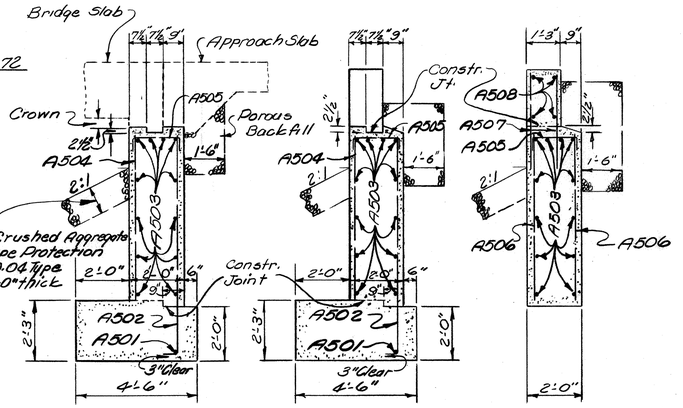
NOTES

CONCRETE shall be Class "E"

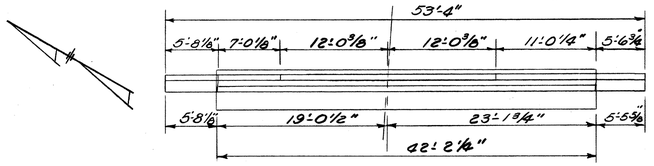
POROUS BACKFILL shall extend upward to the approach slab, paved berms and surface of the earth shoulders and outward to the surface of the embankment slopes. Excavation therefor in excess of that required for construction of the abutment shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.



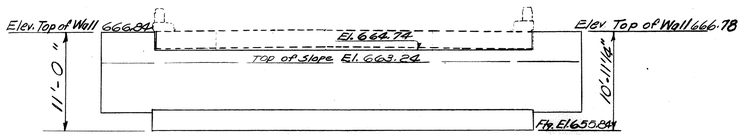
ELEVATION
REAR ABUTMENT RIGHT BRIDGE



SECTION A-A
SECTION B-B
SECTION C-C



PLAN



ELEVATION
FORWARD ABUTMENT RIGHT BRIDGE

Note:
All details and reinforcing steel not shown for the Forward Abutment - Right Bridge are opposite hand to Rear Abutment - Right Bridge

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS
RIGHT BRIDGE

BRIDGE NO. ROS-35-2129 L&R
U.S. 35 over N. & W. RAILWAY
ROSS COUNTY — U.S.R. 35
STA. 1123+87.69 R TO STA. 1125+32.19 R

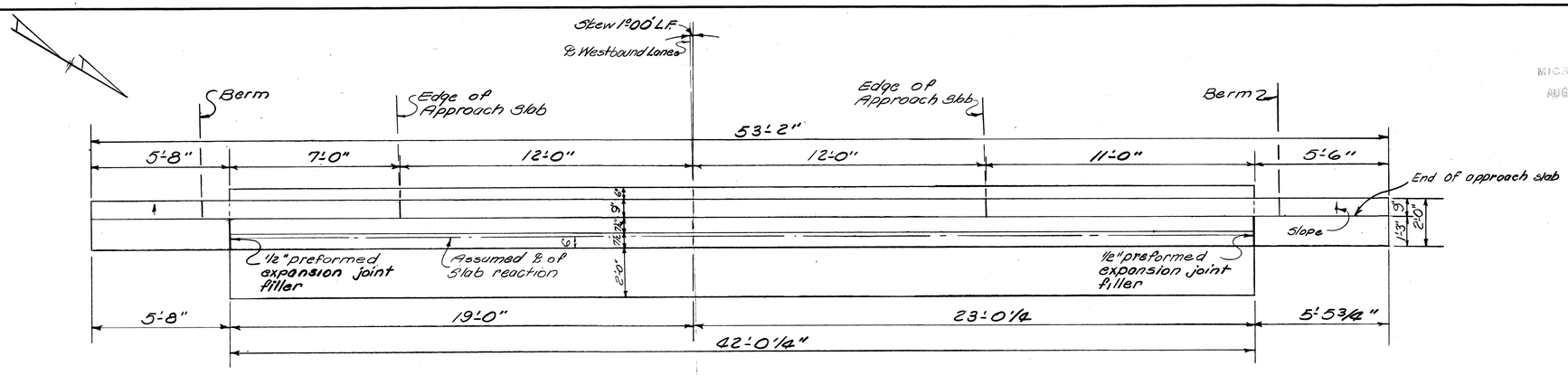
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.R.	E.E.R. D.J.M.		D.S.	[illegible]	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

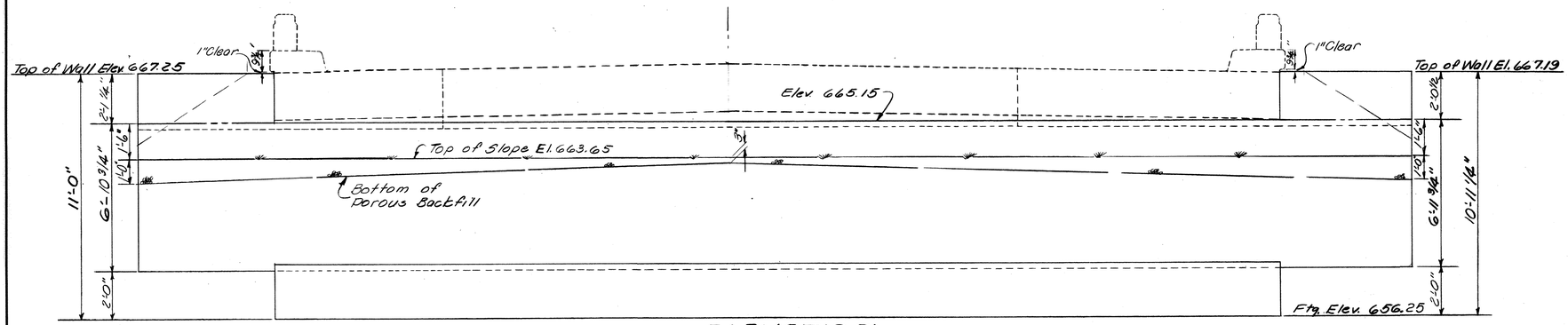
166
240

ROSS COUNTY
ROS-35-21.23

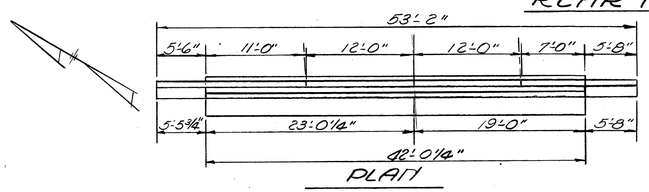


PLAN
REAR ABUTMENT-LEFT BRIDGE

Note:
All details and reinforcing steel not shown for Rear Abutment-Left Bridge are opposite hand to Rear Abutment-Right Bridge

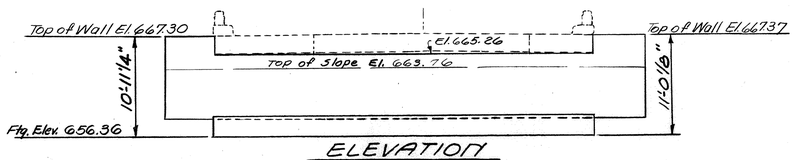


ELEVATION
REAR ABUTMENT-LEFT BRIDGE



PLAN

Note:
All details and reinforcing steel not shown for Forward Abutment-Left Bridge are identical to Rear Abutment-Right Bridge



ELEVATION

FORWARD ABUTMENT-LEFT BRIDGE

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS LEFT BRIDGE

BRIDGE NO. ROS-35-21.23 L & R
U.S. 35 over N. & W. RAILWAY
ROSS COUNTY — U.S. RT. 35
STA. 1123+88.22 L TO STA. 1125+32.72 L

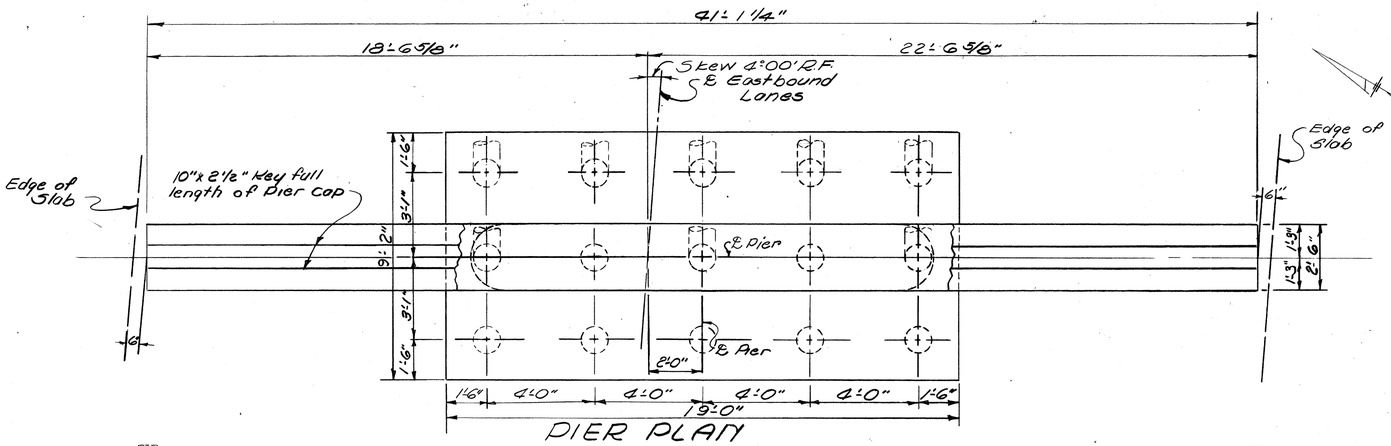
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.P.	E.E.R. D.J.M.		D.S.	W.W.	3/18/63	

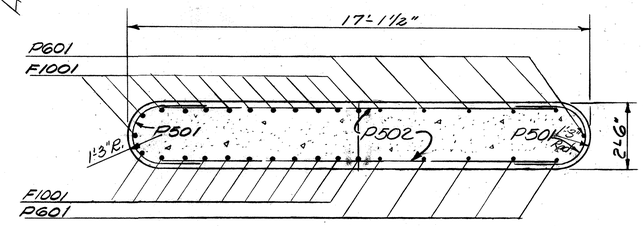
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

167
240

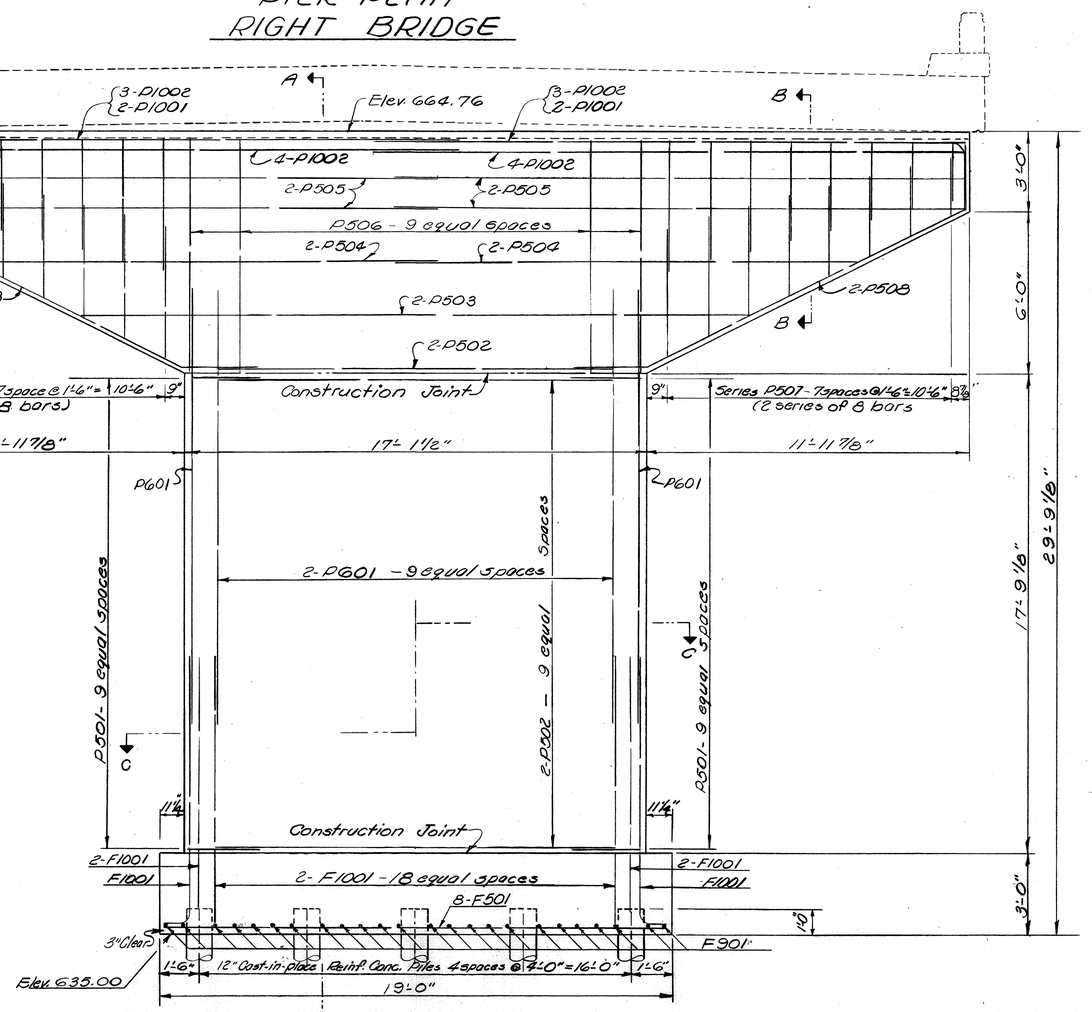
ROSS COUNTY
ROS-35-21.23



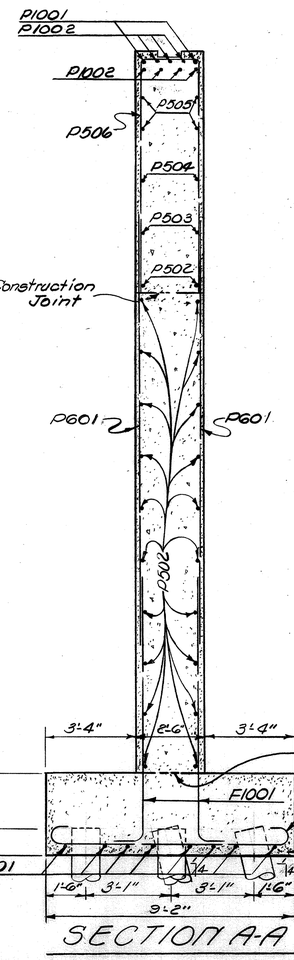
PIER PLAN
RIGHT BRIDGE



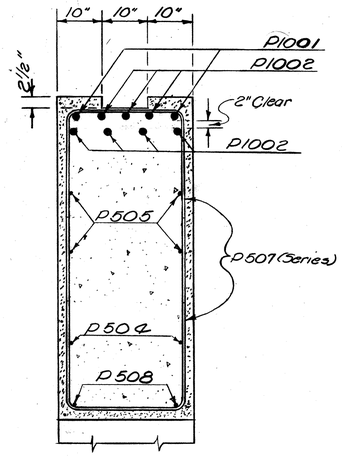
SECTION C-C



ELEVATION - REAR PIER - RIGHT BRIDGE



SECTION A-A



SECTION B-B

-NOTES-

CONCRETE shall be Class "E".

PILES shall be 12" Cast-in-place, reinforced concrete piles.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS

BRIDGE NO ROS-35-2129 L & R
U.S. 35 OVER N. & W. RAILWAY
ROSS COUNTY — U.S.R. 35
STA. 1123+87.69 R TO STA. 1125+32.19 R
STA. 1123+88.22 L TO STA. 1125+32.72 L

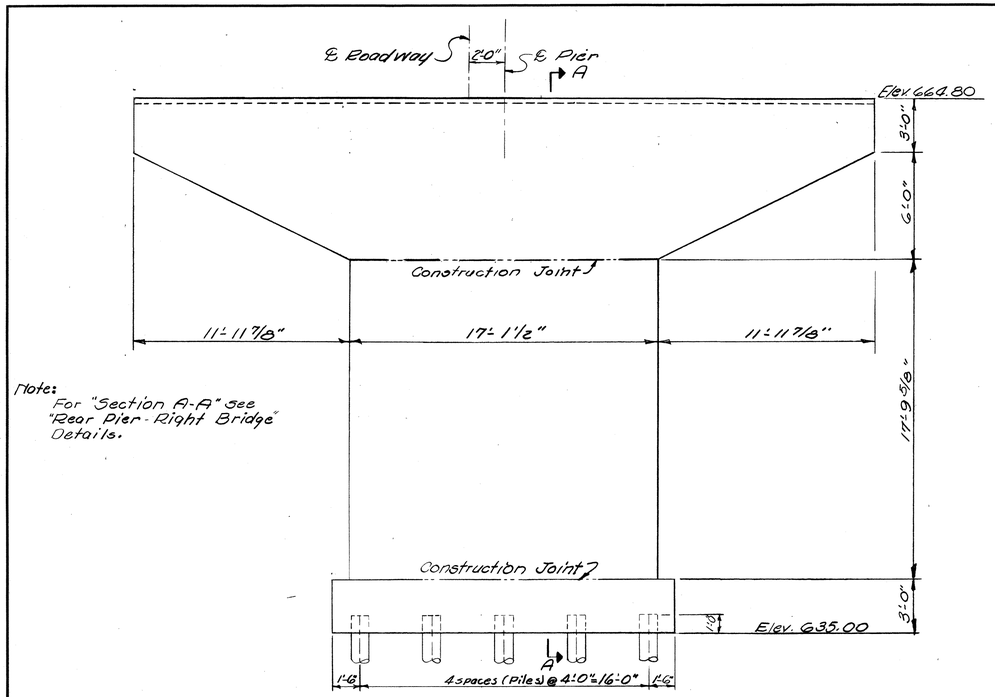
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.R	E.E.R. P.J.M.		D.S.	W.W.	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

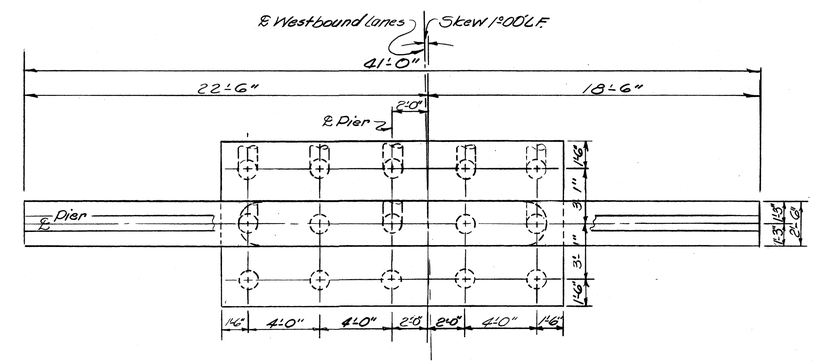
168
240

ROSS COUNTY
ROS-35-21.23



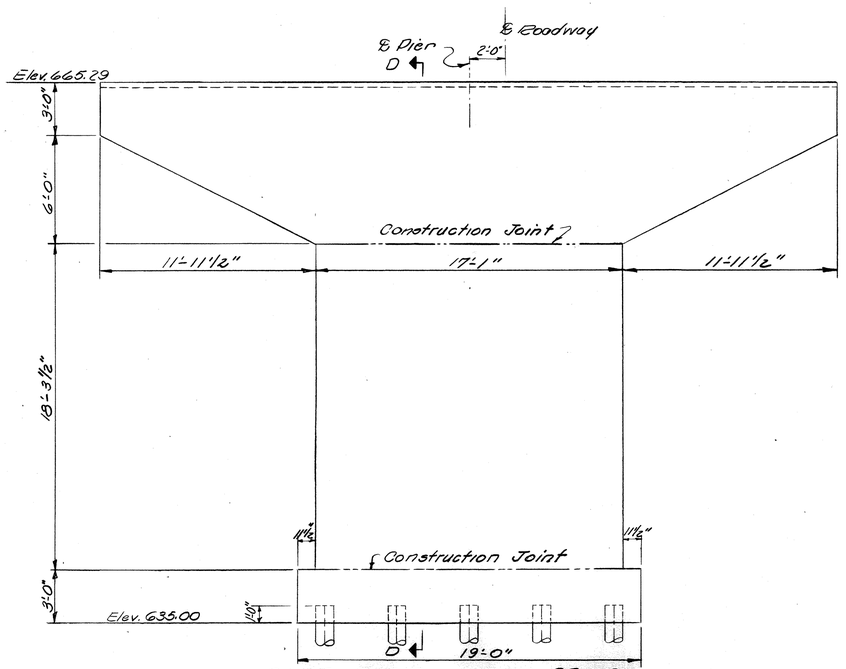
Note:
For "Section A-A" see "Rear Pier - Right Bridge" Details.

ELEVATION
FORWARD PIER - RIGHT BRIDGE

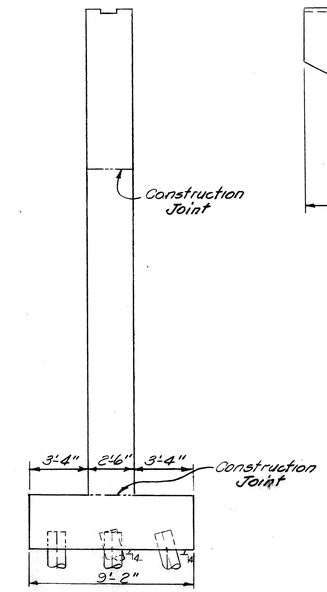


REAR PIER PLAN
LEFT BRIDGE

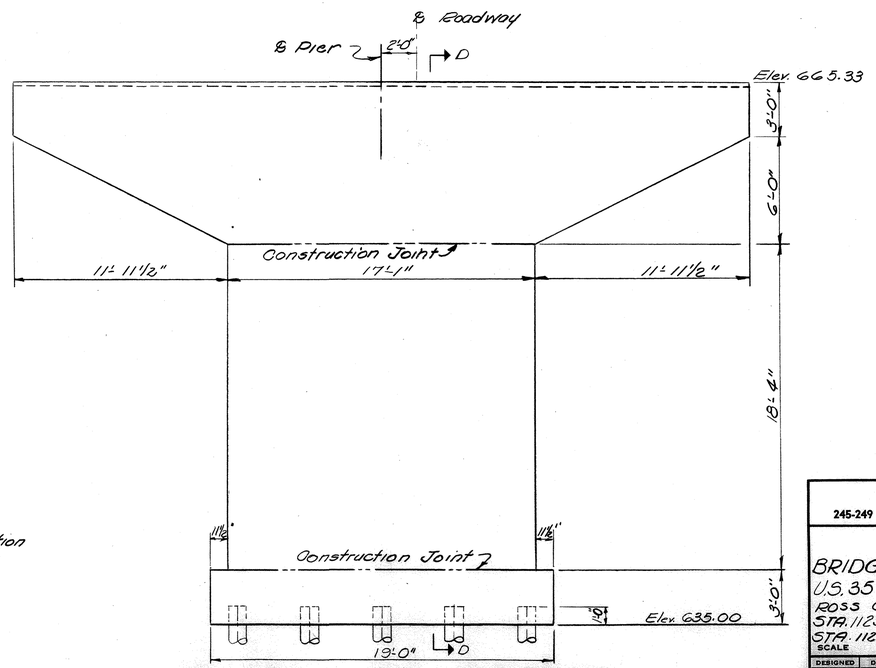
Note:
All reinforcing steel, details and dimensions not shown are identical to Rear Pier - Right Bridge.



REAR PIER - LEFT BRIDGE



SECTION D-D



FORWARD PIER - LEFT BRIDGE

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS
BRIDGE 110 ROS-35-2129 L. & R.
U.S. 35 over N. & W. RAILWAY
ROSS COUNTY U.S.R. 35
STA. 1123+87.69 R TO STA. 1125+32.19 R
STA. 1123+88.22 L TO STA. 1125+32.72 L

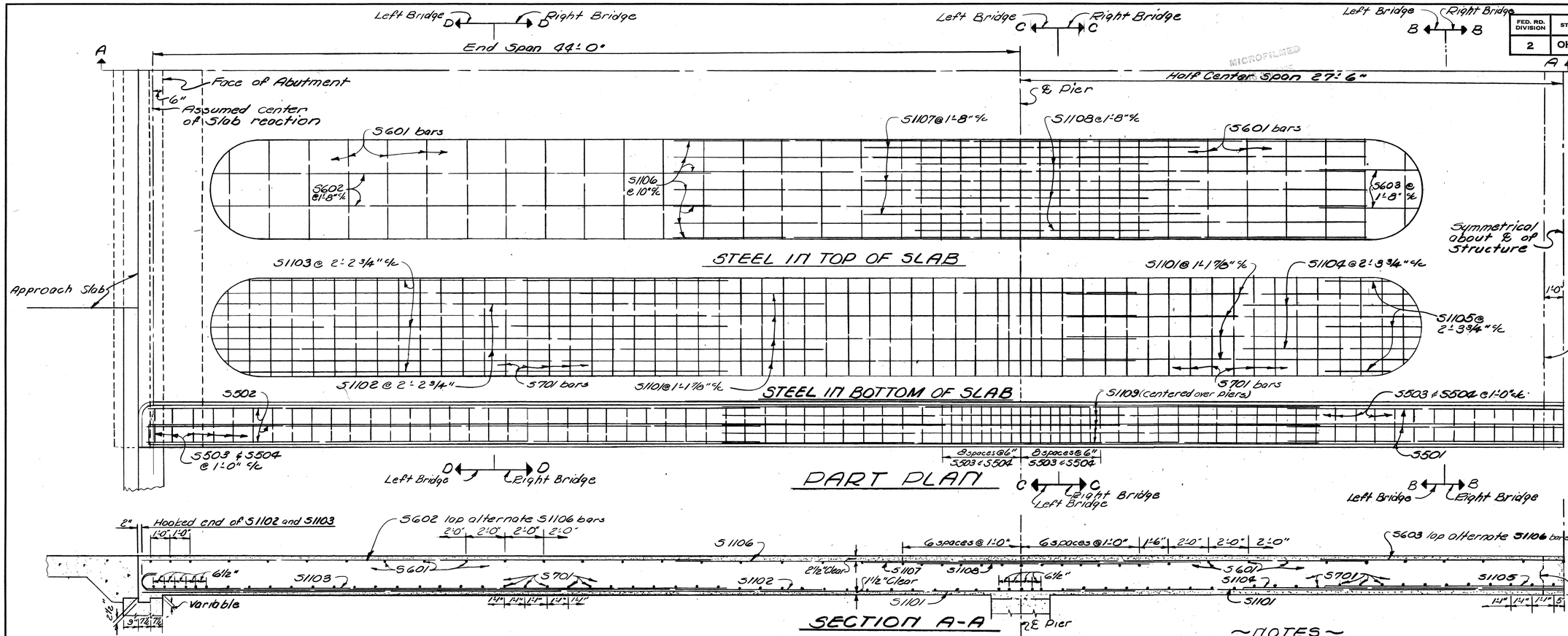
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.R.	E.E.R. P.J.M.		D.S.		3/18/63	

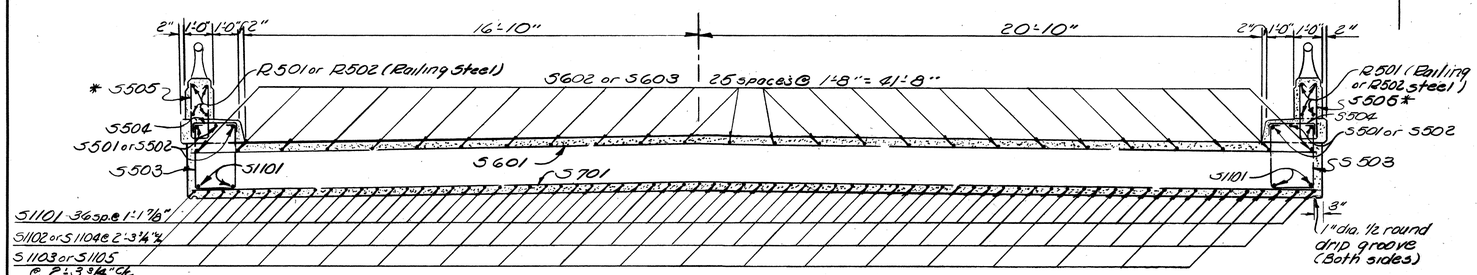
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

169
240

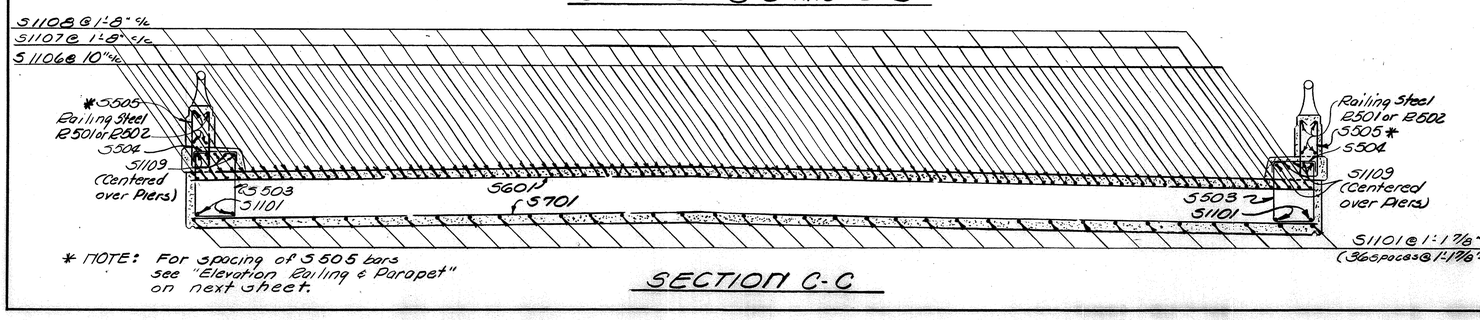
ROSS COUNTY
ROS-35-21.23



SECTION A-A



SECTION B-B AND D-D



* NOTE: For spacing of S505 bars see "Elevation Railing & Parapet" on next sheet.

SECTION C-C

~NOTES~

FOR PLACEMENT of S1106, S1107 and S1108 bars see next sheet.

FOR PARAPET JOINTS, Railing Post Spacing and Railing Steel see next sheet.

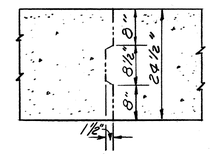
CONSTRUCTION JOINTS: One construction joint in the bridge slab may be placed 1'-0"± off the transverse centerline of the middle span so that it will miss the transverse reinforcing steel. One longitudinal joint on the center-line of roadway will be permitted. A horizontal construction joint shall be placed between each curb and the top of the slab. A horizontal construction joint will also be placed between each parapet wall and the top of each curb.

CAMBER of 1/300 of the span shall be provided in each span, in addition to that required for conformance with the profile of the highway, to allow for dead load deflection. This is the amount of camber required before falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

S601 AND S701 BARS may be furnished in one length as shown or in pairs of different lengths, lapped thirty diameters at the centerline of roadway or beyond a longitudinal construction joint at the centerline of roadway, at the option of the contractor. Determination of the pay quantity will be according to the number and length of bars as shown hereon.

CONCRETE Shall be Class "C"

See Next Sheet for "Additional Notes"



CONSTRUCTION JOINT DETAIL

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SLAB REINFORCING DETAILS

BRIDGE NO ROS-35-2129 L & E.
U.S. 35 OVER N. & W. RAILWAY
ROSS COUNTY U.S.R. 35
STA. 1123+87.69 R TO STA. 1125+32.19 R
STA. 1123+88.22 L TO STA. 1125+32.72 L

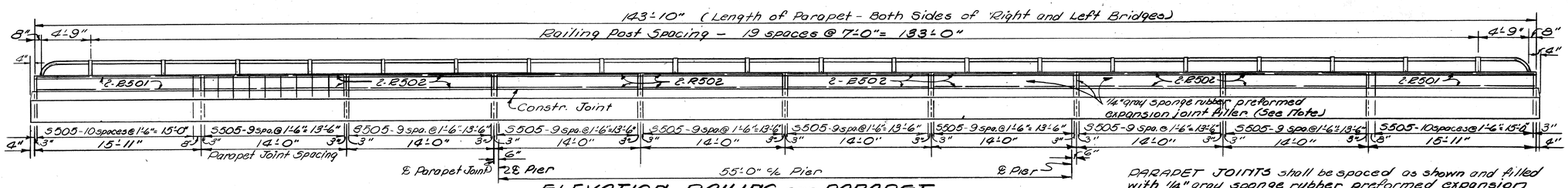
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.P.	D.J.M.		D.S.	W.L.	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

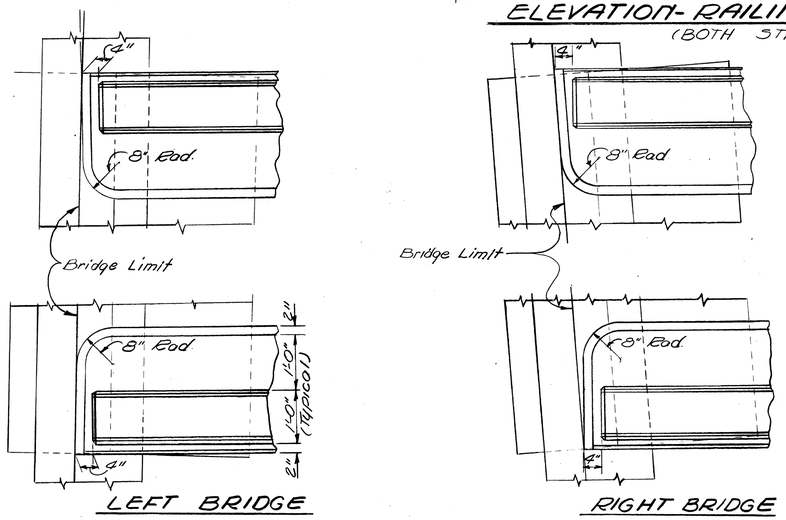
170
240

ROSS COUNTY
ROS-35-21.23



ELEVATION - RAILING AND PARAPET
(BOTH STRUCTURES)

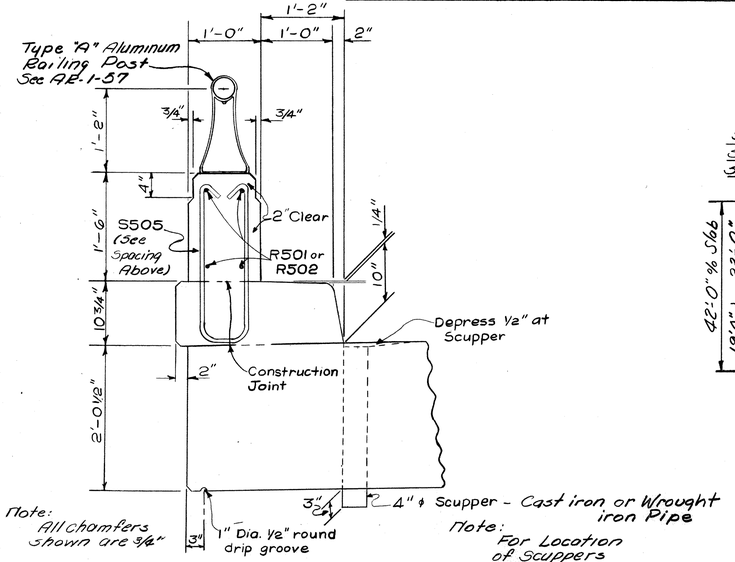
PARAPET JOINTS shall be spaced as shown and filled with 1/4" gray sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type 1. Included with Item S-14 for payment.



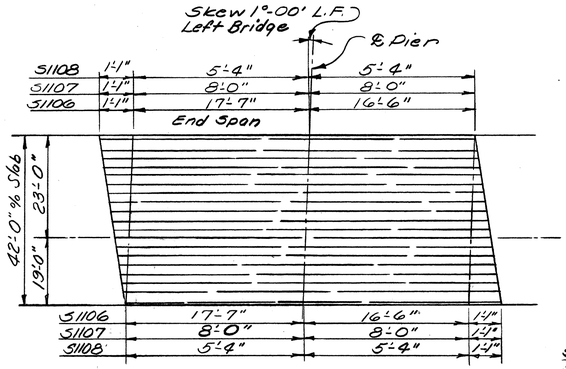
LEFT BRIDGE

RIGHT BRIDGE

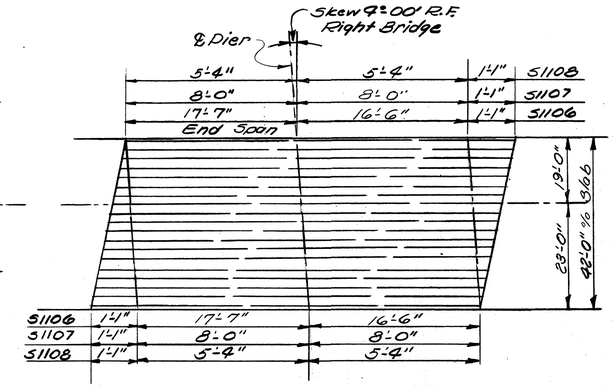
DARAPET AND CURB END DETAILS



PART SECTION
TREATMENT OF PARAPET AND FASCIA



LEFT BRIDGE



RIGHT BRIDGE

PLACEMENT DIAGRAM FOR S1106, S1107 & S1108 BARS

— NOTES —

CURBS shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full dead load deflection.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SUPERSTRUCTURE DETAILS

BRIDGE NO. ROS-35-2129 L & R.
U.S. 35 OVER N. & W. RAILWAY
ROSS COUNTY — U.S.R. 35
STA. 1123+37.69 E TO STA. 1125+32.19 E
STA. 1123+88.22 L TO STA. 1125+32.72 L

SCALE		DATE				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.P.	P.J.M.		D.S.	W.K.	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

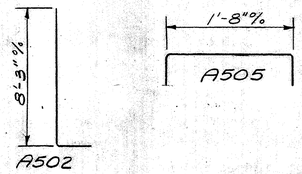
171
240

ROSS COUNTY
ROS-35-21.23

REINFORCING STEEL LIST

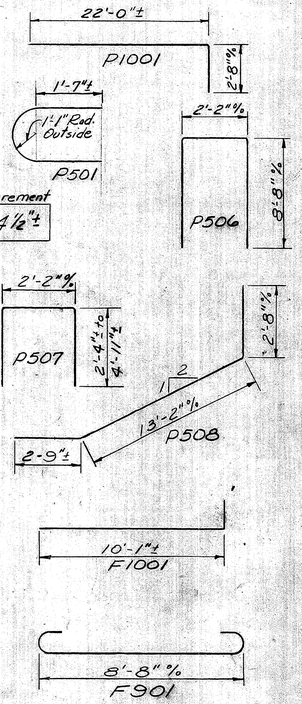
Bar Number	Number Required	Length	Shape	Weight
ONE ABUTMENT				
A501	2	21'-9"	—	46
A502	43	8'-9"	L	393
A503	24	27'-4"	—	684
A504	43	6'-3"	—	280
A505	51	2'-8"	⊓	142
A506	16	6'-4"	—	106
A507	16	3'-6"	—	58
A508	4	5'-2"	—	22
A509	4	5'-4"	—	22
TOTAL ONE ABUTMENT				1,753
TOTAL FOUR ABUTMENTS				7,012

Bending Diagrams



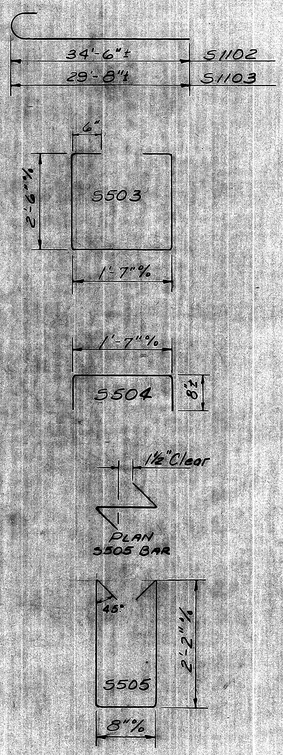
Bar Number	Number Required	Length	Shape	Weight
ONE PIER				
P1001	4	24'-4"	⌐	419
P1002	14	22'-0"	—	1325
P601	22	15'-5"	—	510
P501	20	6'-7"	⊂	137
P502	22	14'-8"	—	337
P503	2	24'-11"	—	52
P504	4	17'-3"	—	72
P505	8	21'-2"	—	177
P506	10	19'-3"	⊓	201
P507	45 series of 8 bars	4'-7" to 11'-9"	⊓	306
P508	4	18'-5"	◢	77
F1001	44	11'-2"	⌐¬	2115
F901	24	11'-2"	⊂⊃	911
F501	8	18'-6"	—	154
TOTAL ONE PIER				6,793
TOTAL FOUR PIERS				27,172

Bending Diagrams



Bar Number	Number Required	Length	Shape	Weight
ONE SUPERSTRUCTURE				
S1101	123	50'-4"	—	32,893
S1102	36	34'-1"	⊂	6,902
S1103	36	31'-3"	⊂	5,977
S1104	18	32'-6"	—	3,108
S1105	18	24'-2"	—	2,311
S1106	102	35'-2"	—	19,058
S1107	50	17'-1"	—	4,538
S1108	50	11'-9"	—	3,121
S1109	20	30'-3"	—	3,214
S701	142	41'-8"	—	12,094
S601	87	41'-8"	—	5,445
S602	52	28'-11"	—	2,259
S603	26	24'-9"	—	967
S501	6	27'-11"	—	175
S502	12	31'-1"	—	389
S503	320	7'-1"	□	2,364
S504	320	2'-8"	⊓	890
S505	204	5'-7"	⋂	1,188
TOTAL ONE SUPERSTRUCTURE				106,893
TOTAL TWO SUPERSTRUCTURES				213,786
RAILING STEEL				
R501	32	15'-7"	—	
R502	128	13'-8"	—	
REPLACEMENT STEEL				
RE501	2	5'-7"	—	
RE601	1	5'-11"	—	
RE701	2	6'-3"	—	
RE901	1	6'-10"	—	
RE1001	1	7'-3"	—	
RE1101	9	7'-7"	—	

Bending Diagrams



NOTES

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 A501 is a number 5 size bar and P1001 is a number 10 size bar.

RAILING STEEL in the parapet wall is included with Item S-14 Railing for payment.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2129 L & R.
U.S.R. 35 over N. & W. RAILWAY

ROSS COUNTY U.S.R. 35
STA. 1123+87.69 R. To 1125+32.19 R.
STA. 1123+88.22 L. To 1125+32.72 L.

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LER	W.O.J.		D.S.	MAC	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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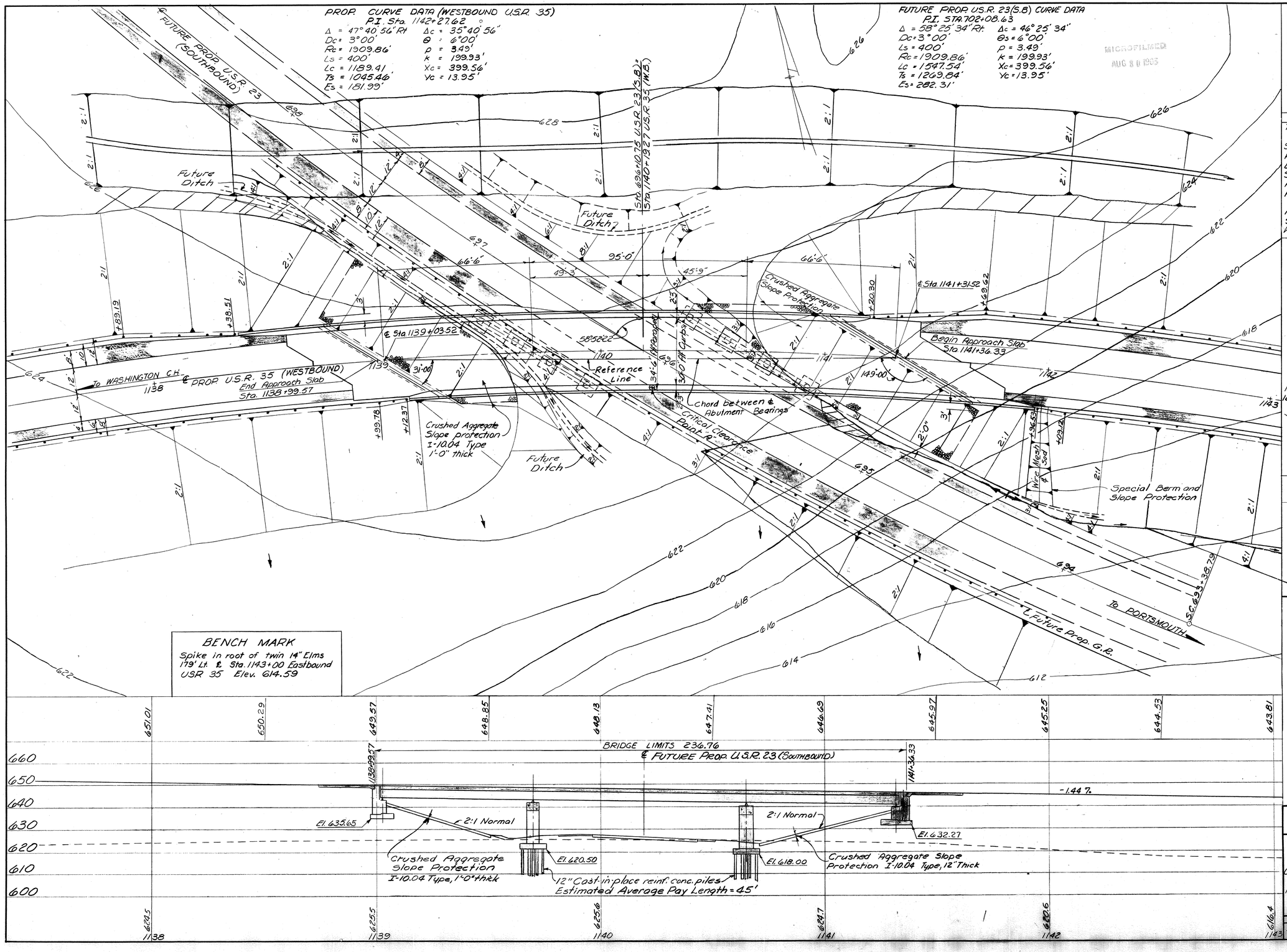
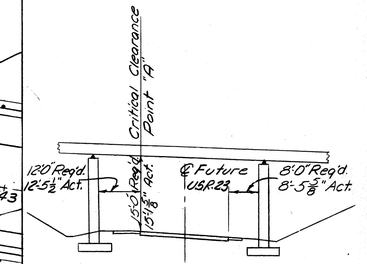
ROSS COUNTY
ROS -35 - 21.23

PROP. CURVE DATA (WESTBOUND U.S.R. 35)
P.I. Sta. 1142+27.62
Δ = 47°40'56" Rt. Δc = 35°40'56"
Dc = 3°00' θ = 6°00'
Rc = 1909.86' p = 3.49'
Ls = 400' k = 199.93'
Lc = 1189.41' Xc = 399.56'
Ts = 1045.46' Yc = 13.95'
Es = 181.99'

FUTURE PROP. U.S.R. 23 (S.B.) CURVE DATA
P.I. STA. 702+08.63
Δ = 58°25'34" Rt. Δc = 46°25'34"
Dc = 3°00' θs = 6°00'
Ls = 400' p = 3.49'
Rc = 1909.86' k = 199.93'
Lo = 1547.54' Xc = 399.56'
Ts = 1269.84' Yc = 13.95'
Es = 282.31'





CLEARANCE DIAGRAM
SECTION NORMAL TO U.S.R. 23 (S.B.)

BENCH MARK
Spike in root of twin 14" Elms
179' Lt. ℄ Sta. 1143+00 Eastbound
USR 35 Elev. 614.59

PROPOSED BRIDGE DATA

TYPE: Continuous Welded Girder with Concrete Deck and Substructure.
SPANS: 66'-6" - 95'-0" - 66'-6"
ROADWAY: 30'-0" Flr. 2'-3" Safety Curbs.
LOAD FREQUENCY: CF - 400 (57)
SKEW: 59°-00' R.F.
APPROACH SLAB: AS-1-54 (25" Long)
RAILING: Aluminum Rail and Supports and Concrete Parapet
ALIGNMENT: 3°00' Curve.
SUPERELEVATION: 0.083 Ft. per Ft.
WEARING SURFACE: 1" Monolithic Concrete

FOUNDATION SOUNDINGS

Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of Bureau of Bridges in Columbus or in the division office but the State does not guarantee the accuracy thereof.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SITE PLAN

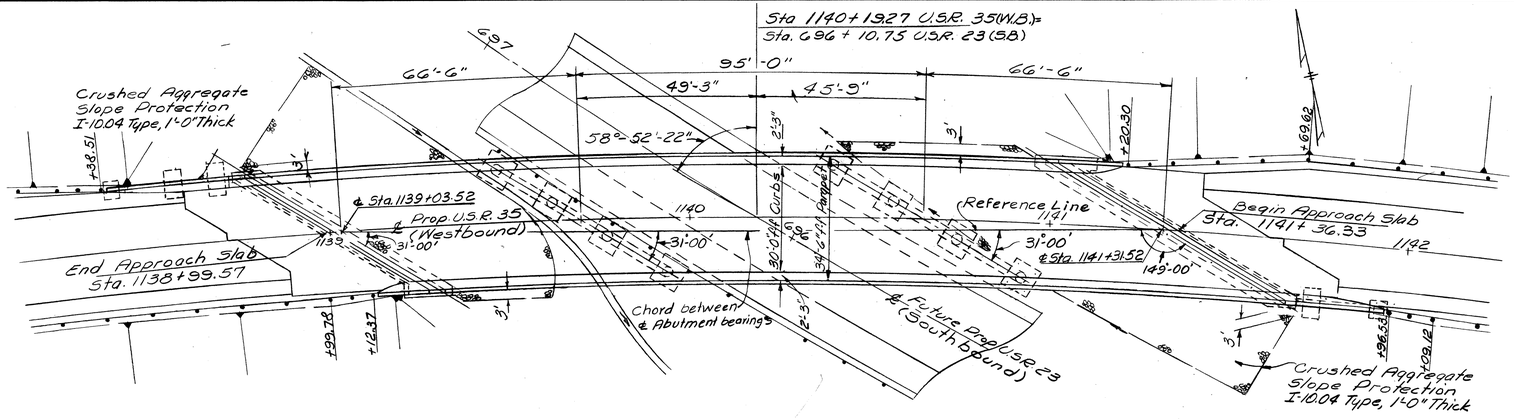
BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP.

ROSS COUNTY U.S.R. 35
STA. 1138 + 99.57 TO STA. 1141 + 36.33

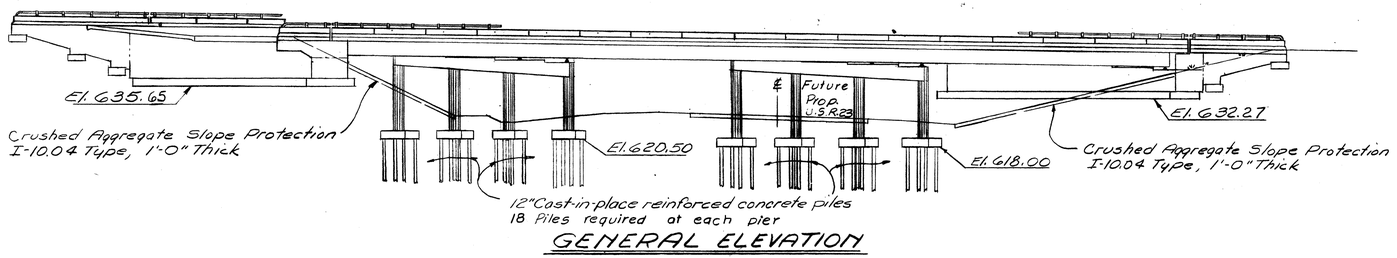
SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WL	LLF		D.S.	WL	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ROSS COUNTY
ROS-35-21.23



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S.	PIERS	SUPER	GENERAL	AS BUILT
E-2	745	Cu.Yds.	Unclassified Excavation	570	175			
I-10	798	Sq.Yds.	Crushed Aggregate Slope Protection				798	
S-1	283	Cu.Yds.	Class "C" Concrete, Superstructure			283		
S-1	92	Cu.Yds.	Class "C" Concrete, Pier Caps and Columns		92			
S-1	244	Cu.Yds.	Class "E" Concrete, Abutments above Footings	244				
S-1	137	Cu.Yds.	Class "E" Concrete, Footings	90	47			
S-3	49	Lin. Ft.	Waterproofing, premolded Sealing Strip	49				
S-4	113,003	Pounds	Reinforcing Steel	14,880	23,909	74,220		
S-7	269,900	Pounds	Structural Steel			269,900		
S-8	269,900	Pounds	Field Painting of Structural Steel			269,900		
S-9	55	Sq.Ft.	1" Preformed Expansion Joint Filler	55				
S-14	561.13	Lin. Ft.	Railing, Aluminum Rail and Supports and Concrete Parapet	97.42		463.71		
S-16	Lump Sum	Lump	First Test Pile		Lump			
S-18	1620	Lin.Ft.	12" Cast-in-place reinforced concrete piles		1620			
S-29	13	Each	Scuppers, including supports			13		
S-29	76	Cu.Yds.	Porous Backfill	76				
S-101	283	Each	Water Reducing, Set-Retarding, Admixture			283		

GENERAL NOTES

REFERENCE: shall be made to standard drawing FSB-1-62, dated 1-15-63, AS-1-54, revised 7-5-62, AE-1-57 revised 4-2-62 and Supplemental Specifications S-101 dated 7-12-62 and S-307 dated 10-1-64.

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

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

PILES shall be driven to a minimum bearing capacity of 44 tons per pile for the piers.

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

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

For HIGH STRENGTH STEEL BOLT note, see Sheet 222

WELDING OF STRUCTURAL STEEL shall be Class "A", except as otherwise shown. Welds shown as field welds may, at the option of the contractor be made in the shop. Class "B" welds are shown Thus: B

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-122, Rubbed Finish, shall apply to the following exposed concrete surfaces:

(a) The entire superstructure except the top and bottom surfaces of safety curbs and roadway.

(b) The entire surface of piers and abutments except bridge seats, backwalls and the face of spill-through abutments between outside girders.

GIRDER ERECTION: The contractor shall submit to the Director for approval 3 prints showing his proposed erection procedure for the plate girders.

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

SUPERELEVATION TABLE

15' Lt. ℄	STATION	℄ ELEVATION	15' Rt. ℄
655.42	1336+50	654.17	652.92
655.06	+75	653.81	652.56
654.70	1337+00	653.45	652.20
654.34	+25	653.09	651.84
653.98	+50	652.73	651.48
653.62	+75	652.37	651.12
653.26	1338+00	652.01	650.76
652.90	+25	651.65	650.40
652.54	+50	651.29	650.04
652.18	+75	650.93	649.68
651.82	1339+00	650.57	649.32
651.46	+25	650.21	648.96
651.10	+50	649.85	648.60
650.74	+75	649.49	648.24
650.38	1340+00	649.13	647.88
650.02	+25	648.77	647.52
649.66	+50	648.41	647.16
649.30	+75	648.05	646.80
648.94	1341+00	647.69	646.44
648.58	+25	647.33	646.08
648.22	+50	646.97	645.72
647.86	+75	646.61	645.36
647.50	1342+00	646.25	645.00

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GENERAL PLAN AND ELEVATION & EST. QUANTITIES AND GEN. NOTES
BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. OVER U.S.R. 23 & B. FUTURE PROR
ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DESIGNED						
D.J.P.	W.D.J.		D.S. R.M.S.	W.K.	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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ROSS COUNTY
ROS-35-21.23

NOTES

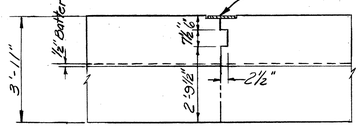
CONCRETE for Abutments shall be Class "E"

For VIEW "B"-"B" see Sheet No. 176
For VIEW "C"-"C" see Sheet No. 175

POROUS BACKFILL shall extend upward to the approach slab and outward to the wingwalls. Excavation therefor, in excess of that required for construction of the abutments, shall be considered as paid for in the bid price per cu.yd. paid for porous backfill.

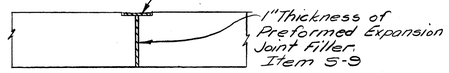
⊕ ½" Premolded expansion joint filler is included with approach slab for payment.

12"x½" Premolded Sealing Strip in 13"x¾" recess, Item S-3. Extends from top of footing to bottom of Approach Slab.

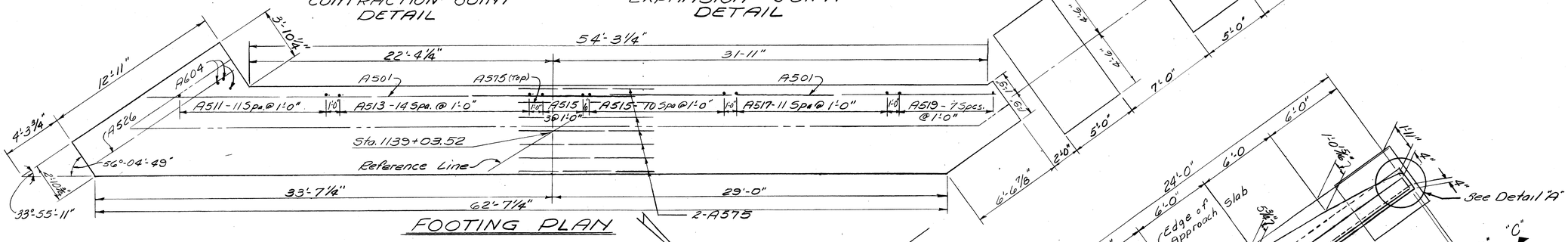


CONTRACTION JOINT DETAIL

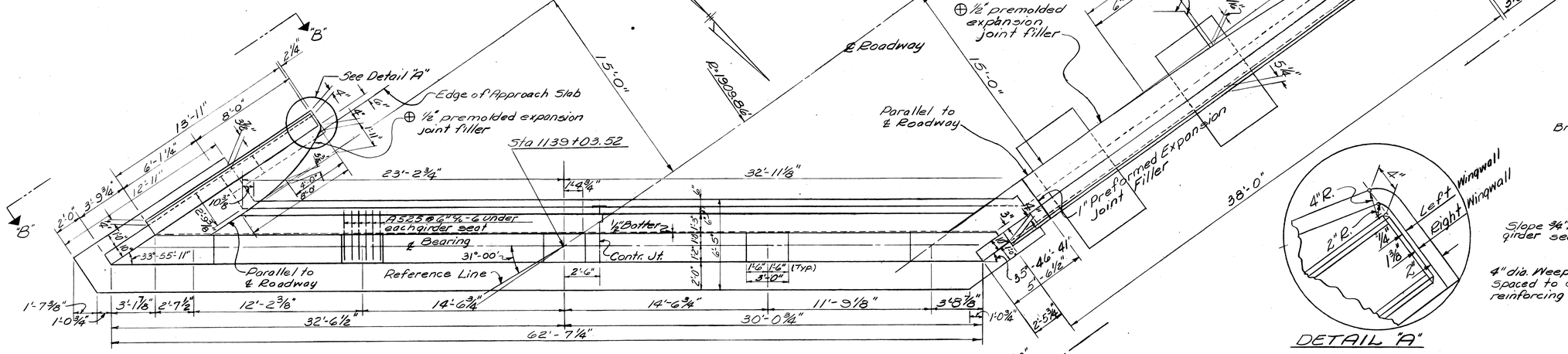
12"x½" Premolded Sealing Strip in 13"x¾" recess, Item S-3 Extends from top of Footing to bottom of Safety Curb



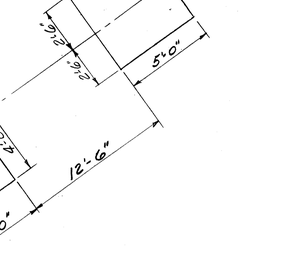
EXPANSION JOINT DETAIL



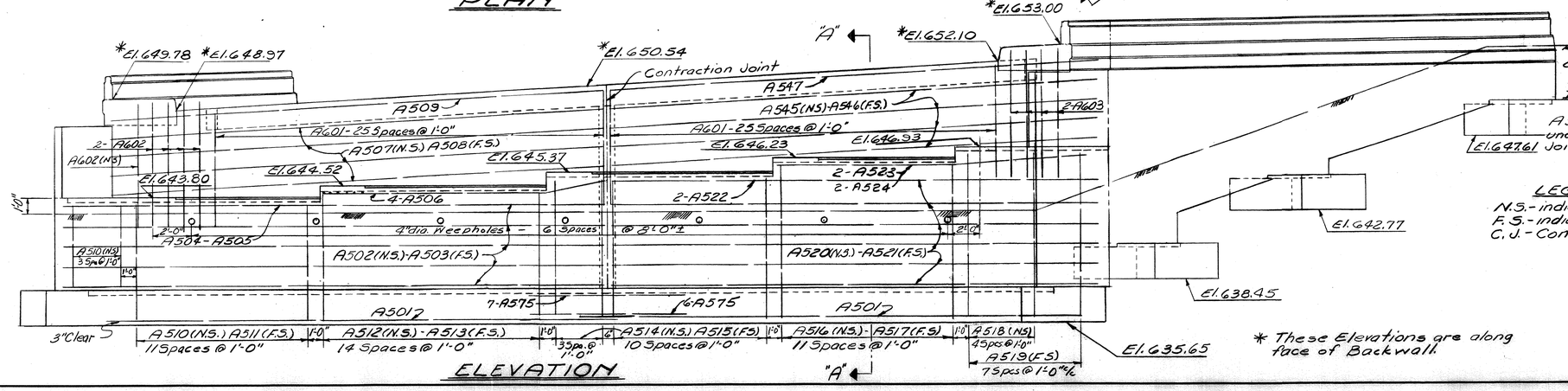
FOOTING PLAN



PLAN

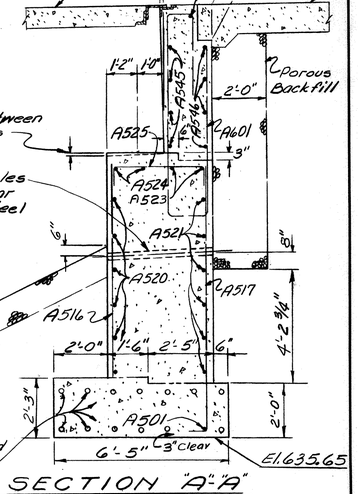


DETAIL "A"



ELEVATION

* These Elevations are along face of Backwall.



SECTION "A"-"A"

LEGEND

N.S. - indicates Near Side
F.S. - indicates Far Side
C.J. - Construction Joint

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REAR ABUTMENT DETAILS

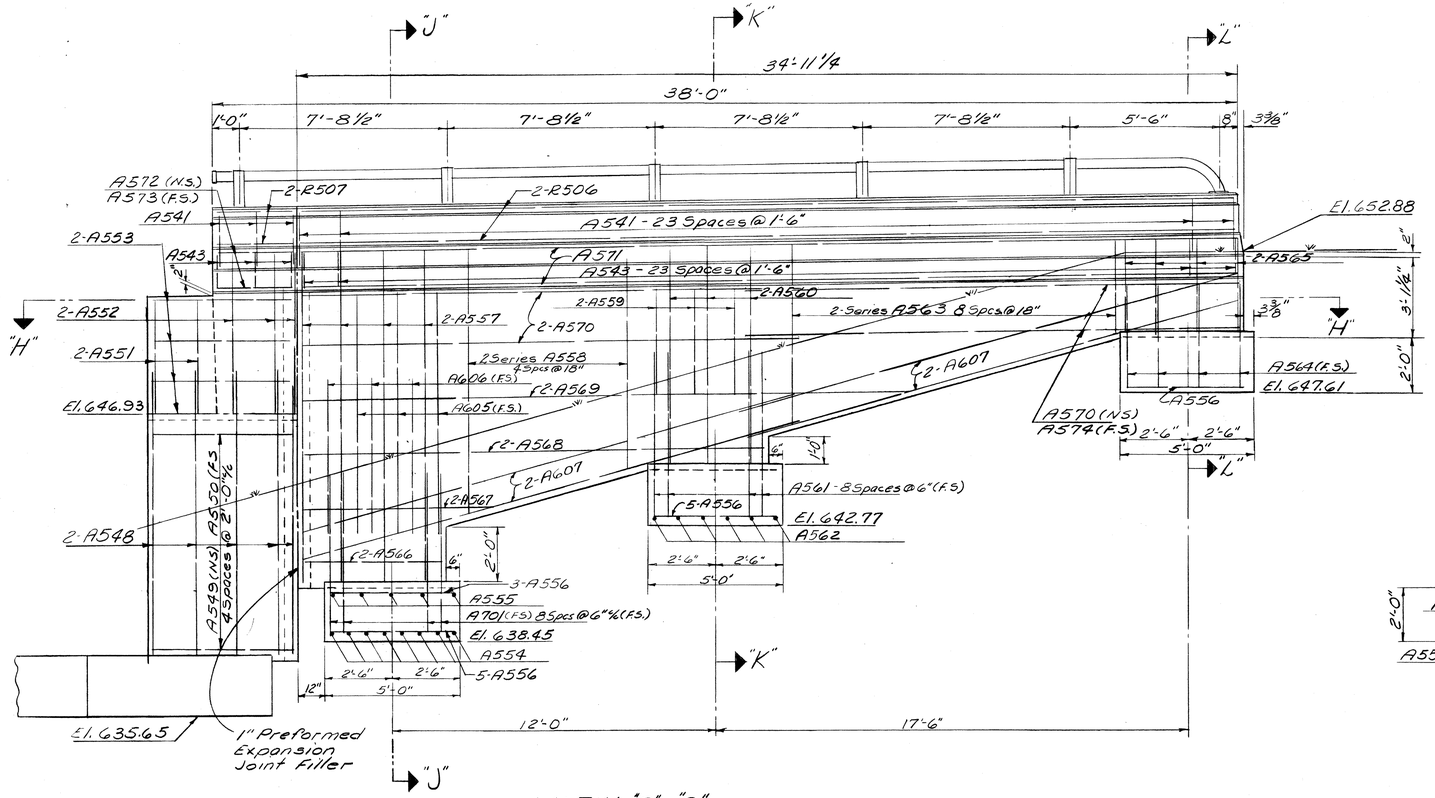
BRIDGE NO. ROS-35-2157L
U.S.R. 35 WB. OVER U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	W.D.J.		R.M.S.	WK	3/14/63	

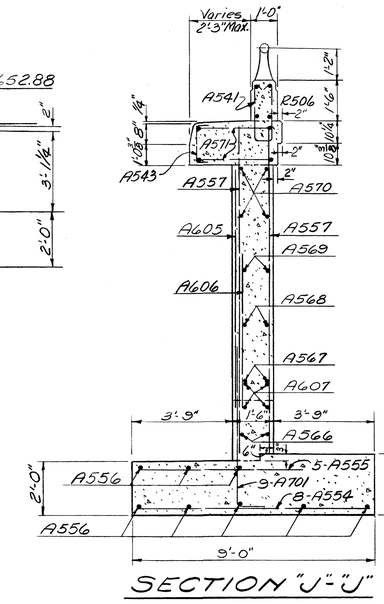
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

175/240

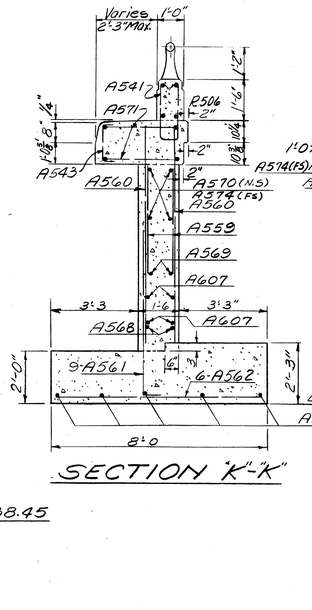
ROSS COUNTY
ROS-35-21.23



VIEW "C"-"C"



SECTION "J"-"J"



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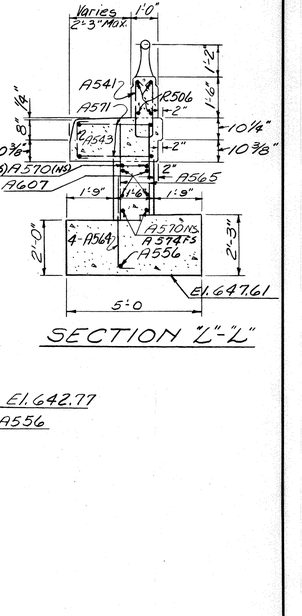
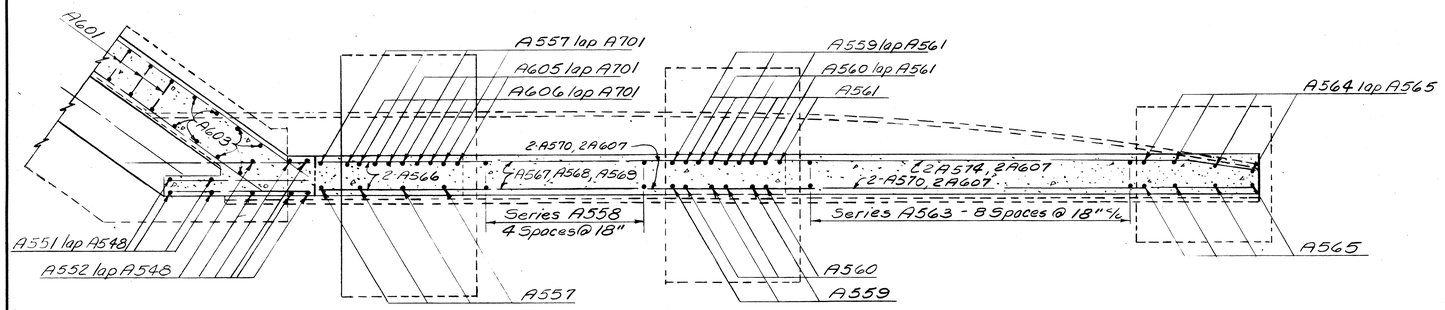


SECTION "L"-"L"



SECTION "H"-"H"

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REAR ABUTMENT DETAILS

BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP.

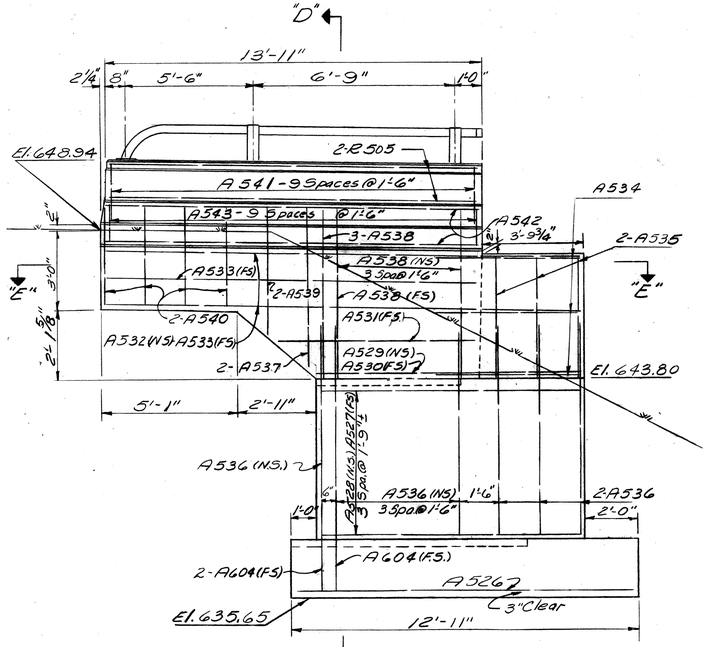
ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 To STA. 1141+36.33

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP WJE	WDJ			WJE	3/14/63	

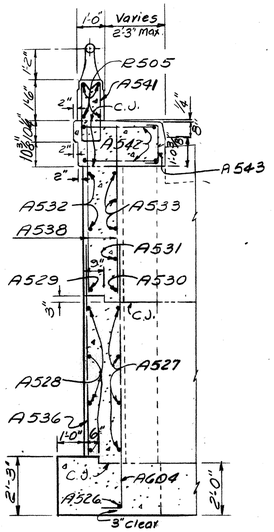
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

176
240

ROSS COUNTY
ROS-35-21.23



VIEW "B"-"B"



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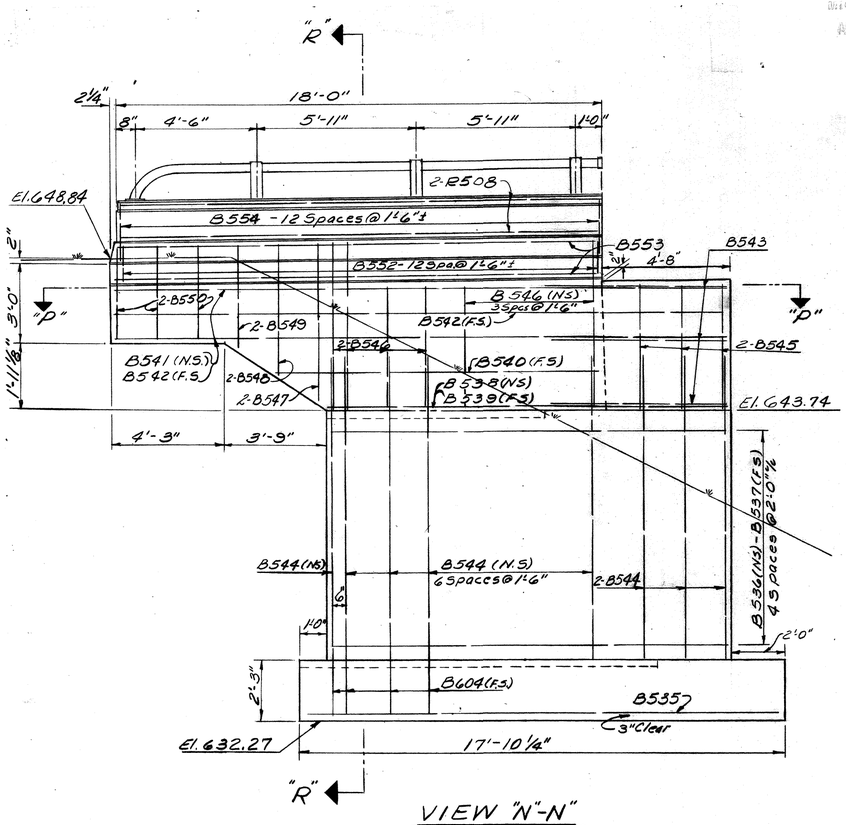
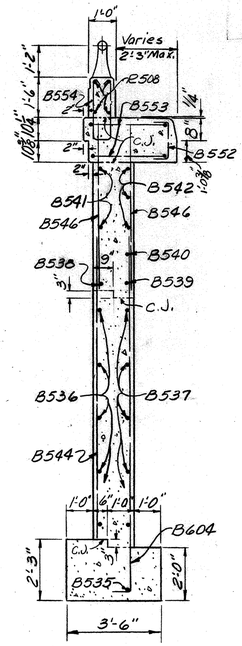


VIEW "N"-"N"



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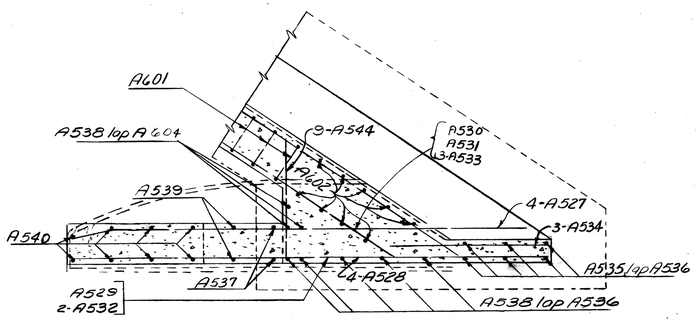


SECTION "E"-"E"

NOTES

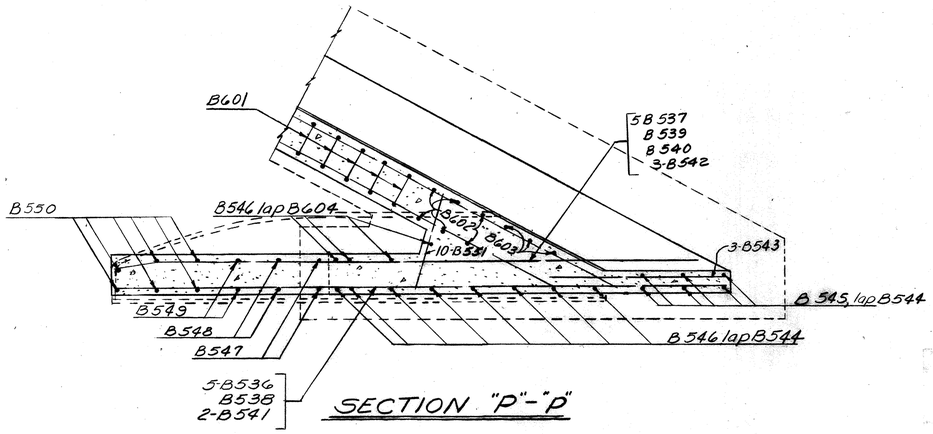
ALUMINUM RAILING, concrete parapet and reinforcing steel, (Railing Steel) in parapet are included with Item S-14 for payment.

ALUMINUM RAILING on Wingwall shall be in lengths of not less than two panels.

LEGEND

N. S. - Near Side
F. S. - Far Side
C. J. - Construction Joint

REAR ABUTMENT



SECTION "P"-"P"

FORWARD ABUTMENT

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS

BRIDGE NO. ROS-35-2157 L
USR 35 W.B. OVER USR 23 S.B. FUTURE PROP.

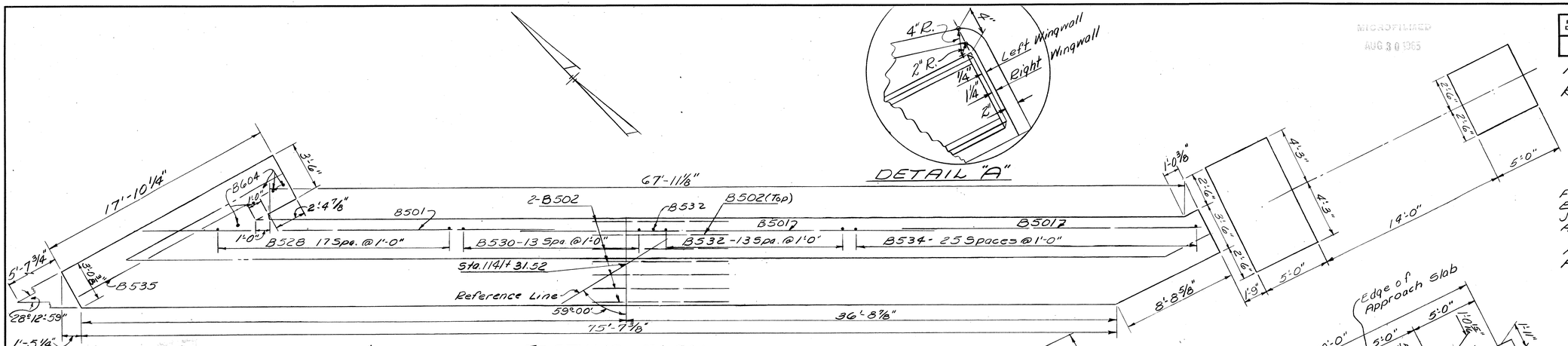
ROSS COUNTY — USR. 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	W.D.J.		Ron Gius	WK	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

177
240

ROSS COUNTY
ROS-35-21.23



NOTES

For additional Notes and Expansion and Contraction Joint Details See Rear Abutment Details, Sheet No. 174

For VIEW "M"-"M" see Sheet No. 178
For VIEW "N"-"N" see Sheet No. 176

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

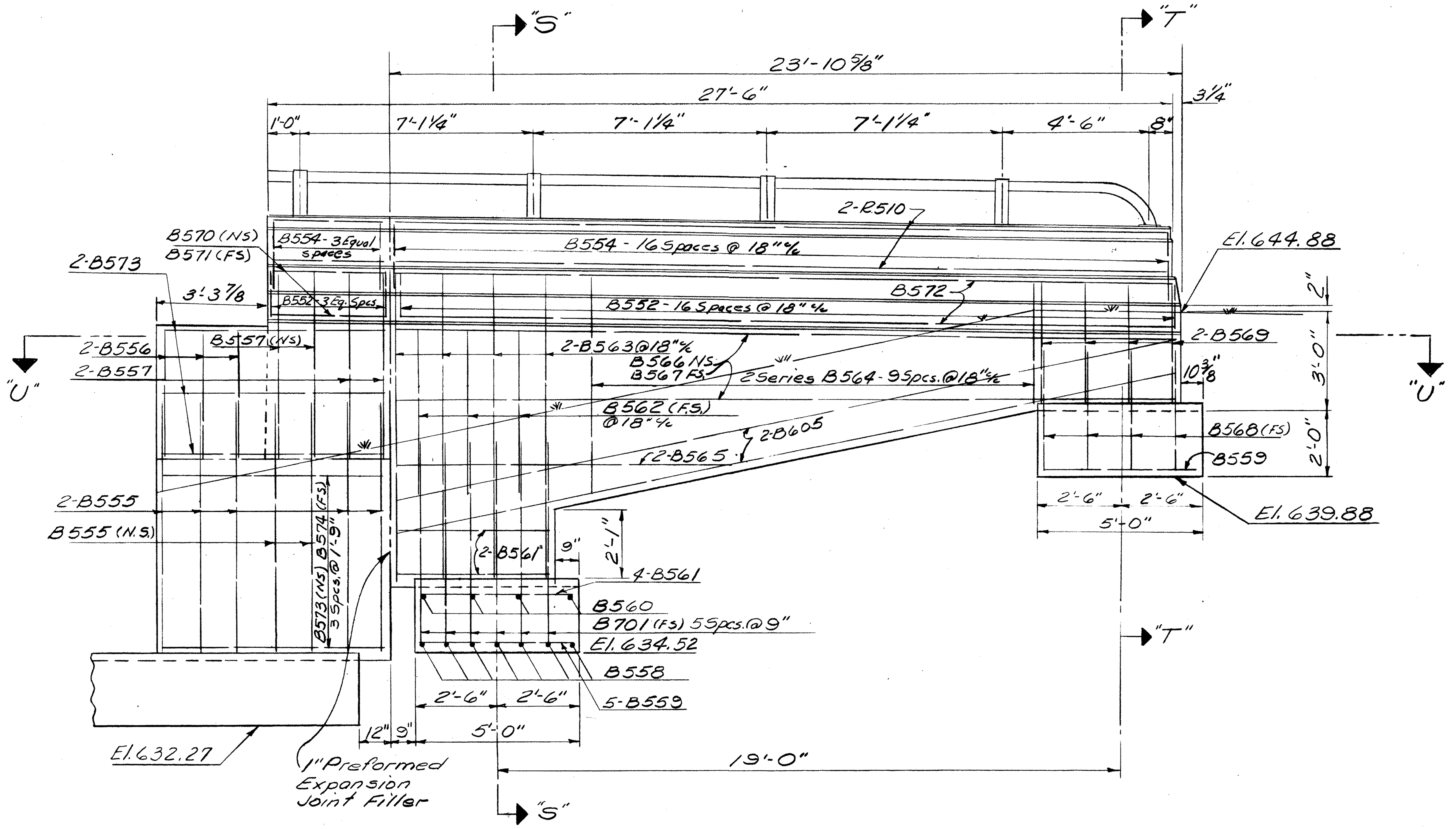
FORWARD ABUTMENT DETAILS

BRIDGE NO. ROS-35-2157 L
U.S.R.35 W.B. OVER U.S.R.23 S.B. FUTURE PROP.
ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 To STA. 1141+36.33

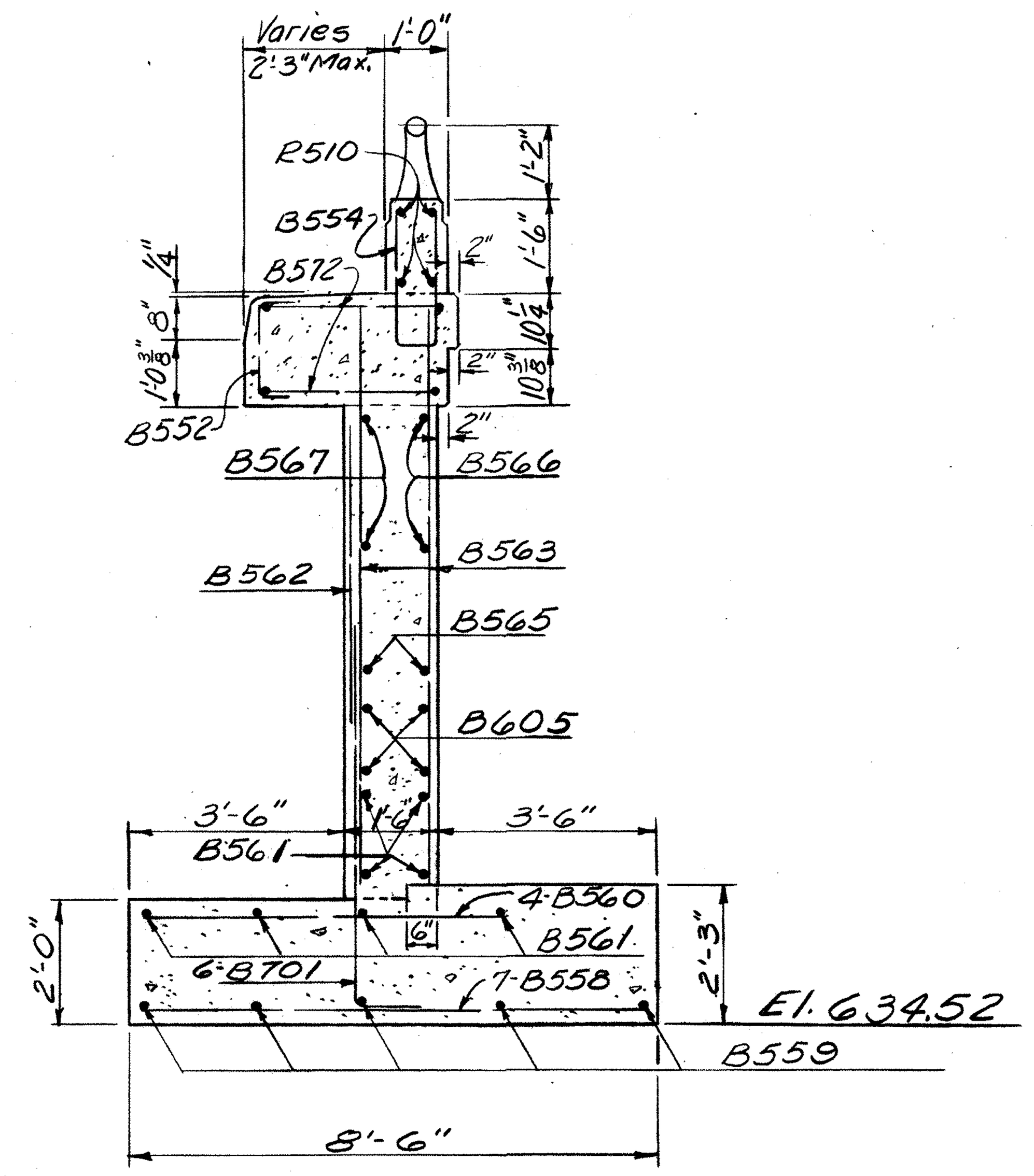
SCALE				DATE	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	WDJ		R.M.S.	[illegible]	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

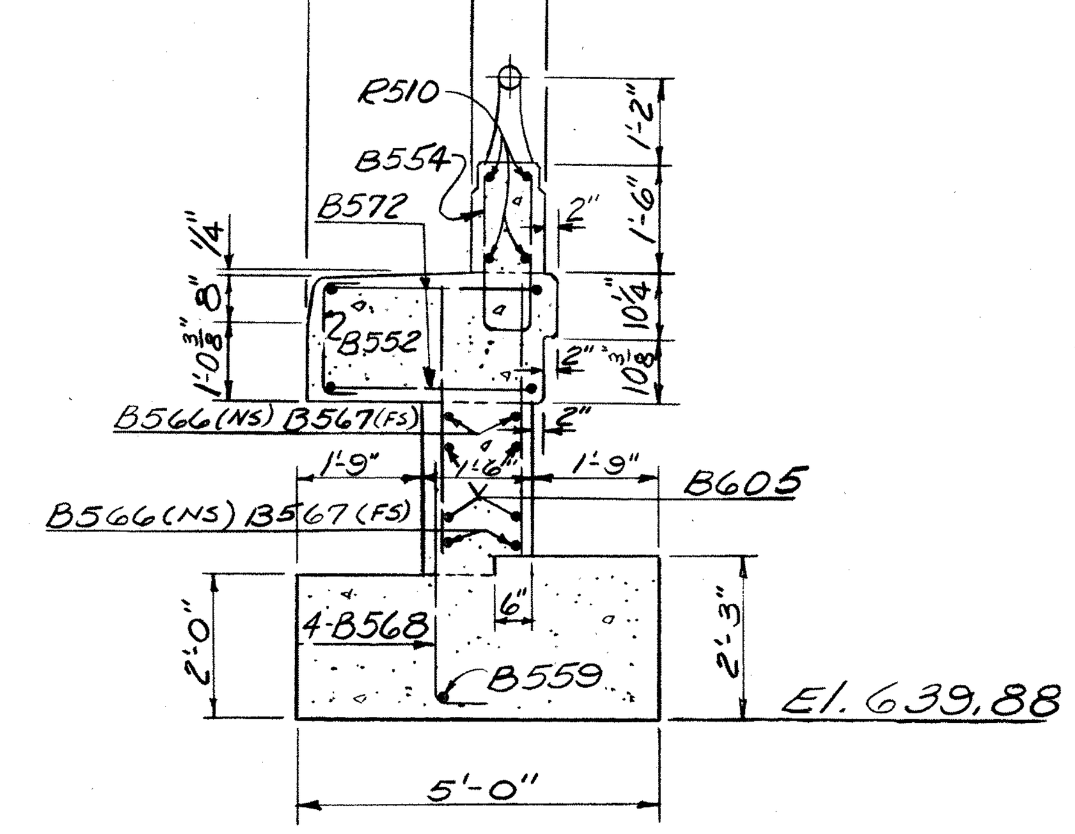
ROSS COUNTY
ROS-35-21.23



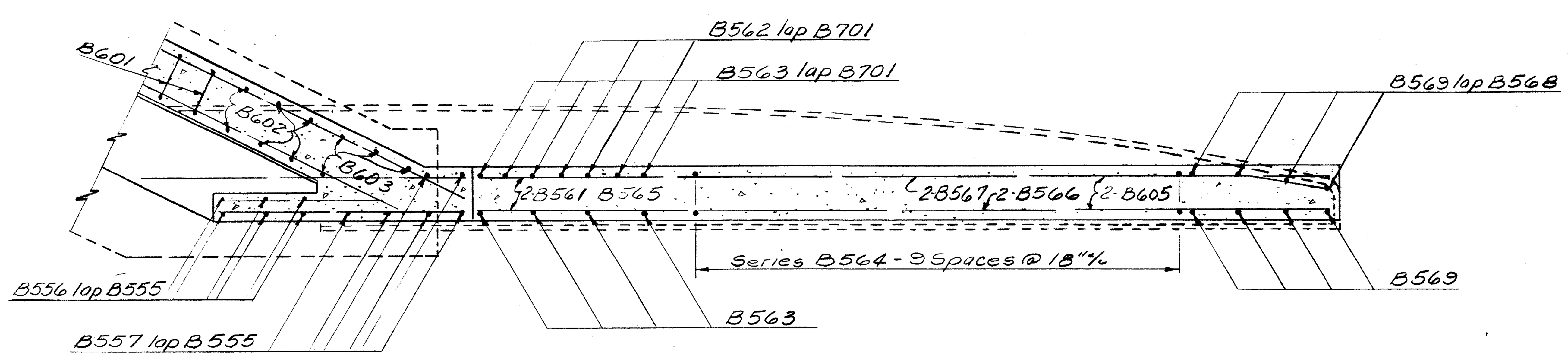
VIEW "M"-"M"



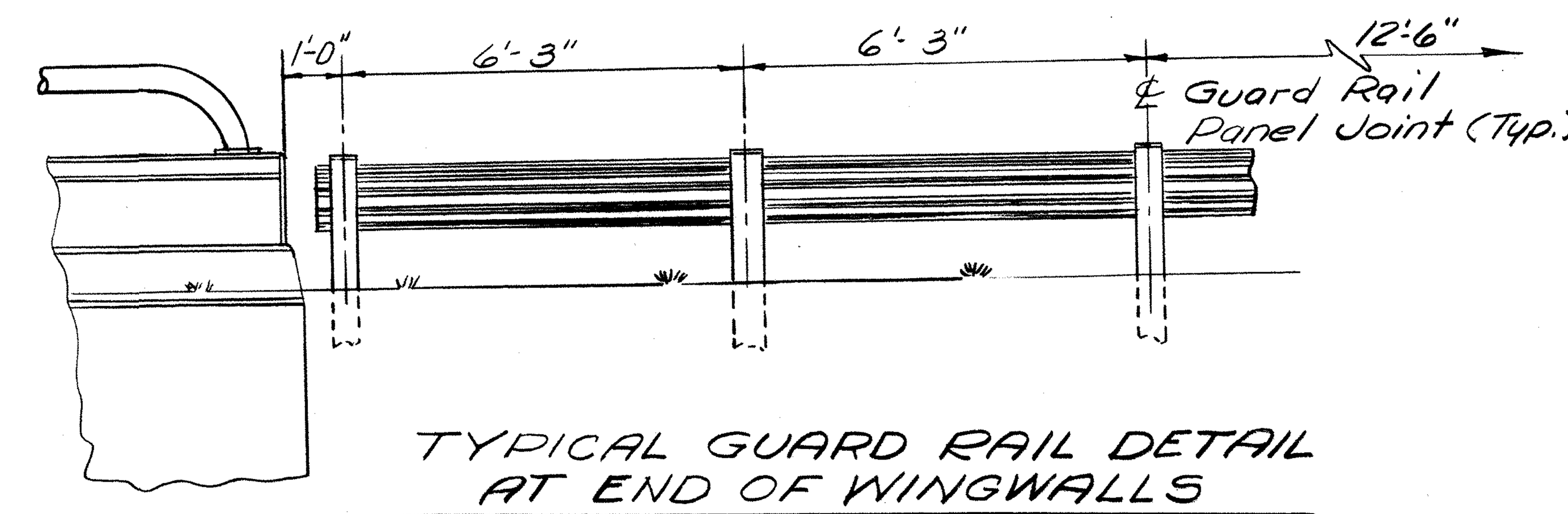
SECTION "S"-"S"



SECTION "T"-"T"



SECTION "U"-"U"



TYPICAL GUARD RAIL DETAIL
AT END OF WINGWALLS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

FORWARD ABUTMENT DETAILS
BRIDGE NO. ROS-35-2157L
USR 35 W.B. over USR 23 S.B. FUTURE PROP.

ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DJP	WDJ		[signature]	[signature]	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

179
240

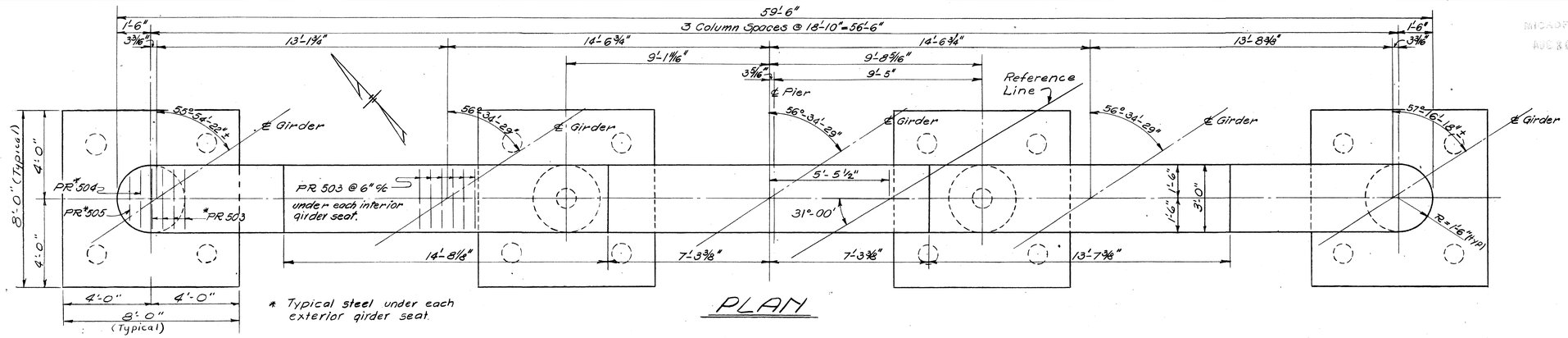
MICROFILMED
AUG 30 1965

ROSS COUNTY
ROS-35-21.23

NOTE

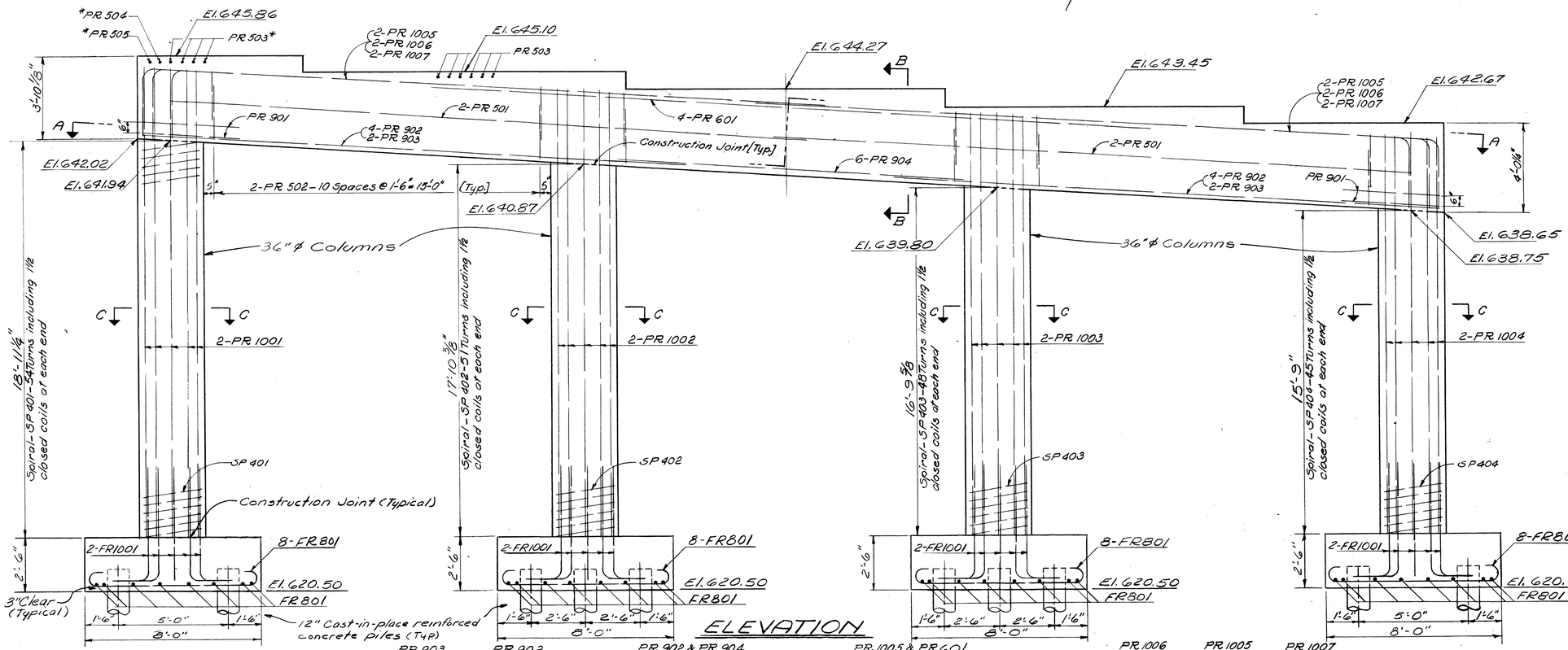
CONCRETE shall be Class "C" For Pier Caps and Columns and Class "E" for Footings.

PILES shall be 12" Cast-in-place reinforced concrete

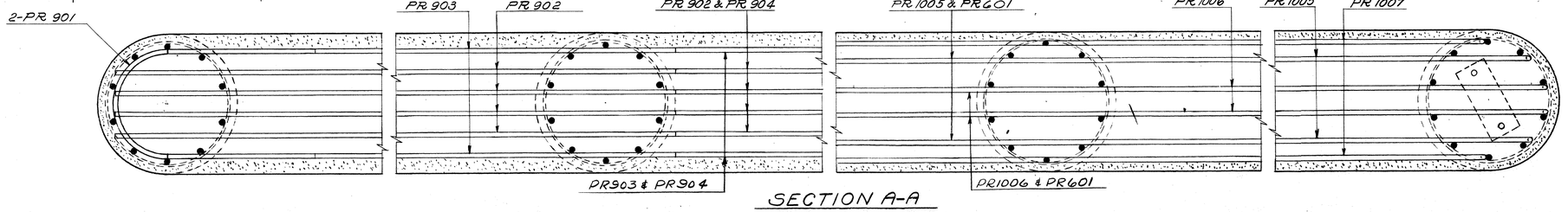


* Typical steel under each exterior girder seat.

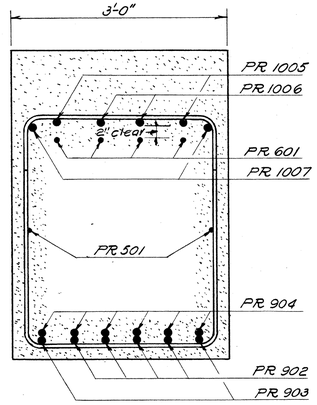
PLAN



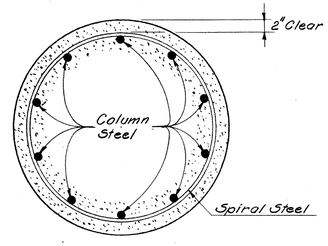
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REAR PIER DETAILS
BRIDGE NO. ROS-35-2157 L
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

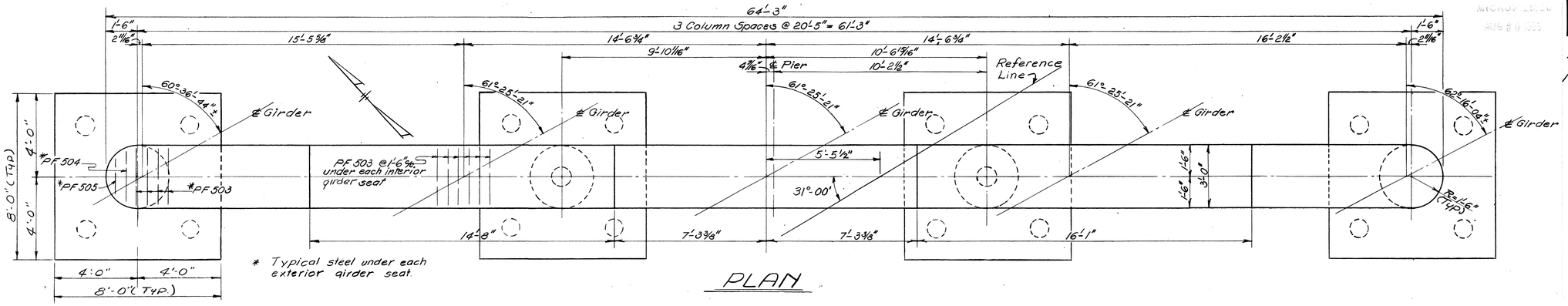
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	K.D.D.	L.P.	R.M.S.	WL	3/14/63	

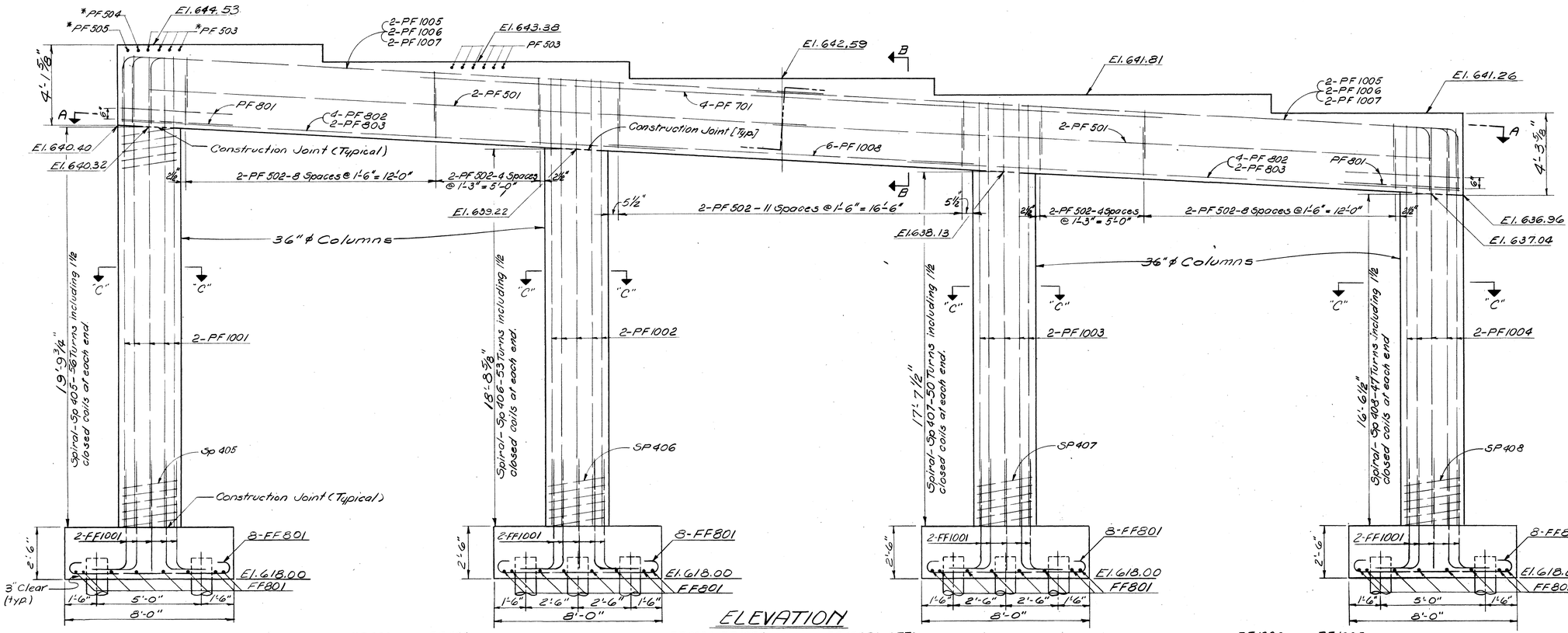
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

180
240

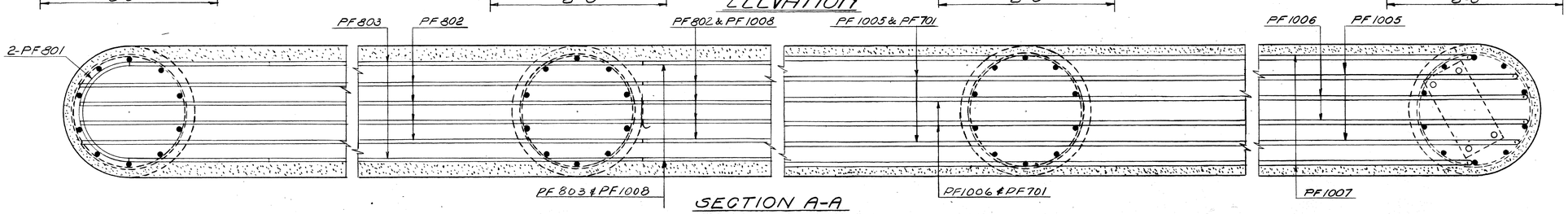
ROSS COUNTY
ROS-35-21.23



PLAN



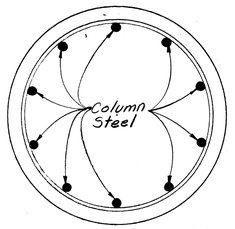
ELEVATION



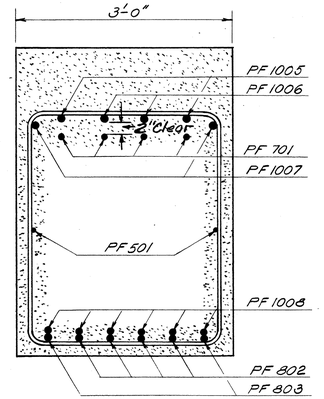
SECTION A-A

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

PILES shall be 12" Cast-in-place reinforced concrete



SECTION "C"-"C"



SECTION B-B

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

FORWARD PIER DETAILS

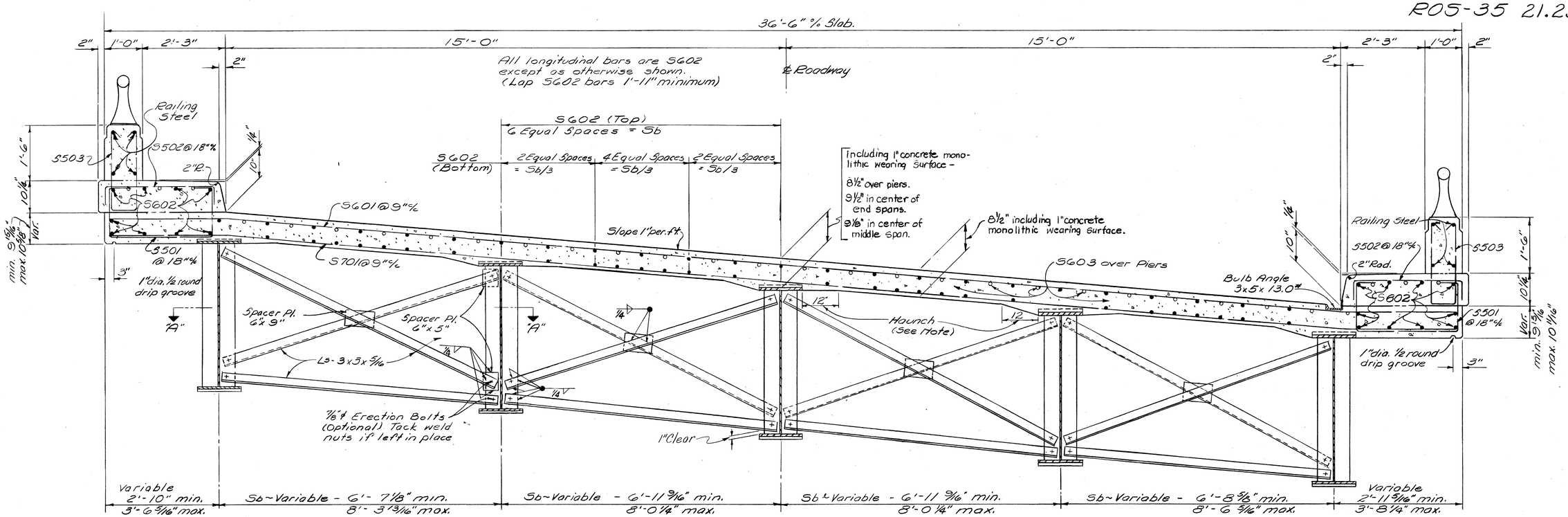
BRIDGE No. ROS-35-2157 L.
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY — U.S.R. 35
STA. 1138+39.57 TO STA. 1141+36.33

SCALE — DATE

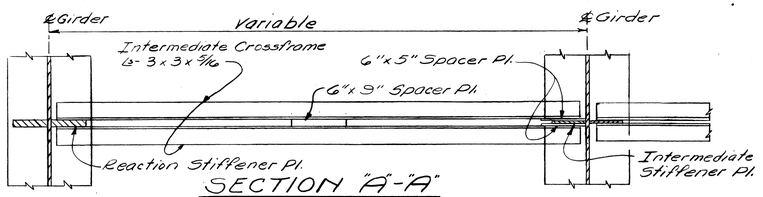
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	K.D.D.	L.P.	R.M.S.	WL	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ROSS COUNTY
ROS-35 21.23



TYPICAL TRANSVERSE SECTION



SECTION "A"-"A"

(Applies where intermediate crossframe is welded to a pier reaction stiffener plate. At abutment reaction stiffeners, one ¼" fill plate welded to intermediate stiffener shall be used.

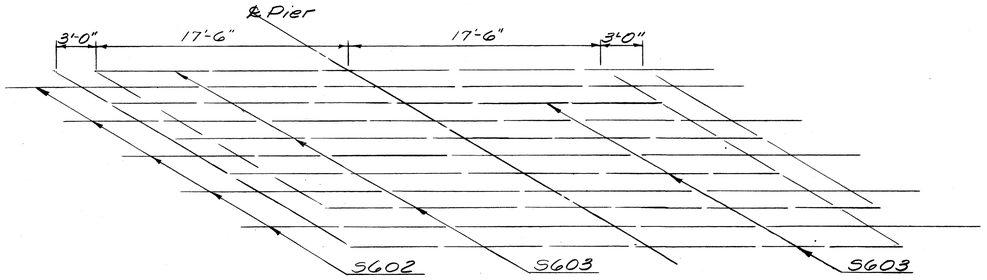


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTES

CONCRETE shall be Class "C."

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

DECK SLAB HAUNCH: The haunch in the superelevated deck slab adjacent to the top of steel girders, which is shown as 12" wide, may vary from this dimension between the limits of 9" and 12" on low side and between 12" and 15" on high side. Except on the high side, the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 12" width.

SLAB THICKNESS shown includes 1" for monolithic wearing surface. The slab thickness shown over the girders 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.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SLAB REINFORCING DETAILS

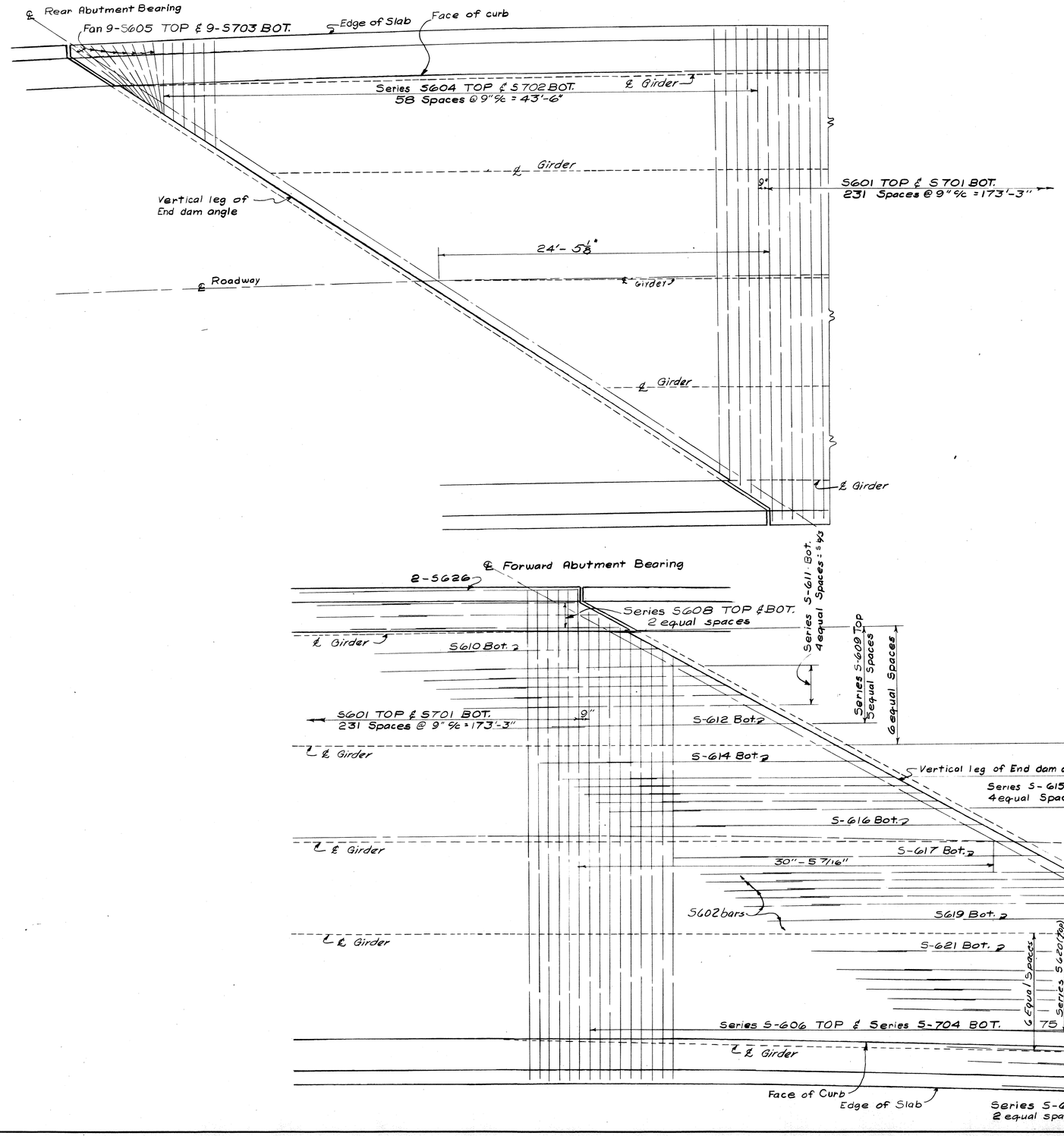
BRIDGE NO. ROS-35-2157 L
U.S.R. 35 W.B. OVER U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

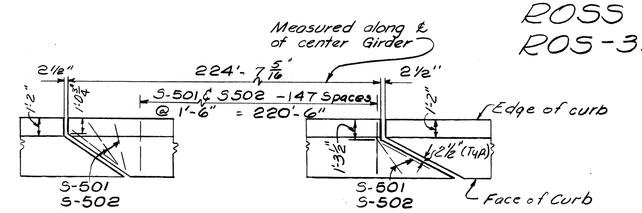
SCALE			DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S. K.D.D.	W.D.J.		D.S.	WHK	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

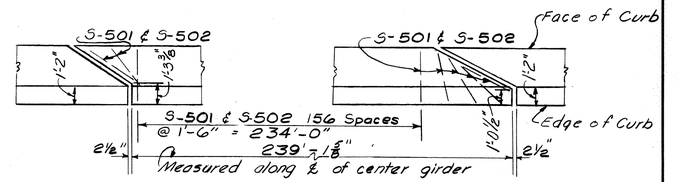
182
240

ROSS COUNTY
ROS-35-21.23





LEFT CURB



RIGHT CURB

NOTE:
Reinforcing bar spacing is measured along the ℄ of the center girder.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SLAB REINFORCING PLAN

BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP

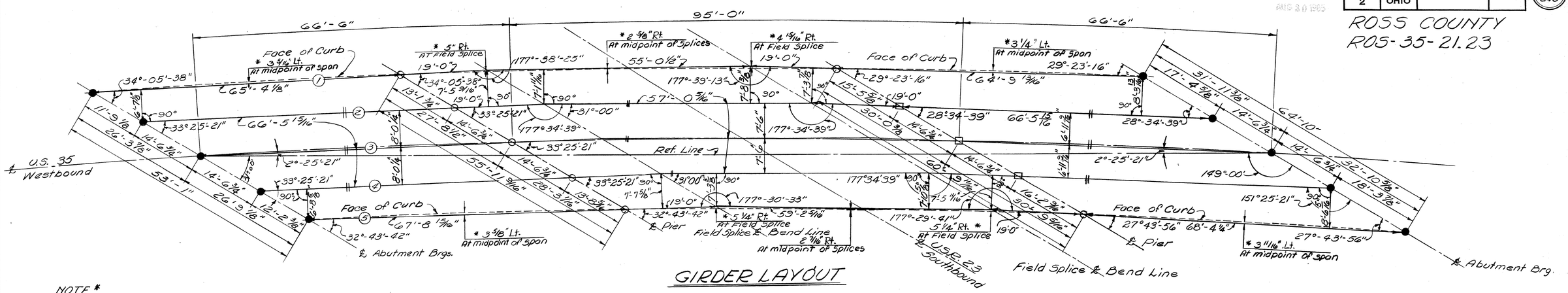
ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	R.S.	L.B.	D.S.	W.L.	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

183
240

ROSS COUNTY
ROS-35-21.23



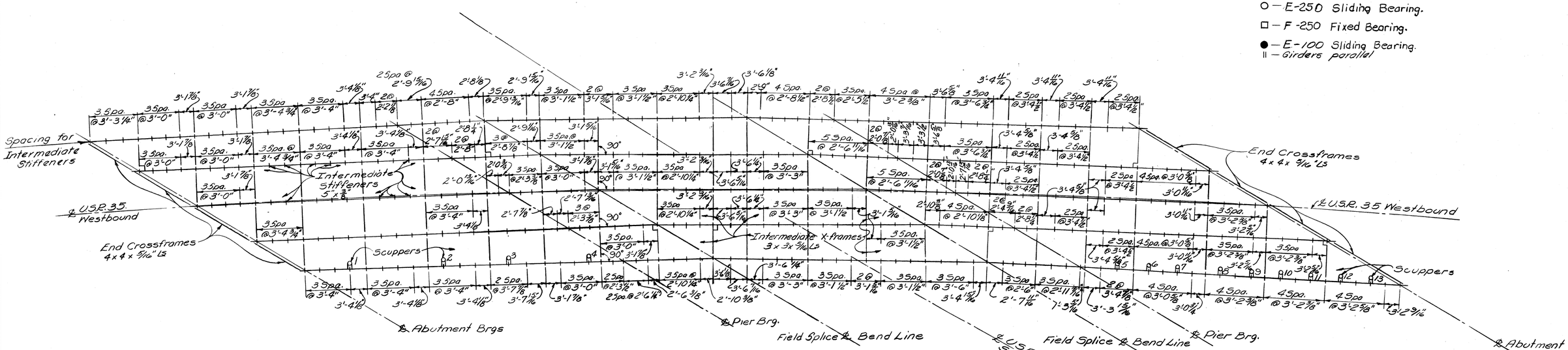
GIRDER LAYOUT

NOTE *

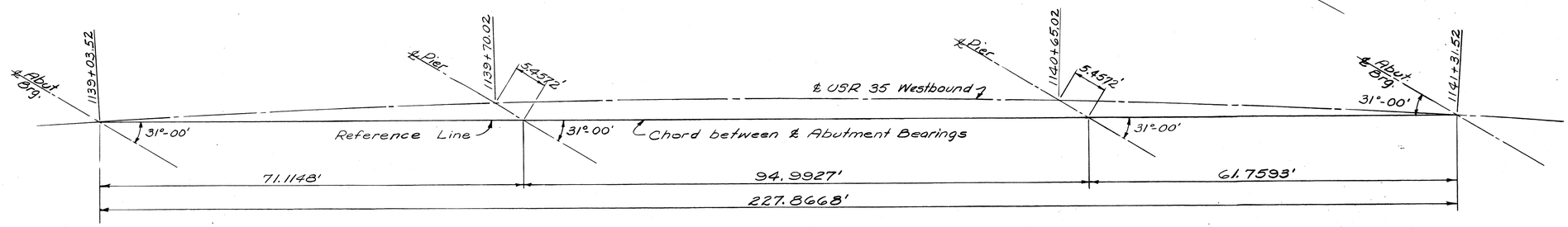
The dimensions shown are measured from the center of girder to the face of curb. The center of fascia girders at abutments and pier bearings coincides with the face of curbs.

LEGEND

○ — E-250 Sliding Bearing.
□ — F-250 Fixed Bearing.
● — E-100 Sliding Bearing.
|| — Girders parallel



STEEL FRAMING PLAN



LAYOUT INFORMATION DETAIL

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

STEEL FRAMING PLAN

BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. OVER U.S.R. 23 S.B. FUTURE PROP.

ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	W.D.J.		D.S.	WK	3/14/63	

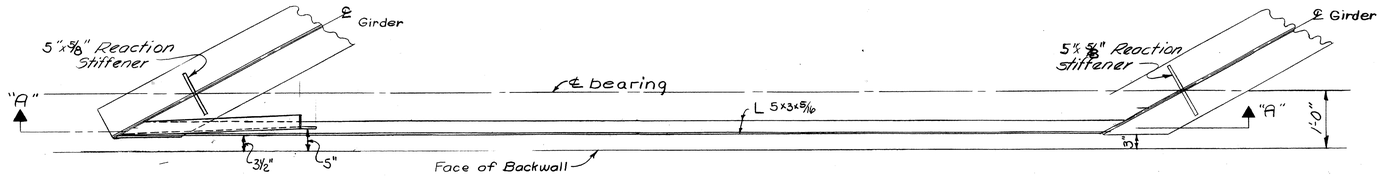

FED. RD. DIVISION 2
STATE OHIO
PROJECT
184
240
ROSS COUNTY
ROS-35-21.23
44'-0" (TYP. All lines)
℄ Rear Abutment Brgs.
℄ Proposed shop web splice *
℄ Rear Pier
19'-0"
℄ Field Splice
℄ Girder
3'-10" Web
Flange 14"x7/8"
Flange 14"x 1 7/8"
Reaction Stiffener 1"x6"
Flange 14"x1 1/4"
Reaction Stiffener 5/8"x5"
Flange 14"x7/8"
Intermediate Stiffeners 3/8"x5"
Flange 14"x 1 7/8"
Flange 14"x 1 1/4"
Intermediate Stiffeners-3/8"x5"
Girder No. 1
47'-1 1/16"
19'-6 1/2"
13'-0 3/8"
5'-11 5/8"
27'-6 1/4"
Girder No. 2,3 & 4
47'-10 3/4"
19'-11 1/2"
13'-3 5/8"
5'-8 3/8"
28'-6 5/32"
Girder No. 5
48'-8 9/16"
20'-5"
13'-7 3/8"
5'-4 5/8"
29'-7 5/32"
Dist. "A"
44'-0" (TYP. All lines)
℄ Girder
℄ Field Splice
19'-0"
℄ Forward Pier
℄ Proposed shop web splice *
℄ Forward Abutment Brg.
Flange 14"x1 1/4"
Flange 14"x1 7/8"
Reaction Stiffener 1"x6"
Flange 14"x 7/8"
Reaction Stiffener 5/8"x5"
Flange 14"x1 1/4"
Intermediate Stiffeners 3/8x5"
Flange 14"x1 7/8"
Flange 14"x 7/8"
Intermediate Stiffeners 3/8"x5"
27'-6 1/4"
5'-11 5/8"
13'-0 3/8"
19'-6 1/2"
46'-9 11/16"
Girder No. 1
28'-6 5/32"
5'-8 3/8"
13'-3 5/8"
19'-11 1/2"
48'-1 1/4"
Girder No. 2,3 & 4
29'-7 5/32"
5'-4 5/8"
13'-7 3/8"
20'-5"
49'-6 9/16"
Girder No. 5
Dist. "B"
GIRDER ELEVATION
2'-0 1/4"
Upper splice plate 11/16"x 14" x 2'-0 1/4"
2°-25'-21"
℄ Girder
Lower splice plate 7/8" x 6" x 2'-0 1/4"
℄ Splice
PLAN
Flange 14"x1 1/4"
1 1/16" x 14"x2'-0 1/4" Cut Plate
2-7/8" x 6" x 2'-0 1/4" Cut Plates
3x5x3/8 stiffener & Bolted over web splice plate
5/8" x 1'-6 1/4" x 3'-6" Bent Plates (One each Side)
3'-10"
8 Spaces @ 4 7/8" = 3'-3"
2-7/8" x 6" x 2'-0 1/4" Cut Plates
Flange 14"x1 1/4"
1 1/16" x 14" x 2'-0 1/4" Cut Plates
Note: All bolts for splice shall be 7/8" ⌀ H.S. Bolts
ELEVATION
TYPICAL FIELD SPLICE
Supplementary to Sec. S-7.14, these stiffeners shall have contact bearing with the compression flange, but may have a clearance of not more than 1/8 inch from the tension flange. The top flange shall be considered the tension flange thru Dist. "A" and Dist. "B" indicated above. At all other locations, the bottom flange shall be considered the tension flange. In shop painting, care shall be taken to make certain that paint is forced through from one side to the other of the 1/8" opening.
Corners of the stiffeners against the web should be clipped to clear web to flange (typical) weld.
Cut for tight fit Milling not required (Do not Weld)
3'-10" x 3/8" web
Plates 5/8" x 5"
Do not weld
3'-10"x 3/8" web
Plates 5" x 3/8"
Do not weld
Cut for tight fit Milling not required (Do not Weld)
3'-10" x 3/8" web
Plates 1"x6"
ABUTMENT
INTERMEDIATE
PIER
STIFFENER DETAILS
NOTES
All flange butt-welds shall be ground flush.
(A) Weld after placing at least one pass on other side
Optional shop splices will be permitted in the webs and flanges of girders but their location shall be submitted to the Director for approval.
Weld from both sides. Welds must be centered on joint
WEB
2 1/2 Max.
Chamfer before welding
60°
80°
FLANGES
TYPICAL SHOP SPLICE WELDS
* Approved 10/20/65
ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street
Chillicothe, Ohio
GIRDER DETAILS
BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. over U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY
U.S.R. 35
STA. 1138+39.57 TO STA. 1141+36.33
SCALE
DATE
DESIGNED R.M.S.
DRAWN WDJ
TRACED
CHECKED D.S.
REVIEWED
DATE 3/14/63
REVISED
Revised As-Built 4-14-70

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

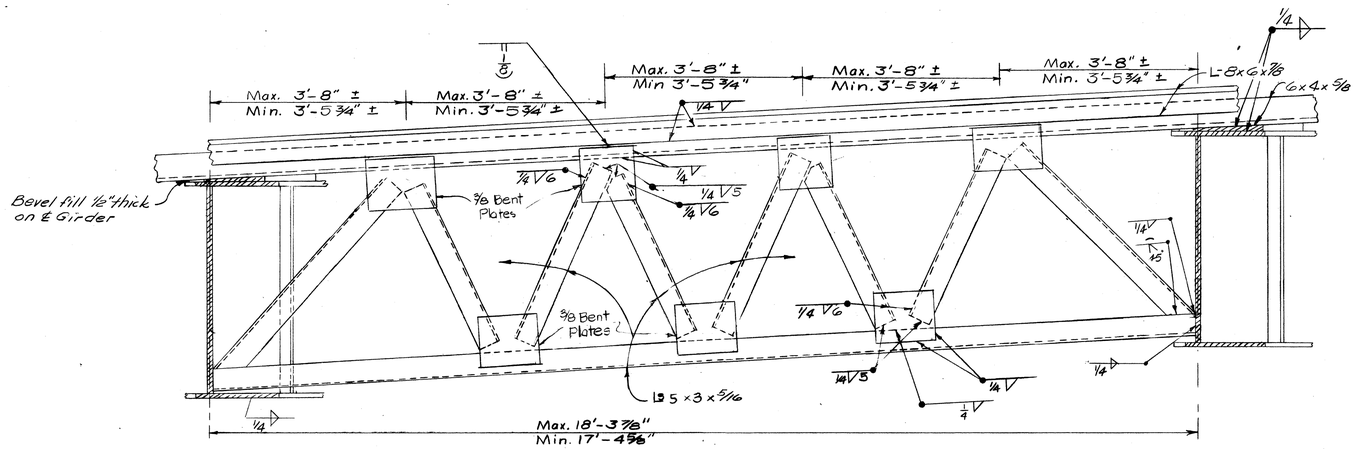
185
240

MICROFILMED
AUG 8 D 1963

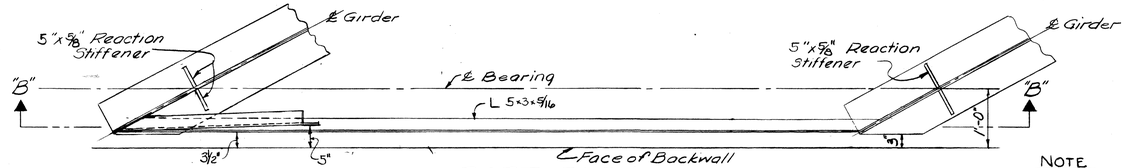
ROSS COUNTY
ROS-35-21.23



PART PLAN
END CROSSFRAME

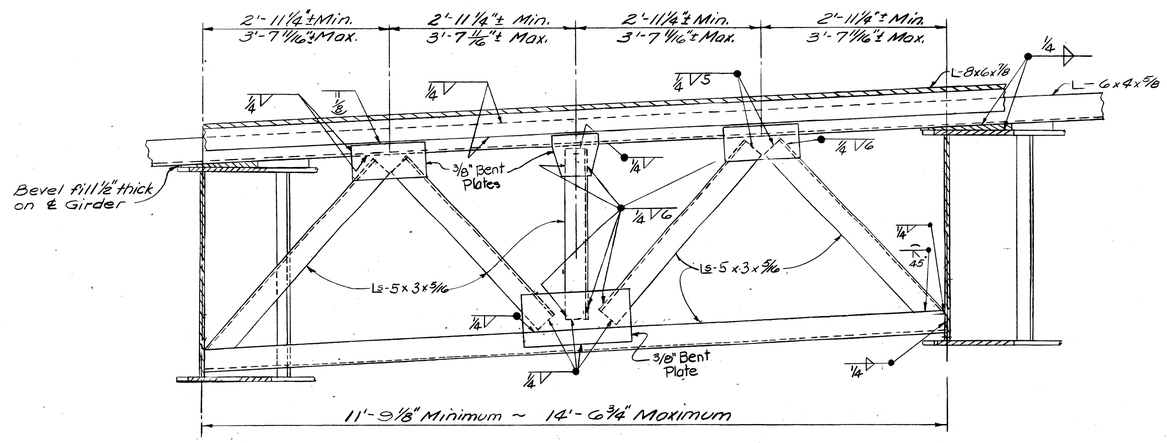


SECTION "A"-"A"

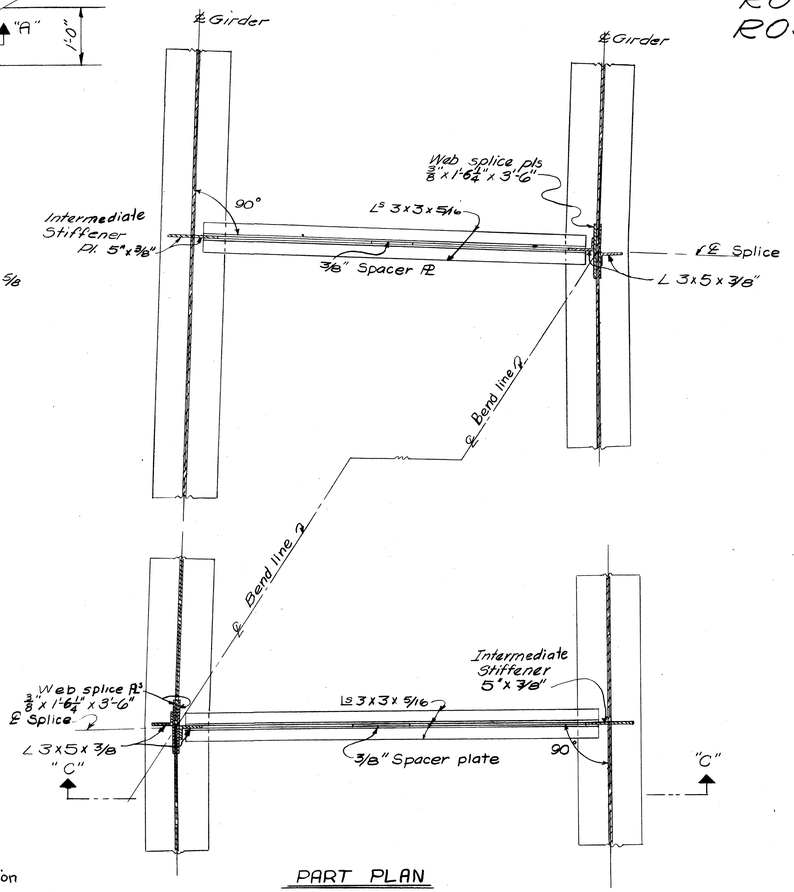


PART PLAN
END CROSSFRAME

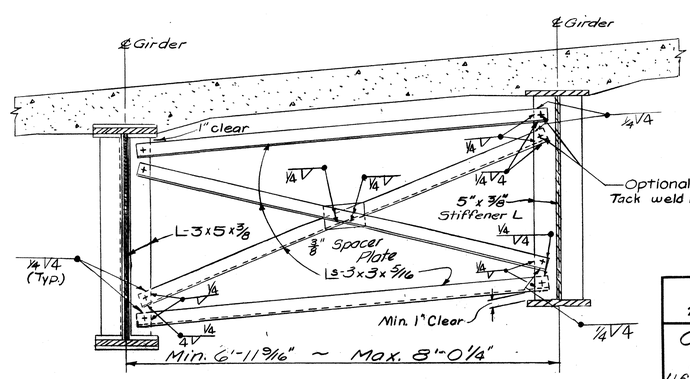
NOTE
See Section "A"-"A" and Section "B"-"B" Sheet No 186 for vertical alignment of end crossframes.



SECTION "B"-"B"



PART PLAN



SECTION "C"-"C"
CROSSFRAME AT FIELD SPLICE ~ BEND LINE

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

CROSSFRAME DETAILS

BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. OVER U.S.R. 23 S.B. FUTURE PROP.

ROSS COUNTY U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

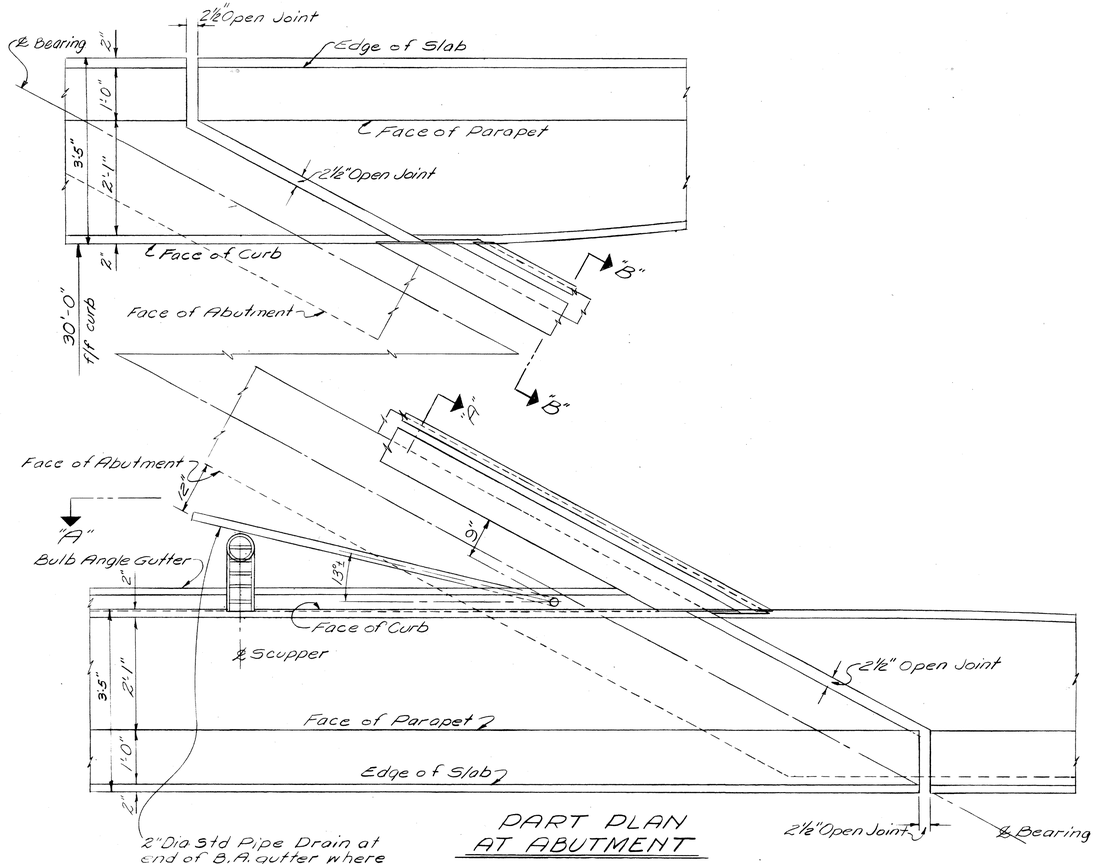
SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	E.S. H.D.J.		D. S.	W.L.	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

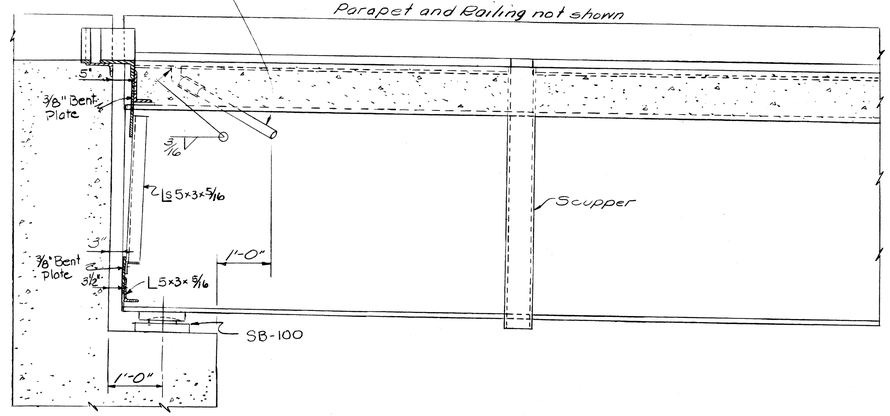
186/240

RECEIVED AUG 30 1963

ROSS COUNTY
ROS-35 21.23



PART PLAN AT ABUTMENT



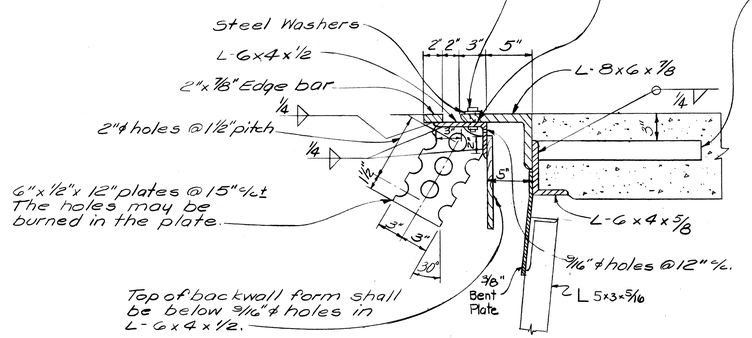
SECTION "A"-"A"

No joints will be permitted in end dam angles attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 2'-0" in length with a joint at the Contraction joint in the backwall. These shall be closely butted but shall not be welded.

5/8" x 2" bolts at not more than 2'-0" ℄ with nuts tack-welded to under side of lower angle. 1 1/16" holes in upper angle. Center 5/8" bolts in 1 1/16" holes. Apply flake graphite between washers and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has set, preferably within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Fill holes with bituminous material.

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of backwall concrete.

Anchor bars 2 x ½ x 1'-6" @ 1'-3" ℄ placed parallel with longitudinal reinforcing steel



SECTION "B"-"B"

Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

END DAM DETAILS

BRIDGE NO. ROS-35-2157L
U.S.R. 35 W.B. OVER U.S.R. 23 S.B. FUTURE PROP.

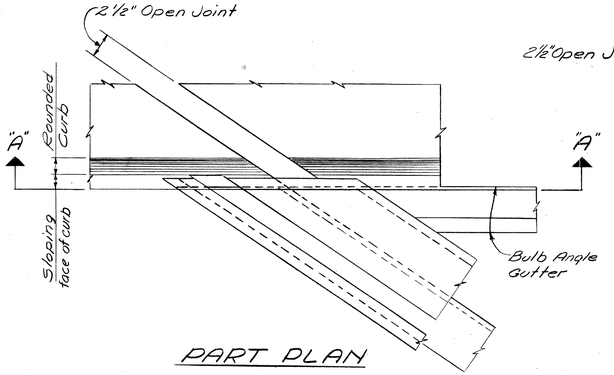
ROSS COUNTY U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	W.D.J.		D.S.	WWC	3/14/63	

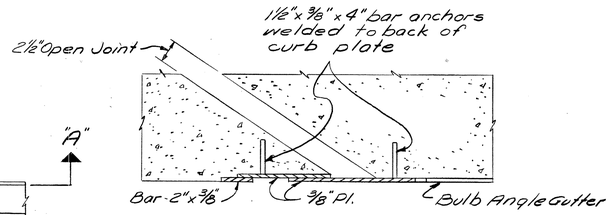
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

187/240

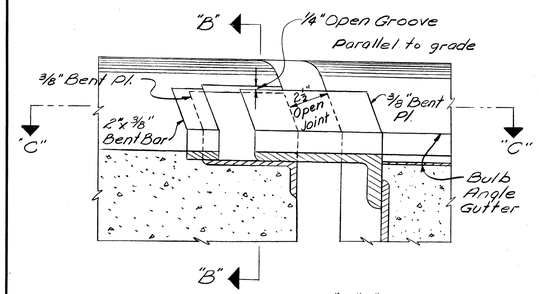
ROSS COUNTY
ROS-35-21.23



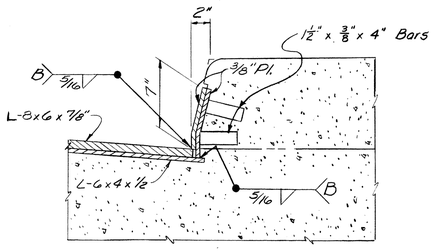
PART PLAN



SECTION "C"-"C"



SECTION "A"-"A"

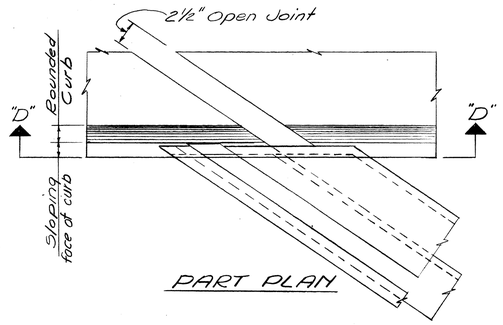


SECTION "B"-"B"

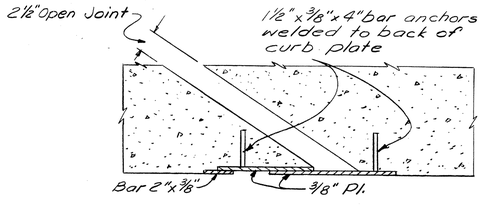
CURB PLATE DETAILS (RT. ℄)

DEFLECTION AND CAMBER											
SPAN	GIRDER NUMBER	LENGTH OF GIRDER	POINT IN SPAN	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO REMAINING DEAD LOAD	CONVEXITY OR CONCAVITY DUE TO SUPERELEVATION	TOTAL DEFLECTION	CAMBER REQUIRED	CONVEXITY OR CONCAVITY DUE TO SUPERELEVATION	TOTAL	CAMBER REQUIRED
REAR	1	65.3410'	16.3358' 32.6705' 49.0057'	+0.04" +0.04" +0.01"	+0.20" +0.21" +0.03"	-0.02" -0.02" -0.02"	+0.22" +0.23" +0.02"	+¼" +¼" 0	-0.21" -0.28" -0.21"	+0.02" -0.03" -0.17"	0" 0" -1/16"
	2	66.4965'	16.6241' 33.2482' 49.8724'	+0.04" +0.04" +0.01"	+0.17" +0.17" +0.03"	-0.02" -0.02" -0.02"	+0.19" +0.19" +0.02"	+3/16" +3/16" 0	-0.21" -0.29" -0.22"	0.00" -0.03" -0.18"	0" -1/16" -3/16"
	3	66.4965'	16.6241' 33.2482' 49.8724'	+0.04" +0.04" +0.01"	+0.17" +0.17" +0.03"	-0.02" -0.02" -0.02"	+0.20" +0.20" +0.02"	+3/16" +3/16" 0"	-0.22" -0.29" -0.22"	-0.01" -0.03" -0.18"	0" -1/16" -3/16"
	4	66.4965'	16.6241' 33.2482' 49.8724'	+0.04" +0.04" +0.01	+0.17" +0.17" +0.03"	-0.10" -0.02" -0.02"	+0.11" +0.19" +0.02"	+⅛ +3/16" +0	-0.22" -0.29" -0.22"	-0.01" -0.03" -0.18"	0" -1/16" -3/16"
	5	67.7454'	16.9363' 33.8727 50.8090'	+0.04" +0.04" +0.01"	+0.20" +0.21" +0.03"	-0.02" -0.03" -0.02"	+0.22" +0.22" +0.02"	+¼" +¼" 0	-0.23" -0.30" -0.23"	+0.01" -0.05" -0.19"	0" -1/16" -3/16"
CENTER	1	93.0395'	19' 46.5197' 74.0395'	+0.04" +0.09" +0.04"	+0.17" +0.42" +0.17"	+0.03" +0.02" +0.03"	+0.24" +0.53" +0.24"	+¼" +½" +¼"	+0.42" +0.22" +0.41"	+0.62" +0.75" +0.62"	+⅝" +⅞" +⅝"
	2	95.0243'	19' 47.5121' 76.0243'	+0.04" +0.09" +0.04"	+0.15" +0.35" +0.15"	+0.04" +0.02" +0.04"	+0.23" +0.46" +0.23"	+¼" +7/16" +¼"	+0.42" +0.23" +0.42"	+0.65" +0.67" +0.61"	+⅝" +11/16" +⅝"
	3	95.0243'	19' 47.5121' 76.0243'	+0.04" +0.09" +0.04"	+0.15" +0.35" +0.15"	+0.04" +0.02" +0.04"	+0.23" +0.46" +0.23"	+¼" +7/16" +¼	+0.43" +0.21" +0.42"	+0.62" +0.65" +0.61"	+⅝" +⅝" +⅝"
	4	95.0243'	19' 47.5121' 76.0243'	+0.04" +0.09" +0.04"	+0.15" +0.35" +0.15"	+0.04" +0.02" +0.04"	+0.23" +0.46" +0.23"	+¼" +7/16" +¼"	+0.43" +0.21" +0.42"	+0.62" +0.65" +0.61"	+⅝" +⅝" +⅝"
	5	97.1951'	19.00' 48.5975' 78.1951'	+0.04" +0.09" +0.04"	+0.17" +0.42" +0.17"	+0.04" +0.02" +0.04"	+0.25" +0.53" +0.25"	+¼" +½" +¼"	+0.44" +0.21" +0.44"	+0.62" +0.72" +0.65"	+⅝" +¾" +⅝"
FORWARD	1	64.8202'	16.2050' 32.4101' 48.6151'	+0.01" +0.04" +0.04"	+0.03" +0.21" +0.20"	-0.02" -0.02" -0.02"	+0.02" +0.23" +0.22"	0 +¼" +¼"	-0.21" -0.27" -0.21"	-0.17" -0.02" +0.02"	-3/16" 0" 0"
	2	66.4965'	16.6241' 33.2482' 49.8724'	+0.01" +0.04" +0.04"	+0.03" +0.17" +0.17"	-0.02" -0.02" -0.02"	+0.02" +0.19" +0.20"	0 +3/16" +3/16"	-0.22" -0.29" -0.21"	-0.18" -0.08" 0.00"	-3/16" -1/16" 0"
	3	66.4965'	16.6241' 33.2482' 49.8724'	+0.01" +0.04" +0.04"	+0.03" +0.17" +0.17"	-0.02" -0.02" -0.02"	+0.02" +0.19" +0.19"	0 +3/16" +3/16"	-0.22" -0.29" -0.22"	-0.18" -0.08" -0.01"	-3/16" -1/16" 0"
	4	66.4965'	16.6241' 33.2482' 49.8724'	+0.01" +0.04" +0.04"	+0.03" +0.17" +0.17"	-0.02" -0.03" -0.02"	+0.02" +0.18" +0.20"	0 +3/16" +3/16"	-0.22" -0.30" -0.22"	-0.18" -0.09" -0.01"	-3/16" -1/16" 0"
	5	68.3552	17.0888' 34.1776' 51.2664'	+0.01" +0.04" +0.04"	+0.03" +0.21" +0.20"	-0.02" -0.03" -0.02"	+0.02" +0.22" +0.22"	0 +1/16" +¼"	-0.23" -0.31" -0.23"	-0.15" -0.06" +0.01"	-3/16" -1/16" 0"

NOTE: (+) Convexity
(-) Concavity



PART PLAN



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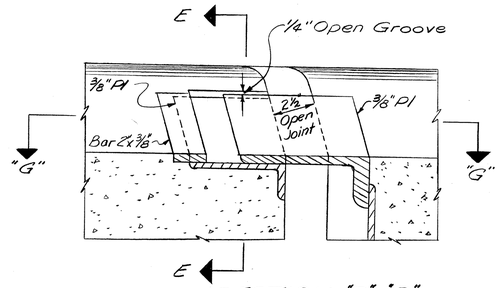

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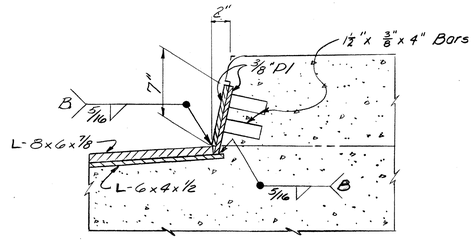


SECTION "E"-"E"

CURB PLATE DETAILS (LT. ℄)

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

CURB PLATE DETAILS AND DEFLECTION AND CAMBER

BRIDGE NO. ROS-35-2157L
U.S.R.35 W.B. OVER U.S.R.23 S.B. FUTURE PROP.

ROSS COUNTY — U.S.R. 35
STA. 1138+99.57 TO STA. 1141+36.33

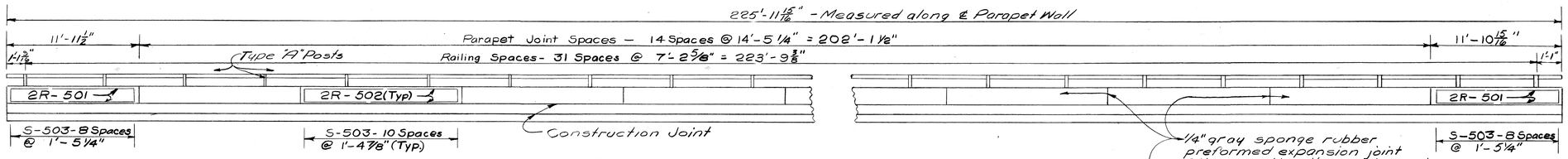
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	W.D.J.		D. S.	WK	3/14/63	2-21-66

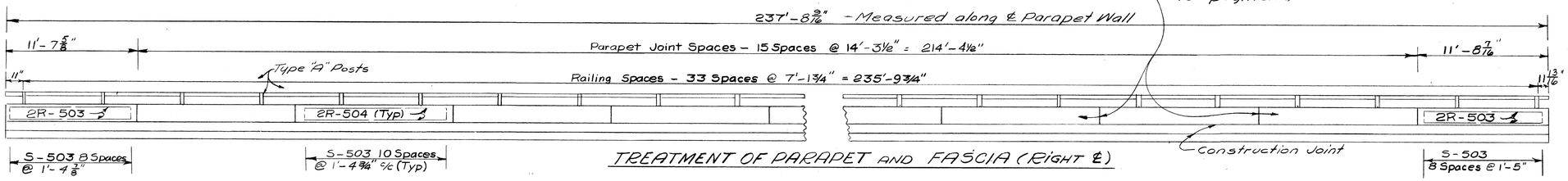
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

188
240

ROSS COUNTY
ROS-35-21.23

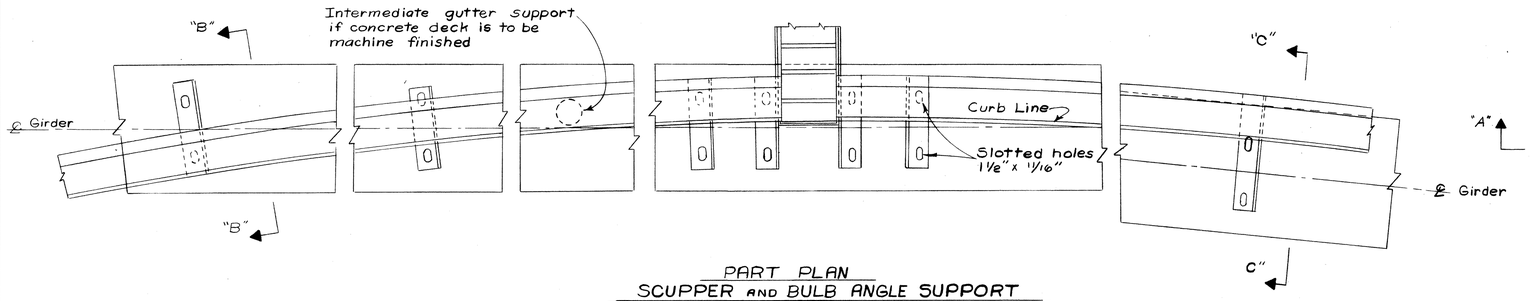


TREATMENT OF PARAPET AND FASCIA (LEFT ℄)

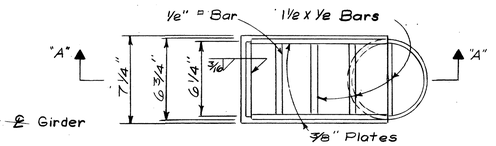


TREATMENT OF PARAPET AND FASCIA (RIGHT ℄)

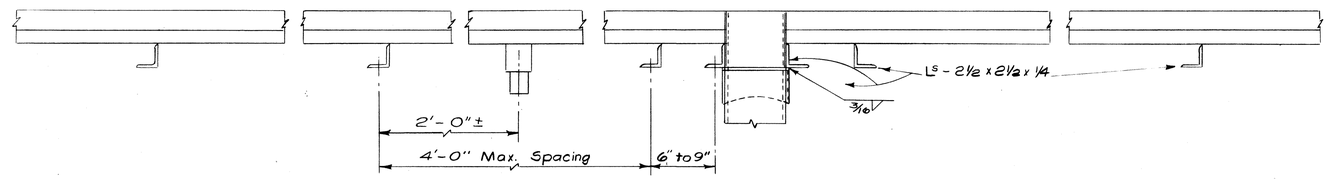
* Dimension "A" is normal to ℄ Girder (See Scupper Location Table, this sheet)



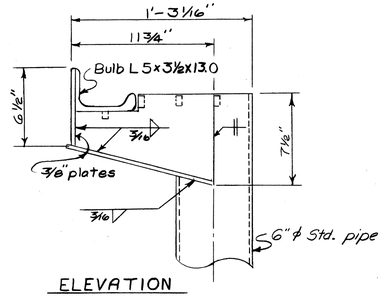
PART PLAN
SCUPPER AND BULB ANGLE SUPPORT



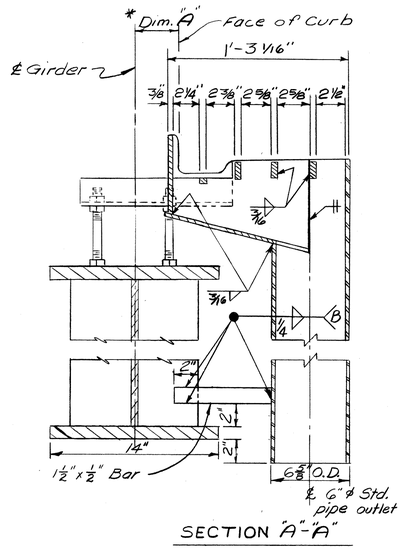
PLAN



ELEVATION

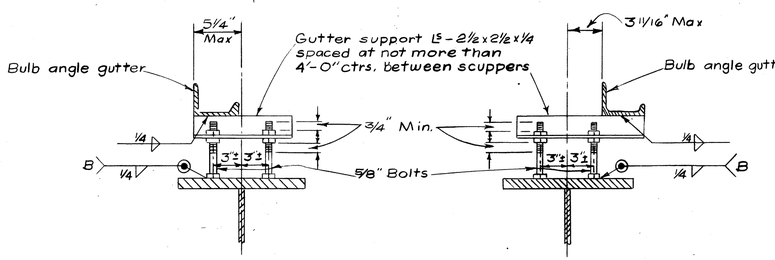


ELEVATION



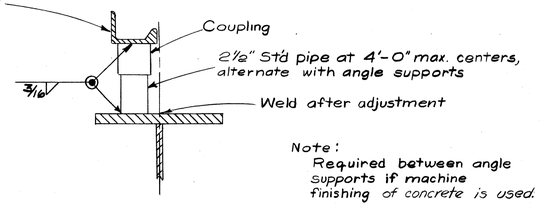
SECTION "A"-"A"

SCUPPER DETAILS



SECTION "B-B"

SECTION "C-C"



INTERMEDIATE GUTTER SUPPORT

Note:
Required between angle supports if machine finishing of concrete is used.

SCUPPER LOCATION	
SCUPPER NO.	DIM. "A"
1	1'3/16"
2	3 9/16"
3	3 5/16"
4	1 7/16"
5	1 9/16"
6	2 1/2"
7	3 1/8"
8	3 5/8"
9	3'1/16"
10	3 1/2"
11	3"
12	2 1/4"
13	1 1/4"

Note:
For location of scuppers by scupper number see Steel Framing Plan.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

DECK DRAINAGE AND RAILING DETAILS
BRIDGE NO. ROS-35-2157 L
U.S.R. 35 W.B. OVER U.S.R. 23 S.B. FUTURE PROP.
ROSS COUNTY U.S.R. 35
STA. 1138+99.37 TO STA. 1141+36.33

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	W.O.J.	L.B.	D.S.	[illegible]	3/14/63	

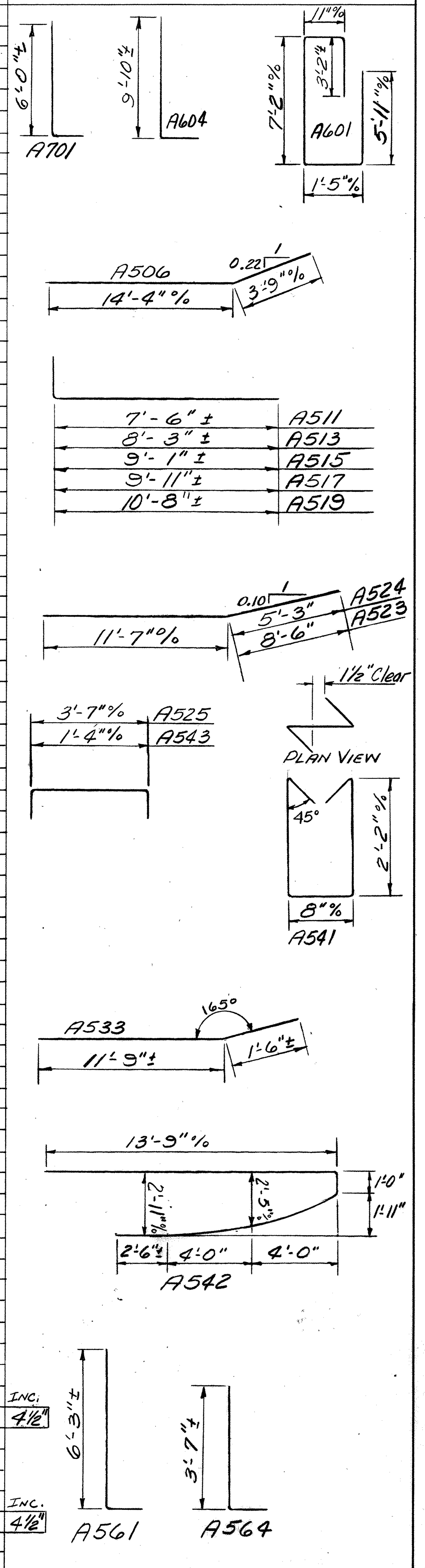
ROSS COUNTY
ROS-35-21.23

For Notes see Sheet No. 190

REINFORCING STEEL LIST

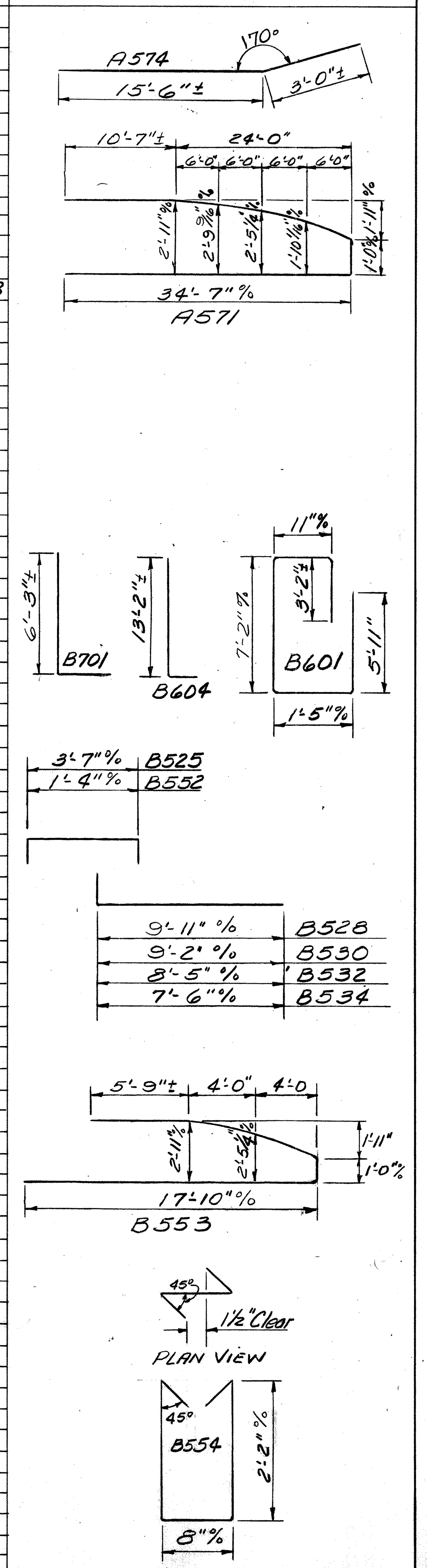
Bar Number	Number Required	Length	Shape	Weight
REAR ABUTMENT				
A701	9	7'-1"	L	130
A601	52	18'-0"	▯	1406
A602	9	8'-1"	—	109
A603	8	8'-0"	—	96
A604	3	10'-6"	L	47
A605	3	9'-0"	—	41
A606	3	5'-9"	—	26
A607	8	19'-0"	—	228
A501	2	32'-4"	—	67
A502	5	35'-0"	—	183
A503	5	30'-4"	—	158
A504	1	16'-7"	—	17
A505	1	17'-8"	—	18
A506	4	18'-1"	—╱	75
A507	4	31'-9"	—	132
A508	4	30'-4"	—	127
A509	1	30'-8"	—	32
A510	16	5'-6"	—	92
A511	12	8'-0"	—┘	100
A512	15	6'-3"	—	98
A513	15	8'-9"	—┘	137
A514	15	7'-1"	—	111
A515	15	9'-7"	—┘	150
A516	12	7'-11"	—	99
A517	12	10'-5"	—┘	130
A518	5	8'-8"	—	45
A519	8	11'-2"	—┘	58
A520	6	27'-6"	—	172
A521	6	31'-6"	—	197
A522	2	12'-2"	—	25
A523	2	20'-1"	—╱	42
A524	2	16'-10"	—╱	35
A525	30	4'-7"	⊓	143
A526	1	12'-7"	—	13
A527	4	9'-0"	—	38
A528	4	9'-7"	—	40
A529	1	9'-2"	—	10
A530	1	5'-3	—	5
A531	1	6'-9"	—	7
A532	2	17'-7"	—	37
A533	3	13'-3"	—╱	41
A534	3	6'-0"	—	19
A535	6	4'-0	—	25
A536	11	7'-6"	—	86
A537	2	5'-6"	—	11
A538	8	5'-9"	—	48
A539	2	4'-6	—	9
A540	8	3'-8"	—	31
A541	37	5'-7"	M	215
A542	2	25'-0"	⊃	52
A543	37	2'-4"	⊓	90
A544	9	4'-7"	—	43
A545	4	30'-6"	—	127
A546	4	31'-6"	—	131
A547	1	31'-8	—	33
A548	10	10'-7"	—	110
A549	5	5'-2"	—	26
A550	5	6'-10"	—	36
A551	4	4'-1"	—	17
A552	6	5'-10"	—	37
A553	8	5'-2"	—	43
A554	8	8'-8"	—	72
A555	5	6'-2"	—	32
A556	14	4'-8"	—	68
A557	8	12'-3"	—	102
A558	2 Series 5 bars	8'-3" to 9'-9"	—	169 (INC. 4½")
A559	6	4'-0"	—	25
A560	6	8'-1"	—	51
A561	9	6'-8"	—┘	63
A562	6	7'-8"	—	48
A563	2 Series 9 bars	3'-6" to 6'-6"	—	94 (INC. 4½")
A564	4	4'-0"	—┘	17
A565	8	3'-8"	—	31

Bending Diagrams



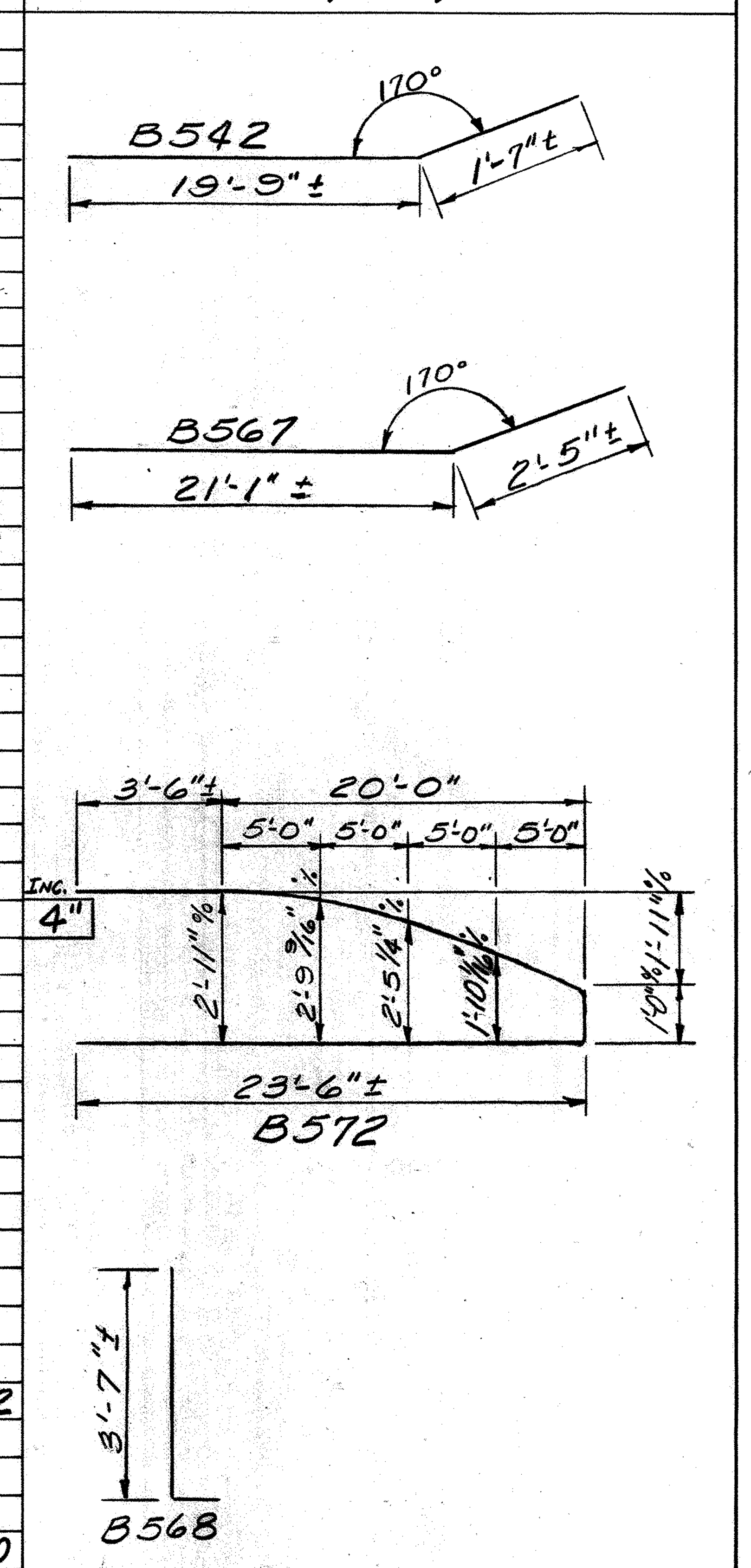
Bar Number	Number Required	Length	Shape	Weight
REAR ABUTMENT CONT.				
A566	2	5'-2"	—	11
A567	2	7'-3"	—	15
A568	2	17'-2"	—	36
A569	2	22'-10"	—	48
A570	6	18'-6"	—	116
A571	2	69'-11	⊃	146
A572	2	2'-9"	—	6
A573	2	3'-4"	—	7
A574	2	18'-6"	—╱	39
A575	13	10'-0	—	136
TOTAL REAR ABUTMENT				7,238
FORWARD ABUTMENT				
B701	6	7'-4"	L	90
B601	64	18'-0"	▯	1730
B602	12	7'-6"	—	135
B603	8	8'-0"	—	96
B604	4	13'-10"	L	83
B605	4	24'-3"	—	146
B501	3	26'-10"	—	84
B502	13	10'-0"	—	136
B503	12	21'-5"	—	268
B504	2	20'-11"	—	44
B505	6	35'-8"	—	223
B506	2	16'-1"	—	34
B507	1	34'-8"	—	36
B508	1	25'-8"	—	27
B509	2	19'-0"	—	40
B510	1	20'-2"	—	21
B511	1	8'-3"	—	9
B512	1	7'-2"	—	7
B513	1	2'-6"	—	3
B514	4	37'-0"	—	154
B515	4	35'-8"	—	149
B516	1	36'-7"	—	38
B517	5	34'-10"	—	182
B518	10	21'-2"	—	221
B519	1	5'-0	—	5
B520	2	27'-3"	—	57
B521	4	13'-2"	—	55
B522	4	39'-3"	—	164
B523	8	21'-2"	—	177
B524	2	21'-4"	—	45
B525	30	4'-7"	⊓	143
B526	8	8'-10"	—	74
B527	18	7'-11"	—	149
B528	18	10'-5"	L	196
B529	14	7'-2"	—	105
B530	14	9'-8"	L	141
B531	15	6'-5"	—	100
B532	15	8'-11"	L	140
B533	21	5'-6"	—	120
B534	26	8'-0"	L	217
B535	1	17'-6"	—	18
B536	5	14'-6"	—	76
B537	5	13'-7"	—	71
B538	1	14'-8"	—	15
B539	1	10'-0"	—	10
B540	1	11'-10"	—	12
B541	2	22'-6"	—	47

Bending Diagrams



Bar Number	Number Required	Length	Shape	Weight
FORWARD ABUTMENT CON'T.				
B542	3	21'-4"	—╱	67
B543	3	6'-3"	—	20
B544	14	10'-10"	—	158
B545	6	4'-0"	—	25
B546	12	5'-10"	—	73
B547	2	5'-4"	—	11
B548	2	4'-4"	—	9
B549	2	3'-4"	—	7
B550	6	3'-0"	—	19
B551	10	3'-8	—	38
B552	34	2'-4"	⊓	83
B553	2	32'-7"	⊃	68
B554	34	5'-7"	M	75
B555	12	7'-6"	—	94
B556	6	3'-9"	—	23
B557	6	5'-5"	—	34
B558	7	8'-2"	—	60
B559	6	4'-8"	—	29
B560	4	5'-11	—	25
B561	8	4'-8"	—	39
B562	3	5'-0"	—	16
B563	8	9'-3"	—╱	77
B564	2 Series 10 bars	3'-8" to 6'-8"	—	108 (INC. 4")
B565	2	10'-3"	—	21
B566	2	23'-6"	—	49
B567	2	23'-6"	—╲	49
B568	4	4'-1"	—	17
B569	8	3'-8"	—	31
B570	2	3'-6"	—	7
B571	2	4'-0"	—	8
B572	2	47'-9"	⊃	100
B573	10	6'-10"	—	71
B574	4	9'-0"	—	38
TOTAL FORWARD ABUT.				7,642
TOTAL TWO ABUT'S.				14,880

Bending Diagrams



ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street
Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2157L
USR 35WB over USR 23 S.B. FUTURE PROP.
ROSS COUNTY USR 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE		DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE / REVISED
DVP	WDJ		R.M.S.	WK	3/14/63

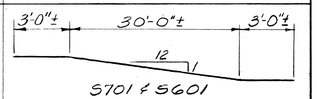
FED. RD. DIVISION	STATE	PROJECT		190 / 240
2	OHIO			

ROSS COUNTY
ROS-35-21.23

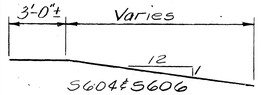
REINFORCING STEEL LIST

Bar Number	Number Required	Length	Shape	Weight	Increment
SUPERSTRUCTURE					
S701	232	36'-1"		17,111	
S702	1 Series of 59 bars	5'-2" to 34'-6"		2,392	6"
S703	9	5'-2"		95	
S704	1 Series of 76 bars	5'-3" to 34'-6"		3,087	4⅝"
S705	10	5'-3"		107	
S601	232	36'-1"		12,574	
S602	426	36'-11"		23,621	
S603	62	38'-0"		3,539	
S604	1 Series of 59 bars	5'-2" to 34'-6"		1,758	6"
S605	9	5'-2"		70	
S606	1 Series of 76 bars	5'-3" to 34'-6"		2,269	4⅝"
S607	10	5'-3"		79	
S608	2 Series of 3 bars	14'-2" to 15'-0"		131	5"
S609	1 Series of 6 bars	15'-0⅛" to 17'-8"		147	6⅜"
S610	1	15'-6"		23	
S611	1 Series of 5 bars	16'-1" to 17'-2"		125	3¼"
S612	1	17'-8"		27	
S613	1 Series of 12 bars	18'-7" to 23'-9"		382	5⅝"
S614	1	19'-1"		29	
S615	1 Series of 5 bars	19'-6" to 20'-5"		150	2¾"
S616	1	20'-11"		31	
S617	1	21'-10"		33	
S618	1 Series of 5 bars	22'-4" to 23'-3"		171	2¾"
S619	1	23'-9"		36	
S620	1 Series of 6 bars	24'-4" to 28'-3"		237	9⅜"
S621	1	25'-1"		38	
S622	1 Series of 5 bars	25'-10" to 27'-5"		200	4¾"
S623	1	28'-3"		42	
S624	2 Series of 3 bars	29'-6" to 30'-6"		270	6"
S625	2	30'-4"		91	
S626	2	15'-6"		47	
S501	316	6'-0"	▭	1,978	
S502	316	3'-10"	▭	1,263	
S503	355	5'-7"	▭	2,067	
TOTAL SUPERSTRUCTURE				74,220	

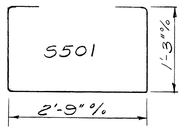
Bending Diagrams

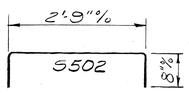


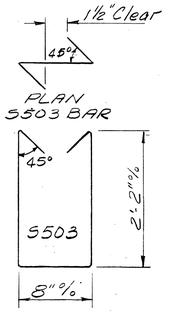
S701 & S601



S604 & S606
S702 & S704





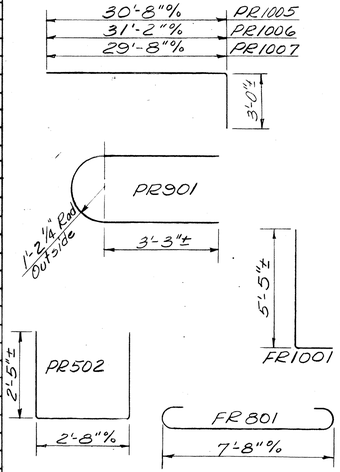


Bar Number	Number Required	Length	Shape	Weight
REAR PIER				
PR1001	10	22'-6"		968
PR1002	10	21'-5"		922
PR1003	10	20'-4"		875
PR1004	10	19'-3"		828
PR1005	4	33'-4"		574
PR1006	4	33'-10"		582
PR1007	4	32'-4"		557
PR901	4	10'-3"	⊂	139
PR902	8	24'-6"		666
PR903	4	23'-2"		315
PR904	6	15'-10"		323
PR601	4	32'-9"		197
PR501	4	29'-0"		121
PR502	66	7'-3"	⊔	499
PR503	26	2'-8"		72
PR504	2	2'-4"		5
PR505	2	1'-10"		4
FR1001	40	6'-6"	L	1119
FR801	64	9'-10"	⊂	1680
SUB-TOTAL				10446

SPIRAL

Bar No.	No. Reqd.	Core Dia % Spiral	Length	Pitch	No. Turns	Weight
SP401	1	32"	18'-11½"	4½"	54	349
SP402	1	32"	17'-10⅜"	4½"	51	330
SP403	1	32"	16'-9⅝"	4½"	48	310
SP404	1	32"	15'-9"	4½"	45	291
SPIRAL TOTAL						1,280
TOTAL REAR PIER						11,726

Bending Diagrams

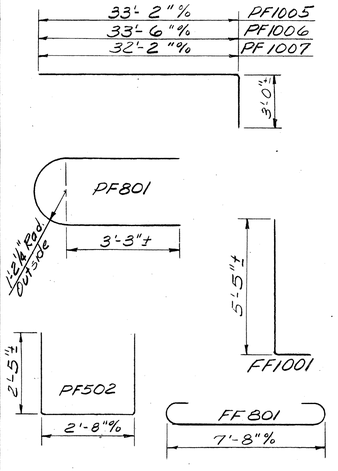


Bar Number	Number Required	Length	Shape	Weight
FORWARD PIER				
PF1001	10	23'-4"		1004
PF1002	10	22'-3"		957
PF1003	10	21'-2"		911
PF1004	10	20'-1"		864
PF1005	4	35'-10"		617
PF1006	4	36'-2"		623
PF1007	4	34'-10"		600
PF1008	6	17'-5"		450
PF801	4	10'-3"	⊂	109
PF802	8	26'-7"		568
PF803	4	25'-3"		270
PF701	4	35'-6"		290
PF501	4	31'-5"		131
PF502	76	7'-3"	⊔	575
PF503	26	2'-8"		72
PF504	2	2'-4"		5
PF505	2	1'-10"		4
FF1001	40	6'-6"	L	1,119
FF801	64	9'-10"	⊂	1,680
SUB-TOTAL				10,849

SPIRAL

Bar NO.	NO. Reqd.	Core Dia. % Spiral	Length	Pitch	NO. Turns	Weight
SP405	1	32"	19'-9⅜"	4½"	56	363
SP406	1	32"	18'-8⅜"	4½"	53	343
SP407	1	32"	17'-7½"	4½"	50	324
SP408	1	32"	16'-6½"	4½"	47	304
SPIRAL TOTAL						1,334
TOTAL FORWARD PIER						12,183

Bending Diagrams



RAILING

Bar No	No. Reqd.	Length	Shape
R501	8	11'-7"	
R502	56	14'-1"	
R503	8	11'-3"	
R504	60	13'-11"	
R505	4	13'-7"	
R506	4	34'-7"	
R507	4	2'-9"	
R508	4	17'-8"	
R509	4	3'-6"	
R510	4	23'-3"	

REPLACEMENT

RE1001	1	7'-3"	
RE901	1	6'-10"	
RE801	1	6'-6"	
RE701	2	6'-3"	
RE601	3	5'-11"	
RE501	1	5'-7"	
RE401	1	5'-3"	C

~NOTES~

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, A501 is a number 5 size bar and P1001 is a number 10 size bar.

RAILING STEEL in the parapet wall is included with Item S. 14 Railing for payment.

SPIRAL REINFORCING BARS:
The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "Number of Turns" shown is the "Length" divided by the pitch plus three turns (total number of closed coils) expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in all other respects conform to Item S-4.
1½ closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers based on 0.68 lb. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2157L
U.S.R. 35 WB. over U.S.R. 23 SB. FUTURE PROP.
ROSS COUNTY — USR 35
STA. 1138+99.57 TO STA. 1141+36.33

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S. K.D.D.	M.O.V.		D.S. R.M.S.	WK	3/14/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

191/240

ROSS COUNTY
ROS-35-21.23

PROPOSED BRIDGE DATA
Type: Welded Hinged Girder with concrete deck and substructure
Two Separate Structures
Spans: 108'-10"-8@136'-0"-108'-10" c/c brgs
Roadway: 42' flf 2'-3" Safety Curbs
Load Frequency: C.F. - 2000 (57)
Skew: 20°-0' L.F
Wearing Surface: 1" Monolithic Concrete
Railing: Aluminum rail and supports and concrete parapet
Alignment: Tangent
Approach Slabs: As-1-54 (25' long)

DRAINAGE AREA
3,848 Sq. Mi.

FOUNDATION SOUNDINGS
Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be examined in the office of the Bureau of Bridges in Columbus or in the Division office but the State does not guarantee the accuracy of it.

Paved Berm 2'-0" inside face of Guard Rail (T4A)

BENCH MARK
Spike in 40" Elm
350' Lt. & Sta. 1166+00
Elev. 608.06

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

SITE PLAN
BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER

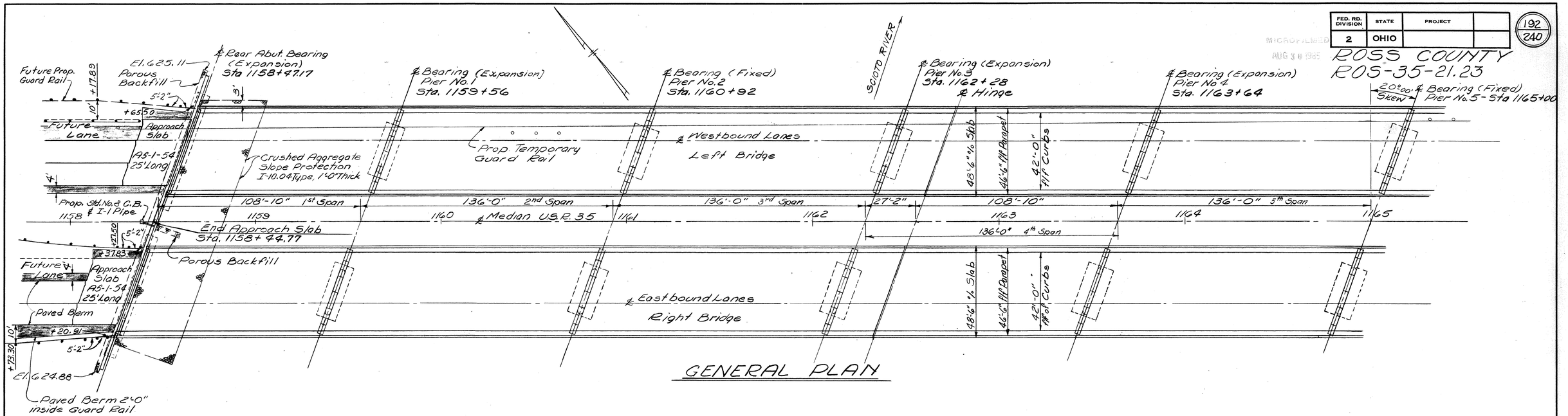
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

SCALE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	W.I.C.	W.I.C.	L.E.B.	R.M.S.	W.I.C.	3/15/63	

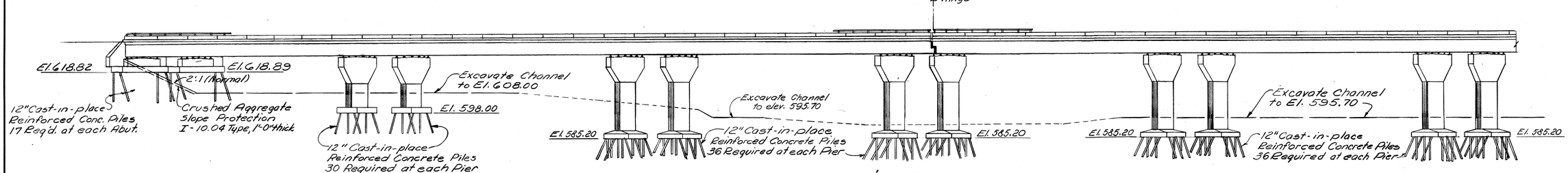
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

192/240

ROSS COUNTY
ROS-35-21.23



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES ~ TWO STRUCTURES

ITEM	QUANTITY	UNIT	DESCRIPTION	ABUT'S.	PIERS	SUPER	GENERAL	AS BUILT
E-2	Lump	Lump.	Cofferdams, Cribs and Sheeting		Lump			
E-2	3,853	Cu.Yds.	Unclassified Excavation	588	3,265			
I-10	1,572	Sq.Yds.	Crushed Aggregate Slope Protection				1,572	
S-1	4,276	Cu.Yds.	Class "C" Concrete, Superstructure			4,276		
S-1	2,249	Cu.Yds.	Class "C" Concrete, Pier Stems and Caps		2,249			
S-1	297	Cu.Yds.	Class "E" Concrete, Abutments above Footings	297				
S-1	1,033	Cu.Yds.	Class "E" Concrete, Footings	192	841			
S-3	65	Lin.Ft.	Waterproofing, Premolded Sealing Strip	65				
S-4	1,475,884	Pounds	Reinforcing Steel	33,694	281,216	1,160,974		
S-7	5,884,300	Pounds	Structural Steel			5,884,300		
S-8	5,884,300	Pounds	Field Painting of Structural Steel			5,884,300		
S-9	35	Sq.Ft.	1" Preformed Expansion Joint Filler	35				
S-14	5,227.38	Lin.Ft	Railing, Aluminum Rail and Supports and Concrete Parapet			5,227.38		
S-16	Lump	Lump	First Test Pile				Lump	
S-17	Lump	Lump	First Pile Test Load				Lump	
S-17	2	Each	Subsequent Pile Test Load				2	
S-18	27,820	Lin.Ft.	12" Cast-in-place Reinforced Concrete Piles, No. 5 gage	2,380	25,440			
S-29	188	Each	Scuppers, including supports			188		
S-29	176	Cu.Yds.	Porous Backfill	176				
S-101	4,276	Each	Water Reducing, Set-Retarding Admixture			4,276		

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

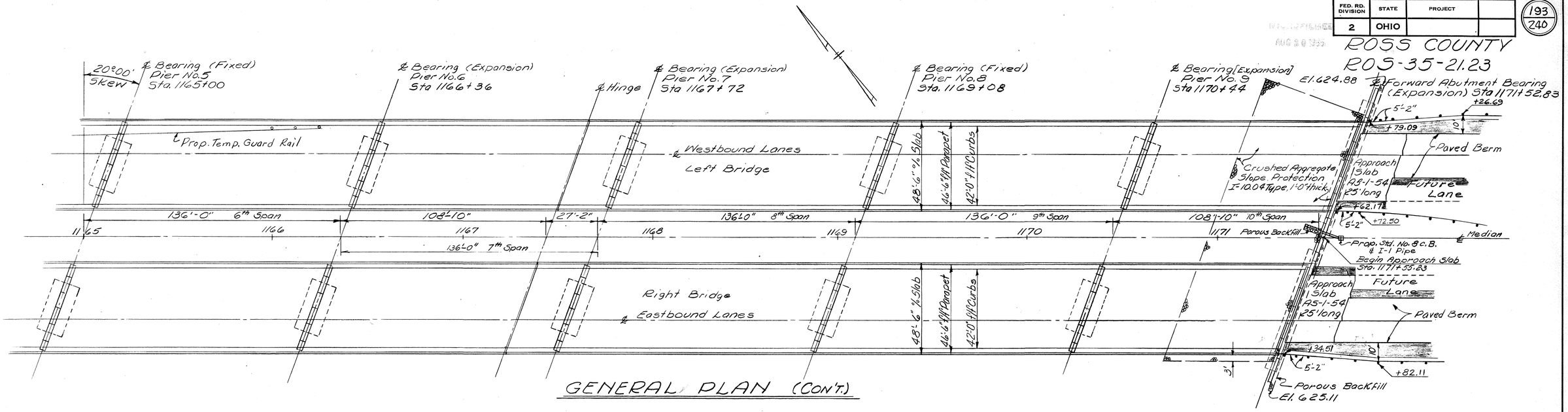
GENERAL PLAN AND ELEVATION AND ESTIMATED QUANTITIES
BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D. R.S.	W.D.J.		R.M.S.		3/15/63	

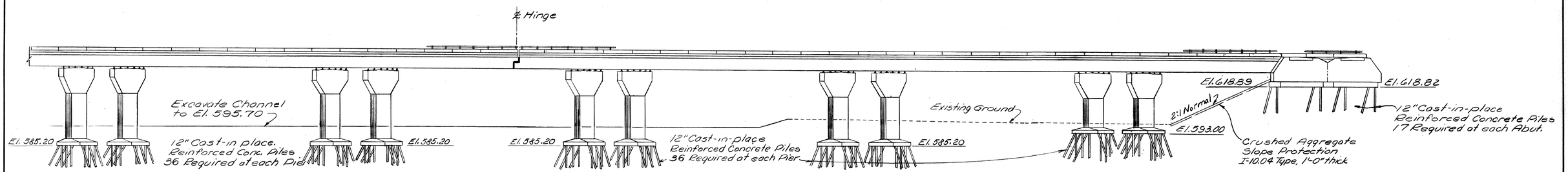
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

193
240

ROSS COUNTY
ROS-35-21.23



GENERAL PLAN (CON'T.)



GENERAL ELEVATION (CONT.)

GENERAL NOTES

REFERENCE shall be made to Standard Drawing RB-1-55 revised 2-2-59, AR 1-57 revised 4-2-62, AS 1-54 revised 7-5-62 and Supplemental Specification S-307, dated 10-1-64 and S-101 dated 7-12-62

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

EXCAVATION QUANTITY for the abutments includes the removal of fill material between the surface of the proposed embankment and the bottom of footings. Excavation quantity for piers includes the removal of material between the surface of the proposed channel and the bottom of footings.

PILES shall be driven to a minimum bearing capacity of 37 tons per pile for the abutments and 48 tons per pile for the piers.

STRUCTURAL STEEL: Steel used for the fabrication of rollers and roller bearing plates shall conform to the requirements of A. S. T. M. Designation A-237-55 (Class B) having a minimum yield strength of 55,000 p s i. All other structural steel shall conform to the requirements of Sec. M-7.4 (a).

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop. Class "B" welds are shown thus B

POROUS BACKFILL shall extend upward to the approach slab, paved berms and surface of the earth shoulders and outward to the surface of the embankment slopes as shown on the General Plan and Elevation and Abutment Drawings. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd paid for porous backfill.

EMBANKMENT PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments for a minimum period of 30 days after which excavation shall be made for the abutments and piles driven.

FIRST TEST PILE: Payment will be made for only one first test pile. It may be driven for either the Right or Left Bridge

GIRDER ERECTION: The Contractor shall submit to the Director for approval 3 prints showing his proposed erection procedure for the plate girders.

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

For HIGH STRENGTH STEEL BOLT note, see Sheet 222.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL PLAN AND ELEVATION AND GENERAL NOTES

BRIDGE NO. ROS-35-21.94 R. & L.
U.S.R. 35 over SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		R.M.S.		2/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

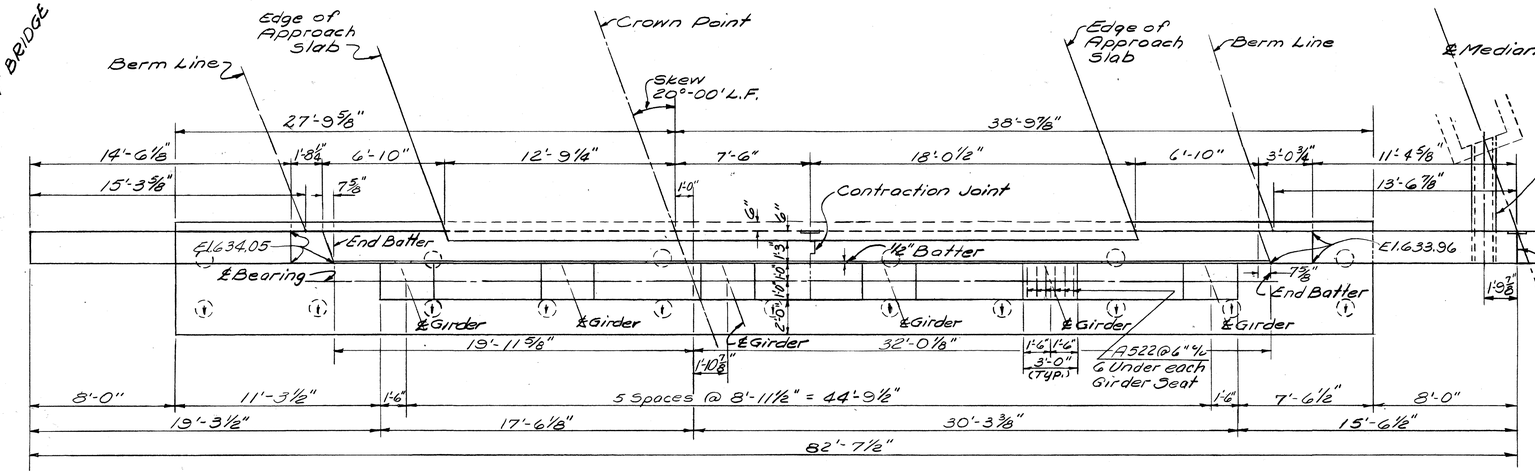
194 / 240

MICROFILMED AUG 30 1985

ROSS COUNTY
ROS-35-21.23

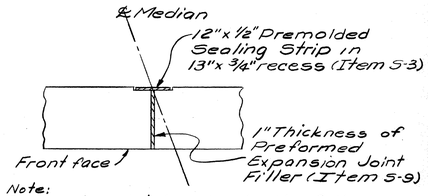
FORWARD ABUT.- LEFT BRIDGE

REAR ABUTMENT- RIGHT BRIDGE



PLAN

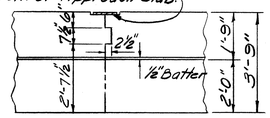
FORWARD ABUTMENT- LEFT BRIDGE
REAR ABUTMENT- RIGHT BRIDGE



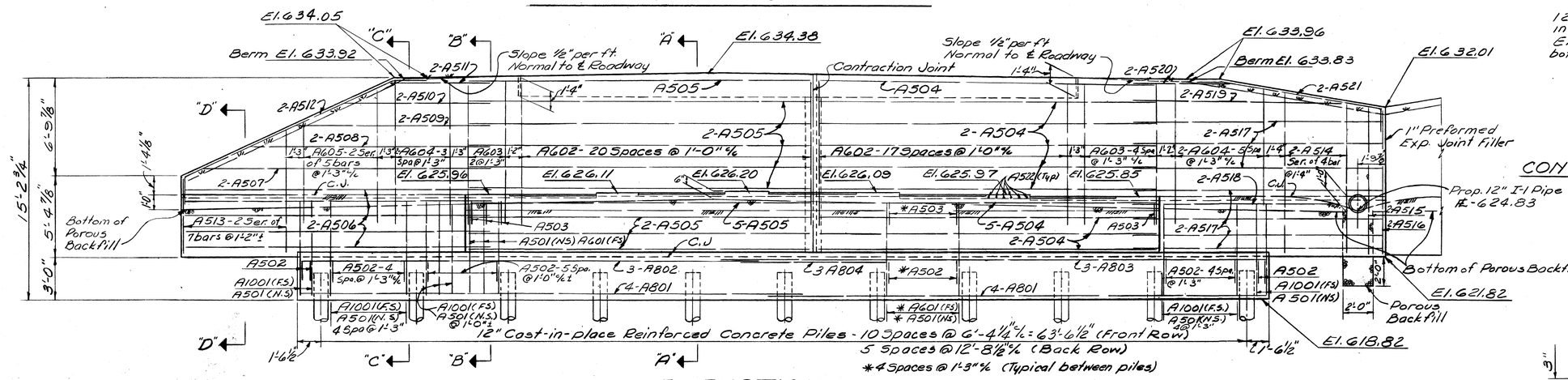
Note:
Expansion joint extends the full height of the wall

EXPANSION JOINT DETAIL

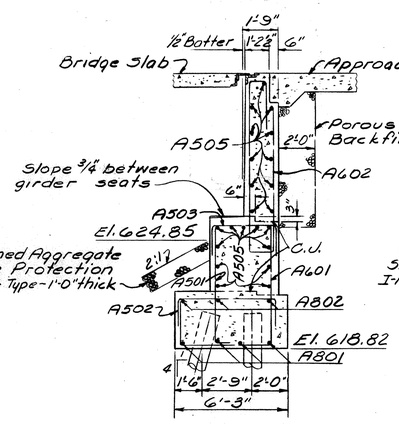
12"x½" Premolded Sealing Strip in 13"x¾" recess (Item 5-3) Extends from top of footing to bottom of Approach Slab.



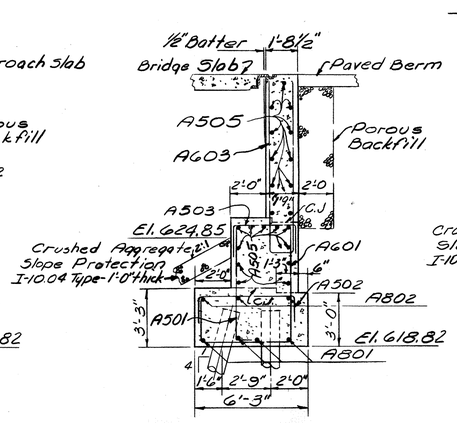
CONTRACTION JOINT DETAIL



ELEVATION



SECTION "A"-"A"



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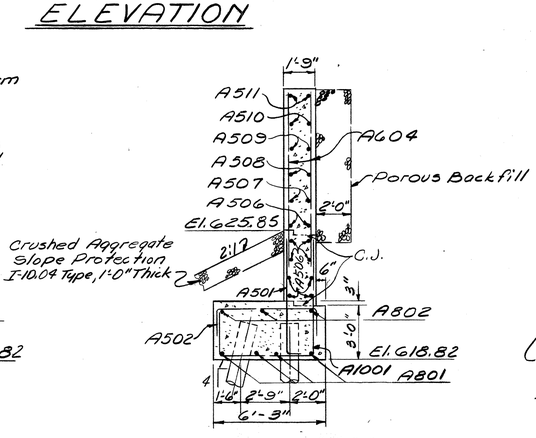

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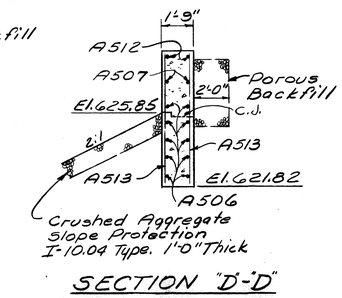

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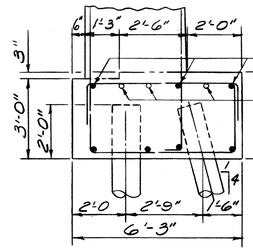

DETAIL SHOWING EXTRA STEEL UNDER CONTRACTION JOINT

LEGEND

N. S. - Near Side
F. S. - Far Side
(F) - Denotes Battered Piles
C. J - Construction Joint

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS

BRIDGE NO. ROS-35-21.94 R&L.
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

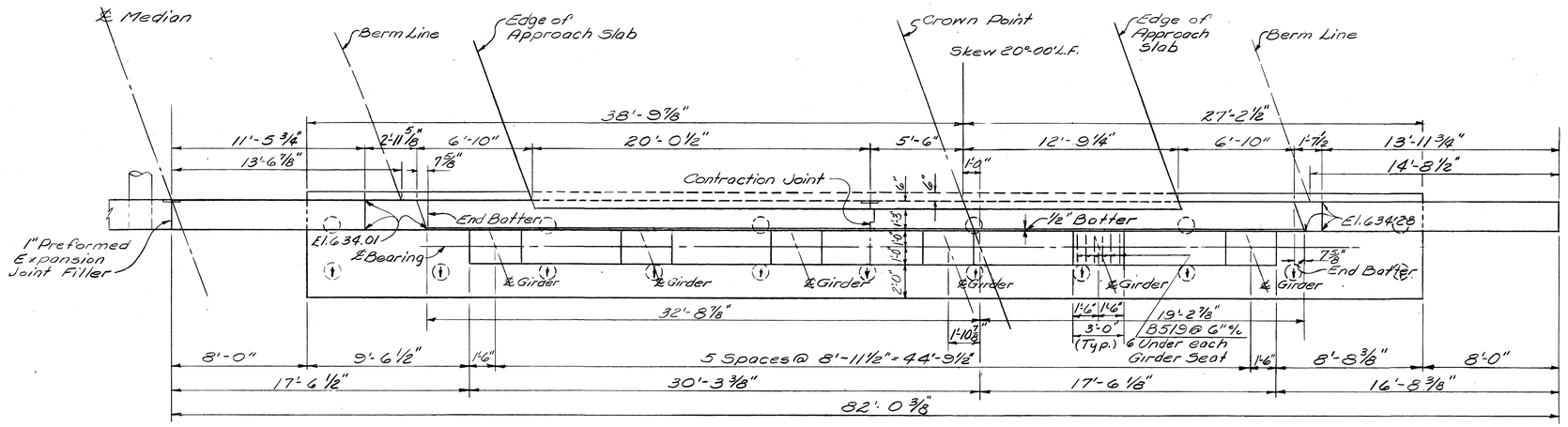
SCALE	DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	W.D.J.		R.M.S.	[illegible]	3/15/83	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

195
240

ROSS COUNTY
ROS-35-21.23



FORWARD ABUT. - RIGHT BRIDGE

REAR ABUTMENT - LEFT BRIDGE

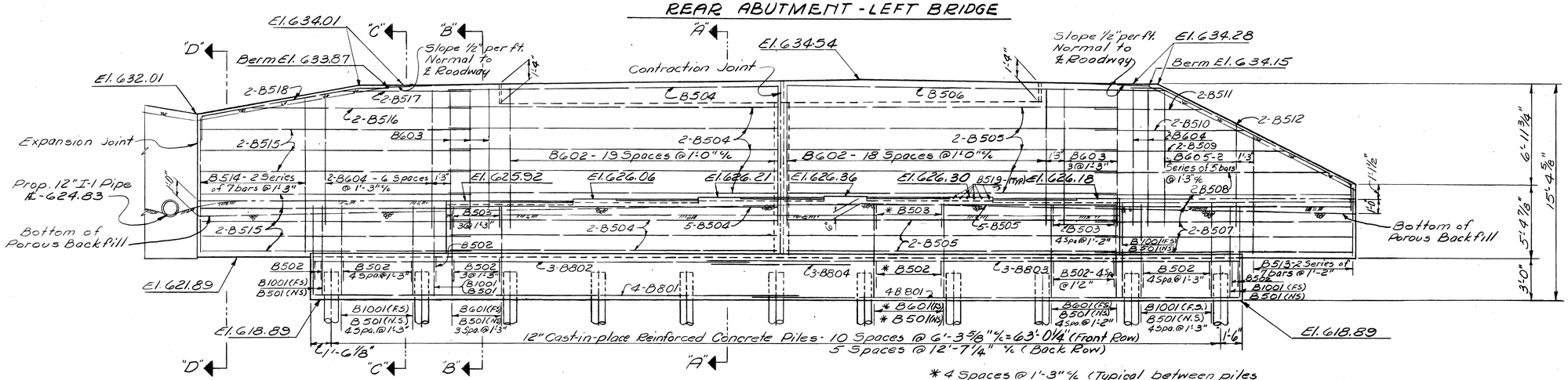
NOTES

Concrete shall be Class "E".

For Expansion and Contraction Joint Details See Sheet No. 194

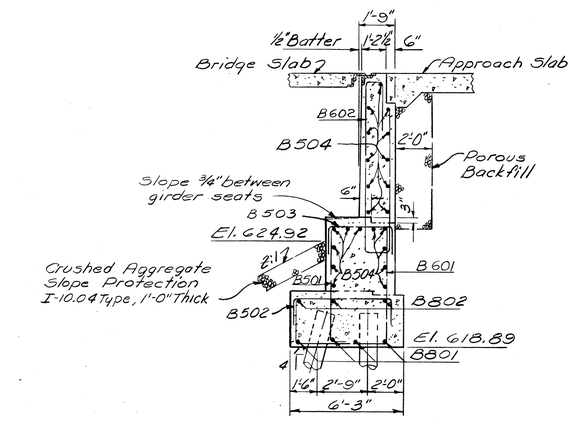
PLAN

FORWARD ABUTMENT - RIGHT BRIDGE
REAR ABUTMENT - LEFT BRIDGE

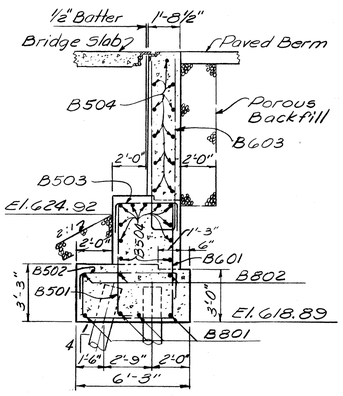


* 4 Spaces @ 1'-3" ℄ (Typical between piles except as otherwise shown)

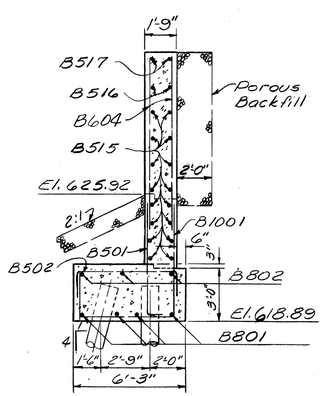
ELEVATION



SECTION "A"-"A"



SECTION "B"-"B"



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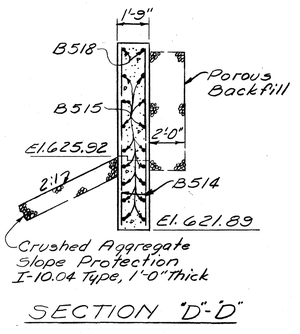

SECTION "D"-"D"

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Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ABUTMENT DETAILS

BRIDGE NO. ROS-35-2194 R&L, U.S.R. 35 over SCIOTO RIVER

ROSS COUNTY — U.S.R. 35

STA. 1158+44.77 TO STA. 1171+55.23

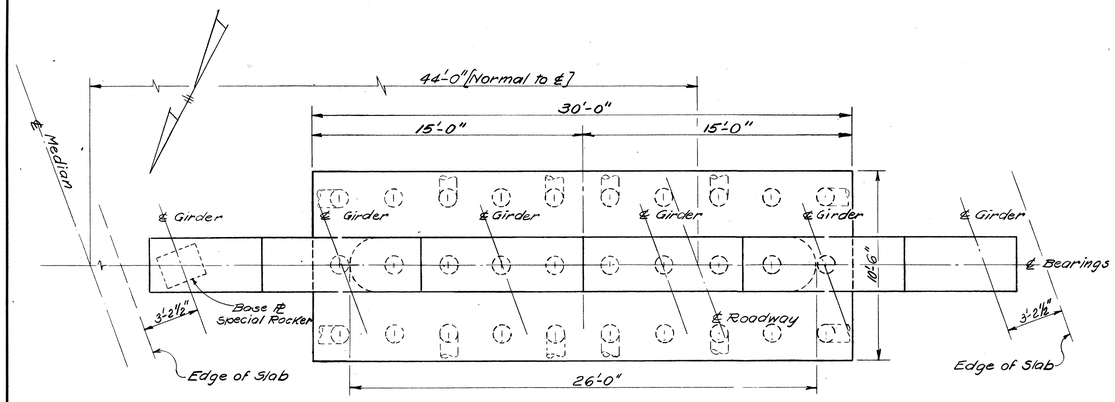
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	W.D.J.		R.M.S.	WHK	3/15/63	

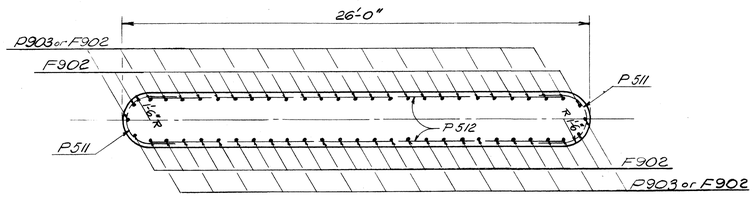
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

196
240

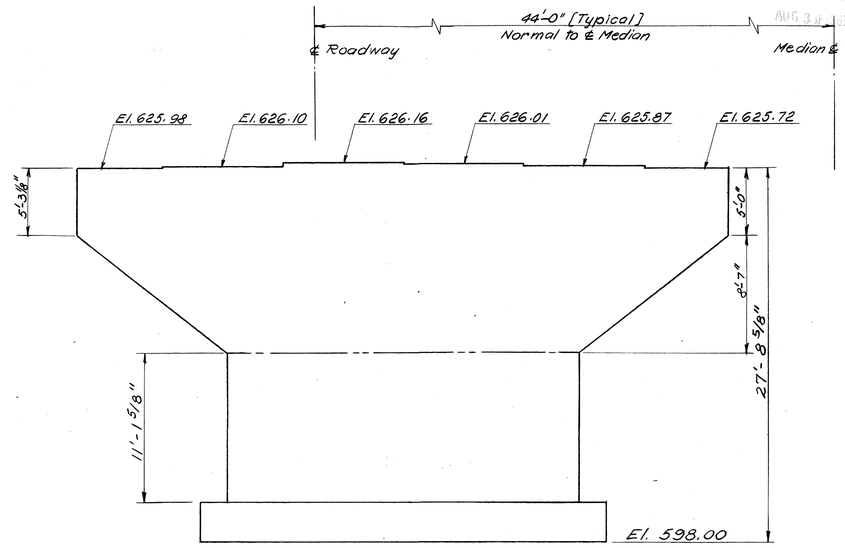
ROSS COUNTY
ROS-35-21.23



PLAN-PIER #1-RIGHT BRIDGE



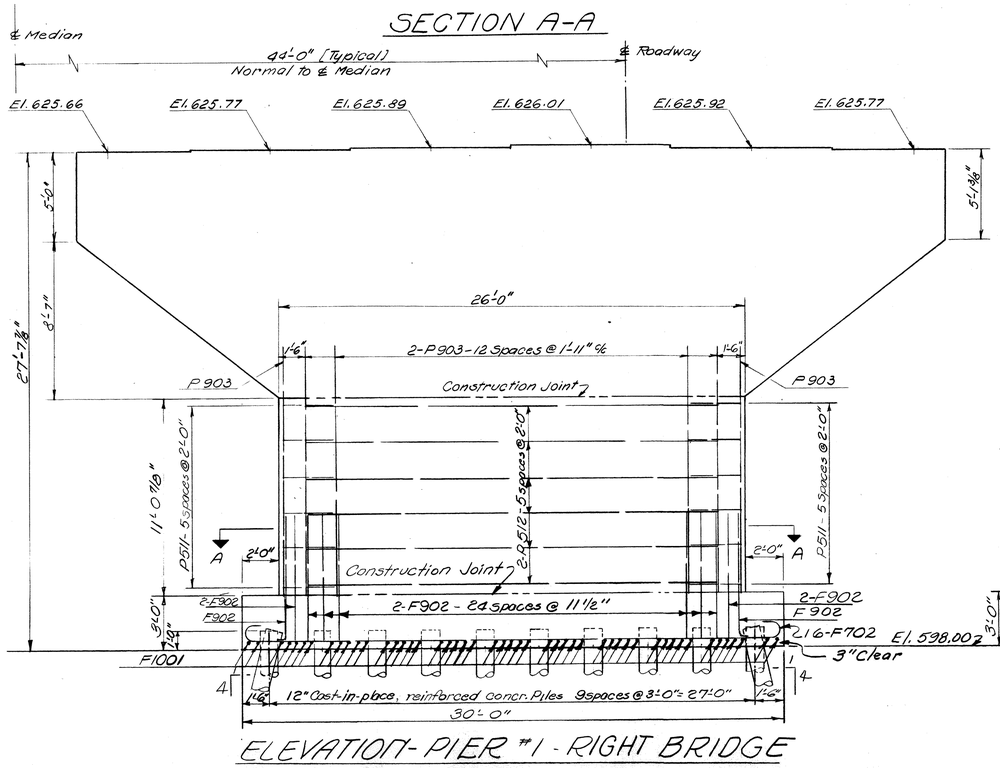
SECTION A-A



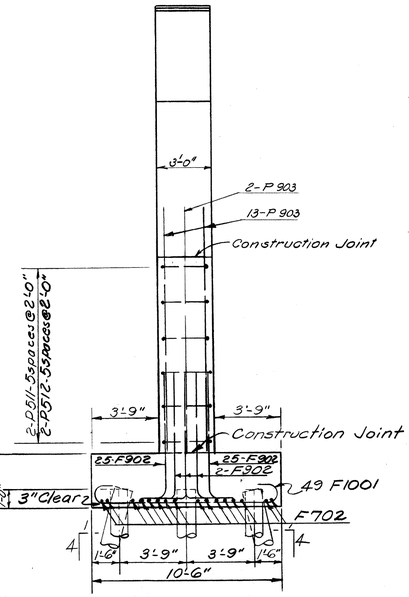
NOTE: For footing and stem details not shown see Pier No. 1 Right Bridge.

ELEVATION-PIER #1-LEFT BRIDGE

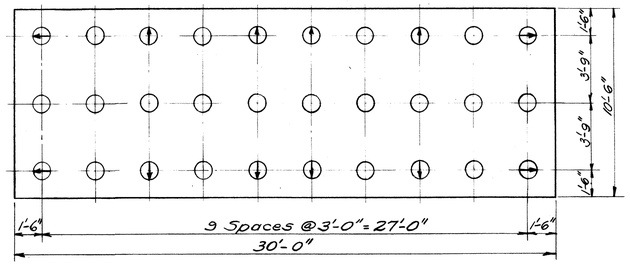
NOTES:
CONCRETE shall be Class "C" for Stem and Cap and Class "E" for Footings.



ELEVATION-PIER #1-RIGHT BRIDGE



END ELEVATION



PILE PLAN

All Piles 12" Cast-in-place Reinforced Concrete

NOTE:
For Cap Details and Reinforcing Steel not shown see Pier No. 2 Right Bridge, Sheet No. 197

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS

BRIDGE NO. ROS-35-2194 R. & L.
U.S.R. 35 over SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

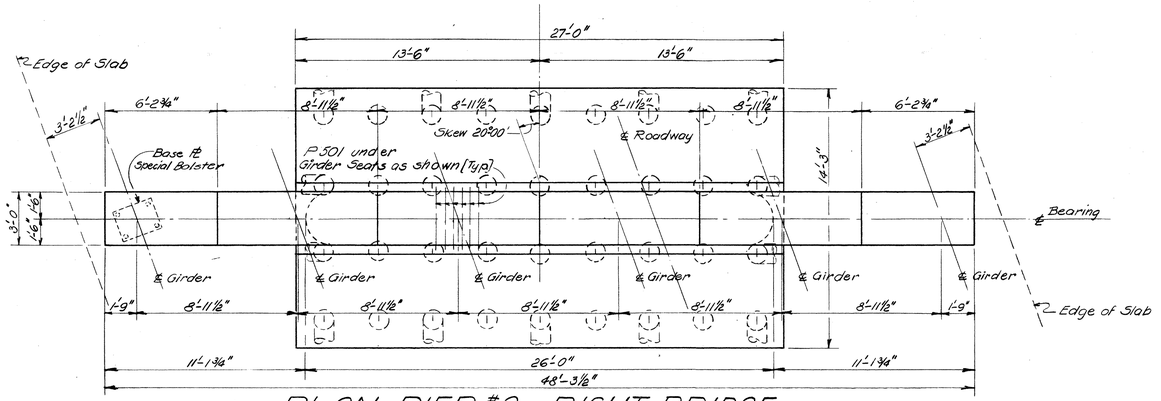
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	L.P.		R.M.S.	WW	3/16/63	

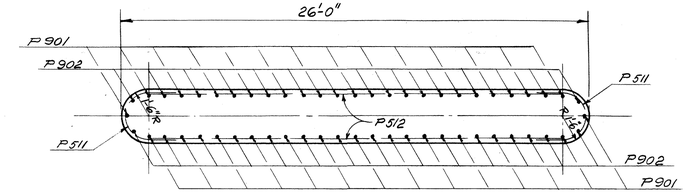
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

197
240

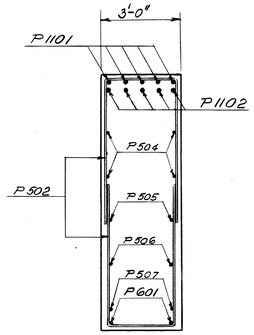
ROSS COUNTY
ROS-35-21.23



PLAN-PIER #2-RIGHT BRIDGE



SECTION B-B

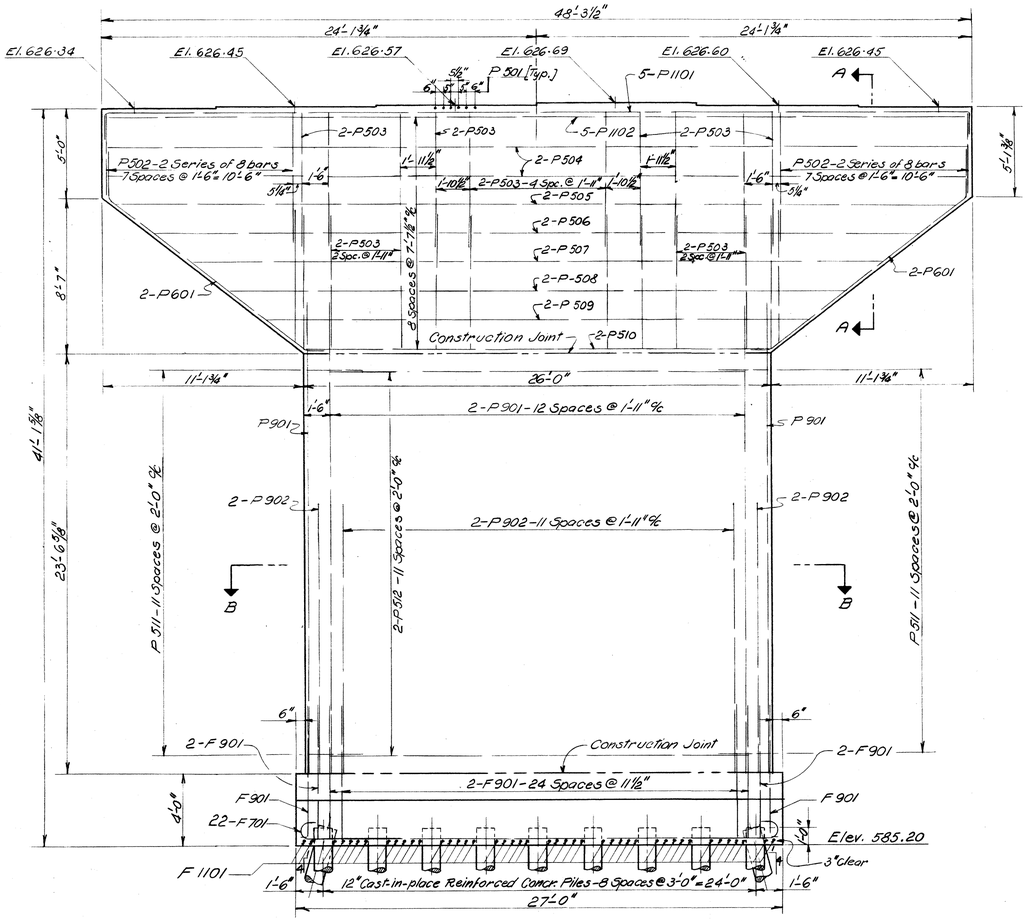


SECTION A-A

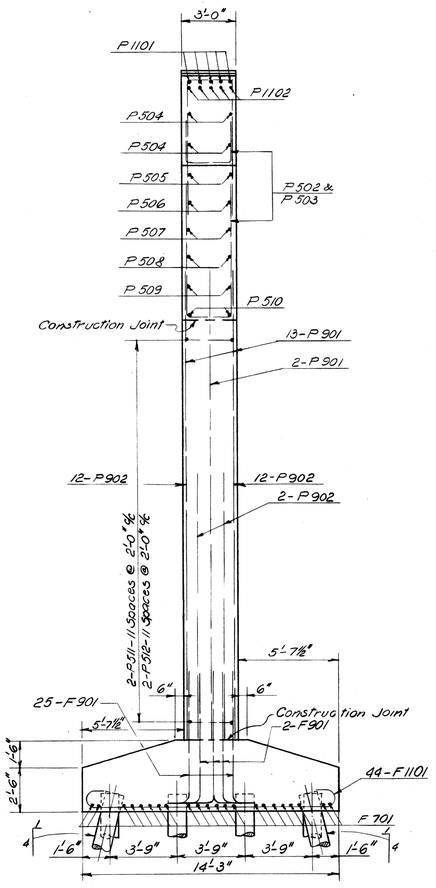
NOTES.

CONCRETE shall be Class "D" for Stem and Cap, and Class "E" for Footings.

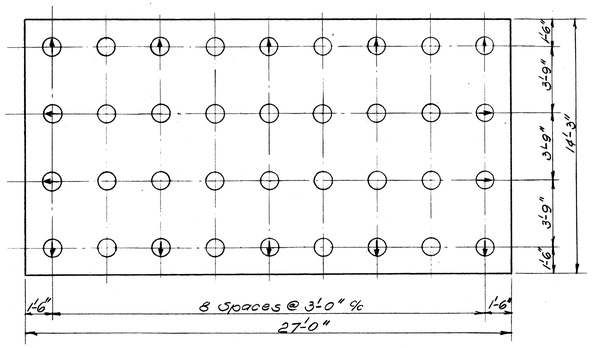
Care shall be taken in placing the reinforcing steel under Girder seats so as not to interfere with bolster anchor bolts in pier No's: 2, 5 & 8



ELEVATION-PIER #2-RIGHT BRIDGE



END ELEVATION



PILE PLAN

All Piles 12" Cast-in-place Reinforced Concrete.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS

BRIDGE No. ROS-35-2194 R. & L.
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

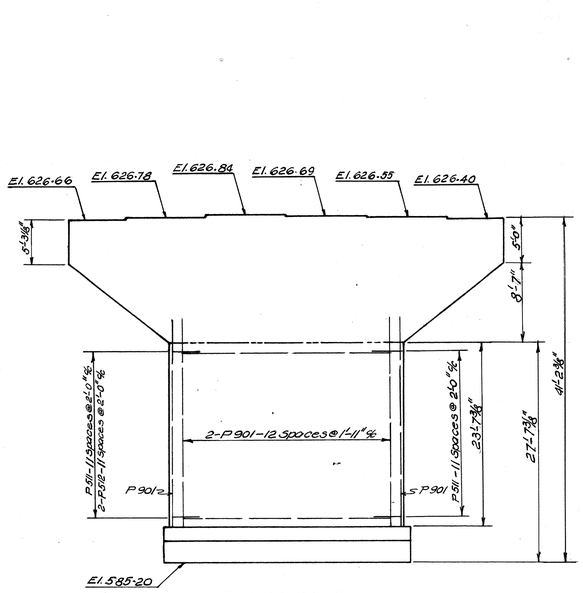
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	L.P.		R.M.S.	NW	3/15/63	

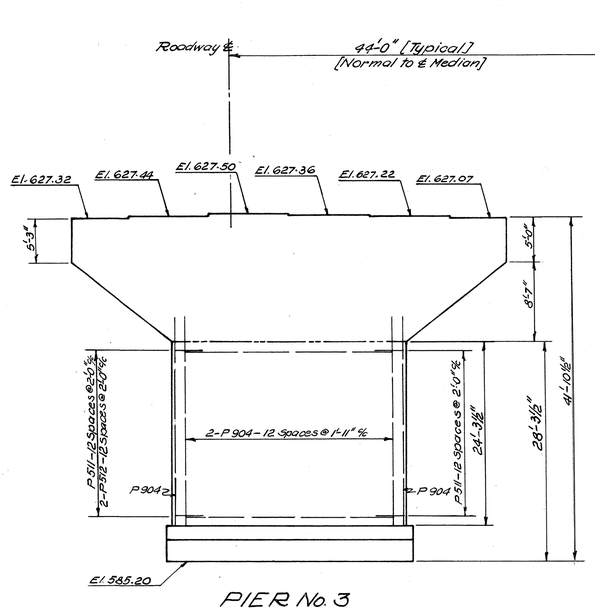
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

198
240

ROSS COUNTY
ROS-35-21.23



PIER No. 2



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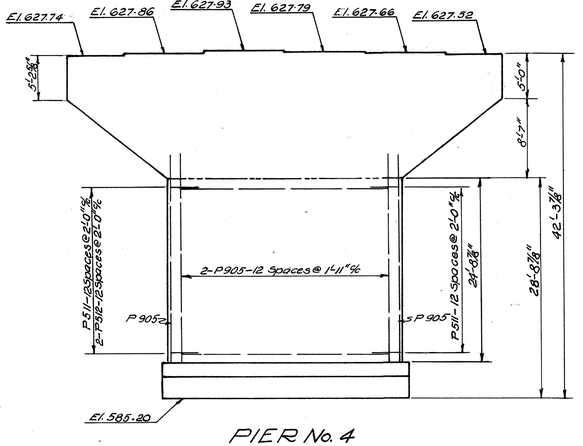

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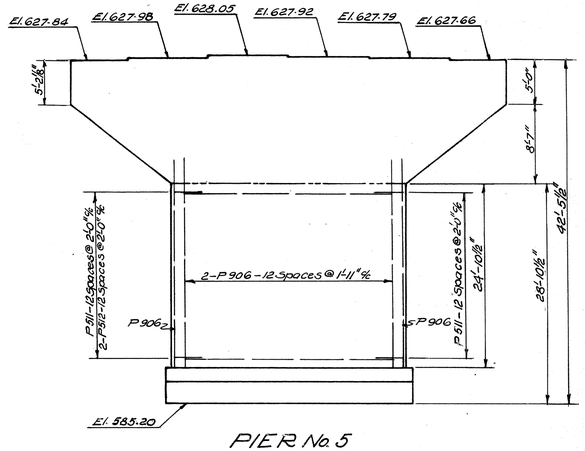

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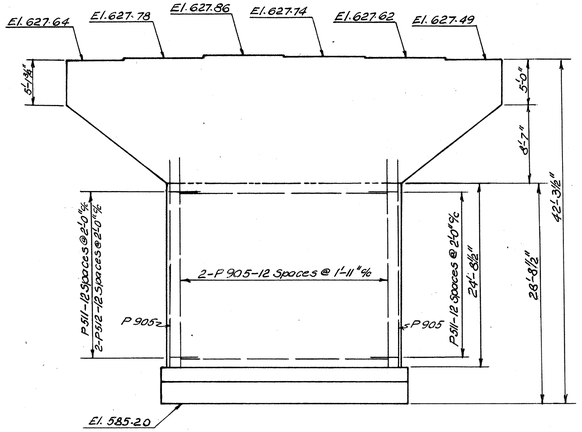

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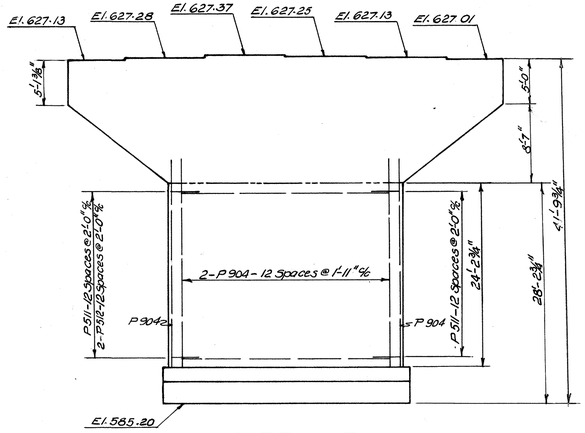

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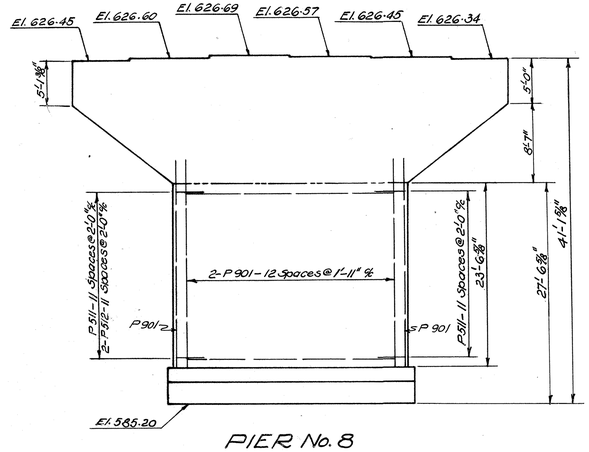

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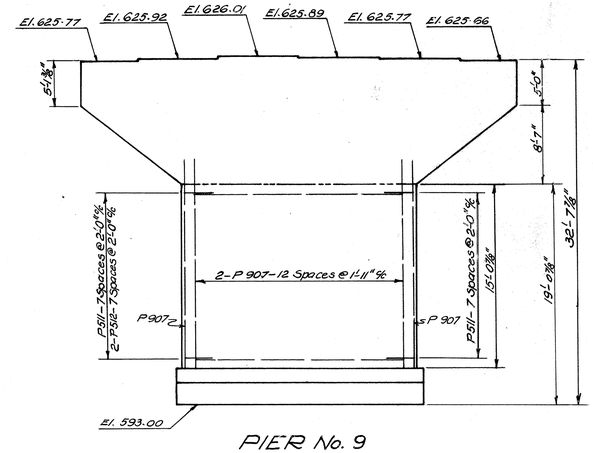


PIER No. 9

NOTE:
Refer to Pier No.2, Right Bridge for Pier Cap Details and Footing Details not shown.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS—LEFT BRIDGE

BRIDGE NO. ROS-35-2194 R. & L.
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

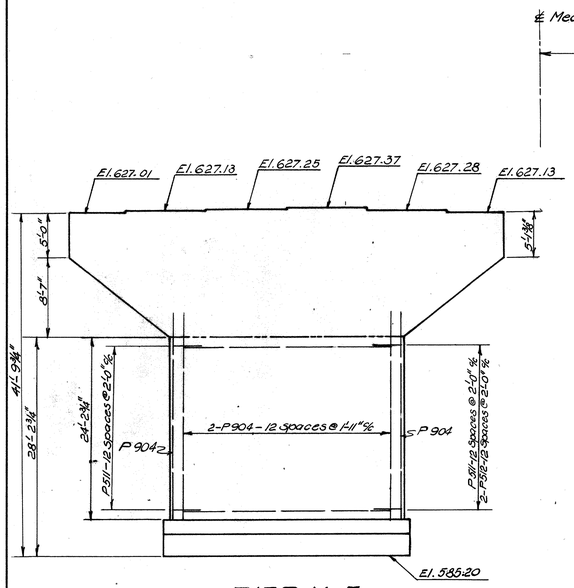
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.P.	L.P.		R.M.S.	WL	3/15/63	

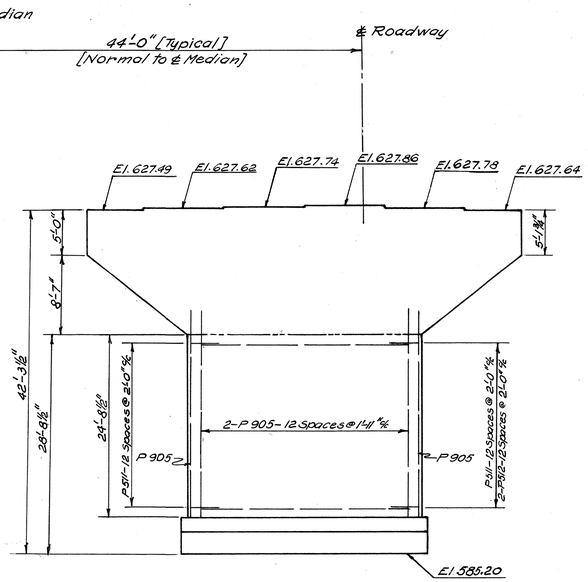
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

199/240

ROSS COUNTY
ROS-35-21.23



PIER No. 3



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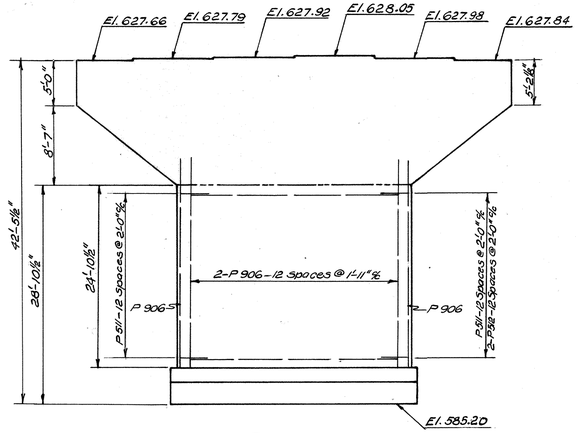

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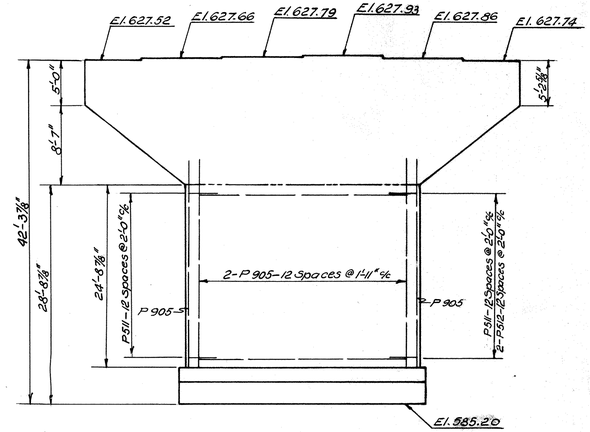
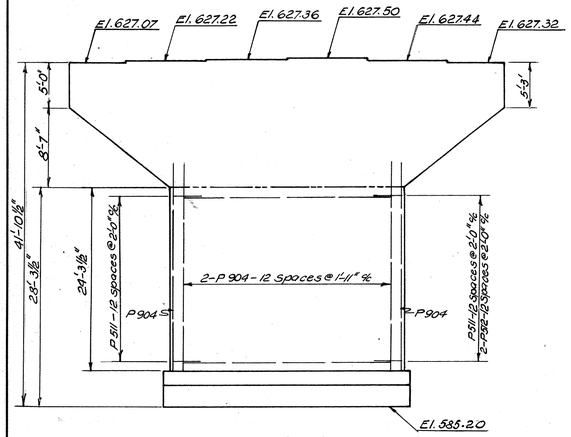
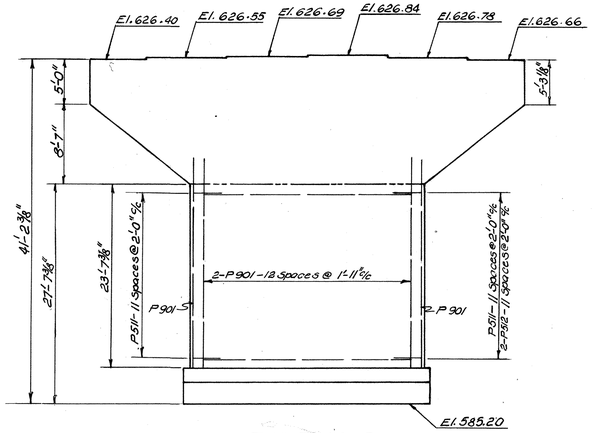


PIER No. 6



PIER No. 7



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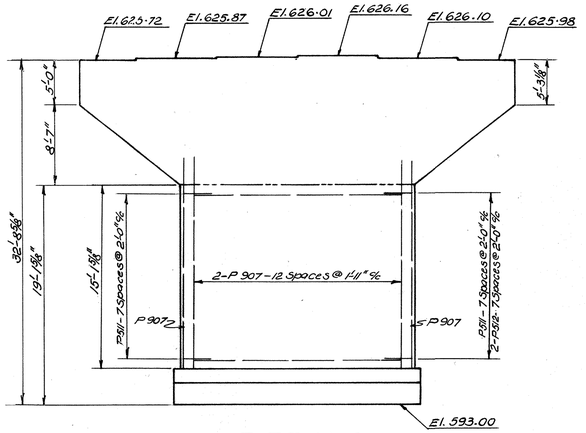

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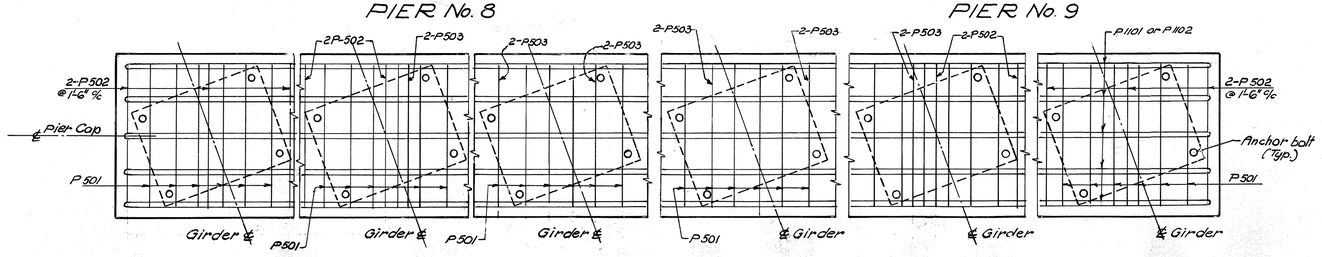

SPECIAL BOLSTER ANCHOR BOLT LAYOUT

NOTE:
Refer to Pier No. 2 Right Bridge for Pier Cap Details and Footing Details not shown.

ELMER S. BARRETT ASSOCIATES
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PIER DETAILS — RIGHT BRIDGE

BRIDGE No. ROS-35-2194 R. & L.
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

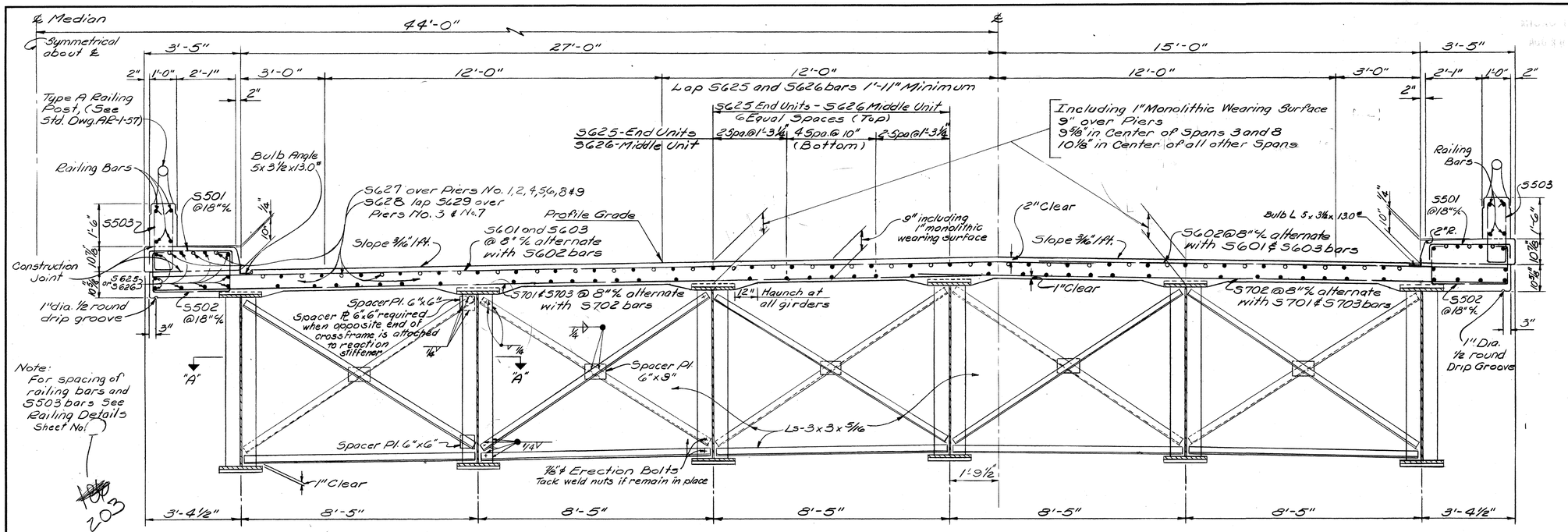
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.J.F.	L.P.		R.M.S.	[illegible]	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

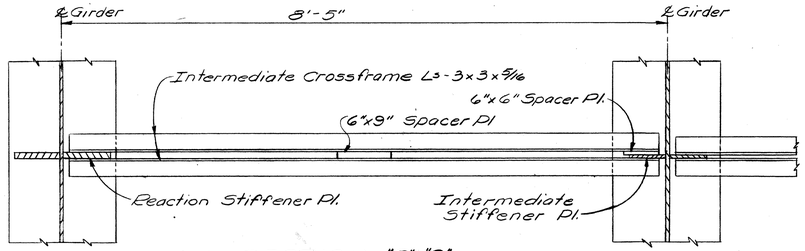
200
240

ROSS COUNTY
ROS-35-21.23



Note: For spacing of railing bars and S503 bars See Railing Details Sheet No. ~~103~~ 102

TYPICAL TRANSVERSE SECTION



SECTION "A"-"A"

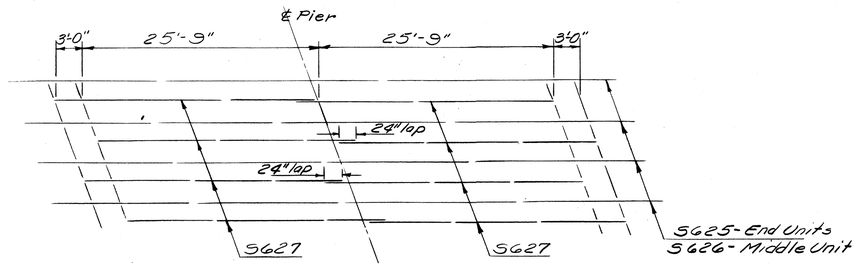
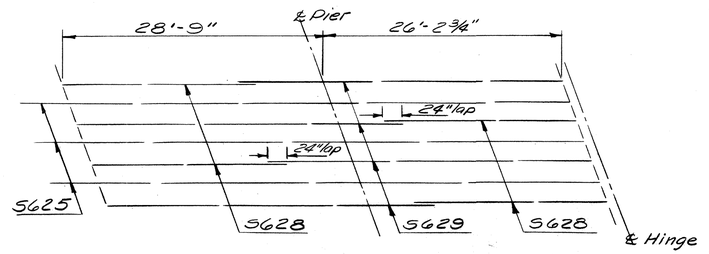


DIAGRAM SHOWING STAGGER OF S627 BARS OVER PIER NOS. 1, 2, 4, 5, 6, 8 & 9.



PART PLAN S628 AND S629 OVER PIER NO'S. 3 & 7.

NOTES

CONCRETE shall be Class "C".

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel girders, which is shown as 12" wide, may vary from this dimension with a minimum of 9" and maximum of 15". Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 12" width.

SLAB THICKNESS shown includes 1" for monolithic wearing surface. The slab thickness shown over the girders 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.

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SLAB REINFORCING DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

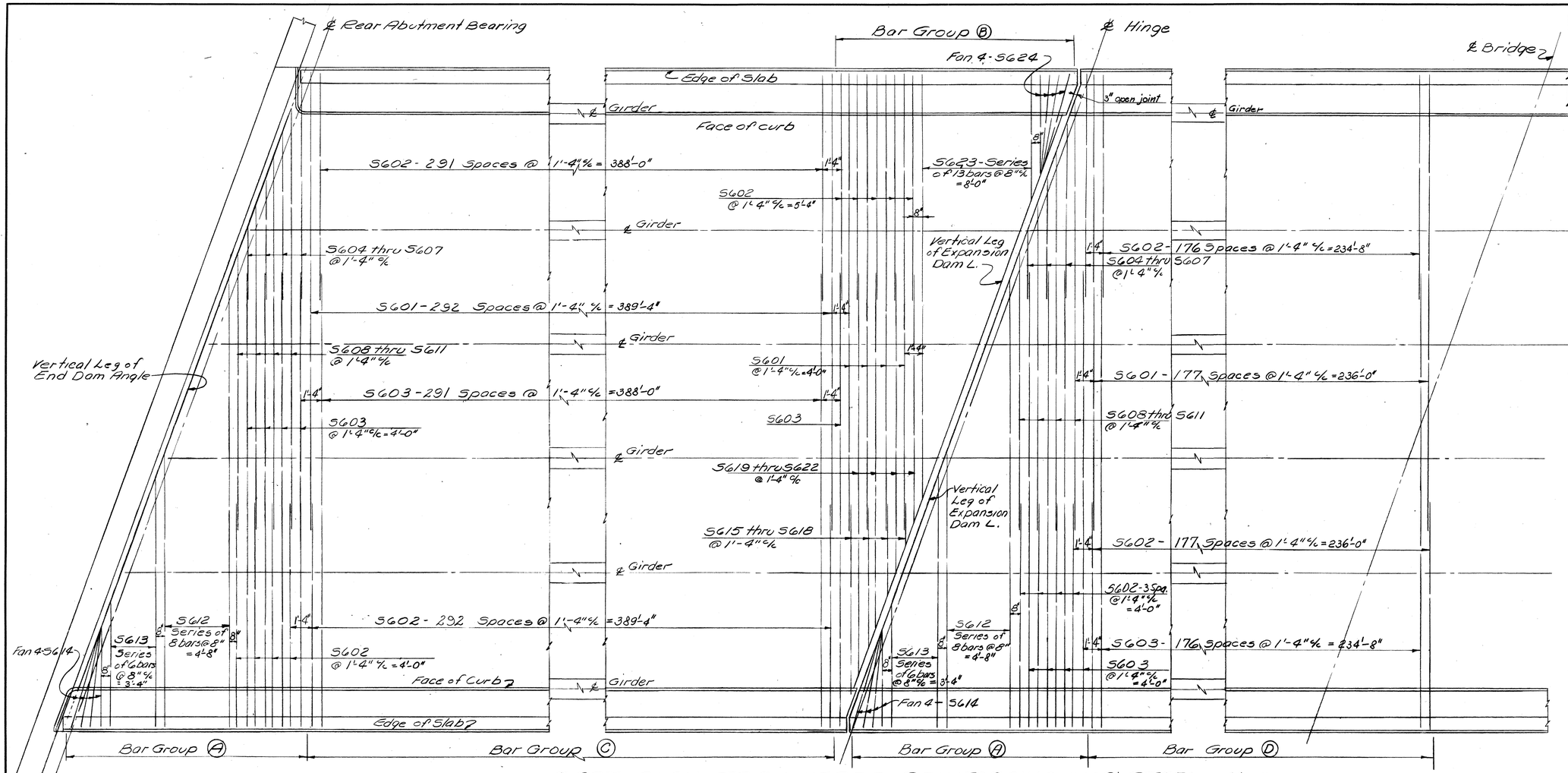
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.O.J.		R.M.S.	WL	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

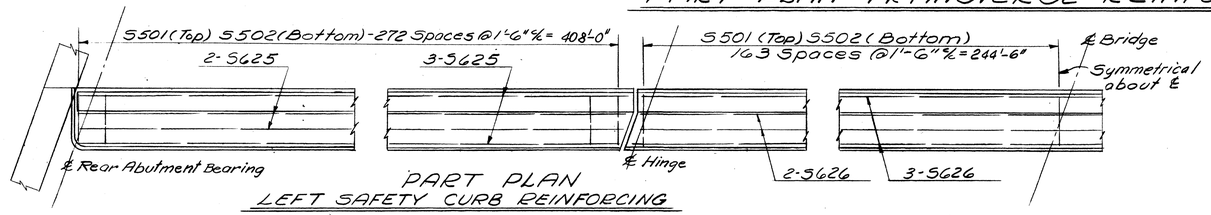
201
240

ROSS COUNTY
ROS-35-21.23

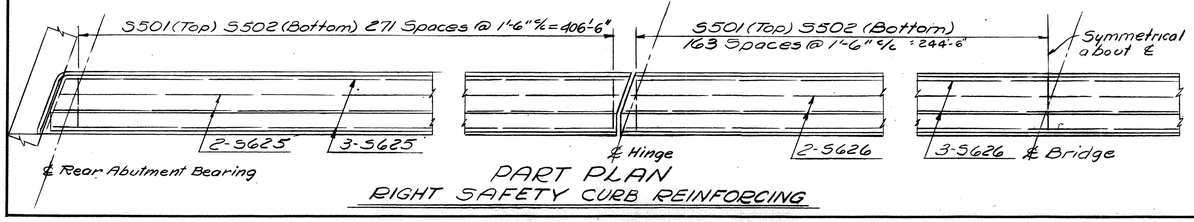


PART PLAN TRANSVERSE REINFORCING (TOP) STEEL

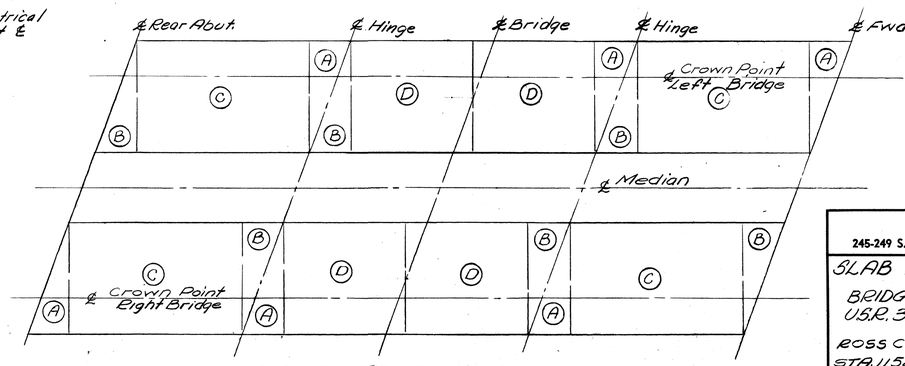
NOTE: For location of Bar Groups See Schematic Plan below.



PART PLAN LEFT SAFETY CURB REINFORCING



PART PLAN RIGHT SAFETY CURB REINFORCING



SCHEMATIC PLAN TRANSVERSE REINFORCING STEEL

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SLAB REINFORCING STEEL

BRIDGE NO. ROS-35-2194 R & L
U.S.R. 35 OVER SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE

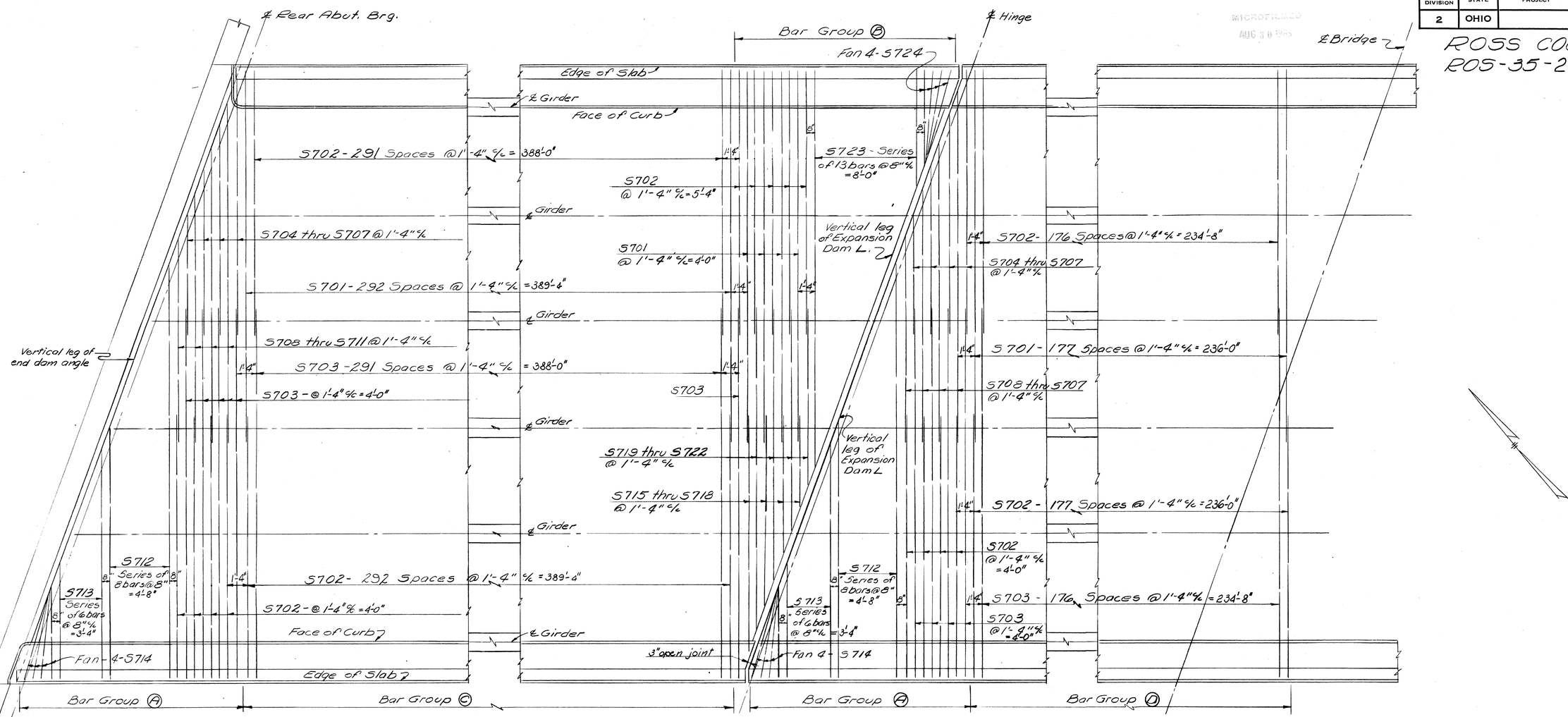
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.O.J.		R.M.S.	[illegible]	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

202
240

MICROFILMED
AUG 30 1965

ROSS COUNTY
ROS-35-21.23



PART PLAN TRANSVERSE REINFORCING (BOTTOM) STEEL

Note: For location of Bar Groups See Schematic Plan on Sheet No. 201.

For reinforcing steel in Safety Curbs See Sheet No. 201

ELMER S. BARRETT ASSOCIATES
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SLAB REINFORCING STEEL

BRIDGE NO. ROS-35-2194 R&L
U.S.R. OVER SCIOTO RIVER

ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

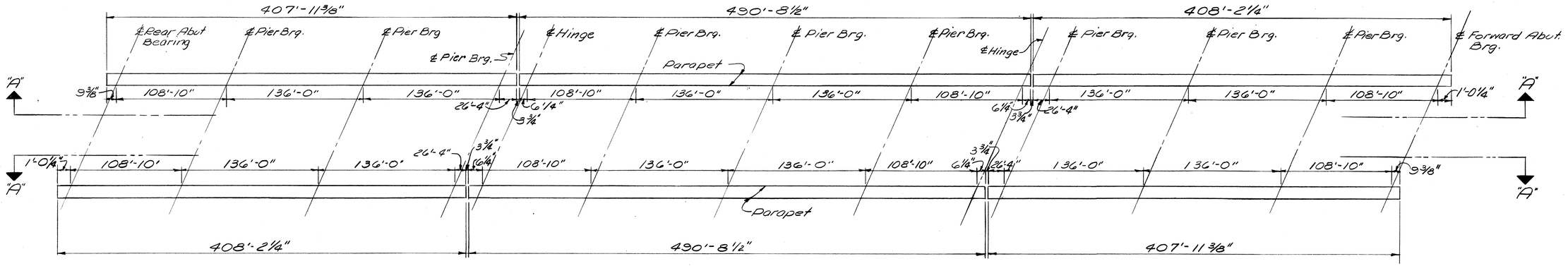
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		R.M.S.	[illegible]	3/15/63	

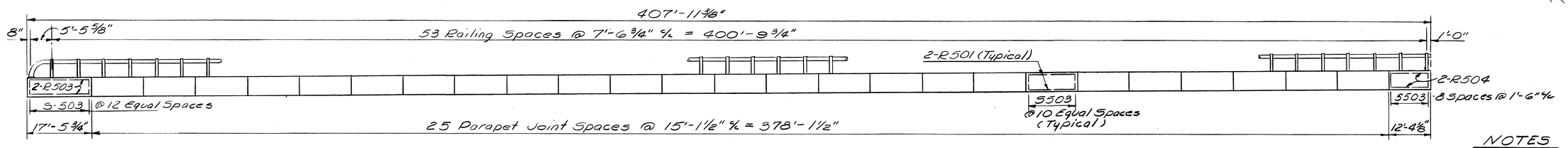
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

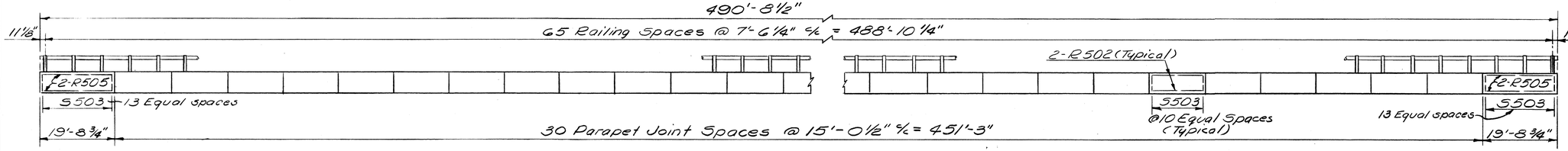
203
240

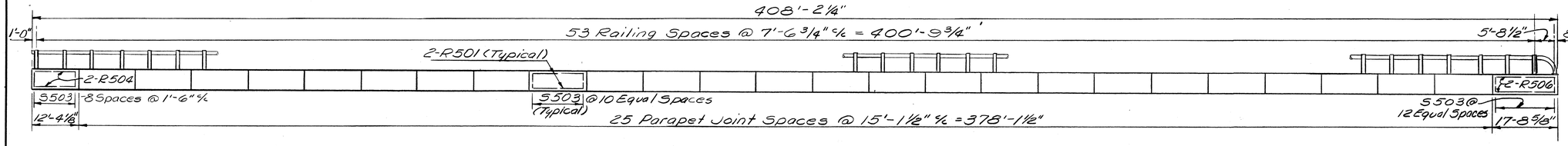
ROSS COUNTY
ROS-35-21.23



PLAN







SECTION "A"-"A"

NOTES

REFERENCE shall be made to Standard Drawing No. AR-1-57 for details not shown.

RAILING shall be Type "A".

RAIL CAPS shall be placed at open joint on superstructure railing ends.

DIMENSIONS: All dimensions shown are horizontal.

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RAILING DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

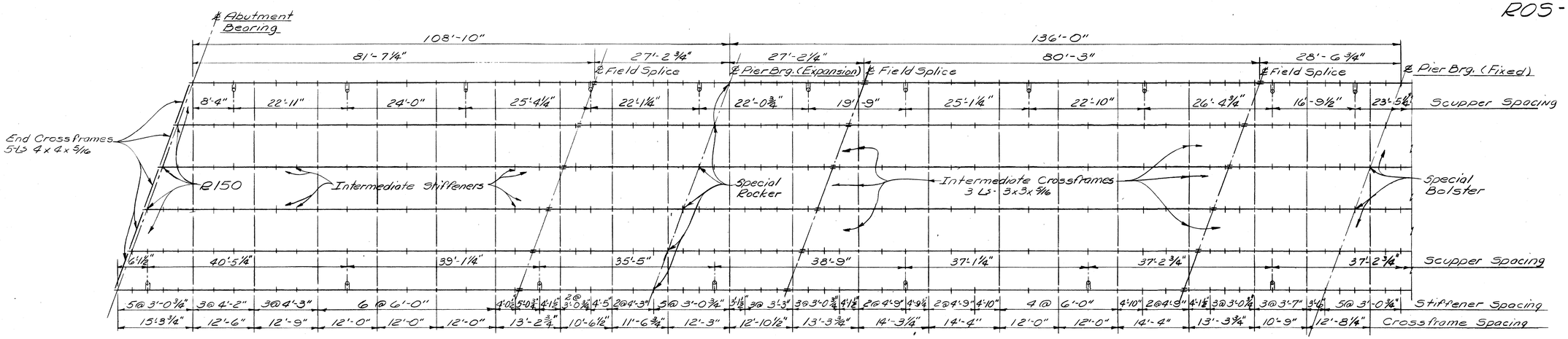
SCALE DATE

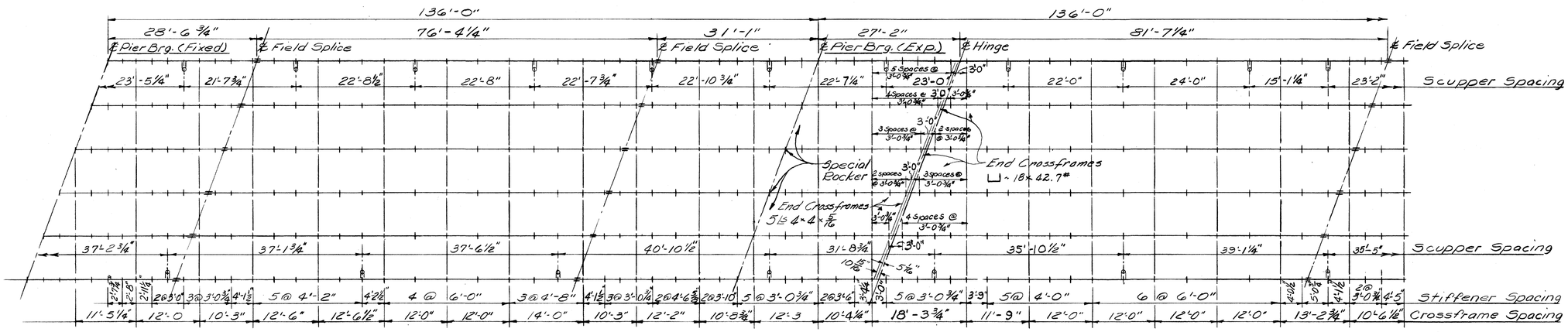
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	M.D.J.		R.M.S.	WK	3/15/63	

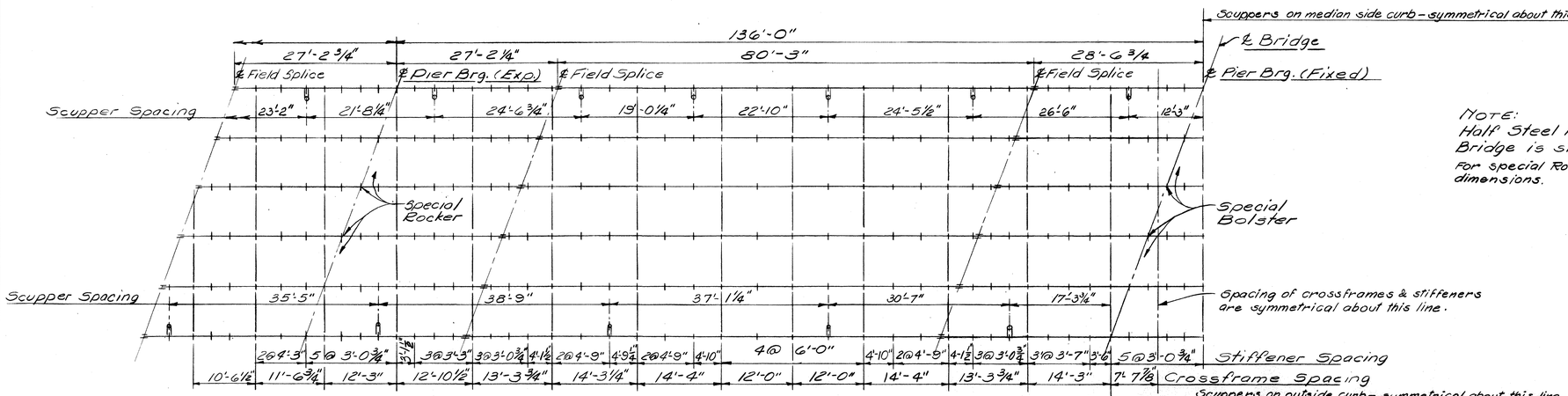
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

204
240

ROSS COUNTY
ROS-35-21.23







NOTE:
Half Steel Framing Plan for Left Bridge is similar to Right Bridge.
For special Rocker & special bolster dimensions. see Sheet No. 211

HALF STEEL FRAMING PLAN - RIGHT BRIDGE

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STEEL FRAMING PLAN

BRIDGE NO. ROS-35-2194 R & L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

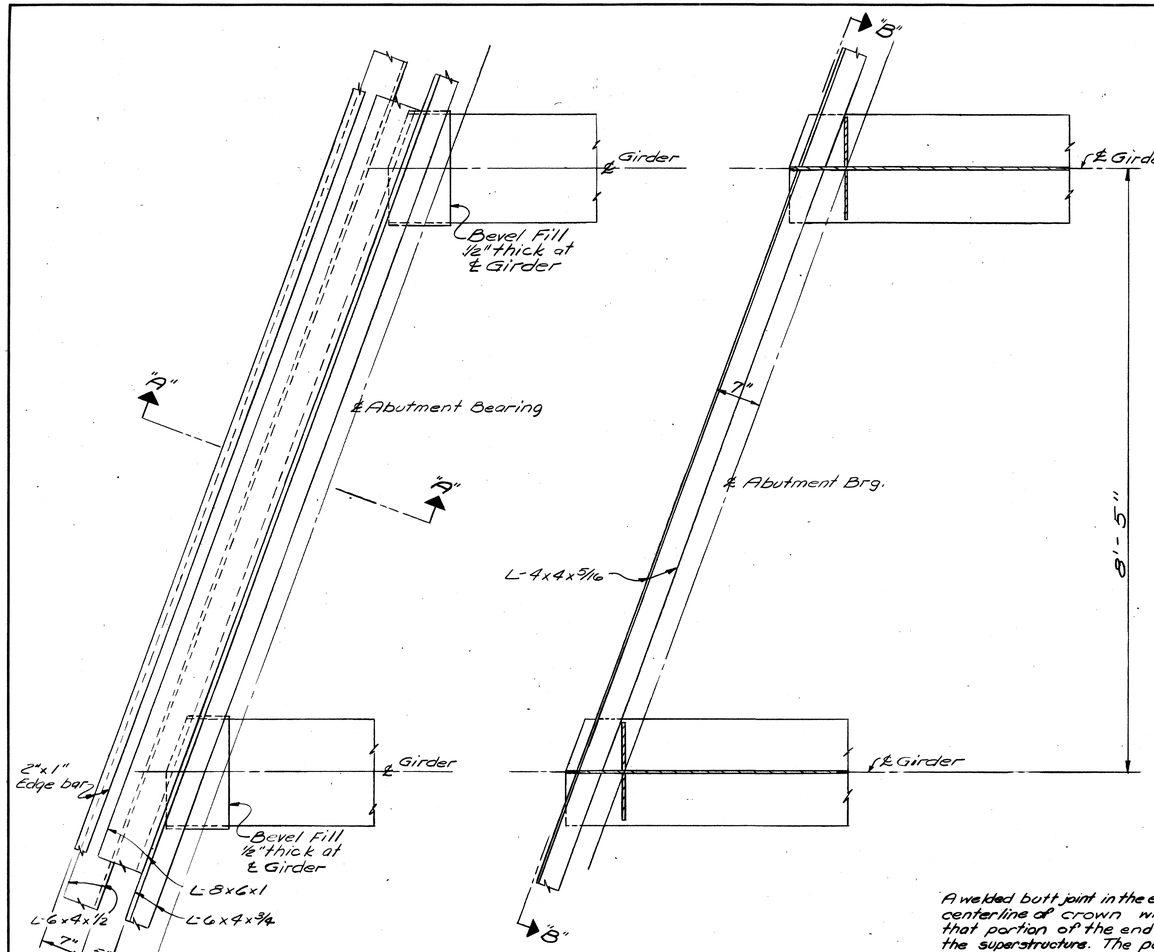
SCALE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D	W.D.J.		R.M.S.	WW	3/16/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

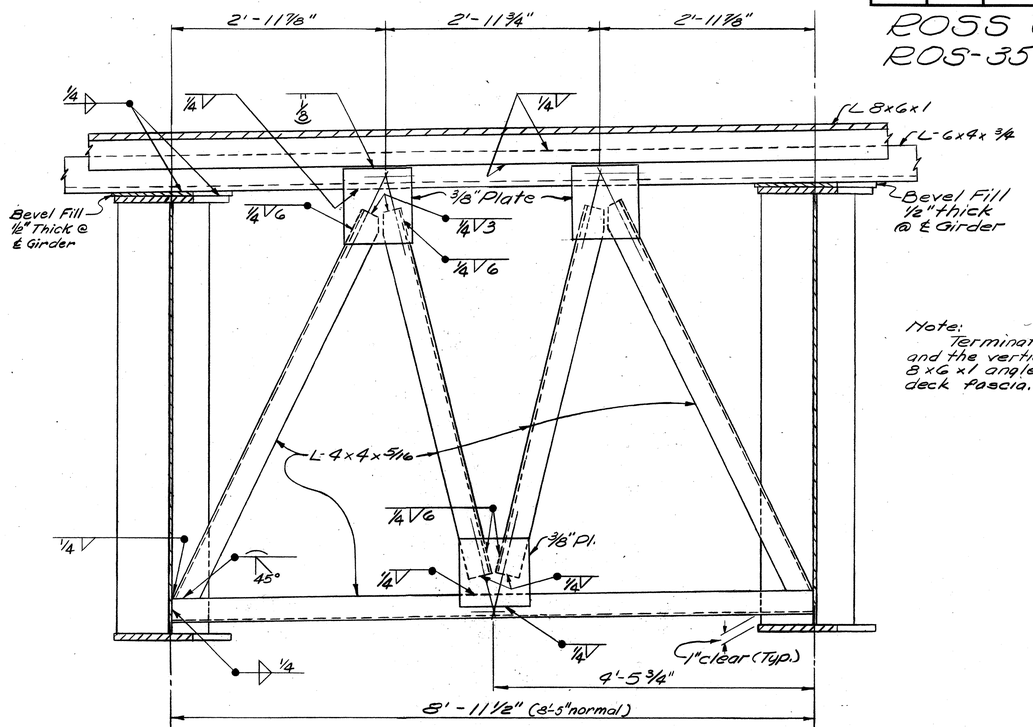
205
240

ROSS COUNTY
ROS-35-21.23



PART PLAN
END DAM

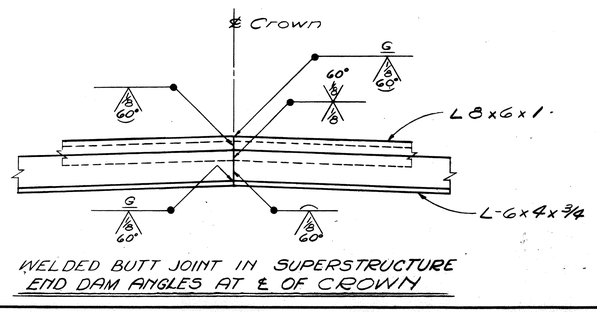
PART PLAN
END CROSSFRAME



SECTION "B"-"B"

Note:
Terminate the 6x4x3/4 angle and the vertical leg of the 8x6x1 angle on line with deck fascia.

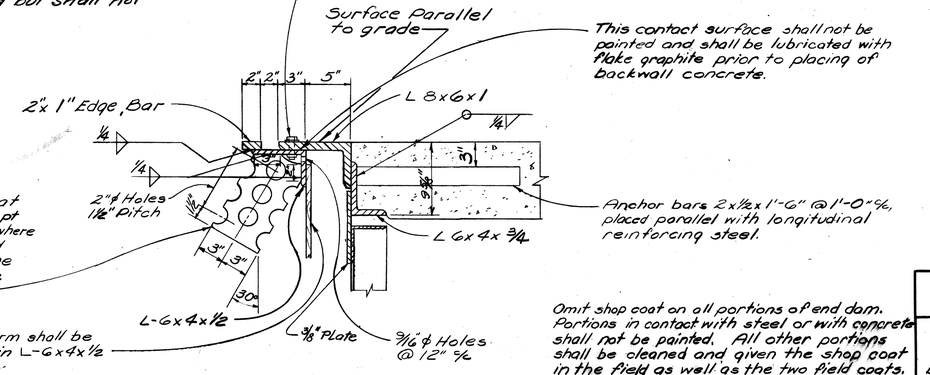
A welded butt joint in the end dam along the centerline of crown will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 6'-0" in length, with one of the joints at the apex of the crown and another at the abutment contraction joint. These shall be closely butted but shall not be welded.



WELDED BUTT JOINT IN SUPERSTRUCTURE
END DAM ANGLES AT ℄ OF CROWN

NOTE: "G" indicates grinding

3/8" x 2" bolts at not more than 2'-0" ℄ with nuts tack-welded to under side of lower angle. 1 1/16" holes in upper angle. Center 3/8" bolts in 1 1/16" holes. Apply flake graphite between washer and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has set, preferably within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Fill holes with bituminous material.



SECTION "A"-"A"

Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

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END DAM DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER

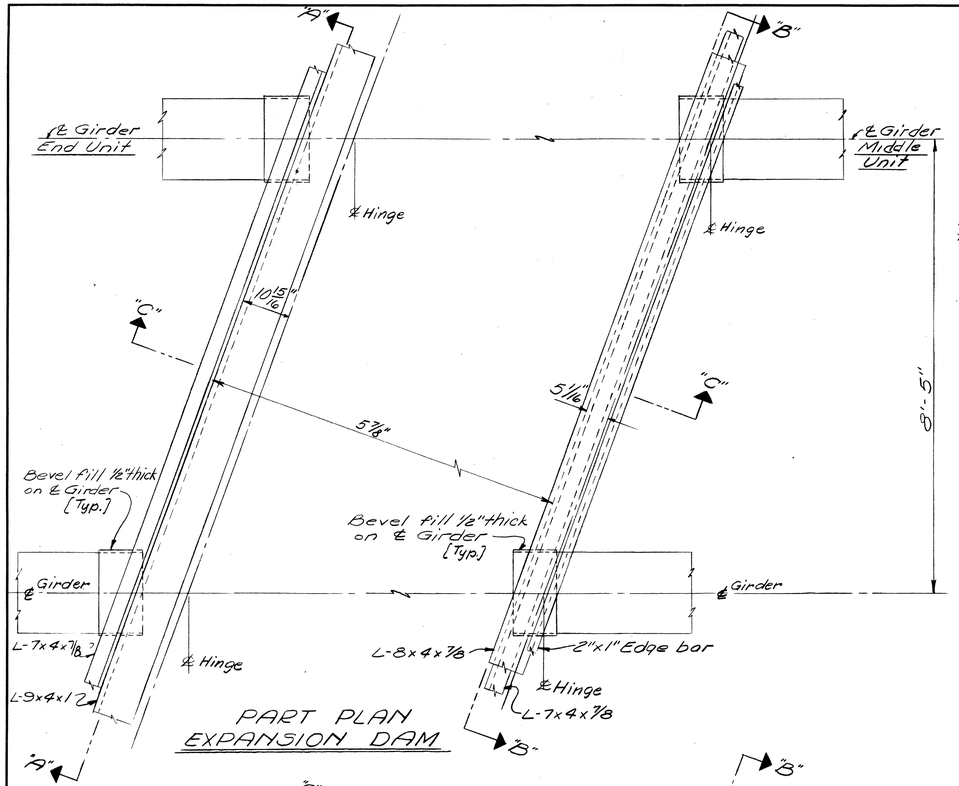
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE	DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		R.M.S.	[illegible]	3/15/63	

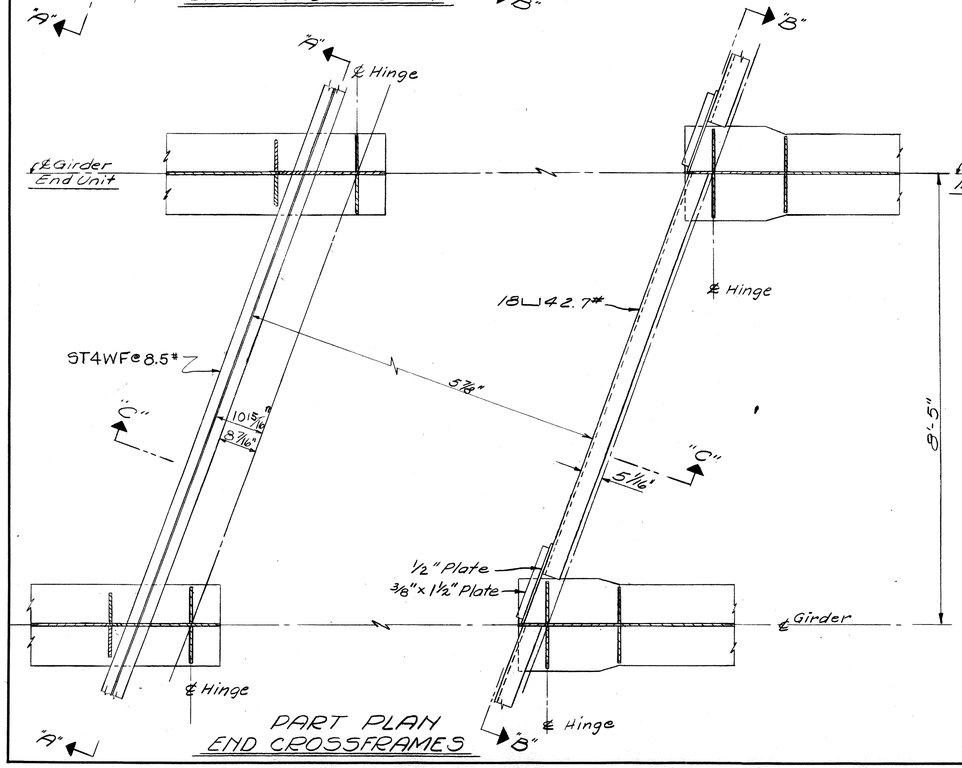
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

206
240

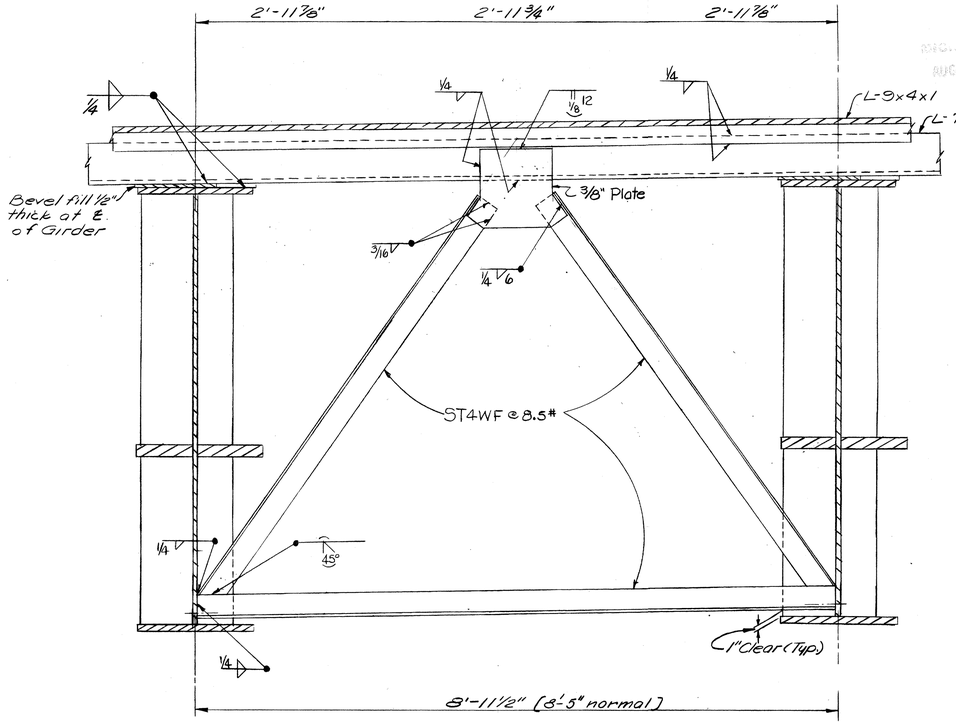
ROSS COUNTY
ROS-35-21.23



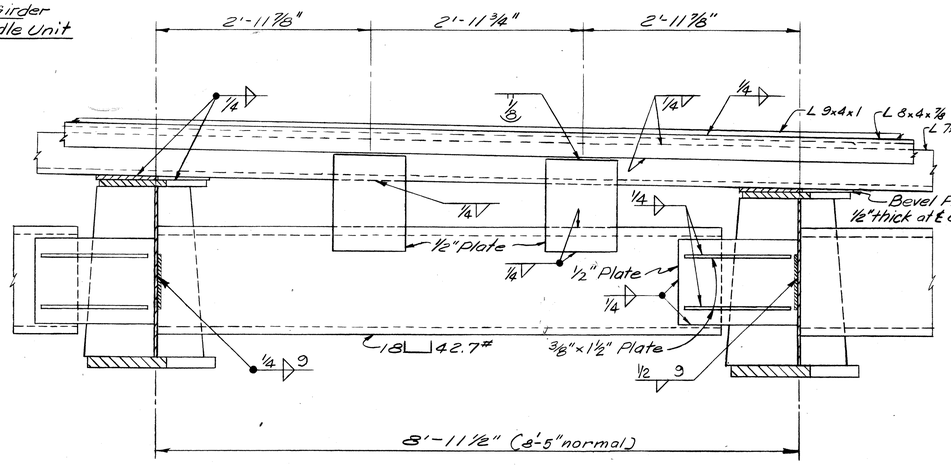
PART PLAN
EXPANSION DAM



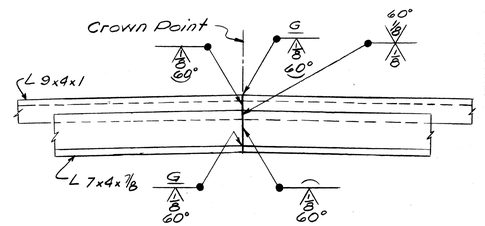
PART PLAN
END CROSSFRAMES



SECTION "A"-"A"

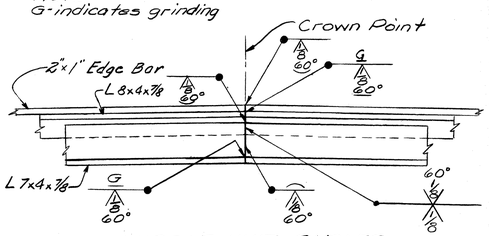


SECTION "B"-"B"



END UNIT ANGLES

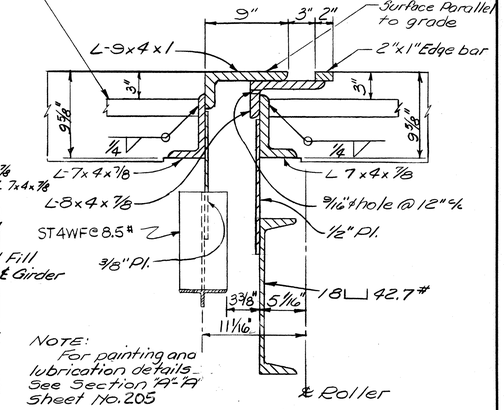
NOTE:
G-indicates grinding



MIDDLE UNIT ANGLES

WELDED BUTT JOINT IN SUPERSTRUCTURE
EXPANSION DAM ANGLES AT CROWN POINT

Anchor bars 2"x1/2"x1'-6" @ 1'-0" ctrs. placed parallel to longitudinal reinforcing steel. (Both sides of Expansion Joint.)



NOTE:
For painting and lubrication details See Section A-A Sheet No. 205

SECTION "C"-"C"

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

EXPANSION DAM DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER

ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+33.23

SCALE — DATE

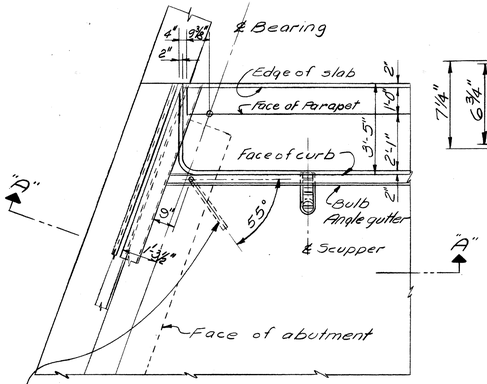
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.O.J.		R.M.S.	WHL	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

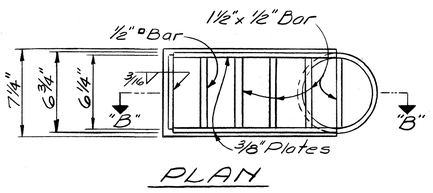
207
2A0

MICROFILMED
AUG 30 1963

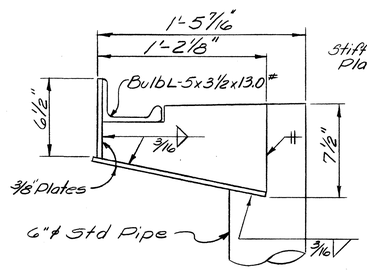
ROSS COUNTY
ROS-35-21.23



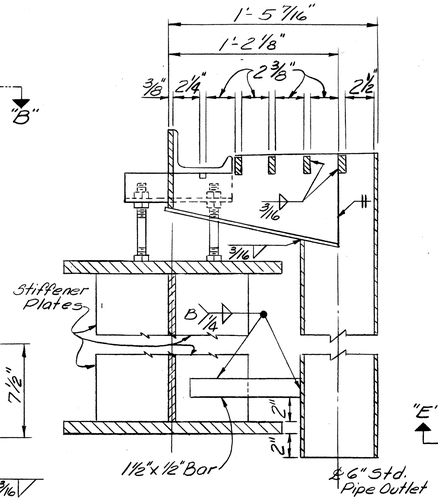
*2" Diameter standard pipe drain at end of bulb angle gutter. Use standard elbow and coupling. A welded bend may be used where space does not permit use of standard elbow



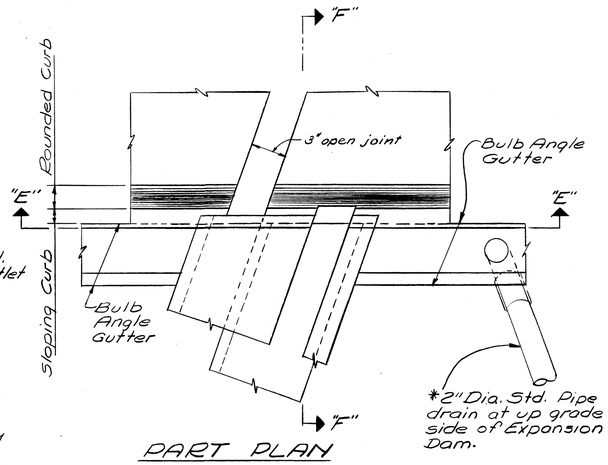
PLAN



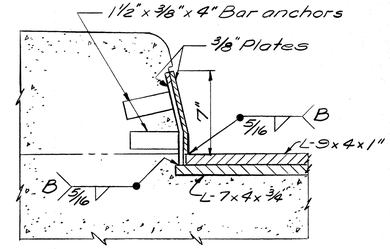
ELEVATION



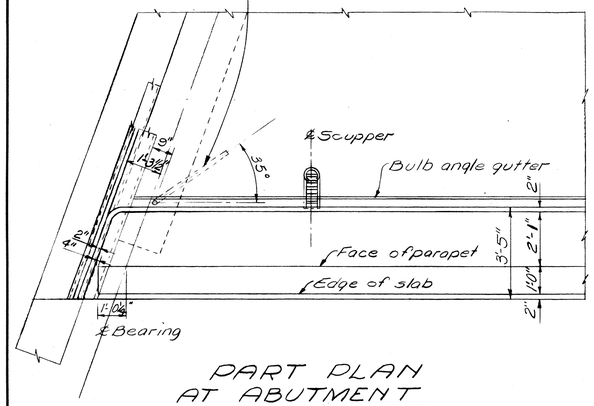
SECTION "B"-"B"



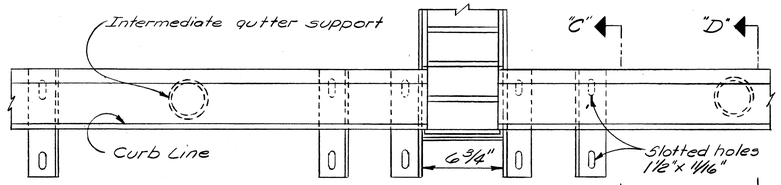
PART PLAN



SECTION "F"-"F"



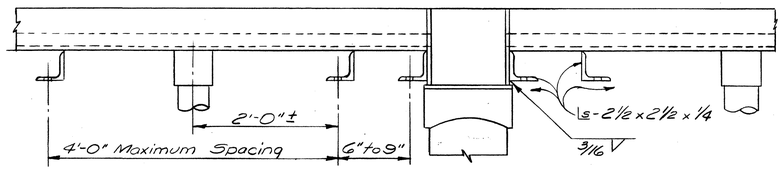
PART PLAN AT ABUTMENT



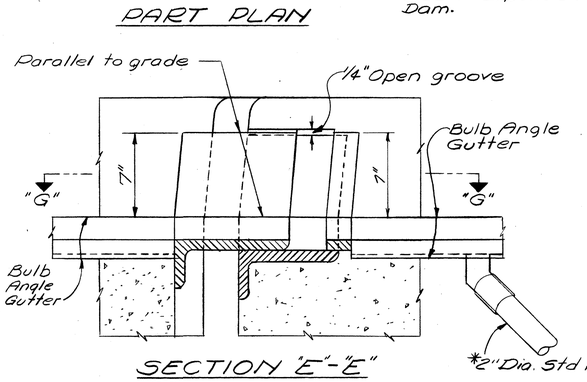
PART PLAN

"C"

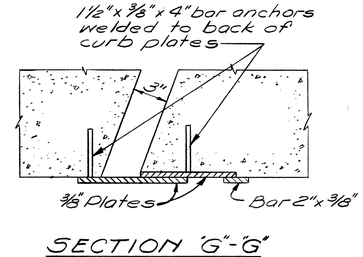
"D"



ELEVATION

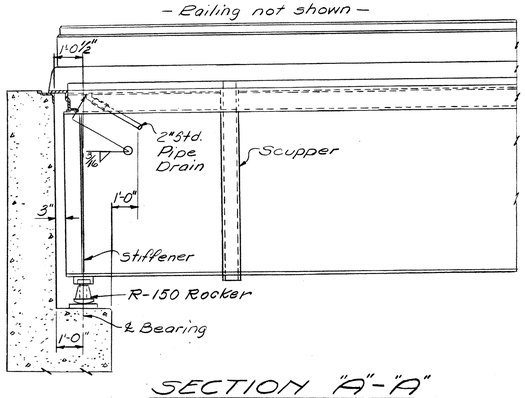


SECTION "E"-"E"



SECTION "G"-"G"

EXPANSION DAM (AT Hinge)
CURB PLATE DETAILS



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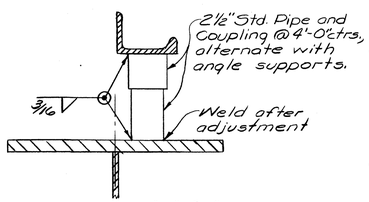
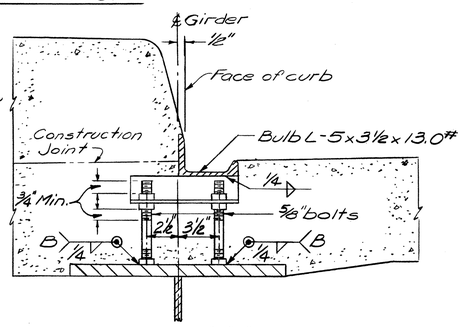


SECTION "D"-"D"
INTERMEDIATE
GUTTER SUPPORT



SECTION "C"-"C"
GUTTER SUPPORT

GUTTER AND SCUPPER DETAILS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

GUTTER AND SCUPPER DETAILS
CURB PLATE DETAILS
BRIDGE NO. ROS-35-2/94 R&L
U.S.R. 35 OVER SCIOTO RIVER

ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		R.M.S.	WWL	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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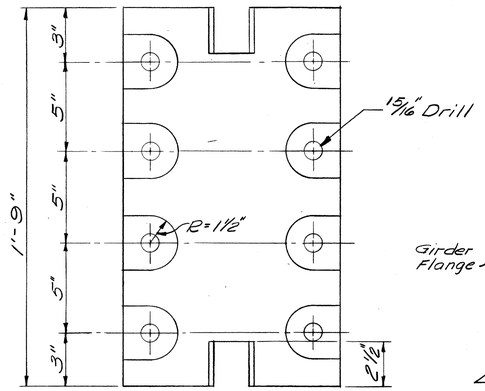
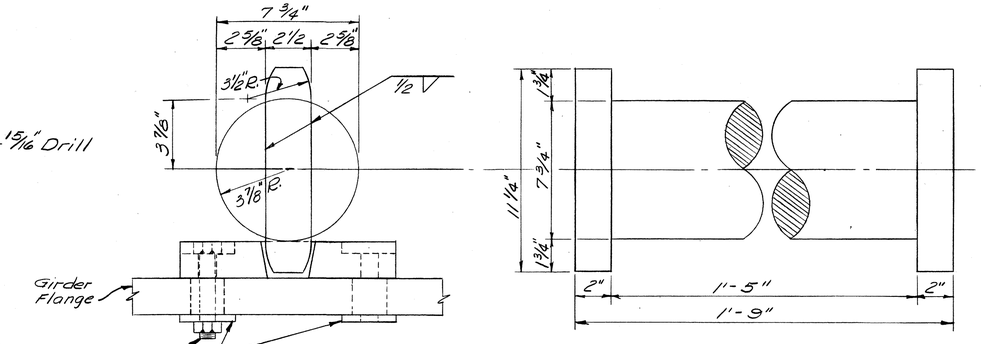
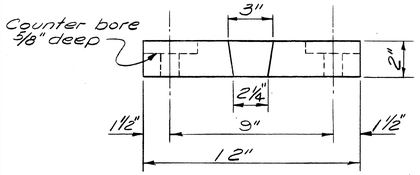
240

ROSS COUNTY
ROS-35-21.23





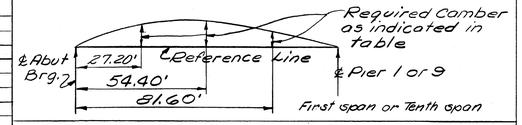
NOTE:
Roller bars and roller bearing plates shall be alloy steel forgings conforming to ASTM A-237-55 (Class "B") or shall be an equivalent material, having a minimum yield point of 55,000 psi.

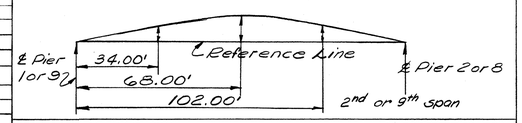


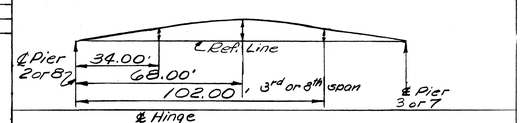
ROLLER BEARING PLATE

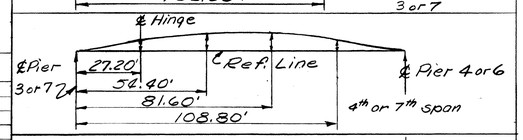
ROLLER DETAIL

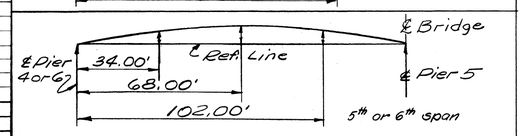
DEFLECTION AND CAMBER							CAMBER DIAGRAMS
SPAN	DISTANCE FROM ℄ BEARING	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO REMAINING DEAD LOAD	CONVEXITY REQUIRED FOR VERTICAL CURVE	SUM OF DEFLECTION AND CONVEXITY	REQUIRED CAMBER	
EXTERIOR GIRDERS							
First & Tenth	27.20'	0.15"	0.46"	——	0.61"	5/8"	
	54.40'	0.18"	0.53"	——	0.71"	11/16"	
	81.60'	0.08"	0.23"	——	0.31"	5/16"	
Second & Ninth	34.00'	0.08"	0.24"	——	0.32"	5/16"	
	68.00'	0.17"	0.50"	——	0.67"	11/16"	
	102.00'	0.09"	0.26"	——	0.35"	3/8"	
Third & Eighth	34.00'	0.09"	0.28"	0.02"	0.39"	3/8"	
	68.00'	0.18"	0.53"	0.05"	0.76"	3/4"	
	102.00'	0.11"	0.33"	0.07"	0.51"	1/2"	
Fourth & Seventh	27.20' ℄ Hinge	0.08"	0.23"	0.30"	0.60"	5/8"	
	54.40'	0.14'	0.43'	0.44'	1.01"	1"	
	81.60'	0.16'	0.47'	0.44'	1.07"	1 1/16"	
	108.80'	0.06"	0.17"	0.30"	0.53"	1/2"	
Fifth & Sixth	34.00'	0.09"	0.27	0.35"	0.71"	11/16"	
	68.00'	0.16'	0.49	0.46"	1.11"	1 1/8"	
	102.00'	0.08"	0.25	0.35"	0.68"	11/16"	
INTERIOR GIRDERS							
First & Tenth	27.20'	0.15"	0.43"	——	0.58"	9/16"	
	54.40'	0.18"	0.50"	——	0.68'	11/16"	
	81.60'	0.08"	0.22"	——	0.30"	5/16"	
Second & Ninth	34.00'	0.08"	0.23"	——	0.31"	5/16"	
	68.00'	0.17"	0.47"	——	0.64"	5/8"	
	102.00'	0.09"	0.25"	——	0.34"	5/16"	
Third & Eighth	34.00'	0.09"	0.26"	0.02"	0.37"	3/8"	
	68.00'	0.18"	0.50"	0.05"	0.73"	3/4"	
	102.00'	0.11"	0.31"	0.07"	0.48"	1/2"	
Fourth & Seventh	27.20' ℄ Hinge	0.08"	0.22"	0.30"	0.60"	5/8"	
	54.40'	0.14"	0.41"	0.44"	0.99"	1"	
	81.60'	0.16"	0.45"	0.44"	1.05"	1 1/16"	
	108.80	0.06"	0.16"	0.30"	0.52"	1/2"	
Fifth & Sixth	34.00'	0.09"	0.25"	0.35"	0.69"	11/16"	
	68.00'	0.17"	0.47"	0.46"	1.10"	1 1/8"	
	102.00'	0.08"	0.24"	0.35"	0.67"	11/16"	

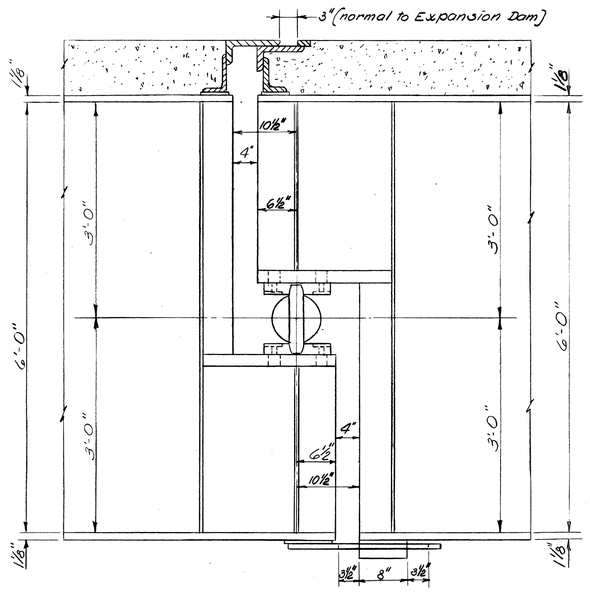












HINGE ASSEMBLY

Note: The roller is to be set so that the top bearing plate is vertically above the bottom bearing plate at 60° F.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

ROLLER DETAILS AND DEFLECTION & CAMBER TABLE

BRIDGE NO. ROS-35-2194 R&L.
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J.		R.M.S.	WK	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

209
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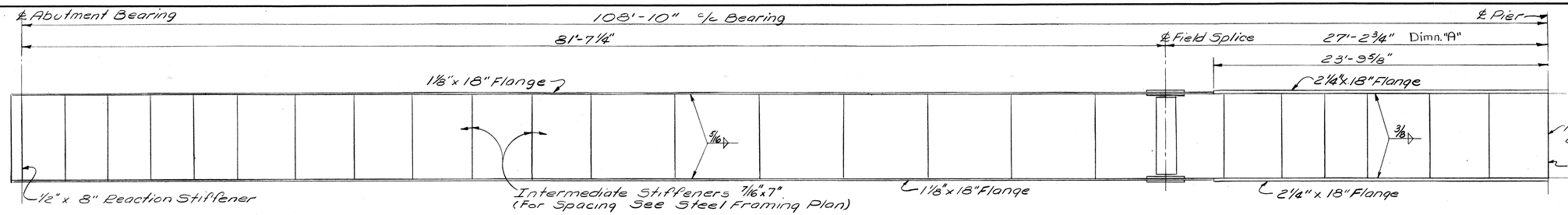
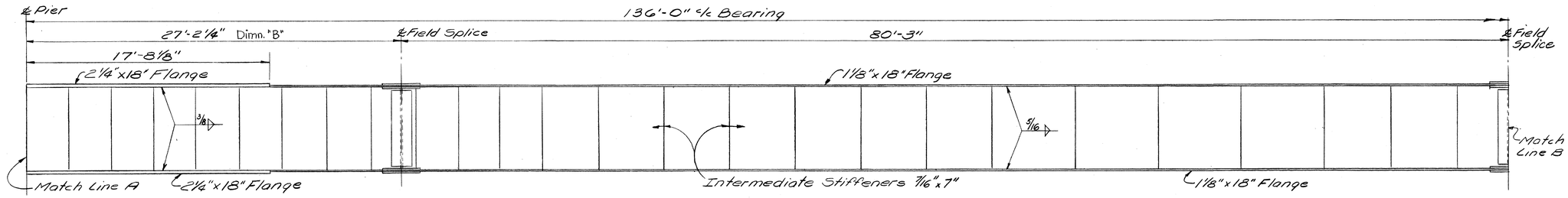
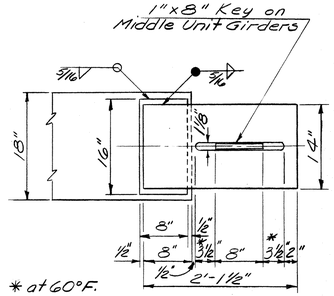
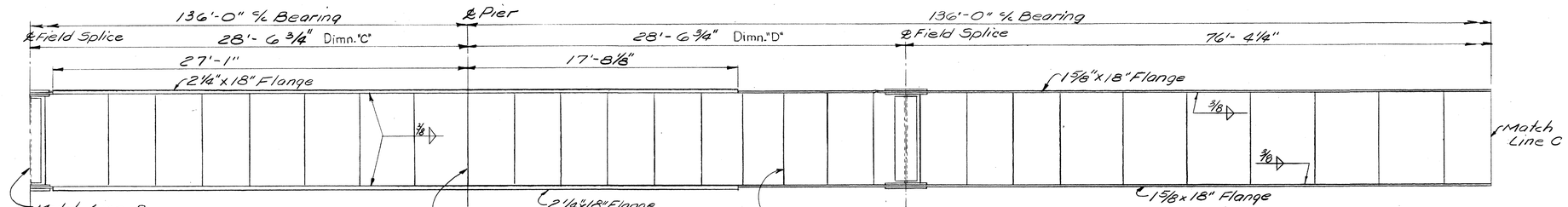
ROSS COUNTY
ROS-35-21.23

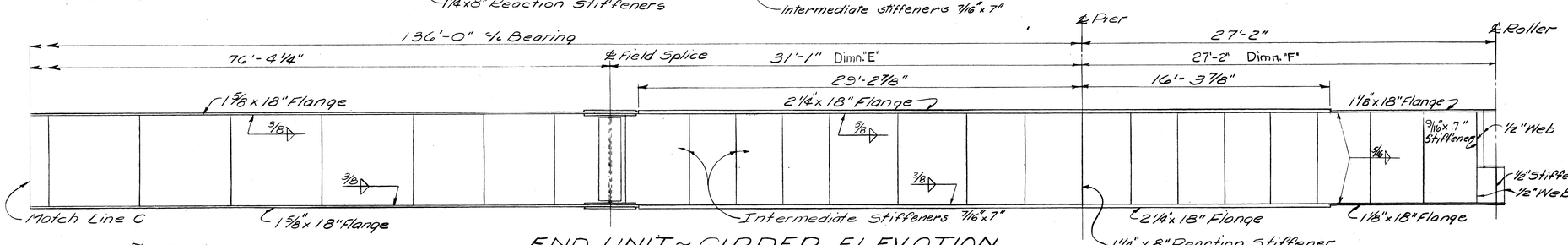






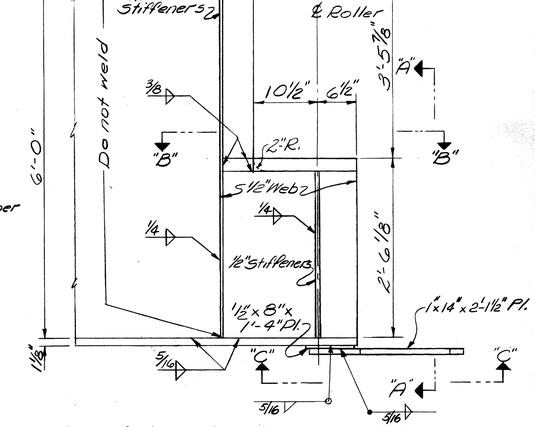
SECTION "C"-"C"



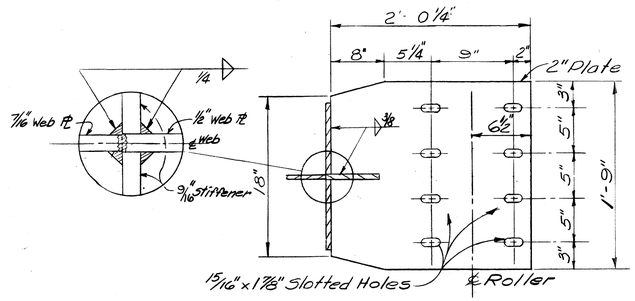


END UNIT ~ GIRDER ELEVATION

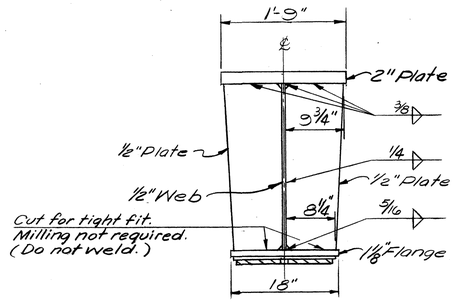
Note:
All Webs 7/16"x 72"
except as shown at
roller bearing.



DETAIL OF END OF GIRDER



SECTION "B"-"B"



SECTION "A"-"A"

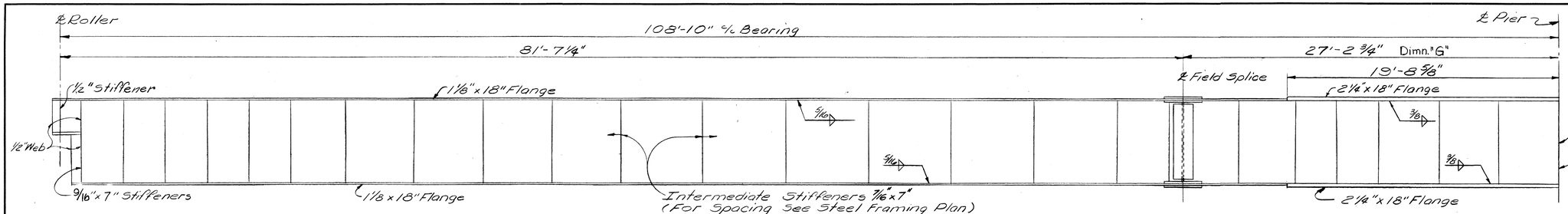
ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

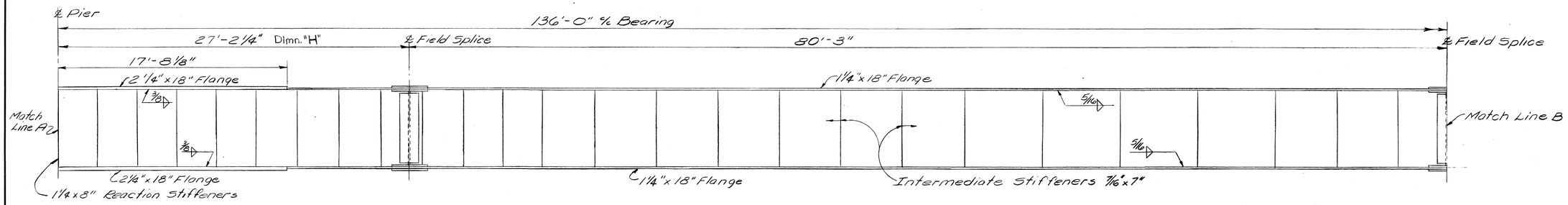
GIRDER DETAILS

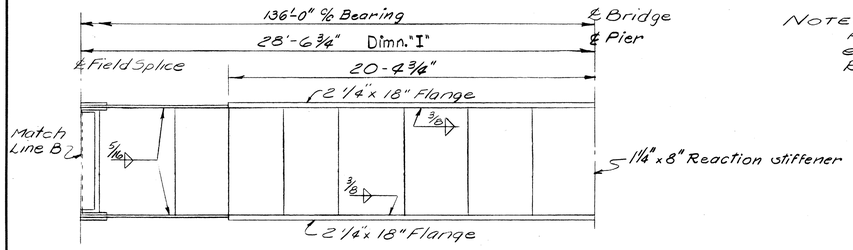
BRIDGE NO. ROS-35-2194 R&L.
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.A.S.	WDJ		R.M.S.	WK	3/15/63	

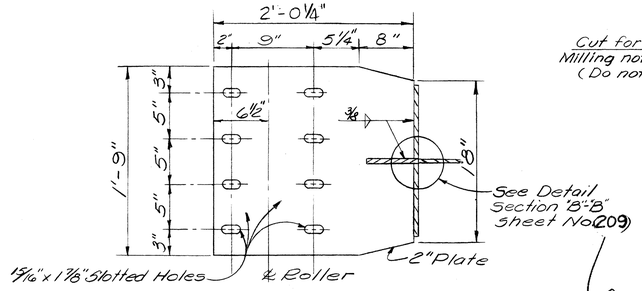






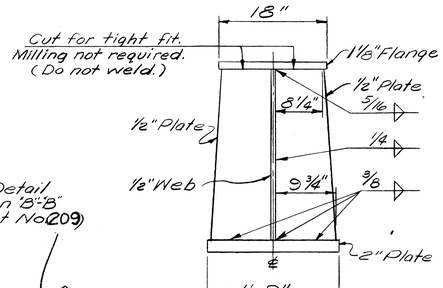
NOTE:
All Webs 7/16"x72" except as shown at Roller Bearing.

HALF MIDDLE UNIT ~ GIRDER ELEVATION

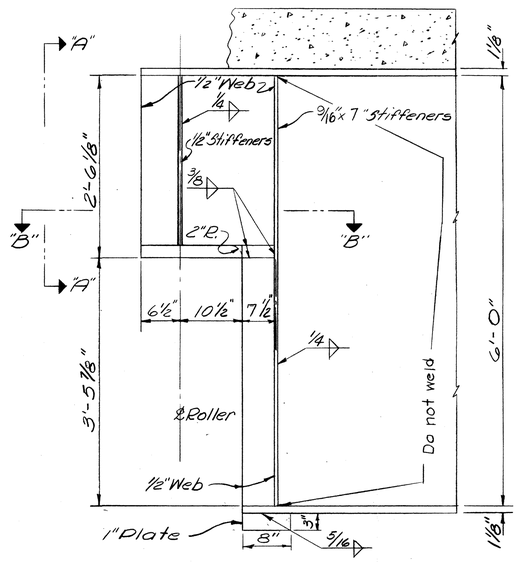


SECTION "B"-"B"

209



SECTION "A"-"A"



DETAIL OF END OF GIRDER

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GIRDER DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER

ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	WOJ		R.M.S.	WK	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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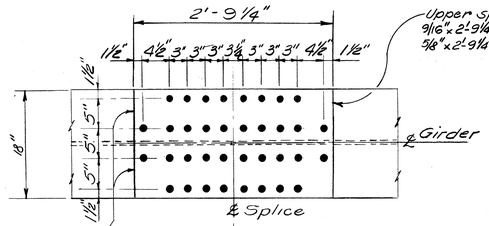
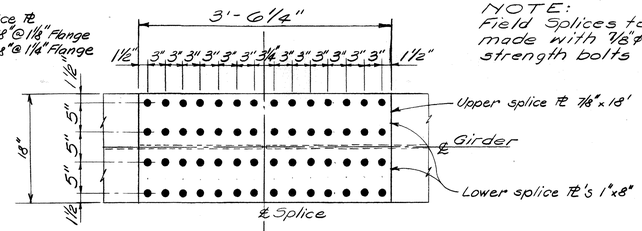
ROSS COUNTY
ROS-35-21.23

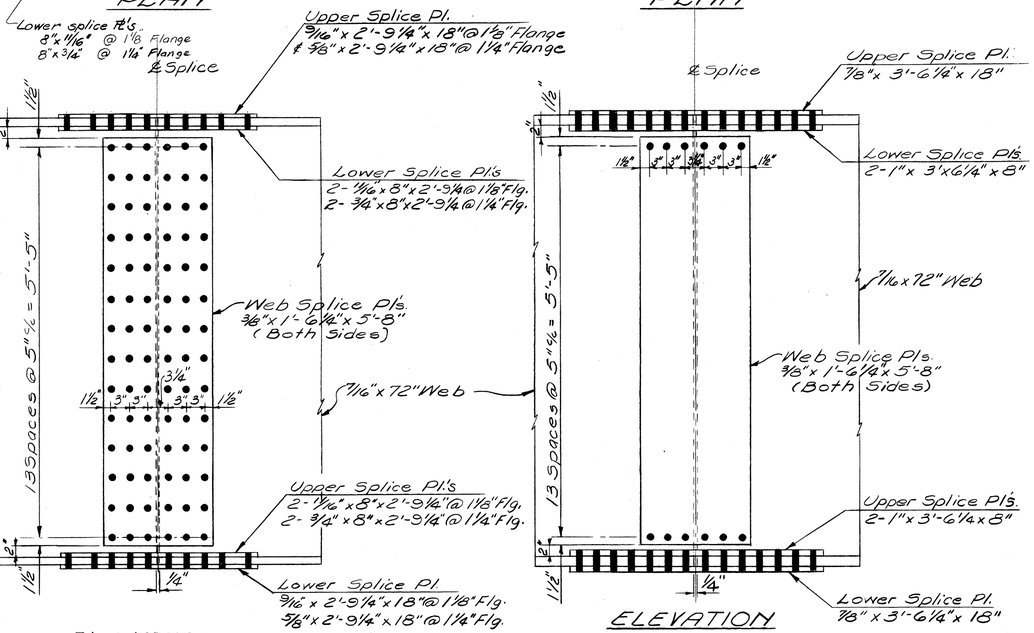
NOTE:
Field Splices to be made with 7/8" ϕ high strength bolts



PLAN



PLAN

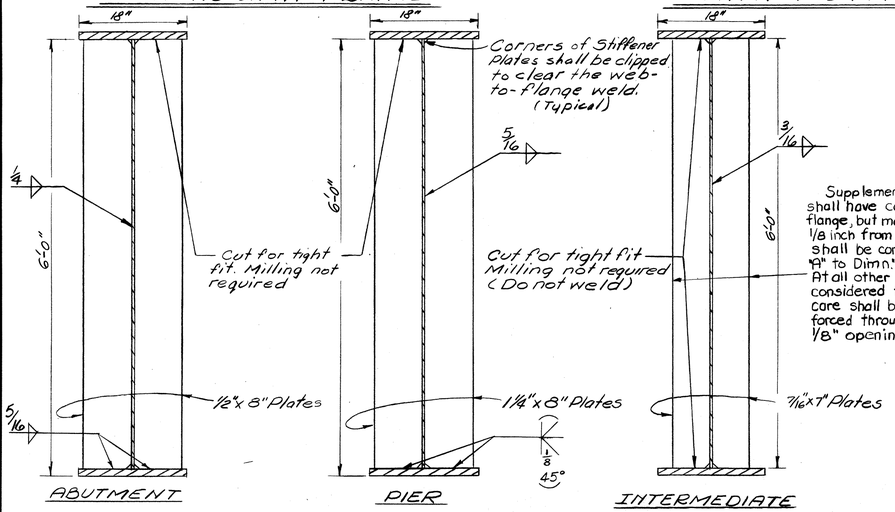


ELEVATION

ELEVATION

TYPICAL FIELD SPLICE WITH 1 1/8" OR 1 1/4" FLANGE

TYPICAL FIELD SPLICE WITH 1 5/8" FLANGE



ABUTMENT PIER INTERMEDIATE

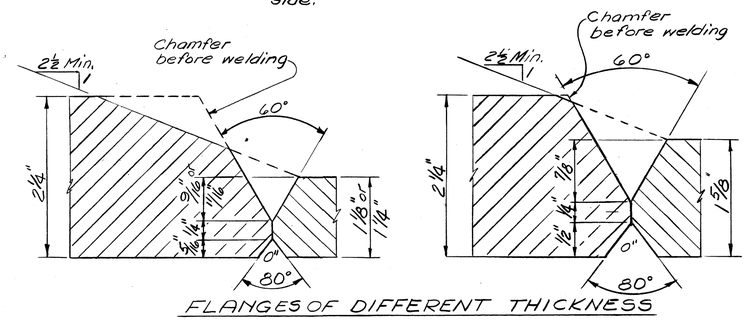
STIFFENER DETAILS

Supplementary to Sec. S-7.14, these stiffners shall have contact bearing with the compression flange, but may have a clearance of not more than 1/8 inch from the tension flange. The top flange shall be considered the tension flange thru Dimn. "A" to Dimn. "I" as indicated on "Girder Elevations". At all other locations, the bottom flange shall be considered the tension flange. In shop painting care shall be taken to make certain that paint is forced through from one side to the other of the 1/8" opening.

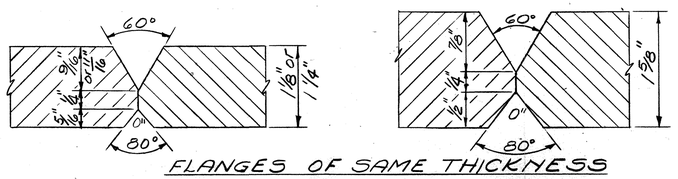
TABLE OF DIMENSIONS FOR SPECIAL ROCKER AND BOLSTER															
A	B	C	D	F	G	H	K	L	M	R	T	Y	Weight (lbs.) Bolster	Weight (lbs.) Rocker	Reaction in lbs.
3 1/4"	22"	4"	3 1/2"	1"	12 1/2"	21 1/8"	16"	30"	27"	13 1/2"	3 1/2"	1 3/16"	1200	1375	346,000

NOTE:
The Table of Dimensions for Special Rocker and Bolster is to be used with Standard Drawing RB-1-55, revised 2-2-59, for Notes, Details and Location of Dimensions.

Note:
All full penetration welds shall be back-gouged and welded after welding far side.

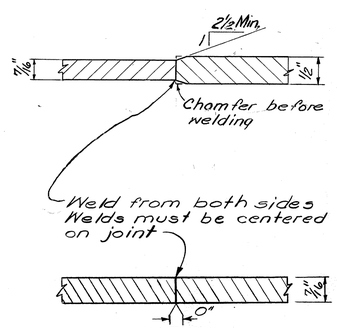


FLANGES OF DIFFERENT THICKNESS



FLANGES OF SAME THICKNESS

SHOP SPLICE WELDS



WEB

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GIRDER DETAILS

BRIDGE NO. ROS-35-2194 R&L
U.S.R. 35 OVER SCIOTO RIVER
ROSS COUNTY U.S.R. 35
STA. 1158+44.77 TO STA. 1171+55.23

SCALE			DATE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	W.D.J.		R.M.S.	W.K.	3/15/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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ROSS COUNTY
ROS-35-21.23

REINFORCING STEEL LIST

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
ONE SUPERSTRUCTURE					
S 701	953	29'-5"	——	57,302	
S 702	1906	21'-0"	——	81,813	
S 703	953	29'-5"	⟍	57,302	18'-1"± / 11'-4" / 0.03/3 — S 703
S 704	3	20'-2"	——	124	
S 705	3	16'-6"	——	101	
S 706	3	12'-10"	——	79	
S 707	3	9'-2"	——	56	
S 708	3	26'-9"	——	164	
S 709	3	23'-1"	——	142	
S 710	3	19'-5"	——	119	
S 711	3	15'-9"	——	97	
S 712	3 Series of 8 bars	20'-0" To 32'-10"	⟍	1,296	Inc. 1'-10"
S 713	3 Series of 6 bars	9'-0" To 18'-2"	——	500	Inc. 1'-10"
S 714	12	7'-2"	——	176	
S 715	3	19'-3"	⟍	118	
S 716	3	14'-11"	⟍	91	
S 717	3	11'-3"	⟍	69	
S 718	3	7'-7"	⟍	47	
S 719	3	25'-2"	⟍	154	
S 720	3	21'-6"	⟍	132	
S 721	3	17'-10"	⟍	109	
S 722	3	14'-2"	⟍	87	
S 723	3 Series of 13 bars	9'-5" To 31'-5"	——	1,628	Inc. 1'-10"
S 724	12	7'-7"	——	186	
S 601	953	33'-6"	⟍	47,952	30'-1" ⅝ / 3'-5"± / 0.03/3 — S 601
S 602	1906	16'-8"	——	47,714	
S 603	953	33'-6"	⟍	47,952	15'-5"± / 18'-1" ⅝ / 0.03/3 — S 603
S 604	3	16'-0"	——	72	
S 605	3	12'-4"	——	56	
S 606	3	8'-8"	——	39	
S 607	3	5'-0"	——	23	
S 608	3	31'-0"	⟍	140	
S 609	3	27'-4"	⟍	123	
S 610	3	23'-8"	⟍	107	
S 611	3	20'-0"	⟍	90	
S 612	3 Series of 8 bars	20'-0" To 32'-10"	⟍	952	Inc. 1'-10"
S 613	3 Series of 6 bars	9'-0" To 18'-2"	——	367	Inc. 1'-10"
S 614	12	7'-2"	——	129	
S 615	3	14'-8"	——	66	
S 616	3	10'-4"	——	47	
S 617	3	6'-8"	——	30	
S 618	3	3'-0"	——	14	
S 619	3	29'-4"	⟍	132	
S 620	3	25'-8"	⟍	116	
S 621	3	22'-0"	⟍	99	
S 622	3	18'-4"	⟍	83	
S 623	3 Series of 13 bars	9'-5" To 31'-5"	——	1,196	Inc. 1'-10"
S 624	12	7'-7"	——	137	
S 625	2184	33'-1"	——	108,525	
S 626	1344	32'-6"	——	65,607	
S 627	504	28'-3"	——	21,385	
S 628	72	21'-3"	——	2,298	
S 629	72	35'-9"	——	3,866	
S 501	1744	4'-0"	⊓	7,276	2'-11" ⅝ / 1'-9" — S 501
S 502	1744	6'-0"	⊔	10,914	2'-9" ⅝ / 1'-3" ⅝ — S 502
S 503	1904	5'-7"	M	11,088	2'-2" ⅝ / 45° / 1½" / 8" ⅝ — S 503
TOTAL ONE SUPERSTRUCTURE				580,487	
TOTAL TWO SUPERSTRUCTURE				1,160,974	
RAILING STEEL TWO BRIDGES					45° / 1½" Clear
R 501	800	14'-9"	——		
R 502	480	14'-8"	——		
R 503	16	17'-2"	——		
R 504	32	12'-0"	——		
R 505	32	19'-5"	——		
R 506	16	17'-4"	——		
REPLACEMENT STEEL					
RE 1101	6	7'-7"	——		
RE 1001	1	7'-3"	——		
RE 901	5	6'-10"	——		
RE 801	1	6'-6"	——		
RE 701	21	6'-3"	——		
RE 601	36	5'-11"	——		
RE 501	6	5'-7"	——		

S 608 27'-7" ⅝ / S 609 23'-11" ⅝ / S 610 20'-3" ⅝ / S 611 16'-7" ⅝ / 3'-5"± / 0.03/3 — S 608 thru S 611

14'-9" To 1'-11" / 18'-1" ⅝ / 0.03/3 — S 612

S 619 13'-11" / S 620 10'-3" / S 621 6'-7" / S 622 2'-11" / 15'-5" ⅝ / 0.03/3 — S 619 thru S 622

NOTES

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, A501 is a No. 5 size bar and P1001 is a No. 10 size bar.

RAILING STEEL in the parapet wall is included with Item S-14 Railing for payment.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE NO. ROS-35-2194 R. & L.
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.D.D.	W.D.J.	L.P.	R.M.S.	WL	3/15/63	

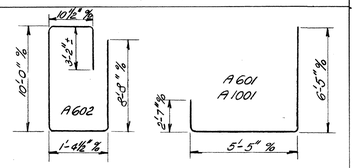
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

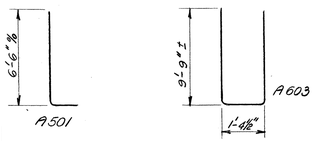
213
240

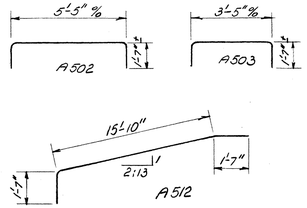
ROSS COUNTY
ROS-35-21.23

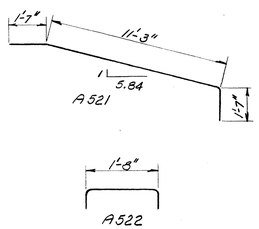
REINFORCING STEEL LIST

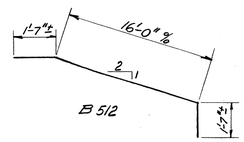
Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
FORWARD ABUTMENT – LEFT BRIDGE					
REAR ABUTMENT – RIGHT BRIDGE					
A 1001	17	13'-10"	⌴	1,012	
A 801	8	34'-5"	—	735	
A 802	3	31'-4"	—	251	
A 803	3	37'-6"	—	300	
A 804	3	10'-0"	—	80	
A 601	38	14'-1"	⌴	804	
A 602	39	23'-6"	⌴	1,377	
A 603	8	20'-7"	⌴	247	
A 604	20	10'-1"	—	303	
A 605	2 Series of 5 Bars	7'-0" To 9'-4"	—	123	Inc. 7"
A 501	55	7'-0"	L	402	
A 502	55	8'-4"	⌐	478	
A 503	39	6'-4"	⌐	258	
A 504	22	23'-3"	—	534	
A 505	22	23'-8"	—	543	
A 506	10	21'-0"	—	219	
A 507	2	19'-10"	—	41	
A 508	2	16'-7"	—	35	
A 509	2	13'-4"	—	28	
A 510	2	10'-1"	—	21	
A 511	2	7'-0"	—	15	
A 512	2	18'-10"	◺	39	
A 513	Series of 7 Bars	5'-4" To 8'-6"	—	51	Inc. 6⅛"
A 514	Series of 4 Bars	10'-4" To 11'-0"	—	45	Inc. 2⅝/8
A 515	2	10'-0"	—	21	
A 516	2	9'-10"	—	21	
A 517	14	17'-1"	—	249	
A 518	2	14'-8"	—	31	
A 519	2	14'-6"	—	30	
A 520	2	6'-6"	—	14	
A 521	2	14'-3"	◹	30	
A 522	36	2'-8"	⌐	100	
TOTAL - FWD. ABUT. LT. B.R.				8,437	
TOTAL - REAR ABUT. RT. B.R.				8,437	
TOTAL TWO ABUTMENTS				16,874	
FORWARD ABUTMENT – RIGHT BRIDGE					
REAR ABUTMENT – LEFT BRIDGE					
B 1001	16	13'-10"	⌴	952	See A 1001
B 801	8	34'-1"	—	728	
B 802	3	30'-8"	—	246	
B 803	3	37'-6"	—	300	
B 804	3	10'-0"	—	80	
B 601	39	14'-1"	⌴	825	See A 601
B 602	39	23'-6"	⌴	1,377	See A 602
B 603	7	20'-7"	⌴	216	See A 603
B 604	18	10'-1"	—	273	
B 605	2 Series of 5 Bars	7'-2" To 9'-8"	—	126	Inc. 7⅛"
B 501	55	7'-0"	L	402	See A 501
B 502	54	8'-4"	⌐	469	See A 502
B 503	39	6'-4"	⌐	258	See A 503
B 504	22	23'-5"	—	537	
B 505	21	23'-4"	—	511	
B 506	1	26'-6"	—	28	
B 507	10	18'-3"	—	190	
B 508	2	16'-8"	—	35	
B 509	2	13'-8"	—	29	
B 510	2	10'-8"	—	22	
B 511	2	7'-8"	—	16	
B 512	2	19'-0"	◹	40	
B 513	2 Series of 7 Bars	4'-10" To 8'-7"	—	98	Inc. 7½"
B 514	2 Series of 7 Bars	9'-9" To 11'-1"	—	152	Inc. 2⅝/8
B 515	16	19'-1"	—	318	
B 516	2	15'-8"	—	33	
B 517	2	9'-0"	—	19	
B 518	2	14'-6"	◹	30	
B 519	36	2'-8"	⌐	100	See A 522
TOTAL - FWD. ABUT. RT. B.R.				8,410	
TOTAL - REAR ABUT. LT. B.R.				8,410	
TOTAL TWO ABUTMENTS				16,820	
9 PIERS – LEFT BRIDGE					
P 1101	45	51'-11"	⌐	12,413	
P 1102	45	47'-11"	—	11,456	
P 901	56	26'-5"	—	5,030	
P 902	224	15'-6"	—	11,805	
P 903	28	14'-0"	—	1,333	
P 904	56	27'-2"	—	5,173	
P 905	56	27'-7"	—	5,254	
P 906	28	27'-9"	—	2,642	
P 907	28	18'-0"	—	1,714	
P 601	36	18'-4"	◹	991	
P 501	324	3'-8"	⌐	1,239	
P 502	36 Series of 8 Bars	9'-1" To 17'-5"	⊓	3,816	
P 503	270	17'-5"	⊓	4,905	
P 504	36	47'-11"	—	1,799	
P 505	18	46'-5"	—	871	
P 506	18	42'-4"	—	795	
P 507	18	38'-3"	—	718	
P 508	18	34'-2"	—	641	
P 509	18	30'-1"	—	565	
P 510	18	26'-0"	—	488	
P 511	206	7'-5"	⊂	1,534	
P 512	206	23'-0"	—	4,942	
F 1101	352	17'-1"	⊂⊃	31,949	
F 1001	49	13'-0"	⊂⊃	2,741	
F 901	448	8'-6"	L	12,947	
F 902	56	8'-3"	L	1,571	
F 701	176	28'-4"	⊂⊃	10,193	
F 702	16	31'-4"	⊂⊃	1,025	
TOTAL 9 PIERS – LEFT BRIDGE				140,608	
TOTAL 9 PIERS – RIGHT BRIDGE				140,608	
TOTAL PIERS – LT. & RT. BRIDGE				281,216	

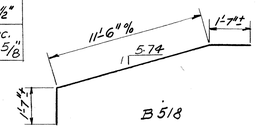


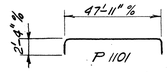


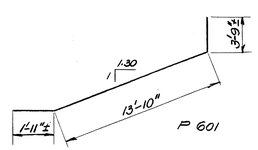


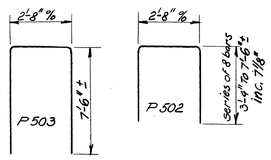


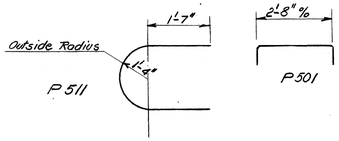


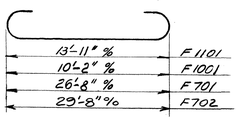


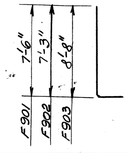












For Notes see Sheet No. 212

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST

BRIDGE NO. ROS-35-2194 R.& L.
U.S.R. 35 over SCIOTO RIVER
ROSS COUNTY — U.S.R. 35
STA. 1158+44.77 To STA. 1171+55.23

SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.D.D.	W.D.J. L.P.	L.P.	R.M.S.	WL	3/15/63	

FED. RD. DIVISION	STATE	PROJECT		214 / 240
2	OHIO			

ROSS COUNTY
ROS-35-21.23

PROP CURVE DATA (U.S.R. 35)
P.I. Sta. 1189+49.62
Δ = 38°48'00" Rt. Dc = 3°00' Rc = 1909.86' Ls = 400' Lc = 893.33' Ts = 873.73' Es = 118.66
Dc = 26°48'00" Ds = 6°00' p = 3.49' K = 199.93' Xc = 399.56' Yc = 13.95'

RAMP "A"

RAMP "B"*

RAMP "C"

RAMP "D"*

PROP E. MAIN ST. CURVE DATA*
P.I. Sta. 123+33.22
Δ = 7°00' Lt.
Dc = 2°00'
L = 350.00'
T = 175.22'
E = 5.36'
R = 2864.79'

BENCH MARK
R.R. Spike in ϕ
178' Lt. & Sta. 1207+80
Elev. 620.69

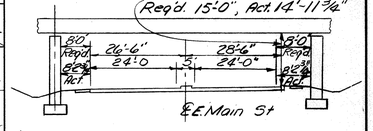
* Items so indicated are to be constructed as part of ROS-35-22.82

PROPOSED BRIDGE DATA

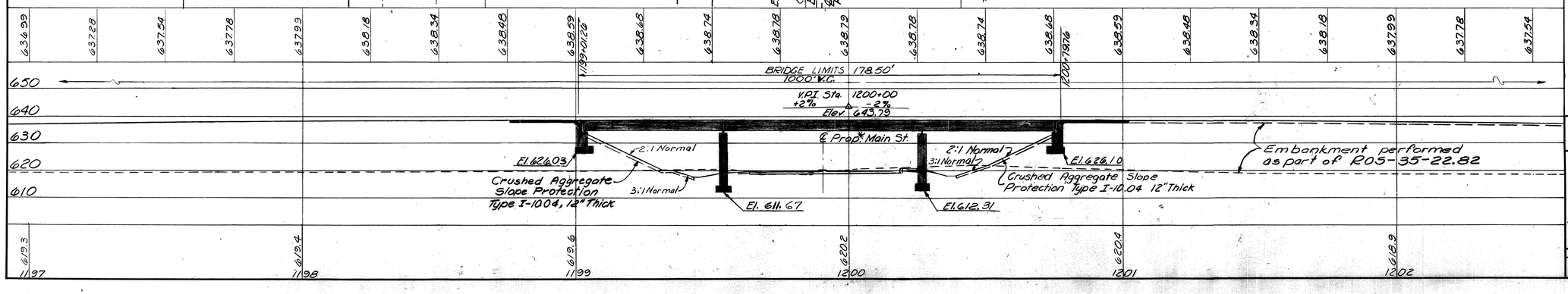
TYPE: Continuous Steel Beam with Concrete Deck and Concrete Substructure Two Separate Structures.
SPANS: 50'-9" - 72'-6" - 50'-9"
ROADWAY: 2 @ 52'-0" b/f Parapet
LOAD FREQUENCY: CF-2000 (57)
SKEW: 2°00' R.F.
WEARING SURFACE: 1" Monolithic Concrete.
APPROACH SLABS: AS-1-54 (25' Long)
RAILING: Aluminum Rail and Supports with Concrete Parapets.
ALIGNMENT: Tangent.

FOUNDATION SOUNDINGS

Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information, the accuracy of which the state does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.



CLEARANCE DIAGRAM
SECTION NORMAL TO E. MAIN ST.



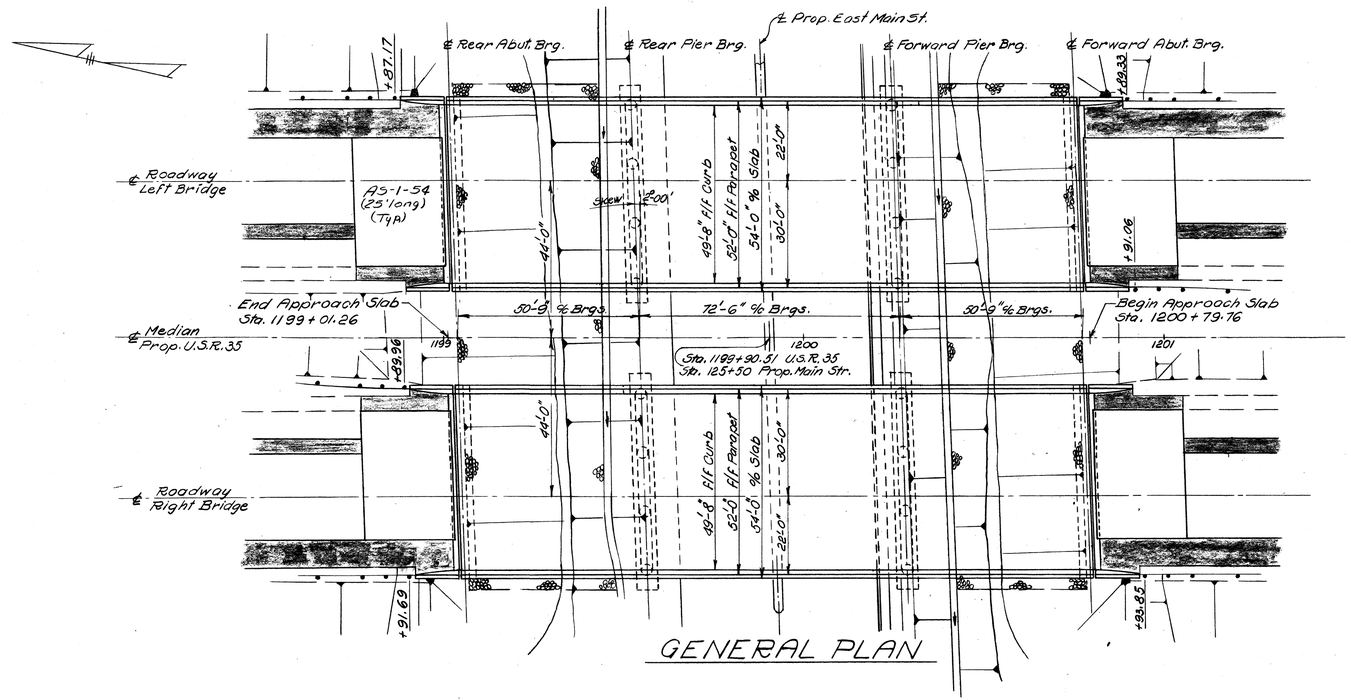
ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SITE PLAN

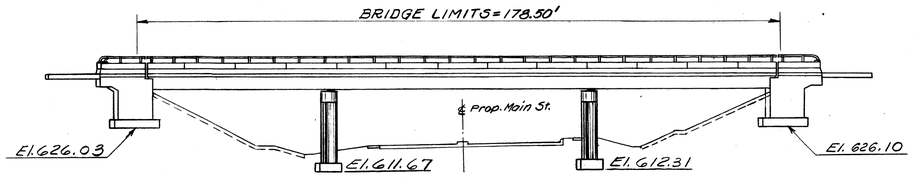
BRIDGE NO. ROS-35-2271 L & R.
U.S.R. 35 OVER EAST MAIN ST.

ROSS COUNTY U.S.R. 35
STA. 1199+01.26 TO STA. 1200+79.76

SCALE			DATE		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WK		L.L.F.	E.M.S. D.J.P.	WK	3/18/63	



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES [TWO STRUCTURES]

ITEM	QUANTITIES F.674(10)	QUANTITIES 100% STATE	QUANTITIES TOTAL	UNIT	DESCRIPTION	ABUT'S	PIERS	SUPER	GENERAL	AS BUILT
E-2			1136	Cu. Yds.	Unclassified Excavation	639	497			
E-2			Lump Sum	Lump	Cofferdams, cribs and sheeting		Lump			
S-1			584	Cu. Yds.	Class "C" Concrete, Superstructure			584		
S-1			155	Cu. Yds.	Class "C" Concrete, Pier Caps and Columns		155			
S-1			290	Cu. Yds.	Class "E" Concrete, Abutments above Footing	290				
S-1			255	Cu. Yds.	Class "E" Concrete, Footings	125	130			
S-3			42	Lin. Ft.	Waterproofing, premolded Sealing Strip	42				
S-4			247,561	Lbs.	Reinforcing Steel	18,180	59,895	169,486		
S-7			506,250	Lbs.	Structural Steel			506,250		
S-8			506,250	Lbs.	Field Painting of Structural Steel			506,250		
S-14			799.00	Lin. Ft.	Railing, Aluminum Rail and Supports and Concrete Parapet	96.67		702.33		
S-29			16	Each	Scuppers, including supports			16		
S-29			66	Cu. Yds.	Porous Backfill	66				
I-10			1,507	Sq. Yds.	Crushed Aggregate Slope Protection				1,507	
S-101			584	Each	Water-Reducing, Set-Retarding Admixture			584		

EMBANKMENT PROCEDURE:
The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments. The embankment at the forward abutment is to be placed as part of an adjacent project, ROS-35-22.82.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

215/240

MICROFILMED AUG 30 1965

ROSS COUNTY
ROS-35-21.23

GENERAL NOTES

REFERENCE shall be made to Supplemental Specifications S-307 revised 10-1-64 and to Standard Drawings FSB-1-62 dated 1-15-63, AS-1-54, revised 7-5-62, modified as per plan and AR-1-57, revised 4-2-62, and Supplemental Specification, S-101, dated 7-12-62.

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

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

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.40 Tons per sq. ft. Pier footings are designed for a maximum bearing pressure of 2.20 Tons per sq. ft.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
Class "B" welds are shown thus: B

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

a. The entire superstructure except the top and bottom surfaces of safety curb and roadways.

b. The entire surface of Piers and Abutments except bridge seats, backwalls, and the face of spill-through abutments between outside beams.

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

UTILITY LINES: All expense involved in relocating (installing) the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

GENERAL PLAN and ELEVATION
ESTIMATED QUANTITIES & GEN. NOTES
BRIDGE NO. ROS-35-2271 L & R
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY U.S.R. 35
STA. 1199+01.26 TO STA. 1200+79.76

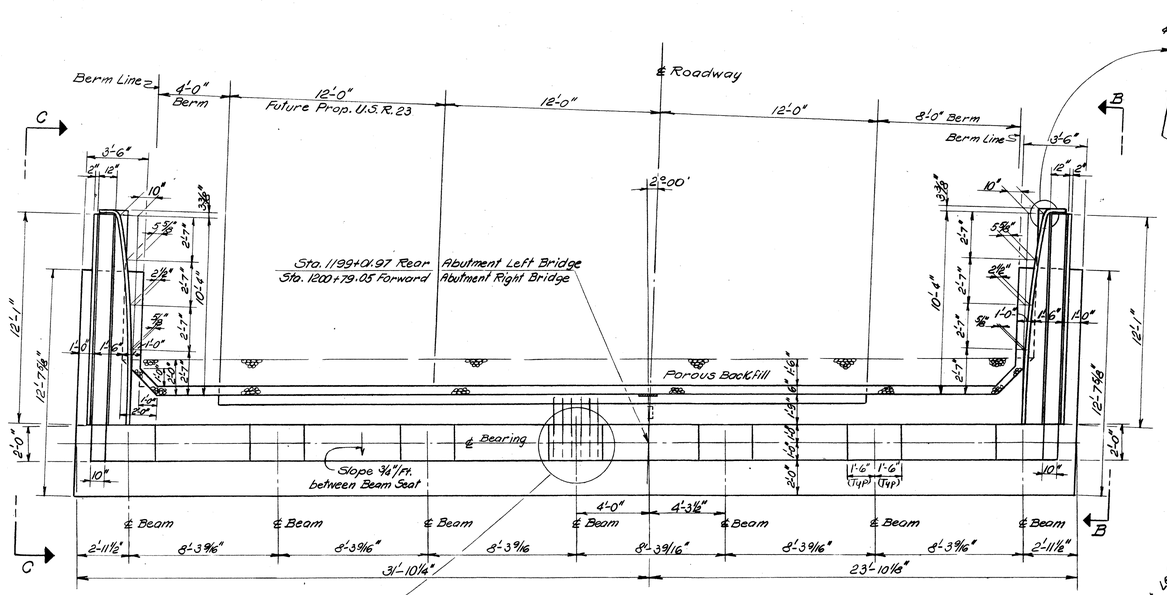
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	L.P.		D.J.P.	W.L.	3/18/63	

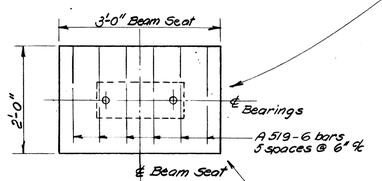
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

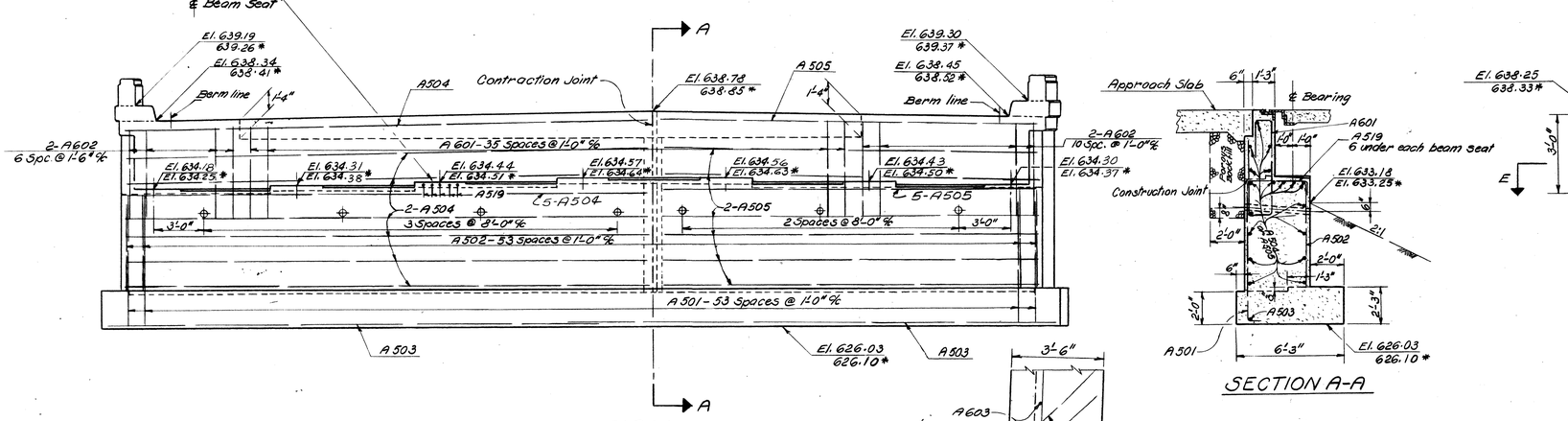
216/240

ROSS COUNTY
ROS-35-21.23



PLAN
REAR ABUTMENT-LEFT BRIDGE
FORWARD ABUTMENT-RIGHT BRIDGE





ELEVATION

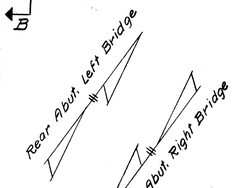
NOTES:
CONCRETE for abutments shall be Class "E".

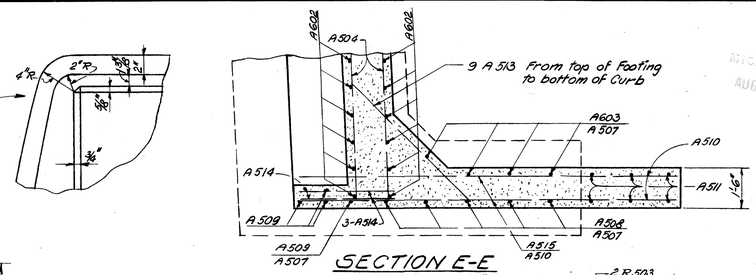
POROUS BACKFALL shall extend upward to the approach slab and outward to the abutment wings. Excavation therefor in excess of that required for construction of the abutments shall be considered as paid for in the bid price per cu.yd. paid for porous Backfill.

SEE STANDARD DRAWING AR-1-57 for Details of aluminum railing and concrete parapet.

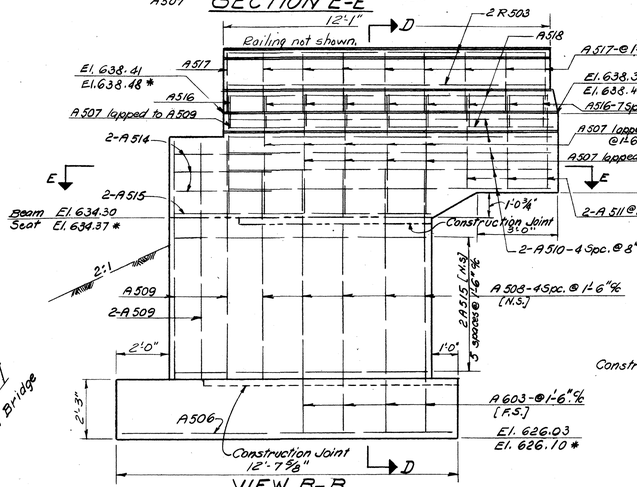
ALUMINUM RAILING and Concrete Parapet Wall are included with Item S-14, Railing for payment.

ALUMINUM RAILING on abutment Wing-walls shall be continuous.

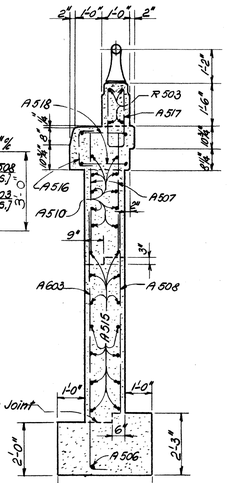




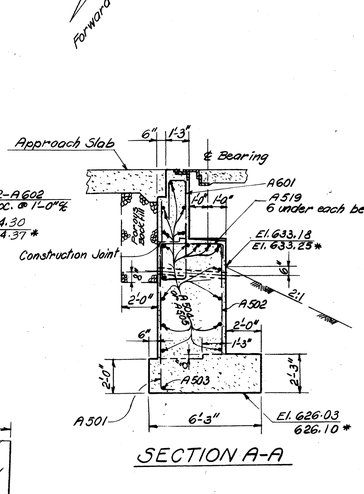
SECTION E-E



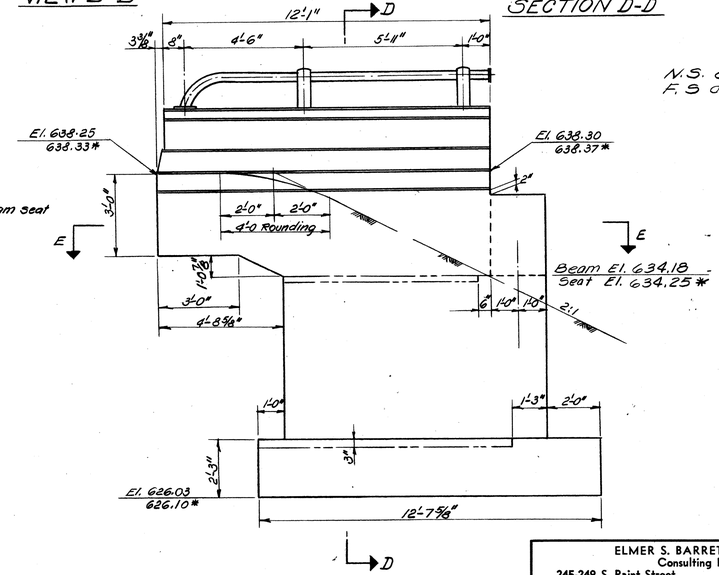
VIEW B-B



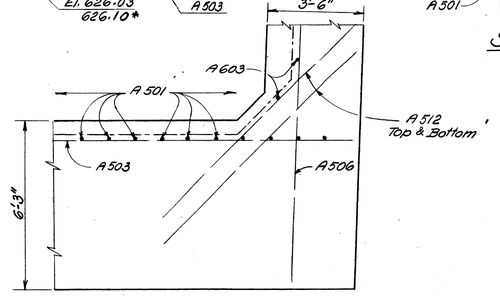
SECTION D-D



SECTION A-A



VIEW C-C



PART FOOTING PLAN

LEGEND
N.S. denotes Near Side
F.S denotes Far Side

NOTES:
* These are the elevations for Forward Abutment Right Bridge.

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

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

ABUTMENT DETAILS

BRIDGE No. ROS-35-2271 L & R
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY U.S.R. 35
STA. 1199+01.26 To STA. 1200+79.76

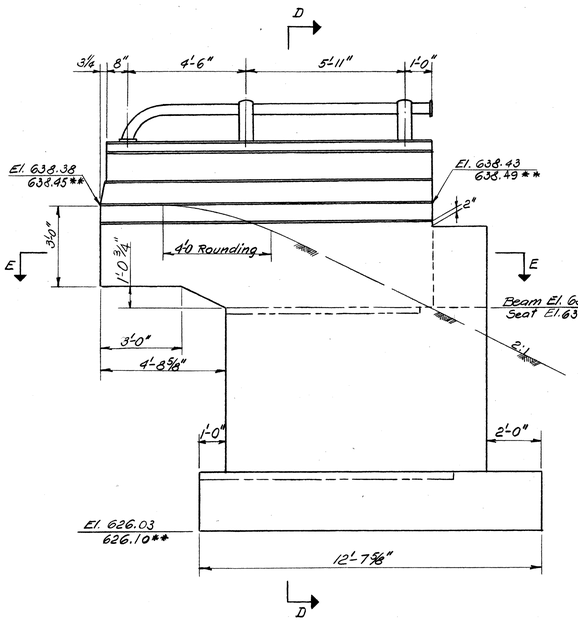
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	D.S.	L.P.	D.J.P.	J.H.	3/18/63	

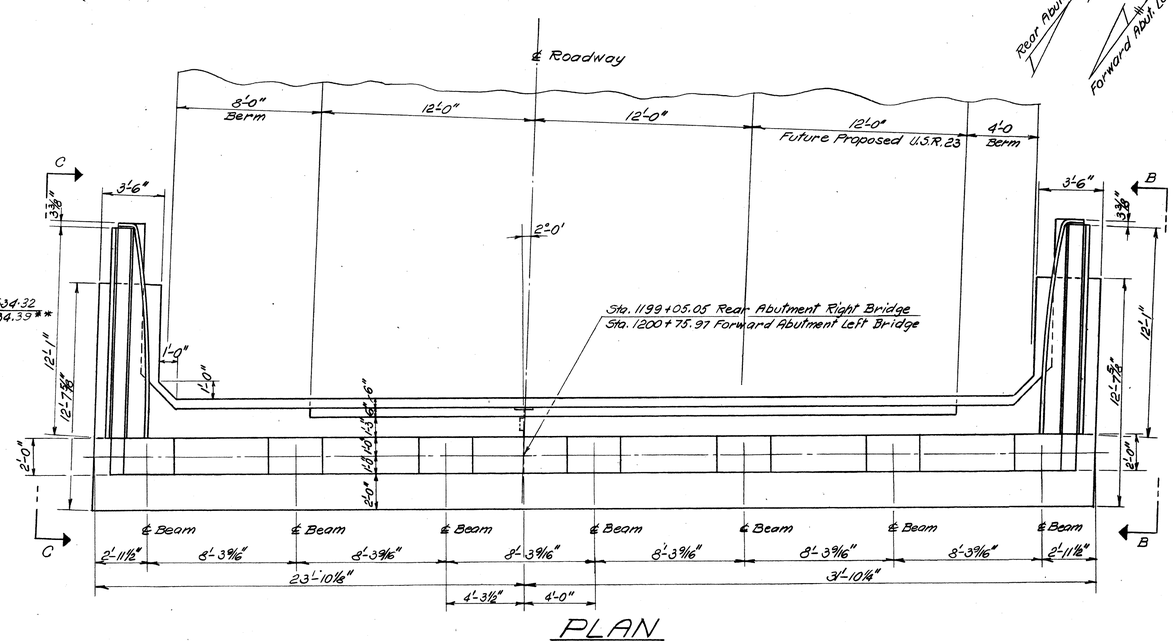
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

217
240

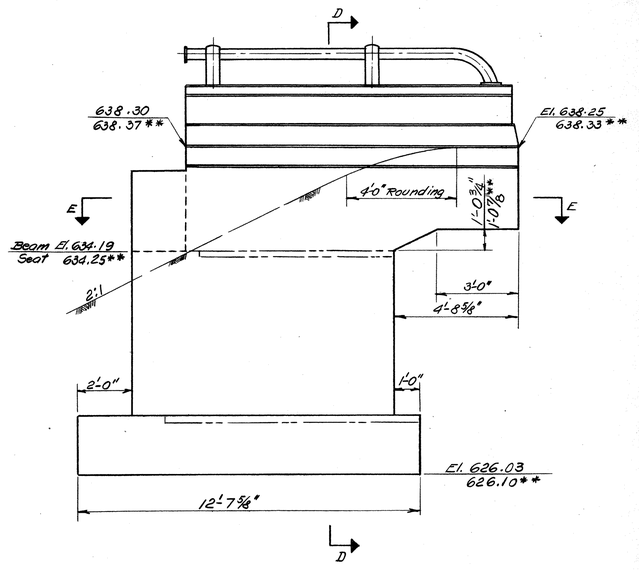
ROSS COUNTY
ROS-35-21.23



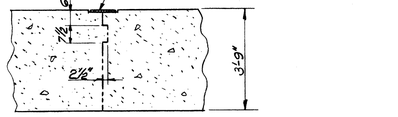
VIEW C-C



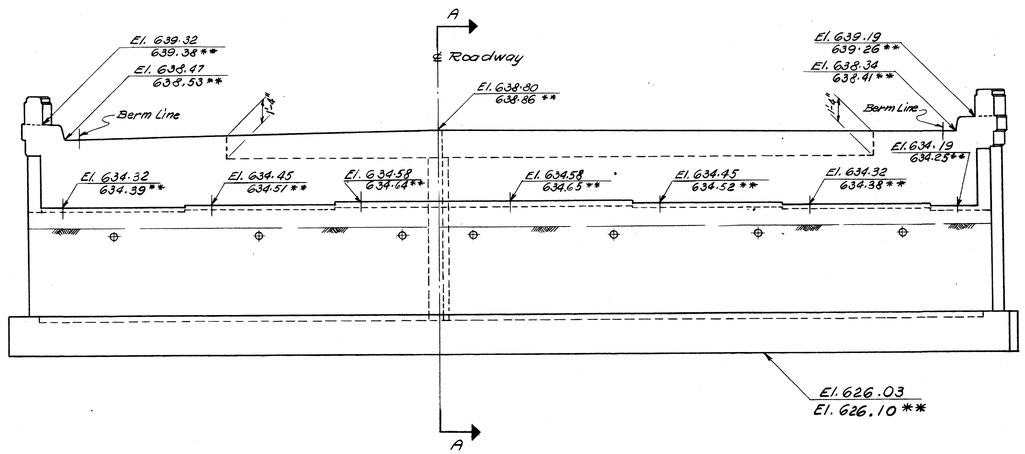
PLAN
REAR ABUTMENT-RIGHT BRIDGE
FORWARD ABUTMENT-LEFT BRIDGE



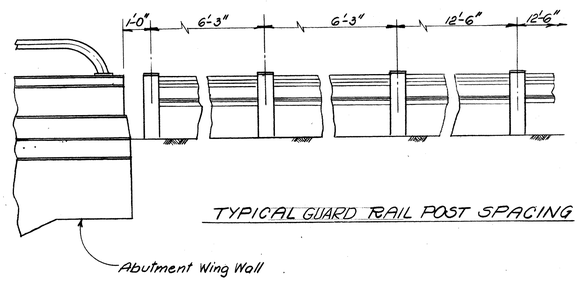
VIEW B-B



DETAILS of CONTRACTION JOINT



ELEVATION



TYPICAL GUARD RAIL POST SPACING

NOTE:
** These elevations and dimensions are for Forward Abutment Left Bridge.

For all Dimensions, Details and Reinforcing Steel not shown see Sheet No. 216

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ABUTMENT DETAILS
BRIDGE No. ROS-35-2271 L & R
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY — U.S.R. 35
STA. 1199+01.26 To STA. 1200+79.76

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D.S.	D.S.	L.R.	D.J.P.	W.W.	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

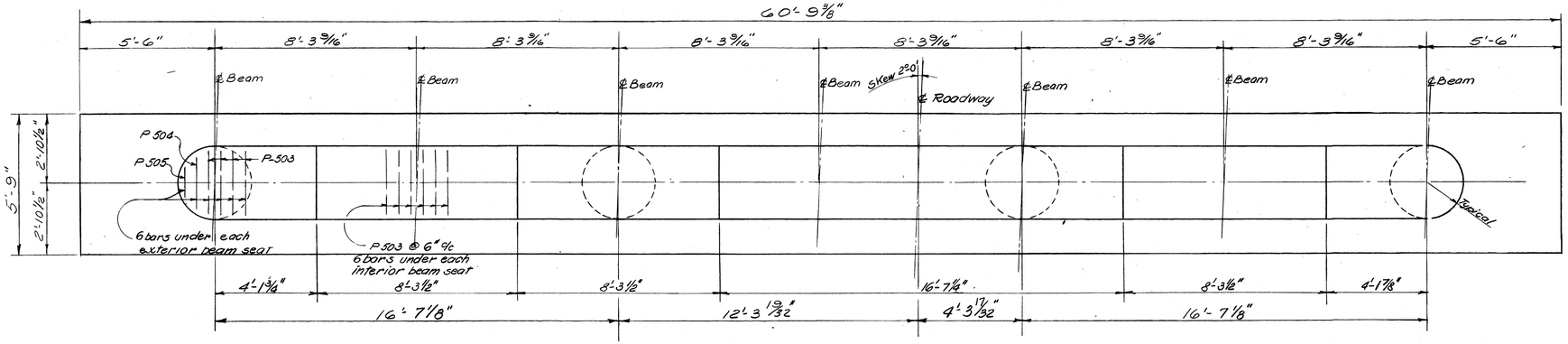
218
240

ROSS COUNTY
ROS-35-21.23

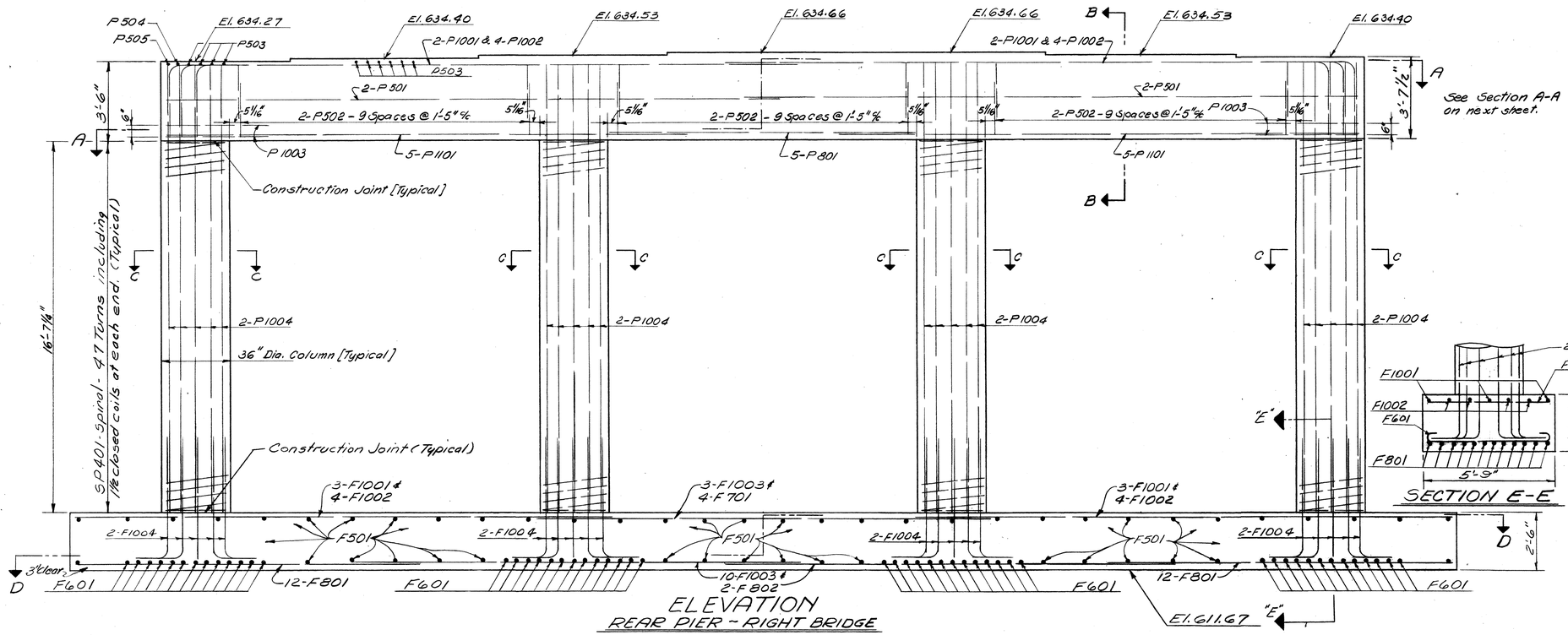
NOTES

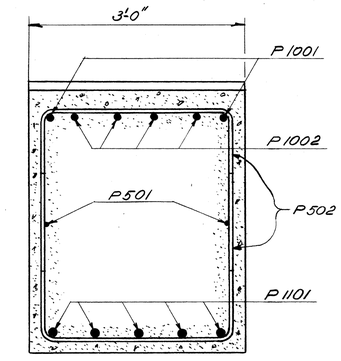
CONCRETE shall be Class 'C' for Pier Caps and Columns and Class 'E' for Footings.

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

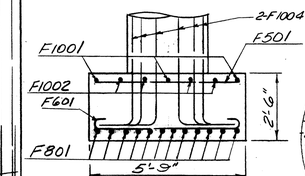


PIER PLAN

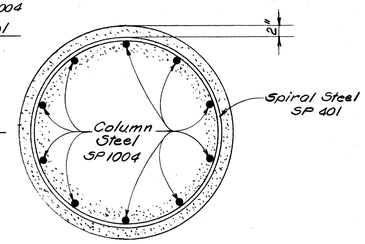




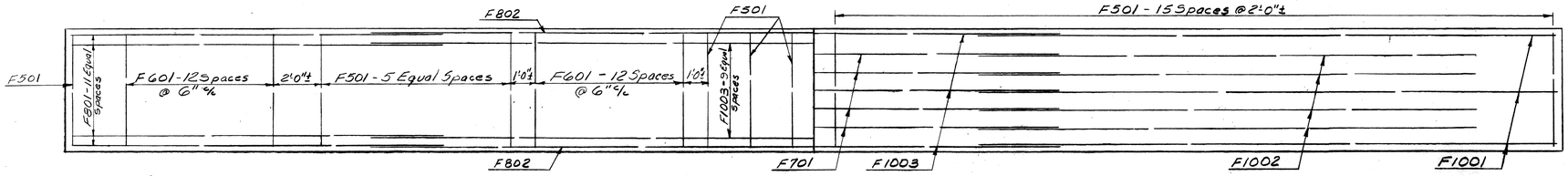
SECTION B-B



SECTION E-E



SECTION C-C



SECTION D-D

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

PIER DETAILS

BRIDGE NO. ROS-35-2271 L&R
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY — U.S.R. 35
STA. 1199+01.26 To STA. 1200+79.76

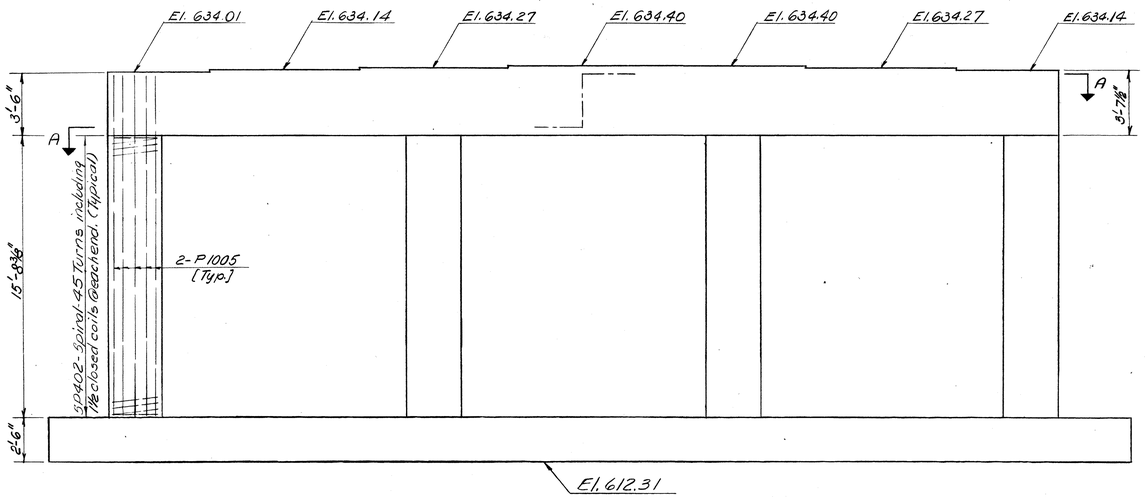
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	D.S.	L.F. W.J.D	R.M.S.	WK	3/18/63	

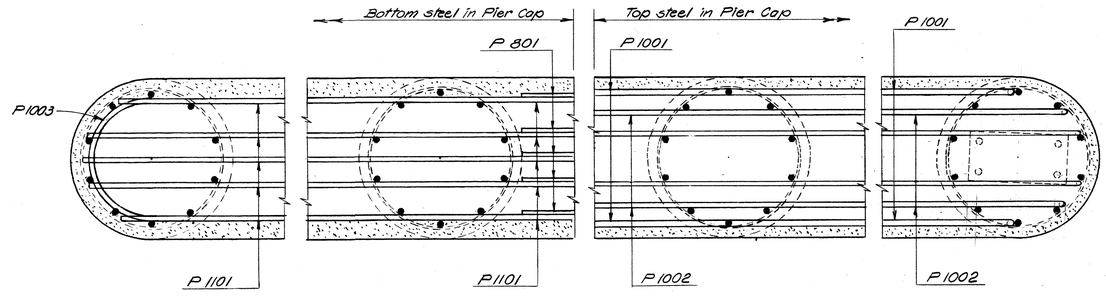
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

219
240

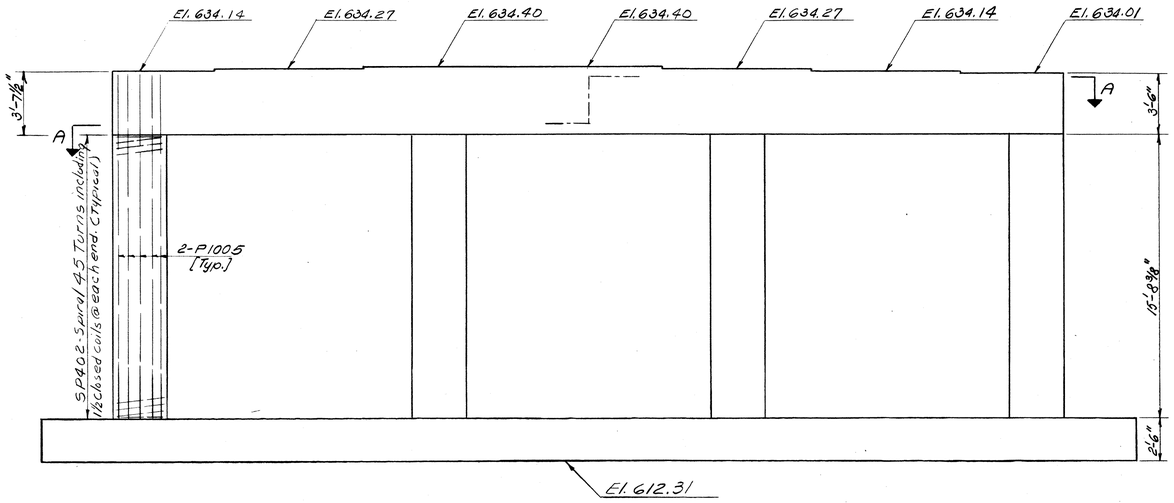
ROSS COUNTY
ROS-35-21.23



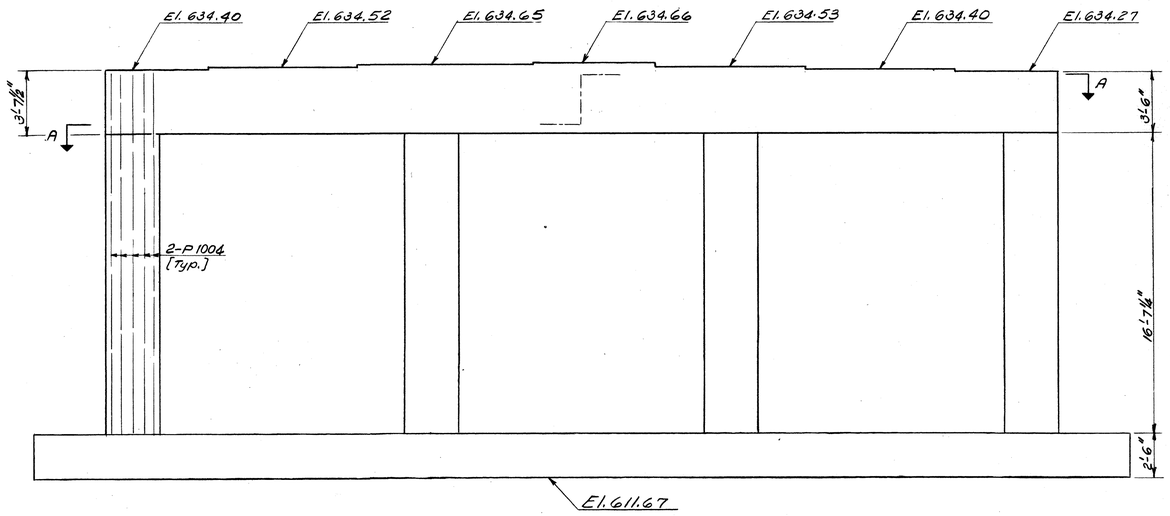
ELEVATION
FORWARD PIER~ RIGHT BRIDGE



SECTION A-A



ELEVATION
FORWARD PIER~ LEFT BRIDGE



ELEVATION
REAR PIER~ LEFT BRIDGE

NOTE:
All Details, Dimensions and Reinforcing Steel not shown are identical to Rear Pier-Right Bridge.

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PIER DETAILS

BRIDGE No. ROS-35-2271 L & R.
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY U.S.R. 35
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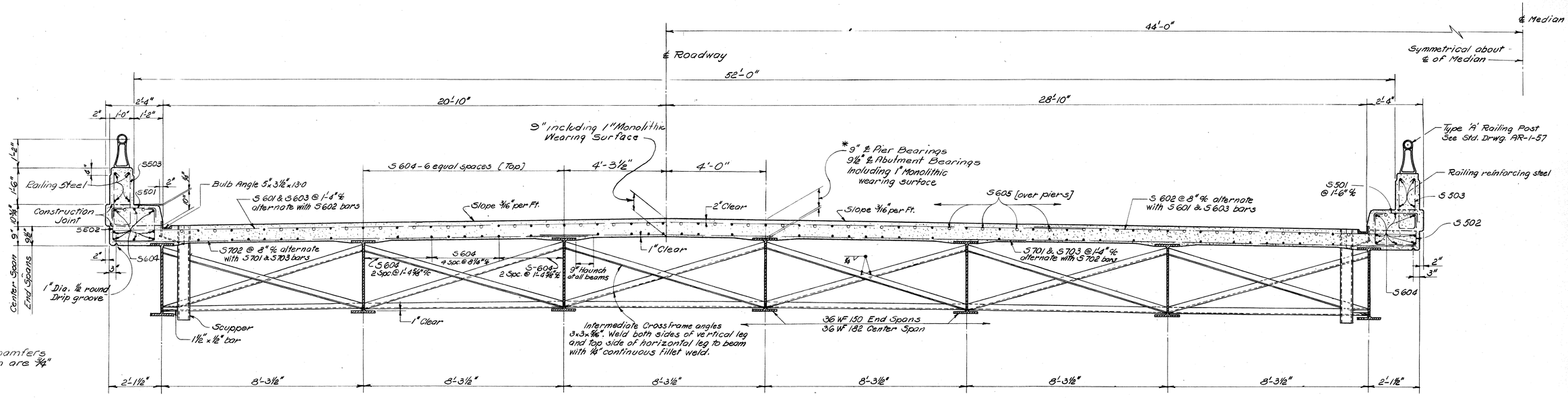
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	D.S.	L.P. W.D.J.	R.M.S.	NW	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

220
240

ROSS COUNTY
ROS-35-21.23



Note:
All chamfers shown are ¾"

TRANSVERSE SECTION

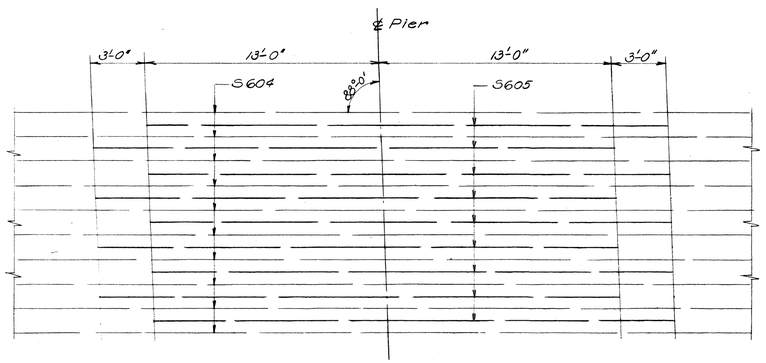


DIAGRAM SHOWING STAGGER OF S 605 BARS OVER PIERS

NOTES

CONCRETE shall be Class 'C' for Superstructure.

DECK SLAB HAUNCH : The Haunch in the deck slab adjacent to the Top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and a maximum of 12". Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" width.

* This is a 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 beam may not have the exact Camber or conformation required to place it parallel to the Finished grade.

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ROSS COUNTY — U.S.R.35
STA. 1199+01.26 To STA. 1200+79.76

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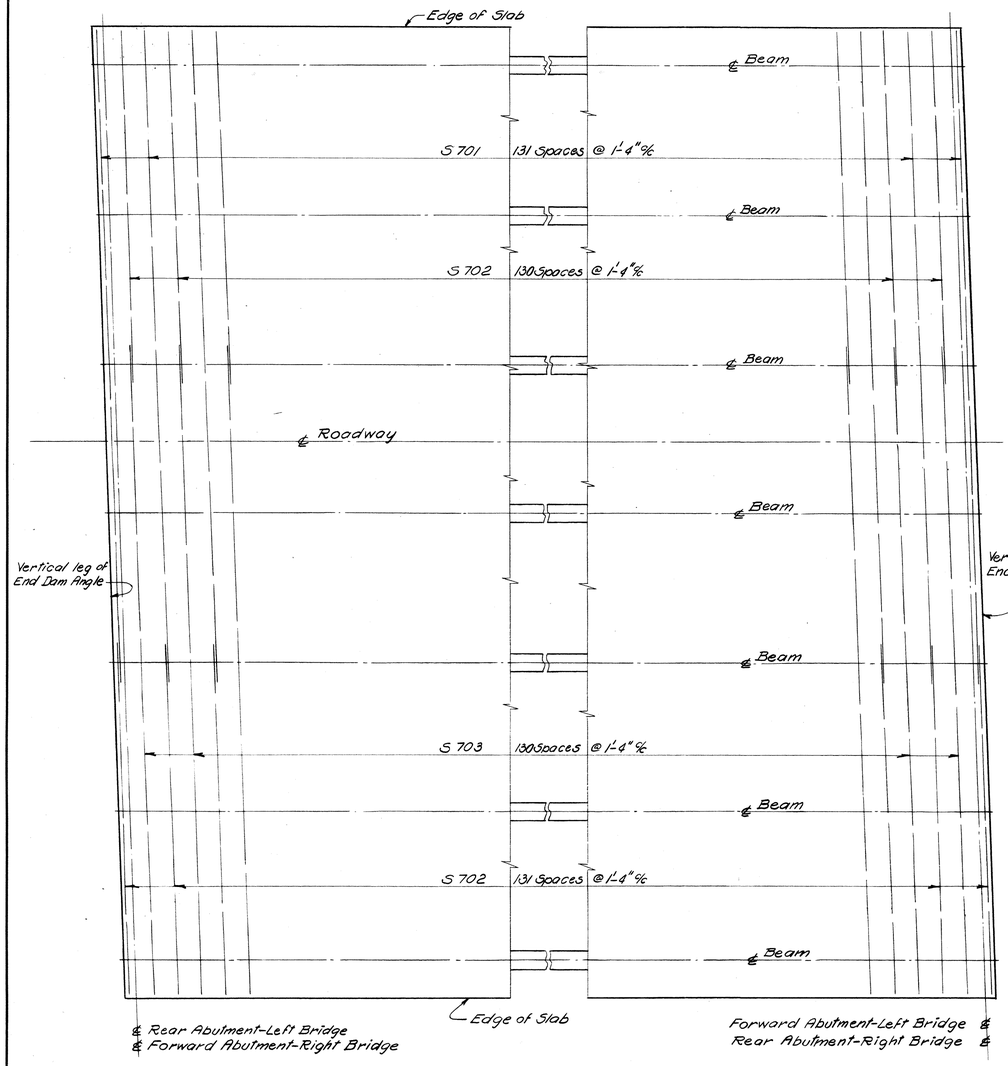
D.S.	L.P.		D.J.P.	W.W.	3/18/63	

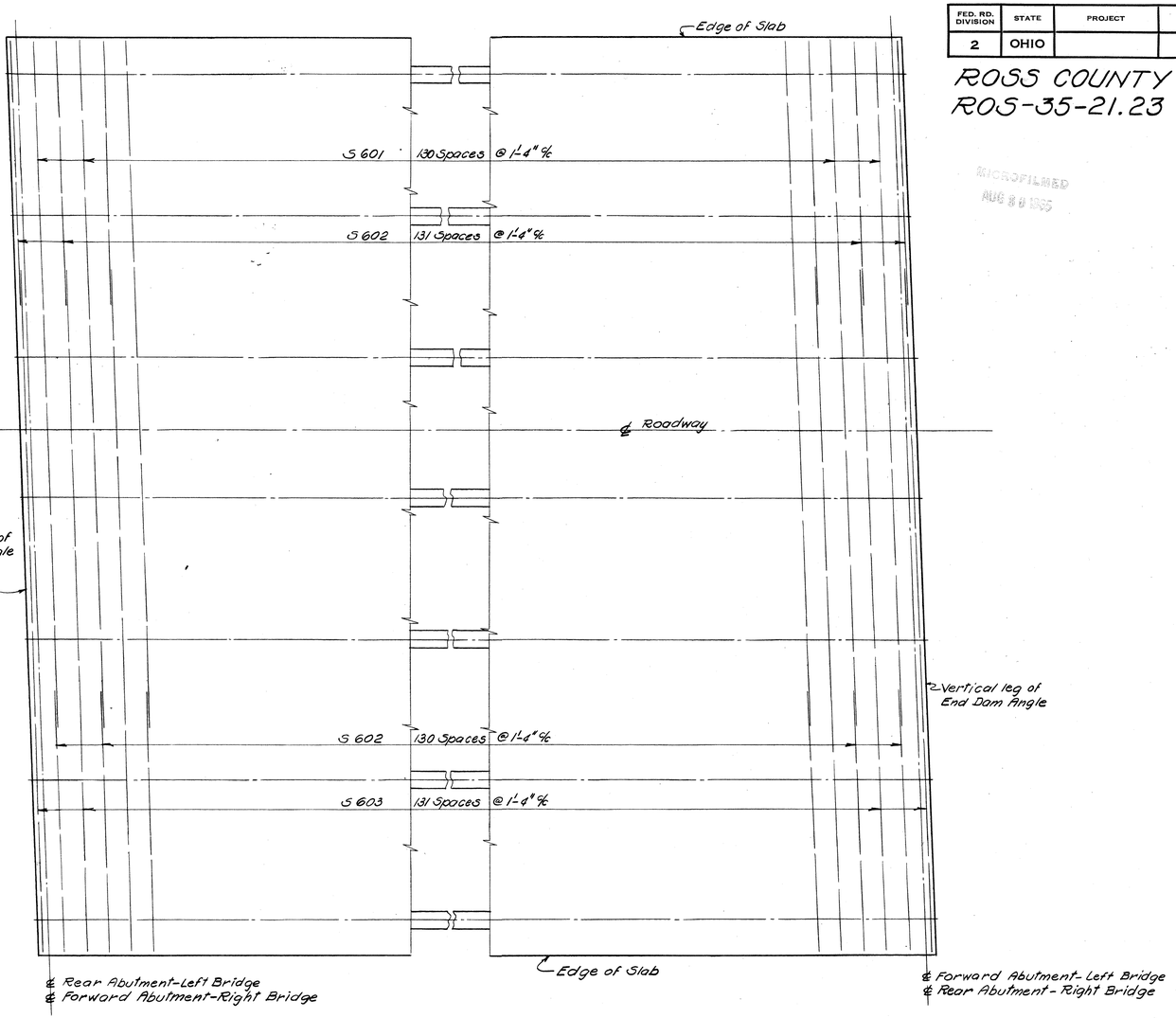
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

221
240

ROSS COUNTY
ROS-35-21.23



PART PLAN of SLAB
TRANSVERSE REINFORCING [BOTTOM] STEEL



PART PLAN of SLAB
TRANSVERSE REINFORCING [TOP] STEEL

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SUPERSTRUCTURE DETAILS
BRIDGE No. ROS-35-2271 L & R
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ROSS COUNTY U.S.R. 35
STA. 1199+01.26 To STA. 1200+79.76

SCALE DATE

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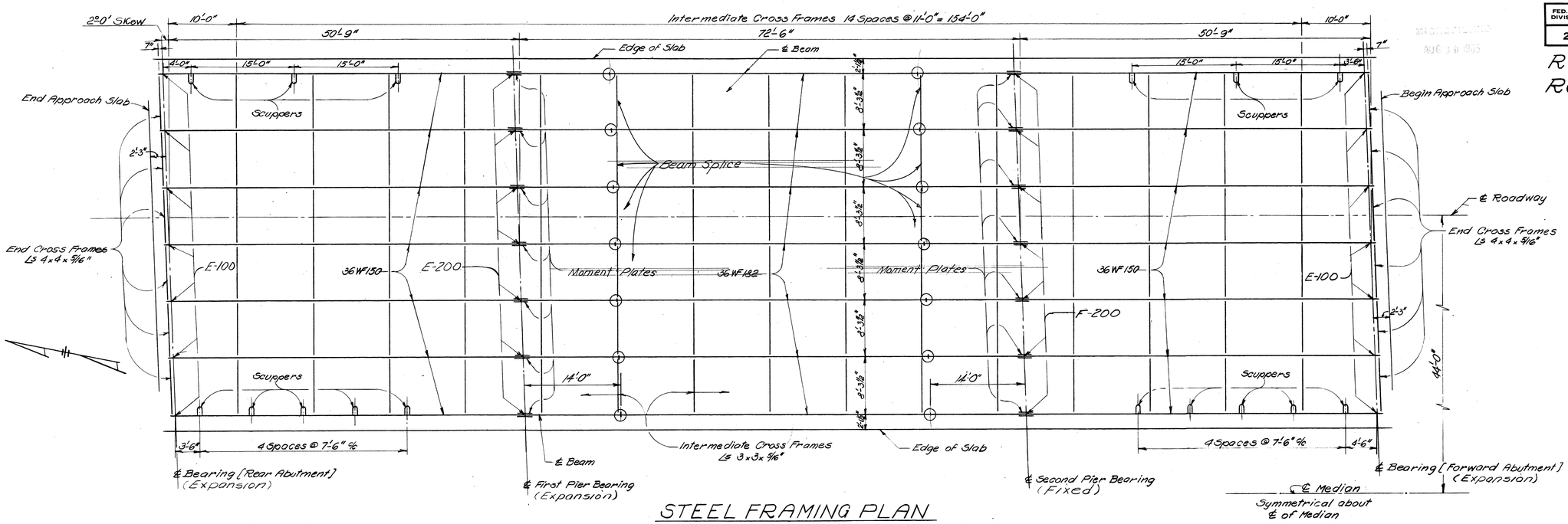
D.S.	L.P.		D.J.P.	WK	3/18/63	

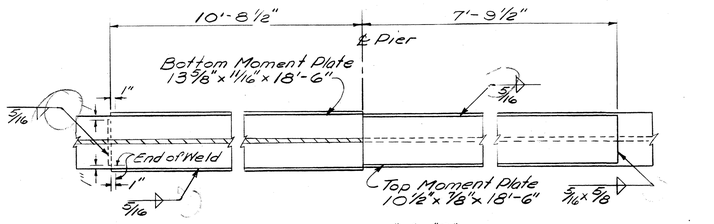
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

222
240

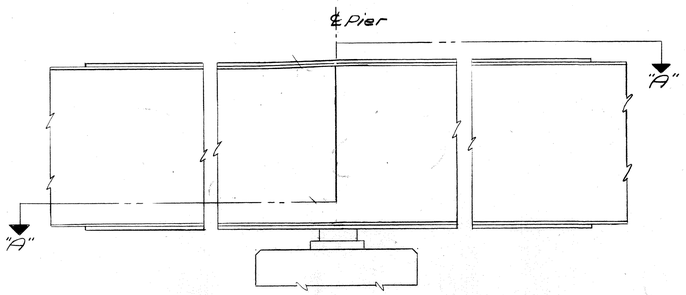
ROSS COUNTY
ROS-35-21.23



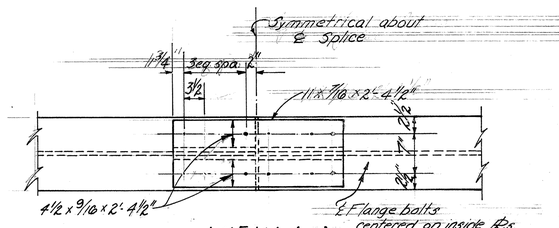
STEEL FRAMING PLAN



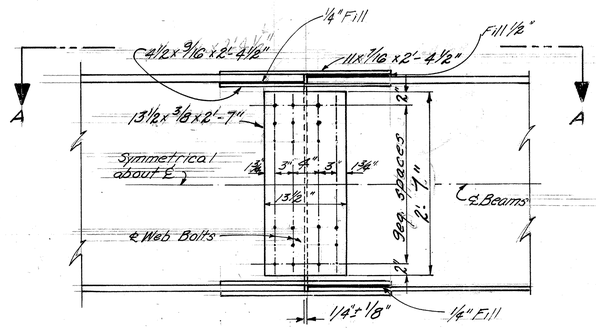
SECTION "A"-"A"



BEAM ELEVATION



VIEW A-A



BEAM SPLICE DETAIL

Fills shown are based on nominal beam dimensions. In fabrication, fill sizes shall be based on actual beam dimensions.

HIGH STRENGTH STEEL BOLTS: Under Sec. 3-710, High-Strength Steel Bolts, Nuts and Washers, paragraph two(2) shall be completely revised and the last sentence of paragraph four (4), revised to read as follows.

"In the 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, 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 completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner."

"Bolt lengths determined by the use of Table No. 1 shall be adjusted to the next ¼-inch length increment."

USE 1"ø High Strength Steel Bolts.

CONCRETE DECK PLACING:
In order to facilitate water curing of the concrete of the deck slab the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

ADDITIONAL NOTES:
For additional notes see General Plan and Elevation.

DEAD LOAD DEFLECTION

LOCATION	Outside Beams		Inside Beams	
	End Span	Middle Span	End Span	Middle Span
Deflection due to weight of steel	0.026"	0.098"	0.027"	0.098"
Deflection due to remaining dead load.	0.119"	0.419"	0.108"	0.378"
Convexity due to vertical curve	0.155"	0.315"	0.155"	0.315"
Sum of Deflection & Convexity	0.299"	0.825"	0.289"	0.792"
Camber required	0	7/8"	0	13/16"

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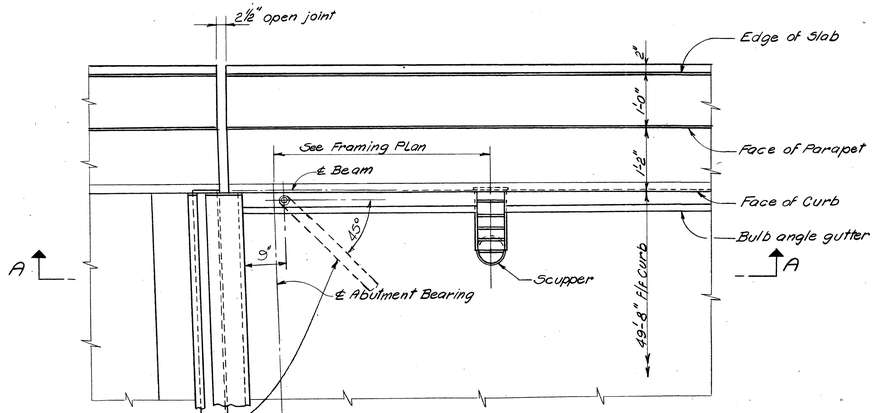
ROSS COUNTY — U.S.R. 35
STA. 1199+01.26 TO STA. 1200+79.76
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	W.D.J. L.P.		D.J.P.		3/16/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

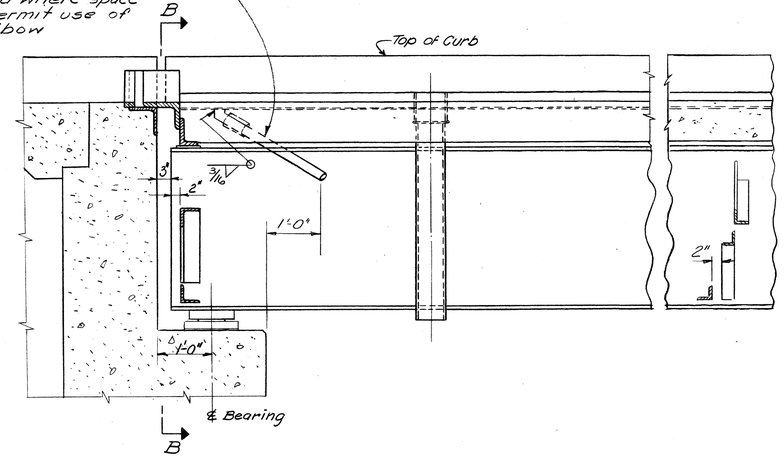
223
240

ROSS COUNTY
ROS-35-21.23

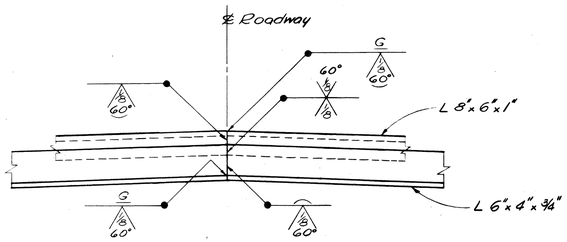


PART PLAN at ABUTMENT

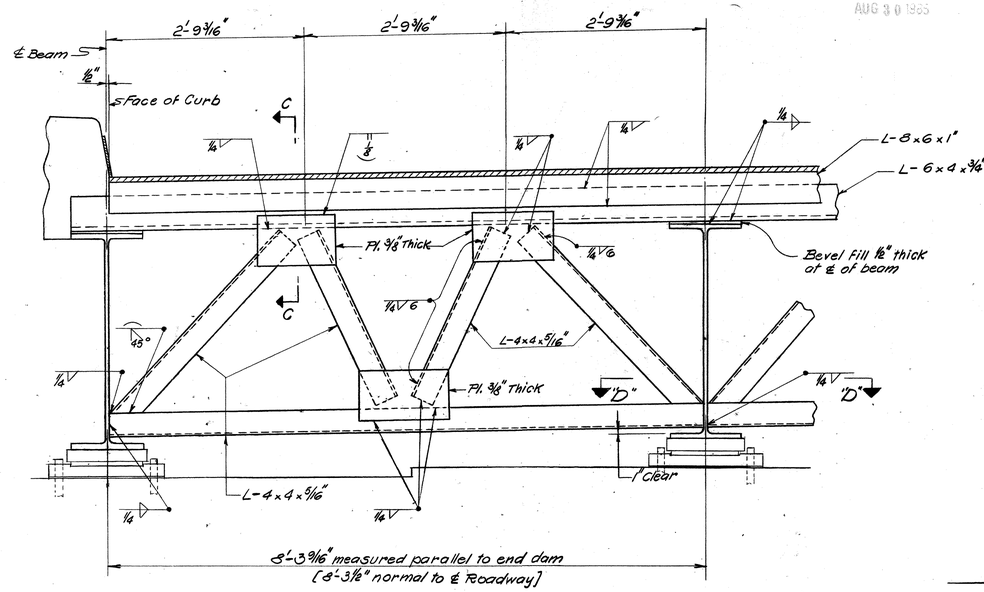
2" Dia. standard pipe drain at end of Bulb anglegutter where grade slopes down to end dam. Use Std. elbow and coupling. A welded bend may be used where space does not permit use of standard elbow



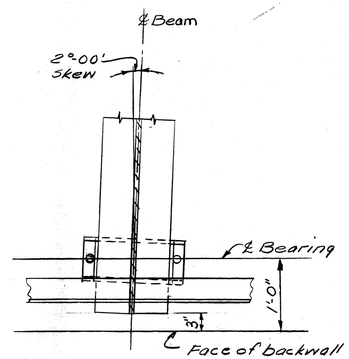
SECTION A-A



WELDED BUTT JOINT IN SUPERSTRUCTURE END DAM ANGLES AT ℄ OF ROADWAY

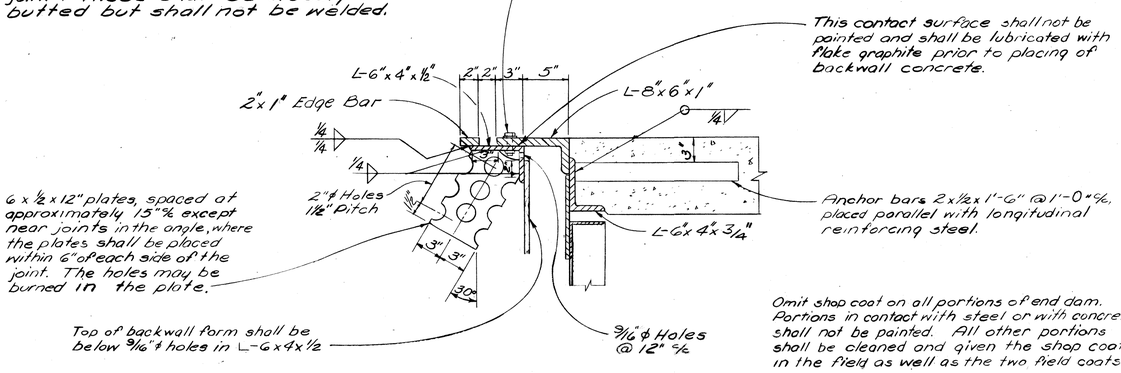


SECTION B-B



SECTION "D"-"D"

A welded butt joint in the end dam along the centerline of roadway, will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 6'-0" in length, with one of the joints at the apex of the crown, and an extra joint at the contraction joint. These shall be closely butted but shall not be welded.



SECTION C-C

⅝"x 2" bolts at not more than 2'-0"℄ with nuts tack-welded to under side of lower angle. 1 1/16" holes in upper angle. Center ⅝" bolts in 1 1/16" holes. Apply flake graphite between washer and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has set, preferably within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Fill holes with bituminous material.

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of backwall concrete.

Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

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U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY — U.S.R. 35
STA. 1199+01.26 To STA. 1200+79.76

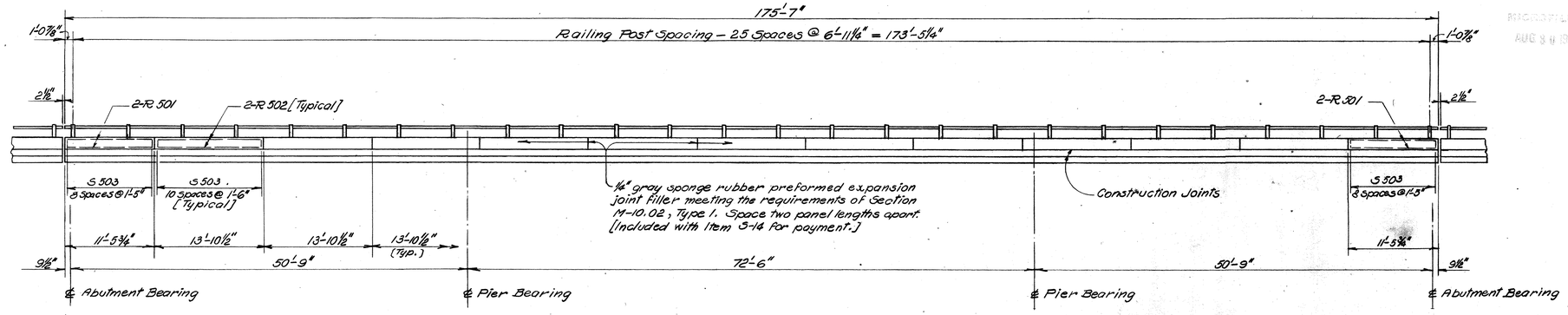
SCALE — DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	W.D.J. L.P.		D.J.P.	WW	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

224/240

ROSS COUNTY
ROS-35-21.23

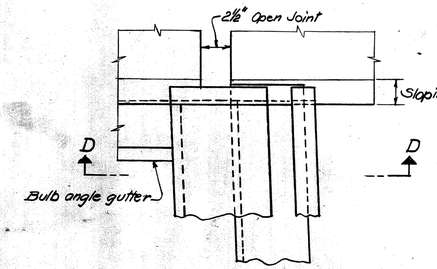


TREATMENT OF PARAPET AND FASCIA

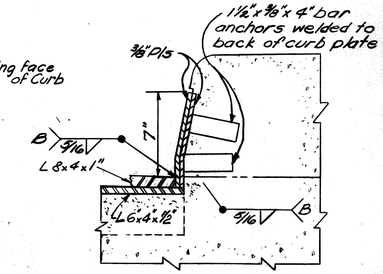
NOTES

DECK DRAINAGE: Scuppers shall be made of steel. Milled joints will be permitted in bulb angles but individual lengths shall be as long as practicable. Gutters shall be accurately adjusted for alignment and grade with allowance for dead load deflection before concrete is placed. Welding for scuppers shall be continuous fillet weld. Steel gutters and supports are included under Item S-7, structural steel.

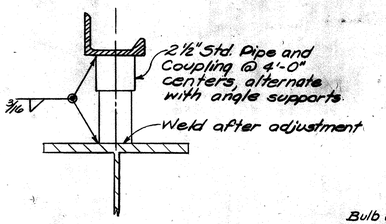
SCUPPERS are paid for under Item S-29, scuppers.



PART PLAN



SECTION "E"-"E"



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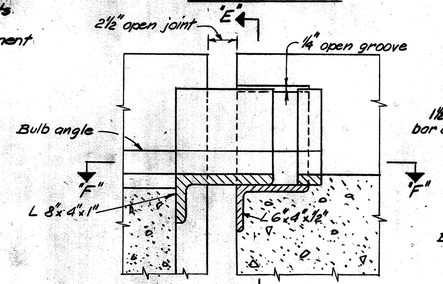

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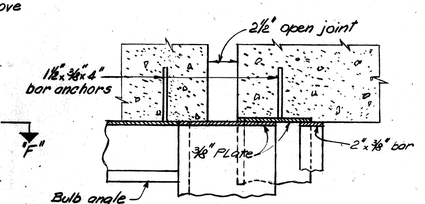
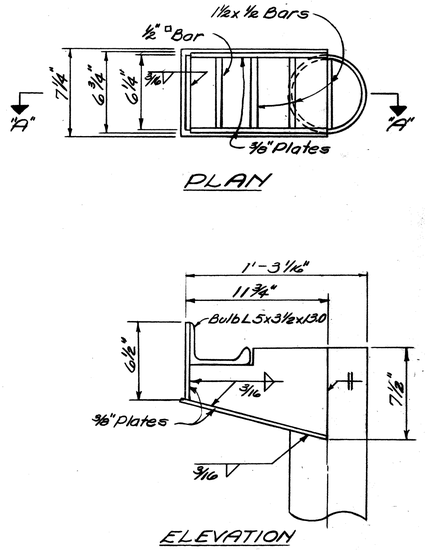


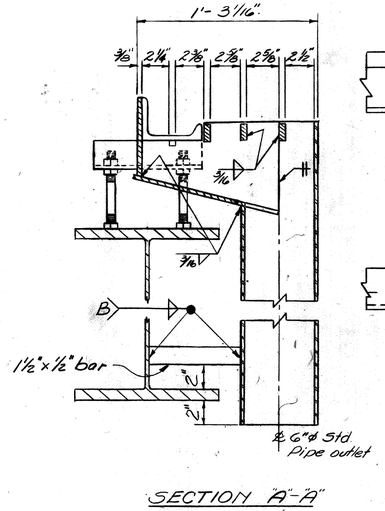
SECTION "F"-"F"

CURB PLATE DETAILS

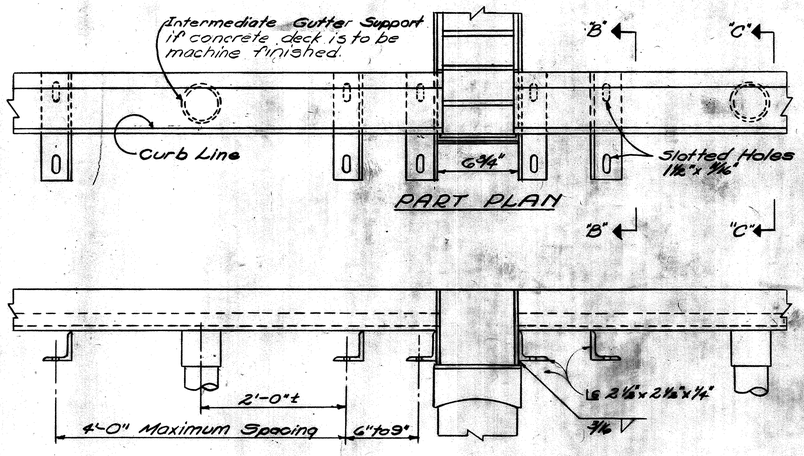


PLAN

ELEVATION

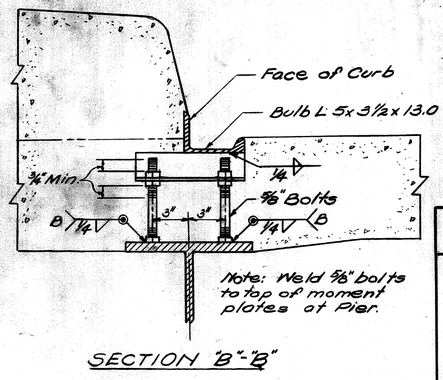


SECTION "A"-"A"



PART PLAN

ELEVATION



Note: Weld ⅝" bolts to top of moment plates of Pier.

SECTION "B"-"B"

GUTTER AND SCUPPER DETAILS

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPERSTRUCTURE DETAILS
BRIDGE No. ROS-35-2271 L & R
U.S.R. 35 over EAST MAIN STREET
ROSS COUNTY U.S.R. 35
STA. 1199+01.26 TO STA. 1200+79.76

SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.S.	W.D.H. L.P.		D.J.P.	W.L.	3/18/63	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

225
240

ROSS COUNTY
ROS-35-21.23

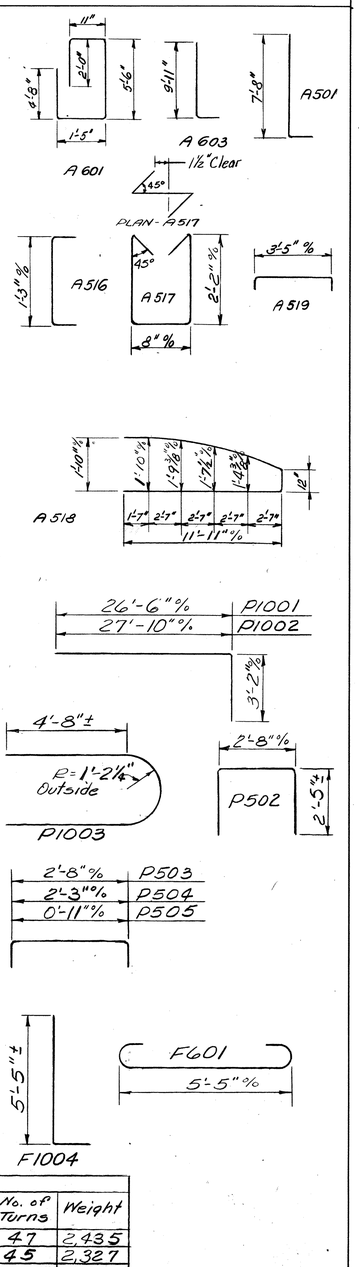
REINFORCING STEEL LIST

Bar Number	Number Required	Length	Shape	Weight
ONE ABUTMENT				
A 601	36	13'-11"		753
A 602	36	5'-8"		306
A 603	8	10'-7"		127
A 501	54	8'-2"		460
A 502	54	5'-9"		324
A 503	2	28'-6"		59
A 504	18	30'-6"		572
A 505	18	22'-6"		422
A 506	2	12'-3"		26
A 507	20	4'-10"		101
A 508	10	7'-7"		79
A 509	8	9'-1"		76
A 510	20	12'-0"		250
A 511	12	3'-7"		45
A 512	8	10'-0"		89
A 513	18	6'-0"		113
A 514	12	3'-7"		45
A 515	28	9'-3"		270
A 516	18	2'-3"		42
A 517	18	5'-7"		92
A 518	4	25'-4"		106
A 519	42	4'-5"		194
TOTAL ONE ABUTMENT				4,545
TOTAL FOUR ABUTMENTS				18,180
FOUR PIERS				
P1101	40	22'-11"		4870
P1001	16	29'-4"		2,020
P1002	32	30'-8"		4,223
P1003	16	13'-1"		901
P1004	80	19'-11"		6,856
P1005	80	19'-0"		6,541
P801	20	13'-7"		725
P501	16	27'-0"		451
P502	240	7'-3"		1,815
P503	152	3'-8"		581
P504	8	3'-3"		27
P505	8	1'-11"		16
F1001	24	23'-6"		2427
F1002	32	20'-2"		2,777
F1003	92	19'-9"		7,819
F1004	160	6'-6"		4,475
F801	96	15'-3		3,909
F802	16	19'-1"		815
F701	16	19'-9		646
F601	208	6'-9"		2,109
F501	200	5'-5"		1,130
SUB-TOTAL				55,133

SPIRAL

Bar No.	No Req'd.	Core Dia. % Spiral	Length	Pitch	No. of Turns	Weight
SP401	8	32"	16'-7 1/2"	4 1/2"	47	2,435
SP402	8	32"	15'-8 3/16"	4 1/2"	45	2,327
SPIRAL TOTAL						4,762
TOTAL FOUR PIERS						59,895

Bending Diagrams

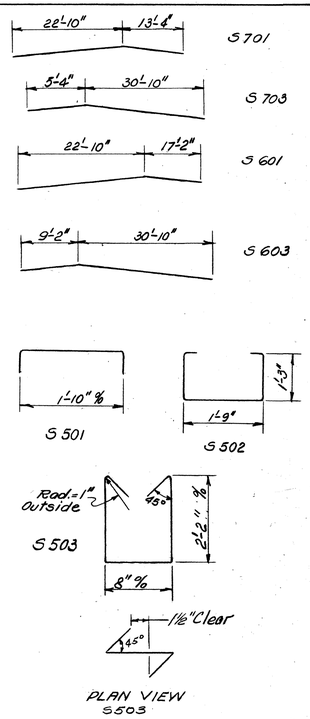


Bar Number	Number Required	Length	Shape	Weight
ONE SUPERSTRUCTURE				
S 701	132	36'-2"		9,758
S 702	263	19'-7"		10,528
S 703	131	36'-2"		9,684
S 601	131	40'-0"		7,871
S 602	263	15'-8"		6,189
S 603	132	40'-0"		7,931
S 604	558	30'-10"		25,842
S 605	80	29'-0"		3,485
S 501	232	2'-10"		686
S 502	232	5'-3"		1,271
S 503	278	5'-7"		1,498
TOTAL ONE SUPERSTRUCTURE				84,743
TOTAL TWO SUPERSTRUCTURES				169,486
RAILING STEEL				
R 501	32	11'-7"		
R 502	176	13'-6"		
R 503	16	11'-9"		

REPLACEMENT STEEL

RE1101	1	7'-7"	
RE1001	2	7'-3"	
RE801	1	6'-6"	
RE701	4	6'-3"	
RE601	3	5'-11"	
RE501	2	5'-7"	
RE401	1	5'-3"	

Bending Diagrams



- NOTES -

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, A501 is a No. 5 size bar and P1001 is a No. 10 size bar.

RAILING STEEL in the parapet wall is included with Item S-14 Railing for payment.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "Number of Turns" shown is the "Length" divided by the pitch plus three turns (total number of closed coils) expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers based on 0.68 lb. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

ELMER S. BARRETT ASSOCIATES
Consulting Engineers
245-249 S. Paint Street — Chillicothe, Ohio

REINFORCING STEEL LIST
BRIDGE No. ROS-35-2271 L & R
U.S.R. 35 over EAST MAIN STREET
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